GENERAL NOTES:

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-15	REVISED 07-17-2015
AS-2-15	REVISED 01-18-2019
SBR-1-20	REVISED 07-17-2020
SICD-1-21	REVISED 01-21-2022
SICD-2-14	REVISED 01-15-2021
TVPF-1-18	DATED 07-20-2018
VPF-1-90	REVISED 07-20-2018
HL-20.14	REVISED 04-17-2020
HL-30.32	REVISED 04-17-2020

REFERENCE SHALL BE MADE TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 5-02-2022

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50

STEEL HP SECTIONS - ASTM A572 - YIELD STRENGTH 50 KSI

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE LRFD BRIDGE DESIGN SPECIFICATIONS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DECK DESIGN LOADING

DESIGN LOADING INCLUDES:

VEHICULAR LIVE LOAD: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT

EXISTING STRUCTURE PLANS

THE EXISTING STRUCTURE PLANS ARE AVAILABLE ONLINE THROUGH THE FOLLOWING WEBSITE:
ftp://ftp.dot.state.oh.us/pub/Contracts/Attach/D08-102781/Reference%20Files/

IT IS THE RESPONSIBLITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL PERTINENT EXISTING DRAWINGS AND DETAILS RELEVANT TO THIS PROJECT.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS WORK CONSISTS OF REMOVAL OF THE EXISTING BARRIER , EXISTING FENCE, EXISTING EXPANSION JOINTS, EXISTING PIER BEARINGS, EXISTING ABUTMENT BEARINGS, PORTIONS OF THE EXISTING ABUTMENT BACKWALL AND WINGWALLS. WHEN REPLACING THE ABUTMENT BEARINGS USE TEMPORARY SUPPORTS DURING CONSTRUCTION, SEE ITEM 516-JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE FOR DETAILS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL OF CONCRETE. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

ALL UTILITIES MUST REMAIN ACTIVE DURING CONSTRUCTION UNLESS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL TEMPORARILY SUPPORT ANY CONDUITS AND ELECTRICAL BOXES AS NECESSARY TO PERFORM THE REPAIRS.

REMOVALS SHALL BE PERFORMED IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLANS AND NOTES.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN

ITEM 510 - DOWEL HOELS WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

USE AN ANCHOR ADHESIVE EVALUATED ACCORDING TO ICCES REPORT AC308, "ACCEPTANCE CRITERIA FOR POST-INTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS", FOR CRACKED AND UNCRACKED CONCRETE APPLICATIONS, PUBLISHED ICCES REPORTS FOR ACCEPTABLE PRODUCTS ARE AVAILABLE AT:

WWW.ICC-ES.ORG/EVALUATION_REPORTS/INDEX.SHTML

SELECT FROM ON THE FOLLOWING APPROVED PRODUCTS:

DEWALT/POWERS FASTENERS PURE 110+ EPOXY ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-3298)

ADHESIVES TECHNOLOGY CORPORATION (ATC) ULTRABOND HS1CC ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-4057)

HILT HIT-HY 200 ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-3187)

INSTALL ADHESIVE ANCHORS ACCORDING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN SECTION 4.3 OF THE ICCES REPORTS LISTED ABOVE. THE MINIMUM EMBEDMENT DEPTH FOR ANCHORS SHALL BE AS SHOWN IN THE PLANS.

ITEM 512 - SEALING OF CONCRETE STRUCTURES, AS PER PLAN

ITEM 512 - SEALING OF CONCRETE STRUCTURES, AS PER PLAN (CONTINUED)

DUE TO THE RECENT SUPPLY SHORTAGES, THE DEPARTMENT HAS BEEN MADE AWARE OF DIFFICULTIES THAT SUPPLIERS ARE HAVING IN OBTAINING THE NECESSARY MATERIALS FOR EPOXY. ON THIS PROJECT THE CONTRACTOR CAN USE TRADITIONAL EPOXY-URETHANE SEALERS APPROVED ON THE QPL OR ELECT TO SUBSTITUTE BRIDGE COTE XL-70 W/SILANE THAT IS LISTED ON THE APPROVED NOISE SUPPLIER LIST UNDER APPROVED SEALERS FOR NOISE BARRIERS. APPROVEDNOISESUPPLIERSLIST.PDF (OHIO.GOV) .

IF BRIDGE COTE XL-70 W/SILANE IS CHOSEN, MEET THE REQUIREMENTS OF THE BRIDGE COTE XL-70 W/SILANE TECHNICAL DATA SHEET WITH THE EXCEPTION OF THE SURFACE PREPARATION THAT WILL STILL FOLLOW THE REQUIREMENTS LISTED UNDER C&MS 512 FOR EPOXY URETHANE SEALERS.

ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL

FIELD PAINT THE EXISTING STRUCTURAL STEEL USING OZEU SPECIFICATIONS. COLOR TO BE FEDERAL COLOR NUMBER 14277.

ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN

PRIOR TO ENCASING THE BEAM ENDS, PREPARE THE ENDS PER SSPC SP10 OR SSPC SP11 TO BARE METAL ACHIEVING A 1.5 TO 3.5 MIL PROFILE. PAINT THE BEAM ENDS WITH ORGANIC ZINC PRIME COAT PER C&MS 514. PROVIDE THE PRIME COAT THICKNESS AS PER C&MS 514.20. EXTEND THE LIMITS OF THE BEAM PREPARATION AND PAINTING 1-FT BEYOND THE LIMITS OF THE END DIAPHRAGM CONCRETE.
AFTER THE DIAPHRAGM CONCRETE IS SET, SEAL THE INTERFACE BETWEEN THE BEAM AND CONCRETE WITH CAULK.
THE DEPARTMENT WILL PAY FOR ALL ABOVE LABOR AND AT THE CONTRACT BID PRICE FOR ITEM 514 – FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF TEMPORARILY SUPPORTING THE EXISTING STRUCTURES TO COMPLETE THE WORK AS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE EXISTING STRUCTURE WILL BE RAISED AN AVERAGE OF APPROXIMATELY 9 INCHES TO PROVIDE INCREASED VERTICAL CLEARANCES. IT IS ASSUMED THE BRIDGE WILL BE JACKED AFTER THE DECK AND BARRIERS HAVE BEEN REMOVED, RESULTING IN THE FOLLOWING DEAD LOAD REACTIONS (KIPS) DURING JACKING:

	REAR ABUT.	PIER 1	PIER 2	PIER 3	FWD ABUT.
EXTERIOR BEAMS	4.3	19.5	22.8	19.5	4.3
INTERIOR BEAMS	4.5	20.3	23.7	20.3	4.5

JACKING SHALL BE DONE IN ACCORDANCE WITH CMS 501.05.B.5 WITH CAREFUL ATTENTION TO ENSURE BEAMS ARE RAISED UNIFORMLY.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN:

ESITMATED QUANTITES ARE BASED ON THE MOST RECENT IN-DEPTH INSPECTION OF THE STRUCTURE. AREAS TO BE PATCHED HAVE BEEN DETAILED IN THE PLANS.

IT IS POSSIBLE THAT ADDITIONAL AREAS REQUIRING PATCHING MAY HAVE DEVELOPED SINCE THE MOST RECENT INSPECTION OF THE STRUCTURE. THEREFORE, THE CONTRACTOR SHALL SOUND THE SURROUNDING PERIMETER OF THE AREA TO BE PATCHED AND PATCH NEW AREAS APPROVED BY THE ENGINEER THAT HAVE NOT BEEN DETAILED IN THE PLANS.

MEASUREMENT AND PAYMENT:
THE PLAN QUANTITIES INCLUDE AN INCREASE OF THE FIELD MEASURED QUANTITIES. THE ACCEPTED QUANTITIES FOR THE COMPLETED WORK AS DESCRIBED WILL BE MEASURED AND PAID BY ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 530 - SPECIAL - FORM LINER

DESCRIPTION:
THIS ITEM SHALL INCLUDE MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO INCORPORATE DECORATIVE FORM LINER ON THE EXTERIOR FACES OF THE CONCRETE PARAPETS.

THE ADDITIONAL THICKNESS OF THE DECORATIVE FORM LINER SHALL BE ADDED TO THE EXTERIOR FACE OF THE STANDARD SBR-1-20 PARAPET SHOWN HERIN. THE INCORPORATION OF THIS FORM LINER SHALL NOT RESULT IN ANY REDUCTION TO THE PROPOSED ROADWAY WIDTH.

ITEM 530 - SPECIAL - FORM LINER (CONTINUED)

FORM LINER:
ACCEPTABLE FORM LINER MANUFACTURERS INCLUDE CUSTOMROCK FORM LINER, WWW.CUSTOMROCK.COM, PHONE 1-800-637-2447 OR APPROVED EQUAL.

ACCEPTABLE FORM LINER PATTERNS INCLUDE #1103 RUSTIC ASHLAR (KEYED) OR APPROVED EQUAL.

VANDAL PROTECTION FENCING:

INSTALL FENCING FOR EACH CONSTRUCTION PHASE PRIOR TO OPENING THAT PHASE TO VEHICULAR AND/OR PEDESTRIAN TRAFFIC.

INSPECTION OF EXISTING STRUCTURAL STEEL:

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO C&MS 511.07, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511 - SUPERSTRUCTURE CONCRETE. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME THE RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.24 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

ABUT. - ABUTMENT
APPR. - APPROACH
BTM. - BOTTOM
BRG. - BEARING
℄ - CENTERLINE
C/C - CENTER TO CENTER
C.J. - CONSTRUCTION JOINT
CLR. - CLEARANCE
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONSTR. - CONSTRUCTION
CU YD - CUBIC YARD
DIA. - DIAMETER
E.F. - EACH FACE
ELEV., EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F.F. - FAR FACE
F.S. - FIELD SPLICE
FT/FT - FOOT PER FOOT
FTG. - FOOTING
FWD. - FORWARD
GALV. = GALVANIZED
LF - LEFT FORWARD
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MOT - MAINTENANCE OF TRAFFIC
N.F. - NEAR FACE
NO./# - NUMBER
O/O - OUT TO OUT
P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PVI - POINT OF VERTICAL INTERSECTION
R. - RADIUS
R.A. - REAR ABUTMENT
RF - RIGHT FORWARD
R/W - RIGHT OF WAY
SAN. - SANITARY
SER. - SERIES
SHT. - SHEET
SPA. - SPACES OR SPACING
SR - STATE ROUTE
STA. - STATION
STD. - STANDARD
STR. - STRAIGHT
TBM - TEMPORARY BENCH MARK
TEMP. - TEMPORARY
T/PARAPET - TOE OF PARAPET
T/T - TOE TO TOE
TYP. - TYPICAL
U.G. - UNDERGROUND
VERT. - VERTICAL

GENERAL NOTES
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

SFN 6802702
DESIGN AGENCY
B&N burgessniple.com
DESIGNER BCS | CHECKER XAC
REVIEWER SJA 3-23-22
PROJECT ID 102781
SUBSET 2 | TOTAL 34
SHEET P.67 | TOTAL P.99

