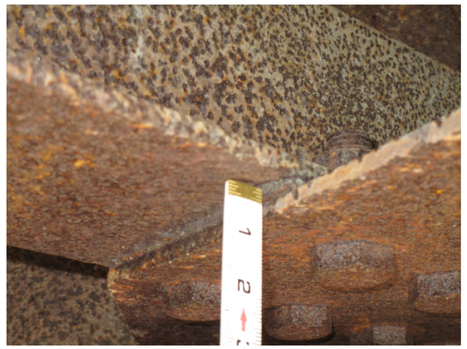
PR-I-14



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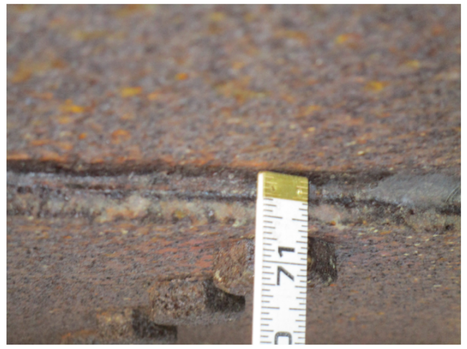
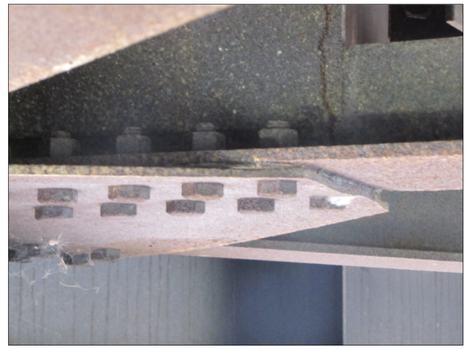


PR-I-16

PR-I-17

PR-I-1



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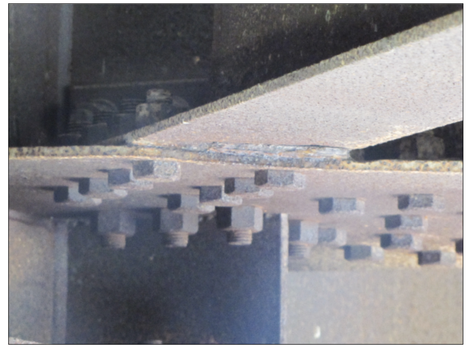

PR-I-3

PR-I-4

PR-I-5

PR-I-6

PHOTO LOCATION LEGEND

PR-I-1 GIRDER 1, PANEL POINT 26, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-2 GIRDER 1, PANEL POINT 20, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND LATERAL BRACING MEMBERS.

PR-I-3 GIRDER 1, PANEL POINT 18, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND LATERAL BRACING MEMBERS.

PR-I-4 GIRDER 1, PANEL POINT 15, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND LATERAL BRACING MEMBERS.

PR-I-5 GIRDER 1, PANEL POINT 15, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD.

PR-I-6 GIRDER 2, PANEL POINT 15, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD.

PR-I-7 GIRDER 3, PANEL POINT 12, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-8 GIRDER 3, PANEL POINT 26, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-9 GIRDER 4, PANEL POINT 12, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-10 GIRDER 3, PANEL POINT 10, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-11 GIRDER 3, PANEL POINT 15, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-12 GIRDER 3, PANEL POINT 18, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-13 GIRDER 3, PANEL POINT 23, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD.

PR-I-14 GIRDER 3, PANEL POINT 29, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-15 GIRDER 4, PANEL POINT 6, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-16 GIRDER 4, PANEL POINT 9, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PR-I-17 GIRDER 4, PANEL POINT 35, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN GUSSET PLATE AND CROSSFRAME BOTTOM CHORD AND LATERAL BRACING MEMBERS.

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

SHEET 12 OF 14

DRAWN BY : H. ROSEMOND DATE : 2/2019
CHECKED BY : G. COLS DATE : 2/2019
DESIGNED BY : J. SLOAN DATE : 2/2019
DESIGN CHECKED BY : E. ZHOU DATE : 2/2019

PACK RUST REPAIRS

FOR REPRESENTATION ONLY

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AECOM License No. F-0342

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN 2/28/2020

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

REHABILITATION

STRUCTURAL STEEL REPAIRS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-92
1			3			TOTAL SHEETS
2			4			129

DATE: 2/27/2020
TIME: 3:58:48 PM

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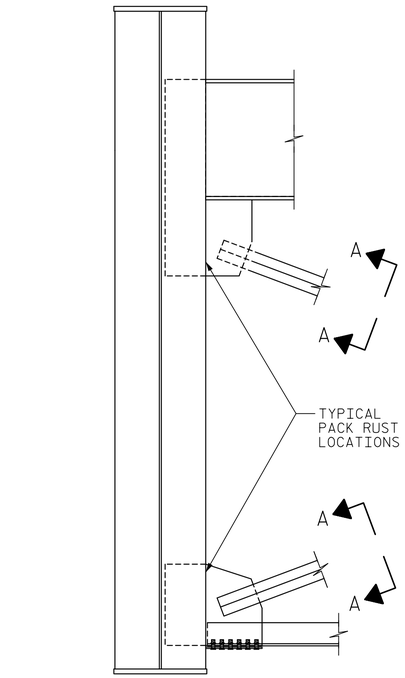
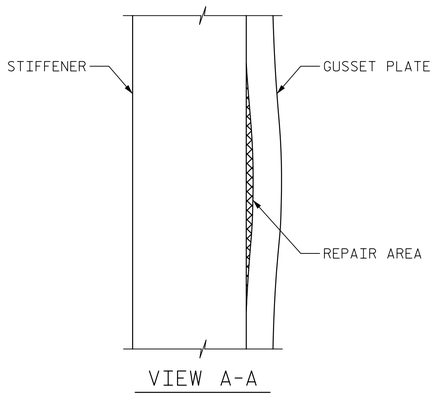


ELEVATION OF TYPICAL PACK RUST REPAIR - TYPE II



VIEW A-A

PR-II-1

PR-II-2

PR-II-3

PR-II-4

PR-II-5

PR-II-6

PHOTO LOCATION LEGEND

PR-II-1 GIRDER 3, PANEL POINT 12, AT TOP CROSSFRAME CONNECTION: PACK RUST BETWEEN CROSSFRAME DIAGONAL GUSSET PLATE AND CONNECTOR PLATE.

PR-II-2 GIRDER 3, PANEL POINT 12, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN CROSSFRAME DIAGONAL GUSSET PLATE AND CONNECTOR PLATE.

PR-II-3 GIRDER 3, PANEL POINT 26, AT TOP CROSSFRAME CONNECTION: PACK RUST BETWEEN CROSSFRAME DIAGONAL GUSSET PLATE AND CONNECTOR PLATE.

PR-II-4 GIRDER 3, PANEL POINT 16, AT BOTTOM CROSSFRAME CONNECTION: PACK RUST BETWEEN CROSSFRAME DIAGONAL GUSSET PLATE AND CONNECTOR PLATE.

PR-II-5 GIRDER 4, PANEL POINT 12, AT TOP CROSSFRAME CONNECTION: PACK RUST BETWEEN CROSSFRAME DIAGONAL GUSSET PLATE AND CONNECTOR PLATE.

PR-II-6 GIRDER 4, PANEL POINT 26, AT TOP CROSSFRAME CONNECTION: PACK RUST BETWEEN CROSSFRAME DIAGONAL GUSSET PLATE AND CONNECTOR PLATE.

TYPE II PACK RUST REPAIR PROCEDURE:

FOR PACK RUST REPAIRS, HRCSA PENENTRANT, AND PAINT, SEE SPECIAL PROVISIONS.

1. CLEAN AREA TO REMOVE PACK RUST. DO NOT DISCONNECT ANY MEMBERS OR LOOSEN ANY BOLTS.
2. APPLY AN HRCSA PENETRANT TO THE CLEANED AREA IN ACCORDANCE WITH MANUFACTURER'S RECOMENDATIONS.
3. APPLY COMPATIBLE ONE-STEP HRCSA PRIMER/TOP-COAT, APPLYING MULTIPLE COATS AS NECESSARY TO FILL GAP OR CREVICE. COAT THE ENTIRE GUSSET PLATE AND 3"BEYOND THE GUSSET PLATE ON EACH ADJOINING MEMBER.

   THE ENGINEER SHALL INSPECT EACH REPAIR AREA BETWEEN EACH STEP OF THE REPAIR.

   FOR PAY ITEMS, SEE SHEET 14.

PACK RUST REPAIRS

FOR REPRESENTATION ONLY. REPAIR SHALL BE PERFORMED AT EACH LOCATION NOTED. FOR REPAIR LOCATIONS, SEE PHOTO LOCATION LEGEND.

DRAWN BY :	M. TOM	DATE :	2/2019
CHECKED BY :	G. COLS	DATE :	2/2019
DESIGNED BY :	J. SLOAN	DATE :	2/2019
DESIGN CHECKED BY :	E. ZHOU	DATE :	2/2019

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN
8/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

REHABILITATION

STRUCTURAL STEEL REPAIRS

PROJECT NO. 15BPR.20
HENDERSON COUNTY
STATION: 35+30.22 -L-

SHEET 13 OF 14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-93
1			3			TOTAL SHEETS
2			4			129

DATE: 2/27/2020
TIME: 3:59:00 PM

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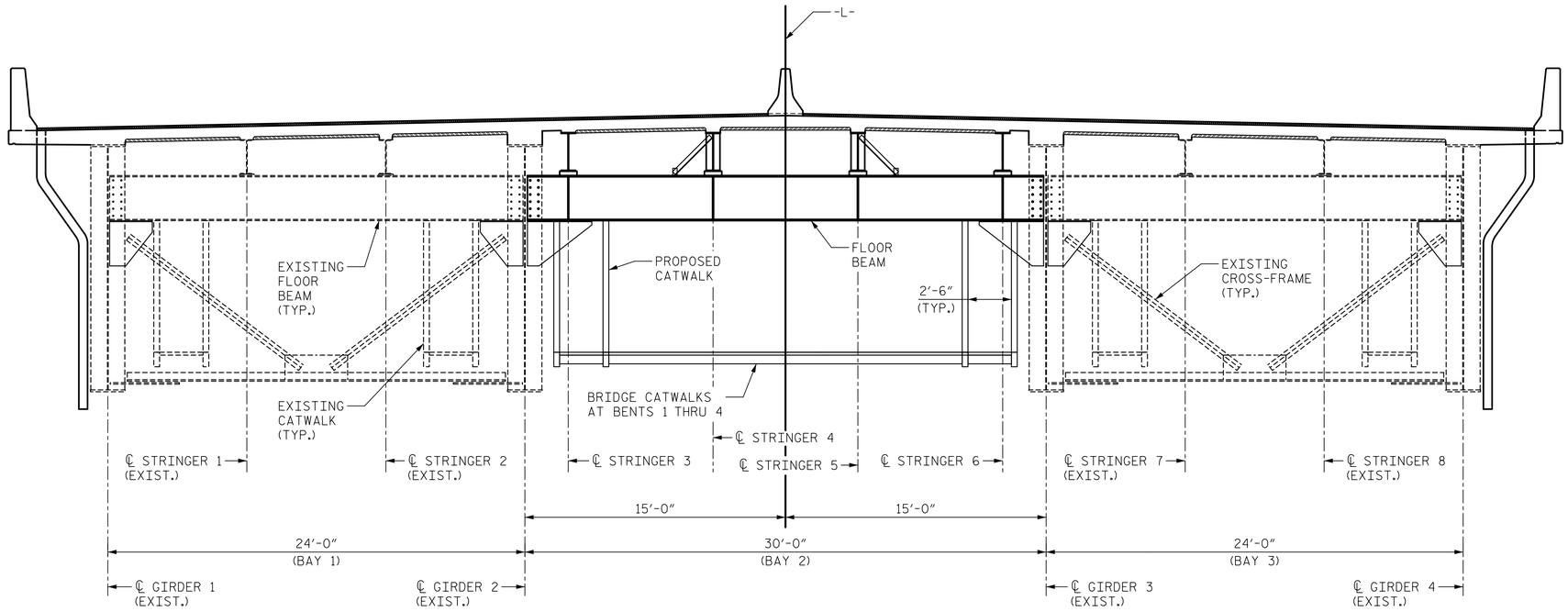
DGN: R:\Structures\04_Drawings\40_JT_15BPR.20_SMU_SR13.dgn



TYPICAL SECTION

(CROSS FRAMES SHOWN TYPICAL OF INTERMEDIATE CROSS FRAMES)

NOTES:

THIS DRAWING IS A SCHEMATIC ONLY AND IS NOT A WORKING DRAWING.

FOR FURTHER DETAILS, SEE ACCESS AND FALL PROTECTION SPECIAL PROVISION.

CONTRACTOR SHALL SUBMIT WORKING DRAWINGS IN ACCORDANCE WITH THE SPECIAL PROVISION.

PAYMENT SHALL BE MADE AS A LUMP SUM UNDER ACCESS AND FALL PROTECTION PAY ITEM.

PROJECT NO. 15BPR.20

HENDERSON **COUNTY**

STATION: 35+30.22 -L-

SHEET 1 OF 3

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3/28/2020

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DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS & FALL PROTECTION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-97
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 4/2019
CHECKED BY : J. SLOAN DATE : 4/2019
DESIGNED BY : N. BROWN/ D. TUTTLE DATE : 4/2019
DESIGN CHECKED BY : J. SLOAN/J. LIU DATE : 4/2019

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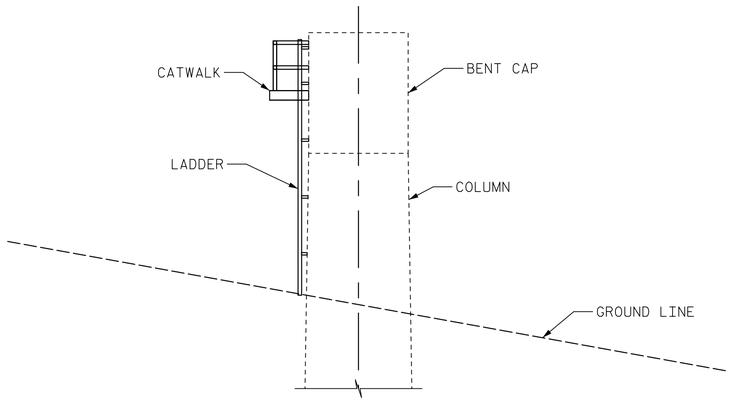
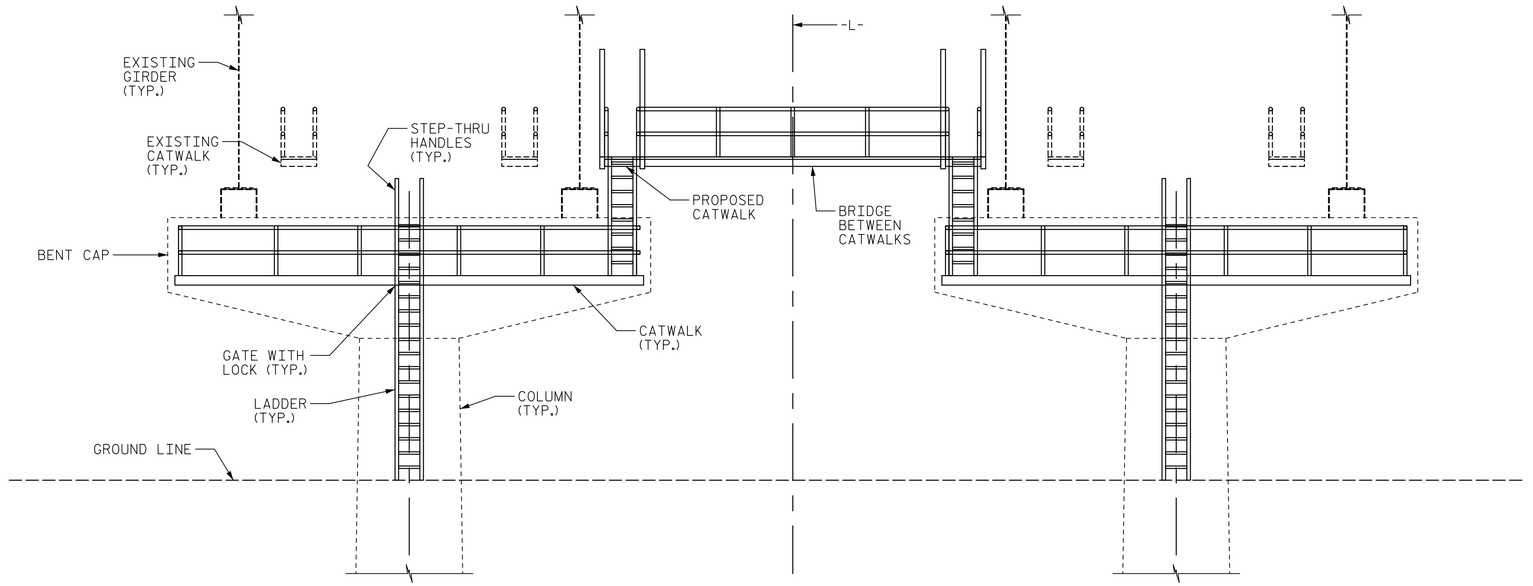


