

HAM - LMST Beechmont Bridge (PART 1 AND PART 2)  
 200595 PID - 107295  
 Dist 8 12/17/2020

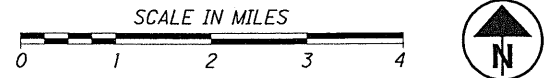
Contract Proposal available @  
[www.contracts.dot.state.oh.us](http://www.contracts.dot.state.oh.us)

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LOCATION MAP

LATITUDE: 39°06'32" LONGITUDE: -84°24'05"



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

**DESIGN DESIGNATION**

DESIGN SPEED: 20 MPH  
 LEGAL SPEED: N/A  
 DESIGN FUNCTIONAL CLASSIFICATION:  
 MULTI-USE TRAIL

**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATES	SHEET #
SHOULDER WIDTH	09/03/2020	31

**UNDERGROUND UTILITIES**  
 Contact Two Working Days Before You Dig  
  
**OHIO811.org**  
 Before You Dig  
 OHIO811, 8-1-1, or 1-800-362-2764  
 (Non-members must be called directly)

PLAN PREPARED BY:

**IBI GROUP**  
 23 Triangle Park Drive - Suite 2300  
 Cincinnati OH 45246 USA  
 tel 513 942 3141 fax 513 881 2263  
 ibigroup.com

**ENGINEERS SEAL:**  
 FOR STRUCTURES OVER 20' SPAN (HAM-32-0127)

STATE OF OHIO  
 REGISTERED PROFESSIONAL ENGINEER  
 STEVEN JOSEPH ANSLINGER  
 E-53230

SIGNED: *Steven J. Anslinger*  
 DATE: 8/27/2020

**ENGINEERS SEAL:**  
 FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20' SPAN

STATE OF OHIO  
 REGISTERED PROFESSIONAL ENGINEER  
 STEVEN R. BUTLER  
 E-71774

SIGNED: *Steve Butler*  
 DATE: 8/31/2020

STANDARD CONSTRUCTION DRAWINGS											SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-1.1	7/28/00	MGS-1.1	1/19/18	BR-1-13	1/17/14	HL-30.22	4/17/20	MT-98.28	1/17/20	TC-41.30	10/18/13	800	10/16/20	SOIL NAIL
BP-2.2	7/18/08	MGS-2.1	1/19/18	BR-2-15	7/17/15	HL-30.33	4/17/20	MT-98.29	1/17/20	TC-41.41	7/19/19	813	10/19/18	RETAINING WALL
BP-3.1	01/17/20	MGS-3.1	1/19/18	EXJ-4-87	1/19/18	HL-40.10	7/17/20	MT-98.30	7/19/19	TC-42.10	10/18/13	821	4/20/12	7/22/19
CB-1.1	7/19/19	MGS-3.2	1/18/13	GSD-1-19	1/18/19	HL-50.21	4/17/20	MT-99.20	4/19/19	TC-42.20	10/18/13	832	10/19/18	WATERWAY PERMIT TO BE ISSUED
CB-2.1	7/20/18	MGS-4.2	7/19/13	HW-2.1	7/20/18	HL-60.11	7/21/17	MT-99.30	1/17/20	TC-52.10	10/18/13	878	1/17/20	
		MGS-4.3	1/18/13	HW-2.2	7/20/18	HL-60.12	4/17/20	MT-99.60	7/15/16	TC-52.20	7/20/18	913	4/21/17	
		MGS-5.3	7/15/16	PCB-91	7/17/20	HL-60.31	1/17/20	MT-101.60	1/17/20	TC-61.10	1/17/20	921	4/20/12	
DM-1.1	7/17/20	MGS-6.1	1/19/18	RB-1-55	7/19/13			MT-101.70	1/17/20	TC-61.30	7/19/19	961	1/18/19	
DM-2.1	1/18/13					MT-95.31	7/19/19	MT-101.75	1/17/20	TC-65.10	1/17/14	1126	4/19/19	
DM-4.1	7/17/20	RM-4.2	4/17/20	HL-10.11	4/17/20	MT-95.32	4/19/19	MT-101.80	1/17/20	TC-65.11	7/21/17	888	10/18/19	
DM-4.2	7/20/12	RM-4.5	7/21/17	HL-10.12	1/20/17	MT-95.45	1/17/20	MT-101.90	7/17/20	TC-71.10	1/19/18			
DM-4.3	1/15/16	RM-4.6	7/19/13	HL-10.13	4/17/20	MT-95.50	7/21/17	MT-102.10	1/17/20	TC-72.20	7/20/18			
DM-4.4	1/15/16	RM-5.2	1/18/19	HL-20.11	7/17/20	MT-96.26	1/18/19	MT-105.10	1/17/20	TC-83.10	1/17/20			
				HL-20.14	4/17/20	MT-97.10	4/19/19	MT-120.00	1/19/18	TC-84.20	10/18/13			
BP-5.1	1/18/19	AS-1-15	7/17/15	HL-30.11	7/17/20	MT-98.10	1/17/20			TC-84.21	10/18/13			
		AS-2-15	1/18/19	HL-30.21	4/17/20	MT-98.20	4/19/19	TC-41.20	10/18/13	TC-85.10	4/17/20			
										TC-85.21	4/17/20			
										TC-85.22	1/19/18			

**PROJECT DESCRIPTION**

CONSTRUCTION OF A CONNECTION TO THE EXISTING LITTLE MIAMI SCENIC TRAIL BIKE TRAIL AND THE EXISTING OTTO ARMLEDER BIKE TRAIL VIA THE WIDENING OF THE EXISTING BRIDGE OVER BEECHMONT AVENUE.

PROJECT EARTH DISTURBED AREA: 3.09 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 3.25 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: 6.34 ACRES

**2019 SPECIFICATIONS**

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

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

**HAM LMST BEECHMONT BRIDGE - PT 1**

CITY OF CINCINNATI  
 ANDERSON TOWNSHIP  
 HAMILTON COUNTY, OHIO

FOR PART 2, SEE HAM-SR 32-1.44R



**INDEX OF SHEETS:**

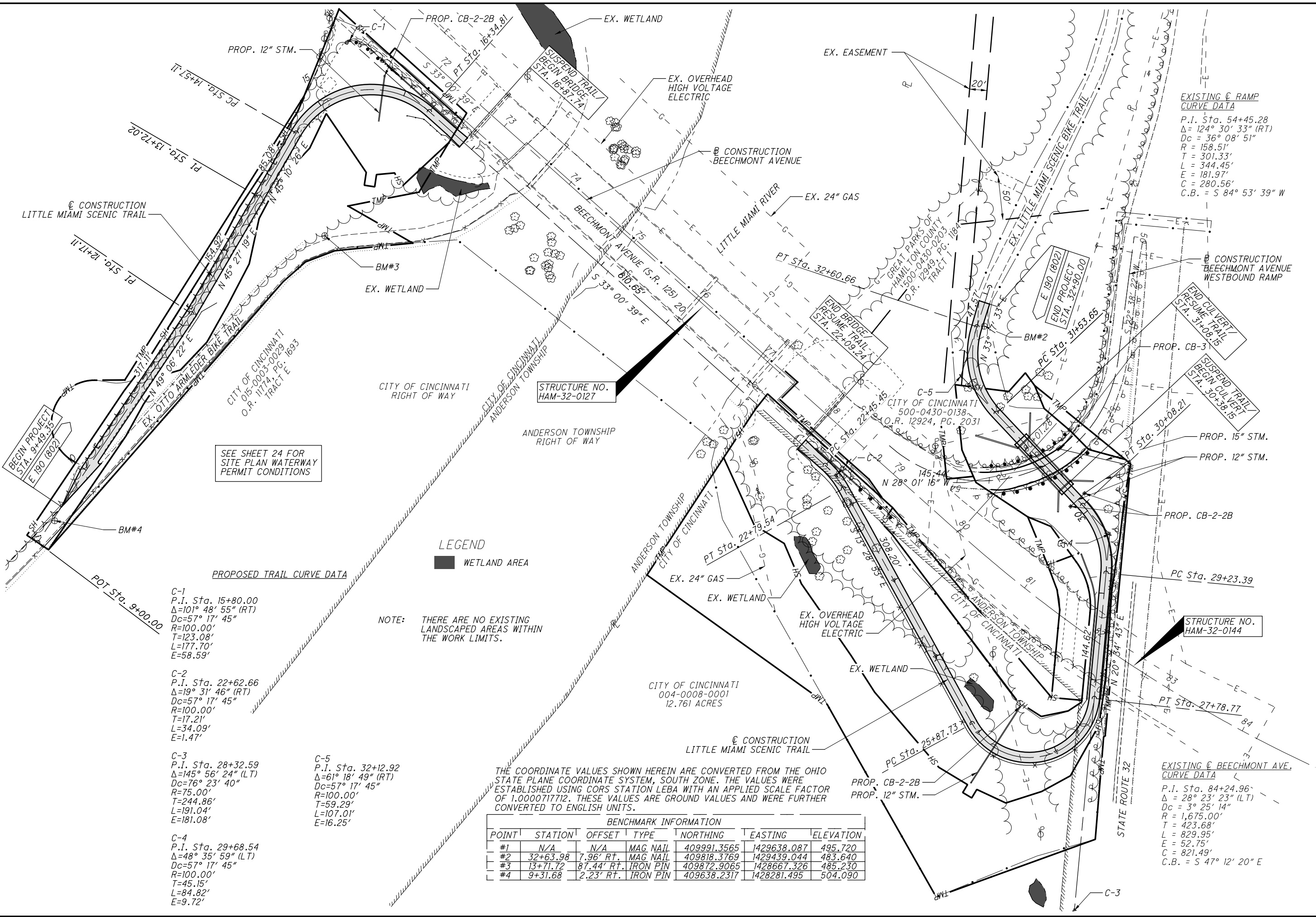
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I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE PART-TIME CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEETS 9-16, DURING WHICH TIME DETOURS WILL BE PROVIDED AS SHOWN HEREIN. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED: *Tony K. Copbell*  
 DATE: 9/2/2020 DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. **E 190 (802)**  
 PID NO. **107295**  
 CONSTRUCTION PROJECT NO. **NONE**  
 RAILROAD INVOLVEMENT **NONE**  
 HAM LMST BEECHMONT BRIDGE - PT 1  
 1/127



**EXISTING C RAMP CURVE DATA**  
 P.I. Sta. 54+45.28  
 $\Delta = 124^\circ 30' 33''$  (RT)  
 $Dc = 36^\circ 08' 51''$   
 $R = 158.51'$   
 $T = 301.33'$   
 $L = 344.45'$   
 $E = 181.97'$   
 $C = 280.56'$   
 C.B. =  $S 84^\circ 53' 39'' W$

SEE SHEET 24 FOR SITE PLAN WATERWAY PERMIT CONDITIONS

NOTE: THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.

**LEGEND**  
 ■ WETLAND AREA

**C-1**  
 P.I. Sta. 15+80.00  
 $\Delta = 101^\circ 48' 55''$  (RT)  
 $Dc = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 123.08'$   
 $L = 177.70'$   
 $E = 58.59'$

**C-2**  
 P.I. Sta. 22+62.66  
 $\Delta = 19^\circ 31' 46''$  (RT)  
 $Dc = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 17.21'$   
 $L = 34.09'$   
 $E = 1.47'$

**C-3**  
 P.I. Sta. 28+32.59  
 $\Delta = 145^\circ 56' 24''$  (LT)  
 $Dc = 76^\circ 23' 40''$   
 $R = 75.00'$   
 $T = 244.86'$   
 $L = 191.04'$   
 $E = 181.08'$

**C-4**  
 P.I. Sta. 29+68.54  
 $\Delta = 48^\circ 35' 59''$  (LT)  
 $Dc = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 45.15'$   
 $L = 84.82'$   
 $E = 9.72'$

**C-5**  
 P.I. Sta. 32+12.92  
 $\Delta = 61^\circ 18' 49''$  (RT)  
 $Dc = 57^\circ 17' 45''$   
 $R = 100.00'$   
 $T = 59.29'$   
 $L = 107.01'$   
 $E = 16.25'$

THE COORDINATE VALUES SHOWN HEREIN ARE CONVERTED FROM THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. THE VALUES WERE ESTABLISHED USING CORS STATION LEBA WITH AN APPLIED SCALE FACTOR OF 1.0000717712. THESE VALUES ARE GROUND VALUES AND WERE FURTHER CONVERTED TO ENGLISH UNITS.

BENCHMARK INFORMATION						
POINT	STATION	OFFSET	TYPE	NORTHING	EASTING	ELEVATION
#1	N/A	N/A	MAG NAIL	409991.3565	1429638.087	495.720
#2	32+63.98	7.96' RT.	MAG NAIL	409818.3769	1429439.044	483.640
#3	13+71.72	87.44' RT.	IRON PIN	409872.9065	1428667.326	485.230
#4	9+31.68	2.23' RT.	IRON PIN	409638.2317	1428281.495	504.090

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**PUBLIC LANDS AND FACILITIES**

**GENERAL:**  
THE PROJECT AND WORK TO BE PERFORMED ARE LOCATED WITHIN OR ABUTTING PUBLIC LANDS AND FACILITIES PROTECTED UNDER SECTION 4(F) OF THE U.S. DEPARTMENT OF TRANSPORTATION (USDOT) ACT OF 1966 (23 CFR PART 774). THESE PUBLIC LANDS AND FACILITIES INCLUDE THE EXISTING SEGMENTS OF THE LITTLE MIAMI SCENIC TRAIL (PAVED MULTI-USE BIKE/PEDESTRIAN TRAIL) AND ASSOCIATED PARKING AND TRAILHEAD AREA; THE LITTLE MIAMI RIVER (DESIGNATED AND MANAGED AS A STATE AND FEDERAL SCENIC RIVER), INCLUDING ITS SURFACE WATERS AND BANKS; AND THE PUBLIC LANDS, PASSIVE RECREATION AREAS AND GREENSPACE ALONG THE RIVER AND TRAIL. THE PROVISIONS OF THIS SECTION ARE FEDERAL REQUIREMENTS TO AVOID OR MINIMIZE CONSTRUCTION PERIOD IMPACTS ON THESE SECTION 4(F) PUBLIC LANDS AND FACILITIES.

**TEMPORARY CONSTRUCTION FENCING FOR RESOURCES WITHIN OR ABUTTING CONSTRUCTION LIMITS:**  
TO PROTECT THE PUBLIC LANDS AND FACILITIES ALONG THE LITTLE MIAMI RIVER (INCLUDING THE RIVER ITSELF, AS WELL AS THE ASSOCIATED MULTI-USE TRAIL AND PASSIVE RECREATION LANDS AND GREENSPACE) AND THE PUBLIC, THE CONTRACTOR SHALL INSTALL AND MAINTAIN SECURE AND COMPLETE TEMPORARY CONSTRUCTION FENCING ALONG THE LANDSIDE BOUNDARIES OF THE PROJECT CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

**APPROPRIATE SIGNAGE:**  
PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL SIGNAGE APPROVED BY THE ENGINEER TO TRAIL, LANDS AND RIVER USERS OF CONSTRUCTION ACTIVITIES AND ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS.

ADVISORY AND SAFETY TEMPORARY SIGNS/BUOYS/MARKERS ARE TO BE PLACED 300 FEET UPSTREAM AND DOWNSTREAM OF THE PROJECT AREA TO ALERT BOATERS OF CONSTRUCTION ACTIVITY AND PROVIDE INSTRUCTIONS TO SAFELY NAVIGATE AROUND/THROUGH/OR AVOID THE PROJECT AREA.

PORTAGE TEMPORARY SIGNAGE IS TO BE PLACED AT THE NEAREST UPSTREAM AND DOWNSTREAM PUBLIC ACCESS POINTS (ARMELDER PARK AND MAGRISH PARK, RESPECTIVELY) THAT PROVIDE INFORMATION ABOUT THE DURATION OF POSSIBLE RECREATIONAL IMPACTS AND PROVIDE PORTAGE AND RE-ROUTING INSTRUCTIONS FOR PADDLERS.

PERMANENT SCENIC RIVER PERMANENT SIGNS SHALL BE POST-MOUNTED ON THE RIGHT-HAND SIDE OF THE TRAIL ON BOTH TRAIL BRIDGE APPROACHES APPROXIMATELY 50 FEET FROM THE START OF THE ON-BRIDGE TRAIL SECTION. THE SIGNS SHALL BE MUTCD STANDARD FOR PARKS AND RECREATION FACILITIES FOR LOW-SPEED/NON-ROADWAY CONDITIONS, 18" X 18", AND SHALL HAVE A WHITE MESSAGE AND WHITE BORDER ON A BROWN BACKGROUND. THE SIGN MESSAGE SHALL READ: LITTLE MIAMI STATE AND NATIONAL SCENIC RIVER. A PERMANENT SIGN OF APPROPRIATE SIZE, SCALE AND COLORS, APPROVED BY THE PROJECT ENGINEER, SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF THE NEW LITTLE MIAMI SCENIC TRAIL BRIDGE, WITH APPROVED MESSAGE TO INCLUDE: BRIDGE/TRAIL NAME, BRIDGE NUMBER, AND LITTLE MIAMI RIVER MILE.

THE CONTRACTOR SHALL PLACE THE SIGNS IN LOCATIONS AS APPROVED BY THE ENGINEER. ALL LABOR, EQUIPMENT, AND MATERIALS ASSOCIATED WITH TEMPORARY SIGNAGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC.

**STORING/ STAGING RESTRICTIONS:**  
THE CONTRACTOR SHALL NOT STORE OR STAGE CONSTRUCTION EQUIPMENT OR MATERIALS WITHIN THE BOUNDARIES OF THE PUBLIC LANDS AND FACILITIES ALONG THE LITTLE MIAMI RIVER (INCLUDING THE RIVER ITSELF, AS WELL AS THE ASSOCIATED MULTI-USE TRAIL AND PASSIVE RECREATION LANDS AND GREENSPACE), OUTSIDE OF PROPOSED CONSTRUCTION LIMITS, EXCEPT FOR AREA(S) APPROVED BY THE OFFICIAL WITH JURISDICTION (GREAT PARKS OF HAMILTON COUNTY; ODNR) SPECIFICALLY FOR STORAGE AND STAGING OF EQUIPMENT PER CMS 107.10.

**COORDINATE CONSTRUCTION SCHEDULE:**  
THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH THE ODNR TRAILS ADMINISTRATOR, GREAT PARKS OF HAMILTON COUNTY, AND ODOT PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND PROVIDE REGULAR UPDATES, ESPECIALLY DURING THE PEAK PERIOD OF MAY 1-OCTOBER 15. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION ENGINEER AND GREAT PARKS OF HAMILTON COUNTY AT LEAST 24 HOURS IN ADVANCE OF CONSTRUCTION ACTIVITIES THAT WILL RESTRICT ACCESS TO THE TRAIL. DUE TO THE ANTICIPATED NATURE AND COMPLEXITY OF CONSTRUCTION ACTIVITIES, IT MAY NOT BE POSSIBLE TO REMOVE RESTRICTIONS TO RECREATIONAL BOATING DURING SUMMER HOLIDAYS AND/OR WEEKENDS.

**PUBLIC LANDS AND FACILITIES**

**MAINTAIN ACCESS TO PROPERTY:**  
THE CONTRACTOR SHALL MAINTAIN SAFE AND SECURE PUBLIC ACCESS TO THE PUBLIC LANDS AND FACILITIES ALONG THE LITTLE MIAMI RIVER (INCLUDING THE RIVER ITSELF, AS WELL AS THE ASSOCIATED MULTI-USE TRAIL AND PASSIVE RECREATION LANDS AND GREENSPACE) AT ALL TIMES DURING CONSTRUCTION ACTIVITIES, EXCEPT AS PERMITTED FOR SCHEDULED AND APPROVED CLOSURES NEEDED TO MAINTAIN WORKER AND PUBLIC SAFETY, BY USE OF FLAGGING OPERATIONS AND/OR A DETOUR APPROVED BY THE PROJECT ENGINEER, AND AS IDENTIFIED ELSEWHERE IN THESE NOTES. BECAUSE THERE ARE MIXED USES OF THE PUBLIC WATERS AND LANDS THROUGH THE PROJECT SITE, THE CONTRACTOR IS ADVISED THAT CONDITIONS OF ACTIVITY AND USE MAY DICTATE SPECIAL AND IMMEDIATE COORDINATION AND CONTROL ACTIONS FOR THE PROJECT BOTH PUBLIC AND WORKER SAFETY, AND SHALL ADVISE THE PROJECT ENGINEER IMMEDIATELY OF ANY SUCH CONDITIONS THAT MAY AFFECT EITHER PLANNED ACCESS OR SPECIFIC SAFETY MEASURES.

**MAINTAIN ACCESS; RESTRICT ONLY WHEN NECESSARY:**  
THE CONTRACTOR SHALL ONLY RESTRICT PUBLIC ACCESS TO THE PUBLIC LANDS AND FACILITIES ALONG THE LITTLE MIAMI RIVER (INCLUDING THE RIVER ITSELF, AS WELL AS THE ASSOCIATED MULTI-USE TRAIL AND PASSIVE RECREATION LANDS AND GREENSPACE) FOR TIME PERIODS NEEDED TO COMPLETE CONSTRUCTION ACTIVITIES THAT COULD COMPROMISE PUBLIC OR WORKER SAFETY. ACCESS TO THE PUBLIC LANDS AND FACILITIES ALONG THE LITTLE MIAMI RIVER (INCLUDING THE RIVER ITSELF, AS WELL AS THE ASSOCIATED MULTI-USE TRAIL AND PASSIVE RECREATION LANDS AND GREENSPACE) SHALL REMAIN OPEN TO THE PUBLIC AT ALL OTHER TIMES THROUGHOUT CONSTRUCTION. CLOSURES AND ACCESS RESTRICTIONS SHALL BE DISCUSSED AT EVERY PROGRESS MEETING, AND OTHERWISE COORDINATED AT LEAST WEEKLY OR AS NEEDED. THE PROJECT ENGINEER SHALL NOTIFY THE ODNR TRAILS ADMINISTRATOR WHEN WATER ACCESS RESTRICTIONS TO BOATERS AND PADDLERS ON THE RIVER THROUGH THE SITE WILL LAST LONGER THAN ONE (1) CONSECUTIVE DAY. FOR SHORTER TERM RIVER USE INTERRUPTIONS (< 1 DAY), FLAGGERS OR OTHER MEANS WILL BE UTILIZED TO ALERT PUBLIC RIVER TRAFFIC OF RIVER CLOSURES.

THE PROJECT ENGINEER SHALL NOTIFY THE ODNR TRAILS ADMINISTRATOR 14 CALENDAR DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO ALLOW ODNR TO POST NOTICE OF IMPENDING PROJECT CONSTRUCTION ON THE APPROPRIATE ODNR WEBPAGES AND ASSOCIATED ONLINE BOATING MAPS. AS PART OF NOTIFICATION EFFORTS, THE PROJECT ENGINEER SHALL ALSO PROVIDE PLANS THAT INDICATE SIGNAGE LOCATION ALONG THE WATERWAY AND ANY ADDITIONAL PLANNED NOTIFICATION EFFORTS WITH ODNR THAT WILL TAKE PLACE DURING OR AFTER CONSTRUCTION. THE ODNR TRAILS ADMINISTRATOR WILL BE NOTIFIED WHEN THE PROJECT IS COMPLETE, AND ALL SIGNAGE HAS BEEN REMOVED.

**SCENIC RIVER FLOODPLAIN**

ANY AND ALL CONSTRUCTION DEBRIS, EARTHEN DEBRIS, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, AND TRASH SHOULD BE DISPOSED OF AT AN APPROVED UPLAND SITE OR LAND FILL ABOVE FEMA 100-YEAR FLOOD ELEVATIONS. DISPOSAL OF ANY SUCH MATERIALS WITHIN 1000 FEET OF THE LITTLE MIAMI RIVER IS PROHIBITED. THE CONTRACTOR SHALL KEEP ALL IDLE EQUIPMENT, FUELS, LUBRICANTS, AND ANY STORAGE FOR/POTENTIALLY TOXIC OR HAZARDOUS MATERIALS OUT OF THE FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA.

**WATERWAY PERMITS**

FEDERAL AND STATE WATERWAY PERMITS HAVE BEEN ISSUED FOR THIS PROJECT. SEE SPECIAL PROVISIONS PACKAGE SPP IN THE CONTRACT DOCUMENTS FOR PERMITS AND CONDITIONS OF PERFORMANCE REQUIRED OF THE CONTRACTOR.

**STORMWATER PERMITS**

THIS PROJECT HAS AN ESTIMATED EARTH DISTURBED AREA OF 6.34 ACRES. NOI, SWPPP AND COMPLIANCE SUBMITTALS ARE REQUIRED UNDER OHIO EPA PERMIT NO.: OHCO00005 (CONSTRUCTION GENERAL NPDES PERMIT FOR STORMWATER). THE REQUIRED NPDES SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND SUBMITTED TO THE PROJECT ENGINEER FOR NOTIFICATION. SEE SPECIAL PROVISIONS PACKAGE SPP IN THE CONTRACT DOCUMENTS FOR PERMIT CONDITIONS OF PERFORMANCE REQUIRED OF THE CONTRACTOR.

**FLOODPLAIN PERMITS**

SPECIAL FLOODPLAIN ACTIVITY PERMITS HAVE BEEN ISSUES FOR THIS PROJECT. A "CERTIFICATE OF COMPLETION" WILL BE REQUIRED TO BE SUBMITTED TO THE HAMILTON COUNTY DEPARTMENT OF PLANNING & DEVELOPMENT FLOODPLAIN MANAGEMENT DIVISION AT PROJECTS END TO VERIFY THAT THE COMPLETED BRIDGE PROJECT MEETS ALL NFIP STANDARDS. SEE SPECIAL PROVISIONS PACKAGE SPP IN THE CONTRACT DOCUMENTS FOR PERMIT CONDITIONS OF PERFORMANCE REQUIRED OF THE CONTRACTOR.

**WETLANDS**

THERE ARE 5 SMALL WETLANDS ON THE PROJECT SITE. WETLANDS 2, 3 AND 5 (PLAN SHEET 24) ARE TO BE FILLED AS PART OF PROJECT EARTHWORK (SEE ADDITIONAL NOTES BELOW REGARDING NON-REGULATORY REPLACEMENT AND MITIGATION OF THESE 3 WETLANDS). WETLANDS 1 AND 4 ARE JUST OUTSIDE THE PROJECT WORK LIMITS ARE NOT TO BE DISTURBED IN THE COURSE OF WORK.

