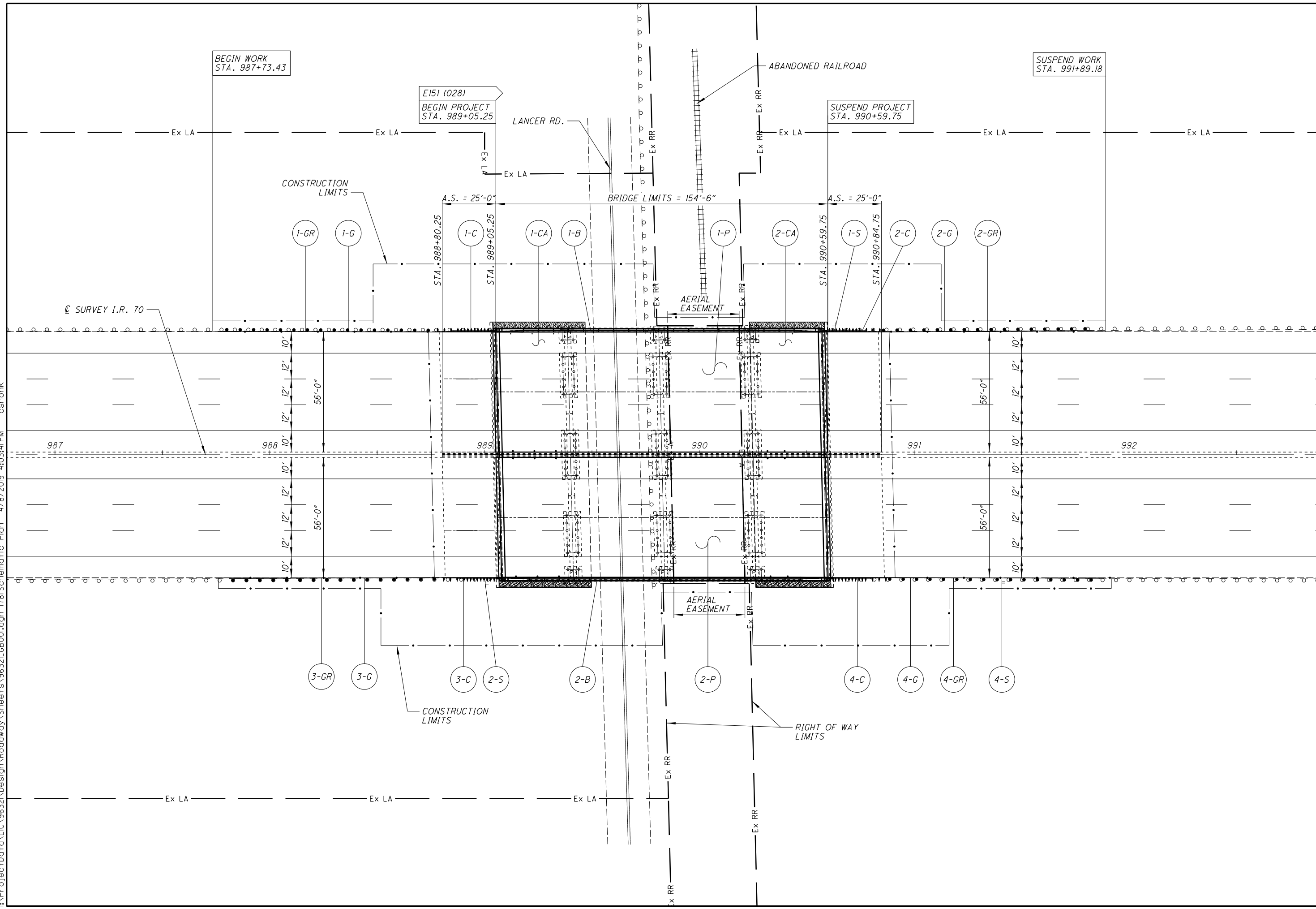


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**SCHEMATIC PLAN
(LIC-70-1781)**



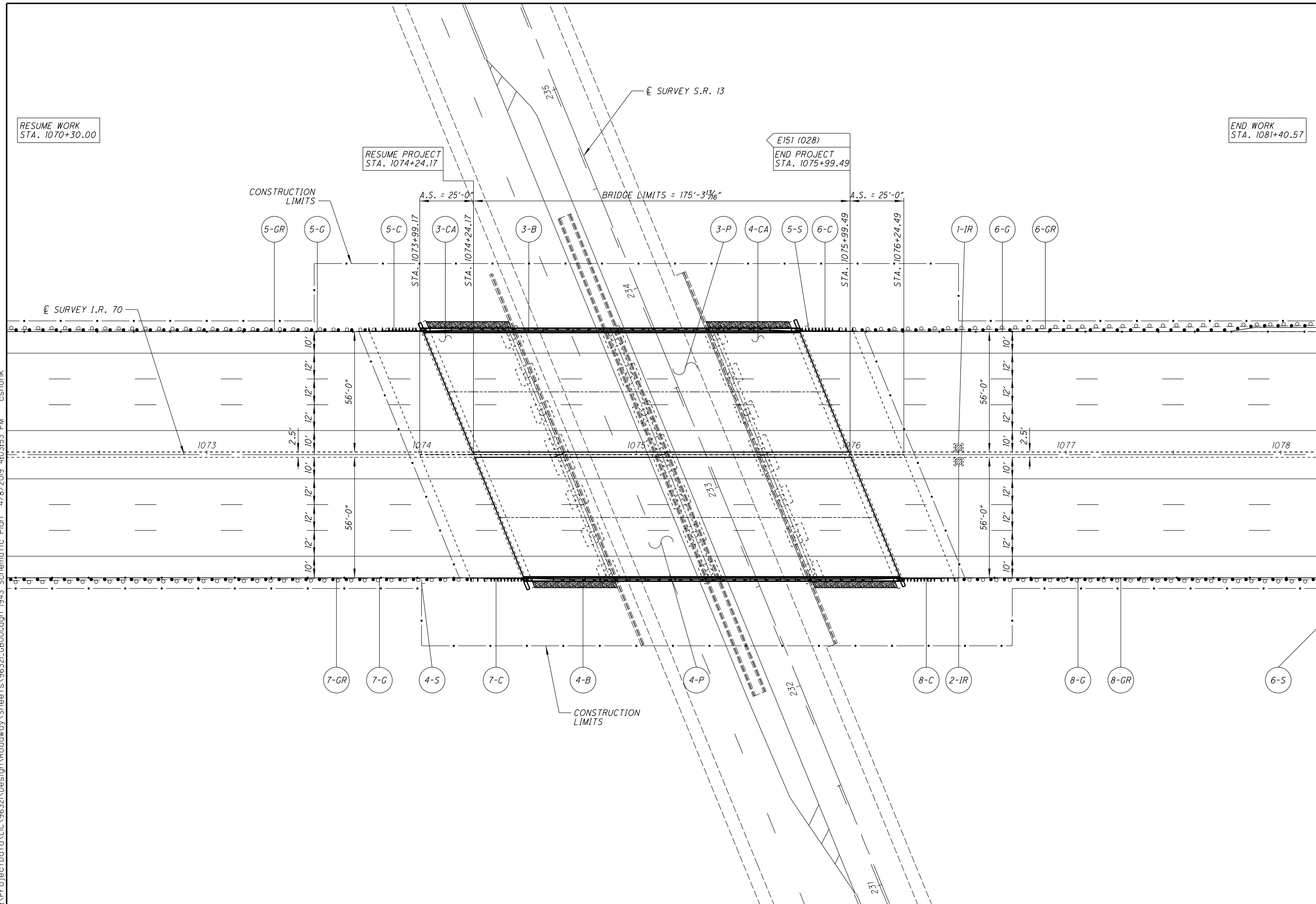
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RESUME WORK
STA. 1070+30.00

RESUME PROJECT
STA. 1074+24.17

E151 (028)
END PROJECT
STA. 1075+99.49

END WORK
STA. 1081+40.57



CALCULATED
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**SCHEMATIC PLAN
(LIC-70-1943)**

LIC-70-17.80/19.42

GENERAL NOTES

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NOTIFICATION OF CONSTRUCTION AND RESTRICTIONS

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510
OR EMAIL AT: D05.PIO@dot.state.oh.us

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525
OR EMAIL AT: brian.bosch@dot.state.oh.us

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099
OR EMAIL AT: hauling.permits@dot.state.oh.us

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

UTILITY OWNERSHIP

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERICAN ELECTRIC POWER CO.
(DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
ATTN: PAUL PAXTON
614-883-6831

WINDSTREAM COMMUNICATIONS
11101 ANDERSON DRIVE
SUITE 100
LITTLE ROCK, ARIZONA
ATTN: BARBARA GRAVES
510-748-4590

CENTURYLINK TELEPHONE
441 WEST BROAD STREET
PATASKLA, OHIO 43062
ATTN: DEE REED
740-927-8282

LICKING COUNTY WATER AND WASTEWATER
4455C WALNUT RD.
BUCKEYE LAKE, OHIO 43008
ATTN: KEVIN EBY
740-928-0302

THE LOCATION OF THE UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

AERIAL EASEMENT LIC-70-1781 BRIDGE

ODOT HAS AN AERIAL EASEMENT LOCATED AT SPAN 3 ON LIC-70-1780 AS SHOWN ON SHEET 2/50. THE CONTRACTOR SHALL PERFORM FORWARD ABUTMENT REPAIRS, PLACE CRUSHED AGGREGATE SLOPE PROTECTION AND ALL OTHER WORK ACTIVITIES LOCATED UNDER SPAN 4 DURING PHASE 1 AFTER THE EXISTING GUARDRAIL HAS BEEN REMOVED. THE CONTRACTOR SHALL ACCESS THE WORK AREA UNDER SPAN 4 FROM I.R. 70. THE THOMAS J EVANS FOUNDATION IS THE CURRENT PROPERTY OWNER.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

MOBILIZATION

THE CONTRACTOR SHALL ON ANY CONTRACT FOR WHICH HIS BID EXCEEDS \$50,000.00 INCLUDE AN AMOUNT TO COVER ANY APPLICABLE EXPENDITURES REFERRED TO UNDER ITEM 624 OF THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS. PAYMENT SHALL BE THE LUMP SUM BID PRICE FOR ITEM 624, MOBILIZATION.

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 PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

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.

REMOVED MATERIALS

ALL REMOVED MATERIALS EXCEPT AS NOTED ELSEWHERE IN THE PLANS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE JOB SITE.

GENERAL PROVISIONS

THE CONTRACTOR'S ATTENTION IS CALLED TO ALL OF SECTION 100 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION.

ITEM 209 RESHAPING UNDER GUARDRAIL

RESHAPE BERMS AT LOCATIONS SHOWN ON SHEET 24/50 WHERE EXISTING GUARDRAIL IS REMOVED OR WHERE NEW GUARDRAIL IS TO BE ERECTED SHALL BE RESHAPED AS DESCRIBED IN CMS 209.05 AND AS DIRECTED BY THE ENGINEER TO ENSURE A SMOOTH SURFACE FREE FROM ALL IRREGULARITIES. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY IN ADDITION TO ITEM 209 RESHAPING UNDER GUARDRAIL.

ITEM 209 RESHAPING UNDER GUARDRAIL.....20.2 STA.

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)

THIS ITEM SHALL BE USED TO FILL IN RUMBLE STRIPS FOR MAINTAINING TRAFFIC IN LOCATIONS SHOWN ON SHEET 25/50. PLACEMENT OF ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) SHALL BE 2.0 FEET IN WIDTH WITH AVERAGE THICKNESS FOR CALCULATION PURPOSES OF 0.75 INCHES. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) 108 CU.YD.

LOCATION OF GUARDRAIL

THE LOCATIONS OF THE GUARDRAIL RUNS, AS SHOWN IN THE THESE PLANS ARE SUBJECT TO ADJUSTMENTS PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATION WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 659 SEEDING AND MULCHING, CLASS 1

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 - SEEDING AND MULCHING, CLASS 1 200 SQ. YD.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

THE CONTRACTOR SHALL REESTABLISH THE SLOPE, AS SHOWN ON SHEETS 27/50 AND 37/50, WITHIN CRUSHED AGGREGATE SLOPE PROTECTION LIMITS BEFORE PLACEMENT OCCURS. AREAS THAT HAVE BEEN ERODED SHALL BE FILLED IN WITH EXCAVATED MATERIAL TO MATCH THE SURROUNDING GRADE AS DIRECTED BY THE ENGINEER. ALL EXCAVATION SHALL BE PERFORMED AS PER CMS 601.01. THE FINISHED GRADE SHALL PROVIDE POSTIVE DRAINAGE TO THE EXISTING DITCHES.

THE CONTRACOR SHALL FILL ABANDONED PILES WITH CRUSHED AGGREGATE CONFORMING TO CMS 703.19. TWO ABANDONED STEEL PILES, 12" DIAMETER, HAVE BEEN LOCATED UNDER SPAN 1 OF LIC-70-1943. THE ESTIMATED FILL DEPTHS ARE 2' AND 12'. ANY ABANDONED PILES CONFLICTING WITH THE PROPOSED GRADE SHALL BE CUT 6" BELOW THE PROPOSED GRADE.

ALL WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN 371 CU. YD.

ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION TO THE DEPARTMENT:

THE CONTRACTOR SHALL PROVIDE AS-BUILT DATA FOR THE SPECIFIED COMPLETED CONSTRUCTION ITEMS IN OHIO STATE PLANE COORDINATES (GRID). THE CONSTRUCTION ITEMS SHALL BE LOCATED AS PER THE SURVEY FEATURE CODE LIST FOUND ON THE OHIO DEPARTMENT OF TRANSPORTATION OFFICE OF CADD & MAPPING SERVICES WEBSITE. AN EMAIL CONTAINING A COMMA DELIMITED ASCII FILE AND A SURVEYOR'S CERTIFICATION SHALL BE DELIVERED TO Cody.Gierhart@dot.ohio.gov AFTER ALL INFORMATION HAS BEEN COLLECTED. THE ASCII FILE SHALL INCLUDE A HEADER CONTAINING NAME OF SURVEYOR, DATE(S) OF COLLECTION, HORIZONTAL DATUM (I.E. NAD83 (2011), OHIO STATE PLANE COORDINATE SYSTEM NORTH OR SOUTH), VERTICAL DATUM (I.E. NAVD 88, GEOD12A) AND METHOD OF COLLECTION (I.E. OHIO VRS, GPS RTK, TOTAL STATION, ETC.) AND BE IN A TABLE FORM AS FOLLOWS:

POINT NUMBER, NORTHING, EASTING, ELEVATION, FEATURE CODE, DESCRIPTION

BELOW IS A LIST OF THE ITEMS THE CONTRACTOR IS REQUIRED TO PROVIDE.
- GUARDRAIL AND CABLE BARRIER

THE ABOVE ITEMS SHALL BE COLLECTED USING SURVEY GRADE EQUIPMENT MEETING THE REQUIREMENTS OF SECTION 400 IN THE OHIO DEPARTMENT OF TRANSPORTATION SURVEY & MAPPING SPECIFICATIONS MANUAL.

ALL COST ASSOCIATED WITH OBTAINING THE INFORMATION LISTED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.

IN ADDITION TO THE ABOVE REQUIREMENTS, THE LOCATIONS OF ALL PROPOSED GUARDRAIL INSTALLATIONS SHALL BE STAKED BY THE CONTRACTOR PRIOR TO INSTALLATION ON THIS PROJECT. THE CONTRACTOR IS REQUIRED TO STAKE EACH LOCATION TO INDICATE THE BEGINNING AND END OF THE PROPOSED GUARDRAIL RUN. THIS WILL ALSO INCLUDE INDICATING THE TYPE OF END TREATMENT TO BE INSTALLED AT EACH LOCATION. THE CONTRACTOR SHALL STAKE EACH LOCATION AT LEAST TWO (2) DAYS PRIOR TO INSTALLATION.

BEFORE GIVING THE CONTRACTOR FINAL APPROVAL TO INSTALL THE RUN OF GUARDRAIL, THE PROJECT ENGINEER MAY ADJUST THE LOCATION AS STAKED TO PROVIDE THE MAXIMUM PROTECTION FOR THE TRAVELING PUBLIC. NO GUARDRAIL WILL BE INSTALLED UNTIL THE PROJECT ENGINEER GIVES THE CONTRACTOR APPROVAL FOR EACH LOCATION.

PAYMENT FOR STAKING WILL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK AS DESCRIBED ABOVE AND WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE. ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN LUMP

GENERAL NOTES

LIC-70-17.80/19.42

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ITEM 614 MAINTAINING TRAFFIC

A MINIMUM OF TWO LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON I.R. 70.

LANE CLOSURES WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE STANDARD DRAWINGS LISTED ON THE TITLE SHEET, IN CONSIDERATION OF THE TRAFFIC FLOW. LANE CLOSURES SHALL ONLY OCCUR DURING CONTRACTOR WORK HOURS.

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.

THE CONTRACTOR WILL HAVE ON SITE AND IN WORKING AND OR SUITABLE CONDITION; ALL EQUIPMENT, TOOLS, LABORERS, LEO'S, TRAFFIC CONTROL DEVICES AND INCIDENTALS NECESSARY TO EFFICIENTLY PERFORM THE CLOSURE BEFORE INITIALIZING THE LANE CLOSURE.

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.

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$75 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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

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

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

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 50 HOURS

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

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

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S)	COUNTY-ROUTE-SECTION(S)	DIRECTION(S)
WZ-30647	LIC-70-16.88 TO 20.46	EASTBOUND AND WESTBOUND

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRECONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORKDURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

WORK ZONE SPEED ZONES (WZSZS) (CONTINUED)

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.J

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

[ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 12 SIGN MNTH] [ASSUMING 6 DSL SIGN ASSEMBLY(IES) FOR 2 MONTH(S)]

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ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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

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

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

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

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

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

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

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

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN.....4 SIGN MONTH

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

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

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

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

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

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

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

PHASE 1 EASTBOUND - 2 EACH
PHASE 1 WESTBOUND - 2 EACH

PHASE 2 EASTBOUND - 2 EACH
PHASE 2 WESTBOUND - 2 EACH
8 EACH

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY

ITEM 614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)..... 8 EACH

SEQUENCE OF OPERATIONS:

PHASE 1 (I.R. 70): (I.R. 70)

- 1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE AND MAINTAIN TRAFFIC BY USE OF THE 2 INSIDE LANES.
- 2) FILL IN RUMBLE STRIPS ON THE OUTSIDE SHOULDER WITH ITEM 448 INTERMEDIATE COURSE TO ALLOW FOR MAINTAINING TRAFFIC ON THE SHOULDER.
- 3) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE AND MAINTAIN TRAFFIC BY USE OF THE 2 OUTSIDE LANES.
- 4) FILL IN RUMBLE STRIPS ON THE INSIDE SHOULDER WITH ITEM 448 INTERMEDIATE COURSE TO ALLOW FOR MAINTAINING TRAFFIC ON THE SHOULDER. COVER MEDIAN INLETS WITH BOLT ANCHORED STEEL PLATES TO ALLOW FOR MAINTAINING TRAFFIC ON THE INSIDE SHOULDER FOR PHASE 1.
- 5) SET UP TRAFFIC CONTROL FOR PHASE 1 AS SHOWN ON SHEETS 7/50, 9/50, AND 11/50 TO 15/50.

6) AT BRIDGE NO. LIC-70-1781: LANCER SHALL BE REDUCED DOWN TO 1 LANE WITH THE USE OF FLAGGERS DURING REMOVAL AND CONSTRUCTION OF THE PARPETS. REPLACE EXISTING CONCRETE OVERLAY WITH NEW SDC CONCRETE OVERLAY. ALL WORK UNDER SPAN 4 SUCH AS THE FORWARD ABUTMENT REPAIRS, PLACEMENT OF CRUSHED AGGREGATE SLOPE PROTECTION ON THE FORWARD ABUTMENT SLOPE, AND ALL BRIDGE WORK FOR PHASE 1 AS INDICATED IN THESE PLANS SHALL BE PERFORMED DURING PHASE 1 DUE TO ACCESS CONSTRAINTS.

AT BRIDGE NO. LIC-70-1943: A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED IN EACH DIRECTION DURING REMOVAL AND CONSTRUCTION OF THE DECK EDGES AND PARAPETS. REPLACE EXISTING CONCRETE OVERLAY WITH NEW SDC CONCRETE OVERLAY AND PERFORM ALL BRIDGE WORK FOR PHASE 1 AS INDICATED IN THESE PLANS.

7) INSTALL OUTSIDE SHOULDER GUARDRAIL FOR BOTH BRIDGES AND PERFORM ALL ROADWAY WORK FOR PHASE 1 AS INDICATED IN THESE PLANS.

PHASE 2:

- 1) SET UP TRAFFIC CONTROL FOR PHASE 2 AS SHOWN ON SHEETS 7/50 TO 10/50 AND 16/50 TO 20/50.
- 2) RECONSTRUCT INLETS TO GRADE AT LOCATIONS SHOWN IN THESE PLANS.
- 3) AT BRIDGE NO. LIC-70-1781: REPLACE EXISTING CONCRETE OVERLAY WITH NEW SDC CONCRETE OVERLAY. REPAIR REAR ABUTMENTS, PLACE CRUSHED AGGREGATE SLOPE PROTECTION ON THE REAR ABUTMENT SLOPE AND PERFORM ALL BRIDGE FOR PHASE 2 AS INDICATED IN THESE PLANS.

AT BRIDGE NO. LIC-70-1943: REPLACE EXISTING CONCRETE OVERLAY WITH NEW SDC CONCRETE OVERLAY, PLACE CRUSHED AGGREGATE SLOPE PROTECTION ON THE ABUTMENT SLOPES, AND PERFORM ALL BRIDGE WORK FOR PHASE 2 AS INDICATED IN THESE PLANS.

- 4) INSTALL INSIDE SHOULDER GUARDRAIL FOR AT BRIDGE NO. LIC-70-1943 AND PERFORM ALL ROADWAY WORK FOR PHASE 2 AS INDICATED IN THESE PLANS.
- 5) PLACE ALL PERMANENT PAVEMENT MARKINGS.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC. (REFER TO MAINTAINING TRAFFIC NOTE ON SHEET 5/50 FOR RESTRICTIONS).

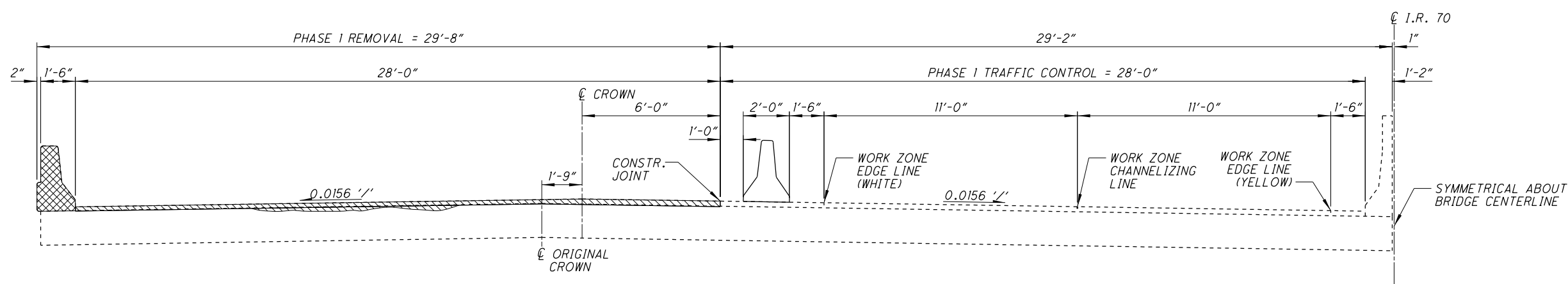
IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATIVE METHODS FOR THE MAINTENANCE OF TRAFFIC. PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE ENGINEER.

ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE OPENING ANY LANES TO TRAFFIC.

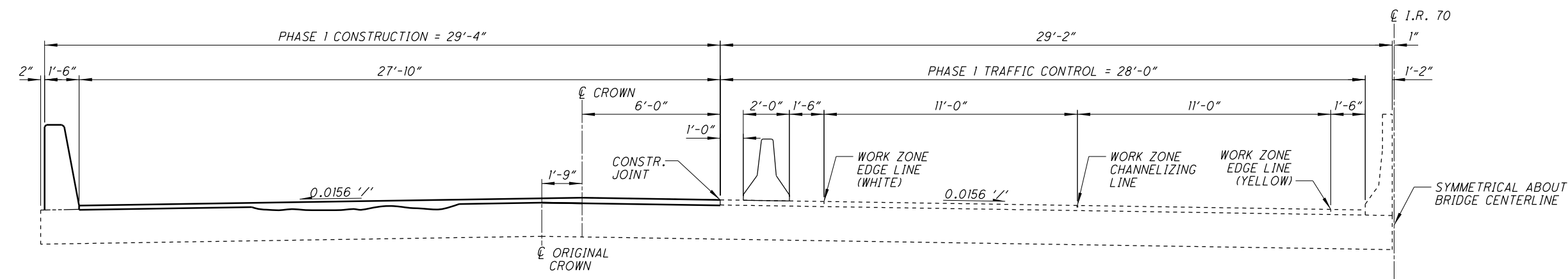
CALCULATED
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MAINTENANCE OF TRAFFIC NOTES

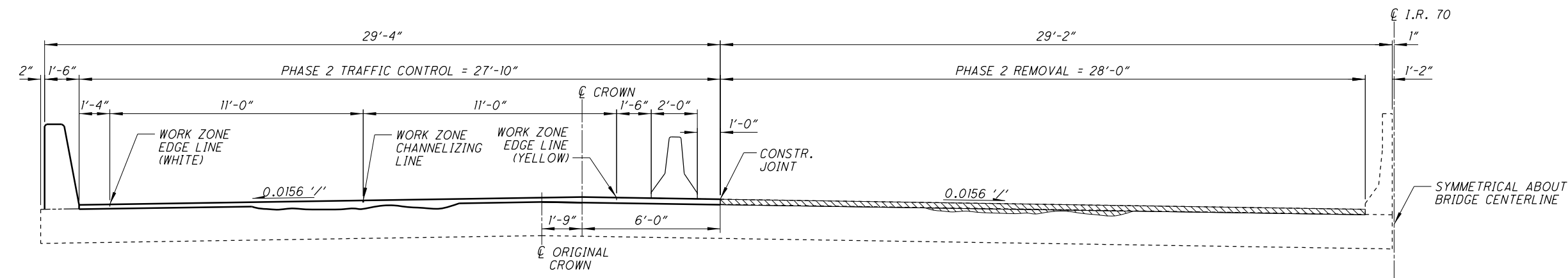
LIC-70-17.80/19.42



PHASE 1 REMOVAL AND TRAFFIC CONTROL
(LIC-70-1781 WESTBOUND SHOWN)

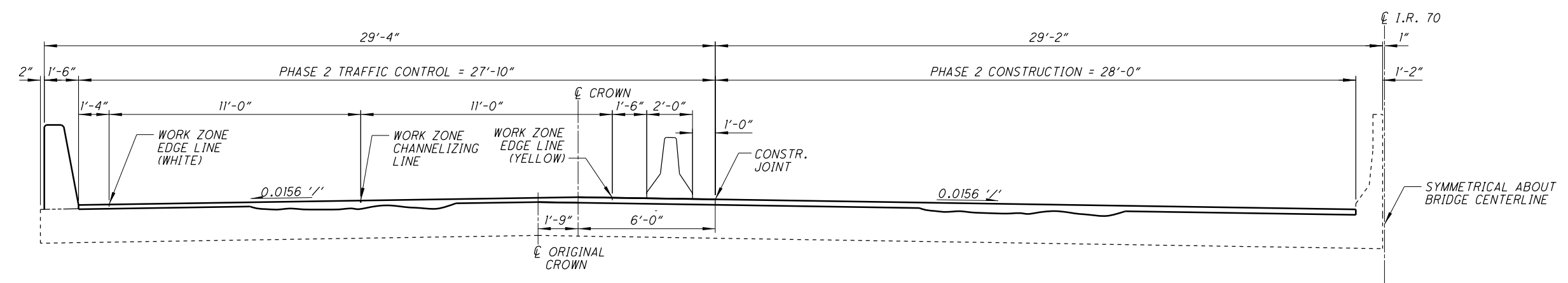


PHASE 1 CONSTRUCTION AND TRAFFIC CONTROL
(LIC-70-1781 WESTBOUND SHOWN)

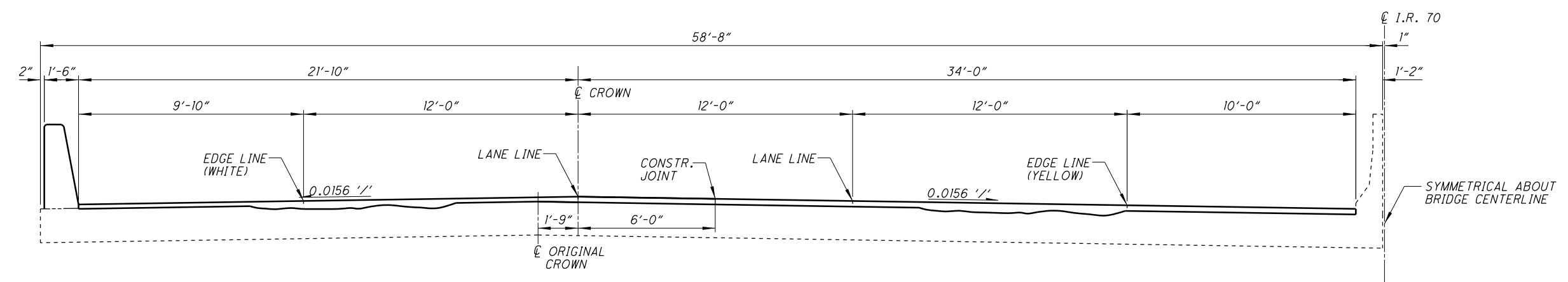


PHASE 2 REMOVAL AND TRAFFIC CONTROL
(LIC-70-1781 WESTBOUND SHOWN)