PROFILE

(NORTH FACE OF BENT 1 AND SOUTH FACE OF BENT 4 SHOWN)



ELEVATION

(EAST FACE OF BENT 1 AND WEST FACE OF BENT 4 SHOWN)

LADDERS AND CATWALKS AT BENTS 1 AND 4

(SUPERSTRUCTURE CROSSFRAMES AND BENT CAP P.T. NOT SHOWN FOR CLARITY)

NOTES:

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PROJECT NO. 15BPR.20

HENDERSON **COUNTY**

STATION: 35+30.22 -L-

SHEET 2 OF 3

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12/28/2020

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 4/2019
CHECKED BY : J. SLOAN DATE : 4/2019
DESIGNED BY : N. BROWN/D. TUTTLE DATE : 4/2019
DESIGN CHECKED BY : J. SLOAN DATE : 4/2019

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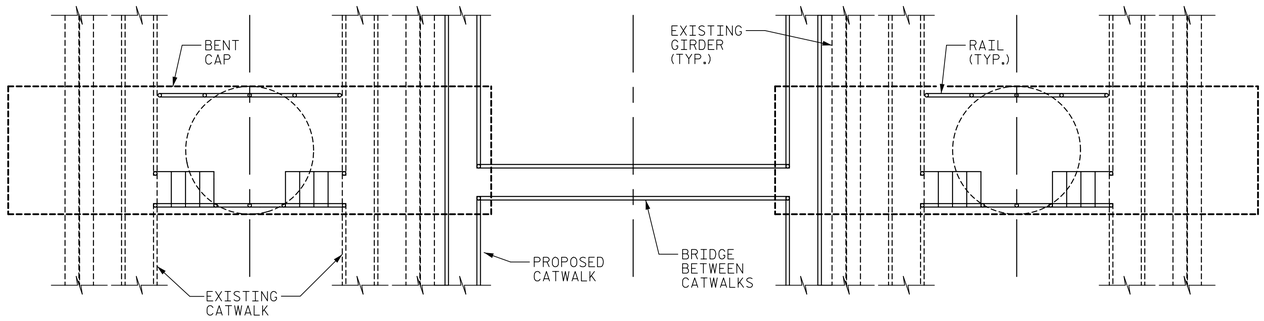
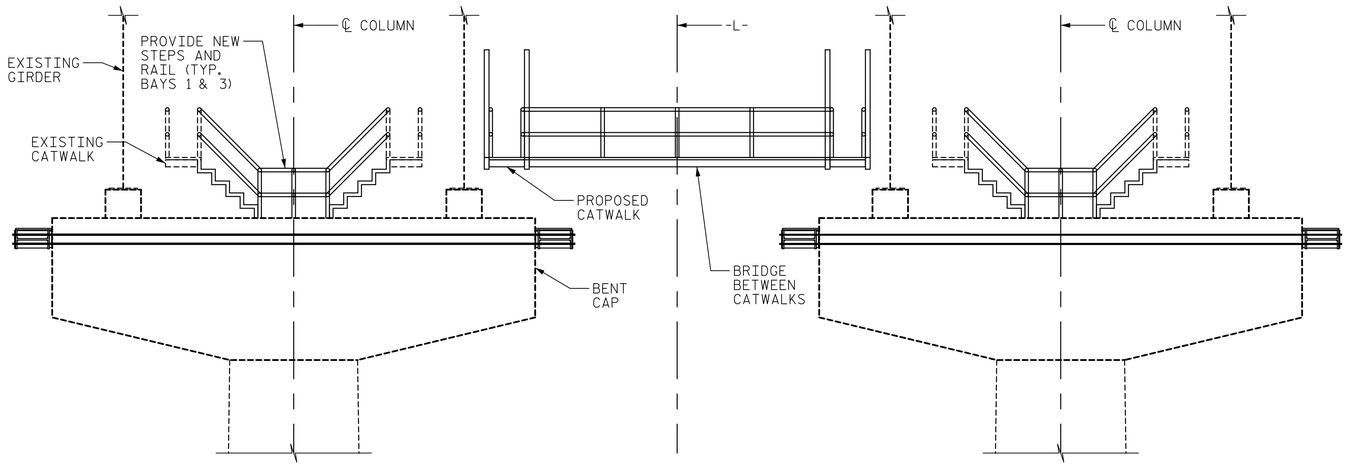
USER: Henry.Rosemond
DGN: R:\Structures\04 Drawings\401_IBI_15BPR.20_SMU.DW2.dgn



PLAN

(P.T. ANCHORAGES AND BARS NOT SHOWN IN PLAN VIEW FOR CLARITY)



ELEVATION

LADDERS AND CATWALKS AT BENTS 2 AND 3

(SUPERSTRUCTURE CROSSFRAMES NOT SHOWN FOR CLARITY)

NOTES:

THIS DRAWING IS A SCHEMATIC ONLY AND IS NOT A WORKING DRAWING.

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PROJECT NO. 15BPR.20

HENDERSON **COUNTY**

STATION: 35+30.22 -L-

SHEET 3 OF 3

DRAWN BY : S. STREDNAK DATE : 4/2019
CHECKED BY : J. SLOAN DATE : 4/2019
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DESIGN CHECKED BY : J. SLOAN DATE : 4/2019

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4/28/2020

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ACCESS & FALL PROTECTION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-99
1			3			TOTAL SHEETS
2			4			129

DATE: 2/27/2020
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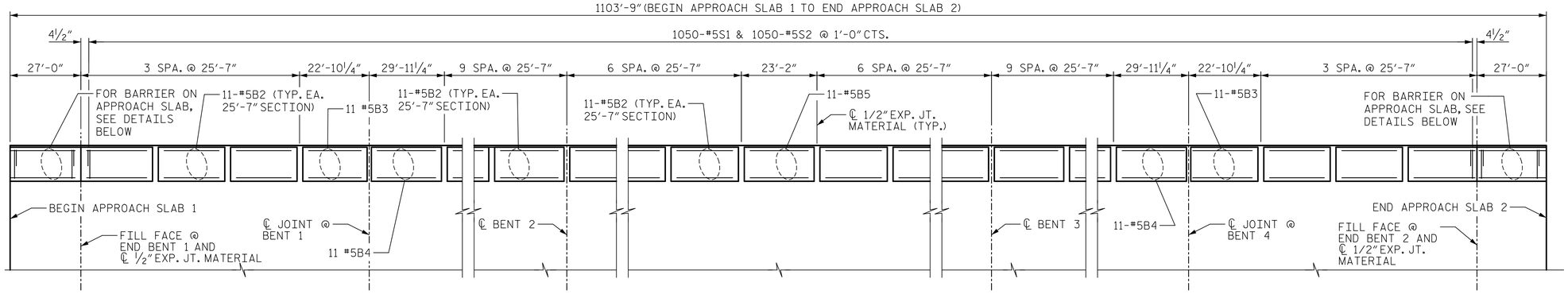
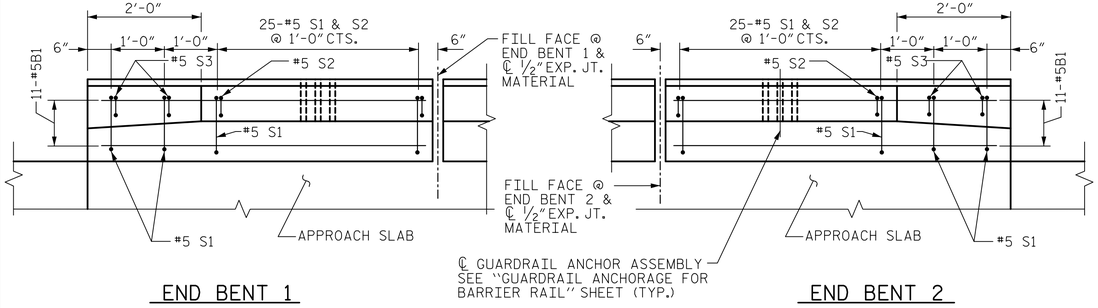
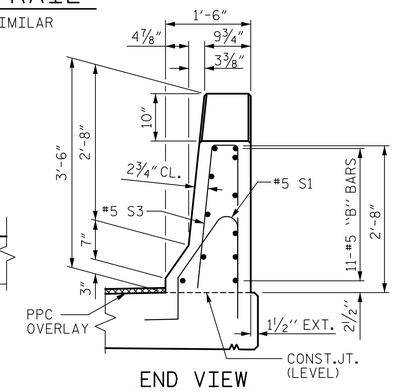


PLAN OF BARRIER RAIL

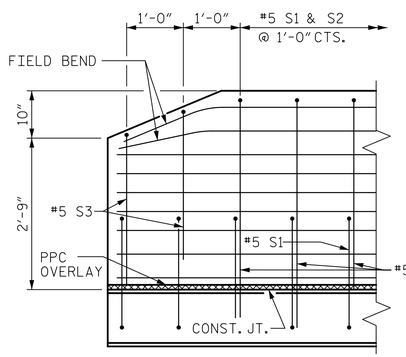
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR



END BENT 1 — END BENT 2

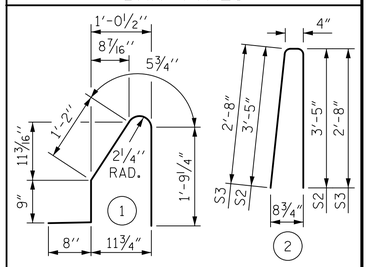


END VIEW



SIDE VIEW

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR CONCRETE BARRIER RAIL ONLY

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✳ B1	44	5	STR	26'-7"	1,220
✳ B2	792	5	STR	25'-2"	20,789
✳ B3	44	5	STR	22'-5"	1,029
✳ B4	44	5	STR	29'-6"	1,354
✳ B5	22	5	STR	22'-9"	522
✳ B6	16	6	STR	12'-0"	288
✳ S1	2208	5	1	4'-10"	11,131
✳ S2	2208	5	2	7'-2"	15,504
✳ S3	8	5	2	5'-8"	47

✳ EPOXY COATED REINFORCING STEEL	52,884 LBS.
ALL-LIGHTWEIGHT CONCRETE	310.5 CU. YDS.
CONCRETE BARRIER RAIL (ALL-LIGHTWEIGHT CONC.)	2,207.5 LIN. FT.

NOTES

THE BARRIER RAIL IN EACH SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

GROOVED CONTRACTION JOINTS, ½" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

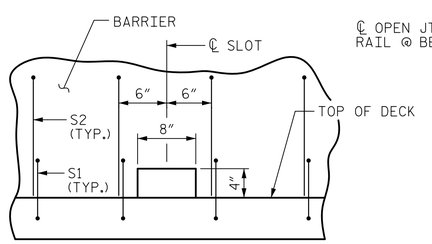
S1 AND S2 BARS IN THE BARRIER SHALL BE SHIFTED SLIGHTLY AS NECESSARY TO PROVIDE 2" MIN CLEARANCE TO ALL OPEN JOINTS IN THE BARRIER.

AT LOCATIONS OF INLET ON APPROACH SLAB, INSTALL #6 B7 BARS AS SHOWN IN THE "SECTION THRU RAIL." BARS SHALL BE CENTERED AROUND INLET.

FOR ALL-LIGHTWEIGHT CONCRETE, SEE SPECIAL PROVISIONS.

PLAN OF BARRIER RAIL ON APPROACH SLAB

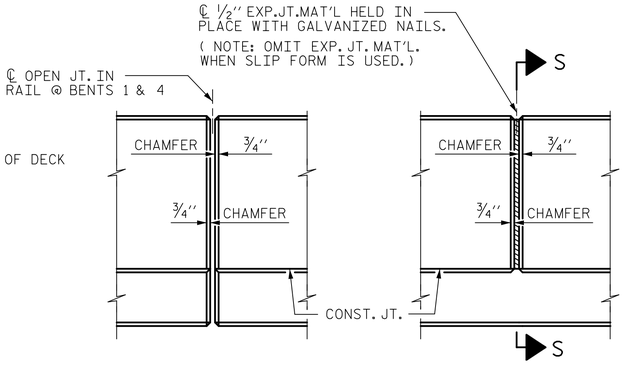
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR



SLOT IN BARRIER

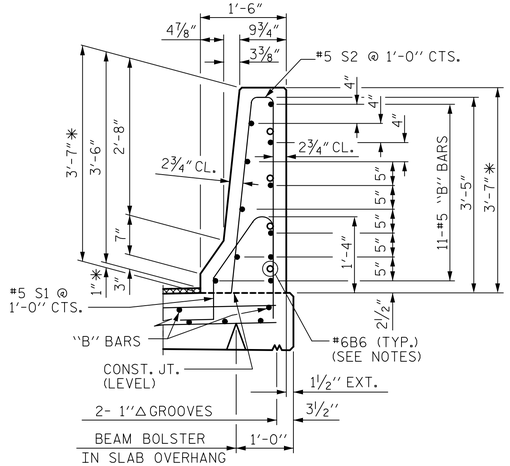
SEE PLAN OF SPANS FOR LOCATIONS.

NOTE: REINFORCEMENT MAY BE SHIFTED TO PROVIDE CLEARANCE TO SLOT



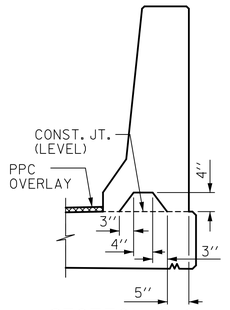
ELEVATION AT EXPANSION JOINTS

END OF RAIL DETAILS



SECTION THRU RAIL

✳ DIMENSION TO TOP OF CONCRETE DECK PRIOR TO PPC OVERLAY



SECTION S-S

AT DAM IN OPEN JOINT (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

BARRIER RAIL DETAILS

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN
2/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

CONCRETE BARRIER RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-100
1			3			TOTAL SHEETS
2			4			129

DRAWN BY :	M. K. TOM	DATE : 1/2019
CHECKED BY :	G. COLS	DATE : 1/2019
DESIGNED BY :	N. BROWN	DATE : 1/2019
DESIGN CHECKED BY :	J. SLOAN	DATE : 1/2019

