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STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

D08-BM-FY2017B
GREENE, HAMILTON
& CLERMONT COUNTIES
DISTRICT WIDE BRIDGE MAINTENANCE

PROJECT DESCRIPTION

GENERAL BRIDGE MAINTENANCE PROJECT INCLUDING STRUCTURAL STEEL REPAIR, PAINTING, SEALING, EXPANSION JOINT REPLACEMENT, PRESSURE RELIEF JOINT INSTALLATION, BEARINGS REHABILITATION, AND OTHER MINOR MAINTENANCE WORK ON SEVERAL BRIDGES IN THE DISTRICT.

PROJECT EARTH DISTURBED AREA: 0 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES
(MAINTENANCE PROJECT)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2016 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
91684

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

D08-BM-FY2017B

1
54

LOCATION MAP
SEE PAGE 2

LOCATION MAP

LATITUDE: 39°26'40" LONGITUDE: 84°16'43"



PORTION TO BE IMPROVED	—————	—————
INTERSTATE HIGHWAY	—————	—————
FEDERAL ROUTES	—————	—————
STATE ROUTES	—————	—————
COUNTY & TOWNSHIP ROADS	—————	—————
OTHER ROADS	—————	—————

DESIGN EXCEPTIONS

NONE



PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION - BRIDGE DEPARTMENT
DISTRICT 8 LEBANON, OHIO

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UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

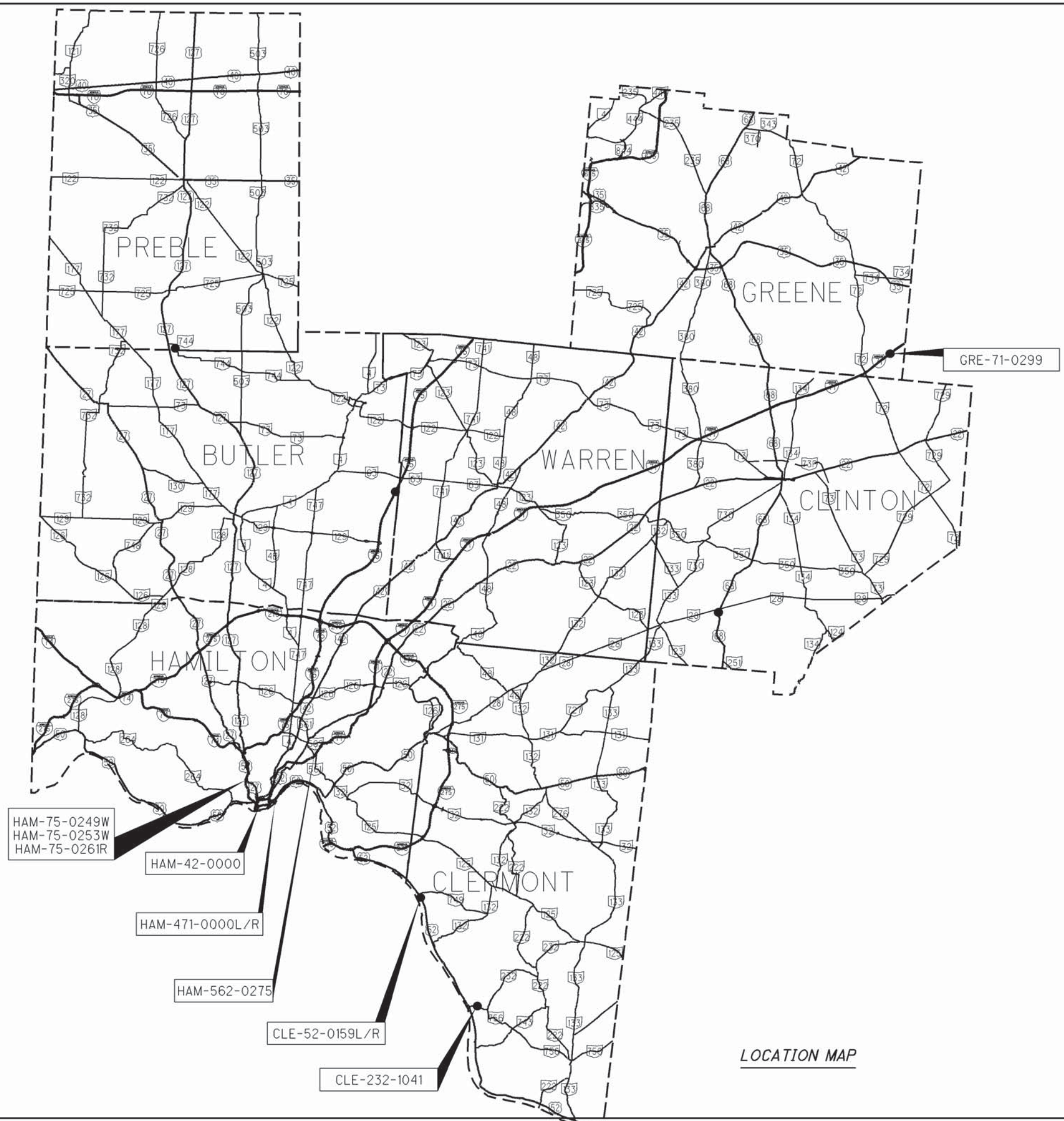
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
1-800-925-0988

ENGINEERS SEAL:		STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
<p>SIGNED: Christopher A. Howard DATE: 5-15-17</p>	BP-2.4	7/16/04	MGS-1.1	7/19/13	MT-95.30	7/15/16	MT-105.10	7/19/13	800	4-21-17
	BP-3.1	4/20/12	MGS-2.1	7/19/13	MT-95.31	1/20/17	MT-110.10	7/19/13	832	5-5-09
	BP-9.1	4/15/05	MGS-3.1	7/18/14	MT-95.32	1/20/17				
			MGS-6.1	7/19/13	MT-95.40	1/20/17				
	RM-4.2	10/15/10			MT-95.45	1/20/17				
	RM-4.5	7/18/14	AS-1-15	7/17/15	MT-95.61	7/19/13				
	RM-4.6	7/19/13	AS-2-15	7/17/15	MT-97.10	7/18/14				
			VPF-1-90	7/17/15	MT-98.10	1/20/17				
	A-1-69	7/19/02	AS-1-81	1/18/13	MT-98.11	1/20/17				
	BR-1	7/19/02			MT-98.20	7/18/14				
	EXJ-4-87	7/19/02			MT-98.22	1/20/17				
	PCB-91	1/18/13			MT-98.28	1/20/17				
					MT-101.70	1/17/14				
					MT-101.75	7/15/16				
					MT-101.80	7/17/15				

APPROVED: DATE: 5/16/17 DISTRICT DEPUTY DIRECTOR

APPROVED: _____ DATE: _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

LOCATION MAP & TRAFFIC DATA

D08 - BM - FY 2017B

CONSTRUCTION NOTIFICATION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF:

- TWENTY-ONE (21) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND/OR ROAD CLOSURES.
- FOURTEEN (14) DAYS PRIOR TO LANE CLOSURES AND/OR SHIFTS IN TRAFFIC PATTERNS.

THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY EMAIL AT D08.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY AT (513) 933-6577 OR EMAIL AT CHRISTOPHER.BASS@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

NON-USE OF ASBESTOS-CONTAINING MATERIALS

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNT OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 623- CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

PRIOR TO THE START OF ROADWAY OPERATION, THE CONTRACTOR SHALL REFERENCE THE LENGTH OF THE PROJECT ON BOTH SIDES OF THE ROADWAY, IN A MANNER SATISFACTORY TO THE ENGINEER. THE PAVEMENT SHALL BE REFERENCED IN 100 FEET INCREMENTS, OR IN INCREMENTS ACCEPTABLE TO THE ENGINEER, IN A SEMIPERMANENT CONDITION.

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN. SEE BELOW FOR PROJECT SPECIFIC REQUIREMENTS.

WHILE PERFORMING CONCRETE SEALING WORK, IF ACCESS IS RESTRICTED DUE TO THE PRESENCE OF VEGETATION, REMOVE SAID VEGETATION A MAXIMUM OF 2' AWAY FROM THE SURFACE TO BE SEALED TO ALLOW ACCESS. THIS WORK, INCLUDING ALL LABOR, EQUIPMENT, AND INCIDENTALS SHALL BE PAID FOR UNDER ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, LUMP SUM.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROTECTION OF LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS THE EXISTING RIGHT-OF-WAY LIMITS.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

ENVIRONMENTAL NOTES

IF PAINTING, WELDING, SAND AND/OR WATER BLASTING (CLEANING), HYDRO-DEMOLITION OR SEALING ANY PORTION OF THE BRIDGE STRUCTURES IS INCORPORATED AS PART OF THE PROJECT AT OR OVER A ROAD OR WATERWAY, THEN APPROPRIATE APRONS SHALL BE UTILIZED TO PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT, WELDING SLAG AND/OR SEALANT OVER SPRAY AND OTHER DEBRIS. APRONS SHALL PREVENT DEBRIS, PAINT OVER SPRAY, AND SEALANTS FROM AFFECTING VEHICULAR/PEDESTRIAN TRAFFIC AND/OR PROTECTED AREAS.

NO TOXIC OR HAZARDOUS MATERIAL SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO A SCENIC RIVER OR ANY TRIBUTARY WATER COURSES. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALTIC OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING SEALING, RESURFACING OR OTHER BRIDGE/PAVEMENT ACTIVITIES SHALL BE REMOVED IMMEDIATELY AND DISPOSED OF AT AN APPROPRIATE FACILITY ABOVE THE FEMA 100 YEAR FLOOD ELEVATION AND NOT WITHIN 1000 FEET OF THE SCENIC RIVER OR TRIBUTARY.

THE FOLLOWING BRIDGE SPANS JURISDICTIONAL WATERS:

CLE-52-0159L/R (SFN 1301381/1301411) OVER TEN MILE CREEK

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO.

ITEM 202 - ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN

WHERE DESIGNATED, EXISTING ANCHOR ASSEMBLIES INCLUDING ALL POST AND HARDWARE SHALL BE REMOVED. THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE ENTIRE CONCRETE ANCHOR AND CONCRETE ENCASEMENT. ALL HOLES LEFT AFTER REMOVAL OF ASSEMBLIES AND POSTS SHALL BE FILLED WITH GRANULAR MATERIAL AS DIRECTED BY THE ENGINEER. PAYMENT SHALL INCLUDE ALL NECESSARY LABOR AND EQUIPMENT REQUIRED TO PERFORM THE INDICATED ABOVE.

GUARDRAIL INSTALLATION

THIS PROJECT REQUIRES THE INSTALLATION OF NEW GUARDRAIL POSTS. SURVEY WORK HAS NOT BEEN PERFORMED ON THIS PROJECT, NOR HAVE THE UTILITY LOCATIONS BEEN CONFIRMED IN THE FIELD. IN ADDITION TO CMS 105.07, IF, DURING THE COURSE OF INSTALLING ANY NEW GUARDRAIL COMPONENT, IT IS DETERMINED THAT A UTILITY CONFLICT MAY RESULT, THE CONTRACTOR IS TO NOTIFY THE PROJECT ENGINEER IMMEDIATELY. UTILITIES ARE NOT BE RELOCATED AS A RESULT OF THIS OPERATION. ADJUSTMENTS TO THE PROPOSED GUARDRAIL WILL ACCOMMODATE THE EXISTING UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE GUARDRAIL VIA MEANS THAT WOULD BE COMPLIANT WITH THE IMPACTED UTILITY'S SAFETY GUIDELINES AS WELL AS STILL MEETING ODOT'S DESIGN CRITERIA. ANY MINOR ADJUSTMENTS MADE TO THE PROPOSED GUARDRAIL INSTALLATIONS SHALL BE INCIDENTAL TO PAY ITEM 606.

ITEM 606 - BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4, AS PER PLAN

THE EXISTING FORWARD AND REAR APPROACH GUARDRAIL AT BRIDGE No.: CLE-52-0159 L WILL NEED TO BE REMOVED IN ORDER TO COMPLETE THE PROPOSED BRIDGE WORK. AT NO TIME SHALL THE HAZARD BE LEFT UNPROTECTED. GUARDRAIL REMOVAL SHALL OCCUR SUBSEQUENT TO THE ESTABLISHMENT OF THE WORK ZONE AND THE PLACEMENT PORTABLE CONCRETE BARRIER FOR THE ACTIVE MAINTENANCE OF TRAFFIC PHASE AS DETAILED IN THE PLANS. THE CONTRACTOR IS TO SALVAGE GUARDRAIL COMPONENTS DURING CONSTRUCTION ACCORDING TO CMS 606.05, AND REINSTALL THE GUARDRAIL UPON COMPLETION OF THE PROPOSED BRIDGE WORK. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE ABOVE REFERENCED WORK IS TO BE INCLUDED IN THE UNIT PRICE.

ITEM 614 - MAINTAINING TRAFFIC

ALL LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT IN ACCORDANCE WITH THE UNAUTHORIZED USE TABLE, BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPT. OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THESE PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES TO MAINTAIN THE TRAVELED PAVEMENT SAFELY.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
(OTHER HOLIDAY OR EVENT)	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$125 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC (PLAN NOTE 642-2).

TRUCK MOUNTED ATTENUATOR

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER WHEN THE CONTRACTOR IS SETTING/REMOVING SHORT TERM WORK ZONES, A TRUCK MOUNTED ATTENUATOR (TMA) MUST TRAIL THE OPERATION, INCLUDING SETTING THE ADVANCE WARNING SIGNS UP OR TAKING THEM DOWN. THIS SAME TRUCK MUST HAVE A TYPE B FLASHING ARROW PANEL MOUNTED ON IT FACING THE REAR OF THE TRUCK. THE CONTRACTOR SHALL USE A TMA FOR ANY APPLICATION WHERE THE OMTCD OR STANDARD CONSTRUCTION DRAWING USES THE PHRASE OPTIONAL OR WHEN SPECIFIED IN THE PLAN.

THE T.M.A. MUST BRING A VEHICLE WEIGHING 1800 TO 4500 LBS. AND TRAVELING AT 60 MPH TO A SAFE, CONTROLLED STOP, PER NCHRP 350 CRITERIA. THE MANUFACTURERS SPECIFICATION MUST BE FOLLOWED CONCERNING THE SIZE OF THE TRUCK AND THE CONNECTIONS TO THE T.M.A.

THE TRUCK MOUNTED ATTENUATOR NOTE IS APPLICABLE TO THE FOLLOWING ROUTES: CLE-52, GRE-71, HAM-71, HAM-75, HAM-471, AND HAM-562.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL) (CONT.)

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE A 17 EACH
ITEM 614, OBJECT MARKER, ONE WAY 17 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE B 44 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 44 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

KYTC - BRENT SPENCE BRIDGE COORDINATION

KYTC IS PLANNING A REHABILITATION PROJECT OF THE BRENT SPENCE BRIDGE. DURING THE SECOND HALF OF THE CALENDER YEAR 2017, THERE WILL BE VARIOUS LONG-TERM LANE CLOSURES ON I-71 AND I-75 FOR A PERIOD OF APPROXIMATELY 60 DAYS. WHEN KYTC HAS LONG-TERM LANE REDUCTIONS ON THE BRENT SPENCE BRIDGE, NO WORK IS TO BE PERFORMED AND ALL LANES ARE TO BE OPEN TO TRAFFIC AT ALL TIMES AT THE HAMILTON COUNTY WORK LOCATIONS.

INTERIM COMPLETION DATE FOR SELECTED WORK

NOVEMBER 31, 2017 IS SET AS AN INTERIM DATE OF COMPLETION FOR THE DEBRIS NETTING INSTALLATION OVER SAWYER POINT PARK AND STRUCTURE DRAINAGE REMOVAL AND REPLACEMENT FOR ALL DOWNSPOUTS FROM PIER 10 NORTH TO PIER 15 OF BRIDGE No.: HAM-471-0000 L/R. ALL WORK ASSOCIATED WITH THE STRUCTURES LISTED BELOW ARE TO ALSO BE COMPLETED BY THIS INTERIM COMPLETION DATE OF NOVEMBER 31, 2017.

- HAM-42-0000
- HAM-75-0261 R
- CLE-52-0158 L

THE INTERIM DATE WILL BE SUBJECT TO LIQUIDATED DAMAGES AS INDICATED BY SECTION 108.07 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BOOK. REQUEST FOR TIME EXTENSIONS TO THE INTERIM COMPLETION DATE WILL BE PROCESSED AS PER SECTION 108.06 OF THE SPECIFICATIONS BOOK. A GRANTED TIME EXTENSION TO THE INTERIM COMPLETION DATE WILL NOT INCLUDE A CORRESPONDING EXTENSION TO THE FINAL COMPLETION DATE.

TRI-STATE PARKING LOT COORDINATION

STRUCTURE DRAINAGE REMOVAL AND INSTALLATION WORK ASSOCIATED WITH BRIDGE No.: HAM-471-0000 SHALL BE COORDINATED WITH TRI-STATE PARKING. PRIOR TO ANY WORK BEING PERFORMED FROM PIER 16 NORTH TO PIER 21, THE CONTRACTOR SHALL CONTACT TRI-STATE PARKING TO DISCUSS POTENTIAL CLOSURES WITHIN THE PARKING AREA.

CONTACT INFORMATION:

TRI-STATE PARKING

MATTHEW FELDHAUS
TELEPHONE: (513) 381-7275

AARON CAHILL
TELEPHONE: (859) 760-1071

THE CONTRACTOR SHALL ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE SIGNAGE ALERTING THE PUBLIC OF PARKING LOT STALL CLOSURES NEEDED TO PERFORM THE WORK.

CONES AND NO PARKING SIGNS SHALL BE ERECTED AROUND THE WORK AREA (i.e. THE IMPACTED PARKING LOT STALLS). THE SIGNAGE NEAR THE IMPACTED PARKING LOT STALLS SHALL BE REMOVED PRIOR TO OPENING THE STALLS FOR USE. THE CONTRACTOR SHALL ERECT ONE NO PARKING SIGN FOR EACH PARKING STALL CLOSED TO THE PUBLIC FOR USE. PARKING STALL SIGNAGE MAY BE METAL OR PAPER.

PAYMENT FOR ERECTIONS AND REMOVAL OF NOTICE OF CLOSURE SIGNAGE SHALL BE INCLUDED WITH ITEM 614 MAINTAINING TRAFFIC.

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

D08 - BM - FY 2017B

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ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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

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

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

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

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN _ HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE-CONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 1 SIGN MONTH

ASSUMING 2 PCMS SIGN FOR 2 MONTH

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

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

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

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

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS

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

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

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

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

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

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

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 300 HOURS

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

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

ITEM 618 - RUMBLE STRIPS , (ASPHALT CONCRETE), AS PER PLAN

THE CONTRACTOR SHALL PLACE RUMBLE STRIPS ON THE OUTSIDE SHOULDER PAVEMENT OF WESTBOUND U.S. 50 PER SCD BP-9.1 FROM STA. 79+63 TO STA. 82+62 AND FROM STA. 84+97 TO STA. 96+32 AS LAID OUT IN THE PLANS. RUMBLE STRIPS ARE TO BE PLACED AFTER THE COMPLETION OF THE BRIDGE WORK AND TRAFFIC IS TO BE MAINTAINED USING A RIGHT LANE CLOSURE PER SCD MT-95.30.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER FT OF ITEM 618, RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN.

AN ESTIMATED QUANTITY OF 1700 FT HAS BEEN CARRIED TO THE GENERAL SUMMARY.

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

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UNAUTHORIZED LANE USE TABLE

LOCATION	DIRECTION	EX. NO. OF THRU LANES	WEEKDAY LANE CLOSURE TIMES PERMITTED				WEEKENDS LANE CLOSURE TIMES PERMITTED				UNAUTHORIZED LANE USE		
			1 LANE CLOSED		2 LANES CLOSED		1 LANE CLOSED		2 LANES CLOSED		TIME UNIT	DISINCENTIVE PER TIME UNIT	NOTES
			CONST. SEASON	NON - CONST. SEASON	CONST. SEASON	NON - CONST. SEASON	CONST. SEASON	NON - CONST. SEASON	CONST. SEASON	NON - CONST. SEASON			
HAM-42	BOTH	2	9 AM-3 PM 6 PM-6AM	9 AM-3 PM 6 PM-6 AM	NONE	NONE	ANYTIME	ANYTIME	NONE	NONE	15 MINUTES	\$500	NOTE 2, NOTE 3 AND NOTE 5
I-71	BOTH	2	MIDNIGHT-1 PM 7PM- MIDNIGHT	MIDNIGHT-2 PM 6 PM-MIDNIGHT	NONE	NONE	ANYTIME	ANYTIME	NONE	NONE	15 MINUTES	\$1,125	NOTE 4 AND NOTE 5
I-75	SB	4	7 PM - 6 AM	7 PM - 7 AM	9 PM - 6 AM	9 PM - 6 AM	9 AM - 2 PM 6 PM-7 AM	8 AM-3 PM 6 PM-7 AM	8 PM-6 AM	7 PM-6 AM	15 MINUTES	\$1,875	NOTE 1, NOTE 3 AND NOTE 5
	NB	4	7 PM-6 AM	7 PM-7 AM	9 PM-6 AM	9 PM-6 AM	9 AM-2 PM 6 PM-7 AM	8 AM-3 PM 6 PM-7 AM	8 PM-6 AM	7PM-6 AM	15 MINUTES	\$1,875	NOTE 1, NOTE 2 AND NOTE 5
I-471	SB	2	10 PM-6AM	10 PM-6 AM	NONE	NONE	9 PM-6 AM	8 PM-6 AM	NONE	NONE	15 MINUTES	\$1,875	NOTE 1, NOTE 2 AND NOTE 5
	NB	2	10 PM-6AM	10 PM-6 AM	NONE	NONE	9 PM-6 AM	8 PM-6 AM	NONE	NONE	15 MINUTES	\$1,875	NOTE 3 AND NOTE 5
SR 562	BOTH	2	8 PM-6 AM	7 PM-6 AM	NONE	NONE	9AM-11AM 7 PM-7 AM	9 AM-2 PM 6 PM-7 AM	NONE	NONE	15 MINUTES	\$1,500	NOTE 5
PETE ROSE WAY	WB	2	9 AM-3 PM 6 PM-6AM	9 AM-3 PM 6 PM-6 AM	NONE	NONE	ANYTIME	ANYTIME	NONE	NONE	15 MINUTES	\$500	NOTE 3 AND NOTE 5
	EB	2	9 AM-3 PM 6 PM-6AM	9 AM-3 PM 6 PM-6 AM	NONE	NONE	ANYTIME	ANYTIME	NONE	NONE	15 MINUTES	\$500	NOTE 4 AND NOTE 5
SPRING GROVE AVE.	SB	3	9 AM-3 PM 6 PM-6AM	9 AM-3 PM 6 PM-6 AM	9 AM-3 PM 6 PM-6 AM	9 AM-3 PM 6 PM- 6 AM	ANYTIME	ANYTIME	ANYTIME	ANYTIME	15 MINUTES	\$500	
	NB	2	9 AM-3 PM 6 PM-6AM	9 AM-3 PM 6 PM-6 AM	NONE	NONE	ANYTIME	ANYTIME	NONE	NONE	15 MINUTES	\$500	
I-75 SB TO WHV RAMP		1	10 PM-5 AM	10 PM-5 AM	N/A	N/A	10 PM-5 AM	10 PM-5 AM	N/A	N/A	15 MINUTES	\$500	NOTE 3 AND NOTE 5
ALL OTHER RAMPS		1	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	15 MINUTES	\$500	

COMMENTS

Note 1: NO SHOULDER CLOSURE BETWEEN THE HOURS OF 6AM TO 9AM AND 3PM TO 7PM MONDAY THROUGH FRIDAY.
 Note 2: I-75 NO CLOSURES 2 HOUR BEFORE TO 2 HOURS AFTER THE SCHEDULED END OF EVENTS AT GREAT AMERICAN BALL PARK, PAUL BROWN STADIUM, OR US BANK ARENA. THIS RESTRICTION ALSO APPLIES TO EVENTS REACHING AN ATTEDANCE OF 10,000+
 Note 3: I-75 NO CLOSURES 2 HOURS BEFORE TO 1 HOUR AFTER THE SCHEDULED START OF EVENTS AT GREAT AMERICAN BALL PARK, PAUL BROWN STADIUM, OR US BANK ARENA. THIS RESTRICTION ALSO APPLIES TO EVENTS REACHING AN ATTEDANCE OF 10,000+
 Note 4: THERE SHALL BE NO LANE CLOSURES FRIDAY 6 AM THRU 9PM NOR SUNDAY NOON THRU 9 PM.
 Note 5: THERE SHALL BE NO LANE CLOSURES ON HOLIDAYS OR HOLIDAY WEEKENDS. ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING HOLIDAYS OR EVENTS: CHRISTMAS, NEW YEARS, MEMORIAL DAY, FOURTH OF JULY, LABOR DAY, THANKSGIVING, AND EASTER.
 Note 6: A PERMIT MUST BE OBTAINED THROUGH THE CITY OF CINCINNATI FOR WORK UNDER BRIDGE HAM-471-0000 L/R AT SAWYER POINT PARK. PERMIT APPLICATIONS MUST BE SUBMITTED AND APPROVED A MINIMUM OF 2 WEEKS PRIOR TO THE START OF WORK.

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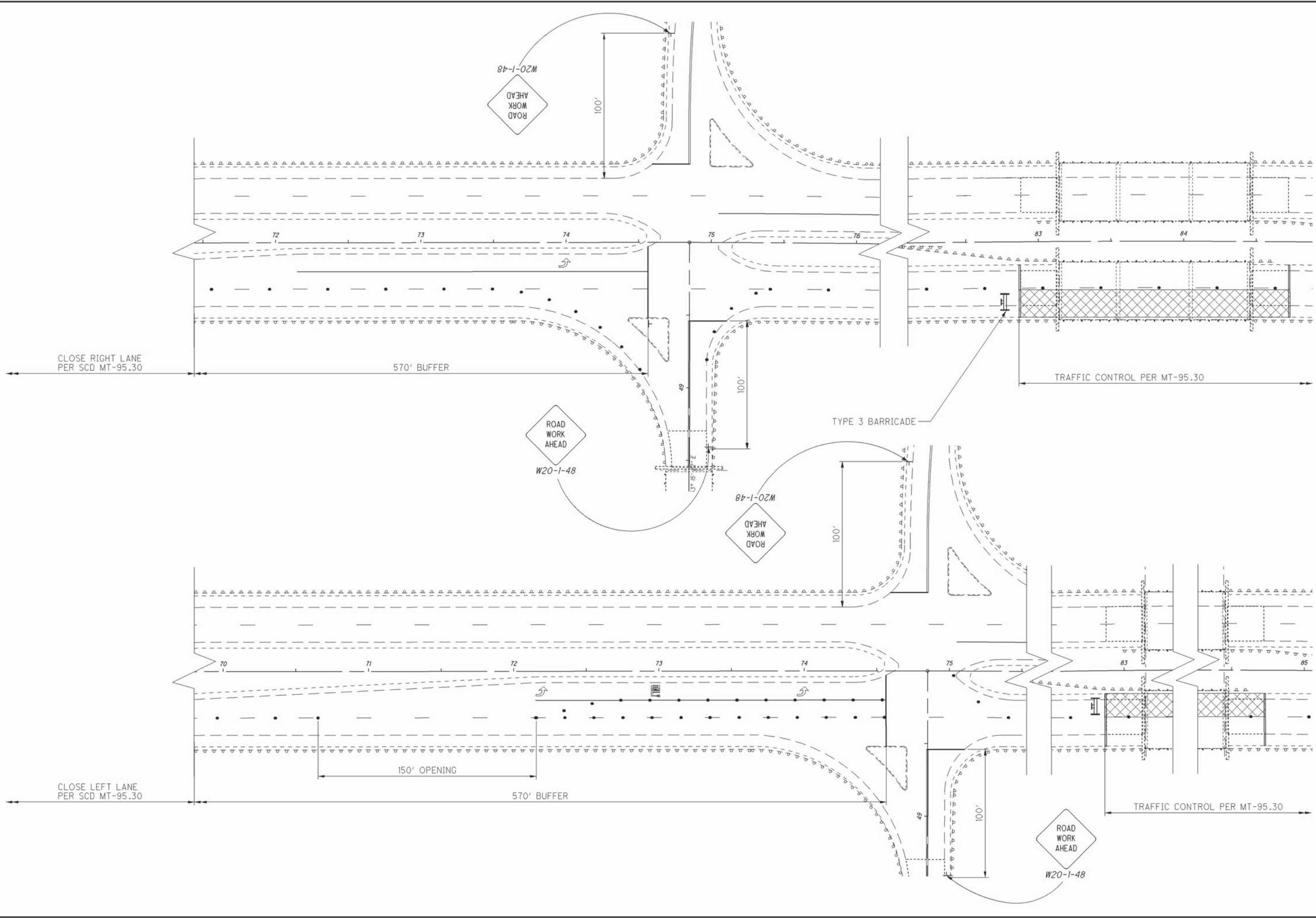
UNAUTHORIZED USE TABLE

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SHEET NO.	PHASE	202	252	614										615		622					
		PAVEMENT REMOVED SQ YD	FULL DEPTH PAVEMENT SAW CUTTING FEET	WORK ZONE IMPACT ATTENUATOR (UNI-DIRECTIONAL) EACH	WORK ZONE IMPACT ATTENUATOR (BI-DIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE A EACH	BARRIER REFLECTOR, TYPE B EACH	OBJECT MARKER, ONE WAY EACH	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1 MILE	WORK ZONE DOTTED LINE, CLASS 1, 740.06, TYPE 1 FEET	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN SNMT	LAW ENFORCEMENT OFFICER W/ PATROL CAR FOR ASSISTANCE, AS PER PLAN HOUR	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SQ YD	ROADS FOR MAINTAINING TRAFFIC LUMP	PORTABLE CONCRETE BARRIER, 32" FT	PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED FT					
9	1	1280	1454	1	1	10	18	28	0.78	720				1280	LUMP	720	130				
10	2			1	1	7	11	18	0.32	720						420	130				
12				1			7	7	0.1							80	130				
5											4	300									
19				1			8	8								370					
TOTALS CARRIED TO GENERAL SUMMARY		1280	1454	4	2	17	44	61	1.2	1440	4	300		1280	LUMP	1590	390				

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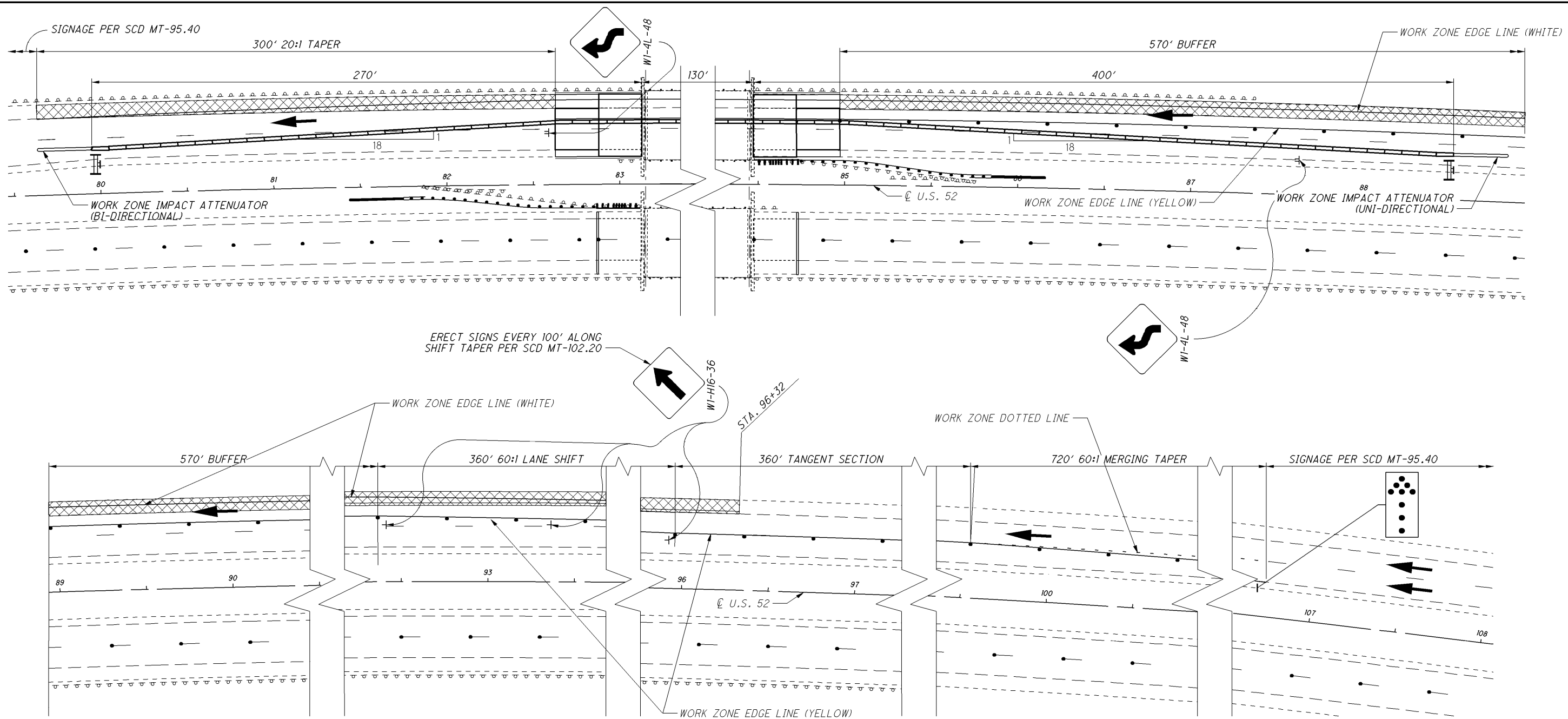
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**MAINTAINANCE OF TRAFFIC
BRIDGE No.: CLE-52-0159R**

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MAINTENANCE OF TRAFFIC: PHASE 1 QUANTITIES

TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUB-SUMMARY			
ITEM	TOTAL	UNIT	DESCRIPTION
202	1280	SQ YD	PAVEMENT REMOVED
252	1454	FEET	FULL DEPTH PAVEMENT SAWING
614	10	EACH	BARRIER REFLECTOR, TYPE A
614	18	EACH	BARRIER REFLECTOR, TYPE B
614	28	EACH	OBJECT MARKER, ONE WAY
614	0.78	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I
614	720	FEET	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I
614	1	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)
614	1	EACH	WORK ZONE IMPACT ATTENUATOR (BI-DIRECTIONAL)
615	1280	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
615		LUMP	ROADS FOR MAINTAINING TRAFFIC
622	720	FEET	PORTABLE CONCRETE BARRIER, 32"
622	130	FEET	PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (PLACED PRIOR TO PHASE 1)

NOTES:

- 1) PRIOR TO PHASE ONE, REPLACE WESTBOUND OUTSIDE SHOULDER PAVEMENT FROM STA. 79+63 TO STA. 82+62 AND FROM STA. 84+97 TO STA. 96+32. PERFORM RIGHT LANE CLOSURE PER SCD MT-95.30.
- 2) SHOULDER PAVEMENT SHALL MEET ALL REQUIREMENTS FOR CLASS A FLEXIBLE PAVEMENT.
- 3) ANY SUBGRADE COMPACTION OR EARTHWORK REQUIRED TO COMPLETE THE SHOULDER WORK SHALL BE INCLUDED WITH ITEM 615 - ROADS FOR MAINTAINING TRAFFIC FOR PAYMENT.
- 4) ONCE CONSTRUCTION IS COMPLETED, ITEM 615 SHOULDER PAVEMENT SHALL BE LEFT IN PLACE AND RUMBLE STRIPS SHALL BE CUT IN KIND.

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MAINTENANCE OF TRAFFIC - PHASE ONE

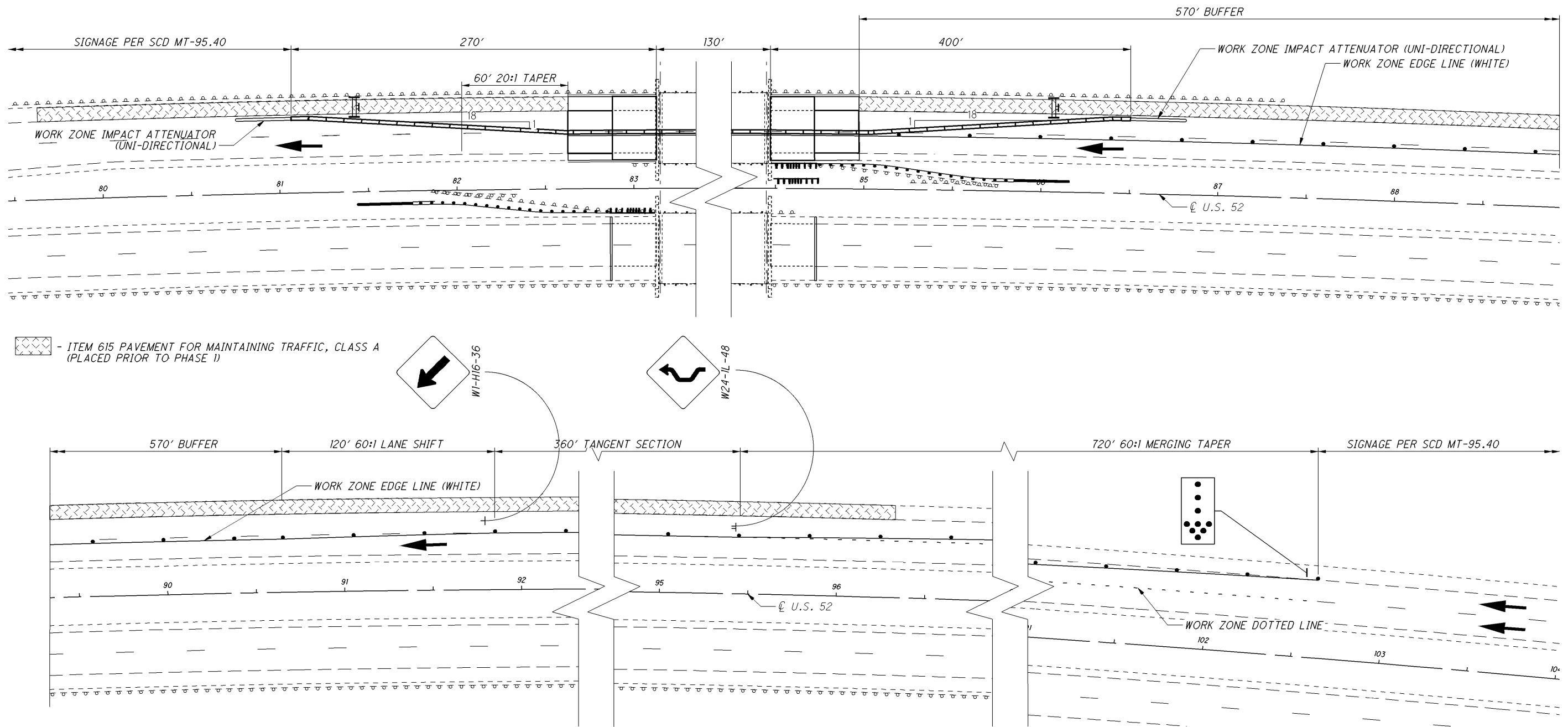
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- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (PLACED PRIOR TO PHASE 1)

MAINTENANCE OF TRAFFIC: PHASE 2 QUANTITIES			
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUB-SUMMARY			
ITEM	TOTAL	UNIT	DESCRIPTION
614	7	EACH	BARRIER REFLECTOR, TYPE A
614	11	EACH	BARRIER REFLECTOR, TYPE B
614	18	EACH	OBJECT MARKER, ONE WAY
614	0.32	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I
614	720	FEET	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I
614	1	EACH	WORK ZONE IMPACT ATTENUATOR (UNI-DIRECTIONAL)
614	1	EACH	WORK ZONE IMPACT ATTENUATOR (BI-DIRECTIONAL)
622	420	FEET	PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED
622	130	FEET	PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED



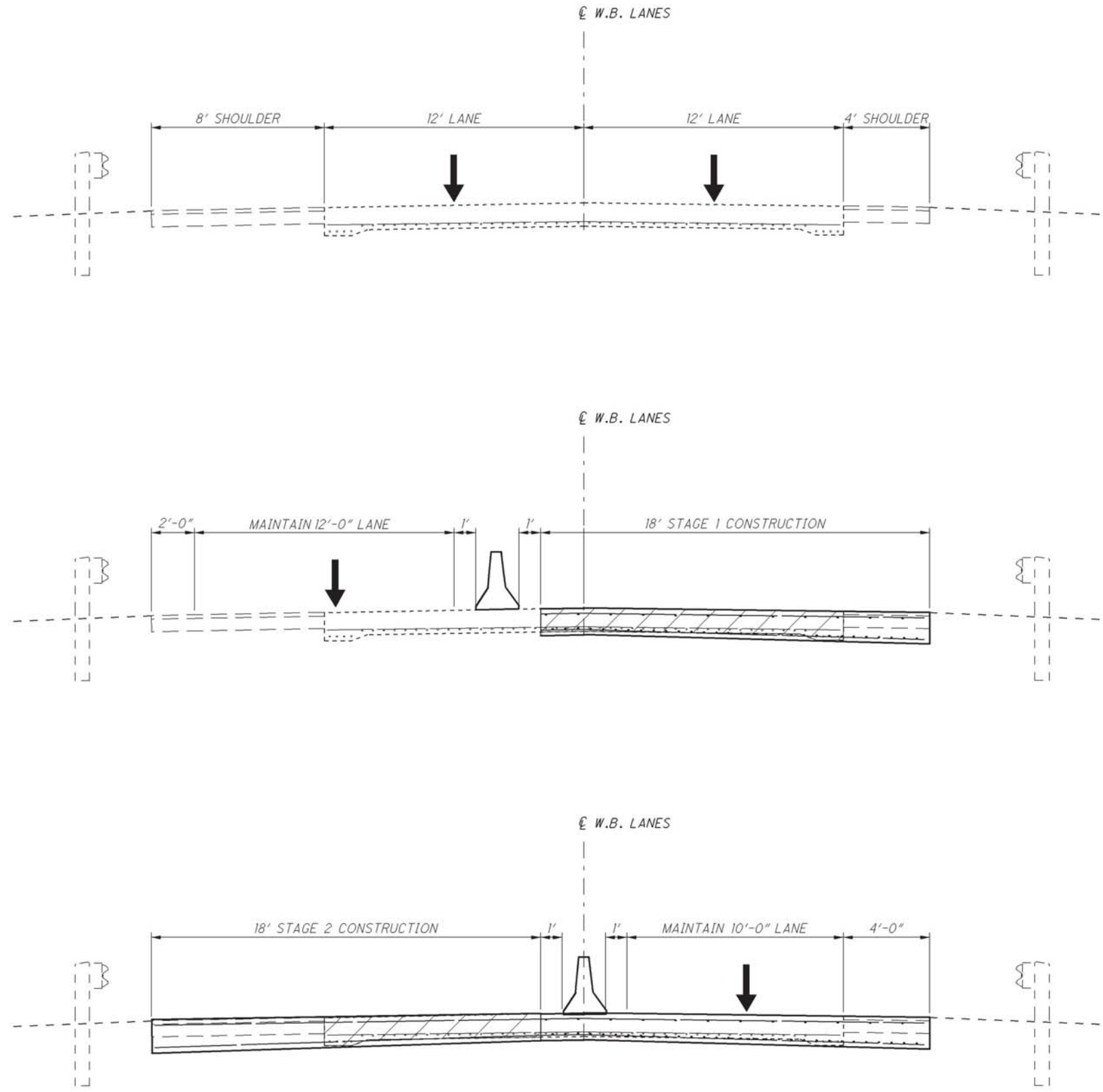
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MAINTENANCE OF TRAFFIC - PHASE TWO
BRIDGE No.: CLE-52-159L

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LEGEND

 - EXISTING APPROACH SLAB REMOVED

NOTE

BRIDGE MOUNTED PORTABLE CONCRETE BARRIER SHALL BE UNANCHORED.

