TRANSPORTATION CABINET

DEPARTMENT OF HIGHWAYS

BOONE COUNTY, KY & DEARBORN COUNTY, IN

I-275 OVER OHIO RIVER

CARROLL LEE CROPPER BRIDGE

BRIDGE 008B00052N

SUPERSTRUCTURE REHABILITATION

INDEX OF SHEETS

ESTIMATE OF QUANTITIES

BID ITEM CODE	0001	0214	0339 (0336)	1984	1985	2003	2014	2351	2363	2387
BID ITEM	(1) DGA BASE	(1) CL3 ASPH BASE 1.0D PG64-22	(2) CL3 ASPH SURF 0.38D PG64-22	DELINEATOR FOR BARRIER - WHITE	DELINEATOR FOR BARRIER - YELLOW	RELOCATE TEMP CONC BARRIER	(4) BARRICADE TYPE III	GURDRAIL-STEEL W BEAM-S FACE	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1
UNIT	TON	TON	TON	EACH	EACH	LIN FT	EACH	LIN FT	EACH	EACH
ROADWAY ITEMS TOTAL	4917	2562	71	350	2500	56270	3	50	1	1
(as built)	3682.7	1971.6	170.0	0	559.0	18,380		31.0		

BID ITEM CODE	2562	2568	2569	2650	2671	2696	2775	2898	5985 (5950)	6511
BID ITEM	(3) SIGNS	MOBILIZATION	DEMOBILIZATION	MAINTAIN AND CONTROL TRAFFIC	(4) PORTABLE CHANGEABLE MESSAGE SIGN	SHOULDER RUMBLE STRIPS-SAWED	(4) ARROW PANEL	RELOCATE CRASH CUSHION	SEEDING AND PROTECTION (Erosion Control Blanket)	PAVEMENT STRIPING-TEMP PAINT - 6 INCH
UNIT	SQ FT	LS	LS	LS	EACH	LF	EACH	EACH	SQ YD	LIN FT
ROADWAY ITEMS TOTAL	651	1	1	1	9	3818	2	16	20000	25000
(as built)	1540.5				18	1774		3	10,343	28,338

BID ITEM CODE	6549	6550	6551	6556	6557	6585	6586	6592	6600	23143ED
BID ITEM	PAVE STRIPING - TEMP REM TAPE - B	PAVE STRIPING - TEMP REM TAPE - W	PAVE STRIPING - TEMP REM TAPE - Y	(8) PAVE STRIPING -DUR TY 1-6 IN W	(8) PAVE STRIPING -DUR TY 1-6 IN Y	PAVEMENT MARKER TYPE IVA - MW TEMP	PAVEMENT MARKER TYPE IVA - MY TEMP	PAVEMENT MARKER TYPE V - B WR	REMOVE PAVEMENT MARKER TYPE V	K.P.D.E.S PERMIT & TEMP. EROSION CONTROL
UNIT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EACH	EACH	EACH	EACH	LS
ROADWAY ITEMS TOTAL	16000	75500	59500	10118	8094	320	110	40	40	1
(as built)	16,157	37,305	59,340	10,056	9,087	64	60	0	0	

BID ITEM CODE	24190ER	40099	20545-ND	20471E-S509	20738N-S112	24703EC	24703EC	24707ED
BID ITEM	DURABLE WATERBORNE MARKING-6 IN Y	(5) PCC PAVEMENT (6 INCH)	(6) TEMP MEDIAN CROSSOVER	TEMP CONC MED BARRIER	TEMP CRASH CUSHION	(7) INDIANA GUARDRAIL TRANS TY TGB APPR END	(7) INDIANA GUARDRAIL TRANS TY TGB TRAIL END	CABLE BARRIER SYSTEM REMOVE & RESTORE
UNIT	LIN FT	SQ YD	EACH	LIN FT	EACH	EACH	EACH	LS
ROADWAY ITEMS TOTAL	2000	872	4	14400	6	1	1	1
(as built)	0	0		14220				

(1) FOR CROSSOVERS AND SHOULDER RECONSTRUCTION
(2) FOR INDIANA SHOULDER REPAIR
(3) INTENDED FOR TEMPORARY TRAFFIC CONTROL SIGNS AND INCLUDES INITIAL PLACEMENT ONLY. ANY RELOCATION OF THESE TEMPORARY SIGNS REQUIRED WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL.
(4) THE QUANTITY FOR THESE ITEMS INCLUDES THE MAXIMUM IN PLACE AT ANY ONE TIME. ANY RELOCATION REQUIRED WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL.
(5) FOR KENTUCKY SHOULDER REPLACEMENT
(6) INCLUDES ALL GRADING AND DRAINAGE
(7) INCLUDES ALL GUARDRAIL ELEMENTS AND HARDWARE REQUIRED TO CONSTRUCT THE BRIDGE END CONNECTIONS IN INDIANA
(8) FOR BRIDGE DECK STRIPING

BID ITEM CODE		24708ED	24709ED	24094EC	24409EC	24429EC	24430EC	24431EC	3298	3299
BID ITEM		MEDIAN WALL RETROFIT	PLINTH RETROFIT	PARTIAL DEPTH PATCHING	DRILLED HOLES IN STEEL MEMBERS	REMOVE & REPLACE GIRDER BEARINGS	REMOVE & REPLACE FINGER EXPANSION JOINT	DRAINAGE SYSTEM MODIFICATIONS	EXPANSION JOINT REPLACEMENT	ARMORED EDGE FOR CONCRETE
LOCATION	UNIT	LF	LF	CY	EACH	EACH	EACH	LS	LF	LF
DECK OVERLAY				110						
FASCIA CURBS & PLINTH			8210							
MEDIAN CURBS & WALL		4100								
NORTH APPROACH SECTION 1	AT NORTH ABUTMENT								60	60
NORTH APPROACH SECTION 1	AT PIER IN3 (PIER 4)					4			60	
NORTH APPROACH SECTION 2	AT PIER 1N								60	
NORTH APPROACH SECTION 2	AT PIER 5N								60	
NORTH APPROACH SECTION 2	AT PIER A				5		1	0.5		
TRUSS SPANS	TRUSS JOINTS								540	
SOUTH APPROACH	AT PIER D				12		1	0.5		
SOUTH APPROACH	AT SOUTH ABUTMENT								60	60
BRIDGE ITEMS TOTAL		4100	8210	110	17	4	2	1	840	120
(as built)		4097.5	8192	599.96	0					

BID ITEM CODE		8151	8504	8526	8534	8550	20394NS835	4810
BID ITEM		STEEL REINFORCEMENT EPOXY COATED	EPOXY SAND SLURRY	CONCRETE CLASS "M" FULL DEPTH PATCHING	CONCRETE OVERLAY LATEX	HYDRODEMOLITION	PVC CONDUIT-3" IN MEDIAN BARRIER	ELECTRICAL JUNCTION BOX
LOCATION	UNIT	LB	SY	CY	CY	SY	LF	EACH
DECK OVERLAY			3150	22	1112	26500		
FASCIA CURBS & PLINTH								
MEDIAN CURBS & WALL							3955	1
NORTH APPROACH SECTION 1	AT NORTH ABUTMENT							
NORTH APPROACH SECTION 1	AT PIER IN3 (PIER 4)							
NORTH APPROACH SECTION 2	AT PIER 1N							
NORTH APPROACH SECTION 2	AT PIER 5N							
NORTH APPROACH SECTION 2	AT PIER A							
TRUSS SPANS	TRUSS JOINTS							
SOUTH APPROACH	AT PIER D							
SOUTH APPROACH	AT SOUTH ABUTMENT							
BRIDGE ITEMS TOTAL		3130	3150	22	1112	26500	3955	1
(as built)		0	3133.29	12.868			3934	

AS BUILT PLANS

Ryan Griffith
Director - Division of Construction
Date 1-7-19

8000	Advance Warning Flasher Temporary Ty A	25 Each
8001	Law Enforcement Officer	321.75 Hours
8002	Staking - Median Cross-Overs	1 Each
8007	Ditching & Shouldering	650 LF
8008	Ditch Excavation	1,000 CY
8012	Pavement Sawcut	945 LF
8015	Erosion Control Blanket	10,343 SY
8003	Structural Steel - Stringer Plating	1 LS
8009	EW - Patch Potholes in existing bridge deck	1 LS
8013	EW - Revised Fencing	1 LS
8014	Lane Closure	2 EA

NOTE:

PROJECT REFERENCES ARE INCLUDED IN THE PROPOSAL DOCUMENTS THAT ACCOMPANY THIS PLAN SET AND INCLUDE THE FOLLOWING:

KYTC & INDOT STANDARD DRAWINGS
ACTIVE SEPIA LIST
SPECIAL NOTES
SPECIAL PROVISIONS
SPECIFICATIONS

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

STATE OF KENTUCKY
MICHAEL A. LAWLER
23093
LICENSED PROFESSIONAL ENGINEER

Michael A Lawler

Digitally signed by Michael A Lawler
DN: c=US, o=Stantec Consulting Services Inc, ou=KY, ou=Structures, cn=Michael A Lawler, dnQualifier=ORC20000205602.ID
Date: 2014.08.20 10:31:42 -04'00'

ITEM NUMBER
6-2039.00

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE I-275
CROSSING OHIO RIVER

TITLE, INDEX & EST OF QUANT

PREPARED BY
Stantec

SHEET NO. S1
DRAWING NO. 27164

142980

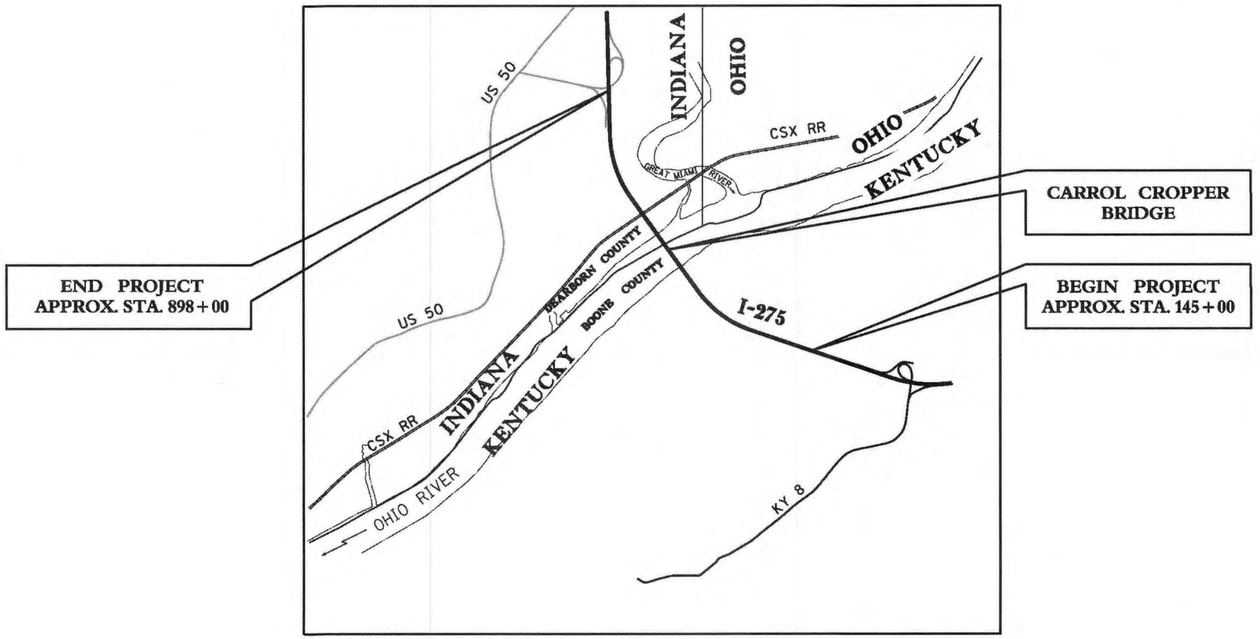
FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\001-27164_S001_TITLE INDEX & EST OF QUANT.DGN
USER: afarmer
DATE PLOTTED: August 20, 2014
E-SHEET NAME:
MicroStation v8.11.7.443

COUNTY AND STATE	ITEM NO.	SHEET NO.
BOONE, KY & DEARBORN, IN	6-2039.00	S2

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT

I-275 OVER OHIO RIVER
CARROLL LEE CROPPER BRIDGE



LAYOUT MAP

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

BOONE

ITEM NO. 6-2039.00

PROJECT NUMBER:

LETTING DATE: SEPTEMBER 26, 2014

RECOMMENDED BY: _____ PROJECT MANAGER DATE:

PLAN APPROVED BY: _____ STATE HIGHWAY ENGINEER DATE:

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: agrace DATE PLOTTED: August 11, 2014 | FILE NAME: V:\1785\ACTIVE\17856401A\STRUCTURAL\SUBMITTAL\CADD DELIVERABLES\27164_S2.DGN

GENERAL NOTES

SPECIFICATIONS

REFERENCES TO THE SPECIFICATIONS ARE TO THE CURRENT EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION INCLUDING ANY CURRENT SUPPLEMENTAL SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE 17TH EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DESIGN LOAD AND METHOD

NEW STEEL FINGER EXPANSION DAMS AND NEW GIRDER BEARINGS ARE DESIGNED FOR HS25 LIVE LOAD. ALL REINFORCED CONCRETE AND STRUCTURAL STEEL MODIFICATIONS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

MATERIALS DESIGN SPECIFICATIONS

FOR CLASS "M" REINFORCED CONCRETE
F'c = 4000 PSI

FOR STEEL REINFORCEMENT
Fy = 60000 PSI

FOR STRUCTURAL STEEL (NEW)
Fy = 50000 PSI FOR GRADE 50

FOR STRUCTURAL STEEL (EXISTING)
Fy = 36000 PSI FOR ASTM A36

MATERIALS

ASTM OR AASHTO SPECIFICATIONS, CURRENT EDITION, AS DESIGNATED BELOW SHALL GOVERN THE MATERIALS FURNISHED.

	ASTM	AASHTO
STRUCTURAL STEEL	A709, GR 50	M270 GR 50
HIGH STRENGTH BOLTS FOR STRUCTURAL STEEL JOINT	A325	M164
CARBON AND ALLOY STEEL NUTS		M291
HARDENED STEEL WASHERS		M293
PIPE, STEEL, BLACK AND HOT-DIPPED, ZINC COATED WELDED AND SEAMLESS	A53	
DEFORMED AND PLAIN BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT (GRADE 60)		M31

ALL STRUCTURAL STEEL SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST APPLICABLE TO ZONE 2 MINIMUM SERVICE TEMPERATURE FROM -1° TO -30° F, IN ACCORDANCE WITH THE FOLLOWING: M270 GR 50 OF 15 FT-LBS AT 40°F. - ALL OTHER STRUCTURAL STEEL

SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO T243 CURRENT EDITION, UTILIZING (H) FREQUENCY TESTING. WHEN PLATE THICKNESS EXCEEDS 1½", FREQUENCY OF TESTING SHALL BE (P).

CONCRETE

CLASS "M" CONCRETE IS TO BE USED IN PARTIAL AND FULL DEPTH PATCHING OF DECK, EXPANSION JOINT REPLACEMENTS AND FINGER JOINT REPLACEMENTS. CLASS "AA" CONCRETE TO BE USED FOR ALL PLINTH AND MEDIAN WALL RETROFITS.

CLEANING AND PAINTING

ALL NEW STRUCTURAL STEEL SHALL BE BLAST CLEANED IN THE SHOP TO A NEAR WHITE CONDITION AND SHOP PAINTED WITH ONE COAT OF INORGANIC ZINC RICH PRIMER IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. EXISTING STEEL AREAS OF THE BRIDGE TO BE IN CONTACT WITH NEW STEEL, INCLUDING AREAS UNDER BOLT HEADS, SHALL BE CLEANED OF ALL DIRT, RUST AND FOREIGN MATTER USING HAND CLEANING METHODS BEFORE INSTALLING THE NEW STEEL. UNLESS NOTED OTHERWISE ON THE PLANS, ALL NEW AND EXISTING STEEL WITHIN 12" OF THE WORK LIMITS OF EACH RETROFIT LOCATION SHALL BE CLEANED AS NECESSARY USING HAND METHODS AND PAINTED AS DIRECTED BY THE ENGINEER. HAND METHODS FOR FIELD CLEANING SHALL CONSIST OF SCRAPING AND WIRE BRUSHING. NO BLAST CLEANING WILL BE ALLOWED ON THE BRIDGE.

THE PAINT FOR ALL PAINTING WORK SHALL CONFORM TO SECTION 821 OF THE STANDARD SPECIFICATIONS. THE COLOR OF THE FIELD COATING SHALL MATCH THE PRESENT COLOR OF THE EXISTING BRIDGE STEEL AS NEAR AS POSSIBLE, AND SHALL BE APPROVED BY THE ENGINEER BEFORE ANY APPLICATION. CLEANING AND PAINTING SHALL BE INCIDENTAL TO THE APPROPRIATE BID ITEMS AND SHALL BE IN ACCORDANCE WITH THE SPECIAL NOTES.

TOUCH-UP PAINTING

ALL AREAS OF NEW OR EXISTING STRUCTURAL STEEL ON WHICH THE PAINT HAS BEEN DAMAGED BY THE CONTRACTOR WITH WELD BURNS OR BY OTHER MEANS DURING CONSTRUCTION OR AFTER FINAL PAINTING SHALL BE WIRE BRUSH CLEANED AND SPOT PAINTED AS DIRECTED BY THE ENGINEER. THE COST OF THIS TOUCH UP PAINTING IS TO BE INCLUDED IN THE PRICE BID FOR APPROPRIATE ITEMS.

WELDING SPECIFICATIONS

ALL WELDING AND WELDING MATERIALS EXCEPT FOR REINFORCEMENT, SHALL CONFORM TO JOINT SPECIFICATIONS ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE. MODIFICATION AND ADDITIONS AS STATED ON THE PLANS AND SPECIAL NOTES FOR WELDING STEEL BRIDGES SHALL SUPERSEDE THE ANSI/AASHTO/AWS SPECIFICATIONS. NONDESTRUCTIVE TESTING BY THE CONTRACTOR (QC) WILL NOT BE REQUIRED. WELDING PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED PRIOR TO THE START OF FABRICATIONS AND RETROFIT. THE COST OF WELDING, WELDING MATERIALS, STRAIGHTENING, ALTERING AND BURNING NEW OR EXISTING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ITEMS.

HIGH STRENGTH BOLT CONNECTIONS

UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL NEW BOLTS SHALL BE ⅞" DIAMETER HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 15/16" DIAMETER. ALL BOLTED CONNECTIONS ARE DESIGNED AS FRICTION TYPE CONNECTIONS. TIGHTENING SHALL BE IN ACCORDANCE WITH SECTION 607.08 OF THE STANDARD SPECIFICATIONS.

ELASTOMERIC BEARING PADS

ELASTOMERIC BEARING PADS SHALL CONFORM TO THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.

BEARINGS SHALL BE LOW TEMPERATURE GRADE 3 WITH DUROMETER HARDNESS OF 50 OR 60 AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD B. THE COST OF BEARING PADS IS TO BE INCLUDED IN THE UNIT PRICE FOR "REMOVE AND REPLACE GIRDER BEARINGS".

REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. ALL REINFORCEMENT SHALL BE EPOXY COATED.

STUD WELDING

STUDS SHALL BE WELDED IN ACCORDANCE WITH AWS SPECIFICATIONS.

DIMENSIONS

DIMENSIONS SHOWN ON THESE PLANS ARE TAKEN FROM ORIGINAL CONSTRUCTION CONTRACT PLANS AND SUBSEQUENT RETROFIT PLANS, AND DO NOT NECESSARILY REFLECT REVISIONS MADE DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY DIMENSIONS, INCLUDING THICKNESSES OF PARTS, WITH FIELD MEASUREMENTS PRIOR TO ORDERING MATERIALS OR FABRICATING STEEL. ALL PLAN DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60° F. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

PROHIBITED FIELD WELDING

EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR AN AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

DAMAGE TO STRUCTURE

THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY AND EXPENSE FOR ANY AND ALL DAMAGE TO THE STRUCTURE, INCLUDING TRUSS MEMBERS, DURING THE REPAIR AND RETROFIT WORK; EVEN TO THE REMOVAL AND REPLACEMENT OF TRUSS MEMBERS AND FALLEN SPANS, SHOULD THE DAMAGE RESULT FROM THE CONTRACTOR'S ACTIONS.

MAINTAINING TRAFFIC

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE PLANS AND SPECIAL NOTES FOR MAINTENANCE OF TRAFFIC.

PLANS OF EXISTING STRUCTURE

AS AN AID TO THE CONTRACTOR, A PORTION OF THE PLANS AND SHOP DRAWINGS OF THE EXISTING STRUCTURES ARE AVAILABLE FROM THE DIVISION OF MAINTENANCE UPON REQUEST. THE COMPLETENESS OF THESE DRAWINGS IS NOT GUARANTEED AND NO RESPONSIBILITY IS ASSUMED BY KYTC FOR THEIR ACCURACY. THE ORIGINAL EXISTING DRAWING NUMBERS FOR THESE STRUCTURES INCLUDE: 17207, 17208, 17209, 17210 AND INDOT I-275-0-2415. ADDITIONAL DRAWINGS (SHOP DRAWINGS, AS-BUILT AND MODIFICATIONS) INCLUDE: 17207 (SHOP), 17208 (AS-BUILT) AND 19182 (DECK OVERLAY MODIFICATIONS).

ON-SITE INSPECTION

EACH CONTRACTOR SUBMITTING A BID FOR THIS WORK SHALL MAKE A THOROUGH INSPECTION OF THE BRIDGE AND THE WORK SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS SO THAT WORK CAN BE EXPEDITIOUSLY PERFORMED AFTER A CONTRACT IS AWARDED. A SUITABLE METHOD OF PERFORMING THE WORK DESCRIBED HEREIN SHOULD BE INVESTIGATED. SUBMISSION OF A BID WILL BE CONSIDERED EVIDENCE OF THIS INSPECTION HAVING BEEN MADE. ANY CLAIMS RESULTING FROM SITE CONDITIONS WILL NOT BE HONORED BY KYTC.

CONCRETE REMOVAL

THE CONTRACTOR SHALL REMOVE CONCRETE WITH A METHOD THAT WILL NOT DAMAGE EXISTING REINFORCEMENT, SHEAR CONNECTORS, OR STRUCTURAL STEEL THAT IS TO REMAIN IN THE STRUCTURE. ALL REMOVAL SHALL BE TO NEAT SAW CUT LINES AND FEATHER EDGES WILL NOT BE PERMITTED. REINFORCING BARS WHICH ARE SHOWN ON THE PLANS AS REMAINING AND WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH NEW EPOXY COATED BARS OF THE SAME SIZE AND SHAPE, AS DIRECTED BY THE ENGINEER. NO PAYMENT WILL BE MADE FOR THE REPLACEMENT BARS. SHEAR CONNECTORS WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH NEW STUD SHEAR CONNECTORS, REGARDLESS OF TYPE DAMAGED, AT THE SPACING SHOWN ON THE PLANS. NO PAYMENT WILL BE MADE FOR THE REPLACEMENT SHEAR CONNECTORS.

EXISTING STEEL REINFORCEMENT

THE COST OF CUTTING, BENDING AND CLEANING EXISTING REINFORCING BARS IS TO BE INCIDENTAL TO THE APPROPRIATE BID ITEMS.

SAWCUTTING

PRIOR TO THE REMOVAL OF THE EXISTING CONCRETE MASONRY, CUT THE SURFACE WITH A CONCRETE SAW TO THE DEPTH NOTED ON THE PLANS OR ONE INCH TO FACILITATE A NEAT LINE. THE COST OF CUTTING CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ITEMS.

REMOVAL OF EXISTING RIVETS AND BOLTS

THE CONTRACTOR WILL BE PERMITTED TO REMOVE RIVETS AND BOLTS IN ANY MANNER WHICH DOES NOT DAMAGE ADJACENT STRUCTURAL STEEL. THIS MAY INCLUDE MECHANICAL REMOVAL OR OTHER METHOD APPROVED BY THE ENGINEER. USE OF CUTTING TORCHES WILL NOT BE PERMITTED.

REMOVE STEEL

ALL EXISTING STEEL THAT IS REMOVED AND NOT REUSED IN THE COMPLETED STRUCTURE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE BRIDGE SITE.

REMOVE AND REPLACE GIRDER BEARINGS

THE UNIT PRICE BID FOR "REMOVE AND REPLACE GIRDER BEARINGS" SHALL INCLUDE ALL COSTS TO JACK AND SUPPORT THE ENDS OF THE EXISTING STEEL GIRDERS AT PIER IN3 (PIER 4) DURING THE REMOVAL AND REPLACEMENT OF THE EXISTING BEARINGS.

THE JACKING AND SUPPORT SYSTEM MUST BE DESIGNED TO SUPPORT BOTH LIVE LOAD AND DEAD LOAD IN ACCORDANCE WITH THE SPECIAL NOTE FOR GIRDER BEARING REPLACEMENT. DURING JACKING OPERATIONS THE BRIDGE WILL BE POSTED FOR A REDUCED LIVE LOAD LEVEL. LIMITATIONS ON THE DURATION OF THE JACKING AND BEARING REPLACEMENT OPERATION ARE INCLUDED IN THE SPECIAL NOTE.

THE CONTRACTOR SHALL SUBMIT A JACKING PLAN AND TEMPORARY SUPPORT SYSTEM CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL BEFORE BEGINNING THE JACKING OPERATION. THE DESIGN MUST BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED IN KENTUCKY.

THE UNIT PRICE FOR "REMOVE AND REPLACE GIRDER BEARINGS" SHALL ALSO INCLUDE ALL SUPPLIES, MATERIALS, AND LABOR TO REMOVE THE EXISTING BEARING ASSEMBLIES, PREPARE INTERFACE SURFACES, INSTALL BEARING ASSEMBLIES, AND PAINT THE GIRDERS AS DIRECTED IN THE SPECIAL NOTE.

REMOVE AND REPLACE FINGER EXPANSION JOINT

THE UNIT PRICE BID FOR "REMOVE AND REPLACE FINGER EXPANSION JOINT" SHALL INCLUDE ALL COSTS REQUIRED TO COMPLETE THE REPLACEMENT OF THE FINGER EXPANSION JOINTS AT PIERS A & D. THIS SHALL INCLUDE REMOVAL OF THE CONCRETE DECK AND EXISTING EXPANSION JOINT ASSEMBLY AS SHOWN IN THE PLANS, FABRICATION AND INSTALLATION OF THE NEW EXPANSION JOINT ASSEMBLY (INCLUDING THE DRAINAGE SYSTEM TO THE LIMITS SHOWN IN THE PLANS), RETROFITS TO THE EXISTING STEEL STRINGERS, NEW STEEL REINFORCEMENT, AND FORMING AND PLACING CLASS "M" CONCRETE DIAPHRAGMS, AND PAINTING THE STRINGERS AS DIRECTED IN THE SPECIAL NOTE.

DRAINAGE SYSTEM AT PIERS IN, 5N, A & D

THE UNIT PRICE BID FOR "DRAINAGE SYSTEM MODIFICATIONS" SHALL INCLUDE ALL COSTS TO COMPLETE THE REMOVAL OF ALL EXPANSION JOINT PIPE DRAINAGE SYSTEMS AS SHOWN IN THESE PLANS. THIS WORK ALSO INCLUDES THE INSTALLATION OF THE DRAIN SYSTEM AT PIERS A & D, INCLUDING RETROFIT OR REPLACEMENT OF THE PIPE HANGERS.

BONDING NEW CONCRETE TO PREVIOUSLY PLACED CONCRETE

WHERE A BONDED CONSTRUCTION JOINT IS CALLED FOR IN THE PLANS, NEW CONCRETE SHALL BE BONDED TO PREVIOUSLY PLACED (CURED) CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS (SEE SPECIAL NOTE FOR STRUCTURAL ADHESIVES WITH EXTENDED CONTACT TIME). THE COST OF THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR THE CLASS CONCRETE BEING PLACED.

PLINTH/MEDIAN WALL RETROFIT & EXPANSION JOINT REPLACEMENT WORK

THE PLINTH/MEDIAN WALL RETROFIT AND EXPANSION JOINT REPLACEMENT WORK IS PERFORMED IN SEPARATE CONSTRUCTION PHASES. AT THE COMPLETION OF PHASE 2 AND BEFORE ALL LANES OF TRAFFIC ARE OPEN, NO UNPROTECTED GAPS LARGER THAN 4 INCHES OR ANY OTHER TRAFFIC SNAG HAZARDS SHALL BE ALLOWED IN THE PLINTH/MEDIAN WALLS. DURING CONSTRUCTION PHASES 3 AND 5, PORTIONS OF PLINTH/MEDIAN WALL RETROFITS MAY NEED TO BE PARTIALLY REMOVED TO ACCOMMODATE THE INSTALLATION OF THE STRIP SEAL TERMINATION AT THE GUTTER LINES. ALL WORK, INCLUDING REMOVAL AND RECONSTRUCTION OF PLINTH/MEDIAN WALL RETROFITS THAT MAY BE REQUIRED TO PERFORM EXPANSION JOINT REPLACEMENT SHALL BE INCIDENTAL TO THE JOINT REPLACEMENT. IF THE INSTALLATION REQUIRES REMOVAL OF PORTIONS OF THE PLINTH/MEDIAN WALL RETROFITS DURING JOINT REPLACEMENT, THE CONTRACTOR SHALL REMOVE AND REPLACE A MINIMUM OF 1 FOOT OF THE WALL RETROFITS AND ENSURE THE FINAL LIMITS MATCH THE PREVIOUSLY PLACED WALL RETROFIT.

FILTER FABRIC PROTECTION

IF SURFACE CLEANING DEBRIS, OVER SPRAY FOR SEALING PROTECTION, DECK DEMOLITION OR CONCRETE PLACEMENT ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND/OR BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

FULL PENETRATION OF DECK REHAB

IF CONTRACTOR HAS THE POTENTIAL TO PENETRATE THE DECK DURING THE DECK REHAB WORK, THEN THEY WILL BE REQUIRED TO INSTALL FALSEWORK PROTECTION WITHIN THE GIRDERS, DIRECTLY BELOW THE AREA OF ANY FULL DECK PENETRATION, AND OVER THE CSXT RAILROAD SPAN (SPAN IN7). PROTECTION WILL NEED TO BE INSTALLED BEFORE THE DECK IS PENETRATED AND WILL STAY IN PLACE FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES. IN ADDITION, FILTER FABRIC PROTECTION WILL BE REQUIRED TO PROTECT THE TRACK AND BALLAST DIRECTLY UNDER THE FALSEWORK PROTECTION.

BRIDGE JACKING

IF ANY STRUCTURES ARE JACKED ABOVE THE CSXT RAILROAD SPAN, THEN THE CONTRACTOR WILL BE REQUIRED TO PREPARE A SUBMITTAL PACKAGE THAT INCLUDES, BUT NOT LIMITED TO: PROCEDURES, PLANS SHEETS, THE JACKING SYSTEM/SCHEME, CALCULATIONS, TIME SCHEDULES, DATA SHEETS, STRUCTURE WEIGHTS, ETC. ALL JACKING EQUIPMENT AND DEVICES SHALL HAVE A CAPACITY FOR 150% OF THE ACTUAL LOAD. THE FACTOR OF SAFETY PROVIDED BY THE MANUFACTURER IN THE DEVICE CAPACITY DATA SHALL NOT BE CONSIDERED IN THE 150% REQUIREMENTS. DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR ENGINEER'S SEAL AND SIGNATURE. THE BRIDGE JACKING PROCEDURE MUST BE APPROVED BY CSXT'S ENGINEERING DEPARTMENT OR IT'S REPRESENTATIVE. CSXT REQUIRES UP TO 30 DAYS TO REVIEW SUBMITTALS IN ORDER TO PROVIDE COMMMENTS AND/OR APPROVALS.

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

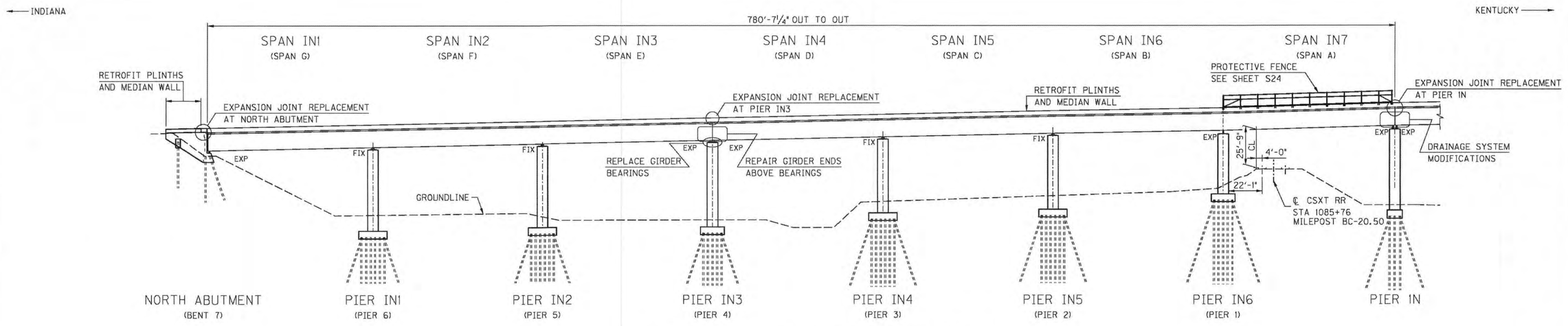
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

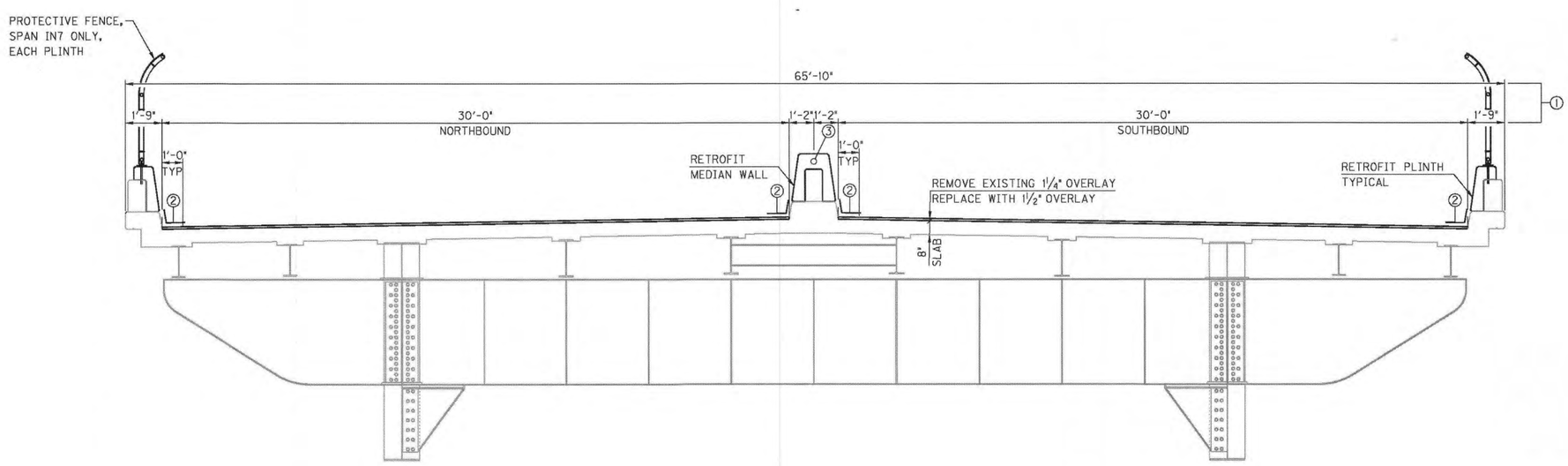
GENERAL NOTES

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S3
		DRAWING NO. 27164

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: cgrace DATE PLOTTED: August 12, 2014 | FILE NAME: V:\17855\ACTIVE\17855401A\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\003-27164_S003_GENERAL NOTES.DGN



ELEVATION - NORTH APPROACH - SECTION 1



TYPICAL SECTION

LOOKING TOWARD KENTUCKY

NOTATIONS:

① DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLAN SETS, PRIOR TO THE ADDITION OF THE 1 1/4" OVERLAY.

② AREA TO RECEIVE EPOXY SAND SLURRY TREATMENT.

③ 3" DIA SCHEDULE 40 PVC CONDUIT

NOTE:
FOR CLARITY THE NAMING CONVENTION FOR THE SPANS, SUBSTRUCTURE UNITS AND SUPERSTRUCTURE COMPONENTS WILL MATCH THE NOMENCLATURE AS PUBLISHED IN THE KYTC CARROLL LEE CROPPER INSPECTION MANUAL. THE NOMENCLATURE FROM THE ORIGINAL PLANS, IF DIFFERENT, IS ALSO INCLUDED IN PARENTHESIS BELOW THE TITLES.

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

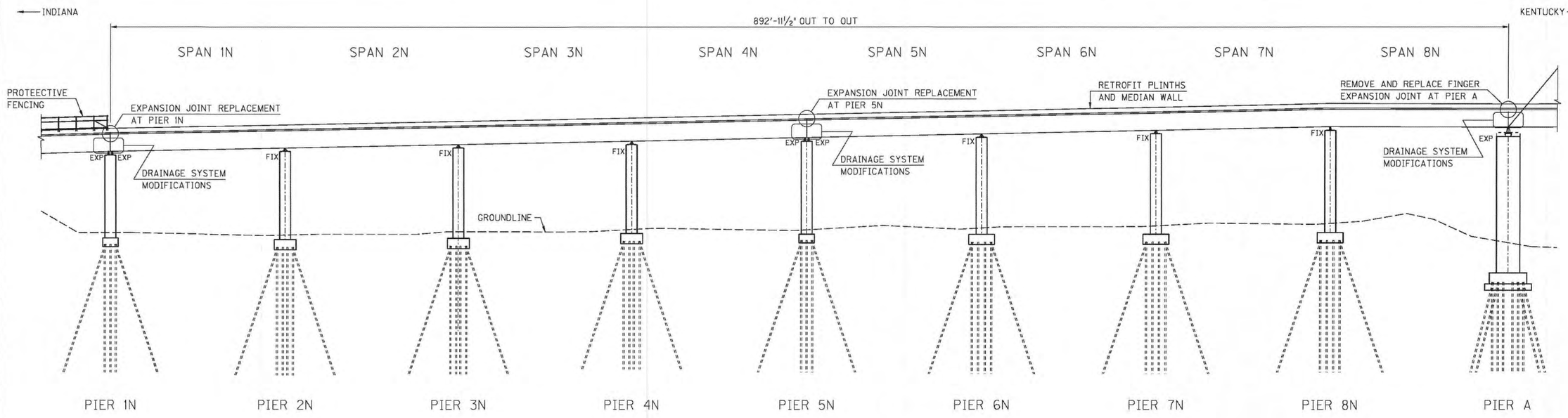
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

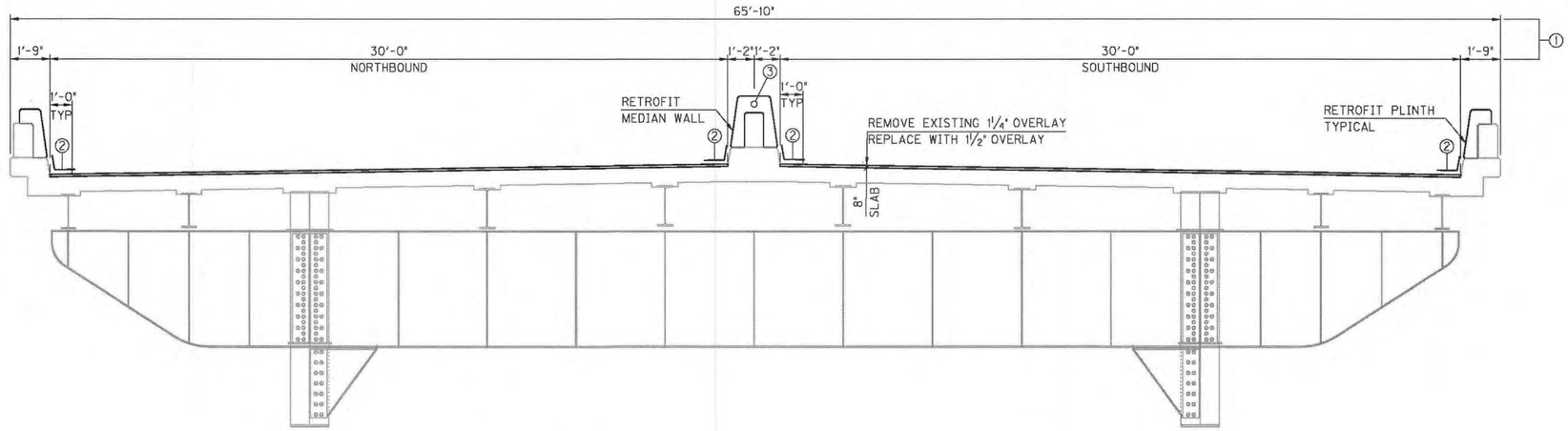
ELEV & TYP SECT (N APPROACH 1)

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S4
		DRAWING NO. 27164

FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\004-27164_S004_ELE & TYP SECT (N APPROACH 1).DGN
USER: agrace
DATE PLOTTED: August 12, 2014
E-SHEET NAME:
MicroStation v8.11.7.443



ELEVATION – NORTH APPROACH – SECTION 2



TYPICAL SECTION

LOOKING TOWARD KENTUCKY

NOTATIONS:

① DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLAN SETS, PRIOR TO THE ADDITION OF THE 1¼" OVERLAY.

② AREA TO RECEIVE EPOXY SAND SLURRY TREATMENT.

③ 3" DIA SCHEDULE 40 PVC CONDUIT

NOTE:
FOR CLARITY THE NAMING CONVENTION FOR THE SPANS, SUBSTRUCTURE UNITS AND SUPERSTRUCTURE COMPONENTS WILL MATCH THE NOMENCLATURE AS PUBLISHED IN THE KYTC CARROLL LEE CROPPER INSPECTION MANUAL. THE NOMENCLATURE FROM THE ORIGINAL PLANS, IF DIFFERENT, IS ALSO INCLUDED IN PARENTHESIS BELOW THE TITLES.

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

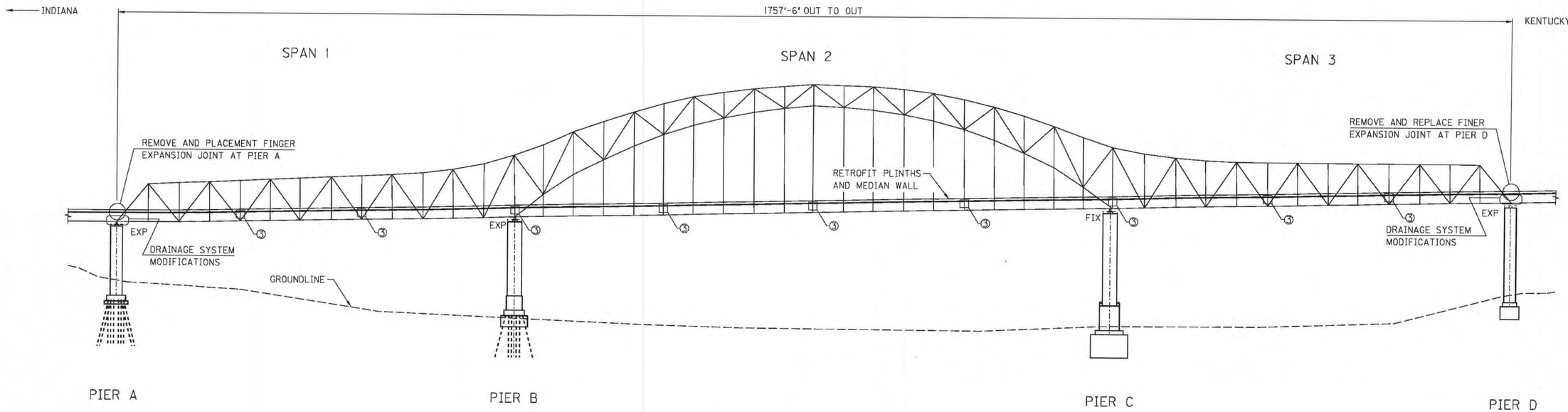
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

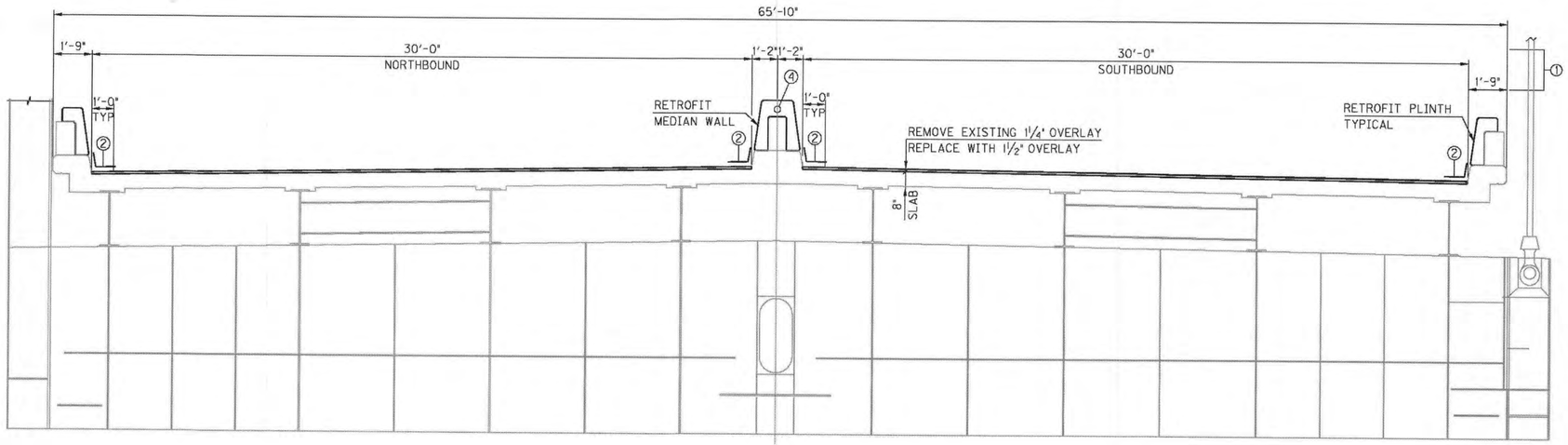
ELEV & TYP SECT (N APPROACH 2)

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S5
		DRAWING NO. 27164

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: agrace DATE PLOTTED: August 11, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\CADD DELIVERABLES\27164_S5.DGN



ELEVATION – TRUSS



SHOWING SPAN 1 OR 3

TYPICAL SECTION

LOOKING TOWARD KENTUCKY

SHOWING SPAN 2

NOTATIONS:

① DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLAN SETS, PRIOR TO THE ADDITION OF THE 1¼" OVERLAY.

② AREA TO RECEIVE SAND EPOXY TREATMENT.

③ EXPANSION JOINT REPLACEMENT

④ 3" DIA SCHEDULE 40 PVC CONDUIT

NOTE:
FOR CLARITY THE NAMING CONVENTION FOR THE SPANS, SUBSTRUCTURE UNITS AND SUPERSTRUCTURE COMPONENTS WILL MATCH THE NOMENCLATURE AS PUBLISHED IN THE KYTC CARROLL LEE CROPPER INSPECTION MANUAL. THE NOMENCLATURE FROM THE ORIGINAL PLANS, IF DIFFERENT, IS ALSO INCLUDED IN PARENTHESIS BELOW THE TITLES.

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

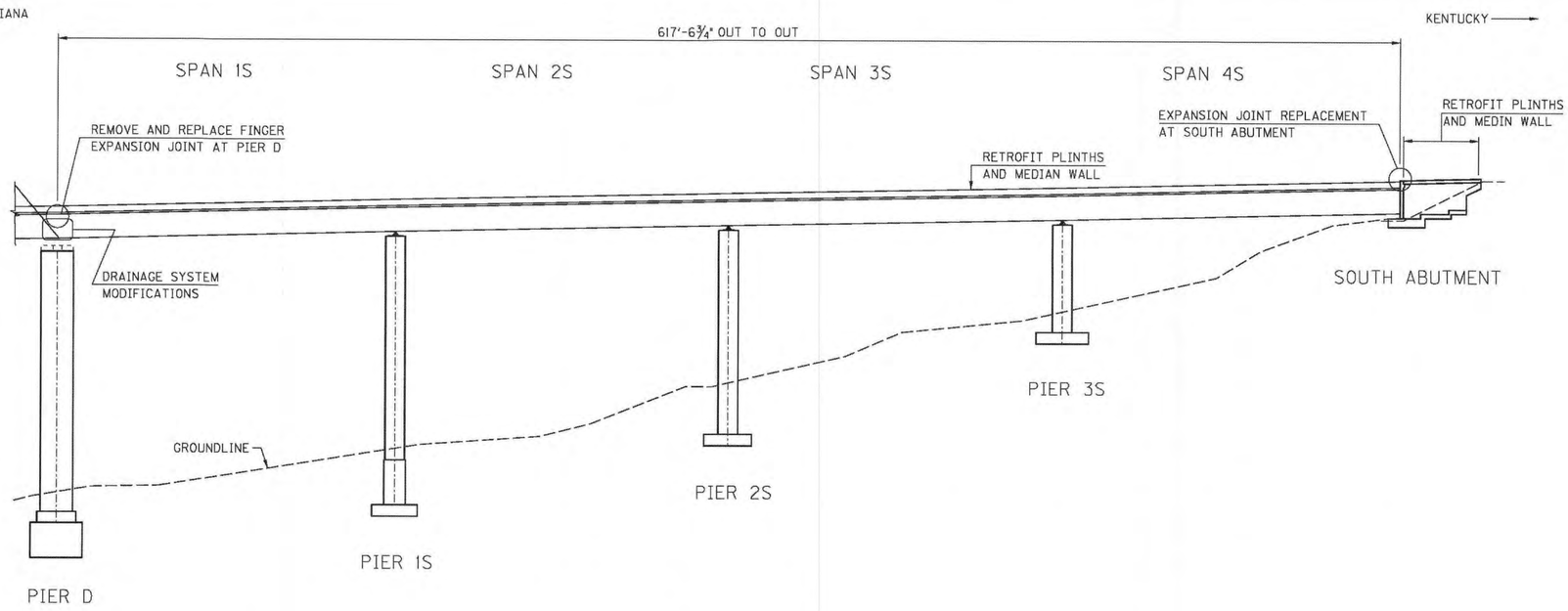
COUNTY AND STATE: **BOONE, KY & DEARBORN, IN**

ROUTE: **I-275** | CROSSING: **OHIO RIVER**

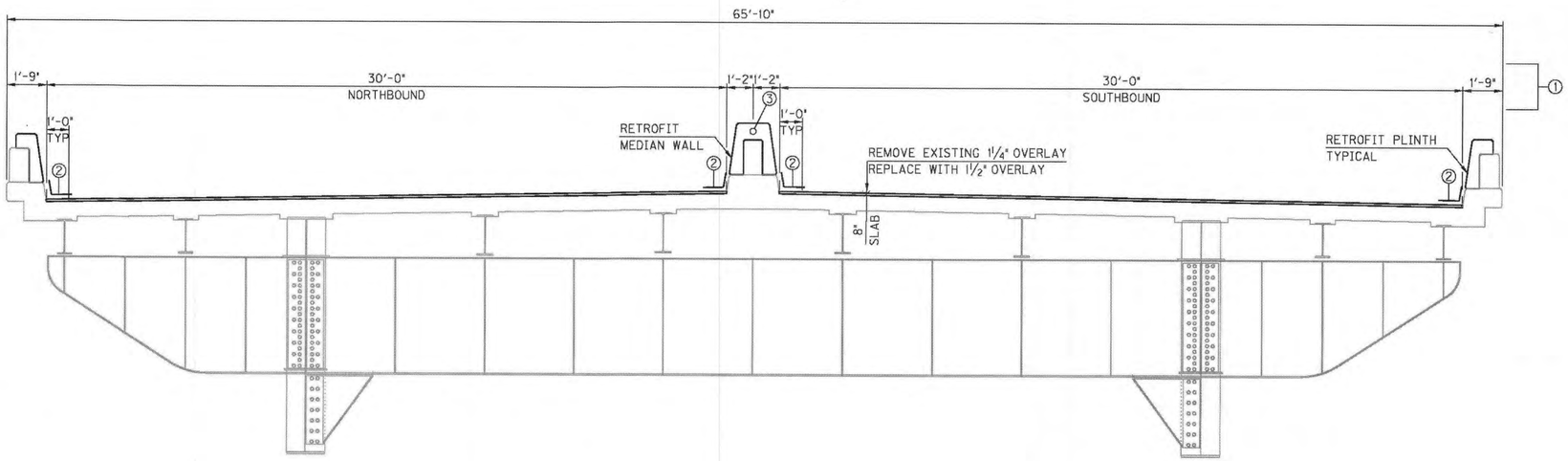
ELEV & TYP SECT (TRUSS)

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S6
		DRAWING NO. 27164

FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\CADD DELIVERABLES\27164_S6.DGN
USER: agrace
DATE PLOTTED: August 11, 2014
E-SHEET NAME:
MicroStation v8.11.7.443



ELEVATION – SOUTH APPROACH



TYPICAL SECTION

LOOKING TOWARD KENTUCKY

NOTATIONS:

① DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLAN SETS, PRIOR TO THE ADDITION OF THE 1¼" OVERLAY.

② AREA TO RECEIVE EPOXY SAND SLURRY TREATMENT.

③ 3" DIA SCHEDULE 40 PVC CONDUIT

NOTE:
FOR CLARITY THE NAMING CONVENTION FOR THE SPANS, SUBSTRUCTURE UNITS AND SUPERSTRUCTURE COMPONENTS WILL MATCH THE NOMENCLATURE AS PUBLISHED IN THE KYTC CARROLL LEE CROPPER INSPECTION MANUAL. THE NOMENCLATURE FROM THE ORIGINAL PLANS, IF DIFFERENT, IS ALSO INCLUDED IN PARENTHESIS BELOW THE TITLES.

REVISION	DATE
DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

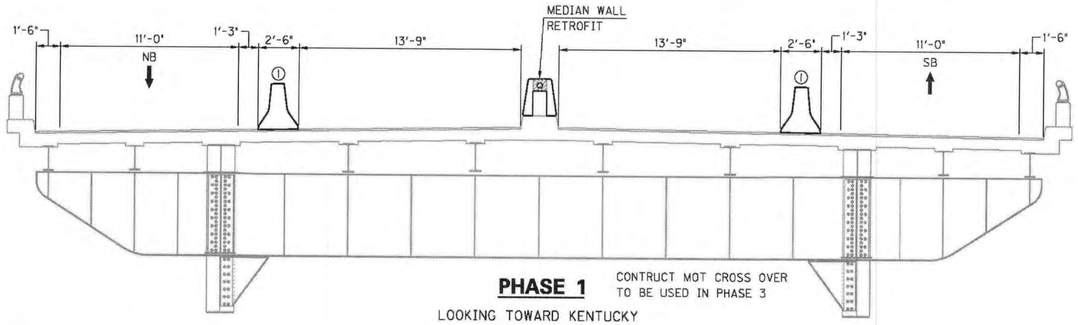
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE: I-275 | CROSSING: OHIO RIVER

ELEV & TYP SECT (S APPROACH)

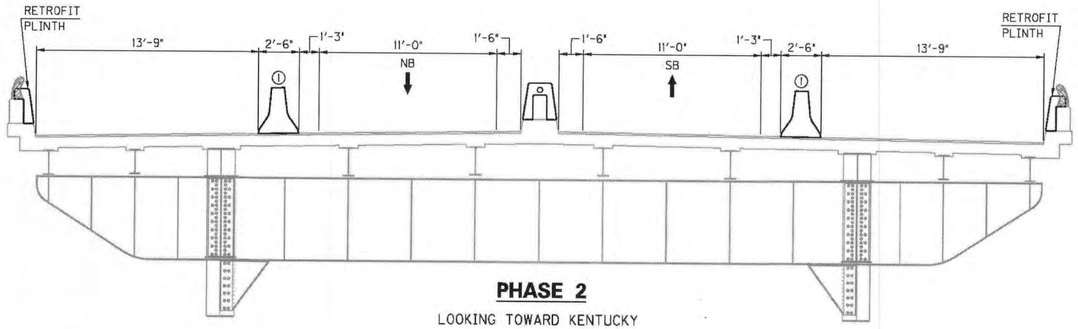
ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S7
		DRAWING NO. 27164

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: agrace DATE PLOTTED: August 11, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\CADD DELIVERABLES\27164_S7.DGN



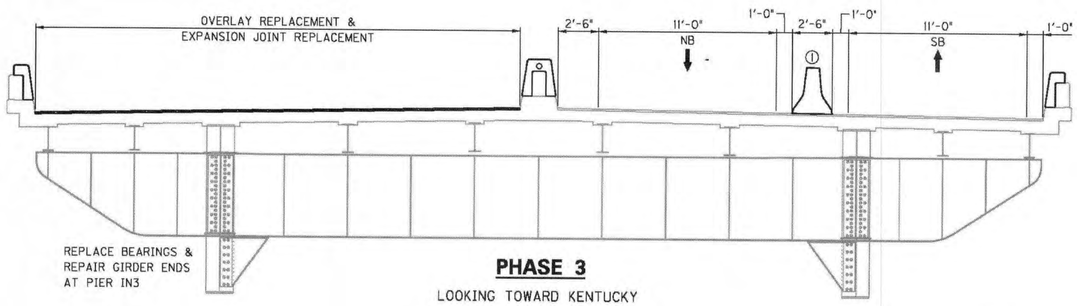
PHASE 1 CONTRUCT MOT CROSS OVER TO BE USED IN PHASE 3

LOOKING TOWARD KENTUCKY



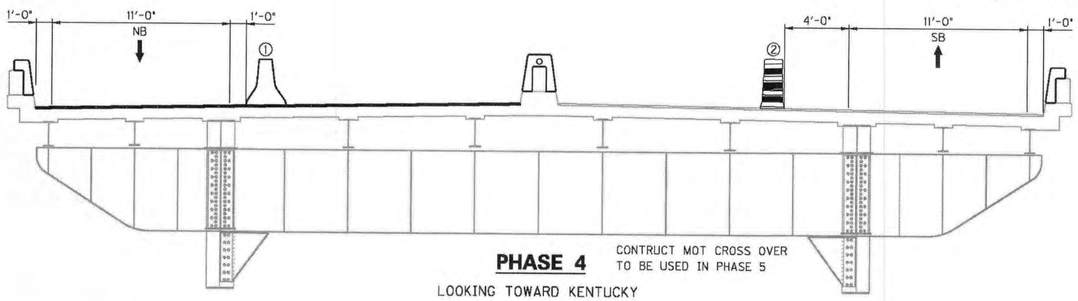
PHASE 2

LOOKING TOWARD KENTUCKY



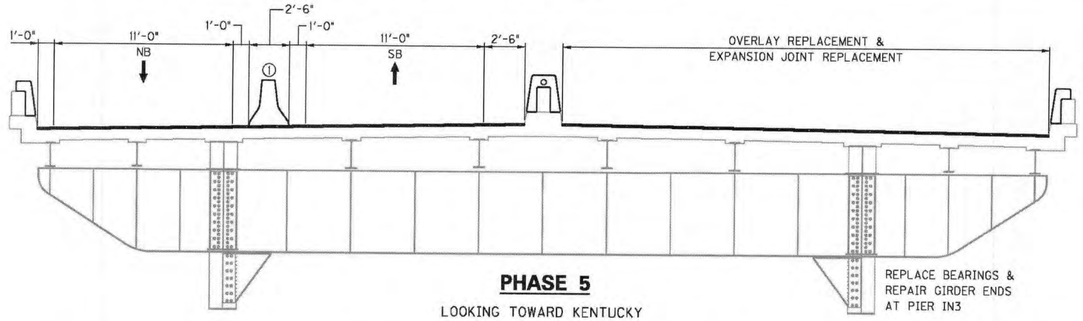
PHASE 3

LOOKING TOWARD KENTUCKY



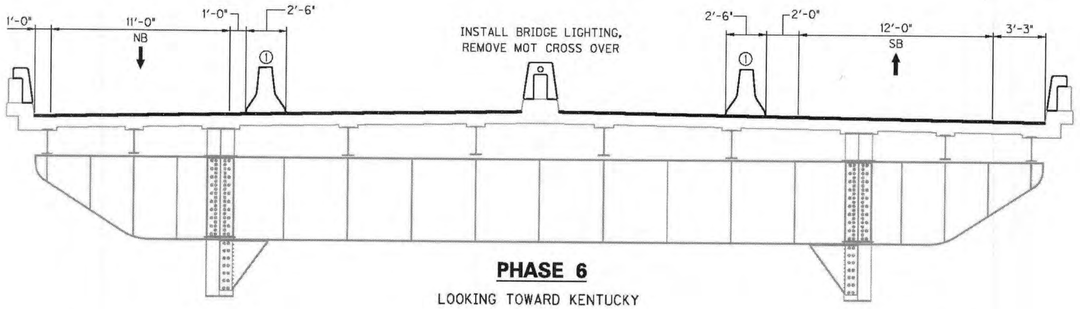
PHASE 4 CONTRUCT MOT CROSS OVER TO BE USED IN PHASE 5

LOOKING TOWARD KENTUCKY



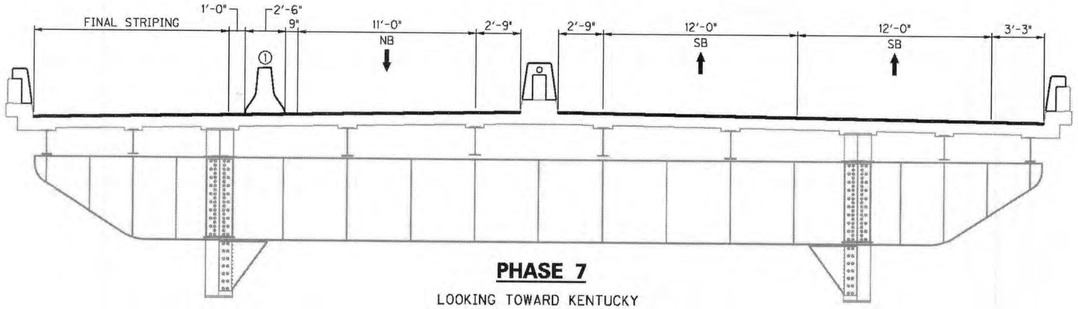
PHASE 5

LOOKING TOWARD KENTUCKY



PHASE 6

LOOKING TOWARD KENTUCKY



PHASE 7

LOOKING TOWARD KENTUCKY

NOTATIONS:
① TEMPORARY CONCRETE BARRIER
② TRAFFIC CONTROL DEVICE

REVISION	DATE
DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

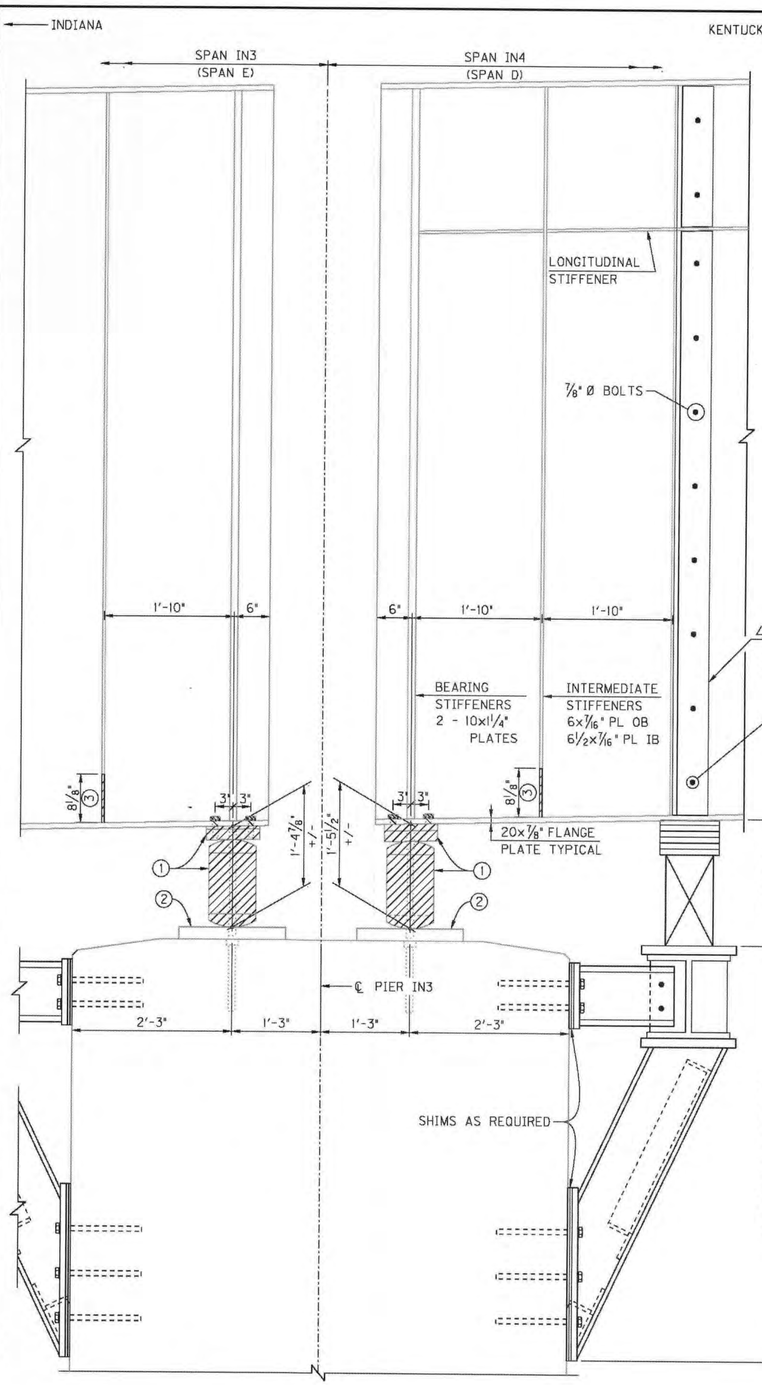
COUNTY
BOONE, KY & DEARBORN, IN

ROUTE **I-275** | CROSSING **OHIO RIVER**

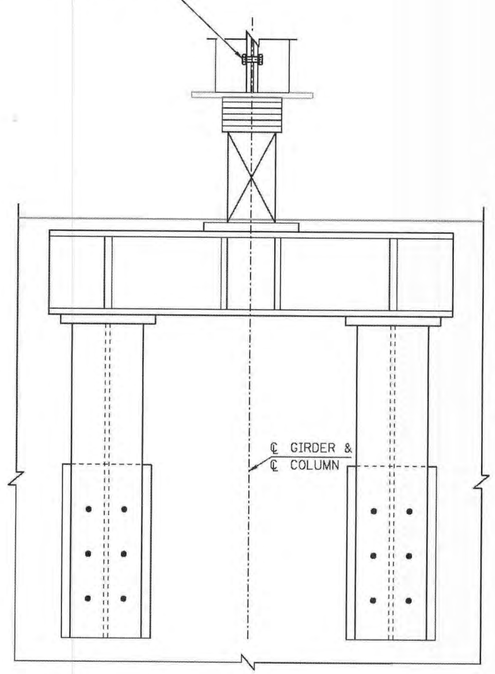
PHASE CONSTRUCTION & MOT

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S8
		DRAWING NO. 27164

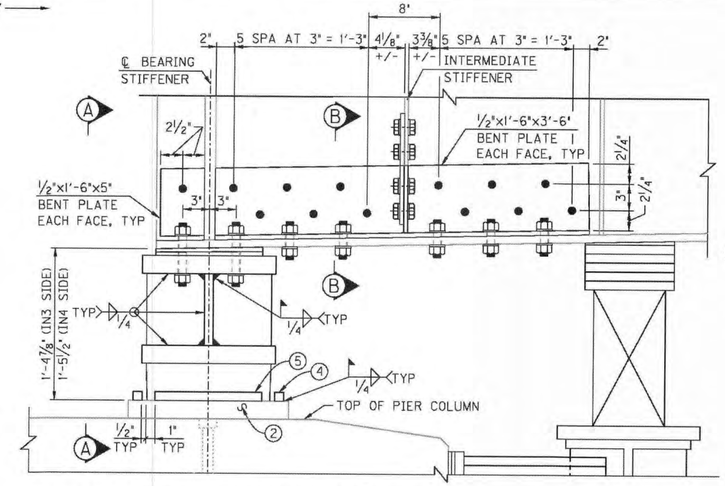
MicroStation v8.11.7.443 | E-SHEET NAME: | USER: agrace DATE PLOTTED: August 11, 2014 | FILE NAME: V:\1785\ACTIVE\1785640141\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\608-27164_S08_PHASE CONSTRUCTION & MOT.DGN



ELEVATION - DOWNSTREAM GIRDERS OUTBOARD FACE,
UPSTREAM GIRDERS SIMILAR

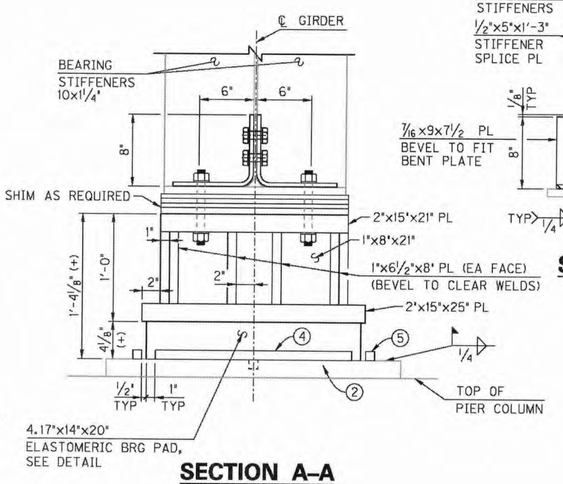


GIRDER JACKING AND BEARING REMOVAL AT PIER IN3 (PIER 4)

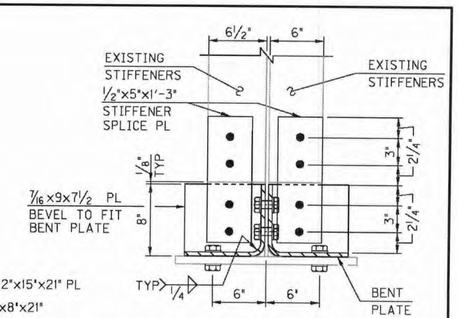


ELASTOMERIC BEARING REPLACEMENT & GIRDER REPAIR

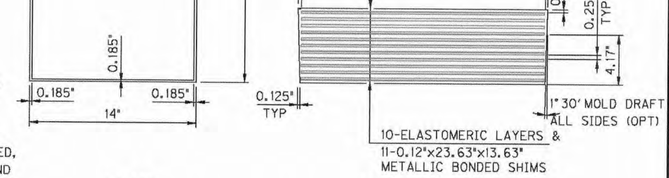
ELEVATION - DOWNSTREAM GIRDERS OUTBOARD FACE,
SPAN IN4 SIDE OTHER LOCATIONS SIMILAR



SECTION A–A



SECTION B–B



PLAN SECTION X-X

ELASTOMERIC BEARING PAD DETAIL

NOTATIONS:

① REMOVE EXPANSION SHOE ASSEMBLY, INCLUDING BOLTS AND PINTLES.

② 1'-6"x2"x2'-9" PLATE & ANCHORS TO REMAIN. AFTER PINTLES ARE REMOVED, FILL VOIDS WITH WELD MATERIAL AND GRIND FLUSH.

③ PARTIAL REMOVAL OF INBOARD & OUTBOARD INTERMEDIATE STIFFENERS.

④ 1"x1"x22" KEEPER PLATE

⑤ 1"x1"x12" KEEPER PLATE

OB - DENOTES OUTBOARD

IN - DENOTES INBOARD

NOTE:

ALL JACKING, BEARING REMOVAL/REPLACEMENT AND GIRDER REPAIR WORK, PER PHASE, SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF THE JOINT REPLACEMENT AND OVERLAY REPLACEMENT WORK DURING THAT PHASE.

ALL DIMENSIONS SHOWN ARE BASED ON EXISTING PLANS, CONTRACTOR SHALL FIELD VERIFY.

PROVIDE TAPERED SHIMS FOR SLOPING SURFACES AS NEEDED.

SEE SPECIAL NOTE FOR ADDITIONAL DETAILS AND REQUIREMENTS.

REVISION	DATE
DATE: 08/2014	CHECKED BY
DESIGNED BY: M. MULLINS	R. CATRON
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

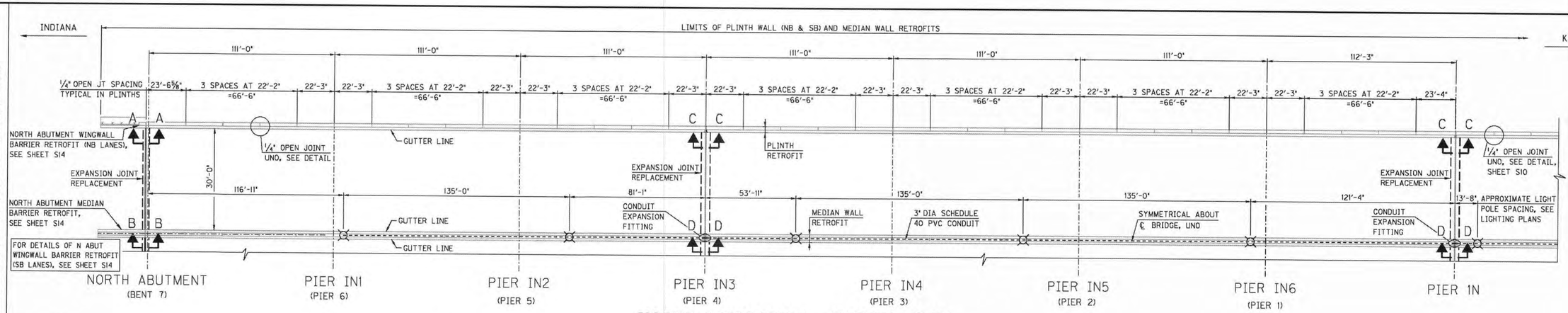
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE: I-275 | CROSSING: OHIO RIVER

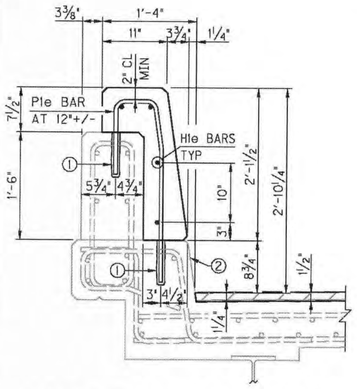
BEARING & GIRDER REPAIR – IN3

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S9
		DRAWING NO. 27164

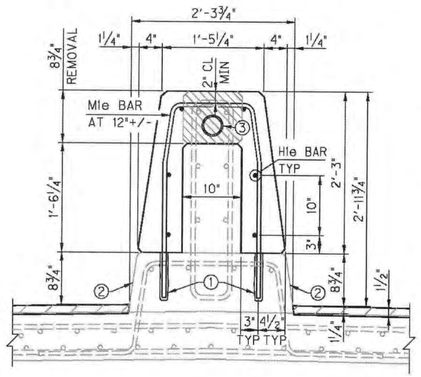
FILE NAME: V:\1785\ACTIVE\1785640141\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\009-27164_S009_BEARING & GIRDER REPAIR - IN3.DGN
USER: agrace
DATE PLOTTED: August 11, 2014
E-SHEET NAME:
MicroStation v8.11.7.443



NORTH APPROACH 1 – PARTIAL PLAN



PLINTH RETROFIT SECTION



MEDIAN WALL RETROFIT SECTION

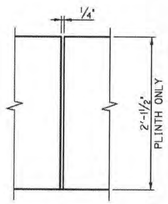
NOTATIONS:

① ANCHOR LEG OF #5 BAR WITH POLYESTER RESIN INTO ¾" Ø x10" DEEP CORE DRILLED HOLE. SEE SPECIAL NOTE

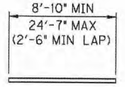
② PATCH EXISTING SPALLED CONCRETE IN CURB AS REQUIRED.

③ 3" DIA SCHEDULE 40 PVC CONDUIT

④ EXTRUDED JOINT ARMOR AND TERMINATION TREATMENT, AS PROVIDED BY MANUFACTURER.

