



Richland County Engineer

77 NORTH MULBERRY STREET • MANSFIELD, OHIO 44902-1208

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March 19, 2019

ADDENDUM NO. ONE TO CONTRACT DOCUMENTS FOR

ORWEILER ROAD, RIC-TR152-0.20, BRIDGE REPLACEMENT TROY/SPRINGFIELD TOWNSHIPS, RICHLAND COUNTY, OHIO PID NO. 98716 FED. NO. E160(775)

Bid Opening: April 4, 2019, 10:30 AM local time

The attention of all bidders is called to the following modification to the contract documents for **Orweiler Road, RIC-TR152-0.20, Bridge Replacement, Troy/Springfield Townships, Richland County, Ohio**. These modifications are to be taken into account in preparing proposals. They shall be subject to all terms, limitations and provisions of the original contract documents, and shall be included and made a part of any contracts executed for this project. The Bidders will be responsible for including this addendum in subject contract.

1. Plan sheet GENERAL NOTES, page 3 of 28, paragraph "Clearing and Grubbing, As Per Plan" Should be replaced with the following paragraph:

CLEARING AND GRUBBING, AS PER PLAN

All trees specifically marked for removal within the construction limits are to be removed by the Engineer. Remove and dispose of all tree and stump remainder under the lump sum bid Item 201, Clearing and Grubbing, As Per Plan.

SIZES	NO. STUMPS
12"	10
18"	3
36"	1

Hardwood from trees removed under this item from Parcel 10-SH and 11-SH shall remain with respective property owners. Cut the trunk and limbs 6-inch diameter and larger into lengths 8 to 10 feet and place wood on the owner's property outside of the road right-of-way where directed by the Engineer.

Additional clearing of brush, overhanging foliage or vegetation may be required as directed by the Richland County Engineer and shall be included in the lump sum price bid for Item 201, Clearing and Grubbing, As Per Plan.

No trees, stumps, brush, vegetation or other items removed under 201 shall be disposed of within the project limits.

2. The attached Soil Boring sheets have been prepared for this project.

PROJECT DESCRIPTION:

THE PROPOSED PROJECT WILL INCLUDE COMPLETE REPLACEMENT OF THE EXISTING SINGLE STEEL BEAM WITH CORRUGATED METAL DECK ON CONCRETE CAPPED TIMBER PILE AND STONE ABUTMENTS WITH THREE SPANS CONTINUOUS CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE (RIC-TR152-020) OVER HEADWATERS OF CLEAR FORK RESERVOIR IN TROY/SPRINGFIELD TOWNSHIP, RICHLAND COUNTY, OHIO.

HISTORIC RECORDS:

NOT APPLICABLE.

GEOLOGY:

THE SITE IS LOCATED IN THE RICHLAND COUNTY, IN THE NORTH-CENTRAL PART OF OHIO. RICHLAND COUNTY IS NEAR THE SOUTHERN BOUNDARY OF THE WISCONSIN GLACIATION. MOST OF ITS SOILS FORMED IN GLACIAL DEPOSITS. THESE DEPOSITS ARE THICKEST IN THE NORTHERN PART OF THE COUNTY AND THIN OUT TOWARD THE SOUTH, WHERE, IN THE SOUTHERN PART, THEY ARE LACKING ON SOME OF THE HIGHER HILLS. THE NORTHERN PART OF RICHLAND COUNTY IS A TILL PLAIN THAT HAS LOW TO MODERATE RELIEF. GLACIERS LEVELED THE BEDROCK HILLS AND FILLED THE VALLEYS IN THIS PART OF THE COUNTY. THE SOILS FORMED IN THE MATERIALS DEPOSITED IN SHALLOW LAKES THAT EXISTED AFTER THE GLACIERS MELTED. FARTHER SOUTH THE GLACIERS THINNED OUT, AND THEIR LEVELING EFFECT IS LESS PRONOUNCED. COMPARED WITH THE SOILS IN THE NORTHERN PART OF THE COUNTY, THE SOILS CONTAIN MORE MATERIALS WEATHERED FROM THE UNDERLYING BEDROCK AND LESS TRANSPORTED GLACIAL MATERIALS. MOST OF THE COUNTY IS DRAINED BY THE BLACK FORK, CLEAR FORK AND MUDDY FORK OF THE MOHICAN RIVER AND THEIR TRIBUTARIES.

