

O:\Transportation\Projects\000T\DisTr\ct 12\LAK306_0518\04094\Design\Roadway\Sheets\04094_GG003.dgn 4/23/2021 2:29:40 PM Aakuraju

SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	AA	CHECKED	EAK
7	8	12	13	24	56						01/IMS/BR		EXT	TOTAL							
STRUCTURE OVER 20 FOOT SPAN (LAK-306-0518) (CONTINUED)																					
					333,831						333,831	509	10000	333,831	LB	EPOXY COATED REINFORCING STEEL					
					1,270						1,270	510	10000	1,270	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT					
					856						856	511	34447	856	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	53				
					105						105	511	34450	105	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)					
					43						43	511	42012	43	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS					
					63						63	511	44112	63	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING					
					161						161	511	51512	161	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK					
					632						632	512	10050	632	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)					
					1,924						1,924	512	10100	1,924	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)					
					3						3	512	33000	3	SY	TYPE 2 WATERPROOFING					
					600						600	512	74000	600	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES					
					1,100						1,100	513	10201	1,100	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	53				
					10,098						10,098	513	20000	10,098	EACH	WELDED STUD SHEAR CONNECTORS					
					30,500						30,500	513	90000	30,500	LB	STRUCTURAL STEEL, MISC.: MOMENT PLATE RETROFITS	74, 75				
					35,800						35,800	514	00050	35,800	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL					
					35,800						35,800	514	00056	35,800	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT					
					35,800						35,800	514	00060	35,800	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT					
					35,800						35,800	514	00066	35,800	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT					
					50						50	514	00504	50	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL					
					15						15	514	10000	15	EACH	FINAL INSPECTION REPAIR					
					149						149	516	11210	149	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL					
					85						85	516	13200	85	SF	1/2" PREFORMED EXPANSION JOINT FILLER					
					18						18	516	44100	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (10"x12.5"x2.62") (NEOPRENE) AND LOAD PLATE (11"x13.5"x1.62") (BEVELED)					
					36						36	516	44200	36	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (14"x17"x3.17") (NEOPRENE) AND LOAD PLATE (15"x18"x1.62") (BEVELED)					
					9						9	516	44200	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (14"x17"x3.17") (NEOPRENE) AND LOAD PLATE (15"x25"x1.62") (BEVELED)					
					LS						LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	53				
					49						49	518	21200	49	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC					
					174						174	518	40000	174	FT	6" PERFORATED CORRUGATED PLASTIC PIPE					
					16						16	518	40012	16	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE					
					109						109	SPECIAL	51900100	109	SF	COMPOSITE FIBER WRAP SYSTEM	54				
					50						50	519	11100	50	SF	PATCHING CONCRETE STRUCTURE					
					280						280	526	15000	280	SY	REINFORCED CONCRETE APPROACH SLABS (T=13")					
					126						126	526	90030	126	FT	TYPE C INSTALLATION					
					3,392						3,392	SPECIAL	53000600	3,392	SF	STRUCTURES, FORMLINERS	54				
					789						789	607	39901	789	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	55				
					396						396	607	39994	396	FT	TEMPORARY VANDAL FENCE, TYPE B					
					50						50	843	50000	50	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR					
MAINTENANCE OF TRAFFIC																					
		160									160	614	11110	160	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE					
			1	1							2	SPECIAL	61411300	2	EACH	WORK ZONE TRAFFIC SIGNAL	8				
					4						4	614	12384	4	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)					
					65						LS	614	12420	LS		DETOUR SIGNING					
											65	614	13000	65	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC					
		7									19	614	13310	19	EACH	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)					
		8									8	614	13312	8	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)					
		15									27	614	13360	27	EACH	OBJECT MARKER, TWO WAY					
			24								24	614	18601	24	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8				
					0.72						0.72	614	21000	0.72	MILE	WORK ZONE CENTER LINE, CLASS I					
					1.59						1.59	614	22010	1.59	MILE	WORK ZONE EDGE LINE, CLASS I, 6"					
					2,474						2,474	614	23010	2,474	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"					
					472						472	614	24000	472	FT	WORK ZONE DOTTED LINE, CLASS I					
					199						199	614	26000	199	FT	WORK ZONE STOP LINE, CLASS I					
					7						7	614	30000	7	EACH	WORK ZONE ARROW, CLASS I					

GENERAL SUMMARY

LAK - 306 - 5.18

GENERAL NOTES:

PROPOSED WORK: MAJOR REHABILITATION

THE EXISTING DECK WILL BE REPLACED WITH A NEW COMPOSITE REINFORCED CONCRETE DECK ON THE EXISTING 6-SPAN SUPERSTRUCTURE. THE EXISTING BACKWALLS WILL BE REMOVED AND RECONSTRUCTED AND THE JOINTS WILL BE REPLACED. ALL EXISTING BEARINGS WILL BE REPLACED WITH NEW ELASTOMERIC BEARINGS. THE PIER CAPS WILL BE RAISED. MOMENT RETROFITS WILL BE ADDED. WEB RETROFITS WILL BE ADDED TO BEAM LINE 7 AT PIER 3. EXISTING STRUCTURAL STEEL WILL BE PAINTED.

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD BRIDGE DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

AS-1-20	REVISED	7/17/20	SS843	DATED	10/18/2019
AS-1-15	REVISED	7/17/15			
AS-2-15	REVISED	1/18/19			
BR-2-15	REVISED	7/17/15			
EXJ-4-87	REVISED	1/19/18			
GSD-1-19	DATED	1/18/19			
PCB-91	REVISED	7/17/20			
TVPF-1-18	DATED	7/20/18			
VPF-1-90	REVISED	7/20/18			

AND THE FOLLOWING HIGHWAY LIGHTING DRAWINGS:

HL-20.14	DATED	4/17/20
HL-30.21	DATED	4/17/20
HL-30.31	DATED	4/17/20
HL-50.21	DATED	4/17/20

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.

