

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

# BUT-SR4-23.17

## LEMON AND MADISON TOWNSHIPS BUTLER COUNTY

**PROJECT DESCRIPTION**

REHABILITATE BRIDGE BUT-4-23.17 OVER THE GREAT MIAMI RIVER BY PATCHING AND STRENGTHENING PIERS WITH (FIBER REINFORCED POLYMER) FRP. REMOVE AND REPLACE BOTH PIER CAPS AND 2 FEET OF PIER STEMS AT PIER 4. REPLACE EXISTING BEARINGS AT PIER 4.

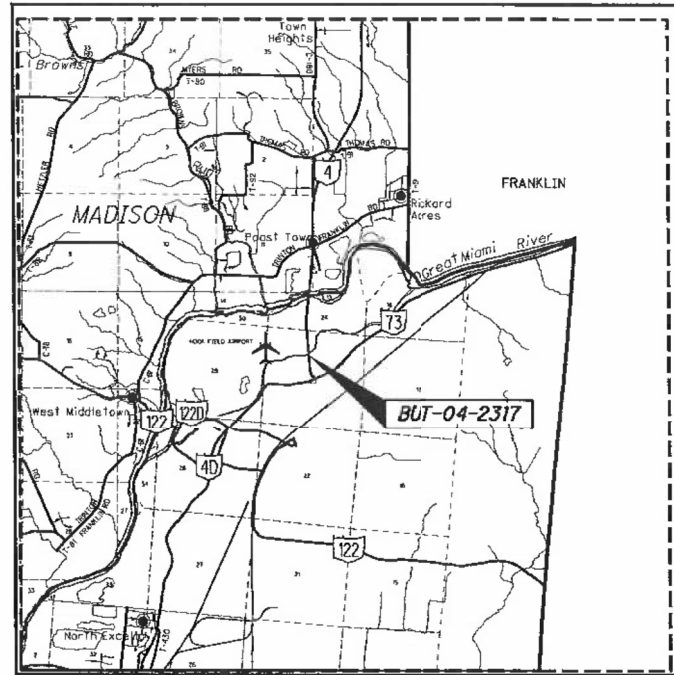
**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 0 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.95 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES  
(MAINTENANCE PROJECT)

2023 SPECIFICATIONS

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

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



LOCATION MAP

LATITUDE: N 39°32'22" LONGITUDE: 84°23'04" W



PORTION TO BE IMPROVED	_____
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	-----
STATE ROUTES	-----
COUNTY & TOWNSHIP ROADS	-----
OTHER ROADS	-----

**DESIGN DESIGNATION**

CURRENT ADT (2024)	8,100
DESIGN YEAR ADT (2044)	8,100
DESIGN HOURLY VOLUME (2036)	950
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	10%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
(03) PRINCIPAL ARTERIAL	
NHS PROJECT	NO

**DESIGN EXCEPTIONS**

NONE

**UNDERGROUND UTILITIES**

Contact Two Working Days  
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
(Non-members must be called directly)

PLAN PREPARED BY:  
BURGESS & NIPLÉ, INC.  
525 VINE STREET, SUITE 1300  
CINCINNATI, OH 45202

**INDEX OF SHEETS:**

TITLE SHEET	1
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STRUCTURE REPAIR (BUT-SR4-23.17)	8-21
ARCHIVE SOIL PROFILES	

ENGINEERS SEAL:

STATE OF OHIO  
REGISTERED PROFESSIONAL ENGINEER  
SAMUEL TAYLOR  
LARGE BELL  
81326

SIGNED: *Sam Bell*  
DATE: 7/12/2022

ENGINEERS SEAL:

STATE OF OHIO  
REGISTERED PROFESSIONAL ENGINEER  
BLAKE C. STEPHENS  
E-85133

SIGNED: *Blake Stephens*  
DATE: 7/13/2022

STANDARD CONSTRUCTION DRAWINGS			SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
RM-3.1	7/20/18		800	01/19/24 ASBESTOS INSPECTION
MT-95.31	7/19/19		821	ASBESTOS REPORT 10/7/22
MT-95.32	4/19/19		832	7/21/23
MT-95.41	1/17/20			WATERWAY PERMIT 03/07/24
MT-101.70	1/17/20			
MT-101.75	1/17/20			
MT-102.10	1/17/20			
MT-105.10	1/17/20			
DM-4.3	1/15/16			
DM-4.4	1/15/16			
TC-71.10	7/16/21			

APPROVED: *Tammy K. Capbell*  
DATE: 10-4-2022 DISTRICT DEPUTY DIRECTOR

DIRECTOR, DEPARTMENT OF TRANSPORTATION  
*Jack M. ...*

P:\PR59208\BUT\02783\Design\Roadway\Sheets\02783.ctb\dgn Sheet 10/3/2022 3:24:38 PM gor-sler

FEDERAL PROJECT NO. E170222  
PID NO. 102783  
CONSTRUCTION PROJECT NO.  
RAILROAD INVOLVEMENT NONE  
BUT-SR4-23.17  
1/21