RECONNAISSANCE:

PSI VISITED THE SITE ON NOVEMBER 23, 2015. THE EXISTING BRIDGE STRUCTURE SPANS IN THE EAST TO WEST DIRECTION OVER HEADWATERS OF CLEAR FORK RESERVOIR, WHICH FLOWS IN A NORTH TO SOUTH DIRECTION. THE SURFACE OF ORWEILER ROAD IS COVERED WITH ASPHALT CONCRETE. BASED ON THE VISUAL SITE OBSERVATIONS AND PROVIDED SITE PLAN, THE SURFACE GRADES ALONG ORWEILER ROAD SLOPE DOWNWARD TOWARDS FROM EAST TO WEST WITH AN ELEVATION DIFFERENCE OF ABOUT 4 FEET IN THE VICINITY OF THE BRIDGE LOCATION. THE BRIDGE EMBANKMENTS SLOPE DOWNWARD TOWARDS CREEK AND EXHIBIT AN ELEVATIONAL DIFFERENCE OF ABOUT 18 FEET BETWEEN THE UNDERSIDE OF THE BRIDGE AND CREEK.

SUBSURFACE EXPLORATION:

THE SCOPE OF THE EXPLORATION AND ANALYSIS INCLUDED A RECONNAISSANCE OF THE PROJECT SITE, DRILLING AND SAMPLING 2 TEST BORINGS TO A DEPTH OF APPROXIMATELY 70 TO 75 FEET BELOW THE EXISTING GRADES, AND AN ENGINEERING ANALYSIS AND EVALUATION OF THE SUBSURFACE MATERIALS.

THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 3.25-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE HOLES THROUGH SOIL. DISTURBED SOIL SAMPLES WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206). THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON JULY 14, 2015, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) WAS 94.6%.

EXPLORATION FINDINGS:

THE SURFACE GRADES, AT BOTH TEST BORING LOCATIONS, CONSISTED OF ASPHALT CONCRETE MEASURING APPROXIMATELY 10 INCHES IN THICKNESS WHICH WAS UNDERLAIN BY SAND AND GRAVEL BASE MATERIALS MEASURING APPROXIMATELY 3 INCHES IN THICKNESS. THE THICKNESS OF SURFACE MATERIALS SHOULD BE EXPECTED TO BE VARIABLE ALONG THE PROJECT LENGTH.

THE SUBGRADE SOILS CONSISTED OF GRAVEL AND STONE FRAGMENTS (A-2-4) SANDY SILT (A-4a) AND SILT (A-4b) AND EXTENDED TO THE TERMINAL DEPTHS OF THE EXPLORATION ABOUT 70 TO 75 FEET BELOW THE EXISTING SURFACE GRADES.

SPECIFICATIONS:

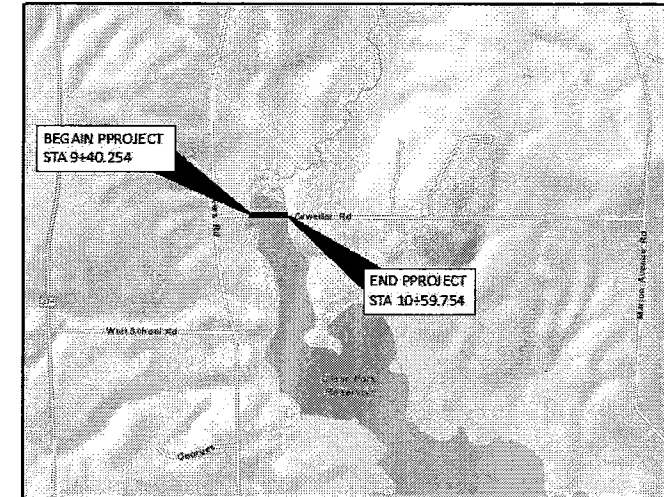
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2015.

