

WASHINGTON TOWNSHIP TOWNSHIP ROAD 103, CRABAPPLE ROAD SLIP REPAIR - SITE 3

WASHINGTON TOWNSHIP, BELMONT COUNTY, OHIO

PROJECT DESCRIPTION

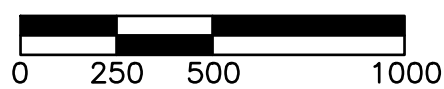
THIS PROJECT CONSISTS OF THE INSTALLATION OF A SHEET PILE RETAINING WALL ALONG A PORTION OF TOWNSHIP ROAD 103 (CRABAPPLE ROAD) WHERE SLOPE FAILURE HAS OCCURRED.

2023 SPECIFICATIONS

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



LOCATION MAP



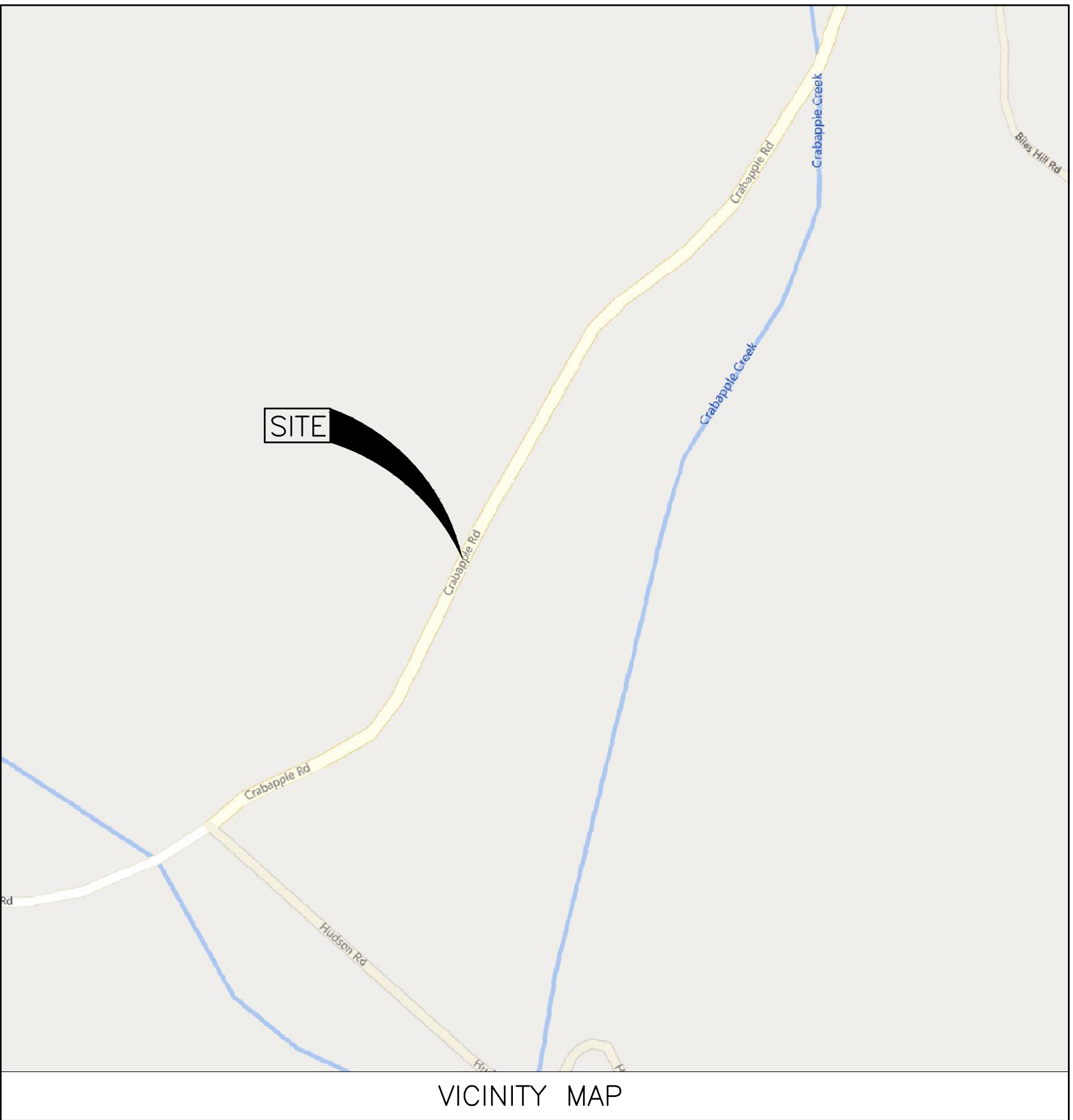
SCALE IN FEET

SHEET TITLE

TITLE SHEET
GENERAL NOTES & SUMMARY
OVERALL SITE PLAN
PLAN & PROFILE
RETAINING WALL DETAILS
PILE TABLE

SHEET NO.

