

**PROJECT DESCRIPTION**

THE PROJECT CONSISTS OF THE CONSTRUCTION OF EIGHT (8) NEW NOISE WALLS ALONG SR 161 BETWEEN ULRU ROAD NAD US 62 IN FRANKLIN COUNTY, OHIO. BASED ON THE AVAILABLE PROJECT INFORMATION, IT IS UNDERSTOOD THAT THE WALLS WILL RANGE FROM 497 TO 2,226 FEET IN LENGTH AND WILL BE 14 FEET HIGH. NOISE WALLS 3, 6, 8, 9, 11, 12 AND 15, AS DESIGNATED AND SHOWN ON THE PROJECT DOCUMENTS, ARE INCLUDED AS PART OF THIS INVESTIGATION.

**HISTORIC RECORDS**

HISTORIC GEOTECHNICAL RECORDS WERE OBTAINED FROM ODOT'S TRANSPORTATION INFORMATION MAPPING SYTEM (TIMS). RESULTS OF THESE EXPLORATIONS INDICATED THAT PREDOMINANTLY EXISTING COHESIVE AND GRANULAR SOILS ARE PRESENT BELOW THE EXISTING GROUND SURFACE, AND ARE UNDERLAIN BY AND SHALE BEDROCK. THESE RESULTS WERE NOT UTILIZED DURING THE CURRENT DESIGN

**GEOLOGY**

PHYSIOGRAPHICALLY, THE PROJECT SITE FALLS WITHIN GALION GLACIATED LOW PLATEAU. THIS REGION IS CHARACTERIZED BY ROLLING UPLANDS WHICH ARE TRANSITIONAL BETWEEN THE GENTLY ROLLING TILL PLAINS AND HILL GLACIATED ALLEGHENY PLATEAU. THE SOILS CONSIST OF THIN TO THICK DRIFT WITH MODERATE RELIEF.

BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK BENEATH THE SITE IS MISSISSIPPIAN-AGE SHALES AND SANDSTONES THE BEDROCK SURFACE IN THE VICINITY OF THE SITE RANGES BETWEEN APPROXIMATELY 5 TO 25 FEET BELOW THE EXISTING SURFACE GRADE.

**RECONNAISSANCE**

FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNELL FROM RESOURCE INTERNATIONAL, INC (RII) BETWEEN OCTBER 18 AND NOVEMBER 15, 2023. THE PROJECT SITE IS LOCATED ALONG SR 161 IN FRANKLIN COUNTY, OHIO. THE PROJECT SITE EXTENDS FROM ULRU ROAD TO APPROXIMATELY 0.3 MILES WEST OF US 62. SR 161 WITHIN THE PROJECT LIMITS IS A BIDIRECTIONAL, DIVIDED, ASPHALT PAVED ROADWAY WITH TWO LANES IN EACH DIRECTION. ALONG THE PROJECT ALIGNMENT, THE LAND USE SURROUNDING SR 161 IS PRIMARILY RESIDENTIAL WITH SOME COMMERCIAL AND/OR INDUSTRIAL PURPOSE. SURFACE DRAINAGE APPEARS TO BE COLLECTED IN THE DRAINAGE DITCHES ALONG THE MAJORITY OF THE ROADWAY ALIGNMENT.

**SUBSURFACE EXPLORATION**

BETWEEN OCTOBER 23 AND DECEMBER 5, 2023, A TOTAL OF FIFTY-THREE (53) BORINGS, DESIGNATED AS B-001-0-23 THROUGH B-053-0-23, WERE PERFORMED AS PART OF THE SUBSURFACE EXPLORATION. THE BORINGS WERE DRILLED AND SAMPLED WITH DIEDRICH D50 TRACK MOUNTED DRILL RIG UTILIZING 3.25-INCH HOLLOW STEM AUGERS TO ADVANCE THE HOLES. STANDARD PENETRATION TESTING (SPT) AND SPLIT SPOON SAMPLING WERE PERFORMED AT 2.5-FOOT INTERVALS IN ALL BORINGS EITHER TO THE BORING TERMINATION DEPTHS OR TO AUGER REFUSAL ON BEDROCK. THE HAMMER UTILIZED IN DIEDRICH D50 TRACK RIG WAS CALIBRATED ON MARCH 21, 2022 AND HAD AN ENERGY RATIO OF 86.4 PERCENT.

THE DEPTH TO BEDROCK WAS DETERMINED BY SPLIT SPOON SAMPLER REFUSAL AND/OR AUGER REFUSAL ON BEDROCK. WHERE THE BORINGS WERE EXTENDED INTO THE BEDROCK, AN NQ2 SIZED, DOUBLE TUBE, DIAMOND BIT CORE BARREL (UTILIZING WIRE LINE EQUIPMENT) WAS USED TO CORE THE BEDROCK. THE ROCK CORES OBTAINED FROM THE BORINGS WERE LOGGED IN THE FIELD AND VISUALLY CLASSIFIED IN THE LABORATORY. THE RETRIEVED CORES WERE ANALYZED TO IDENTIFY THE TYPE OF ROCK, COLOR, MINERAL CONTENT, BEDDING PLANES AND OTHER GEOLOGICAL AND MECHANICAL FEATURES OF INTEREST IN THIS PROJECT.

**EXPLORATION FINDINGS**

THE BORINGS WERE GENERALLY PERFORMED IN THE VICINITY OF THE PROPOSED NOISE WALL ALIGNMENTS. ALL BORINGS, EXCEPT B-038-0-23, ENCOUNTERED TOPSOIL THICKNESSES BETWEEN 1 INCH AND 10 INCHES. BORING B-038-0-23 ENCOUNTERED 3.0 INCHES OF ASPHALT OVERLYING 6.5 INCHES OF CONCRETE OVERLYING 3.5 INCHES OF AGGREGATE BASE.

UNDERLYING THE SURFICIAL SOILS, THE NATURAL SOILS WERE ENCOUNTERED, CONSISTING OF BOTH COHESIVE AND GRANULAR DEPOSITS. THE NATURAL COHESIVE SOILS WERE DESCRIBED AS SANDY SILT, SILT AND CLAY, SILTY CLAY, AND CLAY (ODOT A-4A, A-6A, A-6B, A-7-6). THE SHEAR STRENGTH AND CONSISTENCY OF THE COHESIVE SOILS ARE PRIMARILY DERIVED FROM THE HAND PENETROMETER VALUES (HP). THE COHESIVE SOILS ENCOUNTERED RANGED FROM MEDIUM STIFF (0.5 < HP 1.0 TSF) TO HARD (HP 4.0 TSF). THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED, OBTAINED FROM THE HAND PENETROMETER, RANGED FROM 0.75 TO OVER 4.5 TSF (LIMIT OF THE INSTRUMENT).

THE GRANULAR SOILS WERE DESCRIBED AS GRAVEL, GRAVEL WITH SAND, GRAVEL WITH SAND AND SILT, GRAVEL WITH SAND AND SILT AND CLAY, AND COARSE AND FINE SAND (ODOT A-1-A, A-1B, A-2-4, A-2-6, A-3A). THE RELATIVE DENSITY OF GRANULAR SOILS IS PRIMARILY DERIVED FROM SPT BLOW COUNTS (N<sub>60</sub>). BASED ON THE SPT BLOW COUNTS OBTAINED, THE GRANULAR SOILS ENCOUNTERED RANGED FROM LOOSE (5 < N<sub>60</sub> < 10 BLOWS PER FOOT (BPF)) TO VERY DENSE (N<sub>60</sub> > 50 BPF). BLOW COUNTS RECORDED FROM THE SPT SAMPLING WITHIN THE GRANULAR SOIL DEPOSITS RANGED FROM 9 TO 96 BPF.

COBBLES WERE ENCOUNTERED WITHIN THE OVERBURDEN SOILS AT VARIOUS BORING LOCATIONS AT VARYING DEPTHS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED IN THREE (3) OF THE BORINGS AT DEPTHS RANGING FROM 14.0 TO 22.4 FEET BELOW THE GROUND SURFACE. SIGNIFICANT GROUND WATER FLOW WAS ENCOUNTERED DURING DRILLING IN TWENTY-SIX (26) OF THE BORINGS AT DEPTHS RANGING FROM 12.0 TO 21.0 FEET BELOW THE EXISTING GROUND SURFACE. MEASURABLE GROUNDWATER WAS OBSERVED AT THE COMPLETION OF DRILLING IN SEVENTEEN (17) OF THE BORINGS AT DEPTHS RANGING FROM 7.8 TO 20.5 FEET BELOW EXISTING GRADE ""

LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
	GRAVEL AND/OR STONE FRAGMENTS	A-1-a	2	4
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	11	23
	GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	12	57
	GR. AND/OR ST. FRAGS. WITH SAND, SILT & CLAY	A-2-6	-	2
	COARSE AND FINE SAND	A-3a	1	9
	SANDY SILT	A-4a	18	58
	SILT AND CLAY	A-6a	26	102
	SILTY CLAY	A-6b	12	38
	CLAY	A-7-6	7	9
		TOTAL	89	302
	SANDSTONE	VISUAL		
	SHALE	VISUAL		
	SILTSTONE	VISUAL		
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	SOD AND TOPSOIL = 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	INDICATES WATER CONTENT IN PERCENT.			
N <sub>60</sub>	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
X/Y/Z	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.			
	INDICATES FREE WATER ELEVATION.			
	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.			
	INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.			
SS	INDICATES A SPLIT SPOON SAMPLE.			
NP	INDICATES A NON-PLASTIC SAMPLE.			

**EXPLORATION FINDINGS (CON'T)**

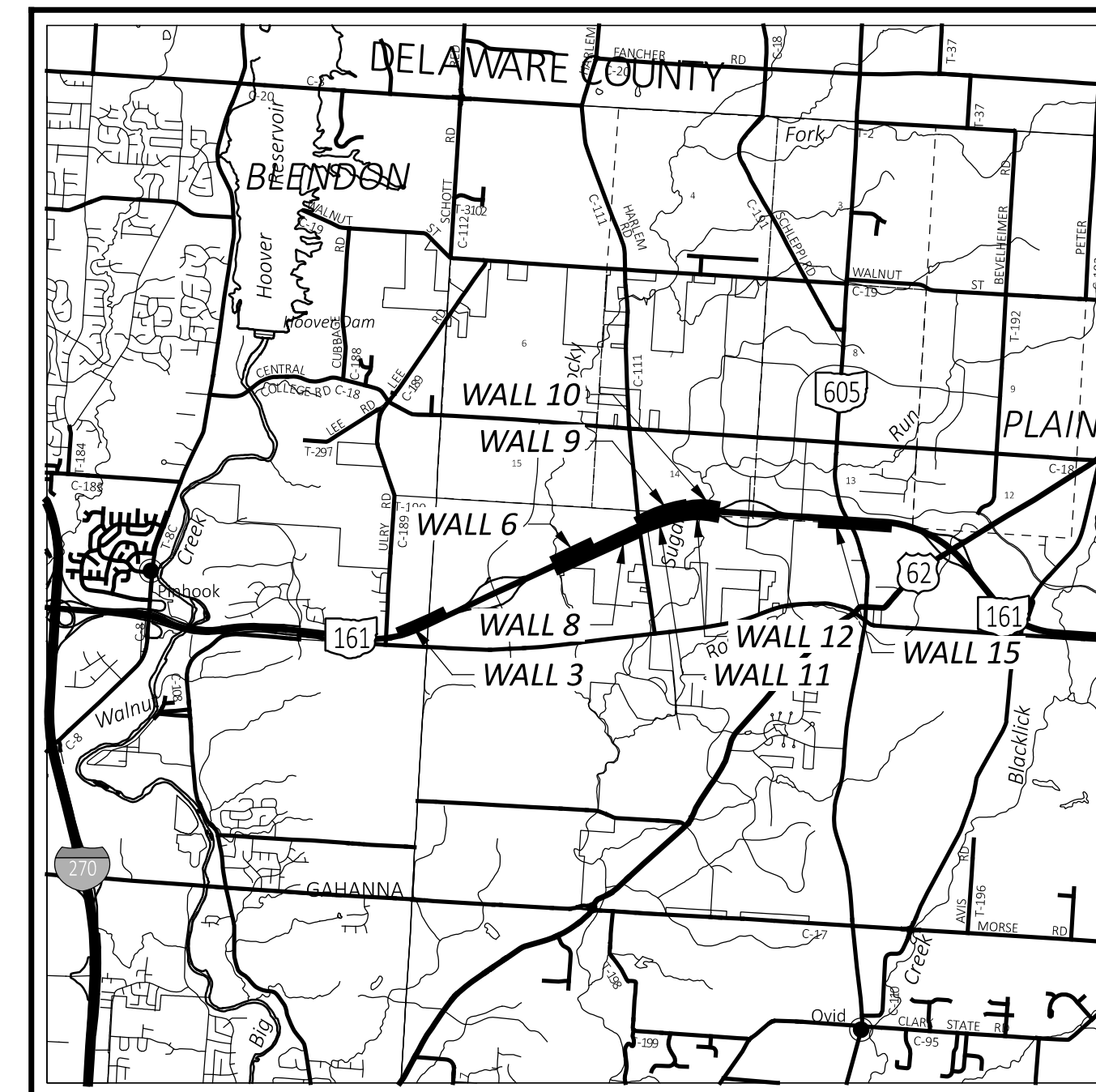
BEDROCK WAS ENCOUNTERED IN BORINGS B-001-0-23 TO B-004-0-23, B-018-0-23, B-024-0-23 B-027-0-23, B-028-0-23, B-038-0-23 TO B-053-0-23 AT DEPTHS RANGING FROM 4.3 TO 23.0 FEET BENEATH THE EXISTING GROUND SURFACE. THE BEDROCK WAS DESCRIBED AS HIGHLY WEATHERED GRAY AND BROWN SANDSTONE, HIGHLY WEATHERED TO SEVERELY WEATHERED GRAY AND BLACK SILTSTONE, AND HIGHLY WEATHERED GRAY SHALESTONE.

**SPECIFICATIONS**

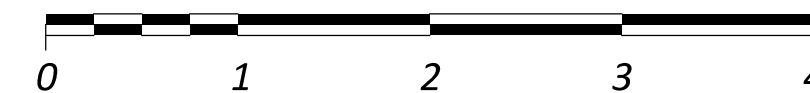
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2022.

**AVAILABLE INFORMATION**

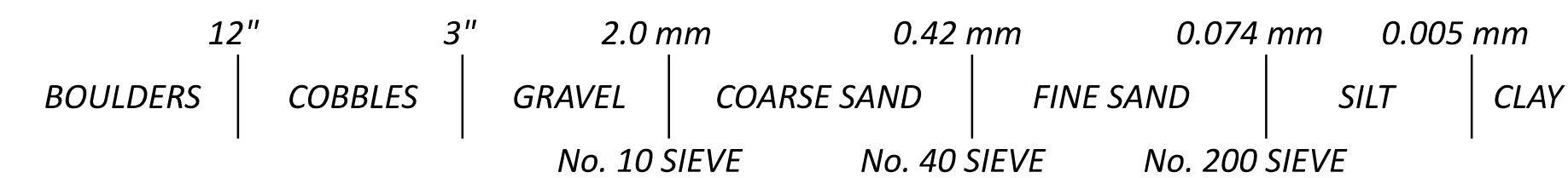
THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.



LOCATION MAP  
SCALE IN MILES



**PARTICLE SIZE DEFINITIONS**



INDEX OF SHEETS			
SUMMARY OF SOIL TEST DATA, SHEETS 2 - 5.			
LOCATION FROM STA.	TO STA.	PLAN	PROFILE
CONST. SR 161 NOISE WALL 3			
2130+00	2135+00	6	6
2135+00	2140+00	7	7
NOISE WALL 6			
2192+00	2197+00	8	8
2197+00	2202+00	9	9
NOISE WALL 8			
2192+00	2197+00	10	10
2197+00	2202+00	11	11
2202+00	2207+00	12	12
2207+00	2212+00	13	13
2212+00	2217+00	14	14
NOISE WALL 9			
2217+00	2222+00	15	15
2222+00	2227+00	16	16
2227+00	2232+00	17	17

INDEX OF SHEETS (CON'T)			
LOCATION FROM STA.	TO STA.	PLAN	PROFILE
CONST. SR 161 NOISE WALL 11			
2216+00	2221+00	18	18
2221+00	2226+00	19	19
2226+00	2231+00	20	20
2231+00	2236+00	21	21
NOISE WALL 12			
2239+00	2244+00	22	22
2244+00	2249+00	23	23
NOISE WALL 15			
2286+00	2291+00	24	24
2291+00	2296+00	25	25
2296+00	2301+00	26	26
2301+00	2306+00	27	27
2306+00	2311+00	28	28

BORING LOGS, SHEETS 29 - 66.

BEDROCK TEST SUMMARY					
BORING ID	SAMPLE ELEVATION	SAMPLE DEPTH	UCS	POINT LOAD	LITHOLOGY
			Qu (PSI)	Qu (PSI)	
B-001-0-23	952.3'	14.0'	4400	-	SANDSTONE
B-003-0-23	955.3'	13.8'	6891	-	SANDSTONE
B-023-0-23	955.3' - 953.5'	21.5' - 23.5'	-	856	SHALE
B-039-0-23	971.4' - 966.4'	15.0' - 20.0'	-	57	SHALE
B-043-0-23	1014.0'	21.0'	6208	-	SANDSTONE
B-046-0-23	1017.1'	22.0'	7887	-	SANDSTONE
B-050-0-23	1017.0'	21.0'	8484	-	SANDSTONE
B-051-0-23	1016.9'	21.2'	8429	-	SANDSTONE

**DRILLING -** TG 10/23 - 12/05/2023  
**DRAWN -** JAS, KSJ 01/18/2023  
**REVIEWED -** DEK 01/18/2023

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
**1 66**  
 SHEET TOTAL  
**P.232 297**





**RESOURCE INTERNATIONAL, INC.**  
Engineering Consultants

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**Unconfined Compressive Strength of Intact Rock Core Specimens**

(ASTM D 7012-14)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

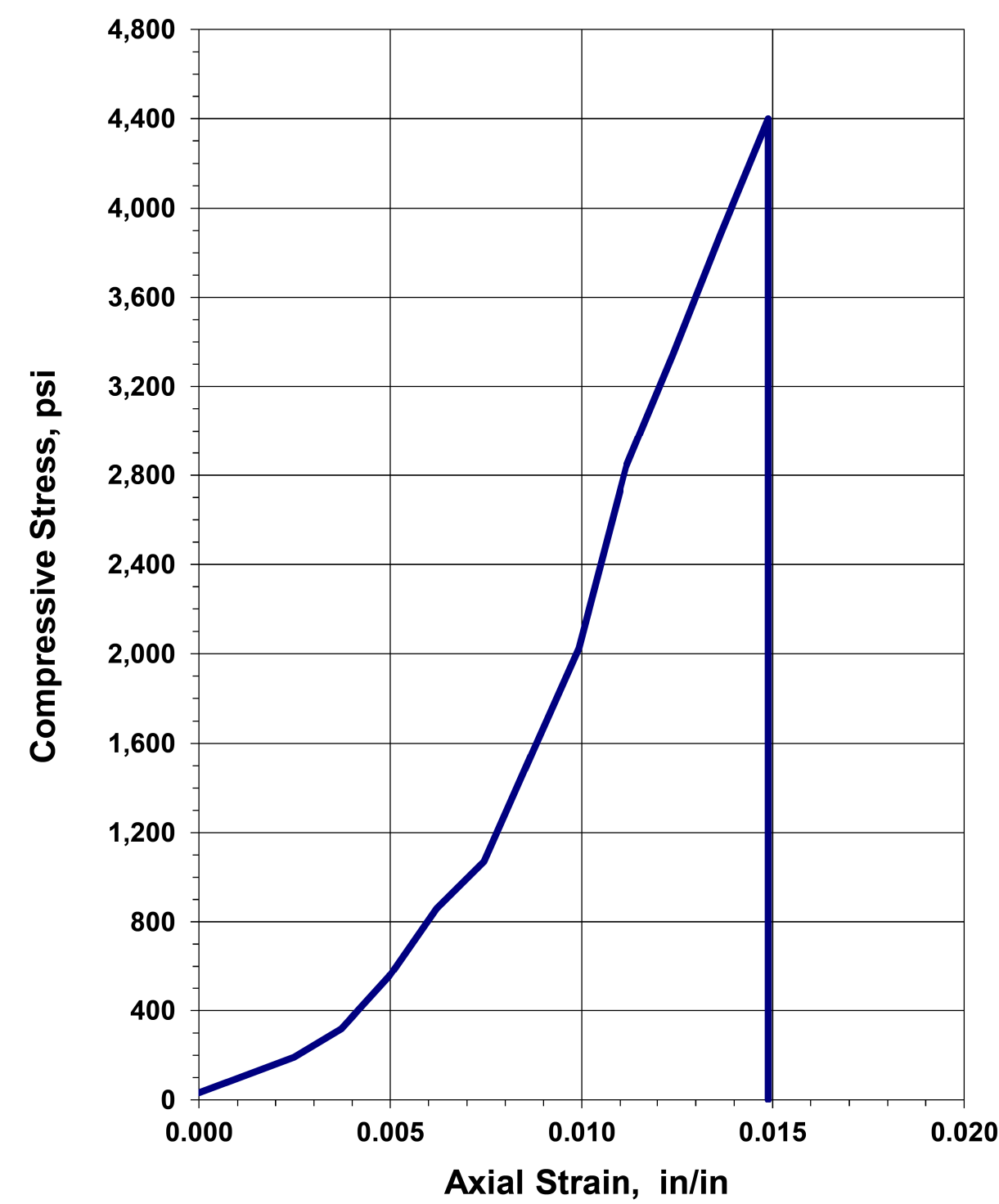
Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

Boring No.:	<u>B-001-0-23</u>	Average Length:	<u>4.030</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.993</u>	in
Depth (ft):	<u>14.0'</u>	Length to diameter ratio:	<u>2.022</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.120</u>	in <sup>2</sup>
Sample Mass:	<u>470.86</u>	Volume:	<u>0.0073</u>	ft <sup>3</sup>
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>142.68</u>	lbs/ft <sup>3</sup>
Rate of Loading:	<u>62.1</u>	Failure Load:	<u>13,727</u>	lbs
Testing Time:	<u>221</u>	Axial Strain at Failure:	<u>0.0149</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>4,400</u>	psi

Sample Preparation: Per ASTM D4543

\*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



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**Unconfined Compressive Strength of Intact Rock Core Specimens**

(ASTM D 7012-14)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

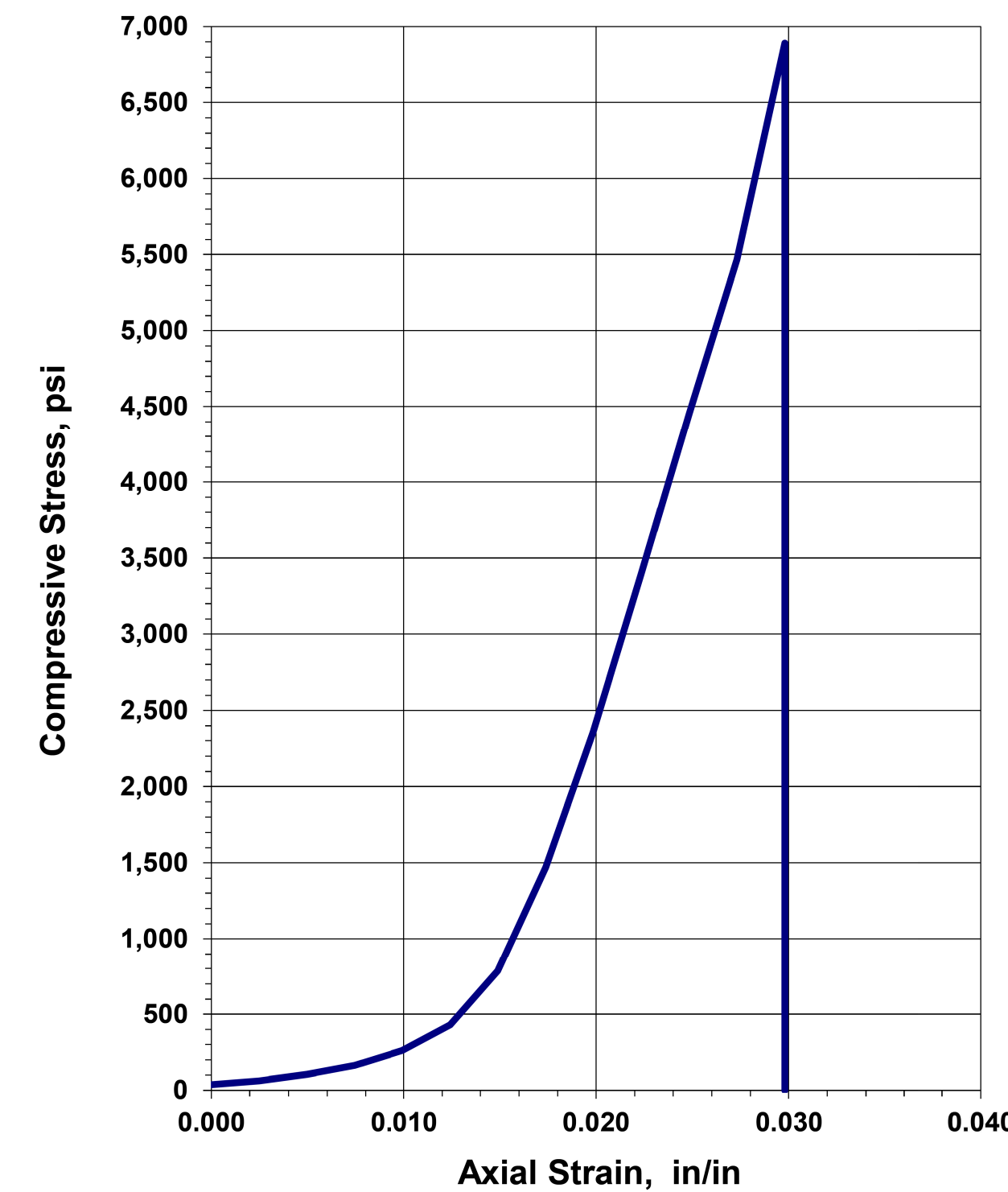
Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

Boring No.:	<u>B-003-0-23</u>	Average Length:	<u>4.028</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.995</u>	in
Depth (ft):	<u>13.8'</u>	Length to diameter ratio:	<u>2.019</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.126</u>	in <sup>2</sup>
Sample Mass:	<u>480.55</u>	Volume:	<u>0.0073</u>	ft <sup>3</sup>
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>145.39</u>	lbs/ft <sup>3</sup>
Rate of Loading:	<u>75.1</u>	Failure Load:	<u>21,542</u>	lbs
Testing Time:	<u>287</u>	Axial Strain at Failure:	<u>0.0298</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>6,891</u>	psi

Sample Preparation: Per ASTM D4543

\*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



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(614) 823-4949

DESIGNER  
JAS

REVIEWER  
DEK 1/19/24

PROJECT ID  
117607

SUBSET TOTAL  
2 66

SHEET TOTAL  
P.233 297





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**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

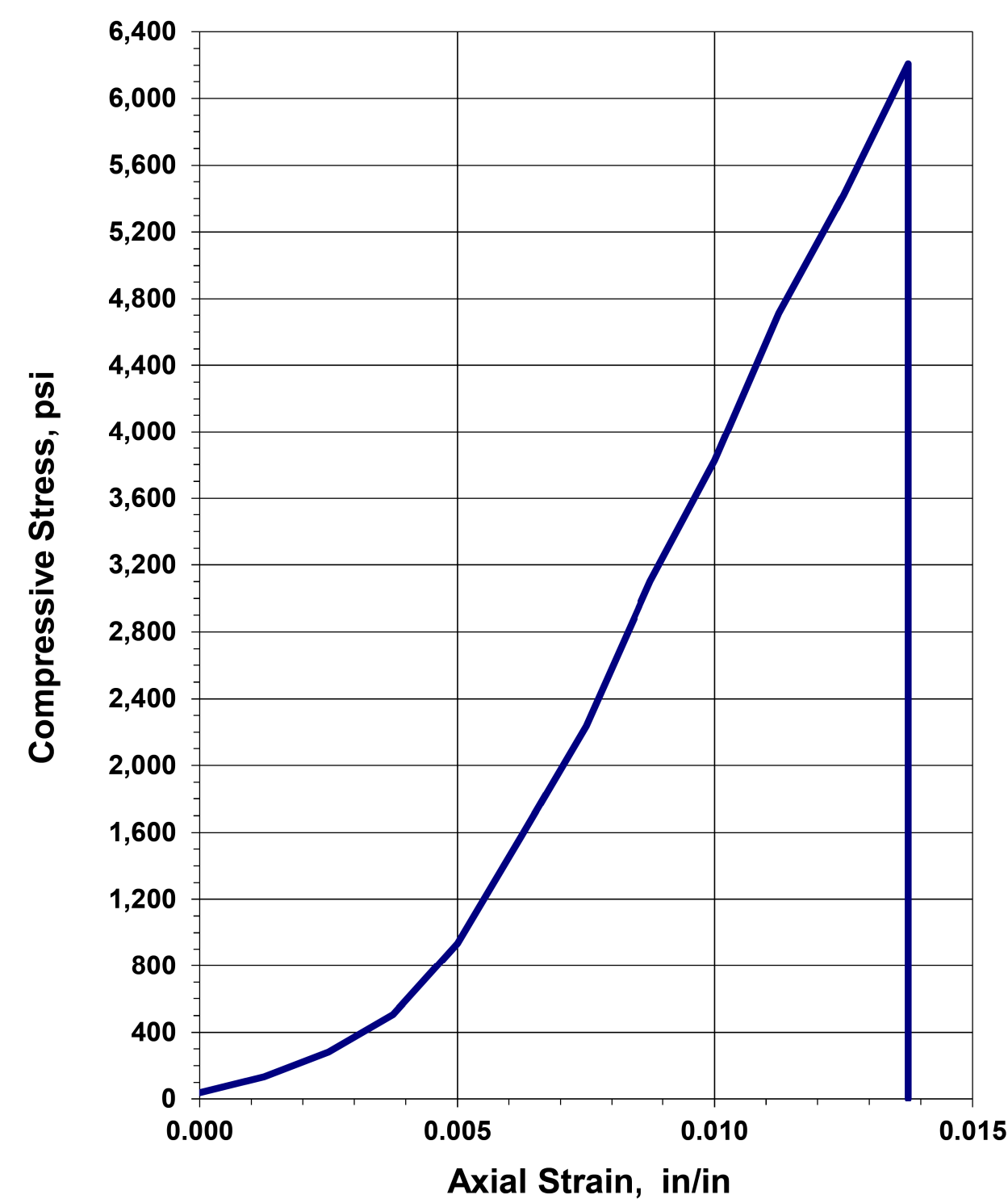
Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

Boring No.:	<u>B-043-0-23</u>	Average Length:	<u>4.000</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.988</u>	in
Depth (ft):	<u>21.00</u>	Length to diameter ratio:	<u>2.012</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.104</u>	in <sup>2</sup>
Sample Mass:	<u>460.53</u>	Volume:	<u>0.0072</u>	ft <sup>3</sup>
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>141.30</u>	lbs/ft <sup>3</sup>
Rate of Loading:	<u>87.2</u>	Failure Load:	<u>19,269</u>	lbs
Testing Time:	<u>221</u>	Axial Strain at Failure:	<u>0.0138</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>6,208</u>	psi

Sample Preparation: Per ASTM D4543 \*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



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**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

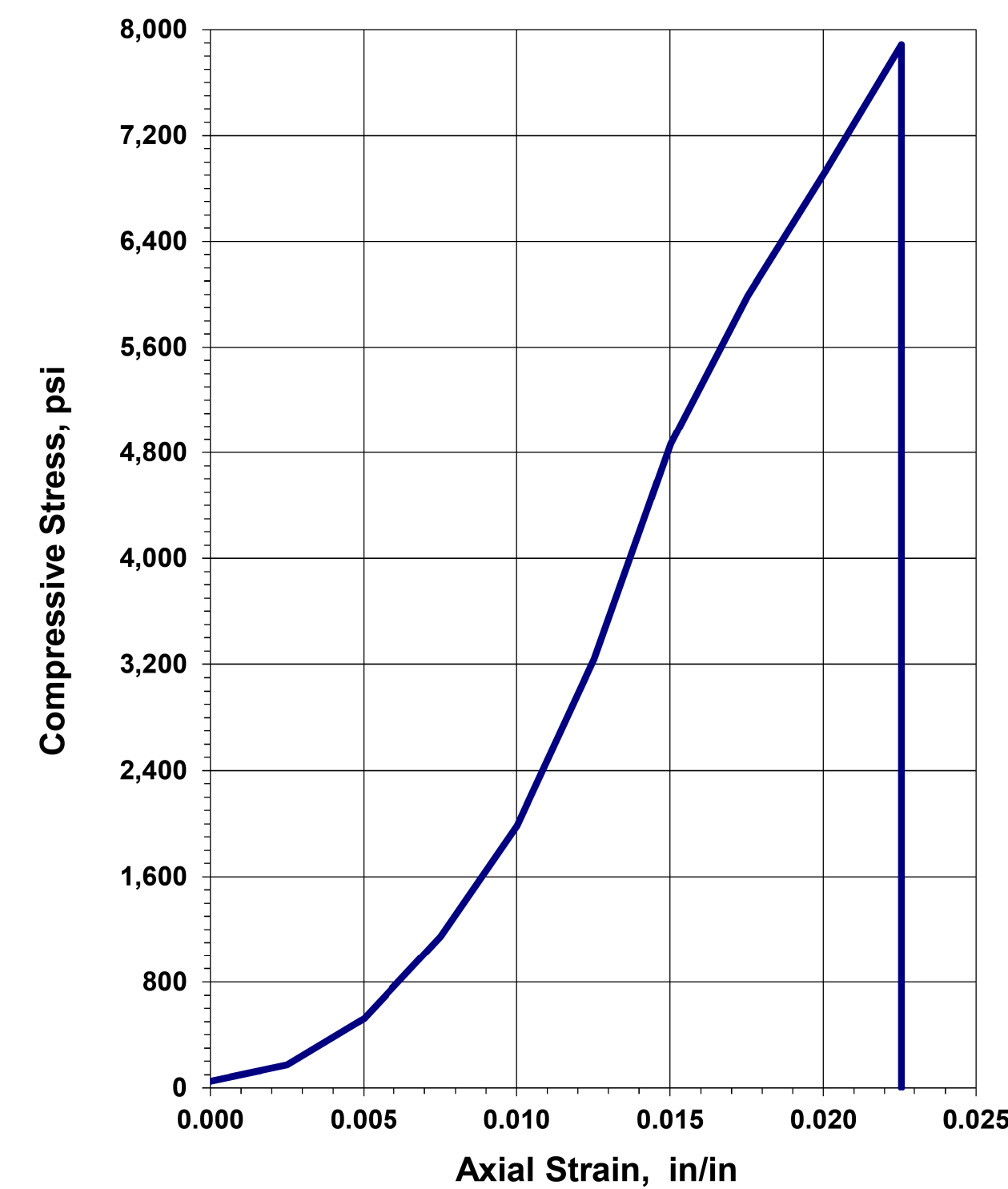
Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