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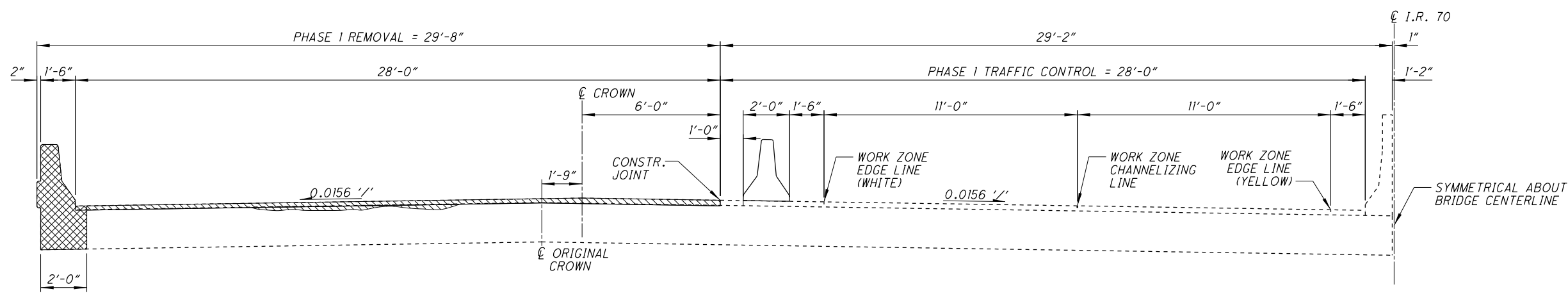


PHASE 2 CONSTRUCTION AND TRAFFIC CONTROL
(LIC-70-1781 WESTBOUND SHOWN)

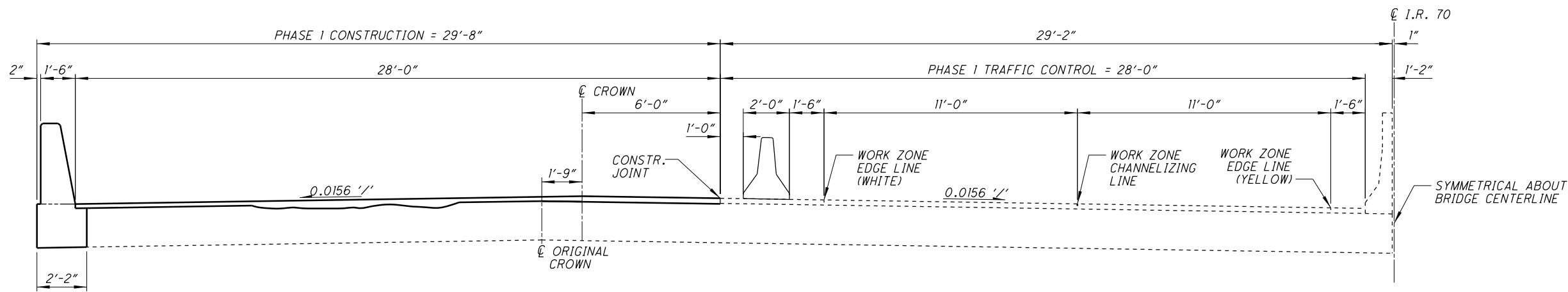


PROPOSED TRANSVERSE SECTION
(LIC-70-1781 WESTBOUND SHOWN)

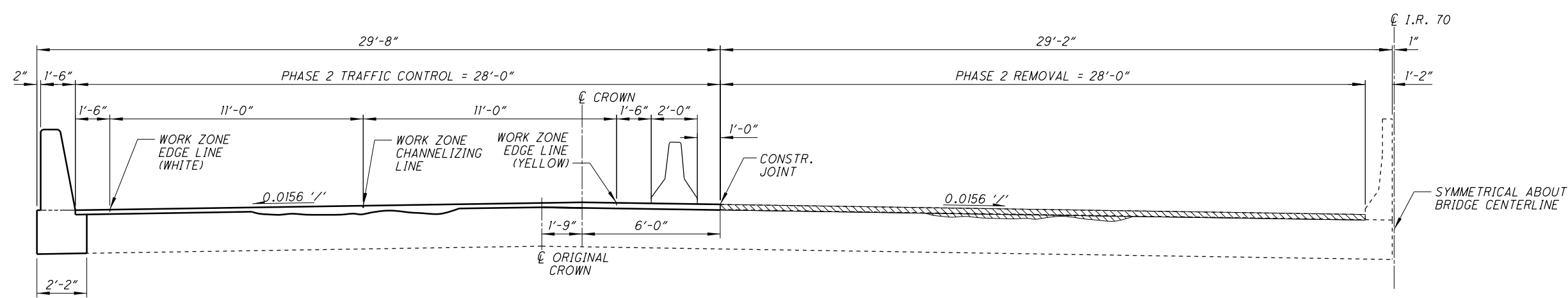
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PHASE 1 REMOVAL AND TRAFFIC CONTROL
(LIC-70-1943 WESTBOUND SHOWN)

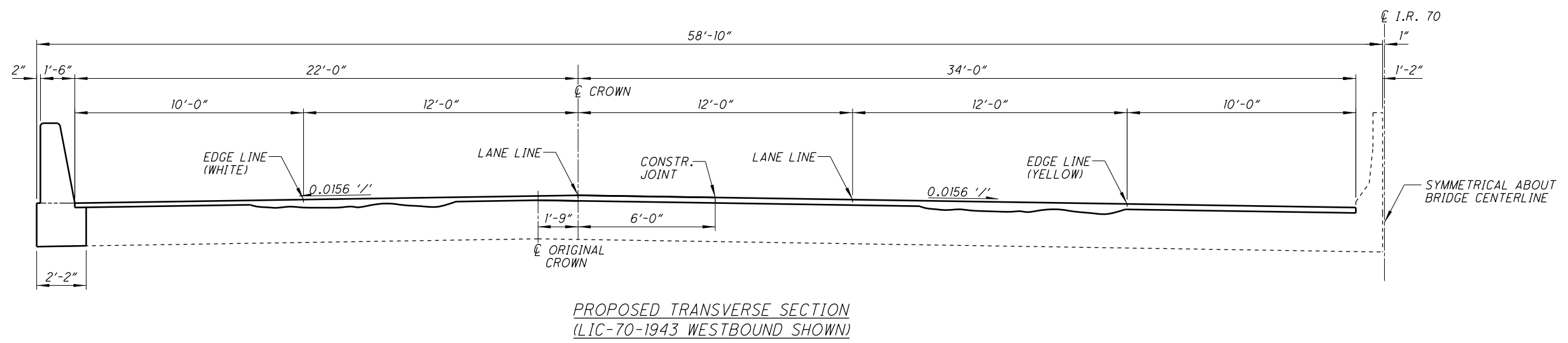
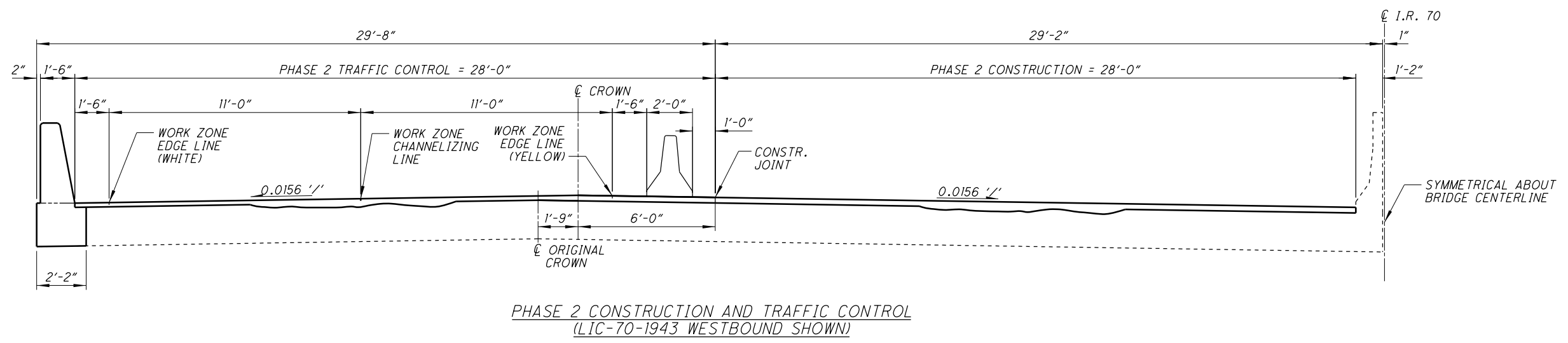


PHASE 1 CONSTRUCTION AND TRAFFIC CONTROL
(LIC-70-1943 WESTBOUND SHOWN)

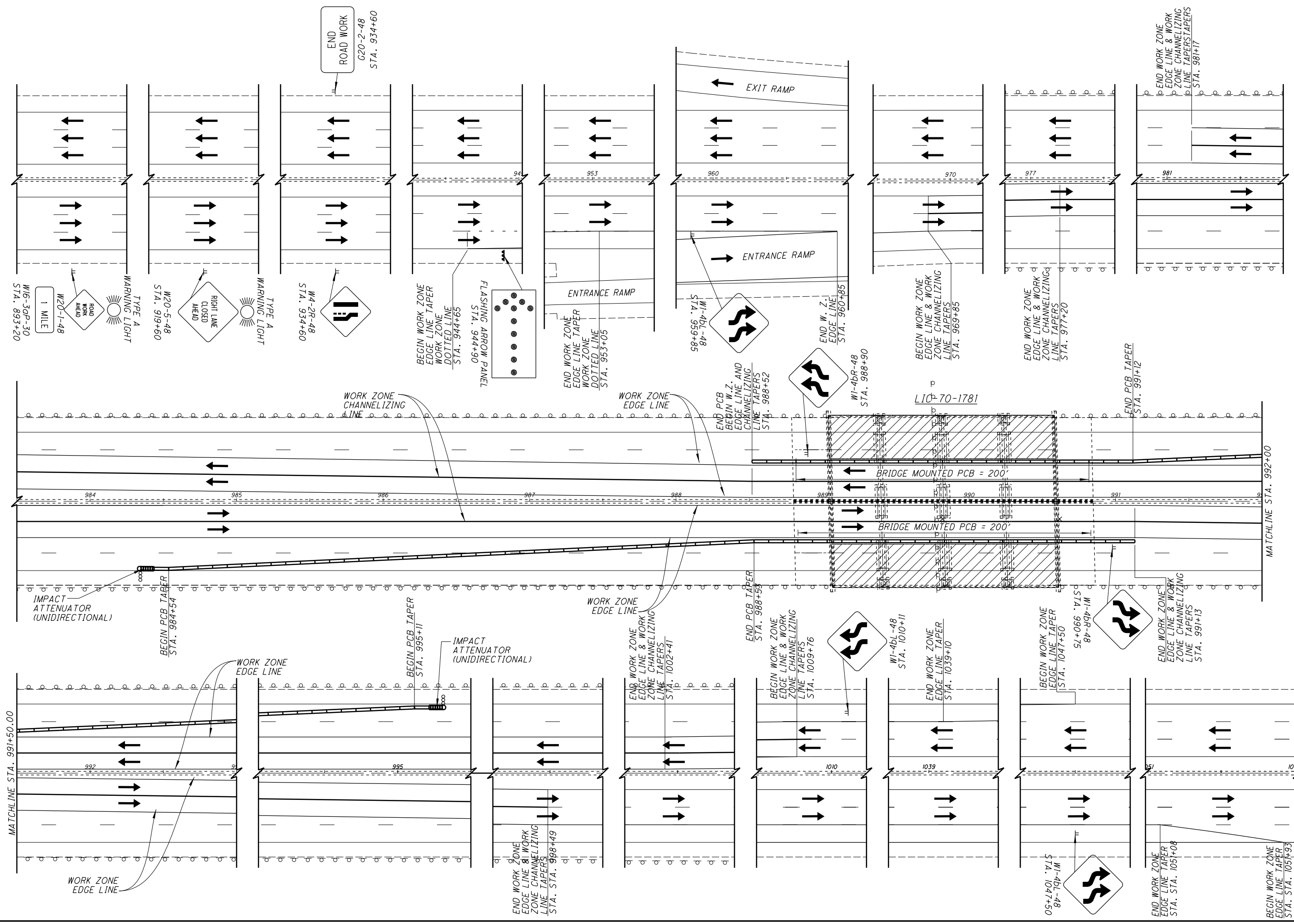


PHASE 2 REMOVAL AND TRAFFIC CONTROL
(LIC-70-1943 WESTBOUND SHOWN)

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W16-3GP-30
STA. 893+20

W20-1-48
STA. 919+60

W4-2R-48
STA. 934+60

W20-5-48
STA. 919+60

W4-2R-48
STA. 934+60

W1-4BL-48
STA. 959+85

BEGIN WORK ZONE
EDGE LINE TAPER
WORK ZONE
DOTTED LINE
STA. 944+65

FLASHING ARROW PANEL
STA. 944+90

END WORK ZONE
EDGE LINE TAPER
WORK ZONE
DOTTED LINE
STA. 953+05

W1-4BL-48
STA. 959+85

W1-4BR-48
STA. 988+90

BEGIN WORK ZONE
EDGE LINE & WORK
ZONE CHANNELIZING
LINE TAPERS
STA. 969+85

END WORK ZONE
EDGE LINE & WORK
ZONE CHANNELIZING
LINE TAPERS
STA. 977+20

END PCB TAPER
STA. 991+12

MATCHLINE STA. 991+50.00

WORK ZONE
EDGE LINE

BEGIN PCB TAPER
STA. 984+54

WORK ZONE
EDGE LINE

BEGIN PCB TAPER
STA. 995+11

IMPACT
ATTENUATOR
(UNIDIRECTIONAL)

END WORK ZONE
EDGE LINE & WORK
ZONE CHANNELIZING
LINE TAPERS
STA. STA. 988+49

WORK ZONE
EDGE LINE

END WORK ZONE
EDGE LINE & WORK
ZONE CHANNELIZING
LINE TAPERS
STA. 1002+41

END PCB TAPER
STA. 988+53

BEGIN WORK ZONE
EDGE LINE & WORK
ZONE CHANNELIZING
LINE TAPERS
STA. 1009+76

W1-4BL-48
STA. 1010+11

END WORK ZONE
EDGE LINE TAPER
STA. 1039+10

W1-4BL-48
STA. 1047+50

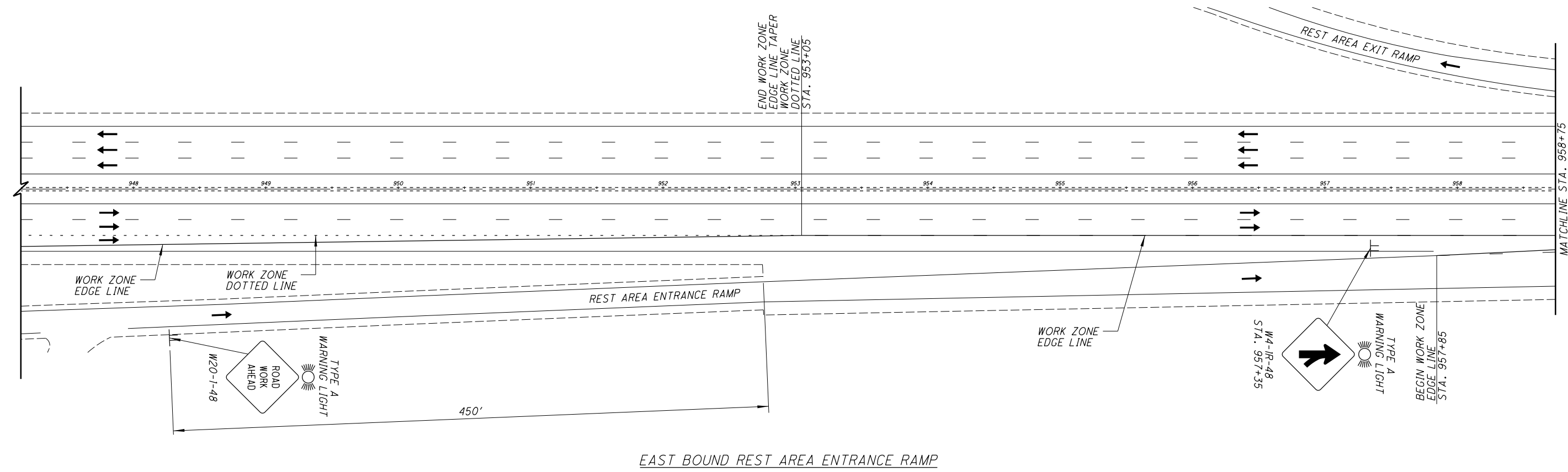
BEGIN WORK ZONE
EDGE LINE TAPER
STA. 1047+50

END WORK ZONE
EDGE LINE TAPER
STA. STA. 105+08

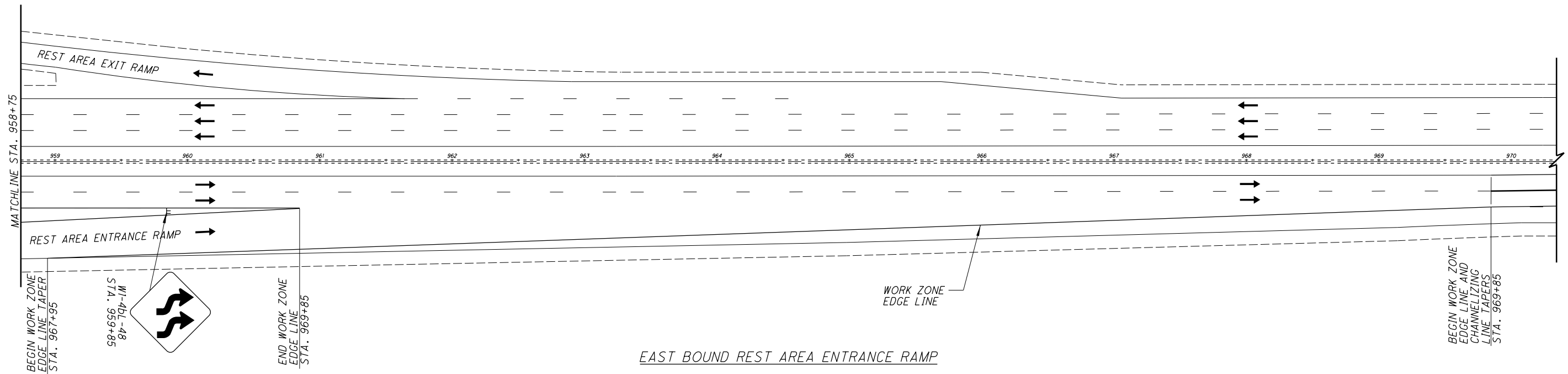
BEGIN WORK ZONE
EDGE LINE TAPER
STA. STA. 105+93

MATCHLINE STA. 992+00

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EAST BOUND REST AREA ENTRANCE RAMP



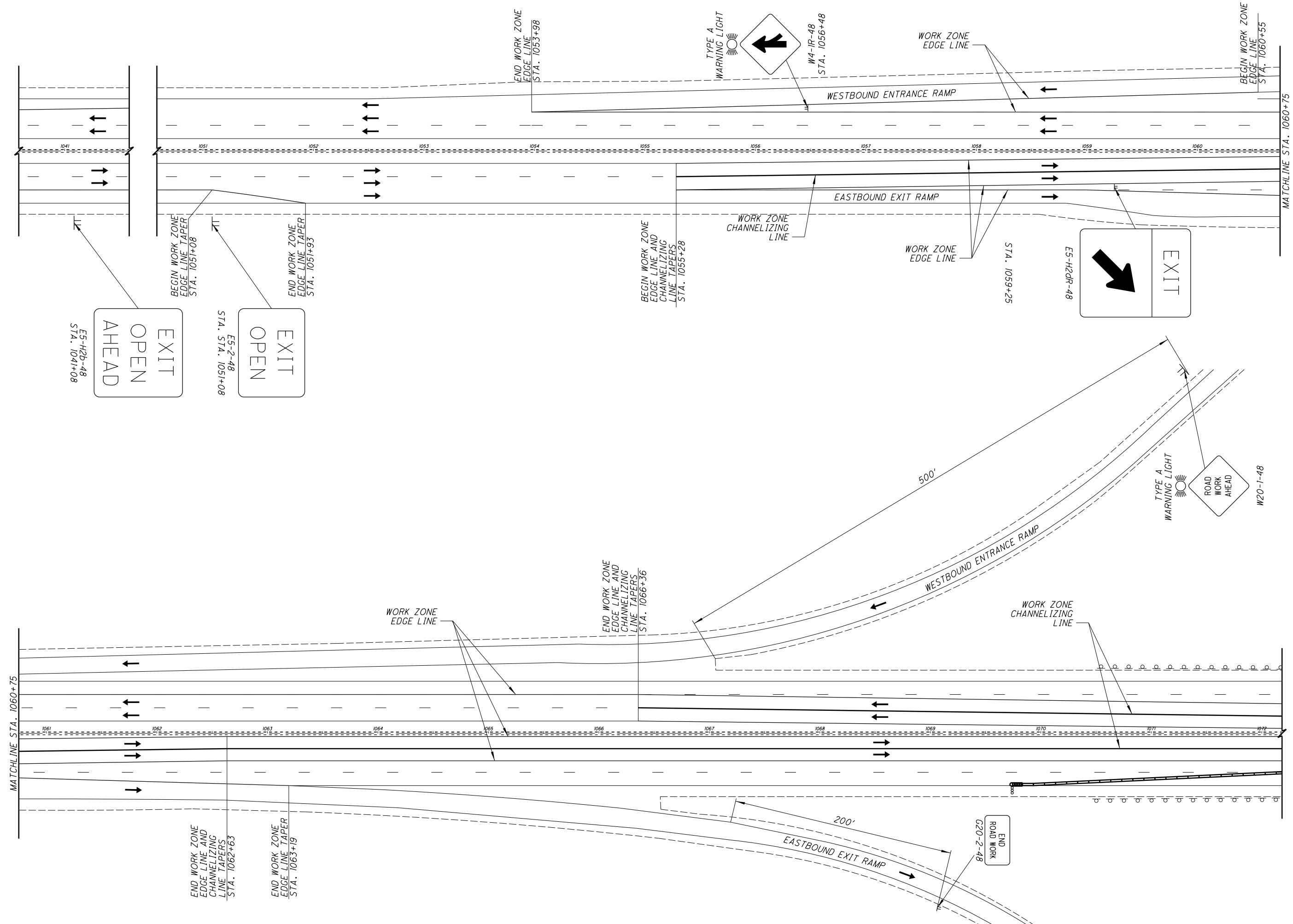
EAST BOUND REST AREA ENTRANCE RAMP

CALCULATED
KMR
CHECKED
CPS

MAINTENANCE OF TRAFFIC (PHASE 1)

LIC-70-17.80/19.42

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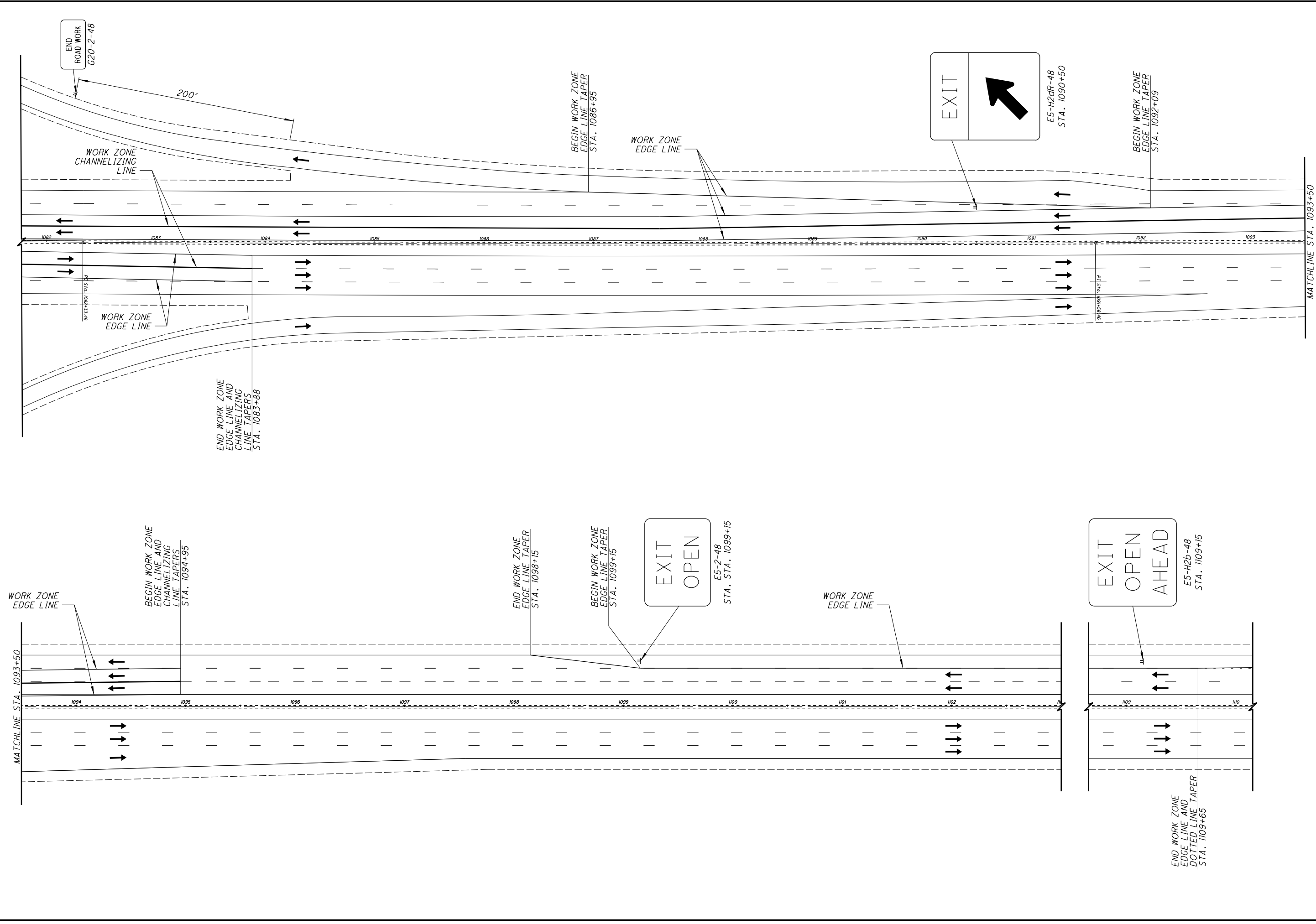
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LIC-70-17.80 / 19.42

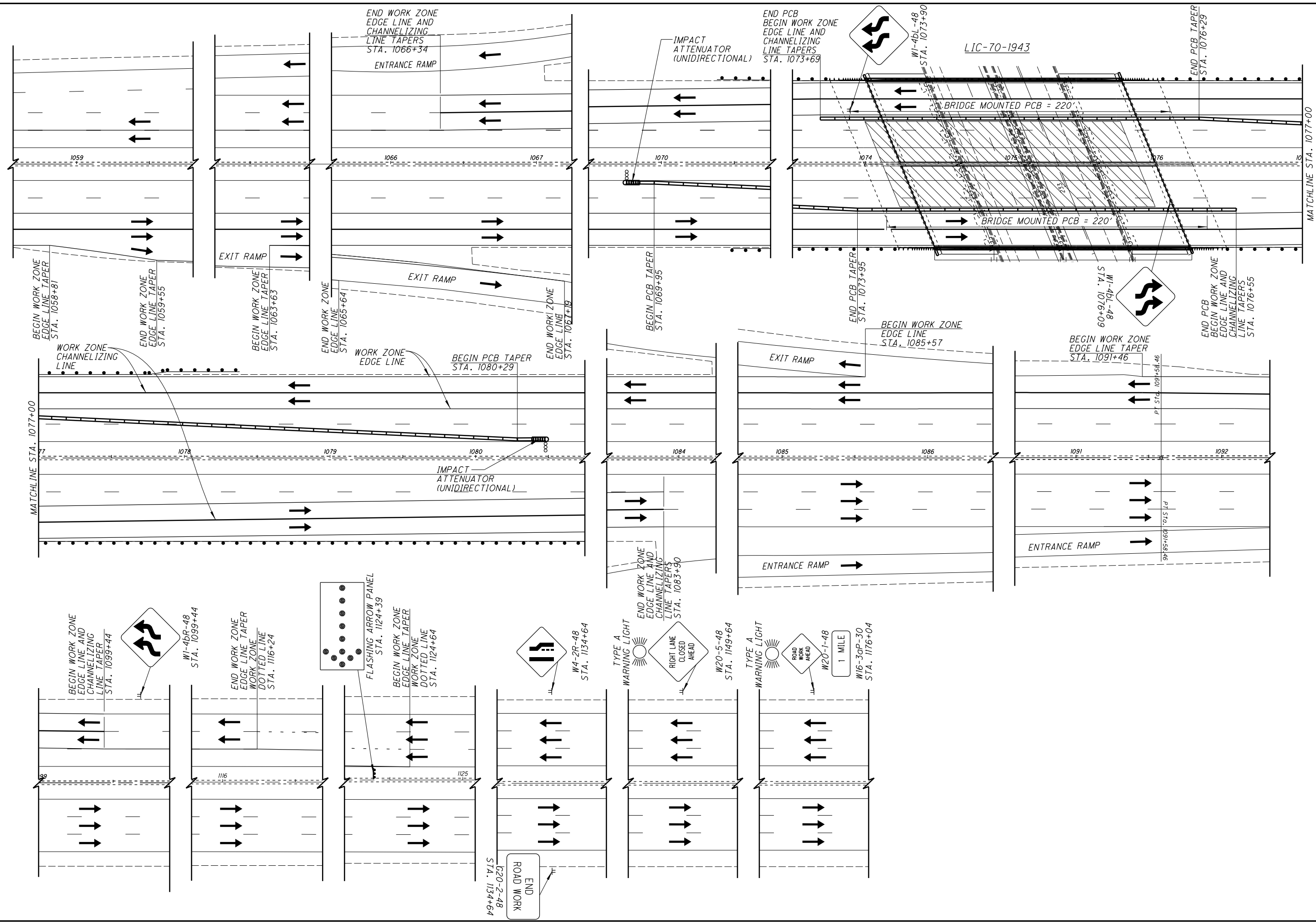
14
50

MAINTENANCE OF TRAFFIC (PHASE 1)