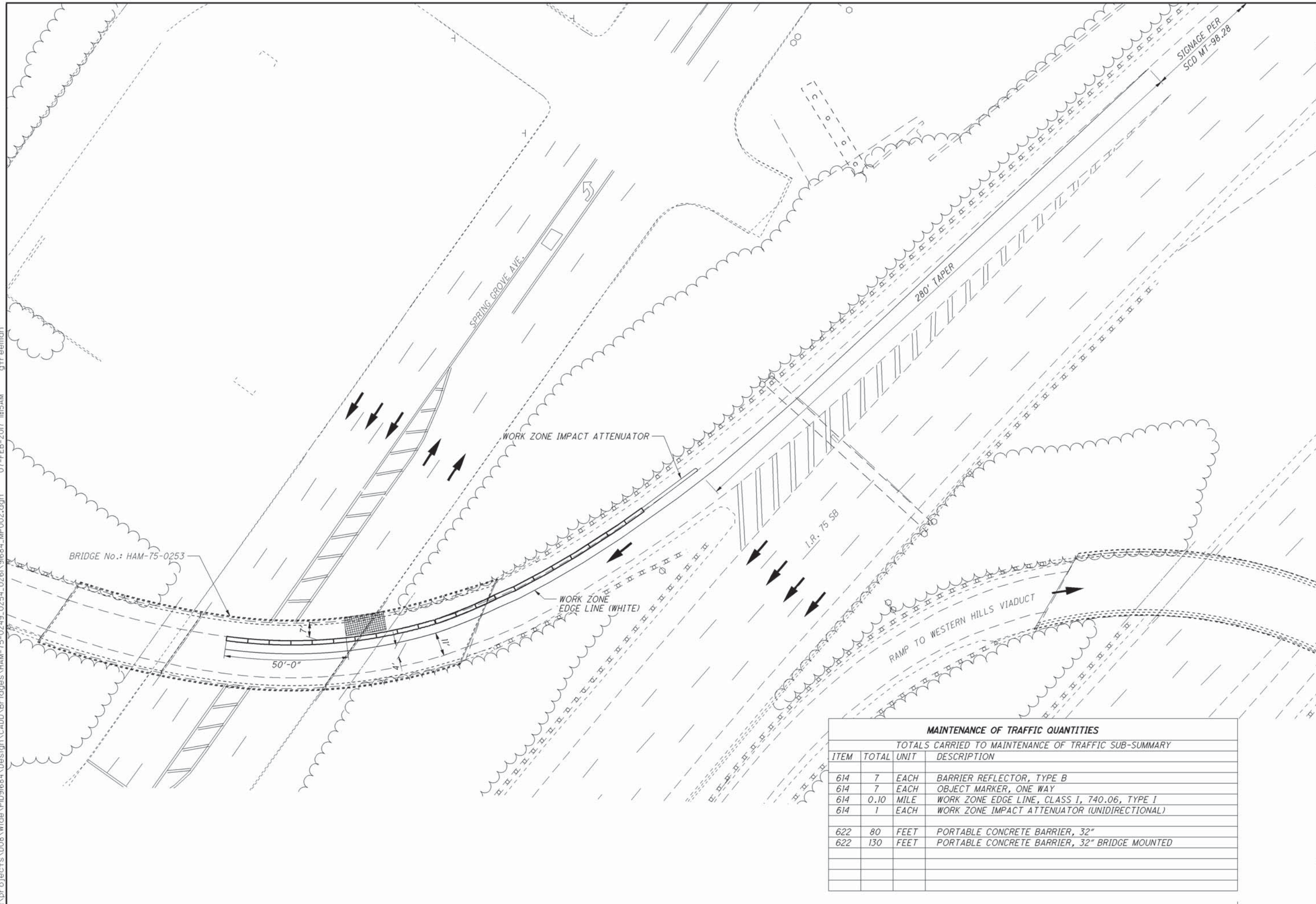
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STAGE CONSTRUCTION DETAIL
BRIDGE No.: CLE-52-159L

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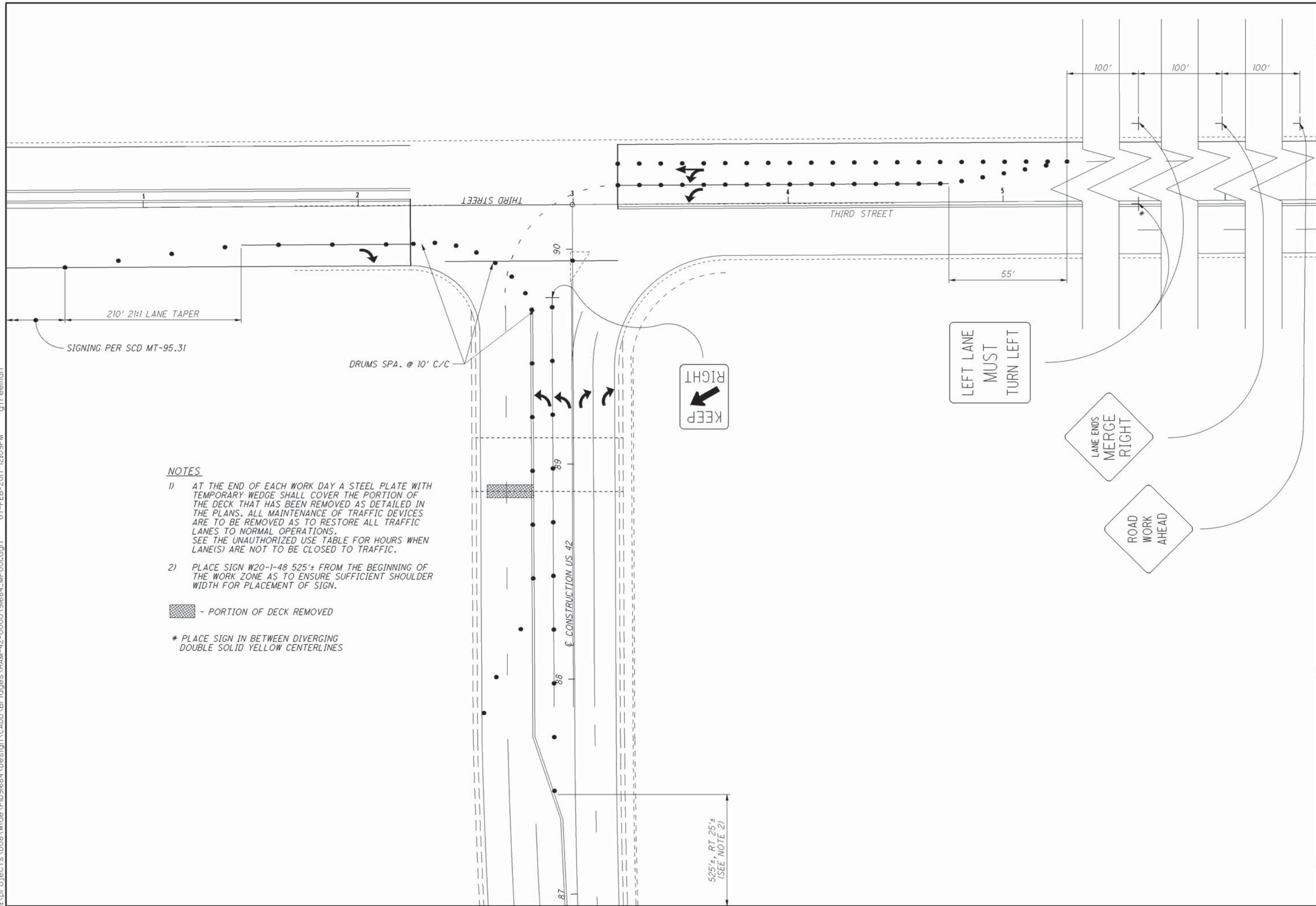
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**MAINTENANCE OF TRAFFIC
BRIDGE No.: HAM-75-0253**

D08 - BM - FY 2017B

MAINTENANCE OF TRAFFIC QUANTITIES			
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUB-SUMMARY			
ITEM	TOTAL	UNIT	DESCRIPTION
614	7	EACH	BARRIER REFLECTOR, TYPE B
614	7	EACH	OBJECT MARKER, ONE WAY
614	0.10	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I
614	1	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)
622	80	FEET	PORTABLE CONCRETE BARRIER, 32"
622	130	FEET	PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED

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NOTES

- 1) AT THE END OF EACH WORK DAY A STEEL PLATE WITH TEMPORARY WEDGE SHALL COVER THE PORTION OF THE DECK THAT HAS BEEN REMOVED AS DETAILED IN THE PLANS. ALL MAINTENANCE OF TRAFFIC DEVICES ARE TO BE REMOVED AS TO RESTORE ALL TRAFFIC LANES TO NORMAL OPERATIONS. SEE THE UNAUTHORIZED USE TABLE FOR HOURS WHEN LANE(S) ARE NOT TO BE CLOSED TO TRAFFIC.
- 2) PLACE SIGN W20-1-48 525'± FROM THE BEGINNING OF THE WORK ZONE AS TO ENSURE SUFFICIENT SHOULDER WIDTH FOR PLACEMENT OF SIGN.

- PORTION OF DECK REMOVED

* PLACE SIGN IN BETWEEN DIVERGING DOUBLE SOLID YELLOW CENTERLINES

CALCULATED XXX
 CHECKED XXX

HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC
HAM-42-0000

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SHEET NUM.										PART.			ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	GTF CHECKED	CAH
44	54									01/IMS/BR	02/NHS/BR	03/STR/BR		EXT	TOTAL						
STRUCTURE REPAIR (BRIDGE No.: HAM-471-0000R)																					
										LUMP			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	17			
810										810			518	51201	810	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN	46			
										LUMP			518	63300	LS		STRUCTURE DRAINAGE, MISC.:DRAINAGE PIPE VIDEO MONITORING	46			
	22									22			519	11100	22	SF	PATCHING CONCRETE STRUCTURE				
7,688										7,688			SPECIAL	53000600	7,688	SF	STRUCTURES, STRUCTURAL DEBRIS NETTING	46			
648										648			SPECIAL	53000600	648	SF	STRUCTURES, DECK CONCRETE REMOVAL	46			
60										60			607	39900	60	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC				
INCIDENTALS																					
										LUMP	LUMP	LUMP	614	11000	LS		MAINTAINING TRAFFIC				
										LUMP	LUMP	LUMP	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING				
										LUMP	LUMP	LUMP	624	10000	LS		MOBILIZATION				

GENERAL SUMMARY

D08 - BM - FY 2017B

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

A-1-69	07-19-02	EXJ-4-87	07-19-02
AS-1-81	01-18-13	GSD-1-96	07-19-02
AS-1-15	07-17-15	BR-1	07-19-02
AS-2-15	07-17-15	PCB-91	01-18-13
VPF-1-90	07-17-15		

DESIGN SPECIFICATIONS

THESE STRUCTURES CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH ED. , AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN: REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

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

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN

THIS ITEM INCLUDES THE WORK NECESSARY FOR REPLACEMENT OF SELECT END CROSS FRAMES, PARTIAL BEAM WEB AND STIFFENER REPLACEMENT, INSTALLATION OF STEEL SLAB SUPPORTS AND/OR THE RETROFIT OF STRUCTURE BEARINGS. THESE ITEMS SHALL BE COMPLETED AT THE LOCATIONS SPECIFIED ON THE PLANS. THIS ITEM ALSO INCLUDES GRINDING THE BEARING AND END CROSS FRAME CONNECTION WELDS SMOOTH AT THE LOCATIONS SHOWN ON THE PLANS.

STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE PROJECT ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED TO THE ENGINEER, IF REQUESTED, BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.06. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CMS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIALS AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT FOR WELDING, CUTTING, GRINDING, DRILLING AND BOLTING SHALL BE DEEMED TO BE INCLUDED FOR PAYMENT UNDER THIS ITEM. PAYMENT FOR FIELD DRILLING HOLES IN EXISTING MATERIAL IN-SITU AS PART OF THE REPAIR SHALL ALSO BE INCLUDED FOR PAYMENT UNDER THIS ITEM. PAYMENT SHALL BE MADE AT A UNIT BID PRICE OF POUNDS.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. MINIMUM WATER PRESSURE SHALL BE 1,500 PSI.

APPROACH SLAB REMOVED, AS PER PLAN

IN ADDITION TO THE REMOVAL OF THE APPROACH SLAB, REMOVAL OF ANY ASPHALT OVERLAYS PLACED ON THE APPROACH SLAB SHALL ALSO BE INCLUDED WITH THIS ITEM FOR PAYMENT.

BEARING WORK

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILT INFORMATION OF EACH REFURBISHED OR REPLACED BEARING SHOWING FINAL BEARING AND SHIM SIZES. PAYMENT FOR THE AS-BUILT INFORMATION AS WELL AS ANY SURVEY WORK REQUIRED TO COMPLETE THE BEARING WORK SHALL BE INCLUDED WITH THE RESPECTIVE BEARING ITEMS FOR PAYMENT.

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

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

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

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

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

ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN OR SECONDARY MEMBERS, FILLET WELDING: AFTER DAMAGED AREAS HAVE BEEN INSPECTED ACCORDING TO ITEM 849 DAMAGE ASSESSMENT. PREPARE THE DAMAGED MATERIAL FOR WELDING, PERFORMING 5/16 INCH FILLET WELDS ACCORDING TO ITEM 513 USING APPROVED ELECTRODES, PROCEDURES AND WELDERS. WELD EACH SECONDARY MEMBER ACCORDING TO PLAN DETAILS. MAGNETIC PARTICLE INSPECT ALL FILLET WELDS ACCORDING TO C&MS 513.25B. THE ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL MATERIALS; TOOLS; LABOR; EQUIPMENT; AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN OR SECONDARY MEMBERS: FILLET WELDING. FOOT.

ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN

THE EXPANSION JOINT FOR BRIDGE HAM-42-0000 SHALL BE CONSTRUCTED AS DETAILED ON SHEET 43 OF 54. PAYMENT FOR ALL LABOR AND MATERIALS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER THIS ITEM.

THE 3" ELASTOMERIC STRIP SEAL IS NOT TO BE PAID UNDER THIS ITEM

ITEM 530 - STRUCTURE, MISC.: DECK CONCRETE REMOVAL
THIS WORK CONSISTS OF REMOVING ALL LOOSE AND DISINTEGRATED CONCRETE AT THE UNDERSIDE OF DECK AND OUTSIDE OF PARAPETS AS NOTED IN THE PLANS. THE CONTRACTOR IS TO COORDINATE REMOVAL OPERATIONS TO PREVENT DEBRIS FALLING ONTO TRAFFIC, PARKED VEHICLES, LANDSCAPED AREAS, OR OTHER OCCUPIED AREAS BELOW.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE REMOVAL OF THE UNDERSIDE OF DECK CONCRETE AND OUTSIDE OF PARAPETS BY THE NUMBER OF SQUARE FEET OF CONCRETE REMOVED.

PAYMENT WILL BE MADE FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE FOR:
ITEM EXTENSION UNIT DESCRIPTION
530 00600 SF SPECIAL - STRUCTURE, MISC.: DECK CONCRETE REMOVAL

ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER SUPPLEMENTAL SPECIFICATIONS 888 AND 898, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN SUPPLEMENTAL SPECIFICATIONS 898 AND 888 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIANS AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL I CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

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DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 BRIDGE DEPT.	DATE	REVIEWED	DRAWN	DESIGNED
	FILE NUMBER	CAH	GTF	GTF
VARIABLES		STRUCTURE	REVISED	CHECKED
STRUCTURE GENERAL NOTES				
BRIDGE NO: VARIES				
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PID No. 91684				
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ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION (CONT.)

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING- RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT 20%
 PROGRESSIVE EQUIVALENT PAYMENTS 50%
 UPON SUBMISSION OF FINAL REPORT 30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

PROPOSED WORK

FOR BRIDGE NO. GRE-71-0299, SFN 2901803
 (SMITH ROAD OVER I-71):

- ① REMOVE UNSOUND CONCRETE AT EAST PIER AND PATCH WITH ITEM 519.
 WRAP THE DETERIORATED PIER COLUMNS ADJACENT TO THE I-71 NB SHOULDER WITH FIBER REINFORCED POLYMER FROM THE BOTTOM OF THE CAP TO 1'-0" BELOW GRADE.
- ② REMOVE AND RECONSTRUCT THE BARRIER IN FRONT OF THE PIER WORK.
 REPLACE THE APPROACH GUARDRAIL TO CURRENT STANDARDS.
- ③ SEAL WITH AN EPOXY URETHANE SEALER.

FOR BRIDGE NO. CLE-232-1041, 1304356
 (SR 232 OVER POPLAR CREEK):

- ① REMOVE AND REPLACE THE POLYMER MODIFIED ASPHALT EXPANSION JOINTS.

FOR BRIDGE NO. CLE-52-0159L, 1301381
 (US 52 EB OVER TENMILE CREEK):

- ① REPLACE THE BACKWALLS AND APPROACH SLABS, AND A SUFFICIENT AMMOUNT OF THE APPROACH ROADWAY TO INSTALL A PRESSURE RELIEF JOINT. THE DECK SIDE OF THE EXPANSION JOINT IS IN GOOD CONDITION AND CAN BE RETROFITTED TO ACCOMODATE A NEW STRIP SEAL EXPANSION JOINT.

FOR BRIDGE NO. CLE-52-0159R, 1301411
 (US 52 WB OVER TENMILE CREEK):

- ① INSTALL A PRESSURE RELIEF JOINT AT THE END OF EACH APPROACH SLAB.
- ② EPOXY INJECT THE CRACKS IN THE BACKWALLS.

FOR BRIDGE NO. HAM-562-0275, 3114082
 (BEECH STREET OVER SR 562):

- ① INSTALL TEMPORARY SUPPORTS TO EITHER SIDE OF IMPACT ON WEST BEAM 5 (WEST FASCIA BEAM). CUT OUT AND REPAIR PORTION OF FLANGE AND WELD IN NEW FLANGE. REMOVE TEMPORARY SUPPORTS THEN REPAIR PAINT.
- ② ON BEAM 2, GRIND SMOOTH THE IMPACTED AREA. REPAIR PAINT.
- ③ HEAT STRAIGHTEN BOTTOM FLANGE ON BEAM 1. GRIND SMOOTH THE IMPACTED AREA. REPAIR PAINT.
- ④ REPLACE SOUTH ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS WITH LOAD PLATES ON HP PEDESTALS.

FOR BRIDGE NO. HAM-75-0259W, 3109453
 (RAMP FROM WHV TO SB I-75 OVER SPRING GROVE):

- ① REMOVE UNSOUND CONCRETE AT INTERMEDIATE EXPANSION JOINT DECK EDGES.
- ② INCLUDE A QUANTITY FOR EPOXY INJECTION OF 10 LINEAR FEET AT EACH CORNER TO BE USED AS DIRECTED BY THE ENGINEER TO INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND BEAMS.
- ③ SEAL THE AREA WITH A GRAY CONCRETE SEALER (FEDERAL COLOR 16515). EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED PRIOR TO SEALING.
- ④ ZONE PAINT WITHIN 5 FEET OF THE INTERMEDIATE EXPANSION JOINTS. COLOR TO MATCH EXISTING.

PROPOSED WORK CONTINUED

FOR BRIDGE NO. HAM-75-0253W, 3109488
 (RAMP FROM WHV TO SB I-75 OVER SPRING GROVE):

- ① REMOVE AND RECONSTRUCT THE DECK EDGE AT THE NORTHEAST DECK OVERHANG BEGINNING AT THE CENTERLINE OF THE NORTH FASCIA BEAM. THE LATERAL LIMITS SHALL EXTEND 3 FEET IN EACH DIRECTION FROM THE EXPANSION JOINT. THE EXPANSION JOINT SHALL BE REPLACED IN THIS AREA WITH A GLUED IN PLACE FOAM JOINT SUCH AS EMSEAL, NSJ SPONGE SEAL, OR WABO EVAZOTE. THE ARMOR SHALL NEED NOT MATCH THE EXISTING JOINT, BUT SHALL BE WELDED IN SOME FASHION TO THE EXISTING JOINT. THE COMPRESSION SEALS SHALL BE MATCHED TO THE EXISTING SEAL AS CLOSE AS POSSIBLE AND CAULKED.
- ② AT THE OTHER 3 INTERMEDIATE EXPANSION JOINT DECK EDGES, REMOVE UNSOUND CONCRETE.
- ③ AS DIRECTED BY THE ENGINEER, INJECT EPOXY IN ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND BEAMS.
- ④ SEAL THE AREA WITH A GRAY CONCRETE SEALER (FEDERAL COLOR 16515). EXPOSED REINFORCING STEEL SHALL BE BLASTED PRIOR TO SEALING.
- ⑤ ZONE PAINT WITHIN 5 FEET OF THE INTERMEDIATE EXPANSION JOINTS. COLOR TO MATCH EXISTING.

FOR BRIDGE NO. HAM-75-0261R, 3109518
 (NB I-75 RAMP TO WHV OVER NB I-75):

- ① REMOVE UNSOUND CONCRETE AT INTERMEDIATE
- ② INCLUDE A QUANTITY FOR EPOXY INJECTION OF 10 LINEAR FEET AT EACH CORNER TO BE USED AS DIRECTED BY THE ENGINEER TO INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND BEAMS.
- ③ SEAL THE AREA WITH A GRAY CONCRETE SEALER (FEDERAL COLOR 16515). EXPOSED REINFORCING STEEL SHALL BE BLASTED PRIOR TO SEALING.
- ④ REPLACE EXISTING COVER SIGN WITH A NEW SIGN MOUNTED TO THE TOP OF THE PARAPET IN SOUND CONCRETE, SIMILAR TO THE EXISTING. ONLY ATTACH ONE SIDE OF THE JOINT TO ALLOW EXPANSION/CONTRACTION.

FOR BRIDGE NO. HAM-471-0000L/R
 SFN L = 3117359, SFN R = 3117367
 (I-471 OVER PARK, PLAYGROUND, PARKING, AND PETE ROSE WAY)

- ① REPLACE EXISTING DRAINAGE SYSTEM FROM THE SCUPPER TO THE GROUND LEVEL. CLEAN DRAINAGE SYSTEM UNDERGROUND TO THE FIRST MANHOLE.
- ② INSTALL NETTING OVER PLAYGROUND AREA WITHIN 50 FEET OF THE INTERMEDIATE EXPANSION JOINT TO PROTECT FROM SPALLING CONCRETE. ATTACH NETTING TO INTERIOR STIFFENERS OF FASCIA BEAM TO PROTECT FROM UV RAYS.
- ③ REPLACE THE DAMAGED FENCE ON SOUTHBOUND I-471 AT TWO LOCATIONS (WEST SIDE: 1 POST, 2 BAYS. EAST SIDE: 5 POSTS 6 BAYS.)

FOR BRIDGE NO. HAM-42-0249W, 3102246
 (US 42 OVER PETE ROSE WAY AND MEHRING WAY):

- ① REPAIR 22± FEET OF DAMAGED EXPANSION JOINT. REMOVE CONCRETE DECK WITHIN THIS LENGTH OF STEEL FOR A DISTANCE 1'-9½" FROM THE JOINT. EXISTING TRANSVERSE REINFORCING STEEL IN THE DECK SHALL BE REMOVED AND REPLACED. THE EXISTING LONGITUDINAL STEEL SHALL REMAIN. RESET THE STEEL EXPANSION JOINT TO THE TOP OF THE BEAMS. INCLUDE NEW EXPANSION JOINT ANCHORS TO BE CAST INTO THE CONCRETE. REWELD TO EXISTING EXPANSION JOINT STEEL WITH A FULL PENETRATION WELD PRIOR TO RECASTING CONCRETE.
- ② REPLACE JOINT SEAL THE ENTIRE WIDTH.

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

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

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

THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY PORTION OF THE STRUCTURE THAT WILL REMAIN IN SERVICE. ANY PORTION OF THE REMAINING STRUCTURE DAMAGED AS A RESULT OF CONTRACTOR ACTIONS SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

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

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

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

DESIGN SPECIFICATIONS

THESE STRUCTURES CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH ED. , AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

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DESIGNED GTF CHECKED	DRAWN GTF REVISED	REVIEWED CAH STRUCTURE FILE NUMBER VARIES	DATE	DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 BRIDGE DEPT.
STRUCTURE GENERAL NOTES				
BRIDGE NO: VARIES				
D08 - BM - FY2017B				
PID No. 91684				
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ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (TWO COAT):

1.0 DESCRIPTION THIS ITEM CONSISTS OF FIELD PAINTING STRUCTURAL STEEL PREVIOUSLY COATED WITH AN OLDER EXISTING OZEU OR IZEU PAINT SYSTEM OR UNPAINTED WEATHERING STEEL TO CORRECT DAMAGE BY COLLISION OR CORROSION. THIS WORK CONSISTS OF PERFORMING SURFACE PREPARATION AND APPLYING A TWO-COAT PAINT SYSTEM TO THE PREPARED STEEL AND FEATHERED REMOVAL AREAS OF EXISTING OZEU OR IZEU PAINT SYSTEMS OR UNPAINTED WEATHERING STEEL.

2.0 GENERAL C&MS 514.05 THROUGH 514.10 AND 514.13.D APPLY UNLESS MODIFIED BY THESE NOTES.

3.0 WASHING EXISTING OZEU OR IZEU PAINTED SURFACES OR UNPAINTED WEATHERING STEEL CLEAN SURFACES TO BE COATED WITH LOW PRESSURE WATER CLEANING TO REMOVE ALL DIRT, DEBRIS, ANIMAL EXCREMENT, SALT CONTAMINANTS AND OTHER ACCUMULATED FOREIGN MATERIAL IN ACCORDANCE WITH SSPC-SPI2 (LP WC), LOW PRESSURE WATER CLEANING. THE PRESSURE WASHER SHALL BE CAPABLE OF ACHIEVING AT LEAST 2000 POUNDS PER SQUARE INCH AT THE NOZZLE. WHEN USING THE POWER WASHING EQUIPMENT, THE NOZZLE SHALL BE MAINTAINED NO MORE THAN 10 INCHES FROM THE SURFACE. SUPPLY AND USE POTABLE WATER. PROVIDE TO THE ENGINEER A LETTER OF WRITTEN ACCEPTANCE FOR ANY BIODEGRADABLE DETERGENTS OR CLEANERS USED IN CONJUNCTION WITH THIS METHOD.

COLLECT AND CONTAIN WATER AND DEBRIS REMOVED DURING WASHING OPERATIONS ABOVE WATER FEATURES IN CONFORMANCE WITH C&MS 514.08 AND C&MS 514.13.D FOR ANY DEBRIS. CREATE SETTLEMENT COLLECTION BASINS AND STRAIN ALL WASH WATER ABOVE LAND FEATURES AS NECESSARY TO PRODUCE VISIBLY CLEAR WATER AND COMPLY WITH C&MS 514.08 AND C&MS 514.13.D FOR ANY DEBRIS.

4.0 SURFACE PREPARATION AFTER THE PRESSURE WASHED

SURFACE HAS DRIED, REMOVE EXISTING PAINT COATING TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER ACCORDING TO: SSPC-SP 11, POWER TOOL CLEANING TO BARE METAL, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 3; SSPC SP6, COMMERCIAL BLAST CLEANING, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 1; OR SSPC SPI2 UHP WJ-4, ULTRAHIGH-PRESSURE WATER JETTING, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 4. SUPPLY BLAST WATER CONTAINING A COMMERCIALY AVAILABLE RUST INHIBITOR AT A DOSAGE THAT PREVENTS FLASH RUSTING FOR 12 HOURS AND DOCUMENTED AS ACCEPTABLE TO THE COATING'S MANUFACTURER. THE ENGINEER WILL USE THE SSPC-VIS 1, SSPC-VIS 3 OR SSPC-VIS 4 TO DETERMINE THE ACCEPTANCE OF THE SURFACE PREPARATION. FEATHER THE EXISTING PAINT TO EXPOSE A MINIMUM OF 1/2 INCH OF EACH COAT. CONTAIN AND DISPOSE OF WASTE GENERATED BY THE CLEANING ACCORDING TO C&MS 514.13.D.

ROUND ALL EXPOSED CORNERS OF MAIN MATERIAL TO BE PAINTED AS NECESSARY TO ACHIEVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A 45 DEGREE ANGLE.

5.0 FIELD PAINTING APPLY THE PRIME AND INTERMEDIATE COATS OF THE THREE-COAT PAINT SYSTEM SPECIFIED IN C&MS 708.02, ACCORDING TO C&MS 514.15, 514.16, 514.17, 514.19 AND 514.20 TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER. TINT THE INTERMEDIATE COAT TO APPROXIMATELY THE SAME COLOR AS THE EXISTING FINISH COLOR, UNPAINTED WEATHERING STEEL OR AS DESIGNATED IN THE CONTRACT. MATCH THE COLOR TO THE ENGINEERS SATISFACTION. THE ENGINEER WILL DETERMINE THE PRIME AND INTERMEDIATE COAT THICKNESS USING A TYPE 2 MAGNETIC GAGE AT SPOT LOCATIONS. DO NOT APPLY THE FINISH COAT. THE PRIME AND INTERMEDIATE COAT OF PAINT SHALL MEET THE MINIMUM DRY FILM THICKNESS REQUIREMENTS OF C&MS 514.20. APPLY PAINT AS FOLLOWS:

A. APPLY THE PRIME COAT ONLY TO THE PREPARED SURFACE OF THE BARE STEEL AND THE EXISTING PRIME COAT EXPOSED BY FEATHERING. DO NOT APPLY THE PRIME COAT TO THE ADJACENT INTERMEDIATE COAT.

B. APPLY CAULK AFTER PRIMING

C. APPLY THE INTERMEDIATE COAT TO THE NEW PRIME COAT AND TO THE EXISTING INTERMEDIATE AND FINISH COAT THAT ARE EXPOSED BY FEATHERING.

AT THE PERIMETER OF THE REPAIR AREA, APPLY THE PRIME AND INTERMEDIATE COATS USING A BRUSH. IN LIEU OF BRUSHING, THE CONTRACTOR MAY DOUBLE MASK THE AREAS NOT TO BE COATED AND SPRAY TO FEATHERED REMOVAL LINES.

BLEND REPAIR AREAS WITH THE ADJACENT COATING TO PROVIDE A FINISHED SURFACE IN THE PATCHED AREAS THAT IS SMOOTH AND HAS AN EVEN PROFILE WITH THE ADJACENT SURFACE.

6.0 MEASUREMENT THE DEPARTMENT WILL MEASURE FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN BY THE NUMBER OF SQUARE FEET OF STRUCTURAL STEEL PAINTED.

THE DEPARTMENT WILL DETERMINE THE SURFACE AREA BY TAKING EXACT FIELD MEASUREMENTS OF ALL PAINTED SURFACES AND CALCULATIONS.

7.0 BASIS OF PAYMENT THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICES AS FOLLOWS:

THE DEPARTMENT MAY CONSIDER PAINT AS ELIGIBLE FOR PAYMENT FOR MATERIAL ON-HAND AS SPECIFIED IN 109.10, HOWEVER, ONLY PAINT THAT THE CONTRACTOR CAN PROVE TO THE ENGINEER WILL

BE USED DURING THE CONSTRUCTION SEASON IS ELIGIBLE FOR PAYMENT. THE CONTRACTOR SHALL PROVIDE THE ENGINEER CALCULATIONS INDICATING THE TOTAL SQUARE FEET OF STEEL TO BE PAINTED DURING THE CONSTRUCTION SEASON. THE CONTRACTOR SHALL ALSO PROVIDE CALCULATIONS SHOWING THE TOTAL NUMBER OF GALLONS REQUIRED.

IF THE CONTRACTOR CAUSES DAMAGE OR INJURY TO PUBLIC OR PRIVATE PROPERTY, THE DEPARTMENT WILL NOT PAY FOR RESTORING THE PROPERTY TO ITS ORIGINAL CONDITION.

THE DEPARTMENT WILL NOT PAY FOR REPAIRING ADJACENT COATINGS DAMAGED DURING THE WASHING, POWER TOOL CLEANING OR BLAST CLEANING OPERATION.

THE DEPARTMENT WILL NOT PAY FOR REMOVING AND REPLACING AN AREA OF COATING BECAUSE A SPOT OR MAXIMUM AVERAGE THICKNESS EXCEEDS THE MAXIMUM SPOT THICKNESS.

THE DEPARTMENT WILL NOT PAY FOR ADDITIONAL TESTING REQUIRED BY ANY HAULER, TREATMENT FACILITY, DISPOSAL FACILITY OR LANDFILL.

THE DEPARTMENT WILL NOT PAY FOR ACCESSING, INSPECTING, AND REPAIRING AREAS THAT ARE NOT FOUND TO BE IN CONFORMANCE WITH THE SPECIFICATIONS AND PERTINENT CONTRACT DOCUMENTS.

ALL OTHER REQUIREMENTS OF THIS FIELD PAINTING SPECIFICATION ARE CONSIDERED INCIDENTAL TO THE WORK.

ITEM	UNIT	DESCRIPTION
514	SQUARE FEET	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL - TWO COAT, AS PER PLAN

DESIGNED GTF CHECKED	DRAWN GTF REVISED	REVIEWED CAH STRUCTURE FILE NUMBER VARIES	DATE	DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT & BRIDGE DEPT.
STRUCTURE GENERAL NOTES				
BRIDGE NO: VARIES				
D08 - BM - FY2017B PID No. 91684				
3 / 3				
18 54				

REPAIR TYPE 530.C INSTALL CARBON FIBERWRAP

DESCRIPTION:

THIS WORK SHALL CONSIST OF PROVIDING A CARBON FIBER REINFORCED POLYMER (CFRP) STRENGTHENING AND PROTECTION SYSTEM. THE CFRP SYSTEM IS TO BE APPLIED TO THE COLUMNS AS DESIGNATED BY THE PROJECT DRAWINGS.

CONCRETE SEALER IS TO BE REMOVED FROM THE EXISTING SURFACES TO THE INSTALLERS SATISFACTION PRIOR TO THE CONCRETE CLEANING AND SPALL REPAIR.

THE CONCRETE IS TO BE PATCHED PER ITEM 530, THEN CLEANED AND PREPARED TO THE INSTALLERS SATISFACTION PRIOR TO THE INSTALLATION OF THE CFRP SYSTEM.

DESIGN:

THE CFRP SYSTEM SHALL BE DESIGNED TO PROVIDE MINIMUM FACTORED SHEAR AND FLEXURAL CAPACITIES FOR THE AREAS LISTED ON THE DRAWINGS. THE FACTORED SHEAR CAPACITY SHALL BE DESIGNED ACCORDING TO ACI-440.2R-08 WITH A STRAIN LIMITED TO 0.0027 FOR THREE SIDED APPLICATIONS AND 0.004 FOR COMPLETE WRAP APPLICATIONS. THE FACTORED FLEXURAL CAPACITY SHALL BE DESIGNED ACCORDING TO ACI-440.2R-08 WITH A STRAIN LIMITED TO 0.006.

A MINIMUM E X A VALUE FOR THE INSTALLED CFRP SYSTEM IS 476 KIPS/INCH WIDTH OF INSTALLED CFRP SYSTEM FOR THE COLUMNS.

MATERIALS:

10,000-HOUR DURABILITY TESTS FOR 140°F FOR WATER, SALT WATER, ALKALINE SOIL AND OTHER FACTORS (REFER TO TABLE.)

CFRP MATERIALS SHALL HAVE A CURRENT INTERNATIONAL CODE COUNCIL EVALUATION SERVICE REPORT (ICC ESR #) COMPLIANT WITH THE 2012 IBC. MATERIALS MUST PROVIDE STRUCTURAL AND DURABILITY TESTING AS DEFINED IN ICC AC 125.

TO BE AN APPROVED EQUAL THE INSTALLER MUST PROVIDE A HISTORY OF A MINIMUM OF 5 INSTALLATIONS OF COMPARABLE SIZE COMPLETED IN THE LAST 5 YEARS, DURABILITY TESTING, INDEPENDENT LABORATORY TESTING FOR CORRODED CONCRETE REPAIRS, DESIGN EQUIVALENCE TO THE SPECIFIED SYSTEM, AND ALL PROPOSED MATERIAL DATA.

POLYESTER OR OTHER RESINS WILL NOT BE ALLOWED AS A SUBSTITUTE TO EPOXY RESINS. GLASS COMPOSITE SYSTEMS WILL NOT BE ALLOWED AS A SUBSTITUTE TO CARBON COMPOSITE SYSTEMS.

MATERIALS MANUFACTURER:

ONE MANUFACTURER SHALL SUPPLY ALL MATERIALS REQUIRED FOR THE CFRP SYSTEM. THE MANUFACTURER SHALL BE ONE OF THE THREE LISTED BELOW OR APPROVED EQUAL FOR THE CARBON FIBER REINFORCED POLYMER (CFRP) STRENGTHENING AND PROTECTION SYSTEM.

TYFO FIBERWRAP COMPOSITE SYSTEM MANUFACTURER: FYFE COMPANY, LLC
3940 RUFFIN RD, SUITE C
SAN DIEGO, CA 92123
(858) 642-0694
APPLICATOR: FIBRWRAP CONSTRUCTION

MBRACE COMPOSITE STRENGTHENING SYSTEM
MANUFACTURER: BASF CONSTRUCTION CHEMICALS BUILDING SYSTEMS
889 VALLEY PARK DRIVE
SHAKOPEE, MN 55379
WWW.BUILDINGSYSTEMS.BASF.COM
CUSTOMER SERVICE: 800-433-9517

COMPOSITE CARBON FIBER WRAP
SIKA CORPORATION SIKAKORPORATION
201 POLITO AVENUE
LYNDHURST, NJ 07071
TELEPHONE: 1-800-933-SIKA
WWW.USA.SIKA.COM
LOCAL CONTACT: SEAN GALLAGHER
(513) 403-5742

D.CARBON WRAP SYSTEM
DOW AKSA, USA
1881 W. OAK PARKWAY
MARIETTA, GA 30062
TELEPHONE: 678-269-1366
WWW.DOWAKSAUSA.COM

THE CFRP MATERIAL SUPPLIER SHALL HAVE SPECIFIED MATERIALS FOR 5 PROJECTS OF COMPARABLE SIZE WITHIN THE LAST 5 YEARS. THE MANUFACTURER MUST SUBMIT THE NAME OF THE APPLICATORS COMPANY AND THEIR APPROVAL WITH THE BID DOCUMENTS.

SURFACE PREPARATION:

THE REPAIRED CONCRETE SURFACES SHALL BE ALLOWED TO CURE A MINIMUM OF 14 DAYS. THE SURFACES SHALL BE CLEAN AND FREE OF FINIS, DEPRESSIONS, OR OTHER CONDITIONS THAT MAY AFFECT THE INTENDED PERFORMANCE OF THE CFRP SYSTEM.

CORNERS PERPENDICULAR TO THE STRONG FIBER DIRECTION SHALL BE ROUNDED TO A MINIMUM RADIUS OF 3/4".

THE CERTIFIED AND EXPERIENCED INSTALLER RESPONSIBLE SHALL VERIFY THAT ALL REQUIRED SURFACE PREPARATION HAS BEEN COMPLETED PROPERLY AND THAT THE CFRP SYSTEM IS CLEARED FOR INSTALLATION.

COMPOSITE APPLICATION:

THE CFRP SYSTEM SHALL ONLY BE INSTALLED BY INDIVIDUALS CERTIFIED IN WRITING BY THE MATERIAL SUPPLIER. INSTALLERS WITHOUT THE PROPER CERTIFICATIONS WILL NOT BE ALLOWED TO COMPLETE THIS WORK.

TEMPERATURES OF THE SUBSTRATE TO RECEIVE THE COMPOSITE, AMBIENT TEMPERATURES, AND THE TEMPERATURE OF THE CFRP MATERIALS SHALL BE BETWEEN 50°F AND 95°F AT THE TIME OF MIXING OF EPOXY. THE CFRP SYSTEM SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SUBSTRATE TEMPERATURE IS MORE THAN 5°F ABOVE THE DEW POINT. APPLICATIONS OF THE CFRP SHALL BEGIN WITHIN ONE HOUR OF THE MIXING OF EPOXIES.

THE MANUFACTURER SHALL DESIGNATE THE PROPER MIXING PROCEDURE FOR THE EPOXY RESINS.

APPLY A PRIMER COATING OF EPOXY TO SURFACES OF THE SUBSTRATE TO RECEIVE THE CFRP SYSTEM.

SATURATE THE CARBON FIBER IN A DOCUMENTED SUCCESSFUL MANNER THAT ENSURES FULL SATURATION OF THE CARBON FIBER PRIOR TO THE INSTALLATION OF THE CFRP. SATURATION OF THE CARBON FIBER IN PLACE IS NOT ALLOWED. APPLY THE CFRP TO THE PREPARED AND PRIMERED SUBSTRATE USING METHODS THAT PROVIDED A UNIFORM TENSILE FORCE OVER THE WIDTH OF THE SATURATED CARBON FABRIC. STRONG FIBERS SHALL NOT DEVIATE FROM THE INTENDED FIBER DIRECTION MORE THAN 1/2" PER 12" LENGTH OF COMPOSITE. INSPECTION OF THE INSTALLED COMPOSITE SHALL BE COMPLETED PRIOR TO THE CURING OF THE CFRP TO ENSURE THAT ALL EDGES, SEAMS, AND OTHER AREAS ARE PROPERLY ADHERED. DURING THIS INSPECTION PROCESS, RELEASING OF ENTRAPPED AIR AND OTHER IDENTIFIED DEFICIENCIES SHALL BE ADDRESSED.

AFTER THE CFRP SYSTEM HAS BEEN INSTALLED, USE THICKENED EPOXY TO DETAIL ALL EDGES AND SEAMS TO PROVIDE A SMOOTH FINISH. APPLY A FINAL LAYER OF THICKENED EPOXY TO THE INSTALLED CFRP SYSTEM FOR PROTECTION.

COATING SYSTEM APPLICATION:

AREAS AFTER THE EPOXY SETS YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT, ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS, AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH:

1. SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.

2. BUBBLES LESS THAN 12" IN DIAMETER SHALL BE REPAIRED BY INJECTING THE EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF THE ENTRAPPED AIR.

3. BUBBLES, DELAMINATIONS, AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATINGS. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER.

4. THE EPOXY-URETHANE SEALER SHALL THEN BE APPLIED TO THE FINAL EPOXY COAT.

QUALITY CONTROL:

INSTALLER MUST FOLLOW THE QUALITY CONTROL MANUAL FOR THE INSTALLATION OF THE CFRP SYSTEMS, PRODUCED BY THE MANUFACTURER

MEASUREMENT AND PAYMENT:

THIS ITEM WILL BE PAID FOR BY (SQUARE FOOTAGE COVERED X NUMBER OF LAYERS) AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ITEM	EXTENSION	UNIT	DESCRIPTION
519	00100	SF	SPECIAL - CARBON FIBER WRAP SYSTEM

PROPERTY	REQUIREMENT	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI, MIN. IN PRIMARY FIBER DIRECTION	121,000 PSI	D309, AVERAGE OF 25 1" BY 10" NORMALIZED TO 0.04" THICKNESS
ULTIMATE TENSILE STRENGTH, PSI, MIN. IN ORTHOGONAL FIBER DIRECTION	3,000 PSI	D309, AVERAGE OF 25 1" BY 10" NORMALIZED TO 0.04" THICKNESS
10,000 HOURS EXPOSURE TO 100% HUMIDITY	121,000 PSI	C 581
TENSILE STRENGTH (MIN AFTER TEST) 10,000 HOURS EXPOSURE TO OZONE	121,000 PSI	D1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH (MIN AFTER TEST) 10,000 HOURS EXPOSURE TO ALKALI	121,000 PSI	D 3083 USING SOIL BURIAL BURIAL - WATER CONTENT
TENSILE STRENGTH (MIN AFTER TEST) 10,000 HOURS EXPOSURE TO SALT	121,000 PSI	C 581 AND D 1141 OMITTING ADDITION OF HEAVY METAL
TENSILE STRENGTH (MIN AFTER TEST) 10,000 HOURS EXPOSURE AT 140 DEGREES F.	121,000 PSI	D 3045
TENSILE STRENGTH (MIN AFTER TEST) ULTRAVIOLET (UV) EXPOSURE	121,000 PSI	G 53 USING FS 40 UV-B BULBS FOR A MINIMUM 38 CYCLES. THE CYCLE SHALL BE 4 HOURS OF CONDENSATE EXPOSURE AT 40 DEGREES C.
ELONGATION PERCENT, MIN PERCENT, MAX	0.85% 1.7%	
TENSILE MODULUS, PSI MIN, OF PRIMARY FIBERS, E	11,900,000 PSI	D3039, AVERAGE OF 25 1" BY 10" NORMALIZED TO 0.04" THICKNESS
VISUAL DEFECTS	ACCEPTANCE LEVEL III	D 2563
COEFFICIENT OF THERMAL EXPANSION IN PRIMARY DIRECTION	3.6 PPM/DEG F (+ 15%)	D696

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STRUCTURE NOTES
BRIDGE NO: VARIES

D08 - BM - FY2017B
PID No. 91684

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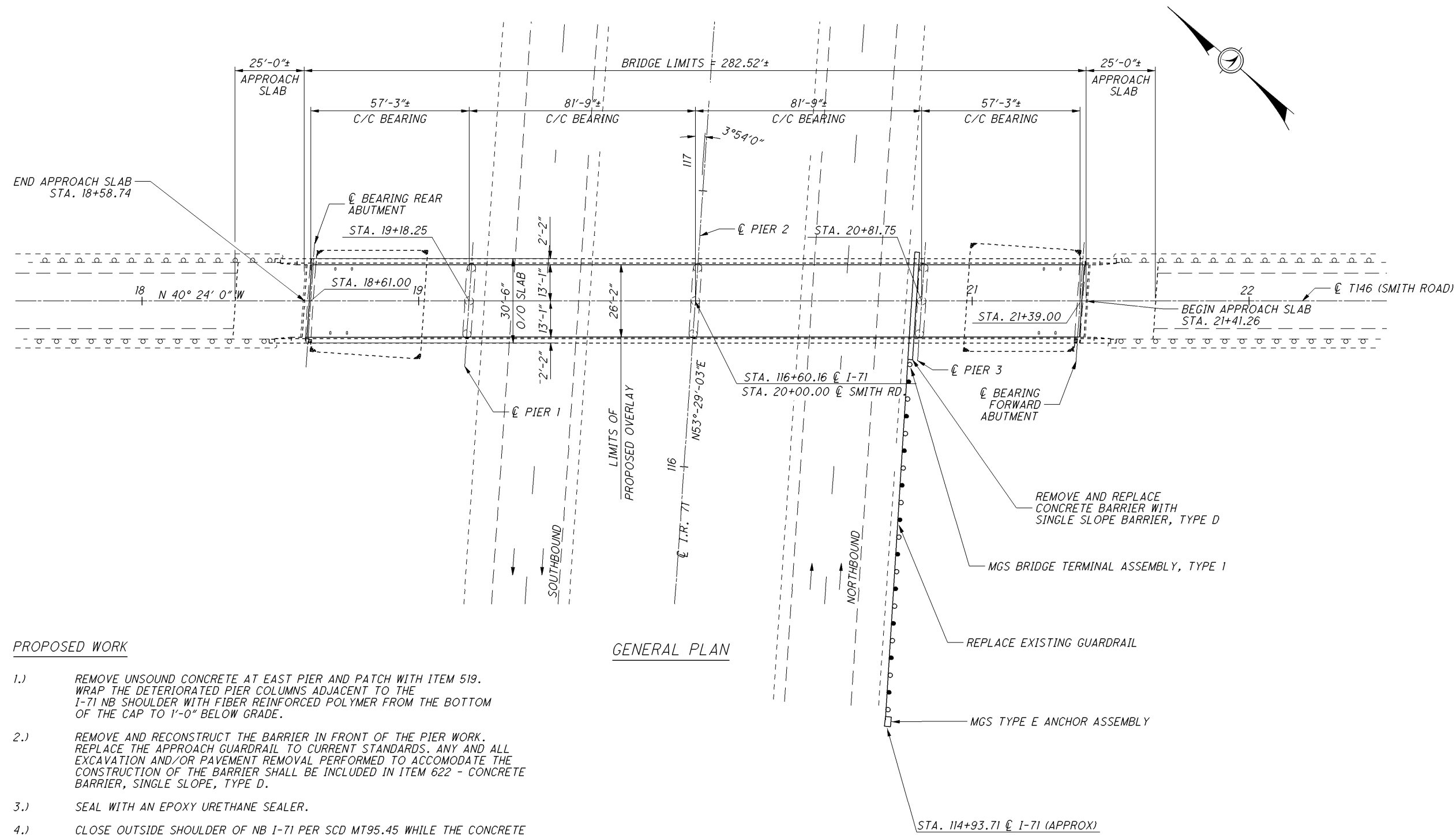
DESIGN AGENCY
ODOT DISTRICT 8
BRIDGE OFFICE

DATE
REVIEWED
STRUCTURE FILE NUMBER
VARIES

DRAWN
CAH
REVISION

DESIGNED
CAH
CHECKED
GF

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GENERAL PLAN

PROPOSED WORK

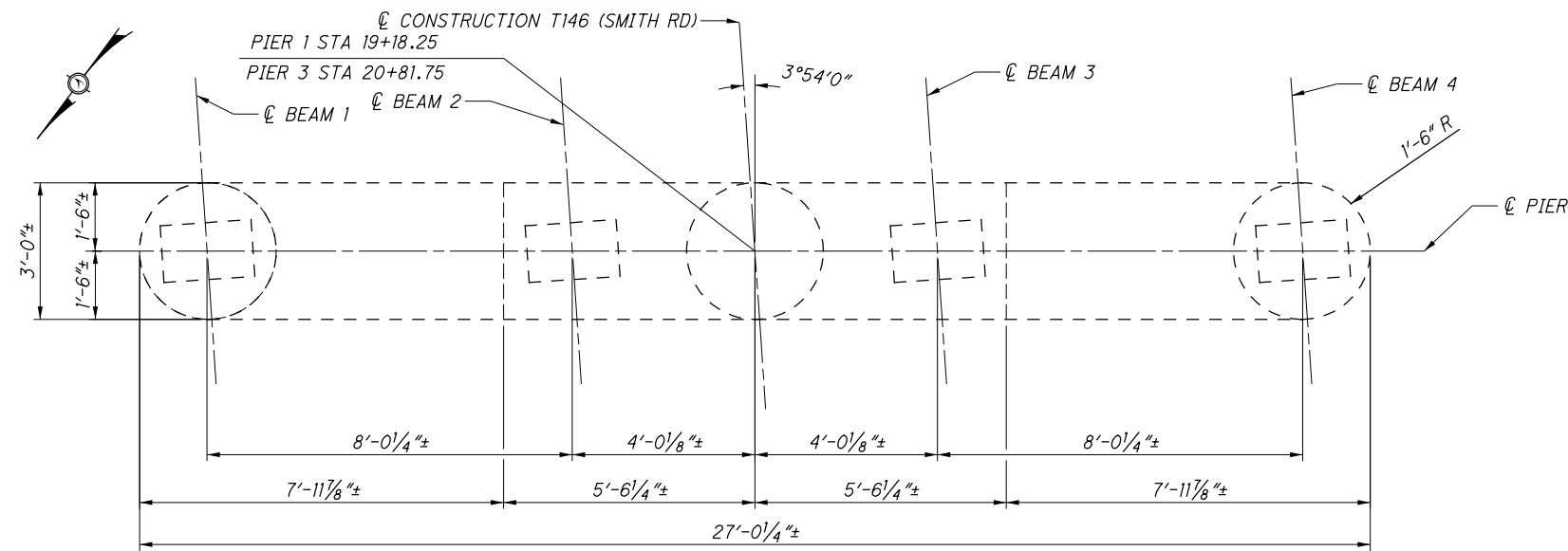
- 1.) REMOVE UNSOUND CONCRETE AT EAST PIER AND PATCH WITH ITEM 519. WRAP THE DETERIORATED PIER COLUMNS ADJACENT TO THE I-71 NB SHOULDER WITH FIBER REINFORCED POLYMER FROM THE BOTTOM OF THE CAP TO 1'-0" BELOW GRADE.
- 2.) REMOVE AND RECONSTRUCT THE BARRIER IN FRONT OF THE PIER WORK. REPLACE THE APPROACH GUARDRAIL TO CURRENT STANDARDS. ANY AND ALL EXCAVATION AND/OR PAVEMENT REMOVAL PERFORMED TO ACCOMODATE THE CONSTRUCTION OF THE BARRIER SHALL BE INCLUDED IN ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D.
- 3.) SEAL WITH AN EPOXY URETHANE SEALER.
- 4.) CLOSE OUTSIDE SHOULDER OF NB I-71 PER SCD MT95.45 WHILE THE CONCRETE BARRIER PIER PROTECTION AS WELL AS THE GUARDRAIL ARE BEING REMOVED AND REPLACED. APPLICABLE PAY ITEMS FOR MAINTENANCE OF TRAFFIC HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUB-SUMMARY.