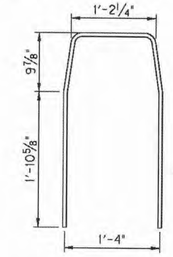


PROVIDE 1/4" OPEN JT TO MATCH EXISTING JOINT LOCATIONS, PLINTH WALLS ONLY



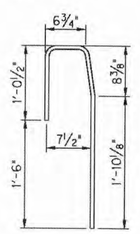
1/4" JOINT DETAIL

NOTE:
ALL NEW REINFORCING STEEL SHALL BE EPOXY COATED



#5 M1e BAR

4063 REQ'D
MEDIAN WALL RETROFIT



#5 P1e BAR

4063 REQ'D NB PLINTH RETROFIT
4063 REQ'D SB PLINTH RETROFIT

NOTES:

REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. CLEAN, STRAIGHTEN & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.

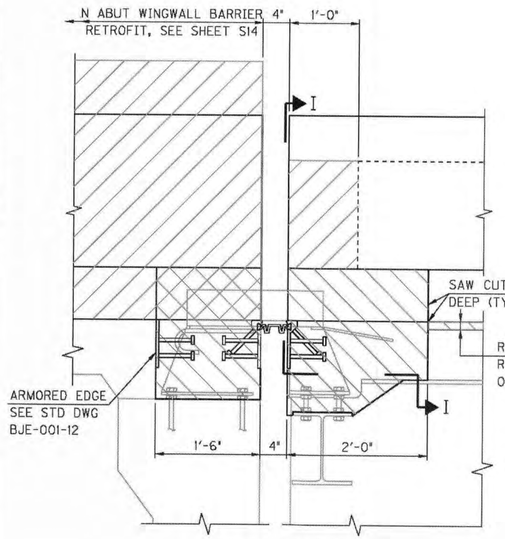
SEE GENERAL NOTES FOR PLINTH/MEDIAN RETROFITS (PHASES 1 & 2) AND EXPANSION JOINT REPLACEMENT (PHASES 3 & 5) WORK COORDINATION.

PREFORMED EXPANSION JOINT STRIP SEAL SHALL BE D.S. BROWN COMPANY, L2-400 WITH SSPA STEELFLEX RAIL OR APPROVED EQUIVALENT.

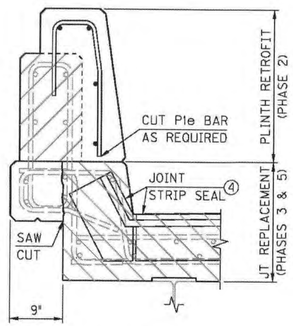
CUT EXISTING REINFORCEMENT AS REQUIRED TO CLEAR NEW STRIP SEALS.

SEE SHEET S11 FOR SECTIONS C-C AND D-D.

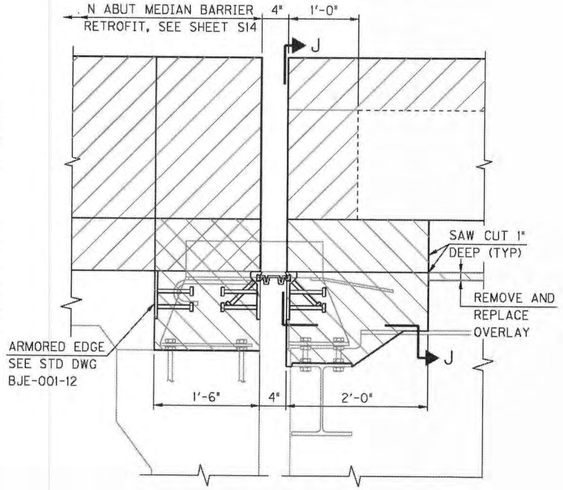
THE AREAS OF CLASS "M" CONCRETE WITHIN THE LIMITS OF THE EXPANSION JOINT REPLACEMENTS ARE EXCLUDED FROM THE MEASURED QUANTITY FOR THE CONCRETE OVERLAY-LATEX BID ITEM.



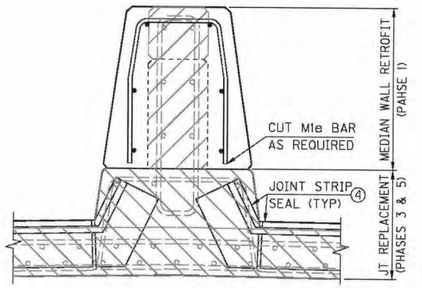
SECTION A–A



SECTION I–I



SECTION B–B



SECTION J–J

REVISION	DATE
DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: S. FOY	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

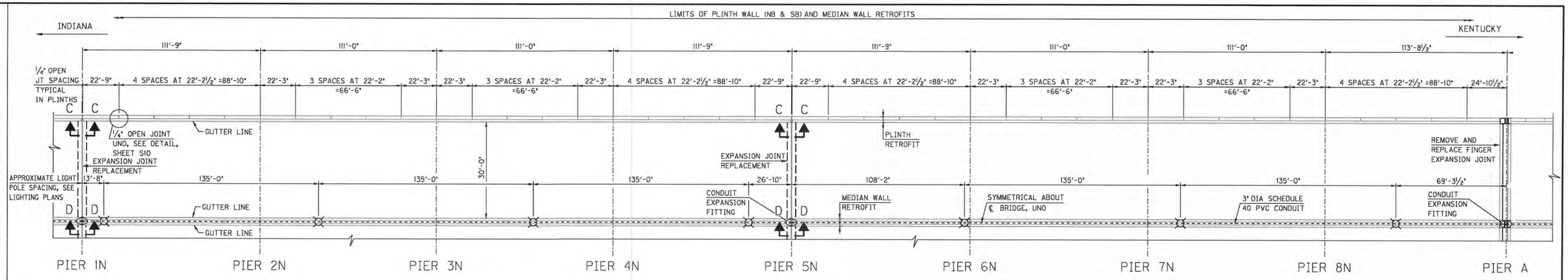
ROUTE: I-275
CROSSING: OHIO RIVER

DECK PLAN (N APPROACH 1)

ITEM NUMBER
6-2039.00

PREPARED BY
Stantec

SHEET NO. S10
DRAWING NO. 27164

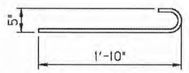


NORTH APPROACH 2 – PARTIAL PLAN

FOR DETAILS OF THE FINGER JOINTS AT PIER A, SEE SHEETS S16-S20.

NOTATIONS:

① EXTRUDED JOINT ARMOR AND TERMINATION TREATMENT, AS PROVIDED BY MANUFACTURER.



#5e HOOK BAR DETAIL

NOTES:

REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. CLEAN, STRAIGHTEN & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.

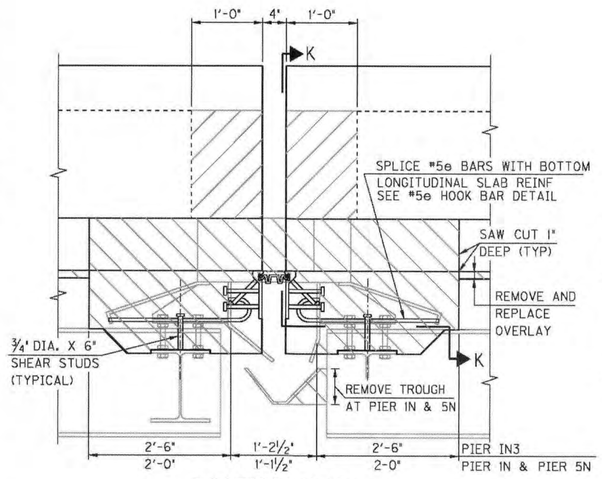
SEE GENERAL NOTES FOR PLINTH/MEDIAN RETROFITS (PHASES 1 & 2) AND EXPANSION JOINT REPLACEMENT (PHASES 3 & 5) WORK COORDINATION.

PREFORMED EXPANSION JOINT STRIP SEAL SHALL BE D.S. BROWN COMPANY, L2-400 WITH SSPA STEELFLEX RAIL OR APPROVED EQUIVALENT.

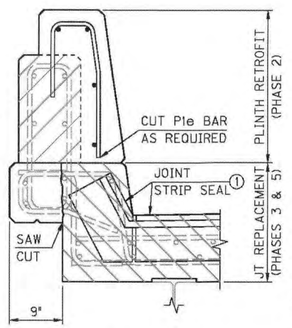
CUT EXISTING REINFORCEMENT AS REQUIRED TO CLEAR NEW STRIP SEALS AND NEW FINGER JOINTS.

FOR JOINT REMOVAL DETAILS AT PIER A SEE SHEET S18.

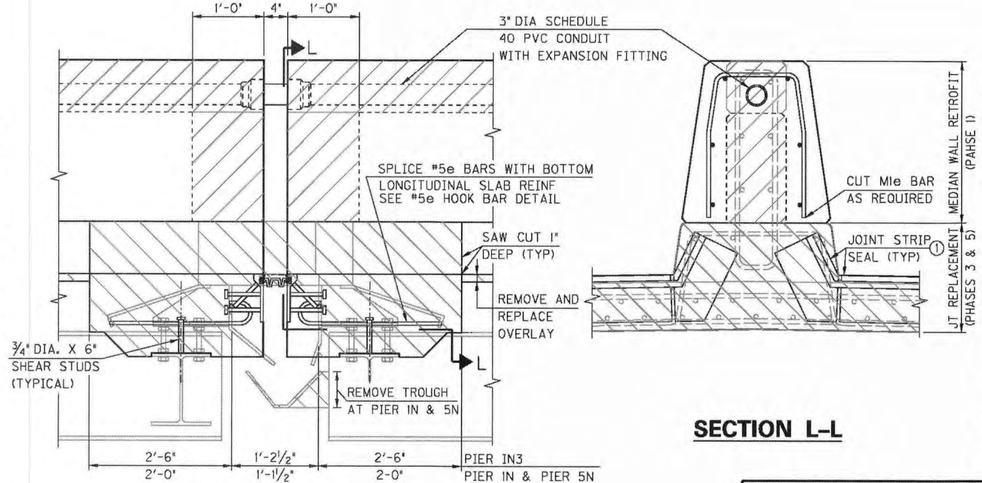
THE AREAS OF CLASS 'M' CONCRETE WITHIN THE LIMITS OF THE EXPANSION JOINT REPLACEMENTS AND THE REMOVE AND REPLACE FINGER EXPANSION JOINT ARE EXCLUDED FROM THE MEASURED QUANTITY FOR THE CONCRETE OVERLAY-LATEX BID ITEM.



SECTION C–C



SECTION K–K



SECTION C–C

SECTION L–L

ITEM NUMBER
6–2039.00

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: S. FOY	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE: **BOONE, KY & DEARBORN, IN**

ROUTE: **I-275** | CROSSING: **OHIO RIVER**

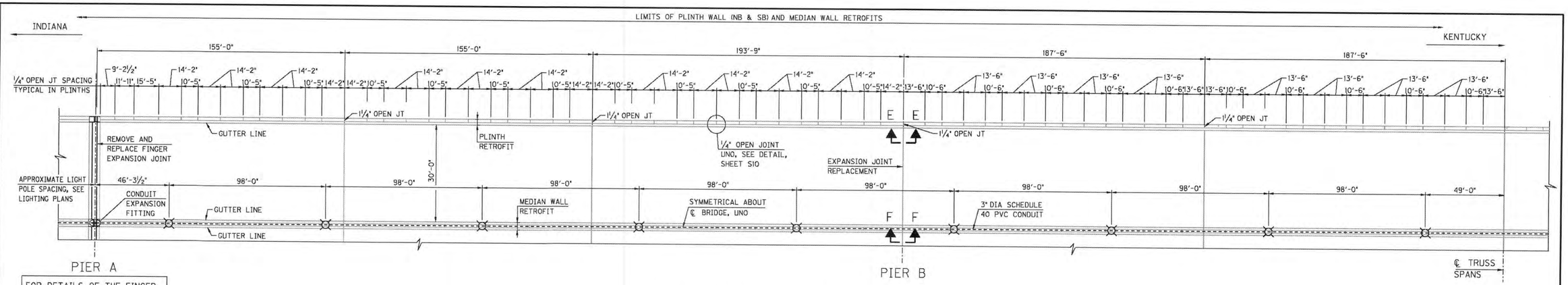
DECK PLAN (N APPROACH 2)

PREPARED BY: Stantec

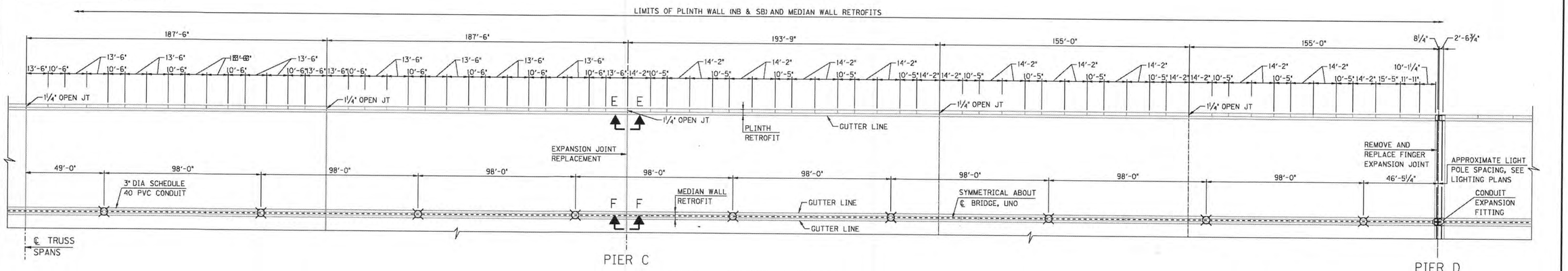
SHEET NO. S11

DRAWING NO. 27164

FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\011-27164-S011_DECK PLAN IN APPROACH 2L.DGN
USER: agrace DATE PLOTTED: August 12, 2014
E-SHEET NAME:
MicroStation v8.11.7.443



TRUSS - PARTIAL PLAN



TRUSS - PARTIAL PLAN

NOTATIONS:

① EXTRUDED JOINT ARMOR AND TERMINATION TREATMENT, AS PROVIDED BY MANUFACTURER.

NOTES:

REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. CLEAN, STRAIGHTEN & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.

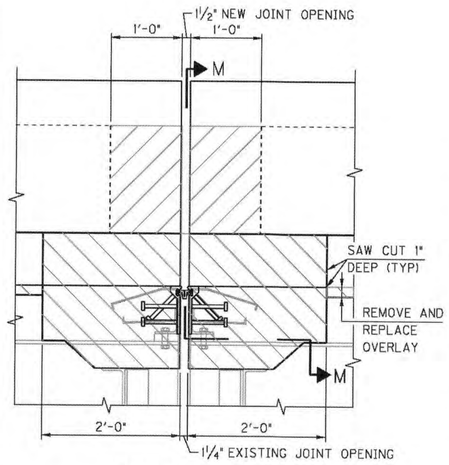
PREFORMED EXPANSION JOINT STRIP SEAL SHALL BE D.S. BROWN COMPANY, L2-400 WITH SSPA STEELFLEX RAIL OR APPROVED EQUIVALENT.

SEE GENERAL NOTES FOR PLINTH/MEDIAN RETROFITS (PHASES 1 & 2) AND EXPANSION JOINT REPLACEMENT (PHASES 3&5) WORK COORDINATION.

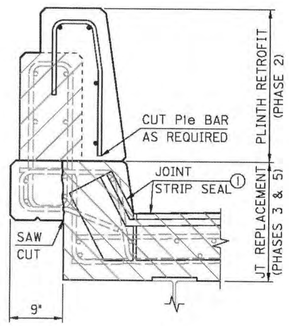
CUT EXISTING REINFORCEMENT AS REQUIRED TO CLEAR NEW STRIP SEALS AND NEW EXPANSION JOINTS.

FOR JOINT REMOVAL DETAILS AT PIER A AND D, SEE SHEET S18.

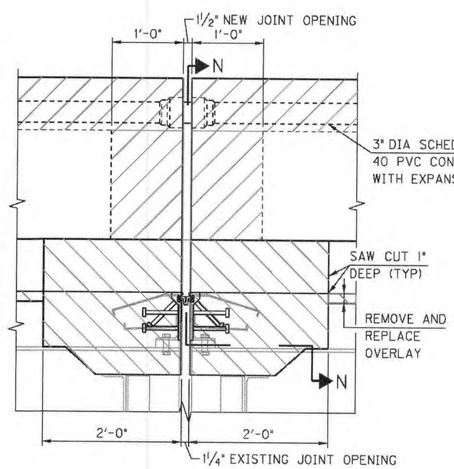
THE AREAS OF CLASS 'M' CONCRETE WITHIN THE LIMITS OF THE EXPANSION JOINT REPLACEMENTS AND THE REMOVE AND REPLACE FINGER EXPANSION JOINTS ARE EXCLUDED FROM THE MEASURED QUANTITY FOR THE CONCRETE OVERLAY-LATEX BID ITEM.



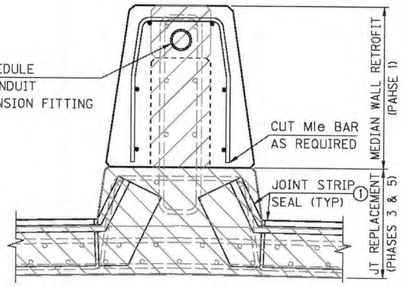
SECTION E-E



SECTION M-M



SECTION F-F



SECTION N-N

ITEM NUMBER
6-2039.00

REVISION	DATE
DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: S. FOY	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

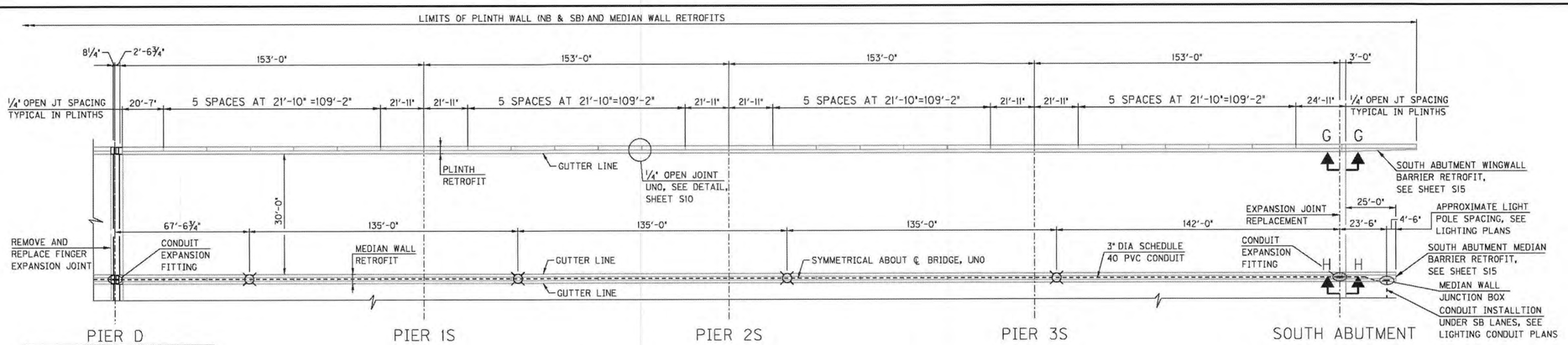
ROUTE I-275 | CROSSING OHIO RIVER

DECK PLAN (TRUSS)

PREPARED BY Stantec

SHEET NO. S12

DRAWING NO. 27164

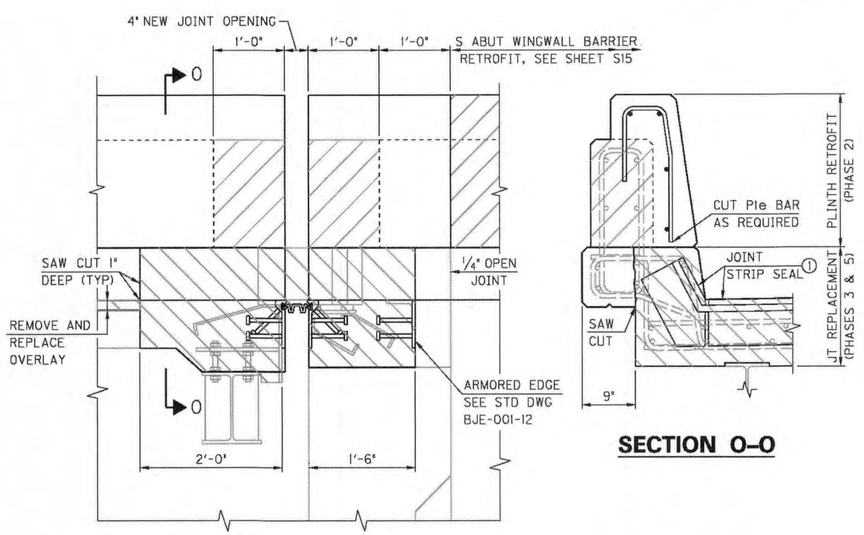


FOR DETAILS OF THE FINGER JOINTS AT PIER D, SEE SHEETS S16-S18, S21 & S22.

SOUTH APPROACH - PARTIAL PLAN

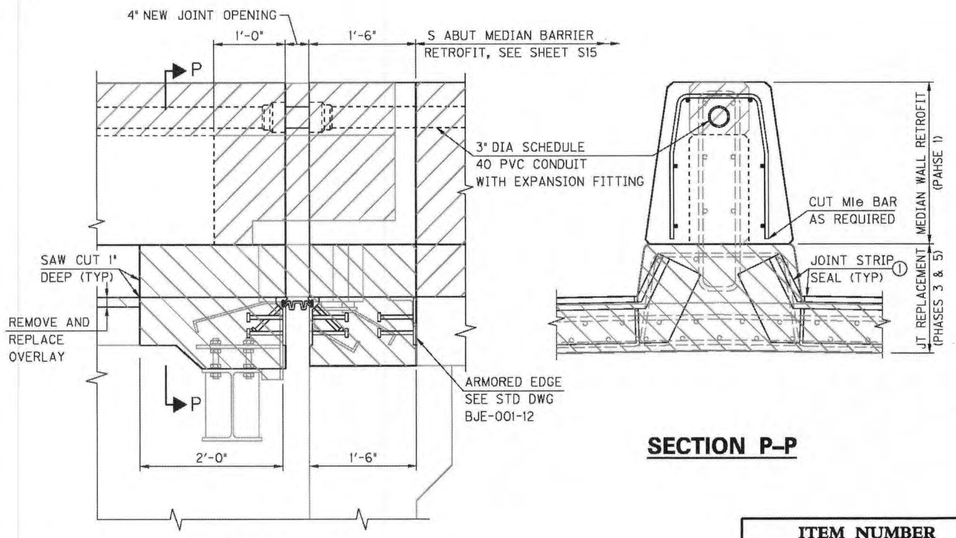
NOTATIONS:

① EXTRUDED JOINT ARMOR AND TERMINATION TREATMENT, AS PROVIDED BY MANUFACTURER.



SECTION G-G

SECTION O-O



SECTION H-H

SECTION P-P

NOTES:

REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. CLEAN, STRAIGHTEN & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.

SEE GENERAL NOTES FOR PLINTH/MEDIAN RETROFITS (PHASES 1 & 2) AND EXPANSION JOINT REPLACEMENT (PHASES 3&5) WORK COORDINATION.

PREFORMED EXPANSION JOINT STRIP SEAL SHALL BE D.S. BROWN COMPANY, L2-400 WITH SSPA STEELFLEX RAIL OR APPROVED EQUIVALENT.

CUT EXISTING REINFORCEMENT AS REQUIRED TO CLEAR NEW FINGER EXPANSION JOINTS AND NEW STRIP SEALS

FOR JOINT REMOVAL DETAILS AT PIER D SEE SHEET S18.

THE AREAS OF CLASS 'M' CONCRETE WITHIN THE LIMITS OF THE EXPANSION JOINT REPLACEMENT AND THE REMOVE AND REPLACE FINGER EXPANSION JOINT ARE EXCLUDED FROM THE MEASURED QUANTITY FOR THE CONCRETE OVERLAY-LATEX BID ITEM.

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: S. FOY	A. FARMER

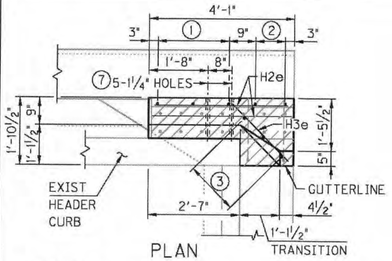
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

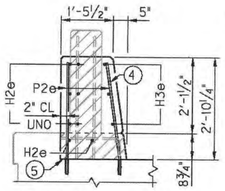
ROUTE	CROSSING
I-275	OHIO RIVER

DECK PLAN (S APPROACH)

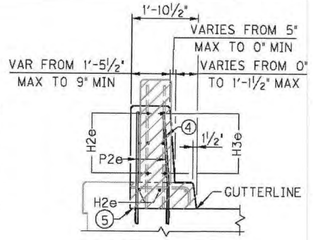
ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S13
		DRAWING NO. 27164



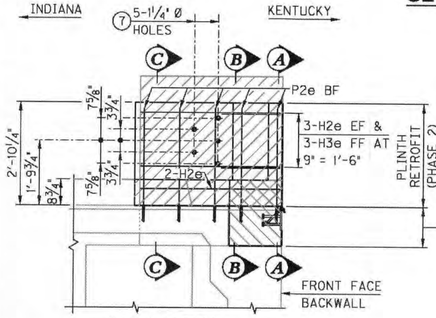
PLAN



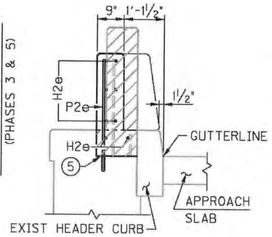
SECTION A–A



SECTION B–B



ELEVATION



SECTION C–C

NORTH ABUTMENT WINGWALL (NBL)

PLINTH

NOTATIONS:

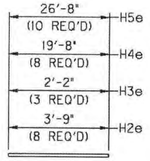
1. 3-P2e AT 12" = 2'-0"
2. 2-P2e AT 10"
3. 3-P2e AT 9" = 1'-6"
4. FIELD BEND/CUT TO FIT
5. CONSTRUCTION JOINT
6. MATCH EXISTING DIMENSIONS AT TIE IN
7. HOLES FOR ATTACHMENT OF GUARDRAIL TRANSITION TYPE TGB. SEE INDOT STANDARD DRAWING E 706-CBRT-04.

NOTES:

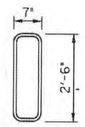
ALL DIMENSIONS TAKEN FROM EXISTING PLANS. CONTRACTOR TO FIELD VERIFY.

EXISTING VERTICAL REINFORCEMENT SHALL BE SAND-BLASTED CLEAN, STRAIGHTEN, CUT TO FIT AND INCORPORATED INTO NEW CONSTRUCTION.

SEE GENERAL NOTES FOR PLINTH/MEDIAN RETROFITS (PHASES 1 & 2) AND EXPANSION JOINT REPLACEMENT (PHASES 3 & 5) WORK COORDINATION.

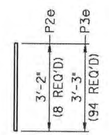


#5 He BARS



#5 M2e BARS

21 REQUIRED



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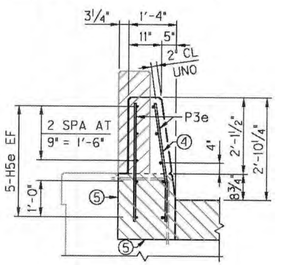
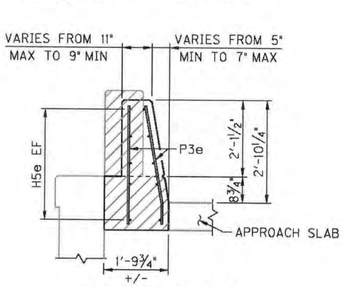
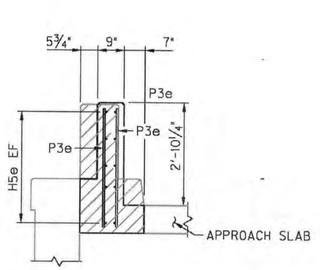


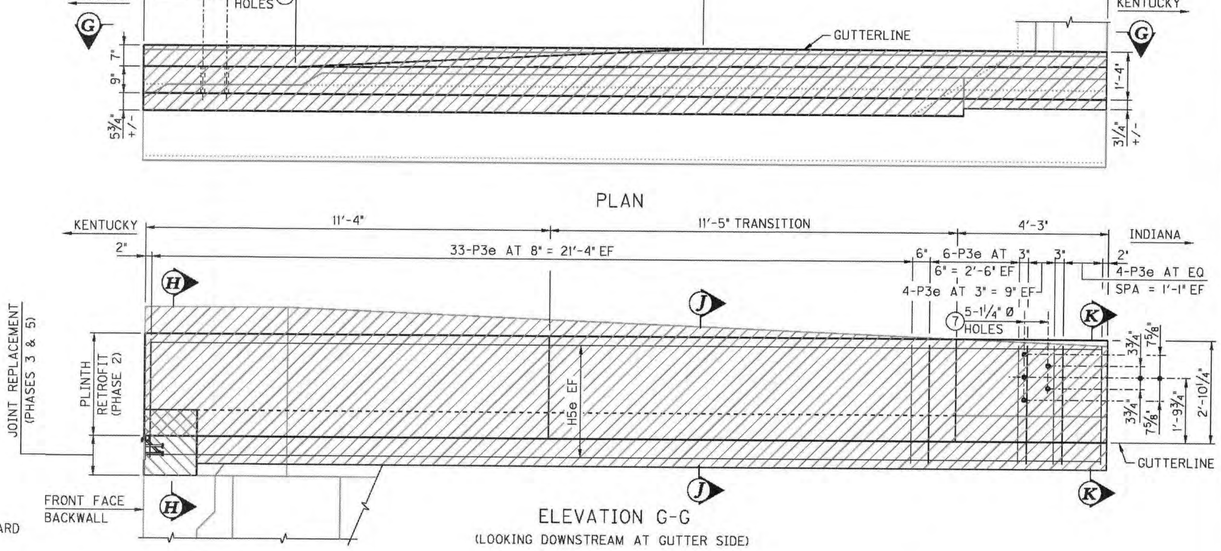
SECTION H–H



SECTION J–J



SECTION K–K



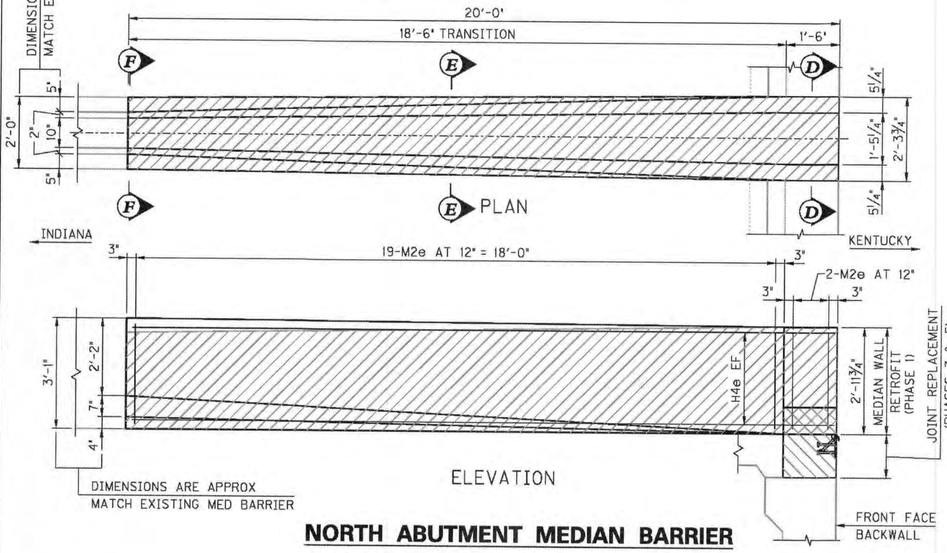
PLAN

ELEVATION G-G

(LOOKING DOWNSTREAM AT GUTTER SIDE)

NORTH ABUTMENT WINGWALL (SBL)

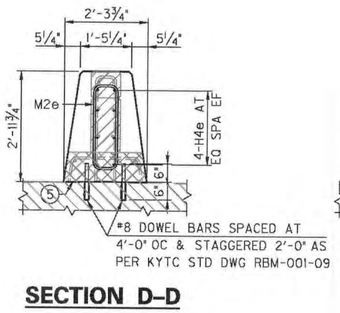
PLINTH



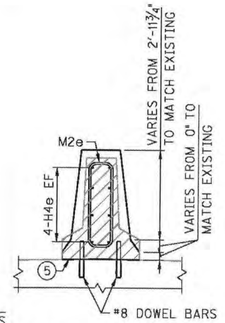
PLAN

ELEVATION

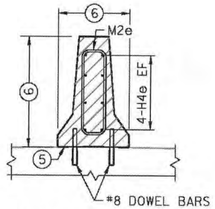
NORTH ABUTMENT MEDIAN BARRIER



SECTION D–D



SECTION E–E



SECTION F–F

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: R. YOUNG	M. LAWLER
DETAILED BY: R. YOUNG	M. LAWLER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

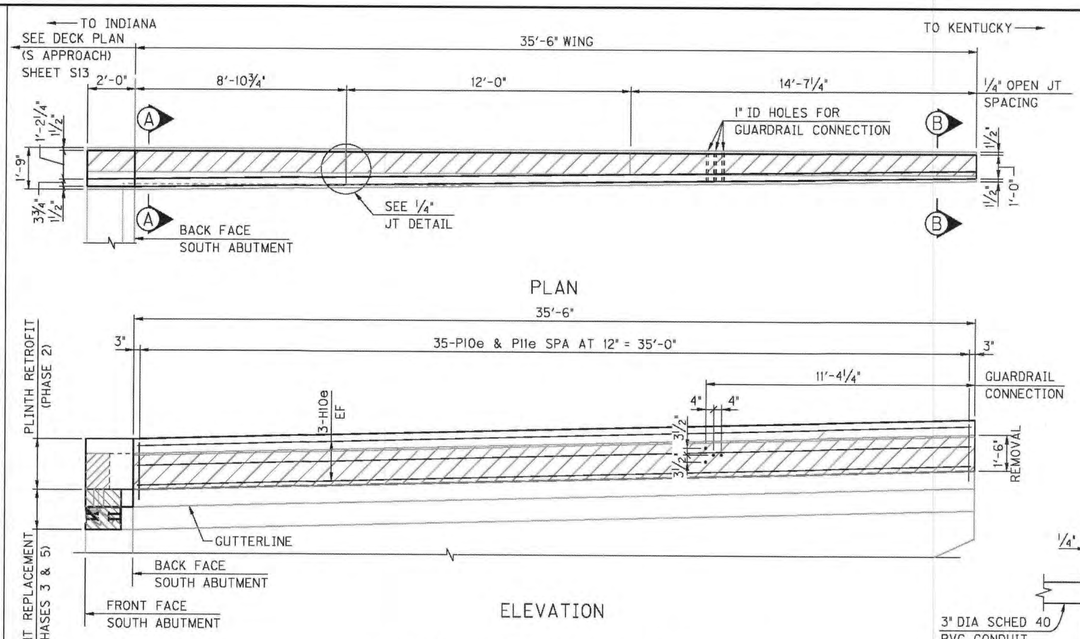
COUNTY: **BOONE, KY & DEARBORN, IN**

ROUTE: **I-275** | CROSSING: **OHIO RIVER**

N ABUTMENT BARRIER RETROFITS

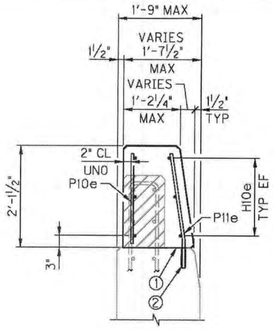
ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S14
		DRAWING NO. 27164

FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\014-27164_S014_N ABUTMENT BARRIER RETROFITS.DGN
USER: agrace
DATE PLOTTED: August 11, 2014
E-SHEET NAME:
MicroStation v8.11.7.443

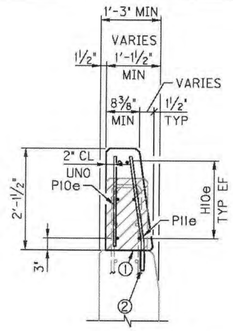


SOUTH ABUTMENT WINGWALL

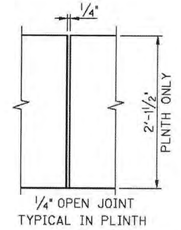
NORTH BOUND LANES - SOUTH BOUND LANES SIMILAR



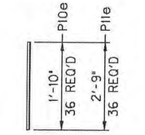
SECTION A–A



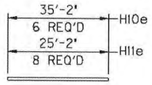
SECTION B–B



JOINT DETAIL



#5 Pe BARS



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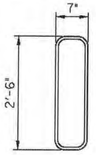
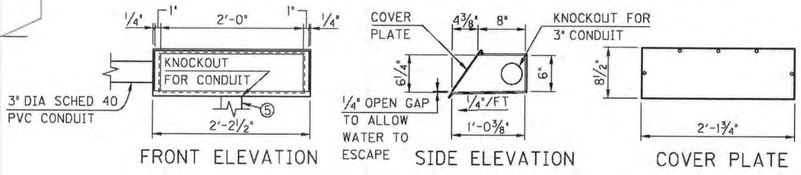


#5 M2e BARS

26 REQUIRED

NOTE: JUNCTION BOX TO BE FABRICATED FROM ¼" GALVANIZED STEEL PLATES. COVER PLATE TO BE FABRICATED FROM ⅛" GALVANIZED STEEL PLATES.

NOTE: COVER PLATE SHALL INCLUDE (5) STAINLESS STEEL SCREW CAPS WITH WINGNUTS TO SECURE TO BOX AND RUBBER GASKET FOR ALL SIDES WHERE SCREWS ARE INSTALLED.



MEDIAN WALL JUNCTION BOX (24")

NOTATIONS:

① CONSTRUCTION JOINT

② ANCHOR LEG OF #5 BAR WITH POLYESTER RESIN INTO ¾" x10" DEEP CORE DRILLED HOLE.

③ ANCHOR MEDIAN BARRIER RETROFIT AS PER KYTC STD DWG RBM-001-09

④ MEDIAN WALL JUNCTION BOX

⑤ CONDUIT INSTALLATION UNDER SB LANES, SEE LIGHTING PLANS

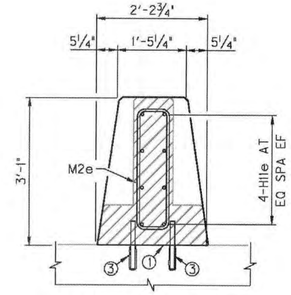
NOTES:

ALL DIMENSIONS TAKEN FROM EXISTING PLANS. CONTRACTOR TO FIELD VERIFY.

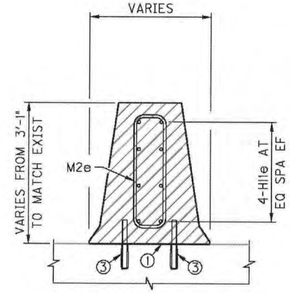
EXISTING VERTICAL REINFORCEMENT SHALL BE SAND-BLASTED CLEAN, STRAIGHTEN, CUT TO FIT AND INCORPORATED INTO NEW CONSTRUCTION.

FIELD BEND P11e BARS TO FIT.

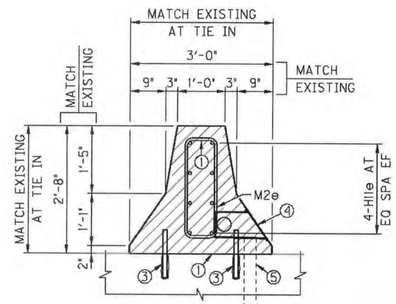
SEE GENERAL NOTES FOR PLINTH/MEDIAN RETROFITS (PHASES 1 & 2) AND EXPANSION JOINT REPLACEMENT (PHASES 3 & 5) WORK COORDINATION.



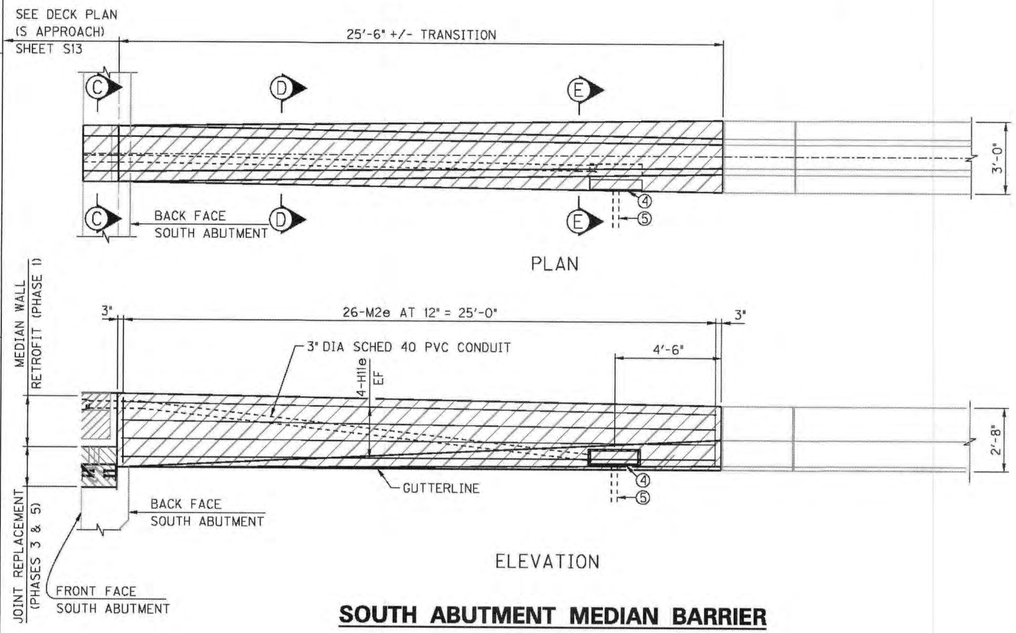
SECTION C–C



SECTION D–D



SECTION E–E



SOUTH ABUTMENT MEDIAN BARRIER

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. GRACE	M. LAWLER
DETAILED BY: A. GRACE	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

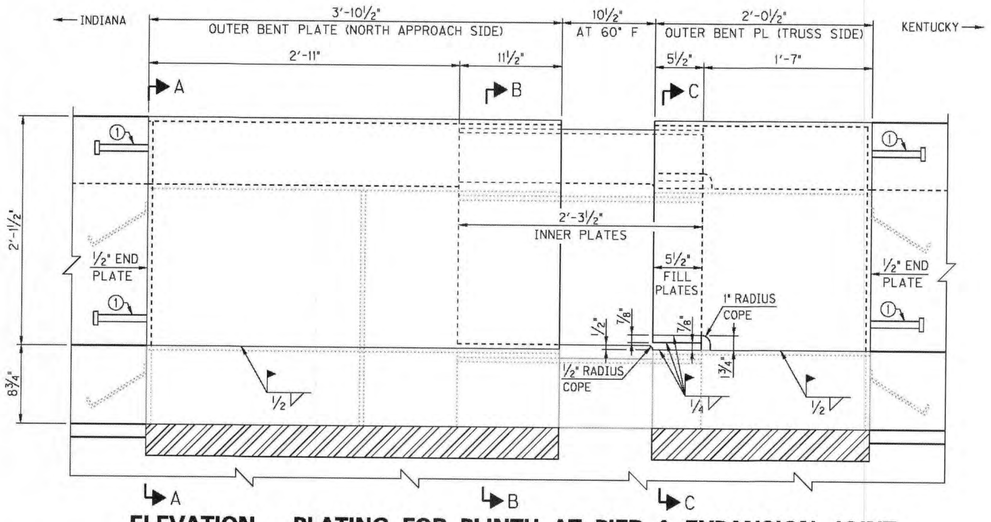
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

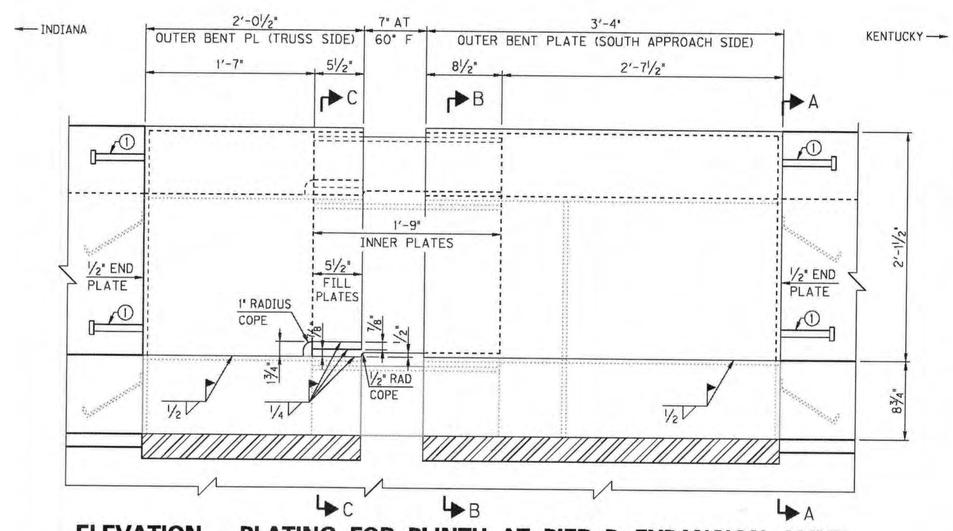
S ABUTMENT BARRIER RETROFITS

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S15
		DRAWING NO. 27164

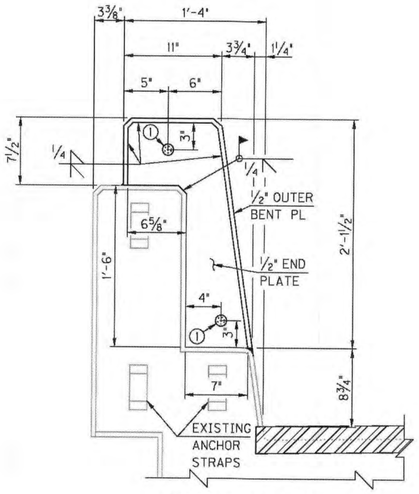
FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\015-27164_S015_S ABUTMENT BARRIER RETROFITS.DGN
USER: agrace
DATE PLOTTED: August 11, 2014
E-SHEET NAME:
MicroStation v8.11.7.443



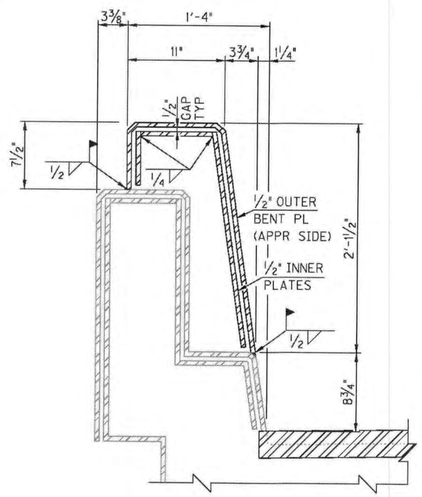
ELEVATION – PLATING FOR PLINTH AT PIER A EXPANSION JOINT



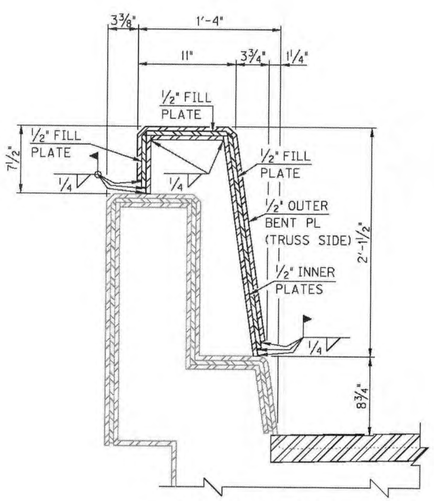
ELEVATION – PLATING FOR PLINTH AT PIER D EXPANSION JOINT



SECTION A–A



SECTION B–B



SECTION C–C

NOTATIONS:
Φ ½" DIA x 6" SHEAR STUD

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. FARMER	M. LAWLER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

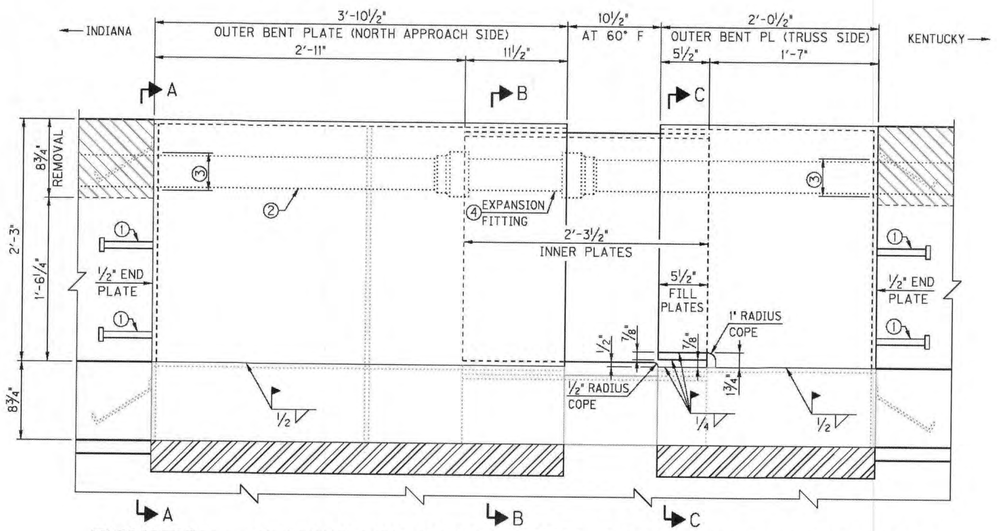
COUNTY & STATE: **BOONE, KY & DEARBORN, IN**

ROUTE: **I-275** | CROSSING: **OHIO RIVER**

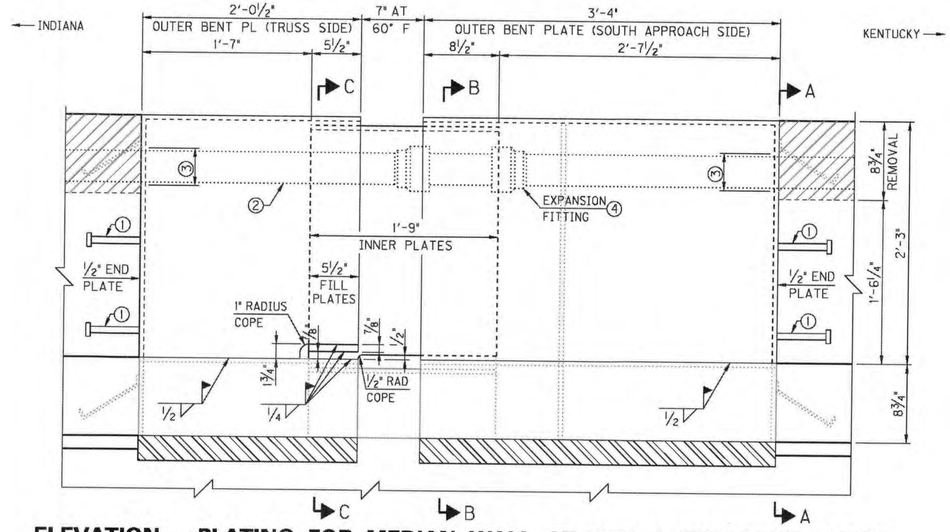
PLATING AT PIERS A & D EXP JTS

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S16
		DRAWING NO. 27164

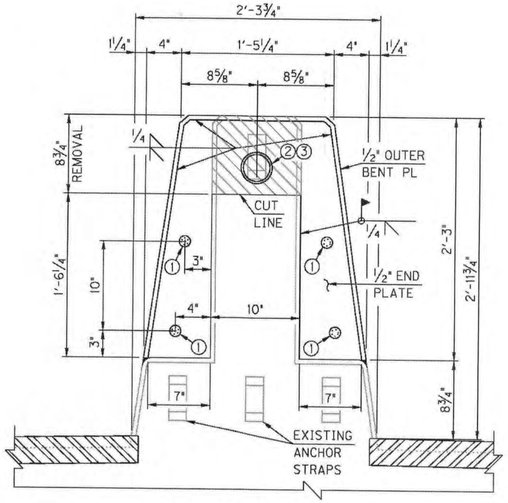
MicroStation v8.11.7.443 | E-SHEET NAME: | USER: agrace DATE PLOTTED: August 12, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTAL\FNS2\CADD DELIVERABLES\016-27164_S016_PLATING AT PIERS A & D EXP JTS.DGN



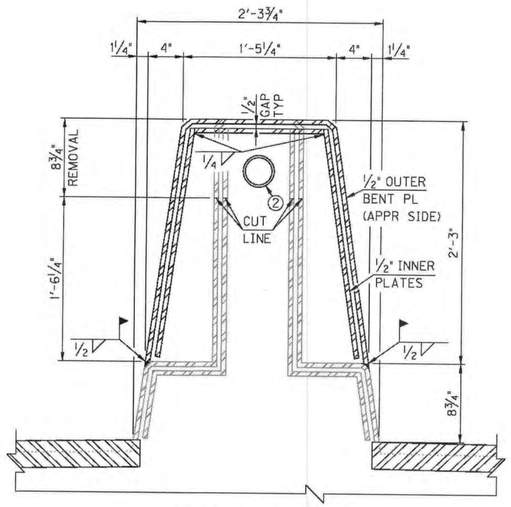
ELEVATION – PLATING FOR MEDIAN WALL AT PIER A EXPANSION JOINT



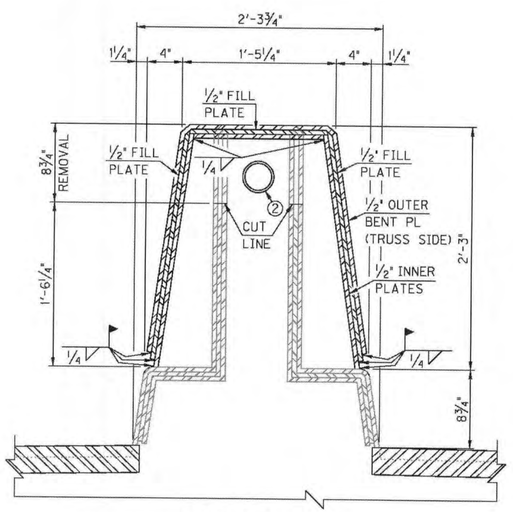
ELEVATION – PLATING FOR MEDIAN WALL AT PIER D EXPANSION JOINT



SECTION A–A



SECTION B–B



SECTION C–C

NOTATIONS:

① ½" DIA x 6" SHEAR STUD

② 3" DIA SCHEDULE 40 PVC CONDUIT

③ 3½"+/- PERFORATION OR SLOT IN END PLATE TO ALLOW CONDUIT INSTALLATION, TYP

④ EXPANSION FITTING SHALL BE SIZED TO ACCOMODATE TOTAL EXPANSION MOVEMENT:
AT PIER A = 11"
AT PIER D = 7¾"

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. FARMER	M. LAWLER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY & STATE
BOONE, KY & DEARBORN, IN

ROUTE: I-275
CROSSING: OHIO RIVER

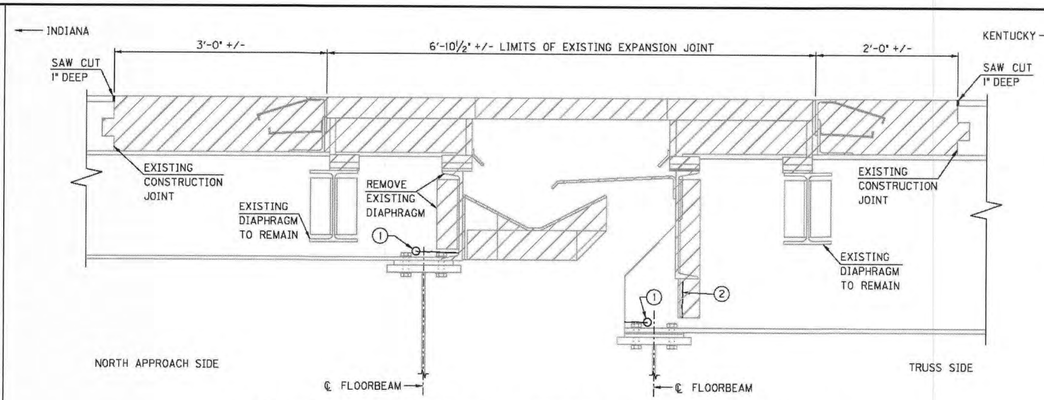
PLATING AT PIERS A & D EXP JTS

PREPARED BY: Stantec

SHEET NO.: S17

DRAWING NO.: 27164

ITEM NUMBER
6-2039.00



JOINT AND DRAINAGE SYSTEM REMOVAL AT PIER A

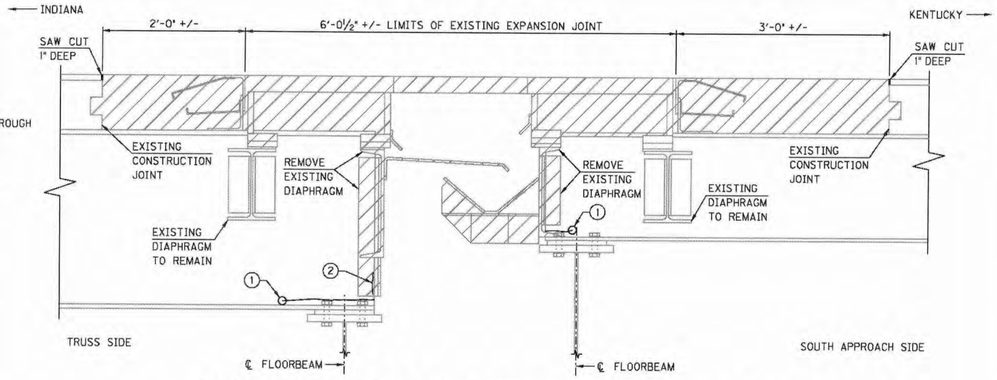
NOTATIONS

(1) DRILL 1" DIA CRACK ARREST HOLES THROUGH CRACKS IN STRINGER WEBS, SEE STRINGER CRACK LOCATION TABLE

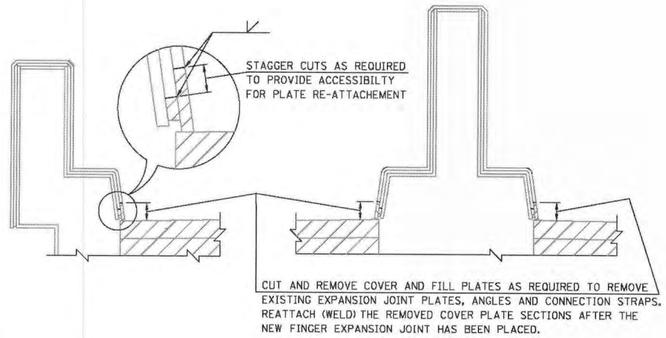
(2) CRACKS IN CONNECTION ANGLES, SEE STRINGER CRACK LOCATION TABLE MEMBER TO BE REMOVED

LEGEND

LIMITS OF REMOVAL



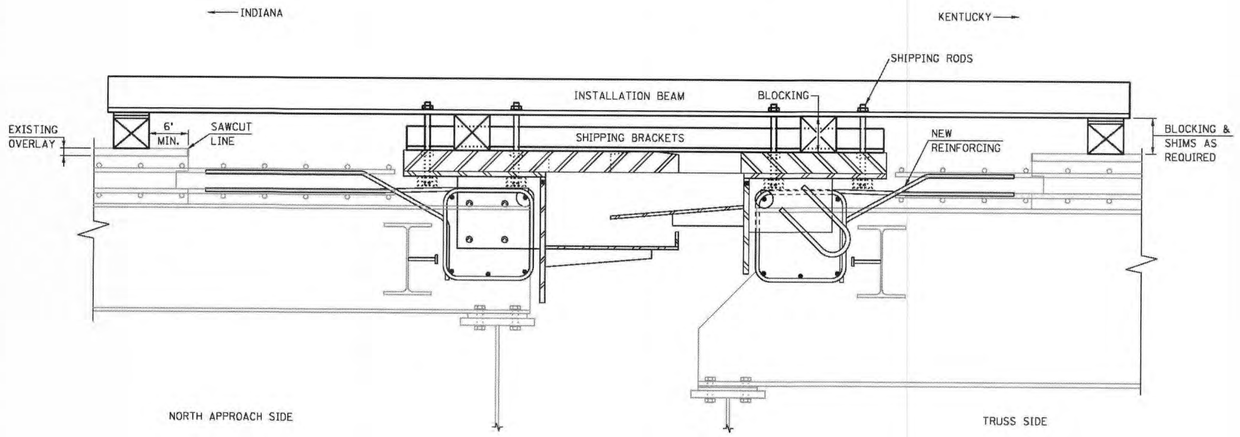
JOINT AND DRAINAGE SYSTEM REMOVAL AT PIER D



PLINTH & MEDIAN WALL PLATING REMOVAL AT PIERS A & D

INSTALLATION NOTES:

1. TRANSPORT FINGER JOINT ASSEMBLIES WITH A MINIMUM OF TWO INSTALLATION BEAMS.
2. SUPPORT INSTALLATION BEAMS ON BLOCKING AND SHIMS AS REQUIRED TO ALIGN THE TOP SURFACE OF THE FINGER PLATES WITH THE TOP OF THE DECK OVERLAY.
3. REPLACE DAMAGED TRANSVERSE REINFORCEMENT AS REQUIRED, PLACE NEW REINFORCING.
4. FORM AND PLACE THE CONCRETE DIAPHRAGM.
5. AFTER CONCRETE HAS REACHED 4000 PSI COMPRESSIVE STRENGTH, REMOVE THE INSTALLATION BEAMS AND SHIPPING BRACKETS, THEN REPLACE SHIPPING RODS WITH CONNECTION BOLTS.



JOINT INSTALLATION DETAIL

SHOWN AT PIER A JOINT, DETAIL SIMILAR AT PIER D JOINT

STRINGER CRACK LOCATION

SPAN	PIER	STRINGER	LOCATION	LENGTH
8N NORTH APPROACH SIDE	A (WB)	A	WEB ABOVE BOTTOM FLANGE FILLET	3⅛"
		B	WEB ABOVE BOTTOM FLANGE FILLET	3¼"
	A (Eastbound)	B'	WEB ABOVE BOTTOM FLANGE FILLET	5⅛"
		A'	WEB ABOVE BOTTOM FLANGE FILLET	3½"
1 TRUSS SIDE	A (WB)	A	WEB ABOVE BOTTOM FLANGE FILLET BELOW DIAPHRAGM CONNECTION	1¾"
	A (EB)	A'	DIAPHRAGM CONNECTION ANGLE	5¾"
3 TRUSS SIDE	D (WB)	A	WEB ABOVE BOTTOM FLANGE FILLET	2⅜"
			DS DIAPHRAGM CONNECTION ANGLE	2"
		B	WEB ABOVE BOTTOM FLANGE FILLET	7"
		C	WEB ABOVE BOTTOM FLANGE FILLET	2"
		D	WEB ABOVE BOTTOM FLANGE FILLET	1¾"
		D'	WEB ABOVE BOTTOM FLANGE FILLET	3"
		C'	WEB ABOVE BOTTOM FLANGE FILLET	4¾"
		B'	LOWER PORTION OF WEB BETWEEN FLANGE FILLET & CONN ANGLE	13½"
		A'	WEB ABOVE BOTTOM FLANGE FILLET	1⅞"
			US DIAPHRAGM CONNECTION ANGLE	2⅞"
IS SOUTH APPROACH SIDE	D (WB)	A	WEB ABOVE BOTTOM FLANGE FILLET	4¼"
		B	WEB ABOVE BOTTOM FLANGE FILLET	4"
		B'	WEB ABOVE BOTTOM FLANGE FILLET	4¼"
		A'	WEB ABOVE BOTTOM FLANGE FILLET	4⅞"

NOTE:
CRACK ARREST HOLES SHALL BE PAID AT THE UNIT PRICE FOR "DRILLED HOLES IN STEEL MEMBERS"

048 Item eliminated, changed to Item 8003 Retrofit Structural Steel Stringer + Flange

Pier A Westbound 25% ✓
A Eastbound 25% ✓
D Westbound 25% ✓
D Eastbound 25% ✓

REVISION	DATE
DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: A. FARMER	R. YOUNG

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE: I-275 | CROSSING: OHIO RIVER

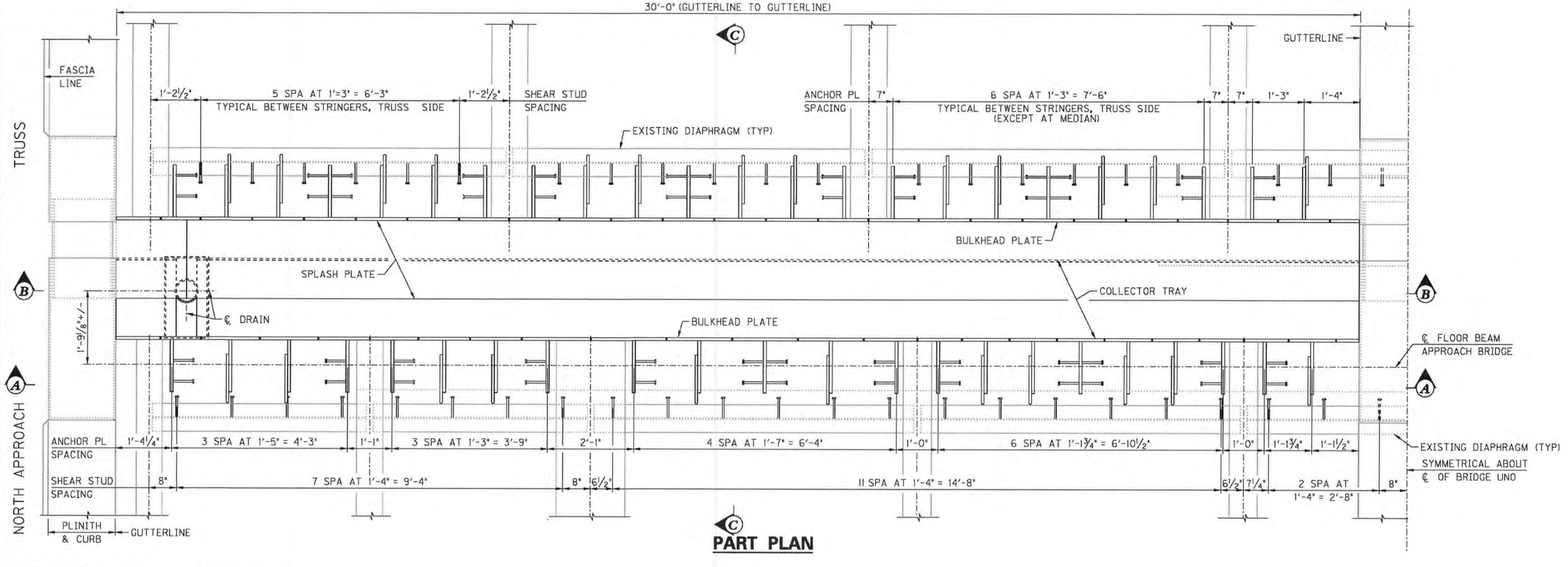
JOINT REMOVAL & CRACK ARREST

ITEM NUMBER: **6-2039.00**

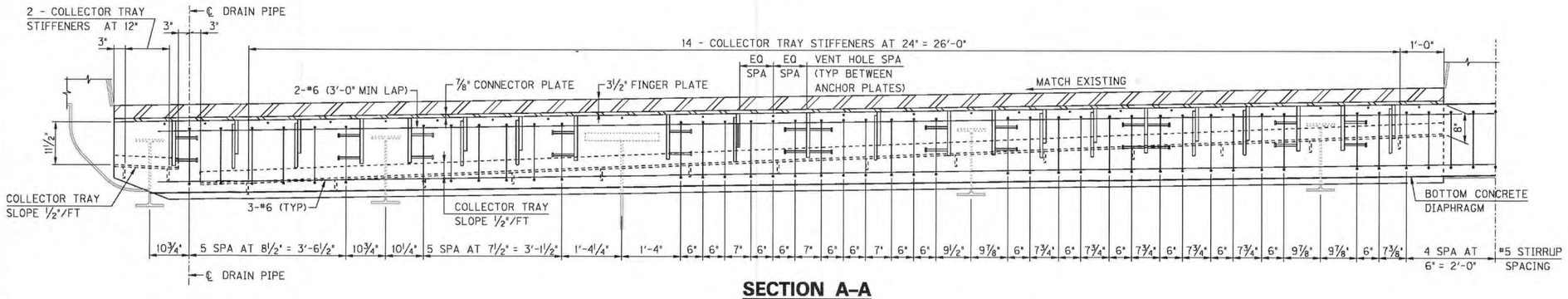
PREPARED BY: Stantec

SHEET NO.: S18

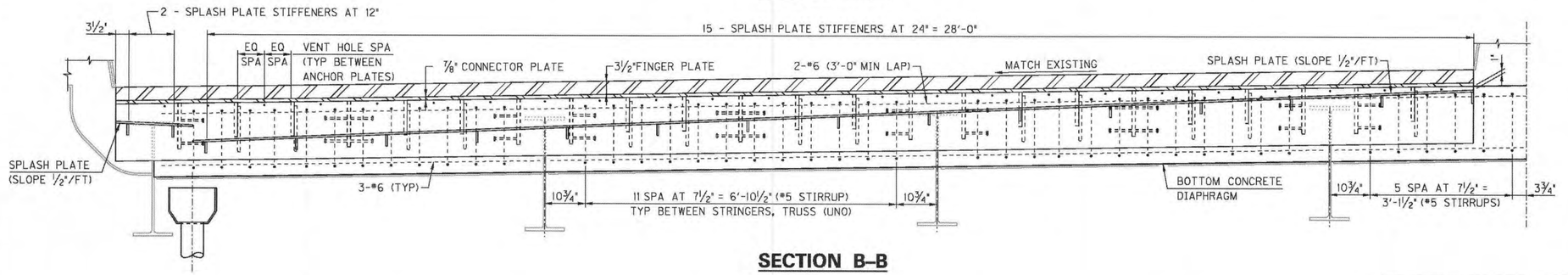
DRAWING NO.: 27164



PART PLAN



SECTION A-A



SECTION B-B

NOTE:
FOR SECTION C-C, SEE SHEET S20

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: S. PARSONS	A. FARMER

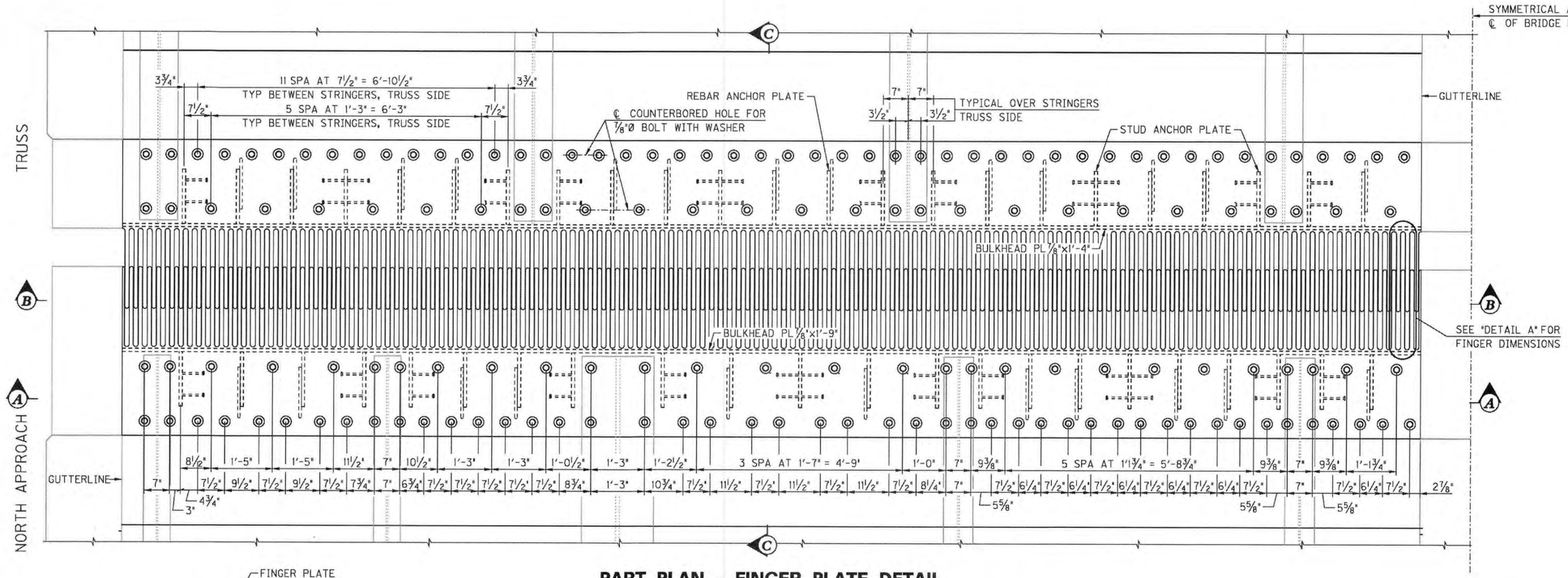
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

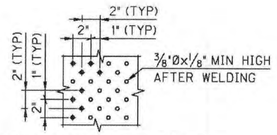
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE: I-275
CROSSING: OHIO RIVER

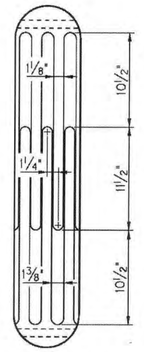
FINGER EXPANSION JT - PIER A

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S19
		DRAWING NO. 27164

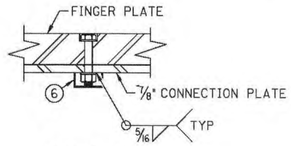




ANTI-SKID PATTERN ON FINGER PLATES



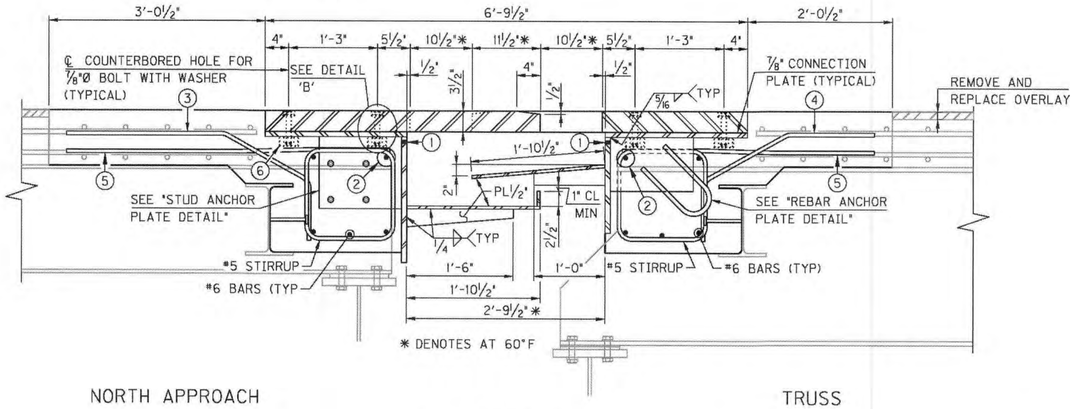
DETAIL A



DETAIL B

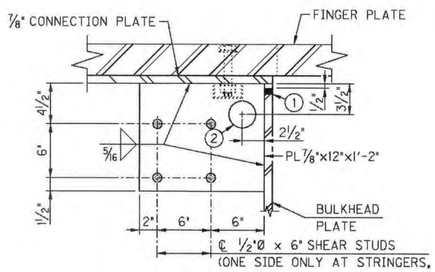
PART PLAN – FINGER PLATE DETAIL

NOTE:
FOR SECTIONS A-A & B-B, SEE SHEET S19.

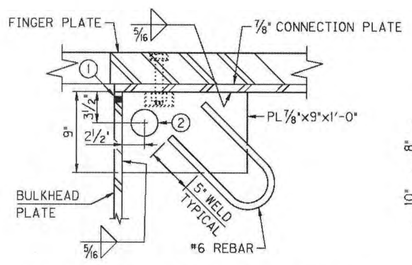


SECTION C–C

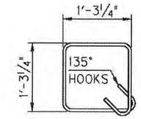
NOTE:
FINGER JOINT DIMENSIONS ARE AT 60° F. IF THE EXPANSION JOINT IS INSTALLED AT TEMPERATURE OTHER THAN 60° F, THE JOINT OPENING SHALL BE REDUCED OR INCREASED 5/16" FOR EACH 10° ABOVE OR BELOW 60° F, RESPECTIVELY.