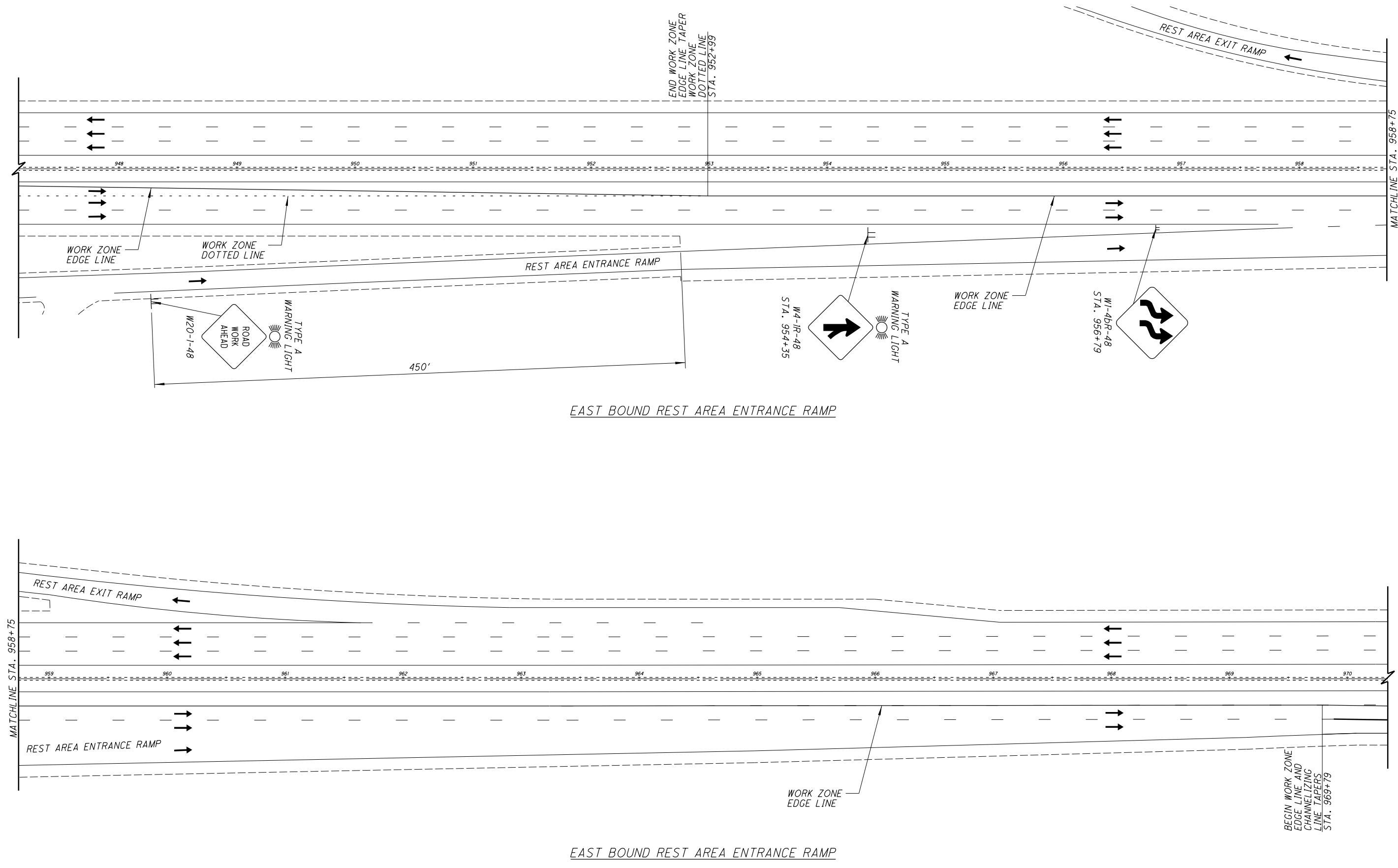
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EAST BOUND REST AREA ENTRANCE RAMP

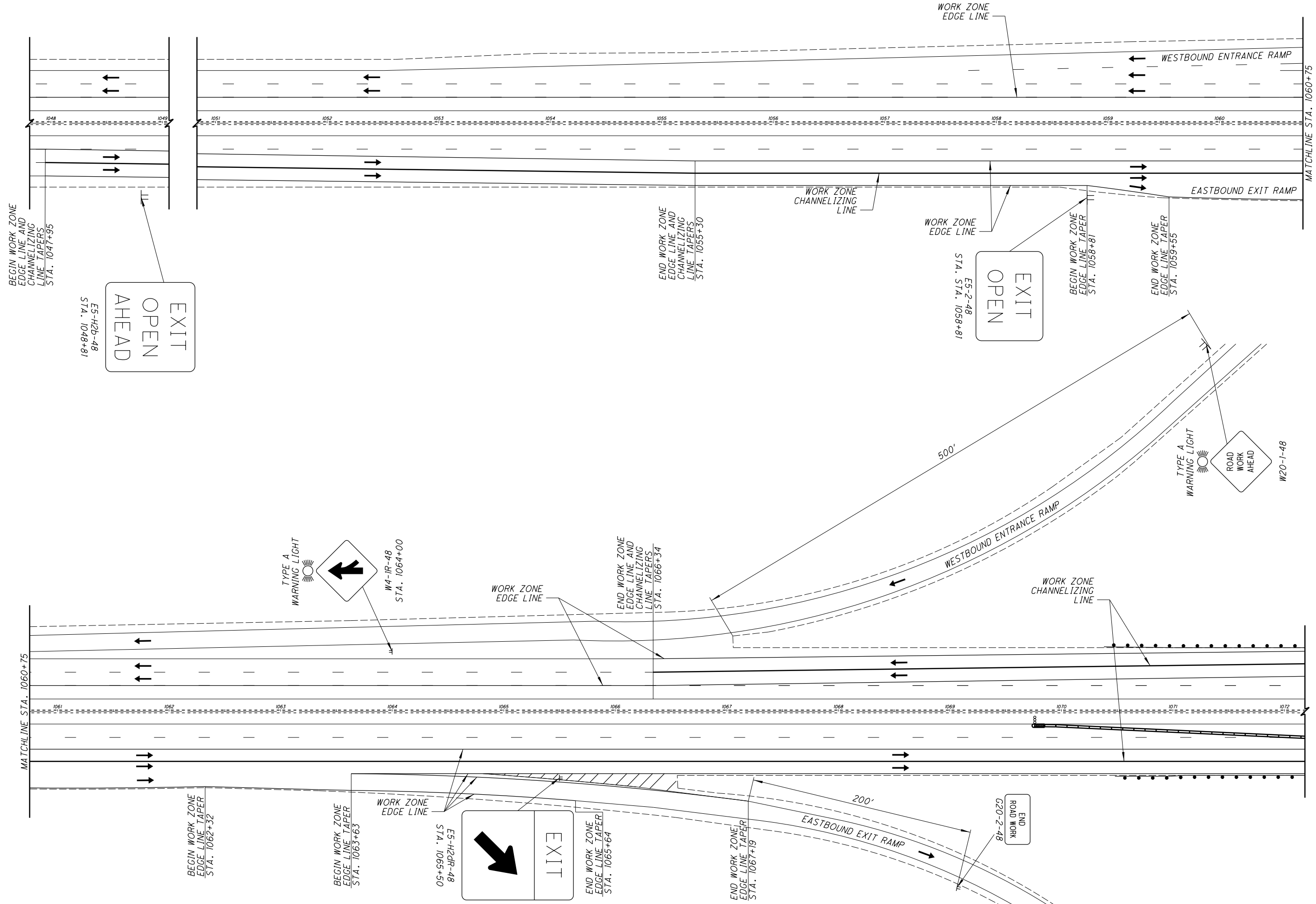
EAST BOUND REST AREA ENTRANCE RAMP

CALCULATED
KMR
CHECKED
CPS

MAINTENANCE OF TRAFFIC (PHASE 2)

LIC-70-17.80/19.42

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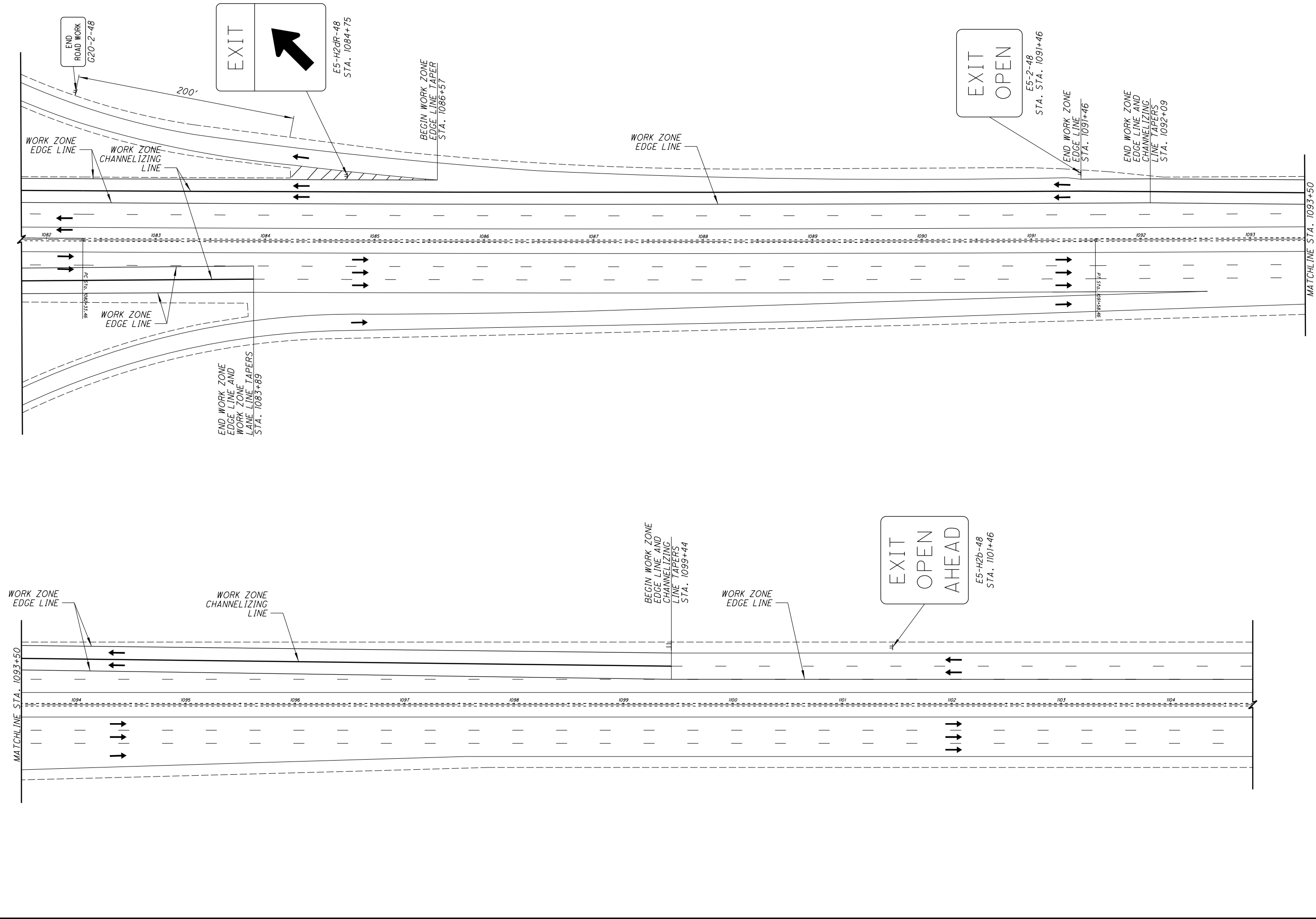


CALCULATED
KMR
CHECKED
CPS

MAINTENANCE OF TRAFFIC (PHASE 2)

LIC-70-17.80/19.42

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614 BARRIER REFLECTORS

STATIONING	SPACING (FT.)	TYPE 1	TYPE 2	TYPE 3	TYPE 4	OBJECT MARKER, ONE-WAY
		WHITE	WHITE	WHITE	WHITE	
E.B. PHASE 1 (ON EX. MEDIAN BARRIER)						
974+20 - 994+20	50	41				41
1059+60 - 1079+60	50	41				41
EASTBOUND PHASE 1 (ON PCB)						
984+54 - 991+13	50	15				15
1069+93 - 1076+53	50	15				15
W.B. PHASE 1 (ON EX. MEDIAN BARRIER)						
985+50 - 1001+50	50	33				33
1070+70 - 1090+20	50	40				40
WESTBOUND PHASE 1 (ON PCB)						
988+52 - 995+11	50	15				15
1073+71 - 1080+30	50	15				15
E.B. PHASE 2 (ON GUARDRAIL)						
975+31 - 989+07	50		29			29
990+61 - 993+56	50		7			7
1070+50 - 1074+50	50		9			9
1076+22 - 1079+52	50		8			8
E.B. PHASE 2 (ON PARAPET)						
989+07 - 990+61	50	4				4
1074+50 - 1076+22	50	5				5
EASTBOUND PHASE 2 (ON PCB)						
984+54 - 991+13	50	15				15
1069+95 - 1076+35	50	15				15
W.B. PHASE 2 (ON GUARDRAIL)						
985+43 - 989+04	50		9			9
990+58 - 1003+65	50		27			27
1070+40 - 1074+02	50		9			9
1075+75 - 1078+36	50		7			7
W.B. PHASE 2 (ON PARAPET)						
989+04 - 990+58	50	4				4
1074+02 - 1075+75	50	5				5
WESTBOUND PHASE 2 (ON PCB)						
988+52 - 995+11	50	15				15
1073+69 - 1080+29	50	15				15
TOTALS		293	105			398

LEGEND

W - WHITE
 Y - YELLOW
 PCB - PORTABLE CONCRETE BARRIER

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY
 ITEM 614 - BARRIER REFLECTOR, TYPE 1 (ONE WAY) 293 EACH
 ITEM 614 - BARRIER REFLECTOR, TYPE 2 (ONE WAY) 105 EACH
 ITEM 614 - OBJECT MARKER, ONE WAY..... 398 EACH

614 BARRIER REFLECTORS

THESE REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO ALL REQUIREMENTS OF 626 EXCEPT THAT SPACING SHALL BE AS SHOWN ON THIS SHEET.

614 OBJECT MARKERS

OBJECT MARKERS FROM PHASE 1 THAT THE PROJECT ENGINEER CONSIDERS ACCEPTABLE FOR PHASE 2 AFTER THE PORTABLE CONCRETE BARRIER HAS BEEN MOVED SHALL BE NON-PERFORMED.

ITEM 614. MAINTAINING TRAFFIC (ESTIMATED QUANTITIES)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.....10 CU.YD.

ITEM 614 WORK ZONE LANE LINE, CLASS 1, 6"

EASTBOUND (PHASE 2)
 (OUTSIDE RT.) STA. 944+65 TO STA. 960+85 = 1,620 FEET
 (OUTSIDE RT.) STA. 998+48 TO STA. 1047+95 = 4,947 FEET

WESTBOUND (PHASE 2)
 (OUTSIDE RT.) STA. 1009+86 TO STA. 1066+34 = 5,648 FEET
 (OUTSIDE RT.) STA. 1099+44 TO STA. 1118+05 = 1,861 FEET

14,076 FEET/2.67 MILES

ITEM 614 WORK ZONE EDGE LINE, CLASS 1, 6"

EASTBOUND (PHASE 1)
 LEFT (YELLOW) STA. 969+85 TO STA. 998+49 = 2,864 FEET
 LEFT (YELLOW) STA. 1055+28 TO STA. 1083+88 = 2,860 FEET
 RIGHT (WHITE) STA. 944+65 TO STA. 960+85 = 1,620 FEET
 (ENTRANCE RAMP) - RIGHT (WHITE) STA. 957+85 TO STA. 960+85 = 300 FEET
 RIGHT (WHITE) STA. 967+95 TO STA. 1051+93 = 8,398 FEET
 RIGHT (WHITE) STA. 1055+28 TO STA. 1083+88 = 2,860 FEET
 (EXIT RAMP) - RIGHT (WHITE) STA. 1055+28 TO STA. 1063+19 = 791 FEET

WESTBOUND (PHASE 1)
 LEFT (YELLOW) STA. 981+17 TO STA. 1009+76 = 2,859 FEET
 LEFT (YELLOW) STA. 1066+36 TO STA. 1095+95 = 2,959 FEET
 RIGHT (WHITE) STA. 981+17 TO STA. 1047+50 = 6,633 FEET
 RIGHT (WHITE) STA. 1053+98 TO STA. 1095+95 = 4,197 FEET
 (EXIT RAMP) - RIGHT (WHITE) STA. 1053+98 TO STA. 1060+55 = 657 FEET
 (EXIT RAMP) - RIGHT (WHITE) STA. 1086+95 TO STA. 1092+09 = 514 FEET
 RIGHT (WHITE) STA. 1098+15 TO STA. 1118+05 = 1,990 FEET

EASTBOUND (PHASE 2)
 LEFT (YELLOW) STA. 944+60 TO STA. 1083+90 = 13,930 FEET
 RIGHT (WHITE) STA. 969+79 TO STA. 998+49 = 2,870 FEET
 RIGHT (WHITE) STA. 1047+95 TO STA. 1065+64 = 1,769 FEET
 RIGHT (WHITE) STA. 1063+63 TO STA. 1083+90 = 2,027 FEET
 RIGHT (WHITE) STA. 1063+63 TO STA. 1067+19 = 356 FEET

WESTBOUND (PHASE 2)
 LEFT (YELLOW) STA. 981+17 TO STA. 1124+64 = 14,347 FEET
 RIGHT (WHITE) STA. 981+17 TO STA. 1009+76 = 2,859 FEET
 RIGHT (WHITE) STA. 1066+34 TO STA. 1085+57 = 1,923 FEET
 RIGHT (WHITE) STA. 1091+46 TO STA. 1099+44 = 803 FEET

80,386 FEET/15.22 MILES

FOR INFORMATIONAL PURPOSES ONLY

(YELLOW) EDGE LINE = 39,819 FEET/7.54 MILES
 (WHITE) EDGE LINE = 40,567 FEET/7.68 MILES
 82,186 FEET/15.22 MILES

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER

EASTBOUND (PHASE 1): 873 EACH
 WESTBOUND (PHASE 1): 873 EACH
 EASTBOUND (PHASE 2): 873 EACH
 WESTBOUND (PHASE 2): 873 EACH
 3,492 EACH

FOR INFORMATIONAL PURPOSES ONLY

(YELLOW) RPM = 1,088 EACH
 (WHITE) RPM = 2,404 EACH
 3,492 EACH

ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS 1, 8"

EASTBOUND (PHASE 1)
 STA. 969+85 TO STA. 998+49 = 2,900 FEET
 STA. 1055+28 TO STA. 1083+88 = 2,860 FEET

WESTBOUND (PHASE 1)
 STA. 981+17 TO STA. 1005+78 = 2,461 FEET
 STA. 1066+36 TO STA. 1095+95 = 2,959 FEET

EASTBOUND (PHASE 2)
 STA. 969+79 TO STA. 998+49 = 2,870 FEET
 STA. 1047+95 TO STA. 1083+90 = 3,595 FEET

WESTBOUND (PHASE 2)
 STA. 981+17 TO STA. 1009+76 = 2,859 FEET
 STA. 1066+34 TO STA. 1099+44 = 3,310 FEET
 23,814 FEET

ITEM 614 WORK ZONE DOTTED LINE, CLASS 1

EASTBOUND (PHASE 1)
 STA. 944+65 TO STA. 953+05 = 840 FEET

WESTBOUND (PHASE 1)
 STA. 1009+65 TO STA. 1118+05 = 840 FEET

EASTBOUND (PHASE 2)
 STA. 944+60 TO STA. 953+00 = 840 FEET

WESTBOUND (PHASE 2)
 STA. 1116+24 TO STA. 1124+64 = 840 FEET
 3,360 FEET

ITEM 622 PORTABLE CONCRETE BARRIER, 32"

EASTBOUND (PHASE 1)
 STA. 984+44 TO STA. 988+83 = 440 FEET
 STA. 990+83 TO STA. 991+13 = 30 FEET
 STA. 1069+83 TO STA. 1074+13 = 430 FEET
 STA. 1076+33 TO STA. 1076+53 = 20 FEET

WESTBOUND (PHASE 1)
 STA. 988+52 TO STA. 988+82 = 30 FEET
 STA. 990+82 TO STA. 995+21 = 440 FEET
 STA. 1073+71 TO STA. 1073+91 = 20 FEET
 STA. 1076+11 TO STA. 1080+40 = 430 FEET

EASTBOUND (PHASE 2)
 STA. 984+44 TO STA. 988+83 = 440 FEET
 STA. 990+83 TO STA. 991+13 = 30 FEET
 STA. 1069+85 TO STA. 1074+15 = 430 FEET
 STA. 1076+35 TO STA. 1076+55 = 20 FEET

WESTBOUND (PHASE 2)
 STA. 988+52 TO STA. 988+82 = 30 FEET
 STA. 990+82 TO STA. 995+21 = 440 FEET
 STA. 1073+69 TO STA. 1073+89 = 20 FEET
 STA. 1076+09 TO STA. 1080+39 = 430 FEET
 3,680 FEET

ITEM 622 PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED

EASTBOUND (PHASE 1)
 STA. 988+83 TO STA. 990+83 = 200 FEET
 STA. 1074+13 TO STA. 1076+33 = 220 FEET

WESTBOUND (PHASE 1)
 STA. 988+82 TO STA. 990+82 = 200 FEET
 STA. 1073+91 TO STA. 1076+11 = 220 FEET

EASTBOUND (PHASE 2)
 STA. 988+83 TO STA. 990+83 = 200 FEET
 STA. 1074+15 TO STA. 1076+35 = 220 FEET

WESTBOUND (PHASE 2)
 STA. 988+82 TO STA. 990+82 = 200 FEET
 STA. 1073+89 TO STA. 1076+09 = 220 FEET
 1,680 FEET

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CALCULATED
 KMR
 CHECKED
 CPS

MAINTENANCE OF TRAFFIC QUANTITIES

LIC-70-17.80/19.42

ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)											
REF #	STATION / DESCRIPTION	#	L	W	T	C.F.	CU YD				
1-RS	981+17.00 TO 1009+76.00	1	x	2859	x	2	x	0.0625	÷	27	13.2
2-RS	981+17.00 TO 1009+76.00	1	x	2859	x	2	x	0.0625	÷	27	13.2
3-RS	969+85.00 TO 998+49.00	1	x	2854	x	2	x	0.0625	÷	27	13.3
4-RS	969+85.00 TO 998+48.00	1	x	2853	x	2	x	0.0625	÷	27	13.3
5-RS	1066+34.00 TO 1084+23.00	1	x	1789	x	2	x	0.0625	÷	27	8.3
6-RS	1091+46.00 TO 1099+44.00	1	x	798	x	2	x	0.0625	÷	27	3.7
7-RS	1066+36.00 TO 1094+95.00	1	x	2859	x	2	x	0.0625	÷	27	13.2
8-RS	1055+28.00 TO 1083+88.00	1	x	2850	x	2	x	0.0625	÷	27	13.2
9-RS	1047+95.00 TO 1065+84.00	1	x	1769	x	2	x	0.0625	÷	27	8.2
10-RS	1066+56.00 TO 1083+90.00	1	x	1734	x	2	x	0.0625	÷	27	8.0
										108	

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN											
REF #	STATION / DESCRIPTION	#	L	W	T	C.F.	CU YD				
1-CA	REAR ABUTMENT	1.08	x	40.00	x	123.5	x	0.5	÷	27	98.8
1-CA	REAR ABUT. W.W. CORNERS	2	x	3.00	x	3	x	0.5	÷	27	0.3
2-CA	FORWARD ABUTMENT	1.11	x	32.00	x	123.5	x	0.5	÷	27	81.2
2-CA	FWD. ABUT. W.W. CORNERS	2	x	3.00	x	3	x	0.5	÷	27	0.3
3-CA	REAR ABUTMENT	1.06	x	38.54	x	123.83	x	0.5	÷	27	93.7
3-CA	ABANDONED PILES	1	x	14.00	x	0.79	x	1	÷	27	0.4
4-CA	FORWARD ABUTMENT	1.09	x	38.54	x	123.83	x	0.5	÷	27	96.3
TOTAL CARRIED TO GENERAL SUMMARY =										371	

ITEM 642 EDGE LINE, 6", TYPE 1

EASTBOUND

LEFT (YELLOW) STA. 969+85 TO STA. 988+81 = 1,896 FEET
 LIC-70-1780 BRIDGE SUSPEND
 LEFT (YELLOW) STA. 990+85 TO STA. 998+49 = 764
 LEFT (YELLOW) STA. 1055+28 TO STA. 1074+04 = 1,876 FEET
 LIC-70-1942 BRIDGE SUSPEND
 LEFT (YELLOW) STA. 1076+29 TO STA. 1083+88 = 759 FEET
 RIGHT (WHITE) STA. 969+79 TO STA. 988+81 = 1,902 FEET
 LIC-70-1780 BRIDGE SUSPEND
 RIGHT (WHITE) STA. 990+86 TO STA. 998+49 = 763 FEET
 RIGHT (WHITE) STA. 1047+95 TO STA. 1065+64 = 1,769 FEET
 RIGHT (WHITE) STA. 1066+56 TO STA. 1074+19 = 763 FEET
 LIC-70-1942 BRIDGE SUSPEND
 RIGHT (WHITE) STA. 1076+44 TO STA. 1083+90 = 746 FEET
 (EXIT RAMP) - LEFT (YELLOW) STA. 1066+56 TO STA. 1067+19 = 63 FEET

WESTBOUND

LEFT (YELLOW) STA. 981+17 TO STA. 988+80 = 763 FEET
 LIC-70-1780 BRIDGE SUSPEND
 LEFT (YELLOW) STA. 990+85 TO STA. 1009+76 = 1,891 FEET
 LEFT (YELLOW) STA. 1066+36 TO STA. 1073+95 = 759 FEET
 LIC-70-1942 BRIDGE SUSPEND
 LEFT (YELLOW) STA. 1076+20 TO STA. 1095+95 = 1,975 FEET
 RIGHT (WHITE) STA. 981+17 TO STA. 988+79 = 762 FEET
 LIC-70-1780 BRIDGE SUSPEND
 RIGHT (WHITE) STA. 990+84 TO STA. 1009+76 = 1,892 FEET
 RIGHT (WHITE) STA. 1066+34 TO STA. 1073+80 = 746 FEET
 LIC-70-1942 BRIDGE SUSPEND
 RIGHT (WHITE) STA. 1076+05 TO STA. 1084+23 = 818 FEET
 RIGHT (WHITE) STA. 1091+46 TO STA. 1099+44 = 803 FEET

21,710 FEET/4.11 MILES

FOR INFORMATIONAL PURPOSES ONLY

(YELLOW) EDGE LINE = 10,746 FEET/2.03 MILES
 (WHITE) EDGE LINE = 10,964 FEET/2.08 MILES
21,710 FEET/4.11 MILES

ITEM 642 LANE LINE, 6", TYPE 1

EASTBOUND

(INSIDE LEFT) STA. 944+60 TO STA. 988+81 = 4,421 FEET
 LIC-70-1780 BRIDGE SUSPEND
 (INSIDE LEFT) STA. 990+85 TO STA. 1074+09 = 8,324 FEET
 LIC-70-1742 BRIDGE SUSPEND
 (INSIDE LEFT) STA. 1076+34 TO STA. 1083+90 = 756 FEET

 (OUTSIDE RIGHT) STA. 944+60 TO STA. 988+81 = 4,421 FEET
 LIC-70-1780 BRIDGE SUSPEND
 (OUTSIDE RIGHT) STA. 990+86 TO STA. 1074+14 = 8,328 FEET
 LIC-70-1742 BRIDGE SUSPEND
 (OUTSIDE RIGHT) STA. 1076+39 TO STA. 1083+88 = 749 FEET

WESTBOUND

(INSIDE LEFT) STA. 981+17 TO STA. 988+80 = 763 FEET
 LIC-70-1780 BRIDGE SUSPEND
 (INSIDE LEFT) STA. 990+84 TO STA. 1073+90 = 8,306 FEET
 LIC-70-1742 BRIDGE SUSPEND
 (INSIDE LEFT) STA. 1076+15 TO STA. 1124+64 = 4,849 FEET

(OUTSIDE RIGHT) STA. 981+17 TO STA. 988+79 = 762 FEET
 LIC-70-1780 BRIDGE SUSPEND
 (OUTSIDE RIGHT) STA. 990+84 TO STA. 1073+85 = 8,301 FEET
 LIC-70-1742 BRIDGE SUSPEND
 (OUTSIDE RIGHT) STA. 1076+10 TO STA. 1118+06 = 4,196 FEET

54,176 FEET/10.26 MILES

ITEM 642 CHANNELIZING LINE, 12", TYPE 1

I.R. TO EASTBOUND EXIT RAMP GORE AREA

STA. 1064+81 TO STA. 1066+56 = 175 FT. X 2 = 350 FEET
350 FEET

ITEM 646 EDGE LINE, 6"

(TO BE PLACED ON BRIDGES/APPROACH SLABS)

EASTBOUND

LEFT (YELLOW) STA. 988+80 TO STA. 990+85 = 205 FEET
 LEFT (YELLOW) STA. 1074+04 TO STA. 1076+29 = 225 FEET
 RIGHT (WHITE) STA. 988+81 TO STA. 990+86 = 205 FEET
 RIGHT (WHITE) STA. 1074+19 TO STA. 1076+44 = 225 FEET

WESTBOUND

LEFT (YELLOW) STA. 988+80 TO STA. 990+85 = 205 FEET
 LEFT (YELLOW) STA. 1073+95 TO STA. 1076+20 = 225 FEET
 RIGHT (WHITE) STA. 988+79 TO STA. 990+84 = 205 FEET
 RIGHT (WHITE) STA. 1073+80 TO STA. 1076+05 = 225 FEET

1,720 FEET/0.33 MILES

FOR INFORMATIONAL PURPOSES ONLY

(YELLOW) EDGE LINE = 860 FEET/0.165 MILES
 (WHITE) EDGE LINE = 860 FEET/0.165 MILES
1,720 FEET/0.33 MILES

ITEM 646 LANE LINE, 6"

(TO BE PLACED ON BRIDGES/APPROACH SLABS)

EASTBOUND

(INSIDE LEFT) STA. 988+80 TO STA. 990+85 = 205 FEET
 (INSIDE LEFT) STA. 1074+09 TO STA. 1076+34 = 225 FEET
 (OUTSIDE RIGHT) STA. 988+81 TO STA. 990+86 = 205 FEET
 (OUTSIDE RIGHT) STA. 1074+14 TO STA. 1076+39 = 225 FEET

WESTBOUND

(INSIDE LEFT) STA. 988+89 TO STA. 990+84 = 205 FEET
 (INSIDE LEFT) STA. 1073+90 TO STA. 1076+15 = 225 FEET
 (OUTSIDE RIGHT) STA. 988+79 TO STA. 990+84 = 205 FEET
 (OUTSIDE RIGHT) STA. 1073+85 TO STA. 1076+10 = 225 FEET

1,720 FEET/0.33 MILES

ITEM 659 SEEDING AND MULCHING, CLASS 1

AN ESTIMATED QUANTITY OF SEEDING AND MULCHING, CLASS 1 HAS BEEN PROVIDED BELOW FOR EARTH THAT MAY BE DISTURBED DURING CONSTRUCTION.