PRE-127-19.11

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/1/2023 TIME: 10:35:13 AM USER: gorsler
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ESTIMATED QUANTITIES

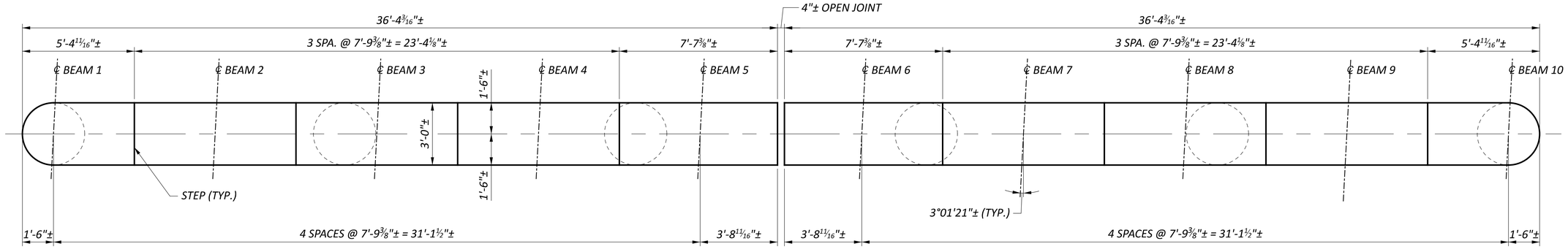
CALC.	DATE	CHK'D	DATE
XAC	3-04-22	BCS	3-14-22

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GENERAL	SHT. REF.
202	11203	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2/34
202	22900	414	SY	APPROACH SLAB REMOVED				414	
202	75260	564	FT	VANDAL FENCE REMOVED			564		
503	11101	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS				2/34
503	21100	65	CY	UNCLASSIFIED EXCAVATION	65				
509	10000	196,398	LB	EPOXY COATED REINFORCING STEEL	2,702	3,864	189,832		
509	30020	10,589	FT	NO. 4 GFRP DEFORMED BARS			10,589		
510	10001	636	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	204	432			2/34
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				
511	34446	731	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			731		
511	34448	101	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			101		
511	42510	34	CY	CLASS QC1 CONCRETE, PIER CAP		34			
511	46010	30	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	30				
512	10101	1,387	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	140	552	695		2/34
512	74000	346	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	152	194			
512	10601	202	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN	155	47			
513	20000	9,090	EACH	WELDED SHEAR CONNECTORS			9,090		
513	95020	LS	LS	STRUCTURAL STEEL, MISC.: CUT AND SPLICE EXISTING CROSSFRAME MENBERS			LS		18/34
514	00050	32,379	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			32,379		
514	00057	32,379	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN			32,379		2/34
514	00062	31,878	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			31,878		
514	00066	31,878	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT			31,878		
514	00504	47	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			47		
514	10000	10	EACH	FINAL INSPECTION REPAIR			10		
516	10010	152	FT	ARMORLESS PREFORMED JOINT SEAL				152	
516	13600	16	SF	1" PREFORMED EXPANSION JOINT FILLER			16		
516	13900	154	SF	2" PREFORMED EXPANSION JOINT FILLER	154				
516	14020	248	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	248				
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 1'-3"x1'-6"x2½", AS PER PLAN			10		21/34
516	44201	20	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 1'-3"x1'-5½"x3", AS PER PLAN			20		20/34
516	44301	20	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 1'-0"x1'-2"x4½", AS PER PLAN			20		19/34
516	47001	LS	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LS	2/34
518	21200	92	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	92				
519	11101	22	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	10	12			2/34
526	25000	422	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				422	
526	90030	152	FT	TYPE C INSTALLATION				152	
530	13000	1961	SF	SPECIAL - FORM LINER			1961		2/34
607	39900	550	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			550		
607	39994	564	FT	TEMPORARY VANDAL FENCE, TYPE B			564		
625	33000	2	EACH	STRUCTURE GROUNDING SYSTEM			2		

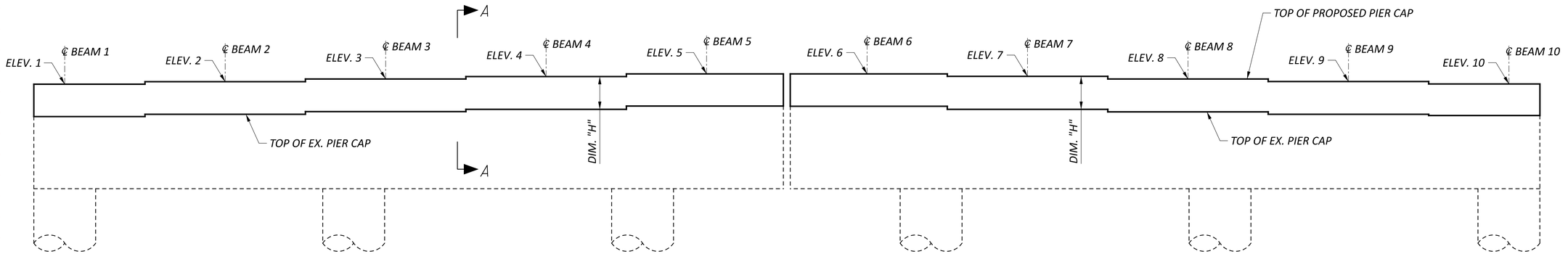
ESTIMATED QUANTITIES
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

SFN 6802702
DESIGN AGENCY B&N burgessniple.com
DESIGNER BCS | CHECKER XAC
REVIEWER SJA 3-23-22
PROJECT ID 102781
SUBSET 3 | TOTAL 34
SHEET P.68 | TOTAL P.99