FOR WETLANDS 2, 3 AND 5, THE TOP 9 INCHES (AVERAGE DEPTH) OF SOIL AND ORGANIC MATERIAL WITHIN THE APPROXIMATE EXISTING WETLAND BOUNDARY, AS FLAGGED IN THE FIELD, IS TO BE STRIPPED AND STOCKPILED NEARBY. IN THE COURSE OF FINAL GRADING AND DRAINAGE WORK, NEW REPLACEMENT WETLAND AREAS WILL BE GRADED BACK IN TO THE FINISH LANDSCAPE IN GENERAL CONSISTENCY WITH DEPTH AND CONFIGURATION OF THE EXISTING WETLANDS, AS DIRECTED BY THE PROJECT ENGINEER, WITH A FINISH LAYER OF THE STOCKPILED SOIL AND ORGANIC MATERIAL. THIS WORK WILL BE PAID FOR UNDER ITEM 203, EXCAVATION AND EMBANKMENT. THE REPLACEMENT WETLAND WORK IS NOT PART OF THE REGULATORY OR WATERWAY PERMIT OBLIGATION FOR THE PROJECT.

CALCULATED  
JAG  
CHECKED  
SRB

**GENERAL NOTES**

HAM LMST BEECHMONT  
BRIDGE - PT 1

**ITEM 614 - MAINTAINING TRAFFIC**

BEECHMONT AVE  
A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, EXCEPT FOR CLOSURES ALLOWED PER THE LANE VALUE CONTRACT TABLE.

SR-32 TO SR-125 WB RAMP  
A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 10 CONSECUTIVE CALENDAR DAYS BEGINNING FRIDAY AT 10 AM AND ENDING MONDAY AT 6 AM, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 15. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$25,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

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

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

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

SR-32 TO SR-125 WB RAMP

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

LANE VALUE CONTRACT TABLE						
LOCATION	EX. THRU LANES	1 LANE CLOSURE	15 MIN. SHORT DURATION COMPLETE CLOSURE	COMPLETE CLOSURE	TIME UNIT	DISINCENTIVE PER TIME UNIT
BEECHMONT AVE RAMP	2	6 AM - 8 PM	5 AM - 10 PM	-	1 MIN.	\$160
SR-32 TO SR-125 WB RAMP	1	-	-	5 AM - 10 PM	1 MIN.	\$65
BIKE TRAIL	-	-	-	10 DAY MAX	DAY	\$25,000
				90 DAY MAX	DAY	\$900

**MAINTENANCE OF BICYCLE TRAFFIC**

CONTRACTOR TO PLACE "TRAIL CLOSED AHEAD" SIGN AT EACH TERMINUS OF THE ARMLEDER AND LUNKEN CONNECTOR TRAIL, AND ON THE LITTLE MIAMI SCENIC TRAIL AT CLEAR CREEK PARK. TYPE III BARRICADES WITH "TRAIL CLOSED" SIGNS SHALL BE PLACED APPROACHING THE WORK AREA ALONG THE EXISTING TRAILS.

LENGTH AND DURATION OF CLOSURES SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. CLOSURES 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.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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

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

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

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

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

IF ON-THE-WATER LAW ENFORCEMENT ASSISTANCE IS NEEDED DURING CONSTRUCTION, THE ODOT PROJECT ENGINEER SHALL CONTACT THE DIVISION OF PARKS AND WATERCRAFT LAW ENFORCEMENT SUPERVISOR (SHANNON.HOFFER@DNR.STATE.OH.US OR (937) 902-4950)

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

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 72 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.

**MAINTENANCE OF CANOE TRAFFIC**

CANOE TRAFFIC SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION OF THE PROJECT EITHER THROUGH EXISTING RIVER CHANNEL OR THROUGH PORTAGE TRAIL APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL PLACE APPROPRIATE SIGNAGE/BUOYS/MARKERS AT A MINIMUM OF 300 FEET UPSTREAM AND 300 FEET DOWNSTREAM OF THE PROJECT AREA TO ALERT PADDLERS/BOATERS OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS, AS NEEDED. EXISTING BOAT LAUNCH/PORTAGE AT OTTO ARMLEDER PARK AND THE EAST BANK (BATAVIA ROAD) CAN BE USED DURING CONSTRUCTION ACTIVITIES.

THE ABOVE SIGNING SHALL BE MOUNTED IN SUCH A WAY AS TO BE A MINIMUM OF 4 FEET ABOVE THE WATER LEVEL, UNOBTAINED BY TREE BRANCHES, AND PROPERLY ANGLED FOR MAXIMUM VISIBILITY FROM THE MAIN CLEAR CHANNEL. THE METHOD OF SUPPORTING THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. UPON COMPLETION OF THE PROJECT, THE SIGNS AND SUPPORT SYSTEMS SHALL BE COMPLETELY REMOVED FROM THE RIVER CHANNEL. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE LIVERIES 14 CALENDAR DAYS PRIOR TO ANY CHANGES AFFECTING RECREATIONAL BOATING TRAFFIC. COPIES OF THE NOTIFICATION SHALL BE PROVIDED TO THE PROJECT ENGINEER.

PORTAGE TRAILS IF USED SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR WITH THE LEAST POSSIBLE DISTURBANCE TO THE SURROUNDING AREA. THE TRAIL SHALL BE ADEQUATELY MARKED IN BOTH DIRECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE RIGHT-OF-WAY FOR THE PORTAGE TRAILS IF REQUIRED.

IN THE EVENT PIPES ARE USED TO DIVERT OR CARRY RIVER WATER, BOTH THE INLET AND OUTLET ENDS SHALL BE ADEQUATELY PROTECTED BY GRATES OR FENCE SO THAT PEOPLE OR CANOES ARE NOT DRAWN THROUGH OR HELD BY THEM.

RIVER CLOSED SIGN  
CONTRACTOR TO PLACE SIGN AT BOAT RAMPS UPSTREAM AND DOWNSTREAM OF THE BRIDGE. THE BOAT RAMPS ARE LOCATED AT ARMLEDER PARK UPSTREAM AND IN THE MAGRISH RIVERLANDS RESERVE DOWNSTREAM. SIGN TO SAY "RIVER CLOSED AT BEECHMONT AVENUE BRIDGE".

SHORT TERM RIVER CLOSURES SHALL BE ALLOWED AS DIRECTED BY THE ENGINEER FOR OPERATIONS SUCH AS BEAM SETTING. IN ADDITION TO THE RIVER CLOSED SIGNS, PERSONNEL ON BOATS SHALL BE PLACED DIRECTLY UPSTREAM OF THE PROJECT IN ORDER TO STOP ANY RIVER TRAFFIC.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

TEMPORARY RESTRICTIONS ARE ANTICIPATED TO LAST LONGER THAN 14 DAYS, ALTHOUGH NOT CONSECUTIVE, AND EXISTING PORTAGE WELL BE USED. THE PROJECT ENGINEER SHALL NOTIFY THE ODOT TRAILS ADMINISTRATOR (TOM ARBOUR) VIA EMAIL AND/OR TELEPHONE (THOMAS.ARBOUR@DNR.STATE.OH.US OR 614-265-6575) 48 HOURS IN ADVANCE WHEN RESTRICTIONS LASTING LONGER THAN A DAY WILL OCCUR. THE USE OF FLAGGERS OR OTHER MEANS WILL BE USED TO ALERT PADDLERS/BOATERS WHEN SHORT-TERM RESTRICTIONS (E.G. 15-30 MINUTES INTERVALS) ARE REQUIRED.

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SHEET NUM.						PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	21	22	24	82	01/CMQ/OT	02/NHS/BR	03/NFP/OT						
<i>ROADWAY</i>														
LS						LS			201	11000	LS	CLEARING AND GRUBBING		
		236				236			202	32000	236	FT	CURB REMOVED	
		78				78			202	35100	78	FT	PIPE REMOVED, 24" AND UNDER	
		532				532			202	38000	532	FT	GUARDRAIL REMOVED	
		1				1			202	58100	1	EACH	CATCH BASIN REMOVED	
		5				5			202	98100	5	EACH	REMOVAL MISC.:EXISTING POSTS	26,29
			4,380			4,380			203	10000	4,380	CY	EXCAVATION	
			22,862			22,862			203	20000	22,862	CY	EMBANKMENT	
		5				5			SPECIAL	20365000	5	EACH	SETTLEMENT PLATFORM	7
2			2			4			204	45000	4	HOUR	PROOF ROLLING	
			76			76			206	10500	76	TON	CEMENT	
			2,916			2,916			206	11000	2,916	SY	CURING COAT	
			2,916			2,916			206	15010	2,916	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
						LS			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
		250				250			606	13000	250	FT	GUARDRAIL, TYPE 5	
		100				100			606	15050	100	FT	GUARDRAIL, TYPE MGS	
		1				1			606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
		1				1			606	35002	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
		1				1			606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
		1,007				1,007			607	98000	1,007	FT	FENCE, MISC.: WOOD FENCE	6
		163				163			622	90000	163	FT	BARRIER, MISC.: MOMENT SLAB BARRIER	34-37
LS						LS			SPECIAL	69098400	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTIONS	7
						LS			878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
<i>EROSION CONTROL</i>														
		326				326			601	20000	326	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
		706				706			601	21000	706	SY	CONCRETE SLOPE PROTECTION	
		17				17			601	32200	17	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
				608		608			653	10000	608	CY	TOPSOIL FURNISHED AND PLACED	
2						2			659	00100	2	EACH	SOIL ANALYSIS TEST	
						997			659	00300	997	CY	TOPSOIL	
						8,979			659	00550	8,979	SY	SEEDING AND MULCHING, CLASS 4A	
						449			659	14000	449	SY	REPAIR SEEDING AND MULCHING	
						449			659	15000	449	SY	INTER-SEEDING	
						1.21			659	20000	1.21	TON	COMMERCIAL FERTILIZER	
						1.86			659	31000	1.86	ACRE	LIME	
						50			659	35000	50	MGAL	WATER	
						20			659	40000	20	MSF	MOWING	
				5,467		5,467			670	00500	5,467	SY	SLOPE EROSION PROTECTION	
		146				146			671	15000	146	SY	EROSION CONTROL MAT, TYPE A	
						LS			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
						LS			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
						LS			832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
		35,000				35,000			832	30000	35,000	EACH	EROSION CONTROL	
<i>DRAINAGE</i>														
					LS	LS			601	35100	LS		ROCK CHANNEL PROTECTION, MISC.: TEMPORARY ACCESS FILL	82
		0.42				0.42			602	20000	0.42	CY	CONCRETE MASONRY	
		58				58			611	04600	58	FT	12" CONDUIT, TYPE C	
		103				103			611	04601	103	FT	12" CONDUIT, TYPE C, AS PER PLAN	51
		74				74			611	04900	74	FT	12" CONDUIT, TYPE D	
		24				24			611	05900	24	FT	15" CONDUIT, TYPE B	
		54				54			611	06700	54	FT	15" CONDUIT, TYPE F, 707.51 OR 707.21	
		1				1			611	98150	1	EACH	CATCH BASIN, NO. 3	
		4				4			611	98470	4	EACH	CATCH BASIN, NO. 2-2B	

**GENERAL SUMMARY (1 OF 4)**

**HAM LMST BEECHMONT BRIDGE - PT 1**

SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	JAG	CHECKED	SRB
54	67	75								01/CMQ/OT	02/NHS/BR	03/NFP/OT										
	48												625	25300	48	FT	CONDUIT, 1-1/2", 725.04					
	1,578												625	25400	1,578	FT	CONDUIT, 2", 725.04					
	2												625	27502	2	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), 70W LED, ASSYMETRIC WIDE, WALL MOUNT, 240V					
	6												625	27505	6	EACH	LUMINAIRE, TUNNEL, SOLID STATE (LED), AS PER PLAN, 8W LED, 4000K, 12V	66				
	788												625	29000	788	FT	TRENCH					
	273												625	29600	273	FT	TRENCH IN PAVED AREA, TYPE B					
	2												625	29900	2	EACH	JUNCTION BOX					
	3												625	29920	3	EACH	STRUCTURE JUNCTION BOX					
	5												625	30700	5	EACH	PULL BOX, 725.08, 18"					
	1												625	31506	1	EACH	PULL BOX REMOVED AND REPLACED					
	10												625	32000	10	EACH	GROUND ROD					
	2												625	33000	2	EACH	STRUCTURE GROUNDING SYSTEM					
	1												625	34001	1	EACH	POWER SERVICE, AS PER PLAN	66				
	2												625	35011	2	EACH	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	66				
	550												625	98100	550	FT	LIGHTING, MISC.: NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	66				
	173												625	98100	173	FT	LIGHTING, MISC.:1 1/2" DUCT CABLE WITH TWO NO. 4 AWG 5000 VOLT CABLES	66				
	LS												625	98200	LS		LIGHTING, MISC.:LIGHTING.	66				
	LS												625	98200	LS		LIGHTING, MISC.:MAINTAIN EXISTING LIGHTING	66				
	1												630	89814	1	EACH	REMOVAL OF WOOD POLE AND STORAGE					
	2												632	28200	2	EACH	DISCONNECT SWITCH WITH ENCLOSURE					
	30												632	30100	30	FT	MESSANGER WIRE, 7 STRAND, 5/16" DIAMETER WITH ACCESSORIES					
	30												632	30600	30	FT	TETHER WIRE, WITH ACCESSORIES					
	1												632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER					
	2												632	89300	2	EACH	WOOD POLE, CLASS 3-40 FT					
	1												632	89400	1	EACH	DOWN GUY					
																	STRUCTURE 20 FOOT SPAN AND UNDER (HAM-032-0136)					
	125												451	10020	125	SY	6" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA	74				
	LS												503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
	4,172												503	21100	4,172	CY	UNCLASSIFIED EXCAVATION					
	19,805												509	10000	19,805	LB	EPOXY COATED REINFORCING STEEL					
	175												511	52100	175	CY	CLASS QC FS CONCRETE					
	168												511	71300	168	SY	CONCRETE, MISC.: CLASS QC FS CONCRETE (WINGWALLS AND HEADWALLS)	74				
	747												512	10100	747	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)					
	381												512	33000	381	SY	TYPE 2 WATERPROOFING					
	73												516	13600	73	SF	1" PREFORMED EXPANSION JOINT FILLER					
	50												518	21200	50	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC					
	70												611	97400	70	FT	CONDUIT, MISC.:16'X11' CONDUIT, TYPE A, 706.05, 7'-0" MAX. COVER	74				
	1,825												613	41200	1,825	CY	LOW STRENGTH MORTAR BACKFILL					
	133												888	10000	133	SY	HIGH FRICTION SURFACE TREATMENT, SINGLE LIFT					
																	RETAINING WALLS (SOIL NAIL WALL)					
	222												202	32800	222	SY	CONCRETE SLOPE PROTECTION REMOVED					
	LS												503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	53				
	5,289												509	10000	5,289	LB	EPOXY COATED REINFORCING STEEL					
	54												511	53014	54	CY	CLASS QC3 CONCRETE, MISC.:QC3 CONCRETE WITH QC/QA, SOIL NAIL WALL PERMANENT CIP FACING	53				
	164												512	10100	164	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)					
	8												516	13600	8	SF	1" PREFORMED EXPANSION JOINT FILLER					
	189												518	40010	189	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS					
	866												518	62600	866	SF	STRUCTURE DRAINAGE, MISC.:PREFABRICATED GEOCOMPOSITE DRAIN	54				
	1,648												520	10001	1,648	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	53				
	38												601	21000	38	SY	CONCRETE SLOPE PROTECTION					
	99												601	37500	99	FT	PAVED GUTTER, TYPE 1-2					
	2												610	50000	2	EACH	RETAINING WALL, MISC.: SOIL NAIL VERIFICATION TEST	54				
	6												610	50000	6	EACH	RETAINING WALL, MISC.: SOIL NAIL PROOF TEST	54				
	1,819												610	50010	1,819	SF	RETAINING WALL, MISC.: SOIL NAIL RETAINING WALL	54				

GENERAL SUMMARY (3 OF 4)

HAM LMST BEECHMONT BRIDGE - PT 1

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ROADWAY QUANTITIES

SHEET NO.	REF. NO.	STATION		SIDE	202	202	202	202	202	203	606	606	606	606	606	607	609	622
		FROM	TO		CURB REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	REMOVAL MISC.: EXISTING POSTS EACH	SETTLEMENT PLATFORM EACH	GUARDRAIL, TYPE 5 FT	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	FENCE, MISC.: WOOD FENCE FT	CURB, TYPE 4-C FT	BARRIER MISC.: MOMENT SLAB BARRIER FT
26	R-1	11+58	12+42	RT												90		
26	R-2	14+72	14+74	RT					2									
27	R-3	16+15	16+89	RT												74		
28	R-4	22+08	25+50	RT												345		
28	R-5	23+00	25+00	C/L						3								
29	R-6	25+50	28+50	RT												320		
29	R-7	27+50	27+78	RT					3							20		
29	R-8	26+00	27+00	C/L						2								
30	R-9	28+50	30+08	RT												158		
	R-10	NOT USED																
31	R-11	52+45	53+74	RT	124	78	125	1			125							
31	R-12	52+50	53+62	LT	112		125				125							
32	R-13	15+42	16+73	LT			161					50	1	1			18	94
33	R-14	22+24	23+24	LT			121					50			1			69
TOTALS CARRIED TO GENERAL SUMMARY					236	78	532	1	5	5	250	100	1	1	1	1007	18	163

EROSION CONTROL/DRAINAGE QUANTITIES

SHEET NO.	REF. NO.	STATION		SIDE	601	601	601	602	611	611	611	611	611	611	611	671
		FROM	TO		CRUSHED AGGREGATE SLOPE PROTECTION SY	CONCRETE SLOPE PROTECTION SY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	12" CONDUIT, TYPE C FT	12" CONDUIT, TYPE C, AS PER PLAN FT	12" CONDUIT, TYPE D FT	15" CONDUIT, TYPE B FT	15" CONDUIT, TYPE F FT	CATCH BASIN, NO. 3 EACH	CATCH BASIN, NO. 2-2B EACH	EROSION CONTROL MAT, TYPE A SY
27	D-1	15+75	15+75	RT & LT			15	0.21			52				1	
27	EC-1	16+67	17+40	RT & LT	163	353										
28	EC-2	21+56	22+29	RT & LT	163	353										
28	EC-3	24+50	25+50	LT												83
29	EC-4	25+50	26+25	LT												63
29	D-2	26+25	26+25	RT & LT			2	0.21		103					1	
30	D-3	30+08	30+17	RT & LT					58		22				2	
30	D-4	30+08	30+75	RT								24	54	1		
TOTALS CARRIED TO GENERAL SUMMARY					326	706	17	0.42	58	103	74	24	54	1	4	146

CALCULATED  
JAG  
CHECKED  
SRB

SUBSUMMARIES

HAM LMST BEECHMONT  
BRIDGE - PT 1

ROADWAY/PAVEMENT QUANTITIES (LITTLE MIAMI SCENIC TRAIL)

SHEET NO.	REF. NO.	STATION		a	b	c	f	g	h	204	206	206	206	304	407	441	441	451
		FROM	TO	FT	FT	SF	SF	SF	SF	HR	TON	SY	SY	CY	GAL	CY	CY	SY
25	P-1	9+49	10+50	100.65	12.00	1,207.80	134.20	1,342.00	301.95	0.08	4.34	167.75	167.75	33.30	26.84	7.46	5.59	
26	P-2	10+50	15+50	500.00	12.00	6,000.00	666.67	6,666.67	1,500.00	0.42	21.56	833.33	833.33	165.43	133.33	37.04	27.78	
27	P-3	15+50	16+88	138.00	12.00	1,656.00	184.00	1,840.00	414.00	0.12	5.95	230.00	230.00	45.66	36.80	10.22	7.67	
28	P-4	22+09	25+50	340.76	12.00	4,089.12	454.35	4,543.47	1,022.28	0.28	14.70	567.93	567.93	112.75	90.87	25.24	18.93	
29	P-5	25+50	28+50	300.00	12.00	3,600.00	400.00	4,000.00	900.00	0.25	12.94	500.00	500.00	99.26	80.00	22.22	16.67	14.00
30	P-6	28+50	30+38	188.15	12.00	2,257.80	250.87	2,508.67	564.45	0.16	8.11	313.58	313.58	62.25	50.17	13.94	10.45	14.00
30	P-7	31+08	32+90	181.85	12.00	2,182.20	242.47	2,424.67	545.55	0.15	7.84	303.08	303.08	60.17	48.49	13.47	10.10	
SUBTOTAL										1.46	75.44	2,915.68	2,915.68	578.82	466.51	129.59	97.19	28.00
TOTALS CARRIED TO THE GENERAL SUMMARY										2	76	2,916	2,916	579	467	130	98	28

PAVEMENT QUANTITIES (BEECHMONT WESTBOUND RAMP)

SHEET NO.	REF. NO.	STATION		a	b	c	e	g	255	301	304	407	441	609	
		FROM	TO	FT	FT	SF	SF	SF	FT	CY	CY	GAL	CY	CY	FT
31	P-8	52+50	53+74	124.00	10.00	1,240.00	1,240.00	1,240.00	30.00	34.44	22.96	13.78	6.70	4.78	124.00
31	P-9	52+50	53+62	112.00	10.00	1,120.00	1,120.00	1,120.00	22.00	31.11	20.74	12.44	6.05	4.32	112.00
SUBTOTAL									52.00	65.56	43.70	26.22	12.75	9.10	236.00
TOTALS CARRIED TO THE GENERAL SUMMARY									52	66	44	27	13	10	236

PAVEMENT QUANTITIES (BEECHMONT AVENUE)

SHEET NO.	REF. NO.	STATION		a	b	c	e	g	255	301	304	407	441	
		FROM	TO	FT	FT	SF	SF	SF	FT	CY	CY	GAL	CY	CY
32	P-10	71+00	72+62	162.00	8.00	1,296.00	1,296.00	1,296.00	162.00	20.00	24.00	14.40	7.00	5.00
33	P-11	78+14	79+20	106.00	7.00	742.00	742.00	742.00	106.00	11.45	13.74	8.24	4.01	2.86
SUBTOTAL									268.00	31.45	37.74	22.64	11.01	7.86
TOTALS CARRIED TO THE GENERAL SUMMARY									268	32	38	23	12	8

EARTHWORK/SEEDING QUANTITIES

SHEET NO.	STATION		203	203	659
	FROM	TO	CY	CY	SY
38	9+00	11+00	104	23	79
39	11+50	12+50	256	233	248
40	13+00	14+00	407	615	484
41	14+50	15+50	245	404	248
42	15+75	16+50	564	3107	1178
43	22+50	23+00	476	2498	789
44	23+50	24+50	604	5761	1553
45	25+00	26+00	0	6374	1822
46	26+25	27+00	0	2952	1196
47	27+50	29+00	380	552	364
48	29+50	30+50	805	0	405
49	31+00	32+00	512	123	406
50	32+50	33+00	27	220	207
TOTALS CARRIED TO GENERAL SUMMARY			4380	22862	
TOTALS TO SHEET 6					8979

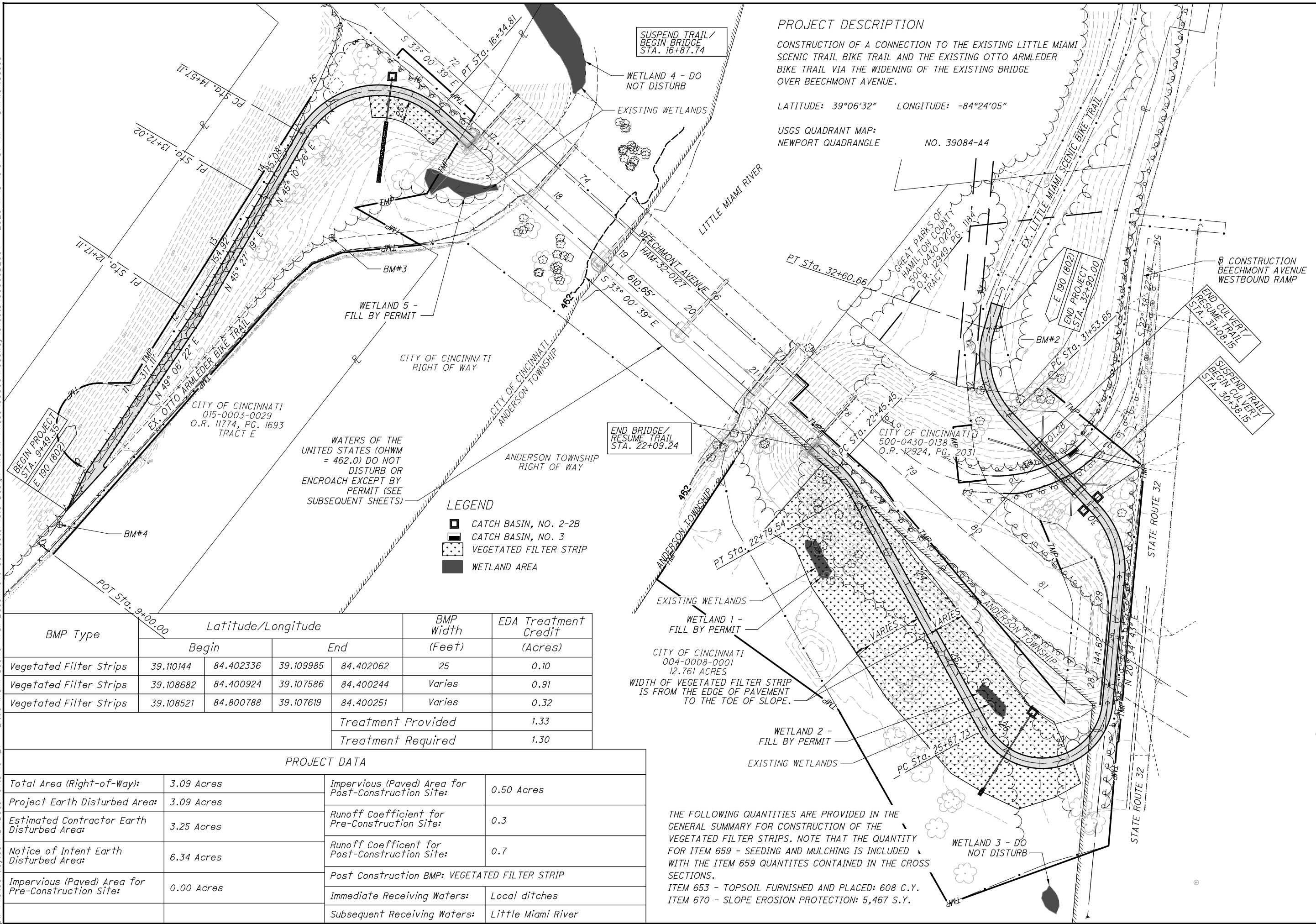
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CHECKED  
SRB



SUBSUMMARIES

HAM LMST BEECHMONT  
BRIDGE - PT 1



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 CALCULATED: JAG  
 CHECKED: SRB

**PROJECT SITE PLAN**

**HAM LMST BEECHMONT BRIDGE - PT 1**

24  
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**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:**

REFER TO THE FOLLOWING STANDARD DRAWINGS:

BP-1.1 DATED 07/28/2000  
 BP-2.2 DATED 07/18/2008

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

SS 888 DATED 10/18/2019  
 SS 1126 DATED 04/19/2019

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2019 EDITION.

**DESIGN LOADING:**

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.