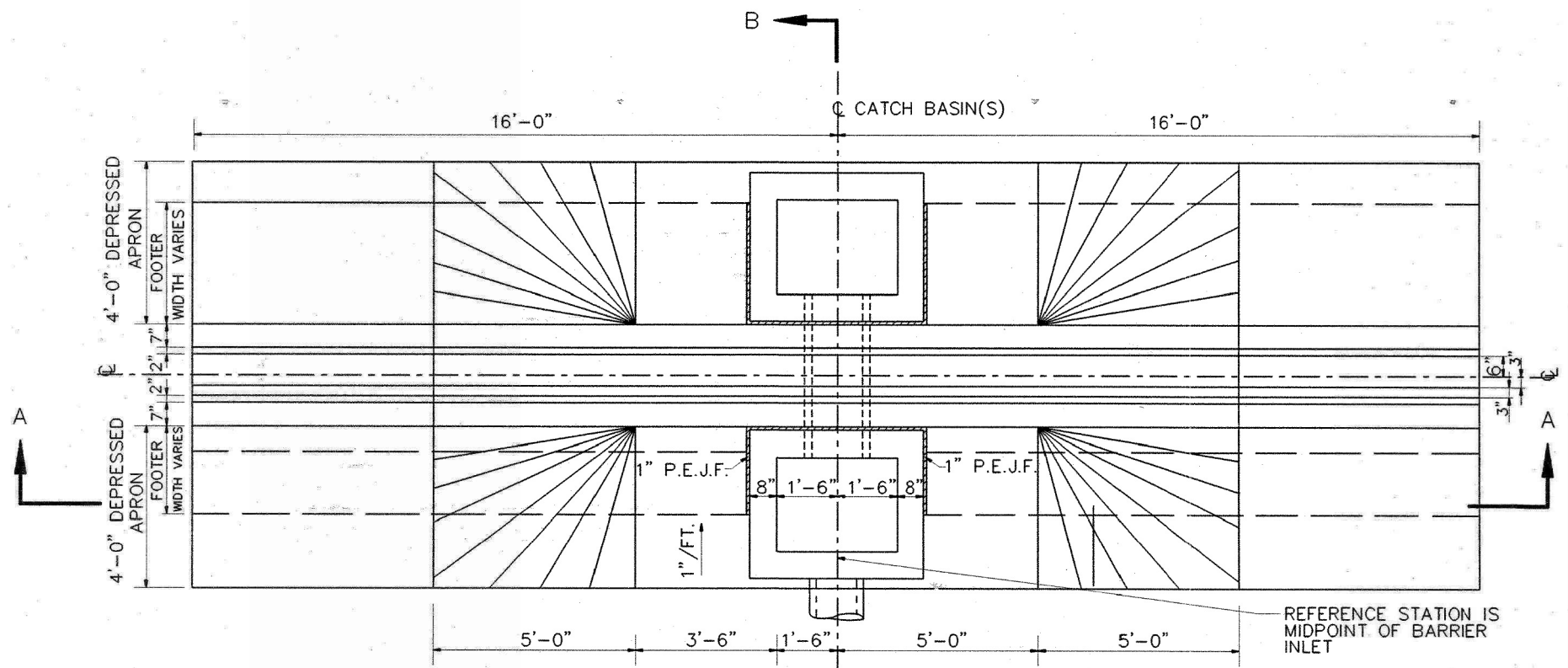
LIC-70-1780 BRIDGE

REAR ABUTMENT/APP. SLAB AREA: 50 SQ. YDS.
 FORWARD ABUTMENT/APP. SLAB AREA: 50 SQ. YDS.

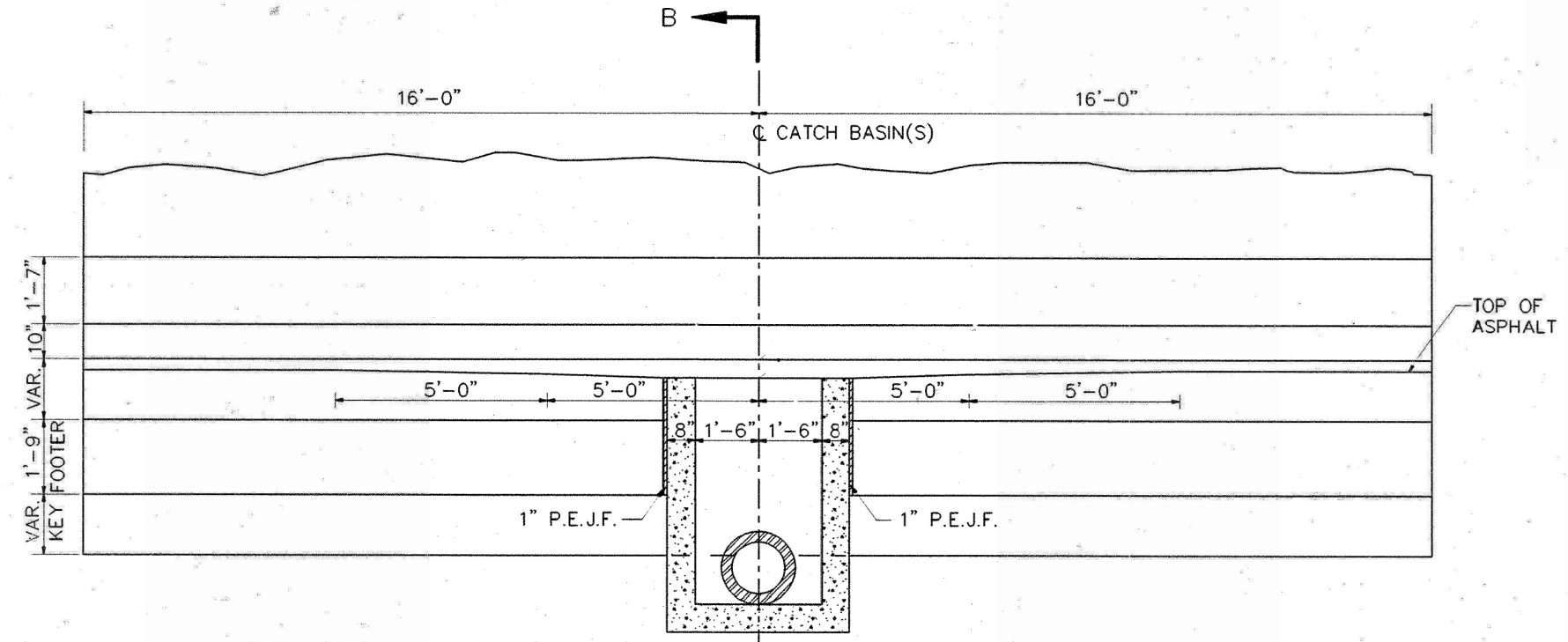
LIC-70-1942 BRIDGE

REAR ABUTMENT/APP. SLAB AREA: 50 SQ. YDS.
 FORWARD ABUTMENT/APP. SLAB AREA: 50 SQ. YDS.
200 SQ. YDS.

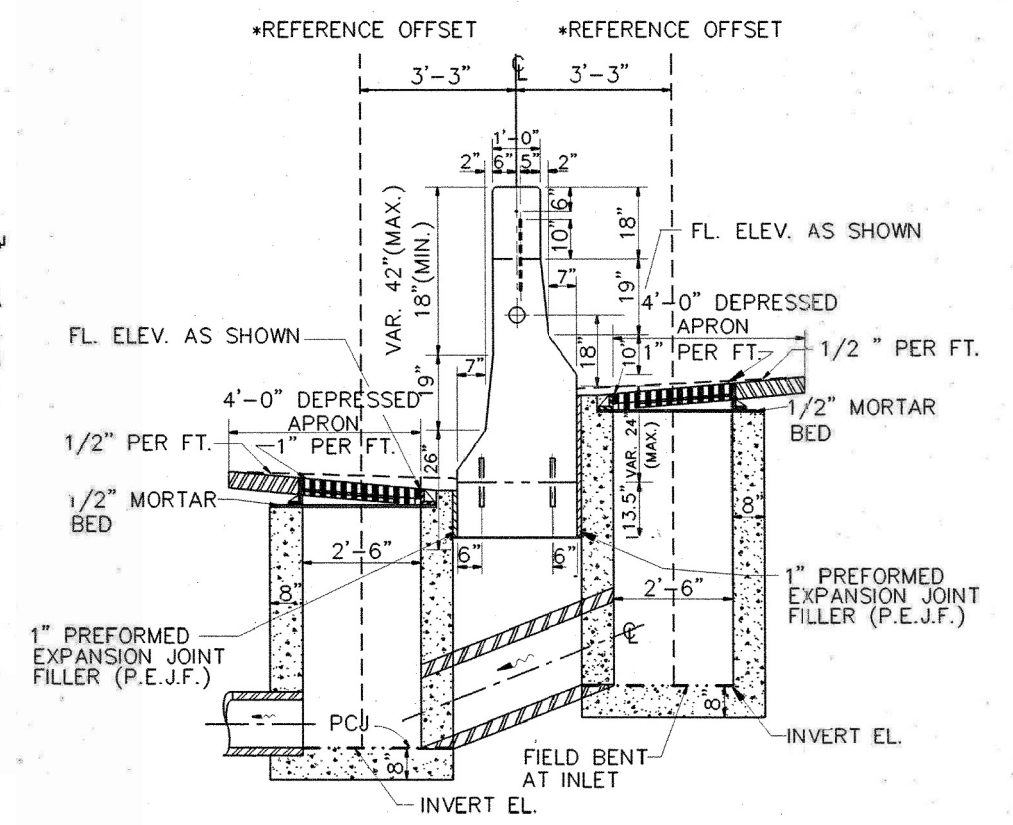
I:\ProjectData\LIC\96321\Design\Roadway\Sheets\96321_DD000.dgn Existing Median Inlet Details 10/24/2018 11:18:40 AM cshonk



PLAN VIEW MEDIAN INLET AND RETAINING WALL



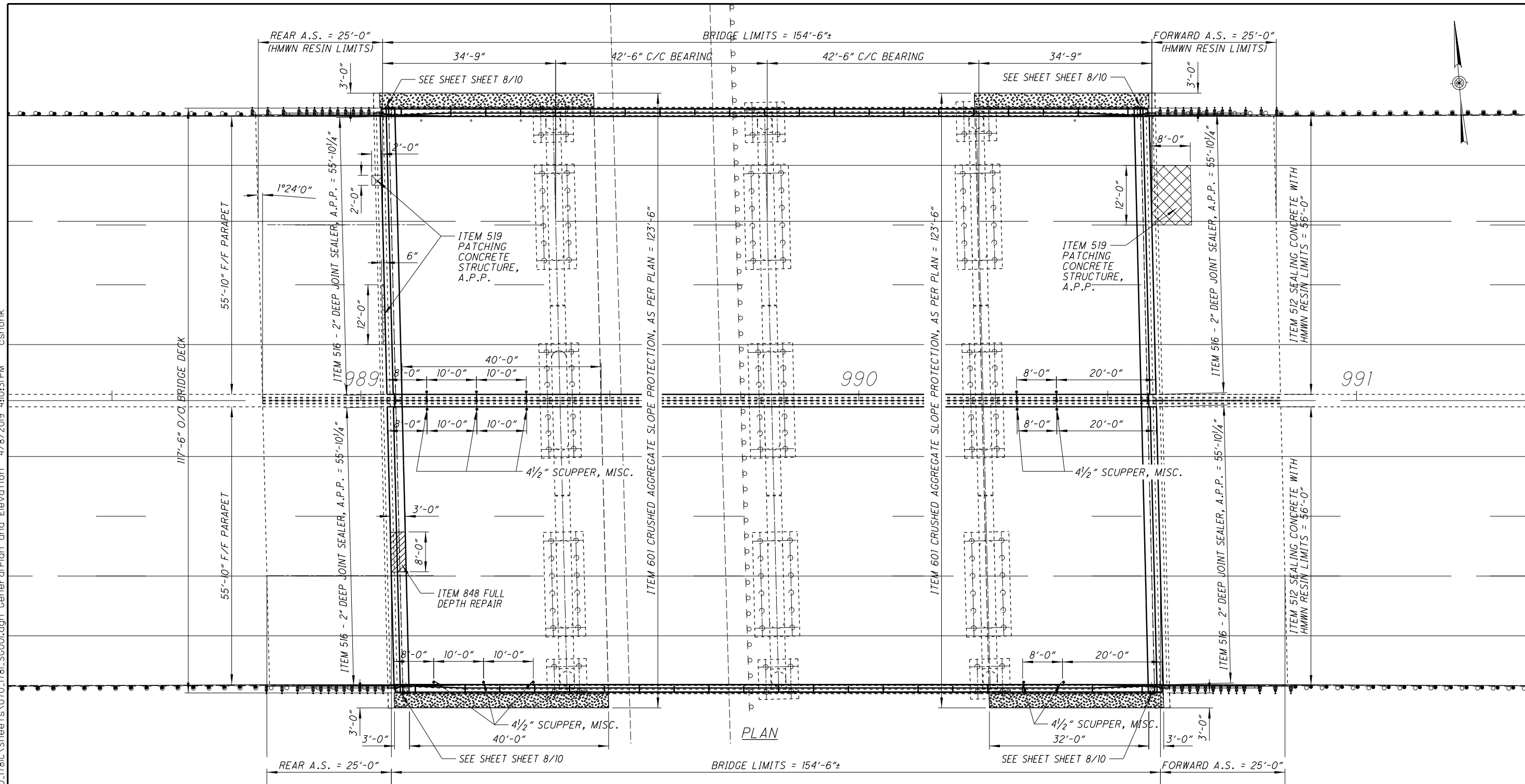
ELEVATION A-A
MEDIAN INLET AND RETAINING WALL



SECTION B-B

SHEET NOTES:
SEE STANDARD CONSTRUCTION DRAWINGS I-3A & B, BARRIER MEDIAN INLETS, FOR GRATE DETAILS
REFERENCE OFFSET, 3'-3", IS TO CENTER OF INLET
INLET NO. 3B AS PER PLAN 2

I:\ProjectData\9632\DesignStructures\LIC070_1781\SG00\dgn GeneralPlan and Elevation 4/8/2019 4:10:31PM cshonk



EL. 1075.00
EL. 1070.00
EL. 1065.00
EL. 1060.00
EL. 1055.00
EL. 1050.00
EL. 1045.00
EL. 1040.00
EL. 1035.00

EXISTING STRUCTURE
 TYPE: CONTINUOUS REINFORCED CONCRETE SLAB DECK, WITH REINFORCED CONCRETE SUBSTRUCTURE
 SPANS: 34'-0", 42'-6", 42'-6", 34'-0" C/C BEARINGS
 ROADWAY: 56'-0" TOE/TOE PARAPETS (E.B. & W.B.)
 LOADING: CF-2000 (51)
 SKEW: 1°24'00" R.F.
 APPROACH SLABS: 25'-0" (AS-1-81)
 ALIGNMENT: TANGENT
 CROWN: NORMAL
 STRUCTURAL FILE NUMBER: 4503813
 DATE BUILT: 1958
 DISPOSITION: BRIDGE REPAIR

REHABILITATED STRUCTURE
 TYPE: CONTINUOUS REINFORCED CONCRETE SLAB DECK, WITH REINFORCED CONCRETE SUBSTRUCTURE
 SPANS: 34'-0", 42'-6", 42'-6", 34'-0" C/C BEARINGS
 ROADWAY: 55'-10" TOE/TOE PARAPETS
 LOADING: HS-20 44
 SKEW: 1°24'00" R.F.
 APPROACH SLABS: 25'-0" (AS-1-81)
 ALIGNMENT: TANGENT
 CROWN: NORMAL
 STRUCTURAL FILE NUMBER: 4503813
 COORDINATES: LATITUDE: 39.945844°
 LONGITUDE: -82.438842°

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
 DATE: 09/17/18
 REVIEWED: CPS
 DRAWN: KMR
 CHECKED: JDR
 STRUCTURE FILE NUMBER: 4503813
 REVISED: XXX
 GENERAL PLAN AND ELEVATION
 BRIDGE NO.: LIC-70-1781
 OVER TWP. RD. 327
 LIC-70-17.80 / 19.42
 PID No. 96321
 1 / 10
 27 / 50

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

CPA-1-08 DATED/REVISED: 07-18-08
 PCB-91 DATED/REVISED: 01-18-13
 SBR-1-13 DATED/REVISED: 07-20-18

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED/REVISED: 10-19-18
 832 DATED/REVISED: 10-19-18
 848 DATED/REVISED: 01-20-17

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012, INCLUDING THE 2012 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA

ITEM 511 CLASS QC2 CONCRETE, SUPERSTRUCTURE (PARAPET)
 COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
 ITEM 511 CLASS QC1 CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)
 COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI
 STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50,000 PSI

DESIGN LOADING

DESIGN LOADING: HS-20-44.

CONSTRUCTION SEQUENCE

SEE SHEET 6/50 FOR THE PLAN SEQUENCE OF OPERATIONS.

REFERENCE

EXISTING BRIDGE PLANS MAY BE INSPECTED AND ARE PROVIDED WITH THIS PROJECT'S BIDDING DOCUMENTS.

INSPECTION FOR BATS

PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS. THE CONTRACTOR SHALL NOTIFY CHRIS YODER IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5193 (chris.yoder@dot.ohio.gov), OR, BRIAN TATMAN @ (740) 323-5191 (brian.tatman@dot.ohio.gov) OF THE RESULTS OF THE INSPECTION.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 510 - DOWEL HOLES, WITH NONSHINK, NONMETALLIC GROUT, AS PER PLAN

PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS EXCEPT AS NOTED ABOVE. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NONSHRINK, NON METALLIC GROUT, 705.20.

ITEM 511 - CONCRETE, MISC.: PUMPED SELF CONSOLIDATING CONCRETE

IN ADDITION TO THE WORK ITEMS REQUIRED IN 511, THIS ITEM WILL INCLUDE THE DEVELOPMENT, DELIVERY AND PLACEMENT OF A CLASS QC2 SELF CONSOLIDATING CONCRETE MIX DESIGN AS DESCRIBED IN THE FOLLOWING NOTE:

PROVIDE A CONCRETE MIX WITH THE FOLLOWING PROPERTIES:

SELF-CONSOLIDATING CONCRETE (SCC): WHEN REQUIRED IN THE DESIGN PLANS OR APPROVED BY THE ENGINEER, PROVIDE AN SCC MIX WITH AGGREGATE GRADATIONS WITHIN ZONE II OF THE COARSENESS FACTOR CHART THAT IS FLOWABLE, NON-SEGREGATING CONCRETE THAT CAN SPREAD INTO PLACE, FILL THE FORMWORK, AND ENCAPSULATE THE REINFORCEMENT WITHOUT MECHANICAL CONSOLIDATION. INCREASING THE AMOUNT OF AN APPROVED 705.12 (SCC) ADMIXTURE OF AN APPROVED JMF TO ACHIEVE THE DESIRED CONSISTENCY; RE-PROPORTIONING THE AGGREGATES WITHIN ZONE II; ADDING CEMENTITIOUS MATERIAL; AND INCLUDING A VISCOSITY MODIFYING ADMIXTURE (VMA) ARE ACCEPTABLE METHODS OF IMPROVING THE STABILITY OF THE MIX. A NEW MIX DESIGN IS NOT REQUIRED.

SLUMP REQUIREMENTS OF TABLE 499.04-1 DO NOT APPLY.

ESTABLISH QUALITY CONTROL PROCEDURES IN THE QUALITY CONTROL PLAN FOR SCC CONCRETE. SET THE TARGET SLUMP FLOW FOR THE MIX AND MAINTAIN THE FLOW WITHIN ± 2 INCHES. VISUALLY INSPECT THE STABILITY OF THE MIX TO ENSURE THAT THERE IS NO AGGREGATE PILE IN THE MIDDLE OF, NOR MORTAR HALO IN EXCESS OF $\frac{1}{2}$ INCH ON THE LEADING EDGE OF THE SLUMP FLOW TEST PILE. TEST THE SLUMP FLOW ACCORDING TO ASTM C1611.

GRADATION:

PROVIDE A WELL-GRADED CONCRETE MIX BY MAINTAINING THE GRADATION OF THE COMBINATION OF AGGREGATES WITHIN ZONE II (OPTIMAL) OF THE COARSENESS FACTOR CHART (FIGURE 1) AS DEFINED IN THE COMPASS OR EQUAL SOFTWARE. USE A 1 INCH NOMINAL MAXIMUM SIZE AGGREGATE. ENSURE THAT THE DESIGN YIELD IS 27.0 CU. FT.

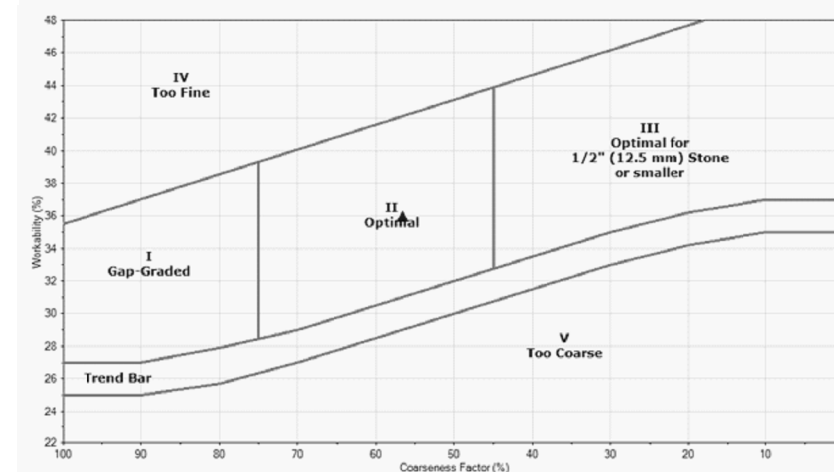


FIGURE 1- COARSENESS FACTOR CHART

USE THE FOLLOWING SIEVE SIZES TO DETERMINE THE GRADATION OF THE AGGREGATES:

- 1 1/2 INCH # 8
- 1 INCH # 16
- 3/4 INCH # 30
- 1/2 INCH # 50
- 3/8 INCH # 100
- #4 # 200

IN THE CHART: WORKABILITY FACTOR (%) REFERS TO THE PERCENT OF THE COMBINED AGGREGATE THAT PASSES THE NO. 8 SIEVE. COARSENESS FACTOR (%) REFERS TO THE PERCENT OF THE COMBINED AGGREGATE THAT IS RETAINED ON THE NO. 8 SIEVE THAT IS ALSO RETAINED ON THE 3/8 IN. SIEVE. THE CHART IS BASED ON A CEMENT CONTENT OF 564 LBS /CU.YD. ADJUST TO WORKABILITY PROPORTIONATELY AND DIRECTLY BY 2.5% PER 94 LBS. OF CEMENT WHEN USING EITHER LESS OR MORE. ENSURE THAT THE CONCRETE MIX DESIGN IS WORKABLE AND FINISHABLE DURING THE TRIAL PROCESS. WHEN THE MIX IS DETERMINED TO HAVE ISSUES RELATING TO WORKABILITY OR FINISHABILITY IN THE FIELD, THE DEPARTMENT MAY RESCIND THE MIX DESIGN ACCEPTANCE.

ITEM 511 - CONCRETE, MISC.: PUMPED SELF CONSOLIDATING CONCRETE (CONTINUED)

ADDITIONALLY, PROVIDE A CONCRETE MIX AT A SLUMP THAT ALLOWS THE CONCRETE MIX TO BE PUMPED THROUGH AN ACCESS HOLE(S) IN THE FACE OF A VERTICAL FORM(S), SELF CONSOLIDATED, AND THEN PRESSURIZED, FILLING THE FORMWORK TIGHT TO THE UNDERSIDE OF THE DECK SLAB OR DIAPHRAGM.

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

ACCESS HOLES MAY BE PROVIDED AT A MINIMUM SPACING OF 6 FEET. USE THE ACCESS HOLES TO DELIVER THE CONCRETE. IF MULTIPLE ACCESS HOLES ARE UTILIZED, THOSE NOT USED FOR FINAL CONCRETE DELIVERY SHALL BE BLOCKED PRIOR TO PRESSURE FILLING THE UPPER PORTION OF THE FORMWORK. DRILL 1" BREATHING/MONITORING HOLES IN THE VERTICAL FORMS WITHIN 6 INCHES OF THE TOP OF THE FORMS (BOTTOM OF THE DECK) SPACED BETWEEN 3 AND 5 FEET AND ELSEWHERE THROUGHOUT THE FORMWORK AS DIRECTED BY THE ENGINEER.

PUMP THE CONCRETE INTO THE FORMS UNTIL FULL AND ALL AIR VOIDS ARE DETERMINED TO HAVE BEEN ELIMINATED. THE ENGINEER WILL USE THE 1 INCH BREATHING/MONITORING HOLES DRILLED INTO THE VERTICAL FORMS TO DETERMINE WHEN THE AIR VOIDS HAVE BEEN ELIMINATED, (I.E. WHEN CONCRETE SEEPS FROM THE BREATHING/MONITORING HOLES).

ASSURE THE CONCRETE HAS COMPLETELY FILLED THE FORMS UP TO THE BOTTOM OF THE DECK BEFORE MOVING OPERATIONS TO ANOTHER POUR. USE VIBRATION EQUIPMENT TO HELP CONSOLIDATE THE CONCRETE MIX.

THE CONTRACTOR SHALL PROVIDE FORMWORK TO WITHSTAND THE PRESSURE REQUIRED TO PLACE CONCRETE BY THIS PUMPING/PRESSURIZATION METHOD.

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.

WHEN THE FORMWORK IS REMOVED, THE PROJECT ENGINEER WILL DETERMINE IF THE NEW CONCRETE IS FLUSH WITH THE UNDERSIDE OF THE CONCRETE ABOVE. IF THERE ARE VOIDS FOUND BETWEEN THE NEW CONCRETE AND THE UNDERSIDE OF THE CONCRETE ABOVE, THEN THE CONTRACTOR WILL PRESSURE GROUT THE VOIDS UNTIL ALL MATERIAL IS FOUND TO BE IN CONTACT WITH ONE ANOTHER. THE GROUT MATERIAL WILL ACHIEVE AT LEAST 4000 PSI IN 7 DAYS AND CONSIST OF CEMENT AND SAND MEETING ODOT MATERIALS SPECIFICATIONS.

A PROPOSED FORM PUMPING SYSTEM MEETING ALL REQUIREMENTS OF THIS ITEM MUST BE SUBMITTED AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. A TEST AREA ON THE FIRST BRIDGE ABUTMENT TO BE DONE SHALL BE USED TO DETERMINE THE PERFORMANCE OF THE PROPOSED PUMPING SYSTEM. UPON COMPLETING THE TEST SECTION, THE PROJECT ENGINEER SHALL INSPECT THE AREA FOR THE PRESENCE OF AIR VOIDS TO ENSURE THAT ALL AREAS ARE FILLED. UPON APPROVAL OF THE TEST AREA BY THE PROJECT ENGINEER, THE CONTRACTOR MAY USE THE APPROVED FORM PUMPING SYSTEM.

ALL PROPOSED CONCRETE WORK IS TO BE PERFORMED FROM BENEATH THE STRUCTURE.

ALL EXISTING 4" DIAMETER WEEP HOLES SHALL BE MAINTAINED (EXTENDED) AS SHOWN IN THE ABUTMENT DETAILS. ALL FORMWORK/WORK NECESSARY AS DESCRIBED ABOVE SHALL BE INCIDENTAL TO ITEM 511.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITY OF CUBIC YARDS.

PAYMENT WILL INCLUDE FORMWORK, DEVELOPMENT AND PLACEMENT OF THE SELF CONSOLIDATING CONCRETE MIX, PRESSURE GROUTING, EXCAVATION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS ITEM.

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DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

DATE
09/17/18

REVIEWED
CPS
STRUCTURE FILE NUMBER
4503813

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KMR
REVISION
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DESIGNED
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BRIDGE NOTES
BRIDGE NO. - LIC-70-1781
OVER TWP. RD. 327

LIC-70-17.80/19.42
PID No. 96321

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ITEM 202 PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUBSTRUCTURE)

ALL CONCRETE REMOVED SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. NO REMOVALS SHALL BE DEEPER THAN 6" FROM THE FACE OF THE EXISTING ABUTMENTS OR BEYOND THE ASSUMED EXISTING ϕ BEARING AS SHOWN IN THE ABUTMENT DETAILS. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ALL WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE).