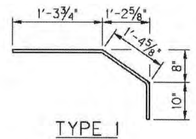
STUD ANCHOR PLATE DETAIL



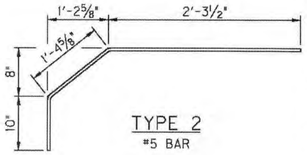
REBAR ANCHOR PLATE DETAIL



*5 STIRRUP



TYPE 1
*5 BAR



TYPE 2
*5 BAR

NOTATIONS:

1. ½'Ø VENT HOLE
2. 3'Ø HOLE (FOR REINFORCEMENT PASS THRU)
3. TYPE 2 BAR, SPACED WITH EXISTING LONGITUDINAL REINFORCEMENT.
4. TYPE 1 BAR, SPACED WITH EXISTING LONGITUDINAL REINFORCEMENT.
5. *5 BARS, SPACED WITH EXISTING LONGITUDINAL REINFORCEMENT. BEND IN FIELD AS REQUIRED.
6. PROVIDE PROTECTIVE LEAKPROOF PVC CAPS. ATTACH TO STEEL WITH AN APPROVED ADHESIVE. (TYPICAL)

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: S. PARSONS	A. FARMER

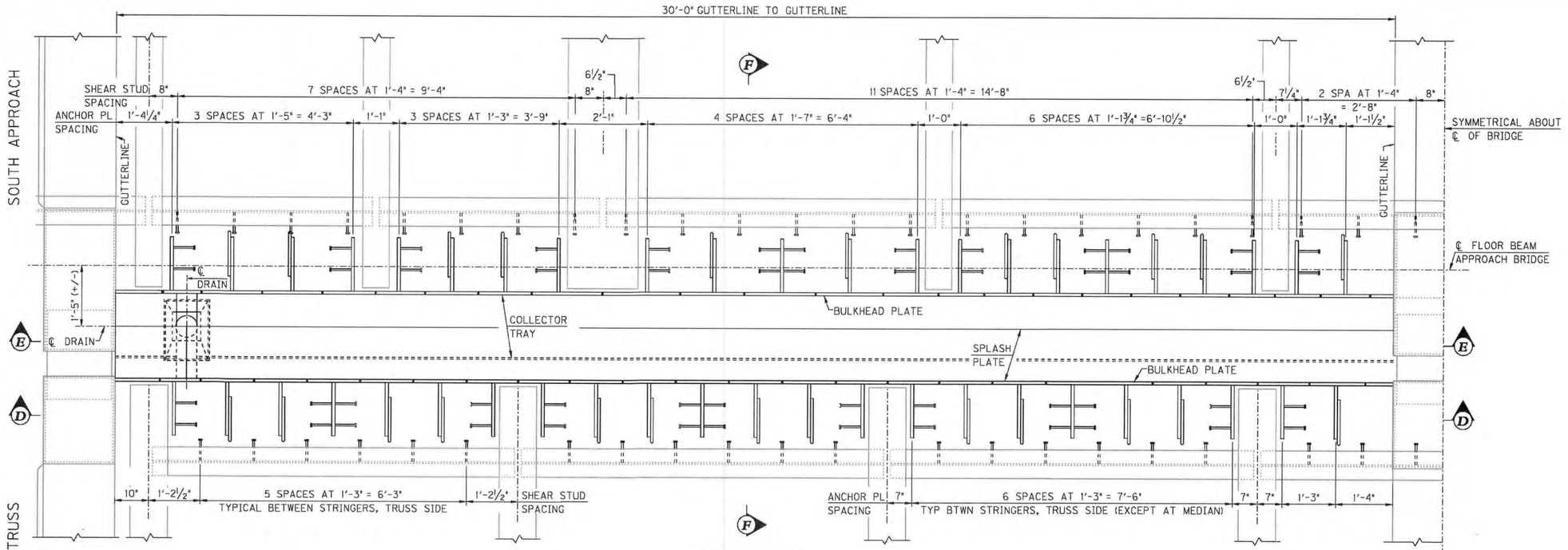
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

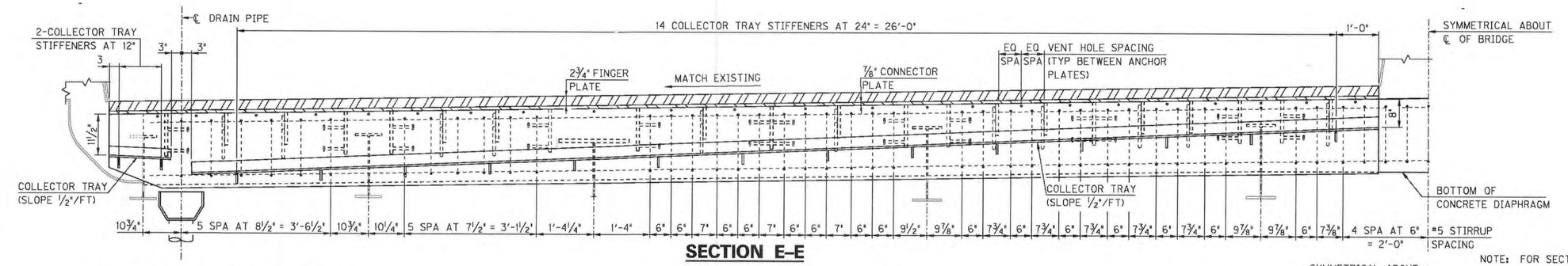
FINGER EXPANSION JT – PIER A

ITEM NUMBER	PREPARED BY	SHEET NO.	DRAWING NO.
6-2039.00	Stantec	S20	27164



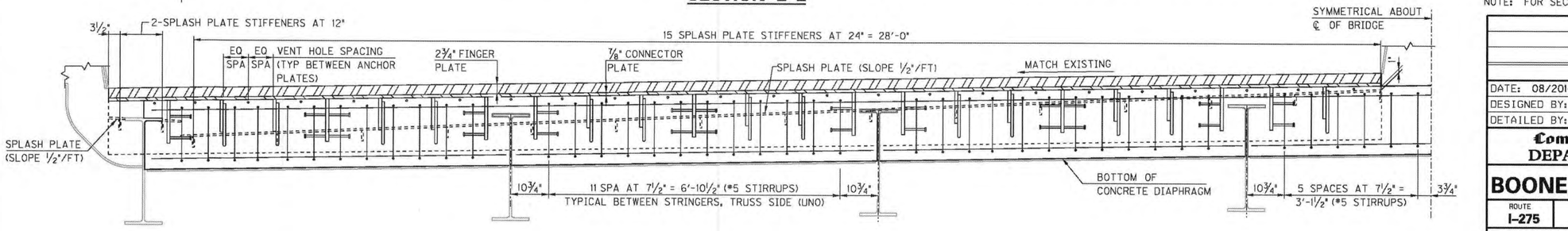
PART PLAN

(FINGER PLATES & CONNECTOR PLATES NOT SHOWN)



SECTION E–E

NOTE: FOR SECTION F-F, SEE SHEET S22.



SECTION D–D

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: R. YOUNG	A. FARMER

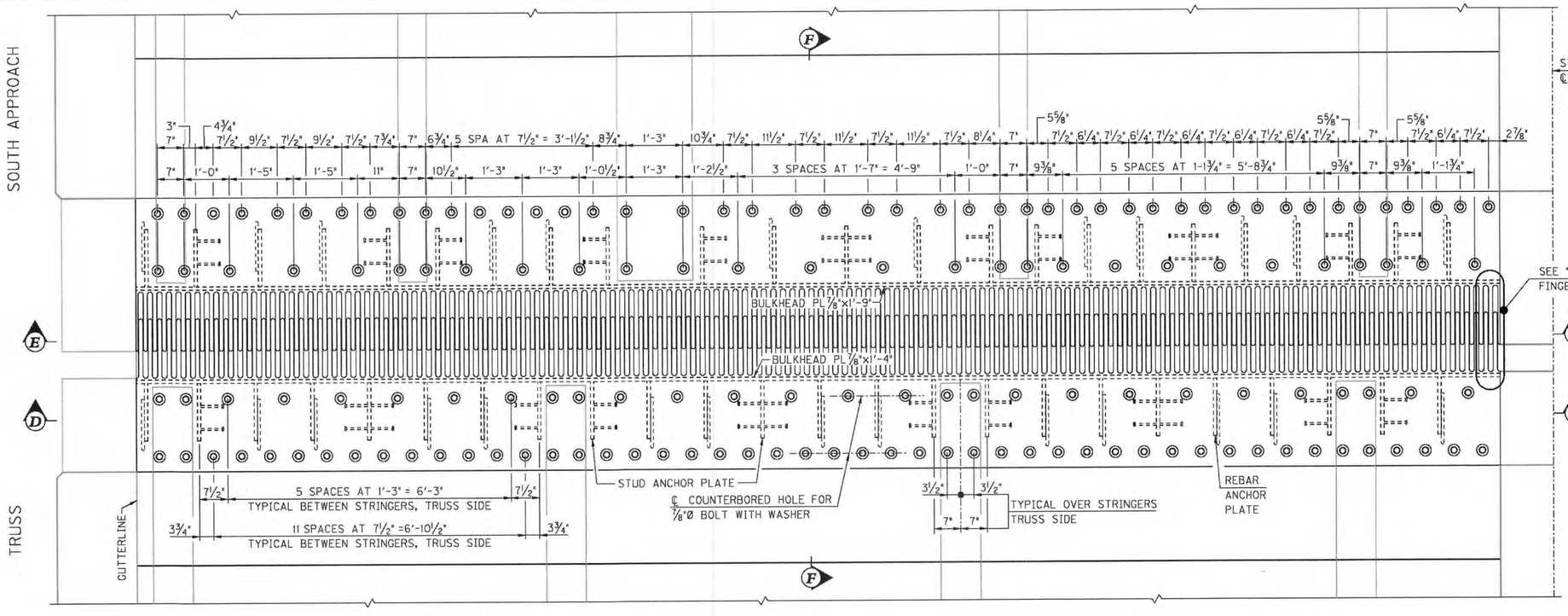
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

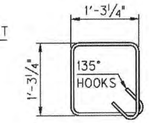
COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

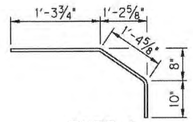
FINGER EXPANSION JT – PIER D

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S21
		DRAWING NO. 27164

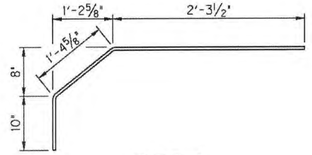




#5 STIRRUP



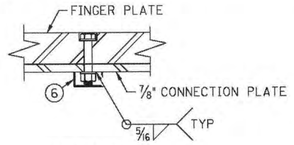
TYPE 1
#5 BAR



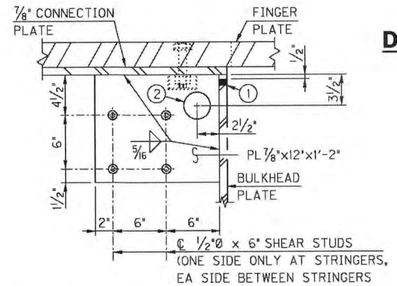
TYPE 2
#5 BAR

PART PLAN – FINGER PLATE DETAIL

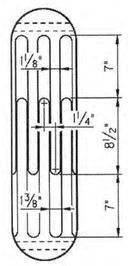
NOTE: FOR SECTIONS D-D & E-E, SEE SHEET S21.



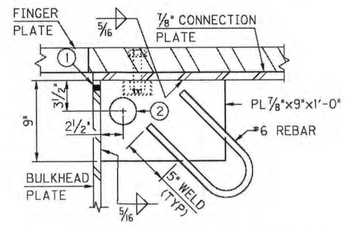
DETAIL B



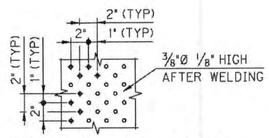
STUD ANCHOR PLATE DETAIL



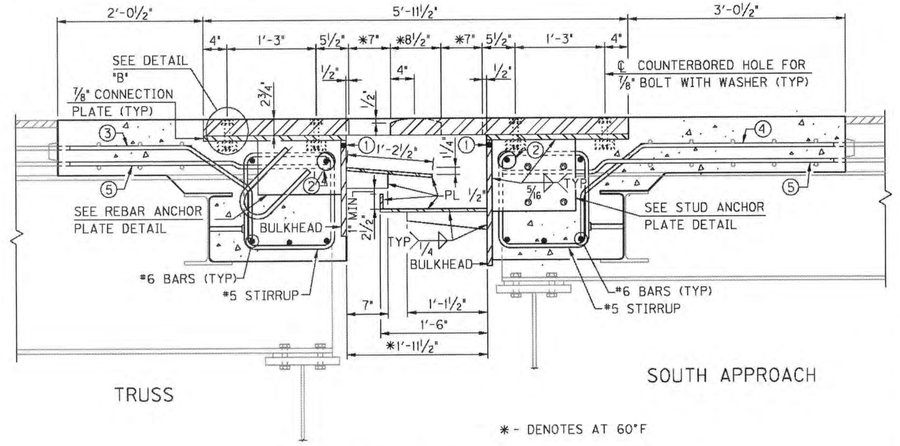
DETAIL "A"



REBAR ANCHOR PLATE DETAIL



ANTI-SKID PATTERN ON FINGER PLATES



SECTION F-F

NOTE:
FINGER JOINT DIMENSIONS ARE AT 60°F. IF THE EXPANSION JOINT IS INSTALLED AT TEMPERATURE OTHER THAN 60° F, THE JOINT OPENING SHALL BE REDUCED OR INCREASED 5/16" FOR EACH 10° ABOVE OR BELOW 60° F, RESPECTIVELY.

NOTATIONS:

1. ½"Ø VENT HOLE
2. 3"Ø HOLE (FOR REINFORCEMENT PASS THRU)
3. TYPE 1 BAR, SPACED WITH EXISTING LONGITUDINAL REINFORCEMENT.
4. TYPE 2 BAR, SPACED WITH EXISTING LONGITUDINAL REINFORCEMENT.
5. #5 BARS, SPACED WITH EXISTING LONGITUDINAL REINFORCEMENT. BEND IN FIELD AS REQUIRED.
6. PROVIDE PROTECTIVE LEAKPROOF PVC CAPS. ATTACH TO STEEL WITH AN APPROVED ADHESIVE. (TYPICAL)

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. FARMER	M. LAWLER
DETAILED BY: R. YOUNG	A. FARMER

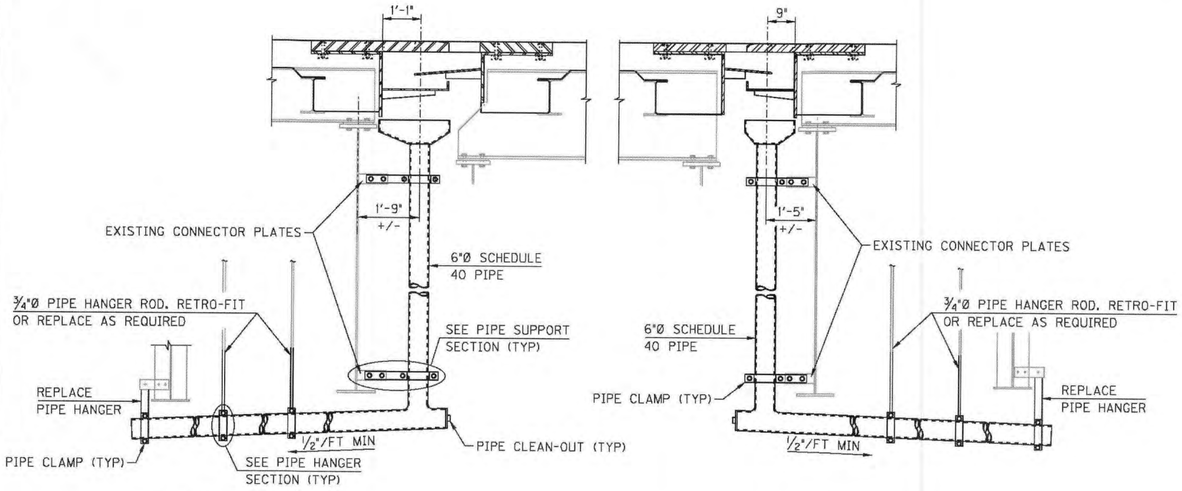
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

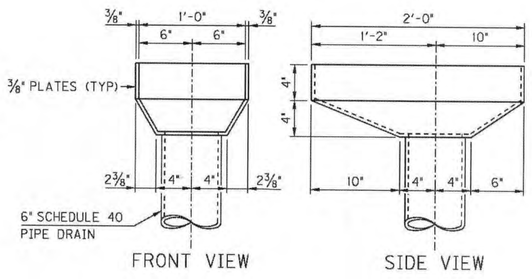
FINGER EXPANSION JT – PIER D

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S22
		DRAWING NO. 27164

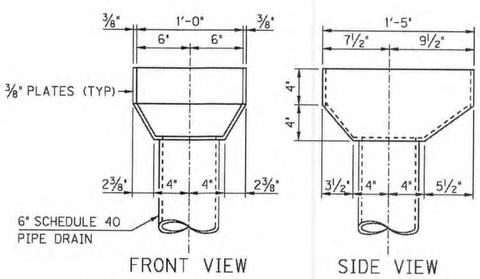


NORTH APPROACH TRUSS SOUTH APPROACH

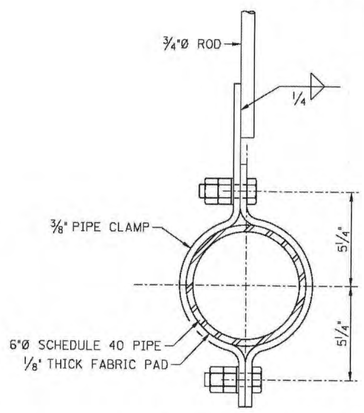
DRAIN PIPE ELEVATION AT PIERS A & D



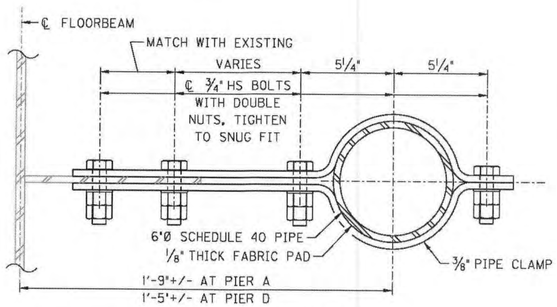
COLLECTOR BOX DETAIL AT PIER A



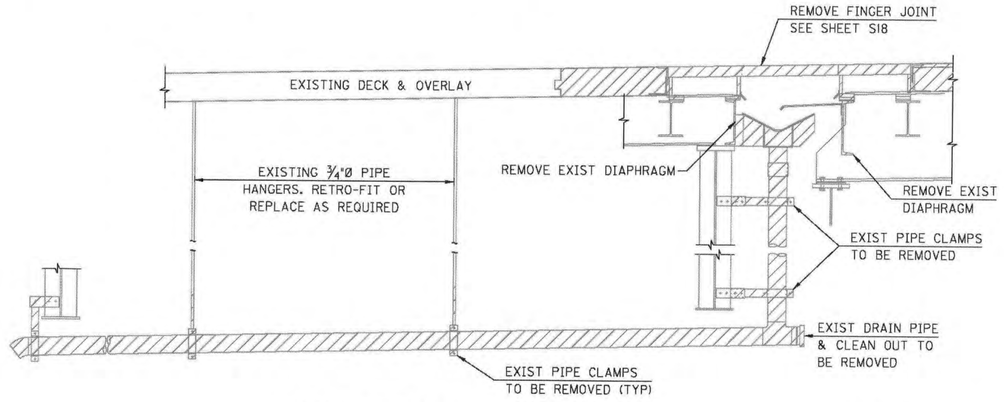
COLLECTOR BOX DETAIL AT PIER D



PIPE HANGER SECTION



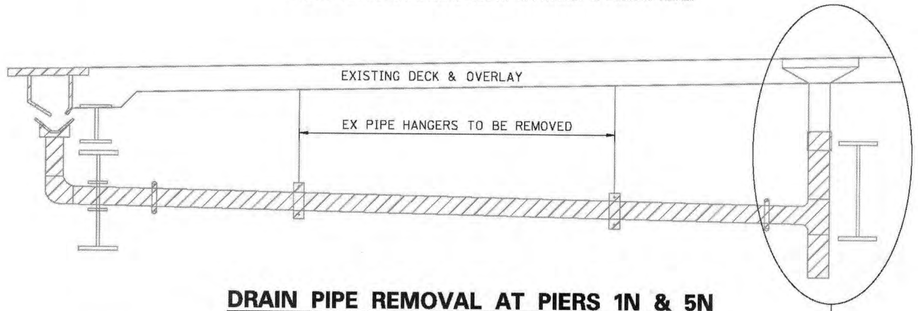
PIPE SUPPORT SECTION



NORTH APPROACH TRUSS

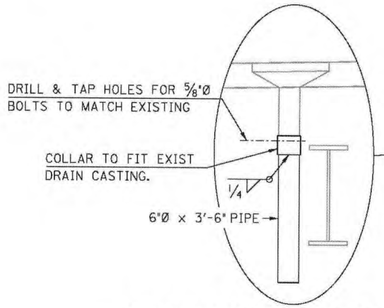
DRAIN PIPE REMOVAL AT PIERS A & D

(NORTH APPROACH SHOWN, SOUTH APPROACH OPPOSITE HAND)



DRAIN PIPE REMOVAL AT PIERS 1N & 5N

INDICATES REMOVAL



DRAIN PIPE REPLACEMENT AT PIER 1N & 5N

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: S. PARSONS	A. FARMER
DETAILED BY: S. PARSONS	A. FARMER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

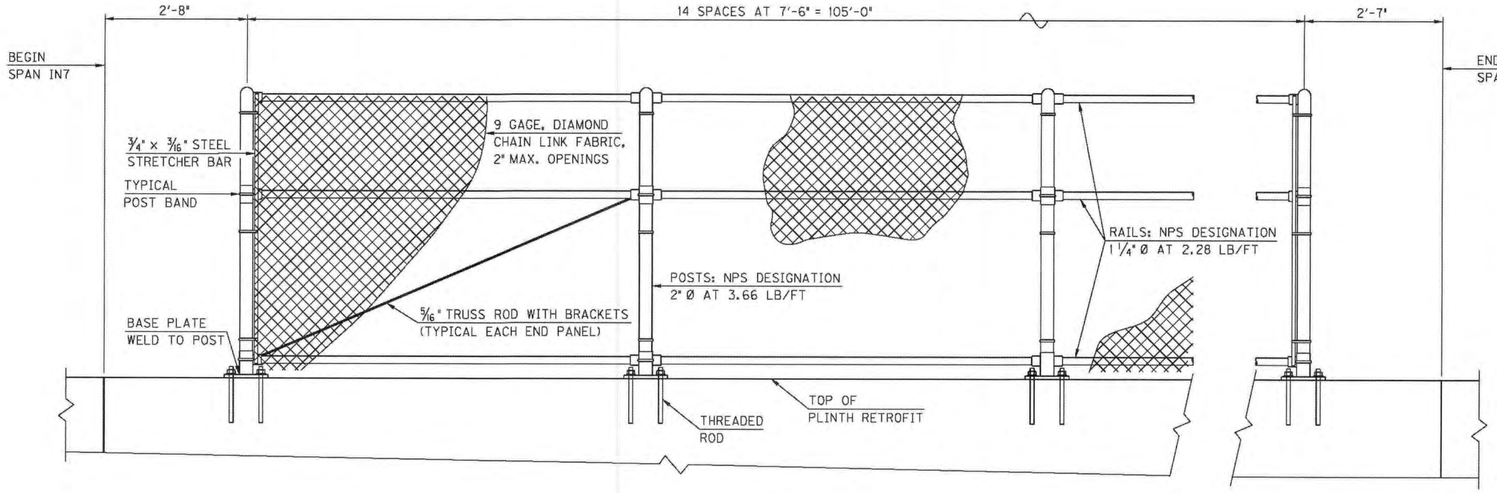
COUNTY AND STATE: BOONE, KY & DEARBORN, IN

ROUTE: I-275 CROSSING: OHIO RIVER

DRAINAGE SYSTEM MODIFICATIONS

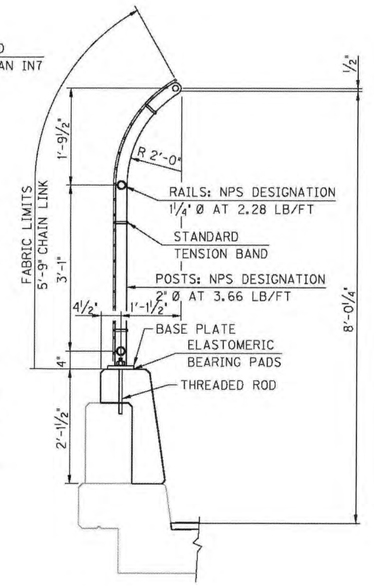
ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S23
		DRAWING NO. 27164

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: agrace DATE PLOTTED: August 11, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\STRUCTURAL\SUBMITTALS\FNS2\CADD DELIVERABLES\023-27164_S023_DRAINAGE SYSTEM MODIFICATIONS.DGN



PART FENCE ELEVATION

SHOWING FASCIA



FENCE SECTION

NOTES

SPECIFICATIONS:
UNLESS OTHERWISE NOTED, VINYL COAT ALL MATERIALS USED IN THE FABRICATION OF THE PROTECTIVE FENCE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATION M181.

POSTS:
ENSURE FENCE POSTS ARE NPS DESIGNATION, 2" DIA. AT 3.66 POUNDS PER FOOT, GRADE I. FENCE POSTS SHALL BE SET NORMAL TO THE ROADWAY GRADE.

RAILS:
ENSURE FENCE RAILS ARE NPS DESIGNATION, 1 1/4" DIA. AT 2.28 POUNDS PER FOOT, GRADE I.

BASE PLATES:
ENSURE BASE PLATES CONFORM TO AASHTO M183 OR SAE M1020 AND ARE GALVANIZED IN ACCORDANCE WITH ASTM A153. APPLY A VINYL FINISH COAT ON ALL EXPOSED SURFACES OF THE BASE PLATES AFTER THE POSTS ARE IN PLACE.

FINISHING:
ALL EXPOSED SHARP EDGES SHALL BE ROUNDED. ALL ROUGH-CUT ENDS AND EDGES SHALL BE GROUND OR FILED SMOOTH.

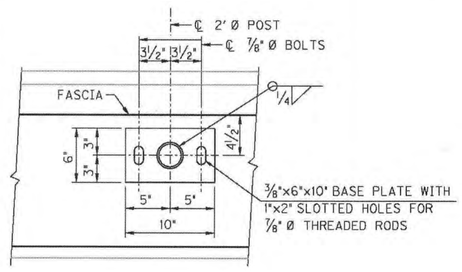
THREADED RODS:
THREADED RODS TO BE DRILLED IN PLACE, USING A POLYESTER RESIN SET SYSTEM. ALL PARTS OF THE ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

ELASTOMERIC BEARING PADS:
ELASTOMERIC BEARING PADS SHALL BE PLACED UNDER EACH BASE PLATE. THE PAD SHALL COVER THE ENTIRE CONTACT AREA BETWEEN THE PLATE AND THE CONCRETE BARRIER AND SHALL BE NEATLY TRIMMED.

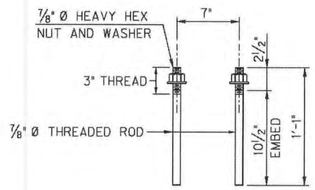
CHAIN LINK FABRIC:
USE POLYVINYL CHLORIDE (PVC) COATED STEEL FENCE TYPE IV WITH THE COATING COLOR TO BE DARK GREEN WITH THE SIZE OF THE FENCE BEING IN ACCORDANCE WITH SECTION 817 OF THE SPECIFICATIONS. TIE THE FABRIC TO THE POSTS AND RAILS AT 2 FOOT CENTERS MAXIMUM.

DAMAGE COATING:
AFTER THE INSTALLATION OF THE CHAIN LINK FABRIC, CLEAN ANY DAMAGED AREAS OF THE FENCE COMPONENTS BY WASHIHNG WITH MINERAL SPIRIT SOLVENT SUFFICIENT TO REMOVE ANY CONTAMINANTS. AFTER CLEAING, APPLY A VINYL WASHING PRIMER TO THE SURFACES WITH A DRY FILM THICKNESS OF 0.3 MIL TO 0.5 MIL BEFORE THE FINAL VINYL FINISH COAT IS APPLIED.

COST:
COST OF THREADED RODS, BASE PLATES, FENCE POSTS, RAILS, CHAIN LINK FABRIC, HARDWARE AND ELASTOMERIC BEARING PADS SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR PLINTH RETROFIT.



BASE PLATE DETAILS



THREADED ROD DETAILS

REVISION	DATE

DATE: 08/2014	CHECKED BY
DESIGNED BY: A. GRACE	M. LAWLER
DETAILED BY: A. GRACE	M. LAWLER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY AND STATE
BOONE, KY & DEARBORN, IN

ROUTE	CROSSING
I-275	OHIO RIVER

PROTECTIVE FENCE

ITEM NUMBER	PREPARED BY	SHEET NO.
6-2039.00	Stantec	S24
		DRAWING NO. 27164

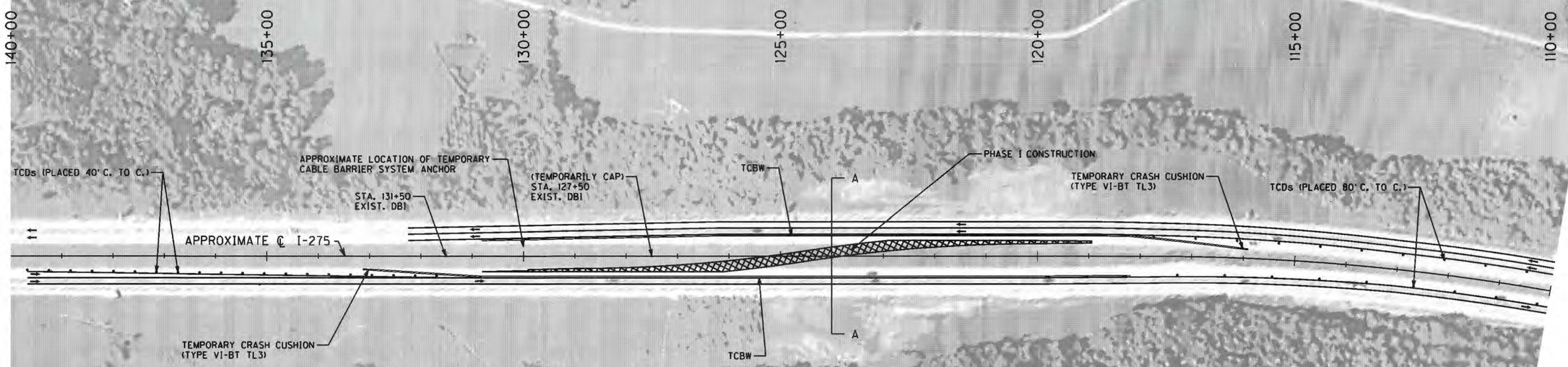
COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	RI

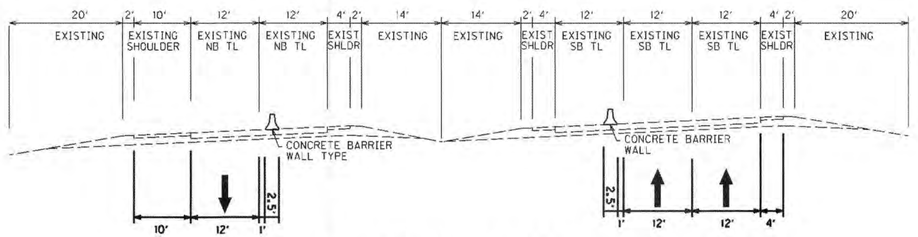
PHASE I

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE LEFT (INSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, CONSTRUCT THE PROPOSED MEDIAN CROSSOVERS BETWEEN STA. 118+00 TO STA. 131+00 (APPROX. KY I-275 ℄) AND STA. 869+00 TO STA. 878+00 (APPROX. IN I-275 ℄), AND COMPLETE CONSTRUCTION OF THE CARROLL CROPPER MEDIAN WALL RETROFIT.
- DURING CONSTRUCTION OF THE CARROLL CROPPER BRIDGE, THE EXISTING MEDIAN CABLE BARRIER SYSTEM WILL BE REMOVED FROM ITS EXISTING NORTHERN END AT APPROX. STA. 96+00 (APPROX. KY I-275 ℄) THROUGH THE MEDIAN CROSSOVER WORK ZONES. A TEMPORARY ANCHOR SYSTEM WILL CONSTRUCTED IN ORDER TO KEEP THE CABLE BARRIER SYSTEM OPERATIONAL THROUGHOUT THE DURATION OF THE CARROLL CROPPER BRIDGE CONSTRUCTION.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.

PHASE II (NOT SHOWN)

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE I (KYTC STANDARD DRAWING NO. TTC-115-02), CLOSE THE RIGHT (OUTSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, REMOVE THE PHASE I TEMPORARY BARRIER WALLS ALONG THE MEDIAN CROSSOVER WORK ZONES AND COMPLETE CONSTRUCTION OF THE CARROLL CROPPER BRIDGE PLINTH RETROFITS. THE SOUTHBOUND I-275 TRAVEL LANES CAN BE RESTORED TO THEIR ORIGINAL CONFIGURATION AT THE SOUTHERN BRIDGE END. (KENTUCKY SIDE). NOTE: PHASE II QUANTITIES ARE BASED ON LANE SHIFTS (AT TAPER RATE OF 45:1) BETWEEN THE MEDIAN CROSSOVER WORK ZONES AND CARROLL CROPPER BRIDGE.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-115-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.





MOT PHASE I
SECTION A–A

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE I
KENTUCKY

FILE NAME: V:\1785\ACTIVE\178564014\TRANSPORTATION\DESIGN\DRAWINGS\FINAL_PLANS_7-15-2014\ROADWAY\RG01D0WT.DGN
USER: kdeep
DATE PLOTTED: September 3, 2014
E-SHEET NAME:
MicroStation v8.11.7.443

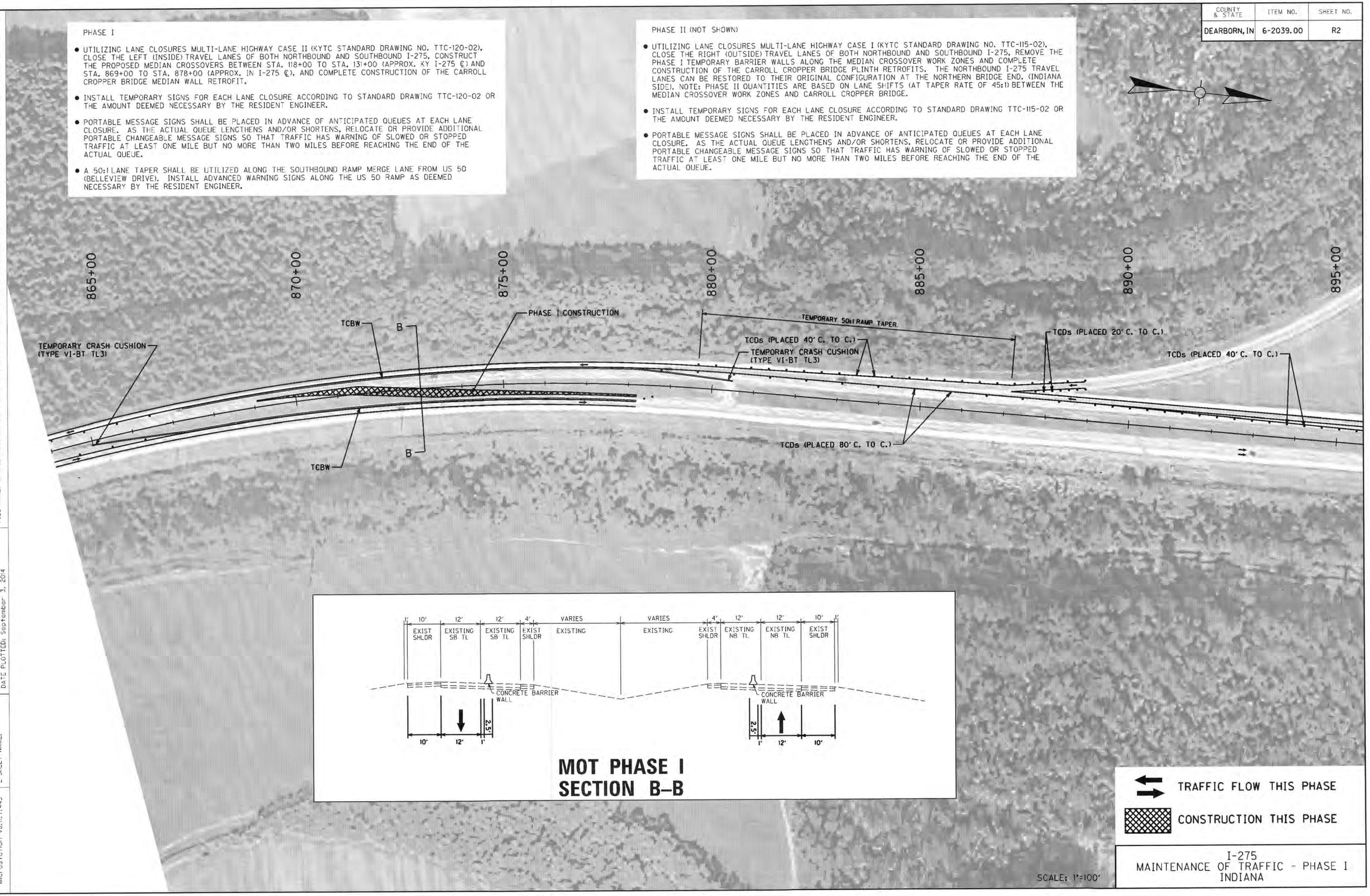
COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R2

PHASE I

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE LEFT (INSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, CONSTRUCT THE PROPOSED MEDIAN CROSSOVERS BETWEEN STA. 118+00 TO STA. 131+00 (APPROX. KY I-275 ℄) AND STA. 869+00 TO STA. 878+00 (APPROX. IN I-275 ℄), AND COMPLETE CONSTRUCTION OF THE CARROLL CROPPER BRIDGE MEDIAN WALL RETROFIT.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.
- A 50:1 LANE TAPER SHALL BE UTILIZED ALONG THE SOUTHBOUND RAMP MERGE LANE FROM US 50 (BELLEVIEW DRIVE). INSTALL ADVANCED WARNING SIGNS ALONG THE US 50 RAMP AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

PHASE II (NOT SHOWN)

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE I (KYTC STANDARD DRAWING NO. TTC-115-02), CLOSE THE RIGHT (OUTSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, REMOVE THE PHASE I TEMPORARY BARRIER WALLS ALONG THE MEDIAN CROSSOVER WORK ZONES AND COMPLETE CONSTRUCTION OF THE CARROLL CROPPER BRIDGE PLINTH RETROFITS. THE NORTHBOUND I-275 TRAVEL LANES CAN BE RESTORED TO THEIR ORIGINAL CONFIGURATION AT THE NORTHERN BRIDGE END. (INDIANA SIDE). NOTE: PHASE II QUANTITIES ARE BASED ON LANE SHIFTS (AT TAPER RATE OF 45:1) BETWEEN THE MEDIAN CROSSOVER WORK ZONES AND CARROLL CROPPER BRIDGE.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-115-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.



MOT PHASE I
SECTION B–B

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

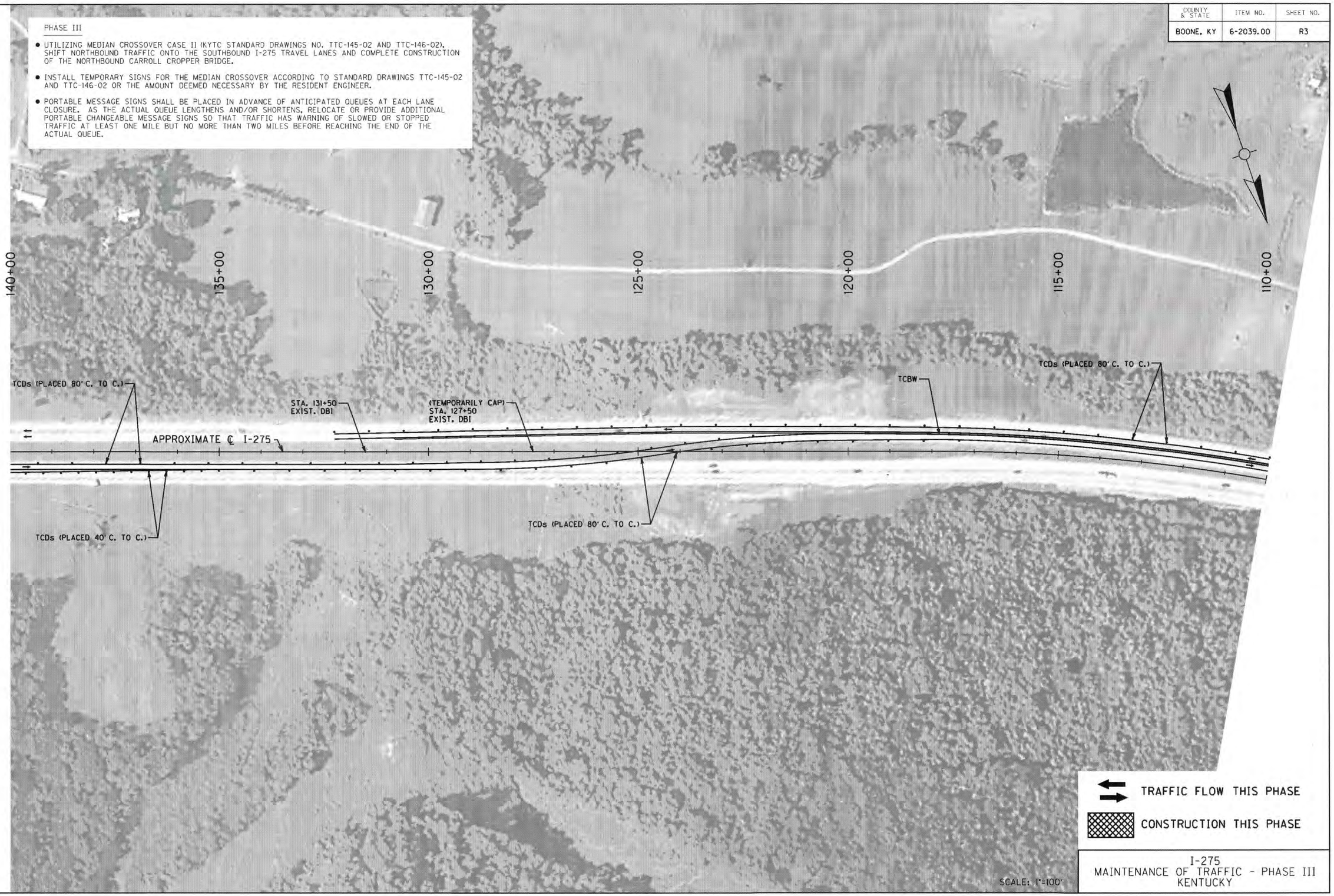
I-275
MAINTENANCE OF TRAFFIC - PHASE I
INDIANA

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\1785640\4\TRANSPORTATION\DESIGN\DRAWING\FINAL_PLANS_7-15-2014\ROADWAY\R00200MT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	R3

PHASE III

- UTILIZING MEDIAN CROSSOVER CASE II (KYTC STANDARD DRAWINGS NO. TTC-145-02 AND TTC-146-02). SHIFT NORTHBOUND TRAFFIC ONTO THE SOUTHBOUND I-275 TRAVEL LANES AND COMPLETE CONSTRUCTION OF THE NORTHBOUND CARROLL CROPPER BRIDGE.
- INSTALL TEMPORARY SIGNS FOR THE MEDIAN CROSSOVER ACCORDING TO STANDARD DRAWINGS TTC-145-02 AND TTC-146-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.



TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE III
KENTUCKY

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\TRANSPORTATION\DESIGN\DRAWINGS\FINAL_PLANS_7-15-2014\ROADWAY\R003000MT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	R4

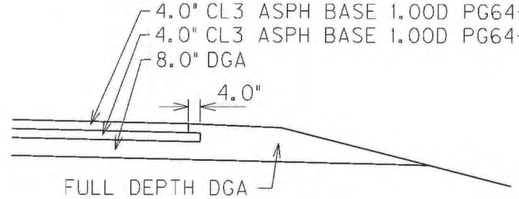
130+00

125+00

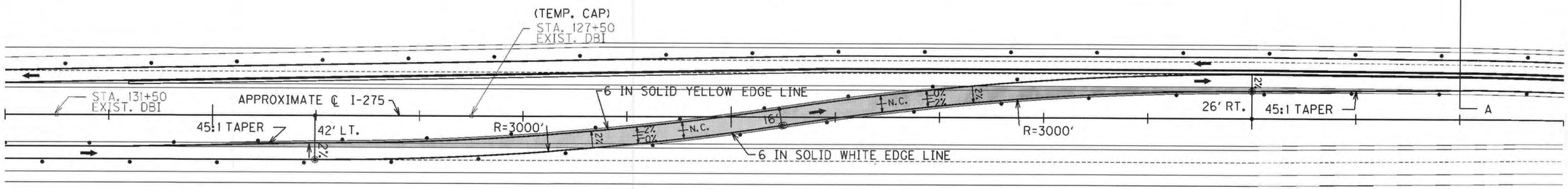
120+00

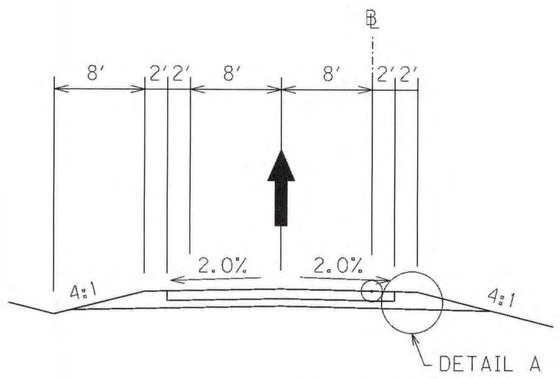
MEDIAN CROSSOVER ℄ NOTE

- MEDIAN CROSSOVER DESIGN SPEED = 45 MPH
- UTILIZE EXISTING DBI STATIONS TO LOCATE ALIGNMENT OF PROPOSED MEDIAN CROSSOVER.
- A STRAIGHT LINE GRADE SHALL BE UTILIZED BETWEEN EDGES OF EXISTING PAVEMENT.

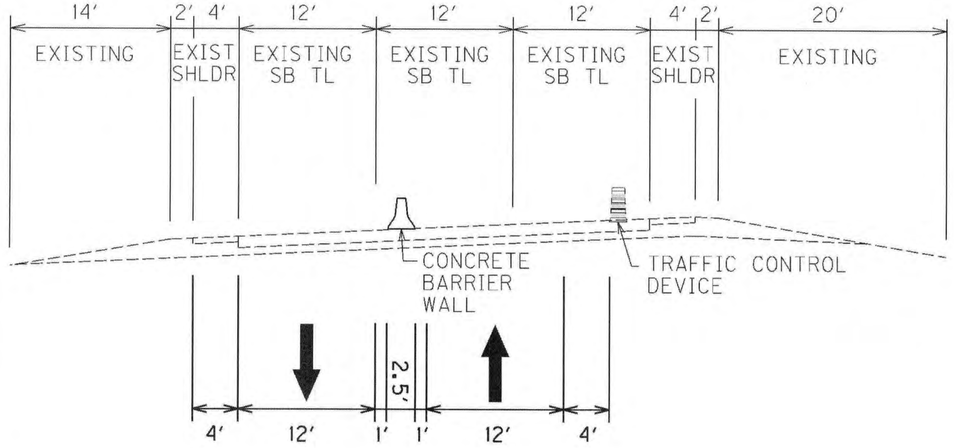


DETAIL A
MEDIAN CROSSOVER PAVEMENT





MEDIAN CROSSOVER
TYPICAL SECTION
NORMAL CROWN SECTION



MOT PHASE III
SECTION A–A

SCALE: 1"=50'

I-275
MOT PHASE III
KY NORTHBOUND MEDIAN CROSSOVER

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep | DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\1785640\14\TRANSPORTATION\DESIGN\DRAWING\FINAL_PLANS_7-15-2014\ROADWAY\R00400MT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R5

PHASE III

- UTILIZING MEDIAN CROSSOVER CASE II (KYTC STANDARD DRAWINGS NO. TTC-145-02 AND TTC-146-02), SHIFT NORTHBOUND TRAFFIC ONTO THE SOUTHBOUND I-275 TRAVEL LANES AND COMPLETE CONSTRUCTION OF THE NORTHBOUND CARROLL CROPPER BRIDGE.
- INSTALL TEMPORARY SIGNS FOR THE MEDIAN CROSSOVER ACCORDING TO STANDARD DRAWINGS TTC-145-02 AND TTC-146-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.
- A 50:1 LANE TAPER SHALL BE UTILIZED ALONG THE SOUTHBOUND RAMP MERGE LANE FROM US 50 (BELLEVIEW DRIVE). INSTALL ADVANCED WARNING SIGNS ALONG THE US 50 RAMP AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE III
INDIANA

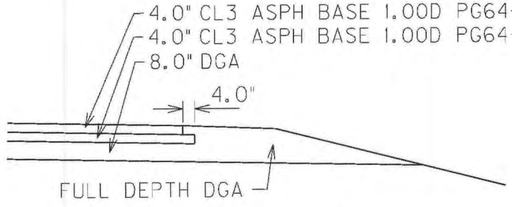
MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeap DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\17856404\TRANSPORTATION\DESIGN\DRAWING\FINAL_PLANS_7-15-2014\ROADWAY\R00500MT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R6

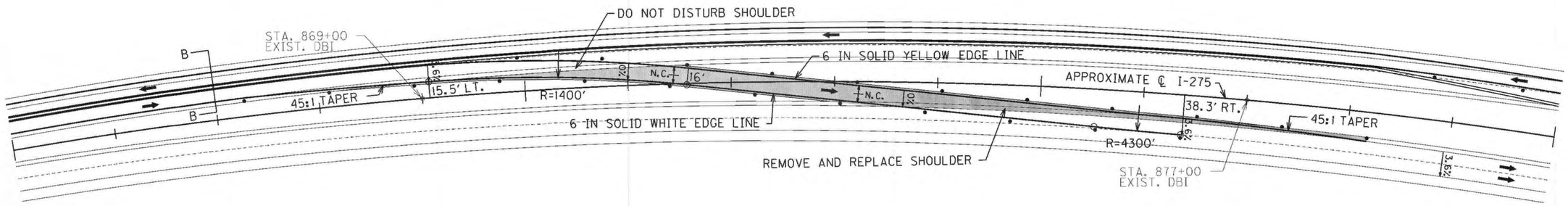
865+00 870+00 875+00 880+00

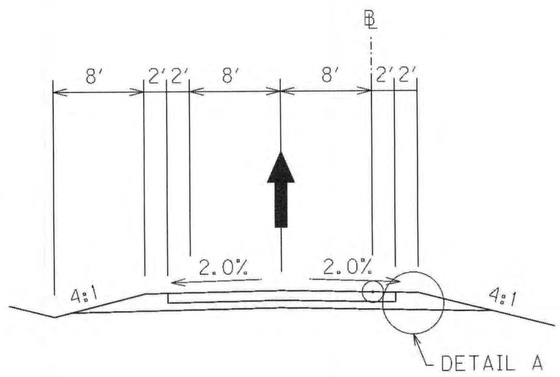
MEDIAN CROSSOVER ℄ NOTE

- MEDIAN CROSSOVER DESIGN SPEED = 45 MPH
- UTILIZE EXISTING DBI STATIONS TO LOCATE ALIGNMENT OF PROPOSED MEDIAN CROSSOVER.
- A STRAIGHT LINE GRADE SHALL BE UTILIZED BETWEEN EDGES OF EXISTING PAVEMENT.

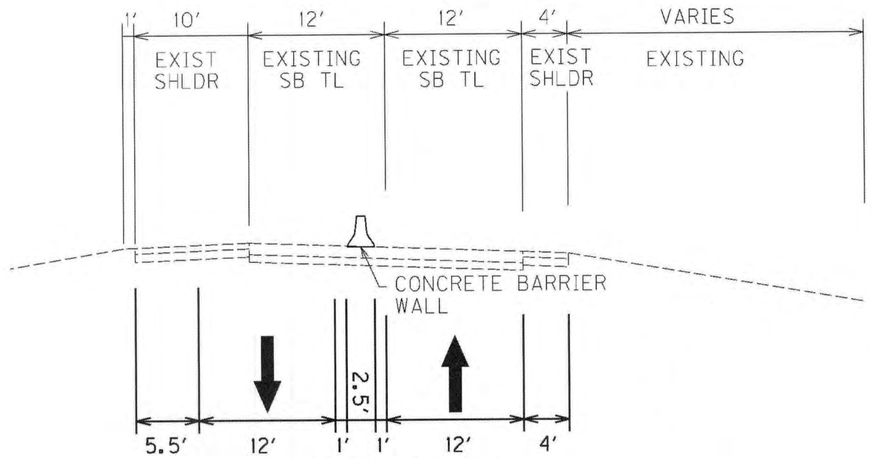


DETAIL A
MEDIAN CROSSOVER PAVEMENT





MEDIAN CROSSOVER TYPICAL SECTION NORMAL CROWN SECTION



MOT PHASE III SECTION B–B

SCALE: 1"=50'

I-275
MOT PHASE III
INDIANA NORTHBOUND MEDIAN CROSSOVER

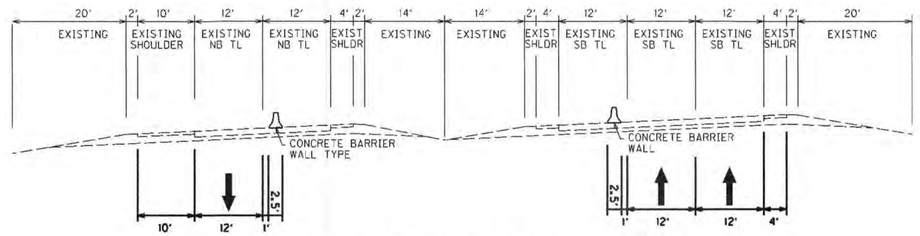
COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	R7

PHASE IV

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE LEFT (INSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, REMOVE THE EXISTING PHASE III MEDIAN CROSSOVERS AND CONSTRUCT THE PROPOSED MEDIAN CROSSOVERS BETWEEN STA. 118+00 TO STA. 131+00 (APPROX. KY I-275 ℄) AND STA. 867+00 TO STA. 878+00 (APPROX. IN I-275 ℄).
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.

140+00 135+00 130+00 125+00 120+00 115+00 110+00

TCDs (PLACED 40' C. TO C.)
STA. 131+50 EXIST. DBI
(TEMPORARILY CAP) STA. 127+50 EXIST. DBI
TCBW
A
TEMPORARY CRASH CUSHION (TYPE VI-BT TL3)
TCDs (PLACED 80' C. TO C.)
APPROXIMATE ℄ I-275
TEMPORARY CRASH CUSHION (TYPE VI-BT TL3)
TCBW
A



MOT PHASE IV
SECTION A–A

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE IV
KENTUCKY

MicroStation v8.11.7.443 | E SHEET NAME: | USER: kdosp DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\1785640I4\TRANSPORTATION\DESIGN\DRAWING\FINAL_PLANS_I-15-2014\ROADWAY\ROOTOOMT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R8

PHASE IV

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE LEFT (INSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, REMOVE THE EXISTING PHASE III MEDIAN CROSSOVERS AND CONSTRUCT THE PROPOSED MEDIAN CROSSOVERS BETWEEN STA. 118+00 TO STA. 131+00 (APPROX. KY I-275 ℄) AND STA. 867+00 TO STA. 878+00 (APPROX. IN I-275 ℄).
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.
- A 50:1 LANE TAPER SHALL BE UTILIZED ALONG THE SOUTHBOUND RAMP MERGE LANE FROM US 50 (BELLEVIEW DRIVE). INSTALL ADVANCED WARNING SIGNS ALONG THE US 50 RAMP AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

865+00 870+00 875+00 880+00 885+00 890+00 895+00

TEMPORARY CRASH CUSHION (TYPE VI-BT TL3)

TCBW

B

TCBW

B

TEMPORARY 50:1 RAMP TAPER

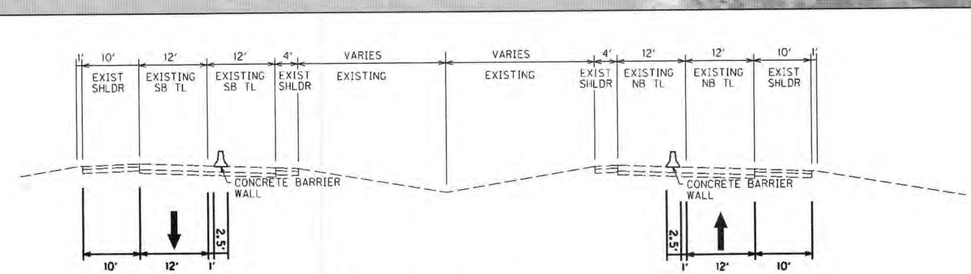
TCDs (PLACED 40' C. TO C.)

TEMPORARY CRASH CUSHION (TYPE VI-BT TL3)

TCDs (PLACED 20' C. TO C.)

TCDs (PLACED 40' C. TO C.)

TCDs (PLACED 80' C. TO C.)



MOT PHASE IV
SECTION B–B

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

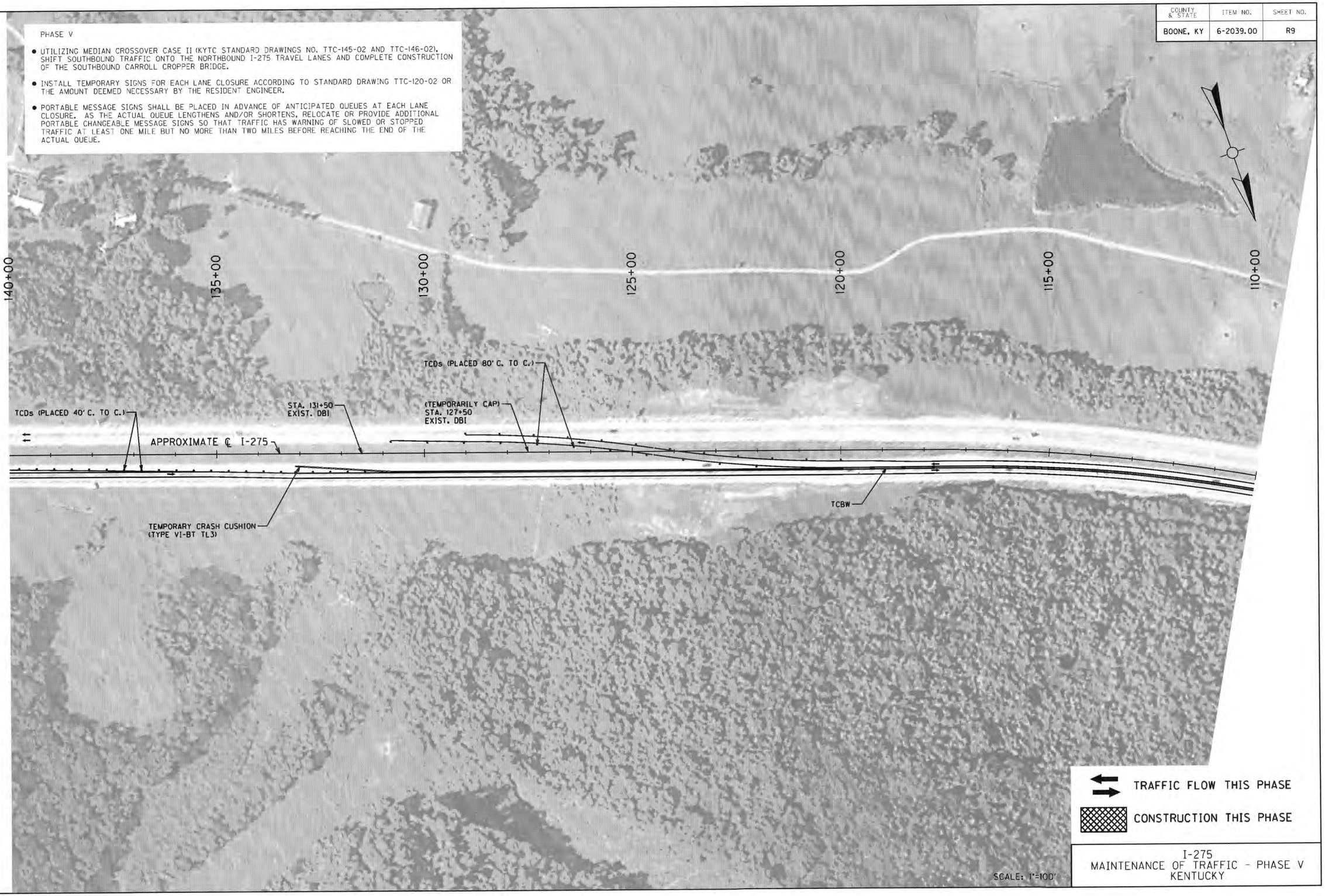
I-275
MAINTENANCE OF TRAFFIC - PHASE IV
INDIANA

MicroStation V8.11.7.443 | E-SHEET NAME: | USER: Kdeep DATE PLOTTED: September 3, 2014 | FILE NAME: W:\1785\ACTIVE\178564014\TRANSPORTATION\DESIGN\DRAWINGS\FINAL_PLANS_7-15-2014\ROADWAY\ROO800MT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	R9

PHASE V

- UTILIZING MEDIAN CROSSOVER CASE II (KYTC STANDARD DRAWINGS NO. TTC-145-02 AND TTC-146-02), SHIFT SOUTHBOUND TRAFFIC ONTO THE NORTHBOUND I-275 TRAVEL LANES AND COMPLETE CONSTRUCTION OF THE SOUTHBOUND CARROLL CROPPER BRIDGE.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.



TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE V
KENTUCKY

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep | DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\

COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	R10

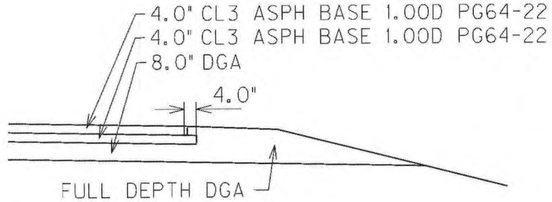
130+00

125+00

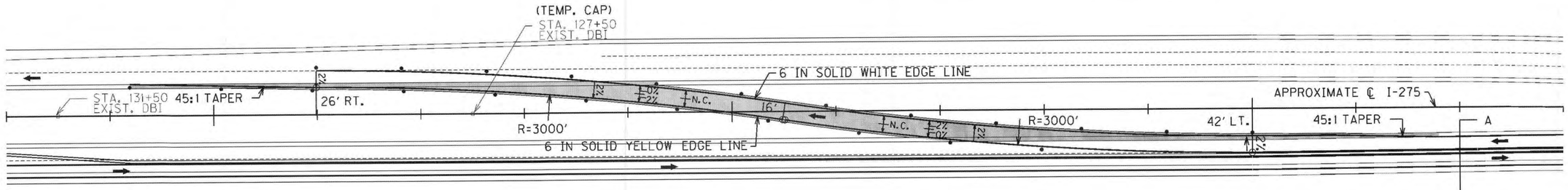
120+00

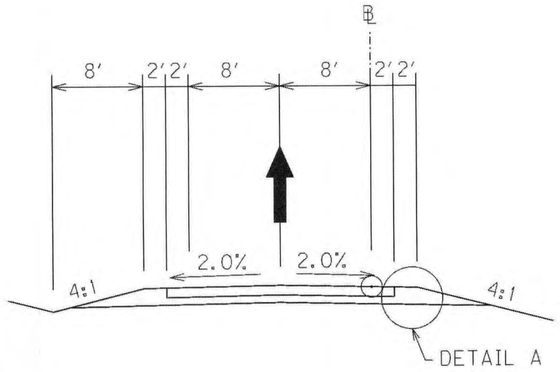
MEDIAN CROSSOVER $\mathbb{Q}$ NOTE

- MEDIAN CROSSOVER DESIGN SPEED = 45 MPH
- UTILIZE EXISTING DBI STATIONS TO LOCATE ALIGNMENT OF PROPOSED MEDIAN CROSSOVER.
- A STRAIGHT LINE GRADE SHALL BE UTILIZED BETWEEN EDGES OF EXISTING PAVEMENT.

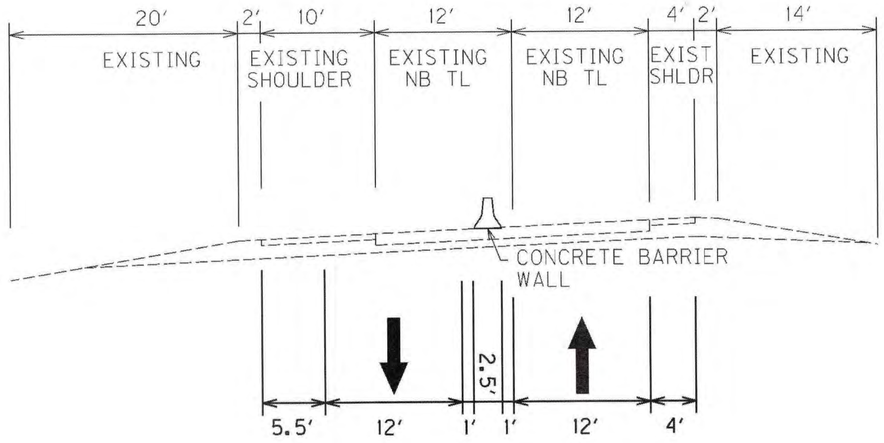


DETAIL A
MEDIAN CROSSOVER PAVEMENT





MEDIAN CROSSOVER
TYPICAL SECTION
NORMAL CROWN SECTION



MOT PHASE V
SECTION A–A

SCALE: 1"=50'

I-275
MOT PHASE V
KY SOUTHBOUND MEDIAN CROSSOVER

COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R11

PHASE V

- UTILIZING MEDIAN CROSSOVER CASE II (KYTC STANDARD DRAWINGS NO. TTC-145-02 AND TTC-146-02), SHIFT SOUTHBOUND TRAFFIC ONTO THE NORTHBOUND I-275 TRAVEL LANES AND COMPLETE CONSTRUCTION OF THE SOUTHBOUND CARROLL CROPPER BRIDGE.
- INSTALL TEMPORARY SIGNS FOR THE MEDIAN CROSSOVER ACCORDING TO STANDARD DRAWINGS TTC-145-02 AND TTC-146-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.
- A 50:1 LANE TAPER SHALL BE UTILIZED ALONG THE SOUTHBOUND RAMP MERGE LANE FROM US 50 (BELLEVIEW DRIVE). INSTALL ADVANCED WARNING SIGNS ALONG THE US 50 RAMP AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE V
INDIANA

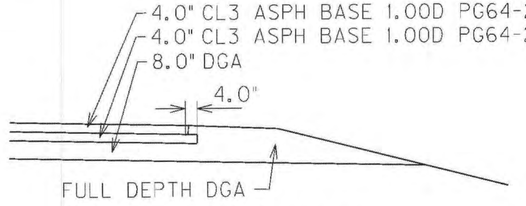
MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\TRANSPORTATION\DESIGN\DRAWING\FINAL_PLANS_7-15-2014\ROADWAY\R0110001.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R12

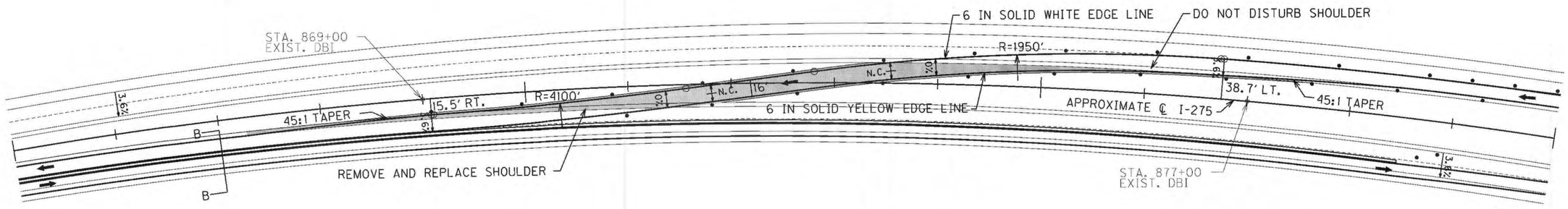
865+00 870+00 875+00 880+00

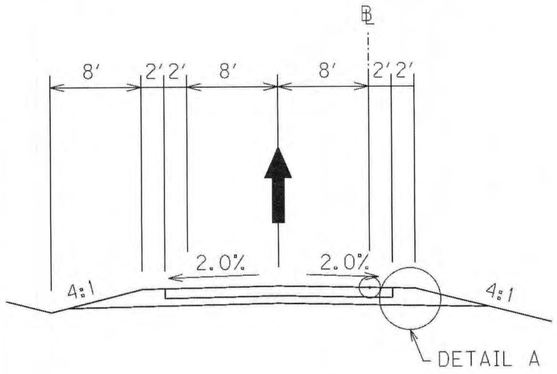
MEDIAN CROSSOVER ℄ NOTE

- MEDIAN CROSSOVER DESIGN SPEED = 45 MPH
- UTILIZE EXISTING DBI STATIONS TO LOCATE ALIGNMENT OF PROPOSED MEDIAN CROSSOVER.
- A STRAIGHT LINE GRADE SHALL BE UTILIZED BETWEEN EDGES OF EXISTING PAVEMENT.

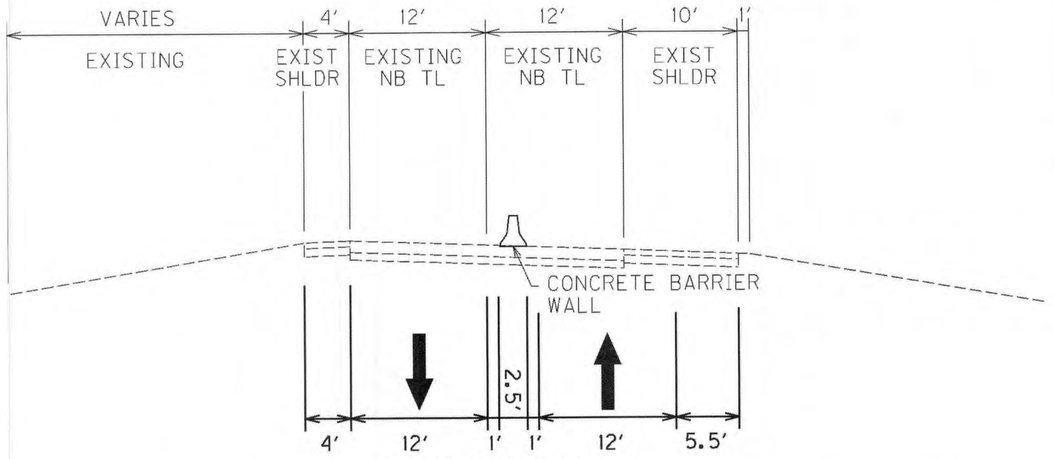


DETAIL A
MEDIAN CROSSOVER PAVEMENT





MEDIAN CROSSOVER
TYPICAL SECTION
NORMAL CROWN SECTION



MOT PHASE V
SECTION B–B

SCALE: 1"=50'

I-275
MOT PHASE V
INDIANA SOUTHBOUND MEDIAN CROSSOVER

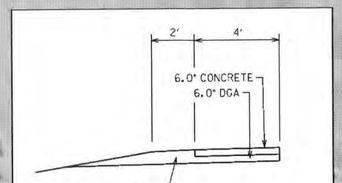
COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY	6-2039.00	R13

PHASE VI

- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE LEFT (INSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, REMOVE THE EXISTING PHASE V MEDIAN CROSSOVERS, COMPLETE INSTALLATION OF THE CARROLL CROPPER BRIDGE LIGHTING AND REPLACE ALL SHOULDER PAVEMENT DISTURBED DURING CONSTRUCTION.
- REMOVE THE TEMPORARY CABLE BARRIER ANCHOR SYSTEM CONSTRUCTED IN PHASE I. REPLACE ALL OF THE CABLE BARRIER CONCRETE PAD DISTURBED DURING CONSTRUCTION AND RE-INSTALL THE CABLE BARRIER SYSTEM TO ITS ORIGINAL CAPACITY.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.

PHASE VII (NOT SHOWN)

- UTILIZING LANE CLOSURE MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE RIGHT (OUTSIDE) TRAVEL LANE OF NORTHBOUND I-275 ALONG THE CARROLL CROPPER BRIDGE AND PLACE PERMANENT STRIPING. NOTE: PHASE VII QUANTITIES ARE BASED ON LANE SHIFTS (AT TAPER RATE OF 45:1) BETWEEN THE MEDIAN CROSSOVER WORK ZONES AND CARROLL CROPPER BRIDGE.

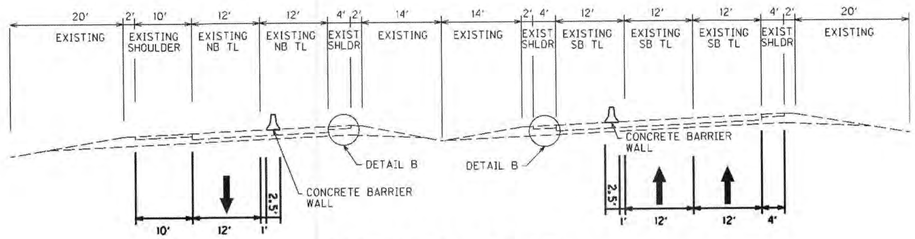


DETAIL B
KENTUCKY I-275
SHOULDER PAVEMENT

140+00 135+00 130+00 125+00 120+00 115+00 110+00

TCDs (PLACED 40' C. TO C.)
STA. 131+50 EXIST. DBI
(TEMPORARILY CAP) STA. 127+50 EXIST. DBI
APPROXIMATE ℄ I-275
TCBW
A
PHASE VI CONSTRUCTION
TEMPORARY CRASH CUSHION (TYPE VI-BT TL3)
TCDs (PLACED 80' C. TO C.)