Boring No.:	<u>B-046-0-23</u>	Average Length:	<u>3.992</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.995</u>	in
Depth (ft):	<u>22.0'</u>	Length to diameter ratio:	<u>2.001</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.126</u>	in <sup>2</sup>
Sample Mass:	<u>519.17</u>	Volume:	<u>0.0072</u>	ft <sup>3</sup>
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>158.49</u>	lbs/ft <sup>3</sup>
Rate of Loading:	<u>101.9</u>	Failure Load:	<u>24,655</u>	lbs
Testing Time:	<u>242</u>	Axial Strain at Failure:	<u>0.0225</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>7,887</u>	psi

Sample Preparation: Per ASTM D4543 \*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_





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**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

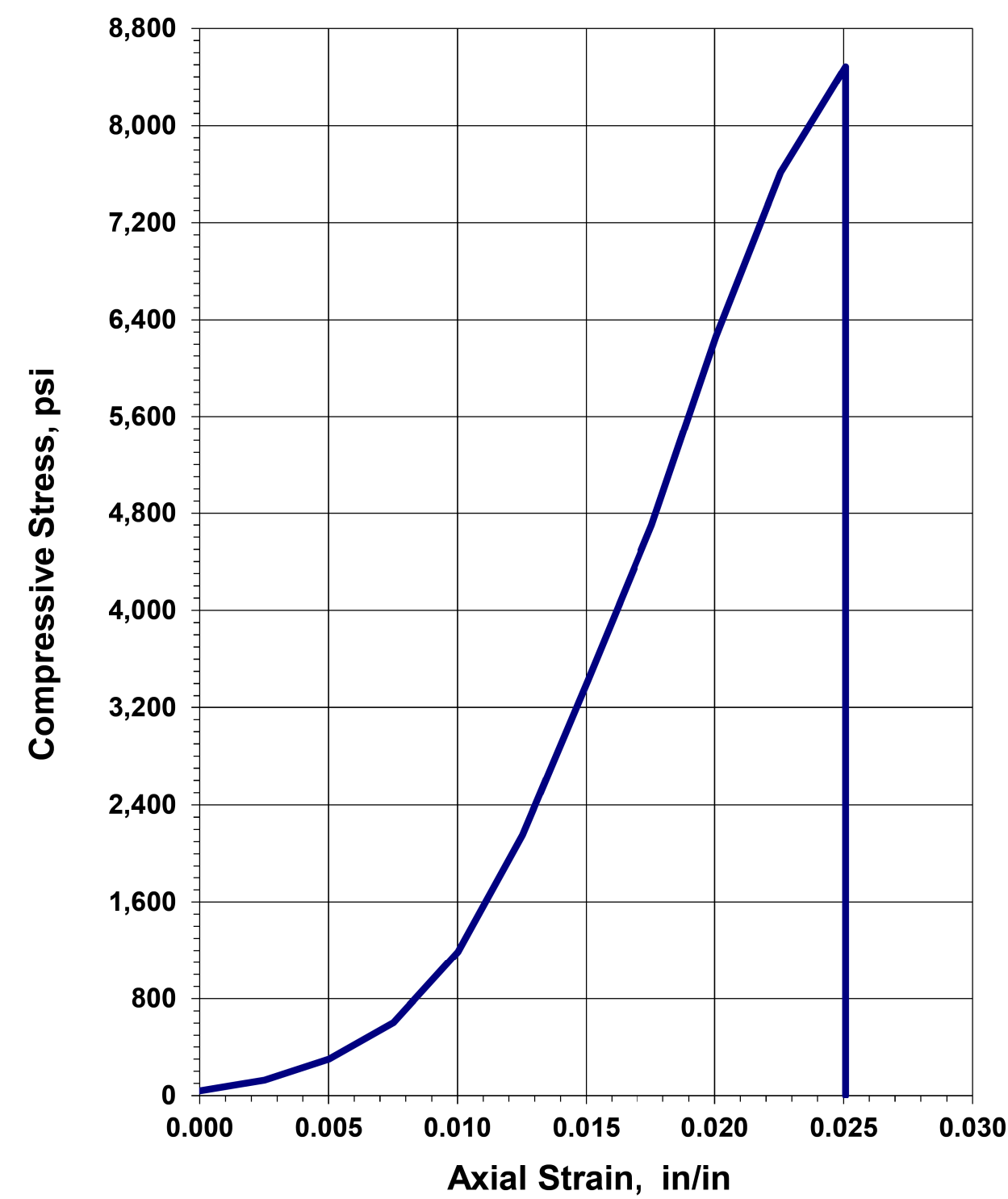
Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

Boring No.:	<u>B-050-0-23</u>	Average Length:	<u>3.988</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.985</u>	in
Depth (ft):	<u>21.0'</u> feet	Length to diameter ratio:	<u>2.009</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.095</u>	in <sup>2</sup>
Sample Mass:	<u>455.36</u>	Volume:	<u>0.0071</u>	ft <sup>3</sup>
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>140.56</u>	lbs/ft <sup>3</sup>
Rate of Loading:	<u>108.5</u>	Failure Load:	<u>26,255</u>	lbs
Testing Time:	<u>242</u>	Axial Strain at Failure:	<u>0.0251</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>8,484</u>	psi

Sample Preparation: Per ASTM D4543 \*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



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**Unconfined Compressive Strength  
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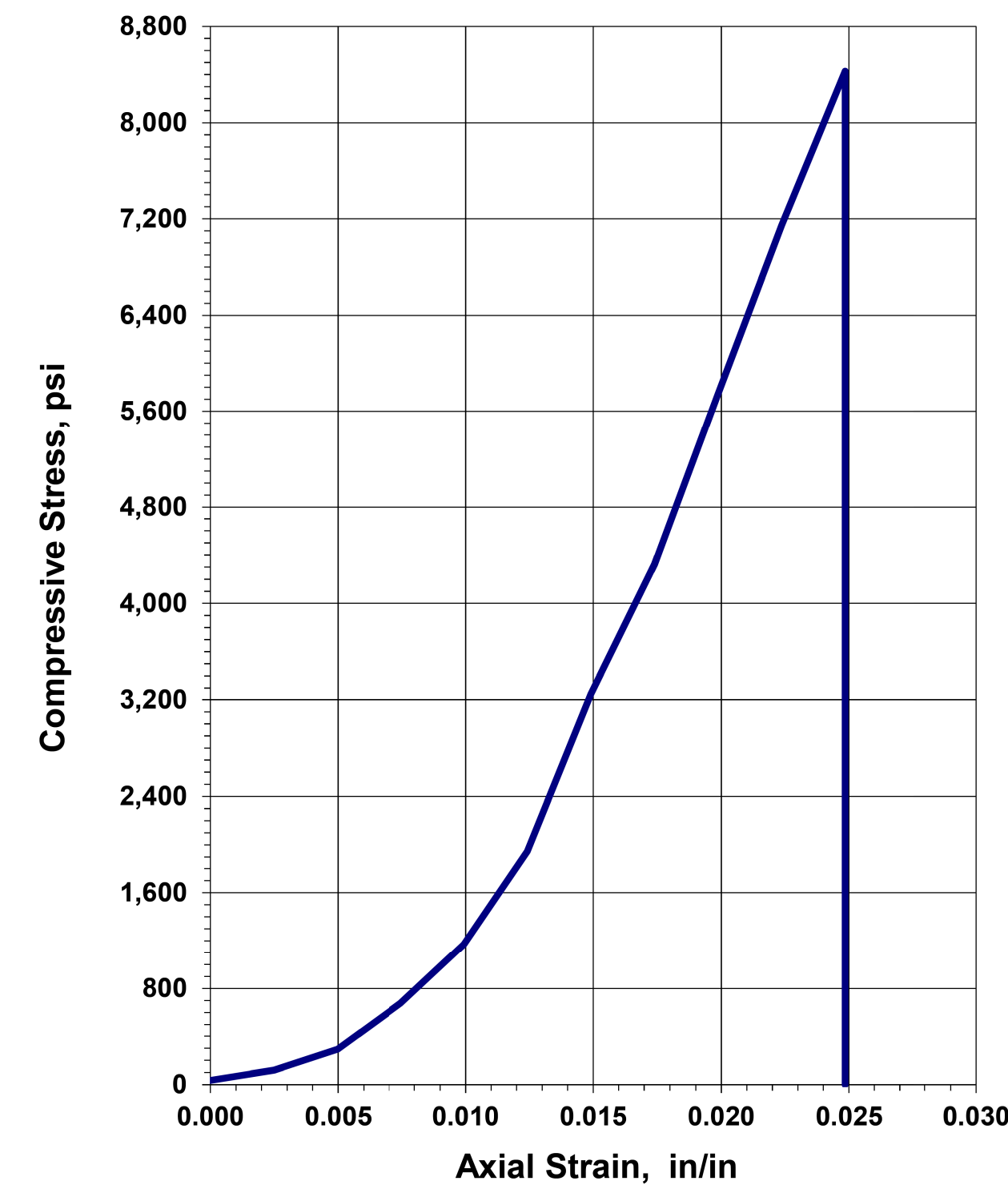
Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

Boring No.:	<u>B-052-0-23</u>	Average Length:	<u>4.024</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.993</u>	in
Depth (ft):	<u>21.20</u>	Length to diameter ratio:	<u>2.019</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.120</u>	in <sup>2</sup>
Sample Mass:	<u>505.98</u>	Volume:	<u>0.0073</u>	ft <sup>3</sup>
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>153.55</u>	lbs/ft <sup>3</sup>
Rate of Loading:	<u>112.4</u>	Failure Load:	<u>26,295</u>	lbs
Testing Time:	<u>234</u>	Axial Strain at Failure:	<u>0.0249</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>8,429</u>	psi

Sample Preparation: Per ASTM D4543 \*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



DESIGN AGENCY  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
JAS

REVIEWER  
DEK 1/19/24

PROJECT ID  
117607

SUBSET	TOTAL
4	66

SHEET	TOTAL
P.235	297





**RESOURCE INTERNATIONAL, INC.**  
Engineering Consultants

6350 Presidential Gateway,  
Columbus, OH 43231  
Phone (614) 823-4949

9885 Rockside Road  
Cleveland, OH 44125  
Phone (216) 573-0955

4480 Lake Forest Drive  
Cincinnati, Ohio 45242  
Phone (513) 769-6998

**Point Load Strength Index  
of Rock Specimens**  
(ASTM D 5731-08)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: EM/IKL

Rock Description: Gray Shale

Boring No.: B-23-0-23  
Station / Offset: RC-3  
Sample No. / Depth: 21.5'-23.5'

Test Apparatus: Forney-LA 0080  
Serial Number: A125/AZ/0014  
Date of Calibration: 4/25/2023

Sample No.	Test Type	Depth (ft)	Width (mm)	Diameter (mm)	Load (N)	D <sub>e</sub> <sup>2</sup> (mm <sup>2</sup> )	D <sub>e</sub> (mm)	F	Is (MPa)	Is <sub>(50)</sub> (MPa)	σ <sub>c</sub> (MPa)
1	a ⊥	21.5-23.5	49.7	21.1	503	1,336	36.5	0.87	0.38	0.33	4.52
2	a ⊥	21.5-23.5	49.6	25.8	783	1,631	40.4	0.91	0.48	0.44	5.76
3	a ⊥	21.5-23.5	49.7	23.1	525	1,463	38.3	0.89	0.36	0.32	4.31
4	a ⊥	21.5-23.5	49.7	28.5	814	1,802	42.5	0.93	0.45	0.42	5.42
5	a ⊥	21.5-23.5	49.7	30.0	854	1,895	43.5	0.94	0.45	0.42	5.41
6	a ⊥	21.5-23.5	49.7	25.1	916	1,589	39.9	0.90	0.58	0.52	6.92
7	a ⊥	21.5-23.5	49.7	24.6	816	1,555	39.4	0.90	0.52	0.47	6.30
8	a ⊥	21.5-23.5	49.7	22.6	798	1,429	37.8	0.88	0.56	0.49	6.70
9	a ⊥	21.5-23.5	49.7	21.5	789	1,361	36.9	0.87	0.58	0.51	6.96
10	a ⊥	21.5-23.5	49.7	22.5	801	1,427	37.8	0.88	0.56	0.49	6.73

**STATISTICS**

Mean Is <sub>(50)</sub> ⊥	<b>0.44 MPa (64 psi)</b>
Mean Is <sub>(50)</sub>	
Ia <sub>(50)</sub>	

**Specific Specimen Shape:**

- d = diametrical
- a = axial
- b = block
- i = irregular lump
- ⊥ = perpendicular to bedding plane
- || = parallel to bedding plane

**Estimated Uniaxial Compression, σ<sub>c</sub> = K\*Is**

K = 12  
Mean σ<sub>c</sub> = **5.90 MPa (0.856 psi)**

\*Per Section 206.1.3 of 2011 ODOT Rock Slope Design Guide

Remarks: \_\_\_\_\_

1



**RESOURCE INTERNATIONAL, INC.**  
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Phone (216) 573-0955

4480 Lake Forest Drive  
Cincinnati, Ohio 45242  
Phone (513) 769-6998

**Point Load Strength Index  
of Rock Specimens**  
(ASTM D 5731-08)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: EM/IKL

Rock Description: Gray Shale

Boring No.: B-39-0-23  
Station / Offset: RC-2  
Sample No. / Depth: 15.0-20.0

Test Apparatus: Forney-LA 0080  
Serial Number: A125/AZ/0014  
Date of Calibration: 4/25/2023

Sample No.	Test Type	Depth (ft)	Width (mm)	Diameter (mm)	Load (N)	D <sub>e</sub> <sup>2</sup> (mm <sup>2</sup> )	D <sub>e</sub> (mm)	F	Is (MPa)	Is <sub>(50)</sub> (MPa)	σ <sub>c</sub> (MPa)
1	a ⊥	17.5-18.5	49.9	21.7	50	1,381	37.2	0.88	0.04	0.03	0.43
2	a ⊥	17.5-18.5	49.5	24.4	45	1,539	39.2	0.90	0.03	0.03	0.35
3	a ⊥	17.5-18.5	50.5	20.4	40	1,309	36.2	0.86	0.03	0.03	0.37
4	a ⊥	17.5-18.5	50.6	23.9	48	1,538	39.2	0.90	0.03	0.03	0.37
5	a ⊥	17.5-18.5	50.6	22.3	49	1,440	38.0	0.88	0.03	0.03	0.41
6	a ⊥	17.5-18.5	50.6	21.1	49	1,362	36.9	0.87	0.04	0.03	0.43
7	a ⊥	17.5-18.5	50.6	22.6	53	1,455	38.1	0.89	0.04	0.03	0.44
8	a ⊥	17.5-18.5	50.6	22.6	48	1,456	38.2	0.89	0.03	0.03	0.40
9	a ⊥	17.5-18.5	50.6	35.0	51	2,255	47.5	0.98	0.02	0.02	0.27
10	a ⊥	17.5-18.5	50.6	22.2	52	1,429	37.8	0.88	0.04	0.03	0.44

**STATISTICS**

Mean Is <sub>(50)</sub> ⊥	<b>0.03 MPa (4 psi)</b>
Mean Is <sub>(50)</sub>	
Ia <sub>(50)</sub>	

**Specific Specimen Shape:**

- d = diametrical
- a = axial
- b = block
- i = irregular lump
- ⊥ = perpendicular to bedding plane
- || = parallel to bedding plane

**Estimated Uniaxial Compression, σ<sub>c</sub> = K\*Is**

K = 12  
Mean σ<sub>c</sub> = **0.39 MPa (0.057 psi)**

\*Per Section 206.1.3 of 2011 ODOT Rock Slope Design Guide

Remarks: \_\_\_\_\_



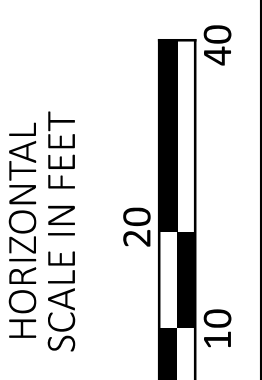
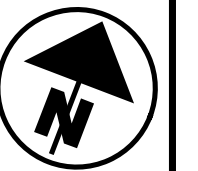
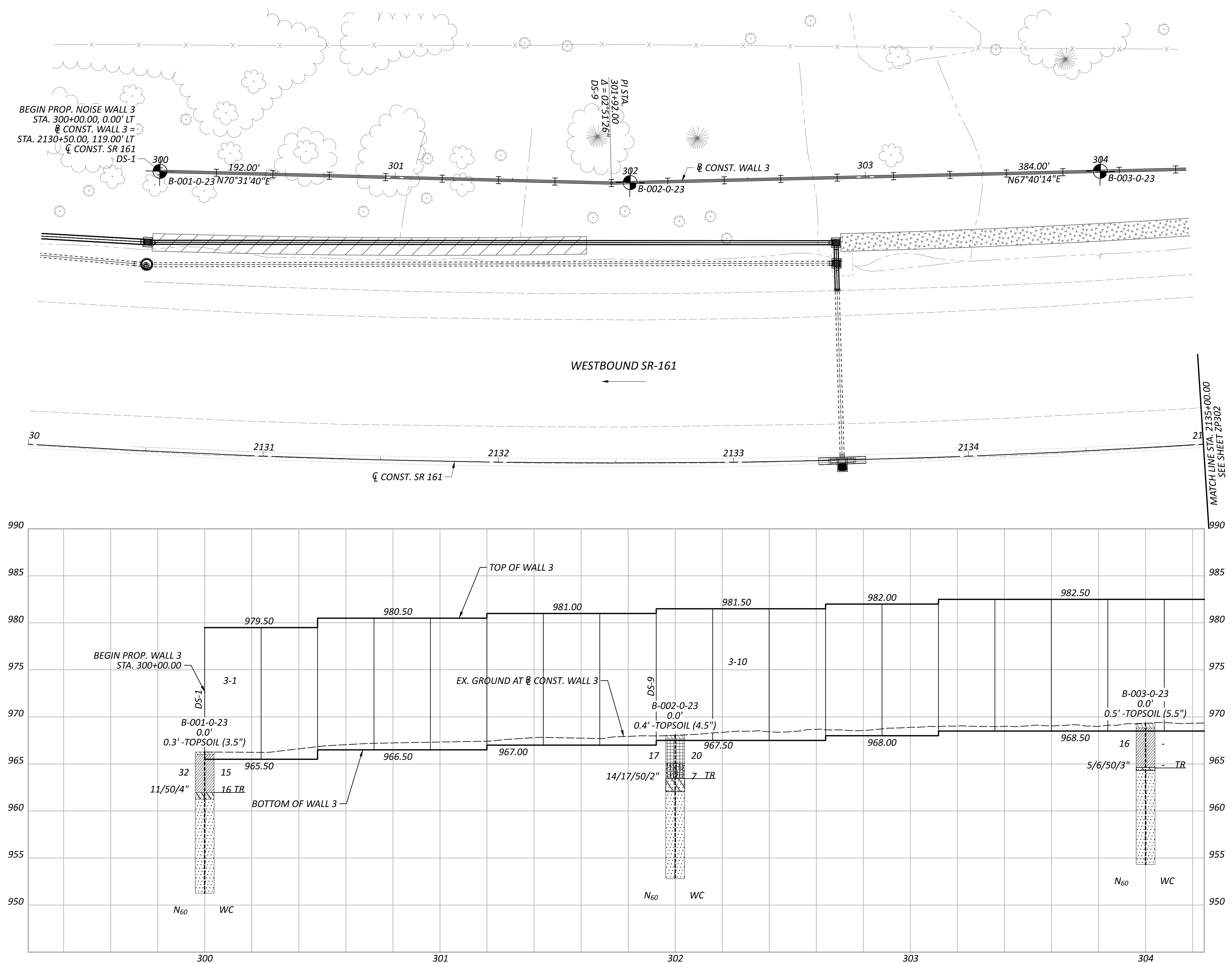
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGN AGENCY	RESOURCE INTERNATIONAL
DESIGNER	JAS
REVIEWER	DEK
PROJECT ID	117607
SUBSET	5
TOTAL	66
SHEET	P.236
TOTAL	297



**FRA-161-15.80 NOISE WALLS**

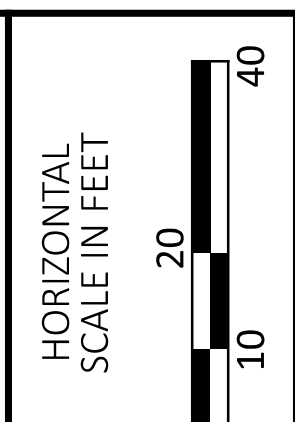
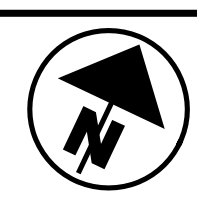
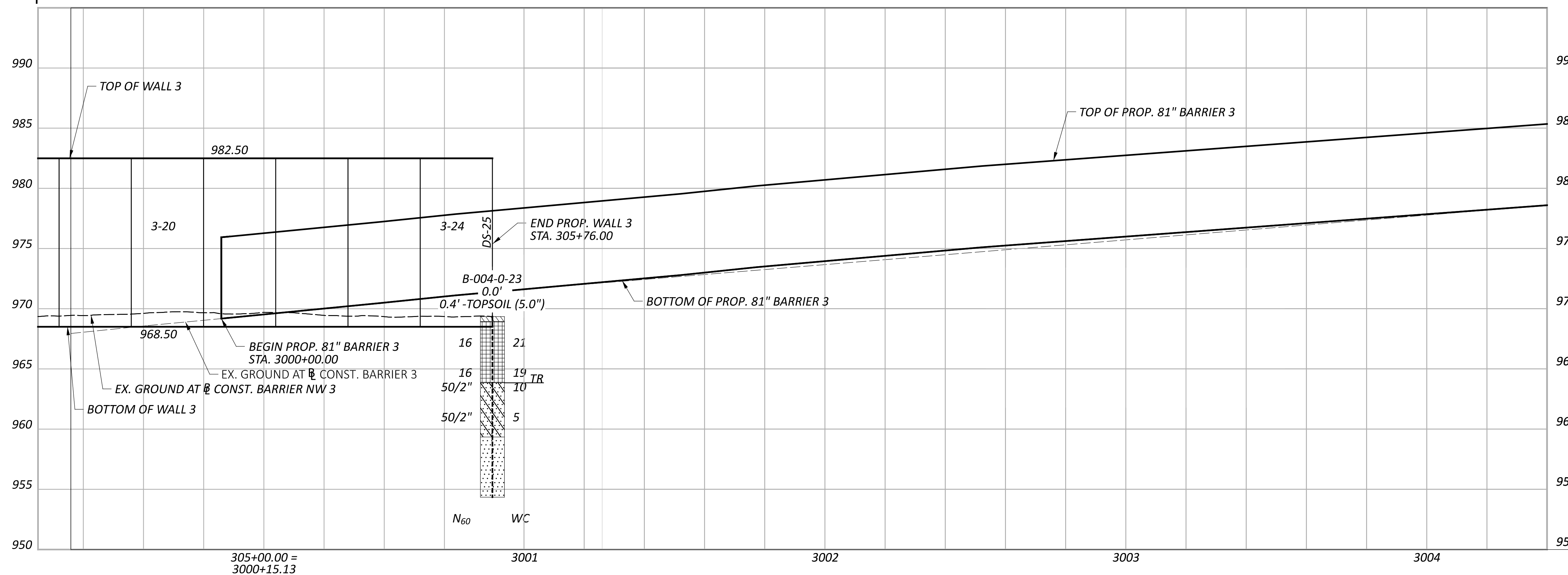
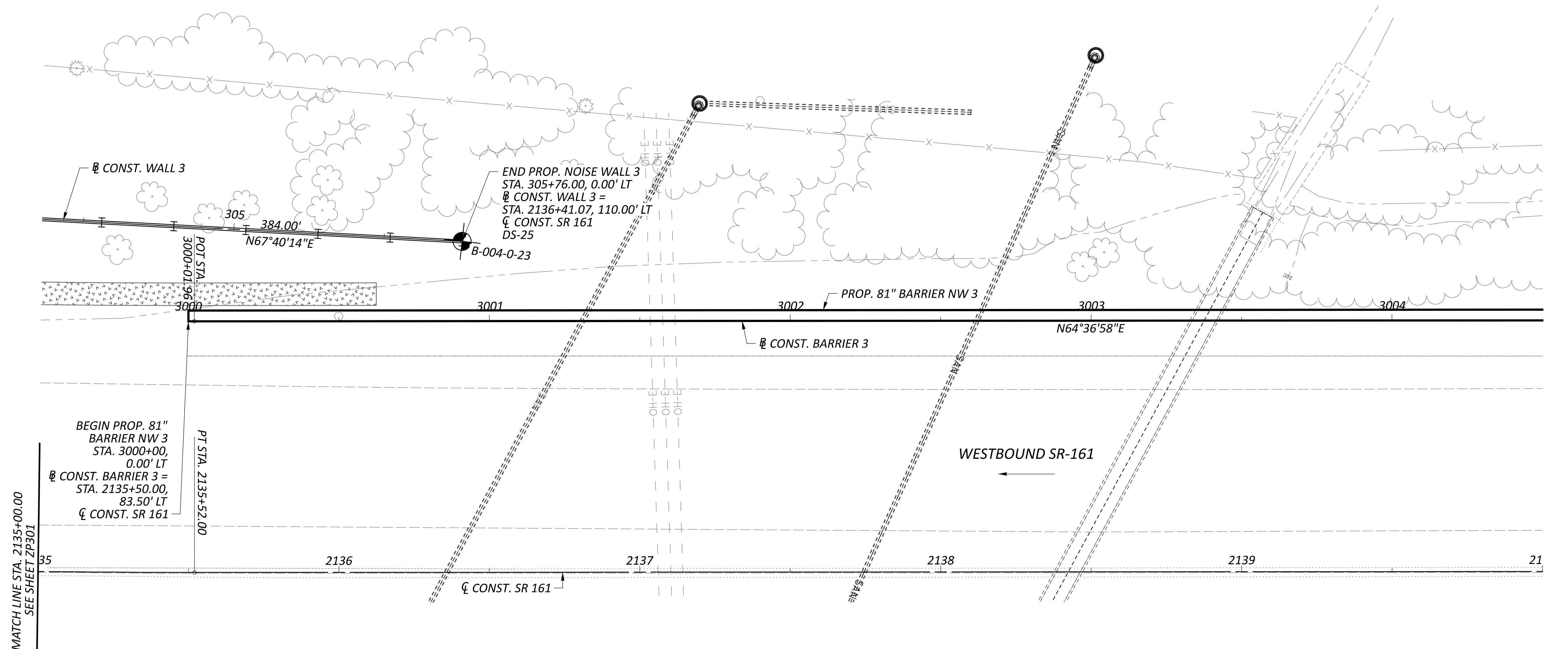
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**GEOTECHNICAL PROFILE - NOISE WALL 3  
 STA. 2130+00.00 TO STA. 2135+00.00**

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
6	66
SHEET	TOTAL
P.237	297

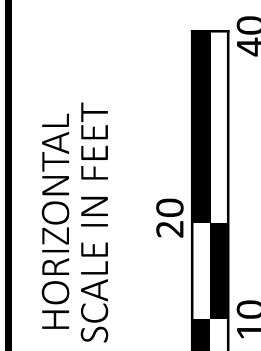
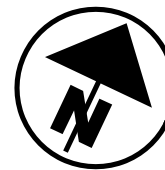
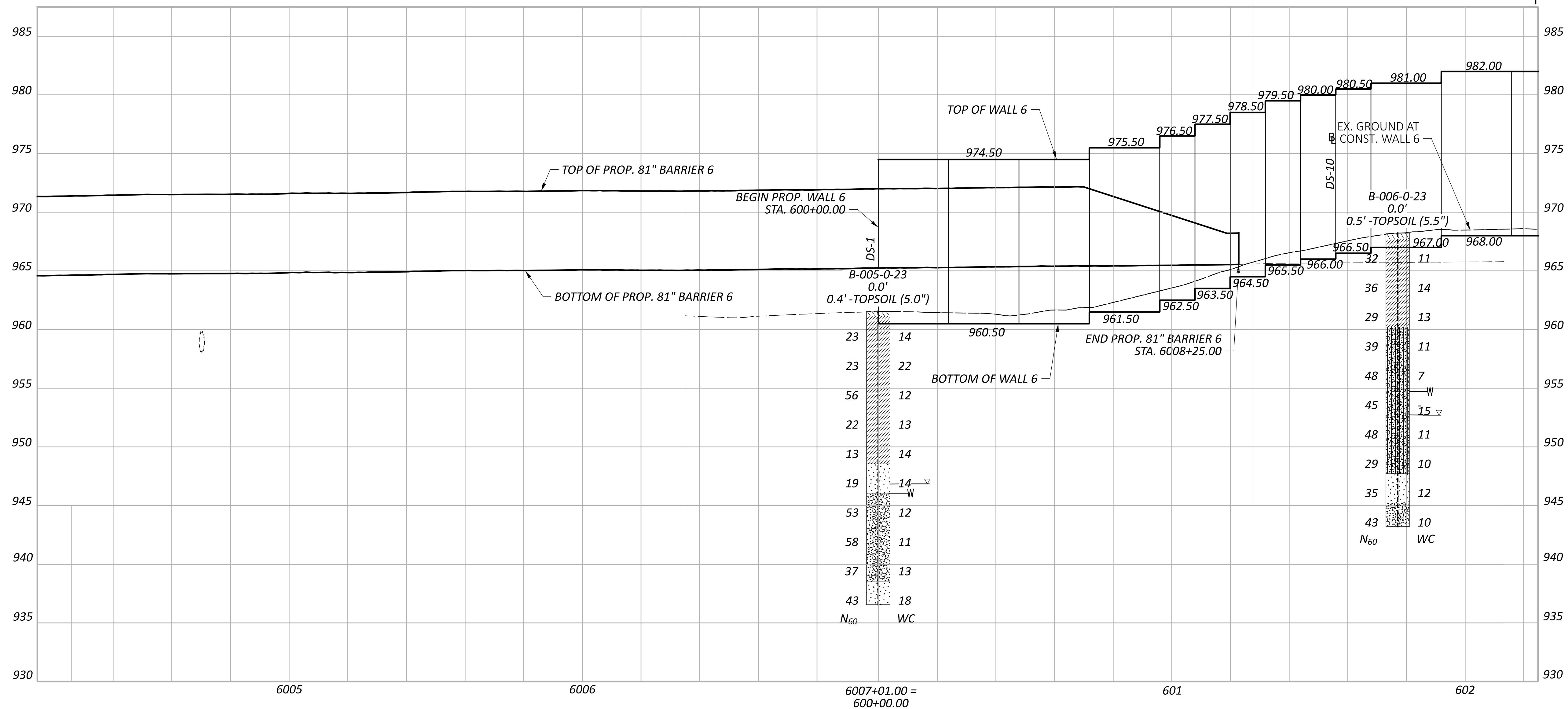
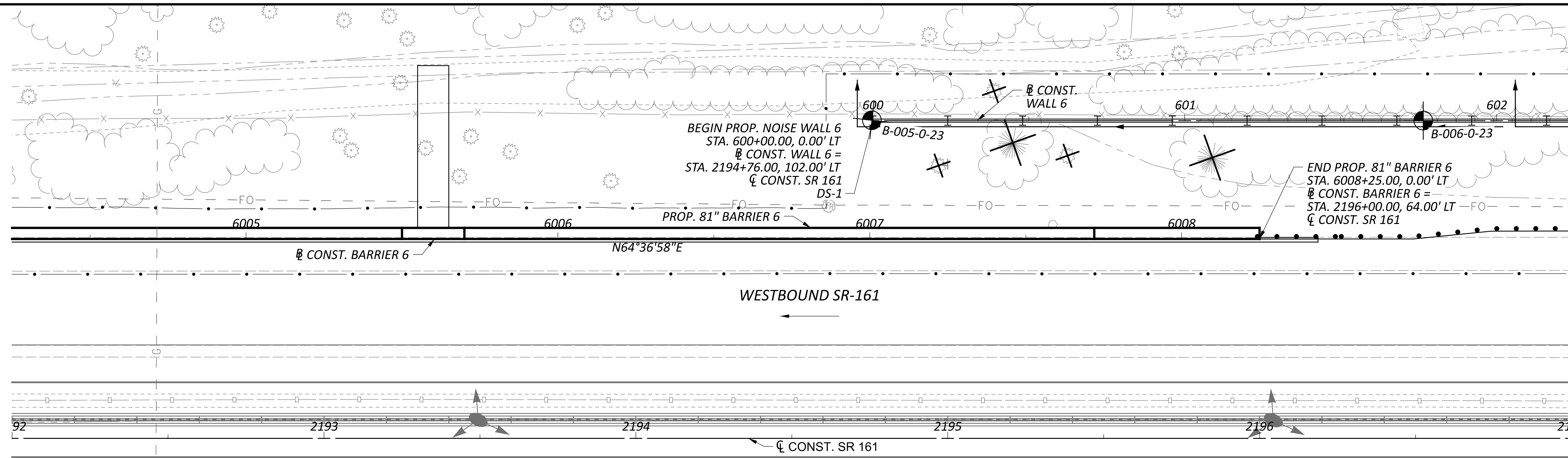