ITEM 202 PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE)

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE PARAPETS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED IN THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING PARAPET REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND I.E. EXISTING BRIDGE DECK. CHIPPING HAMMERS SHALL NOT BE HEAVIER THE NOMINAL 85-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE QUANTITY OF REMOVALS ON A CUBIC YARD BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE).

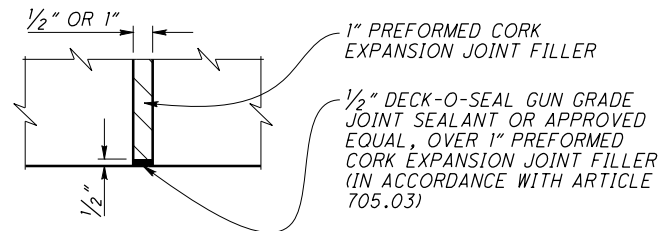
ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

UPON COMPLETION OF THE PROPOSED BRIDGE DECK THE CONTRACTOR SHALL SAW CUT ALONG THE END OF THE BRIDGE DECK ENDS (WITHOUT CUTTING THE DECK) AN AREA 1" WIDE BY 2" DEEP AND FILL THIS AREA WITH HOT APPLIED JOINT SEALER 705.04.

ITEM 516 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN

ALL 1" P.E.J.F., A.P.P. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER $\frac{1}{2}$ " FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS, INCLUDING BACKSIDES, WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID ITEM 516 - 1" PEJF, A.P.P., SQ.FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

ITEM 519 - PATCHING CONCRETE STRUCTURE

REMOVE ALL LOOSE AND DISINTEGRATED CONCRETE FROM THE AREAS SHOWN IN THE PLAN ON SHEETS 1/10 AND 8/10 AND AS PER CMS 519.03. AN ADDITIONAL ESTIMATED QUANTITY 10 SQ. FT. HAS BEEN PROVIDED TO PATCH THE INTERIOR OR MEDIAN BRIDGE RAIL AND TO BE USED AS DIRECTED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR THE WORK DESCRIBED ABOVE AND DESCRIBED IN CMS 519 UNDER ITEM 519 PATCHING CONCRETE STRUCTURE (SQ. FT.)

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

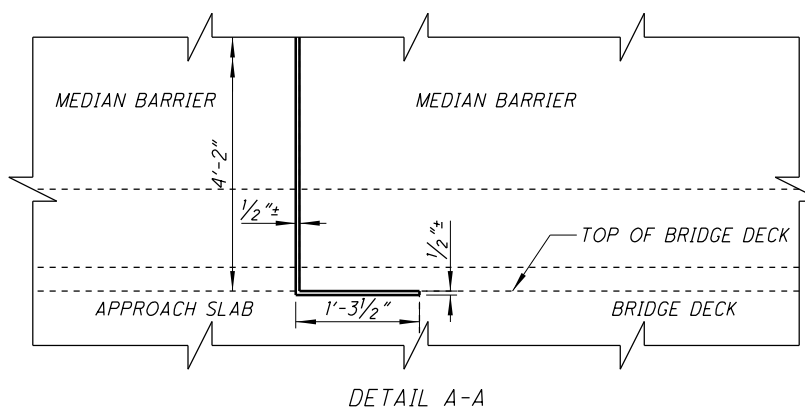
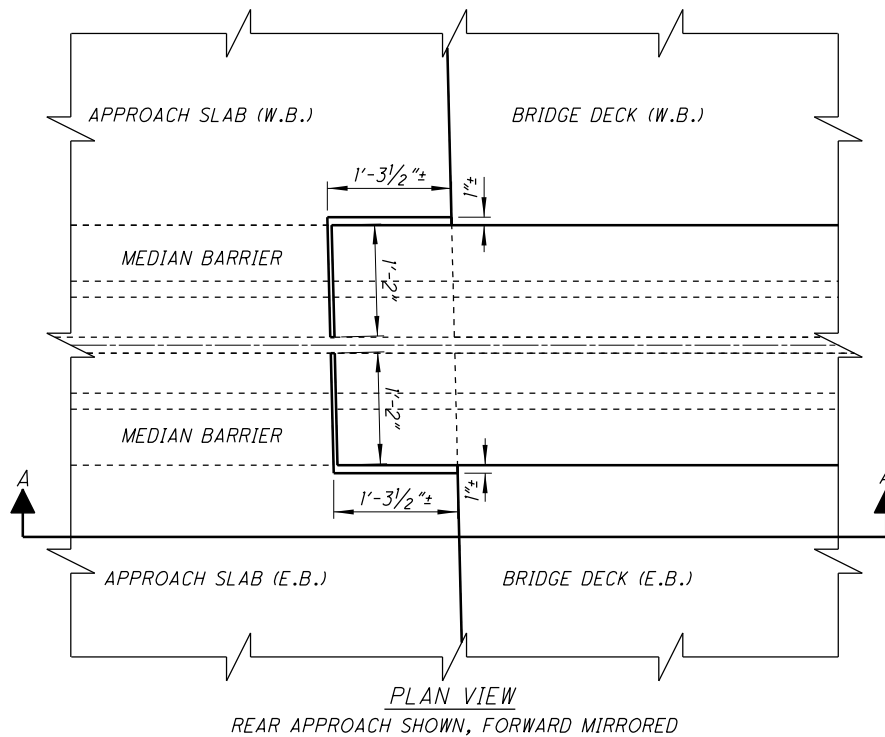
REMOVE ALL LOOSE AND DISINTEGRATED CONCRETE FROM THE AREAS SHOWN ON THE APPROACH SLABS SHOWN ON SHEET AND ON THE BRIDGE DECK EDGE SHOWN ON SHEET 1/10 AS PER CMS 519.03 WITH THE EXCEPTION THAT PATCHES ON HORIZONTAL SURFACES SHALL BE 4" DEEP MINIMUM OR AS DIRECTED BY THE ENGINEER. THESE AREAS ARE SHOWN FOR ESTIMATION PURPOSES, THE AREAS TO BE PATCHED ARE TO VERIFIED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR THE WORK DESCRIBED ABOVE AND DESCRIBED IN CMS 519 UNDER ITEM 519 PATCHING CONCRETE STRUCTURE (SQ. FT.)

ITEM 516 JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL CLEAN THE JOINTS SHOWN IN THE DETAIL BELOW AS DESCRIBED IN CMS 516.06 PRIOR TO PLACEMENT OF THE JOINT SEALER. THE JOINT/VOID SHALL BE FILLED WITH EXPANDING FOAM AND CURED FOR 24 HOURS. AFTER CURING THE CONTRACTOR SHALL CUT OUT EXCESS FOAM TO A DEPTH OF $\frac{1}{2}$ " MEASURED FROM THE EXISTING CONCRETE SURFACE. AFTER THE FOAM HAS BEEN REMOVED THE JOINTS SHALL BE SEALED WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

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P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - JOINT SEALER, A.P.P., FEET. AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.



ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL CONCRETE SURFACES SHALL PREPARED AS PER CMS 512.03 BEFORE PLACEMENT OF THE SEALER. THE CONTRACTOR SHALL SEAL PIERS 1, 2, 3 AND COLUMNS FROM GROUND LEVEL TO THE TOP OF THE PIER, PIER CAP, OR BOTTOM OF BRIDGE DECK WITH EPOXY URETHANE SEALER. SEAL ALL OTHER CONCRETE SURFACE AREAS IN THE LIMITS DETAILED IN THESE PLANS.

THE FINAL URETHANE (OR SYSTEM SPECIFIED) COATING SYSTEM APPLICATION COLOR SHALL BE FEDERAL COLOR FS-595C-16440: LIGHT GULL GRAY.

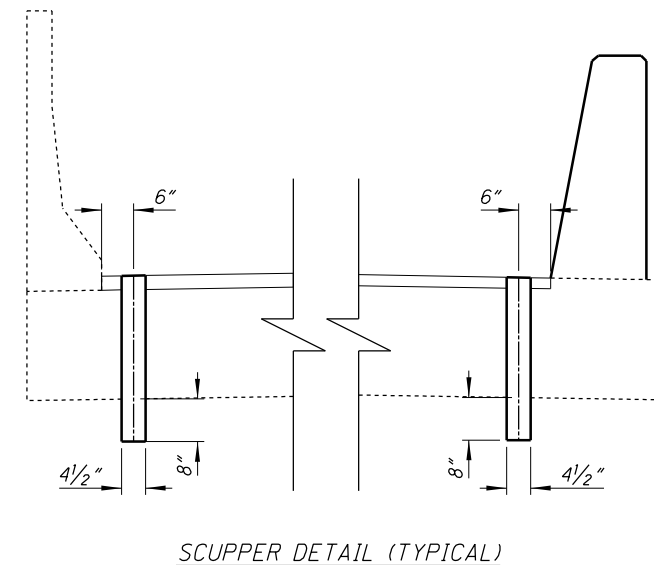
THE DEPARTMENT WILL PAY FOR THE WORK DESCRIBED ABOVE AND DESCRIBED IN CMS 512 UNDER ITEM 512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (SQ. YD.)

ITEM 518 - SCUPPER, MISC.: 4 1/2" CONDUIT

THE CONTRACTOR SHALL PROVIDE MATERIAL FOR THIS ITEM CONFORMING TO THE C.M.S. 707.46. THE PVC PIPE SHALL HAVE A NOMINAL INSIDE DIAMETER OF 4" AND A NOMINAL OUTSIDE DIAMETER OF 4 1/2". THE CONTRACTOR SHALL FIELD CUT/BEVEL, CUT/BORE HOLES FOR, PLACE, AND SEAL A 4" CONDUIT, AT EACH LOCATION, AS SHOWN ON SHEET 1/10.

PRIOR TO INSTALLING THE SCUPPERS, THE CONTRACTOR SHALL SUBMIT AN INSTALLATION PROCEDURE, THE ADHESIVE MATERIAL AND SEALING MATERIAL TO THE ENGINEER FOR REVIEW. AFTER RECEIVING APPROVAL FROM THE ENGINEER AND THE COMPLETION OF THE SDC OVERLAY, THE CONTRACTOR SHALL INSTALL ONE SCUPPER WITH THE ENGINEER'S SUPERVISION. AFTER THE INSTALLATION IS COMPLETE AND THE ADHESIVE HAS BEEN GIVEN ADEQUATE TIME TO SET, THE BOND BETWEEN THE CONCRETE AND THE PVC SHALL BE TESTED. THIS SHALL BE DONE BY ATTACHING A 50 POUND WEIGHT TO THE BOTTOM OF THE PVC PIPE FOR A PERIOD NOT LESS THAN 24 HOURS. AFTER THE PERIOD HAS ELAPSED AND THE WEIGHT HAS BEEN REMOVED, THE ENGINEER SHALL INSPECT THE THE SCUPPER. IF THE ENGINEER DEEMS THE SCUPPER ACCEPTABLE, THE CONTRACTOR SHALL INSTALL THE REMAINING SCUPPERS USING THE SAME PROCEDURE AS THE TEST INSTALLATION. IF THE ENGINEER DEEMS THE SCUPPER UN-ACCEPTABLE, THE CONTRACTOR SHALL FURNISH ANOTHER PROCEDURE AND TEST AT NO ADDITIONAL COST TO THE DEPARTMENT.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF ON AN EACH LOCATION BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITY OF SCUPPERS CONDUIT AT THE CONTRACT PRICE FOR ITEM 518 - SCUPPER MISC.: 4" CONDUIT.



**ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4" THICKNESS)
ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 7/8" THICKNESS)
ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN**

THIS ITEM SHALL CONFORM TO SS 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

THE OVERLAY MATERIAL SHALL MEET THE FOLLOWING CRITERIA:
2 LBS./C. Y. POLYPROPYLENE MICROFIBERS 1 1/4" MIN. SHALL BE ADDED TO THE MIX.

THE MICROFIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

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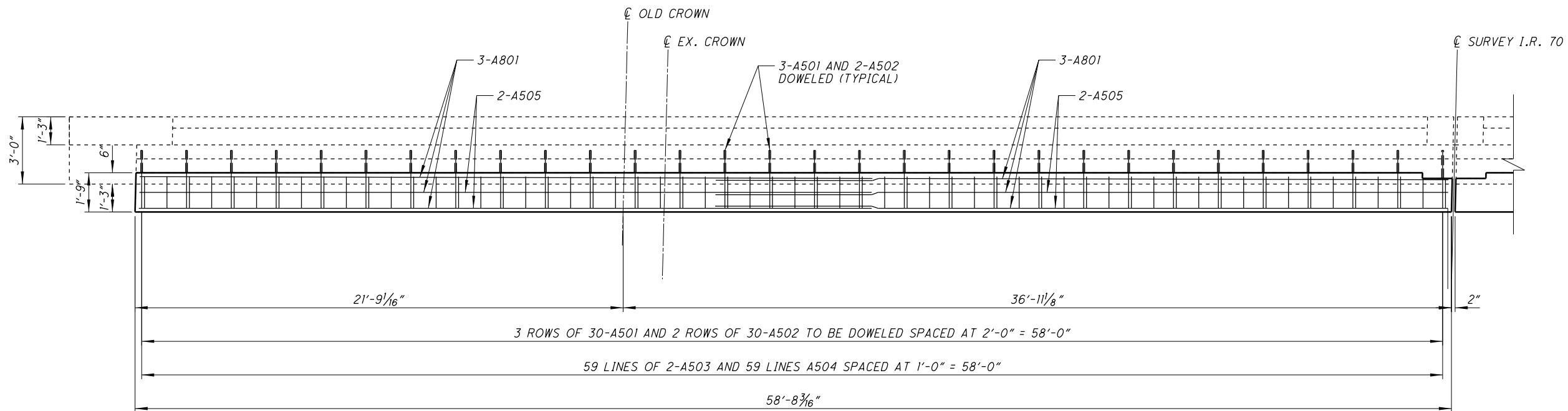
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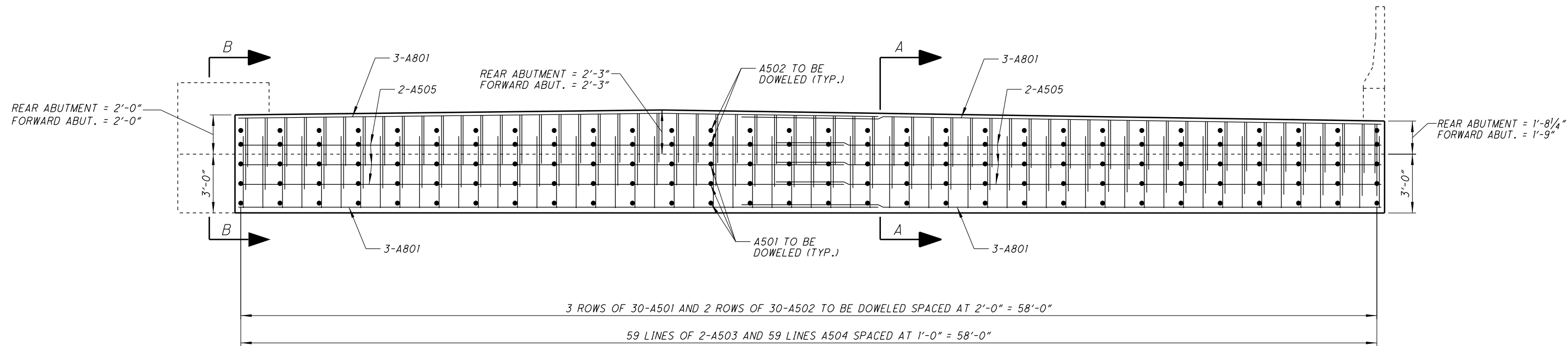
SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
											01/IMS/BR							
											3		202	11301	3	CY	STRUCTURE REPAIR (LIC-70-1781)	3
											37		202	11301	37	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)	3
											LS		503	21300	LS		UNCLASSIFIED EXCAVATION	
											20,295		509	10000	20,295	LB	EPOXY COATED REINFORCING STEEL	
											1,304		510	10001	1,304	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	2
											66		511	71100	66	CY	CONCRETE, MISC.:WITH HIGH EARLY STRENGTH PUMPED SELF CONSOLIDATING CONCRETE	2
											48		511	34448	48	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)	
											1,677		512	10100	1,677	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	3
											623		512	10300	623	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
											626		512	74000	626	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
											1		516	13601	1	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3
											27		516	31001	27	FT	JOINT SEALER, AS PER PLAN	3
											224		516	31011	224	FT	2" DEEP JOINT SEALER, AS PER PLAN	3
											15		518	12500	15	EACH	SCUPPER, MISC.: 4 1/2" CONDUIT	3
											24		519	11100	24	SF	PATCHING CONCRETE STRUCTURE	3
											106		519	11101	106	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3
											690		848	10201	690	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4" THICKNESS)	3
											1,228		848	10201	1,228	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 7/8" THICKNESS)	3
											1,922		848	20000	1,922	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
											64		848	30201	64	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	3
											77		848	50000	77	SY	HAND CHIPPING	
											LS		848	50100	LS		TEST SLAB	
											2		848	50200	2	CY	FULL-DEPTH REPAIR	1
											696		848	50320	696	SY	EXISTING CONCRETE OVERLAY REMOVED (2" THICKNESS)	
											1,228		848	50320	1,228	SY	EXISTING CONCRETE OVERLAY REMOVED (2 5/8" THICKNESS)	
											767		848	50340	767	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	REVIEWED CPS	DATE 09/17/18
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BRIDGE NO.: LIC-70-1781		
OVER TWP. RD. 327		
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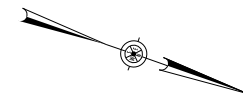
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PLAN VIEW
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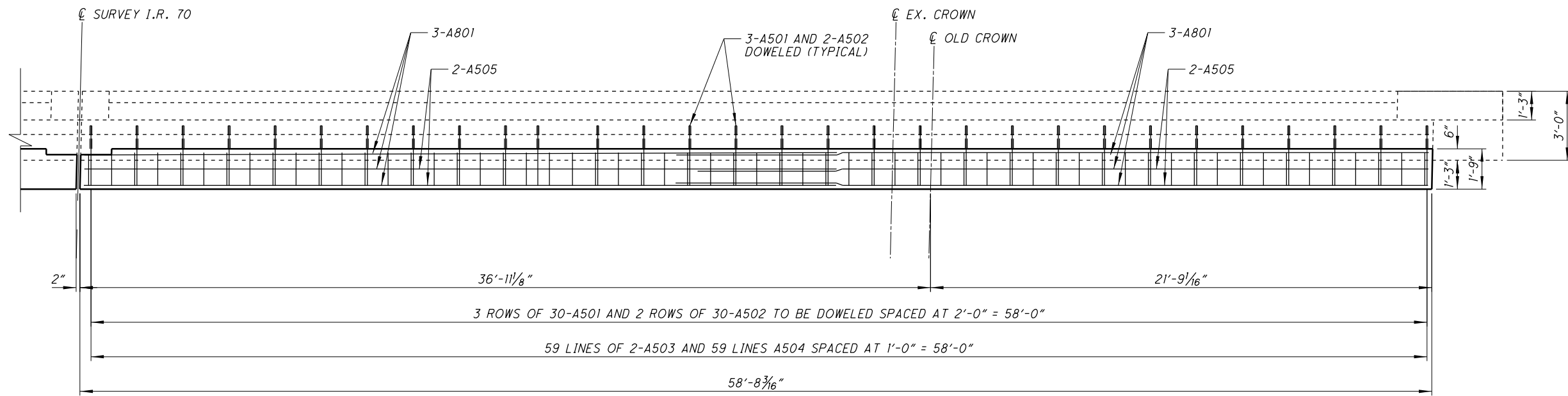


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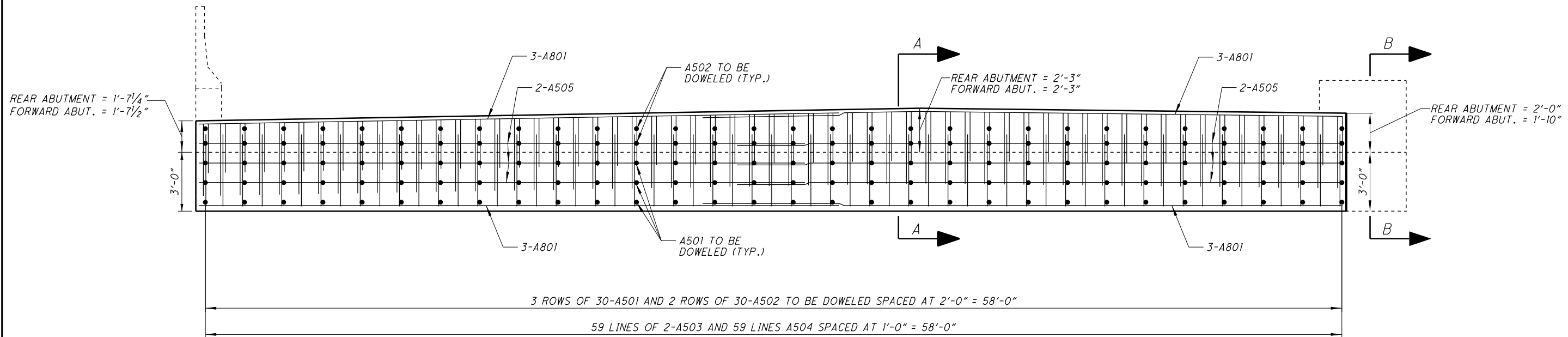


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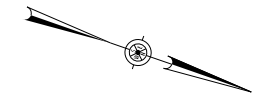
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PLAN VIEW
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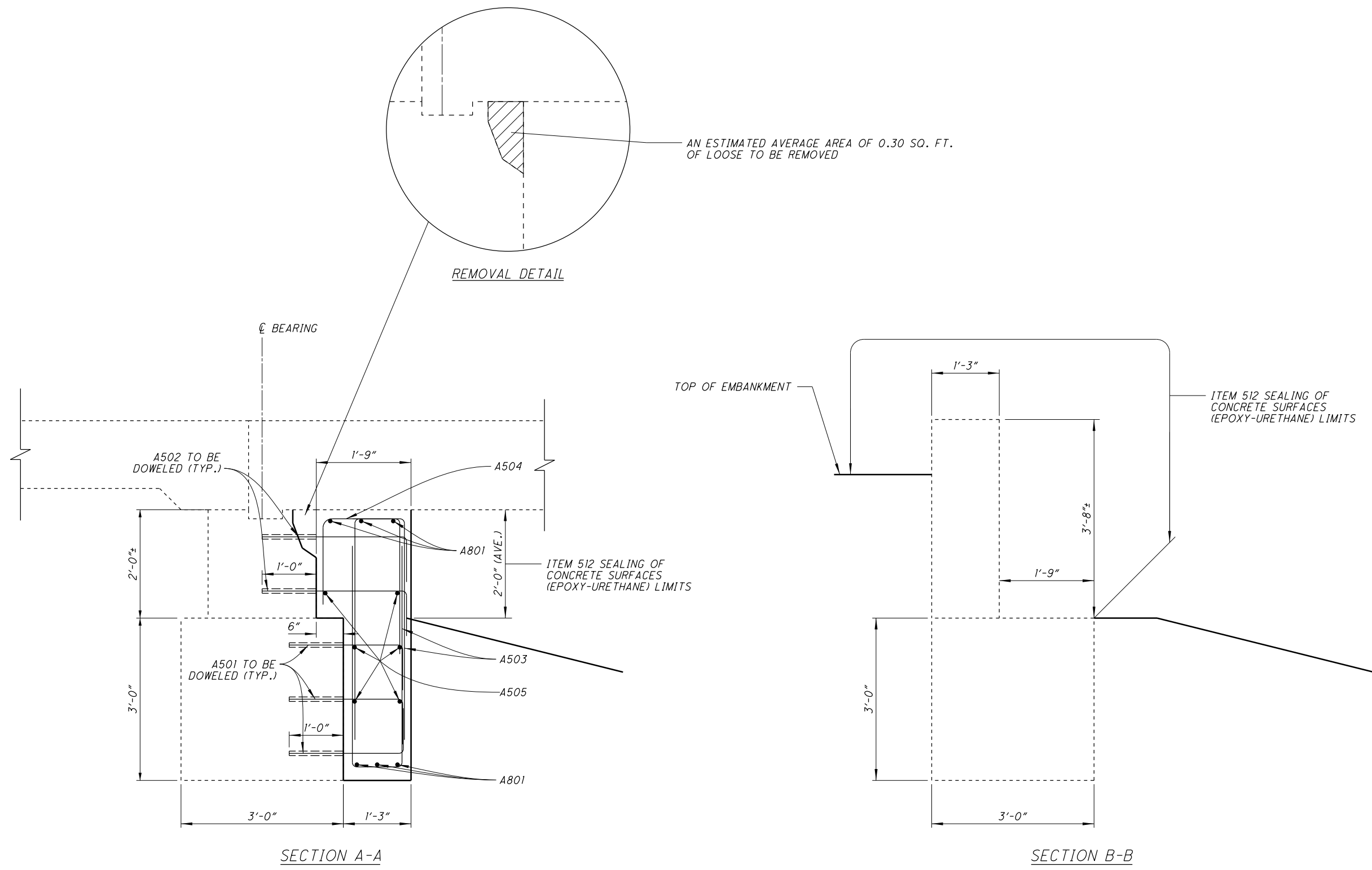


ELEVATION VIEW
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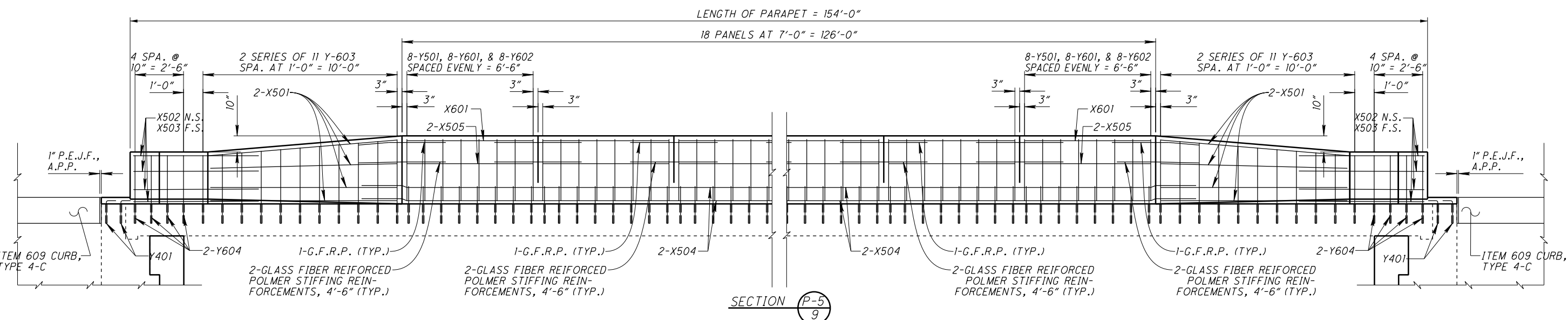
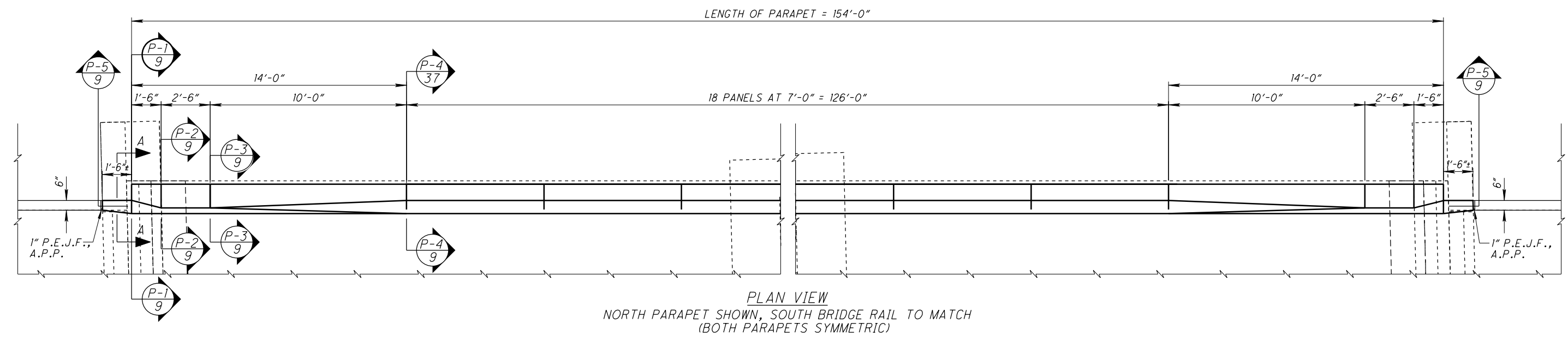
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REVIEWED CPS	DATE 09/17/18
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REVISOR XXX	
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LIC-70-17.80/19.42	PID No. 96321
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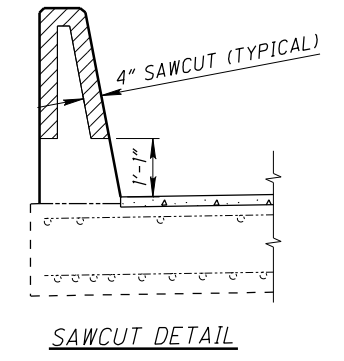
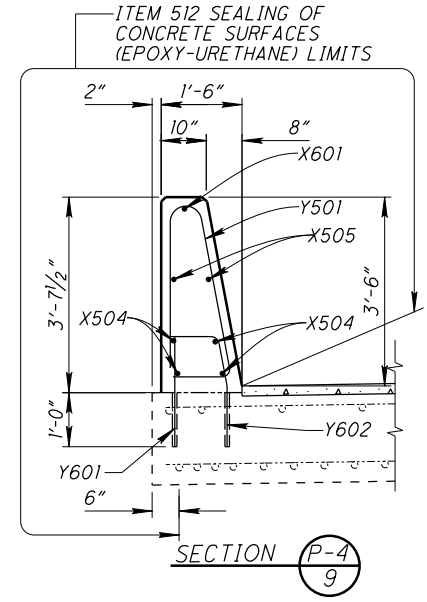
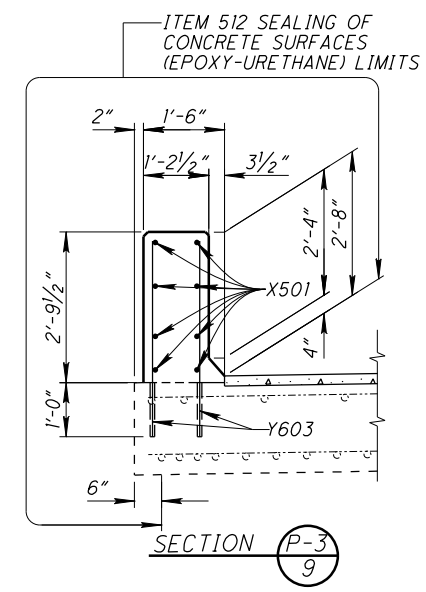
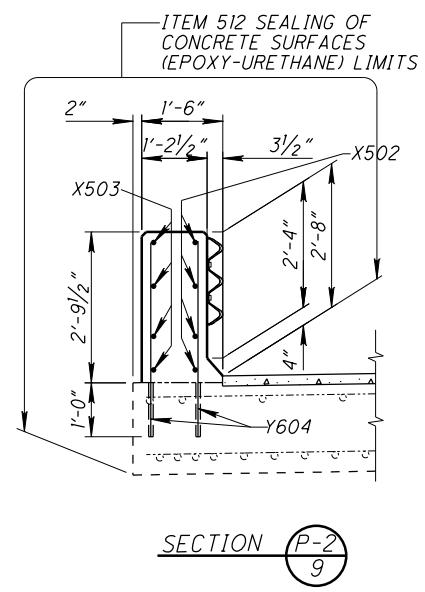
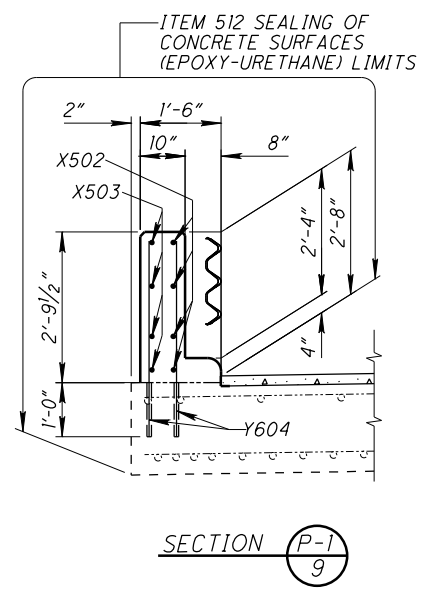
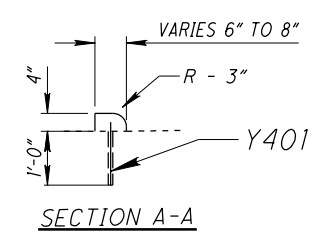


