

PROJECT DESCRIPTION

EXCAVATION OF CUT SLOPE AND DITCH DRAINAGE IMPROVEMENT TO TO ADDRESS SLOPE FAILURES ALONG S.R. 555.

HISTORIC RECORDS

NO HISTORICAL GEOTECHNICAL RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

THE PROJECT IS IN THE NON-GLACIATED MUSKINGUM-PITTSBURGH PLATEAU PHYSIOGRAPHIC REGION WHICH IS CHARACTERIZED AS A MODERATE TO HIGH RELIEF DISSECTED PLATEAU WITH BROAD MAJOR DRAINAGE VALLEYS. THESE DRAINAGE VALLEYS CONTAIN OUTWASH AND LACUSTRINE TERRACES. THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) INTERACTIVE GEOLOGIC MAP INDICATES THAT THE OVERBURDEN COLLUVIUM IN THIS AREA IS PREDOMINATELY COHESIVE AND UNDERLAIN BY PENNSYLVANIAN-AGED SHALE, SILTSTONE, SANDSTONE, CLAYSTONE, AND LESSER AMOUNTS OF LIMESTONE AND COAL BEDROCK FROM THE CONEMAUGH GROUP. THIS REGION IS KNOWN TO HAVE RAPID VERTICAL AND HORIZONTAL CHANGES OF ROCK TYPES.

RECONNAISSANCE

A SITE RECONNAISSANCE WAS PERFORMED BY THE OFFICE OF GEOTECHNICAL ENGINEERING (OGE) ON JANUARY 22, 2024. THE WEARABLE ROADWAY SURFACE WAS NOTED AS BEING IN FAIR CONDITION WITH SEVERAL AREAS OF PAVEMENT CRACKING PRESENT. ABOVE THE ROADWAY, THE WESTERN SIDE, HAS BEEN EXCAVATED FOR CONSTRUCTION OF THE ROADWAY AND DRAINAGE DITCH. THIS SLOPE IS WELL VEGETATED BUT EXPRESSES INSTABILITY WITH CREEP AND TRANSLATIONAL MOVEMENT CLOSING OFF THE DITCH. ADJACENT LAND USAGE IS PRIMARILY RURAL RESIDENTIAL LOTS WITH A MIX OF GRASSY AND PASTURE LANDS BETWEEN.

SUBSURFACE EXPLORATION & FINDINGS

EIGHT (8) DYNAMIC CONE PENETRATION SOUNDINGS, D-001-0-24, D-001-1-24, AND D-002-0-24 THROUGH D-007-0-24, WERE PERFORMED USING A WILDCAT DYNAMIC CONE PENETROMETER (WDCP) ON JANUARY 22, 2024. THE SOUNDINGS WERE COMPLETED ABOVE THE ROADWAY ALONG THE TOP OF THE SLOPE RUNNING ADJACENT TO THE WESTERN DITCH LINE OF S.R. 555 TO DELINEATE THE LIMITS OF THE SLOPE INSTABILITY. RESULTS OF THE WDCP SOUNDINGS INDICATED WEAK SOILS AT THE GROUND SURFACE BECOMING STRONGER WITH DEPTH. ALL WDCP SOUNDINGS WERE REPORTED AS DRY UPON COMPLETION.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2024.

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.

LEGEND

DESCRIPTION



WDCP SOUNDING LOCATION - PLAN VIEW.



WDCP SOUNDING PLOTTED TO VERTICAL SCALE ONLY.

INDEX OF SHEETS			
LOCATION		PLAN VIEW SHEET	CROSS SECTION SHEET
FROM STA.	TO STA.		
CONST. S.R. 555			
108+00	118+00	2	-
109+75, 111+25, 111+95, 113+00		-	3
114+00, 115+00, 116+00		-	4
WDGP SOUNDING LOGS, SHEETS 5-8.			