DESIGN LOADING:

DECK AND SUPERSTRUCTURE: HL-93
SUBSTRUCTURE: CF= 2000 (57)
FOUNDATION: CF= 2000 (57)
FUTURE WEARING SURFACE = 0.06 K/SQ. FT.

DESIGN DATA:

CONCRETE, QC/QA CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE, QC/QA CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (PARAPET)
CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60000 PSI
STRUCTURAL STEEL - ALL NEW STEEL, ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50000 PSI.
EXISTING STEEL, ASTM MINIMUM YIELD STRENGTH 33000 PSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

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

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

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). 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. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05. THIS WORK CONSISTS OF:

- A. REMOVAL OF ENTIRE EXISTING DECK, CURBS, RAILS, SCUPPERS, FENCING, CROSS-FRAMES AT PIER 3, AND BEARINGS. THE TOTAL EXISTING BRIDGE DECK THICKNESS IS APPROXIMATELY 10".
- B. 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 DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF 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 TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.
- C. REMOVALS METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVAL OVER STRUCTURAL MEMBERS (STEEL GIRDERS), 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 STRUCTURAL MEMBERS. DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G. FINISHING MACHINE, SCUPPER 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 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 ENGINEER TO THE DIRECTOR. OBTAIN DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

- D. EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.
- E. REMOVAL OF PORTIONS OF WINGWALLS AND ABUTMENTS, INCLUDING BACKWALLS, AS SHOWN ON PLANS.
- F. MODIFY EXISTING PIERS AS SHOWN ON PLANS.
- G. 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 NEW CONCRETE.
- H. 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.
- I. 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.
- J. EXISTING UTILITIES SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.

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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 511. CLASS QC2 CONCRETE WITH QC/QA. BRIDGE DECK, AS PER PLAN

THE REMOVAL OF THE DECK INCLUDES FIELD SURVEY OF THE BOTTOM OF EXISTING GIRDERS/BEAMS BEFORE AND AFTER DECK REMOVAL TO OBTAIN THE REBOUND. THE REBOUND WILL BE INPUT INTO A SPREADSHEET PROVIDED TO THE CONTRACTOR BY THE ENGINEER OF RECORD TO OBTAIN SCREED ELEVATIONS REQUIRED FOR DECK PLACEMENT OPERATIONS. A PDF OF THIS SPREADSHEET SHALL BE INCLUDED WITH THE AS-BUILT PLANS.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN:

ALL REQUIREMENTS OF C&MS 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH C&MS 501.06, TO THE ENGINEER. PROVIDE THE ENGINEER WITH "AS-BUILT" DRAWINGS ACCORDING TO C&MS 513.06, EXCEPT C&MS 501.04 DOES NOT APPLY. UPON RECEIPT OF THE ENGINEER'S ACCEPTANCE, SUPPLY A COPY OF THE DRAWINGS, ACCORDING TO SUPPLEMENT 1002, TO THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM: PROPOSED INTERMEDIATE CROSS FRAMES AT PIER 3 IN BAYS 6 AND 7.

INSPECTION OF EXISTING STRUCTURAL STEEL:

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND 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.

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

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05.

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 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 WORK AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

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 2.31 KIP.

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

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

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

UTILITY LINES:

UTILITY LINES: THE UTILITY(IES) SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

MECHANICAL CONNECTORS:

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATION WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

MECHANICAL CONNECTORS SHALL DEVELOP A MINIMUM ULTIMATE STRENGTH OF 125% OF THE REQUIRED YIELD STRENGTH OF THE MATERIAL THEY CONNECT. CONNECTOR AND DOWEL BARS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE FOR ITEM 509, EPOXY COATED REINFORCING STEEL.

ITEM 512. SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

THE COLOR OF THE EPOXY SEALER SHALL BE FC 595B-25630, LIGHT GREY, SEMI-GLOSS. FOR AREAS WHICH HAVE FORMLINER, THE COLOR SHALL BE FC 595B-23578, TAN, SEMI-GLOSS.

ITEM 514. FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT:

IN ACCORDANCE WITH CMS 514, ALL NEW AND EXISTING STRUCTURAL STEEL SHALL BE PREPARED AND PAINTED WITH THE OZEU COATING SYSTEM. THE FINISH COAT SHALL BE FEDERAL COLOR 595B-15180, MEDIUM BLUE, GLOSS.

O:\Transportation\Projects\ODOT\District 12\AK306_0518\04094\Design\Structures\AK306_0518C\Sheets\306_0518CGN001.dgn 4/23/2021 2:49:53 PM cjackman

 8455 Palms Plaza, Suite 300 Columbus, Ohio 43240	DESIGN AGENCY PRIMEVY 8455 Palms Plaza, Suite 300 Columbus, Ohio 43240	DATE 10/15/2020	REVIEWED CCJ	DRAWN AMT	DESIGNED AMT	CHECKED KDC	STRUCTURE FILE NUMBER 4303997	REVISIONS REVISED	GENERAL NOTES BRIDGE NO. LAK-306-0518 SR 306 OVER IIR-90	LAK-306-5.18 PID No. 104094	3 / 37 53 87
--	--	--------------------	-----------------	--------------	-----------------	----------------	----------------------------------	----------------------	--	--------------------------------	--------------------

O:\Transportation\Projects\ODOT\District 12\AK306_0518_104094\Design\Structures\AK306_0518C\Sheets\306_0518CE0001.dgn 4/23/2021 1:58:23 PM adesimone

ESTIMATED QUANTITIES - LAK-306-0518

CALCULATED BY: JAT 08-17-20
CHECKED BY: KDC 08-19-20

NOTES:

- QUANTITIES FOR THE PROPOSED SIDEWALK AND CURB OVER THE APPROACH SLABS, ARE INCLUDED IN THE ROADWAY SUBSUMMARY. PLEASE REFER TO SHEET 25
87.