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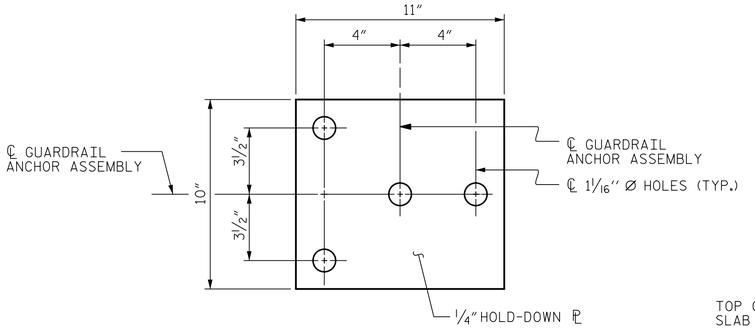
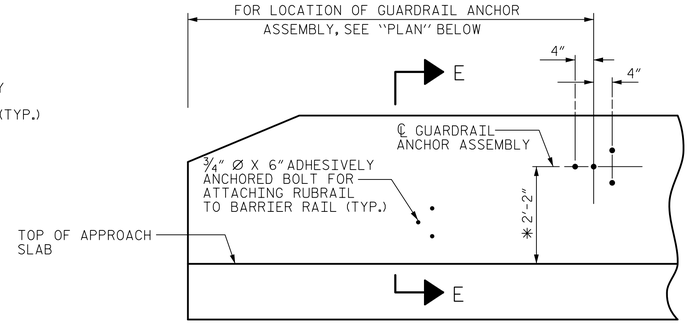
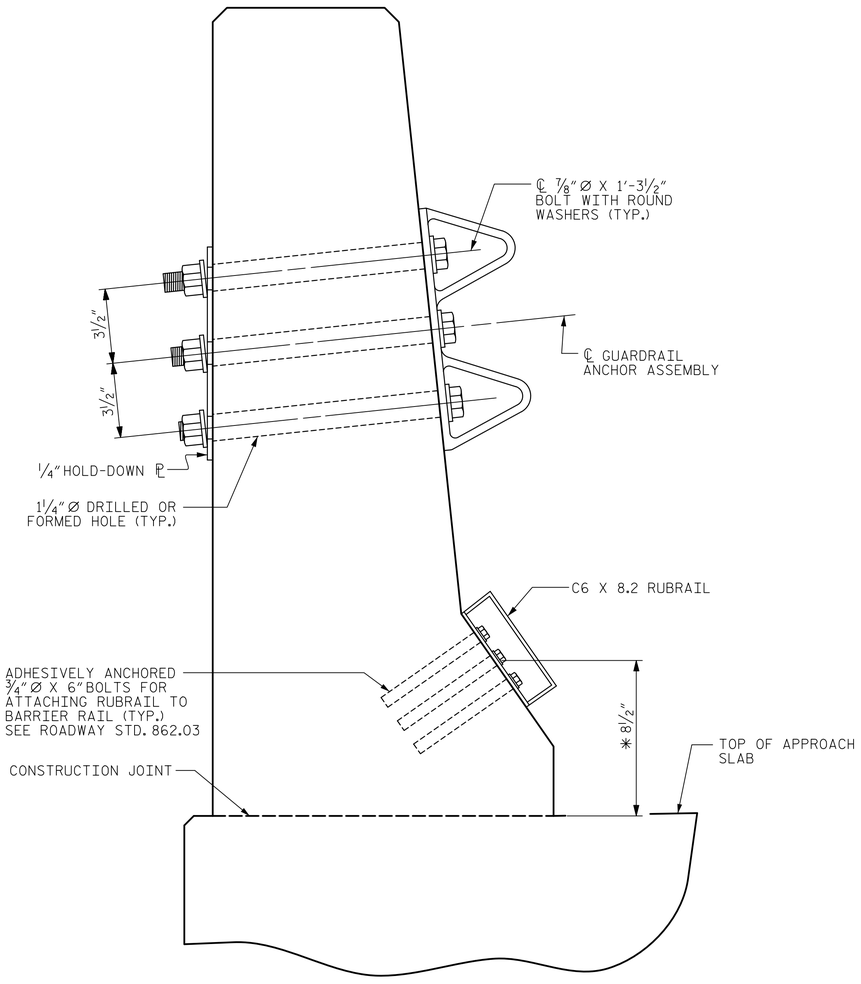


PLAN

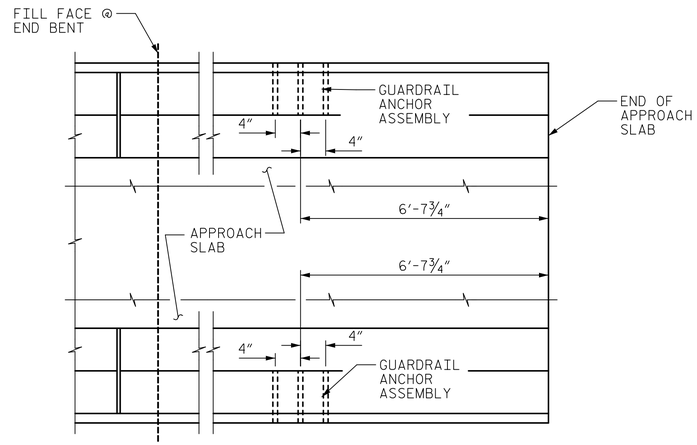


ELEVATION



SECTION E-E

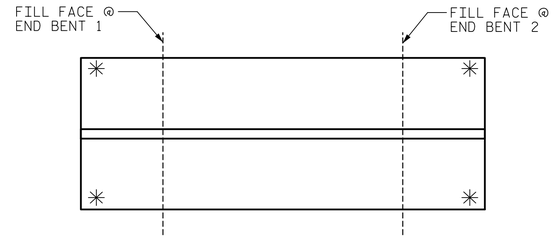
GUARDRAIL ANCHOR ASSEMBLY DETAILS



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT #2 SHOWN, END BENT #1 SIMILAR.



SKETCH SHOWING POINTS OF ATTACHMENTS

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4'' HOLD-DOWN PLATE AND 4 - 7/8'' Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8'' Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE 1 1/4'' Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 3/4″ Ø X 6″ BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 3/4″ Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.

* DIMENSION SHOW TO TOP OF THE APPROACH SLAB PRIOR TO INSTALLATION OF PPC OVERLAY.

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN
1/28/2020

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

GUARDRAIL ANCHORAGE FOR BARRIER RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-101
1			3			TOTAL SHEETS
2			4			129

ASSEMBLED BY : K.M. DONALD	DATE : 1/2019	
CHECKED BY : G.R. COLS	DATE : 1/2019	
DRAWN BY : TLA 5/06	REV. 7/12	MAA/GM
CHECKED BY : GM 5/06	REV. 6/13	MAA/GM
	REV. 12/17	MAA/THC

STD. NO. GRA2

DATE: 2/27/2020
TIME: 4:40:52 PM

USER: Henry.Rosemond
DGN: R:\Structures\04 Drawings\40_IB7_15BPR.20_SMU_GRA.dgn

NOTES:

THE CONCRETE MEDIAN BARRIER IN EACH CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE CONCRETE MEDIAN BARRIER AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN CONCRETE MEDIAN BARRIER EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF CONCRETE BARRIER SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

ALL REINFORCING STEEL IN THE CONCRETE MEDIAN BARRIER SHALL BE EPOXY COATED.

CONCRETE MEDIAN BARRIER RAIL SHALL BE CONSTRUCTED DURING STAGE III.

#5D1 AND #5D2 SHALL BE MACHINE THREADED TO FIT TO COUPLER AND DELIVERED CONNECTED. THREADS SHALL BE GREASED TO PERMIT EASY SEPARATION AFTER INSTALLATION. COUPLERS ARE CONSIDERED INCIDENTAL TO THE COST OF CONCRETE MEDIAN BARRIER.

THE #5D1 COUPLED TO #5D2 SHALL BE PUSHED INTO GREEN CONCRETE AFTER POURING AND SCREEDING THE DECK. THE COUPLER SHALL BE INSTALLED TO BE FLUSH WITH THE TOP OF THE FINISHED CONCRETE DECK. ONCE DECK HAS CURED, #5D2 SHALL BE UNTHREADED AND SET ASIDE. A TEMPORARY BOLT SHALL BE INSTALLED IN THE COUPLER AND SEALED TO PREVENT DEBRIS INTRUSION AND PROTECT THE THREADS. SEE DETAIL "D". WHEN CONSTRUCTING MEDIAN BARRIER, REMOVE SEALER AND TEMPORARY BOLT AND THREAD #5D2 IN TO COUPLER.

THE CONTRACTOR MAY SUBMIT ALTRENATIVE DETAILS FOR ANCHORING THE MEDIAN BARRIER INTO THE DECK TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OF THE DECK. ANY ALTERNATIVE METHODS APPROVED FOR CONSTRUCTION SHALL BE AT NO ADD'L COST TO THE DEPARTMENT.

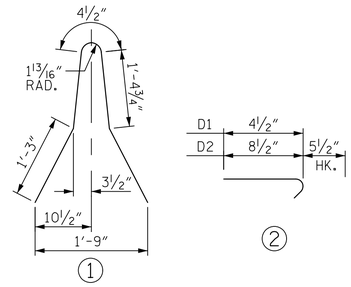
FOR MECHANICAL COUPLERS, SEE SPECIAL PROVISIONS.

S1, D1, AND D2 BARS IN THE BARRIER AND DECK SHALL BE SHIFTED SLIGHTLY, AS NECESSARY, TO PROVIDE 2" MIN. CLEARANCE TO ALL OPEN JOINTS IN THE BARRIER.

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS FOR THE D1, D2, AND COUPLER PRIOR TO FABRICATION TO ENSURE PROPER FIT.

FOR ALL-LIGHTWEIGHT CONCRETE, SEE SPECIAL PROVISIONS.

BAR TYPE

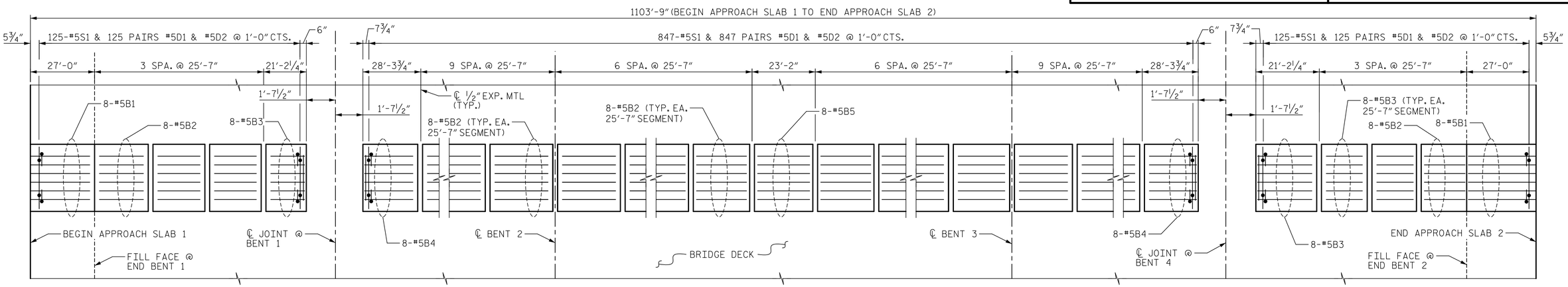


BILL OF MATERIAL

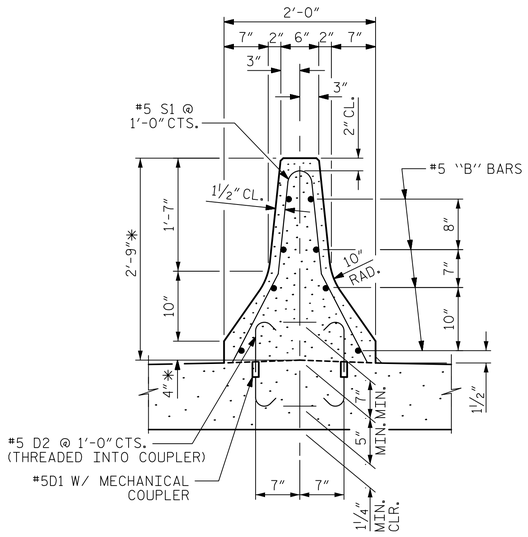
CONCRETE MEDIAN BARRIER

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✳B1	16	5	STR	26'-8"	445
✳B2	288	5	STR	25'-3"	7,585
✳B3	16	5	STR	20'-10"	348
✳B4	16	5	STR	27'-11"	466
✳B5	8	5	STR	22'-10"	191
✳S1	1097	5	1	5'-8"	6,484
✳D1	2194	5	2	10"	1,907
✳D2	2194	5	2	1'-2"	2,670

✳EPOXY COATED REINF. STEEL	20,096 LBS.
ALL-LIGHTWEIGHT CONCRETE	118 CU. YDS.
CONCRETE MEDIAN BARRIER (ALL-LIGHTWEIGHT CONCRETE)	1,097.25 LIN. FT.

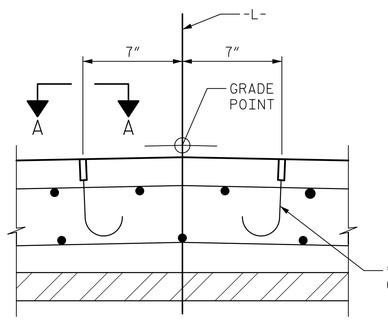


PLAN OF CONCRETE MEDIAN BARRIER



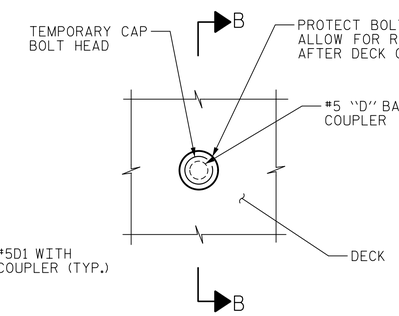
SECTION THRU 2'-9" MEDIAN BARRIER

✳DIMENSION TO TOP OF CONCRETE DECK PRIOR TO PPC OVERLAY

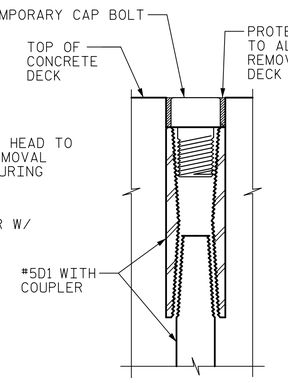


SECTION THRU DECK

SHOWN AFTER BARS PUSHED INTO GREEN CONCRETE AND #5D2 UNTHREADED.



VIEW A-A



SECTION B-B

DETAIL "D"

MEDIAN BARRIER COUPLER NOTES;

1. INSTALL #5 "D" BARS (WITH FEMALE COUPLER END) IN DECK AT LOCATIONS SHOWN ON "CONCRETE MEDIAN BARRIER" SHEET.
2. INSTALL TEMPORARY BOLT INTO COUPLER. BOLT SHALL NOT PROJECT ABOVE THE TOP OF THE DECK.
3. BOLT HEAD SHALL BE PROTECTED TO ALLOW FOR REMOVAL AFTER CURING OF DECK. ENGINEER SHALL APPROVE METHOD.
4. POUR AND SCREED DECK.
5. AT FINAL STAGE, REMOVE BOLT TO INSTALL #5 "D" BAR (WITH THREADED END) FOR MEDIAN BARRIER.

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

DRAWN BY : M. K. TOM DATE : 1/2019
CHECKED BY : G. COLS DATE : 2/2019
DESIGNED BY : G. COLS DATE : 2/2019
DESIGN CHECKED BY : J. SLOAN DATE : 2/2019

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN 2/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

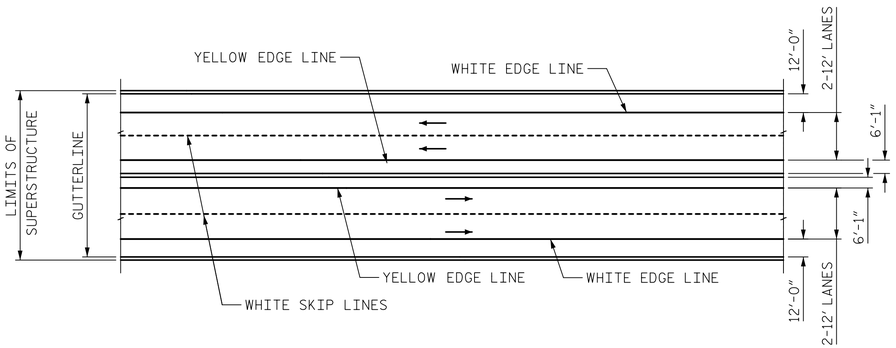
SUPERSTRUCTURE

CONCRETE MEDIAN BARRIER

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-102

TOTAL SHEETS 129



PAVEMENT MARKING ALIGNMENT

SHOWN AT FINAL STAGE. SEE TRANSPORTATION MANAGEMENT PLANS FOR PAVEMENT MARKINGS AT INTERMEDIATE STAGES

NOTES

PROPOSED JOINT SHALL BE WATSON BOWMAN TRANSFLEX REINFORCED ELASTOMERIC MOLDED RUBBER EXPANSION JOINT SYSTEM MODEL 1300 OR APPROVED EQUIVALENT.

ALL BLOCKOUT AND FORMED OPENING DIMENSIONS BASED ON MANUFACTURER-PROVIDED JOINT DETAILS AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

JOINT MATERIALS SHALL BE ORDERED AND SHOP DRAWINGS APPROVED PRIOR TO CONSTRUCTION OF CONCRETE DECK AT THE JOINT.

FINAL JOINT SHALL NOT BE INSTALLED UNTIL PPC OVERLAY IS COMPLETE.

DIFFERENCES IN ACTUAL JOINT OPENINGS AND INSTALLATION TEMPERATURES SHALL BE REPORTED TO THE ENGINEER. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION GUIDELINES AND MAKE ANY NECESSARY ADJUSTMENTS TO ACCOUNT FOR SUCH DIFFERENCES.

CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF THE PROPOSED MOLDED RUBBER SEGMENTAL EXPANSION JOINT.

ADHESIVE ANCHOR BOLTS AND HARDWARE FROM THE PROPOSED EXPANSION JOINT SHALL BE STAINLESS STEEL OR GALVANIZED PER ASTM A153 AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTORS ATTENTION IS BROUGHT TO THE FACT THAT THE ℄ JOINT DOES NOT COINCIDE WITH ℄ BENT OR BENT CONTROL LINE.

