

Project: ATB-531-			Sheet	1 of 8
Purpose: Shoring Design			Job No. : 073958	
By:	Date:	CHKD By:	Date:	
TLM	3/14/23	YLZ	3/14/23	

**PURPOSE:**

To remediate potential landslides at the ATB-531 project installing a PZC-26 Steel Sheet Pile is proposed. The cross sections were provided by ODOT, and the soil properties were developed by ODOT OGE and SM&E. Four walls were analyzed using soil properties developed from CPT testing within the station ranges of each wall. For each wall service and strength loads were investigated for an exposed height of thirteen feet after an assumed long-term sloughing and a foreslope of 5.7 degrees (10:1 H:V) due to grading. The sloughing is assumed based on the eventual stabilization of the toe against wave action from Lake Erie. It is know that a long term solution for the toe of the wall is necessary, but is unfunded at this time. To allow for funding and development of plans for the long-term toe erosion each wall was assumed to develop an exposed height of thirteen feet over time with a foreslope of 5.7°. This geometry is conservative considering the proposed geometry for all the walls. The deflection criteria of 10% of the total sheeting length (height) due to the location of the wall being 10 feet or more from the traffic live load. The moment capacity and shear capacity were analyze using LRFD methods. The sheeting lengths for each wall are assumed to be as follows: Wall 1, 50 feet; Wall 2, 35 feet; Wall 3, 50 feet; and Wall 4, 50 feet.

Actual critical case has a design height of 9.6 feet in earlier iterations of the slope remediation. Currently it is shown to have height of six feet at Wall 3 at STA 283+00; However, for conservatism the exposed height of 9.6 feet and a foreslope of 21.8° was used.

**CODES/STANDARDS:**

ODOT Geotechnical Design Manual 2022

AASHTO BDM 9<sup>th</sup> edition

**FORMULAS**

Basic unit conversions

Project: ATB-531-				Sheet 2 of 8	
Purpose: Shoring Design				Job No. : 073958	
By: TLM	Date: 3/14/23	CHKD By: YLZ	Date: 3/14/23		

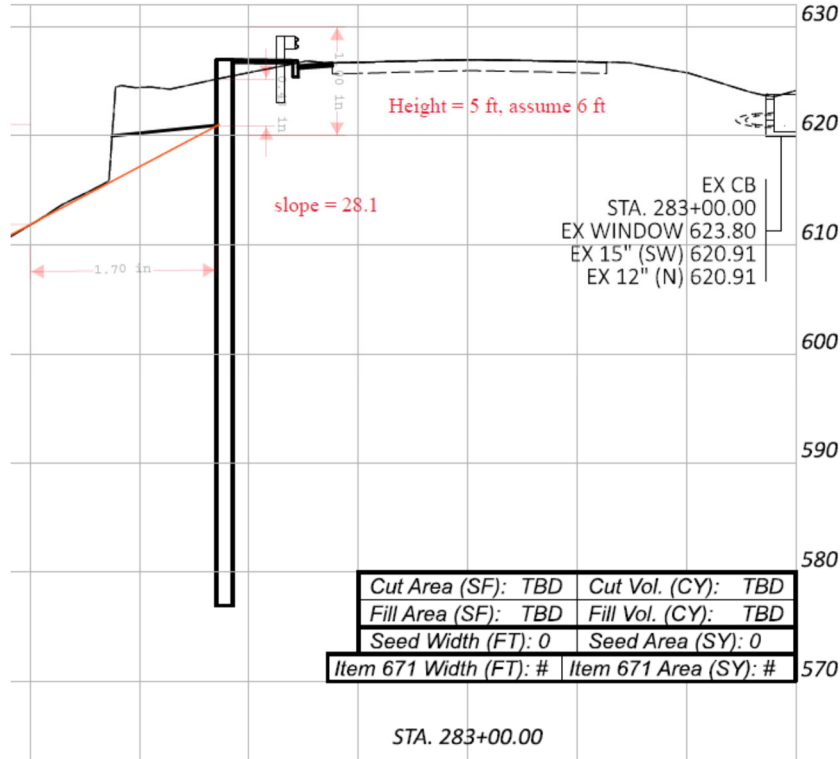
## SOURCE OF INPUT DATA

Figure 1 PZC-26 Properties

Per Single Section	PZC™ 12	PZC™ 13	PZC™ 14	PZC™ 17	PZC™ 18	PZC™ 19	PZC™ 26
Nominal Width (in.)	27.88	27.88	27.88	25.00	25.00	25.00	27.88
Wall Depth - Height (in.)	12.52	12.56	12.60	15.21	15.25	15.30	17.70
Web Thickness (in.)	0.335	0.375	0.420	0.335	0.375	0.420	0.525
Flange Thickness (in.)	0.335	0.375	0.420	0.335	0.375	0.420	0.600
Area (in. <sup>2</sup> )	13.64	14.82	16.15	13.64	14.82	16.16	21.72
Weight Per Foot (lbs/ft)	46.4	50.4	55.0	46.4	50.4	55.0	73.9
Moment of Inertia (in. <sup>4</sup> )	326.6	353.0	381.6	492.9	532.2	576.3	994.3
Section Modulus (in. <sup>3</sup> )	52.0	56.2	60.5	64.5	69.8	75.3	112.4
Total Surface Area (ft <sup>2</sup> /ft)	6.09	6.09	6.09	6.09	6.09	6.09	6.65
Nominal Coating Area (ft <sup>2</sup> /ft)	5.60	5.60	5.60	5.60	5.60	5.60	6.15

Project: ATB-531-			Sheet 3 of 8	
Purpose: Shoring Design			Job No. : 073958	
By:	Date:	CHKD By:	Date:	
TLM	3/14/23	YLZ	3/14/23	

Figure 2: Worst Case design section



The worst-case cross section occurs STA 283+00 and projecting the failure to the wall location determines that the make unsupported height is 6 feet.

Ground Water for the worst-case boring/cpt log is six feet below grade.

SM&E provided the soil data below.

Project: ATB-531-				Sheet	4 of 8
Purpose: Shoring Design				Job No. : 073958	
By:	Date:	CHKD By:	Date:		
TLM	3/14/23	YLZ	3/14/23		

## Surcharge

The traffic surcharge is based on the geometry in client supplied cross sections. Table 1 the yellow data is input, and white blocks are converted units to the format and units in P-Y WALL. Based on all the cross sections the edge of pavement is 12-13 feet from the center line, this would indicate the travel lane is likely 10 feet; however, a 12-foot travel lane was assumed.

**Table 1 Surcharge**

	Distance of wall from CL (ft)	Surcharge (psf)	Road Width (ft)	Load Factor	Surcharge (psi)	P-Y WALL X (in)	P-Y WALL W (in)
Service Load	22	250	24	1.0	1.74	264	288
Strength Load	22	250	24	1.75	3.04	264	288

**Table 2 Soil Properties for Wall 1**

The design parameters for wall were summarized by wall by SM&E.

Assumed Ground Elevation		634		Wall 1		STA 254+30 TO 259+00				
Soil Layer	Bottom of Layer	Soil Model Top Depth	Soil Model Bottom Depth	Soil Model	Cohesion (psf)	Phi (degrees)	Moist Unit Weight (Pcf)	Strain Factor E50 krm	Soil modulus (pci)	
1	631	0	3	Sand	0	34	125	-	60	
2	624	3	10	Stiff Clay W/o Free Water	1000*	30	110	0.005	-	
3	606	10	28	Sand	0	34	125	-	60	
4	603	28	31	Stiff Clay W/o Free Water	1500	0	115	0.005	-	
5	596	31	38	Sand	0	32	115	-	60	
6	590	38	44	Stiff Clay W/o Free Water	1750	0	115	0.005	-	
7	581	44	53	Stiff Clay W/o Free Water	1250	0	115	0.005	-	
8	572	53	62	Stiff Clay W/o Free Water	3000	0	120	0.005	-	
9	570	62	64	Stiff Clay W/o Free Water	7000	0	125	0.004	-	
10	570		64	Weak Rock						

\*A 0.333 Active coefficient of Friction was used for active pressure based on the recommended  $\phi' = 30^\circ$

Project: ATB-531-				Sheet	5 of 8
Purpose: Shoring Design				Job No. : 073958	
By:	Date:	CHKD By:	Date:		
TLM	3/14/23	YLZ	3/14/23		

**Table 3 Soil Properties for Wall 2**

Assumed Ground Elevation		610		WALL 2		STA 277+30 TO 280+75			
Soil Layer	Bottom of Layer	Soil Model Top Depth	Soil Model Bottom Depth	Soil Model	Cohesion (psf)	Phi (degrees)	Moist Unit Weight (Pcf)	Strain Factor E50 krm	Soil modulus (pci)
1	600	0	10	Sand	0	34	122	-	60
2	596	10	14	Sand	25	31	115	-	60
3	590	14	20	Stiff Clay W/o Free Water	800	-	115	0.007	-
4	582	20	28	Stiff Clay W/o Free Water	1000	-	115	0.005	-
5	576	28	34	Stiff Clay W/o Free Water	1500	-	120	0.005	-
6	571	34	39	Stiff Clay W/o Free Water	3000	-	125	0.005	-
7	571	39	39	Weak Rock					

**Table 4 Soil Properties for Wall 3**

Assumed Ground Elevation		634		WALL 3		STA 282+00 to 291+18.33			
Soil Layer	Bottom of Layer	Soil Model Top Depth	Soil Model Bottom Depth	Soil Model	Cohesion (psf)	Phi (degrees)	Moist Unit Weight (Pcf)	Strain Factor E50 krm	Soil modulus (pci)
1	611	0	23	Sand	0	34	122	-	60
2	602	23	32	Sand	0	31	115	-	60
3	598	32	36	Stiff Clay W/o Free Water	500	-	112	0.007	-
4	588	36	46	Stiff Clay W/o Free Water	800	-	115	0.007	-
5	581	46	53	Stiff Clay W/o Free Water	1000	-	115	0.005	-
6	574	53	60	Stiff Clay W/o Free Water	1250	-	120	0.005	-
7	570	60	64	Stiff Clay W/o Free Water	3000	-	125	0.0005	-
8	570	64	64	Weak Rock					

**Table 5 Soil Properties for Wall 4**

Assumed Ground Elevation		637		WALL 4		STA 377+09.50 to 381+41			
Soil Layer	Bottom of Layer	Soil Model Top Depth	Soil Model Bottom Depth	Soil Model	Cohesion (psf)	Phi (degrees)	Moist Unit Weight (Pcf)	Strain Factor E50 krm	Soil modulus (pci)
1	624	0	13	Stiff Clay W/o Free Water	1000	30	115	0.005	-
1a	611	13	26	Stiff Clay W/o Free Water	1000	-	115	0.005	-
2	594	26	43	Sand	-	34	120		60
3	568	43	69	Stiff Clay W/o Free Water	3000	-	125	0.005	-
4	568	69	69	Weak Rock					

\*A 0.333 Active coefficient of Friction was used for active pressure based on the recommended  $\phi' = 30^\circ$

Project: ATB-531-			Sheet 6 of 8	
Purpose: Shoring Design			Job No. : 073958	
By:	Date:	CHKD By:	Date:	
TLM	3/14/23	YLZ	3/14/23	

Figure 2: Wall Configuration for Service Loads

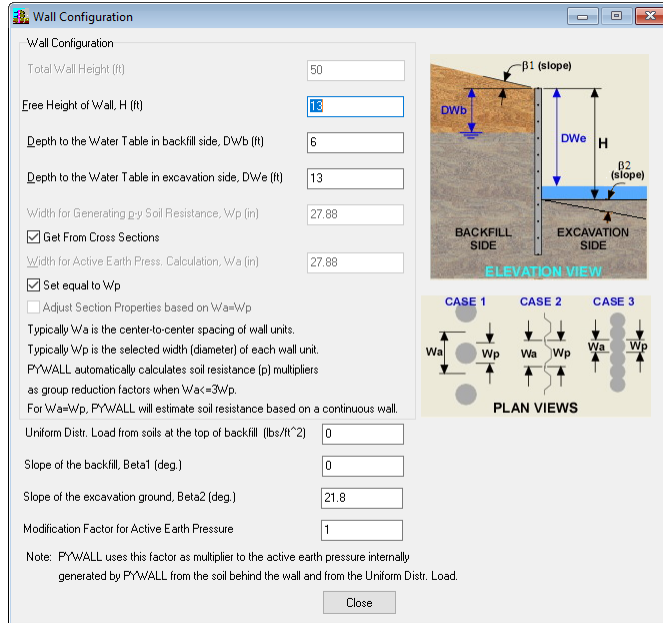
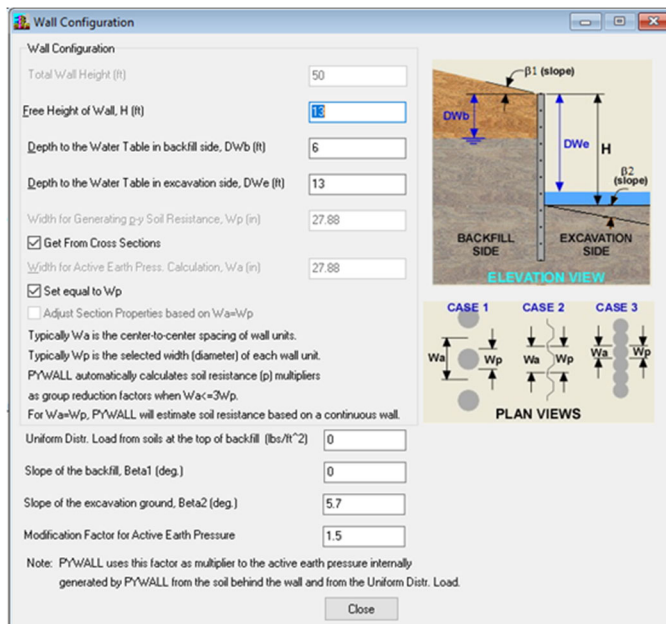


Figure 3: Wall Configuration for Strength Loads



Note Wall 2 has a length of 35 feet.

Project: ATB-531-			Sheet 7 of 8	
Purpose: Shoring Design			Job No. : 073958	
By:	Date:	CHKD By:	Date:	
TLM	3/14/23	YLZ	3/14/23	

Figure 4: Wall 3 Critical Section Short Term Greatest Dredge Line Service Load

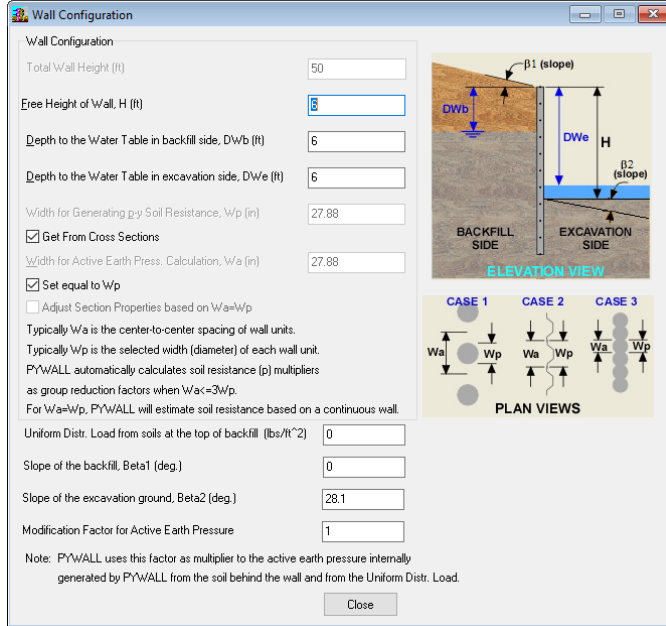


Figure 5: Wall Critical Section Short Term Greatest Dredge Line Strength Load

**COMPUTER PROGRAMS:**

MicroStation (by others) and Excel

P-Y WALL by Ensoft 2022 version

Project: ATB-531-			Sheet 8 of 8
Purpose: Shoring Design			Job No. : 073958
By: TLM	Date: 3/14/23	CHKD By: YLZ	Date: 3/14/23

## SUMMARY OF FINDINGS

Wall / Case	Maximum Deflection (in)	Factored Maximum Moment lbs.-in	Factored Maximum Shear lbs.
Wall 1 / Case 1: Service	3.543	1,959,000	-19,480
Wall 1 / Case 2: Strength Load	9.349	4,109,000	-31,149
Wall 2 / Case 1: Service	2.199	1,424,000	-15,370
Wall 2 / Case 2: Strength Load	5.646	2,399,00	-28,220
Wall 3 / Case 1: Service	3.577	1,840,000	14,230
Wall 3 / Case 2: Strength Load	11.31	4,123,000	-27,940
Wall 3 / Critical Case Service	3.044	1,344,00	9,023
Wall 3 / Critical Case Service	12.27	3,486,000	-26,687
Wall 4 / Case 1: Service	0.681	660,200	8,902
Wall 4 / Case 2: Strength Load	1.542	1,164,000	14,100

## Checks

Maximum Resistance for PZC-26 is:

$$f_y \times S_x = 50,000 \text{ psi} \times 112.4 \text{ in}^3 = 5,620,000 \text{ lbs.-in,}$$

All cases are acceptable against moment.

Shear resistance is

$$0.6 \times f_y \times A_w = 0.6 \times 50000 \times 17.70 \text{ in.} \times 0.525 \text{ in.} = 278,775 \text{ lbs.}$$

All cases are acceptable against shear.

Maximum allowable deflection under the service load is 0.01 sheeting length.

Wall	Length	Maximum Allowable Deflection (in)
Wall 1, 3, 4	50	6
Wall 2	35	4.2

All cases are acceptable against deflection.



Wall 1

Long Term Stability and Load

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 1\  
Name of input data file : Wall 1 13 foot Ser Case W05.py7d  
Name of output file : Wall 1 13 foot Ser Case W05.py7o  
Name of plot output file : Wall 1 13 foot Ser Case W05.py7p

-----

Time and Date of Analysis

-----

Date: March 13, 2023 Time: 17:05:37

Wall 1 13 foot ATB-531-Service Load

\*\*\*\*\*  
\* 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 = 50.000 FT  
NUMBER OF INCREMENTS = 100  
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	50.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.100E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI	TOTAL WEIGHT	UNIT	DRAINED	ZTOP
	FT	PSI	DEG	PCI	T OR F	FT	
1	3.0	0.0	34.0	0.072	T	0.00	
2	3.0	6.9	0.0	0.064	T	3.00	
3	4.0	6.9	0.0	0.064	T	6.00	
4	3.0	0.0	34.0	0.072	T	10.00	
5	15.0	0.0	34.0	0.072	T	13.00	
6	3.0	10.4	0.0	0.067	F	28.00	
7	7.0	0.0	32.0	0.067	T	31.00	
8	6.0	12.2	0.0	0.067	F	38.00	
9	9.0	8.7	0.0	0.067	F	44.00	
10	9.0	20.8	0.0	0.069	F	53.00	
11	2.0	48.6	0.0	0.072	F	62.00	

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
0.000E+00	0.000E+00
3.000E+00	2.604E+00
6.000E+00	4.896E+00
1.000E+01	6.223E+00
1.300E+01	7.532E+00
2.800E+01	1.407E+01
3.100E+01	1.517E+01
3.800E+01	1.774E+01
4.400E+01	1.994E+01
5.300E+01	2.324E+01
6.200E+01	2.685E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	1.000E+00	1.000E+00	3.333E-01
3	1.000E+00	1.000E+00	3.333E-01
4	2.827E-01	3.537E+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	3.073E-01	3.255E+00	0.000E+00
8	1.000E+00	1.000E+00	0.000E+00
9	1.000E+00	1.000E+00	0.000E+00
10	1.000E+00	1.000E+00	0.000E+00
11	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	8.89	1.50	13.25	2.00	0.00	-0.00	0.00
2	40.14	4.50	13.75	5.00	0.00	-0.00	0.00
3	93.63	8.00	10.62	8.67	0.00	-0.00	0.00
4	72.23	11.50	6.66	12.00	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT
3	0.00	8.00	41.47	8.67
4	62.21	11.50	23.33	12.00

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.0000E+00	0.0000E+00
5.0000E-01	4.51043E+00
1.0000E+00	1.00953E+01
1.5000E+00	1.56359E+01
2.0000E+00	2.11049E+01
2.5000E+00	2.64785E+01
3.0000E+00	3.17358E+01
3.5000E+00	4.06630E+01
4.0000E+00	4.57734E+01
4.5000E+00	5.07332E+01
5.0000E+00	5.55397E+01
5.5000E+00	6.01957E+01
6.0000E+00	6.47039E+01
6.5000E+00	7.30846E+01
7.0000E+00	8.13287E+01
7.5000E+00	8.94474E+01
8.0000E+00	9.74518E+01
8.5000E+00	1.05350E+02
9.0000E+00	1.13151E+02
9.5000E+00	1.20863E+02
1.0000E+01	1.28499E+02
1.0500E+01	1.27467E+02
1.1000E+01	1.35148E+02
1.1500E+01	1.42779E+02
1.2000E+01	1.50360E+02
1.2500E+01	1.57901E+02
1.3000E+01	1.65406E+02
1.3500E+01	1.65144E+02
1.4000E+01	1.64854E+02
1.4500E+01	1.64542E+02
1.5000E+01	1.64213E+02
1.5500E+01	1.63867E+02
1.6000E+01	1.63513E+02
1.6500E+01	1.63148E+02
1.7000E+01	1.62775E+02
1.7500E+01	1.62398E+02
1.8000E+01	1.62019E+02
1.8500E+01	1.61637E+02
1.9000E+01	1.61252E+02
1.9500E+01	1.60870E+02
2.0000E+01	1.60491E+02
2.0500E+01	1.60112E+02
2.1000E+01	1.59738E+02
2.1500E+01	1.59368E+02
2.2000E+01	1.59002E+02