1
2
3
4
5
6



VICINITY MAP



SCALE IN FEET

THE STANDARD DRAWINGS LISTED ON THESE PLANS SHALL BE CONSIDERED A PART THEREOF

STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS
ODOT STANDARD CONSTRUCTION DRAWINGS		
MT-101.60	1/20/17	
MT-105.10	7/19/13	
MGS-2.1	1/9/18	
MGS-4.1	1/20/17	

PLANS PREPARED BY:

verdantas

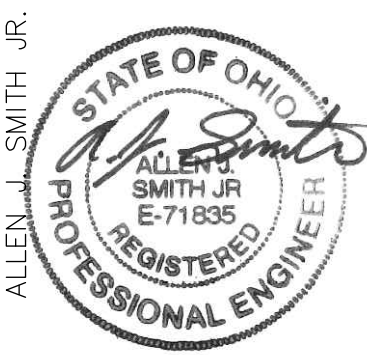
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STATE: OHIO

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C/G

CHK'D BY:

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DRAWN BY:

C/G/LAF

CHECKED BY:

AJS

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WASHINGTON TOWNSHIP ~ BELMONT COUNTY ~ OHIO

SLIP REPAIR PLANS

FOR CRABAPPLE ROAD

SITE 3

TITLE SHEET

APPLICATION NO.

DATE:

2025-08-25

SCALE:

AS NOTED

SHEET:

1

GENERAL NOTES:

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR THE PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00PM AND 7:00AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE ESTIMATED QUANTITIES FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING.

SURVEYS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL DETAIL SURVEYS NEEDED FOR CONSTRUCTION.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING GENERAL SEQUENCE SHALL BE USED TO CONSTRUCT THE PROPOSED RETAINING WALLS:

1. CLOSE A PORTION OF CRABAPPLE ROAD.
2. INSTALL PZ40 SHEET PILE WALL.
3. BACKFILL AREAS INDICATED IN PLANS.
4. RECONSTRUCT ROADWAY SURFACE TO THE LIMITS SHOWN ON THE PLANS.
5. OPEN CRABAPPLE ROAD TO TRAFFIC.

FINAL GRADING

CONTRACTOR SHALL GRADE AS NECESSARY IN FRONT OF THE SHEETPILE PILE WALL TO ENSURE POSITIVE DRAINAGE AWAY FROM THE FACE OF THE WALL. NO DEPRESSIONS WHICH MAY HOLD WATER SHALL BE PERMITTED TO REMAIN.

CUT OFF THE TOP OF THE SHEET PILING IN A CLEAN, STRAIGHT LINE AT THE ELEVATIONS SPECIFIED IN THE PLANS. DO NOT STAIR STEP. THE LENGTH OF THE PILE CUT OFF SHALL BE SUFFICIENT TO PERMIT THE REMOVAL OF TALL DAMAGED MATERIAL. ANY IRREGULARITIES SHALL BE STRAIGHTENED OR CUT OFF BY GRINDING. DISPOSE OF CUT-OFFS NOT INCORPORATED INTO THE WORK PROPERLY.

REMOVE AND REPLACE, OR OTHERWISE CORRECT, SHEET PILES THAT THE ENGINEER DEEMS UNACCEPTABLE. SUBMIT DETAILS OF THE PLANNED CORRECTIONS TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE INITIATED ANY CORRECTIVE ACTION. ANY SHEET PILING RUPTURED IN THE INTERLOCK OR OTHERWISE DAMAGED DURING DRIVING SHOULD BE REMOVED AND REPLACED.

ITEM 504 - STEEL PILES, MISC.: PZ40

THE CONTRACTOR SHALL FURNISH TYPE 1 STEEL SHEET PILING SHALL BE USED WHERE SHOWN ON THE DRAWINGS AND SHALL BE A CORRUGATED STEEL SHEETING NON-GALVANIZED INTERLOCKING TYPE WITH THE FOLLOWING DESIGN CRITERIA:

1. PZ40 BY NUCOR OR APPROVED EQUAL
2. MINIMUM ELASTIC SECTION MODULUS OF $60.7 \text{ IN}^3/\text{FT}^2$

STEEL SHEETING SHALL CONFORM TO ASTM A 72 GRADE 60.

THE SIDES FOR EACH PIECE OF SHEETING SHALL BE FURNISHED WITH AN INTERLOCK THAT IS CONTINUOUS FOR THE FULL LENGTH OF THE SHEETING. THE INTERLOCK SHALL HAVE AN OPENING OF SUFFICIENT WIDTH TO ALLOW FOR FREE SLIPAGE OF THE ADJOINING SHEET.