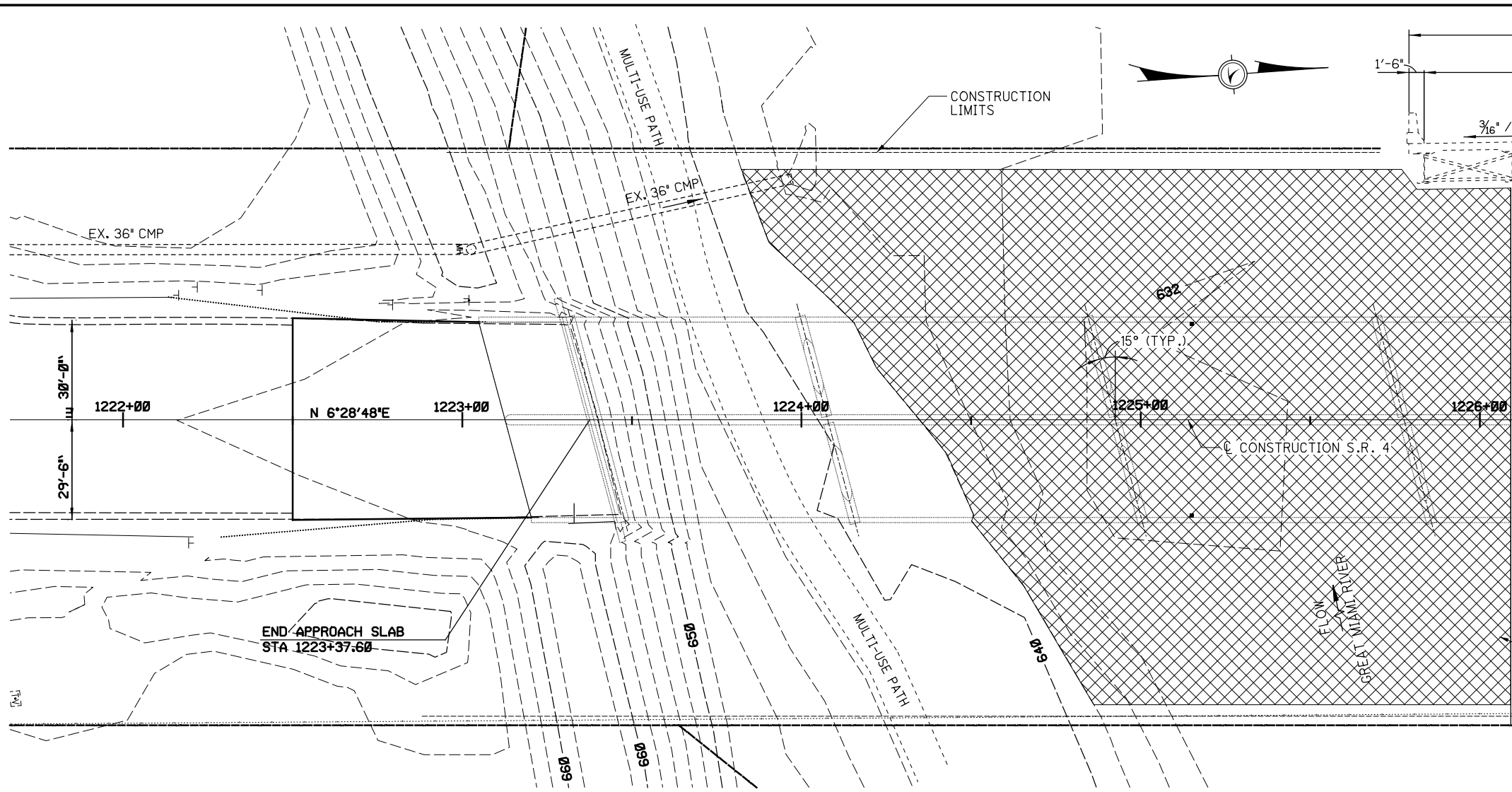
SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	STB	CHECKED	SCS
2	3	12								01/NHS/13		EXT	TOTAL							
	48									48	202	30800	48	SY	ROADWAY					
	48									48	609	50000	48	SY	TRAFFIC ISLAND REMOVED					
															4" CONCRETE TRAFFIC ISLAND					
															ENVIRONMENTAL / REMEDIATION					
		LUMP								LUMP	SPECIAL	69098400	LS		MISC.: WORK INVOLVING ASBESTOS CONTAINING MATERIALS	12				
															TRAFFIC CONTROL					
	0.55									0.55	644	00100	0.55	MILE	EDGE LINE, 4"					
	0.34									0.34	644	00200	0.34	MILE	LANE LINE, 4"					
	0.09									0.09	644	00300	0.09	MILE	CENTER LINE					
	360									360	644	00400	360	FT	CHANNELIZING LINE, 8"					
	2									2	644	01300	2	EACH	LANE ARROW					
	0.51									0.51	646	10000	0.51	MILE	EDGE LINE, 4"					
	0.25									0.25	646	10100	0.25	MILE	LANE LINE, 4"					
															STRUCTURE REPAIR (BUT-SR 4-23.17)					
															MAINTENANCE OF TRAFFIC					
30										30	614	11110	30	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE					
100										100	614	11630	100	FT	INCREASED BARRIER DELINEATION					
4										4	614	12384	4	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)					
										LS	614	12420	LS		DETOUR SIGNING					
44										44	614	13310	44	EACH	BARRIER REFLECTOR, TYPE 1, (BIRDIRECTIONAL)					
	9									9	614	13312	9	EACH	BARRIER REFLECTOR, TYPE 2, (BIRDIRECTIONAL)					
44	9									53	614	13360	53	EACH	OBJECT MARKER, TWO WAY					
	0.01									0.01	614	20200	0.01	MILE	WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I					
	0.59									0.59	614	21200	0.59	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I					
	0.26									0.26	614	22200	0.26	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I					
	170									170	614	23400	170	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I					
391	48									391	614	24400	391	FT	WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I					
	48									48	615	20000	48	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A					
	2,090									2,090	622	41100	2,090	FT	PORTABLE BARRIER, UNANCHORED					
															INCIDENTALS					
										LS	614	11000	LS		MAINTAINING TRAFFIC					
										LS	624	10000	LS		MOBILIZATION					

