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UTILITIES

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

WATER

CITY OF CLEVELAND
DIVISION OF WATER
1201 LAKESIDE AVENUE, 2nd FLOOR
CLEVELAND, OHIO 44114
ATTN: FRED ROBERTS
PHONE: (216) 664-2444, EXT. 5520
FAX: (216) 664-2838

CITY OF CLEVELAND
DIVISION OF WATER
POLLUTION CONTROL
12302 KIRBY ROAD
CLEVELAND, OHIO 44108
ATTN: RACHID ZOGHAIB
PHONE: (216) 664-3785

LAKEWOOD WATER
DIVISION
12650 DETROIT AVENUE
LAKEWOOD, OH 44107
ATTN: NICK DELVECCHIO
PHONE: (216) 529-1867

SEWER

LAKE COUNTY DEPT. UTILITIES
ADMINISTRATION BUILDING
105 MAIN ST.
PAINESVILLE, OHIO 44077
ATTN: ALBERT SAARI
PHONE: (440) 350-2652

LAKEWOOD SEWER
DIVISION
12650 DETROIT AVENUE
LAKEWOOD, OH 44107
ATTN: NICK DELVECCHIO
PHONE: (216) 529-1867

GAS

DOMINION EAST OHIO GAS COMPANY
320 SPRINGSIDE DR.
AKRON, OHIO 44333
ATTN: BRYAN DAYTON
PHONE: (330) 664-2409

CABLE

CHARTER COMMUNICATIONS
7 SEVERANCE CIRCLE
CLEVELAND HEIGHTS, OHIO 44118
ATTN: PAT SANTOITEMMO
PHONE: (216) 575-8016
EXT. 12165554202
FAX: (216) 581-3262

CHARTER COMMUNICATIONS
8179 DOW CIRCLE
STRONGSVILLE, OHIO 44136
SUPERVISOR: GARY NAUMANN
PHONE: (216) 575-8016, EXT. 5033
FIELD ENGINEER: PAUL SILVESTRO
PHONE: (216) 575-8016
EXT. 12165555034
FAX: (440) 826-2940

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT IS NOT ANTICIPATED TO AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

ELECTRIC

THE ILLUMINATING COMPANY
6896 MILLER RD., SUITE 101
BRECKSVILLE, OHIO 44141
ATTN: DEAN CHATFIELD
PHONE: (216) 970-0627

COMMUNICATIONS

AT & T OHIO
13630 LORAIN AVENUE 2ND FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS
PHONE: (216) 476-6142
FAX: (216) 476-6013

WINDSTREAM
100 OWEN BROWN ST.
HUDSON, OHIO 44236
ATTN: JEFF GUYAS
PHONE: (330) 650-8404

WINDSTREAM
560 TERNES AVENUE
ELYRIA, OHIO 44035
ATTN: GEOFFREY HAMM
PHONE: (440) 329-4245

COX COMMUNICATIONS
12221 PLAZA DRIVE
PARMA, OH 44130
ATTN: MARK PRESTON
PHONE: (216) 535-3347

PARKS

CLEVELAND METROPOLITAN PARK DISTRICT
4101 FULTON PARKWAY
CLEVELAND, OHIO 44144
ROCKY RIVER RESERVATION MANAGER
EMERALD NECKLACE MARINA
ATTN: RICK DITCH
PHONE: (440) 331-8287

CLEVELAND METROPOLITAN PARK RANGERS
4600 VALLEY PARKWAY
FAIRVIEW PARK, OHIO 44126
PHONE: (440) 333-0791
PHONE: (440) 331-5530 (24 HOUR DISPATCH)

GOVERNMENT AGENCY

NINTH COAST GUARD DISTRICT COMMANDER
1240 EAST NINTH STREET
CLEVELAND, OHIO 44199
ATTN: MR. LEE SOULE
PHONE: (216) 902-6085
Lee.D.Soule@uscg.mil

U.S. ARMY CORPS OF ENGINEERS
USACE, BUFFALO DISTRICT
OHIO AREA OFFICE
ATTN: MR. VITO MELILLI, CHIEF
PHONE: (216) 685-1205
vito.c.melilli@usace.army.mil

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS OR WITHIN STATE PROPERTY.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 8:00 PM AND 8:00 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

EXISTING DIMENSIONS

ALL DIMENSIONS ARE APPROXIMATE (±).

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING LIMITATIONS:

- 1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO MAINTENANCE OF TRAFFIC SHEETS WITHIN THIS PLAN).

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION, NO STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT-OF-WAY WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. EXCEPT AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES, THE STAGING AND OR STORAGE OF CONSTRUCTION EQUIPMENT WILL NOT TAKE PLACE OUTSIDE OF PROPOSED CONSTRUCTION LIMITS WITHIN THE DEFINED BOUNDARIES OF THE 4(f) PROPERTY. ALL RESTORATION WILL BE AT NO COST TO THE STATE.

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 SUBSIDIARY AGREEMENT GOVERNING COMPLETION OF THIS PROJECT.

CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 623, THE CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AS NECESSARY PRIOR TO AND AT COMPLETION OF THE WORK, AT WORK INTERFACES SUCH AS ENDS OF DECK, EXPANSION JOINTS, AND END OF APPROACH SLABS. THESE MEASUREMENTS ARE INTENDED TO ENSURE PROPOSED WORK MEETS EXISTING GRADES AND PROVIDES A SMOOTH RIDING SURFACE FOR THE TRAVELING PUBLIC.

EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE AFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND. PAYMENT FOR THE NEW PAVEMENT MARKINGS IS AS LISTED IN THE PLANS.

ITEM 201 - CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING, FOR EACH BRIDGE LOCATION TO BE USED AS DIRECTED BY THE ENGINEER. 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.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE B FIELD OFFICE, AS SPECIFIED IN TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

THE COPIER SUPPLIED MUST MEET THE REQUIREMENTS OF THE COPIER SUPPLIED WITH THE TYPE C FIELD OFFICE.

THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.

THE CONTRACTOR SHALL FURNISH, SET-UP AND MAINTAIN A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11ac FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN 6 MNTH

ENVIRONMENTAL

NO WORK TO BE WITHIN STREAMS OR WETLANDS.

CALCULATED
JL
CHECKED
MS

GENERAL NOTES

CUY-06A-0.42
LAK-528-1.92
PID NO. 103033

ITEM 614. MAINTAINING TRAFFIC

A. GENERAL

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAKE THE PROPOSED CONSTRUCTION WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY. FURTHERMORE, IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

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

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR HIGHWAYS AND STREETS, CURRENT EDITION. COPIES ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF CONTRACTS, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43216. NOTE: ALL DEVICES SHALL COMPLY, FOR CONDITION AND LOCATION, WITH THE CURRENT EDITION OF THE NCHRP 350 CRASH TESTING GUIDELINES AND WITH THE CRITERIA PUBLISHED IN QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES AND ACCEPTABLE DELINEATION METHODS FOR VEHICLES, AVAILABLE ONLINE AT [HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/ENGINEERING/ROADWAY/DESIGNSTANDARDS/TRAFFIC/QUALITYGUIDELINES/DOCUMENTS/QUALITYSTANDARDS OCTOBER2010 101410.PDF](http://www.dot.state.oh.us/divisions/engineering/roadway/designstandards/traffic/qualityguidelines/documents/qualitystandards OCTOBER2010 101410.PDF)

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.

B. NOTIFICATION

FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED OF FUTURE LANE CLOSURES AND TRAFFIC CONSTRUCTIONS. THEREFORE THE CONTRACTOR SHALL SUBMIT A SCHEDULE TO THE OHIO DEPARTMENT OF TRANSPORTATION INFORMATION OFFICER INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST FOURTEEN (14) DAYS PRIOR TO THE IMPLEMENTATION OF ANY CLOSURES. THE CONTRACTOR SHALL ALSO NOTIFY THE LOCAL LAW ENFORCEMENT AGENCIES OF LANE CLOSURES AT LEAST THREE (3) DAYS PRIOR TO IMPLEMENTATION.

DISTRICT 12 PUBLIC INFORMATION OFFICER
 5500 TRANSPORTATION BLVD.
 GARFIELD HEIGHTS, OHIO 44125-5396
 PHONE: (216) 581-2100 EXT. 244

C. ITEM 614, MAINTAINING TRAFFIC LOCATION #1 (CUY-06A-00.42)

WORK CONSISTS OF COMPLETE REPLACEMENT OF THE EXISTING REAR (WEST) EXPANSION JOINT AT THE ABUTMENT. THE WORK WILL INCLUDE REPLACING A PORTION OF THE SUPERSTRUCTURE DECK END AND REPLACING THE BACKWALL ABOVE APPROACH SLAB SEAT IN ORDER TO PROPERLY INSTALL THE NEW JOINTS AND THEIR ANCHORAGES INTO NEW CONCRETE AND TO REMOVE THE PORTIONS OF EXISTING REPAIRS THAT WOULD INHIBIT PROPER JOINT INSTALLATION. ADDITIONAL WORK WILL INCLUDE ADDING DOWELS AS NEEDED AND PATCHING PORTIONS OF ADJACENT APPROACH SLABS.

NOTIFICATION

THE CONTRACTOR WILL NOTIFY THE OHIO DEPARTMENT OF TRANSPORTATION, THE CITIES OF LAKEWOOD AND ROCKY RIVER AND LOCAL LAW ENFORCEMENT AGENCIES A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: START OF CONSTRUCTION, LANE CLOSURES, AND CHANGES TO TRAFFIC PATTERNS.

RESTRICTIONS

A MINIMUM OF ONE 10 FOOT LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT.

A LEFT TURN LANE SHALL BE PROVIDED AT EACH END OF THE STRUCTURE. THE TURN LANE SHALL BE A MINIMUM OF 20 FEET LONG AND 9 FEET WIDE. THE LENGTH OF THE TRANSITION SHALL BE PER THE SHIFT TAPER CRITERIA OUTLINED IN OMTUCD SECTION 6C.08.

AT LEAST ONE SIDEWALK SHALL BE MAINTAINED AT ALL TIMES FOR PEDESTRIAN TRAFFIC. POST A PEDESTRIAN DETOUR FOR A CLOSED SIDEWALK ACCORDING TO SCD MT-110.10.

ALL SUPERSTRUCTURE WORK SHALL BE CONSTRUCTED IN TWO PHASES. EACH PHASE SHALL HAVE A MAXIMUM DURATION OF 14 CALENDAR DAYS. THE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS AND SCHEMATIC PLAN DEPICT A TWO-PHASE MAINTENANCE OF TRAFFIC SCHEME IN THE IMMEDIATE VICINITY OF THE WORK ZONE. THE CONTRACTOR SHALL DEVELOP A PLAN FOR LANE CLOSURES AND LANE SHIFTS APPROACHING THE WORK ZONE FOR EACH PHASE AND PRESENT IT TO THE DISTRICT WORK ZONE TRAFFIC CONTROL ENGINEER AND PROJECT ENGINEER FOR APPROVAL BEFORE BEGINNING WORK.

THE MAINTENANCE OF TRAFFIC PLAN SHALL BE IN CONFORMANCE WITH OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE STANDARD CONSTRUCTION DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC PLAN HAS BEEN APPROVED.

ALL WORK SHALL BE CONDUCTED FROM WITHIN A CLOSURE USING DRUMS ACCORDING TO THE RESTRICTIONS AND THE CONCEPTS PRESENTED IN SCDS MT-95.31 AND MT-95.32 AND ASSOCIATED STANDARD CONSTRUCTION DRAWINGS (SEE LIST ON TITLE SHEET).

SEQUENCE OF CONSTRUCTION

PHASE 1

CLOSE ONE LANE OF TRAFFIC IN EACH DIRECTION AND SHIFT TRAFFIC TO THE NORTH SIDE OF THE BRIDGE. MAINTAIN TRAFFIC IN TWO LANES THROUGH THE WORK ZONE WITH ONE LANE IN EACH DIRECTION. IMMEDIATELY WEST OF THE WORK ZONE, PROVIDE A LEFT TURN LANE WITH A MINIMUM LENGTH OF 20 FEET AND A MINIMUM WIDTH OF 9 FEET. THE STOP LINE MAY BE EXTENDED INTO THE INTERSECTION UP TO A MAXIMUM OF 15 FEET TO DEVELOP THE LEFT TURN LANE. SEE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS AND SCHEMATIC PLAN FOR DETAILS. REMOVE AND RECONSTRUCT 34 FEET OF THE BRIDGE JOINT ON THE SOUTH HALF OF THE BRIDGE.

PHASE 2

CLOSE ONE LANE OF TRAFFIC IN EACH DIRECTION AND SHIFT TRAFFIC TO THE SOUTH SIDE OF THE BRIDGE. MAINTAIN TRAFFIC IN THREE LANES THROUGH THE WORK ZONE WITH ONE LANE IN EACH DIRECTION AND A WEST BOUND LEFT TURN LANE. THE STOP LINE FOR THE LEFT TURN LANE MAY BE MOVED EASTWARD A MINIMUM OF 20 FEET TO PROVIDE ADDITIONAL WIDTH FOR VEHICLES TURNING ONTO DETROIT ROAD FROM WOOSTER ROAD OR LAKE ROAD. SEE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS AND SCHEMATIC PLAN FOR DETAILS. REMOVE AND RECONSTRUCT 30 FEET OF THE BRIDGE JOINT ON THE NORTH HALF OF THE BRIDGE.

TRUCK TURNING RESTRICTION

BECAUSE OF THE PROXIMITY OF THE WORK SITE TO THE INTERSECTION OF WOOSTER ROAD/LAKE ROAD AND THE NECESSITY TO MAINTAIN EAST BOUND TRAFFIC ON DETROIT ROAD IN A SINGLE NARROW LANE, LARGE TRACTOR-TRAILER VEHICLES MAY NOT HAVE SUFFICIENT SPACE TO COMPLETE A RIGHT OR LEFT TURN FROM THE SIDE ROADS ONTO EASTBOUND DETROIT ROAD WITHOUT TRACKING OVER THE ADJACENT OPPOSING LANE. FOR THE DURATION OF THE PROJECT, TRUCK TURNING MOVEMENTS FOR TRUCKS OVER 40' FROM WOOSTER ROAD/LAKE ROAD TO EASTBOUND DETROIT ROAD SHALL BE PROHIBITED DURING CONSTRUCTION. SEE ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN NOTE AND TRUCK DETOUR NOTE FOR DETAILS.

TRUCK DETOUR ROUTE

DUE TO THE TRUCK TURNING RESTRICTIONS ONTO EASTBOUND DETROIT ROAD, TRUCKS OVER 40' IN LENGTH SHALL BE DETOURED ALONG THE FOLLOWING ROUTE:

- WEST ON DETROIT ROAD
- TURN NORTH ON CLAGUE ROAD
- TAKE THE RAMP FOR EASTBOUND I-90
- TAKE EXIT 161 FOR DETROIT ROAD

D. MAINTENANCE OF TRAFFIC: LOCATION #2, LAK-528-01.92

WORK CONSISTS OF COMPLETE REPLACEMENT OF THE EXISTING EXPANSION JOINTS AT THE REAR AND FORWARD ABUTMENTS. THE WORK WILL INCLUDE REPLACING A PORTION OF THE SUPERSTRUCTURE DECK END AND REPLACING THE BACKWALL ABOVE THE APPROACH SLAB SEAT IN ORDER TO PROPERLY INSTALL THE NEW JOINTS AND THEIR ANCHORAGES INTO NEW CONCRETE AND TO REMOVE THE PORTIONS OF EXISTING STRUCTURE THAT WOULD INHIBIT PROPER JOINT INSTALLATION. ADDITIONAL WORK WILL INCLUDE REMOVAL AND PLACEMENT OF ADDITIONAL EROSION CONTROL BELOW THE BRIDGE DECK.

NOTIFICATION:

THE CONTRACTOR WILL NOTIFY THE OHIO DEPARTMENT OF TRANSPORTATION A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: START OF CONSTRUCTION, LANE CLOSURES, SHOULDER CLOSURES, AND CHANGES IN TRAFFIC PATTERNS.

RESTRICTIONS:

A MINIMUM OF ONE 10 FOOT LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT WITH THE EXCEPTION THAT THE CONTRACTOR SHALL MAINTAIN 1 LANE TWO WAY TRAFFIC DURING THE REPLACEMENT OF THE EXISTING EXPANSION JOINTS. THE CONTRACTOR SHALL PROVIDE A 1 LANE TWO-WAY SIGNALIZED CLOSING AT EACH END OF THE BRIDGE PER STANDARD CONSTRUCTION DRAWING MT-96.11.

THE LAK-528-01.92 BRIDGE REPAIR SHALL BE COMPLETED IN FOUR (4) SEPARATE PHASES. THE PHASES SHALL PROCEED FROM PHASE 1 TO PHASE 4 AS DESCRIBED BELOW. THE MOT TYPICAL AND SR 528 SIGNALIZED CLOSURE ON SHEETS 10-11 DEPICT THE PROPOSED MAINTENANCE OF TRAFFIC SCHEMES TO BE UTILIZED FOR EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL DEVELOP A PLAN FOR LANE CLOSURES, SHOULDER CLOSURES, AND LANE SHIFTS FOR EACH PHASE OF CONSTRUCTION AND PRESENT IT TO THE DISTRICT WORK ZONE TRAFFIC CONTROL ENGINEER AND PROJECT ENGINEER FOR APPROVAL BEFORE BEGINNING WORK.

THE MAINTENANCE OF TRAFFIC PLAN SHALL BE IN CONFORMANCE WITH OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE STANDARD CONSTRUCTION DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC PLAN HAS BEEN APPROVED BY THE ENGINEER.

ALL WORK SHALL BE CONDUCTED FROM WITHIN A CLOSURE USING PORTABLE BARRIER ACCORDING TO THE RESTRICTIONS AND THE CONCEPTS PRESENTED IN STANDARD CONSTRUCTION DRAWING MT-96.11 AND ASSOCIATED STANDARD CONSTRUCTION DRAWINGS (SEE LIST ON TITLE SHEET)

SEQUENCE OF CONSTRUCTION:

PHASE 1: THE CONTRACTOR SHALL REMOVE AND RECONSTRUCT THE EXPANSION JOINT AT THE RIGHT REAR APPROACH. TO COMPLETE THIS WORK THE CONTRACTOR SHALL CLOSE THE RIGHT LANE AT THE REAR APPROACH AND MAINTAIN TRAFFIC WITH A 1 LANE TWO-WAY SIGNALIZED CLOSING AS DETAILED ON SHEETS 10-11.

PHASE 2: THE CONTRACTOR SHALL COMPLETE THE REMOVAL AND RECONSTRUCTION OF THE REAR EXPANSION JOINT BY CLOSING THE LEFT LANE AT THE REAR APPROACH SLAB AND MAINTAIN TRAFFIC WITH A 1 LANE TWO-WAY CLOSURE AS DETAILED ON SHEETS 10-11.

PHASE 3: PHASE 3 WILL BE THE SAME AS PHASE 1 EXCEPT FOR THE WORK AND SIGNALIZED CLOSING WILL BE AT THE FORWARD END OF THE BRIDGE.

PHASE 4: PHASE 4 WILL BE THE SAME AS PHASE 2 EXCEPT FOR THE WORK AND SIGNALIZED CLOSING WILL BE AT THE FORWARD END OF THE BRIDGE.

THE CROSSFRAME REPLACEMENT AND EROSION CONTROL REPAIR WORK CAN BE COMPLETED SIMULTANEOUSLY WITH JOINT REPAIR AND THE CONTRACTOR MAY USE THE SIGNALIZED CLOSING WORK ZONE FOR CONSTRUCTION STAGING. EROSION CONTROL MATERIALS MAY NOT BE STORED ON THE BRIDGE DECK.

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E. SPECIAL HOLIDAYS AND EVENTS

LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS

NO SET-UP OR TAKE DOWN OF MAINTENANCE OF TRAFFIC ITEMS SUCH AS PAVEMENT MARKINGS, DRUMS, PCB'S ETC., SHALL BE DONE 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 THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH (12:00N OR 6:00 AM) MONDAY
MONDAY	12:00N FRIDAY THROUGH (12:00N OR 6:00 AM) TUESDAY
TUESDAY	12:00N MONDAY THROUGH (12:00N OR 6:00 AM) WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH (12:00N OR 6:00 AM) THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH (12:00N OR 6:00 AM) MONDAY
FRIDAY	12:00N THURSDAY THROUGH (12:00N OR 6:00 AM) MONDAY
SATURDAY	12:00N FRIDAY THROUGH (12:00N OR 6:00 AM) MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE LIMITATIONS.

F. MAINTENANCE OF TRAFFIC SYSTEMS

1. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITIONS EXISTS, THEY MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

2. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE "MANUAL" OR AS SHOWN IN THE STANDARD DRAWINGS.

3. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

4. FLAGGERS

AT LEAST TWO FLAGGERS ARE REQUIRED FOR EACH CLOSURE. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

5. PROTECTION OF PUBLIC

PERSONAL CARS SHALL NOT BE PARKED WITHIN THE RIGHT OF WAY.

6. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

G. MAINTENANCE OF TRAFFIC MATERIALS

1. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES ARE TO BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.

2. SIGN SUPPORT

SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.

3. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL CHOOSE A FLASHING ARROW BOARD FROM ODOT'S APPROVED LIST AND FOLLOW THE GUIDELINES IN SUPPLEMENTAL SPECIFICATION 821 AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS. PAYMENT FOR THE ABOVE MENTIONED ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

4. DRUMS

DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEQUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

5. CONES

CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

6. BARRIER

PORTABLE CONCRETE BARRIER IF NECESSARY IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

7. FLASHERS

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWINGS.

8. FLOODLIGHTING

FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.

9. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

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MAINTENANCE OF TRAFFIC NOTES - 2

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H. CONTRACTORS EQUIPMENT - OPERATION AND STORAGE

NO EQUIPMENT HAVING A GROSS WEIGHT IN EXCESS OF 60,000 POUNDS SHALL BE PERMITTED ON ANY BRIDGE STRUCTURE IN ACCORDANCE WITH 501.05.B.6. A STRUCTURAL ANALYSIS SHALL BE PERFORMED, SIGNED, SEALED AND DATED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO PROVE PROPOSED EQUIPMENT HAVING A GROSS WEIGHT IN EXCESS OF 60,000 POUNDS WILL NOT EXCEED UNIT STRESSES IN ACCORDANCE WITH 501.05.B.6. THE CONTRACTOR SHALL SUBMIT COPIES OF THE CALCULATIONS TO THE ENGINEER, AT LEAST FIFTEEN (15) DAYS PRIOR TO BEGINNING WORK, AND RECEIVE APPROVAL BEFORE STARTING.

THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN WORK OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT THAT IS NOT PROTECTED BY CONCRETE BARRIERS SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT, TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/SUPERVISOR HAS BEEN GRANTED.

I. ESTIMATED QUANTITIES

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO REPAIR AND ADJUST THE EXISTING ASPHALT SURFACES USED DURING THE MAINTENANCE OF TRAFFIC AS APPROVED BY THE ENGINEER.

	CUY-06A-0042	LAK-528-0192
ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	20 CU. YD.	20 CU. YD.
ITEM 614 - INCREASED BARRIER DELINEATION		1320 FT.
ITEM 614 - WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		8 EACH
ITEM 614 - OBJECT MARKER, TWO WAY		32 EACH
ITEM 614 - WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I		0.76 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I		0.5 MILE
ITEM 614 - WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I		120 FT.
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN		50 SQ. YD.
ITEM 622 - PORTABLE BARRIER, 32"		1320 FT.
ITEM 642 - EDGE LINE, 6"		0.38 MILE
ITEM 642 - CENTER LINE		0.19 MILE
ITEM 642 - REMOVAL OF PAVEMENT MARKING		2640 FT.

J. PAYMENTS

UNLESS STATED OTHERWISE, PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES INCLUDING DETOURS AND INTERSTATE LANE CLOSURES/SHIFTS SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS AND WALKWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUM AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

OVERNIGHT JOINT TRENCH CLOSING

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SAFE WORK SITE BY REDUCING THE RISK OF VEHICLES OR PEDESTRIANS FALLING INTO THE OPEN JOINT TRENCH DURING CONSTRUCTION. THE CONTRACTOR SHALL COVER UNFILLED JOINT REPAIR AREAS AT THE END OF EACH WORK DAY WITH A STEEL PLATE.

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME FOR EACH LOCATION, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE SAFETY ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN ACCEPTED.

IF DURING THE PROJECT THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE CONTRACTOR TO ADJUST THE MAINTENANCE OF TRAFFIC SCHEME TO THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT OW-124 (ROAD CONSTRUCTION AHEAD) SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SET-UP TIME. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - DETOUR SIGNING

THE CONTRACTOR SHALL ERECT, MAINTAIN, AND REMOVE ALL DETOUR SIGNING. THE DETOUR PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY ODOT PRIOR TO THE WORK. PAYMENT FOR ALL MATERIAL, LABOR AND EQUIPMENT TO PERFORM TRUCK DETOURS INCLUDING SIGNS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

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 OPERATING 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.

ONE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) EACH FOR NORTHBOUND TRAFFIC ON WOOSTER ROAD APPROACHING DETROIT AVENUE AND SOUTHBOUND TRAFFIC ON LAKE ROAD APPROACHING DETROIT AVENUE SHALL BE USED TO NOTIFY THE PUBLIC OF CLOSURE TIMES AT LEAST THREE DAYS IN ADVANCE OF IMPLEMENTING THE DETOUR. 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.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER AND SHALL SPECIFY THAT ONLY TRUCKS OVER 40' MUST FOLLOW THE DETOUR. 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.

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 THE 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 2 SIGN MONTH

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MAINTENANCE OF TRAFFIC NOTES - 3					
<p>CUY-06A-0.42 LAK-528-1.92 PID NO. 103033</p>					
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CONFLICTING PAVEMENT MARKINGS

CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED AS PER ITEM 614.11(G)(1) BY WATER BLASTING ONLY. ANY PAVEMENT MARKINGS THAT ARE REMOVED SHALL BE REPLACED IN KIND, WITH ITEM 646 (EPOXY) MATERIAL.

ITEM 614 - DELINEATION OF PORTABLE AND PERMANENT BARRIER

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

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

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE ALONG TAPERS AND TRANSITION AREAS AND ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE CRIMPED. PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MOT SUBSUMMARY AND CARRIED TO THE GENERAL SUMMARY.

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

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

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 OMUTCD INTENDS THAT FLAGGERS BE USED.

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

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

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

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

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

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

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

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

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

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

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	<u>CUY-06A-0042</u>	<u>LAK-528-0192</u>
	<u>24</u> HOURS	<u>32</u> HOURS

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

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

ITEM 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.

ITEM SPECIAL - WORK ZONE TRAFFIC SIGNAL

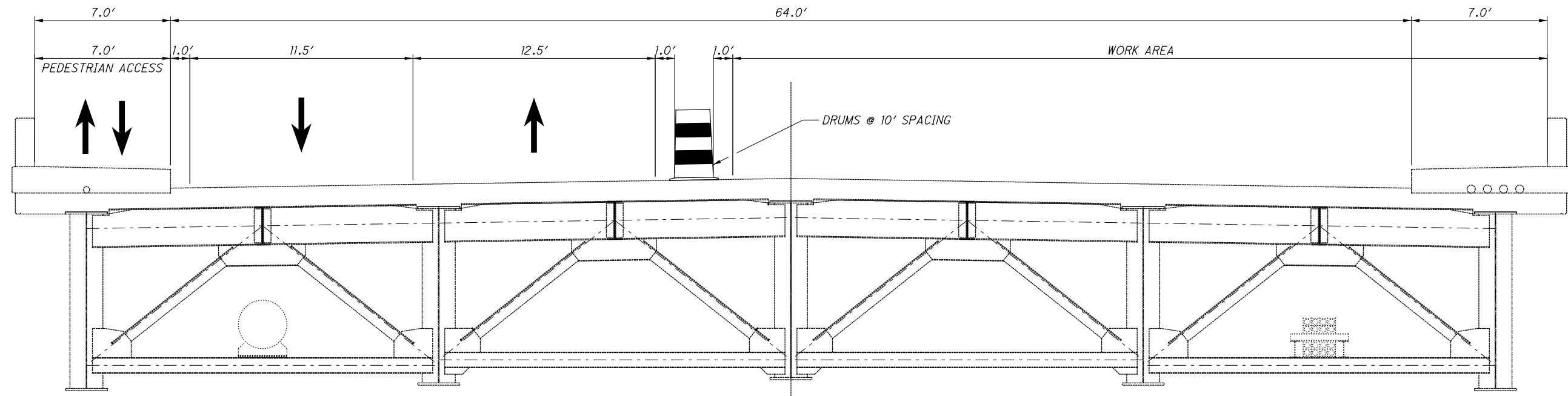
THIS ITEM SHALL CONFORM TO STANDARD CONSTRUCTION DRAWING MT-96.11 AND SUPPLEMENTAL SPECIFICATION 961. PAYMENT OF 4 EACH SHALL INCLUDE A SIGNAL AT BOTH ENDS OF A WORK ZONE.

