

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

D07-BH-FY16

AUGLAIZE COUNTY  
DARKE COUNTY  
LOGAN COUNTY  
MERCER COUNTY

**PROJECT DESCRIPTION**  
THIS PROJECT SHALL CONSIST OF ENCASING EXISTING BRIDGE PILES IN CONCRETE, REPLACING BRIDGE DECK EDGES, PATCHING AND OR REFACING BACKWALLS, AND OTHER MISCELLANEOUS WORK.

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

FEDERAL PROJECT NO.  
E130(646)

PID. NO.  
93568

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
NONE

D07-BH-FY16



**DESIGN DESIGNATION**  
(NONE REQUIRED)

**TRAFFIC VOLUMES FOR DETOUR LOCATIONS**  
DAR-47-1206 CURRENT ADT 1900  
DAR-49-0728 CURRENT ADT 6060  
LOG-508-0196 CURRENT ADT 1020

**DESIGN EXCEPTIONS**  
(NONE REQUIRED)

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**2013 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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY FOR THE FOLLOWING STRUCTURES:

- DAR-47-1206
- DAR-49-0728
- LOG-508-0196

DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 7-9.

FOR THE REMAINING STRUCTURES ON THIS PROJECT, THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Randy Chewalby, PE, PS, BSWC  
DATE 12/14/15 DISTRICT DEPUTY DIRECTOR

APPROVED [Signature]  
DATE 12-16-15 DIRECTOR, DEPARTMENT OF TRANSPORTATION

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
BEFORE YOU DIG

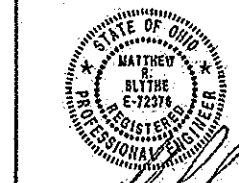
CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE  
SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 7  
1001 ST MARY'S AVENUE  
SIDNEY, OHIO

ENGINEERS SEAL:

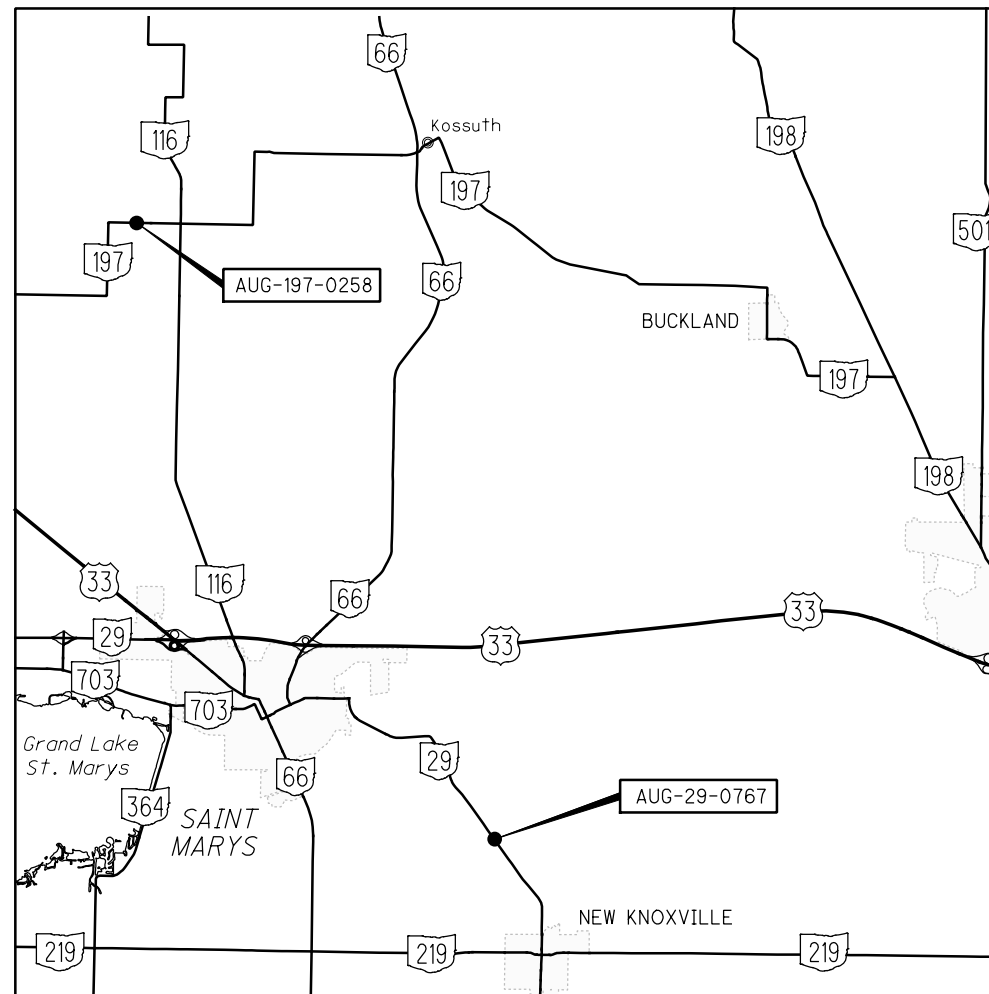


SIGNED: [Signature]  
DATE: 12-3-15

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	DM-4.3	7/19/13	800	1/15/16
CPP-1-08	7/19/13	DM-4.4	7/20/12	821	4/20/12
DBR-3-11	7/15/11			832	1/17/14
DBR-2-73	7/19/02			844	7/17/15
DS-1-92	7/18/03	TC-41.20	10/18/13	846	4/17/15
		TC-42.20	10/18/13	921	4/20/12
DM-4.3	7/19/13				
DM-4.4	7/20/12	TC-52.10	10/18/13		
		TC-52.20	7/18/14		
MT-95.30	7/18/14				
MT-97.10	7/18/14				
MT-101.60	7/19/13				
MT-105.10	7/19/13				
				SPECIAL PROVISIONS	
				WPC	11/24/14

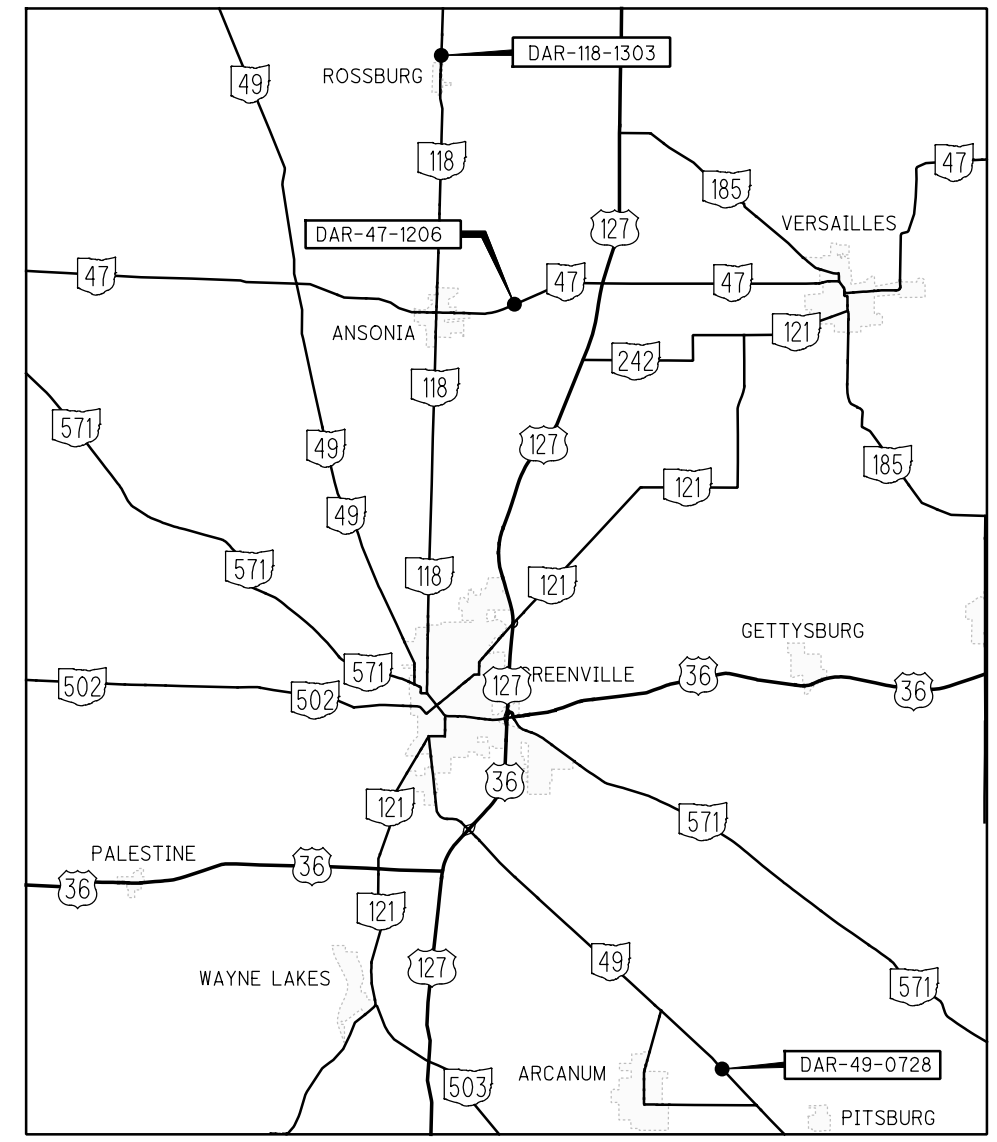
D07 - BH FY 16  
160112 PID - 93568  
Dist 7 3/1/2016  
Contract Proposal Available @ www.contracts.dot.state.oh.us/home

PROJECTS \ District Wide \ D07-BH-FY16-93568



**AUGLAIZE COUNTY**

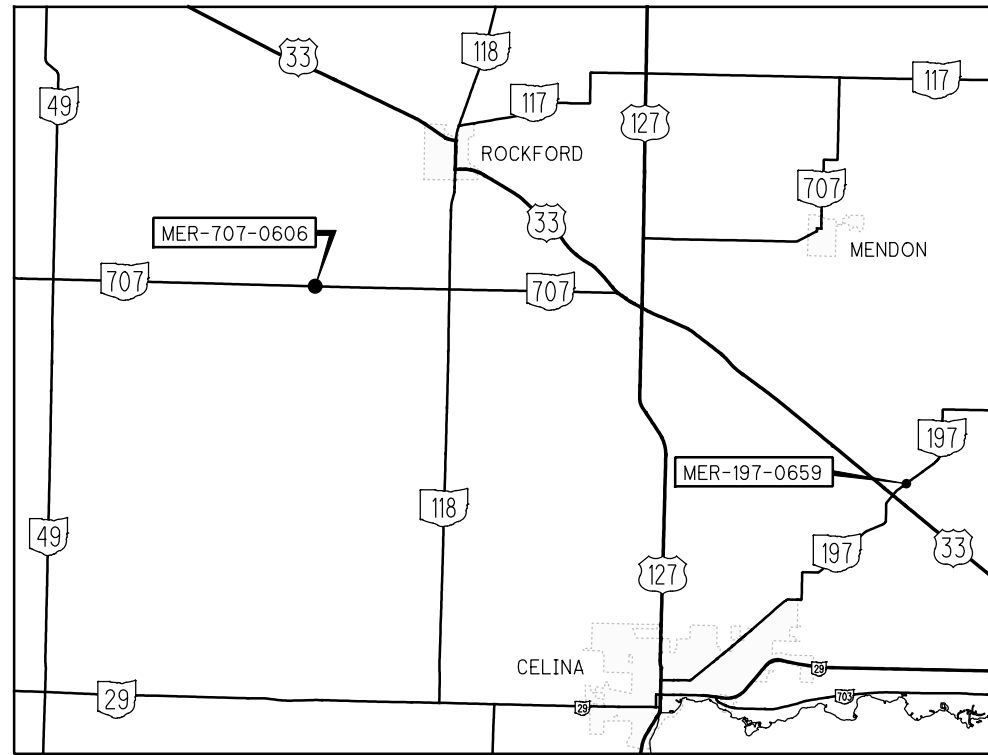
AUG-29-0767 LATITUDE: 40°31'18" LONGITUDE: -84°19'58"  
 AUG-197-0258 LATITUDE: 40°38'28" LONGITUDE: -84°25'35"



**DARKE COUNTY**

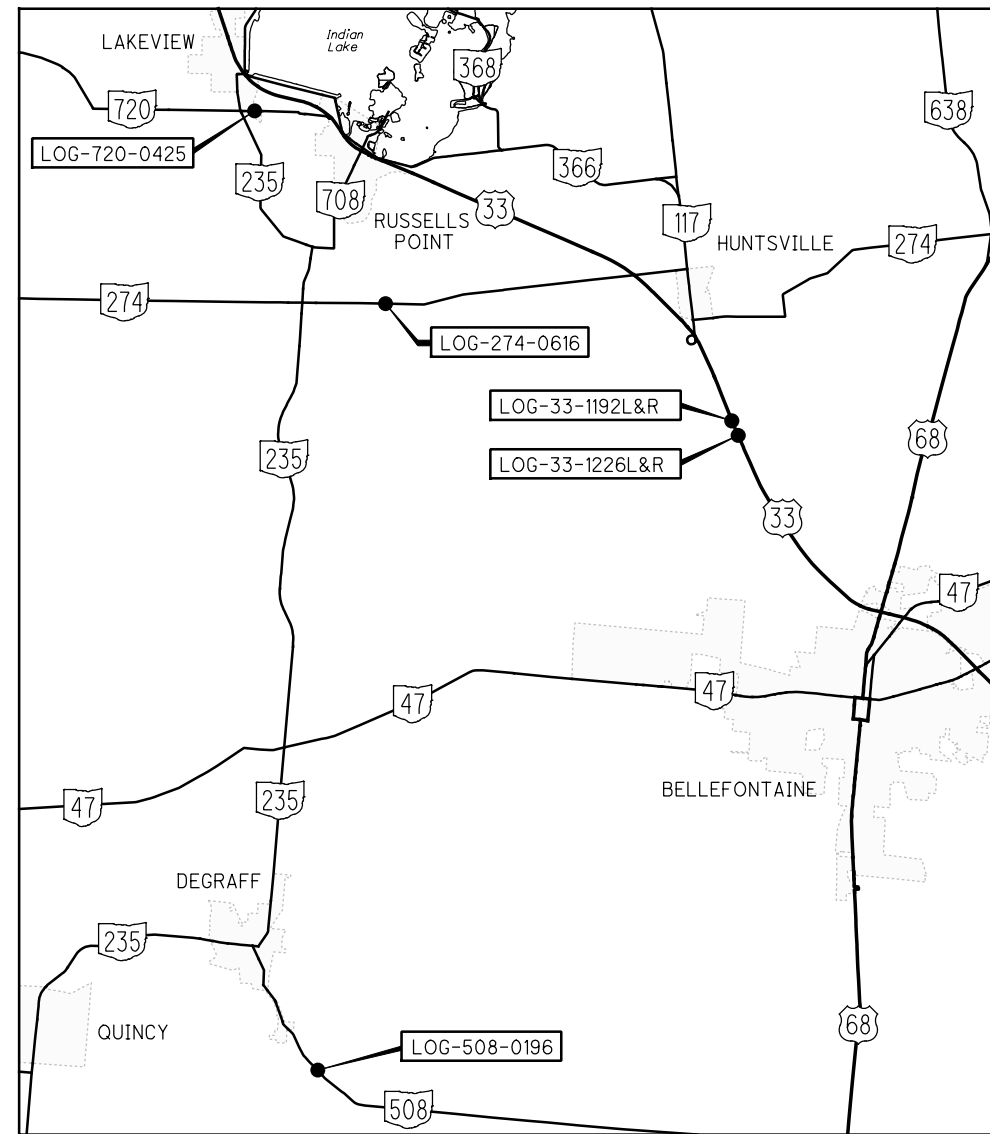
DAR-47-1206 LATITUDE: 40°13'02" LONGITUDE: -84°36'29"  
 DAR-49-0728 LATITUDE: 40°00'04" LONGITUDE: -84°31'29"  
 DAR-118-1303 LATITUDE: 40°17'08" LONGITUDE: -84°38'14"

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### MERCER COUNTY

MER-197-0659 LATITUDE: 40°36'23" LONGITUDE: -84°29'14"  
 MER-707-0606 LATITUDE: 40°39'18" LONGITUDE: -84°41'38"



### LOGAN COUNTY

LOG-33-1192 L/R LATITUDE: 40°25'17" LONGITUDE: -83°47'48"  
 LOG-33-1226 L/R LATITUDE: 40°25'01" LONGITUDE: -83°47'39"  
 LOG-274-0616 LATITUDE: 40°26'22" LONGITUDE: -83°53'05"  
 LOG-508-0196 LATITUDE: 40°17'15" LONGITUDE: -83°53'57"  
 LOG-720-0425 LATITUDE: 40°28'38" LONGITUDE: -83°55'13"

**ROADWAY NOTES**

**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.

**EXISTING PLANS**

EXISTING PLANS ENTITLED AUG-29-05.19, DAR-47-05.36, DAR-49-06.16, DAR-118-0924, LOG-33-10.85, LOG-274-05.92, LOG-508-01.88, LOG-720-00.99, MER-197-06.53, MER-117-0178. PLANS FOR AUG-197-02.58 ARE FOUND IN PLANS MER-197-6.53. MAY BE INSPECTED IN THE ODOT DISTRICT 7 OFFICE IN SIDNEY, OHIO.

**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.

**SEEDING AND MULCHING**

AN ESTIMATED AREA OF 100 SQ. YDS. OF SEEDING AND MULCHING PER WORK SITE WAS USED TO DETERMIND THESE QUANTITIES.

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF DISTURBED SOIL RESULTING FROM THE WORK ON THE PROJECT:

659, SEEDING AND MULCHING	1400 SQ. YD.
659, COMMERCIAL FERTILIZER	0.13 TON
659, WATER	7.5 M. GAL.

AS DETERMINED BY THE ENGINEER, SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES AND WITHIN THE CONSTRUCTION LIMITS.

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL AREAS WITHIN 15 FEET OF THE SLAB EDGE SHALL BE CLEARED AND GRUBBED. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**ENVIRONMENTAL NOTES**

NO INSTREAM WORK IS PERMITTED AT THE DAR-47-1206 STRUCTURE OVER THE STILLWATER RIVER. NO TEMPORARY FILL MAY BE PLACED BELOW ORDINARY HIGH WATER MARK AT THIS LOCATION. NO EQUIPMENT (INCLUDING SCAFFOLDING OR BRACING) MAY BE PLACED BELOW THE ORDINARY HIGH WATER MARK OF THE STILLWATER RIVER. IF DEBRIS ENTERS THE WATERWAY DURING CONSTRUCTION, THE DEBRIS MUST BE REMOVED PROMPTLY, UTILIZING EQUIPMENT STAGED ABOVE THE ORDINARY HIGH WATER MARK.

**STRUCTURAL NOTES**

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- DBR-2-73 DATED/REVISED 7-19-02
- DS-1-92 DATED/REVISED 7-18-03
- DBR-3-11 DATED/REVISED 7-15-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

- 844 DATED 7-17-15
- 846 DATED 4-17-15

**DESIGN SPECIFICATIONS**

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, INCLUDING THE INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

**DECK PROTECTION METHOD**

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

WATERPROOFING

ASPHALT CONCRETE OVERLAY

STEEL DRIP STRIP

SEALING OF CONCRETE SURFACES

GALVANIC ANODES

**DESIGN DATA**

CONCRETE QC2 - COMPRESSIVE STRENGTH 4500 PSI (BRIDGE DECK)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS INCLUDING FLOOR OF SLAB 1" 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 DISINTERGRATED 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 COST OF THE SAW-CUT SHALL BE INCLUDED IN THE LUMP SUM COST OF PORTIONS OF STRUCTURES REMOVED, AS PER PLAN.

**EXISTING STRUCTURE VERIFICATION**

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO 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 202 - BRIDGE RAIL REMOVED FOR REUSE, AS PER PLAN**

THIS ITEM OF WORK CONSISTS OF REMOVING THE ENTIRE LINEAR FEET OF BRIDGERAIL ATTACHED TO THE SLAB EDGE THAT WILL BE REPLACED. THIS WORK INCLUDES THE REMOVAL OF ALL HARDWARE, POSTS, BLOCKOUTS, AND GUARDRAIL PANELS. THIS MATERIAL SHALL BE STORED WITHIN THE STATES RIGHT OF WAY UNTIL NEEDED TO BE REATTACHED TO NEW DECK EDGE.

**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.

**ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN**

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN: 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.

**ITEM SPECIAL - PILE ENCASEMENT**

ENCASE ALL STEEL 12 BP 53 H-PILES, AND ALL 14" CAST IN PLACE REINFORCED CONCRETE STEEL PILES FOR THE CAPPED PILE PIERS IN CONCRETE CONFORMING TO C&MS 511 (F'C=4.0 KSI). PROVIDE A CONCRETE SLUMP BETWEEN 6 TO 8 INCHES WITH THE USE OF A SUPERPLASTICIZER. PLACE THE CONCRETE WITHIN A FORM THAT CONSISTS OF POLYETHYLENE PIPE (707.33), OR PVC PIPE (707.42). THE ENCASEMENT SHALL EXTEND FROM 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE DIMENSIONS DETAILED IN THE PLANS. POSITION THE PIPE SO THAT AT LEAST 3 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE. EXTEND THE CONCRETE 3" ABOVE THE TOP OF THE CASING AND SLOPE TO DRAIN FROM THE PILE OUT TO THE CASING.

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE DEPARTMENT WILL MEASURE PILE ENCASEMENT BY THE NUMBER OF FEET. THE DEPARTMENT WILL DETERMINE THE SUM AS THE LENGTH MEASURED ALONG THE AXIS OF EACH PILE. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR: ITEM - SPECIAL, PILE ENCASEMENT.

**ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN**

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.

THE CONTRACTOR MAY USE THE SAME CONCRETE MIX DEVELOPED FOR ITEM SPECIAL-PATCHING CONCRETE STRUCTURE, MISC.: WITH PUMPED SELF CONSOLIDATING CONCRETE IN LIEU OF THE CLASS QC2 CONCRETE PER THE SPECIFICATION.

ALL COST, EQUIPMENT AND MATERIALS ASSOCIATED WITH PREPARING THE PATCH, PLACING REINFORCING STEEL, PLACING CONCRETE AND CURING THE PATCH SHALL BE CONSIDERED INCIDENTAL TO ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN.

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GENERAL NOTES ( 1 OF 2 )

D07-BH-FY16

**ITEM 511 CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)**

THIS PAY ITEM SHALL INCLUDE ALL LABOR, TOOLS, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO PROPERLY INSTALL EMBEDDED GALVANIC ANODES. SUPPLY AND INSTALL ANODES ACCORDING TO SUPPLEMENTAL SPECIFICATION 844. CONCRETE REPAIR MATERIAL SHALL BE SUPPLIED, PLACED AND PAID FOR BY ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK.

**ITEM 844 CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN**

844.01 DESCRIPTION

INSTALL CONCRETE PATCHES USING GALVANIC ANODES PER SUPPLEMENTAL SPECIFICATION 844 EXCEPT AS NOTED BELOW.

ALL CONCRETE PATCHES SHALL BE PLACED TO THE EXISTING SURFACE UNLESS OTHERWISE DETAILED IN THE PLANS.

844.02 MATERIALS

PROVIDE A CONCRETE WITH THE FOLLOWING PROPERTIES:

MINIMUM PORTLAND CEMENT CONTENT	800 LB/CU. YD.
NO MICRO SILICA AND NO FLY ASH	
MAXIMUM COARSE AGGREGATE SIZE	#8
MAXIMUM WATER/CEMENT RATIO	0.38
COARSE TO FINE AGGREGATE RATIO TO PRODUCE SELF CONSOLIDATING CONCRETE	
MINIMUM 3 DAY STRENGTH	4000 PSI
MINIMUM 28 DAY STRENGTH	5500 PSI
AIR CONTENT	8% ±2%
MINIMUM SPREAD	24"

PROVIDE A CONCRETE MIX AT A SLUMP THAT ALLOWS THE CONCRETE MIX TO BE PLACED THROUGH A 3 1/2" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE THE PIER. THE FINAL CONCRETE MIX WILL BE A SELF CONSOLIDATING CONCRETE USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

SUBMIT THE MIX DESIGN AND TEST RESULTS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

DURING THE CONCRETE OPERATIONS ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT.

844.03 CLEANING AND REPAIR OF REINFORCING STEEL

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.

844.04 GALVANIC ANODE INSTALLATION

INSTALL ANODE UNITS AND REPAIR MATERIAL IMMEDIATELY FOLLOWING PREPARATION AND CLEANING OF STEEL REINFORCEMENT. REPAIR MATERIAL SHALL BE PLACED NO LATER THAN ONE (1) WEEK AFTER CONCRETE REMOVAL UNLESS APPROVED BY THE ENGINEER. GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES.

THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES OR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK OR PLACING CONCRETE.

844.06 QUALITY CONTROL

THE PROPOSED FORM SYSTEM MUST BE SUBMITTED, AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. THE FORM SYSTEM SHALL NOT BE SUPPORTED THROUGH THE PATCH. THE FORM SYSTEM SHALL PROVIDE ENOUGH HEAD PRESSURE TO ENSURE THE PATCH IS FULLY CONSOLIDATED AND NULL OF VOIDS. THE FORM SYSTEM SHALL INCORPORATE VENTS ALONG THE TOP OF THE PATCH TO ALLOW ENTRAPPED AIR TO ESCAPE DURING CONCRETE PLACEMENT. THE FORM SYSTEM SHALL INCORPORATE A GATE/VALVE SYSTEM CAPABLE OF CONTAINING THE SELF CONSOLIDATING CONCRETE ONCE CONCRETE PLACEMENT IS COMPLETE.

WHEN THE FORMWORK IS REMOVED, THE PROJECT ENGINEER WILL DETERMINE IF THE NEW CONCRETE IS FLUSH WITH THE UNDERSIDE OF THE DECK. IF THERE ARE SMALL VOIDS FOUND BETWEEN THE NEW CONCRETE AND THE UNDERSIDE OF THE DECK, THEN THE CONTRACTOR WILL PNEUMATICALLY MORTAR THE VOIDS UNTIL ALL MATERIAL IS FOUND TO BE IN CONTACT WITH ONE ANOTHER AT NO COST TO THE DEPARTMENT. THE PNEUMATICALLY PLACED MORTAR SHALL CONFORM TO CMS 520.

844.08 BASIS OF PAYMENT

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 844 CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN

PAYMENT WILL INCLUDE REMOVAL OF THE UNSOUND CONCRETE, FORMWORK, PLACING DRAIN HOLES, DEVELOPMENT AND PLACEMENT OF THE SELF CONSOLIDATING CONCRETE MIX AND PNEUMATICALLY PLACED MORTAR.

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GENERAL NOTES (2 OF 2)

D07-BH-FY16

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**ITEM 614 - MAINTAINING TRAFFIC**

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITH THE EXCEPTION FOR DOING THE DECK EDGE REPAIR AND GUARDRAIL/BRIDGE RAIL WORK AT STRUCTURES DAR-47-1206, DAR-49-0728, AND LOG-508-0196 IN WHICH CASE TRAFFIC SHALL BE DETOURED FOR 21 DAYS EACH AS SHOWN ON SHEETS 7-9.

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.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURES. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

**ITEM 614, MAINTAINING TRAFFIC (ROAD CLOSED SIGN)**

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

BRIDGE DAR-47-1206 OVER THE STILLWATER RIVER THAT IS APPROXIMATELY 0.25 MILE EAST OF BEISNER RD.

BRIDGE DAR-49-0728 OVER THE PAINTER CREEK THAT IS APPROXIMATELY 0.4 MILE SOUTH OF HOLLANSBURG-SAMPSON RD.

BRIDGE LOG-508-0196 OVER STONY CREEK THAT IS APPROXIMATELY 0.8 MILE NORTH OF COUNTY ROAD 62

WILL BE  
CLOSED MMM DD  
FOR DD DAYS  
INFO: 1-888-200-9919

W20-H13-60  
MMM = MONTH (LTR)  
DD = DATE (1 OR 2 DIGITS)

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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.

**DETOUR SIGNING**

THE CONTRACTOR SHALL PROVIDE THE DETOUR SIGNING AS SHOWN ON SHEETS 7-9. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 DETOUR SIGNING.

**CONSTRUCTION TIME CONSTRAINTS - DAR-49-0728**

THE DETOUR FOR DAR-49-0728 SHALL NOT BEGIN BEFORE AUGUST 1, 2016.

**ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)**

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

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 \$50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

**PERMITTED LANE CLOSURE**

THE LANE CLOSURE TIMES ON LOG-US 33 SHALL BE AS FOLLOWS:  
ONE LANE MAY BE CLOSED FROM 6:00 PM TO 7:00 AM, SEVEN DAYS PER WEEK.  
NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

CALCULATED  
DDS  
CHECKED  
PNS

MAINTENANCE OF TRAFFIC NOTES

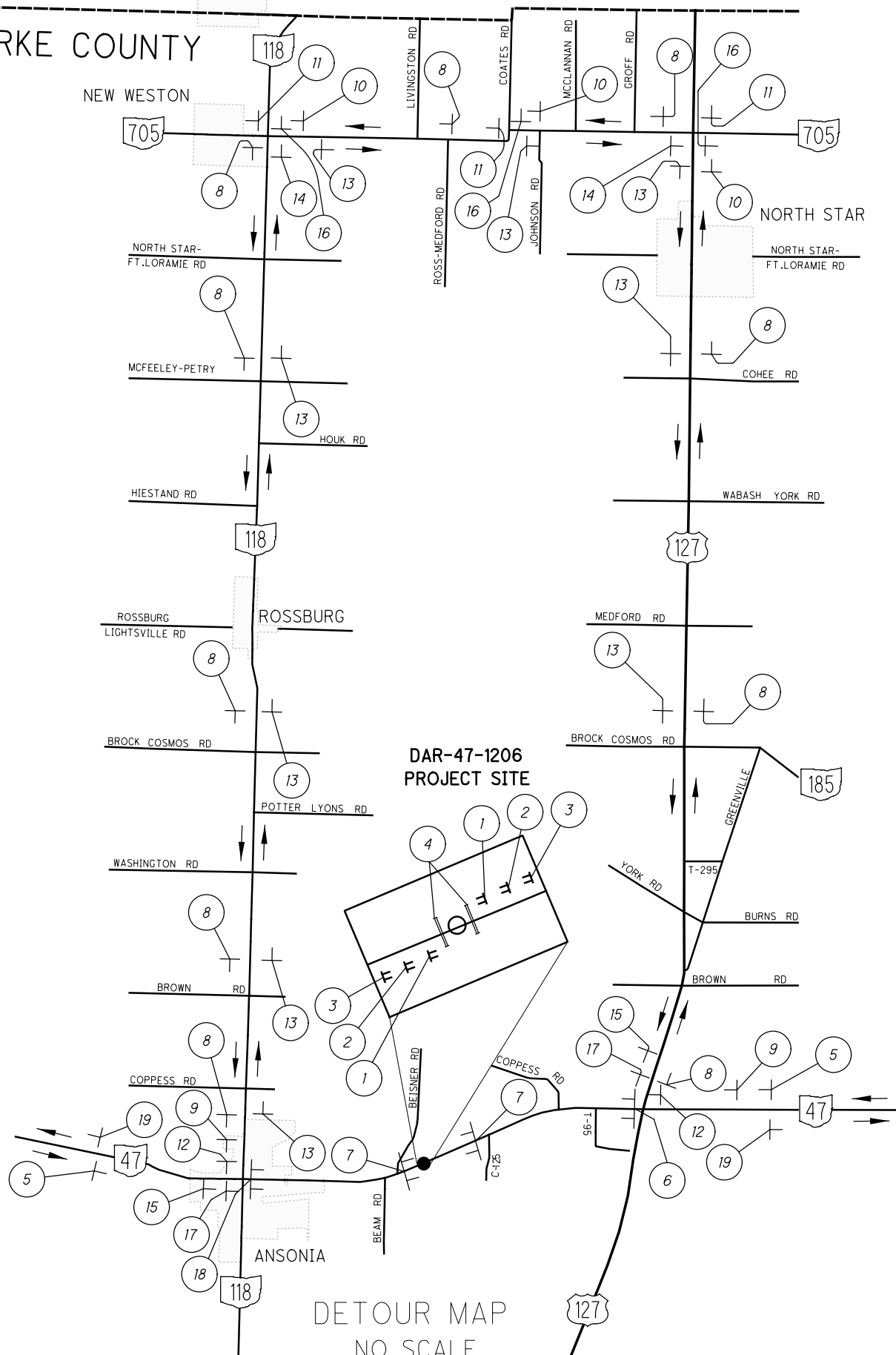
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MERCER COUNTY

DARKE COUNTY

BURKETTSTVILLE



DETOUR MAP  
NO SCALE

<p>1</p> <p>W20-3-48</p> <p>W16-2-30</p>	<p>2</p> <p>TYPE A WARNING LIGHT PER MT-101.60</p> <p>W20-3-48</p> <p>W16-2-30</p>	<p>3</p> <p>TYPE A WARNING LIGHT PER MT-101.60</p> <p>W20-1-48</p>	<p>4</p> <p>R11-2-48 ON TYPE III BARRICADE</p>	<p>W20-2-36</p> <p>5</p>
<p>6</p> <p>R11-3A-60</p> <p>M4-10R-48 ON TYPE III BARRICADE</p>	<p>R11-3-66 ON TYPE III BARRICADE</p> <p>7</p>	<p>8</p> <p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-24-2</p> <p>M6-3-21</p>	<p>9</p> <p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-24-2</p> <p>M5-1R-21</p>	<p>10</p> <p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-24-2</p> <p>M5-1L-21</p>
<p>11</p> <p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-24-2</p> <p>M6-1-21</p>	<p>12</p> <p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-24-2</p> <p>M6-1-21</p>	<p>13</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-24-2</p> <p>M6-3-21</p>	<p>14</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-24-2</p> <p>M5-1R-21</p>	<p>15</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-24-2</p> <p>M5-1L-21</p>
<p>16</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-24-2</p> <p>M6-1-21</p>	<p>17</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-24-2</p> <p>M6-1-21</p>	<p>18</p> <p>R11-3A-60</p> <p>M4-10R-48 ON TYPE III BARRICADE</p>	<p>19</p> <p>M4-8A-24</p>	