AVAILABLE INFORMATION:

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE RICHLAND COUNTY ENGINEER OFFICE AT 77 NORTH MULBERRY STREET, MANSFIELD, OHIO 44902.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGS WITH SAND AND SILT	A-2-4	4	0
SANDY SILT	A-4a	3	13
SILT	A-4b	1	16
	TOTAL	8	29
PAVEMENT AND BASE = X= APPROXIMATE THICKNESS.	VISUAL		
BORING LOCATION - PLAN VIEW.			
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATE WATER CONTENT IN PERCENT		
N60	INDICATES STANDARD PENETRATION RESISTANCE. NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
W-	INDICATES FREE WATER ELEVATION		
	FREE WATER ELEVATION AFTER DRILLING		
SS	INDICATES A SPLIT SPOON SAMPLE.		
NP	INDICATES A NON-PLASTIC SAMPLE.		
TR	INDICATES TOP OF THE ROCK.		



LOCATION MAP
PROJECT LOCATION MAP
(NOT IN SCALE)



PARTICLE SIZE DEFINITIONS						
300 mm	75 mm	2.0 mm	0.42 mm	0.074 mm	0.005 mm	
Boulders	Cobbles	Gravel	Course Sand	Fine Sand	Silt	Clay
			No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE	

RECON. -	AV	11-23-15
DRILLING	PSI	12-09-15 TO 12-09-15
DRAWN -	ST	02-17-17
REVIEW -	AV	02/17-17

DESIGN AGENCY
RICHLAND COUNTY ENGINEER
77 NORTH MULBERRY ROAD
MANSFIELD, OHIO 44902

PID NO.
98716

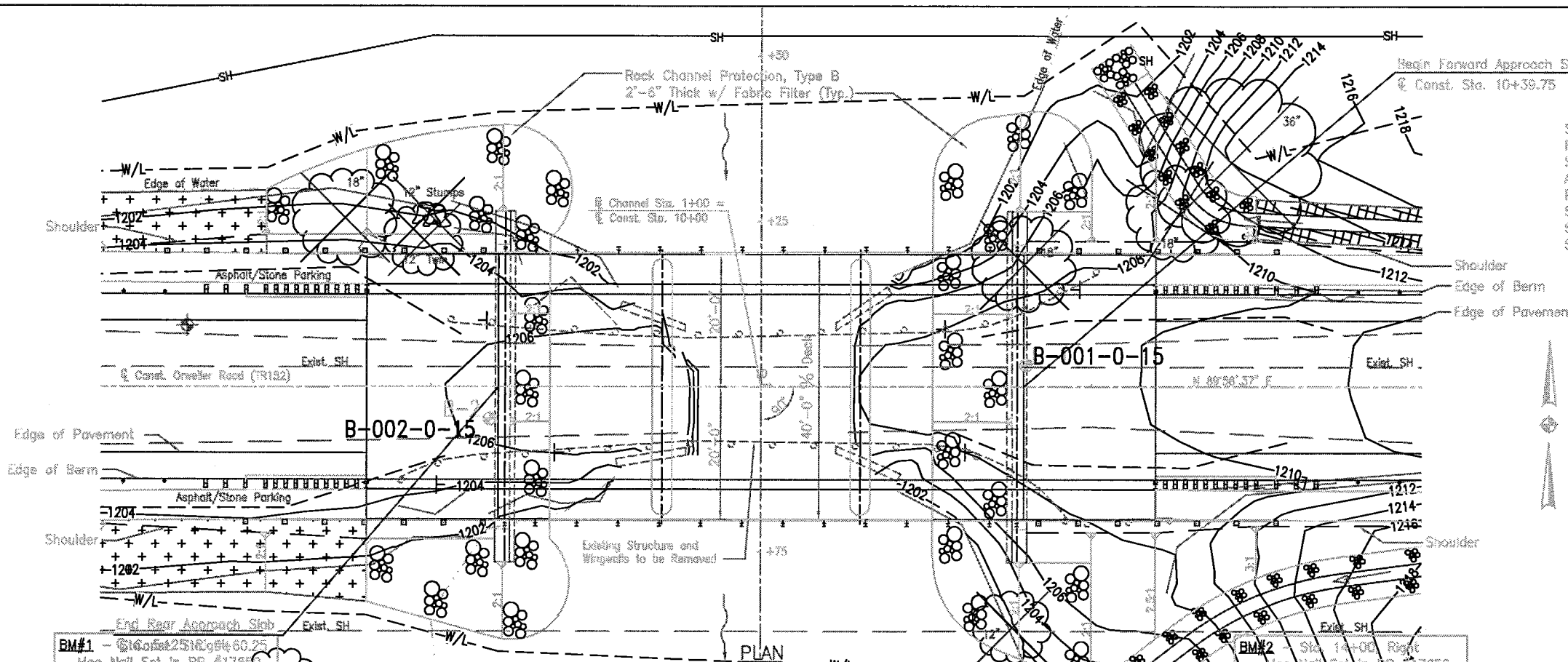
STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. RIC-TR152-0-20 OVER HEADWATERS OF CF RESERVOIR