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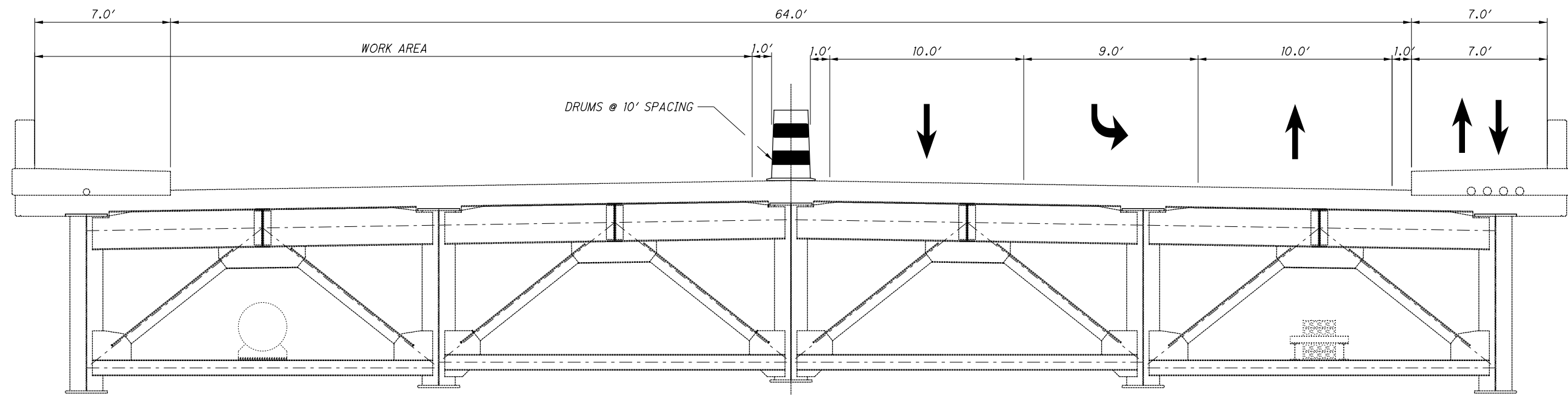
MAINTENANCE OF TRAFFIC NOTES - 4

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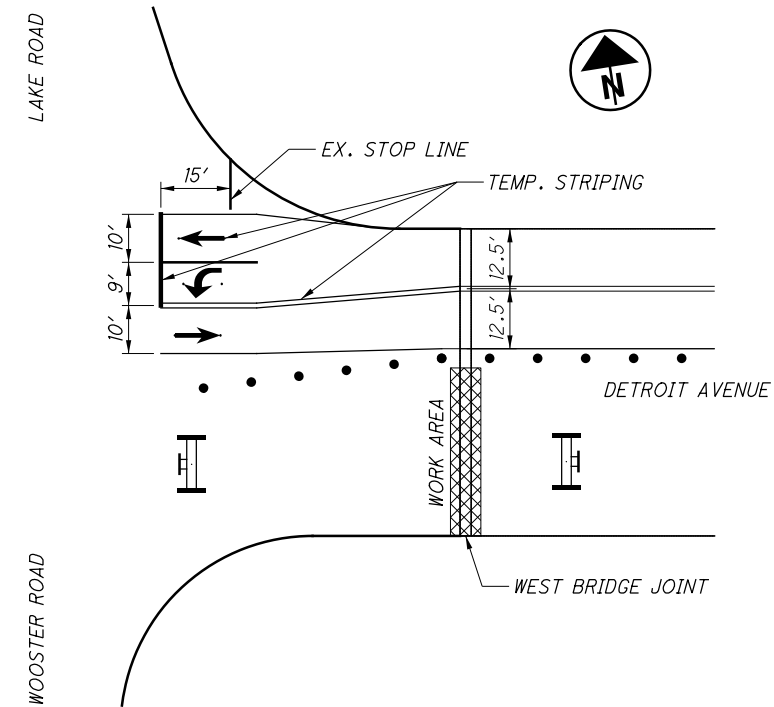
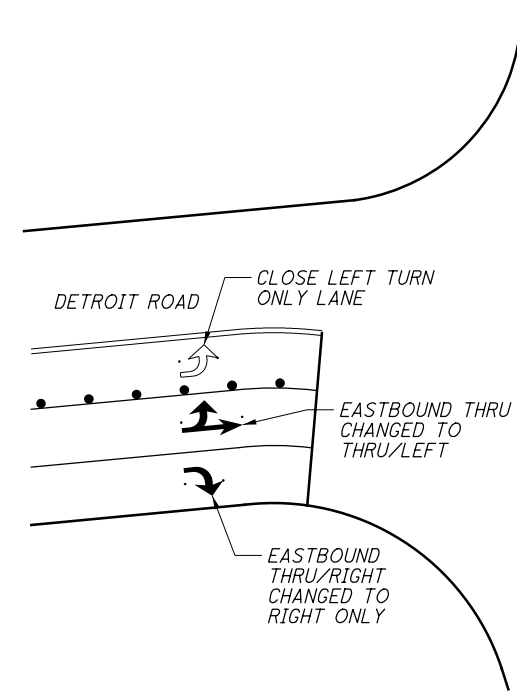


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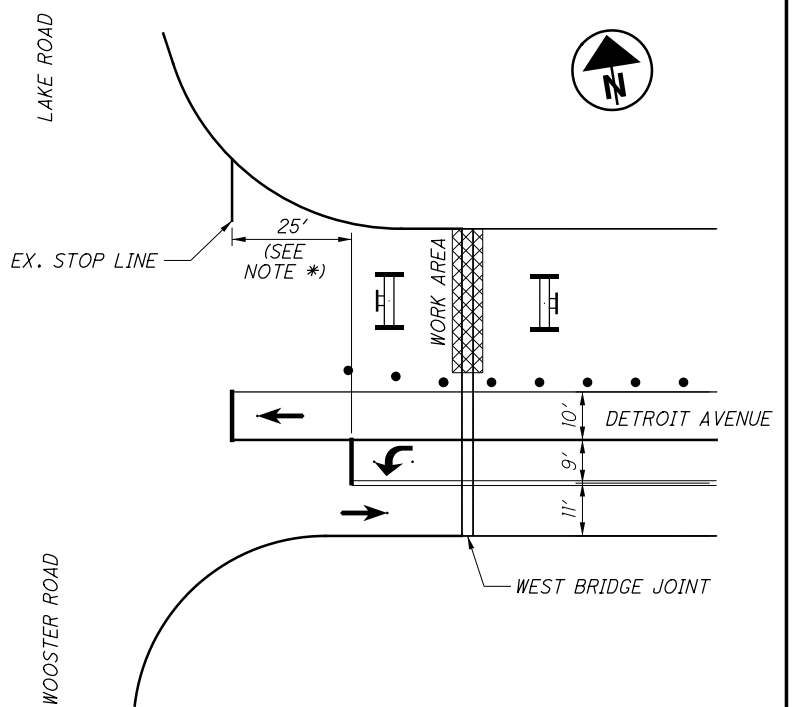
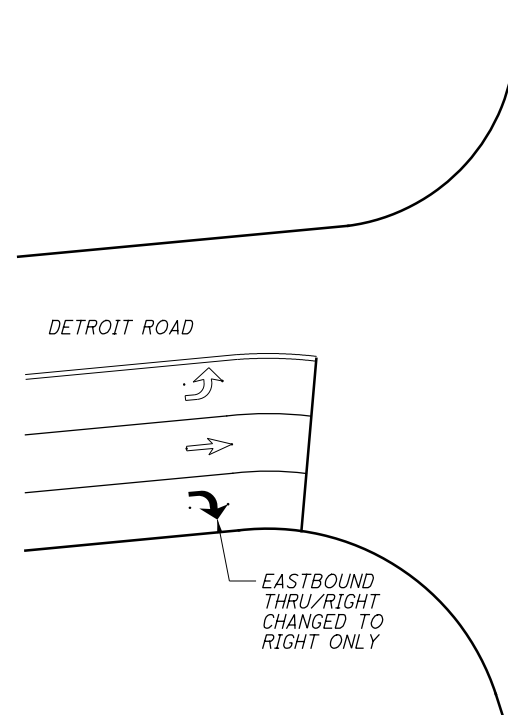
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MAINTENANCE OF TRAFFIC TYPICAL SECTIONS CUY-6A-0.42

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



PHASE 1



PHASE 2

LEGEND

-  TYPE III BARRICADE
-  DRUMS SPACED AT 10' C/C

NOTE:

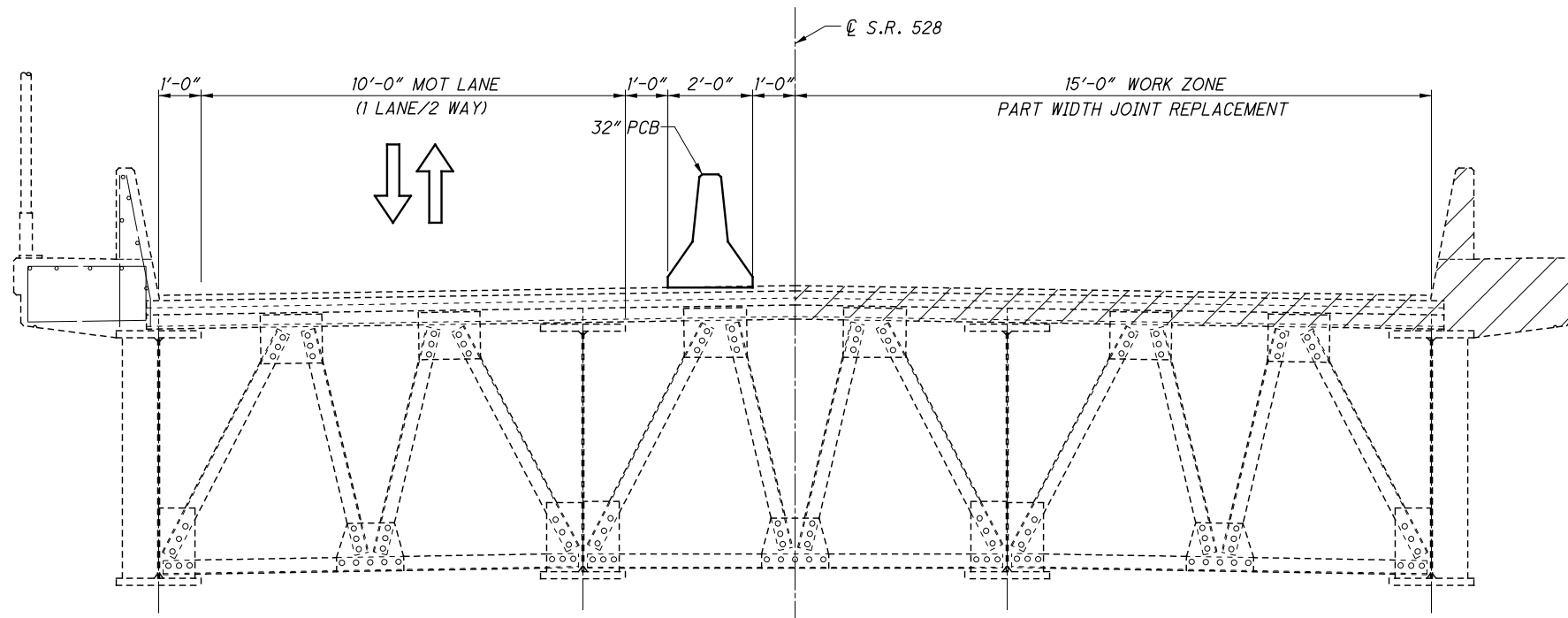
LANE CLOSURES, TAPERS, AND OTHER DETAILS NOT SHOWN SHALL BE IN ACCORDANCE WITH OMTCD, STANDARD CONSTRUCTION DRAWINGS AND SPECIFICATIONS. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.

* MAXIMUM DISTANCE FROM STOP BAR TO SIGNAL FACE MUST BE MAINTAINED. MAXIMUM DISTANCE FOR A 12" SIGNAL FACE IS 180'.

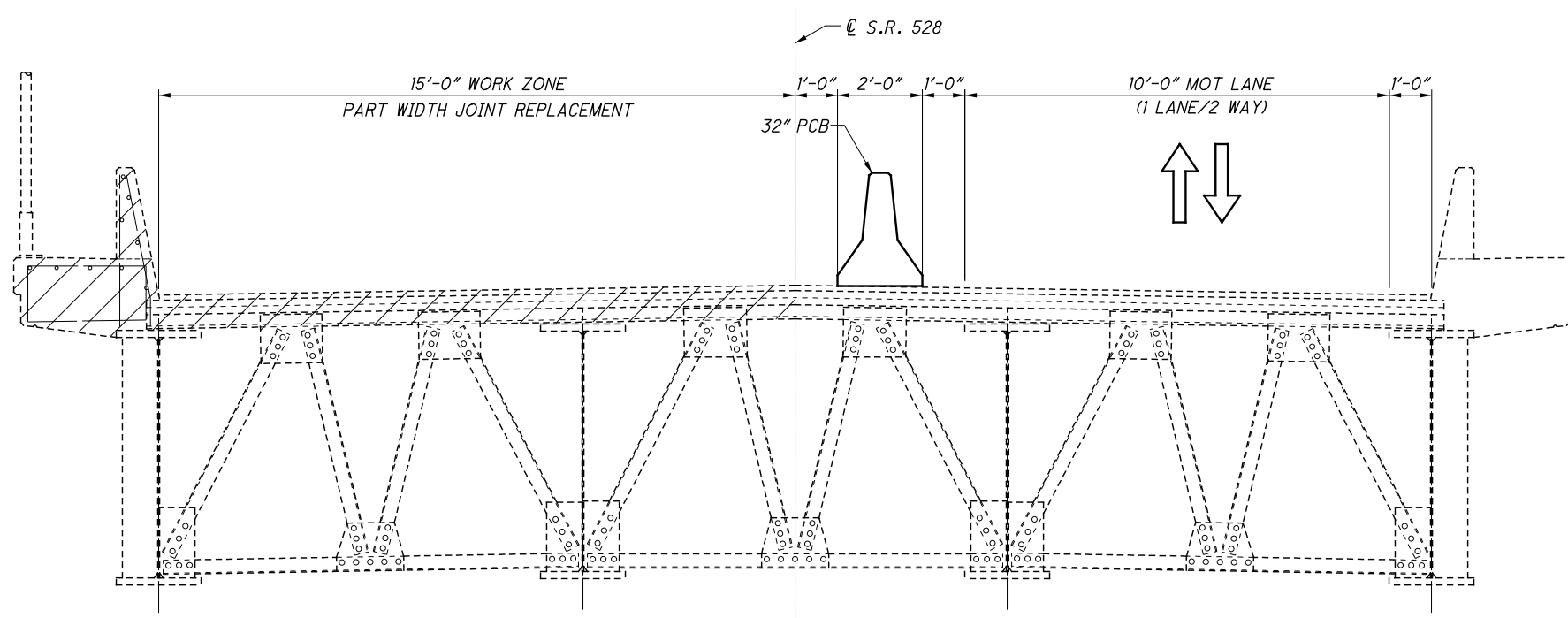
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MAINTENANCE OF TRAFFIC SCHEMATIC PLAN CUY-06A-0.42

**CUY-06A-0.42
LAK-528-1.92**



TYPICAL SECTION PHASE 1 & 3



TYPICAL SECTION PHASE 2 & 4

CALCULATED	JL
CHECKED	MS

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
LAK-528-01.92

CUY-06A-0.42
LAK-528-1.92
PID NO. 103033

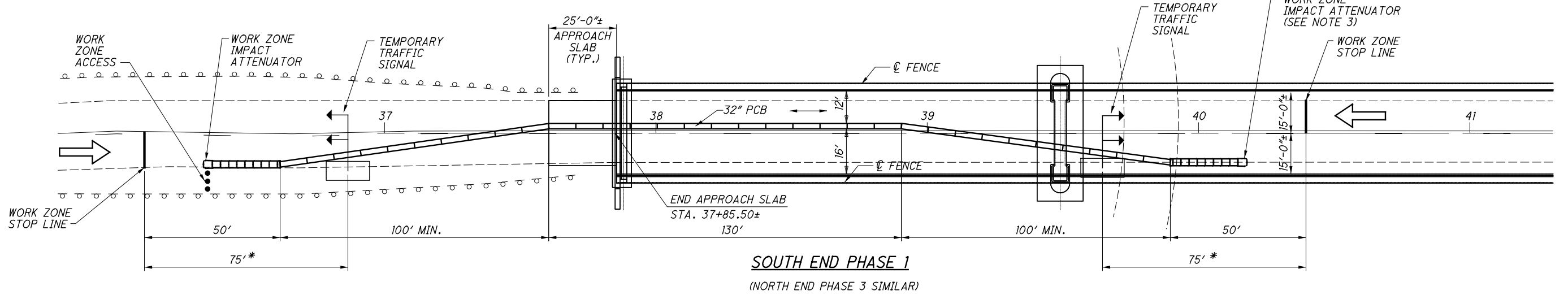
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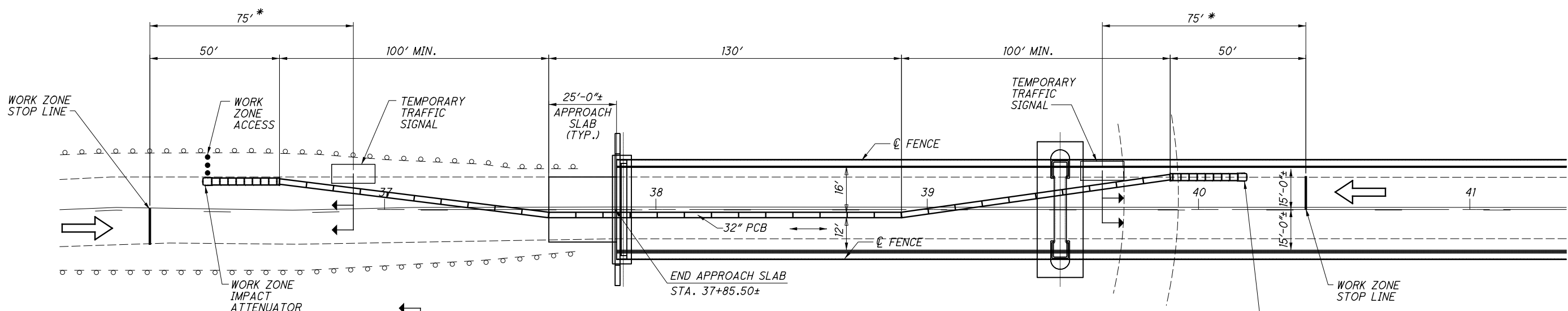
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**MAINTENANCE OF TRAFFIC PLAN
LAK-528-01.92**

**CUY-06A-0.42
LAK-528-1.92
PID NO. 103033**



*SIGNAL SUPPORT LOCATION
(DISTANCE AS PER SCD MT-96.11
UNLESS OTHERWISE APPROVED
BY THE ENGINEER)



*SIGNAL SUPPORT LOCATION
(DISTANCE AS PER SCD MT-96.11
UNLESS OTHERWISE APPROVED
BY THE ENGINEER)

ITEM 615 - PAVEMENT FOR MAINTAINING OF TRAFFIC, CLASS B, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 615 THIS ITEM SHALL ALSO INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS FOR INSTALLATION, MAINTENANCE, AND REMOVAL OF ALL FENCING, EARTHWORK, GUARDRAIL, SIDEWALK, AND ALL OTHER ITEMS AS NECESSARY TO PROVIDE A COMPLETE, FUNCTIONAL, AND SAFE INSTALLATION FOR PUBLIC USE.

A QUANTITY OF ITEM 615 - PAVEMENT FOR MAINTAINING OF TRAFFIC, CLASS B HAS BEEN PROVIDED TO RESTORE EXISTING SHOULDER TO A USABLE CONDITION FOR MAINTENANCE OF TRAFFIC OPERATIONS.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 615 - PAVEMENT FOR MAINTAINING OF TRAFFIC, CLASS B, AS PER PLAN 50 SQ. YD.

NOTES:

- 1.) SEE SHEET 10 FOR MOT TYPICAL SECTIONS
- 2.) FOR ADDITIONAL INFORMATION SEE SCD. MT-96.11, MT-96.20 AND SUPPLEMENTAL SPECIFICATION 961
- 3.) THE CONTRACTOR SHALL NOT BE PERMITTED TO ANCHOR THE IMPACT ATTENUATOR TO THE BRIDGE DECK.

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SHEET NUMBER							PARTICIPATION		ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	AS PER PLAN SHEET
3	4-7	16	28	01/NFP/BR	02/NFP/BR									
												ROADWAY		
LS				LS	LS	201	11000	LS				CLEARING AND GRUBBING		
												TRAFFIC CONTROL		
	0.38				0.38	642	00094	0.38	MILE			EDGE LINE, 6"		
	0.19				0.19	642	00290	0.19	MILE			CENTER LINE		
	2640				2640	642	30000	2640	FT			REMOVAL OF PAVEMENT MARKING		
												STRUCTURE REPAIR (CUY-6A-0042, SFN 1801074)		
		LS		LS		202	11201	LS				PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	15	
		LS		LS		202	98000	LS				REMOVAL MISC.: REMOVAL OF EXISTING STEEL	20	
		1010		1010		512	10050	1010	SY			SEALING OF CONCRETE SURFACES (NON-EPOXY)		
		1970		1970		513	10201	1970	LB			STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	15, 17	
		LS		LS		SPECIAL	51480110	LS				FIELD PAINTING OF STRUCTURAL STEEL CROSSFRAMES	15	
		78		78		516	12301	78	FT			STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE, AS PER PLAN	15	
		1		1		518	12801	1	EACH			SCUPPER, MODIFICATION, AS PER PLAN	21	
		1830		1830		SPECIAL	51900100	1830	SF			COMPOSITE FIBER WRAP SYSTEM	15, 21	
		540		540		519	11100	540	SF			PATCHING CONCRETE STRUCTURE		
		80		80		526	98200	80	FT			APPROACH SLABS, MISC.: PLACE WATERPROOFING AND COMPRESSION SEAL	15	
		137		137		610	50010	137	SF			RETAINING WALL, MISC.: MODULAR BLOCK RETAINING WALL	22	
		996		996		847	10001	996	SY			MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (3" THICK)	23	
		14		14		847	20001	14	CY			MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	23	
		LS		LS		847	30000	LS				TEST SLAB		
		996		996		847	30401	996	SY			EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (3" THICK)	23	
		100		100		847	50000	100	SY			HAND CHIPPING		
												STRUCTURE REPAIR (LAK-528-0192, SFN 4306031)		
			LS		LS	202	11203	LS				PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	26	
			2754		2754	509	10001	2754	LB			EPOXY COATED REINFORCING STEEL, AS PER PLAN	26	
			200		200	509	20001	200	LB			REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	26	
			12		12	510	10000	12	EACH			DOWEL HOLES WITH NONSHRINK, NON-METALLIC GROUT		
			11		11	511	34411	11	CY			CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	26	
			3		3	511	34449	3	CY			CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	32	
			173		173	512	10101	173	SY			SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	27	
			1894		1894	513	21501	1894	LB			REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	27	
			1428		1428	514	00050	1428	SF			SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
			1428		1428	514	00056	1428	SF			FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		
			1666		1666	514	00060	1666	SF			FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
			1666		1666	514	00066	1666	SF			FIELD PAINTING STRUCTURAL STEEL, FINISH COAT		
			64		64	516	11211	64	FT			STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	27	
			8		8	516	45305	8	EACH			REFURBISH BEARING DEVICE, AS PER PLAN	27	
			LS		LS	516	47001	LS				JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	27	
			106		106	601	32205	106	CY			ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC, AS PER PLAN	27	
			16		16	SPECIAL	60740300	16	FT			VANDAL PROTECTION FENCE REMOVED AND REBUILT	29, 32	
			1		1	847	20001	1	CY			MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	27	
			20		20	847	30400	20	SY			EXISTING CONCRETE OVERLAY REMOVED, 1/4" NOMINAL THICKNESS		

GENERAL SUMMARY - 1

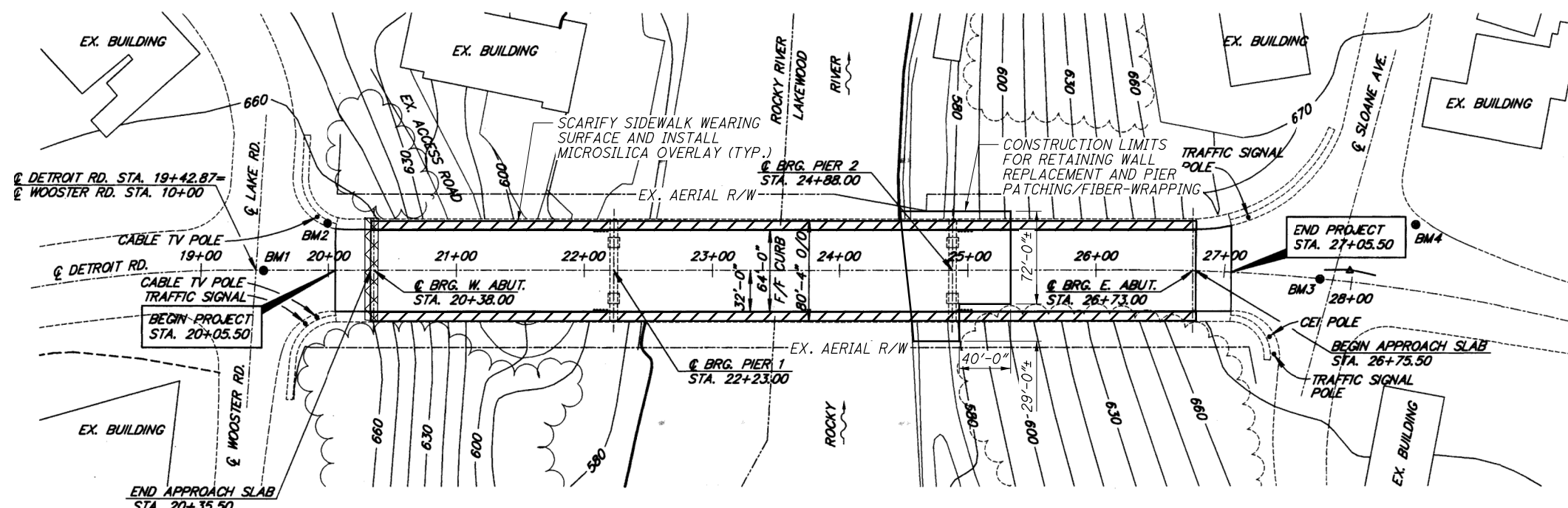
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LAK-528-1.92
PID NO. 103033

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SHEET NUMBER								PARTICIPATION		ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	AS PER PLAN SHEET
3	4-7		16		28			01/NFP/BR	02/NFP/BR						
													MAINTENANCE OF TRAFFIC		
	56							24	32	614	11110	56	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	4								4	SPECIAL	61411300	4	EACH	WORK ZONE TRAFFIC SIGNAL	7
	1320								1320	614	11630	1320	FT	INCREASED BARRIER DELINEATION	
	8								8	614	12336	8	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
	LS							LS		614	12420	LS		DETOUR SIGNING	
	40							20	20	614	13000	40	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
	32								32	614	13360	32	EACH	OBJECT MARKER, TWO WAY	
	2							2		614	18601	2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
	0.76								0.76	614	21200	0.76	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	
	0.50								0.50	614	22200	0.50	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	
	120								120	614	26400	120	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	
	50								50	615	25001	50	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	11
	1320								1320	622	41000	1320	FT	PORTABLE BARRIER, 32"	
														INCIDENTALS	
	LS							LS	LS	614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	4
6								3	3	619	16011	6	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	3
LS								LS	LS	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	3
								LS	LS	624	10000	LS		MOBILIZATION	

CALCULATED JL
 CHECKED MS
GENERAL SUMMARY - 2
 CUY-06A-0.42
 LAK-528-1.92
 PID NO. 103033

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- NOTE:**
UTILITIES ON THE BRIDGE STRUCTURE:
 - 8" DIA. GAS MAIN
 - 4-5" I.D. C.E.I. ELECTRICAL DUCTS
 - 16-4" DIA. AMERITECH TELEPHONE DUCTS
 - 2-2" LIGHTING CONDUITS
 - 4" DIA. TRAFFIC SIGNAL INTER-CONNECTION DUCT
 - 30" DIA. WATER MAIN

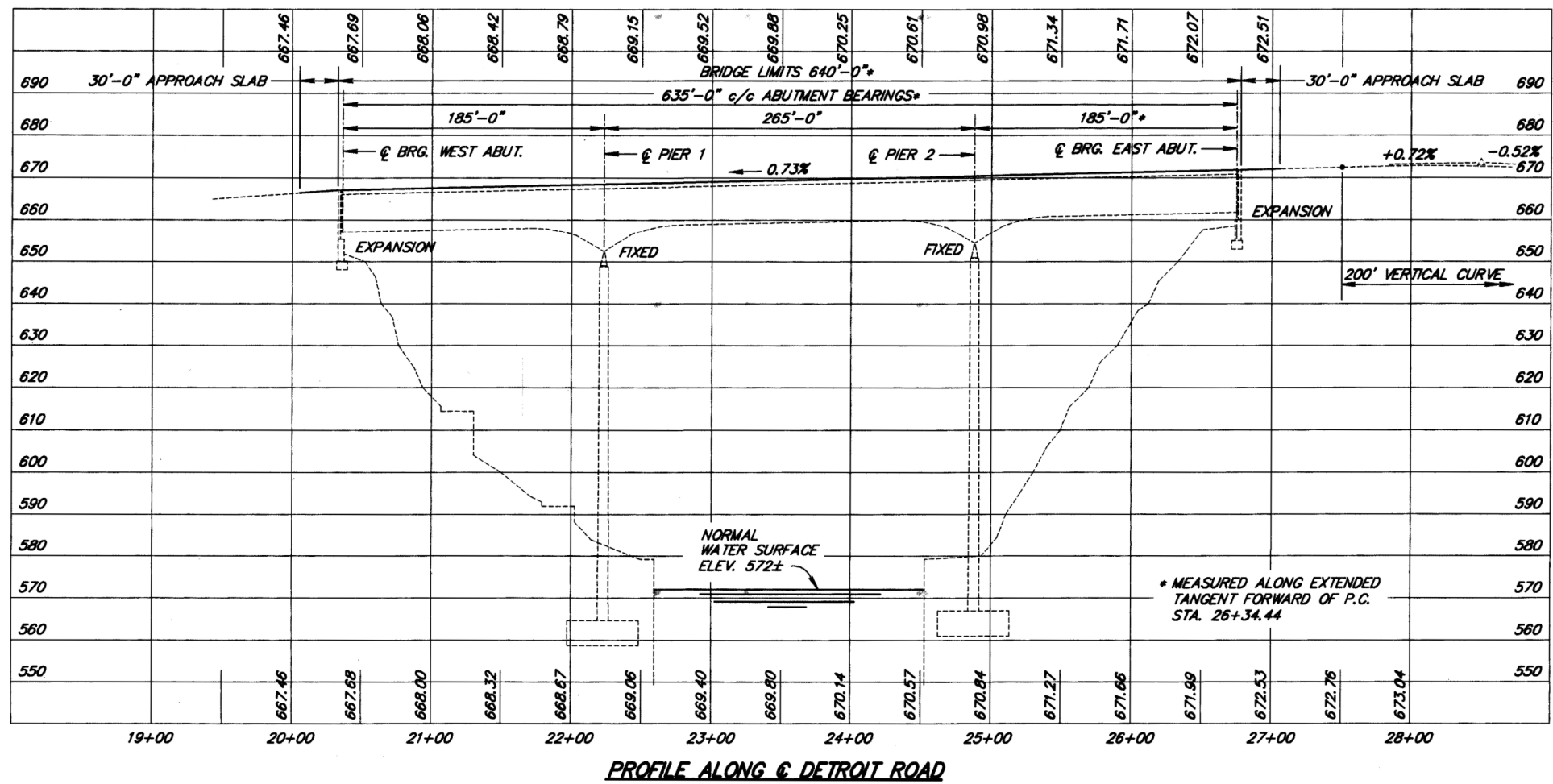
- BENCHMARKS:**
 BM1 - IRON PIN MONUMENT, STA. 19+43.36, ELEV. 666.50
 BM2 - PK NAIL, STA. 20+30.80, 37' LEFT, ELEV. 668.26
 BM3 - IRON PIN MONUMENT, STA. 27+38.40, ELEV. 672.80
 BM4 - PK NAIL, STA. 28+54.20, 56' LEFT, ELEV. 672.81

HORIZONTAL CURVE DATA		VERTICAL CURVE DATA	
P.I. STA.	27+99.78	P.V.I. STA.	28+50.00
P.C. STA.	26+34.44	P.V.I. ELEV.	673.48
Δ	13° 10' 07.5"	CORR.	-0.31
Dc	4' 00' 00"	P/G	673.17
R	1,432.40'	V.C.	200'
L	329.22'	G1	+0.72%
C	328.49'	G2	-0.52%
T	165.34'		

DESIGN DESIGNATION (FROM 2000 REHAB PLANS):

CURRENT ADT (1999)	13,010
DESIGN YEAR ADT (2019)	16,640
DESIGN HOURLY VOLUME (2019)	1,331
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	3%
DESIGN SPEED	40 MPH
LEGAL SPEED	25 MPH
FUNCTIONAL CLASSIFICATION	URBAN ARTERIAL
NHS PROJECT	NO

- PROPOSED WORK**
1. REPLACE WEST (REAR) ABUTMENT JOINT. SEE [X] AREAS ON SHEET [4/10] FOR DETAILS AND LIMITS.
 2. REPLACE NOTED END CROSSFRAME MEMBERS AT THE WEST (REAR) ABUTMENT. SEE [X] AREAS ON SHEET [4/10] FOR DETAILS AND LIMITS.
 3. SCARIFY SIDEWALK WEARING SURFACE AND INSTALL MICROSILICA OVERLAY. SEE [X] AREAS ON THIS SHEET AND SHEET [10/10] FOR DETAILS.
 4. PATCH AND FIBER WRAP PIER 2 COLUMN AS SHOWN ON SHEET [8/10].
- NOTES**
1. ALL STATIONS, ELEVATIONS, DIMENSIONS, ETC. SHOWN ARE FROM EXISTING PLANS AND ARE THEREFORE CONSIDERED TENTATIVE AND APPROXIMATE ONLY.



