



Geohazard Exploration Report
SR 800 Landslide Repair
Dennison, Ohio
S&ME Project No. 24170095

PREPARED FOR:

**Village of Dennison
302 Grant Street
Dennison, Ohio 44621**

PREPARED BY:

**S&ME, Inc.
6190 Enterprise Court
Dublin, OH 43016**

December 30, 2024



December 30, 2024

Village of Dennison
302 Grant Street
Dennison, Ohio 44621

Attention: Mr. Nate Quicksall, P.E.
E: nwq@wequicksall.com

Reference: **Geohazard Exploration Report**
SR 800 Landslide Repair
Dennison, Ohio
S&ME Project No. 24170095

Dear Mr. Quicksall:

S&ME, Inc. (S&ME) has completed the Geohazard Exploration for a landslide along a section of SR 800 located in Dennison, Ohio. The work was performed in general accordance with S&ME Proposal No. 24170095, dated May 31, 2024. The purpose of our exploration was to explore subsurface conditions and to provide site information regarding surface and subsurface conditions, ground water observation, provide the laboratory test result and prepare a geotechnical data report for use by others during design phase design. This report describes our understanding of the project, presents the results of field exploration and laboratory testing.

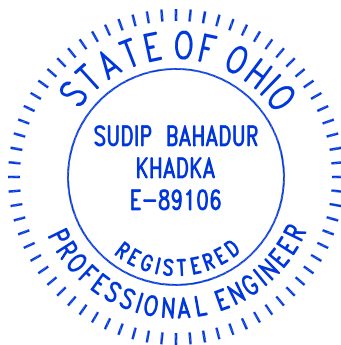
We appreciate having been given the opportunity to be of service on this project. If you require additional assistance or have any questions, please feel free to contact our office at 513-771-8471.

Sincerely,

S&ME, Inc.

A handwritten signature in blue ink, appearing to read 'Sudip B. Khadka'.

Sudip B. Khadka, P.E.
Team Lead/Project Manager



A handwritten signature in blue ink, appearing to read 'Benjamin C. Dusina'.

Benjamin C. Dusina, P.E.
Principal Engineer/Senior Reviewer



1.0 Executive Summary

S&ME has completed the Geohazard Exploration Report for the proposed SR 800 Landslide Repair Project in Dennison, Ohio. The summary provided below is based on the information provided by the client at the time of this report and our subsurface drilling operations. The information presented below is the summary intended for providing an overview of the project and site conditions. This summary cannot be used in lieu of reading the entire geotechnical report. This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Information related to the site is presented in the report text.

Category	Key Geotechnical Findings
Project Description	The project site is along the SR 800, about 410 feet from the intersection with Center Street. There are a few houses to the west and a narrow creek called Little Stillwater Creek to the east. A narrow trail, Stillwater Circle, runs for about 1,230 feet parallel to SR 800, connecting two sections of the highway. A residential area is located east of the site. A few surface mines are located within the vicinity of the project site. A landslide is visible on a section of SR 800 adjacent to a recently constructed soldier pile and plug pile retaining wall. A repair for the slope failure is being considered. Currently this project is approved to move forward with the Dumped-Rock Fill but need to confirm that this is an appropriate method of improvement. If this is not the appropriate method for repair, then additional funds through OPWC may be required. S&ME understands that the funding mechanism may be OPWC Emergency funds and that Quicksall will be designing the repair for the landslide and preparing construction plans and specifications.
Regional Geology	Based on the USDA Web Soil Survey, the predominant near surface soil type are Fitchville-Urban Land Complex, 0 to 8 percent slopes with parent material being Glaciolacustrine deposits and Canadice Silty Clay Loam, 0 to 3 percent slopes with parent material being Glaciolacustrine deposits. A review of Geologic Map indicates that the site consists of Alluvium and Alluvial terraces of the Holocene age. Bedrock geology indicates that the site consists of layers of Shale, Siltstone, Sandstone, Conglomerate and subordinate amounts of Limestone of predominantly shades of gray and black of Pennsylvanian age. The diagnostic features shows that the bedrock consists of economic beds of coal and clay with marine limestone flint and shale beds. There is a local development of thick quartzose sandstone and conglomerate in lower ¼ of unit. Mapping indicated there is rapid horizontal and vertical changes of rock types. Our borings encountered bedrock at depths of 29 feet and 14.8 feet and is consistent with published literature.
Subsurface Conditions	Two (2) soil test borings were performed on this site for this Geohazard Exploration, reaching a depth of 50.92 feet and 36.5 feet. Below asphalt and aggregate base, fill soils consisting of A-1-b, A-4a, A-2-4, A-4b, and A-6a were encountered to a maximum depth of 13.5 feet. Below fill soils, alluvial soils consisting of A-4a, A-6a, and A-3a to a maximum depth of 29 feet followed by Shale, Sandstone and Siltstone bedrock units. A general summary of subsurface conditions encountered in our borings and recorded groundwater depths are summarized in Section 6.1.
Slope Repair Options	Based on the conditions encountered, we analyzed two options for landslide repair. Soldier Pile and Lagging wall with plug piers as lagging and Rockfill Slope were analyzed and the results are presented in this report.



Table of Contents

1.0	Executive Summary	2
2.0	Introduction	3
3.0	Project Information.....	3
4.0	Geology and Observations of the Project	4
4.1	Regional Geology	4
4.2	Review of Regional Mining Activities.....	4
4.3	Potential Karst Activity	5
4.4	Reconnaissance	6
5.0	Exploration	7
5.1	Field Investigation.....	7
5.2	Laboratory Testing	8
6.0	Findings	9
6.1	General Subsurface Profile.....	10
6.2	Groundwater Observations	11
7.0	Analyses and Recommendations.....	11
7.1	Assessment of Existing Conditions.....	11
7.2	Slope Stability Methodology.....	11
7.2.1	Back Analysis	11
7.3	Shear Strength Parameters	12
7.4	Lateral Analyses Parameters.....	12
8.0	Recommendations.....	13
8.1	SPL Retaining Wall.....	13
8.2	Dumped Rock Fill Repair.....	14
9.0	Limitations of Report	14



List of Figures

Figure 2-1 – Landslide Location and Adjacent Retaining Wall	4
Figure 3-1 – Mine Map	5
Figure 3-2 – Site Map	6
Figure 4-1 – Site Location Plan	7

List of Tables

Table 4-1 – Boring Coordinate Summary	8
Table 4-2 – Laboratory Test Summary	9
Table 5-1 – Boring Location Summary	10
Table 6-1 – Shear Strength Parameters (B-001-0-24)	12
Table 6-2 – Shear Strength Parameters (B-002-0-24)	13
Table 7-1 – Summary of SPL Retaining Wall	14
Table 7-2 – Summary of Rockfill Analyses	14

Appendices

Appendix I – Additional Figures

- Geotechnical Engineering Report Information
- Vicinity Map
- Boring Location Plan

Appendix II – Field Exploration

- Soil Log Legend
- Rock Core Log Legend
- Test Boring Logs
- Rock Core Pictures
- Summary of Field Procedures

Appendix III – Laboratory Testing

- Laboratory Test Summary
- Unconfined Compressive Strength of Soil
- Unconfined Compressive Strength of Rock
- Consolidated Undrained Triaxial Test Results
- Summary of Laboratory Procedures

Appendix IV – Stability Analyses

- Back Analyses
- Landslide Design Load Calculations
- PY Wall Calculations
- Rock Fill Slope Analyses



2.0 Introduction

S&ME, Inc. (S&ME) has completed the Geohazard Exploration for the landslide along a section of SR 800 in Dennison, Ohio. The work was performed in general accordance with S&ME Proposal No. 24170095, dated May 31, 2024. The purpose of our exploration was to explore subsurface conditions and to provide site information regarding surface and subsurface conditions, groundwater observations, provide the laboratory test results and prepare a geotechnical report for use by others during design phase for the landslide repair. This report describes our understanding of the project, presents the results of field exploration, laboratory testing, and geotechnical analyses.

3.0 Project Information

Project information was provided to us by Mr. Nate Quicksall, P.E., with W.E. Quicksall and Associates, Inc. (Quicksall), via e-mail communication and phone call. S&ME was provided with a KMZ, photos, and previous plan sheets from an adjacent project constructed in 2017 (ODOT PID 97262). Based on a follow up phone call, we understand that the project has reduced in size from a soldier pile retaining wall design (~\$1.5M) to more of a maintenance project using dumped rock fill (~\$400K). Currently this project is approved to move forward with the dumped rock fill alternative, but environmental permits will likely be required, which are outside our approved scope of services. If this is not the appropriate method then, additional funds through OPWC will be needed. S&ME understands that the funding mechanism may be OPWC Emergency funds and that Quicksall will be designing the repair for the landslide and preparing construction plans and specifications. We understand that the Phase 1 Geohazard Exploration does not need to meet the ODOT SGE guidelines. Figure 2-1 is a photo provided by Quicksall showing the landslide location and the adjacent soldier pile and plug pile retaining wall project.

The project information and considerations detailed above should be reviewed and confirmed by the appropriate team members. Modifications to our recommendations may be required if the actual conditions vary from the project information and considerations described herein.



Figure 3-1 – Landslide Location and Adjacent Retaining Wall

4.0 Geology and Observations of the Project

4.1 Regional Geology

Based on the USDA Web Soil Survey, the predominant near surface soil type are Fitchville-Urban Land Complex, 0 to 8 percent slopes with parent material being Glaciolacustrine deposits and Canadice Silty Clay Loam, 0 to 3 percent slopes with parent material being Glaciolacustrine deposits. A quick review of Geologic Map of indicates that the site consists of Alluvium and Alluvial terraces of the Holocene age. Bedrock geology indicates that the site consists of layers of Shale, Siltstone, Sandstone, Conglomerate and subordinate amounts of Limestone of predominantly shades of gray and black of Pennsylvanian age. The diagnostic features shows that the bedrock consists of economic beds of coal and clay with marine limestone flint and shale beds. There is a local development of thick quartzose sandstone and conglomerate in lower ¼ of unit. It also shows there is rapid horizontal and vertical changes of rock types. Our borings encountered bedrock at depths of 29 feet and 14.8 feet and is consistent with published literature.

4.2 Review of Regional Mining Activities

Our review of the available mines record maintained by Ohio Department of Natural Resources (ODNR) indicates that there are several mines within the immediate vicinity of the site. Coal mining with mine code (TS-156) and

large area of AUM Non-Coal with mine code (TS-156) are observed within 0.03 miles west of the site. There are several AUM Non-Coal and Abandoned Underground Coal Mining with Mine Code i.e. TS-358, and Coal Mining with National ID: D-2177 within 0.45 miles east of the site. There is several AUM Partially Known Coal mining and abandoned underground coal mining with Mine code TS-073 and within 0.5 miles south of the site. There are no mapped mines directly beneath the project site.

Mines of Ohio

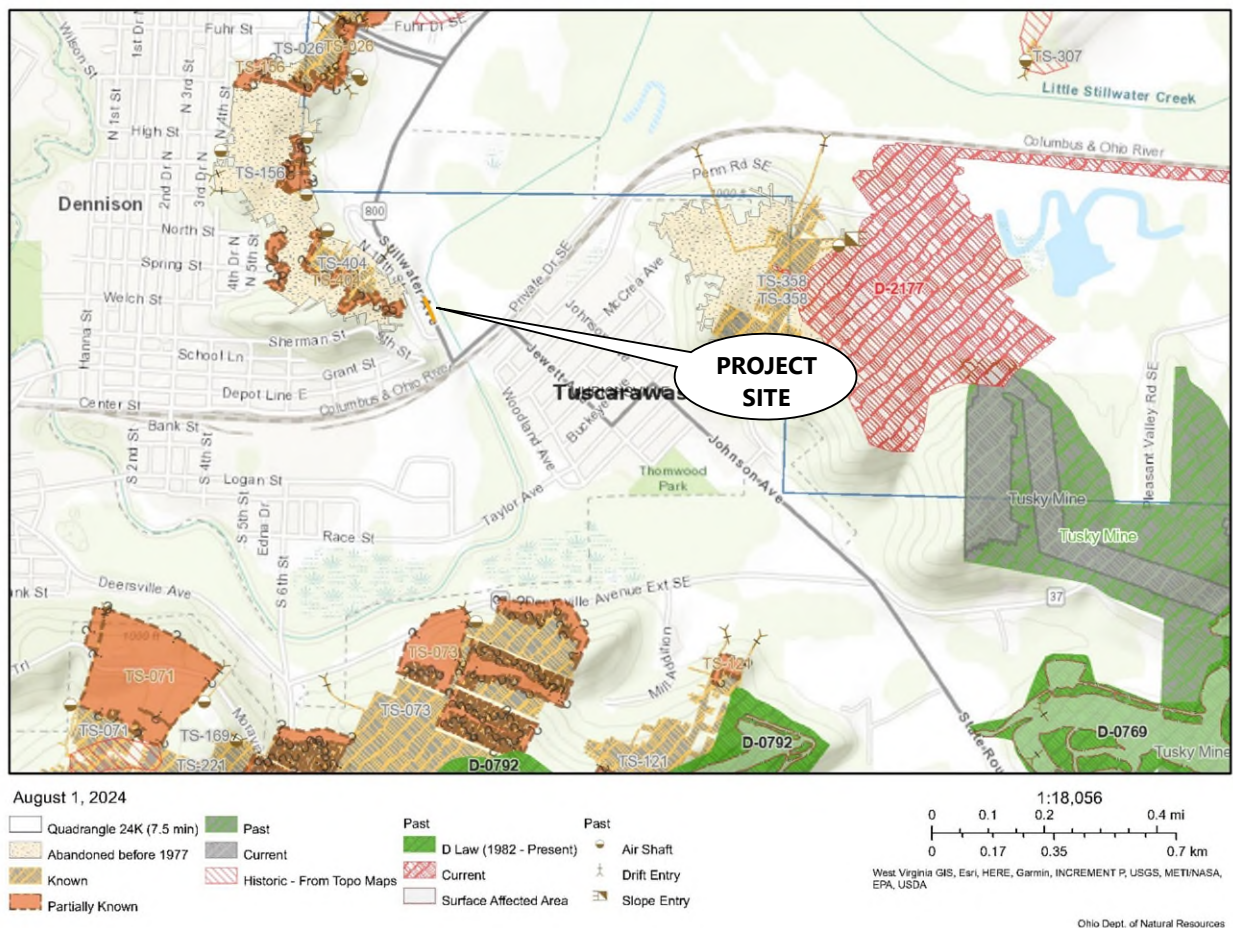


Figure 4-1 – Mine Map

4.3 Potential Karst Activity

Based on the review of Karst Mapping maintained by the Ohio Department of Natural Resources (ODNR), there is no Karst features within the immediate vicinity of the site. There are a few points which appears to be spring on DEM but not visited within 3.5 miles north of the site. There are few more similar features located within 5.5 to 6.5 miles northwest and west of the site.

Karst Map

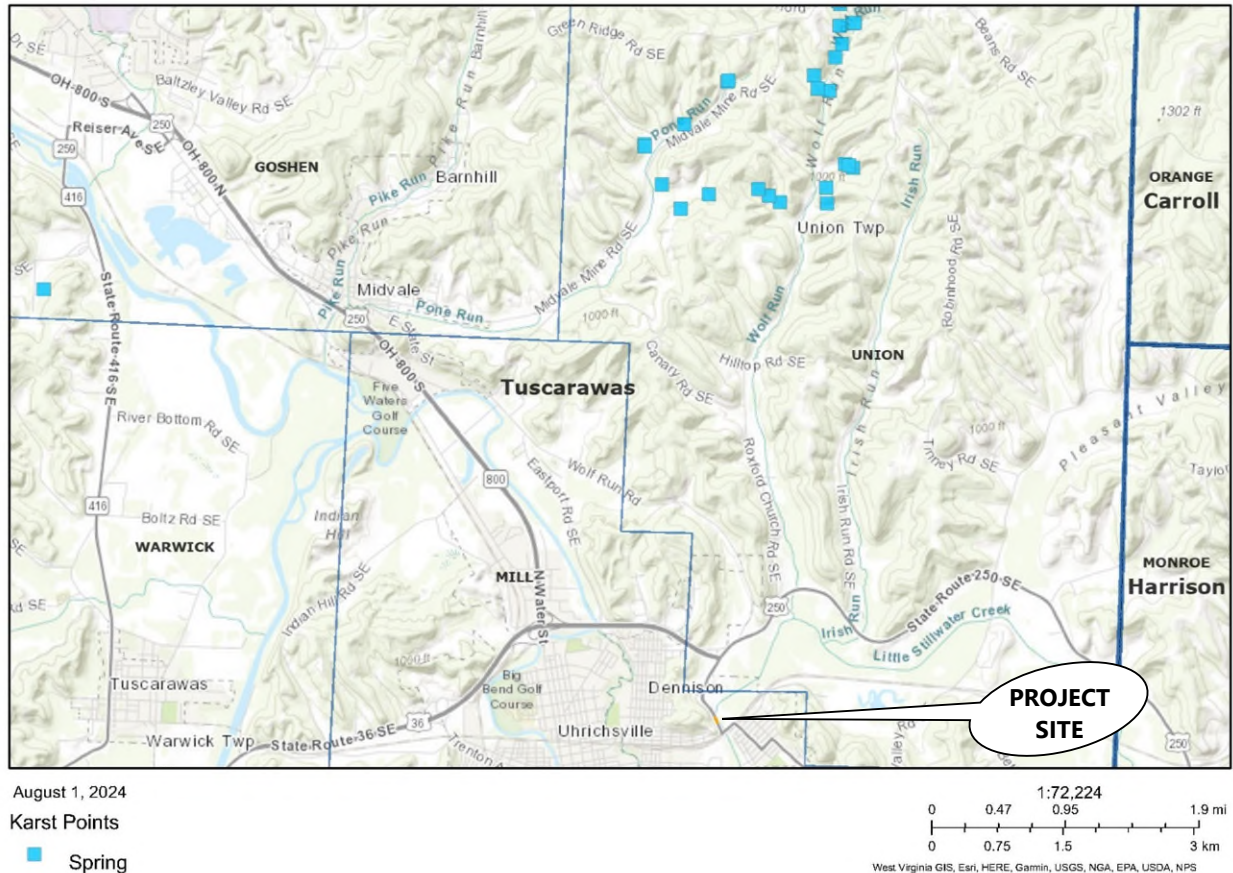


Figure 4-2 – Site Map

4.4 Reconnaissance

S&ME performed two (2) site visits on June 6, 2024, and July 9, 2024, prior to drilling to observe the existing site conditions and stake locations of the borings. Based on our site visit and aerial maps, the project site is along the SR 800 highway, about 410 feet from the intersection with Center Street. There are a few houses to the west and a narrow creek called Little Stillwater Creek to the east. A narrow trail, Stillwater Circle, runs for about 1,230 feet parallel to OH-800, connecting two sections of the highway. Several coal mines are within 0.03 miles west of the site, and a large mine factory is just past Little Stillwater Creek to the east. Additional mines are 0.45 to 0.5 miles to the east and south. A railway track is about 420 feet to the south. The boring site has consistent elevations of 859 feet at two boring locations. The elevation drops to 844 feet at Little Stillwater Creek to the east and rises to 1017 feet at the top of the hilly mine to the west. Figure 4-1 on the following page illustrates the site outlined in red.



Figure 4-3 – Site Location Plan

5.0 Exploration

5.1 Field Investigation

For geotechnical exploration, two (2) soil test borings with boring number B-001-0-24, and B-002-0-24 were performed on this site between July 17 and July 18, 2024. The boring locations were staked in the field prior to our field exploration by S&ME personnel. The boring locations were recorded using hand-held surveying equipment with sub-meter horizontal accuracy and the reported top of boring elevations were obtained from available mapping to the nearest foot.



Boring B-001-0-24 encountered auger refusal at a depth of 30.9 feet and rock coring was extended to a depth of 50.9 feet. Boring B-002-0-24 encountered auger refusal at a depth of 16.5 feet and rock coring was extended to a depth of 36.5 feet.

The borings were performed using mobile B-57 track mounted drill rig using 3¼-inch hollow stem augers. Soil samples were obtained using a split-barrel sampler (SPT) driven by an automatic hammer system in general accordance with ASTM D1586. Split-barrel soil samples were placed in air-tight containers and retained for visual classification and subsequent laboratory testing. One (1) Undisturbed samples (Shelby tube) was obtained in each of the boring locations for this project. Rock coring was performed by using NQ2 Core Barrel type. A general description of our field procedures, a test boring log legend, and boring logs are provided in Appendix II of this report. The stratification lines shown on the boring logs represent the approximate boundaries between soil types. The actual transitions may be more gradual than shown.

In the field, experienced S&ME personnel performed the following: 1) examined the samples recovered from the borings; 2) preserved representative portions of the samples in airtight glass jars; 3) prepared a log of each boring; 4) made seepage and groundwater observations; 5) made hand-penetrometer measurements in soil specimens exhibiting cohesion; and, 6) provided liaison between the field work and the Project Engineer so the exploration program could be modified in the event unusual or unexpected subsurface conditions were encountered. The recovered samples were transported to the laboratory of S&ME for further examination and testing.

Boring coordinates and elevations are summarized in Table 4-1 below. The approximate locations of the borings are shown on the Boring Location Plan (Figure 2) in Appendix I.

Table 5-1 – Boring Coordinate Summary

Boring No.	Latitude (°)	Longitude (°)	Surface Elevation (ft)	Asphalt (in)	Aggregate Base (in)	Termination Depth (ft)
B-001-0-24	40.394517	-81.325208	859	12	6	50.9
B-002-0-24	40.395013	-81.325494	859	10	8	36.5

Note:

1. Latitude and Longitude were obtained using a handheld GPS with sub-meter horizontal accuracy.
2. Surface Elevations were obtained using available topographic information.

5.2 Laboratory Testing

Following retrieval, the S&ME staff on-site preserved the recovered soil samples in airtight glass jars. The recovered samples were returned to our laboratory where applicable laboratory tests were assigned. These tests are used to assess the engineering properties of the soil. The soil samples were visually classified by a geotechnical engineer. S&ME conducted the following laboratory test for the obtained split spoon, Shelby tube and rock core sample.

- ◆ Moisture Content Determinations
- ◆ Atterberg Limits
- ◆ Hydrometer Analyses (short)
- ◆ Unit Weight Tests



- ◆ Triaxial Consolidated Undrained (CU) Test
- ◆ Unconfined Compression Test (Rock)

The results of the soil and rock core testing performed on samples recovered from borings are summarized in Table 4-2 below.

Table 5-2 – Laboratory Test Summary

Boring No.	Depth (ft)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Rock Unconfined Compressive Strength (psi)
B-001-0-24	11.5-13.5	24	29	21	8	-
B-001-0-24	13.5-15.0	25	26	20	6	-
B-001-0-24	18.5-20.0	18	NP	NP	NP	-
B-001-0-24	39.3-39.8	0.9	-	-	-	11,395
B-002-0-24	8.5-10.0	25	32	17	15	-
B-002-0-24	11.0-12.5	22	30	18	12	-
B-002-0-24	16.5-17.3	0.4	-	-	-	18,031

The results of the laboratory index tests are recorded numerically on individual boring logs and the results of the strength tests are presented in Appendix II. Based upon the results of the laboratory testing program, the field logs were modified, as necessary, and copies of the laboratory corrected boring logs are presented in Appendix II. Shown on these logs are: descriptions of the soil stratigraphy encountered; depths from which samples were preserved; sampling efforts (blow-counts) required to obtain the specimens in the borings; laboratory testing results; seepage and groundwater observations made at the time of drilling; and, values of hand-penetrometer measurements made in soil samples exhibiting cohesion. For your reference, hand-penetrometer values are roughly equivalent to the unconfined compressive strength of the cohesive fraction of the soil sample. An explanation of the symbols and terms used on the boring logs, definitions of the special adjectives used to denote the minor soil components, and information pertaining to sampling and identification are presented in Appendix II.

6.0 Findings

The following is a generalized description of the subsurface conditions. The stratification of the soil, as shown on the Boring Logs in Appendix II, represents the conditions at the actual boring locations. Lines of demarcation represent the approximate boundary between the soil types, but the transition may be gradual or not clearly defined.



6.1 General Subsurface Profile

Each of the borings were drilled through the asphalt followed by aggregate base course. The subsurface conditions were consistent with the published Geological mapping information. Table 5-1 below provides the generalized subsurface conditions of the soils encountered.

Table 6-1 – Boring Location Summary

Depth (ft.)	Group	Description ⁽¹⁾	Range of SPT N-Values (blows per foot)
0.0-1.0	N/A (Surface cover)	10 to 12-inches of Asphalt	--
0.8-1.5	N/A (Base)	6 to 8 inches of Aggregate Base	--
1.0-13.5	A	Fill: Very loose, gray to dark brown to black, Gravel with Sand (A-1-b), Gravel with Sand and Silt (A-2-4), very soft to medium stiff, brown to gray, Sandy Silt (A-4a), Silt and Clay (A-6a)	0-6
10.0-27.0	B	Alluvium: Medium stiff to hard, brown, gray, orange-brown, Sandy Silt (A-4a), Silt and Clay (A-6a)	5-50/4"
27.0-29.0	C	Alluvium: Very loose, gray, Coarse and Fine Sand (A-3a) <i>(only encountered in B-001-0-24)</i>	17
29.0-31.0	D	Weathered Bedrock: Shale, Interbedded with Sandstone and Sandstone, blue gray to brown and orange-brown, severely to highly weathered, very weak to weak	17
31.0-35.3	E	Bedrock: Shale (90%) Interbedded with Sandstone (10%), brown and orange-brown, severely to highly weathered, very weak to weak, highly fractured to fractured <i>(only encountered in B-001-0-24)</i>	--
16.5-28.3	F	Bedrock: Sandstone, brown and orange-brown to blue-gray, moderately to highly weathered, highly to slightly fractured, very weak to moderately strong, very fine to medium grained texture <i>(only encountered in B-002-0-24)</i>	--
28.3-50.9	G	Bedrock: Siltstone, blue gray, slightly to moderately weathered, fractured to intact, moderately to slightly strong	--

Note:

1. This is a generalized summary and may not accurately depict the actual conditions encountered in the test borings. These groups may not be encountered at each boring location.



6.2 Groundwater Observations

Seepage and groundwater observations were made during drilling operations, before and after rock coring, and backfilling the borings. Seepage was encountered at a depth of 19 feet and 12 feet in borings B-001-0-24 and B-002-0-24, respectively. Groundwater was measured at 27 feet during drilling on B-001-0-24 during drilling and at 23.6' inside auger prior to rock coring. Water levels on both borings were measured after completion of rock coring but these should not be considered true water levels due to inclusion of water to rock coring. Long-term groundwater levels were not measured, so the groundwater levels and seepage measurements should be considered as temporary, short-term observations and should not be assumed to be representative of the long-term static groundwater level. Groundwater levels will be affected by the water level in Little Stillwater Creek. Groundwater levels can fluctuate due to seasonal variations in precipitation, construction activities, etc.

7.0 Analyses and Recommendations

7.1 Assessment of Existing Conditions

For both the Upper and Lower Slopes, S&ME evaluated a repair option consisting of a Soldier Pile and Lagging (SPL) retaining wall with plug piers as lagging between the soldier (reinforced) piles located along the eastern edge of the pavement. The plug piers replace traditional wooden or concrete lagging boards to retain the soil between the reinforced piers by using one (1) or two (2) unreinforced piers. Another repair option of placing dumped rock fill to buttress the existing slopes was also analyzed. The analyses were based on the slope geometry information provided by Quicksall for the landslide area. The following sections of this report describe our analyses and provide retaining wall recommendations.

7.2 Slope Stability Methodology

7.2.1 Back Analysis

Following completion of our exploration and laboratory testing, we developed a subsurface model of the slope for stability analysis. The model was constructed with information from the topographic survey of the site provided by Quicksall, our measurements made from the soil test borings and rock cores, as well as our observations of the slopes. For these sections, S&ME delineated the subsurface strata based on the results of our soil borings and developed the cross-section layers for analyses. Two (2) soil cross sections were evaluated for slope stability along a profile extending near both borings based on the different top of bedrock depths (29-feet and 14.8 feet) encountered in borings. Generalized typical sections are provided in Appendix IV.

For our stability analysis, we used the computer program SLIDE2 (version 9.003) developed by Rocscience, Inc. Static slope stability analyses for the pre-failure condition were performed on the cross-sections using Spencer's method (Spencer, 1973) with a deterministic approach. This method provides solutions based on limit equilibrium theory. Shear strength parameters of the soil for our analysis were assessed by performing a back analysis on the failure surface at a depth near to 6 feet to evaluate the combination of shear strength parameters yielding a Factor of Safety of about 1.0. The Factor of Safety is the ratio of Resisting Forces to Driving Forces. A Factor of Safety



greater than 1.0 indicates the Resisting Forces are greater than the Driving Forces while a Factor of Safety of less than 1.0 indicates the Resisting Forces are less than the Driving Forces and the slope is likely unstable.

Slope stability analysis for static existing conditions were performed to evaluate the factor of safety against rotational failures for the roadway using drained soil strength parameters consistent with the effective stress (long-term/draines) condition because the roadway has been in-place for many years.

The calculated Factor of Safety of the slope near 1.0 indicating that continued movement is expected. While performing our stability analysis, we observed that the model is sensitive to minor changes in material strength as well as minor variations in groundwater levels. The back analysis output is included in Appendix IV.

7.3 Shear Strength Parameters

Both correlations and laboratory testing results for this investigation were used to develop shear strength parameters for the soil conditions encountered in our borings. In addition to index testing, triaxial test data was performed on select Shelby tube specimens and recovered bedrock samples. The laboratory testing data was used to develop the shear strength of the soil and bedrock layers. The shear strength parameters of the natural cohesive layers were selected based on the results of the laboratory testing and correlations to laboratory index test results.

7.4 Lateral Analyses Parameters

A lateral load analysis was performed based on the selected pile type for the service and strength limits state. The lateral load analysis was performed using PYWall (version 2022.7.8). Global stability analyses were performed to determine landslide loads after back analysis on critical sections. Three (3) conditions were evaluated for calculating landslide loads: i) Normal water level conditions; ii) Rapid Drawdown Conditions (Partial); and iii) Rapid Drawdown Conditions (Full). The highest landslide load that would exhibit adequate factor of safety (FOS) greater than 1.3 [for (i) condition] and greater than 1.1 [for (ii) and (iii) conditions] for long-term conditions was taken and included during lateral analyses. Tables 6-1 and 6-2 summarize the parameters used in our analyses at each critical section near both borings.

Table 7-1 – Shear Strength Parameters (B-001-0-24)

Soil Layer	Soil Type	Total Unit Weight (pcf)	c/Su (psf)	Φ' (deg)	E ₅₀	K _{py} (pci)	Strain Factor k _{rm}	UCS, q _u (psi)	RQD (%)
Gravel with Sand and Silt (A-6a)	Sand (Reese)	110	-	25	-	25	-	-	-
Sandy Silt (A-4a)	Silt (c-phi soil)	110	0	24	0.02	80	-	-	-
Silt (A-4b) and Sandy Silt (A-4a)	Silt (c-phi soil)	110	0	34	0.01	250	-	-	-
Silt and Clay (A-6a)	Silt (c-phi soil)	110	150	22	0.02	-	-	-	-



Soil Layer	Soil Type	Total Unit Weight (pcf)	c/Su (psf)	Φ' (deg)	E ₅₀	K _{py} (pci)	Strain Factor k _{rm}	UCS, q _u (psi)	RQD (%)
Weathered Shale Bedrock	Weak Rock	150	-	-	-	-	0.0005	9.7	0
Shale/Siltstone Bedrock	Strong Rock	160	-	-	-	-	0.0005	11,000	8-59

Table 7-2 – Shear Strength Parameters (B-002-0-24)

Soil Layer	Soil Type	Total Unit Weight (pcf)	c/Su (psf)	Φ' (deg)	E ₅₀	K _{py} (pci)	Strain Factor k _{rm}	UCS, q _u (psi)	RQD (%)
Sandy Silt (A-4a)	Silt (c-phi soil)	90-110	0	28-34	0.02-0.007	25-500	-	-	-
Silt and Clay (A-6a)	Silt (c-phi soil)	90	150	22	0.02	30	-	-	-
Weathered Shale Bedrock	Weak Rock	150	-	-	-	-	0.0005	9.7	0
Sandstone/Siltstone Bedrock	Strong Rock	160	-	-	-	-	0.0005	11,000	77-91

The lateral analyses input data and resulting plots are attached to Appendix IV of this report.

8.0 Recommendations

Two (2) repair alternatives were considered for this project. Both repair alternates are individually discussed on the following sections.

8.1 SPL Retaining Wall

S&ME proposes a SPL retaining wall with two (2) 30-inch plug piers as the lagging located along the eastern edge of the pavement. The results of our analyses indicate that a drilled shaft, cantilever retaining wall using 36-inch diameter drilled shafts with W27x129 steel piles spaced at 6.5 feet on center can be used for slope repair. The reinforced shafts should be extended at least 10 feet into bedrock at shallow bedrock areas (bedrock < 25 feet) and at least 5-feet into bedrock at deep bedrock areas (bedrock > 25 feet). The unreinforced plug piers will be extended to a depth of 12-feet. Refer to Table 7-1 for the retaining wall summary. The retaining wall should be installed using top-down construction, and under the supervision of a qualified engineering representative to ensure that the correct embedment depths are achieved and that the wall is constructed in accordance with ODOT specifications and the design plans. Utilities should be verified in the field prior to construction. The SPL retaining wall has been designed to provide a factor of safety of greater than 1.3 for long-term stability. The landslide



design load calculations and lateral analyses plots are provided in Appendix IV of this report. This is the preferred option for slope repair.

Table 8-1 – Summary of SPL Retaining Wall

Location/ Station	Drilled Shaft Diameter (in)	Drill Shaft Center-to- Center Spacing (ft)	Reinforcing Beam	Minimum Bedrock Embedment (ft)	Plug Pier (unreinforced) Length
453+25	36	6.5	W27x129	5	12 feet
455+00	36	6.5	W27x129	10	12 feet

8.2 Dumped Rock Fill Repair

Dumped Rock Fill analyses were performed as an alternative to the SPL retaining wall for this project. The analyses were performed using a computer program SLIDE2 developed by Rocscience, Inc., which uses limit equilibrium slope stability analyses. The analyses indicated that a rockfill slope of 2.5H:1V (Horizontal to Vertical) at Station 453+25 and a rockfill slope of 2.25H:1V at Station 455+00 is required to obtain a factor of safety of 1.3. However, this alternative will extend into the existing Little Stillwater Creek that would require United States Army Corps of Engineers (USACE) and other environmental permits. We understand that the permit from USACE has already been obtained for the rockfill. For obtaining a FOS of 1.3, an encroachment of 8-feet to entire width of the river is required. Table 7-2 below provides a summary of rockfill slope and obtained factors of safety for two (2) sections analyzed. The results of rockfill analyses are included in Appendix IV of this report.

Table 8-2 – Summary of Rockfill Analyses

Location/ Station	Slope (Horizontal to Vertical, H:V)	Factor of Safety (FOS)
453+25	2.5H:1V	1.30
455+00	2.25H:1V	1.30

9.0 Limitations of Report

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other representation or warranty either express or implied, is made.

We relied on project information given to us to develop our conclusions and recommendations. If the project information described in this report is not accurate, or if it changes during project development, we should be notified of the changes so that we can modify our recommendations based on this additional information if necessary.



Our conclusions and recommendations are based on limited data from a field exploration program. Subsurface conditions can vary widely between explored areas. Some variations may not become evident until construction. If conditions are encountered which appear different than those described in our report, we should be notified. This report should not be construed to represent subsurface conditions for the entire site.

Unless specifically noted otherwise, our field exploration program did not include an assessment of regulatory compliance, environmental conditions or pollutants or presence of any biological materials (mold, fungi, bacteria). If there is a concern about these items, other studies should be performed. S&ME can provide a proposal and perform these services if requested.

S&ME should review the final plans and specifications to confirm that earthwork and other recommendations are properly interpreted and implemented. The recommendations in this report are contingent on S&ME's review of final plans and specifications followed by our observation and monitoring of earthwork construction activities.

For more information on the use and limitations of this report, please read the Geoprofessional Business Association (GBA) document that follows this page.



Geohazard Exploration Report
SR 800 Slip Repair
Dennison, Ohio
S&ME Project No. 24170095

Appendices



Appendix I – Additional Figures

Geotechnical Engineering Report Information
Vicinity Map
Boring Location Plan



Important Information About Your Geotechnical Engineering Report

Variations in subsurface conditions can be a principal cause of construction delays, cost overruns and claims. The following information is provided to assist you in understanding and managing the risk of these variations.

Geotechnical Findings Are Professional Opinions

Geotechnical engineers cannot specify material properties as other design engineers do. Geotechnical material properties have a far broader range on a given site than any manufactured construction material, and some geotechnical material properties may change over time because of exposure to air and water, or human activity.

Site exploration identifies subsurface conditions at the time of exploration and only at the points where subsurface tests are performed or samples obtained. Geotechnical engineers review field and laboratory data and then apply their judgment to render professional opinions about site subsurface conditions. Their recommendations rely upon these professional opinions. Variations in the vertical and lateral extent of subsurface materials may be encountered during construction that significantly impact construction schedules, methods and material volumes. While higher levels of subsurface exploration can mitigate the risk of encountering unanticipated subsurface conditions, no level of subsurface exploration can eliminate this risk.

Scope of Geotechnical Services

Professional geotechnical engineering judgment is required to develop a geotechnical exploration scope to obtain information necessary to support design and construction. A number of unique project factors are considered in developing the scope of geotechnical services, such as the exploration objective; the location, type, size and weight of the proposed structure; proposed site grades and improvements; the construction schedule and sequence; and the site geology.

Geotechnical engineers apply their experience with construction methods, subsurface conditions and exploration methods to develop the exploration scope. The scope of each exploration is unique based on available project and site information. Incomplete project information or constraints on the scope of exploration increases the risk of variations in subsurface conditions not being identified and addressed in the geotechnical report.

Services Are Performed for Specific Projects

Because the scope of each geotechnical exploration is unique, each geotechnical report is unique. Subsurface conditions are explored and recommendations are made for a specific project.

Subsurface information and recommendations may not be adequate for other uses. Changes in a proposed structure location, foundation loads, grades, schedule, etc. may require additional geotechnical exploration, analyses, and consultation. The geotechnical engineer should be consulted to determine if additional services are required in response to changes in proposed construction, location, loads, grades, schedule, etc.

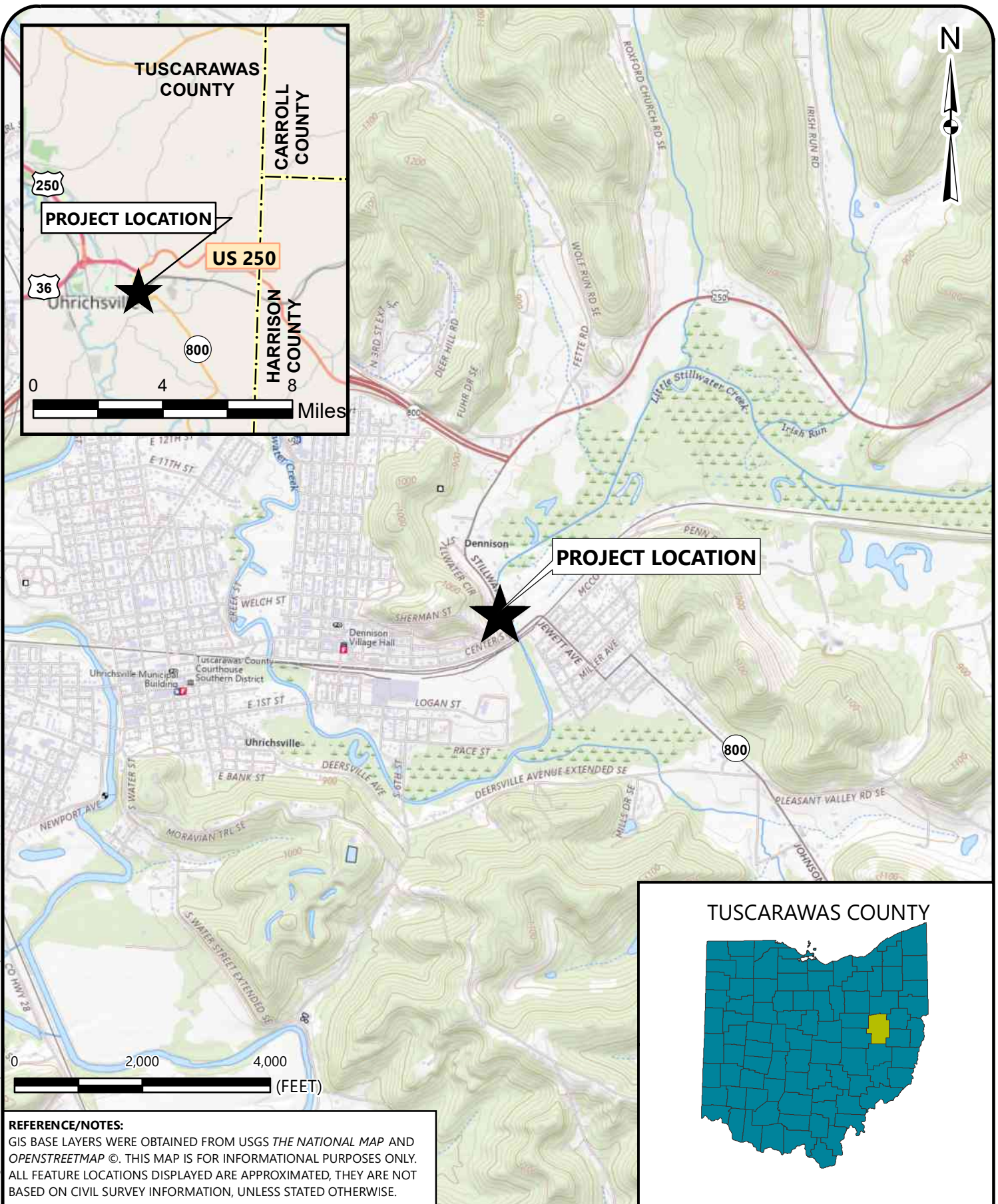
Geo-Environmental Issues

The equipment, techniques, and personnel used to perform a geo-environmental study differ significantly from those used for a geotechnical exploration. Indications of environmental contamination may be encountered incidental to performance of a geotechnical exploration but go unrecognized. Determination of the presence, type or extent of environmental contamination is beyond the scope of a geotechnical exploration.

Geotechnical Recommendations Are Not Final

Recommendations are developed based on the geotechnical engineer's understanding of the proposed construction and professional opinion of site subsurface conditions. Observations and tests must be performed during construction to confirm subsurface conditions exposed by construction excavations are consistent with those assumed in development of recommendations. It is advisable to retain the geotechnical engineer that performed the exploration and developed the geotechnical recommendations to conduct tests and observations during construction. This may reduce the risk that variations in subsurface conditions will not be addressed as recommended in the geotechnical report.

Drawing Path: C:\Users\alacy\Documents\ArcGIS\Projects\24170095_SR800SlipRepair_VMap.mxd plotted by alacy 07-31-2024



VICINITY MAP

STATE ROUTE 800 SLIP REPAIR
DENNISON, TUSCARAWAS COUNTY, OHIO

SCALE:
1" = 2,000'
DATE:
10-31-24
PROJECT NUMBER
24170095

Figure No.

1

Drawing Path: C:\Users\alacy\Documents\ArcGIS\Projects\24170095_SlipRepair\24170095_SlipRepair_V1.mxd plotted by alacy 07-31-2024



PLAN OF BORINGS

STATE ROUTE 800 SLIP REPAIR
DENNISON, TUSCARAWAS COUNTY, OHIO

SCALE:
1" = 200'

DATE:
10-31-24
PROJECT NUMBER
24170095

Figure No.

2



Appendix II – Field Exploration

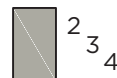
Soil Log Legend
Rock Core Log Legend
Test Boring Logs
Rock Core Pictures
Summary of Field Procedures

ODOT SOIL LOG

LEGEND



The **STANDARD PENETRATION TEST (SPT)** as defined by AASHTO T206 (or ASTM D1586) is a method to obtain a disturbed soil sample for examination and testing and to obtain relative density and consistency information. A standard 1.4-inch I.D./2-inch O.D. split-barrel sampler is driven three 6-inch increments (see graphic at right) with a 140 lb. hammer freely falling 30 inches. The hammer can either be of a trip, free-fall design, or actuated by a rope and cathead. The SPT N Value is determined by adding the number of blows from the 2nd and 3rd 6-inch increments.



SPT BLOWCOUNT CORRECTION FOR HAMMER EFFICIENCY (N_{60}) is determined by the following equation: $N_{60} = N * [\text{Drill Rod Energy Ratio (\%)} / 60]$, and where the drill rod energy ratio is determined in accordance with ASTM D4633. If the drill rod energy ratio exceeds 90%, it is limited to 90% to determine the N_{60} value and is shown on the log as 90*.

SHELBY TUBE (ST) samples are obtained by hydraulically pushing a thin-walled tube (typically 3-inches in diameter) to obtain a relatively undisturbed sample for testing of fine-grained soils to determine engineering properties such as strength, compressibility, permeability, and density. Shelby tubes are sampled in general accordance with ASTM D1587 (AASHTO T207).



DESCRIPTIVE ORDER OF SOIL STRATA: Consistency/Density, color, ODOT soil classification description, minor soil constituents with percentage modifiers, organic content, miscellaneous constituents or descriptions, relative moisture condition.

ODOT SOIL CLASSIFICATION DESCRIPTION AND SYMBOL

	GRAVEL (A-1-a)		SILT (A-4-b)		ORGANIC CLAY (A-8b)
	GRAVEL WITH SAND (A-1-B)		ELASTIC SILT AND CLAY (A-5)		PEAT
	FINE SAND (A-3)		SILT AND CLAY (A-6a)		UNCONTROLLED FILL
	COARSE AND FINE SAND (A-3a)		SILTY CLAY (A-6b)		BOULDERY ZONE
	GRAVEL WITH SAND AND SILT (A-2-4 OR A-2-5)		ELASTIC CLAY (A-7-5)		SOD/ROOTMAT/TOPSOIL
	GRAVEL WITH SAND, SILT AND CLAY (A-2-6 OR A-2-7)		CLAY (A-7-6)		PAVEMENT OR BASE
	SANDY SILT (A-4a)		ORGANIC SILT (A-8a)		CONCRETE

SOIL LOG SYMBOLS

SS - Split-Spoon Sample	Qu - Unconfined Compressive Strength	FS - Fine Sand Content, %
ST - Shelby Tube Sample	γ_d - Dry Unit Weight, pcf	SI - Silt Content, %
TR - Top of Rock	γ_m - Moist Unit Weight, pcf	CL - Clay Content, %
REC - Sample Recovery, %	GR - Gravel Content, %	LL - Liquid Limit
HP - Hand Penetrometer Value, tsf	CS - Coarse Sand Content, %	PL - Plastic Limit
LOI - Loss on Ignition Test, %		PI - Plasticity Index
		WC - Natural Water Content, %

NOTE: Particle size contents are expressed % by weight.

PARTICLE SIZE

Particle	Size	US Sieve Size
Boulder	>300 mm (12 in.)	12 in.
Cobble	75 - 300 mm (3 - 12 in.)	3 - 12 in.
Coarse gravel	19 - 75 mm (3/4 - 3 in.)	3/4 - 3 in.
Fine gravel	2 - 19 mm (0.08 - 3/4 in.)	#10 - 3/4 in.
Coarse sand	0.42 - 2.0 mm	#40 - #10
Fine sand	0.074 - 0.42 mm	#200 - #40
Silt	0.005 - 0.074 mm	NA
Clay	< 0.005 mm	NA

FINE-GRAINED SOIL (Relative Consistency)

	N_{60}	HP
Very soft	< 2 bpf	< 0.25 tsf
Soft	2 - 4 bpf	> 0.25 - 0.5 tsf
Medium stiff	5 - 8 bpf	> 0.5 - 1.0 tsf
Stiff	9 - 15 bpf	> 1.0 - 2.0 tsf
Very stiff	16 - 30 bpf	> 2.0 - 4.0 tsf
Hard	> 30 bpf	> 4.0 tsf

COARSE-GRAINED SOIL (Relative Density)

	N_{60}
Very loose	< 5 bpf
Loose	5 - 10 bpf
Medium dense	11 - 30 bpf
Dense	31 - 50 bpf
Very dense	> 50 bpf

MINOR CONSTITUENTS (% By Weight)

	Percentage
Trace	0% - 10%
Little	>10% - 20%
Some	>20% - 35%
"And"	$\geq 35\%$

ORGANIC CONTENT OF SOIL (Determined by ASTM D2974 or AASHTO T267)

Classification	Percentage
Slightly organic	2% - 4%
Moderately organic	>4% - 10%
Highly organic	> 10%

RELATIVE MOISTURE CONDITION

Dry	Cohesive - Powdery, WC well below PL Granular - No moisture present
Damp	Cohesive - Leaves very little moisture when pressed, WC < PL Granular - Internal moisture, little to no surface moisture
Moist	Cohesive - Leaves moisture when pressed, PL < WC < LL - 3 Granular - Free water on surface, shiny appearance
Wet	Cohesive - Mushy, WC near or above LL Granular - Voids filled with free water

At Time of Drilling

At end of Drilling

24 hrs After Drilling

Free water (seepage or groundwater) observation made anytime during the drilling process. Depending on time of reading and drilling methodologies, this value may be influenced by the drilling process.

Free water measurement soon after the drilling processes are complete, and the borehole is at final depth. Drilling fluids, if introduced during drilling, may influence this measurement.

Free water measurements made in a borehole hours to days after drilling is complete including the time elapsed (i.e., "24 hrs" as shown at left). Depending on subsurface conditions, elapsed time, drilling process, etc. this observation may reflect a stabilized level.

REFERENCES:

Ohio Department of Transportation (ODOT), Specifications for Geotechnical Explorations (SGE)

ODOT ROCK CORE LOG LEGEND



DESCRIPTIVE ORDER FOR ROCK STRATA

Bedrock type, color, weathering, strength, texture, bedding, other descriptors, type and condition of discontinuities, unit RQD, unit recovery.

When alternating layers occur between two distinct rock types, describe the material as "Interbedded" with the major rock type first, with estimated percentage, and the secondary rock type second, with estimated percentage. Provide the unit RQD and unit recovery, then describe each rock type in detail.

For spread footings founded on or into bedrock, describe discontinuities using the modified Rock Mass Rating (RMR) system (degree of fracturing, aperture width and surface roughness). For drilled shafts extending into bedrock, describe discontinuities using the Geologic Strength Index (GSI) system (discontinuity structure and surface condition). For rock cut slopes, describe discontinuities using both the modified RMR and GSI systems.

COMMON OHIO BEDROCK TYPES AND SYMBOLS



SHALE



SILTSTONE



LIMESTONE



COAL



CLAYSTONE/
MUDSTONE



SANDSTONE



DOLOMITE



UNDERCLAY/
FIRECLAY

WEATHERING

Unweathered	No evidence of chemical or mechanical alternation of the rock mass. Mineral crystals have a bright appearance with no discoloration. Fractures show little or no staining on surfaces.
Slightly Weathered	Slight discoloration of the rock surface with minor alterations along discontinuities. Less than 10% of the rock volume presents alteration.
Moderately Weathered	Portions of the rock mass are discolored with a dull appearance. Surfaces may have a pitted appearance with weathering "halos". Isolated zones of varying rock strengths.
Highly Weathered	Entire rock mass appears discolored and dull. Some pockets of slightly to moderately weathered rock and some areas of severely weathered materials may be present.
Severely Weathered	Majority of the rock mass reduced to a soil-like state. Zones of more resistant rock may be present, but the material can generally be molded and crumbled by hand pressures.

STRENGTH

APPROX. UNCONFINED
COMPRESSIVE STRENGTH (PSI)

Extremely Strong	Cannot be scratched by a knife or sharp pick. Chipping off hand specimens requires hard repeated blows of a geologist's hammer.	> 30,000
Very Strong	Cannot be scratched by a knife or sharp pick. Breaking off hand specimens requires hard repeated blows of a geologist's hammer.	30,000 - 15,000
Strong	Can be scratched with a knife or pick with difficulty. Requires hard hammer blows to detach hand specimen.	15,000 - 7,500
Moderately Strong	Can be scratched with a knife or pick. Gouges ¼" deep can be excavated by a pick. Requires moderate hammer blows to detach specimen.	7,500 - 3,600
Slightly Strong	Can be gouged 0.05 inch deep by firm pressure with a knife or pick point. Can excavate small pieces (1-inch) by hard blows with a pick.	3,600 - 1,500
Weak	Can be gouged readily by a knife or pick or excavated in small fragments by moderate blows of a pick. Small, thin pieces can be broken by hand.	1,500 - 750
Very Weak	Can be carved with a knife and excavated readily with a pick. Pieces 1 inch or more thick can be broken by hand. Can be scratched by fingernail.	750 - 40

TEXTURE

Boulder	> 12 in.
Cobble	12 - 3 in.
Gravel	3 - 0.08 in.
Coarse Sand	0.08 - 0.02 in.
Medium Sand	0.02 - 0.01 in.
Fine Sand	0.01 - 0.005 in.
Very Fine Sand	0.005 - 0.003 in.

BEDDING

Very Thick Bedded	> 36 in.
Thick Bedded	36 in. - 18 in.
Medium Bedded	18 in. - 10 in.
Thin Bedded	10 in. - 2 in.
Very Thin Bedded	2 in. - 0.4 in.
Laminated	0.4 in. - 0.1 in.
Thinly Laminated	< 0.1 in.

ODOT ROCK CORE LOG LEGEND



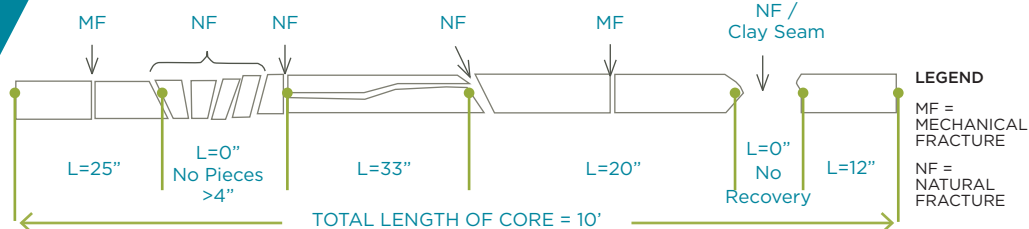
ROCK CORE RECOVERY

Recovery to be determined by core run and by rock unit (layer).

$$REC = \frac{\text{Length of Rock Core Recovered}}{\text{Length of Core Run}} \times 100$$

(Recovery)

ROCK QUALITY DESIGNATION (RQD)



$$RQD = \left(\frac{\sum \text{Core with Length (L) } \geq 4''}{\text{Core Run or Interval Total Length}} \right) \times 100$$

(Equation)

$$RQD = \left(\frac{25'' + 33'' + 20'' + 12''}{120''} \right) \times 100 = 75\%$$

(Example)

DESCRIPTORS

Arenaceous - Sandy
Argillaceous - Clayey
Brecciated - Contains angular gravel
Calcareous - Contains calcium carbonate
Carbonaceous - Contains carbon
Cherty - Contains chert
Conglomeritic - Contains rounded gravel
Crystalline - Contains crystalline structure

Dolomitic - Contains Ca/Mg carbonate
Feriferous - Contains iron
Fissile - Thin planar partings
Fossiliferous - Contains fossils
Friable - Easily broken down
Micaceous - Contains mica
Pyritic - Contains pyrite
Siliceous - Contains silica
Stylolitic - Contains stylotites
Vuggy - Contains openings

DISCONTINUITIES IN BEDROCK

Fault Fracture which expresses displacement parallel to the surface that does not result in a polished surface.
Joint Planar fracture that does not express displacement. Generally occurs at regularly spaced intervals.
Shear Fracture which expresses displacement parallel to the surface that results in polished surfaces or slickensides.
Bedding A surface produced along a bedding plane.
Contact A surface produced along a contact plane. (generally not seen in Ohio)

MODIFIED RMR DISCONTINUITY TERMS

DEGREE OF FRACTURING

Unfractured >10 ft.
Intact 10 ft. - 3 ft.
Slightly Fractured 3 ft. - 1 ft.
Moderately Fractured 12 in. - 4 in.
Fractured 4 in. - 2 in.
Highly Fractured < 2 in.

APERTURE WIDTH

Open > 0.2 in.
Narrow 0.2 in. - 0.05 in.
Tight < 0.05 in.

SURFACE ROUGHNESS

Very Rough Near vertical steps and ridges occur on the discontinuity surface.
Slightly Rough Asperities on the discontinuity surface are distinguishable and can be felt.
Slickensided Surface has a smooth, glassy finish with visual evidence of striation.