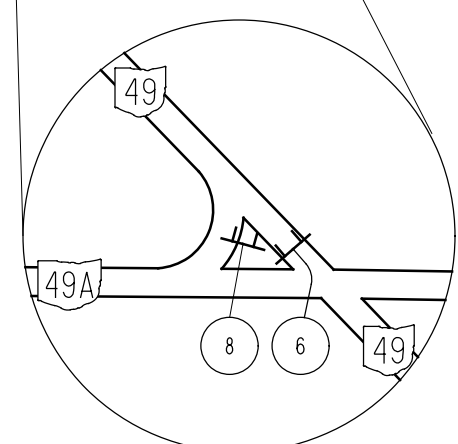
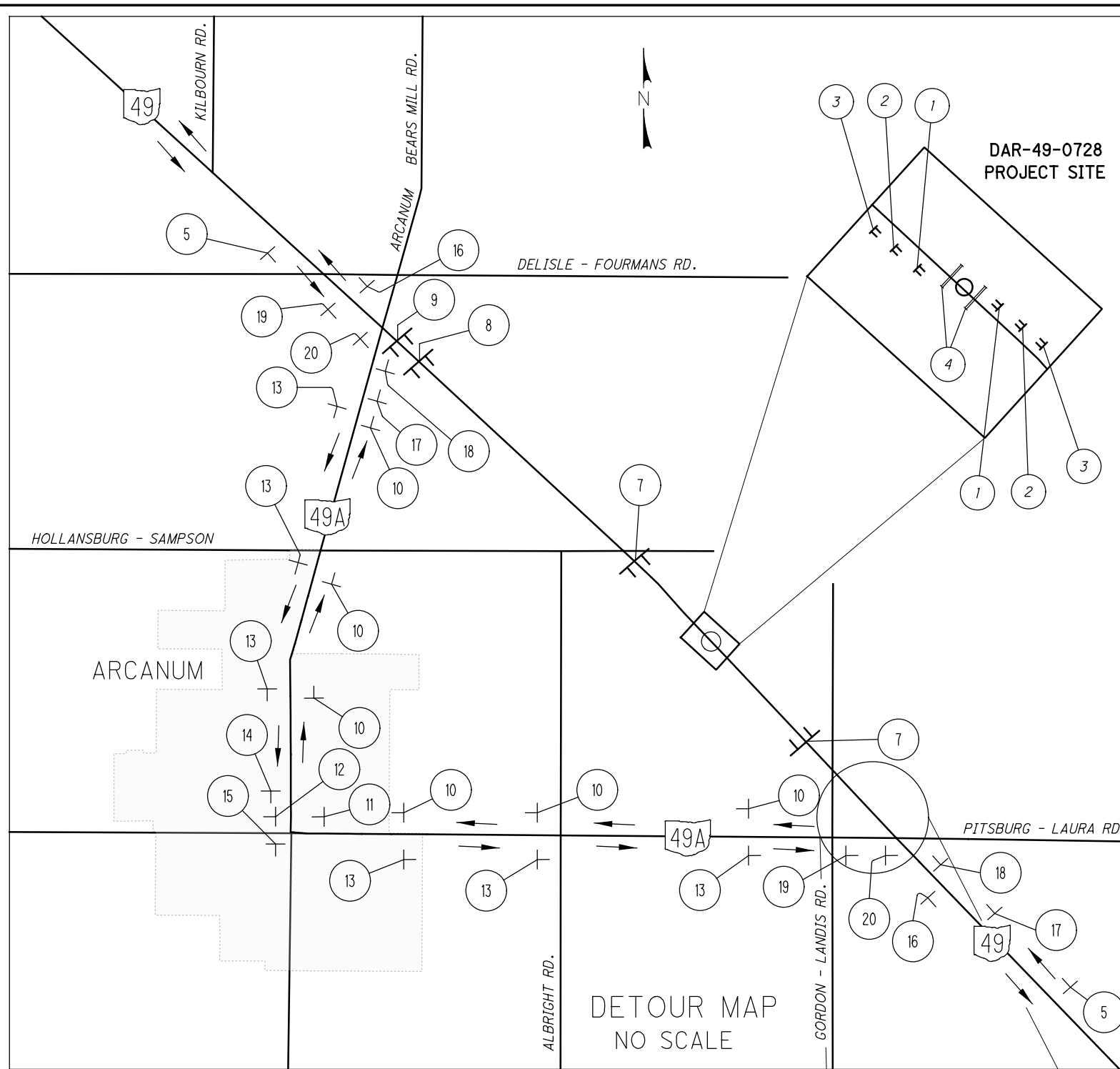
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MAINTENANCE OF TRAFFIC  
DAR-47-1206 DETOUR PLAN

D07-BH-FY16

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<p>1</p> <p>ROAD CLOSED AHEAD</p> <p>W20-3-48</p> <p>500 FEET</p> <p>W16-2-30</p>	<p>2</p> <p>ROAD CLOSED AHEAD</p> <p>W20-3-48</p> <p>1000 FEET</p> <p>W16-2-30</p>	<p>3</p> <p>ROAD WORK AHEAD</p> <p>W20-1-48</p>	<p>4</p> <p>ROAD CLOSED</p> <p>R11-2-48</p> <p>ON TYPE III BARRICADE</p>
<p>5</p> <p>DETOUR AHEAD</p> <p>W20-2-36</p>	<p>6</p> <p>ROAD CLOSED 1.0 MILES AHEAD LOCAL TRAFFIC ONLY</p> <p>R11-3A-60</p> <p>DETOUR</p> <p>M4-10R-48</p> <p>ON TYPE III BARRICADE</p>	<p>7</p> <p>ROAD CLOSED LOCAL TRAFFIC ONLY</p> <p>R11-3-66</p> <p>ON TYPE III BARRICADE</p>	<p>8</p> <p>ROAD CLOSED 1.0 MILES AHEAD LOCAL TRAFFIC ONLY</p> <p>R11-3A-60</p>
<p>9</p> <p>ROAD CLOSED 1.6 MILES AHEAD LOCAL TRAFFIC ONLY</p> <p>R11-3A-60</p> <p>ON TYPE III BARRICADE</p> <p>DETOUR</p> <p>M4-10R-48</p> <p>ON TYPE III BARRICADE</p>	<p>10</p> <p>DETOUR</p> <p>M4-8-24</p> <p>NORTH</p> <p>M3-1-24</p> <p>49</p> <p>M1-5-24-2</p> <p>↑</p> <p>M6-3-21</p>	<p>11</p> <p>DETOUR</p> <p>M4-8-24</p> <p>NORTH</p> <p>M3-1-24</p> <p>49</p> <p>M1-5-24-2</p> <p>↘</p> <p>M5-1R-21</p>	<p>12</p> <p>DETOUR</p> <p>M4-8-24</p> <p>NORTH</p> <p>M3-1-24</p> <p>49</p> <p>M1-5-24-2</p> <p>→</p> <p>M6-1-21</p>
<p>13</p> <p>DETOUR</p> <p>M4-8-24</p> <p>SOUTH</p> <p>M3-3-24</p> <p>49</p> <p>M1-5-24-2</p> <p>↑</p> <p>M6-3-21</p>	<p>14</p> <p>DETOUR</p> <p>M4-8-24</p> <p>SOUTH</p> <p>M3-3-24</p> <p>49</p> <p>M1-5-24-2</p> <p>↙</p> <p>M5-1L-21</p>	<p>15</p> <p>DETOUR</p> <p>M4-8-24</p> <p>SOUTH</p> <p>M3-3-24</p> <p>49</p> <p>M1-5-24-2</p> <p>←</p> <p>M6-1-21</p>	<p>16</p> <p>END DETOUR</p> <p>M4-8A-24</p>

<p>17</p> <p>DETOUR</p> <p>M4-8-24</p> <p>NORTH</p> <p>M3-1-24</p> <p>49</p> <p>M1-5-24-2</p> <p>↙</p> <p>M5-1L-21</p>	<p>18</p> <p>DETOUR</p> <p>M4-8-24</p> <p>NORTH</p> <p>M3-1-24</p> <p>49</p> <p>M1-5-24-2</p> <p>←</p> <p>M6-1-21</p>	<p>19</p> <p>DETOUR</p> <p>M4-8-24</p> <p>SOUTH</p> <p>M3-3-24</p> <p>49</p> <p>M1-5-24-2</p> <p>↘</p> <p>M5-1R-21</p>	<p>20</p> <p>DETOUR</p> <p>M4-8-24</p> <p>SOUTH</p> <p>M3-3-24</p> <p>49</p> <p>M1-5-24-2</p> <p>→</p> <p>M6-1-21</p>
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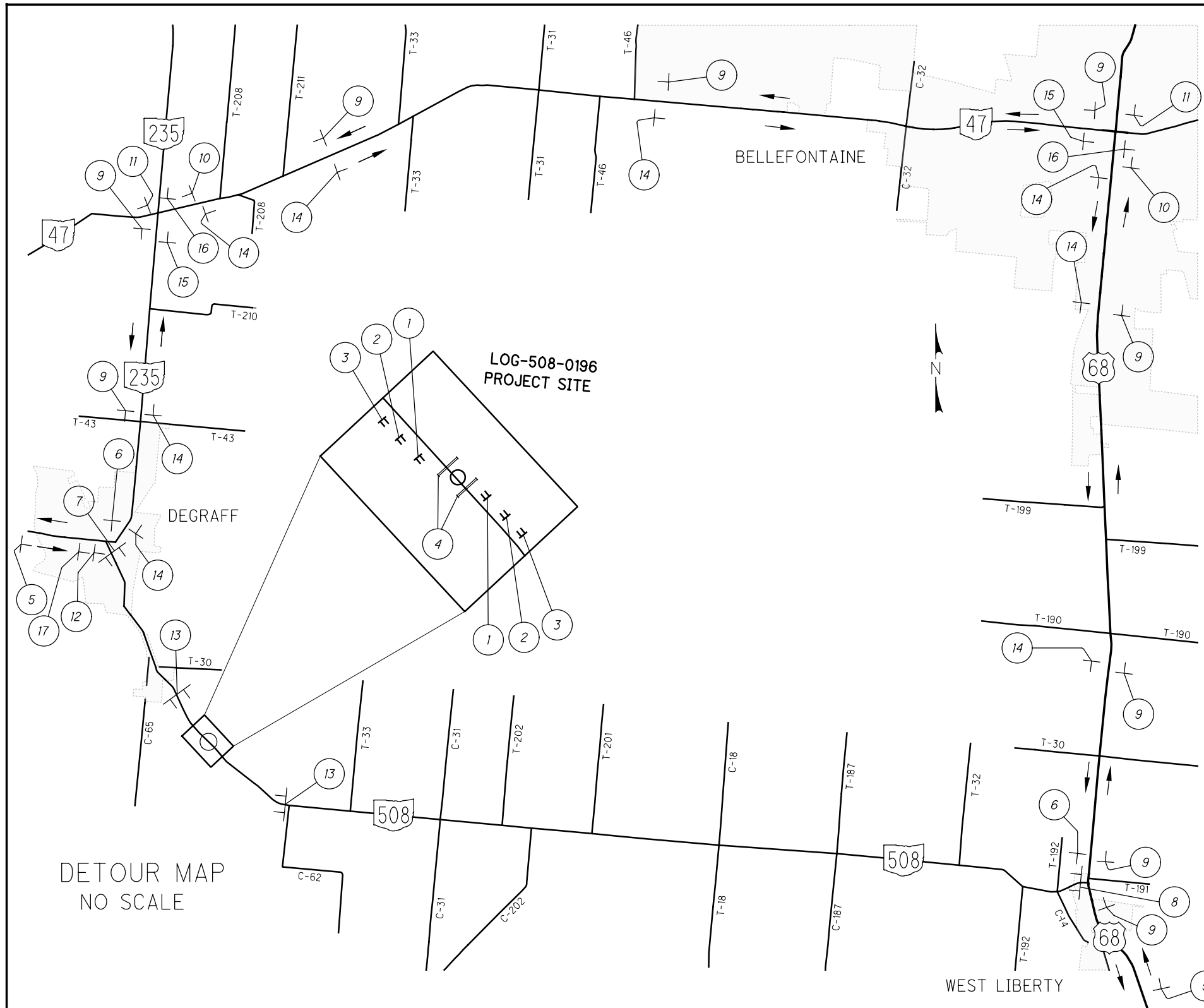
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**MAINTENANCE OF TRAFFIC  
DAR-49-0728 DETOUR PLAN**

**D07-BH-FY16**

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<p>1</p> <p>W20-3-48</p> <p>W16-2-30</p>	<p>TYPE A WARNING LIGHT PER MT-101.60</p> <p>2</p> <p>W20-3-48</p> <p>W16-2-30</p>	<p>TYPE A WARNING LIGHT PER MT-101.60</p> <p>W20-1-48</p> <p>3</p>
<p>R11-2-48</p> <p>ON TYPE III BARRICADE</p> <p>4</p>	<p>W20-2-36</p> <p>5</p>	<p>M4-8A-24</p> <p>6</p>
<p>R11-3A-60</p> <p>ON TYPE III BARRICADE</p> <p>M4-10L-48</p> <p>ON TYPE III BARRICADE</p> <p>7</p>	<p>R11-3A-60</p> <p>ON TYPE III BARRICADE</p> <p>M4-10R-48</p> <p>ON TYPE III BARRICADE</p> <p>8</p>	<p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-30-3</p> <p>M6-3-21</p> <p>9</p>
<p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-30-3</p> <p>M5-1L-21</p> <p>10</p>	<p>M4-8-24</p> <p>M3-4-24</p> <p>M1-5-30-3</p> <p>M6-1L-21</p> <p>11</p>	<p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-30-3</p> <p>M6-1L-21</p> <p>12</p>

<p>13</p> <p>R11-3-66</p> <p>ON TYPE III BARRICADE</p>
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<p>14</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-30-3</p> <p>M6-3-21</p>
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<p>15</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-30-3</p> <p>M5-1R-21</p>
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<p>16</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-30-3</p> <p>M6-1R-21</p>
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<p>17</p> <p>M4-8-24</p> <p>M3-2-24</p> <p>M1-5-30-3</p> <p>M5-1L-21</p>
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SHEET NUMBER										PARTICIPATION			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	6		19	26	31	38	42	43		OFFICE CALCS	01/NHS/BR	02/STR/BR						
																	STRUCTURE 20 FOOT SPAN AND OVER (DAR-47-1206)	
												LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	4
												2743	509	10001	2743	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	4
												40	509	20001	40	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	4
												26	511	34444	26	CY	CLASS QC2 CONCRETE, BRIDGE DECK	
												152	511	81300	152	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)	5
												49	512	10100	49	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
												79	512	33010	79	SY	TYPE 3 WATERPROOFING	
												250	517	72710	250	FT	RAILING (DEEP BEAM BRIDGE RETROFIT RAILING)	
												152	517	76302	152	EACH	RAILING, MISC.: TYPE B ANCHORS	
												295	SPECIAL	51822300	295	FT	STEEL DRIP STRIP	
												5	519	11101	5	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4
												1.2	846	00110	1.2	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
																	STRUCTURE 20 FOOT SPAN AND OVER (DAR-49-0728)	
												LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	4
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
							120					120	SPECIAL	50771200	120	FT	PILE ENCASEMENT	4
												3355	509	10001	3355	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	4
												40	509	20001	40	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	4
												98	510	10000	98	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
												14	511	34444	14	CY	CLASS QC2 CONCRETE, BRIDGE DECK	
												1	511	50210	1	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	
												98	511	81300	98	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)	5
												80	512	10100	80	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
												49	512	33010	49	SY	TYPE 3 WATERPROOFING	
												22	516	13200	22	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
												162.5	517	72710	162.5	FT	RAILING (DEEP BEAM BRIDGE RETROFIT RAILING)	
												96	517	76302	96	EACH	RAILING, MISC.: TYPE B ANCHORS	
												182	SPECIAL	51822300	182	FT	STEEL DRIP STRIP	
					2							2	519	11101	2	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4
												95	844	10001	95	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	5
												4	846	00110	4	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
																	STRUCTURE 20 FOOT SPAN AND OVER (DAR-118-1303)	
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
							126					126	SPECIAL	50771200	126	FT	PILE ENCASEMENT	4
																	STRUCTURE 20 FOOT SPAN AND OVER (LOG-33-1192 L)	
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
								98				98	SPECIAL	50771200	98	FT	PILE ENCASEMENT	4
					2							2	519	11101	2	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4
																	STRUCTURE 20 FOOT SPAN AND OVER (LOG-33-1192 R)	
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
							98					98	SPECIAL	50771200	98	FT	PILE ENCASEMENT	4
					5							5	519	11101	5	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4

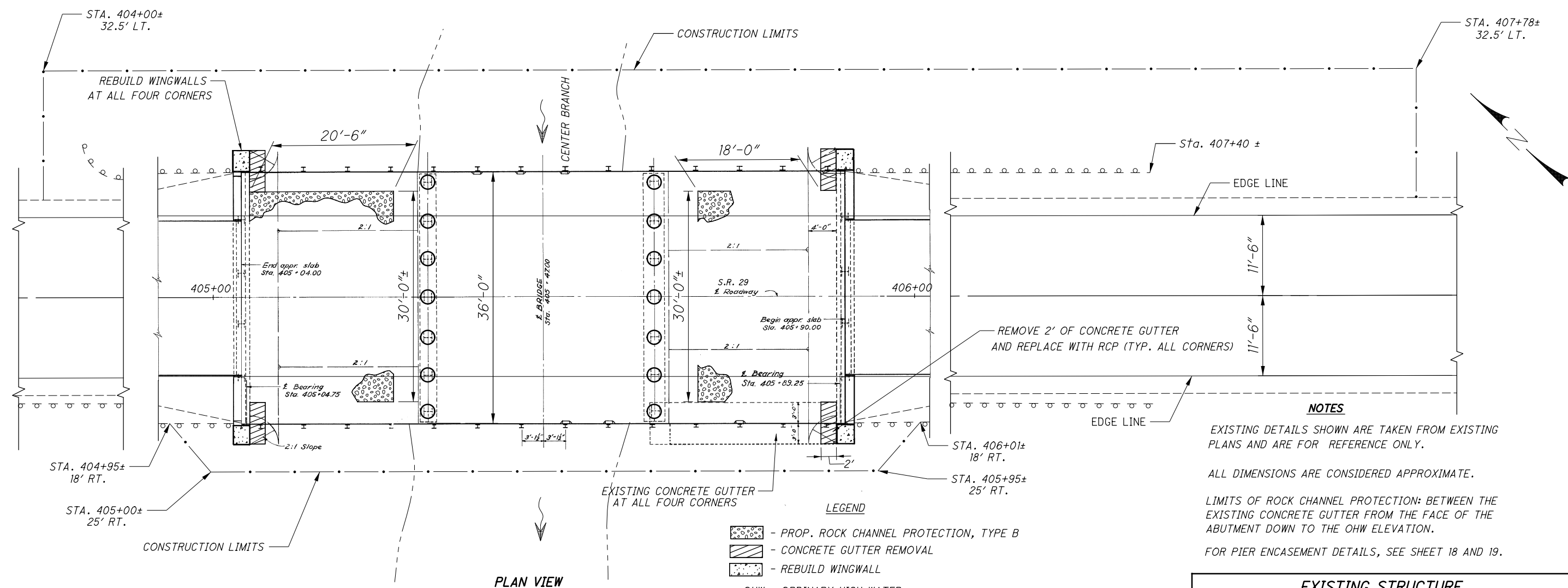
GENERAL SUMMARY (2 OF 4)

D07 - BH - FY16





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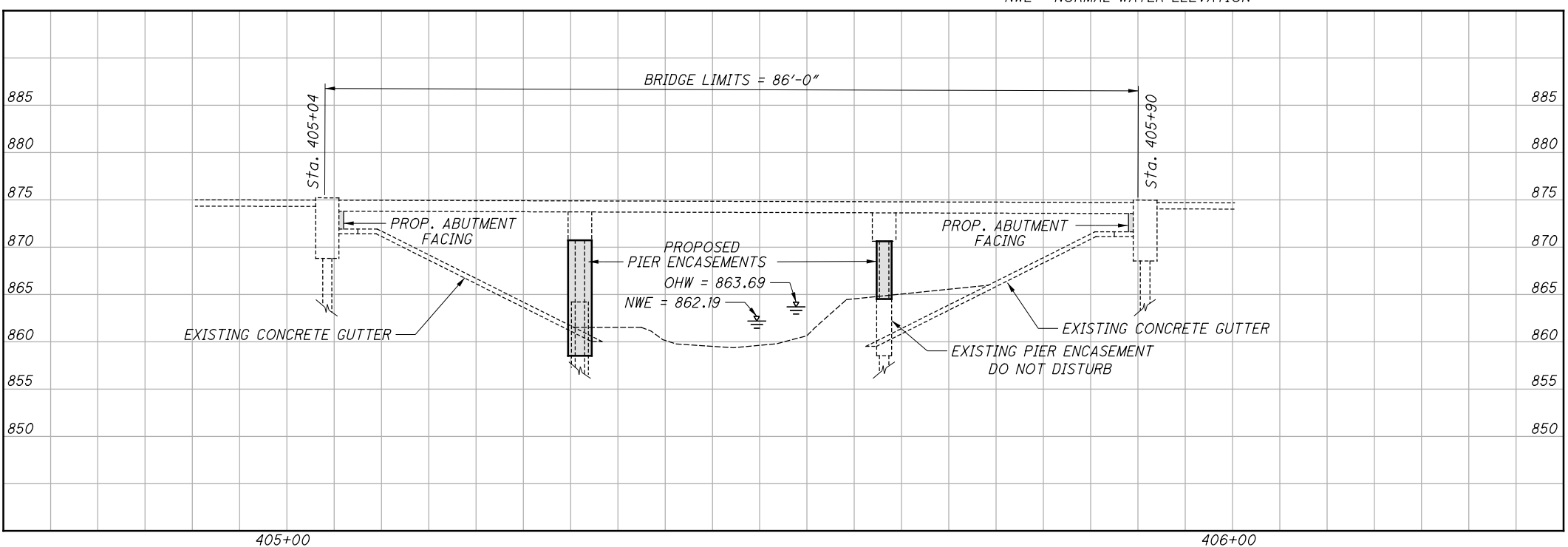
**NOTES**

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.

ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.

LIMITS OF ROCK CHANNEL PROTECTION: BETWEEN THE EXISTING CONCRETE GUTTER FROM THE FACE OF THE ABUTMENT DOWN TO THE OHW ELEVATION.

FOR PIER ENCASEMENT DETAILS, SEE SHEET 18 AND 19.



**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE

SPANS: 26' - 32.5' - 26' c/c BRG'S.

ROADWAY: 36'-0" f/f GUARD RAILS

LOADING: CF = 130(57)

SKEW: NONE

APPROACH SLABS: AS-4-47 (15' LONG)

ALIGNMENT: TANGENT

STRUCTURAL FILE NUMBER: 0600121

DATE BUILT: 1954

WEARING SURFACE: 6 1/2" BITUMINOUS ASPHALT CONCRETE (1993)

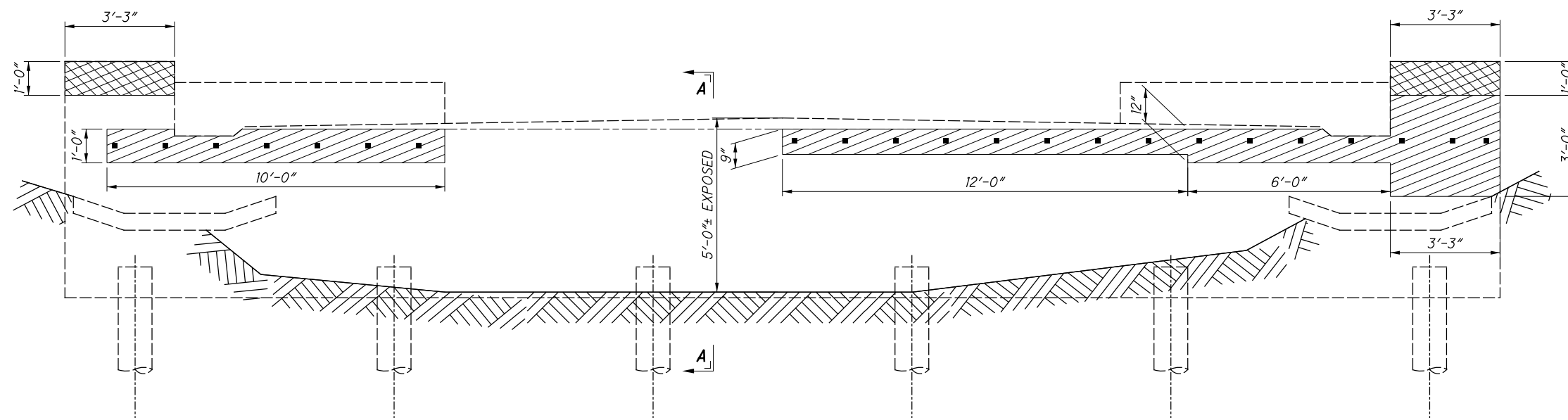
DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

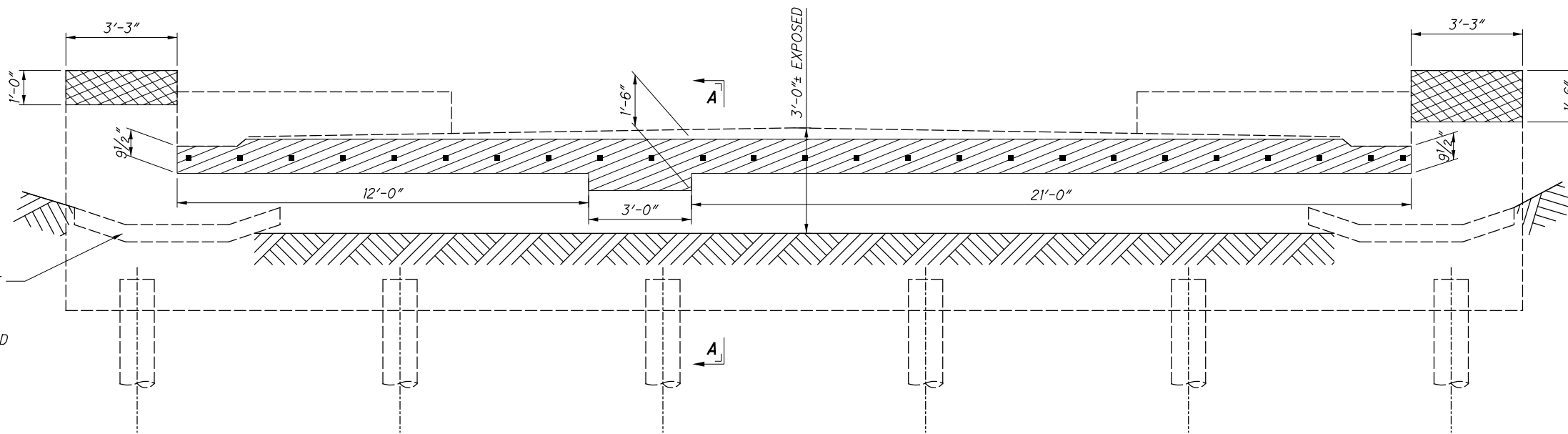
- 1.) REFACE ABUTMENTS WITH ANODES.
- 2.) ENCASE PIER COLUMNS
- 3.) REBUILD WINGWALLS
- 4.) PLACE ROCK CHANNEL PROTECTION IN FRONT OF THE ABUTMENTS AND IN BETWEEN EXISTING CONCRETE GUTTERS

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
DATE 11-24-15
REVIEWED MRB
STRUCTURE FILE NUMBER 0600121
DRAWN DDS
CHECKED CWV
DESIGNED DDS
AUGLAIZE COUNTY STA. 405+04.00 STA. 405+90.00
<b>SITE PLAN</b> BRIDGE No.: AUG-29-0767 SR 29 OVER CENTER BRANCH
<b>D07-BH-FY16</b> PID No. 93568
1 / 6
14 / 43

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**REAR ABUTMENT**



**FORWARD ABUTMENT**

2' OF EXISTING CONCRETE GUTTER TO BE REMOVED TO GAIN ACCESS TO FACE ABUTMENTS. REPLACE VOID WITH RCP.

BRIDGE: AUG-29-0767	CONCRETE REMOVAL PER 202	UN SOUND CONCRETE REMOVAL PER 844	GALVANIC ANODES PER 844
	CU. FT.	SQ. FT.	EA.
REAR ABUTMENT	16	34	22
FORWARD ABUTMENT	20	38	25
FOR INFORMATION ONLY	26		47
CARRIED TO GENERAL SUMMARY		72	

**NOTES**

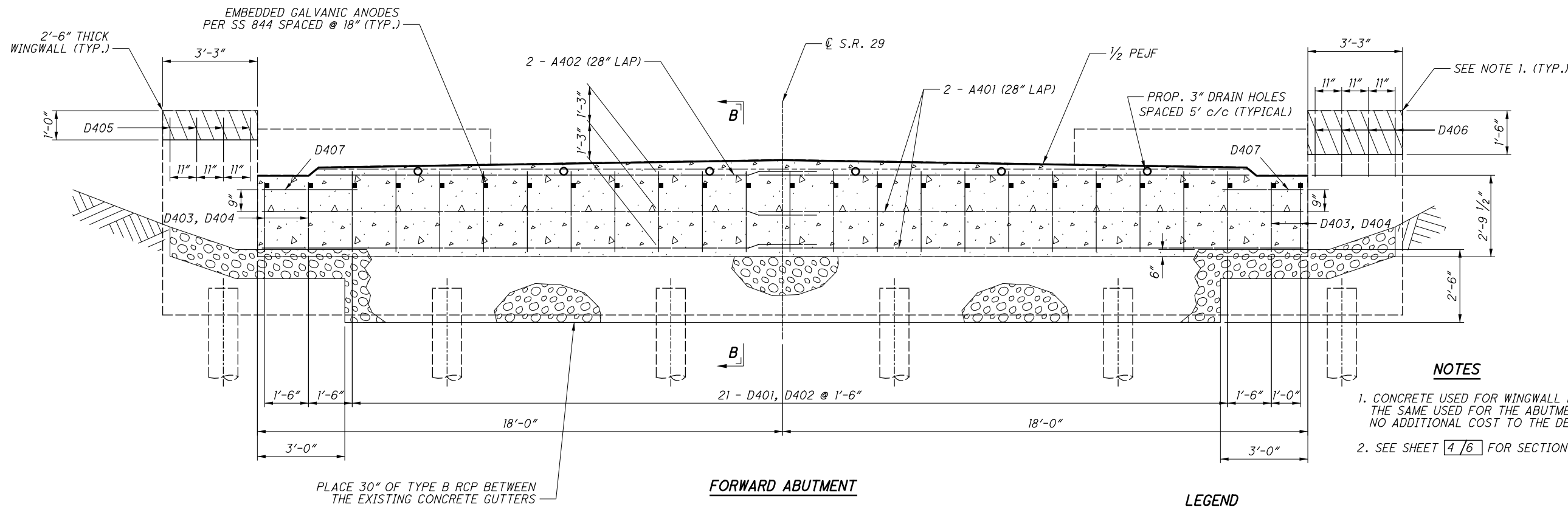
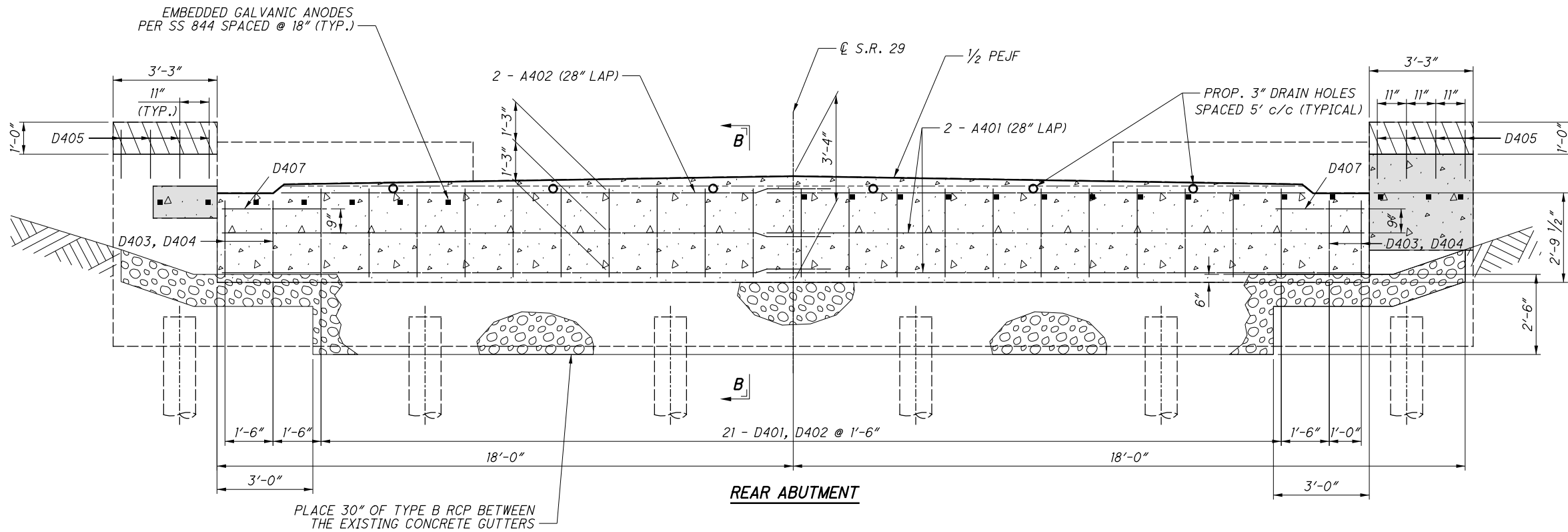
- SEE SHEET 4/6 FOR SECTION A-A
- ANODES ARE TO BE PLACED IN AREAS OF UNSOUND CONCRETE REMOVAL ONLY.

**LEGEND**

- AREA OF CONCRETE TO BE REMOVED PER ITEM 202
- AREA OF UNSOUND CONCRETE TO BE REMOVED AND ANODE PLACEMENT @ 18" MAX SPACING PER ITEM 844.