EXISTING STRUCTURE	
TYPE:	CONTINUOUS STEEL GIRDER WITH FLOOR SYSTEM, REINFORCED CONCRETE DECK AND SUBSTRUCTURES
SPANS:	185'-0", 265'-0", 185'-0" @/@ BEARINGS
ROADWAY:	64'-0" F/F CURBS WITH TWO (2) 7'-0" SIDEWALKS (STRUCTURE WIDTH 80'-4" O/O)
LOADING:	HS20-44, CASE II, AND ALTERNATE MILITARY LOADING
SKEW:	NONE
APPROACH SLABS:	AS-1-72 (30'-0" LONG) MODIFIED
ALIGNMENT:	TANGENT
SUPERELEVATION:	NONE
CROWN:	3/16" / FT.
WEARING SURFACE:	3" MICRO-SILICA MODIFIED CONCRETE (BRIDGE DECK), 1 3/4" ASPHALT CONCRETE (APPROACH SLAB)
STRUCTURAL FILE NUMBER:	1801074
DISPOSITION:	TO REMAIN WITH REPAIRS AS SHOWN IN THE PLANS
COORDINATES:	LATITUDE 41° 28' 56" LONGITUDE 81° 49' 53"

PROPOSED STRUCTURE	
SAME AS EXISTING EXCEPT:	
JOINTS:	REPLACE EXISTING SIDEWALK AND ROADWAY JOINTS WITH ELASTOMERIC STRIP SEAL AT THE WEST (REAR) ABUTMENT
PIERS:	PIER 2 TO BE PATCHED AND FIBER WRAPPED

DESIGN AGENCY: AKRON CLEVELAND COLUMBUS
 564 WHITE POND DRIVE
 AKRON, OHIO 44320-1100
 (330) 836-3111

AECOM

DATE: 10/16
 REVIEWED: PJW
 DRAWN: KGR
 DESIGNED: KGR
 CHECKED: KGR
 STRUCTURE FILE NUMBER: 1801074
 CUYAHOGA COUNTY
 STA. 20+35.50
 STA. 26+75.50

PLAN AND ELEVATION
 BRIDGE NO. CUY-06A-0042
 DETROIT ROAD OVER ROCKY RIVER

CUY-06A-0.42
 LAK-528-1.92
 PID No. 103033

1 / 10

14
 37

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-15 DATED 07-17-15
AND TO SUPPLEMENTAL SPECIFICATIONS:
NONE

DESIGN DATA:

PROPOSED STRUCTURAL STEEL - ASTM A709 GRADE 50W -
YIELD STRENGTH 50 KSI

DESCRIPTION OF WORK:

COMPLETE THE FOLLOWING AT THE WEST (REAR) ABUTMENT:

1. REMOVE THE DIAGONALS AND BOTTOM CHORD OF THE SOUTH FASCIA BAY END CROSS FRAME AND THE GUSSET PLATES TO WHICH THE MEMBERS ARE CONNECTED. REMOVE THE BOTTOM CHORD OF THE NORTH FASCIA BAY END CROSS FRAME.
2. INSTALL NEW END CROSS FRAME GUSSET PLATES AND MEMBERS.

COMPLETE THE FOLLOWING AT THE WEST (REAR) ABUTMENT IN PHASES:

1. WITHIN THE ROADWAY LIMITS, REMOVE THE JOINT PLATES, JOINT ARMOR, AND CONCRETE IN EXISTING BACKWALLS ABOVE THE APPROACH SLAB SEATS, KEEPING THE EXISTING LONGITUDINAL REINFORCING IN PLACE. WITHIN THE SIDEWALK LIMITS, REMOVE THE JOINT PLATES, JOINT ARMOR, AND CONCRETE IN EXISTING BACKWALLS TO THE LIMITS SHOWN ON SHEET [5/10], KEEPING THE EXISTING LONGITUDINAL REINFORCING IN PLACE.
2. WITHIN THE ROADWAY LIMITS, REMOVE THE JOINT PLATES, JOINT ARMOR, AND CONCRETE IN EXISTING DECK ENDS, KEEPING THE EXISTING LONGITUDINAL REINFORCING IN PLACE. WITHIN THE SIDEWALK LIMITS, REMOVE THE JOINT PLATES, JOINT ARMOR, AND CONCRETE IN EXISTING SIDEWALK ENDS, KEEPING THE EXISTING LONGITUDINAL REINFORCING IN PLACE.
3. PATCH THE ENDS OF APPROACH SLABS AS DIRECTED BY THE ENGINEER, AND PLACE TYPE "A" WATERPROOFING AGAINST THE ENDS OF THE APPROACH SLAB PER DETAIL B ON AS-1-15.
4. PLACE THE EXPANSION JOINT SYSTEM PER THE MANUFACTURER'S SPECIFICATIONS.
5. PLACE NEW REINFORCING STEEL FOR THE DECK, SIDEWALK, AND BACKWALL. FORM AND POUR NEW CONCRETE FOR THE DECK, SIDEWALK, AND BACKWALL.
6. AFTER ALL PHASES OF CONCRETE POURS ARE COMPLETED, PLACE THE COMPRESSION SEALS PER DETAIL B ON AS-1-15, SEAL WITH HMWM, AND PLACE THE STRIP SEALS IN THE MODULAR JOINT.

NOTIFICATION:

THE U.S. ARMY CORPS OF ENGINEERS AND THE NINTH COAST GUARD DISTRICT COMMANDER MUST BE NOTIFIED AT LEAST 30 DAYS IN ADVANCE OF THE START OF WORK ON CUY-06A-0.42.

LIABILITY INSURANCE:

IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 107.12B, THE CITY OF LAKEWOOD AND CLEVELAND METROPARKS MUST BE NAMED ADDITIONAL INSURED.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT ARE CONSIDERED TENTATIVE AND APPROXIMATE. REFER TO CMS SECTIONS 102.05 AND 105.02. THE ORIGINAL CONSTRUCTION PLANS AND PREVIOUS REHABILITATION PLANS OF THE EXISTING BRIDGE ARE AVAILABLE UPON REQUEST AT THE DISTRICT 12 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, GARFIELD HEIGHTS, OHIO.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, BASE ALL PROJECT WORK ON ACTUAL DETAILS AND DIMENSIONS VERIFIED IN THE FIELD.

UTILITIES:

SEE SHEET (3/37) FOR LIST OF UTILITIES.

MAINTENANCE OF TRAFFIC:

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE ARE CONSTRAINED. REFER TO THE MAINTENANCE OF TRAFFIC PLANS SEE SHEET (4/37). ALL SIDEWALK REPAIR WORK AND JOINT REPAIR WORK SHALL BE COMPLETED CONCURRENTLY.

PIER 2 REPAIR WORK REQUIRES ACCESS THROUGH THE EMERALD NECKLACE MARINA. AN ACCESS PERMIT, AS PROVIDED UNDER THE SPECIAL PROVISIONS, WAS ACQUIRED BY ODOT FROM THE CLEVELAND METROPARKS. CONTRACTOR SHALL CONTACT THE CLEVELAND METROPARKS ROCK RIVER RESERVATION MANAGER TWO WEEKS PRIOR TO REQUIRING ACCESS TO PERFORM PIER 2 REPAIR WORK. PIER 2 WORK SHALL NOT TAKE PLACE BEFORE MAY 30 OR AFTER NOVEMBER 1. USE OF THE PERMIT AREA WILL BE LIMITED TO A 100 CONTINUOUS CALENDAR DAY PERIOD. 100 CONTINUOUS CALENDAR DAY PERIOD IS CONSIDERED AN INTERIM COMPLETION DATE AND SUBJECT TO LIQUIDATED DAMAGES PER ODOT CMS 108.07.

DURING WORKING HOURS, THE CONTRACTOR SHALL PROVIDE FOR INTERMITTENT ACCESS BY CLEVELAND METROPARKS TO THE BOAT FACILITIES WITHIN THE CONSTRUCTION LIMITS AT THE EAST PIER (PIER 2). ACCESS TO THE FACILITIES SHALL BE PROVIDED BY MOVEABLE BARRIERS AND/OR CONSTRUCTION BARRELS. FOR BIDDING PURPOSES, THE CONTRACTOR SHOULD EXPECT TO PROVIDE TEMPORARY ACCESS TO THE BOAT FACILITIES FOR UP TO 15 MINUTES AND UP TO 5 TIMES DAILY.

IN ADDITION TO PROVIDING TEMPORARY ACCESS TO THE BOAT FACILITIES, THE CONTRACTOR SHALL SECURE HIS WORK AREA AROUND THE PIER FROM PEDESTRIANS BY UTILIZING TEMPORARY FENCING AND APPROPRIATE SIGNAGE TO RESTRICT PEDESTRIAN ACCESS TO THE WORK AREA.

DURING NON-WORKING HOURS, THE CONTRACTOR SHALL MOVE BARRIERS AND/OR CONSTRUCTION BARRELS BACK TO ALLOW ACCESS BY CLEVELAND METROPARKS TO THE BOAT FACILITIES WITHIN THE CONSTRUCTION LIMITS.

CONTINGENCY QUANTITIES:

DO 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 WILL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED IN THIS NOTE. THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE.

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST.

THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. SUBMIT A DETAILED PROCEDURE OF THE DECK REMOVAL TO THE ENGINEER AT LEAST 7 DAYS BEFORE CONSTRUCTION BEGINS.

DEPARTMENT ACCEPTANCE IS NOT REQUIRED. THE PROCEDURE SHALL INCLUDE ALL DETAILS, EQUIPMENT AND METHODS TO BE USED FOR REMOVAL OF THE CONCRETE OVER THE GIRDER AND CROSS FRAME FLANGES. REPLACE OR REPAIR MAIN STEEL DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT.

AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

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

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

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

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH 501.06 TO THE ENGINEER. PROVIDE THE ENGINEER "AS-BUILT" DRAWINGS ACCORDING TO 513.06, EXCEPT 501.04 DOES NOT APPLY. UPON RECEIPT OF THE ENGINEER'S ACCEPTANCE, SUPPLY A COPY OF THE DRAWINGS, ACCORDING TO SUPPLEMENT 1002, TO THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES. IN ADDITION TO THESE REQUIREMENTS, ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO REMOVE THE EXISTING STEEL MEMBERS TO BE REPLACED AND ANY PREPARATION INCLUDING BUT NOT LIMITED TO REAMING AND/OR FIELD DRILLING OF BOLT HOLES AS NECESSARY TO COMPLETE THE WORK WILL BE INCLUDED FOR PAYMENT IN THE CONTRACT PRICE BID FOR ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

ITEM SPECIAL - FIELD PAINTING OF STRUCTURAL STEEL CROSS FRAMES

NEW GUSSET PLATES AND CROSS FRAME MEMBERS SHALL BE PAINTED WITH SYSTEM IZEU. THE URETHANE FINISH COAT COLOR SHALL CLOSELY MATCH THE EXISTING PAINT COLOR (FEDERAL STD. NO. 595A - 10080).

ITEM 526 - APPROACH SLABS, MISC.: PLACE WATERPROOFING AND COMPRESSION SEAL:

FOR THE FULL LENGTH OF ALL INTERFACES BETWEEN APPROACH SLABS AND NEW BACKWALLS, PLACE WATERPROOFING AND COMPRESSION SEAL PER DETAIL B ON ODOT SCD AS-1-15, SHEET 2.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT PER FT. UNDER THIS PAY ITEM.

ITEM 516 - STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE, AS PER PLAN:

AT THE LOCATIONS SHOWN, FURNISH ALL MATERIALS, SERVICES, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO DESIGN, FABRICATE, INSPECT, TEST AND INSTALL STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE IN ACCORDANCE WITH THE PLANS AND THESE NOTES. ALL PROVISIONS OF 516 APPLY. ALL REQUIREMENTS OF 513, UF LEVEL FABRICATION APPLY, UNLESS MODIFIED BY THESE NOTES.

ALL NEW CONCRETE AND REINFORCEMENT NEEDED FOR THE NEW BACKWALLS, DECK, AND SIDEWALK AT/NEAR THE JOINTS IS INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM. ALL REINFORCEMENT IS TO BE EPOXY COATED AND BE PER CMS 509, WHILE ALL CONCRETE IS TO BE CLASS QC2 CONCRETE, SUPERSTRUCTURE PER CMS 511. ANY DOWELING NEEDED IS TO BE PER CMS 510 USING NONSHRINK NONMETALLIC GROUT.

INCLUDE THE COST OF ALL THE LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO DESIGN, SUPPLY, AND INSTALL THE EXPANSION JOINT ACCORDING TO THE PLANS AND THESE NOTES. INCLUDE ALL CONCRETE, REINFORCING, STRUCTURAL STEEL, DOWEL HOLES, PAINT, HMWM, ETC. NECESSARY WITH THIS ITEM FOR PAYMENT.

ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM

DESCRIPTION: THIS WORK SHALL CONSIST OF PROVIDING AND INSTALLING A FIBER WRAP PIER CAP OR COLUMN. PREPARATION, WRAPPING THE PIER CAP/COLUMN, AND ALL INCIDENTALS NECESSARY TO COMPLETE. THE INSTALLATION SHALL BE PER THE MANUFACTURER'S REQUIREMENTS.

MATERIALS: SUPPLIERS SHALL HAVE A MINIMUM OF 10 INSTALLATIONS AND FURNISH CERTIFIED TEST REPORTS INCLUDING 1000 HOUR TESTS FOR 140 °F WATER, SALT WATER, ALKALINE SOIL, OZONE AND EFFERVESCENCE IN ADDITION TO THE REQUIREMENTS LISTED BELOW.

THE FABRIC FOR THE COMPOSITE CASING SHALL BE CONTINUOUS FILAMENT WOVEN FABRIC. PRIMARY FIBERS FOR THE FABRIC SHALL BE (E) ELECTRICAL GLASS FIBERS. THE FIBER SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 0.05 INCHES. THE MINIMUM WEIGHT OF THE FABRIC SHALL BE 27.0 OUNCES PER SQUARE YARD.

THE EPOXY SHALL BE SUPPLIED BY THE MANUFACTURER TO MEET THE COMPOSITE STRENGTH GIVEN BELOW. POLYESTER RESIN SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR EPOXY RESIN.

THE COMPOSITE OF THE FIBER WRAPPED CASING SYSTEM SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

(CONTINUED NEXT SHEET)

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DESIGN AGENCY ARCON CLEVELAND COLUMBUS 564 WHITE POND DRIVE ARCON, OHIO 44320-1100 (330) 836-3111		DATE 10/16	
PROJECT BRIDGE NO. CUY-06A-0042		STRUCTURE FILE NUMBER 1801074	
DRAWN KGR	REVIEWED P.J.W.	CHECKED KGR	DESIGNED DEB
GENERAL NOTES - 1			
DETROIT ROAD OVER ROCKY RIVER			
CUY-06A-0.42 LAK-528-1.92 PID No. 103033			
2 / 10			
15 37			

PROPERTY	REQUIREMENTS	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI MIN. IN PRIMARY FIBER DIRECTION	60,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
ULTIMATE TENSILE STRENGTH, PIS MIN. IN ORTHOGONAL FIBER DIRECTION	3,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO 100% HUMIDITY	60,000 PSI	C581
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO OZONE	60,000 PSI	D1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO ALKALI	60,000 PSI	D3083 USING SOIL BURIAL - WATER CONTENT OF 73% +/- 3%
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO SALT WATER	60,000 PSI	C581 AND D1141 OMITTING ADDITION OF HEAVY METAL REAGENTS
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE @ 140 DEGREES F	60,000 PSI	D3045
TENSILE STRENGTH (MIN. AFTER TEST) ULTRAVIOLET (UV) EXPOSURE	60,000 PSI	G154 USING FS40 UV-B BULBS FOR A MIN. 40 CYCLES. THE CYCLE SHALL BE 4 HOURS OF CONDENSATE EXPOSURE AT 40 DEGREES C.
ELONGATION: PERCENT, MIN.	1.70%	
PERCENT, MAX.	5.00%	
TENSILE MODULUS, PSI MIN. OF PRIMARY FIBERS	3,000,000	D3039
VISUAL DEFECTS	Acceptance Level III	D2563
COEFFICIENT OF THERMAL EXPANSION IN THE PRIMARY DIRECTION	4,300,000 PPM/Deg. F (+15%)	D696

ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM (CONTINUED)

SURFACE PREPARATION: THE SURFACE TO RECEIVE THE COMPOSITE WRAP SHALL BE FREE FROM FINIS, SHARP EDGES, AND PROTRUSIONS THAT WILL CAUSE VOIDS BEHIND THE CASING OR THAT, IN THE OPINION OF THE ENGINEER, WILL DAMAGE THE FIBER. THE REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACE IS INCIDENTAL TO THE PREPARATION FOR THE COMPOSIT FIBER WRAP SYSTEM AND WILL NOT BE PAID FOR SEPERATELY UNDER ITEM 512. IF FIBERS ARE TO WRAP AROUND CORNERS OF RECTANGLE CROSS-SECTIONS, THE CORNERS SHALL BE ROUNDED TO A 2 INCH RADIUS. THIS WILL HELP PREVENT STRESS CONCENTRATIONS IN THE FIBER WRAP AND VOIDS BETWEEN THE FIBER WRAP AND THE CONCRETE. IN ADDITION, THE SURFACE SHALL BE SMOOTH AND FREE OF VOIDS OR UNDULATIONS THAT WOULD PREVENT FULL CONTACT BETWEEN THE CONCRETE AND THE FIBER WRAP. ALL CONCRETE PATCHES SHALL BE CURED AS APPROVED BY THE ENGINEER.

AVOIDANCE OF THE EXISTING BEARINGS SHALL BE UNDERSTOOD, AND THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AN ACCEPTABLE WRAPPING METHOD AROUND THESE BEARING DEVICES. ADDITIONALLY, IF THERE ARE CONDUITS AND OR DOWNSPOUTS ATTACHED TO THE COLUMNS OR PIER CAPS TO RECEIVE FIBER WRAP, THE CONTRACTOR SHALL REMOVE THESE ITEMS AS DIRECTED BY THE ENGINEER AND RE-INSTALL THEM AFTER THE APPLICATION OF THE FINAL URETHANE TOP COAT.

COMPOSITE APPLICATION: THE AMBIENT TEMPERATURE AND THE TEMPERATURE OF THE EPOXY RESIN COMPONENTS SHALL BE BETWEEN 55 DEG. F AND 95 DEG. F AT THE TIME OF MIXING. THE COMPOSITE SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SURFACE TEMPERATURE IS MORE THAN 5 DEG. F ABOVE THE DEW POINT. APPLICATION SHALL BEGIN WITHIN ONE HOUR AFTER THE BATCH HAS BEEN MIXED.

THE COMPONENTS OF THE EPOXY RESIN SHALL BE MIXED WITH A MECHANICAL MIXER AND APPLIED UNIFORMLY TO THE FIBER AT A RATE THAT SHALL INSURE COMPLETE SATURATION OF THE FABRIC.

THE FABRIC/EPOXY COMPOSITE SHALL BE APPLIED TO THE SURFACE OF THE COLUMN BY WRAPPING METHODS THAT PRODUCE A UNIFORM FORCE THAT IS DISTRIBUTED ACROSS THE ENTIRE WIDTH OF THE FABRIC. THE PRIMARY FIBERS OF THE FABRIC SHALL NOT DEVIATE FROM A HORIZONTAL LINE MORE THAN 1/2 INCH PER FOOT. THE HORIZONTAL LAP SHALL BE 2" MINIMUM AND THE MINIMUM PERIMETER LAP SHALL BE 1'-0". ENTRAPPED AIR SHALL BE RELEASED OR ROLLED OUT BEFORE THE EPOXY SETS.

SUCCESSIVE LAYERS OF COMPOSITE MATERIALS SHALL BE PLACED BEFORE POLYMERIZATION OF THE PREVIOUS LAYER OF EPOXY IS TOO DRY TO ACHIEVE ADEQUATE BOND BETWEEN LAYERS. IF POLYMERIZATION DOES OCCUR BETWEEN LAYERS THE SURFACE MUST BE ROUGHENED USING A LIGHT ABRASIVE THAT WILL NOT DAMAGE THE FIBER.

THE FINAL LAYER OF EPOXY SHALL BE APPLIED TO THE FINAL LAYER OF FABRIC, WITH CARE TAKEN TO INSURE COATING OF ALL EDGES AND SEAMS. SPACES BETWEEN THE BANDS OF FABRIC SHALL BE FILLED WITH EPOXY THICKENED AS DIRECTED BY THE MANUFACTURER.

A FINAL INSPECTION SHALL BE PERFORMED ON ALL FIBER WRAPPED SURFACES AFTER THE EPOXY SETS YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT. ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF

THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH:

- SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.
- BUBBLES LESS THAN 12" DIAMETER SHALL BE REPAIRED BY INJECTING WITH EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF ENTRAPPED AIR.
- BUBBLES, DELAMINATIONS AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATING. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER

COATING SYSTEM APPLICATION: A FINAL URETHANE COATING IS REQUIRED TO PROTECT THE FIBERS FROM THE ELEMENTS SPECIFICALLY UV RADIATION AND TO GIVE THE FINAL AESTHETIC EFFECT. THE URETHANE COATING SHALL BE TINTED TO MATCH EXISTING SEAL COAT COLOR.

AFTER 96 HOURS FROM THE FINAL APPLICATION OF EPOXY, IF THE FINAL EPOXY COAT IS COMPLETELY POLYMERIZED, THE EXTERIOR SURFACES OF THE COMPOSITE WRAP SHALL BE CLEANED AND ROUGHENED BY A LIGHT ABRASIVE. CARE SHOULD BE TAKEN DURING THE ROUGHENING PROCESS SO THAT THE FIBERS ARE NOT DAMAGED. ALL CLEANED AND ROUGHENED SURFACES SHALL BE DRY BEFORE APPLYING THE URETHANE COATING.

MEASUREMENT AND PAYMENT: THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE AND INSTALL A FIBER WRAP CASING SYSTEM USING HIGH STRENGTH, HYBRID FIBER/EPOXY COMPOSITES FIELD APPLIED TO THE PIER CAP/COLUMN, INCLUDING ERECTION OF SCAFFOLDING, CLEANING, SURFACE PREPARATION, WRAPPING THE SURFACES AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION PER THE MANUFACTURER'S REQUIREMENTS. PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE SQUARE FOOT PRICE BID FOR ITEM 519 - SPECIAL - COMPOSITE FIBER WRAP SYSTEM.

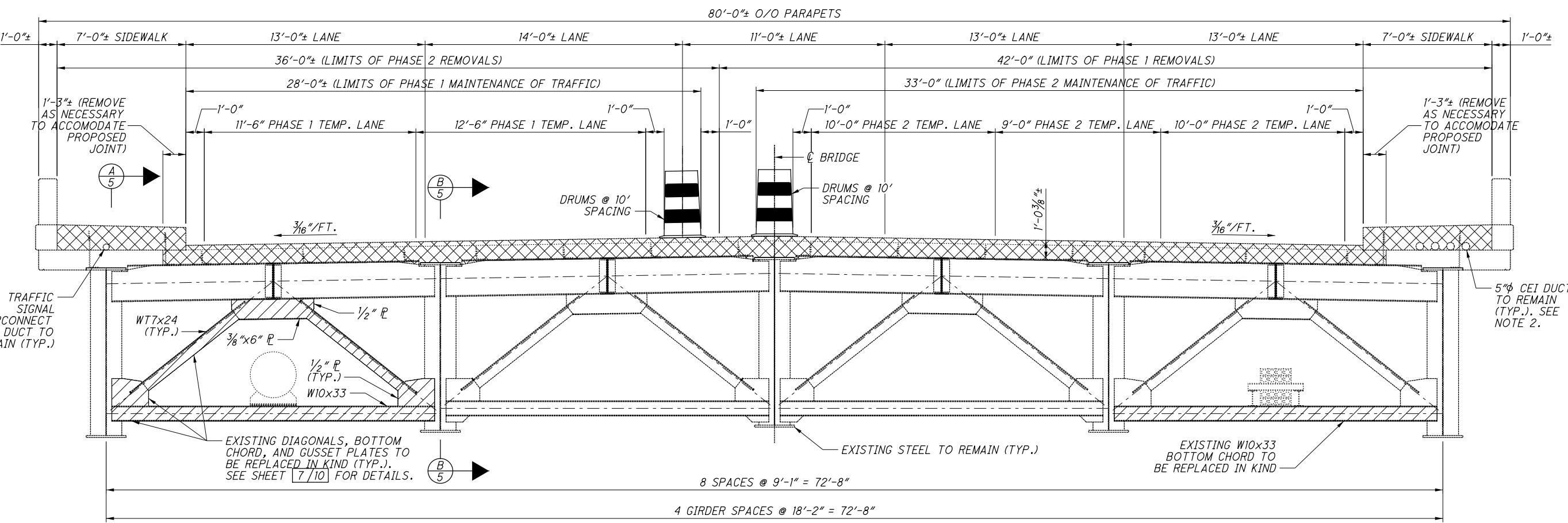
PAYMENT FOR LABOR, MATERIALS, EQUIPMENT, AND INSTALLATION OF THE ABOVE WORK IS INCLUDED WITH ITEM SPECIAL STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM.

ESTIMATED QUANTITES					
ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11201	1	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	2 OF 10
202	98000	1	LS	REMOVAL MISC.: REMOVAL OF EXISTING STEEL	7 OF 10
512	10050	1010	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
513	10201	1970	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	2 & 4 OF 10
SPECIAL	51480110	1	LS	FIELD PAINTING OF STRUCTURAL STEEL CROSSFRAMES	2 OF 10
516	12301	78	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE, AS PER PLAN	2 OF 10
518	12801	1	EA	SCUPPER, MODIFICATION, AS PER PLAN	8 OF 10
SPECIAL	51900100	1830	SF	COMPOSITE FIBERWRAP SYSTEM	2 & 8 OF 10
519	11100	540	SF	PATCHING CONCRETE STRUCTURE	
526	98200	80	FT	APPROACH SLABS, MISC.: PLACE WATERPROOFING AND COMPRESSION SEAL	2 OF 10
610	50010	137	SF	RETAINING WALL MISC.: MODULAR BLOCK RETAINING WALL	9 OF 10
847	10001	996	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (3" THICK)	10 OF 10
847	20001	14	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	10 OF 10
847	30000	1	LS	TEST SLAB	
847	30401	996	SY	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (3" THICK)	10 OF 10
847	50000	100	SY	HAND CHIPPING	

ALL QUANTITIES CARRIED TO SHEET

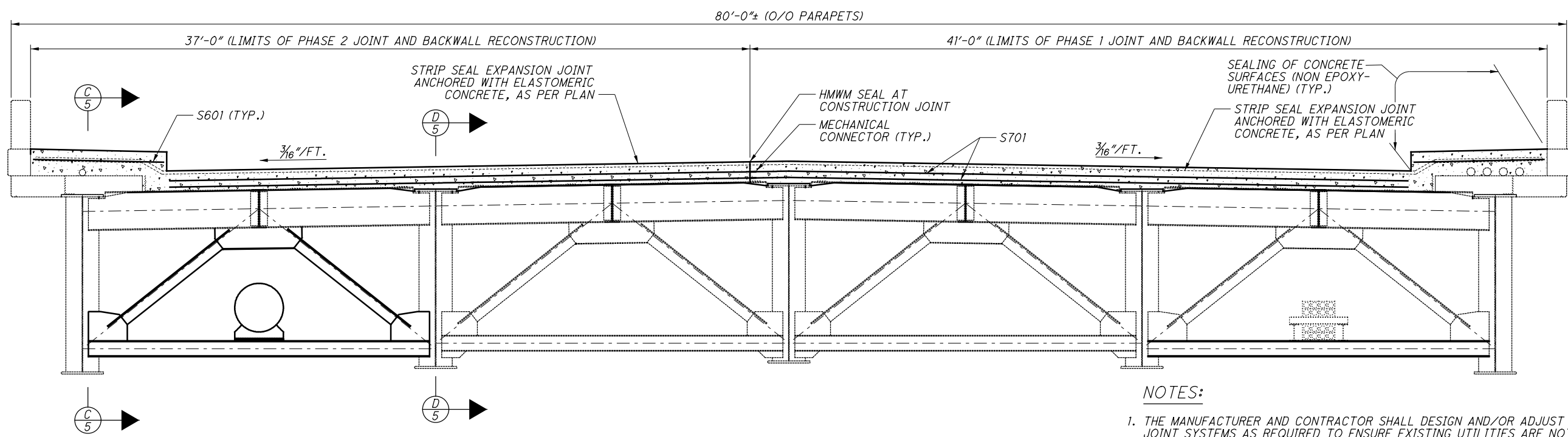
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EXISTING TRANSVERSE SECTION AT END OF DECK
(WEST/REAR ABUTMENT, LOOKING UPSTATION)

LEGEND:
 EXISTING CONCRETE AND JOINT REMOVAL LIMITS PER ITEM 202
 EXISTING STEEL TO BE REMOVED AND REPLACED IN KIND PER ITEM 513

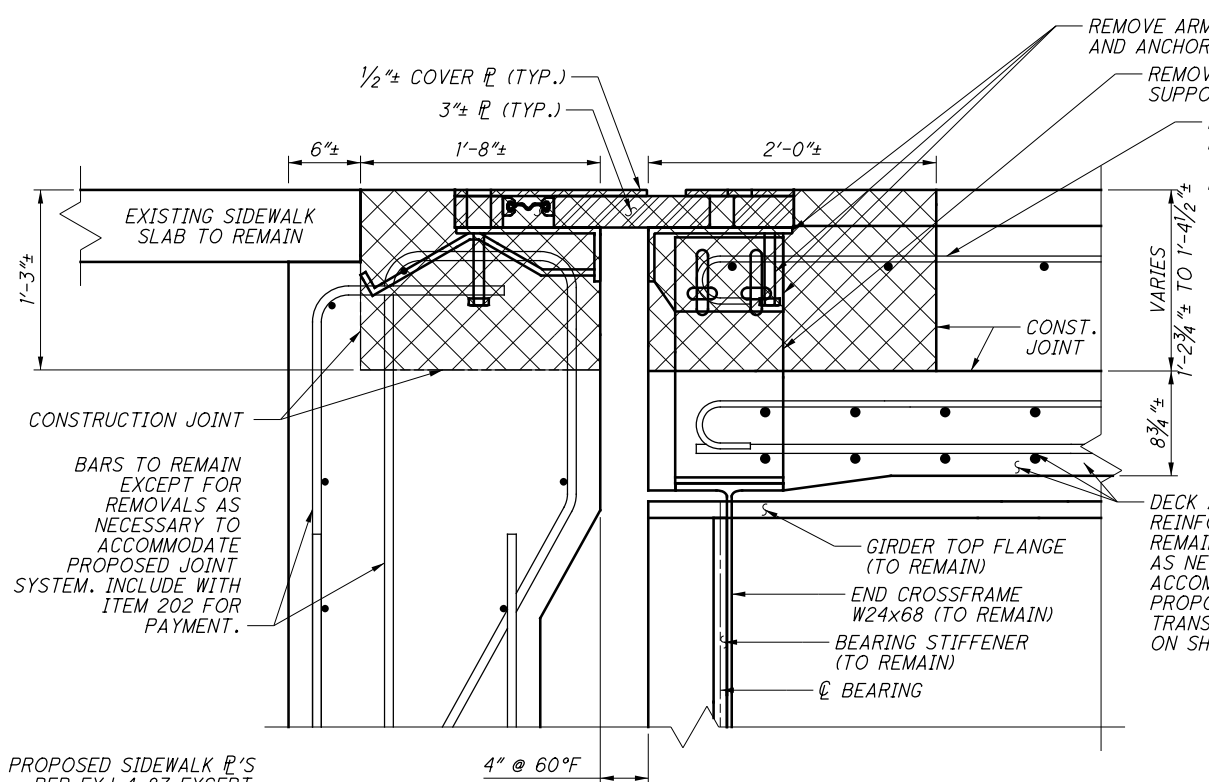


PROPOSED TRANSVERSE SECTION AT END OF DECK
(WEST/REAR ABUTMENT, LOOKING UPSTATION)