GSI DISCONTINUITY TERMS

ROCK MASS STRUCTURE

Intact or Massive Intact rock with few widely spaced discontinuities
Blocky Well interlocked undisturbed rock mass, formed by 3 intersecting discontinuity sets
Very Blocky Interlocked, partially disturbed mass formed by 4 or more joint sets
Blocky/Disturbed/Seamy Angular blocks formed by many intersecting discontinuity sets, bedding planes
Disintegrated Poorly interlocked, heavily broken rock mass
Laminated/Sheared Lack of blockiness due to close spacing of weak shear planes

SURFACE CONDITION

Very Good Very rough, fresh unweathered surfaces
Good Rough, slightly weathered, iron stained surfaces
Fair Smooth, moderately weathered and altered surfaces
Poor Slickensided, high weathered surface with compact coatings
Very Poor Slickensided, highly weathered surface with soft clay coatings



S&ME JOB: 24170095

PROJECT: SR 800 SLIP REPAIR		DRILLING FIRM / OPERATOR:FROSTLINE / P. TUTTLE		DRILL RIG: FROSTLINE B-57 ATV		STATION / OFFSET: 453+13, 11' RT		EXPLORATION ID											
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: S&ME / P. LEITER		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 800		B-001-0-24											
PID: N/A BR ID: N/A		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: N/A		ELEVATION: 857.9 (MSL) EOB: 50.92 ft.		PAGE											
START: 7/18/24 END: 7/18/24		SAMPLING METHOD: SPT / NQ / ST		ENERGY RATIO (%): 80		LAT / LONG: 40.394508 N, 81.325201 W		1 OF 2											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	HOLE SEALED
ASPHALT - 12 INCHES		857.9							GR	CS	FS	SI	CL	LL	PL	PI			
GRANULAR BASE - 6 INCHES		856.9	1																
Fill: Very-loose gray GRAVEL WITH SAND, trace silt, trace clay, contains geofabric layer at ~ 1.75', damp.		856.4	2	3	4	33	SS-1	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	
		854.7	3	2	1														
Fill: Stiff brown becoming dark-brown SANDY SILT, trace to little fine to coarse gravel, trace to little clay, damp.			4	1	4	39	SS-2	1.75-2.0	-	-	-	-	-	-	-	-	-	A-4a (V)	
		852.4	5	2															
Fill: Very-loose dark-brown to black GRAVEL WITH SAND AND SILT, trace clay, contains coal fragments, contains brick fragments at ~6.5', damp to moist.			6	1															
		849.9	7	2	3	50	SS-3	-	-	-	-	-	-	-	-	-	-	A-2-4 (V)	
			8	WOH															
Fill: Medium-stiff brown SANDY SILT, trace to little fine to coarse gravel, trace to little clay, contains geofabric fragments at ~9.4', damp.			9	1	3	67	SS-4	0.75-1.0	-	-	-	-	-	-	-	-	-	A-4a (V)	
		847.9	10	1															
Fill: Soft brown and gray SANDY SILT, trace to little clay, trace fine gravel, moist.			11	WOH	3	78	SS-5	0.25-0.5	-	-	-	-	-	-	-	-	-	A-4a (V)	
		846.4	12	1															
Fill: Very-stiff brown and gray SILT, trace to little clay, trace fine gravel, contains geofabric fragments at ~13.5', damp.			13			100	ST-6	2.0-2.75	1	2	11	73	13	29	21	8	24	A-4b (8)	
		844.4	14																
Medium-stiff brown mottled with gray SANDYSILT, trace to little clay, trace fine gravel, moist.			15	1	5	100	SS-7	0.5-1.0	0	2	32	48	18	26	20	6	25	A-4a (6)	
		840.9	16	2															
Medium-stiff brown SANDY SILT, trace to little fine to coarse gravel, trace clay, contains sandstone fragments, moist.			17																
			18																
		835.9	19	1	7	56	SS-8	0.75-1.0	9	10	34	35	12	NP	NP	NP	18	A-4a (2)	
			20	3	2														
Medium-stiff to stiff gray SILT AND CLAY, trace to little fine to coarse sand, trace fine gravel, few very-stiff zones, damp to moist.			21																
			22																
			23																
		830.9	24	WOH	9	89	SS-9	0.5-1.5	-	-	-	-	-	-	-	-	-	A-6a (V)	
			25	3	4														
Very-loose to loose gray COARSE AND FINE SAND, trace to little silt, trace fine gravel, trace clay, wet.			26																
		828.9	27																
			28																
			29	1	23	100	SS-10A	-	-	-	-	-	-	-	-	-	-	A-3a (V)	
				4	13		SS-10B	2.5-2.75	-	-	-	-	-	-	-	-	-	Rock (V)	

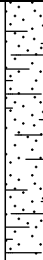
PID:	N/A	BR ID:	N/A	PROJECT:	SR 800 SLIP REPAIR	STATION / OFFSET:	453+13, 11' RT	START:	7/18/24	END:	7/18/24	PG 2 OF 2	B-001-0-24												
MATERIAL DESCRIPTION AND NOTES				ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	HOLE SEALED				
				827.9							GR	CS	FS	SI	CL	LL	PL	PI							
SHALE, blue-gray, severely weathered, very weak, highly fractured, contains sandstone fragments. (continued) SHALE (90%) INTERBEDDED WITH SANDSTONE (10%), brown and orange-brown, severely to highly weathered, very-weak to weak, highly fractured to fractured. (UNIT RQD = 8%) (UNIT REC = 94%)				827.0	31																				
					32																				
					33	8		94	NQ2-11														CORE		
					34																				
				822.7	35																				
SILTSTONE, blue-gray, moderately to slightly weathered, moderately to slightly strong, arenaceous, highly fractured to intact. (UNIT RQD = 59%) (UNIT REC = 97%) Qu = 11,395 psi					36																				
					37																				
					38	32		98	NQ2-12														CORE		
					39																				
					40																				
					41																				
					42																				
					43	55		98	NQ2-13															CORE	
					44																				
					45																				
					46																				
					47																				
					48	89		94	NQ2-14															CORE	
					49																				
					50																				
								807.0	EOB	75		100	NQ2-15												CORE
NOTES:																									
- Coordinates and elevation obtained from Land Survey.																									
- Energy ratio assumed at 80%.																									
- Slight seepage at 19.0'.																									
- Groundwater at 27.0'.																									
- Auger refusal at 30.9'.																									
- Water measured at 23.6' inside HSA prior to rock coring.																									
- Water measured at 12.2' inside HSA after rock coring.																									
- Boring caved at 46.8', water measured at 14.7'.																									
NOTES: SEE ABOVE.																									
ABANDONMENT METHODS. MATERIALS. QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE: CONCRETE PATCH																									



S&ME JOB: 24170095

PROJECT: SR 800 SLIP REPAIR		DRILLING FIRM / OPERATOR:FROSTLINE / P. TUTTLE		DRILL RIG: FROSTLINE B-57 ATV		STATION / OFFSET: 455+07, 11' RT		EXPLORATION ID											
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: S&ME / P. LEITER		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 800		B-002-0-24											
PID: N/A BR ID: N/A		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: N/A		ELEVATION: 858.2 (MSL) EOB: 36.5 ft.		PAGE											
START: 7/17/24 END: 7/17/24		SAMPLING METHOD: SPT / NQ / ST		ENERGY RATIO (%): 80		LAT / LONG: 40.394996 N, 81.325481 W		1 OF 2											
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	HOLE SEALED
									GR	CS	FS	SI	CL	LL	PL	PI			
ASPHALT - 10 INCHES		858.2																	
GRANULAR BASE - 8 INCHES		857.3																	
		856.7																	
Fill: Very-stiff dark-brown to black SANDY SILT , trace to little fine to coarse gravel, trace to little clay, contains coal fragments, damp.		854.9	1	3	8	44	SS-1	2.25	-	-	-	-	-	-	-	-	-	A-4a (V)	
Fill: Medium-stiff to stiff dark-gray to brown SANDY SILT , trace to little clay, trace fine gravel, damp.		852.7	2	1	3	50	SS-2	0.75-1.5	-	-	-	-	-	-	-	-	-	A-4a (V)	
Fill: Soft brown becoming brown and gray SANDY SILT , trace to little clay, trace fine gravel, moist.		850.2	3	1	3	100	SS-3	0.25-0.5	-	-	-	-	-	-	-	-	-	A-4a (V)	
Fill: Very-soft brown and gray SILT AND CLAY , trace to little fine to coarse sand, trace fine gravel, moist.		848.2	4	WOH	0	67	SS-4	0.0-0.25	3	2	11	54	30	32	17	15	25	A-6a (10)	
Stiff to very-stiff brown and gray SILT AND CLAY , trace to little fine to coarse sand, trace fine gravel, moist.		846.2	5	WOH		79	ST-5	1.5-2.25	9	3	20	45	23	30	18	12	22	A-6a (7)	
Stiff to very-stiff brown and orange-brown SANDY SILT , trace to little clay, trace fine gravel, contains sandstone fragments, damp.		844.7	6	3	6	17	SS-6	1.75-2.75	-	-	-	-	-	-	-	-	-	A-4a (V)	
Very-stiff to hard brown and orange-brown SANDY SILT , trace to little fine to coarse gravel, trace to little clay, contains sandstone fragments, damp.		843.4	7	2	5	-	SS-7A	3.0-4.5	-	-	-	-	-	-	-	-	-	A-4a (V)	
SANDSTONE , brown and orange-brown becoming blue-gray, highly weathered, very weak, highly fractured.		841.7	8	50/4"		100	SS-7B	-	-	-	-	-	-	-	-	-	-	Rock (V)	
SANDSTONE , brown and orange-brown becoming blue-gray, moderately to highly weathered, very-fine to medium texture, slightly to moderately strong, highly to slightly fractured.			9																
(UNIT RQD = 77%) (UNIT REC = 100%)			10																
Qu = 18,031 psi			11																
			12																
			13																
			14																
			15																
			16																
			17																
			18																
			19																
			20																
			21																
			22																
			23																
			24																
			25																
			26																
			27																
			28																
			29																



PID: N/A	BR ID: N/A	PROJECT: SR 800 SLIP REPAIR	STATION / OFFSET: 455+07, 11' RT			START: 7/17/24	END: 7/17/24	PG 2 OF 2		B-002-0-24												
MATERIAL DESCRIPTION AND NOTES			ELEV. 828.2	DEPTHS		SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	HOLE SEALED	
											GR	CS	FS	SI	CL	LL	PL	PI				
SILTSTONE, blue-gray, slightly to moderately weathered, slightly to moderately strong, fractured to slightly fractured. (UNIT RQD = 91%) (UNIT REC = 94%)					31	95		97	NQ2-11											CORE		
			821.7	EOB	36	75		75	NQ2-12										CORE			
NOTES:																						
- Coordinates and elevation obtained from Land Survey. - Energy ratio assumed at 80%. - Slight seepage at 12.0'. - Auger refusal at 16.5'. - Water "dry" inside HSA prior to rock coring. - Water measured at 7.7' inside HSA after rock coring. - Boring caved at 15.3', water measured at 12.7'.																						
NOTES: SEE ABOVE.																						
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE; CONCRETE PATCH																						

Geohazard Exploration Report

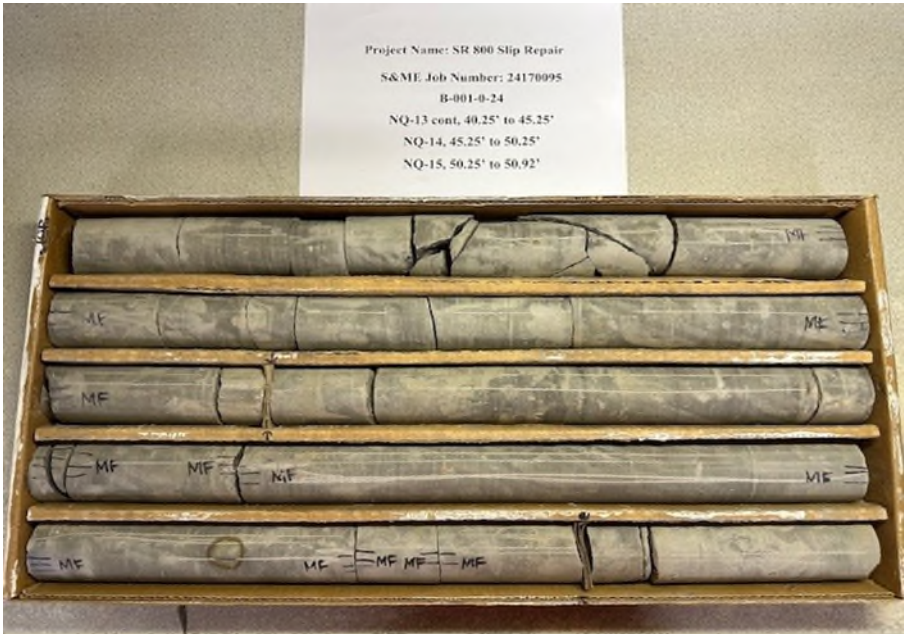
SR 800 Slip Repair

Dennison, Ohio

S&ME Project No. 24170095



 Project Name: SR 800 Slip Repair S&ME Job Number: 24170095 B-001-0-24 NQ-11, 30.92' to 35.25' NQ-12, 35.25' to 40.25' NQ-13, 40.25' to 45.25'			Date: 7/18/2024
Photographer: Paul Leiter, EI			
1	Location / Orientation	B-001-0-24 (Rock Core 1 of 2)	
	Remarks	30.92 feet to 40.25 feet	

 Project Name: SR 800 Slip Repair S&ME Job Number: 24170095 B-001-0-24 NQ-13 cont, 40.25' to 45.25' NQ-14, 45.25' to 50.25' NQ-15, 50.25' to 50.92'			Date: 7/18/2024
Photographer: Paul Leiter, EI			
2	Location / Orientation	B-001-0-24 (Rock Core 2 of 2)	
	Remarks	40.25 feet to 50.92 feet	

			Date: 7/18/2024
			Photographer: Paul Leiter, EI
3	Location / Orientation	B-002-0-24 (Rock Core 1 of 2)	
	Remarks	16.5 feet to 26.0 feet	

			Date: 7/18/2024
			Photographer: Paul Leiter, EI
4	Location / Orientation	B-002-0-24 (Rock Core 2 of 2)	
	Remarks	26 feet to 36.5 feet	



Summary of Field Procedures

◆ Boring and Sampling

Soil Test Boring with Flight Auger

Soil sampling and penetration testing were performed in general accordance with ASTM D1586, *Standard Test Method for Penetration Test and Split Barrel Sampling of Soils*. Borings were made by mechanically twisting a continuous steel flight auger into the soil. At regular intervals, soil samples were obtained with a standard 1.4-inch I. D., 2-inch O. D., split barrel sampler. The sampler was first seated six inches to penetrate any loose cuttings, then driven an additional 12 inches with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler through the two final six inch increments was recorded as the penetration resistance (SPT N) value. The N-value, when properly interpreted by qualified professional staff, is an index of the soil strength and foundation support capability.

Soil Test Boring with Hollow-Stem Auger

Soil sampling and penetration testing were performed in general accordance with ASTM D1586, *Standard Test Method for Penetration Test and Split Barrel Sampling of Soils*. Borings were made by mechanically twisting a continuous steel hollow stem auger into the soil. At regular intervals, soil samples were obtained with a standard 1.4-inch I. D., 2-inch O. D., split barrel sampler. The sampler was first seated six inches to penetrate any loose cuttings, then driven an additional 12 inches with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler through the two final six inch increments was recorded as the penetration resistance (SPT N) value. The N-value, when properly interpreted by qualified professional staff, is an index of the soil strength and foundation support capability.

Auger Borings

Auger borings were advanced mechanically by a drill rig using a flight auger or hollow stem auger in general accordance with ASTM D1452, *Standard Practice for Soil Investigation and Sampling by Auger Borings*. The soils encountered were identified in the field by examining the cuttings brought to the surface. Soil consistency was qualitatively estimated by the relative difficulty of advancing the augers.

Undisturbed (UD) Sampling

Split spoon or split barrel sampling provide samples suitable for visual examination and classification tests but not sufficiently intact for quantitative laboratory testing. To provide samples for quantitative tests, relatively undisturbed samples were obtained by pushing sections of 3-inch O.D., 16-gauge, steel tubing (Shelby tube) into the soil at the desired sampling intervals. The procedures used generally followed those described in ASTM D1587, *Standard Practice for Thin-Walled Tube Geotechnical Sampling of Soils*. Each tube, together with the encased soil, was carefully removed from the ground and the length of the recovered soil measured. Locations and depths of undisturbed samples were recorded on each field test boring record.

Refusal to Drilling

Refusal to the soil drilling methods used at this site may result from encountering hard cemented soil, soft weathered rock, coarse gravel, cobbles or boulders, thin rock seams, or the upper surface of sound continuous rock. Core drilling would be required to determine the character and continuity of materials below refusal of the soil auger in natural soils. Where fills are present, refusal to drilling may also result from encountering buried debris, building materials, or objects. Backhoe test pits would be required to expose and identify buried materials below refusal levels in filled areas.

Rock Core Drilling in Uncased Borehole

In selected borings where refusal to the drilling tools had been encountered, materials below refusal level were cored using a diamond studded bit fastened to the end of hollow double tube core barrel. Hollow stem augers were left in place to stabilize the borehole and the core barrel inserted through the annulus of the drilling rod. Coring was conducted in general accordance with the procedures described in ASTM D2113, *Standard Practice for Rock Core Drilling and Sampling of Rock for Site Investigation*. In this case an NX size core barrel was used to produce cylindrical cores 1-7/8 inches in diameter. Core rod RPM and advance rate were closely monitored during each run to prevent plugging the bit or core blockage or damage. Water without additives was trucked to the site and circulated through the boring to flush cuttings and cool the drill bit during the coring process. Circulating water was released on the surface after completion of coring.

Borehole Closure

Boreholes in areas subject to foot traffic or farm animals were closed immediately after drilling. Boreholes were filled by slowly pouring auger cuttings into the open hole such that minimal "bridging" of the material occurred in the hole. Backfilling of the upper two feet of each hole was tamped as heavily as possible with a shovel handle or other hand held equipment, and the backfill crowned to direct rainfall away on the surface. Where boreholes exceeded five feet in depth, a plastic hole plug was firmly tamped into place within the backfill at a depth of about two feet.

Patching of Asphalt Surface

Penetrations of asphalt surfaces made during the drilling process were patched using compacted asphalt cold patch material. Cold patch asphalt was placed to provide a surface flush with existing pavement adjacent to the boring. Cold patch asphalt was compacted by tamping it into the boring with a shovel handle or similar hand held equipment.

Preservation and Transporting of Soil Samples with Control of Field Moisture

Procedures for preserving soil samples obtained in the field and transportation of samples to the laboratory generally followed those given in ASTM D4220, *Standard Practice for Preserving and Transporting Soil Samples* for Group B samples as defined in Section 4. Group B samples are those samples not suspected of being contaminated and for which only water content and classification, proctor, relative density, or profile logging will be performed. Group B samples also include bulk samples that are intended to be remolded in the laboratory for compaction, swell pressure, percent swell, consolidation, permeability, CBR, or shear testing. Representative samples of the cuttings or split spoon samples, or representative bulk samples, were placed in suitably identified, sealed glass jars or plastic containers and transported to the laboratory. Sample identification numbers on the containers corresponded to sample numbers recorded on field boring records.

or test pit records. Thin-walled tube samples were sealed at the ends with paraffin and capped with plastic end caps.

Preservation and Transporting of Intact Soil Samples

Procedures for preserving certain selected soil samples obtained in the field and transportation of those samples to the laboratory generally followed procedures given in ASTM D4220, *Standard Practice for Preserving and Transporting Soil Samples* for Group C samples as defined in Section 4. Group C samples are intact, naturally formed or field fabricated, samples for density determination, swell pressure, percent swell, permeability testing or shear testing with or without stress-strain plots or volume change measurement, including dynamic and cyclic testing. Representative thin walled tube samples were protected against vibration or shock, or extreme heat or cold, during transport to the laboratory. Sample identification numbers on the containers corresponded to sample numbers recorded on field boring records or test pit records. Thin-walled tube samples were sealed at the ends with paraffin and capped with plastic end caps. Samples were transported in the upright position in containers providing complete encasement in cushioning or insulation for individual samples.

Preservation and Transport of Rock Core Requiring Routine Care

Procedures for preserving recovered rock core specimens followed those given for routine care of non-sensitive, non-fragile samples for which only general visual examination will be performed. Steps for routine care are described in ASTM D5079, *Standard Practices for Preserving and Transporting Rock Core Samples*, section 7.5.1. Rock cored in 5 to 10 foot runs were placed in sleeves or channels in specially constructed wood or cardboard core boxes. Empty portions of sleeves or channels were packed with wood or paper to prevent slippage of the core during transport. Boxes were transported flat and secured to prevent sliding or vibration. A preliminary field log of each core indicating recovery and general visual description was prepared prior to packing of the core.

◆ Field Tests of Earth Materials

The subsurface conditions encountered during drilling were reported on a field test boring record by the chief driller. The record contains information about the drilling method, samples attempted and sample recovery, indications of materials in the borings such as coarse gravel, cobbles, etc., and indications of materials encountered between sample intervals. Representative soil samples were placed in glass jars and transported to the laboratory along with the field boring records. Recovered samples not expended in laboratory tests are commonly retained in our laboratory for 60 days following completion of drilling. Field boring records are retained at our office.

Measurement of Static Water Levels

Water level readings were made in the open boreholes immediately after completing drilling and withdrawal of the tools. Where feasible, measurements were repeated after an elapsed period of 24 hours to gauge the stabilized water level. Procedures for measurement of liquid levels in open boreholes are described in ASTM D4750, *Standard Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation Well)*. A weighted measuring tape was slowly lowered into each borehole until the liquid surface was penetrated by the weighted end. The reading on the tape was recorded at a reference point on the surface and compared to the reading at the demarcation of the wetted and unwetted portions of the tape.

The difference between the two readings was recorded as the depth of the liquid surface below the reference point. Measurements made by this method were then repeated until approximately consistent values were obtained.



Appendix III– Laboratory Testing

Laboratory Test Summary

Unconfined Compressive Strength of Soil

Unconfined Compressive Strength of Rock

Consolidated Undrained Triaxial Test Results

Summary of Laboratory Procedures

SUMMARY OF LABORATORY TEST RESULTS



BORING	S A M P L E	Top Depth	MC	LL	PL	PI	A G G R E G A T E	C O A R S E S A N D	F I N E S A N D	S I L T	C L A Y	S I L T / C L A Y	D / 50	D / 95	H R B ODOT	
	(#)	(ft)											%	%	%	%
B-001-0-24	1	1.50														A-1-b (V)
B-001-0-24	2	3.50														A-4a (V)
B-001-0-24	3	6.00														A-2-4 (V)
B-001-0-24	4	8.50														A-4a (V)
B-001-0-24	5	10.00														A-4a (V)
B-001-0-24	6	11.50	24	29	21	8	1	2	11	73	13		0.0222	0.1500		A-4b (8)
B-001-0-24	7	13.50	25	26	20	6	0	2	32	48	18		0.0325	0.2048		A-4a (6)
B-001-0-24	8	18.50	18	NP	NP	NP	9	10	34	35	12		0.0910	7.4093		A-4a (2)
B-001-0-24	9	23.50														A-6a (V)
B-001-0-24	10A	28.50														A-3a (V)
B-001-0-24	10B	29.00														Rock (V)
B-001-0-24	11	30.92														
B-001-0-24	12	35.25														
B-001-0-24	13	40.25														
B-001-0-24	14	45.25														
B-001-0-24	15	50.25														
B-002-0-24	1	1.50														A-4a (V)
B-002-0-24	2	3.50														A-4a (V)
B-002-0-24	3	6.00														A-4a (V)
B-002-0-24	4	8.50	25	32	17	15	3	2	11	54	30		0.0144	0.4250		A-6a (10)
B-002-0-24	5	10.00	22	30	18	12	9	3	20	45	23		0.0266	17.4320		A-6a (7)
B-002-0-24	6	12.00														A-4a (V)
B-002-0-24	7A	13.50														A-4a (V)
B-002-0-24	7B	14.75														Rock (V)
B-002-0-24	8	16.50														
B-002-0-24	9	20.17														
B-002-0-24	10	25.17														
B-002-0-24	11	30.17														
B-002-0-24	12	35.17														

PROJECT SR 800 SLIP REPAIR

LOCATION SR 800 SLIP REPAIR

JOB NO. 24170095

DATE 8/21/24

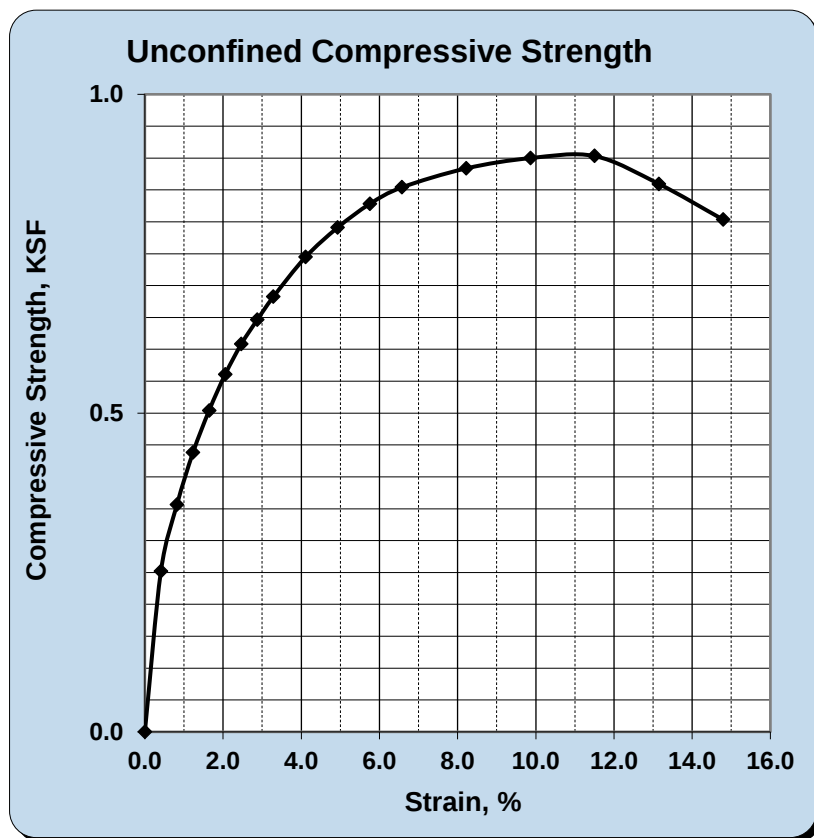
UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS



ASTM D2166

S&ME, Inc. - Columbus: 6190 Enterprise Court, Dublin, Ohio 43016

Project No.:	24170095	Report Date:	8/22/2024
Project Name:	SR 800 Slip Repair	Test Date(s):	7/25/2024
Client Name:	Village of Dennison		
Client Address:	302 Grant Street, Dennison, Ohio 44621		
Boring No.:	B-002-0-24	Sample No.	S-5 ST II
		Depth:	10.0-11.6
Sample Description:	SILTY CLAY (A-6b), some fine to coarse sand, trace fine to coarse gravel.		

**Failed Specimen**Type of Sample: IntactSource of Moisture Sample: Test Specimen

Initial Dry Unit Weight: 108.4 pcf Initial Water Content: 20.4%
 Unconfined Compressive Strength, q_u : **0.903** KSF
 Undrained Shear Strength, s_u : **0.452** KSF

Liquid Limit: 30
 Plasticity Index: 18
 Height to Diameter Ratio: 2.1
 Rate of Strain (%/min.): 1.6
 Strain at Failure: 11.5

References / Comments / Deviations:

BKS

Technical Responsibility

Signature

Senior Engineer

Position

8/22/2024

Date

This report shall not be reproduced, except in full, without the written approval of S&ME, Inc.

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK

ASTM D7012 Method C



S&ME, Inc. - Lexington: 2020 Liberty Road, Suite 105, Lexington, KY 40505

Project No.:	24170095	Report Date:	08/28/24
Project Name:	SR 800 Slip Repair	Test Date(s):	08/27/24
Client Name:	Village of Dennison		
Client Address:	Dennison, OH	Received Date:	08/21/24
Location:	B-001-0-24 NQ-12	Depth, ft:	39.35-39.75
Sample Description:	Siltstone		

Angle of load relative to lithology: Approximately perpendicular

Test Results

Moisture Content

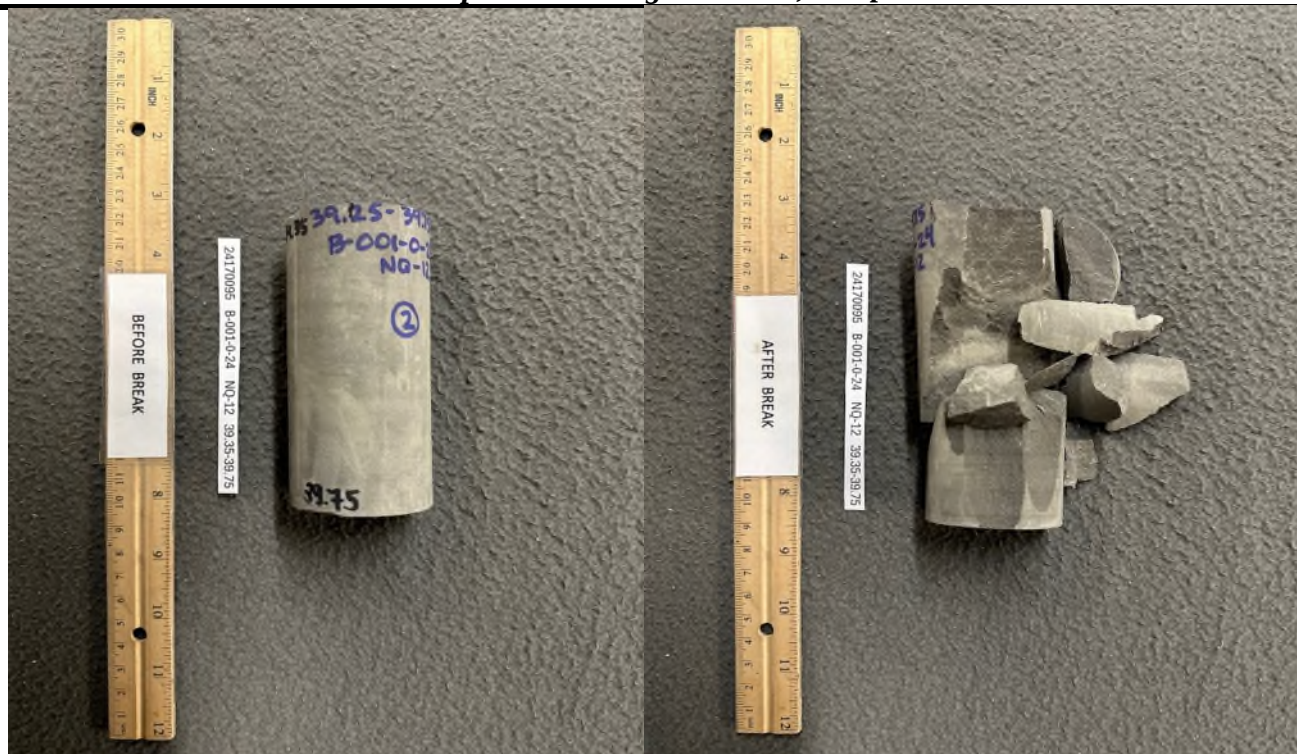
0.9 %

Dry Unit Weight

160.0 pcf

Compressive Strength

11,395 psi



Before Test

After Test

Strain rate: 0.015 in/min.

Notes / Deviations / References:

J. Folsom

Technical Responsibility

Jacob Folsom

Signature

Lab Services Manager

Position

8/30/2024

Date

This report shall not be reproduced, except in full, without the written approval of S&ME, Inc.

UNIAXIAL COMPRESSIVE STRENGTH**OF ROCK**

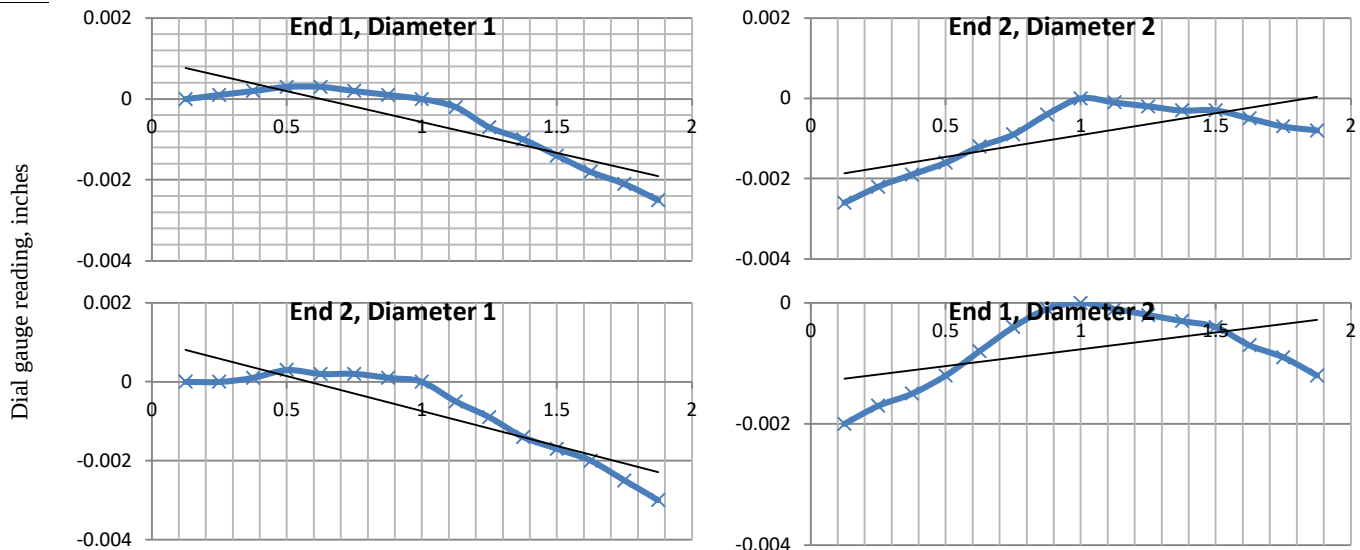
ASTM D 7012 Method C

**S&ME, Inc. - Lexington: 2020 Liberty Road, Suite 105, Lexington, KY 40505**Project Name: **SR 800 Slip Repair**Location: **B-001-0-24 NQ-12** Depth, feet: **39.35-39.75****Summary of Specimen Tolerances**

Length/diameter target:	MET	Perpendicularity target:	MET
Side straightness target:	MET	Planeness target:	MET
Parallelism target:	MET		

*ASTM D4543-08 Standard Practice for Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerance, Section 1.2 - "Rock is a complex engineering material that can vary greatly as a function of lithology, stress history, weathering, moisture content, chemistry, and other natural geologic processes. As such, it is not always possible to obtain or prepare rock core specimens that satisfy the desirable tolerances given in this practice. Most commonly, this situation presents itself with weaker, more porous, and poorly cemented rock types and rock types containing significant or weak (or both) structural features. For these and other rock types which are difficult to prepare, all reasonable efforts shall be made to prepare a specimen in accordance with this practice and for the intended test procedure. However, when it has been determined by trial that this is not possible, the rock specimen will be prepared to the closest tolerance practicable and be considered the best effort and report it as such. If allowable or necessary for the intended test, capping the ends of the specimen as discussed in ASTM D7012 is permitted."

Length to Diameter Ratio		Side Straightness	
Length, inches:	4.33	Diameter, inches:	1.981
Ratio:	2.18	Maximum gap between side of core and reference plate, inches:	< .02
Target tolerance: L:D ratio between 2 to 1 and 2.5 to 1		Target tolerance: Maximum gap less than .02 inches	

Planeness

Distance along diameter, inches		Parallelism	
Maximum point-line deviation, inches:	< .001	Slope difference, Diameter 1, degrees:	0.01
Target Tolerance: No individually measured point should deviate from the best fit line by more than .001 inches.		Slope difference, Diameter 2, degrees:	0.03
		Target Tolerance: Difference between slopes on each end less than 0.25°	
Perpendicularity		Test Information	
Slope of End 1, Diameter 1, degrees:	-0.09	Strain rate, in/min:	0.015
Slope of End 2, Diameter 1, degrees:	-0.10	OR	
Slope of End 1, Diameter 2, degrees:	0.03	Stress rate, lbs/sec:	
Slope of End 2, Diameter 2, degrees:	0.06	Time to failure, min:	6.17
Target Tolerance: Each diameter perpendicular to the long axis to within 0.25°		Temperature:	room temperature

This report shall not be reproduced, except in full, without the written approval of S&ME, Inc.

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK

ASTM D7012 Method C



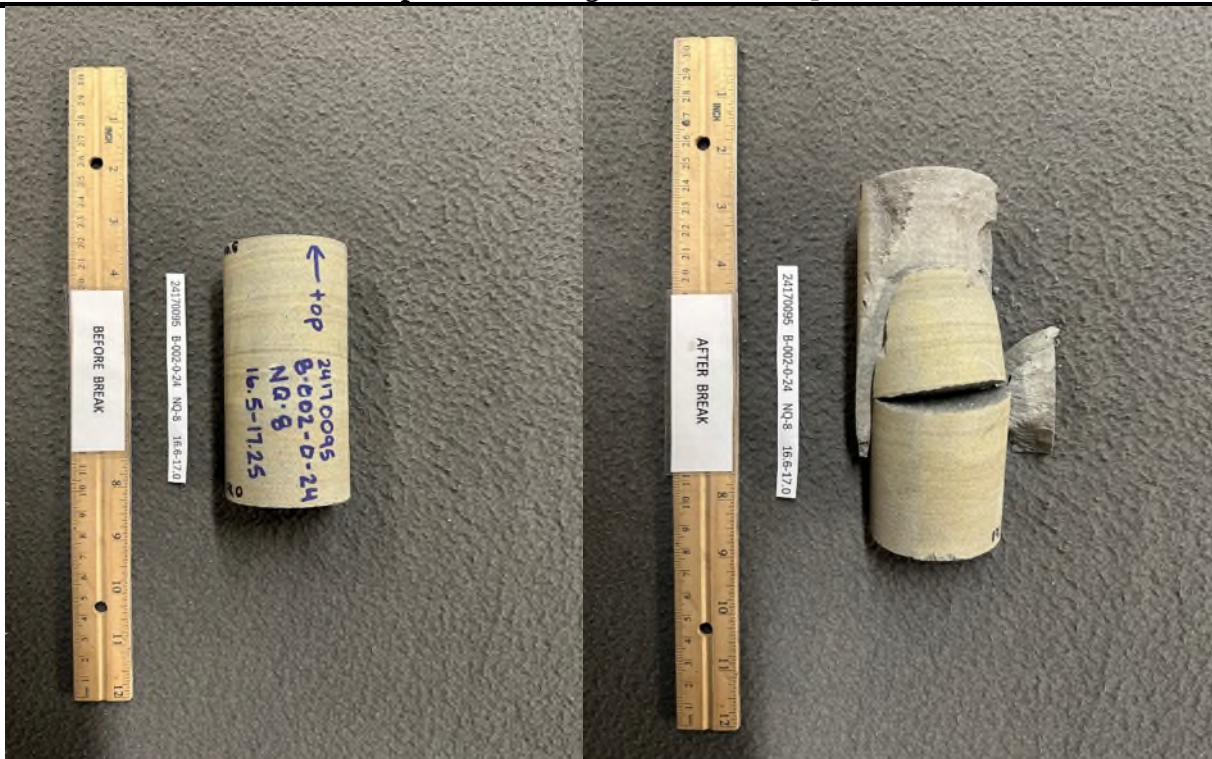
S&ME, Inc. - Lexington: 2020 Liberty Road, Suite 105, Lexington, KY 40505

Project No.:	24170095	Report Date:	08/28/24
Project Name:	SR 800 Slip Repair	Test Date(s):	08/27/24
Client Name:	Village of Dennison		
Client Address:	Dennison, OH	Received Date:	08/21/24
Location:	B-002-0-24 NQ-8	Depth, ft:	16.5-17.3
Sample Description:	Sandstone		

Angle of load relative to lithology: Approximately perpendicular

Test Results

Moisture Content 0.4 % Dry Unit Weight 174.5 pcf
Compressive Strength 18,031 psi



Before Test

After Test

Strain rate: 0.015 in/min.

Notes / Deviations / References:

J. Folsom

Technical Responsibility

Signature

Lab Services Manager

Position

8/30/2024

Date

This report shall not be reproduced, except in full, without the written approval of S&ME, Inc.

UNIAXIAL COMPRESSIVE STRENGTH**OF ROCK**

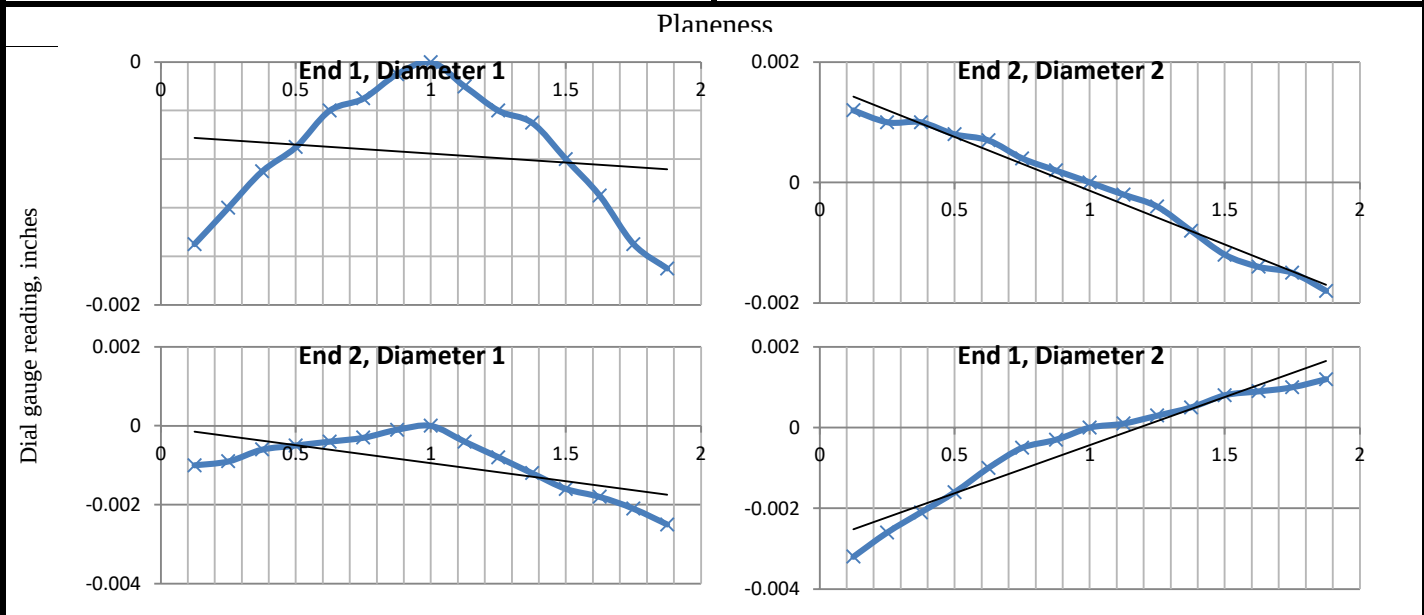
ASTM D 7012 Method C

**S&ME, Inc. - Lexington: 2020 Liberty Road, Suite 105, Lexington, KY 40505**Project Name: **SR 800 Slip Repair**Location: **B-002-0-24 NQ-8** Depth, feet: **16.0-17.0****Summary of Specimen Tolerances**

Length/diameter target:	MET	Perpendicularity target:	MET
Side straightness target:	MET	Planeness target:	MET
Parallelism target:	MET		

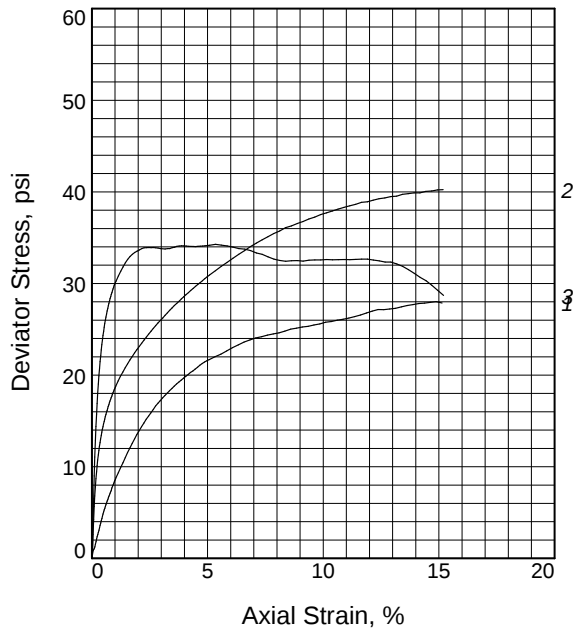
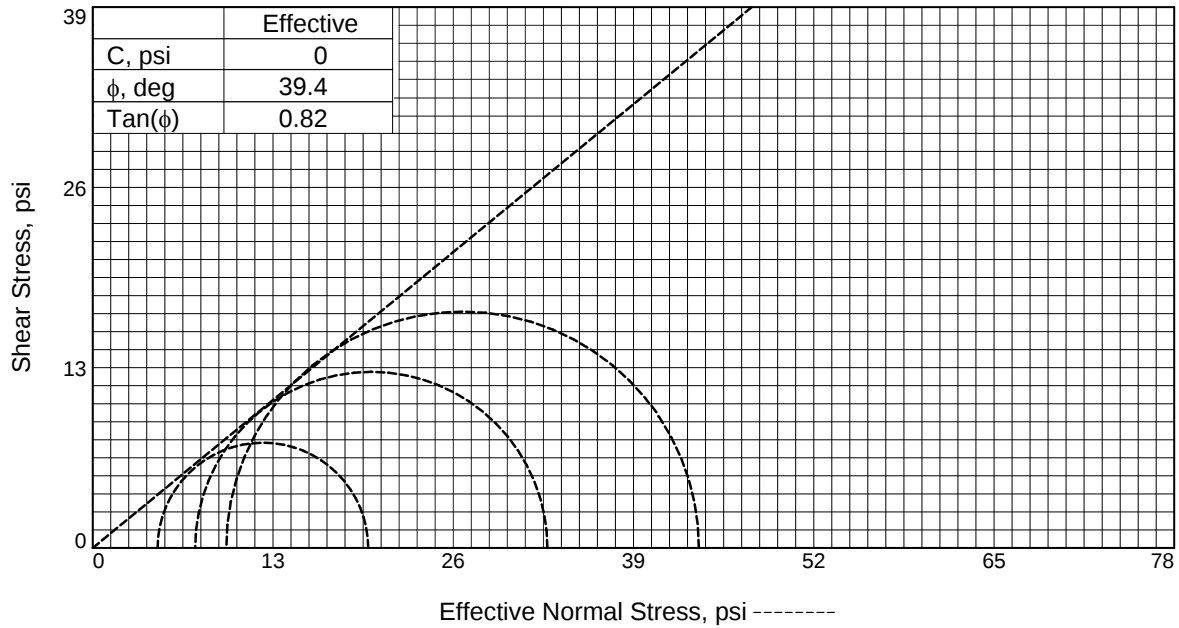
*ASTM D4543-08 Standard Practice for Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerance, Section 1.2 - "Rock is a complex engineering material that can vary greatly as a function of lithology, stress history, weathering, moisture content, chemistry, and other natural geologic processes. As such, it is not always possible to obtain or prepare rock core specimens that satisfy the desirable tolerances given in this practice. Most commonly, this situation presents itself with weaker, more porous, and poorly cemented rock types and rock types containing significant or weak (or both) structural features. For these and other rock types which are difficult to prepare, all reasonable efforts shall be made to prepare a specimen in accordance with this practice and for the intended test procedure. However, when it has been determined by trial that this is not possible, the rock specimen will be prepared to the closest tolerance practicable and be considered the best effort and report it as such. If allowable or necessary for the intended test, capping the ends of the specimen as discussed in ASTM D7012 is permitted."

Length to Diameter Ratio		Side Straightness	
Length, inches:	4.42	Diameter, inches:	1.983
Ratio:	2.23	Maximum gap between side of core and reference plate, inches:	< .02
Target tolerance: L:D ratio between 2 to 1 and 2.5 to 1		Target tolerance: Maximum gap less than .02 inches	



Distance along diameter, inches		Parallelism	
Maximum point-line deviation, inches:	< .001	Slope difference, Diameter 1, degrees:	0.04
Target Tolerance: No individually measured point should deviate from the best fit line by more than .001 inches.		Slope difference, Diameter 2, degrees:	0.24
		Target Tolerance: Difference between slopes on each end less than 0.25°	
Perpendicularity		Test Information	
Slope of End 1, Diameter 1, degrees:	-0.01	Strain rate, in/min:	0.015
Slope of End 2, Diameter 1, degrees:	-0.05	OR	
Slope of End 1, Diameter 2, degrees:	0.14	Stress rate, lbs/sec:	
Slope of End 2, Diameter 2, degrees:	-0.10	Time to failure, min:	6.05
Target Tolerance: Each diameter perpendicular to the long axis to within 0.25°		Temperature:	room temperature

This report shall not be reproduced, except in full, without the written approval of S&ME, Inc.



Sample No.		1	2	3
Initial	Water Content, %	22.8	20.8	23.0
	Dry Density, pcf	103.3	106.0	103.3
	Saturation, %	97.3	95.0	98.1
	Void Ratio	0.6318	0.5899	0.6320
	Diameter, in.	2.86	2.85	2.87
	Height, in.	6.09	6.07	6.08
At Test	Water Content, %	21.9	22.1	22.1
	Dry Density, pcf	106.0	105.5	105.6
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.5907	0.5975	0.5964
	Diameter, in.	2.83	2.87	2.85
	Height, in.	6.05	6.01	6.02
Strain rate, %/min.		0.13	0.13	0.13
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		60.46	70.53	90.11
Fail. Stress, psi		15.18	25.40	34.09
Total Pore Pr., psi		55.78	63.14	80.48
Ult. Stress, psi		27.87	40.24	28.70
Total Pore Pr., psi		49.64	55.54	80.20
$\bar{\sigma}_1$ Failure, psi		19.87	32.79	43.72
$\bar{\sigma}_3$ Failure, psi		4.68	7.39	9.63

Type of Test:

CU with Pore Pressures

Sample Type: INTACT

Description: SILT (A4b), little fine to coarse sand, trace fine gravel.

LL= 29 PL= 21 PI= 8

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767

Client: Village of Dennison

Project: SR 800 SLIP REPAIR Dennison, Ohio

Location: B-001-0-24

Sample Number: ST-6 I,II,III

Depth: 11.5'-13.5'

Proj. No.: 24170095

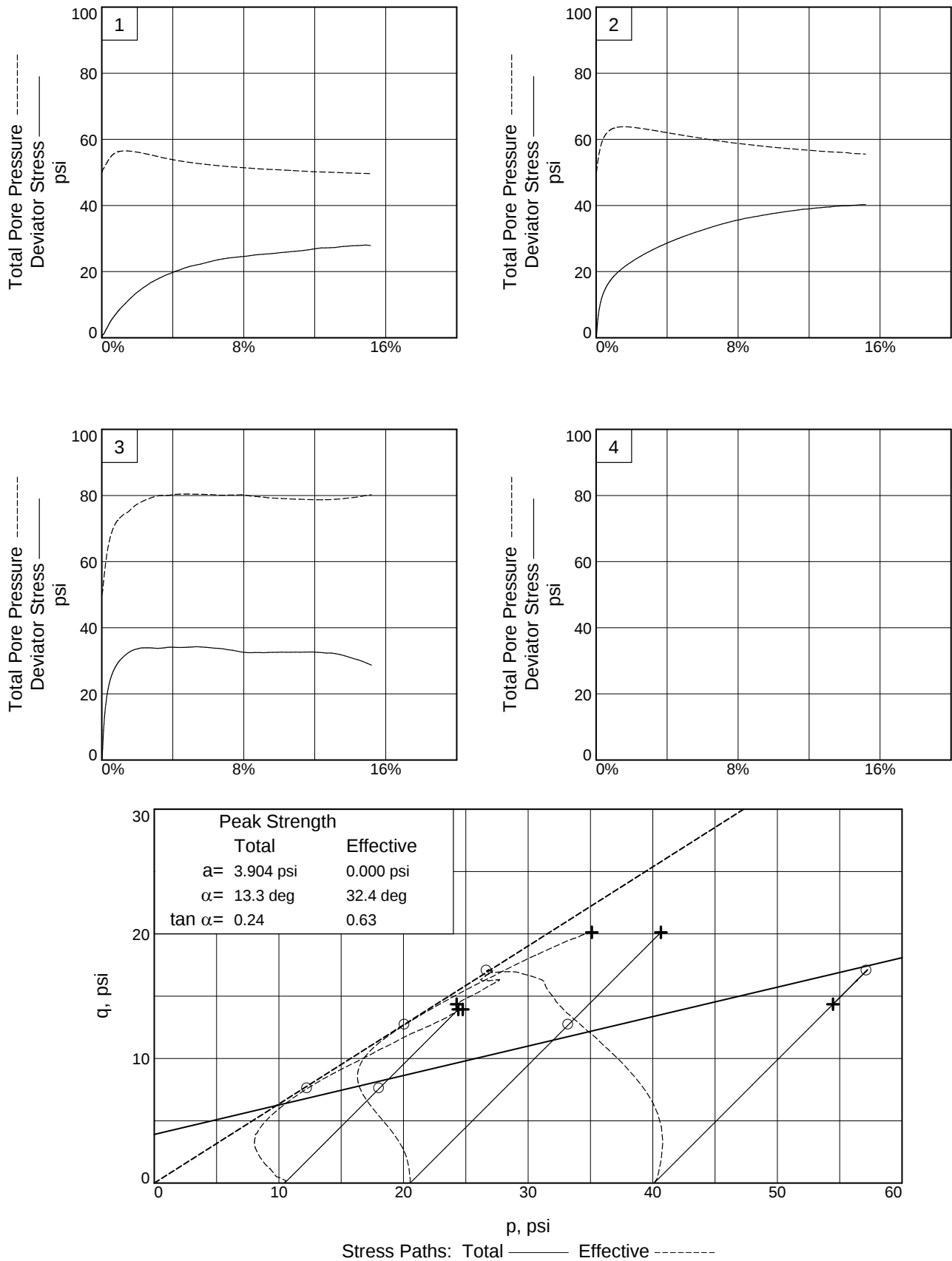
Date Sampled: 7/18/2024

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Figure 1

Tested By: PJM

Checked By: BKS



Client: Village of Dennison
Project: SR 800 SLIP REPAIR Dennison, Ohio
Location: B-001-0-24 **Depth:** 11.5'-13.5' **Sample Number:** ST-6 I,II,III
Project No.: 24170095

Figure 2

S&ME, Inc.



Summary of Laboratory Procedures

Recovered disturbed and undisturbed samples and the drillers' field logs were transported to the laboratory where they were examined by the geotechnical engineer. Selected samples representative of certain groups of soils were subjected to simple classification tests by hand or other simple means.

Recovered disturbed and undisturbed samples and the drillers' field logs were transported to the laboratory where they were examined by the geotechnical engineer. Selected samples representative of certain groups of soils were subjected to simple classification tests by hand or other simple means. Other samples were tested in the laboratory to determine their strength or consolidation properties.

◆ Laboratory Tests of Soil

Examination of Split Spoon Soil Samples

Soil and rock samples and field boring records were reviewed in the laboratory by the geotechnical engineer. Soils were classified in general accordance with the visual-manual method described in ASTM D 2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Method)*. The geotechnical engineer also prepared the final boring records enclosed with this report.

Examination of Split Spoon Soil Samples

Soil and rock samples and field boring records were reviewed in the laboratory by the geotechnical engineer. Representative soil samples were selected for classification testing to provide grain size and plasticity data to allow classification of the samples in general accordance with the AASHTO Classification method described in ASTM D3282, *Standard Practice for Classification of Soils and Soil Aggregate Mixtures for Highway Construction Purposes*. The geotechnical engineer also prepared the final boring records enclosed with this report.

Extrusion and Examination of Group C Undisturbed Samples

Undisturbed samples were stored in the vertical position in the laboratory. Samples were extruded from the thin-walled sampler, using a specially constructed extruder, in the same direction of travel as the sample entered the tube during sampling. In certain cases it was necessary to cut the tube into short sections to facilitate removal of the soil without compressing or disturbing the sample. Specimens were trimmed using a wire saw or steel straightedge. Where removal of pebbles or crumbling resulting from trimming caused voids on the surface of the specimens selected for quantitative laboratory testing, they were filled with remolded soil obtained from the trimmed portion of the sample.

Moisture Content Testing of Soil Samples by Oven Drying

Moisture content was determined in general conformance with the methods outlined in ASTM D2216, "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil or Rock by Mass." This method is limited in scope to Group B, C, or D samples of earth materials which do not contain appreciable amounts of organic material, soluble solids such as salt or reactive solids such as cement. This method is also limited to samples which do not contain contamination.

A representative portion of the soil was divided from the sample using one of the methods described in Section 9 of ASTM D2216. The split portion was then placed in a drying oven and heated to approximately 110 degrees C overnight or until a constant mass was achieved after repetitive weighing. The moisture content of the soil was then computed as the mass of water removed from the sample by drying, divided by the mass of the sample dry, times 100 percent. No attempt was made to exclude any particular particle size from the portion split from the sample.

Liquid and Plastic Limits Testing

Atterberg limits of the soils was determined generally following the methods described by ASTM D4318, *Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils*. Albert Atterberg originally defined "limits of consistency" of fine grained soils in terms of their relative ease of deformation at various moisture contents. In current engineering usage, the liquid limit of a soil is defined as the moisture content, in percent, marking the upper limit of viscous flow and the boundary with a semi-liquid state. The plastic limit defines the lower limit of plastic behavior, above which a soil behaves plastically below which it retains its shape upon drying. The plasticity index (PI) is the range of water content over which a soil behaves plastically. Numerically, the PI is the difference between liquid limit and plastic limit values.

Representative portions of fine grained Group A, B, C, or D samples were prepared using the wet method described in Section 10.1 of ASTM D4318. The liquid limit of each sample was determined using the multipoint method (Method A) described in Section 11. The liquid limit is by definition the moisture content where 25 drops of a hand operated liquid limit device are required to close a standard width groove cut in a soil sample placed in the device. After each test, the moisture content of the sample was adjusted and the sample replaced in the device. The test was repeated to provide a minimum of three widely spaced combinations of N versus moisture content. When plotted on semilog paper, the liquid limit moisture content was determined by straight line interpolation between the data points at N equals 25 blows.

The plastic limit was determined using the procedure described in Section 17 of ASTM D4318. A selected portion of the soil used in the liquid limit test was kneaded and rolled by hand until it could no longer be rolled to a 3.2 mm thread on a glass plate. This procedure was repeated until at least 6 grams of material was accumulated, at which point the moisture content was determined using the methods described in ASTM D2216.

Grain Size Analysis of Samples

The distribution of particle sizes greater than 75 μm was determined in general accordance with the procedures described by ASTM D421, *Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants*, and D422, *Standard Test Method for Particle Size Analysis of Soils*. During preparation samples were divided into two portions. The material coarser than the No. 30 U.S. sieve size fraction was dry sieved through a nest of standard sieves as described in Article 6. Material passing the No. 30 sieve was independently passed through a nest of sieves down to the No. 200 size.

Grain Size Analysis of Samples with Hydrometer

The distribution of particle sizes was determined in general accordance with the procedures described by ASTM D421, *Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants*, and D422, *Standard Test Method for Particle Size Analysis of Soils*. During preparation

samples were divided into two portions. The material coarser than the No. 10 U.S. sieve size fraction was dry sieved through a nest of standard sieves as described in Article 6. Material passing the No. 10 sieve was soaked in demineralized water and a dispersing agent, then the soil-water slurry placed in a glass sedimentation chamber and the specific gravity of the slurry recorded at various time intervals. The grain size distribution was calculated from the time rate of sedimentation of the various size particles. After the final hydrometer reading was obtained, the suspension was washed through the No. 200 sieve. The remaining material retained on the No. 200 sieve was oven dried, and then passed through a standard nest of sieves.

Percent Fines Determination of Samples

A selected specimen of soils was washed over a No. 200 sieve after being thoroughly mixed and dried. This test was conducted in general accordance with ASTM D1140, *Standard Test Method for Amount of Material Finer Than the No. 200 Sieve*. Method A, using water to wash the sample through the sieve without soaking the sample for a prescribed period of time, was used and the percentage by weight of material washing through the sieve was deemed the "percent fines" or percent clay and silt fraction.

CU or "R" Triaxial Shear Tests of Undisturbed Samples

Shear tests were performed using the CU or "R" test method described by ASTM D4767, *Standard Test Method for Consolidated-Undrained Triaxial Compression Test for Cohesive Soils*. This test is typically applicable to fine-grained soils preserved as Group C samples as defined in ASTM D4220. Samples tested using the R test method are isotropically consolidated and sheared in compression without drainage at a constant rate of axial deformation. The shear characteristics measured under undrained conditions are applicable to field conditions where soils that have been fully consolidated under one set of stresses are subjected to a change in stress without time for further consolidation to take place. Measured pore pressures induced by the change in stress can be used to compute effective stress shear strength, which may be applied to field conditions in which full drainage can occur or to conditions in which pore pressures induced by loading can be estimated.

R tests were performed on samples prepared as generally described in Section 6 of ASTM D4767. Each extruded sample was encased in a rubber membrane and sealed to the specimen base and cap with rubber O-rings to prevent drainage of the specimen. For this test UD samples were tested without trimming except for cutting the end surfaces plane and perpendicular to the longitudinal axis of the specimen. Samples were saturated by back pressuring the pore water in the specimen to drive the air in the void spaces into solution, after the system was saturated by applying a vacuum to the specimen and dry drainage system as described in section 8.2.

With the drainage valves of the triaxial cell closed, the cell pressure was increased while maintaining back pressure constant to confine the specimen. After the chamber was pressurized to the desired confining pressure the appropriate drainage ports were opened and the sample allowed to fully consolidate to equilibrium before application of axial load. The fully consolidated sample was then loaded axially by compressing the top platen into the sample at a constant rate of approximately one percent strain per minute, with the drainage ports again closed. Deformation of the sample and the applied stress was recorded electronically using LVDT strain gauges and induced pore pressures measured using a stiff electronic pressure transducer.

Failure of the specimens during the tests was defined as the point of maximum effective stress obliquity, the maximum stress difference (deviator stress) attained at any point during the test, or as the deviator stress at 15 percent strain, whichever occurred first. Test output is attached in the Appendix and includes a plot of deviator stress vs. applied strain for various load increments, induced pore pressure vs. applied strain, $p'-q'$ diagram, and Mohr Circle plots at various increments of confining stress.