FOR MOLDED RUBBER SEGMENTAL EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

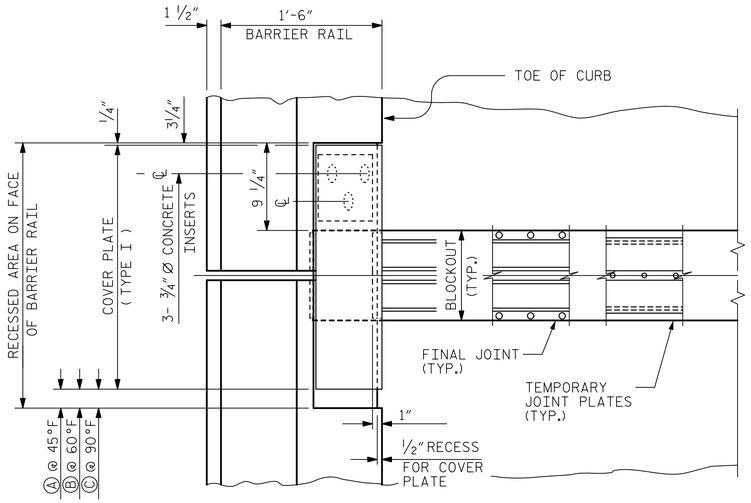
THE STEEL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 OR APPROVED EQUAL AND BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. AT THE CONTRACTOR'S OPTION, THE PLATES MAY BE METALLIZED AFTER FABRICATION. SEE SPECIAL PROVISIONS FOR THERMAL SPRAYED COATINGS (METALLIZATION).

THE ¾'' Ø HEX HEAD BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL.

THE ¾'' CONCRETE INSERTS SHALL BE CLOSED-END FERRULES WITH LOOPED WIRE STRUTS ATTACHED TO THEM. THE INSERTS SHALL CONFORM TO AASHTO M169, GRADE 12L14 AND SHALL HAVE A TENSILE WORKING LOAD CAPACITY OF 3000 LBS.

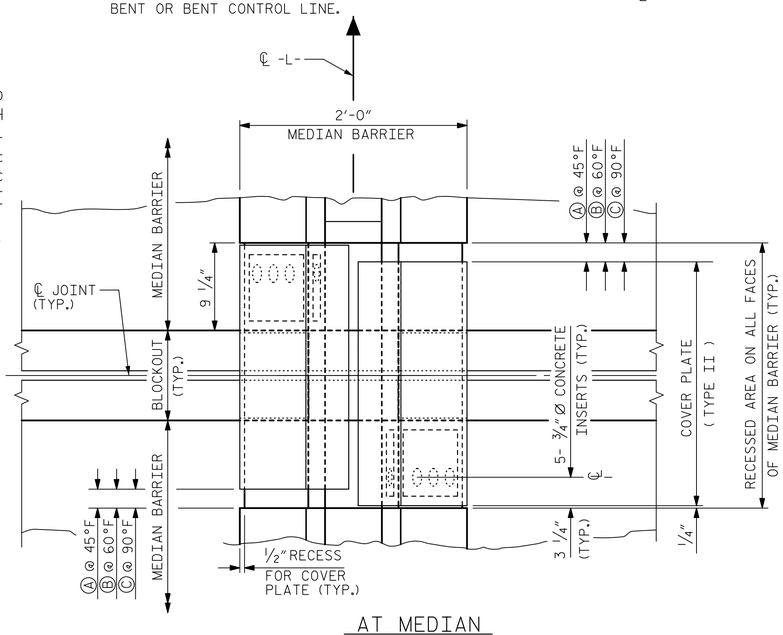
NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ''MOLDED RUBBER SEGMENTAL EXPANSION JOINT SEALS''.

BARRIER COVER PLATES SHALL BE INSTALLED PRIOR TO TRAFFIC ADJACENT TO THAT FACE OF BARRIER.



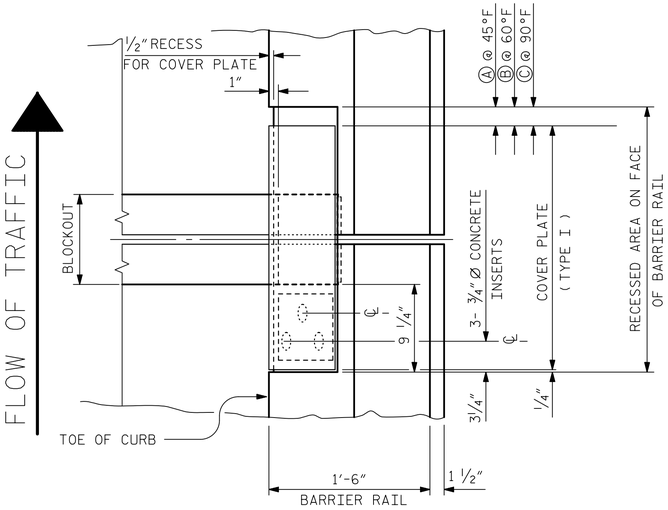
AT LEFT SIDE

FLOW OF TRAFFIC



AT MEDIAN

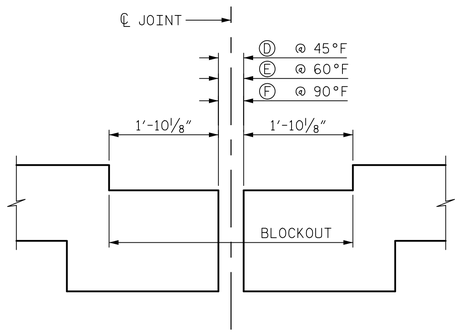
FLOW OF TRAFFIC



AT RIGHT SIDE

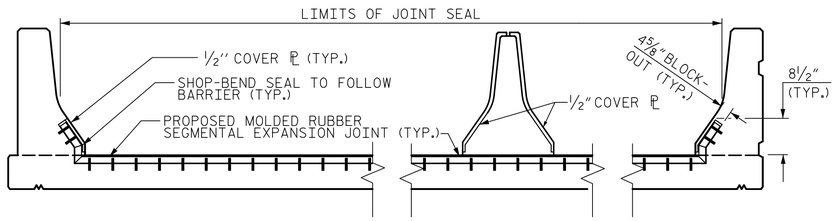
PLAN OF EXPANSION JOINT AT BENTS 1 AND 4

MOVEMENT AND SETTING AT JOINT								
BENT NO.	SKEW ANGLE	TOTAL MOVEMENT (ALONG ℄ RDWY)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ
1	90°-00'-00"	3½"	3¼"	2¾"	1¾"	3¾"	3¼"	2¼"
4	90°-00'-00"	3 3/16"	3⅛"	2⅝"	1 11/16"	3⅝"	3⅛"	2 3/16"



SECTION THRU SLAB

NORMAL TO JOINT



SKETCH SHOWING LIMITS OF JOINT SEAL AT BARRIER RAIL

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

SHEET 1 OF 2

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN 2/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

MOLDED RUBBER SEGMENTAL EXPANSION JOINT SEAL DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-103
1			3			TOTAL SHEETS
2			4			129

DRAWN BY :	K.M. DONALD	DATE :	01/2019
CHECKED BY :	G.R. COLS	DATE :	02/2019
DESIGNED BY :	G.R. COLS	DATE :	02/2019
DESIGN CHECKED BY :	K.M. DONALD	DATE :	02/2019

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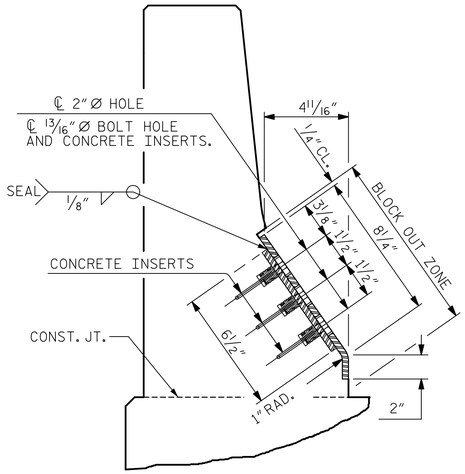
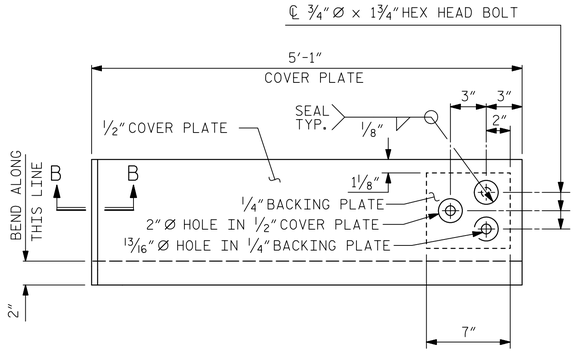
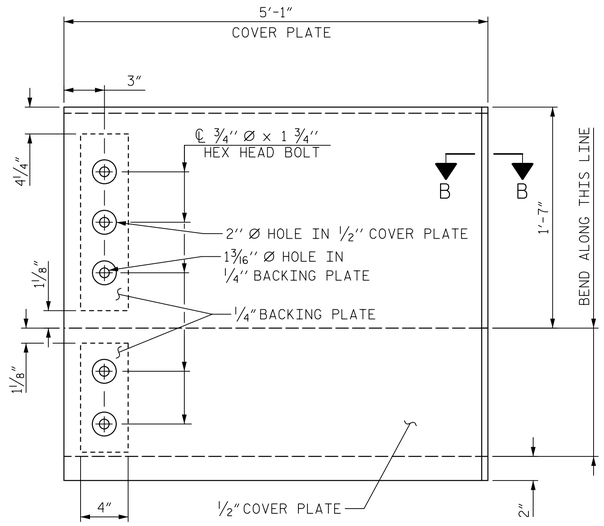


SECTION THRU BARRIER RAIL NORMAL TO JOINT



TYPE I - ELEVATION VIEW

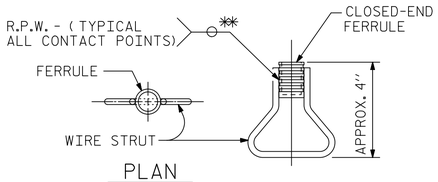


TYPE II - ELEVATION VIEW

COVER PLATE DETAILS

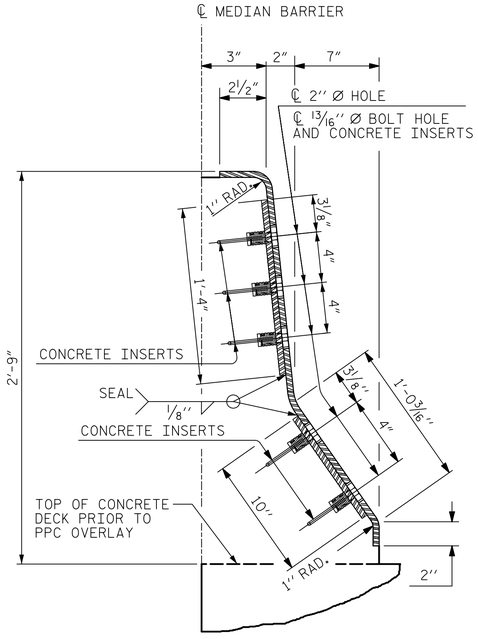
NOTES:

FOR NOTES, SEE SHEET 1.



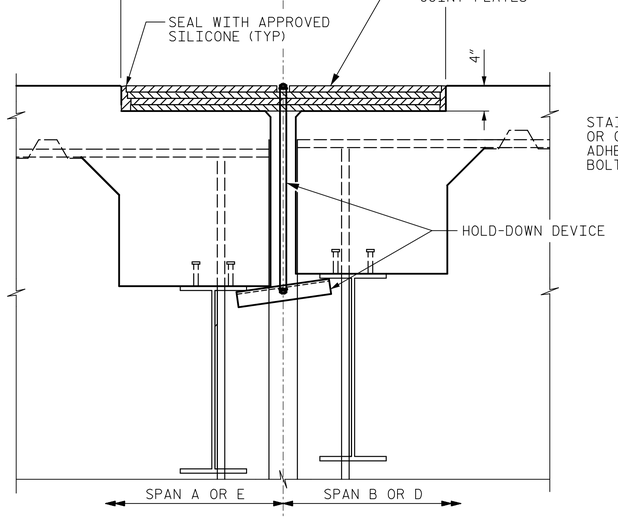
CONCRETE INSERT

** EACH WELDED ATTACHMENT OF WIRE TO FERRULE SHALL DEVELOP THE TENSILE STRENGTH OF THE WIRE.



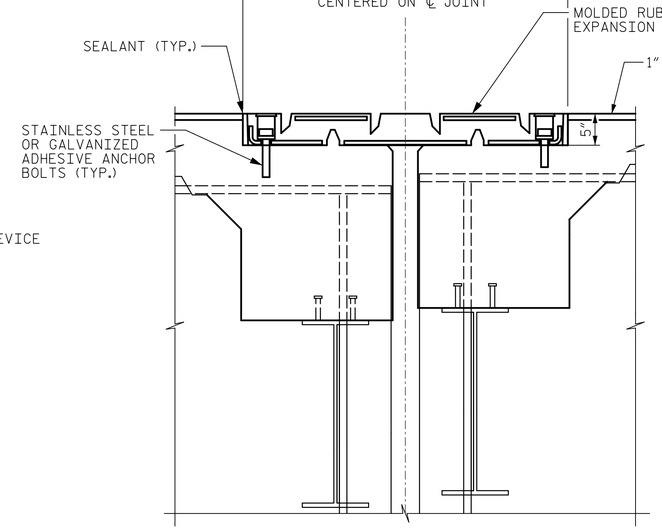
SECTION THRU MEDIAN BARRIER NORMAL TO JOINT

TRAFFIC FACE OF COVER PLATE SHALL GENERALLY FOLLOW MEDIAN BARRIER DIMENSIONS.

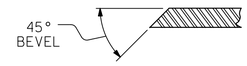


SECTION THRU TEMPORARY JOINT

SCHEMATIC FOR REPRESENTATION ONLY. CONTRACTOR SHALL DESIGN JOINT PLATES AND HOLD DOWN DEVICE.



SECTION THRU FINAL JOINT



SECTION B-B

JOINT CONSTRUCTION SEQUENCE

1. CONSTRUCT DECK AND END DIAPHRAGM PER PLANS OR AS ADJUSTED FOR APPROVED JOINT TYPE.
2. INSTALL TEMPORARY JOINT AND BARRIER COVER PLATES. SEE SPECIAL PROVISIONS.
3. AFTER PPC OVERLAY IS COMPLETE IN THAT STAGE, REMOVE TEMPORARY JOINT PLATES. INSTALL MOLDED RUBBER SEGMENTAL EXPANSION JOINT PER MANUFACTURER'S SPECIFICATION. REINSTALL BARRIER COVER PLATES PRIOR TO TRAFFIC IN ADJACENT LANE.

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

SHEET 2 OF 2

DRAWN BY :	K.M. DONALD — DATE : 01/2019
CHECKED BY :	G.R. COLS — DATE : 01/2019
DESIGNED BY :	G.R. COLS — DATE : 01/2019
DESIGN CHECKED BY :	K.M. DONALD — DATE : 01/2019

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

MOLDED RUBBER SEGMENTAL EXPANSION JOINT SEAL DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-104
1			3			TOTAL SHEETS
2			4			129

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

	GIRDER #1 AND #4													
	SPAN A & SPAN E													
TENTH POINTS	(A1) (E1)	0.08L	0.17L	(A2) (E2)	0.33L	0.42L	(A3) (E3)	0.58L	0.67L	(A4) (E4)	0.83L	0.92L	(A5) (E5)
ORIGINAL CAMBER ↑	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEFLECTION DUE TO WEIGHT OF TOTAL STEEL ↓	0.000	0.021	0.040	0.056	0.068	0.076	0.078	0.076	0.068	0.056	0.040	0.021	0.000
DEFLECTION DUE TO WEIGHT OF SLAB AND RAIL ↓	0.000	0.060	0.116	0.163	0.198	0.221	0.230	0.221	0.198	0.163	0.116	0.060	0.000
DEFLECTION DUE TO PPC ↓	0.000	0.004	0.014	0.024	0.030	0.034	0.036	0.035	0.033	0.028	0.021	0.011	0.000
TOTAL DEAD LOAD DEFLECTION ↓	0.00	0.08	0.17	0.24	0.30	0.33	0.34	0.33	0.30	0.25	0.18	0.09	0.00

	GIRDER #2 AND #3													
	SPAN A & SPAN E													
TENTH POINTS	(A1) (E1)	0.08L	0.17L	(A2) (E2)	0.33L	0.42L	(A3) (E3)	0.58L	0.67L	(A4) (E4)	0.83L	0.92L	(A5) (E5)
ORIGINAL CAMBER ↑	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEFLECTION DUE TO WEIGHT OF TOTAL STEEL ↓	0.000	0.027	0.051	0.072	0.088	0.098	0.102	0.098	0.088	0.072	0.051	0.027	0.000
DEFLECTION DUE TO WEIGHT OF SLAB AND RAIL ↓	0.000	0.083	0.157	0.220	0.268	0.300	0.312	0.300	0.268	0.219	0.156	0.082	0.000
DEFLECTION DUE TO PPC ↓	0.000	0.004	0.014	0.022	0.028	0.032	0.033	0.033	0.031	0.025	0.019	0.010	0.000
TOTAL DEAD LOAD DEFLECTION ↓	0.00	0.11	0.22	0.31	0.38	0.43	0.45	0.43	0.39	0.32	0.23	0.12	0.00

NOTES:

(##) REPRESENTS CROSSFRAME POINT. SEE FRAMING PLAN SHEETS.