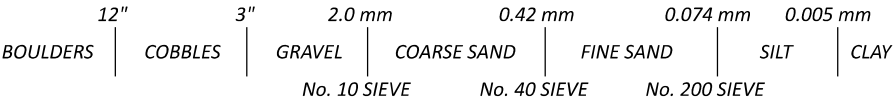


LOCATION MAP

SCALE IN MILES



PARTICLE SIZE DEFINITIONS



RECON. - SAT,PPP,AMJ 01/22/24

DCP - SAT,PPP,AMJ 01/22/24

DRAWN - ARR 07/14/25

REVIEWED - AJC 07/14/25

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

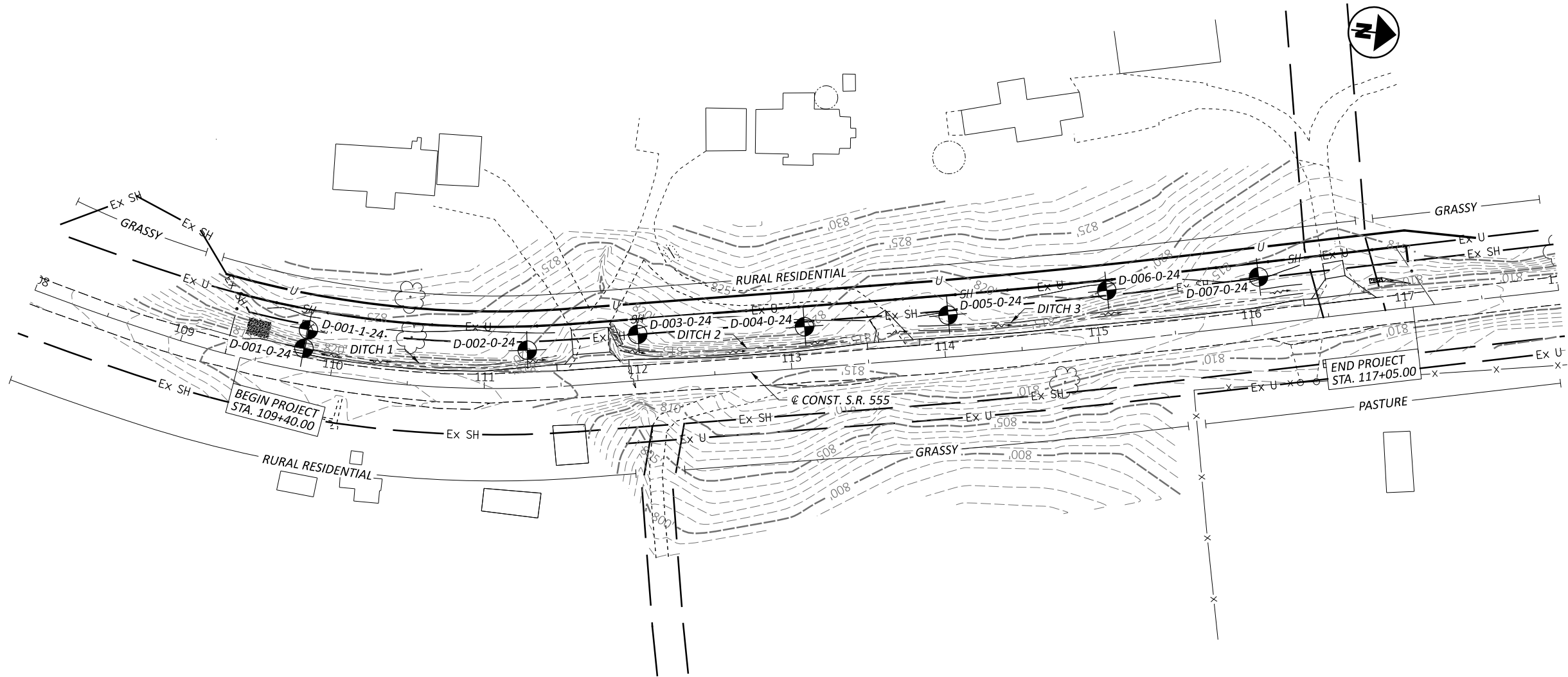