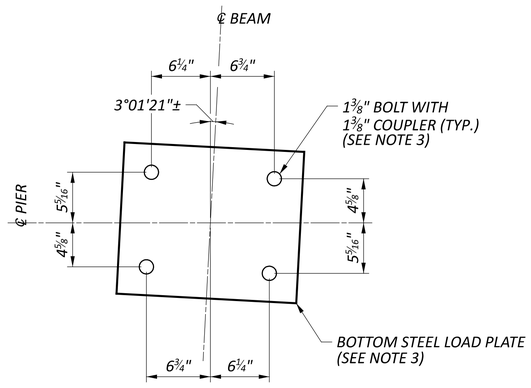
PRE-127-19.11



PLAN



ELEVATION



BEARING SUPPORT BOLT LAYOUT

PIER CAP ELEVATIONS AND PEDESTAL HEIGHTS									
BEAM NUMBER	PIER 1			PIER 2			PIER 3		
	EXISTING	PROPOSED	DIM "H"	EXISTING	PROPOSED	DIM "H"	EXISTING	PROPOSED	DIM "H"
1	1121.84±	1123.28±	1'-5 1/4"±	1121.94±	1123.41±	1'-5 5/8"±	1121.82±	1123.10±	1'-3 3/8"±
2	1121.95±	1123.41±	1'-5 1/2"±	1122.01±	1123.53±	1'-6 1/4"±	1121.96±	1123.22±	1'-3 1/8"±
3	1122.10±	1123.53±	1'-5 3/8"±	1122.15±	1123.66±	1'-6"±	1122.09±	1123.35±	1'-3 1/8"±
4	1122.19±	1123.66±	1'-5 5/8"±	1122.27±	1123.78±	1'-6 1/8"±	1122.20±	1123.47±	1'-3 1/4"±
5	1122.35±	1123.78±	1'-5 1/4"±	1122.40±	1123.90±	1'-6 1/8"±	1122.33±	1123.59±	1'-3 1/8"±
6	1122.34±	1123.79±	1'-5 3/8"±	1122.41±	1123.90±	1'-5 7/8"±	1122.32±	1123.59±	1'-3 1/4"±
7	1122.19±	1123.66±	1'-5 5/8"±	1122.27±	1123.78±	1'-6 1/8"±	1122.20±	1123.47±	1'-3 1/4"±
8	1122.07±	1123.54±	1'-5 5/8"±	1122.17±	1123.66±	1'-5 7/8"±	1122.07±	1123.34±	1'-3 1/4"±
9	1121.95±	1123.42±	1'-5 5/8"±	1122.03±	1123.53±	1'-6"±	1121.96±	1123.21±	1'-3"±
10	1121.89±	1123.29±	1'-4 7/8"±	1121.92±	1123.41±	1'-5 7/8"±	1121.87±	1123.09±	1'-2 5/8"±

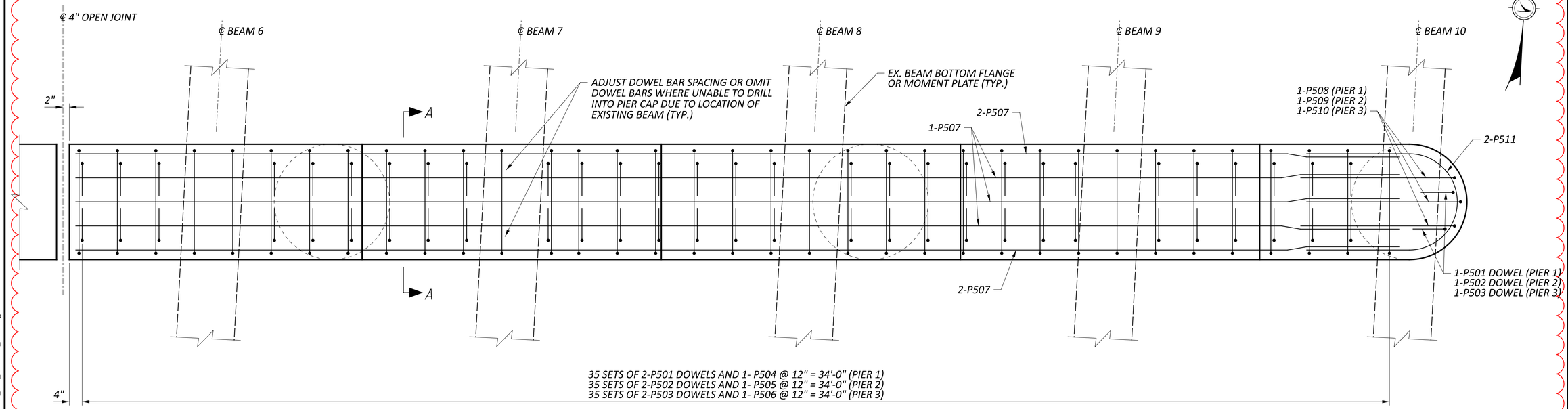
NOTES:

1. CONSTRUCTION OF THE CONCRETE BRIDGE DECK SHALL NOT BEGIN UNTIL THE PROPOSED PIER CAP HAS BEEN CONSTRUCTED.
2. FOR PIER CAP REINFORCING DETAILS, SECTION A-A, AND ADDITIONAL NOTES, SEE SHEET 17A/34 .
3. FOR ADDITIONAL BEARING DETAILS, SEE SHEETS 20/34 AND 21/34.