STEEL SHEET PILING THAT IS FULL LENGTH AS SHOWN ON THE PLANS AND IS REQUIRED TO BE DRIVEN BELOW THE SPECIFIED CUT-OFF ELEVATION SHALL BE SPLICED WITH ADDITIONAL STEEL SHEET PILING WITH A FULL PENETRATION BUTT WELD. SPLICING WILL BE LIMITED TO THREE PER PILE SHEET. A SPICE SHALL NOT BE LESS THAN 3 FEET FROM ANOTHER SPICE ON THE SAME PILE.

WELDING SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ANSI/AWS D 1.1.

ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS AND SHALL BE IN ACCORDANCE THE THE LATEST STANDARDS OF THE AWS AND AISC.
PAYMENT FOR ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED FOR THE ABOVE DESCRIBED SHALL BE INCLUDED IN THE SQUARE FOOT PRICE BID
ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN.

ACCESS

ANY TEMPORARY GRADING, AGGREGATE, DRAINAGE, ETC. NEEDED FOR ACCESS TO THE WORK AREA SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND ANY SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFTS. NO SEPARATE PAYMENT WILL BE MADE.

UTILITY NOTES

THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION.

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO 811 (TELEPHONE NUMBER 800-362-2764), AND TO THE OWNER OF THE UNDERGROUND UTILITIES THAT ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. NOTICE SHALL BE GIVEN AT LEAST 2 WORKING DAYS BEFORE START OF CONSTRUCTION.

THE LOCATION OF UTILITIES AND STRUCTURES ARE SHOWN FROM DATA PROVIDED BY THE SURVEYOR (BASED ON DATA AVAILABLE AT THE TIME OF SURVEY) AND ARE NOT NECESSARILY COMPLETE OR CORRECT. THE NOTIFICATION OF AFFECTED UTILITY OWNERS IN ADVANCE OF CONSTRUCTION AND THE EXACT LOCATION AND PROTECTION OF UTILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF SAME AND FOR ANY RESULTING CONTINGENT DAMAGE OR COSTS. THE COUNTY, OWNER, AND/OR ENGINEER ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OR DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.

ITEM 614, MAINTAINING TRAFFIC

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

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGN AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND PER STD DWG MT-101.60 AT THE POINT OF CLOSURE.

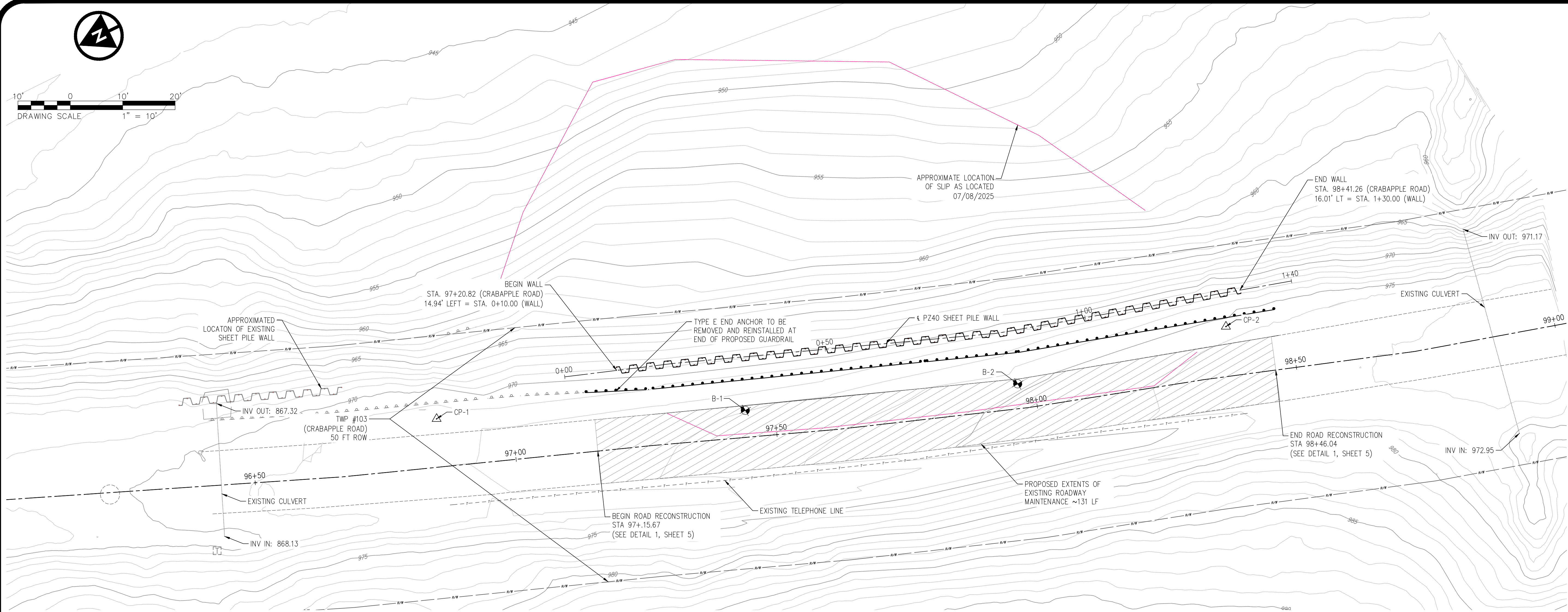
A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$600 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