RIC-TR152-0-20

1/4



Job No. 14017sp Date 8-1-15



INDEX OF SHEETS FOR STRUCTURE

SITE PLAN	1
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STRUCTURE QUANTITIES & STRUCTURE NOTES	3
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PIERS	5
SCREED DIAGRAM & RAILING DETAILS	6
SUPERSTRUCTURE	7
SUPERSTRUCTURE REINFORCING STEEL & SECTIONS	8

Earthwork Limits shown are approximate. Actual slopes shall conform to plan cross sections.

LOCATION
USGS Blooming Grove Quadrangle, Richland County
N 40°43'32" (40.7255)
W 82°39'15" (-82.6542)

HYDRAULICS INFORMATION

DRAINAGE AREA	11.9 Sq. Miles
Est. Q_{10}	= 1450 cfs; V_{10} = 4.0 fps
Est. Q_{100}	= 2530 cfs; V_{100} = 6.0 fps
Structure clears Est. 10-year H.W. by ft. and Est. 100-year H.W. by 0.5 ft. Roadway is overtopped by the 100-year H.W.	

FOUNDATION INVESTIGATION LEGEND
⊕ indicates boring location.

EXISTING STRUCTURE

TYPE: Single-span steel beam with corrugated metal deck on concrete capped timber pile and stone abutments.

SPAN: 23'-0"

ROADWAY: 18'-0" $\frac{1}{2}$ %, 15'-10" $\frac{1}{2}$ % Guardrail

LOADING: Unknown, Posted

SKEW: 0°

WEARING SURFACE: Asphalt Concrete

APPROACH SLABS: Possible Concrete

HEIGHT-GRADE TO STREAM BED: 12'-4"

ALIGNMENT: Tangent

STRUCTURE FILE NO.: 7032678

CONDITION: Poor (General Appraisal 4P)

DATE BUILT: 1950; Superstructure 1977

DISPOSITION: Remove

PROPOSED STRUCTURE

TYPE: Three-span Continuous Concrete Slab with Capped Pile Substructure.

SPAN: 24' ~ 30' ~ 24'

ROADWAY: 28'-0" Top $\frac{1}{2}$ %, 1'-8" Deflector Parapets, 4'-6" Sidewalk, 40'-0" $\frac{1}{2}$ % Deck

LOADING: HL-93

SKEW: 0'-00'

WEARING SURFACE: Monolithic Concrete

APPROACH SLABS: AS-1-15 (20' Long)