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					2 / 37
202	22900	390	SY	APPROACH SLAB REMOVED				390	
202	23500	390	SY	WEARING COURSE REMOVED				390	
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
503	21100	23	CY	UNCLASSIFIED EXCAVATION				23	
509	10000	333,831	LB	EPOXY COATED REINFORCING STEEL	13,273	7,675	312,883		
510	10000	1,270	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	570	700			
511	34447	856	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			856		3 / 37
511	34450	105	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			98	7	
511	42012	43	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		43			
511	44112	63	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	63				
511	51512	161	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK			161		SEE NOTE 1
512	10050	632	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			578	54	
512	10100	1,924	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	238	904	782		
512	33000	3	SY	TYPE 2 WATERPROOFING	3				
512	74000	600	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	38	562			
513	10201	1,100	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			1,100		
513	20000	10,098	EACH	WELDED STUD SHEAR CONNECTORS			10,098		
513	90000	30,500	LB	STRUCTURAL STEEL, MISC., MOMENT PLATE RETROFITS			30,500		
514	00050	35,800	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			35,800		
514	00056	35,800	SF	FIELD PAINTING STRUCTURAL STEEL, PRIME COAT			35,800		
514	00060	35,800	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			35,800		
514	00066	35,800	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			35,800		
514	00504	50	MN HR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			50		
514	10000	15	EACH	FINAL INSPECTION REPAIR			15		
516	11210	149	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			149		
516	13200	85	SF	1/2" PREFORMED EXPANSION JOINT FILLER	85				
516	44100	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (10"x12 1/2"x2.62") (NEOPRENE), AND LOAD PLATE (11"x13 1/2"x1 5/8" BEVELED)	18				
516	44200	36	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (14"x17"x3.17") (NEOPRENE), AND LOAD PLATE (15"x18"x1 5/8" BEVELED)		36			
516	44200	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES (14"x17"x3.17") (NEOPRENE), AND LOAD PLATE (15"x25"x1 5/8" BEVELED)		9			
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF STRUCTURE, AS PER PLAN					2 / 37
518	21200	49	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	49				
518	40000	174	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	174				
518	40012	16	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	16				
SPECIAL	51900100	109	SY	SPECIAL - COMPOSITE FIBER WRAP SYSTEM		109			
519	11100	50	SF	PATCHING CONCRETE STRUCTURE	50				
526	15000	280	SY	REINFORCED CONCRETE APPROACH SLAB (T=13")				280	
526	90030	126	FT	TYPE C INSTALLATION				126	
SPECIAL	53000600	3,392	SF	SPECIAL - STRUCTURE; FORMLINERS			3,392		
601	20000	1070	SY	CRUSHED AGGREGATE SLOPE PROTECTION				1070	
607	39901	789	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN			789		2 / 37
607	39994	396	FT	TEMPORARY VANDAL FENCE, TYPE B			396		
843	50000	50	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	50				

DESIGN AGENCY
PRIME
8415 Pulaski Place, Suite 300
Columbus, Ohio 43240

DESIGNED
JAT
CHECKED
KDC

DRAWN
JAT
REVISED

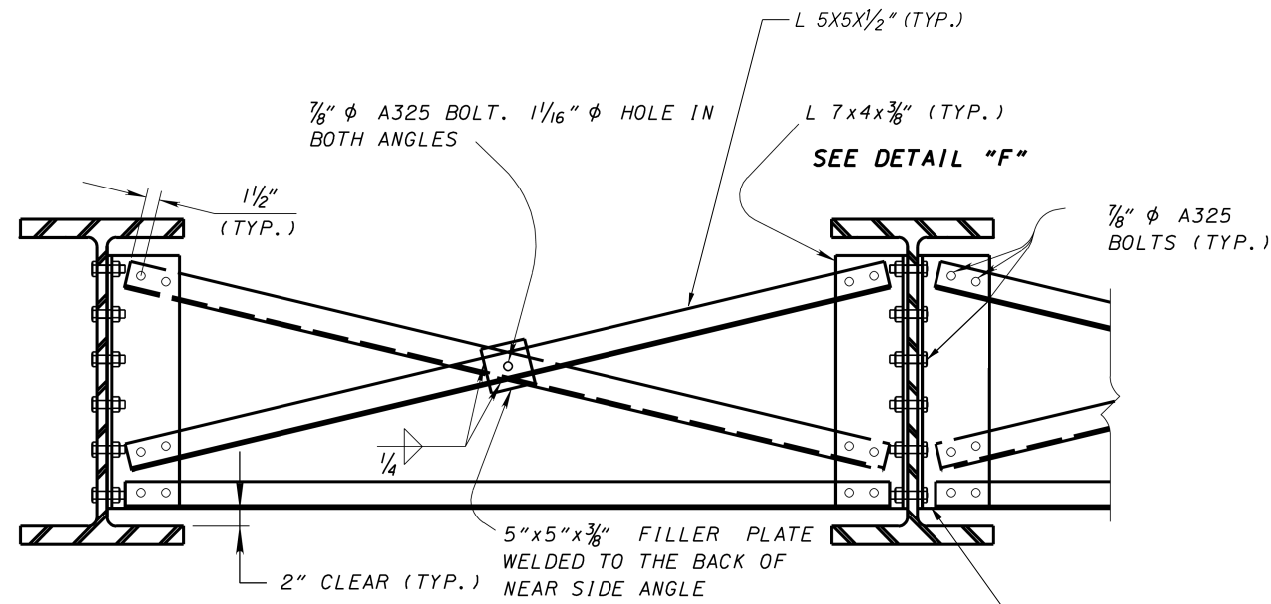
REVIEWED
CCJ
STRUCTURE FILE NUMBER
4303997