Unconfined Compressive Strength Tests of Intact Cohesive Samples

The unconfined compressive strength of intact cohesive soils was determined generally following the procedures described by ASTM D2166, *Standard Test Method for Unconfined Compressive Strength of Cohesive Soil*. Shelby tube sample was extruded and the ends of each specimen were carved by hand and trimmed as necessary to provide a surface perpendicular to the specimen's long axis, but the ends were not capped.

The prepared sample was placed in a compressive testing machine and the specimen compressed in the platen at a rate of 1 to 2 percent strain per minute. Deformation and loading of the sample were recorded at regular intervals until the load values began to decrease with increasing axial strain, or a total strain of 15 percent of the original sample length was attained. Sample stress was corrected at each load increment for the change in cross sectional area produced by deformation of the sample using the formulae in sections 8.2 and 8.3 of ASTM D 2166.

◆ Laboratory Tests of Rock

Examination of Rock Core Specimens

Rock core samples returned to the laboratory were examined by the geotechnical engineer or geologist and the percentage recovery and rock quality designation (RQD) estimated for each run. A core run is defined either as 1) a drill run defined by the length of the core barrel; 2) a change in formation or rock type could constitute the end of a core run; or 3) a core run can be a selected zone of concern. Core run lengths are indicated on the attached boring records.

The "recovery" is the ratio of the sample length recovered in the core barrel to the total length of the core run, expressed as a percent. Rock Quality Designation is described by ASTM D6032, *Standard Test Method for Determining Rock Quality Designation (RQD) of Rock Core*. The RQD is the percentage of the core run consisting of moderately hard or harder NX-sized rock core recovered in segments 4 inches long or longer. When properly interpreted by a qualified professional, the RQD value provides a basis for preliminary design decisions involving foundations or excavation in rock.

Only those pieces of rock formed by natural joints, bedding planes, shear zones, or cleavage planes that result in surfaces of separation were considered for RQD purposes. Pieces formed by breaks in the core due to drilling or handling were not considered. Pieces were considered intact when they appeared to have been bonded together prior to coring and broken surfaces consisted of fresh rock. Where a surface could not be determined as either a natural or mechanical break, it was considered a natural break.

Rock core specimens were classified based on the following characteristics:

Hardness	Description of Core
Soft Rock	May be broken with fingers
Moderately Soft	May be scratched by a nail, corners and edges may be broken with fingers
Moderately Hard	Light blow of hammer required to break sample
Hard Rock	Hard blow of hammer required to break sample
Very Hard	Rock core rings when struck by hammer

Continuity	Core Recovery in Percent
Incompetent	Less than 40 percent
Competent	40 – 70 percent
Fairly Continuous	70 – 90 percent
Continuous	90 – 100 percent

Rock Quality	Rock Quality Designation
Very Poor	0 - 25 percent
Poor	25 – 50 percent
Fair	50 – 75 percent
Good	75 – 90 percent
Excellent	90 – 100 percent

Weathering	Description
Fresh	Rock fresh, crystals bright, some joints may show slight staining
Very Slight	Joints stained, some joints may show thin clay coatings
Slight	Joints stained and rock discolored up to 1 inch from joint surfaces
Moderate	Significant discoloration and weathering effects
Moderately Severe	All rock except quartz discolored and stained
Severe	Rock severely discolored and stained, few intact pieces remain
Very Severe	Rock fabric remains but reduced in strength to strong soil

Detailed rock descriptions, percent recovery, RQD values and the core barrel or bit size used are shown on the appropriate boring records in the Appendix.

Unconfined Compressive Strength Tests of Intact Rock Core

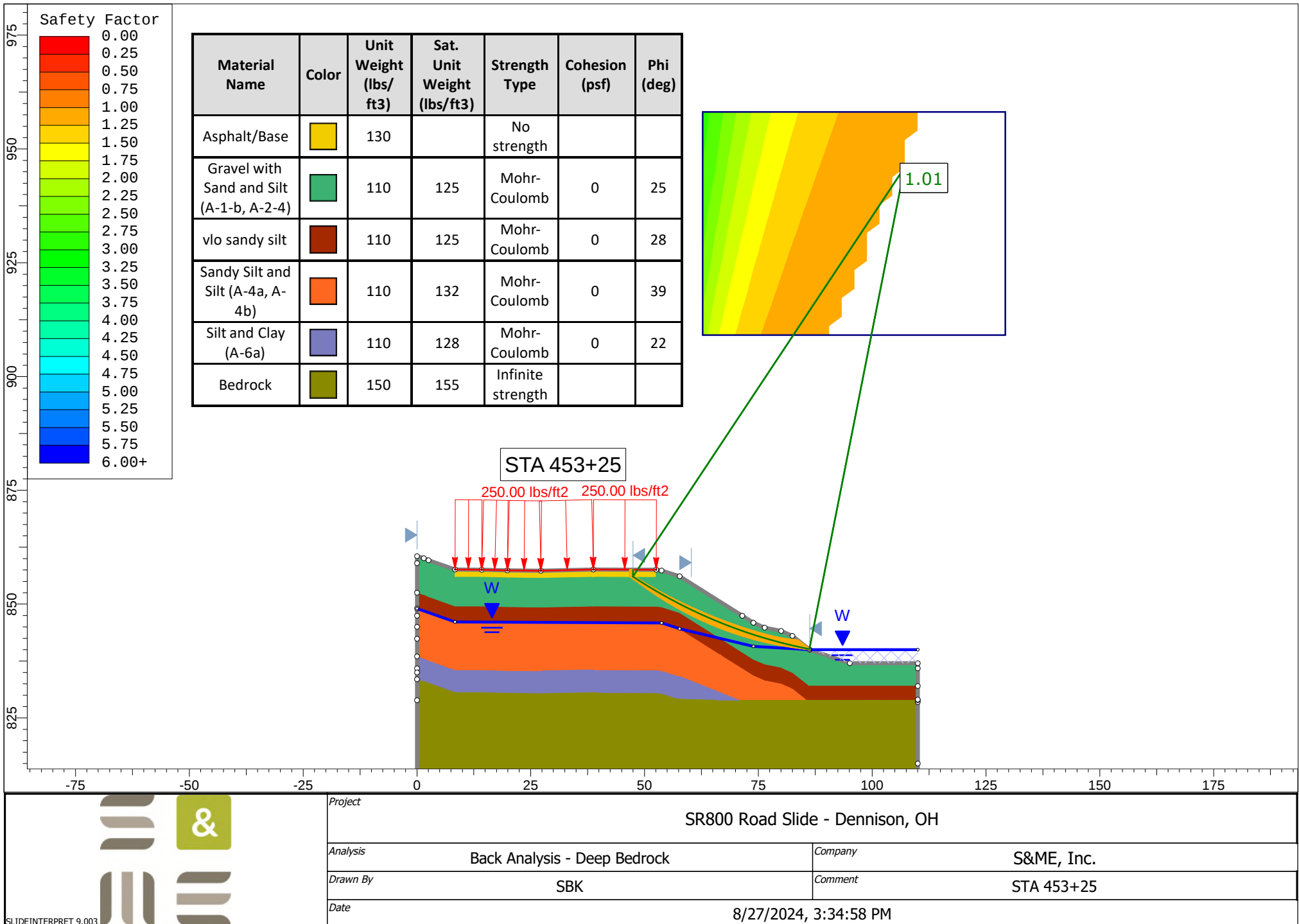
The unconfined compressive strength of intact rock core specimens will be determined generally following the procedures described in ASTM D7012, *Standard Test Methods for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures*. Selected recovered samples of

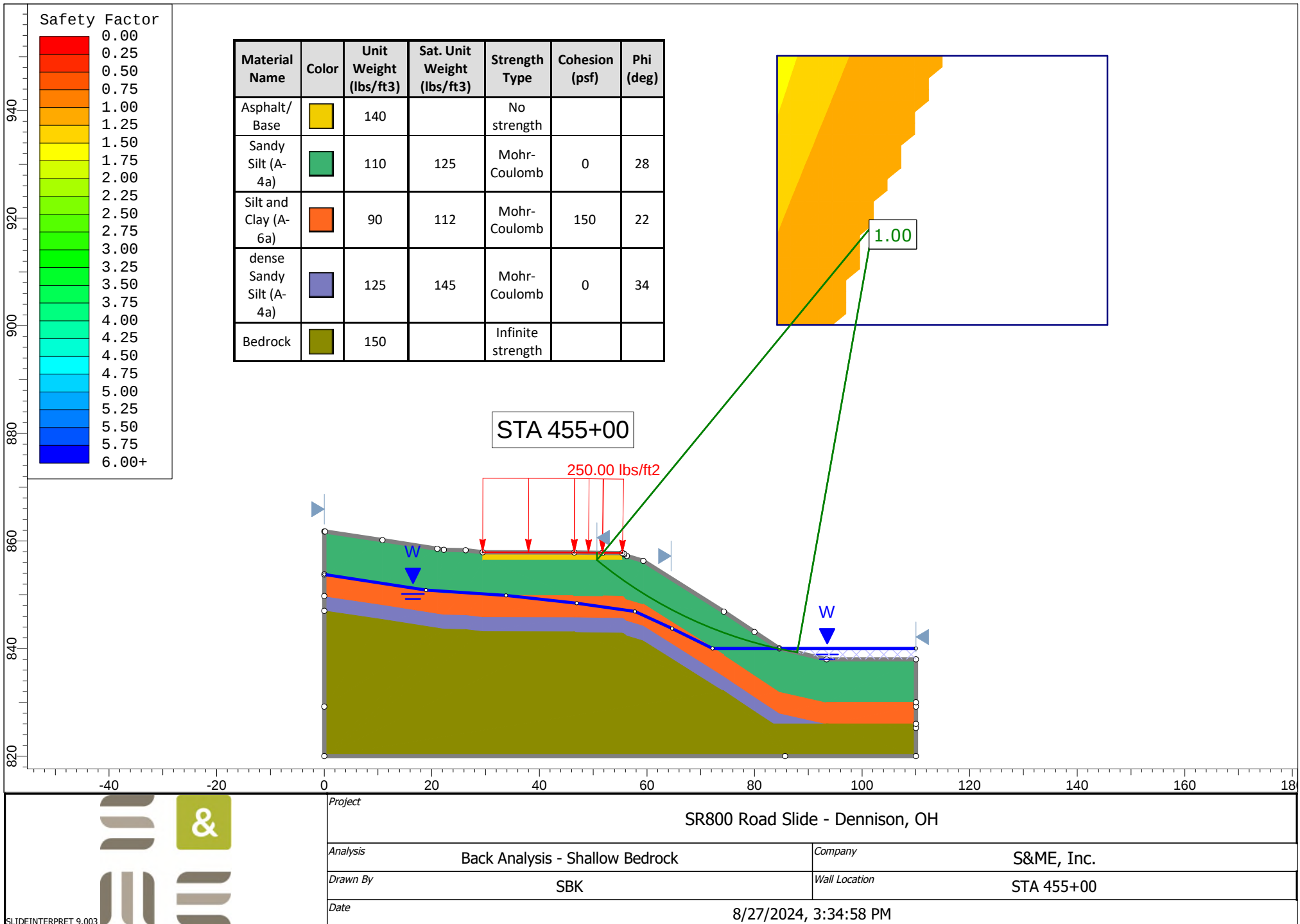
intact rock core representative of each run will be cut to length and the ends machined flat. Specimens will then be placed in a loading frame and axial load continuously applied until peak load and failure are obtained. Specimens selected for testing will meet shape and L/D proportions outlined in ASTM D4543, *Standard Practice for Preparing Rock Core Specimens and Determining Dimensional and Shape Tolerances*. The specimen minimum dimension should be at least six to ten times the maximum particle or mineral dimension, and the L/D ratio at least 2 to 2.5. Samples will be soaked prior to testing.

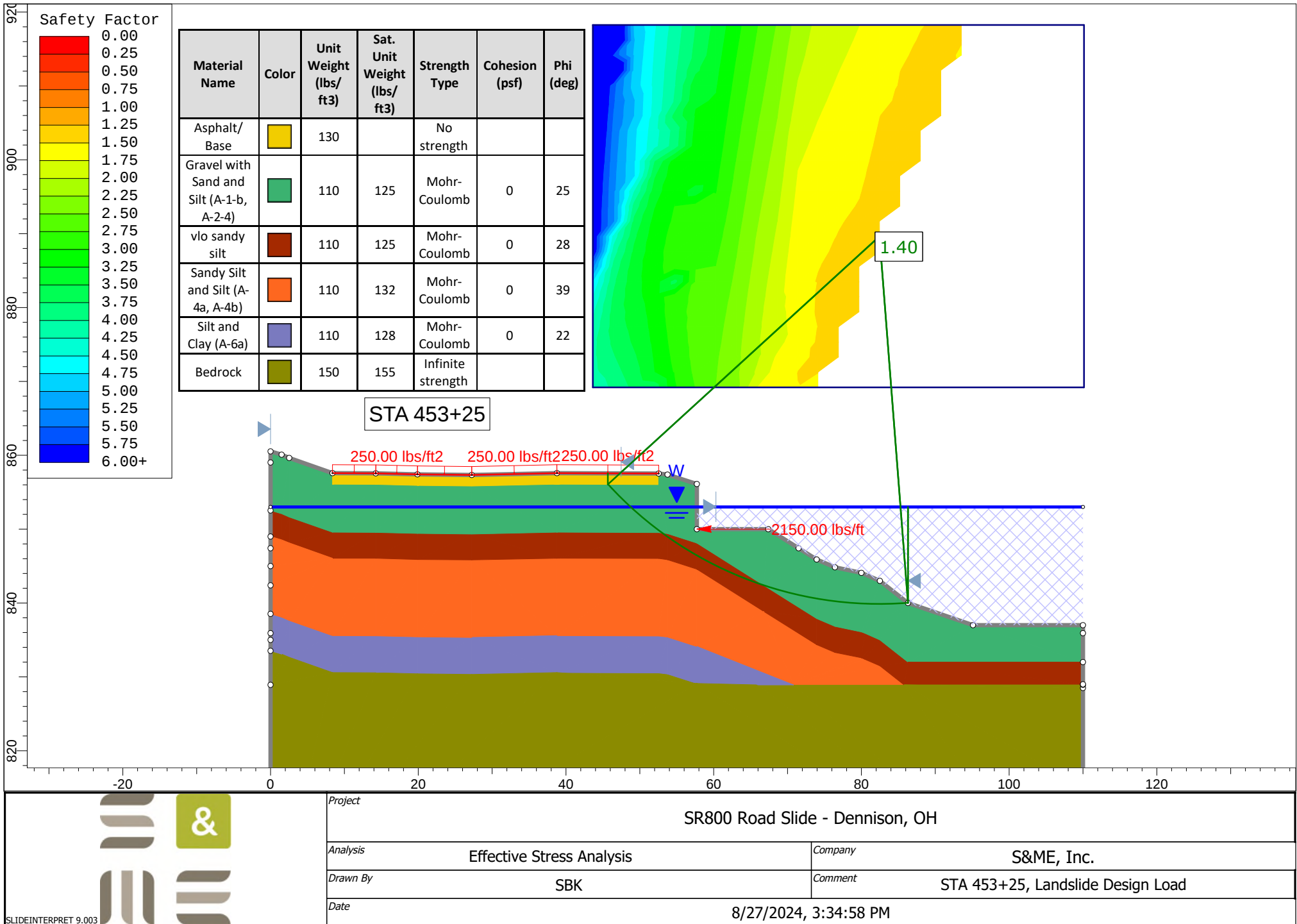


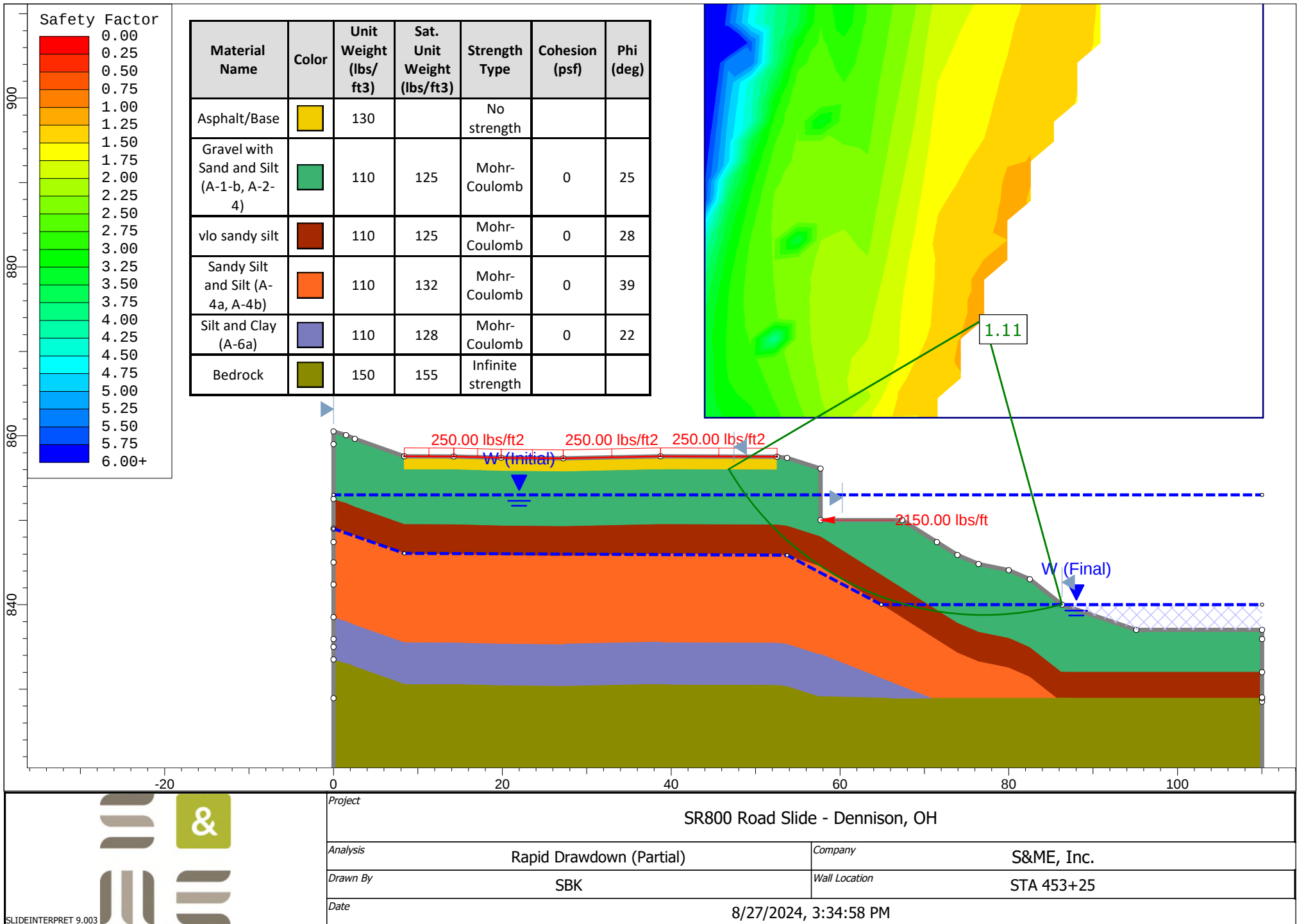
Appendix IV– Stability Analyses

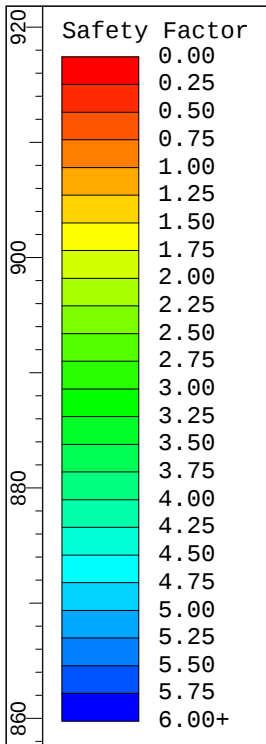
Back Analyses
Landslide Design Load Calculations
PY Wall Calculations
Rock Fill Slope Analyses



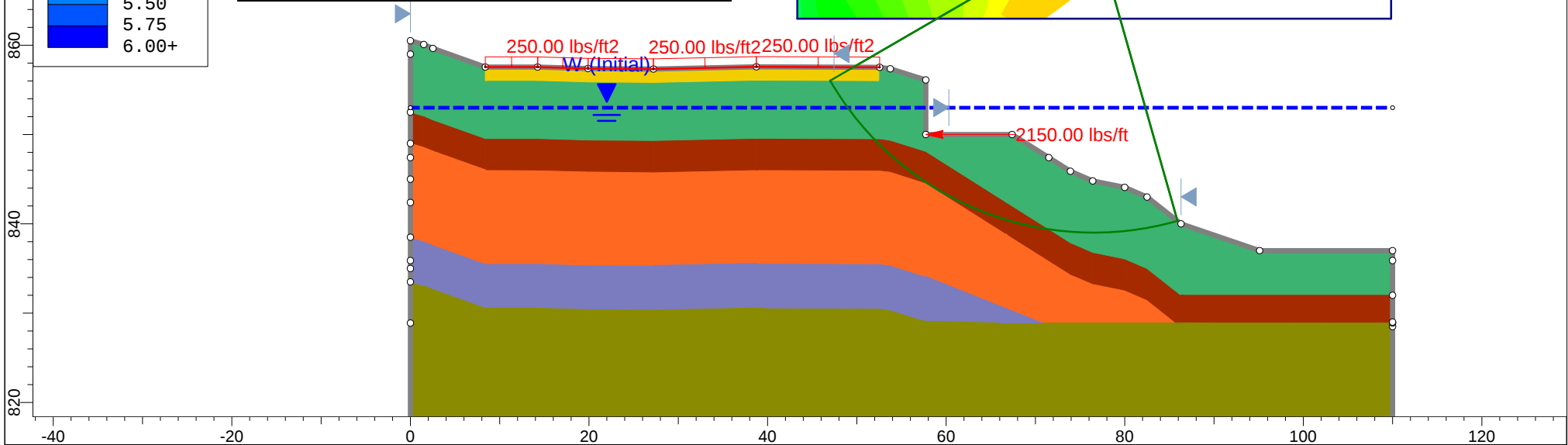
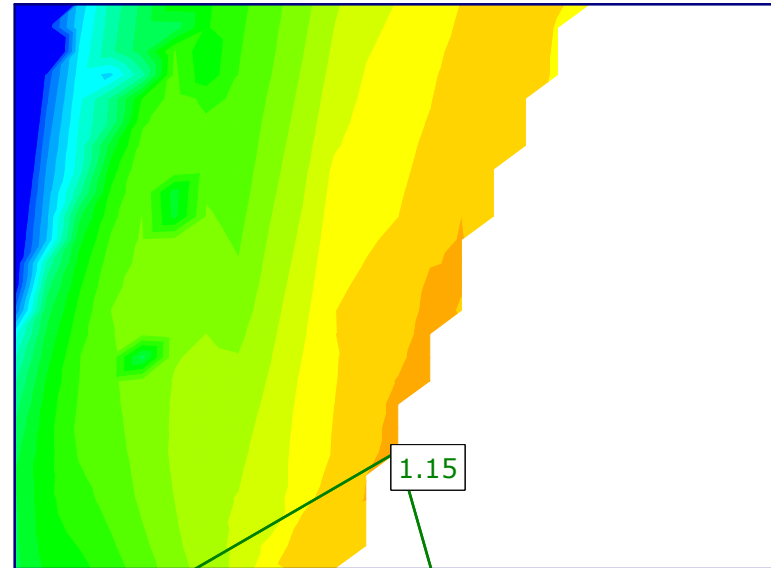




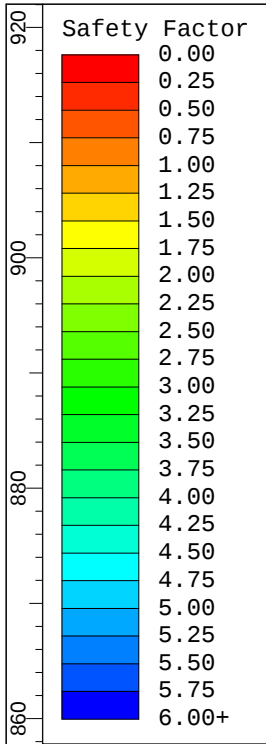




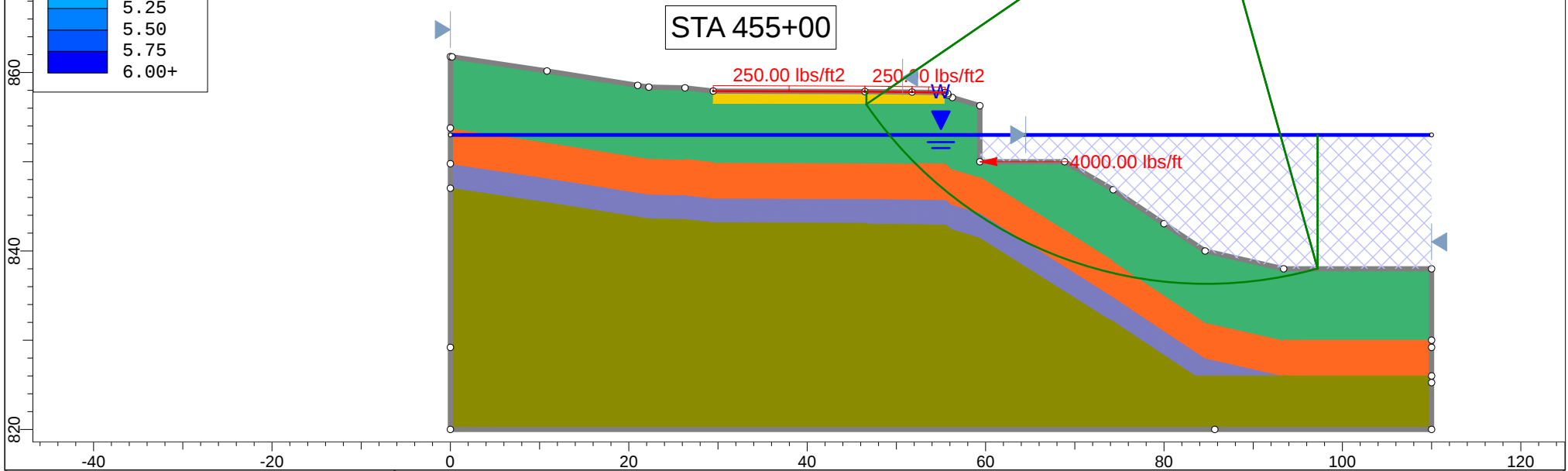
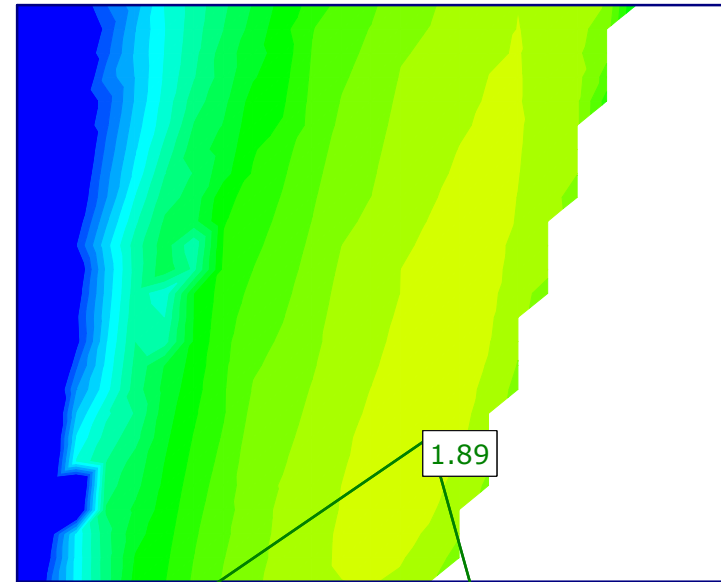
Material Name	Color	Unit Weight (lbs/ft3)	Sat. Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Asphalt/ Base		130		No strength		
Gravel with Sand and Silt (A-1-b, A-2-4)		110	125	Mohr-Coulomb	0	25
vlo sandy silt		110	125	Mohr-Coulomb	0	28
Sandy Silt and Silt (A-4a, A-4b)		110	132	Mohr-Coulomb	0	39
Silt and Clay (A-6a)		110	128	Mohr-Coulomb	0	22
Bedrock		150	155	Infinite strength		



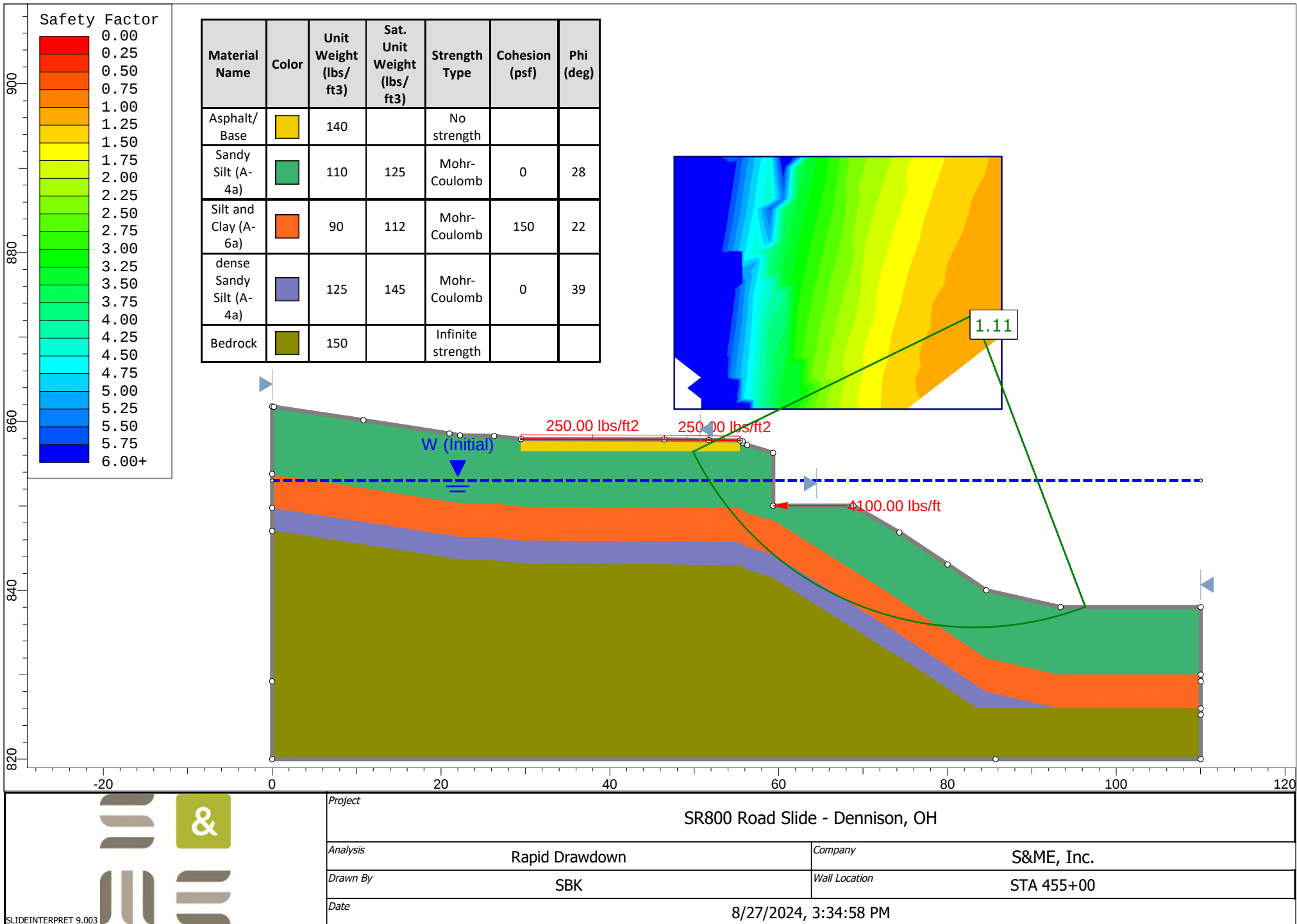
	Project		SR800 Road Slide - Dennison, OH	
	Analysis		Rapid Drawdown	Company S&ME, Inc.
	Drawn By		SBK	Comment STA 453+25
	Date		8/27/2024, 3:34:58 PM	

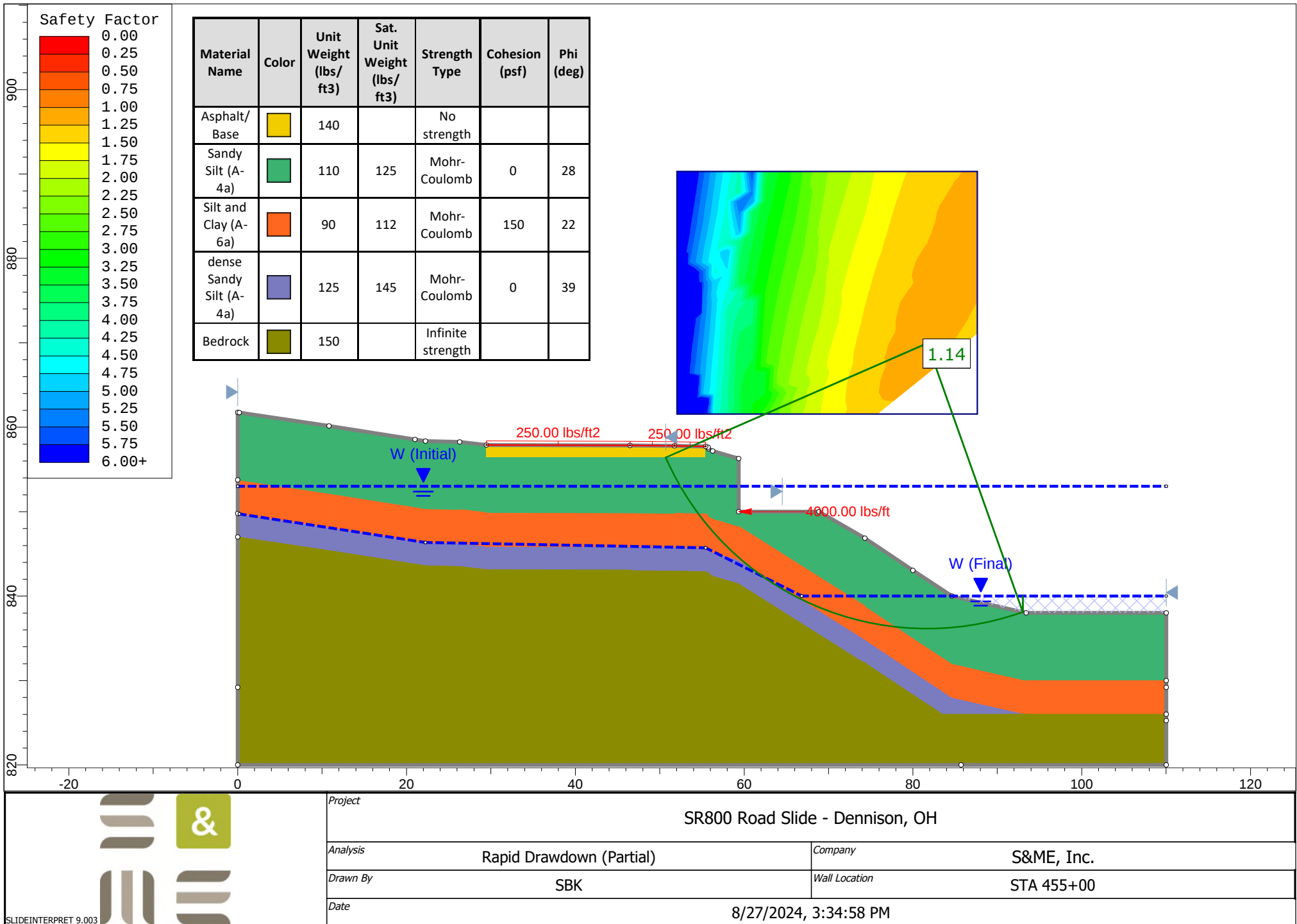


Material Name	Color	Unit Weight (lbs/ft3)	Sat. Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Asphalt/Base		140		No strength		
Sandy Silt (A-4a)		110	125	Mohr-Coulomb	0	28
Silt and Clay (A-6a)		90	112	Mohr-Coulomb	150	22
dense Sandy Silt (A-4a)		125	145	Mohr-Coulomb	0	39
Bedrock		150		Infinite strength		

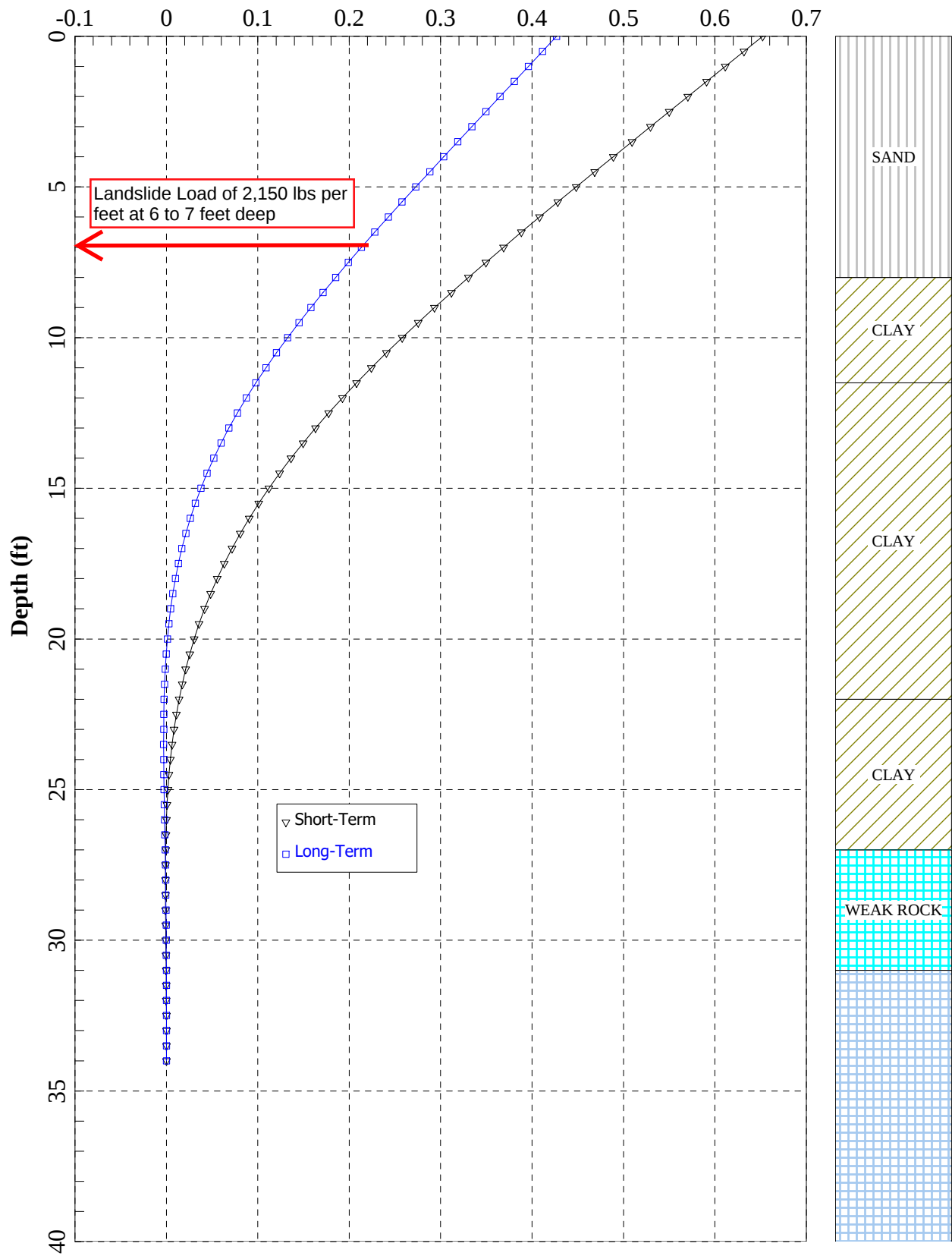


	Project		SR800 Road Slide - Dennison, OH	
	Analysis	Effective Stress Analyses	Company	S&ME, Inc.
	Drawn By	SBK	Wall Location	STA 455+00, Landslide Design Load
	Date	8/27/2024, 3:34:58 PM		





STA 453+25 Depth versus Deflection (Service Case)
Deflection (in)



=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 453+25\

Name of input data file : STA 453+25-Service Case.py7d
Name of output file : STA 453+25-Service Case.py7o
Name of plot output file : STA 453+25-Service Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 08:46:53

STA 453+25 Soldier Pile Wall

* PROGRAM CONTROL PARAMETERS *

NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS = 1
NO OF CROSS SECTIONS = 1
GENERATE EARTH PRESSURE INTERNALLY = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS = 0
NO OF STRUTS/RAKERS = 0

HEIGHT OF WALL	=	34.000 FT
NUMBER OF INCREMENTS	=	68
INCREMENT LENGTH	=	6.000 IN
MAXIMUM ALLOWABLE DEFLECTION	=	100.000 IN
DEFLECTION CLOSURE TOLERANCE	=	1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS	=	100

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	34.0000	1

* CROSS SECTIONS *

CROSS SECTION : 1
 SECTION NAME : Section
 TYPE : ELASTIC
 CROSS SECTION TYPE : I SECTION
 EQUIVALENT DIAMETER : 10.0000 IN
 EXTERNAL WIDTH : 10.0000 IN
 EXTERNAL DEPTH : 27.6000 IN
 FLANGE THICKNESS : 1.10000 IN
 WEB THICKNESS : 0.61000 IN
 YOUNG MODULUS : 2.90000E+07 LBS/IN**2

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

* STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
 S - STIFFNESS OF TRANSVERSE RESISTANCE,
 T - TORQUE, P - AXIAL LOAD,
 R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI LBS-IN**2	Q LBS	S LBS/IN	T IN-LBS	R IN-LBS	P LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
68	0		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	1.290E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

 * WALL INFORMATION *

FREE HEIGHT OF WALL = 6.000E+00 FT
 WIDTH FOR EARTH PRESSURE, WA = 7.800E+01 IN
 WIDTH FOR SOIL RESISTANCE, WP = 3.600E+01 IN
 DEPTH TO THE WATER TABLE AT BACKFILL = 1.100E+01 FT
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.100E+01 FT
 UNIT WEIGHT OF WATER = 3.600E-02 LBS/IN**3
 SLOPE OF THE BACKFILL (deg.) = 0.000E+00
 SLOPE OF THE EXCAVATION GROUND (deg.) = 0.000E+00
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE = 1.736E+00 LBS/IN**2

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	TOTAL UNIT			
			PHI DEG	WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	6.0	0.0	25.0	0.064	T	0.00
2	2.0	0.0	25.0	0.064	T	6.00
3	3.0	3.5	0.0	0.064	F	8.00
4	0.5	3.5	0.0	0.064	F	11.00
5	10.5	5.2	0.0	0.064	F	11.50
6	5.0	6.9	0.0	0.064	F	22.00
7	4.0	9.7	0.0	0.087	T	27.00
8	19.0	11000.0	0.0	0.093	T	31.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
6.000E+00	6.319E+00
8.000E+00	7.847E+00
1.100E+01	1.014E+01
1.150E+01	1.030E+01
2.200E+01	1.379E+01
2.700E+01	1.545E+01
3.100E+01	1.789E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	4.059E-01	2.464E+00	0.000E+00
2	4.059E-01	2.464E+00	0.000E+00
3	1.000E+00	1.000E+00	0.000E+00
4	1.000E+00	1.000E+00	0.000E+00
5	1.000E+00	1.000E+00	0.000E+00
6	1.000E+00	1.000E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00
8	1.000E+00	1.000E+00	0.000E+00

NOTES:

(*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS

(**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE
 IF IT IS DIFFERENT THAN ZERO

 * ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	50.73	3.00	66.97	4.00	0.00	-0.00	0.00

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

* WARNING *

This model uses a reduction of active loads for the cohesive strength of clay. Please check carefully these results. Please evaluate if other alternatives are more applicable to your model (e.g., other/reduced cohesive strength, equivalent fluid pressure, and/or other type of retained soil to simulate drained and/or long-term conditions).

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	5.49596E+01
5.00000E-01	6.70511E+01
1.00000E+00	7.91388E+01
1.50000E+00	9.12366E+01
2.00000E+00	1.03327E+02
2.50000E+00	1.15417E+02
3.00000E+00	1.27507E+02
3.50000E+00	1.39597E+02
4.00000E+00	1.51687E+02
4.50000E+00	1.63784E+02
5.00000E+00	1.75874E+02
5.50000E+00	1.87964E+02
6.00000E+00	2.00054E+02
6.50000E+00	9.23328E+01
7.00000E+00	9.23328E+01
7.50000E+00	9.23328E+01
8.00000E+00	9.23328E+01
8.50000E+00	3.70800E-09
9.00000E+00	3.92400E-09
9.50000E+00	4.14000E-09
1.00000E+01	4.35600E-09
1.05000E+01	4.57200E-09
1.10000E+01	4.78800E-09
1.15000E+01	5.00400E-09
1.20000E+01	5.22000E-09
1.25000E+01	5.43600E-09
1.30000E+01	5.65200E-09
1.35000E+01	5.86800E-09
1.40000E+01	6.08400E-09
1.45000E+01	6.30000E-09
1.50000E+01	6.51600E-09
1.55000E+01	6.73200E-09
1.60000E+01	6.94800E-09
1.65000E+01	7.16400E-09
1.70000E+01	7.38000E-09
1.75000E+01	7.59600E-09
1.80000E+01	7.81200E-09
1.85000E+01	8.02800E-09
1.90000E+01	8.24400E-09

1.95000E+01	8.46000E-09
2.00000E+01	8.67600E-09
2.05000E+01	8.89200E-09
2.10000E+01	9.10800E-09
2.15000E+01	9.32400E-09
2.20000E+01	9.54000E-09
2.25000E+01	9.75600E-09
2.30000E+01	9.97200E-09
2.35000E+01	1.01880E-08
2.40000E+01	1.04040E-08
2.45000E+01	1.06200E-08
2.50000E+01	1.08360E-08
2.55000E+01	1.10520E-08
2.60000E+01	1.12680E-08
2.65000E+01	1.14840E-08
2.70000E+01	1.17000E-08
2.75000E+01	1.19160E-08
2.80000E+01	1.21320E-08
2.85000E+01	1.23480E-08
2.90000E+01	1.25640E-08
2.95000E+01	1.27800E-08
3.00000E+01	1.29960E-08
3.05000E+01	1.32120E-08
3.10000E+01	1.34280E-08
3.15000E+01	1.36440E-08
3.20000E+01	1.38600E-08
3.25000E+01	1.40760E-08
3.30000E+01	1.42920E-08
3.35000E+01	1.45080E-08
3.40000E+01	1.47240E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

6 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SAND

LAYER 2
 THE SOIL IS A SOFT CLAY

LAYER 3
 THE SOIL IS A STIFF CLAY WITH FREE WATER

LAYER 4
THE SOIL IS A STIFF CLAY WITH FREE WATER

LAYER 5
THE LAYER IS WEAK ROCK

LAYER 6
THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
12 POINTS

X, FT	WEIGHT, LBS/IN**3
6.0000	6.3657E-02
8.0000	6.3657E-02
8.0000	6.3657E-02
11.0000	6.3657E-02
11.0000	2.7657E-02
22.0000	2.7657E-02
22.0000	2.7657E-02
27.0000	2.7657E-02
27.0000	5.0806E-02
31.0000	5.0806E-02
31.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
12 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	3.4722E+00	0.000	2.0000E-02	0.0000E+00
11.50	3.4722E+00	0.000	2.0000E-02	0.0000E+00
11.50	5.2083E+00	0.000	1.0000E-02	1.0000E+02
22.00	5.2083E+00	0.000	1.0000E-02	1.0000E+02
22.00	6.9444E+00	0.000	7.0000E-03	5.0000E+02
27.00	6.9444E+00	0.000	7.0000E-03	5.0000E+02
27.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
35.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
3.59E+00	0.01	36.00	25.00	6.37E-02	2.50E+01	2.83	2.14	4.72E-01

Y	P
IN	LBS/IN
0.000	0.000
0.030	0.062
0.060	0.125
0.114	0.237
0.168	0.350
0.222	0.462
0.276	0.574
0.330	0.687
0.384	0.749
0.438	0.775
0.492	0.799
0.546	0.821
0.600	0.841
0.850	0.931
1.100	1.022
1.350	1.112
1.620	1.112

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
2.59E+03	6.01	36.00	25.00	6.37E-02	2.50E+01	1.48	1.05	7.43E+02

Y	P
IN	LBS/IN
0.000	0.000
0.030	45.014
0.060	90.028
0.114	171.052
0.168	252.077

0.222	333.102
0.276	414.127
0.330	495.152
0.384	560.605
0.438	585.306
0.492	608.035
0.546	629.143
0.600	648.890
0.850	737.489
1.100	826.088
1.350	914.687
1.620	914.687

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
2.16E+02	0.50	36.00	25.00	6.37E-02	2.50E+01	2.71	2.04	3.11E+01	

Y	P
IN	LBS/IN
0.000	0.000
0.030	3.746
0.060	7.492
0.114	14.235
0.168	20.977
0.222	27.720
0.276	34.463
0.330	41.205
0.384	46.813
0.438	48.480
0.492	50.001
0.546	51.404
0.600	52.709
0.850	58.547
1.100	64.384
1.350	70.221
1.620	70.221

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
2.80E+03	6.50	36.00	25.00	6.37E-02	2.50E+01	1.40	0.99	8.40E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	48.697
0.060	97.395
0.114	185.050
0.168	272.705
0.222	360.360
0.276	448.015
0.330	535.671
0.384	594.535
0.438	621.117
0.492	645.592
0.546	668.334
0.600	689.619
0.850	785.141
1.100	880.663
1.350	976.184
1.620	976.184

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
4.31E+02	1.00	36.00	25.00	6.37E-02	2.50E+01	2.60	1.93	6.78E+01	

Y	P
IN	LBS/IN
0.000	0.000
0.030	7.492
0.060	14.984
0.114	28.469
0.168	41.955
0.222	55.440

0.276	68.925
0.330	82.411
0.384	95.896
0.438	100.030
0.492	103.273
0.546	106.268
0.600	109.055
0.850	121.527
1.100	134.000
1.350	146.472
1.620	146.472

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	7.00	36.00	25.00	6.37E-02	2.50E+01	1.31	0.92	9.43E+02	
3.02E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	52.443
0.060	104.887
0.114	199.284
0.168	293.682
0.222	388.080
0.276	482.478
0.330	576.876
0.384	623.541
0.438	651.890
0.492	678.009
0.546	702.292
0.600	725.033
0.850	827.114
1.100	929.195
1.350	1031.275
1.620	1031.275

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
6.47E+02	1.50	36.00	25.00	6.37E-02	2.50E+01	2.48	1.83	1.10E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	11.238
0.060	22.476
0.114	42.704
0.168	62.932
0.222	83.160
0.276	103.388
0.330	123.616
0.384	143.844
0.438	153.259
0.492	158.407
0.546	163.164
0.600	167.596
0.850	187.439
1.100	207.282
1.350	227.125
1.620	227.125

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
3.24E+03	7.50	36.00	25.00	6.37E-02	2.50E+01	1.23	0.86	1.05E+03	

Y	P
IN	LBS/IN
0.000	0.000
0.030	56.189
0.060	112.378
0.114	213.519
0.168	314.660
0.222	415.800
0.276	516.941

0.330	613.377
0.384	646.221
0.438	676.159
0.492	703.764
0.546	729.447
0.600	753.513
0.850	861.576
1.100	969.638
1.350	1077.700
1.620	1077.700

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
8.59E+02	1.99	36.00	25.00	6.37E-02	2.50E+01	2.36	1.73	1.57E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	14.921
0.060	29.843
0.114	56.701
0.168	83.560
0.222	110.418
0.276	137.277
0.330	164.135
0.384	190.993
0.438	207.138
0.492	214.181
0.546	220.694
0.600	226.763
0.850	253.939
1.100	281.116
1.350	308.292
1.620	308.292

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN LB
3.45E+03	7.99	36.00	25.00	6.37E-02	2.50E+01	1.17	0.81	1.17E+03

Y	P
IN	LBS/IN
0.000	0.000
0.030	59.873
0.060	119.745
0.114	227.516
0.168	335.287
0.222	443.058
0.276	550.829
0.330	634.837
0.384	670.291
0.438	702.675
0.492	732.588
0.546	760.463
0.600	786.620
0.850	904.151
1.100	1021.681
1.350	1139.212
1.620	1139.212

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
2.01	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	21.982
0.036	47.359
0.108	68.304
0.288	94.719
0.576	119.338
0.864	136.608
1.440	161.967
2.160	185.405
3.240	212.236
4.320	233.596
5.760	257.106
7.200	276.959

9.360	302.271
11.520	323.933
14.400	348.946
17.280	348.946

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
8.01	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	37.190
0.036	80.123
0.108	115.557
0.288	160.246
0.576	201.898
0.864	231.115
1.440	274.017
2.160	313.671
3.240	359.064
4.320	395.201
5.760	434.975
7.200	468.563
9.360	511.386
11.520	548.034
14.400	590.352
17.280	590.352

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
2.88	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	24.179
0.036	52.092
0.108	75.129
0.288	104.184
0.576	131.263
0.864	150.259

1.440	178.152
2.160	203.933
3.240	233.445
4.320	256.939
5.760	282.798
7.200	304.635
9.360	332.476
11.520	356.303
14.400	383.816
17.280	383.816

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
8.88	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	39.386
0.036	84.856
0.108	122.383
0.288	169.711
0.576	213.823
0.864	244.766
1.440	290.202
2.160	332.199
3.240	380.272
4.320	418.544
5.760	460.667
7.200	496.239
9.360	541.591
11.520	580.404
14.400	625.222
17.280	625.222

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
3.75	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000

0.004	26.397
0.036	56.870
0.108	82.021
0.288	113.740
0.576	143.303
0.864	164.041
1.440	194.492
2.160	222.638
3.240	254.857
4.320	280.506
5.760	308.737
7.200	332.577
9.360	362.972
11.520	388.985
14.400	419.021
17.280	419.021

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
9.75	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	41.604
0.036	89.634
0.108	129.274
0.288	179.267
0.576	225.863
0.864	258.548
1.440	306.543
2.160	350.904
3.240	401.685
4.320	442.111
5.760	486.606
7.200	524.181
9.360	572.087
11.520	613.086
14.400	660.427
17.280	660.427

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
4.62	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	28.614
0.036	61.648
0.108	88.912
0.288	123.296
0.576	155.343
0.864	177.823
1.440	210.833
2.160	241.344
3.240	276.269
4.320	304.074
5.760	334.677
7.200	360.519
9.360	393.468
11.520	421.666
14.400	454.226
17.280	454.226

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
10.62	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	43.822
0.036	94.412
0.108	136.165
0.288	188.823
0.576	237.903
0.864	272.331
1.440	322.884
2.160	369.609
3.240	423.097
4.320	465.679
5.760	512.546
7.200	552.123
9.360	602.583
11.520	645.767
14.400	695.632
17.280	695.632

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
5.49	36.000	3.4722E+00	6.0434E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	30.490
0.036	65.689
0.108	94.740
0.288	131.377
0.576	165.525
0.864	189.479
1.440	224.652
2.160	257.163
3.240	294.378
4.320	324.005
5.760	356.613
7.200	384.150
9.360	419.259
11.520	449.305
14.400	483.999
17.280	483.999

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
11.49	36.000	3.4722E+00	6.2117E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	45.656
0.036	98.363
0.108	141.863
0.288	196.725
0.576	247.858
0.864	283.727
1.440	336.395
2.160	385.077
3.240	440.803
4.320	485.166

5.760	533.995
7.200	575.228
9.360	627.800
11.520	672.791
14.400	724.742
17.280	724.742

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	5.51	36.000	5.21E+00	5.21E+00	6.03E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.096	321.441
0.193	454.587
0.289	528.016
0.385	574.534
0.482	605.304
0.578	624.805
0.674	635.594
0.771	639.317
0.867	637.122
0.963	629.847
1.060	618.133
1.156	602.479
1.927	436.464
2.698	270.174
3.468	103.885
28.904	103.885

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3						

11.51 36.000 5.21E+00 5.21E+00 6.21E-02 1.0000E-02
1.00000E+02

Y	P
IN	LBS/IN
0.000	0.000
0.108	469.548
0.215	664.041
0.323	773.578
0.431	844.667
0.539	893.187
0.646	925.561
0.754	945.461
0.862	955.255
0.969	956.589
1.077	950.669
1.185	938.413
1.292	920.539
2.154	664.088
3.016	407.258
3.877	150.427
32.312	150.427

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	8.12	36.000	5.21E+00	5.21E+00	4.98E-02	1.0000E-02

1.00000E+02

Y	P
IN	LBS/IN
0.000	0.000
0.104	444.713
0.208	628.919
0.312	732.017
0.416	798.456
0.520	843.396
0.625	872.955
0.729	890.628
0.833	898.668
0.937	898.643
1.041	891.701
1.145	878.715

1.249	860.736
2.082	621.595
2.915	382.455
3.748	143.314
31.230	143.314

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	14.12	36.000	5.21E+00	6.79E+00	5.57E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	10.75	36.000	5.21E+00	1.38E+01	4.44E-02	1.0000E-02

1.00000E+02

Y	P
IN	LBS/IN
0.000	0.000
0.107	468.555
0.215	662.637
0.322	771.859
0.429	842.681
0.536	890.966
0.644	923.129
0.751	942.834
0.858	952.447
0.965	953.611
1.073	947.529
1.180	935.120
1.287	917.479
2.145	661.734
3.003	405.988
3.861	150.243
32.175	150.243

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	16.75	36.000	5.21E+00	1.04E+01	5.13E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765

2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	13.38	36.000	5.21E+00	1.66E+01	4.11E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	19.38	36.000	5.21E+00	1.27E+01	4.81E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	15.99	36.000	5.21E+00	1.81E+01	3.89E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611

3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	21.99	36.000	5.21E+00	1.42E+01	4.57E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	16.01	36.000	6.94E+00	6.94E+00	3.89E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	22.01	36.000	6.94E+00	6.94E+00	4.57E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102

2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	17.25	36.000	6.94E+00	6.94E+00	3.81E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	23.25	36.000	6.94E+00	8.14E+00	4.47E-02	7.0000E-03
5.00000E+02						

Y	P
---	---

IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	18.50	36.000	6.94E+00	2.71E+01	3.74E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724

22.680 200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	24.50	36.000	6.94E+00	1.39E+01	4.38E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	19.75	36.000	6.94E+00	3.38E+01	3.68E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN

0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	25.75	36.000	6.94E+00	1.82E+01	4.30E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	20.99	36.000	6.94E+00	3.72E+01	3.62E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	26.99	36.000	6.94E+00	2.15E+01	4.23E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000

0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
21.01	36.000	9.70E+00	3.50E+04	3.62E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.218E+02		
		0.180E-04		0.259E+02		
		0.540E-04		0.341E+02		
		0.108E-03		0.406E+02		
		0.162E-03		0.449E+02		
		0.360E-03		0.549E+02		
		0.720E-03		0.653E+02		
		0.108E-02		0.722E+02		
		0.144E-02		0.776E+02		
		0.180E-02		0.821E+02		
		0.450E-02		0.103E+03		
		0.900E-02		0.123E+03		
		0.135E-01		0.136E+03		
		0.180E-01		0.146E+03		
		0.720E-01		0.206E+03		
		0.144E+00		0.245E+03		
		0.216E+00		0.272E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
27.01	36.000	9.70E+00	3.50E+04	4.23E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
22.00	36.000	9.70E+00	3.50E+04	3.69E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		
		0.135E-01		0.198E+03		
		0.180E-01		0.213E+03		
		0.720E-01		0.301E+03		
		0.144E+00		0.359E+03		
		0.216E+00		0.397E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
28.00	36.000	9.70E+00	3.50E+04	4.26E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		
		0.180E-01		0.620E+03		
		0.720E-01		0.877E+03		
		0.144E+00		0.104E+04		
		0.216E+00		0.115E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
23.00	36.000	9.70E+00	3.50E+04	3.75E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.420E+02		
		0.180E-04		0.500E+02		
		0.540E-04		0.658E+02		
		0.108E-03		0.782E+02		
		0.162E-03		0.865E+02		
		0.360E-03		0.106E+03		
		0.720E-03		0.126E+03		
		0.108E-02		0.139E+03		
		0.144E-02		0.149E+03		
		0.180E-02		0.158E+03		
		0.450E-02		0.199E+03		
		0.900E-02		0.236E+03		
		0.135E-01		0.261E+03		
		0.180E-01		0.281E+03		