ESTIMATED GUARDRAIL QUANTITIES

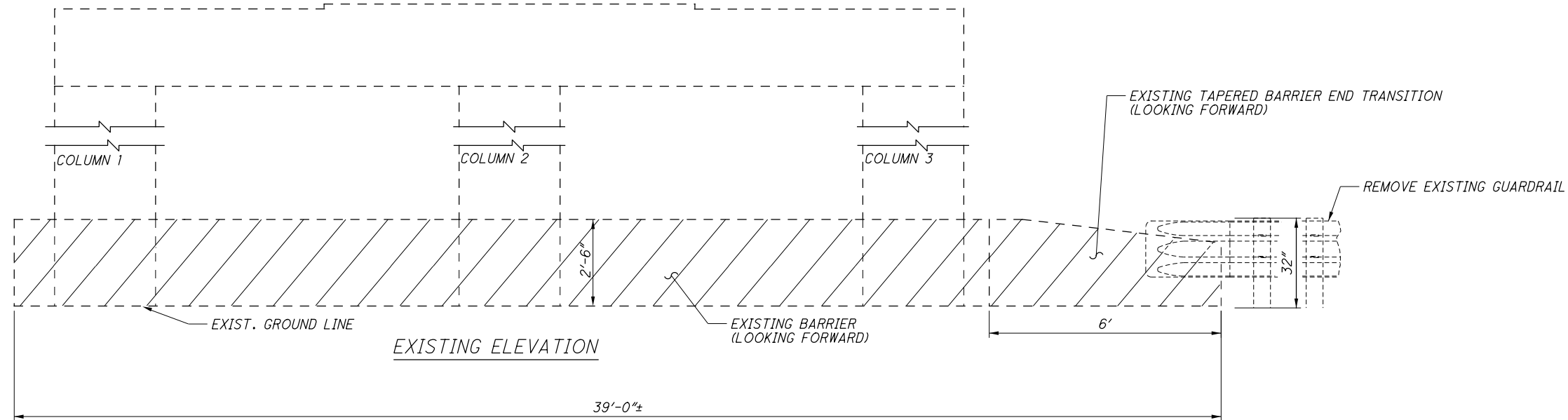
ITEM 202 GUARDRAIL REMOVED	100.00 FT
ITEM 202 BRIDGE TERMINAL ASSEMBLY REMOVED	1 EACH
ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE E	1 EACH
ITEM 606 GUARDRAIL, TYPE MGS	100.00 FT
ITEM 606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	1 EACH
ITEM 606 ANCHOR ASSEMBLY, MGS TYPE E	1 EACH

D08 - BM - FY2017B	GENERAL PLAN	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
PID No. 91684	BRIDGE NO. GRE-71-0299 T146 (SMITH ROAD) OVER I-71	DATE CAH STRUCTURE FILE NUMBER 2901803
1 / 4	DESIGNED CAH CHECKED	DRAWN DS REVIEWED GTF
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EXISTING BARRIER TO BE REMOVED



ESTIMATED GUARDRAIL QUANTITIES

ITEM 202 CONCRETE BARRIER REMOVED

39 FT

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 8 - BRIDGE DEPARTMENT

DATE	STRUCTURE FILE NUMBER
REVIEWED	2901803
DRAWN DS	REVISED GTF
DESIGNED CAH	CHECKED CAH

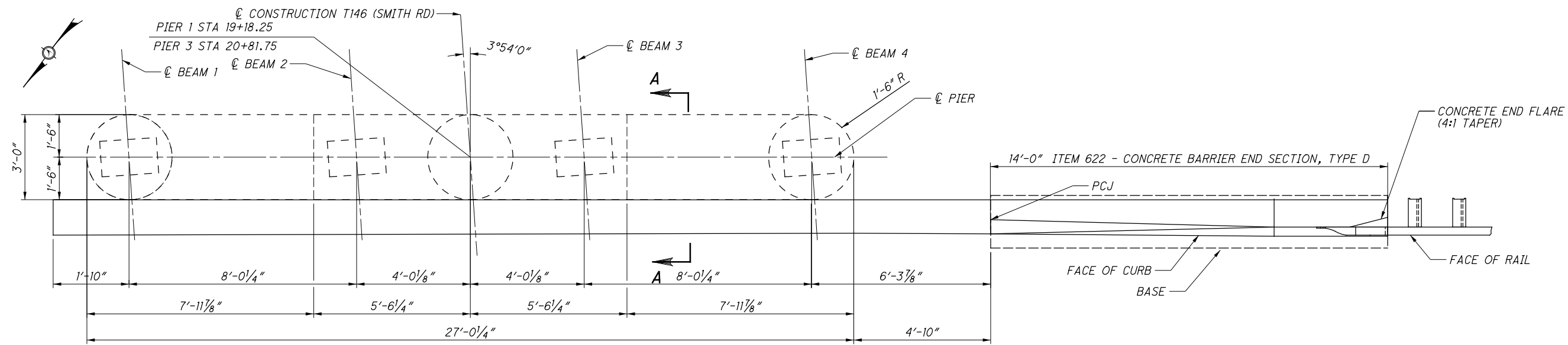
PIER MODIFICATION PLAN
BRIDGE NO. GRE-71-0299
T146 (SMITH ROAD) OVER I-71

D08-BM-FY2017B
PID No. 91684

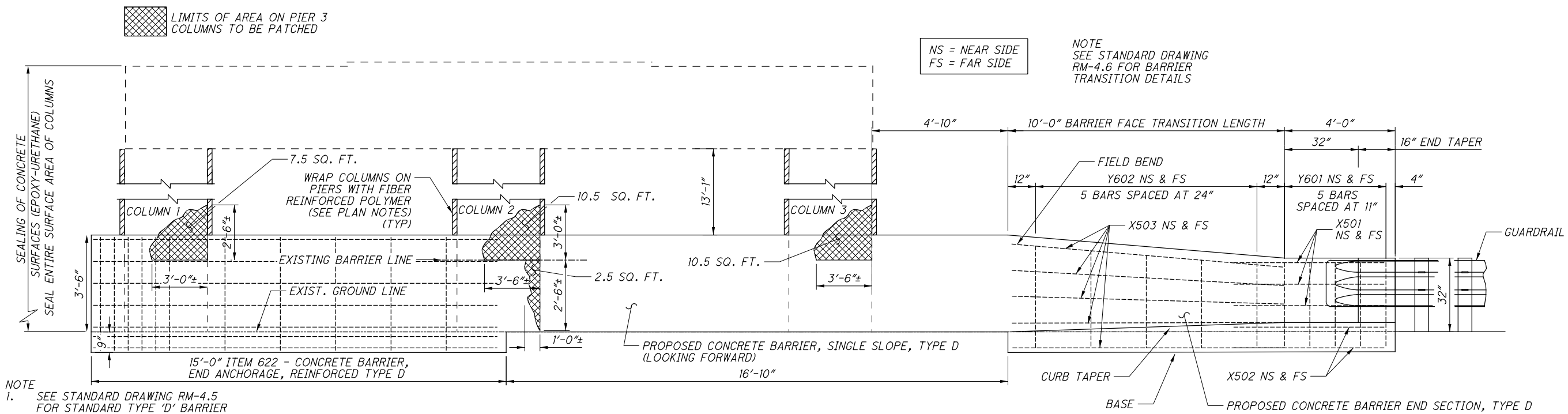
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PROPOSED PLAN (CONCRETE BARRIER AND TRANSITION)



NS = NEAR SIDE
FS = FAR SIDE

NOTE
SEE STANDARD DRAWING
RM-4.6 FOR BARRIER
TRANSITION DETAILS

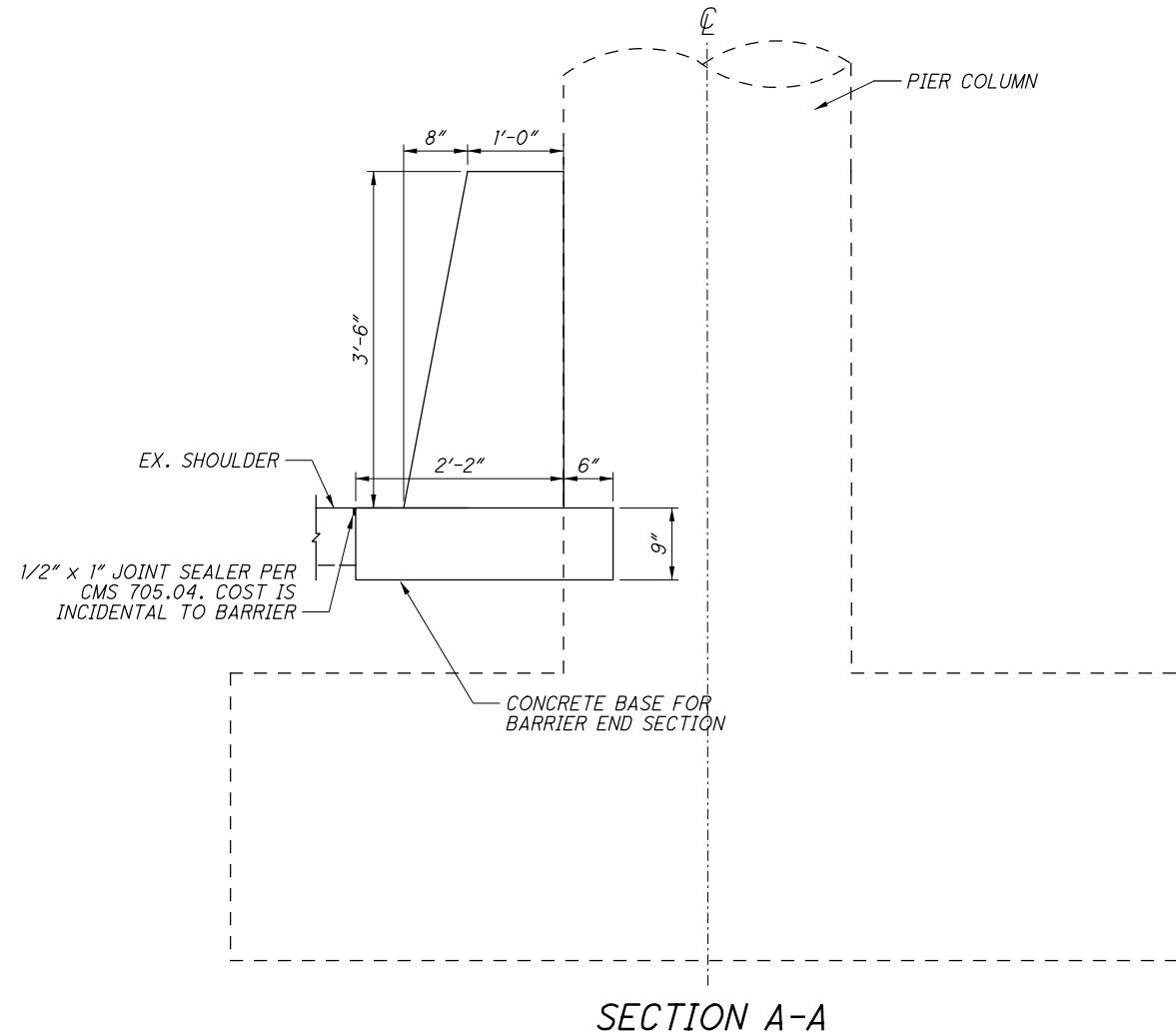
- NOTE
- SEE STANDARD DRAWING RM-4.5 FOR STANDARD TYPE 'D' BARRIER AND REINFORCED END ANCHORAGE DETAILS.
 - EXTEND CONCRETE BASE UNDER STANDARD TYPE 'D' BARRIER IF EXISTING ASPHALT SHOULDER PAVEMENT IS INADEQUATE TO SUPPORT BARRIER.
 - REFER TO STANDARD DRAWINGS FOR REINFORCING STEEL REQUIREMENTS. REBAR SHALL BE INCLUDED WITH THE RESPECTIVE BARRIER ITEMS FOR PAYMENT.

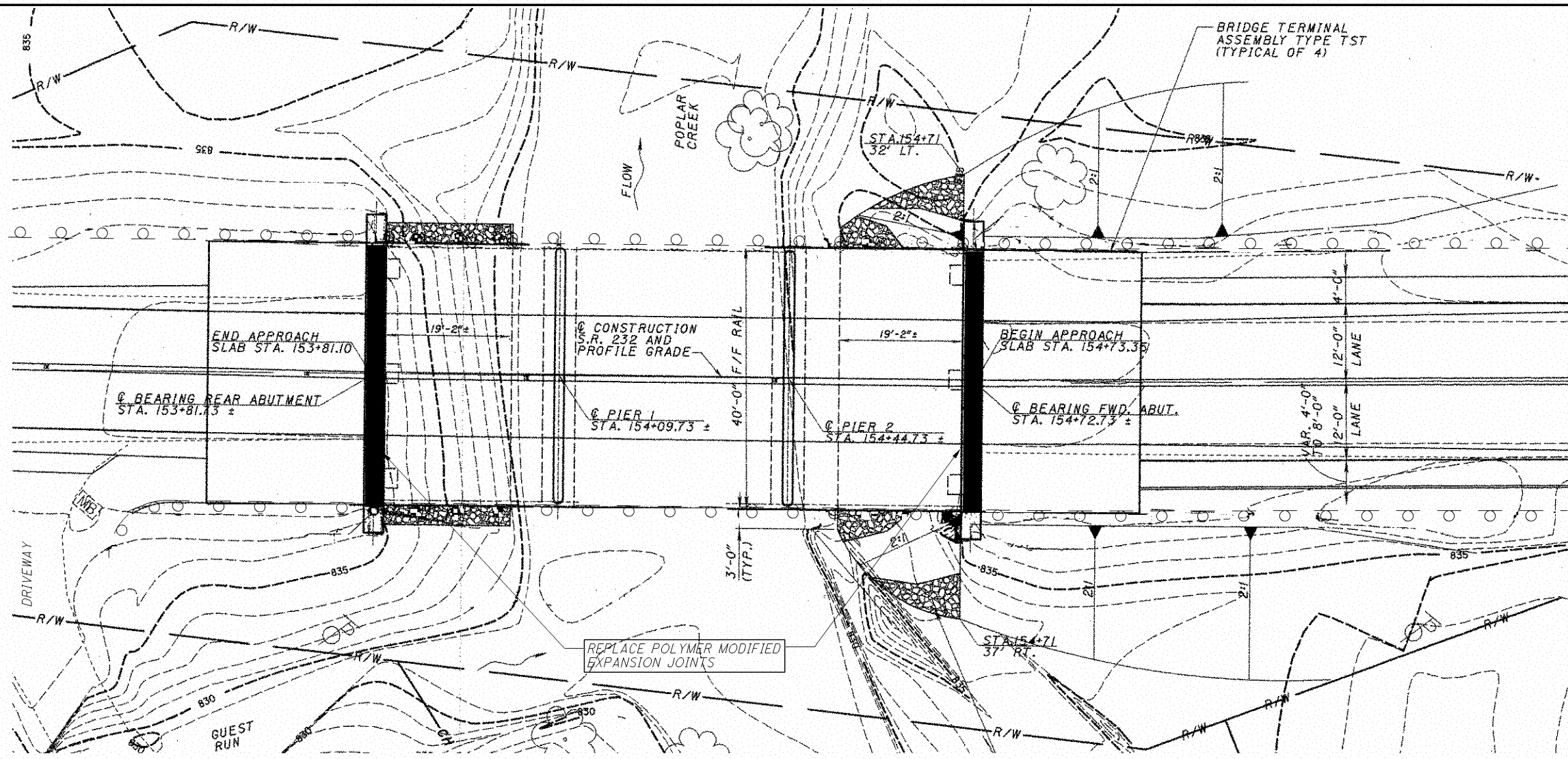
PROPOSED ELEVATION

ESTIMATED GUARDRAIL QUANTITIES

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D	17 FT
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	1 EACH
ITEM 622 - CONCRETE BARRIER, END SECTION, TYPE D, REINFORCED	1 EACH

DESIGNED CAH	CHECKED CAH	DRAWN DS	REVIEWED	DATE	DESIGN AGENCY
				STRUCTURE FILE NUMBER 2901803	STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE DEPARTMENT
PIER MODIFICATION PLAN					
BRIDGE NO. GRE-71-0299 T146 (SMITH ROAD) OVER I-71					
D08-BM-FY2017B		PID No. 91684			
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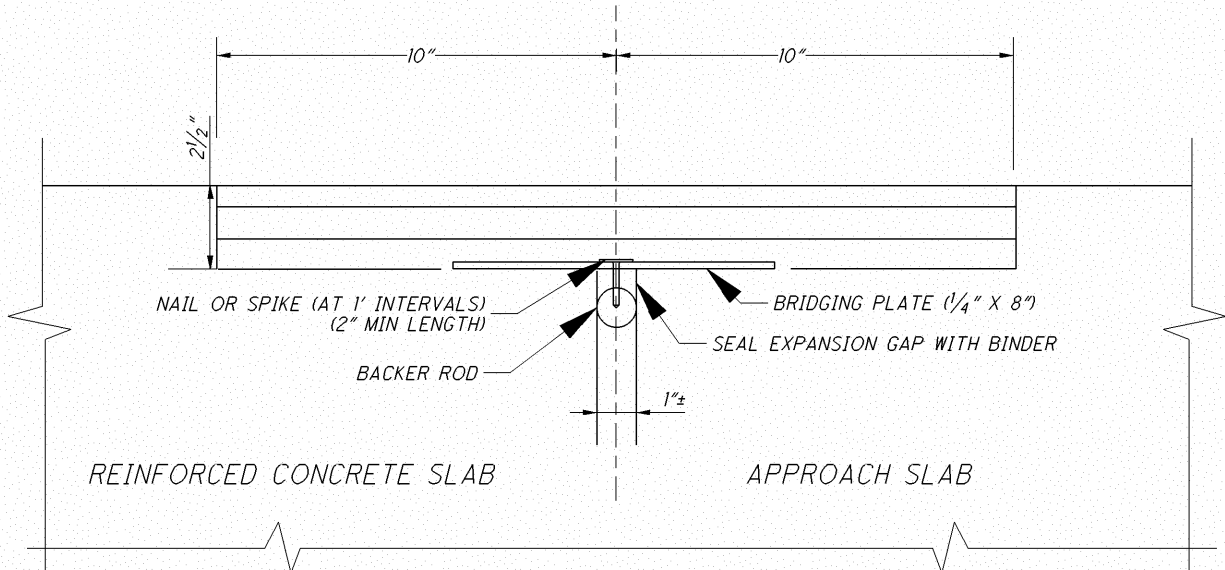
BENCHMARK DATA	
⊕	CAPPED IRON PIN - STA. 153+05.01, 16.60' RT, ELEV 837.72

NOTES:
 1. EXISTING ARCHIVE PLAN USED FOR INFORMATION PURPOSES ONLY

LEGEND:
 [Hatched pattern] - TYPE 'B' ROCK CHANNEL PROTECTION

TRAFFIC DATA	
ADT (2004)	- 3,320
ADT (2024)	- 4,160
ADTT (2024)	- 125
SOURCE	- ODOT

DETAIL FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

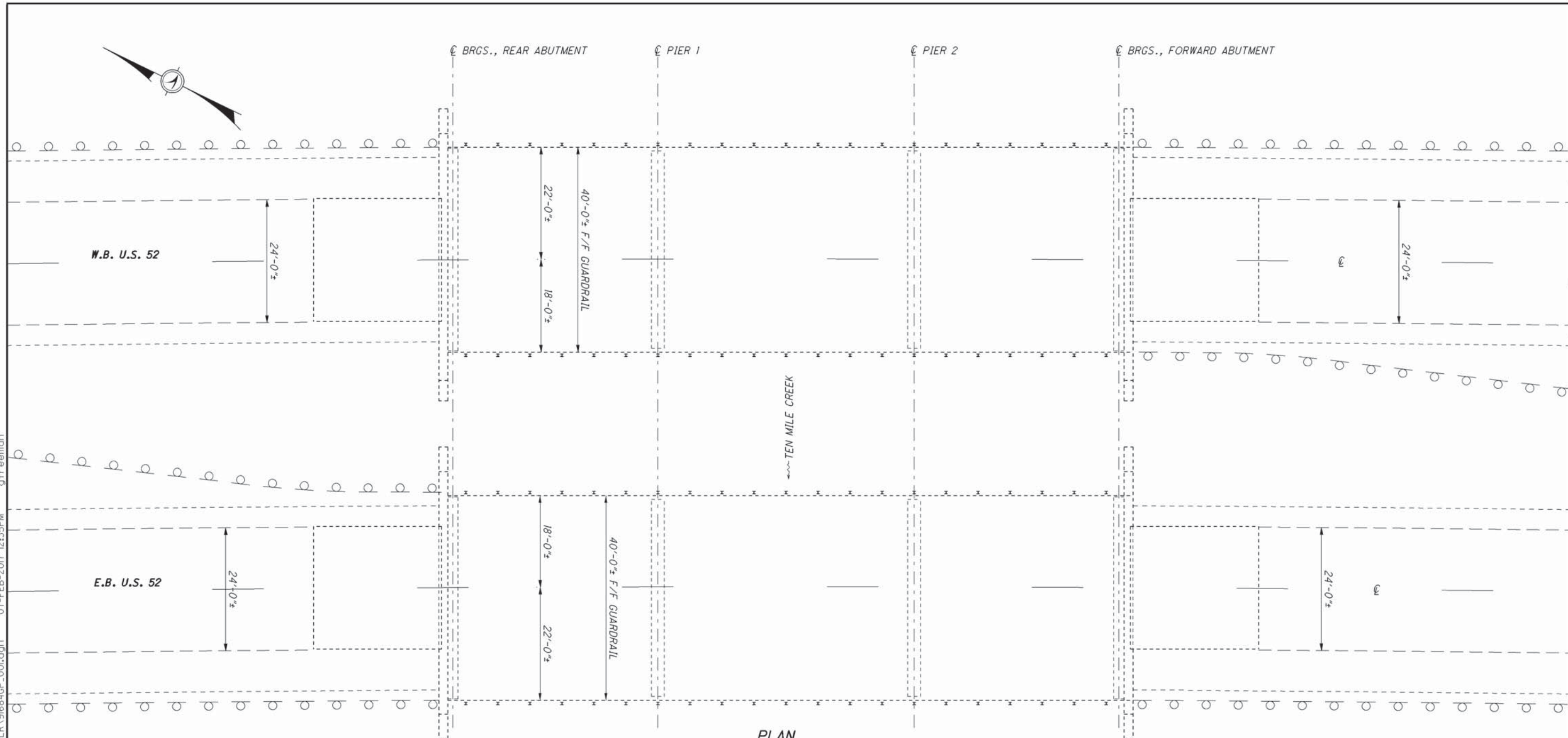


METHOD OF MEASUREMENT AND BASIS OF PAYMENT:
 THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF CUBIC FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM 846, CUBIC FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.
 ESTIMATED EXPANSION JOINT QUANTITY: 40' X 2 1/2" X 20" X 2 EACH = 28 CUBIC FEET

EXISTING STRUCTURE	
PROPOSED WORK:	INSTALL POLYMER MODIFIED ASPHALT EXPANSION JOINT
SPANS:	28'-0"; 35'-0"; 28'-0" C/C SUBSTRUCTURE UNITS
ROADWAY:	40'-0" O/O DECK
LOADING:	HS25 AND ALTERNATE MILITARY LOADING WITH 60 PSF FUTURE WEARING SURFACE (NEW DECK ONLY)
WEARING SURFACE:	MONOLITHIC CONCRETE
ALIGNMENT:	TANGENT
APPROACH SLABS:	AS-1-B1 (25' LONG)
SKEW:	NONE
LATITUDE:	N 38° 57' 41"
LONGITUDE:	W 84° 06' 23"

DESIGN AGENCY: STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE DEPARTMENT
 DATE: _____ REVIEWED: _____ DRAWN: DS CHECKED: CAH
 STRUCTURE FILE NUMBER: 1304356
 GTF
 CAH
 CAH
SITE PLAN
 BRIDGE No.: CLE-232-1041
 SR 232 OVER POPLAR CREEK
D08-BM-FY2017B
 PID No. 91684
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PLAN

NOTE

SEE MAINTENANCE OF TRAFFIC PLANS FOR PHASE CONSTRUCTION DETAILS AND NOTES.

PROPOSED WORK

CLE-52-0159R

- 1) INSTALL PRESSURE RELIEF JOINT AT ENDS OF EACH APPROACH SLAB.
- 2) REMOVE MEDIAN GUARDRAIL, BRIDGE TERMINAL ASSEMBLIES, AND ANCHOR ASSEMBLIES AND REPLACE AS SHOWN IN THE PLANS.
- 3) EPOXY INJECT CRACKS IN FORWARD ABUTMENT AND REAR ABUTMENT BACKWALLS.

CLE-52-0159L

- 1) REMOVE EXISTING APPROACH SLABS AND REPLACE WITH REINFORCED CONCRETE APPROACH SLABS.
- 2) INSTALL 25' OF FULL DEPTH ASPHALT PAVEMENT AT THE ENDS OF EACH APPROACH SLAB.
- 3) MILL AND FILL 25' OF SURFACE COURSE AS SHOWN IN THE PLANS.
- 4) REMOVE MEDIAN GUARDRAIL, BRIDGE TERMINAL ASSEMBLIES, AND ANCHOR ASSEMBLIES AND REPLACE AS SHOWN IN THE PLANS.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES
 SPANS: 40'-0"±, 50'-0"±, 40'-0"± C/C BEARINGS
 ROADWAY: 40'-0"± F/F GUARDRAIL
 LOADING: CF = 2000(57)
 SKEW: NONE
 WEARING SURFACE: 1/4" LATEX MODIFIED CONCRETE OVERLAY
 APPROACH SLABS: AS-1-54 (25' LONG)
 ALIGNMENT: D = 0°28' RIGHT
 STRUCTURAL FILE NUMBER: LEFT BRIDGE: 1301381
 RIGHT BRIDGE: 1301411
 DATE BUILT: 1964
 DISPOSITION: TO BE REHABILITATED

DESIGN AGENCY
 STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT 8 - BRIDGE OFFICE

DATE
 REVIEWED
 CAH
 STRUCTURE FILE NUMBER
 1304356/1301411

DRAWN
 GTF
 REVISIONS
 CHECKED
 CAH

GENERAL PLAN

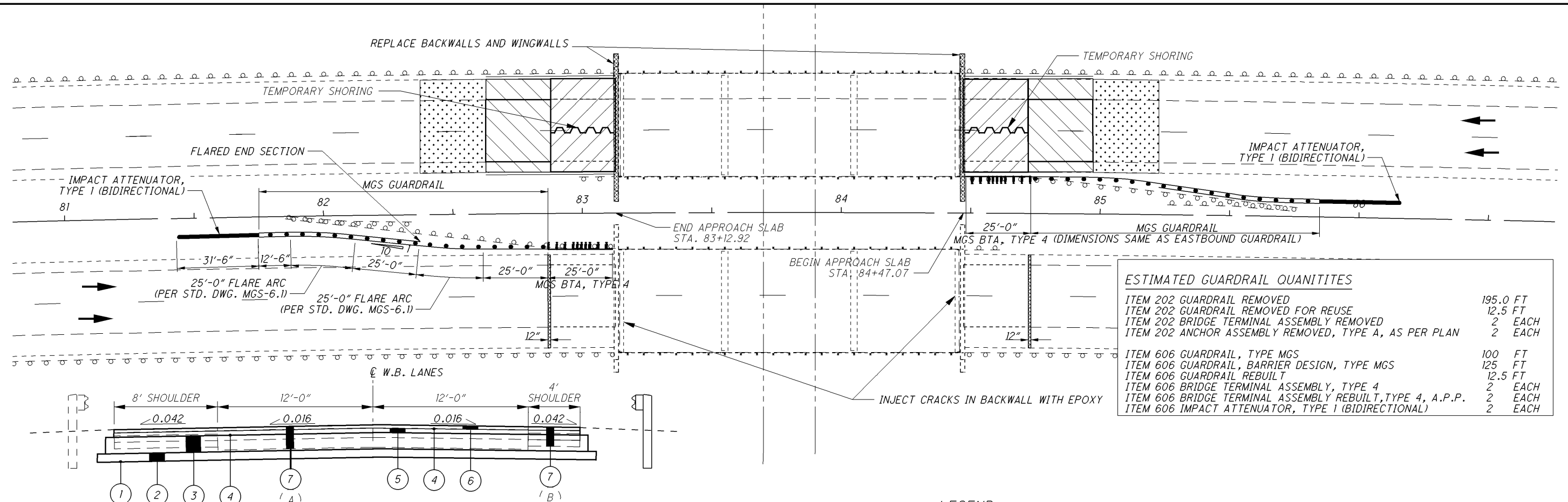
BRIDGE No.: CLE-52-0159L/R
 U.S. 52 OVER TEN MILE CREEK

D08 - BM - FY2017B
 PID No. 91684

1 / 8

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ESTIMATED GUARDRAIL QUANTITIES

ITEM 202 GUARDRAIL REMOVED	195.0 FT
ITEM 202 GUARDRAIL REMOVED FOR REUSE	12.5 FT
ITEM 202 BRIDGE TERMINAL ASSEMBLY REMOVED	2 EACH
ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	2 EACH
ITEM 606 GUARDRAIL, TYPE MGS	100 FT
ITEM 606 GUARDRAIL, BARRIER DESIGN, TYPE MGS	125 FT
ITEM 606 GUARDRAIL REBUILT	12.5 FT
ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4	2 EACH
ITEM 606 BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4, A.P.P.	2 EACH
ITEM 606 IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	2 EACH

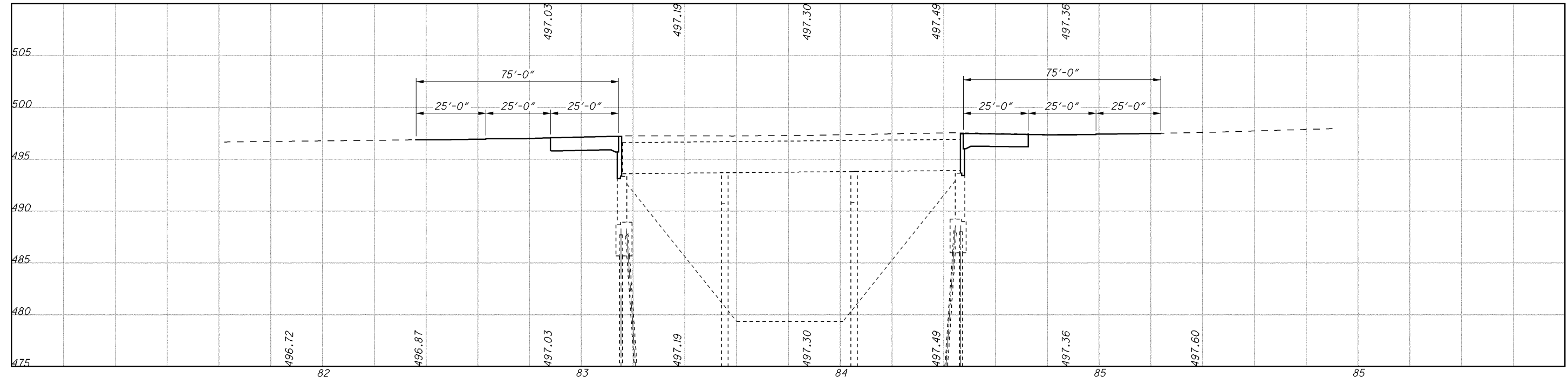
TYPICAL SECTION - US 52 APPROACH PAVEMENT
FULL DEPTH PAVEMENT REPLACEMENT

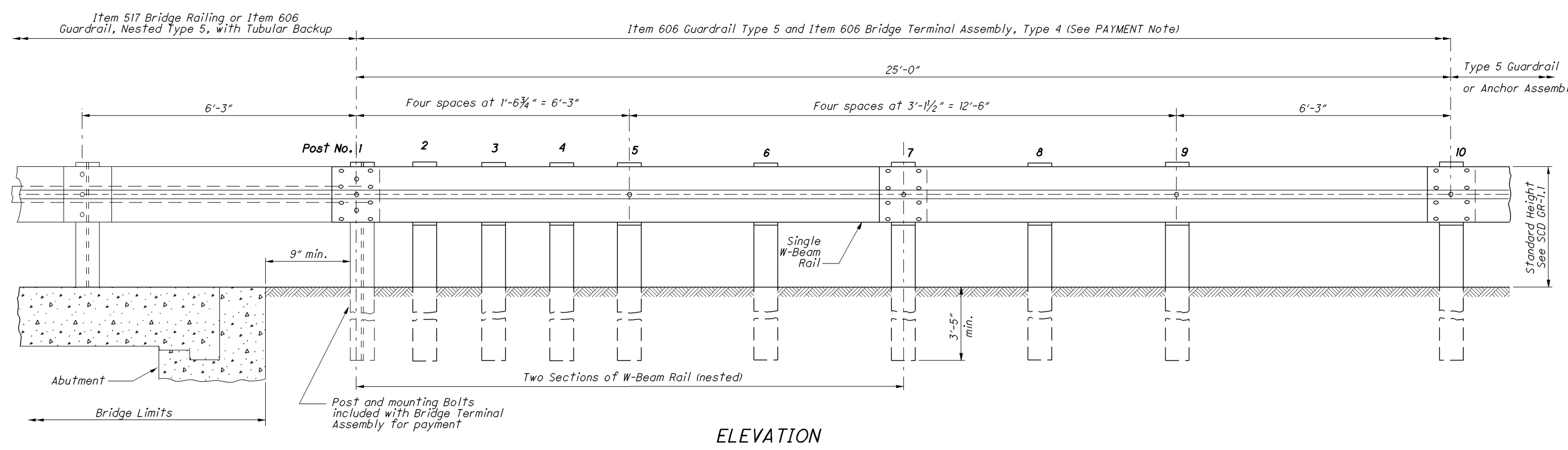
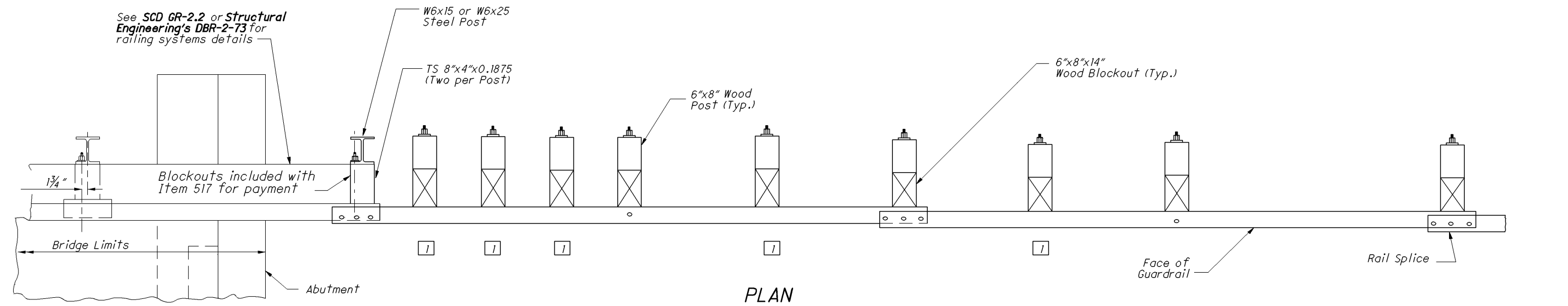
LIMITING STATIONS
 STA. 82+87.75 TO STA. 83+12.75 = 25.00 L.F.
 STA. 84+77.32 TO STA. 85+02.32 = 25.00 L.F.
TOTAL LENGTH = 50.00 L.F.

LEGEND

MARK	ITEM	DESCRIPTION	MARK	ITEM	DESCRIPTION
(1)	204	SUBGRADE COMPACTION	(6)	441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
(2)	304	6" AGGREGATE BASE	(7)	202	PAVEMENT REMOVED
(3)	301	ASPHALT CONCRETE BASE (VARIABLE THICKNESS, 9" MIN. TO 12" MAX.)	(8)	526	REINFORCED CONCRETE APPROACH SLABS (T=15")
(4)	407	TACK COAT	(A)	-	EXISTING ROADWAY PAVEMENT (3" ASPHALT OVER 9" REINFORCED CONCRETE)
(5)	441	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	(B)	-	EXISTING SHOULDER PAVEMENT (3" ASPHALT, OVER 3" AC BASE, OVER 6" AGG. BASE)

- REMOVE EXISTING PAVEMENT AND REPLACE WITH FULL-DEPTH ASPHALT
- REMOVE EXISTING APPROACH SLAB AND REPLACE WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=15")
- REMOVE FULL DEPTH OF PAVEMENT AND REPLACE WITH PRESSURE RELIEF JOINT, TYPE C. ALL WORK AND MATERIALS TO BE PAID UNDER ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE C
- MILL AND FILL SURFACE COURSE





NOTES

GENERAL: For additional details, see SCD GR-1.1.

APPLICATION: The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or to Deep Beam Bridge Guardrail (as shown on Structural Engineering SCD DBR-2-73).

DETAIL INFORMATION: The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted 3/4"x2 1/2". Tighten the bolts as specified for expansion joints in Item 606.05.

POSTS: Posts may be set in drilled holes or driven to grade. See SCD GR-1.1 for additional Post embedment details. Guardrail is not attached to certain posts (see LEGEND).

WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.

BLOCKOUTS: Use wood blockouts only. Steel or plastic blockouts are not permitted. Notched wood blockouts are used with steel posts.

FLARED GUARDRAIL: Start Standard Guardrail Flares as shown on SCD GR-5.1 at or beyond Post No. 10; however, the flare may begin at Post No. 7.

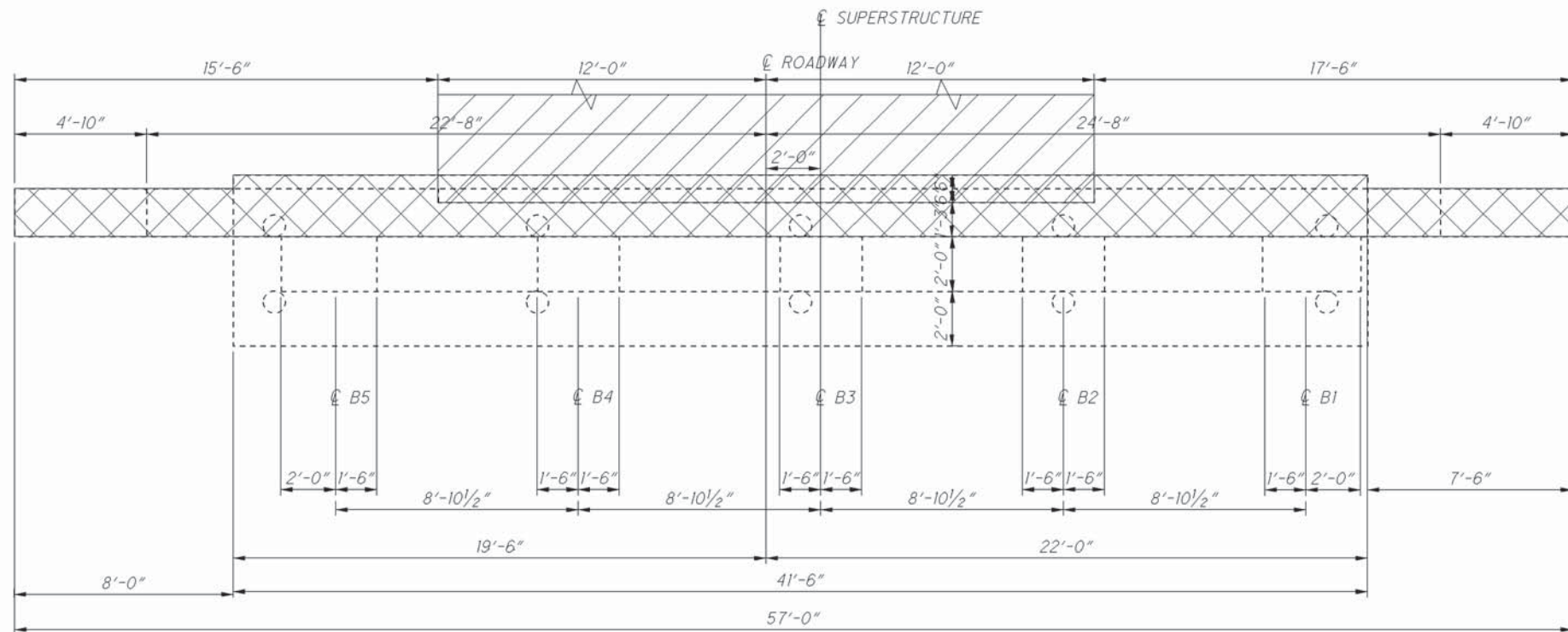
PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with Item 517 - Railing, or Item 606 - Guardrail, Nested Type 5 with Tubular Backup, for payment.

LEGEND

1 Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.