DATE
10/15/2020

ESTIMATED QUANTITIES
BRIDGE NO. LAK-306-0518
SR 306 OVER IR-90

LAK-306-5.18
PID No. 104094

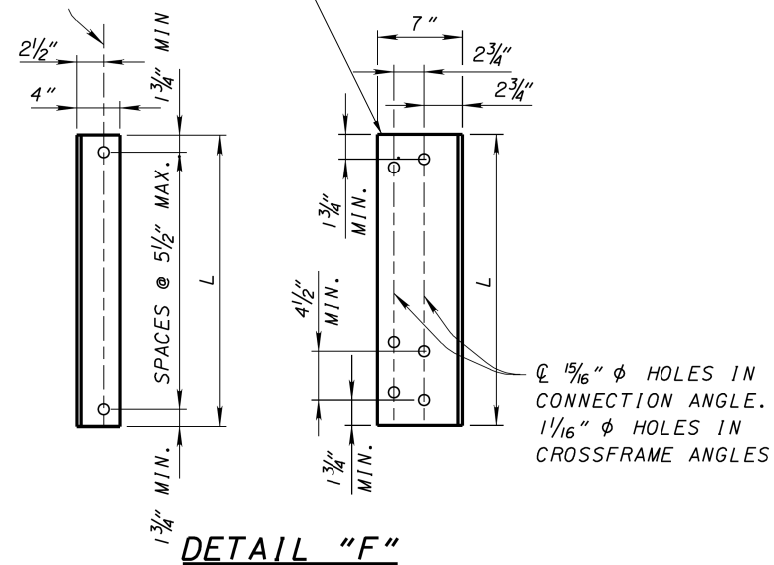
O:\Transportation\Projects\ODOT\District 12\LAK306_0518\104094\Design\Structures\LAK306_0518C\Sheets\306_0518CTS001A.dgn 4/23/2021 2:27:57 PM adesimone



INTERMEDIATE CROSS FRAME
(PIER 3, BAY 6 AND 7 ONLY)

FOR BOLT LAYOUT,
SEE MOMENT PLATE
RETROFIT DETAILS
ON SHEET 254/37

CLIP EDGE OF CONNECTION PLATE 45°
WHEN PROTRUDING BEYOND FLANGE



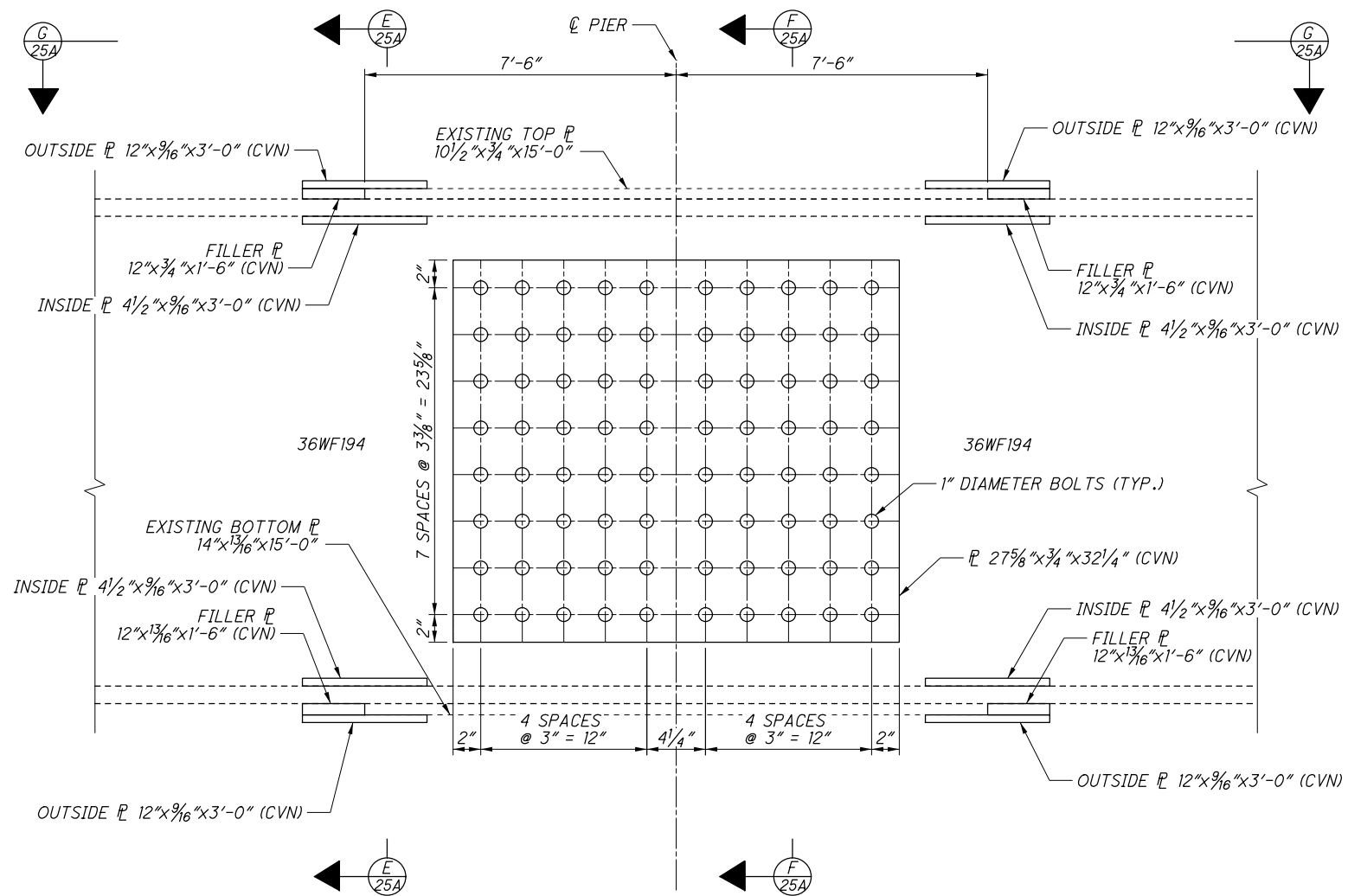
DETAIL "F"