**GEOTECHNICAL PROFILE - NOISE WALL 3**  
 STA. 2135+00.00 TO STA. 2140+00.00

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
7	66
SHEET	TOTAL
P.238	297



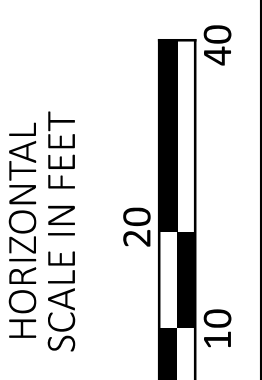
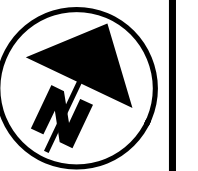
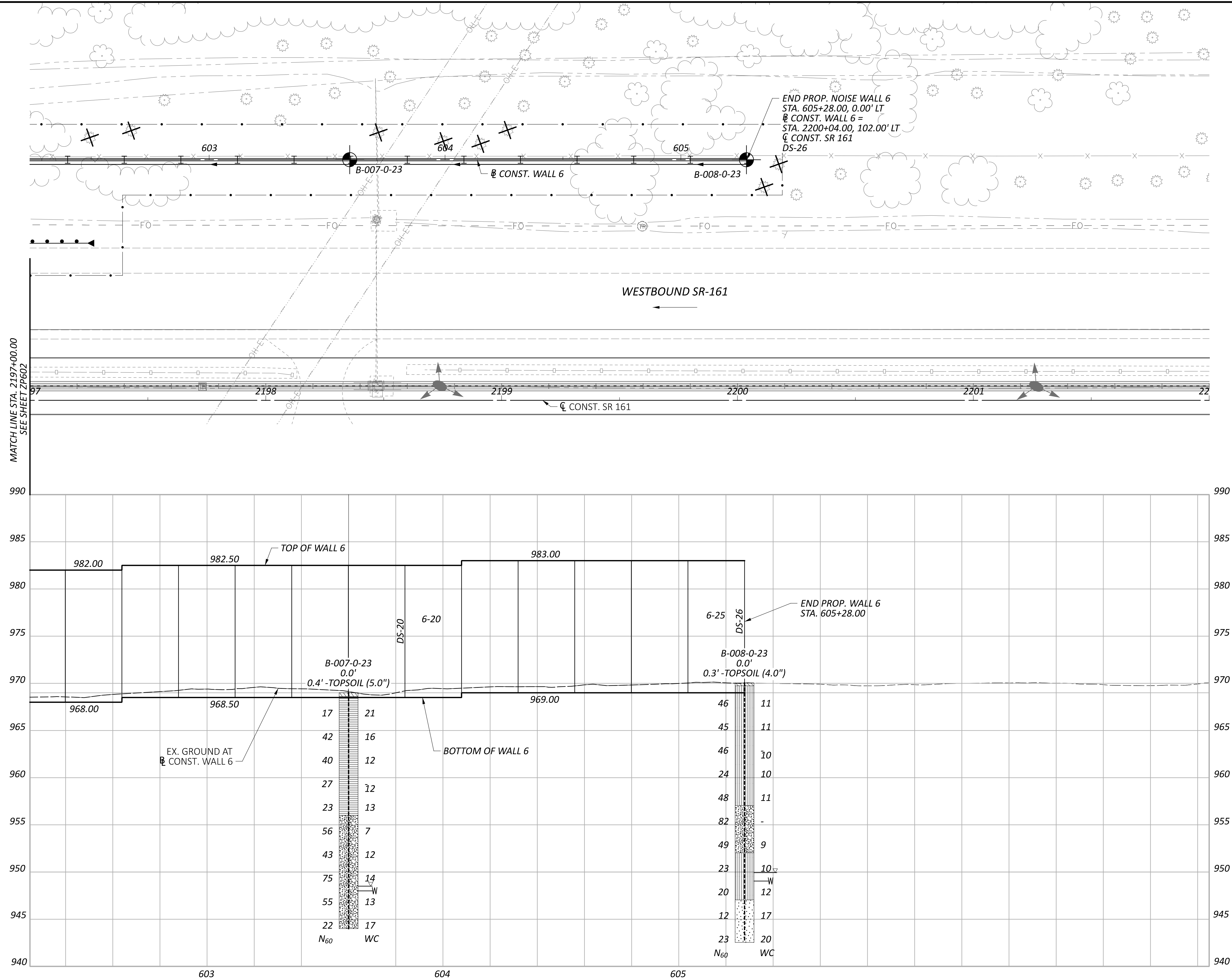


GEOTECHNICAL PROFILE - NOISE WALL 6  
 STA. 2192+00.00 TO STA. 2197+00.00



**FRA-161-15.80 NOISE WALLS**

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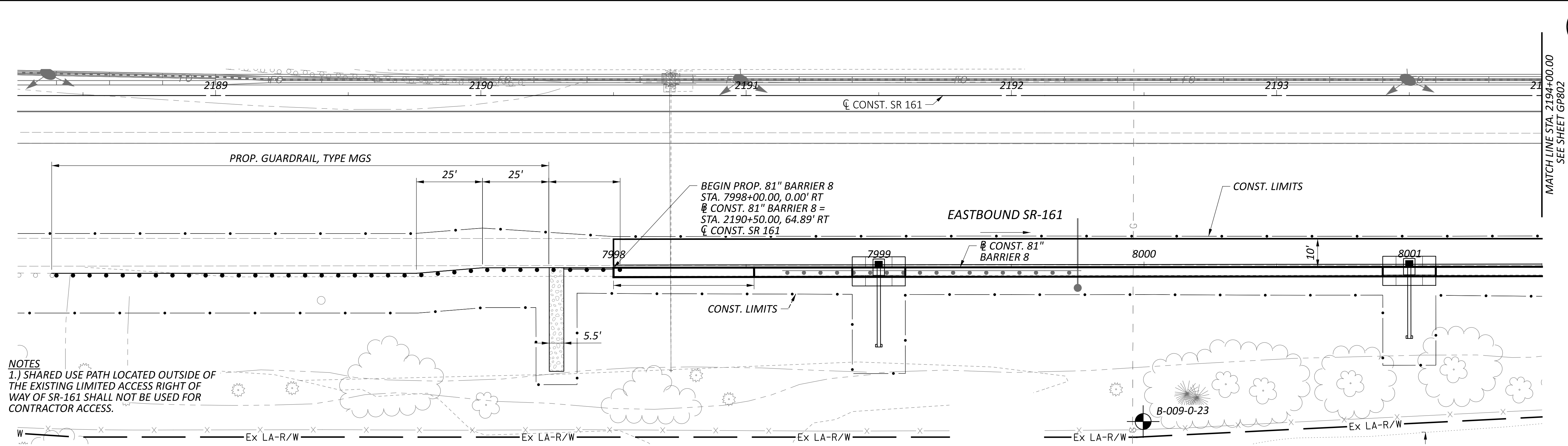
**GEOTECHNICAL PROFILE - NOISE WALL 6  
 STA. 2197+00.00 TO STA. 2202+00.00**

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
9	66
SHEET	TOTAL
P.240	297

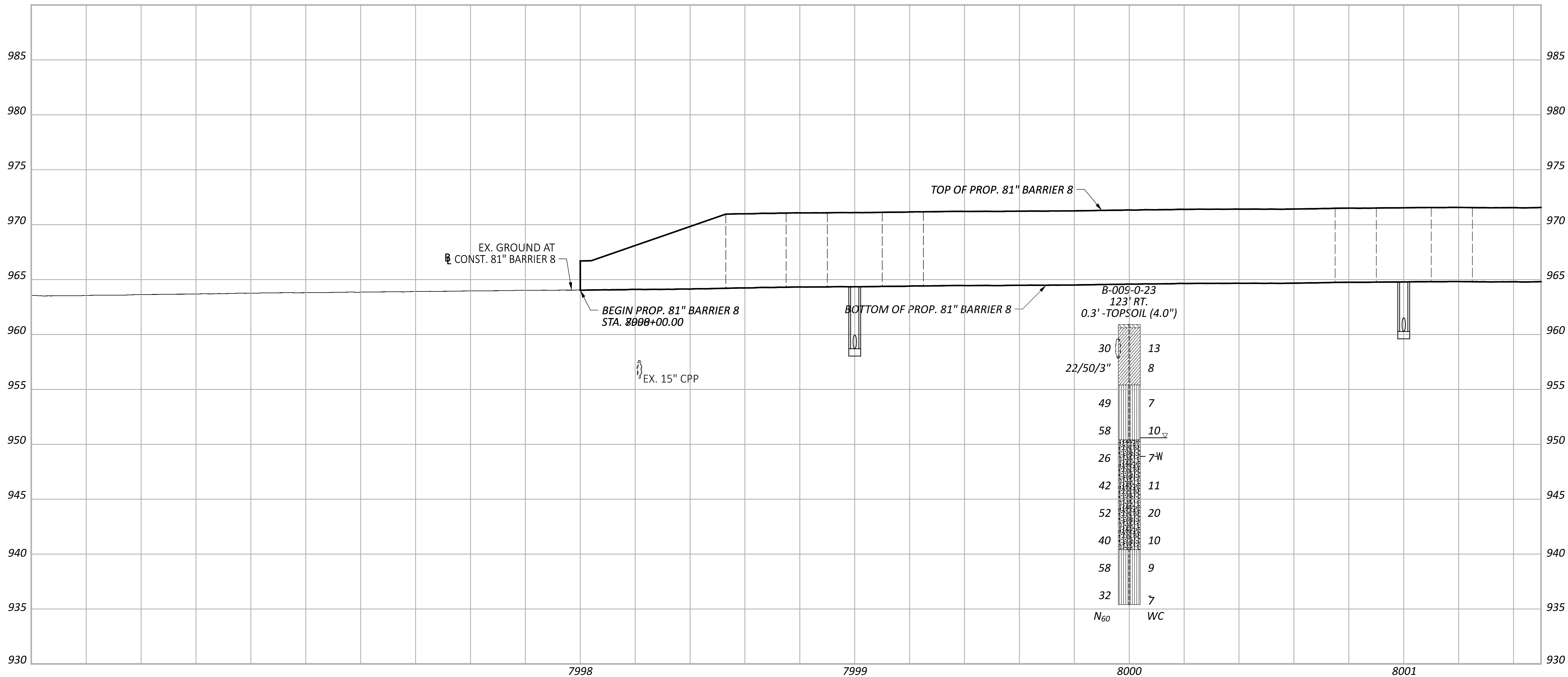
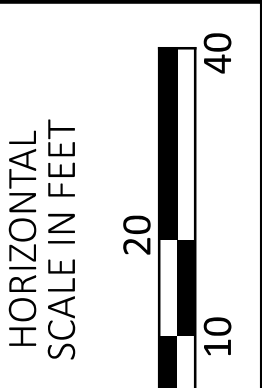


**FRA-161-15.80 NOISE WALLS**

MODEL: CLP\_SR161 - Plan 7 PAPER SIZE: 34x22 (in.) DATE: 5/15/2024 TIME: 10:23:55 PM USER: juans  
 J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP801.dgn



**NOTES**  
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



**GEOTECHNICAL PROFILE - NOISE WALL 8  
 STA. 2188+00.00 TO STA. 2194+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

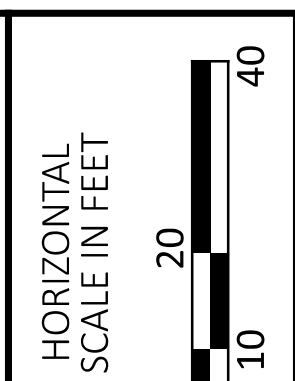
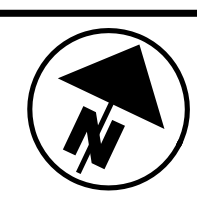
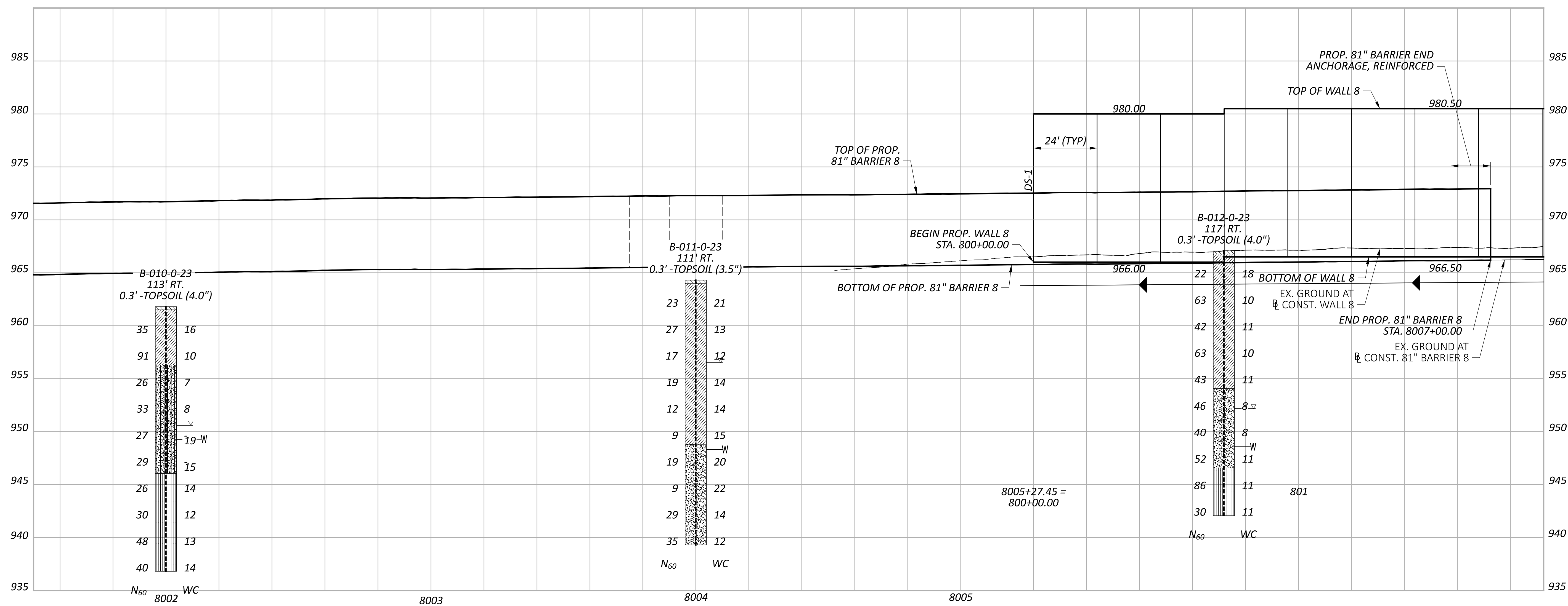
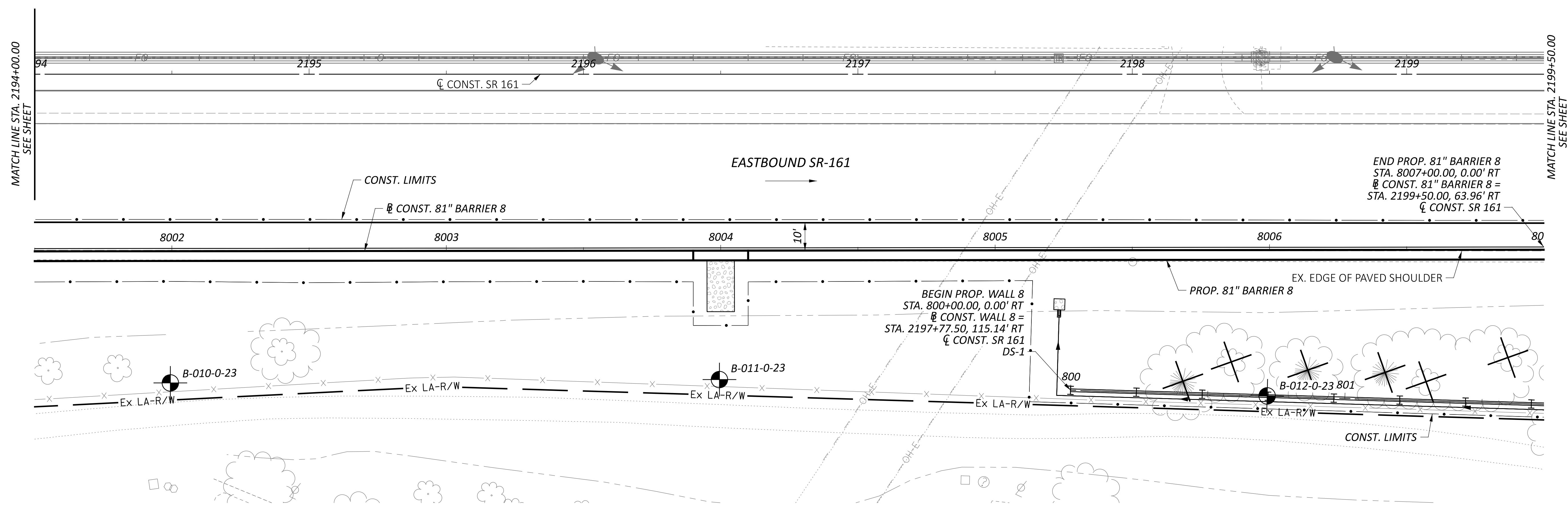
DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET	TOTAL
10	66

SHEET	TOTAL
P.241	297

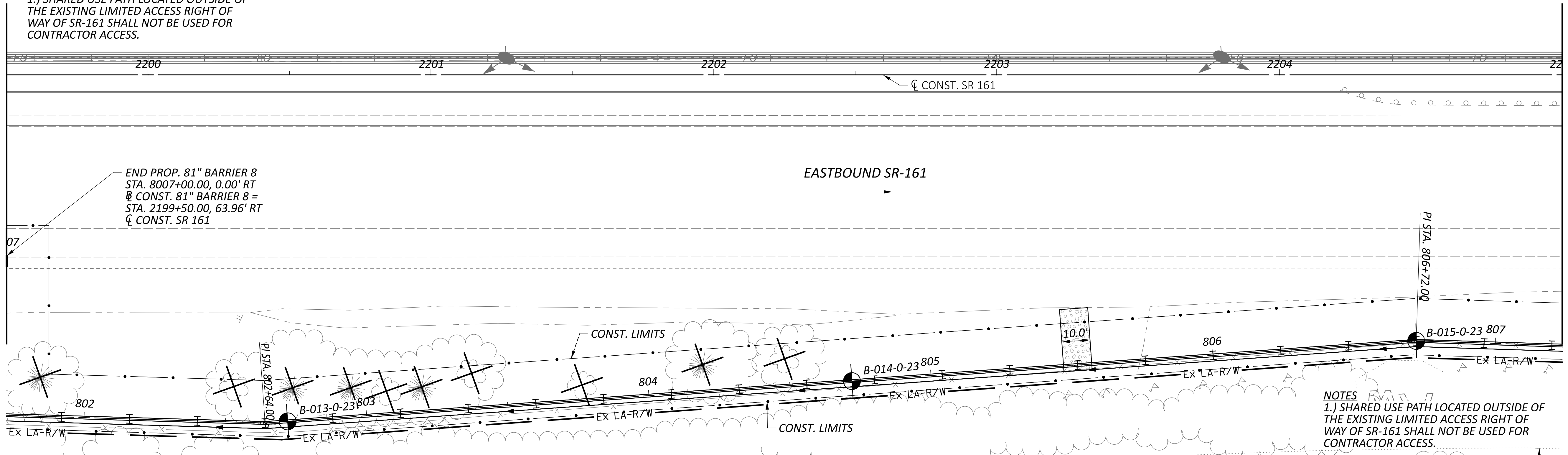


**GEOTECHNICAL PROFILE - NOISE WALL 8**  
 STA. 2194+00.00 TO STA. 2199+50.00

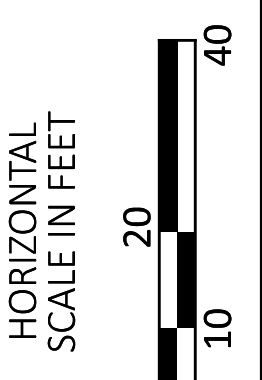
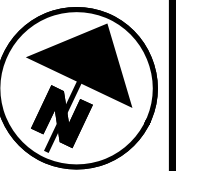
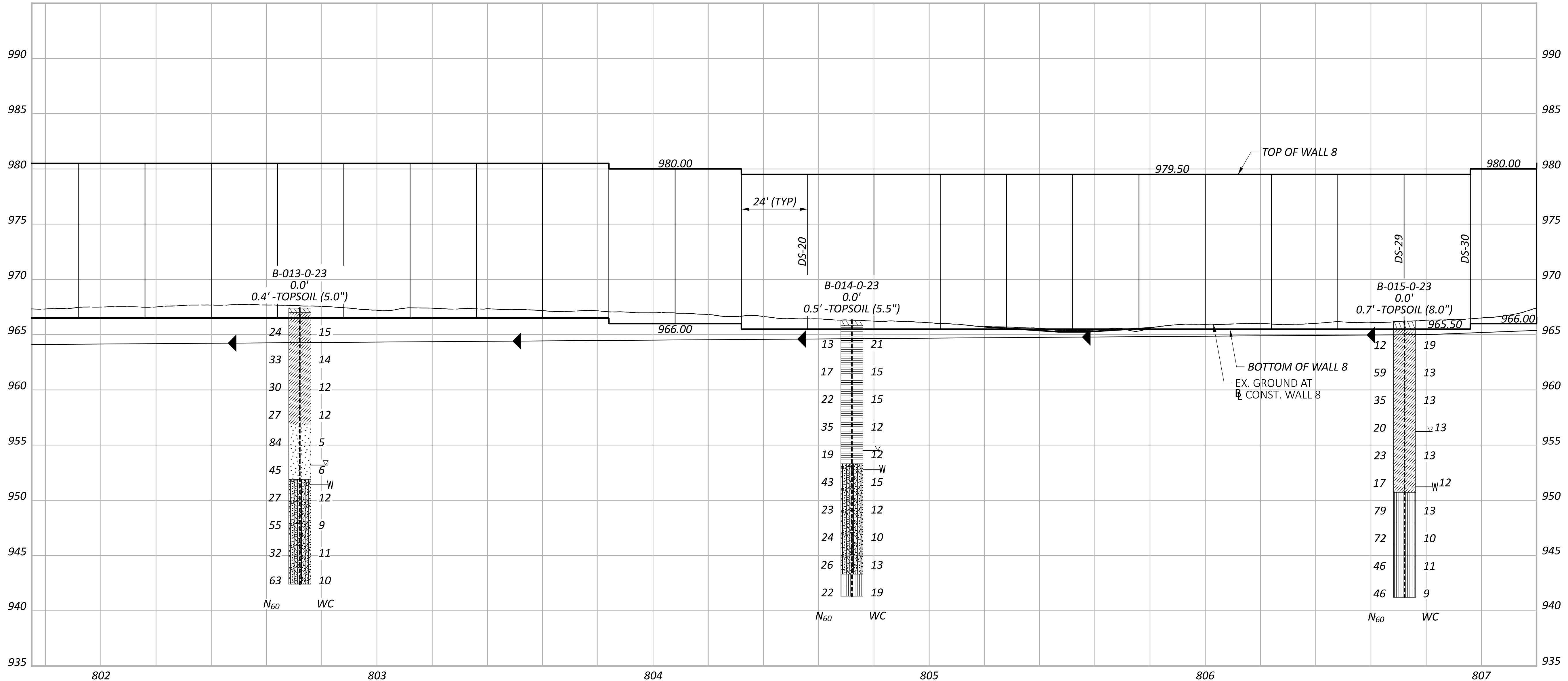
DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
11	66
SHEET	TOTAL
P.242	297



NOTES  
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



NOTES  
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



GEOTECHNICAL PROFILE - NOISE WALL 8  
 STA. 2202+80.00 TO STA. 2203+00.00

DESIGN AGENCY  
**RESOURCE**  
 INTERNATIONAL  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

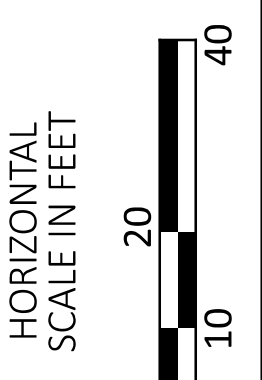
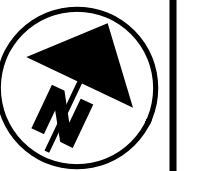
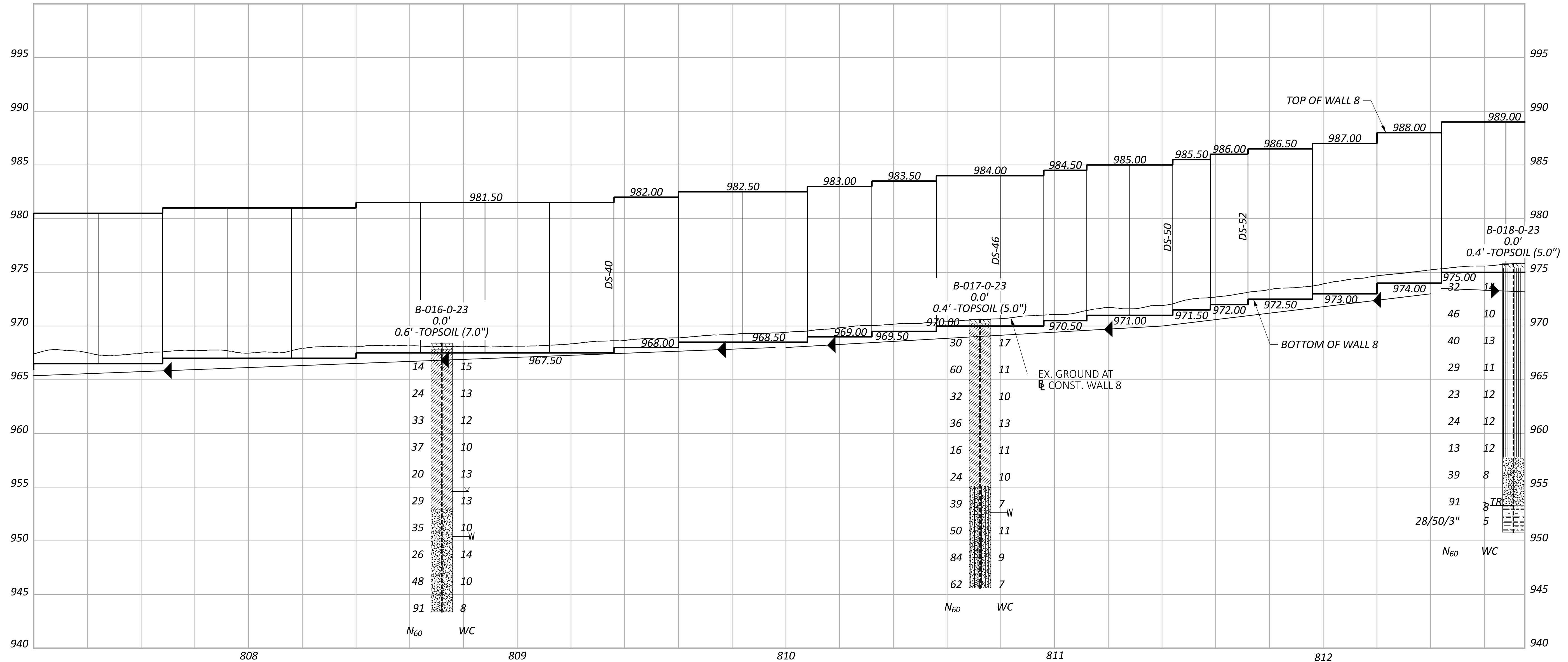
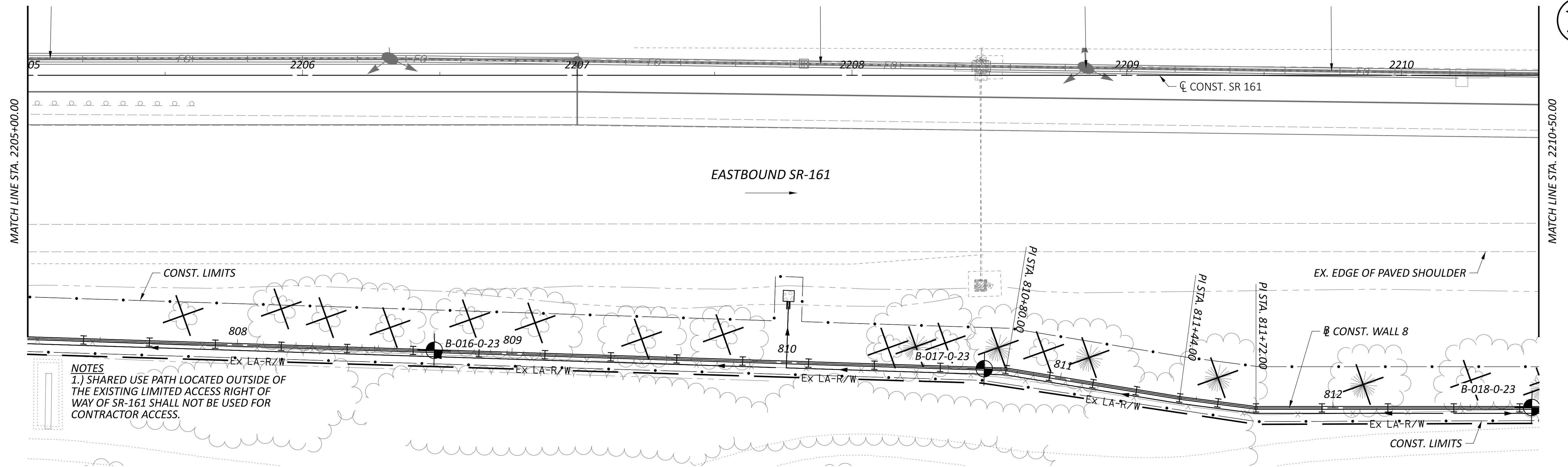
DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET	TOTAL
12	66

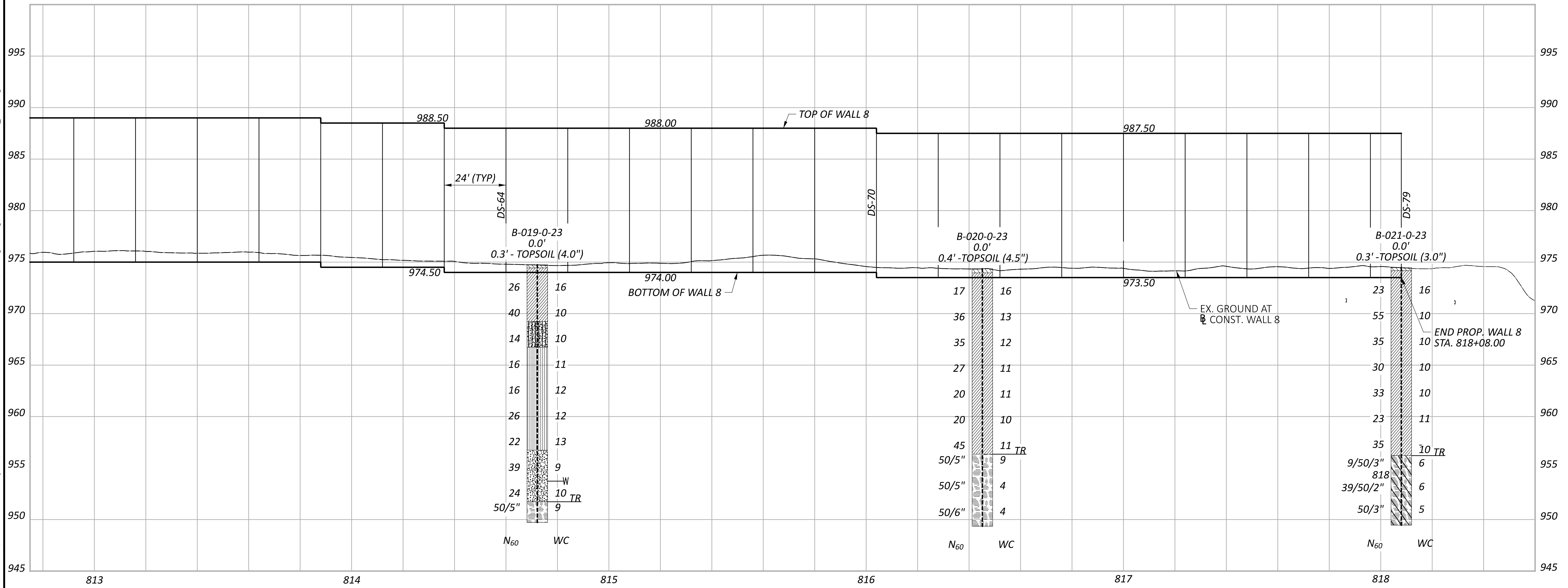
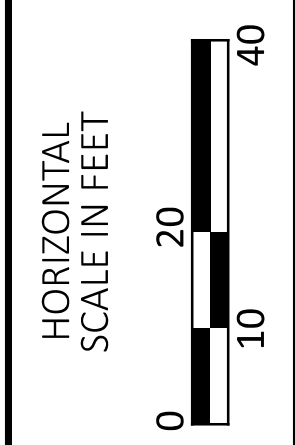
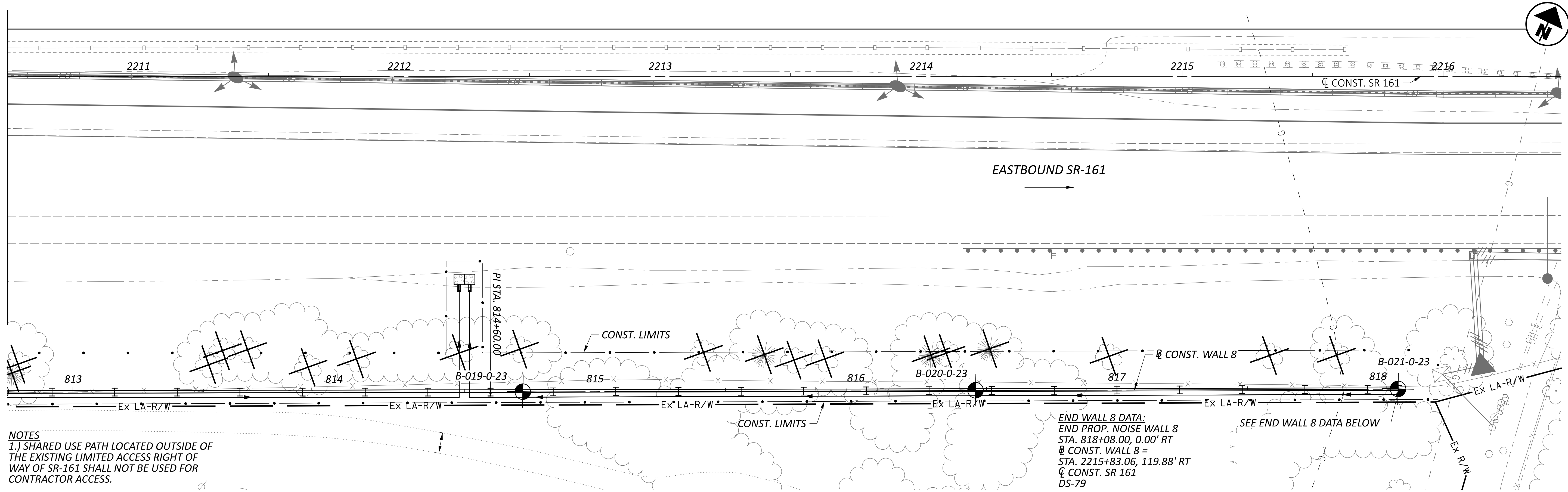
SHEET	TOTAL
P.243	297