AJC 07/14/25

PROJECT ID

118690

SUBSET	TOTAL
1	8

SHEET	TOTAL
P.26	33



GEOTECHNICAL PROFILE - LANDSLIDE
STA. 108+00 TO STA. 118+00 S.R. 555

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

AJC 07/14/25

PROJECT ID

118690

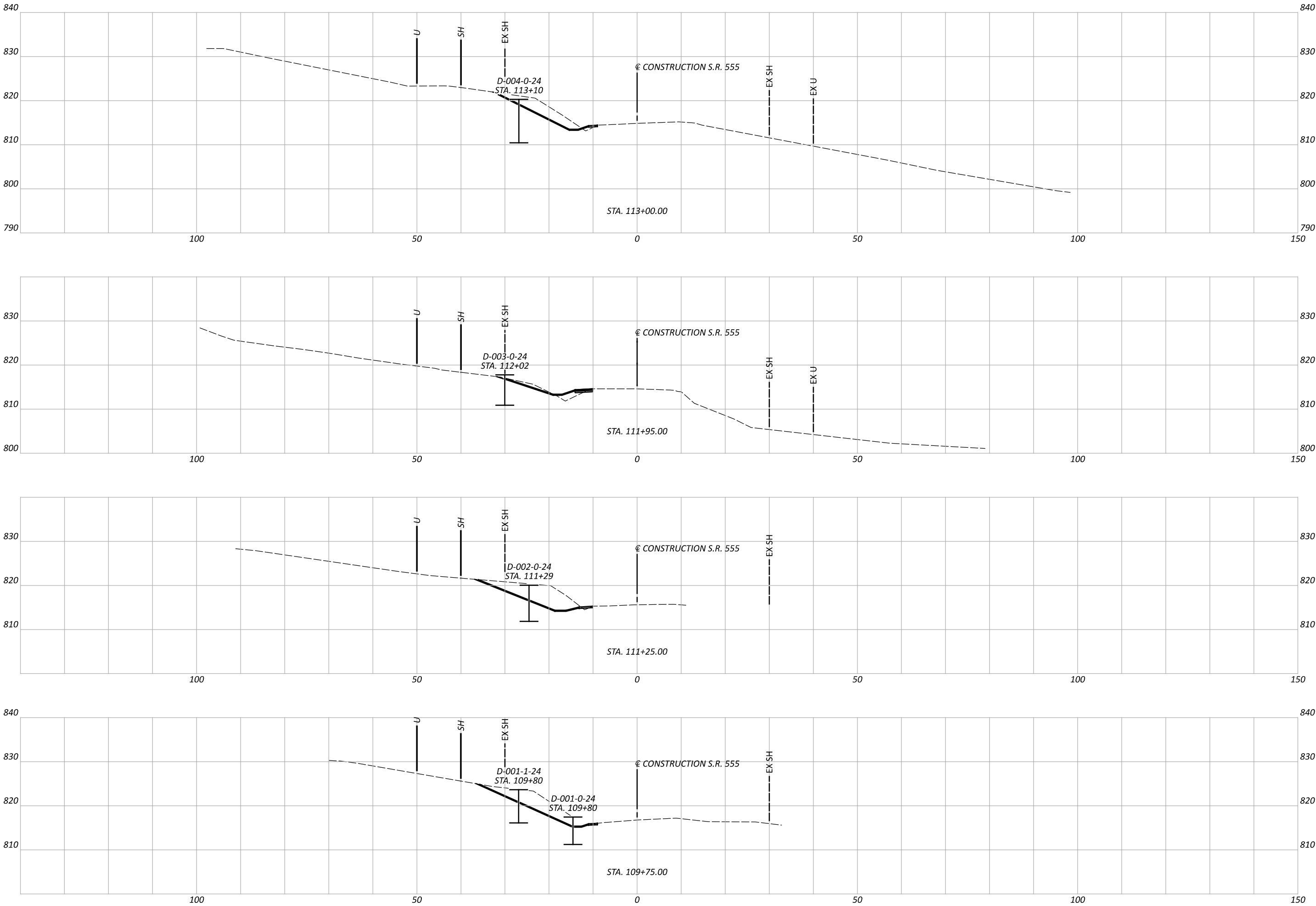
SUBSET TOTAL

2 8

SHEET TOTAL