ALL VALUES ARE SHOWN IN INCHES (DECIMAL FORM).

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

SHEET 1 OF 5

AECOM
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN 2/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

DEAD LOAD DEFLECTION TABLES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-105
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 02/2019
CHECKED BY : J. SLOAN DATE : 02/2019
DESIGNED BY : N. BROWN/D. RITACCO DATE : 02/2019
DESIGN CHECKED BY : J. LIU DATE : 02/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: 2/27/2020
TIME: 4:40:26 PM

USER: Henry.Rosemond
DGN: R:\Structures\04 Drawings\40_105_15BPR.20_S40_DU.dgn

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #1

SPAN B

		①	0.03L	0.06L	②	0.12L	0.15L	③	0.21L	0.24L	④	0.30L	0.33L	⑤	0.39L	0.42L	⑥	0.48L	0.52L	⑦	0.58L	0.61L	⑧	0.67L	0.70L	⑨	0.76L	0.79L	⑩	0.85L	0.88L	⑪	0.94L	0.97L	⑫
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.004	0.026	0.048	0.070	0.091	0.111	0.129	0.145	0.159	0.170	0.180	0.187	0.192	0.195	0.195	0.194	0.189	0.183	0.174	0.164	0.152	0.138	0.124	0.109	0.093	0.078	0.063	0.049	0.037	0.026	0.018	0.011	0.007	0.006
B	DEFLECTION DUE TO NEW STEEL ↓	-0.031	-0.022	-0.014	-0.005	0.002	0.010	0.017	0.023	0.029	0.034	0.038	0.041	0.044	0.046	0.047	0.047	0.047	0.046	0.044	0.042	0.039	0.035	0.032	0.028	0.024	0.020	0.016	0.013	0.010	0.007	0.005	0.004	0.003	0.003
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	-0.010	0.023	0.055	0.087	0.116	0.144	0.170	0.193	0.213	0.231	0.244	0.254	0.260	0.263	0.262	0.258	0.249	0.238	0.225	0.208	0.189	0.170	0.148	0.126	0.105	0.084	0.065	0.049	0.035	0.024	0.016	0.012	0.010	0.012
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	0.011	0.016	0.023	0.029	0.036	0.042	0.049	0.054	0.060	0.065	0.069	0.072	0.075	0.077	0.078	0.078	0.077	0.076	0.074	0.070	0.066	0.062	0.057	0.051	0.045	0.039	0.032	0.027	0.021	0.016	0.011	0.007	0.004	0.002
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	-0.020	-0.032	-0.045	-0.058	-0.070	-0.082	-0.093	-0.103	-0.112	-0.120	-0.126	-0.131	-0.135	-0.136	-0.137	-0.136	-0.133	-0.129	-0.123	-0.116	-0.108	-0.099	-0.089	-0.078	-0.068	-0.057	-0.047	-0.037	-0.028	-0.020	-0.014	-0.009	-0.005	-0.003
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.031	-0.253	-0.473	-0.686	-0.887	-1.076	-1.249	-1.403	-1.537	-1.650	-1.740	-1.809	-1.855	-1.876	-1.875	-1.853	-1.808	-1.743	-1.660	-1.558	-1.441	-1.312	-1.173	-1.029	-0.883	-0.738	-0.601	-0.474	-0.359	-0.259	-0.178	-0.115	-0.072	-0.057
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.035	0.262	0.486	0.703	0.910	1.104	1.282	1.441	1.582	1.703	1.800	1.876	1.930	1.958	1.964	1.948	1.908	1.848	1.768	1.668	1.550	1.417	1.274	1.121	0.966	0.816	0.672	0.538	0.416	0.307	0.215	0.140	0.082	0.049
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.017	0.072	0.128	0.181	0.232	0.280	0.324	0.364	0.399	0.428	0.453	0.472	0.485	0.492	0.493	0.489	0.479	0.465	0.445	0.421	0.393	0.361	0.327	0.290	0.254	0.217	0.181	0.147	0.116	0.087	0.062	0.043	0.029	0.022
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	-0.026	0.092	0.209	0.321	0.431	0.534	0.628	0.715	0.793	0.861	0.917	0.963	0.997	1.018	1.027	1.025	1.010	0.983	0.947	0.899	0.840	0.772	0.698	0.618	0.536	0.458	0.383	0.312	0.247	0.188	0.136	0.093	0.058	0.034

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #1

SPAN C

		⑫	0.02L	0.05L	⑬	0.10L	0.12L	⑭	0.17L	0.19L	⑮	0.24L	0.26L	⑯	0.31L	0.33L	⑰	0.38L	0.40L	⑱	0.45L	0.48L	⑲	0.52L	0.55L	⑳	0.60L	0.62L	㉑	0.67L	0.69L	㉒	0.74L	0.76L	㉓	0.81L	0.83L	㉔	0.88L	0.90L	㉕	0.95L	0.98L	㉖
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.006	0.010	0.017	0.027	0.038	0.052	0.068	0.085	0.103	0.122	0.141	0.160	0.178	0.195	0.211	0.225	0.238	0.249	0.257	0.263	0.267	0.268	0.267	0.263	0.257	0.249	0.238	0.225	0.211	0.195	0.178	0.160	0.141	0.122	0.103	0.085	0.068	0.052	0.038	0.027	0.017	0.010	0.006
B	DEFLECTION DUE TO NEW STEEL ↓	0.003	0.004	0.006	0.009	0.013	0.017	0.022	0.027	0.032	0.038	0.044	0.050	0.056	0.061	0.066	0.071	0.075	0.078	0.081	0.083	0.084	0.085	0.084	0.083	0.081	0.078	0.075	0.071	0.067	0.062	0.056	0.050	0.045	0.039	0.033	0.027	0.022	0.017	0.013	0.010	0.007	0.004	0.003
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.012	0.020	0.031	0.046	0.063	0.083	0.107	0.132	0.160	0.190	0.220	0.250	0.280	0.308	0.334	0.359	0.379	0.397	0.412	0.422	0.429	0.432	0.429	0.423	0.414	0.400	0.382	0.362	0.338	0.311	0.284	0.254	0.223	0.193	0.163	0.135	0.109	0.085	0.064	0.046	0.031	0.020	0.011
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	0.002	0.003	0.005	0.009	0.013	0.018	0.024	0.030	0.037	0.045	0.052	0.059	0.066	0.073	0.079	0.084	0.089	0.092	0.096	0.098	0.099	0.100	0.099	0.098	0.096	0.093	0.089	0.084	0.079	0.073	0.067	0.059	0.052	0.045	0.037	0.030	0.024	0.018	0.013	0.009	0.005	0.003	0.002
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	-0.003	-0.005	-0.009	-0.014	-0.020	-0.027	-0.036	-0.045	-0.056	-0.067	-0.078	-0.089	-0.100	-0.110	-0.120	-0.129	-0.136	-0.143	-0.148	-0.151	-0.153	-0.155	-0.153	-0.151	-0.148	-0.142	-0.136	-0.129	-0.120	-0.110	-0.100	-0.089	-0.077	-0.066	-0.055	-0.045	-0.035	-0.027	-0.019	-0.013	-0.008	-0.005	-0.003
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.057	-0.094	-0.158	-0.243	-0.344	-0.463	-0.598	-0.745	-0.904	-1.069	-1.237	-1.403	-1.565	-1.717	-1.859	-1.987	-2.098	-2.191	-2.267	-2.320	-2.353	-2.364	-2.353	-2.320	-2.267	-2.192	-2.098	-1.987	-1.859	-1.717	-1.565	-1.404	-1.237	-1.070	-0.904	-0.745	-0.598	-0.463	-0.344	-0.242	-0.158	-0.093	-0.055
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.049	0.064	0.102	0.159	0.231	0.319	0.421	0.535	0.659	0.788	0.921	1.052	1.179	1.301	1.413	1.514	1.601	1.675	1.733	1.774	1.798	1.805	1.793	1.764	1.718	1.655	1.579	1.489	1.387	1.274	1.153	1.027	0.899	0.771	0.645	0.523	0.411	0.312	0.225	0.155	0.099	0.061	0.047
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.022	0.036	0.057	0.084	0.115	0.151	0.191	0.235	0.281	0.329	0.377	0.423	0.467	0.509	0.547	0.581	0.610	0.634	0.652	0.664	0.671	0.672	0.668	0.659	0.644	0.624	0.600	0.570	0.537	0.499	0.458	0.415	0.370	0.324	0.278	0.233	0.190	0.151	0.115	0.084	0.057	0.035	0.022
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.034	0.038	0.053	0.077	0.110	0.151	0.199	0.253	0.314	0.375	0.439	0.502	0.561	0.619	0.671	0.718	0.758	0.791	0.817	0.833	0.841	0.842	0.834	0.818	0.796	0.765	0.728	0.686	0.639	0.587	0.531	0.474	0.416	0.357	0.300	0.243	0.190	0.145	0.106	0.074	0.050	0.036	0.033

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #1

SPAN D

		㉖	0.03L	0.06L	㉗	0.12L	0.15L	㉘	0.21L	0.24L	㉙	0.30L	0.33L	㉚	0.39L	0.42L	㉛	0.48L	0.52L	㉜	0.58L	0.61L	㉝	0.67L	0.70L	㉞	0.76L	0.79L	㉟	0.85L	0.88L	㊱	0.94L	0.97L	㊲
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.006	0.007	0.011	0.017	0.026	0.036	0.049	0.062	0.077	0.093	0.108	0.123	0.138	0.151	0.163	0.174	0.182	0.189	0.193	0.195	0.194	0.192	0.187	0.179	0.170	0.158	0.144	0.128	0.110	0.091	0.070	0.048	0.026	0.003
B	DEFLECTION DUE TO NEW STEEL ↓	0.003	0.003	0.004	0.005	0.007	0.010	0.013	0.016	0.020	0.024	0.028	0.032	0.036	0.040	0.043	0.046	0.048	0.049	0.050	0.050	0.049	0.047	0.045	0.042	0.038	0.033	0.027	0.021	0.015	0.007	0.000	-0.008	-0.017	-0.025
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.011	0.009	0.011	0.015	0.023	0.034	0.048	0.064	0.082	0.103	0.124	0.146	0.168	0.187	0.206	0.223	0.236	0.247	0.256	0.260	0.261	0.259	0.252	0.242	0.229	0.212	0.192	0.169	0.143	0.115	0.086	0.054	0.022	-0.012
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	0.002	0.004	0.007	0.011	0.016	0.021	0.027	0.032	0.039	0.045	0.051	0.057	0.062	0.066	0.070	0.074	0.076	0.077	0.078	0.077	0.076	0.075	0.072	0.068	0.064	0.059	0.054	0.048	0.042	0.036	0.029	0.023	0.016	0.011
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	-0.003	-0.005	-0.009	-0.014	-0.021	-0.028	-0.037	-0.047	-0.057	-0.068	-0.079	-0.089	-0.099	-0.108	-0.116	-0.123	-0.129	-0.133	-0.136	-0.137	-0.136	-0.135	-0.131	-0.126	-0.120	-0.111	-0.102	-0.093	-0.081	-0.070	-0.057	-0.045	-0.032	-0.020
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.055	-0.070	-0.113	-0.175	-0.255	-0.355	-0.470	-0.596	-0.733	-0.877	-1.023	-1.167	-1.305	-1.433	-1.550	-1.651	-1.734	-1.799	-1.844	-1.866	-1.867	-1.845	-1.799	-1.731	-1.641	-1.528	-1.395	-1.242	-1.069	-0.881	-0.681	-0.469	-0.249	-0.030
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.047	0.082	0.140	0.216	0.308	0.417	0.540	0.674	0.818	0.968	1.123	1.275	1.419	1.551	1.668	1.768	1.847	1.907	1.947	1.962	1.956	1.927	1.873	1.797	1.700	1.578	1.437	1.278	1.100	0.907	0.700	0.484	0.260	0.034
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.022	0.026	0.039	0.057	0.081	0.108	0.139	0.172	0.207	0.243	0.279	0.314	0.347	0.377	0.405	0.427	0.446	0.460	0.469	0.473	0.472	0.465	0.453	0.436	0.412	0.384	0.350	0.312	0.270	0.224	0.174	0.122	0.069	0.015
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.033	0.056	0.090	0.133	0.184	0.243	0.307	0.378	0.453	0.531	0.613	0.692	0.765	0.832	0.889	0.936	0.972	0.998	1.013	1.014	1.005	0.985	0.952	0.907	0.852	0.785	0.708	0.623	0.530	0.429	0.320	0.209	0.094	-0.022

NOTES:

(##) REPRESENTS CROSSFRAME POINT. SEE FRAMING PLAN SHEETS.

ALL VALUES ARE SHOWN IN INCHES (DECIMAL FORM).

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN 2/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

DEAD LOAD DEFLECTION TABLES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-106
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 02/2019
CHECKED BY : J. SLOAN DATE : 02/2019
DESIGNED BY : N. BROWN/D. RITACCO DATE : 02/2019
DESIGN CHECKED BY : J. LIU DATE : 02/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: 2/27/2020
TIME: 4:50:44 PM

USER: HenryRosemond
DGN: R:\Structures\04_Drawings\40_SPI_15BPR.20_SMU_DLD.dgn

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #2

SPAN B

		①	0.03L	0.06L	②	0.12L	0.15L	③	0.21L	0.24L	④	0.30L	0.33L	⑤	0.39L	0.42L	⑥	0.48L	0.52L	⑦	0.58L	0.61L	⑧	0.67L	0.70L	⑨	0.76L	0.79L	⑩	0.85L	0.88L	⑪	0.94L	0.97L	⑫
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.004	0.026	0.048	0.070	0.091	0.111	0.129	0.145	0.159	0.170	0.180	0.187	0.192	0.195	0.195	0.194	0.189	0.183	0.174	0.164	0.152	0.138	0.124	0.109	0.093	0.078	0.063	0.049	0.037	0.026	0.018	0.011	0.007	0.006
B	DEFLECTION DUE TO NEW STEEL ↓	0.036	0.067	0.098	0.129	0.157	0.185	0.210	0.232	0.251	0.268	0.281	0.291	0.298	0.301	0.301	0.298	0.291	0.281	0.269	0.253	0.235	0.216	0.194	0.171	0.149	0.125	0.102	0.082	0.062	0.045	0.032	0.020	0.013	0.010
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.030	0.149	0.271	0.390	0.502	0.608	0.708	0.794	0.870	0.937	0.990	1.031	1.062	1.077	1.081	1.074	1.053	1.021	0.980	0.926	0.863	0.794	0.717	0.636	0.554	0.468	0.386	0.310	0.239	0.176	0.125	0.080	0.049	0.036
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.011	-0.037	-0.063	-0.088	-0.113	-0.137	-0.160	-0.180	-0.198	-0.215	-0.227	-0.237	-0.245	-0.248	-0.249	-0.247	-0.241	-0.233	-0.222	-0.208	-0.192	-0.175	-0.155	-0.135	-0.115	-0.095	-0.076	-0.058	-0.043	-0.029	-0.019	-0.011	-0.007	-0.006
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.018	0.042	0.066	0.090	0.114	0.136	0.157	0.176	0.193	0.208	0.219	0.228	0.235	0.237	0.237	0.234	0.228	0.219	0.208	0.194	0.178	0.161	0.143	0.124	0.105	0.086	0.069	0.053	0.039	0.027	0.017	0.010	0.005	0.003
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.015	-0.152	-0.290	-0.424	-0.552	-0.672	-0.783	-0.882	-0.969	-1.044	-1.104	-1.151	-1.184	-1.203	-1.208	-1.200	-1.177	-1.142	-1.094	-1.036	-0.967	-0.889	-0.804	-0.714	-0.622	-0.528	-0.438	-0.353	-0.274	-0.205	-0.147	-0.099	-0.065	-0.051
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.001	0.144	0.287	0.426	0.555	0.678	0.790	0.891	0.979	1.054	1.114	1.161	1.193	1.210	1.214	1.204	1.179	1.143	1.094	1.033	0.963	0.886	0.800	0.710	0.619	0.526	0.437	0.354	0.276	0.206	0.148	0.098	0.061	0.040
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.002	0.041	0.081	0.119	0.156	0.190	0.222	0.250	0.275	0.296	0.314	0.328	0.338	0.343	0.344	0.342	0.336	0.326	0.314	0.297	0.277	0.255	0.231	0.205	0.179	0.152	0.126	0.103	0.080	0.060	0.044	0.030	0.021	0.018
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.065	0.280	0.498	0.712	0.910	1.098	1.273	1.424	1.559	1.675	1.766	1.837	1.889	1.912	1.915	1.899	1.857	1.798	1.723	1.623	1.510	1.387	1.248	1.106	0.962	0.812	0.669	0.540	0.415	0.307	0.218	0.140	0.084	0.056