GENERAL SUMMARY

BUT - SR4 - 23.17

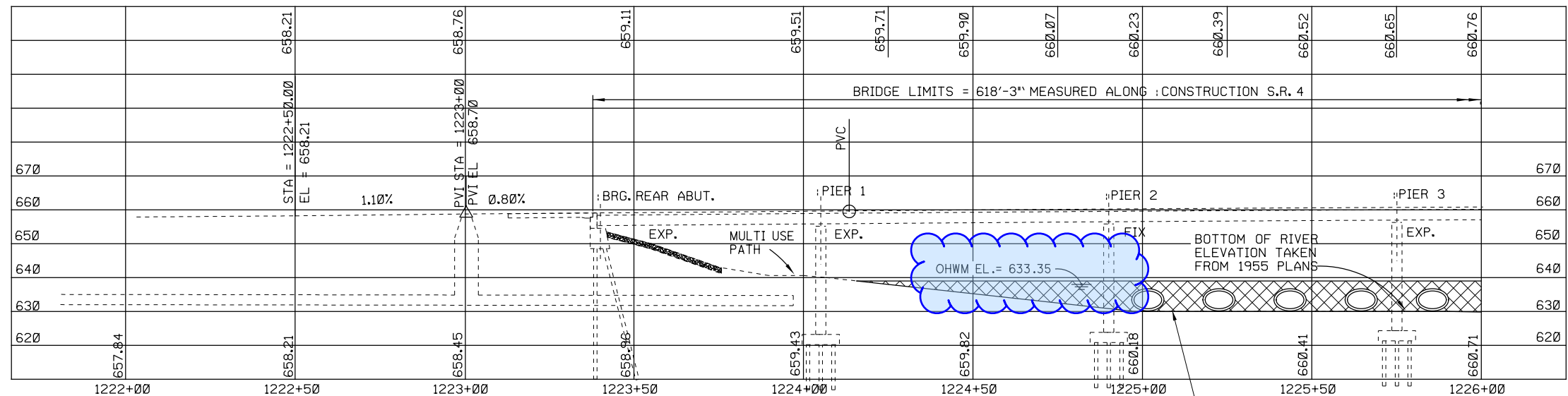
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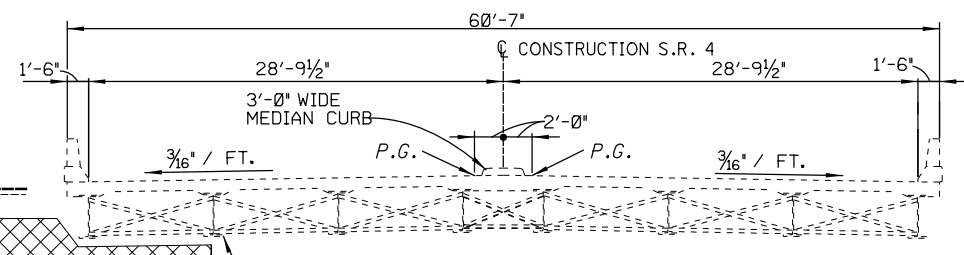
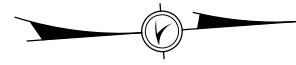


**PLAN**

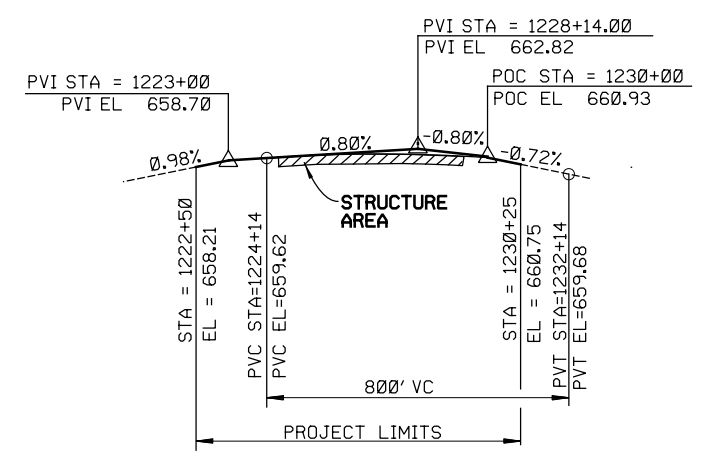
BENCH MARKS	
BM#2 - STA 1220+49.54' LEFT ; CHISELED SQUARE NORTH CORNER OF CONCRETE TRAFFIC BOX PAD, SW CORNER OF INTERSECTION OF S.R.4 AND CARMODY BLVD. ELEV.=655.73	
BM#3 STA 1229+45.35' L ; CHISELED SQUARE ON NW ABUTMENT WALL OF S.R.4 BRIDGE OVER GREAT MIAMI RIVER. ELEV.=661.47	



**PROFILE ALONG PROFILE GRADE**



**TYPICAL SECTION**



**VERTICAL ALIGNMENT**

**PROPOSED WORK**

PATCH THE DETERIORATED AREAS OF PIERS PER ITEM 519. INSTALL COMPOSITE FIBER WRAP SYSTEM IN AREAS DESIGNATED IN THESE PLANS. REMOVE AND REPLACE BOTH PIER CAPS AND 2 FEET OF PIER STEMS AT PIER 4. REMOVE AND REPLACE EXISTING BEARINGS WITH ELASTOMERIC BEARINGS AT PIER 4 LOCATIONS. PAINT ALL STRUCTURAL STEEL IN SPAN 4 AND SPAN 5 LOCATED WITHIN 4'-0" OF PIER 4. PAINT COLOR TO MATCH EXISTING.

**EXISTING STRUCTURE**

TYPE: 8 SPAN STEEL BEAM BRIDGE WITH COMPOSITE CONCRETE DECK SUPPORTED BY REINFORCED CONCRETE SUBSTRUCTURE.

LENGTH OF SPANS: 68', 85', 85', 68', 68', 85', 85', 68' MEASURED C/C BEARINGS ALONG CONSTRUCTION

ROADWAY WIDTH: 57'-7" F/F BRIDGE RAILING

DESIGN LOADING: HS-20-44 CASE II WITH ALTERNATE MILITARY LOADING

SKEW ANGLE: 15°00'00" RIGHT FORWARD

SUPERELEVATION: NONE, NORMAL CROWN

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLAB: AS-1-81 (25' LONG)