DESIGN AGENCY: ODOT DISTRICT 7 PLANNING & ENGINEERING  
 DATE: 11-24-15  
 STRUCTURE FILE NUMBER: 0600121  
 REVIEWED: MRB  
 DRAWN: DDS  
 DESIGNED: DDS  
 CHECKED: CWW  
 REVISIONS: REVISED  
 ABUTMENT REMOVAL DETAILS  
 BRIDGE No.: AUG-29-0767  
 SR 29 OVER CENTER BRANCH  
 D07-BH-FY16  
 PID No. 93568  
 2 / 6  
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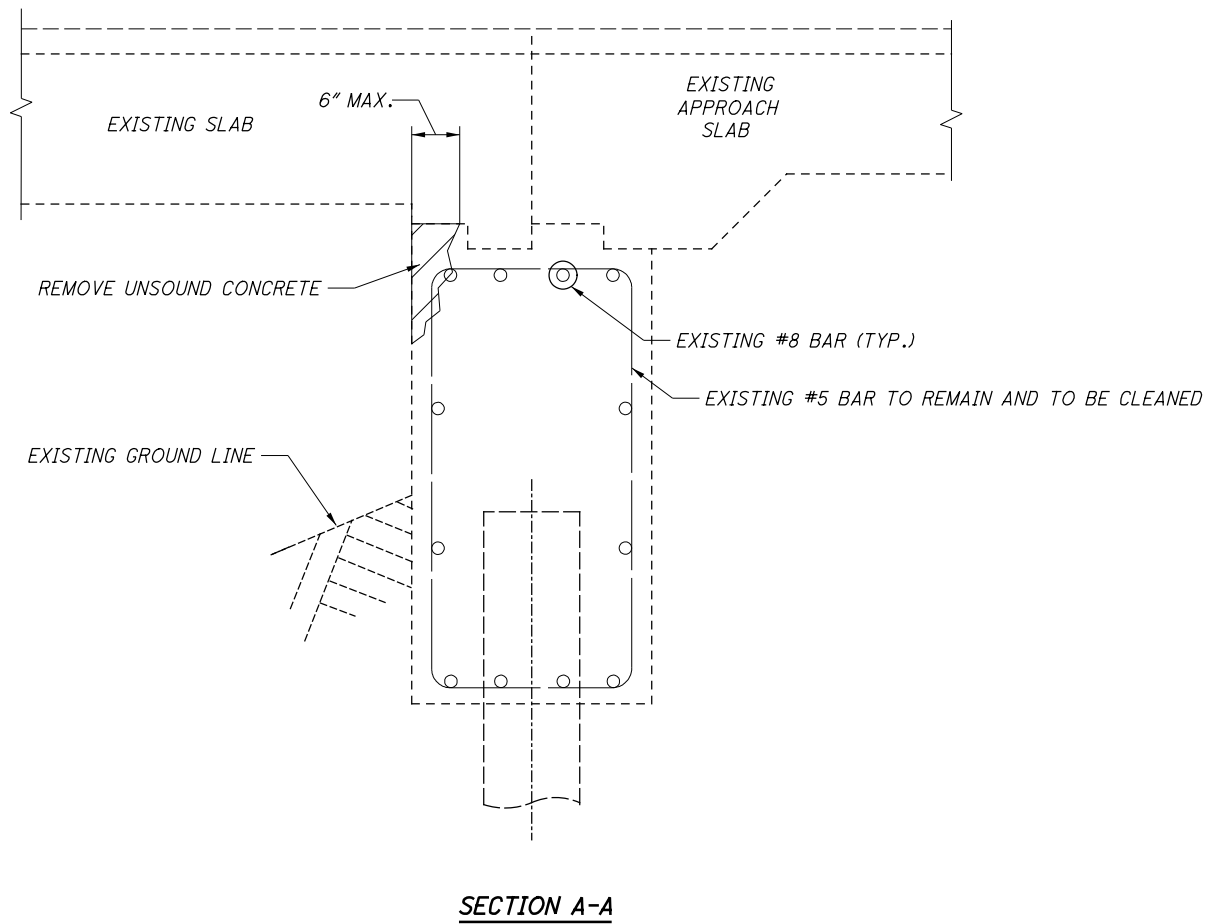
- NOTES**
1. CONCRETE USED FOR WINGWALL REPAIR MAY BE THE SAME USED FOR THE ABUTMENT FACINGS AT NO ADDITIONAL COST TO THE DEPARTMENT.
  2. SEE SHEET 4/6 FOR SECTION B-B

- LEGEND**
- ABUTMENT FACING EXTENSION PER ITEM 844, AS PER PLAN
  - ITEM 844
  - PROP. ROCK CHANNEL PROTECTION, TYPE B
  - ITEM 511

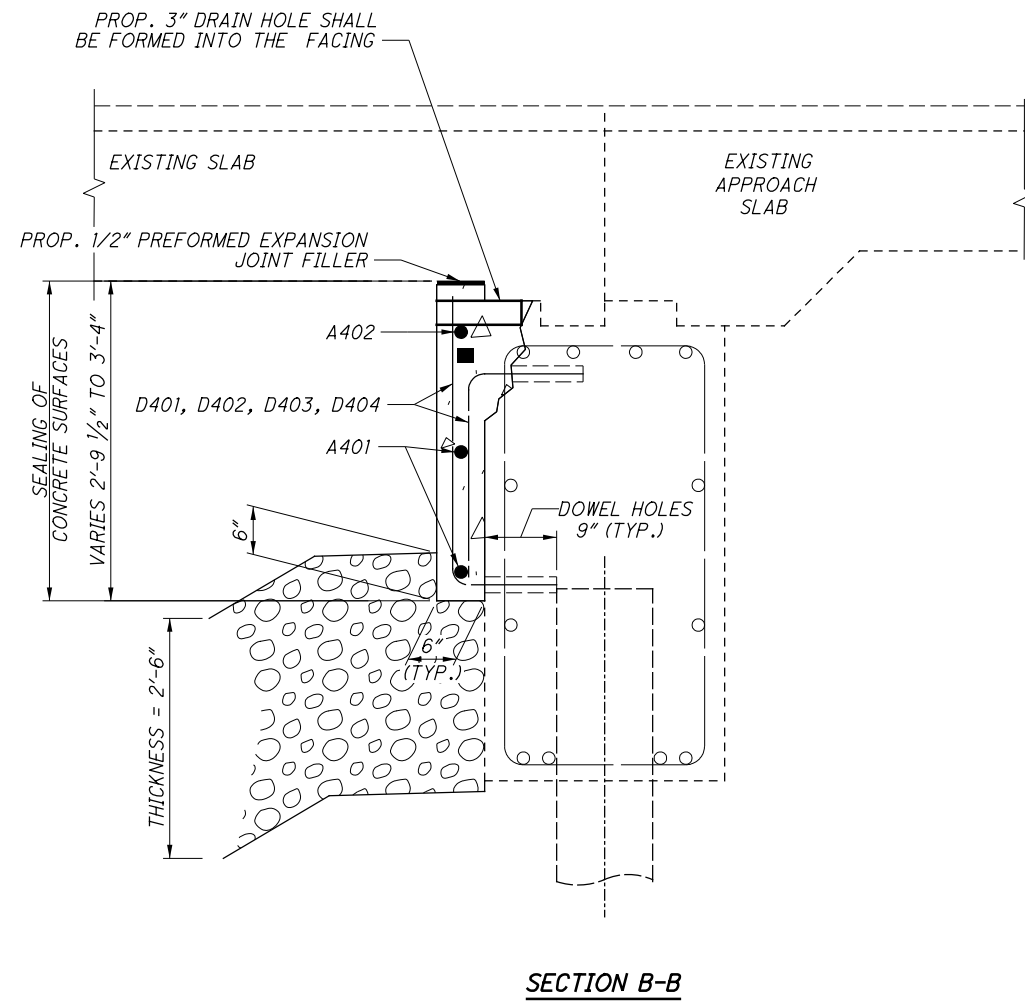
DESIGN AGENCY	ODOT DISTRICT 7
PLANNING & ENGINEERING	
DATE	11-24-15
REVIEWED	MRB
STRUCTURE FILE NUMBER	0600121
DRAWN	DDS
REVISOR	CWW
DESIGNED	DDS
CHECKED	CWW
<b>ABUTMENT DETAILS</b>	
BRIDGE No.: AUG-29-0767	
SR 29 OVER CENTER BRANCH	
<b>D07-BH-FY16</b>	<b>PID No. 93568</b>
3/6	16/43



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





**SECTION A-A**



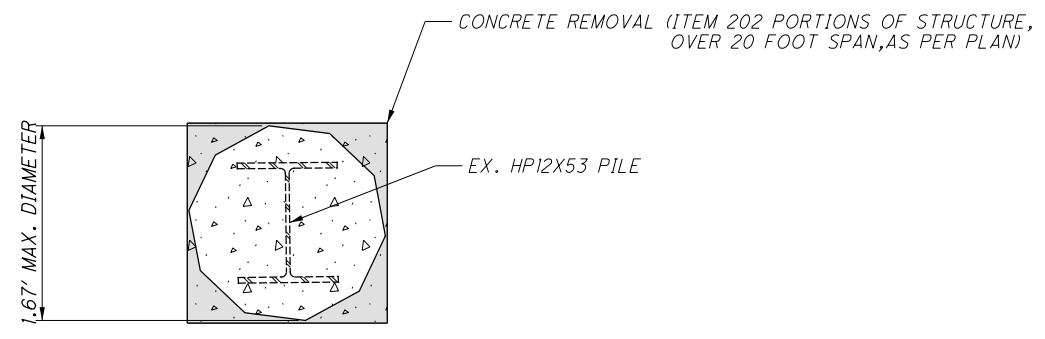
**SECTION B-B**

**LEGEND**

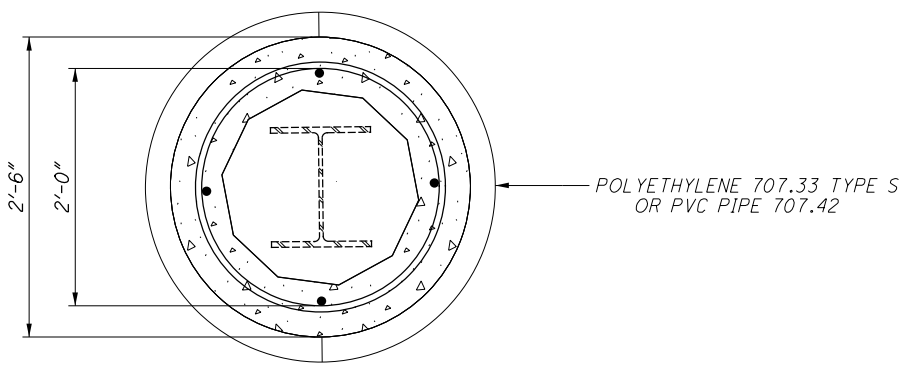
-  - AREA OF UNSOUND CONCRETE
-  - ITEM 844: CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN
-  - PROP. ROCK CHANNEL PROTECTION, TYPE B
-  - PROPOSED GALVANIC ANODE (EGA)

<b>D07-BH-FY16</b> PID No. 93568	<b>ABUTMENT DETAILS</b> BRIDGE No.: AUG-29-0767 SR 29 OVER CENTER BRANCH		DESIGNED DDS CHECKED CWW	DRAWN DDS REVISED	REVIEWED MRB STRUCTURE FILE NUMBER 0600121	DATE 11-24-15	DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
	4 / 6	17 / 43					

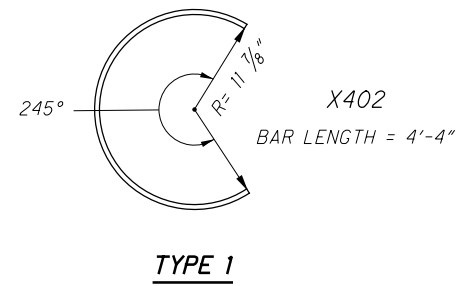
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**EXISTING SECTION A-A**



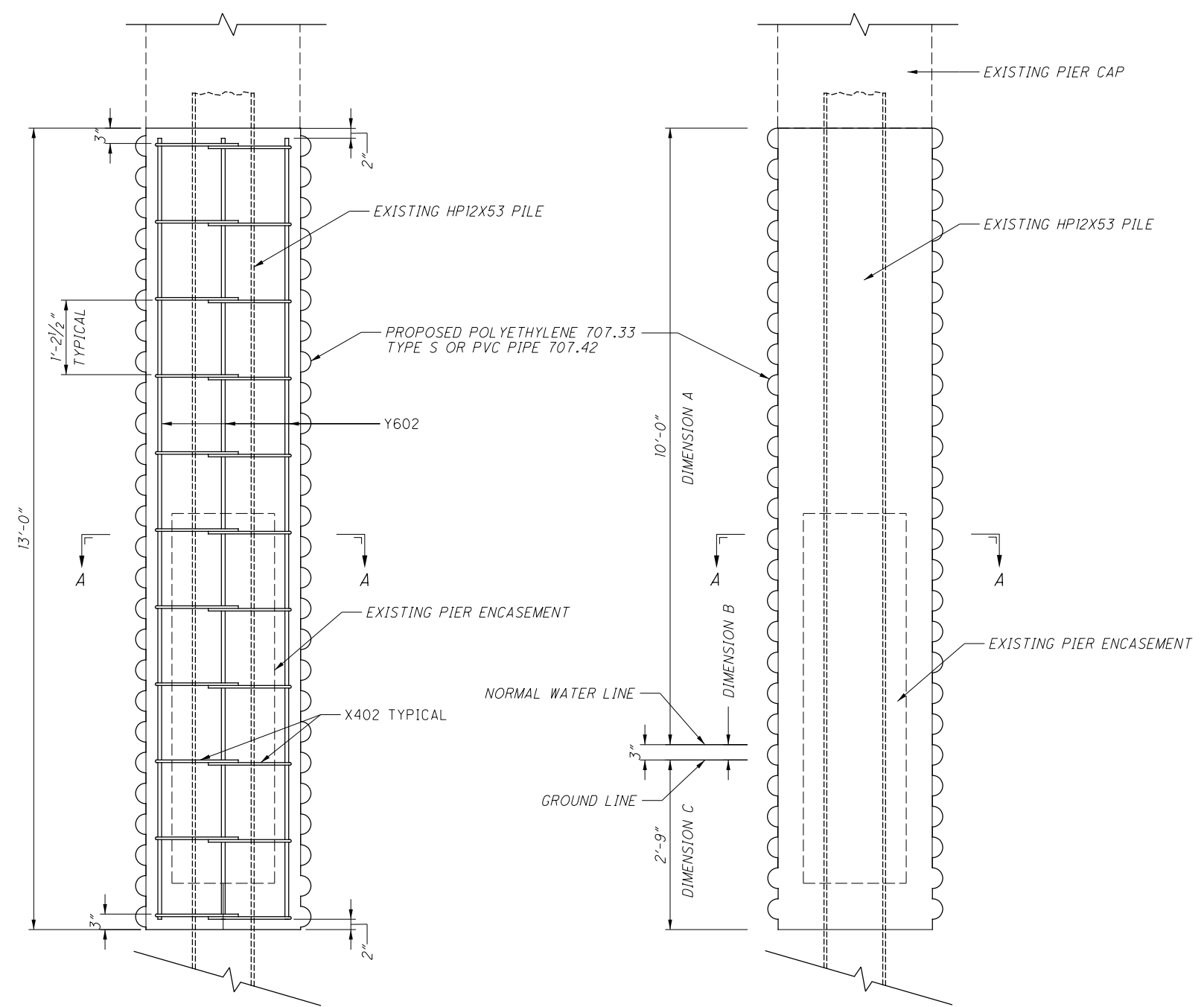
**PROPOSED SECTION A-A**



**TYPE 1**

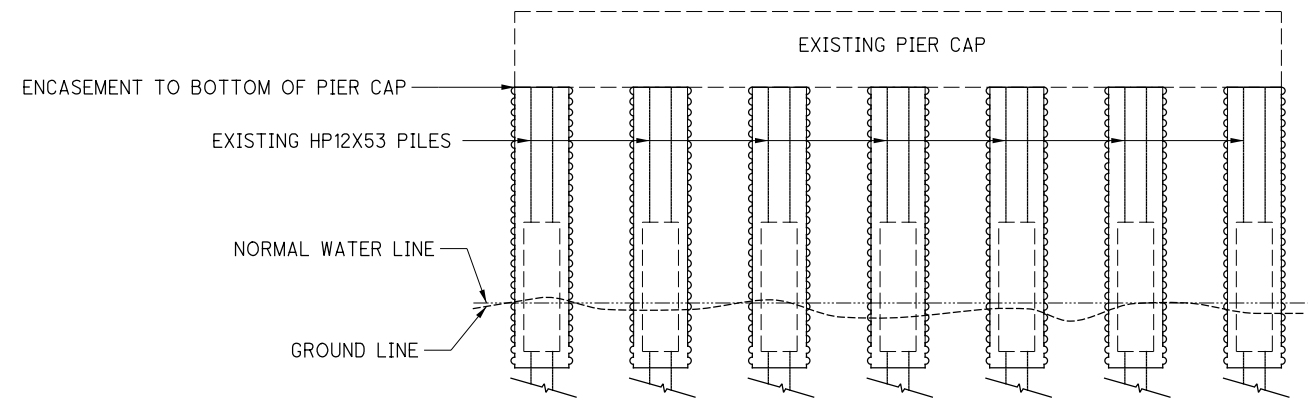
**NOTES**

1. CONCRETE REMOVAL IS INCLUDED IN THE COST OF THE PILE ENCASEMENT.
2. FOR ADDITIONAL DETAILS AND QUANTITIES SEE SHEET **19/43**.



**PILE ENCASEMENT**  
(NOT DRAWN TO SCALE)

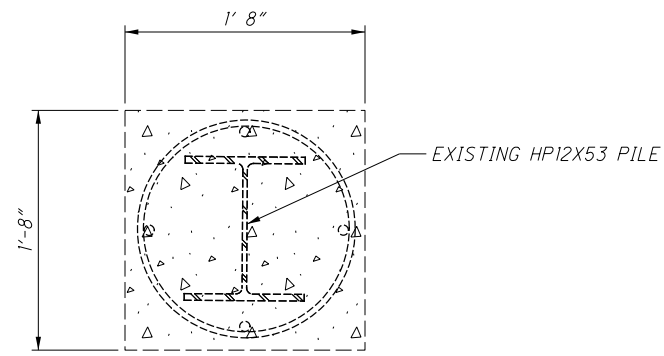
**PILE ENCASEMENT**  
(NOT DRAWN TO SCALE)



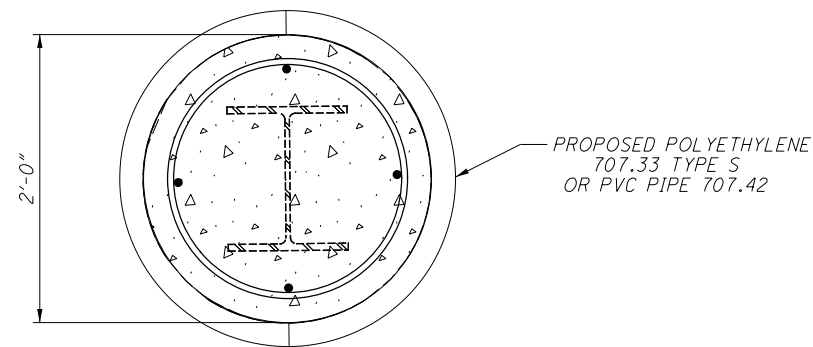
**DETAIL B**  
(NOT DRAWN TO SCALE)

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING	
DESIGNED DDS CWW	REVIEWED MRB STRUCTURE FILE NUMBER 0600121
DATE 11-24-15	
BRIDGE No.: AUG-29-0767 SR 29 OVER CENTER BRANCH	
REAR PIER ENCASEMENT DETAILS	
D07-BH-FY16 PID No. 93568	
5	6
18 43	

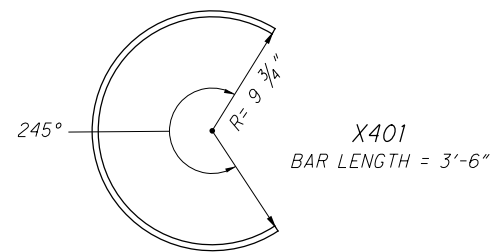
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**EXISTING SECTION A-A**



**PROPOSED SECTION B-B**



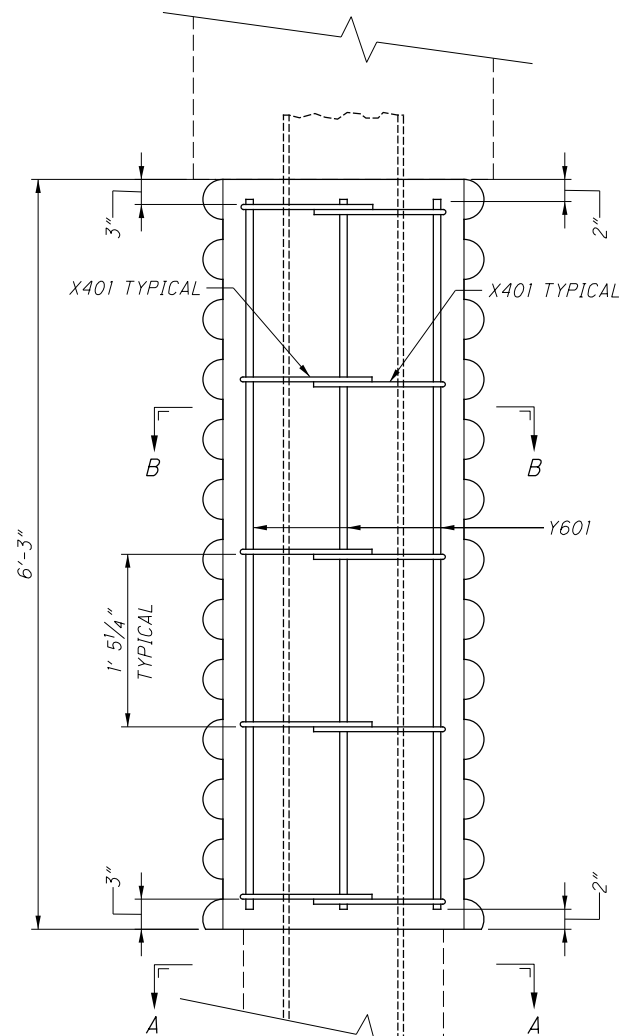
**TYPE 1**

REINFORCING SCHEDULE				
STRUCTURE: AUG-29-0767				
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE
FORWARD PIERS				
X401	70	3'-6"	164	1
Y601	28	5'-11"	249	STR.
REAR PIERS				
X402	154	4'-4"	446	1
Y602	28	12'-8"	533	STR.
TOTALS			1392 LBS.	

THE COST OF THE REINFORCING STEEL IS INCLUDED WITH ITEM SPECIAL, PILE ENCASEMENT

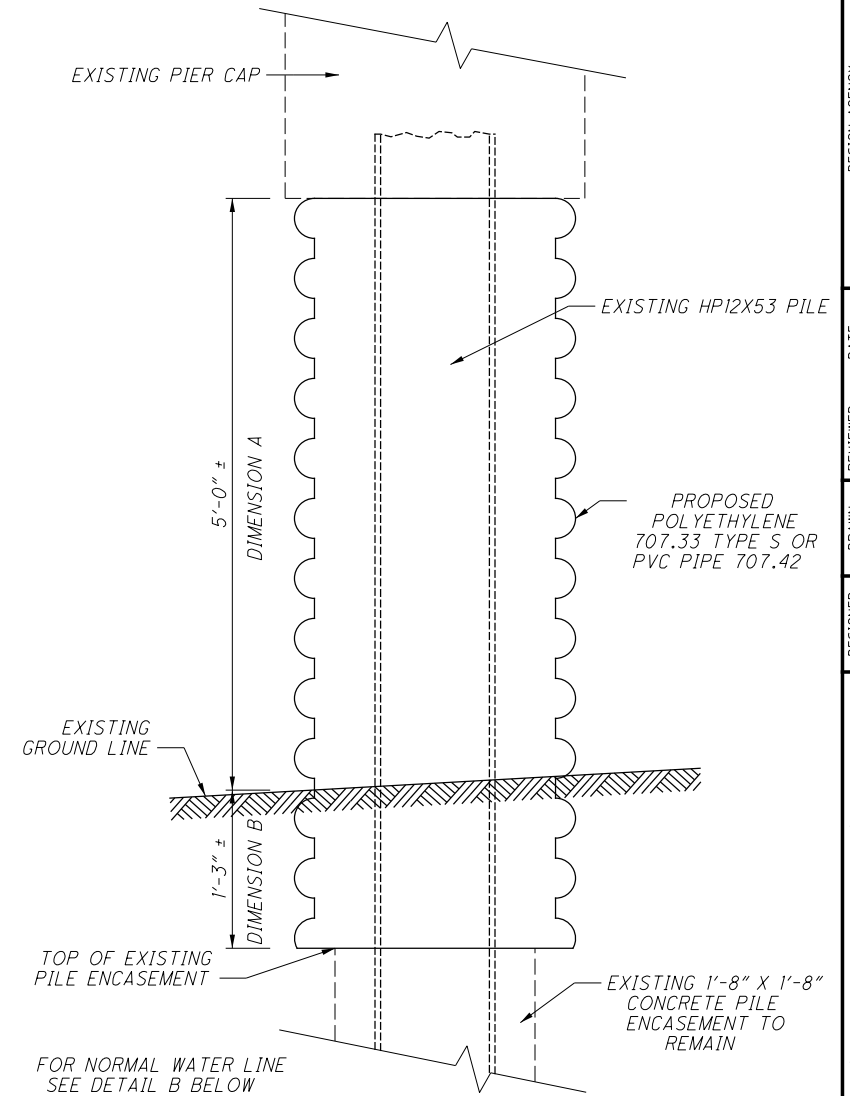
PILE ENCASEMENT LENGTHS						
STRUCTURE: AUG-29-0767						
LOCATION	DIMENSION			TOTAL ENCASEMENT LENGTH	NUMBER OF PILES	TOTAL STRUCTURE ENCASEMENT LENGTH
	A	B	C			
	Ft.	Ft.	Ft.	Ft.	EACH	Ft.
FORWARD PIERS	5.0	1.25	N/A	6.25	7	43.75
REAR PIERS	10.0	0.25	2.75	13.0	7	91.0
TOTALS						135

TOTALS CARRIED TO GENERAL SUMMARY SHEET 10 UNDER ITEM SPECIAL - PILE ENCASEMENT



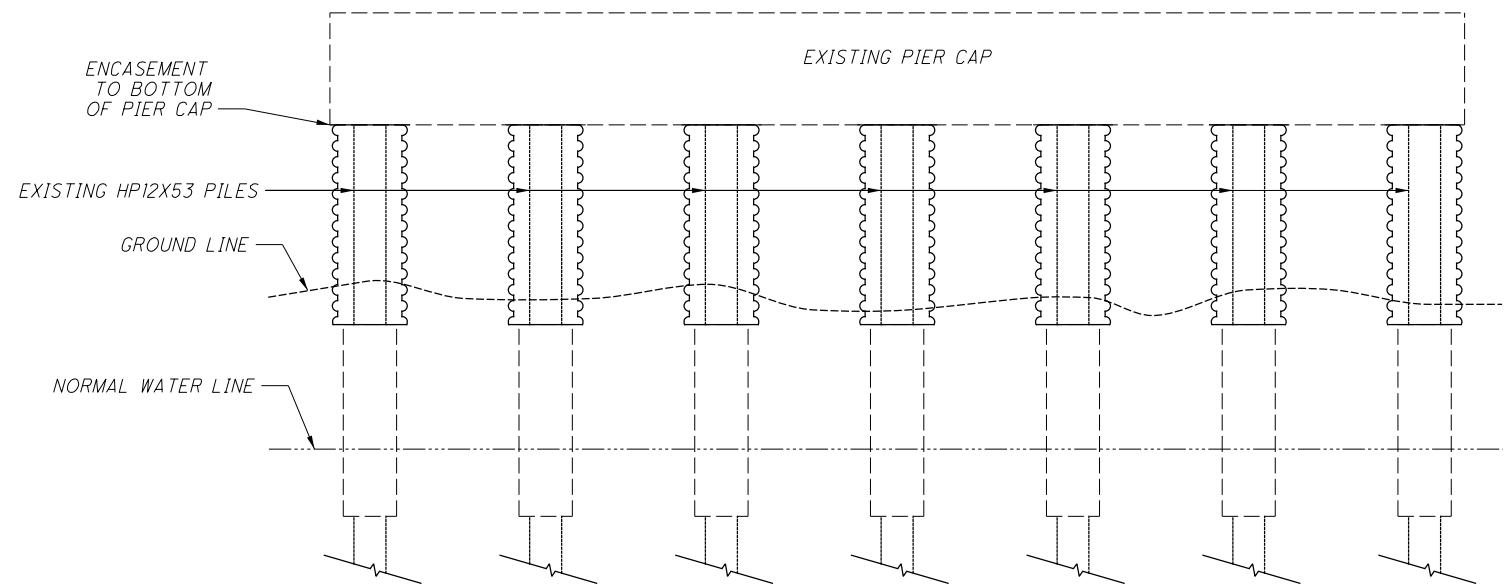
**PILE ENCASEMENT**

(NOT DRAWN TO SCALE)



**PILE ENCASEMENT**

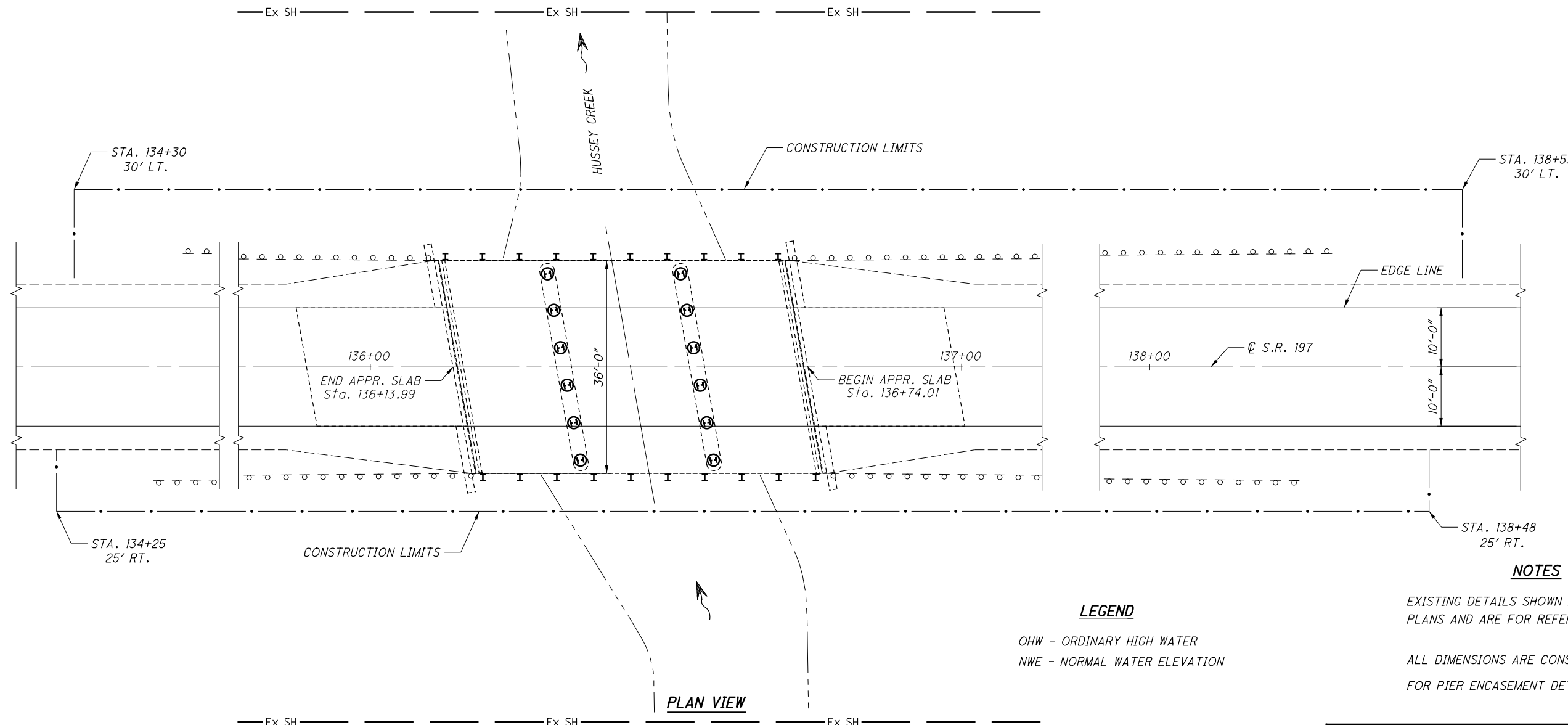
(NOT DRAWN TO SCALE)



**DETAIL B**

(NOT DRAWN TO SCALE)

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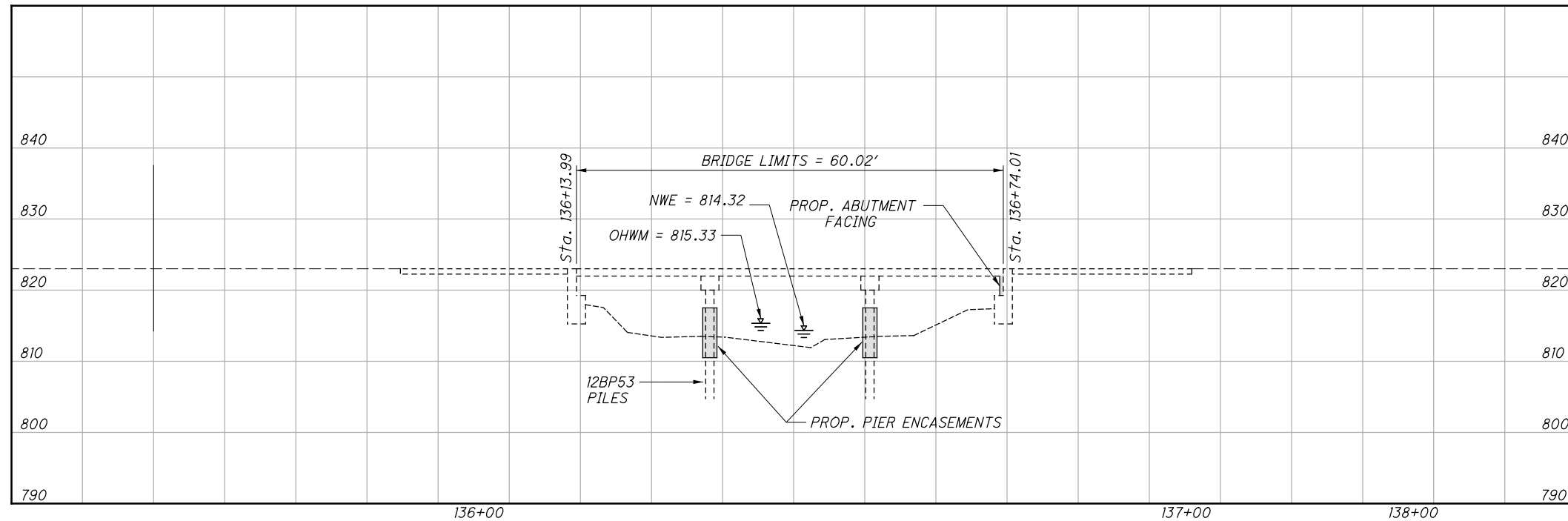
**PLAN VIEW**

**LEGEND**

OHW - ORDINARY HIGH WATER  
NWE - NORMAL WATER ELEVATION

**NOTES**

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.  
ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.



**PROFILE ALONG C CONSTRUCTION S.R. 197**

**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE  
SPANS: 18' - 22.5' - 18' c/c BRG'S.  
ROADWAY: 36'-0" f/f GUARD RAILS  
LOADING: HS20  
SKEW: 10° R.F.  
APPROACH SLABS: AS-1-54 (25' LONG)  
ALIGNMENT: TANGENT  
STRUCTURAL FILE NUMBER: 0602671  
DATE BUILT: 1966  
WEARING SURFACE: 2 1/2" BITUMINOUS ASPHALT CONCRETE (2009)  
DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

- 1.) FACE FORWARD ABUTMENT WITH ANODES.
- 2.) PATCH REAR ABUTMENT.
- 3.) ENCASE PIER COLUMNS.