$L = [D - (2 \times T_f) - 4]$
WHERE:
L = LENGTH (INCH)
D = DEPTH OF ROLLED BEAM (INCH)
 T_f = THICKNESS OF FLANGE (INCH)

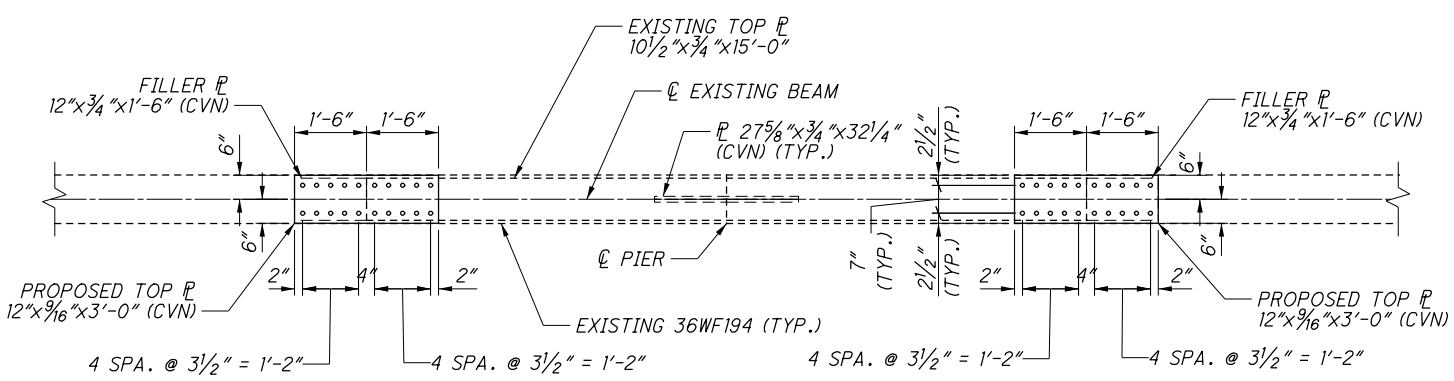
NOTES:

- FOR ADDITIONAL CROSS FRAME DETAILS AND NOTES,
SEE STANDARD DRAWING GSD-1-19.

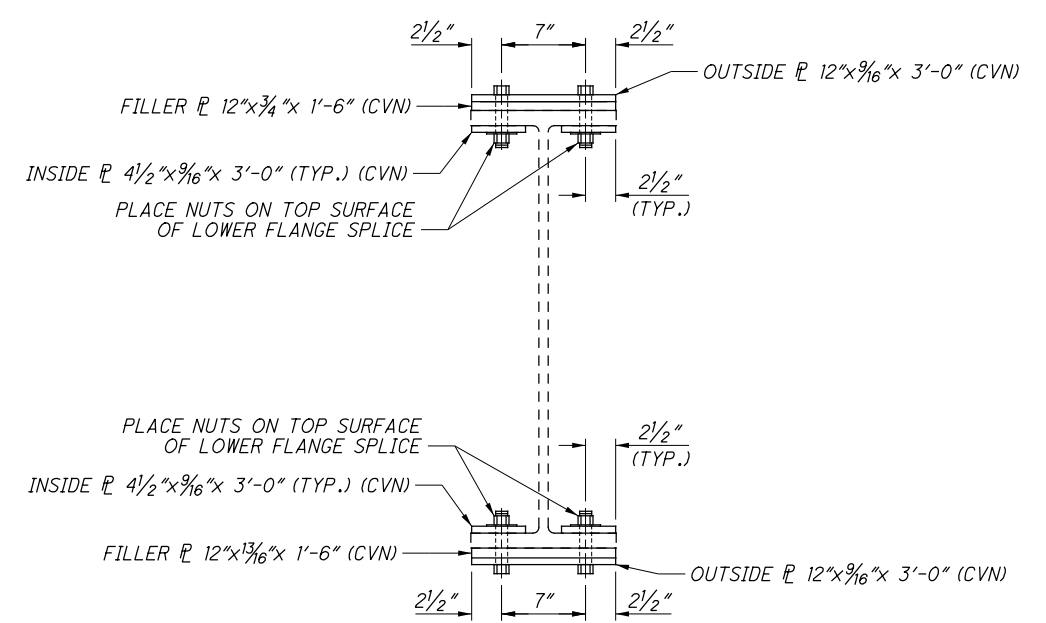
O:\Transportation\Projects\ODOT\District 12\AK306_0518\04094\Design\Structures\LAK306_0518CSD003A.dgn 4/23/2021 12:32:21 PM adesimone



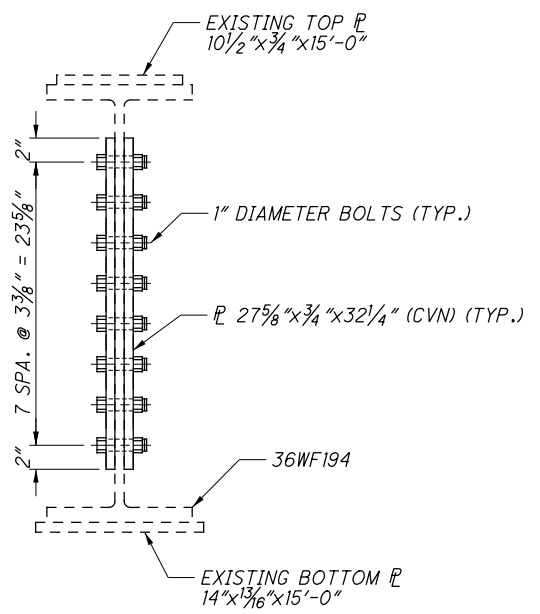
MOMENT PLATE RETROFIT AND WEB SPLICE DETAIL
 (DETAIL AT PIER 3, BEAM 7 ONLY)