2.25000E+01	1.58640E+02
2.30000E+01	1.58286E+02
2.35000E+01	1.57937E+02
2.40000E+01	1.57594E+02
2.45000E+01	1.57257E+02
2.50000E+01	1.56925E+02
2.55000E+01	1.56602E+02
2.60000E+01	1.56284E+02
2.65000E+01	1.55975E+02
2.70000E+01	1.55671E+02
2.75000E+01	1.55375E+02
2.80000E+01	1.55085E+02
2.85000E+01	1.11277E+01
2.90000E+01	1.08515E+01
2.95000E+01	1.05819E+01
3.00000E+01	1.03189E+01
3.05000E+01	1.00627E+01
3.10000E+01	9.81292E+00
3.15000E+01	1.58397E+02
3.20000E+01	1.58160E+02
3.25000E+01	1.57929E+02
3.30000E+01	1.57703E+02
3.35000E+01	1.57486E+02
3.40000E+01	1.57271E+02
3.45000E+01	1.57065E+02
3.50000E+01	1.56861E+02
3.55000E+01	1.56666E+02
3.60000E+01	1.56474E+02
3.65000E+01	1.56287E+02
3.70000E+01	1.56108E+02
3.75000E+01	1.55930E+02
3.80000E+01	1.55760E+02
3.85000E+01	6.76620E+00
3.90000E+01	6.60394E+00
3.95000E+01	6.44641E+00
4.00000E+01	6.29307E+00
4.05000E+01	6.14392E+00
4.10000E+01	5.99894E+00
4.15000E+01	5.85787E+00
4.20000E+01	5.72070E+00
4.25000E+01	5.58715E+00
4.30000E+01	5.45723E+00
4.35000E+01	5.33093E+00
4.40000E+01	5.20826E+00
4.45000E+01	5.08866E+00
4.50000E+01	4.97240E+00
4.55000E+01	4.85921E+00
4.60000E+01	4.74908E+00
4.65000E+01	4.64202E+00
4.70000E+01	4.53775E+00
4.75000E+01	4.43654E+00
4.80000E+01	4.33785E+00
4.85000E+01	4.24166E+00
4.90000E+01	4.14827E+00
4.95000E+01	4.05738E+00
5.00000E+01	3.96872E+00

\*\*\*\*\*  
 \* SOIL LAYERS AND STRENGTH DATA \*  
 \*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

5 LAYER(S) OF SOIL

LAYER 1  
 THE SOIL IS A SAND

LAYER 2  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 3  
THE SOIL IS A SAND

LAYER 4  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH  
14 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.6338E-02
28.0000	3.6338E-02
28.0000	3.0551E-02
31.0000	3.0551E-02
31.0000	3.0551E-02
38.0000	3.0551E-02
38.0000	3.0551E-02
44.0000	3.0551E-02
44.0000	3.0551E-02
53.0000	3.0551E-02
53.0000	3.3444E-02
62.0000	3.3444E-02
62.0000	3.6338E-02
64.0000	3.6338E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
28.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
28.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
31.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
31.00	0.0000E+00	32.000	0.0000E+00	6.0000E+01
38.00	0.0000E+00	32.000	0.0000E+00	6.0000E+01
38.00	1.2153E+01	0.000	5.0000E-03	0.0000E+00
44.00	1.2153E+01	0.000	5.0000E-03	0.0000E+00
44.00	8.6806E+00	0.000	5.0000E-03	0.0000E+00
51.00	8.6806E+00	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	34.00	3.63E-02	6.00E+01	2.82	2.13	5.10E-01
		Y IN		P LBS/IN			
		0.000		0.000			
		0.010		0.060			
		0.020		0.120			
		0.038		0.228			
		0.056		0.336			
		0.074		0.444			

0.092	0.552
0.110	0.660
0.128	0.768
0.146	0.876
0.164	0.984
0.182	1.063
0.200	1.089
0.283	1.207
0.367	1.324
0.450	1.441
0.540	1.441

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.01	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	1.42E+03

Y IN	P LBS/IN
0.000	0.000
0.008	79.083
0.017	158.166
0.035	247.197
0.054	318.892
0.072	381.380
0.090	437.849
0.108	489.960
0.127	538.715
0.145	584.775
0.163	628.605
0.182	670.545
0.200	710.858
0.283	890.942
0.367	1071.026
0.450	1251.110
0.540	1251.110

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
3.75	27.88	34.00	3.63E-02	6.00E+01	0.94	0.57	2.30E+02

Y IN	P LBS/IN
0.000	0.000
0.006	15.433
0.011	30.865
0.030	50.625
0.049	64.732
0.068	76.338
0.087	86.441
0.106	95.510
0.125	103.812
0.143	111.515
0.162	118.734
0.181	125.551
0.200	132.026
0.283	159.962
0.367	187.898



0.450 215.834  
0.540 215.834

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
16.75	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	1.73E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	88.092
0.015	176.185
0.033	289.946
0.052	379.853
0.070	457.668
0.089	527.729
0.107	592.235
0.126	652.493
0.144	709.355
0.163	763.417
0.181	815.115
0.200	864.778
0.283	1083.856
0.367	1302.933
0.450	1522.010
0.540	1522.010

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
7.50	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	4.59E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	10.399
0.004	20.799
0.023	62.402
0.043	90.285
0.063	113.420
0.082	133.833
0.102	152.406
0.122	169.620
0.141	185.773
0.161	201.066
0.180	215.643
0.200	229.611
0.283	287.779
0.367	345.947
0.450	404.115
0.540	404.115

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
20.50	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	2.04E+03

Y IN	P LBS/IN
0.000	0.000
0.007	97.883
0.013	195.766
0.032	334.023
0.051	441.921
0.069	534.899
0.088	618.422
0.107	695.217
0.125	766.887
0.144	834.472
0.163	898.695
0.181	960.085
0.200	1019.042
0.283	1277.199
0.367	1535.356
0.450	1793.513
0.540	1793.513

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
11.25	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	6.89E+02

Y IN	P LBS/IN
0.000	0.000
0.002	15.599
0.004	31.198
0.023	93.603
0.043	135.427
0.063	170.130
0.082	200.750
0.102	228.609
0.122	254.430
0.141	278.659
0.161	301.599
0.180	323.465
0.200	344.416
0.283	431.668
0.367	518.920
0.450	606.172
0.540	606.172

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
24.25	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	2.35E+03

Y IN	P LBS/IN
0.000	0.000
0.006	108.073
0.012	216.147

0.031	378.735
0.050	504.486
0.069	612.523
0.087	709.426
0.106	798.441
0.125	881.463
0.144	959.718
0.162	1034.056
0.181	1105.096
0.200	1173.305
0.283	1470.542
0.367	1767.779
0.450	2065.016
0.540	2065.016

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
14.99	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	9.18E+02

Y IN	P LBS/IN
0.000	0.000
0.002	20.787
0.004	41.574
0.023	124.735
0.043	180.469
0.063	226.713
0.082	267.518
0.102	304.643
0.122	339.051
0.141	371.339
0.161	401.909
0.180	431.047
0.200	458.966
0.283	575.238
0.367	691.509
0.450	807.781
0.540	807.781

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.99	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	2.65E+03

Y IN	P LBS/IN
0.000	0.000
0.006	118.476
0.012	236.952
0.031	423.717
0.049	567.198
0.068	690.200
0.087	800.406
0.106	901.574
0.125	995.889
0.144	1084.761
0.162	1169.164
0.181	1249.807

0.200	1327.225
0.283	1663.455
0.367	1999.685
0.450	2335.916
0.540	2335.916

P-Multiplier = 1.000E+00 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
15.01	27.880	1.04E+01	1.04E+01	3.63E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	39.02682
0.00012	58.35871
0.00024	69.40060
0.00120	103.77810
0.00240	123.41366
0.01200	184.54646
0.02400	219.46396
0.06000	275.96132
0.12000	328.17517
0.18000	363.18553
0.24000	390.26825
0.60000	490.73634
1.20000	583.58715
2.40000	694.00599
2.70000	694.00599
3.00000	694.00599

P-Multiplier = 1.000E+00 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
28.01	27.880	1.04E+01	1.04E+01	3.63E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	54.73589
0.00012	81.84925
0.00024	97.33571
0.00120	145.55084
0.00240	173.09009
0.01200	258.83005
0.02400	307.80254
0.06000	387.04121
0.12000	460.27216
0.18000	509.37488
0.24000	547.35893
0.60000	688.26741
1.20000	818.49250
2.40000	973.35711
2.70000	973.35711
3.00000	973.35711

P-Multiplier = 1.000E+00 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
15.75	27.880	1.04E+01	1.04E+01	3.61E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	39.41443
0.00012	58.93832
0.00024	70.08987
0.00120	104.80880
0.00240	124.63937
0.01200	186.37932
0.02400	221.64362
0.06000	278.70210
0.12000	331.43452
0.18000	366.79259
0.24000	394.14429
0.60000	495.61020
1.20000	589.38318
2.40000	700.89867
2.70000	700.89867
3.00000	700.89867

P-Multiplier = 1.000E+00 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
28.75	27.880	1.04E+01	1.04E+01	3.61E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	55.66451
0.00012	83.23786
0.00024	98.98705
0.00120	148.02017
0.00240	176.02664
0.01200	263.22122
0.02400	313.02454
0.06000	393.60753
0.12000	468.08087
0.18000	518.01664
0.24000	556.64510
0.60000	699.94416
1.20000	832.37857
2.40000	989.87052
2.70000	989.87052
3.00000	989.87052

P-Multiplier = 1.000E+00 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
16.50	27.880	1.04E+01	1.04E+01	3.58E-02	5.0000E-03

Y IN	P LBS/IN
---------	-------------

0.00000	0.00000
0.00002	39.80639
0.00012	59.52443
0.00024	70.78688
0.00120	105.85108
0.00240	125.87885
0.01200	188.23278
0.02400	223.84777
0.06000	281.47367
0.12000	334.73049
0.18000	370.44018
0.24000	398.06388
0.60000	500.53883
1.20000	595.24433
2.40000	707.86880
2.70000	707.86880
3.00000	707.86880

P-Multiplier = 1.000E+00 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
29.50	27.880	1.04E+01	1.04E+01	3.58E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	56.60356
0.00012	84.64207
0.00024	100.65695
0.00120	150.51725
0.00240	178.99618
0.01200	267.66172
0.02400	318.30522
0.06000	400.24762
0.12000	475.97732
0.18000	526.75550
0.24000	566.03562
0.60000	711.75211
1.20000	846.42067
2.40000	1006.56948
2.70000	1006.56948
3.00000	1006.56948

P-Multiplier = 1.000E+00 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
17.25	27.880	1.04E+01	1.04E+01	3.56E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	40.19835
0.00012	60.11055
0.00024	71.48389
0.00120	106.89335
0.00240	127.11834
0.01200	190.08624
0.02400	226.05191
0.06000	284.24524

0.12000	338.02646
0.18000	374.08777
0.24000	401.98347
0.60000	505.46745
1.20000	601.10549
2.40000	714.83892
2.70000	714.83892
3.00000	714.83892

P-Multiplier = 1.000E+00 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
30.25	27.880	1.04E+01	1.04E+01	3.56E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	57.54261
0.00012	86.04628
0.00024	102.32684
0.00120	153.01432
0.00240	181.96572
0.01200	272.10222
0.02400	323.58589
0.06000	406.88772
0.12000	483.87377
0.18000	535.49436
0.24000	575.42613
0.60000	723.56005
1.20000	860.46276
2.40000	1023.26844
2.70000	1023.26844
3.00000	1023.26844

P-Multiplier = 1.000E+00 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
17.99	27.880	1.04E+01	1.04E+01	3.54E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	40.58595
0.00012	60.69015
0.00024	72.17316
0.00120	107.92405
0.00240	128.34405
0.01200	191.91911
0.02400	228.23157
0.06000	286.98601
0.12000	341.28581
0.18000	377.69483
0.24000	405.85951
0.60000	510.34131
1.20000	606.90152
2.40000	721.73161
2.70000	721.73161
3.00000	721.73161

P-Multiplier = 1.000E+00 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
30.99	27.880	1.04E+01	1.04E+01	3.54E-02	5.0000E-03
	Y IN			P LBS/IN	
	0.00000			0.00000	
	0.00002			58.47123	
	0.00012			87.43488	
	0.00024			103.97818	
	0.00120			155.48365	
	0.00240			184.90227	
	0.01200			276.49338	
	0.02400			328.80789	
	0.06000			413.45404	
	0.12000			491.68248	
	0.18000			544.13612	
	0.24000			584.71231	
	0.60000			735.23680	
	1.20000			874.34883	
	2.40000			1039.78185	
	2.70000			1039.78185	
	3.00000			1039.78185	

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
18.01	27.88	32.00	3.54E-02	6.00E+01	0.88	0.50	9.33E+02
	Y IN			P LBS/IN			
	0.000			0.000			
	0.004			31.434			
	0.007			62.867			
	0.027			137.070			
	0.046			190.779			
	0.065			236.059			
	0.084			276.302			
	0.104			313.068			
	0.123			347.234			
	0.142			379.356			
	0.161			409.811			
	0.181			438.871			
	0.200			466.740			
	0.283			584.981			
	0.367			703.222			
	0.450			821.462			
	0.540			821.462			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
31.01	27.88	32.00	3.54E-02	6.00E+01	0.88	0.50	2.65E+03



Y IN	P LBS/IN
0.000	0.000
0.008	142.561
0.016	285.121
0.034	454.454
0.053	589.829
0.071	707.493
0.090	813.667
0.108	911.558
0.126	1003.087
0.145	1089.516
0.163	1171.732
0.182	1250.383
0.200	1325.965
0.283	1661.876
0.367	1997.787
0.450	2333.698
0.540	2333.698

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
19.75	27.88	32.00	3.49E-02	6.00E+01	0.88	0.50	1.01E+03

Y IN	P LBS/IN
0.000	0.000
0.003	31.159
0.006	62.317
0.026	145.428
0.045	204.502
0.064	254.092
0.084	298.078
0.103	338.217
0.123	375.490
0.142	410.514
0.161	443.708
0.181	475.371
0.200	505.729
0.283	633.847
0.367	761.965
0.450	890.083
0.540	890.083

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
32.75	27.88	32.00	3.49E-02	6.00E+01	0.88	0.50	2.75E+03

Y IN	P LBS/IN
0.000	0.000
0.007	141.392
0.015	282.784
0.033	463.226
0.052	606.066
0.070	729.767

0.089	841.177
0.107	943.773
0.126	1039.625
0.144	1130.083
0.163	1216.093
0.181	1298.346
0.200	1377.366
0.283	1726.299
0.367	2075.231
0.450	2424.164
0.540	2424.164

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
21.50	27.88	32.00	3.46E-02	6.00E+01	0.88	0.50	1.09E+03

Y IN	P LBS/IN
0.000	0.000
0.003	31.217
0.006	62.435
0.025	154.283
0.045	218.628
0.064	272.471
0.083	320.160
0.103	363.642
0.122	403.998
0.142	441.904
0.161	477.819
0.181	512.071
0.200	544.904
0.283	682.947
0.367	820.989
0.450	959.032
0.540	959.032

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
34.50	27.88	32.00	3.46E-02	6.00E+01	0.88	0.50	2.86E+03

Y IN	P LBS/IN
0.000	0.000
0.007	140.671
0.014	281.343
0.032	472.773
0.051	622.958
0.070	752.608
0.088	869.183
0.107	976.428
0.126	1076.553
0.144	1170.998
0.163	1260.765
0.181	1346.585
0.200	1429.013
0.283	1791.030
0.367	2153.047

0.450 2515.063  
 0.540 2515.063

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
23.25	27.88	32.00	3.43E-02	6.00E+01	0.88	0.50	1.17E+03

Y IN	P LBS/IN
0.000	0.000
0.003	31.503
0.005	63.006
0.025	163.437
0.044	232.973
0.064	291.019
0.083	342.374
0.103	389.169
0.122	432.582
0.142	473.348
0.161	511.965
0.181	548.787
0.200	584.080
0.283	732.047
0.367	880.014
0.450	1027.980
0.540	1027.980

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
36.25	27.88	32.00	3.43E-02	6.00E+01	0.88	0.50	2.96E+03

Y IN	P LBS/IN
0.000	0.000
0.006	140.320
0.013	280.639
0.032	482.911
0.050	640.313
0.069	775.816
0.088	897.479
0.106	1009.308
0.125	1113.652
0.144	1212.035
0.163	1305.514
0.181	1394.862
0.200	1480.661
0.283	1855.761
0.367	2230.862
0.450	2605.963
0.540	2605.963

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
24.99	27.88	32.00	3.40E-02	6.00E+01	0.88	0.50	1.25E+03

Y IN	P LBS/IN
0.000	0.000
0.002	31.946
0.005	63.891
0.024	172.752
0.044	247.398
0.063	309.591
0.083	364.569
0.102	414.642
0.122	461.080
0.141	504.678
0.161	545.970
0.180	585.339
0.200	623.069
0.283	780.913
0.367	938.757
0.450	1096.601
0.540	1096.601

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
37.99	27.88	32.00	3.40E-02	6.00E+01	0.88	0.50	3.06E+03

Y IN	P LBS/IN
0.000	0.000
0.006	140.272
0.012	280.544
0.031	493.480
0.050	657.957
0.069	799.207
0.087	925.874
0.106	1042.214
0.125	1150.712
0.144	1252.974
0.162	1350.113
0.181	1442.939
0.200	1532.062
0.283	1920.185
0.367	2308.307
0.450	2696.429
0.540	2696.429

P-Multiplier = 1.000E+00 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
25.01	27.880	1.22E+01	1.22E+01	3.40E-02	5.000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	49.20267
0.00012	73.57516

0.00024	87.49610
0.00120	130.83719
0.00240	155.59252
0.01200	232.66508
0.02400	276.68696
0.06000	347.91544
0.12000	413.74352
0.18000	457.88248
0.24000	492.02674
0.60000	618.69087
1.20000	735.75158
2.40000	874.96101
2.70000	874.96101
3.00000	874.96101

P-Multiplier = 1.000E+00 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
38.01	27.880	1.22E+01	1.22E+01	3.40E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	67.95930
0.00012	101.62286
0.00024	120.85063
0.00120	180.71385
0.00240	214.90619
0.01200	321.35971
0.02400	382.16325
0.06000	480.54485
0.12000	571.46736
0.18000	632.43260
0.24000	679.59305
0.60000	854.54301
1.20000	1016.22863
2.40000	1208.50632
2.70000	1208.50632
3.00000	1208.50632

P-Multiplier = 1.000E+00 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
26.50	27.880	1.22E+01	1.22E+01	3.38E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	49.98224
0.00012	74.74088
0.00024	88.88238
0.00120	132.91016
0.00240	158.05771
0.01200	236.35140
0.02400	281.07077
0.06000	353.42779
0.12000	420.29884
0.18000	465.13713
0.24000	499.82237

0.60000	628.49335
1.20000	747.40877
2.40000	888.82382
2.70000	888.82382
3.00000	888.82382

P-Multiplier = 1.000E+00 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
39.50	27.880	1.22E+01	1.22E+01	3.38E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	69.82697
0.00012	104.41568
0.00024	124.17187
0.00120	185.68026
0.00240	220.81228
0.01200	330.19137
0.02400	392.66593
0.06000	493.75127
0.12000	587.17252
0.18000	649.81321
0.24000	698.26974
0.60000	878.02771
1.20000	1044.15680
2.40000	1241.71869
2.70000	1241.71869
3.00000	1241.71869

P-Multiplier = 1.000E+00 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
28.00	27.880	1.22E+01	1.22E+01	3.37E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	50.76615
0.00012	75.91311
0.00024	90.27641
0.00120	134.99472
0.00240	160.53668
0.01200	240.05832
0.02400	285.47907
0.06000	358.97092
0.12000	426.89078
0.18000	472.43231
0.24000	507.66155
0.60000	638.35060
1.20000	759.13108
2.40000	902.76408
2.70000	902.76408
3.00000	902.76408

P-Multiplier = 1.000E+00 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
41.00	27.880	1.22E+01	1.22E+01	3.37E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.70508
0.00012	107.22410
0.00024	127.51166
0.00120	190.67441
0.00240	226.75136
0.01200	339.07237
0.02400	403.22727
0.06000	507.03146
0.12000	602.96542
0.18000	667.29093
0.24000	717.05077
0.60000	901.64360
1.20000	1072.24099
2.40000	1275.11661
2.70000	1275.11661
3.00000	1275.11661

P-Multiplier = 1.000E+00 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
29.50	27.880	1.22E+01	1.22E+01	3.35E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	51.55007
0.00012	77.08534
0.00024	91.67043
0.00120	137.07927
0.00240	163.01565
0.01200	243.76524
0.02400	289.88736
0.06000	364.51406
0.12000	433.48272
0.18000	479.72749
0.24000	515.50073
0.60000	648.20785
1.20000	770.85339
2.40000	916.70433
2.70000	916.70433
3.00000	916.70433

P-Multiplier = 1.000E+00 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
42.50	27.880	1.22E+01	1.22E+01	3.35E-02	5.0000E-03