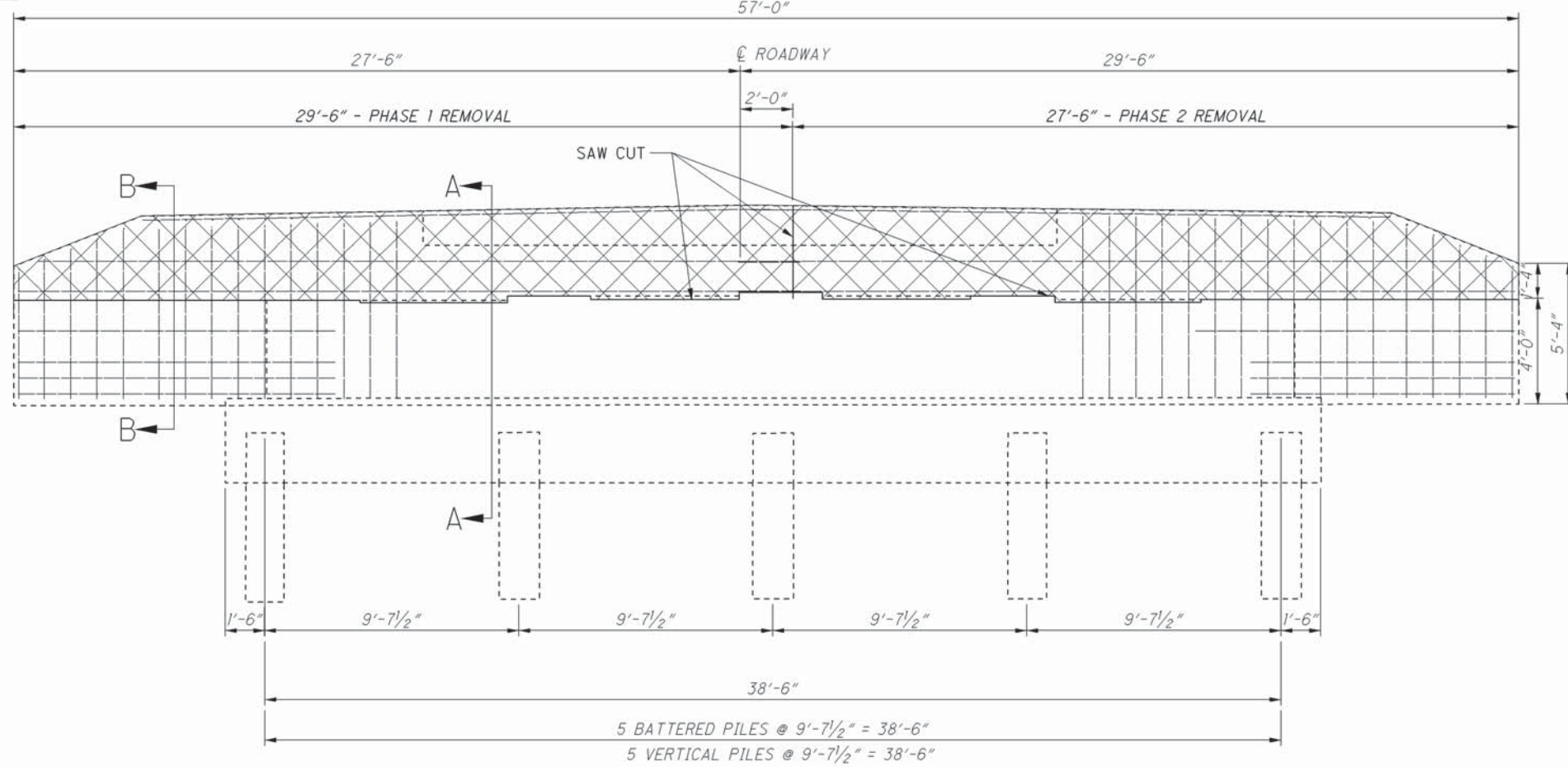
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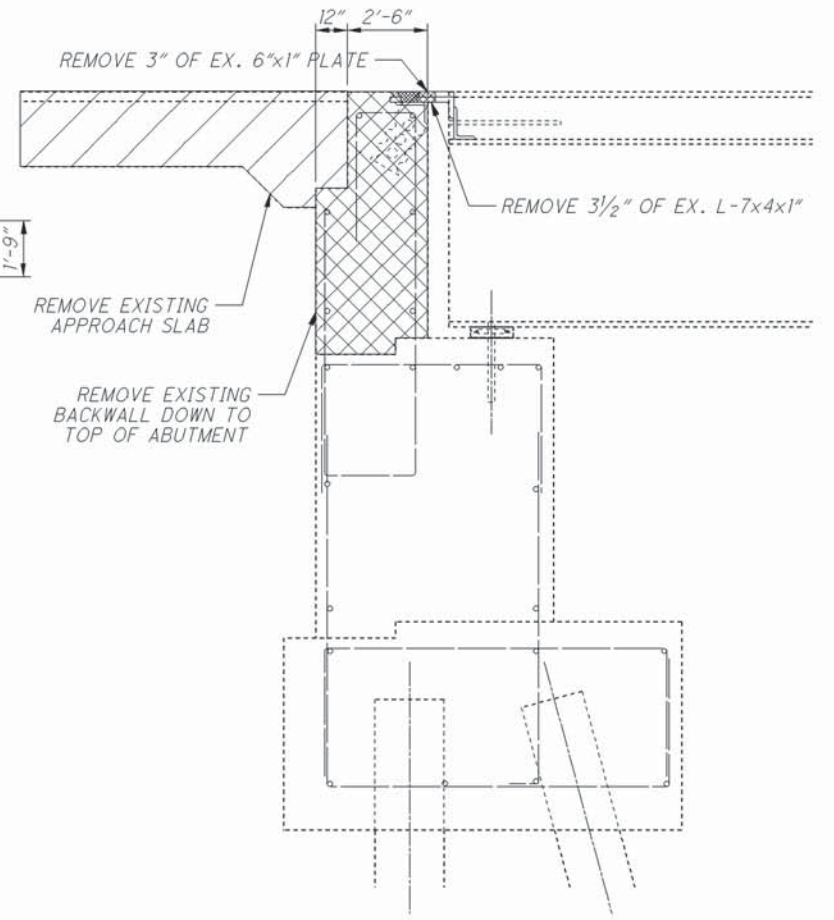


REAR ABUTMENT PLAN

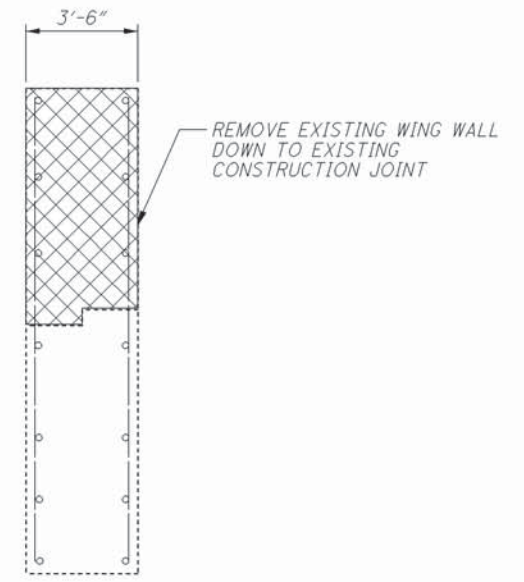
- ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN



REAR ABUTMENT ELEVATION



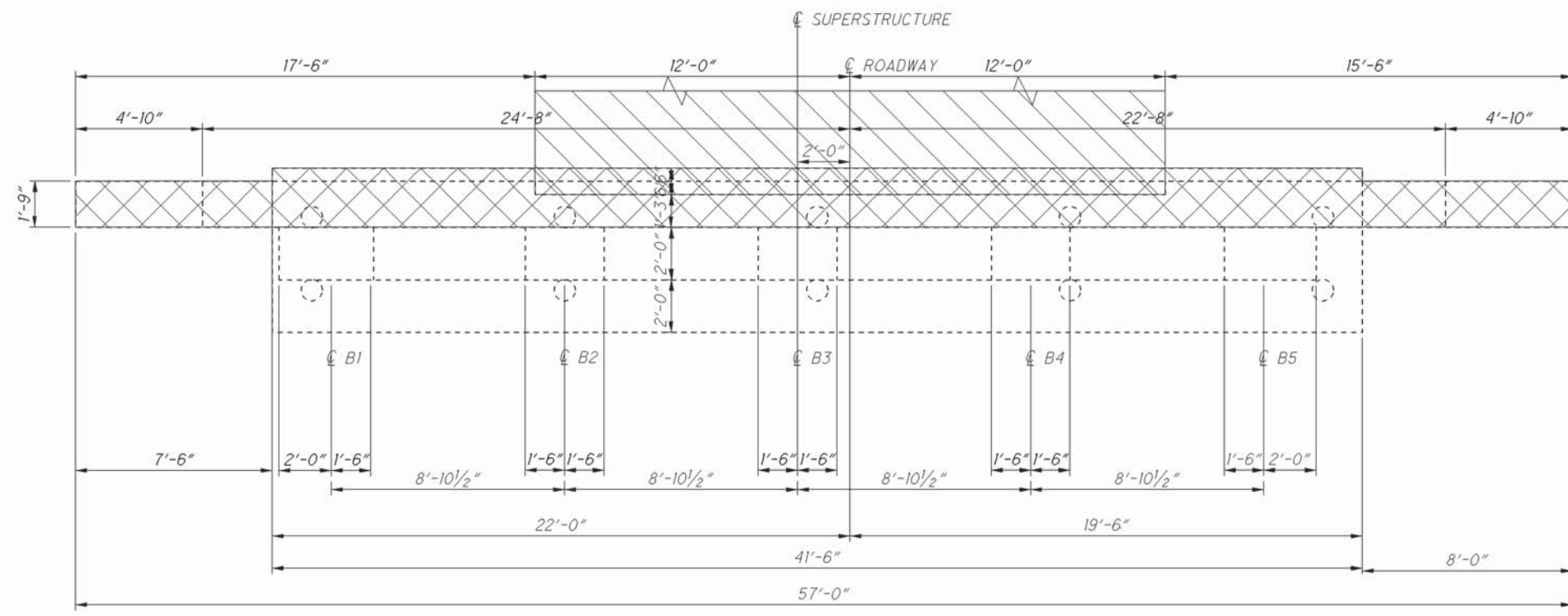
SECTION A



SECTION B

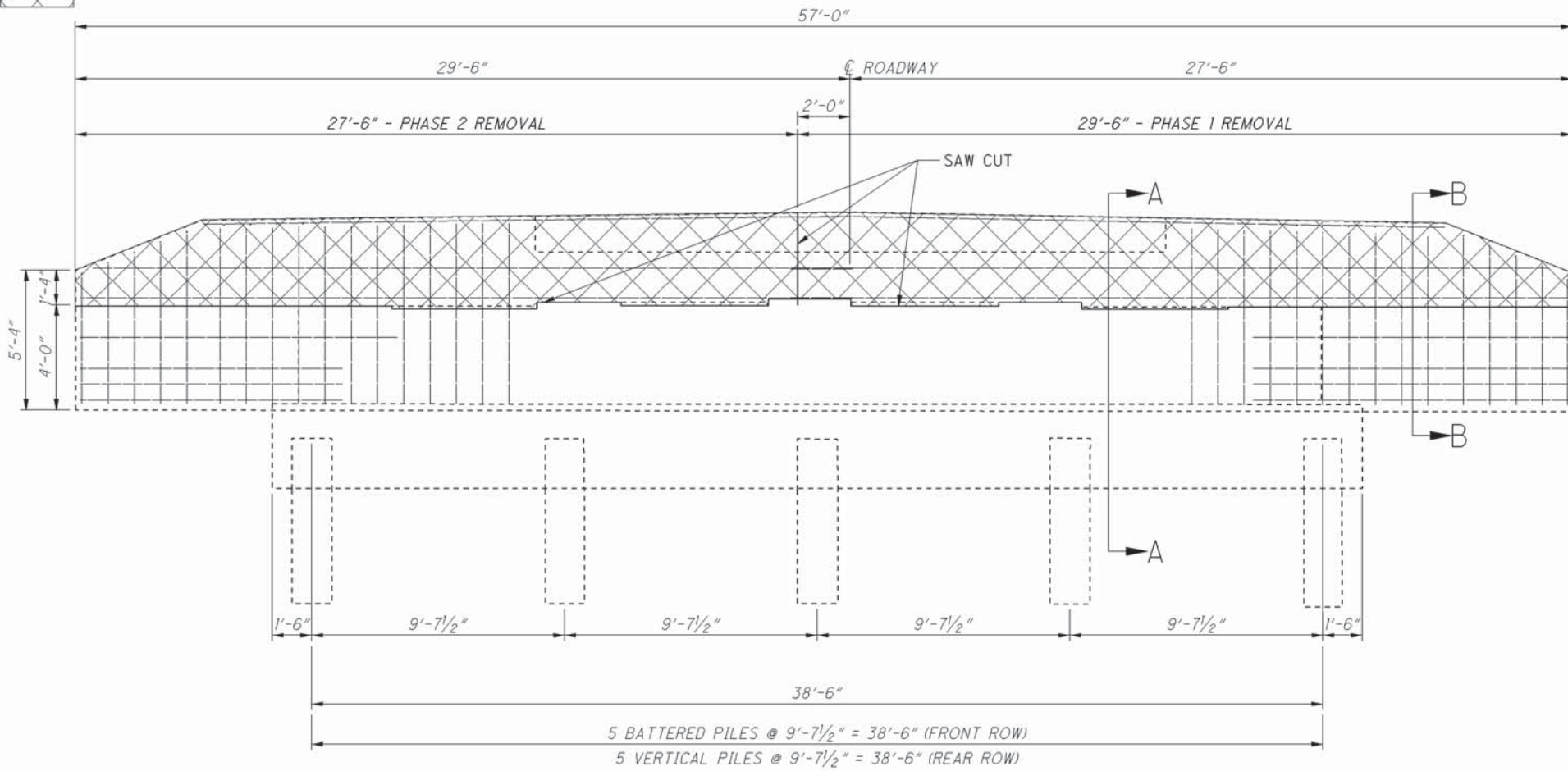
D08 - BM - FY2017B	REAR ABUTMENT REMOVAL DETAILS	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
PID No. 91684	BRIDGE No.: CLE-52-0159L OVER TEN MILE CREEK	DESIGNED GTF CHECKED CAH
3 / 8	DRAWN GTF REVISED	REVIEWED CAH STRUCTURE FILE NUMBER 1301381
26 54		

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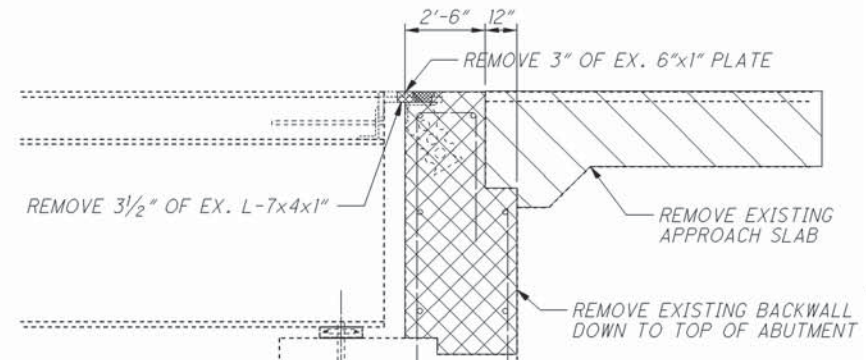


FORWARD ABUTMENT PLAN

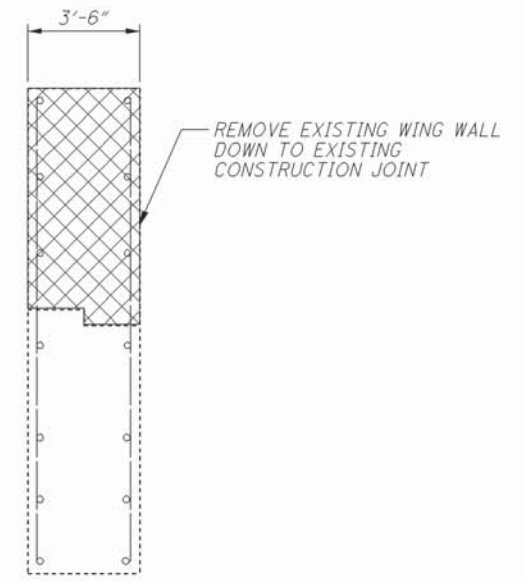
- ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN



FORWARD ABUTMENT ELEVATION

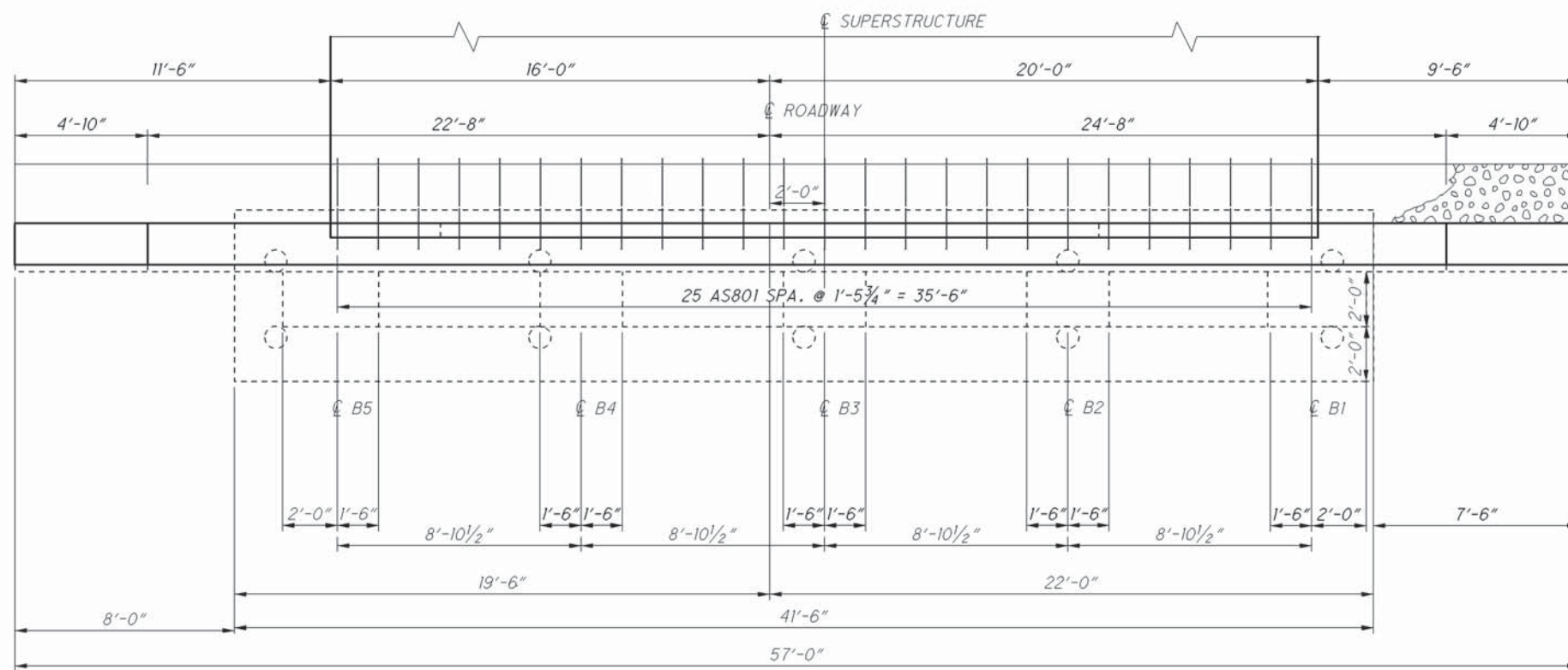


SECTION A

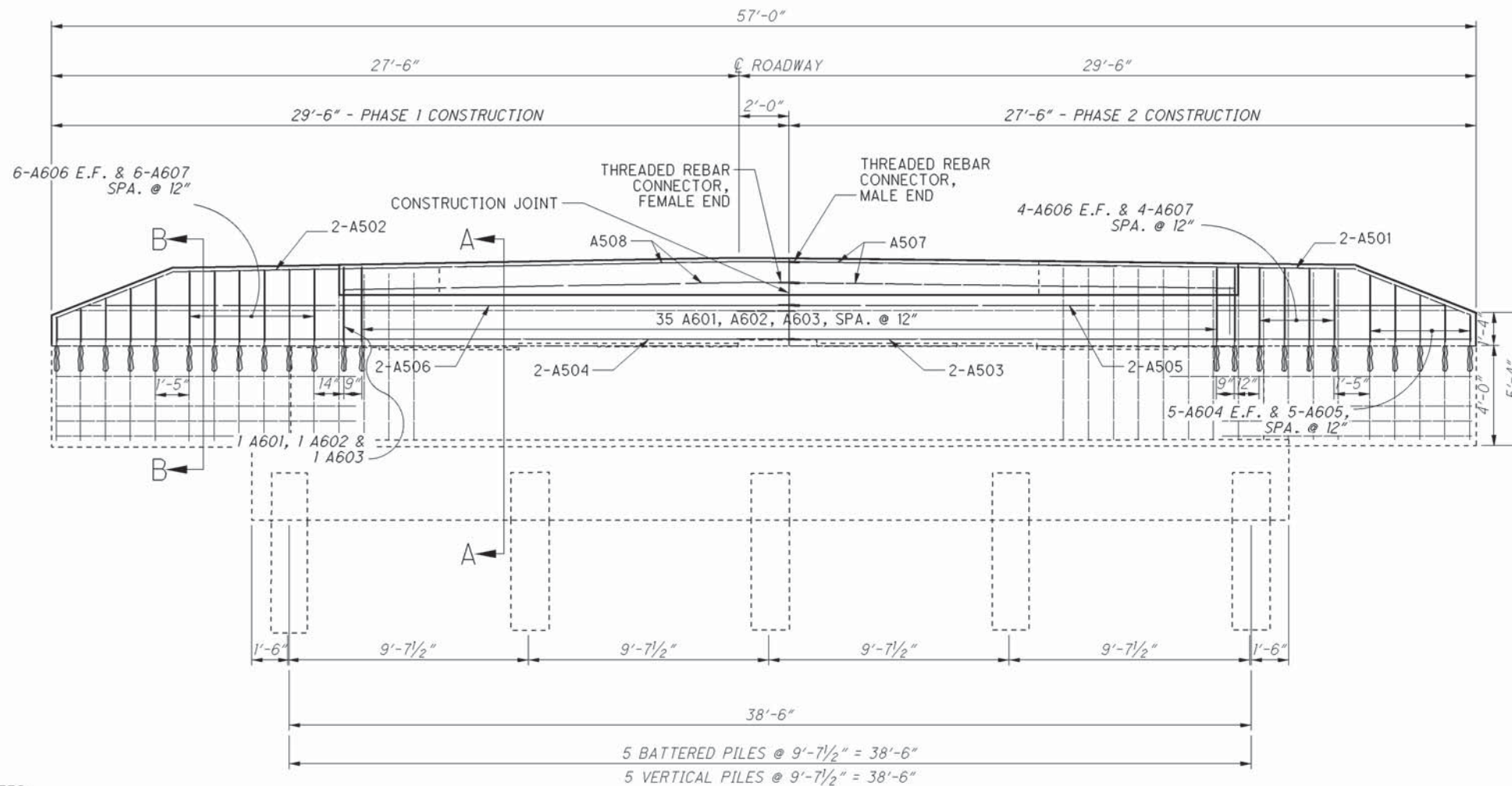


SECTION B

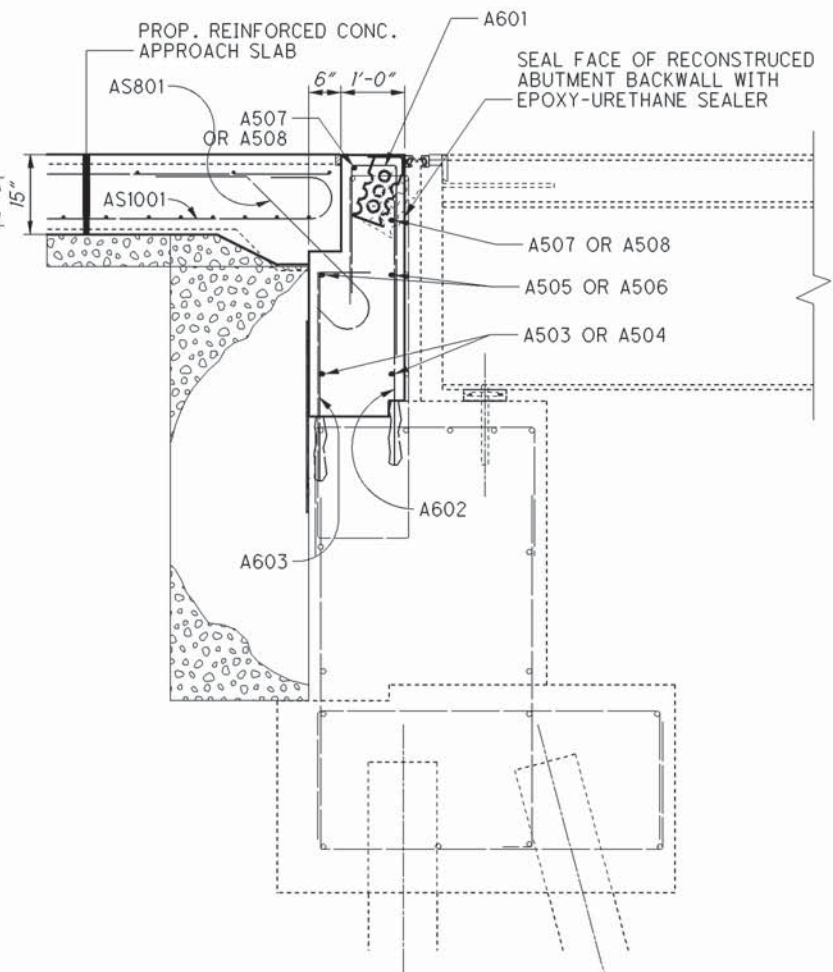
DESIGNED GTF	CHECKED CAH	DRAWN GTF	REVISED REVISED	REVIEWED CAH	DATE STRUCTURE FILE NUMBER 1301381
FORWARD ABUTMENT REMOVAL DETAILS BRIDGE No.: CLE-52-0159L OVER TEN MILE CREEK					
DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE					
D08-BM-FY2017B PID No. 91684					
4 / 8					
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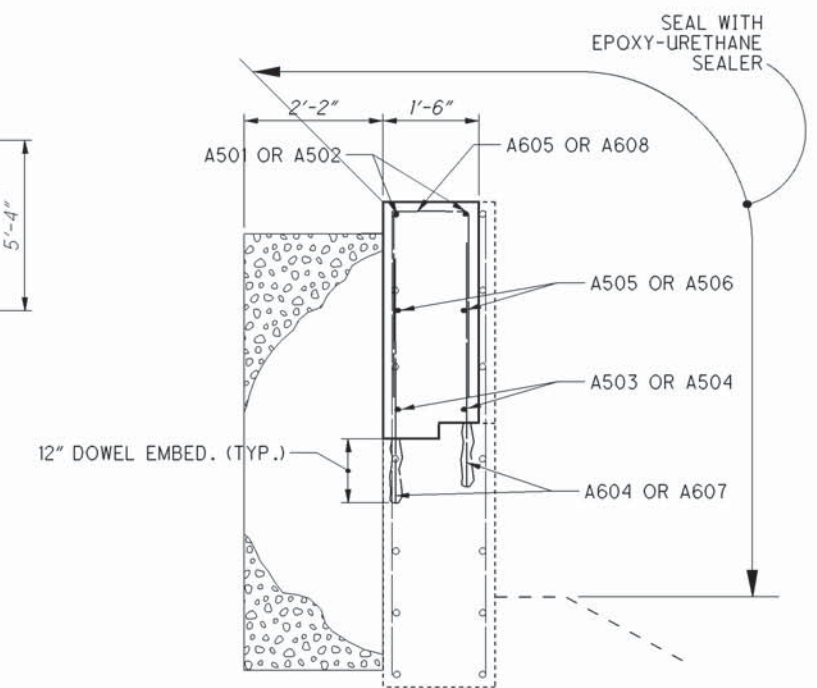
REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION



SECTION A



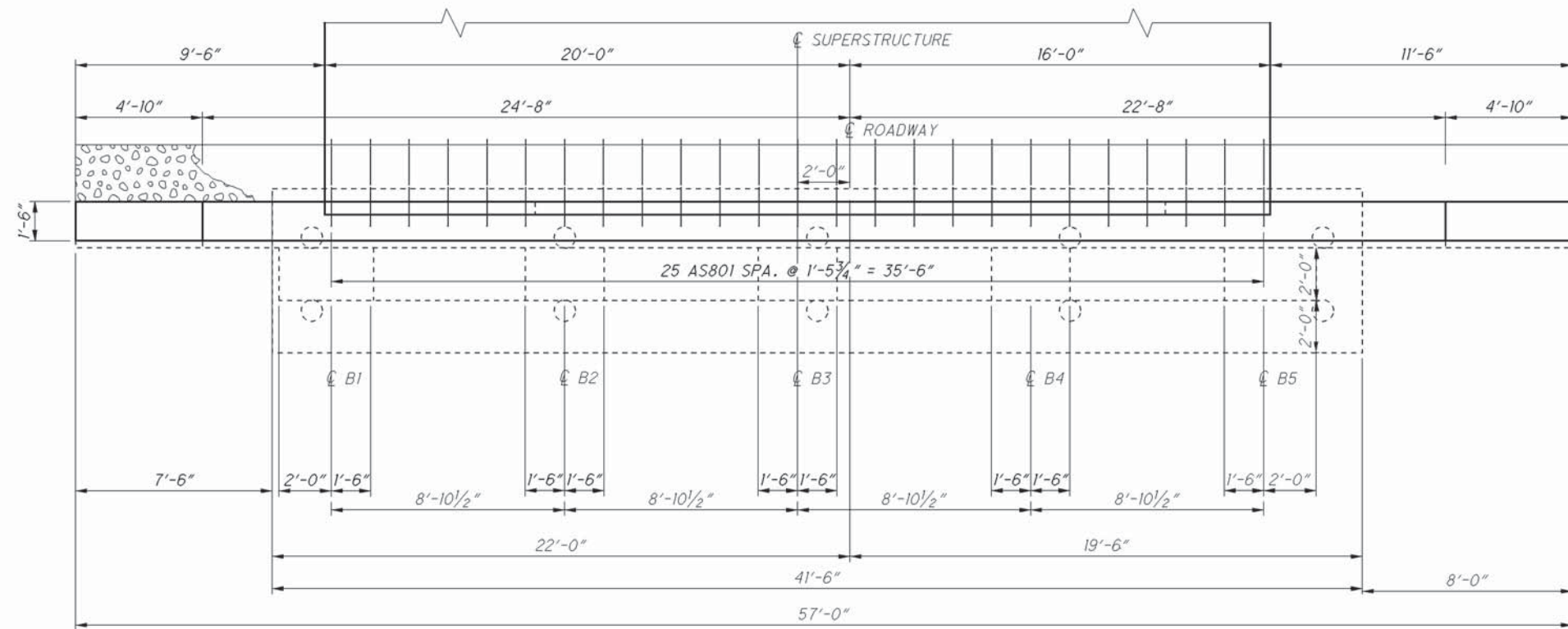
SECTION B

- NOTES:
 1) SEE SHEET 30 FOR EXPANSION JOINT DETAILS
 2) TYPICAL LAP LENGTH OF #5 REINFORCING STEEL IS 29"
 3) INSTALL DOWEL REBAR PER CMS 510 USING NON-SHRINK, NON-METALLIC GROUT.

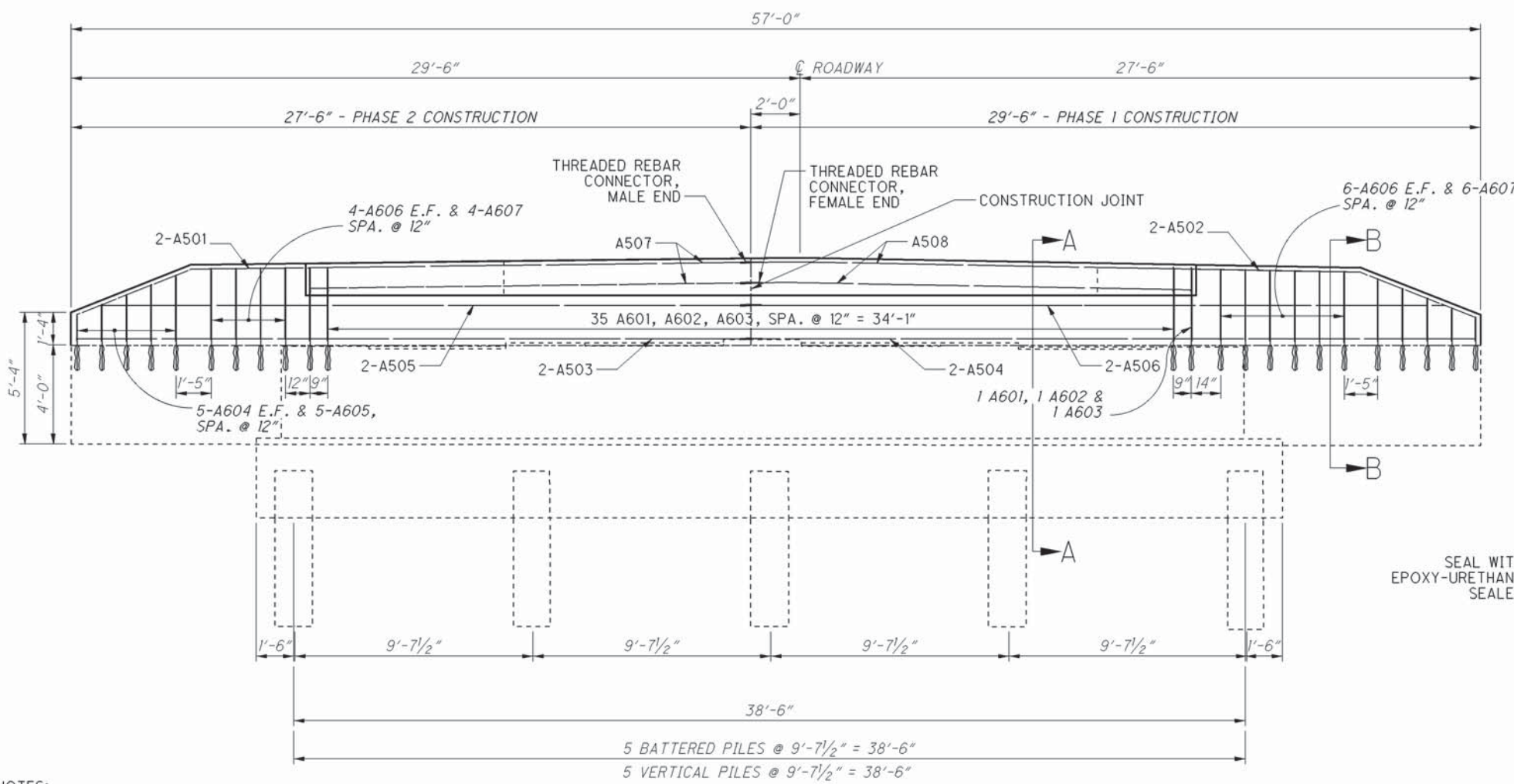
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REAR ABUTMENT DETAIL		DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
BRIDGE No.: CLE-52-0159L OVER TEN MILE CREEK	DATE CAH	STRUCTURE FILE NUMBER 1301381
DESIGNED GTF	DRAWN GTF	REVIEWED CAH
CHECKED CAH	REVISED	DATE
D08-BM-FY2017B PID No. 91684		5 / 8
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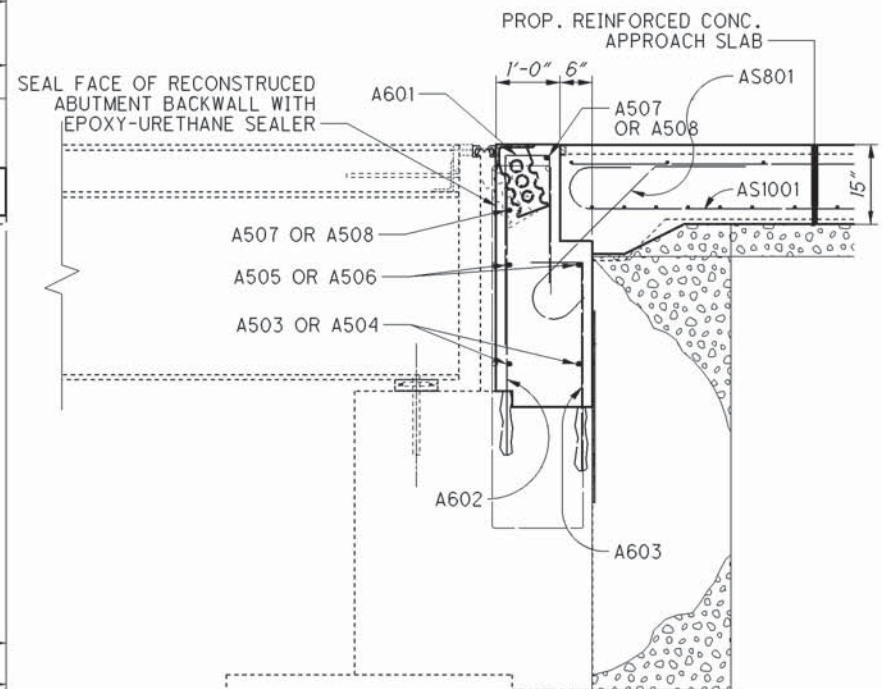


FORWARD ABUTMENT PLAN

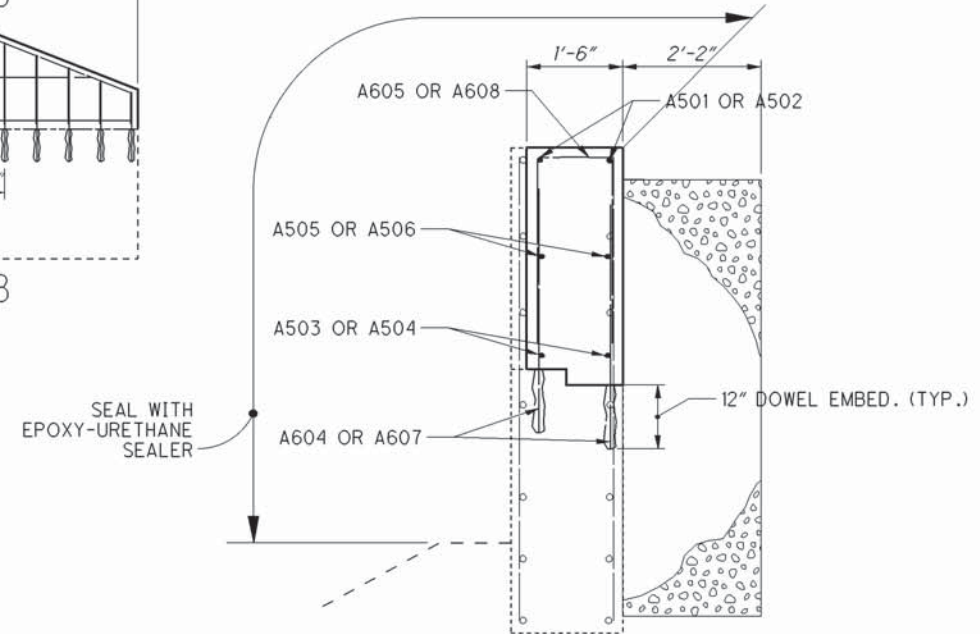


FORWARD ABUTMENT ELEVATION

- NOTES:
 1) SEE SHEET 30 FOR EXPANSION JOINT DETAILS
 2) TYPICAL LAP LENGTH OF #5 REINFORCING STEEL IS 29"
 3) INSTALL DOWEL REBAR PER CMS 510 USING NON-SHRINK, NON-METALLIC GROUT.

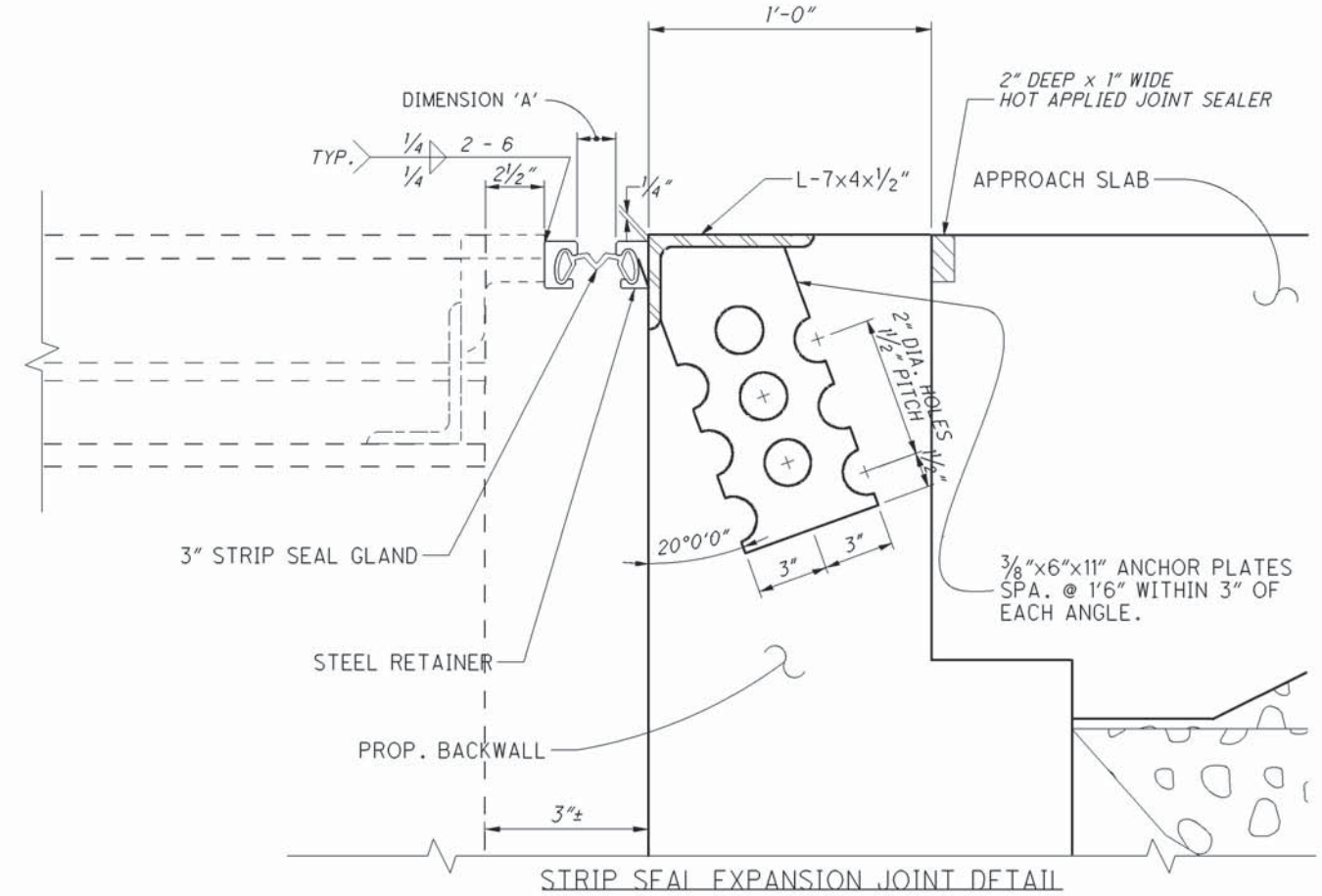
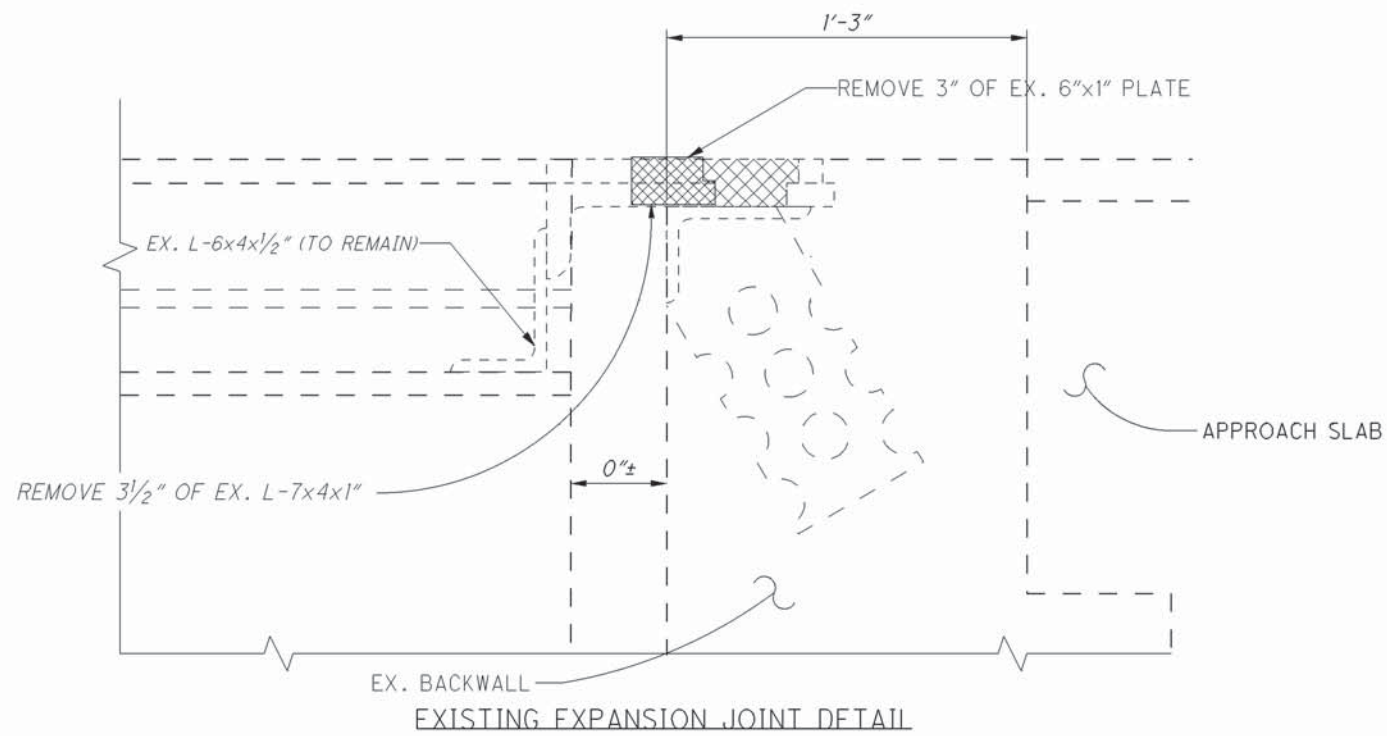


SECTION A



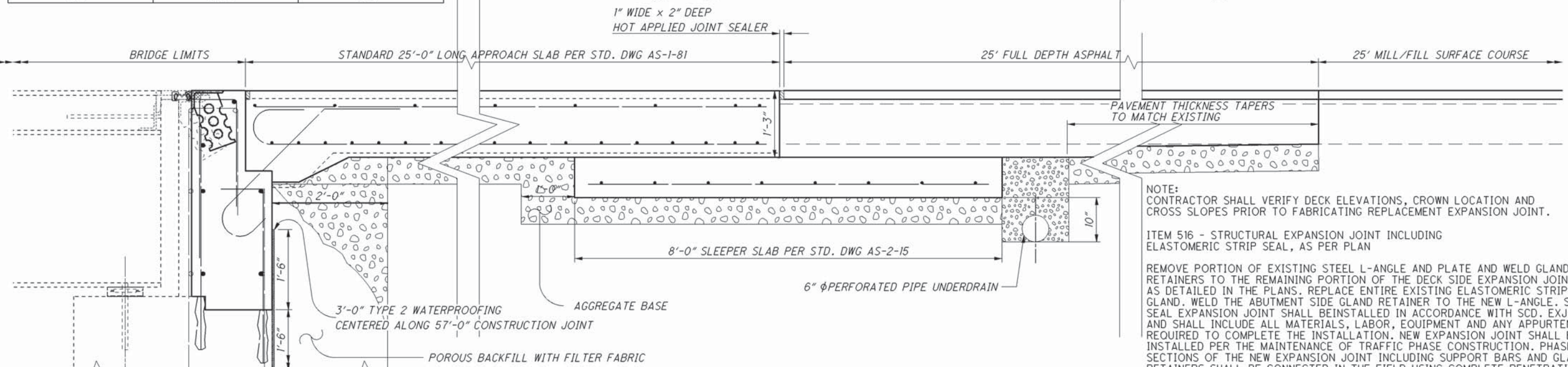
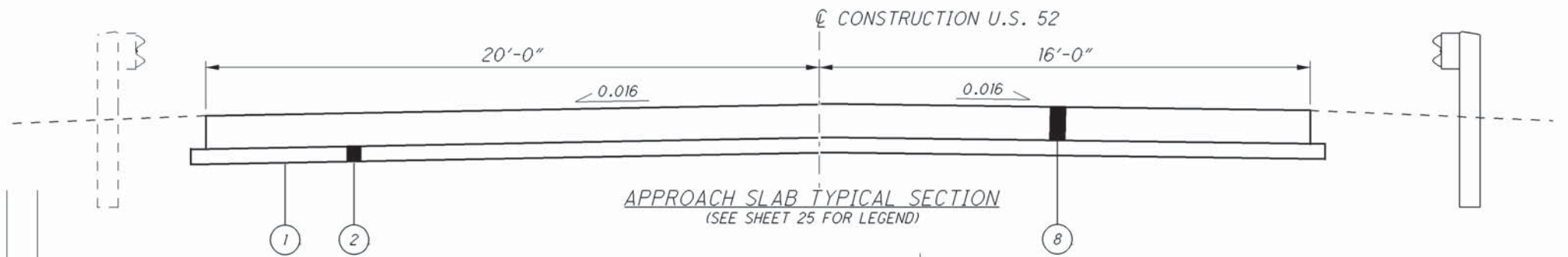
SECTION B

DESIGNED GTF	CHECKED CAH	DRAWN GTF	REVIEWED CAH	DATE	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
					STRUCTURE FILE NUMBER 1301381
FORWARD ABUTMENT DETAIL					
BRIDGE No.: CLE-52-0159L OVER TEN MILE CREEK					
D08-BM-FY2017 PID No. 91684					
6 / 8					
29 54					



ABUTMENT EXPANSION JOINT OPENING TABLE FOR 3" GLAND

AMBIENT TEMP (°F)	DIMENSION "A"	
	FWD. ABUT.	REAR ABUT.
30°	1.86"	1.80"
40°	1.78"	1.77"
50°	1.72"	1.73"
60°	1.64"	1.70"
70°	1.57"	1.67"
80°	1.50"	1.64"
90°	1.43"	1.61"



NOTE:
CONTRACTOR SHALL VERIFY DECK ELEVATIONS, CROWN LOCATION AND CROSS SLOPES PRIOR TO FABRICATING REPLACEMENT EXPANSION JOINT.