PIER DETAILS - 1
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

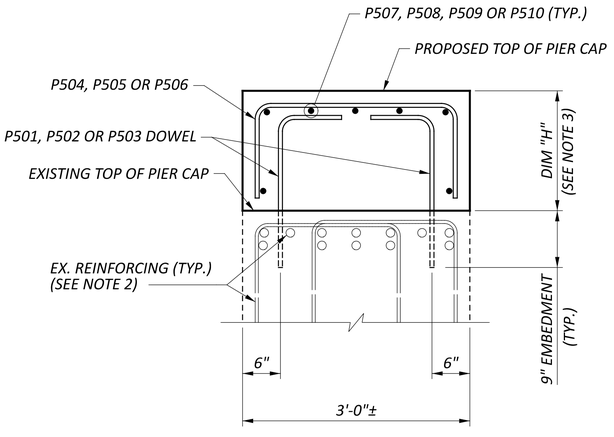
SFN 6802702
DESIGN AGENCY B&N burgessniple.com
DESIGNER BCS | CHECKER MAB
REVIEWER JSB 2-5-23
PROJECT ID 102781
SUBSET 17 | TOTAL 34
SHEET P.82 | TOTAL P.99

PRE-127-19.11



PLAN

(SYMMETRICAL ABOUT ℄ 4" OPEN JOINT)



SECTION A-A

NOTES:

1. DOWEL REINFORCING INTO EXISTING CONCRETE PER ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALIC GROUT.
2. CONTRACTOR SHALL LOCATE EXISTING REINFORCING AND ADJUST DOWEL HOLE LOCATIONS AS REQUIRED. EXISTING REINFORCING IS SHOWN PER RECORD PLANS.
3. FOR DIMENSION "H", SEE SHEET 17/34.

PIER DETAILS - 2
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

SFN 6802702
DESIGN AGENCY B&N burgessniple.com
DESIGNER BCS | CHECKER MAB
REVIEWER JSB 2-5-23
PROJECT ID 102781
SUBSET 17A | TOTAL 34
SHEET P.82A | TOTAL P.99

PRE-127-19.11

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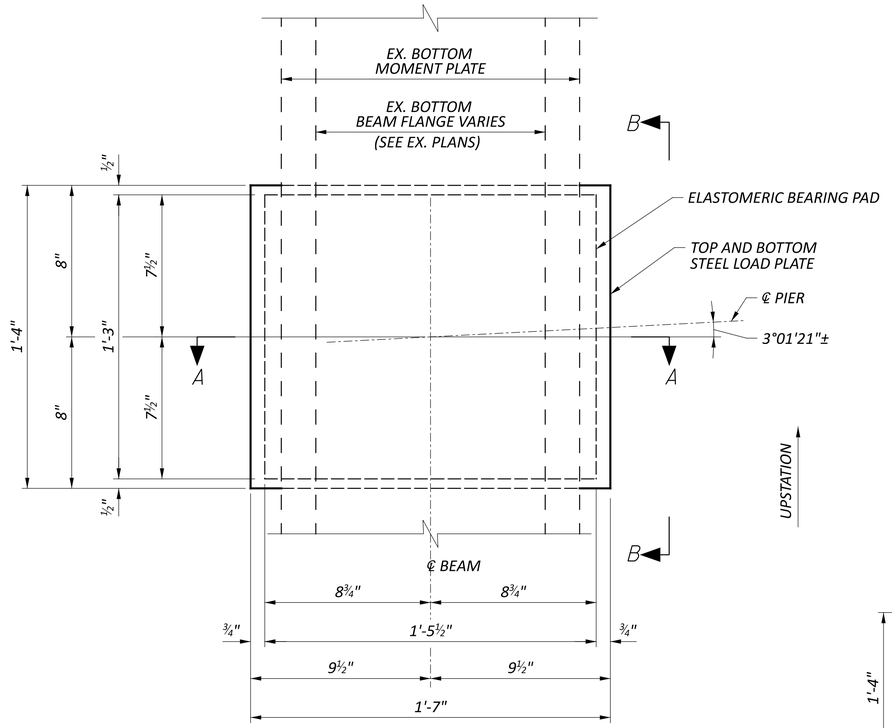
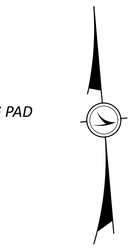
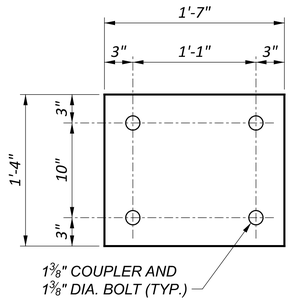


