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ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONTINUED)

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 100 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

ITEM 614 - DETOUR SIGNING

ALL REQUIRED SIGNS AND SUPPORTS SHALL BE FURNISHED, ERECTED, MAINTAINED AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 , DETOUR SIGNING LS

ITEM 614 - MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON CHAMBERSBURG ROAD AT ALL TIMES AS WELL AS RAMPS E AND F, EXCEPT FOR A PERIOD NOT TO EXCEED 150 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 15 - 17.

TRAFFIC SHALL BE MAINTAINED ON RAMPS A AND B AT ALL TIMES, EXCEPT A PERIOD NOT TO EXCEED 60 CALENDAR DAYS, WHEN TRAFFIC SHALL BE DETOURED AS SHOWN ON SHEETS 18 - 19.

TRAFFIC SHALL BE MAINTAINED ON RAMPS C AND D AT ALL TIMES, EXCEPT A PERIOD NOT TO EXCEED 45 CALENDAR DAYS, WHEN TRAFFIC SHALL BE DETOURED AS SHOWN ON SHEETS 20 - 21.

A DISINCENTIVE SHALL BE ASSESSED PER PN 121 PER DAY FOR EACH CALENDAR DAY THE RAMPS AND ROADWAY REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (CONTINUED)

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT. THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 18 SNMT

(ASSUMING 2 PCMS SIGN(S) FOR 5 MONTH(S)  
(ASSUMING 4 PCMS SIGN(S) FOR 2 MONTH(S))

BRIDGE PAINTING EQUIPMENT ON SHOULDERS

IF THE CONTRACTOR'S BRIDGE PAINTING EQUIPMENT IS TO REMAIN ON THE SHOULDERS BEYOND THE PHASE 4 BRIDGE PAINTING LIMITS PROVIDED IN THE QUANTITY TABLE ON SHEET 12A, IT SHALL BE PLACED BEHIND PORTABLE BARRIER (PB) AND A WORK ZONE IMPACT ATTENUATOR SHALL PROTECT THE LEADING BLUNT END OF THE PB (SEE OMTCD, FIGURE 6H-5 "SHOULDER CLOSURE ON FREEWAY" (TA-5)). THE COST FOR ADDITIONAL PB, IMPACT ATTENUATOR, BARRIER REFLECTORS, AND OBJECT MARKERS SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE LUMP SUM BID FOR MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 110 MGAL

CALCULATED  
SLB  
CHECKED  
AKF

MAINTENANCE OF TRAFFIC NOTES

MOT - 235 - 0.22L

**PROPOSED WORK**

1. ALL WORK SHALL BE PERFORMED UNDER COMPLETE CLOSURE OF THE EXISTING BRIDGE.
2. REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE INCLUDING THE WEARING SURFACE, CONCRETE DECK, PARAPETS, EXPANSION JOINTS, SCUPPERS, PORTIONS OF THE NORTHERN FASCIA BEAM AND CROSS FRAMES THAT ARE TO BE REPLACED, AND THE BEARINGS.
3. REMOVE PORTIONS OF EXISTING ABUTMENTS AND PIERS AS DETAILED IN THE PLANS.
4. REMOVE EXISTING APPROACH SLABS.
5. TEMPORARILY SUPPORT, RETROFIT, REPAIR (INCLUDING THE HEAT STRAIGHTENING WORK), AND RAISE THE EXISTING BEAMS.
6. CONSTRUCT NEW ABUTMENT AND PIER CONCRETE.
7. SET NEW BEARINGS AT ABUTMENTS AND PIERS, AND SET EXISTING BEAMS ON TO NEW BEARINGS.
8. INSTALL NEW CROSSFRAMES AT LOCATIONS SHOWN IN THE PLANS.
9. INSTALL WELDED STUD SHEAR CONNECTORS.
10. CONSTRUCT NEW CONCRETE END DIAPHRAGMS AND POUR NEW DECK SLAB.
11. CONSTRUCT NEW ABUTMENT DRAINAGE SYSTEM, POROUS BACKFILL AND CONSTRUCT APPROACH SLABS.
12. PLACE AND GRADE NEW CRUSHED AGGREGATE SLOPE PROTECTION.
13. PAINT STRUCTURAL STEEL AND SEAL CONCRETE SURFACES AS INDICATED IN THE PLANS.

WORK LISTED IS NOT INCLUSIVE, CONTRACTOR WILL SEQUENCE WORK AS NEEDED.

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**STANDARD DRAWINGS**

REFER TO THE FOLLOWING ODOT STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED: 7-17-15
AS-2-15	REVISED: 1-18-19
GSD-1-96	REVISED: 7-19-02
SBR-1-20	DATED: 1-17-20
STCD-1-96	REVISED: 7-18-14
VPF-1-90	REVISED: 7-20-18

**OPERATIONAL IMPORTANCE**

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**DESIGN LOADING**

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS PER SQUARE FOOT

**DESIGN STRESSES**

- CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (BRIDGE DECK & PARAPET)
- CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
- REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
- STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50 KSI (NEW STRUCTURAL STEEL & BOTTOM MOMENT PLATES @ PIER 2)

**DECK PROTECTION METHOD**

GALVANIZED COATED REINFORCING STEEL  
2 1/2" CONCRETE COVER

**MONOLITHIC WEARING SURFACE**

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

**EXISTING STRUCTURE VERIFICATION**

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 CMS 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.

**DECK PLACEMENT DESIGN ASSUMPTIONS:**

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.212 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 IN.