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NO. 5 BARS LAP LENGTH = 2'-1"

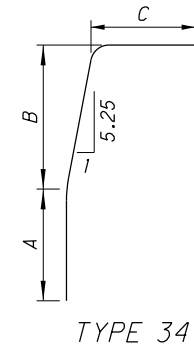
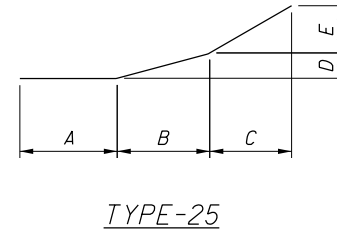
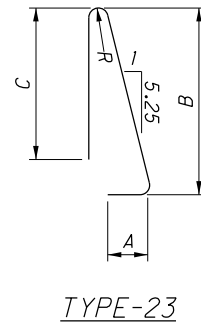
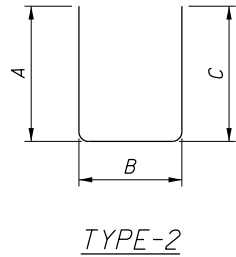
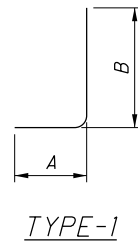
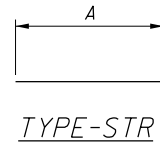


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PARAPET DETAILS					
BRIDGE NO. LIC-70-1781 OVER TWP. RD. 327					
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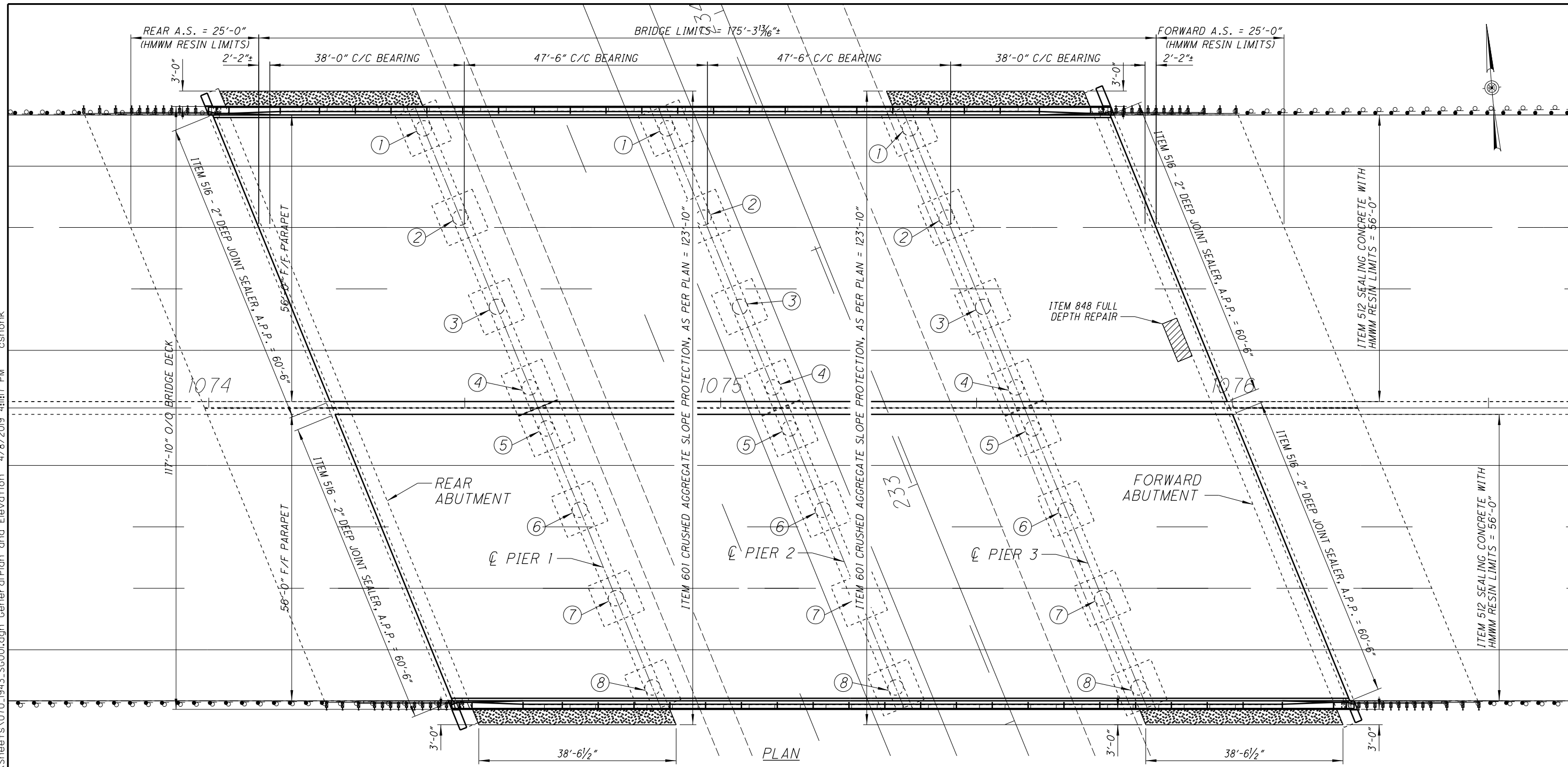
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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
LIC-70-1781 REAR AND FORWARD ABUTMENTS (LEFT & RIGHT BRIDGES)											
A501	360	2'-10"	1,064	1	0'-10"	2'-1"					
A502	240	3'-4"	834	1	0'-10"	2'-7"					
A503	472	8'-0"	3,938	2	3'-8"	0'-11"	3'-8"				
A504	236	5'-1"	1,251	2	1'-5"	1'-5"	2'-6"				
A505	48	30'-11"	1,548	STR.	30'-11"						
A801	48	32'-8"	4,187	STR.	32'-8"						
LIC-70-1781 ABUTMENTS TOTAL			12,822								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	LEFT BRIDGE	RIGHT BRIDGE	TOTAL				A	B	C	D	E	R	INC
LIC-70-1781 PARAPETS (LEFT & RIGHT BRIDGES)													
X501	16	16	32	10'-0"	334	STR.	10'-0"						
X502	8	8	16	5'-8"	95	25	1'-10"	2'-5"	1'-4"	0'-1 1/2"	0'-5"		
X503	8	8	16	5'-8"	95	STR.	5'-8"						
X504	16	16	32	34'-3"	1,143	STR.	34'-3"						
X505	36	36	72	6'-6"	488	STR.	6'-6"						
X601	18	18	36	6'-6"	351	STR.	6'-6"						
Y401	4	4	8	1'-7"	8	1	0'-6"	1'-2"					
Y501	144	144	288	7'-4"	2,203	23	0'-11"	3'-3"	3'-0"				
Y601	144	144	288	2'-0"	865	STR.	2'-0"						
Y602	144	144	288	2'-9"	1,190	34	1'-1"	0'-11"	0'-11"				
	4	4	8	3'-7"			3'-7"						
Y603	SERIES OF	SERIES OF	SERIES OF	TO	529	STR.	TO					0'-1"	
	11	11	11	4'-5"			4'-5"						
Y604	16	16	32	3'-7"	172	STR.	3'-7"						
LIC-70-1781 PARAPETS TOTAL					7,473								
LIC-70-1781 ABUTMENTS TOTAL					12,822								
LIC-70-1781 PARAPETS TOTAL					7,473								
GRAND TOTAL					20,295								



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EXISTING STRUCTURE
 TYPE: CONTINUOUS REINFORCED CONCRETE SLAB DECK, WITH REINFORCED CONCRETE SUBSTRUCTURE
 SPANS: 38'-0", 47'-6", 47'-6", 38'-0" C/C BEARINGS
 ROADWAY: 56'-0" TOE/TOE PARAPETS (E.B. & W.B.)
 LOADING: HS-20-44
 SKEW: 22°15'00" R.F.
 APPROACH SLABS: 25'-0" (AS-1-81)
 ALIGNMENT: TANGENT
 CROWN: NORMAL
 STRUCTURAL FILE NUMBER: 4503902
 DATE BUILT: 1958
 DISPOSITION: BRIDGE REPAIR

REHABILITATED STRUCTURE
 TYPE: CONTINUOUS REINFORCED CONCRETE SLAB DECK, WITH REINFORCED CONCRETE SUBSTRUCTURE
 SPANS: 38'-0", 47'-6", 47'-6", 38'-0" C/C BEARINGS
 ROADWAY: 56'-00" TOE/TOE PARAPETS
 LOADING: HS-20-44
 SKEW: 22°15'00" R.F.
 APPROACH SLABS: 25'-0" (AS-1-81)
 ALIGNMENT: TANGENT
 CROWN: NORMAL
 STRUCTURAL FILE NUMBER: 4503902
 COORDINATES: LATITUDE: 39.943886°
 LONGITUDE: -82.408458°

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

CPA-1-08 DATED/REVISED: 07-18-08
 CS-1-08 DATED/REVISED: 01-19-18
 PCB-91 DATED/REVISED: 01-18-13
 SBR-1-13 DATED/REVISED: 07-20-18

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED/REVISED: 10-19-18
 832 DATED/REVISED: 10-19-18
 844 DATED/REVISED: 04-20-18
 848 DATED/REVISED: 01-20-17

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012, INCLUDING THE 2012 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA

ITEM 511 CLASS QC2 CONCRETE, SUPERSTRUCTURE (PARAPET)
 COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
 ITEM 511 CLASS QC1 CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)
 COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI
 STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50,000 PSI

DESIGN LOADING

DESIGN LOADING: HS-20-44.

CONSTRUCTION SEQUENCE

SEE SHEET 6/50 FOR THE PLAN SEQUENCE OF OPERATIONS.

CONSTRUCTION BRIDGE CLEARANCE

LIC-70-1943: THE EXISTING VERTICAL CLEARANCES ON S.R. 13 ARE 15'-7" NORTHBOUND AND 15'-1" SOUTHBOUND. DURING PHASE 1 CONSTRUCTION ACTIVITIES, INCLUDING TEMPORARY FALSEWORK, THE CONTRACTOR SHALL RESTRICT THE EXISTING VERTICAL CLEARANCE BY NO MORE THAN 1'-0". A LOW CLEARANCE SIGN, (W12-2A), SHALL BE MOUNTED ON THE NORTH SIDE OF THE BRIDGE OVER THE SOUTHBOUND TRAFFIC ON S.R. 13.

REFERENCE

EXISTING BRIDGE PLANS MAY BE INSPECTED AND ARE PROVIDED WITH THIS PROJECT'S BIDDING DOCUMENTS.

INSPECTION FOR BATS

PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS. THE CONTRACTOR SHALL NOTIFY CHRIS YODER IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5193 (chris.yoder@dot.ohio.gov), OR, BRIAN TATMAN @ (740) 323-5191 (brian.tatman@dot.ohio.gov) OF THE RESULTS OF THE INSPECTION.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 510 - DOWEL HOLES, WITH NONSHINK, NONMETALLIC GROUT, AS PER PLAN

PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS EXCEPT AS NOTED ABOVE. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NONSHRINK, NON METALLIC GROUT, 705.20.

ITEM 202 PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUBSTRUCTURE)

SAWCUTS SHALL BE MADE AT THE LOCATIONS AND ELEVATIONS SHOWN IN THE EXISTING ABUTMENT DETAILS. ALL CONCRETE REMOVED FROM THE SAWCUT UP, SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED I.E. EXISTING ABUTMENT BRESTWALLS, WING WALLS, AND TURN BACK WING WALLS. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER.

ALL WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE).

ITEM 202 PORTION OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE)

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE PARAPETS AND DECK EDGES. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED IN THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND I.E. EXISTING BRIDGE DECK.

ALL CONCRETE REMOVED SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE QUANTITY OF REMOVALS ON A CUBIC YARD BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUPERSTRUCTURE).

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE)

ALL CONCRETE SURFACES SHALL PREPARED AS PER CMS 512.03 BEFORE PLACEMENT OF THE EPOXY URETHANE SEALER. THE CONTRACTOR SHALL SEAL ALL CONCRETE SURFACE AREAS IN THE LIMITS DETAILED IN THESE PLAN.

THE FINAL URETHANE (OR SYSTEM SPECIFIED) COATING SYSTEM APPLICATION COLOR SHALL BE FEDERAL COLOR FS-595C-16440: LIGHT GULL GRAY.

THE DEPARTMENT WILL PAY FOR THE WORK DESCRIBED ABOVE AND DESCRIBED IN CMS 512 UNDER ITEM 512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (SQ. YD.)

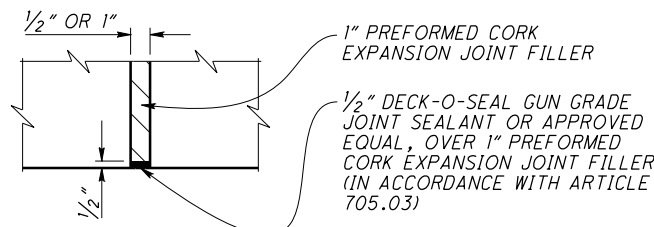
ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

UPON COMPLETION OF THE PROPOSED BRIDGE DECK, APPROACH SLAB, AND ASPHALT RESURFACING THE CONTRACTOR SHALL SAW CUT ALONG THE END OF THE BRIDGE DECK ENDS (WITHOUT CUTTING THE DECK) AN AREA 1" WIDE BY 2" DEEP AND FILL THIS AREA WITH HOT APPLIED JOINT SEALER 705.04.

ITEM 516 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN

ALL 1" P.E.J.F., A.P.P. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS, INCLUDING BACKSIDES, WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
 P.O. BOX 397
 HAMPSHIRE, IL 60140
 PHONE: 800-542-7665



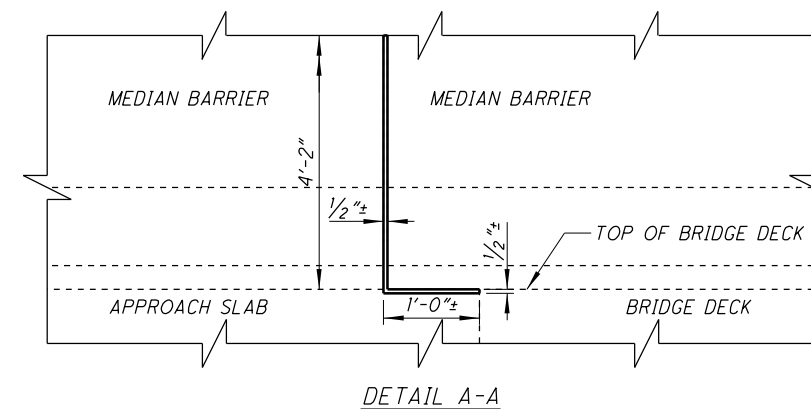
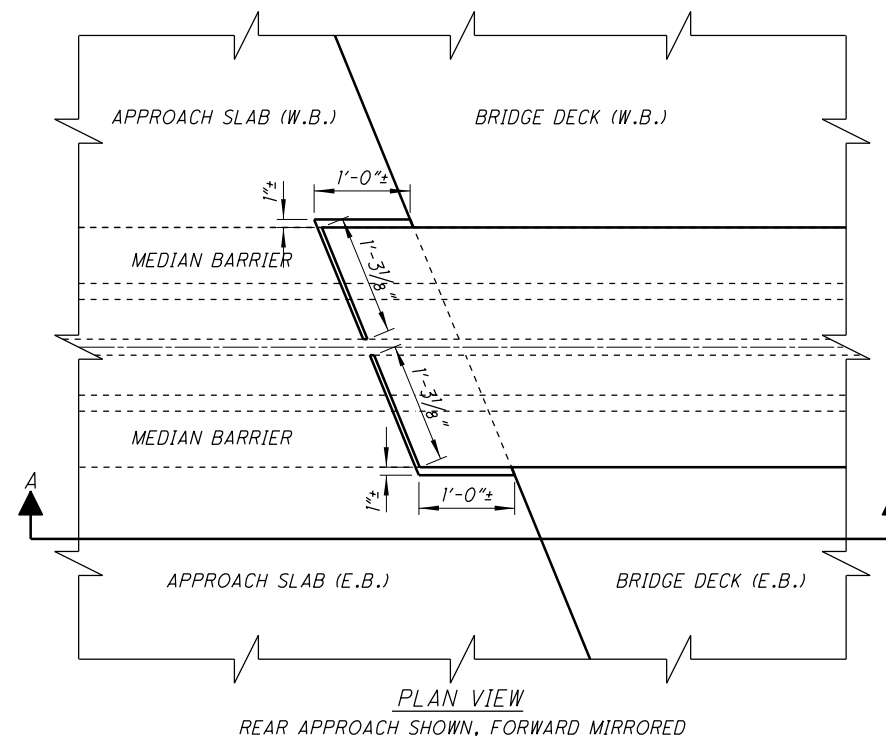
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID ITEM 516 - 1" PEJF, A.P.P., SQ.FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

ITEM 516 JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL CLEAN THE JOINTS SHOWN IN THE DETAIL BELOW AS DESCRIBED IN CMS 516.06 PRIOR TO PLACEMENT OF THE JOINT SEALER. THE JOINT/VOID SHALL BE FILLED WITH EXPANDING FOAM AND CURED FOR 24 HOURS. AFTER CURING THE CONTRACTOR SHALL CUT OUT EXCESS FOAM TO A DEPTH OF 1/2" MEASURED FROM THE EXISTING CONCRETE SURFACE. AFTER THE FOAM HAS BEEN REMOVED THE JOINTS SHALL BE SEALED WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

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 P.O. BOX 397
 HAMPSHIRE, IL 60140
 PHONE: 800-542-7665

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - JOINT SEALER, A.P.P., FEET. AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.



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DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DATE	09/17/18	REVIEWED	CPS
FILE NUMBER	4503902	DRAWN	KMR
		CHECKED	JDR
BRIDGE NOTES			
BRIDGE NO. LIC-70-1943 OVER S.R. 13			
LIC-70-17.80/19.42		PID No. 96321	
2 / 14		38 50	

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ITEM 519 - PATCHING CONCRETE STRUCTURE

REMOVE ALL LOOSE AND DISINTEGRATED CONCRETE FROM THE AREAS SHOWN IN THE PIER DETAILS ON SHEET 8/14 AS PER CMS 519.03. AN ADDITIONAL ESTIMATED QUANTITY 10 SQ. FT. HAS BEEN PROVIDED TO PATCH THE INTERIOR OR MEDIAN BRIDGE RAIL AND TO BE USED AS DIRECTED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR THE WORK DESCRIBED ABOVE AND DESCRIBED IN CMS 519 UNDER ITEM 519 PATCHING CONCRETE STRUCTURE (SQ. FT.)

ITEM 519 - COMPOSITE FIBER WRAP SYSTEM

REFER TO PROPOSAL NOTE 519 FOR ITEM SPECIFICATIONS NOT GIVEN HEREIN. THE REQUIRED CONFINING STRESS DUE TO FRP JACKET (F) WILL BE 0.150 FOR THE HEIGHT SHOWN ON SHEET XX/XX. THE FINAL URETHANE (OR SYSTEM SPECIFIED) COATING SYSTEM APPLICATION COLOR SHALL BE FEDERAL COLOR FS-595C-16440: LIGHT GULL GRAY.

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION

THIS WORK CONSISTS OF PATCHING CONCRETE AT LOCATIONS AT SHOWN IN THE PIER DETAIL SHEETS. A TOTAL OF 67 SQ FT HAS BEEN ESTIMATED TO BE PATCHED. ALL PROVISIONS OF ITEM 519 SHALL APPLY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION 67 SQ FT.

- ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4" THICKNESS)
- ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/8" THICKNESS)
- ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN

THIS ITEM SHALL CONFORM TO SS 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

THE OVERLAY MATERIAL SHALL MEET THE FOLLOWING CRITERIA:
2 LBS./C. Y. POLYPROPYLENE MICROFIBERS 1 1/4" MIN. SHALL BE ADDED TO THE MIX.

THE MICROFIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR.

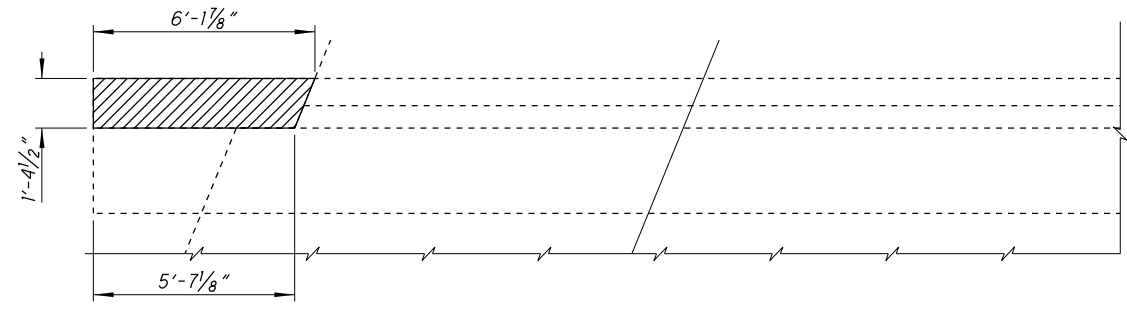
CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

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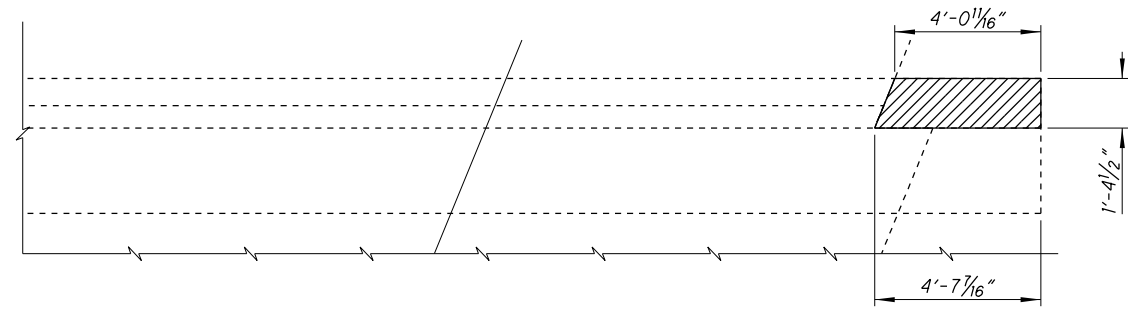
SHEET NUM.										PART.			ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
										01/IMS/BR				EXT	TOTAL			NO.
STRUCTURE REPAIR (LIC-70-1943)																		
										2			202	11301	2	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)	2
										79			202	11301	79	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)	2
										LS			503	21300	LS		UNCLASSIFIED EXCAVATION	
										21,962			509	10000	21,962	LB	EPOXY COATED REINFORCING STEEL	
										28			510	10001	28	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	2
										54			511	32210	54	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
										52			511	34448	52	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)	
										2			511	45710	2	CY	CLASS QC1 CONCRETE, ABUTMENT	
										1,472			512	10100	1,472	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	2
										623			512	10300	623	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
										317			512	74000	317	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
										19			516	13601	19	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	2
										12			516	14020	12	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
										29			516	31001	29	FT	JOINT SEALER, AS PER PLAN	2
										242			516	31011	242	FT	2" DEEP JOINT SEALER, AS PER PLAN	2
										622			SPECIAL	51900100	622	SF	COMPOSITE FIBER WRAP SYSTEM	3
										14			519	11101	14	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3
										67			844	10000	67	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION	3
										789			848	10201	789	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4" THICKNESS)	3
										1,393			848	10201	1,393	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 7/8" THICKNESS)	3
										2,182			848	20000	2,182	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
										73			848	30201	73	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	3
										88			848	50000	88	SY	HAND CHIPPING	
										LS			848	50100	LS		TEST SLAB	
										2			848	50200	2	CY	FULL-DEPTH REPAIR	
										789			848	50320	789	SY	EXISTING CONCRETE OVERLAY REMOVED (2" THICKNESS)	
										1,393			848	50320	1,393	SY	EXISTING CONCRETE OVERLAY REMOVED (2 5/8" THICKNESS)	
										873			848	50340	873	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DATE	09/17/18
REVIEWED	CPS
DRAWN	KMR
DESIGNED	KMR
STRUCTURE FILE NUMBER	4503902
REVISOR	XXX
CHECKED	JDR
BRIDGE QUANTITIES	
BRIDGE NO. LIC-70-1943	
OVER S.R. 13	
LIC-70-17.80/19.42	PID No. 96321
4	14
40	50

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*SOUTH BRIDGE
SOUTHWEST CORNER
PLAN VIEW
(NORTH BRIDGE NORTHEAST CORNER MIRRORED)*



*NORTH BRIDGE
NORTHWEST CORNER
PLAN VIEW
(SOUTH BRIDGE SOUTHEAST CORNER MIRRORED)*

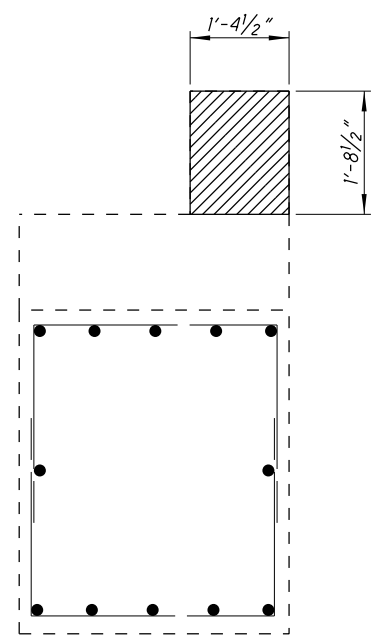
SUBSTRUCTURE REMOVALS -



*SOUTH BRIDGE
SOUTHWEST CORNER
ELEVATION VIEW
(NORTH BRIDGE NORTHEAST CORNER MIRRORED)*



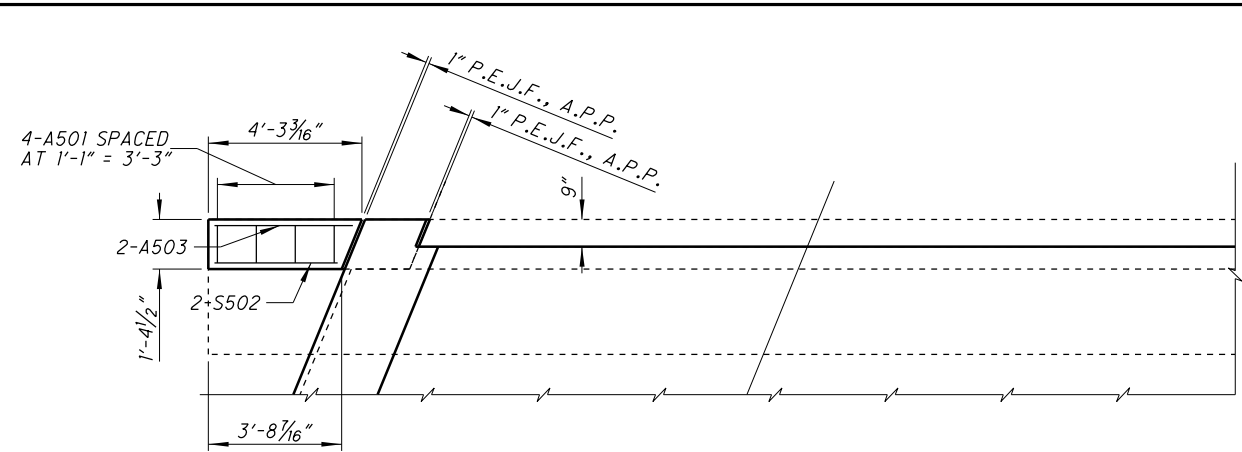
*NORTH BRIDGE
NORTHWEST CORNER
ELEVATION VIEW
(SOUTH BRIDGE SOUTHEAST CORNER MIRRORED)*