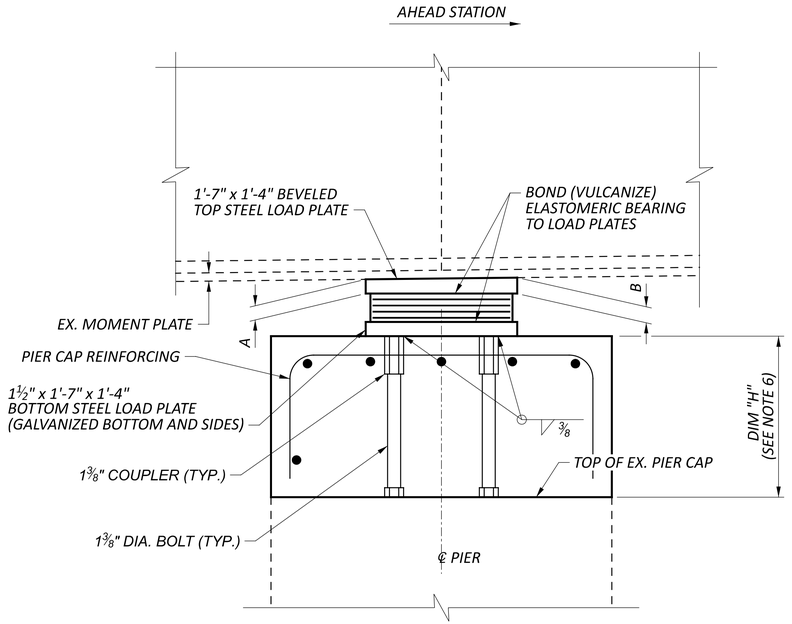
PIER 1 AND PIER 3 BEARING PLAN



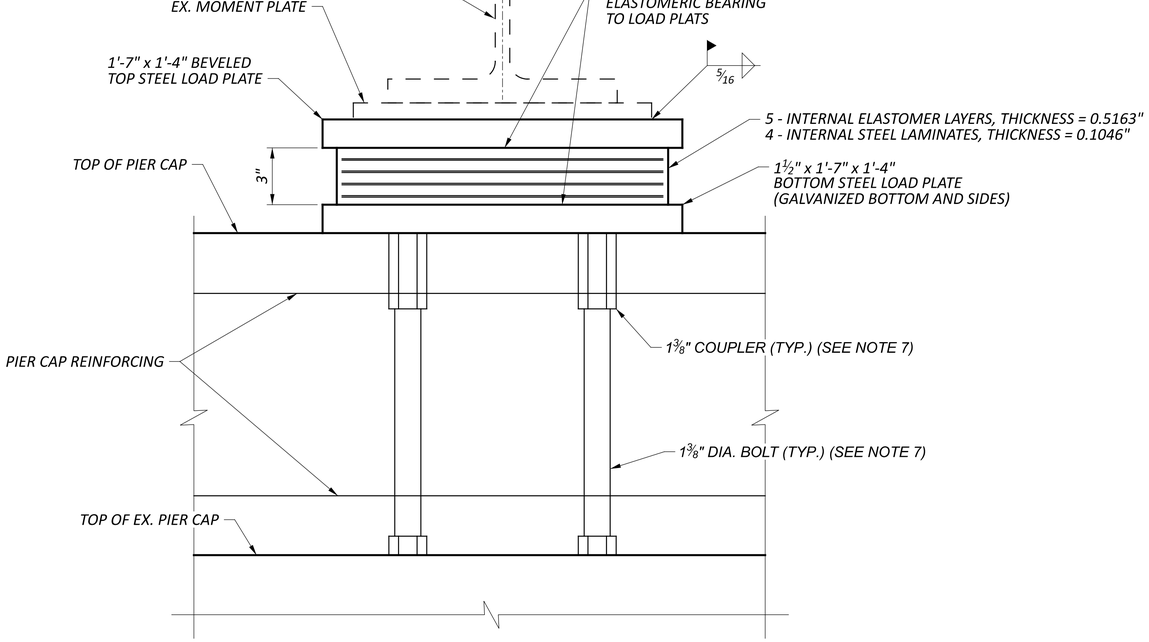
UPSTATION



BOTTOM LOAD PLATE PLAN



SECTION B-B



SECTION A-A

ELASTOMERIC BEARING DATA

LOCATION	TYPE	NO REQ'D	REACTION (KIPS)		DESIGN LOAD (KIPS)	A	B
			DL	LL**			
PIER 1	EXP.	10	151	100	251	1½"	1 9/16"
PIER 3	EXP.	10	151	100	251	1 9/16"	1½"

LEGEND:

** = LIVE LOAD WITHOUT IMPACT

NOTES:

1. THE TOP AND BOTTOM STEEL LOAD PLATE SHALL BE ASTM A709 GRADE 50 STEEL. THE TOP AND BOTTOM STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
2. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
3. BASIS OF PAYMENT FOR THE PIER BEARINGS: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516,ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
4. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
5. SHOP PAINT STEEL LOAD PLATES UNLESS NOTED OTHERWISE. COLOR SHALL BE FEDERAL COLOR NUMBER 14277.
6. FOR DIM "H", SEE SHEET 17/34.
7. BOLTS AND COUPLERS SHALL BE ASTM F3125 GRADE A325 TYPE I.

PIER 1 AND PIER 3 BEARING DETAILS
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