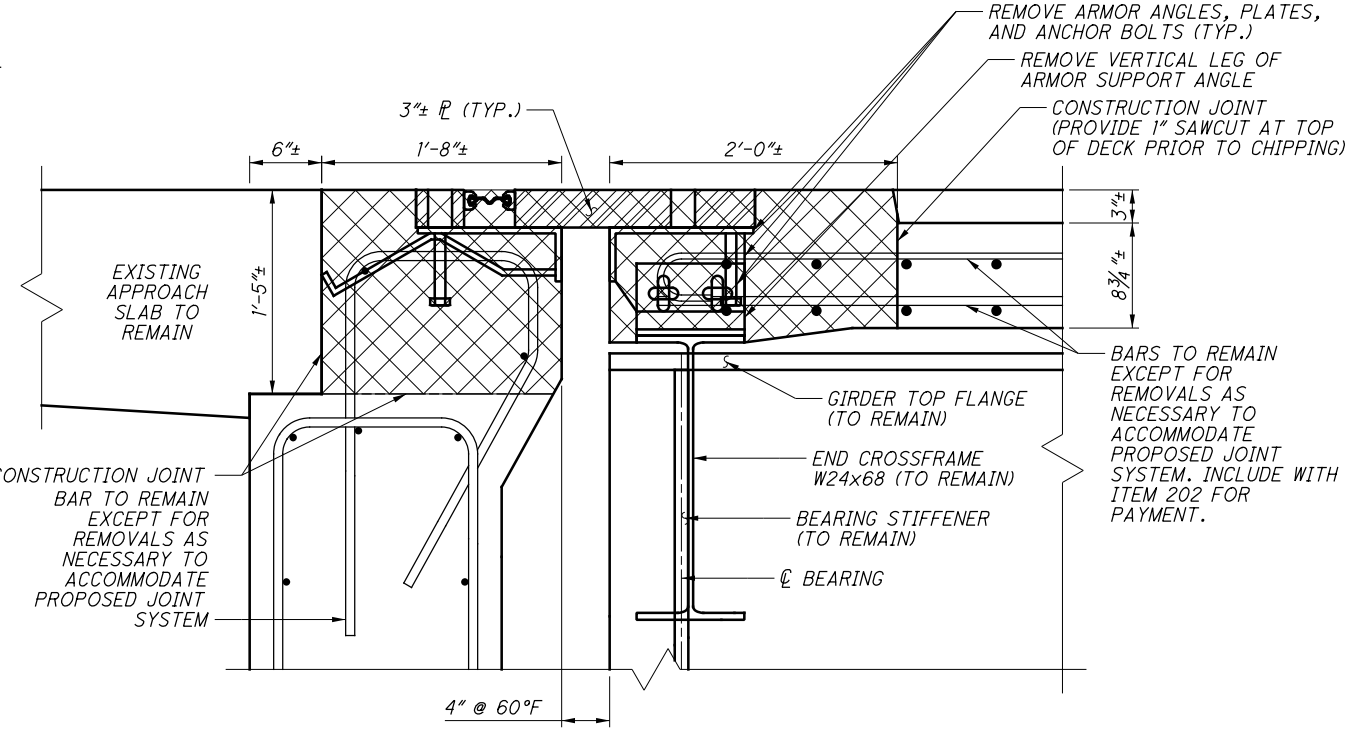
- NOTES:**
1. THE MANUFACTURER AND CONTRACTOR SHALL DESIGN AND/OR ADJUST THE PROPOSED JOINT SYSTEMS AS REQUIRED TO ENSURE EXISTING UTILITIES ARE NOT IMPACTED.
 2. THE CONTRACTOR SHALL REMOVE EXISTING CONCRETE TO 1/2"± OF THE EXISTING CEI DUCTS. REMOVAL OF THE REMAINING 1/2"± CONCRETE TO EXPOSE THE DUCTS AND ANY DE-ENERGIZING REQUIRED TO COMPLETE THIS WORK SHALL BE COORDINATED AND PERFORMED BY CEI. THE CONTRACTOR SHALL NOTIFY CEI AT LEAST 14 DAYS IN ADVANCE OF ANY WORK AT THE SITE AND PROVIDE UPDATED PROJECT SCHEDULE(S) AS THEY BECOME AVAILABLE AND INCLUDE CEI IN THE PRE-CONSTRUCTION MEETING.

DESIGN AGENCY ARRON CLEVELAND COLUMBUS	DATE 10/16
PROJECT NO. 564 WHITE POND DRIVE ARRON, OHIO 44320-1100	REVIEWED P J W
AECOM	STRUCTURE FILE NUMBER 1801074
DESIGNED KGR	DRAWN KGR
CHECKED DEB	REVISED
TRANSVERSE SECTION	
BRIDGE NO. CUY-06A-0042	
DETROIT ROAD OVER ROCKY RIVER	
CUY-06A-0.42	4 / 10
LAK-528-1.92	17
PID No. 103033	37

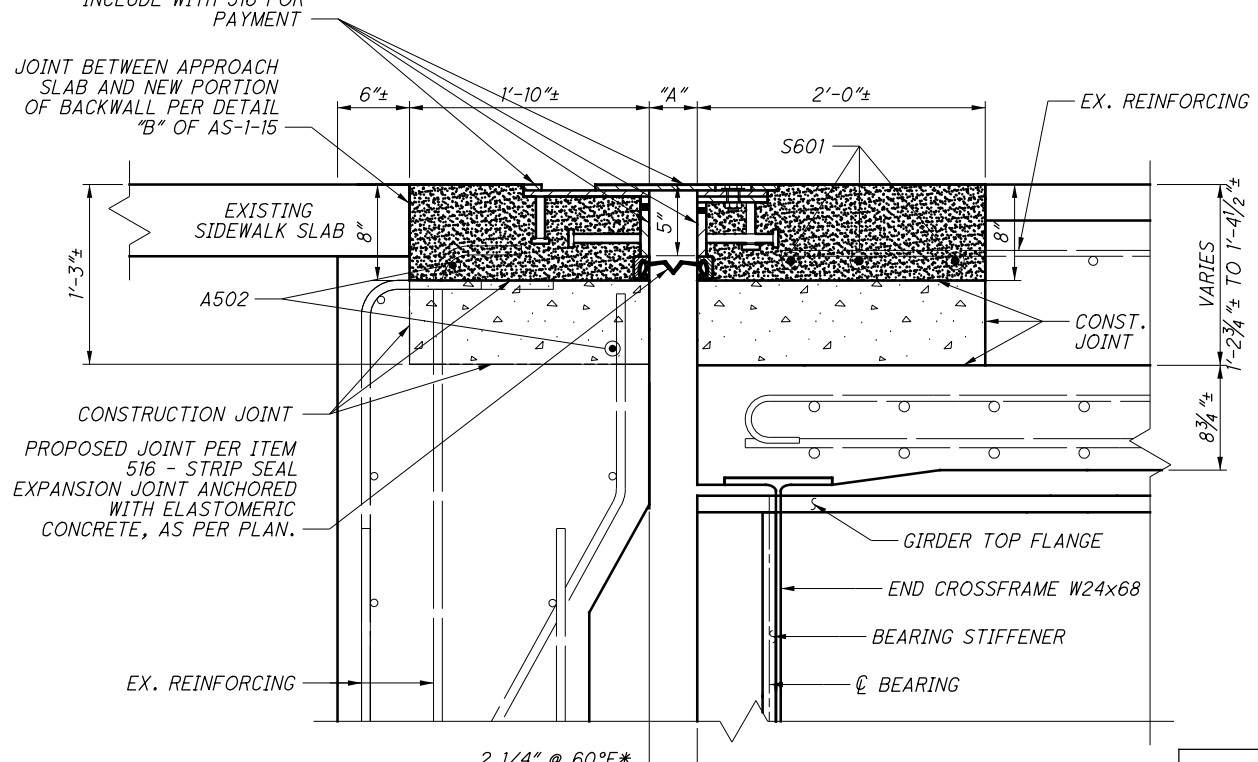
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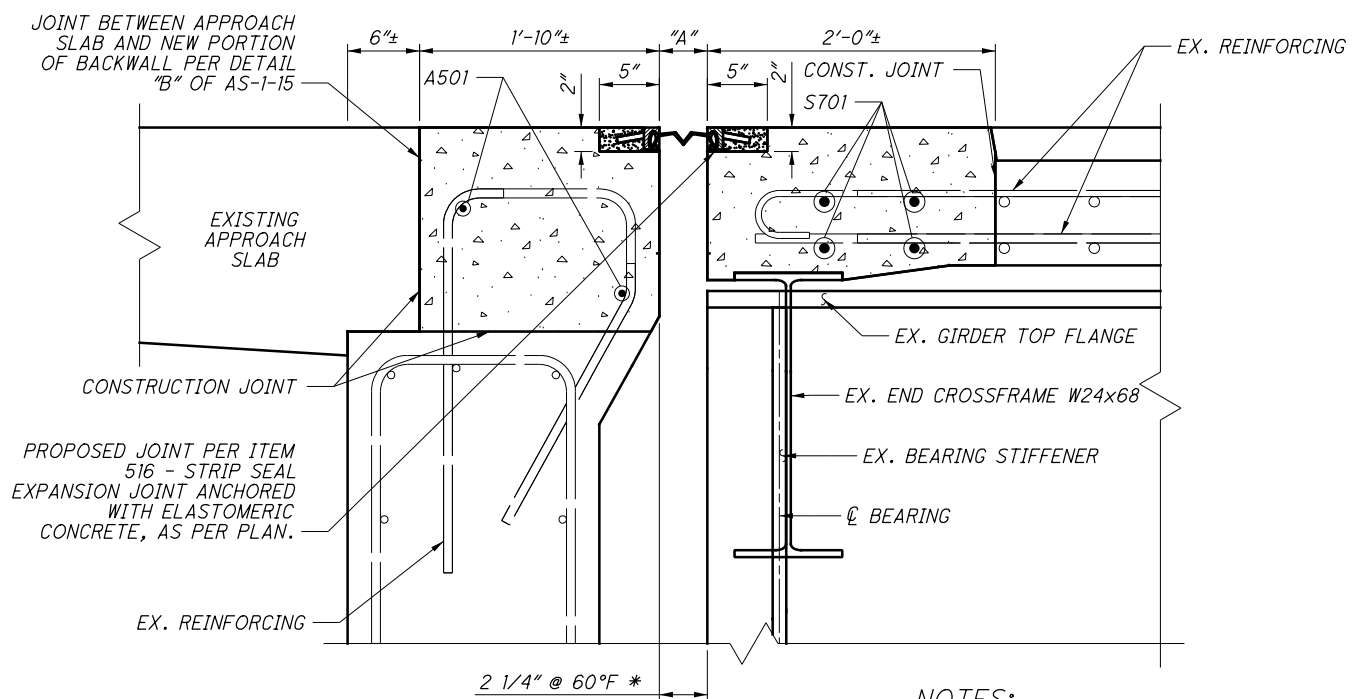
A SECTION
4 EXISTING SIDEWALK JOINT REMOVAL



B SECTION
4 EXISTING ROADWAY JOINT REMOVAL



C SECTION
4 PROPOSED SIDEWALK JOINT REPLACEMENT



D SECTION
4 PROPOSED ROADWAY JOINT REPLACEMENT

- LEGEND:**
- EXISTING CONCRETE AND JOINT REMOVAL LIMITS PER ITEM 202
 - LIMITS OF CLASS QC2 CONCRETE PER ITEM 511
 - LIMITS OF ELASTOMERIC CONCRETE PER ITEM 516

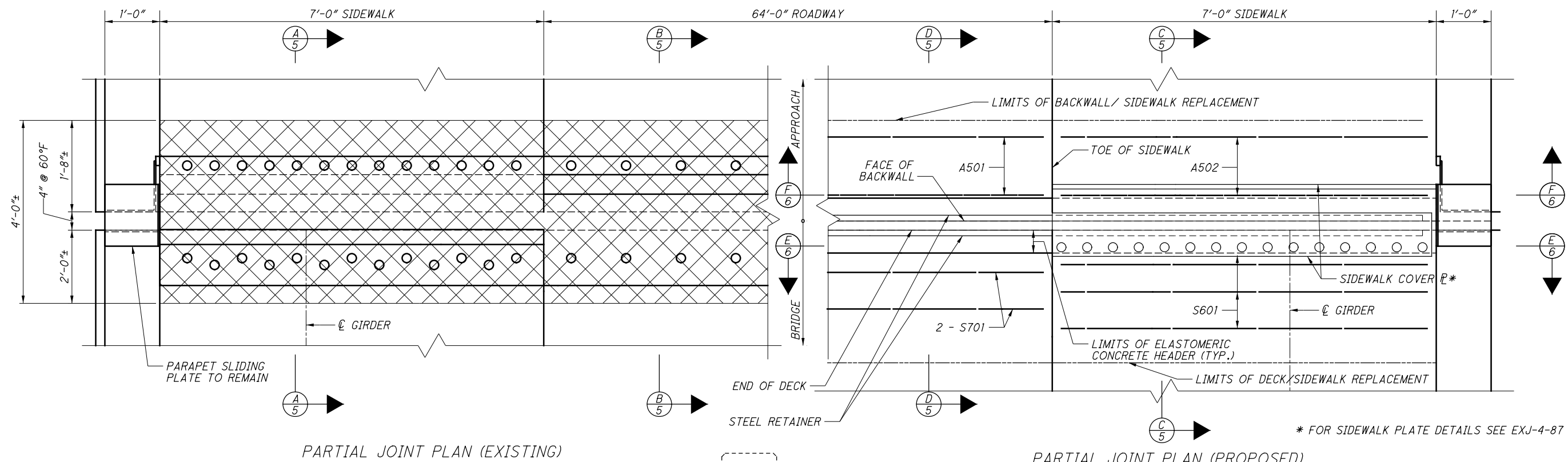
JOINT SETTING TABLE	
TEMPERATURE	DIMENSION "A"
30°F	3"
40°F	2 3/4"
50°F	2 1/2"
60°F	2 1/4"
70°F	2"
80°F	1 3/4"
90°F	1 1/2"

* = DENOTES ADJUSTMENT IN TOP OF BACKWALL TO MEET DIMENSION

- NOTES:**
1. MAXIMUM EXPANSION/CONTRACTION LENGTHS (FROM 60°F):
EXPANSION - 1 1/2"
CONTRACTION - 2 1/4"
 2. RECESS STEEL RETAINER 1/4" BELOW TOP OF DECK SURFACE.
 3. REMOVAL LIMITS SHOWN ARE THE MINIMUM REQUIRED TO COMPLETE THE WORK. SHOULD THE CONTRACTOR ELECT TO REMOVE GREATER PORTIONS TO FACILITATE THE WORK, HE SHALL REPLACE IN KIND THE DECK, SIDEWALK, AND/OR BACKWALL REINFORCING AS SHOWN IN THE ORIGINAL BRIDGE CONSTRUCTION CONTRACT PLANS AT NO ADDITIONAL COST TO THE STATE.
 4. FOR ADDITIONAL NOTES AND DETAILS NOT SHOWN SEE STD. EXJ-4-87 AND GENERAL NOTES SHEET 2/10.

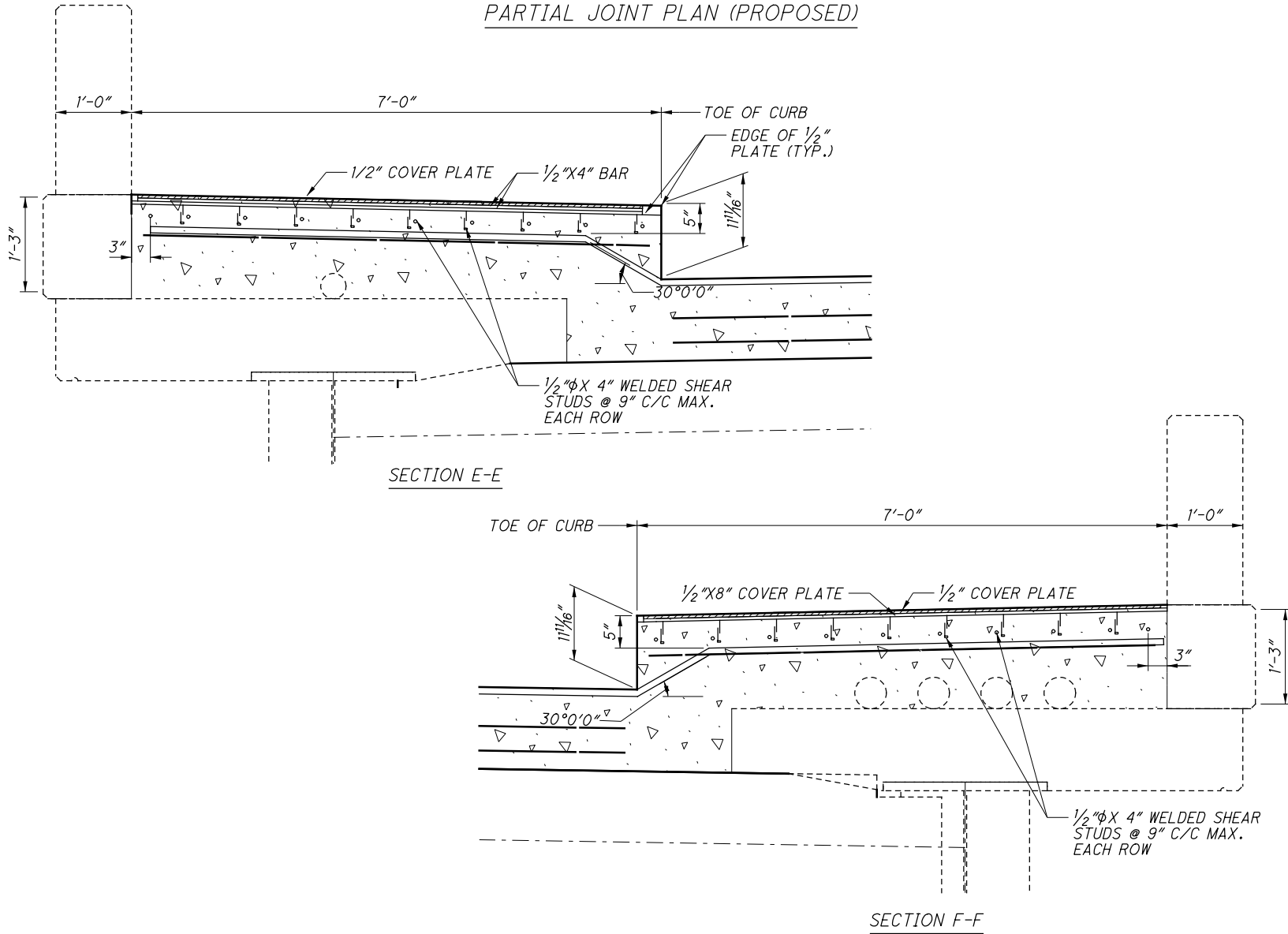
DESIGN AGENCY: ARRON CLEVELAND COLUMBUS
 564 WHITE POND DRIVE
 ARRON, OHIO 44320-1100
AECOM
 DATE: 10/16
 REVIEWED: P.J.W.
 DRAWN: K.G.R.
 CHECKED: K.G.R.
 DESIGNED: K.G.R.
 STRUCTURE FILE NUMBER: 1801074
 BRIDGE NO.: CUY-06A-0042
 DETROIT ROAD OVER ROCKY RIVER
CUY-06A-0.42
LAK-528-1.92
 PID No. 103033
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PARTIAL JOINT PLAN (EXISTING)

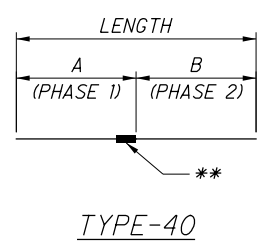
PARTIAL JOINT PLAN (PROPOSED)



SECTION E-E

SECTION F-F

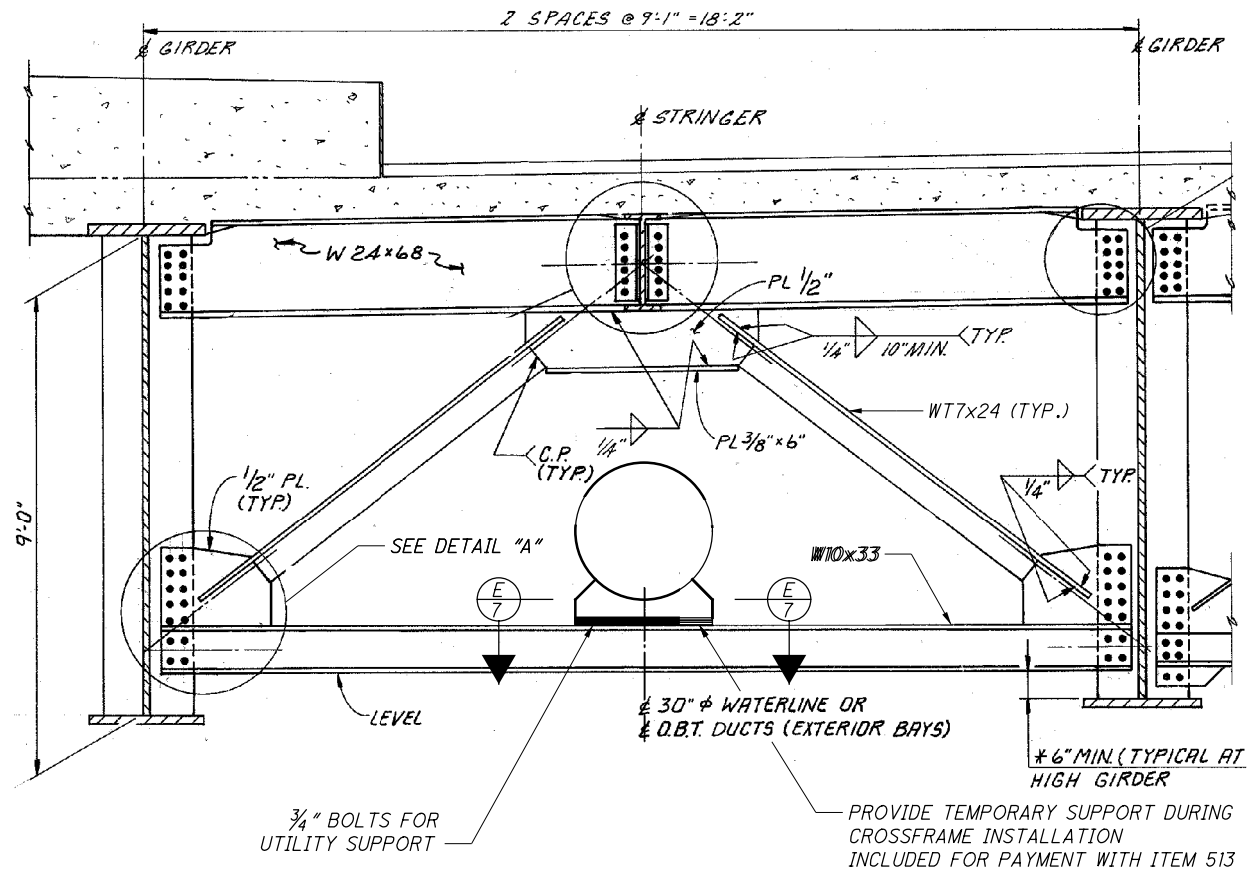
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	R
ABUTMENTS										
A501	2	63'-8"	133	40	33'-10"	29'-10"				
A502	4	6'-8"	28	ST						
SUB-TOTAL			161	(FOR INFORMATION ONLY)						
SUPERSTRUCTURE										
S601	6	6'-8"	60	ST						
S701	2	63'-8"	521	40	33'-10"	29'-10"				
SUB-TOTAL			581	(FOR INFORMATION ONLY)						



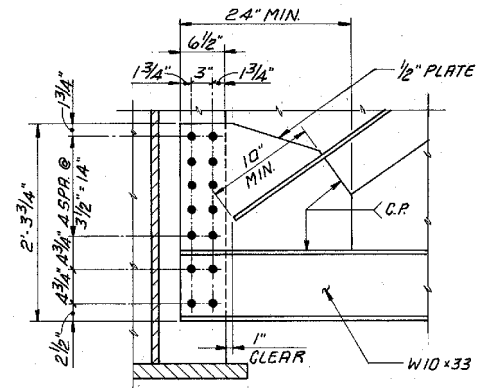
- NOTES:**
- ALL REINFORCING STEEL TO BE EPOXY COATED.
 - ** DENOTES MECHANICAL CONNECTOR AT PHASE CONSTRUCTION JOINT. WEIGHTS OF MECHANICAL CONNECTORS ARE NOT INCLUDED IN TABLE.
 - AT THE OPTION OF THE CONTRACTOR AND NO ADDITIONAL COST TO THE STATE AN ADDITIONAL SPLICE BAR WITH MECHANICAL CONNECTOR AND SINGLE STRAIGHT BAR PER FACE MAY BE SUBSTITUTED FOR THE TYPE 40 BARS.

* FOR SIDEWALK PLATE DETAILS SEE EXJ-4-87

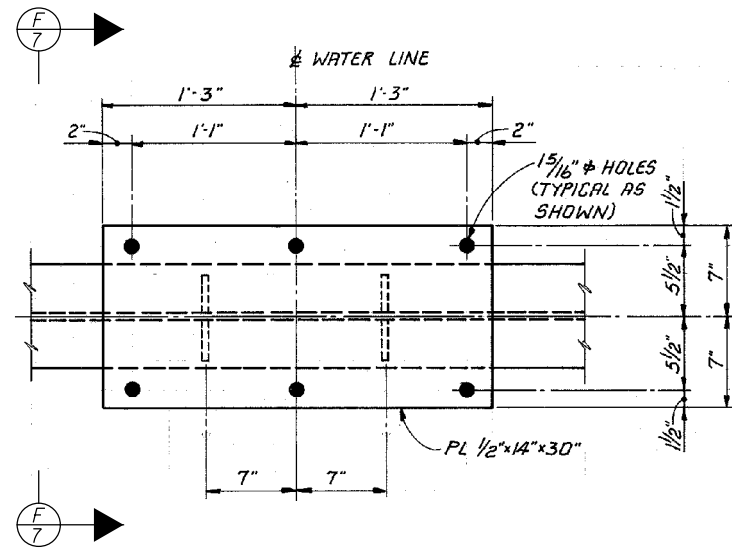
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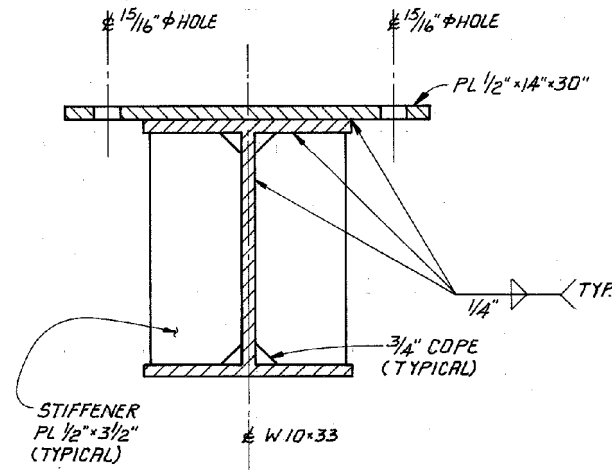
TYPICAL END CROSSFRAME
(LATERAL BRACING CONNECTION PLATES NOT SHOWN)



DETAIL "A"



E SECTION
7 WATERLINE SUPPORT

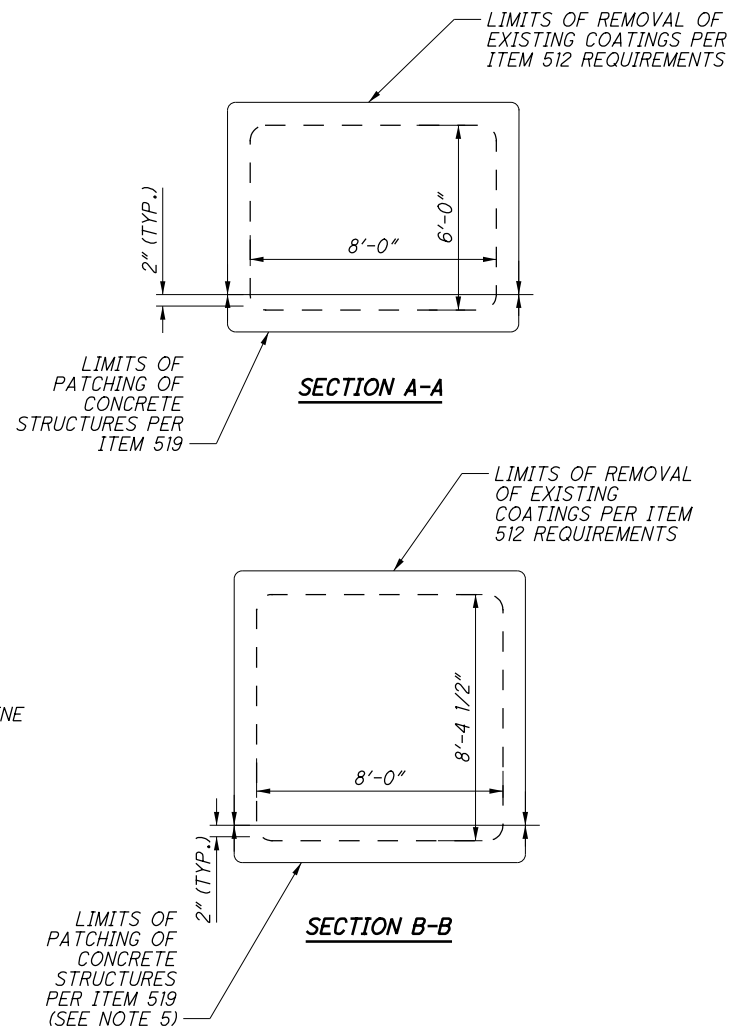
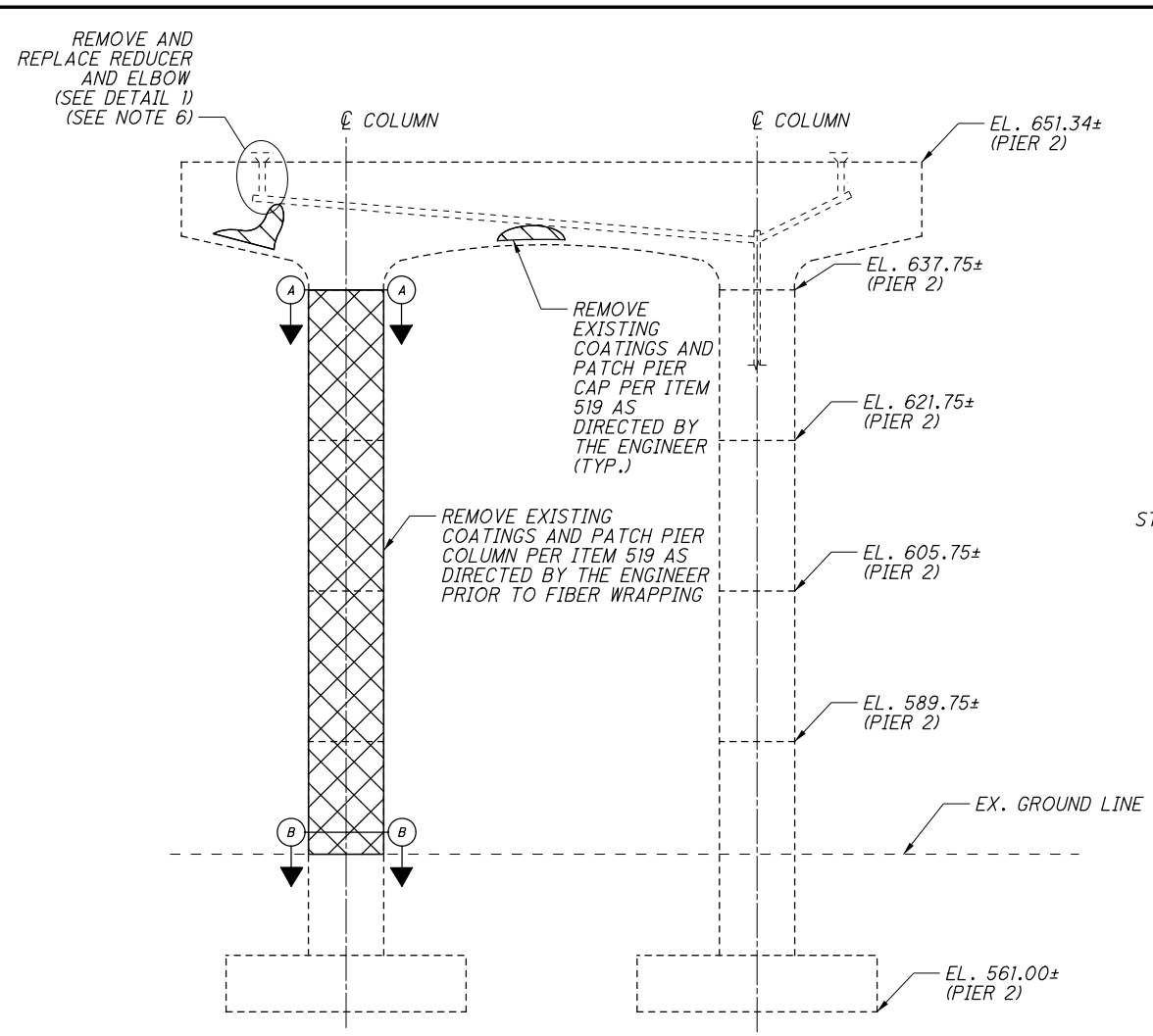