Y IN	P LBS/IN
---------	-------------

0.00000	0.00000
0.00002	73.58318
0.00012	110.03252
0.00024	130.85145
0.00120	195.66856
0.00240	232.69045
0.01200	347.95337
0.02400	413.78862
0.06000	520.31165
0.12000	618.75832
0.18000	684.76865
0.24000	735.83180
0.60000	925.25949
1.20000	1100.32517
2.40000	1308.51453
2.70000	1308.51453
3.00000	1308.51453

P-Multiplier = 1.000E+00 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
30.99	27.880	1.22E+01	1.22E+01	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	52.32964
0.00012	78.25106
0.00024	93.05671
0.00120	139.15225
0.00240	165.48084
0.01200	247.45157
0.02400	294.27117
0.06000	370.02641
0.12000	440.03804
0.18000	486.98214
0.24000	523.29636
0.60000	658.01034
1.20000	782.51057
2.40000	930.56714
2.70000	930.56714
3.00000	930.56714

P-Multiplier = 1.000E+00 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
43.99	27.880	1.22E+01	1.22E+01	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	75.45085
0.00012	112.82533
0.00024	134.17269
0.00120	200.63497
0.00240	238.59653
0.01200	356.78503
0.02400	424.29130
0.06000	533.51807



0.12000	634.46348
0.18000	702.14927
0.24000	754.50849
0.60000	948.74419
1.20000	1128.25334
2.40000	1341.72690
2.70000	1341.72690
3.00000	1341.72690

P-Multiplier = 1.000E+00 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
31.01	27.880	8.68E+00	8.68E+00	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	42.43889
0.00012	63.46094
0.00024	75.46820
0.00120	112.85129
0.00240	134.20355
0.01200	200.68112
0.02400	238.65141
0.06000	300.08827
0.12000	356.86710
0.18000	394.93837
0.24000	424.38890
0.60000	533.64078
1.20000	634.60942
2.40000	754.68204
2.70000	754.68204
3.00000	754.68204

P-Multiplier = 1.000E+00 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
44.01	27.880	8.68E+00	8.68E+00	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	64.58416
0.00012	96.57585
0.00024	114.84869
0.00120	171.73885
0.00240	204.23306
0.01200	305.39965
0.02400	363.18343
0.06000	456.67900
0.12000	543.08591
0.18000	601.02336
0.24000	645.84163
0.60000	812.10285
1.20000	965.75849
2.40000	1148.48687
2.70000	1148.48687
3.00000	1148.48687

P-Multiplier = 1.000E+00 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
32.75	27.880	8.68E+00	8.68E+00	3.32E-02	5.0000E-03
	Y IN			P LBS/IN	
	0.00000			0.00000	
	0.00002			43.34911	
	0.00012			64.82203	
	0.00024			77.08682	
	0.00120			115.27169	
	0.00240			137.08191	
	0.01200			204.98526	
	0.02400			243.76993	
	0.06000			306.52447	
	0.12000			364.52108	
	0.18000			403.40889	
	0.24000			433.49106	
	0.60000			545.08615	
	1.20000			648.22032	
	2.40000			770.86822	
	2.70000			770.86822	
	3.00000			770.86822	

P-Multiplier = 1.000E+00 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
45.75	27.880	8.68E+00	8.68E+00	3.32E-02	5.0000E-03
	Y IN			P LBS/IN	
	0.00000			0.00000	
	0.00002			66.76485	
	0.00012			99.83673	
	0.00024			118.72656	
	0.00120			177.53761	
	0.00240			211.12899	
	0.01200			315.71148	
	0.02400			375.44633	
	0.06000			472.09877	
	0.12000			561.42322	
	0.18000			621.31693	
	0.24000			667.64849	
	0.60000			839.52353	
	1.20000			998.36735	
	2.40000			1187.26556	
	2.70000			1187.26556	
	3.00000			1187.26556	

P-Multiplier = 1.000E+00 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
34.50	27.880	8.68E+00	8.68E+00	3.31E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	44.26368
0.00012	66.18963
0.00024	78.71318
0.00120	117.70367
0.00240	139.97404
0.01200	209.31000
0.02400	248.91295
0.06000	312.99146
0.12000	372.21167
0.18000	411.91993
0.24000	442.63677
0.60000	556.58627
1.20000	661.89635
2.40000	787.13185
2.70000	787.13185
3.00000	787.13185

P-Multiplier = 1.000E+00 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	
47.50	27.880	8.68E+00	8.68E+00	3.31E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	68.95597
0.00012	103.11322
0.00024	122.62298
0.00120	183.36412
0.00240	218.05792
0.01200	326.07264
0.02400	387.76791
0.06000	487.59233
0.12000	579.84827
0.18000	641.70760
0.24000	689.55969
0.60000	867.07540
1.20000	1031.13224
2.40000	1226.22979
2.70000	1226.22979
3.00000	1226.22979

P-Multiplier = 1.000E+00 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	
36.25	27.880	8.68E+00	8.68E+00	3.29E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	45.17825
0.00012	67.55724
0.00024	80.33955
0.00120	120.13565
0.00240	142.86617

0.01200	213.63474
0.02400	254.05596
0.06000	319.45846
0.12000	379.90227
0.18000	420.43098
0.24000	451.78248
0.60000	568.08639
1.20000	675.57238
2.40000	803.39548
2.70000	803.39548
3.00000	803.39548

P-Multiplier = 1.000E+00 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
49.25	27.880	8.68E+00	8.68E+00	3.29E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.14709
0.00012	106.38971
0.00024	126.51940
0.00120	189.19064
0.00240	224.98685
0.01200	336.43381
0.02400	400.08948
0.06000	503.08589
0.12000	598.27332
0.18000	662.09827
0.24000	711.47089
0.60000	894.62728
1.20000	1063.89712
2.40000	1265.19403
2.70000	1265.19403
3.00000	1265.19403

P-Multiplier = 1.000E+00 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
37.99	27.880	8.68E+00	8.68E+00	3.28E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	46.08846
0.00012	68.91833
0.00024	81.95817
0.00120	122.55605
0.00240	145.74452
0.01200	217.93889
0.02400	259.17448
0.06000	325.89466
0.12000	387.55624
0.18000	428.90149
0.24000	460.88464
0.60000	579.53176
1.20000	689.18329
2.40000	819.58167

2.70000 819.58167  
 3.00000 819.58167

P-Multiplier = 1.000E+00 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
50.99	27.880	8.68E+00	8.68E+00	3.28E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		73.32777		
	0.00012		109.65060		
	0.00024		130.39727		
	0.00120		194.98940		
	0.00240		231.88279		
	0.01200		346.74564		
	0.02400		412.35238		
	0.06000		518.50567		
	0.12000		616.61063		
	0.18000		682.39184		
	0.24000		733.27775		
	0.60000		922.04795		
	1.20000		1096.50599		
	2.40000		1303.97272		
	2.70000		1303.97272		
	3.00000		1303.97272		

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

Wall 1 13 foot ATB-531-Service Load

RESULTS

NUMBER OF ITERATIONS : 43

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	3.543E+00	-1.309E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	3.464E+00	-1.309E-02	0.000E+00	1.353E+01	0.000E+00	2.706E+01	2.883E+10
2	1.000E+00	3.386E+00	-1.309E-02	1.624E+02	5.735E+01	0.000E+00	6.057E+01	2.883E+10
3	1.500E+00	3.307E+00	-1.309E-02	6.882E+02	1.345E+02	0.000E+00	9.382E+01	2.883E+10
4	2.000E+00	3.229E+00	-1.309E-02	1.777E+03	2.448E+02	0.000E+00	1.266E+02	2.883E+10
5	2.500E+00	3.150E+00	-1.309E-02	3.625E+03	3.875E+02	0.000E+00	1.589E+02	2.883E+10
6	3.000E+00	3.072E+00	-1.309E-02	6.427E+03	5.622E+02	0.000E+00	1.904E+02	2.883E+10
7	3.500E+00	2.993E+00	-1.309E-02	1.037E+04	7.794E+02	0.000E+00	2.440E+02	2.883E+10
8	4.000E+00	2.915E+00	-1.308E-02	1.578E+04	1.039E+03	0.000E+00	2.746E+02	2.883E+10
9	4.500E+00	2.836E+00	-1.308E-02	2.284E+04	1.328E+03	0.000E+00	3.044E+02	2.883E+10
10	5.000E+00	2.758E+00	-1.307E-02	3.172E+04	1.647E+03	0.000E+00	3.332E+02	2.883E+10
11	5.500E+00	2.679E+00	-1.307E-02	4.260E+04	1.994E+03	0.000E+00	3.612E+02	2.883E+10
12	6.000E+00	2.601E+00	-1.306E-02	5.565E+04	2.369E+03	0.000E+00	3.882E+02	2.883E+10
13	6.500E+00	2.523E+00	-1.304E-02	7.103E+04	2.782E+03	0.000E+00	4.385E+02	2.883E+10
14	7.000E+00	2.444E+00	-1.303E-02	8.904E+04	3.246E+03	0.000E+00	4.880E+02	2.883E+10
15	7.500E+00	2.366E+00	-1.301E-02	1.100E+05	3.758E+03	0.000E+00	5.367E+02	2.883E+10
16	8.000E+00	2.288E+00	-1.298E-02	1.341E+05	4.319E+03	0.000E+00	5.847E+02	2.883E+10
17	8.500E+00	2.211E+00	-1.295E-02	1.618E+05	4.927E+03	0.000E+00	6.321E+02	2.883E+10
18	9.000E+00	2.133E+00	-1.291E-02	1.933E+05	5.582E+03	0.000E+00	6.789E+02	2.883E+10
19	9.500E+00	2.056E+00	-1.287E-02	2.288E+05	6.284E+03	0.000E+00	7.252E+02	2.883E+10
20	1.000E+01	1.978E+00	-1.282E-02	2.687E+05	7.033E+03	0.000E+00	7.710E+02	2.883E+10
21	1.050E+01	1.902E+00	-1.276E-02	3.132E+05	7.800E+03	0.000E+00	7.648E+02	2.883E+10
22	1.100E+01	1.825E+00	-1.269E-02	3.623E+05	8.588E+03	0.000E+00	8.109E+02	2.883E+10
23	1.150E+01	1.750E+00	-1.261E-02	4.162E+05	9.422E+03	0.000E+00	8.567E+02	2.883E+10



93	4.650E+01	-3.205E-07	-1.704E-07	1.164E+03	-1.139E+02	9.012E-01	3.326E+01	2.883E+10
94	4.700E+01	-6.163E-07	1.110E-08	5.806E+02	-7.836E+01	1.752E+00	3.774E+01	2.883E+10
95	4.750E+01	-1.872E-07	9.477E-08	2.236E+02	-4.456E+01	5.380E-01	2.985E+01	2.883E+10
96	4.800E+01	5.210E-07	1.228E-07	4.581E+01	-1.952E+01	-9.658E-01	2.023E+01	2.883E+10
97	4.850E+01	1.286E-06	1.265E-07	-1.063E+01	-3.874E+00	-2.397E+00	1.107E+01	2.883E+10
98	4.900E+01	2.039E-06	1.253E-07	-6.729E-01	2.650E+00	-3.818E+00	1.980E+00	2.883E+10
99	4.950E+01	2.790E-06	1.274E-07	2.117E+01	5.607E-02	-5.252E+00	-7.169E+00	2.883E+10
100	5.000E+01	3.568E-06	1.296E-07	0.000E+00	-1.764E+00	-3.381E+00	3.528E+00	2.883E+10

END OF ANALYSIS

=====  
PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====  
This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 1\  
Name of input data file : Wall 1 13 foot Str Case W05.py7d  
Name of output file : Wall 1 13 foot Str Case W05.py7o  
Name of plot output file : Wall 1 13 foot Str Case W05.py7p

-----  
Time and Date of Analysis  
-----

Date: March 13, 2023 Time: 17:16:39

Wall 1 13 foot cut ATB-531 Strength Case

\*\*\*\*\*  
\* 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 = 50.000 FT  
NUMBER OF INCREMENTS = 100  
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	50.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1



SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.304E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.100E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI	TOTAL WEIGHT	UNIT	DRAINED	ZTOP
	FT	PSI	DEG	PCI	T OR F	FT	
1	3.0	0.0	34.0	0.072	T	0.00	
2	3.0	6.9	0.0	0.064	T	3.00	
3	4.0	6.9	0.0	0.064	T	6.00	
4	3.0	0.0	34.0	0.072	T	10.00	
5	15.0	0.0	34.0	0.072	T	13.00	
6	3.0	10.4	0.0	0.067	F	28.00	
7	7.0	0.0	32.0	0.067	T	31.00	
8	6.0	12.2	0.0	0.067	F	38.00	
9	9.0	8.7	0.0	0.067	F	44.00	
10	9.0	20.8	0.0	0.069	F	53.00	
11	2.0	48.6	0.0	0.069	F	62.00	

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
0.000E+00	0.000E+00
3.000E+00	2.604E+00
6.000E+00	4.896E+00
1.000E+01	6.223E+00
1.300E+01	7.532E+00
2.800E+01	1.407E+01
3.100E+01	1.517E+01
3.800E+01	1.774E+01
4.400E+01	1.994E+01
5.300E+01	2.324E+01
6.200E+01	2.685E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	1.000E+00	1.000E+00	3.333E-01
3	1.000E+00	1.000E+00	3.333E-01
4	2.827E-01	3.537E+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	3.073E-01	3.255E+00	0.000E+00
8	1.000E+00	1.000E+00	0.000E+00
9	1.000E+00	1.000E+00	0.000E+00
10	1.000E+00	1.000E+00	0.000E+00
11	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	15.53	1.50	19.88	2.00	0.00	-0.00	0.00
2	62.40	4.50	20.62	5.00	0.00	-0.00	0.00
3	144.23	8.00	15.93	8.67	0.00	-0.00	0.00
4	110.54	11.50	9.99	12.00	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT
3	0.00	8.00	62.21	8.67
4	93.31	11.50	34.99	12.00

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
0.0000E+00	0.0000E+00
5.0000E-01	7.03496E+00
1.0000E+00	1.59468E+01
1.5000E+00	2.47814E+01
2.0000E+00	3.34922E+01
2.5000E+00	4.20347E+01
3.0000E+00	5.03736E+01
3.5000E+00	6.41853E+01
4.0000E+00	7.22371E+01
4.5000E+00	8.00268E+01
5.0000E+00	8.75488E+01
5.5000E+00	9.48059E+01
6.0000E+00	1.01804E+02
6.5000E+00	1.14576E+02
7.0000E+00	1.27110E+02
7.5000E+00	1.39428E+02
8.0000E+00	1.51542E+02
8.5000E+00	1.63469E+02
9.0000E+00	1.75229E+02
9.5000E+00	1.86838E+02
1.0000E+01	1.98308E+02
1.0500E+01	1.96760E+02
1.1000E+01	2.08269E+02
1.1500E+01	2.19683E+02
1.2000E+01	2.31019E+02
1.2500E+01	2.42280E+02
1.3000E+01	2.53482E+02
1.3500E+01	2.53019E+02
1.4000E+01	2.52515E+02
1.4500E+01	2.51971E+02
1.5000E+01	2.51394E+02
1.5500E+01	2.50795E+02
1.6000E+01	2.50173E+02
1.6500E+01	2.49534E+02
1.7000E+01	2.48885E+02
1.7500E+01	2.48224E+02
1.8000E+01	2.47560E+02
1.8500E+01	2.46891E+02
1.9000E+01	2.46225E+02
1.9500E+01	2.45556E+02
2.0000E+01	2.44892E+02
2.0500E+01	2.44232E+02
2.1000E+01	2.43576E+02
2.1500E+01	2.42930E+02
2.2000E+01	2.42291E+02

2.25000E+01	2.41661E+02
2.30000E+01	2.41039E+02
2.35000E+01	2.40429E+02
2.40000E+01	2.39829E+02
2.45000E+01	2.39241E+02
2.50000E+01	2.38664E+02
2.55000E+01	2.38098E+02
2.60000E+01	2.37543E+02
2.65000E+01	2.37002E+02
2.70000E+01	2.36470E+02
2.75000E+01	2.35951E+02
2.80000E+01	2.35447E+02
2.85000E+01	1.94413E+01
2.90000E+01	1.89587E+01
2.95000E+01	1.84881E+01
3.00000E+01	1.80286E+01
3.05000E+01	1.75808E+01
3.10000E+01	1.71445E+01
3.15000E+01	2.39960E+02
3.20000E+01	2.39545E+02
3.25000E+01	2.39143E+02
3.30000E+01	2.38750E+02
3.35000E+01	2.38366E+02
3.40000E+01	2.37995E+02
3.45000E+01	2.37632E+02
3.50000E+01	2.37278E+02
3.55000E+01	2.36935E+02
3.60000E+01	2.36601E+02
3.65000E+01	2.36277E+02
3.70000E+01	2.35960E+02
3.75000E+01	2.35653E+02
3.80000E+01	2.35352E+02
3.85000E+01	1.18214E+01
3.90000E+01	1.15381E+01
3.95000E+01	1.12627E+01
4.00000E+01	1.09948E+01
4.05000E+01	1.07344E+01
4.10000E+01	1.04809E+01
4.15000E+01	1.02345E+01
4.20000E+01	9.99470E+00
4.25000E+01	9.76135E+00
4.30000E+01	9.53468E+00
4.35000E+01	9.31387E+00
4.40000E+01	9.09920E+00
4.45000E+01	8.89037E+00
4.50000E+01	8.68741E+00
4.55000E+01	8.48974E+00
4.60000E+01	8.29737E+00
4.65000E+01	8.11029E+00
4.70000E+01	7.92824E+00
4.75000E+01	7.75120E+00
4.80000E+01	7.57862E+00
4.85000E+01	7.41078E+00
4.90000E+01	7.24741E+00
4.95000E+01	7.08849E+00
5.00000E+01	6.93376E+00

\*\*\*\*\*  
\* SOIL LAYERS AND STRENGTH DATA \*  
\*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

5 LAYER(S) OF SOIL

LAYER 1  
THE SOIL IS A SAND

LAYER 2  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 3  
THE SOIL IS A SAND

LAYER 4  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH  
14 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.6338E-02
28.0000	3.6338E-02
28.0000	3.0551E-02
31.0000	3.0551E-02
31.0000	3.0551E-02
38.0000	3.0551E-02
38.0000	3.0551E-02
44.0000	3.0551E-02
44.0000	3.0551E-02
53.0000	3.0551E-02
53.0000	3.3444E-02
62.0000	3.3444E-02
62.0000	3.3444E-02
64.0000	3.3444E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
28.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
28.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
31.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
31.00	0.0000E+00	32.000	0.0000E+00	6.0000E+01
38.00	0.0000E+00	32.000	0.0000E+00	6.0000E+01
38.00	1.2153E+01	0.000	5.0000E-03	0.0000E+00
44.00	1.2153E+01	0.000	5.0000E-03	0.0000E+00
44.00	8.6806E+00	0.000	5.0000E-03	0.0000E+00
51.00	8.6806E+00	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	34.00	3.63E-02	6.00E+01	2.82	2.13	5.10E-01
		Y IN		P LBS/IN			
		0.000		0.000			
		0.010		0.060			
		0.020		0.120			
		0.038		0.228			
		0.056		0.336			
		0.074		0.444			

0.092	0.552
0.110	0.660
0.128	0.768
0.146	0.876
0.164	0.984
0.182	1.063
0.200	1.089
0.283	1.207
0.367	1.324
0.450	1.441
0.540	1.441

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.01	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	1.42E+03

Y IN	P LBS/IN
0.000	0.000
0.008	79.083
0.017	158.166
0.035	247.197
0.054	318.892
0.072	381.380
0.090	437.849
0.108	489.960
0.127	538.715
0.145	584.775
0.163	628.605
0.182	670.545
0.200	710.858
0.283	890.942
0.367	1071.026
0.450	1251.110
0.540	1251.110

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
3.75	27.88	34.00	3.63E-02	6.00E+01	0.94	0.57	2.30E+02

Y IN	P LBS/IN
0.000	0.000
0.006	15.433
0.011	30.865
0.030	50.625
0.049	64.732
0.068	76.338
0.087	86.441
0.106	95.510
0.125	103.812
0.143	111.515
0.162	118.734
0.181	125.551
0.200	132.026
0.283	159.962
0.367	187.898

0.450 215.834  
0.540 215.834

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
16.75	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	1.73E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	88.092
0.015	176.185
0.033	289.946
0.052	379.853
0.070	457.668
0.089	527.729
0.107	592.235
0.126	652.493
0.144	709.355
0.163	763.417
0.181	815.115
0.200	864.778
0.283	1083.856
0.367	1302.933
0.450	1522.010
0.540	1522.010

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
7.50	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	4.59E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	10.399
0.004	20.799
0.023	62.402
0.043	90.285
0.063	113.420
0.082	133.833
0.102	152.406
0.122	169.620
0.141	185.773
0.161	201.066
0.180	215.643
0.200	229.611
0.283	287.779
0.367	345.947
0.450	404.115
0.540	404.115

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
20.50	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	2.04E+03

Y IN	P LBS/IN
0.000	0.000
0.007	97.883
0.013	195.766
0.032	334.023
0.051	441.921
0.069	534.899
0.088	618.422
0.107	695.217
0.125	766.887
0.144	834.472
0.163	898.695
0.181	960.085
0.200	1019.042
0.283	1277.199
0.367	1535.356
0.450	1793.513
0.540	1793.513

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
11.25	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	6.89E+02

Y IN	P LBS/IN
0.000	0.000
0.002	15.599
0.004	31.198
0.023	93.603
0.043	135.427
0.063	170.130
0.082	200.750
0.102	228.609
0.122	254.430
0.141	278.659
0.161	301.599
0.180	323.465
0.200	344.416
0.283	431.668
0.367	518.920
0.450	606.172
0.540	606.172