SFN 6802702

DESIGN AGENCY

B&N burgessniple.com

DESIGNER	CHECKER
BCS	MAB

REVIEWER: JSB 2-5-23

PROJECT ID: 102781

SUBSET	TOTAL
20	34

SHEET	TOTAL
P.85	P.99

PRE-127-19.11

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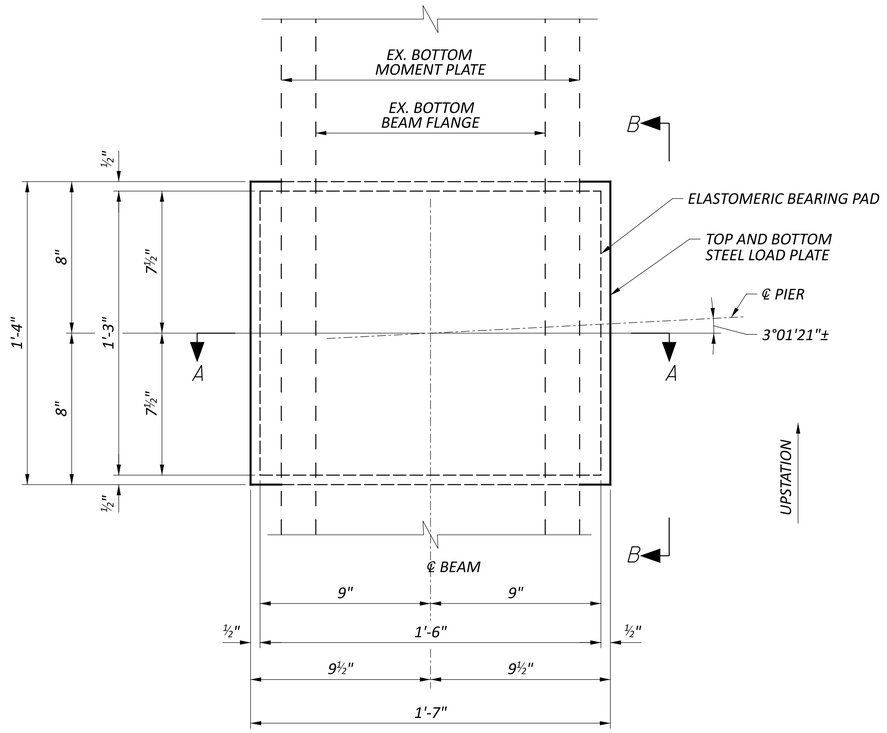
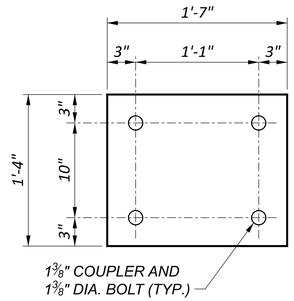
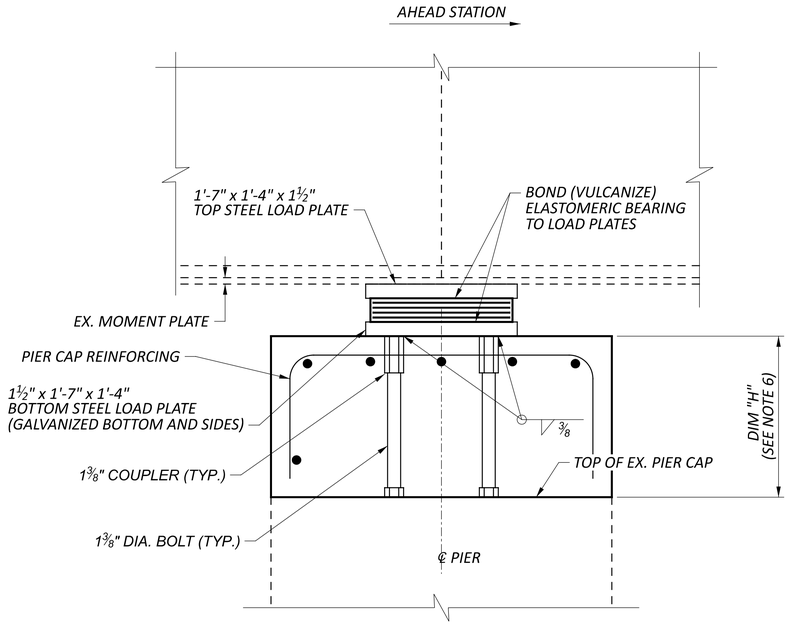


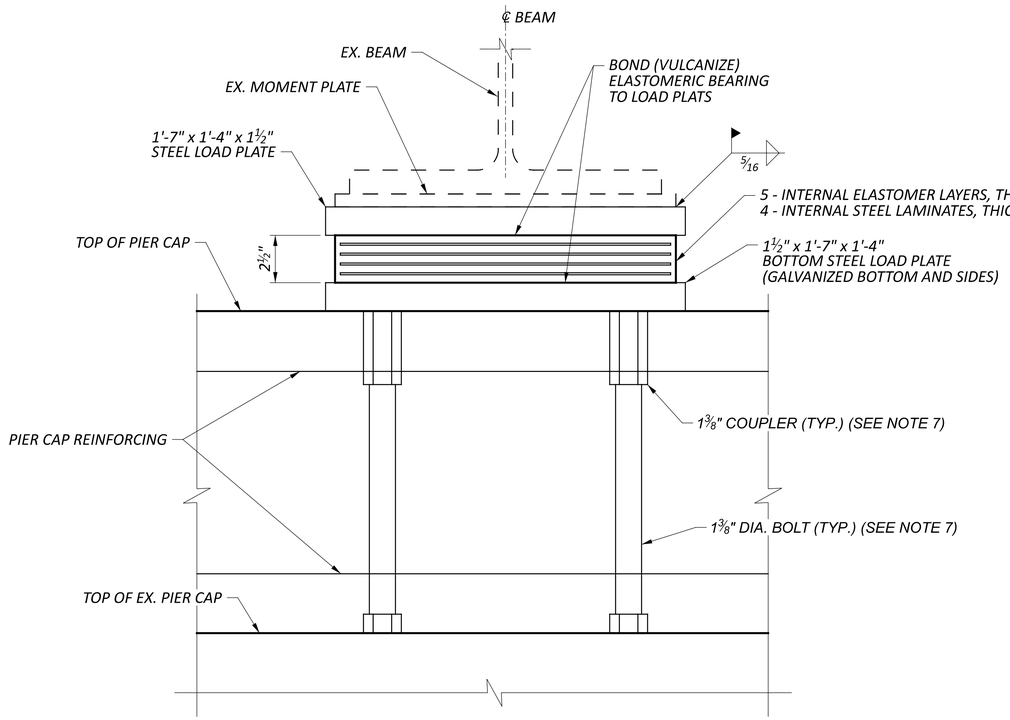
PIER 2 BEARING PLAN



BOTTOM LOAD PLATE PLAN



SECTION B-B



SECTION A-A

ELASTOMERIC BEARING DATA					
LOCATION	TYPE	NO REQ'D	REACTION (KIPS)		DESIGN LOAD (KIPS)
			DL	LL**	
PIER 2	EXP.	10	169	105	274