**GEOTECHNICAL PROFILE - NOISE WALL 8**  
 STA. 2205+00.00 TO STA. 2210+50.00

DESIGN AGENCY	
 RESOURCE INTERNATIONAL 8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
13	66
SHEET	TOTAL
P.244	297





GEOTECHNICAL PROFILE - NOISE WALL 8  
 STA. 2210+50.00 TO STA. 2216+50.00

DESIGN AGENCY  
**RESOURCE** INTERNATIONAL  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

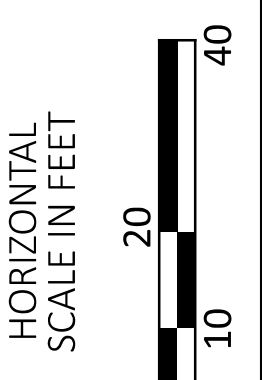
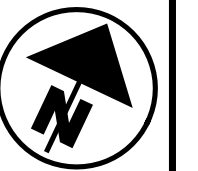
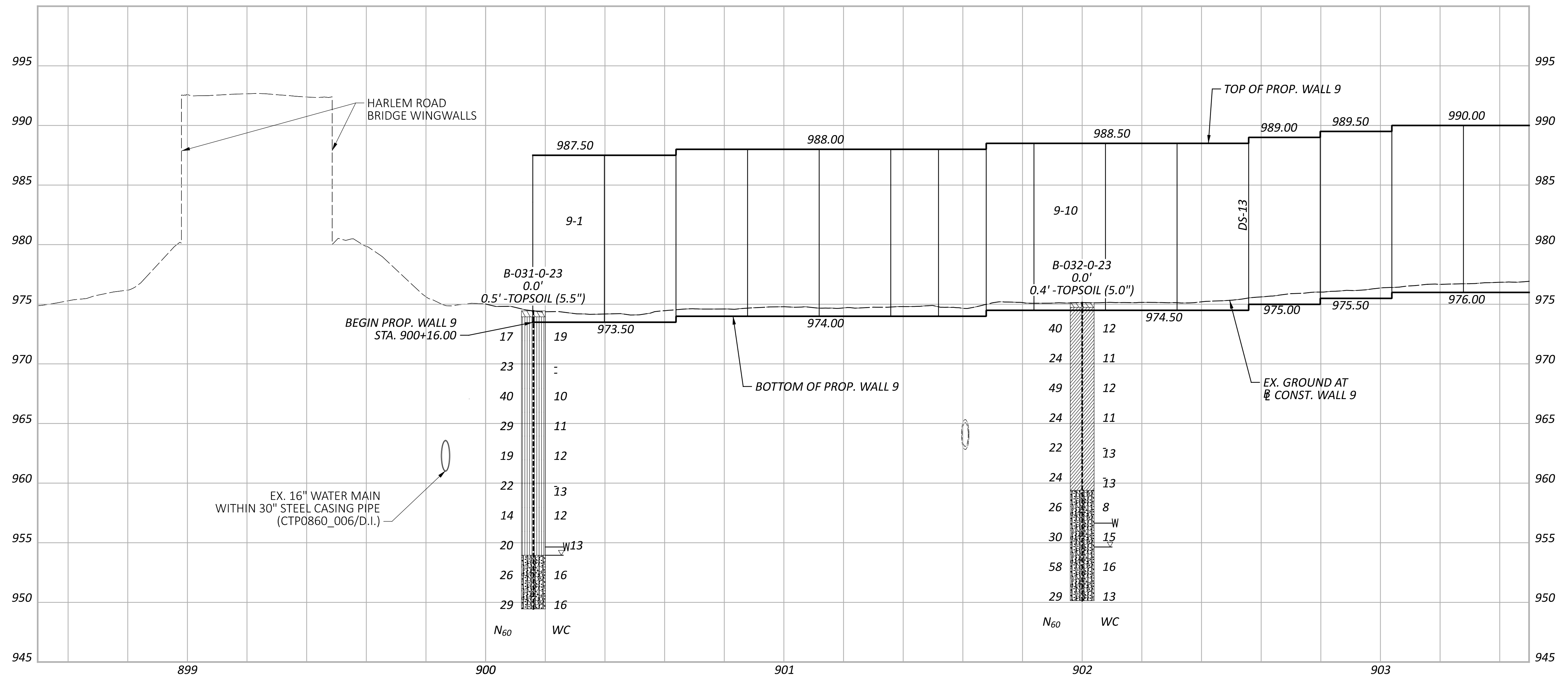
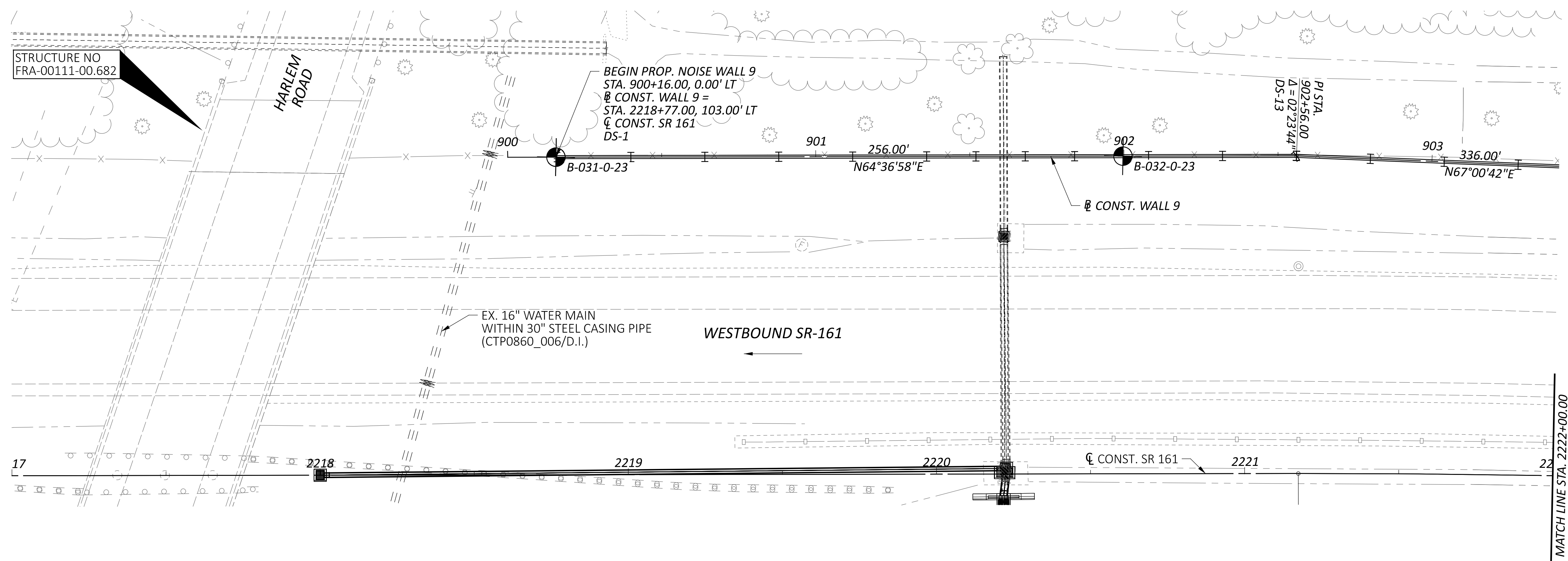
DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET	TOTAL
14	66

SHEET	TOTAL
P.245	297



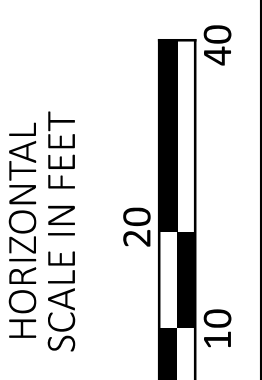
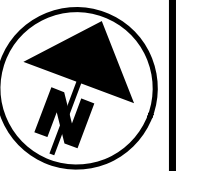
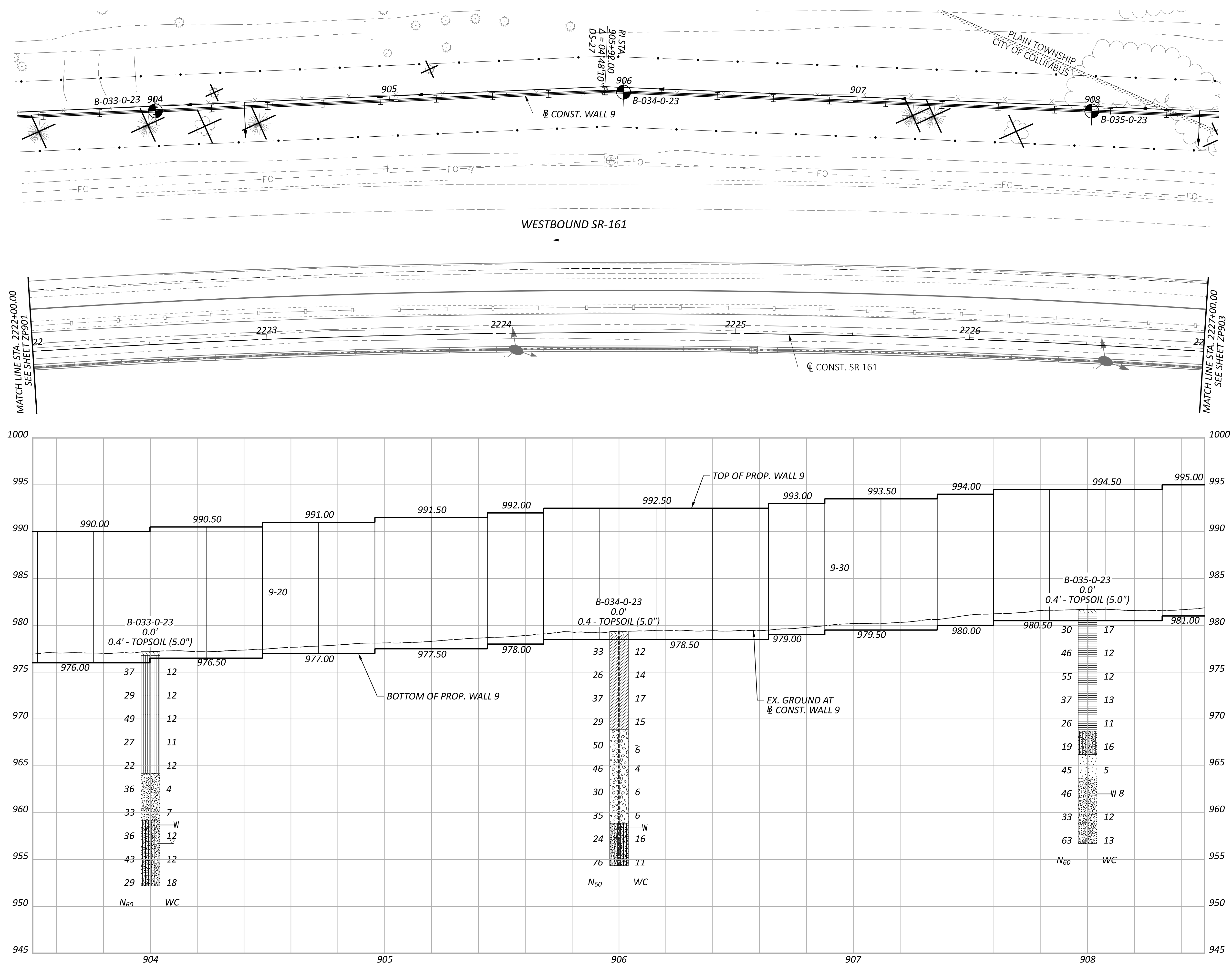
GEOTECHNICAL PROFILE - NOISE WALL 9  
 STA. 2217+16.00 TO STA. 2222+00.00

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
15	66
SHEET	TOTAL
P.246	297



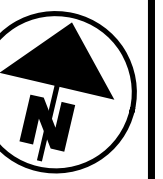
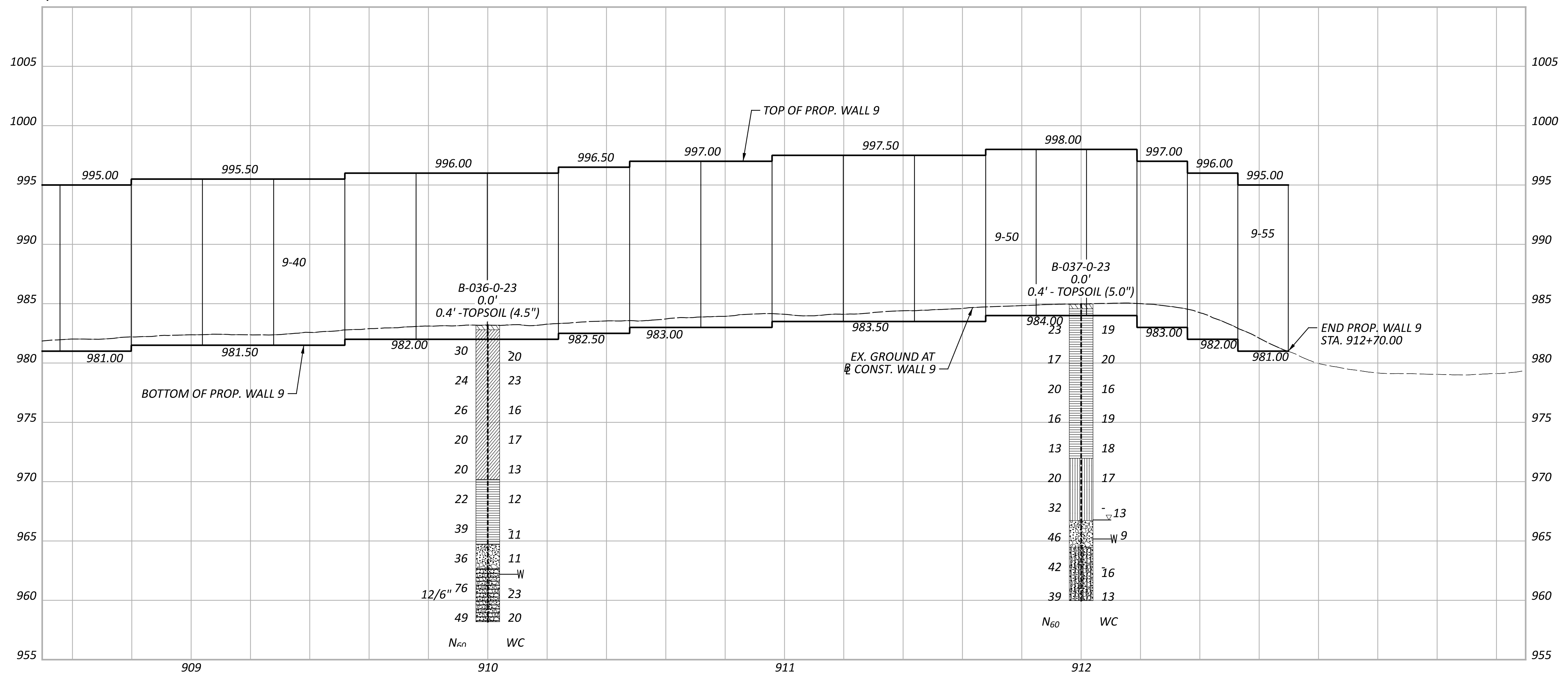
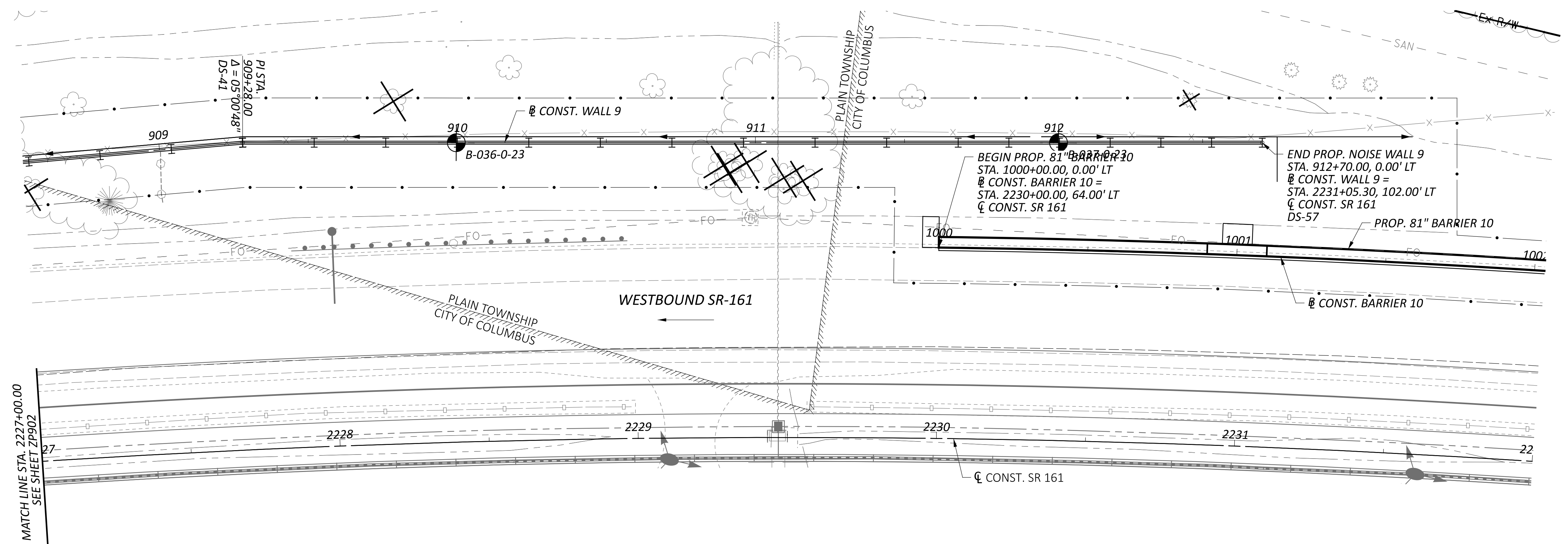
**FRA-161-15.80 NOISE WALLS**

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 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Zp902.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 9  
 STA. 2222+00.00 TO STA. 2227+00.00**

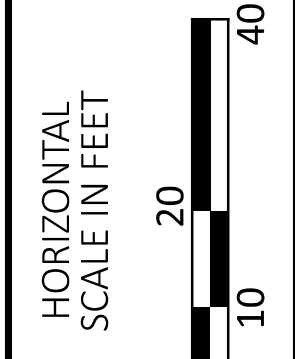
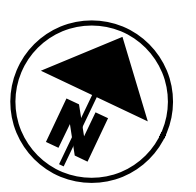
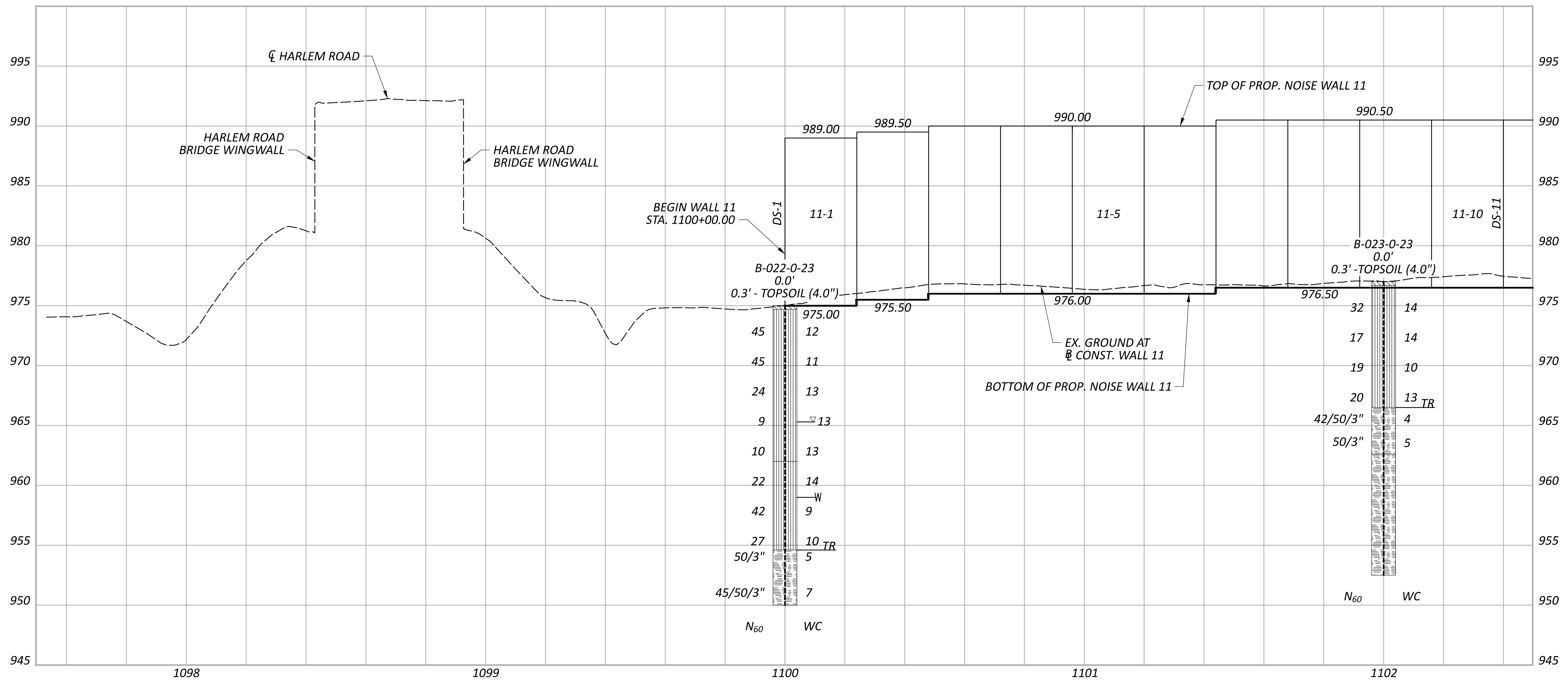
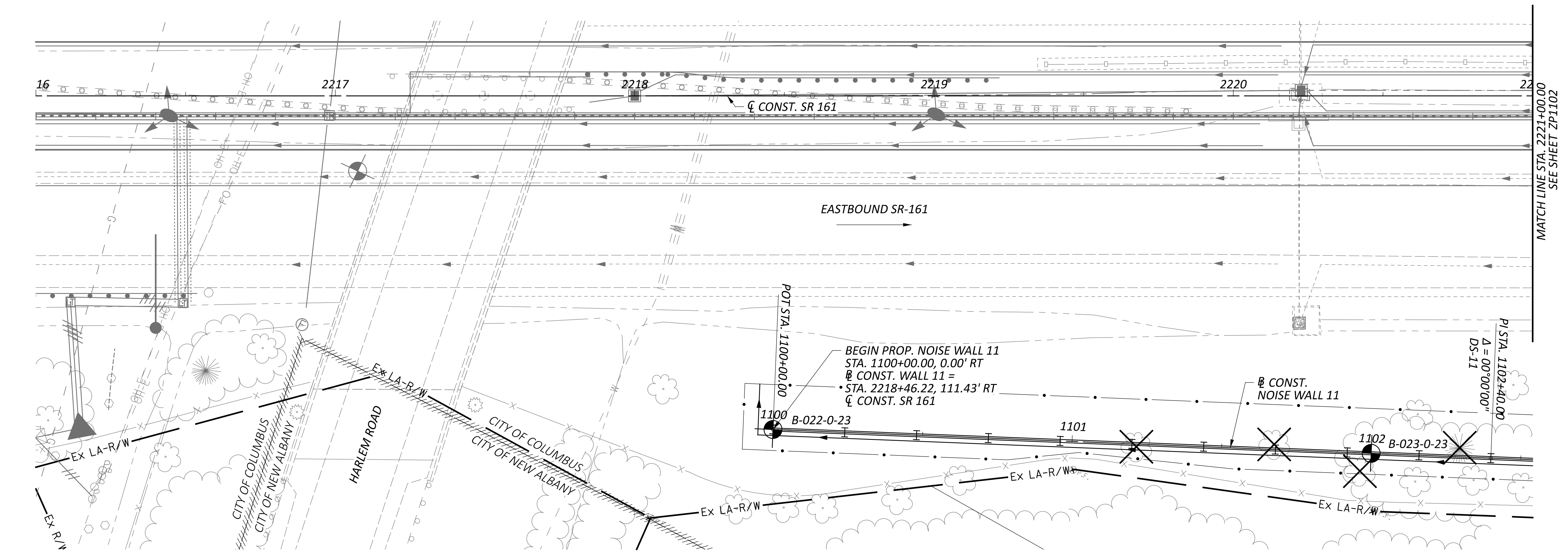
DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
16	66
SHEET	TOTAL
P.247	297



GEOTECHNICAL PROFILE - NOISE WALL 9  
 STA. 2227+00.00 TO STA. 2232+00.00

DESIGN AGENCY	
6350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
17	66
SHEET	TOTAL
P.248	297



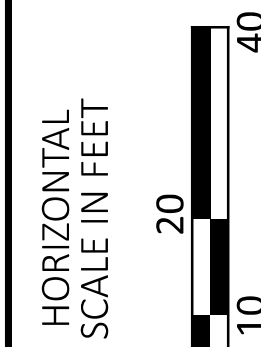
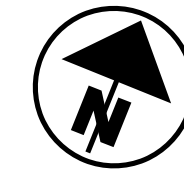
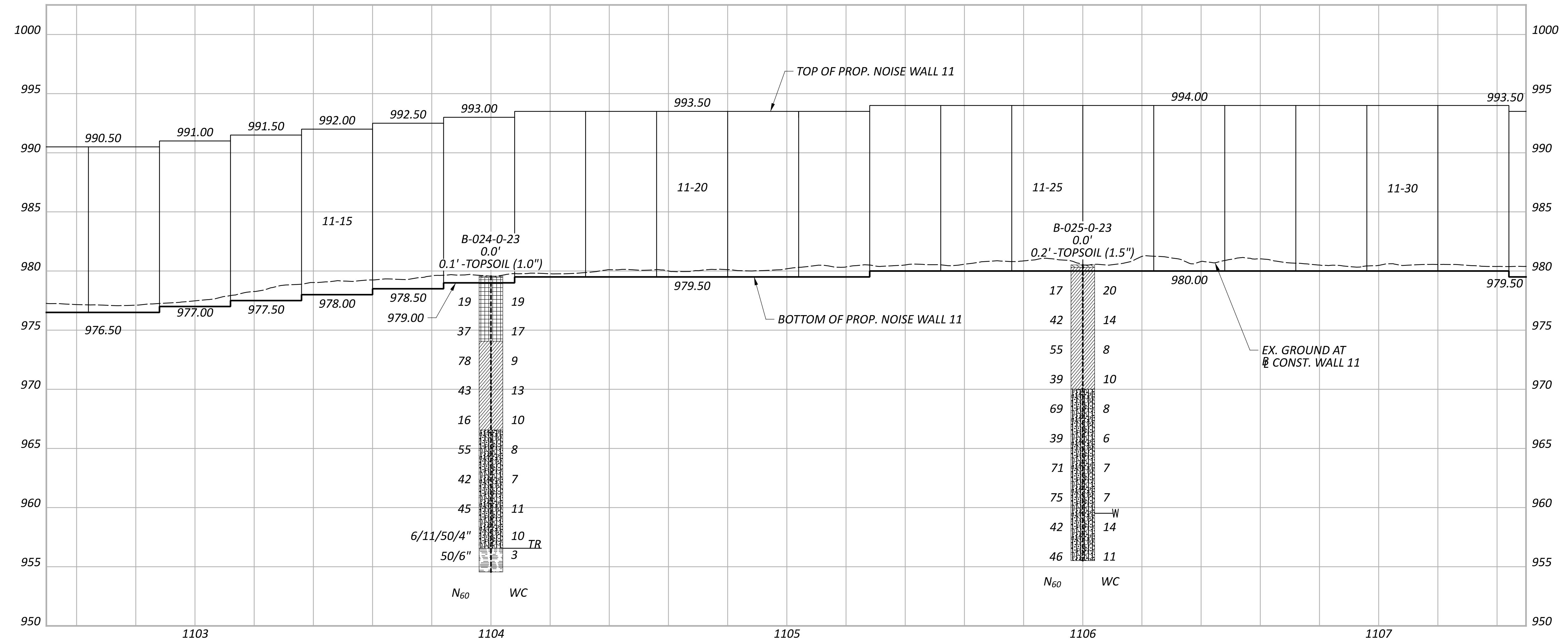
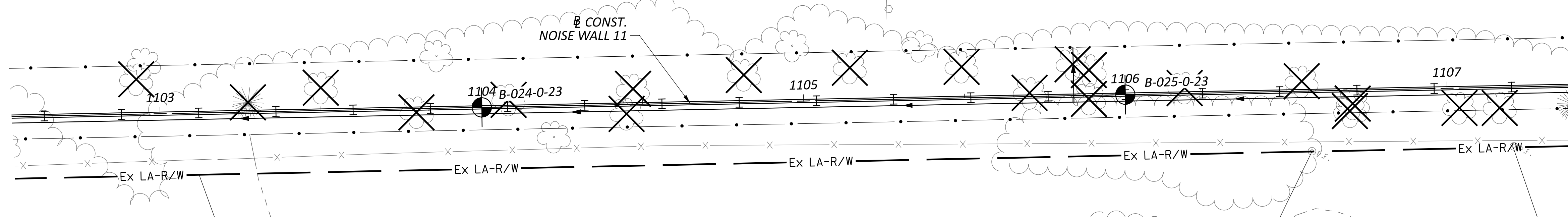
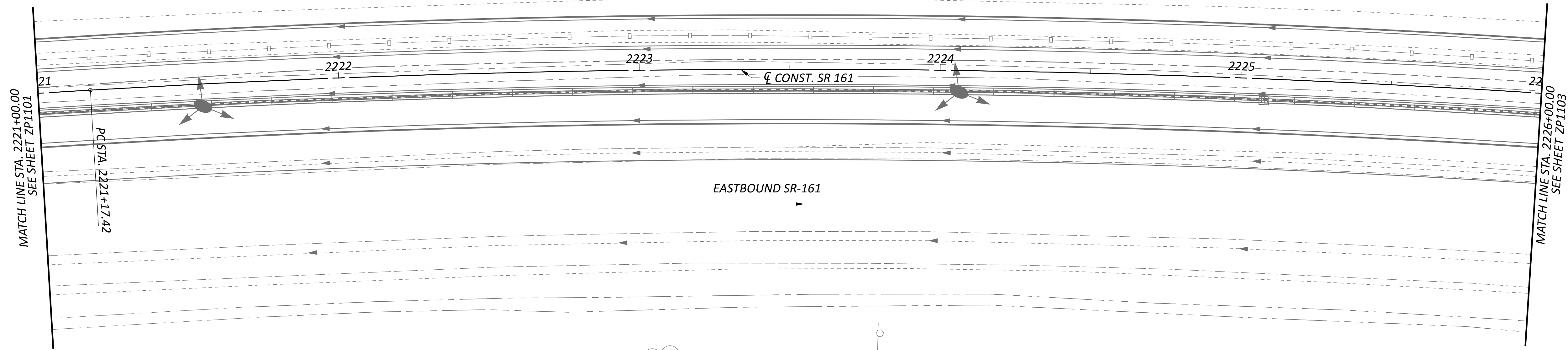


**GEOTECHNICAL PROFILE - NOISE WALL 11**  
STA. 2216+00.00 TO STA. 2221+00.00

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 KSJ  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 18 66  
 SHEET TOTAL  
 P.249 297

**FRA-161-15.80 NOISE WALLS**

MODEL: Plan-1 PAPER: 34x42 (in.) DATE: 5/15/2024 TIME: 11:58:13 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1102.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 11  
 STA. 2221+00.00 TO STA. 2226+00.00**