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

**POST-CONSTRUCTION BRIDGE INSPECTION**

AT LEAST TWO WEEKS PRIOR TO OPENING THE BRIDGE TO TRAFFIC, THE CONTRACTOR SHALL NOTIFY THE ODOT DISTRICT 7 BRIDGE INSPECTION ENGINEER (937-497-6884) TO ALLOW FOR THE NATIONAL BRIDGE INSPECTION STANDARDS (NBIS) REQUIRED POST-CONSTRUCTION INITIAL INSPECTION OF THE BRIDGE.

**ASBESTOS NOTIFICATION:**

AN ASBESTOS SURVEY OF BRIDGE NO. MOT-235-0022L SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF THE DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

ASBESTOS PROGRAM  
OHIO EPA, DAPC  
P.O. BOX 1049  
COLUMBUS, OH 43216-1049  
PHONE: (614) 466-0061

AT LEAST TEN (10) WORKING DAYS PRIOR TO START OF THE BRIDGE DEMOLITION WORK, THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: THE CONTRACTOR'S NAME AND ADDRESS, THE SCHEDULED DATES FOR RENOVATION AND A DESCRIPTION OF THE PLANNED DEMOLITION OR RENOVATION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 7 OFFICE, 1001 SAINT MARYS AVENUE, SIDNEY, OHIO 45365.

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

**TEMPORARY VERTICAL CLEARANCES**

CONTRACT TEMPORARY VERTICAL CLEARANCES SHALL EQUAL THE EXISTING VERTICAL CLEARANCES BEFORE THE STRUCTURE IS RAISED.

CONTRACT TEMPORARY VERTICAL CLEARANCES SHALL EQUAL THE PROPOSED VERTICAL CLEARANCES AFTER THE STRUCTURE IS RAISED.

**ITEM 509 - REINFORCING STEEL. REPLACEMENT OF EXISTING REINFORCING STEEL. AS PER PLAN**

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. A CONTINGENCY QUANTITY OF 100 LBS SHALL BE USED.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

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

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE CONCRETE DECK INCLUDING PARAPETS, DECK JOINTS, END CROSS FRAMES, SCUPPERS AND OTHER ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK 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. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO FLANGES.

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.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF THE FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. OBTAIN APPROVAL BEFORE PERFORMING REPAIR.

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 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 511.10, 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.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAMS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.


DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPERS AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

**REINFORCING STEEL. MISC.: GALVANIZED COATED REINFORCING STEEL**

ALL REINFORCING STEEL SHALL BE GALVANIZED STEEL CONFORMING TO ASTM A767, CLASS 1. THE GALVANIZED COATED REINFORCING STEEL WILL MEET ALL OTHER REQUIREMENTS OF 509. THE GALVANIZED COATING WILL BE APPLIED AFTER THE REINFORCING HAS BEEN FABRICATED. IF THE GALVANIZED SURFACE BECOMES DAMAGED DURING HANDLING IN THE FIELD, REPAIRS WILL CONFORM TO ASTM A780. USE BAR SUPPORTS AND TIE WIRES WHICH ARE PLASTIC COATED OR EPOXY COATED. ONLY SUPPLIERS CERTIFIED UNDER S1068 MAY PROVIDE THIS REINFORCING.

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	REVIEWED DGN STRUCTURE FILE NUMBER 5709660
DRAWN RFV REVISED	CHECKED DJC
<b>GENERAL NOTES</b>	
BRIDGE NO. MOT-235-0022L S.R. 235 (CHAMBERSBURG ROAD) OVER S.R. 4	
MOT-235-0.22L PID No. 99860	2 / 24
104 141	

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

THIS WORK CONSISTS OF RAISING THE EXISTING BEAMS TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF ANY REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

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 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15'), AS PER PLAN**

APPROACH SLAB CONCRETE SHALL BE PLACED SEPARATELY FROM THE SUPERSTRUCTURE CONCRETE.

ALL REINFORCING STEEL IS TO BE GALVANIZED COATED SIMILAR TO THE REST OF THE STRUCTURE.

**TYPE C INSTALLATION, AS PER PLAN**

ALL REINFORCING STEEL IS TO BE GALVANIZED COATED SIMILAR TO THE REST OF THE STRUCTURE.