0.720E-01	0.397E+03
0.144E+00	0.473E+03
0.216E+00	0.523E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
29.00	36.000	9.70E+00	3.50E+04	4.29E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.308E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		
		0.180E-02		0.387E+03		
		0.450E-02		0.486E+03		
		0.900E-02		0.578E+03		
		0.135E-01		0.640E+03		
		0.180E-01		0.688E+03		
		0.720E-01		0.973E+03		
		0.144E+00		0.116E+04		
		0.216E+00		0.128E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.00	36.000	9.70E+00	3.50E+04	3.81E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.522E+02		
		0.180E-04		0.620E+02		
		0.540E-04		0.816E+02		
		0.108E-03		0.971E+02		
		0.162E-03		0.107E+03		
		0.360E-03		0.131E+03		
		0.720E-03		0.156E+03		
		0.108E-02		0.173E+03		
		0.144E-02		0.186E+03		
		0.180E-02		0.196E+03		

0.450E-02	0.247E+03
0.900E-02	0.293E+03
0.135E-01	0.325E+03
0.180E-01	0.349E+03
0.720E-01	0.493E+03
0.144E+00	0.587E+03
0.216E+00	0.649E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.00	36.000	9.70E+00	3.50E+04	4.32E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		
		0.180E-04		0.134E+03		
		0.540E-04		0.177E+03		
		0.108E-03		0.210E+03		
		0.162E-03		0.233E+03		
		0.360E-03		0.284E+03		
		0.720E-03		0.338E+03		
		0.108E-02		0.374E+03		
		0.144E-02		0.402E+03		
		0.180E-02		0.425E+03		
		0.450E-02		0.534E+03		
		0.900E-02		0.636E+03		
		0.135E-01		0.703E+03		
		0.180E-01		0.756E+03		
		0.720E-01		0.107E+04		
		0.144E+00		0.127E+04		
		0.216E+00		0.141E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.99	36.000	9.70E+00	3.50E+04	3.86E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.622E+02		
		0.180E-04		0.740E+02		
		0.540E-04		0.974E+02		
		0.108E-03		0.116E+03		
		0.162E-03		0.128E+03		
		0.360E-03		0.156E+03		

0.720E-03	0.186E+03
0.108E-02	0.206E+03
0.144E-02	0.221E+03
0.180E-02	0.234E+03
0.450E-02	0.294E+03
0.900E-02	0.350E+03
0.135E-01	0.387E+03
0.180E-01	0.416E+03
0.720E-01	0.588E+03
0.144E+00	0.700E+03
0.216E+00	0.774E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.99	36.000	9.70E+00	3.50E+04	4.34E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		
		0.180E-04		0.134E+03		
		0.540E-04		0.177E+03		
		0.108E-03		0.210E+03		
		0.162E-03		0.233E+03		
		0.360E-03		0.284E+03		
		0.720E-03		0.338E+03		
		0.108E-02		0.374E+03		
		0.144E-02		0.402E+03		
		0.180E-02		0.425E+03		
		0.450E-02		0.534E+03		
		0.900E-02		0.636E+03		
		0.135E-01		0.703E+03		
		0.180E-01		0.756E+03		
		0.720E-01		0.107E+04		
		0.144E+00		0.127E+04		
		0.216E+00		0.141E+04		

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
300.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
		0.000D+00	0.000D+00
		0.576D-02	0.527D+05
		0.115D-01	0.105D+06
		0.173D-01	0.133D+06
		0.230D-01	0.136D+06

0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.208D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
372.10	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.347D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
312.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06

0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.220D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
384.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.360D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
324.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06

0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.233D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
396.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.372D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
336.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06

0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.245D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
408.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.385D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
347.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06

0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.257D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
419.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.398D+03

STA 453+25 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
FT		IN	RAD	LBS-IN	LBS	LBS/IN
LBS	LBS-IN**2					
-----	-----	----	-----	-----	-----	-----
0	0.000E+00	6.522E-01	-3.405E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	6.318E-01	-3.405E-03	0.000E+00	2.012E+02	0.000E+00
4.023E+02	1.362E+11					
2	1.000E+00	6.114E-01	-3.405E-03	2.414E+03	6.397E+02	0.000E+00
4.748E+02	1.362E+11					

3	1.500E+00	5.909E-01	-3.405E-03	7.677E+03	1.151E+03	0.000E+00
5.474E+02	1.362E+11					
4	2.000E+00	5.705E-01	-3.405E-03	1.622E+04	1.735E+03	0.000E+00
6.200E+02	1.362E+11					
5	2.500E+00	5.501E-01	-3.404E-03	2.849E+04	2.391E+03	0.000E+00
6.925E+02	1.362E+11					
6	3.000E+00	5.297E-01	-3.402E-03	4.491E+04	6.345E+03	0.000E+00
7.215E+03	1.362E+11					
7	3.500E+00	5.092E-01	-3.399E-03	1.046E+05	1.360E+04	0.000E+00
7.288E+03	1.362E+11					
8	4.000E+00	4.889E-01	-3.392E-03	2.081E+05	1.769E+04	0.000E+00
9.101E+02	1.362E+11					
9	4.500E+00	4.685E-01	-3.380E-03	3.170E+05	1.864E+04	0.000E+00
9.827E+02	1.362E+11					
10	5.000E+00	4.483E-01	-3.364E-03	4.318E+05	1.966E+04	0.000E+00
1.055E+03	1.362E+11					
11	5.500E+00	4.282E-01	-3.342E-03	5.529E+05	2.075E+04	0.000E+00
1.128E+03	1.362E+11					
12	6.000E+00	4.082E-01	-3.315E-03	6.808E+05	2.191E+04	-3.805E-01
1.198E+03	1.362E+11					
13	6.500E+00	3.884E-01	-3.282E-03	8.159E+05	2.265E+04	-4.695E+01
2.723E+02	1.362E+11					
14	7.000E+00	3.688E-01	-3.243E-03	9.526E+05	2.279E+04	-9.211E+01
1.359E+00	1.362E+11					
15	7.500E+00	3.495E-01	-3.198E-03	1.089E+06	2.267E+04	-1.309E+02
-2.313E+02	1.362E+11					
16	8.000E+00	3.304E-01	-3.147E-03	1.225E+06	2.234E+04	-1.643E+02
-4.319E+02	1.362E+11					
17	8.500E+00	3.117E-01	-3.090E-03	1.357E+06	2.173E+04	-1.307E+02
-7.844E+02	1.362E+11					
18	9.000E+00	2.934E-01	-3.028E-03	1.485E+06	2.103E+04	-1.047E+02
-6.282E+02	1.362E+11					
19	9.500E+00	2.754E-01	-2.960E-03	1.610E+06	2.039E+04	-1.068E+02
-6.409E+02	1.362E+11					
20	1.000E+01	2.578E-01	-2.886E-03	1.730E+06	1.975E+04	-1.084E+02
-6.503E+02	1.362E+11					
21	1.050E+01	2.408E-01	-2.807E-03	1.847E+06	1.908E+04	-1.143E+02
-6.856E+02	1.362E+11					
22	1.100E+01	2.242E-01	-2.723E-03	1.959E+06	1.839E+04	-1.147E+02
-6.885E+02	1.362E+11					
23	1.150E+01	2.081E-01	-2.635E-03	2.067E+06	1.770E+04	-1.151E+02
-6.907E+02	1.362E+11					
24	1.200E+01	1.925E-01	-2.541E-03	2.171E+06	1.673E+04	-2.098E+02
-1.259E+03	1.362E+11					
25	1.250E+01	1.776E-01	-2.444E-03	2.268E+06	1.521E+04	-2.952E+02
-1.771E+03	1.362E+11					
26	1.300E+01	1.632E-01	-2.342E-03	2.354E+06	1.321E+04	-3.720E+02
-2.232E+03	1.362E+11					
27	1.350E+01	1.495E-01	-2.237E-03	2.427E+06	1.077E+04	-4.406E+02
-2.644E+03	1.362E+11					

28	1.400E+01	1.364E-01	-2.128E-03	2.483E+06	7.944E+03	-5.018E+02
-3.011E+03	1.362E+11					
29	1.450E+01	1.239E-01	-2.018E-03	2.522E+06	4.990E+03	-4.829E+02
-2.898E+03	1.362E+11					
30	1.500E+01	1.122E-01	-1.907E-03	2.543E+06	2.146E+03	-4.651E+02
-2.791E+03	1.362E+11					
31	1.550E+01	1.010E-01	-1.795E-03	2.548E+06	-5.589E+02	-4.365E+02
-2.619E+03	1.362E+11					
32	1.600E+01	9.062E-02	-1.683E-03	2.536E+06	-3.047E+03	-3.929E+02
-2.357E+03	1.362E+11					
33	1.650E+01	8.086E-02	-1.571E-03	2.511E+06	-5.281E+03	-3.518E+02
-2.111E+03	1.362E+11					
34	1.700E+01	7.176E-02	-1.462E-03	2.473E+06	-7.277E+03	-3.134E+02
-1.880E+03	1.362E+11					
35	1.750E+01	6.332E-02	-1.354E-03	2.424E+06	-9.046E+03	-2.763E+02
-1.658E+03	1.362E+11					
36	1.800E+01	5.551E-02	-1.248E-03	2.364E+06	-1.060E+04	-2.421E+02
-1.453E+03	1.362E+11					
37	1.850E+01	4.833E-02	-1.146E-03	2.297E+06	-1.196E+04	-2.107E+02
-1.264E+03	1.362E+11					
38	1.900E+01	4.176E-02	-1.046E-03	2.221E+06	-1.314E+04	-1.819E+02
-1.092E+03	1.362E+11					
39	1.950E+01	3.578E-02	-9.503E-04	2.139E+06	-1.415E+04	-1.558E+02
-9.346E+02	1.362E+11					
40	2.000E+01	3.036E-02	-8.581E-04	2.051E+06	-1.501E+04	-1.322E+02
-7.930E+02	1.362E+11					
41	2.050E+01	2.548E-02	-7.698E-04	1.959E+06	-1.574E+04	-1.109E+02
-6.656E+02	1.362E+11					
42	2.100E+01	2.112E-02	-6.856E-04	1.862E+06	-1.635E+04	-9.196E+01
-5.517E+02	1.362E+11					
43	2.150E+01	1.725E-02	-6.058E-04	1.762E+06	-1.685E+04	-7.512E+01
-4.507E+02	1.362E+11					
44	2.200E+01	1.385E-02	-5.304E-04	1.660E+06	-1.726E+04	-6.031E+01
-3.618E+02	1.362E+11					
45	2.250E+01	1.089E-02	-4.596E-04	1.555E+06	-1.763E+04	-6.170E+01
-3.702E+02	1.362E+11					
46	2.300E+01	8.336E-03	-3.935E-04	1.448E+06	-1.799E+04	-5.819E+01
-3.491E+02	1.362E+11					
47	2.350E+01	6.167E-03	-3.321E-04	1.339E+06	-1.831E+04	-5.114E+01
-3.068E+02	1.362E+11					
48	2.400E+01	4.351E-03	-2.755E-04	1.229E+06	-1.858E+04	-3.609E+01
-2.165E+02	1.362E+11					
49	2.450E+01	2.861E-03	-2.239E-04	1.117E+06	-1.875E+04	-2.373E+01
-1.423E+02	1.362E+11					
50	2.500E+01	1.665E-03	-1.772E-04	1.004E+06	-1.887E+04	-1.381E+01
-8.284E+01	1.362E+11					
51	2.550E+01	7.344E-04	-1.355E-04	8.902E+05	-1.893E+04	-6.094E+00
-3.654E+01	1.362E+11					
52	2.600E+01	3.914E-05	-9.878E-05	7.765E+05	-1.895E+04	-3.282E-01
-1.947E+00	1.362E+11					

53	2.650E+01	-4.509E-04	-6.708E-05	6.628E+05	-1.894E+04	3.736E+00
2.244E+01	1.362E+11					
54	2.700E+01	-7.659E-04	-4.039E-05	5.493E+05	-1.891E+04	6.347E+00
3.810E+01	1.362E+11					
55	2.750E+01	-9.356E-04	-1.869E-05	4.360E+05	-1.843E+04	1.513E+02
9.082E+02	1.362E+11					
56	2.800E+01	-9.902E-04	-1.869E-06	3.281E+05	-1.708E+04	2.995E+02
1.797E+03	1.362E+11					
57	2.850E+01	-9.581E-04	1.044E-05	2.310E+05	-1.524E+04	3.130E+02
1.878E+03	1.362E+11					
58	2.900E+01	-8.649E-04	1.873E-05	1.452E+05	-1.334E+04	3.208E+02
1.925E+03	1.362E+11					
59	2.950E+01	-7.333E-04	2.349E-05	7.091E+04	-1.141E+04	3.242E+02
1.946E+03	1.362E+11					
60	3.000E+01	-5.830E-04	2.523E-05	8.312E+03	-9.480E+03	3.174E+02
1.905E+03	1.362E+11					
61	3.050E+01	-4.306E-04	2.447E-05	-4.286E+04	-7.644E+03	2.946E+02
1.768E+03	1.362E+11					
62	3.100E+01	-2.894E-04	2.169E-05	-8.342E+04	-5.963E+03	2.658E+02
1.595E+03	1.362E+11					
63	3.150E+01	-1.703E-04	1.733E-05	-1.144E+05	-2.474E+03	8.967E+02
5.383E+03	1.362E+11					
64	3.200E+01	-8.143E-05	1.232E-05	-1.131E+05	2.455E+03	7.450E+02
4.473E+03	1.362E+11					
65	3.250E+01	-2.244E-05	7.960E-06	-8.496E+04	5.308E+03	2.052E+02
1.233E+03	1.362E+11					
66	3.300E+01	1.410E-05	5.001E-06	-4.941E+04	5.537E+03	-1.291E+02
-7.744E+02	1.362E+11					
67	3.350E+01	3.758E-05	3.506E-06	-1.851E+04	4.118E+03	-3.439E+02
-2.064E+03	1.362E+11					
68	3.400E+01	5.616E-05	3.098E-06	0.000E+00	1.543E+03	-5.140E+02
-3.085E+03	1.362E+11					

=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 453+25\

Name of input data file : STA 453+25-Service Case.py7d
Name of output file : STA 453+25-Service Case.py7o
Name of plot output file : STA 453+25-Service Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 08:46:54

Long Term : STA 453+25 Soldier Pile Wall

* PROGRAM CONTROL PARAMETERS *

NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS = 1
NO OF CROSS SECTIONS = 1
GENERATE EARTH PRESSURE INTERNALLY = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS = 0
NO OF STRUTS/RAKERS = 0

HEIGHT OF WALL = 34.000 FT
NUMBER OF INCREMENTS = 68
INCREMENT LENGTH = 6.000 IN
MAXIMUM ALLOWABLE DEFLECTION = 100.000 IN
DEFLECTION CLOSURE TOLERANCE = 1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS = 100

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	34.0000	1

* CROSS SECTIONS *

CROSS SECTION : 1
SECTION NAME : Section
TYPE : ELASTIC
CROSS SECTION TYPE : I SECTION
EQUIVALENT DIAMETER : 10.0000 IN
EXTERNAL WIDTH : 10.0000 IN
EXTERNAL DEPTH : 27.6000 IN
FLANGE THICKNESS : 1.10000 IN
WEB THICKNESS : 0.61000 IN
YOUNG MODULUS : 2.90000E+07 LBS/IN**2

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

* STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
S - STIFFNESS OF TRANSVERSE RESISTANCE,
T - TORQUE, P - AXIAL LOAD,
R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI	Q	S	T	R	P
			LBS-IN**2	LBS	LBS/IN	IN-LBS	IN-LBS	LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
68	0		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	1.290E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

* WALL INFORMATION *

FREE HEIGHT OF WALL = 6.000E+00 FT

WIDTH FOR EARTH PRESSURE, WA = 7.800E+01 IN
 WIDTH FOR SOIL RESISTANCE, WP = 3.600E+01 IN
 DEPTH TO THE WATER TABLE AT BACKFILL = 1.100E+01 FT
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.100E+01 FT
 UNIT WEIGHT OF WATER = 3.600E-02 LBS/IN**3
 SLOPE OF THE BACKFILL (deg.) = 0.000E+00
 SLOPE OF THE EXCAVATION GROUND (deg.) = 0.000E+00
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE = 1.736E+00 LBS/IN**2

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	PHI DEG	TOTAL UNIT WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	6.0	0.0	25.0	0.064	T	0.00
2	2.0	0.0	25.0	0.064	T	6.00
3	3.0	0.0	24.0	0.064	T	8.00
4	0.5	0.0	24.0	0.064	T	11.00
5	10.5	0.0	34.0	0.064	T	11.50
6	5.0	1.0	22.0	0.064	T	22.00
7	4.0	9.7	0.0	0.087	T	27.00
8	19.0	11000.0	0.0	0.093	T	31.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
6.000E+00	6.319E+00
8.000E+00	7.847E+00
1.100E+01	1.014E+01
1.150E+01	1.030E+01
2.200E+01	1.379E+01
2.700E+01	1.545E+01

3.100E+01

1.789E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	4.059E-01	2.464E+00	0.000E+00
2	4.059E-01	2.464E+00	0.000E+00
3	4.217E-01	2.371E+00	0.000E+00
4	4.217E-01	2.371E+00	0.000E+00
5	2.827E-01	3.537E+00	0.000E+00
6	4.550E-01	2.198E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00
8	1.000E+00	1.000E+00	0.000E+00

NOTES:

- (*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS
 (**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE
 IF IT IS DIFFERENT THAN ZERO

 * ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	50.73	3.00	66.97	4.00	0.00	-0.00	0.00

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	5.49596E+01
5.00000E-01	6.70511E+01
1.00000E+00	7.91388E+01
1.50000E+00	9.12366E+01
2.00000E+00	1.03327E+02
2.50000E+00	1.15417E+02
3.00000E+00	1.27507E+02
3.50000E+00	1.39597E+02
4.00000E+00	1.51687E+02
4.50000E+00	1.63784E+02
5.00000E+00	1.75874E+02

5.50000E+00	1.87964E+02
6.00000E+00	2.00054E+02
6.50000E+00	9.23328E+01
7.00000E+00	9.23328E+01
7.50000E+00	9.23328E+01
8.00000E+00	9.23328E+01
8.50000E+00	9.59436E+01
9.00000E+00	9.59436E+01
9.50000E+00	9.59436E+01
1.00000E+01	9.59436E+01
1.05000E+01	9.59436E+01
1.10000E+01	9.59436E+01
1.15000E+01	9.59436E+01
1.20000E+01	6.43176E+01
1.25000E+01	6.43176E+01
1.30000E+01	6.43176E+01
1.35000E+01	6.43176E+01
1.40000E+01	6.43176E+01
1.45000E+01	6.43176E+01
1.50000E+01	6.43176E+01
1.55000E+01	6.43176E+01
1.60000E+01	6.43176E+01
1.65000E+01	6.43176E+01
1.70000E+01	6.43176E+01
1.75000E+01	6.43176E+01
1.80000E+01	6.43176E+01
1.85000E+01	6.43176E+01
1.90000E+01	6.43176E+01
1.95000E+01	6.43176E+01
2.00000E+01	6.43176E+01
2.05000E+01	6.43176E+01
2.10000E+01	6.43176E+01
2.15000E+01	6.43176E+01
2.20000E+01	6.43176E+01
2.25000E+01	5.29164E+01
2.30000E+01	5.29164E+01
2.35000E+01	5.29164E+01
2.40000E+01	5.29164E+01
2.45000E+01	5.29164E+01
2.50000E+01	5.29164E+01
2.55000E+01	5.29164E+01
2.60000E+01	5.29164E+01
2.65000E+01	5.29164E+01
2.70000E+01	5.29164E+01
2.75000E+01	1.19160E-08
2.80000E+01	1.21320E-08
2.85000E+01	1.23480E-08
2.90000E+01	1.25640E-08
2.95000E+01	1.27800E-08
3.00000E+01	1.29960E-08

3.05000E+01	1.32120E-08
3.10000E+01	1.34280E-08
3.15000E+01	1.36440E-08
3.20000E+01	1.38600E-08
3.25000E+01	1.40760E-08
3.30000E+01	1.42920E-08
3.35000E+01	1.45080E-08
3.40000E+01	1.47240E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

6 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SAND

LAYER 2
 THE SOIL IS A SILT

LAYER 3
 THE SOIL IS A SILT

LAYER 4
 THE SOIL IS A SILT

LAYER 5
 THE LAYER IS WEAK ROCK

LAYER 6
 THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
 12 POINTS

X, FT	WEIGHT, LBS/IN**3
6.0000	6.3657E-02
8.0000	6.3657E-02
8.0000	6.3657E-02
11.0000	6.3657E-02
11.0000	2.7657E-02
22.0000	2.7657E-02
22.0000	2.7657E-02
27.0000	2.7657E-02

27.0000	5.0806E-02
31.0000	5.0806E-02
31.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
12 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	0.0000E+00	24.000	2.0000E-02	8.0000E+01
11.50	0.0000E+00	24.000	2.0000E-02	8.0000E+01
11.50	0.0000E+00	34.000	1.0000E-02	2.5000E+02
22.00	0.0000E+00	34.000	1.0000E-02	2.5000E+02
22.00	1.0417E+00	22.000	2.0000E-02	0.0000E+00
27.00	1.0417E+00	22.000	2.0000E-02	0.0000E+00
27.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
35.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
3.59E+00	0.01	36.00	25.00	6.37E-02	2.50E+01	2.83	2.14	4.72E-01

Y	P
IN	LBS/IN
0.000	0.000
0.030	0.062
0.060	0.125
0.114	0.237
0.168	0.350
0.222	0.462
0.276	0.574
0.330	0.687
0.384	0.749
0.438	0.775

0.492	0.799
0.546	0.821
0.600	0.841
0.850	0.931
1.100	1.022
1.350	1.112
1.620	1.112

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	6.01	36.00	25.00	6.37E-02	2.50E+01	1.48	1.05	7.43E+02	
2.59E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	45.014
0.060	90.028
0.114	171.052
0.168	252.077
0.222	333.102
0.276	414.127
0.330	495.152
0.384	560.605
0.438	585.306
0.492	608.035
0.546	629.143
0.600	648.890
0.850	737.489
1.100	826.088
1.350	914.687
1.620	914.687

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB

/IN	0.50	36.00	25.00	6.37E-02	2.50E+01	2.71	2.04	3.11E+01
2.16E+02								

Y	P
IN	LBS/IN
0.000	0.000
0.030	3.746
0.060	7.492
0.114	14.235
0.168	20.977
0.222	27.720
0.276	34.463
0.330	41.205
0.384	46.813
0.438	48.480
0.492	50.001
0.546	51.404
0.600	52.709
0.850	58.547
1.100	64.384
1.350	70.221
1.620	70.221

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
2.80E+03	6.50	36.00	25.00	6.37E-02	2.50E+01	1.40	0.99	8.40E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	48.697
0.060	97.395
0.114	185.050
0.168	272.705
0.222	360.360
0.276	448.015
0.330	535.671
0.384	594.535
0.438	621.117
0.492	645.592

PCD	DEPTH	BELOW GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	PCT
/IN	FT		IN		LBS/IN**3		LBS/IN**3			LB /IN LB

3.02E+03 7.00 36.00 25.00 6.37E-02 2.50E+01 1.31 0.92 9.43E+02

Y	P
IN	LBS/IN
0.000	0.000
0.030	52.443
0.060	104.887
0.114	199.284
0.168	293.682
0.222	388.080
0.276	482.478
0.330	576.876
0.384	623.541
0.438	651.890
0.492	678.009
0.546	702.292
0.600	725.033
0.850	827.114
1.100	929.195
1.350	1031.275
1.620	1031.275

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
6.47E+02	1.50	36.00	25.00	6.37E-02	2.50E+01	2.48	1.83	1.10E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	11.238
0.060	22.476
0.114	42.704
0.168	62.932
0.222	83.160
0.276	103.388
0.330	123.616
0.384	143.844
0.438	153.259
0.492	158.407
0.546	163.164

0.600	167.596
0.850	187.439
1.100	207.282
1.350	227.125
1.620	227.125

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	7.50	36.00	25.00	6.37E-02	2.50E+01	1.23	0.86	1.05E+03	
3.24E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	56.189
0.060	112.378
0.114	213.519
0.168	314.660
0.222	415.800
0.276	516.941
0.330	613.377
0.384	646.221
0.438	676.159
0.492	703.764
0.546	729.447
0.600	753.513
0.850	861.576
1.100	969.638
1.350	1077.700
1.620	1077.700

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	1.99	36.00	25.00	6.37E-02	2.50E+01	2.36	1.73	1.57E+02	

8.59E+02

Y	P
IN	LBS/IN
0.000	0.000
0.030	14.921
0.060	29.843
0.114	56.701
0.168	83.560
0.222	110.418
0.276	137.277
0.330	164.135
0.384	190.993
0.438	207.138
0.492	214.181
0.546	220.694
0.600	226.763
0.850	253.939
1.100	281.116
1.350	308.292
1.620	308.292

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	LB /IN	LB
	FT	IN		LBS/IN**3	LBS/IN**3					
/IN										
3.45E+03	7.99	36.00	25.00	6.37E-02	2.50E+01	1.17	0.81	1.17E+03		

Y	P
IN	LBS/IN
0.000	0.000
0.030	59.873
0.060	119.745
0.114	227.516
0.168	335.287
0.222	443.058
0.276	550.829
0.330	634.837
0.384	670.291
0.438	702.675
0.492	732.588
0.546	760.463
0.600	786.620

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.182E+03
0.600E-01	0.364E+03
0.114E+00	0.692E+03
0.168E+00	0.102E+04
0.222E+00	0.107E+04
0.276E+00	0.111E+04
0.330E+00	0.114E+04
0.384E+00	0.116E+04
0.438E+00	0.119E+04
0.492E+00	0.121E+04
0.546E+00	0.123E+04
0.600E+00	0.124E+04
0.850E+00	0.117E+04
0.110E+01	0.109E+04
0.135E+01	0.101E+04
0.162E+01	0.101E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
2.88	36.00	24.0	6.366E-02	8.000E+01	2.24	1.64	0.000E+00
1.941E+02							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.218E-01	0.430E+02
0.436E-01	0.859E+02
0.992E-01	0.119E+03
0.155E+00	0.142E+03
0.211E+00	0.160E+03
0.266E+00	0.176E+03
0.322E+00	0.189E+03
0.377E+00	0.202E+03
0.433E+00	0.213E+03
0.489E+00	0.224E+03
0.544E+00	0.233E+03
0.600E+00	0.242E+03
0.850E+00	0.282E+03

0.110E+01	0.322E+03
0.135E+01	0.362E+03
0.162E+01	0.362E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
8.88	36.00	24.0	6.366E-02	8.000E+01	1.12	0.76	0.000E+00
1.183E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.203E+03
0.600E-01	0.406E+03
0.114E+00	0.771E+03
0.168E+00	0.114E+04
0.222E+00	0.121E+04
0.276E+00	0.126E+04
0.330E+00	0.131E+04
0.384E+00	0.135E+04
0.438E+00	0.139E+04
0.492E+00	0.142E+04
0.546E+00	0.145E+04
0.600E+00	0.148E+04
0.850E+00	0.135E+04
0.110E+01	0.123E+04
0.135E+01	0.110E+04
0.162E+01	0.110E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
3.75	36.00	24.0	6.366E-02	8.000E+01	2.03	1.48	0.000E+00
2.928E+02							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.382E-01	0.102E+03
0.764E-01	0.204E+03
0.129E+00	0.237E+03
0.181E+00	0.261E+03
0.234E+00	0.280E+03
0.286E+00	0.296E+03
0.338E+00	0.311E+03
0.391E+00	0.324E+03
0.443E+00	0.335E+03
0.495E+00	0.346E+03
0.548E+00	0.356E+03
0.600E+00	0.366E+03
0.850E+00	0.409E+03
0.110E+01	0.452E+03
0.135E+01	0.495E+03
0.162E+01	0.495E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN								
9.75	36.00	24.0	6.366E-02		8.000E+01	1.04	0.69	0.000E+00
1.389E+03								

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.224E+03
0.600E-01	0.448E+03
0.114E+00	0.851E+03
0.168E+00	0.125E+04
0.222E+00	0.136E+04
0.276E+00	0.143E+04
0.330E+00	0.150E+04
0.384E+00	0.156E+04
0.438E+00	0.161E+04
0.492E+00	0.165E+04
0.546E+00	0.169E+04
0.600E+00	0.173E+04
0.850E+00	0.156E+04
0.110E+01	0.138E+04

0.135E+01	0.120E+04
0.162E+01	0.120E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
	LBS/IN									
	4.62		36.00	24.0	6.366E-02		8.000E+01	1.83	1.32	0.000E+00
	4.070E+02									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.564E-01	0.190E+03
0.113E+00	0.380E+03
0.161E+00	0.404E+03
0.210E+00	0.423E+03
0.259E+00	0.439E+03
0.308E+00	0.452E+03
0.356E+00	0.464E+03
0.405E+00	0.475E+03
0.454E+00	0.484E+03
0.503E+00	0.493E+03
0.551E+00	0.501E+03
0.600E+00	0.508E+03
0.850E+00	0.545E+03
0.110E+01	0.582E+03
0.135E+01	0.619E+03
0.162E+01	0.619E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
	LBS/IN									
	10.62		36.00	24.0	6.366E-02		8.000E+01	1.00	0.64	0.000E+00
	1.610E+03									

Y	P
---	---

IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.245E+03
0.600E-01	0.490E+03
0.114E+00	0.931E+03
0.168E+00	0.137E+04
0.222E+00	0.154E+04
0.276E+00	0.163E+04
0.330E+00	0.171E+04
0.384E+00	0.178E+04
0.438E+00	0.185E+04
0.492E+00	0.191E+04
0.546E+00	0.196E+04
0.600E+00	0.201E+04
0.850E+00	0.178E+04
0.110E+01	0.156E+04
0.135E+01	0.133E+04
0.162E+01	0.133E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
5.49	36.00	24.0	6.043E-02	8.000E+01	1.65	1.18	0.000E+00
5.084E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.122E+03
0.600E-01	0.244E+03
0.114E+00	0.463E+03
0.168E+00	0.573E+03
0.222E+00	0.586E+03
0.276E+00	0.596E+03
0.330E+00	0.605E+03
0.384E+00	0.612E+03
0.438E+00	0.619E+03
0.492E+00	0.625E+03
0.546E+00	0.630E+03
0.600E+00	0.635E+03
0.850E+00	0.656E+03
0.110E+01	0.677E+03
0.135E+01	0.699E+03

0.162E+01 0.699E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	11.49		36.00	24.0	6.212E-02		8.000E+01	0.95	0.59	0.000E+00
1.800E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.266E+03
0.600E-01	0.531E+03
0.114E+00	0.101E+04
0.168E+00	0.149E+04
0.222E+00	0.168E+04
0.276E+00	0.179E+04
0.330E+00	0.189E+04
0.384E+00	0.197E+04
0.438E+00	0.205E+04
0.492E+00	0.212E+04
0.546E+00	0.219E+04
0.600E+00	0.225E+04
0.850E+00	0.197E+04
0.110E+01	0.170E+04
0.135E+01	0.142E+04
0.162E+01	0.142E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	5.51		36.00	34.0	6.034E-02		2.500E+02	2.05	1.49	0.000E+00
5.269E+02										

Y	P
IN	LBS/IN

0.000E+00	0.000E+00
0.176E-01	0.143E+03
0.352E-01	0.286E+03
0.917E-01	0.379E+03
0.148E+00	0.436E+03
0.205E+00	0.480E+03
0.261E+00	0.515E+03
0.318E+00	0.546E+03
0.374E+00	0.573E+03
0.431E+00	0.597E+03
0.487E+00	0.619E+03
0.544E+00	0.639E+03
0.600E+00	0.658E+03
0.850E+00	0.738E+03
0.110E+01	0.819E+03
0.135E+01	0.899E+03
0.162E+01	0.899E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
11.51	36.00	34.0	6.207E-02	2.500E+02	1.05	0.69	0.000E+00
2.891E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.508E-01	0.117E+04
0.102E+00	0.235E+04
0.151E+00	0.259E+04
0.201E+00	0.277E+04
0.251E+00	0.292E+04
0.301E+00	0.305E+04
0.351E+00	0.317E+04
0.401E+00	0.327E+04
0.450E+00	0.337E+04
0.500E+00	0.345E+04
0.550E+00	0.354E+04
0.600E+00	0.361E+04
0.850E+00	0.325E+04
0.110E+01	0.288E+04
0.135E+01	0.252E+04
0.162E+01	0.252E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

	DEPTH	B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Puí									
	FT		IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN									
	8.12		36.00	34.0	4.981E-02	2.500E+02	1.50	1.07	0.000E+00
1.084E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.460E-01	0.675E+03
0.920E-01	0.135E+04
0.143E+00	0.135E+04
0.194E+00	0.135E+04
0.244E+00	0.135E+04
0.295E+00	0.135E+04
0.346E+00	0.135E+04
0.397E+00	0.135E+04
0.448E+00	0.135E+04
0.498E+00	0.135E+04
0.549E+00	0.135E+04
0.600E+00	0.135E+04
0.850E+00	0.136E+04
0.110E+01	0.136E+04
0.135E+01	0.136E+04
0.162E+01	0.136E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

	DEPTH	B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PUC
Puí									
	FT		IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN									
	14.12		36.00	34.0	5.569E-02	2.500E+02	0.91	0.54	0.000E+00
4.005E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00

0.469E-01	0.139E+04
0.937E-01	0.278E+04
0.144E+00	0.319E+04
0.195E+00	0.350E+04
0.246E+00	0.377E+04
0.296E+00	0.400E+04
0.347E+00	0.421E+04
0.397E+00	0.439E+04
0.448E+00	0.456E+04
0.499E+00	0.472E+04
0.549E+00	0.486E+04
0.600E+00	0.500E+04
0.850E+00	0.434E+04
0.110E+01	0.368E+04
0.135E+01	0.302E+04
0.162E+01	0.302E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
10.75	36.00	34.0	4.440E-02	2.500E+02	1.12	0.76	0.000E+00
1.787E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.336E-01	0.713E+03
0.672E-01	0.143E+04
0.120E+00	0.161E+04
0.174E+00	0.173E+04
0.227E+00	0.183E+04
0.280E+00	0.191E+04
0.334E+00	0.198E+04
0.387E+00	0.204E+04
0.440E+00	0.209E+04
0.493E+00	0.214E+04
0.547E+00	0.219E+04
0.600E+00	0.223E+04
0.850E+00	0.204E+04
0.110E+01	0.185E+04
0.135E+01	0.166E+04
0.162E+01	0.166E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN			LBS/IN**3	LBS/IN**3			LBS/IN
	16.75		36.00	34.0	5.130E-02	2.500E+02		0.88	0.51	0.000E+00
	5.270E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.506E-01	0.183E+04
0.101E+00	0.366E+04
0.151E+00	0.418E+04
0.201E+00	0.459E+04
0.251E+00	0.494E+04
0.301E+00	0.524E+04
0.351E+00	0.551E+04
0.400E+00	0.576E+04
0.450E+00	0.599E+04
0.500E+00	0.620E+04
0.550E+00	0.639E+04
0.600E+00	0.658E+04
0.850E+00	0.568E+04
0.110E+01	0.478E+04
0.135E+01	0.388E+04
0.162E+01	0.388E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN			LBS/IN**3	LBS/IN**3			LBS/IN
	13.38		36.00	34.0	4.112E-02	2.500E+02		0.95	0.58	0.000E+00
	2.636E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.835E+03

0.601E-01	0.167E+04
0.114E+00	0.202E+04
0.168E+00	0.226E+04
0.222E+00	0.245E+04
0.276E+00	0.262E+04
0.330E+00	0.276E+04
0.384E+00	0.289E+04
0.438E+00	0.300E+04
0.492E+00	0.310E+04
0.546E+00	0.320E+04
0.600E+00	0.329E+04
0.850E+00	0.289E+04
0.110E+01	0.248E+04
0.135E+01	0.208E+04
0.162E+01	0.208E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
19.38	36.00	34.0	4.810E-02	2.500E+02	0.88	0.50	0.000E+00
6.682E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.560E-01	0.240E+04
0.112E+00	0.479E+04
0.161E+00	0.540E+04
0.210E+00	0.589E+04
0.258E+00	0.632E+04
0.307E+00	0.669E+04
0.356E+00	0.702E+04
0.405E+00	0.733E+04
0.454E+00	0.761E+04
0.502E+00	0.787E+04
0.551E+00	0.811E+04
0.600E+00	0.834E+04
0.850E+00	0.719E+04
0.110E+01	0.604E+04
0.135E+01	0.489E+04
0.162E+01	0.489E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN										
15.99			36.00	34.0	3.891E-02		2.500E+02	0.89	0.51	0.000E+00
3.630E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.317E-01	0.109E+04
0.635E-01	0.218E+04
0.117E+00	0.266E+04
0.171E+00	0.301E+04
0.224E+00	0.329E+04
0.278E+00	0.353E+04
0.332E+00	0.374E+04
0.385E+00	0.392E+04
0.439E+00	0.409E+04
0.493E+00	0.425E+04
0.546E+00	0.440E+04
0.600E+00	0.453E+04
0.850E+00	0.392E+04
0.110E+01	0.330E+04
0.135E+01	0.268E+04
0.162E+01	0.268E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN										
21.99			36.00	34.0	4.566E-02		2.500E+02	0.88	0.50	0.000E+00
8.238E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.148E+04
0.600E-01	0.296E+04

0.114E+00	0.562E+04
0.168E+00	0.675E+04
0.222E+00	0.740E+04
0.276E+00	0.796E+04
0.330E+00	0.844E+04
0.384E+00	0.887E+04
0.438E+00	0.927E+04
0.492E+00	0.963E+04
0.546E+00	0.997E+04
0.600E+00	0.103E+05
0.850E+00	0.887E+04
0.110E+01	0.745E+04
0.135E+01	0.603E+04
0.162E+01	0.603E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
16.01	36.00	22.0	3.890E-02	2.700E+02	0.88	0.50	3.375E+02
2.444E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.871E-02	0.449E+03
0.174E-01	0.899E+03
0.757E-01	0.155E+04
0.134E+00	0.191E+04
0.192E+00	0.219E+04
0.250E+00	0.241E+04
0.309E+00	0.261E+04
0.367E+00	0.278E+04
0.425E+00	0.293E+04
0.483E+00	0.308E+04
0.542E+00	0.321E+04
0.600E+00	0.333E+04
0.850E+00	0.282E+04
0.110E+01	0.230E+04
0.135E+01	0.179E+04
0.162E+01	0.179E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
FT			IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN										
22.01			36.00	22.0	4.565E-02		2.700E+02	0.88	0.50	3.375E+02
4.679E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.161E-01	0.109E+04
0.323E-01	0.219E+04
0.890E-01	0.313E+04
0.146E+00	0.372E+04
0.203E+00	0.418E+04
0.259E+00	0.456E+04
0.316E+00	0.489E+04
0.373E+00	0.518E+04
0.430E+00	0.544E+04
0.486E+00	0.569E+04
0.543E+00	0.591E+04
0.600E+00	0.612E+04
0.850E+00	0.522E+04
0.110E+01	0.433E+04
0.135E+01	0.343E+04
0.162E+01	0.343E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
FT			IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN										
17.25			36.00	22.0	3.809E-02		2.700E+02	0.88	0.50	3.375E+02
2.676E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.916E-02	0.503E+03
0.183E-01	0.101E+04
0.765E-01	0.170E+04

0.135E+00	0.209E+04
0.193E+00	0.239E+04
0.251E+00	0.263E+04
0.309E+00	0.284E+04
0.367E+00	0.303E+04
0.425E+00	0.319E+04
0.484E+00	0.335E+04
0.542E+00	0.349E+04
0.600E+00	0.362E+04
0.850E+00	0.307E+04
0.110E+01	0.251E+04
0.135E+01	0.196E+04
0.162E+01	0.196E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
23.25	36.00	22.0	4.469E-02	2.700E+02	0.88	0.50	3.375E+02
5.000E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.166E-01	0.118E+04
0.332E-01	0.236E+04
0.899E-01	0.335E+04
0.147E+00	0.398E+04
0.203E+00	0.446E+04
0.260E+00	0.486E+04
0.317E+00	0.521E+04
0.373E+00	0.552E+04
0.430E+00	0.580E+04
0.487E+00	0.606E+04
0.543E+00	0.630E+04
0.600E+00	0.652E+04
0.850E+00	0.557E+04
0.110E+01	0.462E+04
0.135E+01	0.366E+04
0.162E+01	0.366E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	18.50		36.00	22.0	3.739E-02		2.700E+02	0.88	0.50	3.375E+02
	2.921E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.963E-02	0.561E+03
0.193E-01	0.112E+04
0.773E-01	0.186E+04
0.135E+00	0.228E+04
0.193E+00	0.260E+04
0.252E+00	0.286E+04
0.310E+00	0.309E+04
0.368E+00	0.329E+04
0.426E+00	0.347E+04
0.484E+00	0.363E+04
0.542E+00	0.379E+04
0.600E+00	0.393E+04
0.850E+00	0.333E+04
0.110E+01	0.274E+04
0.135E+01	0.214E+04
0.162E+01	0.214E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	24.50		36.00	22.0	4.382E-02		2.700E+02	0.88	0.50	3.375E+02
	5.335E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.171E-01	0.128E+04
0.342E-01	0.255E+04
0.908E-01	0.359E+04
0.147E+00	0.425E+04

0.204E+00	0.476E+04
0.261E+00	0.519E+04
0.317E+00	0.556E+04
0.374E+00	0.588E+04
0.430E+00	0.618E+04
0.487E+00	0.645E+04
0.543E+00	0.671E+04
0.600E+00	0.694E+04
0.850E+00	0.593E+04
0.110E+01	0.492E+04
0.135E+01	0.391E+04
0.162E+01	0.391E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
19.75	36.00	22.0	3.677E-02	2.700E+02	0.88	0.50	3.375E+02
3.178E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.101E-01	0.623E+03
0.202E-01	0.125E+04
0.782E-01	0.203E+04
0.136E+00	0.249E+04
0.194E+00	0.283E+04
0.252E+00	0.311E+04
0.310E+00	0.335E+04
0.368E+00	0.356E+04
0.426E+00	0.375E+04
0.484E+00	0.393E+04
0.542E+00	0.410E+04
0.600E+00	0.425E+04
0.850E+00	0.361E+04
0.110E+01	0.297E+04
0.135E+01	0.233E+04
0.162E+01	0.233E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
25.75	36.00	22.0	4.304E-02	2.700E+02	0.88	0.50	3.375E+02	
5.683E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.176E-01	0.137E+04
0.353E-01	0.275E+04
0.918E-01	0.383E+04
0.148E+00	0.453E+04
0.205E+00	0.507E+04
0.261E+00	0.552E+04
0.318E+00	0.591E+04
0.374E+00	0.626E+04
0.431E+00	0.657E+04
0.487E+00	0.686E+04
0.544E+00	0.713E+04
0.600E+00	0.738E+04
0.850E+00	0.631E+04
0.110E+01	0.523E+04
0.135E+01	0.416E+04
0.162E+01	0.416E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
20.99	36.00	22.0	3.623E-02	2.700E+02	0.88	0.50	3.375E+02	
3.445E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.106E-01	0.689E+03
0.212E-01	0.138E+04
0.791E-01	0.221E+04
0.137E+00	0.269E+04
0.195E+00	0.306E+04

0.253E+00	0.336E+04
0.311E+00	0.362E+04
0.368E+00	0.385E+04
0.426E+00	0.405E+04
0.484E+00	0.424E+04
0.542E+00	0.442E+04
0.600E+00	0.458E+04
0.850E+00	0.390E+04
0.110E+01	0.321E+04
0.135E+01	0.252E+04
0.162E+01	0.252E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
26.99	36.00	22.0	4.233E-02	2.700E+02	0.88	0.50	3.375E+02
6.026E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.181E-01	0.147E+04
0.362E-01	0.294E+04
0.926E-01	0.408E+04
0.149E+00	0.481E+04
0.205E+00	0.538E+04
0.262E+00	0.585E+04
0.318E+00	0.626E+04
0.374E+00	0.663E+04
0.431E+00	0.696E+04
0.487E+00	0.726E+04
0.544E+00	0.754E+04
0.600E+00	0.781E+04
0.850E+00	0.668E+04
0.110E+01	0.554E+04
0.135E+01	0.441E+04
0.162E+01	0.441E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
21.01	36.000	9.70E+00	3.50E+04	3.62E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.218E+02		
		0.180E-04		0.259E+02		
		0.540E-04		0.341E+02		
		0.108E-03		0.406E+02		
		0.162E-03		0.449E+02		
		0.360E-03		0.549E+02		
		0.720E-03		0.653E+02		
		0.108E-02		0.722E+02		
		0.144E-02		0.776E+02		
		0.180E-02		0.821E+02		
		0.450E-02		0.103E+03		
		0.900E-02		0.123E+03		
		0.135E-01		0.136E+03		
		0.180E-01		0.146E+03		
		0.720E-01		0.206E+03		
		0.144E+00		0.245E+03		
		0.216E+00		0.272E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
27.01	36.000	9.70E+00	3.50E+04	4.23E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
22.00	36.000	9.70E+00	3.50E+04	3.69E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		
		0.135E-01		0.198E+03		
		0.180E-01		0.213E+03		
		0.720E-01		0.301E+03		
		0.144E+00		0.359E+03		
		0.216E+00		0.397E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
28.00	36.000	9.70E+00	3.50E+04	4.26E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		

0.180E-01	0.620E+03
0.720E-01	0.877E+03
0.144E+00	0.104E+04
0.216E+00	0.115E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
23.00	36.000	9.70E+00	3.50E+04	3.75E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.420E+02		
		0.180E-04		0.500E+02		
		0.540E-04		0.658E+02		
		0.108E-03		0.782E+02		
		0.162E-03		0.865E+02		
		0.360E-03		0.106E+03		
		0.720E-03		0.126E+03		
		0.108E-02		0.139E+03		
		0.144E-02		0.149E+03		
		0.180E-02		0.158E+03		
		0.450E-02		0.199E+03		
		0.900E-02		0.236E+03		
		0.135E-01		0.261E+03		
		0.180E-01		0.281E+03		
		0.720E-01		0.397E+03		
		0.144E+00		0.473E+03		
		0.216E+00		0.523E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
29.00	36.000	9.70E+00	3.50E+04	4.29E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.308E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		

0.180E-02	0.387E+03
0.450E-02	0.486E+03
0.900E-02	0.578E+03
0.135E-01	0.640E+03
0.180E-01	0.688E+03
0.720E-01	0.973E+03
0.144E+00	0.116E+04
0.216E+00	0.128E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.00	36.000	9.70E+00	3.50E+04	3.81E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.522E+02		
		0.180E-04		0.620E+02		
		0.540E-04		0.816E+02		
		0.108E-03		0.971E+02		
		0.162E-03		0.107E+03		
		0.360E-03		0.131E+03		
		0.720E-03		0.156E+03		
		0.108E-02		0.173E+03		
		0.144E-02		0.186E+03		
		0.180E-02		0.196E+03		
		0.450E-02		0.247E+03		
		0.900E-02		0.293E+03		
		0.135E-01		0.325E+03		
		0.180E-01		0.349E+03		
		0.720E-01		0.493E+03		
		0.144E+00		0.587E+03		
		0.216E+00		0.649E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.00	36.000	9.70E+00	3.50E+04	4.32E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		
		0.180E-04		0.134E+03		
		0.540E-04		0.177E+03		
		0.108E-03		0.210E+03		
		0.162E-03		0.233E+03		

0.360E-03	0.284E+03
0.720E-03	0.338E+03
0.108E-02	0.374E+03
0.144E-02	0.402E+03
0.180E-02	0.425E+03
0.450E-02	0.534E+03
0.900E-02	0.636E+03
0.135E-01	0.703E+03
0.180E-01	0.756E+03
0.720E-01	0.107E+04
0.144E+00	0.127E+04
0.216E+00	0.141E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.99	36.000	9.70E+00	3.50E+04	3.86E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.622E+02		
		0.180E-04		0.740E+02		
		0.540E-04		0.974E+02		
		0.108E-03		0.116E+03		
		0.162E-03		0.128E+03		
		0.360E-03		0.156E+03		
		0.720E-03		0.186E+03		
		0.108E-02		0.206E+03		
		0.144E-02		0.221E+03		
		0.180E-02		0.234E+03		
		0.450E-02		0.294E+03		
		0.900E-02		0.350E+03		
		0.135E-01		0.387E+03		
		0.180E-01		0.416E+03		
		0.720E-01		0.588E+03		
		0.144E+00		0.700E+03		
		0.216E+00		0.774E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.99	36.000	9.70E+00	3.50E+04	4.34E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		

0.180E-04	0.134E+03
0.540E-04	0.177E+03
0.108E-03	0.210E+03
0.162E-03	0.233E+03
0.360E-03	0.284E+03
0.720E-03	0.338E+03
0.108E-02	0.374E+03
0.144E-02	0.402E+03
0.180E-02	0.425E+03
0.450E-02	0.534E+03
0.900E-02	0.636E+03
0.135E-01	0.703E+03
0.180E-01	0.756E+03
0.720E-01	0.107E+04
0.144E+00	0.127E+04
0.216E+00	0.141E+04

DEPTH-EXCAVATION	SIDE	DIAM	C
	IN	IN	LBS/IN**2
300.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.208D+03

DEPTH-BACKFILL	SIDE	DIAM	C
	IN	IN	LBS/IN**2
372.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06

0.173D-01	0.133D+06
0.230D-01	0.136D+06
0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.347D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
312.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.220D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
384.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06

0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.360D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
324.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.233D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
396.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06

0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.372D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
336.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.245D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
408.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06

0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.385D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
347.90		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.257D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
419.90		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06

0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.398D+03

Long Term : STA 453+25 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
LBS	FT	IN	RAD	LBS-IN	LBS	LBS/IN
LBS	LBS-IN**2					
-----	-----	----	-----	-----	-----	-----
0	0.000E+00	4.267E-01	-2.571E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	4.113E-01	-2.571E-03	0.000E+00	2.012E+02	0.000E+00
4.023E+02	1.362E+11					
2	1.000E+00	3.959E-01	-2.571E-03	2.414E+03	6.397E+02	0.000E+00
4.748E+02	1.362E+11					
3	1.500E+00	3.805E-01	-2.571E-03	7.677E+03	1.151E+03	0.000E+00
5.474E+02	1.362E+11					
4	2.000E+00	3.650E-01	-2.570E-03	1.622E+04	1.735E+03	0.000E+00
6.200E+02	1.362E+11					
5	2.500E+00	3.496E-01	-2.569E-03	2.849E+04	2.391E+03	0.000E+00
6.925E+02	1.362E+11					
6	3.000E+00	3.342E-01	-2.568E-03	4.491E+04	6.345E+03	0.000E+00
7.215E+03	1.362E+11					
7	3.500E+00	3.188E-01	-2.564E-03	1.046E+05	1.360E+04	0.000E+00
7.288E+03	1.362E+11					
8	4.000E+00	3.034E-01	-2.558E-03	2.081E+05	1.769E+04	0.000E+00
9.101E+02	1.362E+11					
9	4.500E+00	2.881E-01	-2.546E-03	3.170E+05	1.864E+04	0.000E+00
9.827E+02	1.362E+11					
10	5.000E+00	2.729E-01	-2.530E-03	4.318E+05	1.966E+04	0.000E+00
1.055E+03	1.362E+11					
11	5.500E+00	2.578E-01	-2.508E-03	5.529E+05	2.075E+04	0.000E+00
1.128E+03	1.362E+11					
12	6.000E+00	2.428E-01	-2.481E-03	6.808E+05	2.191E+04	-2.526E-01
1.199E+03	1.362E+11					
13	6.500E+00	2.280E-01	-2.448E-03	8.159E+05	2.271E+04	-2.847E+01

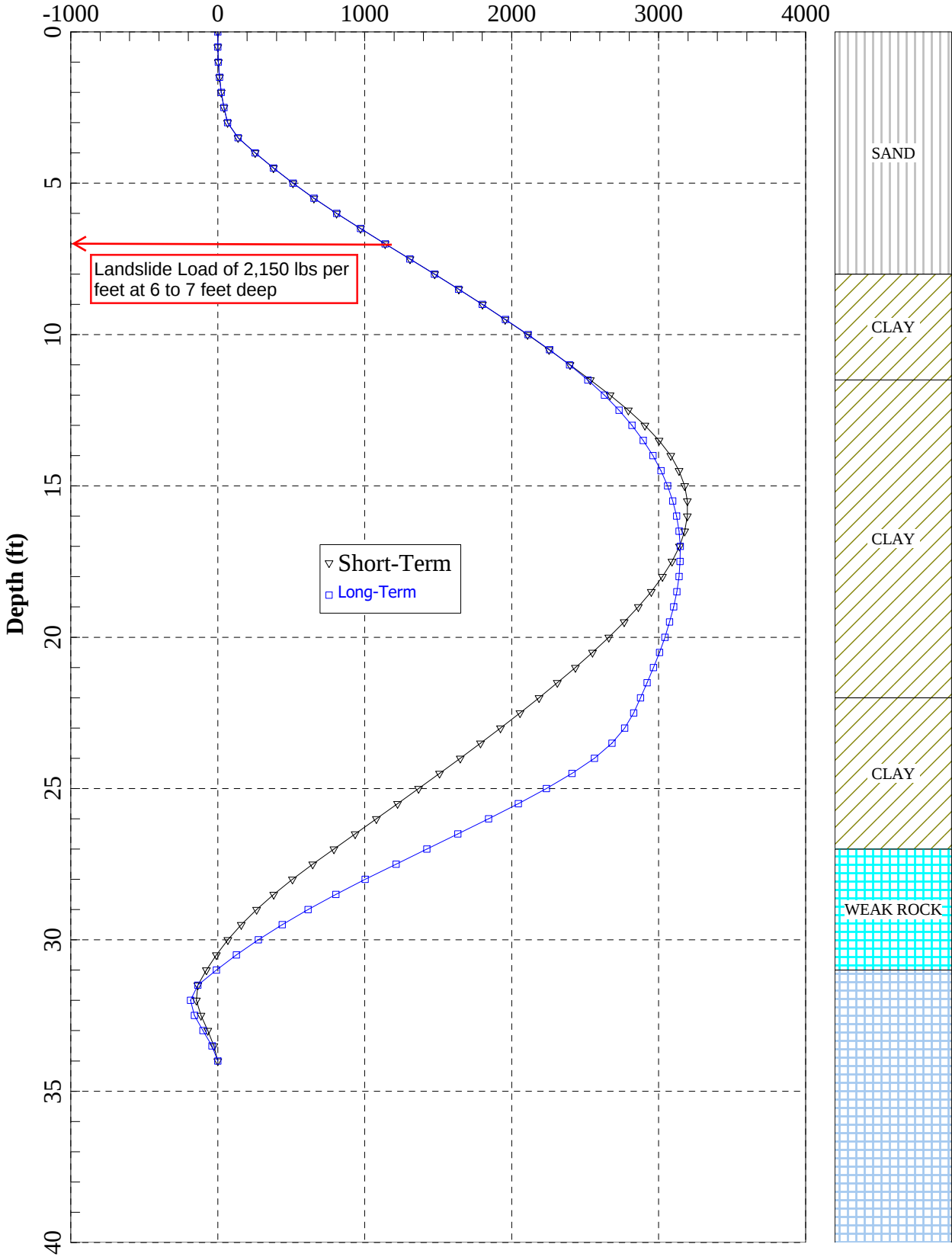
3.832E+02	1.362E+11					
14	7.000E+00	2.134E-01	-2.409E-03	9.532E+05	2.301E+04	-5.330E+01
2.342E+02	1.362E+11					
15	7.500E+00	1.991E-01	-2.364E-03	1.092E+06	2.318E+04	-7.458E+01
1.065E+02	1.362E+11					
16	8.000E+00	1.851E-01	-2.313E-03	1.231E+06	2.324E+04	-9.204E+01
1.778E+00	1.362E+11					
17	8.500E+00	1.713E-01	-2.255E-03	1.371E+06	2.318E+04	-1.162E+02
-1.218E+02	1.362E+11					
18	9.000E+00	1.580E-01	-2.192E-03	1.510E+06	2.298E+04	-1.430E+02
-2.821E+02	1.362E+11					
19	9.500E+00	1.450E-01	-2.122E-03	1.647E+06	2.255E+04	-1.911E+02
-5.712E+02	1.362E+11					
20	1.000E+01	1.325E-01	-2.047E-03	1.780E+06	2.184E+04	-2.386E+02
-8.561E+02	1.362E+11					
21	1.050E+01	1.205E-01	-1.966E-03	1.909E+06	2.055E+04	-3.837E+02
-1.727E+03	1.362E+11					
22	1.100E+01	1.089E-01	-1.879E-03	2.027E+06	1.876E+04	-4.044E+02
-1.851E+03	1.362E+11					
23	1.150E+01	9.793E-02	-1.787E-03	2.134E+06	1.693E+04	-3.978E+02
-1.811E+03	1.362E+11					
24	1.200E+01	8.749E-02	-1.691E-03	2.230E+06	1.459E+04	-5.411E+02
-2.861E+03	1.362E+11					
25	1.250E+01	7.763E-02	-1.591E-03	2.309E+06	1.142E+04	-6.450E+02
-3.484E+03	1.362E+11					
26	1.300E+01	6.839E-02	-1.488E-03	2.367E+06	7.728E+03	-7.134E+02
-3.894E+03	1.362E+11					
27	1.350E+01	5.978E-02	-1.383E-03	2.402E+06	3.723E+03	-7.503E+02
-4.116E+03	1.362E+11					
28	1.400E+01	5.179E-02	-1.277E-03	2.412E+06	-4.224E+02	-7.600E+02
-4.174E+03	1.362E+11					
29	1.450E+01	4.445E-02	-1.171E-03	2.396E+06	-4.419E+03	-7.009E+02
-3.820E+03	1.362E+11					
30	1.500E+01	3.774E-02	-1.067E-03	2.359E+06	-8.045E+03	-6.362E+02
-3.431E+03	1.362E+11					
31	1.550E+01	3.165E-02	-9.641E-04	2.300E+06	-1.127E+04	-5.680E+02
-3.022E+03	1.362E+11					
32	1.600E+01	2.617E-02	-8.645E-04	2.223E+06	-1.408E+04	-4.981E+02
-2.603E+03	1.362E+11					
33	1.650E+01	2.127E-02	-7.686E-04	2.131E+06	-1.648E+04	-4.282E+02
-2.183E+03	1.362E+11					
34	1.700E+01	1.694E-02	-6.771E-04	2.026E+06	-1.845E+04	-3.595E+02
-1.771E+03	1.362E+11					
35	1.750E+01	1.315E-02	-5.905E-04	1.910E+06	-2.004E+04	-2.964E+02
-1.392E+03	1.362E+11					
36	1.800E+01	9.856E-03	-5.091E-04	1.785E+06	-2.124E+04	-2.352E+02
-1.025E+03	1.362E+11					
37	1.850E+01	7.037E-03	-4.334E-04	1.655E+06	-2.210E+04	-1.773E+02
-6.776E+02	1.362E+11					
38	1.900E+01	4.656E-03	-3.634E-04	1.520E+06	-2.261E+04	-1.234E+02

-3.547E+02	1.362E+11					
39	1.950E+01	2.676E-03	-2.995E-04	1.383E+06	-2.282E+04	-7.448E+01
-6.100E+01	1.362E+11					
40	2.000E+01	1.062E-03	-2.416E-04	1.246E+06	-2.275E+04	-3.094E+01
2.002E+02	1.362E+11					
41	2.050E+01	-2.233E-04	-1.897E-04	1.110E+06	-2.243E+04	1.015E+01
4.468E+02	1.362E+11					
42	2.100E+01	-1.215E-03	-1.438E-04	9.770E+05	-2.184E+04	5.678E+01
7.266E+02	1.362E+11					
43	2.150E+01	-1.948E-03	-1.036E-04	8.481E+05	-2.100E+04	9.359E+01
9.475E+02	1.362E+11					
44	2.200E+01	-2.458E-03	-6.892E-05	7.249E+05	-1.997E+04	1.212E+02
1.113E+03	1.362E+11					
45	2.250E+01	-2.775E-03	-3.956E-05	6.085E+05	-1.879E+04	1.570E+02
1.260E+03	1.362E+11					
46	2.300E+01	-2.932E-03	-1.516E-05	4.995E+05	-1.744E+04	1.872E+02
1.441E+03	1.362E+11					
47	2.350E+01	-2.957E-03	4.629E-06	3.992E+05	-1.593E+04	2.102E+02
1.579E+03	1.362E+11					
48	2.400E+01	-2.877E-03	2.021E-05	3.084E+05	-1.435E+04	2.099E+02
1.577E+03	1.362E+11					
49	2.450E+01	-2.715E-03	3.200E-05	2.270E+05	-1.279E+04	2.032E+02
1.537E+03	1.362E+11					
50	2.500E+01	-2.493E-03	4.041E-05	1.549E+05	-1.130E+04	1.891E+02
1.452E+03	1.362E+11					
51	2.550E+01	-2.230E-03	4.584E-05	9.147E+04	-9.898E+03	1.713E+02
1.346E+03	1.362E+11					
52	2.600E+01	-1.943E-03	4.865E-05	3.612E+04	-8.613E+03	1.512E+02
1.225E+03	1.362E+11					
53	2.650E+01	-1.646E-03	4.918E-05	-1.188E+04	-7.449E+03	1.309E+02
1.103E+03	1.362E+11					
54	2.700E+01	-1.353E-03	4.775E-05	-5.327E+04	-6.409E+03	1.098E+02
9.766E+02	1.362E+11					
55	2.750E+01	-1.073E-03	4.462E-05	-8.879E+04	-5.331E+03	1.967E+02
1.181E+03	1.362E+11					
56	2.800E+01	-8.171E-04	4.008E-05	-1.172E+05	-3.885E+03	2.850E+02
1.711E+03	1.362E+11					
57	2.850E+01	-5.921E-04	3.452E-05	-1.354E+05	-2.202E+03	2.759E+02
1.656E+03	1.362E+11					
58	2.900E+01	-4.029E-04	2.837E-05	-1.437E+05	-5.794E+02	2.647E+02
1.589E+03	1.362E+11					
59	2.950E+01	-2.516E-04	2.208E-05	-1.424E+05	9.492E+02	2.445E+02
1.468E+03	1.362E+11					
60	3.000E+01	-1.380E-04	1.603E-05	-1.323E+05	2.352E+03	2.225E+02
1.337E+03	1.362E+11					
61	3.050E+01	-5.929E-05	1.060E-05	-1.141E+05	3.561E+03	1.798E+02
1.081E+03	1.362E+11					
62	3.100E+01	-1.077E-05	6.115E-06	-8.954E+04	4.453E+03	1.158E+02
7.028E+02	1.362E+11					
63	3.150E+01	1.409E-05	2.806E-06	-6.072E+04	4.540E+03	-9.132E+01

-5.278E+02	1.362E+11					
64	3.200E+01	2.291E-05	6.970E-07	-3.506E+04	3.647E+03	-2.121E+02
-1.258E+03	1.362E+11					
65	3.250E+01	2.246E-05	-4.485E-07	-1.695E+04	2.401E+03	-2.068E+02
-1.234E+03	1.362E+11					
66	3.300E+01	1.752E-05	-9.595E-07	-6.250E+03	1.303E+03	-1.608E+02
-9.627E+02	1.362E+11					
67	3.350E+01	1.094E-05	-1.126E-06	-1.322E+03	5.208E+02	-9.985E+01
-6.011E+02	1.362E+11					
68	3.400E+01	4.010E-06	-1.155E-06	0.000E+00	1.101E+02	-3.577E+01
-2.203E+02	1.362E+11					

END OF ANALYSIS

STA 453+25 Depth versus Moment (Strength Case)
Bending Moment (in-kips)



=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 453+25\

Name of input data file : STA 453+25-Strength Case.py7d
Name of output file : STA 453+25-Strength Case.py7o
Name of plot output file : STA 453+25-Strength Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 08:48:25

STA 453+25 Soldier Pile Wall

* PROGRAM CONTROL PARAMETERS *

NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS = 1
NO OF CROSS SECTIONS = 1
GENERATE EARTH PRESSURE INTERNALLY = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS = 0
NO OF STRUTS/RAKERS = 0

HEIGHT OF WALL	=	34.000 FT
NUMBER OF INCREMENTS	=	68
INCREMENT LENGTH	=	6.000 IN
MAXIMUM ALLOWABLE DEFLECTION	=	100.000 IN
DEFLECTION CLOSURE TOLERANCE	=	1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS	=	100

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	34.0000	1

* CROSS SECTIONS *

CROSS SECTION : 1
 SECTION NAME : Section
 TYPE : ELASTIC
 CROSS SECTION TYPE : I SECTION
 EQUIVALENT DIAMETER : 10.0000 IN
 EXTERNAL WIDTH : 10.0000 IN
 EXTERNAL DEPTH : 27.6000 IN
 FLANGE THICKNESS : 1.10000 IN
 WEB THICKNESS : 0.61000 IN
 YOUNG MODULUS : 2.90000E+07 LBS/IN**2

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

 * STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
 S - STIFFNESS OF TRANSVERSE RESISTANCE,
 T - TORQUE, P - AXIAL LOAD,
 R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI	Q	S	T	R	P
			LBS-IN**2	LBS	LBS/IN	IN-LBS	IN-LBS	LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
68	0		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	1.290E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

 * WALL INFORMATION *

FREE HEIGHT OF WALL = 6.000E+00 FT
 WIDTH FOR EARTH PRESSURE, WA = 7.800E+01 IN
 WIDTH FOR SOIL RESISTANCE, WP = 3.600E+01 IN
 DEPTH TO THE WATER TABLE AT BACKFILL = 1.100E+01 FT
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.100E+01 FT
 UNIT WEIGHT OF WATER = 3.600E-02 LBS/IN**3
 SLOPE OF THE BACKFILL (deg.) = 0.000E+00
 SLOPE OF THE EXCAVATION GROUND (deg.) = 0.000E+00
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE = 1.736E+00 LBS/IN**2

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	TOTAL UNIT			
	FT	PSI	PHI DEG	WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	6.0	0.0	25.0	0.064	T	0.00
2	2.0	0.0	25.0	0.064	T	6.00
3	3.0	3.5	0.0	0.064	F	8.00
4	0.5	3.5	0.0	0.064	F	11.00
5	10.5	5.2	0.0	0.064	F	11.50
6	5.0	6.9	0.0	0.064	F	22.00
7	4.0	9.7	0.0	0.087	T	27.00
8	19.0	11000.0	0.0	0.093	T	31.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
6.000E+00	6.319E+00
8.000E+00	7.847E+00
1.100E+01	1.014E+01
1.150E+01	1.030E+01
2.200E+01	1.379E+01
2.700E+01	1.545E+01
3.100E+01	1.789E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	4.059E-01	2.464E+00	0.000E+00
2	4.059E-01	2.464E+00	0.000E+00
3	1.000E+00	1.000E+00	0.000E+00
4	1.000E+00	1.000E+00	0.000E+00
5	1.000E+00	1.000E+00	0.000E+00
6	1.000E+00	1.000E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00
8	1.000E+00	1.000E+00	0.000E+00

NOTES:

- (*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS
- (**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE
 IF IT IS DIFFERENT THAN ZERO

 * ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	76.10	3.00	100.45	4.00	0.00	-0.00	0.00

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

* WARNING *

This model uses a reduction of active loads for the cohesive strength of clay. Please check carefully these results. Please evaluate if other alternatives are more applicable to your model (e.g., other/reduced cohesive strength, equivalent fluid pressure, and/or other type of retained soil to simulate drained and/or long-term conditions).