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
24.25	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	2.35E+03

Y IN	P LBS/IN
0.000	0.000
0.006	108.073
0.012	216.147



0.031	378.735
0.050	504.486
0.069	612.523
0.087	709.426
0.106	798.441
0.125	881.463
0.144	959.718
0.162	1034.056
0.181	1105.096
0.200	1173.305
0.283	1470.542
0.367	1767.779
0.450	2065.016
0.540	2065.016

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
14.99	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	9.18E+02

Y IN	P LBS/IN
0.000	0.000
0.002	20.787
0.004	41.574
0.023	124.735
0.043	180.469
0.063	226.713
0.082	267.518
0.102	304.643
0.122	339.051
0.141	371.339
0.161	401.909
0.180	431.047
0.200	458.966
0.283	575.238
0.367	691.509
0.450	807.781
0.540	807.781

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.99	27.88	34.00	3.63E-02	6.00E+01	0.88	0.50	2.65E+03

Y IN	P LBS/IN
0.000	0.000
0.006	118.476
0.012	236.952
0.031	423.717
0.049	567.198
0.068	690.200
0.087	800.406
0.106	901.574
0.125	995.889
0.144	1084.761
0.162	1169.164
0.181	1249.807

0.200	1327.225
0.283	1663.455
0.367	1999.685
0.450	2335.916
0.540	2335.916

P-Multiplier = 1.000E+00 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
15.01	27.880	1.04E+01	1.04E+01	3.63E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	39.02682
0.00012	58.35871
0.00024	69.40060
0.00120	103.77810
0.00240	123.41366
0.01200	184.54646
0.02400	219.46396
0.06000	275.96132
0.12000	328.17517
0.18000	363.18553
0.24000	390.26825
0.60000	490.73634
1.20000	583.58715
2.40000	694.00599
2.70000	694.00599
3.00000	694.00599

P-Multiplier = 1.000E+00 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
28.01	27.880	1.04E+01	1.04E+01	3.63E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	54.73589
0.00012	81.84925
0.00024	97.33571
0.00120	145.55084
0.00240	173.09009
0.01200	258.83005
0.02400	307.80254
0.06000	387.04121
0.12000	460.27216
0.18000	509.37488
0.24000	547.35893
0.60000	688.26741
1.20000	818.49250
2.40000	973.35711
2.70000	973.35711
3.00000	973.35711

P-Multiplier = 1.000E+00 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
15.75	27.880	1.04E+01	1.04E+01	3.61E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	39.41443
0.00012	58.93832
0.00024	70.08987
0.00120	104.80880
0.00240	124.63937
0.01200	186.37932
0.02400	221.64362
0.06000	278.70210
0.12000	331.43452
0.18000	366.79259
0.24000	394.14429
0.60000	495.61020
1.20000	589.38318
2.40000	700.89867
2.70000	700.89867
3.00000	700.89867

P-Multiplier = 1.000E+00 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
28.75	27.880	1.04E+01	1.04E+01	3.61E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	55.66451
0.00012	83.23786
0.00024	98.98705
0.00120	148.02017
0.00240	176.02664
0.01200	263.22122
0.02400	313.02454
0.06000	393.60753
0.12000	468.08087
0.18000	518.01664
0.24000	556.64510
0.60000	699.94416
1.20000	832.37857
2.40000	989.87052
2.70000	989.87052
3.00000	989.87052

P-Multiplier = 1.000E+00 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
16.50	27.880	1.04E+01	1.04E+01	3.58E-02	5.0000E-03

Y IN	P LBS/IN
---------	-------------

0.00000	0.00000
0.00002	39.80639
0.00012	59.52443
0.00024	70.78688
0.00120	105.85108
0.00240	125.87885
0.01200	188.23278
0.02400	223.84777
0.06000	281.47367
0.12000	334.73049
0.18000	370.44018
0.24000	398.06388
0.60000	500.53883
1.20000	595.24433
2.40000	707.86880
2.70000	707.86880
3.00000	707.86880

P-Multiplier = 1.000E+00 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
29.50	27.880	1.04E+01	1.04E+01	3.58E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	56.60356
0.00012	84.64207
0.00024	100.65695
0.00120	150.51725
0.00240	178.99618
0.01200	267.66172
0.02400	318.30522
0.06000	400.24762
0.12000	475.97732
0.18000	526.75550
0.24000	566.03562
0.60000	711.75211
1.20000	846.42067
2.40000	1006.56948
2.70000	1006.56948
3.00000	1006.56948

P-Multiplier = 1.000E+00 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
17.25	27.880	1.04E+01	1.04E+01	3.56E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	40.19835
0.00012	60.11055
0.00024	71.48389
0.00120	106.89335
0.00240	127.11834
0.01200	190.08624
0.02400	226.05191
0.06000	284.24524

0.12000	338.02646
0.18000	374.08777
0.24000	401.98347
0.60000	505.46745
1.20000	601.10549
2.40000	714.83892
2.70000	714.83892
3.00000	714.83892

P-Multiplier = 1.000E+00 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
30.25	27.880	1.04E+01	1.04E+01	3.56E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	57.54261
0.00012	86.04628
0.00024	102.32684
0.00120	153.01432
0.00240	181.96572
0.01200	272.10222
0.02400	323.58589
0.06000	406.88772
0.12000	483.87377
0.18000	535.49436
0.24000	575.42613
0.60000	723.56005
1.20000	860.46276
2.40000	1023.26844
2.70000	1023.26844
3.00000	1023.26844

P-Multiplier = 1.000E+00 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
17.99	27.880	1.04E+01	1.04E+01	3.54E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	40.58595
0.00012	60.69015
0.00024	72.17316
0.00120	107.92405
0.00240	128.34405
0.01200	191.91911
0.02400	228.23157
0.06000	286.98601
0.12000	341.28581
0.18000	377.69483
0.24000	405.85951
0.60000	510.34131
1.20000	606.90152
2.40000	721.73161
2.70000	721.73161
3.00000	721.73161

P-Multiplier = 1.000E+00 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
30.99	27.880	1.04E+01	1.04E+01	3.54E-02	5.0000E-03
	Y IN			P LBS/IN	
	0.00000			0.00000	
	0.00002			58.47123	
	0.00012			87.43488	
	0.00024			103.97818	
	0.00120			155.48365	
	0.00240			184.90227	
	0.01200			276.49338	
	0.02400			328.80789	
	0.06000			413.45404	
	0.12000			491.68248	
	0.18000			544.13612	
	0.24000			584.71231	
	0.60000			735.23680	
	1.20000			874.34883	
	2.40000			1039.78185	
	2.70000			1039.78185	
	3.00000			1039.78185	

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
18.01	27.88	32.00	3.54E-02	6.00E+01	0.88	0.50	9.33E+02
	Y IN			P LBS/IN			
	0.000			0.000			
	0.004			31.434			
	0.007			62.867			
	0.027			137.070			
	0.046			190.779			
	0.065			236.059			
	0.084			276.302			
	0.104			313.068			
	0.123			347.234			
	0.142			379.356			
	0.161			409.811			
	0.181			438.871			
	0.200			466.740			
	0.283			584.981			
	0.367			703.222			
	0.450			821.462			
	0.540			821.462			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
31.01	27.88	32.00	3.54E-02	6.00E+01	0.88	0.50	2.65E+03

Y	P
IN	LBS/IN
0.000	0.000
0.008	142.561
0.016	285.121
0.034	454.454
0.053	589.829
0.071	707.493
0.090	813.667
0.108	911.558
0.126	1003.087
0.145	1089.516
0.163	1171.732
0.182	1250.383
0.200	1325.965
0.283	1661.876
0.367	1997.787
0.450	2333.698
0.540	2333.698

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
19.75	27.88	32.00	3.49E-02	6.00E+01	0.88	0.50	1.01E+03

Y	P
IN	LBS/IN
0.000	0.000
0.003	31.159
0.006	62.317
0.026	145.428
0.045	204.502
0.064	254.092
0.084	298.078
0.103	338.217
0.123	375.490
0.142	410.514
0.161	443.708
0.181	475.371
0.200	505.729
0.283	633.847
0.367	761.965
0.450	890.083
0.540	890.083

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
32.75	27.88	32.00	3.49E-02	6.00E+01	0.88	0.50	2.75E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	141.392
0.015	282.784
0.033	463.226
0.052	606.066
0.070	729.767

0.089	841.177
0.107	943.773
0.126	1039.625
0.144	1130.083
0.163	1216.093
0.181	1298.346
0.200	1377.366
0.283	1726.299
0.367	2075.231
0.450	2424.164
0.540	2424.164

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
21.50	27.88	32.00	3.46E-02	6.00E+01	0.88	0.50	1.09E+03

Y IN	P LBS/IN
0.000	0.000
0.003	31.217
0.006	62.435
0.025	154.283
0.045	218.628
0.064	272.471
0.083	320.160
0.103	363.642
0.122	403.998
0.142	441.904
0.161	477.819
0.181	512.071
0.200	544.904
0.283	682.947
0.367	820.989
0.450	959.032
0.540	959.032

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
34.50	27.88	32.00	3.46E-02	6.00E+01	0.88	0.50	2.86E+03

Y IN	P LBS/IN
0.000	0.000
0.007	140.671
0.014	281.343
0.032	472.773
0.051	622.958
0.070	752.608
0.088	869.183
0.107	976.428
0.126	1076.553
0.144	1170.998
0.163	1260.765
0.181	1346.585
0.200	1429.013
0.283	1791.030
0.367	2153.047



0.450 2515.063  
 0.540 2515.063

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
23.25	27.88	32.00	3.43E-02	6.00E+01	0.88	0.50	1.17E+03

Y IN	P LBS/IN
0.000	0.000
0.003	31.503
0.005	63.006
0.025	163.437
0.044	232.973
0.064	291.019
0.083	342.374
0.103	389.169
0.122	432.582
0.142	473.348
0.161	511.965
0.181	548.787
0.200	584.080
0.283	732.047
0.367	880.014
0.450	1027.980
0.540	1027.980

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
36.25	27.88	32.00	3.43E-02	6.00E+01	0.88	0.50	2.96E+03

Y IN	P LBS/IN
0.000	0.000
0.006	140.320
0.013	280.639
0.032	482.911
0.050	640.313
0.069	775.816
0.088	897.479
0.106	1009.308
0.125	1113.652
0.144	1212.035
0.163	1305.514
0.181	1394.862
0.200	1480.661
0.283	1855.761
0.367	2230.862
0.450	2605.963
0.540	2605.963

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
24.99	27.88	32.00	3.40E-02	6.00E+01	0.88	0.50	1.25E+03

Y IN	P LBS/IN
0.000	0.000
0.002	31.946
0.005	63.891
0.024	172.752
0.044	247.398
0.063	309.591
0.083	364.569
0.102	414.642
0.122	461.080
0.141	504.678
0.161	545.970
0.180	585.339
0.200	623.069
0.283	780.913
0.367	938.757
0.450	1096.601
0.540	1096.601

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
37.99	27.88	32.00	3.40E-02	6.00E+01	0.88	0.50	3.06E+03

Y IN	P LBS/IN
0.000	0.000
0.006	140.272
0.012	280.544
0.031	493.480
0.050	657.957
0.069	799.207
0.087	925.874
0.106	1042.214
0.125	1150.712
0.144	1252.974
0.162	1350.113
0.181	1442.939
0.200	1532.062
0.283	1920.185
0.367	2308.307
0.450	2696.429
0.540	2696.429

P-Multiplier = 1.000E+00 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
25.01	27.880	1.22E+01	1.22E+01	3.40E-02	5.000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	49.20267
0.00012	73.57516

0.00024	87.49610
0.00120	130.83719
0.00240	155.59252
0.01200	232.66508
0.02400	276.68696
0.06000	347.91544
0.12000	413.74352
0.18000	457.88248
0.24000	492.02674
0.60000	618.69087
1.20000	735.75158
2.40000	874.96101
2.70000	874.96101
3.00000	874.96101

P-Multiplier = 1.000E+00 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
38.01	27.880	1.22E+01	1.22E+01	3.40E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	67.95930
0.00012	101.62286
0.00024	120.85063
0.00120	180.71385
0.00240	214.90619
0.01200	321.35971
0.02400	382.16325
0.06000	480.54485
0.12000	571.46736
0.18000	632.43260
0.24000	679.59305
0.60000	854.54301
1.20000	1016.22863
2.40000	1208.50632
2.70000	1208.50632
3.00000	1208.50632

P-Multiplier = 1.000E+00 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
26.50	27.880	1.22E+01	1.22E+01	3.38E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	49.98224
0.00012	74.74088
0.00024	88.88238
0.00120	132.91016
0.00240	158.05771
0.01200	236.35140
0.02400	281.07077
0.06000	353.42779
0.12000	420.29884
0.18000	465.13713
0.24000	499.82237

0.60000	628.49335
1.20000	747.40877
2.40000	888.82382
2.70000	888.82382
3.00000	888.82382

P-Multiplier = 1.000E+00 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
39.50	27.880	1.22E+01	1.22E+01	3.38E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	69.82697
0.00012	104.41568
0.00024	124.17187
0.00120	185.68026
0.00240	220.81228
0.01200	330.19137
0.02400	392.66593
0.06000	493.75127
0.12000	587.17252
0.18000	649.81321
0.24000	698.26974
0.60000	878.02771
1.20000	1044.15680
2.40000	1241.71869
2.70000	1241.71869
3.00000	1241.71869

P-Multiplier = 1.000E+00 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
28.00	27.880	1.22E+01	1.22E+01	3.37E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	50.76615
0.00012	75.91311
0.00024	90.27641
0.00120	134.99472
0.00240	160.53668
0.01200	240.05832
0.02400	285.47907
0.06000	358.97092
0.12000	426.89078
0.18000	472.43231
0.24000	507.66155
0.60000	638.35060
1.20000	759.13108
2.40000	902.76408
2.70000	902.76408
3.00000	902.76408

P-Multiplier = 1.000E+00 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
41.00	27.880	1.22E+01	1.22E+01	3.37E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.70508
0.00012	107.22410
0.00024	127.51166
0.00120	190.67441
0.00240	226.75136
0.01200	339.07237
0.02400	403.22727
0.06000	507.03146
0.12000	602.96542
0.18000	667.29093
0.24000	717.05077
0.60000	901.64360
1.20000	1072.24099
2.40000	1275.11661
2.70000	1275.11661
3.00000	1275.11661

P-Multiplier = 1.000E+00 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
29.50	27.880	1.22E+01	1.22E+01	3.35E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	51.55007
0.00012	77.08534
0.00024	91.67043
0.00120	137.07927
0.00240	163.01565
0.01200	243.76524
0.02400	289.88736
0.06000	364.51406
0.12000	433.48272
0.18000	479.72749
0.24000	515.50073
0.60000	648.20785
1.20000	770.85339
2.40000	916.70433
2.70000	916.70433
3.00000	916.70433

P-Multiplier = 1.000E+00 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
42.50	27.880	1.22E+01	1.22E+01	3.35E-02	5.0000E-03

Y IN	P LBS/IN
---------	-------------

0.00000	0.00000
0.00002	73.58318
0.00012	110.03252
0.00024	130.85145
0.00120	195.66856
0.00240	232.69045
0.01200	347.95337
0.02400	413.78862
0.06000	520.31165
0.12000	618.75832
0.18000	684.76865
0.24000	735.83180
0.60000	925.25949
1.20000	1100.32517
2.40000	1308.51453
2.70000	1308.51453
3.00000	1308.51453

P-Multiplier = 1.000E+00 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
30.99	27.880	1.22E+01	1.22E+01	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	52.32964
0.00012	78.25106
0.00024	93.05671
0.00120	139.15225
0.00240	165.48084
0.01200	247.45157
0.02400	294.27117
0.06000	370.02641
0.12000	440.03804
0.18000	486.98214
0.24000	523.29636
0.60000	658.01034
1.20000	782.51057
2.40000	930.56714
2.70000	930.56714
3.00000	930.56714

P-Multiplier = 1.000E+00 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
43.99	27.880	1.22E+01	1.22E+01	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	75.45085
0.00012	112.82533
0.00024	134.17269
0.00120	200.63497
0.00240	238.59653
0.01200	356.78503
0.02400	424.29130
0.06000	533.51807

0.12000	634.46348
0.18000	702.14927
0.24000	754.50849
0.60000	948.74419
1.20000	1128.25334
2.40000	1341.72690
2.70000	1341.72690
3.00000	1341.72690

P-Multiplier = 1.000E+00 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
31.01	27.880	8.68E+00	8.68E+00	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	42.43889
0.00012	63.46094
0.00024	75.46820
0.00120	112.85129
0.00240	134.20355
0.01200	200.68112
0.02400	238.65141
0.06000	300.08827
0.12000	356.86710
0.18000	394.93837
0.24000	424.38890
0.60000	533.64078
1.20000	634.60942
2.40000	754.68204
2.70000	754.68204
3.00000	754.68204

P-Multiplier = 1.000E+00 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
44.01	27.880	8.68E+00	8.68E+00	3.34E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	64.58416
0.00012	96.57585
0.00024	114.84869
0.00120	171.73885
0.00240	204.23306
0.01200	305.39965
0.02400	363.18343
0.06000	456.67900
0.12000	543.08591
0.18000	601.02336
0.24000	645.84163
0.60000	812.10285
1.20000	965.75849
2.40000	1148.48687
2.70000	1148.48687
3.00000	1148.48687

P-Multiplier = 1.000E+00 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
32.75	27.880	8.68E+00	8.68E+00	3.32E-02	5.0000E-03
	Y IN			P LBS/IN	
	0.00000			0.00000	
	0.00002			43.34911	
	0.00012			64.82203	
	0.00024			77.08682	
	0.00120			115.27169	
	0.00240			137.08191	
	0.01200			204.98526	
	0.02400			243.76993	
	0.06000			306.52447	
	0.12000			364.52108	
	0.18000			403.40889	
	0.24000			433.49106	
	0.60000			545.08615	
	1.20000			648.22032	
	2.40000			770.86822	
	2.70000			770.86822	
	3.00000			770.86822	

P-Multiplier = 1.000E+00 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
45.75	27.880	8.68E+00	8.68E+00	3.32E-02	5.0000E-03
	Y IN			P LBS/IN	
	0.00000			0.00000	
	0.00002			66.76485	
	0.00012			99.83673	
	0.00024			118.72656	
	0.00120			177.53761	
	0.00240			211.12899	
	0.01200			315.71148	
	0.02400			375.44633	
	0.06000			472.09877	
	0.12000			561.42322	
	0.18000			621.31693	
	0.24000			667.64849	
	0.60000			839.52353	
	1.20000			998.36735	
	2.40000			1187.26556	
	2.70000			1187.26556	
	3.00000			1187.26556	

P-Multiplier = 1.000E+00 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
34.50	27.880	8.68E+00	8.68E+00	3.31E-02	5.0000E-03



Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	44.26368
0.00012	66.18963
0.00024	78.71318
0.00120	117.70367
0.00240	139.97404
0.01200	209.31000
0.02400	248.91295
0.06000	312.99146
0.12000	372.21167
0.18000	411.91993
0.24000	442.63677
0.60000	556.58627
1.20000	661.89635
2.40000	787.13185
2.70000	787.13185
3.00000	787.13185

P-Multiplier = 1.000E+00 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	
47.50	27.880	8.68E+00	8.68E+00	3.31E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	68.95597
0.00012	103.11322
0.00024	122.62298
0.00120	183.36412
0.00240	218.05792
0.01200	326.07264
0.02400	387.76791
0.06000	487.59233
0.12000	579.84827
0.18000	641.70760
0.24000	689.55969
0.60000	867.07540
1.20000	1031.13224
2.40000	1226.22979
2.70000	1226.22979
3.00000	1226.22979

P-Multiplier = 1.000E+00 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	
36.25	27.880	8.68E+00	8.68E+00	3.29E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	45.17825
0.00012	67.55724
0.00024	80.33955
0.00120	120.13565
0.00240	142.86617

0.01200	213.63474
0.02400	254.05596
0.06000	319.45846
0.12000	379.90227
0.18000	420.43098
0.24000	451.78248
0.60000	568.08639
1.20000	675.57238
2.40000	803.39548
2.70000	803.39548
3.00000	803.39548

P-Multiplier = 1.000E+00 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
49.25	27.880	8.68E+00	8.68E+00	3.29E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.14709
0.00012	106.38971
0.00024	126.51940
0.00120	189.19064
0.00240	224.98685
0.01200	336.43381
0.02400	400.08948
0.06000	503.08589
0.12000	598.27332
0.18000	662.09827
0.24000	711.47089
0.60000	894.62728
1.20000	1063.89712
2.40000	1265.19403
2.70000	1265.19403
3.00000	1265.19403

P-Multiplier = 1.000E+00 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
37.99	27.880	8.68E+00	8.68E+00	3.28E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	46.08846
0.00012	68.91833
0.00024	81.95817
0.00120	122.55605
0.00240	145.74452
0.01200	217.93889
0.02400	259.17448
0.06000	325.89466
0.12000	387.55624
0.18000	428.90149
0.24000	460.88464
0.60000	579.53176
1.20000	689.18329
2.40000	819.58167