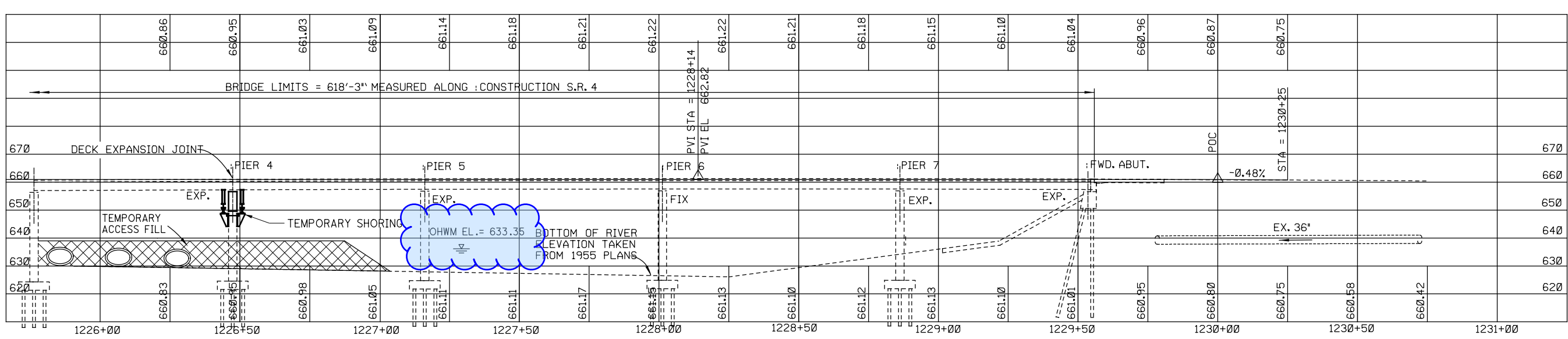
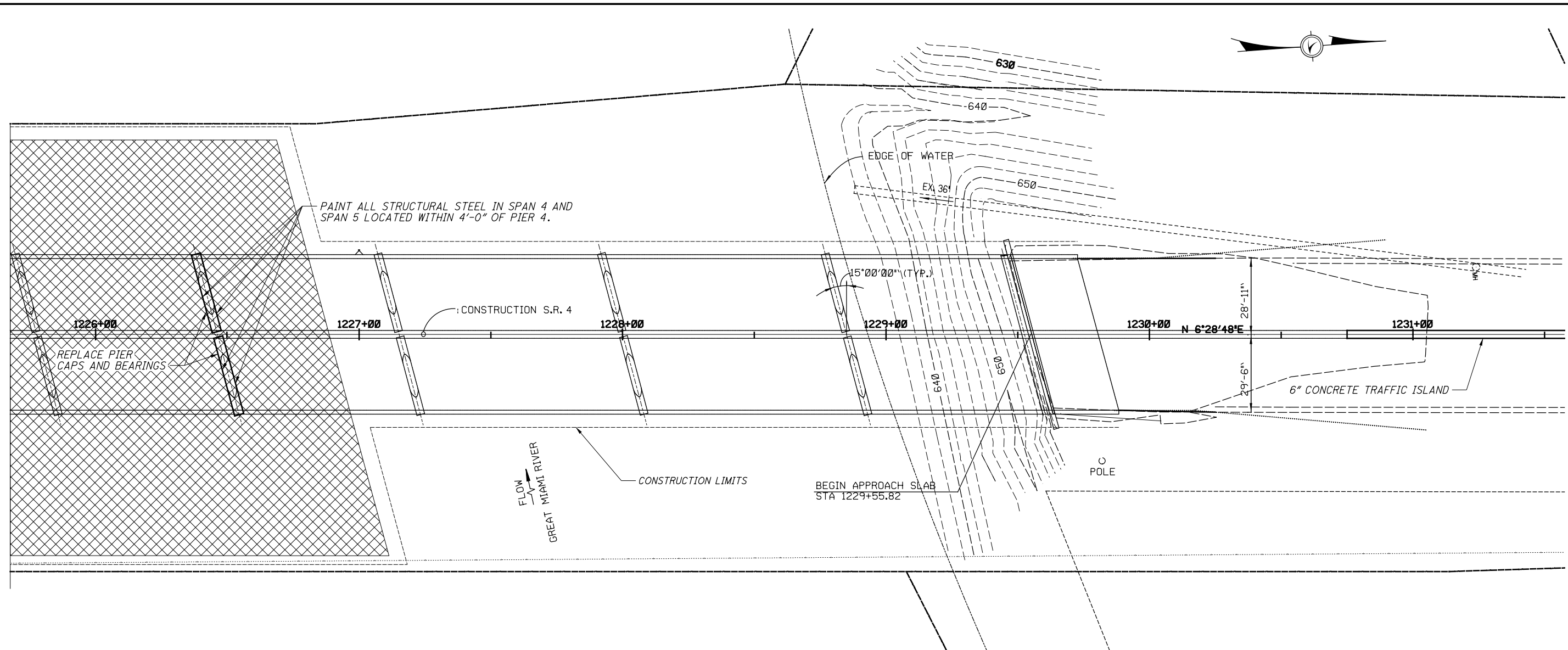
ALIGNMENT: TANGENT

LATITUDE: N 39° 32' 22"

LONGITUDE: W 84° 23' 04"

<b>DESIGN AGENCY</b> BURGESS & NIPLE 525 VINE ST. CINCINNATI, OHIO	<b>DATE</b> 9/22/21
	<b>REVIEWED</b> MAB
	<b>STRUCTURE FILE NUMBER</b> 0900397
<b>DESIGNED</b> BCS	<b>BUTLER COUNTY</b> STA. 1223+37.60 STA. 1229+55.52
<b>DRAWN</b> JDG	<b>SITE PLAN - 1</b>
<b>CHECKED</b> SUA	BRIDGE NO. BUT-04-2317 S.R. 4 OVER GREAT MIAMI RIVER
<b>REVISIONS</b>	<b>BUT - SR 4 - 23.17</b> PID No. 102783
	1 / 14
	8 21

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<b>BUT - SR4-23.17</b>	<b>SITE PLAN - 2</b>	BUTLER COUNTY STA. 1223+37.60 STA. 1229+55.52	DESIGN AGENCY BURGESS & NIPLE 525 VINE ST. CINCINNATI, OHIO
2 / 14	9 / 21	BRIDGE NO. BUT-04-2317 S.R. 4 OVER GREAT MIAMI RIVER	REVIEWED MAB DATE 9/22/21
		DESIGNED BCS CHECKED SJA	DRAWN JDG REVISOR
			STRUCTURE FILE NUMBER 0900397