**DESIGN STRESSES:**

CONCRETE CLASS QC FS - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI (ALL REINFORCING SHALL BE EPOXY COATED)

**ANCHOR DOWELS:**

ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH OF 5". PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

THREADED INSERTS OR NON-PROTRUDING MECHANICAL CONNECTORS CAPABLE OF DEVELOPING AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCEMENT SHOWN ARE AN ACCEPTABLE ALTERNATIVE TO RESIN BONDING. MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS SHALL HAVE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. THE DEPARTMENT WILL CONSIDER PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS AS INCIDENTAL TO ITEM 611.

**CULVERT END SECTION:**

THE OUTLET END BOX SECTION SHALL BE FABRICATED FLUSH (WITHOUT THE PROTRUDING TONGUE).

**BOX CULVERT WALL AND TOP/BOTTOM SLAB THICKNESS:**

THE WALL AND TOP/BOTTOM SLAB THICKNESSES SHOWN IN THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP/BOTTOM SLAB THICKNESSES OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

**ITEM 511 - CLASS QC FS CONCRETE (FOOTING):**

**ITEM 511 - CONCRETE MISC.: CLASS QC FS CONCRETE (WINGWALLS AND HEADWALLS):**

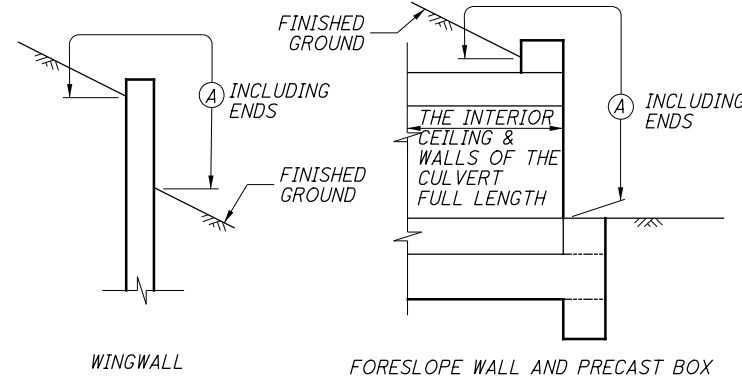
PROVIDE CLASS QC FS CONCRETE FOR THE HEADWALLS, WINGWALLS, AND FOOTINGS ACCORDING TO 499.03 AND SUPPLEMENTAL SPECIFICATION 1126. UNLESS THE PRECAST HEADWALL/WINGWALL SYSTEM IS ON THE APPROVED PRODUCTS LIST, THE DEPARTMENT WILL NOT PERMIT THE USE OF PRECAST HEADWALLS OR WINGWALLS. IF THE SYSTEM IS ON THE APPROVED PRODUCTS LIST, THEN THE FOLLOWING IS APPLICABLE: THE DEPARTMENT WILL PERMIT THE USE OF PRECAST CONCRETE IN LIEU OF CAST-IN-PLACE CONCRETE FOR HEADWALLS AND WINGWALLS IN ACCORDANCE WITH C&MS 602.03. THE DEPARTMENT WILL PAY FOR THE WINGWALL AND HEADWALL CONCRETE IN SQUARE YARD AS DETERMINED FROM PLAN DIMENSIONS USING THE WALL HEIGHTS ABOVE THE FOOTING AND LENGTH ALONG THE EXTERIOR FACES OF THE WALLS. THE DEPARTMENT WILL CONSIDER THE REINFORCING STEEL IN THE WINGWALLS AND HEADWALLS, INCLUDING THE REINFORCEMENT THAT EXTENDS INTO THE FOOTINGS, AS INCIDENTAL TO THE RETAINING/WINGWALL CONCRETE. THE TOTAL QUANTITY OF CAST-IN-PLACE WINGWALL AND HEADWALL CONCRETE IS 71 CU YD. THE TOTAL QUANTITY OF CAST-IN-PLACE WINGWALL AND HEADWALL REINFORCING STEEL IS 10,819 LBS.

**FOUNDATION BEARING RESISTANCE:**

THE CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 1.79 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 2.46 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.15 KIPS PER SQUARE FOOT.

**SEALING OF FORESLOPE WALL AND WINGWALLS:**

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).



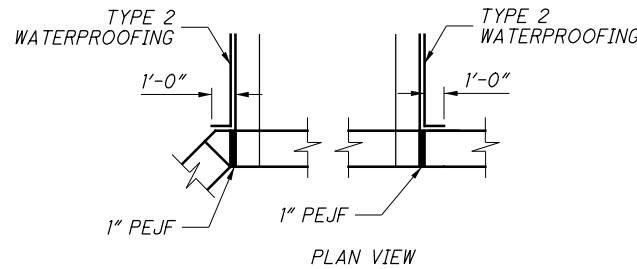
WINGWALL FORESLOPE WALL AND PRECAST BOX

**LIMITS OF ITEM 512 - SEALING CONCRETE SURFACES**

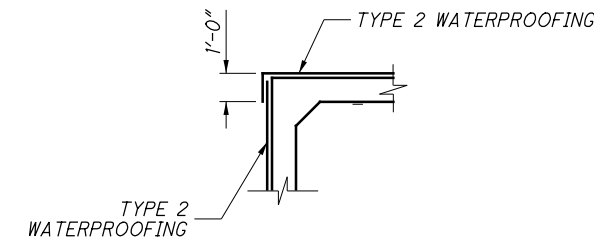
(A) - SEAL ENTIRE CONCRETE SURFACE AREA

**WATERPROOFING:**

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. IT SHALL ALSO BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN THE SIDES WITH A ONE FOOT OVERLAP FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.



PLAN VIEW



SECTION VIEW

**WATERPROOFING DETAILS**

**ITEM 611 - CONDUIT, MISC.: 16'X11' CONDUIT, TYPE A, 706.05, 7'-0" MAX. COVER, AS PER PLAN:**

ALL REQUIREMENTS OF 706.05 SHALL BE MET. THIS ITEM SHALL INCLUDE MECHANICAL CONNECTORS SPECIFIED IN THE PLANS. BACKFILLING AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH 611.06 EXCEPT THAT THE BACKFILL SHALL BE LSM PER THE LOW STRENGTH MORTAR BACKFILL, AS PER PLAN NOTE. PRECAST REINFORCED CONCRETE BOX CULVERT REINFORCING STEEL AREA, WALL AND SLAB THICKNESSES AND CONCRETE COMPRESSIVE STRENGTH SHALL BE DESIGNED, SIGNED AND SEALED BY AN OHIO REGISTERED ENGINEER, AND PROVIDED BY THE PRECAST REINFORCED CONCRETE BOX CULVERT MANUFACTURER. FORM AND POUR AROUND ALL RECESSED JUNCTION BOXES FOR LIGHTS, SEE LIGHTING PLAN SHEETS FOR DETAILS. PAYMENT FOR ALL NECESSARY LABOR, EQUIPMENT, AND MATERIALS NEEDED TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 611 - CONDUIT, MISC.: 16'X11' CONDUIT, TYPE A, 706.05, AS PER PLAN.

**ITEM 613. LOW STRENGTH MORTAR BACKFILL (TYPE 1), AS PER PLAN:**

THE BACKFILL MATERIAL FOR ALL EXCAVATION FOR THE CULVERT AND BEHIND PROPOSED WINGWALLS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE 1 SHALL CONFORM TO CMS SECTION 613 AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH 3.5 FEET OF SOIL TO MATCH FINISH GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND THE PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

LSM SHALL BE PLACED IN 5 FEET MAXIMUM PER LIFT AND WITH A MINIMUM OF 24 HOUR WAITING PERIOD BETWEEN LIFTS.

PAYMENT TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 613, LOW STRENGTH MORTAR BACKFILL, TYPE 1, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

**SUGGESTED SEQUENCE OF CONSTRUCTION:**

1. CLOSE THE RAMP TO TRAFFIC UPON RECEIVING APPROVAL FROM THE ENGINEER. FOR SR-32 TO SR-125 RAMP CLOSING RESTRICTIONS, REFER TO MOT PLANS.
2. REMOVE/RELOCATE EX. GUARD RAILS, LIGHT POLE AND UTILITIES AS SHOWN ON THE PLANS.
3. EXCAVATE FOR PROPOSED CULVERT AND WINGWALLS.
4. CONSTRUCT PROPOSED CULVERT AND WINGWALLS AS SHOWN ON THE PLANS.
5. BACKFILL AT THE SIDES AND TOP OF PROPOSED CULVERT AND BEHIND PROPOSED WINGWALL WITH LSM. PROVIDE POST SLEEVE FOR GUARD RAILS POSTS AND STEEL CASING FOR UTILITY LINES.
6. INSTALL POROUS BACKFILL BEHIND WINGWALLS.
7. CONSTRUCT PROPOSED DRAINAGE REPLACE EX. WATER LINE AND UNDERGROUND LIGHTING ELECTRIC AS SHOWN ON THE PLANS.
8. CONSTRUCT ASPHALT CONCRETE PAVEMENT AS SHOWN ON THE PLANS.
9. RECONSTRUCT GUARD RAILS AND RESET EX. LIGHT POLE.
10. COMPLETE OTHER ITEMS OF WORK SPECIFIED IN THE PLANS AND OPEN THE RAMP TO TRAFFIC. WORK LISTED IS NOT ALL EXCLUSIVE. THE CONTRACTOR WILL SEQUENCE WORK AS NEEDED AND MAY SUBMIT ALTERNATE CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL BY THE ENGINEER.


**ABBREVIATIONS:**

THE FOLLOWING ABBREVIATIONS ARE USED THROUGHOUT THESE PLANS:

- CL = CENTERLINE
- CIP = CAST IN PLACE
- CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
- EF = EACH FACE
- EL = ELEVATION
- EX = EXISTING
- FF = FAR FACE
- NF = NEAR FACE
- PEJF = PREFORMED EXPANSION JOINT FILLER
- TYP = TYPICAL

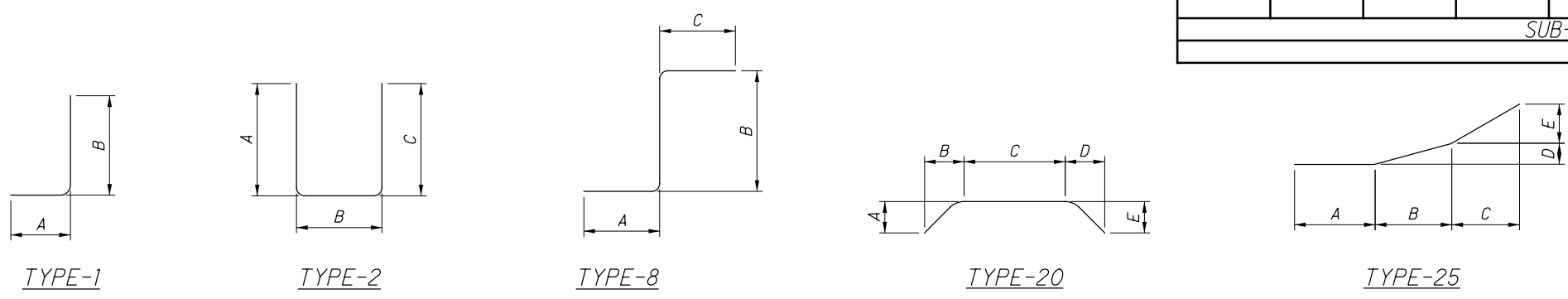
DESIGN AGENCY  IBI GROUP, INC. 11111 BIRCHMOUNT ROAD CINCINNATI, OH 45246 TEL: 513.942.3141 FAX: 513.881.2283 www.ibigroup.com	DATE 08/31/20	REVIEWED JBK	STRUCTURE FILE NUMBER 3102000	GENERAL NOTES AND ESTIMATED QUANTITIES - 1 HAM-032-0136 LITTLE MIAMI SCENIC TRAIL UNDER SR 32 RAMP
DRAWN TDW	DESIGNED AIS	CHECKED SRB	REVISIONS REVISED	HAM LMST BEECHMONT BRIDGE - PT 1 PID No. 107295
2 / 8				74 127

ESTIMATED QUANTITIES						COMPUTED BY: AIS	DATED: 7-1-20
						CHECKED BY: SS	DATED: 7-1-20
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SHEET #		
451	10020	125	SY	6" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA			
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING			
503	21100	4,172	CY	UNCLASSIFIED EXCAVATION			
509	10000	19,805	LB	EPOXY COATED REINFORCING STEEL			
511	52100	175	CY	CLASS QC FS CONCRETE (FOOTING)	2 / 8		
511	71300	168	SY	CONCRETE MISC.: CLASS QC FS CONCRETE (WINGWALLS AND HEADWALLS)	2 / 8		
512	10100	747	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			
512	33000	381	SY	TYPE 2 WATERPROOFING	2 / 8		
516	13600	73	SF	1" PREFORMED EXPANSION JOINT FILLER			
518	21200	50	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC			
611	97400	70	FT	CONDUIT, MISC.: 16' X 11' CONDUIT, TYPE A, 706.05, 7'-0" MAX COVER, AS PER PLAN	2 / 8		
613	41200	1,825	CY	LOW STRENGTH MORTAR BACKFILL	2 / 8		
888	10000	133	SY	HIGH FRICTION SURFACE TREATMENT, SINGLE LIFT			

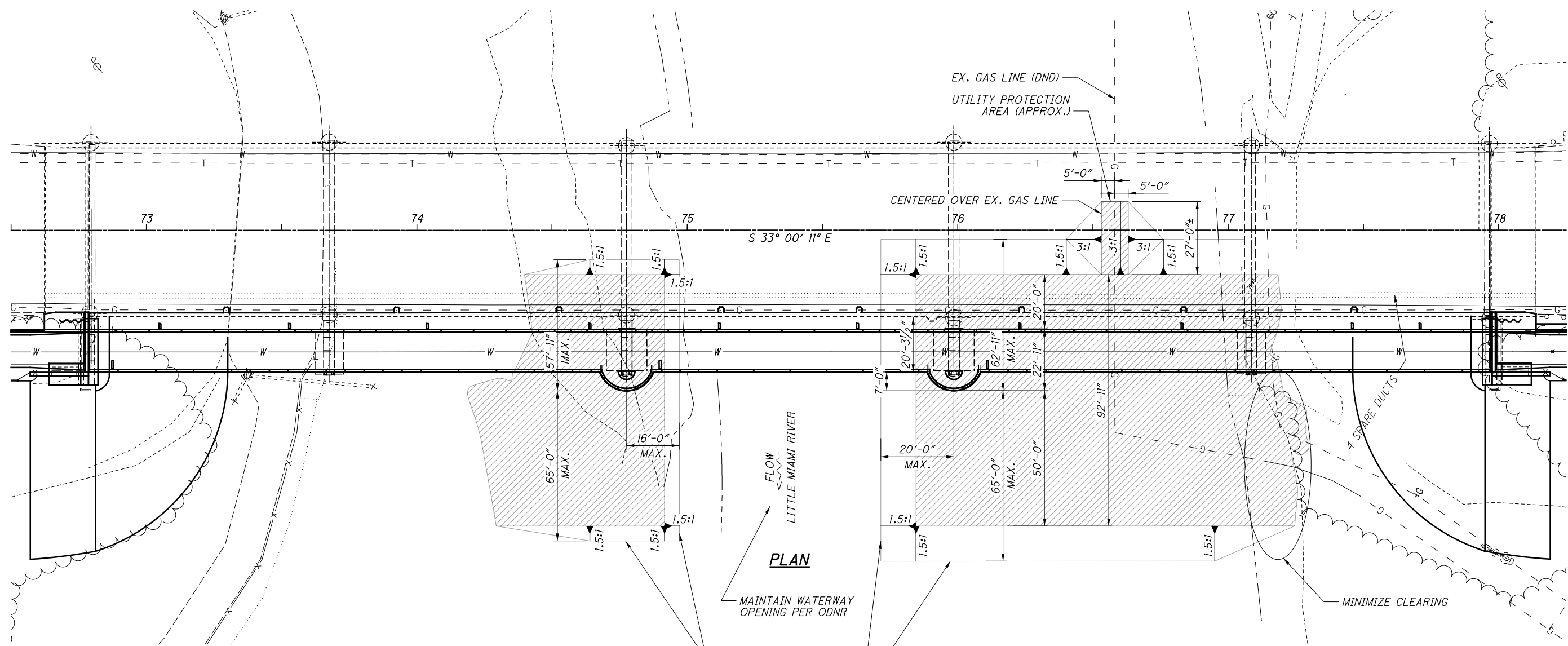
 IBI GROUP 10000 Cincinnati, OH 45266 Tel: 513.842.3141 Fax: 513.881.2263 ibigroup.com	DESIGN AGENCY IBI
	DATE 08/31/20
REVIEWED JBK	STRUCTURE FILE NUMBER 3102000
DRAWN TDW	REVISED
DESIGNED AIS	CHECKED SRB
GENERAL NOTES AND ESTIMATED QUANTITIES - 2 HAM-032-0136 LITTLE MIAMI SCENIC TRAIL UNDER SR 32 RAMP	
HAM LMST BEECHMONT BRIDGE - PT 1 PID No. 107295	3 / 8 75 127

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS					
	R.A.	F.A.	TOTAL				A	B	C	D	E	R
<b>CULVERT FOOTING REINFORCING STEEL</b>												
WF501	2		2	28' - 5"	657	STR.						4 7/8"
	S.O.		S.O.	TO								
	12		12	24' - 0"								
WF502		2	2	30' - 6"	636	20	2' - 3"	2' - 3"	24' - 3"	1' - 7"	2' - 9"	11 1/8"
		S.O.	S.O.	TO								
		12	12	20' - 4"			14' - 1"					
WF503	4		4	21' - 6"	90	STR.						
WF504	4		4	24' - 6"	102	STR.						
WF505	2		2	21' - 1"	44	20	2' - 3"	2' - 3"	14' - 9"	2' - 3"	2' - 3"	
WF506	2		2	21' - 8"	45	20	2' - 3"	2' - 3"	15' - 4"	2' - 3"	2' - 3"	
WF507		4	4	26' - 0"	108	STR.						
WF508		4	4	23' - 0"	96	STR.						
WF509	2		2	20' - 4"	42	20	2' - 3"	2' - 3"	14' - 1"	1' - 7"	2' - 9"	
WF510	2		2	21' - 1"	44	20	2' - 3"	2' - 3"	14' - 10"	1' - 7"	2' - 9"	
WF511		24	24	24' - 8"	617	STR.						
WF512		12	12	10' - 3"	128	8	3' - 3"	4' - 0"	3' - 3"			
WF513		7	7	10' - 8"	78	STR.						
WF514		16	16	16' - 11"	282	25	4' - 0"	8' - 0"	4' - 0"	4' - 0"	0"	
WF515	2		2	25' - 5"	580	STR.						4 7/8"
	S.O.		S.O.	TO								
	12		12	21' - 0"								
WF516		2	2	29' - 11"	695	STR.						4 7/8"
		S.O.	S.O.	TO								
		12	12	25' - 6"								
WF517	2		2	29' - 6"	632	20	2' - 3"	2' - 3"	23' - 2"	2' - 3"	2' - 3"	9 1/8"
		S.O.	S.O.	TO								
		12	12	21' - 1"			14' - 9"					
WF518		2	2	28' - 8"	638	STR.						6 7/8"
		S.O.	S.O.	TO								
		12	12	22' - 4"								
WF519		4	4	24' - 8"	103	STR.						
WF520	5	5	10	17' - 8"	184	STR.						
WF601	78	117	195	10' - 0"	2,929	2	4' - 7"	1' - 2"	4' - 7"			
WF602	12	12	24	7' - 8"	276	1	2' - 9"	5' - 0 1/2"				
WF701	156	234	390	10' - 8"	8,503	STR.						
WF702	24	26	50	9' - 9"	996	STR.						
WF703	32	32	64	8' - 6"	1,112	STR.						
WF704	4	4	8	11' - 6"	188	STR.						
<b>SUB-TOTAL</b>					<b>19,805</b>							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS					
	R.A.	F.A.	TOTAL				A	B	C	D	E	R
<b>CULVERT HEADWALL &amp; WINGWALL REINFORCING STEEL</b>												
WW501	2		2	21' - 5"	109	STR.						3"
	S.O.		S.O.	TO								
	4		4	4' - 8"								
WW502	12		12	22' - 8"	284	STR.						
WW503	1		1	14' - 1"	186	STR.						4 5/8"
	S.O.		S.O.	TO								
	16		16	8' - 3"								
WW504	2		2	23' - 4"	49	STR.						
WW505	4	4	8	17' - 8"	147	STR.						
WW506		2	2	20' - 8"	84	STR.						7' - 3"
		S.O.	S.O.	TO								
		3	3	6' - 2"								
WW507		1	1	14' - 1"	226	STR.						3 5/8"
		S.O.	S.O.	TO								
		19	19	8' - 8"								
WW508	2		2	27' - 8"	58	STR.						
WW509	1		1	14' - 1"	253	STR.						0 3/4"
	S.O.		S.O.	TO								
	18		18	13' - 0"								
WW510	34		34	24' - 8"	875	STR.						
WW511	2		2	24' - 3"	123	STR.						0"
	S.O.		S.O.	TO								
	4		4	5' - 3"								
WW512	1		1	14' - 1"	210	STR.						4 1/8"
	S.O.		S.O.	TO								
	18		18	8' - 3"								
WW513	2		2	26' - 4"	55	STR.						
WW514		14	14	27' - 2"	397	STR.						
WW515		1	1	8' - 11"	156	STR.						0 7/8"
		S.O.	S.O.	TO								
		18	18	7' - 9"								
WW516	12		12	25' - 8"	321	STR.						
WW517	35	55	90	4' - 8"	438	1	1' - 0"	3' - 9"				
WW601	1		1	14' - 1"	537	STR.						2 1/4"
	S.O.		S.O.	TO								
	32		32	8' - 3"								
WW602	25	25	50	3' - 10"	288	2	1' - 2"	11"	2' - 1"			
WW603		1	1	14' - 1"	600	STR.						1 3/4"
		S.O.	S.O.	TO								
		37	37	8' - 8"								
WW604		1	1	14' - 2"	714	STR.						0 3/8"
		S.O.	S.O.	TO								
		35	35	13' - 0"								
WW605	1		1	14' - 1"	604	STR.						2"
	S.O.		S.O.	TO								
	36		36	8' - 3"								
WW606		1	1	8' - 11"	438	STR.						0 3/8"
		S.O.	S.O.	TO								
		35	35	7' - 9"								
WW801	68	107	175	8' - 1"	3777	1	1' - 4"	7' - 0"				
<b>SUB-TOTAL</b>					<b>10,929</b>							
							FOR INFORMATION ONLY, INCLUDED WITH ITEM 511, CONCRETE MISC: CLASS QC FS CONCRETE (WINGWALLS AND HEADWALLS) FOR PAYMENT					



	DESIGN AGENCY IBI Group, Inc. Cincinnati, OH 45226 Tel: 513.942.3141 Fax: 513.881.2263 i@ibigroup.com
REINFORCING STEEL LIST HAM-032-0136 LITTLE MIAMI SCENIC TRAIL UNDER SR 32 RAMP	DATE: 08/31/20 REVIEWED: JBK DRAWN: MJT DESIGNED: MJT CHECKED: SRB STRUCTURE FILE NUMBER: 3102000
HAM LMST BEECHMONT BRIDGE - PT 1 PID No. 107295	8 / 8 80 127



**PLAN**

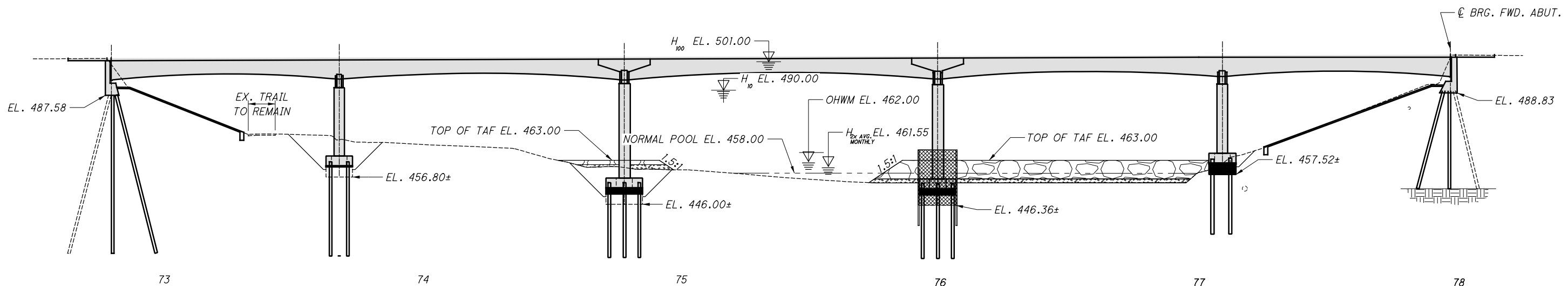
MAINTAIN WATERWAY  
 OPENING PER ODNR  
  
 MAXIMUM EXTENT OF  
 TAF AT TOE OF  
 SLOPE, INCLUDING  
 ANGLE OF REPOSE

**LEGEND**

TAF - TEMPORARY ACCESS FILL  
 OHWM - ORDINARY HIGH WATER MARK

**NOTE:**

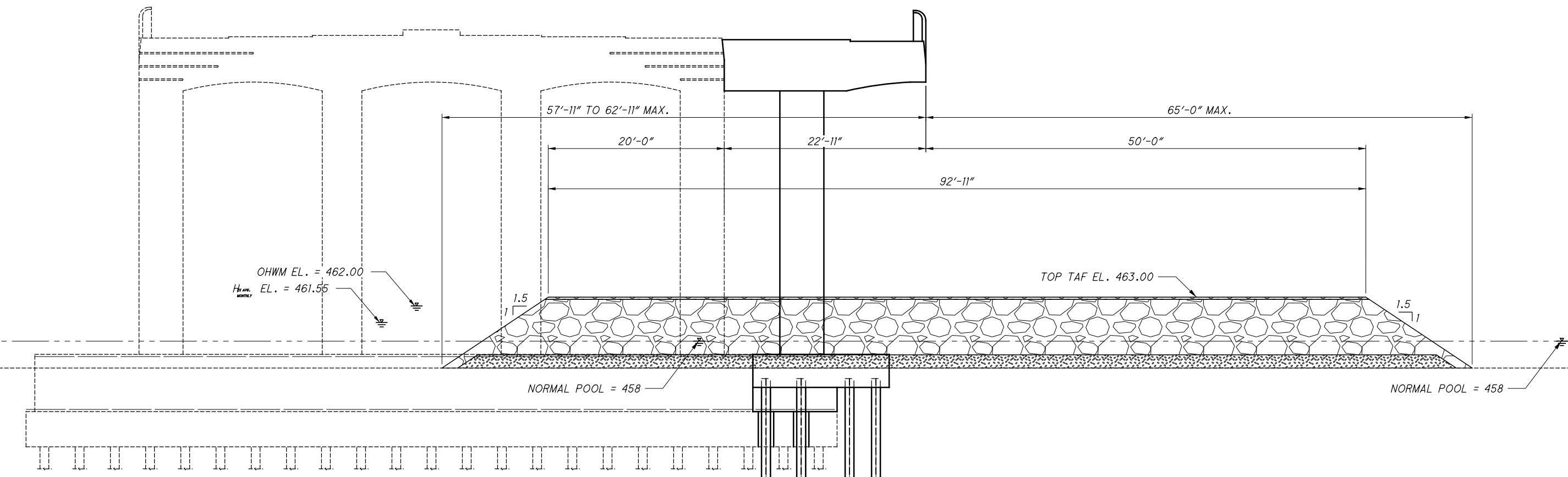
1. TEMPORARY ACCESS FILL CONCEPT DESIGN FOR  
 WATERWAY PERMIT CONDITION.