2.70000 819.58167  
 3.00000 819.58167

P-Multiplier = 1.000E+00 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
50.99	27.880	8.68E+00	8.68E+00	3.28E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	73.32777
0.00012	109.65060
0.00024	130.39727
0.00120	194.98940
0.00240	231.88279
0.01200	346.74564
0.02400	412.35238
0.06000	518.50567
0.12000	616.61063
0.18000	682.39184
0.24000	733.27775
0.60000	922.04795
1.20000	1096.50599
2.40000	1303.97272
2.70000	1303.97272
3.00000	1303.97272

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

Wall 1 13 foot cut ATB-531 Strength Case

RESULTS

NUMBER OF ITERATIONS : 11

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	9.349E+00	-3.083E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	9.164E+00	-3.083E-02	0.000E+00	2.110E+01	0.000E+00	4.221E+01	2.883E+10
2	1.000E+00	8.979E+00	-3.083E-02	2.533E+02	9.005E+01	0.000E+00	9.568E+01	2.883E+10
3	1.500E+00	8.794E+00	-3.083E-02	1.081E+03	2.122E+02	0.000E+00	1.487E+02	2.883E+10
4	2.000E+00	8.610E+00	-3.083E-02	2.800E+03	3.871E+02	0.000E+00	2.010E+02	2.883E+10
5	2.500E+00	8.425E+00	-3.083E-02	5.725E+03	6.136E+02	0.000E+00	2.522E+02	2.883E+10
6	3.000E+00	8.240E+00	-3.082E-02	1.016E+04	8.909E+02	0.000E+00	3.022E+02	2.883E+10
7	3.500E+00	8.055E+00	-3.082E-02	1.642E+04	1.235E+03	0.000E+00	3.851E+02	2.883E+10
8	4.000E+00	7.870E+00	-3.082E-02	2.498E+04	1.644E+03	0.000E+00	4.334E+02	2.883E+10
9	4.500E+00	7.685E+00	-3.081E-02	3.614E+04	2.101E+03	0.000E+00	4.802E+02	2.883E+10
10	5.000E+00	7.500E+00	-3.080E-02	5.019E+04	2.603E+03	0.000E+00	5.253E+02	2.883E+10
11	5.500E+00	7.315E+00	-3.079E-02	6.738E+04	3.150E+03	0.000E+00	5.688E+02	2.883E+10
12	6.000E+00	7.131E+00	-3.077E-02	8.799E+04	3.740E+03	0.000E+00	6.108E+02	2.883E+10
13	6.500E+00	6.946E+00	-3.075E-02	1.123E+05	4.389E+03	0.000E+00	6.875E+02	2.883E+10
14	7.000E+00	6.762E+00	-3.073E-02	1.407E+05	5.114E+03	0.000E+00	7.627E+02	2.883E+10
15	7.500E+00	6.577E+00	-3.069E-02	1.736E+05	5.914E+03	0.000E+00	8.366E+02	2.883E+10
16	8.000E+00	6.393E+00	-3.065E-02	2.116E+05	6.787E+03	0.000E+00	9.093E+02	2.883E+10
17	8.500E+00	6.209E+00	-3.060E-02	2.551E+05	7.732E+03	0.000E+00	9.808E+02	2.883E+10
18	9.000E+00	6.026E+00	-3.055E-02	3.044E+05	8.748E+03	0.000E+00	1.051E+03	2.883E+10
19	9.500E+00	5.843E+00	-3.048E-02	3.601E+05	9.834E+03	0.000E+00	1.121E+03	2.883E+10
20	1.000E+01	5.660E+00	-3.040E-02	4.224E+05	1.099E+04	0.000E+00	1.190E+03	2.883E+10
21	1.050E+01	5.478E+00	-3.030E-02	4.919E+05	1.217E+04	0.000E+00	1.181E+03	2.883E+10
22	1.100E+01	5.297E+00	-3.019E-02	5.685E+05	1.339E+04	0.000E+00	1.250E+03	2.883E+10
23	1.150E+01	5.116E+00	-3.006E-02	6.526E+05	1.467E+04	0.000E+00	1.318E+03	2.883E+10

24	1.200E+01	4.936E+00	-2.992E-02	7.446E+05	1.603E+04	0.000E+00	1.386E+03	2.883E+10
25	1.250E+01	4.757E+00	-2.975E-02	8.449E+05	1.745E+04	0.000E+00	1.454E+03	2.883E+10
26	1.300E+01	4.579E+00	-2.957E-02	9.540E+05	1.893E+04	-7.205E-01	1.517E+03	2.883E+10
27	1.350E+01	4.402E+00	-2.935E-02	1.072E+06	2.036E+04	-2.824E+01	1.349E+03	2.883E+10
28	1.400E+01	4.227E+00	-2.912E-02	1.198E+06	2.163E+04	-5.503E+01	1.185E+03	2.883E+10
29	1.450E+01	4.053E+00	-2.885E-02	1.332E+06	2.273E+04	-8.183E+01	1.021E+03	2.883E+10
30	1.500E+01	3.880E+00	-2.856E-02	1.471E+06	2.367E+04	-1.086E+02	8.566E+02	2.883E+10
31	1.550E+01	3.710E+00	-2.824E-02	1.616E+06	2.445E+04	-1.354E+02	6.923E+02	2.883E+10
32	1.600E+01	3.541E+00	-2.789E-02	1.764E+06	2.506E+04	-1.622E+02	5.278E+02	2.883E+10
33	1.650E+01	3.375E+00	-2.751E-02	1.916E+06	2.550E+04	-1.890E+02	3.632E+02	2.883E+10
34	1.700E+01	3.211E+00	-2.709E-02	2.071E+06	2.578E+04	-2.158E+02	1.985E+02	2.883E+10
35	1.750E+01	3.050E+00	-2.665E-02	2.226E+06	2.590E+04	-2.427E+02	3.314E+01	2.883E+10
36	1.800E+01	2.892E+00	-2.617E-02	2.381E+06	2.585E+04	-2.696E+02	-1.322E+02	2.883E+10
37	1.850E+01	2.736E+00	-2.565E-02	2.536E+06	2.563E+04	-2.965E+02	-2.977E+02	2.883E+10
38	1.900E+01	2.584E+00	-2.511E-02	2.689E+06	2.525E+04	-3.234E+02	-4.630E+02	2.883E+10
39	1.950E+01	2.435E+00	-2.454E-02	2.839E+06	2.471E+04	-3.503E+02	-6.285E+02	2.883E+10
40	2.000E+01	2.289E+00	-2.393E-02	2.985E+06	2.400E+04	-3.772E+02	-7.938E+02	2.883E+10
41	2.050E+01	2.148E+00	-2.329E-02	3.127E+06	2.312E+04	-4.041E+02	-9.592E+02	2.883E+10
42	2.100E+01	2.010E+00	-2.263E-02	3.263E+06	2.208E+04	-4.294E+02	-1.115E+03	2.883E+10
43	2.150E+01	1.876E+00	-2.194E-02	3.392E+06	2.089E+04	-4.546E+02	-1.270E+03	2.883E+10
44	2.200E+01	1.747E+00	-2.122E-02	3.514E+06	1.954E+04	-4.799E+02	-1.426E+03	2.883E+10
45	2.250E+01	1.621E+00	-2.048E-02	3.627E+06	1.804E+04	-5.052E+02	-1.581E+03	2.883E+10
46	2.300E+01	1.501E+00	-1.971E-02	3.730E+06	1.638E+04	-5.304E+02	-1.736E+03	2.883E+10
47	2.350E+01	1.385E+00	-1.892E-02	3.823E+06	1.457E+04	-5.557E+02	-1.891E+03	2.883E+10
48	2.400E+01	1.274E+00	-1.812E-02	3.905E+06	1.260E+04	-5.809E+02	-2.047E+03	2.883E+10
49	2.450E+01	1.167E+00	-1.730E-02	3.974E+06	1.047E+04	-6.062E+02	-2.202E+03	2.883E+10
50	2.500E+01	1.066E+00	-1.647E-02	4.031E+06	8.184E+03	-6.350E+02	-2.378E+03	2.883E+10
51	2.550E+01	9.698E-01	-1.562E-02	4.072E+06	5.718E+03	-6.638E+02	-2.554E+03	2.883E+10
52	2.600E+01	8.786E-01	-1.477E-02	4.099E+06	3.076E+03	-6.926E+02	-2.730E+03	2.883E+10
53	2.650E+01	7.925E-01	-1.392E-02	4.109E+06	2.575E+02	-7.214E+02	-2.906E+03	2.883E+10
54	2.700E+01	7.116E-01	-1.307E-02	4.102E+06	-2.737E+03	-7.502E+02	-3.082E+03	2.883E+10
55	2.750E+01	6.358E-01	-1.222E-02	4.077E+06	-5.907E+03	-7.790E+02	-3.258E+03	2.883E+10
56	2.800E+01	5.650E-01	-1.137E-02	4.031E+06	-9.253E+03	-8.078E+02	-3.434E+03	2.883E+10
57	2.850E+01	4.993E-01	-1.054E-02	3.966E+06	-1.282E+04	-6.375E+02	-3.708E+03	2.883E+10
58	2.900E+01	4.385E-01	-9.724E-03	3.877E+06	-1.597E+04	-4.501E+02	-2.587E+03	2.883E+10
59	2.950E+01	3.826E-01	-8.928E-03	3.774E+06	-1.853E+04	-4.387E+02	-2.521E+03	2.883E+10
60	3.000E+01	3.314E-01	-8.155E-03	3.655E+06	-2.101E+04	-4.262E+02	-2.449E+03	2.883E+10
61	3.050E+01	2.848E-01	-7.408E-03	3.522E+06	-2.343E+04	-4.149E+02	-2.384E+03	2.883E+10
62	3.100E+01	2.425E-01	-6.691E-03	3.374E+06	-2.579E+04	-4.066E+02	-2.337E+03	2.883E+10
63	3.150E+01	2.045E-01	-6.005E-03	3.212E+06	-2.750E+04	-4.200E+02	-1.080E+03	2.883E+10
64	3.200E+01	1.704E-01	-5.354E-03	3.044E+06	-2.856E+04	-4.153E+02	-1.055E+03	2.883E+10
65	3.250E+01	1.402E-01	-4.739E-03	2.869E+06	-2.956E+04	-3.940E+02	-9.290E+02	2.883E+10
66	3.300E+01	1.136E-01	-4.161E-03	2.689E+06	-3.038E+04	-3.581E+02	-7.163E+02	2.883E+10
67	3.350E+01	9.028E-02	-3.620E-03	2.505E+06	-3.098E+04	-3.195E+02	-4.868E+02	2.883E+10
68	3.400E+01	7.012E-02	-3.119E-03	2.318E+06	-3.135E+04	-2.807E+02	-2.564E+02	2.883E+10
69	3.450E+01	5.286E-02	-2.656E-03	2.129E+06	-3.149E+04	-2.417E+02	-2.426E+01	2.883E+10
70	3.500E+01	3.825E-02	-2.233E-03	1.940E+06	-3.140E+04	-2.014E+02	2.155E+02	2.883E+10
71	3.550E+01	2.607E-02	-1.849E-03	1.752E+06	-3.107E+04	-1.630E+02	4.435E+02	2.883E+10
72	3.600E+01	1.607E-02	-1.503E-03	1.567E+06	-3.049E+04	-1.174E+02	7.152E+02	2.883E+10
73	3.650E+01	8.025E-03	-1.196E-03	1.386E+06	-2.965E+04	-7.790E+01	9.503E+02	2.883E+10
74	3.700E+01	1.713E-03	-9.259E-04	1.211E+06	-2.854E+04	-2.174E+01	1.285E+03	2.883E+10
75	3.750E+01	-3.087E-03	-6.914E-04	1.044E+06	-2.698E+04	6.936E+01	1.830E+03	2.883E+10
76	3.800E+01	-6.583E-03	-4.904E-04	8.873E+05	-2.491E+04	1.507E+02	2.316E+03	2.883E+10
77	3.850E+01	-8.972E-03	-3.206E-04	7.448E+05	-2.301E+04	2.354E+02	1.484E+03	2.883E+10
78	3.900E+01	-1.043E-02	-1.796E-04	6.112E+05	-2.137E+04	2.878E+02	1.796E+03	2.883E+10
79	3.950E+01	-1.113E-02	-6.515E-05	4.884E+05	-1.947E+04	3.202E+02	1.989E+03	2.883E+10
80	4.000E+01	-1.121E-02	2.495E-05	3.775E+05	-1.747E+04	3.241E+02	2.011E+03	2.883E+10
81	4.050E+01	-1.083E-02	9.323E-05	2.787E+05	-1.547E+04	3.225E+02	2.000E+03	2.883E+10
82	4.100E+01	-1.009E-02	1.422E-04	1.919E+05	-1.349E+04	3.168E+02	1.964E+03	2.883E+10
83	4.150E+01	-9.121E-03	1.743E-04	1.169E+05	-1.155E+04	3.081E+02	1.910E+03	2.883E+10
84	4.200E+01	-8.002E-03	1.920E-04	5.331E+04	-9.673E+03	2.974E+02	1.845E+03	2.883E+10
85	4.250E+01	-6.817E-03	1.977E-04	8.032E+02	-7.864E+03	2.857E+02	1.773E+03	2.883E+10
86	4.300E+01	-5.630E-03	1.935E-04	-4.106E+04	-6.128E+03	2.738E+02	1.700E+03	2.883E+10
87	4.350E+01	-4.495E-03	1.816E-04	-7.273E+04	-4.463E+03	2.622E+02	1.629E+03	2.883E+10
88	4.400E+01	-3.451E-03	1.642E-04	-9.462E+04	-2.867E+03	2.515E+02	1.564E+03	2.883E+10
89	4.450E+01	-2.524E-03	1.432E-04	-1.071E+05	-1.359E+03	2.332E+02	1.453E+03	2.883E+10
90	4.500E+01	-1.732E-03	1.205E-04	-1.109E+05	8.457E+00	2.049E+02	1.282E+03	2.883E+10
91	4.550E+01	-1.078E-03	9.786E-05	-1.070E+05	1.201E+03	1.756E+02	1.104E+03	2.883E+10
92	4.600E+01	-5.575E-04	7.669E-05	-9.651E+04	2.193E+03	1.381E+02	8.787E+02	2.883E+10

93	4.650E+01	-1.576E-04	5.825E-05	-8.072E+04	2.977E+03	1.069E+02	6.901E+02	2.883E+10
94	4.700E+01	1.415E-04	4.352E-05	-6.078E+04	3.142E+03	-6.796E+01	-3.602E+02	2.883E+10
95	4.750E+01	3.647E-04	3.273E-05	-4.301E+04	2.734E+03	-8.377E+01	-4.561E+02	2.883E+10
96	4.800E+01	5.342E-04	2.534E-05	-2.798E+04	2.255E+03	-9.112E+01	-5.013E+02	2.883E+10
97	4.850E+01	6.687E-04	2.077E-05	-1.595E+04	1.736E+03	-9.711E+01	-5.382E+02	2.883E+10
98	4.900E+01	7.834E-04	1.837E-05	-7.148E+03	1.181E+03	-1.023E+02	-5.705E+02	2.883E+10
99	4.950E+01	8.891E-04	1.744E-05	-1.771E+03	5.957E+02	-1.072E+02	-6.008E+02	2.883E+10
100	5.000E+01	9.927E-04	1.725E-05	0.000E+00	1.476E+02	-5.614E+01	-2.952E+02	2.883E+10

END OF ANALYSIS

Wall 2

Long Term Stability and Load

=====  
PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====  
This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 2\  
Name of input data file : Wall 2 13 foot Ser Case W05.py7d  
Name of output file : Wall 2 13 foot Ser Case W05.py7o  
Name of plot output file : Wall 2 13 foot Ser Case W05.py7p

-----  
Time and Date of Analysis  
-----

Date: March 13, 2023 Time: 15:36:25

Wall 2 13 foot ATB-531-Service Load

\*\*\*\*\*  
\* 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 = 35.000 FT  
NUMBER OF INCREMENTS = 70  
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	35.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
70	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.100E+01



\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI	TOTAL WEIGHT	UNIT	DRAINED	ZTOP
	FT	PSI	DEG	PCI	T OR F	FT	
1	6.0	0.0	34.0	0.071	T	0.00	
2	4.0	0.0	34.0	0.071	T	6.00	
3	3.0	0.0	31.0	0.067	T	10.00	
4	1.0	0.0	31.0	0.067	T	13.00	
5	6.0	5.6	0.0	0.067	F	14.00	
6	8.0	6.9	0.0	0.067	F	20.00	
7	6.0	10.4	0.0	0.069	F	28.00	
8	5.0	20.8	0.0	0.072	F	34.00	

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH	STRESS
FT	LBS/IN**2
0.000E+00	0.000E+00
6.000E+00	5.083E+00
1.000E+01	6.744E+00
1.300E+01	7.844E+00
1.400E+01	8.211E+00
2.000E+01	1.041E+01
2.800E+01	1.334E+01
3.400E+01	1.575E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	2.827E-01	3.537E+00	0.000E+00
3	3.201E-01	3.124E+00	0.000E+00
4	3.201E-01	3.124E+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	Z1	PA2	Z2	PA3	Z3	PA4
	LBS/IN	FT	LBS/IN	FT	LBS/IN	FT	LBS/IN
1	31.67	3.00	51.74	4.00	0.00	-0.00	0.00
2	84.29	8.00	11.27	8.67	0.00	-0.00	0.00
3	86.61	11.50	6.34	12.00	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

\*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT
2	0.00	8.00	41.47	8.67
3	62.21	11.50	23.33	12.00

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	0.00000E+00
5.00000E-01	4.86311E+00
1.00000E+00	1.04662E+01
1.50000E+00	1.60126E+01
2.00000E+00	2.14718E+01
2.50000E+00	2.68172E+01
3.00000E+00	3.20285E+01
3.50000E+00	3.65312E+01
4.00000E+00	4.14827E+01
4.50000E+00	4.62669E+01
5.00000E+00	5.08838E+01
5.50000E+00	5.53306E+01
6.00000E+00	5.96214E+01
6.50000E+00	6.80746E+01
7.00000E+00	7.61821E+01
7.50000E+00	8.44011E+01
8.00000E+00	9.24947E+01
8.50000E+00	1.00474E+02
9.00000E+00	1.08350E+02
9.50000E+00	1.16137E+02
1.00000E+01	1.23837E+02
1.05000E+01	1.38513E+02
1.10000E+01	1.46100E+02
1.15000E+01	1.53630E+02
1.20000E+01	1.61107E+02
1.25000E+01	1.68546E+02
1.30000E+01	1.75945E+02
1.35000E+01	1.75655E+02
1.40000E+01	1.75446E+02
1.45000E+01	2.08038E+01
1.50000E+01	2.04544E+01
1.55000E+01	2.00895E+01
1.60000E+01	1.97126E+01
1.65000E+01	1.93261E+01
1.70000E+01	1.89330E+01
1.75000E+01	1.86682E+01
1.80000E+01	1.82681E+01
1.85000E+01	1.78666E+01
1.90000E+01	1.74646E+01
1.95000E+01	1.70640E+01
2.00000E+01	1.66655E+01
2.05000E+01	1.62702E+01
2.10000E+01	1.60090E+01
2.15000E+01	1.56209E+01
2.20000E+01	1.52378E+01
2.25000E+01	1.48606E+01
2.30000E+01	1.44895E+01
2.35000E+01	1.41251E+01
2.40000E+01	1.37671E+01
2.45000E+01	1.35327E+01
2.50000E+01	1.31867E+01
2.55000E+01	1.28482E+01
2.60000E+01	1.25173E+01
2.65000E+01	1.21936E+01
2.70000E+01	1.18777E+01

2.75000E+01	1.15691E+01
2.80000E+01	1.13678E+01
2.85000E+01	1.10717E+01
2.90000E+01	1.07834E+01
2.95000E+01	1.05024E+01
3.00000E+01	1.02286E+01
3.05000E+01	9.96208E+00
3.10000E+01	9.70280E+00
3.15000E+01	9.53357E+00
3.20000E+01	9.28571E+00
3.25000E+01	9.04455E+00
3.30000E+01	8.81036E+00
3.35000E+01	8.58230E+00
3.40000E+01	8.36065E+00
3.45000E+01	8.14542E+00
3.50000E+01	8.00518E+00

\*\*\*\*\*  
 \* SOIL LAYERS AND STRENGTH DATA \*  
 \*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

5 LAYER(S) OF SOIL

LAYER 1  
 THE SOIL IS A SAND

LAYER 2  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 3  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH  
 10 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.0551E-02
14.0000	3.0551E-02
14.0000	3.0551E-02
20.0000	3.0551E-02
20.0000	3.0551E-02
28.0000	3.0551E-02
28.0000	3.3444E-02
34.0000	3.3444E-02
34.0000	3.6338E-02
39.0000	3.6338E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
 10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
14.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
14.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
20.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
20.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
28.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00