**GENERAL NOTES CONTINUED:**

**ITEM SPECIAL - STRUCTURE, MISC.: TEMPORARY CONSTRUCTION SITE ACCESS**

IN ADDITION TO THE REQUIREMENTS SET FORTH IN THE WATERWAY PERMIT FOR THE CONSTRUCTION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL TEMPORARY ACCESS ROADS AND FILL, THE CONTRACTOR SHALL ALSO MAKE NOTE OF AND COMPLY WITH THE FOLLOWING:

IN-WATER WORK RESTRICTION DATES ARE FROM 4/15 TO 8/30. TEMPORARY ACCESS FILL MAY NOT BE PLACED, MOVED OR REMOVED DURING THIS TIME FRAME.

THE TEMPORARY ACCESS FILL SHALL BE DESIGNED PER THE SPECIAL PROVISIONS. ANY DEVIATION TO THE SPAN, RISE, OR NUMBER OF CONDUITS WILL REQUIRE HYDRAULIC ANALYSIS USING THE MCD HECRAS MODEL. IN ADDITION TO THE SPECIAL PROVISION REQUIREMENTS, MCD REQUIRES THAT THE TAF BE CHECKED WITH THE OFFICIAL PLAN FLOOD (OPF) DISCHARGE. APPROVAL FROM MCD COULD TAKE A COUPLE OF MONTHS.

THE CONSTRUCTION MATERIALS SHALL BE STORED ABOVE THE 100 YEAR FLOOD ELEVATION 649.00 UNLESS PERFORMING ACTUAL INSTALLATIONS. UPON COMPLETION OF THE PROJECT, THE TEMPORARY FILLS WILL BE REMOVED AND DISPOSED OF IN AN UPLAND LOCATION OUTSIDE THE 100 YEAR FLOOD PLAIN OF THE STREAM AND ITS TRIBUTARIES.

ALL PERMANENT FILL MATERIAL SHALL BE LIMESTONE OR CONCRETE AND SHALL BE FREE OF SOILS AND ROCK FINES. ANY CONSTRUCTION FILL PLACED BELOW OHWM ELEVATION 633.35. MUST COMPLY WITH ALL ENVIRONMENTAL REQUIREMENTS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ENGINEER PRIOR TO THE INITIATION OF ANY WORK IN THE MASSIE CREEK.

THE CONTRACTOR SHALL ENSURE THAT PERMANENT AND/OR TEMPORARY ACCESS FILL MATERIALS ARE NOT DISCHARGED BEYOND THE ODOT PROJECT RIGHT-OF-WAY LIMITS. THE CONTRACTOR IS REQUIRED TO NOTIFY ODOT IMMEDIATELY OF ANY MATERIAL THAT MOVES BEYOND THE PROJECT RIGHT-OF-WAY BOUNDARIES. THE CONTRACTOR SHALL BE SUBJECT TO ALL PERMITS, REQUIREMENTS AND PENALTIES SET BY THE WATERWAY PERMIT(S) FOR FAILING TO MEET THE DISCHARGE REQUIREMENTS AND SHALL BE RESPONSIBLE FOR RECLAMATION OF DISCHARGED MATERIALS.

THE CONTRACTOR AND THE ENGINEER SHALL PERFORM A PRE-CONSTRUCTION INSPECTION OF THE SITE. WITH THE EXCEPTION OF THE PERMANENT FILL SHOWN IN THE PLAN, THE CONTRACTOR IS REQUIRED TO RESTORE THE SITE TO PRE-CONSTRUCTION CONDITIONS. ONCE THE TEMPORARY ACCESS FILL IS REMOVED, AND PRIOR TO COMPLETION OF PHYSICAL WORK, THE CONTRACTOR AND THE ENGINEER SHALL PERFORM A FINAL SITE INSPECTION TO ENSURE THAT THE SITE IS RESTORED TO PRE-CONSTRUCTION CONDITIONS. ANY VIOLATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM ODOT THAT THE RESTORATION IS SATISFACTORY. RESTORATION SHALL ADHERE TO ENVIRONMENTAL COMMITMENTS.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT THIER CONSTRUCTION WORK PLAN TO THE PROJECT ENGINEER FOR APPROVAL. THE WORK PLAN SHALL INCLUDE PROPOSED METHODS FOR COFFERDAMS, DEWATERING AND MAINTAINING STREAM FLOW WHICH ADHERE TO ENVIRONMENTAL AND FLOOD PROTECTION REQUIREMENTS. ANY MODIFICATION TO THE APPROVED CONSTRUCTION WORK PLAN REQUIRES WRITTEN APPROVAL FROM THE ENGINEER. NO

**ITEM SPECIAL - STRUCTURE, MISC.: TEMPORARY CONSTRUCTION SITE ACCESS**

ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN. THE CONTRACTOR IS REQUIRED TO INSTALL CONSTRUCTION BMP'S IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 832. ALL COSTS ASSOCIATED WITH CONSTRUCTION BMPS AND RELATED GRADING IS INCIDENTAL TO THE WORK PERFORMED.

THE CONTRACTOR IS REQUIRED TO PERFORM ALL IN-STREAM WORK IN ACCORDANCE WITH IN-STREAM AND WETLAND RESTRICTIONS AND INTERIM COMPLETION DATES WHERE APPLICABLE. THE CONTRACTOR IS REQUIRED TO COMPLETELY REMOVE ALL EQUIPMENT AND STORED MATERIALS FROM THE STREAM TO AN ELEVATION AT OR ABOVE THE 100 YEAR FLOOD ELEVATION WHEN FLOODING IS ANTICIPATED. AT NO TIME SHALL ANY CONSTRUCTION EQUIPMENT BE LEFT IDLE OR ALLOWED TO WORK IN A PARTIALLY SUBMERGED CONDITION. NO DEBRIS OR TEMPORARY EARTHWORK FILL/EXCAVATION SHALL BE LEFT IN THE STREAM OR ALONG THE STREAM BANKS. ALL EXCAVATED RIVER BOTTOM MATERIALS SHALL BE DISPOSED AND/OR STORED OFF-SITE AS NECESSARY. THE DISPOSAL/STORAGE SITE SHALL BE UPLAND AND LOCATED OUTSIDE OF THE 100 YEAR FLOOD BOUNDARY OF THE MASSIE CREEK.