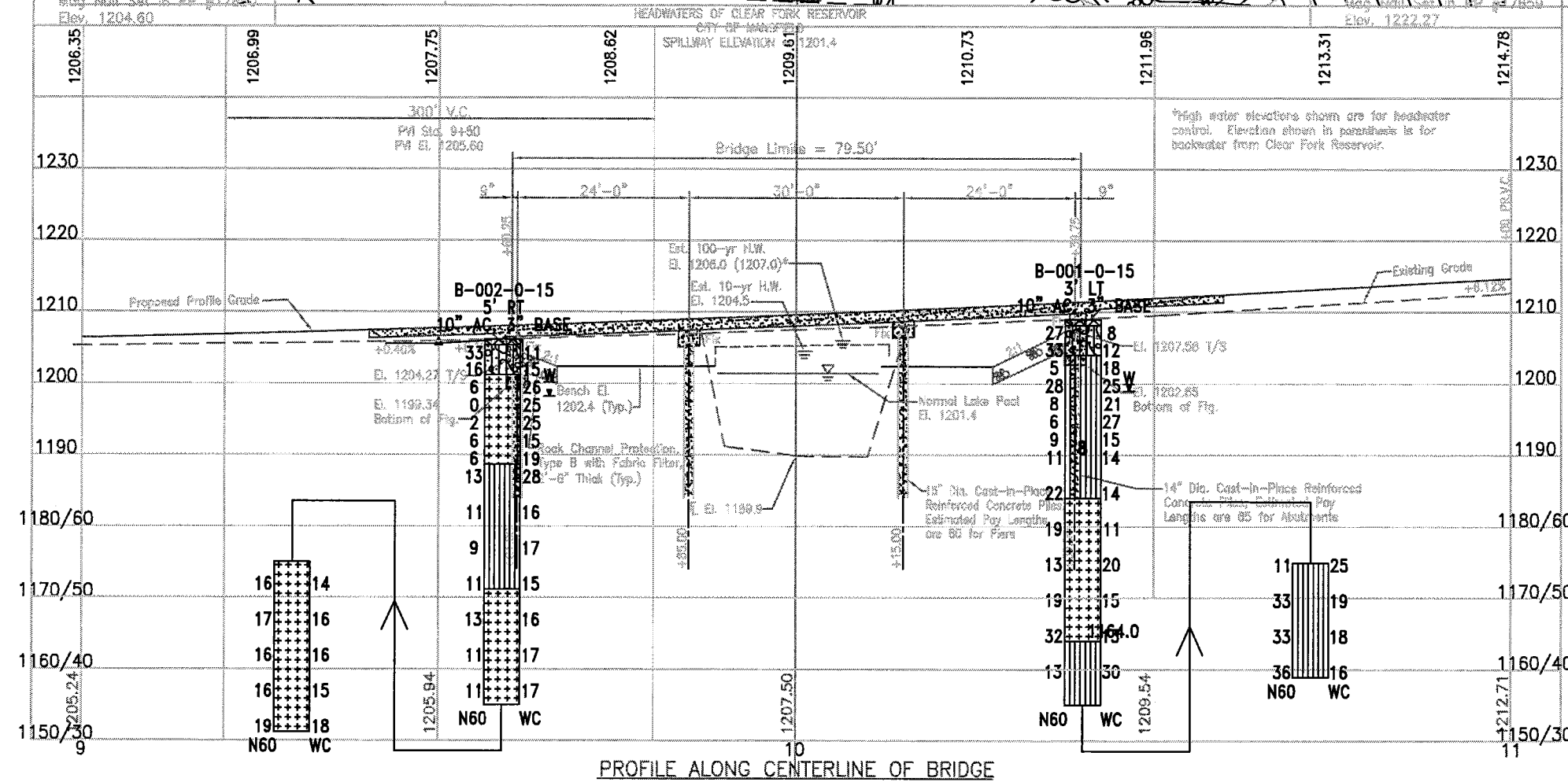
ALIGNMENT: Tangent

NORMAL CROWN: 0.016

AVERAGE DAILY TRAFFIC: 250 (2038)

STRUCTURE FILE NO.: 7032677

HYDRAULIC DESIGN YEAR FREQUENCY: 10 year



HORIZONTAL SCALE IN FT
 0 10 20 30
 N
 DRAWN BY: ST
 CHECKED BY: AV
 SITE PLAN
 BRIDGE NO. RIC-TR152-0-20 OVER HEADWATERS OF THE CLEAR FORK RESERVOIR, A TRIBUTARY OF THE CLEAR FORK - MOHICAN RIVER
 2 / 4
 14
 28