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #2

SPAN C

		⑫	0.02L	0.05L	⑬	0.10L	0.12L	⑭	0.17L	0.19L	⑮	0.24L	0.26L	⑯	0.31L	0.33L	⑰	0.38L	0.40L	⑱	0.45L	0.48L	⑲	0.52L	0.55L	⑳	0.60L	0.62L	㉑	0.67L	0.69L	㉒	0.74L	0.76L	㉓	0.81L	0.83L	㉔	0.88L	0.90L	㉕	0.95L	0.98L	㉖
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.006	0.010	0.017	0.027	0.038	0.052	0.068	0.085	0.103	0.122	0.141	0.160	0.178	0.195	0.211	0.225	0.238	0.249	0.257	0.263	0.267	0.268	0.267	0.263	0.257	0.249	0.238	0.225	0.211	0.195	0.178	0.160	0.141	0.122	0.103	0.085	0.068	0.052	0.038	0.027	0.017	0.010	0.006
B	DEFLECTION DUE TO NEW STEEL ↓	0.010	0.017	0.030	0.046	0.063	0.085	0.108	0.133	0.160	0.189	0.216	0.243	0.270	0.294	0.317	0.338	0.355	0.369	0.381	0.389	0.394	0.396	0.394	0.389	0.381	0.369	0.354	0.337	0.316	0.294	0.269	0.243	0.216	0.188	0.160	0.133	0.108	0.084	0.063	0.045	0.029	0.017	0.010
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.036	0.060	0.102	0.158	0.219	0.293	0.376	0.464	0.559	0.658	0.754	0.849	0.942	1.027	1.107	1.179	1.239	1.290	1.331	1.359	1.376	1.383	1.376	1.357	1.329	1.287	1.235	1.175	1.102	1.023	0.937	0.844	0.749	0.653	0.555	0.460	0.373	0.290	0.218	0.156	0.101	0.059	0.036
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.006	-0.013	-0.024	-0.038	-0.055	-0.075	-0.097	-0.122	-0.149	-0.177	-0.205	-0.233	-0.261	-0.286	-0.310	-0.333	-0.351	-0.367	-0.380	-0.389	-0.394	-0.397	-0.394	-0.389	-0.380	-0.367	-0.352	-0.334	-0.311	-0.287	-0.262	-0.234	-0.206	-0.178	-0.150	-0.123	-0.098	-0.075	-0.055	-0.038	-0.024	-0.013	-0.006
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.003	0.006	0.012	0.020	0.030	0.043	0.058	0.075	0.094	0.114	0.135	0.155	0.176	0.196	0.214	0.231	0.245	0.258	0.268	0.275	0.279	0.281	0.279	0.275	0.268	0.258	0.245	0.231	0.214	0.196	0.176	0.155	0.135	0.114	0.094	0.075	0.058	0.043	0.030	0.020	0.012	0.006	0.003
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.051	-0.077	-0.123	-0.184	-0.255	-0.337	-0.430	-0.531	-0.639	-0.749	-0.861	-0.970	-1.075	-1.174	-1.265	-1.347	-1.418	-1.478	-1.525	-1.559	-1.579	-1.586	-1.579	-1.559	-1.526	-1.478	-1.419	-1.348	-1.266	-1.175	-1.076	-0.971	-0.861	-0.750	-0.639	-0.531	-0.431	-0.337	-0.254	-0.183	-0.122	-0.076	-0.050
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.040	0.051	0.079	0.120	0.170	0.230	0.300	0.377	0.461	0.550	0.640	0.730	0.818	0.900	0.977	1.046	1.106	1.157	1.198	1.227	1.244	1.250	1.243	1.225	1.195	1.154	1.102	1.041	0.971	0.894	0.811	0.723	0.633	0.544	0.455	0.372	0.296	0.226	0.166	0.117	0.077	0.050	0.038
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.018	0.027	0.043	0.062	0.084	0.109	0.138	0.168	0.200	0.233	0.266	0.298	0.329	0.358	0.384	0.409	0.429	0.446	0.459	0.469	0.475	0.477	0.475	0.469	0.459	0.446	0.429	0.409	0.385	0.358	0.330	0.299	0.266	0.233	0.200	0.168	0.138	0.109	0.084	0.062	0.042	0.027	0.018
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.056	0.082	0.136	0.211	0.295	0.399	0.520	0.648	0.790	0.940	1.086	1.232	1.377	1.509	1.634	1.749	1.843	1.924	1.990	2.034	2.062	2.074	2.060	2.030	1.984	1.916	1.834	1.738	1.622	1.497	1.364	1.220	1.073	0.927	0.779	0.638	0.511	0.392	0.290	0.206	0.132	0.080	0.054

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #2

SPAN D

		㉖	0.03L	0.06L	㉗	0.12L	0.15L	㉘	0.21L	0.24L	㉙	0.30L	0.33L	㉚	0.39L	0.42L	㉛	0.48L	0.52L	㉜	0.58L	0.61L	㉝	0.67L	0.70L	㉞	0.76L	0.79L	㉟	0.85L	0.88L	㊱	0.94L	0.97L	㊲
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.006	0.007	0.011	0.017	0.026	0.036	0.049	0.062	0.077	0.093	0.108	0.123	0.138	0.151	0.163	0.174	0.182	0.189	0.193	0.195	0.194	0.192	0.187	0.179	0.170	0.158	0.144	0.128	0.110	0.091	0.070	0.048	0.026	0.003
B	DEFLECTION DUE TO NEW STEEL ↓	0.010	0.012	0.020	0.032	0.045	0.062	0.081	0.102	0.124	0.147	0.170	0.192	0.214	0.233	0.251	0.267	0.278	0.288	0.294	0.297	0.297	0.294	0.287	0.277	0.264	0.247	0.227	0.205	0.179	0.152	0.123	0.093	0.061	0.031
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.036	0.048	0.080	0.124	0.175	0.238	0.309	0.385	0.467	0.552	0.634	0.715	0.792	0.861	0.924	0.978	1.019	1.050	1.071	1.078	1.074	1.059	1.028	0.986	0.934	0.867	0.790	0.705	0.606	0.500	0.388	0.269	0.148	0.030
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.006	-0.006	-0.011	-0.018	-0.029	-0.042	-0.057	-0.074	-0.093	-0.113	-0.133	-0.153	-0.173	-0.190	-0.206	-0.221	-0.231	-0.239	-0.245	-0.247	-0.246	-0.243	-0.236	-0.225	-0.213	-0.197	-0.179	-0.159	-0.136	-0.112	-0.088	-0.062	-0.036	-0.011
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.003	0.005	0.010	0.017	0.027	0.039	0.053	0.069	0.086	0.105	0.124	0.143	0.162	0.179	0.195	0.209	0.220	0.228	0.235	0.237	0.237	0.235	0.228	0.219	0.208	0.193	0.176	0.157	0.136	0.114	0.090	0.066	0.042	0.018
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.050	-0.063	-0.097	-0.144	-0.202	-0.271	-0.350	-0.434	-0.524	-0.617	-0.710	-0.799	-0.884	-0.961	-1.030	-1.088	-1.135	-1.170	-1.193	-1.201	-1.196	-1.176	-1.144	-1.097	-1.036	-0.962	-0.875	-0.776	-0.666	-0.547	-0.420	-0.287	-0.150	-0.015
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.038	0.060	0.098	0.148	0.207	0.276	0.354	0.438	0.527	0.619	0.711	0.800	0.886	0.964	1.033	1.094	1.142	1.179	1.203	1.212	1.209	1.191	1.158	1.112	1.052	0.976	0.888	0.787	0.675	0.553	0.423	0.285	0.142	0.001
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.018	0.020	0.029	0.042	0.058	0.077	0.099	0.122	0.148	0.174	0.199	0.225	0.249	0.270	0.289	0.306	0.319	0.328	0.334	0.336	0.335	0.331	0.321	0.308	0.290	0.269	0.245	0.217	0.186	0.152	0.116	0.078	0.039	0.002
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.054	0.083	0.140	0.218	0.306	0.415	0.539	0.669	0.811	0.960	1.104	1.246	1.384	1.507	1.619	1.718	1.793	1.852	1.893	1.908	1.905	1.882	1.830	1.759	1.668	1.551	1.416	1.265	1.090	0.902	0.704	0.490	0.273	0.058

NOTES:

(##) REPRESENTS CROSSFRAME POINT. SEE FRAMING PLAN SHEETS.

ALL VALUES ARE SHOWN IN INCHES (DECIMAL FORM).

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN
12/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

DEAD LOAD DEFLECTION TABLES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-107
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 02/2019
CHECKED BY : J. SLOAN DATE : 02/2019
DESIGNED BY : N. BROWN/D. RITACCO DATE : 02/2019
DESIGN CHECKED BY : J. LIU DATE : 02/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #3

SPAN B

		①	0.03L	0.06L	②	0.12L	0.15L	③	0.21L	0.24L	④	0.30L	0.33L	⑤	0.39L	0.42L	⑥	0.48L	0.52L	⑦	0.58L	0.61L	⑧	0.67L	0.70L	⑨	0.76L	0.79L	⑩	0.85L	0.88L	⑪	0.94L	0.97L	⑫
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.004	0.025	0.047	0.069	0.089	0.108	0.126	0.141	0.155	0.166	0.176	0.183	0.188	0.190	0.191	0.189	0.185	0.178	0.170	0.160	0.148	0.135	0.121	0.107	0.091	0.076	0.062	0.048	0.036	0.026	0.017	0.011	0.007	0.006
B	DEFLECTION DUE TO NEW STEEL ↓	0.036	0.067	0.098	0.129	0.158	0.185	0.211	0.232	0.252	0.269	0.282	0.292	0.299	0.302	0.301	0.298	0.291	0.282	0.270	0.254	0.236	0.217	0.195	0.172	0.149	0.125	0.103	0.082	0.063	0.046	0.032	0.021	0.013	0.010
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.030	0.149	0.271	0.391	0.503	0.609	0.708	0.794	0.871	0.938	0.991	1.032	1.063	1.078	1.082	1.075	1.054	1.022	0.981	0.927	0.864	0.795	0.717	0.637	0.555	0.469	0.387	0.311	0.239	0.176	0.125	0.081	0.050	0.037
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.021	-0.158	-0.296	-0.431	-0.559	-0.679	-0.790	-0.891	-0.979	-1.054	-1.115	-1.163	-1.196	-1.216	-1.222	-1.214	-1.192	-1.156	-1.109	-1.050	-0.981	-0.903	-0.818	-0.727	-0.634	-0.539	-0.448	-0.362	-0.282	-0.211	-0.152	-0.104	-0.069	-0.053
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.000	0.162	0.325	0.483	0.632	0.772	0.900	1.016	1.117	1.204	1.273	1.326	1.363	1.384	1.388	1.377	1.348	1.306	1.250	1.181	1.101	1.012	0.913	0.811	0.706	0.600	0.499	0.404	0.315	0.236	0.170	0.114	0.071	0.047
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.018	-0.047	-0.077	-0.106	-0.135	-0.162	-0.188	-0.211	-0.233	-0.251	-0.266	-0.277	-0.286	-0.291	-0.292	-0.290	-0.284	-0.275	-0.264	-0.249	-0.231	-0.211	-0.189	-0.167	-0.143	-0.120	-0.097	-0.078	-0.059	-0.042	-0.029	-0.018	-0.011	-0.009
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.022	0.050	0.079	0.107	0.135	0.162	0.187	0.209	0.230	0.248	0.262	0.274	0.282	0.286	0.288	0.286	0.280	0.272	0.260	0.246	0.229	0.210	0.189	0.167	0.145	0.122	0.100	0.081	0.062	0.046	0.032	0.020	0.011	0.007
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.007	0.022	0.038	0.054	0.069	0.083	0.097	0.109	0.119	0.129	0.136	0.142	0.147	0.148	0.149	0.148	0.145	0.141	0.135	0.127	0.118	0.108	0.096	0.085	0.073	0.060	0.049	0.039	0.029	0.021	0.015	0.010	0.006	0.006
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.059	0.271	0.486	0.696	0.892	1.078	1.251	1.400	1.533	1.648	1.738	1.809	1.860	1.882	1.885	1.869	1.828	1.769	1.695	1.596	1.484	1.362	1.225	1.084	0.942	0.794	0.654	0.526	0.404	0.297	0.210	0.134	0.079	0.051

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #3

SPAN C

		⑫	0.02L	0.05L	⑬	0.10L	0.12L	⑭	0.17L	0.19L	⑮	0.24L	0.26L	⑯	0.31L	0.33L	⑰	0.38L	0.40L	⑱	0.45L	0.48L	⑲	0.52L	0.55L	⑳	0.60L	0.62L	㉑	0.67L	0.69L	㉒	0.74L	0.76L	㉓	0.81L	0.83L	㉔	0.88L	0.90L	㉕	0.95L	0.98L	㉖
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.006	0.010	0.017	0.026	0.037	0.050	0.065	0.081	0.099	0.117	0.135	0.153	0.171	0.187	0.203	0.216	0.229	0.239	0.247	0.253	0.256	0.257	0.256	0.253	0.247	0.239	0.229	0.216	0.203	0.187	0.171	0.153	0.135	0.117	0.099	0.081	0.065	0.050	0.037	0.025	0.016	0.010	0.005
B	DEFLECTION DUE TO NEW STEEL ↓	0.010	0.017	0.030	0.046	0.063	0.084	0.108	0.133	0.160	0.188	0.216	0.243	0.270	0.294	0.316	0.337	0.354	0.369	0.381	0.389	0.394	0.396	0.394	0.389	0.381	0.369	0.354	0.337	0.316	0.294	0.269	0.243	0.216	0.188	0.160	0.133	0.108	0.084	0.063	0.045	0.029	0.017	0.010
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.037	0.061	0.102	0.158	0.220	0.293	0.376	0.464	0.559	0.658	0.754	0.849	0.942	1.027	1.106	1.179	1.239	1.289	1.331	1.359	1.376	1.383	1.375	1.357	1.328	1.286	1.235	1.174	1.102	1.022	0.936	0.844	0.748	0.653	0.554	0.460	0.372	0.290	0.217	0.156	0.101	0.059	0.036
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.053	-0.080	-0.127	-0.189	-0.261	-0.345	-0.438	-0.540	-0.649	-0.761	-0.873	-0.983	-1.089	-1.188	-1.280	-1.362	-1.433	-1.493	-1.540	-1.574	-1.594	-1.600	-1.594	-1.574	-1.541	-1.493	-1.434	-1.362	-1.280	-1.189	-1.090	-0.984	-0.873	-0.761	-0.649	-0.540	-0.438	-0.343	-0.259	-0.187	-0.125	-0.078	-0.051
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.047	0.061	0.093	0.140	0.196	0.264	0.344	0.432	0.528	0.629	0.732	0.835	0.935	1.029	1.117	1.197	1.266	1.324	1.371	1.404	1.423	1.430	1.422	1.401	1.368	1.320	1.261	1.191	1.110	1.022	0.927	0.827	0.724	0.621	0.520	0.425	0.338	0.258	0.190	0.135	0.089	0.058	0.045
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.009	-0.017	-0.030	-0.047	-0.067	-0.089	-0.115	-0.143	-0.173	-0.204	-0.235	-0.266	-0.296	-0.324	-0.350	-0.374	-0.394	-0.410	-0.424	-0.433	-0.438	-0.441	-0.438	-0.433	-0.424	-0.410	-0.393	-0.374	-0.350	-0.324	-0.296	-0.266	-0.235	-0.204	-0.172	-0.142	-0.115	-0.089	-0.067	-0.047	-0.030	-0.017	-0.009
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.007	0.011	0.019	0.029	0.042	0.058	0.076	0.096	0.118	0.141	0.164	0.187	0.210	0.231	0.250	0.268	0.283	0.296	0.306	0.313	0.317	0.319	0.317	0.312	0.306	0.295	0.282	0.267	0.250	0.230	0.209	0.186	0.163	0.140	0.117	0.095	0.075	0.057	0.042	0.029	0.018	0.011	0.007
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.006	0.010	0.017	0.026	0.036	0.047	0.061	0.074	0.090	0.106	0.121	0.136	0.152	0.166	0.179	0.191	0.200	0.208	0.215	0.220	0.223	0.225	0.223	0.220	0.216	0.209	0.201	0.192	0.180	0.167	0.153	0.138	0.122	0.106	0.090	0.074	0.060	0.047	0.035	0.026	0.017	0.010	0.006
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.051	0.072	0.119	0.187	0.266	0.363	0.476	0.597	0.731	0.874	1.013	1.154	1.293	1.421	1.542	1.653	1.744	1.822	1.887	1.930	1.957	1.969	1.955	1.926	1.881	1.815	1.735	1.642	1.530	1.408	1.280	1.141	1.000	0.861	0.719	0.586	0.466	0.354	0.258	0.182	0.115	0.069	0.049