TEMPORARY CRASH CUSHION (TYPE VI-BT TL3)
TCBW
A



MOT PHASE VI
SECTION A-A

TRAFFIC FLOW THIS PHASE

CONSTRUCTION THIS PHASE

SCALE: 1"=100'

I-275
MAINTENANCE OF TRAFFIC - PHASE VI
KENTUCKY

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\17856014\TRANSPORTATION\DESIGN\DRAWING\FINAL_PLANS_7-15-2014\ROADWAY\R013006MT.DGN

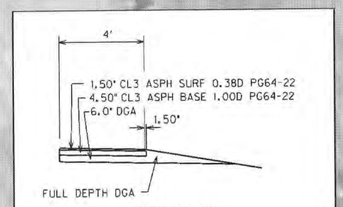
COUNTY & STATE	ITEM NO.	SHEET NO.
DEARBORN, IN	6-2039.00	R14

PHASE VI

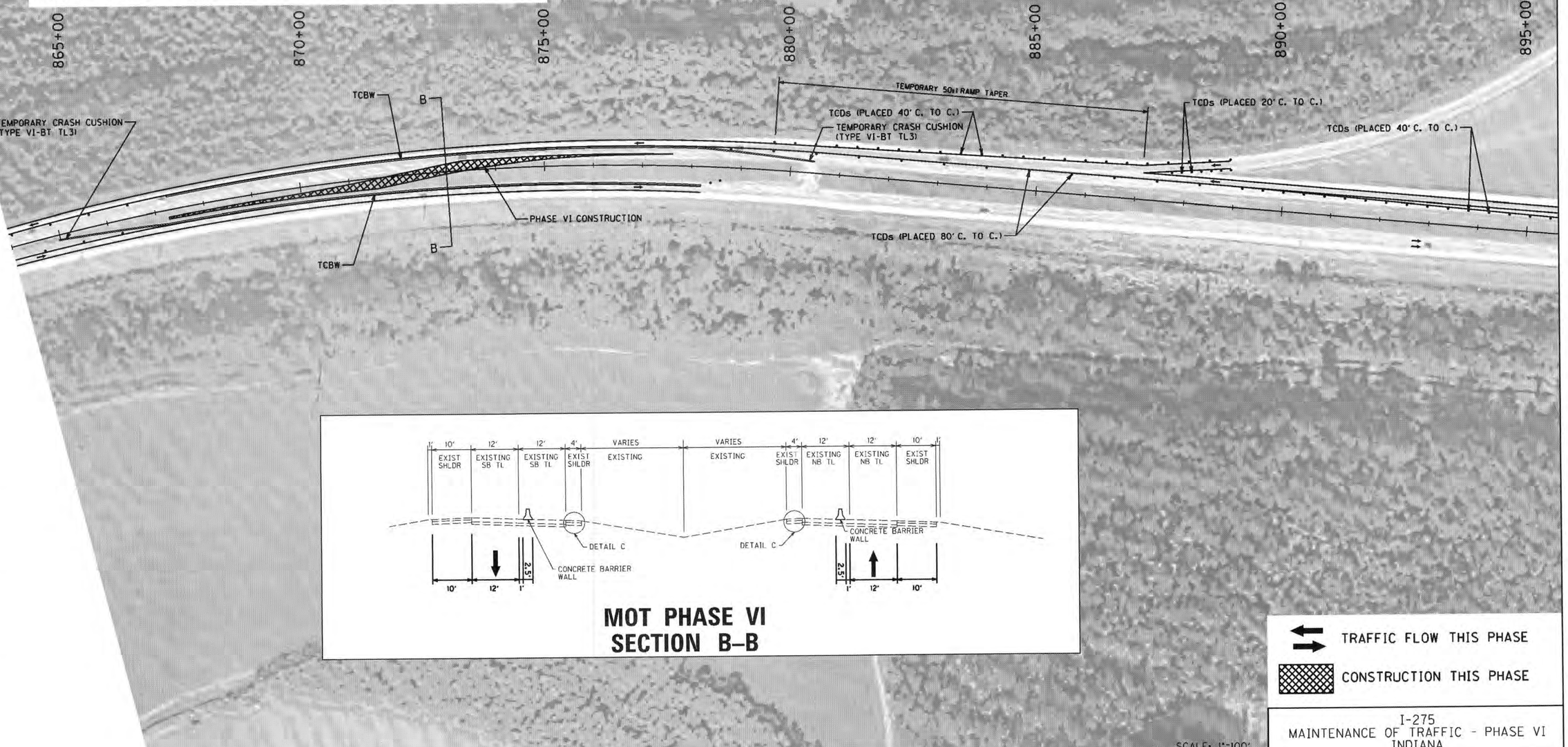
- UTILIZING LANE CLOSURES MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE LEFT (INSIDE) TRAVEL LANES OF BOTH NORTHBOUND AND SOUTHBOUND I-275, REMOVE THE EXISTING PHASE V MEDIAN CROSSOVERS, COMPLETE INSTALLATION OF THE CARROLL CROPPER BRIDGE LIGHTING AND REPLACE ALL SHOULDER PAVEMENT DISTURBED DURING CONSTRUCTION.
- INSTALL TEMPORARY SIGNS FOR EACH LANE CLOSURE ACCORDING TO STANDARD DRAWING TTC-120-02 OR THE AMOUNT DEEMED NECESSARY BY THE RESIDENT ENGINEER.
- PORTABLE MESSAGE SIGNS SHALL BE PLACED IN ADVANCE OF ANTICIPATED QUEUES AT EACH LANE CLOSURE. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE.
- A 50:1 LANE TAPER SHALL BE UTILIZED ALONG THE SOUTHBOUND RAMP MERGE LANE FROM US 50 (BELLEVIEW DRIVE). INSTALL ADVANCED WARNING SIGNS ALONG THE US 50 RAMP AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

PHASE VII (NOT SHOWN)

- UTILIZING LANE CLOSURE MULTI-LANE HIGHWAY CASE II (KYTC STANDARD DRAWING NO. TTC-120-02), CLOSE THE RIGHT (OUTSIDE) TRAVEL LANE OF NORTHBOUND I-275 ALONG THE CARROLL CROPPER BRIDGE AND PLACE PERMANENT STRIPING. NOTE: PHASE VII QUANTITIES ARE BASED ON LANE SHIFTS (AT TAPER RATE OF 45:1) BETWEEN THE MEDIAN CROSSOVER WORK ZONES AND CARROLL CROPPER BRIDGE.



DETAIL C
INDIANA I-275
SHOULDER PAVEMENT



MOT PHASE VI
SECTION B–B

TRAFFIC FLOW THIS PHASE

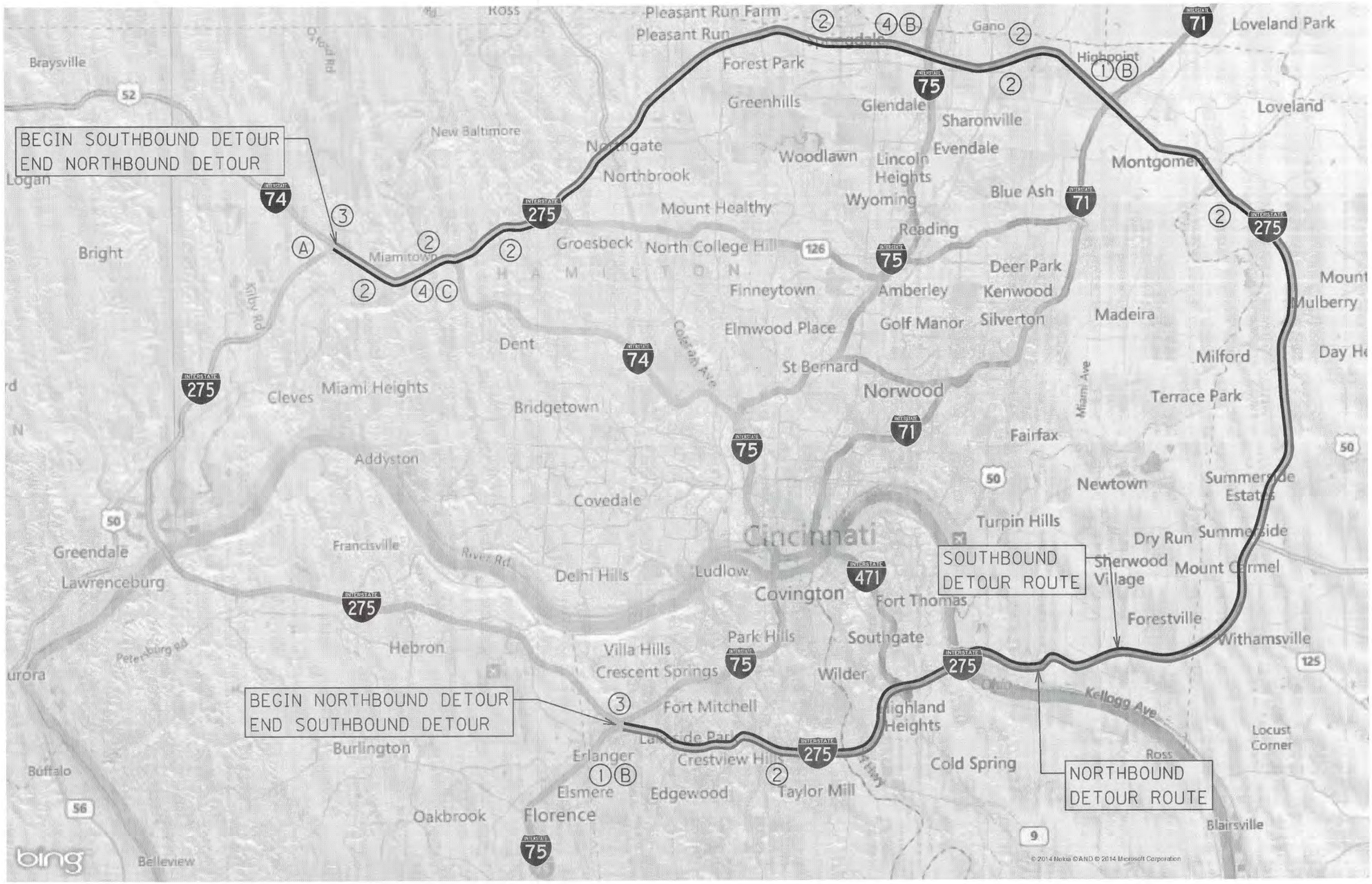
CONSTRUCTION THIS PHASE

I-275
MAINTENANCE OF TRAFFIC - PHASE VI
INDIANA

SCALE: 1"=100'

MicroStation v8.11.7.443 | E-SHEET NAME: | USER: kdeep | DATE PLOTTED: September 3, 2014 | FILE NAME: V:\1785\ACTIVE\178564014\TRANSPORTATION\DESIGN\DRAWINGS\FINAL_PLANS_7-15-2014\ROADWAY\R0140GMT.DGN

COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY DEARBORN, IN	6-2039.00	R15



SEE NEXT PAGE FOR DETOUR SIGNS KEY

NOT TO SCALE

I-275
WIDE LOAD DETOUR MAP

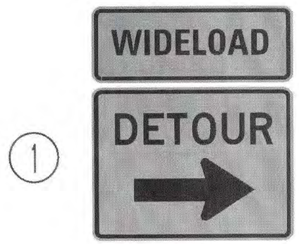
COUNTY & STATE	ITEM NO.	SHEET NO.
BOONE, KY DEARBORN, IN	6-2039.00	R16

DETOUR NOTES

THE HIGHLIGHTED ROUTE IS TO BE SIGNED AS A DETOUR FOR WIDE LOADS AND AS AN ALTERNATIVE ROUTE FOR TRAFFIC WANTING TO AVOID POSSIBLE DELAYS DURING CONSTRUCTION OF THE I-275 PROJECT. PORTABLE CHANGEABLE MESSAGE SIGNS ARE TO BE PLACED IN ADVANCE OF THE KENTUCKY I-275/I-75 INTERCHANGE FOR I-275 NORTHBOUND TRAFFIC, PRIOR TO THE I-74\I-275 INTERCHANGE FOR EASTBOUND I-74 TRAFFIC, PRIOR TO THE OHIO I-75/I-275 INTERCHANGE FOR I-275 SOUTHBOUND TRAFFIC, AND IN ADVANCE OF THE I-71/I-275 INTERCHANGE FOR I-275 SOUTHBOUND TRAFFIC. DETOUR SHEET SIGNS ARE TO BE PLACED IN ADVANCE OF ALL INTERCHANGE RAMPS ALONG I-75, I-71, AND I-74 BETWEEN THE BEGINNING AND ENDING POINTS OF THE DETOUR.

DETOUR SIGNS KEY

(48" X 18")



① M4-9R (48" X 36")

(48" X 18")

② M4-9 (48" X 36")

③ M4-8A (24" X 18")

(48" X 18")

④ M4-9L (48" X 36")

PORTABLE CHANGEABLE MESSAGE SIGNS

Ⓐ WIDELOAD
I-275 SB
USE 74EB

Ⓑ WIDELOAD
USE
I-275 EB

Ⓒ WIDELOAD
USE
I-275

ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

NOT TO SCALE

I-275
WIDE LOAD DETOUR MAP

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BOONE	6-2039.00	TI

ROADWAY LIGHTING ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
17	EACH	24710EC	POLE 33' MTG HT WITH 12" ARM
18	EACH	24711EC	POLE 19' MTG HT WITH 12" ARM
35	EACH	4741	POLE BASE IN MED WALL
1	EACH	4761	LIGHTING CONTROL EQUIPMENT
70	EACH	4780	FUSED CONNECTOR KIT
~~300~~ 82	LIN FT	4797	CONDUIT 3 INCH
13	EACH	4800	MARKER
3478' ~~4,000~~	LIN FT	4820	TRENCHING AND BACKFILLING
2,919	LIN FT	4832	WIRE-NO. 12
12459' ~~13,500~~	LIN FT	4836	WIRE-NO. 2
3478' ~~4,500~~	LIN FT	4863	CABLE - NO. 2/3C DUCTED
1	LP SUM	4940	REMOVE LIGHTING
~~3~~ 2	EACH	20391NS835	ELECTRICAL JUNCTION BOX TYPE A
~~80~~ 64	LIN FT	21543EN	BORE AND JACK CONDUIT
1	LP SUM	23365EC	LIGHTING NAV MONITORING SYSTEM
1	LP SUM	23366EC	SOLAR POWERED NAV/AV LIGHTING SYSTEM
35	EACH	24589ED	LED LUMINAIRE
1	Each	04810	Electrical Junction Box - Added: 9-24-14
1	Each	10094NX	EW - Install Transformer
1	Each	10094NX	EW - Navigational Light Base Revisions
1	LS	10090NX	EW - Install Transformer @ Utility Service Location
1	LS	23055N	Remove - Bridge Conduit

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND OTHER SPECIAL NOTES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 716 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPIRAL REINFORCEMENT SPLICING

THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE PROJECT SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS. SUBMISSIONS OF A BID WILL BE CONSIDERED AN AFFIRMATION OF THIS INSPECTION HAVING BEEN COMPLETED.

CONTRARY TO SECTION 834.14.01:
ADD SENTENCE THAT STATES 'PROVIDE CALCULATIONS AND DRAWINGS THAT ARE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF KENTUCKY".

ADD SENTENCE TO SECTION 834.06: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES : "PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

ADD SENTENCE TO SECTION 834.09: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES: "PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501". THIS REQUIREMENT IS ONLY FOR THE USE-2 WIRE.

MEASUREMENT NOTE THAT ARE IN ADDITION TO SECTION ~~716~~:

SOLAR POWERED NAVIGATION/AVIATION LIGHTING SYSTEM- DEPARTMENT WILL MEASURE THE QUANTITY AS LUMP SUM UNIT. THE DEPARTMENT WILL NOT MEASURE FURNISHING AND INSTALLING SPECIFIED UPSTREAM AND DOWNSTREAM LED LIGHTING UNITS, SOLAR ARRAYS, CONTROL EQUIPMENT, BATTERIES, CABINETS, MOUNTING HARDWARE, CONDUIT, WIRING AND ALL OTHER NECESSARY EQUIPMENT TO COMPLETE A FULLY FUNCTIONING SOLAR POWERED NAVIGATION LIGHTING SYSTEM THAT COMPLIES WITH UNITED STATES COAST GUARD AND ALL OTHER REGULATORY REQUIREMENTS. THE DEPARTMENT WILL NOT MEASURE MAINTAINING OF THE EXISTING NAVIGATION AND AVIATION LIGHTS. THE CONTRACTOR SHALL NOTIFY THE COAST GUARD OR FAA IF ANY OF THE LIGHTS ARE OUT AS SOON AS POSSIBLE. THE COAST GUARD AND FAA CONTACTS CAN BE OCCUPIED FROM THE TRAFFIC ENGINEER IN THE DISTRICT OFFICE.

LIGHTING NAV MONITORING SYSTEM- DEPARTMENT WILL MEASURE THE QUANTITY AS LUMP SUM UNIT. THE DEPARTMENT WILL NOT MEASURE FURNISHING AND INSTALLING ALL NECESSARY EQUIPMENT INCLUDING HARDWARE AND SOFTWARE, RADIO TRANSMITTERS AND RECEIVERS, MODEMS, CURRENT TRANSFORMERS, CABINETS, WIRING, CONDUIT AND ALL OTHER EQUIPMENT TO COMPLETE A FULLY FUNCTIONING MONITORING SYSTEM FOR THE NAVIGATION LIGHTING.

THE CONTRACTOR SHALL NOT DRILL ANY HOLES INTO THE EXISTING BRIDGE STRUCTURE BUT MAY DRILL HOLES IN CONCRETE BRIDGE WALL OR CATWALK PLATFORM RAILING. ALL DRILLED HOLES SHALL BE REGALVANIZED BEFORE BOLTS OR SCREWS ARE INSTALLED.

DESIGNED BY: TAS	
DATE SUBMITTED: 8-18-2014	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

BOONE

PROJECT NUMBERS: NHPP IM 2759 (130)

BRIDGE/NAV/AVIATION LIGHTING ESTIMATES OF QUANTITIES

7-30-2014

MicroStation v8.11.7.443 | E-SHEET NAME: T0010DSU | USER: tea.swansegar DATE PLOTTED: August 18, 2014 | FILE NAME: G:\PWWORK\TED.SWANSEGAR\D0994922\T0010DSU.DGN

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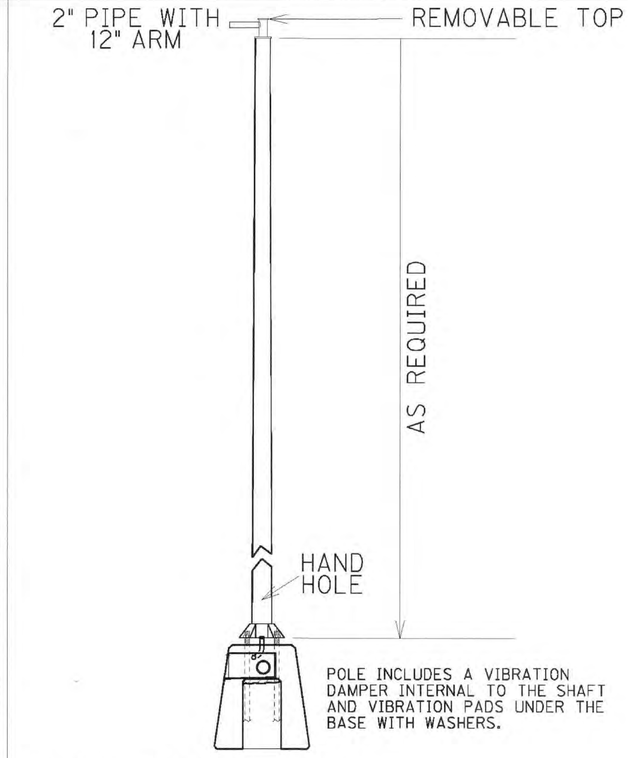


DESIGN CRITERIA FOR LED LUMINAIRES IN BRIDGE

OVERALL BRIDGE CRITERIA
ILLUMINANCE:
AVERAGE: NOT LESS THAN .72 FOOTCANDLES
AND MORE THAN .864 FOOTCANDLES
MINIMUM: NOT LESS THAN .20 FOOTCANDLES
AVERAGE/MINIMUM: NOT MORE THAN 3:1
MAXIMUM/MINIMUM: NOT TO BE MORE THEN 6:1

ALL POLE LOCATIONS, ARM LENGTHS, AND ORIENTATION OF LUMINAIRE SHOULD BE MAINTAINED DUE TO BRIDGE BEAM AND JOINTS.

LUMINAIRE DESIGN:

DRIVER: NOT TO EXCEED 1000 mA
ANSI M-S-V DISTRIBUTION
LAMP WATTAGE:
TYPE B/C: CAN NOT EXCEED 108 WATTS

LUMINAIRE DESIGNATION EXAMPLE

2 - 7 - A - 6 - 10

- 10 — DISTANCE FROM RIGHT EDGE OF DRIVING LANE TO CENTER OF POLE BASE. (SEE NOTE BELOW)
- 6 — MAST ARM LENGTH
- A — LUMINAIRE WATTAGE
- 7 — LUMINAIRE NUMBER IN CIRCUIT
- 2 — CIRCUIT NUMBER

NOTE:

ALL TYPE B LUMINAIRES ARE MOUNTED AT 33' LED LUMINAIRE ON 30 FOOT POLE
ALL TYPE C LUMINAIRES ARE MOUNTED AT 19' LED LUMINAIRE ON 16 FOOT POLE

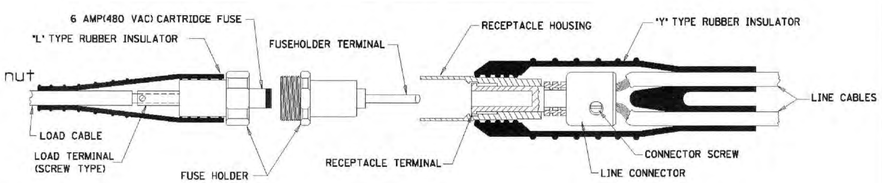
6/10/2014

LED Luminaire Specifications

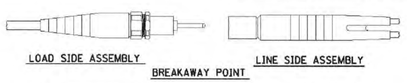
The following are the required Specifications for the LED Fixture:

1. The Luminaire shall be listed by a National Recognized Testing Laboratory (NRTL) as defined by the U.S. Department of Labor. The testing laboratory must be listed by OSHA in its scope of recognition for the applicable tests being conducted as required by this specification. A list of recognized testing labs for products sold in the United States may be found on the U.S. Department of Labor's web site: http://www.osha.gov/
2. The Luminaire shall be listed and labeled by a NRTL as being in compliance with UL 1598 and suitable for use in wet locations.
3. Key components including LED drivers, LED light sources, and surge protection devices shall be RoHS compliant.
4. Shall have an International Electrotechnical Commission (IEC) 529 Ingress Protection (IP) rating of IP 66 or greater.
5. Shall be in compliance with Electro Magnetic Interference (EMI) requirements as defined by FCC 47 Sub Part 15; CISPR15, CISPR22 Class A (120Vmin), EN61000-3-2, -3-3, -4-4, -4-5.
6. Shall be tested according to the most current version of Illuminating Engineering Society of North America (IESNA) LM-79.
7. Shall have lumen maintenance measured in accordance the most current version of Illuminating Engineering Society of North America (IESNA) LM-80.
8. Shall have long term lumen maintenance documented according to the most current version of Illuminating Engineering Society of North America (IESNA) TM-21.
9. The fixture shall have a diecast aluminum housing.
10. The luminaire finish shall be corrosion resistant with a polyester powdercoat of 2.5 mil nominal thickness. Finish shall pass per ASTM D1654 after 5000 hours of testing per ASTM B117.
11. All hardware on the exterior of the housing including cover and latch shall be stainless steel, zinc or steel with zinc alloy electroplate and chromate top coat .
12. The luminaire shall be easy to open when properly mounted and shall have readily accessible internal parts. Access to all internal parts requiring replacement shall not require tools (i.e. "tool-less entry").
13. The luminaire shall have a vibration rating of 3G per the American National Standard (ANSI) IEEE C136.31, Table 2 Roadway Lighting Equipment -Luminaire Vibration for both normal applications and bridge and overpass applications.
14. The luminaire shall be designed to allow water shedding.
15. The luminaire shall have a passive cooling method shall be employed to manage thermal output of LED light engine and power supply.
16. The luminaire shall have a label per ANSI C136.22 that states operating voltage and current range. The label must be clearly visible on the inside of the housing.
17. The luminaire shall fully operate in a temperature range of -40 degrees C up to 40 degrees C (-40 degrees F to 104 degrees F).
18. In retrofit applications, the LED luminaire shall not be more wattage than the original HPS fixture if you are replacing one for one. For the optimized proposal, we will allow the wattage to be greater than the original proposed luminaire.
19. The luminaire shall have an integral power supply (electronic driver). The power supply shall not have a manual, field-adjustable setting for current output.
20. The luminaire shall have a power supply (electronic driver) that will operate on a 480 volt single phase at 60 hertz.
21. The luminaire shall have a power supply (electronic driver) that has a power factor of .90 or greater at full load.
22. The luminaire shall have a power supply (electronic driver) that has total harmonic distortion of 20% or less at full load.
23. The luminaire shall have power supply (electronic driver) output ripple of less than 10%.
24. The luminaire shall have power supply (electronic driver) with a rated life of 100,000 hours with a luminaire operated at an ambient temperature of 25°C (77°F).
25. The luminaire shall have an isolated power supply (electronic driver) output.
26. The luminaire shall have a power supply (electronic driver) that has thermal overload protection.
27. The luminaire shall have a power supply (electronic driver) that is self-limited short circuit protected and over load protected.
28. The luminaire shall not use any active thermal cutback, such as in order to achieve a higher thermal performance.
29. The luminaire shall have a power supply (electronic driver) that is terminated with quick disconnect wire harnesses for easy maintenance. Wire nut termination is not acceptable.
30. The luminaire shall have a terminal block for terminating wiring to the luminaire. The terminal block shall be a 3 station, tunnel lug terminal board that will accommodate #6 thru #18 AWG pole wire.
31. Fixture shall have a surge protection that meets 10KV/5KA per ANSI/IEEEC62.41.
32. The luminaire shall have life rating on all electrical components of 100,000 hours or greater when operated at full lumen output at 25 degrees C.
33. All LED components shall be L70 rated when operated in a luminaire at 25 degrees C (77 degrees F) at 100,000 hours.
34. Electrical components shall be protected per ANSI/IEEE standard C62.41, for Class C applications.
35. The LED shall fully operate in a temperature range -40 degrees C to 40 degrees C (-40 degrees F to 104 degrees F).
36. The LED shall lose no more than a 15% optical intensity of initial delivered lumens due to thermal loading when operated at 25°C (77°F).
37. The LED shall deliver an average 80% of initial delivered lumens after 70,000 hours of operation when operated at 25°C (77°F).
38. The LED shall have a rated life of 100,000 hours when operated at 25 °C (77°F).
39. The LED shall have a minimum Luminaire efficacy of 80 lumens/watt.
40. The Correlated Color Temperature (CCT) shall be 4000K with a variance of 250K, white, that conforms to LM-79. All fixtures in the design shall utilize the same CCT throughout.
41. The minimum color rendering index (CRI) shall not be less than 70.
42. The optics shall have a completely sealed optical system.
43. The optical system shall have a (IEC) (IP) rating of 66 or greater.
44. The optics shall have an Illuminating Engineering Society of North America (IESNA) Backlight, Uplight and Glare (BUG) rating as follows:
    a. Backlight rating shall not exceed 3;
    b. Uplight rating shall not exceed 0;
    c. Glare rating shall not exceed 3/4
45. The Light Loss Factor (LLF) shall be calculated for each fixture as follows:
    LLF = LLD X LDD
    Lamp Lumen Depreciation Factor (LLD) shall be the specified percentage of LED lumen maintenance at
    70,000 hours at 25°C (77°F) from the TM-21 report. This LLD should be according to LM -80 and TM -21 reports. This report shall be submitted for verification.
    Luminaire Dirt Depreciation (LDD)= .9
46. The TM-21 Report must show the drive current used for the submitted luminaire. The report can show a larger drive current to represent a worst case scenario.
47. The Lumen Maintenance Life L_p from the TM-21 Report must not be below 80% at 70,000 hours at 25°C (77°F).
48. The manufacturer shall provide certified test laboratories IES photometrics which verify light levels. Product submittal shall be accompanied by IES TM-21 compliant test reports from a CALiPER qualified or NVLAP accredited testing laboratory for the specific model being submitted.
49. WARRANTY: The Manufacturer shall ensure that the LED Luminaires have a minimum standard warranty of 10 years for all parts, materials, paint finish, and shipping (both ways) required to repair or replace the luminaire. The warranty shall begin upon the date the luminaire is received. The warranty shall be transferable.
    The warranty shall cover all failures including:
    (1) Failure in luminaire LED, housing, wiring, connections, and drivers.
    (2) More than 10 percent decrease in lumen output.
    (3) Significant change in light output color.
    Technical Support. During the warranty period, technical support shall be available from the manufacturer via telephone within 24 hours of the time the call is made from KYTC, and this support shall be made available from factory certified personnel or factory certified installers at no additional charge to the Department.
50. MINIMUM REQUIRED SUBMITTALS:
    Luminaire specification sheet.
    LED driver specification sheet.
    LM-79 Luminaire photometric report.
    The vendor must submit LM-79 in-situ test data to confirm thermal operating temperatures of the luminaire.
    LM-80 Lumen maintenance report.
    TM-21 calculations as defined .
    Backlight, Uplight, Glare (BUG) rating of the luminaire.
    Written product warranty.
    Certified test lab IES photometric reports.
    Including IES electronic file.
    Including intensity and chromaticity data.
    Instructions for installation and maintenance.

BREAKAWAY FUSE CONNECTOR KIT



DETAILS OF TYPE HEB-JW-RYC CONNECTOR



TYPE HEB-JW-RYC CONNECTOR SHOWN

LED LUMINAIRE/FUSE CONNECTOR DETAILS

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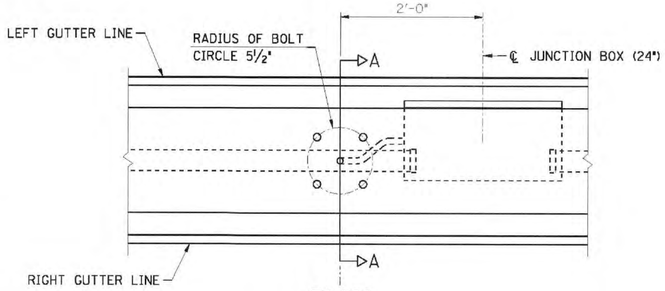
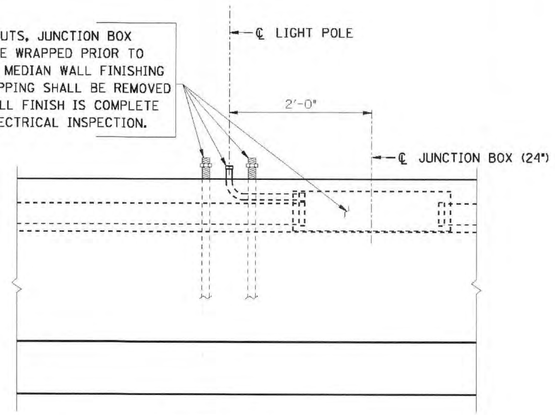


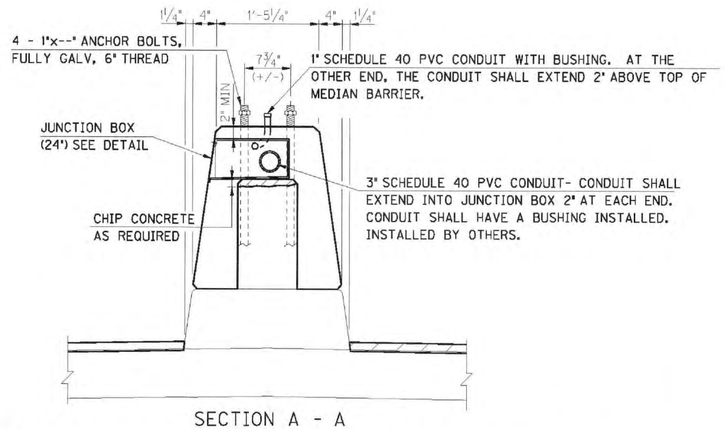
PLAN

NOTE:
ALL THREADS, CAPS, NUTS, JUNCTION BOX COVERS, ETC, SHALL BE WRAPPED PRIOR TO ANY APPLICATION OF MEDIAN WALL FINISHING COMPOUNDS. THE WRAPPING SHALL BE REMOVED AFTER THE MEDIAN WALL FINISH IS COMPLETE AND PRIOR TO THE ELECTRICAL INSPECTION.



ELEVATION

INSTALL GROUNDING LUG ON THE BACK WALL OF THE JUNCTION BOX. THE LUG SHOULD BE CENTERED ON THE BACK WALL. LUG SHOULD BE SIZED TO RECEIVE ALL THE SIZES OF WIRES THAT IS INDICATED ON THE PLAN SHEET.



SECTION A - A

LIGHT SUPPORT STANDARD AT MEDIAN WALL

NOTES:

AT THE LOCATIONS WHERE POLES ARE TO BE INSTALLED ON MEDIAN BARRIER THE CONTRACTOR SHALL INSTALL THEM AS INDICATED BY THIS SHEET. ALL MATERIALS, LABOR, AND INCIDENTALS, WITH THE EXCEPTION OF THE 3" RACEWAY, SHALL BE INCIDENTAL TO THE BID ITEM "POLE BASE IN MEDIAN WALL".

THE CONTRACTOR SHALL BLOW AN APPROPRIATELY SIZED MOUSE THROUGH ALL CONDUITS WITH A PULL STRING ATTACHED TO VERIFY THAT ALL CONDUITS ARE CLEAR OF ANY OBSTRUCTIONS. CONTRACTOR SHALL TIE OFF STRING AT EACH CONDUIT END. ALL CONDUITS SHALL HAVE PIPE/TEST PLUGS INSTALLED IF THE CONDUIT IS NOT IN USE OR ARE SPARES.

THE CONTRACTOR SHALL INSTALL THE ANCHOR BOLTS AFTER THE INSTALLATION OF THE WALL. THE CONCRETE IN THE WALL SHALL MEET THE CURING TIME AS SPECIFY BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL FURNISH AND INSTALL ANCHOR BOLTS AND EPOXY THAT IS CERTIFIED BY THE POLE MANUFACTURER TO PROPERLY MOUNT THE POLES TO THE CONCRETE BARRIER

NOTES

CONSTRUCT JUNCTION BOXES FROM ¼" A36 STEEL PLATE AND THE J.B. COVER FROM ⅛" A36 PLATE. HOT DIP GALVANIZED BOX AND COVER AFTER FABRICATION AND IN ACCORDANCE WITH ASTM A123 AND THE STANDARD SPECIFICATIONS.

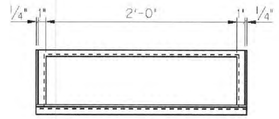
FITTINGS SHALL BE UL LISTED AND CSA-CERTIFIED CONCRETE TIGHT ON THE OUTSIDE OF THE JUNCTION BOX CONDUIT CONNECTION. USE A SEALING LOCK NUT AND A RIGID PVC CONDUIT BUSHING ON THE INSIDE FOR ALL CONDUIT PENETRATIONS.

LIBERALLY COAT THE THREADS OF THE COVER FASTENERS WITH ANTI-SEIZE COMPOUND DURING CONSTRUCTION AND BEFORE FINAL CLOSURE.

PROTECT COVER OF J.B. FROM DAMAGE/DISFIGUREMENT FROM MASONRY COATING APPLICATION AND OTHER SOURCES BY TAPING OR WRAPPING DURING CONSTRUCTION. REMOVE PROTECTION PRIOR TO FINAL ELECTRICAL INSPECTION AND REPAIR ANY DAMAGE OR DISFIGUREMENT TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE DEPARTMENT.

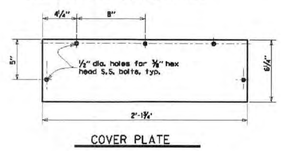
FOR EASE IN FABRICATION, BOX MAY BE FABRICATED WITH THE DIMENSIONS SHOWN IN DETAIL 'ALT. BOX DIMS.' MOUNT BOX COVER FLUSH WITH BARRIER FACE REGARDLESS. WHEN BOX IS PROPERLY MOUNTED, BOX BOTTOM WILL SLOPE TO DRAIN APPROX. ¼" / FT. IN ALL CASES.

AS AN ALTERNATE AND AT NO COST TO THE DEPARTMENT, JUNCTION BOXES MAY BE CONSTRUCTED OF 10-GAUGE AISI T-304 STAINLESS STEEL WITH STEEL WELDED SEAM CONSTRUCTION. FINISH SHALL BE #2B. MOUNTING TABS SHALL BE CONSTRUCTED OF 10-GUAGE T-304 STAINLESS STEEL. ADJUST DIMENSIONS AS NECESSARY TO ACCOMODATE 10-GUAGE STEEL CONSTRUCTION BUT MAINTAIN JUNCTION BOX INTERNAL DIMENSIONS REGARDLESS. GALVANIZING BOX & COVER IS NOT REQUIRED.

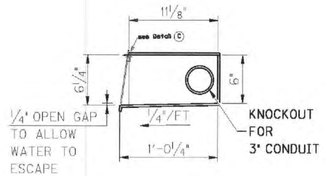


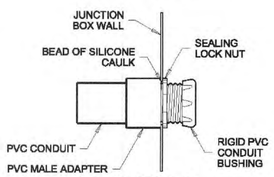
FRONT ELEVATION

NOTE:
INSTALL A RUBBER GASKET FOR ALL SIDES WHERE SCREWS ARE.

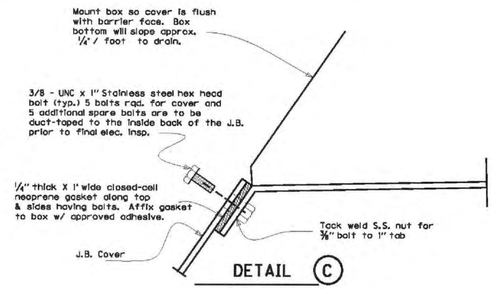


COVER PLATE





BUSHING DETAIL AT J.B. CONDUIT ENTRY



DETAIL (C)

JUNCTION BOX (24")

MEDIAN WALLS ON BRIDGE ONLY

BRIDGE MEDIAN WALL DETAILS

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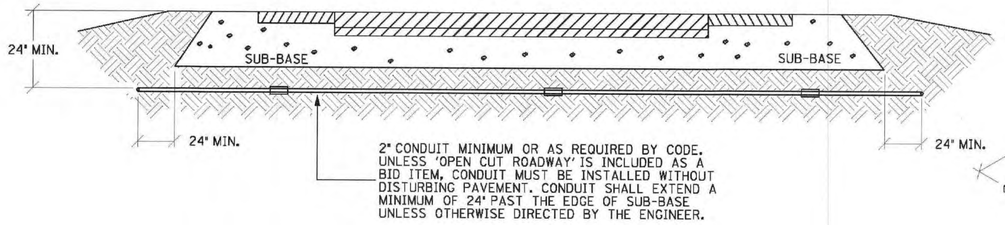
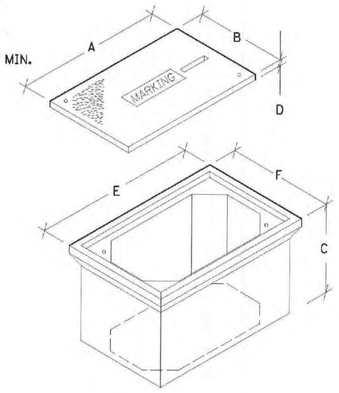
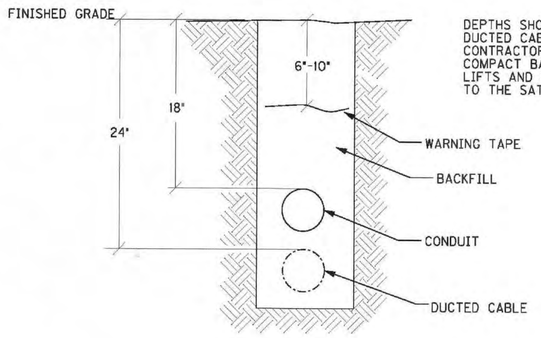


CONDUIT INSTALLATION UNDER EXISTING PAVEMENT DETAIL



JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	1¾" •	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

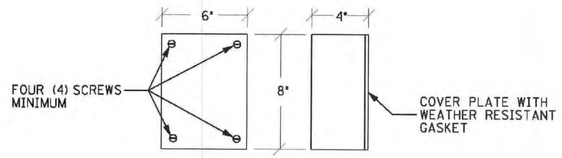
• MINIMUM
NOTE: STACKABLE BOXES ARE PERMITTED



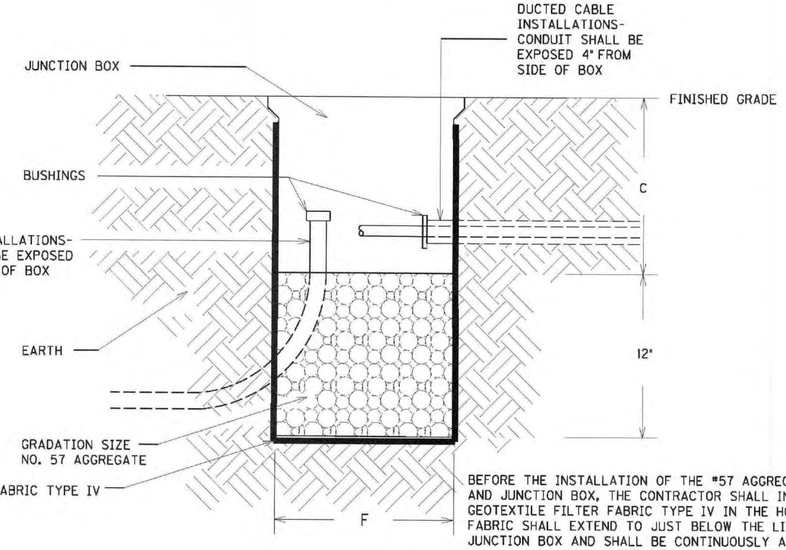
DEPTHS SHOWN FOR CONDUIT AND DUCTED CABLE ARE MINIMUMS. CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN 9" MAXIMUM LIFTS AND RETORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER.

CONDUIT, DUCTED CABLE, AND WARNING TAPE TRENCH

SPLICE BOX SHALL BE FABRICATED FROM MINIMUM 12 GAUGE STEEL AND GALVANIZED AFTER FABRICATION. BOXES SHALL HAVE NO KNOCKOUTS AND SHALL BE PROVIDED WITH A PLATE COVER WITH A WEATHER RESISTANT GASKET AND A MINIMUM OF FOUR SCREWS FOR ATTACHING THE PLATE COVER TO THE BOX. CABLE CLAMPS SHALL BE PROVIDED FOR CABLES ENTERING AND EXITING THE BOX.

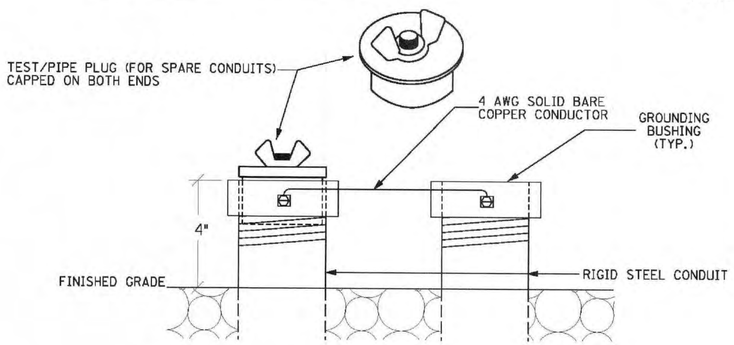


SPLICE BOX

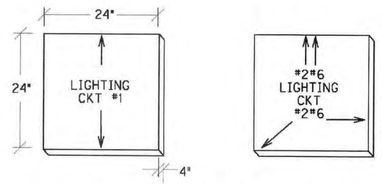


JUNCTION BOX

BEFORE THE INSTALLATION OF THE #57 AGGREGATE AND JUNCTION BOX, THE CONTRACTOR SHALL INSTALL GEOTEXTILE FILTER FABRIC TYPE IV IN THE HOLE. THE FABRIC SHALL EXTEND TO JUST BELOW THE LIP OF THE JUNCTION BOX AND SHALL BE CONTINUOUSLY ADHERED TO THE EXTERIOR OF THE BOX WITH ADHESIVE. ANY LOCATIONS WHERE CONDUITS ENTER THE BOX, THE FABRIC SHALL BE 'X CUT' ONLY AS MUCH AS NECESSARY TO ALLOW PASSAGE OF EACH INDIVIDUAL CONDUIT THROUGH THE FABRIC. THE FABRIC SHALL BE INCIDENTAL TO BID ITEMS 4811, 2039INS835, OR 20392NS835.



TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL



CONCRETE CABLE MARKERS

9/19/2012

TRAFFIC SIGNAL AND ROADWAY LIGHTING JUNCTION BOX AND CONDUIT DETAILS

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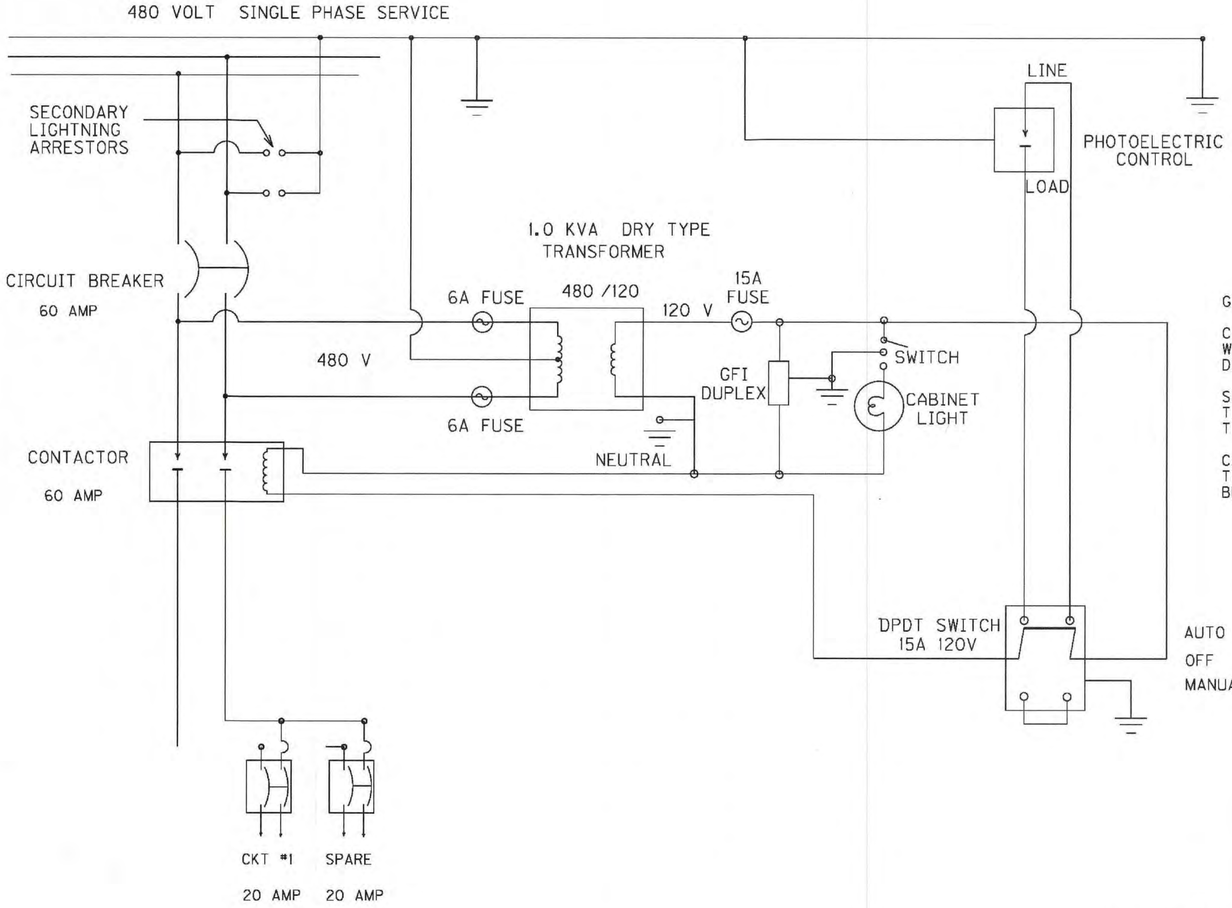
BOONE	6-2039.00	15



NOTES:

CONTRACTOR SHALL INSTALL ALL LIGHTING CONTROL EQUIPMENT AS INDICATED.

CONCRETE SHALL BE CLASS A. CONCRETE SHALL BE POURED ON 12" OF POWER TAMPED DENSE GRADE ROCK. PAD SHALL BE 30" THICK WITH 18" ABOVE GRADE.

PAD SHALL BE OF SUFFICIENT SIZE TO ALLOW A MINIMUM 36" IN FRONT OF THE CABINET AND 12" MINIMUM CLEARANCE AROUND THE SIDES AND BACK OF THE CABINET.

CONCRETE SHALL BE SLOPED 1/8 " PER FOOT TO PREVENT STANDING WATER. OUTSIDE EDGE SHALL HAVE A ONE INCH CHAMFER.

#4 REBAR SHALL BE COMPRISED OF RUNS AS SHOWN AND TIED AT EACH JOINT.

ALL CONSTRUCTION (TO INCLUDE EXCAVATION WORK) AND MATERIALS (CONCRETE , STEEL REINFORCEMENT, ETC.) FOR THE CONCRETE PAD SHALL BE INCIDENTAL TO THE POLE FOR THE LIGHTING CONTROL EQUIPMENT BID ITEM.

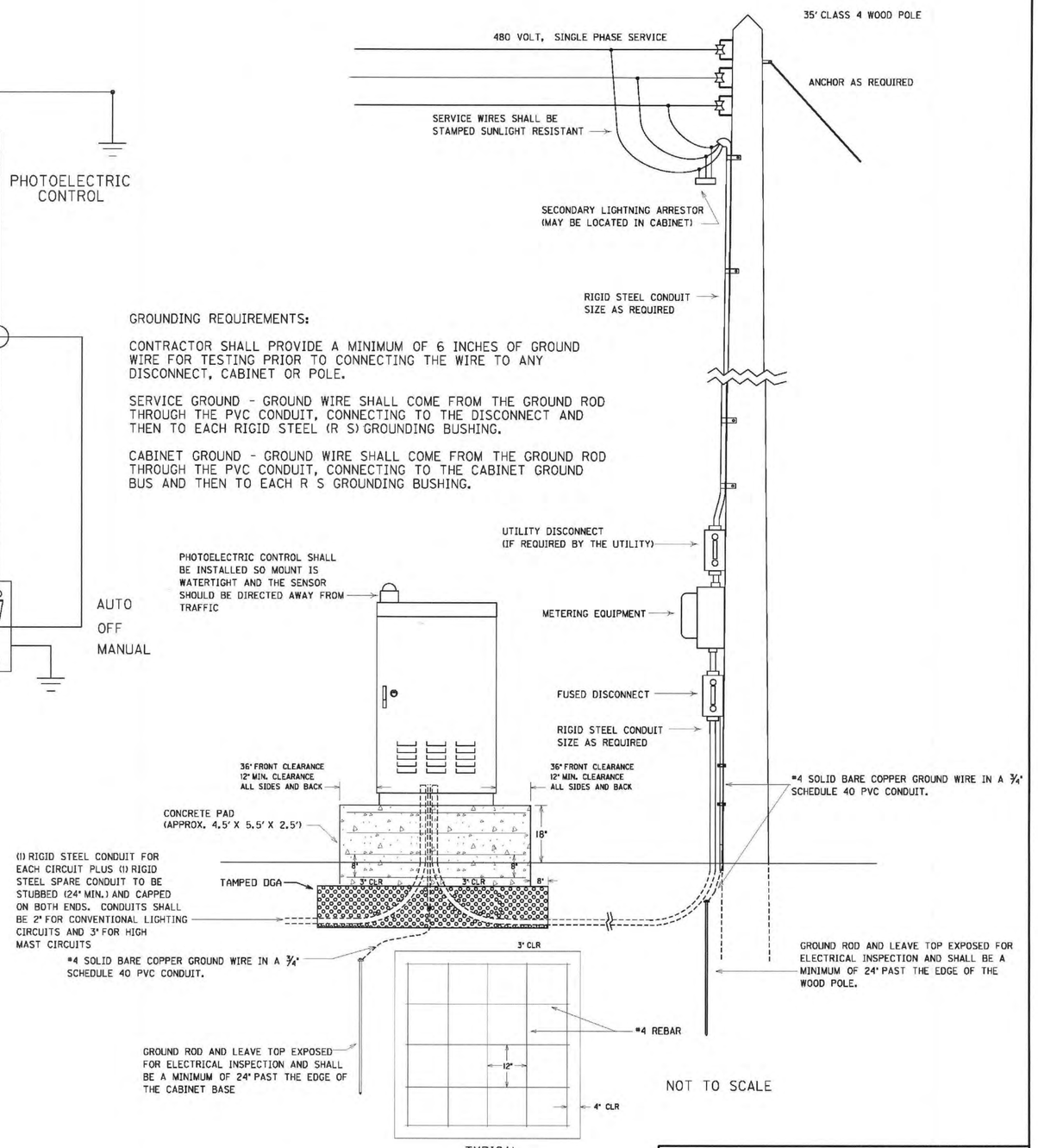
ALL CONDUITS USED FOR GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED ON THE POLE AND/OR IN/TO THE CABINET ARE INCIDENTAL TO BID ITEM "4761". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE CABINET BASE FOR THE SPARE.

GROUNDING REQUIREMENTS:

CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT, CABINET OR POLE.

SERVICE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE DISCONNECT AND THEN TO EACH RIGID STEEL (R S) GROUNDING BUSHING.

CABINET GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE CABINET GROUND BUS AND THEN TO EACH R S GROUNDING BUSHING.



NOT TO SCALE

BASE MOUNTED SERVICE DETAIL

11/14/2013

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BOONE	6-2039.00	I6

TYPICAL NAVIGATION LIGHTS

NAVIGATION FIXTURES

1) Navigation Lights shall meet all requirements of the United States Coast Guard and other regulatory agencies.

2) Housing shall be cast aluminum and the fittings and nipples shall also be aluminum. All joints shall be sealed with waterproof gaskets and the assembly shall be rain tight.

3) Lens shall be of permanent, rigid, heat resistant glass, 8" nominal outside diameter, standard marine fresnel type 180 degrees or 360 degree red, green as specified.

4) Lighting source shall be 12 volt LED. The LED'S shall utilize ALINGaP (aluminum indium gallium phosphorus) technology for red and INGaN (Indium gallium nitride) for green indications, and shall be rated for 100,000 hours of continuous operation over a temperature range of -40 degrees C to + 74 degrees C. The LED modules shall be rated for a minimum life of 60 months and shall meet all parameters of this specification throughout the 60 month period.

5) Navigation fixture shall be suspended from the swivel on a 1½" stainless steel pipe of required length to meet USCG requirements.

6) Swivel and pipe shall provide for all wiring to be completely contained inside the light assembly. Gaskets and O-rings shall be used to provide a weather tight assembly. The swivel shall be of cast aluminum and spindle shall be of stainless steel.

7) An automatic latch shall hold the light securely in normal operating and service positions. A firm pull on the service cable shall automatically release the latch, allowing the fixture to pivot. As the light is raised, latch shall automatically engage to hold light in service position. Service position shall be at most one foot from the catwalk platform railing or the bridge wall structure. The service position shall be at least one foot above the bridge wall or catwalk railing. Fixture shall be designed so that light may be pulled from either side. A stainless steel 10800 LB service cable shall be provided to facilitate raising and lowering light for service. The bridge will required a winch assemblies for lowering and raising the navigation light fixtures. Each winch assemblies shall have a locking mechanism for securing the navigation light fixtures.

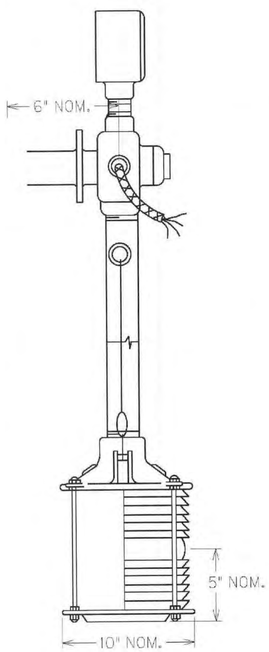
8) Assembly mounting shall be accomplished by using ½" diameter stainless steel bolts, nuts, and locking washers.

9) All aluminum attachments to bridge steel members shall be separated from direct contact with steel members by a minimum ⅛" neoprene or mylar gasketing material to prevent corrosion caused by contact between dissimilar metals. This includes navigation fixtures, control cabinets, and all mounting brackets.

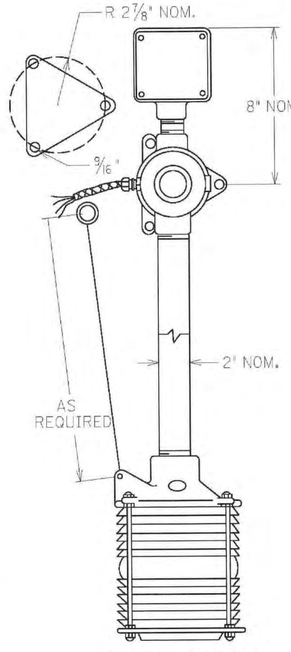
7-29-2014

NOTE:

"X" SHALL BE THE LENGTH NECESSARY FOR THE NAVIGATION LIGHT TO HANG BELOW THE OUTERMOST EDGE OF THE BRIDGE SPAN STRUCTURE SO AS TO BE VISIBLE FROM AN APPROACHING VESSEL (FOR GREEN ONLY)



180° RED



360° GREEN

TYPICAL AVIATION LIGHTS

All aviation fixtures shall be I-810 or approved equal. The fixture shall meet all the requirements as recommended in FAA Advisory circular 70/7460-1 K change 2, Obstruction Marking And Lighting, red lights- Chapters 4,5 (Red), & 12. Lighting source shall be 12 volt LED. The LED'S shall utilize ALINGaP (aluminum indium gallium phosphorus) technology for red and INGaN (Indium gallium nitride) for green indications, and shall be rated for 100,000 hours of continuous operation over a temperature range of -40 degrees C to + 74 degrees C. The LED modules shall be rated for a minimum life of 60 months and shall meet all parameters of this specification throughout the 60 month period. Assembly mounting shall be accomplished by using 1#2" diameter stainless steel bolts, nuts, and locking washers. All aluminum attachments to bridge steel members shall be separated from direct contact with steel members by a minimum 1#8" neoprene or mylar gasketing material to prevent corrosion caused by contact between dissimilar metals. This includes navigation fixtures, control cabinets, and all mounting brackets.

NAVIGATION/AVIATION LIGHT DETAILS

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NAVIGATION LIGHTING SYSTEM SPECIFICATIONS

General:
This installation shall consist of all components necessary for construction of a complete, 12-volt, solar powered navigation and aviation lighting system for the Caroll Cropper Bridge over the Ohio River. The system shall conform to the requirements the US Coast Guard and all other applicable regulatory agencies. This project also includes furnishing and installing a wireless system designed to monitor the status of the Caroll Cropper Bridge for all navigation and aviation light locations.

System Design:
System shall be designed to utilize solar electric modules with storage batteries as the power sources to provide continuous power for navigation lights at the all the specified locations on each bridge as well as sufficient power to operate the wireless monitoring system (approximately 10 watts per location of each monitoring control panel). The system must be designed for operation at an average monthly isolation on a horizontal surface, isolation at tilt, and average monthly temperatures at each site.

Solar modules and mounting structure:
Solar electric panels shall be triple junction solar cells with an unbreakable construction. Panel shall be polymer encapsulated (glass encapsulation is not acceptable). The cells shall be encapsulated to protect from an environment consistent with this site. Each module shall include a weather tight junction box for connecting the array output cable to the battery terminals. The modules shall be designed to provide rated power output for a minimum for fifteen years.

Separate panels shall be installed for the upstream and downstream green indications at each location on the Carroll Cropper Bridge. One panel shall be installed for Kentucky side at pier for 2 red navigation fixtures and 2 aviation fixtures. One panel shall be installed for the Ohio side at pier for 2 red navigation and 1 aviation fixture. Each panel shall be sized to provide the necessary wattage for the LED lighting fixtures, all control equipment, and 10 additional watts at 12 volts D.C. to power the separate monitoring system.

The solar electric modules shall be designed to be securely attached to the bridge structure. Schematic-only diagrams are shown depicting attachment to the selected portion of the bridge. Mounting brackets and arms shall be fabricated from stainless steel structure materials sufficient to provide necessary stability for the panel arrays. Panel orientation shall be adjustable to facilitate maximum solar input. All mounting hardware for attachment to the bridge shall be stainless steel.

The Contractor shall submit to the Engineer for approval shop drawings for cabinets, mounting brackets, and other structural items prior to the fabrication of these items.

Solar controls:
Each solar control shall utilize a solid state integrated control unit capable of managing battery charging and navigation light output control. These functions shall be accomplished within a single cabinet with monitoring system in each of the specified locations.

The charge control portion of the control unit shall be designed such that it draws its power from the solar array only when power is available so as to reduce parasitic load on the system. Units shall use an ambient temperature sensor to adjust the charge termination point (temperature compensated charging) to prolong the battery life. The charge circuit shall employ a pulse-width modulation algorithm for charging the batteries and shall be of solid state series switch type configuration.

On-board, short-circuit protection shall be provided. The controls shall have the ability to detect day and night through a photovoltaic array (dusk till dawn activator). The load control function shall incorporate a low voltage disconnect circuit to disconnect power to the control circuit if the battery voltage falls to a low state of charge (typically 20%).

System Enclosure:
The enclosure shall be fabricated from aluminum with a minimum thickness of 0.125" and be NEMA 3R rated. The cabinet shall provide screened louvered vents on each side of each compartment. The louver screening shall be aluminum for longevity. An integral rain lip shall also be provided at the top of the main cabinet body to minimize entry of rain.

The maintenance entrance shall be hinged and double- locking. The entrance shall be lined with a neoprene gasket around the entire edge. The entrance shall be secured with a Corbin #2 lock. The keyhole for this lock shall have a cover attached to the door with a single rivet. The battery component shall provide a minimum of (1/2") of insulating sheeting around the battery to minimize heat transfer between the battery and the enclosure wall. The cabinet shall be of sufficient size to house the battery and all control components (including monitoring system) and allow sufficient room for routine maintenance. Minimum size: 16" high X 15" wide X 9" deep. All conduit attachments to this cabinet shall be made in the base or side of the cabinet to minimize moisture penetration.

Batteries:
Batteries shall be either gel cell or Absorbed Glass Mat maintenance-free and be non-spillable. Batteries shall be deep cycle marine batteries and shall be 12 volt, minimum 90 amp hour.

System Wiring:
The system shall feature a color coded wiring harness for both the lamps and solar array output. A keyed locking connector shall be utilized in the harness to allow the lamps to be quickly and easily disconnected from the control electronics. An integral fuse assembly shall be included in the load positive wire of the harness. All connections shall be terminated with crimped spade terminals.

The output harness for the solar array shall consist of a jacketed pair of conductors. Jackets shall be of UV resistant PVC or XLT material. Marine terminals shall be utilized for installation and maintenance. All wiring shall be incased in flexible steel conduit. All conductors shall be sized in accordance with National Electrical Code, be appropriate to the solar array output current, and shall be Type THHN or THWN.

Conduit:
All conduit shall be minimum 1" liquid-tight flexible conduit. Where conduit crosses an expansion or open joint, a UL listed rain-tight deflection/expansion fitting shall be used to compensate for movement in any direction between the two conduit ends which it connects. Conduits shall be affixed to the bridge members by using stainless steel straps with stainless steel nuts, bolts and locking washers.

WIRELESS MONITORING SYSTEM SPECIFICATIONS

Monitoring systems:
A system shall be installed to monitor the status of the individual navigation lighting units. The purpose of the monitoring system is to provide a complete, programmable, intelligent, networkable and expandable low voltage monitoring system for the navigational/aviation as described herein and as shown on the schematic drawings and schedules.

The contractor shall furnish and install a complete, microprocessor based, addressable, networkable distributed intelligent low voltage lighting communication system for centralized monitoring. System shall include but not be limited to: relays, controllers, light level sensors, radio frequency transceivers, low voltage control power and data line wiring, software, programming, custom graphical screens and miscellaneous components as required for a complete, operable navigational monitoring system. All system components shall arrive at the job site completely factory pre-wired and ready for field installation. All connections shall be clearly and permanently labeled to facilitate correct and easy termination of equipment.

Each monitoring system shall be wireless and will powered by the 12 volt feed inside navigation control cabinet. The monitoring system shall be capable of sensing current flow, voltage, and fault conditions for the navigation lighting units. The central processing unit cabinet shall have the necessary communications equipment to relay information to the District 2 office by wireless modem compatible with the AT&T network.

Contractor shall furnish and install wireless router, antenna, antenna cabling, power supply, data cables, all connectors, and hardware required for communication. The wireless router shall be installed in one of the solar control cabinet for each bridge locations. Wireless router shall be Sierra Wireless AirLink GX440 shall support AT&T Edge/3G/4G services. The antenna should be Laird Lp-800-2500-9NF sku393969.

The Contractor shall deliver the router to Central Office Traffic Operations for provisioning on the KYTC APN. The cabinet will provision the router within 4 weeks of receipt and return via mail to the contractor. The cabinet will pay the monthly data plan charges. The cabinet will allow temporary access to the router until the close of the contract for configuring of the monitoring system.

The monitoring system shall have a two year warranty on all parts and materials. The warranty shall start on the date of the acceptance of the installation by the Kentucky Transportation Cabinet.

Wireless monitoring shall be possible from up to ½ mile line of sight distance to or from the closest transceiver in an urban environment or with wireless repeaters.
Fully programmable circuit diagnostic capability and alarming via Personal Computer (PC) shall be possible for all fixtures.

Radio network shall operate within an unlicensed FCC band, utilizing spread spectrum and frequency hopping technology. Radio network shall be transparent across Ethernet (LAN) platform.

All of the data accumulation transferred over the wireless RF network shall be automatically error checked. Systems that do not provide send/acknowledge error checking are not acceptable.

Password protected access via the modem shall be possible for interoperable connection from an off-site based PC for factory programming and support and owner access. System communications shall include the modem and bridge to the monitoring system. Factory programming and troubleshooting assistance shall be available via the wireless modem. The system shall be capable of accepting any number of commands or command sequences allowing programs to run continuously.

The monitoring system shall be able to email alerts for each node values and no cell modem connection for a minimum of 1 minute increments. The emails shall be assigned to a minimum of 30 emails. The Alerts shall be label for each node including minimum thresholds, maximum thresholds, actual current reading, and location of system. The monitoring system shall include web based (internet browser) control. The web based control application shall reside within the owner's secure server network and provide the capability to reset the alert/notification system (via the Internet) to a user-defined default condition. This web based control application shall not have any recurring maintenance costs by the cabinet.

All control enclosures shall be designed for simple removal and replacement without the need of special tools or rewiring other than simple disconnection or reconnection.

Central control unit shall support up to 64,000 controllers networked on wireless systems.

Programmed data being stored in static RAM shall be protected from loss during power failure. The CPU based real time clock shall be protected by a rechargeable NiCad or lithium battery capable of withstanding up to a 30-day power loss.

Programmable Wireless RF Linking:
Provide wireless linking expandability with a wireless card slot in communication hub. Wireless link shall provide full function zone control and data accumulation, diagnostics, including current sensing and voltage sensing.

Wireless communications shall be bidirectional. RF transceiver shall operate in an unlicensed FCC ISM band, FCC/IC certified. RF range shall be a minimum 1/2 mile line of sight. Maximum distances of up to 20 miles are subject to urban environmental conditions and obstructions. Surge Protection shall be a minimum 2500 Volts to ground. Equipment shall operate at a voltage of 12 VDC. Equipment shall be capable of operating at temperatures ranging from -40°C to 65°C, @ 95% relative humidity and at a relative humidity ranging from 0-95%, non-condensing.

Provide Redundant RF link where specified, one for each transceiver used.

Custom Graphical Screens:
Provide custom graphical site screens using cad drawings of the site provided by the Kentucky Transportation Cabinet to serve as backgrounds for the site zoom screens. Provide a custom graphical screen for each monitoring system. From there the user shall be able to access each fixture individually, view fixture status, diagnostic files, and data logs.

Data accumulation and archive: The lighting monitor system software shall allow all types of data from the system to be logged and archived. Data shall be accessible via spreadsheet or database, and contain the following:

Navigation Lighting
- Voltage levels for each voltage sensor.
- Current drawn per fixture.
- True and Real Power
- Time and date stamping as required by user.

Factory Service, Support and Start-up:
The manufacturer shall provide factory assembly and testing of all monitor stations and associated apparatus. Monitor modules shall be factory programmed per project specifications. All required software shall be installed prior to factory shipment or uploaded from the factory via modem link.

An on site factory start-up by a qualified technician shall be provided as a part of the system package. Start-up will not be performed until the system installation is complete and a wireless modem has been installed for the system. Start-up shall include a system inspection, additional software installation if necessary; program testing, training and troubleshooting assistance. Support via modem from factory for direct system diagnosis and programming assistance shall be provided at no charge until such time as final acceptance of the complete system has been granted. The manufacturer shall provide a complete submittal package for approval prior to shipment. The package shall consist of product cut sheets and specifications, a bill of materials, warranty information, wire riser diagrams, and field wiring instructions. In addition to the submittals, a set of installation, operator, and maintenance manuals shall be shipped with the equipment.

NAVIGATION LIGHTING SYSTEM AND WIRELESS MONITORING SYSTEM

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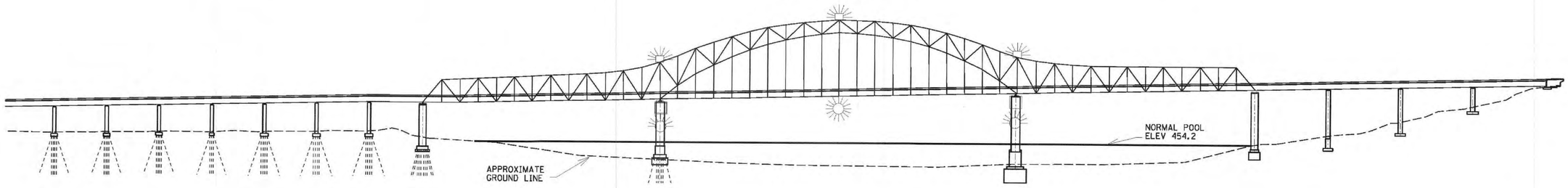
NAVIGATION AND AVIATION LIGHT SCHEMATIC DIAGRAM

ELEVATION VIEW
LOOKING DOWNSTREAM
FROM UPSTREAM SIDE OF I 275

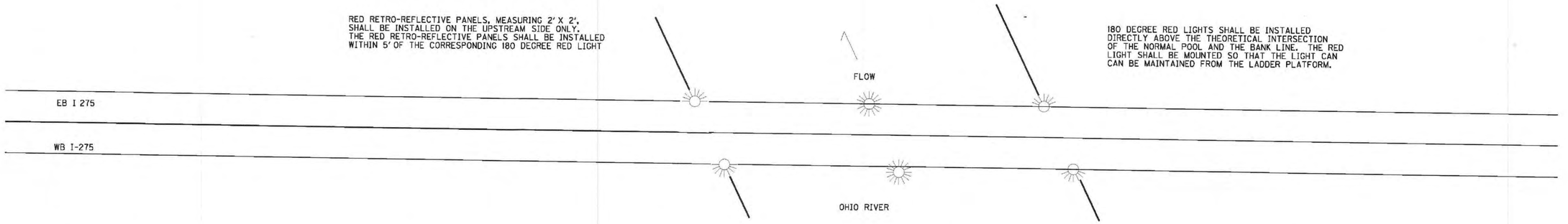


THE 360 DEGREE GREEN LIGHTS SHALL BE IN LINE WITH THE AXIS OF THE CHANNEL AND MARK THE CENTER OF THE NAVIGATION SPAN. ONE GREEN LIGHT SHALL BE ON THE DOWNSTREAM SIDE OF THE DOWNSTREAM BRIDGE AND THE OTHER SHALL BE ON THE UPSTREAM SIDE OF THE UPSTREAM BRIDGE. EACH GREEN LIGHT SHALL BE SECURELY MOUNTED JUST BELOW THE OURTERMOST EDGE OF THE BRIDGE SPAN STRUCTURE IN LINE WITH THE AXIS OF THE CHANNEL. THE GREEN LIGHT SHALL BE MOUNTED SO THAT THE LIGHT CAN CAN MAINTAINED FROM THE ROADWAY.

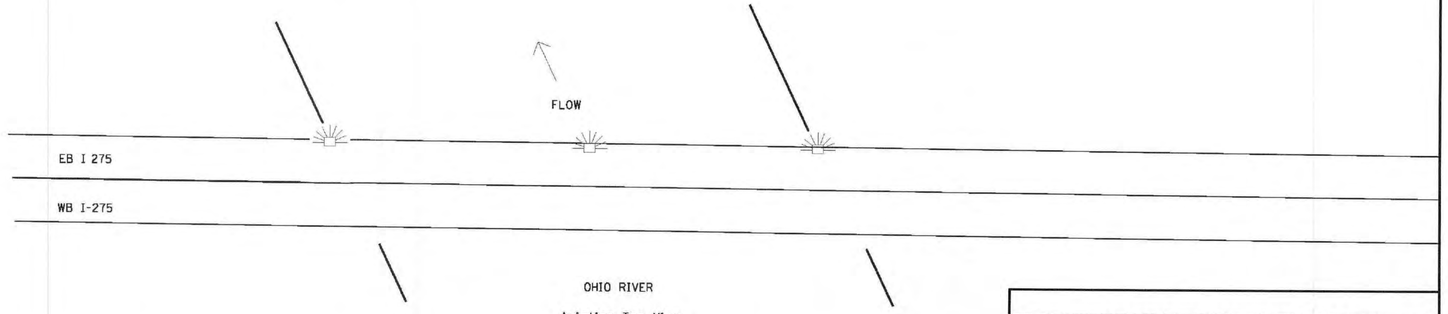
THE 180 DEGREE RED LIGHTS SHALL BE MOUNTED TO SHOW 90 DEGREES ON EITHER SIDE OF A LINE PARALLEL TO THE AXIS OF THE CHANNEL

RED RETRO-REFLECTIVE PANELS, MEASURING 2' X 2', SHALL BE INSTALLED ON THE UPSTREAM SIDE ONLY. THE RED RETRO-REFLECTIVE PANELS SHALL BE INSTALLED WITHIN 5' OF THE CORRESPONDING 180 DEGREE RED LIGHT

180 DEGREE RED LIGHTS SHALL BE INSTALLED DIRECTLY ABOVE THE THEORETICAL INTERSECTION OF THE NORMAL POOL AND THE BANK LINE. THE RED LIGHT SHALL BE MOUNTED SO THAT THE LIGHT CAN CAN BE MAINTAINED FROM THE LADDER PLATFORM.