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

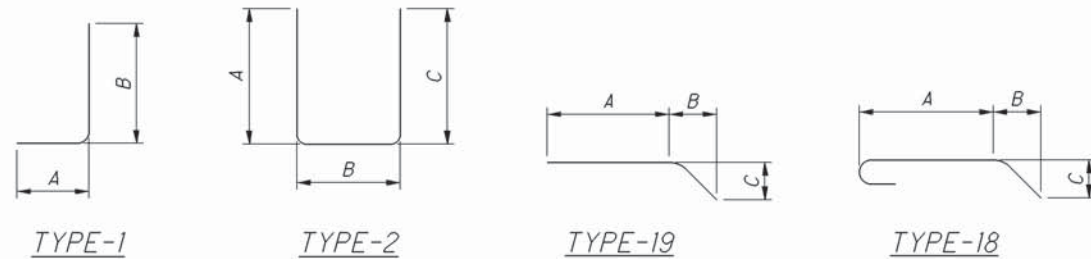
REMOVE PORTION OF EXISTING STEEL L-ANGLE AND PLATE AND WELD GLAND RETAINERS TO THE REMAINING PORTION OF THE DECK SIDE EXPANSION JOINT STEEL AS DETAILED IN THE PLANS. REPLACE ENTIRE EXISTING ELASTOMERIC STRIP SEAL GLAND. WELD THE ABUTMENT SIDE GLAND RETAINER TO THE NEW L-ANGLE. STRIP SEAL EXPANSION JOINT SHALL BE INSTALLED IN ACCORDANCE WITH SCD. EXJ-4-87 AND SHALL INCLUDE ALL MATERIALS, LABOR, EQUIPMENT AND ANY APPURTENANCES REQUIRED TO COMPLETE THE INSTALLATION. NEW EXPANSION JOINT SHALL BE INSTALLED PER THE MAINTENANCE OF TRAFFIC PHASE CONSTRUCTION. PHASED SECTIONS OF THE NEW EXPANSION JOINT INCLUDING SUPPORT BARS AND GLAND RETAINERS SHALL BE CONNECTED IN THE FIELD USING COMPLETE PENETRATION WELDS.

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MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL					A	B	C	D	E	R
FORWARD ABUTMENT REINFORCING STEEL LIST											
A501	2		4'-11"	10	STR						
A502	2		9'-6"	20	19	5'-0"	4'-3"	1'-7 1/2"			
A503	2		26'-8"	56	STR						
A504	2		29'-11"	62	STR						
A505	2		25'-9"	54	STR						
A506	2		28'-8"	60	STR						
A507	2		17'-1"	36	STR						
A508	2		18'-2"	38	STR						
A601	37		5'-4"	296	2	2'-11 1/2"	0'-8 1/4"	2'-0"			
A602	37		4'-2"	229	STR						
A603	37		3'-11"	218	1	0'-9 1/2"	3'-3"				
	4 SR		2'-2"								
A604	OF	TO	90	STR						0'-4 3/4"	
	5		3'-9"								
	2 SR		3'-1"			1'-1 1/4"		1'-1 1/4"			
A605	OF	TO	70	2	TO	1'-2"	TO			0'-4 3/4"	
	5		6'-3"			2'-8 1/4"		2'-8 1/4"			
A606	10		4'-0"	60	STR						
A607	10		6'-7"	99	2	2'-10 1/2"	1'-2"	2'-10 1/2"			
AS801	25		5'-1"	339	18	2'-10 3/4"	1'-0"	1'-0"			
SUB-TOTAL				1737							

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL					A	B	C	D	E	R
REAR ABUTMENT REINFORCING STEEL LIST											
A501	2		4'-11"	10	STR						
A502	2		9'-6"	20	19	5'-0"	4'-3"	1'-7 1/2"			
A503	2		26'-8"	56	STR						
A504	2		29'-11"	62	STR						
A505	2		25'-9"	54	STR						
A506	2		28'-8"	60	STR						
A507	2		17'-1"	36	STR						
A508	2		18'-2"	38	STR						
A601	37		5'-4"	296	2	2'-11 1/2"	0'-8 1/4"	2'-0"			
A602	37		4'-2"	229	STR						
A603	37		3'-11"	218	1	0'-9 1/2"	3'-3"				
	4 SR		2'-2"								
A604	OF	TO	90	STR						0'-4 3/4"	
	5		3'-9"								
	2 SR		3'-1"			1'-1 1/4"		1'-1 1/4"			
A605	OF	TO	70	2	TO	1'-2"	TO			0'-4 3/4"	
	5		6'-3"			2'-8 1/4"		2'-8 1/4"			
A606	10		4'-0"	60	STR						
A607	10		6'-7"	99	2	2'-10 1/2"	1'-2"	2'-10 1/2"			
AS801	25		5'-1"	339	18	2'-10 3/4"	1'-0"	1'-0"			
SUB-TOTAL				1737							

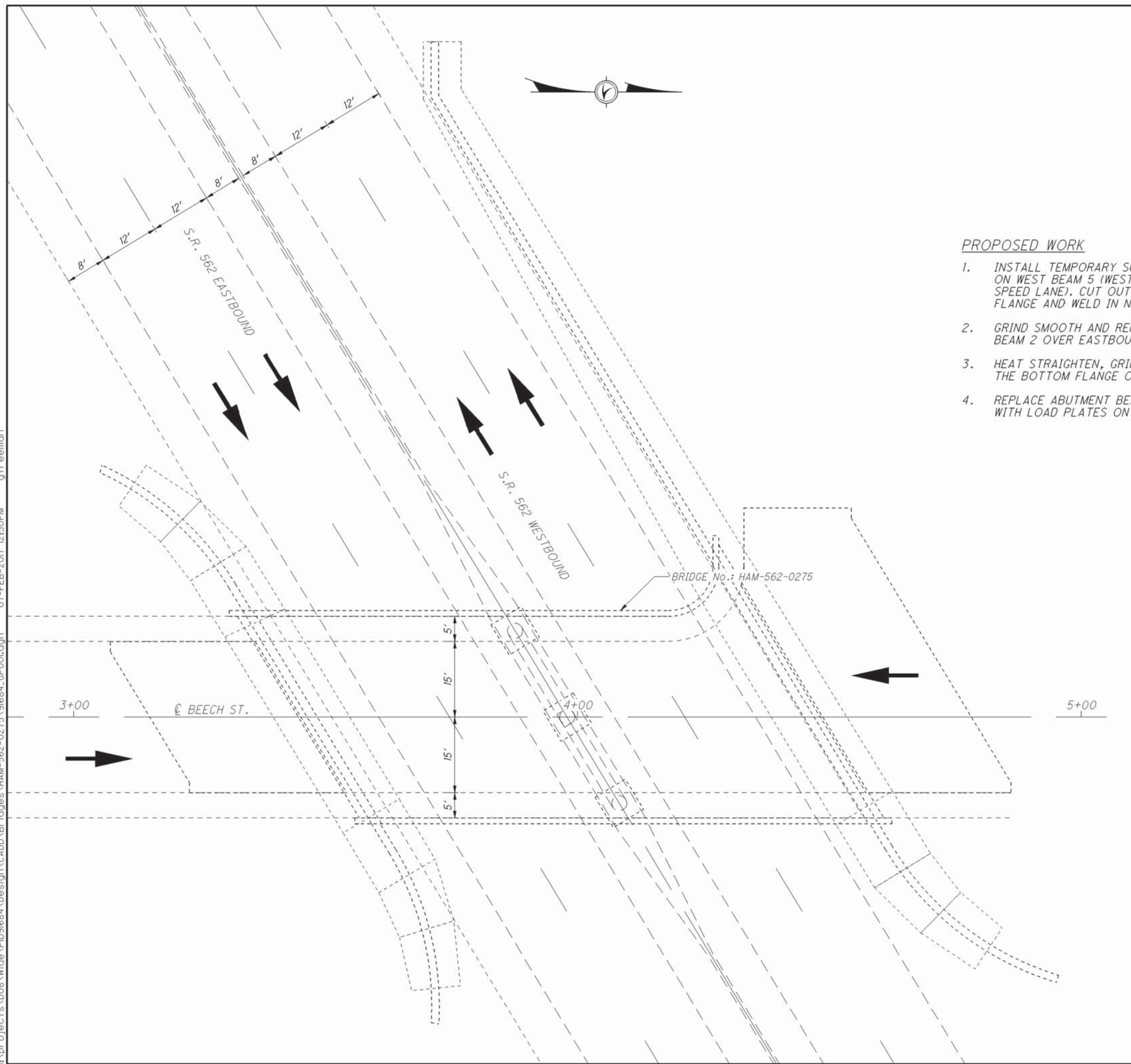


NOTES

- 1) LENGTHS OF REINFORCING STEEL BARS A503, A504, A505, A506, A507 AND A508 HAVE NOT BEEN ADJUSTED FOR MECHANICAL CONNECTORS. THE CONTRACTOR SHALL VERIFY REBAR LENGTHS PRIOR TO FABRICATION.
- 2) IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.
- 3) REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

D08 - BM - FY2017B PID No. 91684	REINFORCING STEEL LIST BRIDGE No.: CLE-52-0159L OVER TEN MILE CREEK	DESIGNED GTF CHECKED CAH	DRAWN GTF REVISED	REVIEWED CAH STRUCTURE FILE NUMBER 1301381	DATE	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
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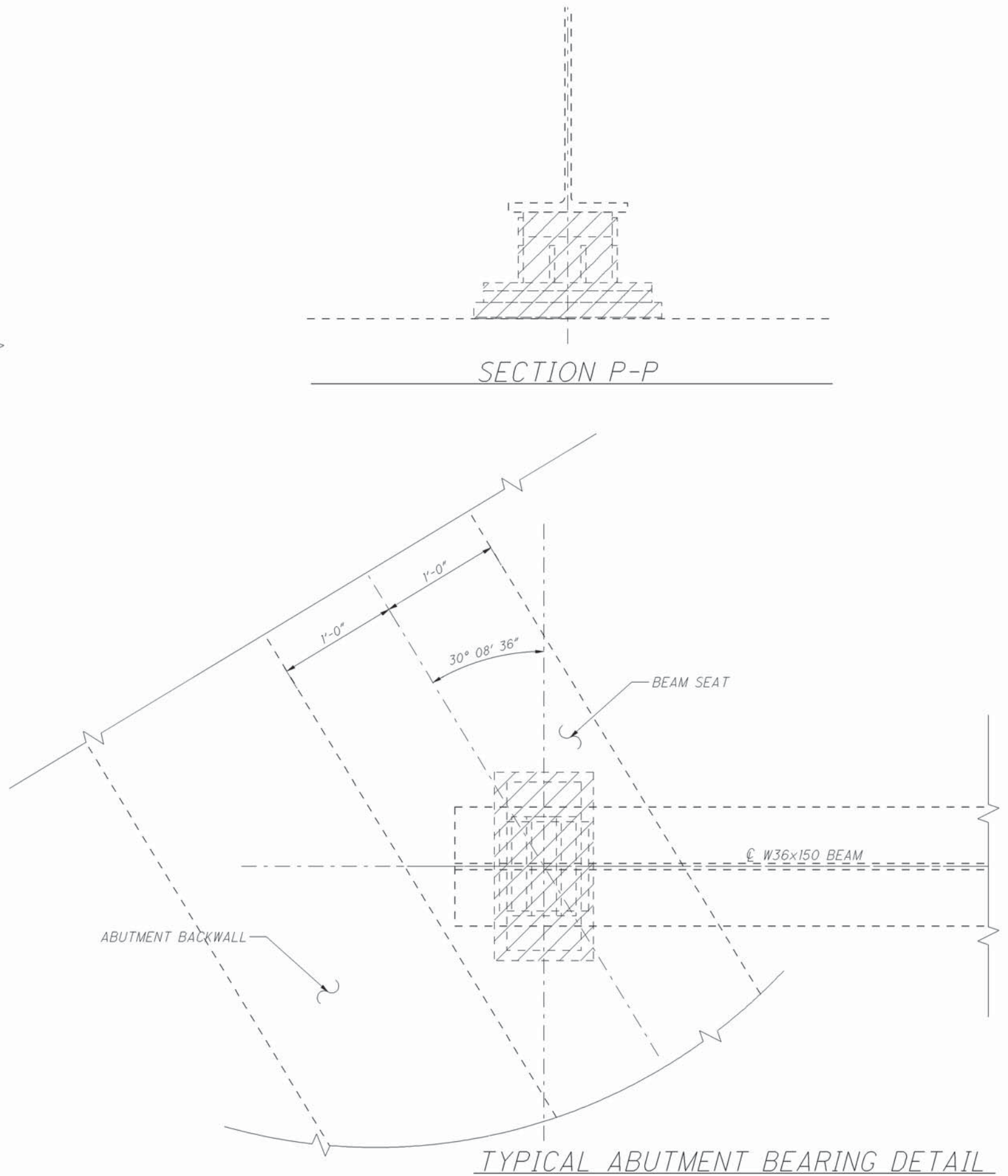
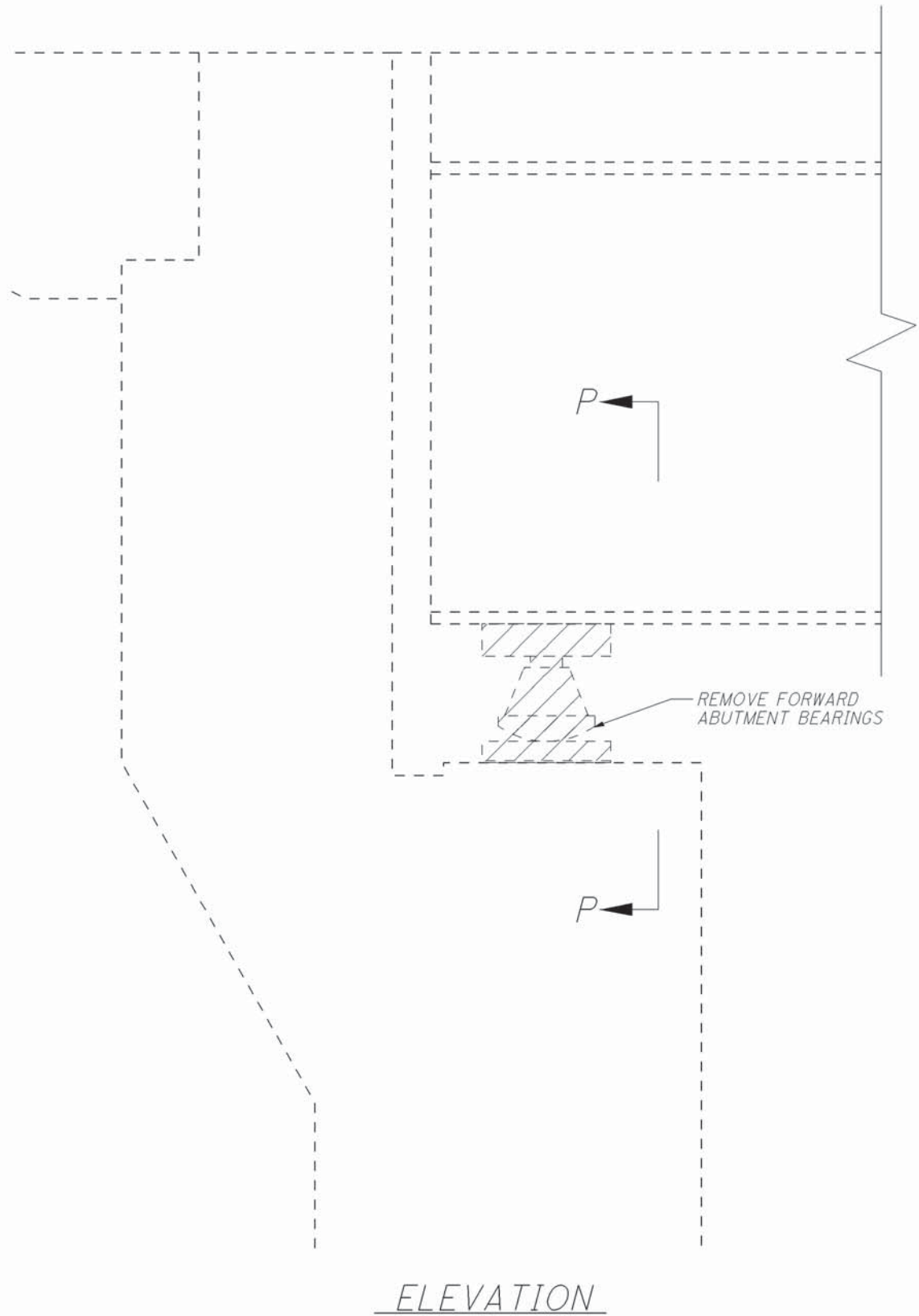
PROPOSED WORK

1. INSTALL TEMPORARY SUPPORTS TO EITHER SIDE OF IMPACT ON WEST BEAM 5 (WEST FACIA BEAM OVER EASTBOUND HIGH SPEED LANE). CUT OUT AND REPAIR PORTION OF CRACKED FLANGE AND WELD IN NEW FLANGE.
2. GRIND SMOOTH AND REPAIR PAINT AT IMPACTED AREA ON BEAM 2 OVER EASTBOUND LANES.
3. HEAT STRAIGHTEN, GRIND SMOOTH AND REPAIR PAINT ON THE BOTTOM FLANGE OF BEAM 1.
4. REPLACE ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS WITH LOAD PLATES ON HP PEDESTALS.

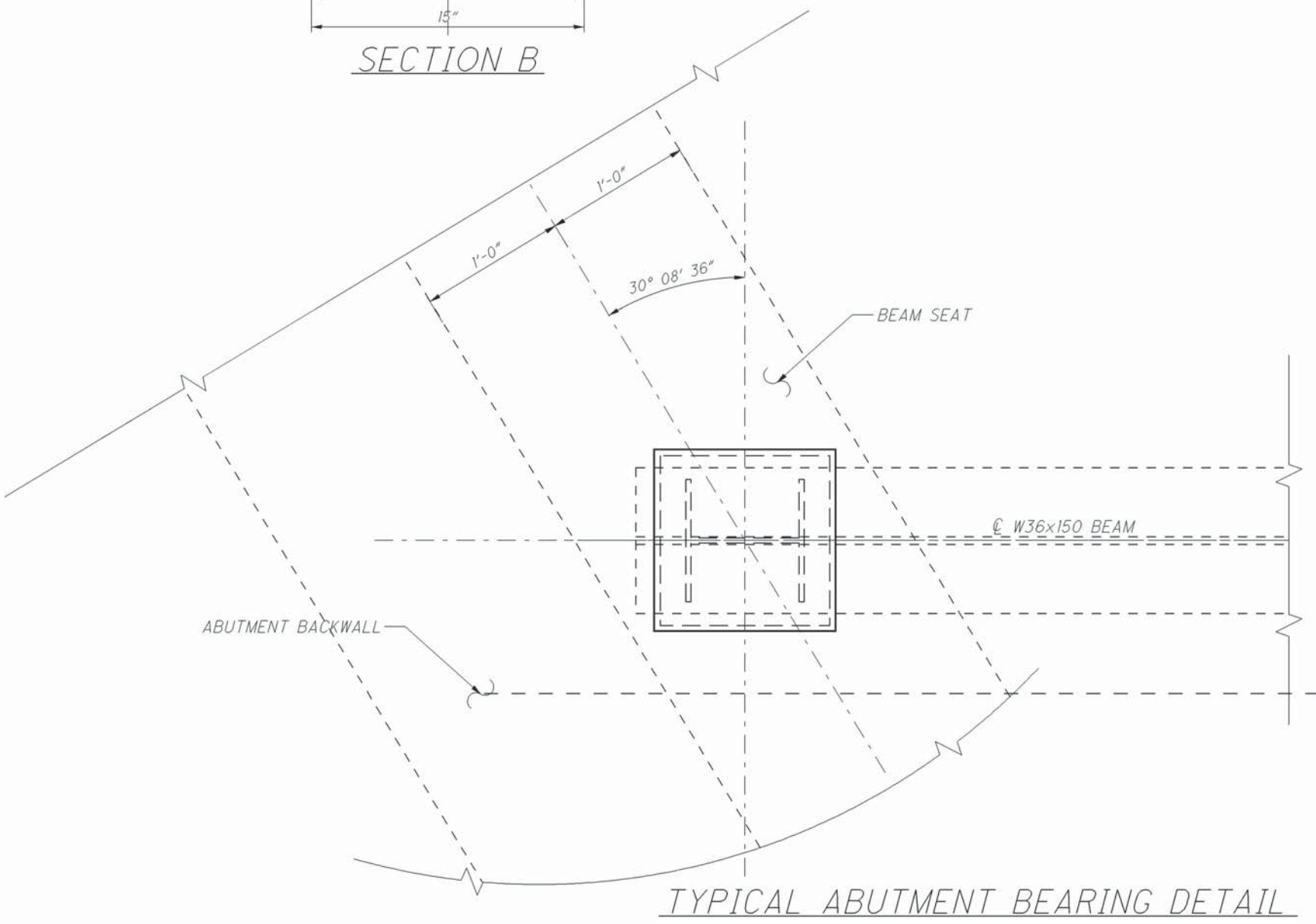
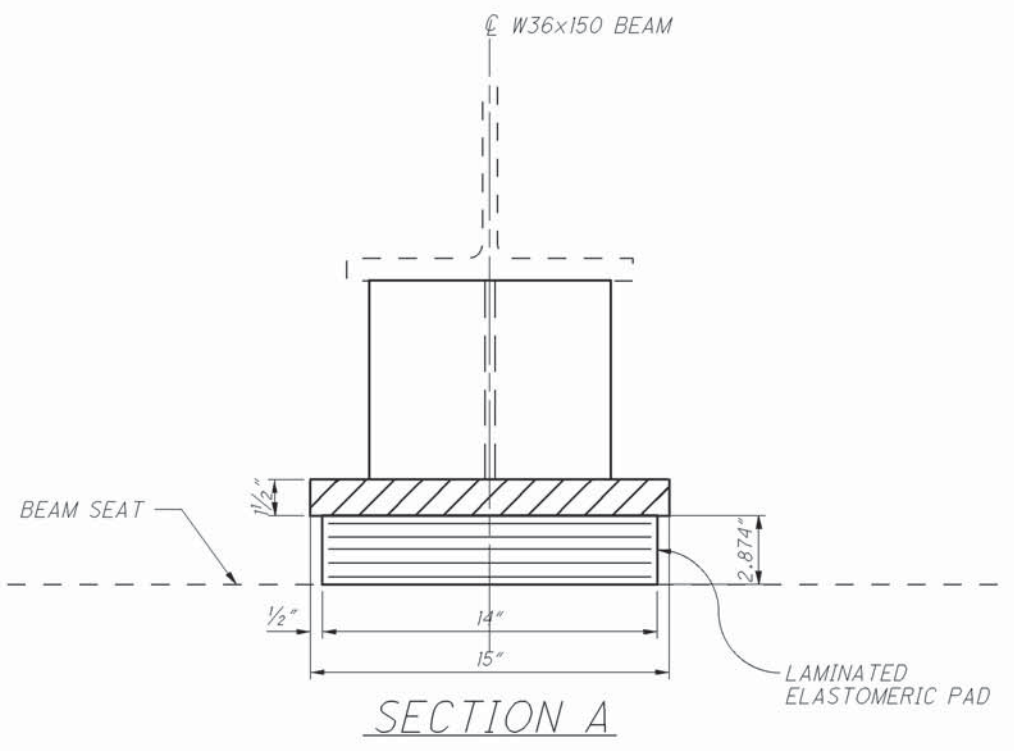
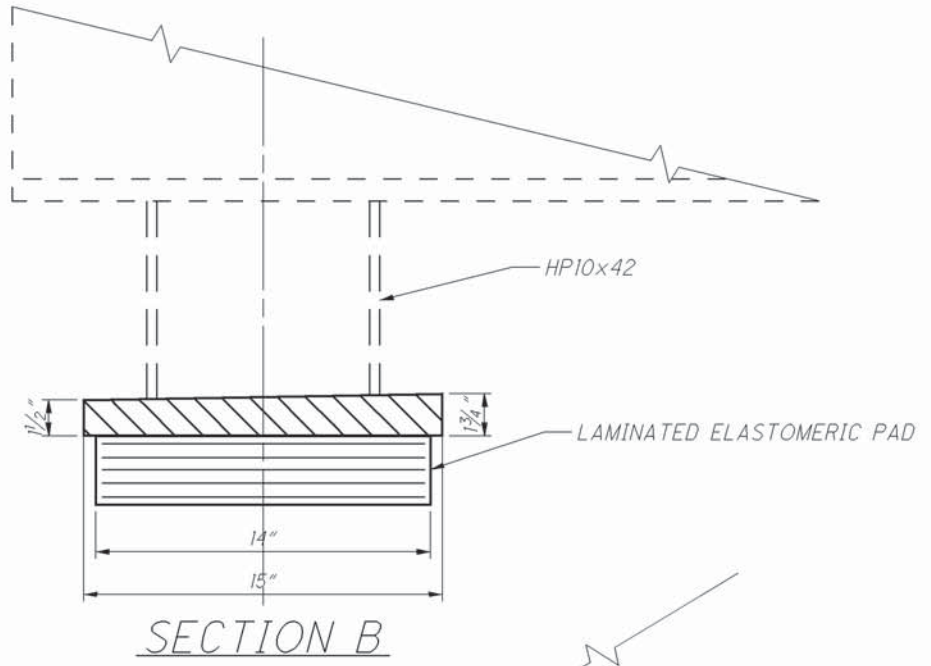
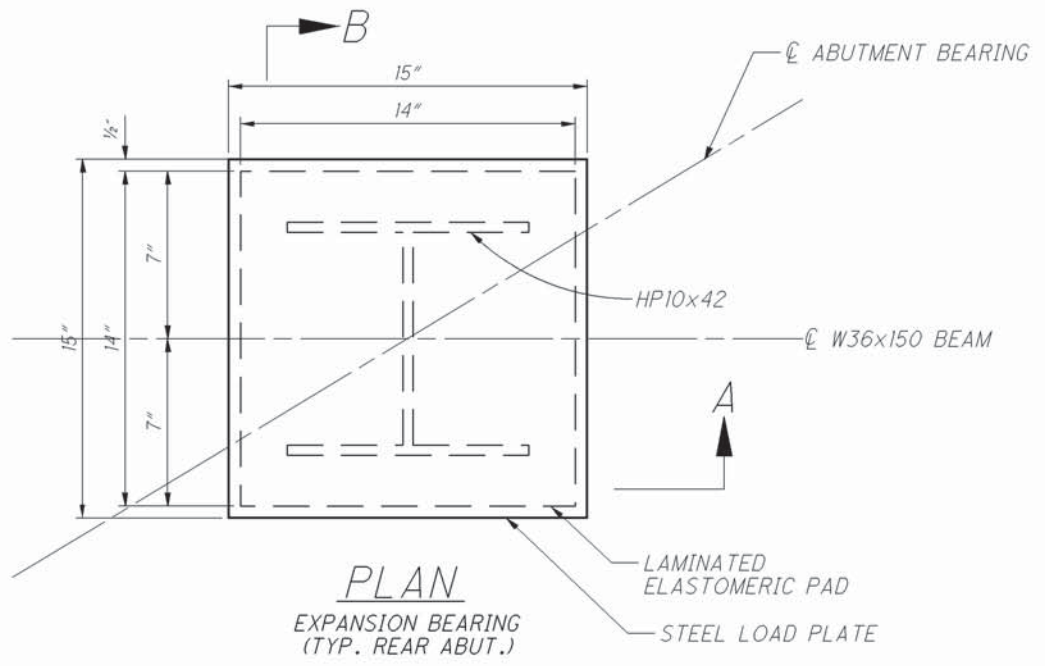
EXISTING STRUCTURE	
TYPE: CONTINUOUS ROLLED STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE	
SPANS: 50'-3", 50'-3"	
ROADWAY: 30'-0" F/F OF 5'-0" WALKS	
LOADING: H20	
SKEW: 31° 08' 36" R.F.	
APPROACH SLABS: AS-1-67 30' LONG & SPECIAL 30' LONG	
ALIGNMENT: TANGENT	
CROWN: 3/16" PER FT.	
STRUCTURAL FILE NUMBER: 3114082	
DATE BUILT: 7/1/1970	
DISPOSITION: SEE PROPOSED WORK	

D08 - BM - FY2017B	PID No. 91684	GENERAL PLAN	BRIDGE No.: HAM-562-0275 BEECH ST. OVER S.R. 562
1 / 6	32 / 54	DESIGNED GTF CHECKED CAH	DRAWN GTF REVISED CAH
REVIEWED CAH	DATE	STRUCTURE FILE NUMBER 3114082	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE

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DESIGNED GTF		DRAWN GTF		REVIEWED CAH		DATE		DESIGN AGENCY	
CHECKED CAH		REVISED		STRUCTURE FILE NUMBER 3114082		STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE			
BEARING REMOVAL DETAIL					BRIDGE No.: HAM-562-0275				
D08-BM-FY2017B					BEECH ST. OVER S.R. 562				
PID No. 91684									
2/6									
33					54				



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DESIGNED GTF		DRAWN GTF		REVIEWED CAH		DATE		DESIGN AGENCY	
CHECKED CAH		REVISED		STRUCTURE FILE NUMBER 3114082				STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE	
BEARING DETAIL									
BRIDGE No.: HAM-562-0275									
BEECH ST. OVER S.R. 562									
D08-BM-FY2017B					PID No. 91684				
3 / 6					34 54				

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REAR ABUTMENT ELASTOMERIC BEARING PAD DATA					
BEAM No.	A	B	C	D	E
	FIELD MEASURED BEARING HEIGHT	PROPOSED BEARING THICKNESS	REQ'D LOAD \bar{P} THICKNESS AT \bar{C} BEARING	H-PILE THICKNESS (A-B-C)	MIN. REQUIRED DEPTH OF BEAM SEAT GRINDING
1	12.36" \pm	2.87"	1.50"	7.99" \pm	N/A
2	12.12" \pm	2.87"	1.50"	7.75" \pm	N/A
3	12.12" \pm	2.87"	1.50"	7.75" \pm	N/A
4	11.76" \pm	2.87"	1.50"	7.39" \pm	N/A
5	11.04" \pm	2.87"	1.50"	6.67" \pm	N/A

ELASTOMERIC BEARING PAD DATA FOR EXISTING BEAMS											
BRIGE NO.	SUB-STRUCTURE	ELASTOMERIC PAD						REACTIONS			MAXIMUM DESIGN LOAD (K)
		T	NO. OF INTER. LAYERS	t_i	t_e	STEEL LAMINATES		TYPE	DEAD LOAD (KIPS)	LIVE * LOAD (KIPS)	
						NO.	THICK.				
HAM-562-0275	REAR ABUT.	2.87"	4	0.500"	0.250"	5	0.0747"	EXP.	86.40	70.31	156.71

t_i = THICKNESS OF INTERNAL ELASTOMER LAYER
 t_e = THICKNESS OF EXTERNAL ELASTOMER LAYER

* W/O IMPACT

NOTES:

- STRUCTURAL STEEL FOR ABUTMENT LOAD PLATES AND HP-SECTIONS SHALL BE PAINTED USING AN OZEU PAINT SYSTEM AND COLOR IS TO MATCH EXISTING. INCLUDED WITH ITEM 514 FOR PAYMENT.
- STRUCTURAL STEEL FOR ABUTMENT LOAD PLATE AND HP-SECTIONS SHALL BE INCLUDED WITH ELASTOMERIC BEARINGS FOR PAYMENT.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILT INFORMATION OF EACH REPLACED BEARING SHOWING FINAL HP-SECTION SIZES. PAYMENT FOR THE AS-BUILT INFORMATION AS WELL AS ANY SURVEY WORK REQUIRED TO COMPLETE THE BEARING WORK SHALL BE INCLUDED WITH THE RESPECTIVE BEARING ITEM(S) FOR PAYMENT.
- SEE SHEET 34 & 33 OF 54 FOR ADDITIONAL DETAILS.

ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING: IF STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° (\pm) 10° F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (\pm) 10° F.

THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO THE DISTRICT 8 BRIDGE ENGINEER PRIOR TO JACKING. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED.

ANY BEARING HP-SECTION HEIGHTS OR DIMENSIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE SHOWN FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY THE HEIGHT OF REQUIRED HP-SECTION BY MEASURING THE DISTANCE BETWEEN THE BEAM SEAT ELEVATION AND THE BOTTOM OF THE EXISTING BEAM FLANGE AND THEN SUBTRACTING FROM THAT DISTANCE THE THICKNESS OF THE BEARING AND LOAD PLATE.

IF THERE IS INSUFFICIENT HEIGHT FOR THE BEARING AND STEEL PLATE THICKNESSES, THE CONTRACTOR SHALL DETERMINE THE REQUIRED DEPTH OF BEAM SEAT GRINDING AND SHALL SUBMIT THIS INFORMATION TO THE ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH THE GRINDING WORK. PROVIDE A LEVEL SURFACE BELOW BEARING. GROUND AREA OF ABUTMENT SEAT SHALL NOT HINDER BEARING MOVEMENT. PROVIDE POSITIVE DRAINAGE FROM THE AREA OF BEAM SEAT GRINDING TO THE FACE OF THE ABUTMENT.

ANY PLATE THICKNESS ADJUSTMENTS AND/OR SHIMS REQUIRED TO COMPLETE THE BEARINGS INSTALLATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A MAXIMUM OF ONE SHIM PLATE SHALL BE ALLOWED PER BEARING.

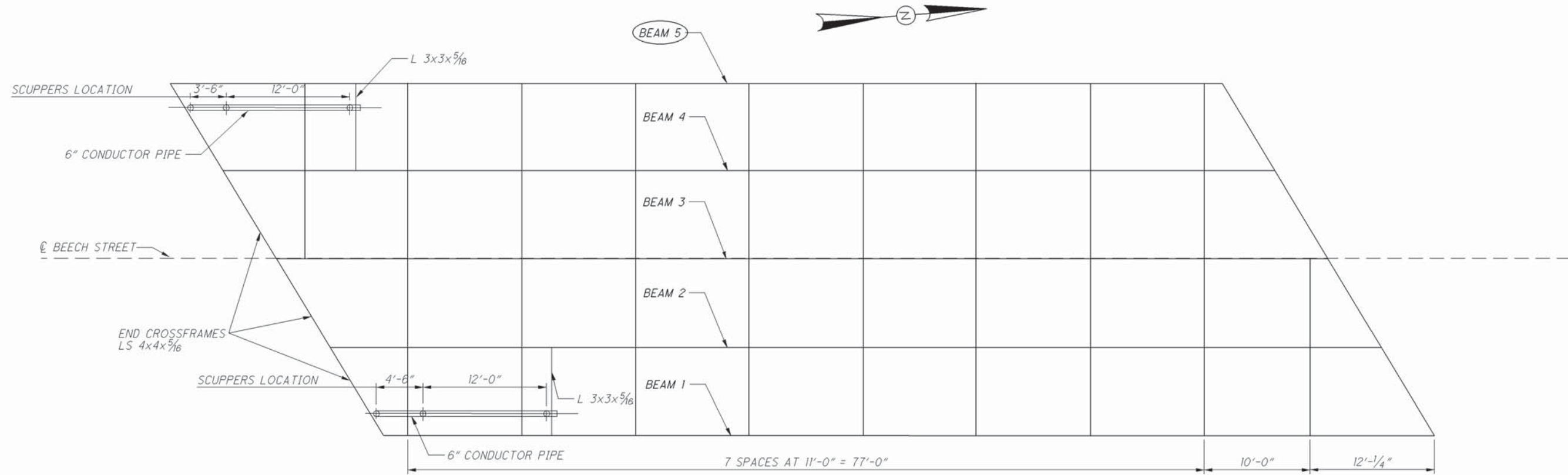
IN ADDITION TO THE REQUIREMENTS OF 516 AND THE DETAILS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL ASSURE THAT THERE IS A SNUG FIT BETWEEN THE BEARING DEVICE AND BEARING SEAT. THE CONTRACTOR SHALL ASSURE THAT NO BEAMS OR BEARING DEVICES ARE FLOATING.

BASIS OF PAYMENT: THE UNIT PRICE BIDS SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE LAMINATED ELASTOMERIC BEARINGS WITH STEEL LOAD PLATES AND HP-SECTIONS INCLUDING GRINDING OF WELDS AND DRILLING, SETTING AND GROUTING OF ANCHOR RODS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

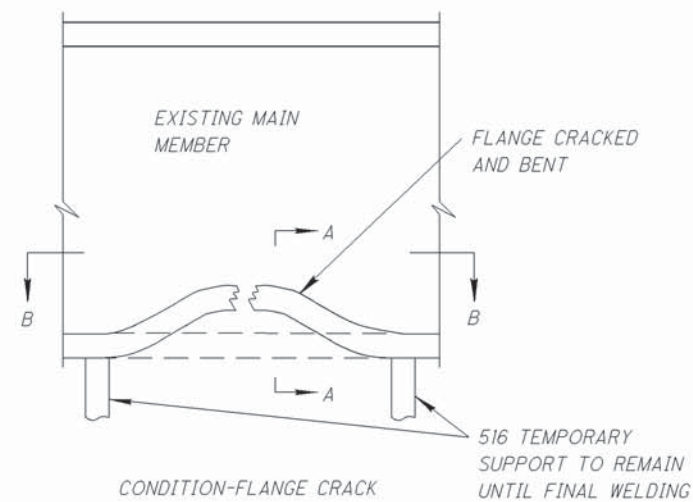
ALL MATERIAL, EQUIPMENT, LABOR AND ANY MISCELLANEOUS ITEMS REQUIRED TO COMPLETE THE GRINDING OF THE BEAM SEATS SHALL BE INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20', AS PER PLAN FOR PAYMENT.

DESIGNED GTF CHECKED CAH	DRAWN GTF REVISED	REVIEWED GTF STRUCTURE FILE NUMBER 3114082	DATE	DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
BEARING DETAIL				
BRIDGE No.: HAM-562-0275 BEECH ST. OVER S.R. 562				
D08 - BM - FY2017B		PID No. 91684		
4 / 6		35 54		

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PROPOSED WORK FOR BEAM 5



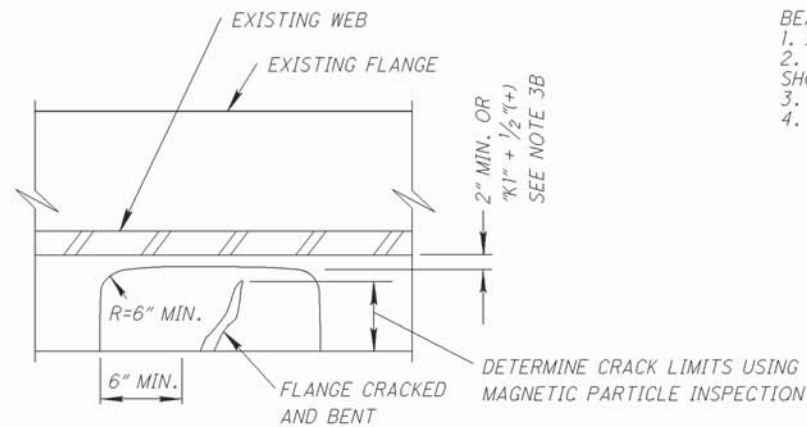
516 TEMPORARY SUPPORT TO REMAIN UNTIL FINAL WELDING

CONDITION-FLANGE CRACK

COLLISION REPAIR FC1-1

SEE NOTE 1

NOTE 1:
DETERMINE IF IMPACT NOTCH IS CRACKED USING MAGNETIC PARTICLE INSPECTION



SECTION B-B
SEE NOTES 1 THROUGH 3

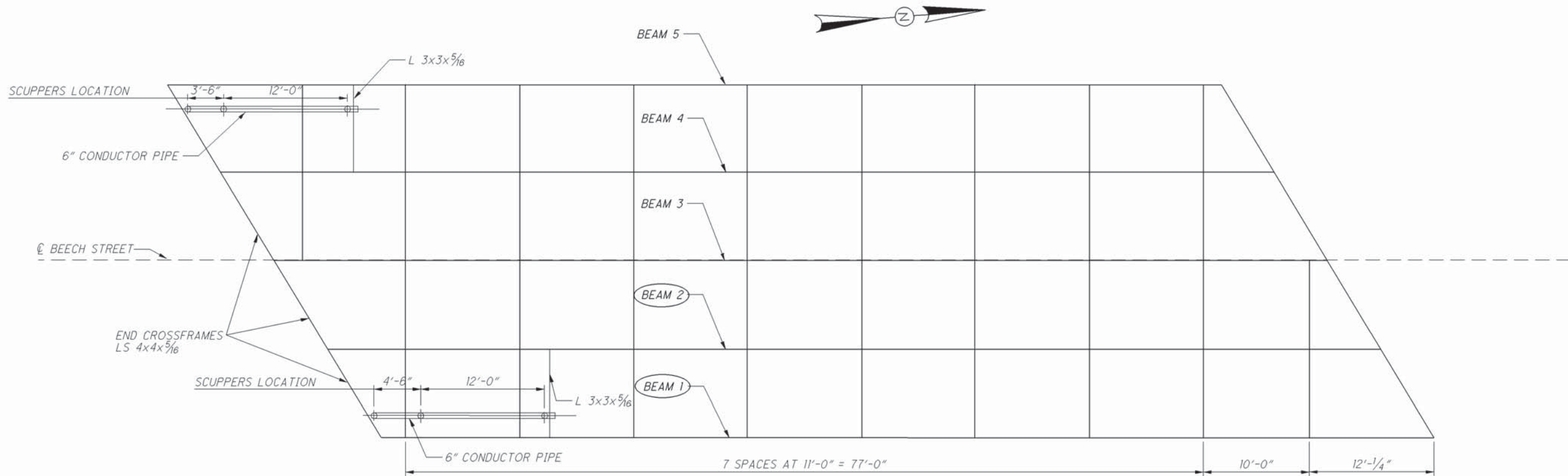
- BEAM 5:**
1. INSTALL TEMPORARY SUPPORTS TO EITHER SIDE OF IMPACT.
 2. CUT OUT PORTION OF FLANGE AND WELD IN NEW PARTIAL FLANGE AS SHOWN IN SECTION B-B.
 3. REMOVE SUPPORTS.
 4. REPAIR PAINT PER CRHS TWO COAT SPECIFICATION.

SEE STRUCTURAL NOTES, PAGE 16, FOR ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (TWO COAT).

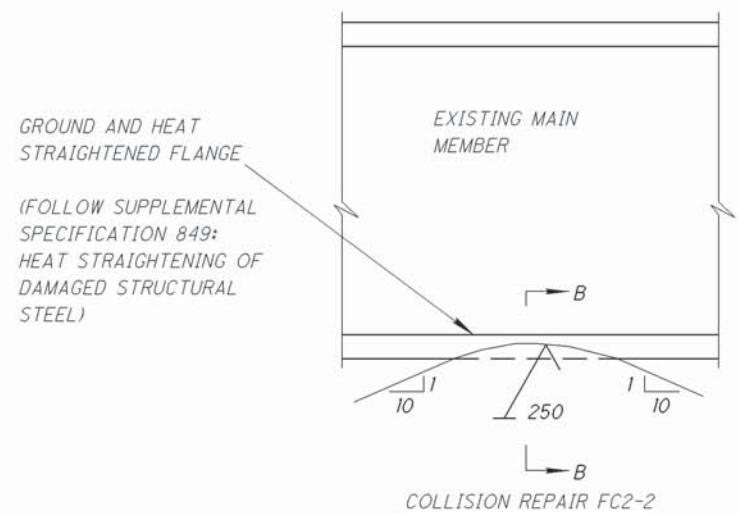
NOTES

- 1: IF NOTCH OR PARTIAL DEPTH CRACK CAN BE REMOVED BY GRINDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849, REPAIR DAMAGED MEMBERS. PERFORM GRINDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849 AND AS ILLUSTRATED IN DETAIL FC2-2
- 2: IF NOTCH OR PARTIAL DEPTH CRACK MUST BE REPAIRED BY WELDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849 REPAIRING DAMAGED MEMBERS, AS ILLUSTRATED IN DETAIL FC2-3. PERFORM COMPLETE PENETRATION WELDING ACCORDING TO C&MS 513.21 BY ATTACHING RUN OFF TABS AND GRIND ALL WELDED SURFACES SMOOTH ACCORDING TO ANSI B46.1 OF 250 mil.
- 3: PERFORM NDT TESTING ACCORDING TO C&MS 513.25A

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PROPOSED WORK FOR BEAMS 1 & 2



IF AREA (t_n, b_n) AFTER GRINDING $\leq 98\%$ OF AREA (t_f, b_f) NOTE #3 APPLIES

BEAM 1:
 1. HEAT STRAIGHTEN THE BOTTOM FLANGE PER SUPPLEMENTAL SPECIFICATION 849.
 2. GRIND SMOOTH THE IMPACTED AREA PER COLLISION REPAIR DETAIL FC2-2 AND SUPPLEMENTAL SPECIFICATION 849.
 3. REPAIR PAINT PER CRHS TWO COAT SPECIFICATION.

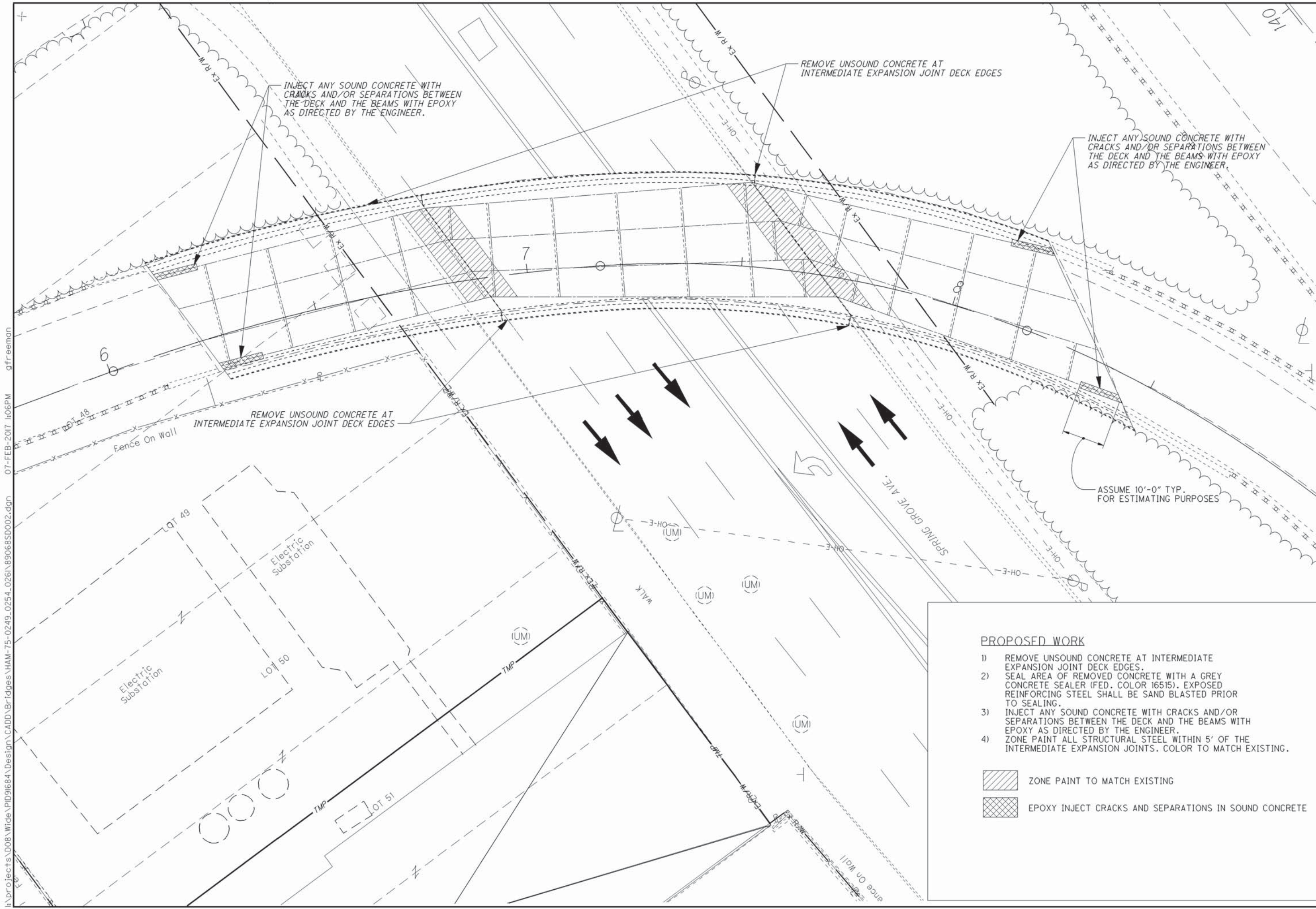
BEAM 2:
 1. GRIND SMOOTH THE IMPACTED AREA PER COLLISION REPAIR DETAIL FC2-2 AND SUPPLEMENTAL SPECIFICATION 849.
 2. REPAIR PAINT PER CRHS TWO COAT SPECIFICATION.