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

LOCAL ACCESS SHALL BE MAINTAINED FROM ONE DIRECTION AT ALL TIMES, INCLUDING THE PROPERTIES BEYOND THE PROJECT.

ESTIMATED QUANTITIES			
ITEM NO.	UNIT	ITEM DESCRIPTION	QUANTITY
ROADWAY			
202	SY	PAVEMENT REMOVED	175
204	SY	SUBGRADE COMPACTION AND PROOF ROLL	175
304	CY	AGGREGATE BASE	29
441	CY	ASPHALT SURFACE COURSE	9.7
301	CY	ASPHALT CONCRETE BASE COURSE	14.5
712	SY	ODOT TYPE D GEOTEXTILE FABRIC	175
606	LF	GUARDRAIL TYPE MGS, AS PER PLAN	124
611	EA	ANCHOR ASSEMBLY, MGS TYPE E REMOVED AND RELOCATED	1
203	CY	EMBANKMENT	30
SHEET PILING			
504	SF	STEEL SHEET PILING, LEFT IN PLACE AS PER PLAN	2395
EROSION CONTROL			
659	SY	SEEDING AND MULCHING, CLASS 2	140
832	LUMP	EROSION CONTROL	LUMP
MAINTENANCE OF TRAFFIC			
614	LUMP	DETOUR SIGNING/MAINTAINING TRAFFIC	LUMP
INCIDENTALS			
201	LUMP	CLEARING AND GRUBBING	LUMP
103	LUMP	PREMIUM FOR CONTRACT PERFORMANCE BOND AND PAYMENT	LUMP
623	LUMP	CONSTRUCTION LAYOUT STAKES AND SURVEYING	LUMP
624	LUMP	MOBILIZATION	LUMP

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SURVEYOR NOTES:

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.

DATES OF FIELD WORK: 07/08/2025

EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON.

SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREIN ARE BASED ON OHIO STATE PLANE COORDINATE SYSTEM. SOUTH SYSTEM, NAD83, GEOID12A.

BENCHMARKS:

AS PER THE TOPOGRAPHIC SURVEY PREPARED BY VERDANTAS THE CONTRACTOR AND/OR HIS SURVEYOR SHALL BE RESPONSIBLE TO CROSS CHECK ALL CONTROL FOR DISTURBANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

BENCHMARK #1 - VDT CONTROL POINT PINS #1
ELEVATION = 971.41
BENCHMARK #2 - VDT CONTROL POINT PINS #2
ELEVATION = 975.54

CONTROL POINTS

BASIS OF BEARING: TRUE NORTH, BASED ON OBSERVATIONS, GPS DATA COLLECTED WITH TRIMBLER8 UNIT VRS CORRECTION ON OHIO STATE PLANE SOUTH ZONE COORDINATE SYSTEM, NAD 1983, NAVD 1988, GEOID 12A.

POINT #	NORTHING	EASTING	STATION AND OFFSET	DESCRIPTION
CP-1	686305.1170	2390070.9310	STA. 96+85.72, 9.20' LT.	CONTROL POINT PIN
CP-2	686165.8530	2390010.8480	STA. 98+37.84, 9.48' LT.	CONTROL POINT PIN

ALIGNMENT DETAILS

BASIS OF BEARING: TRUE NORTH, BASED ON OBSERVATIONS, GPS DATA COLLECTED WITH TRIMBLE 8 UNIT VRS CORRECTION ON OHIO STATE PLANE SOUTH ZONE COORDINATE SYSTEM, NAD 1983, NAVD 1988, GEOID 12A.