THE CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING AND GRADING AS REQUIRED TO ACCESS THE SITE. THE CONTRACTOR MAY CHOOSE AN ALTERNATE ENTRY LOCATION AND WILL BE RESPONSIBLE FOR ANY ACCESS AGREEMENTS.

UNLESS ITEMIZED SEPERATELY, ALL EQUIPMENT, MATERIAL, LABOR AND ANY MISCELLANEOUS APPURTENANCES ASSOCIATED WITH THE CONSTRUCTION, MAINTENANCE AND SUBSEQUENT REMOVAL OF THE TEMPORARY CONSTRUCTION ACCESS AND FILL AS WELL AS SITE INSPECTIONS, SURVEY, GRADING/EARTHWORK FOR SITE ACCESS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - TEMPORARY CONSTRUCTION SITE ACCESS.

**ITEM 512 SPECIAL - URETHANE TOP COAT SEALER**

THIS ITEM SHALL CONSIST OF THE APPLICATION OF A URETHANE TOP COAT SEALER OVER CONCRETE AREAS PREVIOUSLY COATED WITH FIBER WRAP.

THE AREA SHALL BE DRY AND FREE FROM DUST, DIRT, OIL, WAX, CURING COMPOUNDS, EFFLORESCENCE, LAITANCE AND OTHER FOREIGN MATERIALS WITH THE EXCEPTION OF THE FIBER WRAP.

THE COATING SHALL BE APPLIED BEFORE THE FINAL THICKENED EPOXY LAYER HAS BEEN ALLOWED TO CURE (AS DETERMINED BY THE MANUFACTURER) TO BETTER ADHERE TO THE COMPOSITE FIBER WRAP SYSTEM.

IF THE INSTALLED FRP IS ALLOWED TO COMPLETELY CURE PRIOR TO THE APPLICATION OF THE FINAL COATING, THE SURFACE GLOSS MUST BE BROKEN BY HAND SANDING OR LIGHT ABRASIVE BLASTING FOR PROPER ADHERENCE TO THE FINAL COATING.

THE COATING SYSTEM SHALL CONSIST OF THE APPLICATION OF A URETHANE TOP COAT SEALER OVER THE INSTALLED FRP SYSTEM. THE COLOR SHALL MATCH THE COLOR OF THE EXISTING SEALER AND THE MATERIAL AND APPLICATION SHALL CONFORM TO CMS 512.

THE COATING MATERIAL SUPPLIER MUST PROVIDE A LETTER VERIFYING THAT THE FULL COATING SYSTEM IS COMPATIBLE WITH THE INSTALLED FRP SYSTEM.

THE COST OF ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO ACCOMPLISH THIS ITEM OF WORK SHALL BE PAID FOR BY SQUARE YARDAGE COVERED.

**ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM**

SEE BRIDGE PLAN FOR DRAWINGS.  
SEE PROPOSAL NOTE 519 FOR SPECIFICATIONS.

**DESCRIPTION**

THIS WORK CONSISTS OF REMOVING EXCISING DETERIORATED FIBER WRAP, PREPARING THE UNDERLYING PATCHED CONCRETE SURFACES AND DESIGNING THE SYSTEM TO MEET THE REQUIREMENTS IN THE PLANS. FURNISH AND INSTALL A SINGLE LAYER OF FIBER REINFORCED POLYMER (FRP) COMPOSITE WRAP ORIENTED VERTICALLY OVER EACH REPAIR AREA DESIGNATED IN THE PLANS. FIBER MAY BE EITHER CARBON (CFRP) OR E-GLASS (EGFRP). EXTEND FIBER WRAP 12" BEYOND THE PATCH AREA.

1. CUT OUT ALL FIBER WRAP NOT ADHERED TO THE CONCRETE OR COVERING DETERIORATED CONCRETE USING A GRINDER WITH A CUTTING WHEEL.
2. REMOVE ANY UNSOUND CONCRETE AND PATCH PER ITEM 519.
3. USE A ZEC WHEEL TO GRIND OFF THE ADJACENT EPOXY SEALER DOWN TO THE FABRIC/EPOXY LAYER. THE REMOVAL OF SEALER DOES NOT HAVE TO BE ANY LARGER THAN 4" FROM THE FRP REMOVAL CUT LINE EDGE.
4. AFTER THE PATCH HAS CURED OUT. APPLY THE NEW FABRIC PATCH IN ACCORDANCE WITH THE SPECIFICATION. RESEAL.
5. THE CERTIFIED AND EXPERIENCED INSTALLER SHALL SUBMIT A QUALITY CONTROL AND QUALITY ASSURANCE PLAN FOR THE FRP INSTALLATION.
6. THE FRP SYSTEM SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF A MANUFACTURER QUALIFIED TECHNICIAN UNTIL THE INSTALLER HAS DEMONSTRATED HIS ABILITY TO PERFORM THE INSTALLATION TO SATISFACTION OF THE ENGINEER AND THE MANUFACTURER.

IN ADDITION, END OF PIER 6 CAP AS SHOWN IN PLAN NEEDS TO BE PATCHED AND WRAPPED. THIS WORK CONSISTS OF PREPARING EXISTING SOUND CONCRETE SURFACES AND DESIGNING THE SYSTEM TO MEET THE REQUIREMENTS IN THE PLANS. FURNISH AND INSTALL A SINGLE LAYER OF FIBER REINFORCED POLYMER (FRP) COMPOSITE WRAP ORIENTED VERTICALLY OVER ALL FACES OF THE PIER CAP INCLUDING END OF THE CAP WITHIN THE LIMITS AS SHOWN IN THE PLANS. FIBER MAY BE EITHER CARBON (CFRP) OR E-GLASS (EGFRP).