PROJECT: ORWEILER RD TR152-0.20 TYPE: BRIDGE REPLACEMENT PID: 98716 BR ID: 7030650 START: 12/9/15 END: 12/9/15	DRILLING FIRM / OPERATOR: SAMPLING FIRM / LOGGER: DRILLING METHOD: SAMPLING METHOD:	PSI / K.C. PSI / Z.O. 3.25" HSA SPT	DEPTH	ELEV.	SPT/ ROD	REC N60 (%)	SAMPLE ID	HP (tsf)	STATION / OFFSET:										EXPLORATION ID B-001-0-15		
									DRILL RIG: D-50 (15) HAMMER: DIEDRICH AUTOMATIC CALIBRATION DATE: 7/14/15 ENERGY RATIO (%): 94.6	ALIGNMENT: ORWEILER ROAD ELEVATION: 1209.0 (MSL) EOB: 70.0 ft.	LAT / LONG: 40.725552780, 82.653986110	GRADATION (%)	GR	CS	FS	SI	CL	LL		PL	PI
10" ASPHALT AND SAND AND GRAVEL (BASE) MEDIUM DENSE, BROWN, GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT, TRACE CLAY, TRACE CONCRETE, MOIST (FILL)			2.5	1209.0	17	27	SS-1	-	41	17	15	-	27	-	NP	NP	NP	8	A-2-4 (O)		
			5.0	1208.1	4	33	SS-2	-	31	14	20	-	35	-	NP	NP	NP	12	A-2-4 (O)		
			7.5	1204.0	1	5	SS-3	-	-	-	-	-	-	-	-	-	-	-	18	A-4a (V)	
			10.0		0	28	SS-4	-	-	-	-	-	-	-	-	-	-	-	25	A-4a (V)	
			12.5		1	8	SS-5	-	-	-	-	-	-	-	-	-	-	-	21	A-4a (V)	
			15.0		1	6	SS-6	-	-	-	-	-	-	-	-	-	-	-	27	A-4a (V)	
			17.5		1	9	SS-7	-	-	-	-	-	-	-	-	-	-	-	15	A-4a (V)	
			20.0		1	11	SS-8	-	19	15	12	26	28	22	17	5	14	14	A-4a (4)		
			22.5																		
			25.0	1184.0	5	22	SS-9	-	-	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
			27.5																		
			30.0		5	19	SS-10	-	-	-	-	-	-	-	-	-	-	-	11	A-4b (V)	
			32.5																		
			35.0		2	13	SS-11	-	-	-	-	-	-	-	-	-	-	-	20	A-4b (V)	
			37.5																		
			40.0		4	19	SS-12	-	-	-	-	-	-	-	-	-	-	-	15	A-4b (V)	
			42.5																		
			45.0	1164.0	6	32	SS-13	-	-	-	-	-	-	-	-	-	-	-	13	A-4b (V)	
		47.5																			
		50.0		2	13	SS-14	-	-	-	-	-	-	-	-	-	-	-	30	A-4a (V)		
		52.5																			
		55.0		3	11	SS-15	-	-	-	-	-	-	-	-	-	-	-	25	A-4a (V)		
		57.5																			
		60.0		6	33	SS-16	-	-	-	-	-	-	-	-	-	-	-	19	A-4a (V)		
		62.5																			
		65.0		9	33	SS-17	-	-	-	13	3	36	12	NP	NP	NP	18	A-4a (3)			
		67.5																			
		70.0	1139.0	8	36	SS-18	-	-	-	-	-	-	-	-	-	-	-	16	A-4a (V)		

688

PROJECT: ORWELLER RD TR152-0.20
 TYPE: BRIDGE REPLACEMENT
 PID: 98716 BR ID: 7030650
 START: 12/10/15 END: 12/10/15

DRILLING FIRM / OPERATOR:
 SAMPLING FIRM / LOGGER:
 DRILLING METHOD:
 SAMPLING METHOD:

PSI / K.C.C.
 PSI / Z.O.
 3.25" HSA
 SPT

DRILL RIG: D-50 (15)
 HAMMER: DIETRICH AUTOMATIC
 CALIBRATION DATE: 7/14/15
 ENERGY RATIO (%): 94.6

STATION / OFFSET:
 ALIGNMENT: ORWELLER ROAD
 ELEVATION: 1206.2 (MSL) EOB: 75.0 ft.
 LAT / LONG: 40.725544440, 82.654225000