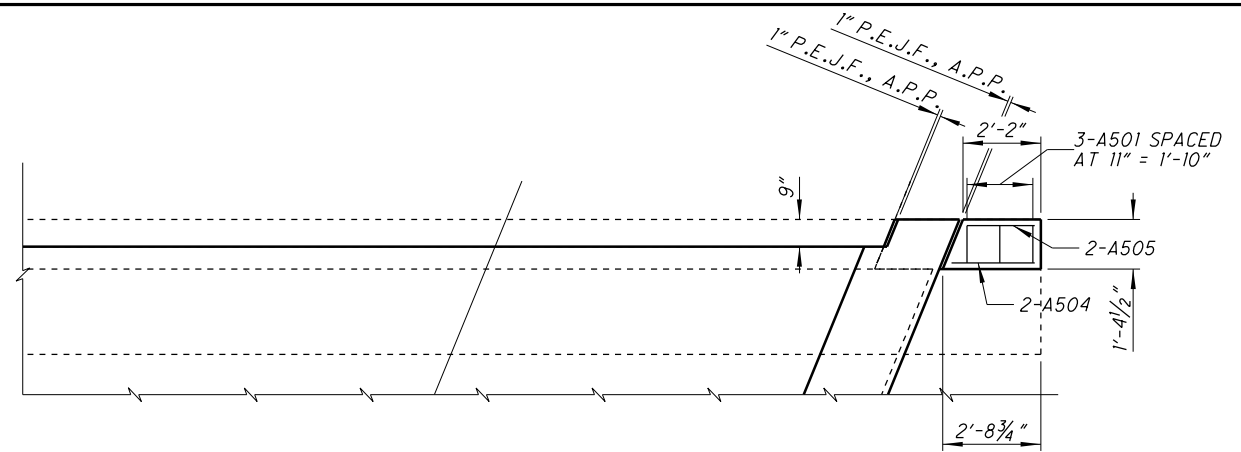
SECTION VIEW

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED	DATE	STRUCTURE FILE NUMBER	
CPS	09/17/18	4503902	
DRAWN	KMR	REVISION	XXX
DESIGNED	KMR	CHECKED	JDR
REAR AND FORWARD ABUTMENT REMOVAL DETAILS			
BRIDGE NO. LIC-70-1943 OVER S.R. 13			
LIC-70-17.80 / 19.42		PID No. 96321	
5 / 14		41 / 50	

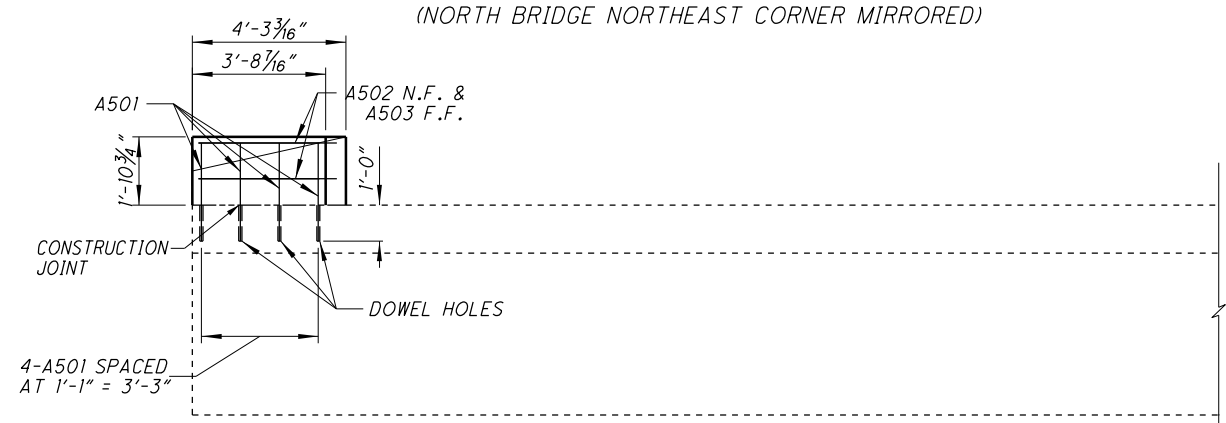
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**SOUTH BRIDGE
SOUTHWEST CORNER
PLAN VIEW**
(NORTH BRIDGE NORTHEAST CORNER MIRRORED)

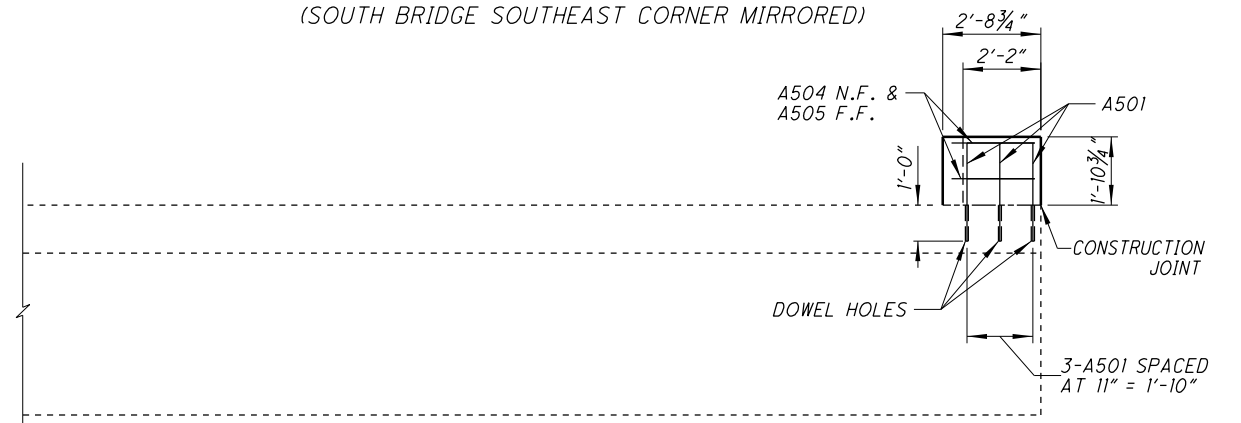


**NORTH BRIDGE
NORTHWEST CORNER
PLAN VIEW**
(SOUTH BRIDGE SOUTHEAST CORNER MIRRORED)

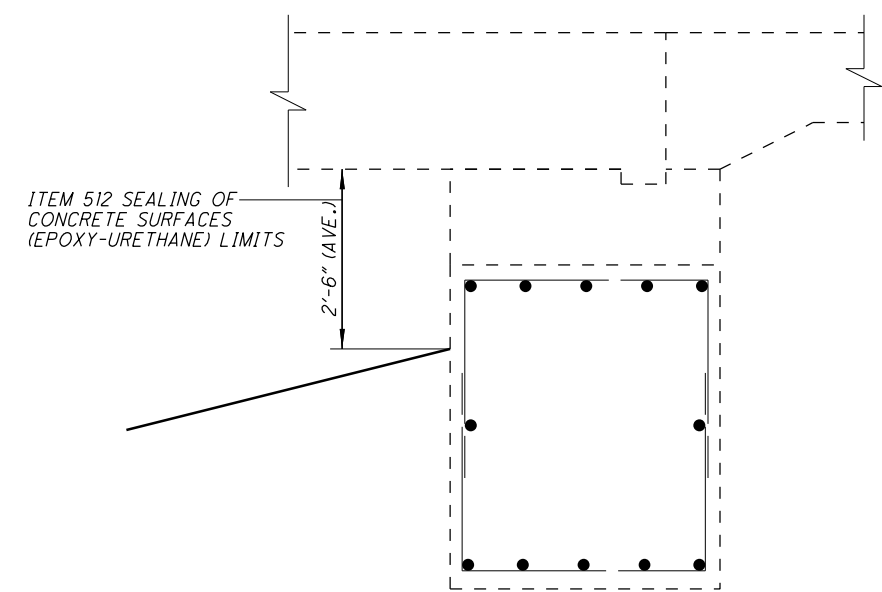


**SOUTH BRIDGE
SOUTHWEST CORNER
ELEVATION VIEW**
(NORTH BRIDGE NORTHEAST CORNER MIRRORED)

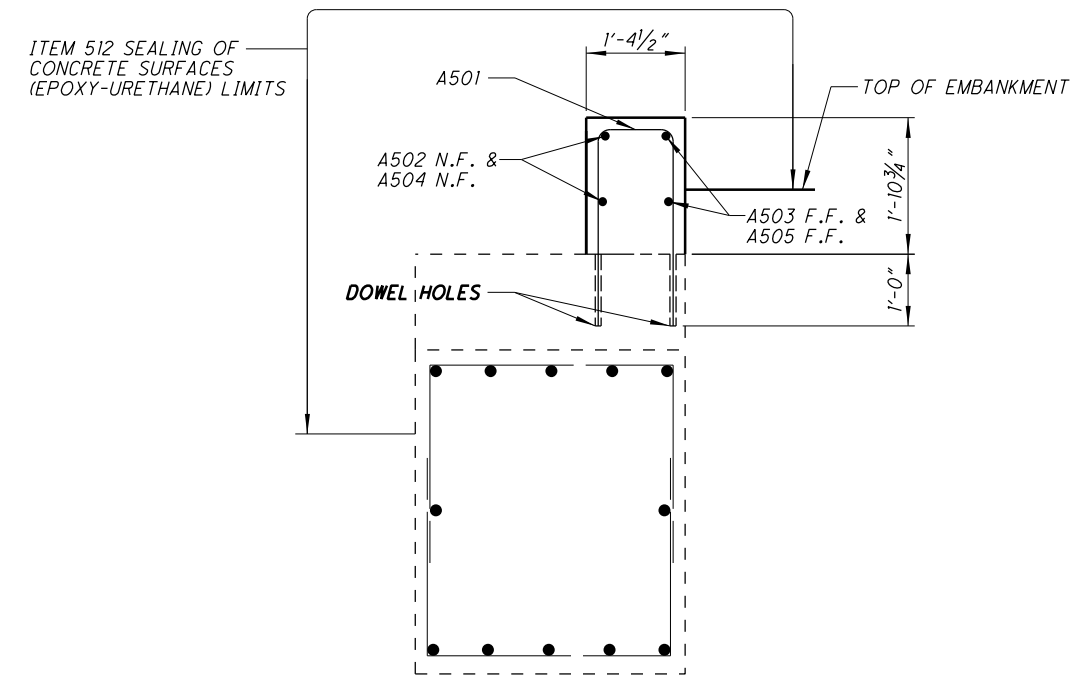
N.F. - NEAR FACE
F.F. - FAR FACE



**NORTH BRIDGE
NORTHWEST CORNER
ELEVATION VIEW**
(SOUTH BRIDGE SOUTHEAST CORNER MIRRORED)



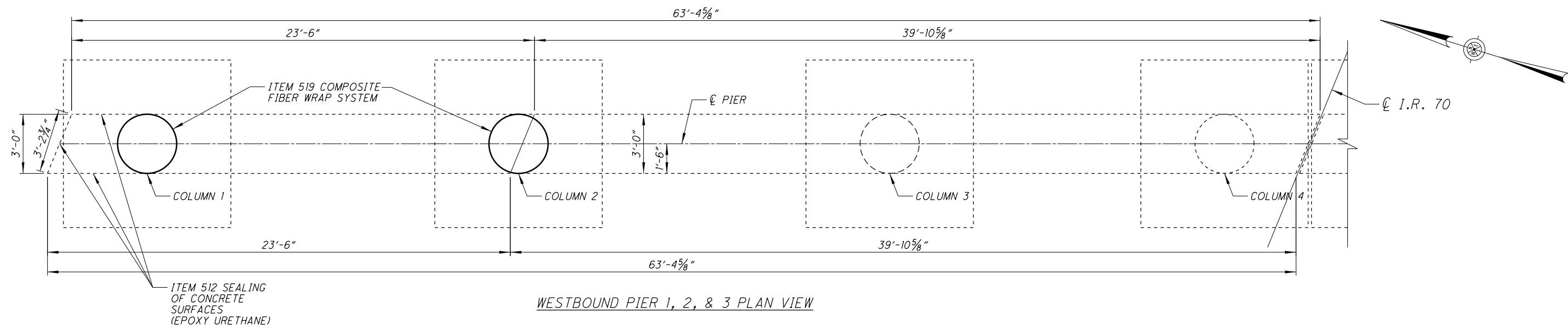
ABUTMENT SECTION VIEW



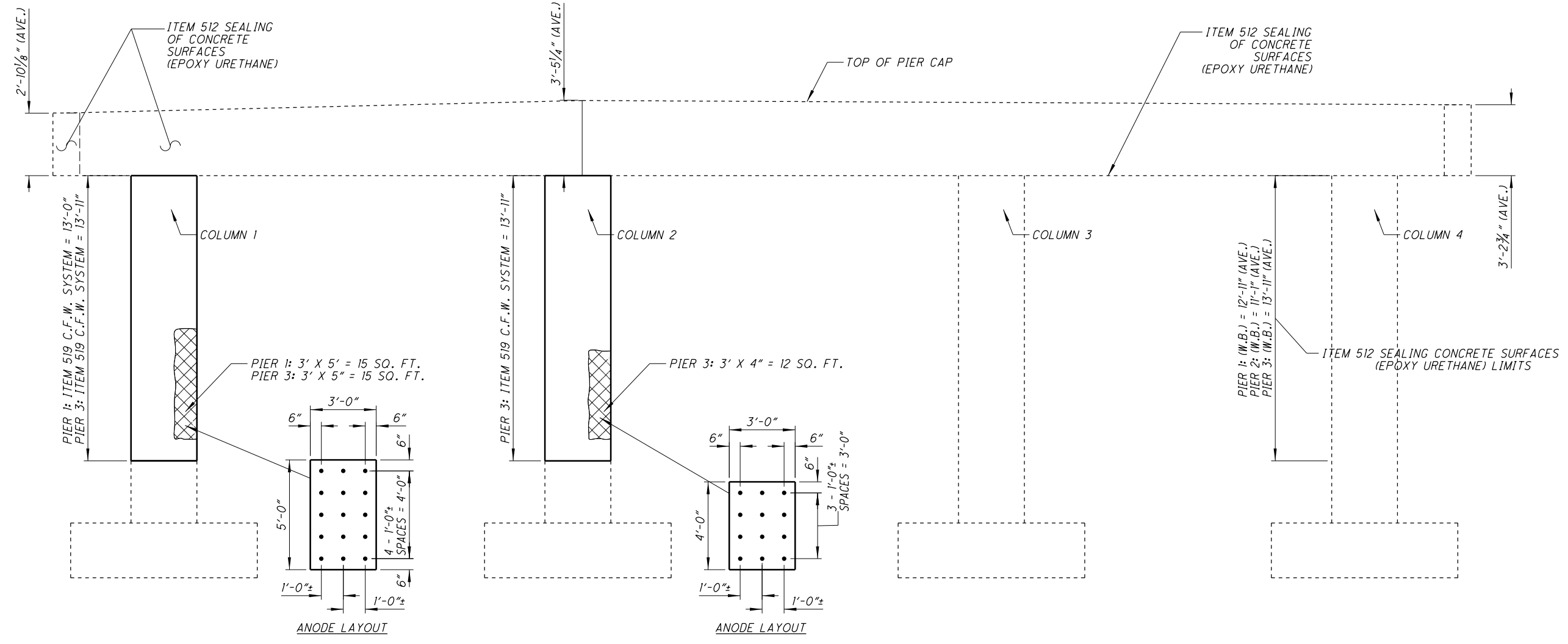
WING WALL SECTION VIEW

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED	DATE	STRUCTURE FILE NUMBER	4503902
CPS	09/17/18		
DRAWN	KMR	REVISION	XXX
DESIGNED	KMR	CHECKED	JDR
REAR AND FORWARD ABUTMENT DETAILS			
BRIDGE NO. LIC-70-1943 OVER S.R. 13			
LIC-70-17.80/19.42		PID No. 96321	
6 / 14		42 50	

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WESTBOUND PIER 1, 2, & 3 PLAN VIEW

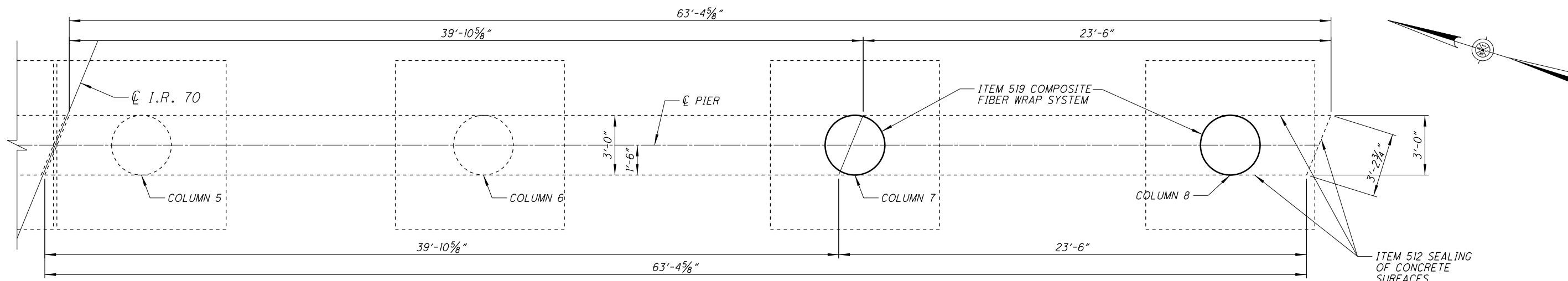


WESTBOUND PIER 1, 2, & 3 ELEVATION VIEW

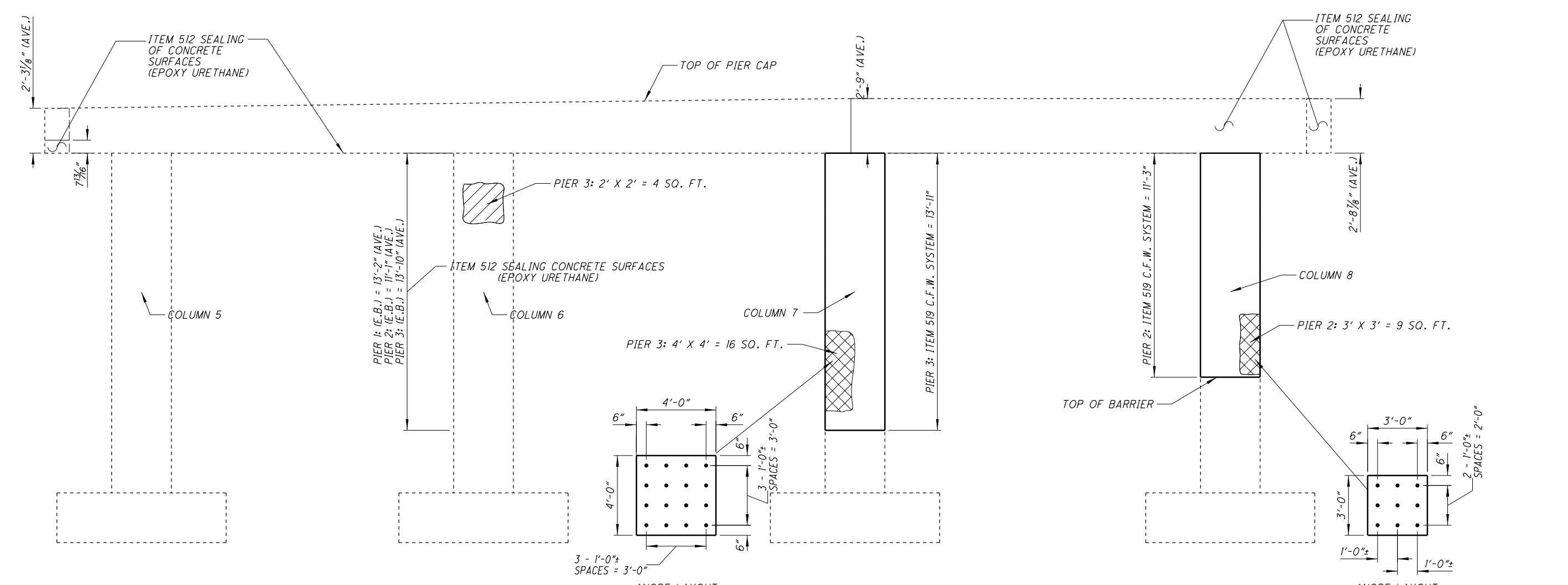
LEGEND
 - ITEM 844 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED CPS	DATE 09/17/18
DRAWN KMR	STRUCTURE FILE NUMBER 4503902
DESIGNED KMR	CHECKED JDR
REVISOR KMR	REVISION XXX
PIER 1, 2, & 3 DETAILS (WESTBOUND) BRIDGE NO. LIC-70-1943 OVER S.R. 13	
LIC-70-17.80/19.42 PID No. 96321	
7 / 14	
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EASTBOUND PIER 1, 2, & 3 PLAN VIEW

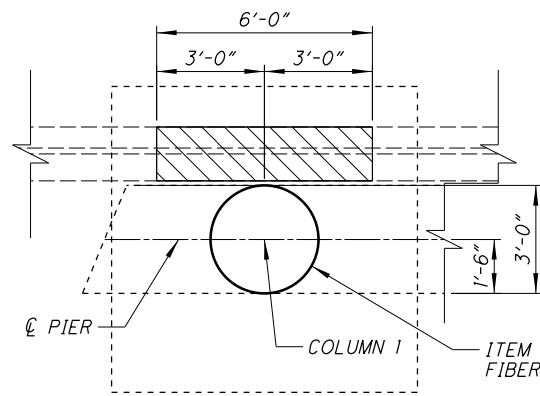


EASTBOUND PIER 1, 2, & 3 ELEVATION VIEW

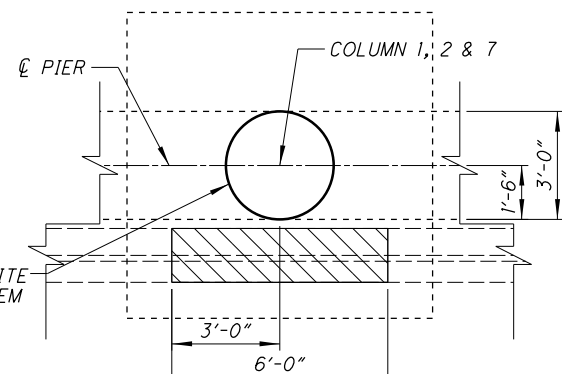
- LEGEND**
- ITEM 844 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION
 - ITEM 519 PATCHING CONCRETE STRUCTURE

<p>LIC-70-17.80/19.42</p> <p>PID No. 96321</p>	<p>PIER 1, 2, & 3 DETAILS (EASTBOUND)</p> <p>BRIDGE NO. LIC-70-1943</p> <p>OVER S.R. 13</p>	<p>DESIGN AGENCY</p> <p>OHIO DEPARTMENT OF</p> <p>TRANSPORTATION, DISTRICT 5</p>	<p>REVIEWED</p> <p>CPS 09/17/18</p> <p>STRUCTURE FILE NUMBER</p> <p>4503902</p>
<p>8 / 14</p>	<p>44</p> <p>50</p>	<p>DESIGNED</p> <p>KMR</p> <p>CHECKED</p> <p>JDR</p>	<p>DRAWN</p> <p>KMR</p> <p>REVISED</p> <p>XXX</p>

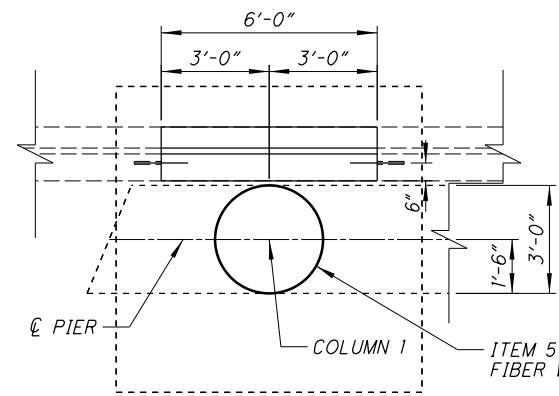
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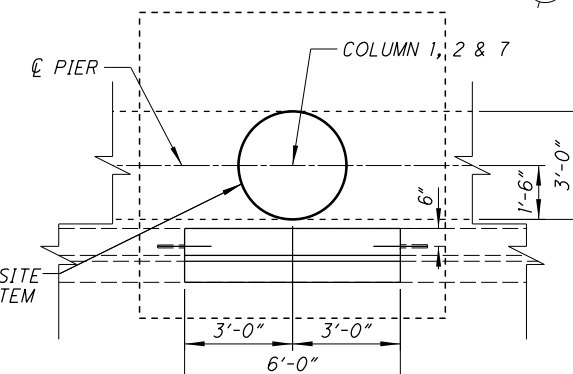
PIER 1, COLUMN 1
PLAN VIEW CONCRETE
BARRIER REMOVAL DETAIL



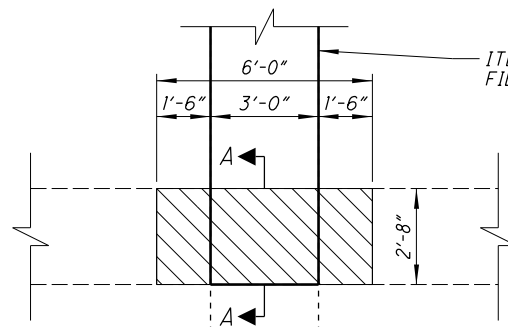
PIER 3, COLUMN 1, 2 & 7
PLAN VIEW CONCRETE
BARRIER REMOVAL DETAIL



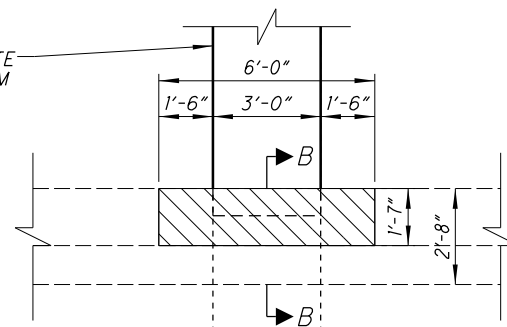
PIER 1, COLUMN 1
PLAN VIEW CONCRETE
BARRIER REMOVAL DETAIL



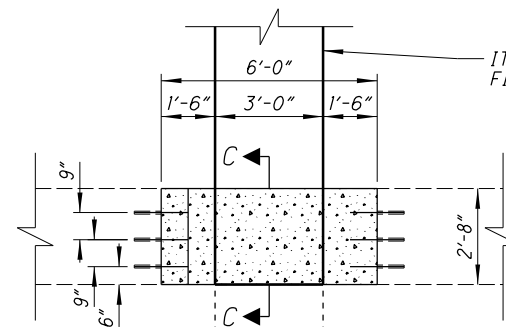
PIER 3, COLUMN 1, 2 & 7
PLAN VIEW CONCRETE
BARRIER REMOVAL DETAIL



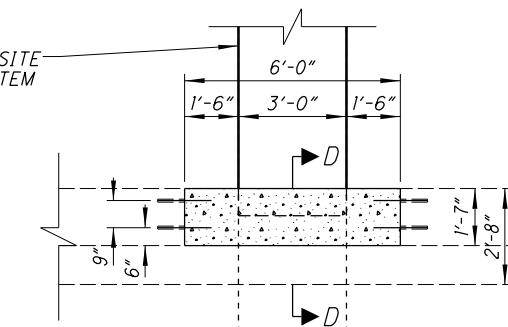
PIER 1, COLUMN 1
ELEVATION VIEW CONCRETE
BARRIER REMOVAL DETAIL



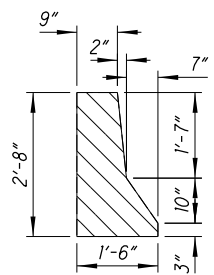
PIER 3, COLUMN 1, 2 & 7
ELEVATION VIEW CONCRETE
BARRIER REMOVAL DETAIL



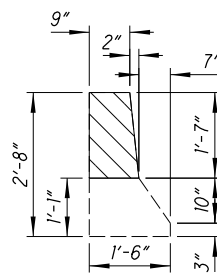
PIER 1, COLUMN 1
ELEVATION VIEW CONCRETE
BARRIER REMOVAL DETAIL



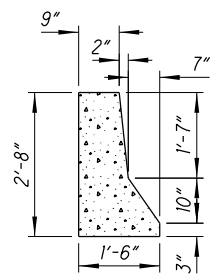
PIER 3, COLUMN 1, 2 & 7
ELEVATION VIEW CONCRETE
BARRIER REMOVAL DETAIL



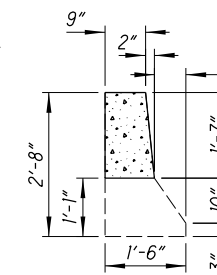
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

ITEM 202 CONCRETE BARRIER REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE CONCRETE ROADWAY BARRIER AS SHOWN IN THE PLAN. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED IN THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING PARAPET REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND I.E. SURROUNDING EXISTING CONCRETE ROADWAY BARRIER.