G VIEW
 25A



E SECTION
 25A



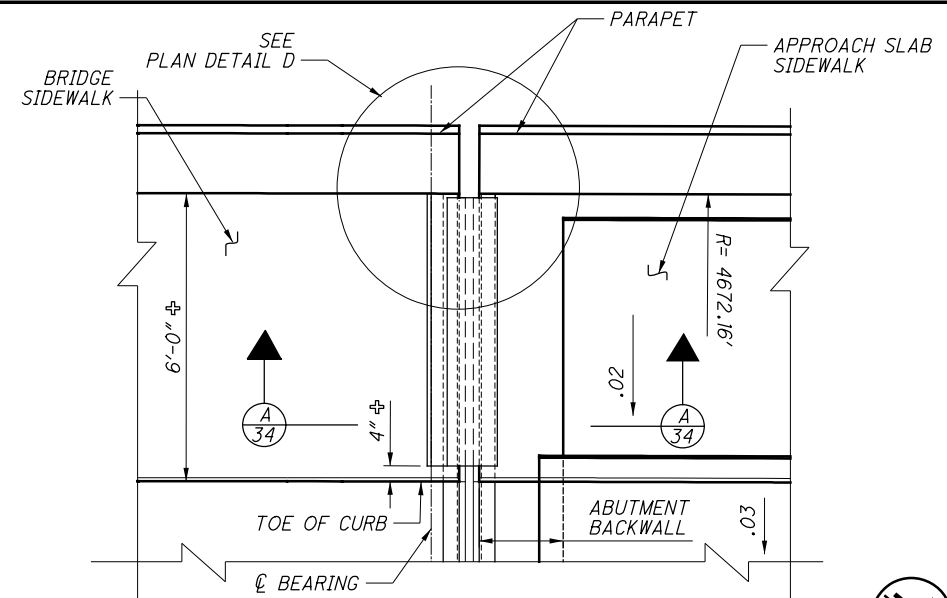
F SECTION
 25A

NOTES:

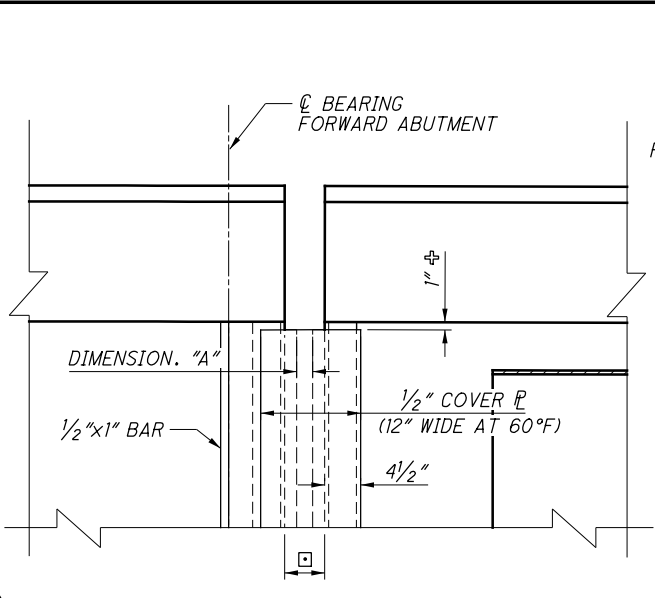
1. ALL NEW STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
2. WHERE A SHAPE OF PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER HIGH STRENGTH, ASTM A325 UNLESS OTHERWISE NOTED.
4. PAYMENT FOR ALL MATERIALS AND LABOR NECESSARY TO INSTALL WEB PLATE RETROFITS SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC., MOMENT PLATE RETROFITS.

DESIGN AGENCY PRIMEV <small>8415 Pulaski Place, Suite 300 Columbus Ohio 43240</small>	DATE 10/15/2020	REVIEWED CCJ	STRUCTURE FILE NUMBER 4303997	MOMENT PLATE DETAILS PIER 3, BEAM 7 ONLY
DRAWN AMT	CHECKED JAT	REVISIONS	BRIDGE NO. LAK-306-0518 SR 306 OVER IR-90	LAK-306-5.18 PID No. 104094
25A / 37				75A 87