**MEASUREMENT AND PAYMENT**

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF THE COMPLETED FRP COMPOSITE WRAP SYSTEM INCLUDING PREPARATION OF THE CONCRETE SUBSTRATE SURFACES AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE FEET	COMPOSITE FIBER WRAP SYSTEM

**ABBREVIATIONS:**

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

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

**ASBESTOS ABATEMENT**

AN ASBESTOS SURVEY FOR SFN 0900397 SCHEDULED FOR RENOVATION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. THE ASBESTOS SURVEY DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS.

**ELECTRONIC SUBMISSION:**

THE CONTRACTOR SHALL SUBMIT ELECTRONICALLY TO OEPA A COMPLETED NOTIFICATION OF DEMOLITION & RENOVATION FORM (NDRF) AND APPLICABLE FEES ALONG WITH THE ASBESTOS SURVEY REPORT. THE COMPLETED NDRF MUST BE SUBMITTED TO OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION AND RENOVATION ACTIVITY. THE CONTRACTOR IS RESPONSIBLE FOR RETAINING AN ELECTRONIC COPY OF THE NDRF (IN PDF FORM) FOR SUBMISSION TO THE DISTRICT ENVIRONMETNAL STAFF AND A ONE HARD COPY TO THE PROJECT ENGINEER.

(GO TO THE OEPA EBUSINESS CENTER AND SUBMIT THE DNRF AND PAYMENT ALONG WITH THE ASBESTOS SURVEY REPORT)

**HARD COPY SUBMISSION:**

THE CONTRACTOR MAY ELECT TO SUBMIT A HARD COPY OF THE COMPLETED NDRF AND PAYMENT ALONG WITH THE ASBESTOS SURVEY REPORT TO THE FOLLOWING:

ASBESTOS PROGRAM OHIO EPA, DAPC P.O. BOX 1049 COLUMBUS, OHIO 43216-1049	OR	ASBESTOS PROGRAM OHIO EPA, DAPC 50 W. TOWN ST., SUITE 700 COLUMBUS, OHIO 43215
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IF THE CONTRACTOR ELECTS TO SUBMIT A HARD COPY TO OEPA THEY ARE RESPONSIBLE FOR RETAINING A HARD COPY OF THE NDRF FOR SUBMISSION TO THE DISTRICT ENVIRONMETNAL STAFF AND A ONE HARD COPY TO THE PROJECT ENGINEER.

**BASIS OF PAYMENT**

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

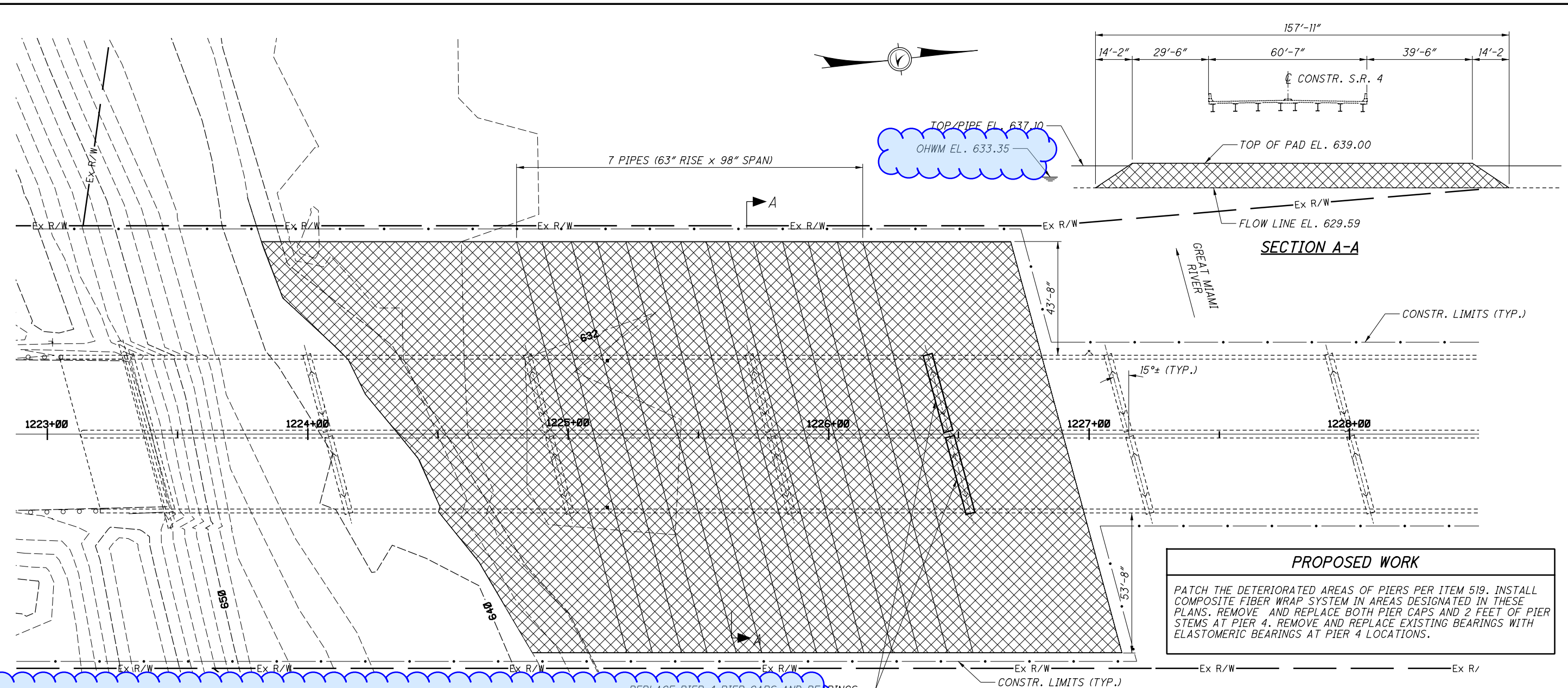
690E98400 ITEM SPECIAL - MISC.: WORK INVOLVING ASBESTOS CONTAINING MATERIALS - LUMP SUM