DESIGN AGENCY



8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER

KSJ

REVIEWER

DEK 1/19/24

PROJECT ID

117607

SUBSET TOTAL

19 66

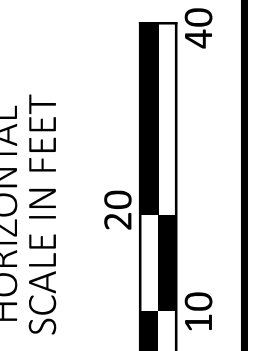
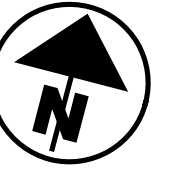
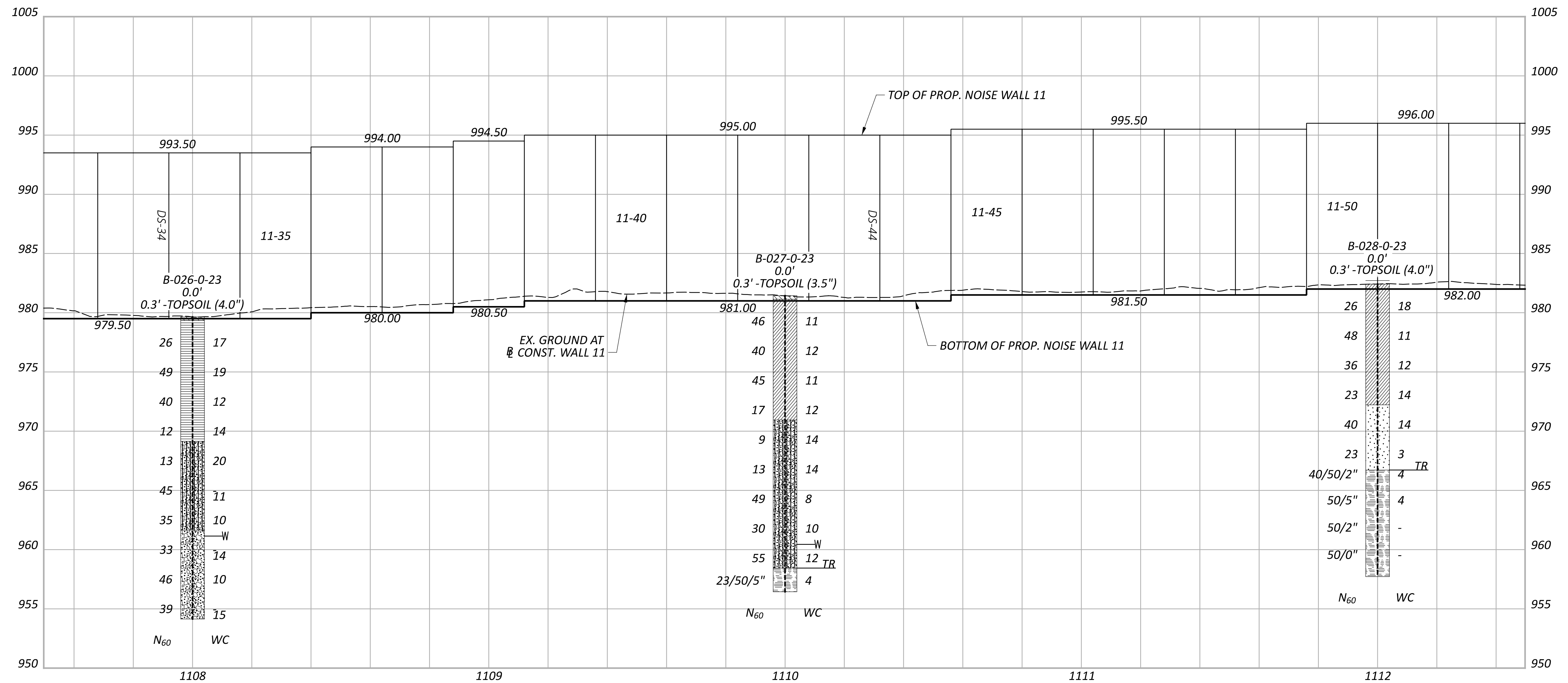
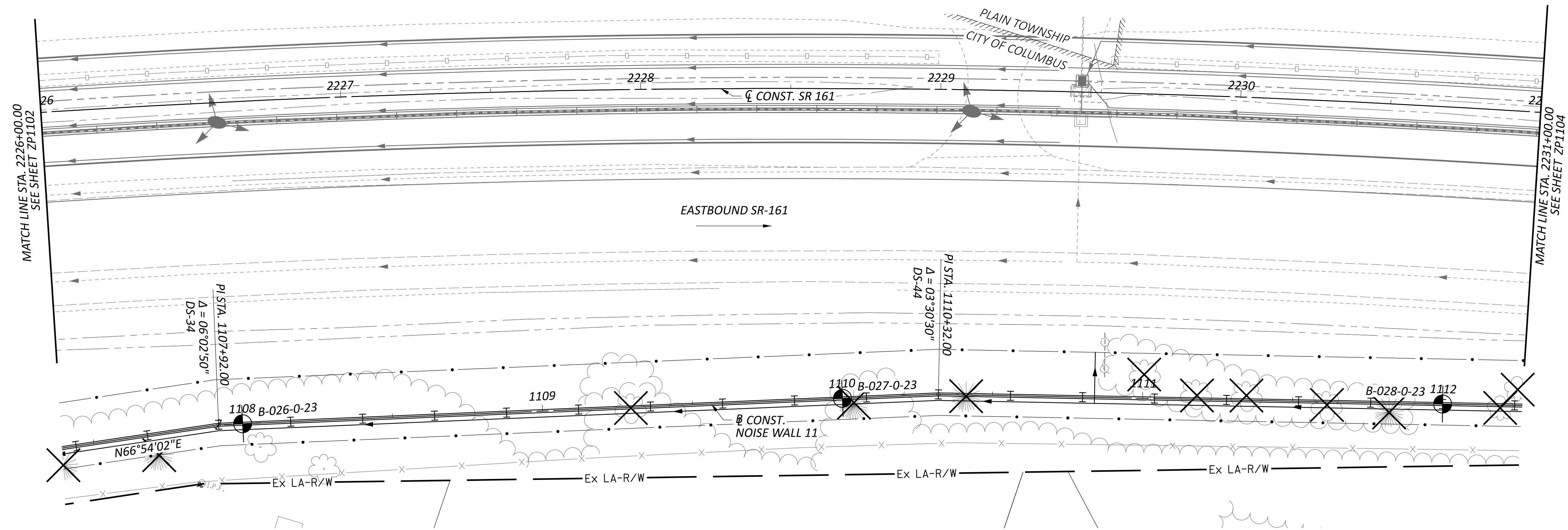
SHEET TOTAL

P.250 297



**FRA-161-15.80 NOISE WALLS**

MODEL: Plan-2 PAPER SIZE: 34x42 (in.) DATE: 5/16/2024 TIME: 12:00:42 AM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Sheets\117607\_ZP1103.dgn

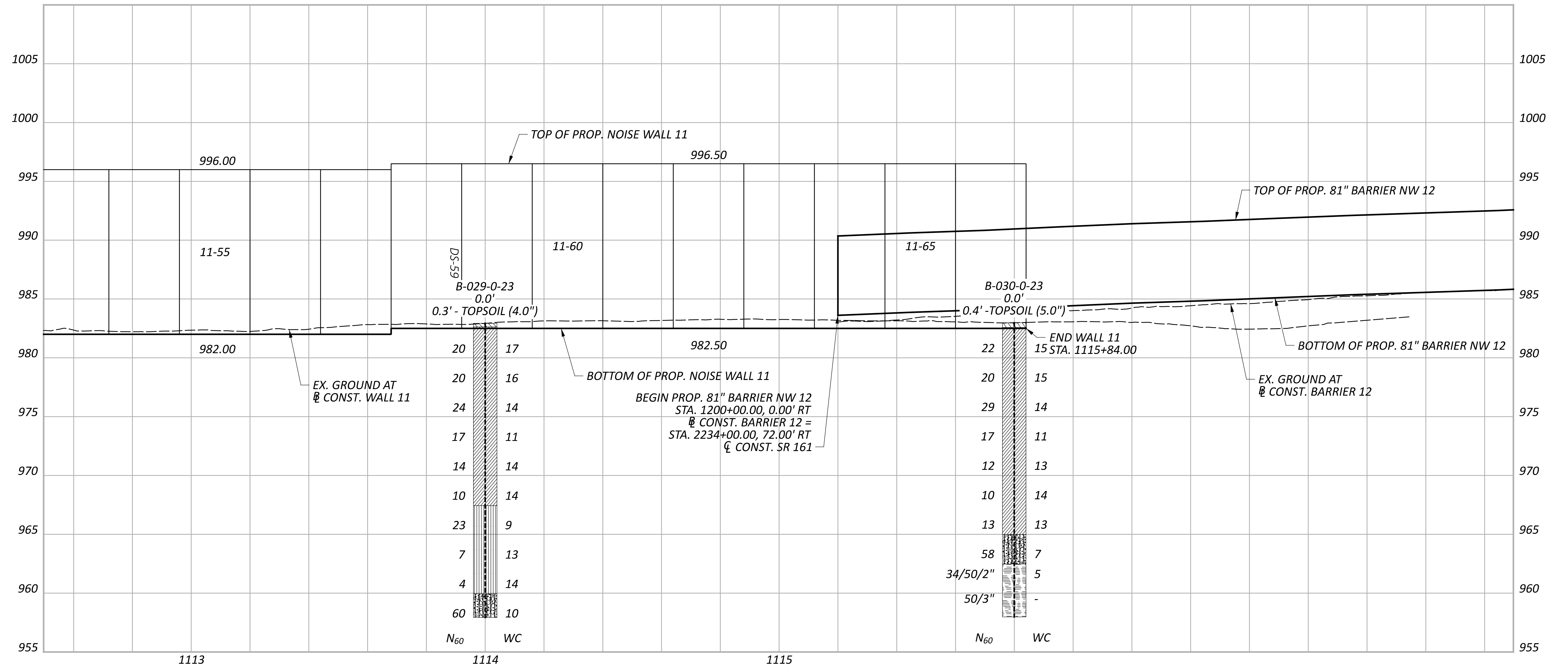
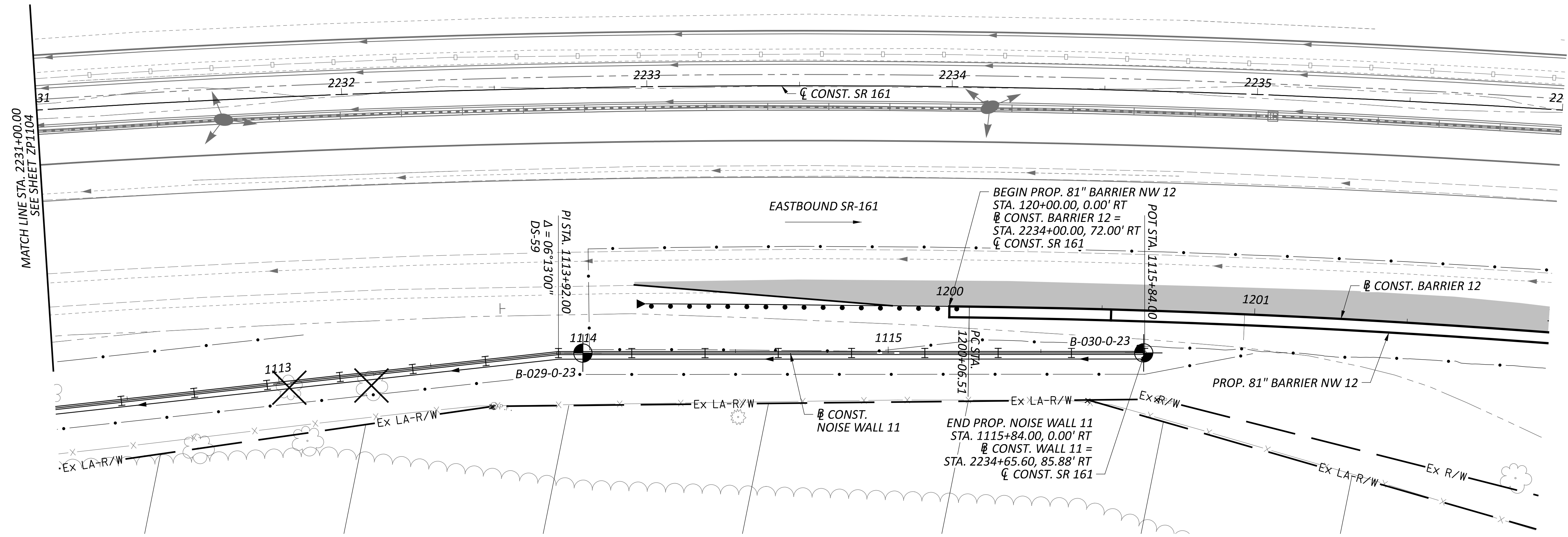


**GEOTECHNICAL PROFILE - NOISE WALL 11  
 STA. 2226+00.00 TO STA. 2231+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 KSJ  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 20 66  
 SHEET TOTAL  
 P.251 297

**FRA-161-15.80 NOISE WALLS**

MODEL: Plan-3 PAPER SIZE: 34x42 (in.) DATE: 5/16/2024 TIME: 12:03:10 AM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1104.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 11  
 STA. 2231+00.00 TO STA. 2236+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

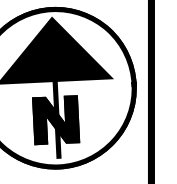
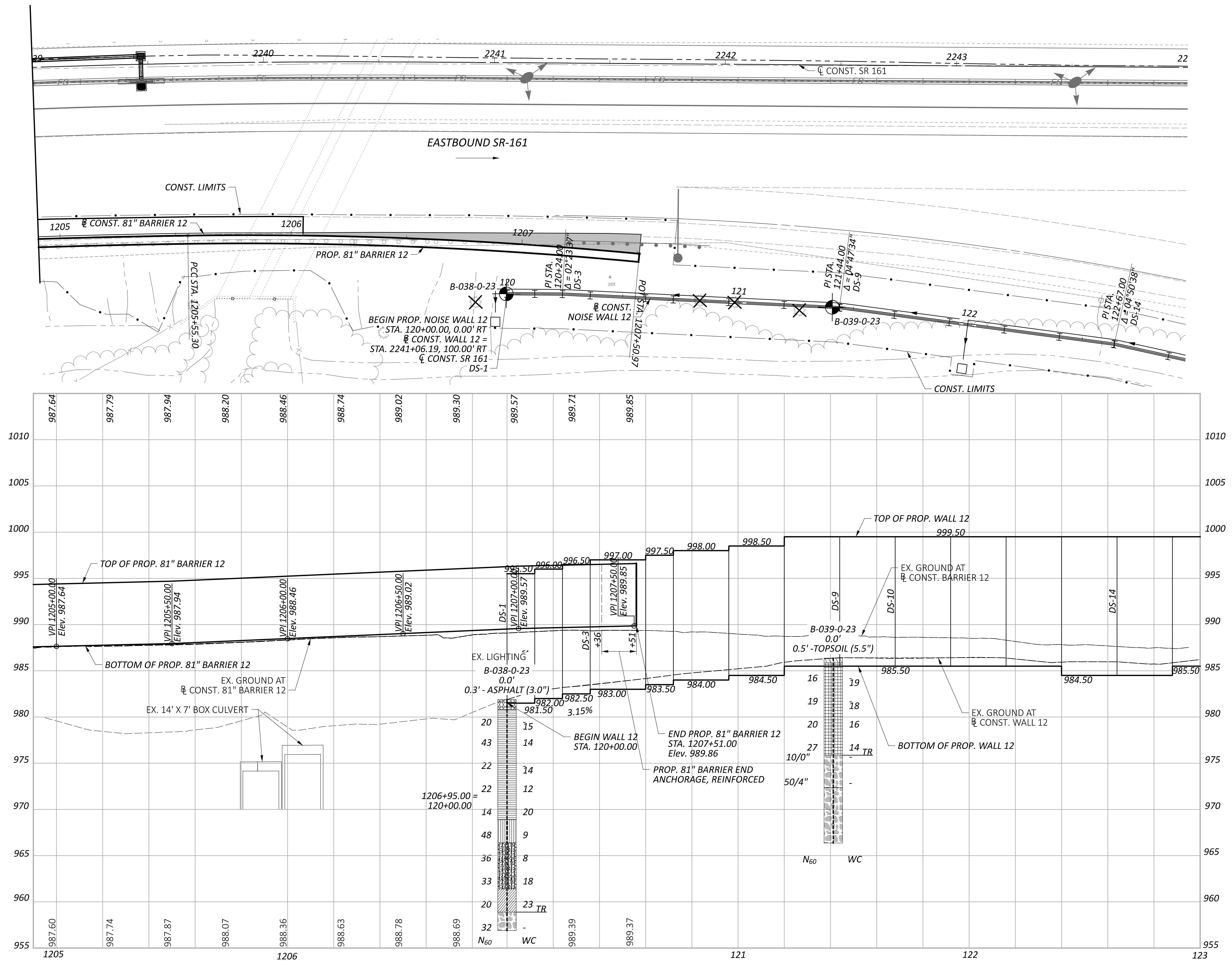
SUBSET TOTAL  
 21 66

SHEET TOTAL  
 P.252 297



**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 12 - Plan 20 PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 12:30:46 AM USER: jmans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Sheets\117607\_ZP1202.dgn

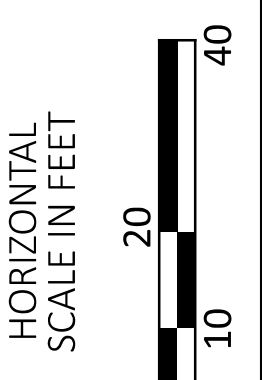
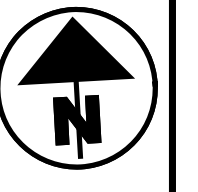
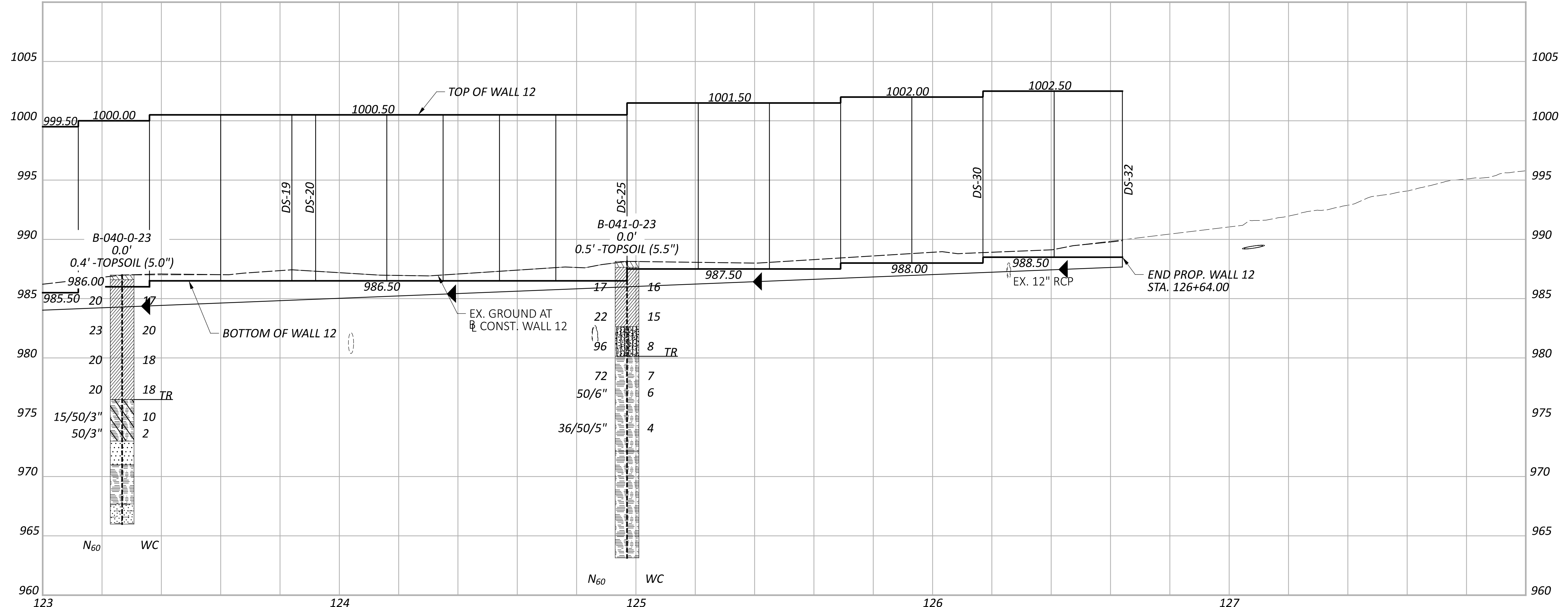
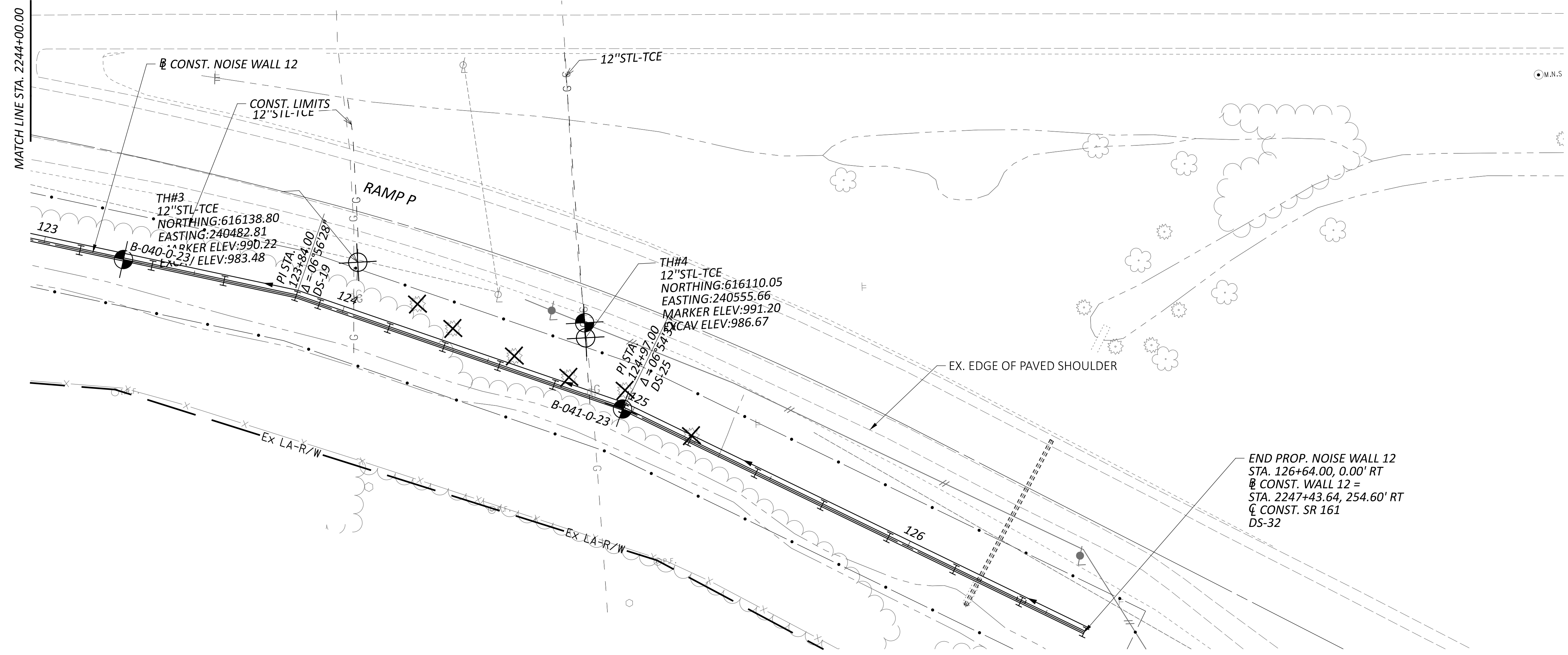


**GEOTECHNICAL PROFILE - NOISE WALL 12**  
 STA. 2239+00.00 TO STA. 2244+00.00

DESIGN AGENCY	
 RESOURCE INTERNATIONAL 6350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4849	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
22	66
SHEET	TOTAL
P.253	297

**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 12 - Plan 21 PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 12:55:01 AM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1203.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 12**  
**STA. 2244+00.00 TO STA. 2249+00.00**

DESIGN AGENCY  
**Resource International**  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

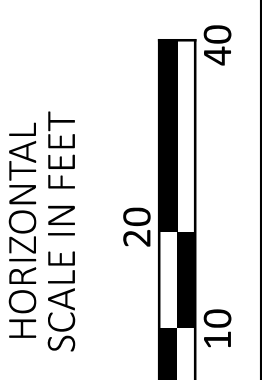
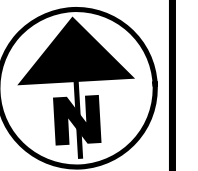
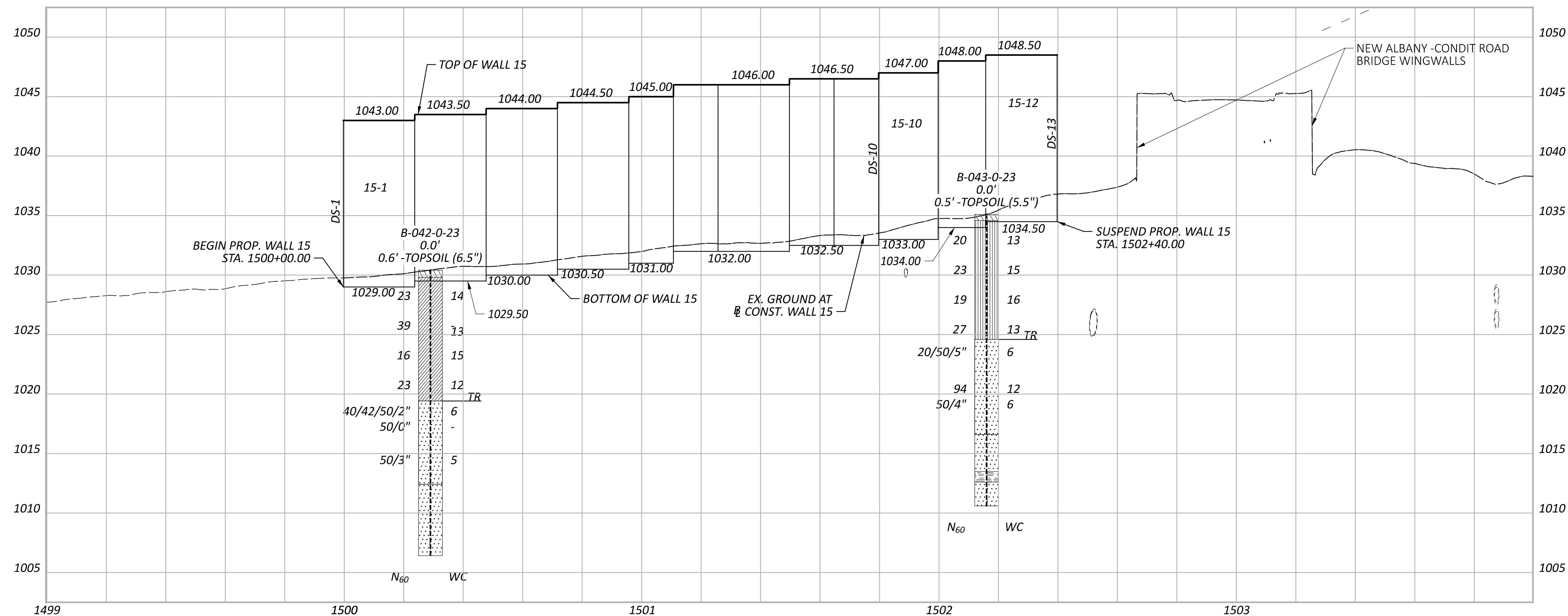
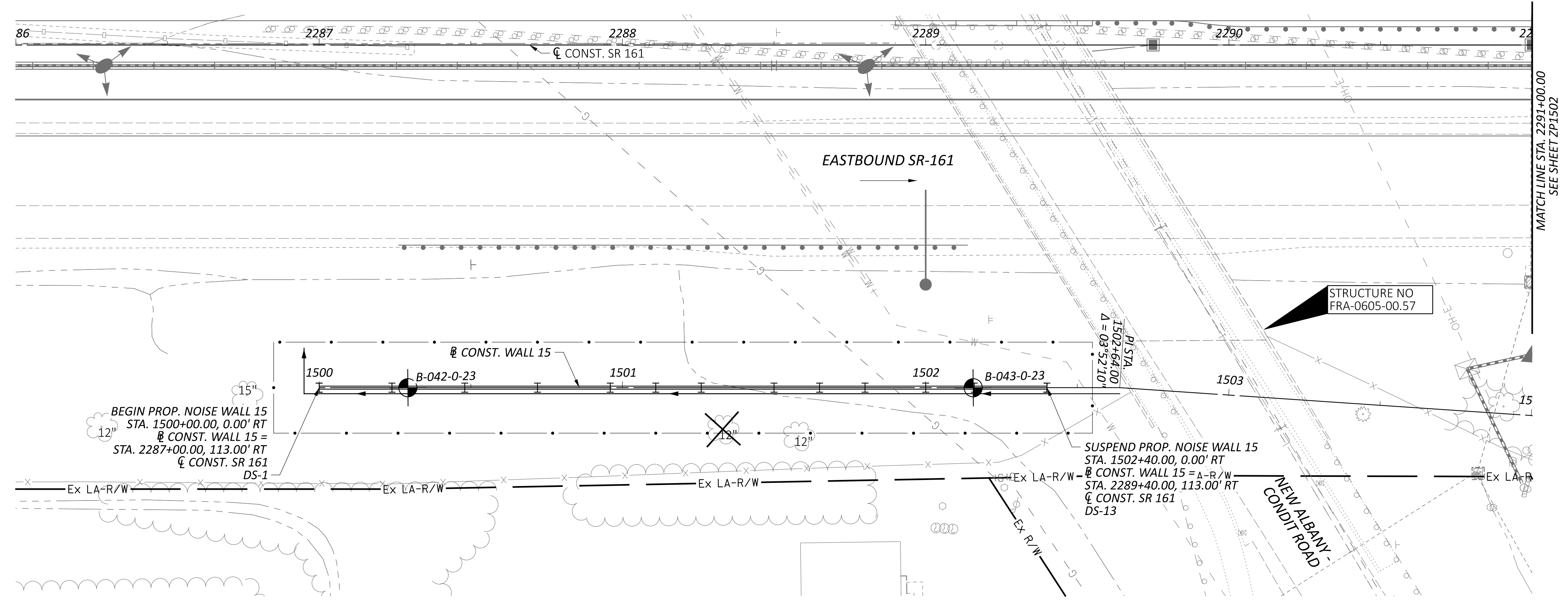
DESIGNER  
**KSJ**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET	TOTAL
23	66