CALCULATED BY: RFV DATE: 3-11-20  
CHECKED BY: DJC DATE: 3-12-20

ITEM	EXT.	PARTICIPATION		UNITS	DESCRIPTION	ABUTMENT	PIER	SUPER	GENERAL	A.P.P. REFERENCE SHEET NO.
		01/NHS/BR	02/NHS/BR							
202	11203	LS			PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					2
202	22900	134		SY	APPROACH SLAB REMOVED				134	
503	11100	LS			COFFERDAMS AND EXCAVATION BRACING					
503	21300	LS			UNCLASSIFIED EXCAVATION					
509	20001	100		LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	2
509	30030	1752		FT	NO. 5 GFRP DEFORMED BARS			1752		
509	30040	6527		FT	NO. 6 GFRP DEFORMED BARS			6527		
509	40000	109103		LB	REINFORCING STEEL, MISC.: GALVANIZED COATED REINFORCING STEEL	2874	16021	90208		2
510	10000	286		EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	160	126			
511	34446	287		CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			287		
511	34450	73		CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			73		
511	41010	53		CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS		53			
511	43510	31		CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	31				
512	10100	853		SY	SEALING CONCRETE SURFACES (EPOXY-URETHANE)	59	264	530		
513	10220	1665		LB	STRUCTURAL STEEL MEMBERS, LEVEL 1			1665		
513	20000	4575		EACH	WELDED STUD SHEAR CONNECTORS			4575		
513	90000	1183		LB	STRUCTURAL STEEL, MISC.: NEW CROSSFRAME ASSEMBLIES AT PIER 2			1183		
514	00050	12290		SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			12290		
514	00056	12290		SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			12290		
514	00060	12490		SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			12490		
514	00066	12490		SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			12490		
514	00504	20		MNHR	GRINDING FINIS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			20		
514	10000	13		EACH	FINAL INSPECTION REPAIR			13		
516	10010	67		FT	ARMORLESS PREFORMED JOINT SEAL				67	
516	13600	5		SF	1" PREFORMED EXPANSION JOINT FILLER	5				
516	13900	34		SF	2" PREFORMED EXPANSION JOINT FILLER	34				
516	14020	93		FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	93				
516	44101	15		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-0" x 1'-7" x 2.41" BEARING WITH 1'-1" x 1'-8" x VARIABLE THICKNESS LOAD PLATE)		15			11
516	44201	10		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10" x 1'-1" x 3.22" BEARING WITH 11" x 1'-2" x 1 1/2" THICK LOAD PLATE)	10				11
516	47001	LS			JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					4
518	21200	43		CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	43				
518	40000	100		FT	6" PERFORATED CORRUGATED PLASTIC PIPE	100				
518	40010	60		FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	60				
526	25011	190		SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15'), AS PER PLAN				190	4
526	90031	67		FT	TYPE C INSTALLATION, AS PER PLAN				67	4
**	601	20000	137	SY	CRUSHED AGGREGATE SLOPE PROTECTION	137				
	607	39900	434	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			434		
					STRUCTURE REPAIR - COLLISION DAMAGE / HEAT STRAIGHTENING QUANTITIES					
	202	11501	1	EACH	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS)					3
***	513	10261	15636	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN			15636		3
***	513	90000	297	1041	LB	STRUCTURAL STEEL, MISC.: REPAIR OF DAMAGED SECONDARY MATERIAL BY REPLACEMENT		1338		3
***	849	10001	LS	LS	DAMAGE ASSESSMENT, AS PER PLAN					3
***	849	10500	LS	LS	SURFACE PREPARATION					
***	849	10600	4	2	HOUR	REPAIRING DAMAGED MEMBERS BY GRINDING		6		
***	849	10700	LS	LS	STRAIGHTENING DAMAGED MEMBERS					

\*\* INCLUDED FOR PAYMENT WITH THE ROADWAY QUANTITIES

\*\*\* PLAN SPLIT 01 INCLUDES ALL COLLISION REPAIR OVER NB S.R. 4. PLAN SPLIT 02 INCLUDES ALL COLLISION REPAIR OVER SB S.R. 4.

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**ESTIMATED QUANTITIES & GENERAL NOTES**

BRIDGE NO. MOT-235-0022L  
S.R. 235 (CHAMBERSBURG ROAD) OVER S.R. 4

**MOT - 235 - 0.22L**  
PID No. 99860

4 / 24

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DATE  
3-13-20

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DGN

DRAWN  
RFV

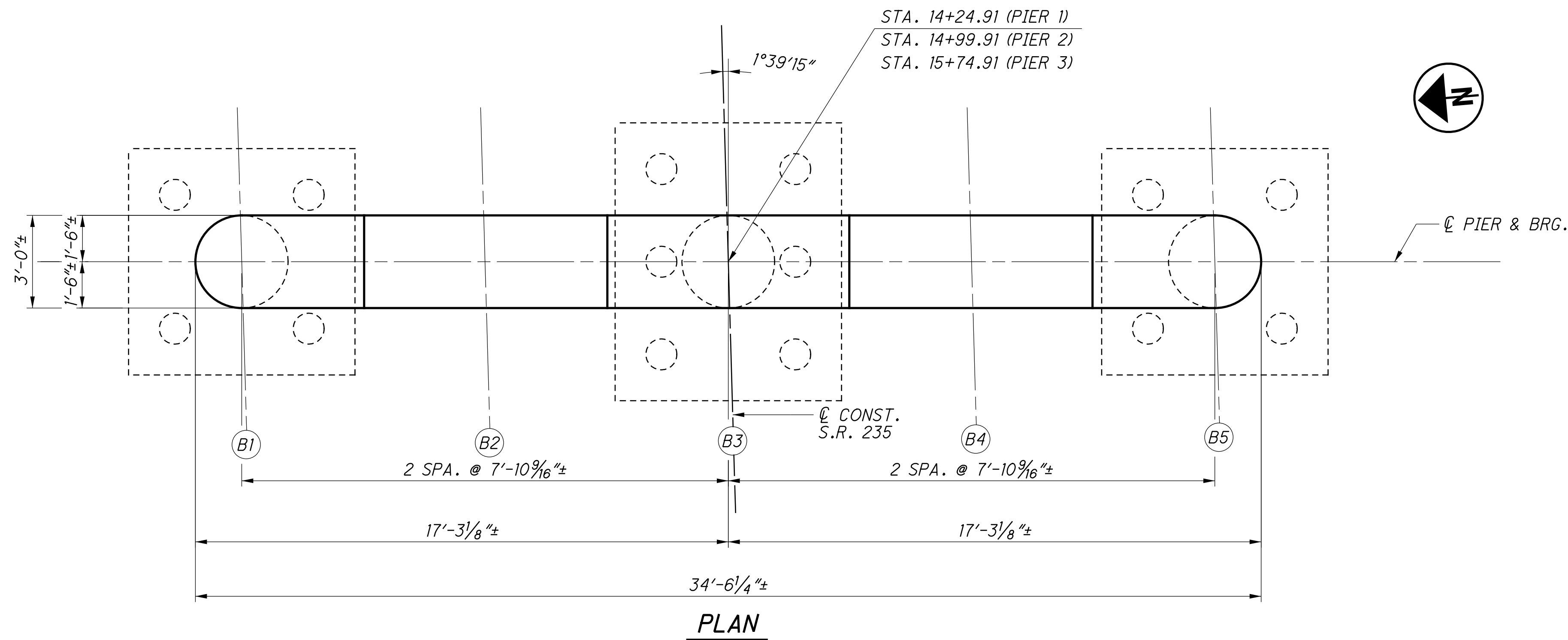
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CHECKED  
DJC