P.27 33





GEOTECHNICAL PROFILE - LANDSLIDE
CROSS SECTIONS STA. 109+75, STA. 111+25, STA. 111+95 & STA. 113+00 S.R. 555



DESIGNER

ARR

REVIEWER

AJC 07/14/25

PROJECT ID

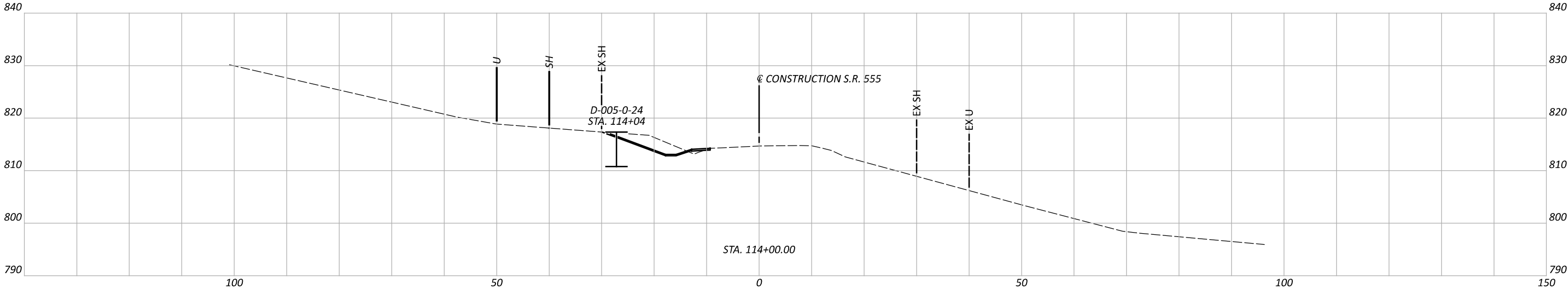
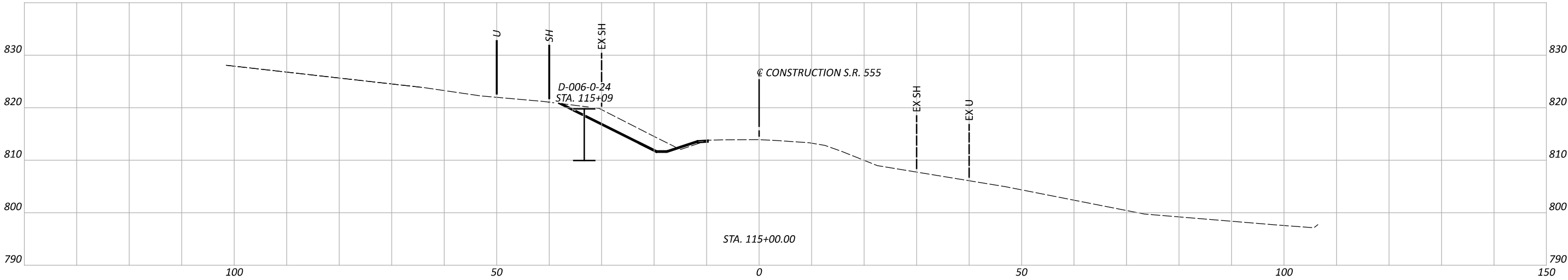
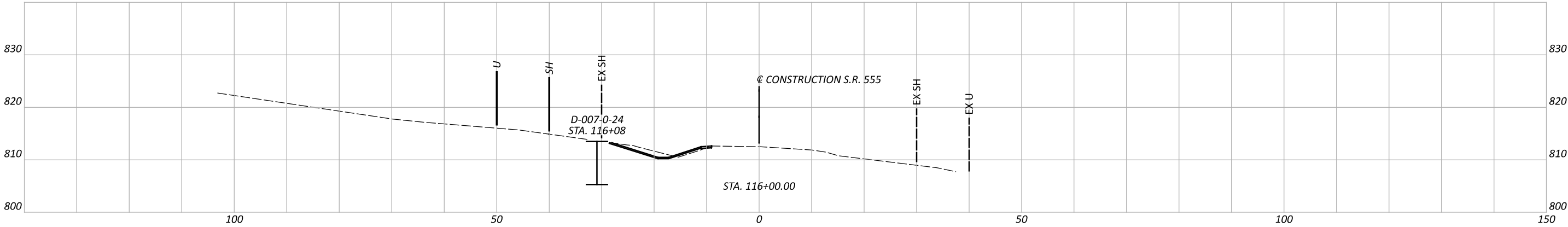
118690