STATION	NORTHING	EASTING	ALIGNMENT
97+15.67	686281.5449	2390050.2340	TWP 103 (CRABAPPLE ROAD)
98+46.04	686161.7454	2389998.9069	TWP 103 (CRABAPPLE ROAD)
97+20.82	686270.7195	2390061.7400	€ PZ40 SHHET PILE WALL
98+41.26	686160.0699	2390015.5314	€ PS40 SHEET PILE WALL

WASHINGTON TOWNSHIP ~ BELMONT COUNTY ~ OHIO
SLIP REPAIR PLANS
FOR CRABAPPLE ROAD
SITE 3
OVERALL SITE PLAN

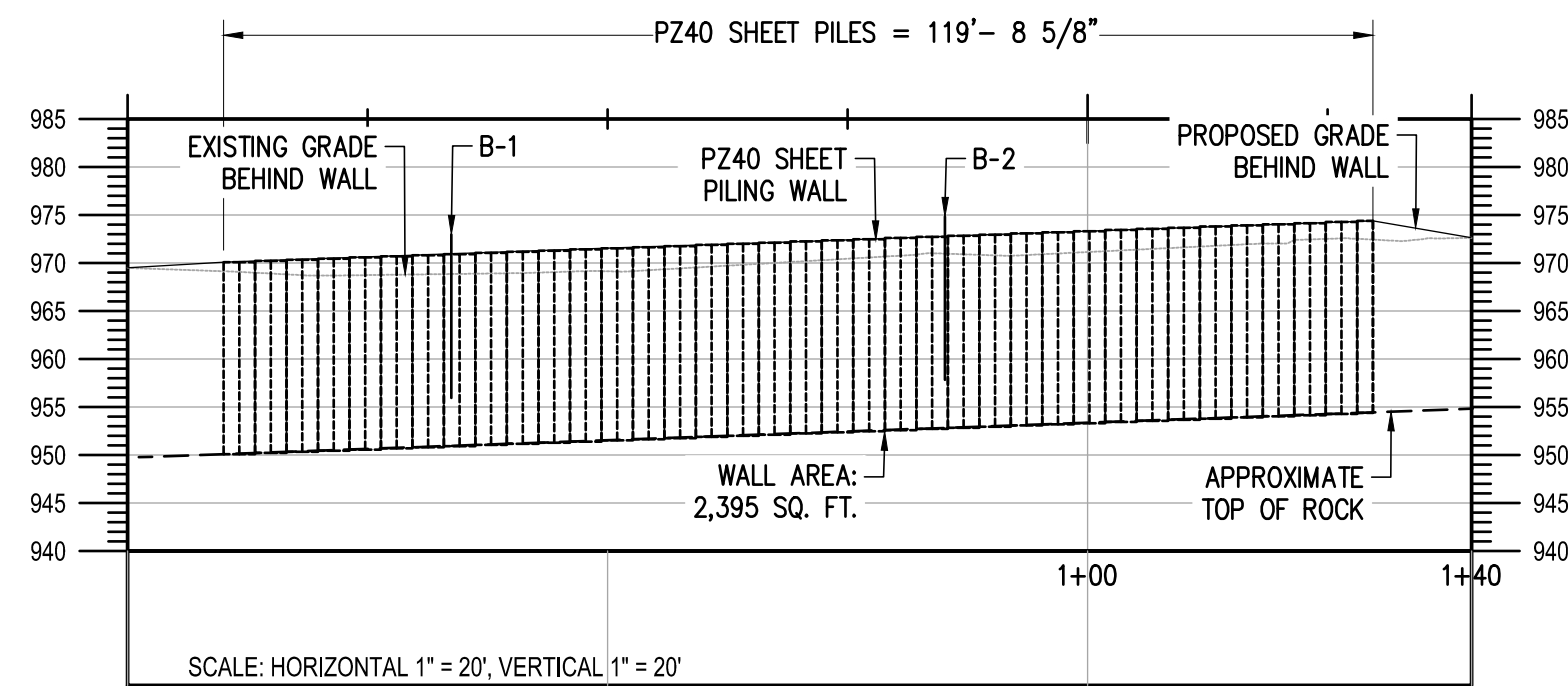
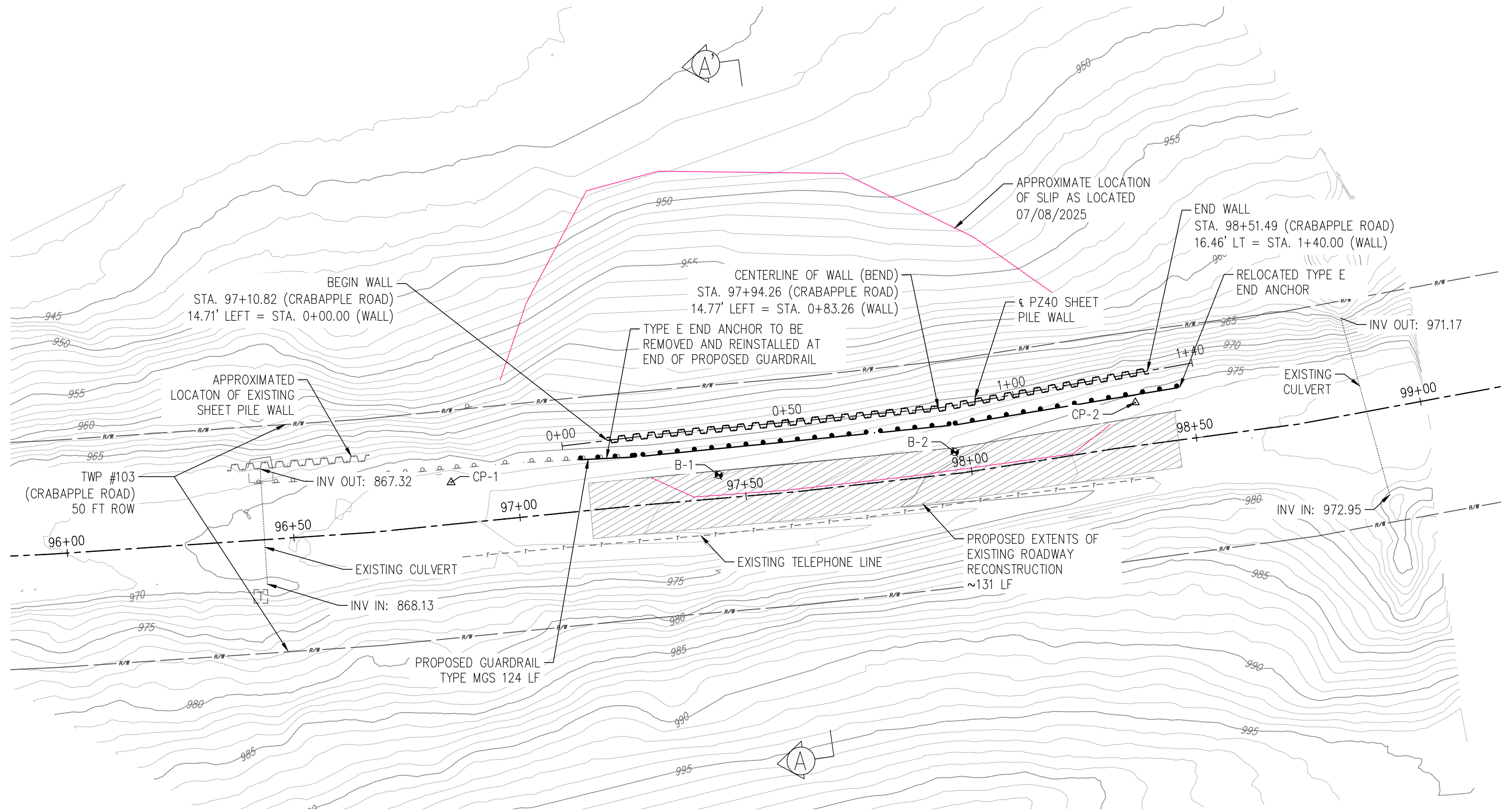
APPLICATION NO.
DATE: 2025-08-25
SCALE: AS NOTED
SHEET: 3