28.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
34.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
34.00	2.0833E+01	0.000	5.0000E-03	0.0000E+00
36.00	2.0833E+01	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	31.00	3.06E-02	6.00E+01	2.82	2.13	3.49E-01
		Y IN		P LBS/IN			
		0.000		0.000			
		0.010		0.060			
		0.020		0.120			
		0.038		0.228			
		0.056		0.336			
		0.074		0.444			
		0.092		0.552			
		0.110		0.638			
		0.128		0.664			
		0.146		0.687			
		0.164		0.708			
		0.182		0.727			
		0.200		0.745			
		0.283		0.825			
		0.367		0.905			
		0.450		0.985			
		0.540		0.985			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.01	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.17E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.005		48.263			
		0.010		96.526			
		0.029		182.104			
		0.048		246.731			
		0.067		301.844			
		0.086		351.094			
		0.105		396.235			
		0.124		438.275			
		0.143		477.859			
		0.162		515.431			
		0.181		551.314			
		0.200		585.749			
		0.283		734.139			
		0.367		882.529			
		0.450		1030.919			
		0.540		1030.919			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.25	27.88	31.00	3.06E-02	6.00E+01	2.65	1.99	1.05E+01
		Y IN		P LBS/IN			
		0.000		0.000			
		0.010		1.800			
		0.020		3.600			
		0.038		6.840			
		0.056		10.080			
		0.074		13.320			
		0.092		16.560			
		0.110		17.682			
		0.128		18.421			
		0.146		19.087			
		0.164		19.695			
		0.182		20.257			
		0.200		20.780			
		0.283		23.118			
		0.367		25.456			
		0.450		27.793			
		0.540		27.793			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.25	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.18E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.005		48.267			
		0.010		96.535			
		0.029		183.515			
		0.048		249.046			
		0.067		304.890			
		0.086		354.777			
		0.105		400.492			
		0.124		443.061			
		0.143		483.139			
		0.162		521.177			
		0.181		557.503			
		0.200		592.363			
		0.283		742.428			
		0.367		892.493			
		0.450		1042.559			
		0.540		1042.559			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.50	27.88	31.00	3.06E-02	6.00E+01	2.48	1.83	2.09E+01
		Y		P			

IN	LBS/IN
0.000	0.000
0.010	3.600
0.020	7.200
0.038	13.680
0.056	20.160
0.074	26.640
0.092	30.728
0.110	32.328
0.128	33.751
0.146	35.037
0.164	36.213
0.182	37.301
0.200	38.314
0.283	42.850
0.367	47.387
0.450	51.923
0.540	51.923

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.50	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.20E+03

Y IN	P LBS/IN
0.000	0.000
0.005	48.282
0.010	96.564
0.029	184.991
0.048	251.452
0.067	308.050
0.086	358.594
0.105	404.902
0.124	448.016
0.143	488.604
0.162	527.124
0.181	563.907
0.200	599.204
0.283	751.003
0.367	902.801
0.450	1054.599
0.540	1054.599

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.75	27.88	31.00	3.06E-02	6.00E+01	2.29	1.69	3.14E+01

Y IN	P LBS/IN
0.000	0.000
0.010	5.400
0.020	10.800
0.038	20.520
0.056	30.240
0.074	39.677
0.092	42.260
0.110	44.505

0.128	46.501
0.146	48.308
0.164	49.962
0.182	51.492
0.200	52.917
0.283	59.303
0.367	65.689
0.450	72.074
0.540	72.074

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.75	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.21E+03

Y IN	P LBS/IN
0.000	0.000
0.005	48.306
0.010	96.612
0.029	186.480
0.048	253.869
0.067	311.219
0.086	362.418
0.105	409.316
0.124	452.975
0.143	494.072
0.162	533.072
0.181	570.312
0.200	606.046
0.283	759.577
0.367	913.109
0.450	1066.640
0.540	1066.640

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.99	27.88	31.00	3.06E-02	6.00E+01	2.12	1.54	4.15E+01

Y IN	P LBS/IN
0.000	0.000
0.010	7.140
0.020	14.280
0.038	27.132
0.056	39.984
0.074	47.800
0.092	50.981
0.110	53.749
0.128	56.213
0.146	58.445
0.164	60.490
0.182	62.383
0.200	64.148
0.283	72.056
0.367	79.964
0.450	87.873
0.540	87.873

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.99	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.23E+03

Y IN	P LBS/IN
0.000	0.000
0.005	48.338
0.010	96.677
0.029	187.934
0.048	256.216
0.067	314.290
0.086	366.120
0.105	413.588
0.124	457.772
0.143	499.360
0.162	538.823
0.181	576.504
0.200	612.659
0.283	767.866
0.367	923.073
0.450	1078.280
0.540	1078.280

P-Multiplier = 1.000E+00 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
1.01	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	16.36610
0.00017	24.47302
0.00034	29.10349
0.00168	43.51987
0.00336	51.75414
0.01680	77.39049
0.03360	92.03333
0.08400	115.72578
0.16800	137.62192
0.25200	152.30370
0.33600	163.66097
0.84000	205.79278
1.68000	244.73023
3.36000	291.03494
3.78000	291.03494
4.20000	291.03494

P-Multiplier = 1.000E+00 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
----------------------	------------	----------------	-------------------	------------------------	-----



14.01            27.880 5.56E+00 5.56E+00 3.06E-02 7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	30.30326
0.00017	45.31395
0.00034	53.88767
0.00168	80.58086
0.00336	95.82734
0.01680	143.29529
0.03360	170.40778
0.08400	214.27644
0.16800	254.81907
0.25200	282.00366
0.33600	303.03265
0.84000	381.04338
1.68000	453.13950
3.36000	538.87672
3.78000	538.87672
4.20000	538.87672

P-Multiplier = 1.000E+00 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	
2.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	17.14566
0.00017	25.63874
0.00034	30.48977
0.00168	45.59285
0.00336	54.21934
0.01680	81.07682
0.03360	96.41713
0.08400	121.23813
0.16800	144.17724
0.25200	159.55835
0.33600	171.45660
0.84000	215.59526
1.68000	256.38742
3.36000	304.89775
3.78000	304.89775
4.20000	304.89775

P-Multiplier = 1.000E+00 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	
15.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	32.17093
0.00017	48.10677
0.00034	57.20891
0.00168	85.54727

0.00336	101.73343
0.01680	152.12695
0.03360	180.91045
0.08400	227.48285
0.16800	270.52423
0.25200	299.38427
0.33600	321.70934
0.84000	404.52807
1.68000	481.06766
3.36000	572.08909
3.78000	572.08909
4.20000	572.08909

P-Multiplier = 1.000E+00 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	
4.00	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	17.92958
0.00017	26.81097
0.00034	31.88380
0.00168	47.67740
0.00336	56.69831
0.01680	84.78374
0.03360	100.82543
0.08400	126.78127
0.16800	150.76918
0.25200	166.85353
0.33600	179.29578
0.84000	225.45251
1.68000	268.10973
3.36000	318.83800
3.78000	318.83800
4.20000	318.83800

P-Multiplier = 1.000E+00 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	
17.00	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	34.04904
0.00017	50.91518
0.00034	60.54870
0.00168	90.54143
0.00336	107.67251
0.01680	161.00795
0.03360	191.47180
0.08400	240.76305
0.16800	286.31713
0.25200	316.86199
0.33600	340.49037
0.84000	428.14397
1.68000	509.15185

3.36000	605.48701
3.78000	605.48701
4.20000	605.48701

P-Multiplier = 1.000E+00 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
5.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	18.71350
0.00017	27.98320
0.00034	33.27783
0.00168	49.76196
0.00336	59.17727
0.01680	88.49066
0.03360	105.23372
0.08400	132.32440
0.16800	157.36112
0.25200	174.14871
0.33600	187.13497
0.84000	235.30976
1.68000	279.83204
3.36000	332.77826
3.78000	332.77826
4.20000	332.77826

P-Multiplier = 1.000E+00 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
18.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	35.92714
0.00017	53.72360
0.00034	63.88849
0.00168	95.53558
0.00336	113.61159
0.01680	169.88895
0.03360	202.03315
0.08400	254.04324
0.16800	302.11003
0.25200	334.33971
0.33600	359.27139
0.84000	451.75986
1.68000	537.23604
3.36000	638.88492
3.78000	638.88492
4.20000	638.88492

P-Multiplier = 1.000E+00 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	
6.99	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	19.49306
0.00017	29.14892
0.00034	34.66411
0.00168	51.83493
0.00336	61.64247
0.01680	92.17699
0.03360	109.61753
0.08400	137.83675
0.16800	163.91644
0.25200	181.40336
0.33600	194.93060
0.84000	245.11225
1.68000	291.48923
3.36000	346.64107
3.78000	346.64107
4.20000	346.64107

P-Multiplier = 1.000E+00 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	
19.99	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	37.79481
0.00017	56.51642
0.00034	67.20973
0.00168	100.50199
0.00336	119.51768
0.01680	178.72061
0.03360	212.53582
0.08400	267.24965
0.16800	317.81519
0.25200	351.72033
0.33600	377.94808
0.84000	475.24455
1.68000	565.16421
3.36000	672.09729
3.78000	672.09729
4.20000	672.09729

P-Multiplier = 1.000E+00 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	
7.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	23.46155

0.00012	35.08320
0.00024	41.72119
0.00120	62.38774
0.00240	74.19194
0.01200	110.94283
0.02400	131.93400
0.06000	165.89823
0.12000	197.28735
0.18000	218.33435
0.24000	234.61552
0.60000	295.01340
1.20000	350.83203
2.40000	417.21195
2.70000	417.21195
3.00000	417.21195

P-Multiplier = 1.000E+00 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
20.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	42.17070
0.00012	63.05990
0.00024	74.99128
0.00120	112.13812
0.00240	133.35545
0.01200	199.41291
0.02400	237.14326
0.06000	298.19186
0.12000	354.61188
0.18000	392.44256
0.24000	421.70697
0.60000	530.26844
1.20000	630.59900
2.40000	749.91282
2.70000	749.91282
3.00000	749.91282

P-Multiplier = 1.000E+00 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
9.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	24.50242
0.00012	36.63967
0.00024	43.57215
0.00120	65.15556
0.00240	77.48346
0.01200	115.86480
0.02400	137.78724
0.06000	173.25828
0.12000	206.03998
0.18000	228.02072

0.24000	245.02421
0.60000	308.10164
1.20000	366.39666
2.40000	435.72151
2.70000	435.72151
3.00000	435.72151

P-Multiplier = 1.000E+00 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
22.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	44.66440
0.00012	66.78886
0.00024	79.42578
0.00120	118.76925
0.00240	141.24124
0.01200	211.20491
0.02400	251.16638
0.06000	315.82500
0.12000	375.58134
0.18000	415.64908
0.24000	446.64400
0.60000	561.62510
1.20000	667.88857
2.40000	794.25783
2.70000	794.25783
3.00000	794.25783

P-Multiplier = 1.000E+00 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
11.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	25.54765
0.00012	38.20264
0.00024	45.43085
0.00120	67.93497
0.00240	80.78875
0.01200	120.80736
0.02400	143.66497
0.06000	180.64913
0.12000	214.82924
0.18000	237.74763
0.24000	255.47646
0.60000	321.24463
1.20000	382.02640
2.40000	454.30852
2.70000	454.30852
3.00000	454.30852

P-Multiplier = 1.000E+00 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
24.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	47.16854
0.00012	70.53341
0.00024	83.87884
0.00120	125.42812
0.00240	149.16001
0.01200	223.04624
0.02400	265.24818
0.06000	333.53193
0.12000	396.63854
0.18000	438.95271
0.24000	471.68538
0.60000	593.11296
1.20000	705.33415
2.40000	838.78839
2.70000	838.78839
3.00000	838.78839

P-Multiplier = 1.000E+00 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
13.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	26.59287
0.00012	39.76561
0.00024	47.28955
0.00120	70.71438
0.00240	84.09404
0.01200	125.74992
0.02400	149.54269
0.06000	188.03999
0.12000	223.61849
0.18000	247.47454
0.24000	265.92870
0.60000	334.38763
1.20000	397.65615
2.40000	472.89553
2.70000	472.89553
3.00000	472.89553

P-Multiplier = 1.000E+00 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
26.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y	P
---	---

IN	LBS/IN
0.00000	0.00000
0.00002	49.67267
0.00012	74.27797
0.00024	88.33189
0.00120	132.08699
0.00240	157.07879
0.01200	234.88757
0.02400	279.32998
0.06000	351.23885
0.12000	417.69574
0.18000	462.25633
0.24000	496.72675
0.60000	624.60082
1.20000	742.77973
2.40000	883.31894
2.70000	883.31894
3.00000	883.31894

P-Multiplier = 1.000E+00 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
14.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	27.63374
0.00012	41.32208
0.00024	49.14051
0.00120	73.48220
0.00240	87.38556
0.01200	130.67188
0.02400	155.39593
0.06000	195.40004
0.12000	232.37112
0.18000	257.16092
0.24000	276.33739
0.60000	347.47587
1.20000	413.22078
2.40000	491.40509
2.70000	491.40509
3.00000	491.40509

P-Multiplier = 1.000E+00 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
27.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	52.16638
0.00012	78.00693
0.00024	92.76640
0.00120	138.71812
0.00240	164.96457
0.01200	246.67957
0.02400	293.35310



0.06000	368.87200
0.12000	438.66520
0.18000	485.46285
0.24000	521.66378
0.60000	655.95747
1.20000	780.06930
2.40000	927.66396
2.70000	927.66396
3.00000	927.66396

P-Multiplier = 1.000E+00 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
15.01	27.880	1.04E+01	1.04E+01	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	37.54232
0.00012	56.13886
0.00024	66.76073
0.00120	99.83058
0.00240	118.71924
0.01200	177.52666
0.02400	211.11597
0.06000	265.46428
0.12000	315.69201
0.18000	349.37065
0.24000	375.42319
0.60000	472.06967
1.20000	561.38860
2.40000	667.60732
2.70000	667.60732
3.00000	667.60732

P-Multiplier = 1.000E+00 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
28.01	27.880	1.04E+01	1.04E+01	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	63.07525
0.00012	94.31950
0.00024	112.16542
0.00120	167.72643
0.00240	199.46147
0.01200	298.26446
0.02400	354.69821
0.06000	446.00940
0.12000	530.39755
0.18000	586.98138
0.24000	630.75254
0.60000	793.12932
1.20000	943.19503
2.40000	1121.65424
2.70000	1121.65424
3.00000	1121.65424

P-Multiplier = 1.000E+00 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
16.50	27.880	1.04E+01	1.04E+01	3.08E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		38.39571		
	0.00012		57.41499		
	0.00024		68.27831		
	0.00120		102.09989		
	0.00240		121.41791		
	0.01200		181.56213		
	0.02400		215.91497		
	0.06000		271.49871		
	0.12000		322.86819		
	0.18000		357.31239		
	0.24000		383.95715		
	0.60000		482.80056		
	1.20000		574.14986		
	2.40000		682.78310		
	2.70000		682.78310		
	3.00000		682.78310		

P-Multiplier = 1.000E+00 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
29.50	27.880	1.04E+01	1.04E+01	3.08E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		65.02412		
	0.00012		97.23375		
	0.00024		115.63106		
	0.00120		172.90877		
	0.00240		205.62434		
	0.01200		307.48010		
	0.02400		365.65753		
	0.06000		459.79000		
	0.12000		546.78554		
	0.18000		605.11768		
	0.24000		650.24126		
	0.60000		817.63509		
	1.20000		972.33747		
	2.40000		1156.31063		
	2.70000		1156.31063		
	3.00000		1156.31063		

P-Multiplier = 1.000E+00 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
----------------------	------------	----------------	-------------------	------------------------	-----

18.00 27.880 1.04E+01 1.04E+01 3.10E-02 5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	39.25388
0.00012	58.69824
0.00024	69.80436
0.00120	104.38187
0.00240	124.13167
0.01200	185.62013
0.02400	220.74078
0.06000	277.56684
0.12000	330.08446
0.18000	365.29851
0.24000	392.53879
0.60000	493.59140
1.20000	586.98241
2.40000	698.04365
2.70000	698.04365
3.00000	698.04365

P-Multiplier = 1.000E+00 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	
31.00	27.880	1.04E+01	1.04E+01	3.10E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	66.98388
0.00012	100.16427
0.00024	119.11606
0.00120	178.12006
0.00240	211.82165
0.01200	316.74723
0.02400	376.67806
0.06000	473.64759
0.12000	563.26509
0.18000	623.35529
0.24000	669.83885
0.60000	842.27776
1.20000	1001.64271
2.40000	1191.16063
2.70000	1191.16063
3.00000	1191.16063

P-Multiplier = 1.000E+00 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	
19.50	27.880	1.04E+01	1.04E+01	3.12E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	40.11204
0.00012	59.98149
0.00024	71.33042
0.00120	106.66386

0.00240	126.84542
0.01200	189.67814
0.02400	225.56659
0.06000	283.63498
0.12000	337.30074
0.18000	373.28463
0.24000	401.12044
0.60000	504.38224
1.20000	599.81495
2.40000	713.30421
2.70000	713.30421
3.00000	713.30421

P-Multiplier = 1.000E+00 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
32.50	27.880	1.04E+01	1.04E+01	3.12E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	68.94364
0.00012	103.09479
0.00024	122.60106
0.00120	183.33135
0.00240	218.01895
0.01200	326.01436
0.02400	387.69860
0.06000	487.50519
0.12000	579.74464
0.18000	641.59291
0.24000	689.43645
0.60000	866.92043
1.20000	1030.94795
2.40000	1226.01063
2.70000	1226.01063
3.00000	1226.01063

P-Multiplier = 1.000E+00 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
20.99	27.880	1.04E+01	1.04E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	40.96544
0.00012	61.25762
0.00024	72.84800
0.00120	108.93317
0.00240	129.54410
0.01200	193.71360
0.02400	230.36560
0.06000	289.66940
0.12000	344.47692
0.18000	381.22638
0.24000	409.65440
0.60000	515.11314
1.20000	612.57621

2.40000	728.47998
2.70000	728.47998
3.00000	728.47998

P-Multiplier = 1.000E+00 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
33.99	27.880	1.04E+01	1.04E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	70.89252
0.00012	106.00904
0.00024	126.06670
0.00120	188.51369
0.00240	224.18182
0.01200	335.23001
0.02400	398.65791
0.06000	501.28579
0.12000	596.13263
0.18000	659.72921
0.24000	708.92517
0.60000	891.42620
1.20000	1060.09038
2.40000	1260.66702
2.70000	1260.66702
3.00000	1260.66702

P-Multiplier = 1.000E+00 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
21.01	27.880	2.08E+01	2.08E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	70.67375
0.00012	105.68191
0.00024	125.67768
0.00120	187.93197
0.00240	223.49004
0.01200	334.19555
0.02400	397.42772
0.06000	499.73891
0.12000	594.29307
0.18000	657.69340
0.24000	706.73754
0.60000	888.67541
1.20000	1056.81912
2.40000	1256.77682
2.70000	1256.77682
3.00000	1256.77682

P-Multiplier = 1.000E+00 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
34.01	27.880	2.08E+01	2.08E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	103.57740
0.00012	154.88434
0.00024	184.18956
0.00120	275.42764
0.00240	327.54051
0.01200	489.78729
0.02400	582.45853
0.06000	732.40283
0.12000	870.97866
0.18000	963.89634
0.24000	1035.77402
0.60000	1302.41687
1.20000	1548.84341
2.40000	1841.89561
2.70000	1841.89561
3.00000	1841.89561

P-Multiplier = 1.000E+00 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
21.50	27.880	2.08E+01	2.08E+01	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	70.97938
0.00012	106.13892
0.00024	126.22116
0.00120	188.74467
0.00240	224.45650
0.01200	335.64075
0.02400	399.14637
0.06000	501.89999
0.12000	596.86304
0.18000	660.53754
0.24000	709.79378
0.60000	892.51842
1.20000	1061.38925
2.40000	1262.21165
2.70000	1262.21165
3.00000	1262.21165

P-Multiplier = 1.000E+00 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
34.50	27.880	2.08E+01	2.08E+01	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	104.24653

0.00012	155.88492
0.00024	185.37946
0.00120	277.20696
0.00240	329.65648
0.01200	492.95141
0.02400	586.22133
0.06000	737.13430
0.12000	876.60536
0.18000	970.12331
0.24000	1042.46533
0.60000	1310.83075
1.20000	1558.84925
2.40000	1853.79462
2.70000	1853.79462
3.00000	1853.79462

P-Multiplier = 1.000E+00 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
22.00	27.880	2.08E+01	2.08E+01	3.16E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.29018
0.00012	106.60368
0.00024	126.77386
0.00120	189.57114
0.00240	225.43935
0.01200	337.11045
0.02400	400.89414
0.06000	504.09770
0.12000	599.47658
0.18000	663.42989
0.24000	712.90181
0.60000	896.42656
1.20000	1066.03685
2.40000	1267.73860
2.70000	1267.73860
3.00000	1267.73860

P-Multiplier = 1.000E+00 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
35.00	27.880	2.08E+01	2.08E+01	3.16E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	104.92700
0.00012	156.90247
0.00024	186.58953
0.00120	279.01643
0.00240	331.80833
0.01200	496.16917
0.02400	590.04790
0.06000	741.94597
0.12000	882.32742
0.18000	976.45581

0.24000	1049.27005
0.60000	1319.38723
1.20000	1569.02468
2.40000	1865.89532
2.70000	1865.89532
3.00000	1865.89532

P-Multiplier = 1.000E+00 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
22.50	27.880	2.08E+01	2.08E+01	3.17E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.60098
0.00012	107.06844
0.00024	127.32655
0.00120	190.39761
0.00240	226.42219
0.01200	338.58015
0.02400	402.64192
0.06000	506.29541
0.12000	602.09011
0.18000	666.32224
0.24000	716.00984
0.60000	900.33471
1.20000	1070.68444
2.40000	1273.26556
2.70000	1273.26556
3.00000	1273.26556

P-Multiplier = 1.000E+00 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
35.50	27.880	2.08E+01	2.08E+01	3.17E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	105.60748
0.00012	157.92001
0.00024	187.79960
0.00120	280.82591
0.00240	333.96017
0.01200	499.38692
0.02400	593.87448
0.06000	746.75763
0.12000	888.04949
0.18000	982.78832
0.24000	1056.07477
0.60000	1327.94371
1.20000	1579.20011
2.40000	1877.99601
2.70000	1877.99601
3.00000	1877.99601