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	8.24382E+01
5.00000E-01	1.00573E+02
1.00000E+00	1.18716E+02
1.50000E+00	1.36851E+02
2.00000E+00	1.54986E+02
2.50000E+00	1.73121E+02
3.00000E+00	1.91264E+02
3.50000E+00	2.09399E+02
4.00000E+00	2.27534E+02
4.50000E+00	2.45669E+02
5.00000E+00	2.63812E+02
5.50000E+00	2.81947E+02
6.00000E+00	3.00082E+02
6.50000E+00	1.38499E+02
7.00000E+00	1.38499E+02
7.50000E+00	1.38499E+02
8.00000E+00	1.38499E+02
8.50000E+00	3.70800E-09
9.00000E+00	3.92400E-09
9.50000E+00	4.14000E-09
1.00000E+01	4.35600E-09
1.05000E+01	4.57200E-09
1.10000E+01	4.78800E-09
1.15000E+01	5.00400E-09
1.20000E+01	5.22000E-09
1.25000E+01	5.43600E-09
1.30000E+01	5.65200E-09
1.35000E+01	5.86800E-09
1.40000E+01	6.08400E-09
1.45000E+01	6.30000E-09
1.50000E+01	6.51600E-09
1.55000E+01	6.73200E-09
1.60000E+01	6.94800E-09
1.65000E+01	7.16400E-09
1.70000E+01	7.38000E-09
1.75000E+01	7.59600E-09
1.80000E+01	7.81200E-09
1.85000E+01	8.02800E-09
1.90000E+01	8.24400E-09

1.95000E+01	8.46000E-09
2.00000E+01	8.67600E-09
2.05000E+01	8.89200E-09
2.10000E+01	9.10800E-09
2.15000E+01	9.32400E-09
2.20000E+01	9.54000E-09
2.25000E+01	9.75600E-09
2.30000E+01	9.97200E-09
2.35000E+01	1.01880E-08
2.40000E+01	1.04040E-08
2.45000E+01	1.06200E-08
2.50000E+01	1.08360E-08
2.55000E+01	1.10520E-08
2.60000E+01	1.12680E-08
2.65000E+01	1.14840E-08
2.70000E+01	1.17000E-08
2.75000E+01	1.19160E-08
2.80000E+01	1.21320E-08
2.85000E+01	1.23480E-08
2.90000E+01	1.25640E-08
2.95000E+01	1.27800E-08
3.00000E+01	1.29960E-08
3.05000E+01	1.32120E-08
3.10000E+01	1.34280E-08
3.15000E+01	1.36440E-08
3.20000E+01	1.38600E-08
3.25000E+01	1.40760E-08
3.30000E+01	1.42920E-08
3.35000E+01	1.45080E-08
3.40000E+01	1.47240E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

6 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SAND

LAYER 2
 THE SOIL IS A SOFT CLAY

LAYER 3
 THE SOIL IS A STIFF CLAY WITH FREE WATER

LAYER 4
THE SOIL IS A STIFF CLAY WITH FREE WATER

LAYER 5
THE LAYER IS WEAK ROCK

LAYER 6
THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
12 POINTS

X, FT	WEIGHT, LBS/IN**3
6.0000	6.3657E-02
8.0000	6.3657E-02
8.0000	6.3657E-02
11.0000	6.3657E-02
11.0000	2.7657E-02
22.0000	2.7657E-02
22.0000	2.7657E-02
27.0000	2.7657E-02
27.0000	5.0806E-02
31.0000	5.0806E-02
31.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
12 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	3.4722E+00	0.000	2.0000E-02	0.0000E+00
11.50	3.4722E+00	0.000	2.0000E-02	0.0000E+00
11.50	5.2083E+00	0.000	1.0000E-02	1.0000E+02
22.00	5.2083E+00	0.000	1.0000E-02	1.0000E+02
22.00	6.9444E+00	0.000	7.0000E-03	5.0000E+02
27.00	6.9444E+00	0.000	7.0000E-03	5.0000E+02
27.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
35.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
3.59E+00	0.01	36.00	25.00	6.37E-02	2.50E+01	2.83	2.14	4.72E-01

Y	P
IN	LBS/IN
0.000	0.000
0.030	0.062
0.060	0.125
0.114	0.237
0.168	0.350
0.222	0.462
0.276	0.574
0.330	0.687
0.384	0.749
0.438	0.775
0.492	0.799
0.546	0.821
0.600	0.841
0.850	0.931
1.100	1.022
1.350	1.112
1.620	1.112

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
2.59E+03	6.01	36.00	25.00	6.37E-02	2.50E+01	1.48	1.05	7.43E+02

Y	P
IN	LBS/IN
0.000	0.000
0.030	45.014
0.060	90.028
0.114	171.052
0.168	252.077

0.222	333.102
0.276	414.127
0.330	495.152
0.384	560.605
0.438	585.306
0.492	608.035
0.546	629.143
0.600	648.890
0.850	737.489
1.100	826.088
1.350	914.687
1.620	914.687

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
2.16E+02	0.50	36.00	25.00	6.37E-02	2.50E+01	2.71	2.04	3.11E+01	

Y	P
IN	LBS/IN
0.000	0.000
0.030	3.746
0.060	7.492
0.114	14.235
0.168	20.977
0.222	27.720
0.276	34.463
0.330	41.205
0.384	46.813
0.438	48.480
0.492	50.001
0.546	51.404
0.600	52.709
0.850	58.547
1.100	64.384
1.350	70.221
1.620	70.221

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
2.80E+03	6.50	36.00	25.00	6.37E-02	2.50E+01	1.40	0.99	8.40E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	48.697
0.060	97.395
0.114	185.050
0.168	272.705
0.222	360.360
0.276	448.015
0.330	535.671
0.384	594.535
0.438	621.117
0.492	645.592
0.546	668.334
0.600	689.619
0.850	785.141
1.100	880.663
1.350	976.184
1.620	976.184

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
4.31E+02	1.00	36.00	25.00	6.37E-02	2.50E+01	2.60	1.93	6.78E+01	

Y	P
IN	LBS/IN
0.000	0.000
0.030	7.492
0.060	14.984
0.114	28.469
0.168	41.955
0.222	55.440

0.276	68.925
0.330	82.411
0.384	95.896
0.438	100.030
0.492	103.273
0.546	106.268
0.600	109.055
0.850	121.527
1.100	134.000
1.350	146.472
1.620	146.472

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	7.00	36.00	25.00	6.37E-02	2.50E+01	1.31	0.92	9.43E+02	
3.02E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	52.443
0.060	104.887
0.114	199.284
0.168	293.682
0.222	388.080
0.276	482.478
0.330	576.876
0.384	623.541
0.438	651.890
0.492	678.009
0.546	702.292
0.600	725.033
0.850	827.114
1.100	929.195
1.350	1031.275
1.620	1031.275

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3				LB /IN LB
6.47E+02	1.50	36.00	25.00	6.37E-02	2.50E+01	2.48	1.83	1.10E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	11.238
0.060	22.476
0.114	42.704
0.168	62.932
0.222	83.160
0.276	103.388
0.330	123.616
0.384	143.844
0.438	153.259
0.492	158.407
0.546	163.164
0.600	167.596
0.850	187.439
1.100	207.282
1.350	227.125
1.620	227.125

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3				LB /IN LB
3.24E+03	7.50	36.00	25.00	6.37E-02	2.50E+01	1.23	0.86	1.05E+03	

Y	P
IN	LBS/IN
0.000	0.000
0.030	56.189
0.060	112.378
0.114	213.519
0.168	314.660
0.222	415.800
0.276	516.941

0.330	613.377
0.384	646.221
0.438	676.159
0.492	703.764
0.546	729.447
0.600	753.513
0.850	861.576
1.100	969.638
1.350	1077.700
1.620	1077.700

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
8.59E+02	1.99	36.00	25.00	6.37E-02	2.50E+01	2.36	1.73	1.57E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	14.921
0.060	29.843
0.114	56.701
0.168	83.560
0.222	110.418
0.276	137.277
0.330	164.135
0.384	190.993
0.438	207.138
0.492	214.181
0.546	220.694
0.600	226.763
0.850	253.939
1.100	281.116
1.350	308.292
1.620	308.292

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN LB
3.45E+03	7.99	36.00	25.00	6.37E-02	2.50E+01	1.17	0.81	1.17E+03

Y	P
IN	LBS/IN
0.000	0.000
0.030	59.873
0.060	119.745
0.114	227.516
0.168	335.287
0.222	443.058
0.276	550.829
0.330	634.837
0.384	670.291
0.438	702.675
0.492	732.588
0.546	760.463
0.600	786.620
0.850	904.151
1.100	1021.681
1.350	1139.212
1.620	1139.212

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
2.01	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	21.982
0.036	47.359
0.108	68.304
0.288	94.719
0.576	119.338
0.864	136.608
1.440	161.967
2.160	185.405
3.240	212.236
4.320	233.596
5.760	257.106
7.200	276.959

9.360	302.271
11.520	323.933
14.400	348.946
17.280	348.946

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
8.01	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	37.190
0.036	80.123
0.108	115.557
0.288	160.246
0.576	201.898
0.864	231.115
1.440	274.017
2.160	313.671
3.240	359.064
4.320	395.201
5.760	434.975
7.200	468.563
9.360	511.386
11.520	548.034
14.400	590.352
17.280	590.352

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
2.88	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	24.179
0.036	52.092
0.108	75.129
0.288	104.184
0.576	131.263
0.864	150.259

1.440	178.152
2.160	203.933
3.240	233.445
4.320	256.939
5.760	282.798
7.200	304.635
9.360	332.476
11.520	356.303
14.400	383.816
17.280	383.816

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
8.88	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	39.386
0.036	84.856
0.108	122.383
0.288	169.711
0.576	213.823
0.864	244.766
1.440	290.202
2.160	332.199
3.240	380.272
4.320	418.544
5.760	460.667
7.200	496.239
9.360	541.591
11.520	580.404
14.400	625.222
17.280	625.222

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
3.75	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000

0.004	26.397
0.036	56.870
0.108	82.021
0.288	113.740
0.576	143.303
0.864	164.041
1.440	194.492
2.160	222.638
3.240	254.857
4.320	280.506
5.760	308.737
7.200	332.577
9.360	362.972
11.520	388.985
14.400	419.021
17.280	419.021

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
9.75	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	41.604
0.036	89.634
0.108	129.274
0.288	179.267
0.576	225.863
0.864	258.548
1.440	306.543
2.160	350.904
3.240	401.685
4.320	442.111
5.760	486.606
7.200	524.181
9.360	572.087
11.520	613.086
14.400	660.427
17.280	660.427

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
4.62	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	28.614
0.036	61.648
0.108	88.912
0.288	123.296
0.576	155.343
0.864	177.823
1.440	210.833
2.160	241.344
3.240	276.269
4.320	304.074
5.760	334.677
7.200	360.519
9.360	393.468
11.520	421.666
14.400	454.226
17.280	454.226

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
10.62	36.000	3.4722E+00	6.3657E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	43.822
0.036	94.412
0.108	136.165
0.288	188.823
0.576	237.903
0.864	272.331
1.440	322.884
2.160	369.609
3.240	423.097
4.320	465.679
5.760	512.546
7.200	552.123
9.360	602.583
11.520	645.767
14.400	695.632
17.280	695.632

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
5.49	36.000	3.4722E+00	6.0434E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	30.490
0.036	65.689
0.108	94.740
0.288	131.377
0.576	165.525
0.864	189.479
1.440	224.652
2.160	257.163
3.240	294.378
4.320	324.005
5.760	356.613
7.200	384.150
9.360	419.259
11.520	449.305
14.400	483.999
17.280	483.999

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
11.49	36.000	3.4722E+00	6.2117E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	45.656
0.036	98.363
0.108	141.863
0.288	196.725
0.576	247.858
0.864	283.727
1.440	336.395
2.160	385.077
3.240	440.803
4.320	485.166

5.760	533.995
7.200	575.228
9.360	627.800
11.520	672.791
14.400	724.742
17.280	724.742

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	5.51	36.000	5.21E+00	5.21E+00	6.03E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.096	321.441
0.193	454.587
0.289	528.016
0.385	574.534
0.482	605.304
0.578	624.805
0.674	635.594
0.771	639.317
0.867	637.122
0.963	629.847
1.060	618.133
1.156	602.479
1.927	436.464
2.698	270.174
3.468	103.885
28.904	103.885

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3						

11.51 36.000 5.21E+00 5.21E+00 6.21E-02 1.0000E-02
1.00000E+02

Y	P
IN	LBS/IN
0.000	0.000
0.108	469.548
0.215	664.041
0.323	773.578
0.431	844.667
0.539	893.187
0.646	925.561
0.754	945.461
0.862	955.255
0.969	956.589
1.077	950.669
1.185	938.413
1.292	920.539
2.154	664.088
3.016	407.258
3.877	150.427
32.312	150.427

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	8.12	36.000	5.21E+00	5.21E+00	4.98E-02	1.0000E-02

1.00000E+02

Y	P
IN	LBS/IN
0.000	0.000
0.104	444.713
0.208	628.919
0.312	732.017
0.416	798.456
0.520	843.396
0.625	872.955
0.729	890.628
0.833	898.668
0.937	898.643
1.041	891.701
1.145	878.715

1.249	860.736
2.082	621.595
2.915	382.455
3.748	143.314
31.230	143.314

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	14.12	36.000	5.21E+00	6.79E+00	5.57E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	10.75	36.000	5.21E+00	1.38E+01	4.44E-02	1.0000E-02

1.00000E+02

Y	P
IN	LBS/IN
0.000	0.000
0.107	468.555
0.215	662.637
0.322	771.859
0.429	842.681
0.536	890.966
0.644	923.129
0.751	942.834
0.858	952.447
0.965	953.611
1.073	947.529
1.180	935.120
1.287	917.479
2.145	661.734
3.003	405.988
3.861	150.243
32.175	150.243

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	16.75	36.000	5.21E+00	1.04E+01	5.13E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765

2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	13.38	36.000	5.21E+00	1.66E+01	4.11E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	19.38	36.000	5.21E+00	1.27E+01	4.81E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	15.99	36.000	5.21E+00	1.81E+01	3.89E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611

3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	21.99	36.000	5.21E+00	1.42E+01	4.57E-02	1.0000E-02
1.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.108	470.191
0.216	664.950
0.324	774.691
0.432	845.952
0.540	894.623
0.648	927.135
0.756	947.161
0.864	957.073
0.972	958.517
1.080	952.701
1.188	940.544
1.296	922.765
2.160	665.611
3.024	408.077
3.888	150.543
32.400	150.543

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	16.01	36.000	6.94E+00	6.94E+00	3.89E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	22.01	36.000	6.94E+00	6.94E+00	4.57E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102

2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	17.25	36.000	6.94E+00	6.94E+00	3.81E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	23.25	36.000	6.94E+00	8.14E+00	4.47E-02	7.0000E-03
5.00000E+02						

Y	P
---	---

IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	18.50	36.000	6.94E+00	2.71E+01	3.74E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724

22.680 200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	24.50	36.000	6.94E+00	1.39E+01	4.38E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	19.75	36.000	6.94E+00	3.38E+01	3.68E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN

0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	25.75	36.000	6.94E+00	1.82E+01	4.30E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	20.99	36.000	6.94E+00	3.72E+01	3.62E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000
0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

KPY	DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
	FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
LBS/IN**3	26.99	36.000	6.94E+00	2.15E+01	4.23E-02	7.0000E-03
5.00000E+02						

Y	P
IN	LBS/IN
0.000	0.000

0.076	626.921
0.151	886.600
0.227	1032.922
0.302	1127.936
0.378	1192.831
0.454	1236.180
0.529	1262.882
0.605	1276.097
0.680	1278.023
0.756	1270.268
0.832	1254.059
0.907	1230.354
1.512	887.481
2.117	544.102
2.722	200.724
22.680	200.724

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
21.01	36.000	9.70E+00	3.50E+04	3.62E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.218E+02		
		0.180E-04		0.259E+02		
		0.540E-04		0.341E+02		
		0.108E-03		0.406E+02		
		0.162E-03		0.449E+02		
		0.360E-03		0.549E+02		
		0.720E-03		0.653E+02		
		0.108E-02		0.722E+02		
		0.144E-02		0.776E+02		
		0.180E-02		0.821E+02		
		0.450E-02		0.103E+03		
		0.900E-02		0.123E+03		
		0.135E-01		0.136E+03		
		0.180E-01		0.146E+03		
		0.720E-01		0.206E+03		
		0.144E+00		0.245E+03		
		0.216E+00		0.272E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
27.01	36.000	9.70E+00	3.50E+04	4.23E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
22.00	36.000	9.70E+00	3.50E+04	3.69E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		
		0.135E-01		0.198E+03		
		0.180E-01		0.213E+03		
		0.720E-01		0.301E+03		
		0.144E+00		0.359E+03		
		0.216E+00		0.397E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
28.00	36.000	9.70E+00	3.50E+04	4.26E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		
		0.180E-01		0.620E+03		
		0.720E-01		0.877E+03		
		0.144E+00		0.104E+04		
		0.216E+00		0.115E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
23.00	36.000	9.70E+00	3.50E+04	3.75E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.420E+02		
		0.180E-04		0.500E+02		
		0.540E-04		0.658E+02		
		0.108E-03		0.782E+02		
		0.162E-03		0.865E+02		
		0.360E-03		0.106E+03		
		0.720E-03		0.126E+03		
		0.108E-02		0.139E+03		
		0.144E-02		0.149E+03		
		0.180E-02		0.158E+03		
		0.450E-02		0.199E+03		
		0.900E-02		0.236E+03		
		0.135E-01		0.261E+03		
		0.180E-01		0.281E+03		

0.720E-01	0.397E+03
0.144E+00	0.473E+03
0.216E+00	0.523E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
29.00	36.000	9.70E+00	3.50E+04	4.29E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.308E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		
		0.180E-02		0.387E+03		
		0.450E-02		0.486E+03		
		0.900E-02		0.578E+03		
		0.135E-01		0.640E+03		
		0.180E-01		0.688E+03		
		0.720E-01		0.973E+03		
		0.144E+00		0.116E+04		
		0.216E+00		0.128E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.00	36.000	9.70E+00	3.50E+04	3.81E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.522E+02		
		0.180E-04		0.620E+02		
		0.540E-04		0.816E+02		
		0.108E-03		0.971E+02		
		0.162E-03		0.107E+03		
		0.360E-03		0.131E+03		
		0.720E-03		0.156E+03		
		0.108E-02		0.173E+03		
		0.144E-02		0.186E+03		
		0.180E-02		0.196E+03		

0.450E-02	0.247E+03
0.900E-02	0.293E+03
0.135E-01	0.325E+03
0.180E-01	0.349E+03
0.720E-01	0.493E+03
0.144E+00	0.587E+03
0.216E+00	0.649E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.00	36.000	9.70E+00	3.50E+04	4.32E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		
		0.180E-04		0.134E+03		
		0.540E-04		0.177E+03		
		0.108E-03		0.210E+03		
		0.162E-03		0.233E+03		
		0.360E-03		0.284E+03		
		0.720E-03		0.338E+03		
		0.108E-02		0.374E+03		
		0.144E-02		0.402E+03		
		0.180E-02		0.425E+03		
		0.450E-02		0.534E+03		
		0.900E-02		0.636E+03		
		0.135E-01		0.703E+03		
		0.180E-01		0.756E+03		
		0.720E-01		0.107E+04		
		0.144E+00		0.127E+04		
		0.216E+00		0.141E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.99	36.000	9.70E+00	3.50E+04	3.86E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.622E+02		
		0.180E-04		0.740E+02		
		0.540E-04		0.974E+02		
		0.108E-03		0.116E+03		
		0.162E-03		0.128E+03		
		0.360E-03		0.156E+03		

0.720E-03	0.186E+03
0.108E-02	0.206E+03
0.144E-02	0.221E+03
0.180E-02	0.234E+03
0.450E-02	0.294E+03
0.900E-02	0.350E+03
0.135E-01	0.387E+03
0.180E-01	0.416E+03
0.720E-01	0.588E+03
0.144E+00	0.700E+03
0.216E+00	0.774E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.99	36.000	9.70E+00	3.50E+04	4.34E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		
		0.180E-04		0.134E+03		
		0.540E-04		0.177E+03		
		0.108E-03		0.210E+03		
		0.162E-03		0.233E+03		
		0.360E-03		0.284E+03		
		0.720E-03		0.338E+03		
		0.108E-02		0.374E+03		
		0.144E-02		0.402E+03		
		0.180E-02		0.425E+03		
		0.450E-02		0.534E+03		
		0.900E-02		0.636E+03		
		0.135E-01		0.703E+03		
		0.180E-01		0.756E+03		
		0.720E-01		0.107E+04		
		0.144E+00		0.127E+04		
		0.216E+00		0.141E+04		

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
300.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
		0.000D+00	0.000D+00
		0.576D-02	0.527D+05
		0.115D-01	0.105D+06
		0.173D-01	0.133D+06
		0.230D-01	0.136D+06

0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.208D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
372.10	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.347D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
312.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06

0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.220D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
384.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.360D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
324.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06

0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.233D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
396.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.372D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
336.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06

0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.245D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
408.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.385D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
347.90		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06

0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.257D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
419.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.398D+03

STA 453+25 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
FT		IN	RAD	LBS-IN	LBS	LBS/IN
LBS	LBS-IN**2					
-----	-----	----	-----	-----	-----	-----
0	0.000E+00	8.441E-01	-4.336E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	8.181E-01	-4.336E-03	0.000E+00	3.017E+02	0.000E+00
6.034E+02	1.362E+11					
2	1.000E+00	7.921E-01	-4.336E-03	3.621E+03	9.596E+02	0.000E+00
7.123E+02	1.362E+11					

3	1.500E+00	7.661E-01	-4.336E-03	1.152E+04	1.726E+03	0.000E+00
8.211E+02	1.362E+11					
4	2.000E+00	7.401E-01	-4.335E-03	2.434E+04	2.602E+03	0.000E+00
9.299E+02	1.362E+11					
5	2.500E+00	7.141E-01	-4.334E-03	4.274E+04	3.586E+03	0.000E+00
1.039E+03	1.362E+11					
6	3.000E+00	6.881E-01	-4.331E-03	6.737E+04	7.904E+03	0.000E+00
7.598E+03	1.362E+11					
7	3.500E+00	6.621E-01	-4.327E-03	1.376E+05	1.556E+04	0.000E+00
7.706E+03	1.362E+11					
8	4.000E+00	6.361E-01	-4.318E-03	2.540E+05	2.009E+04	0.000E+00
1.365E+03	1.362E+11					
9	4.500E+00	6.103E-01	-4.304E-03	3.787E+05	2.151E+04	0.000E+00
1.474E+03	1.362E+11					
10	5.000E+00	5.845E-01	-4.285E-03	5.122E+05	2.304E+04	0.000E+00
1.583E+03	1.362E+11					
11	5.500E+00	5.589E-01	-4.259E-03	6.552E+05	2.468E+04	0.000E+00
1.692E+03	1.362E+11					
12	6.000E+00	5.334E-01	-4.227E-03	8.083E+05	2.642E+04	-4.078E-01
1.798E+03	1.362E+11					
13	6.500E+00	5.081E-01	-4.187E-03	9.722E+05	2.759E+04	-5.042E+01
5.285E+02	1.362E+11					
14	7.000E+00	4.831E-01	-4.141E-03	1.139E+06	2.796E+04	-1.028E+02
2.144E+02	1.362E+11					
15	7.500E+00	4.584E-01	-4.087E-03	1.308E+06	2.801E+04	-1.552E+02
-1.004E+02	1.362E+11					
16	8.000E+00	4.341E-01	-4.026E-03	1.476E+06	2.776E+04	-2.059E+02
-4.046E+02	1.362E+11					
17	8.500E+00	4.101E-01	-3.957E-03	1.641E+06	2.709E+04	-1.572E+02
-9.434E+02	1.362E+11					
18	9.000E+00	3.866E-01	-3.881E-03	1.801E+06	2.628E+04	-1.135E+02
-6.809E+02	1.362E+11					
19	9.500E+00	3.636E-01	-3.799E-03	1.956E+06	2.559E+04	-1.164E+02
-6.983E+02	1.362E+11					
20	1.000E+01	3.410E-01	-3.709E-03	2.108E+06	2.488E+04	-1.191E+02
-7.149E+02	1.362E+11					
21	1.050E+01	3.190E-01	-3.613E-03	2.255E+06	2.414E+04	-1.267E+02
-7.605E+02	1.362E+11					
22	1.100E+01	2.977E-01	-3.511E-03	2.397E+06	2.338E+04	-1.285E+02
-7.708E+02	1.362E+11					
23	1.150E+01	2.769E-01	-3.402E-03	2.535E+06	2.260E+04	-1.291E+02
-7.749E+02	1.362E+11					
24	1.200E+01	2.568E-01	-3.287E-03	2.669E+06	2.151E+04	-2.355E+02
-1.413E+03	1.362E+11					
25	1.250E+01	2.375E-01	-3.167E-03	2.793E+06	1.980E+04	-3.358E+02
-2.015E+03	1.362E+11					
26	1.300E+01	2.188E-01	-3.042E-03	2.906E+06	1.750E+04	-4.306E+02
-2.584E+03	1.362E+11					
27	1.350E+01	2.010E-01	-2.911E-03	3.003E+06	1.466E+04	-5.156E+02
-3.094E+03	1.362E+11					

28	1.400E+01	1.839E-01	-2.777E-03	3.082E+06	1.135E+04	-5.859E+02
-3.515E+03	1.362E+11					
29	1.450E+01	1.676E-01	-2.640E-03	3.140E+06	7.913E+03	-5.606E+02
-3.363E+03	1.362E+11					
30	1.500E+01	1.522E-01	-2.501E-03	3.177E+06	4.622E+03	-5.365E+02
-3.219E+03	1.362E+11					
31	1.550E+01	1.376E-01	-2.361E-03	3.195E+06	1.471E+03	-5.138E+02
-3.083E+03	1.362E+11					
32	1.600E+01	1.239E-01	-2.220E-03	3.195E+06	-1.547E+03	-4.923E+02
-2.954E+03	1.362E+11					
33	1.650E+01	1.110E-01	-2.080E-03	3.176E+06	-4.440E+03	-4.722E+02
-2.833E+03	1.362E+11					
34	1.700E+01	9.892E-02	-1.941E-03	3.141E+06	-7.153E+03	-4.320E+02
-2.592E+03	1.362E+11					
35	1.750E+01	8.769E-02	-1.804E-03	3.091E+06	-9.597E+03	-3.827E+02
-2.296E+03	1.362E+11					
36	1.800E+01	7.728E-02	-1.669E-03	3.026E+06	-1.176E+04	-3.371E+02
-2.022E+03	1.362E+11					
37	1.850E+01	6.767E-02	-1.537E-03	2.950E+06	-1.365E+04	-2.950E+02
-1.770E+03	1.362E+11					
38	1.900E+01	5.883E-02	-1.409E-03	2.862E+06	-1.531E+04	-2.563E+02
-1.538E+03	1.362E+11					
39	1.950E+01	5.075E-02	-1.285E-03	2.766E+06	-1.674E+04	-2.210E+02
-1.326E+03	1.362E+11					
40	2.000E+01	4.341E-02	-1.166E-03	2.661E+06	-1.797E+04	-1.890E+02
-1.134E+03	1.362E+11					
41	2.050E+01	3.676E-02	-1.051E-03	2.550E+06	-1.902E+04	-1.601E+02
-9.603E+02	1.362E+11					
42	2.100E+01	3.079E-02	-9.414E-04	2.433E+06	-1.990E+04	-1.341E+02
-8.044E+02	1.362E+11					
43	2.150E+01	2.547E-02	-8.369E-04	2.311E+06	-2.063E+04	-1.109E+02
-6.652E+02	1.362E+11					
44	2.200E+01	2.075E-02	-7.379E-04	2.186E+06	-2.124E+04	-9.034E+01
-5.420E+02	1.362E+11					
45	2.250E+01	1.661E-02	-6.445E-04	2.057E+06	-2.179E+04	-9.413E+01
-5.648E+02	1.362E+11					
46	2.300E+01	1.302E-02	-5.568E-04	1.924E+06	-2.234E+04	-9.084E+01
-5.451E+02	1.362E+11					
47	2.350E+01	9.929E-03	-4.750E-04	1.788E+06	-2.286E+04	-8.234E+01
-4.940E+02	1.362E+11					
48	2.400E+01	7.315E-03	-3.993E-04	1.650E+06	-2.329E+04	-6.066E+01
-3.640E+02	1.362E+11					
49	2.450E+01	5.137E-03	-3.298E-04	1.509E+06	-2.360E+04	-4.260E+01
-2.556E+02	1.362E+11					
50	2.500E+01	3.358E-03	-2.664E-04	1.367E+06	-2.381E+04	-2.785E+01
-1.671E+02	1.362E+11					
51	2.550E+01	1.940E-03	-2.094E-04	1.223E+06	-2.395E+04	-1.609E+01
-9.652E+01	1.362E+11					
52	2.600E+01	8.451E-04	-1.587E-04	1.079E+06	-2.402E+04	-7.008E+00
-4.205E+01	1.362E+11					

53	2.650E+01	3.537E-05	-1.144E-04	9.350E+05	-2.404E+04	-2.933E-01
-1.760E+00	1.362E+11					
54	2.700E+01	-5.272E-04	-7.635E-05	7.908E+05	-2.402E+04	4.372E+00
2.623E+01	1.362E+11					
55	2.750E+01	-8.809E-04	-4.470E-05	6.467E+05	-2.357E+04	1.489E+02
8.931E+02	1.362E+11					
56	2.800E+01	-1.064E-03	-1.927E-05	5.080E+05	-2.220E+04	3.056E+02
1.834E+03	1.362E+11					
57	2.850E+01	-1.112E-03	2.893E-07	3.803E+05	-2.031E+04	3.257E+02
1.954E+03	1.362E+11					
58	2.900E+01	-1.060E-03	1.448E-05	2.643E+05	-1.832E+04	3.382E+02
2.029E+03	1.362E+11					
59	2.950E+01	-9.383E-04	2.384E-05	1.605E+05	-1.627E+04	3.436E+02
2.062E+03	1.362E+11					
60	3.000E+01	-7.741E-04	2.889E-05	6.905E+04	-1.421E+04	3.434E+02
2.060E+03	1.362E+11					
61	3.050E+01	-5.916E-04	3.019E-05	-1.002E+04	-1.222E+04	3.187E+02
1.912E+03	1.362E+11					
62	3.100E+01	-4.118E-04	2.826E-05	-7.762E+04	-1.039E+04	2.918E+02
1.751E+03	1.362E+11					
63	3.150E+01	-2.525E-04	2.359E-05	-1.347E+05	-5.664E+03	1.284E+03
7.704E+03	1.362E+11					
64	3.200E+01	-1.288E-04	1.741E-05	-1.456E+05	1.725E+03	1.179E+03
7.073E+03	1.362E+11					
65	3.250E+01	-4.351E-05	1.170E-05	-1.140E+05	6.457E+03	3.984E+02
2.390E+03	1.362E+11					
66	3.300E+01	1.160E-05	7.686E-06	-6.811E+04	7.333E+03	-1.063E+02
-6.375E+02	1.362E+11					
67	3.350E+01	4.872E-05	5.613E-06	-2.603E+04	5.676E+03	-4.461E+02
-2.677E+03	1.362E+11					
68	3.400E+01	7.896E-05	5.040E-06	5.129E-11	2.169E+03	-7.229E+02
-4.338E+03	1.362E+11					

=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 453+25\

Name of input data file : STA 453+25-Strength Case.py7d
Name of output file : STA 453+25-Strength Case.py7o
Name of plot output file : STA 453+25-Strength Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 08:48:26

Long Term : STA 453+25 Soldier Pile Wall

* PROGRAM CONTROL PARAMETERS *

NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS = 1
NO OF CROSS SECTIONS = 1
GENERATE EARTH PRESSURE INTERNALLY = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS = 0
NO OF STRUTS/RAKERS = 0

HEIGHT OF WALL = 34.000 FT
NUMBER OF INCREMENTS = 68
INCREMENT LENGTH = 6.000 IN
MAXIMUM ALLOWABLE DEFLECTION = 100.000 IN
DEFLECTION CLOSURE TOLERANCE = 1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS = 100

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	34.0000	1

* CROSS SECTIONS *

CROSS SECTION : 1
SECTION NAME : Section
TYPE : ELASTIC
CROSS SECTION TYPE : I SECTION
EQUIVALENT DIAMETER : 10.0000 IN
EXTERNAL WIDTH : 10.0000 IN
EXTERNAL DEPTH : 27.6000 IN
FLANGE THICKNESS : 1.10000 IN
WEB THICKNESS : 0.61000 IN
YOUNG MODULUS : 2.90000E+07 LBS/IN**2

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

* STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
S - STIFFNESS OF TRANSVERSE RESISTANCE,
T - TORQUE, P - AXIAL LOAD,
R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI	Q	S	T	R	P
			LBS-IN**2	LBS	LBS/IN	IN-LBS	IN-LBS	LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
68	0		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	1.290E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

* WALL INFORMATION *

FREE HEIGHT OF WALL = 6.000E+00 FT

WIDTH FOR EARTH PRESSURE, WA = 7.800E+01 IN
 WIDTH FOR SOIL RESISTANCE, WP = 3.600E+01 IN
 DEPTH TO THE WATER TABLE AT BACKFILL = 1.100E+01 FT
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.100E+01 FT
 UNIT WEIGHT OF WATER = 3.600E-02 LBS/IN**3
 SLOPE OF THE BACKFILL (deg.) = 0.000E+00
 SLOPE OF THE EXCAVATION GROUND (deg.) = 0.000E+00
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE = 1.736E+00 LBS/IN**2

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	PHI DEG	TOTAL UNIT WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	6.0	0.0	25.0	0.064	T	0.00
2	2.0	0.0	25.0	0.064	T	6.00
3	3.0	0.0	24.0	0.064	T	8.00
4	0.5	0.0	24.0	0.064	T	11.00
5	10.5	0.0	34.0	0.064	T	11.50
6	5.0	1.0	22.0	0.064	T	22.00
7	4.0	9.7	0.0	0.087	T	27.00
8	19.0	11000.0	0.0	0.093	T	31.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
6.000E+00	6.319E+00
8.000E+00	7.847E+00
1.100E+01	1.014E+01
1.150E+01	1.030E+01
2.200E+01	1.379E+01
2.700E+01	1.545E+01

3.100E+01

1.789E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	4.059E-01	2.464E+00	0.000E+00
2	4.059E-01	2.464E+00	0.000E+00
3	4.217E-01	2.371E+00	0.000E+00
4	4.217E-01	2.371E+00	0.000E+00
5	2.827E-01	3.537E+00	0.000E+00
6	4.550E-01	2.198E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00
8	1.000E+00	1.000E+00	0.000E+00

NOTES:

- (*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS
 (**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE
 IF IT IS DIFFERENT THAN ZERO

 * ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	76.10	3.00	100.45	4.00	0.00	-0.00	0.00

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	8.24382E+01
5.00000E-01	1.00573E+02
1.00000E+00	1.18716E+02
1.50000E+00	1.36851E+02
2.00000E+00	1.54986E+02
2.50000E+00	1.73121E+02
3.00000E+00	1.91264E+02
3.50000E+00	2.09399E+02
4.00000E+00	2.27534E+02
4.50000E+00	2.45669E+02
5.00000E+00	2.63812E+02

5.50000E+00	2.81947E+02
6.00000E+00	3.00082E+02
6.50000E+00	1.38499E+02
7.00000E+00	1.38499E+02
7.50000E+00	1.38499E+02
8.00000E+00	1.38499E+02
8.50000E+00	1.43914E+02
9.00000E+00	1.43914E+02
9.50000E+00	1.43914E+02
1.00000E+01	1.43914E+02
1.05000E+01	1.43914E+02
1.10000E+01	1.43914E+02
1.15000E+01	1.43914E+02
1.20000E+01	9.64764E+01
1.25000E+01	9.64764E+01
1.30000E+01	9.64764E+01
1.35000E+01	9.64764E+01
1.40000E+01	9.64764E+01
1.45000E+01	9.64764E+01
1.50000E+01	9.64764E+01
1.55000E+01	9.64764E+01
1.60000E+01	9.64764E+01
1.65000E+01	9.64764E+01
1.70000E+01	9.64764E+01
1.75000E+01	9.64764E+01
1.80000E+01	9.64764E+01
1.85000E+01	9.64764E+01
1.90000E+01	9.64764E+01
1.95000E+01	9.64764E+01
2.00000E+01	9.64764E+01
2.05000E+01	9.64764E+01
2.10000E+01	9.64764E+01
2.15000E+01	9.64764E+01
2.20000E+01	9.64764E+01
2.25000E+01	7.93728E+01
2.30000E+01	7.93728E+01
2.35000E+01	7.93728E+01
2.40000E+01	7.93728E+01
2.45000E+01	7.93728E+01
2.50000E+01	7.93728E+01
2.55000E+01	7.93728E+01
2.60000E+01	7.93728E+01
2.65000E+01	7.93728E+01
2.70000E+01	7.93728E+01
2.75000E+01	1.19160E-08
2.80000E+01	1.21320E-08
2.85000E+01	1.23480E-08
2.90000E+01	1.25640E-08
2.95000E+01	1.27800E-08
3.00000E+01	1.29960E-08

3.05000E+01	1.32120E-08
3.10000E+01	1.34280E-08
3.15000E+01	1.36440E-08
3.20000E+01	1.38600E-08
3.25000E+01	1.40760E-08
3.30000E+01	1.42920E-08
3.35000E+01	1.45080E-08
3.40000E+01	1.47240E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

6 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SAND

LAYER 2
 THE SOIL IS A SILT

LAYER 3
 THE SOIL IS A SILT

LAYER 4
 THE SOIL IS A SILT

LAYER 5
 THE LAYER IS WEAK ROCK

LAYER 6
 THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
 12 POINTS

X, FT	WEIGHT, LBS/IN**3
6.0000	6.3657E-02
8.0000	6.3657E-02
8.0000	6.3657E-02
11.0000	6.3657E-02
11.0000	2.7657E-02
22.0000	2.7657E-02
22.0000	2.7657E-02
27.0000	2.7657E-02

27.0000	5.0806E-02
31.0000	5.0806E-02
31.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
12 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	0.0000E+00	25.000	0.0000E+00	2.5000E+01
8.00	0.0000E+00	24.000	2.0000E-02	2.5000E+01
11.50	0.0000E+00	24.000	2.0000E-02	2.5000E+01
11.50	0.0000E+00	34.000	1.0000E-02	2.5000E+01
22.00	0.0000E+00	34.000	1.0000E-02	2.5000E+01
22.00	1.0417E+00	22.000	2.0000E-02	0.0000E+00
27.00	1.0417E+00	22.000	2.0000E-02	0.0000E+00
27.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
31.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
35.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN LB
3.59E+00	0.01	36.00	25.00	6.37E-02	2.50E+01	2.83	2.14	4.72E-01

Y	P
IN	LBS/IN
0.000	0.000
0.030	0.062
0.060	0.125
0.114	0.237
0.168	0.350
0.222	0.462
0.276	0.574
0.330	0.687
0.384	0.749
0.438	0.775

0.492	0.799
0.546	0.821
0.600	0.841
0.850	0.931
1.100	1.022
1.350	1.112
1.620	1.112

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	6.01	36.00	25.00	6.37E-02	2.50E+01	1.48	1.05	7.43E+02	
2.59E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	45.014
0.060	90.028
0.114	171.052
0.168	252.077
0.222	333.102
0.276	414.127
0.330	495.152
0.384	560.605
0.438	585.306
0.492	608.035
0.546	629.143
0.600	648.890
0.850	737.489
1.100	826.088
1.350	914.687
1.620	914.687

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB

/IN	0.50	36.00	25.00	6.37E-02	2.50E+01	2.71	2.04	3.11E+01
2.16E+02								

Y	P
IN	LBS/IN
0.000	0.000
0.030	3.746
0.060	7.492
0.114	14.235
0.168	20.977
0.222	27.720
0.276	34.463
0.330	41.205
0.384	46.813
0.438	48.480
0.492	50.001
0.546	51.404
0.600	52.709
0.850	58.547
1.100	64.384
1.350	70.221
1.620	70.221

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
PCD	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	6.50	36.00	25.00	6.37E-02	2.50E+01	1.40	0.99	8.40E+02	
2.80E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	48.697
0.060	97.395
0.114	185.050
0.168	272.705
0.222	360.360
0.276	448.015
0.330	535.671
0.384	594.535
0.438	621.117
0.492	645.592

PCD	DEPTH	BELOW GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	PCT
/IN	FT		IN		LBS/IN**3		LBS/IN**3			LB /IN LB

3.02E+03 7.00 36.00 25.00 6.37E-02 2.50E+01 1.31 0.92 9.43E+02

Y	P
IN	LBS/IN
0.000	0.000
0.030	52.443
0.060	104.887
0.114	199.284
0.168	293.682
0.222	388.080
0.276	482.478
0.330	576.876
0.384	623.541
0.438	651.890
0.492	678.009
0.546	702.292
0.600	725.033
0.850	827.114
1.100	929.195
1.350	1031.275
1.620	1031.275

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
/IN	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
6.47E+02	1.50	36.00	25.00	6.37E-02	2.50E+01	2.48	1.83	1.10E+02	

Y	P
IN	LBS/IN
0.000	0.000
0.030	11.238
0.060	22.476
0.114	42.704
0.168	62.932
0.222	83.160
0.276	103.388
0.330	123.616
0.384	143.844
0.438	153.259
0.492	158.407
0.546	163.164

0.600	167.596
0.850	187.439
1.100	207.282
1.350	227.125
1.620	227.125

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	7.50	36.00	25.00	6.37E-02	2.50E+01	1.23	0.86	1.05E+03	
3.24E+03									

Y	P
IN	LBS/IN
0.000	0.000
0.030	56.189
0.060	112.378
0.114	213.519
0.168	314.660
0.222	415.800
0.276	516.941
0.330	613.377
0.384	646.221
0.438	676.159
0.492	703.764
0.546	729.447
0.600	753.513
0.850	861.576
1.100	969.638
1.350	1077.700
1.620	1077.700

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	
	FT	IN		LBS/IN**3	LBS/IN**3			LB /IN	LB
/IN	1.99	36.00	25.00	6.37E-02	2.50E+01	2.36	1.73	1.57E+02	

8.59E+02

Y	P
IN	LBS/IN
0.000	0.000
0.030	14.921
0.060	29.843
0.114	56.701
0.168	83.560
0.222	110.418
0.276	137.277
0.330	164.135
0.384	190.993
0.438	207.138
0.492	214.181
0.546	220.694
0.600	226.763
0.850	253.939
1.100	281.116
1.350	308.292
1.620	308.292

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

PCD	DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PCT	LB /IN	LB
	FT	IN		LBS/IN**3	LBS/IN**3					
/IN										
3.45E+03	7.99	36.00	25.00	6.37E-02	2.50E+01	1.17	0.81	1.17E+03		

Y	P
IN	LBS/IN
0.000	0.000
0.030	59.873
0.060	119.745
0.114	227.516
0.168	335.287
0.222	443.058
0.276	550.829
0.330	634.837
0.384	670.291
0.438	702.675
0.492	732.588
0.546	760.463
0.600	786.620

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.809E-01	0.154E+03
0.162E+00	0.307E+03
0.243E+00	0.461E+03
0.324E+00	0.614E+03
0.404E+00	0.768E+03
0.566E+00	0.107E+04
0.647E+00	0.123E+04
0.647E+00	0.123E+04
0.764E+00	0.119E+04
0.881E+00	0.116E+04
0.999E+00	0.112E+04
0.112E+01	0.108E+04
0.123E+01	0.105E+04
0.135E+01	0.101E+04
0.149E+01	0.101E+04
0.162E+01	0.101E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
2.88	36.00	24.0	6.366E-02	2.500E+01	2.24	1.64	0.000E+00
1.941E+02							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.185E+02
0.600E-01	0.370E+02
0.114E+00	0.702E+02
0.168E+00	0.103E+03
0.222E+00	0.137E+03
0.276E+00	0.170E+03
0.330E+00	0.191E+03
0.384E+00	0.203E+03
0.438E+00	0.214E+03
0.492E+00	0.224E+03
0.546E+00	0.234E+03
0.600E+00	0.242E+03
0.850E+00	0.282E+03

0.110E+01	0.322E+03
0.135E+01	0.362E+03
0.162E+01	0.362E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
8.88	36.00	24.0	6.366E-02	2.500E+01	1.12	0.76	0.000E+00
1.183E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.850E-01	0.180E+03
0.170E+00	0.359E+03
0.255E+00	0.539E+03
0.340E+00	0.719E+03
0.425E+00	0.899E+03
0.595E+00	0.126E+04
0.680E+00	0.144E+04
0.680E+00	0.144E+04
0.792E+00	0.138E+04
0.903E+00	0.133E+04
0.102E+01	0.127E+04
0.113E+01	0.122E+04
0.124E+01	0.116E+04
0.135E+01	0.110E+04
0.149E+01	0.110E+04
0.162E+01	0.110E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
3.75	36.00	24.0	6.366E-02	2.500E+01	2.03	1.48	0.000E+00
2.928E+02							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.250E+02
0.600E-01	0.501E+02
0.114E+00	0.951E+02
0.168E+00	0.140E+03
0.222E+00	0.185E+03
0.276E+00	0.230E+03
0.330E+00	0.275E+03
0.384E+00	0.320E+03
0.438E+00	0.334E+03
0.492E+00	0.346E+03
0.546E+00	0.356E+03
0.600E+00	0.366E+03
0.850E+00	0.409E+03
0.110E+01	0.452E+03
0.135E+01	0.495E+03
0.162E+01	0.495E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN								
9.75	36.00	24.0	6.366E-02		2.500E+01	1.04	0.69	0.000E+00
1.389E+03								

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.888E-01	0.207E+03
0.178E+00	0.414E+03
0.266E+00	0.621E+03
0.355E+00	0.828E+03
0.444E+00	0.104E+04
0.621E+00	0.145E+04
0.710E+00	0.166E+04
0.710E+00	0.166E+04
0.817E+00	0.158E+04
0.923E+00	0.151E+04
0.103E+01	0.143E+04
0.114E+01	0.136E+04
0.124E+01	0.128E+04
0.135E+01	0.120E+04

0.149E+01	0.120E+04
0.162E+01	0.120E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
	4.62		36.00	24.0	6.366E-02		2.500E+01	1.83	1.32	0.000E+00
	4.070E+02									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.316E+02
0.600E-01	0.632E+02
0.114E+00	0.120E+03
0.168E+00	0.177E+03
0.222E+00	0.234E+03
0.276E+00	0.291E+03
0.330E+00	0.347E+03
0.384E+00	0.404E+03
0.438E+00	0.461E+03
0.492E+00	0.491E+03
0.546E+00	0.500E+03
0.600E+00	0.508E+03
0.850E+00	0.545E+03
0.110E+01	0.582E+03
0.135E+01	0.619E+03
0.162E+01	0.619E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
	10.62		36.00	24.0	6.366E-02		2.500E+01	1.00	0.64	0.000E+00
	1.610E+03									

Y	P
---	---

IN	LBS/IN
0.000E+00	0.000E+00
0.924E-01	0.236E+03
0.185E+00	0.471E+03
0.277E+00	0.707E+03
0.369E+00	0.943E+03
0.462E+00	0.118E+04
0.646E+00	0.165E+04
0.739E+00	0.189E+04
0.739E+00	0.189E+04
0.841E+00	0.179E+04
0.943E+00	0.170E+04
0.104E+01	0.161E+04
0.115E+01	0.152E+04
0.125E+01	0.143E+04
0.135E+01	0.133E+04
0.149E+01	0.133E+04
0.162E+01	0.133E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
5.49	36.00	24.0	6.043E-02	2.500E+01	1.65	1.18	0.000E+00
5.084E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.381E+02
0.600E-01	0.762E+02
0.114E+00	0.145E+03
0.168E+00	0.213E+03
0.222E+00	0.282E+03
0.276E+00	0.350E+03
0.330E+00	0.419E+03
0.384E+00	0.487E+03
0.438E+00	0.556E+03
0.492E+00	0.625E+03
0.546E+00	0.630E+03
0.600E+00	0.635E+03
0.850E+00	0.656E+03
0.110E+01	0.677E+03
0.135E+01	0.699E+03

0.162E+01 0.699E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	11.49		36.00	24.0	6.212E-02		2.500E+01	0.95	0.59	0.000E+00
1.800E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.940E-01	0.260E+03
0.188E+00	0.520E+03
0.282E+00	0.780E+03
0.376E+00	0.104E+04
0.470E+00	0.130E+04
0.658E+00	0.182E+04
0.752E+00	0.208E+04
0.752E+00	0.208E+04
0.851E+00	0.197E+04
0.951E+00	0.186E+04
0.105E+01	0.175E+04
0.115E+01	0.164E+04
0.125E+01	0.153E+04
0.135E+01	0.142E+04
0.149E+01	0.142E+04
0.162E+01	0.142E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	5.51		36.00	34.0	6.034E-02		2.500E+01	2.05	1.49	0.000E+00
5.269E+02										

Y	P
IN	LBS/IN

0.000E+00	0.000E+00
0.118E+00	0.961E+02
0.236E+00	0.192E+03
0.355E+00	0.288E+03
0.473E+00	0.385E+03
0.591E+00	0.481E+03
0.828E+00	0.673E+03
0.946E+00	0.769E+03
0.946E+00	0.769E+03
0.101E+01	0.791E+03
0.108E+01	0.813E+03
0.115E+01	0.834E+03
0.122E+01	0.856E+03
0.128E+01	0.878E+03
0.135E+01	0.899E+03
0.149E+01	0.899E+03
0.162E+01	0.899E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
11.51	36.00	34.0	6.207E-02	2.500E+01	1.05	0.69	0.000E+00
2.891E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.149E+00	0.344E+03
0.298E+00	0.688E+03
0.446E+00	0.103E+04
0.595E+00	0.138E+04
0.744E+00	0.172E+04
0.104E+01	0.241E+04
0.119E+01	0.275E+04
0.119E+01	0.275E+04
0.122E+01	0.271E+04
0.124E+01	0.267E+04
0.127E+01	0.263E+04
0.130E+01	0.260E+04
0.132E+01	0.256E+04
0.135E+01	0.252E+04
0.149E+01	0.252E+04
0.162E+01	0.252E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

	DEPTH	B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Puí									
	FT		IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN									
	8.12		36.00	34.0	4.981E-02	2.500E+01	1.50	1.07	0.000E+00
1.084E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.116E+00	0.169E+03
0.231E+00	0.339E+03
0.347E+00	0.508E+03
0.462E+00	0.678E+03
0.578E+00	0.847E+03
0.809E+00	0.119E+04
0.924E+00	0.136E+04
0.924E+00	0.136E+04
0.995E+00	0.136E+04
0.107E+01	0.136E+04
0.114E+01	0.136E+04
0.121E+01	0.136E+04
0.128E+01	0.136E+04
0.135E+01	0.136E+04
0.149E+01	0.136E+04
0.162E+01	0.136E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Puí									
	FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN									
14.12		36.00	34.0	5.569E-02		2.500E+01	0.91	0.54	0.000E+00
4.005E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00