F SECTION
7 WATERLINE SUPPORT

NOTES:

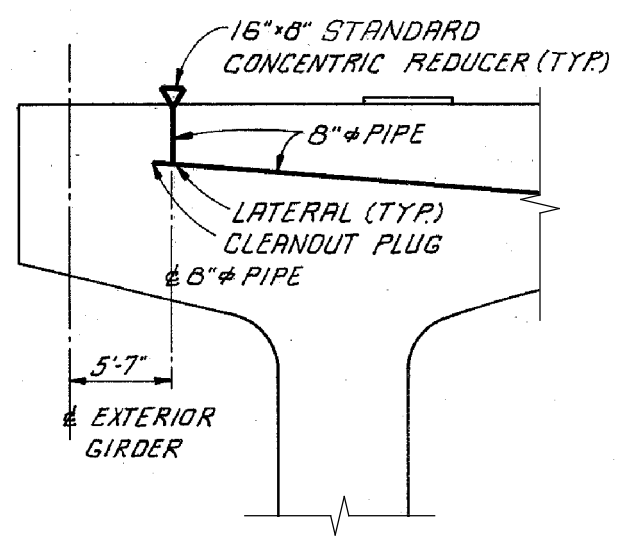
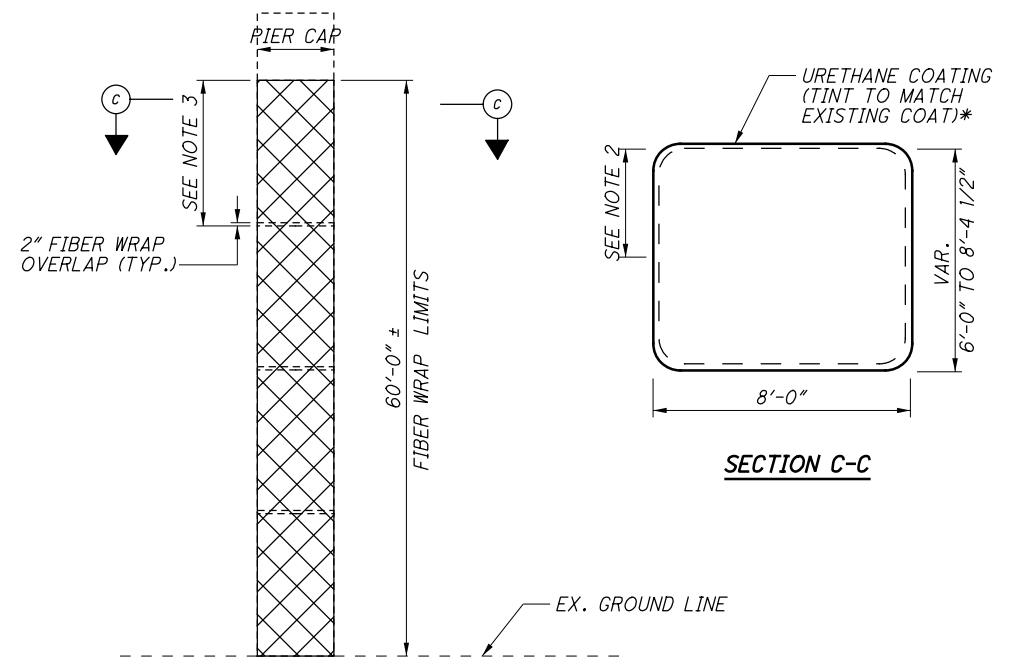
- EXISTING END CROSSFRAME DETAILS TO BE REPLACED IN KIND AS SHOWN ON SHEET 4/10.
- ALL BOLTS SHALL BE 1" ϕ ASTM A325, TYPE 3 HIGH STRENGTH BOLTS UNLESS NOTED OTHERWISE.

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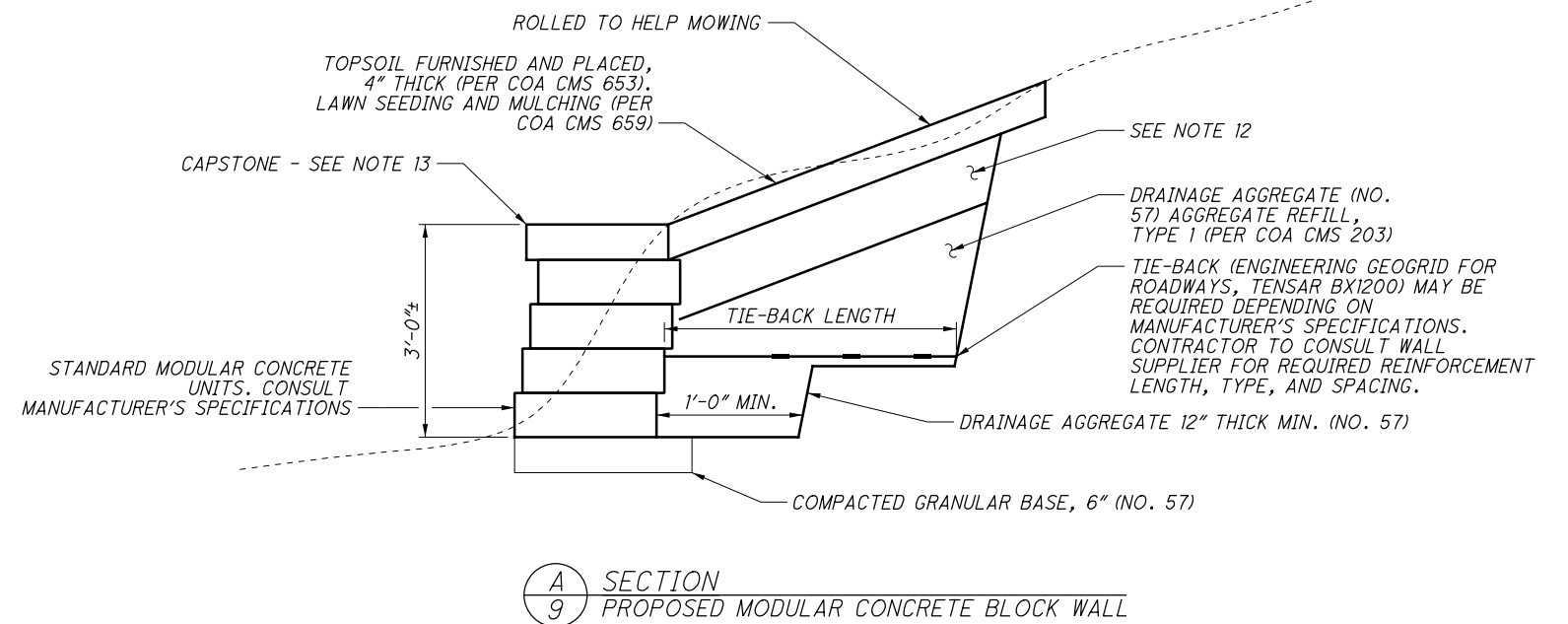
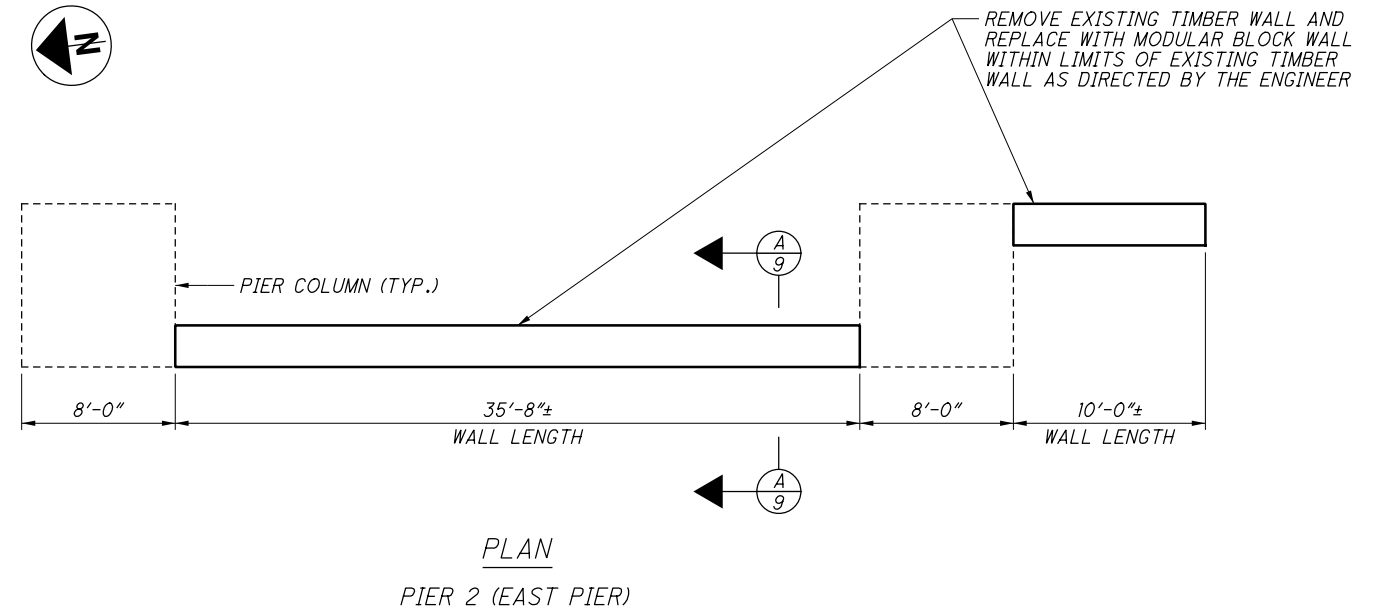
- NOTES:
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
 2. FIBER WRAP SHALL BE INSTALLED AS ONE CONTINUOUS WRAP, EXTENDING AROUND THE COLUMN TWICE WITH A MINIMUM 1'-0" LAP
 3. 2'-0" TYPICAL FABRIC WIDTH FOR INSTALLATION (NOT TO SCALE)
 4. PERFORM SURFACE PREPARATION INCLUDING REMOVALS AND ALL PATCHING WORK IN ACCORDANCE WITH ITEM 519 IN 20'-0" MAXIMUM INCREMENTS. COMPLETE PATCHING IN A 10'-0" MAXIMUM LIMIT BEFORE PROCEEDING TO THE NEXT SEGMENT. WORK SHALL PROCEED FROM THE GROUND LINE TO THE TOP OF THE COLUMN. FOLLOWING COMPLETION OF ALL PATCHING WRAP THE COLUMN IN THE LIMITS SHOWN PROCEEDING FROM THE GROUND LINE TO THE TOP OF THE COLUMN.
 5. LIMIT THE CONCRETE REMOVAL TO AN 8" MAXIMUM DEPTH. IMMEDIATELY NOTIFY THE ENGINEER IF SOUND CONCRETE IS NOT ENCOUNTERED IN THESE LIMITS.
 6. REPLACE EXISTING CONCENTRIC REDUCER AND ELBOW WITH A NEW REDUCER AND ELBOW WITH A LATERAL CLEANOUT AND PLUG. THE MATERIAL FOR THE NEW PIECES SHALL BE GALVANIZED STEEL PIPE SHALL BE IN ACCORDANCE WITH CMS 518 AND 707 REQUIREMENTS. U- BOLTS AND BRACKETS FOR HORIZONTAL BRACES SHALL BE 5/8" DIAMETER GALVANIZED AND SHALL BE FURNISHED WITH GALVANIZED HEX NUTS AND LOCK WASHERS. THE REPLACED REDUCER AND ELBOW INCLUDING REMOVALS, PIPE, FITTINGS, BRACES SUPPORTS AND INCIDENTALS NECESSARY TO REMOVE THE EXISTING AND INSTALL THE NEW REDUCER, ELBOW AND LATERAL CLEANOUT SHALL BE PAID FOR AT THE UNIT BID PRICE FOR EACH MODIFICATION FOR ITEM 518 SCUPPER MODIFICATION AS PER PLAN

- LEGEND:
- FIBER WRAP PIERS PER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM
 - INCLUDED WITH ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM.
 - LIMITS OF PATCHING PER ITEM 519



ITEM 610 - RETAINING WALL MISC.: MODULAR BLOCK RETAINING WALL

1. THIS DRAWING DEPICTS MINIMUM BASIC INSTALLATION OF A MODULAR BLOCK RETAINING WALL. VARIATIONS MAY BE MADE TO FIT VARIABLE CONDITIONS, HOWEVER, GUIDELINES DEPICTED ON THIS DRAWING SHALL BE FOLLOWED.
2. MODULAR BLOCK RETAINING WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 610, INCLUDING THE APPLICABLE APPROVAL AND PERMITTING PROCESS, AND THE MANUFACTURER'S RECOMMENDATIONS.
3. MODULAR BLOCK RETAINING WALL INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH ITEM 610.03 WITH THE FOLLOWING ADDITIONAL INFORMATION AS A MINIMUM:
 - INDICATE MODULAR BLOCK MANUFACTURER, UNIT, AND COLOR.
 - PROVIDE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 - "RECENT" TEST DATA INDICATING STANDARD UNIT'S CONFORMANCE TO ASTM C-1372 (SEE NOTE 4 BELOW).
 - INDICATE FACE SETBACK DISTANCE.
 - INDICATE TIE-BACK (ENGINEERING GEOGRID) LENGTH.
 - DEPICT PROPOSED METHOD OF CONSTRUCTING VERTICAL FACE RETURNS AT LOCATIONS REQUIRING A VERTICAL FACE (SEE NOTE 6 BELOW).
 - INDICATE TOE DETAIL, IF APPLICABLE (SEE NOTE 7 BELOW).
 - PROVIDE MANUFACTURER'S RECOMMENDED SEALANT SPECIFICATIONS (SEE NOTE 11).
 - INDICATE SEALANT'S CONFORMANCE TO ASTM E-514, D-1653-93, AND D-3273-94).
4. MODULAR BLOCK STANDARD UNITS SHALL CONFORM TO ASTM 1372 AND SHALL BE ONE OF THE FOLLOWING:
 - ALLAN BLOCK - "STONES"
 - KEYSTONE - "STRAIGHT SPLIT" (STANDARD AND COMPACT)
 - UNILOCK - "PISA II"
 - VERSA-LOK - "STANDARD UNIT"
5. MODULAR BLOCK RETAINING WALLS SHALL BE ONE OF THE FOLLOWING COLORS AS DESIGNATED ON THE PLAN SET OR SELECTED BY THE ENGINEERING DURING INSTALLATION PRECEDURE APPROVAL:
 - NATURAL GRAY
 - RUSTIC RED
 - SANDSTONE/BUFF
6. VERTICAL FACE RETURNS SHALL BE BUILT AGAINST ADJACENT EXISTING WALLS, STEPS, AND/OR OTHER STRUCTURES REQUIRING A VERTICAL FACE RETURN. THE LENGTH OF RETURNS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
7. MODULAR BLOCK RETAINING WALLS SHALL BURY BELOW THE TOP OF THE SIDEWALK OR FINISHED GRADE ONE (1) INCH OF BLOCK FACE FOR EVERY ONE (1) FOOT OF WALL HEIGHT WITH A MINIMUM OF ONE-HALF BLOCK FACE BURIED. MODULAR BLOCK WALLS SIX (6) FEET OR MORE IN HEIGHT SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL A PROPOSED TOE DETAIL DEPICTING BURY DEPTH AND HORIZONTAL PLACEMENT OF BURIED BLOCK UNITS.
8. BACKFILL BEHIND THE RETAINING WALL SHALL BE COMPACTED IN INTERVALS EQUIVALENT TO THE THICKNESS OF ONE (1) COURSE OF MODULAR BLOCK UNITS BY HAND-OPERATED VIBRATORY MACHINES. NO HEAVY MACHINERY MAY BE USED BEHIND THE WALL.
9. ENGINEERING GEOGRID SHALL BE INSTALLED EVERY THREE (3) COURSES MAXIMUM, BUT NEVER WITHIN THE TWO (2) COURSES BELOW THE CAPSTONE.
10. MAXIMUM FINISHED SLOPE ABOVE A MODULAR BLOCK WALL SHALL NOT EXCEED 2 TO 1. SLOPES FLATTER THAN 3 TO 1 ARE ACCEPTABLE PROVIDED POSITIVE DRAINAGE TOWARD THE STREET IS MAINTAINED.
11. ALL EXPOSED FACES OF MODULAR BLOCK WALLS SHALL BE COATED WITH A CLEAR PENETRATING SEALANT THAT RESISTS WATER, WEATHER, MOLD, CORROSION, DE-ICING COMPOUNDS, AND CONFORMS TO ASTM E-514, D-1653-93, AND D-3273-94. COST CONSIDERED INCIDENTAL TO ITEM 611.
12. NATIVE SOILS EQUIVALENT TO THE THICKNESS OF ONE (1) COURSE OF MODULAR BLOCK UNITS SHALL BE PROVIDED ABOVE THE DRAINAGE AGGREGATE AND BELOW THE TOPSOIL.
13. ALL CAPSTONES SHALL BE GLUED.
14. MODULAR BLOCK RETAINING WALLS SHALL BE CONSTRUCTED SO THAT THE FACE OF THE WALL MATCHES THE EXISTING FACE OF TIMBER WALL LOCATION.



15. PAYMENT SHALL BE MADE FOR ITEM 610 - RETAINING WALL MISC.: MODULAR BLOCK RETAINING WALL ON A SQUARE FOOT BASIS. PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS REQUIRED TO REMOVE THE EXISTING TIMBER WALL AS WELL AS SUPPLY AND INSTALL THE PROPOSED RETAINING WALL AND GEOSYNTHETIC REINFORCEMENT COMPLETE IN PLACE AS DIRECTED BY THE ENGINEER. SEE THIS SHEET FOR MORE CONSTRUCTION LIMIT INFORMATION. THE QUANTITY OF 137 SQUARE FEET WILL BE USED.

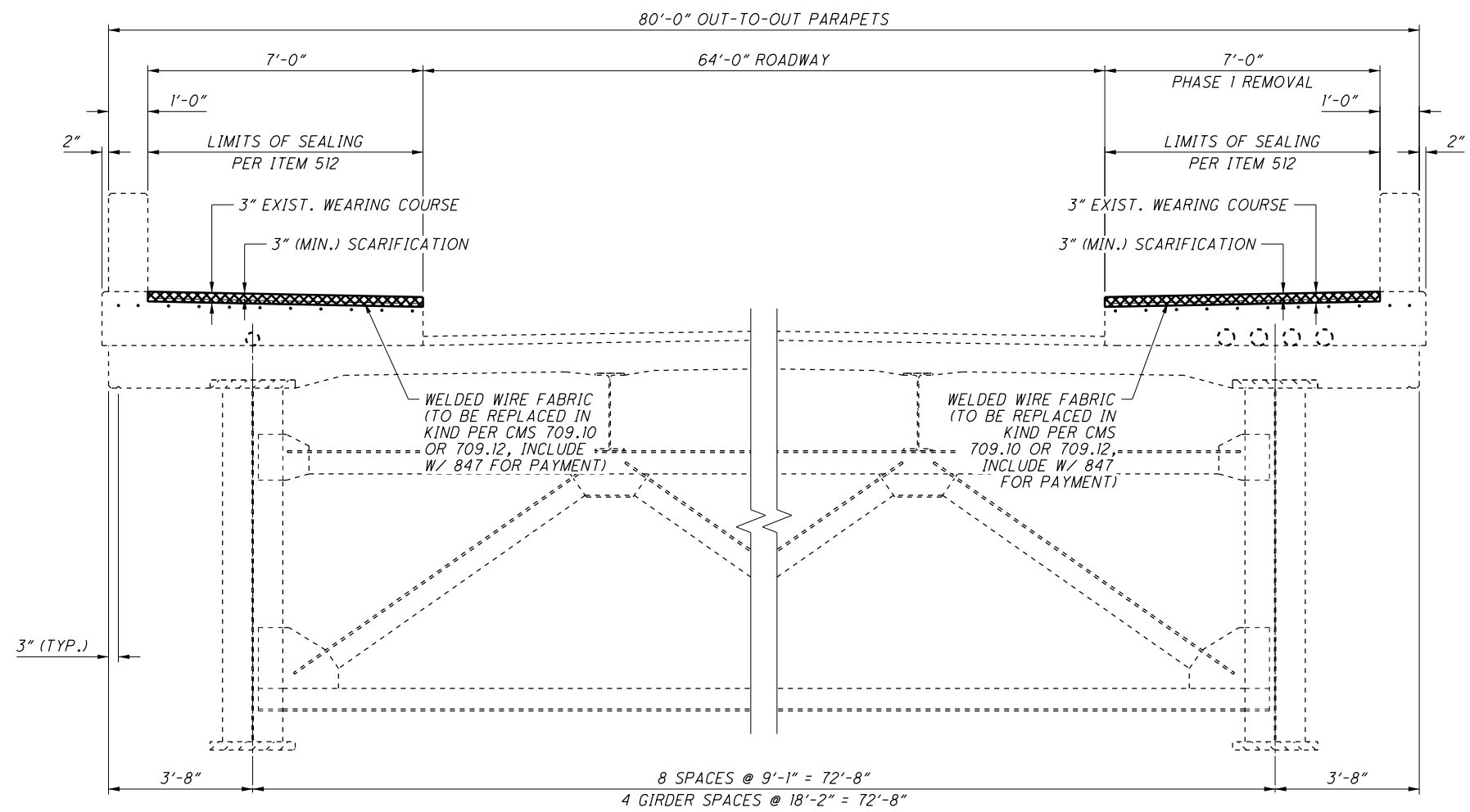
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 610 - RETAINING WALL MISC.: MODULAR BLOCK RETAINING WALL 137 SF.

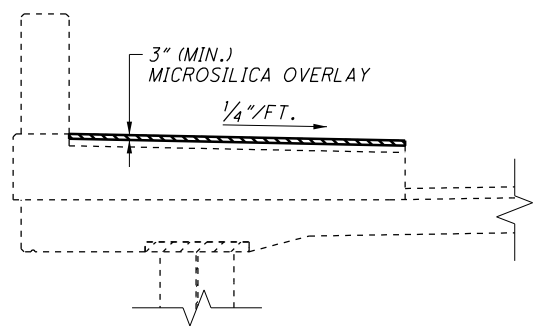
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<p>AECOM</p> <p>DESIGN AGENCY ARON CLEVELAND COLUMBUS 564 WHITE POND DRIVE ARON, OHIO 44320-1100 (330) 836-3111</p>	<p>DATE 1/17</p>	<p>REVIEWED P.J.W.</p>	<p>STRUCTURE FILE NUMBER 1801074</p>	<p>DRAWN K.G.R.</p>	<p>CHECKED DEB</p>
<p>SPECIAL - RETAINING WALL MISC.: MODULAR CONCRETE BLOCK WALL</p> <p>BRIDGE NO. CUY-06A-0042 DETROIT ROAD OVER ROCKY RIVER</p>					
<p>CUY-06A-0.42 LAK-528-1.92 PID No. 103033</p>					
<p>9 / 10</p>					
<p>22 37</p>					

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TRANSVERSE SECTION
LOOKING UPSTATION



OVERLAY DETAIL
TYPICAL OF BOTH SIDEWALKS

- LEGEND:**
- LIMITS OF SIDEWALK WEARING SURFACE SCARIFICATION PER ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (3" THICK)
 - LIMITS OF MICRO SILICA MODIFIED CONCRETE OVERLAY PER ITEM 847 - MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (3" THICK)

ITEM 847 - MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (3" THICK)
 ITEM 847 - MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
 ITEM 847 - TEST SLAB

THESE ITEMS SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION 847 - BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING SCARIFICATION AND CHIPPING, WITH THE FOLLOWING REVISIONS:

847.11
 THE COMPONENTS OF THE MICRO SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS FOLLOWS:

CONCRETE TABLE
 QUANTITIES PER CUBIC YARD
 AGGREGATES (SSD)

MICRO SILICA OVERLAY CONCRETE, AS PER PLAN

AGGREGATE TYPE	FINE AGGREGATE (LB)	#8 COARSE AGGREGATE* (LB)	AGGREGATE TOTAL (LB)	CEMENT CONTENT (LB)	MICRO-SILICA (LB)	WATER TO CEMENT RATIO	AIR CONTENT ±2%	FIBER 1/4" POLYPROPYLENE (LB)
GRAVEL	1410	1430	2840	600	50	0.40	8	1
LIMESTONE	1410	1450	2860	600	50	0.40	8	1
SLAG	1300	1350	2650	600	50	0.40	8	1

- * ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127
- ** FIBER MESH SHALL BE 100% VIRGIN POLYPROPYLENE IN A FIBRILLATED NETWORK FORM AND SHALL BE 1/4" IN LENGTH (FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN)

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD):

- NATURAL SAND AND GRAVEL 2.62
- LIMESTONE SAND 2.68
- LIMESTONE 2.65
- SLAG 2.30
- MICRO SILICA SOLIDS 2.20
- PORTLAND CEMENT 3.15

FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (3" THICK)

PERFORM THIS WORK PER SUPPLEMENTAL SPECIFICATION 847 - BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING SCARIFICATION AND CHIPPING, WITH THE FOLLOWING ADDITIONS:

THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING PARAPET OR EXISTING SIDEWALK CURB PLATE DURING REMOVAL OPERATIONS. ANY DAMAGE TO THE PARAPET OR CURB PLATE DURING REMOVALS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR THESE REPAIRS AND THEY SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED FOR PAYMENT WITH ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (3" THICK).

DESIGN AGENCY: ARRON CLEVELAND COLUMBUS
 564 WHITE POND DRIVE
 ARRON, OHIO 44320-1100
 (330) 836-3111

AECOM

DATE: 10/16
 REVIEWED: PJW
 STRUCTURE FILE NUMBER: 1801074

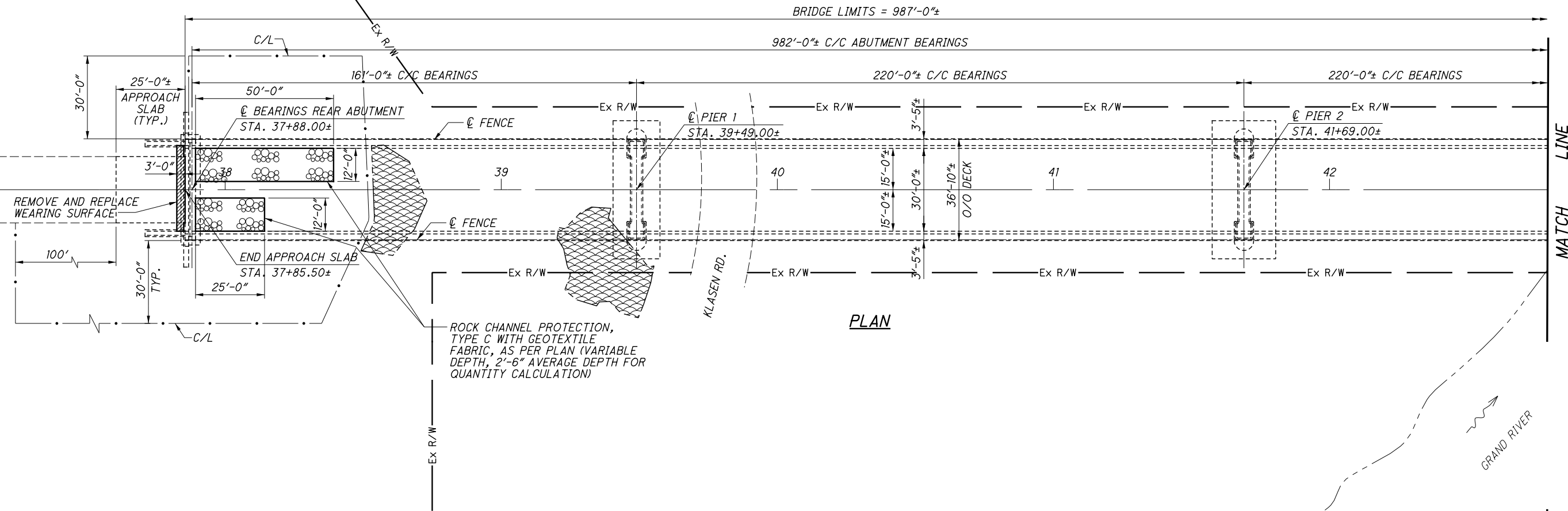
DESIGNED: KGR
 CHECKED: DEB

SIDEWALK REPAIR DETAILS
 BRIDGE NO. CUY-06A-0042
 DETROIT ROAD OVER ROCKY RIVER

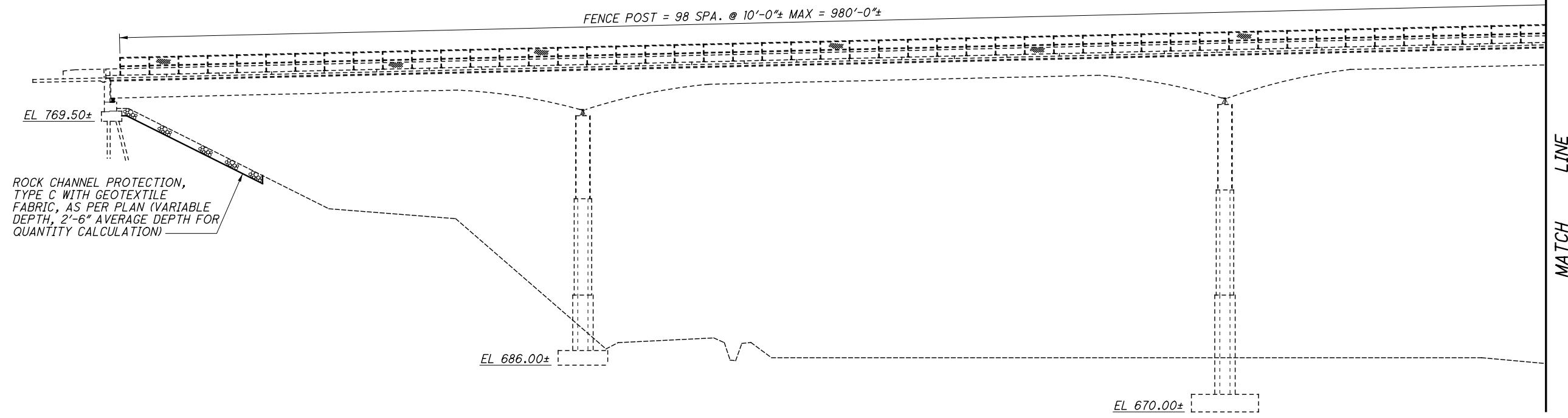
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 PID No. 103033

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PLAN



ELEVATION

LEGEND

- INDICATES WETLANDS

RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
DATE 2/07/17	STRUCTURE FILE NUMBER 4306031
REVIEWED JDB	DRAWN USB
DESIGNED BLN	CHECKED DLR
GENERAL PLAN - 1 BRIDGE NO. LAK-528-0192 OVER GRAND RIVER	
CUY-06A-0.42 LAK-528-1.92 PID No. 103033	
1 / 14	
24 37	

LAK-528-0192

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

EXJ-4-87 (REVISED 7-19-02)
GSD-1-96 (REVISED 7-19-02)
PCB-91 (REVISED 1-18-13)
SBR-1-13 (REVISED 1-17-14)
VPF-1-90 (REVISED 7-17-15)

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
847 (DATED 1-20-2017)

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17th EDITION (2002), INCLUDING ALL SUBSEQUENT INTERIM SPECIFICATIONS AND THE 2004 ODOT BRIDGE DESIGN MANUAL INCLUDING INTERIMS.