DESIGN AGENCY  
ODOT DISTRICT 7  
PLANNING & ENGINEERING

DATE  
11-24-15  
REVIEWED  
MRB  
STRUCTURE FILE NUMBER  
0602671

DRAWN  
DDS  
REVISED

DESIGNED  
DDS  
CHECKED  
CWW

AUGLAIZE COUNTY  
STA. 136+13.99  
STA. 136+74.01

**SITE PLAN**

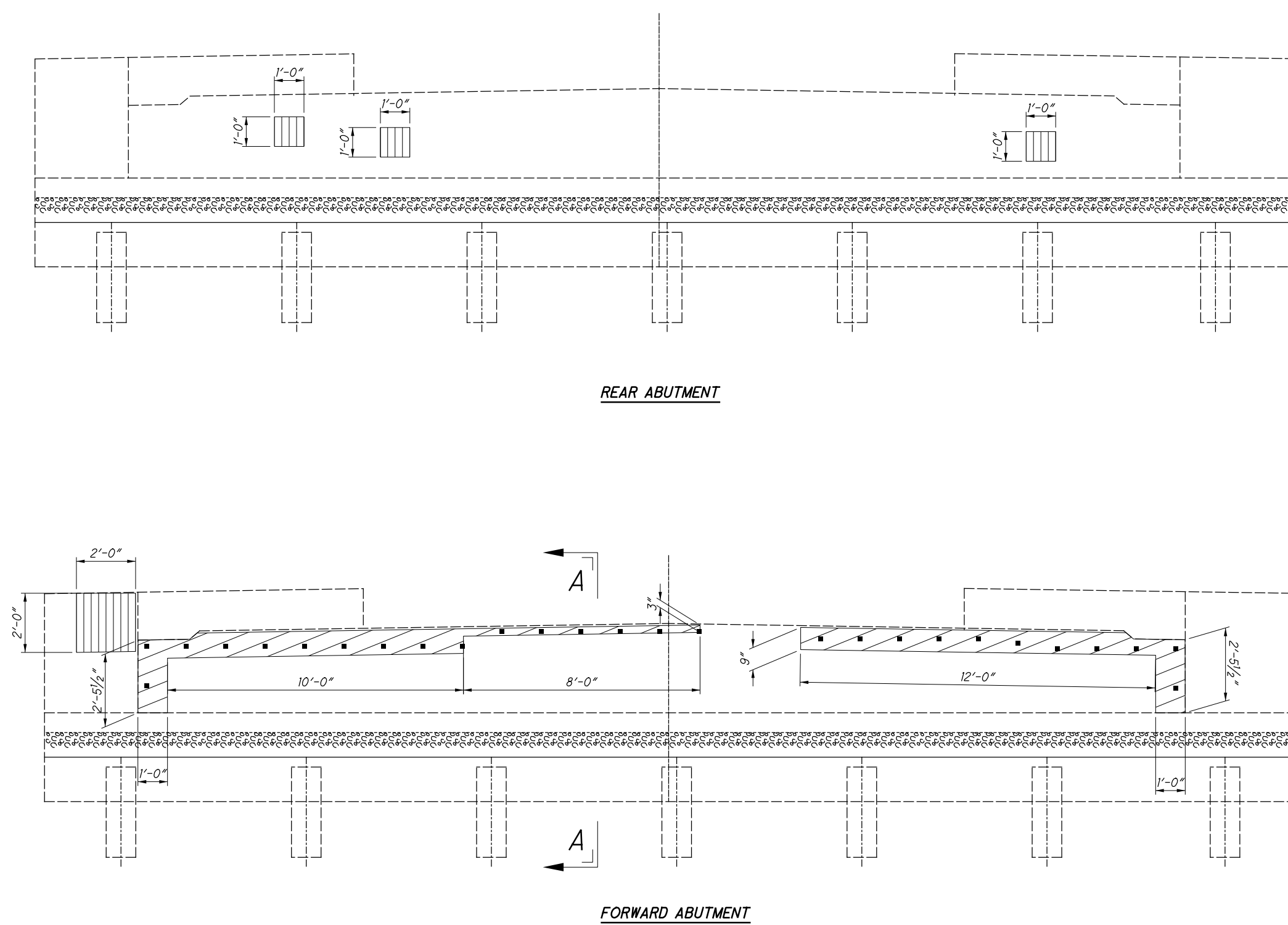
BRIDGE No.: AUG-197-0258  
SR 197 OVER HUSSEY CREEK

**D07-BH-FY16**  
PID No. 93568

1 / 3

20  
43

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**REAR ABUTMENT**

**FORWARD ABUTMENT**

BRIDGE: AUG-197-0258	UNSOUD CONCRETE TO BE PATCHED PER 519	UNSOUD CONCRETE REMOVAL PER 844	GALVANIC ANODES PER 844
	SQ. FT.	SQ. FT.	EA.
REAR ABUTMENT	3		
FORWARD ABUTMENT	4	24	27
FOR INFORMATION ONLY			27
CARRIED TO GENERAL SUMMARY	7	24	

**NOTES**

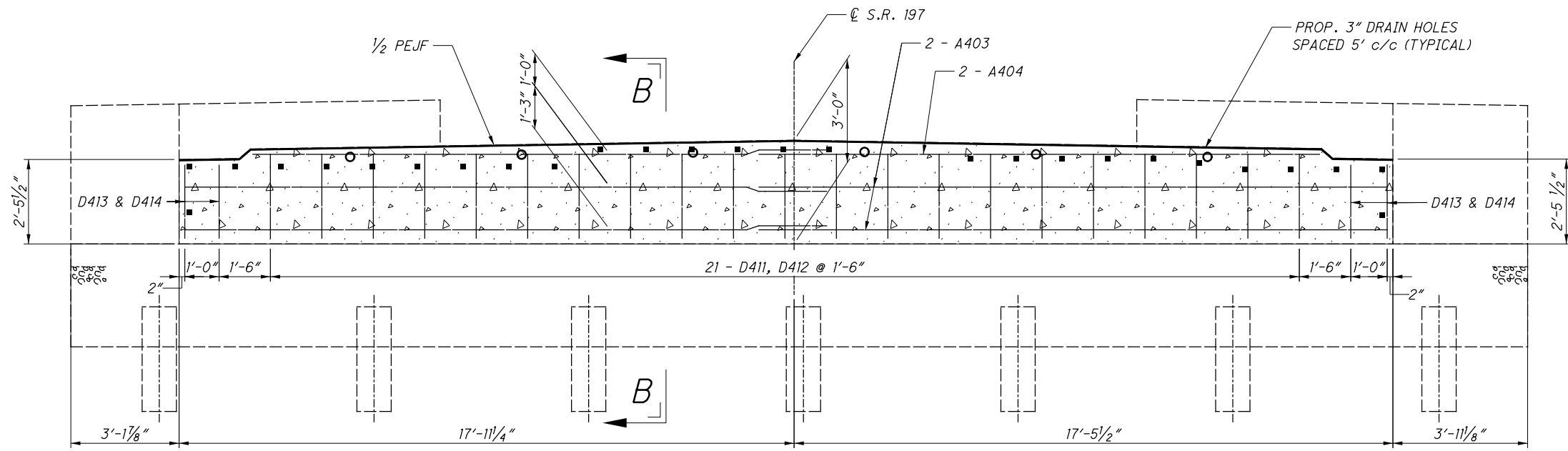
- SEE SHEET 3/3 FOR SECTION A-A
- ANODES ARE TO BE PLACED IN AREAS OF UNSOUND CONCRETE REMOVAL ONLY.

**LEGEND**

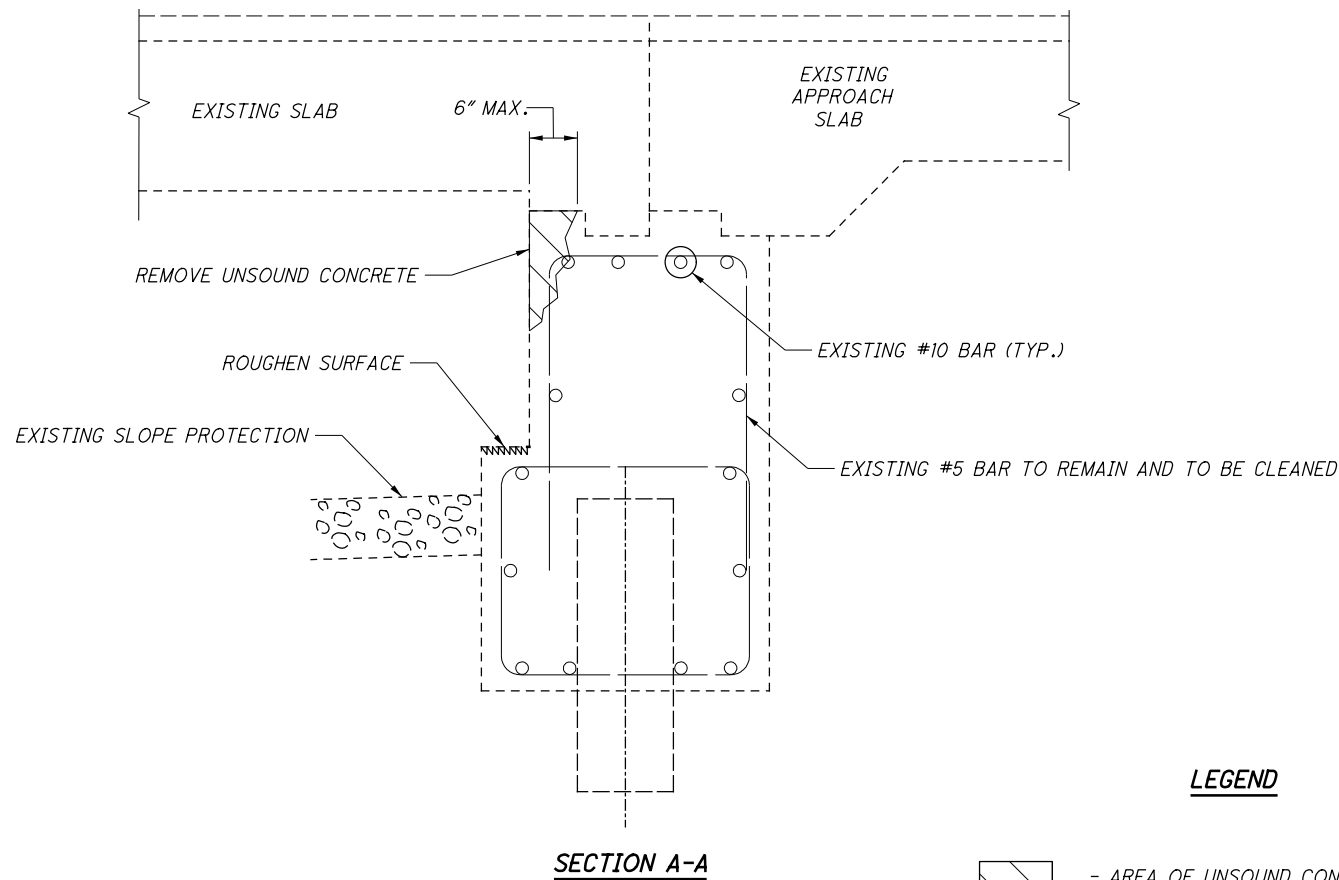
- AREA OF UNSOUND CONCRETE TO BE PATCHED PER ITEM 519 PATCHING CONCRETE STRUCTURE, AS PER PLAN
- AREA OF UNSOUND CONCRETE TO BE REMOVED AND ANODE PLACEMENT @ 16" MAX SPACING PER ITEM 844.

DESIGNED DDS	DRAWN DDS	REVIEWED MRB	DESIGN AGENCY
			ODOT DISTRICT 7 PLANNING & ENGINEERING
CHECKED CWW	REVISED	DATE 11-24-15	STRUCTURE FILE NUMBER 0602671
ABUTMENT REMOVAL DETAILS		BRIDGE No.: AUG-197-0258 SR 197 OVER HUSSEY CREEK	
D07-BH-FY16		PID No. 93568	
2/3		21/43	

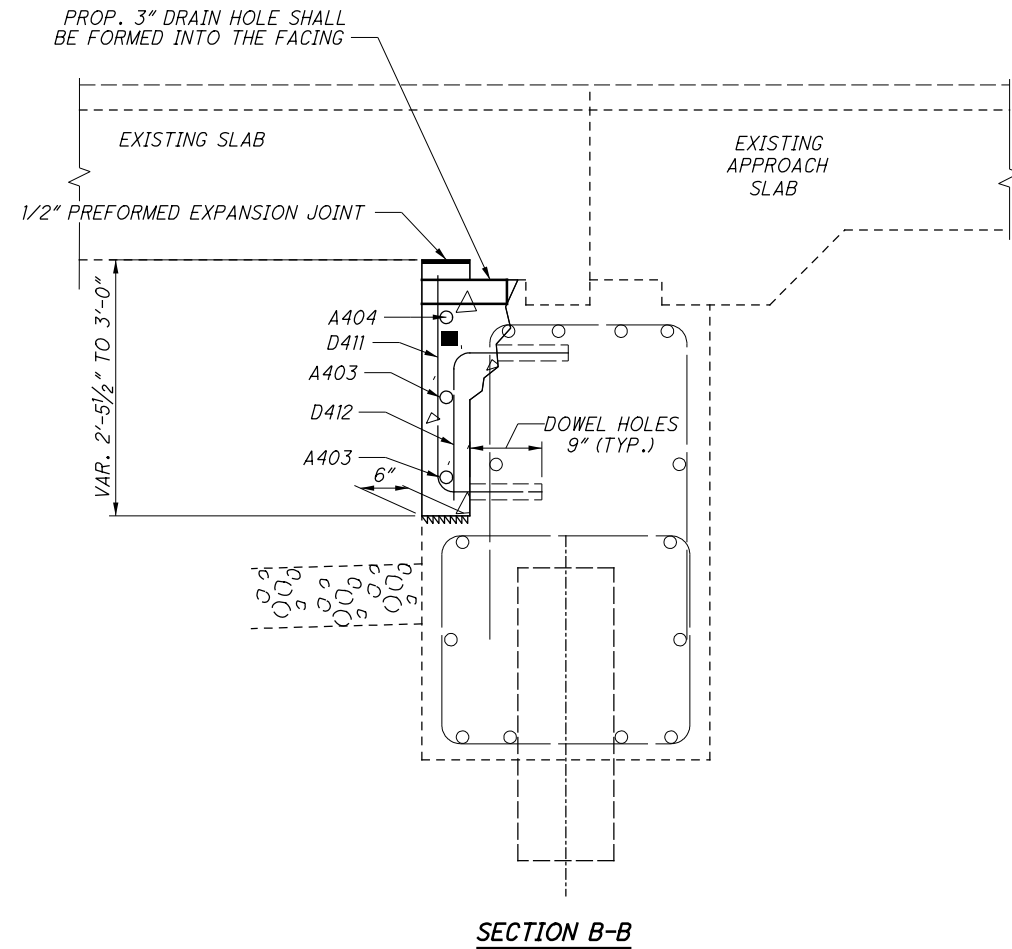
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**FORWARD ABUTMENT**






**SECTION A-A**



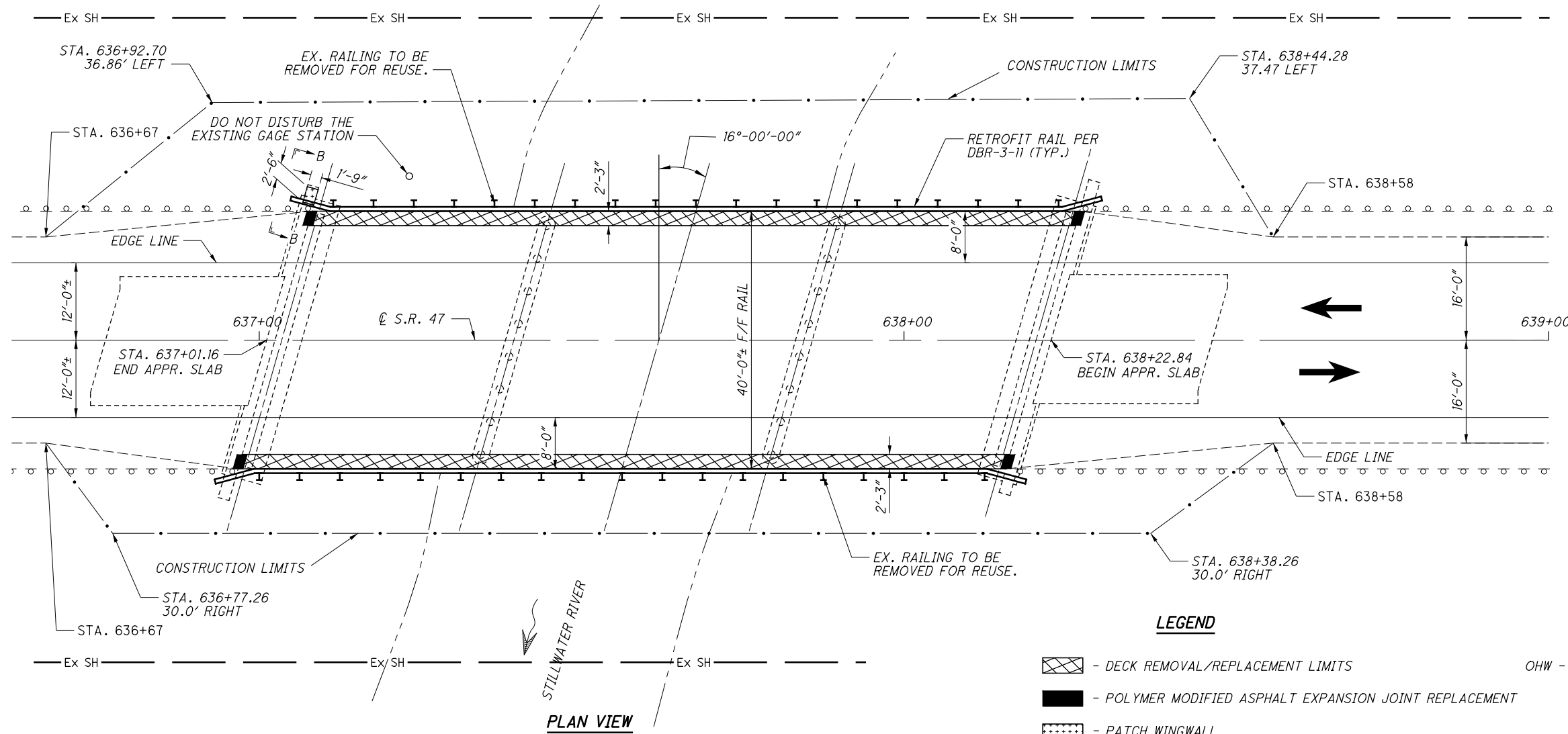
**SECTION B-B**

**LEGEND**

-  - AREA OF UNSOUND CONCRETE
-  - ITEM 844: CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN
-  - PROPOSED GALVANIC ANODE

DESIGNED		DRAWN	REVIEWED	DATE	DESIGN AGENCY
DDS		DDS	MRB	11-24-15	ODOT DISTRICT 7
CHECKED		REVISED	STRUCTURE FILE NUMBER		PLANNING & ENGINEERING
CWW			0602671		
<b>ABUTMENT DETAILS</b>					
BRIDGE NO.: AUG-197-0258					
SR 197 OVER HUSSEY CREEK					
<b>D07-BH-FY16</b>					
PID No. 93568					
3 / 3					
22					
43					

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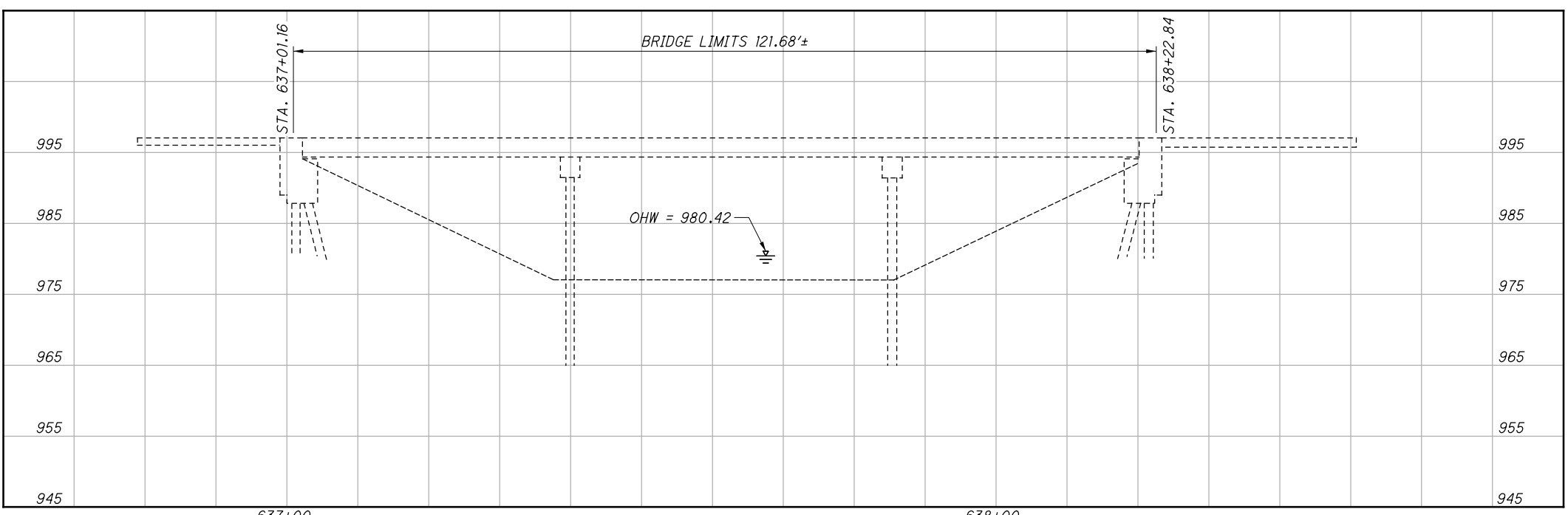


**PLAN VIEW**

- LEGEND**
- DECK REMOVAL/REPLACEMENT LIMITS
  - POLYMER MODIFIED ASPHALT EXPANSION JOINT REPLACEMENT
  - PATCH WINGWALL
- OHW - ORDINARY HIGH WATER

**NOTES**

1. EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.
2. ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.
3. THE EXISTING PROFILE SHALL BE MAINTAINED.
4. SEE SHEET 7/43 FOR S.R. 47 DETOUR.
5. SEE SHEET 24 FOR SECTION B-B DETAILS



**PROFILE ALONG  $\hat{C}$  CONSTRUCTION S.R. 47**

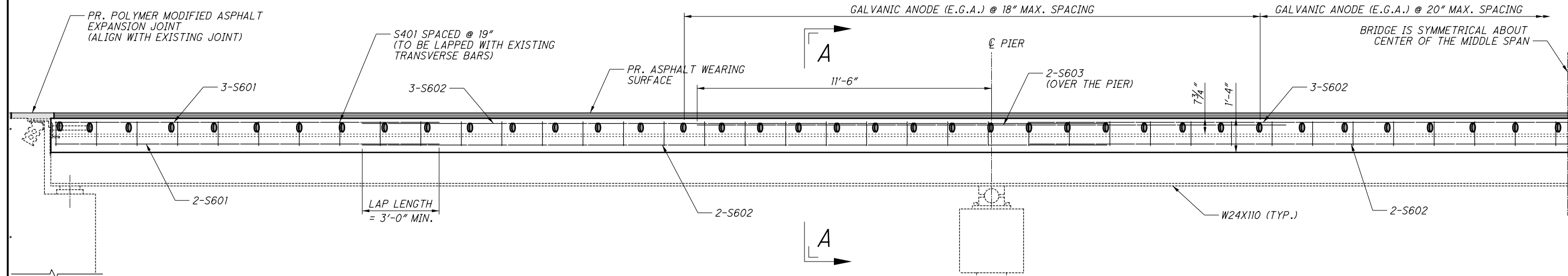
EXISTING STRUCTURE
TYPE: THREE SPAN CONTINUOUS STEEL BEAM WITH CAPPED PILE SUBSTRUCTURE SPANS: 36' - 45' - 36' c/c BRG'S. ROADWAY: 40'-0" f/f GUARD RAILS LOADING: HS20 SKEW: 16° L.F. APPROACH SLABS: AS-1-54 (25' LONG) ALIGNMENT: TANGENT STRUCTURAL FILE NUMBER: 1900668 DATE BUILT: 1965 WEARING COURSE: 2½" BITUMINOUS ASPHALT CONCRETE (2014) DISPOSITION: TO BE REHABILITATED

PROPOSED WORK
1.) REPLACE DECK EDGES 2.) PATCH TOP OF LEFT REAR WINGWALL 3.) RETROFIT BRIDGE RAILING



DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
DATE 11-24-15
REVIEWED MRB
DRAWN DDS
DESIGNED DDS
DARKE COUNTY STA. 637+01.16 STA. 638+22.84
SITE PLAN BRIDGE NO.: DAR-47-1206 S.R. 47 OVER THE STILLWATER RIVER
D07-BH-FY16 PID No. 93568
1 / 2
23 43

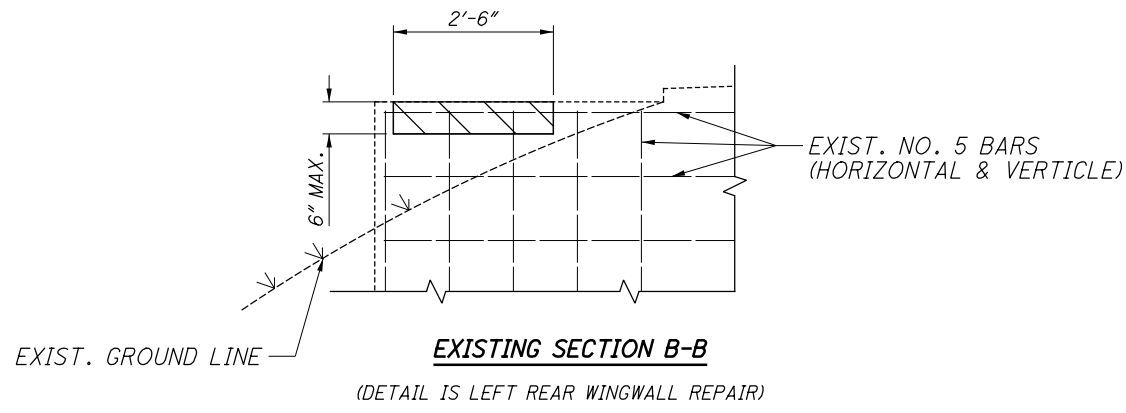
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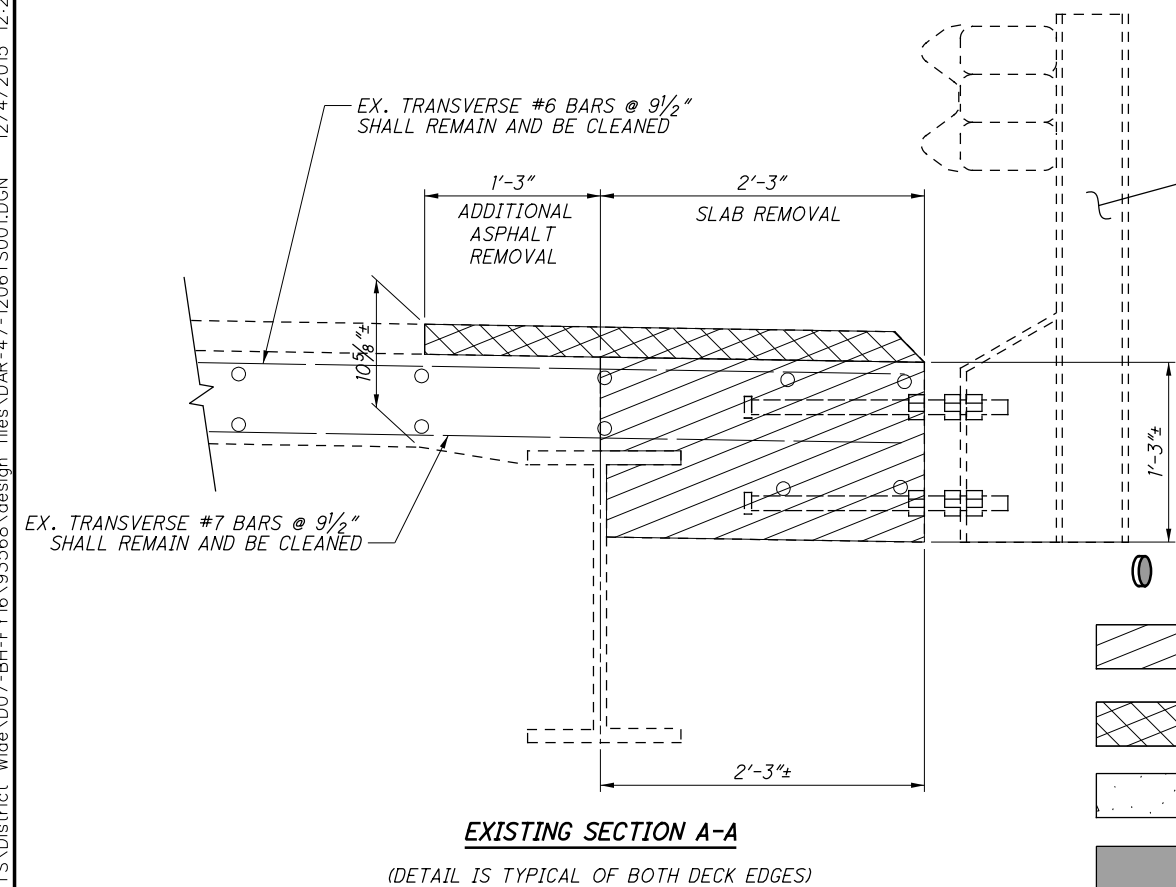
DESIGNED	DDS	CHECKED	CWW
DRAWN	DDS	REVISED	
REVIEWED	MRB	DATE	11-24-15
STRUCTURE FILE NUMBER			1900668
DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING			

**SUPERSTRUCTURE DETAILS**  
 BRIDGE NO.: DAR-47-1206  
 S.R. 47 OVER THE STILLWATER RIVER

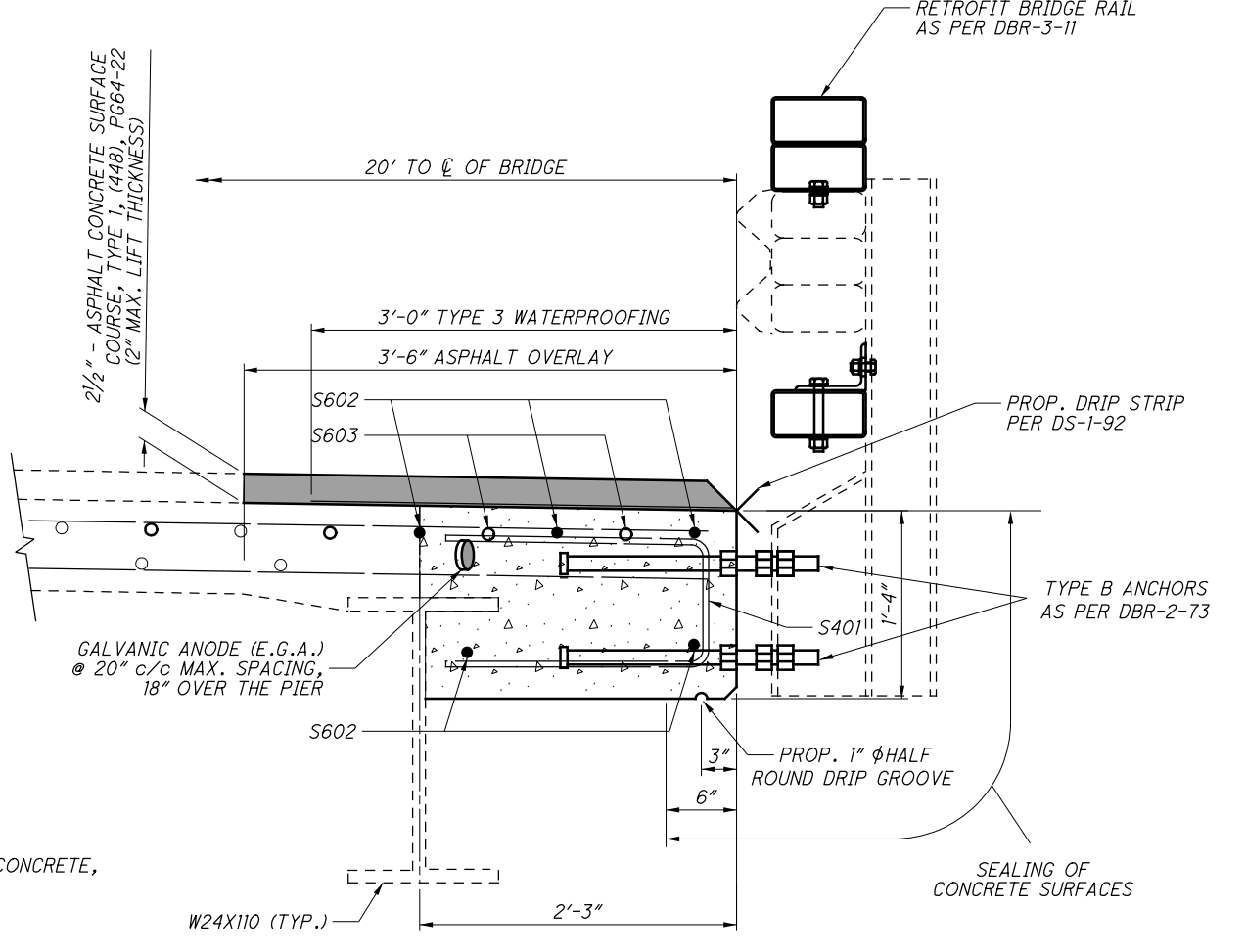
**D07-BH-FY16**  
 PID No. 93568  
 2 / 2  
 24 / 43



**PARTIAL SLAB ELEVATION**



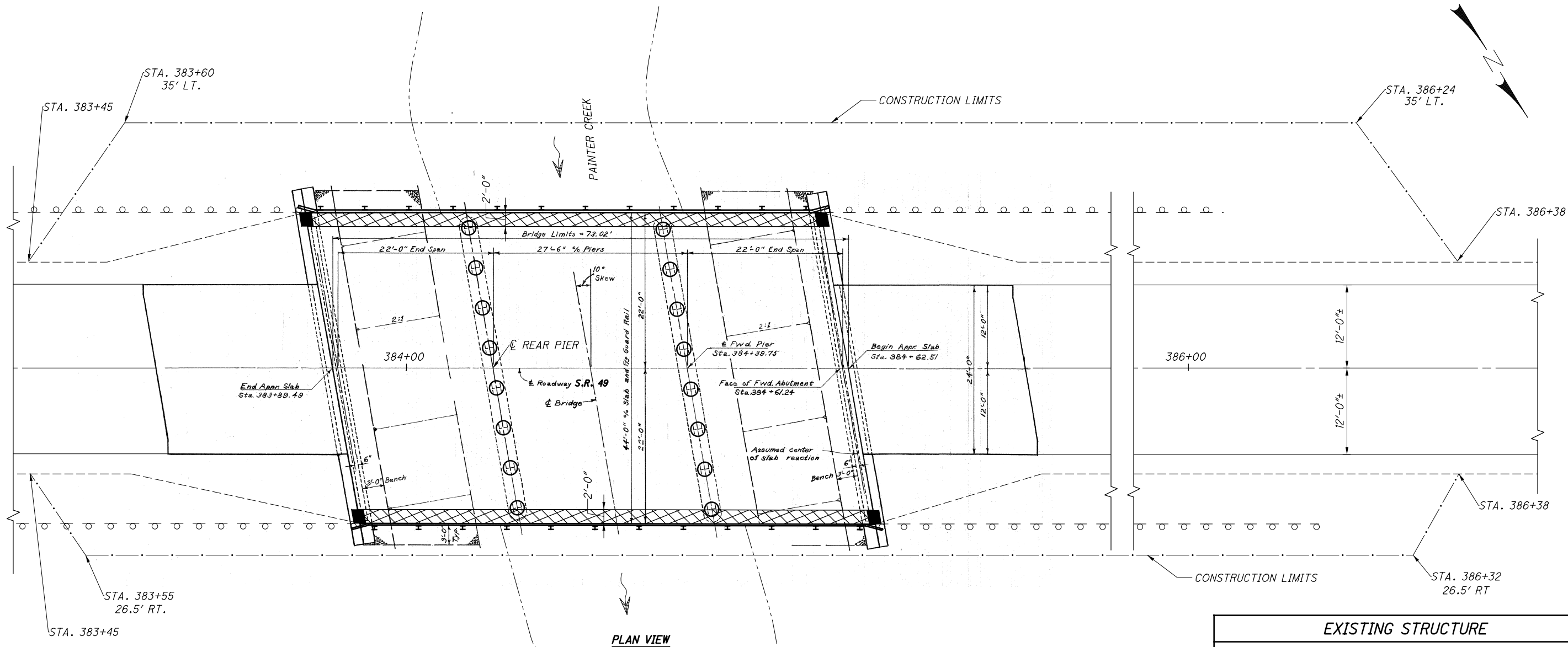
- LEGEND**
- PROPOSED GALVANIC ANODE, PER ITEM 511-CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)
  - PORTION OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
  - WEARING COURSE REMOVED
  - PROPOSED CLASS QC2 CONCRETE, BRIDGE DECK
  - PROPOSED ASPHALT
  - ITEM 519 PATCHING CONCRETE STRUCTURES



**PROPOSED SECTION A-A**  
 (DETAIL IS TYPICAL OF BOTH DECK EDGES)



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- LEGEND**
- DECK REMOVAL/REPLACEMENT LIMITS
  - POLYMER MODIFIED ASPHALT EXPANSION JOINT

**PLAN VIEW**

**NOTES**

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY. ALL DIMENSIONS ARE CONSIDERED APPROXIMATE. SEE SHEET 8/43 FOR S.R. 49 DETOUR.

OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.

**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE

SPANS: 22' - 27.5' - 22' c/c BRG'S.

ROADWAY: 44'-0" f/f GUARD RAILS

LOADING: HS20

SKEW: 10° R.F.

APPROACH SLABS: AS-1-54 (25' LONG)

ALIGNMENT: TANGENT

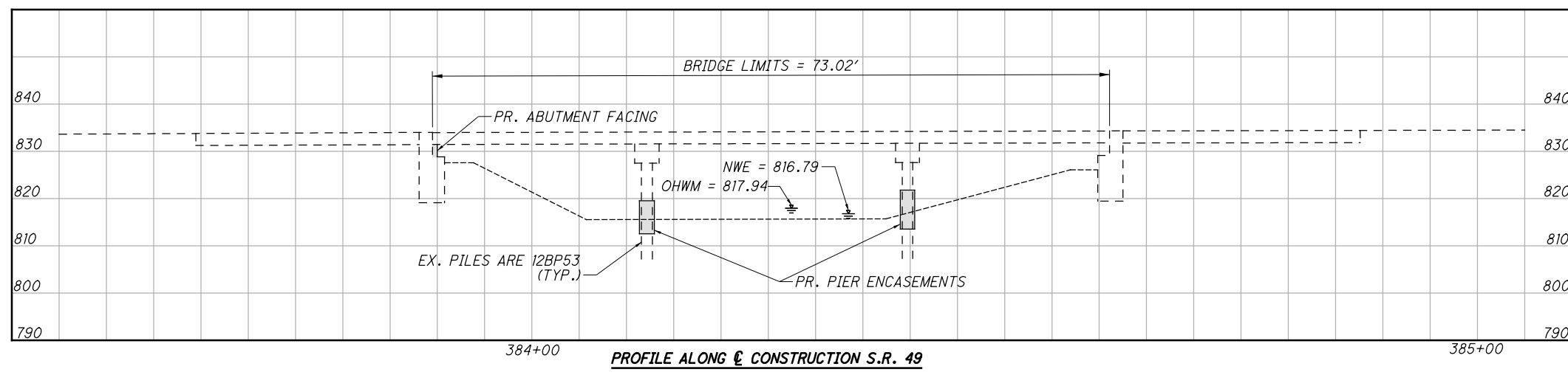
STRUCTURAL FILE NUMBER: 1900900

DATE BUILT: 1960

WEARING COURSE: 2" BITUMINOUS ASPHALT CONCRETE (2008)

DISPOSITION: TO BE REHABILITATED

- PROPOSED WORK**
- 1.) ENCASE PIER COLUMNS
  - 2.) FACE REAR ABUTMENT WITH ANODES
  - 3.) PATCH FORWARD ABUTMENT
  - 4.) REPLACE SLAB EDGES
  - 5.) RETROFIT BRIDGE RAILING
  - 6.) REBUILD WINGWALLS



**PROFILE ALONG & CONSTRUCTION S.R. 49**

**SITE PLAN**

DARKE COUNTY  
 STA. 383+89.49  
 STA. 384+62.51

BRIDGE NO.: DAR-49-0728  
 S.R. 49 OVER PAINTER CREEK

DESIGN AGENCY  
 ODOT DISTRICT 7  
 PLANNING & ENGINEERING

DATE  
 11-24-15

REVIEWED  
 MRB

DRAWN  
 DDS

DESIGNED  
 DDS

CHECKED  
 CWW

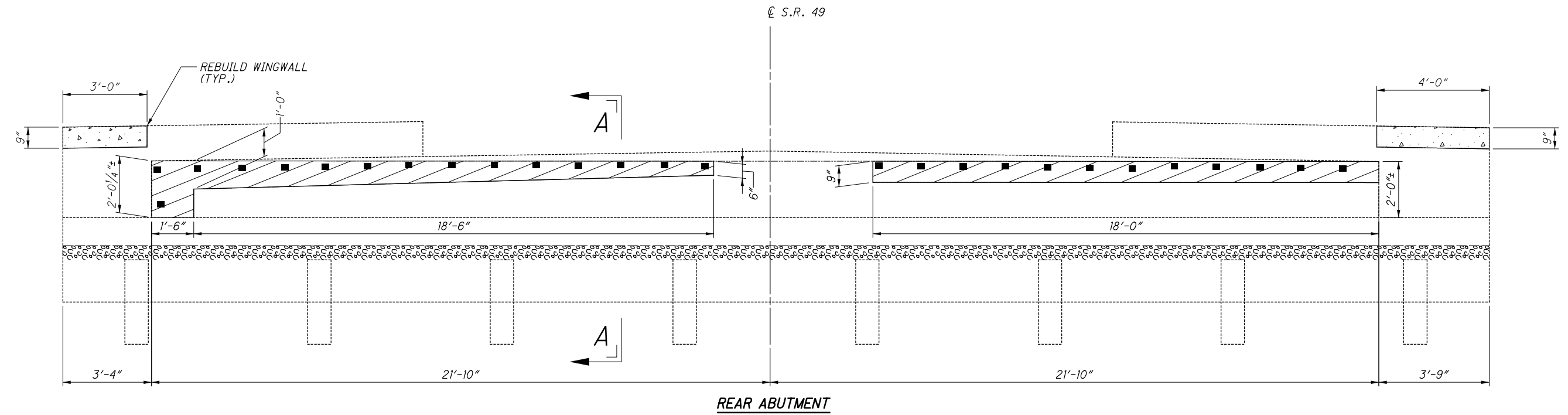
STRUCTURE FILE NUMBER  
 1900900

PID No. 93568

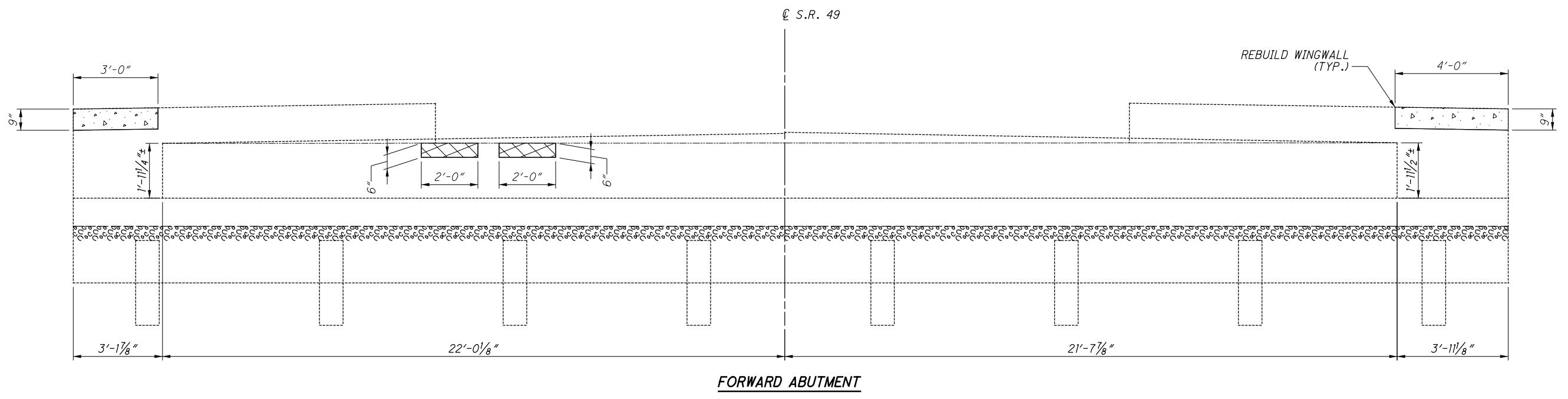
1 / 4

25 / 43

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**REAR ABUTMENT**



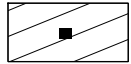
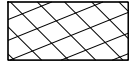
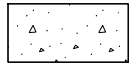
**FORWARD ABUTMENT**

BRIDGE: DAR-49-0728	CONCRETE REMOVAL PER 202	UNSOUND CONCRETE PATCHED PER 519	UNSOUND CONCRETE REMOVAL PER 844	GALVANIC ANODES PER 844
	CU. FT.	SQ. FT.	SQ. FT.	EA.
REAR ABUTMENT	6.5		30	27
FORWARD ABUTMENT	6.5	2		
INFORMATION ONLY	13			
CARRIED TO GENERAL SUMMARY		2	30	

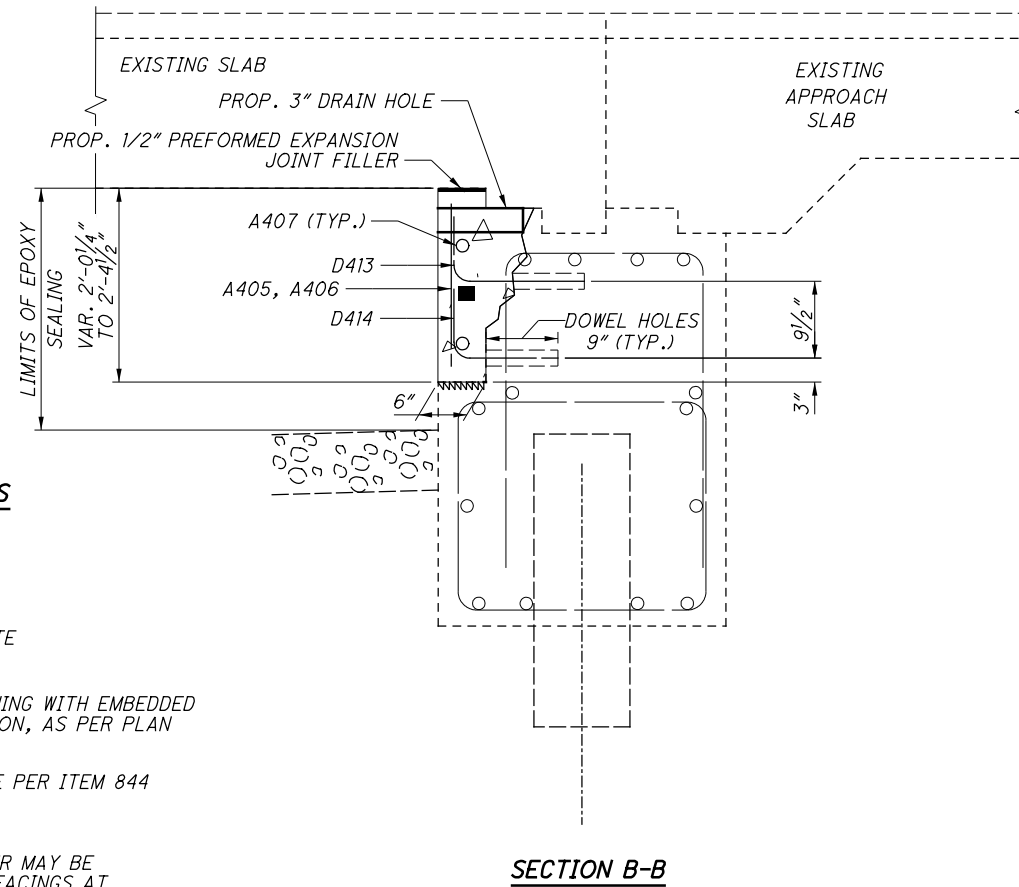
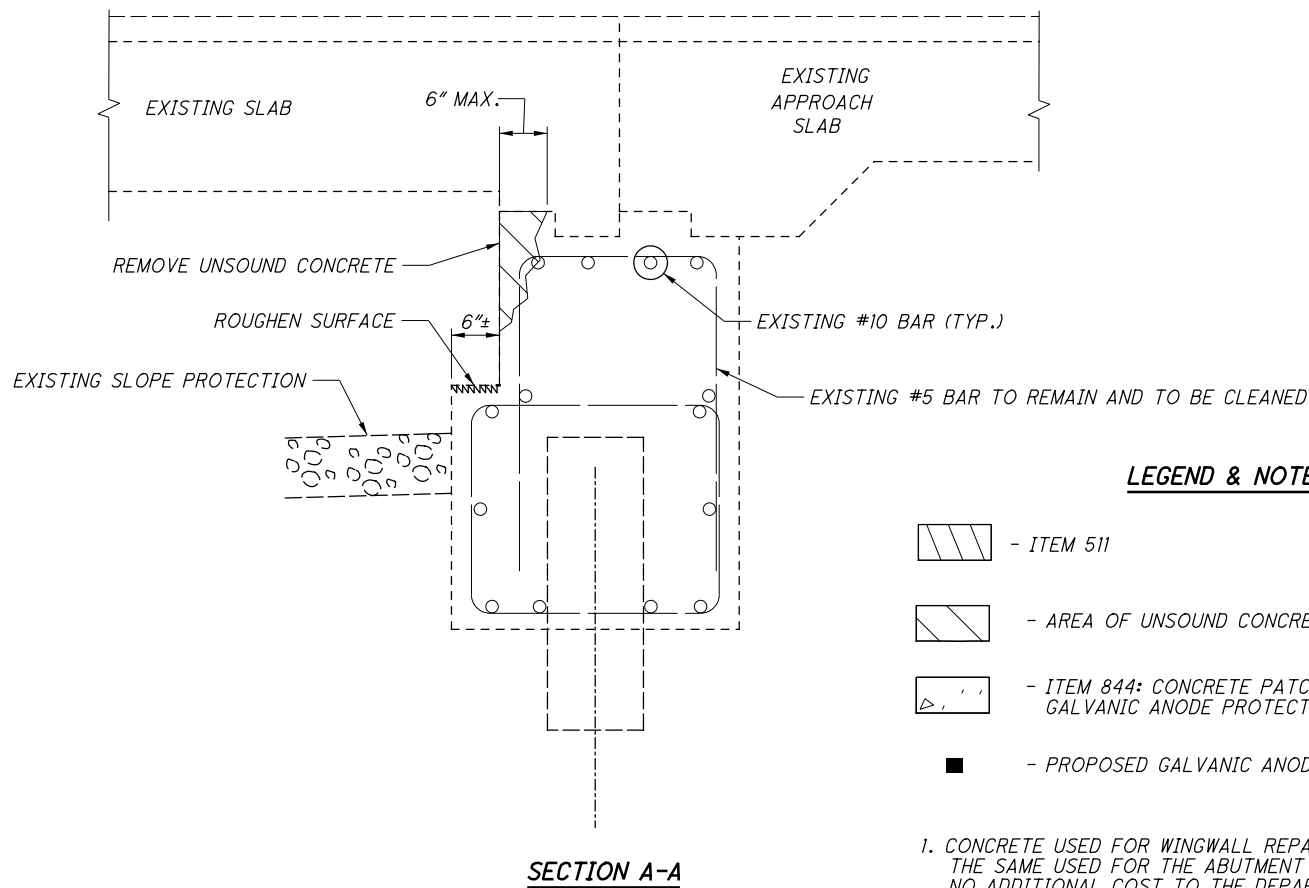
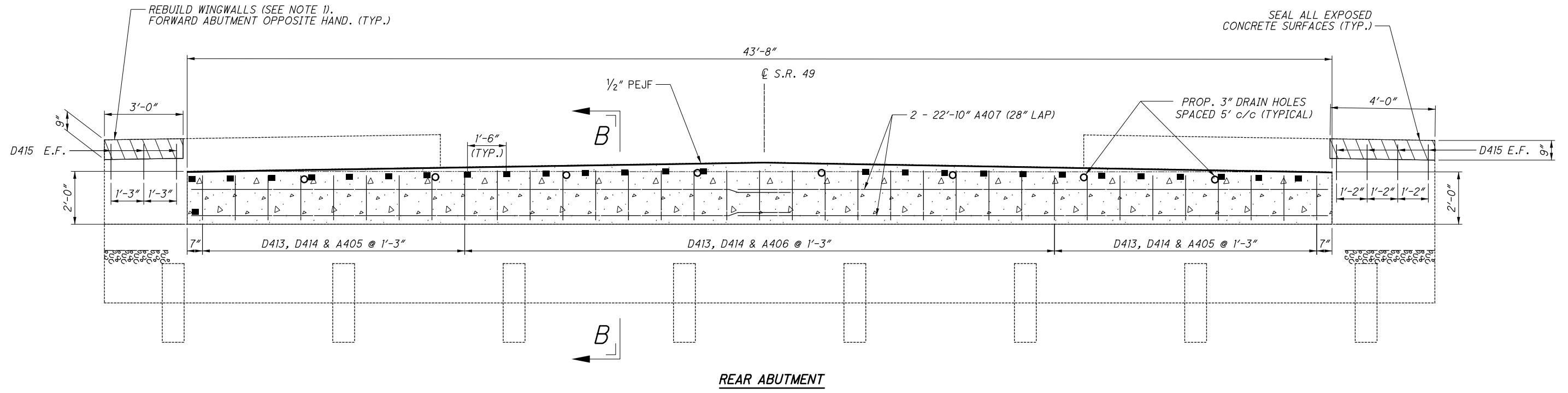
**NOTES**

1. SEE SHEET **3/4** FOR SECTION A-A





**LEGEND**

-  - AREA OF UNSOUND CONCRETE TO BE PATCHED PER ITEM 844 CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN
-  - AREA OF UNSOUND CONCRETE TO BE PATCHED PER ITEM 519 PATCHING CONCRETE STRUCTURE, AS PER PLAN
-  - AREA OF CONCRETE TO BE REMOVED PER ITEM 202

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**LEGEND & NOTES**

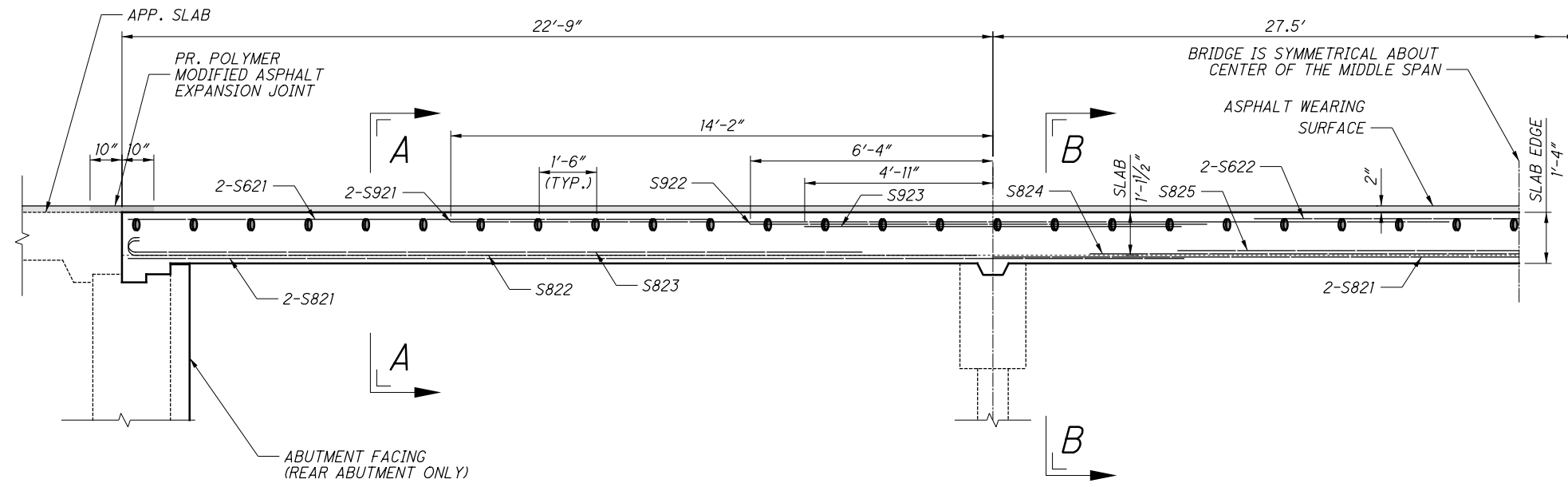
-  - ITEM 511
-  - AREA OF UNSOUND CONCRETE
-  - ITEM 844: CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN
-  - PROPOSED GALVANIC ANODE PER ITEM 844

1. CONCRETE USED FOR WINGWALL REPAIR MAY BE THE SAME USED FOR THE ABUTMENT FACINGS AT NO ADDITIONAL COST TO THE DEPARTMENT.

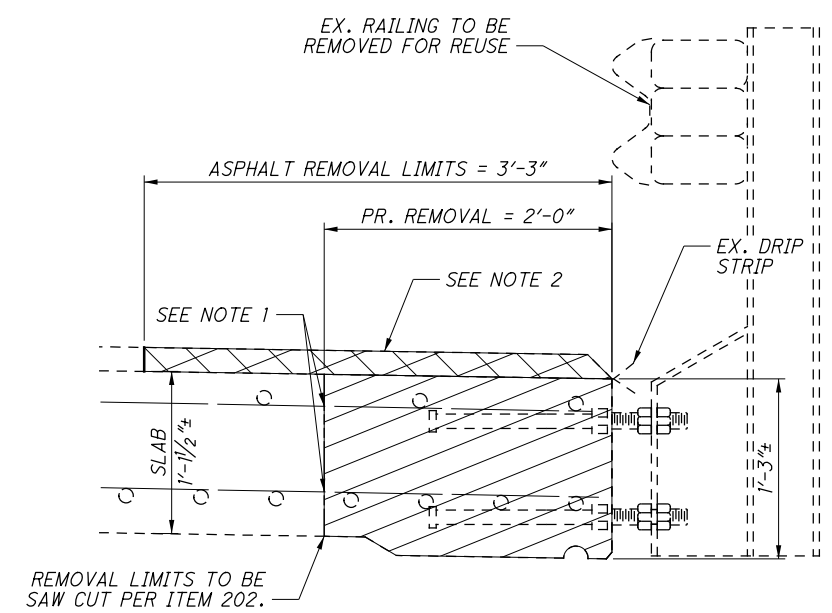
2. E.F. = EACH FACE

DESIGNED DDS CHECKED CWW	DRAWN DDS REVISED	REVIEWED MRB	DATE 11-24-15	DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
ABUTMENT DETAILS		BRIDGE NO.: DAR-49-0728		STRUCTURE FILE NUMBER 1900900
D07-BH-FY16		S.R. 49 OVER PAINTER CREEK		PID No. 93568
3 / 4		27		43

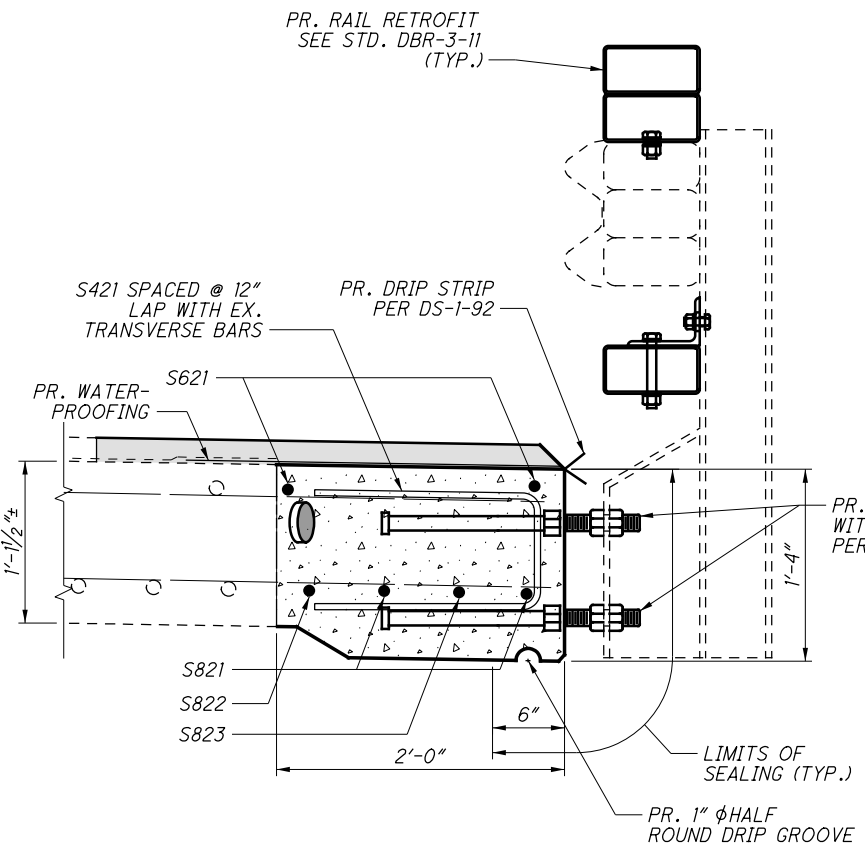
I:\PROJECTS\District Wide\07-BH-FY16\93568\design\_files\AR-49-0728TS001.DGN 12/4/2015 11:13:41 AM dslmmon



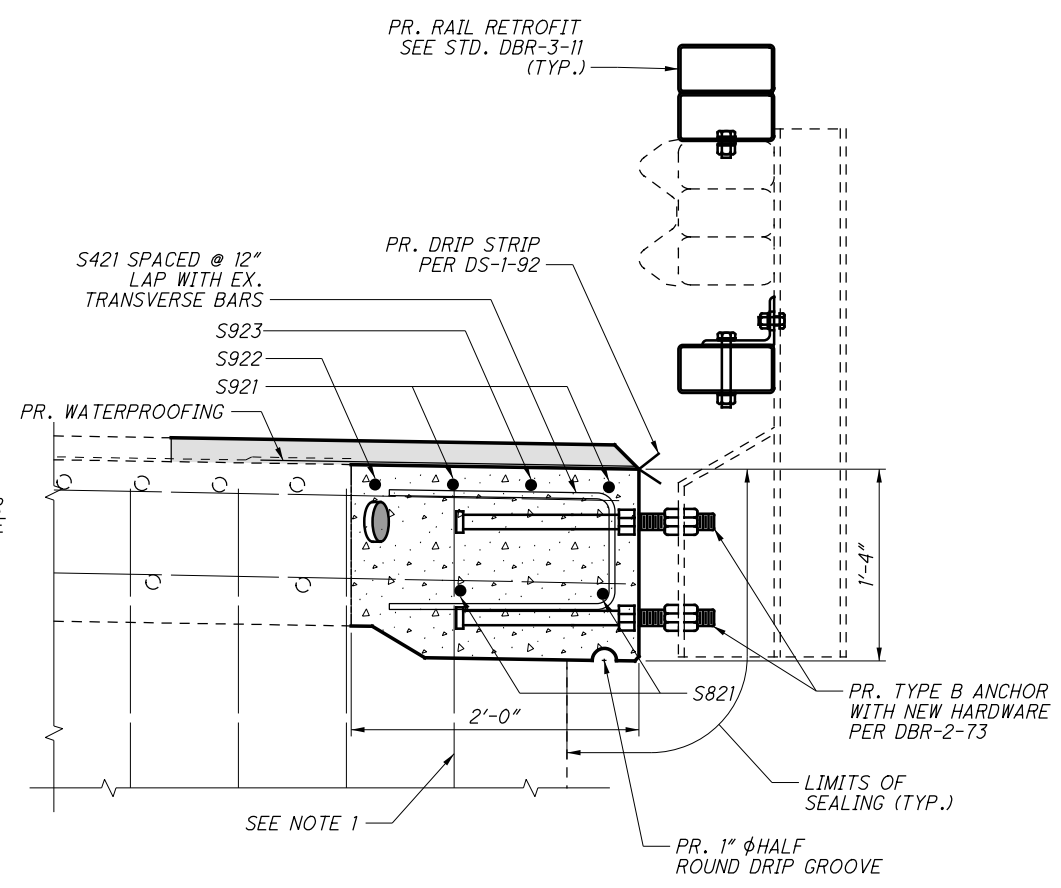
**PARTIAL SLAB ELEVATION**



**TYP. SLAB EDGE REMOVAL**



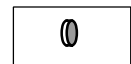


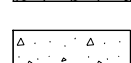
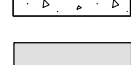
**SECTION A-A  
 PROPOSED SLAB**



**SECTION B-B  
 PROPOSED PIER SECTION**

**NOTES & LEGEND**

- EXISTING TRANSVERSE REINFORCING STEEL AND PIER STIRRUPS IN OVERHANG REMOVAL LIMITS TO REMAIN AND SHALL NOT BE CUT.
- CARE SHALL BE TAKEN WHILE REMOVING THE ASPHALT WEARING SURFACE SO THAT THE EXISTING WATERPROOFING IS NOT DAMAGED.

-  - PROPOSED GALVANIC ANODE PER ITEM 511.
-  - PORTION OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
-  - WEARING COURSE REMOVED
-  - PROPOSED CLASS QC2 CONCRETE, BRIDGE DECK
-  - PROPOSED ASPHALT

DESIGN AGENCY  
 ODOT DISTRICT 7  
 PLANNING & ENGINEERING

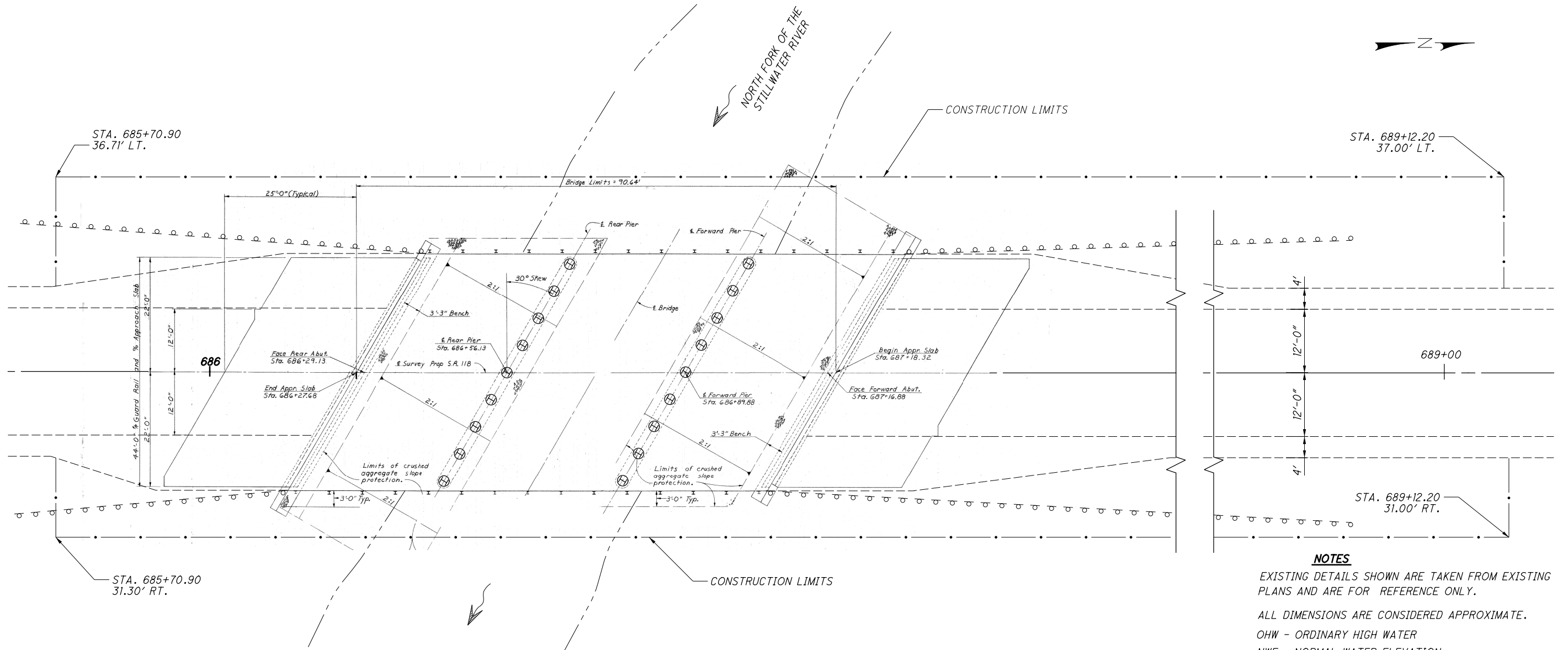
DATE  
 11-24-15  
 REVIEWED  
 MRB  
 DRAWN  
 DDS  
 CHECKED  
 DDS  
 STRUCTURE FILE NUMBER  
 1900900  
 REVISED  
 CWW

**SUPERSTRUCTURE DETAILS**  
 BRIDGE NO.: DAR-49-0728  
 S.R. 49 OVER PAINTER CREEK

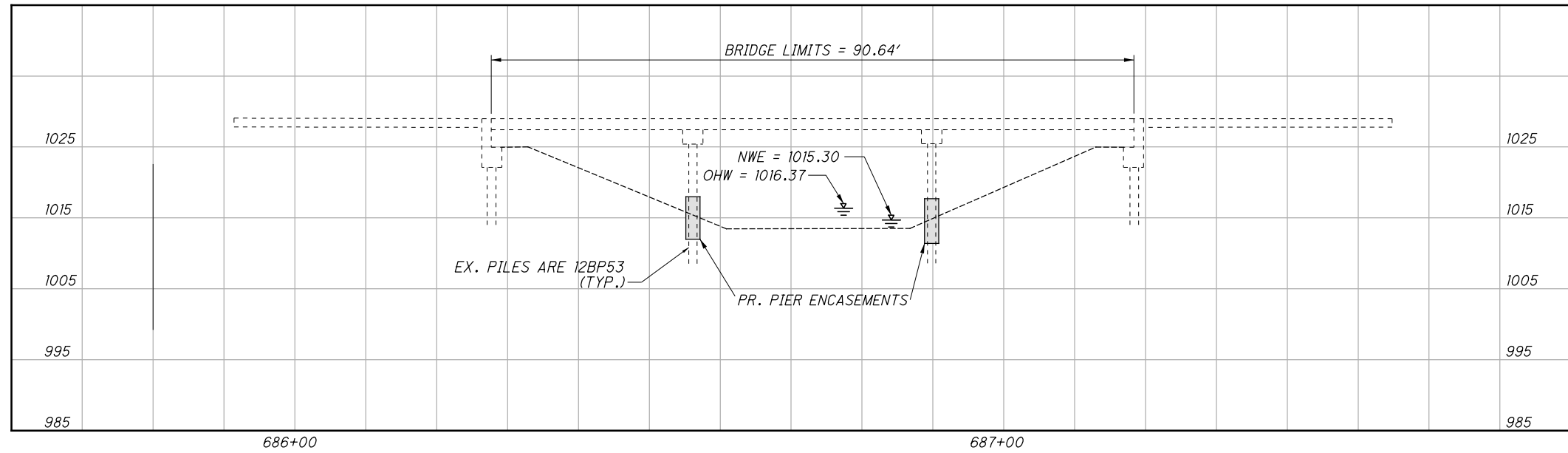
**D07-BH-FY16**  
 PID No. 93568

4 / 4

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**NOTES**  
 EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.  
 ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
 OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.