0.147E+00	0.436E+03
0.294E+00	0.871E+03
0.441E+00	0.131E+04
0.588E+00	0.174E+04
0.734E+00	0.218E+04
0.103E+01	0.305E+04
0.118E+01	0.348E+04
0.118E+01	0.348E+04
0.120E+01	0.341E+04
0.123E+01	0.333E+04
0.126E+01	0.325E+04
0.129E+01	0.318E+04
0.132E+01	0.310E+04
0.135E+01	0.302E+04
0.149E+01	0.302E+04
0.162E+01	0.302E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
10.75	36.00	34.0	4.440E-02	2.500E+01	1.12	0.76	0.000E+00
1.787E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.117E+00	0.247E+03
0.233E+00	0.495E+03
0.350E+00	0.742E+03
0.466E+00	0.989E+03
0.583E+00	0.124E+04
0.816E+00	0.173E+04
0.932E+00	0.198E+04
0.932E+00	0.198E+04
0.100E+01	0.193E+04
0.107E+01	0.187E+04
0.114E+01	0.182E+04
0.121E+01	0.177E+04
0.128E+01	0.171E+04
0.135E+01	0.166E+04
0.149E+01	0.166E+04
0.162E+01	0.166E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
FT			IN		LBS/IN**3		LBS/IN**3			LBS/IN
16.75			36.00	34.0	5.130E-02		2.500E+01	0.88	0.51	0.000E+00
5.270E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.151E+00	0.548E+03
0.302E+00	0.110E+04
0.454E+00	0.164E+04
0.605E+00	0.219E+04
0.756E+00	0.274E+04
0.106E+01	0.383E+04
0.121E+01	0.438E+04
0.121E+01	0.438E+04
0.123E+01	0.430E+04
0.126E+01	0.421E+04
0.128E+01	0.413E+04
0.130E+01	0.404E+04
0.133E+01	0.396E+04
0.135E+01	0.388E+04
0.149E+01	0.388E+04
0.162E+01	0.388E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
FT			IN		LBS/IN**3		LBS/IN**3			LBS/IN
13.38			36.00	34.0	4.112E-02		2.500E+01	0.95	0.58	0.000E+00
2.636E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.121E+00	0.337E+03

0.242E+00	0.673E+03
0.364E+00	0.101E+04
0.485E+00	0.135E+04
0.606E+00	0.168E+04
0.848E+00	0.236E+04
0.970E+00	0.269E+04
0.970E+00	0.269E+04
0.103E+01	0.259E+04
0.110E+01	0.249E+04
0.116E+01	0.239E+04
0.122E+01	0.228E+04
0.129E+01	0.218E+04
0.135E+01	0.208E+04
0.149E+01	0.208E+04
0.162E+01	0.208E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
	19.38		36.00	34.0	4.810E-02		2.500E+01	0.88	0.50	0.000E+00
	6.682E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.156E+00	0.669E+03
0.313E+00	0.134E+04
0.469E+00	0.201E+04
0.626E+00	0.267E+04
0.782E+00	0.334E+04
0.109E+01	0.468E+04
0.125E+01	0.535E+04
0.125E+01	0.535E+04
0.127E+01	0.527E+04
0.128E+01	0.520E+04
0.130E+01	0.512E+04
0.132E+01	0.505E+04
0.133E+01	0.497E+04
0.135E+01	0.489E+04
0.149E+01	0.489E+04
0.162E+01	0.489E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
15.99	36.00	34.0	3.891E-02	2.500E+01	0.89	0.51	0.000E+00	
3.630E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.127E+00	0.437E+03
0.255E+00	0.875E+03
0.382E+00	0.131E+04
0.510E+00	0.175E+04
0.637E+00	0.219E+04
0.892E+00	0.306E+04
0.102E+01	0.350E+04
0.102E+01	0.350E+04
0.107E+01	0.336E+04
0.113E+01	0.323E+04
0.118E+01	0.309E+04
0.124E+01	0.296E+04
0.129E+01	0.282E+04
0.135E+01	0.268E+04
0.149E+01	0.268E+04
0.162E+01	0.268E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
21.99	36.00	34.0	4.566E-02	2.500E+01	0.88	0.50	0.000E+00	
8.238E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.161E+00	0.796E+03
0.323E+00	0.159E+04

0.484E+00	0.239E+04
0.646E+00	0.318E+04
0.807E+00	0.398E+04
0.113E+01	0.557E+04
0.129E+01	0.637E+04
0.129E+01	0.637E+04
0.130E+01	0.631E+04
0.131E+01	0.626E+04
0.132E+01	0.620E+04
0.133E+01	0.615E+04
0.134E+01	0.609E+04
0.135E+01	0.603E+04
0.149E+01	0.603E+04
0.162E+01	0.603E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
16.01	36.00	22.0	3.890E-02	2.700E+02	0.88	0.50	3.375E+02
2.444E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.871E-02	0.449E+03
0.174E-01	0.899E+03
0.757E-01	0.155E+04
0.134E+00	0.191E+04
0.192E+00	0.219E+04
0.250E+00	0.241E+04
0.309E+00	0.261E+04
0.367E+00	0.278E+04
0.425E+00	0.293E+04
0.483E+00	0.308E+04
0.542E+00	0.321E+04
0.600E+00	0.333E+04
0.850E+00	0.282E+04
0.110E+01	0.230E+04
0.135E+01	0.179E+04
0.162E+01	0.179E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
FT			IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN										
22.01			36.00	22.0	4.565E-02		2.700E+02	0.88	0.50	3.375E+02
4.679E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.161E-01	0.109E+04
0.323E-01	0.219E+04
0.890E-01	0.313E+04
0.146E+00	0.372E+04
0.203E+00	0.418E+04
0.259E+00	0.456E+04
0.316E+00	0.489E+04
0.373E+00	0.518E+04
0.430E+00	0.544E+04
0.486E+00	0.569E+04
0.543E+00	0.591E+04
0.600E+00	0.612E+04
0.850E+00	0.522E+04
0.110E+01	0.433E+04
0.135E+01	0.343E+04
0.162E+01	0.343E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1										
FT			IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN										
17.25			36.00	22.0	3.809E-02		2.700E+02	0.88	0.50	3.375E+02
2.676E+03										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.916E-02	0.503E+03
0.183E-01	0.101E+04
0.765E-01	0.170E+04

0.135E+00	0.209E+04
0.193E+00	0.239E+04
0.251E+00	0.263E+04
0.309E+00	0.284E+04
0.367E+00	0.303E+04
0.425E+00	0.319E+04
0.484E+00	0.335E+04
0.542E+00	0.349E+04
0.600E+00	0.362E+04
0.850E+00	0.307E+04
0.110E+01	0.251E+04
0.135E+01	0.196E+04
0.162E+01	0.196E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
23.25	36.00	22.0	4.469E-02	2.700E+02	0.88	0.50	3.375E+02
5.000E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.166E-01	0.118E+04
0.332E-01	0.236E+04
0.899E-01	0.335E+04
0.147E+00	0.398E+04
0.203E+00	0.446E+04
0.260E+00	0.486E+04
0.317E+00	0.521E+04
0.373E+00	0.552E+04
0.430E+00	0.580E+04
0.487E+00	0.606E+04
0.543E+00	0.630E+04
0.600E+00	0.652E+04
0.850E+00	0.557E+04
0.110E+01	0.462E+04
0.135E+01	0.366E+04
0.162E+01	0.366E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	18.50		36.00	22.0	3.739E-02		2.700E+02	0.88	0.50	3.375E+02
	2.921E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.963E-02	0.561E+03
0.193E-01	0.112E+04
0.773E-01	0.186E+04
0.135E+00	0.228E+04
0.193E+00	0.260E+04
0.252E+00	0.286E+04
0.310E+00	0.309E+04
0.368E+00	0.329E+04
0.426E+00	0.347E+04
0.484E+00	0.363E+04
0.542E+00	0.379E+04
0.600E+00	0.393E+04
0.850E+00	0.333E+04
0.110E+01	0.274E+04
0.135E+01	0.214E+04
0.162E+01	0.214E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	24.50		36.00	22.0	4.382E-02		2.700E+02	0.88	0.50	3.375E+02
	5.335E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.171E-01	0.128E+04
0.342E-01	0.255E+04
0.908E-01	0.359E+04
0.147E+00	0.425E+04

0.204E+00	0.476E+04
0.261E+00	0.519E+04
0.317E+00	0.556E+04
0.374E+00	0.588E+04
0.430E+00	0.618E+04
0.487E+00	0.645E+04
0.543E+00	0.671E+04
0.600E+00	0.694E+04
0.850E+00	0.593E+04
0.110E+01	0.492E+04
0.135E+01	0.391E+04
0.162E+01	0.391E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
19.75	36.00	22.0	3.677E-02	2.700E+02	0.88	0.50	3.375E+02
3.178E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.101E-01	0.623E+03
0.202E-01	0.125E+04
0.782E-01	0.203E+04
0.136E+00	0.249E+04
0.194E+00	0.283E+04
0.252E+00	0.311E+04
0.310E+00	0.335E+04
0.368E+00	0.356E+04
0.426E+00	0.375E+04
0.484E+00	0.393E+04
0.542E+00	0.410E+04
0.600E+00	0.425E+04
0.850E+00	0.361E+04
0.110E+01	0.297E+04
0.135E+01	0.233E+04
0.162E+01	0.233E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
25.75	36.00	22.0	4.304E-02	2.700E+02	0.88	0.50	3.375E+02	
5.683E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.176E-01	0.137E+04
0.353E-01	0.275E+04
0.918E-01	0.383E+04
0.148E+00	0.453E+04
0.205E+00	0.507E+04
0.261E+00	0.552E+04
0.318E+00	0.591E+04
0.374E+00	0.626E+04
0.431E+00	0.657E+04
0.487E+00	0.686E+04
0.544E+00	0.713E+04
0.600E+00	0.738E+04
0.850E+00	0.631E+04
0.110E+01	0.523E+04
0.135E+01	0.416E+04
0.162E+01	0.416E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
20.99	36.00	22.0	3.623E-02	2.700E+02	0.88	0.50	3.375E+02	
3.445E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.106E-01	0.689E+03
0.212E-01	0.138E+04
0.791E-01	0.221E+04
0.137E+00	0.269E+04
0.195E+00	0.306E+04

0.253E+00	0.336E+04
0.311E+00	0.362E+04
0.368E+00	0.385E+04
0.426E+00	0.405E+04
0.484E+00	0.424E+04
0.542E+00	0.442E+04
0.600E+00	0.458E+04
0.850E+00	0.390E+04
0.110E+01	0.321E+04
0.135E+01	0.252E+04
0.162E+01	0.252E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
26.99	36.00	22.0	4.233E-02	2.700E+02	0.88	0.50	3.375E+02
6.026E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.181E-01	0.147E+04
0.362E-01	0.294E+04
0.926E-01	0.408E+04
0.149E+00	0.481E+04
0.205E+00	0.538E+04
0.262E+00	0.585E+04
0.318E+00	0.626E+04
0.374E+00	0.663E+04
0.431E+00	0.696E+04
0.487E+00	0.726E+04
0.544E+00	0.754E+04
0.600E+00	0.781E+04
0.850E+00	0.668E+04
0.110E+01	0.554E+04
0.135E+01	0.441E+04
0.162E+01	0.441E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
21.01	36.000	9.70E+00	3.50E+04	3.62E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.218E+02		
		0.180E-04		0.259E+02		
		0.540E-04		0.341E+02		
		0.108E-03		0.406E+02		
		0.162E-03		0.449E+02		
		0.360E-03		0.549E+02		
		0.720E-03		0.653E+02		
		0.108E-02		0.722E+02		
		0.144E-02		0.776E+02		
		0.180E-02		0.821E+02		
		0.450E-02		0.103E+03		
		0.900E-02		0.123E+03		
		0.135E-01		0.136E+03		
		0.180E-01		0.146E+03		
		0.720E-01		0.206E+03		
		0.144E+00		0.245E+03		
		0.216E+00		0.272E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
27.01	36.000	9.70E+00	3.50E+04	4.23E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
22.00	36.000	9.70E+00	3.50E+04	3.69E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		
		0.135E-01		0.198E+03		
		0.180E-01		0.213E+03		
		0.720E-01		0.301E+03		
		0.144E+00		0.359E+03		
		0.216E+00		0.397E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
28.00	36.000	9.70E+00	3.50E+04	4.26E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		

0.180E-01	0.620E+03
0.720E-01	0.877E+03
0.144E+00	0.104E+04
0.216E+00	0.115E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
23.00	36.000	9.70E+00	3.50E+04	3.75E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.420E+02		
		0.180E-04		0.500E+02		
		0.540E-04		0.658E+02		
		0.108E-03		0.782E+02		
		0.162E-03		0.865E+02		
		0.360E-03		0.106E+03		
		0.720E-03		0.126E+03		
		0.108E-02		0.139E+03		
		0.144E-02		0.149E+03		
		0.180E-02		0.158E+03		
		0.450E-02		0.199E+03		
		0.900E-02		0.236E+03		
		0.135E-01		0.261E+03		
		0.180E-01		0.281E+03		
		0.720E-01		0.397E+03		
		0.144E+00		0.473E+03		
		0.216E+00		0.523E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
29.00	36.000	9.70E+00	3.50E+04	4.29E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.308E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		

0.180E-02	0.387E+03
0.450E-02	0.486E+03
0.900E-02	0.578E+03
0.135E-01	0.640E+03
0.180E-01	0.688E+03
0.720E-01	0.973E+03
0.144E+00	0.116E+04
0.216E+00	0.128E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.00	36.000	9.70E+00	3.50E+04	3.81E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.522E+02		
		0.180E-04		0.620E+02		
		0.540E-04		0.816E+02		
		0.108E-03		0.971E+02		
		0.162E-03		0.107E+03		
		0.360E-03		0.131E+03		
		0.720E-03		0.156E+03		
		0.108E-02		0.173E+03		
		0.144E-02		0.186E+03		
		0.180E-02		0.196E+03		
		0.450E-02		0.247E+03		
		0.900E-02		0.293E+03		
		0.135E-01		0.325E+03		
		0.180E-01		0.349E+03		
		0.720E-01		0.493E+03		
		0.144E+00		0.587E+03		
		0.216E+00		0.649E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.00	36.000	9.70E+00	3.50E+04	4.32E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		
		0.180E-04		0.134E+03		
		0.540E-04		0.177E+03		
		0.108E-03		0.210E+03		
		0.162E-03		0.233E+03		

0.360E-03	0.284E+03
0.720E-03	0.338E+03
0.108E-02	0.374E+03
0.144E-02	0.402E+03
0.180E-02	0.425E+03
0.450E-02	0.534E+03
0.900E-02	0.636E+03
0.135E-01	0.703E+03
0.180E-01	0.756E+03
0.720E-01	0.107E+04
0.144E+00	0.127E+04
0.216E+00	0.141E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
24.99	36.000	9.70E+00	3.50E+04	3.86E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.622E+02		
		0.180E-04		0.740E+02		
		0.540E-04		0.974E+02		
		0.108E-03		0.116E+03		
		0.162E-03		0.128E+03		
		0.360E-03		0.156E+03		
		0.720E-03		0.186E+03		
		0.108E-02		0.206E+03		
		0.144E-02		0.221E+03		
		0.180E-02		0.234E+03		
		0.450E-02		0.294E+03		
		0.900E-02		0.350E+03		
		0.135E-01		0.387E+03		
		0.180E-01		0.416E+03		
		0.720E-01		0.588E+03		
		0.144E+00		0.700E+03		
		0.216E+00		0.774E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
30.99	36.000	9.70E+00	3.50E+04	4.34E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.113E+03		

0.180E-04	0.134E+03
0.540E-04	0.177E+03
0.108E-03	0.210E+03
0.162E-03	0.233E+03
0.360E-03	0.284E+03
0.720E-03	0.338E+03
0.108E-02	0.374E+03
0.144E-02	0.402E+03
0.180E-02	0.425E+03
0.450E-02	0.534E+03
0.900E-02	0.636E+03
0.135E-01	0.703E+03
0.180E-01	0.756E+03
0.720E-01	0.107E+04
0.144E+00	0.127E+04
0.216E+00	0.141E+04

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
300.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.208D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
372.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06

0.173D-01	0.133D+06
0.230D-01	0.136D+06
0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.347D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
312.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.220D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
384.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06

0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.360D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
324.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.233D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
396.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06

0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.372D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
336.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.245D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
408.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06

0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.385D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
347.90		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.257D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
419.90		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06

0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.398D+03

Long Term : STA 453+25 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 7

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
LBS	FT	IN	RAD	LBS-IN	LBS	LBS/IN
LBS	LBS-IN**2					
-----	-----	----	-----	-----	-----	-----
0	0.000E+00	1.016E+00	-4.913E-03	0.000E+00	0.000E+00	0.000E+00
-7.002E-08	1.362E+11					
1	5.000E-01	9.866E-01	-4.913E-03	-4.201E-07	3.017E+02	0.000E+00
6.034E+02	1.362E+11					
2	1.000E+00	9.571E-01	-4.912E-03	3.621E+03	9.596E+02	0.000E+00
7.123E+02	1.362E+11					
3	1.500E+00	9.277E-01	-4.912E-03	1.152E+04	1.726E+03	0.000E+00
8.211E+02	1.362E+11					
4	2.000E+00	8.982E-01	-4.911E-03	2.434E+04	2.602E+03	0.000E+00
9.299E+02	1.362E+11					
5	2.500E+00	8.687E-01	-4.910E-03	4.274E+04	3.586E+03	0.000E+00
1.039E+03	1.362E+11					
6	3.000E+00	8.393E-01	-4.907E-03	6.737E+04	7.904E+03	0.000E+00
7.598E+03	1.362E+11					
7	3.500E+00	8.098E-01	-4.903E-03	1.376E+05	1.556E+04	0.000E+00
7.706E+03	1.362E+11					
8	4.000E+00	7.804E-01	-4.894E-03	2.540E+05	2.009E+04	0.000E+00
1.365E+03	1.362E+11					
9	4.500E+00	7.511E-01	-4.880E-03	3.787E+05	2.151E+04	0.000E+00
1.474E+03	1.362E+11					
10	5.000E+00	7.219E-01	-4.861E-03	5.122E+05	2.304E+04	0.000E+00
1.583E+03	1.362E+11					
11	5.500E+00	6.928E-01	-4.835E-03	6.552E+05	2.468E+04	0.000E+00
1.692E+03	1.362E+11					
12	6.000E+00	6.639E-01	-4.803E-03	8.083E+05	2.642E+04	-4.320E-01
1.798E+03	1.362E+11					
13	6.500E+00	6.352E-01	-4.764E-03	9.722E+05	2.758E+04	-5.353E+01

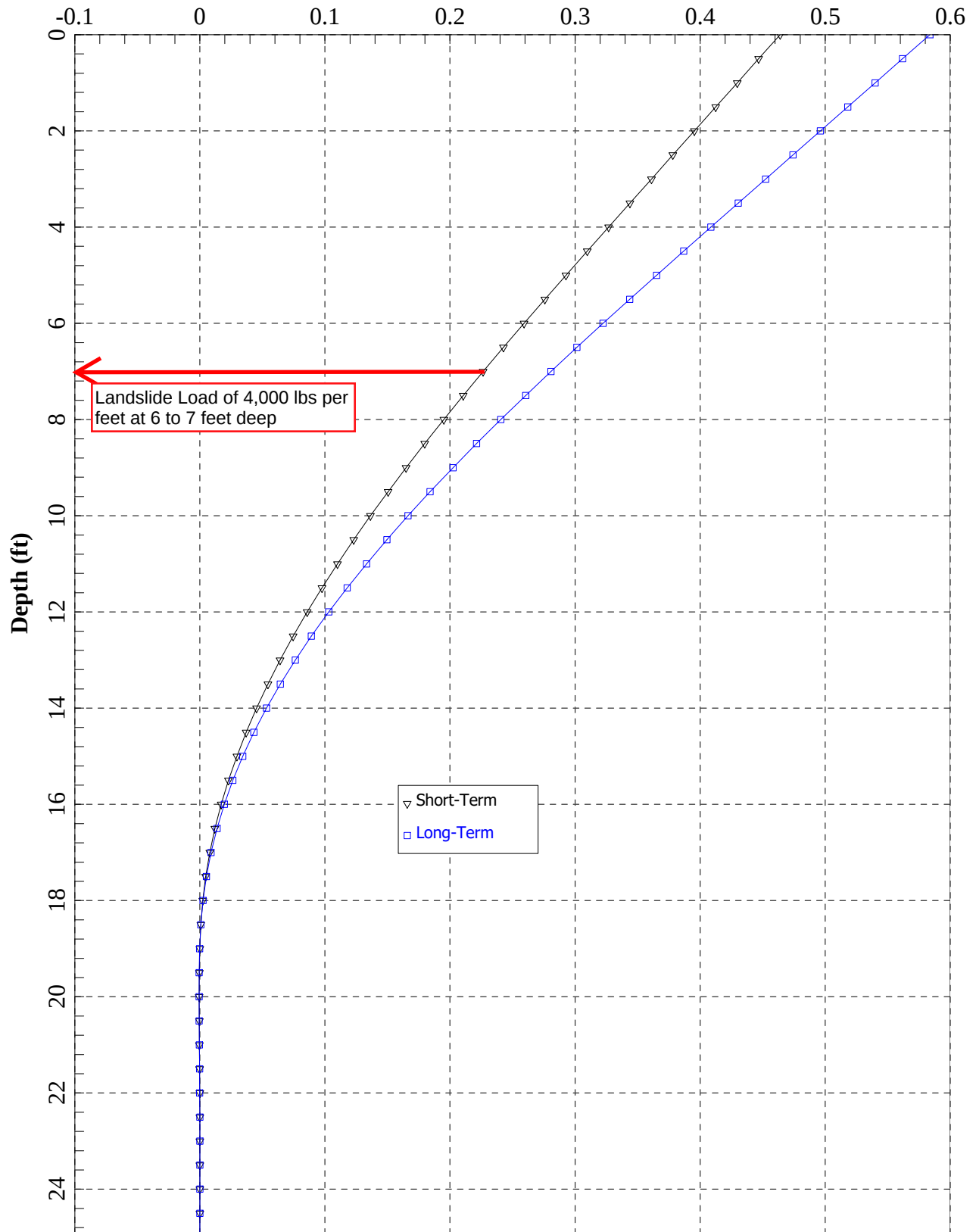
5.098E+02	1.362E+11					
14	7.000E+00	6.067E-01	-4.717E-03	1.139E+06	2.792E+04	-1.094E+02
1.744E+02	1.362E+11					
15	7.500E+00	5.785E-01	-4.663E-03	1.307E+06	2.792E+04	-1.659E+02
-1.641E+02	1.362E+11					
16	8.000E+00	5.507E-01	-4.602E-03	1.474E+06	2.759E+04	-2.212E+02
-4.964E+02	1.362E+11					
17	8.500E+00	5.233E-01	-4.533E-03	1.638E+06	2.710E+04	-2.239E+02
-4.798E+02	1.362E+11					
18	9.000E+00	4.963E-01	-4.458E-03	1.800E+06	2.662E+04	-2.248E+02
-4.853E+02	1.362E+11					
19	9.500E+00	4.698E-01	-4.375E-03	1.958E+06	2.597E+04	-2.805E+02
-8.194E+02	1.362E+11					
20	1.000E+01	4.438E-01	-4.285E-03	2.111E+06	2.499E+04	-3.353E+02
-1.148E+03	1.362E+11					
21	1.050E+01	4.184E-01	-4.189E-03	2.258E+06	2.352E+04	-4.403E+02
-1.778E+03	1.362E+11					
22	1.100E+01	3.936E-01	-4.087E-03	2.393E+06	2.170E+04	-4.567E+02
-1.877E+03	1.362E+11					
23	1.150E+01	3.694E-01	-3.979E-03	2.518E+06	1.978E+04	-4.686E+02
-1.948E+03	1.362E+11					
24	1.200E+01	3.458E-01	-3.865E-03	2.631E+06	1.774E+04	-4.524E+02
-2.136E+03	1.362E+11					
25	1.250E+01	3.230E-01	-3.747E-03	2.731E+06	1.566E+04	-4.352E+02
-2.033E+03	1.362E+11					
26	1.300E+01	3.009E-01	-3.625E-03	2.819E+06	1.368E+04	-4.172E+02
-1.924E+03	1.362E+11					
27	1.350E+01	2.795E-01	-3.499E-03	2.895E+06	1.181E+04	-3.986E+02
-1.813E+03	1.362E+11					
28	1.400E+01	2.589E-01	-3.370E-03	2.960E+06	1.005E+04	-3.796E+02
-1.699E+03	1.362E+11					
29	1.450E+01	2.390E-01	-3.239E-03	3.016E+06	8.364E+03	-3.769E+02
-1.683E+03	1.362E+11					
30	1.500E+01	2.200E-01	-3.105E-03	3.061E+06	6.699E+03	-3.709E+02
-1.647E+03	1.362E+11					
31	1.550E+01	2.018E-01	-2.969E-03	3.096E+06	5.079E+03	-3.620E+02
-1.593E+03	1.362E+11					
32	1.600E+01	1.844E-01	-2.832E-03	3.122E+06	3.520E+03	-3.507E+02
-1.526E+03	1.362E+11					
33	1.650E+01	1.678E-01	-2.694E-03	3.138E+06	2.035E+03	-3.373E+02
-1.445E+03	1.362E+11					
34	1.700E+01	1.521E-01	-2.556E-03	3.146E+06	6.359E+02	-3.219E+02
-1.353E+03	1.362E+11					
35	1.750E+01	1.371E-01	-2.417E-03	3.146E+06	-6.762E+02	-3.084E+02
-1.271E+03	1.362E+11					
36	1.800E+01	1.230E-01	-2.279E-03	3.138E+06	-1.902E+03	-2.930E+02
-1.179E+03	1.362E+11					
37	1.850E+01	1.098E-01	-2.141E-03	3.123E+06	-3.030E+03	-2.762E+02
-1.078E+03	1.362E+11					
38	1.900E+01	9.735E-02	-2.004E-03	3.102E+06	-4.054E+03	-2.580E+02

-9.692E+02	1.362E+11					
39	1.950E+01	8.573E-02	-1.868E-03	3.075E+06	-4.965E+03	-2.388E+02
-8.538E+02	1.362E+11					
40	2.000E+01	7.493E-02	-1.733E-03	3.042E+06	-5.758E+03	-2.185E+02
-7.323E+02	1.362E+11					
41	2.050E+01	6.493E-02	-1.600E-03	3.005E+06	-6.429E+03	-1.979E+02
-6.084E+02	1.362E+11					
42	2.100E+01	5.573E-02	-1.469E-03	2.965E+06	-6.975E+03	-1.771E+02
-4.840E+02	1.362E+11					
43	2.150E+01	4.731E-02	-1.339E-03	2.922E+06	-7.397E+03	-1.566E+02
-3.607E+02	1.362E+11					
44	2.200E+01	3.966E-02	-1.211E-03	2.876E+06	-7.698E+03	-1.365E+02
-2.400E+02	1.362E+11					
45	2.250E+01	3.277E-02	-1.086E-03	2.829E+06	-8.987E+03	-4.690E+02
-2.338E+03	1.362E+11					
46	2.300E+01	2.663E-02	-9.624E-04	2.768E+06	-1.223E+04	-7.697E+02
-4.142E+03	1.362E+11					
47	2.350E+01	2.122E-02	-8.424E-04	2.683E+06	-1.719E+04	-1.045E+03
-5.792E+03	1.362E+11					
48	2.400E+01	1.652E-02	-7.269E-04	2.562E+06	-2.266E+04	-9.355E+02
-5.137E+03	1.362E+11					
49	2.450E+01	1.250E-02	-6.174E-04	2.411E+06	-2.717E+04	-7.270E+02
-3.886E+03	1.362E+11					
50	2.500E+01	9.116E-03	-5.151E-04	2.236E+06	-3.050E+04	-5.415E+02
-2.772E+03	1.362E+11					
51	2.550E+01	6.321E-03	-4.208E-04	2.045E+06	-3.279E+04	-3.827E+02
-1.820E+03	1.362E+11					
52	2.600E+01	4.066E-03	-3.352E-04	1.843E+06	-3.422E+04	-2.508E+02
-1.029E+03	1.362E+11					
53	2.650E+01	2.298E-03	-2.586E-04	1.634E+06	-3.493E+04	-1.456E+02
-3.972E+02	1.362E+11					
54	2.700E+01	9.624E-04	-1.913E-04	1.423E+06	-3.508E+04	-6.255E+01
1.009E+02	1.362E+11					
55	2.750E+01	2.563E-06	-1.333E-04	1.213E+06	-3.497E+04	1.830E+01
1.098E+02	1.362E+11					
56	2.800E+01	-6.366E-04	-8.443E-05	1.004E+06	-3.412E+04	2.668E+02
1.601E+03	1.362E+11					
57	2.850E+01	-1.011E-03	-4.463E-05	8.037E+05	-3.237E+04	3.175E+02
1.905E+03	1.362E+11					
58	2.900E+01	-1.172E-03	-1.339E-05	6.152E+05	-3.037E+04	3.467E+02
2.080E+03	1.362E+11					
59	2.950E+01	-1.171E-03	9.835E-06	4.392E+05	-2.824E+04	3.638E+02
2.183E+03	1.362E+11					
60	3.000E+01	-1.054E-03	2.559E-05	2.763E+05	-2.604E+04	3.714E+02
2.229E+03	1.362E+11					
61	3.050E+01	-8.642E-04	3.447E-05	1.268E+05	-2.386E+04	3.524E+02
2.114E+03	1.362E+11					
62	3.100E+01	-6.406E-04	3.704E-05	-1.005E+04	-2.183E+04	3.261E+02
1.957E+03	1.362E+11					
63	3.150E+01	-4.197E-04	3.384E-05	-1.352E+05	-1.465E+04	2.068E+03

1.241E+04	1.362E+11					
64	3.200E+01	-2.345E-04	2.677E-05	-1.858E+05	-2.003E+03	2.147E+03
1.288E+04	1.362E+11					
65	3.250E+01	-9.838E-05	1.918E-05	-1.592E+05	7.140E+03	9.008E+02
5.405E+03	1.362E+11					
66	3.300E+01	-4.353E-06	1.347E-05	-1.001E+05	9.962E+03	3.986E+01
2.392E+02	1.362E+11					
67	3.350E+01	6.321E-05	1.039E-05	-3.965E+04	8.345E+03	-5.788E+02
-3.473E+03	1.362E+11					
68	3.400E+01	1.203E-04	9.514E-06	0.000E+00	3.304E+03	-1.101E+03
-6.609E+03	1.362E+11					

END OF ANALYSIS

STA 455+00 Depth versus Deflection (Service Case)
Deflection (in)



=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 455+00\

Name of input data file : STA 455+00-Service Case.py7d
Name of output file : STA 455+00-Service Case.py7o
Name of plot output file : STA 455+00-Service Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 09:14:55

STA 455+00 Soldier Pile Wall

* PROGRAM CONTROL PARAMETERS *

NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS = 1
NO OF CROSS SECTIONS = 1
GENERATE EARTH PRESSURE INTERNALLY = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS = 0
NO OF STRUTS/RAKERS = 0

HEIGHT OF WALL	=	25.000 FT
NUMBER OF INCREMENTS	=	50
INCREMENT LENGTH	=	6.000 IN
MAXIMUM ALLOWABLE DEFLECTION	=	100.000 IN
DEFLECTION CLOSURE TOLERANCE	=	1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS	=	100

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	25.0000	1

* CROSS SECTIONS *

CROSS SECTION : 1
 SECTION NAME : Section
 TYPE : ELASTIC
 CROSS SECTION TYPE : I SECTION
 EQUIVALENT DIAMETER : 10.0000 IN
 EXTERNAL WIDTH : 10.0000 IN
 EXTERNAL DEPTH : 27.6000 IN
 FLANGE THICKNESS : 1.10000 IN
 WEB THICKNESS : 0.61000 IN
 YOUNG MODULUS : 2.90000E+07 LBS/IN**2

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

* STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
 S - STIFFNESS OF TRANSVERSE RESISTANCE,
 T - TORQUE, P - AXIAL LOAD,
 R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI LBS-IN**2	Q LBS	S LBS/IN	T IN-LBS	R IN-LBS	P LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50	0		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	2.400E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

 * WALL INFORMATION *

FREE HEIGHT OF WALL = 6.000E+00 FT
 WIDTH FOR EARTH PRESSURE, WA = 7.800E+01 IN
 WIDTH FOR SOIL RESISTANCE, WP = 3.600E+01 IN
 DEPTH TO THE WATER TABLE AT BACKFILL = 1.200E+01 FT
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.200E+01 FT
 UNIT WEIGHT OF WATER = 3.600E-02 LBS/IN**3
 SLOPE OF THE BACKFILL (deg.) = 0.000E+00
 SLOPE OF THE EXCAVATION GROUND (deg.) = 0.000E+00
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE = 1.736E+00 LBS/IN**2

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	TOTAL UNIT			
			PHI DEG	WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	3.0	5.2	0.0	0.064	F	0.00
2	3.0	3.5	0.0	0.052	F	3.00
3	2.0	3.5	0.0	0.052	F	6.00
4	4.0	1.7	0.0	0.052	F	8.00
5	3.0	10.4	0.0	0.064	F	12.00
6	2.0	9.7	0.0	0.087	T	15.00
7	33.0	11000.0	0.0	0.093	T	17.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
3.000E+00	4.028E+00
6.000E+00	5.903E+00
8.000E+00	7.153E+00
1.200E+01	9.653E+00
1.500E+01	1.065E+01
1.700E+01	1.187E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	1.000E+00	1.000E+00	0.000E+00
2	1.000E+00	1.000E+00	0.000E+00
3	1.000E+00	1.000E+00	0.000E+00
4	1.000E+00	1.000E+00	0.000E+00
5	1.000E+00	1.000E+00	0.000E+00
6	1.000E+00	1.000E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00

NOTES:

- (*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS
 (**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE
 IF IT IS DIFFERENT THAN ZERO

 * ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	0.00	1.50	0.00	2.00	0.00	5.79	0.00
2	0.00	4.50	0.00	5.00	0.00	6.56	0.00

Net active pressure is negative.

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

* WARNING *

This model uses a reduction of active loads for the cohesive strength of clay. Please check carefully these results. Please evaluate if other alternatives are more applicable to your model (e.g., other/reduced cohesive strength, equivalent fluid pressure, and/or other type of retained soil to simulate drained and/or long-term conditions).

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	1.35416E+02
5.00000E-01	5.46000E-10
1.00000E+00	1.01400E-09
1.50000E+00	1.48200E-09
2.00000E+00	1.95000E-09
2.50000E+00	2.41800E-09
3.00000E+00	2.88600E-09
3.50000E+00	3.35400E-09
4.00000E+00	3.82200E-09
4.50000E+00	4.29000E-09
5.00000E+00	4.75800E-09
5.50000E+00	5.22600E-09
6.00000E+00	5.69400E-09
6.50000E+00	2.84400E-09
7.00000E+00	3.06000E-09
7.50000E+00	3.27600E-09
8.00000E+00	3.49200E-09
8.50000E+00	8.75016E+01
9.00000E+00	8.75016E+01
9.50000E+00	8.75016E+01
1.00000E+01	8.75016E+01
1.05000E+01	8.75016E+01
1.10000E+01	8.75016E+01
1.15000E+01	8.75016E+01
1.20000E+01	8.75016E+01
1.25000E+01	5.43600E-09
1.30000E+01	5.65200E-09
1.35000E+01	5.86800E-09
1.40000E+01	6.08400E-09
1.45000E+01	6.30000E-09
1.50000E+01	6.51600E-09
1.55000E+01	6.73200E-09
1.60000E+01	6.94800E-09
1.65000E+01	7.16400E-09
1.70000E+01	7.38000E-09
1.75000E+01	7.59600E-09
1.80000E+01	7.81200E-09

1.85000E+01	8.02800E-09
1.90000E+01	8.24400E-09
1.95000E+01	8.46000E-09
2.00000E+01	8.67600E-09
2.05000E+01	8.89200E-09
2.10000E+01	9.10800E-09
2.15000E+01	9.32400E-09
2.20000E+01	9.54000E-09
2.25000E+01	9.75600E-09
2.30000E+01	9.97200E-09
2.35000E+01	1.01880E-08
2.40000E+01	1.04040E-08
2.45000E+01	1.06200E-08
2.50000E+01	1.08360E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

5 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SOFT CLAY

LAYER 2
 THE SOIL IS A SOFT CLAY

LAYER 3
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4
 THE LAYER IS WEAK ROCK

LAYER 5
 THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
 10 POINTS

X, FT	WEIGHT, LBS/IN**3
6.0000	5.2083E-02
8.0000	5.2083E-02
8.0000	5.2083E-02
12.0000	5.2083E-02
12.0000	2.7657E-02

15.0000	2.7657E-02
15.0000	5.0806E-02
17.0000	5.0806E-02
17.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	3.4722E+00	0.000	2.0000E-02	0.0000E+00
8.00	3.4722E+00	0.000	2.0000E-02	0.0000E+00
8.00	1.7361E+00	0.000	2.0000E-02	0.0000E+00
12.00	1.7361E+00	0.000	2.0000E-02	0.0000E+00
12.00	1.0417E+01	0.000	7.0000E-03	0.0000E+00
15.00	1.0417E+01	0.000	7.0000E-03	0.0000E+00
15.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
26.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
0.01	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	19.684
0.036	42.408
0.108	61.163
0.288	84.815
0.576	106.861
0.864	122.325
1.440	145.032
2.160	166.021
3.240	190.046
4.320	209.173
5.760	230.225
7.200	248.002
9.360	270.668
11.520	290.065
14.400	312.463

17.280 312.463

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
6.01	36.000	3.4722E+00	5.7862E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	34.105
0.036	73.477
0.108	105.972
0.288	146.954
0.576	185.150
0.864	211.944
1.440	251.287
2.160	287.652
3.240	329.279
4.320	362.419
5.760	398.894
7.200	429.695
9.360	468.966
11.520	502.575
14.400	541.382
17.280	541.382

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
0.50	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	20.801
0.036	44.815
0.108	64.634
0.288	89.630
0.576	112.926
0.864	129.268
1.440	153.265
2.160	175.444
3.240	200.833

4.320	221.046
5.760	243.292
7.200	262.079
9.360	286.031
11.520	306.529
14.400	330.198
17.280	330.198

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
6.50	36.000	3.4722E+00	5.7425E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	35.222
0.036	75.884
0.108	109.444
0.288	151.768
0.576	191.215
0.864	218.887
1.440	259.519
2.160	297.075
3.240	340.067
4.320	374.292
5.760	411.961
7.200	443.772
9.360	484.329
11.520	519.039
14.400	559.117
17.280	559.117

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
1.00	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	21.937
0.036	47.263
0.108	68.165

0.288	94.525
0.576	119.095
0.864	136.329
1.440	161.636
2.160	185.027
3.240	211.803
4.320	233.120
5.760	256.581
7.200	276.394
9.360	301.654
11.520	323.272
14.400	348.234
17.280	348.234

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
7.00	36.000	3.4722E+00	5.7044E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	36.358
0.036	78.332
0.108	112.974
0.288	156.664
0.576	197.384
0.864	225.948
1.440	267.891
2.160	306.659
3.240	351.036
4.320	386.366
5.760	425.250
7.200	458.087
9.360	499.953
11.520	535.782
14.400	577.154
17.280	577.154

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
1.50	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	23.074
0.036	49.711
0.108	71.695
0.288	99.421
0.576	125.263
0.864	143.390
1.440	170.008
2.160	194.610
3.240	222.773
4.320	245.194
5.760	269.870
7.200	290.709
9.360	317.278
11.520	340.015
14.400	366.271
17.280	366.271

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
7.50	36.000	3.4722E+00	5.6713E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	37.495
0.036	80.780
0.108	116.504
0.288	161.559
0.576	203.552
0.864	233.009
1.440	276.263
2.160	316.242
3.240	362.006
4.320	398.440
5.760	438.539
7.200	472.402
9.360	515.576
11.520	552.525
14.400	595.190
17.280	595.190

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
1.99	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	24.191
0.036	52.118
0.108	75.167
0.288	104.235
0.576	131.328
0.864	150.333
1.440	178.240
2.160	204.034
3.240	233.560
4.320	257.066
5.760	282.938
7.200	304.786
9.360	332.641
11.520	356.480
14.400	384.006
17.280	384.006

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
7.99	36.000	3.4722E+00	5.6428E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	38.612
0.036	83.187
0.108	119.976
0.288	166.373
0.576	209.617
0.864	239.952
1.440	284.495
2.160	325.665
3.240	372.793
4.320	410.312
5.760	451.607
7.200	486.479
9.360	530.940

11.520	568.989
14.400	612.925
17.280	612.925

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
2.01	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	15.849
0.036	34.146
0.108	49.247
0.288	68.292
0.576	86.043
0.864	98.494
1.440	116.778
2.160	133.678
3.240	153.023
4.320	168.423
5.760	185.374
7.200	199.688
9.360	217.938
11.520	233.556
14.400	251.591
17.280	251.591

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
8.01	36.000	1.7361E+00	5.6419E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	27.138
0.036	58.467
0.108	84.324
0.288	116.933
0.576	147.327
0.864	168.647
1.440	199.953

2.160	228.889
3.240	262.013
4.320	288.383
5.760	317.406
7.200	341.915
9.360	373.164
11.520	399.907
14.400	430.786
17.280	430.786

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
3.00	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	17.561
0.036	37.834
0.108	54.566
0.288	75.668
0.576	95.336
0.864	109.132
1.440	129.391
2.160	148.115
3.240	169.550
4.320	186.613
5.760	205.395
7.200	221.255
9.360	241.476
11.520	258.781
14.400	278.763
17.280	278.763

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
9.00	36.000	1.7361E+00	5.5941E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	28.834

0.036	62.120
0.108	89.593
0.288	124.240
0.576	156.533
0.864	179.185
1.440	212.448
2.160	243.192
3.240	278.385
4.320	306.403
5.760	337.240
7.200	363.281
9.360	396.482
11.520	424.896
14.400	457.705
17.280	457.705

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
4.00	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	19.287
0.036	41.553
0.108	59.930
0.288	83.106
0.576	104.707
0.864	119.859
1.440	142.109
2.160	162.674
3.240	186.215
4.320	204.957
5.760	225.584
7.200	243.003
9.360	265.212
11.520	284.218
14.400	306.164
17.280	306.164

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
----------------	------	---	-----------	-----

FT	IN	LBS/IN**2	LBS/IN**3	
10.00	36.000	1.7361E+00	5.5556E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	29.497
0.036	63.550
0.108	91.656
0.288	127.101
0.576	160.137
0.864	183.311
1.440	217.339
2.160	248.792
3.240	284.795
4.320	313.458
5.760	345.005
7.200	371.645
9.360	405.611
11.520	434.679
14.400	468.244
17.280	468.244

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
5.00	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	21.013
0.036	45.272
0.108	65.293
0.288	90.544
0.576	114.078
0.864	130.586
1.440	154.827
2.160	177.233
3.240	202.881
4.320	223.300
5.760	245.773
7.200	264.751
9.360	288.947
11.520	309.655
14.400	333.565
17.280	333.565

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
11.00	36.000	1.7361E+00	5.5240E-02	2.0000E-02
	Y, IN		P, LBS/IN	
	0.000		0.000	
	0.004		29.497	
	0.036		63.550	
	0.108		91.656	
	0.288		127.101	
	0.576		160.137	
	0.864		183.311	
	1.440		217.339	
	2.160		248.792	
	3.240		284.795	
	4.320		313.458	
	5.760		345.005	
	7.200		371.645	
	9.360		405.611	
	11.520		434.679	
	14.400		468.244	
	17.280		468.244	

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
5.99	36.000	1.7361E+00	5.2083E-02	2.0000E-02
	Y, IN		P, LBS/IN	
	0.000		0.000	
	0.004		22.725	
	0.036		48.960	
	0.108		70.612	
	0.288		97.919	
	0.576		123.371	
	0.864		141.224	
	1.440		167.440	
	2.160		191.671	
	3.240		219.408	
	4.320		241.490	
	5.760		265.794	

7.200	286.318
9.360	312.485
11.520	334.879
14.400	360.738
17.280	360.738

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
11.99	36.000	1.7361E+00	5.4979E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	29.497
0.036	63.550
0.108	91.656
0.288	127.101
0.576	160.137
0.864	183.311
1.440	217.339
2.160	248.792
3.240	284.795
4.320	313.458
5.760	345.005
7.200	371.645
9.360	405.611
11.520	434.679
14.400	468.244
17.280	468.244

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
6.01	36.000	1.04E+01	1.04E+01	5.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	60.53342
0.00050	90.51858
0.00101	107.64534

0.00504	160.96732
0.01008	191.42349
0.05040	286.24487
0.10080	340.40444
0.25200	428.03593
0.50400	509.02337
0.75600	563.32696
1.00800	605.33421
2.52000	761.16747
5.04000	905.18577
10.08000	1076.45336
11.34000	1076.45336
12.60000	1076.45336

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
12.01	36.000	1.04E+01	1.04E+01	5.50E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	84.87225
0.00050	126.91362
0.00101	150.92658
0.00504	225.68788
0.01008	268.38964
0.05040	401.33611
0.10080	477.27176
0.25200	600.13747
0.50400	713.68775
0.75600	789.82533
1.00800	848.72255
2.52000	1067.21210
5.04000	1269.13622
10.08000	1509.26583
11.34000	1509.26583
12.60000	1509.26583

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
6.75	36.000	1.04E+01	1.04E+01	4.94E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	63.33654
0.00050	94.71021
0.00101	112.63006
0.00504	168.42123
0.01008	200.28772
0.05040	299.50000
0.10080	356.16753
0.25200	447.85696
0.50400	532.59468
0.75600	589.41291
1.00800	633.36539
2.52000	796.41481
5.04000	947.10216
10.08000	1126.30062
11.34000	1126.30062
12.60000	1126.30062

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
12.75	36.000	1.04E+01	1.04E+01	5.34E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	87.58638
0.00050	130.97218
0.00101	155.75305
0.00504	232.90514
0.01008	276.97245
0.05040	414.17040
0.10080	492.53439
0.25200	619.32922
0.50400	736.51071
0.75600	815.08309
1.00800	875.86378
2.52000	1101.34039
5.04000	1309.72183

10.08000	1557.53051
11.34000	1557.53051
12.60000	1557.53051

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
7.50	36.000	1.04E+01	1.04E+01	4.72E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	66.12722
0.00050	98.88326
0.00101	117.59268
0.00504	175.84207
0.01008	209.11265
0.05040	312.69633
0.10080	371.86071
0.25200	467.59009
0.50400	556.06146
0.75600	615.38317
1.00800	661.27224
2.52000	831.50582
5.04000	988.83264
10.08000	1175.92681
11.34000	1175.92681
12.60000	1175.92681

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
13.50	36.000	1.04E+01	1.04E+01	5.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	90.31653
0.00050	135.05472
0.00101	160.60803

0.00504	240.16503
0.01008	285.60597
0.05040	427.08053
0.10080	507.88720
0.25200	638.63435
0.50400	759.46851
0.75600	840.49008
1.00800	903.16536
2.52000	1135.67031
5.04000	1350.54721
10.08000	1606.08035
11.34000	1606.08035
12.60000	1606.08035

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
8.25	36.000	1.04E+01	1.04E+01	4.54E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	68.88574
0.00050	103.00820
0.00101	122.49809
0.00504	183.17737
0.01008	217.83584
0.05040	325.74055
0.10080	387.37297
0.25200	487.09573
0.50400	579.25771
0.75600	641.05404
1.00800	688.85739
2.52000	866.19231
5.04000	1030.08206
10.08000	1224.98091
11.34000	1224.98091
12.60000	1224.98091

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
14.25	36.000	1.04E+01	1.04E+01	5.07E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	93.03444
0.00050	139.11894
0.00101	165.44123
0.00504	247.39234
0.01008	294.20073
0.05040	439.93270
0.10080	523.17110
0.25200	657.85284
0.50400	782.32327
0.75600	865.78303
1.00800	930.34440
2.52000	1169.84615
5.04000	1391.18936
10.08000	1654.41229
11.34000	1654.41229
12.60000	1654.41229

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
8.99	36.000	1.04E+01	1.04E+01	4.40E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	71.58985
0.00050	107.05180
0.00101	127.30676
0.00504	190.36802
0.01008	226.38700
0.05040	338.52752
0.10080	402.57933
0.25200	506.21672
0.50400	601.99652
0.75600	666.21867
1.00800	715.89855
2.52000	900.19476
5.04000	1070.51801

10.08000	1273.06764
11.34000	1273.06764
12.60000	1273.06764

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
14.99	36.000	1.04E+01	1.04E+01	4.95E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	95.71190
0.00050	143.12267
0.00101	170.20249
0.00504	254.51210
0.01008	302.66760
0.05040	452.59361
0.10080	538.22755
0.25200	676.78532
0.50400	804.83791
0.75600	890.69957
1.00800	957.11897
2.52000	1203.51339
5.04000	1431.22668
10.08000	1702.02496
11.34000	1702.02496
12.60000	1702.02496

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS FT	DIAM IN	Qu LBS/IN**2	Eu LBS/IN**2	GAMMA AVG LBS/IN**3	E50	RQD %
9.01	36.000	9.70E+00	3.50E+04	4.39E-02	5.000E-04	0.000

Y IN	P LBS/IN
0.900E-05	0.218E+02
0.180E-04	0.259E+02
0.540E-04	0.341E+02
0.108E-03	0.406E+02
0.162E-03	0.449E+02

0.360E-03	0.549E+02
0.720E-03	0.653E+02
0.108E-02	0.722E+02
0.144E-02	0.776E+02
0.180E-02	0.821E+02
0.450E-02	0.103E+03
0.900E-02	0.123E+03
0.135E-01	0.136E+03
0.180E-01	0.146E+03
0.720E-01	0.206E+03
0.144E+00	0.245E+03
0.216E+00	0.272E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.01	36.000	9.70E+00	3.50E+04	4.95E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
9.50	36.000	9.70E+00	3.50E+04	4.43E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.268E+02		

0.180E-04	0.319E+02
0.540E-04	0.420E+02
0.108E-03	0.499E+02
0.162E-03	0.552E+02
0.360E-03	0.674E+02
0.720E-03	0.802E+02
0.108E-02	0.887E+02
0.144E-02	0.953E+02
0.180E-02	0.101E+03
0.450E-02	0.127E+03
0.900E-02	0.151E+03
0.135E-01	0.167E+03
0.180E-01	0.179E+03
0.720E-01	0.254E+03
0.144E+00	0.301E+03
0.216E+00	0.334E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.877E+02		
		0.180E-04		0.104E+03		
		0.540E-04		0.137E+03		
		0.108E-03		0.163E+03		
		0.162E-03		0.181E+03		
		0.360E-03		0.220E+03		
		0.720E-03		0.262E+03		
		0.108E-02		0.290E+03		
		0.144E-02		0.312E+03		
		0.180E-02		0.330E+03		
		0.450E-02		0.415E+03		
		0.900E-02		0.493E+03		
		0.135E-01		0.546E+03		
		0.180E-01		0.586E+03		
		0.720E-01		0.829E+03		
		0.144E+00		0.986E+03		
		0.216E+00		0.109E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%

10.00	36.000	9.70E+00	3.50E+04	4.46E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		
		0.135E-01		0.198E+03		
		0.180E-01		0.213E+03		
		0.720E-01		0.301E+03		
		0.144E+00		0.359E+03		
		0.216E+00		0.397E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.00	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		
		0.180E-01		0.620E+03		
		0.720E-01		0.877E+03		
		0.144E+00		0.104E+04		
		0.216E+00		0.115E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.50	36.000	9.70E+00	3.50E+04	4.49E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.369E+02		
		0.180E-04		0.439E+02		
		0.540E-04		0.578E+02		
		0.108E-03		0.688E+02		
		0.162E-03		0.761E+02		
		0.360E-03		0.929E+02		
		0.720E-03		0.110E+03		
		0.108E-02		0.122E+03		
		0.144E-02		0.131E+03		
		0.180E-02		0.139E+03		
		0.450E-02		0.175E+03		
		0.900E-02		0.208E+03		
		0.135E-01		0.230E+03		
		0.180E-01		0.247E+03		
		0.720E-01		0.349E+03		
		0.144E+00		0.416E+03		
		0.216E+00		0.460E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.978E+02		
		0.180E-04		0.116E+03		
		0.540E-04		0.153E+03		
		0.108E-03		0.182E+03		
		0.162E-03		0.201E+03		
		0.360E-03		0.246E+03		
		0.720E-03		0.292E+03		
		0.108E-02		0.324E+03		
		0.144E-02		0.348E+03		
		0.180E-02		0.368E+03		
		0.450E-02		0.462E+03		
		0.900E-02		0.550E+03		
		0.135E-01		0.609E+03		
		0.180E-01		0.654E+03		
		0.720E-01		0.925E+03		
		0.144E+00		0.110E+04		

0.216E+00 0.122E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.99	36.000	9.70E+00	3.50E+04	4.52E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.419E+02		
		0.180E-04		0.499E+02		
		0.540E-04		0.656E+02		
		0.108E-03		0.780E+02		
		0.162E-03		0.864E+02		
		0.360E-03		0.105E+03		
		0.720E-03		0.125E+03		
		0.108E-02		0.139E+03		
		0.144E-02		0.149E+03		
		0.180E-02		0.158E+03		
		0.450E-02		0.198E+03		
		0.900E-02		0.236E+03		
		0.135E-01		0.261E+03		
		0.180E-01		0.280E+03		
		0.720E-01		0.397E+03		
		0.144E+00		0.472E+03		
		0.216E+00		0.522E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.99	36.000	9.70E+00	3.50E+04	4.97E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.307E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		
		0.180E-02		0.387E+03		
		0.450E-02		0.486E+03		
		0.900E-02		0.578E+03		

0.135E-01	0.640E+03
0.180E-01	0.687E+03
0.720E-01	0.972E+03
0.144E+00	0.116E+04
0.216E+00	0.128E+04

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
132.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.107D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
204.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06

0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.247D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
159.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.135D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
231.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06

0.922D-01 0.275D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
186.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.162D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
258.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.304D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
213.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.190D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
285.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.332D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
------------------	------	------	---

IN	IN	LBS/IN**2
239.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.217D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
311.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.360D+03

STA 455+00 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
LBS	FT	IN	RAD	LBS-IN	LBS	LBS/IN
LBS-IN**2						
-----	-----	-----	-----	-----	-----	-----
0	0.000E+00	4.640E-01	-2.858E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	4.468E-01	-2.858E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
2	1.000E+00	4.297E-01	-2.858E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
3	1.500E+00	4.125E-01	-2.858E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
4	2.000E+00	3.954E-01	-2.858E-03	0.000E+00	3.501E-08	0.000E+00
7.002E-08	1.362E+11					
5	2.500E+00	3.782E-01	-2.858E-03	4.201E-07	7.002E-08	0.000E+00
0.000E+00	1.362E+11					
6	3.000E+00	3.611E-01	-2.858E-03	8.403E-07	6.000E+03	0.000E+00
1.200E+04	1.362E+11					
7	3.500E+00	3.439E-01	-2.857E-03	7.200E+04	1.800E+04	0.000E+00
1.200E+04	1.362E+11					
8	4.000E+00	3.268E-01	-2.850E-03	2.160E+05	2.400E+04	0.000E+00
-7.002E-08	1.362E+11					
9	4.500E+00	3.097E-01	-2.838E-03	3.600E+05	2.400E+04	0.000E+00
7.001E-08	1.362E+11					
10	5.000E+00	2.927E-01	-2.819E-03	5.040E+05	2.400E+04	0.000E+00
7.004E-08	1.362E+11					
11	5.500E+00	2.759E-01	-2.793E-03	6.480E+05	2.400E+04	0.000E+00
-1.940E-11	1.362E+11					
12	6.000E+00	2.592E-01	-2.762E-03	7.920E+05	2.388E+04	-4.052E+01
-2.431E+02	1.362E+11					
13	6.500E+00	2.428E-01	-2.724E-03	9.345E+05	2.351E+04	-8.335E+01
-5.001E+02	1.362E+11					
14	7.000E+00	2.265E-01	-2.679E-03	1.074E+06	2.300E+04	-8.553E+01
-5.132E+02	1.362E+11					
15	7.500E+00	2.106E-01	-2.629E-03	1.211E+06	2.248E+04	-8.750E+01
-5.250E+02	1.362E+11					
16	8.000E+00	1.950E-01	-2.573E-03	1.344E+06	2.195E+04	-8.920E+01
-5.352E+02	1.362E+11					
17	8.500E+00	1.797E-01	-2.511E-03	1.474E+06	2.172E+04	-7.486E+01
7.585E+01	1.362E+11					
18	9.000E+00	1.649E-01	-2.443E-03	1.605E+06	2.184E+04	-6.124E+01
1.576E+02	1.362E+11					
19	9.500E+00	1.504E-01	-2.369E-03	1.736E+06	2.199E+04	-6.247E+01

1.502E+02	1.362E+11					
20	1.000E+01	1.364E-01	-2.290E-03	1.868E+06	2.214E+04	-6.359E+01
1.435E+02	1.362E+11					
21	1.050E+01	1.229E-01	-2.205E-03	2.002E+06	2.228E+04	-6.462E+01
1.373E+02	1.362E+11					
22	1.100E+01	1.100E-01	-2.114E-03	2.136E+06	2.241E+04	-6.557E+01
1.316E+02	1.362E+11					
23	1.150E+01	9.758E-02	-2.017E-03	2.271E+06	2.255E+04	-6.494E+01
1.354E+02	1.362E+11					
24	1.200E+01	8.578E-02	-1.914E-03	2.406E+06	2.269E+04	-6.393E+01
1.414E+02	1.362E+11					
25	1.250E+01	7.462E-02	-1.805E-03	2.543E+06	2.218E+04	-1.937E+02
-1.162E+03	1.362E+11					
26	1.300E+01	6.413E-02	-1.690E-03	2.672E+06	2.065E+04	-3.149E+02
-1.890E+03	1.362E+11					
27	1.350E+01	5.434E-02	-1.569E-03	2.791E+06	1.875E+04	-3.173E+02
-1.904E+03	1.362E+11					
28	1.400E+01	4.530E-02	-1.444E-03	2.897E+06	1.688E+04	-3.058E+02
-1.835E+03	1.362E+11					
29	1.450E+01	3.701E-02	-1.314E-03	2.993E+06	1.510E+04	-2.899E+02
-1.739E+03	1.362E+11					
30	1.500E+01	2.952E-02	-1.181E-03	3.079E+06	1.339E+04	-2.805E+02
-1.683E+03	1.362E+11					
31	1.550E+01	2.284E-02	-1.043E-03	3.154E+06	1.199E+04	-1.857E+02
-1.114E+03	1.362E+11					
32	1.600E+01	1.700E-02	-9.031E-04	3.222E+06	1.080E+04	-2.097E+02
-1.258E+03	1.362E+11					
33	1.650E+01	1.201E-02	-7.598E-04	3.283E+06	9.503E+03	-2.227E+02
-1.336E+03	1.362E+11					
34	1.700E+01	7.882E-03	-6.140E-04	3.336E+06	8.156E+03	-2.266E+02
-1.359E+03	1.362E+11					
35	1.750E+01	4.639E-03	-4.661E-04	3.381E+06	-1.849E+04	-8.654E+03
-5.193E+04	1.362E+11					
36	1.800E+01	2.289E-03	-3.230E-04	3.115E+06	-6.990E+04	-8.483E+03
-5.090E+04	1.362E+11					
37	1.850E+01	7.624E-04	-1.985E-04	2.543E+06	-1.081E+05	-4.239E+03
-2.544E+04	1.362E+11					
38	1.900E+01	-9.238E-05	-1.024E-04	1.818E+06	-1.186E+05	7.132E+02
4.279E+03	1.362E+11					
39	1.950E+01	-4.668E-04	-3.776E-05	1.119E+06	-1.037E+05	4.274E+03
2.564E+04	1.362E+11					
40	2.000E+01	-5.455E-04	-4.919E-07	5.737E+05	-7.587E+04	4.995E+03
2.997E+04	1.362E+11					
41	2.050E+01	-4.727E-04	1.673E-05	2.083E+05	-4.790E+04	4.328E+03
2.597E+04	1.362E+11					
42	2.100E+01	-3.448E-04	2.129E-05	-1.179E+03	-2.545E+04	3.157E+03
1.894E+04	1.362E+11					
43	2.150E+01	-2.172E-04	1.913E-05	-9.705E+04	-1.001E+04	1.989E+03
1.193E+04	1.362E+11					
44	2.200E+01	-1.153E-04	1.432E-05	-1.213E+05	-8.805E+02	1.055E+03