DESIGN DATA

DESIGN LOADING - EXISTING STEEL BEAM SUPERSTRUCTURE, SUBSTRUCTURE AND FOUNDATION: HS20-44, THE ALTERNATE MILITARY LOADING.
- EXPANSION JOINT - HS25 WITH 100% IMPACT

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH
- 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH
- 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996
- GRADE 60 WITH MINIMUM YIELD STRENGTH OF 60,000 PSI
- ALL REINFORCING STEEL SHALL BE EPOXY COATED PER MATERIAL SPECIFICATION 709.00.
- SPLICES INDICATED ARE FOR GRADE 60 STEEL

STRUCTURAL STEEL - PROPOSED: ASTM 709, GRADE 50, YIELD STRENGTH 50,000 PSI

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL AND 2 1/2 INCH CONCRETE COVER.

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

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 THAT HAVE BEEN VERIFIED IN THE FIELD.

ESTIMATED QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING THE COMPLETION OF THIS PROJECT.

EXISTING STRUCTURE PLANS MAY BE VIEWED BY PROSPECTIVE BIDDERS AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BLVD, GARFIELD HEIGHTS, OHIO AND AT THE FOLLOWING WEBSITE: [HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

UTILITY LINES

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

PROPOSED LAK-528-0192 WORK

1. SET UP AND MAINTAIN TRAFFIC CONTROL FOR PHASE CONSTRUCTION FOR THE REAR AND FORWARD ABUTMENT EXPANSION JOINT REPLACEMENT AND RELATED PARAPET WORK DURING SEPARATE TIME PERIODS. MAINTAIN ONE LANE OF SIGNALIZED BI-DIRECTIONAL TRAFFIC AT ALL TIMES.
2. REMOVE FENCE AND FENCE POSTS AT THE NORTH END THAT ARE MOUNTED ON CONCRETE THAT IS TO BE REMOVED. SHORTEN FENCE AND ATTACH WITH NEW ANCHOR BOLTS TO THE SIDEWALK CONCRETE THAT REMAINS PER PLAN DETAILS.
3. REMOVE THE EXISTING REAR AND FORWARD ABUTMENT JOINTS INCLUDING PORTION OF CONCRETE DECK AND BACKWALL AND PORTION OF EXISTING CONCRETE WEARING SURFACE ON APPROACH SLABS. ALSO REMOVE AND REPLACE END CROSSFRAMES.
4. BEND DESIGNATED VERTICAL STIRRUP BARS IN THE REMOVAL AREAS TO PROVIDE CLEARANCE FOR THE PROPOSED REPLACEMENT JOINT PER PLAN DETAILS.
5. REMOVE SECTIONS OF THE PARAPET TO ACCOMMODATE THE REPLACEMENT OF THE JOINT. SAVE PROJECTING REINFORCING IN THESE LOCATIONS FOR REUSE PER PLAN DETAILS.
6. MEASURE JOINT OPENING AND COMPARE TO THE PLAN VALUES AT A GIVEN TEMPERATURE.
7. PLACE NEW JOINT, NEW REINFORCING STEEL AND CONCRETE IN THE DECK, ABUTMENT BACKWALL AND PARAPET.
8. PLACE NEW OVERLAY ON PORTIONS OF APPROACH SLABS ADJACENT TO NEW JOINT.
9. REPEAT THE PROCEDURE FOR THE OTHER CONSTRUCTION PHASES. THE ELASTOMERIC JOINT SEAL SHALL BE CONTINUOUS ACROSS THE DECK.
10. JACK AND SUPPORT THE GIRDERS AT EACH ABUTMENT SO GIRDER BEARINGS CAN BE REFURBISHED.
11. PLACE NEW ROCK CHANNEL PROTECTION AT EACH ABUTMENT PER PLAN DETAILS.
12. CLEAN AND PAINT NEW END CROSSFRAMES AND EXISTING STEEL GIRDERS WITHIN 10 FEET FROM JOINT.
13. CLEAN AND SEAL ABUTMENTS PER PLAN DETAILS.

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

REMOVAL LIMITATIONS

THIS WORK CONSISTS OF THE PARTIAL REMOVAL OF CONCRETE DECKS AND PARAPETS, AND FINGER JOINTS AT THE ABUTMENTS. THE REMOVAL LIMITS ARE SHOWN IN THE PLANS. THE EXISTING REINFORCING STEEL PROJECTING INTO THESE REMOVAL AREAS IS TO BE PRESERVED FOR REUSE AS INDICATED IN THE PLANS.

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

PROTECTION OF STEEL SUPPORT SYSTEMS

IT IS NOT ANTICIPATED THAT THE CONCRETE REMOVAL WILL AFFECT THE STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSSFRAMES, ETC.) AT THE BRIDGE ENDS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05. THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS.

CUT LINE CONSTRUCTION JOINT PREPARATION

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

MEASUREMENT AND PAYMENT

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

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

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

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

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. A QUANTITY OF 200 POUNDS HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES.

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

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT

DOWEL QUANTITY IS FOR NEW REINFORCING STEEL INSTALLED INTO EXISTING CONCRETE AS SHOWN ON THE PLANS.

AN ADDITIONAL QUANTITY OF 12 DOWEL BARS HAS BEEN INCLUDED IN THE JOINT REPLACEMENT PLANS TO BE USED AS DIRECTED BY THE ENGINEER TO SECURE REPLACEMENT REINFORCING STEEL BARS IN THE EXISTING CONCRETE BACKWALL, DECK OR PARAPET. THE QUANTITY IS TO USED FOR EXISTING BARS DEEMED UNUSABLE BY THE ENGINEER UPON COMPLETION OF CONCRETE REMOVAL AND PREPARATION FOR THE NEW JOINT CONCRETE OPERATIONS.

THIS QUANTITY IS NOT TO BE USED FOR ANCHORING REPLACEMENT REINFORCING STEEL BARS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS; NOR IS IT TO BE USED FOR THE ANCHORAGE OF THE LOW PROFILE JOINT SYSTEM, WHOSE ANCHOR INSTALLATION IS PAID FOR AS PART OF THE JOINT PAY ITEM.

ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN

INCLUDED IN THIS CONCRETE ITEM IS ALL DECK, BLOCK-OUT, BACKWALL, AND MISC. CONCRETE REQUIRED TO REPLACE THE EXPANSION JOINTS (NOT INCLUDING RAILING PARAPET CONCRETE).

BRIDGE JOINT BLOCK-OUT AND BACKWALL CONCRETE MAY BE OPENED TO TRAFFIC AFTER SEVEN DAYS OF CURING AND WHEN COMPRESSIVE STRENGTH IS > 0.85% f'c OR FLEXURAL STRENGTH IS > 650 PSI. ODOT SUPPLEMENT 1098, PROCEDURE FOR ESTIMATING CONCRETE STRENGTH BY THE MATURITY METHOD, SHALL BE USED TO DETERMINE CONCRETE STRENGTH.

GENERAL NOTES CONTINUED: SEE SHEET **4/14**.

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RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DATE 2/07/17
REVIEWED JDB
STRUCTURE FILE NUMBER 4306031

DESIGNED BLN
CHECKED DLR
DRAWN SJK
REVISED
GENERAL NOTES - 1
BRIDGE NO. LAK-528-0192
OVER THE GRAND RIVER

CUY-06A-0.42
LAK-528-1.92
PID No. 103033

3 / 14

26
37

\\REL8\Current\2016\116041 D12_Bridge_Rehab\Group 1A_Project\ProjectData\103033\Design\Structures\AK-528-0192\528-0192.CGN001.dgn 2/16/2017 1:23:59 PM JeffSmith

ITEM 512 – SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

SEAL THE REBUILT PARAPETS, DECK END BLOCK FASCIA, AND ALL EXPOSED ABUTMENT CONCRETE (INCLUDING BACKWALLS, SEATS, BREASTWALLS AND WINGWALLS). REMOVE DEBRIS AND CLEAN SURFACES OF WALLS AND SEATS PER 512.03 E & F. THE EPOXY-URETHANE SHALL BE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 595B-25630 (SEMI-GLOSS, LIGHT GRAY), OR AS CLOSELY MATCHES THE SEALER COLOR ON THE EXISTING CONCRETE.

ITEM 513 – REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN

WORK UNDER THIS ITEM INCLUDES THE REMOVAL OF DETERIORATED CROSSFRAME MEMBERS AT THE ABUTMENT SUPERSTRUCTURE JOINTS AND INSTALLATION OF NEW CROSSFRAME MEMBERS. LOCATIONS OF THE DETERIORATED CROSSFRAME MEMBERS ARE DETAILED IN THE PLANS. MEMBER REPLACEMENT SHALL BE COMPLETED PRIOR TO BEGINNING ITEM 514 PAINTING OPERATIONS.

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.04 OR SUPPLY THE ENGINEER WITH "AS-BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT FOR REMOVAL AND INSTALLATION OF CROSSFRAME MEMBERS SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER POUND OF NEW MATERIAL FOR ITEM 513 – REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.

ITEM 514 – FIELD PAINTING, GENERAL

IN ADDITION TO THE REQUIREMENTS SHOWN IN ITEM, THE FOLLOWING NOTES SHALL APPLY.

COLOR:

THE FINISH COAT COLOR SHALL BE BLUE TO MATCH THE EXISTING BLUE FINISH PAINT. THE COLOR IS ESTIMATED TO MATCH FEDERAL STANDARD 595-15200.

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

THE STRIP SEAL EXPANSION JOINT INCLUDING THE REMOVABLE COVER PLATE SHALL BE CONSTRUCTED AS DETAILED IN THE PLANS.

SUPPLY A JOINT STRIP SEAL THAT IS CONTINUOUS ACROSS THE JOINT FROM PARAPET TO PARAPET. FIELD FABRICATED SPLICES ARE NOT PERMITTED.

JOINTS WILL NOT BE OPEN TO TRAFFIC WITHOUT THE STEEL COVER PLATES IN PLACE.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT FOR INSTALLATION OF THE STEEL EXPANSION JOINT, STRIP SEAL, AND COVER PLATE SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER FOOT FOR ITEM 516 – STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

ITEM 516 – REFURBISH BEARING DEVICE, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE,

THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 – REFURBISH BEARING DEVICE, AS PER PLAN.

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

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

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.B.

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

THIS WORK INCLUDES RAISING AND SUPPORTING THE GIRDERS WHILE THE BEARINGS ARE REFURBISHED.

REACTIONS AT THE BEARINGS:

ABUTMENTS

DEAD LOAD
 LIVE LOAD
 TOTAL LOAD 190 K (BASED ON PLAN INFORMATION)

THE LOADS GIVEN ARE REACTIONS AT THE BEARINGS; THESE ARE NOT REQUIRED JACKING FORCES. THE CONTRACTOR IS LIMITED TO RAISING THE BEAMS 1/4"

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

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

ITEM 601 – ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PLACE THE ROCK CHANNEL PROTECTION ON BOTH THE REAR AND FORWARD ABUTMENT SLOPES PER APPROXIMATE PLAN LOCATIONS. THIS MATERIAL IS TO FILL EROSION GULLEYS OF VARIABLE DEPTH. FILL THE GULLEYS AT THE REAR ABUTMENT AND DRESS UP THE SLOPE IN THE AREA IN FRONT OF THE ABUTMENT. GEOTEXTILE FABRIC IS REQUIRED ONLY IN THE GULLEY AREA AND ROCK CHANNEL PROTECTION CAN BE PLACED DIRECTLY ON THE EXISTING AGGREGATE PROTECTION.

THE ROCK CHANNEL PROTECTION SHOULD BE PLACED IN A SIMILAR MANNER AT THE FORWARD ABUTMENT. HOWEVER, DUE TO THE STEEP PORTION OF THE SLOPE ABOUT 30 FEET FROM THE ABUTMENT AND THE LIMITED CLEARANCE FROM THE EXISTING GIRDERS, MUCH OF THE MATERIAL WILL NEED TO BE PLACED BY HAND. PLACE THE ROCK IN THE LARGE GULLEY TOWARD THE SLOPE BREAK, BUT DO NOT ALLOW IT TO FALL DOWN THE SLOPE. ALL WORK SHALL BE TO THE SATISFACTION OF ENGINEER.

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 601 – ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC, AS PER PLAN.

ITEM 847 – MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN

THIS ITEM SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION 847 – BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING SCARIFICATION AND CHIPPING, WITH THE FOLLOWING REVISIONS:

847.11

THE COMPONENTS OF THE MICRO SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS FOLLOWS:

CONCRETE TABLE
 QUANTITIES PER CUBIC YARD
 AGGREGATES (SSD)

MICRO SILICA OVERLAY CONCRETE, AS PER PLAN

AGGREGATE TYPE	FINE AGGREGATE (LB)	#8 COARSE AGGREGATE* (LB)	AGGREGATE TOTAL (LB)	CEMENT CONTENT (LB)	MICRO-SILICA (LB)	WATER TO CEMENT RATIO	AIR CONTENT ±2%	FIBER 1/4" POLYPROPYLENE (LB)
GRAVEL	1410	1430	2840	600	50	0.40	8	1
LIMESTONE	1410	1450	2860	600	50	0.40	8	1
SLAG	1300	1350	2650	600	50	0.40	8	1

- * ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127
- ** FIBER MESH SHALL BE 100% VIRGIN POLYPROPYLENE IN A FIBRILLATED NETWORK FORM AND SHALL BE 1/4" IN LENGTH (FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN)

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD):

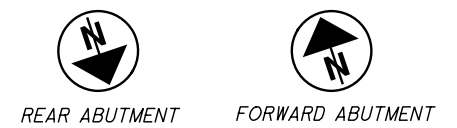
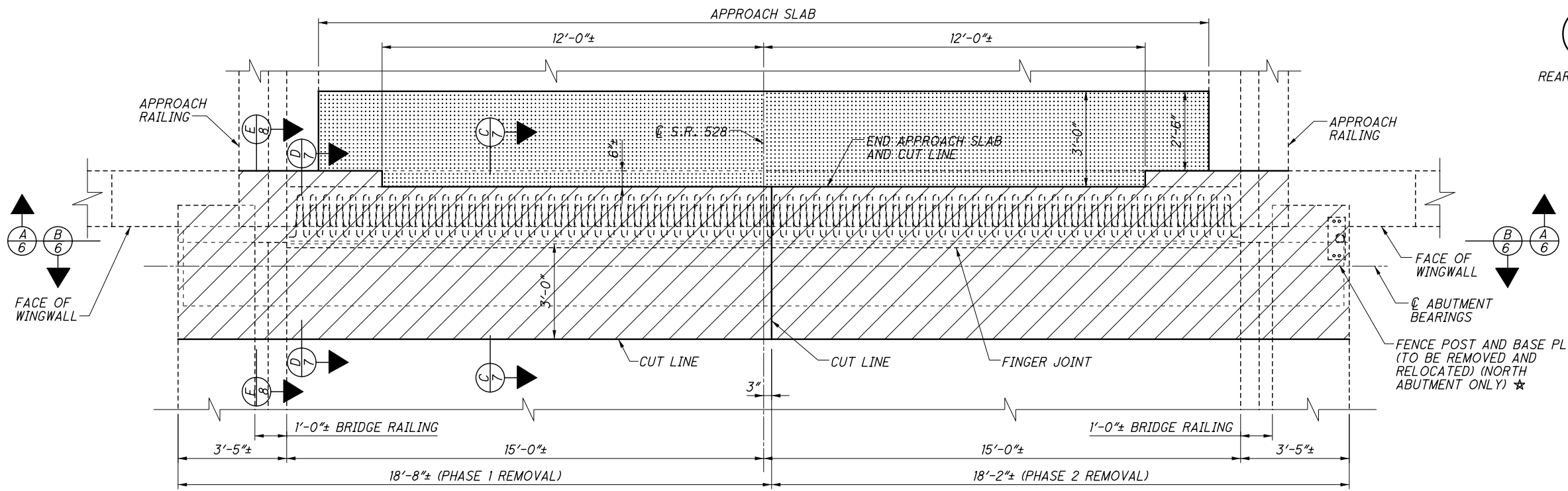
- NATURAL SAND AND GRAVEL 2.62
- LIMESTONE SAND 2.68
- LIMESTONE 2.65
- SLAG 2.30
- MICRO SILICA SOLIDS 2.20
- PORTLAND CEMENT 3.15

FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

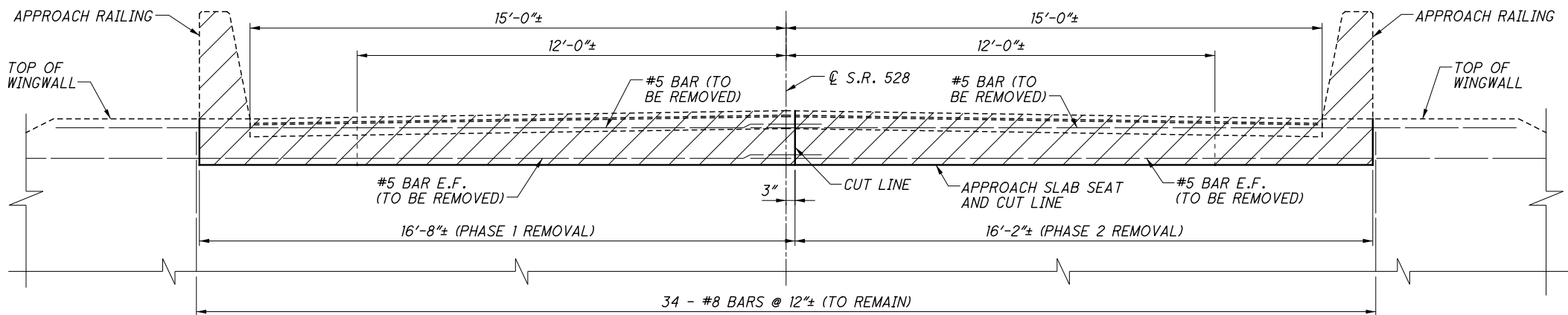
ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

RICHLAND ENGINEERING LIMITED
 29 NORTH PARK STREET
 MANSFIELD, OHIO 44902
 DATE 2/07/17
 JDB
 STRUCTURE FILE NUMBER 4306031
 DRAWN SJK
 CHECKED DLR
 REVISIONS
 DESIGNED BLN
 REVIEWED JDB
 GENERAL NOTES - 2
 BRIDGE NO. LAK-528-0192
 OVER THE GRAND RIVER
 CUY-06A-0.42
 LAK-528-1.92
 PID No. 103033
 4 / 14
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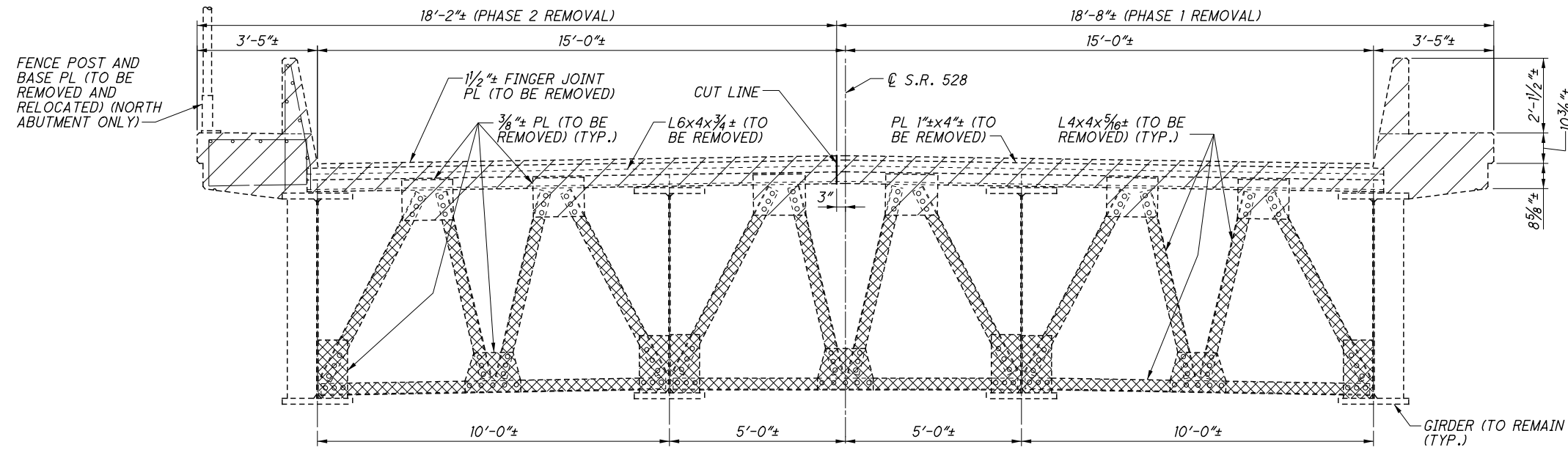
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PLAN



SECTION A-A



SECTION B-B

LEGEND

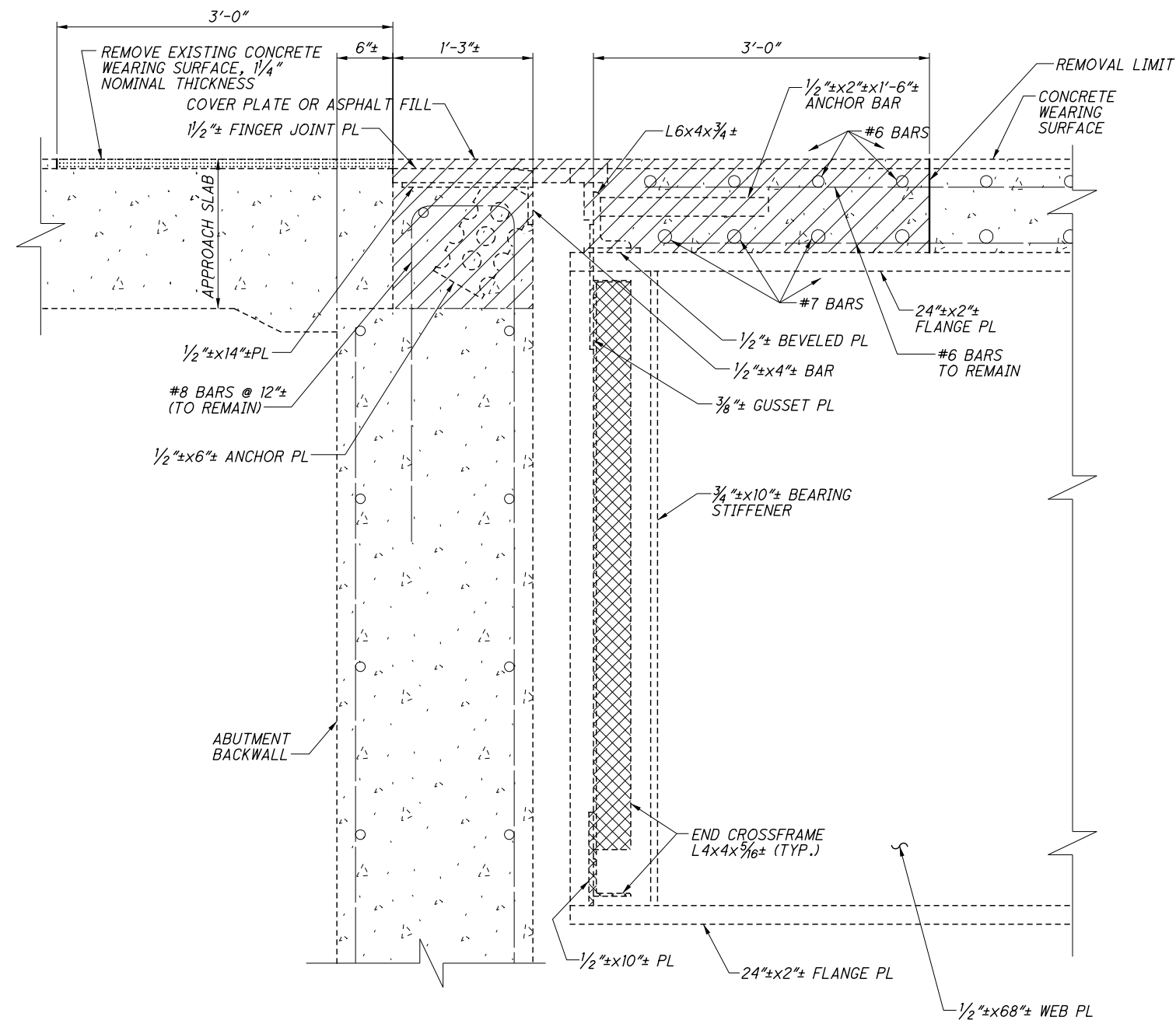
- ★ INDICATES WORK TO BE INCLUDED UNDER ITEM SPECIAL - VANDAL PROTECTION FENCE REMOVED AND REBUILT.
- INDICATES MATERIALS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES MATERIALS TO BE REMOVED PER ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.
- INDICATES EXISTING CONCRETE WEARING SURFACE TO BE REMOVED PER ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, 1/4" NOMINAL THICKNESS.