PROFILE ALONG  $\hat{C}$  CONSTRUCTION S.R. 118

**EXISTING STRUCTURE**

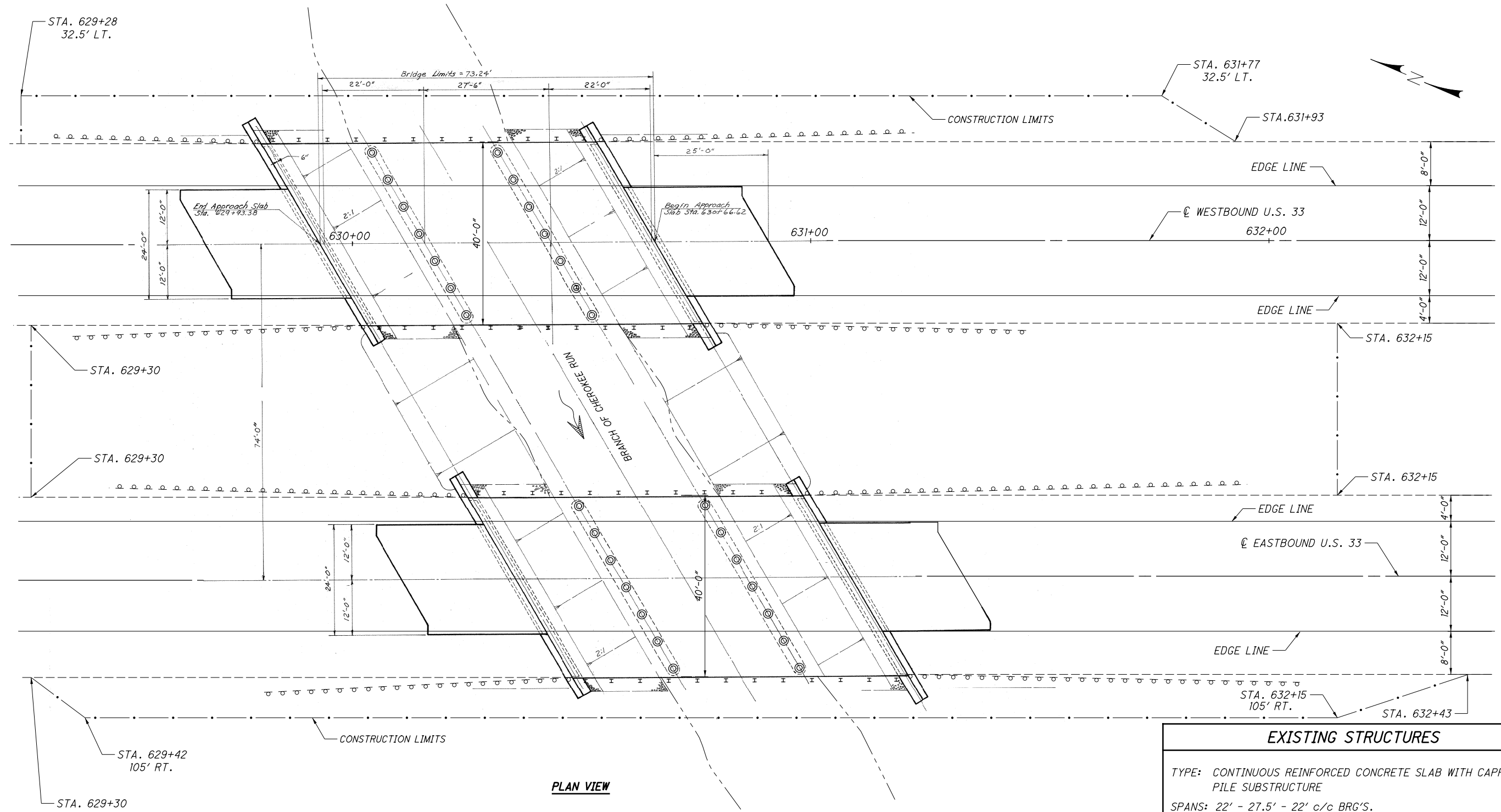
TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE  
 SPANS: 27' - 33.75' - 27' c/c BRG'S.  
 ROADWAY: 44'-0" f/f GUARD RAILS  
 LOADING: HS20  
 SKEW: 30° L.F.  
 APPROACH SLABS: AS-1-54 (25' LONG)  
 ALIGNMENT: TANGENT  
 STRUCTURAL FILE NUMBER: 1901729  
 DATE BUILT: 1979  
 WEARING COURSE: 2" BITUMINOUS ASPHALT CONCRETE (2006)  
 DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

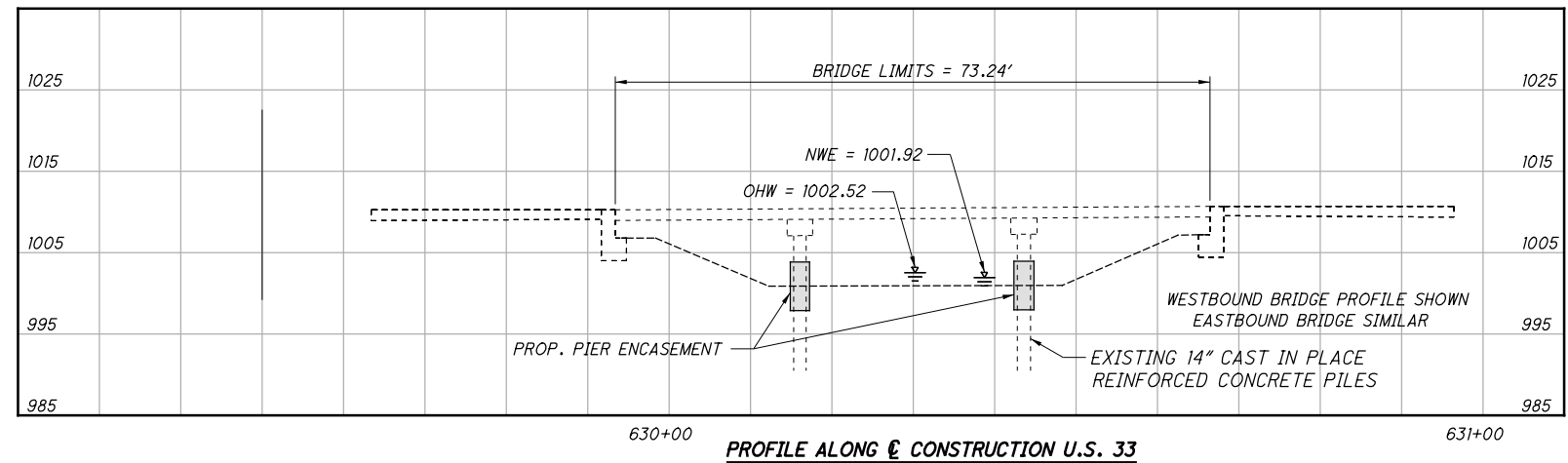
1.) ENCASE PIER COLUMNS

DESIGN AGENCY: ODOT DISTRICT 7 PLANNING & ENGINEERING  
 DATE: 11-24-15  
 REVIEWED: MRB  
 DRAWN: DDS  
 DESIGNED: DDS  
 CHECKED: CWW  
 STRUCTURE FILE NUMBER: 1901729  
 DARKE COUNTY  
 STA. 686+27.68  
 STA. 687+18.32  
**SITE PLAN**  
 BRIDGE NO.: DAR-118-1303  
 SR 118 OVER NORTH FORK OF THE STILLWATER RIVER  
**D07-BH-FY16**  
 PID No. 93568  
 1 / 1  
 29 / 43

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**PLAN VIEW**



**PROFILE ALONG  $\hat{C}$  CONSTRUCTION U.S. 33**

**LEGEND & NOTES**

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.  
 ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
 OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.

**EXISTING STRUCTURES**

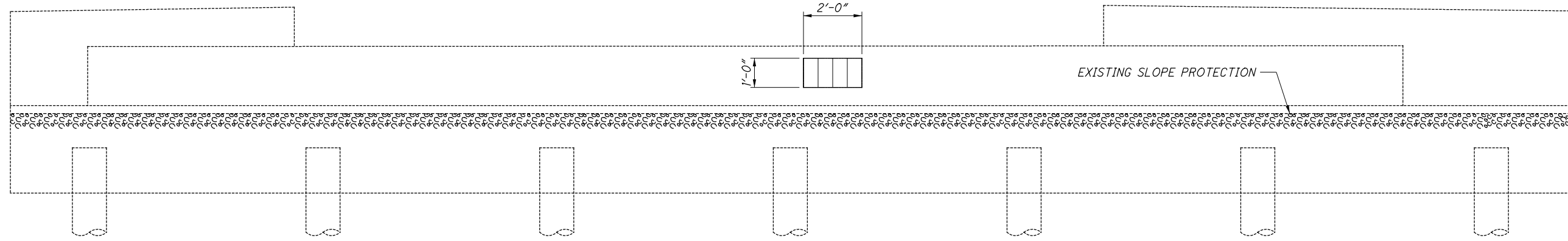
TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE  
 SPANS: 22' - 27.5' - 22' c/c BRG'S.  
 ROADWAY: 40'-0" f/f GUARD RAILS  
 LOADING: HS20  
 SKEW: 30° R.F.  
 APPROACH SLABS: AS-1-54 (25' LONG)  
 ALIGNMENT: TANGENT  
 STRUCTURAL FILE NUMBER: 4600398/4600428  
 DATE BUILT: 1966  
 WEARING COURSE: 4.9" BITUMINIOUS ASPHALT CONCRETE (1996)  
 DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

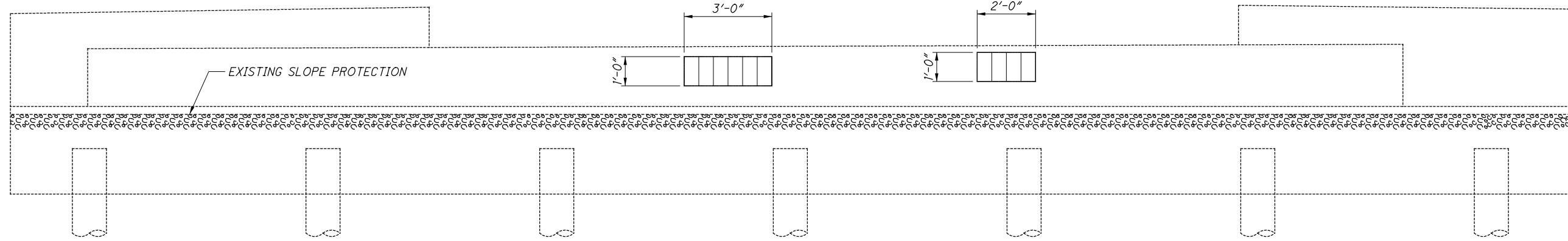
- 1.) PATCH ABUTMENTS.
- 2.) ENCASE PIER COLUMNS.

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING	DATE 11-24-15	REVIEWED MRB	STRUCTURE FILE NUMBER 4600398/4600428
DESIGNED DDS	DRAWN DDS	CHECKED CWW	REVISED
LOGAN COUNTY STA. 629+93.38 STA. 630+66.62	SITE PLAN BRIDGE No.: LOG-33-1192 L/R US 33 OVER BRANCH OF CHEROKEE RUN		
D07-BH-FY16 PID No. 93568	1 / 2	30	43

I:\PROJECTS\District Wide\07-BH-FY16\93568\design\_files\LOG-33-1192L&R\LOG-33-1192L&R\LOG-33-1192L&R\LOG-33-1192L&R.dgn 12/4/2015 11:14:28 AM dslemmon



**REAR ABUTMENT**  
LOG-33-1192 LEFT



**FORWARD ABUTMENT**  
LOG-33-1192 RIGHT

BRIDGE: LOG-33-1192L&R	CONCRETE PATCHED PER 519, AS PER PLAN
	SQ. FT.
REAR ABUTMENT LEFT BRIDGE	2
REAR ABUTMENT RIGHT BRIDGE	5
CARRIED TO GENERAL SUMMARY	7

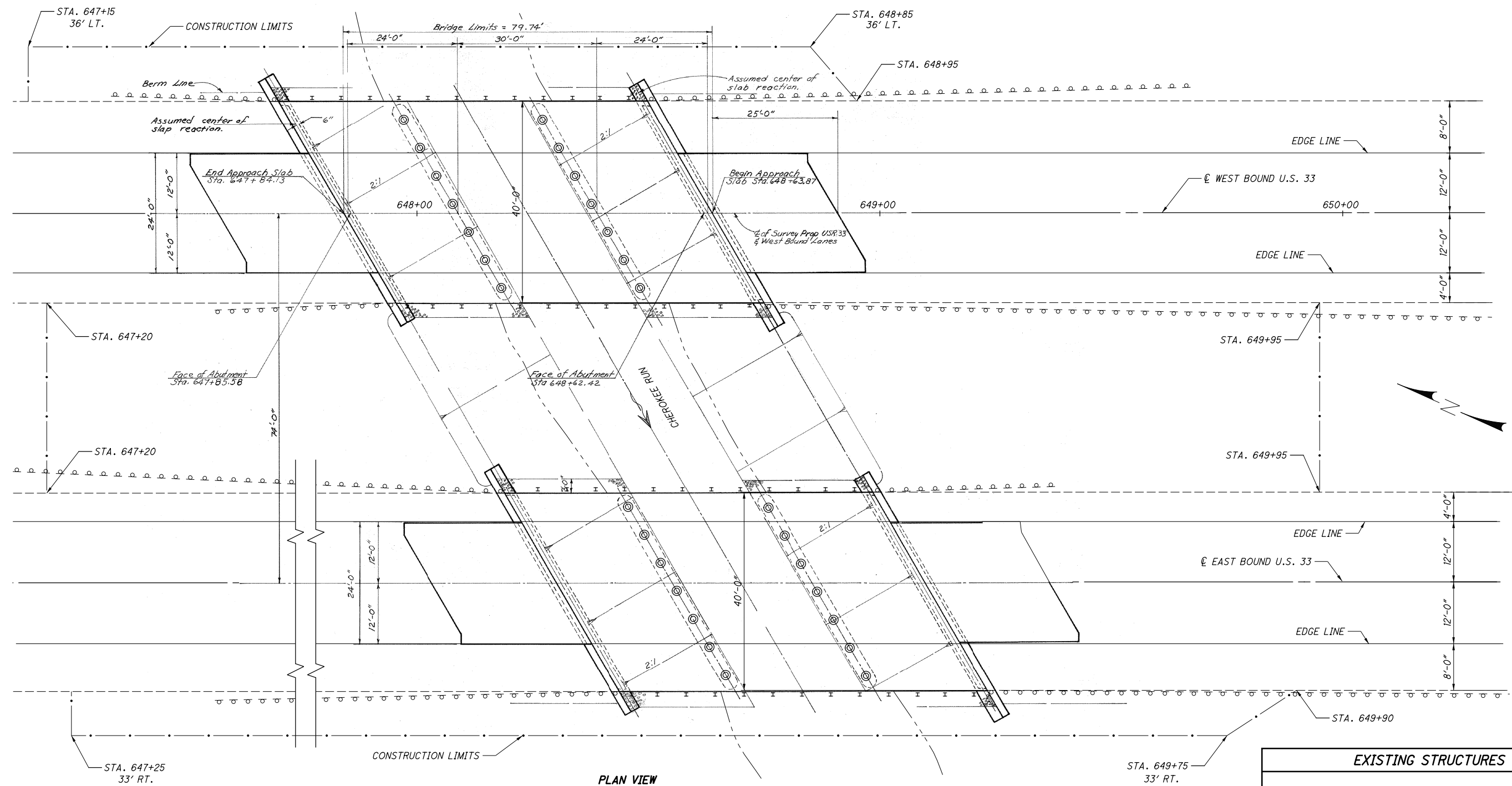
**LEGEND**



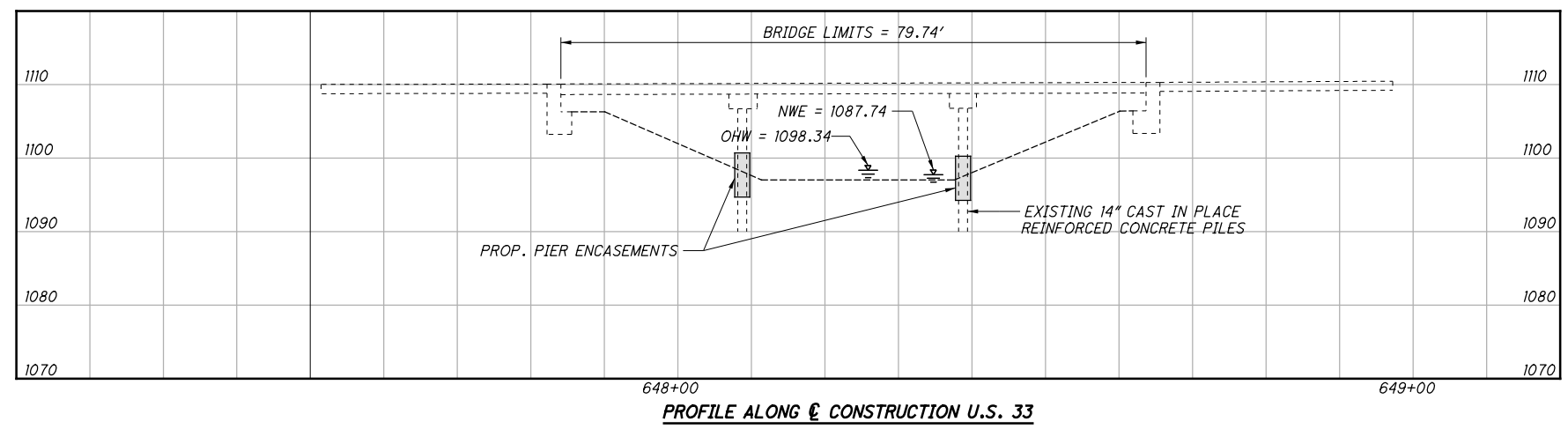
- AREA OF CONCRETE TO BE PATCHED PER ITEM 519  
PATCHING CONCRETE STRUCTURE, AS PER PLAN

<b>D07-BH-FY16</b>	<b>ABUTMENT DETAILS</b>	DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING	DATE 11-24-15
PID No. 93568	BRIDGE No.: LOG-33-1192 L/R US 33 OVER BRANCH OF CHEROKEE RUN	REVIEWED MRB	STRUCTURE FILE NUMBER 4600398/4600428
2 / 2	DESIGNED DDS	DRAWN DDS	REVISED
31 43	CHECKED CWW	REVISED	

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**PLAN VIEW**



**NOTES**  
 EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY. ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
 OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41-42.

**EXISTING STRUCTURES**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE  
 SPANS: 24' - 30' - 24' c/c BRG'S.  
 ROADWAY: 40'-0" f/f GUARD RAILS  
 LOADING: HS20  
 SKEW: 30° R.F.  
 APPROACH SLABS: AS-1-54 (25' LONG)  
 ALIGNMENT: TANGENT  
 STRUCTURAL FILE NUMBER: 4600452/4600487  
 DATE BUILT: 1966  
 WEARING COURSE: 4.9" BITUMINIOUS ASPHALT CONCRETE (1996)  
 DISPOSITION: TO BE REHABILITATED

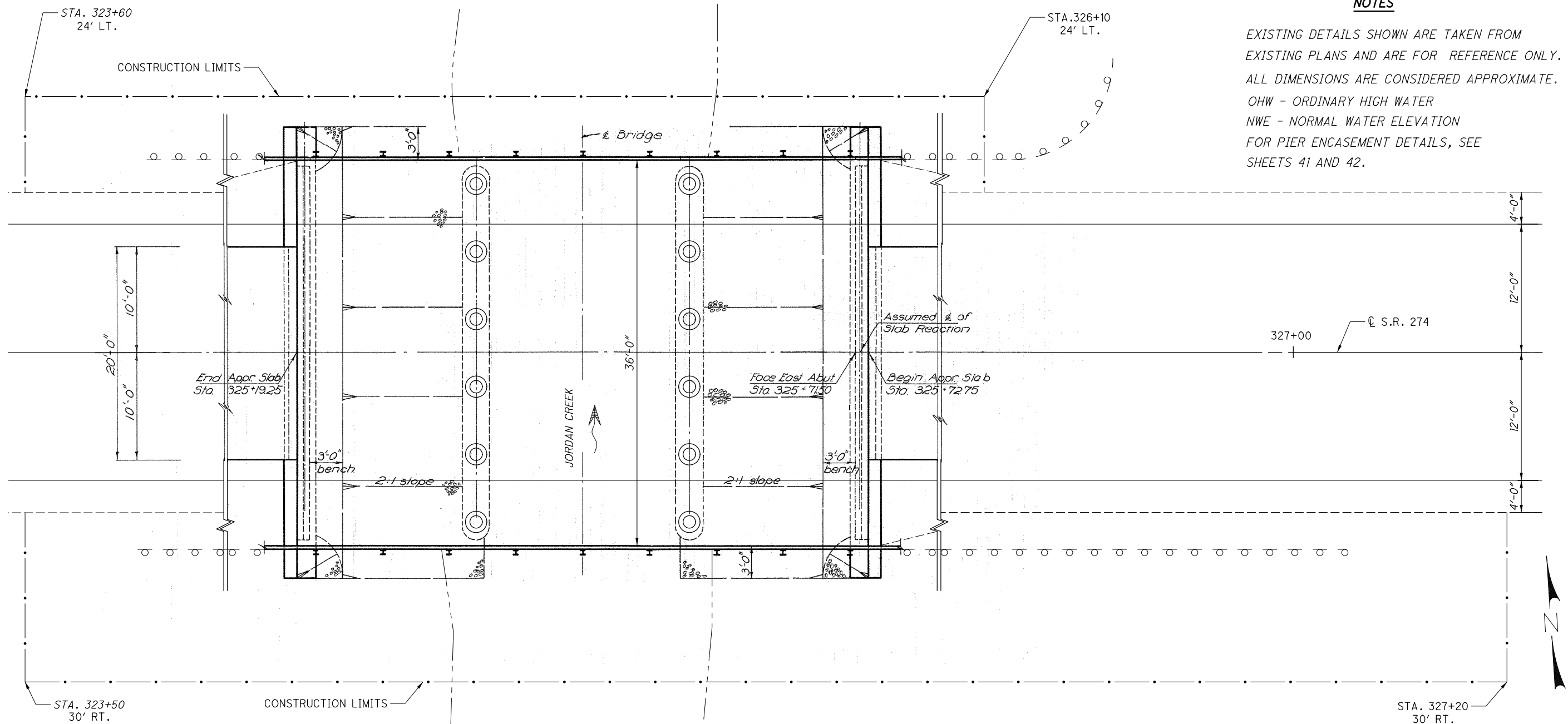
**PROPOSED WORK**

- 1.) ENCASE PIER COLUMNS

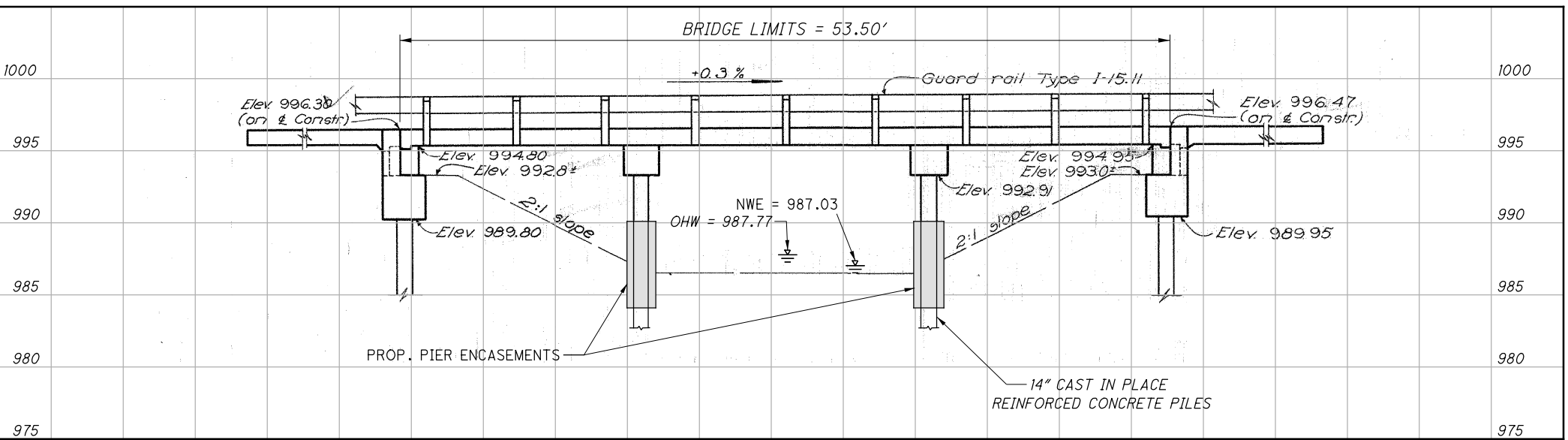
<b>SITE PLAN</b> BRIDGE No.: LOG-33-1226L/R US 33 OVER CHEROKEE RUN	LOGAN COUNTY STA. 647+84.13 STA. 648+63.87	DESIGNED DDS CHECKED CWW	DRAWN DDS REVISED	REVIEWED MRB STRUCTURE FILE NUMBER 4600452/4600487	DATE 11-24-15	DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING	
D07-BH-FY16 PID No. 93568		1 / 1 32 / 43					



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PLAN VIEW



PROFILE ALONG CENTERLINE CONSTRUCTION S.R. 274

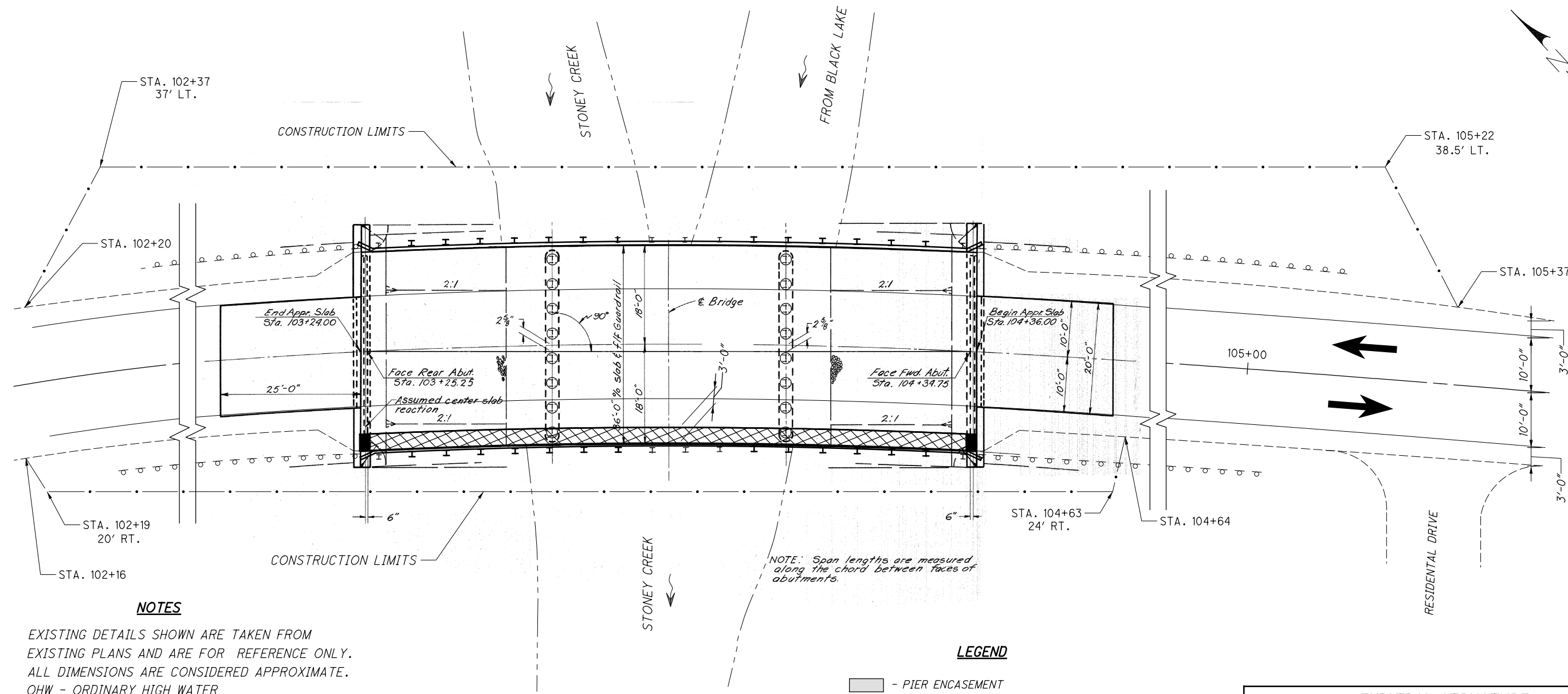
**NOTES**  
 EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY. ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
 OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.

EXISTING STRUCTURE	
TYPE:	CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE
SPANS:	16' - 20' - 16' c/c BRG'S.
ROADWAY:	36'-0" f/f GUARD RAILS
LOADING:	HS20
SKIEW:	NONE
APPROACH SLABS:	AS-1-54 (25' LONG)
ALIGNMENT:	TANGENT
STRUCTURAL FILE NUMBER:	4602617
DATE BUILT:	1962
WEARING COURSE:	3.5" BITUMINIOUS ASPHALT CONCRETE (2006)
DISPOSITION:	TO BE REHABILITATED

PROPOSED WORK	
1.) ENCASE PIER COLUMNS	

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING	DATE 11-24-15
DRAWN DDS	REVIEWED MRB
DESIGNED DDS	CHECKED CWW
LOGAN COUNTY STA. 325+19.25 STA. 325+72.75	STRUCTURE FILE NUMBER 4602617
SITE PLAN	
BRIDGE No.: LOG-274-0616 SR 274 OVER JORDAN CREEK	
D07-BH-FY16	PID No. 93568
1 / 1	
33 43	

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NOTE: Span lengths are measured along the chord between faces of abutments.

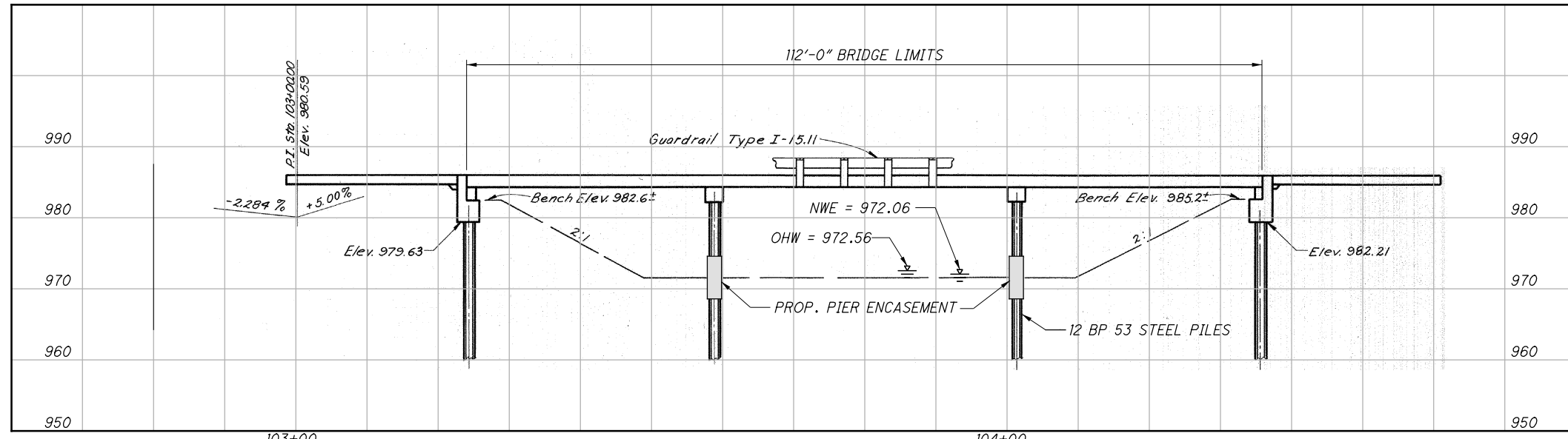
PLAN VIEW

LEGEND

- PIER ENCASEMENT
- DECK REMOVAL/REPLACEMENT LIMITS
- POLYMER MODIFIED ASPHALT EXPANSION JOINT

NOTES

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY. ALL DIMENSIONS ARE CONSIDERED APPROXIMATE. OHW - ORDINARY HIGH WATER NWE - NORMAL WATER ELEVATION FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.



PROFILE ALONG & CONSTRUCTION S.R. 508

**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE

SPANS: 34' - 42.5' - 34' c/c BRG'S.