STRUCTURE FILE NUMBER  
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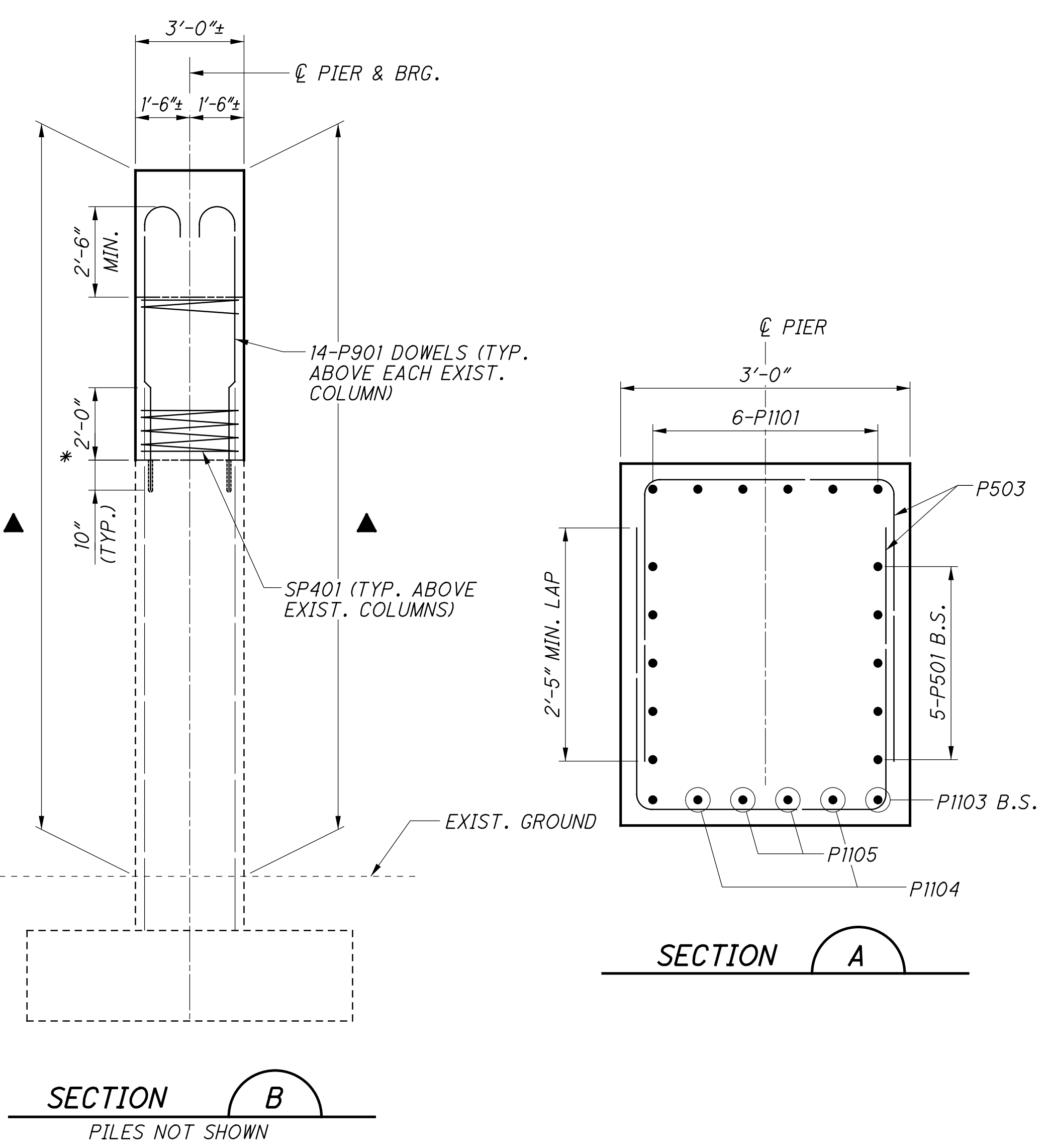
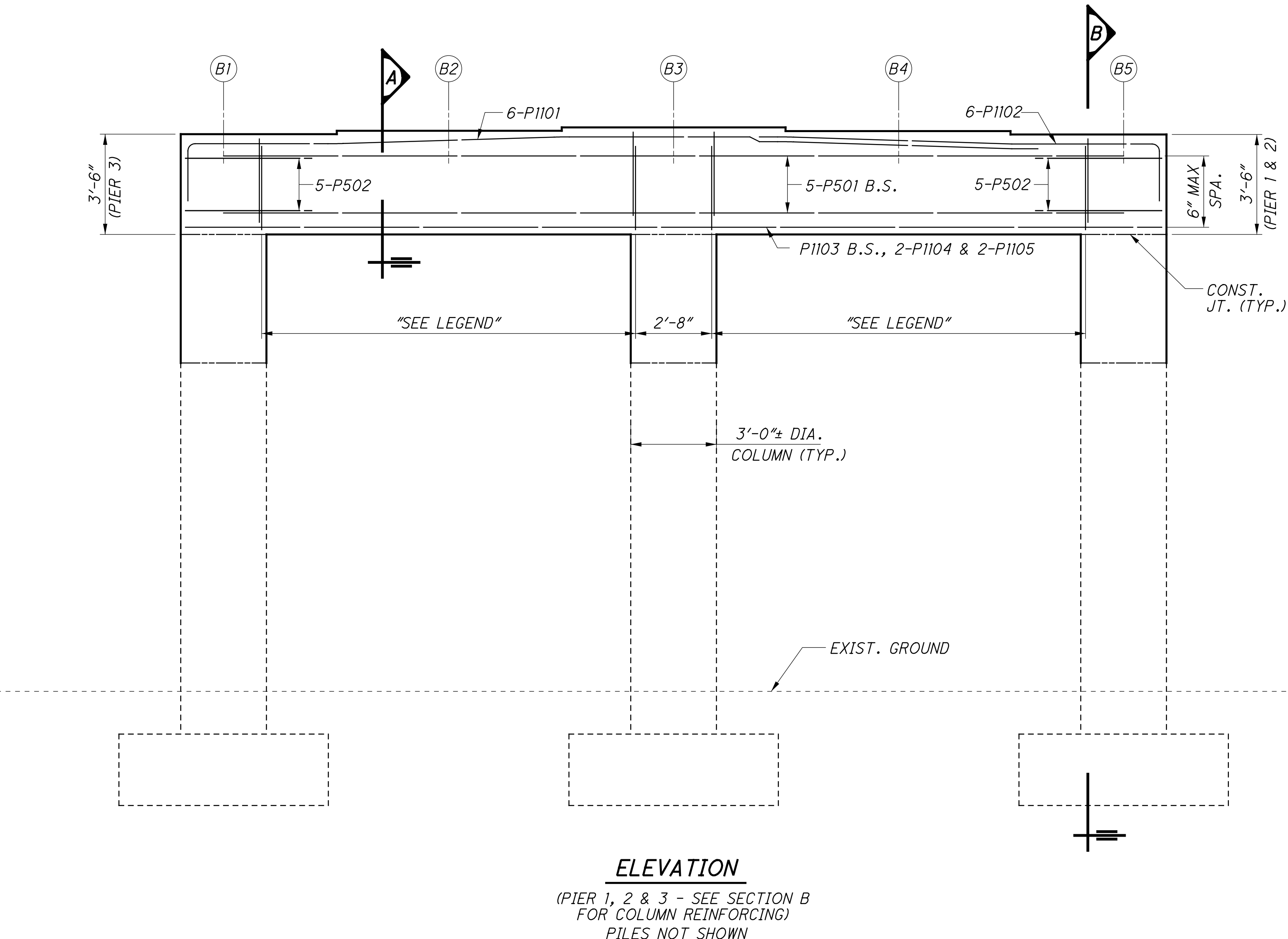
PIER SEAT ELEVATIONS					
PIER 1	Ⓑ1	Ⓑ2	Ⓑ3	Ⓑ4	Ⓑ5
	831.52	831.64	831.76	831.64	831.51
PIER 2	Ⓑ1	Ⓑ2	Ⓑ3	Ⓑ4	Ⓑ5
	831.81	831.93	832.06	831.93	831.81
PIER 3	Ⓑ1	Ⓑ2	Ⓑ3	Ⓑ4	Ⓑ5
	831.57	831.69	831.82	831.70	831.57