CALCULATED  
 A.I.S.  
 CHECKED  
 S.S.

**TEMPORARY ACCESS FILLS**

**HAM LMST BEECHMONT BRIDGE - PT 1**



**NOTES:**

1. THE TEMPORARY ACCESS FILL SHALL ACCOMMODATE A FLOW RATE (Q) EQUAL TO TWICE THE HIGHEST MEAN MONTHLY FLOW SUCH THAT THE BACKWATER ELEVATION DOES NOT EXCEED THE OHWM. Q FOR THIS LOCATION IS  $2 \times 3610 = 7220$  CFS.
2. TAF FINAL DESIGN BY CONTRACTOR TO APPROVAL OF PROJECT ENGINEER.
3. TEMPORARY ACCESS FILL CONCEPT DESIGN FOR WATERWAY PERMIT CONDITION.

CALCULATED	0	20	40
AISS	HORIZONTAL SCALE IN FEET		
CHECKED	SS		

**TEMPORARY ACCESS FILLS**

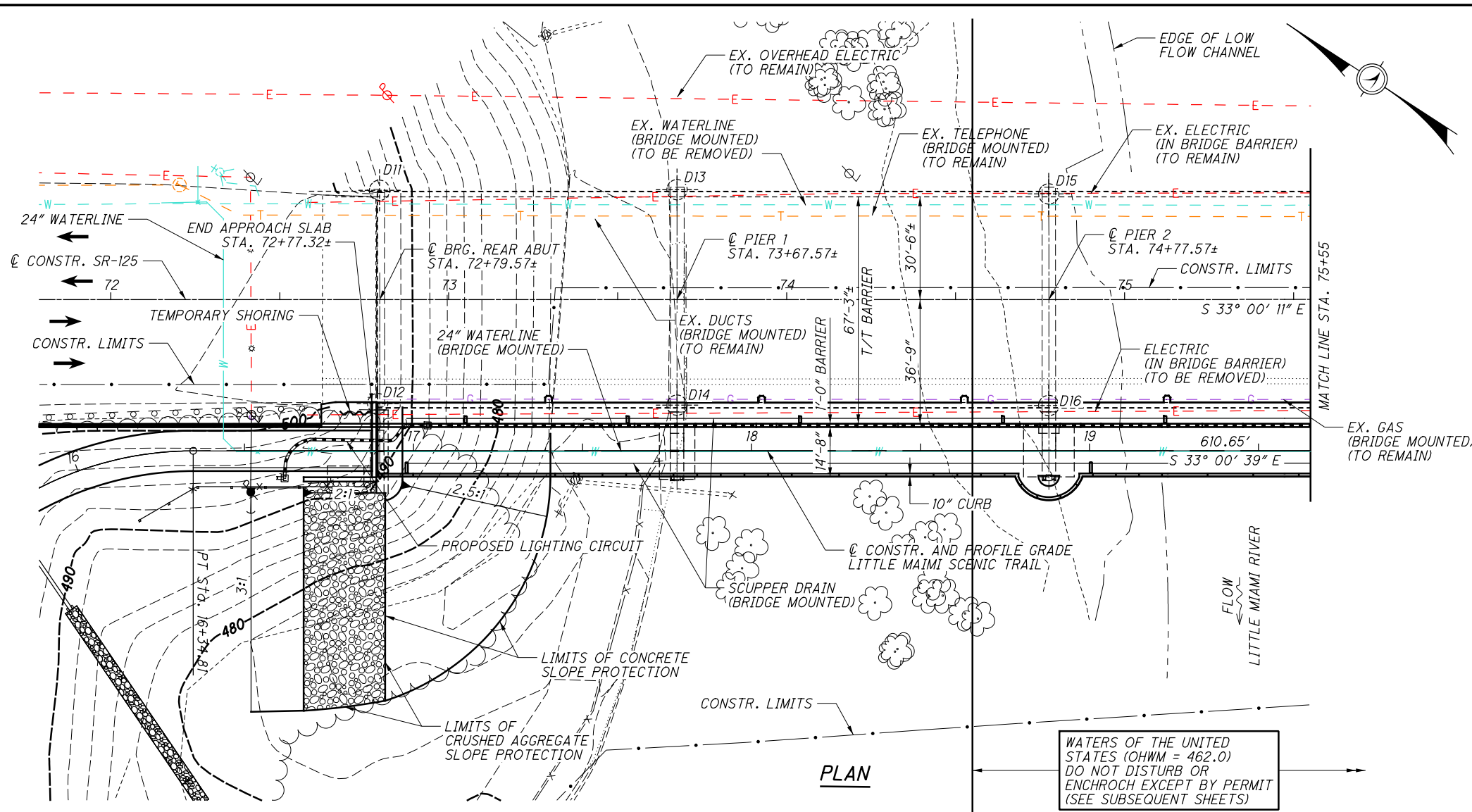
**HAM LMST BEECHMONT BRIDGE - PT 1**

**LEGEND**

- TAF - TEMPORARY ACCESS FILL
- OHWM - ORDINARY HIGH WATER MARK



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**PLAN**

BENCHMARK DATA	
BM#2: MAG NAIL SET IN THE EXISTING BIKE TRAIL 400' NORTH OF THE INTERSECTION OF SR 32 AND SR 125. 12' NORTH OF THE SOUTHERN END OF THE BIKE TRAIL. 35' EAST OF A SANITARY SEWER MANHOLE AND 3' WEST OF THE EAST EDGE OF THE BIKE TRAIL. ELEV.=483.64	
SEE TRAIL PLANS FOR ADDITIONAL BENCHMARK INFORMATION.	

- NOTES**
- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
  - REFER TO TRAIL PLANS FOR ADDITIONAL BENCHMARK AND APPROACH PAVEMENT INFORMATION

**LEGEND**

⊕ APPROXIMATE HISTORIC BORING LOCATION

**APPROXIMATE TOP OF BEDROCK ELEVATIONS**

BORING D11, EL. 423±	BORING D12, EL. 433±
BORING D13, EL. 428±	BORING D14, EL. 426±
BORING D15, EL. 430±	BORING D16, EL. 429±

**HYDRAULIC DATA (BASED ON LITTLE MIAMI RIVER)**

DRAINAGE AREA = 1,753 SQ. MILES

Q (50) = 79,000 CFS V (50) = 13.87 FT/S

Q (100) = 89,500 CFS V (100) = 13.32 FT/S

STRUCTURE ABOVE THE 100 YEAR HW BY 25.01 FEET.

STRUCTURE ABOVE THE 100 YEAR BACKWATER HW BY 1.12 FEET.

**EXISTING STRUCTURE**

TYPE: CONTINUOUS HAUNCHED RIVETED STEEL PLATE GIRDER WITH NON-COMPOSITE REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE

SPANS: 88'-0"±, 110'-0"±, 121'-0"±, 110'-0"±, 88'-0"±

ROADWAY: 61'-0"± T/T BARRIER

LOADING: S-20-46

SKEW: NONE

APPROACH SLABS: 15'± LONG

ALIGNMENT: TANGENT

CROWN: VARIES

STRUCTURAL FILE NUMBER: 3102076

DATE BUILT: 1951, REHAB 1989

DISPOSITION: TO REMAIN WITH WIDENING

**PROPOSED STRUCTURE**

TYPE: CONTINUOUS HAUNCHED WELDED STEEL PLATE GIRDER WITH NON-COMPOSITE REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE

SPANS: TO MATCH EXISTING

ROADWAY: 67'-3"± T/T BARRIER WITH 14'-0" WIDE TRAIL

LOADING: HS20 CASE I AND ALTERNATE MILITARY LOADING 90 PSF PEDESTRIAN LOADING AND FUTURE WEARING SURFACE (FWS) OF 60 PSF

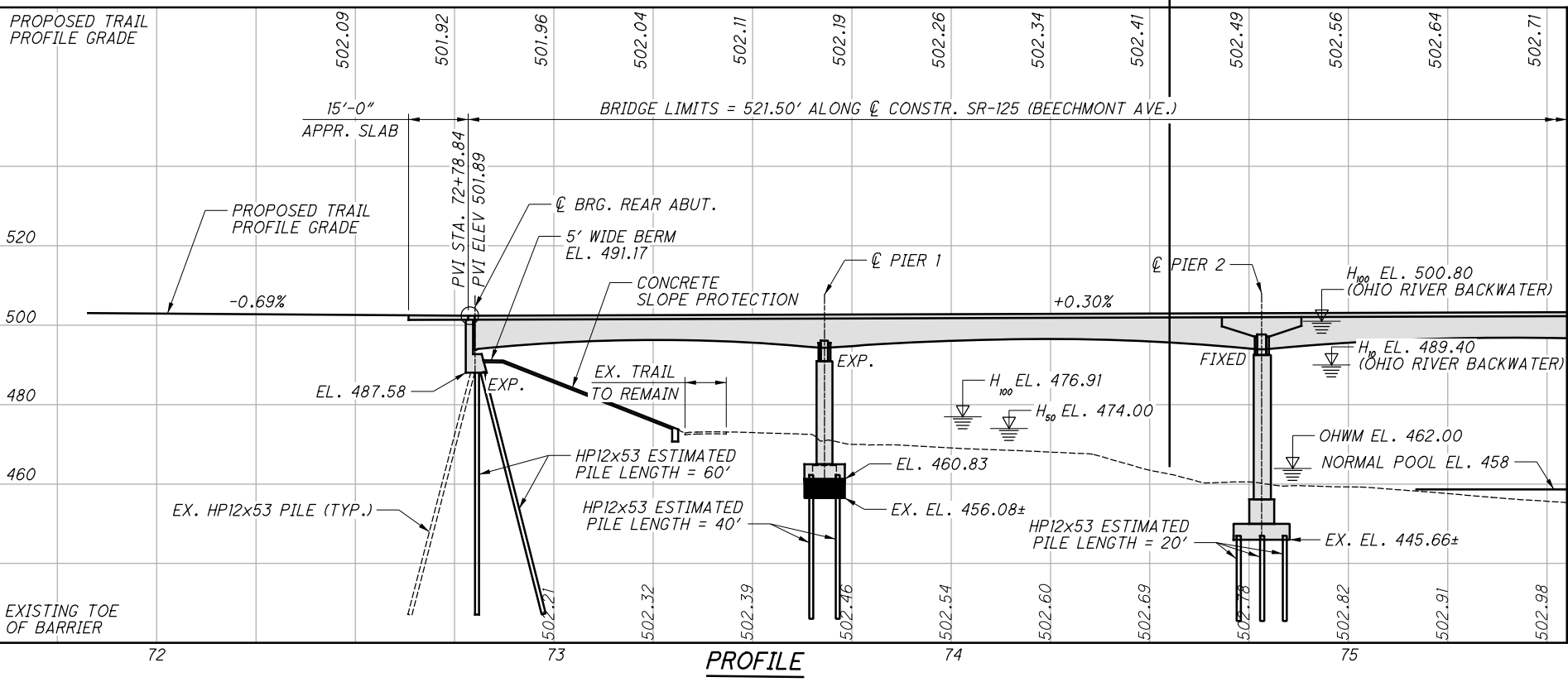
SKEW: NONE

APPROACH SLABS: 15' LONG (AS-1-15) MODIFIED

ALIGNMENT: TANGENT

CROWN: VARIES

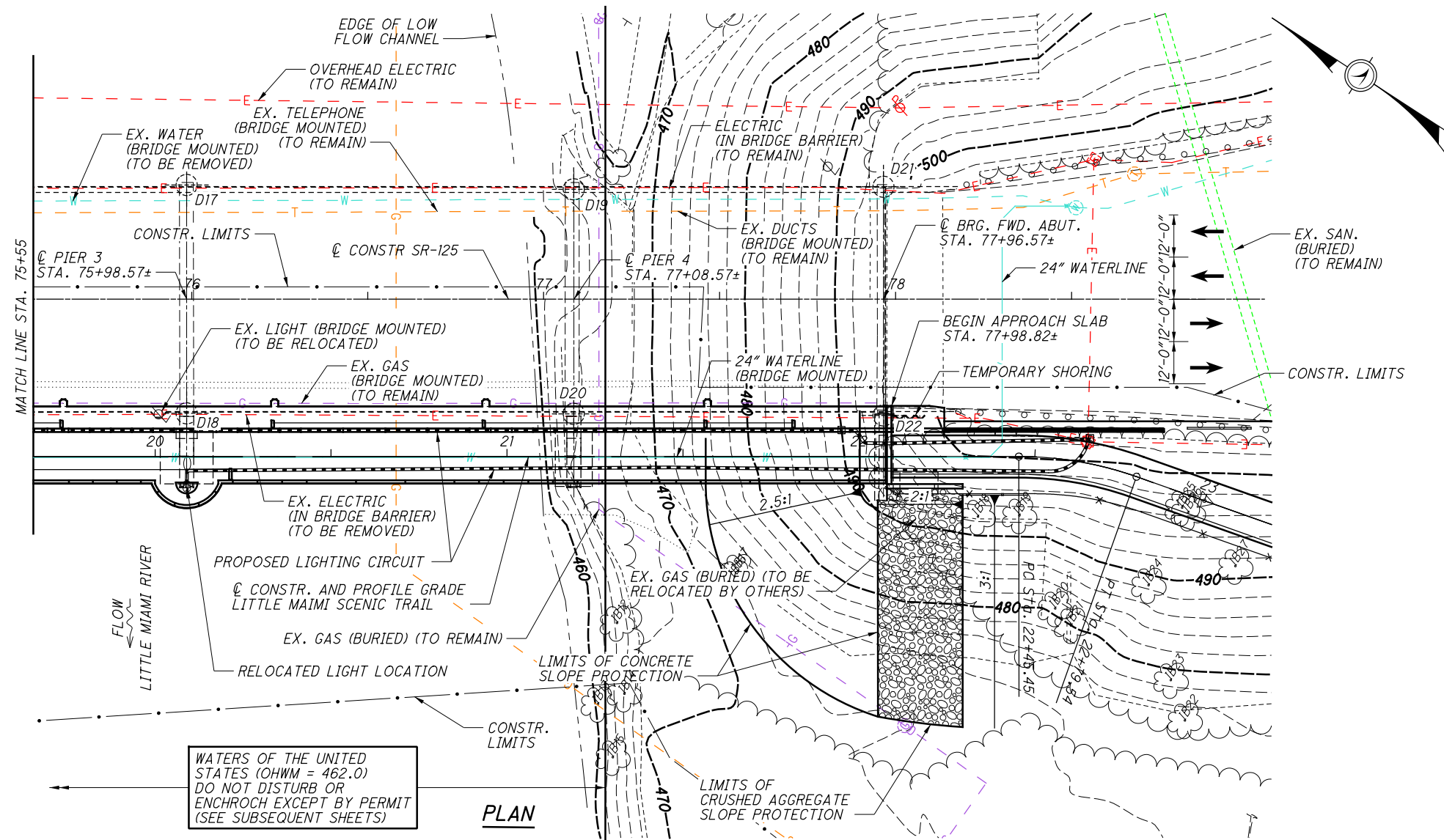
COORDINATES: LATITUDE 39° 06' 35.73" N  
LONGITUDE -84° 24' 08.11" W



**PROFILE**

DESIGN AGENCY: BURGESS & NIPLE  
 312 PLUM ST., CINCINNATI, OH  
 DATE: 5/3/2019  
 MAB STRUCTURE FILE NUMBER: 3102076  
 DRAWN: SJA  
 CHECKED: XAC  
 DESIGNED: SJA  
 HAMILTON COUNTY  
 STA. 72+77.32  
 STA. 77+98.82  
**SITE PLAN - 1**  
 BRIDGE NO. HAM-32-0127  
 SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER  
**HAM LMST BEECHMONT BRIDGE - PT 1**  
 PID No. 107295  
 1/42  
 83  
 127

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**PROPOSED WORK:**

1. CLOSE PORTIONS OF EXISTING BRIDGE.
2. REMOVE PORTIONS OF EXISTING STRUCTURE.
3. WIDEN EXISTING PIERS AND ABUTMENTS.
4. CONSTRUCT TWO NEW STEEL PLATE GIRDERS AND CROSS FRAMES.
5. INSTALL NEW WATERLINE.
6. INSTALL NEW BRIDGE SCUPPERS.
7. WIDEN EXISTING CONCRETE DECK AND APPROACH SLABS.
8. INSTALL NEW CONCRETE BARRIER BETWEEN ROADWAY AND TRAIL.
9. RE-INSTALL HIGHWAY LIGHT POLE ON NEW BARRIER.
10. INSTALL TRAIL RAILING.
11. SEAL THE BR-2-15 (MODIFIED) BARRIER TO THE LIMITS SHOWN IN THE PLANS WITH CLEAR SILANE SEALER.
12. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ENVIRONMENTAL COMMITMENTS FOR THIS PROJECT.

**LEGEND**

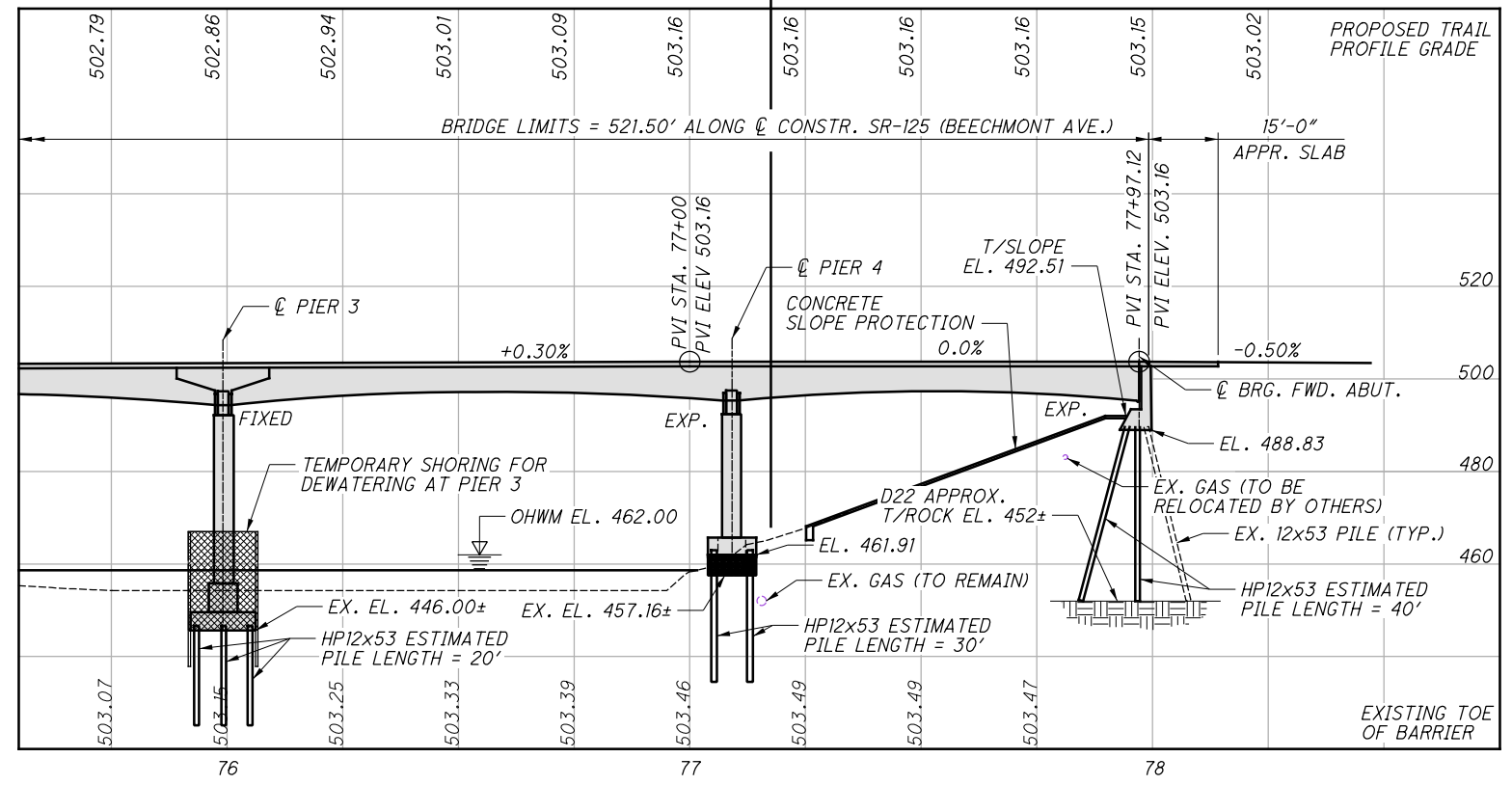
⊕ APPROXIMATE HISTORIC BORING LOCATION

**APPROXIMATE TOP OF BEDROCK ELEVATIONS**

BORING D17, EL. 431±    BORING D18, EL. 429±  
 BORING D19, EL. 438±    BORING D20, EL. 435±  
 BORING D21, EL. 456±    BORING D22, EL. 452±

WATERS OF THE UNITED STATES (OHWM = 462.0) DO NOT DISTURB OR ENCHROACH EXCEPT BY PERMIT (SEE SUBSEQUENT SHEETS)

**PLAN**



<b>HAM LMST BEECHMONT BRIDGE - PT 1</b> PID No. 107295	<b>SITE PLAN - 2</b> BRIDGE NO. HAM-32-0127 SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER	HAMILTON COUNTY STA. 72+77.32 STA. 77+98.82	DESIGN AGENCY BURGESS & NIPLÉ 312 PLUM ST., CINCINNATI, OH
2 / 42	84	127	DATE 5/3/2019 MAB
DRAWN SJA	DESIGNED SJA	CHECKED XAC	REVIEWED STRUCTURE FILE NUMBER 3102076

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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 511, CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN:

LOCATE THE LOW CONTACT POINT OF THE OVERHANG FALSEWORK NO MORE THAN 76 INCHES ±2 INCHES BELOW THE BOTTOM OF THE GIRDER'S TOP FLANGE. THE BRACKET CONTACT POINT LOCATION REQUIREMENTS OF CMS 508 DO NOT APPLY.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 KIPS FOR A TOTAL MACHINE LOAD OF 17.6 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 512 - SEALING OF CONCRETE SURFACES (NON - EPOXY), AS PER PLAN:

CLEAR SILANE SEALER SHALL BE APPLIED TO THE SURFACES SHOWN IN THESE PLANS. PAYMENT SHALL BE INCLUDED WITH ITEM 512 - SEALING OF CONCRETE SURFACES (NON - EPOXY), AS PER PLAN.

LIMITATIONS OF OPERATIONS

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

1. MAINTENANCE OF TRAFFIC LIMITATIONS
2. CONCRETE SHALL BE IN PLACE AT LEAST 30 DAYS PRIOR TO SEALING.

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

THIS ITEM INCLUDES FABRICATION AND ERECTION OF CROSSFRAMES, CROSSFRAME CONNECTION BOLTS, WELDS AND CONNECTION PLATES AS SHOWN IN THE PLANS. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF EXISTING GIRDERS PRIOR TO FABRICATION TO CONFIRM PROPOSED CROSSFRAME DETAILS WILL ALIGN WITH EXISTING. ALL LABOR AND MATERIALS REQUIRED TO VERIFY EXISTING DIMENSIONS AND DRILL HOLES INTO EXISTING GIRDERS SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN:

THE COLOR OF THE INTERMEDIATE COAT SHALL MATCH EXISTING STEEL.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINAL COAT, AS PER PLAN:

THE COLOR OF THE FINAL COAT SHALL MATCH EXISTING STEEL.

ITEM 517 - RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING), AS PER PLAN:

THIS ITEM COVERS THE MODIFIED BR-2-15 RAILING ALONG THE BRIDGE DECK. THIS ITEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE CONCRETE AND REINFORCING ABOVE OR EXTENDING ABOVE THE UPPER SURFACE OF THE BRIDGE DECK; SAWCUTS; CAULKING COMPOUND; ANCHOR BOLTS; STEEL PLATES; STEEL POST; STEEL TUBE RAILING; STEEL POST CAPS; BOLTS; HEX NUTS, WASHERS AND OTHER HARDWARE; AND GALVANIZING OF ANY STEEL POST AND RAILING ELEMENTS AND ARE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR THE MEASURED LENGTH. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE ALL OTHER NECESSARY MATERIAL, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ITEM 517 - RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING), AS PER PLAN.

ITEM 517 - RAILING MISC., AESTHETIC BIKE RAILING

STEEL RAILING: A STEEL RAILING SHALL BE CONSTRUCTED ACROSS THE STRUCTURE AS SHOWN ON THE PLANS. THE STRUCTURAL STEEL SHALL BE FABRICATED ACCORDING TO ITEM 513, STANDARD FABRICATIONS. THE FABRICATED STEEL RAILING AND HARDWARE (INCLUDING ALL JUNCTION BOXES) SHALL BE GALVANIZED PER CMS 711.02.

PRIOR TO GALVANIZING, ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES SHALL HAVE A 1/8 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. VENT HOLES WHERE REQUIRED FOR GALVANIZING SHALL BE DETAILED BY THE FABRICATOR AND PLACED IN THE UNDERSIDE OF THE MEMBERS.

GALVANIZED COATINGS DAMAGED IN THE SHOP SHALL BE REPAIRED PER ASTM A780 METHOD A3. GALVANIZED COATINGS DAMAGED IN THE FIELD SHALL BE REPAIRED PER CMS 711.02.

ALL LABOR, EQUIPMENT AND MATERIALS ACCOCIATED WITH THIS WORK SHALL BE INCLUDED WITH ITEM 517 - RAILING MISC., AESTHETIC BIKE RAILING, FOR PAYMENT.

ITEM 526 REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN

THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE CONCRETE, STEEL REINFORCEMENT, PARAPETS, PEJF AND SEALING OF CONCRETE SURFACES NECESSARY TO FORM AND PLACE THE APPROACH SLABS AND CONCRETE RAILING ON THE APPROACH SLAB, AS SHOWN IN THE PLANS. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE ALL OTHER NECESSARY MATERIAL, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 526 REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN.

ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN:

THIS ITEM INCLUDES THE CONCRETE SLOPE PROTECTION AND THE 1" PREFORMED EXPANSION JOINT FILLER.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, PIER FOUNDATION OR ABUTMENT EXCAVATION, EXCAVATION FOR SLOPE PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

INSTREAM WORK

INSTREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS, COFFERDAMS, OR OTHER EQUIPMENT ACCESS PADS. THIS TEMPORARY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- |   |  |
|---|--|
| ABUT. - ABUTMENT                                    | O/O - OUT TO OUT                             |
| APPR. - APPROACH                                    | P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE |
| BTM. - BOTTOM                                       | P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  |
| BRG. - BEARING                                      | PG - PROFILE GRADE                           |
| BRGS. - BEARINGS                                    | PGL - PROFILE GRADE LINE                     |
| CL - CENTERLINE                                     | PROP. - PROPOSED                             |
| C/C - CENTER TO CENTER                              | PT - POINT OF TANGENCY                       |
| CIP - CAST-IN-PLACE                                 | PVC - POINT OF VERTICAL CURVATURE            |
| C.J. - CONSTRUCTION JOINT                           | PVI - POINT OF VERTICAL INTERSECTION         |
| CLR. - CLEARANCE                                    | PVT - POINT OF VERTICAL TANGENCY             |
| CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS      | R. - RADIUS                                  |
| CONC. - CONCRETE                                    | R.A. - REAR ABUTMENT                         |
| CONSTR. - CONSTRUCTION                              | RF - RIGHT FORWARD                           |
| CU YD - CUBIC YARD                                  | RT. - RIGHT                                  |
| DIA. - DIAMETER                                     | R/W - RIGHT OF WAY                           |
| E.F. - EACH FACE                                    | SAN. - SANITARY                              |
| ELEV., EL. - ELEVATION                              | SER. - SERIES                                |
| EQ. - EQUAL   | SHT. - SHEET                                 |
| EX. - EXISTING                                      | S.O. - SERIES OF                             |
| EXP. - EXPANSION                                    | SPA. - SPACES OR SPACING                     |
| F.A. - FORWARD ABUTMENT                             | SR - STATE ROUTE                             |
| F.F. - FAR FACE                                     | STA. - STATION                               |
| F.S. - FIELD SPLICE                                 | STD. - STANDARD                              |
| FT/FT - FOOT PER FOOT                               | STM. - STORM                                 |
| FTG. - FOOTING                                      | STR. - STRAIGHT                              |
| FWD. - FORWARD                                      | TBM - TEMPORARY BENCH MARK                   |
| GALV. = GALVANIZED                                  | TEMP. - TEMPORARY                            |
| GEN. - GENERAL                                      | T.O.S. - TOE OF SLOPE                        |
| LF - LEFT FORWARD                                   | T/PARAPET - TOE OF PARAPET                   |
| LT. - LEFT  | T/T - TOE TO TOE                             |
| MAX. - MAXIMUM                                      | TYP. - TYPICAL                               |
| MIN. - MINIMUM                                      | U.G. - UNDERGROUND                           |
| MISC. - MISCELLANEOUS                               | VAR. - VARIES                                |
| MOT - MAINTENANCE OF TRAFFIC                        | VC - VERTICAL CURVE                          |
| N.F. - NEAR FACE                                    | VERT. - VERTICAL                             |
| N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE | W/O - WITHOUT                                |
| NO./# - NUMBER                                      |  |

DESIGNED	SJA	DATE	5/3/2019	DESIGN AGENCY	BURGESS & NIPL
	CHECKED		3102076		312 PLUM ST., CINCINNATI, OH
DRAWN	BCS	REVIEWED	MAB		
	REVISED				
<b>GENERAL NOTES - 2</b>					
BRIDGE NO. HAM-32-0127					
SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER					
<b>HAM LMST BEECHMONT BRIDGE - PT 1</b>					
PID No. 107295					
4 / 42					
86					
127					

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ESTIMATED BRIDGE QUANTITIES

CALC.	DATE	CHK'D	CHK'D.
XAC/JDG	6/2020	SJA	6/2020

ITEM	ITEM EXT.	TOTAL	PLAN SPLIT			UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GENERAL	SHT. REF.
			01/CMQ/OT	02/NHS/BR	03/NFP/OT							
202	11203	LUMP	LUMP				PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3/42
503	11101	LUMP	LUMP				COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					3/42
503	21300	LUMP	LUMP				UNCLASSIFIED EXCAVATION					
505	11100	LUMP	LUMP				PILE DRIVING EQUIPMENT MOBILIZATION					
507	00200	1,710	1,710			FT	STEEL PILES HPI2X53, FURNISHED	770	940			
507	00251	1,500	1,500			FT	STEEL PILES HPI2X53, DRIVEN, AS PER PLAN	700	800			3/42
507	00410	8	8			EACH	STEEL PILES MISC.: STEEL PILES DRIVEN THRU HOLES IN EXISTING FOOTINGS		8			
507	92201	32	32			FT	PREBORED HOLES, AS PER PLAN:		32			3/42
509	10001	184,916	184,916			LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	10,477	46,565	127,874		4/38
509	20001	200	200			LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				200	3/42
510	10000	172	172			EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	66	78		28	
511	34447	363	363			CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			363		4/38
511	34448	6	6			CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			6		
511	41012	162	162			CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		162			
511	46012	15	15			CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	15				
511	46510	31	31			CY	CLASS QC1 CONCRETE, FOOTING		31			
511	46512	178	178			CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	62	116			
511	50212	23	38			CY	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	38				
512	10051	288	288			SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN			288		4/38
512	10300	122	122			SY	SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN			122		
512	33000	7	7			SY	TYPE 2 WATERPROOFING	7				
513	10201	53,992	53,992			LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			53,992		
513	10300	291,444	291,444			LB	STRUCTURAL STEEL MEMBERS, LEVEL 5			291,444		
513	20000	316	316			EACH	WELDED STUD SHEAR CONNECTORS			316		
514	00061	24,530	24,530			SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN			24,530		4/38
514	00067	24,530	24,530			SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			24,530		4/38
516	11210	44	44			FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			44		
516	13200	45	45			SF	1/2" PREFORMED EXPANSION JOINT FILLER		45			
516	13600	42	42			SF	1" PREFORMED EXPANSION JOINT FILLER			42		
516	46000	4	4			EACH	BEARING DEVICE, BOLSTER			4		
516	46200	8	8			EACH	BEARING DEVICE, ROCKER			8		
517	75121	519	519			FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING), AS PER PLAN			519		4/42
517	76300	534	534			FT	RAILING, MISC.: AESTHETIC BIKE RAILING			534		4/42
518	12301	13	13			EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			13		33/42
518	21200	39	39			CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	39				
518	40000	64	64			FT	6" PERFORATED CORRUGATED PLASTIC PIPE	64				
518	40012	19	19			FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	19				
518	51101	327	327			FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN			327		33/42
518	51201	444	444			FT	10" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN			444		33/42
526	10001	25	25			SY	REINFORCED CONCRETE APPROACH SLABS (T=12"), AS PER PLAN				25	4/42
638	98100	LUMP			LUMP		WATER WORK, MISC.: BRIDGE WATERLINE					

DESIGN AGENCY: BURGESS & NIPLE  
 312 PLUM ST., CINCINNATI, OH

DATE: 5/3/2019  
 REVIEWED: MAB  
 STRUCTURE FILE NUMBER: 3102076

DRAWN: JDG  
 CHECKED: XAC

DESIGNED: BCS  
 CHECKED: XAC

ESTIMATED QUANTITIES  
 BRIDGE NO. HAM-32-0127  
 SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER

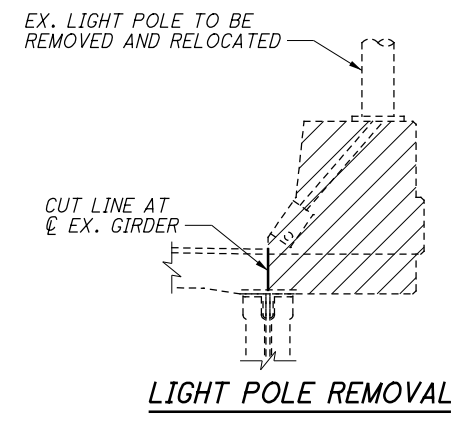
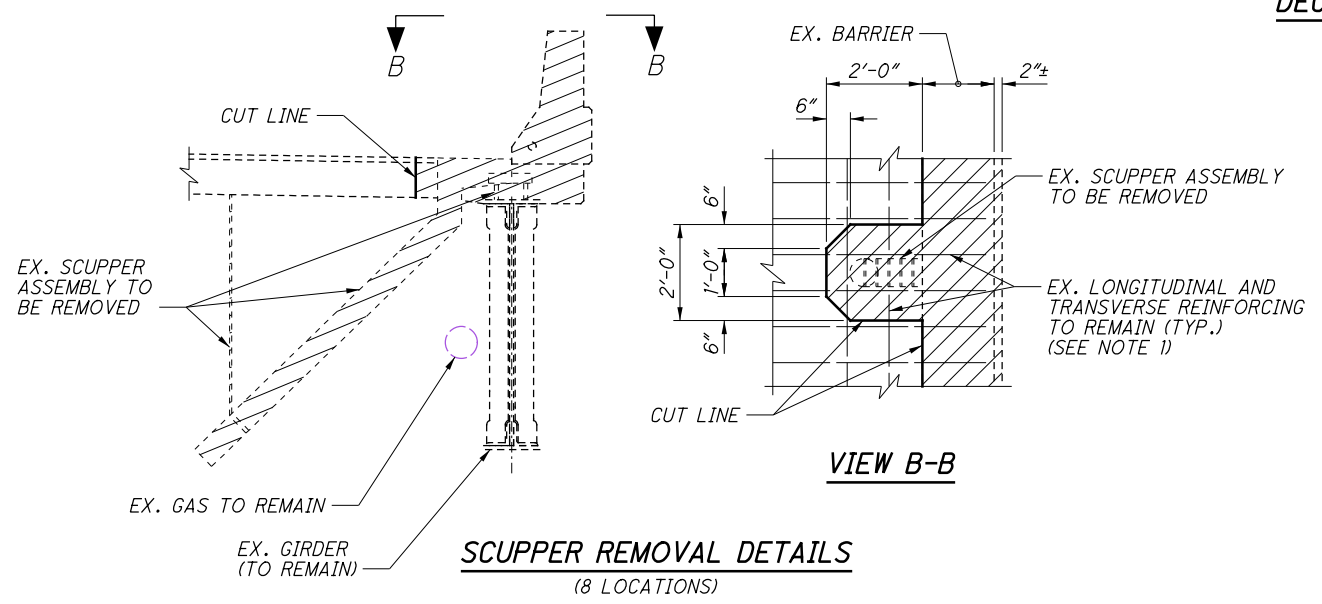
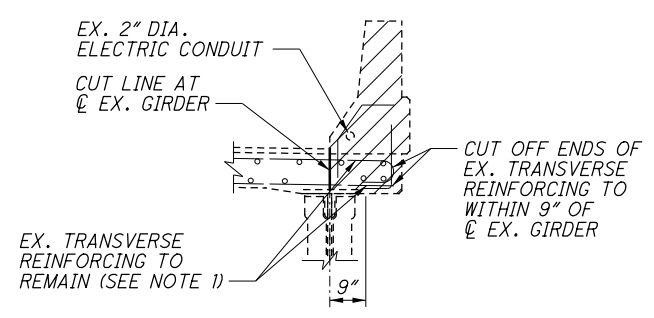
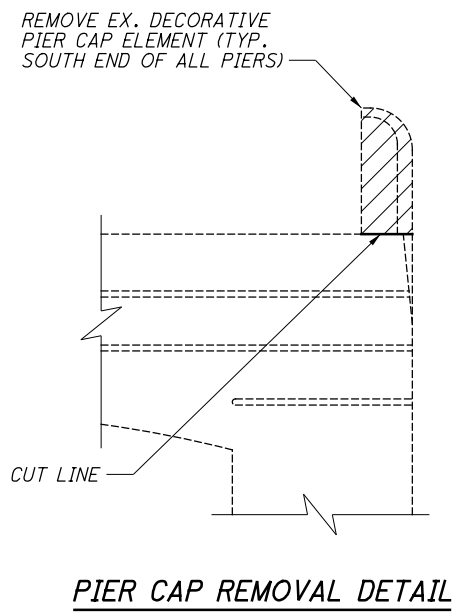
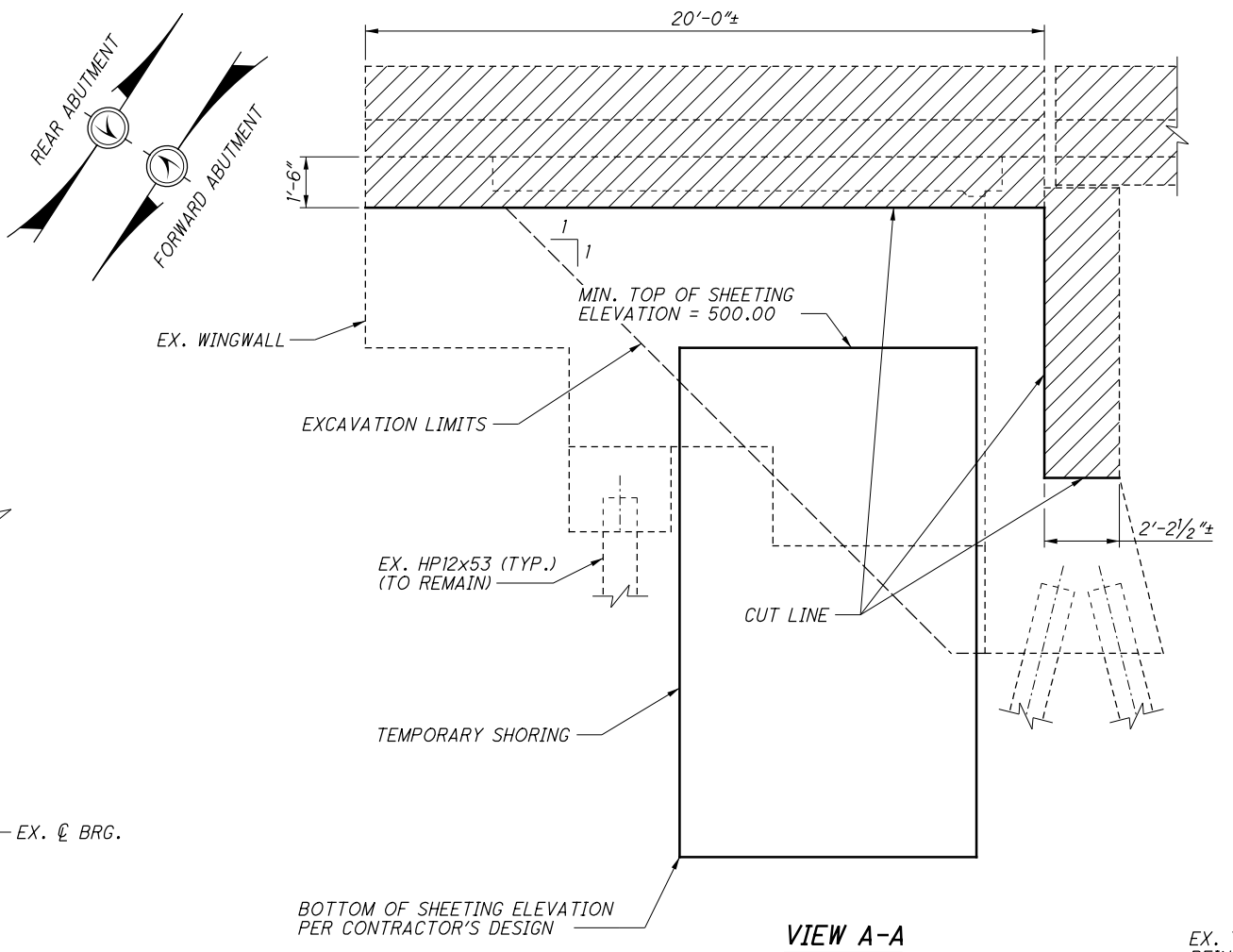
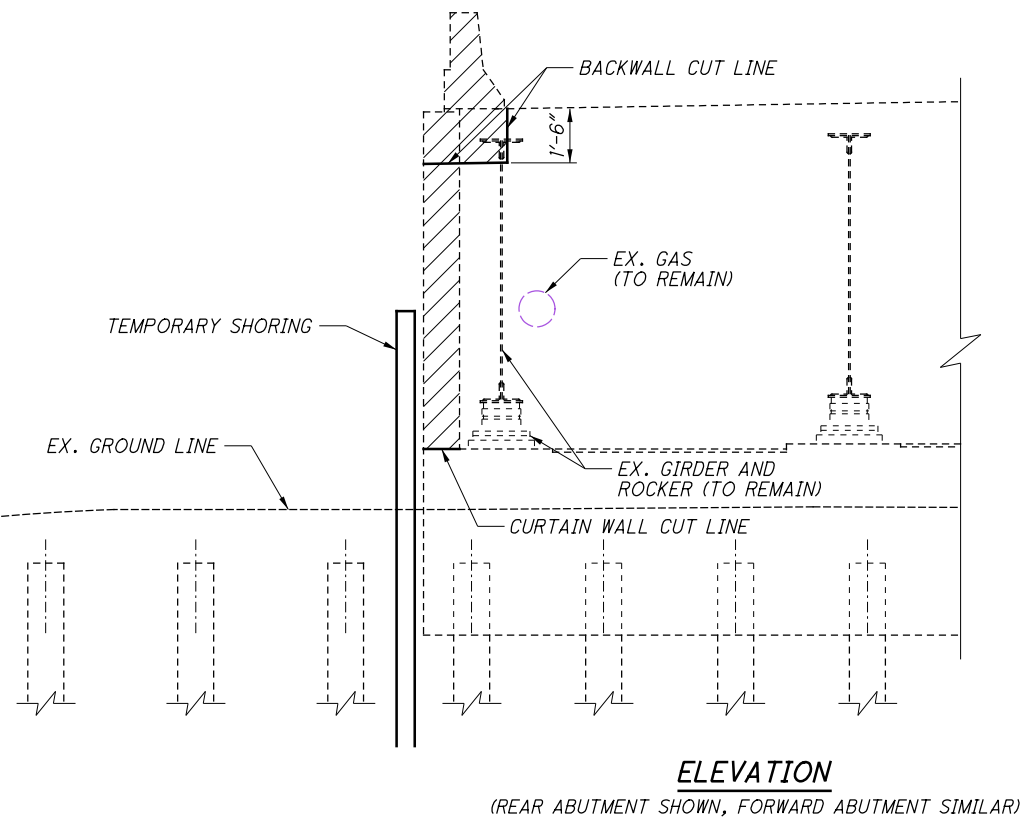
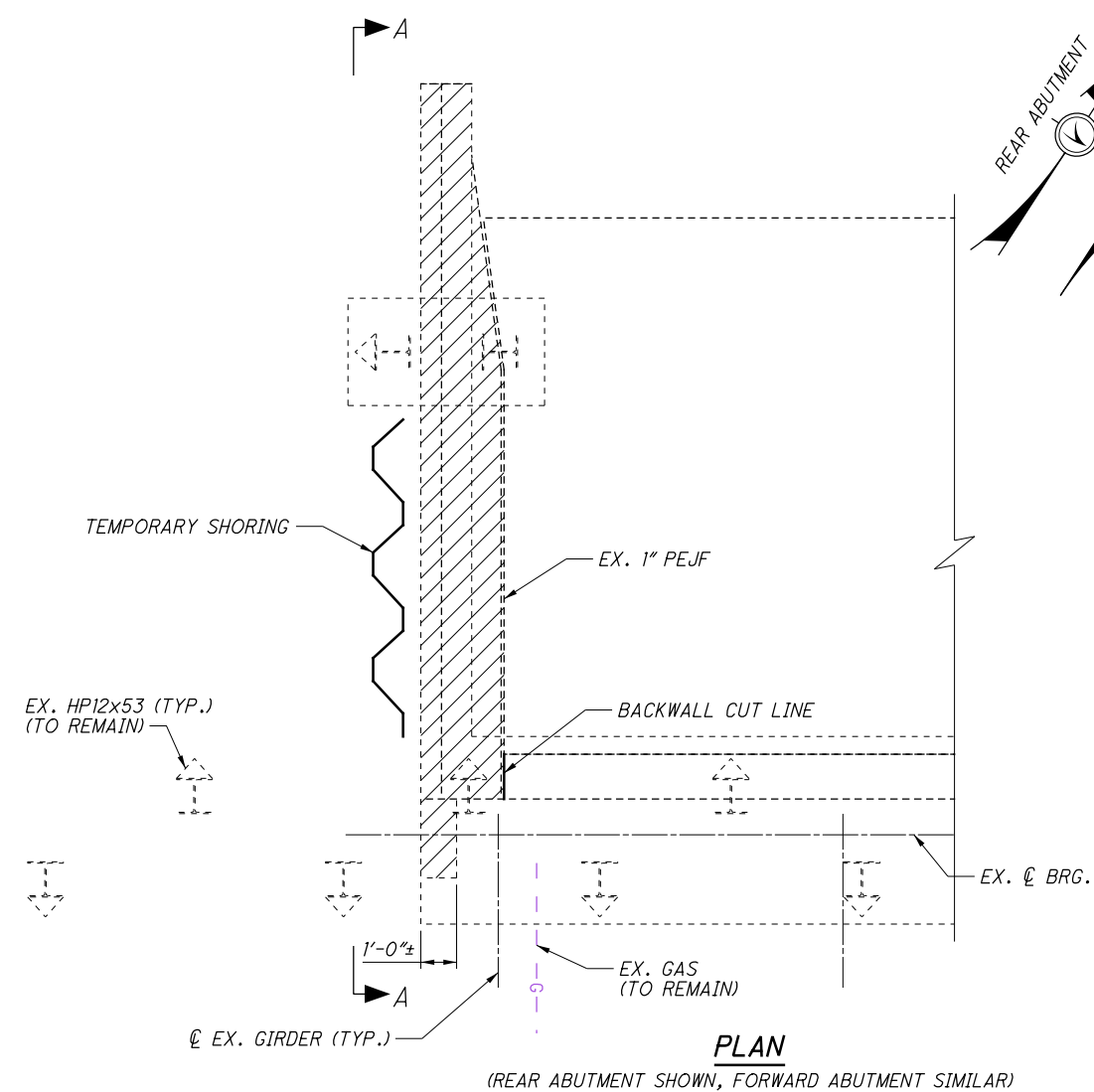
HAM LMST BEECHMONT  
 BRIDGE - PT 1  
 PID No. 107295

5/42

87  
 127



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**LEGEND**

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

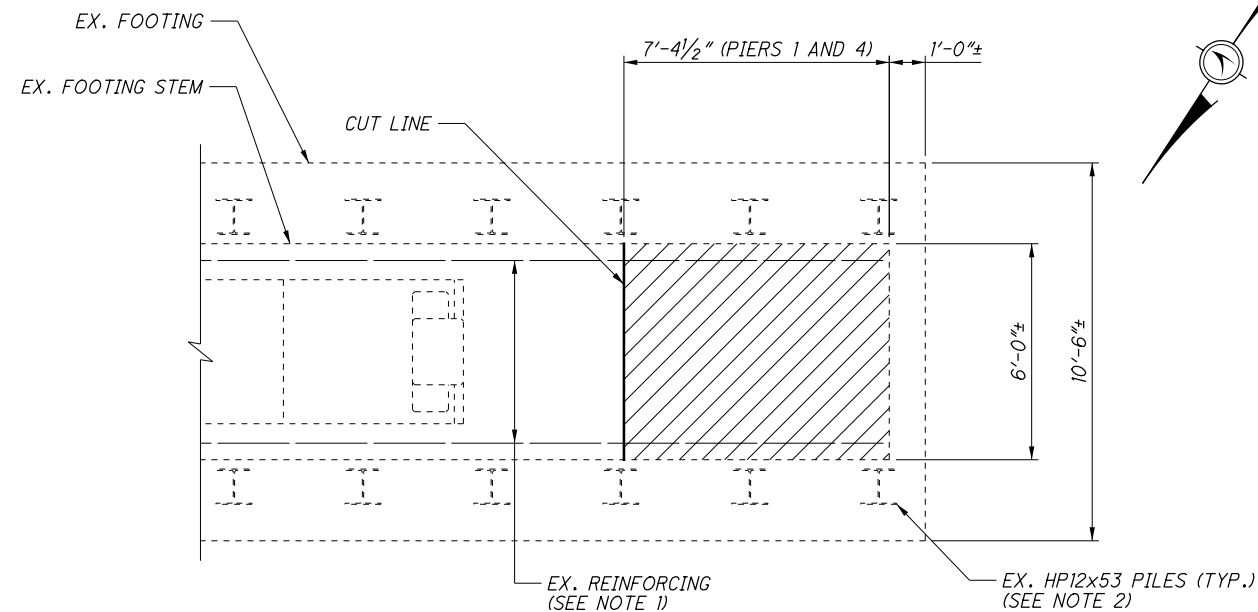
**NOTES:**

1. EXISTING LONGITUDINAL AND TRANSVERSE DECK REINFORCING SHALL REMAIN AS SHOWN. DAMAGED REINFORCING SHALL BE REPLACED WITH EPOXY COATED BARS OF THE SAME SIZE AND DOWELED 9" INTO EXISTING DECK CONCRETE AS DIRECTED BY THE ENGINEER AND AT NO COST TO THE PROJECT. RETAINED REINFORCING SHALL BE PRESERVED WITHOUT DAMAGE TO THE SATISFACTION OF THE ENGINEER.

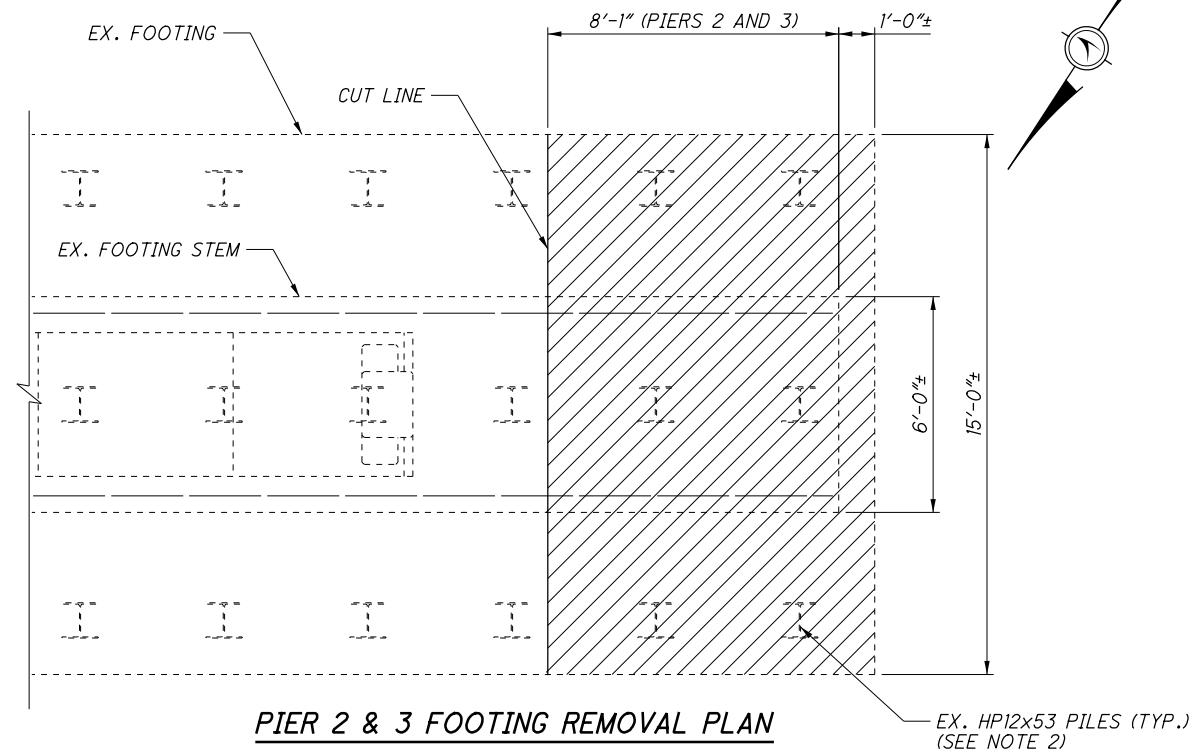
2. FOR CUT LINE AND REMOVAL OF EX. EXPANSION JOINT ARMOR, SEE SHEET 34/42 .