NOTES

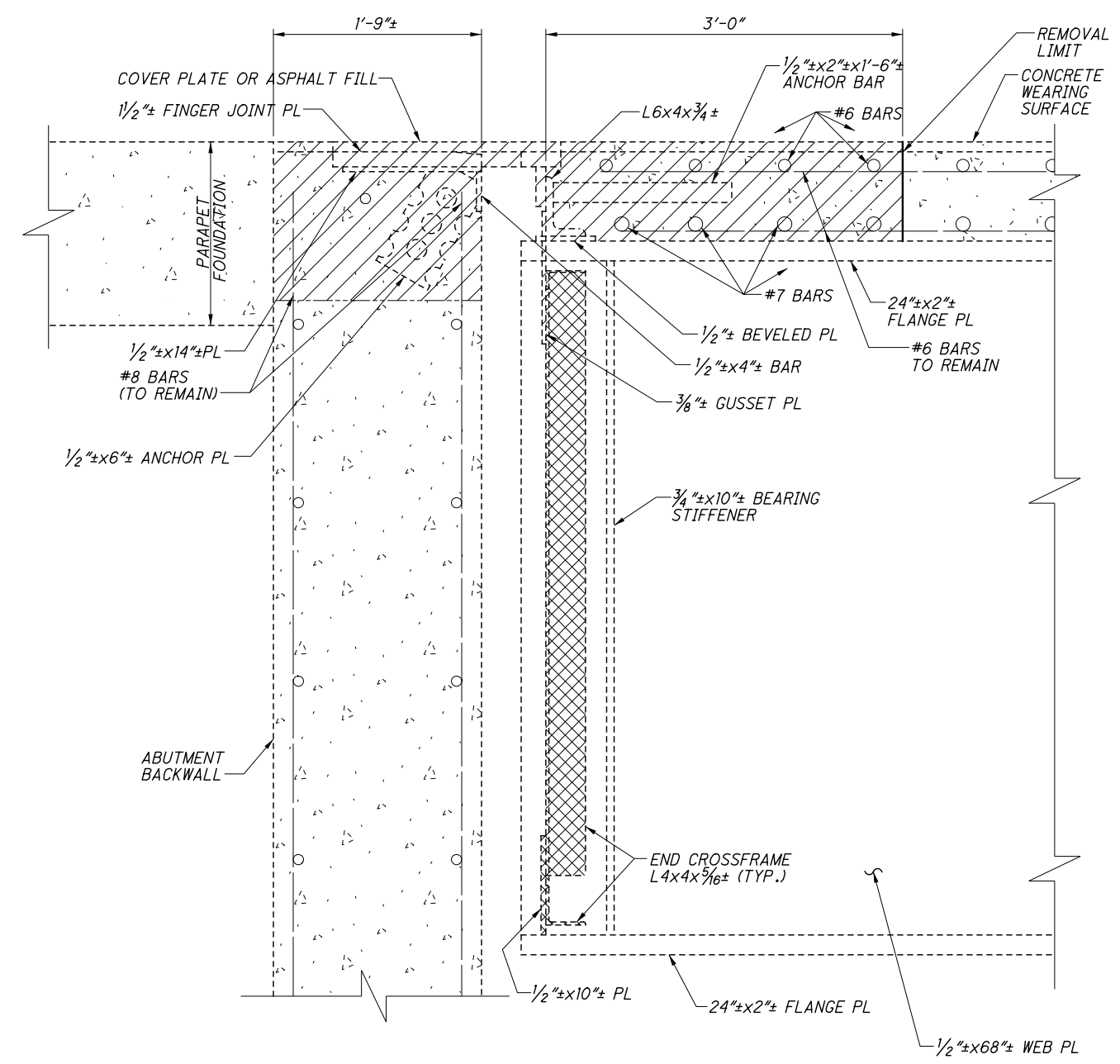
MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

EXPANSION JOINT REMOVAL DETAILS - 1
 BRIDGE NO. LAK-528-0192 OVER THE GRAND RIVER
 RICHLAND ENGINEERING LIMITED
 29 NORTH PARK STREET
 MANSFIELD, OHIO 44902
 DATE: 2/07/17
 REVIEWED: JDB
 STRUCTURE FILE NUMBER: 4306031
 DRAWN: JLS
 CHECKED: DLR
 DESIGNED: BLN
 CUY-06A-0.42
 LAK-528-1.92
 PID No. 103033
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 29 / 37

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


SECTION C-C



SECTION D-D

LEGEND

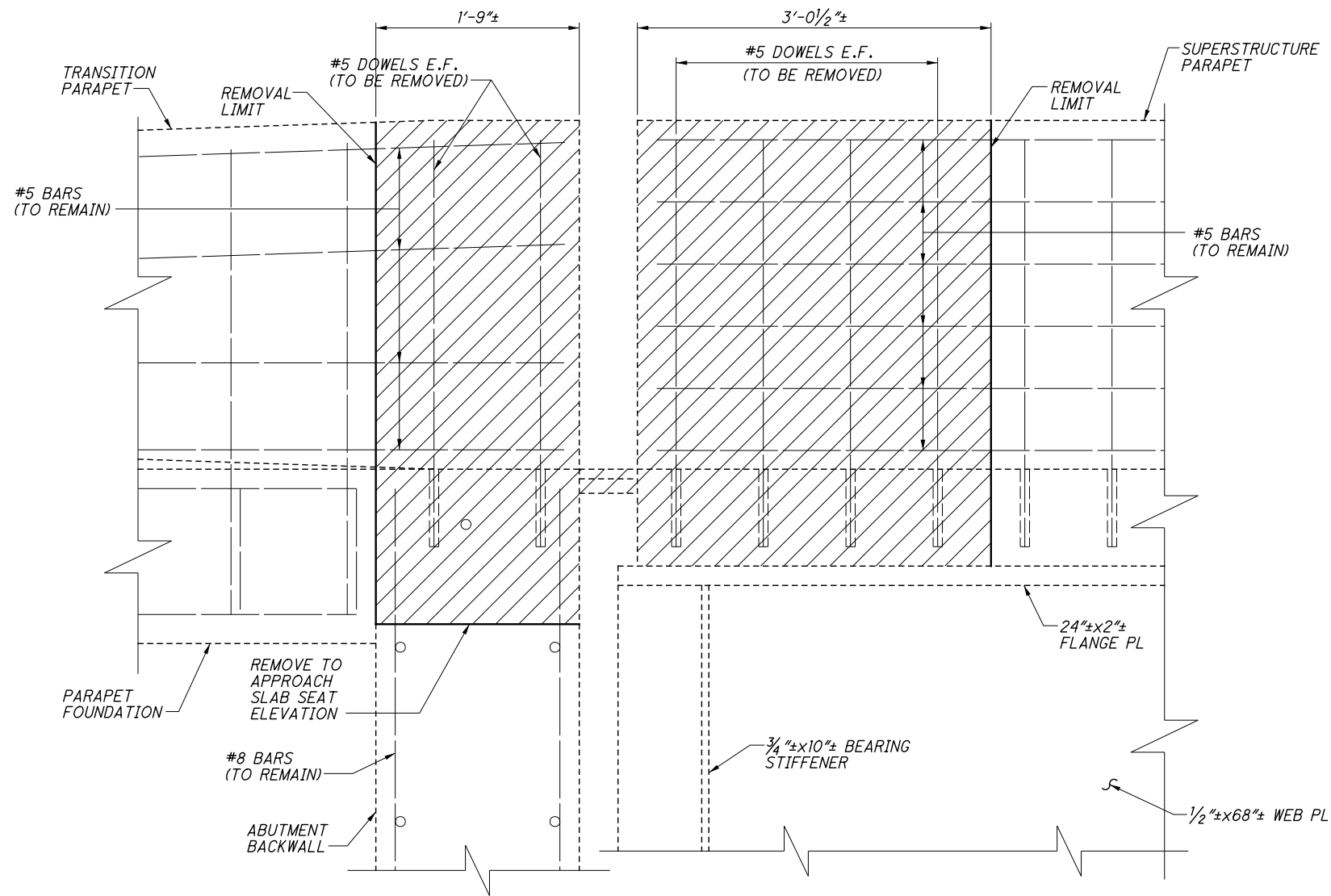
-  INDICATES MATERIALS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
-  INDICATES MATERIALS TO BE REMOVED PER ITEM 513 - REPLACEMENT OF DETERIORATED CROSSFRAMES, AS PER PLAN.
-  INDICATES EXISTING CONCRETE WEARING SURFACE TO BE REMOVED PER ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, 1/4" NOMINAL THICKNESS.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
SECTIONS C-C & D-D: FOR LOCATIONS SEE SHEET 6/14.

<p>EXPANSION JOINT REMOVAL DETAILS - 2 BRIDGE NO. LAK-528-0192 OVER THE GRAND RIVER</p>	<p>DATE: 2/07/17 REVIEWED: JDB DRAWN: JLS DESIGNED: BLN CHECKED: DLR</p>	<p>STRUCTURE FILE NUMBER: 4306031 RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902</p>
<p>CUY-06A-0.42 LAK-528-1.92 PID No. 103033</p>	<p>7 / 14</p>	<p>30 37</p>

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SECTION E-E

LEGEND

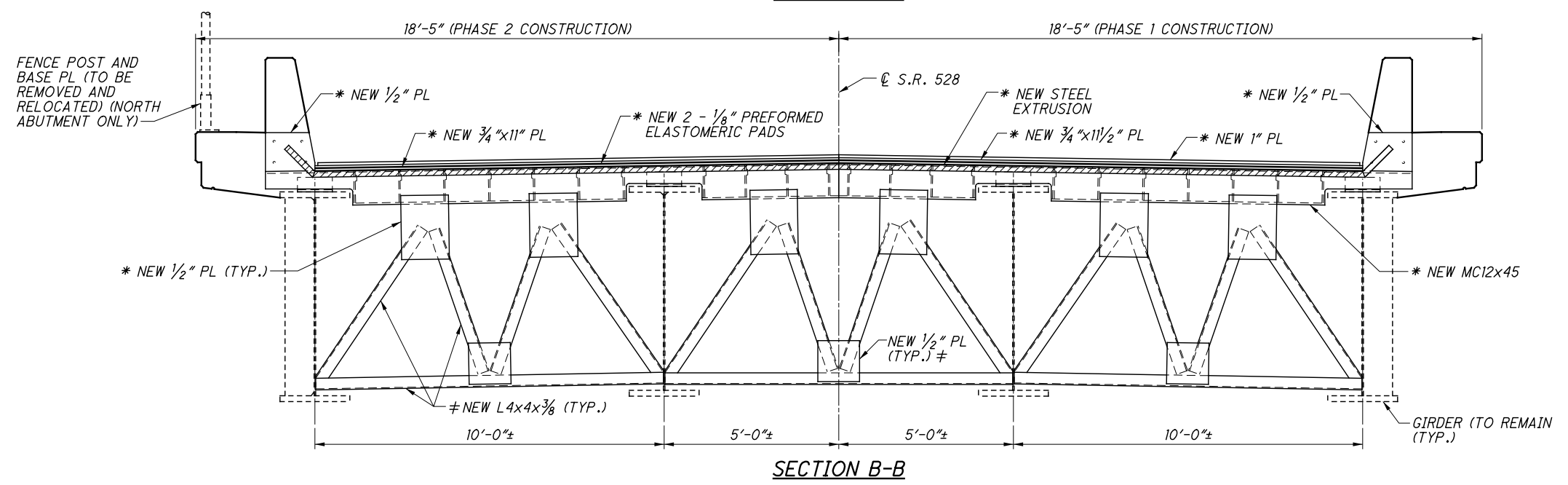
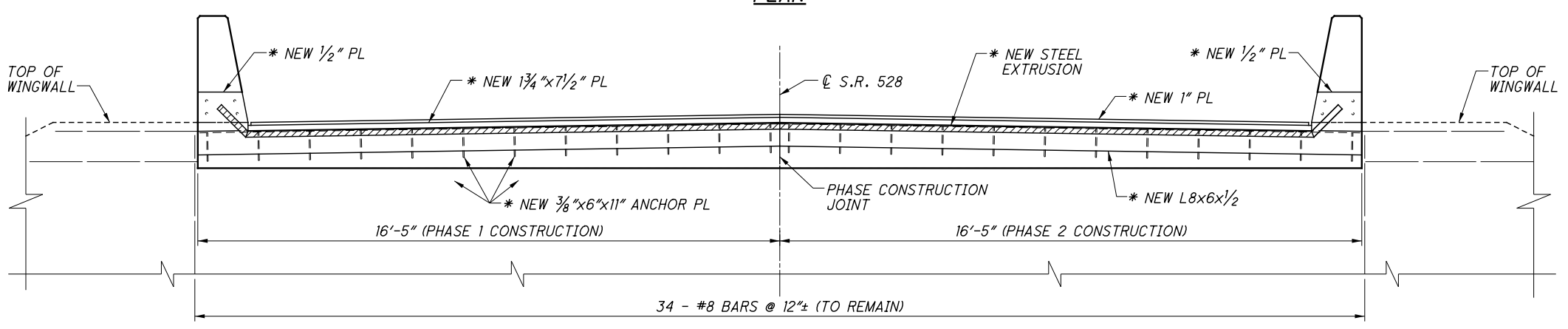
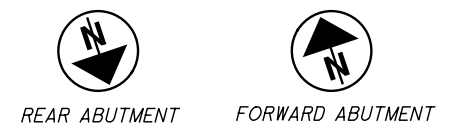
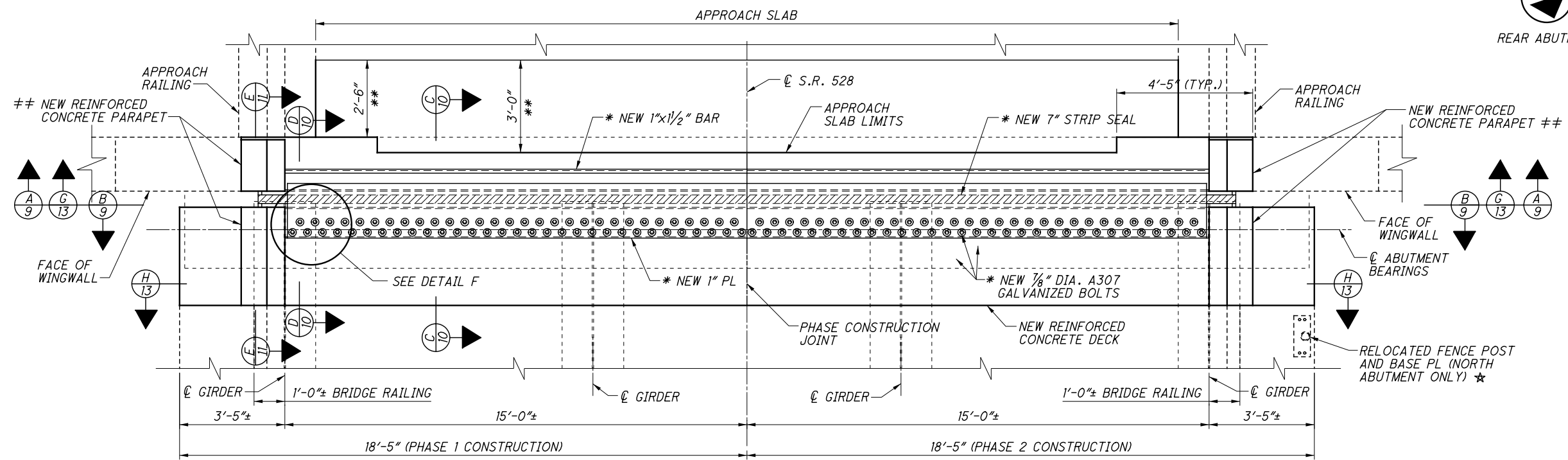
 INDICATES MATERIALS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
SECTION E-E: FOR LOCATION SEE SHEET 6/14.

<p>CUY-06A-0.42 LAK-528-1.92 PID No. 103033</p>	<p>EXPANSION JOINT REMOVAL DETAILS - 3 BRIDGE NO. LAK-528-0192 OVER THE GRAND RIVER</p>	<p>DESIGNED BLN</p> <p>CHECKED DLR</p>	<p>DRAWN JLS</p> <p>REVISOR</p>	<p>REVIEWED JDB</p> <p>STRUCTURE FILE NUMBER 4306031</p>	<p>DATE 2/07/17</p>	<p>RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902</p>
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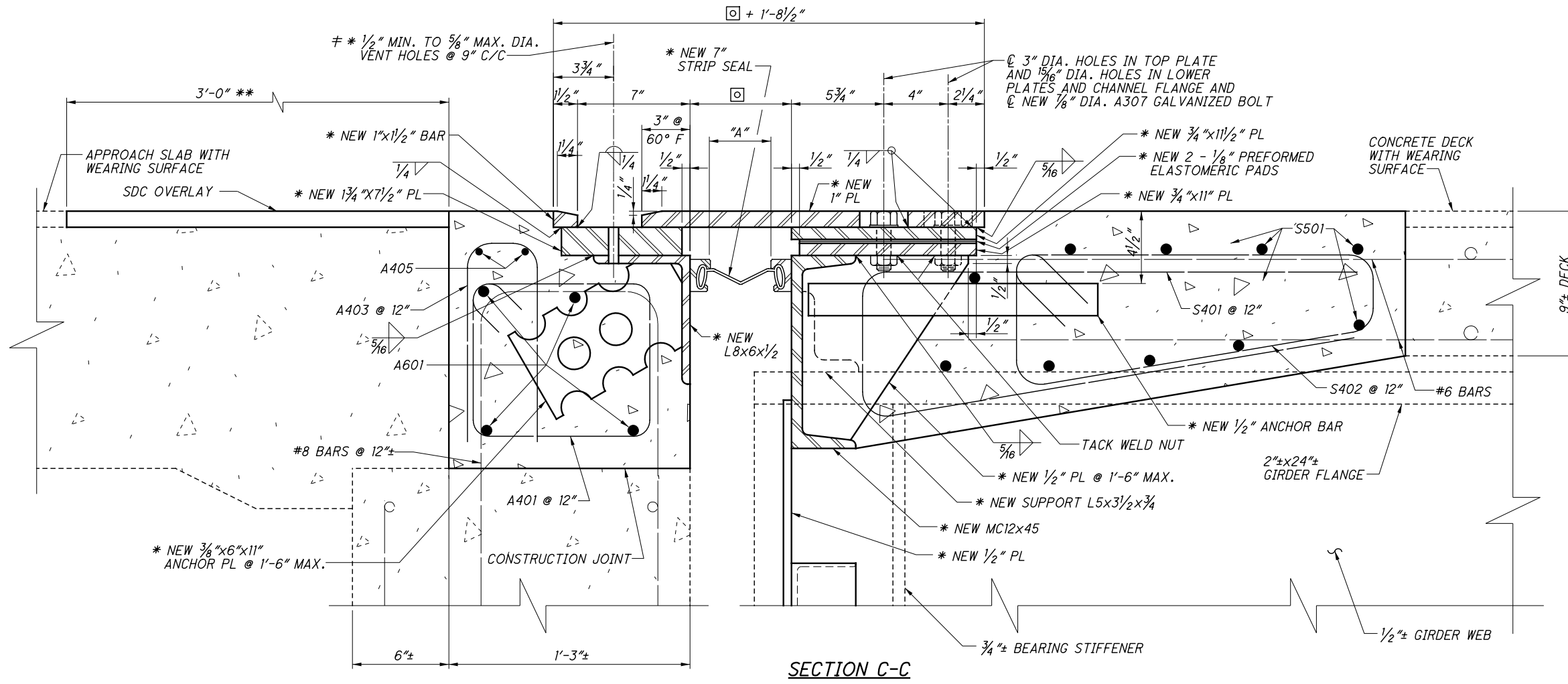


- LEGEND**
- * INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN FOR PAYMENT.
 - ** INCLUDED WITH ITEM 847 - MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN FOR PAYMENT.
 - ≠ INCLUDED WITH ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN FOR PAYMENT.
 - ≠≠ INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN FOR PAYMENT.
 - ★ INDICATES WORK TO BE INCLUDED UNDER ITEM SPECIAL-VANDAL PROTECTION FENCE REMOVED AND REBUILT.

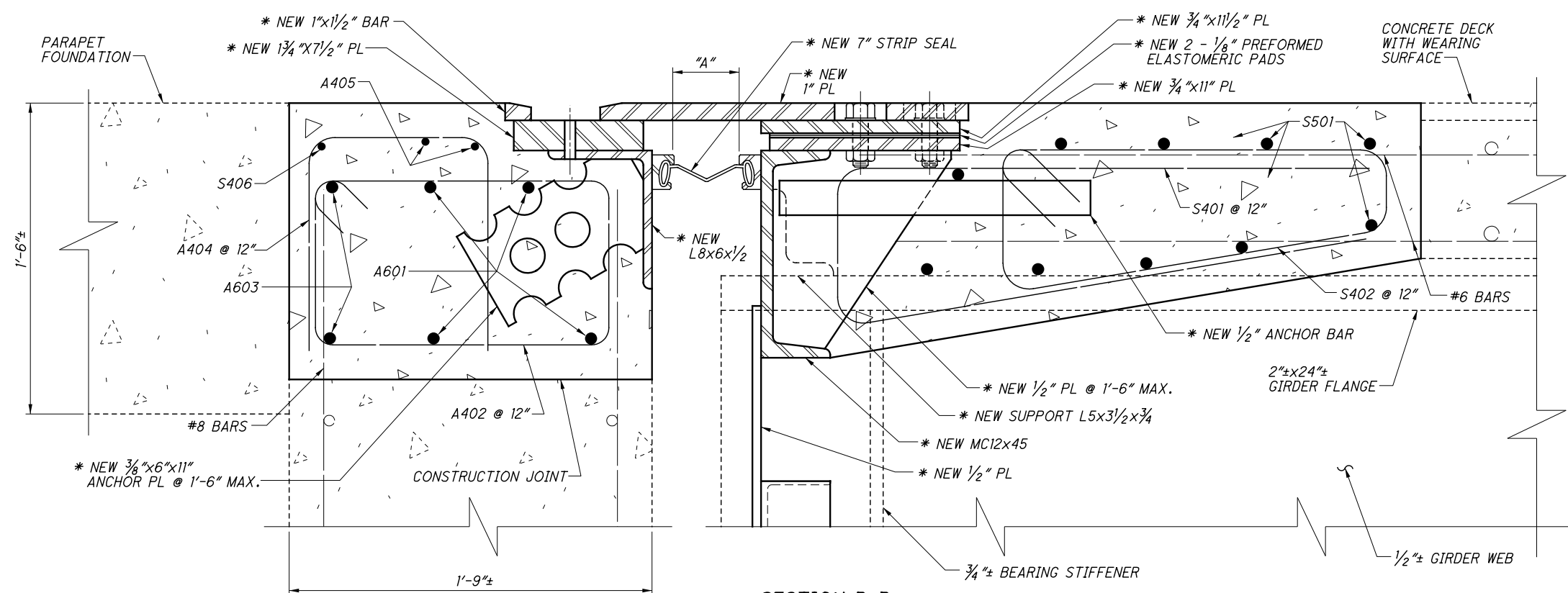
- NOTES**
- MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
 - DETAIL F:** SEE SHEET 11/14.
 - ADDITION NOTES AND DETAILS:** SEE STANDARD DRAWING GSD-1-96.

EXPANSION JOINT DETAILS - 1
 BRIDGE NO. LAK-528-0192 OVER THE GRAND RIVER
 RICHLAND ENGINEERING LIMITED
 29 NORTH PARK STREET
 MANSFIELD, OHIO 44902
 DATE: 2/07/17
 REVIEWED: JDB
 STRUCTURE FILE NUMBER: 4306031
 DESIGNED: BLN
 CHECKED: DLR
 DRAWN: JLS
 REVISED:
 CUY-06A-0.42
 LAK-528-1.92
 PID No. 103033
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SECTION C-C



SECTION D-D
(FOR DETAILS & DIMENSIONS NOT SHOWN SEE SECTION C-C)

JOINT SETTING TABLE
7" STRIP SEAL

TEMPERATURE (°F)	DIMENSION "A" (INCHES)
30°	4 3/16"
40°	3 7/8"
50°	3 5/8"
60°	3 3/8"
70°	3"
80°	2 3/4"
90°	2 1/8"

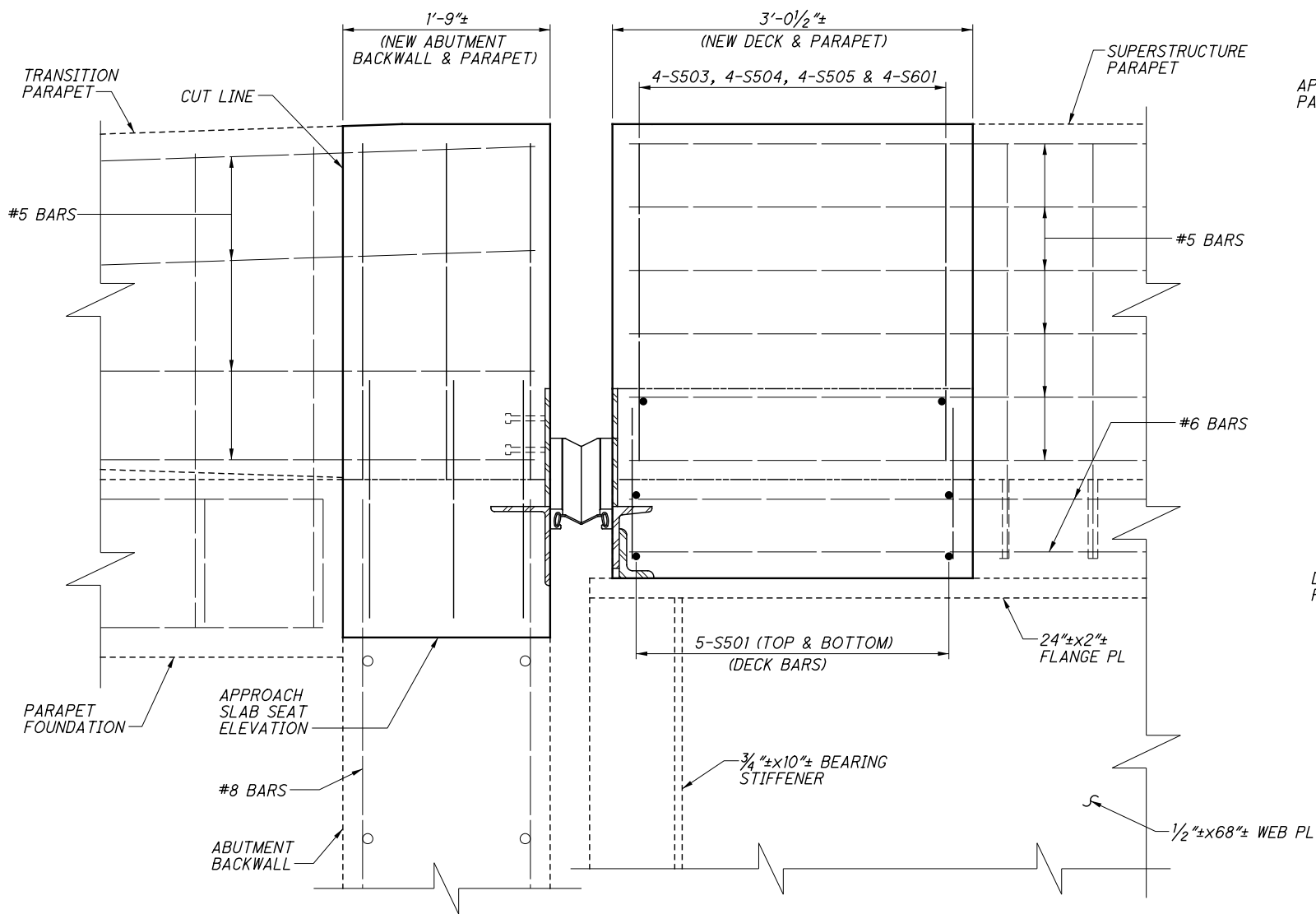
LEGEND

- * INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN FOR PAYMENT.
- # FILL VENT HOLES IN PLATE WITH SINGLE PACK MOISTURE CURED POLYURETHANE BASE CAULKING MATERIAL PER 514.02.
- ** INCLUDED WITH ITEM 847 - MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN FOR PAYMENT.
- ☐ THIS DIMENSION IS THE SUM OF:
(2 x STEEL RETAINER WIDTH + DIMENSION "A")

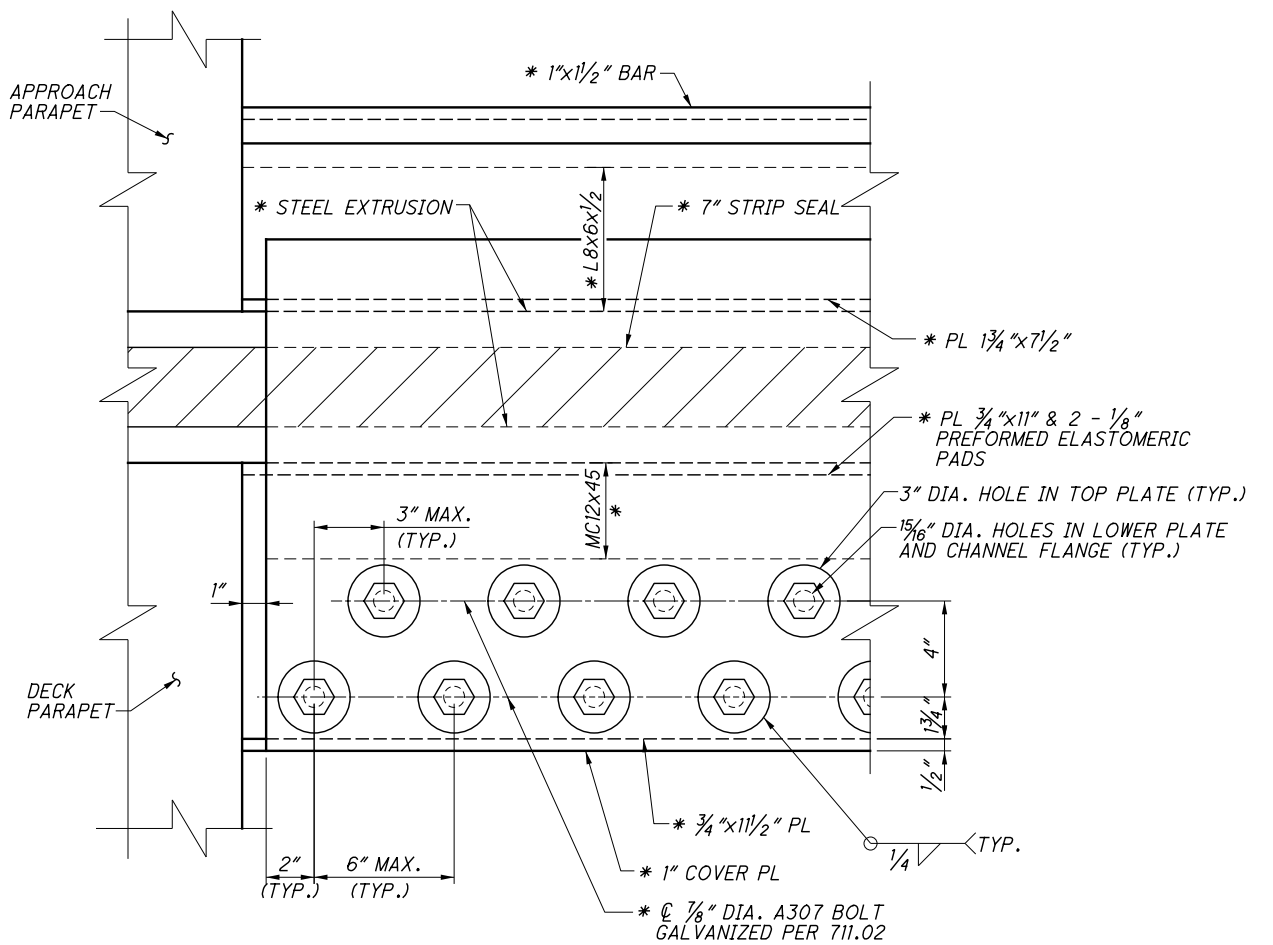
NOTES

- MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
- SECTIONS C-C & D-D:** FOR LOCATIONS SEE SHEET 9/14.

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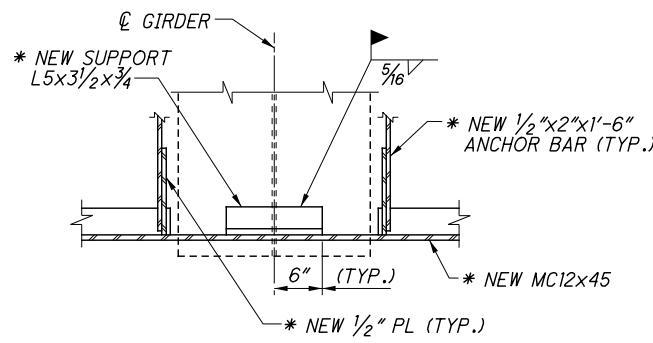


SECTION E-E

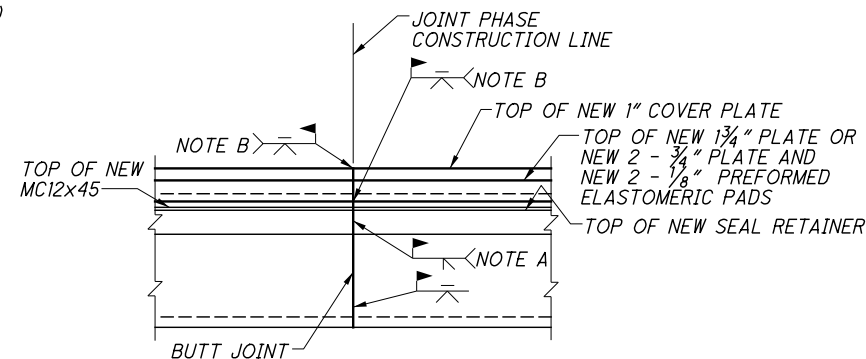


DETAIL F

(ALL MATERIALS SHOWN IN THIS DETAIL ARE NEW)



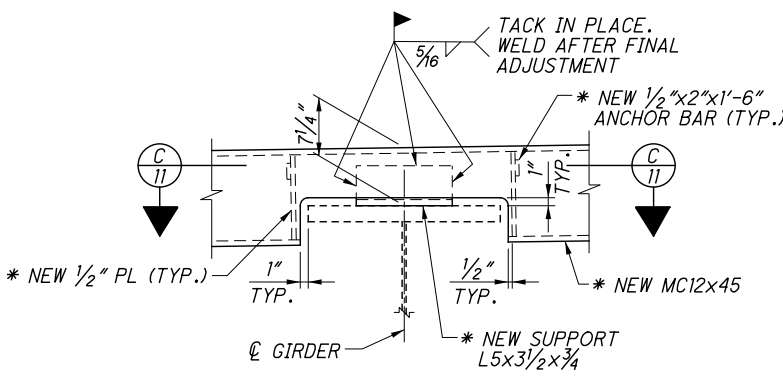
SECTION C-C



TYPICAL JOINT ARMOR SPLICE AT PHASED CONSTRUCTION JOINT

WELDING NOTES

- A. WELDS AT JOINTS IN RETAINERS SHALL BE WATERTIGHT, PARTIAL PENETRATION WELDS AROUND THE OUTER PERIPHERY OF THE ABUTTING SURFACES. GRIND FLUSH ALL WELDS IN CONTACT WITH THE JOINT SEAL.
- B. WELD SHOWN IS ALONG THE FULL LENGTH OF THE JOINT AT THE TOP OF THE 1 3/4" x 7 1/2" PL AND THE 1" x 1 1/2" BAR. THE 1" SLIDING COVER PLATE AND ATTACHED 3/4" PLATE ARE TO BE DISCONTINUOUS AT THE PHASE CONSTRUCTION JOINT.