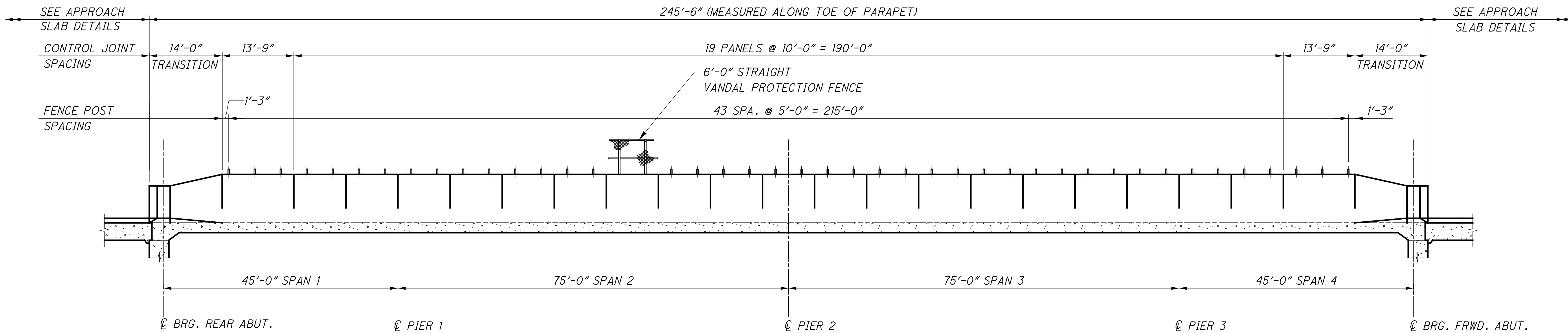
**LEGEND:**

STIRRUPS: 17 PAIRS OF P503 SPA. @ 10" = 13'-1 1/8" (PIER 1 & 3)  
 19 PAIRS OF P503 SPA. @ 9" = 13'-1 1/8" (PIER 2)