DESIGNED	SJA	CHECKED	BCS
DRAWN	JDG	REVISED	
REVIEWED	MAB	STRUCTURE FILE NUMBER	3102076
DATE	5/3/2019	DESIGN AGENCY	BURGESS & NIPLE
			312 PLUM ST., CINCINNATI, OH
<b>REMOVAL DETAILS - 1</b>			
BRIDGE NO. HAM-32-0127			
SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER			
<b>HAM LMST BEECHMONT BRIDGE - PT 1</b>			
PID No. 107295			
6 / 42			
88			
127			

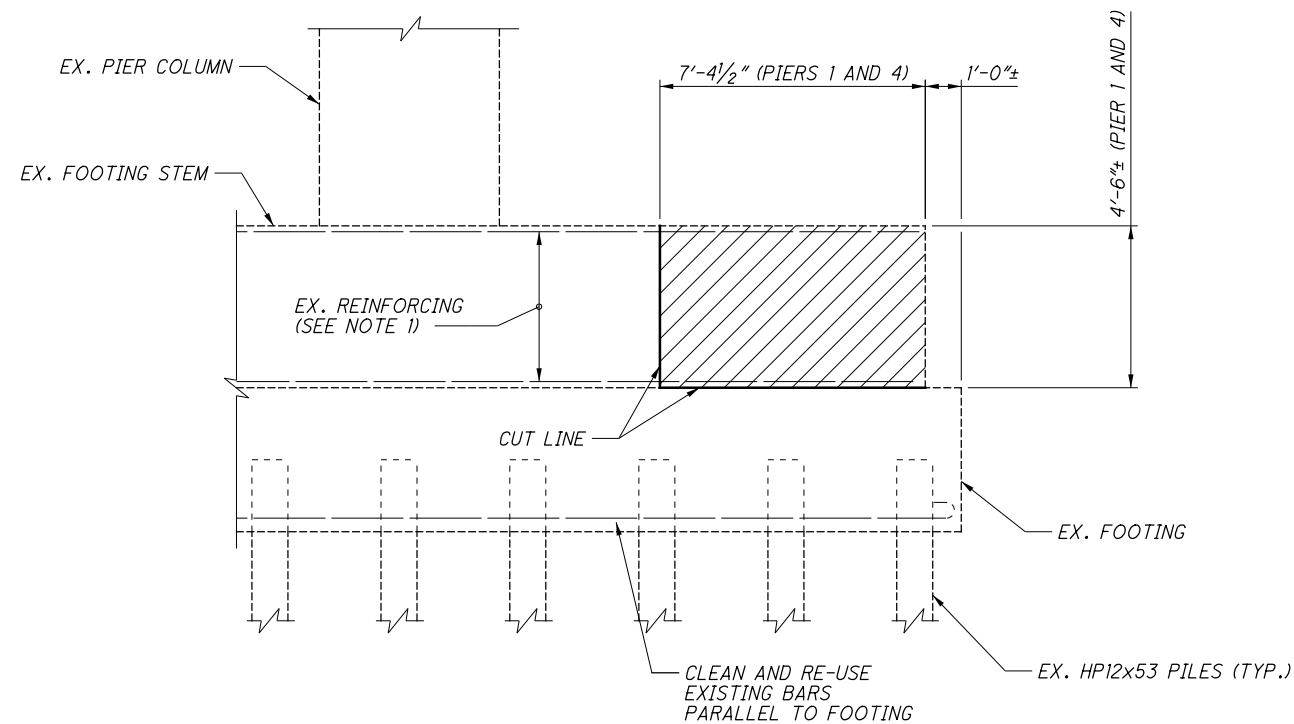
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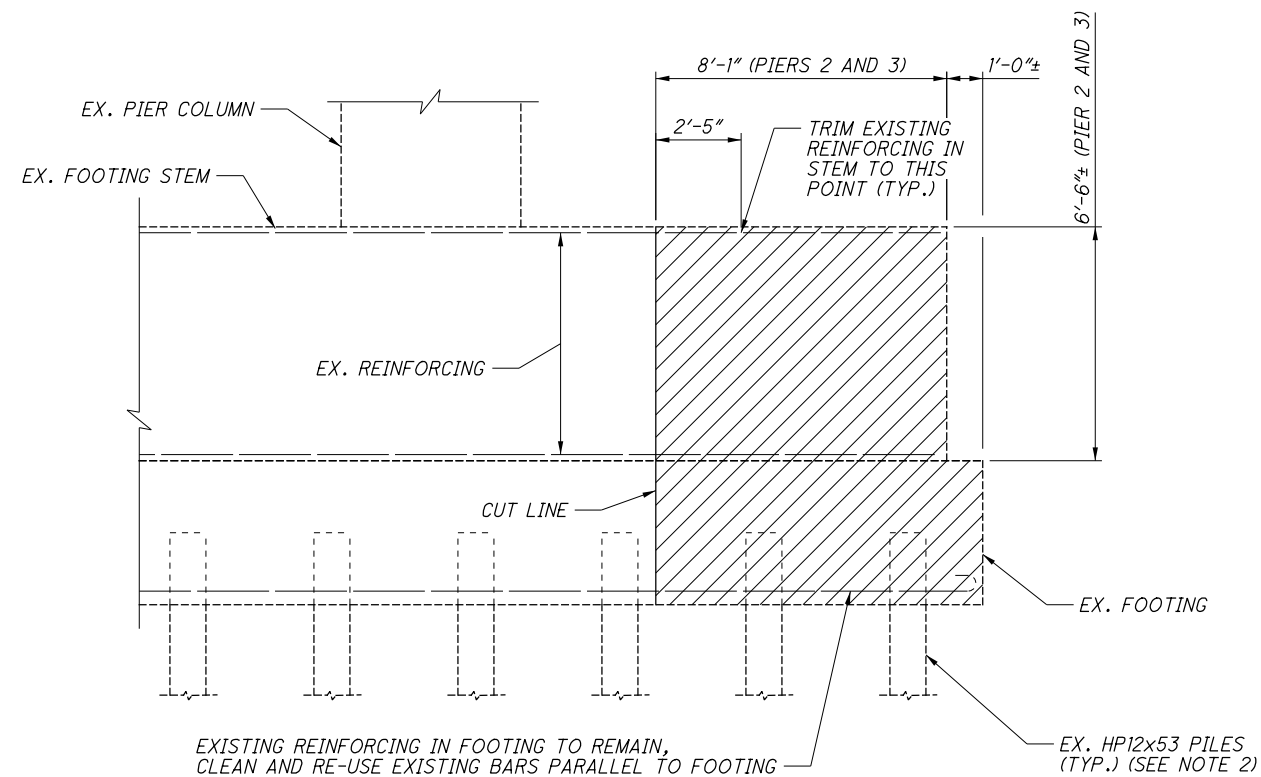
**PIER 1 & 4 FOOTING REMOVAL PLAN**



**PIER 2 & 3 FOOTING REMOVAL PLAN**



**PIER 1 & 4 FOOTING REMOVAL ELEVATION**



**PIER 2 & 3 FOOTING REMOVAL ELEVATION**

**LEGEND**



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

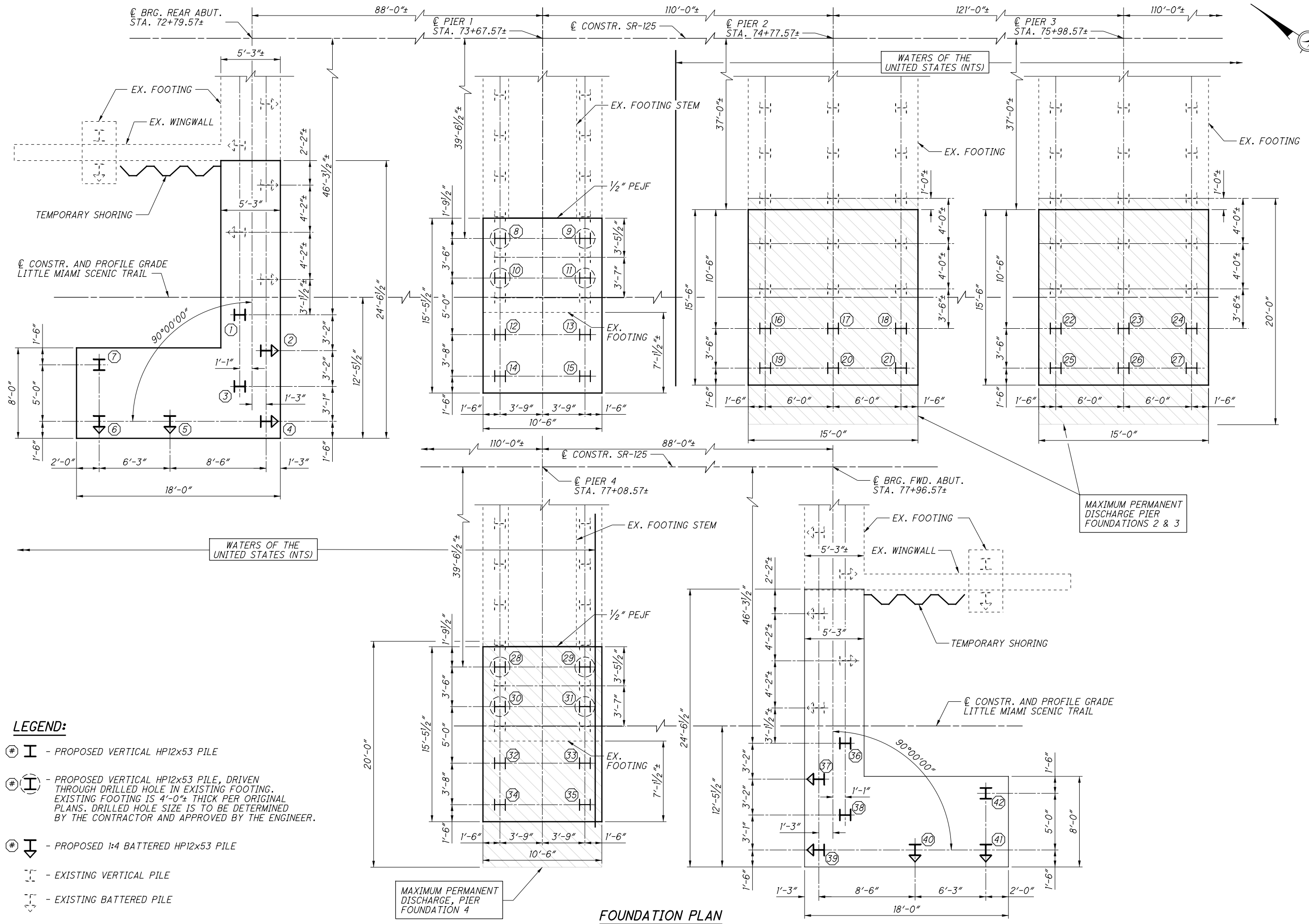
**NOTES:**

- EXISTING REINFORCING SHALL BE CUT FLUSH WITH THE CUT LINE PIERS 1 AND 4 ONLY.
- EXISTING PILES ARE TO REMAIN AND BE RE-USED.

DESIGNED SJA	DRAWN JDG	REVIEWED MAB	DATE 5/3/2019	DESIGN AGENCY BURGESS & NIPLE 312 PLUM ST., CINCINNATI, OH
			STRUCTURE FILE NUMBER 3102076	
CHECKED BCS	REVISED			
<b>REMOVAL DETAILS - 2</b>				
BRIDGE NO. HAM-32-0127				
SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER				
HAM LMST BEECHMONT BRIDGE - PT 1 PID No. 107295				
7 / 42				
89 127				



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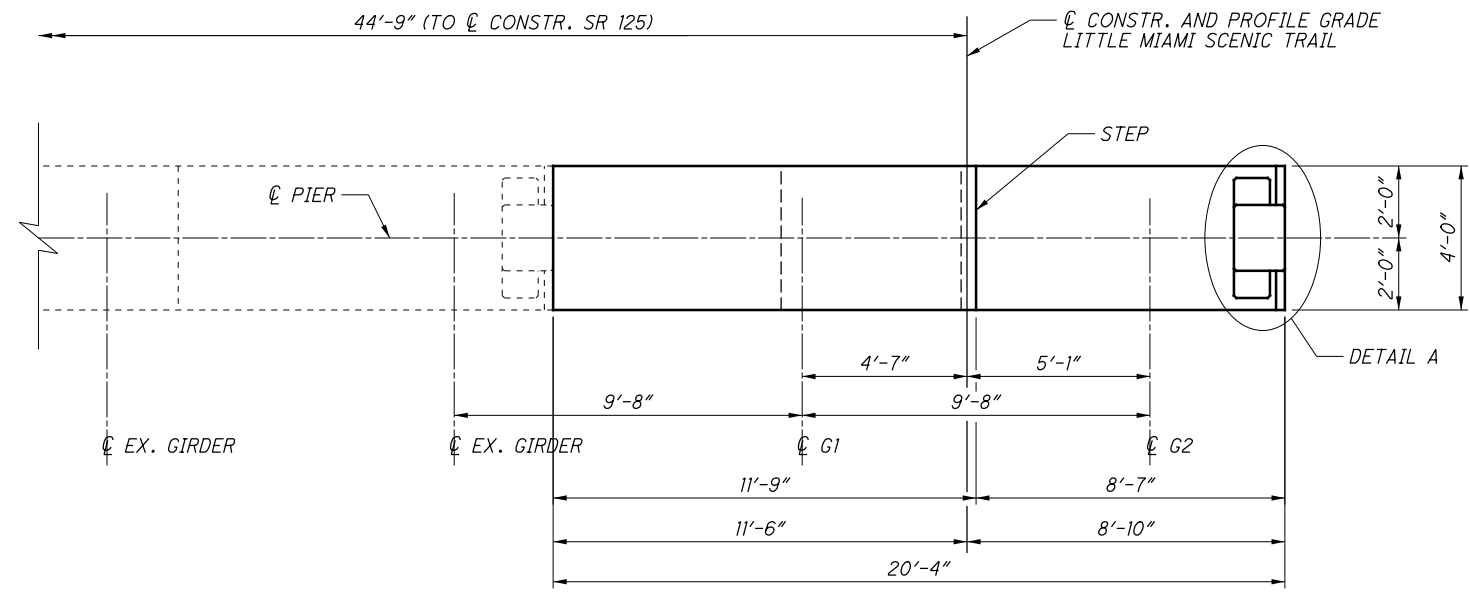
FOUNDATION PLAN

**LEGEND:**

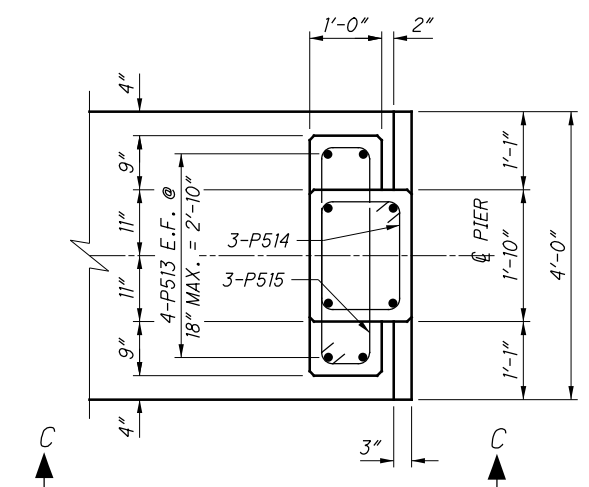
- ⊕ I - PROPOSED VERTICAL HP12x53 PILE
- ⊕ (I) - PROPOSED VERTICAL HP12x53 PILE, DRIVEN THROUGH DRILLED HOLE IN EXISTING FOOTING. EXISTING FOOTING IS 4'-0"± THICK PER ORIGINAL PLANS. DRILLED HOLE SIZE IS TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- ⊕ I↘ - PROPOSED 1:4 BATTERED HP12x53 PILE
- - - - - EXISTING VERTICAL PILE
- - - - - EXISTING BATTERED PILE

DESIGNED		DRAWN		REVIEWED		DATE		DESIGN AGENCY	
XAC	JDG	MAB	JDG	MAB	MAB	5/3/2019		BURGESS & NIPLE	
BCS	BCS	BCS	BCS	BCS	BCS	3102076		312 PLUM ST., CINCINNATI, OH	
FOUNDATION PLAN					BRIDGE NO. HAM-32-0127				
SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER					SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER				
HAM LMST BEECHMONT BRIDGE - PT 1					PID No. 107295				
8 / 42					90 / 127				

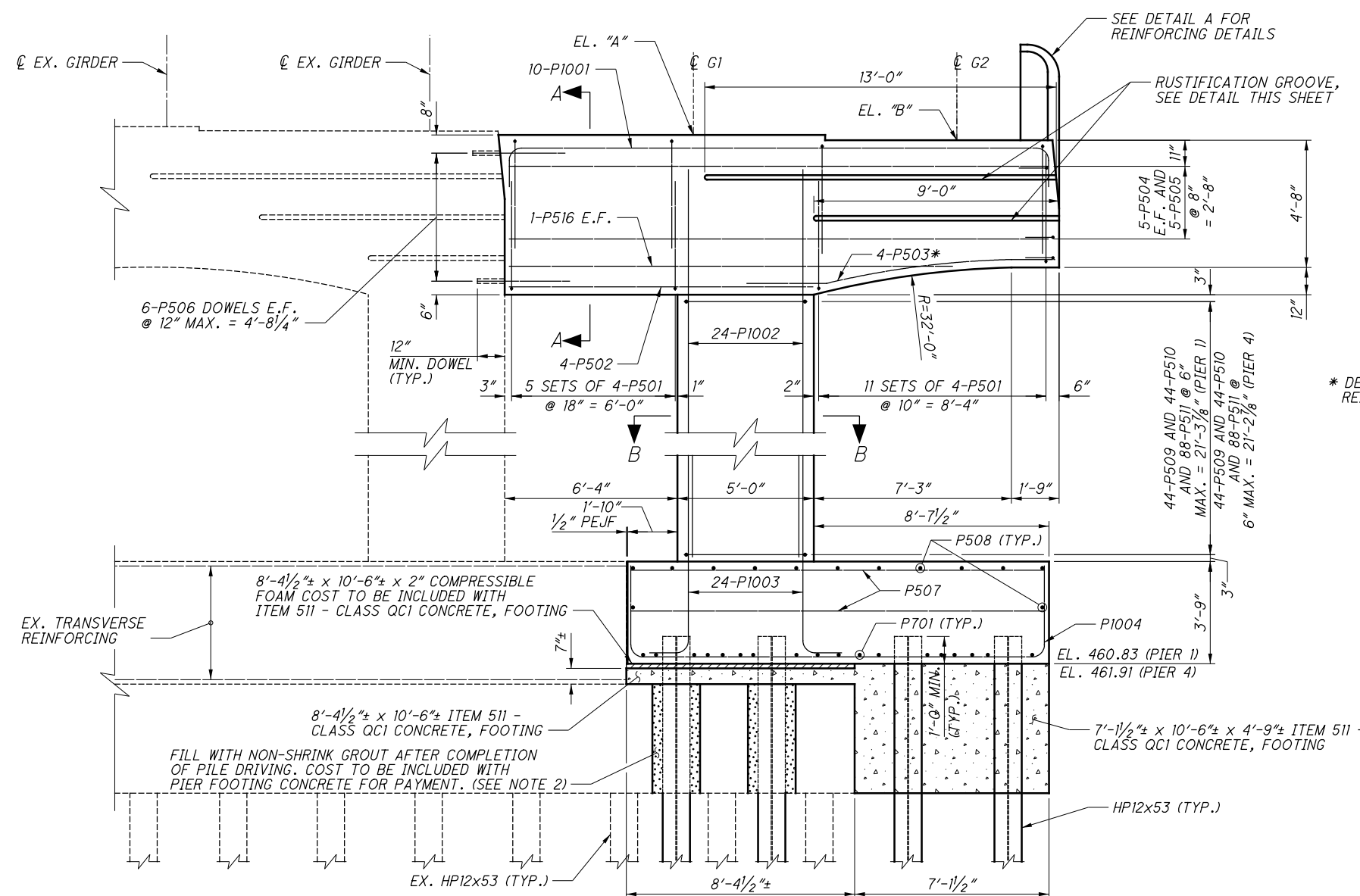
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**PIERS 1 AND 4 PLAN**  
(FOOTING NOT SHOWN)

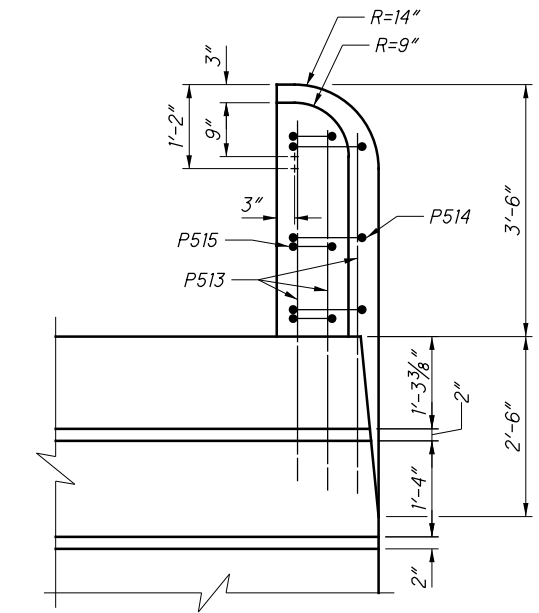


**DETAIL A**

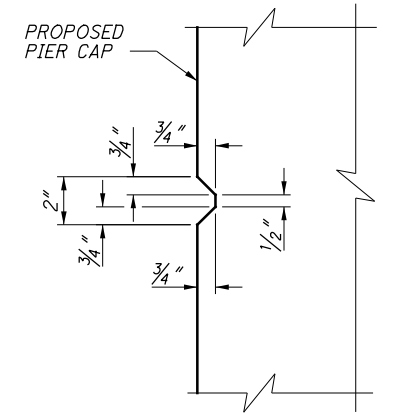


**PIERS 1 AND 4 ELEVATION**

PIER NO.	EL. "A"	EL. "B"	MIN. LAP SPLICE LENGTH
1	492.26	492.07	#5 2'-5"
4	493.26	493.07	#10 6'-0"