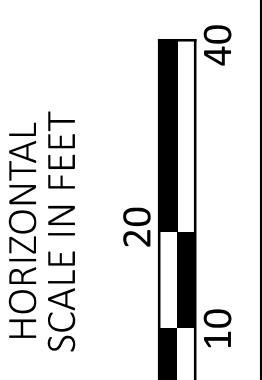
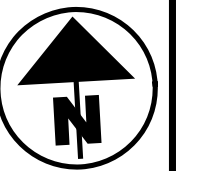
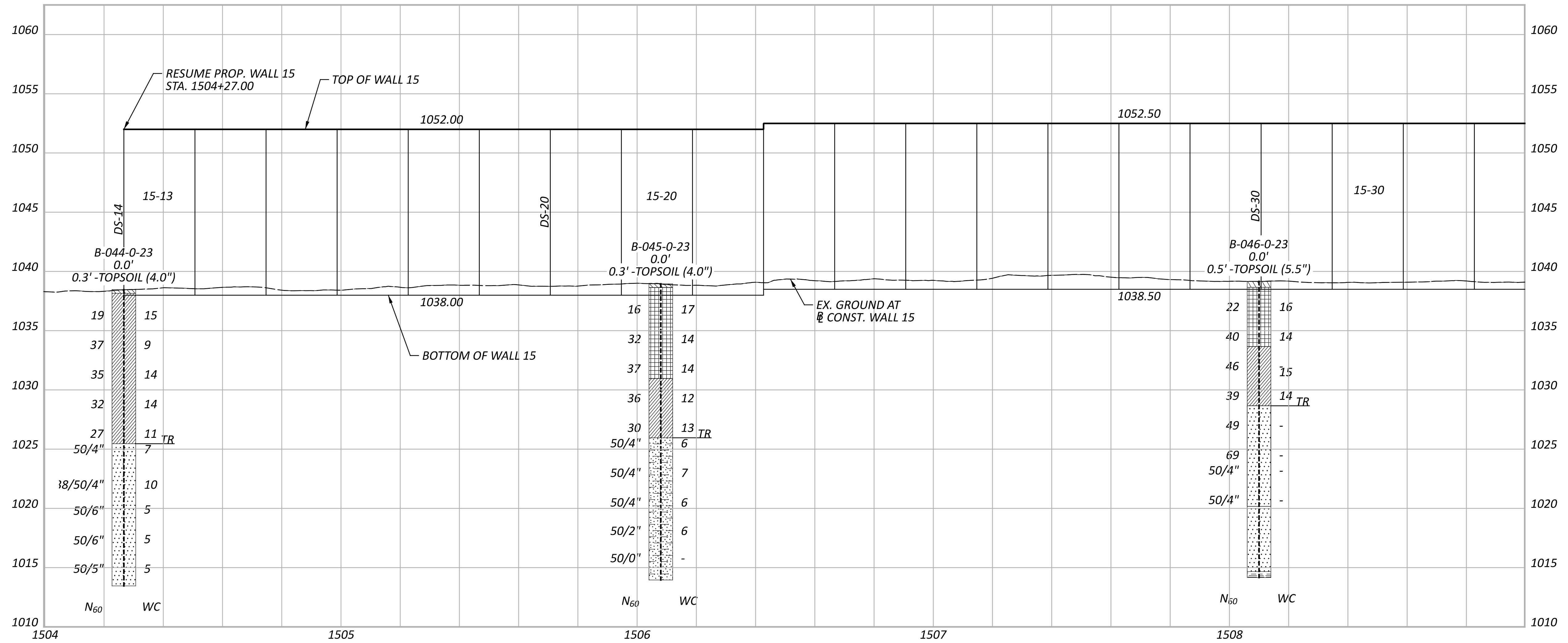
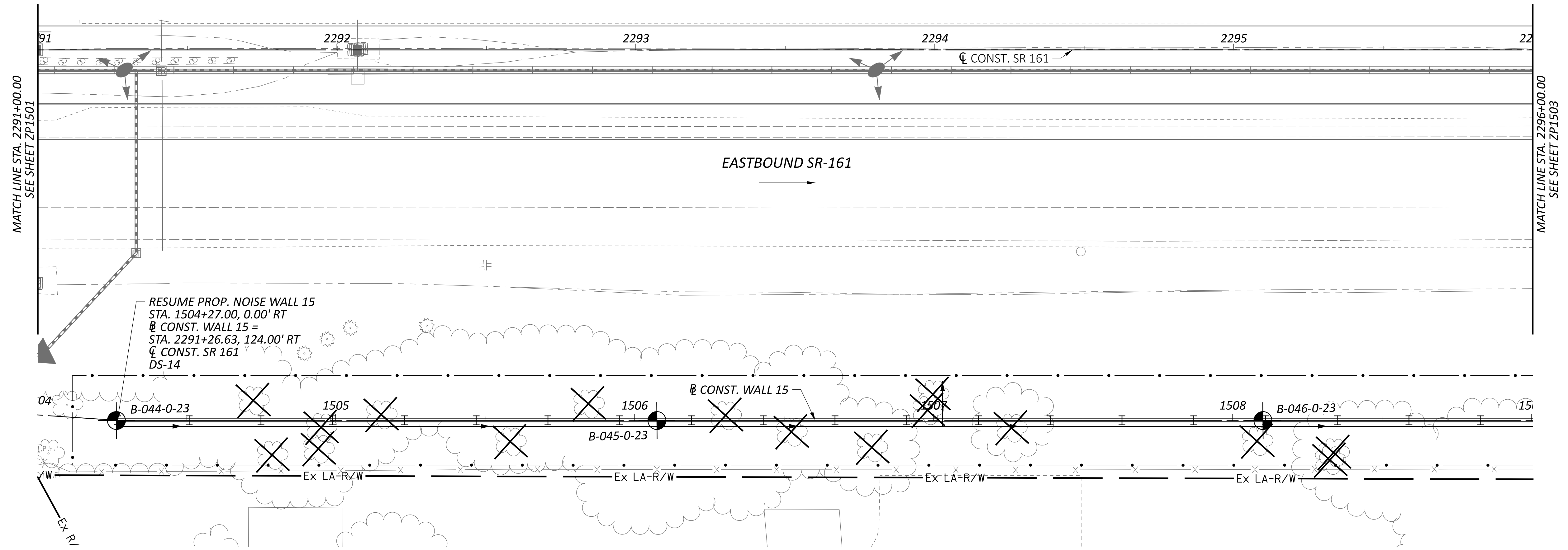
SHEET	TOTAL
P.254	297



GEOTECHNICAL PROFILE - NOISE WALL 15  
 STA. 2286+00.00 TO STA. 2291+00.00

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
24	66
SHEET	TOTAL
P.255	297





GEOTECHNICAL PROFILE - NOISE WALL 15  
STA. 2291+00.00 TO STA. 2296+00.00

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

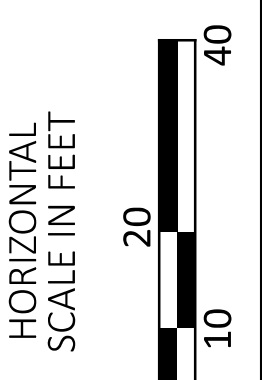
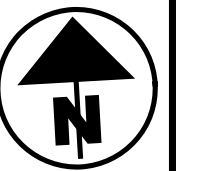
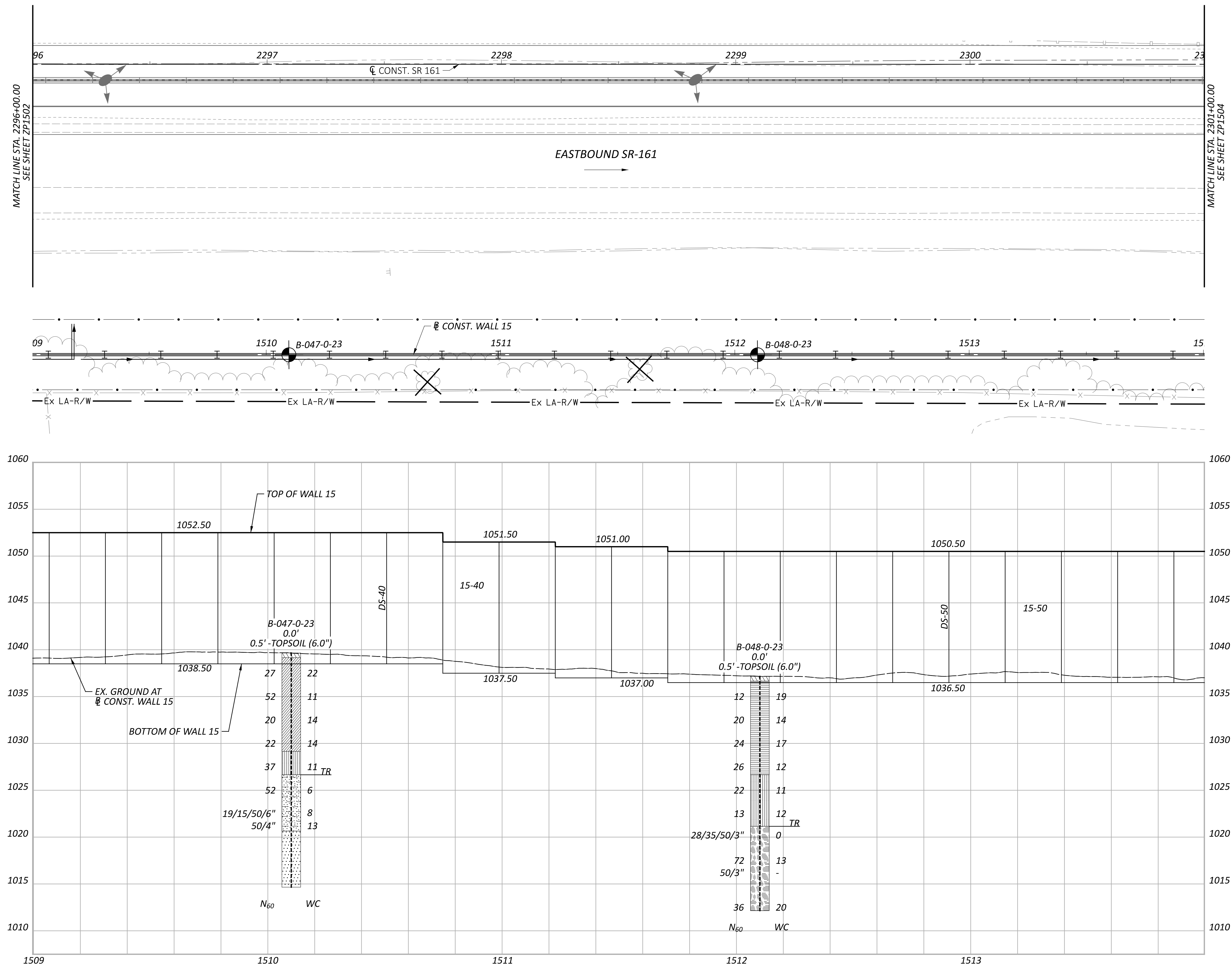
PROJECT ID  
 117607

SUBSET TOTAL  
 25 66

SHEET TOTAL  
 P.256 297

**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 15 - Plan 24 PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 1:07:20 AM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1503.dgn

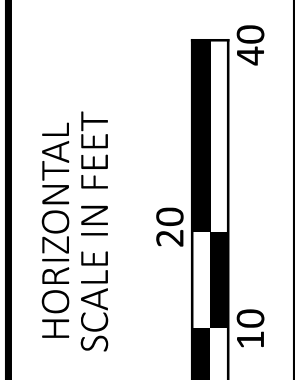
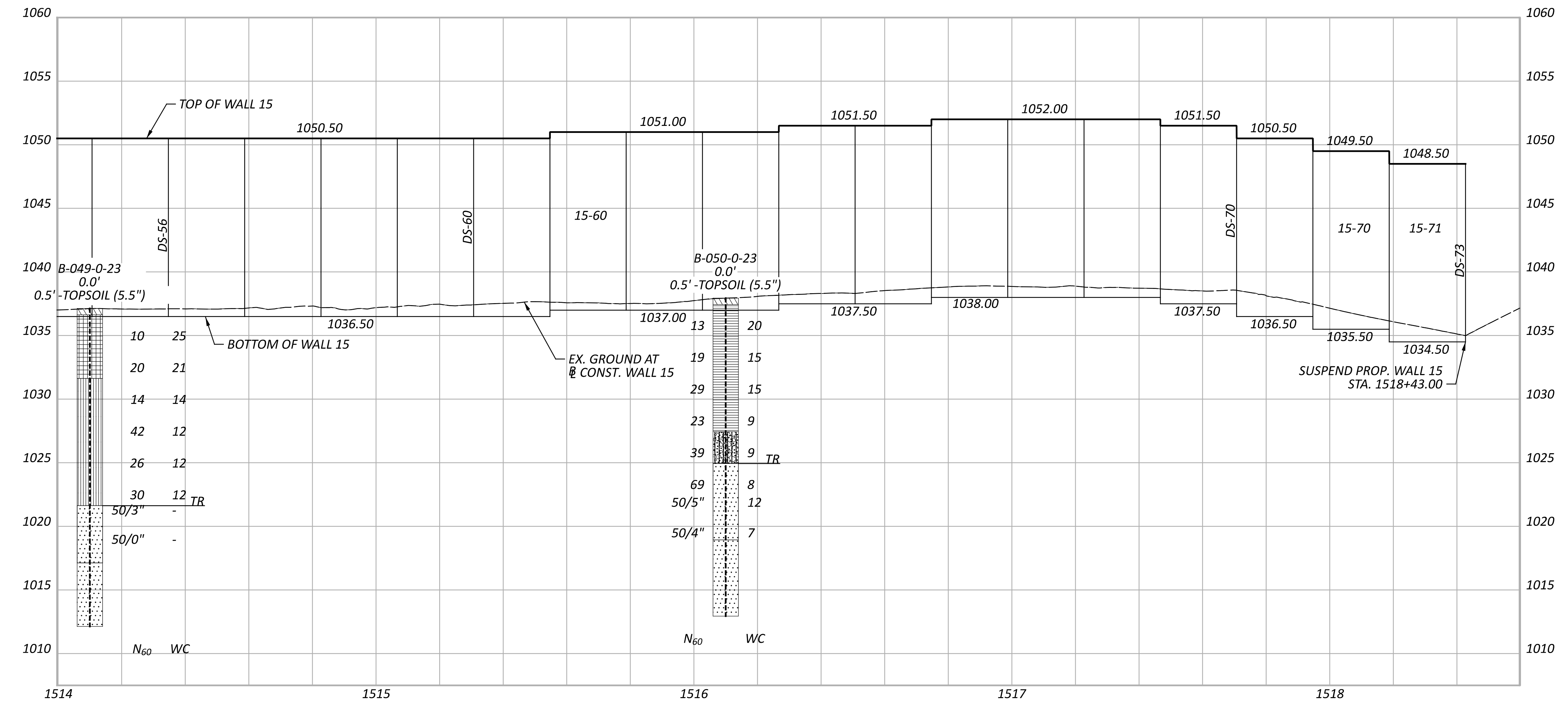
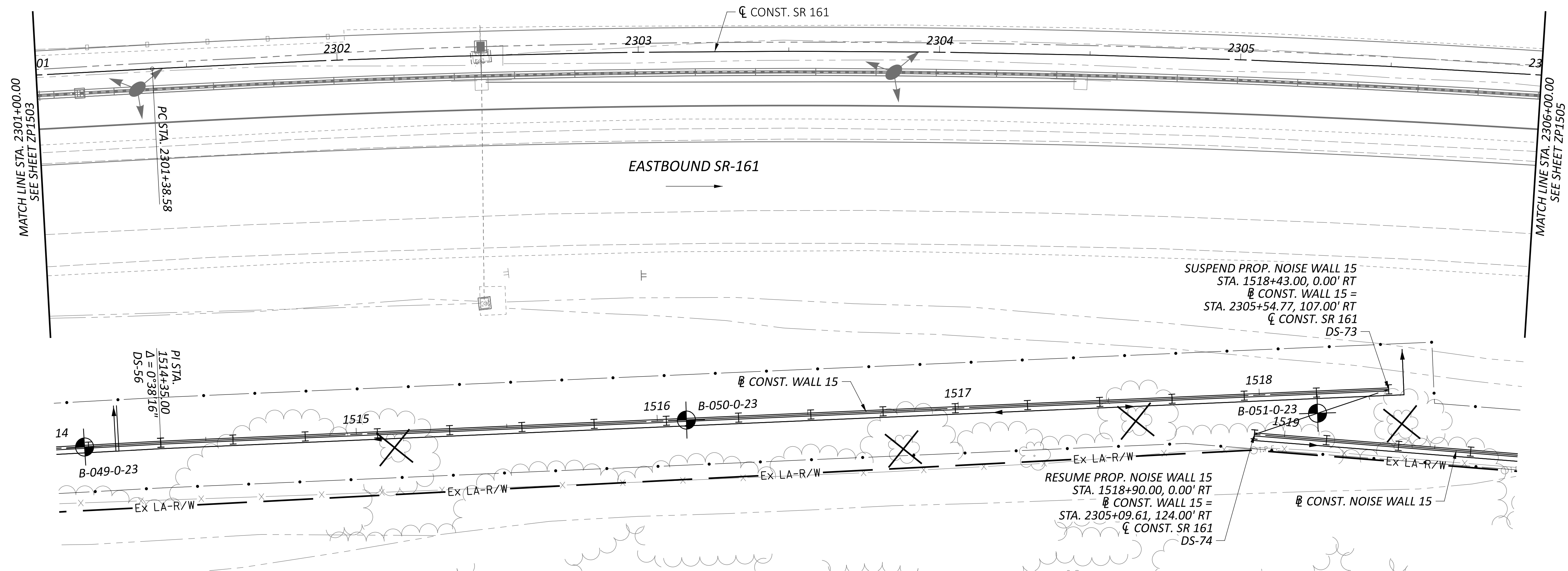


**GEOTECHNICAL PROFILE - NOISE WALL 15**  
 STA. 2296+00.00 TO STA. 2301+00.00

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
26	66
SHEET	TOTAL
P.257	297

**FRA-161-15.80 NOISE WALLS**

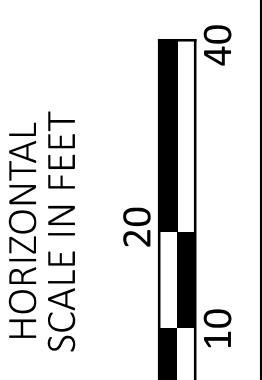
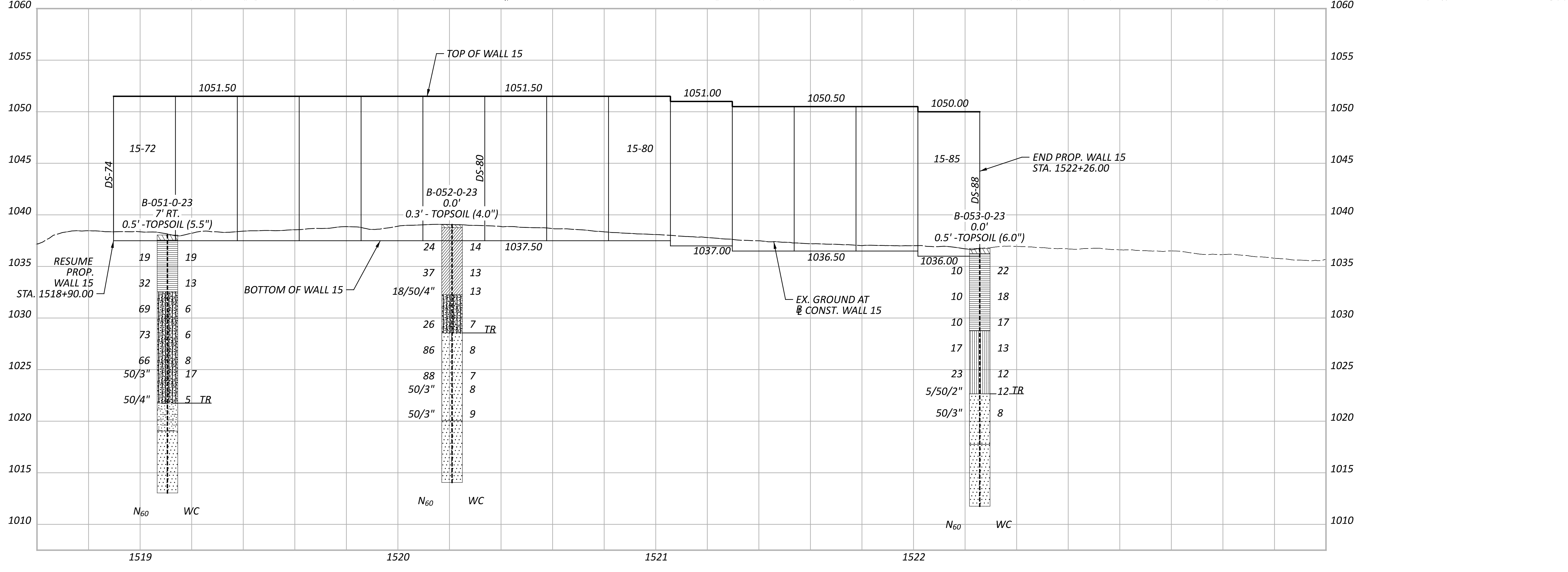
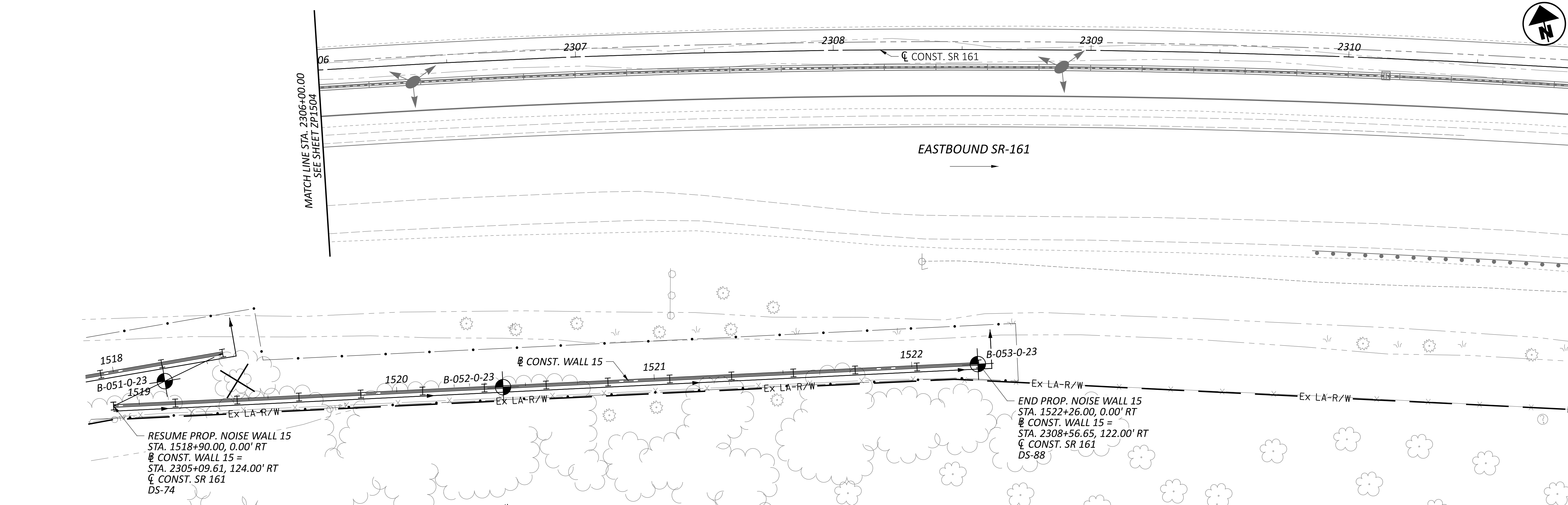
MODEL: Wall 15 - Plan 25 PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 1:10:55 AM USER: juans  
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1504.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 15  
 STA. 2301+00.00 TO STA. 2306+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 KSJ  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 27 66  
 SHEET TOTAL  
 P.258 297





**GEOTECHNICAL PROFILE - NOISE WALL 15**  
**STA. 2306+00.00 TO STA. 2311+00.00**

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
28	66
SHEET	TOTAL
P.259	297



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:13:05 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL001.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/22/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 300+00 / 0'  
ALIGNMENT: CL WALL 3  
ELEVATION: 966.3 (MSL) EOB: 15.0 ft.  
LAT / LONG: 40.080429, -82.864610

EXPLORATION ID  
**B-001-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (3.5")  
HARD, BROWN SILT AND CLAY, LITTLE GRAVEL,  
TRACE SAND, DAMP.

**SANDSTONE** : GRAY, HIGHLY WEATHERED.  
**SANDSTONE** : BROWN AND GRAY, MODERATELY TO SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, IRON STAINED, PYRITIC, FRACTURED, NARROW APERTURE, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE CONDITION.  
-HIGHLY FRACTURED AND HEAVILY IRON STAINED FROM 5.0' - 7.0'  
-@ 6.6' - 7.0' 60 DEGREE FRACTURE  
-@ 10.3' - 10.8' 45 DEGREE FRACTURE AND HEAVILY IRON STAINED  
-@ 10.8' - 13.6' SPECKLES OF PYRITE THROUGHOUT

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
1	6											
2	10	32	4.5+								15	A-6a (V)
3	12											
4	11										16	A-6a (V)
5	50/4"		4.5+									
6												
7	0											CORE
8												
9												
10												
11												
12												
13	45										100	NQ2-2
14												
15												

ELEV. 966.3	DEPTHS	
966.0		
962.0	TR	
961.3		
951.3		EOB

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

<b>Photo No.</b> 1	
<b>Boring:</b> B-001-0-23	
RC-1: 5.0'-10.0' REC (%):80 RQD (%):10	
RC-2: 10.0'-15.0' REC (%):100 RQD (%):45	



DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
8350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
JAS

REVIEWER  
DEK 1/19/24

PROJECT ID  
117607

SUBSET TOTAL  
29 66

SHEET TOTAL  
P.260 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALL 3  
BORING LOG & ROCK CORE PHOTO FOR B-001-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:13:24 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL002.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/22/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 302+00 / 0'  
 ALIGNMENT: CL WALL 3  
 ELEVATION: 968.1 (MSL) EOB: 15.3 ft.  
 LAT / LONG: 40.080609, -82.863925

EXPLORATION ID  
**B-002-0-23**  
 PAGE  
 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
							GR	CS	FS	SI	CL	LL	PL		
0.4' TOPSOIL (4.5')	968.1		3												
HARD, BROWN-GRAY CLAY, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE SAND AND GRAVEL, MOIST.	967.7	1	5	17	SS-1	4.5+	5	8	34	50	55	21	34	20	A-7-6 (19)
-@2.8' - 3.4' COBBLES	965.1	2	7												
VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, DAMP.	963.5	3	14												
SANDSTONE : GRAY, HIGHLY WEATHERED.	962.1	4	17											7	A-2-4 (V)
		5	50/2"												
SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.		6		0	NQ2-1	68									CORE
-@6.0' - 9.7' APPROXIMATELY 4MM PYRITE NODULES THROUGHOUT		7													
-@9.7' CLAY SEAM		8													
-@10.25' - 12.0' MANY PYRITE FLECKS THROUGHOUT		9													
-@11.0' - 15.75' FEW PYRITE FLECKS	952.9	10		53	NQ2-2	96									CORE
		11													
		12													
		13													
		14													
		15													
		EOB													

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

<p><b>Photo No.</b> 2</p>			
<p><b>Boring:</b> B-002-0-23</p>			
<p>RC-1: 6.0-10.25' REC (%):96 RQD (%):10</p>			
<p>RC-2: 10.25-15.25' REC (%):96 RQD (%):53</p>			

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 30 66  
 SHEET TOTAL  
 P.261 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 3  
 BORING LOG & ROCK CORE PHOTO FOR B-002-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:13:43 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL003.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/20/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 304+00 / 0'  
ALIGNMENT: CL WALL 3  
ELEVATION: 969.1 (MSL) EOB: 15.0 ft.  
LAT / LONG: 40.080806, -82.863307

EXPLORATION ID  
**B-003-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')  
HARD, BROWN SILT AND CLAY, TRACE GRAVEL

**SANDSTONE** : BROWN, HIGHLY WEATHERED.  
**SANDSTONE** : BROWN TO GRAY, MODERATELY TO SLIGHTLY WEATHERED; STRONG; FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.  
-@7.0' - 9.0' HIGHLY FRACTURED; RED IRON OXIDE STAINING IN FRACTURES

-@10.0' - 11.0' 4MM PYRITE NODULES THROUGHOUT  
-@11.0' - 11.2' CLAY SEAM  
-@11.2' - 13.5' MANY TINY PYRTIE SPECKS THROUGHOUT

-@13.5' - 15.0' LITTLE PYRITE

DEPTH (ft)	SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	GR	GRADATION (%)						WC	HOLE SEALED
						FS	SI	CL	LL	PL	PI		
1	3												
2	5	16	47	SS-1	4.5+	-	-	-	-	-	-	-	A-6a (V)
3	6												
4	5		60	SS-2	4.5+	-	-	-	-	-	-	-	A-6a (V)
5	6	50/3"											
6													
7	0		80	NQ2-1									CORE
8													
9													
10													
11													
12	55		100	NQ2-2									CORE
13													
14													
15													

EOB

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

**Photo No.**  
**3**

**Boring:**  
B-003-0-23


RC-1: 5.0'-10.0'  
REC (%):80  
RQD (%):0






**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:14:01 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1004.dgn

<b>Project Name:</b> FRA-161-15.80		<b>Location:</b> Franklin County, Ohio
<b>Photo No.</b> 4		
<b>Boring:</b> B-003-0-23		
RC-2: 10.0-15.0' REC (%):100 RQD (%):55		

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  

SUBSET	TOTAL
32	66
SHEET	TOTAL
P.263	297

GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 3  
 BORING LOG & ROCK CORE PHOTO FOR B-003-0-23



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:14:13 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL005.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 305+76 / 0'  
 ALIGNMENT: CL WALL 3  
 ELEVATION: 969.2 (MSL) EOB: 15.0 ft.  
 LAT / LONG: 40.081003, -82.862692

EXPLORATION ID  
**B-004-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, MOTTLED BROWN CLAY, SOME SILT, TRACE COARSE TO FINE SAND, MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.  
 -@11.8' - 12.4' FRACTURE  
 -@13.3' - 15.0' MANY TINY PYRITE NODULES THROUGHOUT

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED	
				GR	CS	FS	SI	CL	LL	PL			
1	3												
2	4	SS-1	4.5+	0	1	6	35	58	52	20	32	21	A-7-6 (18)
3	7												
4	4	SS-2	4.5+	-	-	-	-	-	-	-	-	19	A-7-6 (V)
5	7												
6	50/2"	SS-3	--	--	--	--	--	--	--	--	--	10	Rock (V)
7													
8	50/2"	SS-4	--	--	--	--	--	--	--	--	--	5	Rock (V)
9													
10													
11													
12	0	NQ2-1	75										CORE
13													
14													
15													

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio



**Photo No.**  
**5**

**Boring:**  
 B-004-0-23

RC-1: 10.0-15.0'  
 REC (%):75  
 RQD (%):0



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:14:32 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL006.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 600+00 / 0'  
ALIGNMENT: CL WALL 6  
ELEVATION: 961.5 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.087831, -82.843714

EXPLORATION ID  
**B-005-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
VERY STIFF TO HARD, DARK BROWN TO BROWNISH GRAY SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE, DARK GRAY COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, WET.

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, WET.

DENSE, DARK GRAY COARSE AND FINE SAND, TRACE FINE GRAVEL, TRACE SILT, WET.

DEPTH	ELEV.	SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (GI)		
							GR	CS	FS	SI	CL	LL			PL	PI
1	961.1	6	8	72	SS-1	4.5+	-	-	-	-	-	-	-	14	A-6a (V)	
2		8														
3																
4		5	6	56	SS-2	4.5+	-	-	-	-	-	-	-	22	A-6a (V)	
5		10														
6		8	16	56	SS-3	4.5+	-	-	-	-	-	-	-	12	A-6a (V)	
7		23														
8																
9		7	7	22	SS-4	4.5+	9	11	16	31	33	28	16	12	13	A-6a (7)
10																
11		4	4	13	SS-5	2.50	-	-	-	-	-	-	-	-	14	A-6a (V)
12		5														
13																
14	948.5	5	19	47	SS-6	-	-	-	-	-	-	-	-	14	A-3a (V)	
15	946.0	8														
16		21	21	53	SS-7	-	-	-	-	-	-	-	-	12	A-1-b (V)	
17		16														
18																
19		31	15	58	SS-8	-	-	-	-	-	-	-	-	11	A-1-b (V)	
20		25														
21		9	10	37	SS-9	-	51	17	10	13	9	NP	NP	NP	13	A-1-b (0)
22		16														
23	938.5															
24		8	12	43	SS-10	-	-	-	-	-	-	-	-	18	A-3a (V)	
25	936.5	18														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 15.5' AND UPON COMPLETION @ 14.7'. CAVE-IN DEPTH @ 11.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 601+77 / 0'  
ALIGNMENT: CL WALL 6  
ELEVATION: 968.1 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.088035, -82.843136

EXPLORATION ID  
**B-006-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' TOPSOIL (5.5")  
HARD, BROWN SILT AND CLAY, SOME CLAY, TRACE FINE GRAVEL, DAMP.

DENSE TO MEDIUM DENSE, BROWN GRAY GRAVEL WITH SAND, SILT, AND CLAY, MOIST.

DENSE, GRAY COARSE AND FINE SAND, LITTLE FINE GRAVEL, LITTLE SILT, WET.

DENSE, GRAY GRAVEL WITH SAND, TRACE SILT, WET.

DEPTH	ELEV.	SPT / RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (GI)		
							GR	CS	FS	SI	CL	LL			PL	PI
1	967.6	6	10	32	SS-1	4.5+	-	-	-	-	-	-	-	11	A-6a (V)	
2		12														
3																
4		7	12	36	SS-2	4.5+	7	11	16	32	34	29	17	12	14	A-6a (7)
5		13														
6		7	9	29	SS-3	4.5+	-	-	-	-	-	-	-	13	A-6a (V)	
7		11														
8																
9	960.1	6	11	39	SS-4	-	-	-	-	-	-	-	-	11	A-2-4 (V)	
10		16														
11		7	17	48	SS-5	-	-	-	-	-	-	-	-	7	A-2-4 (V)	
12		16														
13	954.6															
14		9	15	45	SS-6	-	-	-	-	-	-	-	-	-	-	-
15	952.6	13	-	67	2S-6A	-	-	-	-	-	-	-	-	15	A-2-4 (V)	
16		21	18	48	SS-7	-	36	19	14	19	12	24	17	7	11	A-2-4 (0)
17		15														
18																
19	947.6	16	12	29	SS-8	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
20		8														
21		10	12	35	SS-9	-	-	-	-	-	-	-	-	12	A-3a (V)	
22	945.1	12														
23		12														
24		16	15	43	SS-10	-	-	-	-	-	-	-	-	10	A-1-b (V)	
25	943.1	15														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 13.5' AND UPON COMPLETION @ 15.5'. CAVE-IN DEPTH @ 12.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
**34 66**

SHEET TOTAL  
**P.265 297**

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALL 6  
BORING LOGS B-005-0-23 AND B-006-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:14:56 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL007.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/17/23 END: 11/17/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 603+60 / 0'  
 ALIGNMENT: CL WALL 6  
 ELEVATION: 969.0 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088248, -82.842572

EXPLORATION ID  
**B-007-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, BROWN TO BROWNISH GRAY SILTY CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.

ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
969.0	1	5	17	83	SS-1	4.5+	4	10	13	31	42	34	18	16	21	A-6b (10)
968.6	2	5	7													
	3															
	4	12	42	36	SS-2	4.5+	-	-	-	-	-	-	-	-	16	A-6b (V)
	5	15														
	6	8	12	40	100	SS-3	4.5+	-	-	-	-	-	-	-	12	A-6b (V)
	7	16														
	8															
	9	9	27	0	SS-4	-	-	-	-	-	-	-	-	-	-	
	10	10														
	11	22	-	100	2S-4A	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)
	12	8	23	78	SS-5	4.5+	-	-	-	-	-	-	-	-	13	A-6b (V)
	13															
956.0	14	12	56	83	SS-6	-	-	-	-	-	-	-	-	-	7	A-1-b (V)
	15	19	20													
	16	13	43	83	SS-7	-	24	39	15	12	10	NP	NP	12	A-1-b (0)	
	17	17														
	18															
	19	15	75	100	SS-8	-	-	-	-	-	-	-	-	-	14	A-1-b (V)
	20	16	36													
948.5	21															
948.0	22															
	23															
	24	5	7	22	44	SS-10	-	-	-	-	-	-	-	-	17	A-1-b (V)
944.0	25	8														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 13.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/17/23 END: 11/17/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 605+28 / 0'  
 ALIGNMENT: CL WALL 6  
 ELEVATION: 970.0 (MSL) EOB: 27.5 ft.  
 LAT / LONG: 40.088448, -82.842015

EXPLORATION ID  
**B-008-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
 HARD BROWN TO BROWN/GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.

ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
969.7	1	10	46	75	SS-1	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)
	2	14	18													
	3															
	4	10	45	61	SS-2	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)
	5	21														
	6	13	46	0	SS-3	-	-	-	-	-	-	-	-	-	-	
	7	16	16													
	8	28	-	67	2S-3A	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)
	9	5	24	69	SS-4	4.5+	13	11	16	30	30	16	14	2	10	A-4a (5)
	10	10														
	11	5	48	78	SS-5	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)
	12	24														
957.0	13															
	14	29	82	0	SS-6	-	-	-	-	-	-	-	-	-	-	
	15	29	28													
	16	10	49	44	SS-7	-	-	-	-	-	-	-	-	-	9	A-1-b (V)
	17	17	17													
952.0	18															
	19	6	23	36	SS-8	4.5+	27	10	13	27	23	24	14	10	10	A-4a (3)
	20	8	8													
949.9	21															
949.0	22	10	7	20	44	SS-9	3.50	-	-	-	-	-	-	-	12	A-4a (V)
	23															
947.0	24	3	4	12	69	SS-10	-	-	-	-	-	-	-	-	17	A-3a (V)
	25	4	4													
	26	3	6	23	100	SS-11	-	-	-	-	-	-	-	-	20	A-3a (V)
942.5	27	10														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND UPON COMPLETION @ 20.1'; CAVE-IN DEPTH @ 13.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
**35 66**  
 SHEET TOTAL  
**P.266 297**

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 6  
 BORING LOGS B-007-0-23 AND B-008-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:15:19 PM USER: jluans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL008.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/2/23 END: 11/2/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2192+50 / 123' RT  
 ALIGNMENT: CL SR 161  
 ELEVATION: 960.9 (MSL) EOB: 25.5 ft.  
 LAT / LONG: 40.086999, -82.844104

EXPLORATION ID  
**B-009-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
 HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.

-COBBLES @ 4.0'

DENSE TO VERY DENSE, LIGHT BROWN SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP.

MEDIUM DENSE TO VERY DENSE, DARK GRAY TO GRAY GRAVEL WITH SAND AND SILT, MOIST.

DENSE TO VERY DENSE, GRAY SILTY SAND, TRACE CLAY, TRACE FINE GRAVEL, MOIST.

ELEV.  
 960.9  
 960.6

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	5					
2	8	SS-1	4.5+		13	A-6a (V)
3	13					
4	22	SS-2	4.5+		8	A-6a (V)
5	50/3'					
6	9					
7	15	SS-3	-		7	A-4a (V)
8	19					
9	24					
10	26	SS-4	-		10	A-4a (V)
11	26					
12	10	SS-5	-		7	A-2-4 (V)
13	8					
14	11	SS-6	-		11	A-2-4 (V)
15	13					
16	15					
17	18	SS-7	-		20	A-2-4 (V)
18	18					
19	10					
20	14	SS-8	-		10	A-2-4 (V)
21	14					
22	12					
23	20	SS-9	-		9	A-4a (V)
24	20					
25	5	SS-10	-			
	9					
	13					
	21	2S-10A	-		7	A-4a (V)

EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 12.0' AND UPON COMPLETION @ 10.3'; CAVE-IN DEPTH @ 19.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2194+49 / 112' RT  
 ALIGNMENT: CL SR 161  
 ELEVATION: 961.8 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087252, -82.843476

EXPLORATION ID  
**B-010-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
 HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.

-COBBLES FROM 3.8' - 4.5'

MEDIUM DENSE TO DENSE, BROWN GRAVEL WITH SAND AND SILT, WET.

ELEV.  
 961.8  
 961.5

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	8					
2	12	SS-1	4.5+		16	A-6a (V)
3	12					
4	15					
5	45	SS-2	4.5+		10	A-6a (V)
6	18					
7	11					
8	9					
9	26	SS-3	-	44	16 10 27 19 8	7 A-2-4 (0)
10	9					
11	11	SS-4	-			8 A-2-4 (V)
12	12					
13	6					
14	8	SS-5	-			
15	11					
16	7	2S-5A	-			19 A-2-4 (V)
17	10					
18	10	SS-6	-			
19	29					
20	10					
21	5	2S-6A	-			15 A-2-4 (V)
22	7					
23	8	SS-7	4.5+			14 A-4a (V)
24	26					
25	10					
26	8					
27	30	SS-8	4.5+			12 A-4a (6)
28	13					
29	9					
30	16	SS-8	4.5+			13 A-4a (V)
31	17					
32	10					
33	15					
34	40	SS-10	4.5+			14 A-4a (V)

EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 12.5' AND UPON COMPLETION @ 11.2'; CAVE-IN DEPTH @ 13.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 36 66  
 SHEET TOTAL  
 P.267 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT**

**BORING LOGS B-009-0-23 AND B-010-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:15:43 PM USER: jluans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL009.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2196+50 / 111' RT  
 ALIGNMENT: CL SR 161  
 ELEVATION: 964.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087493, -82.842814

EXPLORATION ID  
**B-011-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (3.5')  
 STIFF TO HARD, BROWN TO GRAY SILT AND CLAY, "AND" COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

LOOSE TO DENSE, BROWN GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, WET.

-HEAVE @ 21.0' AND 23.0'

SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)								WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI				
5	7	23	53	4.5+	-	-	-	-	-	-	-	-	21	A-6a (V)	
7	9														
9	10	27	61	4.5+	-	-	-	-	-	-	-	-	13	A-6a (V)	
10															
6	6	17	81	4.5+	17	11	15	30	27	16	11	12	A-6a (5)		
4															
5	5	19	89	3.75	-	-	-	-	-	-	-	-	14	A-6a (V)	
8															
2	3	12	56	2.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
3	5														
1	2	9	53	1.25	-	-	-	-	-	-	-	-	15	A-6a (V)	
2	4														
3	6	19	39	-	-	-	-	-	-	-	-	-	20	A-1-b (V)	
6	7														
2	2	9	67	SS-8	-	68	17	1	5	NP	NP	22	A-1-b (0)		
4															
5	9	29	100	SS-9	-	-	-	-	-	-	-	-	14	A-1-b (V)	
11															
7	10	35	100	SS-10	-	-	-	-	-	-	-	-	12	A-1-b (V)	
14															

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 7.8'. CAVE-IN DEPTH @ 13.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 800+72 / 117' RT  
 ALIGNMENT: CL SR 161  
 ELEVATION: 967.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087734, -82.842176

EXPLORATION ID  
**B-012-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0')  
 HARD, LIGHT BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

-COBBLES FROM 4.8' - 5.2'  
 -AUGER REFUSAL @ 5.2'. OFFSET 7.0' SW, CONTINUED SAMPLING AT 6.0'

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

HARD, BROWN SANDY SILT, LITTLE CLAY, TRACE FINE GRAVEL, MOIST.

SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)								WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI				
5	6	22	53	4.5+	-	-	-	-	-	-	-	-	18	A-6a (V)	
6	9														
14	16	63	72	4.5+	-	-	-	-	-	-	-	-	10	A-6a (V)	
28															
11	13	42	78	4.5+	8	10	15	33	34	30	17	13	A-6a (8)		
16															
20	28	63	47	SS-4	-	-	-	-	-	-	-	-	10	A-6a (V)	
16															
5	18	43	33	SS-5	4.5+	-	-	-	-	-	-	-	11	A-6a (V)	
12															
7	14	46	53	SS-6	-	46	21	8	18	7	NP	NP	8	A-1-b (0)	
18															
15	15	40	72	SS-7	-	-	-	-	-	-	-	-	8	A-1-b (V)	
10															
17	18	52	61	SS-8	-	-	-	-	-	-	-	-	11	A-1-b (V)	
18															
18	18	86	50	SS-9	4.5+	-	-	-	-	-	-	-	11	A-4a (V)	
26															
6	9	30	47	SS-10	4.5+	-	-	-	-	-	-	-	11	A-4a (V)	
12															

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 14.9'. CAVE-IN DEPTH @ 18.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
 RESOURCE INTERNATIONAL, INC.  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 37 66  
 SHEET TOTAL  
 P.268 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 8  
 BORING LOGS B-011-0-23 AND B-012-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:16:06 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL010.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 802+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 967.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087953, -82.841539

EXPLORATION ID  
**B-013-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, LIGHT BROWN TO BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, GRAY COARSE AND FINE SAND, TRACE FINE GRAVEL, TRACE SILT, DAMP.

MEDIUM DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, MOIST.

-AUGER LOST IN BORING @ 18.5' - 23.5'

SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI			
5	7	24	61	4.5+	-	-	-	-	-	-	-	-	15	A-6a (V)
10	10	33	58	4.5+	-	-	-	-	-	-	-	-	14	A-6a (V)
13	11	30	100	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)
11	8	27	61	4.5+	8	16	35	32	28	15	13	12	12	A-6a (8)
11	10	84	64	SS-5	-	-	-	-	-	-	-	-	5	A-3a (V)
17	18	45	33	SS-6	-	-	-	-	-	-	-	-	6	A-3a (V)
15	5	27	61	SS-7	-	-	-	-	-	-	-	-	12	A-2-4 (V)
11	14	55	47	SS-8	-	-	-	-	-	-	-	-	9	A-2-4 (V)
24	9	32	44	SS-9	65	10	6	12	7	23	16	7	11	A-2-4 (0)
10	23	63	47	SS-10	-	-	-	-	-	-	-	-	10	A-2-4 (V)

ELEV. 967.4, 967.0, 956.9, 951.9, 942.4 EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 14.2'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/6/23 END: 11/2/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 804+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 966.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088209, -82.840922

EXPLORATION ID  
**B-014-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' TOPSOIL (5.5")  
 HARD, LIGHT BROWN TO GRAY SILTY CLAY LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, GRAY GRAVEL WITH SAND AND SILT, WET.

MEDIUM DENSE, GRAY SANDY SILT, TRACE CLAY, TRACE FINE GRAVEL, MOIST.

SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI			
3	3	13	72	4.5+	-	-	-	-	-	-	-	-	21	A-6b (V)
6	5	17	47	4.5+	8	6	12	34	40	19	21	15	15	A-6b (12)
7	4	22	53	4.5+	-	-	-	-	-	-	-	-	15	A-6b (V)
9	16	35	64	SS-4	4.5+	-	-	-	-	-	-	-	12	A-6b (V)
10	5	19	72	SS-5	4.25	-	-	-	-	-	-	-	12	A-6b (V)
5	8	43	33	SS-6	-	-	-	-	-	-	-	-	15	A-2-4 (V)
14	8	23	61	SS-7	43	25	11	13	8	28	20	8	12	A-2-4 (0)
8	6	24	78	SS-8	-	-	-	-	-	-	-	-	10	A-2-4 (V)
9	8	26	36	SS-9	-	-	-	-	-	-	-	-	13	A-2-4 (V)
10	5	22	39	SS-10	-	-	-	-	-	-	-	-	19	A-4a (V)

ELEV. 966.4, 965.9, 953.4, 943.4, 941.4 EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 13.5' AND UPON COMPLETION @ 11.8'; CAVE-IN DEPTH @ 12.3'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 38 66  
 SHEET TOTAL  
 P.269 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 8  
 BORING LOGS B-013-0-23 AND B-014-0-23**



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:16:30 PM USER: juans  
 J:\GEOtech\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL01.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 806+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 966.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088482, -82.840308

EXPLORATION ID  
**B-015-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.7' -TOPSOIL (8.0")  
 VERY STIFF, BROWNISH GRAY TO GRAY SILTY CLAY,  
 SOME COARSE TO FINE SAND, TRACE GRAVEL AND  
 SAND, DAMP TO MOIST.

DEPTHS	ELEV.	SPT/ RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1	966.5	3														
2	965.8	4	12	SS-1	3.50	-	-	-	-	-	-	-	-	19	A-6b (V)	
3		4														
4		10	59	SS-2	4.00	-	-	-	-	-	-	-	-	13	A-6b (V)	
5		11														
6		8	11	SS-3	3.50	16	8	13	33	30	34	18	16	13	A-6b (8)	
7		13														
8																
9		9	6	SS-4	3.50	-	-	-	-	-	-	-	-	13	A-6b (V)	
10		8														
11		6	6	SS-5	3.50	-	-	-	-	-	-	-	-	13	A-6b (V)	
12		10														
13																
14	951.0	6	7	SS-6	3.50	-	-	-	-	-	-	-	-	12	A-6b (V)	
15		5														
16		17	30	SS-7	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
17		25														
18																
19		19	24	SS-8	-	42	13	8	24	13	26	17	9	10	A-4a (0)	
20		26														
21																
22		10	18	SS-9	-	-	-	-	-	-	-	-	-	11	A-4a (V)	
23		14														
24	941.5	9	15	SS-10	-	-	-	-	-	-	-	-	-	9	A-4a (V)	
25		17														

NOTES: SEEPAGE @ 14.0'. GROUNDWATER INITIALLY ENCOUNTERED @ 15.0' AND UPON COMPLETION @ 10.0'. CAVE-IN DEPTH @ 14.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 808+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 968.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088693, -82.839666

EXPLORATION ID  
**B-016-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.6' -TOPSOIL (7.0")  
 VERY STIFF TO HARD, LIGHT BROWN TO BROWN SILT  
 AND CLAY, SOME COARSE TO FINE GRAVEL, LITTLE  
 FINE GRAVEL, DAMP TO MOIST.

DEPTHS	ELEV.	SPT/ RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1	968.4	5														
2	967.8	5	14	SS-1	4.5+	-	-	-	-	-	-	-	-	15	A-6a (V)	
3		5														
4		8	24	SS-2	4.5+	-	-	-	-	-	-	-	-	13	A-6a (V)	
5		9														
6		11	33	SS-3	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)	
7		12														
8																
9		8	37	SS-4	4.5+	14	11	15	33	27	28	16	12	10	A-6a (6)	
10		13														
11		7	20	SS-5	3.00	-	-	-	-	-	-	-	-	13	A-6a (V)	
12		7														
13																
14	954.6	5	11	SS-6	3.00	-	-	-	-	-	-	-	-	13	A-6a (V)	
15		9														
16	952.9	12	35	SS-7	-	50	23	9	12	6	23	17	6	10	A-1-b (0)	
17		12														
18		11	26	SS-8	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	
19		9														
20																
21		16	48	SS-9	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
22		17														
23																
24	943.4	13	31	SS-10	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
25		32														

NOTES: SEEPAGE @ 17.5'. GROUNDWATER INITIALLY ENCOUNTERED @ 18.0' AND UPON COMPLETION @ 13.8'. CAVE-IN DEPTH @ 21.0'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT.GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT.GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 39 66  
 SHEET TOTAL  
 P.270 297

GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 8  
 BORING LOGS B-015-0-23 AND B-016-0-23



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:16:54 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL012.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 810+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 970.7 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088908, -82.839020

EXPLORATION ID  
**B-017-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0')

HARD TO VERY STIFF, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP TO MOIST.

DEPTHS	ELEV.	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	ID	HP (tsf)	GRADATION (%)							ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
							GR	CS	FS	SI	CL	LL	PL	PI	LL	PL			
1	970.3	6																	
2	970.3	9	30	81	SS-1	4.5+												17	A-6a (V)
3	970.3	12																	
4	970.3	20	60	36	SS-2	4.5+												11	A-6a (V)
5	970.3	22	20																
6	970.3	12	32	89	SS-3	4.5+												10	A-6a (6)
7	970.3	11	11																
8	970.3																		
9	970.3	7	10	36	SS-4	4.5+												13	A-6a (V)
10	970.3	15																	
11	970.3	5	16	33	SS-5	4.00												11	A-6a (V)
12	970.3	6																	
13	970.3																		
14	970.3	5	24	44	SS-6	3.50												10	A-6a (V)
15	970.3	12																	
16	955.2	10	39	53	SS-7	-												7	A-2-4 (V)
17	955.2	12	15																
18	955.2	15																	
19	955.2	10	50	78	SS-8	-	45	15	12	22	6	NP	NP	NP	11	A-2-4 (0)			
20	955.2	15																	
21	955.2	15	84	100	SS-9	-												9	A-2-4 (V)
22	955.2	30	28																
23	955.2																		
24	945.7	13	62	69	SS-10	-												7	A-2-4 (V)
25	945.7	17	26																

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.0'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G\8\PROJECTS\2023\W-23-107 GPJ

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 812+76 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 975.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089106, -82.838365

EXPLORATION ID  
**B-018-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0')

VERY STIFF TO HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, BROWN-GRAY TO GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTHS	ELEV.	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	ID	HP (tsf)	GRADATION (%)							ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
							GR	CS	FS	SI	CL	LL	PL	PI	LL	PL			
1	975.1	6																	
2	975.1	10	32	58	SS-1	4.5+												14	A-4a (V)
3	975.1	12																	
4	975.1	12	46	92	SS-2	4.5+												10	A-4a (V)
5	975.1	13	19																
6	975.1	17	40	92	SS-3	4.5+												13	A-4a (V)
7	975.1	13	15																
8	975.1																		
9	975.1	8	29	94	SS-4	4.5+												11	A-4a (V)
10	975.1	9	11																
11	975.1	7	23	72	SS-5	3.25	13	11	15	35	26	24	15	9	12	A-4a (5)			
12	975.1	8	8																
13	975.1																		
14	975.1	6	24	89	SS-6	3.25	-											12	A-4a (V)
15	975.1	8	9																
16	975.1	3	13	81	SS-7	2.50	-											12	A-4a (V)
17	975.1	4	5																
18	975.1																		
19	975.1	8	39	58	SS-8	-	61	15	8	11	5	26	20	6	8	A-1-b (0)			
20	975.1	13	14																
21	975.1	11	91	0	SS-9	-													
22	975.1	29	34																
23	953.0	38	-	100	2S-9A	-												8	Rock (V)
24	953.0	28	50/3'	89	SS-10	-												5	Rock (V)
25	950.5																		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 18.4'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G\8\PROJECTS\2023\W-23-107 GPJ

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 40 66  
 SHEET TOTAL  
 P.271 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 8  
 BORING LOGS B-017-0-23 AND B-018-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:17:48 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL013.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 814+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 974.9 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089329, -82.837734

EXPLORATION ID  
**B-019-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0")

HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE, BROWN GRAVEL WITH SAND AND SILT, MOIST.

VERY STIFF TO HARD, GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTH	ELEV.	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	BACK FILL
							GR	CS	FS	SI	CL	LL	PL			
1	974.9	7														
2	974.6	9	26	83	SS-1	4.5+									16	A-6a (V)
3																
4		8	40	94	SS-2	4.5+									10	A-6a (V)
5	969.4	16														
6		4	7	14	61	SS-3	-								10	A-2-4 (V)
7		3														
8																
9		3	5	16	100	SS-4	4.25	12	11	17	35	25	24	14	10	A-4a (5)
10		6														
11		4	5	16	56	SS-5	2.50	-	-	-	-	-	-	-	12	A-4a (V)
12		6														
13																
14		6	8	26	44	SS-6	2.50	-	-	-	-	-	-	-	12	A-4a (V)
15		10														
16		5	6	22	89	SS-7	3.50	-	-	-	-	-	-	-	13	A-4a (V)
17		9														
18	956.9															
19		10	12	39	47	SS-8	-	53	18	10	13	6	24	18	6	A-1-b (0)
20		15														
21	953.9	8	9	24	56	SS-9	-	-	-	-	-	-	-	-	10	A-1-b (V)
22																
23	951.9															
24		50/5"													9	Rock (V)
25	949.9															

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 17.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/27/23 END: 10/27/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 816+46 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 974.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089531, -82.837178

EXPLORATION ID  
**B-020-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' - TOPSOIL (4.5")

HARD, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTH	ELEV.	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	BACK FILL
							GR	CS	FS	SI	CL	LL	PL			
1	974.3	5														
2	973.9	5	17	44	SS-1	4.5+									16	A-6a (V)
3																
4		6	10	36	11	SS-2	4.5+	-	-	-	-	-	-	-	13	A-6a (V)
5		15														
6		10	35	58	SS-3	4.5+	8	10	15	34	33	29	17	12	12	A-6a (7)
7		14														
8																
9		9	27	58	SS-4	4.5+	-	-	-	-	-	-	-	-	11	A-6a (V)
10		10														
11		4	6	20	58	SS-5	4.5+	-	-	-	-	-	-	-	11	A-6a (V)
12		8														
13																
14		4	6	20	56	SS-6	4.5+	11	15	34	29	26	15	11	10	A-6a (6)
15		8														
16		4	16	45	56	SS-7	4.5+	-	-	-	-	-	-	-	11	A-6a (V)
17		15														
18	956.3															
19		50/5"													9	Rock (V)
20																
21		50/5"													4	Rock (V)
22																
23																
24		50/6"													4	Rock (V)
25	949.3															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 17.2'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 41 66  
 SHEET TOTAL  
 P.272 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 8  
 BORING LOGS B-019-0-23 AND B-020-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:17:42 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\_ZL014.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 10/27/23 END: 10/27/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 818+03 / 0'  
ALIGNMENT: CL WALL 8  
ELEVATION: 974.1 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.089729, -82.836617

EXPLORATION ID  
**B-021-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (3.0")  
HARD, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)					WC	ODOT CLASS (GI)
						FS	SI	CL	LL	PL		
1	974.1	6										
2	973.8	8										
3		8										
4		17										
5		19										
6		10										
7		12										
8		12										
9		9										
10		12										
11		9										
12		10										
13		13										
14		6										
15		7										
16		12										
17		12										
18		12										
19	955.9	9										
20		50/3"										
21		39										
22		50/2"										
23		50/3"										
24	949.1	50/3"										
25												

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 19.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 10/30/23 END: 10/30/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1100+00 / 0'  
ALIGNMENT: CL WALL 11  
ELEVATION: 975.0 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090031, -82.835639

EXPLORATION ID  
**B-022-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
VERY STIFF TO HARD, BROWN SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)					WC	ODOT CLASS (GI)
						FS	SI	CL	LL	PL		
1	974.7	9										
2		14										
3		17										
4		11										
5		14										
6		17										
7		8										
8		24										
9		8										
10		9										
11		3										
12		3										
13		4										
14		5										
15		7										
16		8										
17		14										
18		15										
19		5										
20		9										
21	954.6	50/3"										
22		33										
23												
24	950.0	45										
25		50/3"										

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 9.7'; CAVE-IN DEPTH @ 17.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
42 / 66

SHEET TOTAL  
P.273 / 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALLS 8 AND 11  
BORING LOGS B-021-0-23 AND B-022-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:18:06 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL015.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/30/23 END: 10/30/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1102+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 977.0 (MSL) EOB: 24.5 ft.  
 LAT / LONG: 40.090244, -82.835195

EXPLORATION ID  
**B-023-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)						WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL		
1	7										
2	10		4.5+								
3	12										
4	6			11	16	39	26	25	16	9	14 A-4a (6)
5	6										
6	4										
7	5		4.00								10 A-4a (V)
8	8										
9	4										
10	5		3.50								13 A-4a (V)
11	9										
12	42										4 Rock (V)
13	50/3"		100								
14	50/3"		100								5 Rock (V)
15	0		0								CORE
16											
17	0		35								CORE
18											
19											
20											
21											
22	0		100								CORE
23											
24											

0.3' TOPSOIL (4.0')  
 VERY STIFF TO HARD, BROWN TO GRAY SANDY SILT,  
 SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : BLACK, HIGHLY WEATHERED, WEAK, VERY FINE GRAINED, LAMINATED, HIGHLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, VERY POOR SURFACE.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 16.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

<p><b>Photo No.</b> 6</p>	
<p><b>Boring:</b> B-023-0-23</p>	<p>RC-1: 14.4-15.0'                  REC (%):0                  RQD (%):0</p>
<p>RC-2: 15.0-19.5'                  REC (%):35                  RQD (%):0</p>	



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:18:25 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1016.dgn

<b>Project Name:</b> FRA-161-15.80		<b>Location:</b> Franklin County, Ohio
<b>Photo No.</b> 7		
<b>Boring:</b> B-023-0-23		
RC-3: 19.5'-24.5' REC (%):100 RQD (%):0		



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:18:38 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL017.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ

DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC

ALIGNMENT: CL WALL 11  
ELEVATION: 979.6 (MSL) EOB: 25.0 ft.

STATION / OFFSET: 1104+00 / 0'

EXPLORATION ID  
**B-024-0-23**

**MATERIAL DESCRIPTION AND NOTES**

0.1' - TOPSOIL (1.0')

HARD, BROWN CLAY, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

VERY STIFF TO HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.

DENSE TO VERY DENSE, GRAY TO BLACK GRAVEL WITH SAND AND SILT, LITTLE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI				
1	5														
2	5	19	47	4.5+										19	A-7-6 (V)
3	8														
4	10	37	78	4.5+										17	A-7-6 (13)
5	16														
6	17	28	78	4.5+										9	A-6a (V)
7	26														
8															
9	28	18	43	33	4.5+									13	A-6a (V)
10	12														
11	5	6	16	36	2.50									10	A-6a (V)
12															
13															
14	10	17	55	67	SS-6									8	A-2-4 (V)
15	21														
16	10	14	42	92	SS-7									7	A-2-4 (V)
17	15														
18															
19	6	14	45	75	SS-8									11	A-2-4 (0)
20	17														
21	6	11	-	75	SS-9									10	A-2-4 (V)
22	50/4"														
23															
24	50/6"													3	Rock (V)
25															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 18.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ

DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC

ALIGNMENT: CL WALL 11  
ELEVATION: 980.2 (MSL) EOB: 25.0 ft.

STATION / OFFSET: 1106+00 / 0'

EXPLORATION ID  
**B-025-0-23**

**MATERIAL DESCRIPTION AND NOTES**

0.2' - TOPSOIL (1.5')

HARD BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

DENSE TO VERY DENSE, BROWN GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP TO MOIST.

-SHALE FRAGMENTS PRESENT THROUGHOUT

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI				
1	4														
2	5	17	50	4.5+										20	A-6a (V)
3	7														
4	8	12	42	61	4.5+									14	A-6a (V)
5	17														
6	12	17	55	61	SS-3									8	A-6a (6)
7	21														
8															
9	10	13	39	64	SS-4									10	A-6a (V)
10	14														
11	18	21	69	83	SS-5									8	A-2-4 (V)
12	27														
13															
14	9	12	39	78	SS-6									6	A-2-4 (0)
15	15														
16	14	21	71	64	SS-7									7	A-2-4 (V)
17	28														
18															
19	12	22	75	39	SS-8									7	A-2-4 (V)
20	30														
21	12	16	42	61	SS-9									14	A-2-4 (V)
22	13														
23															
24	8	15	46	61	SS-10									11	A-2-4 (V)
25	17														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 15.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
45 / 66

SHEET TOTAL  
P.276 / 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALL 11  
BORING LOGS B-024-0-23 AND B-025-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:19:02 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL018.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 10/31/23 END: 10/31/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1108+00 / 0'  
ALIGNMENT: CL WALL 11  
ELEVATION: 979.8 (MSL) EOB: 25.5 ft.  
LAT / LONG: 40.090906, -82.833225

EXPLORATION ID  
**B-026-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
VERY STIFF TO HARD, LIGHT BROWN SILTY CLAY, "AND" FINE TO COARSE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, BROWN TO DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

DENSE, GRAY TO BLACK GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

-SHALE FRAGMENTS PRESENT THROUGHOUT

DEPTH (ft)	SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
					GR	CS	FS	SI	CL	LL	PL	PI			
1	4														
2	5	26	SS-1	4.5+										17	A-6b (V)
3	13														
4	18	49	SS-2	4.5+										19	A-6b (V)
5	16														
6	9	13	SS-3	4.5+										12	A-6b (V)
7	15														
8															
9	4	4	SS-4	4.00	19	24	12	23	22	36	19	17	14	A-6b (4)	
10	4														
11	3	4	SS-5	-										20	A-2-4 (V)
12	4	13	SS-5	-											
13	5														
14	14	45	SS-6	-											
15	16		2S-6A	-										11	A-2-4 (V)
16	7														
17	14	35	SS-7	-										10	A-2-4 (V)
18	10														
19	9	33	SS-8	-											
20	14		2S-8A	-										14	A-1-b (V)
21	12	46	SS-9	-	50	20	11	11	8	24	18	6	10	A-1-b (0)	
22	17														
23															
24	11	39	SS-10	-											
25	13														
EOB	8		2S-10A	-										15	A-1-b (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 13.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1110+00 / 0'  
ALIGNMENT: CL WALL 11  
ELEVATION: 981.5 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.091062, -82.832539

EXPLORATION ID  
**B-027-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (3.5")  
HARD LIGHT BROWN SILT AND CLAY LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP.

LOOSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE TO LITTLE CLAY, DAMP.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTH (ft)	SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
					GR	CS	FS	SI	CL	LL	PL	PI			
1	7														
2	13	46	SS-1	4.5+										11	A-6a (V)
3	19														
4	11	40	SS-2	4.5+										12	A-6a (V)
5	15														
6	13	45	SS-3	4.5+										11	A-6a (V)
7	16														
8	15														
9	8	17	SS-4	4.5+										12	A-6a (V)
10	5	7													
11	3	9	SS-5	-										14	A-2-4 (V)
12	3														
13															
14	4	13	SS-6	-	35	20	14	19	12	29	19	10	14	A-2-4 (0)	
15	4	5													
16	7	49	SS-7	-										8	A-2-4 (V)
17	16														
18	18														
19	6	30	SS-8	-	54	20	8	13	5	28	18	10	10	A-2-4 (0)	
20	12														
21	12	55	SS-9	-										12	A-2-4 (V)
22	14	24													
23	TR														
24	23		SS-10	-	27									4	Rock (V)
EOB	50/5'														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 16.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET  
46 / 66

SHEET  
P.277 / 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALL 11  
BORING LOGS B-026-0-23 AND B-027-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:19:25 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL019.dgn

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1112+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 982.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091197, -82.831841

EXPLORATION ID  
**B-028-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0")  
 VERY STIFF TO HARD, BROWNISH GRAY TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, GRAY TO BROWN COARSE AND FINE SAND, SOME SILT, TRACE CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
982.2	1	6													
981.9	2	8	26	64	SS-1	4.5+	-	-	-	-	-	-	18	A-6a (V)	
	3	10													
	4	11	48	83	SS-2	4.5+	-	-	-	-	-	-	11	A-6a (V)	
	5	15													
	6	18													
	7	10	36	72	SS-3	4.5+	10	13	31	29	31	17	14	A-6a (7)	
	8	14													
	9	4	23	58	SS-4	3.00	-	-	-	-	-	-	14	A-6a (V)	
971.7	10	10													
	11	23	40	64	SS-5	-	-	-	-	-	-	-	14	A-3a (V)	
	12	13													
	13	15													
	14	5	23	100	SS-6	-	1	32	38	22	7	NP NP	3	A-3a (0)	
	15	8													
966.2	16	40											4	Rock (V)	
	17	50/2"													
	18														
	19	50/5"											4	Rock (V)	
	20														
	21	50/2"													
	22														
	23														
	24	50/0"													
957.2	25														

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 15.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1114+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 983.0 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091321, -82.831138

EXPLORATION ID  
**B-029-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0")  
 HARD TO VERY STIFF BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.


MEDIUM STIFF TO VERY STIFF, BLACK TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

VERY DENSE DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.  
 -SHALE FRAGMENTS IN SS-10

ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
982.7	1	3													
	2	5	20	53	SS-1	4.5+	-	-	-	-	-	-	17	A-6a (V)	
	3	9													
	4	4	20	81	SS-2	4.5+	-	-	-	-	-	-	16	A-6a (V)	
	5	8													
	6	4	24	89	SS-3	4.5+	-	-	-	-	-	-	14	A-6a (V)	
	7	7													
	8	10													
	9	4	17	61	SS-4	4.5+	19	11	14	34	22	15	11	A-6a (5)	
	10	5													
	11	3	14	81	SS-5	2.50	-	-	-	-	-	-	14	A-6a (V)	
	12	7													
	13														
	14	2	10	42	SS-6	2.00	-	-	-	-	-	-	14	A-6a (V)	
967.5	15	4													
	16	4	23	56	SS-7	3.00	-	-	-	-	-	-	9	A-4a (V)	
	17	7													
	18	9													
	19	2	7	56	SS-8	2.25	12	15	16	34	23	15	10	A-4a (4)	
	20	3													
	21	1	4	33	SS-9	0.75	-	-	-	-	-	-	14	A-4a (V)	
	22	2													
960.0	23	8	60	83	SS-10	-	-	-	-	-	-	-	10	A-24 (V)	
958.0	24	19													
	25	23													

NOTES: SEEPAGE @ 22.4' - 25.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 13.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
 47 66  
 SHEET TOTAL  
 P.278 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 11  
 BORING LOGS B-028-0-23 AND B-029-0-23**



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:19:47 PM USER: juans J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL020.dgn

RESOURCE INTERNATIONAL, INC.

PROJECT: FRA-161-15.80 NOISE WALLS		DRILLING FIRM / OPERATOR: RII / TG		STATION / OFFSET: 1115+84 / 0'		EXPLORATION ID B-030-0-23	
TYPE: NOISE WALLS		SAMPLING FIRM / LOGGER: RII / MJ		ALIGNMENT: CL WALL 11		PAGE 1 OF 1	
PID: 117607 SFN: NA		DRILLING METHOD: 3.25" HSA		ELEVATION: 983.0 (MSL) EOB: 25.0 ft.			
START: 11/1/23 END: 11/1/23		SAMPLING METHOD: SPT		LAT / LONG: 40.091378, -82.830480			
MATERIAL DESCRIPTION AND NOTES							
0.4' TOPSOIL (5.0')		ELEV. 983.0		SPT / RQD		GRADATION (%)	
VERY STIFF TO HARD, BROWN TO DARK BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.		982.6		1 3		GR CS FS SI CL LL PL PI WC	
				2 6		- - - - -	
				3 9		- - - - -	
				4 20		11 15 35 30 17 13	
				5 8		- - - - -	
				6 4		- - - - -	
				7 12		- - - - -	
				8 4		- - - - -	
				9 5		- - - - -	
				10 7		- - - - -	
				11 2		- - - - -	
				12 3		- - - - -	
				13 5		- - - - -	
				14 2		11 14 32 23 27 15 12	
				15 5		- - - - -	
				16 2		- - - - -	
				17 4		- - - - -	
				18 5		- - - - -	
VERY DENSE, DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.		985.0		19 8		- - - - -	
				20 20		- - - - -	
				21 34		- - - - -	
				22 50/2'		- - - - -	
				23 50/3'		- - - - -	
				24 0		- - - - -	
				25 0		- - - - -	
SHALE : GRAY, HIGHLY WEATHERED.		958.0		26 0		- - - - -	
				27 0		- - - - -	
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				227 0		- - - - -	
				228 0			



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:20:08 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1021.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 902+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 975.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090809, -82.835481

EXPLORATION ID  
**B-032-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.