6.332E+03	1.362E+11					
45	2.250E+01	-4.537E-05	9.278E-06	-1.076E+05	3.532E+03	4.154E+02
2.492E+03	1.362E+11					
46	2.300E+01	-3.921E-06	5.169E-06	-7.895E+04	4.885E+03	3.590E+01
2.154E+02	1.362E+11					
47	2.350E+01	1.666E-05	2.352E-06	-4.899E+04	4.535E+03	-1.526E+02
-9.153E+02	1.362E+11					
48	2.400E+01	2.430E-05	7.326E-07	-2.453E+04	3.410E+03	-2.225E+02
-1.335E+03	1.362E+11					
49	2.450E+01	2.545E-05	1.484E-08	-8.068E+03	2.044E+03	-2.330E+02
-1.398E+03	1.362E+11					
50	2.500E+01	2.448E-05	-1.628E-07	-1.282E-11	6.723E+02	-2.241E+02
-1.345E+03	1.362E+11					

=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 455+00\
Name of input data file : STA 455+00-Service Case.py7d
Name of output file : STA 455+00-Service Case.py7o
Name of plot output file : STA 455+00-Service Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 09:14:56

Long Term : STA 455+00 Soldier Pile Wall

```
*****
*          PROGRAM CONTROL PARAMETERS          *
*****
```

```
NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS                               = 1
NO OF CROSS SECTIONS                              = 1
GENERATE EARTH PRESSURE INTERNALLY                 = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY   = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS                                   = 0
NO OF STRUTS/RAKERS                               = 0
```

```
HEIGHT OF WALL = 25.000 FT
NUMBER OF INCREMENTS = 50
INCREMENT LENGTH = 6.000 IN
MAXIMUM ALLOWABLE DEFLECTION = 100.000 IN
DEFLECTION CLOSURE TOLERANCE = 1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS = 100
```

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	25.0000	1

* CROSS SECTIONS *

```
CROSS SECTION      : 1
SECTION NAME       : Section
TYPE               : ELASTIC
CROSS SECTION TYPE : I SECTION
EQUIVALENT DIAMETER : 10.0000 IN
EXTERNAL WIDTH     : 10.0000 IN
EXTERNAL DEPTH     : 27.6000 IN
FLANGE THICKNESS   : 1.10000 IN
WEB THICKNESS      : 0.61000 IN
YOUNG MODULUS      : 2.90000E+07 LBS/IN**2
```

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

 * STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
 S - STIFFNESS OF TRANSVERSE RESISTANCE,
 T - TORQUE, P - AXIAL LOAD,
 R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI	Q	S	T	R	P
			LBS-IN**2	LBS	LBS/IN	IN-LBS	IN-LBS	LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	50	0	1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	2.400E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

 * WALL INFORMATION *

FREE HEIGHT OF WALL	=	6.000E+00	FT
WIDTH FOR EARTH PRESSURE, WA	=	7.800E+01	IN
WIDTH FOR SOIL RESISTANCE, WP	=	3.600E+01	IN
DEPTH TO THE WATER TABLE AT BACKFILL	=	1.200E+01	FT
DEPTH TO THE WATER TABLE AT EXCAVATION	=	1.200E+01	FT
UNIT WEIGHT OF WATER	=	3.600E-02	LBS/IN**3
SLOPE OF THE BACKFILL (deg.)	=	0.000E+00	
SLOPE OF THE EXCAVATION GROUND (deg.)	=	0.000E+00	
MODIFICATION FOR ACTIVE EARTH PRESSURE	=	1.000E+00	

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE	=	1.736E+00	LBS/IN**2
--------------------------	---	-----------	-----------

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	PHI DEG	TOTAL UNIT WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	3.0	0.0	28.0	0.064	T	0.00
2	3.0	0.0	28.0	0.052	T	3.00
3	2.0	0.0	28.0	0.052	T	6.00
4	4.0	1.0	22.0	0.052	T	8.00
5	3.0	0.0	34.0	0.064	T	12.00
6	2.0	9.7	0.0	0.087	T	15.00
7	33.0	11000.0	0.0	0.093	T	17.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
3.000E+00	4.028E+00
6.000E+00	5.903E+00
8.000E+00	7.153E+00
1.200E+01	9.653E+00
1.500E+01	1.065E+01
1.700E+01	1.187E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	3.610E-01	2.770E+00	0.000E+00
2	3.610E-01	2.770E+00	0.000E+00
3	3.610E-01	2.770E+00	0.000E+00
4	4.550E-01	2.198E+00	0.000E+00
5	2.827E-01	3.537E+00	0.000E+00
6	1.000E+00	1.000E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00

NOTES:

(*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS

(**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE

IF IT IS DIFFERENT THAN ZERO

* ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	22.56	1.50	14.89	2.00	0.00	-0.00	0.00
2	52.35	4.50	12.18	5.00	0.00	-0.00	0.00

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	4.88896E+01
5.00000E-01	5.96458E+01
1.00000E+00	7.04012E+01
1.50000E+00	8.11590E+01
2.00000E+00	9.19152E+01
2.50000E+00	1.02671E+02
3.00000E+00	1.13428E+02
3.50000E+00	1.22226E+02
4.00000E+00	1.31024E+02
4.50000E+00	1.39823E+02
5.00000E+00	1.48629E+02
5.50000E+00	1.57427E+02
6.00000E+00	1.66226E+02
6.50000E+00	7.67196E+01
7.00000E+00	7.67196E+01
7.50000E+00	7.67196E+01
8.00000E+00	7.67196E+01
8.50000E+00	4.60908E+01
9.00000E+00	4.60908E+01
9.50000E+00	4.60908E+01
1.00000E+01	4.60908E+01
1.05000E+01	4.60908E+01
1.10000E+01	4.60908E+01
1.15000E+01	4.60908E+01
1.20000E+01	4.60908E+01
1.25000E+01	6.00768E+01
1.30000E+01	6.00768E+01
1.35000E+01	6.00768E+01
1.40000E+01	6.00768E+01
1.45000E+01	6.00768E+01
1.50000E+01	6.00768E+01
1.55000E+01	6.73200E-09

1.60000E+01	6.94800E-09
1.65000E+01	7.16400E-09
1.70000E+01	7.38000E-09
1.75000E+01	7.59600E-09
1.80000E+01	7.81200E-09
1.85000E+01	8.02800E-09
1.90000E+01	8.24400E-09
1.95000E+01	8.46000E-09
2.00000E+01	8.67600E-09
2.05000E+01	8.89200E-09
2.10000E+01	9.10800E-09
2.15000E+01	9.32400E-09
2.20000E+01	9.54000E-09
2.25000E+01	9.75600E-09
2.30000E+01	9.97200E-09
2.35000E+01	1.01880E-08
2.40000E+01	1.04040E-08
2.45000E+01	1.06200E-08
2.50000E+01	1.08360E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

5 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SILT

LAYER 2
 THE SOIL IS A SILT

LAYER 3
 THE SOIL IS A SILT

LAYER 4
 THE LAYER IS WEAK ROCK

LAYER 5
 THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
 10 POINTS

X, FT WEIGHT, LBS/IN**3

6.0000	5.2083E-02
8.0000	5.2083E-02
8.0000	5.2083E-02
12.0000	5.2083E-02
12.0000	2.7657E-02
15.0000	2.7657E-02
15.0000	5.0806E-02
17.0000	5.0806E-02
17.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	0.0000E+00	28.000	2.0000E-02	3.0000E+01
8.00	0.0000E+00	28.000	2.0000E-02	3.0000E+01
8.00	1.0417E+00	22.000	2.0000E-02	3.0000E+01
12.00	1.0417E+00	22.000	2.0000E-02	3.0000E+01
12.00	0.0000E+00	34.000	7.0000E-03	5.0000E+02
15.00	0.0000E+00	34.000	7.0000E-03	5.0000E+02
15.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
26.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
0.01	36.00	28.0	5.208E-02		3.000E+01	2.83	2.14	0.000E+00
4.525E-01								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.106E-01	0.265E-01
0.212E-01	0.529E-01
0.791E-01	0.134E+00
0.137E+00	0.198E+00
0.195E+00	0.255E+00

0.253E+00	0.306E+00
0.311E+00	0.354E+00
0.368E+00	0.400E+00
0.426E+00	0.444E+00
0.484E+00	0.485E+00
0.542E+00	0.526E+00
0.600E+00	0.565E+00
0.850E+00	0.732E+00
0.110E+01	0.898E+00
0.135E+01	0.107E+01
0.162E+01	0.107E+01

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
6.01	36.00	28.0	5.786E-02	3.000E+01	1.48	1.05	0.000E+00
8.429E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.540E+02
0.600E-01	0.108E+03
0.114E+00	0.205E+03
0.168E+00	0.302E+03
0.222E+00	0.400E+03
0.276E+00	0.497E+03
0.330E+00	0.594E+03
0.384E+00	0.691E+03
0.438E+00	0.789E+03
0.492E+00	0.886E+03
0.546E+00	0.983E+03
0.600E+00	0.105E+04
0.850E+00	0.105E+04
0.110E+01	0.104E+04
0.135E+01	0.104E+04
0.162E+01	0.104E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
0.50	36.00	28.0	5.208E-02	3.000E+01	2.71	2.04	0.000E+00	
3.010E+01								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.253E-01	0.380E+01
0.507E-01	0.759E+01
0.106E+00	0.122E+02
0.161E+00	0.160E+02
0.215E+00	0.194E+02
0.270E+00	0.224E+02
0.325E+00	0.253E+02
0.380E+00	0.280E+02
0.435E+00	0.305E+02
0.490E+00	0.330E+02
0.545E+00	0.353E+02
0.600E+00	0.376E+02
0.850E+00	0.477E+02
0.110E+01	0.578E+02
0.135E+01	0.680E+02
0.162E+01	0.680E+02

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
6.50	36.00	28.0	5.743E-02	3.000E+01	1.40	0.99	0.000E+00	
9.472E+02								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.759E-01	0.148E+03
0.152E+00	0.296E+03
0.228E+00	0.443E+03
0.303E+00	0.591E+03
0.379E+00	0.739E+03
0.531E+00	0.103E+04

0.607E+00	0.118E+04
0.607E+00	0.118E+04
0.731E+00	0.117E+04
0.855E+00	0.116E+04
0.978E+00	0.114E+04
0.110E+01	0.113E+04
0.123E+01	0.111E+04
0.135E+01	0.110E+04
0.149E+01	0.110E+04
0.162E+01	0.110E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
1.00	36.00	28.0	5.208E-02	3.000E+01	2.60	1.93	0.000E+00
6.619E+01							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.461E-01	0.138E+02
0.923E-01	0.276E+02
0.143E+00	0.357E+02
0.194E+00	0.427E+02
0.245E+00	0.489E+02
0.295E+00	0.546E+02
0.346E+00	0.599E+02
0.397E+00	0.649E+02
0.448E+00	0.696E+02
0.498E+00	0.742E+02
0.549E+00	0.785E+02
0.600E+00	0.827E+02
0.850E+00	0.103E+03
0.110E+01	0.123E+03
0.135E+01	0.143E+03
0.162E+01	0.143E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
7.00	36.00	28.0	5.704E-02	3.000E+01	1.31	0.92	0.000E+00
1.059E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.785E-01	0.165E+03
0.157E+00	0.329E+03
0.235E+00	0.494E+03
0.314E+00	0.658E+03
0.392E+00	0.823E+03
0.549E+00	0.115E+04
0.628E+00	0.132E+04
0.628E+00	0.132E+04
0.748E+00	0.129E+04
0.868E+00	0.126E+04
0.989E+00	0.124E+04
0.111E+01	0.121E+04
0.123E+01	0.118E+04
0.135E+01	0.116E+04
0.149E+01	0.116E+04
0.162E+01	0.116E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
1.50	36.00	28.0	5.208E-02	3.000E+01	2.48	1.83	0.000E+00
1.083E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.135E+02
0.600E-01	0.270E+02
0.114E+00	0.512E+02
0.168E+00	0.695E+02
0.222E+00	0.804E+02
0.276E+00	0.901E+02
0.330E+00	0.989E+02

0.384E+00	0.107E+03
0.438E+00	0.115E+03
0.492E+00	0.122E+03
0.546E+00	0.129E+03
0.600E+00	0.135E+03
0.850E+00	0.165E+03
0.110E+01	0.194E+03
0.135E+01	0.224E+03
0.162E+01	0.224E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
7.50	36.00	28.0	5.671E-02	3.000E+01	1.23	0.86	0.000E+00
1.177E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.808E-01	0.182E+03
0.162E+00	0.363E+03
0.243E+00	0.545E+03
0.323E+00	0.727E+03
0.404E+00	0.909E+03
0.566E+00	0.127E+04
0.647E+00	0.145E+04
0.647E+00	0.145E+04
0.764E+00	0.141E+04
0.881E+00	0.137E+04
0.998E+00	0.133E+04
0.112E+01	0.129E+04
0.123E+01	0.125E+04
0.135E+01	0.121E+04
0.149E+01	0.121E+04
0.162E+01	0.121E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
------------	------	-----	-----------	-----	---	---	-----

Pu1	FT	IN		LBS/IN**3	LBS/IN**3		LBS/IN
LBS/IN							
1.99		36.00	28.0	5.208E-02	3.000E+01	2.36	1.73 0.000E+00
1.555E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.179E+02
0.600E-01	0.358E+02
0.114E+00	0.680E+02
0.168E+00	0.100E+03
0.222E+00	0.123E+03
0.276E+00	0.136E+03
0.330E+00	0.148E+03
0.384E+00	0.158E+03
0.438E+00	0.168E+03
0.492E+00	0.177E+03
0.546E+00	0.186E+03
0.600E+00	0.194E+03
0.850E+00	0.231E+03
0.110E+01	0.268E+03
0.135E+01	0.305E+03
0.162E+01	0.305E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
7.99	36.00	28.0	5.643E-02	3.000E+01	1.17	0.81	0.000E+00	
1.299E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.831E-01	0.199E+03
0.166E+00	0.398E+03
0.249E+00	0.597E+03
0.332E+00	0.796E+03
0.415E+00	0.995E+03
0.582E+00	0.139E+04
0.665E+00	0.159E+04
0.665E+00	0.159E+04

0.779E+00	0.154E+04
0.893E+00	0.148E+04
0.101E+01	0.143E+04
0.112E+01	0.138E+04
0.124E+01	0.132E+04
0.135E+01	0.127E+04
0.149E+01	0.127E+04
0.162E+01	0.127E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
2.01	36.00	22.0	5.208E-02	3.000E+01	2.51	1.86	1.515E+02
6.595E+01							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.122E+02
0.600E-01	0.244E+02
0.114E+00	0.464E+02
0.168E+00	0.683E+02
0.222E+00	0.903E+02
0.276E+00	0.112E+03
0.330E+00	0.134E+03
0.384E+00	0.156E+03
0.438E+00	0.178E+03
0.492E+00	0.198E+03
0.546E+00	0.203E+03
0.600E+00	0.208E+03
0.850E+00	0.185E+03
0.110E+01	0.161E+03
0.135E+01	0.138E+03
0.162E+01	0.138E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							

FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
8.01	36.00	22.0	5.642E-02	3.000E+01	1.25	0.88	3.375E+02
7.168E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.661E+02
0.600E-01	0.132E+03
0.114E+00	0.251E+03
0.168E+00	0.370E+03
0.222E+00	0.489E+03
0.276E+00	0.609E+03
0.330E+00	0.728E+03
0.384E+00	0.847E+03
0.438E+00	0.966E+03
0.492E+00	0.108E+04
0.546E+00	0.114E+04
0.600E+00	0.118E+04
0.850E+00	0.103E+04
0.110E+01	0.891E+03
0.135E+01	0.748E+03
0.162E+01	0.748E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
3.00	36.00	22.0	5.208E-02	3.000E+01	2.27	1.67	1.800E+02
1.302E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.211E+02
0.600E-01	0.422E+02
0.114E+00	0.803E+02
0.168E+00	0.118E+03
0.222E+00	0.156E+03
0.276E+00	0.194E+03
0.330E+00	0.232E+03
0.384E+00	0.270E+03
0.438E+00	0.296E+03

DEPTH	B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN

LBS/IN	4.00	36.00	22.0	5.208E-02	3.000E+01	2.03	1.48	2.088E+02
2.087E+02								

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.301E+02
0.600E-01	0.602E+02
0.114E+00	0.114E+03
0.168E+00	0.169E+03
0.222E+00	0.223E+03
0.276E+00	0.277E+03
0.330E+00	0.331E+03
0.384E+00	0.385E+03
0.438E+00	0.414E+03
0.492E+00	0.422E+03
0.546E+00	0.428E+03
0.600E+00	0.434E+03
0.850E+00	0.407E+03
0.110E+01	0.380E+03
0.135E+01	0.352E+03
0.162E+01	0.352E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
10.00	36.00	22.0	5.556E-02	3.000E+01	1.04	0.69	3.375E+02
1.034E+03							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.841E+02
0.600E-01	0.168E+03
0.114E+00	0.319E+03
0.168E+00	0.471E+03
0.222E+00	0.622E+03
0.276E+00	0.773E+03
0.330E+00	0.925E+03
0.384E+00	0.108E+04
0.438E+00	0.123E+04
0.492E+00	0.138E+04

[illegible]

11.00	36.00	22.0	5.524E-02	3.000E+01	0.99	0.63	3.375E+02
1.214E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.930E+02
0.600E-01	0.186E+03
0.114E+00	0.354E+03
0.168E+00	0.521E+03
0.222E+00	0.689E+03
0.276E+00	0.856E+03
0.330E+00	0.102E+04
0.384E+00	0.119E+04
0.438E+00	0.136E+04
0.492E+00	0.153E+04
0.546E+00	0.169E+04
0.600E+00	0.180E+04
0.850E+00	0.153E+04
0.110E+01	0.126E+04
0.135E+01	0.998E+03
0.162E+01	0.998E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
5.99	36.00	22.0	5.208E-02	3.000E+01	1.60	1.15	2.661E+02
4.061E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.480E+02
0.600E-01	0.960E+02
0.114E+00	0.182E+03
0.168E+00	0.269E+03
0.222E+00	0.355E+03
0.276E+00	0.442E+03
0.330E+00	0.528E+03
0.384E+00	0.615E+03
0.438E+00	0.683E+03
0.492E+00	0.700E+03
0.546E+00	0.715E+03

0.600E+00	0.729E+03
0.850E+00	0.666E+03
0.110E+01	0.604E+03
0.135E+01	0.542E+03
0.162E+01	0.542E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
11.99	36.00	22.0	5.498E-02	3.000E+01	0.94	0.57	3.375E+02	
1.405E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.102E+03
0.600E-01	0.204E+03
0.114E+00	0.387E+03
0.168E+00	0.571E+03
0.222E+00	0.754E+03
0.276E+00	0.938E+03
0.330E+00	0.112E+04
0.384E+00	0.131E+04
0.438E+00	0.149E+04
0.492E+00	0.167E+04
0.546E+00	0.186E+04
0.600E+00	0.204E+04
0.850E+00	0.172E+04
0.110E+01	0.141E+04
0.135E+01	0.109E+04
0.162E+01	0.109E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
6.01	36.00	34.0	5.205E-02	5.000E+02	2.06	1.50	0.000E+00	

4.466E+02

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.517E-02	0.830E+02
0.103E-01	0.166E+03
0.693E-01	0.293E+03
0.128E+00	0.352E+03
0.187E+00	0.394E+03
0.246E+00	0.428E+03
0.305E+00	0.456E+03
0.364E+00	0.480E+03
0.423E+00	0.502E+03
0.482E+00	0.522E+03
0.541E+00	0.541E+03
0.600E+00	0.558E+03
0.850E+00	0.627E+03
0.110E+01	0.696E+03
0.135E+01	0.765E+03
0.162E+01	0.765E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
12.01	36.00	34.0	5.496E-02	5.000E+02	1.05	0.70	0.000E+00
2.541E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.173E-01	0.799E+03
0.347E-01	0.160E+04
0.912E-01	0.202E+04
0.148E+00	0.226E+04
0.204E+00	0.245E+04
0.261E+00	0.260E+04
0.317E+00	0.272E+04
0.374E+00	0.283E+04
0.430E+00	0.293E+04
0.487E+00	0.302E+04
0.543E+00	0.310E+04
0.600E+00	0.317E+04

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.166E-01	0.825E+03
0.332E-01	0.165E+04
0.899E-01	0.214E+04
0.147E+00	0.243E+04
0.203E+00	0.265E+04
0.260E+00	0.283E+04
0.317E+00	0.298E+04
0.373E+00	0.311E+04
0.430E+00	0.323E+04
0.487E+00	0.333E+04
0.543E+00	0.343E+04
0.600E+00	0.352E+04
0.850E+00	0.314E+04
0.110E+01	0.275E+04
0.135E+01	0.237E+04
0.162E+01	0.237E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
7.50	36.00	34.0	4.720E-02	5.000E+02	1.72	1.24	0.000E+00
7.226E+02							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.133E-01	0.312E+03
0.266E-01	0.625E+03
0.839E-01	0.716E+03
0.141E+00	0.761E+03
0.199E+00	0.792E+03
0.256E+00	0.816E+03
0.313E+00	0.836E+03
0.371E+00	0.852E+03
0.428E+00	0.867E+03
0.485E+00	0.880E+03
0.543E+00	0.892E+03
0.600E+00	0.902E+03
0.850E+00	0.947E+03

0.110E+01	0.991E+03
0.135E+01	0.104E+04
0.162E+01	0.104E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
13.50	36.00	34.0	5.194E-02	5.000E+02	0.97	0.61	0.000E+00

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.158E-01	0.845E+03
0.316E-01	0.169E+04
0.884E-01	0.226E+04
0.145E+00	0.260E+04
0.202E+00	0.286E+04
0.259E+00	0.307E+04
0.316E+00	0.324E+04
0.373E+00	0.340E+04
0.429E+00	0.354E+04
0.486E+00	0.367E+04
0.543E+00	0.378E+04
0.600E+00	0.389E+04
0.850E+00	0.343E+04
0.110E+01	0.297E+04
0.135E+01	0.251E+04
0.162E+01	0.251E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
8.25	36.00	34.0	4.542E-02	5.000E+02	1.58	1.13	0.000E+00

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.178E-01	0.486E+03
0.356E-01	0.972E+03
0.921E-01	0.101E+04
0.149E+00	0.103E+04
0.205E+00	0.105E+04
0.261E+00	0.106E+04
0.318E+00	0.107E+04
0.374E+00	0.108E+04
0.431E+00	0.108E+04
0.487E+00	0.109E+04
0.544E+00	0.109E+04
0.600E+00	0.110E+04
0.850E+00	0.112E+04
0.110E+01	0.114E+04
0.135E+01	0.116E+04
0.162E+01	0.116E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN								
14.25	36.00	34.0	5.066E-02		5.000E+02	0.93	0.56	0.000E+00
3.422E+03								

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.150E-01	0.858E+03
0.300E-01	0.172E+04
0.870E-01	0.237E+04
0.144E+00	0.277E+04
0.201E+00	0.306E+04
0.258E+00	0.330E+04
0.315E+00	0.351E+04
0.372E+00	0.369E+04
0.429E+00	0.386E+04
0.486E+00	0.401E+04
0.543E+00	0.415E+04
0.600E+00	0.427E+04
0.850E+00	0.373E+04
0.110E+01	0.319E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

	DEPTH	B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Puí									
	FT		IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN									
	8.99		36.00	34.0	4.396E-02	5.000E+02	1.45	1.02	0.000E+00
1.045E+03									

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.195E-01	0.604E+03
0.390E-01	0.121E+04
0.951E-01	0.124E+04
0.151E+00	0.125E+04
0.207E+00	0.127E+04
0.263E+00	0.127E+04
0.319E+00	0.128E+04
0.376E+00	0.129E+04
0.432E+00	0.129E+04
0.488E+00	0.130E+04
0.544E+00	0.130E+04
0.600E+00	0.131E+04
0.850E+00	0.129E+04
0.110E+01	0.127E+04
0.135E+01	0.126E+04
0.162E+01	0.126E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

	DEPTH	B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Puí	FT		IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN	14.99		36.00	34.0	4.953E-02	5.000E+02	0.90	0.53	0.000E+00
	3.738E+03								

Y P

IN	LBS/IN
0.000E+00	0.000E+00
0.145E-01	0.883E+03
0.290E-01	0.177E+04
0.861E-01	0.250E+04
0.143E+00	0.295E+04
0.200E+00	0.328E+04
0.257E+00	0.356E+04
0.314E+00	0.379E+04
0.372E+00	0.400E+04
0.429E+00	0.419E+04
0.486E+00	0.436E+04
0.543E+00	0.452E+04
0.600E+00	0.467E+04
0.850E+00	0.404E+04
0.110E+01	0.342E+04
0.135E+01	0.280E+04
0.162E+01	0.280E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
9.01	36.000	9.70E+00	3.50E+04	4.39E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.218E+02		
		0.180E-04		0.259E+02		
		0.540E-04		0.341E+02		
		0.108E-03		0.406E+02		
		0.162E-03		0.449E+02		
		0.360E-03		0.549E+02		
		0.720E-03		0.653E+02		
		0.108E-02		0.722E+02		
		0.144E-02		0.776E+02		
		0.180E-02		0.821E+02		
		0.450E-02		0.103E+03		
		0.900E-02		0.123E+03		
		0.135E-01		0.136E+03		
		0.180E-01		0.146E+03		
		0.720E-01		0.206E+03		
		0.144E+00		0.245E+03		
		0.216E+00		0.272E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.01	36.000	9.70E+00	3.50E+04	4.95E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
9.50	36.000	9.70E+00	3.50E+04	4.43E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.268E+02		
		0.180E-04		0.319E+02		
		0.540E-04		0.420E+02		
		0.108E-03		0.499E+02		
		0.162E-03		0.552E+02		
		0.360E-03		0.674E+02		
		0.720E-03		0.802E+02		
		0.108E-02		0.887E+02		
		0.144E-02		0.953E+02		
		0.180E-02		0.101E+03		
		0.450E-02		0.127E+03		
		0.900E-02		0.151E+03		
		0.135E-01		0.167E+03		
		0.180E-01		0.179E+03		
		0.720E-01		0.254E+03		
		0.144E+00		0.301E+03		

0.216E+00 0.334E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.877E+02		
		0.180E-04		0.104E+03		
		0.540E-04		0.137E+03		
		0.108E-03		0.163E+03		
		0.162E-03		0.181E+03		
		0.360E-03		0.220E+03		
		0.720E-03		0.262E+03		
		0.108E-02		0.290E+03		
		0.144E-02		0.312E+03		
		0.180E-02		0.330E+03		
		0.450E-02		0.415E+03		
		0.900E-02		0.493E+03		
		0.135E-01		0.546E+03		
		0.180E-01		0.586E+03		
		0.720E-01		0.829E+03		
		0.144E+00		0.986E+03		
		0.216E+00		0.109E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.00	36.000	9.70E+00	3.50E+04	4.46E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		

0.135E-01	0.198E+03
0.180E-01	0.213E+03
0.720E-01	0.301E+03
0.144E+00	0.359E+03
0.216E+00	0.397E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.00	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		
		0.180E-01		0.620E+03		
		0.720E-01		0.877E+03		
		0.144E+00		0.104E+04		
		0.216E+00		0.115E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.50	36.000	9.70E+00	3.50E+04	4.49E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.369E+02		
		0.180E-04		0.439E+02		
		0.540E-04		0.578E+02		
		0.108E-03		0.688E+02		
		0.162E-03		0.761E+02		
		0.360E-03		0.929E+02		
		0.720E-03		0.110E+03		
		0.108E-02		0.122E+03		

0.144E-02	0.131E+03
0.180E-02	0.139E+03
0.450E-02	0.175E+03
0.900E-02	0.208E+03
0.135E-01	0.230E+03
0.180E-01	0.247E+03
0.720E-01	0.349E+03
0.144E+00	0.416E+03
0.216E+00	0.460E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.978E+02		
		0.180E-04		0.116E+03		
		0.540E-04		0.153E+03		
		0.108E-03		0.182E+03		
		0.162E-03		0.201E+03		
		0.360E-03		0.246E+03		
		0.720E-03		0.292E+03		
		0.108E-02		0.324E+03		
		0.144E-02		0.348E+03		
		0.180E-02		0.368E+03		
		0.450E-02		0.462E+03		
		0.900E-02		0.550E+03		
		0.135E-01		0.609E+03		
		0.180E-01		0.654E+03		
		0.720E-01		0.925E+03		
		0.144E+00		0.110E+04		
		0.216E+00		0.122E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.99	36.000	9.70E+00	3.50E+04	4.52E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.419E+02		
		0.180E-04		0.499E+02		
		0.540E-04		0.656E+02		
		0.108E-03		0.780E+02		

0.162E-03	0.864E+02
0.360E-03	0.105E+03
0.720E-03	0.125E+03
0.108E-02	0.139E+03
0.144E-02	0.149E+03
0.180E-02	0.158E+03
0.450E-02	0.198E+03
0.900E-02	0.236E+03
0.135E-01	0.261E+03
0.180E-01	0.280E+03
0.720E-01	0.397E+03
0.144E+00	0.472E+03
0.216E+00	0.522E+03

AT THE BACKFILL SIDE

DEPTH B GS FT	DIAM IN	Qu LBS/IN**2	Eu LBS/IN**2	GAMMA AVG LBS/IN**3	E50	RQD %
16.99	36.000	9.70E+00	3.50E+04	4.97E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.307E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		
		0.180E-02		0.387E+03		
		0.450E-02		0.486E+03		
		0.900E-02		0.578E+03		
		0.135E-01		0.640E+03		
		0.180E-01		0.687E+03		
		0.720E-01		0.972E+03		
		0.144E+00		0.116E+04		
		0.216E+00		0.128E+04		

DEPTH-EXCAVATION IN	SIDE IN	DIAM IN	C LBS/IN**2
132.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
		0.000D+00	0.000D+00
		0.576D-02	0.527D+05
		0.115D-01	0.105D+06

0.173D-01	0.133D+06
0.230D-01	0.136D+06
0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.107D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
204.10	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.247D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
159.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06

0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.135D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
231.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.275D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
186.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06

0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.162D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
258.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.304D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
213.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06

0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.190D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
285.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.332D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
239.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06

0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.217D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
311.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.360D+03

Long Term : STA 455+00 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

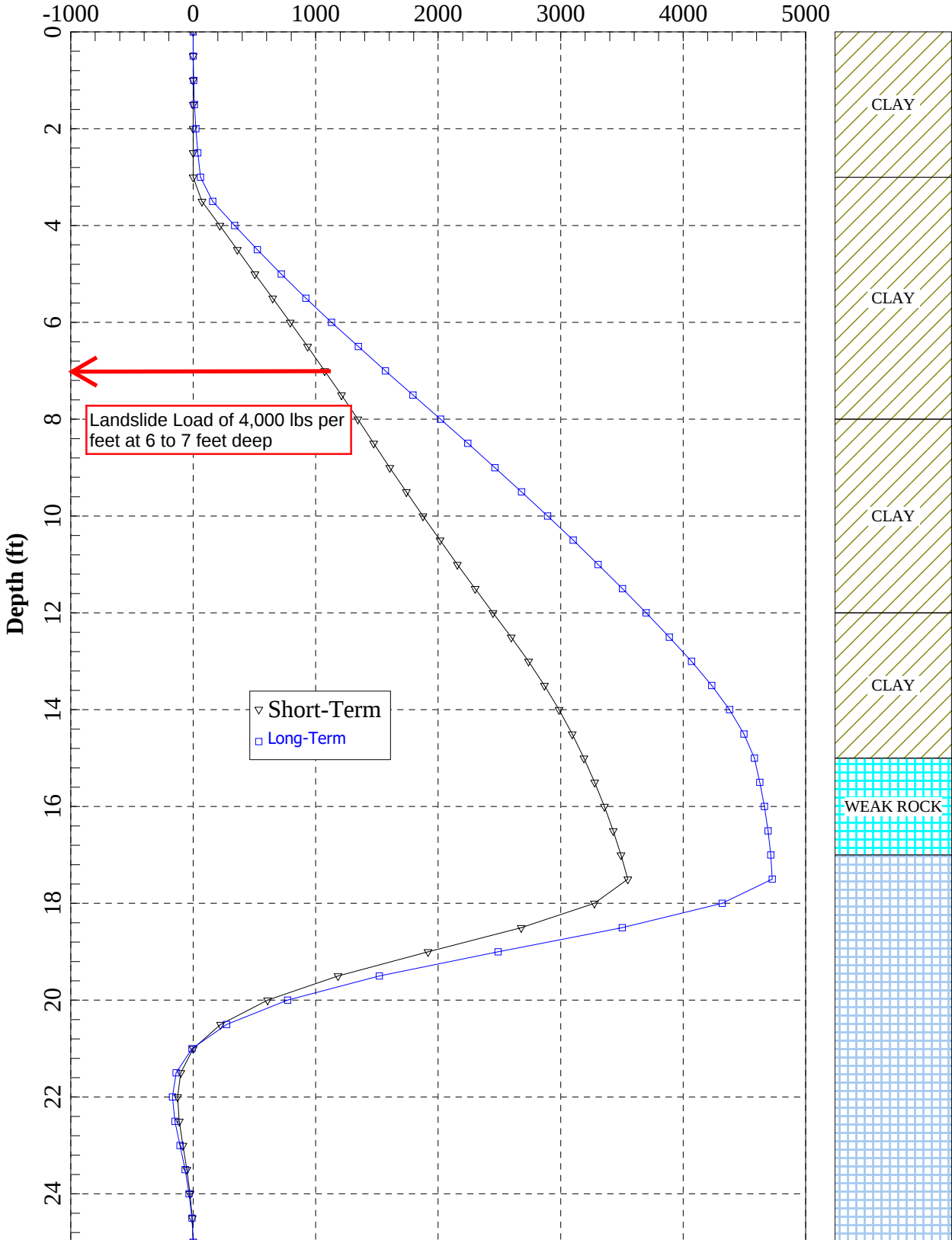
***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
FT		IN	RAD	LBS-IN	LBS	LBS/IN
LBS	LBS-IN**2					
-----	-----	-----	-----	-----	-----	-----
0	0.000E+00	5.837E-01	-3.650E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	5.618E-01	-3.650E-03	0.000E+00	1.789E+02	0.000E+00

3.579E+02	1.362E+11						
2	1.000E+00	5.399E-01	-3.650E-03	2.147E+03	5.691E+02	0.000E+00	
4.224E+02	1.362E+11						
3	1.500E+00	5.180E-01	-3.650E-03	6.829E+03	1.024E+03	0.000E+00	
4.870E+02	1.362E+11						
4	2.000E+00	4.961E-01	-3.650E-03	1.443E+04	1.543E+03	0.000E+00	
5.515E+02	1.362E+11						
5	2.500E+00	4.742E-01	-3.649E-03	2.534E+04	2.127E+03	0.000E+00	
6.160E+02	1.362E+11						
6	3.000E+00	4.523E-01	-3.647E-03	3.995E+04	8.775E+03	0.000E+00	
1.268E+04	1.362E+11						
7	3.500E+00	4.304E-01	-3.644E-03	1.306E+05	2.148E+04	0.000E+00	
1.273E+04	1.362E+11						
8	4.000E+00	4.086E-01	-3.634E-03	2.977E+05	2.824E+04	0.000E+00	
7.861E+02	1.362E+11						
9	4.500E+00	3.868E-01	-3.617E-03	4.695E+05	2.905E+04	0.000E+00	
8.389E+02	1.362E+11						
10	5.000E+00	3.652E-01	-3.593E-03	6.464E+05	2.992E+04	0.000E+00	
8.918E+02	1.362E+11						
11	5.500E+00	3.437E-01	-3.560E-03	8.286E+05	3.084E+04	0.000E+00	
9.446E+02	1.362E+11						
12	6.000E+00	3.224E-01	-3.520E-03	1.016E+06	3.181E+04	-1.816E-01	
9.963E+02	1.362E+11						
13	6.500E+00	3.015E-01	-3.471E-03	1.210E+06	3.246E+04	-2.406E+01	
3.160E+02	1.362E+11						
14	7.000E+00	2.808E-01	-3.413E-03	1.406E+06	3.269E+04	-5.298E+01	
1.424E+02	1.362E+11						
15	7.500E+00	2.605E-01	-3.347E-03	1.603E+06	3.273E+04	-8.732E+01	
-6.359E+01	1.362E+11						
16	8.000E+00	2.406E-01	-3.272E-03	1.799E+06	3.255E+04	-1.275E+02	
-3.046E+02	1.362E+11						
17	8.500E+00	2.213E-01	-3.188E-03	1.993E+06	3.212E+04	-1.391E+02	
-5.579E+02	1.362E+11						
18	9.000E+00	2.024E-01	-3.096E-03	2.184E+06	3.155E+04	-1.422E+02	
-5.766E+02	1.362E+11						
19	9.500E+00	1.841E-01	-2.996E-03	2.372E+06	3.093E+04	-1.572E+02	
-6.667E+02	1.362E+11						
20	1.000E+01	1.664E-01	-2.887E-03	2.555E+06	3.023E+04	-1.674E+02	
-7.279E+02	1.362E+11						
21	1.050E+01	1.494E-01	-2.771E-03	2.735E+06	2.949E+04	-1.725E+02	
-7.586E+02	1.362E+11						
22	1.100E+01	1.332E-01	-2.647E-03	2.909E+06	2.873E+04	-1.739E+02	
-7.666E+02	1.362E+11						
23	1.150E+01	1.177E-01	-2.515E-03	3.079E+06	2.797E+04	-1.709E+02	
-7.486E+02	1.362E+11						
24	1.200E+01	1.030E-01	-2.376E-03	3.245E+06	2.724E+04	-1.645E+02	
-7.104E+02	1.362E+11						
25	1.250E+01	8.918E-02	-2.229E-03	3.406E+06	2.612E+04	-3.135E+02	
-1.520E+03	1.362E+11						
26	1.300E+01	7.626E-02	-2.076E-03	3.558E+06	2.413E+04	-4.714E+02	

-2.468E+03	1.362E+11						
27	1.350E+01	6.427E-02	-1.916E-03	3.696E+06	2.102E+04	-6.848E+02	
-3.749E+03	1.362E+11						
28	1.400E+01	5.326E-02	-1.751E-03	3.811E+06	1.685E+04	-8.256E+02	
-4.593E+03	1.362E+11						
29	1.450E+01	4.326E-02	-1.581E-03	3.898E+06	1.180E+04	-9.772E+02	
-5.502E+03	1.362E+11						
30	1.500E+01	3.429E-02	-1.408E-03	3.952E+06	6.040E+03	-1.064E+03	
-6.022E+03	1.362E+11						
31	1.550E+01	2.637E-02	-1.234E-03	3.970E+06	2.457E+03	-1.906E+02	
-1.144E+03	1.362E+11						
32	1.600E+01	1.949E-02	-1.058E-03	3.982E+06	1.239E+03	-2.154E+02	
-1.293E+03	1.362E+11						
33	1.650E+01	1.367E-02	-8.830E-04	3.985E+06	-9.949E+01	-2.306E+02	
-1.384E+03	1.362E+11						
34	1.700E+01	8.896E-03	-7.076E-04	3.980E+06	-1.497E+03	-2.351E+02	
-1.411E+03	1.362E+11						
35	1.750E+01	5.177E-03	-5.325E-04	3.967E+06	-3.113E+04	-9.643E+03	
-5.786E+04	1.362E+11						
36	1.800E+01	2.506E-03	-3.657E-04	3.607E+06	-8.789E+04	-9.277E+03	
-5.566E+04	1.362E+11						
37	1.850E+01	7.876E-04	-2.222E-04	2.913E+06	-1.289E+05	-4.378E+03	
-2.627E+04	1.362E+11						
38	1.900E+01	-1.607E-04	-1.127E-04	2.061E+06	-1.383E+05	1.219E+03	
7.314E+03	1.362E+11						
39	1.950E+01	-5.644E-04	-3.970E-05	1.253E+06	-1.192E+05	5.167E+03	
3.100E+04	1.362E+11						
40	2.000E+01	-6.371E-04	1.770E-06	6.306E+05	-8.617E+04	5.833E+03	
3.500E+04	1.362E+11						
41	2.050E+01	-5.431E-04	2.047E-05	2.185E+05	-5.375E+04	4.973E+03	
2.984E+04	1.362E+11						
42	2.100E+01	-3.914E-04	2.496E-05	-1.449E+04	-2.808E+04	3.584E+03	
2.150E+04	1.362E+11						
43	2.150E+01	-2.436E-04	2.203E-05	-1.185E+05	-1.064E+04	2.230E+03	
1.338E+04	1.362E+11						
44	2.200E+01	-1.270E-04	1.629E-05	-1.422E+05	-4.591E+02	1.163E+03	
6.979E+03	1.362E+11						
45	2.250E+01	-4.807E-05	1.043E-05	-1.240E+05	4.351E+03	4.401E+02	
2.641E+03	1.362E+11						
46	2.300E+01	-1.861E-06	5.721E-06	-8.996E+04	5.723E+03	1.704E+01	
1.023E+02	1.362E+11						
47	2.350E+01	2.058E-05	2.522E-06	-5.531E+04	5.209E+03	-1.884E+02	
-1.130E+03	1.362E+11						
48	2.400E+01	2.840E-05	6.989E-07	-2.745E+04	3.863E+03	-2.600E+02	
-1.560E+03	1.362E+11						
49	2.450E+01	2.896E-05	-1.029E-07	-8.953E+03	2.288E+03	-2.652E+02	
-1.591E+03	1.362E+11						
50	2.500E+01	2.716E-05	-3.000E-07	-1.282E-11	7.461E+02	-2.487E+02	
-1.492E+03	1.362E+11						

STA 455+00 Depth versus Moment (Strength Case)
Bending Moment (in-kips)



=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 455+00\
Name of input data file : STA 455+00-Strength Case.py7d
Name of output file : STA 455+00-Strength Case.py7o
Name of plot output file : STA 455+00-Strength Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 09:16:27

STA 455+00 Soldier Pile Wall

* PROGRAM CONTROL PARAMETERS *

NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES	=	0
NO OF WALL SECTIONS	=	1
NO OF CROSS SECTIONS	=	1
GENERATE EARTH PRESSURE INTERNALLY	=	1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY	=	1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES	=	0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES	=	0
NO OF TIE BACKS	=	0
NO OF STRUTS/RAKERS	=	0

HEIGHT OF WALL	=	25.000 FT
NUMBER OF INCREMENTS	=	50
INCREMENT LENGTH	=	6.000 IN
MAXIMUM ALLOWABLE DEFLECTION	=	100.000 IN
DEFLECTION CLOSURE TOLERANCE	=	1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS	=	100

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	25.0000	1

* CROSS SECTIONS *

CROSS SECTION : 1
 SECTION NAME : Section
 TYPE : ELASTIC
 CROSS SECTION TYPE : I SECTION
 EQUIVALENT DIAMETER : 10.0000 IN
 EXTERNAL WIDTH : 10.0000 IN
 EXTERNAL DEPTH : 27.6000 IN
 FLANGE THICKNESS : 1.10000 IN
 WEB THICKNESS : 0.61000 IN
 YOUNG MODULUS : 2.90000E+07 LBS/IN**2

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

* STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
 S - STIFFNESS OF TRANSVERSE RESISTANCE,
 T - TORQUE, P - AXIAL LOAD,
 R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI LBS-IN**2	Q LBS	S LBS/IN	T IN-LBS	R IN-LBS	P LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50	0		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	2.400E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

 * WALL INFORMATION *

FREE HEIGHT OF WALL = 6.000E+00 FT
 WIDTH FOR EARTH PRESSURE, WA = 7.800E+01 IN
 WIDTH FOR SOIL RESISTANCE, WP = 3.600E+01 IN
 DEPTH TO THE WATER TABLE AT BACKFILL = 1.200E+01 FT
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.200E+01 FT
 UNIT WEIGHT OF WATER = 3.600E-02 LBS/IN**3
 SLOPE OF THE BACKFILL (deg.) = 0.000E+00
 SLOPE OF THE EXCAVATION GROUND (deg.) = 0.000E+00
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE = 1.736E+00 LBS/IN**2

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	TOTAL UNIT			
			PHI DEG	WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	3.0	5.2	0.0	0.064	F	0.00
2	3.0	3.5	0.0	0.052	F	3.00
3	2.0	3.5	0.0	0.052	F	6.00
4	4.0	1.7	0.0	0.052	F	8.00
5	3.0	10.4	0.0	0.064	F	12.00
6	2.0	9.7	0.0	0.087	T	15.00
7	33.0	11000.0	0.0	0.093	T	17.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
3.000E+00	4.028E+00
6.000E+00	5.903E+00
8.000E+00	7.153E+00
1.200E+01	9.653E+00
1.500E+01	1.065E+01
1.700E+01	1.187E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	1.000E+00	1.000E+00	0.000E+00
2	1.000E+00	1.000E+00	0.000E+00
3	1.000E+00	1.000E+00	0.000E+00
4	1.000E+00	1.000E+00	0.000E+00
5	1.000E+00	1.000E+00	0.000E+00
6	1.000E+00	1.000E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00

NOTES:

- (*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS
 (**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE
 IF IT IS DIFFERENT THAN ZERO

 * ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER NO	PA1 LBS/IN	Z1 FT	PA2 LBS/IN	Z2 FT	PA3 LBS/IN	Z3 FT	PA4 LBS/IN
1	0.00	1.50	0.00	2.00	0.00	5.79	0.00
2	0.00	4.50	0.00	5.00	0.00	6.56	0.00

Net active pressure is negative.

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

* WARNING *

This model uses a reduction of active loads for the cohesive strength of clay. Please check carefully these results. Please evaluate if other alternatives are more applicable to your model (e.g., other/reduced cohesive strength, equivalent fluid pressure, and/or other type of retained soil to simulate drained and/or long-term conditions).

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	2.03128E+02
5.00000E-01	5.46000E-10
1.00000E+00	1.01400E-09
1.50000E+00	1.48200E-09
2.00000E+00	1.95000E-09
2.50000E+00	2.41800E-09
3.00000E+00	2.88600E-09
3.50000E+00	3.35400E-09
4.00000E+00	3.82200E-09
4.50000E+00	4.29000E-09
5.00000E+00	4.75800E-09
5.50000E+00	5.22600E-09
6.00000E+00	5.69400E-09
6.50000E+00	2.84400E-09
7.00000E+00	3.06000E-09
7.50000E+00	3.27600E-09
8.00000E+00	3.49200E-09
8.50000E+00	1.31249E+02
9.00000E+00	1.31249E+02
9.50000E+00	1.31249E+02
1.00000E+01	1.31249E+02
1.05000E+01	1.31249E+02
1.10000E+01	1.31249E+02
1.15000E+01	1.31249E+02
1.20000E+01	1.31249E+02
1.25000E+01	5.43600E-09
1.30000E+01	5.65200E-09
1.35000E+01	5.86800E-09
1.40000E+01	6.08400E-09
1.45000E+01	6.30000E-09
1.50000E+01	6.51600E-09
1.55000E+01	6.73200E-09
1.60000E+01	6.94800E-09
1.65000E+01	7.16400E-09
1.70000E+01	7.38000E-09
1.75000E+01	7.59600E-09
1.80000E+01	7.81200E-09

1.85000E+01	8.02800E-09
1.90000E+01	8.24400E-09
1.95000E+01	8.46000E-09
2.00000E+01	8.67600E-09
2.05000E+01	8.89200E-09
2.10000E+01	9.10800E-09
2.15000E+01	9.32400E-09
2.20000E+01	9.54000E-09
2.25000E+01	9.75600E-09
2.30000E+01	9.97200E-09
2.35000E+01	1.01880E-08
2.40000E+01	1.04040E-08
2.45000E+01	1.06200E-08
2.50000E+01	1.08360E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

5 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SOFT CLAY

LAYER 2
 THE SOIL IS A SOFT CLAY

LAYER 3
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4
 THE LAYER IS WEAK ROCK

LAYER 5
 THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
 10 POINTS

X, FT	WEIGHT, LBS/IN**3
6.0000	5.2083E-02
8.0000	5.2083E-02
8.0000	5.2083E-02
12.0000	5.2083E-02
12.0000	2.7657E-02

15.0000	2.7657E-02
15.0000	5.0806E-02
17.0000	5.0806E-02
17.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	3.4722E+00	0.000	2.0000E-02	0.0000E+00
8.00	3.4722E+00	0.000	2.0000E-02	0.0000E+00
8.00	1.7361E+00	0.000	2.0000E-02	0.0000E+00
12.00	1.7361E+00	0.000	2.0000E-02	0.0000E+00
12.00	1.0417E+01	0.000	7.0000E-03	0.0000E+00
15.00	1.0417E+01	0.000	7.0000E-03	0.0000E+00
15.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
26.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
0.01	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	19.684
0.036	42.408
0.108	61.163
0.288	84.815
0.576	106.861
0.864	122.325
1.440	145.032
2.160	166.021
3.240	190.046
4.320	209.173
5.760	230.225
7.200	248.002
9.360	270.668
11.520	290.065
14.400	312.463

17.280 312.463

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
6.01	36.000	3.4722E+00	5.7862E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	34.105
0.036	73.477
0.108	105.972
0.288	146.954
0.576	185.150
0.864	211.944
1.440	251.287
2.160	287.652
3.240	329.279
4.320	362.419
5.760	398.894
7.200	429.695
9.360	468.966
11.520	502.575
14.400	541.382
17.280	541.382

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
0.50	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	20.801
0.036	44.815
0.108	64.634
0.288	89.630
0.576	112.926
0.864	129.268
1.440	153.265
2.160	175.444
3.240	200.833

4.320	221.046
5.760	243.292
7.200	262.079
9.360	286.031
11.520	306.529
14.400	330.198
17.280	330.198

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
6.50	36.000	3.4722E+00	5.7425E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	35.222
0.036	75.884
0.108	109.444
0.288	151.768
0.576	191.215
0.864	218.887
1.440	259.519
2.160	297.075
3.240	340.067
4.320	374.292
5.760	411.961
7.200	443.772
9.360	484.329
11.520	519.039
14.400	559.117
17.280	559.117

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
1.00	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	21.937
0.036	47.263
0.108	68.165

0.288	94.525
0.576	119.095
0.864	136.329
1.440	161.636
2.160	185.027
3.240	211.803
4.320	233.120
5.760	256.581
7.200	276.394
9.360	301.654
11.520	323.272
14.400	348.234
17.280	348.234

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
7.00	36.000	3.4722E+00	5.7044E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	36.358
0.036	78.332
0.108	112.974
0.288	156.664
0.576	197.384
0.864	225.948
1.440	267.891
2.160	306.659
3.240	351.036
4.320	386.366
5.760	425.250
7.200	458.087
9.360	499.953
11.520	535.782
14.400	577.154
17.280	577.154

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
1.50	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	23.074
0.036	49.711
0.108	71.695
0.288	99.421
0.576	125.263
0.864	143.390
1.440	170.008
2.160	194.610
3.240	222.773
4.320	245.194
5.760	269.870
7.200	290.709
9.360	317.278
11.520	340.015
14.400	366.271
17.280	366.271

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
7.50	36.000	3.4722E+00	5.6713E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	37.495
0.036	80.780
0.108	116.504
0.288	161.559
0.576	203.552
0.864	233.009
1.440	276.263
2.160	316.242
3.240	362.006
4.320	398.440
5.760	438.539
7.200	472.402
9.360	515.576
11.520	552.525
14.400	595.190
17.280	595.190

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
1.99	36.000	3.4722E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	24.191
0.036	52.118
0.108	75.167
0.288	104.235
0.576	131.328
0.864	150.333
1.440	178.240
2.160	204.034
3.240	233.560
4.320	257.066
5.760	282.938
7.200	304.786
9.360	332.641
11.520	356.480
14.400	384.006
17.280	384.006

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
7.99	36.000	3.4722E+00	5.6428E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	38.612
0.036	83.187
0.108	119.976
0.288	166.373
0.576	209.617
0.864	239.952
1.440	284.495
2.160	325.665
3.240	372.793
4.320	410.312
5.760	451.607
7.200	486.479
9.360	530.940

11.520	568.989
14.400	612.925
17.280	612.925

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
2.01	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	15.849
0.036	34.146
0.108	49.247
0.288	68.292
0.576	86.043
0.864	98.494
1.440	116.778
2.160	133.678
3.240	153.023
4.320	168.423
5.760	185.374
7.200	199.688
9.360	217.938
11.520	233.556
14.400	251.591
17.280	251.591

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
8.01	36.000	1.7361E+00	5.6419E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	27.138
0.036	58.467
0.108	84.324
0.288	116.933
0.576	147.327
0.864	168.647
1.440	199.953

2.160	228.889
3.240	262.013
4.320	288.383
5.760	317.406
7.200	341.915
9.360	373.164
11.520	399.907
14.400	430.786
17.280	430.786

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
3.00	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	17.561
0.036	37.834
0.108	54.566
0.288	75.668
0.576	95.336
0.864	109.132
1.440	129.391
2.160	148.115
3.240	169.550
4.320	186.613
5.760	205.395
7.200	221.255
9.360	241.476
11.520	258.781
14.400	278.763
17.280	278.763

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
9.00	36.000	1.7361E+00	5.5941E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	28.834

0.036	62.120
0.108	89.593
0.288	124.240
0.576	156.533
0.864	179.185
1.440	212.448
2.160	243.192
3.240	278.385
4.320	306.403
5.760	337.240
7.200	363.281
9.360	396.482
11.520	424.896
14.400	457.705
17.280	457.705

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
4.00	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	19.287
0.036	41.553
0.108	59.930
0.288	83.106
0.576	104.707
0.864	119.859
1.440	142.109
2.160	162.674
3.240	186.215
4.320	204.957
5.760	225.584
7.200	243.003
9.360	265.212
11.520	284.218
14.400	306.164
17.280	306.164

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
----------------	------	---	-----------	-----

FT	IN	LBS/IN**2	LBS/IN**3	
10.00	36.000	1.7361E+00	5.5556E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	29.497
0.036	63.550
0.108	91.656
0.288	127.101
0.576	160.137
0.864	183.311
1.440	217.339
2.160	248.792
3.240	284.795
4.320	313.458
5.760	345.005
7.200	371.645
9.360	405.611
11.520	434.679
14.400	468.244
17.280	468.244

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**3	
5.00	36.000	1.7361E+00	5.2083E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	21.013
0.036	45.272
0.108	65.293
0.288	90.544
0.576	114.078
0.864	130.586
1.440	154.827
2.160	177.233
3.240	202.881
4.320	223.300
5.760	245.773
7.200	264.751
9.360	288.947
11.520	309.655
14.400	333.565
17.280	333.565

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
11.00	36.000	1.7361E+00	5.5240E-02	2.0000E-02
	Y, IN		P, LBS/IN	
	0.000		0.000	
	0.004		29.497	
	0.036		63.550	
	0.108		91.656	
	0.288		127.101	
	0.576		160.137	
	0.864		183.311	
	1.440		217.339	
	2.160		248.792	
	3.240		284.795	
	4.320		313.458	
	5.760		345.005	
	7.200		371.645	
	9.360		405.611	
	11.520		434.679	
	14.400		468.244	
	17.280		468.244	

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
5.99	36.000	1.7361E+00	5.2083E-02	2.0000E-02
	Y, IN		P, LBS/IN	
	0.000		0.000	
	0.004		22.725	
	0.036		48.960	
	0.108		70.612	
	0.288		97.919	
	0.576		123.371	
	0.864		141.224	
	1.440		167.440	
	2.160		191.671	
	3.240		219.408	
	4.320		241.490	
	5.760		265.794	

7.200	286.318
9.360	312.485
11.520	334.879
14.400	360.738
17.280	360.738

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	GAMMA AVG LBS/IN**3	E50
11.99	36.000	1.7361E+00	5.4979E-02	2.0000E-02

Y, IN	P, LBS/IN
0.000	0.000
0.004	29.497
0.036	63.550
0.108	91.656
0.288	127.101
0.576	160.137
0.864	183.311
1.440	217.339
2.160	248.792
3.240	284.795
4.320	313.458
5.760	345.005
7.200	371.645
9.360	405.611
11.520	434.679
14.400	468.244
17.280	468.244

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
6.01	36.000	1.04E+01	1.04E+01	5.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	60.53342
0.00050	90.51858
0.00101	107.64534

0.00504	160.96732
0.01008	191.42349
0.05040	286.24487
0.10080	340.40444
0.25200	428.03593
0.50400	509.02337
0.75600	563.32696
1.00800	605.33421
2.52000	761.16747
5.04000	905.18577
10.08000	1076.45336
11.34000	1076.45336
12.60000	1076.45336

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
12.01	36.000	1.04E+01	1.04E+01	5.50E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	84.87225
0.00050	126.91362
0.00101	150.92658
0.00504	225.68788
0.01008	268.38964
0.05040	401.33611
0.10080	477.27176
0.25200	600.13747
0.50400	713.68775
0.75600	789.82533
1.00800	848.72255
2.52000	1067.21210
5.04000	1269.13622
10.08000	1509.26583
11.34000	1509.26583
12.60000	1509.26583

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
6.75	36.000	1.04E+01	1.04E+01	4.94E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	63.33654
0.00050	94.71021
0.00101	112.63006
0.00504	168.42123
0.01008	200.28772
0.05040	299.50000
0.10080	356.16753
0.25200	447.85696
0.50400	532.59468
0.75600	589.41291
1.00800	633.36539
2.52000	796.41481
5.04000	947.10216
10.08000	1126.30062
11.34000	1126.30062
12.60000	1126.30062

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
12.75	36.000	1.04E+01	1.04E+01	5.34E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	87.58638
0.00050	130.97218
0.00101	155.75305
0.00504	232.90514
0.01008	276.97245
0.05040	414.17040
0.10080	492.53439
0.25200	619.32922
0.50400	736.51071
0.75600	815.08309
1.00800	875.86378
2.52000	1101.34039
5.04000	1309.72183

10.08000	1557.53051
11.34000	1557.53051
12.60000	1557.53051

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
7.50	36.000	1.04E+01	1.04E+01	4.72E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	66.12722
0.00050	98.88326
0.00101	117.59268
0.00504	175.84207
0.01008	209.11265
0.05040	312.69633
0.10080	371.86071
0.25200	467.59009
0.50400	556.06146
0.75600	615.38317
1.00800	661.27224
2.52000	831.50582
5.04000	988.83264
10.08000	1175.92681
11.34000	1175.92681
12.60000	1175.92681

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
13.50	36.000	1.04E+01	1.04E+01	5.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	90.31653
0.00050	135.05472
0.00101	160.60803

0.00504	240.16503
0.01008	285.60597
0.05040	427.08053
0.10080	507.88720
0.25200	638.63435
0.50400	759.46851
0.75600	840.49008
1.00800	903.16536
2.52000	1135.67031
5.04000	1350.54721
10.08000	1606.08035
11.34000	1606.08035
12.60000	1606.08035

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
8.25	36.000	1.04E+01	1.04E+01	4.54E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	68.88574
0.00050	103.00820
0.00101	122.49809
0.00504	183.17737
0.01008	217.83584
0.05040	325.74055
0.10080	387.37297
0.25200	487.09573
0.50400	579.25771
0.75600	641.05404
1.00800	688.85739
2.52000	866.19231
5.04000	1030.08206
10.08000	1224.98091
11.34000	1224.98091
12.60000	1224.98091