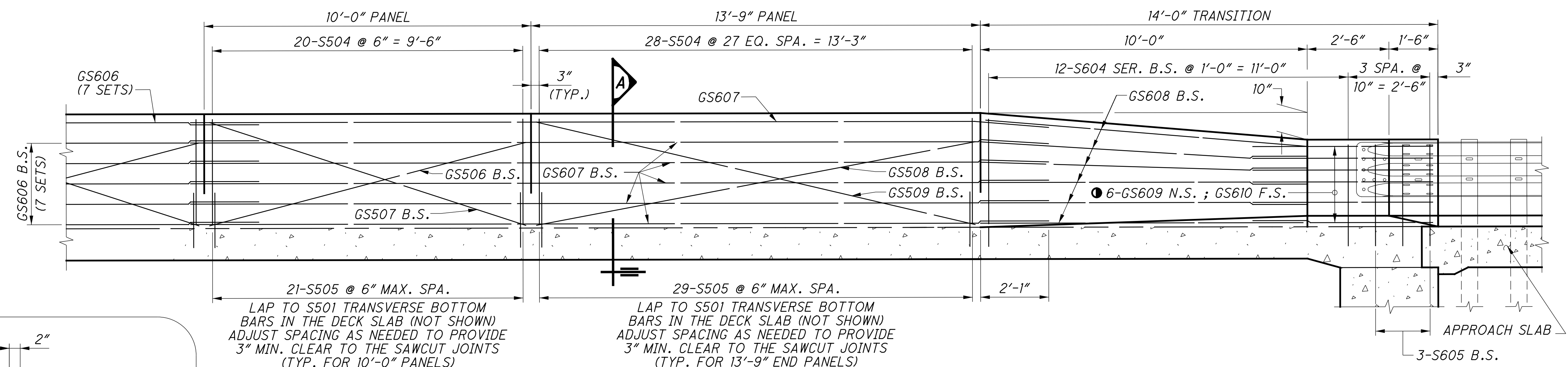
▲ INDICATES LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

\* SEE NOTES ON SHT. NO. 7/24 FOR EXISTING COLUMN & REINFORCING STEEL REMOVAL REQUIREMENTS.

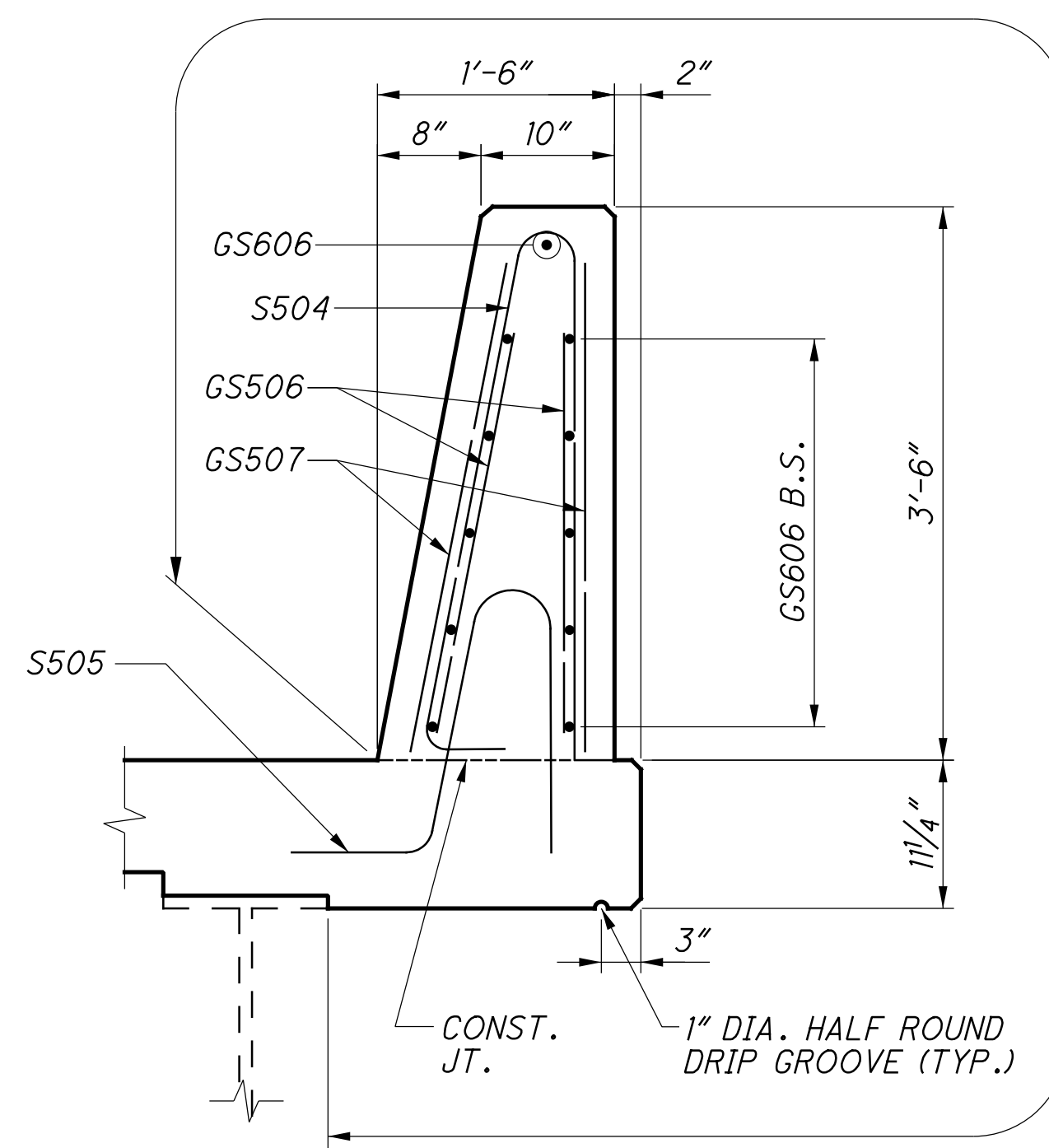




**PARAPET ELEVATION**  
LEFT PARAPET SHOWN,  
RIGHT SIMILAR



**PARAPET DETAILS**



**SECTION A**  
DECK SLAB REINFORCING NOT SHOWN

**NOTES:**

1. DIAGONAL STIFFENING BARS ARE TYPICAL FOR EACH OF THE DIFFERENT SAWCUT PANEL LENGTHS. STIFFENING BARS ARE NOT USED IN THE 14'-0" TRANSITIONS.
2. REINFORCEMENT DESIGNATED WITH A "GS" PREFIX ARE GFRP BARS.
3. LAP SPLICE LENGTH FOR ALL HORIZONTAL GFRP REBAR = 2'-1" MINIMUM.
4. FOR DETAILS, SECTIONS & NOTES NOT SHOWN, SEE STANDARD DRAWING SBR-1-20.
5. FOR FENCE DETAILS NOT SHOWN, SEE STANDARD DRAWING. VPF-1-90.
6. FOR APPROACH SLAB DETAILS, SEE SHT. 22/24.