LEGEND:

** = LIVE LOAD WITHOUT IMPACT

NOTES:

1. THE TOP AND BOTTOM STEEL LOAD PLATE SHALL BE ASTM A709 GRADE 50 STEEL. THE TOP AND BOTTOM STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
2. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
3. BASIS OF PAYMENT FOR THE PIER BEARINGS: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516,ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
4. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
5. SHOP PAINT STEEL LOAD PLATE UNLESS NOTED OTHERWISE. COLOR SHALL BE FEDERAL COLOR NUMBER 14277.
6. FOR DIM "H", SEE SHEET 17/34.
7. BOLTS AND COUPLERS SHALL BE ASTM F3125 GRADE A325 TYPE I.

PIER 2 BEARING DETAILS
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

SFN 6802702

DESIGN AGENCY
B&N burgessniple.com

DESIGNER	CHECKER
BCS	MAB

REVIEWER: JSB 2-4-23

PROJECT ID: 102781

SUBSET	TOTAL
21	34

SHEET	TOTAL
P.86	P.99

PRE-127-19.11

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
WINGWALL REINFORCING											
A501	64	1'-9"	117	1	0'-10"	1'-1"					
A502	96	2'-9"	275	1	0'-10"	2'-1"					
A503	32	9'-9"	325	STR							
A504	32	6'-10"	228	STR							
A505	32	10'-3"	342	2	4'-8"	1'-2"	4'-8"				
A506	32	9'-8"	323	STR							
A507	8	10'-1"	84	STR							
A508	8	14'-3"	119	STR							
A509	24	17'-8"	442	STR							
A510	24	5'-11"	148	2	2'-6"	1'-2"	2'-6"				
	4 SR	6'-5"			2'-9"		2'-9"				
A511	OF	TO	207	2	TO	1'-2"	TO				0'-4½"
	6	10'-1"			4'-7"		4'-7"				
A512	8	11'-1"	92	19	8'-2"	2'-10"	0'-10"				
		TOTAL	2,702								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PIER REINFORCING											
P501	144	2'-7"	388	1	0'-10"	1'-11"					
P502	144	2'-8"	401	1	0'-10"	2'-0"					
P503	144	2'-5"	363	1	0'-10"	1'-9"					
P504	70	4'-7"	335	2	1'-1"	2'-8"	1'-1"				
P505	70	4'-9"	347	2	1'-2"	2'-8"	1'-2"				
P506	70	4'-3"	310	2	0'-11"	2'-8"	0'-11"				
P507	42	34'-6"	1511	STR							
P508	6	4'-11"	31	1	1'-1"	4'-0"					
P509	6	5'-1"	32	1	1'-2"	4'-0"					
P510	6	4'-10"	30	1	0'-11"	4'-0"					
P511	12	9'-3"	116	24	2'-6"	2'-8"				1'-3"	
		TOTAL	3,864								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DIAPHRAGM REINFORCING											
D501	120	7'-6"	939	2	2'-5"	2'-11"	2'-5"				
D502	232	9'-4"	2258	2	3'-1"	3'-5"	3'-1"				
D503	8	6'-10"	57	2	1'-10"	3'-5"	1'-10"				
D801	102	4'-9"	1294	18	2'-7"	1'-0"	1'-0"				
D802	8	21'-6"	457	1	1'-4"	20'-4"					
D803	4	20'-4"	217	STR							
D804	20	36'-8"	1958	STR							
D805	16	9'-0"	384	18	3'-10"	3'-1"	3'-1"				
D806	8	13'-8"	292	1	1'-4"	12'-7"					
D807	4	12'-7"	134	STR							
D808	32	38'-10"	3318	STR							
		TOTAL	11,308								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RAILING REINFORCING											
* X401	48	10'-0"		STR							
* X402	24	6'-4"		25	2'-6"	2'-5"	1'-4"	0'-1 ½"	0'-5"		
* X403	24	5'-1"		STR							
* X404	44	11'-10"		STR							
* X405	44	21'-5"		STR							
* X406	198	30'-0"		STR							
* Y401	32	11'-0"		STR							
* Y402	208	10'-0"		STR							
Y601	596	7'-7"	6789	37	0'-11 ½"	0'-9 ½"	1'-5"	1'-0"	0'-7"		
Y602	668	7'-0"	7023	23	0'-6"	3'-3"	3'-3"			0'-2"	
Y603	48	7'-8"	553	37	1'-0"	0'-9 ½"	1'-5"	1'-0"	0'-7"		
	8 SR	4'-4"				3'-6"					
Y604	OF	TO	628	1	1'-0"	TO					0'-1"
	11	5'-2"				4'-4"					
Y605	32	4'-4"	208	1	1'-0"	3'-6"					
TOTAL EPOXY COATED			15,201								
TOTAL LENGTH (FT) GFRP			10,589'								

* DENOTES GRFP BAR

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED.
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.
3. FOR BENT BAR DETAILS, SEE SHEET 34/34.

REINFORCING LIST - 1
BRIDGE NO. PRE-127-1911
U.S. 127 OVER I.R. 70

SFN 6802702
DESIGN AGENCY B&N burgessniple.com
DESIGNER BCS | CHECKER XAC
REVIEWER JSB 2-5-23
PROJECT ID 102781
SUBSET 33 | TOTAL 34
SHEET P.98 | TOTAL P.99

PRE-127-19.11