C:\Users\pawbentley\Documents\01\Active Projects\District 08\Butler\02783\409\Engineering\Structures\SFN\_0900397\_Sheets\02783\_SFN090397\_SMOO3.0RD.dgn Design 3/14/20

**STRUCTURE GENERAL NOTES - 3**  
 BUT - SR 4 - 23.17  
 PID No. 102783  
 5 / 14  
 12  
 21

DESIGN AGENCY: BURGESS & NIPLE  
 DATE: 9/27/21  
 REVIEWED: 9/27/21  
 DRAWN: JDB  
 DESIGNED: SPA  
 CHECKED: BCS  
 STRUCTURE FILE NUMBER: 0900397  
 525 VINE ST. CINCINNATI, OHIO  
 SR 4 OVER GREAT MIAMI RIVER

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**HYDRAULIC INFORMATION**

1. THE TEMPORARY ACCESS FILL (TAF) SHALL BE DESIGNED PER THE SPECIAL PROVISIONS.
2. ANY DEVIATION TO THE SPAN, RISE, OR NUMBER OF CONDUITS USED FOR THE TAF WILL REQUIRE HYDRAULIC ANALYSIS USING THE MIAMI CONSERVANCY DISTRICT'S (MCD) HECRAS MODEL. IN ADDITION TO THE SPECIAL PROVISION REQUIREMENTS, MCD REQUIRES THE TAF BE CHECKED WITH THE OFFICIAL PLAN FLOOD (OPF) DISCHARGE. APPROVAL FROM MCD COULD TAKE A COUPLE OF MONTHS. CONTACT BARRY PUSKAS (BPUSKAS@MCDWATER.ORG) TO OBTAIN THE HECRAS MODEL.
3. THE CONTRACTOR MUST OBTAIN AN APPROVED RIVER ACCESS & CONSTRUCTION PERMIT FROM MCD.  
<https://www.mcdwater.org/about-mcd/bids-permits>  
 ROXANNE FARRIER, MCD PROPERTY ADMINISTRATOR  
 (RFARRIER@MCDWATER.ORG)  
 PHONE: 937-223-1271

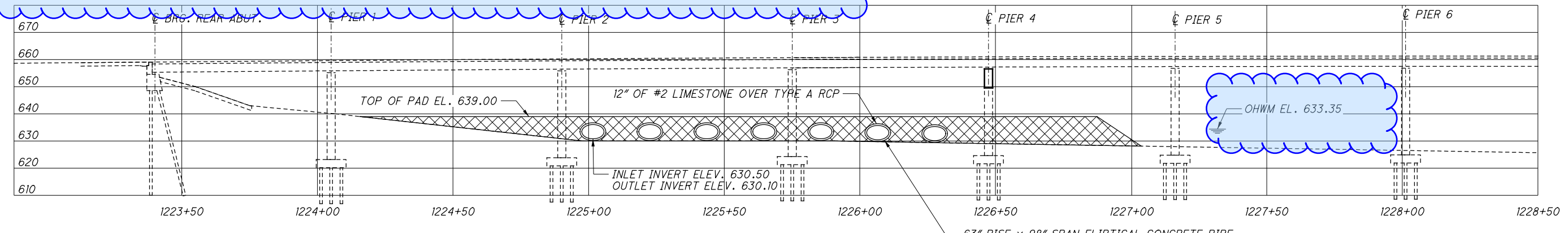
**PROPOSED WORK**

PATCH THE DETERIORATED AREAS OF PIERS PER ITEM 519. INSTALL COMPOSITE FIBER WRAP SYSTEM IN AREAS DESIGNATED IN THESE PLANS. REMOVE AND REPLACE BOTH PIER CAPS AND 2 FEET OF PIER STEMS AT PIER 4. REMOVE AND REPLACE EXISTING BEARINGS WITH ELASTOMERIC BEARINGS AT PIER 4 LOCATIONS.

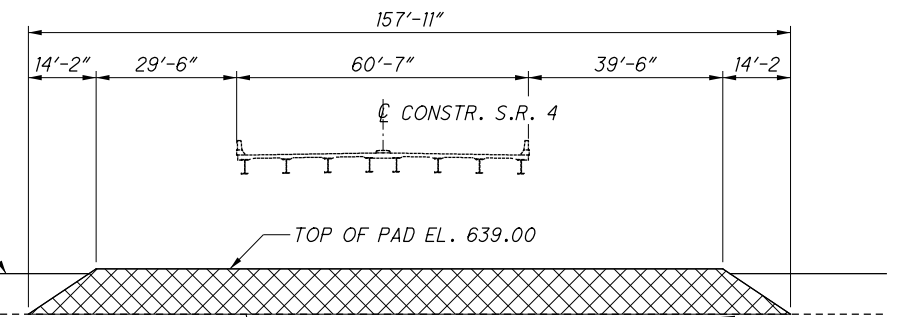
**LEGEND**

= TEMPORARY ACCESS FILL

OHWM = ORDINARY HIGH WATER MARK



**PROFILE ALONG C CONSTRUCTION S.R. 4**



**DESIGN AGENCY**  
 BURGESS & NIPLE  
 525 VINE ST. CINCINNATI, OHIO  
**DATE**  
 9/22/21  
**REVIEWED**  
 MAB  
**STRUCTURE FILE NUMBER**  
 0900397  
**DESIGNED**  
 XAC  
**CHECKED**  
 JB  
**DRAWN**  
 JDG  
**REVISED**  
 -  
**TEMPORARY ACCESS FILL DETAILS**  
 BRIDGE NO. BUT-04-2317  
 SR 4 OVER GREAT MIAMI RIVER  
**BUT - SR 4 - 23.17**  
**PID No. 102783**  
 13 / 14  
 20 / 21