DESIGNED BY:	C/G
DRAWN BY:	C/G/LAF
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PROJECT NO.	32184

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STATE: OHIO P.E. 71835

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CHK'D BY: DATE

REVISION

No.

1

WASHINGTON TOWNSHIP ~ BELMONT COUNTY ~ OHIO

SLIP REPAIR PLANS

FOR CRABAPPLE ROAD

SITE 3

PLAN AND PROFILE

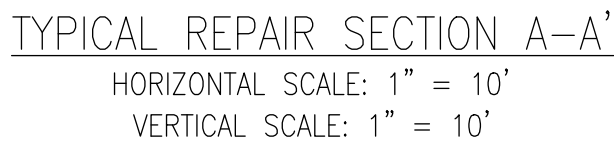
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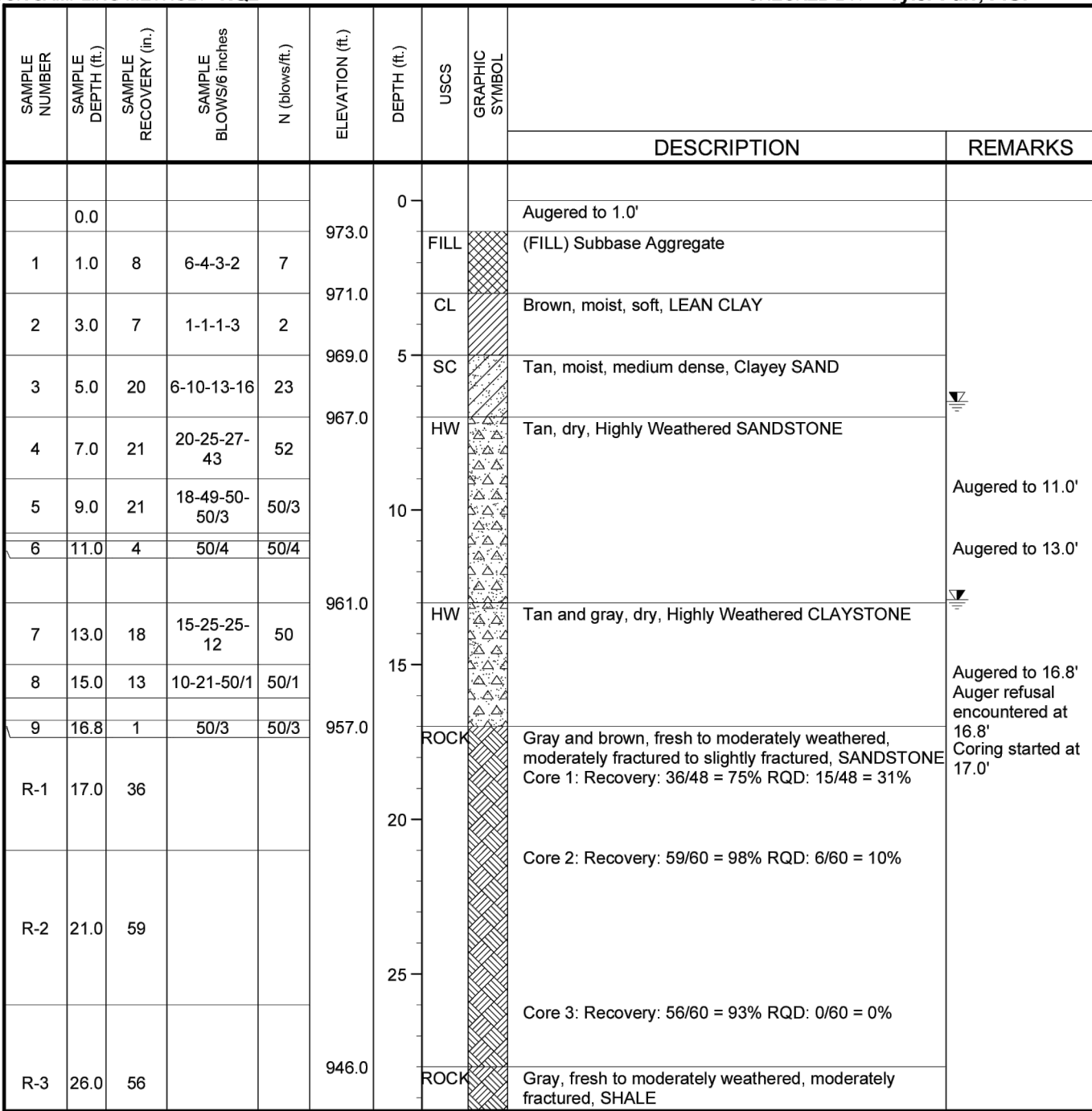
SHEET: 4





- NOTES:**

1. ALL PAVEMENT MATERIALS SHALL CONFORM TO THE CURRENT ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS.
2. THE CONTRACTOR SHALL SAW THE PROPOSED REPAIR JOINTS PER ITEM 203.04E WITH ALL JOINTS TO BE SEALED PER ITEM 423