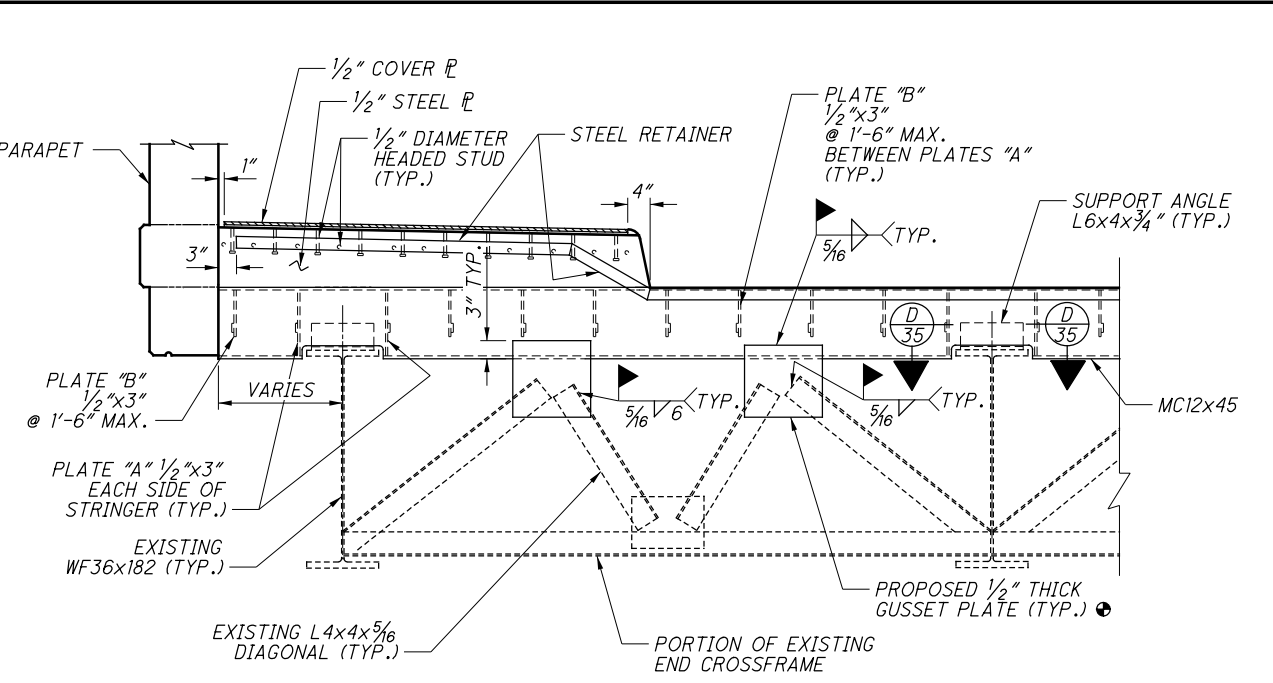
O:\Transportation\Projects\ODOT\District 12\LAK306_0518\104094\Design\Structures\LAK306_0518C\Sheets\306_0518CMD002.dgn 4/23/2021 12:22:01 PM adesimone



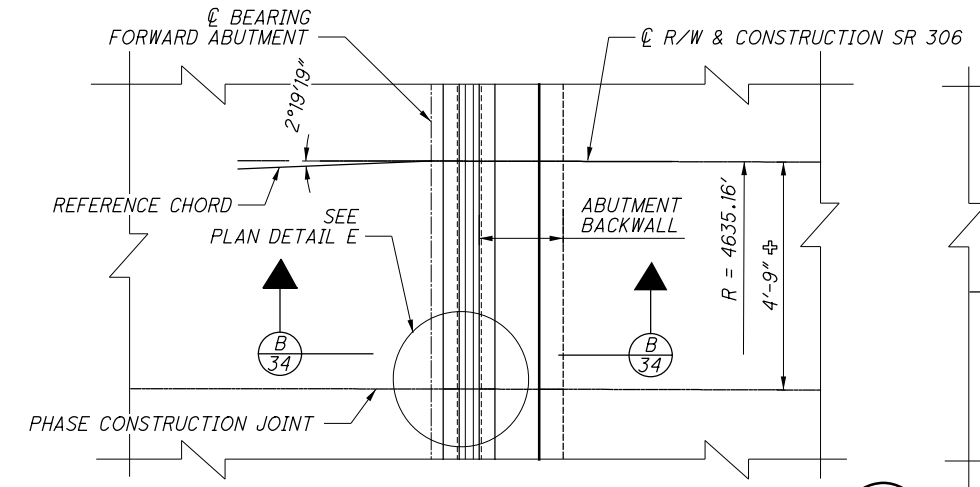
PARTIAL PLAN AT LEFT FORWARD ABUTMENT SIDEWALK



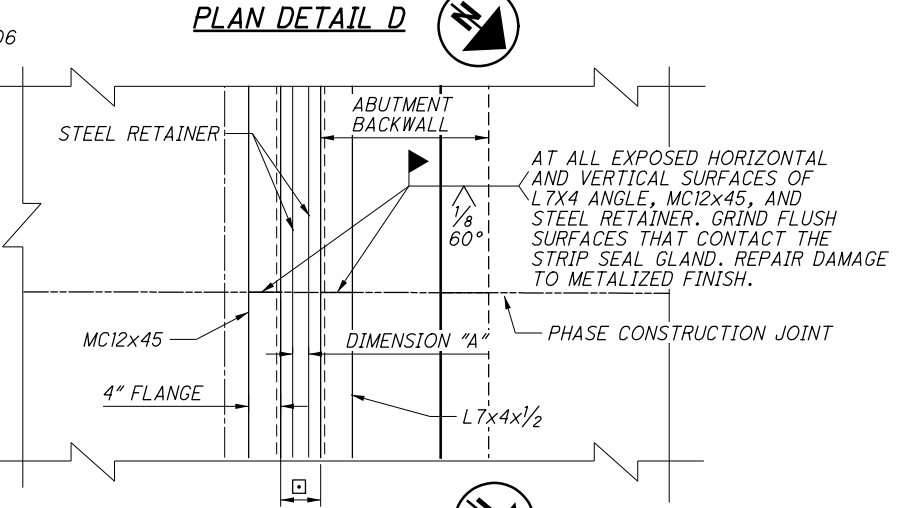
PLAN DETAIL D



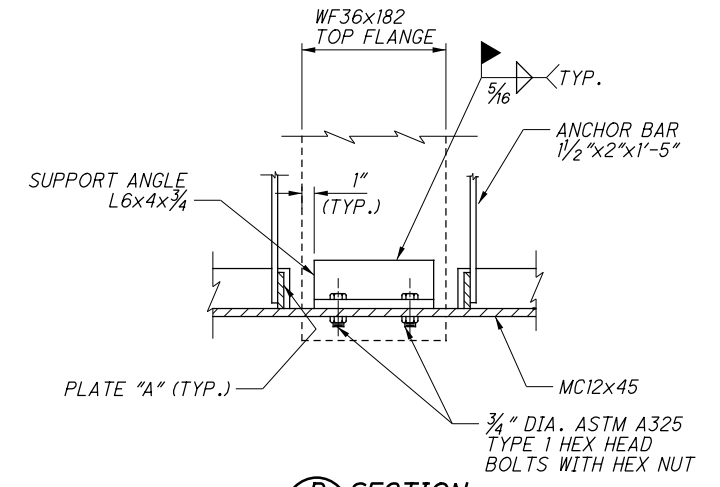
C SECTION
PARTIAL TRANSVERSE SECTION
34, 35