P-Multiplier = 1.000E+00 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
22.99	27.880	2.08E+01	2.08E+01	3.18E-02	5.0000E-03
	Y IN	P LBS/IN			
	0.00000	0.00000			
	0.00002	71.90661			
	0.00012	107.52546			
	0.00024	127.87004			
	0.00120	191.21031			
	0.00240	227.38866			
	0.01200	340.02535			
	0.02400	404.36057			
	0.06000	508.45650			
	0.12000	604.66008			
	0.18000	669.16639			
	0.24000	719.06608			
	0.60000	904.17772			
	1.20000	1075.25458			
	2.40000	1278.70039			
	2.70000	1278.70039			
	3.00000	1278.70039			

P-Multiplier = 1.000E+00 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
35.99	27.880	2.08E+01	2.08E+01	3.18E-02	5.0000E-03
	Y IN	P LBS/IN			
	0.00000	0.00000			
	0.00002	106.27661			
	0.00012	158.92059			
	0.00024	188.98950			
	0.00120	282.60523			
	0.00240	336.07615			
	0.01200	502.55105			
	0.02400	597.63728			
	0.06000	751.48910			
	0.12000	893.67619			
	0.18000	989.01528			
	0.24000	1062.76608			
	0.60000	1336.35759			
	1.20000	1589.20595			
	2.40000	1889.89503			
	2.70000	1889.89503			
	3.00000	1889.89503			

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

Wall 2 13 foot ATB-531-Service Load

RESULTS

-----

NUMBER OF ITERATIONS : 10

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
-------	---------	-------------	--------------	------------------	--------------	----------------------	----------------------	-----------------

0	0.000E+00	2.199E+00	-8.873E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	2.146E+00	-8.873E-03	0.000E+00	1.459E+01	0.000E+00	2.918E+01	2.883E+10
2	1.000E+00	2.093E+00	-8.873E-03	1.751E+02	6.058E+01	0.000E+00	6.280E+01	2.883E+10
3	1.500E+00	2.039E+00	-8.872E-03	7.269E+02	1.400E+02	0.000E+00	9.608E+01	2.883E+10
4	2.000E+00	1.986E+00	-8.872E-03	1.855E+03	2.525E+02	0.000E+00	1.288E+02	2.883E+10
5	2.500E+00	1.933E+00	-8.872E-03	3.757E+03	3.973E+02	0.000E+00	1.609E+02	2.883E+10
6	3.000E+00	1.880E+00	-8.871E-03	6.623E+03	5.739E+02	0.000E+00	1.922E+02	2.883E+10
7	3.500E+00	1.826E+00	-8.869E-03	1.064E+04	7.795E+02	0.000E+00	2.192E+02	2.883E+10
8	4.000E+00	1.773E+00	-8.866E-03	1.598E+04	1.014E+03	0.000E+00	2.489E+02	2.883E+10
9	4.500E+00	1.720E+00	-8.862E-03	2.281E+04	1.277E+03	0.000E+00	2.776E+02	2.883E+10
10	5.000E+00	1.667E+00	-8.856E-03	3.130E+04	1.568E+03	0.000E+00	3.053E+02	2.883E+10
11	5.500E+00	1.614E+00	-8.849E-03	4.163E+04	1.887E+03	0.000E+00	3.320E+02	2.883E+10
12	6.000E+00	1.561E+00	-8.839E-03	5.394E+04	2.232E+03	0.000E+00	3.577E+02	2.883E+10
13	6.500E+00	1.508E+00	-8.826E-03	6.841E+04	2.615E+03	0.000E+00	4.084E+02	2.883E+10
14	7.000E+00	1.455E+00	-8.810E-03	8.532E+04	3.048E+03	0.000E+00	4.571E+02	2.883E+10
15	7.500E+00	1.402E+00	-8.790E-03	1.050E+05	3.529E+03	0.000E+00	5.064E+02	2.883E+10
16	8.000E+00	1.349E+00	-8.766E-03	1.277E+05	4.060E+03	0.000E+00	5.550E+02	2.883E+10
17	8.500E+00	1.297E+00	-8.737E-03	1.537E+05	4.639E+03	0.000E+00	6.028E+02	2.883E+10
18	9.000E+00	1.244E+00	-8.702E-03	1.833E+05	5.265E+03	0.000E+00	6.501E+02	2.883E+10
19	9.500E+00	1.192E+00	-8.660E-03	2.169E+05	5.939E+03	0.000E+00	6.968E+02	2.883E+10
20	1.000E+01	1.141E+00	-8.611E-03	2.546E+05	6.659E+03	0.000E+00	7.430E+02	2.883E+10
21	1.050E+01	1.089E+00	-8.554E-03	2.968E+05	7.446E+03	0.000E+00	8.311E+02	2.883E+10
22	1.100E+01	1.038E+00	-8.487E-03	3.440E+05	8.300E+03	0.000E+00	8.766E+02	2.883E+10
23	1.150E+01	9.872E-01	-8.410E-03	3.964E+05	9.199E+03	0.000E+00	9.218E+02	2.883E+10
24	1.200E+01	9.370E-01	-8.321E-03	4.543E+05	1.014E+04	0.000E+00	9.666E+02	2.883E+10
25	1.250E+01	8.873E-01	-8.220E-03	5.181E+05	1.113E+04	0.000E+00	1.011E+03	2.883E+10
26	1.300E+01	8.383E-01	-8.105E-03	5.879E+05	1.216E+04	-4.928E-01	1.053E+03	2.883E+10
27	1.350E+01	7.901E-01	-7.975E-03	6.641E+05	1.313E+04	-2.779E+01	8.872E+02	2.883E+10
28	1.400E+01	7.426E-01	-7.828E-03	7.455E+05	1.389E+04	-7.207E+01	6.203E+02	2.883E+10
29	1.450E+01	6.961E-01	-7.664E-03	8.307E+05	1.391E+04	-1.157E+02	-5.695E+02	2.883E+10
30	1.500E+01	6.507E-01	-7.483E-03	9.125E+05	1.322E+04	-1.567E+02	-8.175E+02	2.883E+10
31	1.550E+01	6.063E-01	-7.285E-03	9.894E+05	1.229E+04	-1.952E+02	-1.050E+03	2.883E+10
32	1.600E+01	5.632E-01	-7.072E-03	1.060E+06	1.124E+04	-1.943E+02	-1.048E+03	2.883E+10
33	1.650E+01	5.215E-01	-6.845E-03	1.124E+06	1.019E+04	-1.934E+02	-1.045E+03	2.883E+10
34	1.700E+01	4.811E-01	-6.605E-03	1.182E+06	9.147E+03	-1.926E+02	-1.042E+03	2.883E+10
35	1.750E+01	4.422E-01	-6.353E-03	1.234E+06	8.107E+03	-1.918E+02	-1.039E+03	2.883E+10
36	1.800E+01	4.049E-01	-6.092E-03	1.279E+06	7.069E+03	-1.910E+02	-1.036E+03	2.883E+10
37	1.850E+01	3.691E-01	-5.821E-03	1.319E+06	6.034E+03	-1.903E+02	-1.034E+03	2.883E+10
38	1.900E+01	3.350E-01	-5.544E-03	1.352E+06	5.001E+03	-1.895E+02	-1.032E+03	2.883E+10
39	1.950E+01	3.026E-01	-5.259E-03	1.379E+06	3.975E+03	-1.870E+02	-1.020E+03	2.883E+10
40	2.000E+01	2.719E-01	-4.970E-03	1.400E+06	2.961E+03	-1.846E+02	-1.008E+03	2.883E+10
41	2.050E+01	2.429E-01	-4.678E-03	1.414E+06	1.918E+03	-1.960E+02	-1.078E+03	2.883E+10
42	2.100E+01	2.158E-01	-4.382E-03	1.423E+06	8.087E+02	-2.060E+02	-1.140E+03	2.883E+10
43	2.150E+01	1.904E-01	-4.086E-03	1.424E+06	-3.604E+02	-2.153E+02	-1.198E+03	2.883E+10
44	2.200E+01	1.667E-01	-3.791E-03	1.418E+06	-1.583E+03	-2.231E+02	-1.247E+03	2.883E+10
45	2.250E+01	1.449E-01	-3.497E-03	1.405E+06	-2.815E+03	-2.174E+02	-1.215E+03	2.883E+10
46	2.300E+01	1.248E-01	-3.207E-03	1.385E+06	-4.015E+03	-2.122E+02	-1.186E+03	2.883E+10
47	2.350E+01	1.064E-01	-2.921E-03	1.357E+06	-5.181E+03	-2.049E+02	-1.145E+03	2.883E+10
48	2.400E+01	8.971E-02	-2.643E-03	1.322E+06	-6.305E+03	-1.975E+02	-1.103E+03	2.883E+10
49	2.450E+01	7.468E-02	-2.372E-03	1.281E+06	-7.388E+03	-1.909E+02	-1.064E+03	2.883E+10
50	2.500E+01	6.125E-02	-2.110E-03	1.234E+06	-8.436E+03	-1.850E+02	-1.031E+03	2.883E+10
51	2.550E+01	4.936E-02	-1.859E-03	1.180E+06	-9.437E+03	-1.749E+02	-9.723E+02	2.883E+10
52	2.600E+01	3.895E-02	-1.620E-03	1.120E+06	-1.038E+04	-1.655E+02	-9.178E+02	2.883E+10
53	2.650E+01	2.993E-02	-1.393E-03	1.055E+06	-1.128E+04	-1.574E+02	-8.711E+02	2.883E+10
54	2.700E+01	2.223E-02	-1.181E-03	9.851E+05	-1.212E+04	-1.489E+02	-8.219E+02	2.883E+10
55	2.750E+01	1.576E-02	-9.838E-04	9.099E+05	-1.291E+04	-1.371E+02	-7.533E+02	2.883E+10
56	2.800E+01	1.042E-02	-8.027E-04	8.302E+05	-1.362E+04	-1.236E+02	-6.733E+02	2.883E+10
57	2.850E+01	6.124E-03	-6.387E-04	7.464E+05	-1.428E+04	-1.177E+02	-6.398E+02	2.883E+10
58	2.900E+01	2.757E-03	-4.925E-04	6.588E+05	-1.490E+04	-1.121E+02	-6.079E+02	2.883E+10
59	2.950E+01	2.138E-04	-3.649E-04	5.676E+05	-1.537E+04	-6.591E+01	-3.324E+02	2.883E+10
60	3.000E+01	-1.621E-03	-2.565E-04	4.743E+05	-1.495E+04	1.862E+02	1.179E+03	2.883E+10
61	3.050E+01	-2.864E-03	-1.668E-04	3.882E+05	-1.369E+04	2.148E+02	1.348E+03	2.883E+10
62	3.100E+01	-3.622E-03	-9.412E-05	3.101E+05	-1.231E+04	2.252E+02	1.409E+03	2.883E+10
63	3.150E+01	-3.994E-03	-3.684E-05	2.404E+05	-1.088E+04	2.315E+02	1.446E+03	2.883E+10
64	3.200E+01	-4.065E-03	6.849E-06	1.795E+05	-9.427E+03	2.345E+02	1.463E+03	2.883E+10
65	3.250E+01	-3.911E-03	3.877E-05	1.273E+05	-7.964E+03	2.350E+02	1.464E+03	2.883E+10
66	3.300E+01	-3.599E-03	6.075E-05	8.392E+04	-6.504E+03	2.337E+02	1.455E+03	2.883E+10
67	3.350E+01	-3.182E-03	7.460E-05	4.926E+04	-5.058E+03	2.311E+02	1.438E+03	2.883E+10

68	3.400E+01	-2.704E-03	8.214E-05	2.323E+04	-3.631E+03	2.277E+02	1.416E+03	2.883E+10
69	3.450E+01	-2.197E-03	8.515E-05	5.692E+03	-1.936E+03	3.208E+02	1.974E+03	2.883E+10
70	3.500E+01	-1.682E-03	8.574E-05	-1.737E-10	-4.743E+02	1.501E+02	9.487E+02	2.883E+10

END OF ANALYSIS

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 2\  
Name of input data file : Wall 2 13 foot str Case W05.py7d  
Name of output file : Wall 2 13 foot str Case W05.py7o  
Name of plot output file : Wall 2 13 foot str Case W05.py7p

-----

Time and Date of Analysis

-----

Date: March 13, 2023 Time: 15:41:21

Wall 2 13 foot ATB-531-Strength Load

\*\*\*\*\*  
\* 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 = 35.000 FT  
NUMBER OF INCREMENTS = 70  
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	35.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
70	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.175E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI	TOTAL WEIGHT	UNIT	DRAINED	ZTOP
	FT	PSI	DEG	PCI	T OR F	FT	
1	6.0	0.0	34.0	0.071	T	0.00	
2	4.0	0.0	34.0	0.071	T	6.00	
3	3.0	0.0	31.0	0.067	T	10.00	
4	1.0	0.0	31.0	0.067	T	13.00	
5	6.0	5.6	0.0	0.067	F	14.00	
6	8.0	6.9	0.0	0.067	F	20.00	
7	6.0	10.4	0.0	0.069	F	28.00	
8	5.0	20.8	0.0	0.072	F	34.00	

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH	STRESS
FT	LBS/IN**2
0.000E+00	0.000E+00
6.000E+00	5.083E+00
1.000E+01	6.744E+00
1.300E+01	7.844E+00
1.400E+01	8.211E+00
2.000E+01	1.041E+01
2.800E+01	1.334E+01
3.400E+01	1.575E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	2.827E-01	3.537E+00	0.000E+00
3	3.201E-01	3.124E+00	0.000E+00
4	3.201E-01	3.124E+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	Z1	PA2	Z2	PA3	Z3	PA4
	LBS/IN	FT	LBS/IN	FT	LBS/IN	FT	LBS/IN
1	31.67	3.00	77.61	4.00	0.00	-0.00	0.00
2	118.78	8.00	16.90	8.67	0.00	-0.00	0.00
3	125.47	11.50	9.51	12.00	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

\*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT
2	0.00	8.00	62.21	8.67
3	93.31	11.50	34.99	12.00

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
-----	-----
0.00000E+00	0.00000E+00
5.00000E-01	7.67592E+00
1.00000E+00	1.66463E+01
1.50000E+00	2.55177E+01
2.00000E+00	3.42366E+01
2.50000E+00	4.27568E+01
3.00000E+00	5.10399E+01
3.50000E+00	5.80852E+01
4.00000E+00	6.59139E+01
4.50000E+00	7.34526E+01
5.00000E+00	8.06959E+01
5.50000E+00	8.76491E+01
6.00000E+00	9.43180E+01
6.50000E+00	1.07199E+02
7.00000E+00	1.19471E+02
7.50000E+00	1.31942E+02
8.00000E+00	1.44193E+02
8.50000E+00	1.56242E+02
9.00000E+00	1.68111E+02
9.50000E+00	1.79818E+02
1.00000E+01	1.91382E+02
1.05000E+01	2.13394E+02
1.10000E+01	2.24755E+02
1.15000E+01	2.36015E+02
1.20000E+01	2.47190E+02
1.25000E+01	2.58289E+02
1.30000E+01	2.69324E+02
1.35000E+01	2.68816E+02
1.40000E+01	2.68454E+02
1.45000E+01	3.64057E+01
1.50000E+01	3.57951E+01
1.55000E+01	3.51567E+01
1.60000E+01	3.44959E+01
1.65000E+01	3.38212E+01
1.70000E+01	3.31326E+01
1.75000E+01	3.26698E+01
1.80000E+01	3.19700E+01
1.85000E+01	3.12674E+01
1.90000E+01	3.05621E+01
1.95000E+01	2.98623E+01
2.00000E+01	2.91653E+01
2.05000E+01	2.84738E+01
2.10000E+01	2.80166E+01
2.15000E+01	2.73363E+01
2.20000E+01	2.66664E+01
2.25000E+01	2.60062E+01
2.30000E+01	2.53569E+01
2.35000E+01	2.47187E+01
2.40000E+01	2.40928E+01
2.45000E+01	2.36821E+01
2.50000E+01	2.30768E+01
2.55000E+01	2.24844E+01
2.60000E+01	2.19050E+01
2.65000E+01	2.13388E+01
2.70000E+01	2.07859E+01

2.75000E+01	2.02462E+01
2.80000E+01	1.98935E+01
2.85000E+01	1.93758E+01
2.90000E+01	1.88709E+01
2.95000E+01	1.83791E+01
3.00000E+01	1.79001E+01
3.05000E+01	1.74336E+01
3.10000E+01	1.69798E+01
3.15000E+01	1.66839E+01
3.20000E+01	1.62501E+01
3.25000E+01	1.58283E+01
3.30000E+01	1.54179E+01
3.35000E+01	1.50190E+01
3.40000E+01	1.46311E+01
3.45000E+01	1.42542E+01
3.50000E+01	1.40089E+01

\*\*\*\*\*  
 \* SOIL LAYERS AND STRENGTH DATA \*  
 \*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

5 LAYER(S) OF SOIL

LAYER 1  
 THE SOIL IS A SAND

LAYER 2  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 3  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH  
 10 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.0551E-02
14.0000	3.0551E-02
14.0000	3.0551E-02
20.0000	3.0551E-02
20.0000	3.0551E-02
28.0000	3.0551E-02
28.0000	3.3444E-02
34.0000	3.3444E-02
34.0000	3.6338E-02
39.0000	3.6338E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
 10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
14.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
14.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
20.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
20.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
28.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00



28.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
34.00	1.0417E+01	0.000	5.0000E-03	0.0000E+00
34.00	2.0833E+01	0.000	5.0000E-03	0.0000E+00
36.00	2.0833E+01	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	31.00	3.06E-02	6.00E+01	2.82	2.13	3.49E-01
		Y IN		P LBS/IN			
		0.000		0.000			
		0.010		0.060			
		0.020		0.120			
		0.038		0.228			
		0.056		0.336			
		0.074		0.444			
		0.092		0.552			
		0.110		0.638			
		0.128		0.664			
		0.146		0.687			
		0.164		0.708			
		0.182		0.727			
		0.200		0.745			
		0.283		0.825			
		0.367		0.905			
		0.450		0.985			
		0.540		0.985			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.01	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.17E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.005		48.263			
		0.010		96.526			
		0.029		182.104			
		0.048		246.731			
		0.067		301.844			
		0.086		351.094			
		0.105		396.235			
		0.124		438.275			
		0.143		477.859			
		0.162		515.431			
		0.181		551.314			
		0.200		585.749			
		0.283		734.139			
		0.367		882.529			
		0.450		1030.919			
		0.540		1030.919			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.25	27.88	31.00	3.06E-02	6.00E+01	2.65	1.99	1.05E+01
		Y IN		P LBS/IN			
		0.000		0.000			
		0.010		1.800			
		0.020		3.600			
		0.038		6.840			
		0.056		10.080			
		0.074		13.320			
		0.092		16.560			
		0.110		17.682			
		0.128		18.421			
		0.146		19.087			
		0.164		19.695			
		0.182		20.257			
		0.200		20.780			
		0.283		23.118			
		0.367		25.456			
		0.450		27.793			
		0.540		27.793			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.25	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.18E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.005		48.267			
		0.010		96.535			
		0.029		183.515			
		0.048		249.046			
		0.067		304.890			
		0.086		354.777			
		0.105		400.492			
		0.124		443.061			
		0.143		483.139			
		0.162		521.177			
		0.181		557.503			
		0.200		592.363			
		0.283		742.428			
		0.367		892.493			
		0.450		1042.559			
		0.540		1042.559			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.50	27.88	31.00	3.06E-02	6.00E+01	2.48	1.83	2.09E+01
		Y		P			

IN	LBS/IN
0.000	0.000
0.010	3.600
0.020	7.200
0.038	13.680
0.056	20.160
0.074	26.640
0.092	30.728
0.110	32.328
0.128	33.751
0.146	35.037
0.164	36.213
0.182	37.301
0.200	38.314
0.283	42.850
0.367	47.387
0.450	51.923
0.540	51.923

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.50	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.20E+03

Y IN	P LBS/IN
0.000	0.000
0.005	48.282
0.010	96.564
0.029	184.991
0.048	251.452
0.067	308.050
0.086	358.594
0.105	404.902
0.124	448.016
0.143	488.604
0.162	527.124
0.181	563.907
0.200	599.204
0.283	751.003
0.367	902.801
0.450	1054.599
0.540	1054.599

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.75	27.88	31.00	3.06E-02	6.00E+01	2.29	1.69	3.14E+01

Y IN	P LBS/IN
0.000	0.000
0.010	5.400
0.020	10.800
0.038	20.520
0.056	30.240
0.074	39.677
0.092	42.260
0.110	44.505

0.128	46.501
0.146	48.308
0.164	49.962
0.182	51.492
0.200	52.917
0.283	59.303
0.367	65.689
0.450	72.074
0.540	72.074

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.75	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.21E+03

Y IN	P LBS/IN
0.000	0.000
0.005	48.306
0.010	96.612
0.029	186.480
0.048	253.869
0.067	311.219
0.086	362.418
0.105	409.316
0.124	452.975
0.143	494.072
0.162	533.072
0.181	570.312
0.200	606.046
0.283	759.577
0.367	913.109
0.450	1066.640
0.540	1066.640

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.99	27.88	31.00	3.06E-02	6.00E+01	2.12	1.54	4.15E+01