NOTE 3:
 IF NOTCH OR PARTIAL DEPTH CRACK CAN BE REMOVED BY GRINDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849, REPAIR DAMAGED MEMBERS. PERFORM GRINDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849 AND AS ILLUSTRATED IN DETAIL FC2-2

SEE STRUCTURAL NOTES, PAGE 16, FOR ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (TWO COAT).

NOTE: NO HEAT STRAIGHTENING IS NECESSARY ON BEAM 2.

DESIGNED		DESIGNED	REVIEWED	DATE	DESIGN AGENCY
GTF	GTF	CAH	CAH		STATE OF OHIO
CHECKED	CHECKED	REVIS	STRUCTURE FILE NUMBER		DEPARTMENT OF TRANSPORTATION
CAH	CAH		3114082		DISTRICT 8 - BRIDGE OFFICE
COLLISION REPAIR DETAIL					
BRIDGE No.: HAM-562-0275					
BEECH ST. OVER S.R. 562					
D08-BM-FY2017B					
PID No. 91684					
6 / 6					
37					
54					



INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND THE BEAMS WITH EPOXY AS DIRECTED BY THE ENGINEER.

REMOVE UNSOUND CONCRETE AT INTERMEDIATE EXPANSION JOINT DECK EDGES

INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND THE BEAMS WITH EPOXY AS DIRECTED BY THE ENGINEER.

REMOVE UNSOUND CONCRETE AT INTERMEDIATE EXPANSION JOINT DECK EDGES

ASSUME 10'-0" TYP. FOR ESTIMATING PURPOSES

PROPOSED WORK

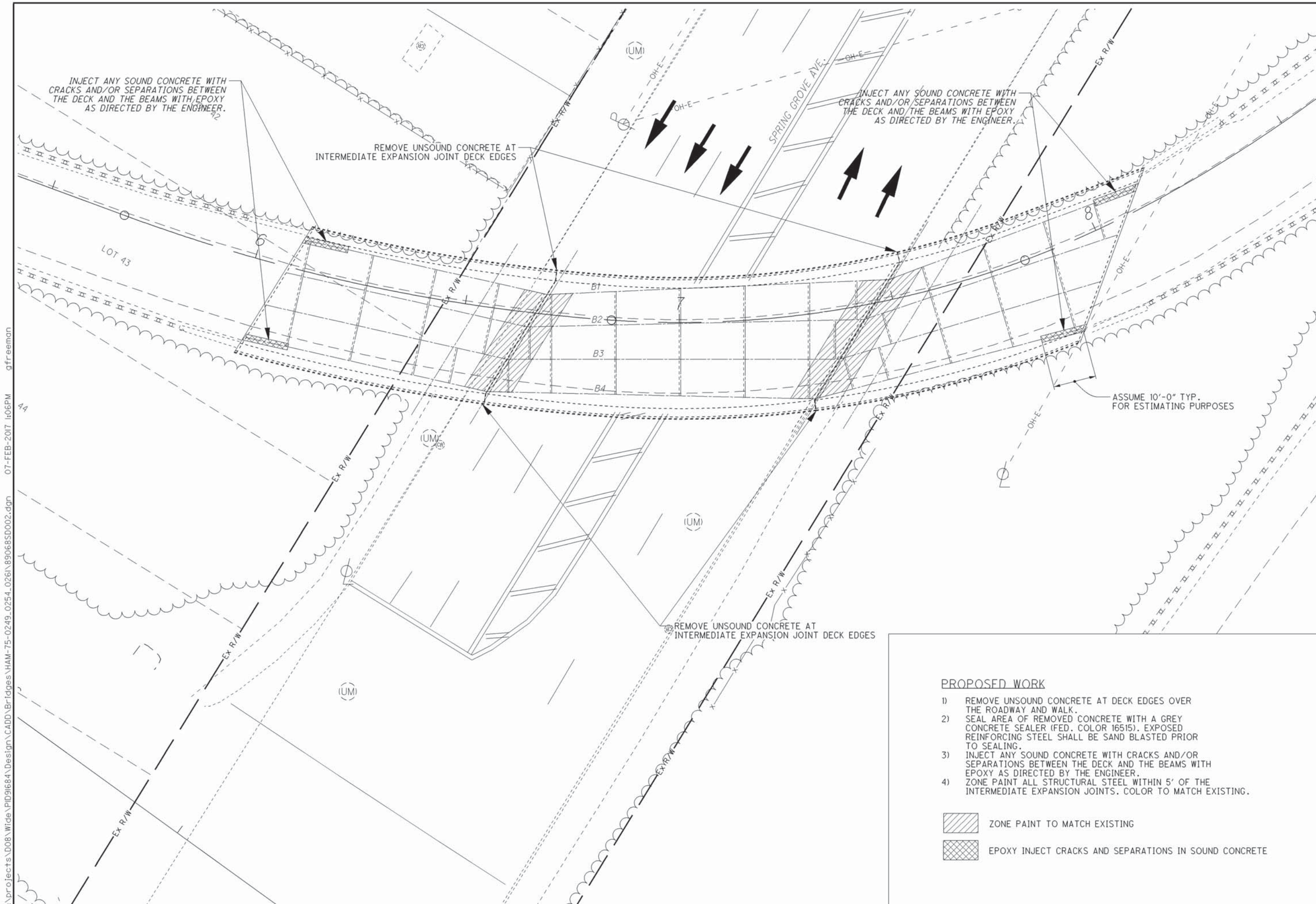
- 1) REMOVE UNSOUND CONCRETE AT INTERMEDIATE EXPANSION JOINT DECK EDGES.
- 2) SEAL AREA OF REMOVED CONCRETE WITH A GREY CONCRETE SEALER (FED. COLOR 16515). EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED PRIOR TO SEALING.
- 3) INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND THE BEAMS WITH EPOXY AS DIRECTED BY THE ENGINEER.
- 4) ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5' OF THE INTERMEDIATE EXPANSION JOINTS. COLOR TO MATCH EXISTING.

- ZONE PAINT TO MATCH EXISTING
- EPOXY INJECT CRACKS AND SEPARATIONS IN SOUND CONCRETE

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DESIGNED GTF	CHECKED CAH	DRAWN GTF	REVIEWED CAH	DATE 3/10/2017
				STRUCTURE FILE NUMBER 3109453
GENERAL PLAN				
BRIDGE No.: HAM-75-0249W				
RAMP FROM WESTERN HILLS VIADUCT TO SB I.R. 75 SPRING GROVE AVE				
D08 - BM - FY2017B				
PID No. 91684				
1 / 4				
38				
54				

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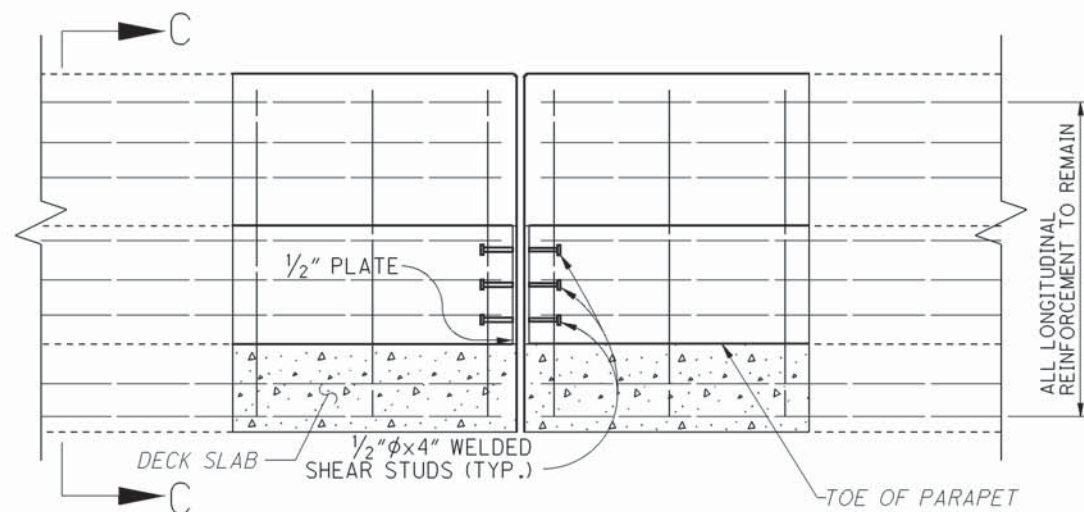
PROPOSED WORK

- 1) REMOVE UNSOUND CONCRETE AT DECK EDGES OVER THE ROADWAY AND WALK.
- 2) SEAL AREA OF REMOVED CONCRETE WITH A GREY CONCRETE SEALER (FED. COLOR 16515). EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED PRIOR TO SEALING.
- 3) INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND THE BEAMS WITH EPOXY AS DIRECTED BY THE ENGINEER.
- 4) ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5' OF THE INTERMEDIATE EXPANSION JOINTS. COLOR TO MATCH EXISTING.

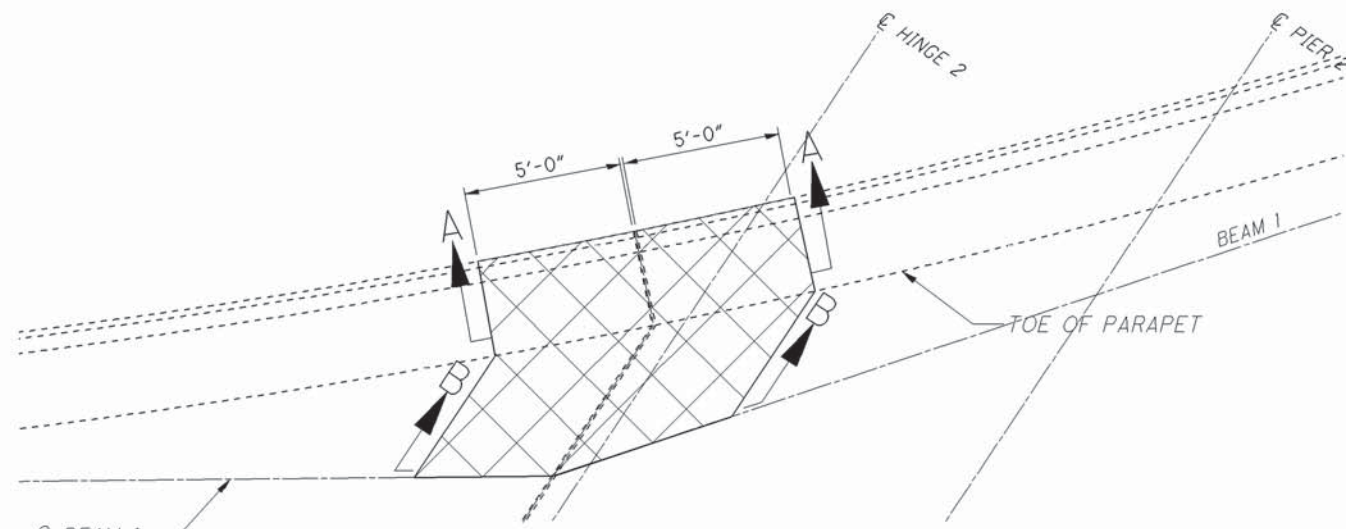
-  ZONE PAINT TO MATCH EXISTING
-  EPOXY INJECT CRACKS AND SEPARATIONS IN SOUND CONCRETE

GENERAL PLAN		BRIDGE No.: HAM-75-0253W	DESIGN AGENCY STATE OF OHIO
SB I.R. 75 RAMP TO WESTERN HILLS VIADUCT OVER SPRING GROVE AVE		STRUCTURE FILE NUMBER 3109488	DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
DESIGNED GTF	DRAWN GTF	REVIEWED CAH	DATE
CHECKED CAH	REVISED	CAH	3/10/17
D08 - BM - FY2017B		PID No. 91684	
2 / 4		39 54	

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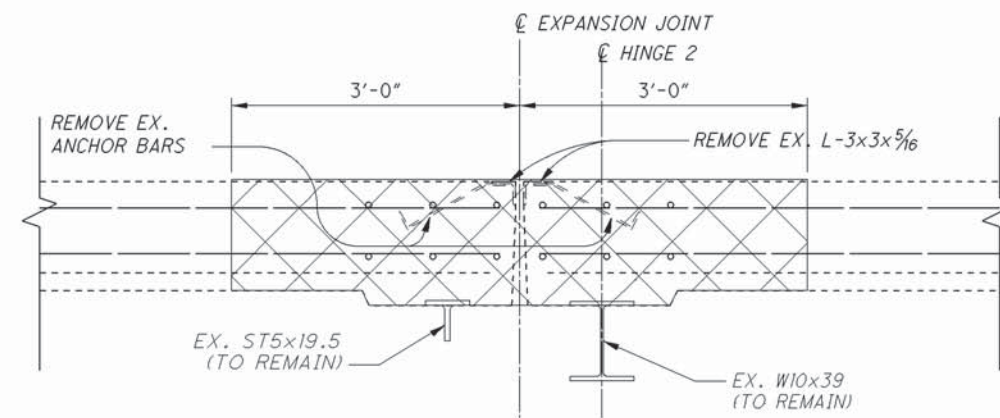
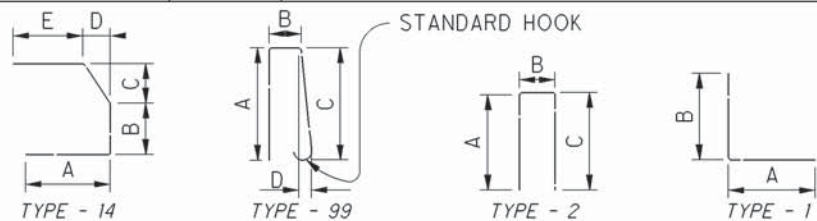


SECTION A-A

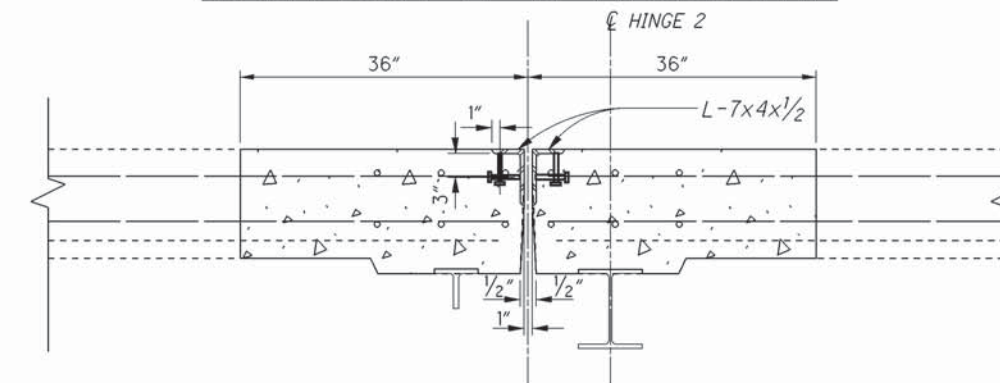


PART PLAN AT EXP. JOINT

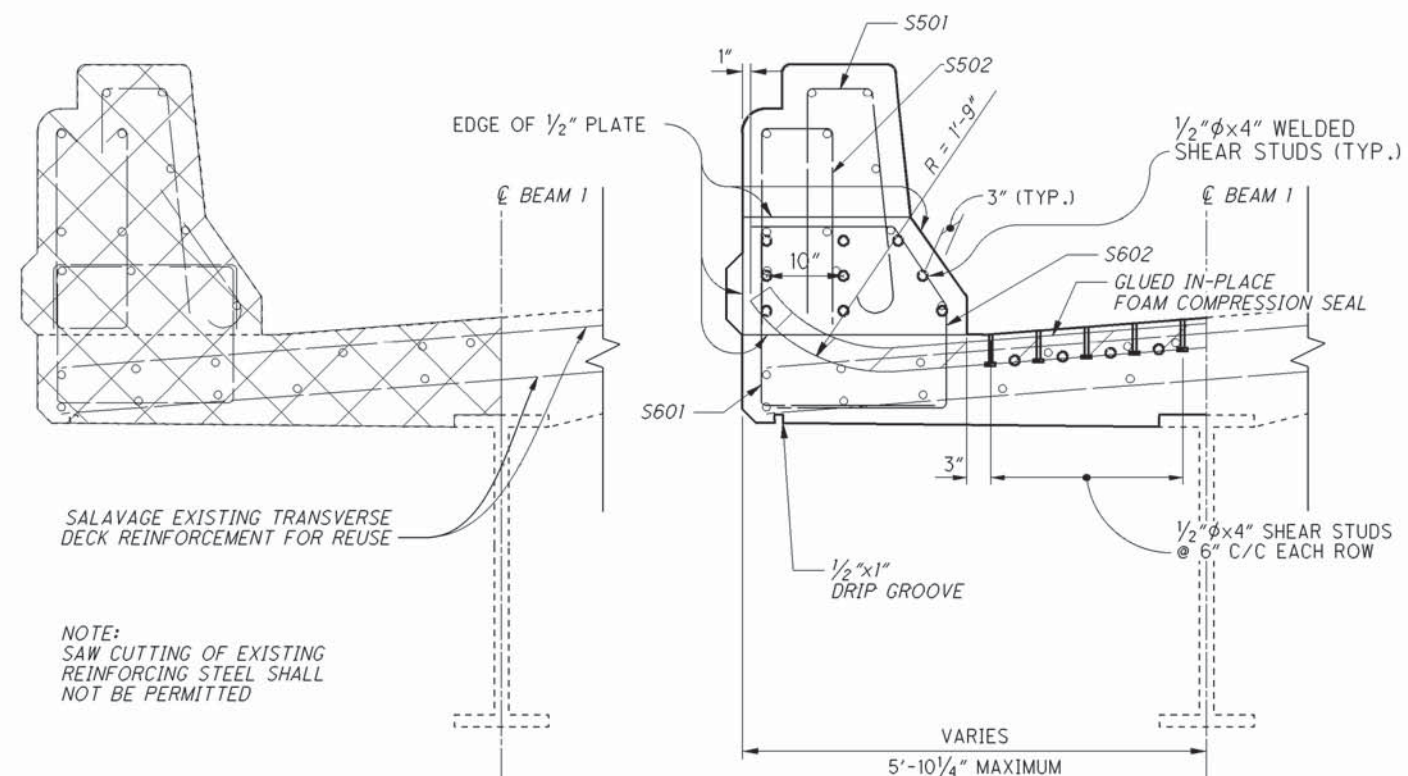
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
REINFORCING STEEL LIST											
S501	6	5'-8"	36	99	2'-4"	0'-8"	2'-4"	0'-2 1/2"			
S502	6	4'-6"	28	2	2'-0 1/4"	0'-8 3/4"	2'-0 1/4"				
S601	6	3'-5"	31	1	1'-9 1/2"	1'-9 1/2"					
A602	6	5'-1"	46	14	1'-9 1/4"	1'-0 3/4"	0'-9 3/4"	0'-6 1/2"	1'-5 3/4"		
SUB-TOTAL			141								



SECTION B-B REMOVAL



SECTION B-B PROPOSED

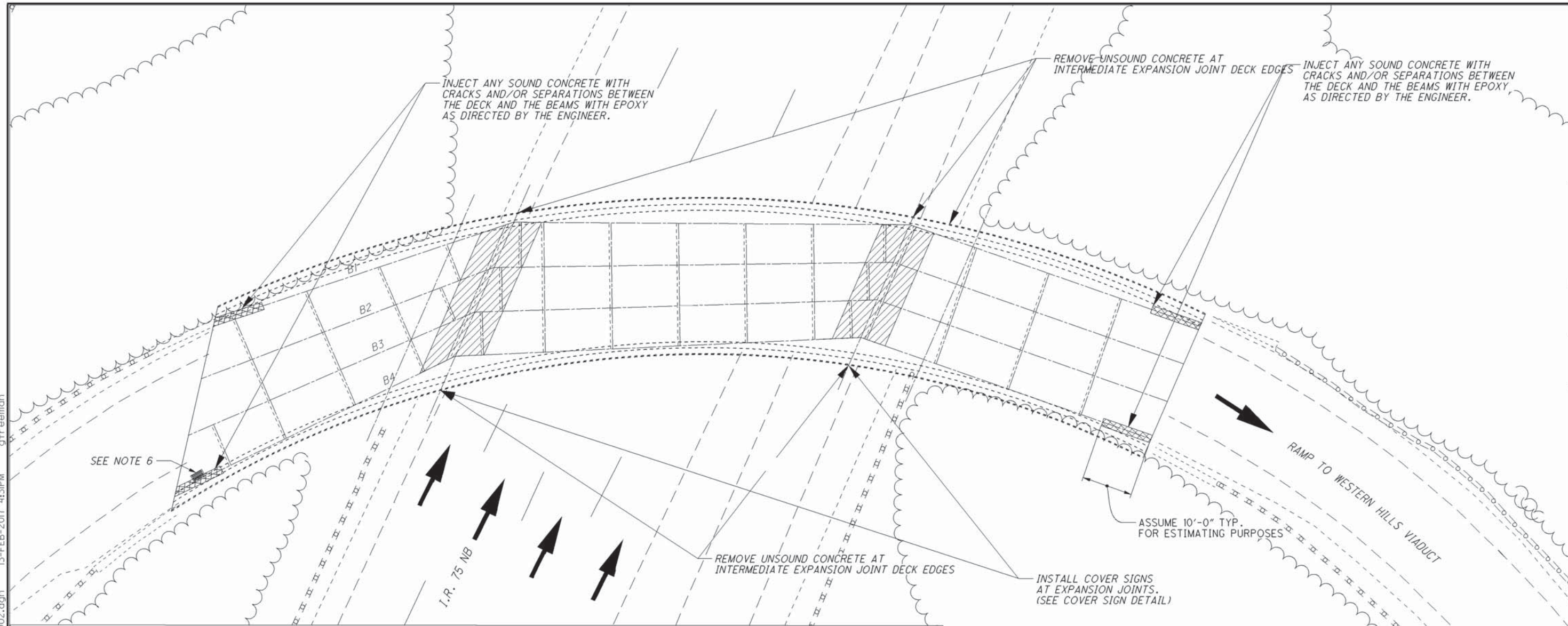


SECTION C-C

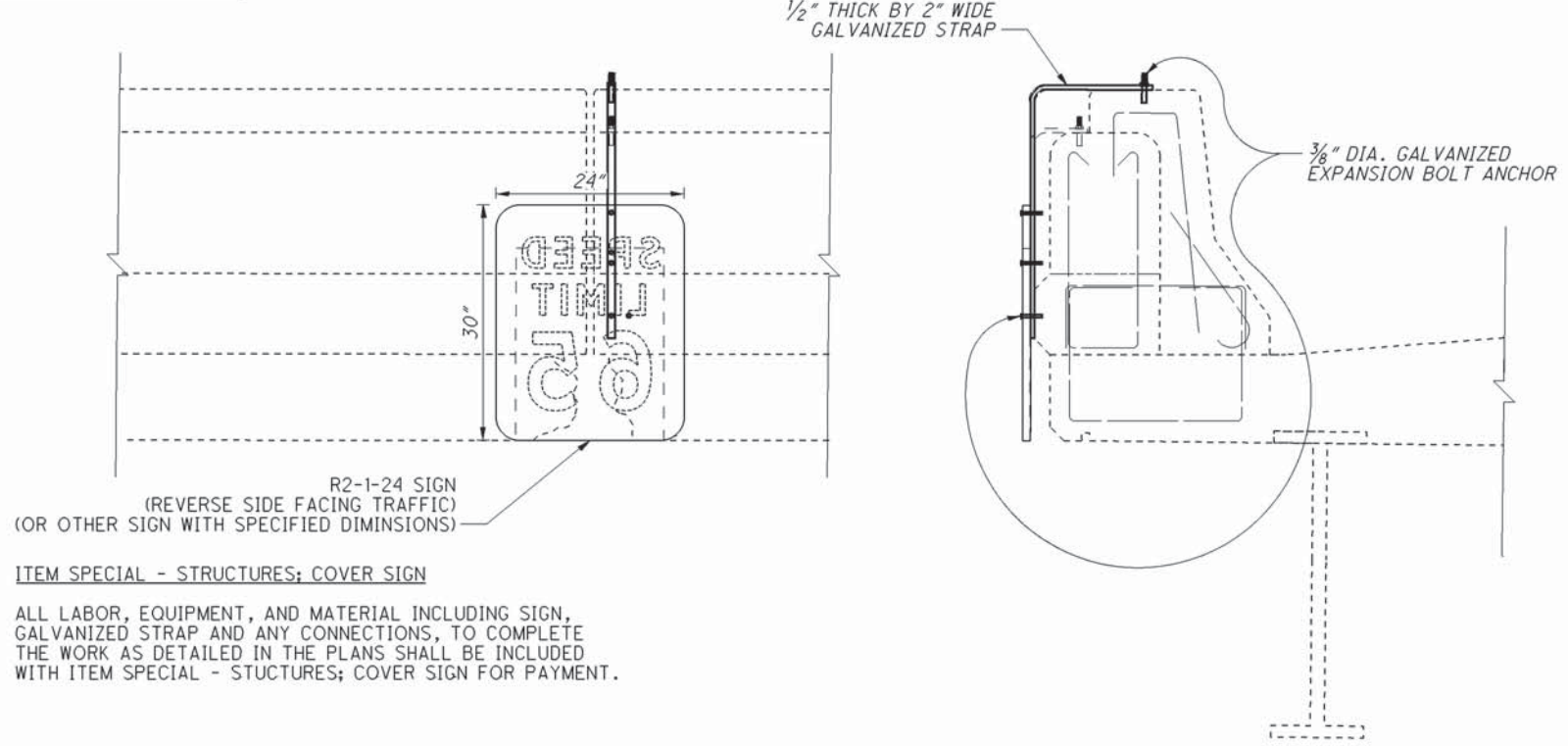
SECTION C-C PROPOSED

NOTE:
SAW CUTTING OF EXISTING
REINFORCING STEEL SHALL
NOT BE PERMITTED

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COVER SIGN DETAIL

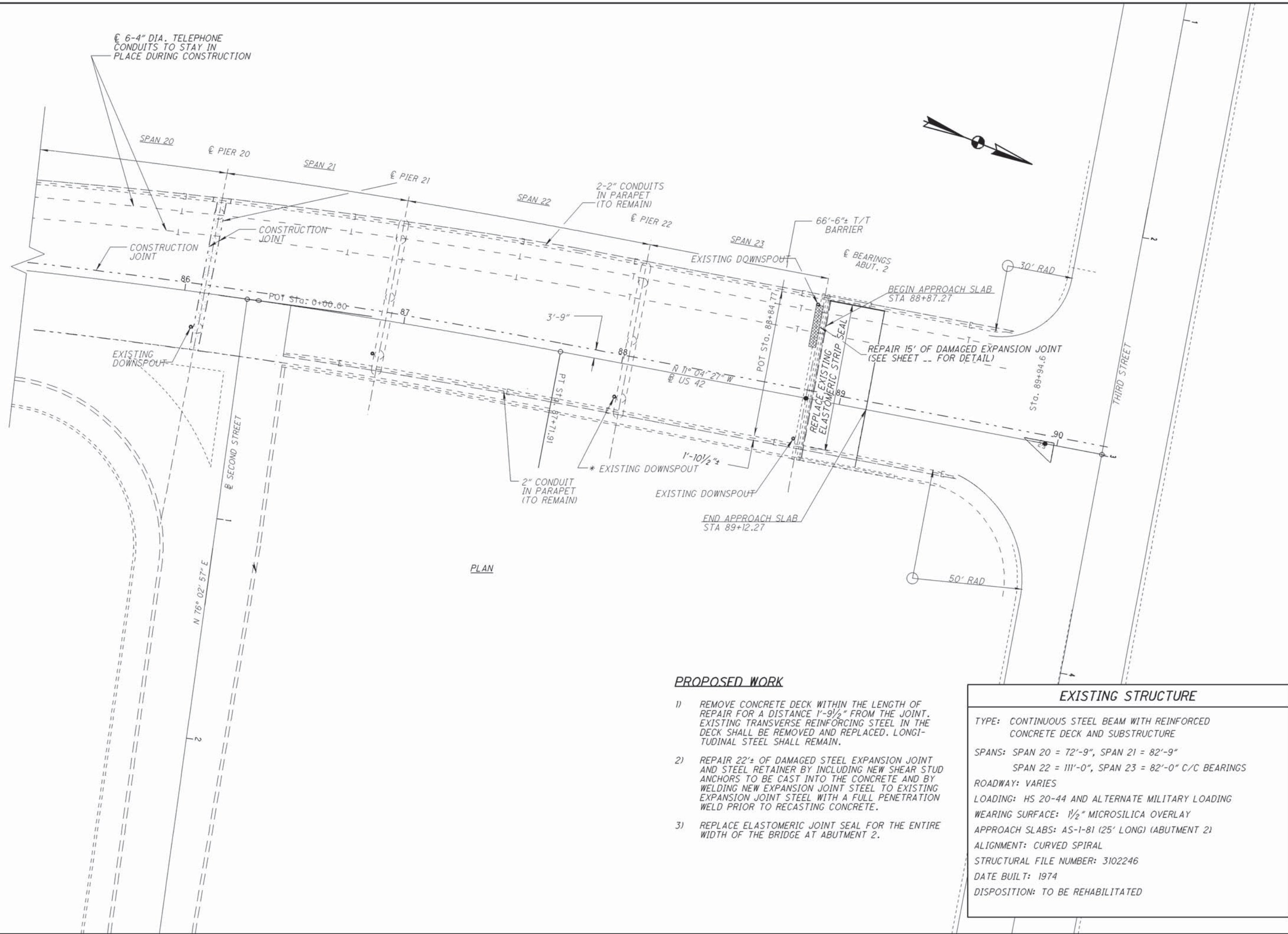


PROPOSED WORK

- 1) REMOVE UNSOUND CONCRETE AT DECK EDGES OVER THE ROADWAY AND WALK.
- 2) SEAL AREA OF REMOVED CONCRETE WITH A GREY CONCRETE SEALER (FED. COLOR 16515). EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED PRIOR TO SEALING.
- 3) INJECT ANY SOUND CONCRETE WITH CRACKS AND/OR SEPARATIONS BETWEEN THE DECK AND THE BEAMS WITH EPOXY AS DIRECTED BY THE ENGINEER.
- 4) ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5' OF THE INTERMEDIATE EXPANSION JOINTS. COLOR TO MATCH EXISTING.
- 5) REMOVE AND REPLACE COVER SIGNS AT THE INTERMEDIATE EXPANSION JOINTS ON THE SOUTHERN PARAPET WALL. ATTACH SIGN TO ONE SIDE OF EXPANSION JOINT ONLY.
- 6) REMOVE DEBRIS FROM DRAINAGE INLET.

- ZONE PAINT TO MATCH EXISTING
- EPOXY INJECT CRACKS AND SEPARATIONS IN SOUND CONCRETE

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PLAN

PROPOSED WORK

- 1) REMOVE CONCRETE DECK WITHIN THE LENGTH OF REPAIR FOR A DISTANCE 1'-9 1/2" FROM THE JOINT. EXISTING TRANSVERSE REINFORCING STEEL IN THE DECK SHALL BE REMOVED AND REPLACED. LONGITUDINAL STEEL SHALL REMAIN.
- 2) REPAIR 22'± OF DAMAGED STEEL EXPANSION JOINT AND STEEL RETAINER BY INCLUDING NEW SHEAR STUD ANCHORS TO BE CAST INTO THE CONCRETE AND BY WELDING NEW EXPANSION JOINT STEEL TO EXISTING EXPANSION JOINT STEEL WITH A FULL PENETRATION WELD PRIOR TO RECASTING CONCRETE.
- 3) REPLACE ELASTOMERIC JOINT SEAL FOR THE ENTIRE WIDTH OF THE BRIDGE AT ABUTMENT 2.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: SPAN 20 = 72'-9", SPAN 21 = 82'-9"
 SPAN 22 = 111'-0", SPAN 23 = 82'-0" C/C BEARINGS

ROADWAY: VARIES

LOADING: HS 20-44 AND ALTERNATE MILITARY LOADING

WEARING SURFACE: 1 1/2" MICROSILICA OVERLAY

APPROACH SLABS: AS-1-81 (25' LONG) (ABUTMENT 2)

ALIGNMENT: CURVED SPIRAL

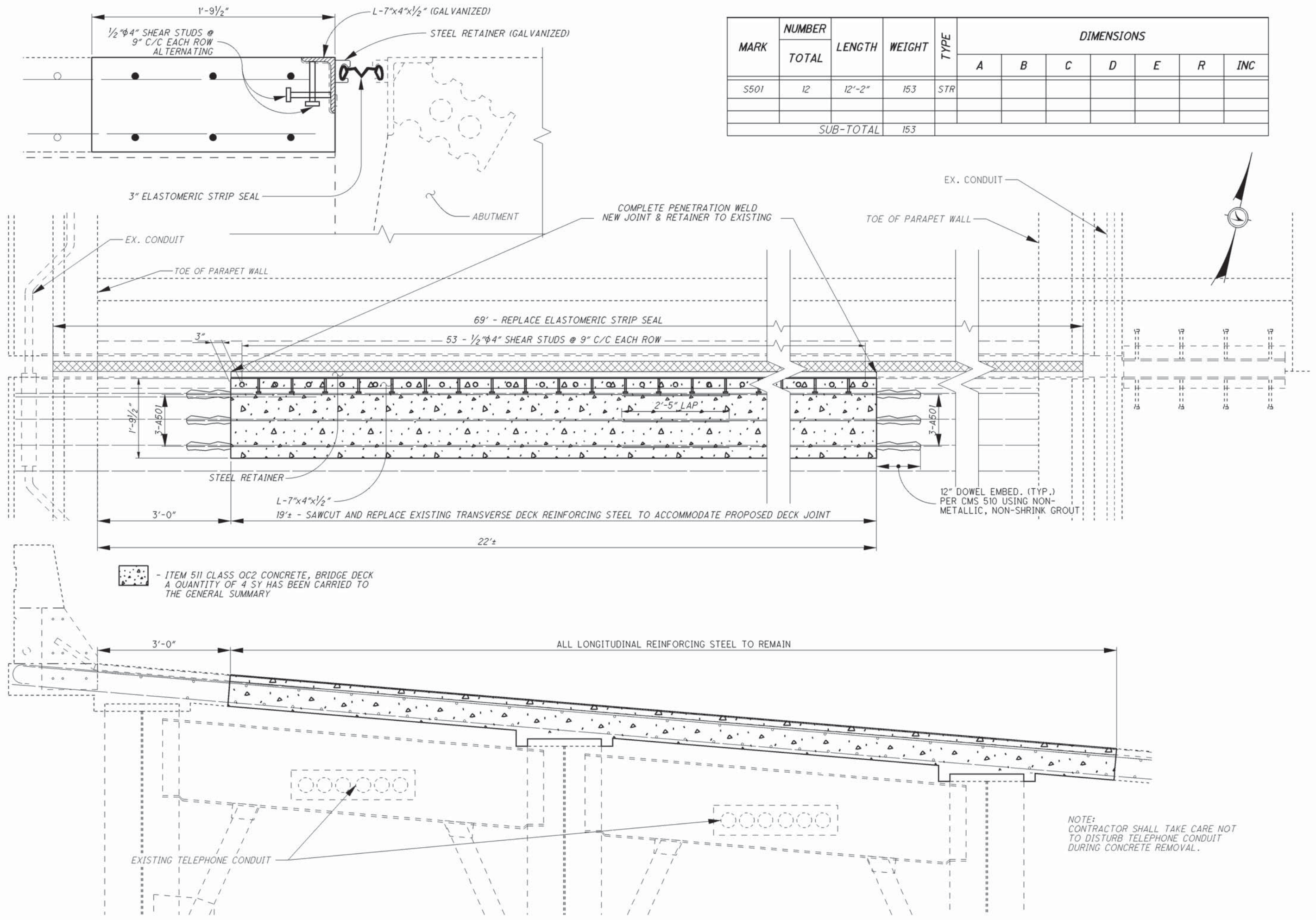
STRUCTURAL FILE NUMBER: 3102246

DATE BUILT: 1974

DISPOSITION: TO BE REHABILITATED

DESIGNED GTF CHECKED CAH	DRAWN GTF REVISED CAH	REVIEWED CAH STRUCTURE FILE NUMBER 3102246	DATE
GENERAL PLAN BRIDGE No.: HAM-42-0000 APPROACH TO CLAY WADE BAILEY BRIDGE			
D08 - BM - FY2017B PID No. 91684		DESIGN AGENCY STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE	
1 / 2		42 / 54	

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MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS							
	TOTAL					A	B	C	D	E	R	INC	
S501	12		12'-2"	153	STR								
SUB-TOTAL				153									

ITEM 511 CLASS QC2 CONCRETE, BRIDGE DECK
A QUANTITY OF 4 SY HAS BEEN CARRIED TO
THE GENERAL SUMMARY

NOTE:
CONTRACTOR SHALL TAKE CARE NOT
TO DISTURB TELEPHONE CONDUIT
DURING CONCRETE REMOVAL.

DESIGN AGENCY: STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 8 - BRIDGE DEPARTMENT

DESIGNED: GTF
CHECKED: CAH

DRAWN: GTF
REVISED:

REVIEWED: CAH
STRUCTURE FILE NUMBER: 3102246

DATE:

EXPANSION JOINT DETAIL
BRIDGE No.: HAM-42-0000
APPROACH TO CLAY WADE BAILEY BRIDGE

D08-BM-FY2017B
PID No. 91684

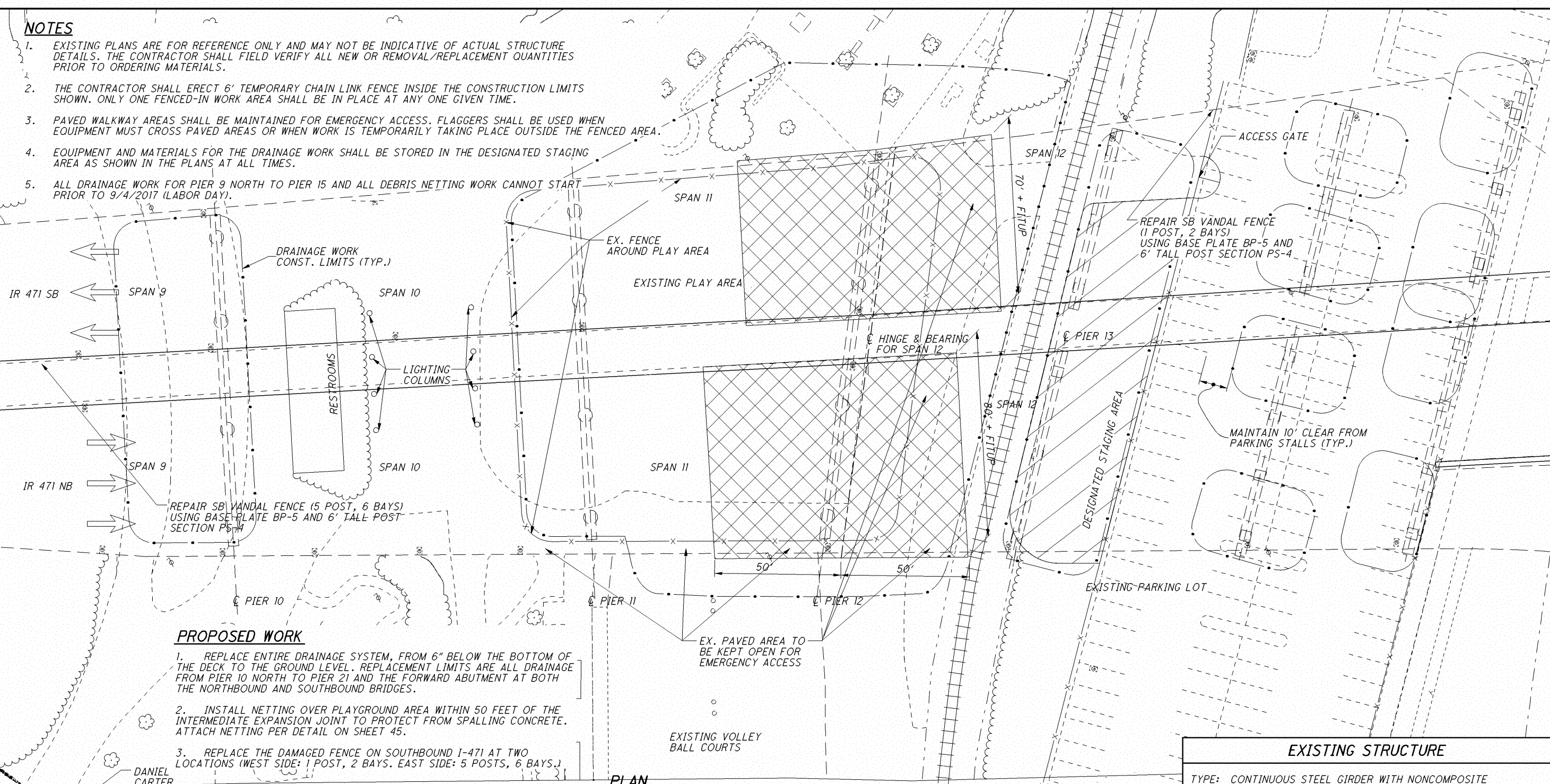
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54

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NOTES

- EXISTING PLANS ARE FOR REFERENCE ONLY AND MAY NOT BE INDICATIVE OF ACTUAL STRUCTURE DETAILS. THE CONTRACTOR SHALL FIELD VERIFY ALL NEW OR REMOVAL/REPLACEMENT QUANTITIES PRIOR TO ORDERING MATERIALS.
- THE CONTRACTOR SHALL ERECT 6' TEMPORARY CHAIN LINK FENCE INSIDE THE CONSTRUCTION LIMITS SHOWN. ONLY ONE FENCED-IN WORK AREA SHALL BE IN PLACE AT ANY ONE GIVEN TIME.
- PAVED WALKWAY AREAS SHALL BE MAINTAINED FOR EMERGENCY ACCESS. FLAGGERS SHALL BE USED WHEN EQUIPMENT MUST CROSS PAVED AREAS OR WHEN WORK IS TEMPORARILY TAKING PLACE OUTSIDE THE FENCED AREA.
- EQUIPMENT AND MATERIALS FOR THE DRAINAGE WORK SHALL BE STORED IN THE DESIGNATED STAGING AREA AS SHOWN IN THE PLANS AT ALL TIMES.
- ALL DRAINAGE WORK FOR PIER 9 NORTH TO PIER 15 AND ALL DEBRIS NETTING WORK CANNOT START PRIOR TO 9/4/2017 (LABOR DAY).



PROPOSED WORK

- REPLACE ENTIRE DRAINAGE SYSTEM, FROM 6" BELOW THE BOTTOM OF THE DECK TO THE GROUND LEVEL. REPLACEMENT LIMITS ARE ALL DRAINAGE FROM PIER 10 NORTH TO PIER 21 AND THE FORWARD ABUTMENT AT BOTH THE NORTHBOUND AND SOUTHBOUND BRIDGES.
- INSTALL NETTING OVER PLAYGROUND AREA WITHIN 50 FEET OF THE INTERMEDIATE EXPANSION JOINT TO PROTECT FROM SPALLING CONCRETE. ATTACH NETTING PER DETAIL ON SHEET 45.
- REPLACE THE DAMAGED FENCE ON SOUTHBOUND I-471 AT TWO LOCATIONS (WEST SIDE: 1 POST, 2 BAYS. EAST SIDE: 5 POSTS, 6 BAYS.)