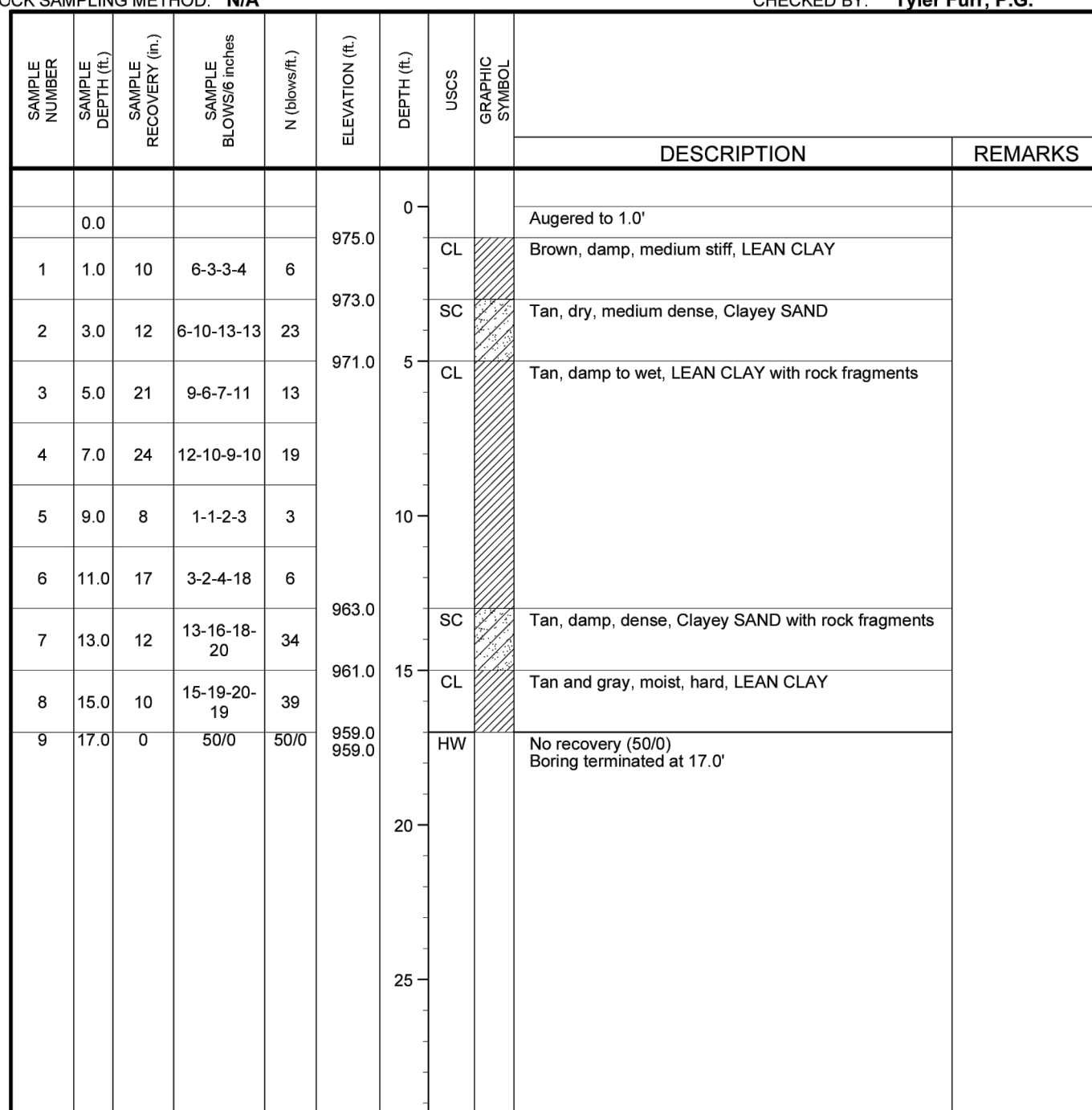
NOTES:



**GEO-TECHNOLOGY
ASSOCIATES, INC.**
206 Bursca Dr
Bridgeville, PA, 15017

LOG OF BORING NO. CRS3-1

Sheet 1 of 2



NOTES-



GEO-TECHNOLOGY ASSOCIATES, INC.
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LOG OF BORING NO. CRS3-2

Sheet 1 of 1

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STATION ALONG CENTERLINE OF ROAD	STATION ALONG CENTERLINE OF WALL	OFFSET FROM CENTERLINE OF ROAD	TOP ELEVATION OF EXISTING GROUND	TOP ELEVATION OF PROPOSED GROUND	TOP ELEVATION OF PANEL	BOTTOM ELEVATION OF PANEL	ESTIMATED TOP OF ROCK ELEVATION	PANEL LENGTH
97+20.82	0+10.00	14.94 LT	969.14	970.09	970.09	950.09	950.09	20
97+30.60	0+20.00	15.22 LT	968.69	970.45	970.45	950.45	950.45	20
97+40.60	0+30.00	15.30 LT	968.76	970.82	970.81	950.81	950.81	20
97+50.60	0+40.00	15.37 LT	968.88	971.19	971.17	951.17	951.17	20
97+60.60	0+50.00	15.43 LT	969.07	971.54	971.53	951.53	951.53	20
97+71.01	0+60.00	15.25 LT	969.56	971.88	971.88	951.88	951.88	20
97+81.01	0+70.00	15.04 LT	970.12	972.22	972.24	952.24	952.24	20
97+91.01	0+80.00	14.84 LT	970.72	972.60	972.60	952.60	952.60	20
98+01.66	0+90.00	15.05 LT	970.73	972.97	972.96	952.96	952.96	20
98+11.66	1+00.00	15.24 LT	971.08	973.32	973.32	953.32	953.32	20
98+21.66	1+10.00	15.42 LT	971.57	973.67	973.67	953.67	953.67	20
98+31.66	1+20.00	15.60 LT	971.99	974.03	974.03	954.03	954.03	20
98+36.27	1+25.00	15.80 LT	972.49	974.21	974.27	954.27	954.27	20

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SLIP REPAIR PLANS

FOR CRABAPPLE ROAD

SITE 3

PILE TABLE

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