ROADWAY: 36'-0" f/f GUARD RAILS

LOADING: CF 130(57)

SKEW: NONE

APPROACH SLABS: AS-1-54 (25' LONG)

ALIGNMENT: 1° R.C.

STRUCTURAL FILE NUMBER: 4603605

DATE BUILT: 1965

WEARING COURSE: 3.0" BITUMINIOUS ASPHALT CONCRETE (2006)

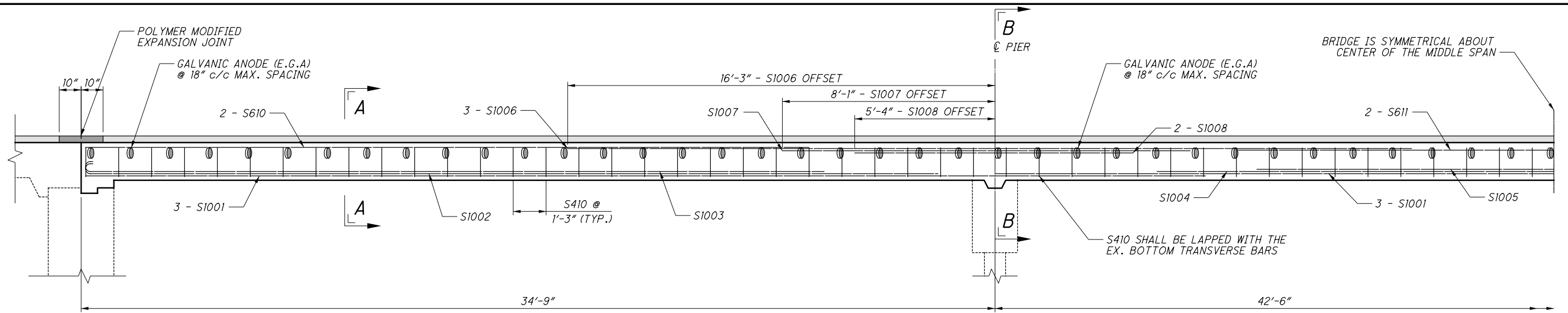
DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

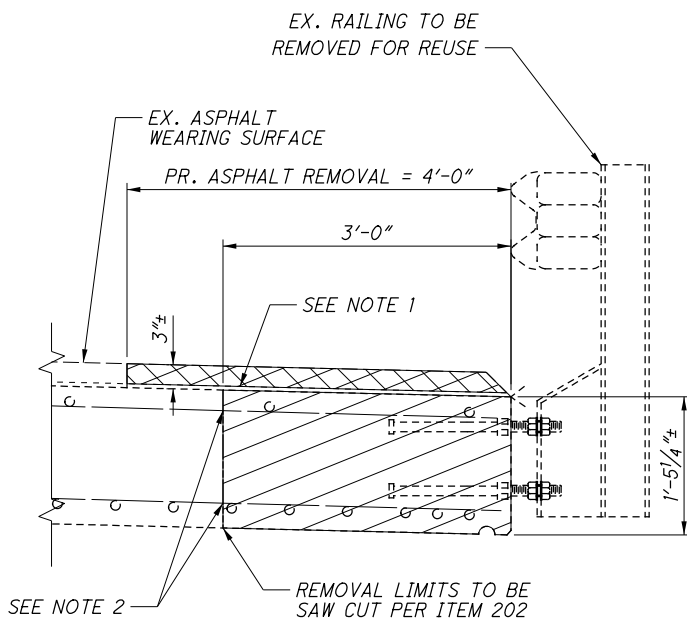
- 1.) ENCASE PIER COLUMNS
- 2.) REPLACE RIGHT DECK EDGE
- 3.) RETROFIT BRIDGE RAILING

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
DATE 11-24-15
REVIEWED MRB
DRAWN DDS
DESIGNED DDS
LOGAN COUNTY STA J03+24.00
BRIDGE No.: LOG-508-0196
D07-BH-FY16
STRUCTURE FILE NUMBER 4603605
CHECKED CWW
STA. 104+36.00
SR 508 OVER STONEY CREEK
PID No. 93568
1 / 2
34 43

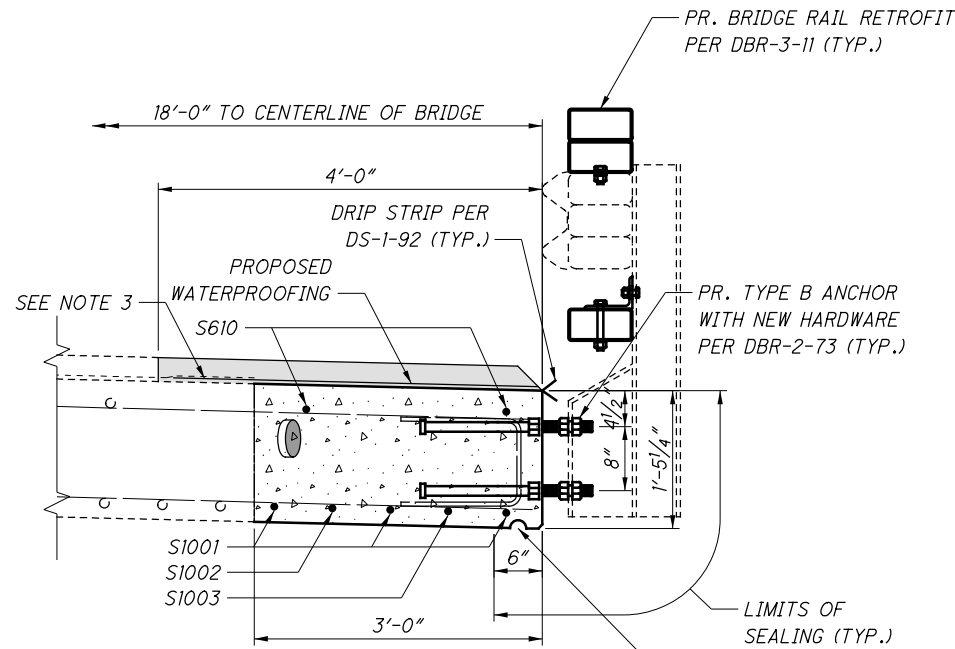
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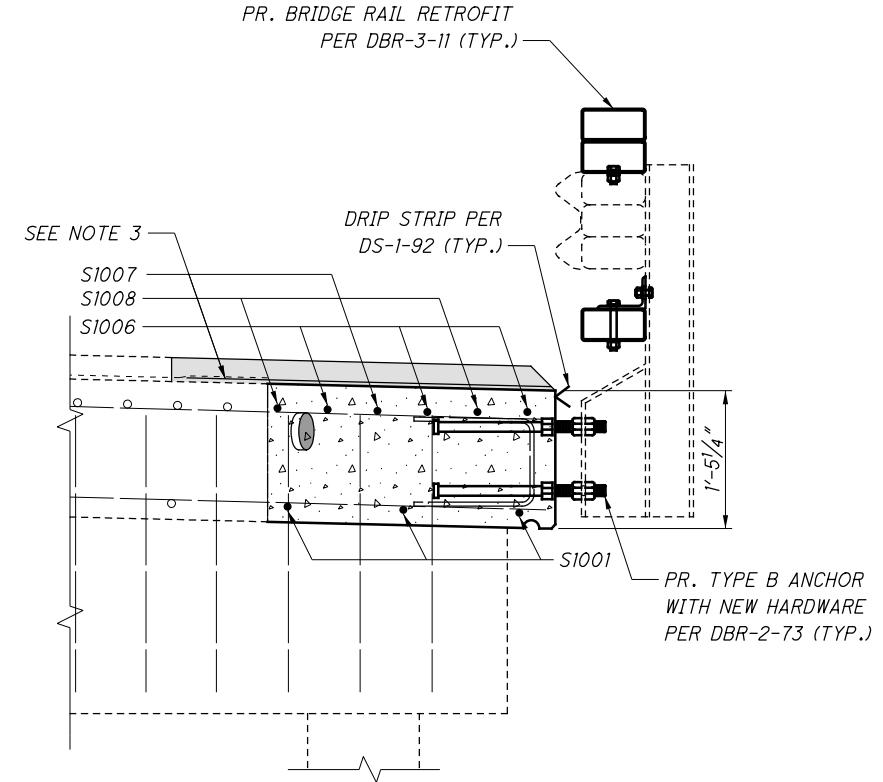
**PARTIAL SLAB ELEVATION**



**SECTION A-A  
EXISTING SLAB**



**SECTION A-A  
PROPOSED SLAB**



**SECTION B-B  
PROPOSED PIER SECTION**

**NOTES**

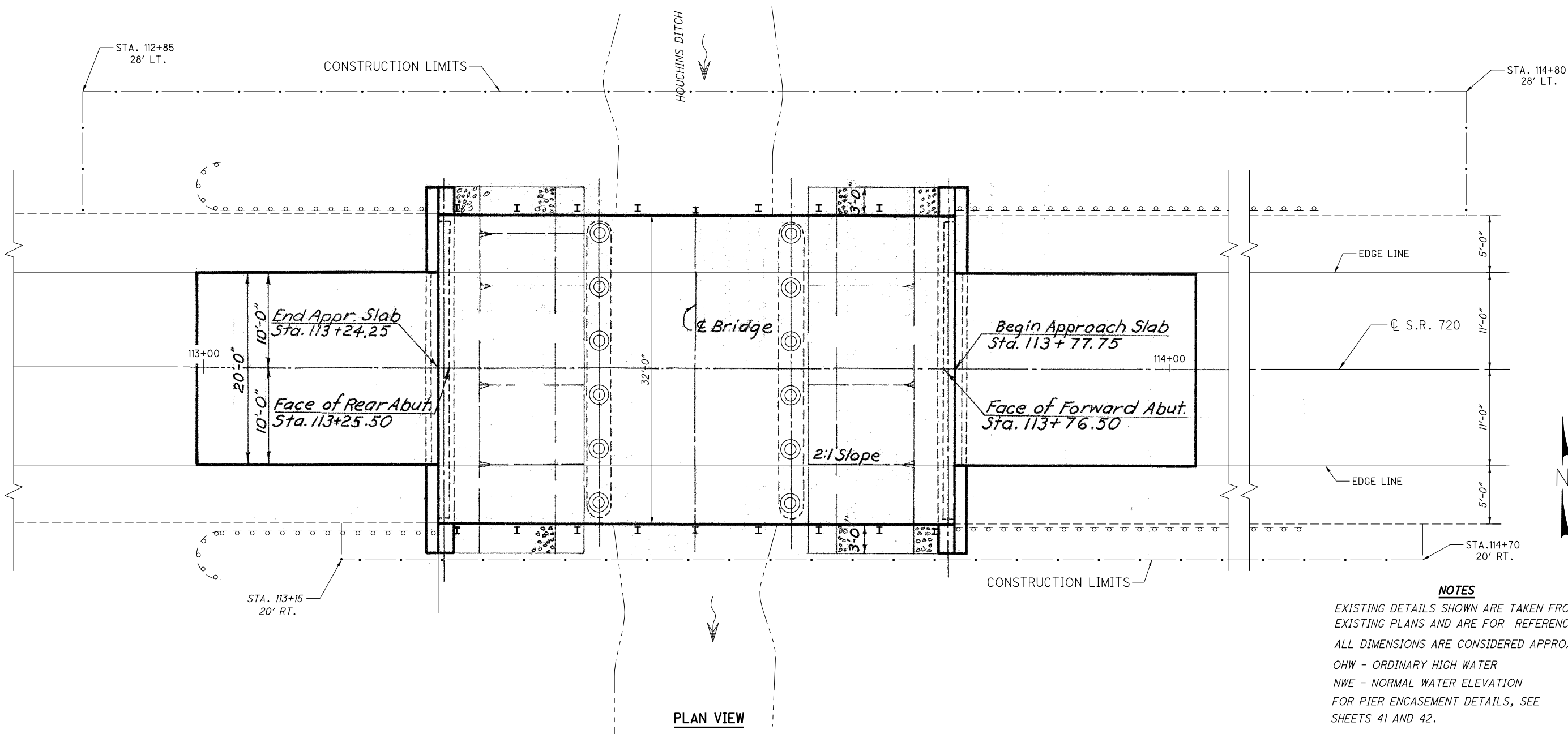
1. CARE SHALL BE TAKEN TO NOT DAMAGE THE EXISTING WATERPROOFING DURING THE WEARING SURFACE REMOVAL.
2. EXISTING TRANSVERSE REINFORCING STEEL SHALL REMAIN.
3. THE EXISTING WATERPROOFING SHALL OVERLAP THE PROPOSED WATERPROOFING.

**LEGEND**

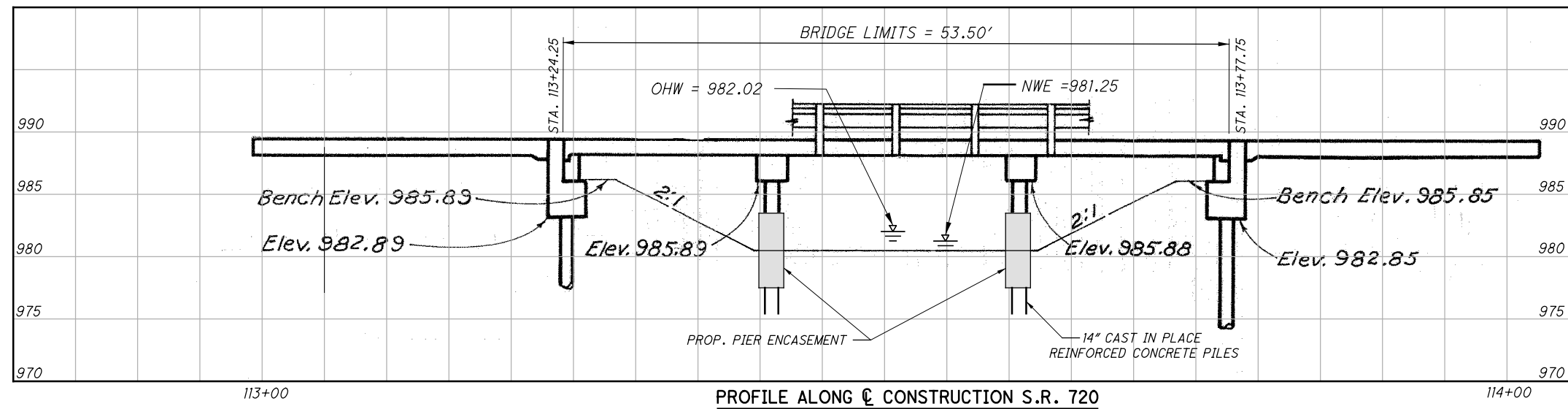
- LIMITS OF REMOVAL
- WEARING COURSE REMOVED
- PROPOSED GALVANIC ANODE PER ITEM 511
- PROPOSED CLASS QC2 CONCRETE, BRIDGE DECK
- PROPOSED ASPHALT

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
DESIGNED DDS CHECKED CWW
DRAWN DDS REVISED
REVIEWED MRB
DATE 11-24-15
STRUCTURE FILE NUMBER 4603605
SUPERSTRUCTURE DETAILS BRIDGE NO.: LOG-508-0196 SR 508 OVER STONY CREEK
D07-BH-FY16 PID No. 93568
2 / 2
35 43

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PLAN VIEW



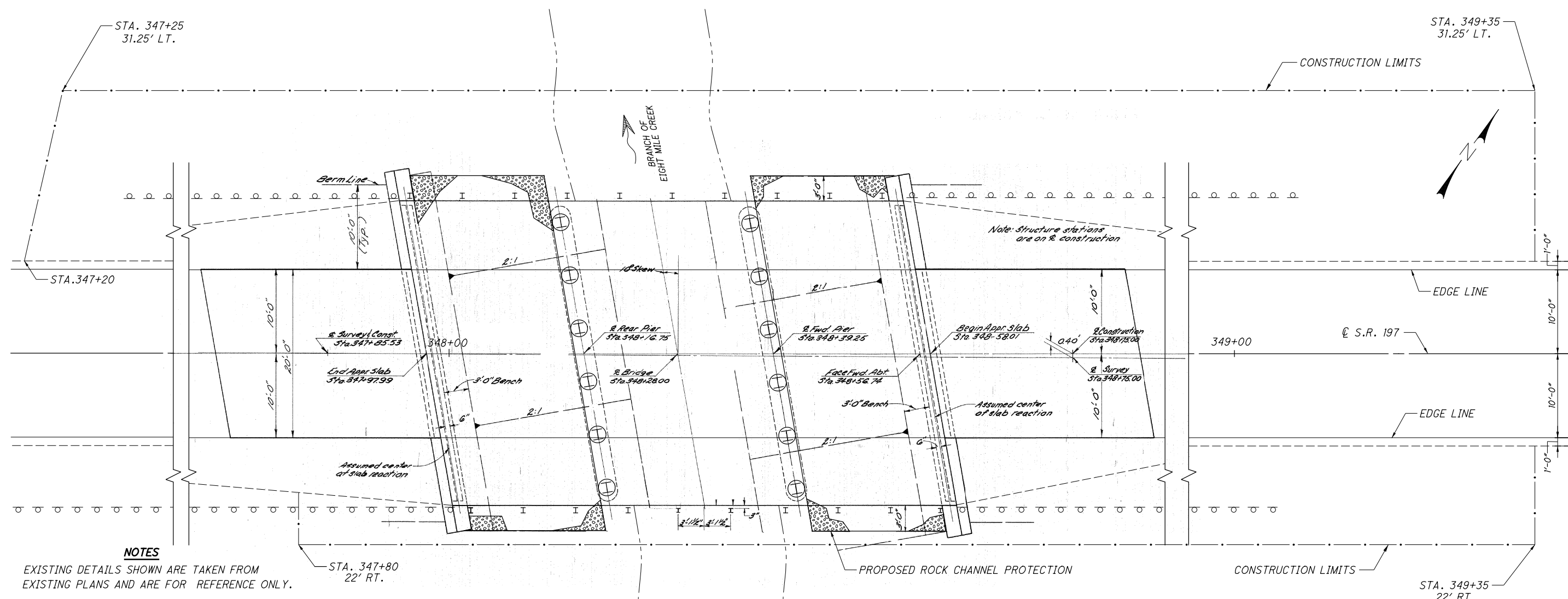
PROFILE ALONG C CONSTRUCTION S.R. 720

**NOTES**  
 EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.  
 ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
 OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.

EXISTING STRUCTURE	
TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE	
SPANS: 16'-20'-16'	
ROADWAY: 32'-0" f/f GUARDRAIL	
LOADING: HS20	
SKEW: NONE	
APPROACH SLABS: AS-1-54 (25' LONG)	
ALIGNMENT: TANGENT	
STRUCTURAL FILE NUMBER: 4604237	
DATE BUILT: 1963	
WEARING COURSE: 2" LATEX MODIFIED CONCRETE OVERLAY (1991)	
DISPOSITION: TO BE REHABILITATED	
PROPOSED WORK	
1.) ENCASE PIER COLUMNS	

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
REVIEWED MRB DATE 11-24-15 STRUCTURE FILE NUMBER 4604237
DRAWN DDS CHECKED REVISID CWV
DESIGNED DDS CHECKED CWV
LOGAN COUNTY STA. 113+24.25 STA. 113+77.75
<b>SITE PLAN</b> BRIDGE No.: LOG-720-0425 SR 720 OVER HOUCHINS DITCH
<b>D07-BH-FY16</b> PID No. 93568
1 / 1
36 / 43

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**NOTES**

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY.  
 ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.  
 OHW - ORDINARY HIGH WATER  
 NWE - NORMAL WATER ELEVATION  
 SLOPE PROTECTION LIMITS SHALL EXTEND 3' PAST THE EDGE OF DECK, AND BE FROM FACE OF ABUTMENT TO THE BACK OF PIER ENCASEMENTS  
 FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.

**PLAN VIEW**

**LEGEND**

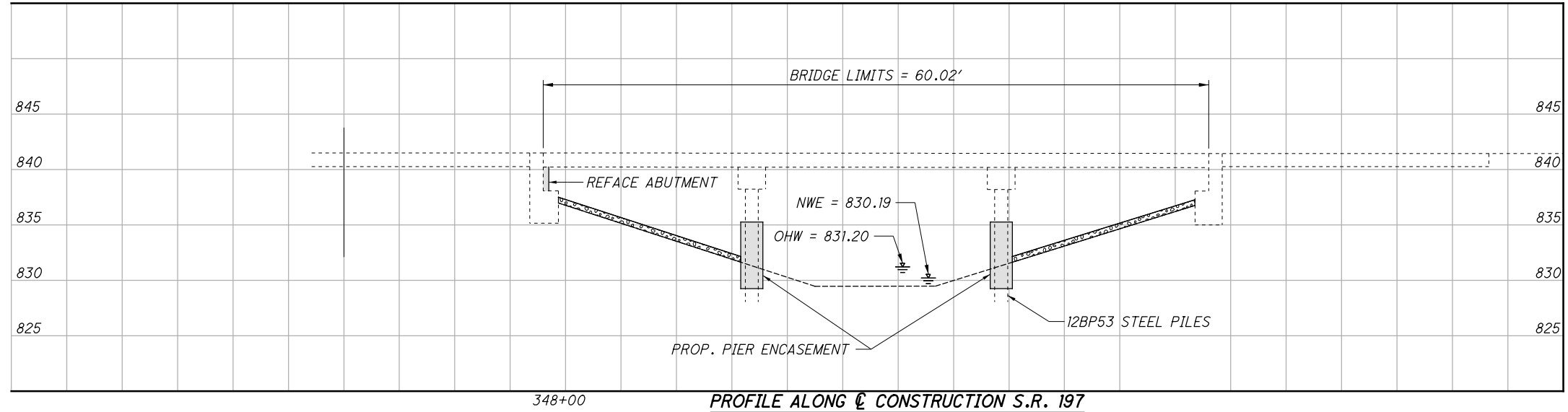
- PROP. ROCK CHANNEL PROTECTION, TYPE B

**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE  
 SPANS: 18' - 22.5' - 18' c/c BRG'S.  
 ROADWAY: 36'-0" f/f GUARD RAILS  
 LOADING: HS20  
 SKEW: 10° R.F.  
 APPROACH SLABS: AS-1-54 (25' LONG)  
 ALIGNMENT: TANGENT  
 STRUCTURAL FILE NUMBER: 5402913  
 DATE BUILT: 1965  
 WEARING COURSE: 3" BITUMINIOUS ASPHALT CONCRETE (1995)  
 DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

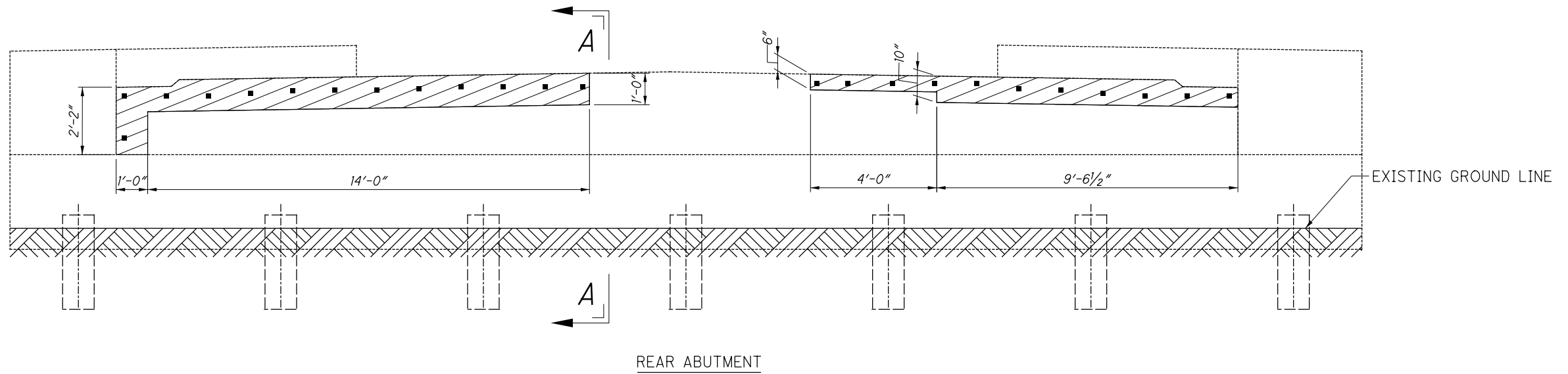
- 1.) FACE REAR ABUTMENT WITH ANODES
- 2.) PATCH FORWARD ABUTMENT
- 3.) ENCASE PIER COLUMNS
- 4.) SEAL ABUTMENTS AND SLAB EDGE
- 5.) PLACE ROCK CHANNEL PROTECTION IN FRONT OF ABUTMENTS



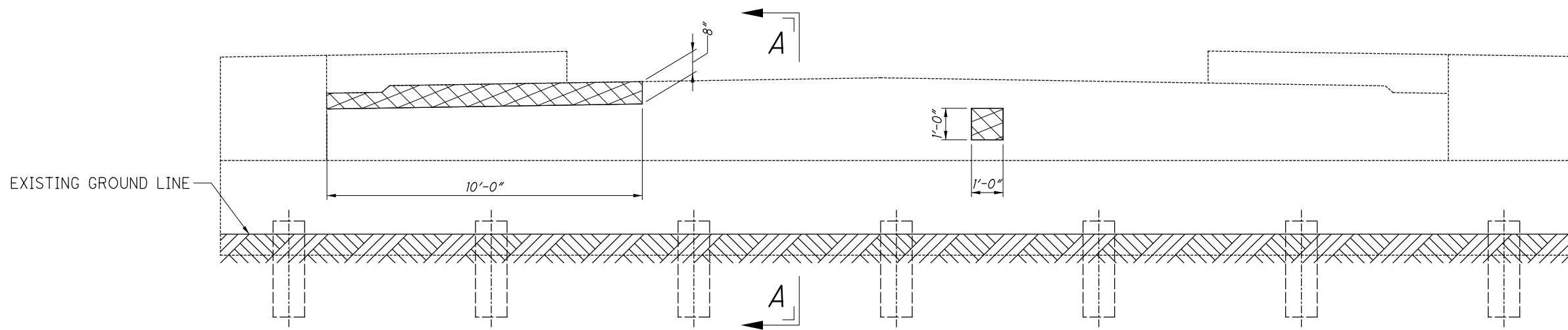
**PROFILE ALONG C CONSTRUCTION S.R. 197**

DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
DATE 11-24-15
REVIEWED MRB
DRAWN DDS
DESIGNED DDS
CHECKED CWW
MERCER COUNTY STA. 347+97.99 STA. 348+58.01
<b>SITE PLAN</b> BRIDGE No.: MER-197-0659 SR 197 OVER BRANCH OF EIGHT MILE CREEK
<b>D07-BH-FY16</b> PID No. 93568
1 / 3
37 / 43

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REAR ABUTMENT



FORWARD ABUTMENT

BRIDGE: MER-197-0659	UN SOUND CONCRETE PATCHED PER 519	UN SOUND CONCRETE REMOVAL PER 844	GALVANIC ANODES PER 844
	SQ. FT.	SQ. FT.	EA.
REAR ABUTMENT		26	24
FORWARD ABUTMENT	8		
INFORMATION ONLY			24
CARRIED TO GENERAL SUMMARY	8	26	

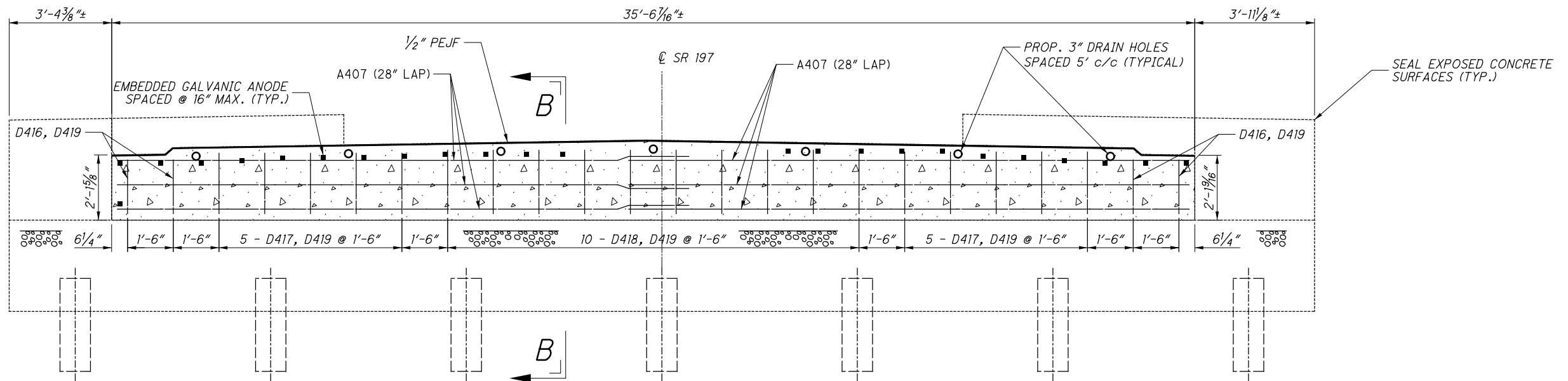
**NOTES**

- SEE SHEET **3/3** FOR SECTION A-A
- ANODES ARE TO BE PLACED IN AREAS OF UNSOUND CONCRETE REMOVAL ONLY.

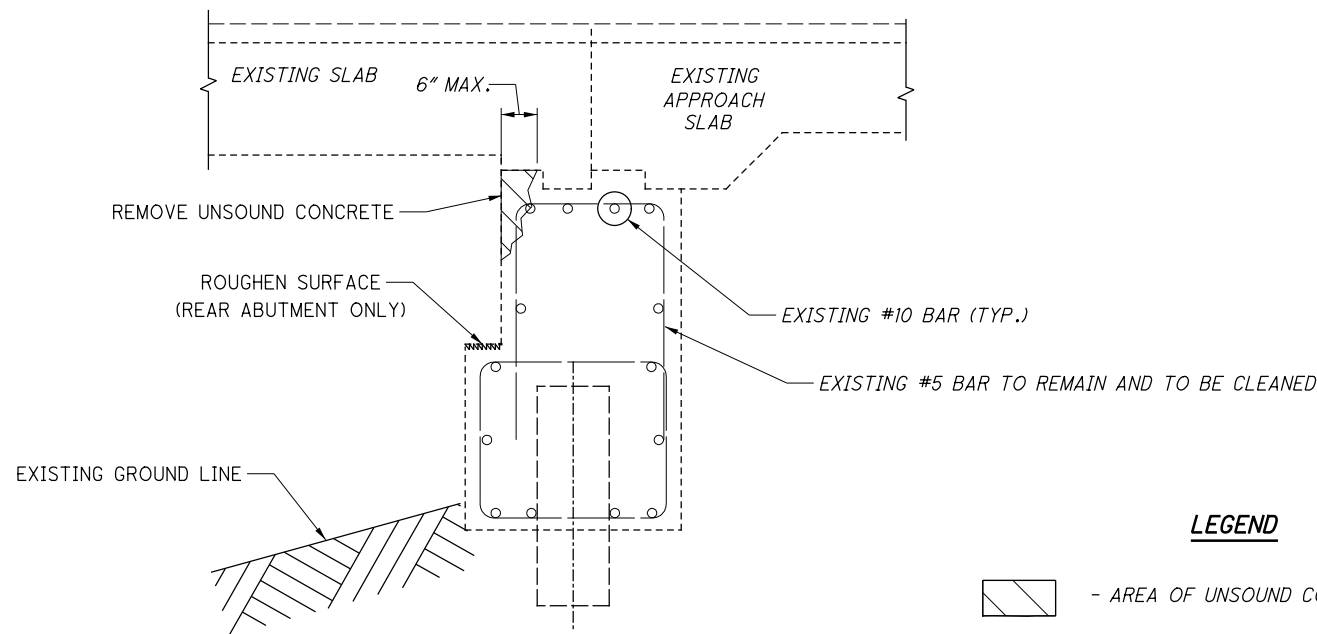
**LEGEND**

-  - AREA OF UNSOUND CONCRETE TO BE PATCHED PER ITEM 519
-  - AREA OF UNSOUND CONCRETE TO BE REMOVED AND ANODE PLACEMENT @ 16" MAX SPACING PER ITEM 844.