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #3

SPAN D

		㉖	0.03L	0.06L	㉗	0.12L	0.15L	㉘	0.21L	0.24L	㉙	0.30L	0.33L	㉚	0.39L	0.42L	㉛	0.48L	0.52L	㉜	0.58L	0.61L	㉝	0.67L	0.70L	㉞	0.76L	0.79L	㉟	0.85L	0.88L	㊱	0.94L	0.97L	㊲
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.005	0.007	0.011	0.017	0.025	0.036	0.048	0.061	0.076	0.091	0.106	0.121	0.135	0.148	0.160	0.170	0.178	0.185	0.189	0.191	0.190	0.188	0.183	0.176	0.166	0.155	0.141	0.126	0.108	0.089	0.069	0.047	0.025	0.004
B	DEFLECTION DUE TO NEW STEEL ↓	0.010	0.013	0.020	0.032	0.045	0.062	0.082	0.103	0.125	0.149	0.172	0.194	0.216	0.236	0.254	0.270	0.282	0.291	0.298	0.301	0.302	0.299	0.292	0.282	0.269	0.252	0.233	0.211	0.185	0.158	0.129	0.098	0.067	0.037
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.036	0.049	0.080	0.125	0.176	0.238	0.310	0.386	0.468	0.554	0.636	0.717	0.794	0.864	0.926	0.980	1.021	1.053	1.074	1.081	1.077	1.062	1.031	0.989	0.936	0.870	0.793	0.707	0.607	0.500	0.388	0.268	0.146	0.027
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.051	-0.066	-0.101	-0.150	-0.208	-0.279	-0.359	-0.445	-0.536	-0.630	-0.724	-0.815	-0.900	-0.978	-1.047	-1.106	-1.154	-1.189	-1.212	-1.220	-1.214	-1.194	-1.161	-1.114	-1.053	-0.977	-0.890	-0.789	-0.678	-0.558	-0.430	-0.296	-0.158	-0.021
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.045	0.069	0.112	0.169	0.236	0.315	0.405	0.500	0.602	0.708	0.813	0.916	1.014	1.103	1.184	1.253	1.309	1.351	1.380	1.391	1.387	1.366	1.329	1.276	1.207	1.120	1.018	0.903	0.774	0.635	0.486	0.328	0.165	0.002
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	-0.009	-0.011	-0.018	-0.029	-0.042	-0.058	-0.078	-0.097	-0.120	-0.143	-0.166	-0.189	-0.211	-0.231	-0.249	-0.264	-0.275	-0.284	-0.290	-0.292	-0.291	-0.287	-0.278	-0.266	-0.252	-0.233	-0.212	-0.189	-0.162	-0.134	-0.106	-0.076	-0.046	-0.016
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	0.007	0.011	0.020	0.032	0.046	0.063	0.082	0.101	0.123	0.146	0.168	0.190	0.211	0.231	0.248	0.262	0.273	0.282	0.288	0.289	0.288	0.284	0.275	0.264	0.249	0.231	0.210	0.188	0.162	0.135	0.107	0.078	0.049	0.020
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.006	0.006	0.009	0.015	0.021	0.029	0.039	0.049	0.060	0.072	0.084	0.096	0.107	0.117	0.126	0.134	0.140	0.144	0.148	0.149	0.149	0.147	0.143	0.137	0.129	0.120	0.109	0.097	0.083	0.069	0.054	0.038	0.021	0.006
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.049	0.078	0.134	0.211	0.299	0.406	0.529	0.657	0.798	0.946	1.088	1.230	1.366	1.489	1.601	1.700	1.774	1.833	1.874	1.890	1.887	1.865	1.813	1.742	1.652	1.536	1.403	1.253	1.080	0.893	0.697	0.486	0.270	0.057

NOTES:

(##) REPRESENTS CROSSFRAME POINT. SEE FRAMING PLAN SHEETS.

ALL VALUES ARE SHOWN IN INCHES (DECIMAL FORM).

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

SHEET 4 OF 5

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN

02/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

DEAD LOAD DEFLECTION TABLES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-108
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 02/2019
CHECKED BY : J. SLOAN DATE : 02/2019
DESIGNED BY : N. BROWN/D. RITACCO DATE : 02/2019
DESIGN CHECKED BY : J. LIU DATE : 02/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: 2/27/2020
TIME: 4:03:05 PM

USER: HenryRosemond
DGN: R:\Structures\04_Drawings\40I_201_15BPR.20_SMU_DL44pn

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #4

SPAN B

		①	0.03L	0.06L	②	0.12L	0.15L	③	0.21L	0.24L	④	0.30L	0.33L	⑤	0.39L	0.42L	⑥	0.48L	0.52L	⑦	0.58L	0.61L	⑧	0.67L	0.70L	⑨	0.76L	0.79L	⑩	0.85L	0.88L	⑪	0.94L	0.97L	⑫
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.004	0.025	0.047	0.069	0.089	0.108	0.126	0.141	0.155	0.166	0.176	0.183	0.188	0.190	0.191	0.189	0.185	0.178	0.170	0.160	0.148	0.135	0.121	0.107	0.091	0.076	0.062	0.048	0.036	0.026	0.017	0.011	0.007	0.006
B	DEFLECTION DUE TO NEW STEEL ↓	-0.031	-0.022	-0.013	-0.005	0.003	0.010	0.018	0.024	0.030	0.035	0.039	0.042	0.045	0.047	0.048	0.048	0.048	0.047	0.045	0.042	0.039	0.036	0.032	0.028	0.024	0.020	0.017	0.013	0.010	0.008	0.006	0.004	0.003	0.003
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	-0.010	0.024	0.056	0.088	0.118	0.146	0.172	0.195	0.215	0.233	0.246	0.256	0.262	0.264	0.263	0.260	0.251	0.240	0.227	0.210	0.191	0.171	0.149	0.127	0.106	0.085	0.066	0.050	0.036	0.025	0.017	0.012	0.011	0.012
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.026	-0.256	-0.485	-0.706	-0.916	-1.112	-1.292	-1.451	-1.591	-1.709	-1.802	-1.873	-1.920	-1.942	-1.941	-1.918	-1.870	-1.802	-1.715	-1.608	-1.486	-1.352	-1.208	-1.058	-0.907	-0.757	-0.614	-0.484	-0.365	-0.263	-0.181	-0.116	-0.073	-0.058
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.045	0.314	0.580	0.837	1.083	1.313	1.523	1.712	1.880	2.023	2.139	2.229	2.293	2.328	2.335	2.318	2.272	2.201	2.108	1.991	1.853	1.696	1.528	1.348	1.164	0.987	0.815	0.655	0.508	0.377	0.266	0.174	0.104	0.063
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	0.017	0.023	0.029	0.035	0.041	0.046	0.052	0.056	0.061	0.065	0.068	0.071	0.073	0.074	0.075	0.075	0.074	0.073	0.071	0.068	0.064	0.060	0.055	0.050	0.045	0.039	0.033	0.028	0.022	0.017	0.012	0.008	0.005	0.003
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	-0.022	-0.028	-0.035	-0.041	-0.048	-0.054	-0.060	-0.064	-0.069	-0.073	-0.076	-0.079	-0.081	-0.082	-0.082	-0.082	-0.080	-0.078	-0.075	-0.072	-0.067	-0.062	-0.057	-0.051	-0.045	-0.038	-0.032	-0.026	-0.020	-0.015	-0.011	-0.007	-0.004	-0.003
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	-0.001	0.008	0.018	0.028	0.037	0.045	0.053	0.060	0.066	0.071	0.076	0.079	0.081	0.083	0.083	0.083	0.081	0.079	0.076	0.073	0.068	0.063	0.057	0.051	0.045	0.038	0.032	0.026	0.021	0.016	0.012	0.008	0.006	0.005
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	-0.023	0.088	0.198	0.303	0.407	0.503	0.592	0.673	0.746	0.811	0.864	0.908	0.941	0.962	0.973	0.973	0.961	0.939	0.906	0.864	0.810	0.747	0.678	0.603	0.524	0.450	0.378	0.310	0.248	0.190	0.139	0.095	0.058	0.032

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #4

SPAN C

		⑫	0.02L	0.05L	⑬	0.10L	0.12L	⑭	0.17L	0.19L	⑮	0.24L	0.26L	⑯	0.31L	0.33L	⑰	0.38L	0.40L	⑱	0.45L	0.48L	⑲	0.52L	0.55L	⑳	0.60L	0.62L	㉑	0.67L	0.69L	㉒	0.74L	0.76L	㉓	0.81L	0.83L	㉔	0.88L	0.90L	㉕	0.95L	0.98L	㉖
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.006	0.010	0.017	0.026	0.037	0.050	0.065	0.081	0.099	0.117	0.135	0.153	0.171	0.187	0.203	0.216	0.229	0.239	0.247	0.253	0.256	0.257	0.256	0.253	0.247	0.239	0.229	0.216	0.203	0.187	0.171	0.153	0.135	0.117	0.099	0.081	0.065	0.050	0.037	0.025	0.016	0.010	0.005
B	DEFLECTION DUE TO NEW STEEL ↓	0.003	0.004	0.007	0.009	0.013	0.017	0.021	0.026	0.032	0.038	0.044	0.049	0.055	0.061	0.066	0.070	0.074	0.077	0.080	0.082	0.083	0.084	0.083	0.082	0.080	0.077	0.074	0.070	0.065	0.060	0.055	0.049	0.043	0.038	0.032	0.026	0.021	0.017	0.012	0.009	0.006	0.004	0.003
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.012	0.020	0.032	0.046	0.063	0.084	0.107	0.132	0.160	0.190	0.220	0.250	0.280	0.307	0.334	0.358	0.379	0.397	0.412	0.421	0.428	0.431	0.428	0.422	0.413	0.399	0.381	0.361	0.337	0.311	0.283	0.253	0.223	0.192	0.162	0.134	0.108	0.084	0.064	0.046	0.031	0.020	0.012
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.058	-0.097	-0.164	-0.251	-0.355	-0.479	-0.619	-0.771	-0.936	-1.108	-1.282	-1.456	-1.624	-1.782	-1.930	-2.064	-2.179	-2.277	-2.356	-2.411	-2.445	-2.457	-2.444	-2.410	-2.355	-2.275	-2.177	-2.062	-1.927	-1.780	-1.621	-1.452	-1.279	-1.105	-0.933	-0.768	-0.616	-0.476	-0.353	-0.248	-0.161	-0.095	-0.056
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.063	0.083	0.132	0.203	0.292	0.400	0.523	0.662	0.812	0.967	1.127	1.284	1.436	1.582	1.716	1.836	1.940	2.028	2.098	2.147	2.176	2.184	2.170	2.136	2.081	2.007	1.916	1.808	1.687	1.552	1.407	1.256	1.102	0.946	0.794	0.647	0.511	0.389	0.283	0.196	0.126	0.079	0.061
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	0.003	0.004	0.007	0.012	0.016	0.022	0.028	0.035	0.042	0.049	0.056	0.063	0.070	0.076	0.082	0.088	0.092	0.095	0.099	0.100	0.102	0.103	0.102	0.101	0.099	0.096	0.092	0.088	0.083	0.077	0.071	0.064	0.057	0.050	0.042	0.035	0.029	0.022	0.017	0.012	0.008	0.004	0.003
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	-0.003	-0.005	-0.008	-0.012	-0.017	-0.023	-0.029	-0.036	-0.043	-0.050	-0.057	-0.064	-0.072	-0.078	-0.084	-0.089	-0.094	-0.098	-0.101	-0.103	-0.104	-0.105	-0.104	-0.103	-0.101	-0.098	-0.094	-0.090	-0.084	-0.078	-0.072	-0.065	-0.057	-0.050	-0.043	-0.036	-0.029	-0.023	-0.017	-0.012	-0.008	-0.005	-0.003
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.005	0.008	0.012	0.018	0.024	0.031	0.038	0.046	0.054	0.062	0.070	0.078	0.085	0.092	0.098	0.104	0.108	0.112	0.115	0.118	0.119	0.120	0.119	0.118	0.116	0.113	0.109	0.104	0.099	0.092	0.086	0.078	0.070	0.062	0.053	0.045	0.037	0.030	0.024	0.017	0.012	0.008	0.005
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.032	0.028	0.035	0.050	0.072	0.101	0.134	0.175	0.219	0.263	0.311	0.357	0.401	0.445	0.484	0.518	0.549	0.574	0.594	0.607	0.614	0.616	0.610	0.598	0.581	0.557	0.529	0.497	0.462	0.422	0.379	0.337	0.293	0.249	0.207	0.165	0.126	0.094	0.066	0.045	0.031	0.025	0.030

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

GIRDER #4

SPAN D

		㉖	0.03L	0.06L	㉗	0.12L	0.15L	㉘	0.21L	0.24L	㉙	0.30L	0.33L	㉚	0.39L	0.42L	㉛	0.48L	0.52L	㉜	0.58L	0.61L	㉝	0.67L	0.70L	㉞	0.76L	0.79L	㉟	0.85L	0.88L	㊱	0.94L	0.97L	㊲
A	DEFLECTION DUE TO EXISTING COVERPLATES ↓	0.005	0.007	0.011	0.017	0.025	0.036	0.048	0.061	0.076	0.091	0.106	0.121	0.135	0.148	0.160	0.170	0.178	0.185	0.189	0.191	0.190	0.188	0.183	0.176	0.166	0.155	0.141	0.126	0.108	0.089	0.069	0.047	0.025	0.004
B	DEFLECTION DUE TO NEW STEEL ↓	0.003	0.003	0.004	0.005	0.007	0.010	0.013	0.016	0.020	0.024	0.028	0.032	0.036	0.039	0.042	0.044	0.046	0.047	0.048	0.047	0.046	0.045	0.042	0.038	0.034	0.029	0.023	0.017	0.010	0.003	-0.005	-0.014	-0.022	-0.031
C	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 2 ↓	0.012	0.010	0.011	0.016	0.023	0.035	0.049	0.065	0.084	0.105	0.126	0.148	0.170	0.191	0.209	0.227	0.240	0.252	0.260	0.264	0.266	0.264	0.257	0.247	0.235	0.217	0.197	0.175	0.149	0.121	0.091	0.059	0.027	-0.007
D	DEFLECTION DUE TO BAY 3 DECK REMOVAL ↓	-0.056	-0.071	-0.114	-0.178	-0.261	-0.364	-0.483	-0.613	-0.755	-0.905	-1.057	-1.207	-1.351	-1.486	-1.607	-1.714	-1.801	-1.869	-1.917	-1.940	-1.942	-1.920	-1.873	-1.802	-1.709	-1.591	-1.452	-1.292	-1.112	-0.916	-0.707	-0.485	-0.257	-0.026
E	DEFLECTION DUE TO SLAB AND BARRIER RAIL IN BAY 3 ↓	0.061	0.103	0.174	0.267	0.379	0.511	0.658	0.819	0.991	1.169	1.354	1.533	1.702	1.858	1.997	2.113	2.207	2.277	2.323	2.340	2.332	2.297	2.233	2.142	2.026	1.882	1.714	1.524	1.314	1.083	0.837	0.579	0.313	0.044
F	DEFLECTION DUE TO BAY 1 DECK REMOVAL ↓	0.003	0.005	0.008	0.012	0.016	0.021	0.027	0.032	0.037	0.043	0.048	0.053	0.057	0.061	0.064	0.067	0.069	0.070	0.071	0.070	0.069	0.068	0.066	0.063	0.060	0.056	0.051	0.047	0.042	0.036	0.031	0.026	0.020	0.015
G	DEFLECTION DUE TO SLAB IN BAY 1 ↓	-0.003	-0.004	-0.007	-0.010	-0.015	-0.020	-0.026	-0.031	-0.037	-0.043	-0.049	-0.055	-0.060	-0.065	-0.069	-0.072	-0.075	-0.076	-0.078	-0.078	-0.078	-0.077	-0.075	-0.072	-0.069	-0.065	-0.060	-0.056	-0.050	-0.044	-0.038	-0.032	-0.025	-0.020
H	DEFLECTION DUE TO FINAL BARRIER RAILS AND PPC ↓	0.005	0.006	0.008	0.012	0.016	0.022	0.027	0.033	0.040	0.046	0.053	0.059	0.065	0.070	0.075	0.079	0.082	0.084	0.085	0.086	0.086	0.084	0.082	0.079	0.074	0.069	0.063	0.056	0.048	0.039	0.030	0.019	0.009	-0.001
I	TOTAL SDL (I = A+B+C+D+E+F+G+H) ↓	0.030	0.058	0.095	0.140	0.192	0.251	0.314	0.383	0.456	0.530	0.609	0.685	0.753	0.817	0.871	0.913	0.946	0.969	0.981	0.980	0.970	0.949	0.915	0.871	0.818	0.753	0.679	0.597	0.508	0.411	0.307	0.200	0.090	-0.022

NOTES:

(##) REPRESENTS CROSSFRAME POINT. SEE FRAMING PLAN SHEETS.