**LEGEND:**

- ▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- GS609 BAR MAY BE PROVIDED AS GALVANIZED COATED STEEL REINFORCEMENT IF A GFRP FABRICATED SHAPE IS NOT AVAILABLE

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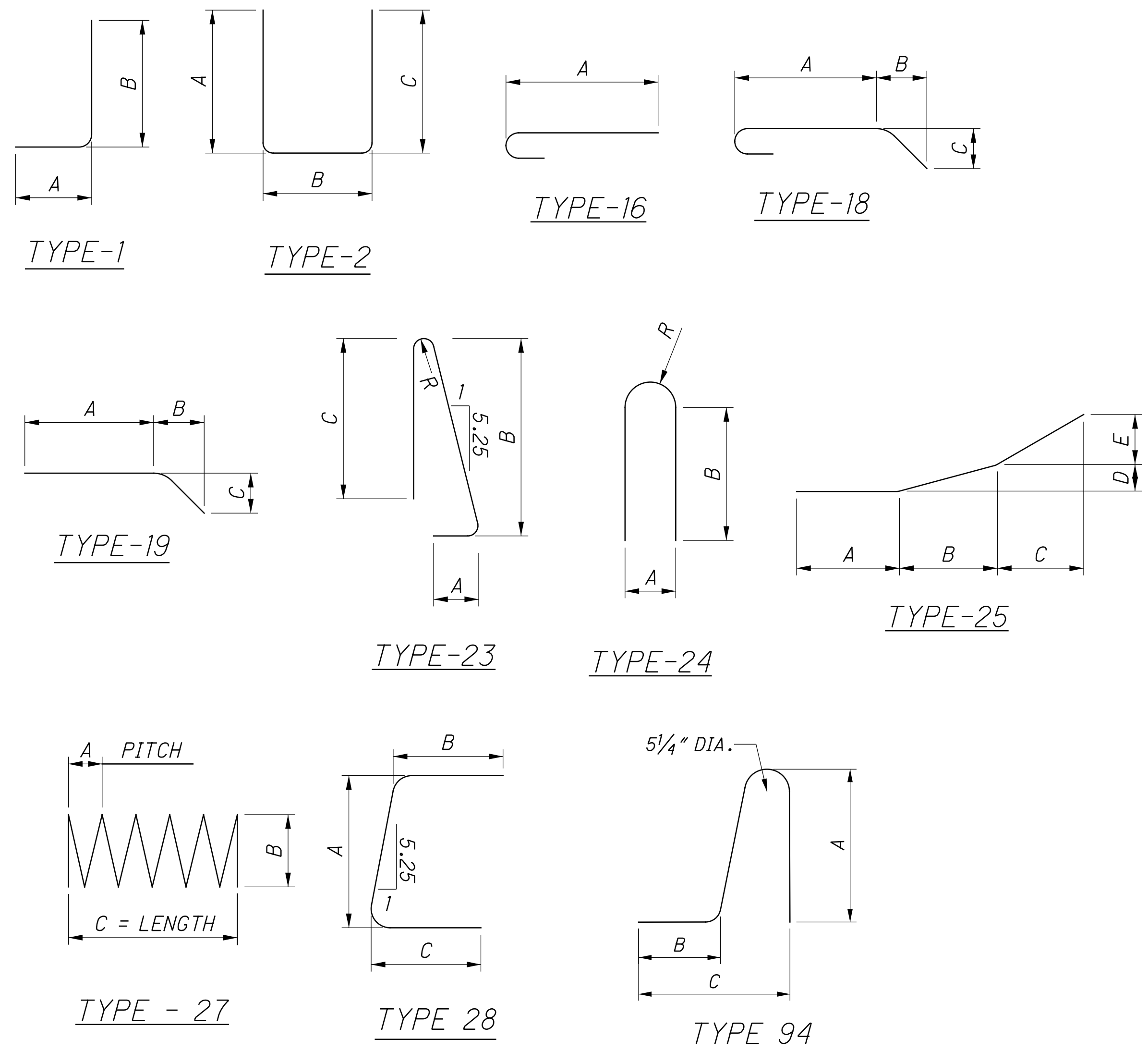
 DESIGN AGENCY GPD GROUP 1801 Watermark Drive, Suite 210, Columbus, OH 43215 614.210.0751 Copyright © 2019 GPD Group, Inc.	REVIEWED DGN STRUCTURE FILE NUMBER 5709660	DATE 3-13-20	
	DRAWN RFV REVISED	DESIGNED REV CHECKED DUC	PARAPET DETAILS BRIDGE NO. MOT-235-0022L S.R. 235 (CHAMBERSBURG ROAD) OVER S.R. 4
	MOT-235-0.22L PID No. 99860		21/24
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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	
ABUTMENTS													
A501	60	60	120	2'-11"	350	1	2'-3"	0'-10"					
A502	30	30	60	6'-2"	386	2	1'-6"	3'-5"	1'-6"				
A503	4	4	8	36'-2"	302	STR							
A504	20	20	40	5'-4"	223	STR							
A505	6	6	12	9'-2"	115	STR							
A506	6	6	12	9'-7"	120	STR							
A507	6	6	12	5'-4"	67	STR							
A508	2	2	4	3'-6"	15	STR							
A509	2	2	4	5'-9"	24	19	2'-0"	3'-5"	1'-7"				
A510	2 SR OF 3	2 SR OF 3	4 SR OF 3	7'-2" TO 9'-8"	105	2	3'-0" TO 4'-3"	1'-5"	3'-0" TO 4'-3"			0'-7 1/2"	
A511	4	4	8	10'-4"	86	2	4'-7"	1'-5"	4'-7"				
A512	6	6	12	5'-10"	73	STR							
A513	2	2	4	3'-9"	16	STR							
A514	2	2	4	6'-2"	26	19	2'-0"	3'-10"	1'-7"				
A801	5	5	10	36'-2"	966	STR							
				TOTAL	2,874	LBS							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
PIERS											
P501	30	31'-6"	986	STR							
P502	30	10'-6"	329	24	2'-8"	3'-2"				1'-4"	
P503	212	8'-5"	1861	2	3'-0"	2'-8"	3'-0"				
P901	126	9'-1"	3891	16	7'-10"						
P1101	18	32'-8"	3124	1	3'-0"	30'-0"					
P1102	18	16'-10"	1610	1	3'-0"	14'-2"					
P1103	6	31'-6"	1004	STR							
P1104	6	33'-7"	1071	STR							
P1105	6	34'-1"	1087	STR							
SP401	9	176'-0"	1058	27	0'-3"	2'-8"	4'-6"				
			TOTAL	16,021	LBS						