MODIFIED DETAIL A
(FROM STD. DWG. EXJ-4-87)

LEGEND

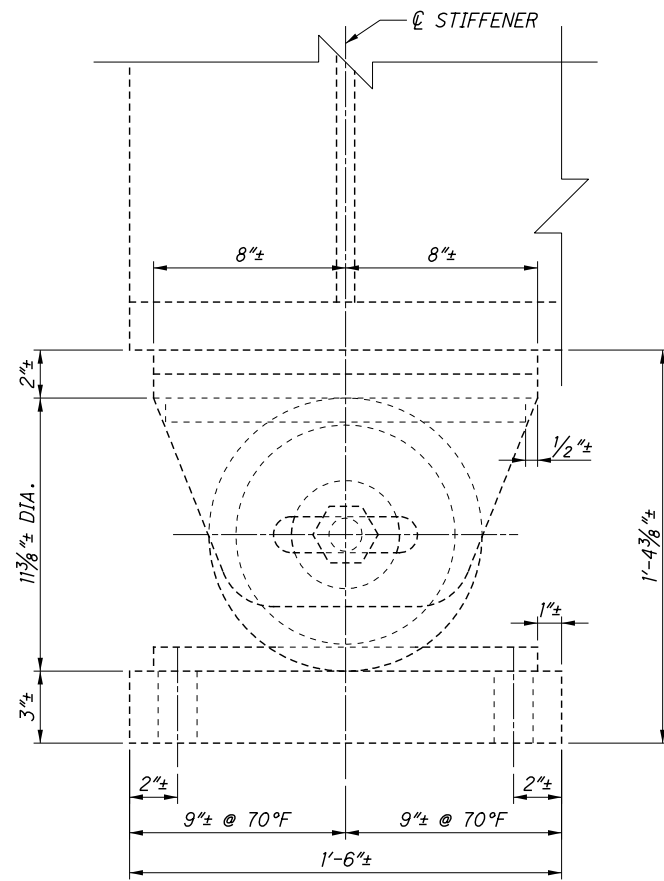
* INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN FOR PAYMENT.

NOTES

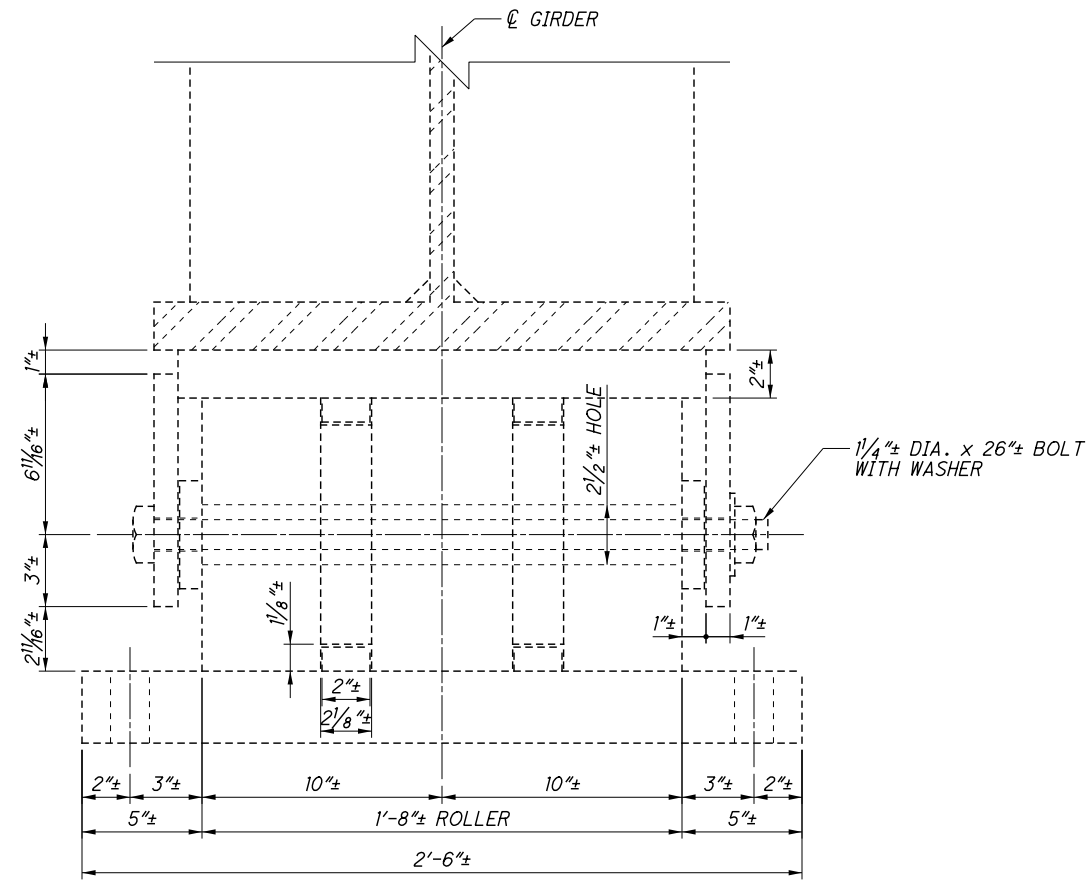
- MATERIALS** SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
- SECTION E-E:** FOR LOCATION SEE SHEET 9/14.
- DETAIL F:** FOR LOCATION SEE SHEET 9/14.

<p>EXPANSION JOINT DETAILS - 3</p> <p>BRIDGE NO. LAK-528-0192 OVER THE GRAND RIVER</p>	<p>DATE: 2/07/17 REVIEWED: JDB DRAWN: JLS DESIGNED: BLN CHECKED: DLR</p>	<p>STRUCTURE FILE NUMBER: 4306031</p>
<p>RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902</p>		
<p>CUY-06A-0.42 LAK-528-1.92 PID No. 103033</p>	<p>11 / 14</p>	<p>34 37</p>

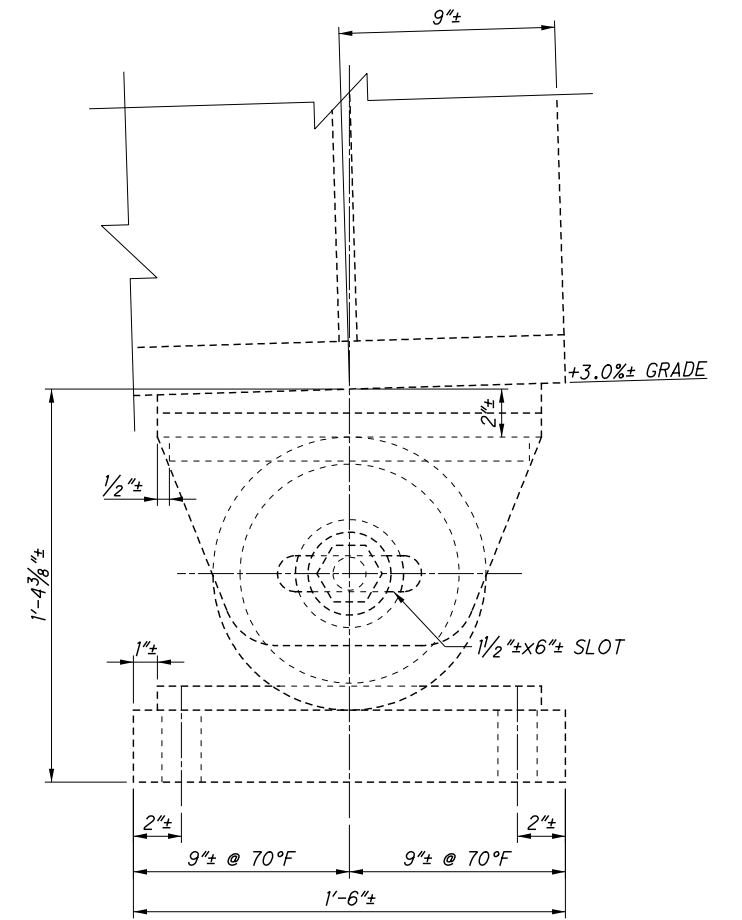
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SIDE ELEVATION
(AT REAR ABUTMENT)



ELEVATION



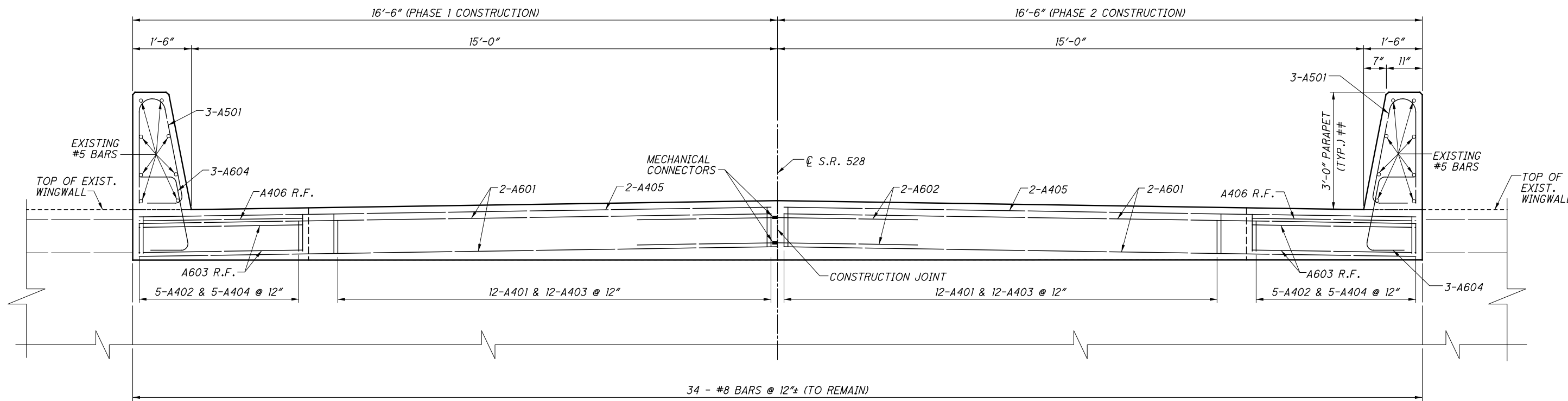
SIDE ELEVATION
(AT FORWARD ABUTMENT)

NOTES

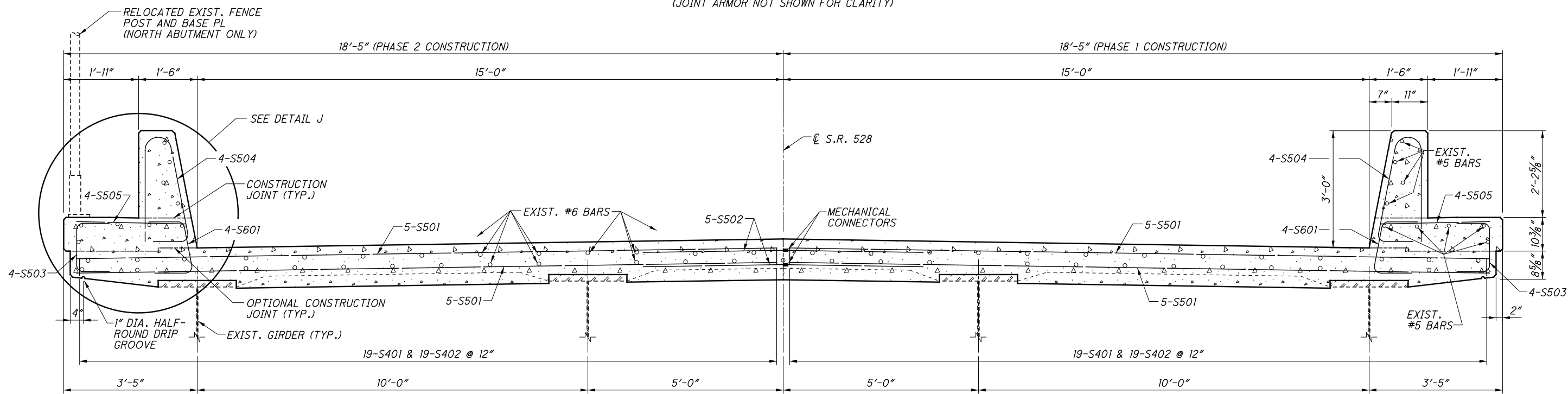
MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

REFURBISH BEARINGS PER ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN. SEE GENERAL NOTE SHEET [4/14].

F:\2016\116041 D12 Bridge Rehab\Group 1A Project\ProjectData\103033\Design\Structures\LAK-528-0192\0192CEX003.dgn 2/15/2017 10:45:56 AM JeffSmith



VIEW G-G
(JOINT ARMOR NOT SHOWN FOR CLARITY)



SECTION H-H

LEGEND

- INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN FOR PAYMENT.

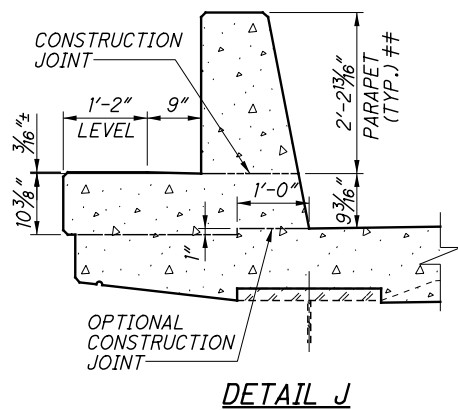
NOTES

MATERIALS SHOWN ARE NEW UNLESS OTHERWISE NOTED.

PROPOSED DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL MATCH THE EXISTING ABUTMENT AND SUPERSTRUCTURE.

REINFORCING STEEL SPLICE LENGTHS SHALL BE 3'-0" FOR HORIZONTAL #5 BARS AND 3'-4" FOR HORIZONTAL #6 BARS.

SECTIONS G-G & H-H: FOR LOCATIONS SEE SHEET 9/14.



DETAIL J

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: CUY-6A-0.42/LAK-
528-1.92

PID: 103033

Date: 1/26/2017

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 11, 2015, and executed by FHWA and ODOT.

1. Waterway Permit Time Restrictions:

No waterway permits are required for CUY-6A-0.42/LAK-528-1.92, PID 103033.

NOTE: If project conditions change and temporary or permanent fill is required, additional permitting is necessary.

2. Deviations From Permitted Construction Activities

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

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

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

3. In-Stream Work Restrictions

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

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Rocky River	23+50.00	No in-stream work permitted
Grand River	40+50.00	No in-stream work permitted

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

4. Cultural Resources

If archeological sites or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section the Engineer shall also contact the Cuyahoga County Sheriff's Office at (216) 443-6000 or the Lake County Sheriff's Office at (440) 350-5517.

5. Aquatic Resource Demarcation:

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance.

No impacts to Rocky River or Grand River are authorized for this project.

The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

6. Spill containment:

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

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

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

7. Blasting:

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

8. Bridge Inspection:

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

9. Project Inspection:

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

10. Temporary Access Fills (Stream and River Crossings and Fills)

Temporary impacts to streams are not authorized for this project. Temporary fill activities can include, but are not limited to, causeways, work pads, coffer dams, sheet piling, and construction equipment. Any unauthorized temporary impacts that occur will be in violation of Section 404 and 401 of the Clean Water Act.

11. Bridge Demolition Debris:

Bridge demolition into Cuyahoga River is not authorized for this project and debris is considered a temporary fill activity by the USACE and Ohio EPA. If any demolition debris inadvertently falls into Cuyahoga River it must be removed immediately. If removal of debris material cannot be achieved immediately, please contact ODOT-Office of Environmental Services-Waterway Permits Unit at 614-466-7100.

12. Notice to Navigation

Contact Mr. Bob Remmers, Chief of the Operations and Technical Services Section of the U.S. Army Corps of Engineers, Buffalo District a minimum of 14 days prior to commencement of construction activities at (716) 879-4277 to provide information for the preparation of a Notice to Navigation Interests for the CUY-6A-0.42 over the Rocky River location. A form is attached to these Special Provisions.

13. Other Notification Requirements

Contact Mr. Lee Soule, U.S. Coast Guard 9th District, 30 days prior to the commencement of construction activities at the CUY-6A-0.42 (Rocky River) location.

Mr. Lee Soule
USCG, 9th District
 (216) 902-6085
Lee.D.Soule@uscg.mil

Contact Mr. Vito Melilli, USACE Ohio Area Office POC, prior to the commencement of construction activities at the CUY-6A-0.42 (Rocky River) location to notify him of the actual start date of the project and all milestone events/operations during the prosecution of work.

Mr. Vito Melilli, Chief
USACE, Buffalo District, Ohio Area Office
 (216) 685-1205
vito.c.melilli@usace.army.mil

14. Incidental Debris

Notify the Engineer and remove any incidental debris that falls into the Federal Channel of the Rocky River. The Engineer shall notify Mr. Vito Melilli, USACE, Ohio Area Office POC, of any such debris.

Mr. Vito Melilli, Chief
USACE, Buffalo District, Ohio Area Office
 (216) 685-1205
vito.c.melilli@usace.army.mil

15. Vertical Bridge Clearance

Scaffolding is authorized for CUY-6A-0.42 from January 1, 2017 through October 31, 2017, provided it hangs no more than 10 feet below low steel of the bridge. Steady burning amber lights shall be displayed on the bottom and four corners of the scaffolding. The permitted bridge lighting must remain operational throughout the project.

LAK-528-1.92 has no vertical bridge clearance restrictions from the U.S. Coast Guard.

16. U.S. Coast Guard Authorization

The U.S. Coast Guard authorization is subject to be rescinded or revised at any time by the Commander, Ninth Coast Guard District should the needs of navigation change or safety concerns arise. Coordination with Mr. Lee Soule, USCG Ninth District is required if CUY-6A-0.42 project conditions change.

Version: 2014

Notice to Navigation

For USACE Internal Use Only						
Received by:		Mail	Email	Intranet	Infoport	File
Navigation number assigned:						

Date: _____

Contact Information

Applicant:	Ohio Department of Transportation
Telephone #:	_____
Contact Person:	_____
Subcontractor:	_____
Name:	_____
Telephone #:	_____
Contact Person:	_____

Who work is being done for

--

Type of work that is being done

--

Location (river/mile point/right or left descending)

--

Description of floating plant (boat and name/type of equipment they will use/how many pieces of equipment)

--

Monitoring which marine channels at the worksite?

--

Location of floating plant during non-working hours:			
Date work will begin:		Completion Date:	
Work Hours per Day:		Days per Week:	

NOTE: WORK CAN NOT BEGIN SOONER THAN 14 DAYS ONCE NTN IS COMPLETE

PERMIT NUMBER:	
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SPECIAL PROVISIONS

ACCESS PERMIT – REPAIR OF DETROIT ROAD BRIDGE OVER ROCKY RIVER, CUY-6A-0.42

PID: 103033

DATE: 2/6/2017

PERMIT-REPAIR DETROIT BRIDGE OVER ROCKY RIVER, CUY-6A-0.42

Permission hereby is granted on behalf of the BOARD OF PARK COMMISSIONERS OF THE CLEVELAND METROPOLITAN PARK DISTRICT ("Cleveland Metroparks") to The Ohio Department of Transportation ("Permittee"), to perform repairs to the subject bridge including the pier and low retaining wall adjacent to Emerald Necklace marina (collectively, the "Improvements") on Cleveland Metroparks land in the Rocky River Reservation within the area identified on the map attached hereto as Exhibit A and made a part hereof (the "Permit Area"), subject to the following terms and conditions:

1. Term of Permit.

This Permit shall take effect on the date of Cleveland Metroparks receipt of proof of insurance, as hereinbelow described, together with this Permit signed by Cleveland Metroparks and Permittee, provided that Permittee shall notify Cleveland Metroparks Ranger Department (440-331-5530) and Reservation Manager Rick Ditch (440-679-1264) of its intent to commence said activities at least two (2) working days in advance of activities and provided further that this Permit shall not take effect before May 30, 2017, and shall continue until November 1, 2017, unless extended with prior written approval by Cleveland Metroparks, except that Permittee, at Permittee's sole cost and expense, thereafter shall be obligated to repair and maintain the Improvements in good condition, whether such repair or maintenance may be required by reason of work in regards to this Permit by Permittee or its subcontractors, or by any other reason such as, without limitation, activities by Cleveland Metroparks or any other party with respect to the Permit Area, and shall be permitted to enter upon the Permit Area from time to time for such repair and maintenance, upon request, and after approval of plans and specifications, pursuant to additional permit(s) issued by Cleveland Metroparks, as necessary; provided, however that Cleveland Metroparks maintains the right to revoke this Permit at any time for failure to comply with any of the terms and conditions hereof.

2. Conditions of Work.

(a) Plans and Specifications. Permittee shall construct the Improvements in accordance with the plans and specifications submitted and so approved by Cleveland Metroparks on January 19, 2017 by Kevin Rohde unless a modification thereof thereafter is approved in writing by Cleveland Metroparks. In addition, Permittee shall perform the following:

- i. Use of the Permit Area shown on Exhibit A will be limited to a continuous 100 calendar day period within the overall Permit period noted herein; said schedule shall be noted on the construction schedule and provided at least one week in advance of need to Cleveland Metroparks.
- ii. Work zone shall be pulled back during non-working hours to the extent that boat launching and recovery operations are unobstructed.
- iii. Access for boat launching and recovery through the Permit Area

- iv. shall be allowed by Permittee with no more than 15 minutes notice.
- iv. Secure pedestrian access to and from the boat launching and recovery area shall be permitted at all times.
- v. Equipment and vehicle access through the dry dock area will only be done after a minimum one (1) day advanced notice.

(b) Compliance with Law. Plans and specifications for, work with respect to, and use of the Improvements must be in compliance with all applicable laws, ordinances, rules, and regulations, including without limitation any and all conditions and requirements imposed by Cleveland Metroparks and other governmental authorities with competent jurisdiction.

(c) Permits, etc. Prior to commencing any work on the Improvements, Permittee shall have obtained any and all necessary permits, authorizations, and other consents from any and all governmental authorities with competent jurisdiction.

3. Driveway Requirements. (Intentionally omitted)

4. Use of Permit Area and Rocky River Reservation.

(a) Removal of Vegetation. Permittee agrees to remove from the Permit Area only vegetation that interferes with construction operations and further agrees that clear cutting of the Permit Area is not required or permitted. Notwithstanding the foregoing, no trees on Cleveland Metroparks property shall be removed, trimmed, or otherwise damaged unless otherwise approved in writing by John Krock of the Cleveland Metroparks Natural Resources Division. Permittee properly shall dispose of trimmed and removed vegetation. Except as expressly permitted under this Permit, Permittee shall be liable to Cleveland Metroparks for loss or damage to any vegetation, including without limitation trees, arising out of, or associated with or related to, any of the activities described herein, the amount of such loss or damage being determined by Cleveland Metroparks.

(b) Removal of Topsoil and/or Dirt. Any topsoil and/or dirt removed for the Improvements shall be removed from Cleveland Metroparks property promptly by Permittee unless required for backfilling and grading.

(c) Storage and Parking Conditions. The Reservation Manager shall approve all parking and storage locations and periods of use. No storage of equipment or materials, parking of vehicles, including without limitation standing or stacking of trucks and parking of Permittee's employees' cars or trucks, shall be permitted on the Permit Area or adjoining Cleveland Metroparks property unless otherwise approved in writing by the Park Manager, and such equipment, materials, or vehicles, including without limitation trucks, shall be at the risk of Permittee.

(d) Traffic Control. To ensure safety of park users, Permittee shall be required to provide traffic control measures. Such measures, whether they be in

the form of flagmen, barricades, lighting, escorts, or any other devices, shall be developed by Permittee and shall follow the standards and guidelines of the Ohio Department of Transportation Manual of Uniform Traffic Control Devices for Streets and Highways, subject to the approval of Cleveland Metroparks Ranger Department. In the event of road closures or other temporary impediments to traffic, Ranger personnel are required and must be arranged in advance with Ranger Headquarters at 440-331-5530.

(e) Inspection Rights. To ensure compliance with the terms of this Permit, Cleveland Metroparks shall retain rights of inspection before, during, and after work with respect to the Improvements.

(f) Injury/Emergency Events. In the event of injury that arises in connection with work with respect to the Improvements, or upon the occurrence of an event that would constitute an emergency, Cleveland Metroparks Ranger Department must be notified immediately at 440-331-5530.

5. Use of Park Roadways and Trails.

(a) No Interference. The operation of equipment and vehicles, including without limitation trucks, on any roadway or trail, and access by persons entering or leaving the Permit Area shall be undertaken in a manner that shall not interfere with, or restrict the use of, or access to, park facilities by park visitors, including without limitation vehicle, bicycle, and pedestrian traffic.

(b) Limited Access. Access for vehicles, including without limitation trucks, to the Permit Area shall be over Valley Parkway and access roadways in the Scenic Park / Emerald Necklace Marina facilities to and from Detroit Avenue only. No other roadway shall be used for such access.

(c) Limitations on Vehicles. All Cleveland Metroparks roadways and parking lots have a 5 ton maximum gross vehicle weight limit, and trucks are prohibited. Trucks or other over-weight vehicles will be allowed on the route to the Permit Area specified herein subject to the following conditions:

- i. Damage caused by Permittee's vehicles, and to include vehicles operated by Permittee's partners, subcontractors and suppliers, are the responsibility of the Permittee.
- ii. Said damage shall include, but not limited to, cracking, faulting, displacement, rutting and disintegration not present before Permittee's Improvement activities, shall be repaired at Permittee's expense and to the satisfaction of Cleveland Metroparks.
- iii. No vehicle, except rubber-tired, shall be operated on any roadway, trail, or any other paved surface unless otherwise approved in writing by the Reservation Manager.
- iv. All Cleveland Metroparks vehicle bridges have been load rated; if applicable, Permittee shall obtain said load rating(s) prior to

starting the Improvements to ensure said capacities will not be exceeded. Permittee is forbidden to exceed the load rating of all subject bridges.

- v. The Permittee is strongly advised to video the approved access route if the above noted weight restrictions will be exceeded, and to have Agreements in place with partners, subcontractors and suppliers with regard to subject damage repair.

(d) Removal of Debris. All roadways and trails must be kept clear of construction debris, spillage, and mud at all times. Should debris, spillage, or mud be carried onto the roadway or trail from the Permit Area, it shall be removed immediately and, in any event, the roadway and trail shall be left clean at the end of each work day.

6. Restoration of Permit Area.

(a) Restoration. Permittee, at Permittee's sole cost and expense, promptly shall restore all surfaces, including without limitation driveways, lawns, grass areas, and fences, to the condition existing before being disturbed.

(b) All Purpose Trail Specifications. Without limiting the generality of the foregoing, Permittee, at Permittee's sole cost and expense, promptly shall restore all purpose trails to the condition existing before being disturbed, including without limitation the following:

- i. All repair areas will be full width; partial width patches will not be permitted.
- ii. After existing asphalt removed, existing subbase shall be inspected by Cleveland Metroparks and direction given as to re-grading and compaction or subbase replacement.
- iii. Subbase shall be replaced as directed with not less than 6" ODOT CMS item 304 limestone aggregate (not slag), compacted, and placed on proof rolled subgrade.
- iv. Installation of not less than 3" ODOT CMS item 448 Asphaltic Concrete.
- v. Asphalt joints shall be "butt" type, perpendicular to trail alignment and saw-cut full asphalt depth, no "feather" edges permitted, and sealed per ODOT CMS 705.04.
- vi. Compliance of all materials with requirements of State of Ohio, Department of Transportation, and Construction & Material Specifications.

It is advised that the Permittee video the access trails and roadways prior to commencing activities.

(c) Seed Specifications. All soil areas disturbed by Permittee's activities shall be seeded and mulched per ODOT CMS 659. The seed mixture for restoration of lawn and roadside areas shall be a mixture of 20% Kentucky 31

Fescue, 25% common Kentucky Bluegrass, 20% Manhattan Rye Grass, and 35% Creeping Red Fescue at the rate of eight (8) pounds per one thousand square feet (8:1000). When specifically required, other areas shall be seeded with ODOT CMS 659 Type 5B Native Wildflower and Grass Mixture. Mulching material shall conform to ODOT CMS 659. Topsoil shall conform to ODOT CMS 653.

7. Indemnification.

Permittee agrees to indemnify, hold harmless, and, if requested, defend Cleveland Metroparks, and any and all of Cleveland Metroparks' officers, employees, and agents from and against any and all liabilities, costs, claims, demands, fines, penalties, proceedings, actions, and causes of action, including without limitation reasonable attorneys' fees, arising out of, or associated with, or related to, any of the activities described herein.

8. Insurance.

Permittee understands that insurance carried by Cleveland Metroparks will not include insurance related to the Activities. Permittee shall maintain self-insurance for claims for bodily injury (including death) and property damage related to this Permit, the Permit Area, and the Activities in accordance with its customary practices, including without limitation maintenance of an assigned reserve therefore, up to commercially reasonable limits but not less than One Million Dollars (\$1,000,000) per occurrence. Promptly upon request by Cleveland Metroparks from time to time, Permittee shall provide Cleveland Metroparks with a letter of confirmation with respect to such self insurance and assigned reserve, in form satisfactory to Cleveland Metroparks.

9. Termination of Permit.

If at any time the Permit Area ceases to be used by Permittee for the purpose specified herein, the rights hereby granted automatically shall terminate whereupon Permittee, if Cleveland Metroparks so requests, shall remove the Improvements from the Permit Area in a manner satisfactory to Cleveland Metroparks and, if either Cleveland Metroparks or Permittee so requests, Cleveland Metroparks and Permittee promptly shall execute and record a document that evidences such termination.

10. Entire Agreement.

This Permit constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, written or oral, with respect thereto.

11. Modification.

No modification of this Permit shall be binding upon Cleveland Metroparks

or Permittee unless set forth in writing and executed by Cleveland Metroparks and Permittee.

12. Severability.

If any provision of this Permit shall be or become invalid or unenforceable, then this Permit shall be divisible as to such provision, and the remainder of this Permit shall be and remain valid and binding as though such provision were not included herein.

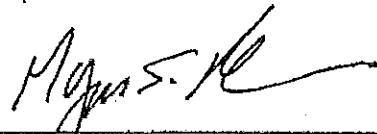
13. Third-Party Rights.

Nothing herein expressed or implied is intended or shall be construed to confer upon any other entity, other than as herein set forth, any rights or remedies under, or by reason of, this Permit.

14. Acceptance of Permit.

Acceptance of this Permit by Permittee will constitute acceptance of all conditions set forth herein.

Accepted:



Myron S. Pakush
Deputy District Director
Ohio Department of Transportation, Dist. 12
5500 Transportation Blvd.
Garfield Heights, Ohio 44125
216-584-2000
myron.pakush@dot.ohio.gov

Date: 02-06-17

Board of Park Commissioners of the
Cleveland Metropolitan Park District
4101 Fulton Parkway
Cleveland, Ohio 44144
(216) 351-6300



John C. Kilgore, P.E.
Manager of Facilities Engineering
216-635-3251
ick@clevelandmetroparks.com

Date: 2/6/17