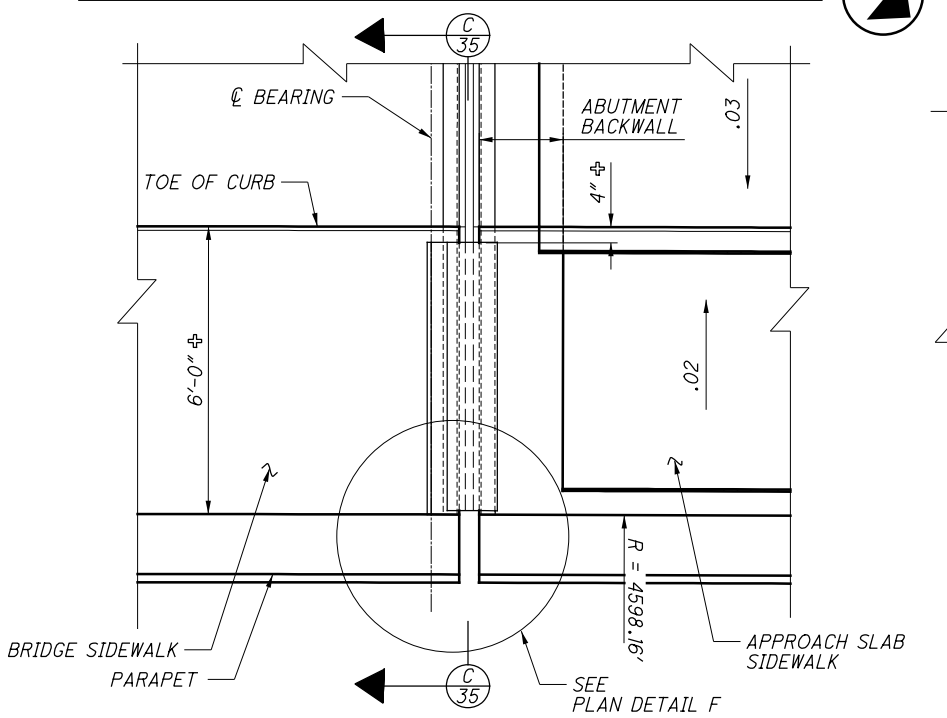
PARTIAL PLAN AT FORWARD ABUTMENT PHASE JOINT



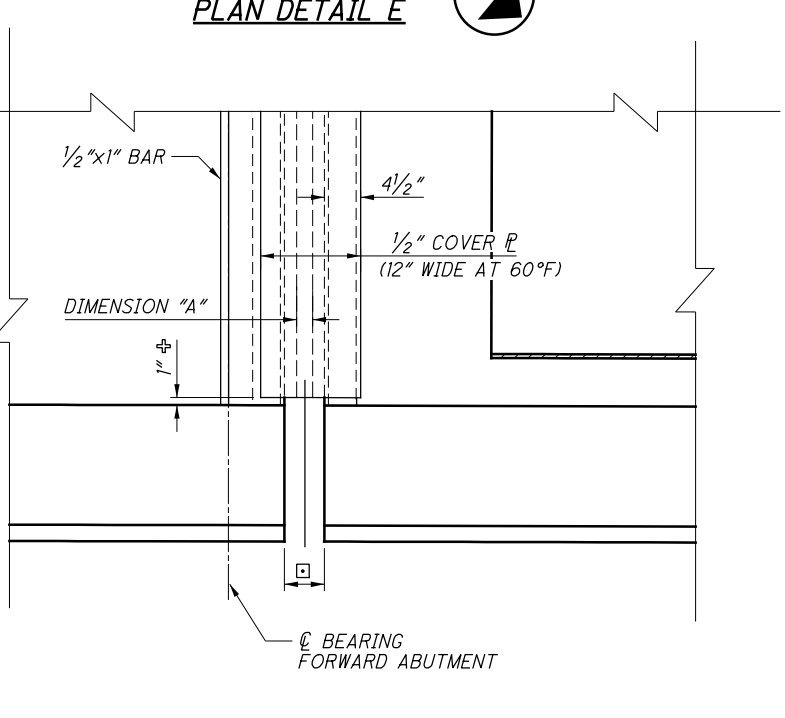
PLAN DETAIL E



D SECTION
35



PARTIAL PLAN AT RIGHT FORWARD ABUTMENT SIDEWALK



PLAN DETAIL F

NOTES

- SEE STANDARD DRAWING EXJ-4-87 FOR MORE EXPANSION JOINT INFORMATION AND DETAILS
- FOR DIMENSION "A" SEE SHEET 34/37.
- SEE STD. BRIDGE DWG. GSD-1-19 FOR DETAILS OF END CROSSFRAMES AND GUSSET PLATES.

LEGEND

- - THIS DIMENSION IS THE SUM OF (2 X STEEL RETAINER WIDTH PLUS DIMENSION "A")
- ⊕ - INDICATES THAT DIMENSION IS RADIAL
- ⊕ - INCLUDED WITH EXPANSION JOINT FOR COATING & PAYMENT.

DESIGN AGENCY 8415 Pulaski Place, Suite 300 Columbus, Ohio 43240	DATE 10/15/2020	DESIGNED BTJ	STRUCTURE FILE NUMBER 4303997
DESIGNED BTJ	REVIEWED CCJ	DRAWN BTJ	REVISION JAT
FORWARD ABUTMENT DECK JOINT DETAILS BRIDGE NO. LAK-306-0518 SR 306 OVER IR-90			
LAK-306-5.18		PID No. 104094	
35 / 37		85 / 87	