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




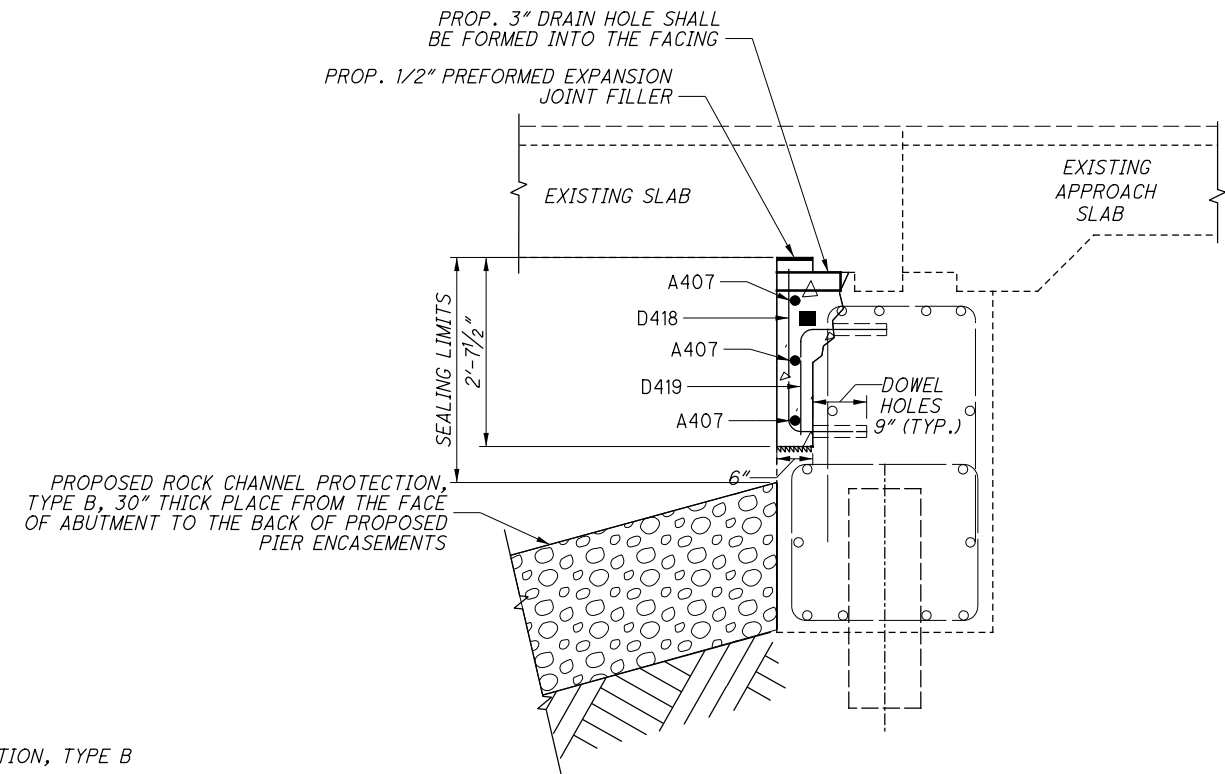
**REAR ABUTMENT**



**SECTION A-A**

**LEGEND**

-  - AREA OF UNSOUND CONCRETE
-  - PROP. ROCK CHANNEL PROTECTION, TYPE B
-  - ITEM 814: CONCRETE PATCHING WITH EMBEDDED GALVANIC ANODE PROTECTION, AS PER PLAN
-  - PROPOSED GALVANIC ANODE PER ITEM 844



**SECTION B-B**

DESIGN AGENCY  
ODOT DISTRICT 7  
PLANNING & ENGINEERING

DATE  
11-24-15

REVIEWED  
MRB

STRUCTURE FILE NUMBER  
5402913

DRAWN  
DDS

DESIGNED  
DDS

CHECKED  
CWW

REVISED

**ABUTMENT DETAILS**

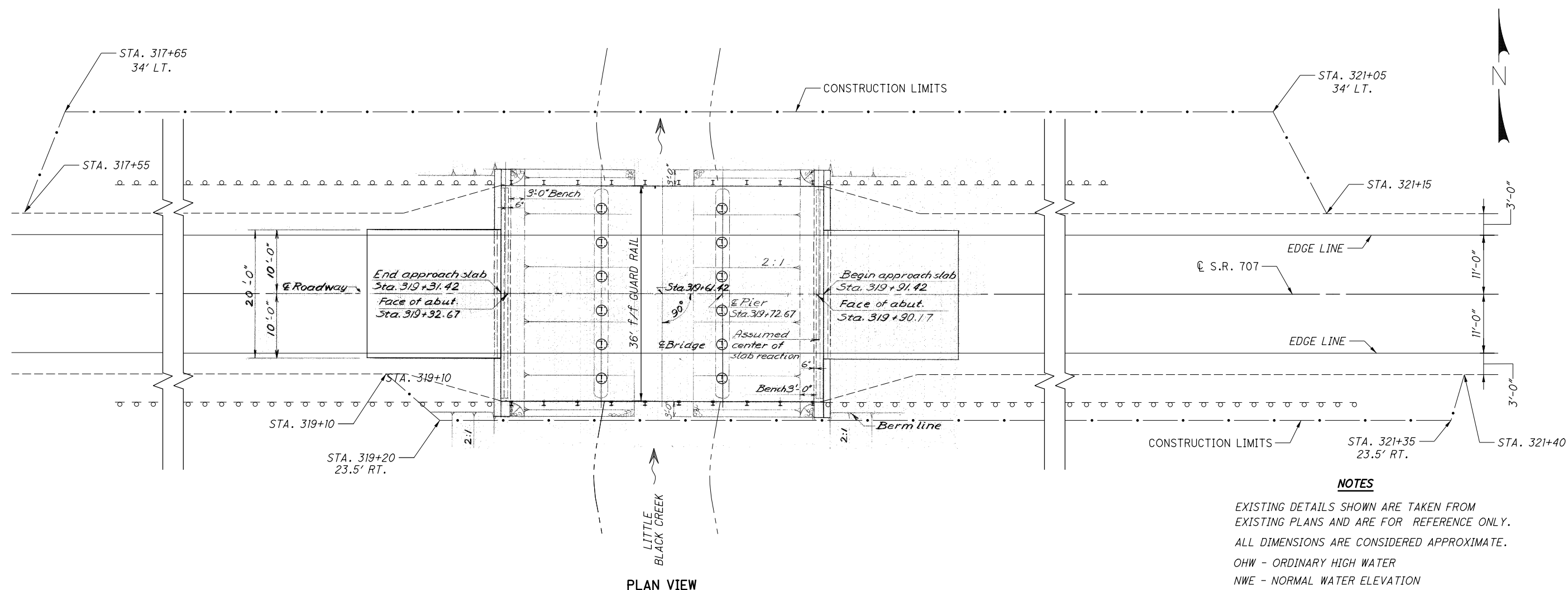
BRIDGE NO.: MER-197-0659

SR 197 OVER BRANCH OF EIGHT MILE CREEK

**D07-BH-FY16**

PID No. 93568

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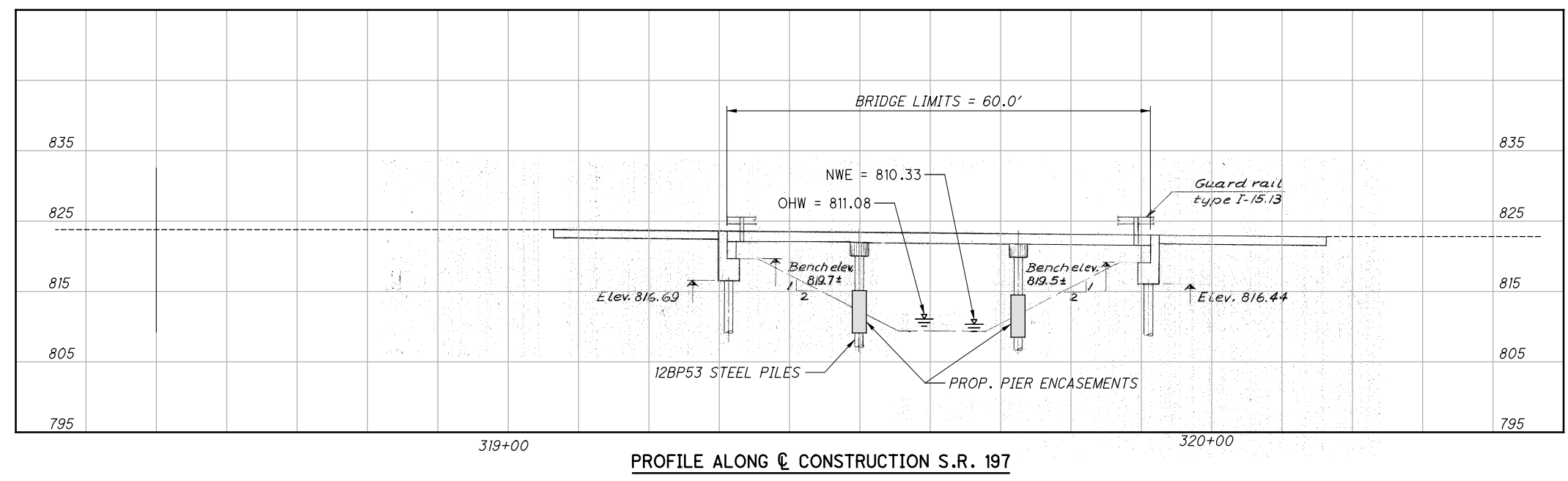


**NOTES**

EXISTING DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND ARE FOR REFERENCE ONLY. ALL DIMENSIONS ARE CONSIDERED APPROXIMATE.

OHW - ORDINARY HIGH WATER  
NWE - NORMAL WATER ELEVATION

FOR PIER ENCASEMENT DETAILS, SEE SHEETS 41 AND 42.



**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE

SPANS: 18' - 22.5' - 18' c/c BRG'S.

ROADWAY: 36'-0" f/f GUARD RAILS

LOADING: HS20

SKEW: NONE

APPROACH SLABS: AS-1-54 (25' LONG)

ALIGNMENT: TANGENT

STRUCTURAL FILE NUMBER: 5404029

DATE BUILT: 1961

WEARING COURSE: 3" BITUMINOUS ASPHALT CONCRETE (2006)

DISPOSITION: TO BE REHABILITATED

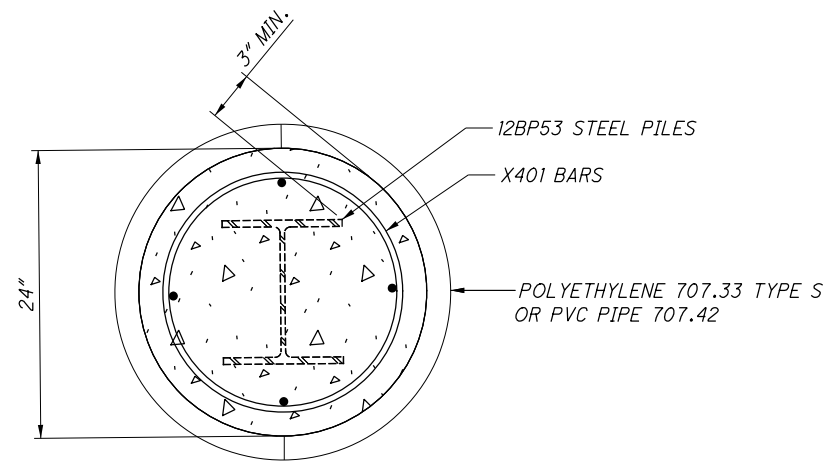
**PROPOSED WORK**

1.) ENCASE PIER COLUMNS

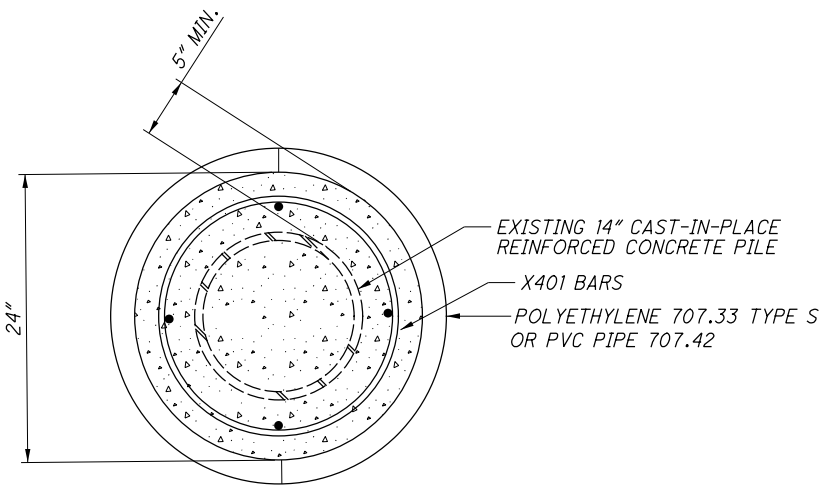
DESIGN AGENCY ODOT DISTRICT 7 PLANNING & ENGINEERING
DATE 11-24-15
REVIEWED MRB
STRUCTURE FILE NUMBER 5404029
DRAWN DDS
DESIGNED DDS
CHECKED CWW
MERCER COUNTY STA. 319+31.42 STA. 319+91.42
<b>SITE PLAN</b> BRIDGE No.: MER-707-0606 SR 707 OVER LITTLE BLACK CREEK
<b>D07-BH-FY16</b> PID No. 93568
1 / 1
40 43



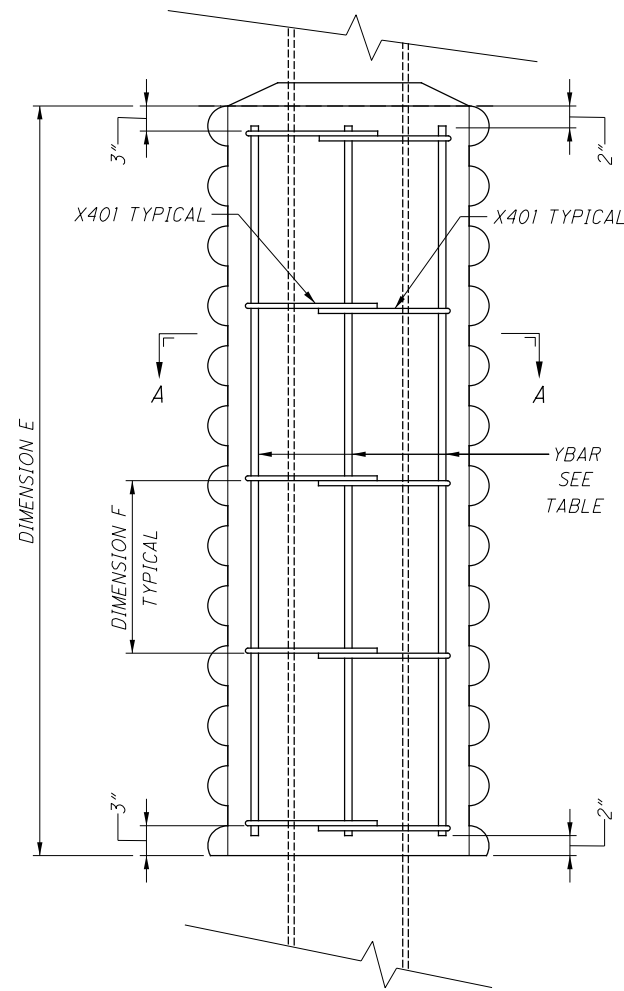
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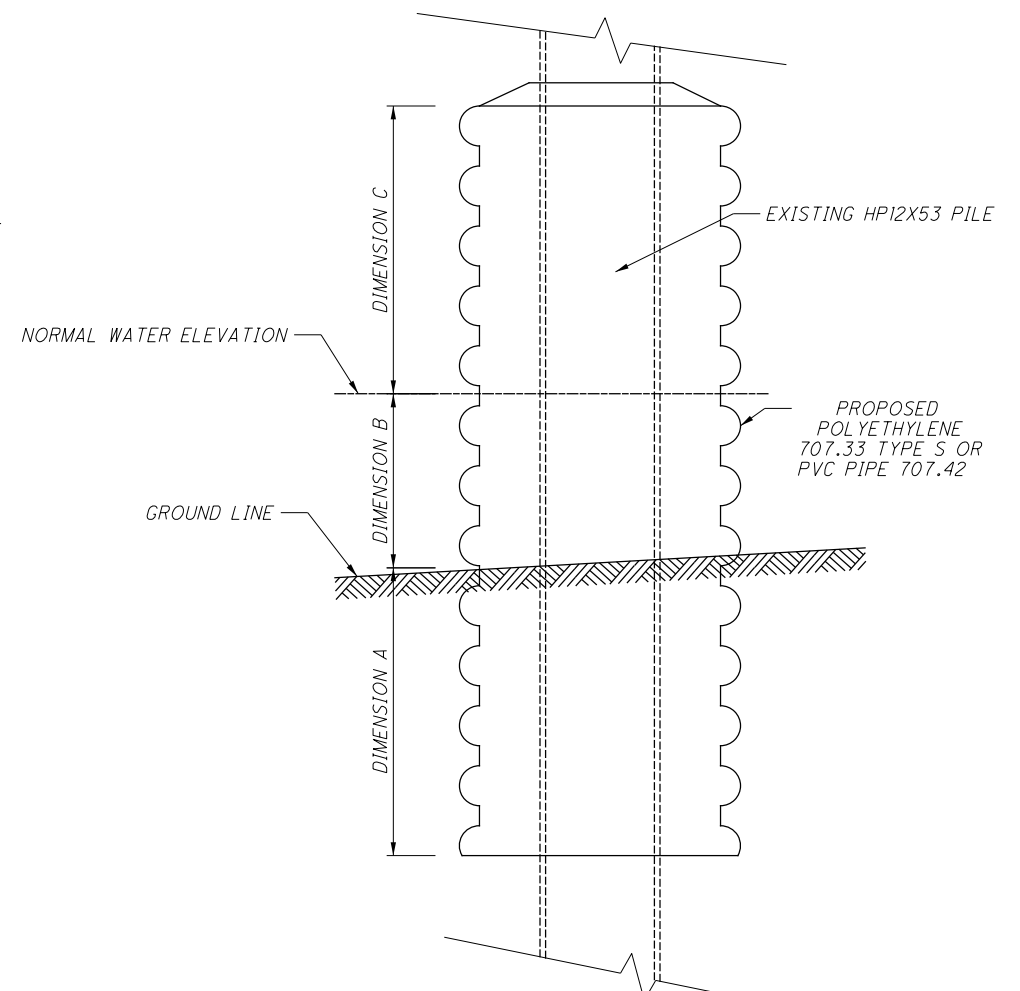
PROPOSED SECTION A-A  
(NOT DRAWN TO SCALE)



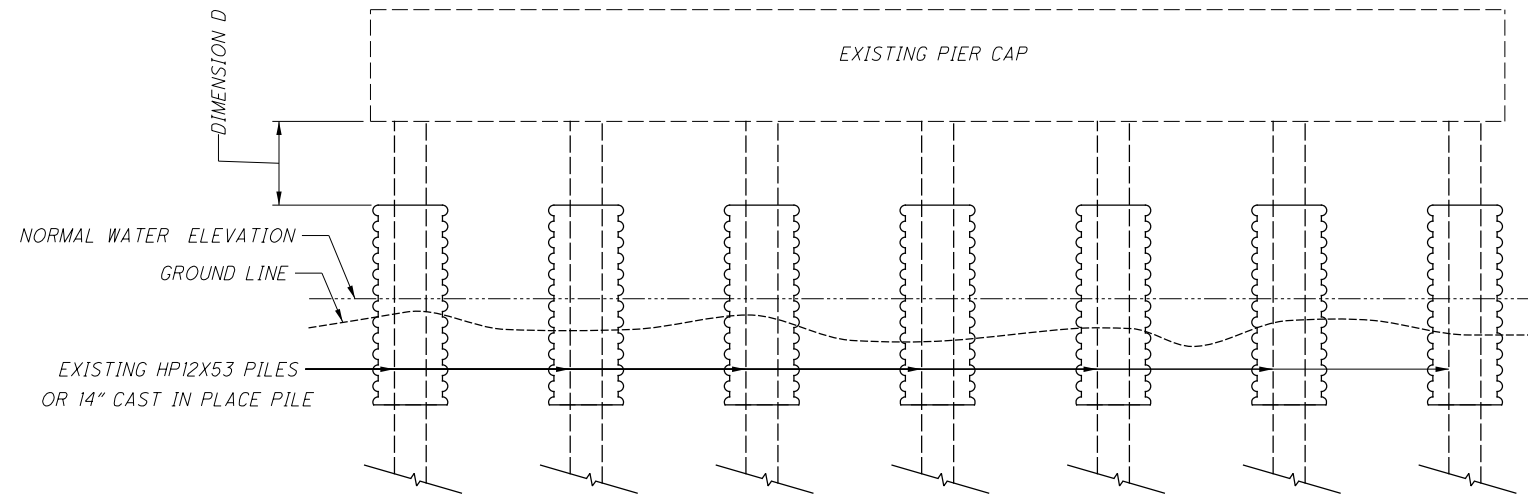
PROPOSED SECTION A-A  
(NOT DRAWN TO SCALE)



PILE ENCASEMENT  
(NOT DRAWN TO SCALE)



PILE ENCASEMENT  
(NOT DRAWN TO SCALE)

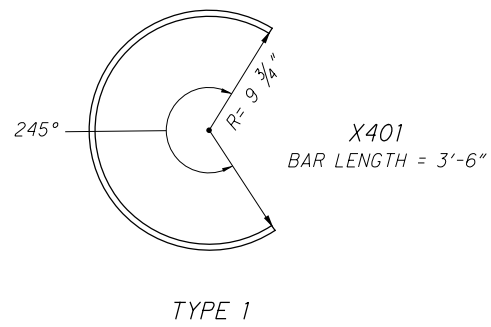


DETAIL B  
(NOT DRAWN TO SCALE)

THE COST OF THE REINFORCING STEEL IS INCLUDED WITH ITEM SPECIAL, PILE ENCASEMENT

REINFORCING SCHEDULE (ESTIMATE)

BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE
STRUCTURE: AUG-197-0258				
X401	144	3'-6"	337	1
Y603	48	6'-8"	481	STR.
STRUCTURE: DAR-49-0728 REAR PIERS				
X401	96	3'-6"	224	1
Y601	32	6'-8"	321	STR.
STRUCTURE: DAR-49-0728 FORWARD PIERS				
X401	96	3'-6"	224	1
Y601	32	7'-8"	369	STR.
STRUCTURE: DAR-118-1303 REAR PIERS				
X401	108	3'-6"	253	1
Y601	36	6'-8"	361	STR.
STRUCTURE: DAR-118-1303 FORWARD PIERS				
X401	108	3'-6"	253	1
Y601	36	6'-8"	361	STR.
STRUCTURE: LOG-33-1192L				
X401	168	3'-6"	393	1
Y601	56	6'-8"	561	STR.
STRUCTURE: LOG-33-1192R				
X401	168	3'-6"	393	1
Y601	56	6'-8"	561	STR.
STRUCTURE: LOG-33-1226L				
X401	196	3'-6"	458	1
Y601	56	8'-2"	686	STR.
STRUCTURE: LOG-33-1226R				
X401	196	3'-6"	458	1
Y601	56	8'-8"	729	STR.
STRUCTURE: LOG-274-0616				
X401	120	3'-6"	281	1
Y601	48	6'-2"	444	STR.
STRUCTURE: LOG-508-0196				
X401	192	3'-6"	449	1
Y601	64	6'-8"	641	STR.
STRUCTURE: LOG-720-0425 REAR PIERS				
X401	72	3'-6"	168	1
Y601	24	6'-8"	240	STR.
STRUCTURE: LOG-720-0425 FORWARD PIERS				
X401	72	3'-6"	168	1
Y601	24	6'-8"	240	STR.
STRUCTURE: MER-197-0659				
X401	120	3'-6"	281	1
Y601	48	6'-2"	444	STR.
STRUCTURE: MER-707-0606				
X401	168	3'-6"	394	1
Y601	48	8'-8"	625	STR.
TOTAL			11,798	



PILE ENCASEMENT LENGTHS

STRUCTURE	DIMENSION						NUMBER OF PILES EACH	TOTAL STRUCTURE ENCASEMENT LENGTH Ft.
	A Ft.	B Ft.	C Ft.	D Ft.	E Ft.	F Ft.		
STRUCTURE: AUG-197-0258	3'	1'	3'	2.5'	7'	1.29'	12	84
STRUCTURE: DAR-49-0728 REAR	3'	1'	3'	1.25'	7'	1.29'	8	56
STRUCTURE: DAR-49-0728 FORWARD	3'	2'	3'	2.16'	8'	1.50'	8	64
STRUCTURE: DAR-118-1303 REAR	3'	1'	3'	7.67'	7'	1.29'	9	63
STRUCTURE: DAR-118-1303 FORWARD	3'	1'	3'	6.67'	7'	1.29'	9	63
STRUCTURE: LOG-33-1192L	3'	1'	3'	4'	7'	1.29'	14	98
STRUCTURE: LOG-33-1192R	3'	1'	3'	4.33'	7'	1.29'	14	98
STRUCTURE: LOG-33-1226L	3'	2.5'	3'	5'	8.5'	1.33'	14	119
STRUCTURE: LOG-33-1226R	3'	3'	3'	3.5'	9'	1.41'	14	126
STRUCTURE: LOG-274-0616	3'	0.5'	3'	3.75'	6.5'	1.50'	12	78
STRUCTURE: LOG-508-0196	3'	1'	3'	7.83'	7'	1.29'	16	112
STRUCTURE: LOG-720-0425 REAR	3'	1'	3'	2.16'	7'	1.29'	6	42
STRUCTURE: LOG-720-0425 FORWARD	3'	1'	3'	1.83'	7'	1.29'	6	42
STRUCTURE: MER-197-0659	3'	0.5'	3'	4'	6.5'	1.50'	12	78
STRUCTURE: MER-707-0606	3'	3'	3'	4'	9'	1.41'	12	108
							<b>TOTALS</b>	1231

TOTALS CARRIED TO GENERAL SUMMARY SHEETS 10-13 UNDER ITEM SPECIAL - PILE ENCASEMENT

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DESIGN AGENCY  
ODOT DISTRICT 7  
PLANNING & ENGINEERING

REVIEWED DATE  
MRB 11-24-15  
STRUCTURE FILE NUMBER

DRAWN DDS  
DDO REVISED

DESIGNED DDS  
CHECKED CWW

PIER ENCASEMENT DETAILS

D07-BH-FY16  
PID No. 93568

2 / 2

42  
43

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**STRUCTURE: AUG-29-0767**

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
D401	42	4'-0"	112	1	1'-1"	3'-0"					
D402	42	3'-3"	91	1	1'-2"	2'-2"					
D403	8	3'-4"	18	1	1'-1"	2'-4"					
D404	8	3'-5"	18	1	1'-2"	2'-4"					
D405	24	2'-6"	40	1	1'-7"	1'-0"					
D406	8	3'-0"	16	1	2'-1"	1'-0"					
D407	4	3'-2"	8	STR.							
A401	8	19'-0"	102	STR.							
A402	4	18'-1"	48	STR.							
SUB-TOTAL			453 lbs.								

**STRUCTURE: AUG-197-0258**

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
D411	21	3'-4"	47	1	1'-1"	2'-4"					
D412	21	3'-0"	42	1	1'-2"	1'-11"					
D413	4	3'-1"	8	1	1'-1"	2'-1"					
D414	4	2'-10"	8	1	1'-2"	1'-9"					
A403	4	18'-8"	50	STR.							
A404	2	16'-8"	22	STR.							
SUB-TOTAL			177 lbs.								

**STRUCTURE: DAR-47-1206**

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
S401	152	4'-3"	432	2	1'-9"	0'-11"	1'-9"				
S601	10	15'-0"	225	STR.							
S602	40	30'-0"	1802	STR.							
S603	8	23'-0"	276	STR.							
SUB-TOTAL			2735 lbs.								

**STRUCTURE: MER-197-0659**

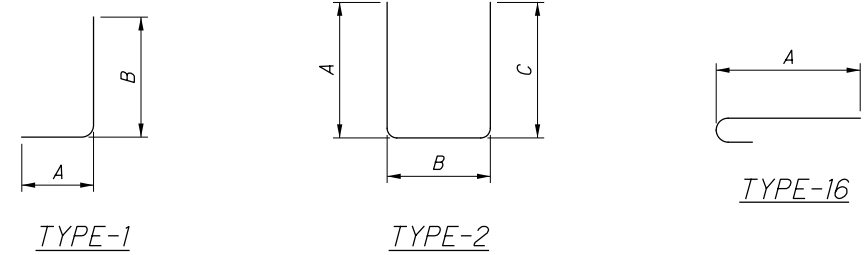
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
D416	4	2'-9"	7	1	1'-1"	1'-9"					
D417	10	2'-11"	19	1	1'-1"	1'-11 1/2"					
D418	10	3'-1"	21	1	1'-1"	2'-1"					
D419	24	2'-6"	40	1	1'-2"	1'-5"					
A407	6	18'-9"	75	STR.							
SUB-TOTAL			162 lbs.								

**STRUCTURE: DAR-49-0728**

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
D413	35	1'-11"	45	1	8"	1'-4"					
D414	35	1'-9"	41	1	9"	1'-1"					
D415	28	2'-0"	37	1	9"	1'-4"					
A405	18	1'-8"	20	STR.							
A406	17	1'-10"	21	STR.							
A407	4	22'-10"	61	STR.							
S421	146	3'-1"	301	2	1'-3"	0'-10"	1'-3"				
S621	8	15'-2"	182	STR.							
S622	4	13'-10"	83	STR.							
S821	12	27'-7"	884	STR.							
S822	4	23'-0"	246	16	22'-2"						
S823	4	20'-0"	214	16	19'-2"						
S824	2	22'-5"	120	STR.							
S825	2	17'-10"	95	STR.							
S921	8	26'-1"	709	STR.							
S922	4	11'-11"	162	STR.							
S923	4	9'-10"	134	STR.							
SUB-TOTAL			3355 lbs.								

**STRUCTURE: LOG-508-0196**

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
S410	90	3'-3"	195	2	1'-3"	0'-11"	1'-3"				
S610	4	27'-6"	165	STR.							
S611	2	24'-0"	72	STR.							
S1001	9	42'-7"	1649	STR.							
S1002	2	33'-10"	291	16	32'-5"						
S1003	2	29'-6"	254	16	28'-1"						
S1004	1	30'-2"	130	STR.							
S1005	1	22'-7"	97	STR.							
S1006	6	32'-1"	828	STR.							
S1007	2	15'-6"	133	STR.							
S1008	4	10'-7"	182	STR.							
SUB-TOTAL			3996 lbs.								



# SPECIAL PROVISIONS

# WATERWAY PERMITS CONDITIONS

C-R-S: D07-BH BR FY 16 Part 1

PID: 93568

Date: 11/24/2014

## 1. Waterway Permit Time Restrictions:

Regional General Permit (RGP) Section B (Maintenance) is authorized for D07-BH BR FY 16 Part 1, PID 93568. A copy of the RGP shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 24, 2014. The permit expires: October 24, 2019.

For permitted work in aquatic resources (including, but not limited to: streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit end date based on project constraints. In order to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit end date. The Engineer will submit the request for a time extension to ODOT-OES-WPU for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR).

## 2. Deviations From Permitted Construction Activities

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or working drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

**3. In-Stream Work Restrictions**

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Center Branch Kopp Creek AUG-29-0767	SLM 07.67	none
Hussey Creek AUG-197-0258	SLM 02.58	none
Painter Creek DAR-49-0728	SLM 07.28	none
N. Fork Stillwater DAR-118-1303	SLM 13.03	none
UNT Cherokee Run LOG-33-1192 L/R	SLM 11.92	none
Cherokee Run LOG-33-1226 L/R	SLM 12.26	none
Jordan Ditch LOG-274-0616	SLM 06.16	none
Stoney Creek LOG-508-0196	SLM 01.96	4/15 – 6/30
Houchins Ditch LOG-720-0425	SLM 04.25	none
UNT Eight Mile Creek MER-197-0659	SLM 06.49	none
Little Black Creek MER-707-0606	SLM 06.06	none

UNT = unnamed tributary stream

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection and temporary work pads.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

The Engineer must submit a request for an "in-water work restriction waiver" to ODOT-OES-WPU (614-466-7100) for consideration and coordination with the USACE, OEPA, and ODNR if in-stream work needs to occur within restricted dates.

**4. Materials:**

Materials utilized in or adjacent to aquatic resources on this project for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Cadmium, chromium, arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

**5. Cultural Resources**

If archeological sites or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section the Engineer shall also contact the appropriate County Sheriff's Office:

- Auglaize – (419) 739-6565
- Darke – (937) 548-3399
- Logan – (937) 592-5731
- Mercer – (419) 586-7724

**6. Aquatic Resource Demarcation:**

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. Specifically, only 0.07 acre of wetland on the southeast quad of AUG-197-0258, 0.01 acre of wetland at DAR-118-1303, 0.01 acre of Wetland at LOG-33-1192 L/R, and 0.002 acre of wetland at MER-197-0659 can be impacted. The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

**7. Spill containment:**

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

**8. Blasting:**

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify Engineer, in writing, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

**9. Bridge Inspection:**

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-OES-WPU (614-466-7100).

**10. Project Inspection:**

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

**11. Temporary Access Fills (Stream and River Crossings and Fills)****Special Provisions Notes:**

Regional General Permit (RGP) for the State of Ohio Department of Transportation

**Definitions:****Hydraulic Opening**

The cross sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM)\*.

**Standard Temporary Discharge**

The hydraulic opening providing a capacity for a discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM shall be known as the Standard Temporary Discharge. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways. These flows are also available in a web application by USGS StreamStats, (<http://water.usgs.gov/osw/streamsta/ohi.html>).

**Average Monthly Flow**

The average monthly flow represents the estimated "normal" flow.

**Temporary Access Fills (TAFs)**

In Streams and Rivers may include, but are not limited to, causeways, cofferdams (as described by other items of work), access pads, temporary bridges, etc. The Contractor will make every attempt minimize disturbance to water bodies, stream banks, stream beds, and approach sections during the construction, maintenance, and removal of the TAFs. Fording of streams and rivers is prohibited. Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. *TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM)\*.*

Do not exceed an overall length of 300 feet measured linearly upstream to downstream.

**Requirements**

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with working drawings that include:

- Plan view drawing (200 scale or less) showing the location of all jurisdictional temporary fill proposed for use on the project
- Scaled Cross section and profile drawing showing the OHWM and the proposed compliant hydraulic opening.
- A description of the installation and staging of all temporary jurisdictional fill over the life of the contract.
- A description of the removal of all jurisdictional temporary fill and restoration of the channel and all

areas impacted by the jurisdictional temporary fill.

- A schedule outlining the timing of the placement and removal of all TAF.
- Have an Ohio Registered Engineer prepare, sign, seal, and date the working drawings. Have a second Ohio Registered Engineer check, sign, and seal and date the working drawings. The preparer and checker are two different Engineers. Include the following statement on the working drawings:  
"These working drawings were prepared in compliance with the terms of the Regional General Permit and all contract documents."
- Include supporting hydraulic calculations developed by the engineer(s) who sealed the working drawings.
- Do not begin in-stream work until the Engineer has accepted the working drawings.

If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (as defined in SS 832) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

If the Contractor proposes a TAF which does not provide for the Standard Temporary Discharge (discharge equal to twice the highest monthly flow without producing a rise in the backwater), the Contractor is required to coordinate the request for the contractor's proposed TAF with the Engineer and the ODOT Office of Environmental Services (OES). The Department makes no guarantee to grant the request. The contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate.

In addition to the requirements described in SS 832, supply the Engineer/OES with the following:

1. A plan and profile showing the temporary access fill(s) with the OHWM.
2. Cross section showing the hydraulic opening and the anticipated discharge flow.
3. A restoration plan for the area affected by the temporary access fill(s).
4. A schedule outlining the timing of the placement and removal of the temporary access fill(s)

The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days. Installation of any jurisdictional fill without a 404 Permit authorized by the USACE is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

**TAFs Construction and Payment**

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with 404/401 permits or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, temporary bridges, etc. Make every attempt minimize disturbance to water bodies, stream banks, stream beds, and approach sections during the construction, maintenance, and removal of the TAFs. Make every attempt to minimize disturbance to water bodies during construction, maintenance, and removal of the causeway and access fills. Construct the causeway and access fills as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the causeway and access fills in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, bed, and approach sections. Construct the causeway and access fills as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, establish a monument upstream of proposed temporary crossing or temporary construction access fill to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (SS 832.02) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by

an Ohio Registered Surveyor.

TAFs placed by the contractor above the OHWM are not subject to the 404/401 permit constraints. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the water elevation of the waterway, exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the permitted temporary access fill up to the elevation of 1 foot above the OHWM, except as noted. Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of temporary access structures that are related to the construction access fill.

Should the water elevation of the waterway exceed the elevation shown on the monument, the Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 of the Construction & Materials Specifications.

Construct the causeway and fills, not including cofferdams and temporary bridges, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

- A. Furnish culverts on the existing stream bottom.
- B. Avoid a drop in water elevation at the downstream end of the culvert.
- C. Furnish a sufficient number of culverts in addition to stream openings to providing a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
- D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

For all fill and surface material placed in the channel, around the culverts, or on the surface of the causeway and access fills furnish clean, non-erodible, nontoxic dumped rock fill, Type B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring the TAFs is complete all portions of the TAF (including all rock and culverts) will be removed in its entirety. The material will not be disposed in other waters of the US or isolated wetland. The stream bottom affected by the causeway and access fills will be restored to its pre-construction elevations. The TAF will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAFs compensation is included in the plans, all environmental protection and control associated with the 404/401 permit activities, including but not limited to TAFs, are incidental to the work within the boundaries of the 404/401 permit or as otherwise identified in the 404/401 permit application.

#### 12. Excavation Activities:

Excavated material will be placed at the upland site and disposed of in such a manner that sediment and runoff to streams and other waters is controlled and minimized. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).