PLAN

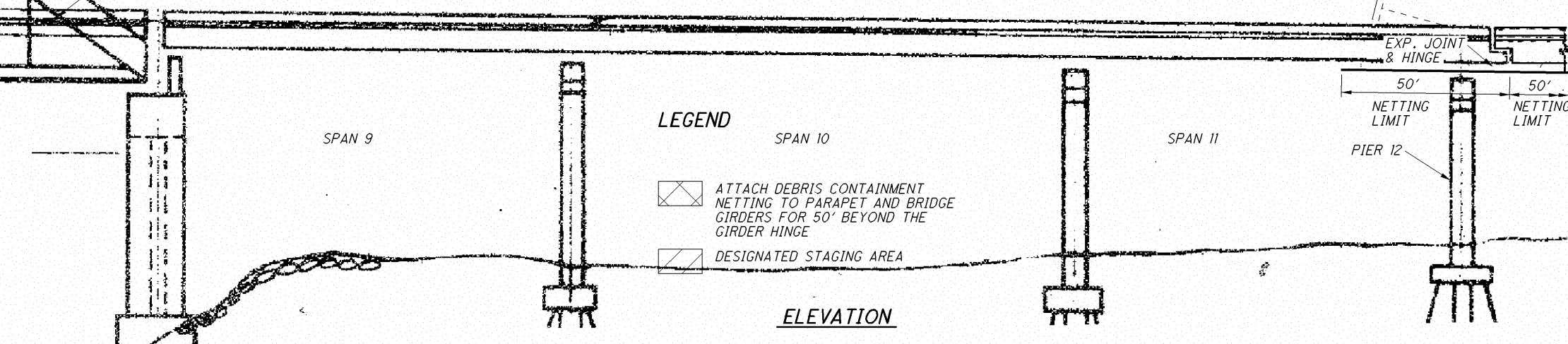
EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL GIRDER WITH NONCOMPOSITE CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE
 SPANS: 57'-3"±, 81'-9"±, 81'-9"±, 57'-3"±, C/C BEARINGS
 ROADWAY: 26'-2" TOE TO TOE PARAPET
 LOADING: HS20-44 & ALT. MILITARY LOADING
 SKEW: 3°-54'-00" LF
 APPROACH SLABS: 25' LONG (AS-1-67)
 ALIGNMENT: TANGENT
 CROWN: NORMAL CROWN
 STRUCTURAL FILE NUMBER: 3117359 (L) / 3117367 (R)
 DATE BUILT: 1976
 DISPOSITION: GOOD
 WEARING SURFACE: 1 3/4"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY
 COORDINATES: LATITUDE 39°-06'-06" N
 LONGITUDE 84°-29'-47" W
 WEARING SURFACE: NEW 2 3/4" MICROSILICA CONCRETE OVERLAY

LEGEND

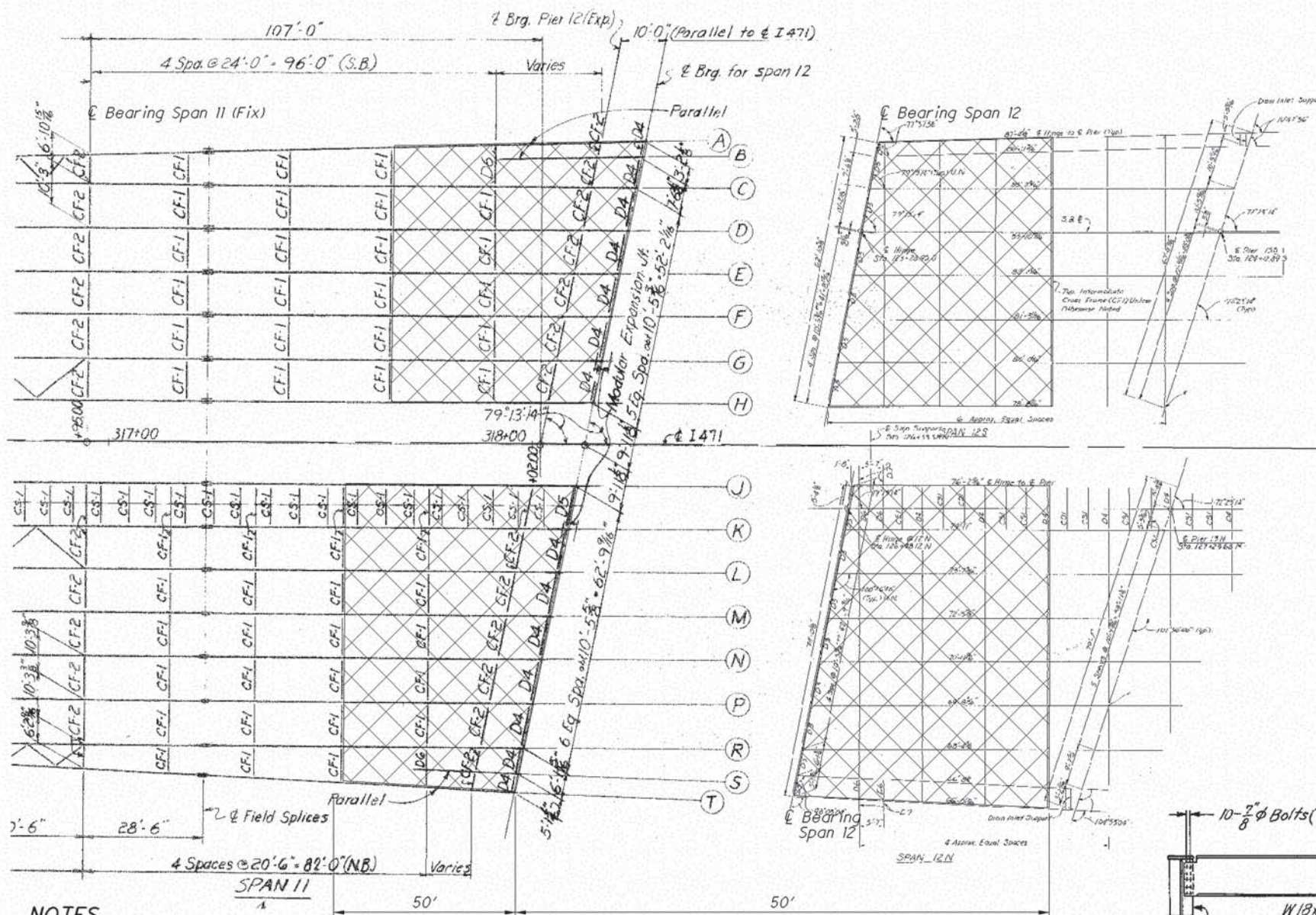
- ATTACH DEBRIS CONTAINMENT NETTING TO PARAPET AND BRIDGE GIRDERS FOR 50' BEYOND THE GIRDER HINGE
- DESIGNATED STAGING AREA

ELEVATION



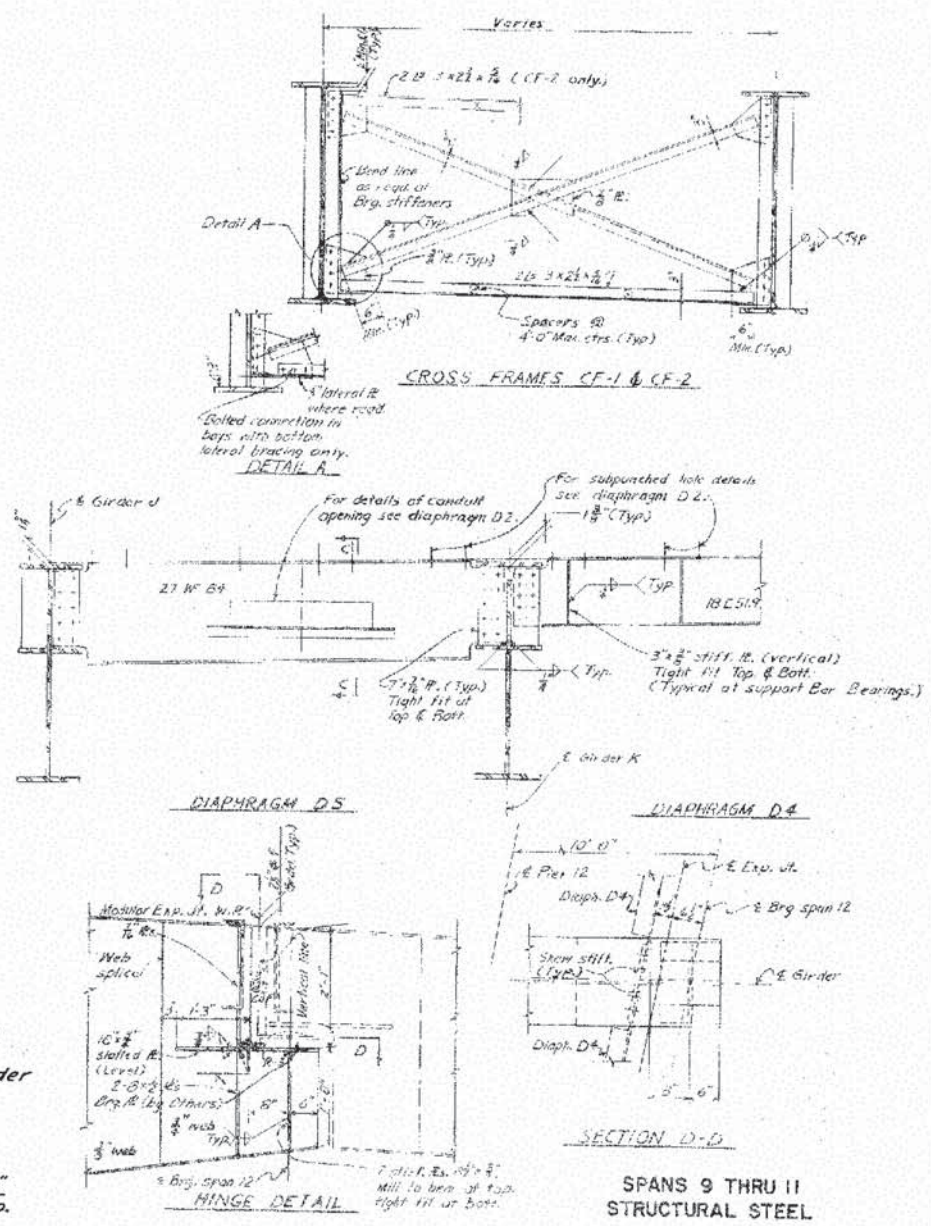
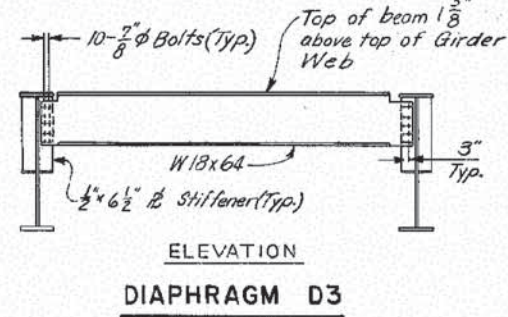
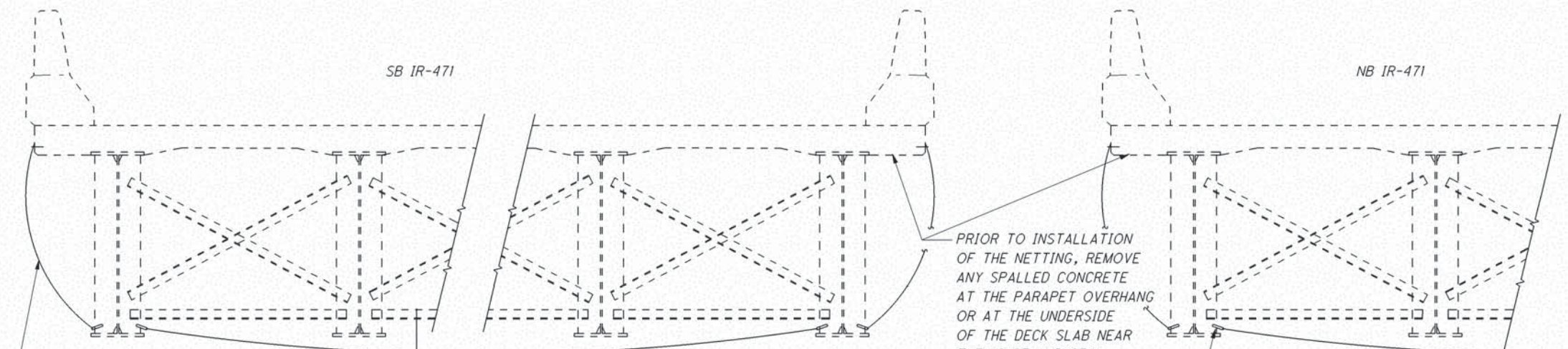
DESIGN AGENCY: STATE OF OHIO
 OHIO DEPT. OF TRANSPORTATION
 DISTRICT 8 - BRIDGE OFFICE
 DATE: _____
 REVIEWED: _____
 STRUCTURE FILE NUMBER: 3117359/3117367
 DRAWN: CAH
 CHECKED: CAH
 REVISIONS: _____
 GENERAL PLAN
 BRIDGE No.: HAM-471-0000/LR
 IR 471 OVER SAWYER POINT AND EAST PETE ROSE WAY
 D08-BM-FY2017B
 PID No. 91684
 1 / 11
 44
 54

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NOTES

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DESIGN AGENCY STATE OF OHIO DPET, OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE	DATE	REVIEWED	DRAWN	DESIGNED
STRUCTURE FILE NUMBER 3117359L/311736TR	CAH	CAH	CAH	CAH
BRIDGE No: HAM-471-0000/LR IR 471 OVER SAWYER POINT	REVISIONS	REVISIONS	REVISIONS	REVISIONS
D08-BM-FY2017B	2 / 11			
PID No. 91684				

ITEM SPECIAL STRUCTURAL DEBRIS NETTING INSTALLATION

THIS WORK SHALL CONSIST OF THE PLACEMENT OF A "STACKED" DEBRIS NETTING SYSTEM TO BE PLACED UNDER SPECIFIED STRUCTURES AND PORTIONS OF STRUCTURES AS SHOWN OR DETAILED ON THE PLAN DRAWINGS. THE STRUCTURAL DEBRIS NETTING SHALL BE INSTALLED ON SPECIFIED STRUCTURES FOR PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC BELOW AND SHALL MEET ALL APPLICABLE GUIDELINES AND FOLLOW MANUFACTURERS SPECIFICATIONS.

THE DEBRIS NETTING SYSTEMS UTILIZED FOR THESE INSTALLATIONS SHALL BE FROM THE FOLLOWING MANUFACTURERS OR AN APPROVED EQUAL:

NETTINGNOW, LLC
885 MAIN STREET, UNIT #445
SOUTH GLASTONBURY, CT 06073
PHONE: 800-481-9534
WWW.NETTINGNOW.COM
CONTACT: HERVE RIVARD

ROC BLOC (N820H WITH WS70BK)
FALLPROOF NETWORK SYSTEMS, INC.
SECOND AVENUE (REAR)
TRENTON, NJ 08619
PHONE: 800-452-0222
WWW.FALLPROOFNETWORKS.COM
CONTACT: GEOFF KLINE

INCORD
226 UPTON RD.
COLCHESTER, CT 06415
PHONE: 800-596-1066
WWW.INCORD.COM
CONTACT: BRIAN HILLERY

NO EXTRA PAYMENT WILL BE MADE FOR REMOVAL OF ANY DELAMINATED CONCRETE. THIS WORK, IF REQUIRED, SHALL BE PERFORMED UNDER A SEPARATE PAY ITEM.

THE COMBINATION OF THE HEAVY DEBRIS NETTING MESH TOGETHER WITH THE LIGHTWEIGHT NETTING OR DEBRIS LINER SPECIFIED SHALL BE CONSIDERED A "SYSTEM". THE "SYSTEM" SHALL BE UTILIZED AS SPECIFIED IN THESE NOTES AND SHALL BE CONSIDERED A UNIT.

THE CONTRACTOR SHALL UTILIZE THE RECOMMENDED MEANS AS SPECIFIED BY THE MANUFACTURER OF THE NETTING TO ATTACH THE "SYSTEM" TO THE STRUCTURE. IT SHALL BE SECURED USING ANCHORS, CABLES, WIRE ROPE CABLE, EYEBOLTS, THIMBLES, TURNBUCKLES, ETC. AND SHALL INCLUDE ALL ASSOCIATED HARDWARE NECESSARY TO SECURELY FASTEN THE "SYSTEM" TO THE BRIDGE. STRUCTURAL NET HARDWARE SHALL BE DROP FORGED, PRESSED OR FORMED STEEL OR MATERIAL OF EQUAL OR BETTER QUALITY. SURFACES SHALL BE SMOOTH AND FREE OF SHARP EDGES. ALL HARDWARE SHALL HAVE A CORROSION RESISTANT FINISH CAPABLE OF WITHSTANDING A FIFTY HOUR SALT SPRAY TEST IN ACCORDANCE WITH ASTM B1117.

SPECIFICATIONS FOR HEAVY DUTY NETTING
STYLE: RASCHEL KNOTLESS MONOFILAMENT FIBER NETTING
FIBER: HIGH TENACITY POLYPROPYLENE (HTPP)
COLOR: BLACK

NAME/DESCRIPTION	TEST DESIGNATION	ACCEPTANCE RANGE
(IF APPLICABLE)		
CORD DIAMETER	3/16"	
MESH SIZE	2 1/2"	
MESH BREAK	ASTM D5034 > 700 LBF	
DYNAMIC DROP TEST	ANSI 10.11350 LB DROPPED	
	34.5 FEET	
LOAD TEST	6000 LB	

ITEM SPECIAL STRUCTURAL DEBRIS NETTING INSTALLATION (CONT'D)

SPECIFICATIONS FOR LIGHT DUTY NETTING OR DEBRIS LINER
STYLE: RASCHEL KNOTLESS MONOFILAMENT FIBER NETTING
FIBER: HIGH TENACITY POLYPROPYLENE (HTPP)
COLOR: BLACK

NAME/DESCRIPTION	TEST DESIGNATION	ACCEPTANCE RANGE
(IF APPLICABLE)		
MESH SIZE		1/8"
BREAKING STRENGTH	ASTM D5034	233 PSI WARP/79 PSI FILL
BURSTING STRENGTH	ASTM D3787	170 PSI
FLAME RETARDANT	NFPA-701 CRITERIA	METHOD 1 MUST PASS

EACH NETTING OR DEBRIS LINER SHALL COVER THE ENTIRE AREA SPECIFIED IN THE PLAN DRAWINGS AND SHALL ALLOW FOR A 12" TO 24" OVERLAP AT BORDERS AND EDGES OF NETS, BEAMS, ARCHES, ETC. IN ORDER FOR PLACEMENT OF "SYSTEM". NETS SHALL BE CAPABLE OF A MINIMUM SERVICE LIFE OF TWO YEARS UNDER NORMAL ON-THE-JOB EXPOSURE TO WEATHER, SUNLIGHT AND HANDLING, EXCLUDING DAMAGE FROM MISUSE, MISHANDLING AND EXPOSURE TO CHEMICALS AND AIRBORNE CONTAMINANTS. GROMMETS SHALL BE STAINLESS STEEL AND SPACED AT 12" ALONG THE SIDES OF THE NETTING PANEL.

EACH STRUCTURAL NET SHALL BE PERMANENTLY LABELED WITH THE FOLLOWING INFORMATION:
1) NAME OF MANUFACTURER
2) IDENTIFICATION OF NET MATERIAL
3) DATE OF MANUFACTURER
4) DATE OF PROTOTYPE TEST
5) NAME OF TESTING AGENCY
6) SERIAL NUMBER

NETTING SYSTEM HARDWARE SHALL CONNECT TO GIRDER STIFFENER PLATES AND CROSS FRAMES. NETTING SYSTEM HARDWARE SHALL NOT CONNECT TO GIRDER WEB OR FLANGES.

ALL WORK VEHICLES AND EQUIPMENT NECESSARY TO ACCESS THE UNDERSIDE OF THE STRUCTURE, OR THE AREAS WHERE THE NETTING IS TO BE PLACED, SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURAL DEBRIS NETTING INSTALLATION. CARE SHALL BE TAKEN WHEN WORKING AROUND TRAFFIC, ACCESS ROADS, PARKS, METROPARK TRAILS, AND ANY AREAS WHERE THE GENERAL PUBLIC MAY HAVE ACCESS TO THE UNDERSIDE OF THE STRUCTURE AND ASSOCIATED RIGHT-OF-WAY. TRAFFIC SHALL BE MAINTAINED ON ALL PARK ROADS, TRAIL PATHS, AND ACCESS ROADS AT ALL TIMES. NO EXTRA PAYMENT WILL BE MADE FOR MAINTAINING TRAFFIC IN THESE AREAS; IT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM SPECIAL STRUCTURAL DEBRIS NETTING INSTALLATION.

PAYMENT FOR THIS ITEM AS DESCRIBED ABOVE SHALL BE MADE UNDER (COMPLETE AND IN PLACE):

ITEM	UNIT	DESCRIPTION
SPECIAL	SF	STRUCTURAL DEBRIS NETTING INSTALLATION

REPLACE DOWNSPOUTS IN KIND

THIS WORK CONSISTS OF REMOVING AND REPLACING THE DRAINAGE DOWNSPOUTS FROM THE BOTTOM OF THE SCUPPER BASIN DOWN TO THE GROUND IN KIND. CONTRACTOR IS TO COORDINATE DRAINAGE REPAIR OPERATIONS TO PREVENT DRAINAGE ONTO TRAFFIC, PARKED VEHICLES, LANDSCAPED AREAS, OR OTHER SIMILAR OCCUPIED AREAS BELOW.

CLEAN DRAINAGE SYSTEM UNDERGROUND TO FIRST MANHOLE AND PERFORM VIDEO INSPECTION OF THE UNDERGROUND SYSTEM TO DETERMINE IT'S CONDITION. IF DETERIORATION IS DISCOVERED, THE CONTRACTOR SHALL ALERT THE PROJECT ENGINEER IMMEDIATELY.

PRIOR TO ORDERING MATERIALS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE/VERIFY QUANTITIES OF REPLACEMENT PIPE, LENGTH OF RUNS, NUMBER AND TYPE OF BENDS, PIPE SUPPORTS, PIPE SIZE AND DIAMETER, ETC. NEEDED IN ORDER TO PROVIDE A COMPLETE INSTALLATION WITH POSITIVE DRAINAGE THAT MATCHES EXISTING CONDITIONS.

ALL DRAINAGE PIPE, DOWN SPOUT AND OTHER MISCELLANEOUS ITEMS REQUIRED TO COMPLETELY REPLACE THE DOWN SPOUT SYSTEM SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS. PIPE SIZE AND DIAMETER SHALL MATCH THE EXISTING PIPE SIZE AND DIAMETER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING ANY NEEDED MAINTENANCE OF TRAFFIC, LIFTS, ETC. REQUIRED TO PERFORM FIELD VERIFICATION PRIOR TO ORDERING MATERIALS AND SUBSEQUENT INSTALLATION. COST FOR THESE ITEMS SHALL BE INCLUDED WITH ITEM 518 - PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE REPLACEMENT OF THE DOWNSPOUTS BY THE NUMBER OF LINEAR FEET OF DOWNSPOUT REMOVED, REPLACED AND ACCEPTED.

PAYMENT WILL BE MADE FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE FOR:

ITEM	EXTENSION	UNIT	DESCRIPTION
202	11201	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
518	51201	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN

ITEM 530 - STRUCTURE, MISC.: DECK CONCRETE REMOVAL
THIS WORK CONSISTS OF REMOVING ALL LOOSE AND DISINTEGRATED CONCRETE AT THE UNDERSIDE OF DECK AND OUTSIDE OF PARAPETS AS NOTED IN THE PLANS. THE CONTRACTOR IS TO COORDINATE REMOVAL OPERATIONS TO PREVENT DEBRIS FALLING ONTO TRAFFIC, PARKED VEHICLES, LANDSCAPED AREAS, OR OTHER OCCUPIED AREAS BELOW.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE REMOVAL OF THE UNDERSIDE OF DECK CONCRETE AND OUTSIDE OF PARAPETS BY THE NUMBER OF SQUARE FEET OF CONCRETE REMOVED.

PAYMENT WILL BE MADE FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE FOR:

ITEM	EXTENSION	UNIT	DESCRIPTION
530	00600	SF	SPECIAL - STRUCTURE, MISC.: DECK CONCRETE REMOVAL

ENVIRONMENTAL COMMITMENTS

ACCESS TO SAWYER POINT PARK (AND THE PLAYGROUND) WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.

APPROPRIATE SIGNAGE WILL BE INSTALLED TO ALERT USERS OF CONSTRUCTION ACTIVITIES, IF IN PROXIMITY TO RECREATIONAL FACILITIES OR FEATURES.

EXCEPT AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES, THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT WILL NOT TAKE PLACE OUTSIDE PROPOSED CONSTRUCTION LIMITS, WITHIN PARK BOUNDARIES.

THE CONTRACTOR WILL BE REQUIRED TO CLOSELY COORDINATE THE SCHEDULE WITH ODOT AND CINCINNATI PARK BOARD (PARK BOARD WILL PROVIDE THE APPROPRIATE CONTACT TO LIST IN THE PROJECT PLANS).

INSTALLATION OF THE NETTING OVER THE PLAYGROUND WILL BE PERFORMED AT NIGHT, WHEN THE PARK IS OFFICIALLY CLOSED TO THE PUBLIC, AND USERS WOULD NOT BE PRESENT.

THE CONTRACTOR SHALL CONTACT THE FOLLOWING REGARDING SAWYER POINT PARK FACILITIES:

KELLY CARR
CELL PHONE: (513) 368-0961
OFFICE PHONE: (513) 352-6184
EMAIL ADDRESS: KELLY.CARR@CINCINNATI-OH.GOV

ITEM 518 - STRUCTURE DRAINAGE MISC.: DRAINAGE PIPE VIDEO MONITORING

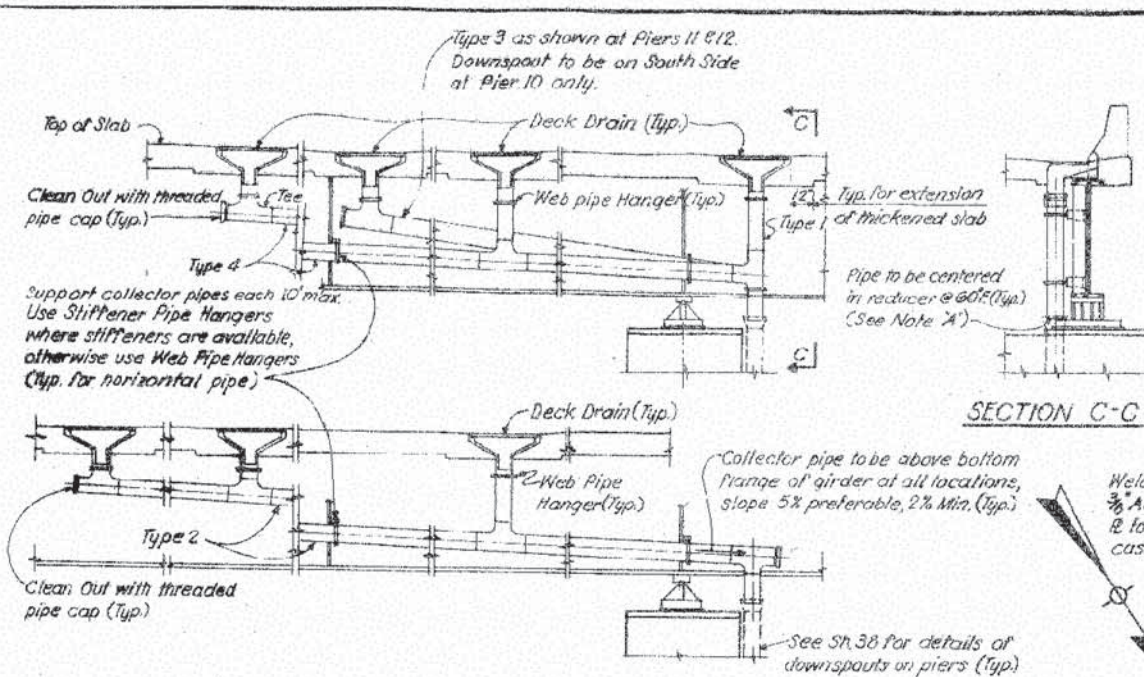
THIS WORK CONSISTS OF PERFORMING VIDEO INSPECTIONS OF THE UNDERGROUND DRAINAGE PIPES TO DETERMINE PIPE CONDITION AND REPLACEMENT NEEDS. THIS WORK SHALL PROCEED AS OUTLINED IN THE DRAINAGE PLANS.

THE CONTRACTOR SHALL COMMENCE THIS WORK WITHIN THIRTY DAYS AFTER OBTAINING A SIGNED CONSTRUCTION CONTRACT AND AUTHORIZATION TO BEGIN CONSTRUCTION. THE ENGINEER SHALL BE ALERTED IMMEDIATELY REGARDING ANY PORTIONS OF THE DRAINAGE PIPE AND/OR STORM SEWER NEEDING REPLACEMENT.

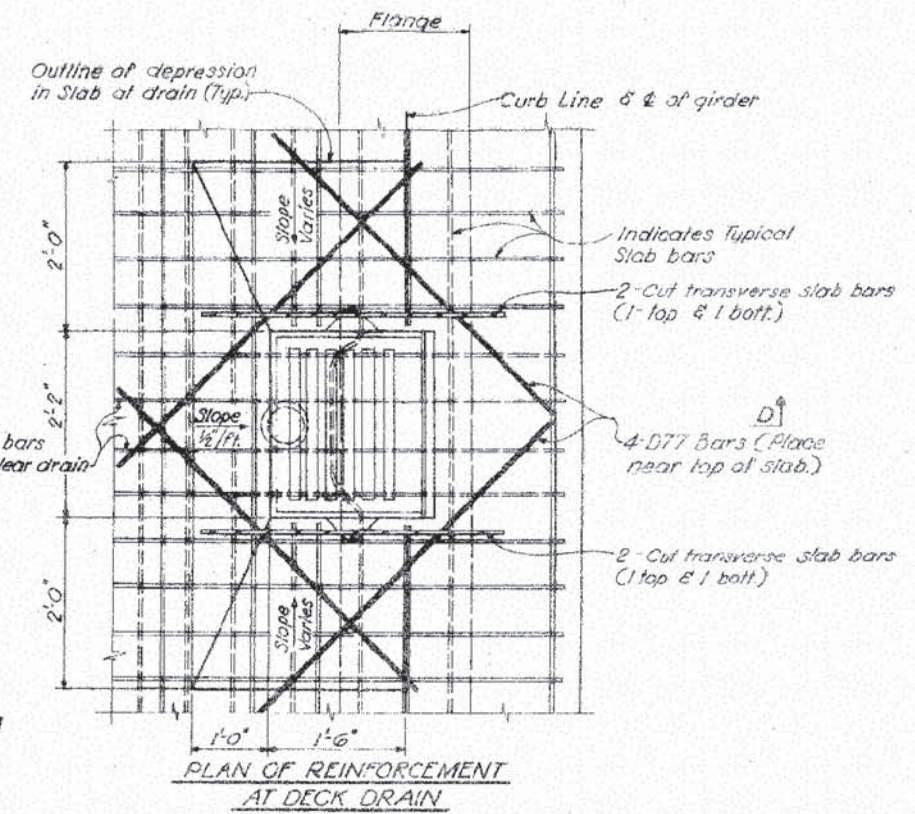
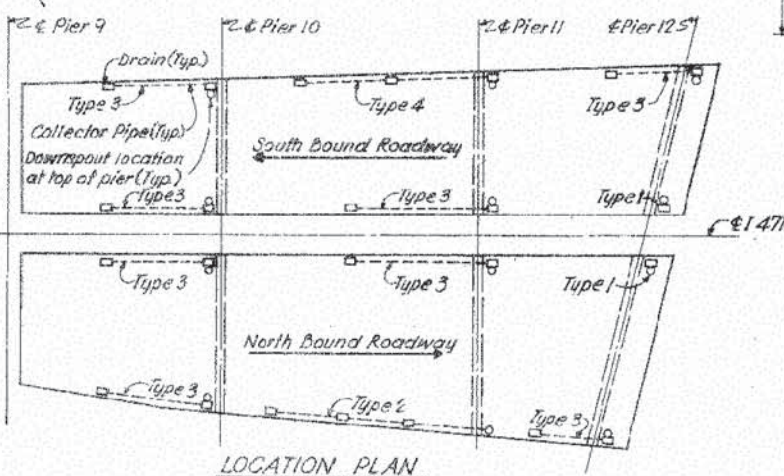
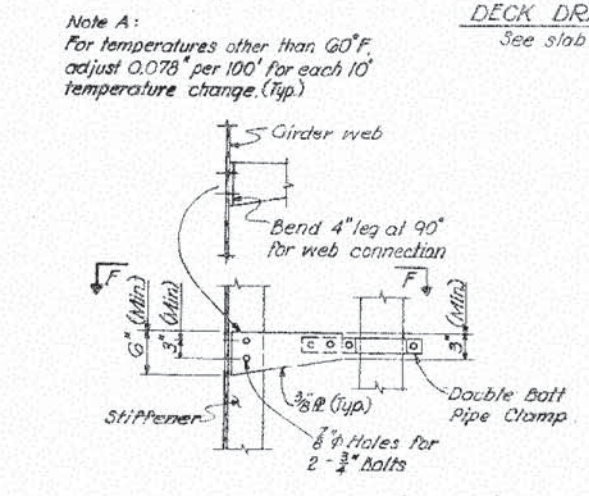
ALL PREPARATION, OPERATION, LABOR AND EQUIPMENT REQUIRED FOR THE DESCRIBED WORK SHALL BE PER ITEM 518-STRUCTURE DRAINAGE, MISC.: DRAINAGE PIPE VIDEO MONITORING.

ITEM	EXTENSION	UNIT	DESCRIPTION
518	63300	LS	STRUCTURE DRAINAGE, MISC.: DRAINAGE PIPE VIDEO MONITORING

DESIGNED	CAH	CHECKED
DRAWN	CAH	REVISED
REVIEWED	DATE	STRUCTURE FILE NUMBER
DESIGN AGENCY	STATE OF OHIO	DEPT. OF TRANSPORTATION
		DISTRICT & BRIDGE DEPT.
DEBRIS CONTAINMENT NOTES		
BRIDGE NO: HAM-471-0000L/R		
I.R. 471 OVER SAWYER POINT		
D08 - BM - FY2017B	PID No. 91684	
3	11	
46		
51		



DECK DRAINAGE COLLECTOR DETAILS
See slab plans for location of deck drains.

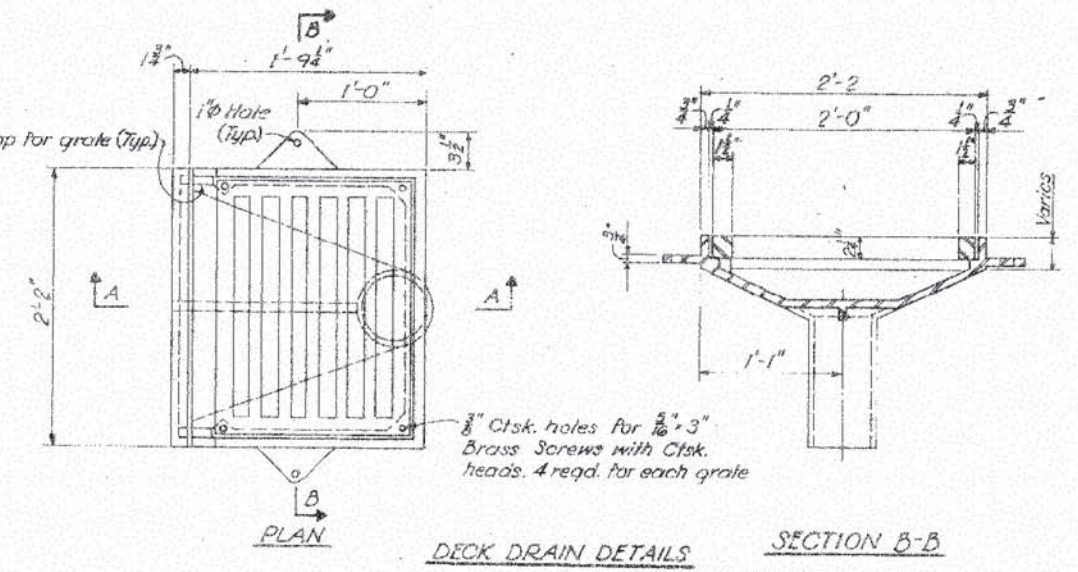
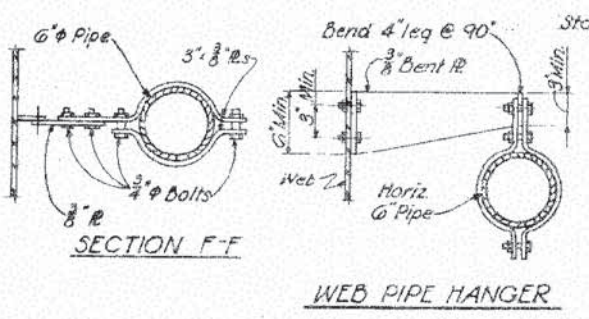


BILL OF REINFORCEMENT

Mark	Type	Size	No. Req'd.	Length Ft.	Length In.
D77	Str.	6	4	5	0

Table indicates the number of bars required for each drain installation. See Bill of Bar Reinforcement for Spans 9-11 for total No. of bars.

Foundry Notes:
Body of Drain Casting shall be Gray Cast Iron, ASTM A48 Class 30A.
Drain Grates shall be Cast Steel, ASTM A27 Grade 70-36.
Fit grate to body and ship in place.
Report of Field Inspection of Castings, current form, shall be submitted to the laboratory of the Division of Materials.
Payment for drain castings will be included in the lump sum price of structural steel.
Painting shall be in accordance with Special Provision No. 80, current edition.
Wall thickness of castings to be 3/4" except down pipe.
Down pipe to have 1/2" wall thickness.



NOTE:
Collector pipes shall be cut and set to clear cross frames when erection of Structural Steel has been completed. See note on Sheet 25 for access hole in diaphragm D6.
For Drain Pipe notes see Sheet 2.

QUANTITIES

ITEM	UNIT	TOTAL
6" Drain Pipe	L.F.	772

SPANS 9 THRU 11
DRAINAGE DETAILS

KENTUCKY DEPARTMENT OF HIGHWAYS
OHIO DEPARTMENT OF HIGHWAYS

PROJECT 1471-4 (S14)
BRIDGE OVER OHIO RIVER ON I 471
CAMPELL COUNTY, KENTUCKY
HAMILTON COUNTY, OHIO

HAZELLE & STIBAL
Consulting Engineers
File No. 809

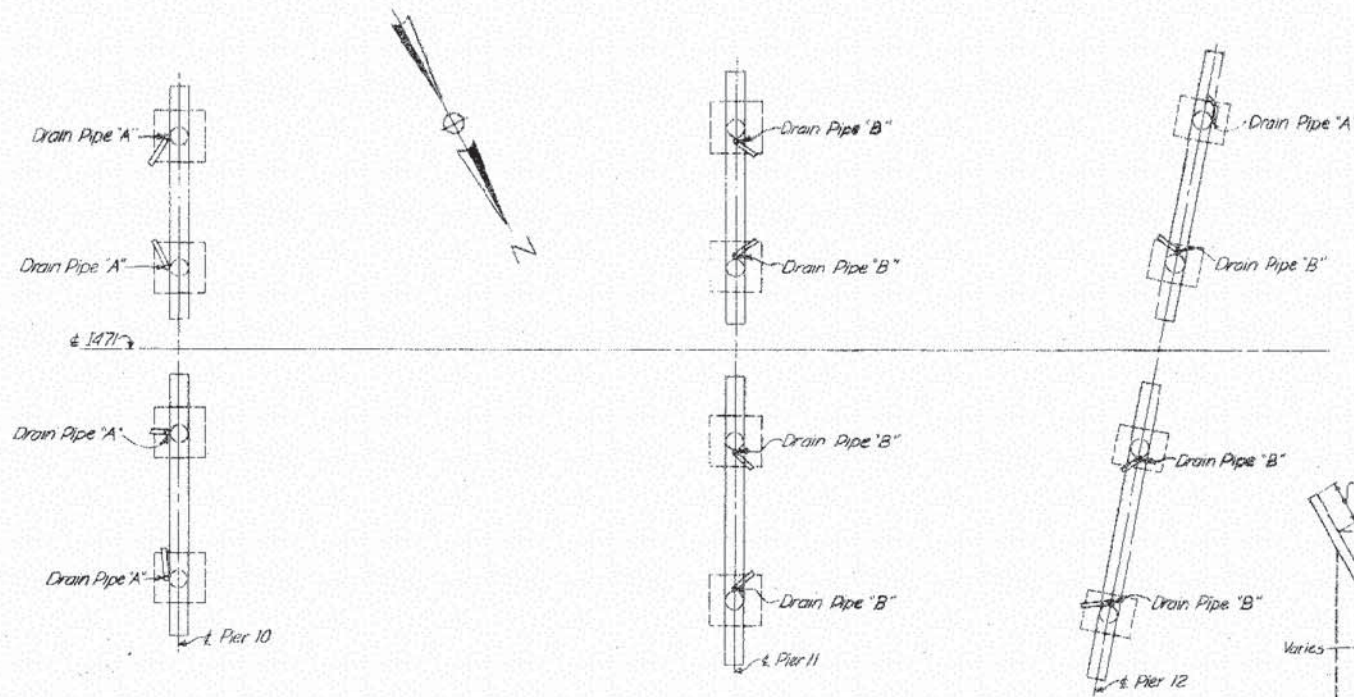
BRIDGE NUMBER

DRAWING NO.
15496

INDEX

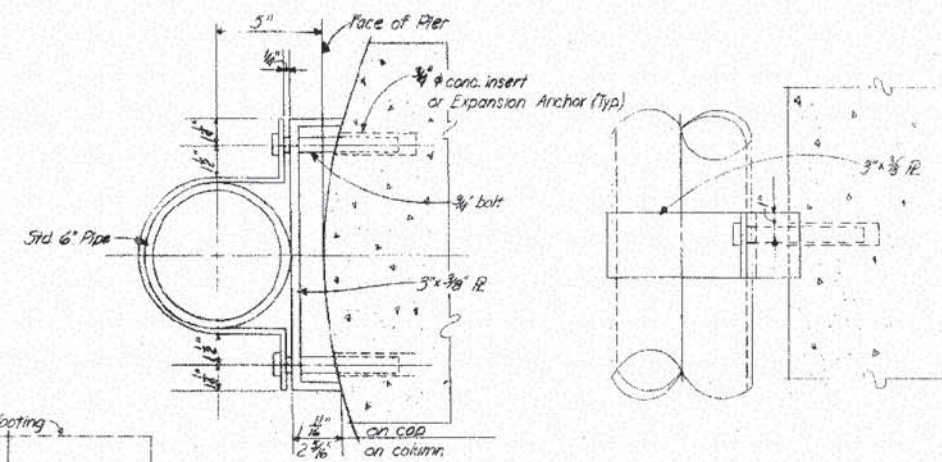
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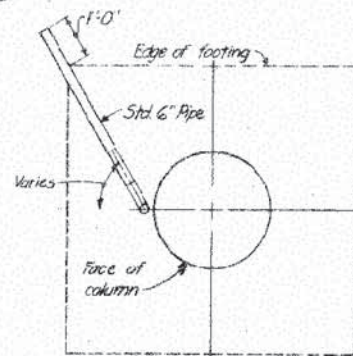


Note: Work this sheet with Sh. No. 99.

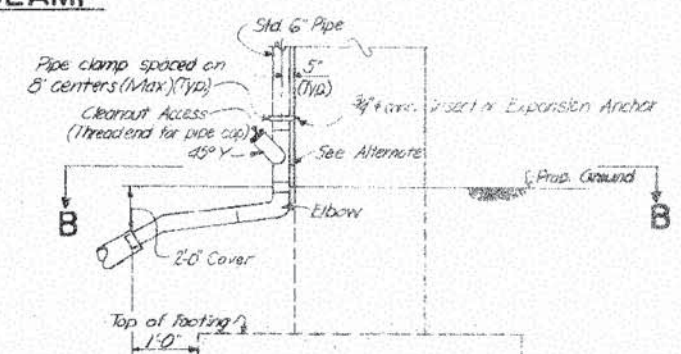
PLAN
(Piling not shown)



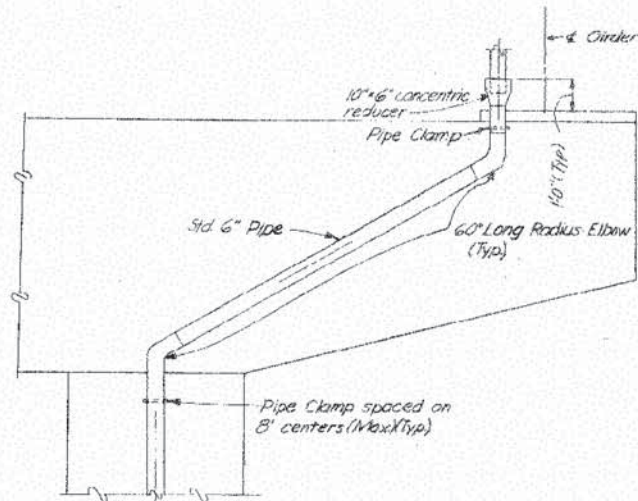
PIPE CLAMP



SECTION B-B

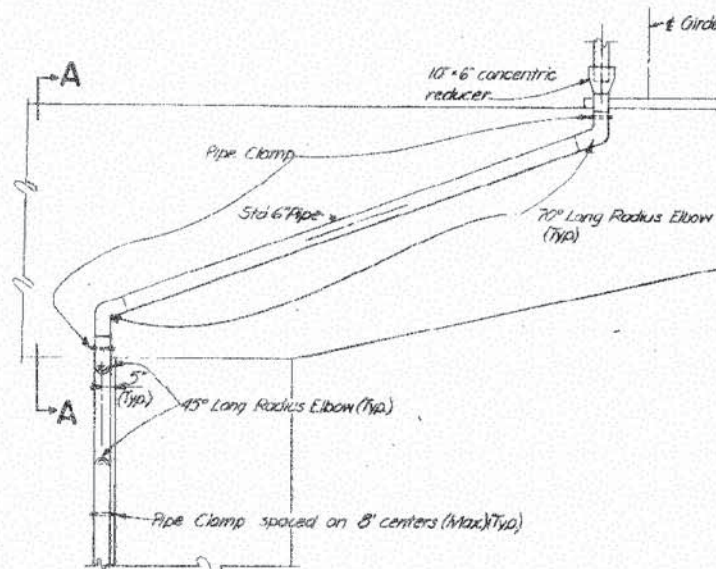


DRAINAGE AT FOOTING



TYPICAL DETAIL OF DOWNSPOUT FOR TYPE "A"

Notes: All anchoring devices for pipe drains shall be so constructed as to be rattle free and secured against rotation or translation.
All pipe shall be supported every 10' maximum horizontally and 8' maximum vertically.
Pipe shall be cut and welded to field dimensions.
All pipe connections shall be leak proof.
For Material Specifications and other notes see General Notes, Sh. No. 2.
Shop drawings are required for drainage details.
Locate all downspouts on columns as shown in Plan.

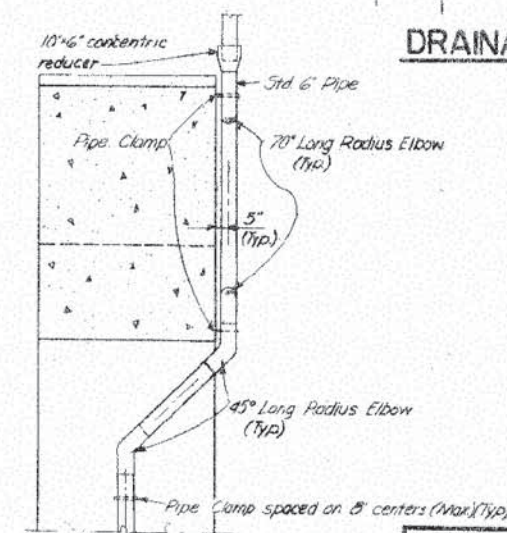


TYPICAL DETAIL OF DOWNSPOUT FOR TYPE "B"

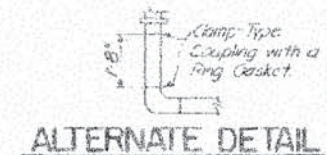
ESTIMATED QUANTITIES
6" Drain Pipe 793 Lin. Ft.