Navigation Top View



Aviation Top View

LEGEND

- NAVIGATION LIGHT (GREEN) 360 DEGREES
- NAVIGATION LIGHT (RED) 180 DEGREES
- AVIATION LIGHT (RED) STEADY 360 DEGREES (FAA L-810)
- RED RETRO-REFLECTIVE PANELS

CARROLL CROPPER BRIDGE
NAV/AV LIGHT SCHEMATIC DIAGRAM

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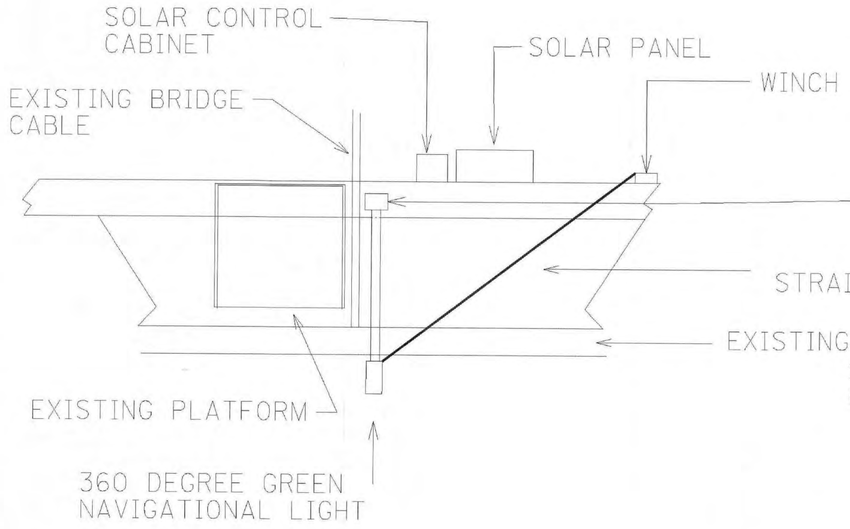
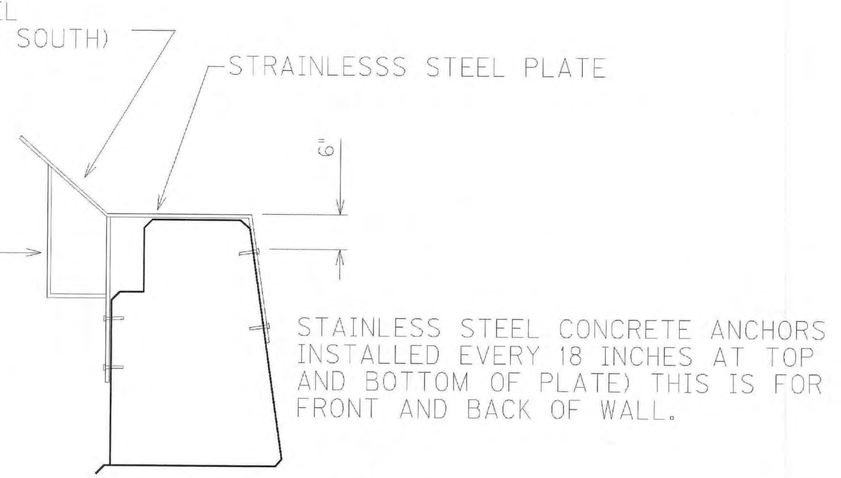
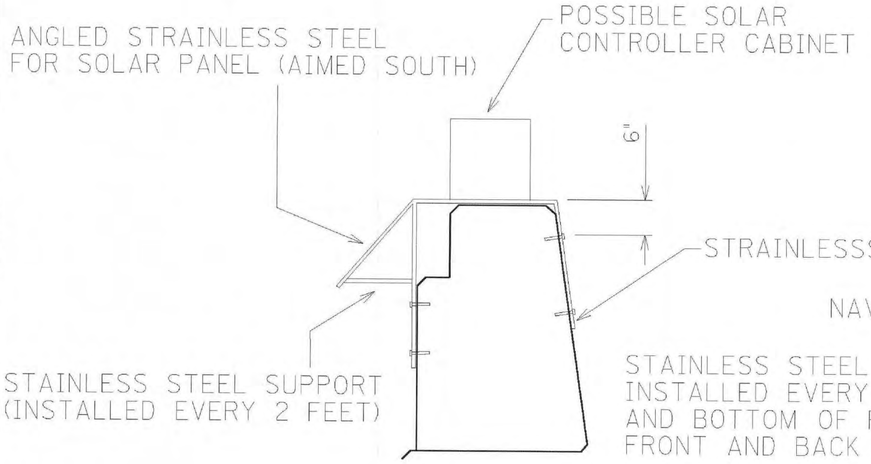


SIDE PROFILE FOR CARROLL CROPPER BRIDGE FOR EASTBOUND AND WESTBOUND SIDE OF BRIDGE

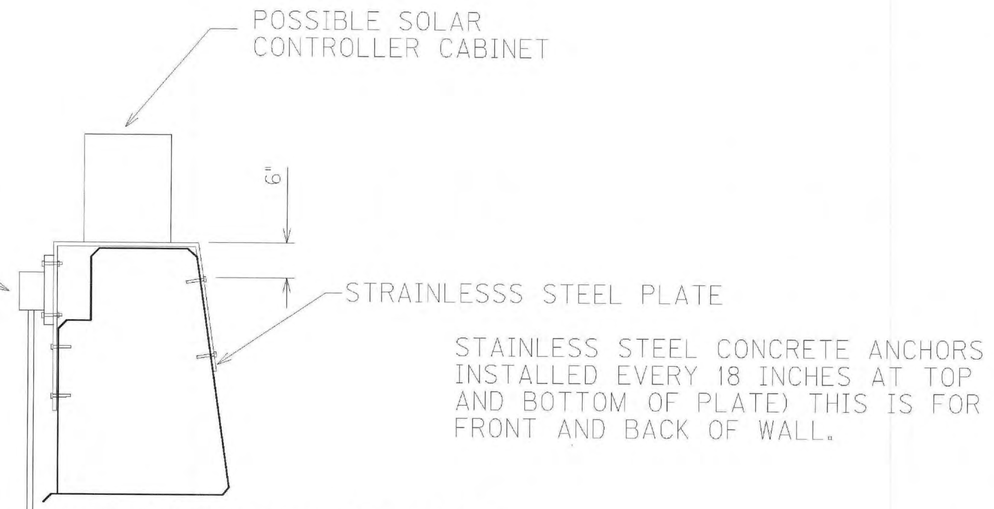
DO NOT INSTALLED SOLAR CONTROLLER CABINET IN FRONT OF SOLAR PANELS.



SIDE PROFILE FOR NORTHSIDE BARRIER WALL OF CARROLL CROPPER BRIDGE



SIDE PROFILE FOR SOUTHSIDE BARRIER WALL OF CARROLL CROPPER BRIDGE



SIDE PROFILE FOR NAV LIGHT SWINGING MOUNT FOR BOTH SIDES BARRIER WALL OF CARROLL CROPPER BRIDGE

GREEN NAVIGATION CABINET
SOLAR PANEL
SCHEMATIC

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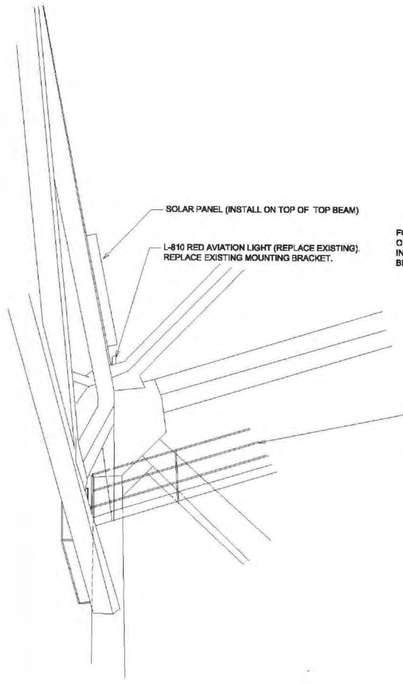
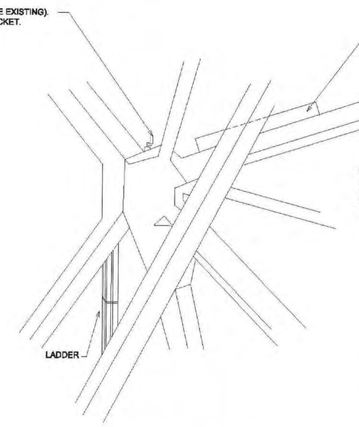


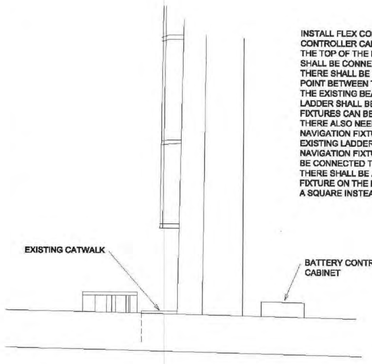
FOR MOUNTING OF THE AVIATION FIXTURE, THE CONTRACTOR CAN ONLY USE THE EXISTING HOLES AND CAN NOT DRILL ANY NEW HOLES IN THE BRIDGE. THE SOLAR PANEL SHALL BE MOUNTED TO THE BRIDGE BEAM WITHOUT DRILLING ANY HOLES IN THE EXISTING BEAM.

SOUTHSIDE UP VIEW OF RED AVIATION FIXTURE LOCATION AND SOLAR PANEL LOCATION FOR THE KENTUCKY SIDE

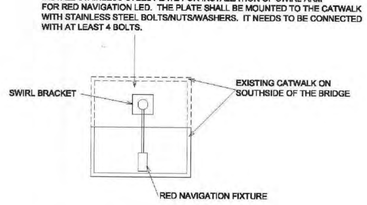


FOR MOUNTING OF THE AVIATION FIXTURE, THE CONTRACTOR CAN ONLY USE THE EXISTING HOLES AND CAN NOT DRILL ANY NEW HOLES IN THE BRIDGE. THE SOLAR PANEL SHALL BE MOUNTED TO THE BRIDGE BEAM WITHOUT DRILLING ANY HOLES IN THE EXISTING BEAM.

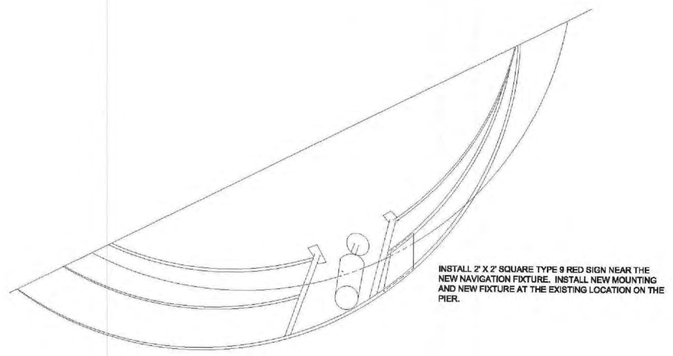
SOUTHSIDE UP VIEW OF RED AVIATION FIXTURE LOCATION AND SOLAR PANEL LOCATION FOR THE INDIANA SIDE



FRONTSIDE OF SOUTHSIDE OF BRIDGE FOR KENTUCKY SIDE RED NAVIGATION FIXTURE(S) LOCATION.



BACKSIDE OF SOUTHSIDE OF BRIDGE FOR KENTUCKY SIDE RED NAVIGATION FIXTURE(S) LOCATION.

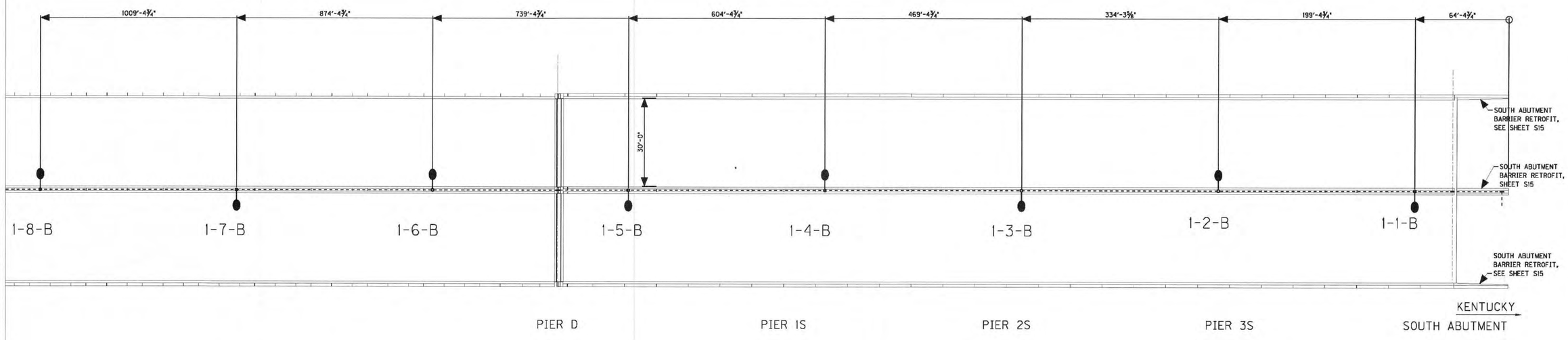


DOWN VIEW OF THE NORTHSIDE OF THE PIER FOR BOTH RED LOCATIONS

RED NAVIGATION CABINET
SOLAR PANEL
SCHEMATIC

MicroStation v8.11.7.443
E-SHEET NAME: ID10000LI
USER: ted.swansegar
DATE PLOTTED: August 18, 2014
FILE NAME: G:\PWORK\TED.SWANSEGAR\D0994922\T010001.DGN

COUNTY OF	ITEM NO.	SHEET NO.
BOONE	6-2039.00	TII



INSTALL BASE MOUNTED LIGHTING CONTROL CABINET TEN FEET FROM THE END OF THE GUARDRAIL ON THE SOUTHSIDE OF THE ROAD FROM THE APPROACH FROM INDIANA. INSTALL A STRUCTURE USING 2" SQUARE POST TO MOUNT THE SECONDARY 480 VOLT DISCONNECT. THIS STRUCTURE SHOULD BE INSTALLED IN THE LIGHTING CONTROL CABINET CONCRETE PAD. ALL CONDUIT ABOVE GROUND SHOULD BE RIGID STEEL CONDUIT. THERE SHALL BE A JUNCTION BOX TYPE A2 INSTALLED NEAR THIS STRUCTURE/LIGHTING CONTROL PAD THAT WILL TRANSITION THE DUCTED CABLE INTO THE DISCONNECT. THE SECONDARY DISCONNECT SHALL HAVE A SEPARATE GROUND SYSTEM FROM THE LIGHTING CONTROLLER CABINET. THE DUCTED CABLE SHALL BE TRANSITIONED THROUGH THE CONDUIT INTO THE SECONDARY DISCONNECT (NOT CUT OFF IN THE JUNCTION BOX).
THE SECONDARY DISCONNECT/CONDUIT/GROUNDING SYSTEM/SQUARE POSTS/EXTRA CONCRETE SHOULD BE INCLUDED IN BID ITEM 4761. THE CONTRACTOR SHALL INSTALL THE WOOD POLE FOR THE LIGHTING CONTROL CABINET NEAR THE EXISTING RWIS LOCATION APPROXIMATELY 4000 FEET FROM THE BRIDGE ON THE SOUTHSIDE OF I-275.
THE CONTRACTOR SHALL INSTALL THE MAIN METER/DISCONNECT ON THIS POLE NEAR THE RWIS SERVICE. THERE SHALL BE A JUNCTION BOX TYPE A1 INSTALLED NEAR THE NEW WOOD POLE FOR TRANSITION OF THE DUCTED CABLE FROM THE MAIN DISCONNECT INTO THE GROUND. THE MAIN DISCONNECT SHALL HAVE A SEPARATE GROUNDING SYSTEM. THE DUCTED CABLE SHALL BE TRANSITIONED THROUGH THE CONDUIT INTO THE MAIN DISCONNECT (NOT CUT OFF IN THE JUNCTION BOX).
INSTALL 3/#2 AWG DUCTED CABLE FROM THE MAIN SERVICE DISCONNECT TO THE SECONDARY DISCONNECT NEAR THE LIGHTING CONTROL CABINET. THERE SHALL BE A MARKER INSTALLED EVERY 300 FEET FROM THE MAIN DISCONNECT TO THE SECONDARY DISCONNECT. THE MARKERS SHALL HAVE THE WORDS "SERVICE WIRE " INSCRIBED IN THE MIDDLE OF THE MARKER AND HAVE ARROWS SHOWING THE DIRECTION IT IS GOING.
INSTALL 3" RIGID STEEL FROM THE LIGHTING CONTROL CABINET TO JUNCTION TYPE A3 WHICH WILL BE LOCATED ACROSS FROM THE ELECTRICAL JUNCTION BOX AS SHOWN ON BRIDGE PLAN SHEET S15.
THE CONTRACTOR WILL BORE AND JACK A 3" RIGID STEEL CONDUIT TO THE ELECTRICAL JUNCTION BOX IN THE MEDIAN WALL (BY OTHERS). THE CONTRACTOR WILL INSTALL 3-#2 AWG WIRE FROM LIGHTING CONTROL CABINET TO POLE "1-35-B " THROUGH POLES "1-1-B" TO "1-34-B". ALL 3" PVC CONDUIT AND THE INITIAL ELECTRICAL JUNCTION IN THE WALL IS BID BY OTHERS. THERE SHALL BE ONE DEWALT DCD780 DRILL (WITH TWO BATTERIES/CHARGER/CASE) OR APPROVED EQUAL AND BE INCIDENTAL TO BID ITEM 23366EC.

Scale 1" = 400'

LEGEND

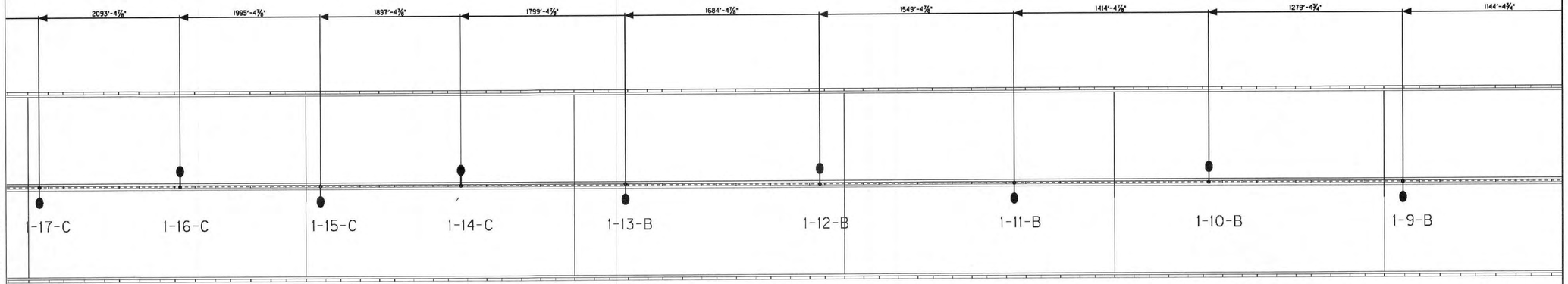
LUMINAIRE POLE

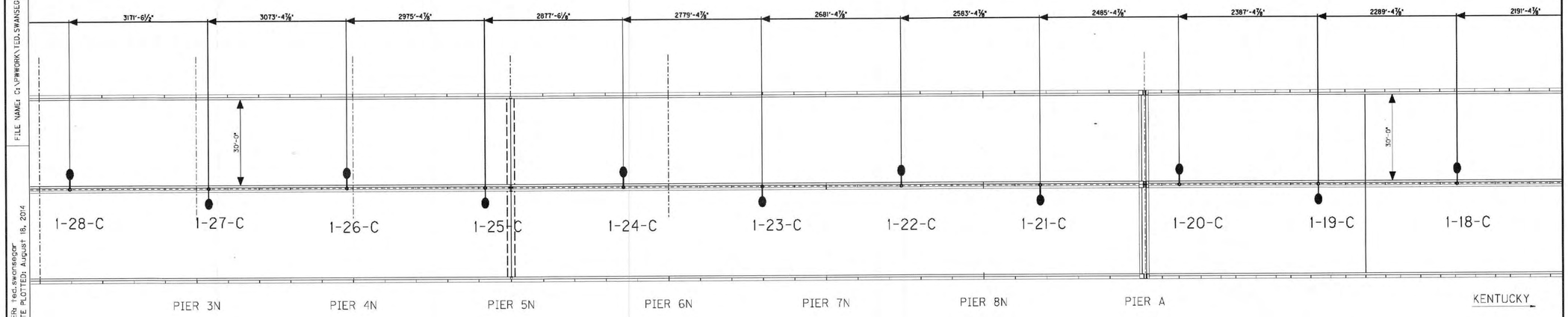
CARROLL CROPPER MEDIAN

LIGHTING PLAN SHEET 1

MicroStation v8.11.7.443 | E-SHEET NAME: T01100L_T | USER: ted.swansegar DATE PLOTTED: August 18, 2014 | FILE NAME: C:\PWWORK\TED.SWANSEGAR\D0994922\ALL LIGHTING STANDARDS1.DGN

COUNTY OF	ITEM NO.	SHEET NO.
BOONE	6-2039.00	T12





Scale 1" = 400'

LEGEND

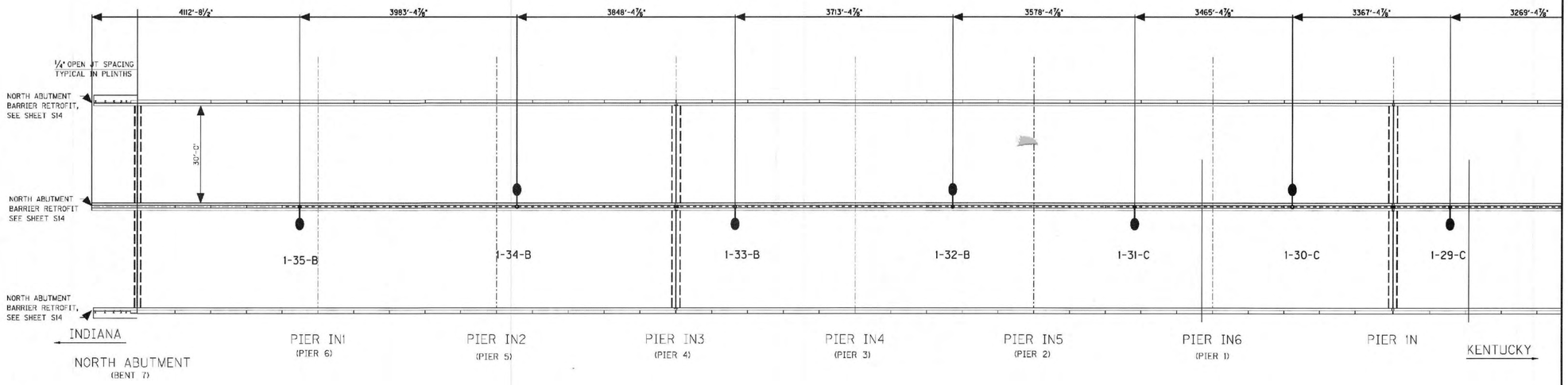
LUMINAIRE POLE

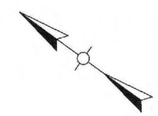
CARROLL CROPPER MEDIAN

LIGHTING PLAN SHEET 2

FILE NAME: C:\PWWORKING\TED.SWANSEGAR\D0994922\ALL LIGHTING STANDARDS1.DGN
USER: ted.swansegar
DATE PLOTTED: August 16, 2014
E-SHEET NAME: T01200LT
MicroStation V8.11.7.443

COUNTY OF	ITEM NO.	SHEET NO.
BOONE	6-2039.00	T13





Scale 1" = 400'

LEGEND

LUMINAIRE POLE

CARROLL CROPPER MEDIAN

LIGHTING PLAN SHEET 3

MicroStation v8.11.7.443 | E-SHEET NAME: T013DLT | USER: ted.swansegar DATE PLOTTED: August 18, 2014 | FILE NAME: G:\PWWORK\TED.SWANSEGAR\D0394922\ALL LIGHTING STANDARDS1.DGN

DESIGN CALCULATIONS

AMERICAN ENGINEERS, INC.

BOONE CO. KY/DEARBORN CO. IN
SHORING DESIGN
I275 over
OHIO RIVER

HALL CONTRACTING OF KY, INC.
3800 CRITTENDEN DRIVE
LOUISVILLE, KY 40233

March 24, 2015

Dale Carpenter PE 3/24/15

DESIGNING YOUR FUTURE, TODAY. AEI

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Louisville, KY 40223
(502) 245-3813
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PROFESSIONAL ENGINEERING

PROJECT No. Indiana Approach COUNTY Boone / Dearborn CALC. BY DL DATE 3/23/15
STRUCTURE I-275 ROAD over Ohio River CHK'D BY SBT DATE 4/27/15

Jack & Support Notes

Structural Steel - Grade 50 ksi min

Bolted Connections - HS-A490 Bolts 1" Diameter

- Standard Holes -

- 120 total - All installed Before Jacking

Contractor must verify Plan Dimensions with Field Conditions. Use 8 3/8" W x 7'-6" as Shim Plates as needed to ensure 2 1/2" (min) Bolt to end of Girder clearance.

Contractor shall set Jack load to a minimum of 290 k and maximum of 350 k once the span for the Bearing to be replaced is Lifted. Provide a 700 k Jack. All work to Jack, support and Replace a Bearing shall be performed while traffic control for phase 3 or phase 5 is set up. All work is opposite the phase of Traffic control.

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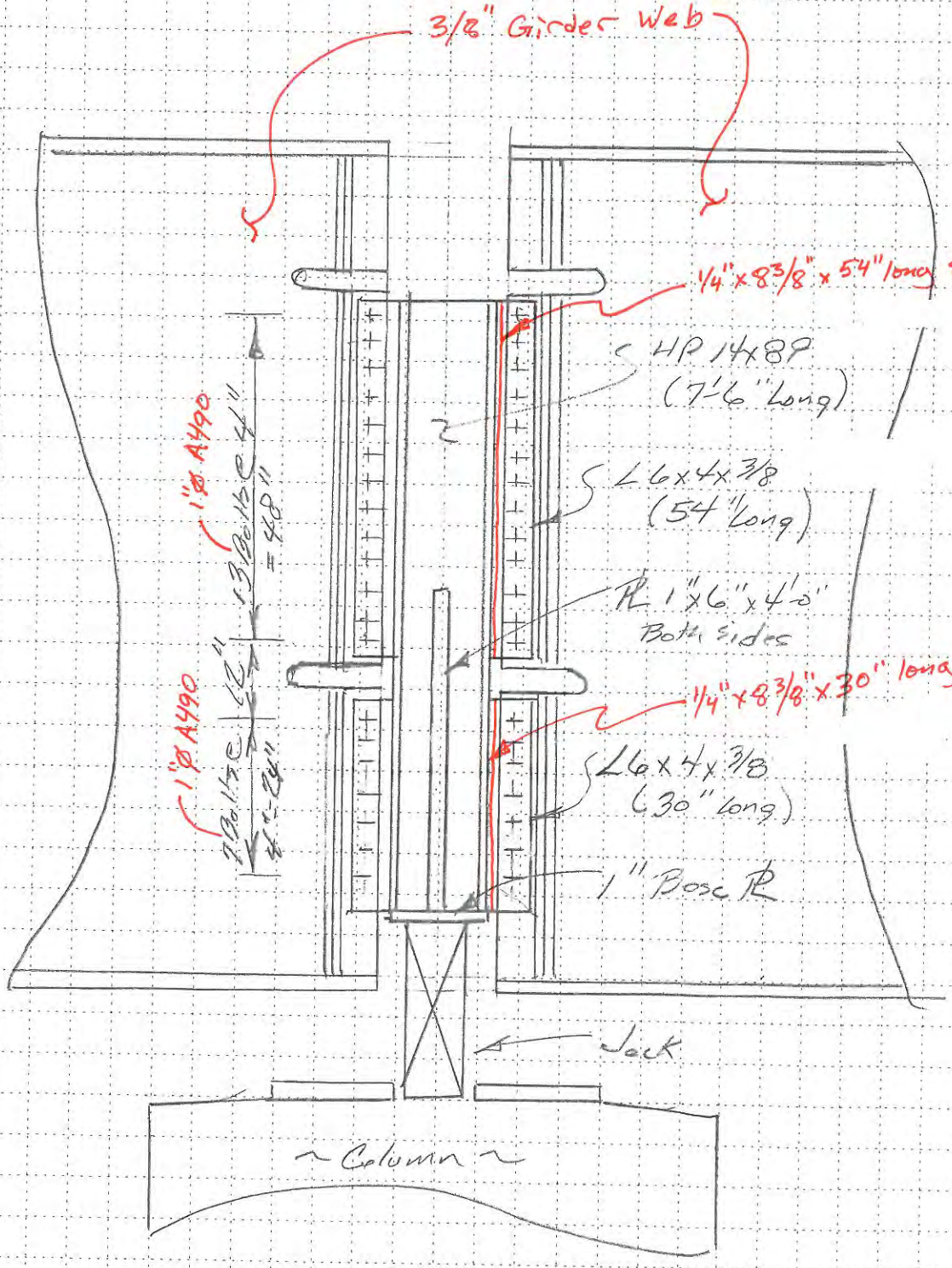
STRUCTURE I-275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Details



Elevation View

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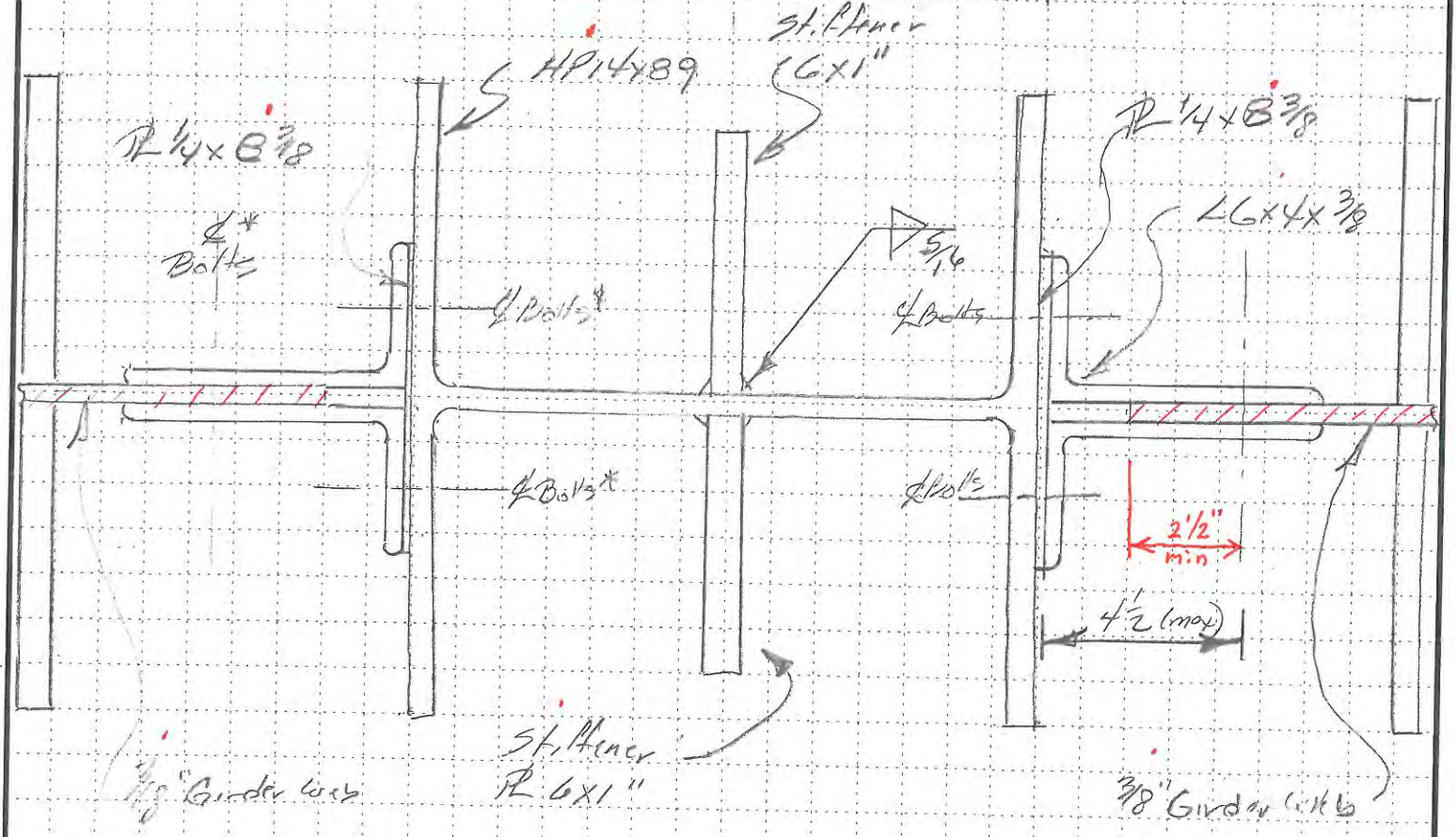
PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DC DATE 3/16/15

STRUCTURE EJ75 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Details



Typical Plan View

Note: All Bolts 1" ϕ A490 HS

All Bolts have same Vertical Spacing

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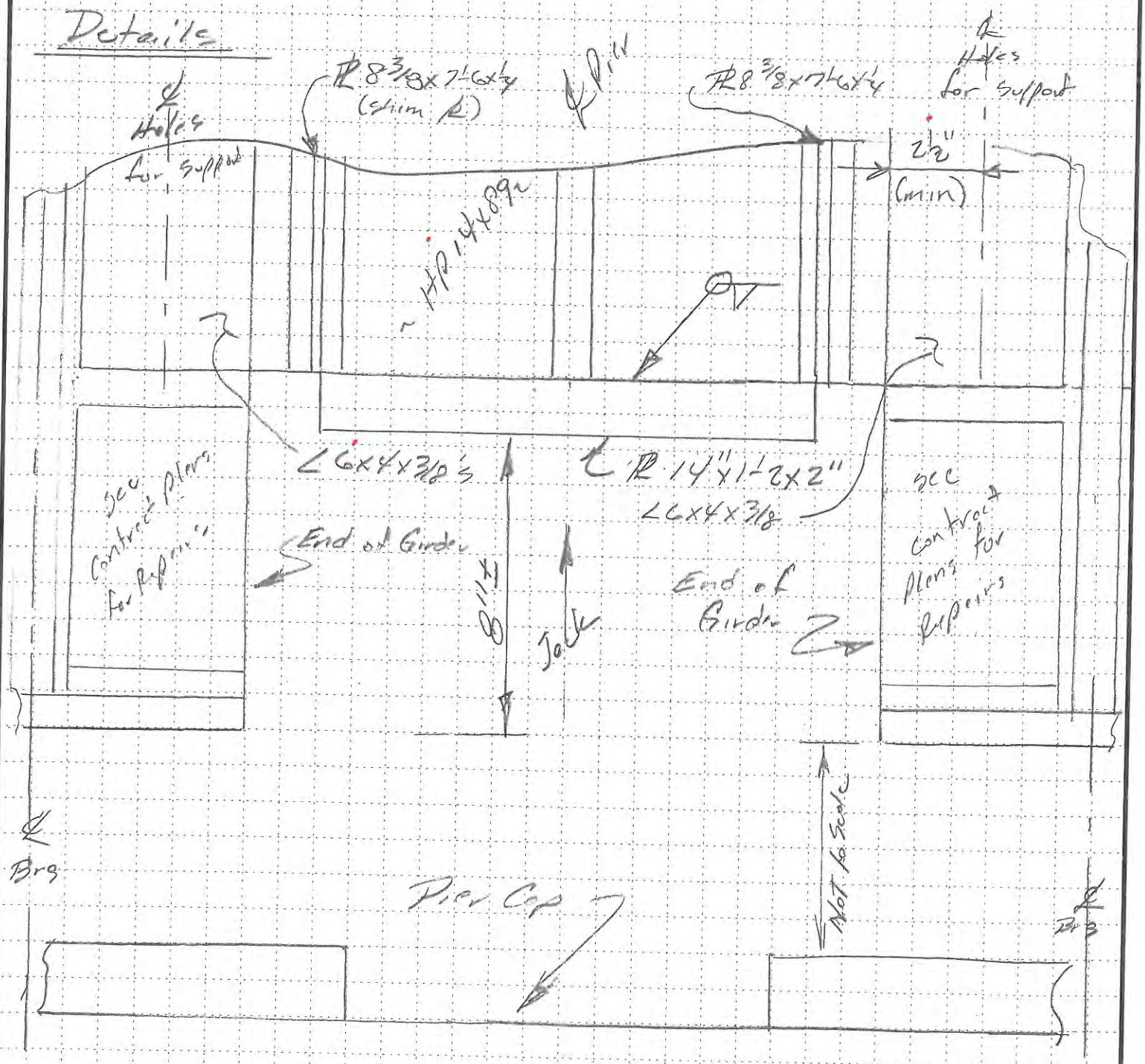
PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DC DATE 3/23/15

STRUCTURE I275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Details



Elevation View

(Jack not shown)

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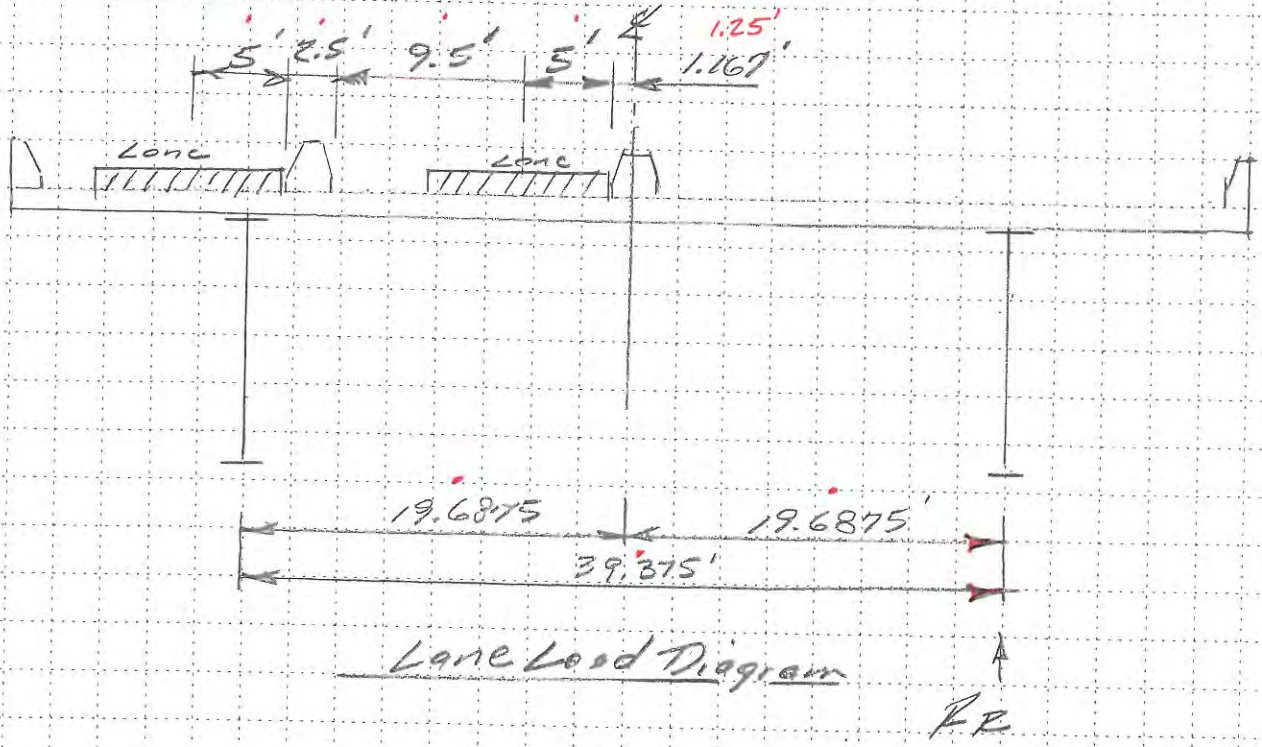
STRUCTURE I275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Jacking & Supporting for Bearing Replacement

Replace Bearing During Phase 3 and Phase 5



Lane Load Diagram

Assuming 1 Lane $R_R = (19.6875' - 1.167 - 5)/39.375' = 0.3434$

Assuming 2 Lanes $R_R = 0.3434 + \left(\frac{19.6875 - 1.167 - 5 - 9.5 - 25 - 5}{39.375'}\right)$

$= 0.3434 + (-3.4795/39.375) = 0.255$

Impact = $50/(L+125)$ (older version of impact formula, but ok) $111'$ span $\Rightarrow$ $50/(111+125) = 0.219$

Live Load Reaction (HS25) See Loading (333' unit)

$= 80470^{\#} \times 1.2119 \times 0.3434 = 33492^{\#}$ or 33.5^{k}

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STRUCTURE I275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Span Dead Load

Structural Steel = ~~1,500,000~~ 1,781,900 (original plans) #/(2x 777') = ~~965~~ 1,147 #/LF

Concrete
Slab = (8.375/12) 150 #/CF x 32.9167' = 3446 #/LF
Barrier = ((11+16)/2)/12 x 3.0' x 150 = ~~319~~ 506
+ (3.375/12) 2.2' ~~3.0~~' x 150 = 127 } = ~~461~~ 649 #/LF
?:1½" overlay → + (1.5/12) 1/12 x 150 = 16
overhang = (2.5 x 2"/12) 150 = 63 #/LF
Median = ½ ((17.25+27.75)/(2 x 12)) 3.1 x 150 = 436 #
Overlay = 30' x ~~15~~ 1.5"/12 (150) = ~~450~~ 563 #/LF
Temp. Barrier = ((9+12)/2)(1/12) 1.500 x 150 = 218
((13+27)/2)/12 x 0.833 x 150 = 208 } 510 #/LF
(3/12) 27/12 x 150 = 84

~~6331~~ 6,814 #/LF

Round up 6500 #/LF

See DL Load Diagram
Reaction = ~~288.6~~ 302.5 K ← may need to revise beam bay per above

Use DL from Proposal = 318 K ← ok used more conservative value.

Total Jacking Load = 318 (D.L.) + 33.5 (L.L.) K = 351.5 K

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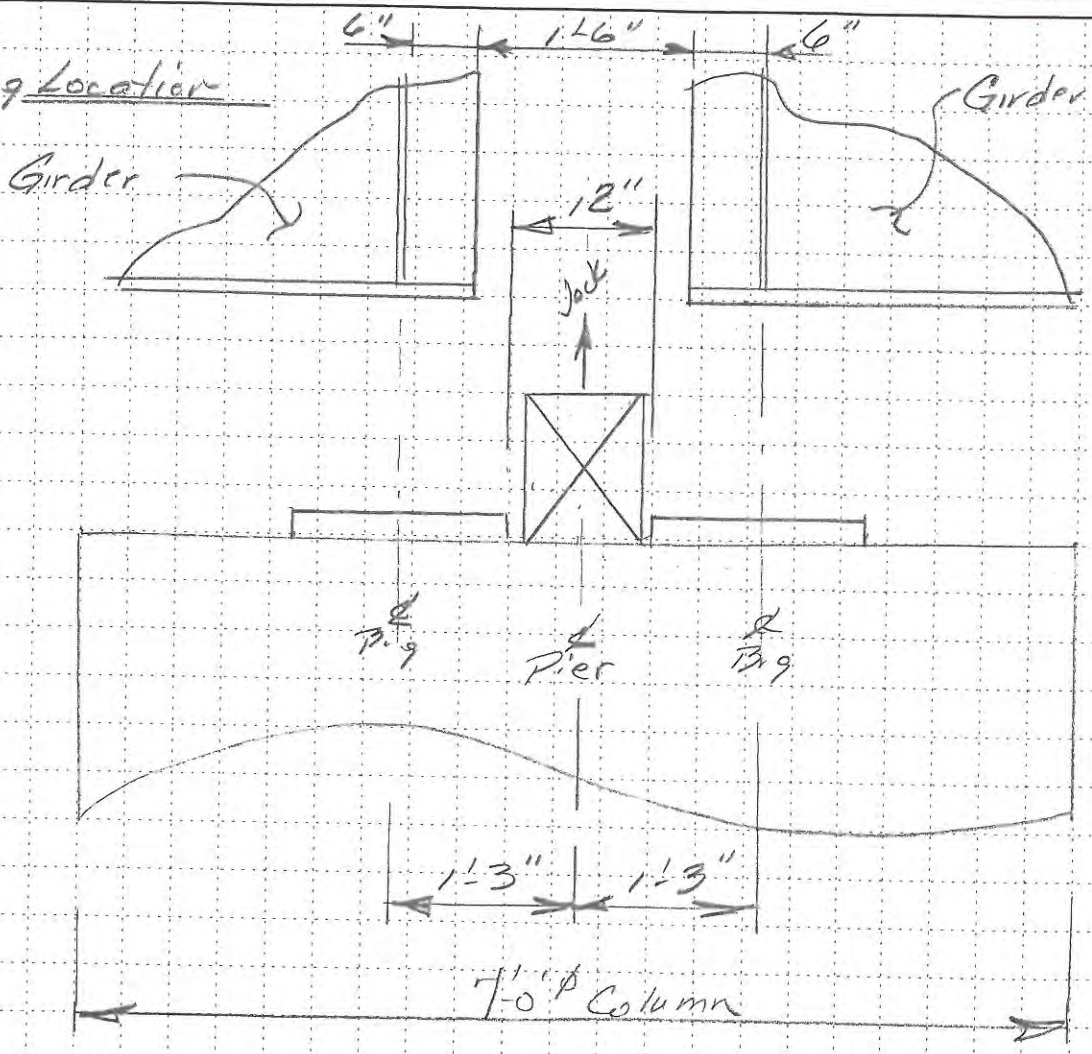
STRUCTURE I-275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Jacking Location



Typical Elevation @ ℄ Column

- Place Jack @ Center of Pier

Total Jack Capacity = 700 K or 350 Ton

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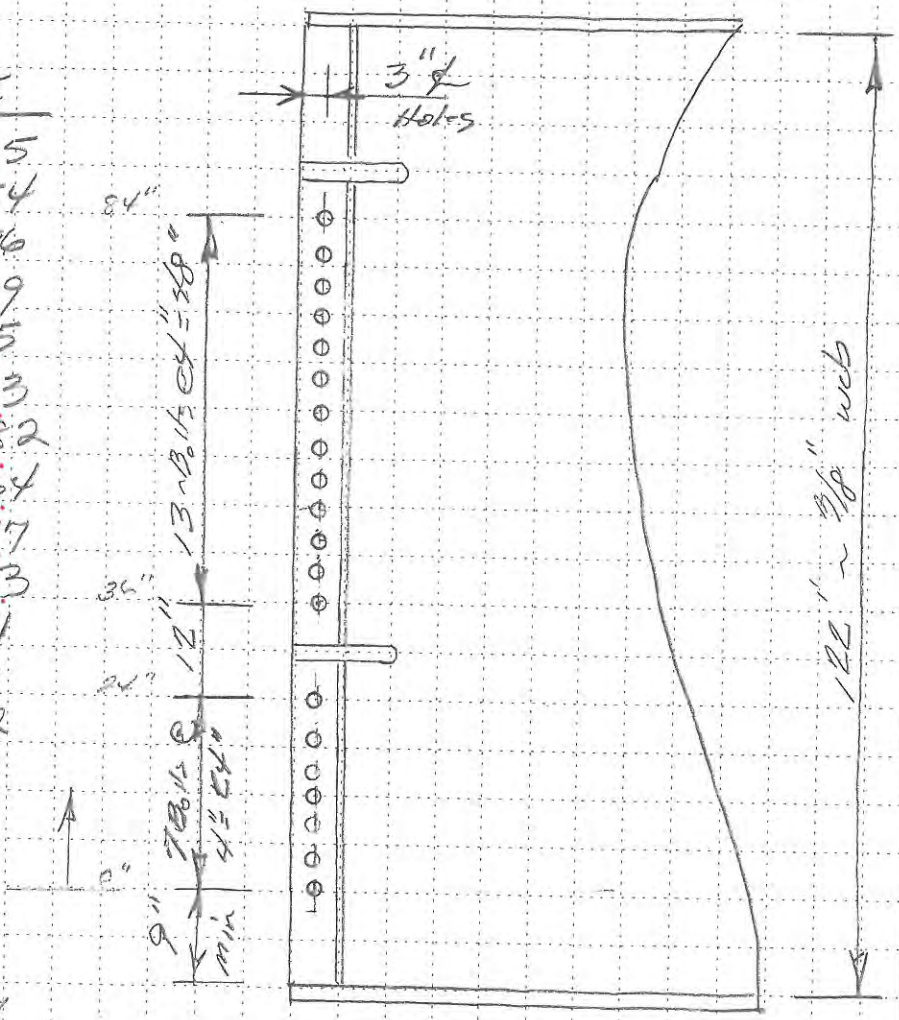
STRUCTURE I-275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Jacking / Supporting

~ Assume Bolting to Girder Web ~

Locate CG Bolts

		I
84"	- 43.2 = 40.8 ⇒	1665
80"	- 43.2 = 36.8 ⇒	1354
76"	- 43.2 = 32.8 ⇒	1076
72"	- 43.2 = 28.8 ⇒	829
68"	- 43.2 = 24.8 ⇒	615
64"	- 43.2 = 20.8 ⇒	433
60"	- 43.2 = 16.8 ⇒	282
56"	- 43.2 = 12.8 ⇒	164
52"	- 43.2 = 8.8 ⇒	77
48"	- 43.2 = 4.8 ⇒	23
44"	- 43.2 = 0.8 ⇒	1
40"	- 43.2 = -3.2 ⇒	10
36"	- 43.2 = -7.2 ⇒	52
32"	- 43.2 = -11.2 ⇒	125
28"	- 43.2 = -15.2 ⇒	231
16"	- 43.2 = -27.2 ⇒	740
12"	- 43.2 = -31.2 ⇒	973
8"	- 43.2 = -35.2 ⇒	1239
4"	- 43.2 = -39.2 ⇒	1537
0"	- 43.2 = -43.2 ⇒	1866
864"		13843



Y_{bar} = 864/20 = 43.2"

Σ 351.5^k Moment = 351.5^k × 12" = 4218 $^{k-in}$ $\frac{4218 \times 43.2}{13843}$ = 13.2^k

Shear Load per Bolt = 351.5^k/20 = 17.6^k Total = $\sqrt{17.6^2 + 13.2^2}$ = 22^k/Bolt

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STRUCTURE I-275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Size Bolts

@ 22 K/Pt. A325 Allowable = 15 ksi in Double Shear

A325 Area Req'd = 22/(15x2) = 0.73 in² Diameter = 1.0 in

A490 Allowable = 19 ksi

Area Req'd = 22/(19x2) = 0.58 Diameter = 0.86 in ~ 7/8" ϕ

~ Check Girder Web ~
(Table 10.32.3B)

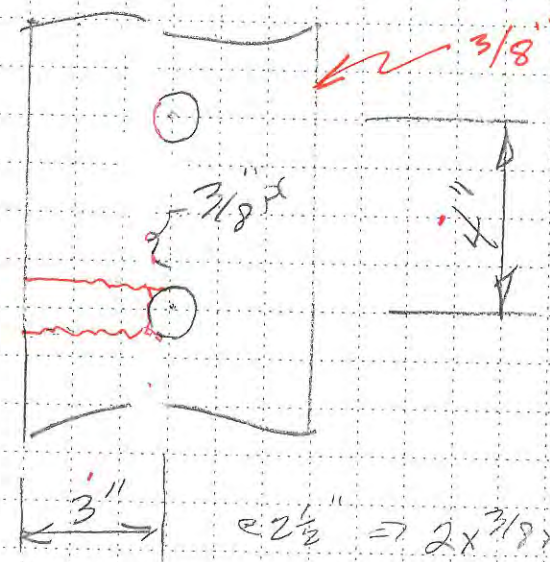
0.5 Lc Fu/d ≤ Fu = 58 ksi Grade 36

Assuming 1" ϕ Bolts
Holes = 1 1/16

Lc = 3" - 1 1/16 / 2 = ~~1.9375~~ 2.4688"

0.5 (~~1.9375~~ 2.4688) 58/1

= ~~58.0~~ 71.6 (ok) < 58 ksi



2 x 3/8 x ~~1.9375~~ 2.4688" x 58 ksi

= 81.7 kips ≥ 22 kips ok

≤ 2 1/2" ⇒ 2 x 3/8 x 1.46 x 58 =

= 62.4 k ≥ 22 k ok

Shear Between Bolts = (4" - 1.0625") x 3/8 x 58 = 61.9 k

Recommend A490 1" Bolts

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PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DL DATE 3/16/15
STRUCTURE I-275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Design Web Stiffner for HP14x73

Assuming 6" stiffners Thickness = $6/12\sqrt{F_y/33000}$

$\Rightarrow$ Thickness = $6/12\sqrt{36/33} = 0.52 \Rightarrow 5/8$ or Larger

Web portion acting as a Column = 18(web Thickness) ← assumed fit to fully transfer stress.

Web Thickness for 14x73 = 0.505"

$18" \times 0.505 = 9.09" \Rightarrow 9.1"$

Check with L6x4x5/8 stiffners

Total Area = $2 \times 5.86 + 9.1 \times 0.505 = 16.30"^2$

Number of 1" ø 490 @ 27 ksi = $5.86 \times 27^{ksi} / (6.79 \times 1.9) = 10.5"$ ← Nominal Slip Resistance Table 10.32.3c

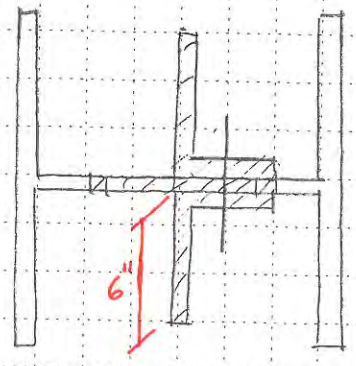
@ 4" spacing $\Rightarrow 11 \times 4 = 44"$ use $\ell/r \Rightarrow \ell = 48"$

Assume 22 ksi Axial stress

Area Req = $351.5/22 = 16^{\square"}$

$(16^{\square"} - 0.505 \times 9)/(6 \times 2) = 0.95"$

Try 1" ℓ $(6" \times 1")(2) = 12$ ← 2 web stiffners



Column Area = $12^{\square"} + 0.505 \times 9.1$
$= 16.6^{\square"}$

$I = 1 \times (12.505^3)/12 + (8.1 \times 0.505^3/12) = 163$ $r = \sqrt{I/A} = \sqrt{163/16.6} = 3.1$

$KL/r = 1.0 \times 48/3.1 = 15.3$ (15.5) Table 10.32-1A Comp Concentic Column

$F_a = 23580 - 1.03(15.3^2) = 23338 > 22^{ksi}$

HP14x73 ok, but use larger HP14x89

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PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DC DATE 3/10/15
STRUCTURE I-275 ROAD over Ohio River CHK'D BY JBT DATE 4/27/15

Check Total Load for Both Spans

Dead Load 333' unit = 288600 #

Dead Load 444' unit = 283450 #
572050 #
added factor to account for weight from page 2
×1.048 = 599,508 #

Live Load HS25

Lane Load 333' unit = 39960 #

Lane Load 444' unit = 39643 # ← (72460# - 32,500#)

Line Load (1.25 × 26000) = 32500 #
112103 #

Impact × 1.2119
135858 #.

Distribution × 0.3434
46654 #.

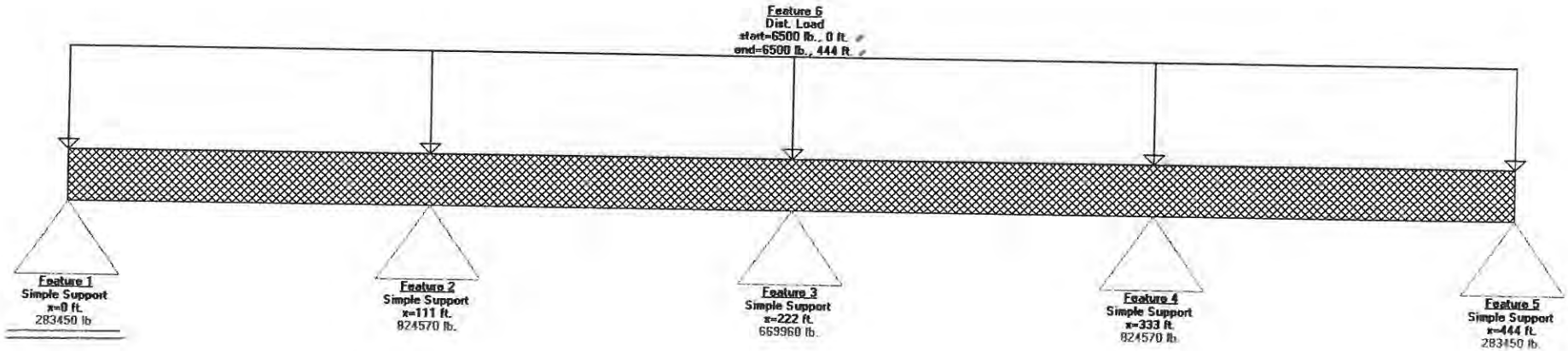
646,163 #
618,509 = 618.5 K
646.2 K

Assume Short Term Overload F_a = 37.5 ksi

HP 14×73 Area = 21.4 in²

Total Allowable = 21.4 in² × 37.5 = 802.5 K

ok, use 14×89 to be conservative



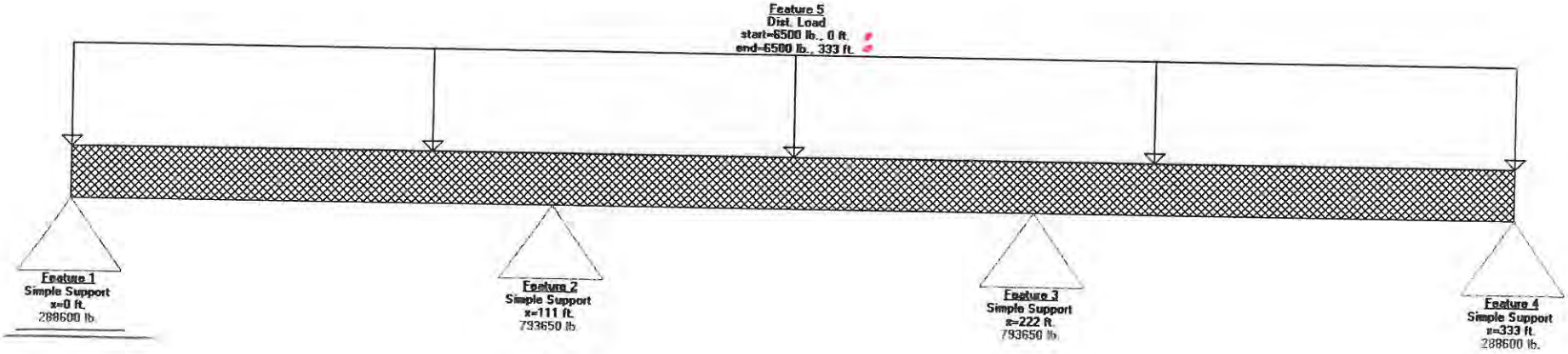
Beam Length is 444 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

Dead Load



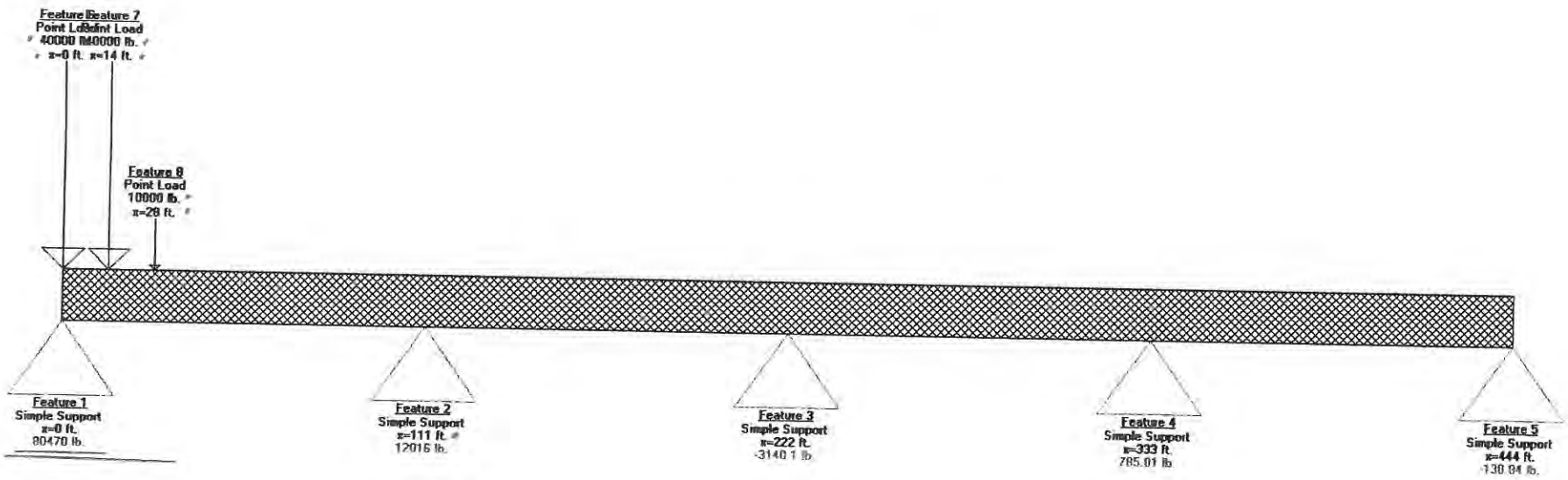
Beam Length is 333 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

Dead Load



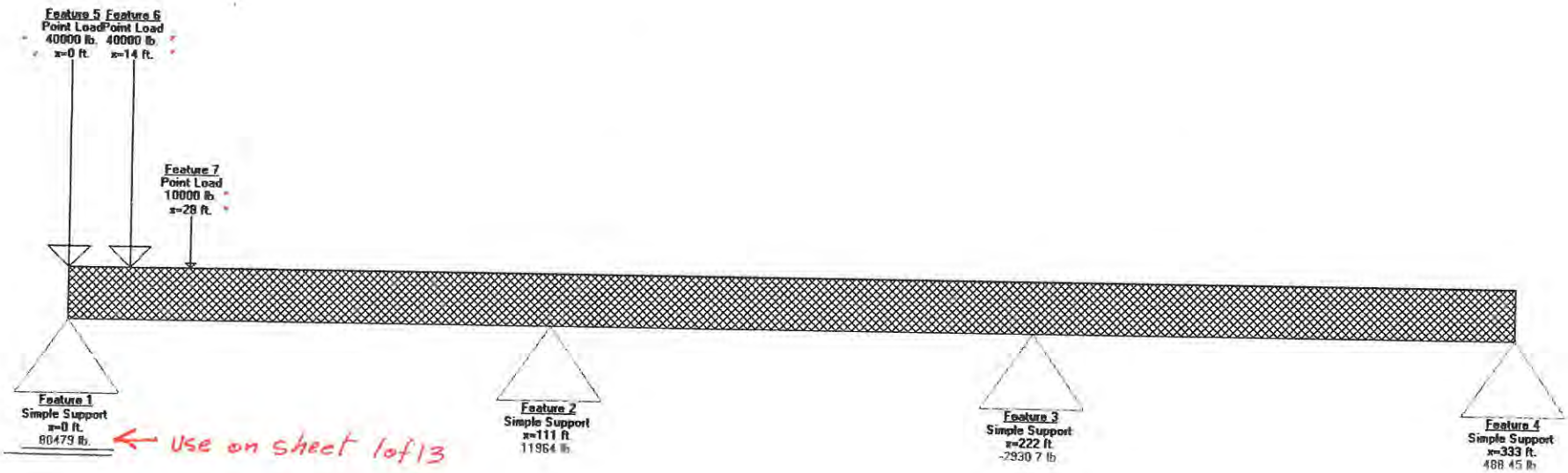
Beam Length is 444 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Truck Load



← Use on sheet 1 of 13

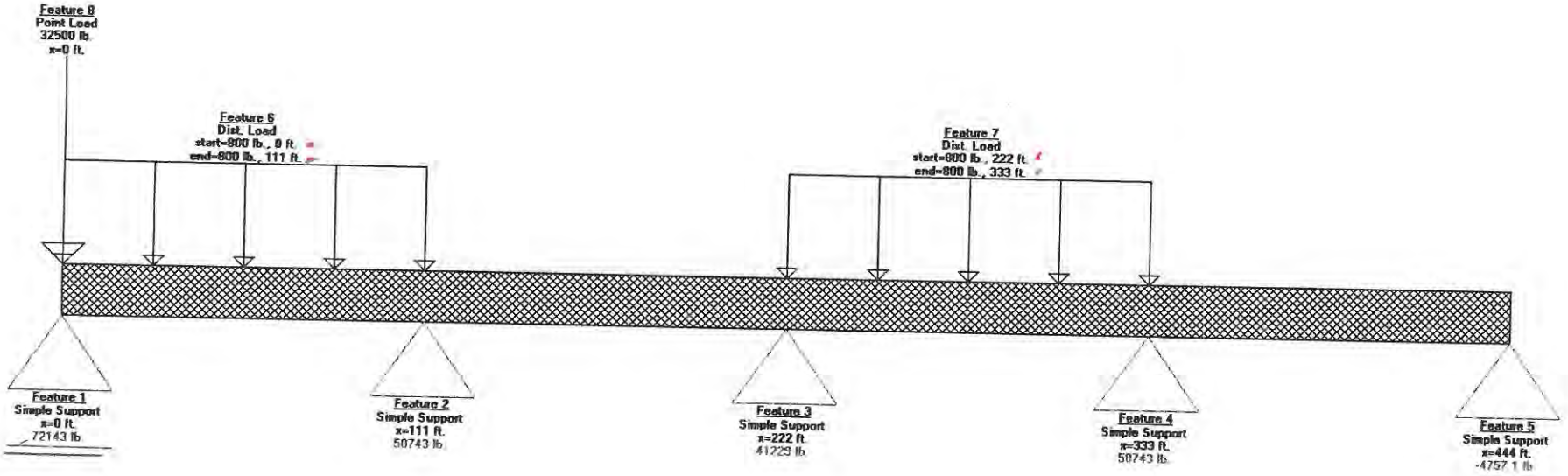
Beam Length is 333 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Truck



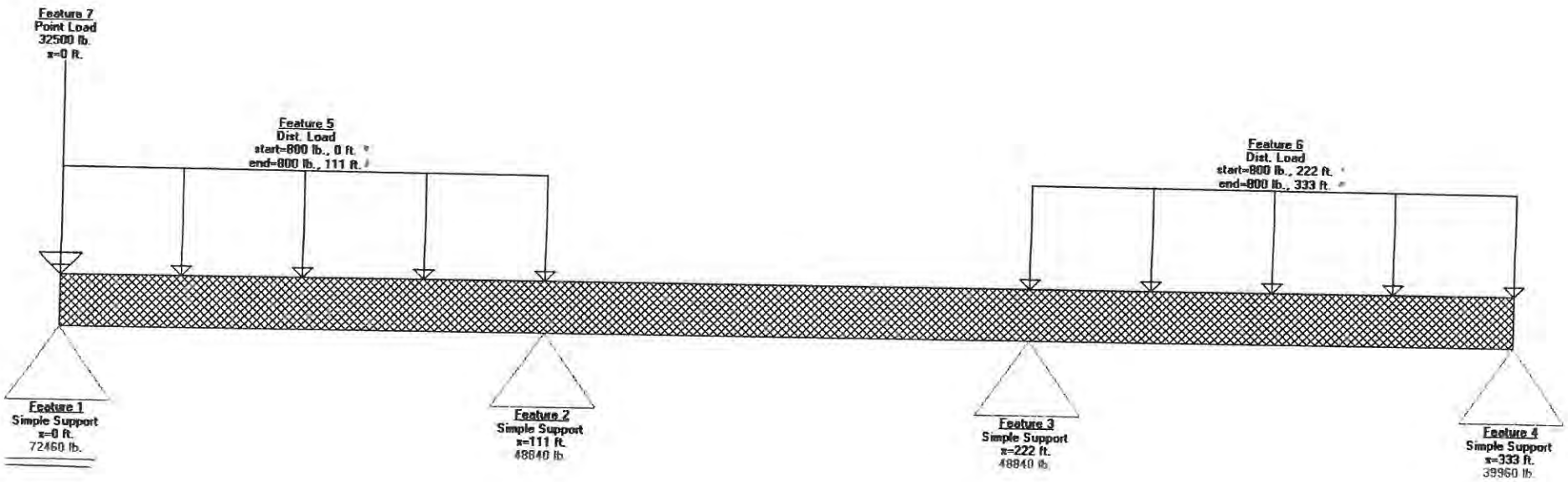
Beam Length is 444 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Lane Load



Beam Length is 333 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Lane Load

DESIGN CALCULATIONS

AMERICAN ENGINEERS, INC.

BOONE CO. KY/DEARBORN CO. IN
SHORING DESIGN
I275 over
OHIO RIVER

HALL CONTRACTING OF KY, INC.
3800 CRITTENDEN DRIVE
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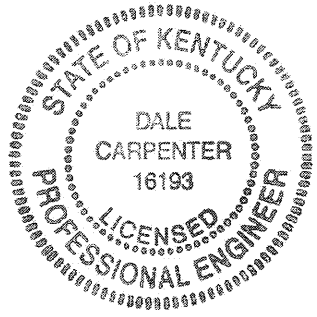

March 24, 2015

Dale Carpenter PE 3/24/15

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PROJECT No. Indiana Approach COUNTY Boone / Dearborn CALC. BY DL DATE 3/20/15

STRUCTURE I-275 ROAD over Ohio River CHK'D BY DATE

Jack & Support Notes

Structural Steel - Grade 50 ksi min

Bolted Connections - HS-A490 Bolts 1" Diameter

- Standard Holes -

- 120 total - All installed Before Jacking

Contractor must verify Plan Dimensions with Field Conditions. Use 8 3/8" W x 7 1/2" as Shim Plates as needed to ensure 2 1/2" (min) Bolt to end of Girder Clearance.

Contractor shall set Jack Load to a minimum of 290 K and maximum of 350 K one the span for the Bearing to be replaced is Lifted. Provide a 700 K Jack.

All work to Jack, support and Replace a Bearing shall be performed while traffic control for phase 3 or phase 5 is set up. All work in opposite the phase of Traffic control.