SUBSET TOTAL

3 8

SHEET TOTAL

P.28 33



GEOTECHNICAL PROFILE - LANDSLIDE
CROSS SECTIONS STA. 114+00, STA. 115+00 & STA. 116+00 S.R. 555



DESIGN AGENCY

DESIGNER

ARR

REVIEWER

AJC 07/14/25

PROJECT ID

118690

SUBSET TOTAL

4 8

SHEET TOTAL

P.29 33

WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 118690
DATE STARTED: 01-22-2024
DATE COMPLETED: 01-22-2024

HOLE #: D-001-0-24
CREW: Taliaferro, Jalbrzikowski, Painter
PROJECT: MUS-555-2.30
LAT/LONG: 39.792163, -81.982077
LOCATION: Muskingum County

SURFACE ELEVATION: 817.5
WATER ON COMPLETION: Dry
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	1	4.4	•	1	VERY LOOSE	VERY SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
- 1 ft	3	13.3	•••	3	VERY LOOSE	SOFT
-	1	4.4	•	1	VERY LOOSE	VERY SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
- 2 ft	2	8.9	••	2	VERY LOOSE	SOFT
-	7	31.1	•••••••	8	LOOSE	MEDIUM STIFF
-	9	40.0	••••••••	11	MEDIUM DENSE	STIFF
- 3 ft	8	35.5	•••••••	10	LOOSE	STIFF
- 1 m	12	53.3	••••••••••	15	MEDIUM DENSE	STIFF
-	14	54.0	••••••••••	15	MEDIUM DENSE	STIFF
- 4 ft	16	61.8	••••••••••	17	MEDIUM DENSE	VERY STIFF
-	15	57.9	••••••••••	16	MEDIUM DENSE	VERY STIFF
-	16	61.8	••••••~	17	MEDIUM DENSE	VERY STIFF
- 5 ft	18	69.5	••••••••••	19	MEDIUM DENSE	VERY STIFF
-	18	69.5	••••••~	19	MEDIUM DENSE	VERY STIFF
-	19	73.3	••••••~	20	MEDIUM DENSE	VERY STIFF
- 6 ft	16	61.8	••••••~	17	MEDIUM DENSE	VERY STIFF
- 2 m	16	61.8	••••••~	17	MEDIUM DENSE	VERY STIFF
- 7 ft						
- 8 ft						
- 9 ft						
- 3 m 10 ft						
- 11 ft						
- 12 ft						
- 4 m 13 ft						

Latitude & Longitude from OGE handheld GPS unit. Elevation from District Survey terrain file.

WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 118690
DATE STARTED: 01-22-2024
DATE COMPLETED: 01-22-2024

HOLE #: D-001-1-24
CREW: Taliaferro, Jalbrzikowski, Painter
PROJECT: MUS-555-2.30
LAT/LONG: 39.792168, -81.982121
LOCATION: Muskingum County

SURFACE ELEVATION: 823.6
WATER ON COMPLETION: Dry
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	4	17.8	•••••	5	LOOSE	MEDIUM STIFF
-	3	13.3	•••	3	VERY LOOSE	SOFT
- 1 ft	3	13.3	•••	3	VERY LOOSE	SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
- 2 ft	2	8.9	••	2	VERY LOOSE	SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
-	3	13.3	•••	3	VERY LOOSE	SOFT
- 3 ft	5	22.2	•••••	6	LOOSE	MEDIUM STIFF
- 1 m	4	17.8	•••••	5	LOOSE	MEDIUM STIFF
-	5	19.3	•••••	5	LOOSE	MEDIUM STIFF
- 4 ft	7	27.0	•••••	7	LOOSE	MEDIUM STIFF
-	7	27.0	•••••	7	LOOSE	MEDIUM STIFF
-	7	27.0	•••••	7	LOOSE	MEDIUM STIFF
- 5 ft	7	27.0	•••••	7	LOOSE	MEDIUM STIFF
-	10	38.6	••••••••	11	MEDIUM DENSE	STIFF
-	11	42.5	••••••••	12	MEDIUM DENSE	STIFF
- 6 ft	14	54.0	••••••~	15	MEDIUM DENSE	STIFF
-	17	65.6	••••••~	18	MEDIUM DENSE	VERY STIFF
- 2 m	20	77.2	••••••~	22	MEDIUM DENSE	VERY STIFF
- 7 ft	22	75.2	••••••~	21	MEDIUM DENSE	VERY STIFF
-	25	85.5	••••••~	24	MEDIUM DENSE	VERY STIFF
-	25	85.5	••••••~	24	MEDIUM DENSE	VERY STIFF
- 8 ft						
- 9 ft						
- 3 m 10 ft						
- 11 ft						
- 12 ft						
- 4 m 13 ft						

Latitude & Longitude from OGE handheld GPS unit. Elevation from District Survey terrain file.



MUS-555-2.30

MODEL: WDCP Sounding Logs for D-002-0-24 and D-003-0-24 PAPER SIZE: 17x11 (in.) DATE: 7/15/2025 TIME: 7:35:18 AM USER: aross3
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WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 118690
DATE STARTED: 01-22-2024
DATE COMPLETED: 01-22-2024

HOLE #: D-002-0-24
CREW: Taliaferro, Jalbrzikowski, Painter
PROJECT: MUS-555-2.30
LAT/LONG: 39.792559, -81.98213
LOCATION: Muskingum County