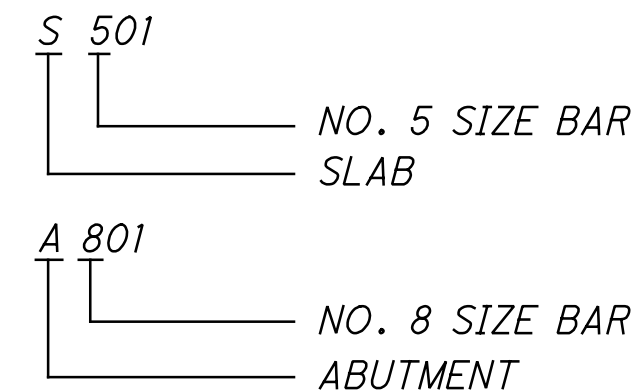
**BAR BENDING DIAGRAM**



**NOTES:**

1. BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE GALVANIZED COATED, SEE SHEET [2/24] NOTE.
3. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES STANDARD BEND.
4. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES:



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REINFORCING SCHEDULE  
BRIDGE NO. MOT-235-0022L  
S.R. 235 (CHAMBERSBURG ROAD) OVER S.R. 4

MOT-235-0.22L  
PID No. 99860

DESIGNED BY: REV: CHECKED BY: DUC

DRAWN BY: RFV REVISIONS

REVIEWED BY: DGN

DATE: 3-13-20

STRUCTURE FILE NUMBER: 5709660

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
SUPERSTRUCTURE - STEEL REINFORCEMENT											
S401	376	30'-0"	7535	STR							
S402	47	20'-10"	654	STR							
S403	1022	9'-8"	6599	2	7'-9"	0'-6"	1'-8"				
S501	1022	36'-2"	38552	STR							
S502	352	30'-0"	11014	STR							
S503	44	24'-10"	1140	STR							
S504	872	7'-1 1/2"	6480	23	0'-6"	3'-3 1/2"	3'-4"			0'-1 1/2"	
S505	914	4'-4"	4131	94	1'-8"	0'-10"	1'-7 1/4"				
S601	120	30'-0"	5407	STR							
S602	80	15'-11"	1913	STR							
S603	40	20'-6"	1232	STR							
S604	8 SR OF 12 TO	3'-10" 4'-9"	619	1	1'-0"	3'-0" TO 3'-11"				0'-1"	
S605	24	3'-11"	141	1	1'-0"	3'-1"					
S801	8	36'-2"	773	STR							
TOTAL STEEL REINFORCEMENT			86,190	LBS							

MARK	NUMBER	LENGTH	TOTAL FEET	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
SUPERSTRUCTURE - GFRP REINFORCEMENT											
GS506	76	10'-0"	760	STR							
GS507	76	10'-2"	773	STR							
GS508	8	13'-7"	109	STR							
GS509	8	13'-9"	110	STR							
TOTAL NO. 5 GFRP			1752	FT							
GS606	154	30'-0"	4620	STR							
GS607	44	26'-3"	1155	STR							
GS608	48	10'-0"	480	STR							
GS609	24	5'-8"	136	25	1'-10"	2'-5"	1'-4"	0'-1 1/2"	0'-5"		
GS610	24	5'-8"	136	STR							
TOTAL NO. 6 GFRP			6527	FT							

GS609 BAR MAY BE PROVIDED AS GALVANIZED COATED STEEL REINFORCEMENT IF A GFRP FABRICATED SHAPE IS NOT AVAILABLE

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	
DIAPHRAGMS													
D501	52	52	104	9'-0"	976	2	2'-11"	3'-5"	2'-11"				
D502	26	26	52	7'-2"	389	2	2'-5"	2'-7"	2'-5"				
D503	6	6	12	11'-10"	148	2	4'-4"	3'-5"	4'-4"				
D801	23	23	46	4'-9"	583	18	2'-7"	1'-0"	1'-0"				
D802	10	10	20	36'-0"	1922	STR							
TOTAL					4,018	LBS							

MOT - 235 - 0.22L  
PID No. 99860

REINFORCING SCHEDULE  
BRIDGE NO. MOT-235-0022L  
S.R. 235 (CHAMBERSBURG ROAD) OVER S.R. 4

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