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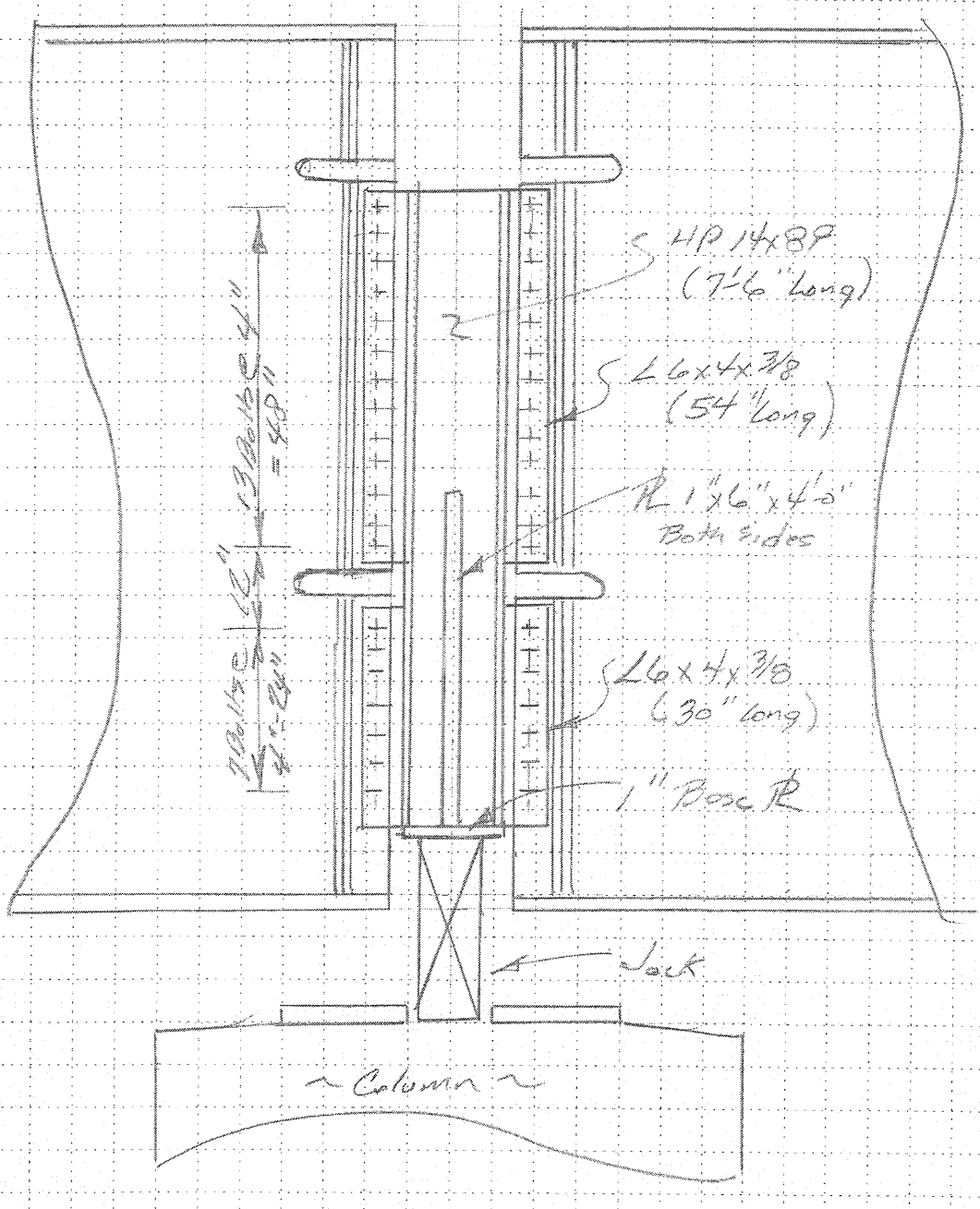
PROFESSIONAL ENGINEERING

PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DK DATE 3/16/15

STRUCTURE I-275 ROAD over Ohio River CHK'D BY DATE

Details



Elevation View

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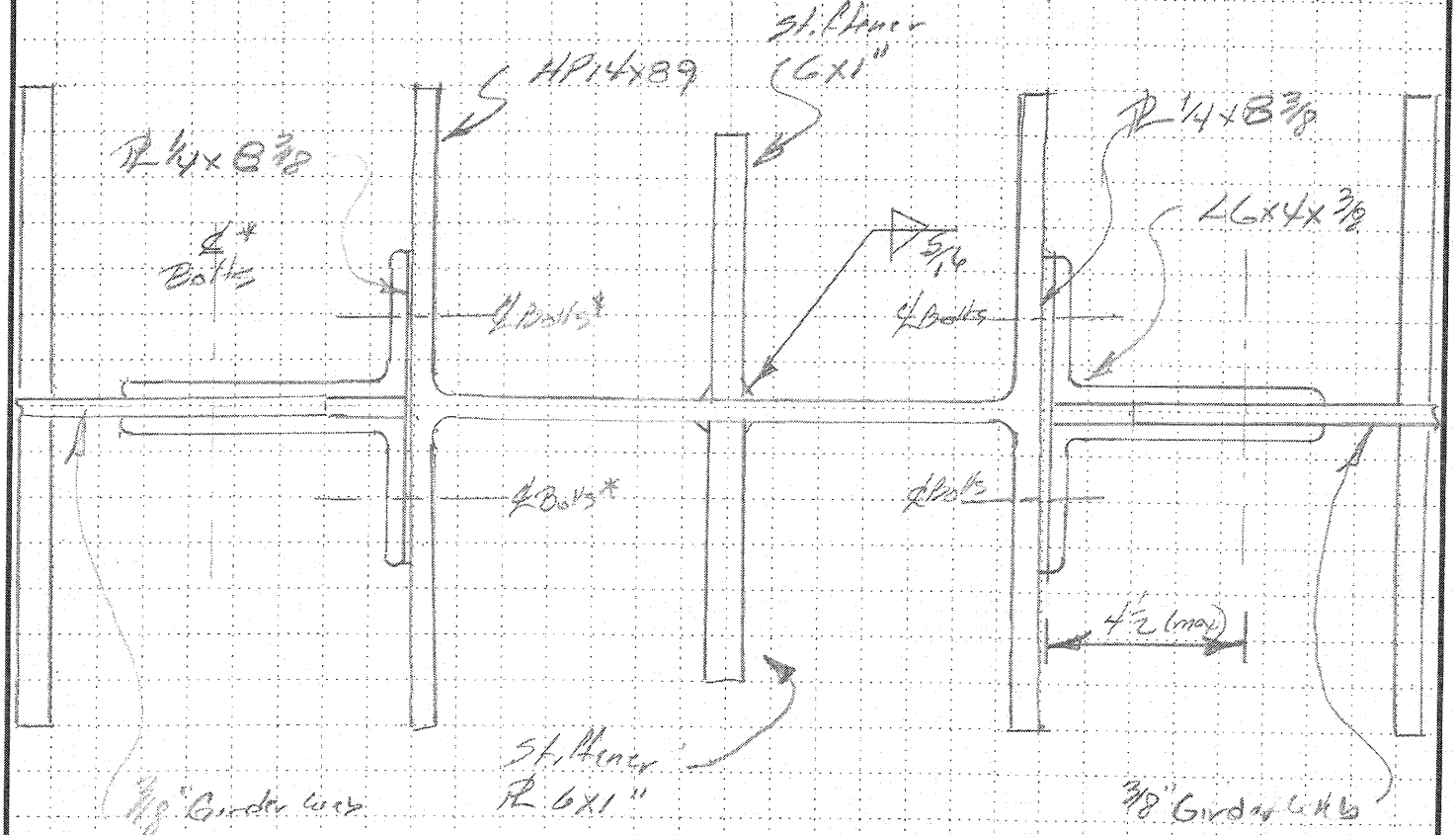
PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DC DATE 3/10/15

STRUCTURE Bg75 ROAD over Ohio River CHK'D BY DATE

Details



Typical Plan View

Note: All Bolts 1" ϕ A490 HS

All bolts have same vertical spacing

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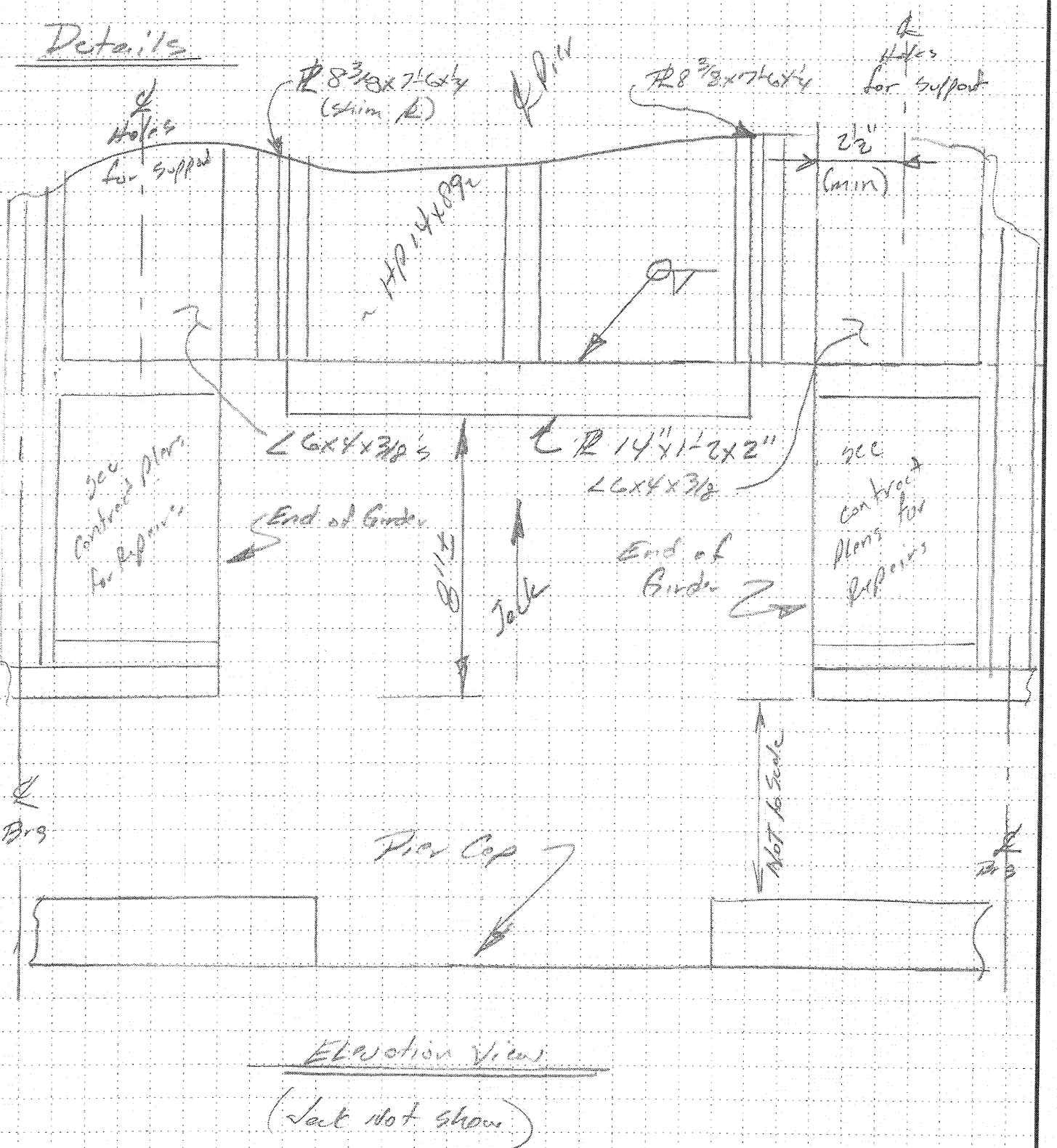
STRUCTURE I-275 ROAD over Ohio River CHK'D BY _____ DATE _____

Details



Elevation View

(Jack not shown)

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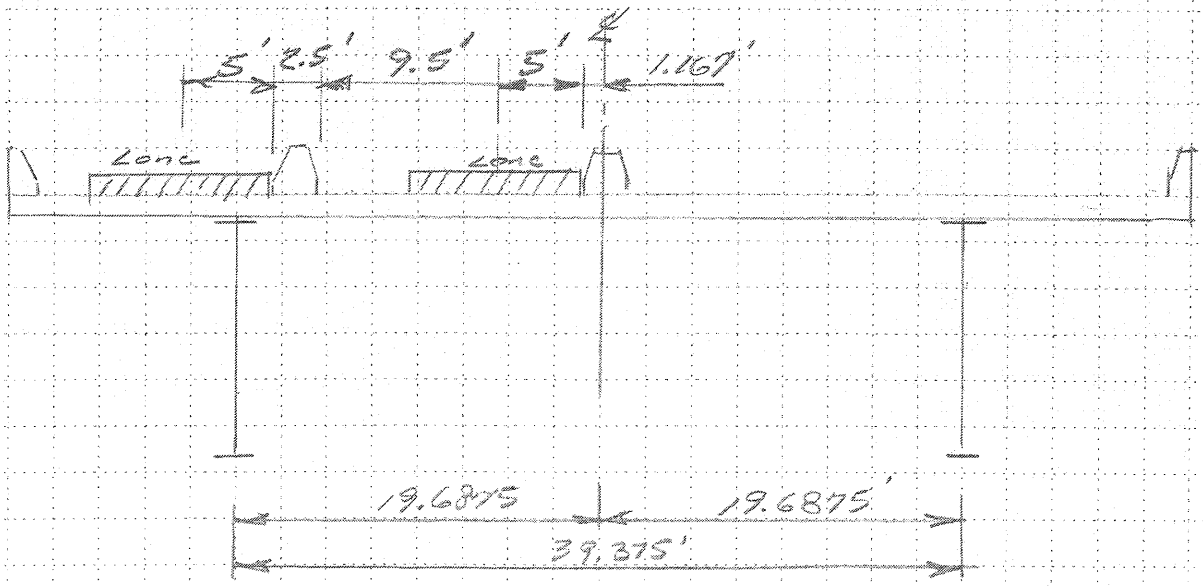
PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DC DATE 3/12/15

STRUCTURE I-275 ROAD over Ohio River CHK'D BY _____ DATE _____

Jacking & Supporting for Bearing Replacement

Replace Bearing During Phase 3 and Phase 5



Lane Load Diagram

Assuming 1 Lane $R_L = (19.6875' - 1.167 - 5)/39.375 = 0.3434$

Assuming 2 Lanes $R_L = 0.3434 + \left(\frac{19.6875 - 1.167 - 5 - 9.5 - 2.5 - 5}{39.375}\right)$

$= 0.3434 + (-3.4795/39.375) = 0.255$

Impact = $50/(L+125)$ $L = 111'$ on $\Rightarrow$ $50/(111+125) = 0.2119$

Live Load Reaction (HS25) See Loading (333'unit)

$= 80479^{\#} \times 1.2119 \times 0.3434 = 33473^{\#}$ or 33.5^{K}

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STRUCTURE I-275 ROAD over Ohio River CHK'D BY _____ DATE _____

Span Dead Load

Structural Steel = 1,500,000 #/(2 x 777') = 965 #/LF

Concrete

Slab = (8.375/12) 150 pcf x 32.967' = 3446 #/LF

Barrier = (11+16/2)/12 x 3.0' x 150 = 319
+ (8.375/12) 1.0' x 150 = 127
+ (1.5/12) 1.0/12 x 150 = 16
= 461 #/LF

overhang = (2.5 x 2 1/2) 150 = 63 #/LF

Median = 1/2 ((17.25+27.75)/2 x 12) 3.1 x 150 = 436 #

Overlay = 30' x 15 (9-12)/12 = 450 #/LF

Temp. Barrier = (1/2)(12) 1.5/12 x 150 = 218
((13+27)/2)/12 x 0.83 x 150 = 208
(3/12) 32/12 x 150 = 84
= 510 #/LF

6331 #/LF

Round up 6500 #/LF

See DL Load Diagram

Reaction = 288.6 K

use DL from Proposal = 318 K

Total Jacking Load = 318 + 33.5 K = 351.5 K

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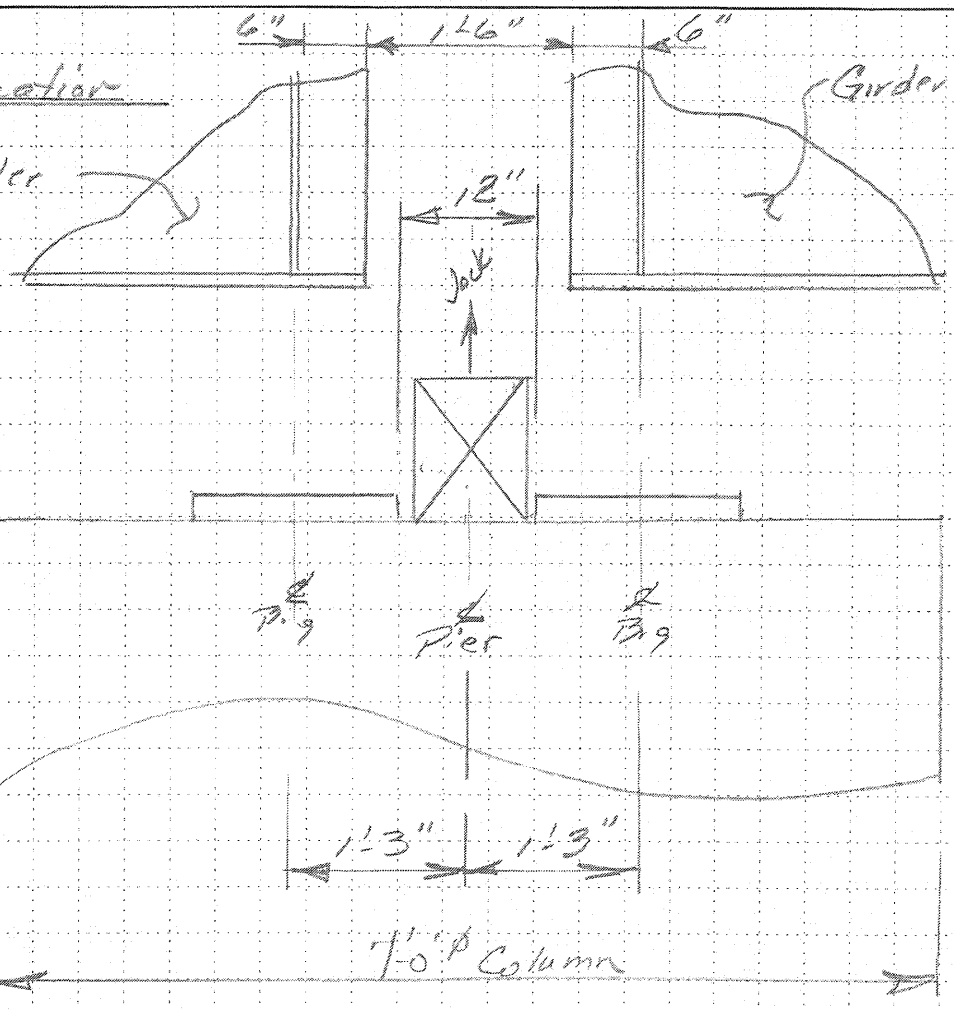
PROJECT No. Indiana Approach COUNTY Boone / Dearborn CALC. BY DL DATE 9/12/15

STRUCTURE I-275 ROAD over Ohio River CHK'D BY _____ DATE _____

Jacking Location



Typical Elevation @ ℄ Column

~ Place Jack @ Center of ℄ Pier

Total Jack Capacity = 700 K or 350 Ton

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PROJECT No. Indiana Approach COUNTY Boone / Dearborn CALC. BY DL DATE 3/12/15

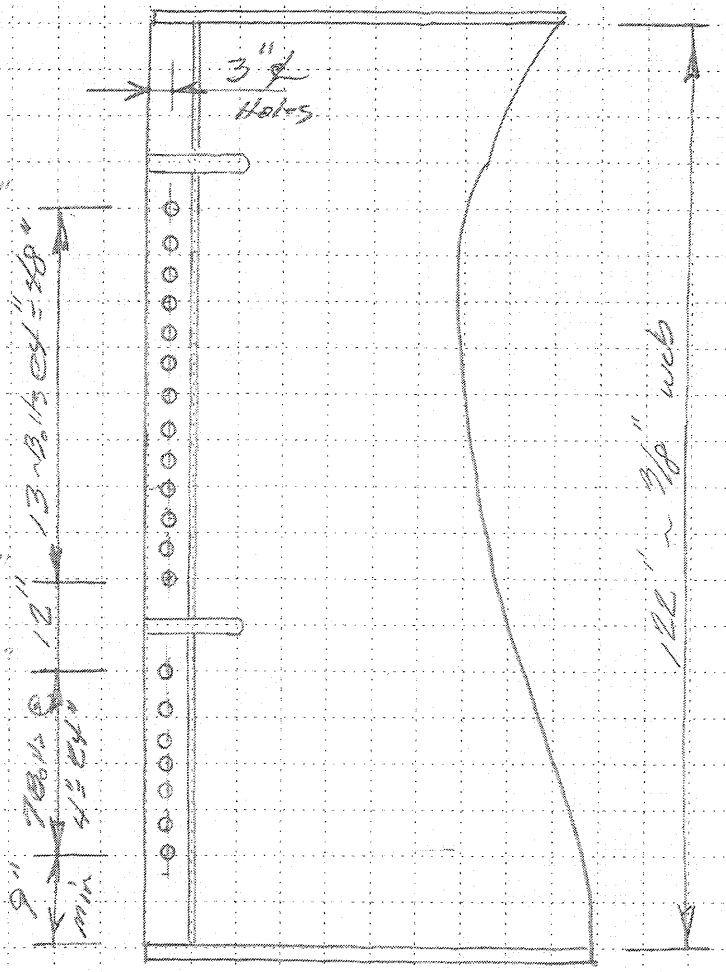
STRUCTURE I-275 ROAD over Ohio River CHK'D BY _____ DATE _____

Jacking / Supporting

~ Assume Bolting to Girder Web ~

Locate CG Bolts

			I
84"	- 43.2 =	40.8 ⇒	1665
80"	- 43.2 =	36.8 ⇒	1354
76"	- 43.2 =	32.8 ⇒	1076
72"	- 43.2 =	28.8 ⇒	829
68"	- 43.2 =	24.8 ⇒	615
64"	- 43.2 =	20.8 ⇒	433
60"	- 43.2 =	16.8 ⇒	282
56"	- 43.2 =	12.8 ⇒	164
52"	- 43.2 =	8.8 ⇒	77
48"	- 43.2 =	4.8 ⇒	23
44"	- 43.2 =	0.8 ⇒	1
40"	- 43.2 =	-3.2 ⇒	10
36"	- 43.2 =	-7.2 ⇒	52
32"	- 43.2 =	-11.2 ⇒	369
28"	- 43.2 =	-15.2 ⇒	538
16"	- 43.2 =	-27.2 ⇒	740
12"	- 43.2 =	-31.2 ⇒	973
8"	- 43.2 =	-35.2 ⇒	1239
4"	- 43.2 =	-39.2 ⇒	1537
0"	- 43.2 =	-43.2 ⇒	1866
864"			13843



$\bar{Y}_b = 864/20 = 43.2"$

Σ 351.5^k Moment = 351.5^k × 12" = 4218 k-in $\frac{4218 \times 43.2}{13843} = 13.2^k$

Shear Load per Bolt = 351.5^k / 20 = 17.6^k Total = $\sqrt{17.6^2 + 13.2^2}$ = 22 kips

PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY JC DATE 3/6/15

STRUCTURE I275 ROAD over Ohio River CHK'D BY ______ DATE ______

Size Bolts

@ 22 K/bolt A325 Allowable = 15 ksi @ Double Shear

A325 Area Reqs = 22/(15x2) = 0.73 □" Diameter = 1.0 ø"

A490 Allowable = 19 ksi

Area Req = 22/(19x2) = 0.58 Diameter = 0.86 ø"

~Check Girder Web~

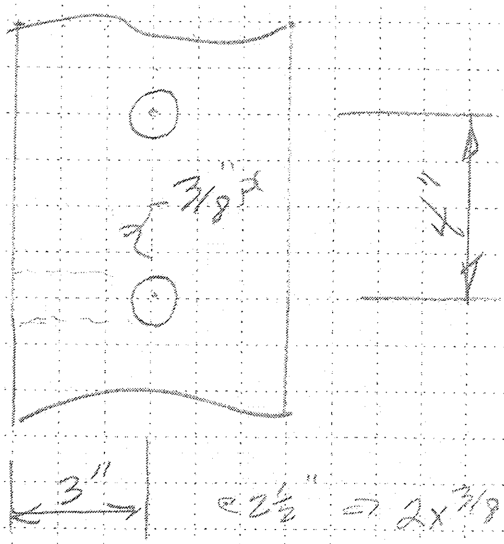
$0.5 L_c F_u / d \le F_u = 58^{ksi}$ Grade 36

Assuming 1" ø Bolts
Holes = 1 1/16

L_c = 3" − 1 1/16 = 1.9375"

0.5(1.9375) 58/1

= 56.2 ksi < 58 ksi



2x 3/8 x 1.9375" x 56.2 ksi

= 81.7 kips ≥ 22 kips OK

@ 2½" ⇒ 2x 3/8 x 1.48 x 56.2 =

= 62.4 k ≥ 22 k OK

Shear Between Bolts = (4" − 1.0625) x 3/8 x 56.2 = 61.9 k

Recommend A490 1" ø Bolts

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PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DL DATE 3/16/15
STRUCTURE I 275 ROAD over Ohio River CHK'D BY ____ DATE ____

Design web stiffener for HP 14x73

Assuming 6" stiffener Thickness = $\frac{b'}{12}\sqrt{F_y/33000}$

⇒ Thickness = $\frac{6}{12}\sqrt{36/33}$ = 0.52 ⇒ 5/8 or Larger

web portion acting as a Column = 18 (web Thickness)

web Thickness HP 14x73 = 0.505"

18 x 0.505 = 9.09" ⇒ 9.1"

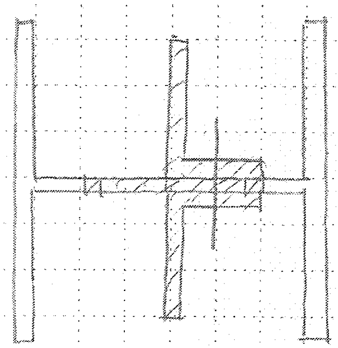
Check with ∠6x4x5/8 stiffener

Total Area = 2x 5.86 + 9.1x 0.505 = 16.3□"

Number of 1" A490 @ 27 KSI = 5.86x 27 KSI/(0.79x19) = 10.5"

@ 4" spacing ⇒ 11x4 = 44" use KL/r ⇒ L = 48"

Assume 22 KSI Axial stress



Area Req = 351.5 K/22 = 16□"

(16□" − 0.505x 9)/(6x2) = 0.95"

Try 1" Pl

Column Area = 12□" + 0.505x 9.1
= 16.6□"

I = 1x (12.505³)/12 + (8.1x 0.505³/12) = 163 $r = \sqrt{\frac{163}{16.6}}$ = 3.1

KL/r = 1.0x48/3.1 = 15.3 Fa = 23580 − 1.03(15.3²) = 23338 > 22 KSI

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PROJECT No. Indiana Approach COUNTY Boone/Dearborn CALC. BY DL DATE 3/17/15

STRUCTURE I-275 ROAD over Ohio River CHK'D BY _____ DATE _____

Check Total Load for Both Spans

Dead Load 333' unit = 288600 #

Dead Load 444' unit = 283450 #

572050 #

Live Load HS25

Lane Load 333' unit = 39960 #

Lane Load 444' unit = 39643 #

Line Load (1.25 x Load) = 32500 #

112103 #

Impact x 1.2119

135858 #

Distribution x 0.3434

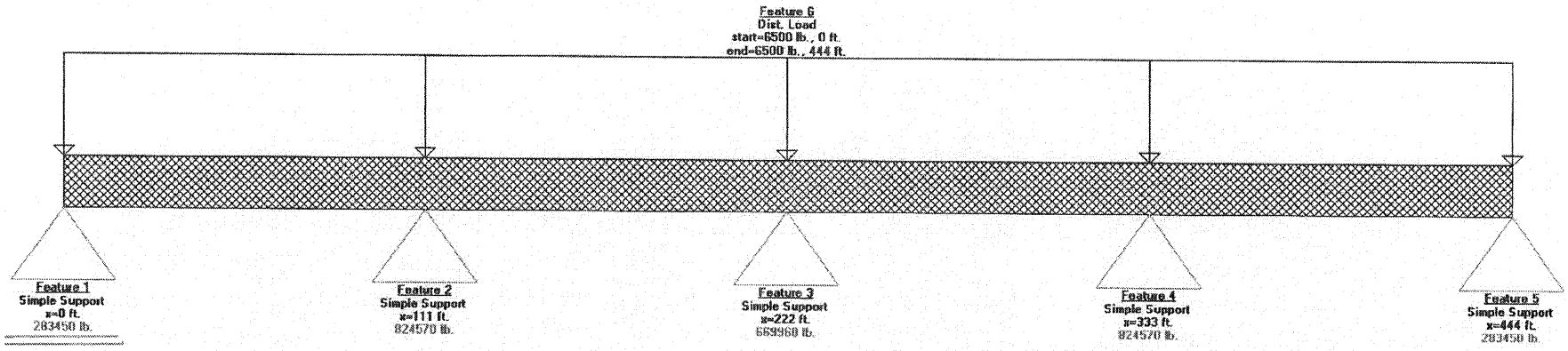
46654 #

618704 # = 618.7 K

Assume Short Term Overload Fc = 37.5 KSI

HP 14x73 Area = 21.4 in²

Total Allowable = 21.4 in² x 37.5 = 802.5 K



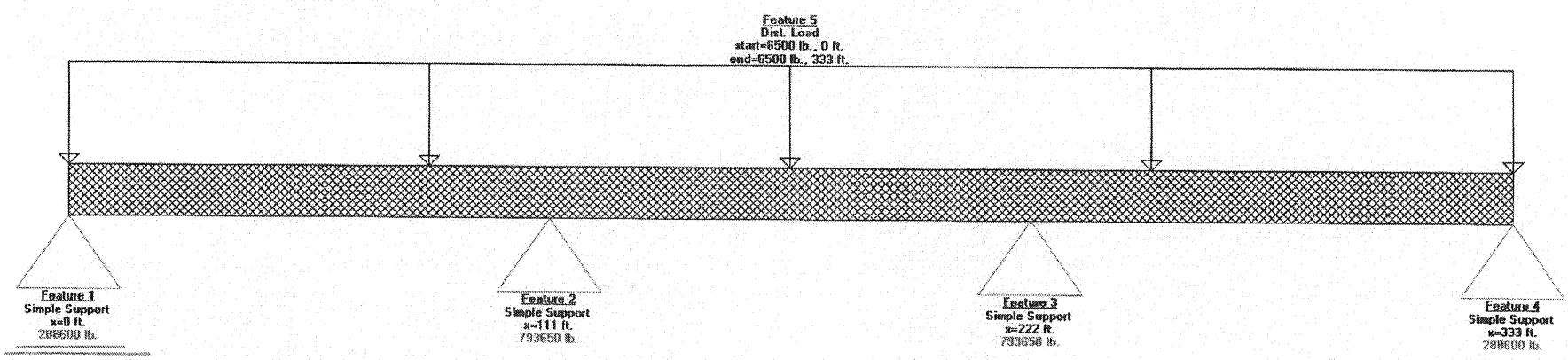
Beam Length is 444 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

Dead Load



Beam Length is 333 ft.

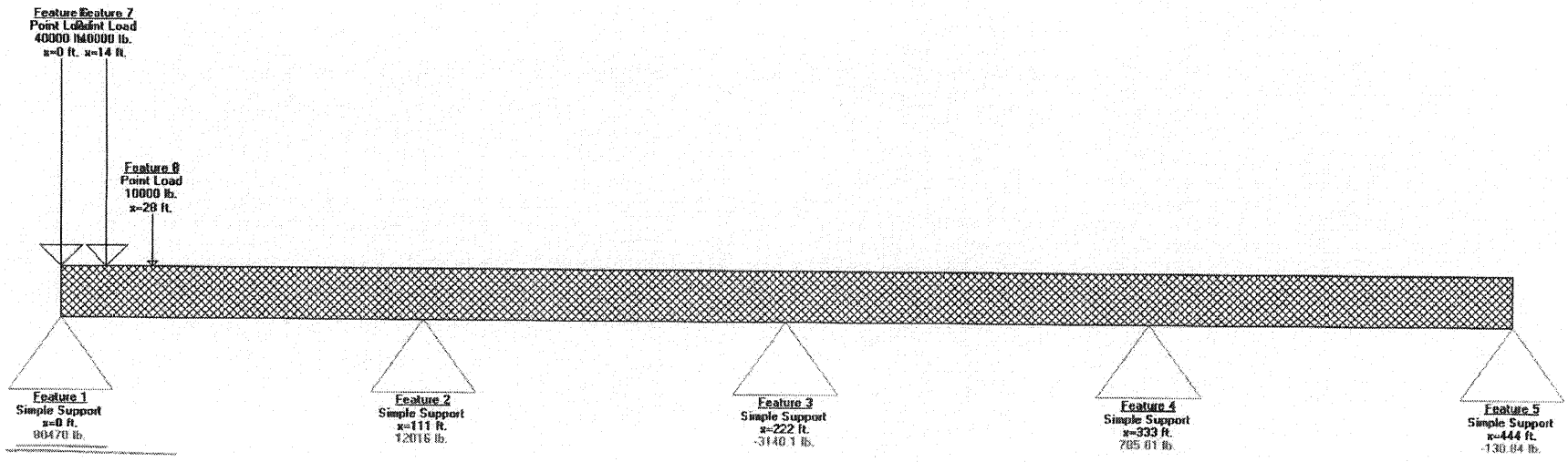
Boone Co.

I-275 over Ohio River

Indiana Approach

Dead Load

Sheet 9 of 13



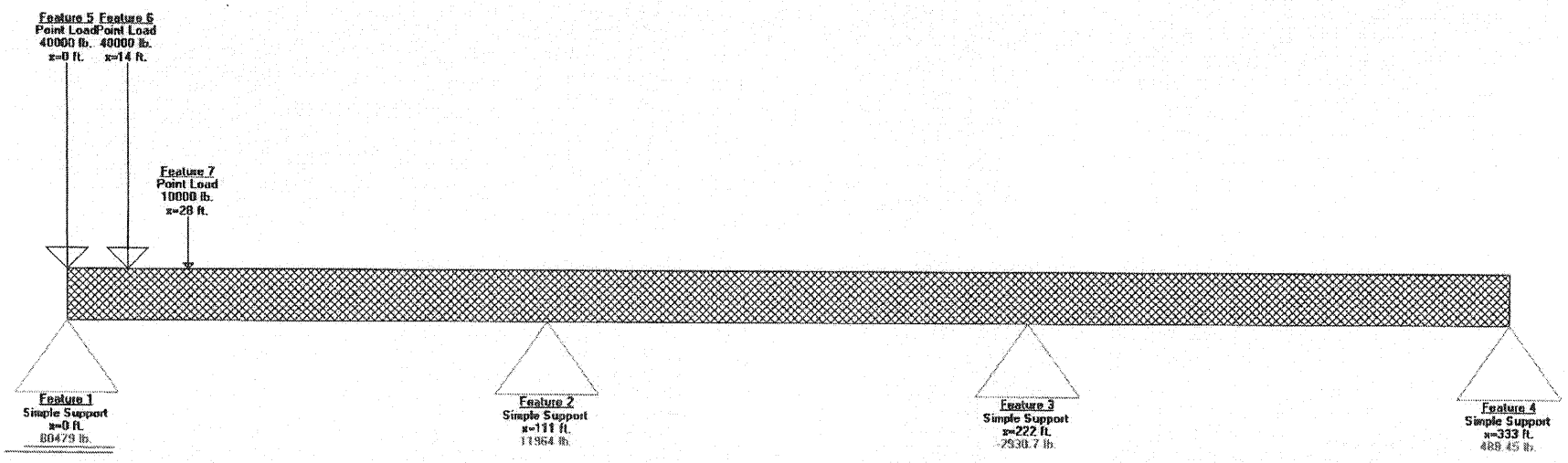
Beam Length is 444 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Truck Load



Beam Length is 333 ft.

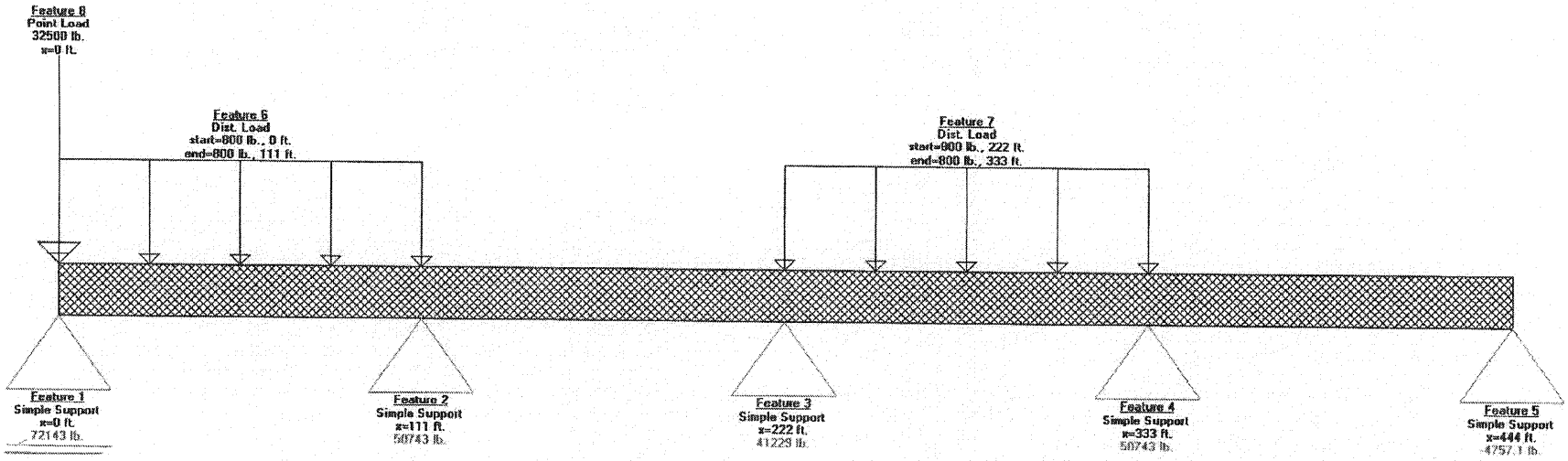
Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Truck

Sheet 11 of 13



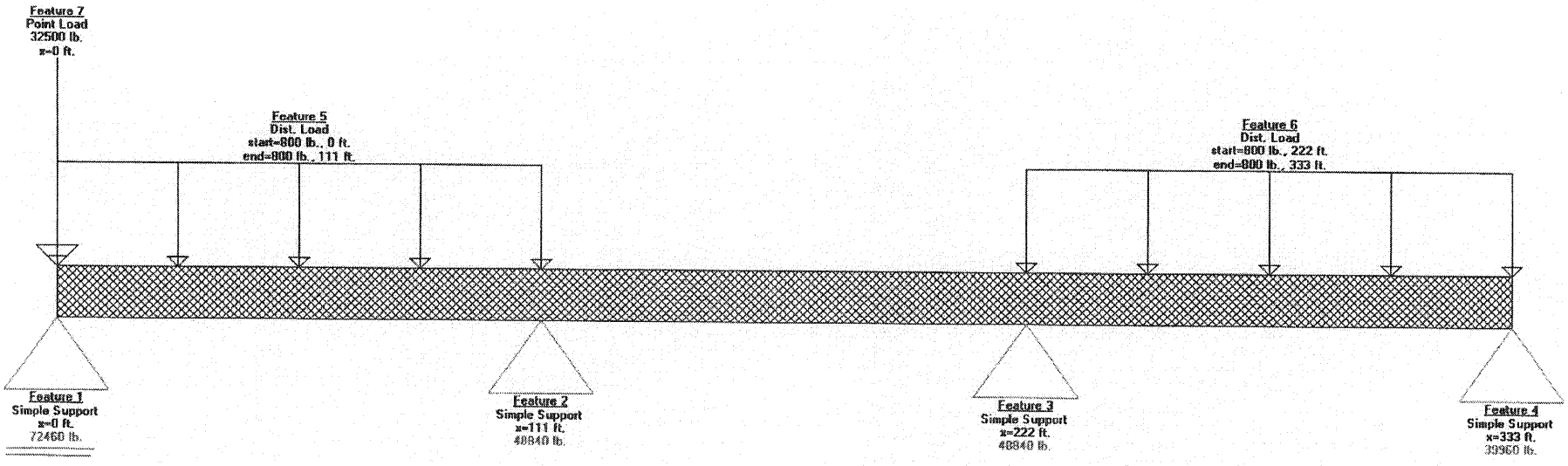
Beam Length is 444 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Lane Load



Beam Length is 333 ft.

Boone Co.

I-275 over Ohio River

Indiana Approach

HS25 Lane Load

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Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 24, 2014

CALL NO. 100
CONTRACT ID NO. 142980
ADDENDUM # 5

Subject: Boone County, IM 2759 (130)
Letting September 26, 2014

(1)Revised - Bid Items - Pages 123-124(a) of 124

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Diana Castle Radcliffe
Director
Division of Construction Procurement

DR:ks
Enclosures

PROPOSAL BID ITEMS

Report Date 9/24/14

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0010	00001		DGA BASE	4,917.00	TON		$	
0020	00214		CL3 ASPH BASE 1.00D PG64-22	2,562.00	TON		$	
0030	00339		CL3 ASPH SURF 0.38D PG64-22	71.00	TON		$	
0040	40099		PCC PAVEMENT	872.00	SQYD		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0050	01984		DELINEATOR FOR BARRIER - WHITE	350.00	EACH		$	
0060	01985		DELINEATOR FOR BARRIER - YELLOW	2,500.00	EACH		$	
0070	02003		RELOCATE TEMP CONC BARRIER	56,270.00	LF		$	
0080	02014		BARRICADE-TYPE III	3.00	EACH		$	
0090	02351		GUARDRAIL-STEEL W BEAM-S FACE	50.00	LF		$	
0100	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		$	
0110	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH		$	
0120	02562		TEMPORARY SIGNS	651.00	SQFT		$	
0130	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0140	02671		PORTABLE CHANGEABLE MESSAGE SIGN	9.00	EACH		$	
0150	02696		SHOULDER RUMBLE STRIPS-SAWED	3,818.00	LF		$	
0160	02775		ARROW PANEL	2.00	EACH		$	
0170	02898		RELOCATE CRASH CUSHION	16.00	EACH		$	
0180	05985		SEEDING AND PROTECTION	20,000.00	SQYD		$	
0190	06511		PAVE STRIPING-TEMP PAINT-6 IN	25,000.00	LF		$	
0200	06549		PAVE STRIPING-TEMP REM TAPE-B	16,000.00	LF		$	
0210	06550		PAVE STRIPING-TEMP REM TAPE-W	75,500.00	LF		$	
0220	06551		PAVE STRIPING-TEMP REM TAPE-Y	59,500.00	LF		$	
0230	06556		PAVE STRIPING-DUR TY 1-6 IN W	10,118.00	LF		$	
0240	06557		PAVE STRIPING-DUR TY 1-6 IN Y	8,094.00	LF		$	
0250	06585		PAVEMENT MARKER TY IVA-MW TEMP	320.00	EACH		$	
0260	06586		PAVEMENT MARKER TY IVA-MY TEMP	110.00	EACH		$	
0270	06592		PAVEMENT MARKER TYPE V-B W/R	40.00	EACH		$	
0280	06600		REMOVE PAVEMENT MARKER TYPE V	40.00	EACH		$	
0290	20471ES509		TEMP CONC MED BARRIER	14,400.00	LF		$	
0300	20545ND		TEMP MEDIAN CROSSOVER	4.00	EACH		$	
0310	20738NS112		TEMP CRASH CUSHION	6.00	EACH		$	
0320	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		$	
0330	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	2,000.00	LF		$	
0340	24703EC		INDIANA GUARDRAIL TRANSITION APPROACH END	1.00	EACH		$	
0350	24703EC		INDIANA GUARDRAIL TRANSITION TRAILING END	1.00	EACH		$	
0360	24707ED		CABLE BARRIER SYSTEM REMOVE & RESTORE	1.00	LS		$	

Section: 0003 - BRIDGE

PROPOSAL BID ITEMS

Report Date 9/24/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0370	03298		EXPAN JOINT REPLACE 4 IN	840.00	LF		$	
0380	03299		ARMORED EDGE FOR CONCRETE	120.00	LF		$	
0390	08151		STEEL REINFORCEMENT-EPOXY COATED	3,130.00	LB		$	
0400	08504		EPOXY SAND SLURRY	3,150.00	SQYD		$	
0410	08526		CONC CLASS M FULL DEPTH PATCH	22.00	CUYD		$	
0420	08534		CONCRETE OVERLAY-LATEX	1,112.00	CUYD		$	
0430	08550		HYDRODEMOLITION	26,500.00	SQYD		$	
0440	24094EC		PARTIAL DEPTH PATCHING	110.00	CUYD		$	
0450	24409EC		DRILL HOLES IN STEEL MEMBERS	17.00	EACH		$	
0460	24429EC		REMOVE AND REPLACE STRINGER BEARINGS	4.00	EACH		$	
0470	24430EC		REM AND REPLACE FINGER EXPANSION JOINT	2.00	EACH		$	
0480	24431EC		DRAINAGE SYSTEM	1.00	EACH		$	
0490	24708ED		MEDIAN WALL RETROFIT MEDIAN WALL	4,100.00	LF		$	
0500	24709ED		PLINTH RETROFIT PLINTH	8,210.00	LF		$	
0501	08510		REM EPOXY BIT FOREIGN OVERLAY ADDED: 9-22-14	26,500.00	SQYD		$	
0502	08549		BLAST CLEANING ADDED: 9-22-14	29,650.00	SQYD		$	
0503	02110		PARTIAL DEPTH PATCHING ADDED: 9-23-14	250.00	CUFT		$	

Section: 0004 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0510	04741		POLE BASE IN MEDIAN WALL	35.00	EACH		$	
0520	04761		LIGHTING CONTROL EQUIPMENT	1.00	EACH		$	
0530	04780		FUSED CONNECTOR KIT	70.00	EACH		$	
0540	04797		CONDUIT-3 IN	300.00	LF		$	
0550	04800		MARKER	13.00	EACH		$	
0560	04820		TRENCHING AND BACKFILLING	4,000.00	LF		$	
0570	04832		WIRE-NO. 12	2,919.00	LF		$	
0580	04836		WIRE-NO. 2	13,500.00	LF		$	
0590	04863		CABLE-NO. 2/3C DUCTED	4,500.00	LF		$	
0600	04940		REMOVE LIGHTING	1.00	LS		$	
0610	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	3.00	EACH		$	
0620	21543EN		BORE AND JACK CONDUIT	80.00	LF		$	
0630	23365EC		LIGHTING-NAV MONITORING SYSTEM	1.00	LS		$	
0640	23366EC		SOLAR POWERED NAV LIGHTING SYSTEM	1.00	LS		$	
0650	24589ED		LED LUMINAIRE	35.00	EACH		$	
0660	24710EC		POLE 33 FT MTG HT W/12 IN ARM	17.00	EACH		$	
0670	24711EC		POLE 19 FT MTG HT W/12 IN ARM	18.00	EACH		$	
0671	20394ES835		PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL ADDED: 9-24-14	3,955.00	LF		$	
0672	04810		ELECTRICAL JUNCTION BOX ADDED: 9-24-14	1.00	EACH		$	

Section: 0005 - DEMOBILIZATION

PROPOSAL BID ITEMS

Report Date 9/24/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0680	**02568**		**MOBILIZATION**	**1.00**	**LS**		**$**	
0690	**02569**		**DEMOBILIZATION**	**1.00**	**LS**		**$**	

TRANSPORTATION CABINET
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Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 24, 2014

CALL NO. 100
CONTRACT ID NO. 142980
ADDENDUM # 4

Subject: Boone County, IM 2759 (130)
Letting September 26, 2014

(1)Revised - Special Note - Page 58(a) of 124

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Diana Castle Radcliffe

Diana Castle Radcliffe
Director
Division of Construction Procurement

DR:ks
Enclosures

SPECIAL NOTE FOR PARTIAL DEPTH PATCHING BID ITEMS 24094EC AND 02110

I. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway s' 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove and replace Latex/PCC pavement, for item 24094EC, and all deteriorated concrete along curb and barrier wall, for item 02110, at locations shown on the attached drawing and/or specified by the Engineer; (3) All other work needed to complete the patching.

II. MATERIALS.

A. Bid Item 24094EC - Latex Concrete. See Section 606.03.17.

B. Bid Item 02110 - Class AA Concrete. See Section 601.

III. CONSTRUCTION.

A. Bid Item 24094EC - See Special Note for Bridge Restoration and Waterproofing with Concrete Overlays.

B. Bid Item 02110 - See Special Note for Plinth and Median Wall Retrofit.

IV. MEASUREMENT.

A. **Bid Item 24094EC** – The department will measure this item in Cubic Yards.

B. **Bid Item 020110** – The department will measure this item in Cubic Feet.

V. PAYMENT. The department will consider bid items 24094EC and 02110 Partial Depth Patching as full payment for all labor, material, and equipment for preparing and placing Partial Depth Patch.

TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 23, 2014

CALL NO. 100
CONTRACT ID NO. 142980
ADDENDUM # 3

Subject: Boone County, IM 2759 (130)
Letting September 26, 2014

(1) Added - Special Note - Page 58(a) of 124
(2) Revised - Bid Items - Pages 123-124 of 124

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Diana Castle Radcliffe

Diana Castle Radcliffe
Director
Division of Construction Procurement

DR:ks
Enclosures

SPECIAL NOTE FOR PARTIAL DEPTH PATCHING BID ITEMS 24094EC AND 02110

I. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove and replace Latex/PCC pavement, for item 24094EC, and all deteriorated concrete along curb and barrier wall, for item 02110, at locations shown on the attached drawing and/or specified by the Engineer; (3) All other work needed to complete the patching.

II. MATERIALS.

A. Bid Item 24094EC - Latex Concrete. See Section 606.03.17.

B. Bid Item 02110 - Class AA Concrete. See Section 601.

III. CONSTRUCTION.

A. Bid Item 24094EC - See Special Note for Bridge Restoration and Waterproofing with Concrete Overlays.

B. Bid Item 02110 - See Special Note for Plinth and Median Wall Retrofit.

IV. MEASUREMENT.

A. **Bid Item 24094EC –** The department will measure this item in Cubic Yards.

B. **Bid Item 020110** – The department will measure this item in Square Feet.

V. PAYMENT. The department will consider bid items 24098EC and 02110 Partial Depth Patching as full payment for all labor, material, and equipment for preparing and placing Partial Depth Patch.

142980

PROPOSAL BID ITEMS

Report Date 9/23/14

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0010	00001		DGA BASE	4,917.00	TON		$	
0020	00214		CL3 ASPH BASE 1.00D PG64-22	2,562.00	TON		$	
0030	00339		CL3 ASPH SURF 0.38D PG64-22	71.00	TON		$	
0040	40099		PCC PAVEMENT	872.00	SQYD		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0050	01984		DELINEATOR FOR BARRIER - WHITE	350.00	EACH		$	
0060	01985		DELINEATOR FOR BARRIER - YELLOW	2,500.00	EACH		$	
0070	02003		RELOCATE TEMP CONC BARRIER	56,270.00	LF		$	
0080	02014		BARRICADE-TYPE III	3.00	EACH		$	
0090	02351		GUARDRAIL-STEEL W BEAM-S FACE	50.00	LF		$	
0100	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		$	
0110	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH		$	
0120	02562		TEMPORARY SIGNS	651.00	SQFT		$	
0130	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0140	02671		PORTABLE CHANGEABLE MESSAGE SIGN	9.00	EACH		$	
0150	02696		SHOULDER RUMBLE STRIPS-SAWED	3,818.00	LF		$	
0160	02775		ARROW PANEL	2.00	EACH		$	
0170	02898		RELOCATE CRASH CUSHION	16.00	EACH		$	
0180	05985		SEEDING AND PROTECTION	20,000.00	SQYD		$	
0190	06511		PAVE STRIPING-TEMP PAINT-6 IN	25,000.00	LF		$	
0200	06549		PAVE STRIPING-TEMP REM TAPE-B	16,000.00	LF		$	
0210	06550		PAVE STRIPING-TEMP REM TAPE-W	75,500.00	LF		$	
0220	06551		PAVE STRIPING-TEMP REM TAPE-Y	59,500.00	LF		$	
0230	06556		PAVE STRIPING-DUR TY 1-6 IN W	10,118.00	LF		$	
0240	06557		PAVE STRIPING-DUR TY 1-6 IN Y	8,094.00	LF		$	
0250	06585		PAVEMENT MARKER TY IVA-MW TEMP	320.00	EACH		$	
0260	06586		PAVEMENT MARKER TY IVA-MY TEMP	110.00	EACH		$	
0270	06592		PAVEMENT MARKER TYPE V-B W/R	40.00	EACH		$	
0280	06600		REMOVE PAVEMENT MARKER TYPE V	40.00	EACH		$	
0290	20471ES509		TEMP CONC MED BARRIER	14,400.00	LF		$	
0300	20545ND		TEMP MEDIAN CROSSOVER	4.00	EACH		$	
0310	20738NS112		TEMP CRASH CUSHION	6.00	EACH		$	
0320	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		$	
0330	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	2,000.00	LF		$	
0340	24703EC		INDIANA GUARDRAIL TRANSITION APPROACH END	1.00	EACH		$	
0350	24703EC		INDIANA GUARDRAIL TRANSITION TRAILING END	1.00	EACH		$	
0360	24707ED		CABLE BARRIER SYSTEM REMOVE & RESTORE	1.00	LS		$	

Section: 0003 - BRIDGE

142980

PROPOSAL BID ITEMS

Report Date 9/23/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0370	03298		EXPAN JOINT REPLACE 4 IN	840.00	LF		$	
0380	03299		ARMORED EDGE FOR CONCRETE	120.00	LF		$	
0390	08151		STEEL REINFORCEMENT-EPOXY COATED	3,130.00	LB		$	
0400	08504		EPOXY SAND SLURRY	3,150.00	SQYD		$	
0410	08526		CONC CLASS M FULL DEPTH PATCH	22.00	CUYD		$	
0420	08534		CONCRETE OVERLAY-LATEX	1,112.00	CUYD		$	
0430	08550		HYDRODEMOLITION	26,500.00	SQYD		$	
0440	24094EC		PARTIAL DEPTH PATCHING	110.00	CUYD		$	
0450	24409EC		DRILL HOLES IN STEEL MEMBERS	17.00	EACH		$	
0460	24429EC		REMOVE AND REPLACE STRINGER BEARINGS	4.00	EACH		$	
0470	24430EC		REM AND REPLACE FINGER EXPANSION JOINT	2.00	EACH		$	
0480	24431EC		DRAINAGE SYSTEM	1.00	EACH		$	
0490	24708ED		MEDIAN WALL RETROFIT MEDIAN WALL	4,100.00	LF		$	
0500	24709ED		PLINTH RETROFIT PLINTH	8,210.00	LF		$	
0501	08510		REM EPOXY BIT FOREIGN OVERLAY ADDED: 9-22-14	26,500.00	SQYD		$	
0502	08549		BLAST CLEANING ADDED: 9-22-14	29,650.00	SQYD		$	
0503	02110		PARTIAL DEPTH PATCHING ADDED: 9-23-14	250.00	CUFT		$	

Section: 0004 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0510	04741		POLE BASE IN MEDIAN WALL	35.00	EACH		$	
0520	04761		LIGHTING CONTROL EQUIPMENT	1.00	EACH		$	
0530	04780		FUSED CONNECTOR KIT	70.00	EACH		$	
0540	04797		CONDUIT-3 IN	300.00	LF		$	
0550	04800		MARKER	13.00	EACH		$	
0560	04820		TRENCHING AND BACKFILLING	4,000.00	LF		$	
0570	04832		WIRE-NO. 12	2,919.00	LF		$	
0580	04836		WIRE-NO. 2	13,500.00	LF		$	
0590	04863		CABLE-NO. 2/3C DUCTED	4,500.00	LF		$	
0600	04940		REMOVE LIGHTING	1.00	LS		$	
0610	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	3.00	EACH		$	
0620	21543EN		BORE AND JACK CONDUIT	80.00	LF		$	
0630	23365EC		LIGHTING-NAV MONITORING SYSTEM	1.00	LS		$	
0640	23366EC		SOLAR POWERED NAV LIGHTING SYSTEM	1.00	LS		$	
0650	24589ED		LED LUMINAIRE	35.00	EACH		$	
0660	24710EC		POLE 33 FT MTG HT W/12 IN ARM	17.00	EACH		$	
0670	24711EC		POLE 19 FT MTG HT W/12 IN ARM	18.00	EACH		$	

Section: 0005 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0680	02568		MOBILIZATION	1.00	LS		$	
0690	02569		DEMOBILIZATION	1.00	LS		$	

TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 22, 2014

CALL NO. 100
CONTRACT ID NO. 142980
ADDENDUM # 2

Subject: Boone County, IM 2759 (130)
Letting September 26, 2014

(1) Revised - Bid Items - Pages 123-124 of 124

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Diana Castle Radcliffe
Director
Division of Construction Procurement

DR:ks
Enclosures

142980

PROPOSAL BID ITEMS

Report Date 9/22/14

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0010	00001		DGA BASE	4,917.00	TON		$	
0020	00214		CL3 ASPH BASE 1.00D PG64-22	2,562.00	TON		$	
0030	00339		CL3 ASPH SURF 0.38D PG64-22	71.00	TON		$	
0040	40099		PCC PAVEMENT	872.00	SQYD		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0050	01984		DELINEATOR FOR BARRIER - WHITE	350.00	EACH		$	
0060	01985		DELINEATOR FOR BARRIER - YELLOW	2,500.00	EACH		$	
0070	02003		RELOCATE TEMP CONC BARRIER	56,270.00	LF		$	
0080	02014		BARRICADE-TYPE III	3.00	EACH		$	
0090	02351		GUARDRAIL-STEEL W BEAM-S FACE	50.00	LF		$	
0100	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		$	
0110	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH		$	
0120	02562		TEMPORARY SIGNS	651.00	SQFT		$	
0130	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0140	02671		PORTABLE CHANGEABLE MESSAGE SIGN	9.00	EACH		$	
0150	02696		SHOULDER RUMBLE STRIPS-SAWED	3,818.00	LF		$	
0160	02775		ARROW PANEL	2.00	EACH		$	
0170	02898		RELOCATE CRASH CUSHION	16.00	EACH		$	
0180	05985		SEEDING AND PROTECTION	20,000.00	SQYD		$	
0190	06511		PAVE STRIPING-TEMP PAINT-6 IN	25,000.00	LF		$	
0200	06549		PAVE STRIPING-TEMP REM TAPE-B	16,000.00	LF		$	
0210	06550		PAVE STRIPING-TEMP REM TAPE-W	75,500.00	LF		$	
0220	06551		PAVE STRIPING-TEMP REM TAPE-Y	59,500.00	LF		$	
0230	06556		PAVE STRIPING-DUR TY 1-6 IN W	10,118.00	LF		$	
0240	06557		PAVE STRIPING-DUR TY 1-6 IN Y	8,094.00	LF		$	
0250	06585		PAVEMENT MARKER TY IVA-MW TEMP	320.00	EACH		$	
0260	06586		PAVEMENT MARKER TY IVA-MY TEMP	110.00	EACH		$	
0270	06592		PAVEMENT MARKER TYPE V-B W/R	40.00	EACH		$	
0280	06600		REMOVE PAVEMENT MARKER TYPE V	40.00	EACH		$	
0290	20471ES509		TEMP CONC MED BARRIER	14,400.00	LF		$	
0300	20545ND		TEMP MEDIAN CROSSOVER	4.00	EACH		$	
0310	20738NS112		TEMP CRASH CUSHION	6.00	EACH		$	
0320	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		$	
0330	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	2,000.00	LF		$	
0340	24703EC		INDIANA GUARDRAIL TRANSITION APPROACH END	1.00	EACH		$	
0350	24703EC		INDIANA GUARDRAIL TRANSITION TRAILING END	1.00	EACH		$	
0360	24707ED		CABLE BARRIER SYSTEM REMOVE & RESTORE	1.00	LS		$	

Section: 0003 - BRIDGE

142980

PROPOSAL BID ITEMS

Report Date 9/22/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0370	03298		EXPAN JOINT REPLACE 4 IN	840.00	LF		$	
0380	03299		ARMORED EDGE FOR CONCRETE	120.00	LF		$	
0390	08151		STEEL REINFORCEMENT-EPOXY COATED	3,130.00	LB		$	
0400	08504		EPOXY SAND SLURRY	3,150.00	SQYD		$	
0410	08526		CONC CLASS M FULL DEPTH PATCH	22.00	CUYD		$	
0420	08534		CONCRETE OVERLAY-LATEX	1,112.00	CUYD		$	
0430	08550		HYDRODEMOLITION	26,500.00	SQYD		$	
0440	24094EC		PARTIAL DEPTH PATCHING	110.00	CUYD		$	
0450	24409EC		DRILL HOLES IN STEEL MEMBERS	17.00	EACH		$	
0460	24429EC		REMOVE AND REPLACE STRINGER BEARINGS	4.00	EACH		$	
0470	24430EC		REM AND REPLACE FINGER EXPANSION JOINT	2.00	EACH		$	
0480	24431EC		DRAINAGE SYSTEM	1.00	EACH		$	
0490	24708ED		MEDIAN WALL RETROFIT MEDIAN WALL	4,100.00	LF		$	
0500	24709ED		PLINTH RETROFIT PLINTH	8,210.00	LF		$	
0501	08510		REM EPOXY BIT FOREIGN OVERLAY ADDED: 9-22-14	26,500.00	SQYD		$	
0502	08549		BLAST CLEANING ADDED: 9-22-14	29,650.00	SQYD		$	

Section: 0004 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0510	04741		POLE BASE IN MEDIAN WALL	35.00	EACH		$	
0520	04761		LIGHTING CONTROL EQUIPMENT	1.00	EACH		$	
0530	04780		FUSED CONNECTOR KIT	70.00	EACH		$	
0540	04797		CONDUIT-3 IN	300.00	LF		$	
0550	04800		MARKER	13.00	EACH		$	
0560	04820		TRENCHING AND BACKFILLING	4,000.00	LF		$	
0570	04832		WIRE-NO. 12	2,919.00	LF		$	
0580	04836		WIRE-NO. 2	13,500.00	LF		$	
0590	04863		CABLE-NO. 2/3C DUCTED	4,500.00	LF		$	
0600	04940		REMOVE LIGHTING	1.00	LS		$	
0610	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	3.00	EACH		$	
0620	21543EN		BORE AND JACK CONDUIT	80.00	LF		$	
0630	23365EC		LIGHTING-NAV MONITORING SYSTEM	1.00	LS		$	
0640	23366EC		SOLAR POWERED NAV LIGHTING SYSTEM	1.00	LS		$	
0650	24589ED		LED LUMINAIRE	35.00	EACH		$	
0660	24710EC		POLE 33 FT MTG HT W/12 IN ARM	17.00	EACH		$	
0670	24711EC		POLE 19 FT MTG HT W/12 IN ARM	18.00	EACH		$	

Section: 0005 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0680	02568		MOBILIZATION	1.00	LS		$	
0690	02569		DEMOBILIZATION	1.00	LS		$	

TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 19, 2014

CALL NO. 100
CONTRACT ID NO. 142980
ADDENDUM # 1

Subject: Boone County, IM 2759 (130)
Letting September 26, 2014

(1) Revised - Special Note - Page 59 of 124
(2) Added - Railroad Notes - Pages 1-30 of 30

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Diana Castle Radcliffe
Director
Division of Construction Procurement

DR:ks
Enclosures

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

I. COMPLETION DATE. The Contractor has the option of selecting the starting date for this Contract. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work. All work in Phase 1 is to be completed by November 26th, 2014. All other phases are to be completed by November 15, 2015.

STRUCTURE	PHASE	START DATE	COMPLETION DATE
008B00052N	1	NA	November 26, 2014
008B00052N	2, 3, 4, 5, 6, & 7	May 26, 2015	November 15, 2015

II. LIQUIDATED DAMAGES. Liquidated damages will be assessed the Contractor in accordance with the Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction, Section 108.09, when the allotted November 26, 2014 or November 15, 2015 completion dates are exceeded.

Additionally, liquidated damages of $25,000 the first day and $50,000 each subsequent day will be assessed for each day past the allotted completion dates.

Contrary to the Standard Specifications, liquidated damages will be assessed the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge or bridges. Contract time will be charged during these months.

All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations.

SPECIAL NOTES FOR PROTECTION OF RAILROAD INTEREST

CSX TRANSPORTATION, INC.

I. AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER:

A. The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad operations and property.

B. The authorized representative of the State, hereinafter referred to as the Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

II. NOTICE OF STARTING WORK:

A. The Contractor shall not commence any work on Railroad rights of way until he has complied with the following conditions:

1. Given the Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, **at least ten (10) days in advance** of the date he proposes to begin work on Railroad rights of way. The notice must refer to Railroad Agreement with the State by the date of the Agreement. **If flagging service is required, such notice shall be submitted at least thirty (30) days in advance** of the date scheduled to commence work. The Railroad's Contact information is on the Summary Sheet.

2. Obtain written authorization from the Railroad to begin work on Railroad rights of way, such authorization to include an outline of specific conditions with which he must comply.

3. Obtain written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.

4. Furnish a schedule for all work within the Railroad rights of way as required by paragraph 7, B, 1.

B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

III. INTERFERENCE WITH RAILROAD OPERATIONS:

A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights of way of the Railroad Company. The Contractor shall store materials so as to prevent trespassers from causing damage to trains or Railroad property and shall not use Railroad property without written permission from the Railroad. Whenever work is to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service (watchman) shall be deferred by the Contractor until the flagging protection required by the Railroad is available at the job site.

B. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect train operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or his representative, such provisions are insufficient, the Railroad Engineer may require or provide such provisions, as he deems necessary at Contractor's cost and expense. In any event, such unusual provisions shall be at the Contractor's expense and without cost and/or time to the Railroad or the State.

IV. TRACK CLEARANCES

A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. However, before undertaking any work within Railroad rights of way, or before placing any obstruction over any track, the Contractor shall:

1. Notify the Railroad's representative **at least 72 hours in advance** of the work.

2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as necessary.

3. Receive permission from the Railroad's representative to proceed with the work.

4. Ascertain that the State Engineer has received copies of notice to the Railroad and of the Railroad's response thereto, and has approved the contractor's methods.

V. CONSTRUCTION PROCEDURES

A. General:

1. Construction work on Railroad property shall be:

   a) Subject to the inspection and approval of the Railroad.

   b) In accord with the Railroad's written outline of specific conditions.

   c) In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment, which the Contractor shall obtain from the Railroad.

   d) In accord with all Special Notes, Summaries, and Addendums.

2. The Railroad requires a submission of construction procedure that meets the requirements of these Special Notes and attachments. The Railroad's **submittal review period is thirty (30) days. Resubmissions will be reviewed within (30) days.**

3. All requirements of the *Construction Submission Criteria* shall be met. Requirements in addition to those in the *Construction Submission* Criteria are listed below in this document:

B. Excavation:

1. The sub grade of an operated track shall be **maintained with edge of berm at least 15'0" from centerline of track and not more than 24 inches below top of rail.** Contractor will not be required to make existing section meet this specification if substandard, in which case the existing section will be maintained.

2. Additionally, the Railroad Engineer may require installation of orange construction fencing for protection of the work area located on Railroad right of way.

C. Excavation of Structures:

1. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles, or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall first be submitted, with the stamp of an Engineer in the State of Kentucky, and approved by

the Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

2. Additionally, a walkway with handrail protection may be required as noted in Section XI herein.

D. Demolition, Erection, Hoisting

1. Railroad tracks and other railroad property must be protected from damage during the procedure. No crane or equipment may be set on the rails or track structure and no material may be dropped on Railroad property.

2. Loads shall not be supported while any trains are passing if that piece of equipment has the capacity to **foul a 50' envelope.**

3. The Railroad may require the Contractor to install filter fabric over the track and ballast to prevent any concrete dust or other construction debris from fouling the ballast. This will be determined during actual construction activities by the Railroad or its representatives. Fabric should extend at least 25 feet beyond the outside edges of the bridge. Fabric will remain in place until all construction activities are complete.

4. Temporary construction clearance: Ensure all falsework, bracing, or forms have a minimum vertical clearance of 23 feet above the top of the highest rail and a minimum horizontal clearance of 12 feet measured perpendicular to the centerline of the nearest track.

E. Blasting:

1. The Contractor shall obtain advance written approval of the Railroad Engineer and the Engineer for use of explosive on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

   a) No blasting shall be done without the presence of an authorized representative of the Railroad. **At least 10 days advance notice** to the person designated in the Railroad's notice of authorization to proceed (see Section II.B above) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.

2. The Railroad representative will:

   a) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.

   b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these Special Notes.

F. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) berm or temporary ditches; (3) sediment basin; (4) aggregate checks; and (5) channel lining. The Contractor will promptly repair eroded areas with Railroad rights of way and to repair any other damage to the property of the Railroad or its tenants at the Contractor's expense.

2. All maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

G. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights of way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

H. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights of way in a neat condition satisfactory to the Railroad Engineer or his authorized representative.

VI. DAMAGES:

A. The Contractor shall assume all liability for any and all damages to his/her work, employees, equipment and materials caused by Railroad traffic.

B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

VII. FLAGGING SERVICES:

A. When Required:

1. Flagging services will not be provided until the contractor's insurance has been reviewed & approved by the Railroad.

2. Under the terms of the agreement between the Department and the Railroad, the **Railroad has sole authority to determine the need for flagging** required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are likely to be, working on the Railroad's rights of way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging. If any element (workers, equipment, tools, scaffolding, etc.) may exist or fall within 50 -feet of the edge of track, a flagman is necessary.

3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three-(3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required until the project has been completed.

B. Scheduling and Notification:

1. Not later than the time that approval is initially requested to begin work on Railroad rights of way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad rights of way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

2. The Contractor will be required to give the Railroad representative **at least 10 working days of advance written notice** of intent to begin work within Railroad rights of way. If it is necessary for the Railroad to advertise a flagging job for bid, it **may take up to 30-days to obtain service**. Once begun, when work is suspended at any time for any reason, the Contractor will be required to give the Railroad representative **at least 72 hours in advance** before resuming work on Railroad rights of way. Such notice shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen is present at the job site. It **may take up to 30 days to obtain flagging initially** from the Railroad. When flagging begins the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and may be unable to be called for on a spot basis. If flagging becomes unnecessary and is suspended, it **may take up to 30 days to again obtain flagging services** from the Railroad. Due to labor agreements, it is necessary to give **5 working days notice before flagging service may be discontinued** and responsibility for payment stopped.

3. If, after the flagman is assigned to the project site, emergencies arise which require the flagman's presence elsewhere, and then the Contractor shall delay work on Railroad rights of way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

4. When demobilizing, the Contractor shall contact the flagman to avoid unnecessary flagging charges. This communication shall be documented.

C. Payment:

1. **The Cabinet will be responsible for paying the Railroad directly for any and all costs of flagging,** which may be required to accomplish the construction.

2. The estimated cost of flagging is listed on the Summary Sheet. The charge to the Cabinet by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.

3. Work by a flagman (M/W) in excess of 8 hours per day or 40 hours per week or on rest days, but not more than 16 hours a day will result in overtime pay at 1 ½ times the appropriate rate. Work by a flagman (M/W) in excess of 16 hours per day will result in overtime pay at 2 times the appropriate rate. Flagman (M/W) working in excess of 16 hours must receive a minimum of 5 hours of rest between shifts or their next shift of work is paid at the overtime rate of 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 ½ times the normal rate.

   Work by a flagman (T&E) in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 ½ times the appropriate rate. After a 12 hour work day the flagman (T&E) must be provided with 12 hours of rest. Flagman (T&E) who work six days consecutive days must receive two days off.

   Flagman's work day begins and ends at his reporting location.

4. Railroad work involved in preparing and handling bills will also be charged to the Contractor. Charges to the Department by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging cost are provided for information only and are not binding in any way.

D. Verification:

1. The Contractor and Project Engineer will review and sign the Railroad flagman's time sheet, attesting that the flagman was present during the time recorded. Flagman may be removed by Railroad if form is not signed. If flagman is removed, the Contractor will not be allowed to re-enter the Railroad rights of way until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact the Railroad's Representative listed on the Project Summary Sheet. All verbal complaints must be confirmed in writing by the Contractor within 5 working days with copy to the Highway Engineer. All written correspondence should be addressed to the Railroad's Representative listed on the Project Summary Sheet.

2. The Railroad flagman assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

VIII. HAUL ACROSS RAILROAD:

A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the State has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental, including flagging, to such crossings whether services are performed by his own forces or by Railroad personnel.

B. *No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless a license agreement or right of entry is granted and executed for its installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the Contractor.* ***The approval process for an agreement normally takes 90-days.***

IX. WORK FOR THE BENEFIT OF THE CONTRACTOR:

A. All temporary or permanent changes in wire lines on the Railroad or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the State and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the State and/or the Railroad.

B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.

X. COOPERATION AND DELAYS:

A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.

B. Train schedules cannot be provided to the Contractor. It is the Contractor's responsibility to contact the Railroad in order to arrange "Track Time." This "Track Time" will be an agreed upon prearranged time period (duration) that the Railroad will, without undue burden, schedule no train traffic to facilitate the Contractor's work on or near Railroad right-of-way. This track time must be arranged during the submission review process.

C. No charge or claims of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railroad traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of Railroad traffic or for any delays due to compliance with these Special Notes.

D. The Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.

E. The Railroad does not assume any responsibility for work performed by others in connection with the Project. No claims of the Contractor against the Railroad for any inconvenience, delay, or additional cost incurred by the Contractor on account of operations by others shall be filed.

XI. TRAINMAN'S WALKWAYS:

*A. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 12~~10~~ feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railroad's protective service is provided shall be removed before the close of each day. If there is any excavation near the walkway, a handrail, with **12'-0" minimum clearance from centerline of track,** shall be placed.*

XII. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHTS OF WAY:

A. All persons shall wear hard hats and reflective vest. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip on type boots is prohibited. High top (6-inch or more) safety-toe shoes with laces, oil-resistant soles, and a distinct separation between heel and sole are required.

*B. No one is allowed within **25' of the centerline of the track** without specific authorization from the flagman.*

C. All persons working near track when train is passing are to look out for dragging bands, chains and protruding or shifting cargo.

D. No one is allowed to cross tracks without specific authorization from the flagman.

*E. All work within **25' of track must stop when train is passing.***

F. No steel tape or chain will be allowed to cross or touch rails without permission.

XIII. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHTS OF WAY:

*A. No crane or boom equipment will be allowed to set up to work or park within **boom distance plus 15' of centerline of track** without specific permission from Railroad Engineer.*

B. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.

C. All employees will stay with their machines when crane or boom equipment is pointed toward track.

D. All cranes and boom equipment under load will stop work while a train is passing (including pile driving).

E. Swinging loads must be secured to prevent movement while train is passing.

F. No loads will be suspended above a moving train.

*G. No equipment will be allowed within **50' of centerline of track** without specific authorization of the flagman.*

H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.

*I. No equipment or load movement **within 50' or above a standing train or other equipment** without specific authorization of the flagman.*

*J. All operating equipment within **50' of track must halt operations when a train is passing**. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.*

K. All equipment, loads and cables are prohibited from touching rails.

L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

M. No equipment or materials will be parked or stored on Railroad's property unless specific permission is granted from the Railroad Engineer.

N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.

O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

XIV. INSURANCE:

Please see the following Railroad Insurance Requirements document.

The remainder of this page is left intenionally blank

XV. FAILURE TO COMPLY:

A. *These Special Notes are supplemental and amendatory to the current version of the Kentucky Department of Highways' Standard Specifications for Road and Bridge Construction and amendments thereof, and where in conflict therewith, these Special Notes shall govern.*

B. *In the event the Contractor violates or fails to comply with any of the requirements of these Special Notes:*

1. The Railroad Engineer may require that the Contractor vacate Railroad property.

2. The Engineer may withhold any and all monies due the Contractor on pay estimates.

3. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

XVI. PAYMENT FOR COST OF COMPLIANCE:

A. *No separate payment will be made for any extra cost incurred on account of compliance with these Special Notes. All such cost shall be included in prices bid for other items of the work as specified in the payment items.*

RAILROAD
INSURANCE REQUIREMENTS

I. Insurance Policies:

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability (CGL) coverage at their sole cost and expense with limits of not less than $5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional insured.

2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than $1,000,000, which insurance must contain a waiver of subrogation against CSXT and its affiliates [if permitted by state law].

3. Commercial Automobile Liability insurance with limits of not less than $1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional insured.

4. Railroad Protective Liability (RPL) insurance with limits of not less than $5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of $10,000,000, which insurance shall satisfy the following additional requirements:

a. The Railroad Protective Liability Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.

b. CSX Transportation must be the named insured on the Railroad Protective Liability Insurance Policy. The named insured's address should be listed as:

CSX Transportation, Inc.
500 Water Street, C-907
Jacksonville, FL 32202

c. The Name and Address of the Contractor and of the Project Sponsor/Involved Governmental Agency must be shown on the Declarations page.

d. A description of operations and location must appear on the Declarations page and must match the Project description.

e. Terrorism Risk Insurance Act (TRIA) coverage must be included.

f. Authorized endorsements must include:

(i) Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later

g. Authorized endorsements may include:

(i) Broad Form Nuclear Exclusion - IL 00 21
(ii) Notice of Non-renewal or cancellation

(iii) Required State Cancellation Endorsement
(iv) Quick Reference or Index - CL/IL 240

h. Authorized endorsements may not include:

(i) A Pollution Exclusion Endorsement except CG 28 31
(ii) An Endorsement that excludes TRIA coverage
(iii) An Endorsement that limits or excludes Professional Liability coverage
(iv) A Non-Cumulation of Liability or Pyramiding of Limits Endorsement
(v) A Known Injury Endorsement
(vi) A Sole Agent Endorsement
(vii) A Punitive or Exemplary Damages Exclusion
(viii) A "Common Policy Conditions" Endorsement
(ix) Policies that contain any type of deductible
(x) Any endorsement that is not named in Section 4 (f) or (g) above that CSXT deems unacceptable

5. All insurance companies must be A. M. Best rated A- and Class VII or better.

6. Such additional or different insurance as CSXT may require.

II. Additional Terms

1. Contractor must submit the complete Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies in an electronic format to:

insurancedocuments@csx.com

2. Neither Agency nor Contractor may begin work on or about CSXT property until written approval of the required insurance has been received from CSXT or CSXT's Insurance Compliance vendor, Ebix.

Kentucky Transportation Cabinet
Division of Right of Way & Utilities

SUMMARY FOR KYTC PROJECTS THAT INVOLVE A RAILROAD

Date: 7/30/2014 *(enter using M/d/yyyy format)*

This project actively involves the below listed railroad company. This Project Summary provides an abbreviated listing of project specific railroad data. The detailed needs of the specified railroad company are included in the Special Notes for Protection of Railroad Interest in the proposal package. By submitting a bid, the contractor attests that they have dutifully considered and accepted the provisions as defined in both documents.

GENERAL ROAD PROJECT INFORMATION *(This section must be provided by KYTC)*

County: Boone
Federal Number: NHPP IM 275 9127
State Number: FD52 008 88806 01C
Route: I 275
Project Description: Deck Overlay on Carroll Cropper Bridge; I-275 over Ohio River
Item Number: 06-2039.00 **Highway Milepost:** 013-014

GENERAL RAIL INFORMATION *(The below sections must be provided by Railroad Company)*

Rail Company Name: CSX Transportation, Inc.
AAR-DOT# (if applicable): 155 966V **Railroad Milepost:** OBC-020.50
Train Count (6am to 6pm): 1 **Train Count (6pm to 6am):** 1 **Train Count (24 hr total):** 2
Maximum Train Speed: 25 mph
(This information is necessary to acquire the necessary insurances when working with Railroad Right of Way)

INSURANCE REQUIREMENTS

The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

(a) Named Insured: CSX Transportation, Inc.
(b) The project description should be as indicated in the General Road Project Information section.
(c) The designation of the jobsite is the route, Milepost, and AAR-DOT# listed above.

FLAGGING INFORMATION

Flagging Estimate:

KYTC will be responsible for paying all flagging costs.

Hourly Rate:

$885.00 per day based on a 12 hour day effective as of the date of this document.

Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 ½ times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 ½ times the normal rate.

Forecasted Rate Increases:

Rates will increase to $0.00 per hour based on a 0 hour day effective _____ *(enter using M/d/yyyy format).*

RAILROAD CONTACTS

(to be provided by Railroad Company)

General Railroad Contact:

Amanda J. DeCesare
CSX Transportation, Inc.
Public Projects Group
1717 Dixie Highway, Suite 400
Fort Wright, Kentucky 41011
(Phone) 859-426-6924
(Email) amanda_decesare@csx.com

Regional Representative (Roadmaster):

Jackson McKeown
Roadmaster at North Vernon, IN
CSX Transportation, Inc.
_____
_____
(Phone) 812-883-9606
(Email) Jackson_McKeown@csx.com

Insurance contact:

_____
CSX Corporation
Insurance Department
_____
_____
(Phone) _____
(Email) insurancedocuments@csx.com

Railroad Designer Contact:

Contractor or In-House Employee? Consultant

Larry J. Shaw, P.E.
URS Corporation
One Indiana Square
Suite 2100
Indianapolis, Indiana 46204
(Phone) 317-532-5481
(Email) larry.shaw@urs.com

Railroad Construction Contact:

Contractor or In-House Employee? Consultant

Wayne Bolen, P.E.
URS Corporation
525 Vine Street
Suite 1800
Cincinnati, Ohio 45202
(Phone) 513-419-3488
(Email) wayne.bolen@urs.com

KENTUCKY TRANSPORTATION CABINET CONTACTS

(to be provided by KYTC)

KYTC Railroad Coordinator:

Allen Rust, PE
Div. of Right of Way & Utilities
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor East
Frankfort, Kentucky 40622
(Phone) 502-782-4950
(Email) allen.rust@ky.gov

KYTC Construction Procurement Director:

Diana Radcliffe, Director
Div. of Construction Procurement
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622
(Phone) 502-564-3500
(Email) Diana.radcliffe@ky.gov

KYTC Construction Director:

Ryan Griffith, Director
Div. of Construction
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622
(Phone) 502-564-4780
(Email) ryan.griffith@ky.gov

UTILITIES & RAILS
KENTUCKY TRANSPORTATION CABINET

The project specific information provided herein is valid as of the date indicated. However, the specific information may be subject to change due to the normal business operations of all parties. The terms and conditions defined here, and in the bid proposal in its entirety, are inclusive and constant.

CSX TRANSPORTATION

CONSTRUCTION SUBMISSION CRITERIA

TABLE OF CONTENTS

Office of Chief Engineer Design, Construction & Capacity
Jacksonville, Florida
Date Issued: April 3, 2009

INTRODUCTION

The information in this document is intended to improve communication and clarify the CSXT criteria related to construction submissions that may involve CSXT property. All work must be performed in a manner as to not adversely impact existing CSXT operations. Please note that there are other standards associated with construction that must be adhered to including but not limited to the CSXT Special Provisions, CSXT Insurance Requirements as well as governing local, county, state and federal requirements. This document and other CSXT standards are subject to change without notice, and future revisions will be available at the CSXT website www.csx.com.

I. DEFINITIONS

Agency – The project sponsor.

AREMA – American Railway Engineering and Maintenance Association – the North American railroad industry standards group.

Construction Submission – The Agency or its representative shall submit six (6) sets of plans, supporting calculations, and detailed means and methods procedures for the specific proposed activity. All plans and supporting calculations shall be signed/sealed by a Professional Engineer as defined below.

Controlled Demolition – Removal of the existing structure or subcomponents in a manner that prevents any portions from falling onto CSXT employees, equipment or property. The proposed procedures shall be detailed in the means and methods submission for CSXT review and acceptance.

Contractor – The Agency's or CSXT's representative retained to perform the project work.

Engineer – CSXT Engineering Representative or a GEC authorized to act on the behalf of CSXT.

GEC – General Engineering Consultant who has been authorized to act on the behalf of CSXT.

Professional Engineer – An engineer who is licensed in State or Commonwealth (if required by the Agency) in which the project is to occur. The drawings and calculations shall be prepared by the Professional Engineer and shall bear his seal and signature.

Submission Review Period - **a minimum of 30 days in advance of start of work.** Up to 30 days will be required for the initial review response. Up to an additional 30 days may be required to review any/all subsequent submissions or resubmission.

Theoretical Railroad Live Load Influence Zone – A 1½ Horizontal to 1 Vertical theoretical slope line starting 1'-6" below top of rail elevation and 12'-0" from the centerline of the nearest track.

II. DEMOLITION PROCEDURE:

The Agency or its contractor shall submit as defined above, a detailed procedure for demolition of the structure over Railroad Tracks.

A. The Agency or its Contractor shall submit the detailed procedure for demolition of existing structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with loading or disposal locations shown, with all dimensions referenced from the center line of the near track, including beam placement on ground or truck loading staging plan. The plan shall also include the location, with relevant dimensions, of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the CSXT rails or track structure and no material may be dropped on CSXT property.