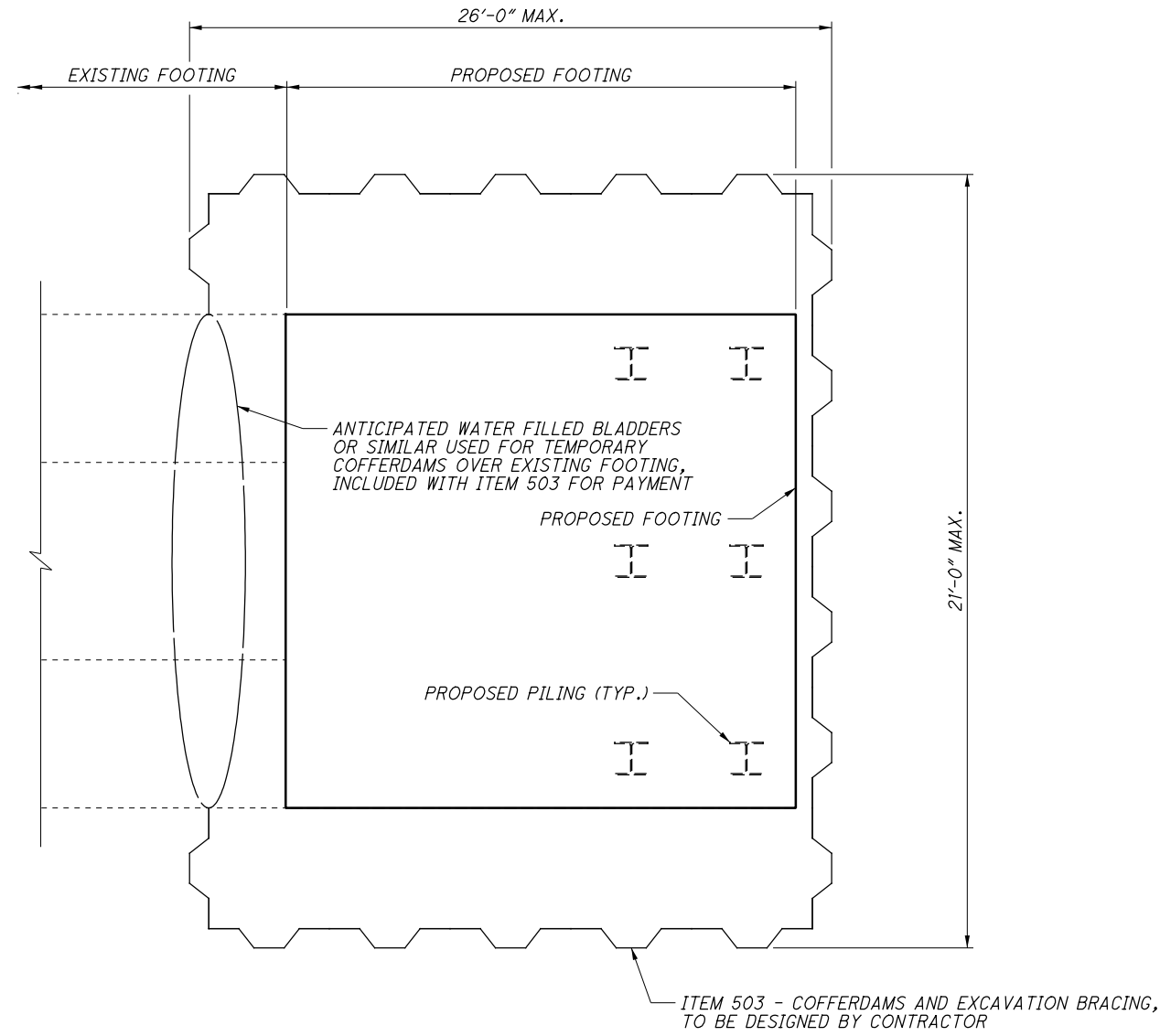
**VIEW C-C**



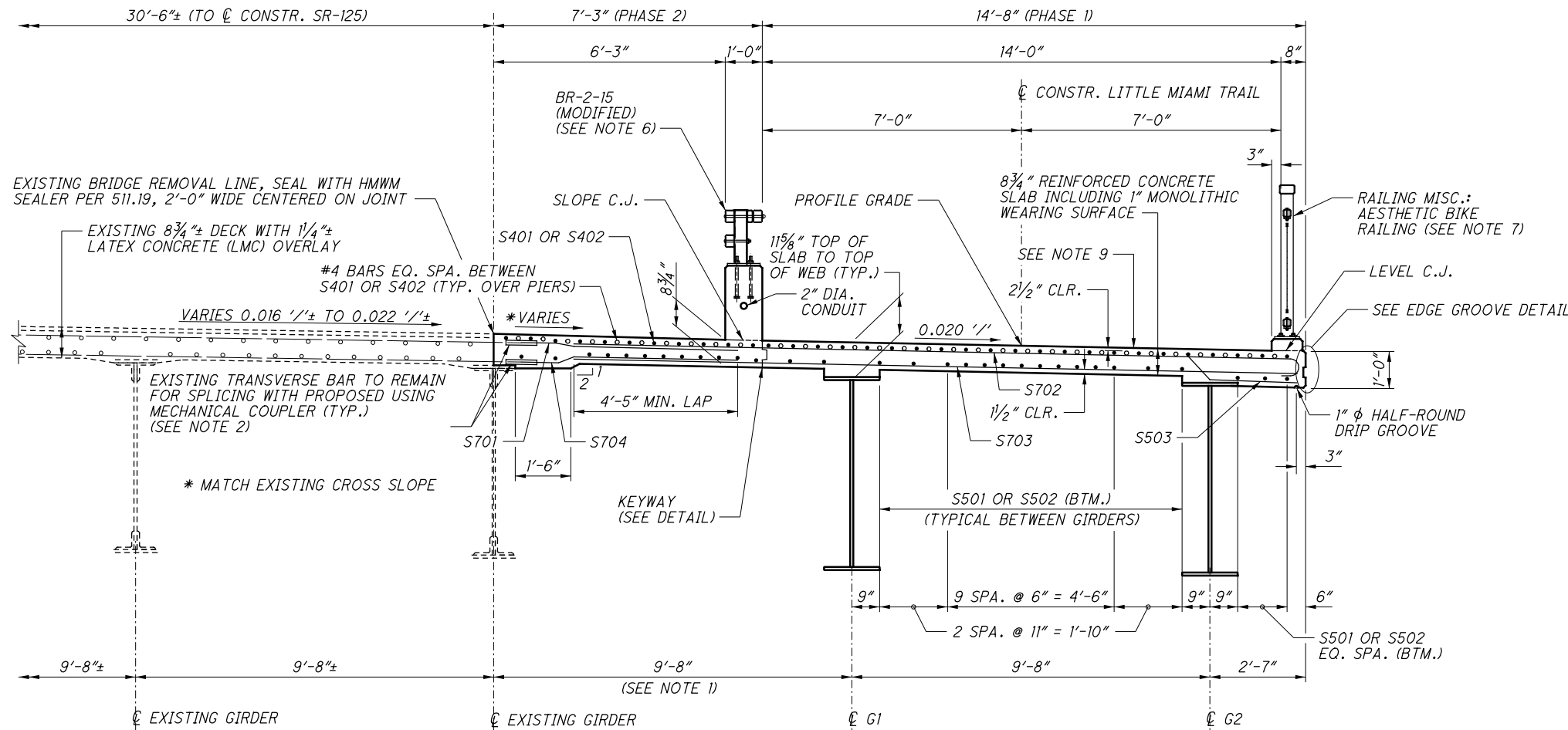
**RUSTIFICATION GROOVE**

**NOTES:**

1. FOR SECTION A-A, B-B, AND FOOTING PLAN, SEE SHEET 13/42 .
2. EXISTING FOOTING IS 4'-0" THICK PER ORIGINAL PLANS. DRILLED HOLE SIZE IS TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

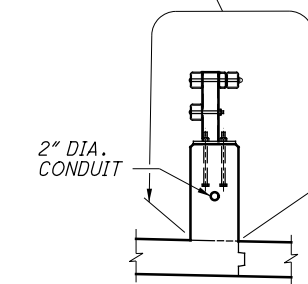


**PIER 3 COFFERDAM PLAN**

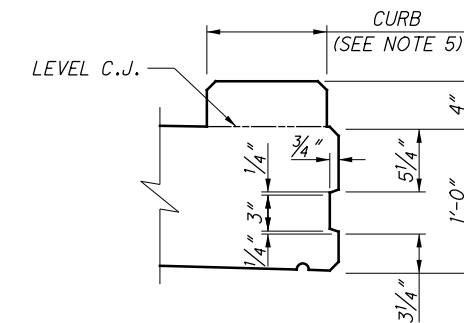


**TRANSVERSE DECK SECTION**  
(CROSSFRAMES AND UTILITIES NOT SHOWN FOR CLARITY)

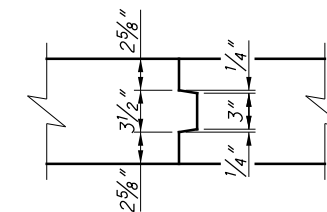
LIMITS OF SEALING  
CONCRETE SURFACES  
WITH CLEAR SILANE SEALER



**BARRIER SEALING DETAIL**



**EDGE GROOVE DETAIL**



**KEYWAY DETAIL**

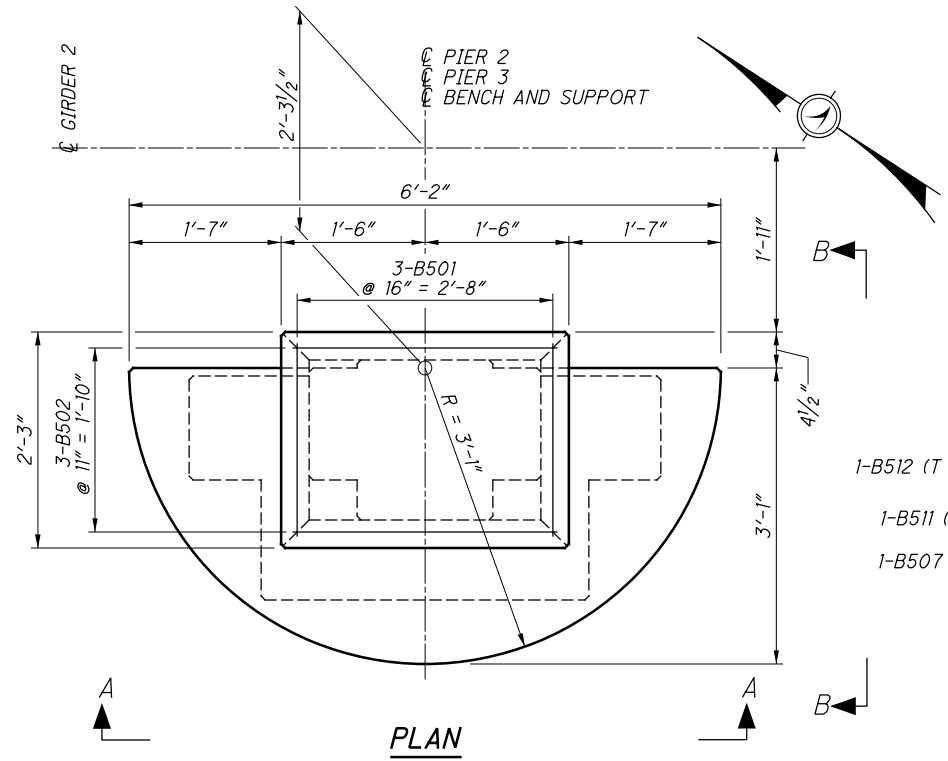
**NOTES:**

1. CROSS FRAMES BETWEEN NEW GIRDER AND EXISTING GIRDER WILL NOT BE INSTALLED UNTIL PHASE 1 DECK HAS BEEN PLACED AND CURED 3 DAYS (MIN.) .
2. MECHANICALLY COUPLE TRANSVERSE DECK REINFORCING TO EXISTING TRANSVERSE DECK REINFORCING.
3. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 5/8 INCHES AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.
4. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM/GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.
5. FOR CURB DETAILS, SEE SHEET 28/42 .
6. FOR BR-2-15 (MODIFIED) BARRIER DETAILS, SEE SHEET 29/42 .
7. FOR AESTHETIC BIKE RAILING DETAILS, SEE SHEET 26/42 .
8. SEE ROADWAY PLAN FOR MAINTAINENCE OF TRAFFIC DETAILS.
9. FINISH CONCRETE DECK PER CMS 511.16.

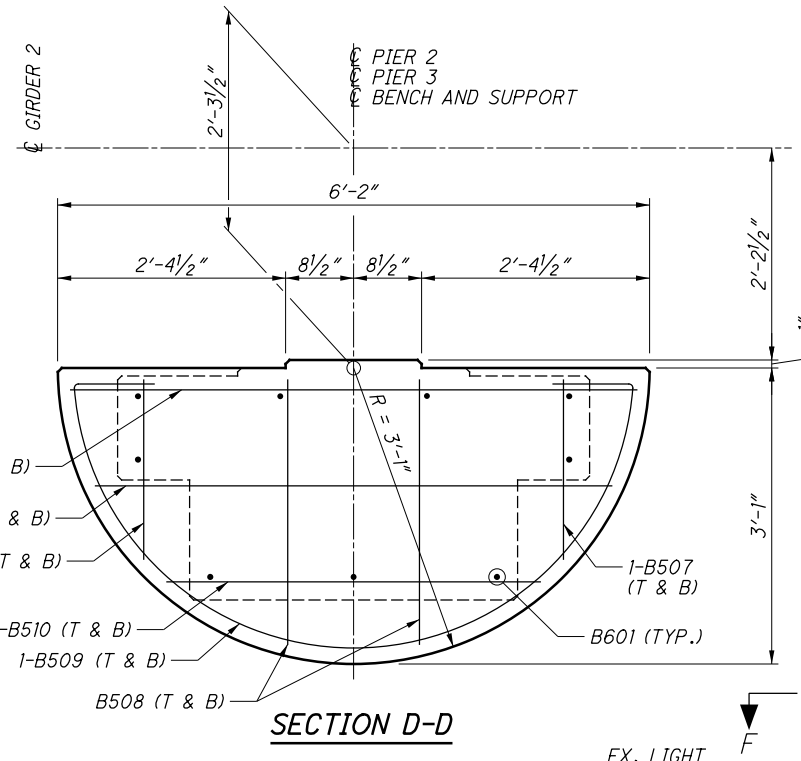
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DESIGNED XAC	DRAWN JDG	REVIEWED MAB	DATE 5/3/2019	DESIGN AGENCY BURGESS & NIPLE
CHECKED SJA	REVISED	STRUCTURE FILE NUMBER 3102076		312 PLUM ST., CINCINNATI, OH
<b>TRANSVERSE DECK SECTION</b>				
BRIDGE NO. HAM-32-0127				
SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER				
<b>HAM LMST BEECHMONT BRIDGE - PT 1</b>				
PID No. 107295				
24/42				
106 127				

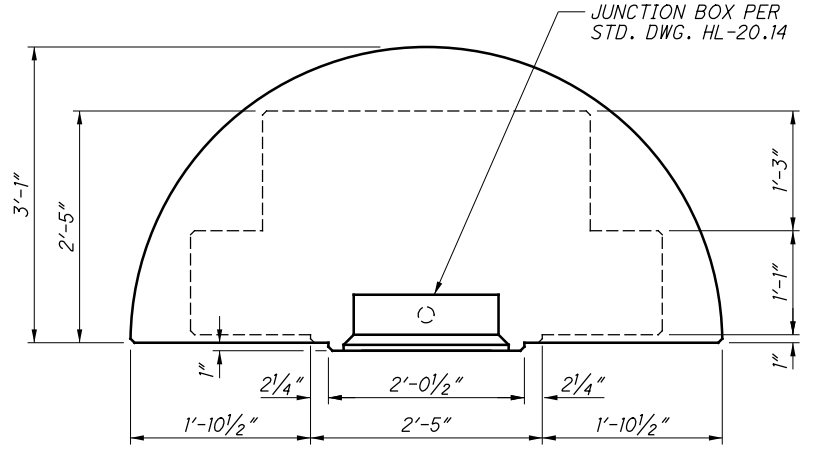
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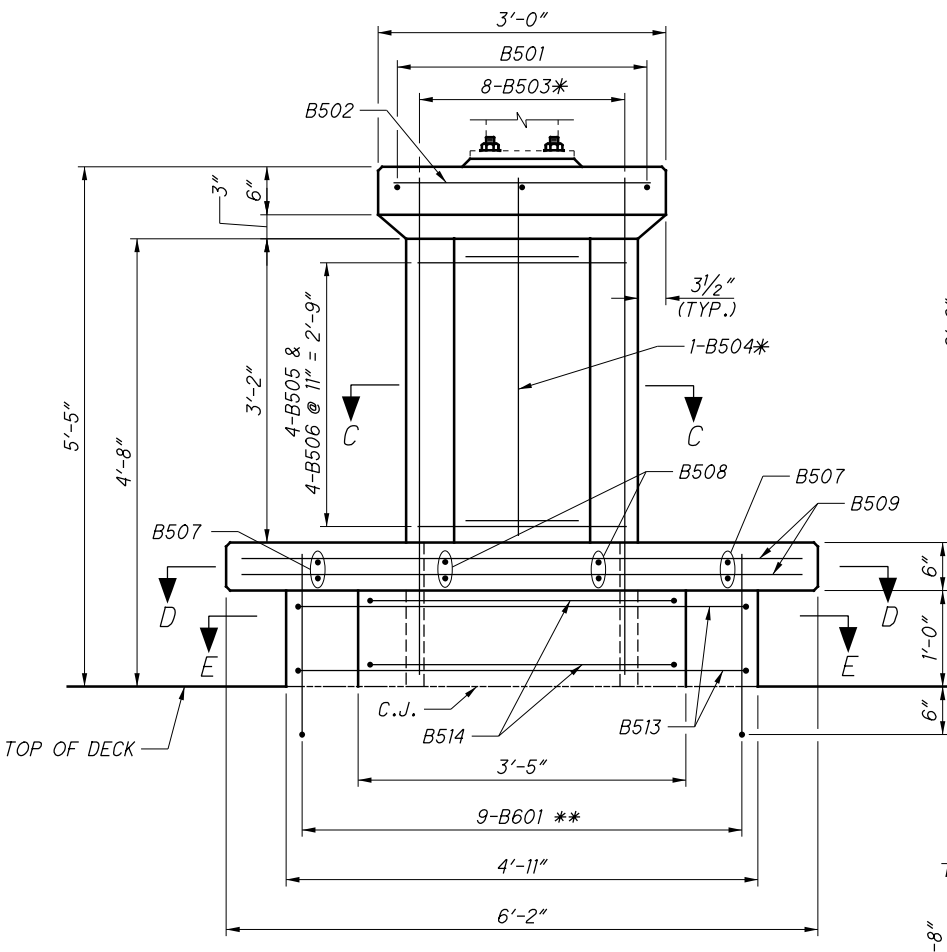
**PLAN**



**SECTION D-D**



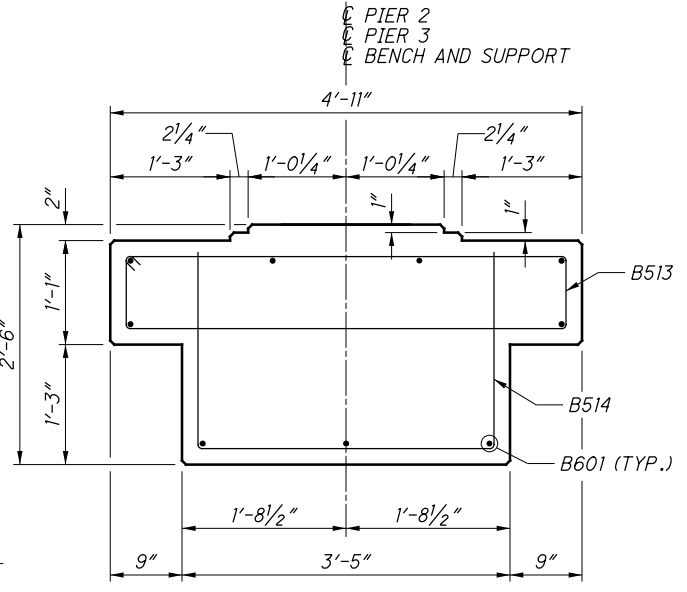
**SECTION G-G**  
(REINFORCING NOT SHOWN FOR CLARITY)



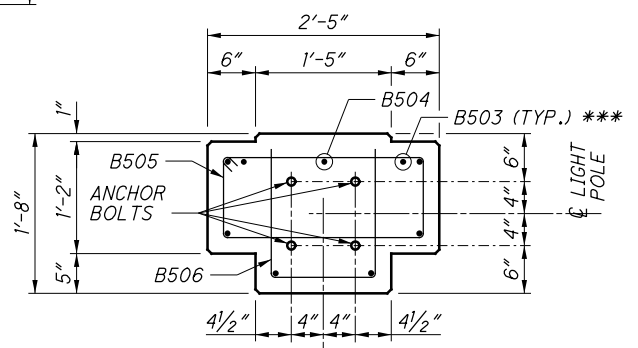
**VIEW A-A**

(JUNCTION BOX AND LIGHTING CONDUIT NOT SHOWN FOR CLARITY)

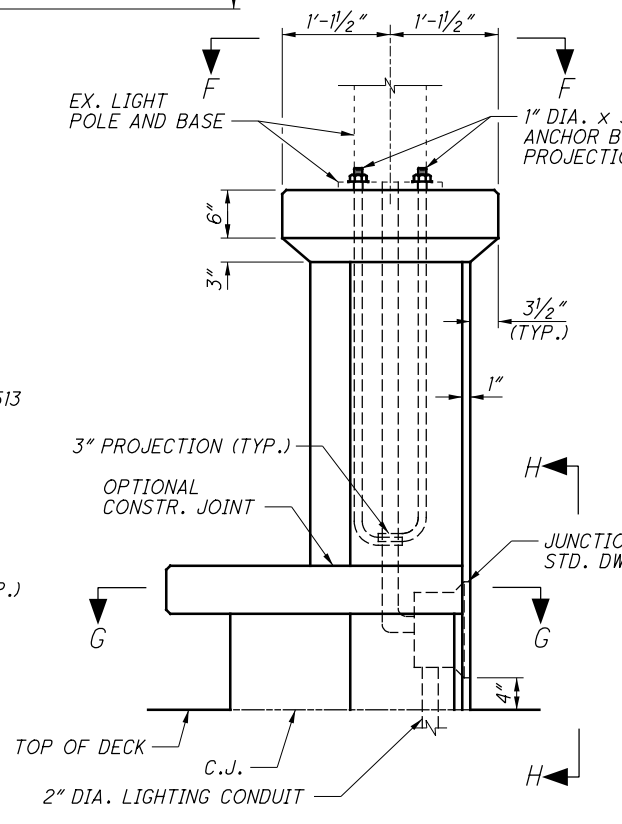
- \* SEE SECTION C-C FOR BAR LOCATION
- \*\* SEE SECTION E-E FOR BAR LOCATION
- \*\*\* ADJUST B503 TO CLEAR JUNCTION BOX BY 1/2"



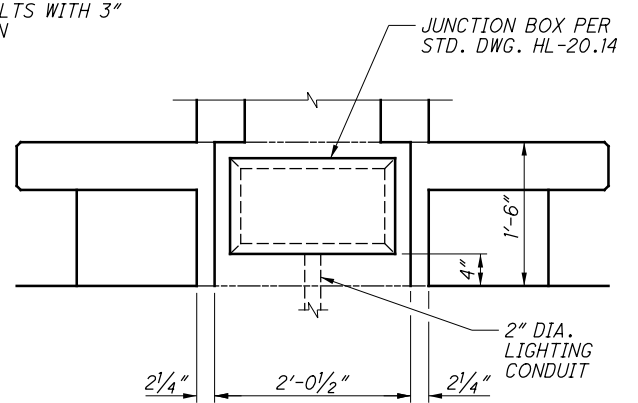
**SECTION E-E**



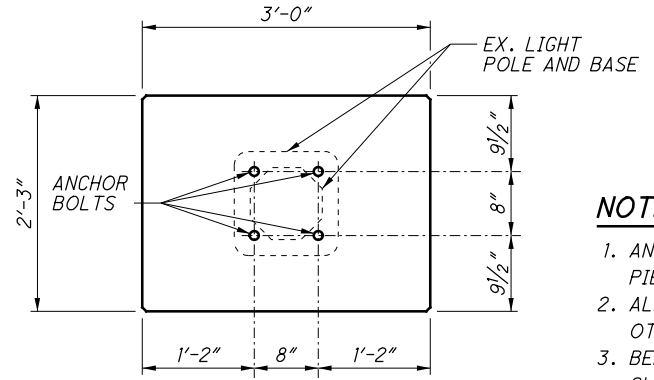
**SECTION C-C**



**VIEW B-B**



**VIEW H-H**



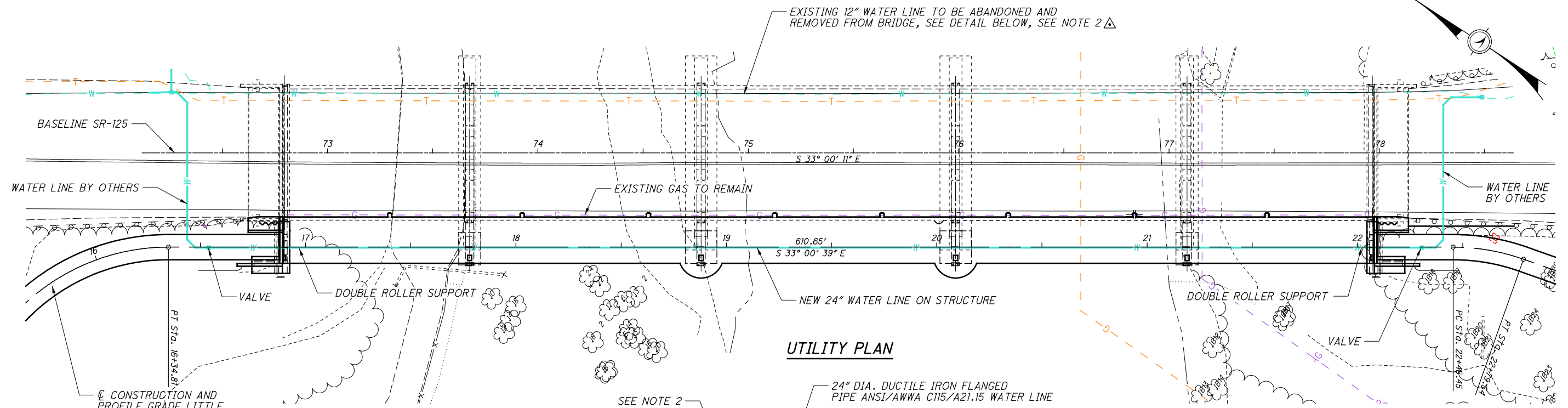
**VIEW F-F**

**NOTES:**

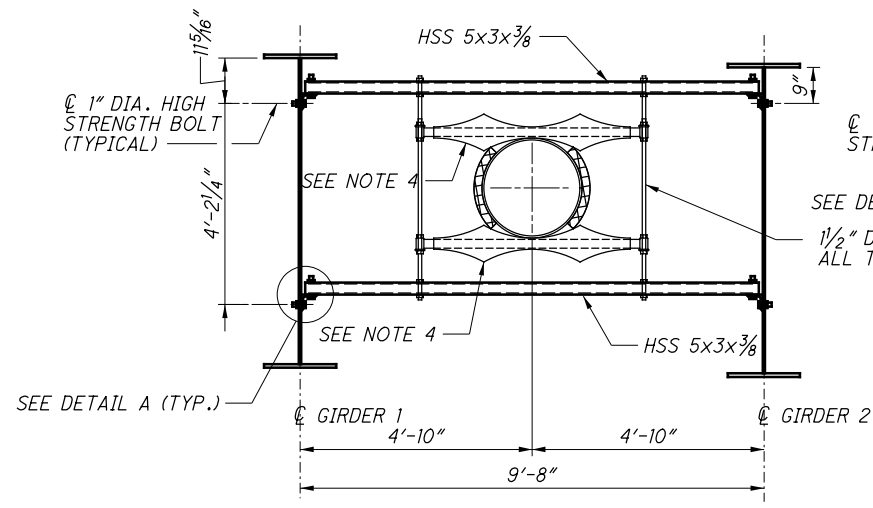
1. ANCHOR BOLTS AND LIGHT POLE ASSEMBLY ONLY APPLY AT PIER 3 BENCH.
2. ALL REINFORCING SHALL HAVE 2" CLEAR COVER UNLESS NOTED OTHERWISE.
3. BENCHES AND LIGHT SUPPORTS ARE INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN FOR PAYMENT.