EXPLORATION ID
 B-002-0-15
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ROD	REC (%)	SMPLE ID	HP (tsf)	GRADATION (%)							WC	BOOT CLASS (qt)	BACK FILL
							GR	FS	SI	CL	LL	PL	PI			
10" ASPHALT AND SAND AND GRAVEL (BASE) MEDIUM DENSE, BROWN/GRAY, GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, TRACE CONCRETE, MOIST (FILL)	1206.2		13	44	SS-1	-	39	46	-	12	NP	NP	11	A-2-4 (O)		
	1205.3		11	44	SS-1	-	39	46	-	12	NP	NP	11	A-2-4 (O)		
	1201.2		2	44	SS-2	-	32	15	18	23	12	17	7	A-2-4 (O)		
			5	44	SS-2	-	32	15	18	23	12	17	7	A-2-4 (O)		
			2	44	SS-3	-	-	-	-	-	-	-	-	26	A-4b (V)	
			3	44	SS-3	-	-	-	-	-	-	-	-	26	A-4b (V)	
			2	44	SS-3	-	-	-	-	-	-	-	-	26	A-4b (V)	
			2	44	SS-3	-	-	-	-	-	-	-	-	26	A-4b (V)	
			0	17	SS-4	-	-	-	-	-	-	-	-	25	A-4b (V)	
			0	17	SS-4	-	-	-	-	-	-	-	-	25	A-4b (V)	
MEDIUM STIFF TO STIFF, GRAY, SILT, TRACE SAND, TRACE GRAVEL, MOIST	1188.7		1	17	SS-5	-	-	-	-	-	-	-	25	A-4b (V)		
			0	17	SS-5	-	-	-	-	-	-	-	25	A-4b (V)		
			1	17	SS-5	-	-	-	-	-	-	-	25	A-4b (V)		
			2	22	SS-6	-	-	-	-	-	-	-	15	A-4b (V)		
			1	22	SS-6	-	-	-	-	-	-	-	15	A-4b (V)		
			2	22	SS-6	-	-	-	-	-	-	-	15	A-4b (V)		
			3	44	SS-7	-	-	-	-	-	-	-	19	A-4b (V)		
			1	44	SS-7	-	-	-	-	-	-	-	19	A-4b (V)		
			3	44	SS-8	-	5	4	41	37	13	20	17	3	28	A-4a (3)
			5	44	SS-8	-	5	4	41	37	13	20	17	3	28	A-4a (3)
STIFF, GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST ** WET @ 18.5' - 20.0'	1171.2		2	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			3	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			11	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			2	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			3	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			4	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			11	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			2	56	SS-9	-	-	-	-	-	-	-	16	A-4a (V)		
			3	67	SS-10	-	-	-	-	-	-	-	17	A-4a (V)		
			9	67	SS-10	-	-	-	-	-	-	-	17	A-4a (V)		
STIFF, GRAY, SILT, LITTLE TO SOME SAND, LITTLE CLAY, TRACE GRAVEL, MOIST			3	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			4	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			13	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			2	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			3	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			4	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			11	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			2	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			3	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			4	56	SS-12	-	0	3	28	56	13	19	16	3	16	A-4b (7)
			3	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			11	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			2	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			3	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			11	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			2	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			3	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-13	-	-	-	-	-	-	-	17	A-4b (V)		
			3	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			11	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			2	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			3	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			11	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			2	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			3	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-14	-	-	-	-	-	-	-	17	A-4b (V)		
			4	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			5	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			16	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			2	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			3	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			4	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			16	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			2	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			3	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			4	56	SS-15	-	-	-	-	-	-	-	14	A-4b (V)		
			4	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			5	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			17	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			2	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			3	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			4	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			17	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			2	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			3	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			4	56	SS-16	-	-	-	-	-	-	-	16	A-4b (V)		
			4	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			5	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			16	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			2	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			3	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			4	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			16	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			2	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			3	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			4	94	SS-17	-	-	-	-	-	-	-	16	A-4b (V)		
			5	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			6	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			16	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			2	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			3	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			4	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			16	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			2	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			3	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			4	89	SS-18	-	-	-	-	-	-	-	15	A-4b (V)		
			5	100	SS-19	-	-	-	-	-	-	-	18	A-4b (V)		
			6	100	SS-19	-	-	-	-	-	-	-	18	A-4b (V)		
	</															