B. Also included with this submittal the following information:

1. Computations showing weight of picks must be submitted. Computations shall be made from field verified plans of the existing structure beams being removed and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.

2. If the sponsor can prove to CSXT that plans do not exist and weights must be calculated from field measurements, the field measurements are to be made under the supervision of the Professional Engineer submitting the procedure and shall include sketches and estimated weight calculations with the procedure. If possible, field measurements shall be taken with a CSXT representative present.

3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have

been "built in" to the crane charts are not to be considered when determining the 150% Factor of Safety.

4. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.

5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.

6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., torch/saw cutting various portions of the superstructure or substructure, dismantling splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.

7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.

8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track. The guardrail will be installed by CSXT forces at the expense of the Agency or its contractor.

9. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.

10. A minimum quantity of 25 Tons of CSXT approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.

11. CSXT's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab.
NOTE: On-track or ground level debris shields such as crane mats are prohibited for use by CSXT.

C. Overhead Demolition Debris Shield - Shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure.

1. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.
2. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.
3. The demolition debris shield shall provide 23'-0" minimum vertical clearance or maintain the existing vertical clearance if the existing clearance is less than 23'-0" as approved by CSXT. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.
4. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 6'-0" out from each side of the track centerline.
5. The demolition debris shield design and supporting calculations all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.
6. The demolition debris shield shall have a **minimum** design load of 50 pounds per square foot **plus** the weight of the equipment, debris, personnel, and other loads to be carried.
7. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
8. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Engineer.

D. Vertical Demolition Debris Shield – This type of shield may be required for substructure removals in close proximity to CSXT track and other facilities, as determined by the Engineer.

1. Prior to commencing the demolition activity, the Contractor shall install a ballast protection system consisting of geotextile to keep the railroad ballast from becoming fouled with construction or demolition debris and fines. The geotextile ballast protection system shall be installed and maintained by the Contractor for the project duration in accordance with the attached plan, or with additional measures as directed by the Engineer.

2. The Agency, or its Contractor, shall submit detailed plans, with detailed calculations, prepared and submitted by a Professional Engineer of the protection shield and ballast protection systems for approval prior to the start of demolition.

3. Blasting will not be permitted to demolish a structure over or within CSXT's right-of-way.

E. The Controlled Demolition procedure must be approved by the **Engineer** prior to undertaking work on the project.

F. The Contractor shall provide timely communication to the Engineer when scheduling the demolition related work so that the Engineer may be present during the entire demolition procedure.

G. At any time during demolition activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

III. ERECTION PROCEDURE:

The Agency or its Contractor shall submit a detailed procedure for performing erection on/about CSXT property, as defined above.

A. The Agency or its Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or

buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the CSXT rails or track structure.

B. Also included with this submittal the following information:

1. As-Built Bridge Seat Elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.

2. Computations showing weight of picks must be submitted. Computations shall be made from plans of the structure beams being erected and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.

3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been "built in" to the crane charts are not to be considered when determining the 150% Factor of Safety.

4. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.

5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.

6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.

7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.

8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.

C. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.

D. The Contractor shall provide timely communication to the Engineer when scheduling the erection related work so that the Engineer may be present during the entire erection procedure.

E. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

IV. EXCAVATION AND SHORING:

The Agency or its contractor shall submit as defined above, a detailed procedure for the installing sheeting/shoring adjacent to Railroad Tracks.

A. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by CSXT. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering* Chapter 8, part 28; except as noted below.

B. Shoring may not be required if all of the following conditions are satisfied:

1. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).

2. Track is on level ground or in a cut section and on stable soil.

3. Excavation does not adversely impact the stability of a CSXT facility (i.e. signal bungalow, drainage facility, undergrade bridge, building, etc.).

4. Shoring is not required by any governing construction code.

C. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.

D. Trench Boxes are prohibited for use on CSXT within the Theoretical Railroad Live Load Influence Zone.

E. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with open sides away from the track may be used. Cofferdams shall be constructed using steel sheet piling, or when approved by the Engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:

1. Shoring shall be designed to resist a vertical live load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8’-6” wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA *Manual for Railway Engineering*, Chapter 8, Part 20.

2. Allowable stresses in materials shall be in accordance with AREMA *Manual for Railway Engineering*, Chapter 7, 8, and 15.

3. A construction procedure for temporary shoring shall be shown on the drawing.

4. All shoring systems on or adjacent to CSXT right-of-way shall be equipped with railings or other approved fall protection.

5. A minimum horizontal clearance of 10’-0” from centerline of the track to face of nearest point of shoring shall be maintained provided a 12’-0” roadbed is maintained with a temporary walkway and handrail system.

F. The contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for CSXT's review and approval.

1. Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances form centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.

2. Six (6) sets of calculations of the shoring design.

   The drawings and calculations shall be prepared by a Licensed Professional Engineer in the State (if required by the Agency) where the shoring is to be constructed and shall bear his seal and signature. Shoring plans shall be approved by CSXT's construction engineering and inspection representative.

3. For sheeting and shoring within 18'-0" of the centerline of the track, the live load influence zone, and in slopes, the contractor shall use interlocked steel sheeting (sheet pile).

4. Sheet pile installed in slopes or within 18'-0" of the centerline of track shall not be removed.

5. Sheet piles shall be cut off a minimum of 3'-0" below the finished grade, ditch line invert, or as directed by the **Engineer**. The ground shall be backfilled and compacted immediately after sheet pile is cut off.

6. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.

G. Blasting is not permitted on or adjacent to CSXT right-of-way without prior written approval from the **Engineer**. Mechanical and Chemical means of rock removal must be explored before blasting is considered. If written permission for the use of explosives is granted, the Agency or Contractor must comply with all of the following:

1. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Agency or Contractor.

2. Electronic detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.

3. No blasting shall be done without the presence of an authorized representative of CSXT. Advance notice to the Engineer as required by the CSXT Special Provisions is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.

4. Agency or Contractor must have at the project site adequate equipment, labor and materials, and allow sufficient time, to clean up debris resulting from the blasting and correct any misalignment of tracks or other damage to CSXT property resulting from the blasting. Any corrective measures required must be performed as directed by the Engineer at the Agency's or Contractor's expense without any delay to trains. If Agency's or Contractor's actions result in the delay of any trains including passenger trains, the Agency or Contractor shall bear the entire cost thereof.

5. The Agency or Contractor may not store explosives on CSXT property.

6. At any time during blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

V. TRACK MONITORING

The Agency or its Contractor shall submit for CSXT review and approval, a detailed track monitoring program to detect both horizontal and vertical movement of the CSXT track and roadbed, a minimum of 30 days in advance of start of work.

A. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to CSXT's right-of-way, the contractor may be required to

CONSTRUCTION SUBMISSION CRITERIA

submit a detailed track monitoring program for CSXT's approval prior to performing any work near CSXT's right-of-way.

B. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. CSXT reserves to the right to modify the survey locations and monitoring frequency as necessary during the project.

C. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.

D. If any movement has occurred as determined by the Engineer, CSXT will be immediately notified. CSXT, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by CSXT or performed by CSXT including the monitoring of corrective action of the contractor will be at project expense.

Lawrenceburg, Dearborn Co., IN
KYTC Project No. FD52 067 85127 01U
CSXT Milepost: 0BC-20.50
CSXT OP No.: KY0277

EXHIBIT D

CONTRACTOR'S ACCEPTANCE

To and for the benefit of the ***Company***, ("***Company***") and to induce the ***Company*** to permit Contractor on or about ***Company's*** property for the purposes of performing work in accordance with the Agreement dated _____, 20__, between the Commonwealth of Kentucky Transportation Cabinet, Department of Highways and the ***Company***, Contractor hereby agrees to abide by and perform all applicable terms of the Agreement, including, particularly Exhibits B and C as included herein.

Contractor: _____

By: _____

Name: _____

Title: _____

Date: _____

CALL NO. 100

CONTRACT ID. 142980

BOONE COUNTY

FED/STATE PROJECT NUMBER IM 2759 (130)

DESCRIPTION BRIDGE OVER OHIO RIVER.

WORK TYPE BRIDGE DECK RESTORATION & WATERPROOFING

PRIMARY COMPLETION DATE 11/15/2015

LETTING DATE: September 26,2014

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME September 26,2014. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

PLANS AVAILABLE FOR THIS PROJECT.

DBE CERTIFICATION REQUIRED - 2%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

TABLE OF CONTENTS

PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 06

CONTRACT ID - 142980

IM 2759 (130)

COUNTY - BOONE

PCN - MB00802751401
IM 2759 (130)

I275 (MP 13.579). BRIDGE OVER OHIO RIVERBRIDGE DECK RESTORATION & WATERPROOFING SYP NO. 06-02039.00.

GEOGRAPHIC COORDINATES LATITUDE 39:06:16.49 LONGITUDE 84:49:34.86

COMPLETION DATE(S):

COMPLETED BY 11/15/2015 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/construction-procurement)

The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR PIPE INSPECTION

Contrary to Section 701.03.08 of the 2012 Standard Specifications for Road and Bridge Construction and Kentucky Method 64-114, certification by the Kentucky Transportation Center for prequalified Contractors to perform laser/video inspection is not required on this contract. It will continue to be a requirement for the Contractor performing any laser/video pipe inspection to be prequalified for this specialized item with the Kentucky Transportation Cabinet-Division of Construction Procurement.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2012 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-010 to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception. Foreign entity is defined within KRS 14A.1-070.

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at https://secure.kentucky.gov/sos/ftbr/welcome.aspx .

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of

this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004. (See attachment)

10/29/12

Commonwealth of Kentucky
Finance and Administration Cabinet
OFFICE OF THE SECRETARY
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

Steven L. Beshear
Governor

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

WHEREAS, KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

NOW, THEREFORE, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.08 Irregular Proposals 102.14 Disqualification of Bidders
102.09 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

"The bidder certifies that it has secured participation by Disadvantaged Business Enterprises ("DBE") in the amount of ____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program."

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 63-35 DBE, within 10 days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the "material listing" on the Construction Procurement website under the specific letting;
3 The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:

- The entire expenditure paid to a DBE manufacturer;
- 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to

the public, maintain an inventory and own and operate distribution equipment; and

- The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;

c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;

4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and

5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the

office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2 Whether the bidder provided solicitations through all reasonable and available means;
3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainly whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the

work requirements of the bid proposal; and

11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry our the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These reports must be submitted within 14 days of payment made to the DBE contractor.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:
http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx

The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact is Melvin Bynes and the telephone number is (502) 564-3601.

Photocopied payments and completed form to be submitted to: Office of Civil Rights and Small Business Development 6th Floor West 200 Mero Street Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

06/20/2014

EXPEDITE PROJECT WORK ORDER

The Contractor may request that the Department expedite the work order for this project to allow for maximization of time to complete the work. In order for the Department to accomplish this task, the Contractor may be required to "hand carry" all required project documentation to facilitate the process. Immediately UPON NOTIFICATION OF AWARD OF THE CONTRACT, deliver required project documentation to:

Division of Construction Procurement
200 Mero St.
Frankfort, KY 40602

CARROLL LEE CROPPER BRIDGE, I-275 OVER OHIO RIVER

Item No. 6-2039.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

I. DESCRIPTION

Perform all work in accordance with the Department's 2012 Standard Specifications, Supplemental Specifications, any applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Remove and replace Guardrail and Guardrail End treatments at the locations listed and/or as directed by the Engineer; (3) Type IV and V pavement markers; (4) Asphalt Surface and Asphalt Base at locations listed and/or as directed by the Engineer; and (5) All other work specified as part of this contract.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes.

A. **Maintain and Control Traffic.** See Traffic Control Plan.

B. **Dense Graded Aggregate.** Crushed Stone Base may not be furnished in lieu of DGA.

C. **Pavement Markings -6 inch Paint.** Use Durable Waterborne Marking 6-inch for permanent striping (12 inch at entrance and exit ramp tapers).

III. CONSTRUCTION METHODS

A. **Maintain and Control Traffic.** See Traffic Control Plan.

B. **Site Preparation.** Be responsible for all site preparation. Do not disturb existing signs. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.

C. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits, but will be incidental to the other items of the work.

D. **Final Dressing, Clean Up, and Seeding and Protection.** After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. I. These items are incidental to other items in the contract.

E. **Pavement Striping and Pavement Markers.** Permanent striping will be in accordance with Section 112, except that:

(1). Striping will be 6" in width, except 12” in gore area;
(2). Permanent striping will be in place before a lane is opened to traffic; and
(3). Permanent striping will be 6" Durable Waterborne Marking Permanent Paint.

F. **On-Site Inspection.** Each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.

G. **Caution:** Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.

H. **Utility Clearance.** It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities.

IV. METHOD OF MEASUREMENT

A. **Maintain and Control Traffic.** See Traffic Control Plan.

B. **Site Preparation.** Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of work.

C. **Dense Graded Aggregate.** DGA will be used for shoulder wedging, beneath new pavement and guardrail end treatments.

D. **Raised Pavement Markers and Permanent Striping.** Permanent striping Durable Waterborne Marking (6" and 12") is measured per linear foot. See Traffic Control Plan. Type IV and V Pavement Markers are measured as each.

E. **Erosion Control.** Erosion control items not listed as bid items will not be measured for payment, but will be considered incidental to the "lump sum" price for the bid item "KPDES Permit and Temp Erosion Control".

F. **Temporary Median Crossover.** This pay item will cover all grading and drainage, including any drainage structures, required for the crossover. DGA and Asphalt Paving are paid separately. Removal of the crossovers prior to reconstructing for the opposing direction and upon completion of the project will be considered incidental to the price bid for "Temporary Median Crossover".

G. **Indiana Guardrail Transitions.** The pay items for "Indiana Guardrail Transition Type TGB (Approach End)" and "Indiana Guardrail Transition Type TGB (Trailing End)" will cover all rail elements, hardware, and any incidentals required to complete the installation at the bridge ends on the Indiana side of the bridge.

H. **Waterblasting.** Waterblasting to remove existing striping shall only be allowed along the bridge deck that will be subsequently overlaid, unless otherwise directed by the Engineer, and this work, contrary to Special Note 10W, shall be considered incidental to "Maintain and Control Traffic."

V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at his expense.

A. **Maintain and Control Traffic.** See Traffic Control Plan.

B. **Site Preparation.** Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.

C. **Dense Grade Aggregate.** See Section 302 of the Standard Specifications.

D. **Raised Pavement Markers and Permanent Striping.** See Traffic Control Plan.

NOTES APPLICABLE TO PROJECT

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1. The dimensions shown on the typical section for pavement and shoulder widths and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified in the Proposal.

2. The contractor is to be advised that low wires may exist on this project. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the contractor’s responsibility to contact the affected utility and cover any costs associated with the impact.

3. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense.

4. Any light poles that are damaged during construction are to be replaced at the contractor's expense.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS
I-275

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified elsewhere in the Proposal.

SPECIAL NOTE FOR BEFORE YOU DIG

Call 1-800-752-6007 toll free a minimum of two and no more than ten business days prior to excavation for information on the location of existing under-ground utilities which subscribe to the before-u-dig (BUD) service. Coordinate excavation with all utility owners, including those who do not subscribe to bud.

Special Note For:
Erosion Prevention and Sediment Control

The Contractor shall be responsible for filing the Kentucky Pollution Discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW) and any KPDES local Municipal Separate Storm Sewer System (MS4) program that has jurisdiction. The NOI shall name the contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit effective on August 1, 2009 or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction.

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

Contrary to Section 213.05, bid items for temporary BMPs will not be listed and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.

The contractor shall be responsible for applying "good engineering practices" as required by the KPDES permit. The contractor may use any temporary BMPs with the approval of the KYTC Engineer.

The contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

The contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control.

The Contractor shall be responsible for filing the KPDES permit Notice of Termination (NOT) with the Kentucky DOW and any local MS4 program that has jurisdiction. The NOT shall be filed after the Engineer agrees that the project is stabilized or the project has been formally accepted.

Payment: Payment will be by lump sum under the bid item "K.P.D.E.S. Permit & Temporary Erosion Control".

SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove pavement striping, temporary or permanent, from asphalt or concrete pavement using ultra-high pressure water.

2.1 MATERIALS AND EQUIPMENT.

2.2 Truck Mounted Ultra-high Pressure Pump and Water Tank. Use a truck having a separate hydrostatic transmission capable of speed increments of ±1 foot per minute at operator's discretion. Use a pump capable of delivering a minimum of 30,000 psi to a bumper mounted deck containing an operator controlled rotating manifold that is speed variable up to at least 3,000 rpm and accepts interchangeable waterjet nozzles. Provide all necessary waterjet nozzle setups and patterns to ensure clean sufficient removal. Ensure the deck's discharge directs the water and removal material in a manner that is not hazardous to vehicles or pedestrians.

2.3 Water. Conform to Section 803.

3.0 CONSTRUCTION. Before starting work, provide the Engineer with a contractor work history of 2 projects where striping removal was completed acceptably for a similar type of pavement. If no history is available, complete 1,000 linear feet of striping removal and obtain the Engineer's approval before continuing.
Conduct striping removal under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications. Waterblast to remove temporary or permanent striping completely as the Engineer directs. Do not damage the pavement in any way and protect all joint seals. If damage is observed, stop the removal process until the operator can make changes and demonstrate acceptable striping removal. Repair any damage to the pavement. Vacuum all marking material and removal debris concurrently with the blasting operation.

4.0 MEASUREMENT. The Department will measure the quantity in linear feet. When the removal area's width exceeds 8 inches and a second pass is required, the Department will measure the length of the additional pass for Payment. The Department will not measure for payment additional passes for widths of 8 inches or less or passes to further eradicate markings. The Department will not measure repair of damaged pavement for payment and will consider it incidental to this item of work.

5.1 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
----	Waterblast Stripe Removal	Linear Foot

The Department will consider payment as full compensation for all work required under this note.

January 1, 2008

CARROLL LEE CROPPER BRIDGE, I-275 OVER OHIO RIVER

BRIDGE SPECIAL NOTES

ITEM NO. 6-2039.00

BRIDGE REHABILITATION

INDEX

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

I. DESCRIPTION

This work consists of bridge surface deck preparation using Hydrodemolition to provide a uniform depth, highly bondable surface and to remove all variable depth, unsound material. This item also includes the removal and disposal of all concrete and debris, vacuuming, shielding, water control, additional jack hammering and all other aspects of work necessary to prepare the deck for the placement of the new latex modified concrete overlay.

II. EQUIPMENT

A. Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

B. Mechanical Scarifying Equipment. The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the old concrete or asphalt wearing surface from the bridge deck to the depths required in the plans or as directed by the Engineer. The equipment shall be self-propelled with sufficient power, traction and stability to maintain accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing the existing bridge deck by means of a ski or matching shoe, or from an independent grade control; in addition, it shall be equipped with an integral loading means to remove the material being cut from the bridge deck and to discharge the cuttings into a truck all in a single operation.

C. Hydro-Demolition Equipment. The Hydrodemolition equipment shall consist of a filtering and pumping unit operating with a self-propelled computerized robot that utilizes a high pressure water jet capable of removing concrete to the depth specified on the plans or as directed by the Engineer and be capable of removing rust and concrete particles from reinforcing steel. The equipment shall provide a rough and bondable surface and remove all unsound concrete during the initial pass. The minimum water usage shall be 43 gal/min operating at 13,000 psi minimum.

D. Vacuum Cleanup Equipment. The vacuum cleanup equipment shall be equipped with fugitive dust control devices and be capable of removing wet debris and water all in the same pass. Provide equipment capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

E. Hand Held Blast Cleaning Equipment. Hand held blast shall be either sand or water as necessary to expose fine and coarse aggregates; thoroughly clean all exposed reinforcing steel; and remove any unsound concrete or laitance layers from the proposed concrete overlay surface. If sand blasting equipment is utilized, the equipment shall have oil traps. If water blasting equipment is utilized, the equipment must be capable of delivering a minimum of 5,000 psi.

F. Power Driven Hand Tools. Power driven hand tools and jackhammers will be permitted, but shall not be heavier than the nominal 45 lb class. Chipping hammers shall not be heavier than the nominal 15 lb class. Only hand chipping tools shall be used when removing concrete within 1 in. of reinforcing steel. Mechanically driven tools shall be operated at a maximum angle of 45 degrees from the bridge floor surface.

III. CONSTRUCTION

A. General: Perform Hydrodemolition surface preparation over the entire top surface of the reinforced concrete bridge deck to provide a rough and bondable surface and to remove all unsound concrete during the initial Hydrodemolition surface preparation pass. The use of hand chipping tools, either hand or mechanically driven, shall be limited to trim work and areas inaccessible or inconvenient for the hydro-demolition equipment.

B. Description: This work shall consist of furnishing the necessary labor, materials and equipment to completely remove the top surface of the Portland cement concrete bridge deck surface in accordance with these Specifications and in reasonably close conformity with the grades, thickness, or sections shown on the Plans or as directed by the Engineer. This work shall include the removal of patches other than sound Portland cement concrete and all loose and unsound concrete by Hydrodemolition; preparation of the sound existing concrete surface; removal, forming and concrete for full depth repairs; blast cleaning or high pressure water cleaning the existing deck prior to placement of the modified concrete overlay; and all other operations necessary to complete this work according to these specifications and to the satisfaction of the Engineer.

C. Preparation of Existing Deck: No operations without reasonably available engineering controls that limit fugitive dust will be acceptable. The Contractor shall comply with all federal, state, regional, and local government agencies' that have requirements regarding the control of fugitive dust generated by concrete removal and blasting operations. The Contractor is responsible for protecting traffic traveling adjacent to and under the work zone while removing bridge deck concrete. Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth for limited areas as designated by the
Engineer. Full depth repairs shall be completed as specified for Full Depth Repair.

D. Removal of Existing Asphaltic Concrete Overlays: If an existing asphaltic concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay and any waterproofing material that was part of the deck must be removed, and the bridge deck cleaned, prior to commencement of the Hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing bituminous overlay and waterproofing material from the original bridge deck. Acceptable depth of scarification shall be the overlay and waterproofing material thickness plus ¼" below the original bridge deck surface. Additional removal depth of existing deck concrete is permitted by mechanical scarification provided. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and required lap splice lengths.

E. Removal of Existing Modified Concrete Overlays: Use conventional methods to remove any and all existing concrete overlay prior to commencement of the Hydrodemolition operation. Clean the bridge deck. Use "Total Surface Hydrodemolition" method to provide a rough & highly bondable surface and to remove partial depth deteriorated concrete with a minimum depth of ¼" below the original deck elevation. If Hydrodemolition does not leave a bondable surface resident can require mechanical scarification to his satisfaction at no additional cost to the Cabinet.

Existing overlay material which is sound and bonded may be left in patch areas with approval of the Project Engineer. If determined the existing patches are to be removed, jackhammers, not to be heavier than the nominal 45 lb class shall be used to remove debonded areas.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete.

F. Bridge Decks with No Existing Concrete Overlay: If Hydrodemolition is to be performed on an original bridge deck surface without a bituminous or concrete bridge deck overlay, the Contractor may use mechanical scarification equipment conforming to these specifications to remove an initial portion of the hydro-demolition depth. The scarification depth shall be ¼". Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.
Cost of the scarification shall be included as a portion of the pay item for Hydrodemolition.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and required lap splice lengths.

IV. Concrete Removal by Hydro-Demolition

A. General: The total surface area of the reinforced concrete bridge deck shall be completely prepared by Hydrodemolition as necessary to provide a highly roughened and bondable surface prior to placement of the proposed bridge deck overlay while removing any deteriorated and unsound concrete in the initial pass. Unsound concrete is defined as existing bridge deck concrete that is deteriorated, spalled, or determined by the engineer to be unsound.

With the use of Hydrodemolition surface preparation, the requirement to provide a minimum ¾" clearance around all reinforcing bars that are more than 50% diameter exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and to provide the required lap splice lengths as required.

B. Calibration: Prior to commencement of the Hydrodemolition removal operation, the Hydrodemolition equipment shall be calibrated on an existing sound concrete surface as designated by the Engineer. The calibration area shall be a minimum of 7 feet wide by 7 feet long to demonstrate the desired result of this specification.

Move the Hydrodemolition equipment to a second area (7'x7') that is unsound as designated by the Engineer to demonstrate the desired result of this specification which is providing a highly rough and bondable surface and removing all unsound concrete during the initial pass is being achieved.

The Engineer shall verify the following settings:

1. Water pressure gauge (13,000 psi minimum)
2. Machine staging control (step)
3. Nozzle size
4. Nozzle speed (travel)
5. Depth of removal
6. Minimum water usage (43 gallons per minute)

During the Hydrodemolition operations, any or all of the above settings may be modified in order to achieve removal of all unsound concrete and to provide a highly bondable surface. The settings may be changed by the Contractor to achieve total removal of unsound concrete, but the Engineer must be notified of all changes. The Engineer may change any or all of the settings in order to achieve the desired results with Hydrodemolition. The removals and depth shall be verified, as necessary, and at least every 30 feet along the cutting path. The readings shall be documented and, if necessary, the equipment re-calibrated to insure the Hydrodemolition process achieves the desired results and removal of unsound concrete.

Calibration shall be required on each structure; each time Hydrodemolition is performed and as required to achieve the results specified by the plan.

C. Debris and Fluid Containment: Prior to commencement of the Hydrodemolition operation, the Contractor shall submit a plan for approval to the engineer for control and filtering of all water discharged during operation. The Contractor, at a minimum, shall block all drains on the deck and install aggregate dams every 150 feet; 6 inches high by 1 foot wide minimum, to strain runoff. The deck shall be used as a settlement basin within itself unless an alternate method of water control, satisfactory to the Engineer and meeting the environmental requirements of any associated Regulatory Agency, is required.

The Contractor shall provide shielding, as necessary, to insure containment of all dislodged concrete within the removal area in order to protect the public from flying debris both on and under the work site.

1. **Cleaning:** Cleaning shall be performed with a vacuum system capable of removing wet debris and water all in the same pass. The vacuum equipment shall be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface. Cleaning shall be done in a timely manner, before debris and water is allowed to dry on the deck surface.

2. **Resounding:** After the Hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that the all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall only be performed when the deck is completely dry and frost-free. Final sounding shall consist of as many successive resounding as required to ensure that all deteriorated and fractured concrete has been removed. Additional removal shall be performed

with 45 lb maximum weight jackhammers operated at an angle of no more than 45 degrees from horizontal. Aerosol spray paint for outlining and sounding chains shall be provided by the Contractor.

3. **Full Depth Repair:** Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth except for limited areas as may be designated by the Engineer. Forms shall be provided to support concrete placed in full depth repair areas. The forms for areas of up to 4 square feet may be suspended from wires from the reinforcing steel. For areas greater than 4 square feet, the forms shall be suspended from the primary members of the superstructure or by shoring below. Areas of full depth repair shall have the concrete faces and reinforcing steel cleaned. Only those areas marked in the field by the Engineer as full depth repair will be paid for as full depth repair.

4. **Preparation Prior to Overlay Placement:** Vehicles other than approved construction equipment will not be permitted on those sections of the deck where Hydrodemolition has begun. Contamination of the deck by construction equipment or from any other source shall be prevented.

V. Measurement

Surface preparation using Hydrodemolition shall be measured as the actual deck area in square yards overlaid and shall include the costs of surface preparation, Hydrodemolition, ¼" (min.) milling into the original concrete bridge deck surface, removal of the surface preparation debris, cleaning, any incidental materials, and all labor and equipment as necessary to complete the work as described in this specification, but not specifically included in other items for payment.

Full Depth Repair when encountered on a bridge deck and marked in the field by the Engineer, full depth repair shall be paid for per Cubic Yard of Class "M" Concrete used.

VI. Payment

Payment for completed and accepted quantities as measured above will be made at the contract price for:

Item	Unit	Description
08550	Square Yard	Hydrodemolition
08526	Cubic Yard	Conc Class "M" Full Depth Patch

Removal of existing flexible (asphalt) concrete patches and rigid modified concrete overlays are included as parts of this work.

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

I. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment
(2) Remove the existing overlay or machine prep the existing slab
(3) Complete full-depth and partial depth repairs as directed by the Engineer
(4) Repair/replace damaged and corroded reinforcing bars
(5) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606
(6) Complete asphalt approach pavement if required
(7) Maintain and control traffic
(8) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

A. Latex Concrete. See Section 606.03.17.
B. Class "M" Concrete. Use either "M1" or "M2". See Section 601.
C. Epoxy-Sand Slurry. See Section 606.03.10.
D. Steel Reinforced – Epoxy Coated. Use Grade 60. See Section 602.

III. CONSTRUCTION.

A. Remove Existing Overlay. In addition to Section 606.03.03, see Special Note for Use of Hydrodemolition Method.
B. Machine prep of existing slab. In addition to Section 606.03.03, see Special Note for Hydrodemolition.
C. Full Depth Slab Repair. See Section 606 and Special Note for Hydrodemolition.
D. Partial Depth Slab Repair and Latex Overlay. Remove areas determined to be unsound by the Engineer via hydrodemolition or via hand held jackhammers weighing less than 45lbs in accordance with Section 606.02.10 D. Repair/Replace all damaged or severely corroded reinforcing bars prior to partial depth repair operation. The Department will not measure material removal and will consider this work incidental to the bid item "PARTIAL DEPTH PATCHING". Mix and place Latex Modified Concrete Overlay in accordance with Sections 606.03.08 and 606.03.17.
E. Surface Texturing. Texture the concrete surface of the overlay in accordance with Section 609.03.10.

IV. MEASUREMENT. See Section 606 and the following:

A. Latex Modified Concrete for Overlay. The Department will measure the quantity in cubic yards using the theoretical volume as follows:

008BB00052N (4048.4'x60'x1.5") = 1102 cu yd (Including all Northbound and Southbound approaches and truss spans)

B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of Concrete required to obtain the finished grade shown on the Plans or established by the Engineer.

C. Steel Reinforcement – Epoxy Coated. The Department will measure any epoxy reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.

V. PAYMENT. See Section 606 and the following:

A. Latex Modified Concrete for Overlay. The Department will make payment for the Latex Modified Concrete under bid item #08534 "CONCRETE OVERLAY – LATEX" for the quantity in cubic yards complete in place.

B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will make payment for the Partial Depth Patching under bid item #24094EC "PARTIAL DEPTH PATCHING". Payment will be for the quantity per cubic yard complete in place.

C. Steel Reinforcement. The Department will make payment for steel reinforcement, if necessary, under bid item #08151 "STEEL REINFORCEMENT – EPOXY COATED". Payment will be at the unit price per pound.

SPECIAL NOTE FOR REPLACING EXPANSION DAMS AND/OR INSTALLING ARMORED EDGES FOR CONCRETE

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment
(2) Remove existing concrete and expansion devices and/or bridge ends
(3) Install armored edges and new concrete as specified and in accordance with the attached detail drawings
(4) Install new joint seals (where required)
(5) Maintain and control traffic
(6) Any other work specified as part of this contract.

II. MATERIALS

A. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

B. Structural Steel. Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition, for Armored Edges. See manufacturer's specifications for Armored Edges on Strip Seal Expansion Dams.

C. Stud Anchors. The armored edge stud anchors are ¾" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).

D. Steel Reinforcement - Epoxy Coated. Use Grade 60. See Section 602.

E. Epoxy Bond Coat. See Section 511.

F. Neoprene Joint Seals (Strip Seal). See Section 807 and attached detail drawings.

III. CONSTRUCTION

A. Remove Existing Materials. Remove the existing expansion dam/bridge end and specified areas of concrete as shown on the attached detail drawings. Remove debris and/or expansion joint filler as directed by the Engineer. When deteriorated concrete adjacent to the limits of removal is encountered, extend the removal area as directed by the Engineer. Dispose of all removed material entirely away from the job site. Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the department. This work is incidental to the contract unit price for "Expansion Joint Replacement" or "Armored Edge for Concrete".

B. Place New Concrete and Armored Edges. After all specified existing materials have been removed; place new armored edges to match the grade of the proposed overlay or to match the original grade (See attached detail drawings). Place the new Class "M" concrete to the scarified grade and finish to receive the new overlay or place the new Class "M" concrete to the original grade and finish with broom strokes drawn transversely from curb to curb (See attached detail drawings).

All new structural steel shall be cleaned and painted in accordance with requirements of Section 607.03.23 except that surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

C. Additional Steel Reinforcement. Furnish for this work, as directed by the Engineer, steel reinforcement as shown in the attached detail drawings. Splice these bars to the existing reinforcement in the deck in the areas of removed concrete as shown in the attached detail drawings or as directed by the Engineer. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete. Field cutting and bending is permitted. Do not place any additional steel reinforcement above the height of the top row of Nelson studs on the armored edges.

Reinforcement, bar splices, and mechanical connectors are incidental to the contract unit price for "Expansion Joint Replacement" or "Replace Armored Edge".

D. Neoprene Joint Seals. Place the preformed joint seal in one continuous, unbroken length. Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.03.04 (E), except that shop drawings will not be required.

E. Shop Plans. Shop Plans will <u>not</u> be required. The contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. MEASUREMENT

A. Expansion Joint Replacement. The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

B. Armored Edge for Concrete. The Department will measure the quantity in linear feet from gutterline to gutterline along the face of the bridge end.

V. PAYMENT

A. Expansion Joint Replacement. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, reinforcement, neoprene joint seal, and all incidental items necessary to complete the work as specified by this note and as shown on the attached detail drawings.

B. Armored Edge for Concrete. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, reinforcement, and all incidental items necessary to complete work as specified by this note and as shown on the attached detail drawings.

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

SPECIAL NOTE FOR REPLACING STEL FINGER EXPANSION JOINTS

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and Plans. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment.
(2) Remove the existing concrete, steel finger expansion joints, expansion joint support channels, and portions of the barriers and barrier expansion sliding plates as required.
(3) Install steel finger expansion joints, steel reinforcement, new stud shear connectors, and new concrete as specified and in accordance with the Plans.
(4) Maintain and control traffic.
(5) Any other work specified as part of this contract.

II. MATERIALS

A. Class "M" Concrete. Use either "M1" or "M2". See Section 601.
B. Structural Steel. Use AASHTO M270 Grade 50 steel, which meets the Charpy V-notch toughness requirements specified in the plans, unless noted otherwise. Stainless steel countersunk cap screws shall conform to ASTM F593 Type 316. Stainless steel nuts shall conform to ASTM A320. Expansion joint drain pipes shall conform to ASTM A53 NPS 6 hot-dipped galvanized steel pipe.
C. Hot-Dipped Galvanizing. The finger expansion joint assemblies shall be hot-dipped galvanized in accordance with ASTM A123. Any areas of damaged galvanizing shall be painted with galvanizing repair paint in accordance with ASTM A780.
D. Stud Anchors. Headed stud anchors shall be ASTM A108, Grade 1015 (Nelson Studs or equal), automatic end welded.
E. Weld Material. See Section 813.10. All welds shall be E70XX.
F. Epoxy Bond Coat. See Section 511.
G. Steel Reinforcement – Epoxy Coated. Use Grade 60. See Section 602.

III. CONSTRUCTION

A. Existing Dimensions. The Contractor shall verify all dimensions with field measurements prior to ordering materials or fabricating steel. Each steel finger expansion joint assembly shall conform to the actual cross-slopes and grades of the existing finger joint assemblies.
B. Sequence of Construction. At the specified locations drill crack arrest holes in specified stringers and girders prior to replacing the finger expansion joint assemblies.

C. Shop Plans. Shop plans will be required for the finger expansion joint assemblies. The Contractor is responsible for obtaining field measurements and supplying the properly sized materials to complete the work. Field measurements that do not match plan dimensions shall be noted in the shop drawings.

D. Maintenance of Traffic. Maintain and control traffic in accordance with the Standard Specifications and the Special Note for Traffic Control. For purposes of this specification, a construction phase shall be considered installing lane closures, partial removal of both (Pier A & Pier D) finger expansion joint assemblies in the closure, setting new finger expansion joint assemblies and finger plates, placing concrete, and removal of traffic control upon the concrete reaching the specified strength requirements.

E. River Navigation. All work involving removal and installation of structural elements beneath the bridge deck shall cease when there is approaching river traffic. The work shall not resume until the river traffic is clear of the bridge area. The Contractor must advise the Coast Guard of the Contractor's proposed schedule of work at lease 14 days prior to the commencement of any field operations. The notification shall be addressed to:

Commander

2nd Coast Guard District

1430 Olive Street

St. Louis. Missouri 63103

Phone: (314) 425-4607

F. Remove Existing Materials. Remove the existing expansion devices and specified areas of concrete as shown on the attached sketches. Remove debris as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Remove and Replace Finger Expansion Joint".

Clean and leave all existing steel reinforcement encountered in place. Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible. Paint shall be fully removed in the vicinity of new shear stud anchors to allow for proper welding.

G. Place New Finger Expansion Joint Assemblies. After all specified existing materials have been removed, place new finger expansion joint assemblies to match the grade and cross-slope of the bridge deck. The assemblies shall be set and adjusted to grade as shown in the plans, or in accordance with an alternative method as detailed in the approved shop drawings.

H. Place New Concrete. Place steel reinforcement, including replacing any existing reinforcement damaged during removal of the concrete deck. The surface areas of existing or previously placed concrete to come in contact with

new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. Place the new Class "M" concrete to the grade matching the top of the existing overlay, and finish with broom strokes drawn transversely from curb to curb. Concrete placed under the connection plates shall be vibrated until it is just forced through the ½" diameter vent holes in the bulkhead plate. Cast any bridge railing removed as part of the joint removal. Upon hardening of the concrete railing patching, replace and weld removed portions of the railing expansion plates.

I. Phase Construction. For the purpose of this Note, the finger-joint construction occurs in two phases; Northbound Lanes and Southbound Lanes. (MOT Phases 3 & 5). The entire finger expansion joint assemblies shall be constructed full width from plinth to median wall.

J. Welding Specifications. All welding and welding materials shall conform to Joint Specificaitons ANSI/AASHTO/AWS D1.5M-D1.5-2008 Bridge Welding Code". Modifications and additions as stated on the plans or special note for welding steel bridges shall supersede the ANSI/AASHTO/AWS specification. Nondestructive testing by the contractor (QC) will not be required. Welding procedures shall be submitted to the Engineer and approved prior to the start of fabrication and retrofit. The cost of welding, welding materials, straightening, altering, and burning new or existing steel shall be included in the contract unit price for "Remove and Replace Finger Expansion Joint".

K. Mill Test Reports. Notarized test reports shall be furnished in triplicate to the Department showing that all the materials used for these repairs conform to the requirements of the Specifications.

L. Painting. Clean and paint new and existing steel surfaces in accordance with Section 607.03.23, Section 614, and the Special Notes for "Surface Preparation and Paint Application", "Paint", and "Waste Management". Components to be cleaned and painted include all existing steel girder, steel stringer, and steel diaphragm surfaces within 12" of the new concrete diaphragms. All areas of new or existing structural steel on which the pant has been damaged by the Contractor with weld burns or by other means during construction or after final painting shall be wire brushed cleaned and spot painted as directed by the Engineer. Cleaning and painting of existing structural steel will be considered incidental to the contract unit price for "Remove and Replace Finger Expansion Joint".

IV. MEASUREMENT

A. Remove and Replace Finger Expansion Joint. Measurement will be for each expansion joint location. Partial payment for work performed during each phase of construction will be paid as the percentage of finger joint assembly installed during that phase of work.

Phase NB = 50%

Phase SB = 50%

Total = 2 Each

V. PAYMENT

A. Remove and Replace Finger Expansion Joint. Payment at the contract unit price is full compensation for (1) removal of the concrete deck and existing expansion joint assembly, (2) fabrication and installation of the new expansion joint assembly (including the drainage system to the limits shown in the plans), (3) retrofits to the existing steel stringers, (4) new steel reinforcement, (5) forming and placing Class "M" Concrete, (6) painting the steel surfaces as specified in this note, and (7) all other materials, labor, equipment, tools, and incidentals necessary to complete the work as specified by this note.

The Department will consider payment as full compensation for all work required by this note and the detail drawings.

SPECIAL NOTE FOR DRAINAGE SYSTEM MODIFICATIONS

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and Plans. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment.
(2) Remove the existing expansion joint pipe drainage system at specified locations.
(3) Install new drainage system as specified and in accordance with the Plans.
(4) Restore disturbed areas to their original condition.
(5) Any other work specified as part of this contract.

II. MATERIALS

A. Structural Steel. Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. Drain pipes shall conform to ASTM A53 NPS 6 hot-dipped galvanized steel pipe. Pipe, collector boxes, support brackets, and clamps shall be painted to match the color of the existing system.

B. Hot-Dipped Galvanizing. Collector boxes shall be hot-dipped galvanized in accordance with ASTM A123. Any areas of damaged galvanizing, and areas near field welded phase construction joints shall be painted with galvanizing repair paint in accordance with ASTM A780.

C. Weld Material. See Section 813.10. All welds shall be E70XX.

VI. CONSTRUCTION

A. Existing Dimensions. The Contractor shall verify all dimensions with field measurements prior to ordering materials or fabricating steel.

B. Sequence of Construction. Removal and replacement of the pipe drainage system may be completed after replacement of the finger expansion joint assemblies, but shall be completed with 7 days of final expansion joint construction.

C. Shop Plans. Shop plans will <u>not</u> be required. The Contractor is responsible for obtaining field measurements and supplying the properly sized materials to complete the work.

D. Remove Existing Materials. Remove the existing system as shown on the attached sketches. Remove debris as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Drainage System Modifications".

E. Place New Drainage System. After all specified existing materials have been removed, install the new drainage system.

F. Welding Specifications. All welding and welding materials shall conform to Joint Specificaitons ANSI/AASHTO/AWS D1.5M-D1.5-2008 Bridge Welding Code". Modifications and additions as stated on the plans or special note for welding steel bridges shall supersede the ANSI/AASHTO/AWS specification.

G. Power Wash Pier Cap. At Piers A & D power wash the pier cap as directed by the Engineer so that it is free of dirt and debris. This work is incidental to the contract unit price for "Drainage System Modifications".

H. Painting. Clean and paint the entire pipe drainage system in accordance with Section 607.03.23, Section 614, and the Special Notes for "Surface Preparation and Paint Application", "Paint", and "Waste Management". Cleaning and painting of existing structural steel will be considered incidental to the contract unit price for "Drainage System Modifications".

VII. MEASUREMENT

A. Drainage System Modifications. Measurement will be lump sum for all drainage system modifications as specified in attached detail drawings.

VIII. PAYMENT

A. Drainage System Modifications. Payment at the contract unit price is full compensation for (1) removal of the existing system, (2) installation of the new system to the limits shown in the plans, (3) power wash cap at Piers A & D, (4) restoring disturbed areas to their original condition, and (5) all other materials, labor, equipment, tools, and incidentals necessary to complete the work as specified by this note.

The Department will consider payment as full compensation for all work required by this note and the detail drawings.

SPECIAL NOTE FOR PLINTH AND MEDIAN WALL RETROFIT

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment
(2) Remove specified portions of existing bridge barrier wall, brush blocks and wing walls
(3) Install additional steel reinforcement and new concrete as specified and in accordance with the attached detail drawings
(4) Paint exposed existing reinforcement and masonry coat all new concrete
(5) Maintain and control traffic
(6) Any other work specified as part of this contract

II. MATERIALS

A. Class "AA" Concrete. See Section 601.

B. Steel Reinforcement-Epoxy Coated. Use Grade 60. See Section 602.

C. Structural Steel. Use AASHTO M270 Grade 50 steel.

D. Hot Dipped Galvanizing. The Nested Plates at Piers A & D on the plinths and median wall shall be hot dipped galvanized in accordance with ASTM A123. Any areas of damaged galvanizing shall be painted with galvanizing paint in accordance with ASTM A780.

E. Class "M" Concrete. Use either M1 or M2. See Section 601.

III. CONSTRUCTION

A. Remove Existing Materials. Remove the aluminum rail as shown on the plans. Salvage existing material as per Section 719.03.06 except the Contractor shall deliver existing salvaged aluminum rail materials to the Department's Bailey Bridge Yard in Frankfort, KY. Deliver the material between the hours of 8:00am and 3:30 pm, Monday through Friday. This work shall be included in the contract unit price for "Plinth Retrofit" and "Median Wall Retrofit".

Removal of Plinth or Median walls shall be performed with lane closures. Do not leave removal areas unprotected.

Prior to beginning the Plinth and Median wall retrofit work, provide safe access, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas. The Engineer will sound the concrete with a hammer and mark the areas of concrete to be removed and patched. All areas of deteriorated concrete found should be repaired as part of this work.

Remove specified areas of deteriorated concrete as directed by the Engineer. The removal of unsound material shall be accomplished with hand tools or

pneumatic hammers that do not exceed twenty (20) pounds. Precautions shall be exercised to protect the underlying sound material. Saw, route, or otherwise manipulate the sides of the patch so that the interface between the old concrete and patch area are perpendicular. Remove all deteriorated loose concrete to a minimum depth of 2" for repairs using vertical and overhead patching material and 4" for repairs using Class M Concrete. Also ensure concrete removal in the patch area extends at least three-quarters (3/4) inch beyond any steel reinforcement more than 50 percent exposed. Dispose of all removed material entirely away from the job site or as directed by the Engineer.

Extreme care shall be taken when removing the existing spalled or delaminated concrete so as not to damage the existing reinforcing stee. Completely clean all existing steel reinforcement encountered free or rust and leave in place. Wire brushing may be required to thoroughly clean exposed steel reinforcement. Repair or replace any damaged steel reinforcement as directed by the Engineer at no additional cost to the Department. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04.

B. Prepare Concrete Surfaces for Patching. Prepare concrete surfaces to be patched in accordance with Section 510.03.01. Final blast cleaning shall be completed within twelve (12) hours prior to placement of the epoxy mortar patch. Concrete must be sound, dry, and clean prior to placement of epoxy resin prime coat.

C. Concrete Sawing. Existing barrier and wingwall parapet sections shall be carefully removed to lines designated on plans by using diamond saw blades or an approved equivalent. The surfaces presented as a result of this removal shall be reasonably true and even with sharp straight corners. Sawing shall be dust free and without vibration. Payment for this work is incidental to "Plinth Retrofit" and "Median Wall Retrofit".

D. Steel Reinforcement. All steel reinforcement shall be epoxy-coated in accordance with Section 811.10. Install the steel reinforcement in accord with Section 602 and as directed by the Engineer. In the attached detail drawings, dimensions shown from face of concrete to bars are clear distances unless otherwise shown. Spacing of bars is from center to center of bars. Payment for steel reinforcement will be incidental to "Plinth Retrofit" and "Median Wall Retrofit".

E. Place New Concrete. Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "AA" Concrete. The surface areas of existing concrete to come in contact with the new Class "AA" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. This work is incidental to the pay item "Plinth Retrofit" and "Median Wall Retrofit".

F. Masonry Coating. A masonry coating shall be applied to all new concrete surfaces; existing concrete surfaces that have been sawcut; and to front, top,

and end faces of existing wingwalls. Payment for this work is incidental to "Plinth Retrofit" and "Median Wall Retrofit".

G. Exposed Reinforcing Bars (Final). The existing reinforcing steel exposed by sawcutting shall be painted a color that is compatible with the sawed concrete face. The paint shall be a heavy duty epoxy with epoxy/polyamide resin. This work should be completed as soon as practicable to reduce rusting and streaking. Payment for this work is incidental to "Plinth Retrofit" and "Median Wall Retrofit".

H. Bonding of Drilled Reinforcement. Where shown on the plans, drill holes and anchor / bond new reinforcement into existing concrete using a polyester resin adhesive conforming to special note 6J for non-epoxy adhesives. Embedment shall be sufficient to develop the full tensile strength of the reinforcing bar in accordance with the polyester resin manufacturer's recommendations. In no case shall embedment be less than the minimum embedment shown in the plans. Installation shall be in strict conformance with the manufacturer's recommendations for the polyester adhesive being used and section 511 of the standard specifications. Holes shall be wire brushed and blown out with air from the bottom up to ensure good bonding. Where indicated in the drawings, holes shall be core drilled. Payment for this work is incidental to "Plinth Retrofit" and "Median Wall Retrofit".

I. Plating for Plinths and Median Walls. Construct nested steel plating at finger expansion joints at Piers A & D. Payment for this work is included in "Plinth Retrofit" and "Median Wall Retrofit".

J. Expansion Joint Replacement Work. Plinth/Median wall retrofit and expansion joint replacement work is performed in separate construction phases. At the completion of Phase 2 and before all lanes of traffic are open, no unprotected gaps larger than 4 inches or any other traffic snag hazards shall be allowed in the plinth/median walls. During construction phases 3 and 5, portions of plinth/median wall retrofits may need to be partially removed to accommodate the strip seal termination at the gutter lines. All work, including removal and reconstruction of plinth/median wall retrofits that may be required to perform expansion joint replacement shall be incidental to the joint replacement. If the contractor removes portions of the plinth/median wall retrofits the contractor shall remove and replace a minimum of 1 foot of the wall retrofits and ensure the final product matches the previously placed wall retrofit.

IV. MEASUREMENT

A. Plinth Retrofit and Median Wall Retrofit. The Department will measure the quantity in linear feet measured along gutterline from end to end of bridge barrier plinth and median wall retrofit.

V. PAYMENT

A. Plinth Retrofit and Median Wall Retrofit. Payment for these items of

work shall be at the contract unit price and payment will be full compensation for the following: (1) Furnish all labor, materials (including reinforcing steel, plastic pipe, steel plating, and concrete), tools, and equipment; (2) Repair Concrete of plinths, median wall, and curbs as directed by the Engineer; (3) Remove existing concrete as specified in the detail drawings; (4) Install additional steel reinforcement and new concrete; (5) Paint exposed existing reinforcement and masonry coat all new concrete and existing sawcut surfaces; and (6) Any other work specified as part of this contract and the attached detail drawings.

SPECIAL NOTE FOR REMOVE AND REPLACE GIRDER BEARINGS

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and Plans. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment.
(2) Jack and temporarily support the stringers at the specified finger joints.
(3) Remove existing bearing assembly and portions of the girder intermediate stiffeners as specified in this note and in accordance with the plans.
(4) Install new bearing assembly and repair girder as specified in this note and in accordance with the plans.
(5) Maintain and control traffic and post bridge for reduced live load during girder jacking operations.
(6) Any other work specified as part of this contract.

II. MATERIALS

A. Structural Steel. Use AASHTO M270 (ASTM A709) Grade 50 steel, which meets the Charpy V-notch toughness requirements specified in the plans.
B. Weld Material. See Section 813.10. All welds shall be E70XX.
C. Elastomeric Bearing Pad. See Section 822. Pads shall be low temperature Grade 3 with durometer hardness of 50 or 60 and shall be subjected to the load testing requirements corresponding to Design Method B.
D. Paint. Match the color of the existing paint. All paint supplied must be contained in the current List of Approved Materials. See Section 821.

III. CONSTRUCTION

A. Existing Dimensions. The Contractor shall verify all dimensions, including thickness of parts, with field measurements prior to ordering materials or fabricating steel.

B. Shop Plans. Shop plans will only be required for the temporary support system. The Contractor is responsible for obtaining field measurements and supplying the properly sized materials to complete the work.

C. Jacking Plan. The Contractor must submit a jacking plan, temporary support system calculations, and shop drawings for approval prior to starting work. The design must be stamped by a professional engineer licensed in the State of Kentucky. The girders shall be shall be lifted a distance no more than that required to snugly fit the new bearing assembly in place plus ¼". To prevent deck cracking, jack all girders concurrently and limit differential movement between stringer lines to $^{1}/_{8}$". For each girder the total estimated design loads to be supported are:

Dead Load	318 kip
Live Load	157.2 kip
Total	475.2 kip

The Contractor's jacking system shall be designed to support a minimum of 200% of these loads. Before jacking operations begin, temporary stiffener angles for the stringer webs must be installed above the jack locations, as shown in the plans. No holes shall be drilled in the flanges of the stringers or floorbeams for installation of the jacking frame. Any holes drilled in the webs of the girders for temporary bracing connections shall have bolts installed in the holes after the connection is removed. Jacking and supporting the steel stringer ends is incidental to the contract unit price for "Remove and Replace Girder Bearings".

D. Jacking Details. The schematic of the temporary support system shown in the plans is one feasible alternative for jacking the girders. Final design is the responsibility of the Contractor. Alternative methods may require additional analysis of existing members by the Contractor as deemed necessary by the Engineer during review of the jacking plan.

E. Maintenance of Traffic. Maintain and control traffic in accordance with the Standard Specifications and the Special Note for Traffic Control.

F. Work Sequence. All work to complete the bearing replacement and girder repair shall be performed prior to the joint replacement and overlay replacement in construction phases 3 and 5.

G. River Navigation. All work involving removal and installation of structural elements beneath the bridge deck shall cease when there is approaching river traffic. The work shall not resume until the river traffic is clear of the bridge area. The Contractor must advise the Coast Guard of the Contractor's proposed schedule of work at lease 14 days prior to the commencement of any field operations. The notification shall be addressed to:

Commander

2nd Coast Guard District

1430 Olive Street

St. Louis. Missouri 63103

Phone: (314) 425-4607

H. Remove Existing Material. Remove the existing bearing assembly and portions of the steel girder intermediate stiffener to the limits shown on the drawings for the bearing removal. Remove existing steel by grinding, cutting or other methods approved by the Engineer that do not damage the adjacent structural steel. Use of cutting torches will not be permitted. All cut edges of the stringers to which new steel plates will be

welded must be reasonable smooth and true to provide uniform bearing between the welded plates. If the Contractor removes portions of the girder outside the limits shown on the plans, the Contractor will make necessary repairs as approved by the Engineer and at no additional cost to the Department. Dispose of all removed material complete away from the job site. This work is incidental to the contract unit price for "Remove and Replace Girder Bearings".

I. **Field Prepare Existing Surfaces.** Existing areas of the bridge to be welded to or in contact with new steel shall be cleaned of all dirt, rust and foreign matter using hand cleaning methods before installing the new steel. Hand methods for field cleaning shall consist of scraping and wire brushing. No blast cleaning will be allowed on the bridge.

J. **Install Bearing Assembly and Girder Repairs.** Install girder bearing assemblies and girder repairs as shown on the plans and as directed by the Engineer. Protect the elastomeric pad and vulcanized bonds on the cover plates from heat. The bearing assembly must meet the fabrication, testing, and installation requirements of the AASHTO Standard Specification, Division II, Section 18.

K. **Welding Specifications.** All welding and welding materials shall conform to Joint Specificaitons ANSI/AASHTO/AWS D1.5M-D1.5-2008 Bridge Welding Code". Modifications and additions as stated on the plans or special note for welding steel bridges shall supersede the ANSI/AASHTO/AWS specification. Nondestructive testing by the contractor (QC) will not be required. Welding procedures shall be submitted to the Engineer and approved prior to the start of fabrication and retrofit. The cost of welding, welding materials, straightening, altering, and burning new or existing steel shall be included in the contract unit price for "Remove and Replace Girder Bearings".

L. **Prohibited Field Welding.** Except as shown on the plans, no welding of any nature shall be performed on the bridge without written consent of the Director, Division of Structural Design, or an authorized representative, and then only in the manner and at the locations designated in the authorization.

M. **Mill Test Reports.** Notarized test reports shall be furnished in triplicate to the Department showing that all the materials used for these repairs conform to the requirements of the Specifications.

N. **Painting.** Clean and paint new and existing steel surfaces in accordance with Section 607.03.23, Section 614, and the Special Notes for "Surface Preparation and Paint Application", "Paint", and "Waste Management". Components to be cleaned and painted include all new structural steel surfaces, including bolts, and all existing steel stringer surfaces within 12" of the work limits for the bearing replacement. All areas of new or existing structural steel on which the pant has been damaged by the Contractor with weld burns or by other means during construction or after final painting shall be wire brushed cleaned and spot painted as directed by the Engineer. Cleaning and painting of all new and existing structural steel will be considered incidental to the contract unit price for "Remove and Replace Girder Bearings".

O. **Damage to the Structure.** The Contractor shall bearing full responsibility and expense for any and all damage to the structure, including truss members, during the repair and retrofit work; even to the removal and replacement of truss members and fallen spans, should the damage result from the Contractor's actions.

IV. MEASUREMENT

A. Remove and Replace Girder Bearings. Measurement will be for each girder bearing that is removed and replaced.

V. PAYMENT

A. Remove and Replace Girder Bearings. Payment at the contract unit price is full compensation for (1) jacking and temporarily supporting the ends of the steel girders, (2) removing and disposing of the existing girder bearings and specified portions of the steel girders, (3) preparing the interface surfaces for welding and painting, (4) furnishing and installing new bearing assemblies and girder repairs, (5) painting the steel surfaces as specified in this note, and (6) all other materials, labor, equipment, tools, and incidentals necessary to complete the work as specified by this note.

The Department will consider payment as full compensation for all work required by this note and the detail drawings.

SPECIAL NOTE FOR SURFACE PREPARATION AND PAINT APPLICATION

I. DESCRIPTION

Clean and Paint new and existing structural steel to the limits specified in the applicable Special Notes and as directed by the engineer in accordance with the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction (current edition) and the following requirements:

II. CONSTRUCTION

A.Surface Preparation

1. **Solvent Cleaning.** Prior to using any of the methods of substrate preparation herein, remove visible grease and oil from the surface. Clean the surface in accordance with SSPC-SP 1 to remove oil, grease, and any other surface contaminants. Only use solvents or detergents that are acceptable to the coating manufacturer and the Department. Use clean cloths for the final wiping of the cleaned surface.

2. **Pressure Washing.** Clean all structural steel by pressure washing. Size the pressure washers so that no combination of hose length or pressure washer placement will result in an output pressure less the 4,500 psi or more than 5,000 psi from any spray wand at any pressure washing location. Hold the wand nozzle a maximum of twelve (12) inches from the surface being pressure washed approximately normal (perpendicular) to the working surface. Use clean, potable water for pressure washing. Do not use water from streams, ponds, lakes or rivers. At the discretion of the Contractor, a non-sudsing, biodegradable detergent may be added to the water to optimize the cleaning operation. If a detergent is used, thoroughly rinse the surface afterward. After the surface is pressure washed and allowed to dry, inspect it for remaining visible dirt. Wipe the dried surface with black and white rags to ascertain cleanliness. Re-clean and rinse as necessary to remove all contaminants on the working surface. On all surfaces not cleaned satisfactorily by pressure washing, employ one or more of the following methods including: 1) Hand scrubbing using wet rags. 2) Solvent cleaning by wiping with solvent-soaked rags. 3) Steam cleaning. After using any additional cleaning procedures pressure wash those areas.

3. **Mechanical Surface Preparation.** After pressure washing, perform mechanical surface preparation on all surfaces not possessing clean, adherent paint (e.g. rust, loose paint, or loose mill scale). All surfaces requiring mechanical surface preparation will be cleaned to an SSPC-SP3. Perform all mechanical surface preparations using power tools. Equip all power tools with vacuum shrouds. Maintain and operate all vacuum shrouded power tools to collect generated debris. Equip all the air exhausts of the vacuum systems with HEPA filters.

After tool cleaning and prior to painting, remove all residue, dirt, dust, or similar contaminates from the cleaned surface to the satisfaction of the Engineer. The Contractor is solely responsible for any damages arising from the surface preparation operations.

B. Paint Application Do not paint areas until they have been inspected and approved by the Engineer (or at the direction of the Engineer, the Department's inspector). Apply paint only to dry, clean surfaces. Apply paint according to the manufacturer's recommendations with the exception that no paint will be applied unless steel temperature and ambient air temperature are above 32° F. For new steel apply in the shop a **Class 1** primer from the approved list referenced in the SPECIAL NOTES FOR PAINT. For new installed structural steel and existing prepared structural steel apply a **Class IV (TYPE VIII)** coating system from the approved list referenced in the SPECIAL NOTES FOR PAINT. Apply paint according to the manufacturer's recommendations with the exception that no paint will be applied unless steel temperature and ambient air temperature are above 32° F.

1. **Prime Coat** – Paint all new structural steel with one (1) coat (dry film thickness per manufacturer's product data sheet) of organic zinc rich primer (see **SPECIAL NOTES FOR PAINT**).

2. **Finish Coat** – Paint all new installed structural steel and prepared existing structural steel with one (1) full finish coat (dry film thickness per manufacturer's product data sheet) (see **SPECIAL NOTES FOR PAINT**).

The finish coat shall closely match the existing structure color.

Damages – Take all steps necessary to preclude damage to public property from paint overspray. Those steps may include changes in the type of containment or cessation of spraying operations. The contractor is solely responsible for any damages arising from the painting operations.

Repair of paint defects – Repair all defects in new paint.

SPECIAL NOTE FOR PAINT

Use a coatings system from an approved supplier. A list of approved suppliers may be found in the Department's List of Approved Materials maintained by the Division of Materials. All paint supplied must conform to the applicable Special Notes contained in this proposal. The Department requires acceptance testing of samples obtained on a per-lot basis per-shipment. The Division of Materials will perform acceptance testing. At his option, the Engineer may elect to conduct more frequent sampling and testing. Test samples will be taken at the Contractor's paint storage site. Department personnel will perform sampling. Allow (10) working days for testing and approval of the sampled paint.

Note: It is the Contractor's responsibility to maintain an adequate inventory of approved paint. The Department assumes no responsibility for lost work due to rejection of paint or approved paint subsequently found to be defective during the application process.

SPECIAL NOTE FOR WASTE MANAGEMENT

All wastes are to be collected and placed in appropriate containers on a daily basis. **(See SPECIAL NOTE FOR ENVIRONMENTAL AND WORKER SAFETY REGULATIONS).**

I. INDUSTRIAL WASTE

Dispose of industrial wastes (non-hazardous wastes) such as paint buckets, paint-contaminated rags, rollers, clogged spray hoses and brushes. Store industrial waste in appropriate containers, and appropriately labeled, prior to disposal. Industrial waste containers not covered or designed to prohibit entry of water, must be included in and comply with Ground Water Protection requirements (see **SPECIAL NOT FOR ENVIRONMENTAL AND WORKER SAFETY REGULATIONS** – D. Groundwater Protection).

II. HAZARDOUS WASTE

A. **Hazardous materials are to be stored separate from paint debris**. All non-reusable solvents used in cleaning are also to be considered hazardous waste. Store solvent wastes in separate containers (i.e. not with the paint debris).

B. **The Department will provide a site on its property for the Contractor to erect a temporary waste storage facility.** Store hazardous waste at that site, in a secured six-foot high chain-link fence enclosure. The enclosure shall be built in accordance with Standard Drawing No. RFC-001-07 of the Kentucky Department of Highways Standard Drawings Book, with the exception that concrete is not required for installation of posts. The fence of the storage area must be firmly attached to metal posts and have a locked gate. The gate must be secured to the fence post by a chain and a lock. Each side of the enclosure is to have appropriate placarding forbidding unauthorized entrance and announcing that the area is a hazardous waste/lead storage site. Cover the ground where the containers will be stored with a waterproof tarpaulin. The contractor shall maintain the tarpaulin to avoid tears or punctures. The drums will be set on skids that are placed on the tarpaulin. There must be adequate aisle space between rows of stored drums so that the drums and labels can be inspected at any time.

C. **The storage area is to be maintained/operated to prevent releases.** The storage area must have a spill clean-up kit. The kit must include, but not limited to shovel, broom, dustpan and absorbent material for solvents. There must be access to communications or alarms whenever authorized personnel are in the storage compound.

D. The designated area must be constructed and accepted by the Engineer prior to the onset of operations at the job site.

E. Maintain the hazardous waste storage facility and return the site to its original state when the work is completed.

F. The Contractor is solely responsible for the management and the disposal of all hazardous waste generated during the cleaning and painting operations in accordance with the Kentucky Revised Statutes, Chapter 224, Subchapter 46, and the Kentucky Administrative Regulations promulgated pursuant thereto.

G. The Kentucky Transportation Cabinet will file a Notification of Hazardous Waste Activity with the Kentucky Division of Waste Management to obtain an EPA Identification Number in accordance with 401 KAR 32:010, Section 3. The Cabinet will provide the Contractor with this EPA ID number to be used in hazardous waste management in compliance with 401 KAR 32:010, Section 3 (1).

H. The Contractor is responsible for furnishing appropriate U.S. DOT containers that are made or lined with materials which are compatible with the hazardous waste to be stored in accordance with 401 KAR 35:180, Section 3. All hazardous wastes collected at the job site will be placed in those containers for transport to the storage site. The containers will be used and managed at the job site and at the storage site in accordance with 401 KAR 35:180. Prior to the transfer of the containers of hazardous waste from the job site to the storage area, the containers will be correctly sealed, labeled, marked and placarded as defined in the pre-transport requirements of 401 KAR 32:030.

I. Each container will be labeled "Hazardous Waste" and the date clearly marked when the hazardous waste is *first* added to the container in compliance with 401 KAR 35:180, Section 4(3). That date marked is the *start date* of the **seventy-five** (75) day storage period.

J. The generator for the waste under this contract is the Kentucky Transportation Cabinet. All records including the labels on the waste containers and the manifests are to be completed using the Transportation Cabinet as the generator.

K. The Department requires that all hazardous waste be removed within seventy-five (75) days of the accumulation start date. The Contractor will select a registered hazardous waste transporter to transport the containers of hazardous waste generated during the painting operations to a permitted hazardous waste treatment, storage or disposal facility. The hazardous waste will be manifested with a Uniform Hazardous Waste Manifest that is to be completed, in entirety, as per the regulations of 401 KAR 32:020 and 401 KAR 32:100. Copies of all manifests with the Land Disposal Restriction Notice will be provided to the Project Manager and the Central Office, Division of Construction. *Final partial payment of 5% for the project will not be released until the* Department *receives all copies of the manifests.*

L. Failure to remove hazardous waste within Seventy-Five (75) days will result in a performance penalty of Two Thousand Dollars ($2,000.00) per drum per day or Eight Thousand Dollars ($8,000.00) per cubic yard per day that the containers are left in storage. This penalty is in addition to any fines that may be assessed by regulatory agencies other than the Transportation Cabinet.

SPECIAL NOTE FOR BRIDGES OVER RAILROAD

Special care shall be taken to ensure no impact to the railroads under bridges listed below. On bridge spans over the railroad tracks, all work and equipment, including any rigging, must be contained above the bottom of the existing deck and between the existing edge barrier walls. Extreme care should be taken to ensure that nothing falls onto the railroad right of way below the bridges. At no point shall the Contractor enter the railroad's right of way.

In the case that anything happens to fall onto railroad right of way, please immediately call the emergency contact listed below. When referring to the bridge location, be sure to mention the DOT number and railroad mile post. Any costs associated with such an incident, including but not limited to removal of the obstruction and/or repairs to the railroad facilities shall be the responsibility of the Contractor.

Bridge: 008B00052N
CSX Transportation, Inc.
DOT # 155 966V
Railroad mile post BC-20.50
Emergency Contact: 1-800-232-0144

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

I. COMPLETION DATE. The Contractor has the option of selecting the starting date for this Contract. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work. All work in Phase 1 and Phase 2 is to be completed by November 26th, 2014. All other phases are to be completed by November 15, 2015.

STRUCTURE	PHASE	START DATE	COMPLETION DATE
008B00052N	1 & 2	NA	November 26, 2014
008B00052N	3, 4, 5, 6, & 7	May 26, 2015	November 15, 2015

II. LIQUIDATED DAMAGES. Liquidated damages will be assessed the Contractor in accordance with the Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction, Section 108.09, when the allotted November 26, 2014 or November 15, 2015 completion dates are exceeded.

Additionally, liquidated damages of $25,000 the first day and $50,000 each subsequent day will be assessed for each day past the allotted completion dates.

Contrary to the Standard Specifications, liquidated damages will be assessed the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge or bridges. Contract time will be charged during these months.

All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations.

TRAFFIC CONTROL PLAN

CARROLL LEE CROPPER BRIDGE, I-275 OVER OHIO RIVER

Item No. 6-2039.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings. Do NOT use Cones for lane closures or shoulder closures.

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition at the beginning of the work and maintained in like new condition until completion of the work. Traffic Control Devices will conform to current MUTCD.

Reduce the speed limit in work areas to 45 miles per hour and establish double fines for work zone speeding violations. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the “WARNING FINE DOUBLED IN WORK ZONE” signs will be dual mounted. At the end of the work zone, the “END DOUBLE FINE” signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period of time. Payment for the signs will be at the unit bid price for signs erected. Any relocation or covering of the signs will be incidental to Maintain and Control Traffic.

If night work is utilized on this project, obtain approval from the Engineer for the method of lighting prior to its use.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Extended lane closures are required on this project, however no lane closures will be permitted during the following period(s).

December 1, 2014 through February 28, 2015

The minimum clear lane width will be 11 feet. Use a lane closure all times when work is performed in the lane or adjacent shoulder. Shoulders used as temporary roadways will be inspected by the Engineer and if deemed necessary by the Engineer, repaired. Perform any maintenance of the shoulder as deemed necessary by the Engineer in order to maintain traffic. Cover edge lines that conflict with the current traffic pattern on any roadway pavement with temporary removable tape. Utilize removable tape as temporary edge lines through lane closures.

All pavement edge transitions must be smooth and level before opening both lanes up to traffic. A lane closure must be in place during all times that pavement edge drop-offs are present (see Pavement Edge Dropoff note).

Note that Lane shifts are required throughout the project. See the Exhibits for lane locations and widths. Stripe according to the MUTCD.

The contractor must notify the Engineer at least fourteen (14) days prior to beginning Phase I construction in either direction.

SHOULDER PREPARATION AND RESTORATION

Prior to placing any lane closures that require shifting traffic onto existing shoulders, patch the shoulders as directed by the Engineer. Remove failed materials and perform additional patching as directed by the Engineer during the time the shoulder is used as a travel lane. All work required for shoulder preparation and restoration is incidental to Maintenance of Traffic.

MEDIAN CABLE BARRIER SYSTEM PREPARATION AND RESTORATION

During construction, the existing median cable barrier system along the Kentucky approach will be removed through the work zone. A temporary anchor system will be constructed in order to keep the remainder of the cable barrier system operational throughout the duration of construction. All work required to remove the existing cable barrier system, install the temporary anchor system, replace concrete pad disturbed during construction, and restore it to its original condition is incidental to Median Cable Barrier System Removal and Restoration.

Carroll Cropper Bridge Rehabilitation Phasing Notes

The bridge rehabilitation will be accomplished in five basic Phases:

- Median Barrier Retrofit
- Plinth Retrofits
- Northbound Lanes Rehabilitation
- Southbound Lanes Rehabilitation
- Median Lighting Installation

Median crossovers are required to provide opposing one-lane traffic on each side while the other side is constructed. The median crossovers are designed for 45 miles per hour. Opposing traffic is separated by a temporary concrete barrier wall on the bridge and approach roadways. The construction zone is separated from adjacent traffic by a temporary concrete barrier wall. Due to the width constraints on the bridge and approaches, wide loads must be detoured to avoid this construction zone. (See Detour Map)

The specific phasing is described below.

Phase 1

The interior lane must be closed on both Kentucky and Indiana approaches to construct the median crossovers required in phase 3 of construction. Construct the median barrier wall retrofit. Temporary Concrete Barrier Walls (TCBW) will be placed as shown prior to construction of the crossovers. Traffic Control Devices (TCD's) will be utilized to maintain the lane closures on the bridge and approaches where no construction activity is ongoing.

Phase 2

The exterior lane must be closed on both Kentucky and Indiana approaches to complete construction of the plinth retrofits. Temporary Concrete Barrier Walls (TCBW) will be placed along the bridge work zones. Traffic Control Devices (TCD's) will be utilized to maintain lane closures on the approaches where no construction activity is ongoing.

Phase 3

Shift northbound traffic to the southbound side as shown. TCBW will be required where opposing traffic is shown. Construct the northbound lanes rehabilitation.

Phase 4

Shift northbound traffic back to the northbound side, maintaining one lane in each direction. Remove the median crossovers constructed in phase 1 and construct the crossovers required for the following phase.

Phase 5

Shift the southbound traffic to the northbound side as shown. TCBW will be required where opposing traffic is shown. Construct the southbound lanes rehabilitation.

Phase 6

Shift southbound traffic back to the southbound side, maintaining one lane in each direction. Install bridge lighting. Remove the median crossovers. Replace all shoulder pavement disturbed during construction. Remove temporary cable barrier anchor system. Replace all cable barrier concrete pad disturbed during construction and re-install the cable barrier system to its original capacity.

Phase 7

Shift the northbound lane to the inside, using a 45:1 shifting taper, to allow placement of the permanent white outside stripe.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Limit lane closures to one lane closure per direction at any given time. Contrary to section 112, lane closures will **NOT** be measured for payment, but are considered incidental to Maintain and Control Traffic.

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted
LEFT/RIGHT LANE CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILE, LEFT/RIGHT LANE CLOSED 3 MILE, SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

Contrary to section 112, Individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

FLASHING ARROWS

Flashing arrows will be paid for once, no matter how many times they are moved or relocated.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions, or if more than one lane closure is in place in the same direction of travel, provide additional portable changeable message signs. Place portable changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens relocate or provide additional portable changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. The messages required to be provided will be designated by the Engineer. The portable changeable message signs will be in operation at all times. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Portable Changeable Message Sign immediately. Portable Changeable Message Boards will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the signs upon completion of the work.

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved Truck Mounted Attenuators in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. Truck Mounted Attenuators will not be measured for payment, but are incidental to Maintain and Control Traffic. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

If lane closures are in place during nighttime hours, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but will be incidental to "Maintain and Control Traffic".

Place temporary and permanent striping in accordance with Section 112, except that:

1. Temporary and permanent striping will be 6" in width; and

2. If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape will be used; and
3. Edge lines will be required for temporary striping; and
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic.
5. Place permanent striping on pavement within the project limits.
6. Permanent striping will be Durable Waterborne Markings.

Should the Contractor change the existing striping pattern, the Contractor is to restripe the roadway back to its original configuration after a certain period of time especially if no work is anticipated for a period of time (i.e. Winter shutdown).

Pavement Striping – Temporary Removable Tape (Black, Yellow, and White) will be measured and paid for at the unit bid price for the initial installation only. Any repair will not be paid for directly but will be considered incidental to other items.

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with plastic drums, vertical panels, or barricades as shown on the Standard Drawings.

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1 ½". Place warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. Wedge all transverse transitions between resurfaced and unresurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course. Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2" – Protect with a lane closure.

2" to 4" – Protect with a lane closure. Place plastic drums, vertical panels, or barricades every 50 feet. Cones may not be used in place of plastic drums, panels, and barricades at any time. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.

Greater than 4" – Pavement Repair areas – In areas where pavement is to be removed, work should proceed continuously so that traffic is exposed to a drop-off for the minimum amount of time necessary to bring the pavement back up to existing grade. Barrel spacing should be 20 feet and appropriate lighting should be utilized to illuminate the area during nighttime operations.