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
14.25	36.000	1.04E+01	1.04E+01	5.07E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	93.03444
0.00050	139.11894
0.00101	165.44123
0.00504	247.39234
0.01008	294.20073
0.05040	439.93270
0.10080	523.17110
0.25200	657.85284
0.50400	782.32327
0.75600	865.78303
1.00800	930.34440
2.52000	1169.84615
5.04000	1391.18936
10.08000	1654.41229
11.34000	1654.41229
12.60000	1654.41229

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
8.99	36.000	1.04E+01	1.04E+01	4.40E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00010	71.58985
0.00050	107.05180
0.00101	127.30676
0.00504	190.36802
0.01008	226.38700
0.05040	338.52752
0.10080	402.57933
0.25200	506.21672
0.50400	601.99652
0.75600	666.21867
1.00800	715.89855
2.52000	900.19476
5.04000	1070.51801

10.08000	1273.06764
11.34000	1273.06764
12.60000	1273.06764

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	C LBS/IN**2	CAVG LBS/IN**2	GAMMA AVG LBS/IN**3	E50
14.99	36.000	1.04E+01	1.04E+01	4.95E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00010	95.71190
0.00050	143.12267
0.00101	170.20249
0.00504	254.51210
0.01008	302.66760
0.05040	452.59361
0.10080	538.22755
0.25200	676.78532
0.50400	804.83791
0.75600	890.69957
1.00800	957.11897
2.52000	1203.51339
5.04000	1431.22668
10.08000	1702.02496
11.34000	1702.02496
12.60000	1702.02496

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS FT	DIAM IN	Qu LBS/IN**2	Eu LBS/IN**2	GAMMA AVG LBS/IN**3	E50	RQD %
9.01	36.000	9.70E+00	3.50E+04	4.39E-02	5.000E-04	0.000

Y IN	P LBS/IN
0.900E-05	0.218E+02
0.180E-04	0.259E+02
0.540E-04	0.341E+02
0.108E-03	0.406E+02
0.162E-03	0.449E+02

0.360E-03	0.549E+02
0.720E-03	0.653E+02
0.108E-02	0.722E+02
0.144E-02	0.776E+02
0.180E-02	0.821E+02
0.450E-02	0.103E+03
0.900E-02	0.123E+03
0.135E-01	0.136E+03
0.180E-01	0.146E+03
0.720E-01	0.206E+03
0.144E+00	0.245E+03
0.216E+00	0.272E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.01	36.000	9.70E+00	3.50E+04	4.95E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
9.50	36.000	9.70E+00	3.50E+04	4.43E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.268E+02		

0.180E-04	0.319E+02
0.540E-04	0.420E+02
0.108E-03	0.499E+02
0.162E-03	0.552E+02
0.360E-03	0.674E+02
0.720E-03	0.802E+02
0.108E-02	0.887E+02
0.144E-02	0.953E+02
0.180E-02	0.101E+03
0.450E-02	0.127E+03
0.900E-02	0.151E+03
0.135E-01	0.167E+03
0.180E-01	0.179E+03
0.720E-01	0.254E+03
0.144E+00	0.301E+03
0.216E+00	0.334E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.877E+02		
		0.180E-04		0.104E+03		
		0.540E-04		0.137E+03		
		0.108E-03		0.163E+03		
		0.162E-03		0.181E+03		
		0.360E-03		0.220E+03		
		0.720E-03		0.262E+03		
		0.108E-02		0.290E+03		
		0.144E-02		0.312E+03		
		0.180E-02		0.330E+03		
		0.450E-02		0.415E+03		
		0.900E-02		0.493E+03		
		0.135E-01		0.546E+03		
		0.180E-01		0.586E+03		
		0.720E-01		0.829E+03		
		0.144E+00		0.986E+03		
		0.216E+00		0.109E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%

10.00	36.000	9.70E+00	3.50E+04	4.46E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		
		0.135E-01		0.198E+03		
		0.180E-01		0.213E+03		
		0.720E-01		0.301E+03		
		0.144E+00		0.359E+03		
		0.216E+00		0.397E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.00	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		
		0.180E-01		0.620E+03		
		0.720E-01		0.877E+03		
		0.144E+00		0.104E+04		
		0.216E+00		0.115E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.50	36.000	9.70E+00	3.50E+04	4.49E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.369E+02		
		0.180E-04		0.439E+02		
		0.540E-04		0.578E+02		
		0.108E-03		0.688E+02		
		0.162E-03		0.761E+02		
		0.360E-03		0.929E+02		
		0.720E-03		0.110E+03		
		0.108E-02		0.122E+03		
		0.144E-02		0.131E+03		
		0.180E-02		0.139E+03		
		0.450E-02		0.175E+03		
		0.900E-02		0.208E+03		
		0.135E-01		0.230E+03		
		0.180E-01		0.247E+03		
		0.720E-01		0.349E+03		
		0.144E+00		0.416E+03		
		0.216E+00		0.460E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.978E+02		
		0.180E-04		0.116E+03		
		0.540E-04		0.153E+03		
		0.108E-03		0.182E+03		
		0.162E-03		0.201E+03		
		0.360E-03		0.246E+03		
		0.720E-03		0.292E+03		
		0.108E-02		0.324E+03		
		0.144E-02		0.348E+03		
		0.180E-02		0.368E+03		
		0.450E-02		0.462E+03		
		0.900E-02		0.550E+03		
		0.135E-01		0.609E+03		
		0.180E-01		0.654E+03		
		0.720E-01		0.925E+03		
		0.144E+00		0.110E+04		

0.216E+00 0.122E+04

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.99	36.000	9.70E+00	3.50E+04	4.52E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.419E+02		
		0.180E-04		0.499E+02		
		0.540E-04		0.656E+02		
		0.108E-03		0.780E+02		
		0.162E-03		0.864E+02		
		0.360E-03		0.105E+03		
		0.720E-03		0.125E+03		
		0.108E-02		0.139E+03		
		0.144E-02		0.149E+03		
		0.180E-02		0.158E+03		
		0.450E-02		0.198E+03		
		0.900E-02		0.236E+03		
		0.135E-01		0.261E+03		
		0.180E-01		0.280E+03		
		0.720E-01		0.397E+03		
		0.144E+00		0.472E+03		
		0.216E+00		0.522E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.99	36.000	9.70E+00	3.50E+04	4.97E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.307E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		
		0.180E-02		0.387E+03		
		0.450E-02		0.486E+03		
		0.900E-02		0.578E+03		

0.135E-01	0.640E+03
0.180E-01	0.687E+03
0.720E-01	0.972E+03
0.144E+00	0.116E+04
0.216E+00	0.128E+04

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
132.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.107D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
204.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06

0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.247D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
159.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.135D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
231.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06

0.922D-01 0.275D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
186.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.162D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
258.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.304D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
213.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.190D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
285.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.332D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
------------------	------	------	---

IN	IN	LBS/IN**2
239.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.217D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
311.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.360D+03

STA 455+00 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
LBS	FT	IN	RAD	LBS-IN	LBS	LBS/IN
LBS-IN**2						
-----	-----	-----	-----	-----	-----	-----
0	0.000E+00	4.795E-01	-2.939E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	4.619E-01	-2.939E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
2	1.000E+00	4.442E-01	-2.939E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
3	1.500E+00	4.266E-01	-2.939E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
4	2.000E+00	4.090E-01	-2.939E-03	0.000E+00	3.501E-08	0.000E+00
7.002E-08	1.362E+11					
5	2.500E+00	3.913E-01	-2.939E-03	4.201E-07	7.002E-08	0.000E+00
0.000E+00	1.362E+11					
6	3.000E+00	3.737E-01	-2.939E-03	8.403E-07	6.000E+03	0.000E+00
1.200E+04	1.362E+11					
7	3.500E+00	3.561E-01	-2.937E-03	7.200E+04	1.800E+04	0.000E+00
1.200E+04	1.362E+11					
8	4.000E+00	3.384E-01	-2.931E-03	2.160E+05	2.400E+04	0.000E+00
-7.002E-08	1.362E+11					
9	4.500E+00	3.209E-01	-2.918E-03	3.600E+05	2.400E+04	0.000E+00
7.001E-08	1.362E+11					
10	5.000E+00	3.034E-01	-2.899E-03	5.040E+05	2.400E+04	0.000E+00
7.004E-08	1.362E+11					
11	5.500E+00	2.861E-01	-2.874E-03	6.480E+05	2.400E+04	0.000E+00
-1.940E-11	1.362E+11					
12	6.000E+00	2.689E-01	-2.842E-03	7.920E+05	2.388E+04	-4.116E+01
-2.469E+02	1.362E+11					
13	6.500E+00	2.520E-01	-2.804E-03	9.345E+05	2.350E+04	-8.463E+01
-5.078E+02	1.362E+11					
14	7.000E+00	2.353E-01	-2.760E-03	1.074E+06	2.298E+04	-8.681E+01
-5.209E+02	1.362E+11					
15	7.500E+00	2.189E-01	-2.710E-03	1.210E+06	2.246E+04	-8.878E+01
-5.327E+02	1.362E+11					
16	8.000E+00	2.028E-01	-2.653E-03	1.343E+06	2.192E+04	-9.046E+01
-5.427E+02	1.362E+11					
17	8.500E+00	1.870E-01	-2.591E-03	1.473E+06	2.182E+04	-7.588E+01
3.322E+02	1.362E+11					
18	9.000E+00	1.717E-01	-2.524E-03	1.605E+06	2.219E+04	-6.204E+01
4.153E+02	1.362E+11					
19	9.500E+00	1.568E-01	-2.450E-03	1.740E+06	2.260E+04	-6.325E+01

4.080E+02	1.362E+11						
20	1.000E+01	1.423E-01	-2.370E-03	1.876E+06	2.301E+04	-6.435E+01	
4.014E+02	1.362E+11						
21	1.050E+01	1.283E-01	-2.285E-03	2.016E+06	2.340E+04	-6.534E+01	
3.954E+02	1.362E+11						
22	1.100E+01	1.149E-01	-2.193E-03	2.157E+06	2.380E+04	-6.625E+01	
3.900E+02	1.362E+11						
23	1.150E+01	1.020E-01	-2.094E-03	2.301E+06	2.419E+04	-6.621E+01	
3.902E+02	1.362E+11						
24	1.200E+01	8.974E-02	-1.990E-03	2.448E+06	2.458E+04	-6.512E+01	
3.968E+02	1.362E+11						
25	1.250E+01	7.812E-02	-1.879E-03	2.596E+06	2.419E+04	-1.962E+02	
-1.177E+03	1.362E+11						
26	1.300E+01	6.719E-02	-1.761E-03	2.738E+06	2.265E+04	-3.184E+02	
-1.910E+03	1.362E+11						
27	1.350E+01	5.699E-02	-1.638E-03	2.868E+06	2.073E+04	-3.204E+02	
-1.923E+03	1.362E+11						
28	1.400E+01	4.754E-02	-1.509E-03	2.987E+06	1.883E+04	-3.117E+02	
-1.870E+03	1.362E+11						
29	1.450E+01	3.888E-02	-1.375E-03	3.094E+06	1.701E+04	-2.949E+02	
-1.769E+03	1.362E+11						
30	1.500E+01	3.104E-02	-1.237E-03	3.191E+06	1.528E+04	-2.847E+02	
-1.708E+03	1.362E+11						
31	1.550E+01	2.404E-02	-1.094E-03	3.277E+06	1.386E+04	-1.874E+02	
-1.124E+03	1.362E+11						
32	1.600E+01	1.791E-02	-9.481E-04	3.357E+06	1.266E+04	-2.127E+02	
-1.276E+03	1.362E+11						
33	1.650E+01	1.266E-02	-7.987E-04	3.429E+06	1.134E+04	-2.259E+02	
-1.355E+03	1.362E+11						
34	1.700E+01	8.321E-03	-6.462E-04	3.493E+06	9.975E+03	-2.303E+02	
-1.382E+03	1.362E+11						
35	1.750E+01	4.906E-03	-4.912E-04	3.549E+06	-1.815E+04	-9.145E+03	
-5.487E+04	1.362E+11						
36	1.800E+01	2.428E-03	-3.409E-04	3.275E+06	-7.256E+04	-8.992E+03	
-5.395E+04	1.362E+11						
37	1.850E+01	8.151E-04	-2.098E-04	2.678E+06	-1.131E+05	-4.530E+03	
-2.718E+04	1.362E+11						
38	1.900E+01	-8.964E-05	-1.086E-04	1.918E+06	-1.246E+05	6.926E+02	
4.157E+03	1.362E+11						
39	1.950E+01	-4.876E-04	-4.028E-05	1.183E+06	-1.092E+05	4.464E+03	
2.679E+04	1.362E+11						
40	2.000E+01	-5.730E-04	-8.445E-07	6.080E+05	-8.003E+04	5.246E+03	
3.148E+04	1.362E+11						
41	2.050E+01	-4.977E-04	1.744E-05	2.223E+05	-5.062E+04	4.557E+03	
2.734E+04	1.362E+11						
42	2.100E+01	-3.637E-04	2.235E-05	5.952E+02	-2.696E+04	3.330E+03	
1.998E+04	1.362E+11						
43	2.150E+01	-2.295E-04	2.013E-05	-1.012E+05	-1.066E+04	2.102E+03	
1.261E+04	1.362E+11						
44	2.200E+01	-1.221E-04	1.510E-05	-1.274E+05	-1.004E+03	1.118E+03	

6.708E+03	1.362E+11					
45	2.250E+01	-4.833E-05	9.800E-06	-1.133E+05	3.677E+03	4.426E+02
2.655E+03	1.362E+11					
46	2.300E+01	-4.498E-06	5.473E-06	-8.323E+04	5.128E+03	4.119E+01
2.471E+02	1.362E+11					
47	2.350E+01	1.734E-05	2.501E-06	-5.172E+04	4.776E+03	-1.588E+02
-9.527E+02	1.362E+11					
48	2.400E+01	2.552E-05	7.913E-07	-2.592E+04	3.598E+03	-2.336E+02
-1.402E+03	1.362E+11					
49	2.450E+01	2.684E-05	3.240E-08	-8.539E+03	2.160E+03	-2.457E+02
-1.474E+03	1.362E+11					
50	2.500E+01	2.590E-05	-1.556E-07	-1.282E-11	7.116E+02	-2.372E+02
-1.423E+03	1.362E+11					

=====

PYWALL for Windows, Version 2022.7.8

Serial Number : 653551717

A Program for the Analysis of
Flexible Retaining Walls
(c) Copyright ENSOFT, Inc., 1987-2022
All Rights Reserved

=====

This program is licensed to :

S&ME, Inc.
Cincinnati, OH

Path to file locations : T:\Columbus-1170\Projects\2024\24170095_Village
of Dennison_SR 800 Slip Repair_Dennison, Ohio\GEO\Project Docs\Calcs\PY Wall
Files\STA 455+00\
Name of input data file : STA 455+00-Strength Case.py7d
Name of output file : STA 455+00-Strength Case.py7o
Name of plot output file : STA 455+00-Strength Case.py7p

Time and Date of Analysis

Date: December 30, 2024 Time: 09:16:28

Long Term : STA 455+00 Soldier Pile Wall

```
*****
*          PROGRAM CONTROL PARAMETERS          *
*****
```

```
NO OF POINTS FOR SPECIFIED DEFLECTIONS AND SLOPES = 0
NO OF WALL SECTIONS                               = 1
NO OF CROSS SECTIONS                             = 1
GENERATE EARTH PRESSURE INTERNALLY                = 1
GENERATE SOIL RESISTANCE (P-Y) CURVES INTERNALLY  = 1
NO OF P-Y MODIFICATION FACTORS FOR GEN. P-Y CURVES = 0
NO OF USER-SPECIFIED SOIL RESISTANCE (P-Y) CURVES = 0
NO OF TIE BACKS                                   = 0
NO OF STRUTS/RAKERS                               = 0
```

```
HEIGHT OF WALL = 25.000 FT
NUMBER OF INCREMENTS = 50
INCREMENT LENGTH = 6.000 IN
MAXIMUM ALLOWABLE DEFLECTION = 100.000 IN
DEFLECTION CLOSURE TOLERANCE = 1.000E-05 IN
MAXIMUM NUMBER OF ITERATIONS = 100
```

* WALL SECTIONS *

SECT	TOP FT	BOTTOM FT	SECTION
1	0.00000	25.0000	1

* CROSS SECTIONS *

```
CROSS SECTION      : 1
SECTION NAME       : Section
TYPE               : ELASTIC
CROSS SECTION TYPE : I SECTION
EQUIVALENT DIAMETER : 10.0000 IN
EXTERNAL WIDTH     : 10.0000 IN
EXTERNAL DEPTH     : 27.6000 IN
FLANGE THICKNESS   : 1.10000 IN
WEB THICKNESS      : 0.61000 IN
YOUNG MODULUS      : 2.90000E+07 LBS/IN**2
```

* CROSS SECTIONS PROPERTIES *

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	10.0000	4697.60

 * STIFFNESS AND LOAD DATA *

EI - FLEXURAL RIGIDITY, Q - TRANSVERSE LOAD,
 S - STIFFNESS OF TRANSVERSE RESISTANCE,
 T - TORQUE, P - AXIAL LOAD,
 R - STIFFNESS OF TORSIONAL RESISTANCE.

FROM	TO	CONTD	EI	Q	S	T	R	P
			LBS-IN**2	LBS	LBS/IN	IN-LBS	IN-LBS	LBS
0	1		1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	50	0	1.362E+11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6	7	0	1.362E+11	2.400E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00

 * WALL INFORMATION *

FREE HEIGHT OF WALL	=	6.000E+00	FT
WIDTH FOR EARTH PRESSURE, WA	=	7.800E+01	IN
WIDTH FOR SOIL RESISTANCE, WP	=	3.600E+01	IN
DEPTH TO THE WATER TABLE AT BACKFILL	=	1.200E+01	FT
DEPTH TO THE WATER TABLE AT EXCAVATION	=	1.200E+01	FT
UNIT WEIGHT OF WATER	=	3.600E-02	LBS/IN**3
SLOPE OF THE BACKFILL (deg.)	=	0.000E+00	
SLOPE OF THE EXCAVATION GROUND (deg.)	=	0.000E+00	
MODIFICATION FOR ACTIVE EARTH PRESSURE	=	1.500E+00	

 * SURCHARGE INFORMATION *

UNIFORM SURFACE PRESSURE	=	1.736E+00	LBS/IN**2
--------------------------	---	-----------	-----------

 * SOIL INFORMATION *

LAYER NO.	TOTAL THICKNESS FT	COHESION/ STRENGTH PSI	PHI DEG	TOTAL UNIT WEIGHT PCI	DRAINED T OR F	ZTOP FT
1	3.0	0.0	28.0	0.064	T	0.00
2	3.0	0.0	28.0	0.052	T	3.00
3	2.0	0.0	28.0	0.052	T	6.00
4	4.0	1.0	22.0	0.052	T	8.00
5	3.0	0.0	34.0	0.064	T	12.00
6	2.0	9.7	0.0	0.087	T	15.00
7	33.0	11000.0	0.0	0.093	T	17.00

 * EFFECTIVE OVERBURDEN STRESS *

DEPTH FT	STRESS LBS/IN**2
0.000E+00	1.736E+00
3.000E+00	4.028E+00
6.000E+00	5.903E+00
8.000E+00	7.153E+00
1.200E+01	9.653E+00
1.500E+01	1.065E+01
1.700E+01	1.187E+01

 * ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT *

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	3.610E-01	2.770E+00	0.000E+00
2	3.610E-01	2.770E+00	0.000E+00
3	3.610E-01	2.770E+00	0.000E+00
4	4.550E-01	2.198E+00	0.000E+00
5	2.827E-01	3.537E+00	0.000E+00
6	1.000E+00	1.000E+00	0.000E+00
7	1.000E+00	1.000E+00	0.000E+00

NOTES:

(*) PASSIVE EARTH COEFFICIENT IS PRINTED ONLY FOR REFERENCE,
 IT IS NOT USED FOR ANALYSIS

(**) OPTIONAL EARTH COEFFICIENT IS USED TO ESTIMATE ACTIVE PRESSURE

IF IT IS DIFFERENT THAN ZERO

* ACTIVE EARTH PRESSURE OF EACH LAYER *

LAYER	PA1	Z1	PA2	Z2	PA3	Z3	PA4
NO	LBS/IN	FT	LBS/IN	FT	LBS/IN	FT	LBS/IN
1	33.85	1.50	22.34	2.00	0.00	-0.00	0.00
2	78.52	4.50	18.28	5.00	0.00	-0.00	0.00

* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH	ACTIVE EARTH PRESSURE
FT	LBS/IN
-----	-----
0.00000E+00	7.33348E+01
5.00000E-01	8.94660E+01
1.00000E+00	1.05604E+02
1.50000E+00	1.21735E+02
2.00000E+00	1.37873E+02
2.50000E+00	1.54003E+02
3.00000E+00	1.70134E+02
3.50000E+00	1.83339E+02
4.00000E+00	1.96537E+02
4.50000E+00	2.09734E+02
5.00000E+00	2.22940E+02
5.50000E+00	2.36137E+02
6.00000E+00	2.49335E+02
6.50000E+00	1.15078E+02
7.00000E+00	1.15078E+02
7.50000E+00	1.15078E+02
8.00000E+00	1.15078E+02
8.50000E+00	6.91380E+01
9.00000E+00	6.91380E+01
9.50000E+00	6.91380E+01
1.00000E+01	6.91380E+01
1.05000E+01	6.91380E+01
1.10000E+01	6.91380E+01
1.15000E+01	6.91380E+01
1.20000E+01	6.91380E+01
1.25000E+01	9.01152E+01
1.30000E+01	9.01152E+01
1.35000E+01	9.01152E+01
1.40000E+01	9.01152E+01
1.45000E+01	9.01152E+01
1.50000E+01	9.01152E+01
1.55000E+01	6.73200E-09

1.60000E+01	6.94800E-09
1.65000E+01	7.16400E-09
1.70000E+01	7.38000E-09
1.75000E+01	7.59600E-09
1.80000E+01	7.81200E-09
1.85000E+01	8.02800E-09
1.90000E+01	8.24400E-09
1.95000E+01	8.46000E-09
2.00000E+01	8.67600E-09
2.05000E+01	8.89200E-09
2.10000E+01	9.10800E-09
2.15000E+01	9.32400E-09
2.20000E+01	9.54000E-09
2.25000E+01	9.75600E-09
2.30000E+01	9.97200E-09
2.35000E+01	1.01880E-08
2.40000E+01	1.04040E-08
2.45000E+01	1.06200E-08
2.50000E+01	1.08360E-08

 * SOIL LAYERS AND STRENGTH DATA *

X AT THE SURFACE OF EXCAVATION SIDE = 6.00 FT

5 LAYER(S) OF SOIL

LAYER 1
 THE SOIL IS A SILT

LAYER 2
 THE SOIL IS A SILT

LAYER 3
 THE SOIL IS A SILT

LAYER 4
 THE LAYER IS WEAK ROCK

LAYER 5
 THE LAYER IS ROCK

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH
 10 POINTS

X, FT WEIGHT, LBS/IN**3

6.0000	5.2083E-02
8.0000	5.2083E-02
8.0000	5.2083E-02
12.0000	5.2083E-02
12.0000	2.7657E-02
15.0000	2.7657E-02
15.0000	5.0806E-02
17.0000	5.0806E-02
17.0000	5.6593E-02
50.0000	5.6593E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
6.00	0.0000E+00	28.000	2.0000E-02	3.0000E+01
8.00	0.0000E+00	28.000	2.0000E-02	3.0000E+01
8.00	1.0417E+00	22.000	2.0000E-02	3.0000E+01
12.00	1.0417E+00	22.000	2.0000E-02	3.0000E+01
12.00	0.0000E+00	34.000	7.0000E-03	5.0000E+02
15.00	0.0000E+00	34.000	7.0000E-03	5.0000E+02
15.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	9.7000E+00	0.000	5.0000E-04	3.5000E+04
17.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00
26.00	1.1000E+04	0.000	0.0000E+00	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
0.01	36.00	28.0	5.208E-02		3.000E+01	2.83	2.14	0.000E+00
4.525E-01								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.106E-01	0.265E-01
0.212E-01	0.529E-01
0.791E-01	0.134E+00
0.137E+00	0.198E+00
0.195E+00	0.255E+00

0.253E+00	0.306E+00
0.311E+00	0.354E+00
0.368E+00	0.400E+00
0.426E+00	0.444E+00
0.484E+00	0.485E+00
0.542E+00	0.526E+00
0.600E+00	0.565E+00
0.850E+00	0.732E+00
0.110E+01	0.898E+00
0.135E+01	0.107E+01
0.162E+01	0.107E+01

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
6.01	36.00	28.0	5.786E-02	3.000E+01	1.48	1.05	0.000E+00
8.429E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.540E+02
0.600E-01	0.108E+03
0.114E+00	0.205E+03
0.168E+00	0.302E+03
0.222E+00	0.400E+03
0.276E+00	0.497E+03
0.330E+00	0.594E+03
0.384E+00	0.691E+03
0.438E+00	0.789E+03
0.492E+00	0.886E+03
0.546E+00	0.983E+03
0.600E+00	0.105E+04
0.850E+00	0.105E+04
0.110E+01	0.104E+04
0.135E+01	0.104E+04
0.162E+01	0.104E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	0.50		36.00	28.0	5.208E-02		3.000E+01	2.71	2.04	0.000E+00
3.010E+01										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.253E-01	0.380E+01
0.507E-01	0.759E+01
0.106E+00	0.122E+02
0.161E+00	0.160E+02
0.215E+00	0.194E+02
0.270E+00	0.224E+02
0.325E+00	0.253E+02
0.380E+00	0.280E+02
0.435E+00	0.305E+02
0.490E+00	0.330E+02
0.545E+00	0.353E+02
0.600E+00	0.376E+02
0.850E+00	0.477E+02
0.110E+01	0.578E+02
0.135E+01	0.680E+02
0.162E+01	0.680E+02

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH	B	GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1	FT		IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN	6.50		36.00	28.0	5.743E-02		3.000E+01	1.40	0.99	0.000E+00
9.472E+02										

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.759E-01	0.148E+03
0.152E+00	0.296E+03
0.228E+00	0.443E+03
0.303E+00	0.591E+03
0.379E+00	0.739E+03
0.531E+00	0.103E+04

0.607E+00	0.118E+04
0.607E+00	0.118E+04
0.731E+00	0.117E+04
0.855E+00	0.116E+04
0.978E+00	0.114E+04
0.110E+01	0.113E+04
0.123E+01	0.111E+04
0.135E+01	0.110E+04
0.149E+01	0.110E+04
0.162E+01	0.110E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
1.00	36.00	28.0	5.208E-02	3.000E+01	2.60	1.93	0.000E+00
6.619E+01							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.461E-01	0.138E+02
0.923E-01	0.276E+02
0.143E+00	0.357E+02
0.194E+00	0.427E+02
0.245E+00	0.489E+02
0.295E+00	0.546E+02
0.346E+00	0.599E+02
0.397E+00	0.649E+02
0.448E+00	0.696E+02
0.498E+00	0.742E+02
0.549E+00	0.785E+02
0.600E+00	0.827E+02
0.850E+00	0.103E+03
0.110E+01	0.123E+03
0.135E+01	0.143E+03
0.162E+01	0.143E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
7.00	36.00	28.0	5.704E-02	3.000E+01	1.31	0.92	0.000E+00
1.059E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.785E-01	0.165E+03
0.157E+00	0.329E+03
0.235E+00	0.494E+03
0.314E+00	0.658E+03
0.392E+00	0.823E+03
0.549E+00	0.115E+04
0.628E+00	0.132E+04
0.628E+00	0.132E+04
0.748E+00	0.129E+04
0.868E+00	0.126E+04
0.989E+00	0.124E+04
0.111E+01	0.121E+04
0.123E+01	0.118E+04
0.135E+01	0.116E+04
0.149E+01	0.116E+04
0.162E+01	0.116E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
1.50	36.00	28.0	5.208E-02	3.000E+01	2.48	1.83	0.000E+00
1.083E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.135E+02
0.600E-01	0.270E+02
0.114E+00	0.512E+02
0.168E+00	0.695E+02
0.222E+00	0.804E+02
0.276E+00	0.901E+02
0.330E+00	0.989E+02

0.384E+00	0.107E+03
0.438E+00	0.115E+03
0.492E+00	0.122E+03
0.546E+00	0.129E+03
0.600E+00	0.135E+03
0.850E+00	0.165E+03
0.110E+01	0.194E+03
0.135E+01	0.224E+03
0.162E+01	0.224E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
7.50	36.00	28.0	5.671E-02	3.000E+01	1.23	0.86	0.000E+00
1.177E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.808E-01	0.182E+03
0.162E+00	0.363E+03
0.243E+00	0.545E+03
0.323E+00	0.727E+03
0.404E+00	0.909E+03
0.566E+00	0.127E+04
0.647E+00	0.145E+04
0.647E+00	0.145E+04
0.764E+00	0.141E+04
0.881E+00	0.137E+04
0.998E+00	0.133E+04
0.112E+01	0.129E+04
0.123E+01	0.125E+04
0.135E+01	0.121E+04
0.149E+01	0.121E+04
0.162E+01	0.121E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
------------	------	-----	-----------	-----	---	---	-----

Pu1	FT	IN		LBS/IN**3	LBS/IN**3		LBS/IN
LBS/IN							
1.99		36.00	28.0	5.208E-02	3.000E+01	2.36	1.73 0.000E+00
1.555E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.179E+02
0.600E-01	0.358E+02
0.114E+00	0.680E+02
0.168E+00	0.100E+03
0.222E+00	0.123E+03
0.276E+00	0.136E+03
0.330E+00	0.148E+03
0.384E+00	0.158E+03
0.438E+00	0.168E+03
0.492E+00	0.177E+03
0.546E+00	0.186E+03
0.600E+00	0.194E+03
0.850E+00	0.231E+03
0.110E+01	0.268E+03
0.135E+01	0.305E+03
0.162E+01	0.305E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
LBS/IN								
7.99	36.00	28.0	5.643E-02	3.000E+01	1.17	0.81	0.000E+00	
1.299E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.831E-01	0.199E+03
0.166E+00	0.398E+03
0.249E+00	0.597E+03
0.332E+00	0.796E+03
0.415E+00	0.995E+03
0.582E+00	0.139E+04
0.665E+00	0.159E+04
0.665E+00	0.159E+04

0.779E+00	0.154E+04
0.893E+00	0.148E+04
0.101E+01	0.143E+04
0.112E+01	0.138E+04
0.124E+01	0.132E+04
0.135E+01	0.127E+04
0.149E+01	0.127E+04
0.162E+01	0.127E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
2.01	36.00	22.0	5.208E-02	3.000E+01	2.51	1.86	1.515E+02
6.595E+01							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.122E+02
0.600E-01	0.244E+02
0.114E+00	0.464E+02
0.168E+00	0.683E+02
0.222E+00	0.903E+02
0.276E+00	0.112E+03
0.330E+00	0.134E+03
0.384E+00	0.156E+03
0.438E+00	0.178E+03
0.492E+00	0.198E+03
0.546E+00	0.203E+03
0.600E+00	0.208E+03
0.850E+00	0.185E+03
0.110E+01	0.161E+03
0.135E+01	0.138E+03
0.162E+01	0.138E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							

FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
8.01	36.00	22.0	5.642E-02	3.000E+01	1.25	0.88	3.375E+02
7.168E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.661E+02
0.600E-01	0.132E+03
0.114E+00	0.251E+03
0.168E+00	0.370E+03
0.222E+00	0.489E+03
0.276E+00	0.609E+03
0.330E+00	0.728E+03
0.384E+00	0.847E+03
0.438E+00	0.966E+03
0.492E+00	0.108E+04
0.546E+00	0.114E+04
0.600E+00	0.118E+04
0.850E+00	0.103E+04
0.110E+01	0.891E+03
0.135E+01	0.748E+03
0.162E+01	0.748E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
3.00	36.00	22.0	5.208E-02	3.000E+01	2.27	1.67	1.800E+02
1.302E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.211E+02
0.600E-01	0.422E+02
0.114E+00	0.803E+02
0.168E+00	0.118E+03
0.222E+00	0.156E+03
0.276E+00	0.194E+03
0.330E+00	0.232E+03
0.384E+00	0.270E+03
0.438E+00	0.296E+03

0.492E+00	0.302E+03
0.546E+00	0.307E+03
0.600E+00	0.312E+03
0.850E+00	0.290E+03
0.110E+01	0.268E+03
0.135E+01	0.246E+03
0.162E+01	0.246E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
9.00	36.00	22.0	5.594E-02	3.000E+01	1.13	0.78	3.375E+02
8.678E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.751E+02
0.600E-01	0.150E+03
0.114E+00	0.285E+03
0.168E+00	0.420E+03
0.222E+00	0.555E+03
0.276E+00	0.691E+03
0.330E+00	0.826E+03
0.384E+00	0.961E+03
0.438E+00	0.110E+04
0.492E+00	0.123E+04
0.546E+00	0.132E+04
0.600E+00	0.136E+04
0.850E+00	0.118E+04
0.110E+01	0.100E+04
0.135E+01	0.819E+03
0.162E+01	0.819E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN

LBS/IN	4.00	36.00	22.0	5.208E-02	3.000E+01	2.03	1.48	2.088E+02
2.087E+02								

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.301E+02
0.600E-01	0.602E+02
0.114E+00	0.114E+03
0.168E+00	0.169E+03
0.222E+00	0.223E+03
0.276E+00	0.277E+03
0.330E+00	0.331E+03
0.384E+00	0.385E+03
0.438E+00	0.414E+03
0.492E+00	0.422E+03
0.546E+00	0.428E+03
0.600E+00	0.434E+03
0.850E+00	0.407E+03
0.110E+01	0.380E+03
0.135E+01	0.352E+03
0.162E+01	0.352E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
10.00	36.00	22.0	5.556E-02	3.000E+01	1.04	0.69	3.375E+02
1.034E+03							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.841E+02
0.600E-01	0.168E+03
0.114E+00	0.319E+03
0.168E+00	0.471E+03
0.222E+00	0.622E+03
0.276E+00	0.773E+03
0.330E+00	0.925E+03
0.384E+00	0.108E+04
0.438E+00	0.123E+04
0.492E+00	0.138E+04

11.00	36.00	22.0	5.524E-02	3.000E+01	0.99	0.63	3.375E+02
1.214E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.930E+02
0.600E-01	0.186E+03
0.114E+00	0.354E+03
0.168E+00	0.521E+03
0.222E+00	0.689E+03
0.276E+00	0.856E+03
0.330E+00	0.102E+04
0.384E+00	0.119E+04
0.438E+00	0.136E+04
0.492E+00	0.153E+04
0.546E+00	0.169E+04
0.600E+00	0.180E+04
0.850E+00	0.153E+04
0.110E+01	0.126E+04
0.135E+01	0.998E+03
0.162E+01	0.998E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
5.99	36.00	22.0	5.208E-02	3.000E+01	1.60	1.15	2.661E+02
4.061E+02							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.480E+02
0.600E-01	0.960E+02
0.114E+00	0.182E+03
0.168E+00	0.269E+03
0.222E+00	0.355E+03
0.276E+00	0.442E+03
0.330E+00	0.528E+03
0.384E+00	0.615E+03
0.438E+00	0.683E+03
0.492E+00	0.700E+03
0.546E+00	0.715E+03

0.600E+00	0.729E+03
0.850E+00	0.666E+03
0.110E+01	0.604E+03
0.135E+01	0.542E+03
0.162E+01	0.542E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
11.99	36.00	22.0	5.498E-02	3.000E+01	0.94	0.57	3.375E+02	
1.405E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.300E-01	0.102E+03
0.600E-01	0.204E+03
0.114E+00	0.387E+03
0.168E+00	0.571E+03
0.222E+00	0.754E+03
0.276E+00	0.938E+03
0.330E+00	0.112E+04
0.384E+00	0.131E+04
0.438E+00	0.149E+04
0.492E+00	0.167E+04
0.546E+00	0.186E+04
0.600E+00	0.204E+04
0.850E+00	0.172E+04
0.110E+01	0.141E+04
0.135E+01	0.109E+04
0.162E+01	0.109E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3	LBS/IN**3				LBS/IN
6.01	36.00	34.0	5.205E-02	5.000E+02	2.06	1.50	0.000E+00	

4.466E+02

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.517E-02	0.830E+02
0.103E-01	0.166E+03
0.693E-01	0.293E+03
0.128E+00	0.352E+03
0.187E+00	0.394E+03
0.246E+00	0.428E+03
0.305E+00	0.456E+03
0.364E+00	0.480E+03
0.423E+00	0.502E+03
0.482E+00	0.522E+03
0.541E+00	0.541E+03
0.600E+00	0.558E+03
0.850E+00	0.627E+03
0.110E+01	0.696E+03
0.135E+01	0.765E+03
0.162E+01	0.765E+03

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
12.01	36.00	34.0	5.496E-02	5.000E+02	1.05	0.70	0.000E+00
2.541E+03							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.173E-01	0.799E+03
0.347E-01	0.160E+04
0.912E-01	0.202E+04
0.148E+00	0.226E+04
0.204E+00	0.245E+04
0.261E+00	0.260E+04
0.317E+00	0.272E+04
0.374E+00	0.283E+04
0.430E+00	0.293E+04
0.487E+00	0.302E+04
0.543E+00	0.310E+04
0.600E+00	0.317E+04

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.166E-01	0.825E+03
0.332E-01	0.165E+04
0.899E-01	0.214E+04
0.147E+00	0.243E+04
0.203E+00	0.265E+04
0.260E+00	0.283E+04
0.317E+00	0.298E+04
0.373E+00	0.311E+04
0.430E+00	0.323E+04
0.487E+00	0.333E+04
0.543E+00	0.343E+04
0.600E+00	0.352E+04
0.850E+00	0.314E+04
0.110E+01	0.275E+04
0.135E+01	0.237E+04
0.162E+01	0.237E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
7.50	36.00	34.0	4.720E-02	5.000E+02	1.72	1.24	0.000E+00
7.226E+02							

Y IN	P LBS/IN
0.000E+00	0.000E+00
0.133E-01	0.312E+03
0.266E-01	0.625E+03
0.839E-01	0.716E+03
0.141E+00	0.761E+03
0.199E+00	0.792E+03
0.256E+00	0.816E+03
0.313E+00	0.836E+03
0.371E+00	0.852E+03
0.428E+00	0.867E+03
0.485E+00	0.880E+03
0.543E+00	0.892E+03
0.600E+00	0.902E+03
0.850E+00	0.947E+03

0.110E+01	0.991E+03
0.135E+01	0.104E+04
0.162E+01	0.104E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
13.50	36.00	34.0	5.194E-02	5.000E+02	0.97	0.61	0.000E+00

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.158E-01	0.845E+03
0.316E-01	0.169E+04
0.884E-01	0.226E+04
0.145E+00	0.260E+04
0.202E+00	0.286E+04
0.259E+00	0.307E+04
0.316E+00	0.324E+04
0.373E+00	0.340E+04
0.429E+00	0.354E+04
0.486E+00	0.367E+04
0.543E+00	0.378E+04
0.600E+00	0.389E+04
0.850E+00	0.343E+04
0.110E+01	0.297E+04
0.135E+01	0.251E+04
0.162E+01	0.251E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
8.25	36.00	34.0	4.542E-02	5.000E+02	1.58	1.13	0.000E+00

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.178E-01	0.486E+03
0.356E-01	0.972E+03
0.921E-01	0.101E+04
0.149E+00	0.103E+04
0.205E+00	0.105E+04
0.261E+00	0.106E+04
0.318E+00	0.107E+04
0.374E+00	0.108E+04
0.431E+00	0.108E+04
0.487E+00	0.109E+04
0.544E+00	0.109E+04
0.600E+00	0.110E+04
0.850E+00	0.112E+04
0.110E+01	0.114E+04
0.135E+01	0.116E+04
0.162E+01	0.116E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA	AVG	KPY	A	B	Puc
Pu1								
FT	IN		LBS/IN**3		LBS/IN**3			LBS/IN
LBS/IN								
14.25	36.00	34.0	5.066E-02		5.000E+02	0.93	0.56	0.000E+00
3.422E+03								

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.150E-01	0.858E+03
0.300E-01	0.172E+04
0.870E-01	0.237E+04
0.144E+00	0.277E+04
0.201E+00	0.306E+04
0.258E+00	0.330E+04
0.315E+00	0.351E+04
0.372E+00	0.369E+04
0.429E+00	0.386E+04
0.486E+00	0.401E+04
0.543E+00	0.415E+04
0.600E+00	0.427E+04
0.850E+00	0.373E+04
0.110E+01	0.319E+04

0.135E+01	0.265E+04
0.162E+01	0.265E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
8.99	36.00	34.0	4.396E-02	5.000E+02	1.45	1.02	0.000E+00
1.045E+03							

Y	P
IN	LBS/IN
0.000E+00	0.000E+00
0.195E-01	0.604E+03
0.390E-01	0.121E+04
0.951E-01	0.124E+04
0.151E+00	0.125E+04
0.207E+00	0.127E+04
0.263E+00	0.127E+04
0.319E+00	0.128E+04
0.376E+00	0.129E+04
0.432E+00	0.129E+04
0.488E+00	0.130E+04
0.544E+00	0.130E+04
0.600E+00	0.131E+04
0.850E+00	0.129E+04
0.110E+01	0.127E+04
0.135E+01	0.126E+04
0.162E+01	0.126E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	PHI	GAMMA AVG	KPY	A	B	Puc
Pu1							
FT	IN		LBS/IN**3	LBS/IN**3			LBS/IN
LBS/IN							
14.99	36.00	34.0	4.953E-02	5.000E+02	0.90	0.53	0.000E+00
3.738E+03							

Y	P
---	---

IN	LBS/IN
0.000E+00	0.000E+00
0.145E-01	0.883E+03
0.290E-01	0.177E+04
0.861E-01	0.250E+04
0.143E+00	0.295E+04
0.200E+00	0.328E+04
0.257E+00	0.356E+04
0.314E+00	0.379E+04
0.372E+00	0.400E+04
0.429E+00	0.419E+04
0.486E+00	0.436E+04
0.543E+00	0.452E+04
0.600E+00	0.467E+04
0.850E+00	0.404E+04
0.110E+01	0.342E+04
0.135E+01	0.280E+04
0.162E+01	0.280E+04

P-Multiplier = 8.324E-01 Y-Multiplier = 1.000E+00

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
9.01	36.000	9.70E+00	3.50E+04	4.39E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.218E+02		
		0.180E-04		0.259E+02		
		0.540E-04		0.341E+02		
		0.108E-03		0.406E+02		
		0.162E-03		0.449E+02		
		0.360E-03		0.549E+02		
		0.720E-03		0.653E+02		
		0.108E-02		0.722E+02		
		0.144E-02		0.776E+02		
		0.180E-02		0.821E+02		
		0.450E-02		0.103E+03		
		0.900E-02		0.123E+03		
		0.135E-01		0.136E+03		
		0.180E-01		0.146E+03		
		0.720E-01		0.206E+03		
		0.144E+00		0.245E+03		
		0.216E+00		0.272E+03		

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.01	36.000	9.70E+00	3.50E+04	4.95E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.827E+02		
		0.180E-04		0.983E+02		
		0.540E-04		0.129E+03		
		0.108E-03		0.154E+03		
		0.162E-03		0.170E+03		
		0.360E-03		0.208E+03		
		0.720E-03		0.247E+03		
		0.108E-02		0.274E+03		
		0.144E-02		0.294E+03		
		0.180E-02		0.311E+03		
		0.450E-02		0.391E+03		
		0.900E-02		0.465E+03		
		0.135E-01		0.515E+03		
		0.180E-01		0.553E+03		
		0.720E-01		0.782E+03		
		0.144E+00		0.930E+03		
		0.216E+00		0.103E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
9.50	36.000	9.70E+00	3.50E+04	4.43E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.268E+02		
		0.180E-04		0.319E+02		
		0.540E-04		0.420E+02		
		0.108E-03		0.499E+02		
		0.162E-03		0.552E+02		
		0.360E-03		0.674E+02		
		0.720E-03		0.802E+02		
		0.108E-02		0.887E+02		
		0.144E-02		0.953E+02		
		0.180E-02		0.101E+03		
		0.450E-02		0.127E+03		
		0.900E-02		0.151E+03		
		0.135E-01		0.167E+03		
		0.180E-01		0.179E+03		
		0.720E-01		0.254E+03		
		0.144E+00		0.301E+03		

0.216E+00 0.334E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
15.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.877E+02		
		0.180E-04		0.104E+03		
		0.540E-04		0.137E+03		
		0.108E-03		0.163E+03		
		0.162E-03		0.181E+03		
		0.360E-03		0.220E+03		
		0.720E-03		0.262E+03		
		0.108E-02		0.290E+03		
		0.144E-02		0.312E+03		
		0.180E-02		0.330E+03		
		0.450E-02		0.415E+03		
		0.900E-02		0.493E+03		
		0.135E-01		0.546E+03		
		0.180E-01		0.586E+03		
		0.720E-01		0.829E+03		
		0.144E+00		0.986E+03		
		0.216E+00		0.109E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.00	36.000	9.70E+00	3.50E+04	4.46E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.319E+02		
		0.180E-04		0.379E+02		
		0.540E-04		0.499E+02		
		0.108E-03		0.593E+02		
		0.162E-03		0.657E+02		
		0.360E-03		0.802E+02		
		0.720E-03		0.953E+02		
		0.108E-02		0.106E+03		
		0.144E-02		0.113E+03		
		0.180E-02		0.120E+03		
		0.450E-02		0.151E+03		
		0.900E-02		0.179E+03		

0.135E-01	0.198E+03
0.180E-01	0.213E+03
0.720E-01	0.301E+03
0.144E+00	0.359E+03
0.216E+00	0.397E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.00	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.927E+02		
		0.180E-04		0.110E+03		
		0.540E-04		0.145E+03		
		0.108E-03		0.173E+03		
		0.162E-03		0.191E+03		
		0.360E-03		0.233E+03		
		0.720E-03		0.277E+03		
		0.108E-02		0.307E+03		
		0.144E-02		0.330E+03		
		0.180E-02		0.349E+03		
		0.450E-02		0.438E+03		
		0.900E-02		0.521E+03		
		0.135E-01		0.577E+03		
		0.180E-01		0.620E+03		
		0.720E-01		0.877E+03		
		0.144E+00		0.104E+04		
		0.216E+00		0.115E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.50	36.000	9.70E+00	3.50E+04	4.49E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.369E+02		
		0.180E-04		0.439E+02		
		0.540E-04		0.578E+02		
		0.108E-03		0.688E+02		
		0.162E-03		0.761E+02		
		0.360E-03		0.929E+02		
		0.720E-03		0.110E+03		
		0.108E-02		0.122E+03		

0.144E-02	0.131E+03
0.180E-02	0.139E+03
0.450E-02	0.175E+03
0.900E-02	0.208E+03
0.135E-01	0.230E+03
0.180E-01	0.247E+03
0.720E-01	0.349E+03
0.144E+00	0.416E+03
0.216E+00	0.460E+03

AT THE BACKFILL SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
16.50	36.000	9.70E+00	3.50E+04	4.96E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.978E+02		
		0.180E-04		0.116E+03		
		0.540E-04		0.153E+03		
		0.108E-03		0.182E+03		
		0.162E-03		0.201E+03		
		0.360E-03		0.246E+03		
		0.720E-03		0.292E+03		
		0.108E-02		0.324E+03		
		0.144E-02		0.348E+03		
		0.180E-02		0.368E+03		
		0.450E-02		0.462E+03		
		0.900E-02		0.550E+03		
		0.135E-01		0.609E+03		
		0.180E-01		0.654E+03		
		0.720E-01		0.925E+03		
		0.144E+00		0.110E+04		
		0.216E+00		0.122E+04		

AT THE EXCAVATION SIDE

DEPTH B GS	DIAM	Qu	Eu	GAMMA AVG	E50	RQD
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3		%
10.99	36.000	9.70E+00	3.50E+04	4.52E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.419E+02		
		0.180E-04		0.499E+02		
		0.540E-04		0.656E+02		
		0.108E-03		0.780E+02		

0.162E-03	0.864E+02
0.360E-03	0.105E+03
0.720E-03	0.125E+03
0.108E-02	0.139E+03
0.144E-02	0.149E+03
0.180E-02	0.158E+03
0.450E-02	0.198E+03
0.900E-02	0.236E+03
0.135E-01	0.261E+03
0.180E-01	0.280E+03
0.720E-01	0.397E+03
0.144E+00	0.472E+03
0.216E+00	0.522E+03

AT THE BACKFILL SIDE

DEPTH B GS FT	DIAM IN	Qu LBS/IN**2	Eu LBS/IN**2	GAMMA AVG LBS/IN**3	E50	RQD %
16.99	36.000	9.70E+00	3.50E+04	4.97E-02	5.000E-04	0.000
		Y		P		
		IN		LBS/IN		
		0.900E-05		0.103E+03		
		0.180E-04		0.122E+03		
		0.540E-04		0.161E+03		
		0.108E-03		0.191E+03		
		0.162E-03		0.212E+03		
		0.360E-03		0.259E+03		
		0.720E-03		0.307E+03		
		0.108E-02		0.340E+03		
		0.144E-02		0.366E+03		
		0.180E-02		0.387E+03		
		0.450E-02		0.486E+03		
		0.900E-02		0.578E+03		
		0.135E-01		0.640E+03		
		0.180E-01		0.687E+03		
		0.720E-01		0.972E+03		
		0.144E+00		0.116E+04		
		0.216E+00		0.128E+04		

DEPTH-EXCAVATION IN	SIDE IN	DIAM IN	C LBS/IN**2
132.10		36.000	5.5E+03
	Y		P
	IN		LBS/IN
		0.000D+00	0.000D+00
		0.576D-02	0.527D+05
		0.115D-01	0.105D+06

0.173D-01	0.133D+06
0.230D-01	0.136D+06
0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.107D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
204.10	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.247D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
159.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06

0.288D-01	0.138D+06
0.346D-01	0.141D+06
0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.135D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
231.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.275D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
186.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06

0.403D-01	0.144D+06
0.461D-01	0.146D+06
0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.162D+03

DEPTH-BACKFILL	SIDE	DIAM	C
IN		IN	LBS/IN**2
258.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06
0.518D-01			0.149D+06
0.576D-01			0.152D+06
0.634D-01			0.154D+06
0.691D-01			0.157D+06
0.749D-01			0.160D+06
0.806D-01			0.162D+06
0.864D-01			0.165D+06
0.922D-01			0.304D+03

DEPTH-EXCAVATION	SIDE	DIAM	C
IN		IN	LBS/IN**2
213.00		36.000	5.5E+03
	Y		P
	IN		LBS/IN
0.000D+00			0.000D+00
0.576D-02			0.527D+05
0.115D-01			0.105D+06
0.173D-01			0.133D+06
0.230D-01			0.136D+06
0.288D-01			0.138D+06
0.346D-01			0.141D+06
0.403D-01			0.144D+06
0.461D-01			0.146D+06

0.518D-01	0.149D+06
0.576D-01	0.152D+06
0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.190D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
285.00	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.332D+03

DEPTH-EXCAVATION SIDE	DIAM	C
IN	IN	LBS/IN**2
239.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06

0.634D-01	0.154D+06
0.691D-01	0.157D+06
0.749D-01	0.160D+06
0.806D-01	0.162D+06
0.864D-01	0.165D+06
0.922D-01	0.217D+03

DEPTH-BACKFILL SIDE	DIAM	C
IN	IN	LBS/IN**2
311.90	36.000	5.5E+03
Y		P
IN		LBS/IN
0.000D+00		0.000D+00
0.576D-02		0.527D+05
0.115D-01		0.105D+06
0.173D-01		0.133D+06
0.230D-01		0.136D+06
0.288D-01		0.138D+06
0.346D-01		0.141D+06
0.403D-01		0.144D+06
0.461D-01		0.146D+06
0.518D-01		0.149D+06
0.576D-01		0.152D+06
0.634D-01		0.154D+06
0.691D-01		0.157D+06
0.749D-01		0.160D+06
0.806D-01		0.162D+06
0.864D-01		0.165D+06
0.922D-01		0.360D+03

Long Term : STA 455+00 Soldier Pile Wall

RESULTS

NUMBER OF ITERATIONS : 5

***** ANALYSIS COMPLETED *****

STA I	X	DEFL.	SLOPE	MOMENT	SHEAR	SOIL_REACT
NET_FORCE/STA	EI					
FT		IN	RAD	LBS-IN	LBS	LBS/IN
LBS	LBS-IN**2					
-----	-----	-----	-----	-----	-----	-----
0	0.000E+00	6.788E-01	-4.219E-03	0.000E+00	0.000E+00	0.000E+00
0.000E+00	1.362E+11					
1	5.000E-01	6.534E-01	-4.219E-03	0.000E+00	2.684E+02	0.000E+00

5.368E+02	1.362E+11						
2	1.000E+00	6.281E-01	-4.219E-03	3.221E+03	8.536E+02	0.000E+00	
6.336E+02	1.362E+11						
3	1.500E+00	6.028E-01	-4.219E-03	1.024E+04	1.536E+03	0.000E+00	
7.304E+02	1.362E+11						
4	2.000E+00	5.775E-01	-4.218E-03	2.165E+04	2.314E+03	0.000E+00	
8.272E+02	1.362E+11						
5	2.500E+00	5.522E-01	-4.217E-03	3.802E+04	3.190E+03	0.000E+00	
9.240E+02	1.362E+11						
6	3.000E+00	5.269E-01	-4.215E-03	5.993E+04	1.016E+04	0.000E+00	
1.302E+04	1.362E+11						
7	3.500E+00	5.016E-01	-4.210E-03	1.600E+05	2.322E+04	0.000E+00	
1.310E+04	1.362E+11						
8	4.000E+00	4.764E-01	-4.199E-03	3.386E+05	3.036E+04	0.000E+00	
1.179E+03	1.362E+11						
9	4.500E+00	4.512E-01	-4.180E-03	5.243E+05	3.158E+04	0.000E+00	
1.258E+03	1.362E+11						
10	5.000E+00	4.262E-01	-4.152E-03	7.176E+05	3.288E+04	0.000E+00	
1.338E+03	1.362E+11						
11	5.500E+00	4.014E-01	-4.116E-03	9.189E+05	3.426E+04	0.000E+00	
1.417E+03	1.362E+11						
12	6.000E+00	3.768E-01	-4.071E-03	1.129E+06	3.571E+04	-2.034E-01	
1.495E+03	1.362E+11						
13	6.500E+00	3.526E-01	-4.017E-03	1.347E+06	3.673E+04	-2.665E+01	
5.305E+02	1.362E+11						
14	7.000E+00	3.286E-01	-3.953E-03	1.569E+06	3.716E+04	-5.810E+01	
3.419E+02	1.362E+11						
15	7.500E+00	3.051E-01	-3.878E-03	1.793E+06	3.739E+04	-9.485E+01	
1.214E+02	1.362E+11						
16	8.000E+00	2.821E-01	-3.795E-03	2.018E+06	3.739E+04	-1.374E+02	
-1.337E+02	1.362E+11						
17	8.500E+00	2.596E-01	-3.701E-03	2.242E+06	3.706E+04	-1.573E+02	
-5.287E+02	1.362E+11						
18	9.000E+00	2.377E-01	-3.597E-03	2.463E+06	3.650E+04	-1.670E+02	
-5.874E+02	1.362E+11						
19	9.500E+00	2.164E-01	-3.484E-03	2.680E+06	3.586E+04	-1.848E+02	
-6.937E+02	1.362E+11						
20	1.000E+01	1.959E-01	-3.361E-03	2.893E+06	3.513E+04	-1.969E+02	
-7.664E+02	1.362E+11						
21	1.050E+01	1.761E-01	-3.229E-03	3.101E+06	3.434E+04	-2.033E+02	
-8.049E+02	1.362E+11						
22	1.100E+01	1.571E-01	-3.088E-03	3.305E+06	3.353E+04	-2.049E+02	
-8.146E+02	1.362E+11						
23	1.150E+01	1.390E-01	-2.938E-03	3.504E+06	3.273E+04	-2.019E+02	
-7.965E+02	1.362E+11						
24	1.200E+01	1.219E-01	-2.780E-03	3.698E+06	3.195E+04	-1.947E+02	
-7.532E+02	1.362E+11						
25	1.250E+01	1.057E-01	-2.612E-03	3.887E+06	3.084E+04	-3.350E+02	
-1.469E+03	1.362E+11						
26	1.300E+01	9.052E-02	-2.437E-03	4.068E+06	2.892E+04	-4.858E+02	

-2.374E+03	1.362E+11					
27	1.350E+01	7.643E-02	-2.254E-03	4.234E+06	2.589E+04	-7.041E+02
-3.684E+03	1.362E+11					
28	1.400E+01	6.347E-02	-2.065E-03	4.379E+06	2.181E+04	-8.371E+02
-4.482E+03	1.362E+11					
29	1.450E+01	5.166E-02	-1.869E-03	4.496E+06	1.689E+04	-9.828E+02
-5.356E+03	1.362E+11					
30	1.500E+01	4.103E-02	-1.669E-03	4.581E+06	1.085E+04	-1.211E+03
-6.726E+03	1.362E+11					
31	1.550E+01	3.162E-02	-1.467E-03	4.626E+06	6.889E+03	-1.979E+02
-1.188E+03	1.362E+11					
32	1.600E+01	2.343E-02	-1.262E-03	4.664E+06	5.630E+03	-2.219E+02
-1.331E+03	1.362E+11					
33	1.650E+01	1.648E-02	-1.056E-03	4.694E+06	4.240E+03	-2.412E+02
-1.447E+03	1.362E+11					
34	1.700E+01	1.076E-02	-8.489E-04	4.715E+06	2.779E+03	-2.458E+02
-1.475E+03	1.362E+11					
35	1.750E+01	6.289E-03	-6.410E-04	4.727E+06	-3.302E+04	-1.169E+04
-7.012E+04	1.362E+11					
36	1.800E+01	3.067E-03	-4.418E-04	4.319E+06	-1.021E+05	-1.134E+04
-6.804E+04	1.362E+11					
37	1.850E+01	9.872E-04	-2.696E-04	3.502E+06	-1.526E+05	-5.478E+03
-3.287E+04	1.362E+11					
38	1.900E+01	-1.675E-04	-1.377E-04	2.488E+06	-1.652E+05	1.270E+03
7.617E+03	1.362E+11					
39	1.950E+01	-6.647E-04	-4.940E-05	1.520E+06	-1.431E+05	6.086E+03
3.652E+04	1.362E+11					
40	2.000E+01	-7.603E-04	1.035E-06	7.707E+05	-1.040E+05	6.962E+03
4.177E+04	1.362E+11					
41	2.050E+01	-6.523E-04	2.400E-05	2.722E+05	-6.516E+04	5.973E+03
3.584E+04	1.362E+11					
42	2.100E+01	-4.723E-04	2.975E-05	-1.127E+04	-3.427E+04	4.325E+03
2.595E+04	1.362E+11					
43	2.150E+01	-2.953E-04	2.644E-05	-1.390E+05	-1.318E+04	2.704E+03
1.623E+04	1.362E+11					
44	2.200E+01	-1.551E-04	1.964E-05	-1.695E+05	-8.094E+02	1.420E+03
8.520E+03	1.362E+11					
45	2.250E+01	-5.963E-05	1.264E-05	-1.488E+05	5.089E+03	5.460E+02
3.276E+03	1.362E+11					
46	2.300E+01	-3.470E-06	6.972E-06	-1.084E+05	6.822E+03	3.177E+01
1.906E+02	1.362E+11					
47	2.350E+01	2.404E-05	3.113E-06	-6.689E+04	6.257E+03	-2.201E+02
-1.321E+03	1.362E+11					
48	2.400E+01	3.388E-05	9.060E-07	-3.331E+04	4.666E+03	-3.102E+02
-1.861E+03	1.362E+11					
49	2.450E+01	3.492E-05	-6.755E-08	-1.090E+04	2.776E+03	-3.197E+02
-1.918E+03	1.362E+11					
50	2.500E+01	3.307E-05	-3.076E-07	2.564E-11	9.084E+02	-3.028E+02
-1.817E+03	1.362E+11					