DESIGNED XAC CHECKED SUA	DRAWN JDG REVISED	REVIEWED MAB	DATE 5/3/2019	DESIGN AGENCY BURGESS & NIPLE
		STRUCTURE FILE NUMBER 3102076		312 PLUM ST., CINCINNATI, OH
<b>BENCH AND LIGHT SUPPORT DETAILS</b>				
BRIDGE NO. HAM-32-0127				
SR 125 (BEECHMONT AVE.) OVER LITTLE MIAMI RIVER				
HAM LMST BEECHMONT BRIDGE - PT 1		PID No. 107295		
30/42		112 127		

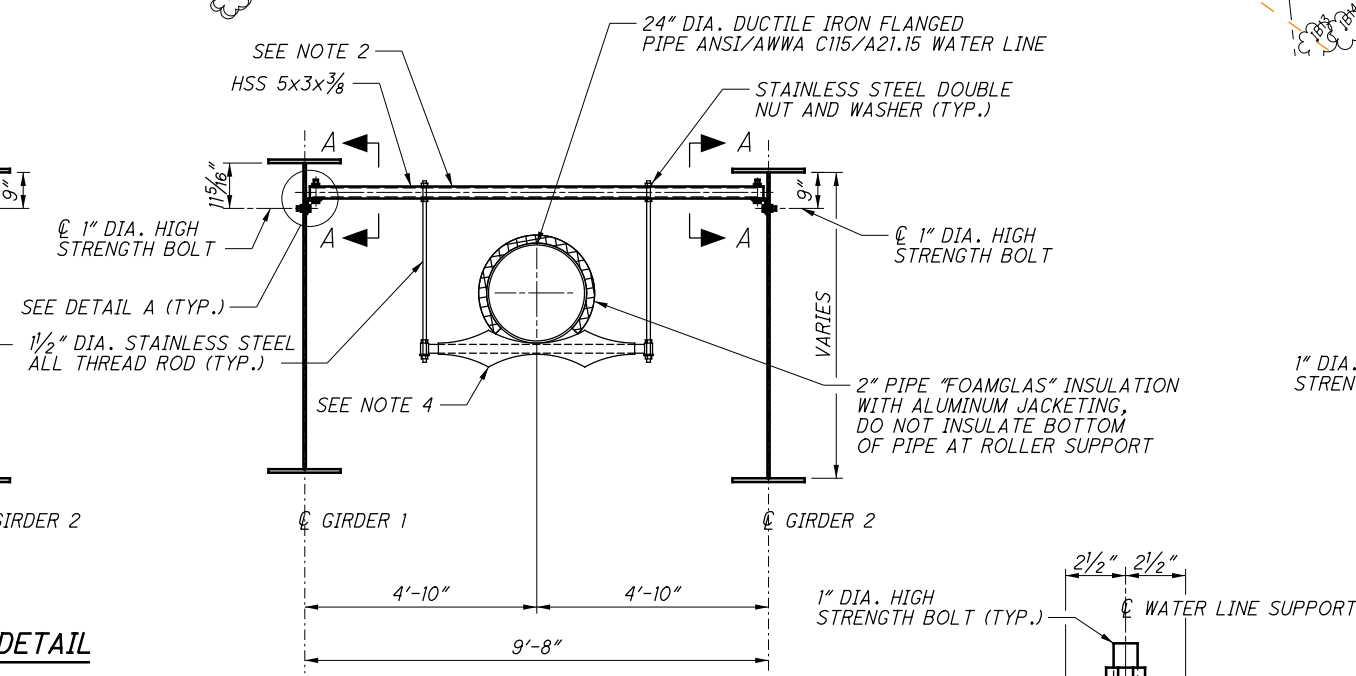
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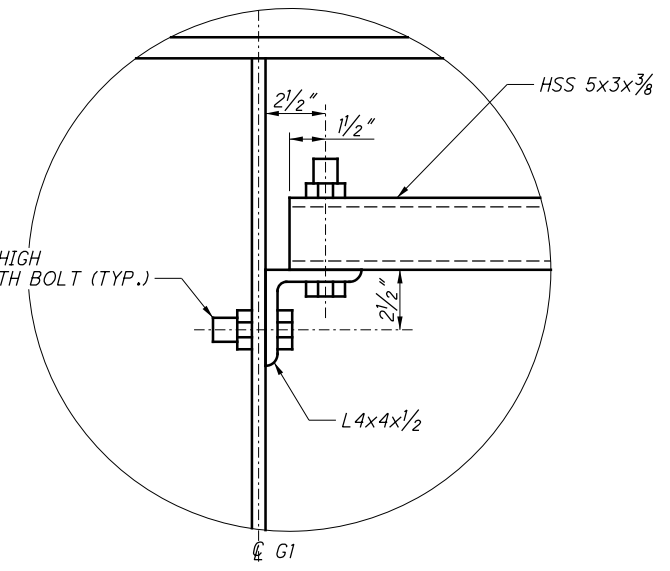
**UTILITY PLAN**



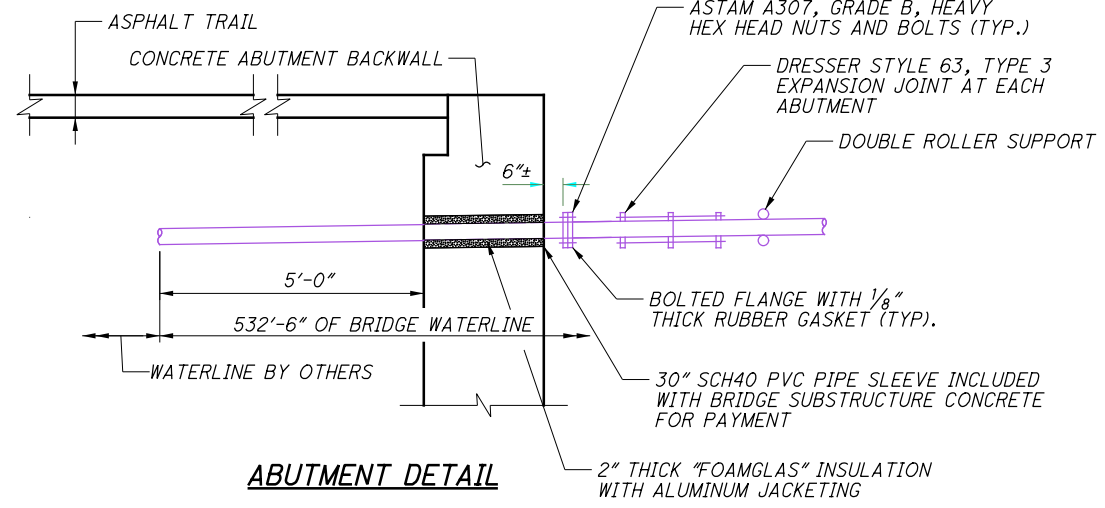
**DOUBLE ROLLER WATERLINE SUPPORT DETAIL**  
(1 REQUIRED AT EACH ABUTMENT)



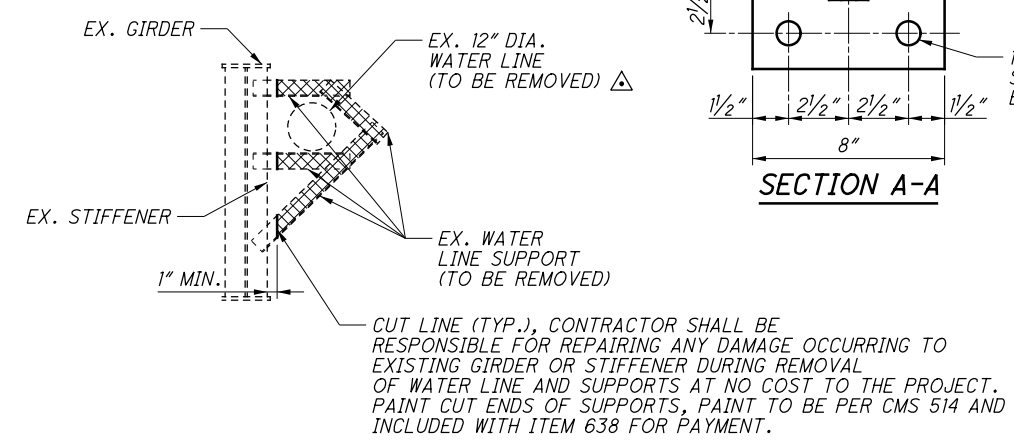
**TYPICAL WATERLINE SUPPORT DETAIL**  
(APPROXIMATELY 30 WILL BE REQUIRED)



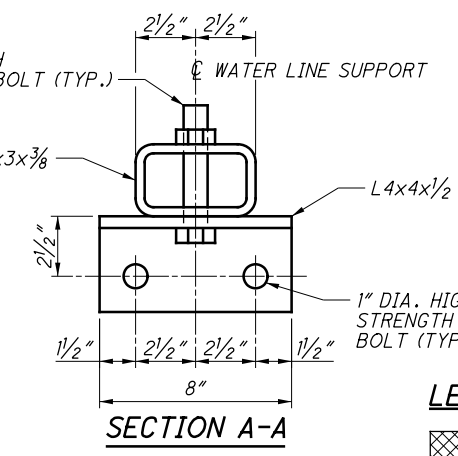
**DETAIL A**



**ABUTMENT DETAIL**



**WATER LINE REMOVAL DETAIL**



**SECTION A-A**

**LEGEND:**  
 REMOVAL LIMITS

**NOTE:**  
 △ EXISTING WATERLINE CONTAINS ABESTOS. THE REMOVAL AND DISPOSAL COST TO BE INCLUDED WITH ITEM SPECIAL - MISC.: WORK INVOLVING ASBESTOS CONTAINING MATERIALS.

**NOTE:**  
 1. SEE SHEET 38/42 FOR WATERLINE NOTES AND ADDITIONAL DETAILS.  
 2. ONCE THE EXISTING WATER LINE IS REMOVED, CAP THE EXISTING PIPE STUBS IN ABUTMENT BACKWALL AND FILL ANY VOIDS AROUND EXISTING PIPE AND PIPE EXANSION FITTINGS WITH GROUT OR CONCRETE.



# GENERAL PROVISIONS

The Contractor is advised that there are several changes to the most recent edition of the City of Cincinnati Supplement dated January 1, 2013. These General Provisions include these changes. The Supplement and a Summary of Changes can be purchased or downloaded from the City's website: <http://www.cincinnati-oh.gov/dote/assets/File/2013%20CITY%20SUPPLEMENT-FINAL.pdf>

Water main items are to be constructed in accordance with the provisions of the State of Ohio, Department of Transportation, Construction and Material Specifications, dated January 1, 2013, and modified by the City of Cincinnati Supplement to said State of Ohio Specifications, effective January 1, 2013, and any supplements or changes thereto. Copies of the State specifications are on file at the Office of Contract Sales of the State of Ohio, Department of Transportation, 25 South Front Street, Columbus, Ohio, and at the offices of the City Engineer of Cincinnati, Ohio. Submittal of a bid for this project implies that the Contractor has taken all provisions of the Supplement into account.

The Greater Cincinnati Water Works (GCWW) understands that differing site conditions results in extra work/change orders to the project. Change orders on GCWW contracts will be done in strict accordance with Item 109.05 C of the State of Ohio Department of Transportation Construction and Material Specifications dated January 1, 2013 or most recent edition and as modified in this City of Cincinnati Supplement. GCWW limits the mark up on wages and fringe benefits as described in 109.05 C. 2. "Labor" to 30%. It is expressly understood that regardless of the nature of the claim, or change in scope of work, the Contractor is not entitled to compensation for loss of anticipated profit or production.

As defined in the City of Cincinnati Supplement, sections 107.07 and 107.071, the Contractor is required to submit, at the time of the pre-construction meeting, a Site Safety Plan. Furthermore, the Contractor shall have an authorized and competent safety representative assigned to the project site.

The Contractor is advised that he has certain responsibilities under Section 153.64 of The Ohio Revised Code. For all underground utilities, contact the Ohio Utilities Protection Service at 1-800-362-2764 (toll free) 48 hours in advance of work. The Contractor is advised that all utility information has been shown on the contract plans from information provided by the owner of each utility in compliance with Sec. 153.64 of the Ohio Revised Code. In cases where utility information is incorrect and it results in a change in the contract plans the Contractor shall notify the owner of the utility to determine the necessary course of action. The Contractor shall submit any subsequent claims as a result of downtime or additional work to the owner of the conflicting utility. The GCWW will not accept claims for any utility other than those as a result of incorrect water main and related appurtenance information.

The Contractor must locate or "pot hole" all utilities within the alignment of the proposed main a minimum of 50 feet ahead of pipe laying. Test holes must be dug, or trench excavated, a minimum of 50 feet (15.2 m) in advance of pipe laying, to assure proper clearance between the water main and any utility crossing, or underground structure. All utilities and structures shall be suitably braced and supported. The Contractor shall understand that any obstructions encountered in the installation of the main, due to the failure of having 50 feet (15.2m) of trench excavated ahead of laying operations, may require removal and relaying of the pipe at the contractor's expense. The GCWW will not accept a claim for different utility conditions encountered when test holes are not performed as required.

Item 1120, "Exploratory Excavation", shall not include excavations within the limits of the proposed trench as defined in 1101.04 and 1101.05. Test holes are required on all utilities within 50 feet of the last laid pipe. Test holes within the alignment of the proposed trench are included in the Contractor's unit bid for Item 1101. Locations to be explored will vary from areas within the roadway to areas outside of the roadway.

It is the nature of construction that unmarked utilities or utilities not shown on the plans may be encountered within the excavation for the proposed work. The Contractor is responsible to identify and remove any abandoned utilities encountered in the excavation. No extra payment will be made to the Contractor for the identification and removal of the abandoned utility. All costs shall be included in the contractor's unit price bid for the appropriate Item 1101-Furnishing & Laying Pipe and Fittings."

Street pavement or sidewalk should not be disturbed for a distance of more than 200 Feet (61.0 m) ahead of the last laid pipe. Backfill shall be completed within 50 feet (15.2 m) of the last laid pipe. Temporary or permanent surface restoration must be installed within a distance of 200 feet (61.0 m) of the laid pipe, including those areas where main installations occur within a closed lane or closed street condition. Roadway plates may be used as a temporary measure for a period not to exceed 24 hours without the approval of the GCWW.

Any undermined pavement of more than 6 inches horizontal must be removed prior to starting trench backfill. If undermining of pavement occurs more than 1 foot, then pavement must be shored to protect traffic, or arrangements made for additional lane closures must be made, if problems continue to occur regarding trenching integrity, sheeting and bracing can be required by the City Engineer or the City Engineer's representative, at the contractor's expense. If any tunneling is necessary, adequate information shown in both plan and profile and tunneling procedures must be submitted to the City Engineer's Office prior to commencement of work.

The GCWW has made every effort to depict the pipe sewers and lateral information on the plans. The Contractor is advised that sewer laterals are shown in plan view only. The Contractor shall determine the elevation of the sewer laterals in advance of laying the water main at these crossings. If the sewer laterals require changing in order to avoid conflict with the water main, or if the Contractor encounters a pipe sewer or lateral in the excavation that was not shown on the plans and requires a change of grade or alignment due to the installation of the water main, the Contractor shall furnish all necessary labor, material, tools, and equipment required to change the grade or alignment of pipe sewers and laterals of various sizes, allowing installation of water mains and appurtenances as shown on the plans, or as directed by the GCWW Inspector. This work shall include all necessary excavation, backfill, and restoration. The Contractor will be compensated under Item 1123, "Changing Pipe Sewers 8 Inch and Under". When crossing sanitary and combination sewers, a vertical clearance of 18" must be maintained.

The Contractor is responsible for all pipe sewers disturbed in the completion of this project. In the event it becomes necessary to repair or replace existing pipe sewers, the Contractor must notify Sewer Maintenance, (513)244-1369, before proceeding with the work.

The Contractor is advised that his unit bid prices for the appropriate Item 1101, "Furnish & Install Pipe and Fittings", includes final restoration of all disturbed surfaces. The GCWW will not make full compensation under Item 1101 until final restoration is complete.

## Notice of Confidentiality - Public Infrastructure Record

This Document is a Public Infrastructure Record of the City of Cincinnati and its Greater Cincinnati Water Works, and is not subject to the public disclosure requirements of the public records laws of the State of Ohio and federal government. This Document is being provided on the basis of your reported need, and shall be considered confidential. By accepting this Document, you agree that it will not be shared or otherwise disclosed to anyone other than persons who have a direct need to know for the sole purpose of carrying out the project for which this Document was obtained. Anyone receiving this Document is bound by the same confidentiality requirements and must take precautions to protect against its dissemination.

The failure to observe the confidentiality requirements of this Notice shall serve as the basis for the City of Cincinnati to immediately seek legal recourse, including the recovery of actual damages resulting from unauthorized access or disclosure of this Document.

Final restoration shall be done in accordance with the restoration detail drawing as shown on Sheet 1.

The Contractor is advised that due to the alignment of the proposed water main, it may be necessary to install a temporary valve box over an existing chambered valve that must remain in service during the water main installation as directed by the GCWW Inspector. The chamber shall be abandoned, a valve box (furnished by the contractor) placed over the valve, and upon project completion, the valve box must be removed. The contractor will not receive additional compensation for this work, but should include the cost of this work in his unit bid price for Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

It is the Contractor's responsibility to provide adequate water supply for domestic and fire fighting purposes. In order to accomplish the water main connections with a minimum amount of inconvenience to the consumers, it may be necessary to do the work at other than normal working hours or as may be scheduled by the GCWW.

The Contractor is advised that the operating pressure of the existing water main within the limits of the subject project is approximately 196-199 P.S.I.

In order to minimize the inconvenience of the consumers, the number of shutdowns required to do the proposed water main work shall be limited. Only one shutdown, limited to 8 hours, will be allowed during a 24 hour period.

All water service branches have a minimum cover of 3.0 feet.

The Contractor is advised that it shall be necessary to install temporary Plug/caps on the existing and proposed water mains in order to maintain service during testing and water main and branch connections. These temporary Plug shall be furnished by the contractor. He is responsible for their proper installation. The cost for this work shall be included in the Contractor's unit bid price for the appropriate Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

The Contractor is required to excavate and expose the existing utilities and existing water mains along the line of the proposed water main and all proposed connection points to verify location, diameter, line and grade. Also, if the removal of the bulkhead or plug is required all excavation and temporary/permanent restoration shall be compensated under the Contractor's unit bid price for Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

The Contractor is advised that all C.J. Plug are to be restrained with a Field Lok Gasket and all M.J. caps are to be restrained using a Megalug Assembly. This includes temporary Plug and caps for testing purposes. When a temporary plug is used, the contractor is permitted to remove the plug by cutting the section of pipe containing the plug and using a solid sleeve at that point to complete the tie-in. In the event that a cap is used, the contractor shall remove the Megalug Assembly and cap before completing the tie-in.

The Contractor is advised that on any fire hydrant required to be relocated with this project, all bolt assemblies shall be replaced. The cost for this work shall be included in the unit bid price for Item 1113 "Relocating Existing Fire Hydrants".

No part of any fire hydrant setting shall be installed closer than five feet to any driveway, inlet, utility pole or guy wire anchor.

Item 1111, "Water Works Valve Chambers", shall also cover the furnishing and installing of Precast Reinforced Concrete Chambers in accordance with O.D.O.T. Specification 706.13. All pertinent provisions of this Item and GCWW Standard Drawing No. 104-1A shall apply. Precast chambers shall be used in all locations where space permits and as directed by the GCWW.

Air cocks may be necessary for the proper operation of the water system. The Air Release Assembly, which may not be shown on the drawing, will be furnished and installed by the Contractor per the detail on these plans, if required by the GCWW.

It shall be the Contractor's responsibility to arrange for the removal and replacement of any poles and guys necessary for the installation of the proposed water mains, and any cost connected thereto shall be at his expense.

All pipe and specials shall be in accordance with City of Cincinnati Specification 40-110-12.

All procured water main and appurtenance materials, other than those furnished through the GCWW must be properly certified; certified for GCWW inspection; or already inspected by the GCWW. Pipe, fittings, valves and fire hydrants must be GCWW inspected and stamped materials.

The Contractor should be advised that all Fittings (Bends, Offset Bends, Tees, Crosses, Sleeves, Caps and Plug) supplied for this job may be either ANSI/AWWA C-110 Full-body Ductile Iron, Cement Lined Fittings or ANSI/AWWA C-153 Compact Ductile Iron, Fusion Bonded Epoxy Coated Fittings in accordance with City of Cincinnati, Department of Purchasing, Standard Specification No. 40-110-12 for Pipe and Fittings Water, Ductile Iron 3" to 60". All fittings are subject to inspection and approval by appropriate GCWW inspection personnel. Minor pinholes and abrasions to epoxy coated valves and fittings are to be repaired using 3M Hot Melt Patch Compounds (H.M.P.C.) in the stick form. Repair procedures shall be in accordance with the General Application Steps identified for the H.M.P.C. All repairs to epoxy coated fittings are subject to inspection and approval by appropriate GCWW inspection personnel.

All rejected material, including pipe and fittings, shall be removed from the project site immediately.

The Contractor must maintain access to sidewalks at all times. Storage of any materials within the public Right of Way, including sidewalks, is not permitted unless approved by GCWW, the Project Engineer, or as indicated on the approved plans.

All copper tubing shall be type "K" of a standard nominal size: 3/4", 1", 1-1/2" and 2". All fittings will have copper flare type connections and shall be in accordance with City of Cincinnati Specification No. 40-113-05.

The contractor shall furnish the necessary certifications for branch material.

All proposed water mains will be hydrostatically tested for leakage in accordance with 1101.054, "Hydrostatic Test for Leakage", of the appropriate Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

The Contractor will be responsible for filling, flushing, and pressure testing new water mains, 20" or smaller. The contractor will provide all labor, material and equipment (including the necessary pumps to apply the pressure test). The Water Works will provide the necessary meter and gauge. All costs for this work shall be included in the contractor's unit bid price for Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings". Once the filling and pressure testing are completed, the Contractor will be responsible for flushing the proposed water main and the GCWW will be responsible for bacteria sampling. The GCWW will be responsible for filling, pressure testing and flushing new water mains greater than 20".

# SUGGESTED BILL OF MATERIAL (Furnished By Contractor)

- 1 Each 6" Ductile Iron Pipe, C.J., Th. Cl. 55, 20' Length
- 14 Each 12" Ductile Iron Pipe, C.J., Th. Cl. 56, 20' Length
- 2 Each 24" Ductile Iron Pipe, C.J., Th. Cl. 56, 20' Length
- 2 Each 16" Wide Polyethylene Flattened Tube, 4 Mil Thickness, Cross Laminate, 20' Length
- 16 Each 27" Wide Polyethylene Flattened Tube, 4 Mil Thickness, Cross Laminate, 20' Length
- 3 Each 54" Wide Polyethylene Flattened Tube, 4 Mil Thickness, Cross Laminate, 20' Length
- 5 Each 1 1/2" Wide Polyethylene Tape with Adhesive
- 8 Each 12" 45° Bend, 2 M.J.
- 1 Each 12" 22 1/2° Bend, 2 M.J.
- 1 Each 12" 11 1/4° Bend, 2 M.J.
- 2 Each 12" Cap, M.J. (Temporary)
- 1 Each 6" Plug, M.J. (Temporary)
- 2 Each 12" Plug, M.J. (Temporary)
- 4 Each 12" Solid Sleeve, 2 M.J.
- 1 Each 12" x 6" Tee, 2 M.J. x Flg.
- 2 Each 24" x 12" Reducer, M.J. P.E.
- 1 Each 6" Valve, Flg. x M.J. Ⓢ
- 2 Each 12" Valve, 2 M.J. Ⓢ
- 1 Each 6" Flange Tyte Rubber Gasket
- 3 Each Valve Box Complete, Iron
- 3 Each Valve Box Frost Plug
- 3 Each BOXLOK Valve Box Alignment Device
- 1 Each 6" Fire Hydrant Extension, (6" Long)
- 1 Each 6" Fire Hydrant
- 2 Each 6" Megalug Assembly
- 38 Each 12" Megalug Assembly
- 2 Each 24" Megalug Assembly
- 8 Each 12" Field Lok Gasket
- 165 LF 24" Steel Casing

## AIR RELEASE MATERIAL (See Detail Sheet 3)

- 2 Each Valve Box Complete, Iron
- 2 Each Valve Box Frost Plug
- 2 Each 1" Ferrule
- 10 Lin. Ft. 1" Copper Service Pipe
- 2 Each 1" x 1" x 3/4" Blow Off Ball Valve Assembly (AY McDonald Part #76109BCAP)

## AIR RELEASE MATERIAL (See Detail Sheet 3)

- 2 Each Valve Box Complete, Iron
- 2 Each Valve Box Frost Plug
- 2 Each 2" Ferrule
- 10 Lin. Ft. 2" Copper Service Pipe
- 2 Each 1" x 1 1/2" x 2" Blow Off Ball Valve Assembly (AY McDonald Part #76109BCAP)

\*\*Temporary and Permanent Restoration shall be done in accordance with the Contract specifications and/or project plan typical sections.

In areas where the pavement; base and/or sub-base is to be replaced as part of the roadway contract, the cost for permanent pavement restoration shall be included under the appropriate pavement bid items. Cost for temporary pavement restoration in these areas shall be included in the Contractor's appropriate Unit Bid Price for Item 1101 or Item 1126.

Unless otherwise noted on the plans, areas where the existing pavement, base and/or sub-base are not to be disturbed, the cost for temporary and permanent pavement restoration shall be included in the Contractor's appropriate Unit Bid Price for Item 1101 or Item 1126.

\*Backfill of the water main and branch trench shall be done in accordance with G.C.W.W. specifications. All water mains and branches installed outside of the pavement area shall utilize Granular Backfill in lieu of the Control Density Fill. All costs for backfill shall be included under Item 1101, "Furnishing and Installing Ductile Iron Pipe and Fittings".

Please note that the G.C.W.W. requirement is in addition to HAMCIN specifications for flowable fill products. A copy of the G.C.W.W. requirement is available at the G.C.W.W. Engineering Office located at 4747 Spring Grove Avenue. Contact the Supervisor of Inspection at 591-7870.

Prior to the start of construction, the Contractor shall submit the necessary Controlled Density Fill compliance documentation for review and approval by the G.C.W.W.

GCWW Note:  
All field layout of water main pipe and specials shall be the responsibility of the Contractor and shall be performed by a licensed surveyor.

Controlled Density Fill must meet both HAMCIN: CLSM-CDF performance specification and O.D.O.T. specification. All flowable fill products shall meet requirements of the current HAMCIN CLSM-CDF Backfill Specification (dated March 2015). Copies of the HAMCIN CLSM-CDF Backfill Specification are made available at the GCWW Engineering Offices at 4747 Spring Grove Avenue, Cincinnati Department of Transportation & Engineering at 801 Plum Street, or their website <http://www.cincinnati-oh.gov/dote/manuals-permits-supplements/>. Also, the Contractor shall submit, prior to the start of construction, the necessary documentation for review and approval by the GCWW.

# HAM-LMST-BEECHMONT Street Improvement INDEX

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Suggested Bill of Materials..	1
Plan.....	2
Restoration Details.....	3

APPROVED:

SCALE: 1" = 20'



*Matthew Smith* 04-09-20  
SUPERVISING ENGINEER  
*Matthew Smith*  
PROFESSIONAL ENGINEER - SYSTEM FACILITIES  
*Matthew Smith* 4/16/20  
CHIEF ENGINEER

Certification of compliance is required to be submitted to the Cincinnati Water Works prior to use.

\*All valve boxes shall be domestically manufactured. All valve boxes for 1-inch air release assemblies and gate valves 12-inch and smaller shall be Tyler Union Series 8850; East Jordan Iron Works Series 8550, or a domestically manufactured approved equal. The approved equal will be determined by the City of Cincinnati Greater Cincinnati Water Works. A valve box frost plug shall also be included. All valve boxes for gate valves 12-inch and smaller shall include the BOXLOK valve box alignment device from EMMA Sales, LLC. All costs associated with adherence to this requirement shall be included in the Contractor's unit bid price for Item 1116 - Furnishing and Installing Valve Box Complete\*



GREATER CINCINNATI  
WATER WORKS  
ENGINEERING DIVISION  
APRIL 2020



CALCULATED  
M/J/C  
CHECKED  
M/S

GENERAL PROVISIONS  
HAM-LMST-BEECHMONT

4-3810 / WW003109

1  
3  
125  
127

HAM-125-LMST-BEECHMONT PID#107295