COORDINATION OF WORK

The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

BOONE COUNTY
FD52 IM 008 99 337.08
CARROLL CROPPER I-275 BRIDGE OVER OHIO RIVER
DECK OVERLAY
ITEM NO. 6-2039.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility coordination efforts have determined that there should not be any utility relocation work required to complete the project. Any work pertaining to utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

N/A

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

N/A

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

BOONE COUNTY
FD52 IM 008 99 337.08
CARROLL CROPPER I-275 BRIDGE OVER OHIO RIVER
DECK OVERLAY
ITEM NO. 6-2039.00

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

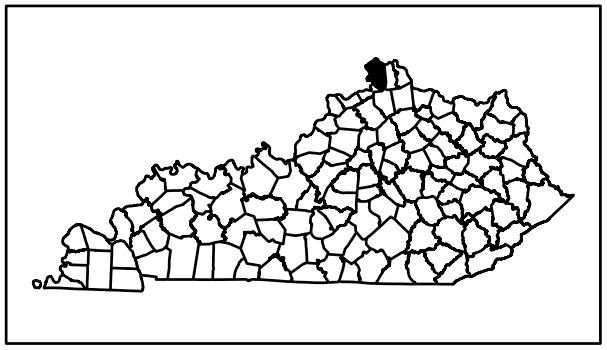
The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

BEFORE YOU DIG

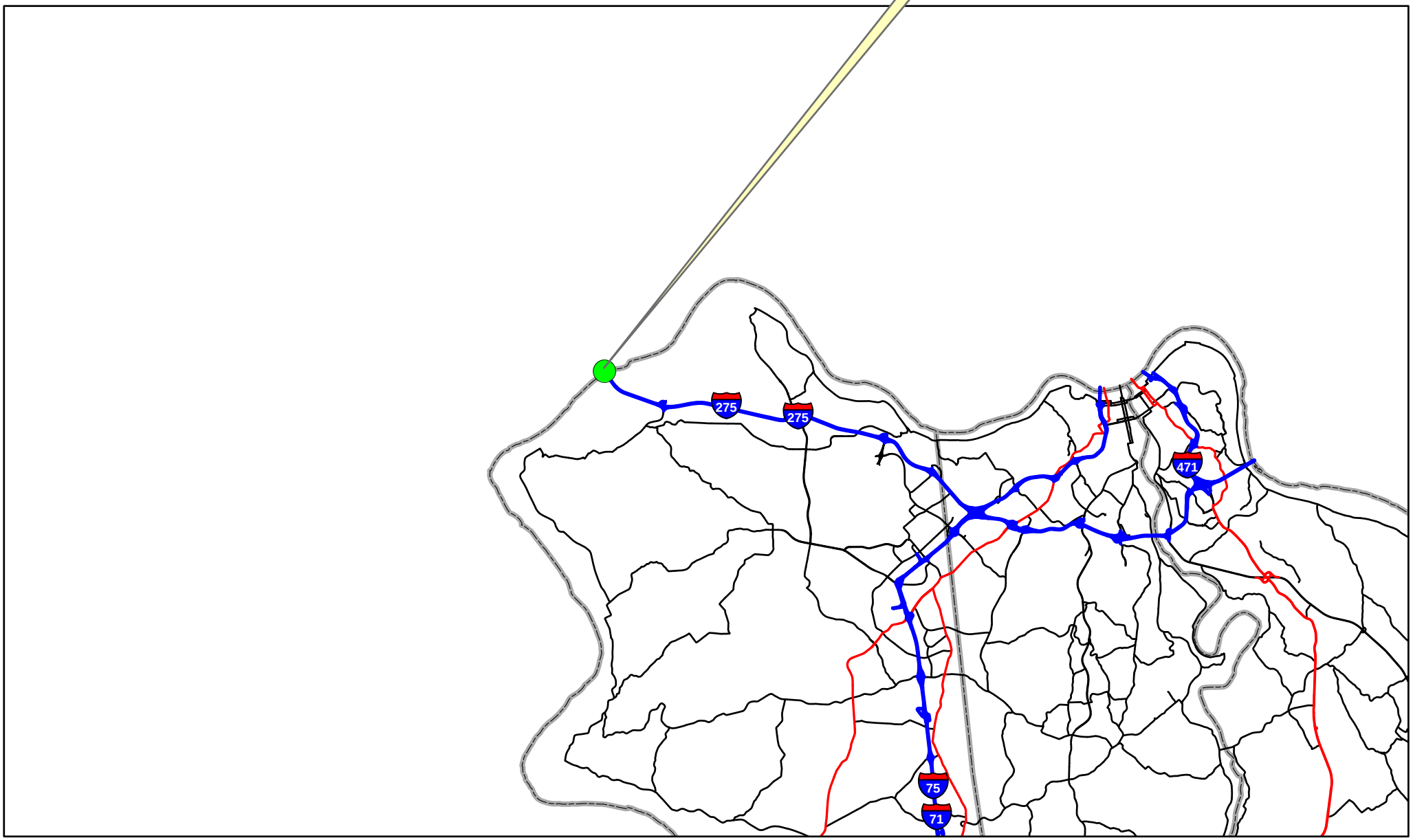
The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.



BOONE COUNTY

BRIDGE 008B00052N
CARROLL CROPPER BRIDGE
OVER OHIO RIVER
LatDD= 39.1045, LonDD= -84.8264



PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2012 with the 2012 Revision.*

Supplemental Specifications to the
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Subsection:	102.15 Process Agent.
Revision:	Replace the 1st paragraph with the following: Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 14A.4-010, 271B.11-010, 271B.11-070, 271B.11-080, 271B.5-010 and 271B.16-220, and file with the Department the name and address of the process agent upon whom process may be served.
Subsection:	105.13 Claims Resolution Process.
Revision:	Delete all references to TC 63-34 and TC 63-44 from the subsection as these forms are no longer available through the forms library and are forms generated within the AASHTO SiteManager software.
Subsection:	108.03 Preconstruction Conference.
Revision:	Replace 8) Staking with the following: 8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection:	109.07.02 Fuel.
Revision:	Revise item Crushed Aggregate Used for Embankment Stabilization to the following: Crushed Aggregate Used for Stabilization of Unsuitable Materials Used for Embankment Stabilization
	Delete the following item from the table. ~~Crushed Sandstone Base (Cement Treated)~~
Subsection:	110.02 Demobilization.
Revision:	Replace the first part of the first sentence of the second paragraph with the following: Perform all work and operations necessary to accomplish final clean-up as specified in the first paragraph of Subsection 105.12;
Subsection:	112.03.12 Project Traffic Coordinator (PTC).
Revision:	Replace the last paragraph of this subsection with the following: Ensure the designated PTC has sufficient skill and experience to properly perform the task assigned and has successfully completed the qualification courses.
Subsection:	112.04.18 Diversions (By-Pass Detours).
Revision:	Insert the following sentence after the 2nd sentence of this subsection. The Department will not measure temporary drainage structures for payment when the contract documents provide the required drainage opening that must be maintained with the diversion. The temporary drainage structures shall be incidental to the construction of the diversion. If the contract documents fail to provide the required drainage opening needed for the diversion, the cost of the temporary drainage structure will be handled as extra work in accordance with section 109.04.
Subsection:	201.03.01 Contractor Staking.
Revision:	Replace the first paragraph with the following: Perform all necessary surveying under the general supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.

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Subsection:	201.04.01 Contractor Staking.
Revision:	Replace the last sentence of the paragraph with the following: Complete the general layout of the project under the supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection:	206.04.01 Embankment-in-Place.
Revision:	Replace the fourth paragraph with the following: The Department will not measure **suitable** excavation included in the original plans that is disposed of for payment and will consider it incidental to Embankment-in-Place.
Subsection:	208.02.01 Cement.
Revision:	Replace paragraph with the following: Select Type I or Type II cement conforming to Section 801. Use the same type cement throughout the work.
Subsection:	208.03.06 Curing and Protection.
Revision:	Replace the fourth paragraph with the following: Do not allow traffic or equipment on the finished surface until the stabilized subgrade has cured for a total of 7-days with an ambient air temperature above 40 degrees Fahrenheit. A curing day consists of a continuous 24-hour period in which the ambient air temperature does not fall below 40 degrees Fahrenheit. Curing days will not be calculated consecutively, but must total seven (7) , 24-hour days with the ambient air temperature remaining at or above 40 degrees Fahrenheit before traffic or equipment will be allowed to traverse the stabilized subgrade. The Department may allow a shortened curing period when the Contractor requests. The Contractor shall give the Department at least 3 day notice of the request for a shortened curing period. The Department will require a minimum of 3 curing days after final compaction. The Contractor shall furnish cores to the treated depth of the roadbed at 500 feet intervals for each lane when a shortened curing time is requested. The Department will test cores using an unconfined compression test. Roadbed cores must achieve a minimum strength requirement of 80 psi.
Subsection:	208.03.06 Curing and Protection.
Revision:	Replace paragraph eight with the following: At no expense to the Department, repair any damage to the subgrade caused by freezing.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Revision:	Revise **Seed Mix Type I** to the mixture shown below: 50% Kentucky 31 Tall Fescue (Festuca arundinacea) 35% Hard Fescue (Festuca (Festuca longifolia) 10% Ryegrass, Perennial (Lolium perenne) 5% White Dutch Clover (Trifolium repens)
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Number:	2)
Revision:	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed mix Type II at a minimum application rate of 100 pounds per acre. If adjacent to a golf course replace the crown vetch with Kentucky 31 Tall Fescue.

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Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Number:	3)
Revision:	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12. Apply seed mix Type III at a minimum application rate of 100 pounds per acre. If adjacent to crop land or golf course, replace the Sericea Lespedeza with Kentucky 31 Fescue.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	B) Procedures for Permanent Seeding.
Revision:	Delete the first sentence of the section.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	B) Procedures for Permanent Seeding.
Revision:	Replace the second and third sentence of the section with the following: Prepare a seedbed and apply an initial fertilizer that contains a minimum of 100 pounds of nitrogen, 100 pounds of phosphate, and 100 pounds of potash per acre. Apply agricultural limestone to the seedbed when the Engineer determines it is needed. When required, place agricultural limestone at a rate of 3 tons per acre.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Top Dressing.
Revision:	Change the title of part to D) Fertilizer.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Fertilizer.
Revision:	Replace the first paragraph with the following: Apply fertilizer at the beginning of the seeding operation and after vegetation is established. Use fertilizer delivered to the project in bags or bulk. Apply initial fertilizer to all areas prior to the seeding or sodding operation at the application rate specified in 212.03.03 B). Apply 20-10-10 fertilizer to the areas after vegetation has been established at a rate of 11.5 pounds per 1,000 square feet. Obtain approval from the Engineer prior to the 2nd fertilizer application. Reapply fertilizer to any area that has a streaked appearance. The reapplication shall be at no additional cost to the Department. Re-establish any vegetation severely damaged or destroyed because of an excessive application of fertilizer at no cost to the Department.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Fertilizer.
Revision:	Delete the second paragraph.
Subsection:	212.04.04 Agricultural Limestone.
Revision:	Replace the entire section with the following: The Department will measure the quantity of agricultural limestone in tons.
Subsection:	212.04.05 Fertilizer.
Revision:	Replace the entire section with the following: The Department will measure fertilizer used in the seeding or sodding operations for payment. The Department will measure the quantity by tons.

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Subsection:	212.05 PAYMENT.
Revision:	Delete the following item code:
	Code Pay Item Pay Unit
	05966 Topdressing Fertilizer Ton
Subsection:	212.05 PAYMENT.
Revision:	Add the following pay items:
	Code Pay Item Pay Unit
	05963 Initial Fertilizer Ton
	05964 20-10-10 Fertilizer Ton
	05992 Agricultural Limestone Ton
Subsection:	213.03.02 Progress Requirements.
Revision:	Replace the last sentence of the third paragraph with the following:
	Additionally, the Department will apply a penalty equal to the liquidated damages when all aspects of the work are not coordinated in an acceptable manner within 7 calendar days after written notification.
Subsection:	213.03.05 Temporary Control Measures.
Part:	E) Temporary Seeding and Protection.
Revision:	Delete the second sentence of the first paragraph.
Subsection:	304.02.01 Physical Properties.
Table:	Required Geogrid Properties
Revision:	Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	B) Sampling.
Revision:	Replace the second sentence with the following:
	The Department will determine when to obtain the quality control samples using the random-number feature of the mix design submittal and approval spreadsheet. The Department will randomly determine when to obtain the verification samples required in Subsections 402.03.03 and 402.03.04 using the Asphalt Mixture Sample Random Tonnage Generator.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	3) VMA.
Revision:	Add the following paragraph below Number 3) VMA:
	Retain the AV/VMA specimens and one additional corresponding G_{mm} sample for 5 working days for mixture verification testing by the Department. For Specialty Mixtures, retain a mixture sample for 5 working days for mixture verification testing by the Department. When the Department's test results do not verify that the Contractor's quality control test results are within the acceptable tolerances according to Subsection 402.03.03, retain the samples and specimens from the affected sublot(s) for the duration of the project.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	4) Density.
Revision:	Replace the second sentence of the Option A paragraph with the following:
	Perform coring by the end of the following work day.

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Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	5) Gradation.
Revision:	Delete the second paragraph.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	H) Unsatisfactory Work.
Number:	1) Based on Lab Data.
Revision:	Replace the second paragraph with the following: When the Engineer determines that safety concerns or other considerations prohibit an immediate shutdown, continue work and the Department will make an evaluation of acceptability according to Subsection 402.03.05.
Subsection:	402.03.03 Verification.
Revision:	Replace the first paragraph with the following: **402.03.03 Mixture Verification.** For volumetric properties, the Department will perform a minimum of one verification test for AC, AV, and VMA according to the corresponding procedures as given in Subsection 402.03.02. The Department will randomly determine when to obtain the verification sample using the Asphalt Mixture Sample Random Tonnage Generator. For specialty mixtures, the Department will perform one AC and one gradation determination per lot according to the corresponding procedures as given in Subsection 402.03.02. However, Department personnel will not perform AC determinations according to KM 64-405. The Contractor will obtain a quality control sample at the same time the Department obtains the mixture verification sample and perform testing according to the procedures given in Subsection 402.03.02. If the Contractor's quality control sample is verified by the Department's test results within the tolerances provided below, the Contractor's sample will serve as the quality control sample for the affected sublot. The Department may perform the mixture verification test on the Contractor's equipment or on the Department's equipment.
Subsection:	402.03.03 Verification.
Part:	A) Evaluation of Sublot(s) Verified by Department.
Revision:	Replace the third sentence of the second paragraph with the following: When the paired *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection:	402.03.03 Verification.
Part:	B) Evaluation of Sublots Not Verified by Department.
Revision:	Replace the third sentence of the first paragraph with the following: When differences between test results are not within the tolerances listed below, the Department will resolve the discrepancy according to Subsection 402.03.05.

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Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the second paragraph with the following: When the *F* -test or *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection: **Part:** **Revision:**	402.03.03 Verification. C) Test Data Patterns. Replace the second sentence with the following: When patterns indicate substantial differences between the verified and non-verified sublots, the Department will perform further comparative testing according to subsection 402.03.05.
Subsection: **Revision:**	402.03 CONSTRUCTION. Add the following subsection: **402.03.04 Testing Equipment and Technician Verification.** For mixtures with a minimum quantity of 20,000 tons and for every 20,000 tons thereafter, the Department will obtain an additional verification sample at random using the Asphalt Mixture Sample Random Tonnage Generator in order to verify the integrity of the Contractor's and Department's laboratory testing equipment and technicians. The Department will obtain a mixture sample of at least 150 lb at the asphalt mixing plant according to KM 64-425 and split it according to AASHTO R 47. The Department will retain one split portion of the sample and provide the other portion to the Contractor. At a later time convenient to both parties, the Department and Contractor will simultaneously reheat the sample to the specified compaction temperature and test the mixture for AV and VMA using separate laboratory equipment according to the corresponding procedures given in Subsection 402.03.02. The Department will evaluate the differences in test results between the two laboratories. When the difference between the results for AV or VMA is not within ± 2.0 percent, the Department will investigate and resolve the discrepancy according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.04 Dispute Resolution. Change the subsection number to 402.03.05.
Subsection: **Part:** **Table:** **Revision:**	402.05 PAYMENT. Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures AC Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to ±0.6.
Subsection: **Revision:**	403.02.10 Material Transfer Vehicle (MTV). Replace the first sentence with the following: In addition to the equipment specified above, provide a MTV with the following minimum characteristics:
Subsection: **Revision:**	412.02.09 Material Transfer Vehicle (MTV). Replace the paragraph with the following: Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.

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Subsection: **Revision:**	412.03.07 Placement and Compaction. Replace the first paragraph with the following: Use a MTV when placing SMA mixture in the driving lanes. The MTV is not required on ramps and/or shoulders unless specified in the contract. When the Engineer determines the use of the MTV is not practical for a portion of the project, the Engineer may waive its requirement for that portion of pavement by a letter documenting the waiver.
Subsection: **Revision:**	412.04 MEASUREMENT. Add the following subsection: 412.04.03. Material Transfer Vehicle (MTV). The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.
Subsection: **Part:** **Revision:**	501.03.19 Surface Tolerances and Testing Surface. B) Ride Quality. Add the following to the end of the first paragraph: The Department will specify if the ride quality requirements are Category A or Category B when ride quality is specified in the Contract. Category B ride quality requirements shall apply when the Department fails to classify which ride quality requirement will apply to the Contract.
Subsection: **Revision:**	603.03.06 Cofferdams. Replace the seventh sentence of paragraph one with the following: Submit drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	605.03.04 Tack Welding. Insert the subsection and the following: 605.03.04 Tack Welding. The Department does not allow tack welding.
Subsection: **Part:** **Number:** **Revision:**	606.03.17 Special Requirements for Latex Concrete Overlays. A) Existing Bridges and New Structures. 1) Prewetting and Grout-Bond Coat. Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection: **Revision:**	609.03 Construction. Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.
Subsection: **Revision:**	611.03.02 Precast Unit Construction. Replace the first sentence of the subsection with the following: Construct units according to ASTM C1577, **replacing Table 1 (Design Requirements for Precast Concrete Box Sections Under Earth, Dead and HL-93 Live Load Conditions) with KY Table 1 (Precast Culvert KYHL-93 Design Table)**, and Section 605 with the following exceptions and additions:

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Subsection: **Number:** **Revision:**	613.03.01 Design. 2) Replace "AASHTO Standard Specifications for Highway Bridges" with "AASHTO LRFD Bridge Design Specifications"
Subsection: **Revision:**	615.06.02 Add the following sentence to the end of the subsection. The ends of units shall be normal to walls and centerline except exposed edges shall be beveled ¾ inch.
Subsection: **Revision:**	615.06.03 Placement of Reinforcement in Precast 3-Sided Units. Replace the reference of 6.6 in the section to 615.06.06.
Subsection: **Revision:**	615.06.04 Placement of Reinforcement for Precast Endwalls. Replace the reference of 6.7 in the section to 615.06.07.
Subsection: **Revision:**	615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units. Replace the subsection with the following: Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outer most longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.
Subsection: **Revision:**	615.06.07 Laps, Welds, and Spacing for Precast Endwalls. Replace the subsection with the following: Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The spacing center-to-center of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

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Subsection:	615.08.01 Type of Test Specimen.
Revision:	Replace the subsection with the following: Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd^3 (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.
Subsection:	615.08.02 Compression Testing.
Revision:	Delete the second sentence.
Subsection:	615.08.04 Acceptability of Core Tests.
Revision:	Delete the entire subsection.
Subsection:	615.12 Inspection.
Revision:	Add the following sentences to the end of the subsection: Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.
Subsection:	716.02.02 Paint.
Revision:	Replace sentence with the following: Conform to Section 821.
Subsection:	716.03 CONSTRUCTION.
Revision:	Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
Subsection:	716.03.02 Lighting Standard Installation.
Revision:	Replace the second sentence with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	A) Conventional Installation.
Revision:	Replace the third sentence with the following: Orient the transformer base so the door is positioned on the side away from on-coming traffic.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	A) Conventional Installation.
Number:	1) Breakaway Installation and Requirements.
Revision:	Replace the first sentence with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	B) High Mast Installation
Revision:	Replace the first sentence with the following: Install each high mast pole as noted on plans.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	B) High Mast Installation
Number:	2) Concrete Base Installation
Revision:	Modification of Chart and succeeding paragraphs within this section:

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Drilled Shaft Depth Data							
Level Ground		3:1 Ground Slope		2:1 Ground Slope		1.5:1 Ground Slope (2)	
Soil	Rock	Soil	Rock	Soil	Rock	Soil	Rock
17 ft	7 ft	19 ft	7 ft	20 ft	7 ft	(1)	7 ft

Steel Requirements			
Vertical Bars		Ties or Spiral	
Size	Total	Size	Spacing or Pitch
#10	16	#4	12 inch

(1): Shaft length is 22' for cohesive soil only. For cohesionless soil, contact geotechnical branch for design.
(2): Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic.

If rock is encountered during drilling operations and confirmed by the engineer to be of sound quality, the shaft is only required to be further advanced into the rock by the length of rock socket shown in the table. The total length of the shaft need not be longer than that of soil alone. Both longitudinal rebar length and number of ties or spiral length shall be adjusted accordingly.

If a shorter depth is desired for the drilled shaft, the contractor shall provide, for the state's review and approval, a detailed column design with individual site specific soil and rock analysis performed and approved by a Professional Engineer licensed in the Commonwealth of Kentucky.

Spiral reinforcement may be substituted for ties. If spiral reinforcement is used, one and one-half closed coils shall be provided at the ends of each spiral unit. Subsurface conditions consisting of very soft clay or very loose saturated sand could result in soil parameters weaker than those assumed. Engineer shall consult with the geotechnical branch if such conditions are encountered.

The bottom of the drilled hole shall be firm and thoroughly cleaned so no loose or compressible materials are present at the time of the concrete placement. If the drilled hole contains standing water, the concrete shall be placed using a tremie to displace water. Continuous concrete flow will be required to insure full displacement of any water.

The reinforcement and anchor bolts shall be adequately supported in the proper positions so no movement occurs during concrete placement. Welding of anchor bolts to the reinforcing cage is unacceptable, templates shall be used. Exposed portions of the foundation shall be formed to create a smooth finished surface. All forming shall be removed upon completion of foundation construction.

Subsection: 716.03.03 Trenching.
Part: A) Trenching of Conduit for Highmast Ducted Cables.
Revision: Add the following after the first sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.

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Subsection:	716.03.03 Trenching.
Part:	B) Trenching of Conduit for Non-Highmast Cables.
Revision:	Add the following after the second sentence: If depths greater than 24 inches are necessary for either situation listed previously, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection:	716.03.10 Junction Boxes.
Revision:	Replace subsection title with the following: Electrical Junction Box.
Subsection:	716.04.07 Pole with Secondary Control Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, or electrical inspection fees, and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breaker, contactor, manual switch, ground rods, and ground wires and will consider them incidental to this item of work.
Subsection:	716.04.08 Lighting Control Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure constructing the concrete base, excavation, backfilling, restoration, any necessary anchors, or electrical inspection fees, and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breakers, contactor, manual switch, ground rods, and ground wires and will consider them incidental to this item of work.
Subsection:	716.04.09 Luminaire.
Revision:	Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection:	716.04.10 Fused Connector Kits.
Revision:	Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection:	716.04.13 Junction Box.
Revision:	Replace the subsection title with the following: Electrical Junction Box Type Various.
Subsection:	716.04.13 Junction Box.
Part:	A) Junction Electrical.
Revision:	Rename A) Junction Electrical to the following: A) Electrical Junction Box.
Subsection:	716.04.14 Trenching and Backfilling.
Revision:	Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.

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Subsection: 716.04.18 Remove Lighting.
Revision: Replace the paragraph with the following:
The Department will measure the quantity as a lump sum for the removal of lighting equipment. The Department will not measure the disposal of all equipment and materials off the project by the contractor. The Department also will not measure the transportation of the materials and will consider them incidental to this item of work.

Subsection: 716.04.20 Bore and Jack Conduit.
Revision: Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.

Subsection: 716.05 PAYMENT.
Revision: Replace items 04810-04811, 20391NS835 and, 20392NS835 under Code, Pay Item, and Pay Unit with the following:

Code	Pay Item	Pay Unit
04810	Electrical Junction Box	Each
04811	Electrical Junction Box Type B	Each
20391NS835	Electrical Junction Box Type A	Each
20392NS835	Electrical Junction Box Type C	Each

Subsection: 723.02.02 Paint.
Revision: Replace sentence with the following: Conform to Section 821.

Subsection: 723.03 CONSTRUCTION.
Revision: Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,

Subsection: 723.03.02 Poles and Bases Installation.
Revision: Replace the first sentence with the following:
Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base.

Subsection: 723.03.02 Poles and Bases Installation.
Part: A) Steel Strain and Mastarm Poles Installation
Revision: Replace the second paragraph with the following: For concrete base installation, see Section 716.03.02, B), 2), Paragraphs 2-7. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:

Subsection: 723.03.02 Poles and Bases Installation.
Part: B) Pedestal or Pedestal Post Installation.
Revision: Replace the fourth sentence of the paragraph with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.

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Subsection: **Part:** **Revision:**	723.03.03 Trenching. A) Under Roadway. Add the following after the second sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain ether required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection: **Revision:**	723.03.11 Wiring Installation. Add the following sentence between the fifth and sixth sentences: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection: **Revision:**	723.03.12 Loop Installation. Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection: **Revision:**	723.04.02 Junction Box. Replace subsection title with the following: Electrical Junction Box Type Various.
Subsection: **Revision:**	723.04.03 Trenching and Backfilling. Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.10 Signal Pedestal. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, specified conduits, fittings, ground rod, ground wire, backfilling, restoring disturbed areas, or other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.15 Loop Saw Slot and Fill. Replace the second sentence with the following: The Department will not measure sawing, cleaning and filling induction loop saw slot, loop sealant, backer rod, and grout and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.16 Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished, installed and connected to pole/pedestal. The Department will not measure installing R10-3e (with arrow) sign, furnishing and installing mounting hardware for sign and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.18 Signal Controller- Type 170. Replace the second sentence with the following: The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees and will consider them incidental to this item of work. The Department will also not measure furnishing and connecting the induction of loop amplifiers, pedestrian isolators, load switches, model 400 modem card; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.

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Subsection: **Revision:**	723.04.20 Install Signal Controller - Type 170. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, and excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees and will consider them incidental to this item of work. The Department will also not measure connecting the induction loop amplifiers, pedestrian, isolators, load switches, model 400 modem card; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.22 Remove Signal Equipment. Replace the paragraph with the following: The Department will measure the quantity as a lump sum removal of signal equipment. The Department will not measure the return of control equipment and signal heads to the Department of Highways as directed by the District Traffic Engineer. The Department also will not measure the transportation of materials of the disposal of all other equipment and materials off the project by the contractor and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.28 Install Pedestrian Detector Audible. Replace the second sentence with the following: The Department will not measure installing sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.29 Audible Pedestrian Detector. Replace the second sentence with the following: The Department will not measure furnishing and installing the sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.30 Bore and Jack Conduit. Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.
Subsection: **Revision:**	723.04.31 Install Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed and connected to pole/pedestal. The Department will not measure installing sign R 10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.32 Install Mast Arm Pole. Replace the second sentence with the following: The Department will not measure arms, signal mounting brackets, anchor bolts, or any other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.33 Pedestal Post. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, conduit, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

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Subsection: 723.04.36 Traffic Signal Pole Base.
Revision: Replace the second sentence with the following: The Department will not measure excavation, reinforcing steel, anchor bolts, specified conduits, ground rods, ground wires, backfilling, or restoration and will consider them incidental to this item of work.

Subsection: 723.04.37 Install Signal Pedestal.
Revision: Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Subsection: 723.04.38 Install Pedestal Post.
Revision: Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Subsection: 723.05 PAYMENT.
Revision: Replace items 04810-04811, 20391NS835 and, 20392NS835 under Code, Pay Item, and Pay Unit with the following:

Code	Pay Item	Pay Unit
04810	Electrical Junction Box	Each
04811	Electrical Junction Box Type B	Each
20391NS835	Electrical Junction Box Type A	Each
20392NS835	Electrical Junction Box Type C	Each

Subsection: 804.01.02 Crushed Sand.
Revision: Delete last sentence of the section.

Subsection: 804.01.06 Slag.
Revision: Add subsection and following sentence.
Provide blast furnace slag sand where permitted. The Department will allow steel slag sand only in asphalt surface applications.

Subsection: 804.04 Asphalt Mixtures.
Revision: Replace the subsection with the following:
Provide natural, crushed, conglomerate, or blast furnace slag sand, with the addition of filler as necessary, to meet gradation requirements. The Department will allow any combination of natural, crushed, conglomerate or blast furnace slag sand when the combination is achieved using cold feeds at the plant. The Engineer may allow other fine aggregates.

Subsection: 806.03.01 General Requirements.
Revision: Replace the second sentence of the paragraph with the following:
Additionally, the material must have a minimum solubility of 99.0 percent when tested according to AASHTO T 44 and PG 76-22 must exhibit a minimum recovery of 60 percent, with a J_{NR} (nonrecoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.

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Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Revision: Replace the Elastic Recovery, % [3] (AASHTO T301) and all corresponding values in the table with the following:

Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50%Pay[1]
MSCR recovery, % [3] (AASHTO TP 70)	60 Min.	≥58	56	55	54	<53

Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Superscript: (3)
Revision: Replace [3] with the following:
Perform testing at 64°C.

Subsection: 813.04 Gray Iron Castings.
Revision: Replace the reference to "AASHTO M105" with "ASTM A48".

Subsection: 813.09.02 High Strength Steel Bolts, Nuts, and Washers.
Number: A) Bolts.
Revision: Delete first paragraph and "Hardness Number" Table. Replace with the following:
A) Bolts. Conform to ASTM A325 (AASHTO M164) or ASTM A490 (AASHTO 253) as applicable.

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Third paragraph, replace the reference to "AWPA C14" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Replace the first sentence of the fourth paragraph with the following:
Use any of the species of wood for round or square posts covered under AWPA U1.

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Fourth paragraph, replace the reference to "AWPA C2" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Delete the second sentence of the fourth paragraph.

Subsection: 814.05.02 Composite Plastic.
Revision: 1) Add the following to the beginning of the first paragraph: Select composite offset blocks conforming to this section and assure blocks are from a manufacturer included on the Department's List of Approved Materials.
2) Delete the last paragraph of the subsection.

Subsection: 816.07.02 Wood Posts and Braces.
Revision: First paragraph, replace the reference to "AWPA C5" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 816.07.02 Wood Posts and Braces.
Revision: Delete the second sentence of the first paragraph.

Subsection: 818.07 Preservative Treatment.
Revision: First paragraph, replace all references to "AWPA C14" with "AWPA U1, Section A".

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Subsection: **Revision:**	834.14 Lighting Poles. Replace the first sentence with the following: Lighting pole design shall be in accordance with loading and allowable stress requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims, with the exception of the following: The Cabinet will waive the requirement stated in the first sentence of Section 5.14.6.2 – Reinforced Holes and Cutouts for high mast poles (only). The minimum diameter at the base of the pole shall be 22 inches for high mast poles (only).
Subsection **Revision:**	834.14.03 High Mast Poles. Remove the second and fourth sentence from the first paragraph.
Subsection **Revision:**	834.14.03 High Mast Poles. Replace the third paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	834.14.03 High Mast Poles. Replace paragraph six with the following: Provide a pole section that conforms to ASTM A 595 grade A with a minimum yield strength of 55 KSI or ASTM A 572 with a minimum yield strength of 55 KSI. Use tubes that are round or 16 sided with a four inch corner radius, have a constant linear taper of .144 in/ft and contain only one longitudinal seam weld. Circumferential welded tube butt splices and laminated tubes are not permitted. Provide pole sections that are telescopically slip fit assembled in the field to facilitate inspection of interior surface welds and the protective coating. The minimum length of the telescopic slip splices shall be 1.5 times the inside diameter of the exposed end of the female section. Use longitudinal seam welds as commended in Section 5.15 of the AASHTO 2013 Specifications. The thickness of the transverse base shall not be less than 2 inches. Plates shall be integrally welded to the tubes with a telescopic welded joint or a full penetration groove weld with backup bar. The handhole cover shall be removable from the handhole frame. One the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM A 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7-guage stainless steel to provide adjustability to insure weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube of the pole but needs to be at least 15 inches. Provide products that are hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A 153 (hardware items).
Subsection: **Revision:**	834.16 ANCHOR BOLTS. Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall follow the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications.

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Subsection: **Revision:**	834.17.01 Conventional. Add the following sentence after the second sentence: Provide a waterproof sticker mounted on the bottom of the housing that is legible from the ground and indicates the wattage of the fixture by providing the first two numbers of the wattage.
Subsection: **Revision:**	834.21.01 Waterproof Enclosures. Replace the last five sentences in the second paragraph with the following sentences: Provide a cabinet door with a louvered air vent, filter-retaining brackets and an easy to clean metal filter. Provide a cabinet door that is keyed with a factory installed standard no. 2 corbin traffic control key. Provide a light fixture with switch and bulb. Use a 120-volt fixture and utilize a L.E.D. bulb (equivalent to 60 watts minimum). Fixture shall be situated at or near the top of the cabinet and illuminate the contents of the cabinet. Provide a 120 VAC GFI duplex receptacle in the enclosure with a separate 20 amp breaker.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first sentence of the first paragraph with the following: Pole diameter and wall thickness shall be calculated in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	835.07 Traffic Poles. *Replace the first sentence of the fourth paragraph with the following: Ensure transverse plates have a thickness ≥ 2 inches. *Add the following sentence to the end of the fourth paragraph: The bottom pole diameter shall not be less than 16.25 inches.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the third sentence of the fifth paragraph with the following: For anchor bolt design, pole forces shall be positioned in such a manner to maximize the force on any individual anchor bolt regardless of the actual anchor bolt orientation with the pole.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first and second sentence of the sixth paragraph with the following: The pole handhole shall be 25 inches by 6.5 inches. The handhole cover shall be removable from the handhole frame. On the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7 gauge stainless steel to provide adjustability to insure a weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube but needs to be at least 12 inches.

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Subsection:	835.07 Traffic Poles.
Revision:	*Replace the first sentence of the last paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky. *Replace the third sentence of the last paragraph with the following: All tables referenced in 835.07 are found in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection:	835.07.01 Steel Strain Poles.
Revision:	Replace the second sentence of the second paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection:	835.07.01 Steel Strain Poles.
Revision:	Replace number 7. after the second paragraph with the following: 7. Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection:	835.07.02 Mast Arm Poles.
Revision:	Replace the second sentence of the fourth paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection:	835.07.02 Mast Arm Poles.
Revision:	Replace number 7) after the fourth paragraph with the following: 7) Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection:	835.07.03 Anchor Bolts.
Revision:	Add the following to the end of the paragraph: There shall be two steel templates (one can be used for the headed part of the anchor bolt when designed in this manner) provided per pole. Templates shall be contained within a 26.5 inch diameter. All templates shall be fully galvanized (ASTM A 153).
Subsection:	835.16.05 Optical Units.
Revision:	Replace the 3rd paragraph with the following: The list of certified products can be found on the following website: http://www.intertek.com.
Subsection:	835.19.01 Pedestrian Detector Body.
Revision:	Replace the first sentence with the following: Provide a four holed pole mounted aluminum rectangular housing that is compatible with the pedestrian detector.
Subsection:	843.01.01 Geotextile Fabric.
Table:	TYPE I FABRIC GEOTEXTILES FOR SLOPE PROTECTION AND CHANNEL LINING
Revision:	Add the following to the chart:

Property	Minimum Value[(1)]	Test Method
CBR Puncture (lbs)	494	ASTM D6241
Permittivity (1/s)	0.7	ASTM D4491

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Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE II FABRIC GEOTEXTILES FOR UNDERDRAINS
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	210	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE III FABRIC GEOTEXTILES FOR SUBGRADE OR EMBANKMENT STABILIZATION
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	370	ASTM D6241
Permittivity (1/s)	0.05	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE IV FABRIC GEOTEXTILES FOR EMBANKMENT DRAINAGE BLANKETS AND PAVEMENT EDGE DRAINS
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	309	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE V HIGH STRENGTH GEOTEXTILE FABRIC
Revision: Make the following changes to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	618	ASTM D6241
Grab Strength (lbs)	700	ASTM D4632
Apparent Opening Size	U.S. #40[3]	ASTM D4751

[3] Maximum average roll value.

REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012.

2. AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002.

3. FHWA Manual on Uniform Traffic Control Devices, Edition of 2009.

4. Active Sepia List

Drawing No.	Drawing Name
001	Delineators at Narrow Shoulder Bridges
002	Delineators for Guardrail
004	Delineators for Concrete Barriers
008	Guardrail Components
009	Crash Cushion Type VI-BT
012	Steel Beam Guardrail "W" Beam
013	Guardrail Posts
014	Guardrail Connector to Bridge End Type A and A-1 Components

5. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

BGX-009-04	Bridge Restoration and Waterproofing with Concrete Overlays
BJE-001-12	Neoprene Expansion Dams and Armored Edges
RBB-010-04	Guardrail Transition from Normal Shoulder to Narrow Bridge
RBC-001-10	Guardrail Connector to Bridge End Type A and A1
RBC-002-02	Guardrail Connector to Bridge End Type A Components
RBE-060-13	Crash Cushion Type VI (One & Two Direction)
RBI-001-10	Typical Guardrail Installations
RBI-002-06	Typical Guardrail Installations
RBM-001-09	Concrete Median Barrier Fixed-Form or Slip-Form (Permanent)
RBM-115-09	Concrete Barrier Wall Type 9T (Temporary)
RBR-016-04	Guardrail Posts
RGS-002-05	Superelevation for Multilane Pavement
RGX-001-05	Miscellaneous Standards Part I
TPM-105-02	Pavement Marker Arrangements Multi-Lane Roadways
TTC-115-02	Lane Closure Multi-Lane Highway Case I
TTC-120-02	Lane Closure Multi-Lane Highway Case II
TTC-145-02	Median Crossover Case II
TTC-146-02	Median Crossover Case II
TTC-155-01	Temporary Pavement Marker Arrangements for Construction Zones
TTC-160-01	Temporary Pavement Marker Arrangements for Lane Closures
TTD-110-01	Post Splicing Detail

TTD-120-01	Work Zone Speed Limit and Double Fine Signs
TTD-125-01	Pavement Condition Warning Signs
TTS-110-01	Mobile Operation for Paint Striping Case III
TTS-115-01	Mobile Operation for Paint Striping Case IV
TTS-120-01	Mobile Operation for Durable Striping Case I

6. Kentucky Transportation Cabinet, Department of Highways, Special Notes & Provisions, current editions, as applicable:

Special Note 6J	Non-Epoxy Adhesives (12/16/2013)
Special Note 7S	Structural Adhesives with Extended Contact Time (1/1/2008)
Special Note	Contract Completion Date and Liquidated Damages on Bridge Repair Contracts *attached*
Special Note	Use of Hydrodemolition Method *attached*
Special Note	Bridge Restoration and Waterproofing with Concrete Overlays *attached*
Special Note	Replacing Expansion Dams and/or Installing Armored Edges for Concrete *attached*
Special Note	Replacing Steel Finger Expansion Joints *attached*
Special Note	Drainage System Modifications *attached*
Special Note	Plinth and Median Wall Retrofit *attached*
Special Note	Remove and Replace Girder Bearings *attached*
Special Note	Surface Preparation and Paint Application *attached*
Special Note	Paint *attached*
Special Note	Waste Management *attached*
Special Note	Bridges over Railroads *attached*
Special Note 1I	Portable Changeable Message Signs (6/15/2012)
Special Note 10W	Waterblasting Striping Removal (1/1/2008)
Special Note	Typical Section Dimensions *attached*
Special Note	Before You Dig *attached*
Special Note	Erosion Prevention and Sediment Control *attached*
Special Note	Shoulder Preparation and Restoration *attached*
Special Provision 4	Welding Steel Bridges

7. Indiana Department of Transportation Standard Drawings, current editions, as applicable:

E 601-TTGB-01	Guardrail Transition Type TGB
E 601-TBGC-02	Thrie-Beam Guardrail Components
E 706-TTFC-01	Concrete Bridge Railing Transition, TFC Plan and Elevation
E 706-TTFC-02	Concrete Bridge Railing Transition, TFC Sections
E 706-TTFC-03	Concrete Bridge Railing Transition, TFC
E 706-TTPP-03	Concrete Bridge Railing Transition, TPF-2
E 706-TTPP-05	Concrete Bridge Railing Transition, TPS-1
E 706-TTPP-06	Concrete Bridge Railing Transition, TPS-1

E 706-TTPP-07 Concrete Bridge Railing Transition, TPS-2

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

AN ACT OF THE KENTUCKY GENERAL ASSEMBLY TO PREVENT DISCRIMINATION IN EMPLOYMENT

KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy). The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age (between forty and seventy), in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

REVISED: 12-3-92

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

> KRS 11A.040 (6) provides:
>
> No present or former public servant shall, within six (6) months of following termination of his office or employment, accept employment, compensation or other economic benefit from any person or business that contracts or does business with the state in matters in which he was directly involved during his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved in state government. This subsection shall not prohibit the performance of ministerial functions, including, but not limited to, filing tax returns, filing applications for permits or licenses, or filing incorporation papers.
>
> KRS 11A.040 (8) states:
>
> A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, for a period of one (1) year after the latter of:
> a) The date of leaving office or termination of employment; or
> b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

General Decision Number: KY140101 07/04/2014 KY101

Superseded General Decision Number: KY20130101

State: Kentucky

Construction Type: Highway

Counties: Boone, Campbell, Kenton and Pendleton Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	01/03/2014
1	04/25/2014
2	05/02/2014
3	05/09/2014
4	06/27/2014
5	07/04/2014

BRKY0002-005 06/01/2009

	Rates	Fringes
BRICKLAYER	$ 26.12	9.73

BROH0001-005 06/01/2008

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 25.75	8.60

CARP0698-001 05/01/2009

BOONE, CAMPBELL, KENTON & PENDLETON COUNTIES:

	Rates	Fringes
Carpenter & Piledrivermen	$ 27.05	9.69
Diver	$ 40.58	9.69

ELEC0212-007 06/02/2014

	Rates	Fringes
ELECTRICIAN	$ 26.74	16.45

ELEC0212-013 07/01/2013

	Rates	Fringes
Sound & Communication Technician	$ 22.50	9.51

ENGI0018-013 05/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 32.44	13.90
GROUP 2	$ 32.32	13.90
GROUP 3	$ 31.28	13.90
GROUP 4	$ 30.10	13.90
GROUP 5	$ 24.64	13.90
GROUP 6	$ 32.69	13.90
GROUP 7	$ 32.94	13.90

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; & Wheel Excavator

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); & Vermeer type Concrete Saw

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag

capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); & Welding Machines

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway) except Masonry); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift (highway); Form Trencher; Hydro Hammer; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); & Vibratory Compactor with Integral Power

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt); Generator; Masonry Fork Lift; Inboard-Outboard Motor Boat Launch; Masonry Fork Lift; Oil Heater (asphalt plant); Oiler; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; & VAC/ALLS

GROUP 6 - Master Mechanic & Boom from 150 to 180

GROUP 7 - Boom from 180 and over

IRON0044-008 06/01/2013

	Rates	Fringes
Ironworkers:		
Fence Erector	$ 22.70	18.40
Structural	$ 25.00	18.40

IRON0372-004 06/01/2013

	Rates	Fringes
IRONWORKER, REINFORCING	$ 26.47	19.30

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* LABO0189-004 07/01/2014

PENDLETON COUNTY:

	Rates	Fringes
LABORER		
GROUP 1	$ 21.80	11.96
GROUP 2	$ 22.05	11.96
GROUP 3	$ 22.10	11.96
GROUP 4	$ 22.70	11.96

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Driller (All Types); Powderman & Blaster; Troxler & Concrete Tester if Laborer is Utilized

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LABO0265-009 05/01/2014

BOONE, CAMPBELL & KENTON COUNTIES:

	Rates	Fringes
LABORER		
GROUP 1	$ 27.72	9.80
GROUP 2	$ 27.89	9.80
GROUP 3	$ 28.22	9.80
GROUP 4	$ 28.67	9.80

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Highway Lighting Worker; Signalization Worker;

Mesh Handlers & Placer; Right-of-way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Skid Steer; Asphalt Raker; Concrete Puddler; Kettle Man (Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - $1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner; & Gunite Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

PAIN0012-016 05/01/2014

	Rates	Fringes
PAINTER		
Bridge	$ 24.39	8.71
Bridge Equipment Tender and Containment Builder	$ 20.73	8.71
Brush & Roller	$ 23.39	8.71
Sandblasting & Water Blasting	$ 24.14	8.71
Spray	$ 23.89	8.71

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* PLUM0392-008 06/01/2014

	Rates	Fringes
PLUMBER	$ 29.80	17.79

SUKY2010-161 02/05/1996

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 15.85	4.60
GROUP 2	$ 16.29	4.60

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Driver

GROUP 2 - Euclid Wagon; End Dump; Lowboy; Heavy Duty Equipment; Tractor-Trailer Combination; & Drag

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to the Kentucky Determination No. CR-14-IV-HWY dated July 14, 2014.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Diana Castle Radcliffe, P.E.
Director, Division of Construction Procurement
Frankfort, Kentucky 40622

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Boone County.

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

142980

PROPOSAL BID ITEMS

Report Date 9/4/14

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0010	00001		DGA BASE	4,917.00	TON		$	
0020	00214		CL3 ASPH BASE 1.00D PG64-22	2,562.00	TON		$	
0030	00339		CL3 ASPH SURF 0.38D PG64-22	71.00	TON		$	
0040	40099		PCC PAVEMENT	872.00	SQYD		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0050	01984		DELINEATOR FOR BARRIER - WHITE	350.00	EACH		$	
0060	01985		DELINEATOR FOR BARRIER - YELLOW	2,500.00	EACH		$	
0070	02003		RELOCATE TEMP CONC BARRIER	56,270.00	LF		$	
0080	02014		BARRICADE-TYPE III	3.00	EACH		$	
0090	02351		GUARDRAIL-STEEL W BEAM-S FACE	50.00	LF		$	
0100	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		$	
0110	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH		$	
0120	02562		TEMPORARY SIGNS	651.00	SQFT		$	
0130	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0140	02671		PORTABLE CHANGEABLE MESSAGE SIGN	9.00	EACH		$	
0150	02696		SHOULDER RUMBLE STRIPS-SAWED	3,818.00	LF		$	
0160	02775		ARROW PANEL	2.00	EACH		$	
0170	02898		RELOCATE CRASH CUSHION	16.00	EACH		$	
0180	05985		SEEDING AND PROTECTION	20,000.00	SQYD		$	
0190	06511		PAVE STRIPING-TEMP PAINT-6 IN	25,000.00	LF		$	
0200	06549		PAVE STRIPING-TEMP REM TAPE-B	16,000.00	LF		$	
0210	06550		PAVE STRIPING-TEMP REM TAPE-W	75,500.00	LF		$	
0220	06551		PAVE STRIPING-TEMP REM TAPE-Y	59,500.00	LF		$	
0230	06556		PAVE STRIPING-DUR TY 1-6 IN W	10,118.00	LF		$	
0240	06557		PAVE STRIPING-DUR TY 1-6 IN Y	8,094.00	LF		$	
0250	06585		PAVEMENT MARKER TY IVA-MW TEMP	320.00	EACH		$	
0260	06586		PAVEMENT MARKER TY IVA-MY TEMP	110.00	EACH		$	
0270	06592		PAVEMENT MARKER TYPE V-B W/R	40.00	EACH		$	
0280	06600		REMOVE PAVEMENT MARKER TYPE V	40.00	EACH		$	
0290	20471ES509		TEMP CONC MED BARRIER	14,400.00	LF		$	
0300	20545ND		TEMP MEDIAN CROSSOVER	4.00	EACH		$	
0310	20738NS112		TEMP CRASH CUSHION	6.00	EACH		$	
0320	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		$	
0330	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	2,000.00	LF		$	
0340	24703EC		INDIANA GUARDRAIL TRANSITION APPROACH END	1.00	EACH		$	
0350	24703EC		INDIANA GUARDRAIL TRANSITION TRAILING END	1.00	EACH		$	
0360	24707ED		CABLE BARRIER SYSTEM REMOVE & RESTORE	1.00	LS		$	

142980

PROPOSAL BID ITEMS

Report Date 9/4/14

Section: 0003 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0370	03298		EXPAN JOINT REPLACE 4 IN	840.00	LF		$	
0380	03299		ARMORED EDGE FOR CONCRETE	120.00	LF		$	
0390	08151		STEEL REINFORCEMENT-EPOXY COATED	3,130.00	LB		$	
0400	08504		EPOXY SAND SLURRY	3,150.00	SQYD		$	
0410	08526		CONC CLASS M FULL DEPTH PATCH	22.00	CUYD		$	
0420	08534		CONCRETE OVERLAY-LATEX	1,112.00	CUYD		$	
0430	08550		HYDRODEMOLITION	26,500.00	SQYD		$	
0440	24094EC		PARTIAL DEPTH PATCHING	110.00	CUYD		$	
0450	24409EC		DRILL HOLES IN STEEL MEMBERS	17.00	EACH		$	
0460	24429EC		REMOVE AND REPLACE STRINGER BEARINGS	4.00	EACH		$	
0470	24430EC		REM AND REPLACE FINGER EXPANSION JOINT	2.00	EACH		$	
0480	24431EC		DRAINAGE SYSTEM	1.00	EACH		$	
0490	24708ED		MEDIAN WALL RETROFIT MEDIAN WALL	4,100.00	LF		$	
0500	24709ED		PLINTH RETROFIT PLINTH	8,210.00	LF		$	

Section: 0004 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0510	04741		POLE BASE IN MEDIAN WALL	35.00	EACH		$	
0520	04761		LIGHTING CONTROL EQUIPMENT	1.00	EACH		$	
0530	04780		FUSED CONNECTOR KIT	70.00	EACH		$	
0540	04797		CONDUIT-3 IN	300.00	LF		$	
0550	04800		MARKER	13.00	EACH		$	
0560	04820		TRENCHING AND BACKFILLING	4,000.00	LF		$	
0570	04832		WIRE-NO. 12	2,919.00	LF		$	
0580	04836		WIRE-NO. 2	13,500.00	LF		$	
0590	04863		CABLE-NO. 2/3C DUCTED	4,500.00	LF		$	
0600	04940		REMOVE LIGHTING	1.00	LS		$	
0610	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	3.00	EACH		$	
0620	21543EN		BORE AND JACK CONDUIT	80.00	LF		$	
0630	23365EC		LIGHTING-NAV MONITORING SYSTEM	1.00	LS		$	
0640	23366EC		SOLAR POWERED NAV LIGHTING SYSTEM	1.00	LS		$	
0650	24589ED		LED LUMINAIRE	35.00	EACH		$	
0660	24710EC		POLE 33 FT MTG HT W/12 IN ARM	17.00	EACH		$	
0670	24711EC		POLE 19 FT MTG HT W/12 IN ARM	18.00	EACH		$	

Section: 0005 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0680	02568		MOBILIZATION	1.00	LS		$	
0690	02569		DEMOBILIZATION	1.00	LS		$	

Questions and Answers

Contract ID	Call #	County	Question	Answer	Modified
14-2980	100	Boone	The Median Wall Retrofit Section on plan sheet S10 shows proposed #5 M1e bars anchored into the existing concrete at 12” on center. The top 8 ¾ inches of the existing concrete median wall is shown to be removed with the reinforcing steel to remain. A proposed 3” diameter schedule 40 PVC conduit is shown inside the top loop of the existing reinforcing steel. Installation of the 3” conduit will be very difficult with the existing reinforcing steel in place and the new reinforcing steel will be in nearly the same location as the existing. May the contractor remove the reinforcing steel in the top 8 ¾ inches of the existing concrete median wall?	Yes, the contractor may remove the existing reinforcement in the top 8 ¾ inches of the existing concrete median wall.	9/15/2014 2:49 PM
14-2980	100	Boone	A under the special note for plinth and median wall retrofit on proposal page 44 says prior to beginning the plinth and median wall retrofit work the Engineer will sound and mark areas of concrete to be removed and patched. Will the outside (not traffic side) vertical face of the plinth be sounded and patched? Will any overhead areas be sounded and patched? What are the limits of the areas to be sounded and patched?	The exterior face of the plinth wall will not be sounded. There are no overhead areas to be sounded or patched The limits of sounding and removal are the front face of the plinth and curb where the retrofit is being installed.	9/15/2014 2:49 PM
14-2980	100	Boone	The special note for contract completion date and liquidated damages on bridge repair contracts on page 59 of the proposal says in addition to liquidated damages assessed in accordance with 108.09 liquidated damages of $25,000 for the first day and $50,000 for each subsequent day	Yes, for a contract amount between $10,000,000.01 and $20,000,000 there will be a daily charge of $4,000.00 and the total liquidated damages if phase 1 and 2 would be $29,000 on day one and	9/15/2014 2:49 PM

			will be assessed for each day past the allotted completion dates. For a contract amount between $10,000,000.01 and $20,000,000 108.09 indicates the daily charge is $4,000. Will liquidated damages of $29,000 be assessed if phase 1 and phase 2 are not complete until November 27 and will liquidated damages of $54,000 per day after November 27 be assessed until phase 1 and phase 2 are complete?	$54,000 each day thereafter.	
14-2980	100	Boone	A under the special note for plinth and median wall retrofit on proposal page 44 says prior to beginning the plinth and median wall retrofit work the Engineer will sound and mark areas of concrete to be removed and patched. Since the area to be patched will not be known until after the sounding is complete, will a bid item be added for this work?	All sounding and removal are incidental to the Plinth wall retrofit. No bid items will be added.	9/15/2014 2:49 PM
14-2980	100	Boone	The special note for contract completion date and liquidated damages on bridge repair contracts on page 59 of the proposal indicates the completion date for phase 1 and phase 2 work is November 26, 2014 but does not specify a start date. On what date can the contractor expect the contract to be awarded and on what date can the contractor expect to receive a notice to begin work?	A start date is not specified in the Contract. The Department will make every effort to accommodate any requests by the successfully bidder to expedite the award and the work order.	9/15/2014 2:49 PM
14-2980	100	Boone	The special note for contract completion date and liquidated damages on bridge repair contracts on page 59 of the proposal says liquidated damages will be assessed in accordance with 108.09 when the November 26, 2014 completion date for phase 1 and phase 2 are exceeded. Will liquidated damages be based on the total contract amount or on the value of the work in phase 1 and phase 2?	Liquidated damages will be based on the total contract amount.	9/15/2014 2:49 PM

14-2980	100	Boone	Can we get as built plans for this bridge	Existing plans are posted under Project related information	9/17/2014 11:39 AM
142980	100	Boone	There does not appear to be enough time to complete phase 1 and phase 2 before November 26, 2014. Can the interim completion date for phase 1 and phase 2 be removed so all phases of work have a completion date November 15, 2015?	addendum will be posted. The change will only require Phase 1 Construction to be completed by November 26th, 2014. Phase 2 will be moved to be completed with the other phases.	9/19/2014 10:49 AM
142980	100	Boone	Sheet R3 shows temporary concrete barrier wall for phase III starting at about 130+80 and sheet R5 shows temporary concrete barrier wall for phase III ending at about 880+50. Is there a station equation between these two points or is there to be 75,000 feet of temporary concrete barrier wall in phase III?	The alignment for I-275 is comprised of two different projects' information. The KY I-275 alignment starts at the state line and proceeds eastward (toward I-75 at Fort Mitchell, Erlanger, etc.) The IN I-275 alignment starts at the state line and proceeds northward (toward I-74). The stationing for KY starts at Sta. 59+75.33. At that same point, The IN alignment begins at Sta. 834+09.27. The length of barrier wall required would be 11750 feet.	9/19/2014 10:49 AM
142980	100	Boone	Sheet S12 shows expansion joint replacement with 1½" joint opening. Will these be paid under line 0370 "Expansion Joint Replace 4 IN"?	Yes, these will be paid under line 0370 "Expan Joint Replace 4 IN".	9/19/2014 10:49 AM
142980	100	Boone	Can the crossover on the Kentucky side be moved closer to the bridge? This will reduce the cost of the traffic maintenance zone.	No, the crossover cannot be moved closer to the bridge.	9/19/2014 10:49 AM
142980	100	Boone	Will existing plans for the truss span be made available?	Plans will be made available under Project Related Information.	9/19/2014 10:49 AM
142980	100	Boone	Will Ohio Department of Transportation portable concrete barrier wall be an acceptable substitute for temporary concrete median barrier? Will steel barrier meeting NCHRP 350 and MASH	This project was conceived and designed assuming the use of 9T temporary barrier wall. However, The Cabinet will consider for	9/19/2014 10:49 AM

			crash test standards be an acceptable substitute for temporary concrete median barrier?	approval the use of NCHRP-350 approved temporary barrier wall alternatives that are comparable to the performance of 9T wall (including deflection distances). The Cabinet will also consider other NCHRP 350 approved temporary barrier wall with characteristics (including deflection distances) that are appropriate for the locations proposed for use. Any alternative barrier proposal must include documentation of NCHRP 350 approval and performance including a detailed description of proposed use (including locations). The Cabinet will not allow barrier that requires anchorage to the bridge deck.	
142980	100	Boone	Sheet S6 shows expansion joint replacement at piers A, B, C and D and at 7 locations between the piers. Sheet S12 shows joint replacement only at the piers. Are the joints between the piers to be replaced? If so, which details apply to the joints between piers A, B, C and D?	Pier A and D joints are detailed on sheets S19 – S22. Sheet S12 Notes specify, preformed expansion joint strip seal shall be D.S. Brown Company, L2-400 with SSPA Steelflex rail or approved equivalent. These will replace all 9 joints between Pier A and Pier D.	9/19/2014 10:49 AM
142980	100	Boone	It is typical that there is a Bid Item for the following Items that we do not see set up in the Bid Items Sheet. 08549 Blast Cleaning, 08510 REM Epoxy Bit Foreign Overlay OR 08551 Machine Prep of Slab Will these Items be added?	Yes, An addendum will be posted.	9/19/2014 10:49 AM
142980	100	Boone	In Section IV, Paragraph B. Calibration of the Special Note for	Yes, The minimum water usage listed in Section IV,	9/19/2014 10:49 AM

			Use of Hydrodemolition Method specification, can the minimum water usage listed be waived provided that the hydrodemolition equipment meets all the other requirements of the specification?	Paragraph B can be waived provided the hydrodemolition equipment meets all the other requirements of the specification.	
142980	100	Boone	Will the contractor be required to provide railroad insurance per 107.18 E?	Yes, An addendum will be posted.	9/19/2014 10:49 AM
142980	100	Boone	Will liquidated damages be assessed if phase 1 and phase 2 work is not complete but two 11 foot lanes are maintained in each direction after November 26, 2014?	Liquidated damages will be assessed if Phase 1 work is not complete by November 26th, 2014. Phase 2 work has a new completion date of November 15, 2015.	9/19/2014 12:10 PM
142980	100	Boone	Project Phasing & Construction Procedures on page 61 of the proposal says no lane closures will be permitted December 1, 2014 through February 28, 2015 and that the minimum clear lane width will be 11 feet. The typical section on plan set S4 shows 30 feet between the median barrier and plinth both northbound and southbound. Will the contractor be permitted to leave the temporary concrete barrier walls used in phase 2 on the roadway between December 1, 2014 through February 28, 2015 if two 11 foot lanes are maintained?	No, the contractor will not be permitted to leave temporary concrete barrier walls in place between December 1, 2014 through February 28, 2015. All lanes of traffic need to be open during this time.	9/19/2014 12:10 PM
142980	100	Boone	on proposal page 48 says post bridge for reduced live load during girder jacking operations. What means of posting is required and at what locations will it be located?	page 48 was inadvertently included in the note. Disregard. Jacking does not occur with live load on the bridge. The jacking operations occurs during the same phase as the overlay and therefore traffic will be on the other side. There is no need to post the bridge.	9/22/2014 8:18 AM
142980	100	Boone	Plan Sheets R1 & R2 shows the lengths of Temporary Concrete Barrier Wall required to construct the crossovers in phase 1. Plans sheet S8 shows temporary concrete	Phase I = Crossover walls (as shown). Plus walls on both sides of bridge (Full length) with transitions per KYTC Standard	9/22/2014 8:18 AM

			barrier wall required in both directions on the bridge. However it does not indicate where the contractor is required to install the wall, from what station to what station. Please provide some additional information (start/end locations) regarding the temporary barrier on Sheet S8 for phase 1,2,4,6,7. This could have an impact on the quantity of temporary barrier wall that is required. For example, in phase 1 if you require wall in both directions for the full length of the bridge, then the quantity required would be around 13,740 LF when you consider the wall required to construct the cross over's as shown on plan sheet R1 & R2.	Drawings. Phase II = walls on both sides of bridge (Full length) with transitions per KYTC Standard Drawings. Phase IV = Crossover walls (as shown). Plus wall on Northbound side of bridge (Full length) with transition per KYTC Standard Drawings (SB bridge can utilize TCD's due to greater clearance). Phase VI = Crossover walls (as shown). Plus walls on both sides of bridge (Full length) with transitions per KYTC Standard Drawings. Phase VII = Wall on Northbound side of bridge (Full length) with transition per KYTC Standard Drawings.	
142980	100	Boone	Would it be possible for me to obtain the roadway portion of this project in a DWG file for roadway lighting design?	This file is posted under Project Related Information	9/23/2014 8:11 AM
1422980	100	Boone	As a follow-up to a previous question regarding sounding and removal of concrete prior to beginning plinth and median wall retrofit work – Contractor's cannot assign a cost to an incidental item for which the quantity is unknown. Will the Department reconsider adding an appropriate bid item by the square foot similar to partial depth patching.	The department will provide a PARTIAL DEPTH PATCHING bid item in square ft that will include patching for both the curb and median/plinth walls. An addendum will be posted	9/23/2014 8:11 AM
142980	100	Boone	Could there be an item added for Curb Repair? This is an unknown quantity until it is sounded. We have no way of sounding the curbs before bid time.	Curb Repair will be paid as Partial depth patching. An addendum will be posted.	9/23/2014 8:11 AM
14-2980	100	Boone	In Addendum #3 Page 58(a) of 124 States IV. MEASUREMENT B. .in Square Feet PROPOSAL BID ITEMS 0503 UNIT = CUFT . Please Clarify which Unit is	An addendum will be posted.	9/24/2014 8:22 AM

			correct? Also, V. PAYMENT ….consider bid items 24098EC what is this item?		
14-2980	100	Boone	Notation 1, on plan sheet S10, specifies “core drilled” holes for embedding reinforcing steel. Is this to be taken literally, or is drilling with a typical masonry/impact rotary bit acceptable?	Yes, drilling with typical masonry/impact rotary bit will be acceptable	9/24/2014 8:22 AM
14-2980	100	Boone	Sheet T1 have sentences added to sections 834.06 and 834.09 require added wording to USE-2 wire “Property of Kentucky Transportation Cabinet”. We cannot find a wire manufacturer that will meet this requirement. Would the Cabinet either remove this requirement from the project or provide a list of manufacturers that can supply the USE-2 wire with this wording on the outer jacket?	The Cabinet will agree to remove this requirement.	9/24/2014 3:18 PM
14-2980	100	Boone	Line Item 540 Qty should be 4050 in lieu of 300 specified in proposal, please clarify.	Line item 540 is only for the conduit from the lighting control cabinet to the initial junction box on the side of the road and the conduit that will be bore/jack from this junction box to the initial junction box in the wall that is in the bridge plans. All other conduits in the wall should be bid by bridge designer with bid item 20394N835. This is stated in a note on T11.	9/24/2014 4:16 PM
14-2980	100	Boone	Line Item 560 We do not find any trenching needed for the job, 4000 FT is specified in proposal but 0 may be needed.	Line 560 is for the trenching of the ducted cable (line item 0590) from the new service to the lighting control cabinet near the bridge.	9/24/2014 4:16 PM
14-2980	100	Boone	Line Item 590 Cable number 2/3 conductor may not be required. 4500 FT is specified in the proposal. Please clarify.	Line 590 is to be installed from the new service to the new lighting control cabinet near the bridge as noted on T11. The	9/24/2014 4:16 PM

				Contractor will be required to install markers to show the path of the ducted cable.	
14-2980	100	Boone	Line Item 630 The plans call for the navigational monitoring system to be installed is that being furnished by the cabinet?	Line item 630: No. This item is furnish and installed by the Contractor as per the notes.	9/24/2014 4:16 PM
142980	100	Boone	Plan Sheet S1 Estimate of Quantities, bottom right, last 2 items, 20394NS835 PVC Conduit-3" in median Barrier, & 4810 Electrical Junction box. We cannot find them on the Bid Items sheet? Please advise.	An addendum has been posted	9/25/2014 8:24 AM
142980	100	Boone	The special notes for the finger dam state to use "Stainless steel countersunk cap screws shall conform to ASTM F593 Type 316. Stainless steel nuts shall conform to ASTM A320." Typically A325 galvanized bolts have been used in the past at the finger plate to support plate connection. Please verify	Stainless steel cap screws and nuts for the finger joints are specified to increase durability and decrease corrosion concerns.	9/25/2014 10:10 AM
142980	100	Boone	Please confirm that there is only 1 electrical junction box in the median barrier.	Bid Item 4810 – Electrical Junction Box. 1 Each is the first junction box in the barrier, from KY end of bridge that feeds the median lights. All other junction boxes, at pole locations, are incidental to the Bid Item 4741 Pole Base in Median Wall as per KYTC Standard Specifications.	9/25/2014 10:10 AM
142980	100	Boone	There is no bid item for the protection fence	Sheet S24 states the cost of protective fence is incidental to the bid item for plinth retrofit.	9/25/2014 10:10 AM
142980	100	Boone	How is the 3" conduit in the median barrier to be paid for?	An addendum has been posted. Bid Item 20394NS835 – PVC Conduit-3" in Median Barrier, 3955 LF	9/25/2014 10:10 AM

14-2980	100	Boone	Proposal Page 25/124. Waterblasting Striping Removal, 5.1 Payment… States that this should be a PAY ITEM? We do not see one? Please clarify	See Page 20, Contrary to Special Note 10W, Waterblasting Striping Removal shall be considered incidental to "Maintain and Control Traffic."	9/25/2014 11:41 AM
14-2980	100	Boone	There are no existing drawings up for Spans IN1-IN7 where the jack and support/remove replace bearings are located. Are these available?	Existing plans have been posted under Project Related Information.	9/25/2014 1:37 PM
14-2980	100	Boone	How are detour signs to paid for?	The detour signs are included in the Bid Item 2562 Signs quantity.	9/25/2014 1:49 PM

KYTC DEPARTMENT OF HIGHWAYS
BID TAB AWARD SHEET FOR LETTING
Date Run : 9/26/14 , 12:10:55 PM GMT-04:00

Call: 100 Contid: 14-2980

County: BOONE District: 06 Date Let: 09-26-14 Contid: 14-2980 SYP: 06-02039.00

Proposal Description: IM 2759 (130) Length: 0 Miles Time: 11/15/2015

BRIDGE DECK RESTORATION & WATERPROOFING BRIDGE OVER OHIO RIVER.

Number of Bidders 5

1	02691	HALL CONTRACTING OF KENTUCKY INC	6,725,000.00
2	02185	AMERICAN CONTRACTING & SERVICES INC	8,153,368.39
3	02768	INTECH CONTRACTING LLC	8,772,892.82
4	00568	MAC CONSTRUCTION & EXCAVATING INC WOS UNRUH UNLIMITED INC.	8,871,092.00
5	00117	EATON ASPHALT PAVING CO INC AND SUBSIDIARY	9,596,222.00

ENGINEERS ESTIMATE 9,621,216.03 LOW BIDDER is -30.10% from ENGINEERS ESTIMATE

Apparent Low Bidder Low > HALL CONTRACTING OF KENTUCKY INC

Prop Line	Item Description	Quantity	Unit	Bidder1	Bidder2	Bidder3	Bidder4	Bidder5	Bidder6
0010	DGA BASE	4,917.000	TON	20.00	25.00	26.00	25.00	25.00	
0020	CL3 ASPH BASE 1.00D PG64-22	2,562.000	TON	83.00	80.00	81.00	80.00	80.00	
0030	CL3 ASPH SURF 0.38D PG64-22	71.000	TON	192.00	192.00	195.00	192.00	192.00	
0040	PCC PAVEMENT	872.000	SQYD	65.00	120.00	95.00	80.00	65.00	
0050	DELINEATOR FOR BARRIER - WHITE	350.000	EACH	4.00	5.00	6.00	4.00	9.00	
0060	DELINEATOR FOR BARRIER - YELLOW	2,500.000	EACH	4.00	5.00	6.00	4.00	9.00	
0070	RELOCATE TEMP CONC BARRIER	56,270.000	LF	3.00	4.00	2.00	2.00	7.00	
0080	BARRICADE-TYPE III	3.000	EACH	75.00	100.00	100.00	300.00	600.00	
0090	GUARDRAIL-STEEL W BEAM-S FACE	50.000	LF	40.00	35.00	40.00	43.75	50.00	
0100	GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.000	EACH	2,200.00	2,200.00	2,750.00	2,500.00	2,800.00	
0110	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.000	EACH	600.00	600.00	700.00	600.00	700.00	
0120	TEMPORARY SIGNS	651.000	SQFT	5.00	7.00	8.00	10.00	15.00	
0130	MAINTAIN & CONTROL TRAFFIC	1.000	LS	200,000.00	250,000.00	50,000.00	376,000.00	500,000.00	
0140	PORTABLE CHANGEABLE MESSAGE SIGN	9.000	EACH	5,500.00	9,000.00	5,000.00	8,500.00	8,000.00	
0150	SHOULDER RUMBLE STRIPS-SAWED	3,818.000	LF	2.25	4.68	3.50	3.00	2.00	
0160	ARROW PANEL	2.000	EACH	4,000.00	4,000.00	1,000.00	4,500.00	1,000.00	
0170	RELOCATE CRASH CUSHION	16.000	EACH	1,000.00	1,000.00	500.00	2,800.00	3,000.00	
0180	SEEDING AND PROTECTION	20,000.000	SQYD	.50	.50	.50	.35	.55	
0190	PAVE STRIPING-TEMP PAINT-6 IN	25,000.000	LF	.25	.26	.30	.23	.30	
0200	PAVE STRIPING-TEMP REM TAPE-B	16,000.000	LF	2.00	2.92	3.00	2.50	3.00	
0210	PAVE STRIPING-TEMP REM TAPE-W	75,500.000	LF	1.50	1.70	2.00	1.50	2.00	
0220	PAVE STRIPING-TEMP REM TAPE-Y	59,500.000	LF	1.50	1.70	2.00	1.50	2.00	
0230	PAVE STRIPING-DUR TY 1-6 IN W	10,118.000	LF	3.50	4.57	6.00	3.50	5.00	
0240	PAVE STRIPING-DUR TY 1-6 IN Y	8,094.000	LF	3.50	4.57	6.00	3.50	5.00	

KYTC DEPARTMENT OF HIGHWAYS
BID TAB AWARD SHEET FOR LETTING
Date Run : 9/26/14 , 12:10:55 PM GMT-04:00

Prop Line	Item Description	Quantity	Unit	Bidder1	Bidder2	Bidder3	Bidder4	Bidder5	Bidder6
0250	PAVEMENT MARKER TY IVA-MW TEMP	320.000	EACH	5.00	4.00	5.00	5.00	5.00	
0260	PAVEMENT MARKER TY IVA-MY TEMP	110.000	EACH	5.00	4.00	5.00	5.00	5.00	
0270	PAVEMENT MARKER TYPE V-B W/R	40.000	EACH	85.00	97.20	120.00	100.00	110.00	
0280	REMOVE PAVEMENT MARKER TYPE V	40.000	EACH	30.00	15.00	20.00	25.00	5.00	
0290	TEMP CONC MED BARRIER	14,400.000	LF	20.00	30.00	20.00	22.00	13.00	
0300	TEMP MEDIAN CROSSOVER	4.000	EACH	15,000.00	49,900.00	50,000.00	49,900.00	49,900.00	
0310	TEMP CRASH CUSHION	6.000	EACH	3,000.00	7,500.00	2,500.00	3,500.00	4,000.00	
0320	KPDES PERMIT AND TEMP EROSION CONTROL	1.000	LS	8,000.00	5,000.00	20,000.00	25,000.00	30,000.00	
0330	DURABLE WATERBORNE MARKING-6 IN Y	2,000.000	LF	1.15	1.48	2.00	2.00	2.00	
0340	INDIANA GUARDRAIL TRANSITION	1.000	EACH	3,500.00	4,000.00	5,000.00	3,250.00	3,000.00	
0350	INDIANA GUARDRAIL TRANSITION	1.000	EACH	3,500.00	4,000.00	5,000.00	3,250.00	3,000.00	
0360	CABLE BARRIER SYSTEM REMOVE & RESTORE	1.000	LS	25,000.00	25,000.00	20,000.00	25,000.00	28,000.00	
0370	EXPAN JOINT REPLACE 4 IN	840.000	LF	650.00	600.00	1,300.00	878.00	800.00	
0380	ARMORED EDGE FOR CONCRETE	120.000	LF	150.00	90.00	125.00	85.00	140.00	
0390	STEEL REINFORCEMENT-EPOXY COATED	3,130.000	LB	2.00	2.00	2.00	5.00	2.00	
0400	EPOXY SAND SLURRY	3,150.000	SQYD	25.00	10.00	20.00	38.00	36.00	
0410	CONC CLASS M FULL DEPTH PATCH	22.000	CUYD	1,000.00	2,000.00	1,000.00	2,000.00	1,500.00	
0420	CONCRETE OVERLAY-LATEX	1,112.000	CUYD	870.00	1,000.00	1,025.00	1,200.00	900.00	
0430	HYDRODEMOLITION	26,500.000	SQYD	18.00	31.00	21.00	22.00	21.00	
0440	PARTIAL DEPTH PATCHING	110.000	CUYD	715.00	850.00	900.00	2,100.00	1,000.00	
0450	DRILL HOLES IN STEEL MEMBERS	17.000	EACH	200.00	100.00	500.00	400.00	500.00	
0460	REMOVE AND REPLACE STRINGER BEARINGS	4.000	EACH	50,000.00	40,000.00	90,000.00	70,000.00	97,000.00	
0470	REM AND REPLACE FINGER EXPANSION JOINT	2.000	EACH	290,000.00	275,000.00	275,000.00	450,000.00	375,000.00	
0480	DRAINAGE SYSTEM	1.000	EACH	100,000.00	50,000.00	75,000.00	90,000.00	92,000.00	
0490	MEDIAN WALL RETROFIT	4,100.000	LF	85.00	135.00	145.00	150.00	150.00	
0500	PLINTH RETROFIT	8,210.000	LF	60.00	75.00	100.00	60.00	110.00	
0501	REM EPOXY BIT FOREIGN OVERLAY	26,500.000	SQYD	6.00	5.00	10.00	6.50	15.00	
0502	BLAST CLEANING	29,650.000	SQYD	2.00	7.00	7.00	2.75	8.00	
0503	PARTIAL DEPTH PATCHING	250.000	CUFT	200.00	250.00	400.00	350.00	340.00	
0510	POLE BASE IN MEDIAN WALL	35.000	EACH	1,555.92	1,555.92	1,600.00	2,000.00	2,200.00	
0520	LIGHTING CONTROL EQUIPMENT	1.000	EACH	19,281.87	19,281.87	20,000.00	14,000.00	16,000.00	
0530	FUSED CONNECTOR KIT	70.000	EACH	175.82	175.82	181.00	250.00	300.00	
0540	CONDUIT-3 IN	300.000	LF	15.93	15.93	16.50	25.00	28.00	
0550	MARKER	13.000	EACH	449.41	449.41	450.00	500.00	570.00	
0560	TRENCHING AND BACKFILLING	4,000.000	LF	3.64	3.64	3.50	5.00	6.00	
0570	WIRE-NO. 12	2,919.000	LF	.62	.62	.45	1.00	1.00	
0580	WIRE-NO. 2	13,500.000	LF	2.34	2.34	2.20	2.25	3.00	

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Prop Line	Item Description	Quantity	Unit	Bidder1	Bidder2	Bidder3	Bidder4	Bidder5	Bidder6
0590	CABLE-NO. 2/3C DUCTED	4,500.000	LF	8.08	8.08	8.00	8.00	9.00	
0600	REMOVE LIGHTING	1.000	LS	4,099.34	4,099.34	20,000.00	10,000.00	12,000.00	
0610	ELECTRICAL JUNCTION BOX TYPE A	3.000	EACH	2,162.05	2,162.05	2,020.00	1,200.00	1,400.00	
0620	BORE AND JACK CONDUIT	80.000	LF	126.32	126.32	130.00	60.00	70.00	
0630	LIGHTING-NAV MONITORING SYSTEM	1.000	LS	84,000.00	81,887.74	85,000.00	100,000.00	120,000.00	
0640	SOLAR POWERED NAV LIGHTING SYSTEM	1.000	LS	140,000.00	130,447.52	135,000.00	100,000.00	110,000.00	
0650	LED LUMINAIRE	35.000	EACH	819.74	819.74	900.00	600.00	700.00	
0660	POLE 33 FT MTG HT W/12 IN ARM	17.000	EACH	1,561.94	1,561.94	1,600.00	1,900.00	2,000.00	
0670	POLE 19 FT MTG HT W/12 IN ARM	18.000	EACH	1,390.23	1,390.23	1,450.00	1,600.00	2,000.00	
0671	PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL	3,955.000	LF	9.45	9.45	9.50	6.00	7.00	
0672	ELECTRICAL JUNCTION BOX	1.000	EACH	1,447.81	1,447.82	2,500.00	1,200.00	1,400.00	
0680	MOBILIZATION	1.000	LS	315,000.00	379,131.63	411,872.89	415,000.00	440,000.00	
0690	DEMOBILIZATION	1.000	LS	96,910.25	116,593.16	123,561.88	135,000.00	180,000.00	
Total Bid				**6,725,000.00**	**8,153,368.39**	**8,772,892.82**	**8,871,092.00**	**9,596,222.00**	