ALL VALUES ARE SHOWN IN INCHES (DECIMAL FORM).

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

SHEET 5 OF 5

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AECOM License No. F-0342

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN 2/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

DEAD LOAD DEFLECTION TABLES

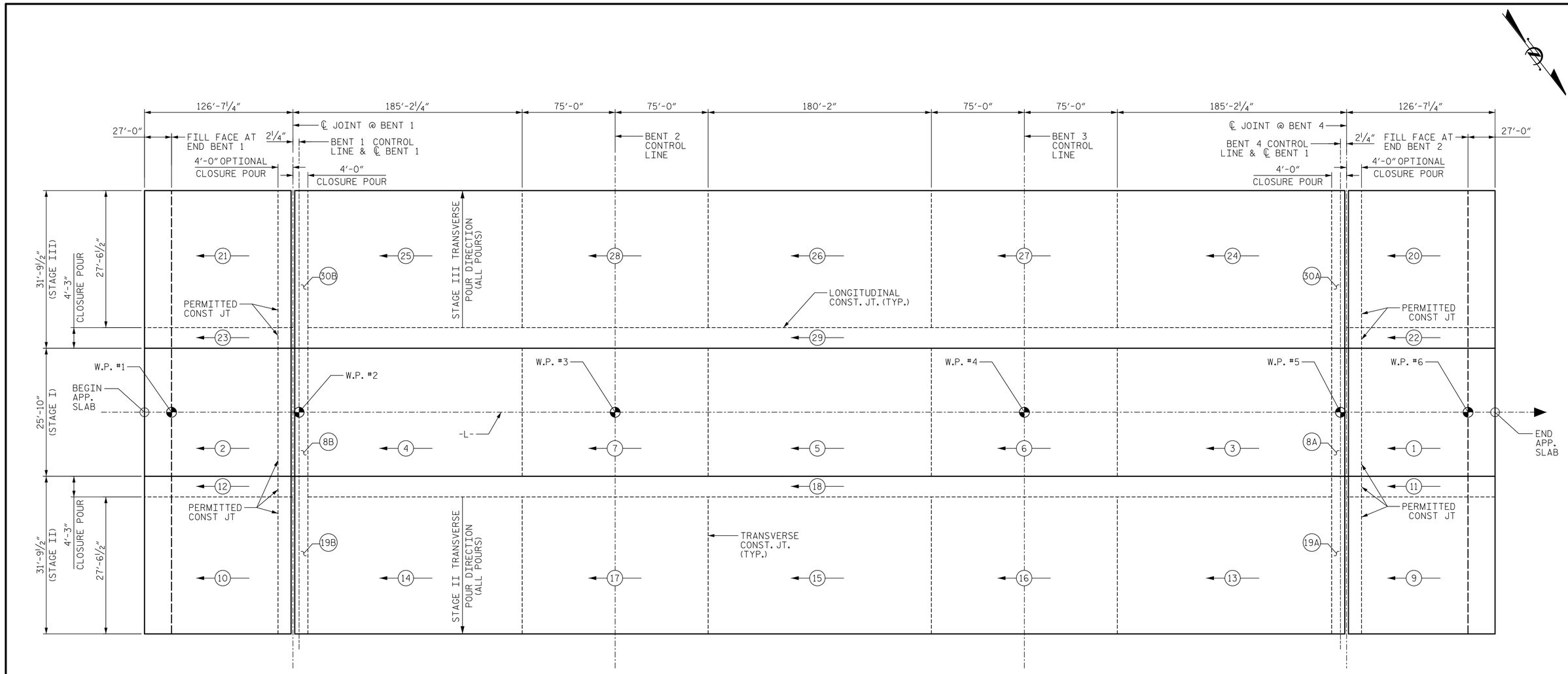
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-109
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : S. STREDNAK DATE : 02/2019
CHECKED BY : J. SLOAN DATE : 02/2019
DESIGNED BY : N. BROWN/D. RITACCO DATE : 02/2019
DESIGN CHECKED BY : J. LIU DATE : 02/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: 2/27/2020
TIME: 4:03:45 PM

USER: HenryRosemond
DGN: R:\Structures\04_Drawings\40_2013_15BPR.20_SMU_DL5.dgn



CONCRETE BREAKDOWN			
NORMAL WEIGHT (CUBIC YDS.)		ALL LIGHTWEIGHT (CUBIC YDS.)	
POUR 1	115.9	POUR 3	112.1
POUR 2	115.9	POUR 4	112.1
POUR 8A	6.9	POUR 5	111.2
POUR 8B	6.9	POUR 6	91.5
POUR 9	123.9	POUR 7	91.5
POUR 10	123.9	POUR 13	126.6
POUR 11	25.3	POUR 14	126.6
POUR 12	25.3	POUR 15	125.2
POUR 19A	7.1	POUR 16	101.6
POUR 19B	7.1	POUR 17	101.6
POUR 20	123.9	POUR 18	142.5
POUR 21	123.9	POUR 24	126.6
POUR 22	25.3	POUR 25	126.6
POUR 23	25.3	POUR 26	125.2
POUR 30A	7.1	POUR 27	101.6
POUR 30B	7.1	POUR 28	101.6
		POUR 29	142.5

PLAN - POURING SEQUENCE

(#) INDICATES POUR NUMBER AND POUR DIRECTION

THE FOLLOWING NUMBERED DECK POURS MAY BE POURED SIMULTANEOUSLY:

- 1 AND 2
- 6 AND 7
- 9 AND 10
- 11 AND 12
- 13 AND 14
- 16 AND 17
- 20 AND 21
- 22 AND 23
- 24 AND 25
- 27 AND 28
- 8A AND 8B
- 19A AND 19B
- 30A AND 30B

THE CONTRACTOR'S ATTENTION IS BROUGHT TO THE FACT THAT THE BRIDGE VIBRATES AND DEFLECTS UNDER LIVE LOAD. THE CONTRACTOR SHALL PLACE AND CURE THE DECK IN A MANNER THAT PREVENTS EXCESSIVE CRACKS OR DEFECTS FROM OCCURRING IN THE DECK FOR ANY REASON AS DETERMINED BY THE ENGINEER.

NOTES:

STAGE I DECK POUR: CONTRACTOR SHALL PLACE ALL FORMWORK AND REINFORCEMENT FOR POURS 3-7 PRIOR TO PLACING ANY CONCRETE FOR POUR 2.

STAGE II DECK POUR: CONTRACTOR SHALL PLACE ALL FORMWORK AND REINFORCEMENT FOR POURS 13-17 PRIOR TO PLACING ANY CONCRETE FOR POUR 13.

STAGE III DECK POUR: CONTRACTOR SHALL PLACE ALL FORMWORK AND REINFORCEMENT FOR POURS 24-28 PRIOR TO PLACING ANY CONCRETE FOR POUR 24.

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035062 JOHN E. SLOAN
11/28/2020

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

DECK POUR SEQUENCE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-110
1			3			TOTAL SHEETS
2			4			129

DRAWN BY : H. ROSEMOND DATE : 02/2020
CHECKED BY : J. SLOAN DATE : 02/2020
DESIGNED BY : G. COLS DATE : 02/2020
DESIGN CHECKED BY : J. SLOAN DATE : 02/2020

DATE: 2/28/2020
TIME: 10:27:06 AM

USER: Henry.Rosemond
DGN: R:\Structures\04 Drawings\401_205_15BPR.20_SMU_BMU.dgn

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2′-0″	1′-9″	2′-0″	1′-9″	2′-9″
#5	2′-6″	2′-2″	2′-6″	2′-2″	3′-5″
#6	3′-0″	2′-7″	3′-10″	2′-7″	4′-4″
#7	5′-3″	3′-6″			
#8	6′-10″	4′-7″			

CONCRETE BREAKDOWN

	STAGE I (CU. YDS.)	STAGE II (CU. YDS.)	STAGE III (CU. YDS.)
NORMAL WT. CONCRETE	245.7	312.6	312.6
FIBER REINFORCED ALL LIGHT WT. CONCRETE	518.4	724.1	724.1

✳GROOVING BRIDGE FLOORS

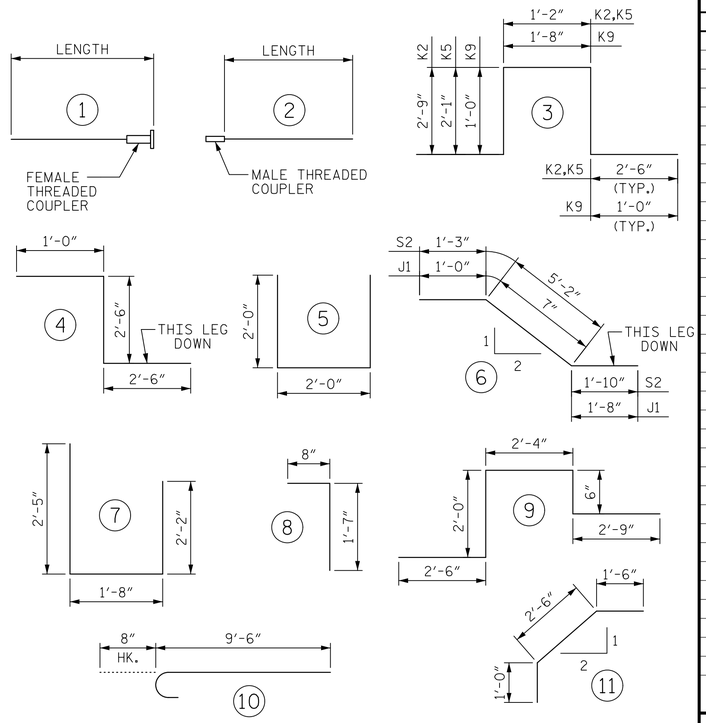
TOTAL	85,495 S.F

✳ PPC OVERLAY

PPC OVERLAY

SHOTBLASTING BRIDGE DECK	10,250 S.Y.
PPC MATERIALS	284.7 C.Y.
PLACING & FINISHING PPC OVERLAY	10,250 S.Y.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

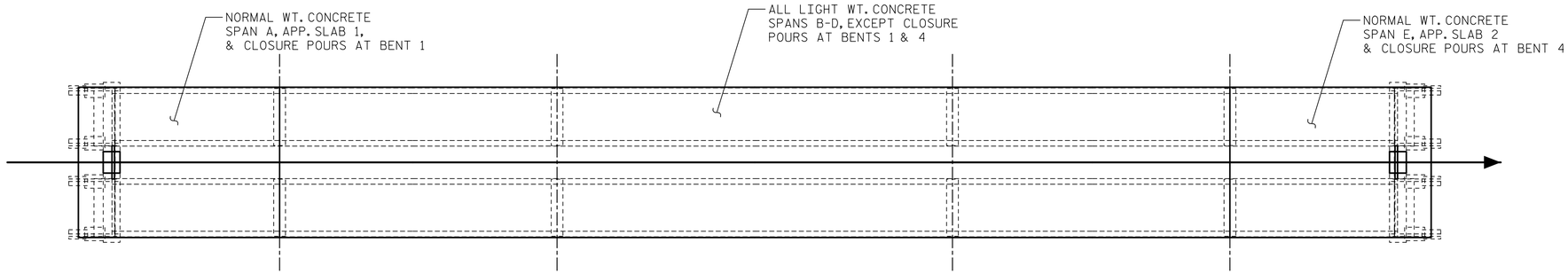
BILL OF MATERIAL

STAGE I

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✳A1	2079	5	STR	25′-6″	55294
A2	2091	5	STR	25′-6″	55613
✳A3	102	5	STR	26′-11″	2864
A4	102	6	STR	28′-6″	4366
✳B1	114	4	STR	25′-11″	1974
✳B2	64	5	STR	25′-10″	1724
✳B3	38	5	STR	27′-10″	1103
✳B4	56	4	STR	25′-6″	954
B5	68	4	STR	25′-6″	1158
B6	132	5	STR	50′-9″	6987
✳B7	228	4	STR	27′-8″	4214
✳B8	152	6	STR	49′-7″	11320
✳B9	192	6	STR	45′-0″	12977
✳B10	114	4	STR	29′-9″	2266
B11	495	5	STR	58′-8″	30289
✳D1	4158	5	1	2′-8″	11565
D2	4182	5	1	2′-4″	10178
✳D3	112	4	1	2′-2″	162
D4	136	4	1	1′-11″	174
✳J1	48	4	6	3′-3″	104
K1	60	5	STR	7′-4″	459
✳K2	16	5	3	11′-8″	195
✳K3	16	5	4	6′-0″	100
✳S1	96	4	5	6′-0″	385
✳S2	48	4	6	8′-3″	265
✳S3	96	4	7	6′-3″	401
✳S4	96	4	11	5′-0″	321
✳S5	96	4	8	2′-3″	144
REINFORCING STEEL			=		109,224
✳EPOXY COATED REINF. STEEL			=		108,332

STAGE II OR STAGE III

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✳A3	126	5	STR	26′-11″	3537
A4	126	6	STR	28′-6″	5394
✳A5	2079	5	STR	31′-6″	68305
A6	2091	5	STR	31′-6″	68699
✳A7	2091	6	10	10′-2″	31930
A8	8	6	STR	11′-4″	136
✳B1	138	4	STR	25′-11″	2389
✳B2	84	5	STR	25′-10″	2263
✳B3	46	5	STR	27′-10″	1335
B6	176	5	STR	50′-9″	9316
✳B7	276	4	STR	27′-8″	5101
✳B8	184	6	STR	49′-7″	13703
✳B9	252	6	STR	45′-0″	17033
✳B10	138	4	STR	29′-9″	2742
B11	660	5	STR	58′-8″	40385
✳B12	112	4	STR	16′-9″	1253
B13	136	4	STR	16′-8″	1514
✳B14	24	5	STR	4′-6″	113
✳D5	2079	5	2	2′-8″	5782
D6	2091	5	2	2′-4″	5089
✳D7	56	4	2	2′-2″	81
D8	68	4	2	1′-11″	87
✳J1	74	4	6	3′-3″	161
K4	60	5	STR	7′-7″	475
✳K5	16	5	3	10′-4″	172
✳K6	8	5	9	10′-1″	84
K7	16	5	STR	5′-4″	89
K8	20	5	STR	1′-10″	38
✳K9	1045	5	3	5′-8″	6176
✳S1	108	4	5	6′-0″	433
✳S2	54	4	6	8′-3″	298
✳S3	88	4	7	6′-3″	367
✳S4	88	4	11	5′-0″	294
✳S5	88	4	8	2′-3″	132
REINFORCING STEEL			=		131,222
✳EPOXY COATED REINF. STEEL			=		163,684



LAYOUT FOR COMPUTING AREA OF REINFORCED CONCRETE DECK SLAB

(LIGHT WT. SQ. FT. = 75,343)

(NORMAL WT. SQ. FT. = 23,357)

ALL LIGHT WEIGHT CONCRETE SHALL INCLUDE 4.0 LBS/CUBIC YARD OF POLYOLEFIN FIBERS. FOR FURTHER DETAILS, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.20

HENDERSON COUNTY

STATION: 35+30.22 -L-

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8/28/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

BILL OF MATERIAL

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-111

TOTAL SHEETS 129

DRAWN BY :	M. K. TOM	DATE : 1/2019
CHECKED BY :	G. COLS	DATE : 2/2019
DESIGNED BY :	G. COLS	DATE : 1/2019
DESIGN CHECKED BY :	J.E. SLOAN	DATE : 2/2019

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DGN: R:\Structures\04 Drawings\401_207_15BPR.20_SMU_BM.dgn