MEASUREMENT AND PAYMENT FOR THE ABOVE WORK: THE DEPARTMENT WILL MEASURE QUANTITY OF REMOVALS ON A FEET BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 CONCRETE BARRIER REMOVED, AS PER PLAN 24 FEET

CALCULATIONS

4 COLUMNS X 6 FT. = 24 FEET

ITEM 622 BARRIER MISC.: CONCRETE

DESCRIPTION: THIS WORK CONSISTS OF REPLACING CONCRETE ROADWAY BARRIER AS SHOWN IN THE PLAN. THE CONCRETE FORM SHALL MATCH THE EXISTING CONCRETE BARRIER IN ORDER TO PROVIDE A SMOOTH TRANSITION. AT THE CONSTRUCTION JOINTS THE EXISTING CONCRETE BARRIER AND THE PROPOSED CONCRETE BARRIER SHALL DOWELED TOGETHER AS SHOWN AND DESCRIBED IN STANDARD DRAWING RM-4.5. DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT SHALL BE USED IN ACCORDANCE TO CMS 510.

MEASUREMENT AND PAYMENT FOR THE ABOVE WORK: THE DEPARTMENT WILL MEASURE THE QUANTITY OF CONCRETE ON A CU. YD. BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF CONCRETE AT THE CONTRACT PRICE FOR ITEM 622 - BARRIER, MISC.: CONCRETE AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

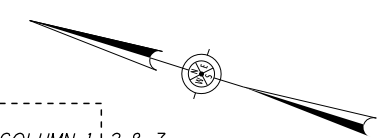
THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 622 BARRIER MISC.: CONCRETE 2 CU. YD.

CALCULATIONS

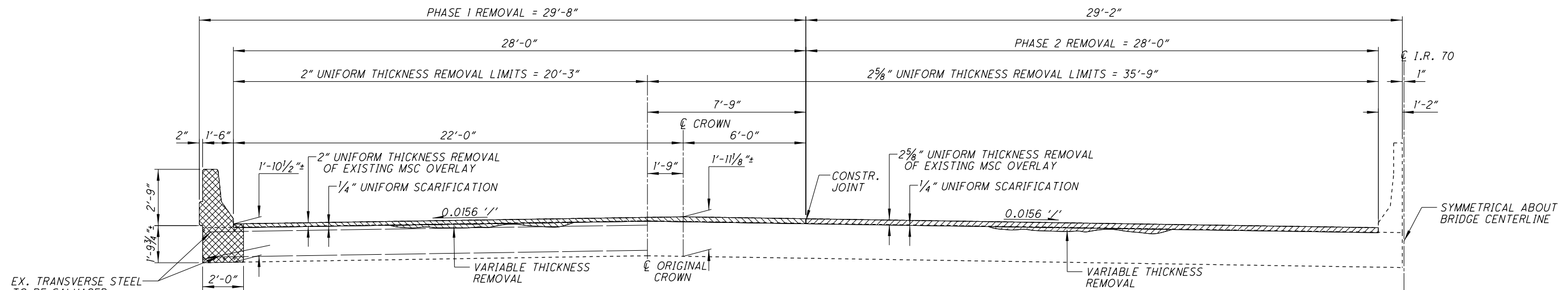
1 COLUMN X 2.70 SQ. FT.
X 6 FT. ÷ 27 = 0.6 CU. YD.

3 COLUMNS X 1.32 SQ. FT.
X 6 FT. ÷ 27 = 0.9 CU. YD.
1.5 CU. YD.

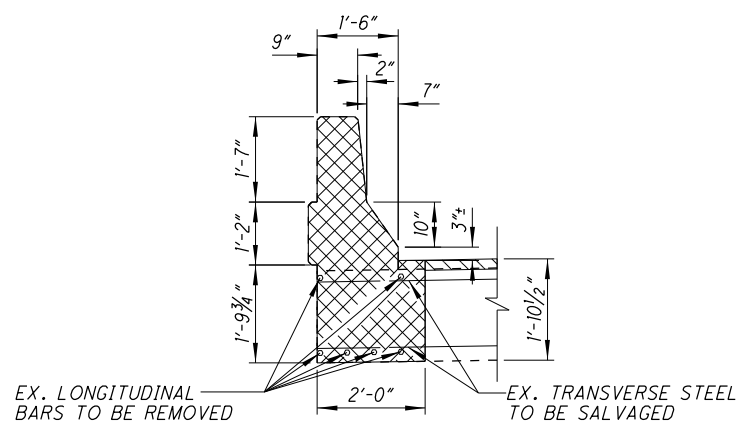


DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	DATE 09/17/18	REVIEWED CPS	DESIGNED KMR	DRAWN KMR	CHECKED JDR
STRUCTURE FILE NUMBER 4503902	REVISED XXX	REVISED XXX	REVISED XXX	REVISED XXX	REVISED XXX
PIER 1 & 3 DETAILS					
BRIDGE NO. LIC-70-1943 OVER S.R. 13					
LIC-70-17.80/19.42					
PID No. 96321					
9 / 14					
45 50					

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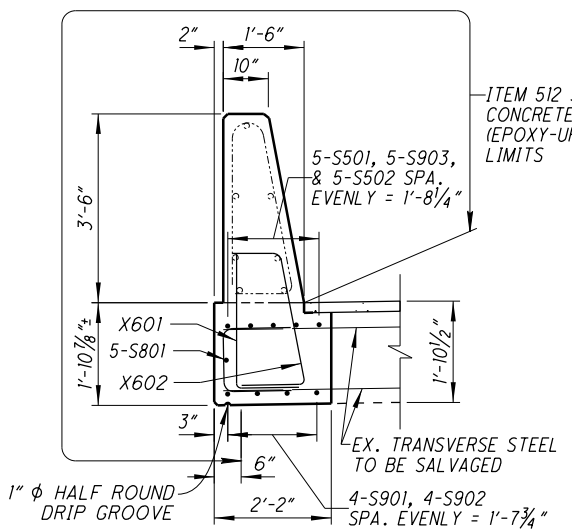


EXISTING LEFT BRIDGE TRANSVERSE SECTION SHOWN
(RIGHT BRIDGE MIRRORED)
(LIC-70-1943 WESTBOUND)

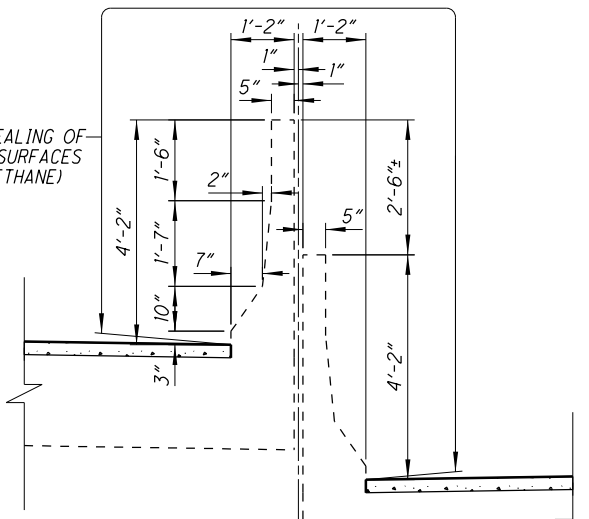


DECK EDGE REMOVAL DETAIL

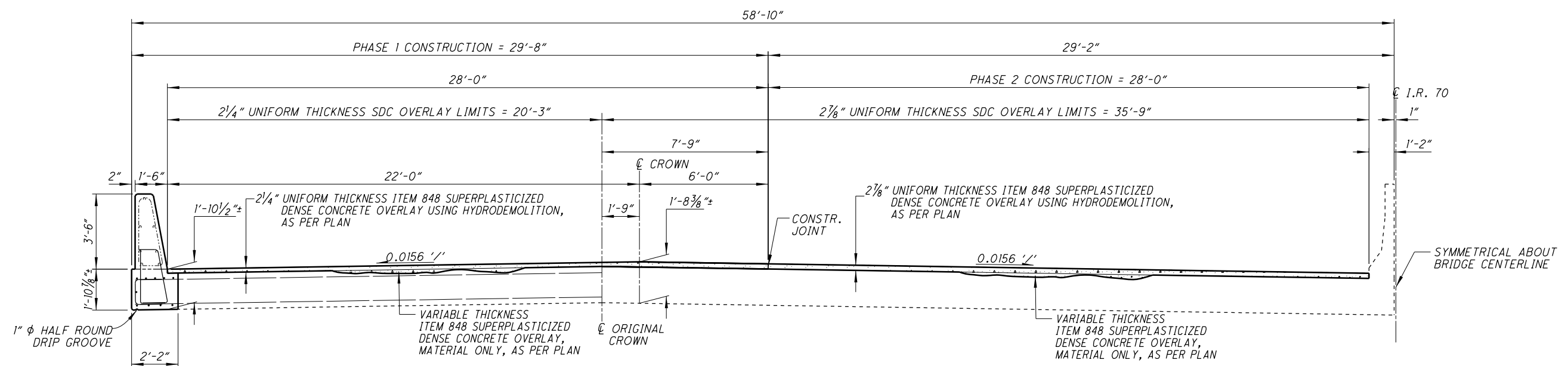
- LEGEND**
- ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)
 - ITEM 847 EXISTING CONCRETE OVERLAY REMOVED (PHASE 1)
 - ITEM 847 EXISTING CONCRETE OVERLAY REMOVED (PHASE 2)



PROPOSED DECK EDGE DETAIL



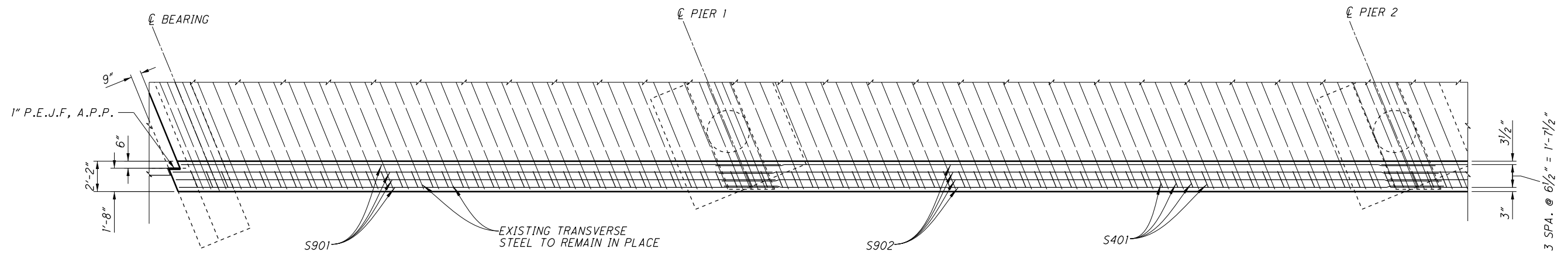
MEDIAN BARRIER SEALING DETAIL



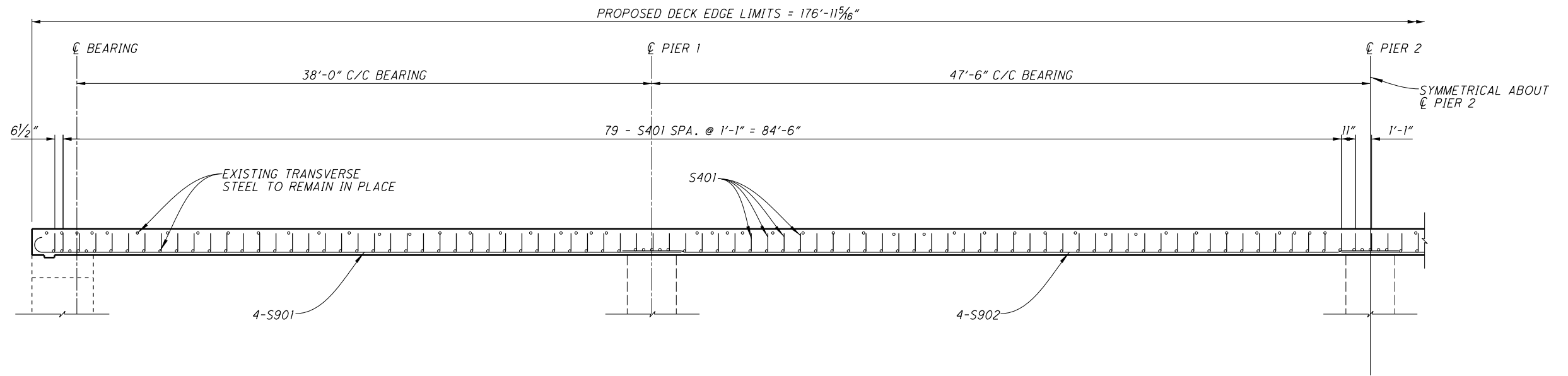
PROPOSED LEFT BRIDGE TRANSVERSE SECTION SHOWN
(RIGHT BRIDGE MIRRORED)
(LIC-70-1943 WESTBOUND)

DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DATE	09/17/18
REVIEWED	CPS
STRUCTURE FILE NUMBER	4503902
DRAWN	KMR
CHECKED	JDR
DESIGNED	KMR
REVISIONS	XXX
TRANSVERSE SECTION	
BRIDGE NO. LIC-70-1943	
OVER S.R. 13	
LIC-70-17.80/19.42	PID No. 96321
10/14	46/50

I:\ProjectData\LIC\96321\Design\Structures\LIC070_1943\SS001.dgn Bottom Mat SteelLayout 10/24/2018 11:19:16 AM cshonk



PLAN VIEW



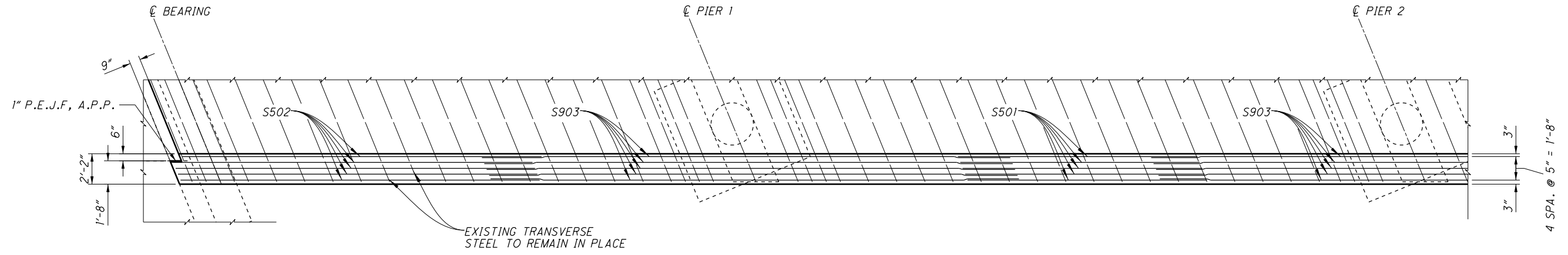
ELEVATION VIEW

LIC-70-17.80/19.42		DESIGN AGENCY	
PID No. 96321		OHIO DEPARTMENT OF	
11/14		TRANSPORTATION, DISTRICT 5	
47		DESIGNED	DATE
50		KMR	09/17/18
		CHECKED	STRUCTURE FILE NUMBER
		JDR	4503902
		DRAWN	REVIEWED
		KMR	CPS
		REVISED	09/17/18
		XXX	STRUCTURE FILE NUMBER
			4503902

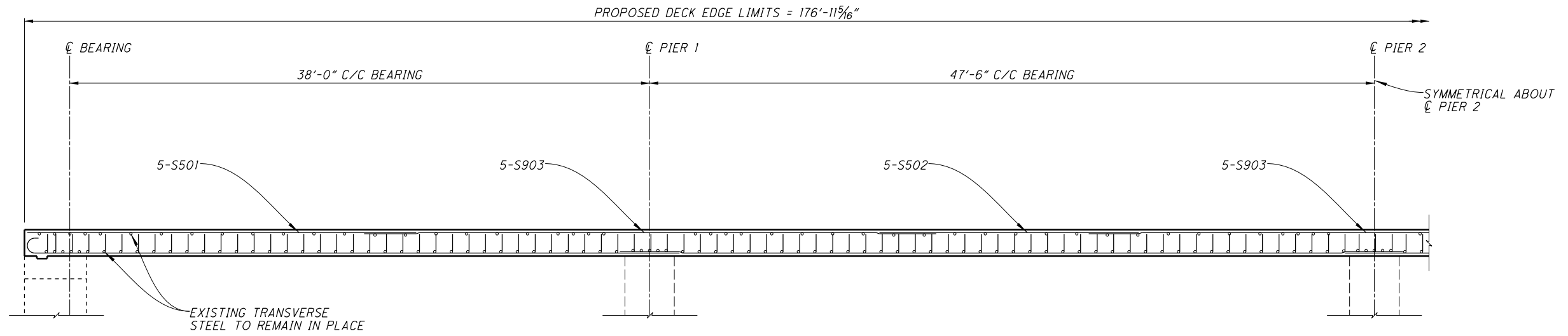
BOTTOM MAT REINFORCING STEEL LAYOUT

BRIDGE NO. LIC-070-1943
OVER S.R. 13

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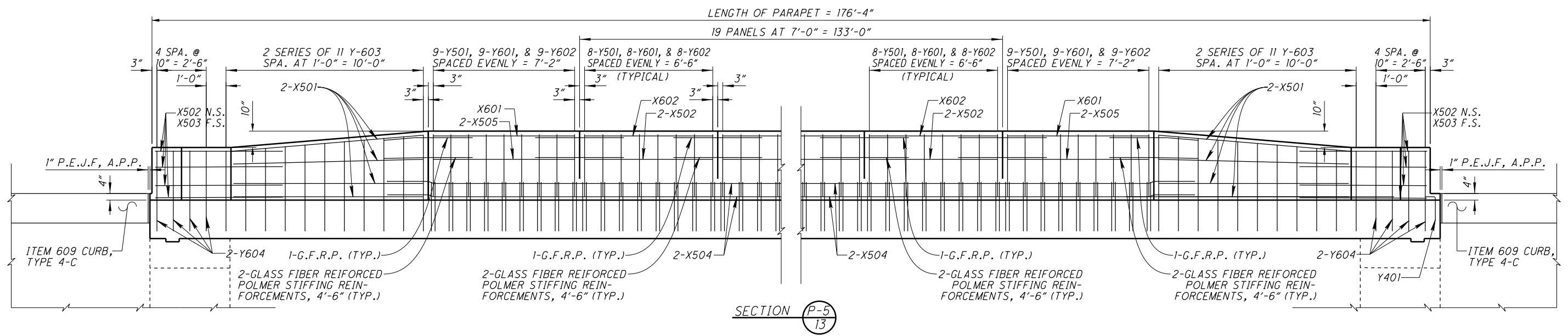
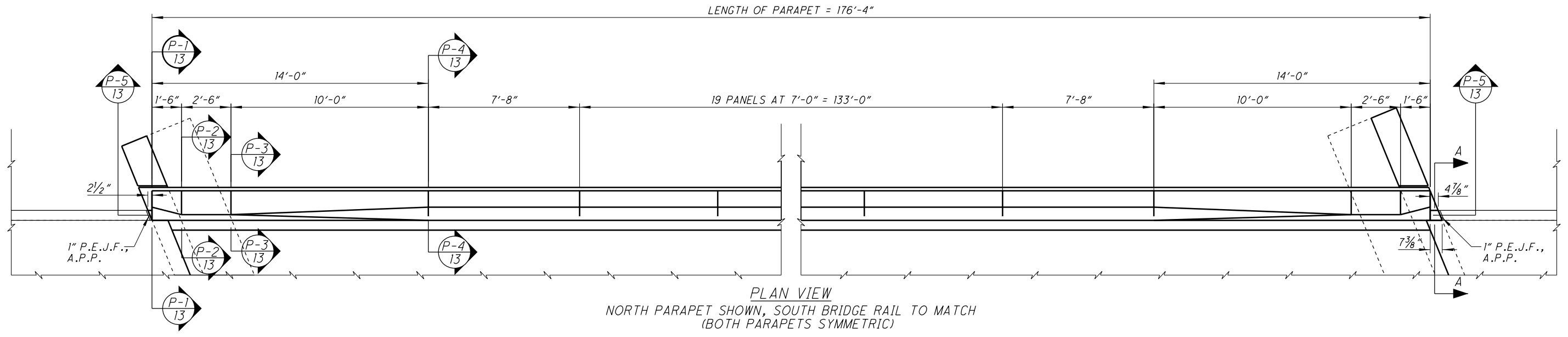
PLAN VIEW



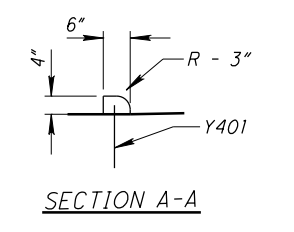
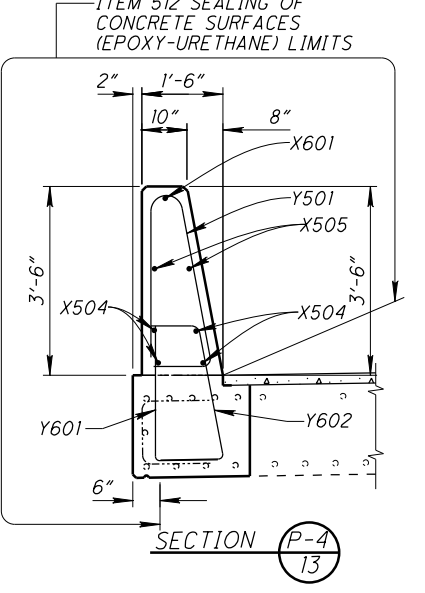
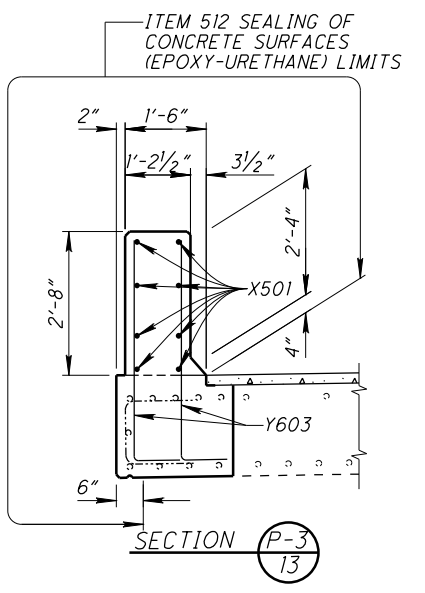
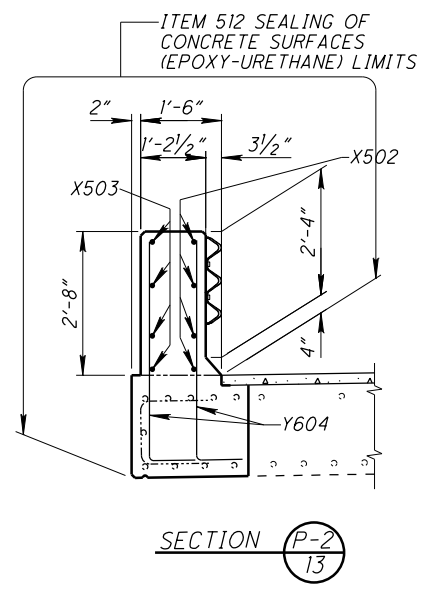
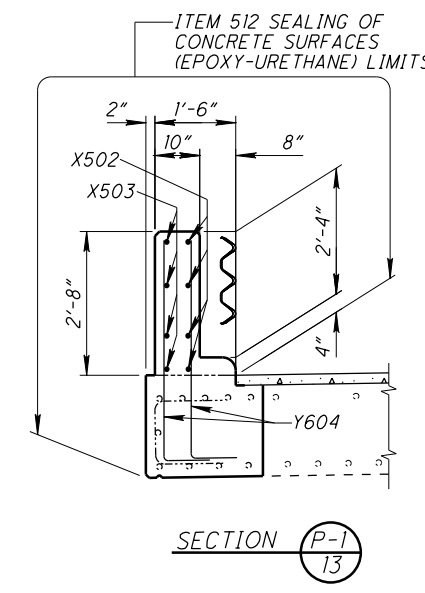
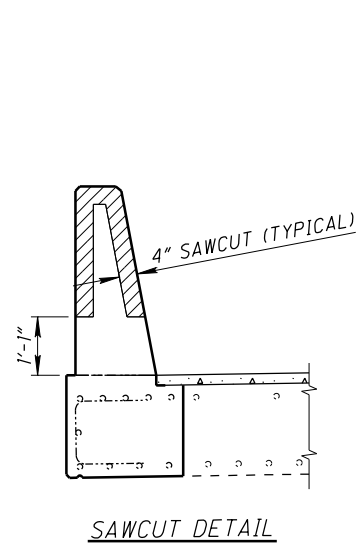
ELEVATION VIEW

DESIGNED KMR		DRAWN KMR		REVIEWED CPS		DATE 09/17/18		DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
CHECKED JDR		REVISED XXX		STRUCTURE FILE NUMBER 4503902					
TOP MAT REINFORCING STEEL LAYOUT					BRIDGE NO. LIC-70-1943 OVER S.R. 13				
LIC-70-17.80/19.42					PID No. 96321				
12/14					48/50				

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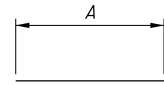
NO. 5 BARS LAP LENGTH = 2'-1"



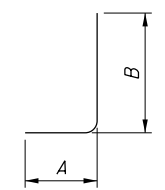
DESIGNED KMR	CHECKED JDR	DRAWN KMR	REVISED XXX	REVIEWED CPS	DATE 09/17/18	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
				STRUCTURE FILE NUMBER 4503902		
PARAPET DETAILS						BRIDGE NO. LIC-70-1943 OVER S.R. 13
LIC-70-17.80/19.42						PID No. 96321
13/14						49 50

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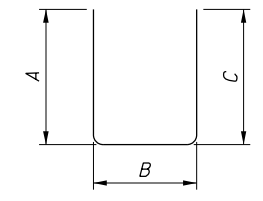
MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	LEFT BRIDGE	RIGHT BRIDGE	TOTAL				A	B	C	D	E	R	INC
LIC-70-1943 ABUTMENTS (LEFT & RIGHT BRIDGES)													
A501	7	7	14	6'-1"	89	2	2'-8"	1'-0"	2'-8"				
A502	2	2	4	3'-5"	14	STR.	3'-5"						
A503	2	2	4	3'-10"	16	STR.	3'-10"						
A504	2	2	4	2'-3"	9	STR.	2'-3"						
A505	2	2	4	1'-10"	8	STR.	1'-10"						
LIC-70-1943 ABUTMENTS TOTAL					136								
LIC-70-1943 DECK EDGES (LEFT & RIGHT BRIDGES)													
S401	163	163	326	3'-6"	762	2	1'-3"	1'-2"	1'-3"				
S501	10	10	20	25'-6"	532	STR.	25'-6"						
S502	10	10	20	17'-0"	355	STR.	17'-0"						
S801	5	5	10	38'-2"	1,019	STR.	38'-2"						
S901	8	8	16	44'-0"	2,394	16	42'-9"						
S902	8	8	16	51'-4"	2,793	STR.	51'-4"						
S903	15	15	30	37'-6"	3,825	STR.	37'-6"						
LIC-70-1943 DECK EDGES TOTAL					11,680								
LIC-70-1943 PARAPETS (LEFT & RIGHT BRIDGES)													
X501	16	16	32	10'-0"	334	STR.	10'-0"						
X502	8	8	16	5'-8"	95	25	1'-10"	2'-5"	1'-4"	0'-1/2"	0'-5"		
X503	8	8	16	5'-8"	95	STR.	5'-8"						
X504	20	20	40	32'-2"	1,342	STR.	32'-2"						
X505	4	4	8	7'-2"	60	STR.	7'-2"						
X506	38	38	76	6'-6"	515	STR.	6'-6"						
X601	2	2	4	7'-2"	43	STR.	7'-2"						
X602	19	19	38	6'-6"	371	STR.	6'-6"						
Y401	1	1	2	1'-7"	2	1	0'-6"	1'-2"					
Y501	170	170	340	7'-4"	2,601	23	0'-11"	3'-3"	3'-0"				
Y601	170	170	340	3'-4"	1,702	1	1'-0"	2'-6"					
Y602	170	170	340	4'-1"	2,085	34	1'-0"	2'-6"	0'-11"				
Y603	4	4	8	4'-8"				4'-0"					
Y603	SERIES OF	SERIES OF	SERIES OF	TO	677	1	0'-10"	TO				0'-1"	
	11	11	11	5'-7"				4'-11"					
Y604	16	16	32	4'-8"	224	1	0'-10"	4'-0"					
LIC-70-1943 PARAPETS TOTAL					10,146								
LIC-70-1943 ABUTMENTS TOTAL					136								
LIC-70-1943 DECK EDGES TOTAL					11,680								
LIC-70-1943 PARAPETS TOTAL					10,146								
GRAND TOTAL					21,962								



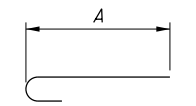
TYPE-STR



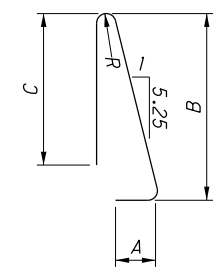
TYPE-1



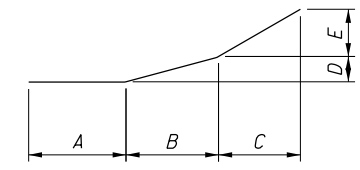
TYPE-2



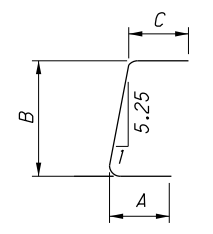
TYPE-16



TYPE-23



TYPE-25



TYPE 34

REINFORCING STEEL SCHEDULE	BRIDGE NO. LIC-70-1943 OVER S.R. 13	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
LIC-70-17.80/19.42	DATE 09/17/18	REVIEWED CPS
PID No. 96321	DESIGNED KMR	DRAWN KMR
14 / 14	CHECKED JDR	REVISED XXX
50	STRUCTURE FILE NUMBER 4503902	REVISED XXX
50		