SURFACE ELEVATION: 820.0
WATER ON COMPLETION: Dry
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	4	17.8	.....	5	LOOSE	MEDIUM STIFF
-	3	13.3	...	3	VERY LOOSE	SOFT
- 1 ft	2	8.9	..	2	VERY LOOSE	SOFT
-	2	8.9	..	2	VERY LOOSE	SOFT
-	1	4.4	.	1	VERY LOOSE	VERY SOFT
- 2 ft	2	8.9	..	2	VERY LOOSE	SOFT
-	2	8.9	..	2	VERY LOOSE	SOFT
-	4	17.8	.....	5	LOOSE	MEDIUM STIFF
- 3 ft	6	26.6	.....	7	LOOSE	MEDIUM STIFF
- 1 m	6	26.6	.....	7	LOOSE	MEDIUM STIFF
-	9	34.7	.....	9	LOOSE	STIFF
- 4 ft	12	46.3	.....	13	MEDIUM DENSE	STIFF
-	11	42.5	.....	12	MEDIUM DENSE	STIFF
-	11	42.5	.....	12	MEDIUM DENSE	STIFF
- 5 ft	12	46.3	.....	13	MEDIUM DENSE	STIFF
-	13	50.2	.....	14	MEDIUM DENSE	STIFF
-	12	46.3	.....	13	MEDIUM DENSE	STIFF
- 6 ft	13	50.2	.....	14	MEDIUM DENSE	STIFF
-	15	57.9	.....	16	MEDIUM DENSE	VERY STIFF
- 2 m	15	57.9	.....	16	MEDIUM DENSE	VERY STIFF
- 7 ft	14	47.9	.....	13	MEDIUM DENSE	STIFF
-	15	51.3	.....	14	MEDIUM DENSE	STIFF
-	24	82.1	.....	23	MEDIUM DENSE	VERY STIFF
- 8 ft	20	68.4	.....	19	MEDIUM DENSE	VERY STIFF
-	16	54.7	.....	15	MEDIUM DENSE	STIFF
- 9 ft						
- 3 m	10 ft					
- 11 ft						
- 12 ft						
- 4 m	13 ft					

Latitude & Longitude from OGE handheld GPS unit. Elevation from District Survey terrain file.

WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 118690
DATE STARTED: 01-22-2024
DATE COMPLETED: 01-22-2024

HOLE #: D-003-0-24
CREW: Taliaferro, Jalbrzikowski, Painter
PROJECT: MUS-555-2.30
LAT/LONG: 39.792751, -81.982194
LOCATION: Muskingum County

SURFACE ELEVATION: 817.8
WATER ON COMPLETION: Dry
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	5	22.2	.....	6	LOOSE	MEDIUM STIFF
-	3	13.3	...	3	VERY LOOSE	SOFT
- 1 ft	3	13.3	...	3	VERY LOOSE	SOFT
-	2	8.9	..	2	VERY LOOSE	SOFT
-	2	8.9	..	2	VERY LOOSE	SOFT
- 2 ft	2	8.9	..	2	VERY LOOSE	SOFT
-	3	13.3	...	3	VERY LOOSE	SOFT
-	3	13.3	...	3	VERY LOOSE	SOFT
- 3 ft	2	8.9	..	2	VERY LOOSE	SOFT
- 1 m	2	8.9	..	2	VERY LOOSE	SOFT
-	5	19.3	.....	5	LOOSE	MEDIUM STIFF
- 4 ft	5	19.3	.....	5	LOOSE	MEDIUM STIFF
-	6	23.2	.....	6	LOOSE	MEDIUM STIFF
-	7	27.0	.....	7	LOOSE	MEDIUM STIFF
- 5 ft	20	77.2	.....	22	MEDIUM DENSE	VERY STIFF
-	22	84.9	.....	24	MEDIUM DENSE	VERY STIFF
-	22	84.9	.....	24	MEDIUM DENSE	VERY STIFF
- 6 ft	24	92.6	.....	25+	MEDIUM DENSE	VERY STIFF
-	23	88.8	.....	25	MEDIUM DENSE	VERY STIFF
- 2 m	25	96.5	.....	25+	MEDIUM DENSE	VERY STIFF
- 7 ft	28	95.8	.....	25+	MEDIUM DENSE	VERY STIFF
- 8 ft						
- 9 ft						
- 3 m	10 ft					
- 11 ft						
- 12 ft						
- 4 m	13 ft					

Latitude & Longitude from OGE handheld GPS unit. Elevation from District Survey terrain file.

GEOTECHNICAL PROFILE - LANDSLIDE
WDCP SOUNDING LOGS FOR D-002-0-24 & D-003-0-24



DESIGN AGENCY	
DESIGNER	
ARR	
REVIEWER	
AJC 07/14/25	
PROJECT ID	
118690	
SUBSET	TOTAL
6	8
SHEET	TOTAL
P.31	33