ELEV. 975.2  
 974.8

SPT/ RQD

GRADATION (%)

ATTERBERG

BACK FILL

DEPTH	ELEV.	SPT/ RQD	REC SAMPLE ID	HP (tsf)	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	
1		9												
2		14	40	SS-1	4.5+	-	-	-	-	-	-	12	A-6a (V)	
3		14												
4		8	24	SS-2	4.5+	9	10	19	34	28	11	11	A-6a (6)	
5		9												
6		7	20	SS-3	4.5+	-	-	-	-	-	-	12	A-6a (V)	
7		14												
8														
9		5	8	SS-4	4.5+	-	-	-	-	-	-	11	A-6a (V)	
10		9	24	SS-4	4.5+	-	-	-	-	-	-			
11														
12		5	7	SS-5	-	-	-	-	-	-	-	-		
13		12	22	SS-5	-	-	-	-	-	-	-	-		
14		6	8	SS-6	-	-	-	-	-	-	-	-		
15		12	24	SS-6	-	-	-	-	-	-	-	-		
16	959.5	4	9	SS-7	-	41	14	12	21	12	24	16	8	A-2-4 (0)
17		9	26	SS-7	-									
18	956.7													
19		8	10	SS-8	-	-	-	-	-	-	-	-	15	A-2-4 (V)
20	954.7	11	30	SS-8	-	-	-	-	-	-	-	-		
21		15	58	SS-9	-	-	-	-	-	-	-	-	16	A-2-4 (V)
22		22	18											
23		5	8	SS-10	-	-	-	-	-	-	-	-	13	A-2-4 (V)
24	950.2	12	29	SS-10	-	-	-	-	-	-	-	-		
25														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 15.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 904+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 977.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091043, -82.834836

EXPLORATION ID  
**B-033-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.

ELEV. 977.2  
 976.8

SPT/ RQD

GRADATION (%)

ATTERBERG

BACK FILL

DEPTH	ELEV.	SPT/ RQD	REC SAMPLE ID	HP (tsf)	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	
1		7												
2		12	37	SS-1	4.5+	-	-	-	-	-	-	12	A-4a (V)	
3		14												
4		10	29	SS-2	4.5+	-	-	-	-	-	-	12	A-4a (V)	
5		10												
6		8	20	SS-3	4.5+	-	-	-	-	-	-	12	A-4a (V)	
7		14	49	SS-3	4.5+	-	-	-	-	-	-			
8														
9		6	27	SS-4	4.5+	12	9	16	39	24	15	10	11	A-4a (6)
10		9	27	SS-4	4.5+									
11		6	7	SS-5	4.5+	-	-	-	-	-	-	-	12	A-4a (V)
12		7	8											
13														
14	964.2	7	13	SS-6	-	-	-	-	-	-	-	-	4	A-1-a (V)
15		12	36	SS-6	-	-	-	-	-	-	-	-		
16		8	33	SS-7	-	59	21	9	-	11	-	NP	7	A-1-a (0)
17		11												
18	959.2													
19		9	13	SS-8	-	-	-	-	-	-	-	-	12	A-2-4 (V)
20	956.7	12	36	SS-8	-	-	-	-	-	-	-	-		
21		17	15	SS-9	-	-	-	-	-	-	-	-	12	A-2-4 (V)
22		15	43	SS-9	-	-	-	-	-	-	-	-		
23		12	29	SS-10	-	-	-	-	-	-	-	-	18	A-2-4 (V)
24	952.2	10	29	SS-10	-	-	-	-	-	-	-	-		
25														

DENSE, GRAY TO BLACK GRAVEL, SOME FINE TO COARSE SAND, LITTLE SILT, MOIST.  
 -LIMESTONE FRAGMENTS IN SS-6

MEDIUM DENSE TO DENSE, DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.  
 -SHALE FRAGMENTS PRESENT THROUGHOUT

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 14.5'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 49 66  
 SHEET TOTAL  
 P.280 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 9  
 BORING LOGS B-032-0-23 AND B-033-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:20:31 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL022.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 906+00 / 0'  
ALIGNMENT: CL WALL 9  
ELEVATION: 979.3 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.091273, -82.834170

EXPLORATION ID  
**B-034-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
					GR	CS	FS	SI	CL	LL	PL	PI				
1	978.9	6														
2		10	SS-1	4.5+												A-6a (V)
3		13														
4		7														
5		8	SS-2	4.5+	11	10	15	38	26	30	18	12	14			A-6a (7)
6		10														
7		12	SS-3	4.5+												A-6a (V)
8		14														
9		9														
10	968.8	10	SS-4	4.5+												A-6a (V)
11		7														
12		15	SS-5	-												
13		20														
14		18	2S-5A	-												A-1-a (V)
15		20														
16		14	SS-6	-	74	10	6	-	10	NP	NP	NP	4			A-1-a (0)
17		10	SS-7	-												A-1-a (V)
18		12														
19		14	SS-8	-												A-1-a (V)
20		10														
21	958.8	6														
22		7	SS-9	-												A-2-4 (V)
23		10														
24		8														
25	954.3	11	SS-10	-												A-2-4 (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 908+00 / 0'  
ALIGNMENT: CL WALL 9  
ELEVATION: 981.4 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.091443, -82.833496

EXPLORATION ID  
**B-035-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
					GR	CS	FS	SI	CL	LL	PL	PI				
1	981.0	7														
2		9	SS-1	4.5+												A-6b (V)
3		12														
4		10														
5		15	SS-2	4.5+	13	8	13	38	28	34	18	16	12			A-6b (9)
6		17														
7		13	SS-3	4.5+												A-6b (V)
8		18														
9		20														
10		6	SS-4	4.5+												A-6b (V)
11		12														
12		8	SS-5	4.5+												A-6b (V)
13		9														
14	968.4	6														
15		7	SS-6	-												A-2-4 (V)
16	965.9	6														
17		13	SS-7	-												A-3a (V)
18		18														
19		10	SS-8	-	57	17	9	15	2	NP	NP	NP	8			A-1-b (0)
20	961.7	14														
21		5														
22		11	SS-9	-												A-1-b (V)
23		12														
24		18														
25	956.4	24	SS-10	-												A-1-b (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.7' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

DESIGN AGENCY  
**RESOURCE INTERNATIONAL, INC.**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
**50 66**

SHEET TOTAL  
**P.281 297**

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALL 9  
BORING LOGS B-034-0-23 AND B-035-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:20:53 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL023.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 910+00 / 0'  
ALIGNMENT: CL WALL 9  
ELEVATION: 983.2 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.091597, -82.832807

EXPLORATION ID  
**B-036-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTH (ft)	ELEV. (MSL)	SPT / RQD	REC SAMPLE ID	REC (%)	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (GI)	BACK FILL	
						GR	CS	FS	SI	CL	LL				PL
1	983.2	9													
2	982.8	10	SS-1	30	-										
3		11													
4		12	2S-1A	100	4.5+								20	A-6a (V)	
5		6													
6		11	SS-2	72	4.25									23	A-6a (V)
7		9													
8		9	SS-3	83	4.5+									16	A-6a (V)
9		7													
10		7	SS-4	100	4.5+									17	A-6a (V)
11		6													
12	970.2	7	SS-5	36	4.5+									13	A-6a (V)
13		7													
14		5	SS-6	39	-									12	A-6b (2)
15		7													
16		10													
17		10	SS-7	39	-										
18	964.7	17													
19		20													
20		11	SS-8	69	-									11	A-1-b (0)
21	962.2	13													
22		10	SS-9	76	0										
23		18													
24		12	2S-9A	-	100									23	A-2-6 (V)
25	958.2	17	SS-10	49	33									20	A-2-6 (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.3'  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 912+00 / 0'  
ALIGNMENT: CL WALL 9  
ELEVATION: 984.9 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.091724, -82.832101

EXPLORATION ID  
**B-037-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTH (ft)	ELEV. (MSL)	SPT / RQD	REC SAMPLE ID	REC (%)	HP (tsf)	GRADATION (%)						WC	ODOT CLASS (GI)	BACK FILL	
						GR	CS	FS	SI	CL	LL				PL
1	984.9	5													
2	984.5	7	SS-1	50	4.5+										
3		9													
4		4													
5		5	SS-2	17	100	4.5+									
6		4													
7		5	SS-3	20	72	4.5+								16	A-6b (11)
8		9													
9		6	SS-4	16	94	4.5+								19	A-6b (V)
10		5													
11		4	SS-5	13	61	3.50								18	A-6b (V)
12	971.9	4													
13		5													
14		4	SS-6	20	53	-								17	A-4a (V)
15		7													
16		3													
17		9	SS-7	32	0	-									
18	966.7	13													
19		16	SS-7A	-	75	-								13	A-4a (2)
20	965.1	16	SS-8	46	100	-								9	A-1-b (V)
21		9													
22		14	SS-9	42	0	-									
23		15													
24		12	SS-9A	-	100	-								16	A-2-4 (V)
25	959.9	15	SS-10	39	61	-								13	A-2-4 (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.8' AND UPON COMPLETION @ 18.2'; CAVE-IN DEPTH @ 19.0'  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
51 / 66

SHEET TOTAL  
P.282 / 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
NOISE WALL 9  
BORING LOGS B-036-0-23 AND B-037-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:21:15 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1024.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 12/5/23 END: 12/5/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 120+00 / 0'  
 ALIGNMENT: CL WALL 12  
 ELEVATION: 979.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091445, -82.828386

EXPLORATION ID  
**B-038-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION  
 AND NOTES**

DEPTH	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			ODOT CLASS (GI)	BACK FILL
					GR	CS	FS	SI	CL	LL	PL	PI		
1	979.3													
2	978.5	6												
3	978.2	7	SS-1	-										
4		9	2S-1A	4.5+										
5		7												
6		10	SS-2	4.5+										
7		20												
8		6												
9		6	SS-3	-										
10		9												
11		14	2S-3A	4.5+	17	9	10	32	32	39	18	21	14	A-6b (10)
12		5												
13		6	SS-4	4.5+										
14		9												
15	966.3	4												
16		5												
17		13	SS-5	4.00										
18		20												
19		7	SS-6	-										
20		13												
21		20												
22		14												
23		15	SS-7	4.5+	50	13	7	22	8	26	21	5	8	A-2-4 (0)
24		10												
25		9												
TR		18	SS-8	-										
EOB		5												
		6												
		8	SS-9	-										
		11												
		14	SS-10	-										
		11												
		11												

LOOSE TO MEDIUM DENSE, BROWN SANDY SILT, SOME FINE GRAVEL, LITTLE CLAY, MOIST.

LOOSE TO MEDIUM DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

VERY STIFF, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.

SHALE : BLACK, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 14.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS. PAVEMENT PATCHED WITH COLD PATCH ASPHALT.



6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 52 66

SHEET TOTAL  
 P.283 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 12  
 BORING LOGS B-038-0-23**







**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:21:50 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1026.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 123+26.79 / 0'  
 ALIGNMENT: CL WALL 12  
 ELEVATION: 987.0 (MSL) EOB: 21.0 ft.  
 LAT / LONG: 40.091207, -82.827079

EXPLORATION ID  
**B-040-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, BROWN TO GRAY SILT AND CLAY, LITTLE TO TRACE SAND AND GRAVEL, DAMP TO MOIST.

**SHALE** : GRAY, HIGHLY WEATHERED.

**SANDSTONE** : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.  
 -@14.3' IRON STAINING IN FRACTURE  
 -@15.0' - 15.2' ZONE OF FRACTURES  
 -@15.7' CLAY SEAM

**SHALE** : GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

**SILTSTONE** : GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, VERY FINE GRAINED, VERY THIN, HIGHLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, FAIR SURFACE.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
1	3											
2	6	20	4.5+								17	A-6a (V)
3	8											
4	7	23	4.5+								20	A-6a (V)
5	9											
6	4	20	4.5+	9	15	37	32	33	18	15	18	A-6a (9)
7	6	8										
8	4	20	4.5+								18	A-6a (V)
9	6	8										
10	8											
11	TR											
12	15										10	Rock (V)
13	50/3"											
14	50/3"										2	Rock (V)
15	0	37	NQ2-1									CORE
16												
17												
18	0	100	NQ2-2									CORE
19												
20												
21	EOB											

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER.

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 9

**Boring:**  
 B-040-0-23

RC-1: 14.0-16.0'  
 REC (%):37  
 RQD (%):0

RC-2: 16.0-21.0'  
 REC (%):100  
 RQD (%):0





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:22:09 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1027.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 124+97.00 / 0'  
 ALIGNMENT: CL WALL 12  
 ELEVATION: 988.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091033, -82.826474

EXPLORATION ID  
**B-041-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTH (ft)	ELEV.	SPT / RQD	REC SAMPLE ID	REC (%)	HP (tsf)	GRADATION (%)						WC	HOLE SEALED
						GR	FS	SI	CL	LL	PL		
1	988.2	4											
2	987.7	5											
3		7											
4		5											
5	982.7	10											
6		13											
7		32											
8	980.2	35											
9		10											
10		21											
11		29											
12		50/6"											
13		36											
14		50/5"											
15													
16	972.2												
17													
18		20											
19													
20													
21													
22		40											
23													
24													
25	963.2												

0.5' - TOPSOIL (5.5')  
 VERY STIFF, BROWN SILTY CLAY, SOME TO LITTLE SAND, LITTLE GRAVEL, MOIST.

VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : GRAY, MODERATELY TO SLIGHTLY WEATHERED, WEAK, FINE GRAINED, LAMINATED TO THIN BEDDED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, DISTURBED, SEAMY, POOR TO GOOD SURFACE.  
 -0.3' CLAYSTONE SEAM @ 16.0'  
 -@17.4' CLAY SEAM  
 -@18.0' CLAY SEAM

-SILTSTONE SEAM @ 21.4'-23.0'

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 12.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER.

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
**10**

**Boring:**  
 B-041-0-23

RC-1: 16.0-20.0'  
 REC (%):68  
 RQD (%):20

RC-2: 20.0-25.0'  
 REC (%):100  
 RQD (%):40





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:22:29 PM USER: juans  
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1028.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/9/23 END: 11/9/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1500+29 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1030.3 (MSL) EOB: 24.0 ft.  
 LAT / LONG: 40.090577, -82.811738

EXPLORATION ID  
**B-042-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.6' TOPSOIL (6.5")  
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DEPTH (ft)	ELEV.	SPT / RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
1	1029.7	3	8	44	SS-1	4.5+	-	-	-	-	-	-	-	14	A-6a (V)	
2		8	8													
3																
4		14	39	0	SS-2	-	-	-	-	-	-	-	-	-		
5		13		100	2S-2A	4.5+	-	-	-	-	-	-	-	13	A-6a (V)	
6		4	5	58	SS-3	4.5+	9	11	16	37	27	16	11	15	A-6a (6)	
7		6														
8																
9		4	8	23	SS-4	4.5+	-	-	-	-	-	-	-	12	A-6a (V)	
10		8														
11	1019.3	40		100	SS-5	-	-	-	-	-	-	-	-	6	Rock (V)	
12		42														
13		50/2'														
14		50/0"			SS-6	-	-	-	-	-	-	-	-	-	Rock (V)	
15																
16		50/3"		67	SS-7	-	-	-	-	-	-	-	-	5	Rock (V)	
17																
18	1012.3	58		75	NQ2-1										CORE	
19																
20																
21																
22																
23																
24	1006.3	68		92	NQ2-2										CORE	

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 16.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 11

**Boring:**  
 B-042-0-23

RC-1: 18.0'-19.0'  
 REC (%):75  
 RQD (%):58

RC-2: 19.0'-24.0'  
 REC (%):92  
 RQD (%):68



DESIGNER	JAS
REVIEWER	DEK 1/19/24
PROJECT ID	117607
SUBSET	56
TOTAL	66
SHEET	P.287
TOTAL	297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 15  
 BORING LOG & ROCK CORE PHOTO FOR B-042-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:22:48 PM USER: juans J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1029.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/9/23 END: 11/9/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1502+16 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1035.0 (MSL) EOB: 24.5 ft.  
 LAT / LONG: 40.090545, -82.811039

EXPLORATION ID  
**B-043-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
1	3											
2	5											
3	9											
4	7											
5	8											
6	3											
7	5											
8	8											
9	4											
10	5											
11	20											
12	50/5"											
13												
14	20											
15	30											
16	35											
17	50/4"											
18												
19	0											
20												
21												
22	33											
23												
24												

0.5' TOPSOIL (5.5')  
 HARD, BROWN SANDY SILT, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST TO DAMP.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

SHALE : GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.2'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio



**Photo No. 12**

**Boring:**  
 B-043-0-23

RC-1: 18.5-19.5'  
 REC (%):75  
 RQD (%):10

RC-2: 19.5-24.5'  
 REC (%):68  
 RQD (%):33

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 JAS

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 57 66

SHEET TOTAL  
 P.288 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 15  
 BORING LOG & ROCK CORE PHOTO FOR B-043-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:23:08 PM USER: juans J:\GEOtech\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL030.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1504+27 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090479, -82.810313

EXPLORATION ID  
**B-044-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION  
 AND NOTES**

0.3' TOPSOIL (4.0")  
 HARD, LIGHT BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 1038.3

DEPTHS

SPT / RQD

REC SAMPLE ID

GR

GRADATION (%)

ATTERBERG

WC

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GR	GRADATION (%)	ATTERBERG	WC	BACK FILL
1	4						
2	7	19	67	SS-1	4.5+	-	15 A-6a (V)
3							
4	12	37	33	SS-2	-	-	9 A-6a (V)
5	13						
6	10	35	100	SS-3	4.5+	14 39 22	14 A-6a (6)
7	12						
8	9	32	67	SS-4	4.5+	-	14 A-6a (V)
9	13						
10							
11	6	27	72	SS-5	4.5+	-	11 A-6a (V)
12	10	9					
13	TR						
14	50/4"		63	SS-6	-	-	7 Rock (V)
15							
16	38		84	SS-7	-	-	10 Rock (V)
17	50/4"						
18							
19	50/6"		100	SS-8	-	-	5 Rock (V)
20							
21	50/6"		100	SS-9	-	-	5 Rock (V)
22							
23	50/5"		100	SS-10	-	-	5 Rock (V)
24							
25	EOB						

SANDSTONE : GRAY, HIGHLY WEATHERED.

ELEV. 1025.3

DEPTHS

SPT / RQD

REC SAMPLE ID

GR

GRADATION (%)

ATTERBERG

WC

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GR	GRADATION (%)	ATTERBERG	WC	BACK FILL
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13	TR						
14	50/4"		63	SS-6	-	-	7 Rock (V)
15							
16	38		84	SS-7	-	-	10 Rock (V)
17	50/4"						
18							
19	50/6"		100	SS-8	-	-	5 Rock (V)
20							
21	50/6"		100	SS-9	-	-	5 Rock (V)
22							
23	50/5"		100	SS-10	-	-	5 Rock (V)
24							
25	EOB						

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 12.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1506+08 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.9 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090452, -82.809651

EXPLORATION ID  
**B-045-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION  
 AND NOTES**

0.3' TOPSOIL (4.0")  
 HARD, LIGHT BROWN TO BROWN CLAY, "AND" SILT, TRACE COARSE TO FINE SAND, DAMP.

ELEV. 1038.9

DEPTHS

SPT / RQD

REC SAMPLE ID

GR

GRADATION (%)

ATTERBERG

WC

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GR	GRADATION (%)	ATTERBERG	WC	BACK FILL
1	5						
2	16	56	SS-1	4.5+	0	3 8 51 38	17 A-7-6 (17)
3	6						
4	9	32	50	SS-2	4.5+	-	14 A-7-6 (V)
5	12						
6	10	37	100	SS-3	4.5+	-	14 A-7-6 (V)
7	13						
8							
9	12	36	83	SS-4	-	11 13 16 7 53 28	12 A-6a (5)
10	13						
11	4	30	78	SS-5	-	-	13 A-6a (V)
12	6						
13	15						
14	TR						
15	50/4"		75	SS-6	-	-	6 Rock (V)
16							
17	50/4"		88	SS-7	-	-	7 Rock (V)
18							
19	50/4"		86	SS-8	-	-	6 Rock (V)
20							
21	50/2"		75	SS-9	-	-	6 Rock (V)
22							
23							
24	50/0"						
25	EOB						

SILTSTONE : GRAY TO DARK GRAY, HIGHLY WEATHERED.

ELEV. 1025.9

DEPTHS

SPT / RQD

REC SAMPLE ID

GR

GRADATION (%)

ATTERBERG

WC

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GR	GRADATION (%)	ATTERBERG	WC	BACK FILL
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13	TR						
14	50/4"		75	SS-6	-	-	6 Rock (V)
15							
16	50/4"		88	SS-7	-	-	7 Rock (V)
17							
18	50/4"		86	SS-8	-	-	6 Rock (V)
19							
20							
21	50/2"		75	SS-9	-	-	6 Rock (V)
22							
23							
24	50/0"						
25	EOB						

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER; CAVE-IN DEPTH @ 13.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
 RESOURCE INTERNATIONAL, INC.  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 58 66  
 SHEET TOTAL  
 P.289 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 15  
 BORING LOGS B-044-0-23 AND B-045-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:23:31 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL031.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1508+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1039.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090415, -82.808921

EXPLORATION ID  
**B-046-0-23**  
 PAGE  
 1 OF 1

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	CS	FS	SI	CL	LL	PL		
1	5											
2	7											
3	8											
4	12											
5	14											
6	15											
7	16											
8	10											
9	8											
10	12											
11	15											
12	11											
13	18											
14	16											
15	32											
16	50/4"											
17												
18	50/4"											
19	0											
20												
21												
22	37											
23												
24												
25												

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')  
 HARD, BROWNISH GRAY CLAY, "AND" SILT, LITTLE FINE GRAVEL, LITTLE COARSE TO FINE SAND, DAMP.

HARD, BROWNISH GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, SOME FINE GRAVEL, MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.  
 -@21.3' - 21.5' SHALE  
 -@22.5' CLAY SEAM  
 -@24.5'-25.0' SHALE

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.2'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:** Franklin County, Ohio

**Photo No.**  
13

**Boring:**  
B-046-0-23

RC-1: 19.0-20.0'  
REC (%):33  
RQD (%):10

RC-2: 20.0-25.0'  
REC (%):93  
RQD (%):37



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:23:51 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL032.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1510+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1039.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090391, -82.808171

EXPLORATION ID  
**B-047-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
1	4											
2	8	27	4.5+									22 A-6a (V)
3	11											
4	11	52	4.5+	11	13	36	31	31	17	14		11 A-6a (8)
5	19											
6	5	20	4.5+									14 A-6a (V)
7	8											
8												
9	5	22	4.5+									14 A-6a (V)
10	8											
11												
12	12	37	4.5+	23	14	32	18	26	17	9		11 A-4a (3)
13	14											
14	15	52										6 Rock (V)
15	20											
16	19											
17	15											
18	50/4"											
19	0											13 Rock (V)
20	42											CORE
21												
22												
23	55											
24												
25												

0.5' TOPSOIL (6.0")  
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.

HARD, BROWN SANDY SILT, LITTLE CLAY, SOME FINE GRAVEL, DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

-@22.4' CLAY SEAM  
 -@ 19.0' - 25.0' RED IRON STAINING THROUGHOUT

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 14.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 14

**Boring:**  
 B-047-0-23

RC-1: 19.0-20.0'  
 REC (%):42  
 RQD (%):10

RC-2: 20.0-25.0'  
 REC (%):92  
 RQD (%):55



DESIGN AGENCY  
 RESOURCE INTERNATIONAL  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 JAS

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 60 66

SHEET TOTAL  
 P.291 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT**

**NOISE WALL 15**

**BORING LOG & ROCK CORE PHOTO FOR B-047-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:24:10 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1033.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1512+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1037.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090360, -82.807478

EXPLORATION ID  
**B-048-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION  
 AND NOTES**

0.5' - TOPSOIL (6.0')  
 HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE  
 TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

VERY STIFF TO HARD, GRAY SANDY SILT, SOME CLAY,  
 LITTLE FINE GRAVEL, DAMP.

SHALE : BROWN, SEVERELY WEATHERED.

DEPTH	SPT/ RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL
				GR	FS	SI	CL	LL	PL	PI				
1	3													
2	3	12	4.5+	-	-	-	-	-	-	-	-	19	A-6b (V)	
3	5													
4	6	20	4.5+	10	5	19	32	34	36	17	19	14	A-6b (10)	
5	7													
6	6	24	4.5+	-	-	-	-	-	-	-	-	17	A-6b (V)	
7	11													
8														
9	8	26	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)	
10	10													
11	5	22	4.5+	18	11	14	33	24	26	16	10	11	A-4a (4)	
12	6	9												
13														
14	3	4	13	64	3.00	-	-	-	-	-	-	12	A-4a (V)	
15	5													
16	28													
17	35	-	40	SS-7	-	-	-	-	-	-	-	0	Rock (V)	
18	50/3"													
19	15	24	72	83	SS-8	-	-	-	-	-	-	13	Rock (V)	
20	26													
21	60/3"	-	0	SS-9	-	-	-	-	-	-	-	-	Rock (V)	
22														
23														
24	11	10	36	50	SS-10	-	-	-	-	-	-	20	Rock (V)	
25	15													

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 16.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:57 - U:\G18\PROJECTS\2023\W-23-107.GPJ



6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 61 66

SHEET TOTAL  
 P.292 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT  
 NOISE WALL 15  
 BORING LOG B-048-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:24:26 PM USER: juans J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL034.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1514+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.9 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090327, -82.806756

EXPLORATION ID  
**B-049-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' TOPSOIL (5.5')  
 VERY STIFF TO HARD, BROWN CLAY, SOME SILT,  
 SOME FINE GRAVEL, TRACE COARSE TO FINE SAND,  
 MOIST TO DAMP.

HARD, GRAY SANDY SILT, TRACE GRAVEL, MOIST TO DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED,  
 STRONG, FINE GRAINED, THIN BEDDED, MODERATELY  
 FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH  
 SURFACES, BLOCKY, GOOD SURFACE.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI			
1	1												
2	3												
3	4												
4	5												
5	6												
6	8												
7	3												
8	4												
9	6												
10	13												
11	16												
12	8												
13	10												
14	4												
15	5												
16	7												
17	14												
18	30												
19	50/3"												
20	0												
21	5												
22	7												
23	14												
24	28												
25	42												

TR

EOB

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 17.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 15

**Boring:**  
 B-049-0-23

RC-1: 19.0-20.0'  
 REC (%):0  
 RQD (%):0

RC-2: 20.0-25.0'  
 REC (%):42  
 RQD (%):28



8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER: JAS  
 REVIEWER: DEK 1/19/24  
 PROJECT ID: 117607  
 SUBSET TOTAL: 62 / 66  
 SHEET TOTAL: P.293 / 297

**GEOTECHNICAL PROFILE - NOISE ABATEMENT**  
**NOISE WALL 15**  
**BORING LOG & ROCK CORE PHOTO FOR B-049-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:24:45 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL035.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1516+10 / 0'  
ALIGNMENT: CL WALL 15  
ELEVATION: 1038.0 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090286, -82.806054

EXPLORATION ID  
**B-050-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' TOPSOIL (5.5')  
VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

DENSE, BROWN GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.  
-@21.0' RED STAINING

DEPTH (ft)	SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	HOLE SEALED
					GR	CS	FS	SI	CL	LL	PL			
1	2													
2	4	13	SS-1	4.00	-	-	-	-	-	-	-	20	A-6b (V)	
3	5													
4	7	19	SS-2	3.25	13	8	13	39	27	37	19	18	A-6b (9)	
5	6													
6	8	29	SS-3	4.00	-	-	-	-	-	-	-	15	A-6b (V)	
7	10													
8	10													
9	4	23	SS-4	4.5+	-	-	-	-	-	-	-	9	A-6b (V)	
10	11													
11	18	39	SS-5	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
12	15													
13	12													
14	6	69	SS-6	-	-	-	-	-	-	-	-	8	Rock (V)	
15	16	32												
16	50/5"	-	SS-7	-	-	-	-	-	-	-	-	12	Rock (V)	
17														
18	50/4"	-	SS-8	-	-	-	-	-	-	-	-	7	Rock (V)	
19	0	25	NQ2-1										CORE	
20														
21														
22	82		NQ2-2										CORE	
23														
24														
25														

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 13.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

**Photo No.**  
16

**Boring:**  
B-050-0-23

RC-1: 19.0-20.0'  
REC (%):0  
RQD (%):25

RC-2: 20.0-25.0'  
REC (%):100  
RQD (%):82





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:25:05 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL036.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1519+10.6 / 8.77' LT  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090226, -82.806530

EXPLORATION ID  
**B-051-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION  
 AND NOTES**

0.5' - TOPSOIL (5.5")  
 HARD, BROWN SILTY CLAY, LITTLE GRAVEL AND SAND, DAMP.

VERY DENSE, BROWN TO GRAY GRAVEL WITH SAND AND SILT, DAMP.

-@ 6.0' - 8.0' COBBLES

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

-VERTICAL FRACTURE @ 20.3', 20.9', 23.2' AND 24.7'

DEPTH (ft)	SPT / RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)						WC	HOLE SEALED		
						GR	FS	SI	CL	LL	PL			PI	
1	3														
2	6	19	39	SS-1	4.5+							19	A-6b (V)		
3	7														
4	10	32	83	SS-2	4.5+	7	6	12	43	32	40	19	21	13	A-6b (12)
5	12														
6	36														
7	26	69	61	SS-3	-									6	A-2.4 (V)
8	22														
9	17	73	72	SS-4	-									6	A-2.4 (V)
10	32														
11	14	66	44	SS-5	-									8	A-2.4 (V)
12	17	29													
13															
14	50/3"		50	SS-6	-									17	Rock (V)
15															
16	50/4"		88	SS-7	-									5	A-2.4 (V)
17															
18															
19	50		75	NQ2-1											CORE
20															
21															
22	50		97	NQ2-2											CORE
23															
24															
25															

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 14.8'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 17

**Boring:**  
 B-051-0-23

RC-1: 19.0'-20.0'  
 REC (%):75  
 RQD (%):50

RC-2: 20.0'-25.0'  
 REC (%):97  
 RQD (%):50





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 5/16/2024 TIME: 7:25:25 PM USER: jluans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL037.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1520+41 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.6 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090130, -82.804859

EXPLORATION ID  
**B-052-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0')  
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

MEDIUM DENSE, BROWN GRAVEL WITH SAND AND SILT, DAMP.  
 -COBBLES @ 6.5'-8.0'

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

-SHALE SEAMS @ 22.6', 23.0, 24.2'

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	CS	FS	SI	CL	LL	PL		
1	6											
2	7											
3	10											
4	12											
5	13											
6	18											
7	50/4"											
8												
9	12											
10	10											
11	TR											
12	10											
13	25											
14	35											
15	28											
16	19											
17	42											
18	50/3"											
19	92											
20	92											
21												
22												
23												
24												
25												

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 13.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 18

**Boring:**  
 B-052-0-23

RC-1: 19.0-20.0'  
 REC (%):92  
 RQD (%):92

RC-2: 20.0-25.0'  
 REC (%):93  
 RQD (%):77





**FRA-161-15.80 NOISE WALLS**

MODEL: Sheet PAPER: 34x22 (in.) DATE: 5/16/2024 TIME: 7:25:45 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL038.dgn

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1522+26 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1036.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090039, -82.804245

EXPLORATION ID  
**B-053-0-23**  
 PAGE  
 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	SPT / RQD	N <sub>60</sub>	REC SAMPLE ID	HP (tsf)	GRADATION (%)						WC	HOLE SEALED			
						GR	FS	SI	CL	LL	PL			PI		
0.5' TOPSOIL (6.0") VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, SOME TO TRACE SAND, TRACE GRAVEL, MOIST.  HARD, BROWN TO BROWN GRAY SANDY SILT, TRACE GRAVEL, DAMP TO MOIST.  SANDSTONE : GRAY, HIGHLY WEATHERED.  SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE. -@22.2' FRACTURE -@22.8' SHALE SEAM -@24.0 CLAY SEAM	1036.5	1														
	1036.0	2	10	SS-1	4.00	-	-	-	-	-	-	22	A-6b (V)			
		3														
		4	3	10	SS-2	4.25	4	8	13	33	42	35	19	16	18	A-6b (10)
		5	4													
		6	2	3	10	SS-3	4.5+	-	-	-	-	-	-	17	A-6b (V)	
		7	4													
		8														
		9	3	17	SS-4	4.5+	-	-	-	-	-	-	-	13	A-4a (V)	
		10	7													
		11	5	23	SS-5	4.5+	13	13	14	29	31	25	15	10	12	A-4a (5)
		12	9													
		13														
		14	5	50/2"	SS-6	-	-	-	-	-	-	-	-	12	Rock (V)	
		15														
		16														
		17														
		18														
		19														
		20	50		50	NQ2-1										
		21														
		22	68		100	NQ2-2										
		23														
		24														
	25															

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.8'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio



**Photo No.**  
**19**

**Boring:**  
 B-053-0-23

RC-1: 19.0-20.0'  
 REC (%):50  
 RQD (%):50

RC-2: 20.0-25.0'  
 REC (%):100  
 RQD (%):68