NOTES

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SECTION A-A



ALTERNATE DETAIL

PIERS 10 THRU 12 DOWNSPOUTS

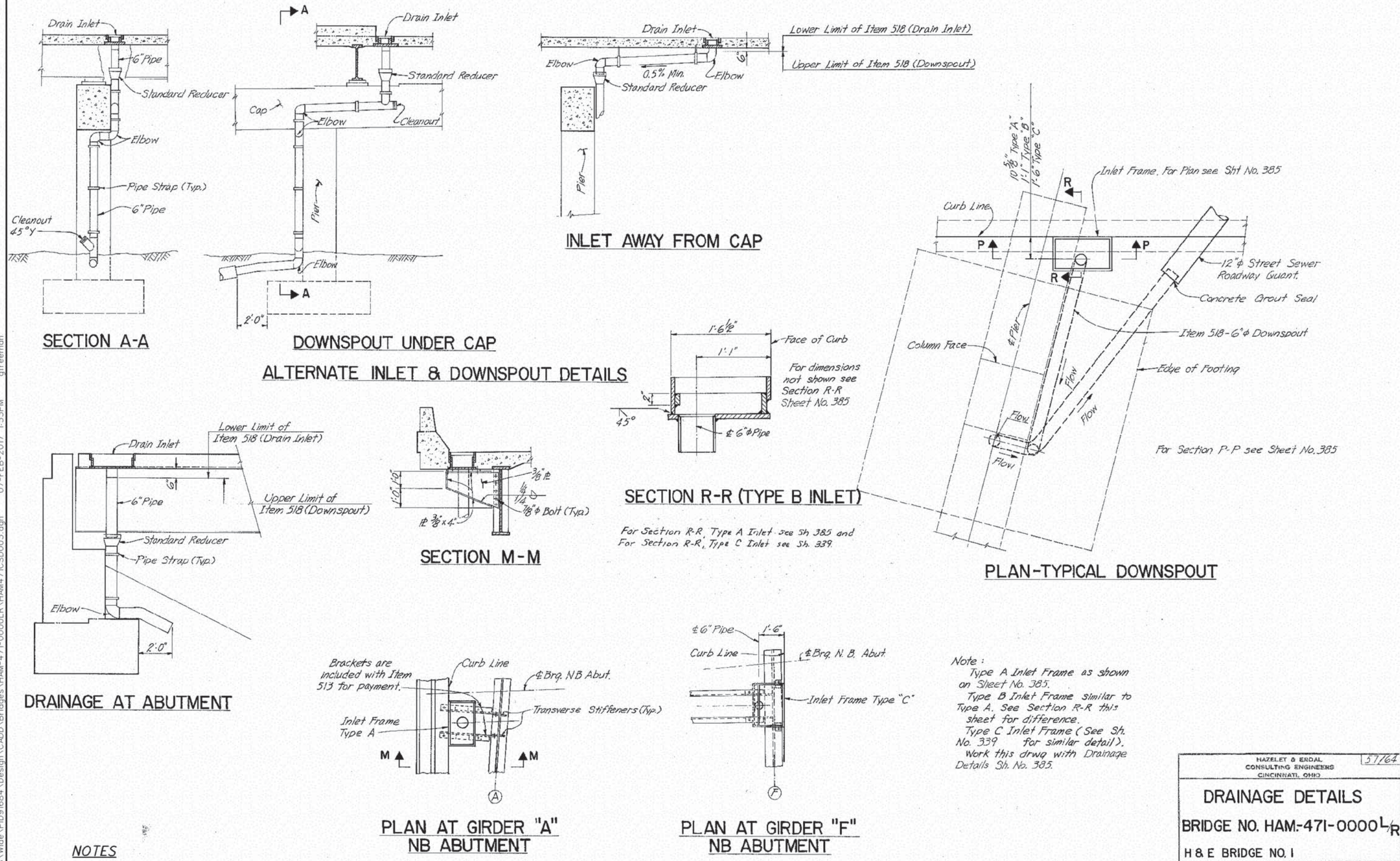
SHEET 52

KENTUCKY DEPARTMENT OF HIGHWAYS
OHIO DEPARTMENT OF HIGHWAYS

PROJECT 1-4714 (B)4
BRIDGE OVER OHIO RIVER ON I-471
CAMPBELL COUNTY, KENTUCKY
HAMILTON COUNTY, OHIO

HAZLET & BIRDA Consulting Engineers File No. 289	BRIDGE NUMBER	DRAWING NO. 18486	INDEX
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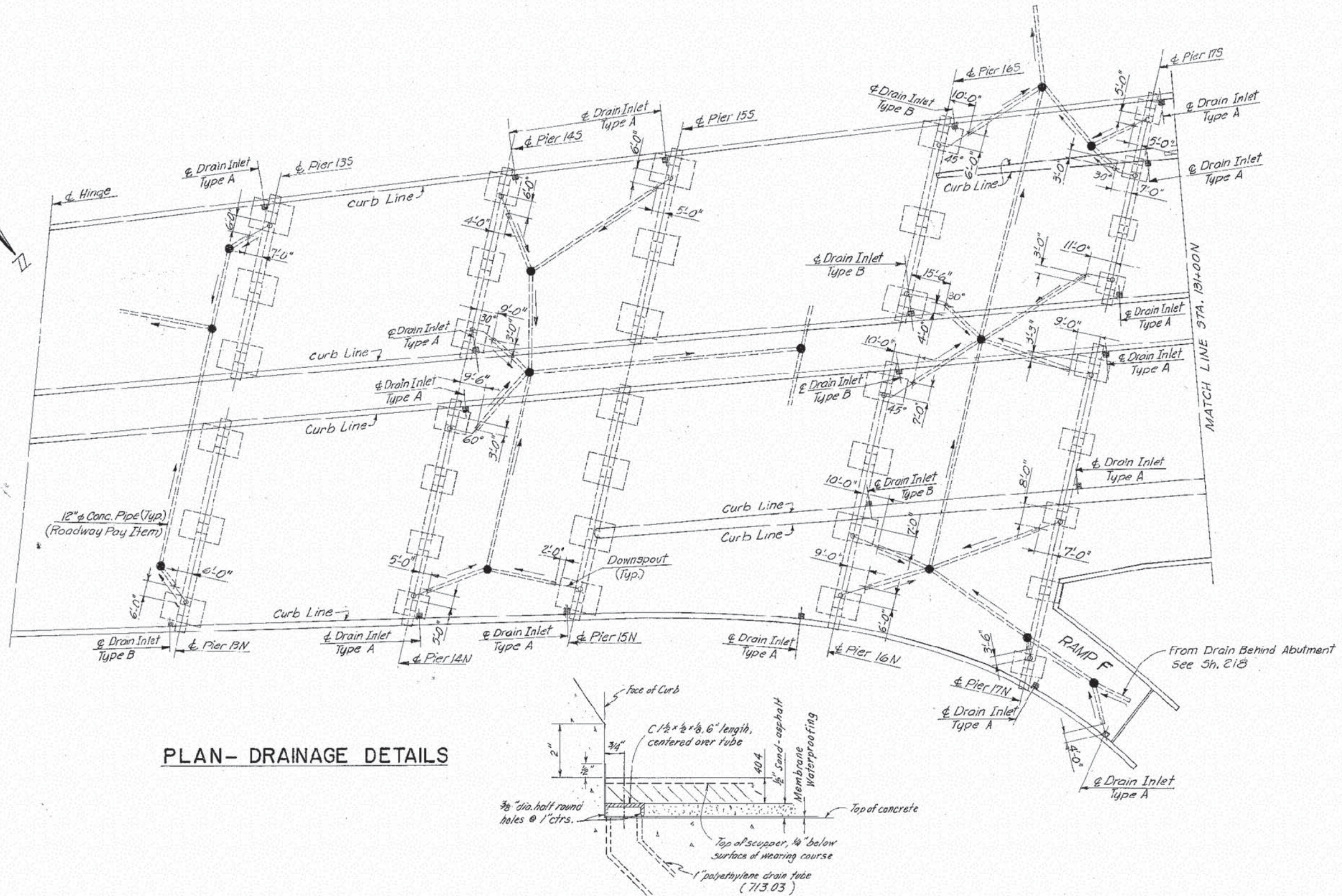
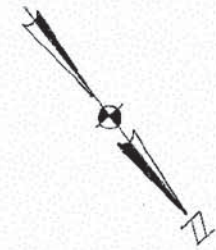


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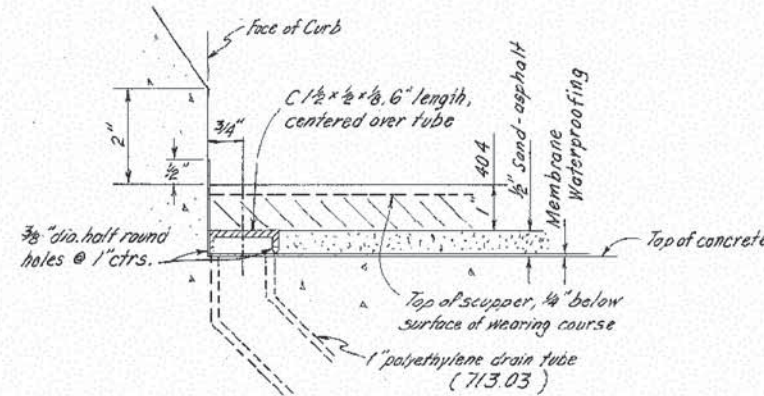
Note:
 Type A Inlet Frame as shown on Sheet No. 385.
 Type B Inlet Frame similar to Type A. See Section R-R this sheet for difference.
 Type C Inlet Frame (See Sh. No. 339 for similar detail).
 Work this drwg with Drainage Details Sh. No. 385.

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO		57/64
DRAINAGE DETAILS		
BRIDGE NO. HAM-471-0000 ^L / _R		
H & E BRIDGE NO. 1		
DESIGNED	DRAWN	TRACED
	ABJ	SL
CHECKED		CRK
REVIEWED DATE	REVISED	
140	10-30-72	

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PLAN- DRAINAGE DETAILS



SUB DRAINAGE and WEARING COURSE DETAILS
 In addition to the location and spacing provisions of 518.07, the polyethylene subdrainage tubes shall be located so that discharge from them will clear all structural members, including crossbracing, conduit support members by at least 6". Place the top of the tube flush with the concrete surface. Place membrane over tube, puncturing if membrane is a sheet type, with the hole sealed around the lip of the tube. Openings in the bottom of the structural tube may be cut in the field, to match drain tube locations.
 Include subdrainage with item 404, Asphalt Concrete, for payment.

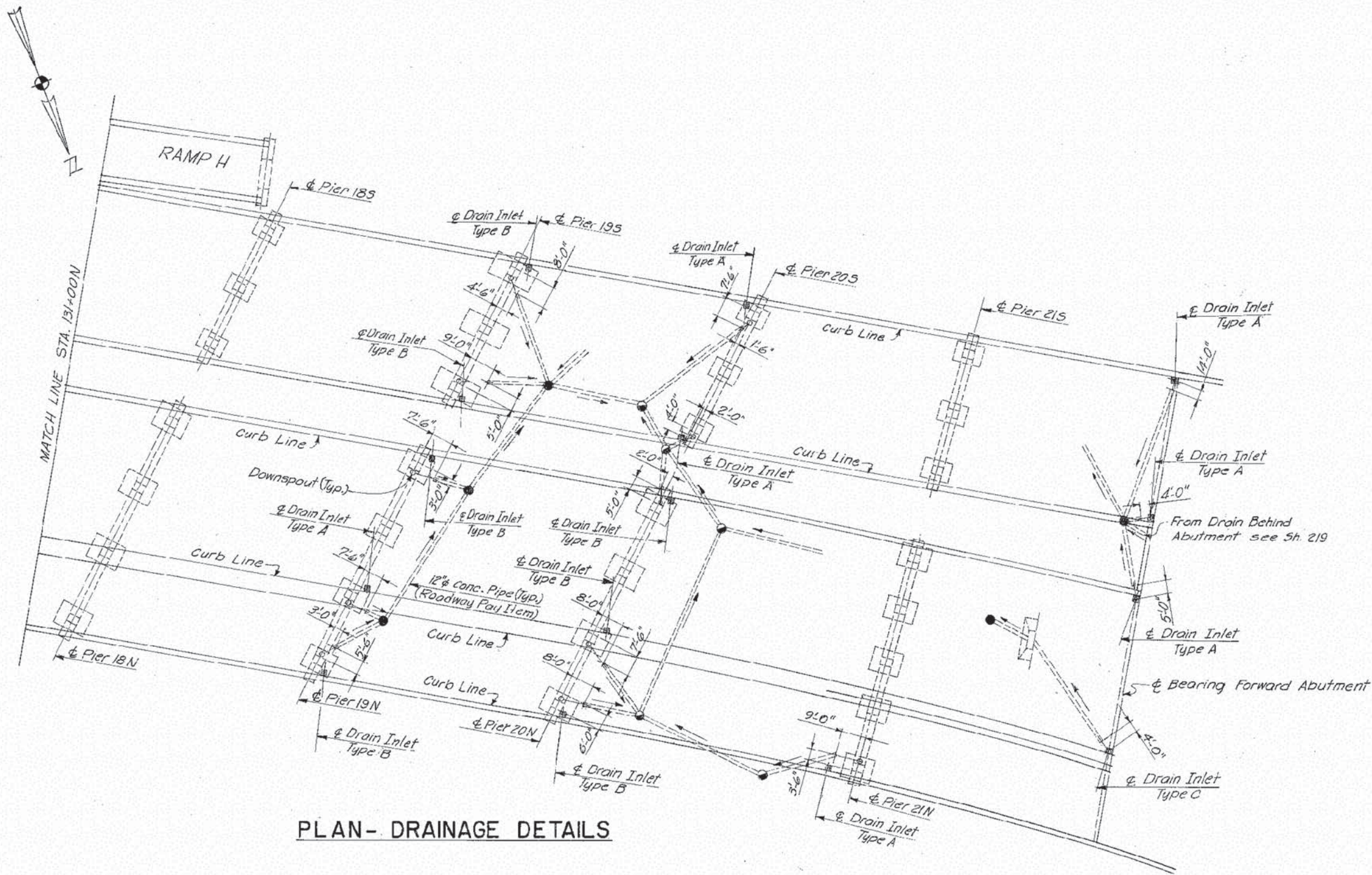
NOTES

1. EXISTING PLANS ARE FOR REFERENCE ONLY AND MAY NOT BE INDICATIVE OF ACTUAL DRAINAGE DETAILS. THE CONTRACTOR SHALL FIELD VERIFY ALL REMOVAL/REPLACEMENT QUANTITIES PRIOR TO ORDERING MATERIALS.

HAZELT & ERCAL CONSULTING ENGINEERS CINCINNATI, OHIO				
58164				
DRAINAGE DETAILS				
BRIDGE NO. HAM-471-0000 ^L / _{TR}				
H & E BRIDGE NO. 1				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
	L.M.H.	V.W.S.	R.B.S.	J.H.G. 10-30-72
				REVISED
				7 / 11

DESIGN AGENCY: STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
 DATE: _____
 REVIEWED: _____
 STRUCTURE FILE NUMBER: 3117359L/311736TR
 DRAWN: CAH
 CHECKED: CAH
 DESIGNED: CAH
 STRUCTURE DRAINAGE DETAILS - SPANS 12 THRU 21
 BRIDGE NO. HAM-471-0000^L/_{TR}
 IR 471 OVER SAWYER POINT
 D08-BM-FY2017B
 PID No. 91684

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PLAN- DRAINAGE DETAILS

NOTES

1. EXISTING PLANS ARE FOR REFERENCE ONLY AND MAY NOT BE INDICATIVE OF ACTUAL DRAINAGE DETAILS. THE CONTRACTOR SHALL FIELD VERIFY ALL REMOVAL/REPLACEMENT QUANTITIES PRIOR TO ORDERING MATERIALS.

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO					159/64
DRAINAGE DETAILS					
BRIDGE NO. HAM-471-0000 ^{L/R}					
H&E BRIDGE NO. 1					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
	LMH	V.W.S.	R.B.S.	J.H.O. 10-30-72	

DESIGNED	C.A.H.	CHECKED	
DRAWN	C.A.H.	REVIEWED	
REVIEWED		DATE	
STRUCTURE FILE NUMBER		3117359L/311736TR	
DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE			

STRUCTURE DRAINAGE DETAILS - SPANS 12 THRU 21
BRIDGE NO. HAM-471-0000^{L/R}
IR 471 OVER SAWYER POINT

D08-BM-FY2017B
PID No. 91684

8 / 11

51
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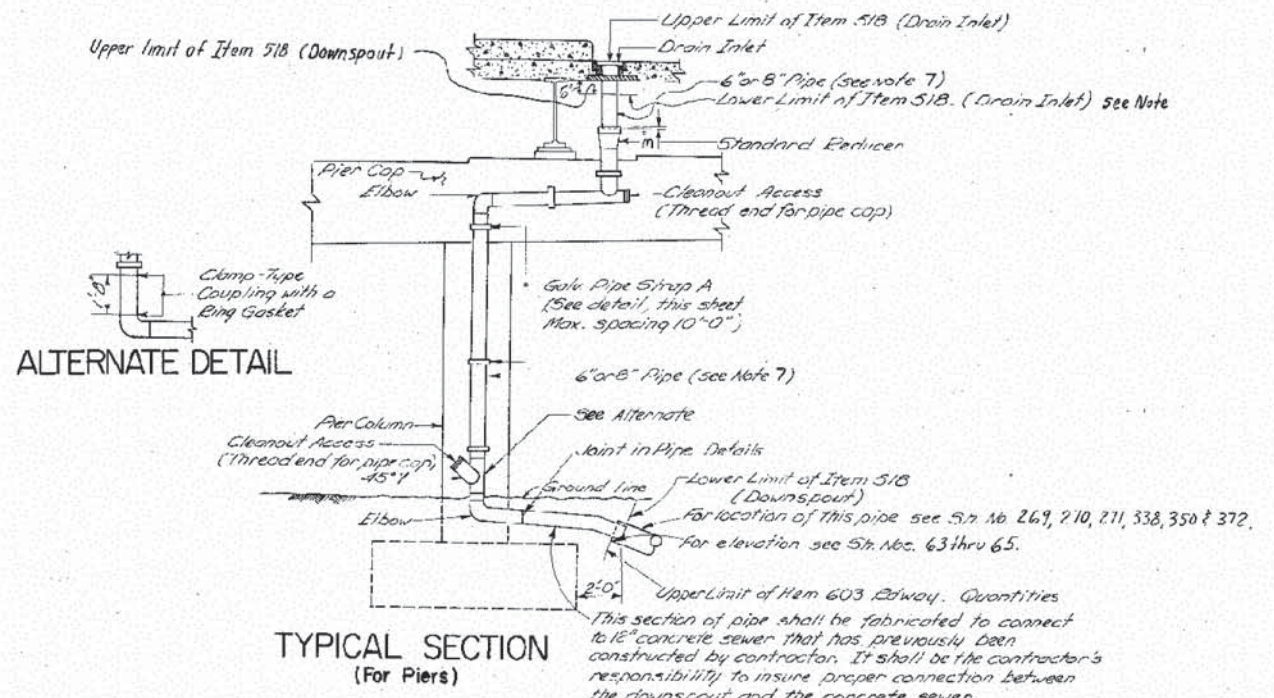
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

385
409

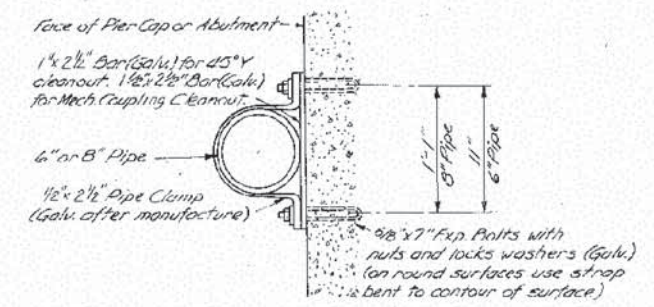
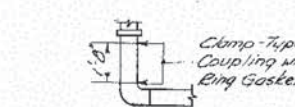
HAMILTON COUNTY
HAM-471-0.08

NOTES

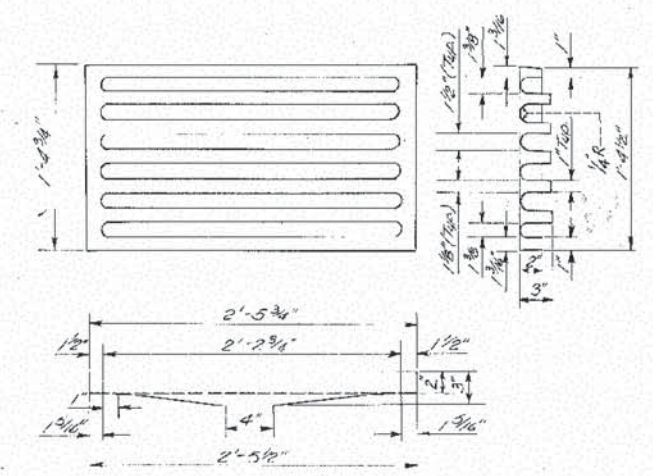
- (1) INLET GRATING CASTINGS SHALL MEET THE REQUIREMENTS OF SEC. 711.12 OF THE MATERIAL SPECIFICATIONS OF THE STATE OF OHIO.
- (2) GRATINGS AND INLETS SHALL BE FITTED TO EACH OTHER WITHOUT RATTLING BY GRINDING GRATING CASTINGS AS NECESSARY.
- (3) INLET FRAME TO BE WELDED STRUCTURAL STEEL PLATES AND STANDARD STEEL PIPE, GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH 711.02.
- (4) WELD CHANNELS TO BEAM WITH 5/16 INCH CONTINUOUS FILLET WELD. WELD TO BEAM WEBS ONLY.
- (5) SPACE LUGS ON INLETS TO PERMIT BOLTING TO SUPPORTING CHANNELS AND BEAMS.
- (6) COPE CHANNELS SO THAT TOP OF CHANNEL IS FLUSH WITH TOP OF FLANGE PLATE.
- (7) DOWNSPOUTS SHALL BE 6" OR 8" (AS INDICATED ON BRIDGE PLANS) STANDARD ALLOY STEEL PIPE, 707.11 OR HOT-DIP GALVANIZED STEEL PIPE. JOINTS SHALL BE MADE BY WELDING OR BY THE USE OF CLAMP-TYPE COUPLING WITH A RING GASKET. ALL WELDING SHALL BE DONE BEFORE GALVANIZING. STRAPS OR CLAMPS FOR ATTACHING DOWNSPOUTS SHALL BE ALLOY STEEL OR HOT-DIP GALVANIZED STEEL ON BOLTS. GALVANIZING AS CALLED FOR IN ASTM A-153 IS ACCEPTABLE.



ALTERNATE DETAIL

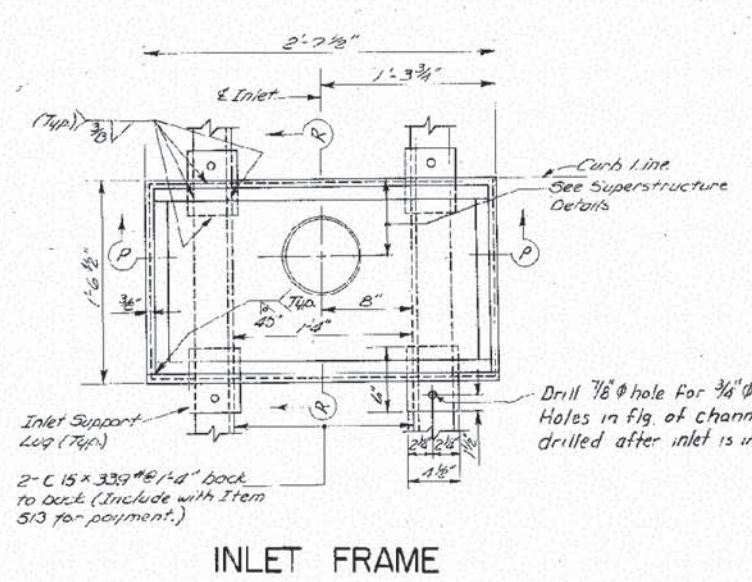


STRAP DETAIL "A"
For mounting on flat surface

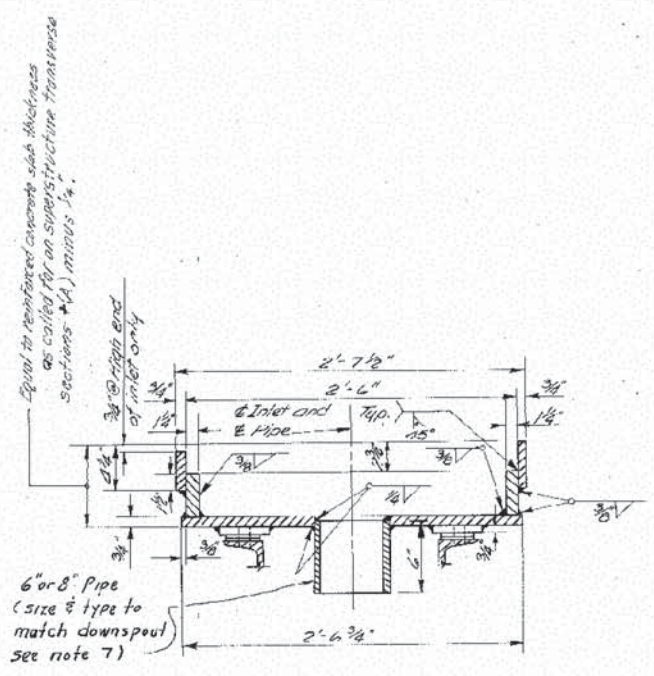


INLET GRATING
(City of Cincinnati Acc. No. 49012)

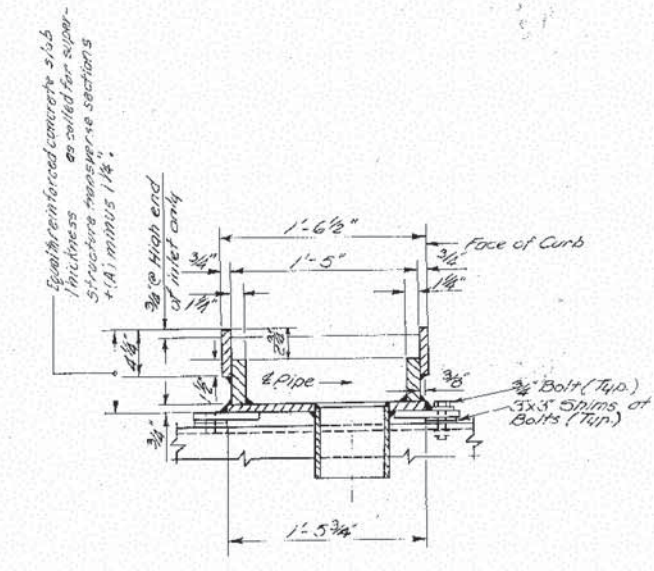
Note: "Drain Inlet" shall include inlet grating, 3/4" bolts, shims, inlet frame, lugs and 6 inches of standard pipe for payment, Item 518, Each.



INLET FRAME



SECTION P-P
A = (Asphalt Concrete thickness - 1/4")



SECTION R-R
A = (Asphalt Concrete thickness - 1/4")

NOTES

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HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
	RJR		JHC	10-19-72	

DESIGN AGENCY: STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE
 DATE: 3/17/76
 REVIEWED: CAH
 DRAWN: CAH
 DESIGNED: CAH
 STRUCTURE FILE NUMBER: 3117359L/3117367R
 STRUCTURE DRAINAGE DETAILS - SPANS 12 THRU 21
 BRIDGE No. HAM-471-0000L/R
 IR 471 OVER SAWYER POINT
 D08-BM-FY2017B
 PID No. 91684

FED. PROJ. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

339
409

HAMILTON COUNTY
HAM-471-008

DESIGN AGENCY
STATE OF OHIO
DEPT. OF TRANSPORTATION
DISTRICT 8 - BRIDGE OFFICE

DATE
REVIEWED
STRUCTURE FILE NUMBER
3117359L/3117367R

DRAWN
CAH
REVISIONS

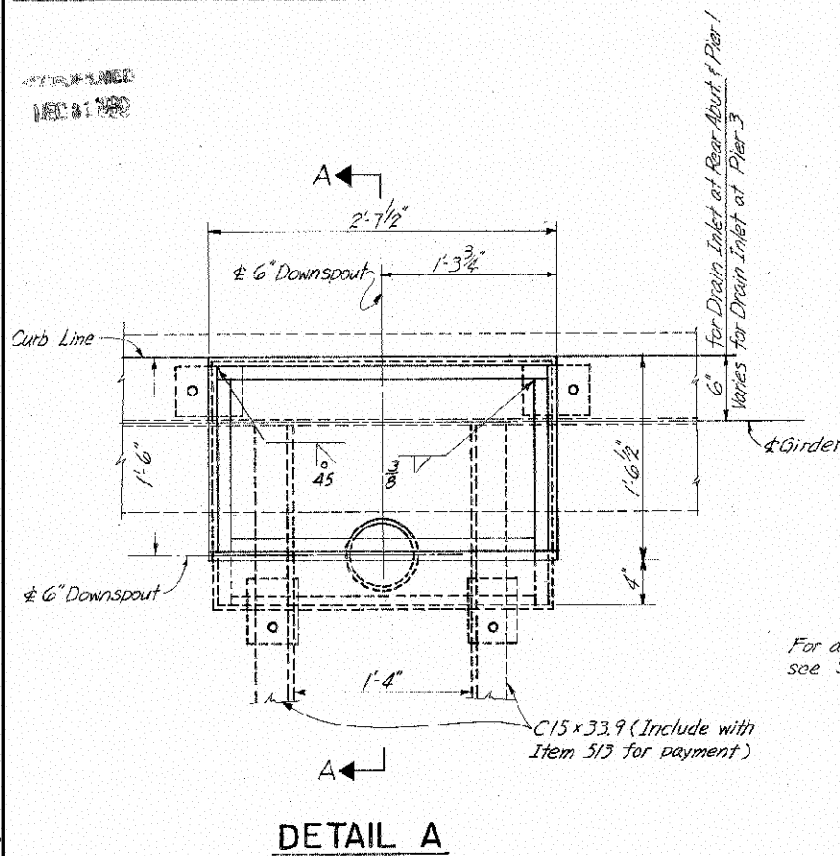
DESIGNED
CAH
CHECKED

STRUCTURE DRAINAGE DETAILS - SPANS 12 THRU 21
BRIDGE No. HAM-471-0000L/R
IR 471 OVER SAWYER POINT

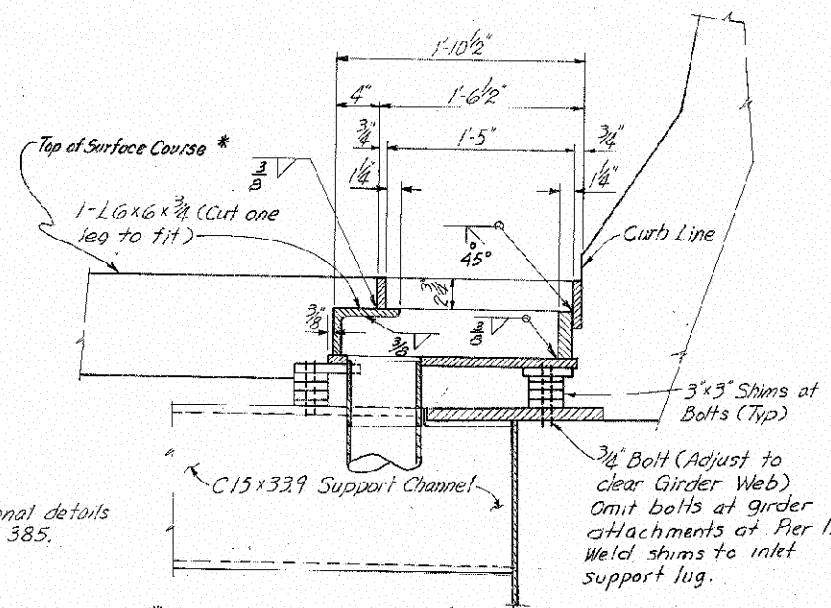
D08-BM-FY2017B
PID No. 91684

10/11

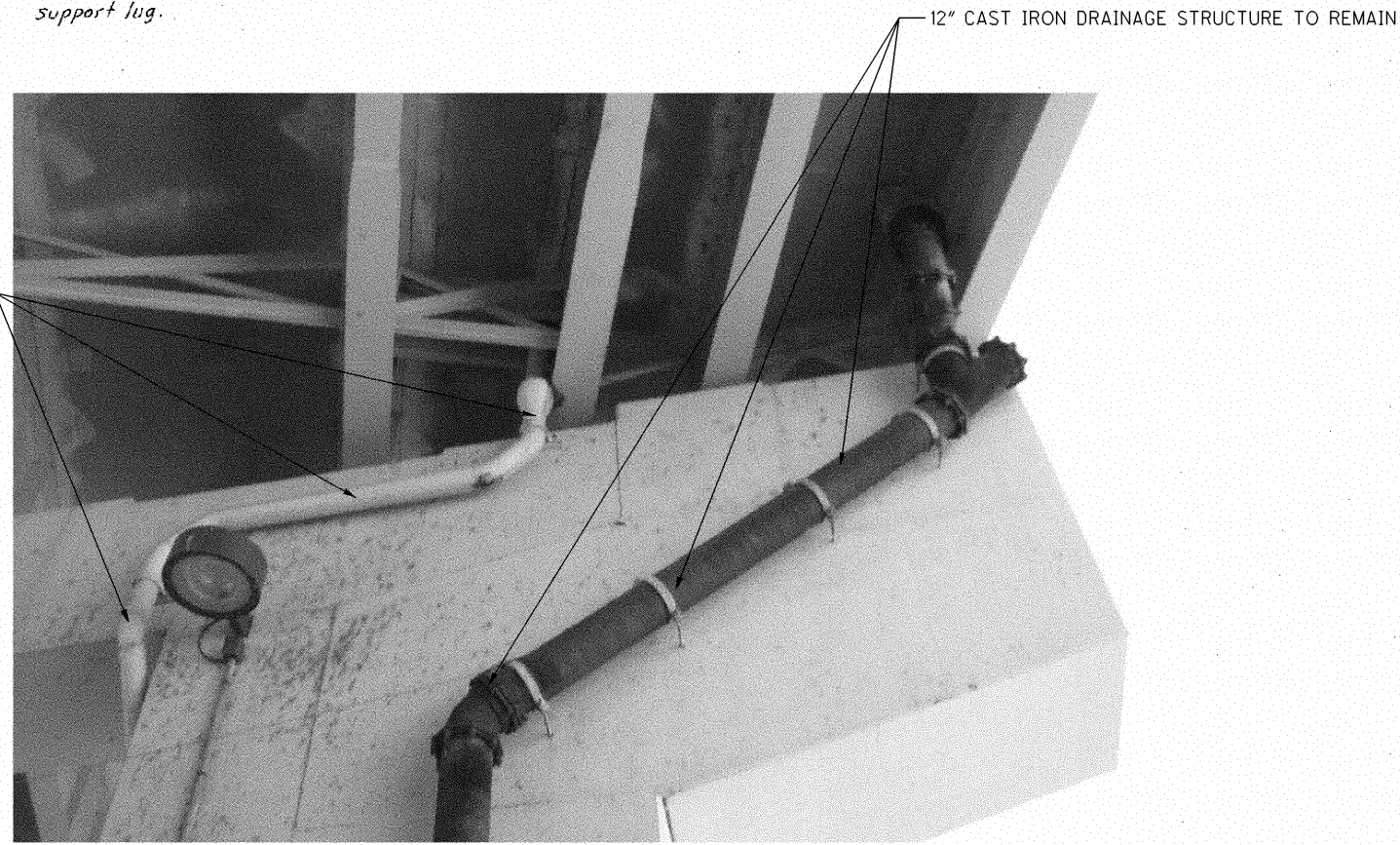
53
54



DETAIL A



SECTION A-A



NOTES

- REFER TO SHEETS 4 THRU 10 FOR DRAINAGE DETAILS AND CONNECTIONS.
- IN ADDITION TO REPLACING THE EXISTING DRAINAGE DOWNSPOUTS AND CONNECTIONS, THE SCUPPER BASINS SHALL BE CLEANED AND FLUSHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE WATER SUPPLY USED DURING THE CLEANING OPERATION AND SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ANY DEBRIS COLLECTED DURING THESE OPERATIONS. ALL WORK NECESSARY TO CLEAN AND FLUSH THE BASINS TO BE INCLUDED WITH ITEM 518 - 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.
- THE UNDERGROUND PORTIONS OF DRAINAGE PIPES SHALL BE CLEANED TO THE NEAREST DRAINAGE INLET. THE PORTIONS THAT ARE TO BE CLEANED BELOW GROUND SHALL ALSO BE INSPECTED USING REMOTE VIDEO INSPECTION EQUIPMENT TO ENSURE THAT THEY ARE INTACT AND FREE OF DEBRIS. THE CONTRACTOR SHALL COORDINATE ALL DRAINAGE REPAIR TO PREVENT ANY DRAINAGE ONTO TRAFFIC, PARKED VEHICLES, LANDSCAPED AREAS, OR OTHER OCCUPIED AREAS BELOW.

PROVIDE A CRAWLER MOUNTED CAMERA AND EQUIPMENT IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 902 CONDUIT INSPECTION EQUIPMENT.

THE CONTRACTOR SHALL CONDUCT A SURVEY OF THE UNDERGROUND PORTIONS OF DRAINAGE PIPES TO THE CLOSEST DRAINAGE INLET. THE CONTRACTOR SHALL DELIVER THREE COPIES OF THE SURVEY IN DIGITAL FORMAT TO THE ENGINEER. ALL DRAINAGE PIPE DEFECTS SHALL BE IDENTIFIED, MEASURED, AND DOCUMENTED. REPLACEMENT OF ANY DAMAGED DRAINAGE PIPES SHALL BE HANDLED BY CHANGE ORDER OF SEPARATE CONTRACT. ALL PREPARATION, INSTALLATION, OPERATION, LABOR AND EQUIPMENT REQUIRED FOR THE DESCRIBED WORK SHALL BE PER ITEM 518-STRUCTURE DRAINAGE, MISC.: DRAINAGE PIPE VIDEO MONITORING.
- ALL DRAINAGE PIPE, DOWN SPOUT AND OTHER MISCELLANEOUS ITEMS REQUIRED TO COMPLETELY REPLACE THE DOWN SPOUT SYSTEM SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING ANY NEEDED MAINTENANCE OF TRAFFIC, LIFTS, ETC. REQUIRED TO PERFORM FIELD VERIFICATION PRIOR TO ORDERING MATERIALS AND SUBSEQUENT INSTALLATION. COST FOR THESE ITEMS SHALL BE INCLUDED WITH ITEM 518 - 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.
- ALL ATTACHMENTS TO STRUCTURAL STEEL SHALL BE BOLTED CONNECTIONS, NOT WELDED AND SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- THE EXISTING 12" CAST IRON DRAINAGE STRUCTURES LOCATED ON THE WESTERN MOST PIERS ARE TO REMAIN. SEE ATTACHED PHOTOGRAPH ON THE RIGHT.

NOTES

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HAZELET & KRAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

36/1/29

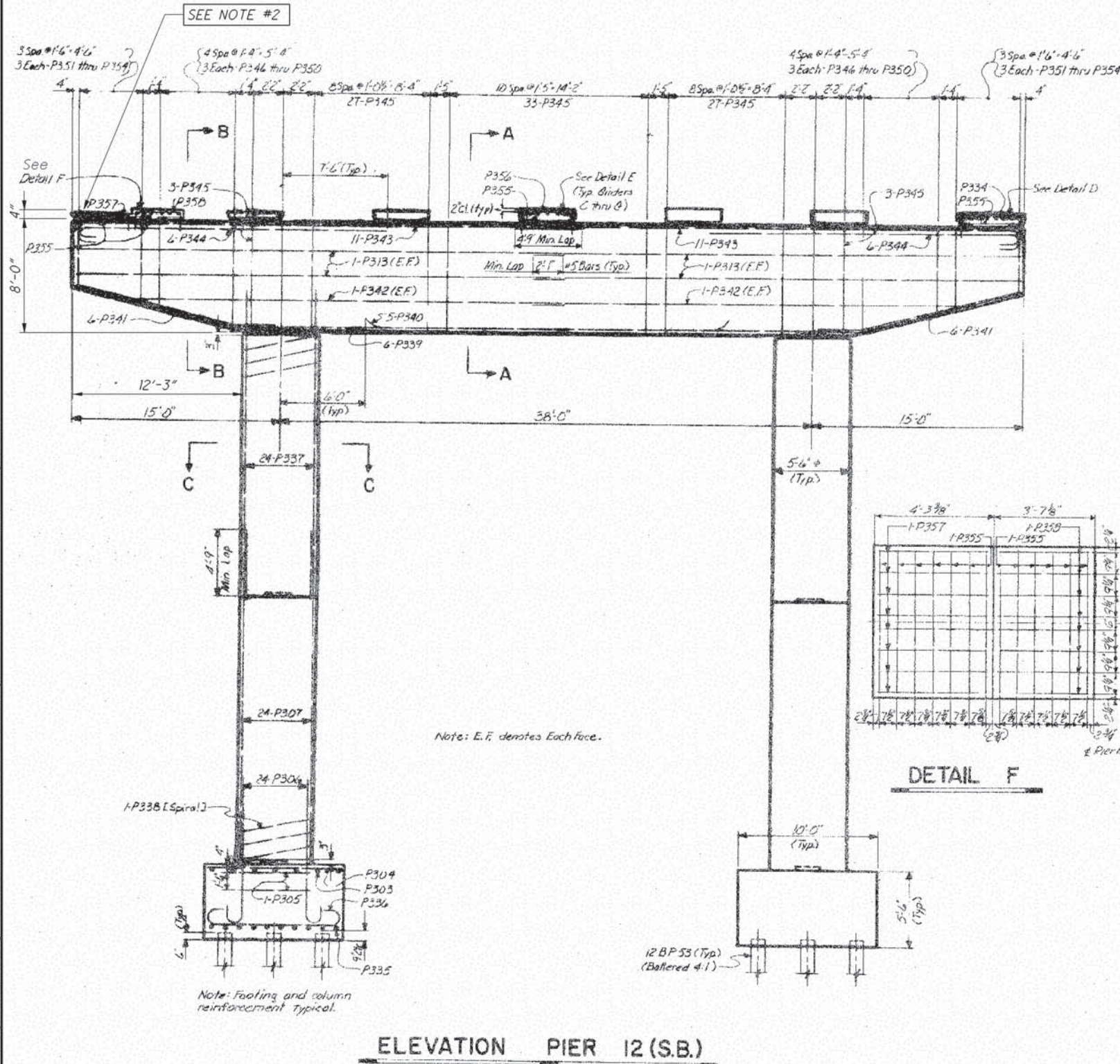
DRAINAGE DETAILS
BRIDGE NO. HAM-471-
RELOCATED SIXTH STREET
OFF COLUMBIA VIADUCT

H&E BRIDGE NO.7

DESIGNED	DRAWN	TYPED	CHECKED	REVISION DATE	REVIEWED
RJF	RJF	ROH	JH	10-18-11	

I:\projects\D08\Wide\PID91684\Design\CADD\Bridges\HAM-471-0000L\R\HAM471CSD007.dgn 09-JUN-2017 8:48AM gfreeman

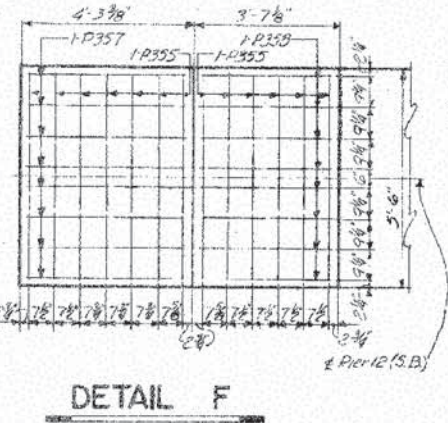
DESIGN AGENCY	STATE	FISCAL YEAR	PROJECT NO.	SHEET NO.	TOTAL SHEETS
STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 - BRIDGE OFFICE	KY.	1614	1471-4	17	



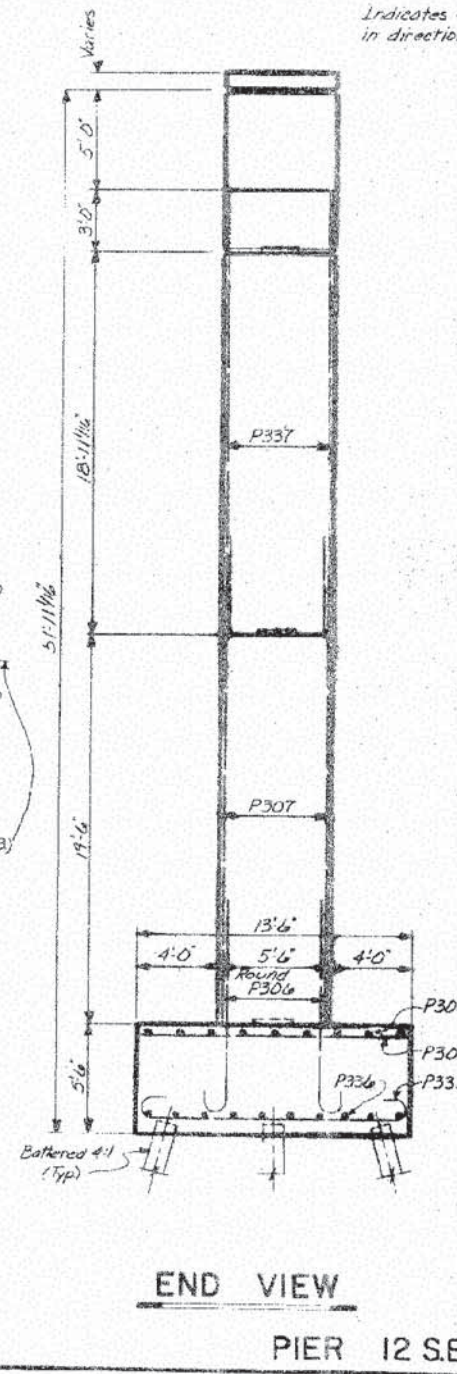
Note: E.F. denotes Each face.

Note: Footing and column reinforcement typical.

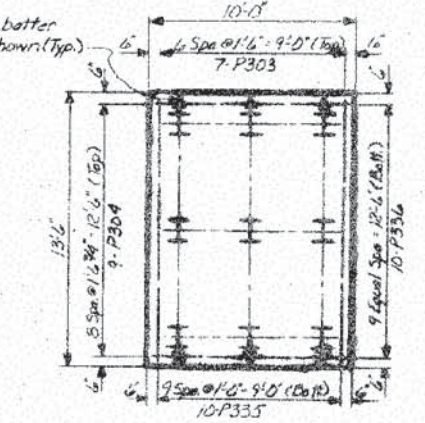
ELEVATION PIER 12 (S.B.)



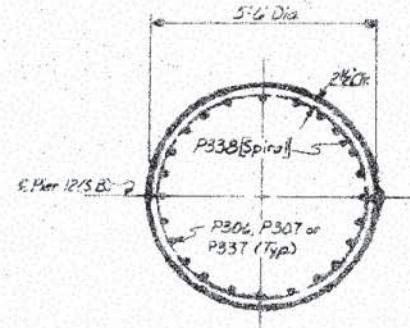
DETAIL F



**END VIEW
PIER 12 S.B.**



TYPICAL FOOTING



SECTION C-C

Note: Bars in columns are to be spaced to miss bottom cap reinforcing as dimensioned in Sections A-A & B-B.

**KENTUCKY DEPARTMENT OF HIGHWAYS
OHIO DEPARTMENT OF HIGHWAYS**

PROJECT 1471-4 (B) 4
BRIDGE OVER OHIO RIVER ON I 471
CAMPBELL COUNTY, KENTUCKY
HAMILTON COUNTY, OHIO

HAZLET & ERDAL Consulting Engineers File No. 889	BRIDGE NUMBER	DRAWING NO. 18486	INDEX
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SHEET 17

NOTES

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- PATCH THE PIER CAP SEAT ADJACENT TO THE OUTSIDE FASCIA GIRDER. APPROX. DEPTH = 4". SALVAGE ALL EXISTING REBAR FOR RE-USE. APPROX. PATCHING AREA = 42 S.F.

PRINT TO SCALE