Y IN	P LBS/IN
0.000	0.000
0.010	7.140
0.020	14.280
0.038	27.132
0.056	39.984
0.074	47.800
0.092	50.981
0.110	53.749
0.128	56.213
0.146	58.445
0.164	60.490
0.182	62.383
0.200	64.148
0.283	72.056
0.367	79.964
0.450	87.873
0.540	87.873

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
13.99	27.88	31.00	3.06E-02	6.00E+01	0.88	0.50	1.23E+03

Y IN	P LBS/IN
0.000	0.000
0.005	48.338
0.010	96.677
0.029	187.934
0.048	256.216
0.067	314.290
0.086	366.120
0.105	413.588
0.124	457.772
0.143	499.360
0.162	538.823
0.181	576.504
0.200	612.659
0.283	767.866
0.367	923.073
0.450	1078.280
0.540	1078.280

P-Multiplier = 1.000E+00 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
1.01	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	16.36610
0.00017	24.47302
0.00034	29.10349
0.00168	43.51987
0.00336	51.75414
0.01680	77.39049
0.03360	92.03333
0.08400	115.72578
0.16800	137.62192
0.25200	152.30370
0.33600	163.66097
0.84000	205.79278
1.68000	244.73023
3.36000	291.03494
3.78000	291.03494
4.20000	291.03494

P-Multiplier = 1.000E+00 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
----------------------	------------	----------------	-------------------	------------------------	-----

14.01            27.880 5.56E+00 5.56E+00 3.06E-02 7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	30.30326
0.00017	45.31395
0.00034	53.88767
0.00168	80.58086
0.00336	95.82734
0.01680	143.29529
0.03360	170.40778
0.08400	214.27644
0.16800	254.81907
0.25200	282.00366
0.33600	303.03265
0.84000	381.04338
1.68000	453.13950
3.36000	538.87672
3.78000	538.87672
4.20000	538.87672

P-Multiplier = 1.000E+00 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	
2.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	17.14566
0.00017	25.63874
0.00034	30.48977
0.00168	45.59285
0.00336	54.21934
0.01680	81.07682
0.03360	96.41713
0.08400	121.23813
0.16800	144.17724
0.25200	159.55835
0.33600	171.45660
0.84000	215.59526
1.68000	256.38742
3.36000	304.89775
3.78000	304.89775
4.20000	304.89775

P-Multiplier = 1.000E+00 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	
15.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	32.17093
0.00017	48.10677
0.00034	57.20891
0.00168	85.54727

0.00336	101.73343
0.01680	152.12695
0.03360	180.91045
0.08400	227.48285
0.16800	270.52423
0.25200	299.38427
0.33600	321.70934
0.84000	404.52807
1.68000	481.06766
3.36000	572.08909
3.78000	572.08909
4.20000	572.08909

P-Multiplier = 1.000E+00 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
4.00	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	17.92958
0.00017	26.81097
0.00034	31.88380
0.00168	47.67740
0.00336	56.69831
0.01680	84.78374
0.03360	100.82543
0.08400	126.78127
0.16800	150.76918
0.25200	166.85353
0.33600	179.29578
0.84000	225.45251
1.68000	268.10973
3.36000	318.83800
3.78000	318.83800
4.20000	318.83800

P-Multiplier = 1.000E+00 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
17.00	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	34.04904
0.00017	50.91518
0.00034	60.54870
0.00168	90.54143
0.00336	107.67251
0.01680	161.00795
0.03360	191.47180
0.08400	240.76305
0.16800	286.31713
0.25200	316.86199
0.33600	340.49037
0.84000	428.14397
1.68000	509.15185

3.36000	605.48701
3.78000	605.48701
4.20000	605.48701

P-Multiplier = 1.000E+00 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
5.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	18.71350
0.00017	27.98320
0.00034	33.27783
0.00168	49.76196
0.00336	59.17727
0.01680	88.49066
0.03360	105.23372
0.08400	132.32440
0.16800	157.36112
0.25200	174.14871
0.33600	187.13497
0.84000	235.30976
1.68000	279.83204
3.36000	332.77826
3.78000	332.77826
4.20000	332.77826

P-Multiplier = 1.000E+00 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
18.50	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	35.92714
0.00017	53.72360
0.00034	63.88849
0.00168	95.53558
0.00336	113.61159
0.01680	169.88895
0.03360	202.03315
0.08400	254.04324
0.16800	302.11003
0.25200	334.33971
0.33600	359.27139
0.84000	451.75986
1.68000	537.23604
3.36000	638.88492
3.78000	638.88492
4.20000	638.88492

P-Multiplier = 1.000E+00 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
6.99	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	19.49306
0.00017	29.14892
0.00034	34.66411
0.00168	51.83493
0.00336	61.64247
0.01680	92.17699
0.03360	109.61753
0.08400	137.83675
0.16800	163.91644
0.25200	181.40336
0.33600	194.93060
0.84000	245.11225
1.68000	291.48923
3.36000	346.64107
3.78000	346.64107
4.20000	346.64107

P-Multiplier = 1.000E+00 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
19.99	27.880	5.56E+00	5.56E+00	3.06E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	37.79481
0.00017	56.51642
0.00034	67.20973
0.00168	100.50199
0.00336	119.51768
0.01680	178.72061
0.03360	212.53582
0.08400	267.24965
0.16800	317.81519
0.25200	351.72033
0.33600	377.94808
0.84000	475.24455
1.68000	565.16421
3.36000	672.09729
3.78000	672.09729
4.20000	672.09729

P-Multiplier = 1.000E+00 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
7.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	23.46155

0.00012	35.08320
0.00024	41.72119
0.00120	62.38774
0.00240	74.19194
0.01200	110.94283
0.02400	131.93400
0.06000	165.89823
0.12000	197.28735
0.18000	218.33435
0.24000	234.61552
0.60000	295.01340
1.20000	350.83203
2.40000	417.21195
2.70000	417.21195
3.00000	417.21195

P-Multiplier = 1.000E+00 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
20.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	42.17070
0.00012	63.05990
0.00024	74.99128
0.00120	112.13812
0.00240	133.35545
0.01200	199.41291
0.02400	237.14326
0.06000	298.19186
0.12000	354.61188
0.18000	392.44256
0.24000	421.70697
0.60000	530.26844
1.20000	630.59900
2.40000	749.91282
2.70000	749.91282
3.00000	749.91282

P-Multiplier = 1.000E+00 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
9.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	24.50242
0.00012	36.63967
0.00024	43.57215
0.00120	65.15556
0.00240	77.48346
0.01200	115.86480
0.02400	137.78724
0.06000	173.25828
0.12000	206.03998
0.18000	228.02072

0.24000	245.02421
0.60000	308.10164
1.20000	366.39666
2.40000	435.72151
2.70000	435.72151
3.00000	435.72151

P-Multiplier = 1.000E+00 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
22.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	44.66440
0.00012	66.78886
0.00024	79.42578
0.00120	118.76925
0.00240	141.24124
0.01200	211.20491
0.02400	251.16638
0.06000	315.82500
0.12000	375.58134
0.18000	415.64908
0.24000	446.64400
0.60000	561.62510
1.20000	667.88857
2.40000	794.25783
2.70000	794.25783
3.00000	794.25783

P-Multiplier = 1.000E+00 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
11.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	25.54765
0.00012	38.20264
0.00024	45.43085
0.00120	67.93497
0.00240	80.78875
0.01200	120.80736
0.02400	143.66497
0.06000	180.64913
0.12000	214.82924
0.18000	237.74763
0.24000	255.47646
0.60000	321.24463
1.20000	382.02640
2.40000	454.30852
2.70000	454.30852
3.00000	454.30852

P-Multiplier = 1.000E+00 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
24.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	47.16854
0.00012	70.53341
0.00024	83.87884
0.00120	125.42812
0.00240	149.16001
0.01200	223.04624
0.02400	265.24818
0.06000	333.53193
0.12000	396.63854
0.18000	438.95271
0.24000	471.68538
0.60000	593.11296
1.20000	705.33415
2.40000	838.78839
2.70000	838.78839
3.00000	838.78839

P-Multiplier = 1.000E+00 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
13.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	26.59287
0.00012	39.76561
0.00024	47.28955
0.00120	70.71438
0.00240	84.09404
0.01200	125.74992
0.02400	149.54269
0.06000	188.03999
0.12000	223.61849
0.18000	247.47454
0.24000	265.92870
0.60000	334.38763
1.20000	397.65615
2.40000	472.89553
2.70000	472.89553
3.00000	472.89553

P-Multiplier = 1.000E+00 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
26.00	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y	P
---	---

IN	LBS/IN
0.00000	0.00000
0.00002	49.67267
0.00012	74.27797
0.00024	88.33189
0.00120	132.08699
0.00240	157.07879
0.01200	234.88757
0.02400	279.32998
0.06000	351.23885
0.12000	417.69574
0.18000	462.25633
0.24000	496.72675
0.60000	624.60082
1.20000	742.77973
2.40000	883.31894
2.70000	883.31894
3.00000	883.31894

P-Multiplier = 1.000E+00 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
14.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	27.63374
0.00012	41.32208
0.00024	49.14051
0.00120	73.48220
0.00240	87.38556
0.01200	130.67188
0.02400	155.39593
0.06000	195.40004
0.12000	232.37112
0.18000	257.16092
0.24000	276.33739
0.60000	347.47587
1.20000	413.22078
2.40000	491.40509
2.70000	491.40509
3.00000	491.40509

P-Multiplier = 1.000E+00 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
27.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	52.16638
0.00012	78.00693
0.00024	92.76640
0.00120	138.71812
0.00240	164.96457
0.01200	246.67957
0.02400	293.35310

0.06000	368.87200
0.12000	438.66520
0.18000	485.46285
0.24000	521.66378
0.60000	655.95747
1.20000	780.06930
2.40000	927.66396
2.70000	927.66396
3.00000	927.66396

P-Multiplier = 1.000E+00 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
15.01	27.880	1.04E+01	1.04E+01	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	37.54232
0.00012	56.13886
0.00024	66.76073
0.00120	99.83058
0.00240	118.71924
0.01200	177.52666
0.02400	211.11597
0.06000	265.46428
0.12000	315.69201
0.18000	349.37065
0.24000	375.42319
0.60000	472.06967
1.20000	561.38860
2.40000	667.60732
2.70000	667.60732
3.00000	667.60732

P-Multiplier = 1.000E+00 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
28.01	27.880	1.04E+01	1.04E+01	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	63.07525
0.00012	94.31950
0.00024	112.16542
0.00120	167.72643
0.00240	199.46147
0.01200	298.26446
0.02400	354.69821
0.06000	446.00940
0.12000	530.39755
0.18000	586.98138
0.24000	630.75254
0.60000	793.12932
1.20000	943.19503
2.40000	1121.65424
2.70000	1121.65424
3.00000	1121.65424

P-Multiplier = 1.000E+00 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
16.50	27.880	1.04E+01	1.04E+01	3.08E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		38.39571		
	0.00012		57.41499		
	0.00024		68.27831		
	0.00120		102.09989		
	0.00240		121.41791		
	0.01200		181.56213		
	0.02400		215.91497		
	0.06000		271.49871		
	0.12000		322.86819		
	0.18000		357.31239		
	0.24000		383.95715		
	0.60000		482.80056		
	1.20000		574.14986		
	2.40000		682.78310		
	2.70000		682.78310		
	3.00000		682.78310		

P-Multiplier = 1.000E+00 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
29.50	27.880	1.04E+01	1.04E+01	3.08E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		65.02412		
	0.00012		97.23375		
	0.00024		115.63106		
	0.00120		172.90877		
	0.00240		205.62434		
	0.01200		307.48010		
	0.02400		365.65753		
	0.06000		459.79000		
	0.12000		546.78554		
	0.18000		605.11768		
	0.24000		650.24126		
	0.60000		817.63509		
	1.20000		972.33747		
	2.40000		1156.31063		
	2.70000		1156.31063		
	3.00000		1156.31063		

P-Multiplier = 1.000E+00 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
----------------------	------------	----------------	-------------------	------------------------	-----

18.00 27.880 1.04E+01 1.04E+01 3.10E-02 5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	39.25388
0.00012	58.69824
0.00024	69.80436
0.00120	104.38187
0.00240	124.13167
0.01200	185.62013
0.02400	220.74078
0.06000	277.56684
0.12000	330.08446
0.18000	365.29851
0.24000	392.53879
0.60000	493.59140
1.20000	586.98241
2.40000	698.04365
2.70000	698.04365
3.00000	698.04365

P-Multiplier = 1.000E+00 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	
31.00	27.880	1.04E+01	1.04E+01	3.10E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	66.98388
0.00012	100.16427
0.00024	119.11606
0.00120	178.12006
0.00240	211.82165
0.01200	316.74723
0.02400	376.67806
0.06000	473.64759
0.12000	563.26509
0.18000	623.35529
0.24000	669.83885
0.60000	842.27776
1.20000	1001.64271
2.40000	1191.16063
2.70000	1191.16063
3.00000	1191.16063

P-Multiplier = 1.000E+00 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	
19.50	27.880	1.04E+01	1.04E+01	3.12E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	40.11204
0.00012	59.98149
0.00024	71.33042
0.00120	106.66386



0.00240	126.84542
0.01200	189.67814
0.02400	225.56659
0.06000	283.63498
0.12000	337.30074
0.18000	373.28463
0.24000	401.12044
0.60000	504.38224
1.20000	599.81495
2.40000	713.30421
2.70000	713.30421
3.00000	713.30421

P-Multiplier = 1.000E+00 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
32.50	27.880	1.04E+01	1.04E+01	3.12E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	68.94364
0.00012	103.09479
0.00024	122.60106
0.00120	183.33135
0.00240	218.01895
0.01200	326.01436
0.02400	387.69860
0.06000	487.50519
0.12000	579.74464
0.18000	641.59291
0.24000	689.43645
0.60000	866.92043
1.20000	1030.94795
2.40000	1226.01063
2.70000	1226.01063
3.00000	1226.01063

P-Multiplier = 1.000E+00 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
20.99	27.880	1.04E+01	1.04E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	40.96544
0.00012	61.25762
0.00024	72.84800
0.00120	108.93317
0.00240	129.54410
0.01200	193.71360
0.02400	230.36560
0.06000	289.66940
0.12000	344.47692
0.18000	381.22638
0.24000	409.65440
0.60000	515.11314
1.20000	612.57621

2.40000	728.47998
2.70000	728.47998
3.00000	728.47998

P-Multiplier = 1.000E+00 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
33.99	27.880	1.04E+01	1.04E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	70.89252
0.00012	106.00904
0.00024	126.06670
0.00120	188.51369
0.00240	224.18182
0.01200	335.23001
0.02400	398.65791
0.06000	501.28579
0.12000	596.13263
0.18000	659.72921
0.24000	708.92517
0.60000	891.42620
1.20000	1060.09038
2.40000	1260.66702
2.70000	1260.66702
3.00000	1260.66702

P-Multiplier = 1.000E+00 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
21.01	27.880	2.08E+01	2.08E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	70.67375
0.00012	105.68191
0.00024	125.67768
0.00120	187.93197
0.00240	223.49004
0.01200	334.19555
0.02400	397.42772
0.06000	499.73891
0.12000	594.29307
0.18000	657.69340
0.24000	706.73754
0.60000	888.67541
1.20000	1056.81912
2.40000	1256.77682
2.70000	1256.77682
3.00000	1256.77682

P-Multiplier = 1.000E+00 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
34.01	27.880	2.08E+01	2.08E+01	3.14E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	103.57740
0.00012	154.88434
0.00024	184.18956
0.00120	275.42764
0.00240	327.54051
0.01200	489.78729
0.02400	582.45853
0.06000	732.40283
0.12000	870.97866
0.18000	963.89634
0.24000	1035.77402
0.60000	1302.41687
1.20000	1548.84341
2.40000	1841.89561
2.70000	1841.89561
3.00000	1841.89561

P-Multiplier = 1.000E+00 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
21.50	27.880	2.08E+01	2.08E+01	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	70.97938
0.00012	106.13892
0.00024	126.22116
0.00120	188.74467
0.00240	224.45650
0.01200	335.64075
0.02400	399.14637
0.06000	501.89999
0.12000	596.86304
0.18000	660.53754
0.24000	709.79378
0.60000	892.51842
1.20000	1061.38925
2.40000	1262.21165
2.70000	1262.21165
3.00000	1262.21165

P-Multiplier = 1.000E+00 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
34.50	27.880	2.08E+01	2.08E+01	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	104.24653

0.00012	155.88492
0.00024	185.37946
0.00120	277.20696
0.00240	329.65648
0.01200	492.95141
0.02400	586.22133
0.06000	737.13430
0.12000	876.60536
0.18000	970.12331
0.24000	1042.46533
0.60000	1310.83075
1.20000	1558.84925
2.40000	1853.79462
2.70000	1853.79462
3.00000	1853.79462

P-Multiplier = 1.000E+00 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
22.00	27.880	2.08E+01	2.08E+01	3.16E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.29018
0.00012	106.60368
0.00024	126.77386
0.00120	189.57114
0.00240	225.43935
0.01200	337.11045
0.02400	400.89414
0.06000	504.09770
0.12000	599.47658
0.18000	663.42989
0.24000	712.90181
0.60000	896.42656
1.20000	1066.03685
2.40000	1267.73860
2.70000	1267.73860
3.00000	1267.73860

P-Multiplier = 1.000E+00 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
35.00	27.880	2.08E+01	2.08E+01	3.16E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	104.92700
0.00012	156.90247
0.00024	186.58953
0.00120	279.01643
0.00240	331.80833
0.01200	496.16917
0.02400	590.04790
0.06000	741.94597
0.12000	882.32742
0.18000	976.45581

0.24000	1049.27005
0.60000	1319.38723
1.20000	1569.02468
2.40000	1865.89532
2.70000	1865.89532
3.00000	1865.89532

P-Multiplier = 1.000E+00 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
22.50	27.880	2.08E+01	2.08E+01	3.17E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	71.60098
0.00012	107.06844
0.00024	127.32655
0.00120	190.39761
0.00240	226.42219
0.01200	338.58015
0.02400	402.64192
0.06000	506.29541
0.12000	602.09011
0.18000	666.32224
0.24000	716.00984
0.60000	900.33471
1.20000	1070.68444
2.40000	1273.26556
2.70000	1273.26556
3.00000	1273.26556

P-Multiplier = 1.000E+00 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
35.50	27.880	2.08E+01	2.08E+01	3.17E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	105.60748
0.00012	157.92001
0.00024	187.79960
0.00120	280.82591
0.00240	333.96017
0.01200	499.38692
0.02400	593.87448
0.06000	746.75763
0.12000	888.04949
0.18000	982.78832
0.24000	1056.07477
0.60000	1327.94371
1.20000	1579.20011
2.40000	1877.99601
2.70000	1877.99601
3.00000	1877.99601

P-Multiplier = 1.000E+00 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
22.99	27.880	2.08E+01	2.08E+01	3.18E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		71.90661		
	0.00012		107.52546		
	0.00024		127.87004		
	0.00120		191.21031		
	0.00240		227.38866		
	0.01200		340.02535		
	0.02400		404.36057		
	0.06000		508.45650		
	0.12000		604.66008		
	0.18000		669.16639		
	0.24000		719.06608		
	0.60000		904.17772		
	1.20000		1075.25458		
	2.40000		1278.70039		
	2.70000		1278.70039		
	3.00000		1278.70039		

P-Multiplier = 1.000E+00 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
35.99	27.880	2.08E+01	2.08E+01	3.18E-02	5.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00002		106.27661		
	0.00012		158.92059		
	0.00024		188.98950		
	0.00120		282.60523		
	0.00240		336.07615		
	0.01200		502.55105		
	0.02400		597.63728		
	0.06000		751.48910		
	0.12000		893.67619		
	0.18000		989.01528		
	0.24000		1062.76608		
	0.60000		1336.35759		
	1.20000		1589.20595		
	2.40000		1889.89503		
	2.70000		1889.89503		
	3.00000		1889.89503		

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

Wall 2 13 foot ATB-531-Strength Load

RESULTS

-----

NUMBER OF ITERATIONS : 10

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
-------	---------	-------------	--------------	------------------	--------------	----------------------	----------------------	-----------------

0	0.000E+00	5.646E+00	-2.003E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	5.526E+00	-2.003E-02	0.000E+00	2.303E+01	0.000E+00	4.606E+01	2.883E+10
2	1.000E+00	5.406E+00	-2.003E-02	2.763E+02	9.599E+01	0.000E+00	9.988E+01	2.883E+10
3	1.500E+00	5.285E+00	-2.003E-02	1.152E+03	2.225E+02	0.000E+00	1.531E+02	2.883E+10
4	2.000E+00	5.165E+00	-2.003E-02	2.946E+03	4.017E+02	0.000E+00	2.054E+02	2.883E+10
5	2.500E+00	5.045E+00	-2.003E-02	5.973E+03	6.327E+02	0.000E+00	2.565E+02	2.883E+10
6	3.000E+00	4.925E+00	-2.003E-02	1.054E+04	9.141E+02	0.000E+00	3.062E+02	2.883E+10
7	3.500E+00	4.805E+00	-2.002E-02	1.694E+04	1.241E+03	0.000E+00	3.485E+02	2.883E+10
8	4.000E+00	4.685E+00	-2.002E-02	2.544E+04	1.613E+03	0.000E+00	3.955E+02	2.883E+10
9	4.500E+00	4.565E+00	-2.001E-02	3.630E+04	2.032E+03	0.000E+00	4.407E+02	2.883E+10
10	5.000E+00	4.444E+00	-2.000E-02	4.982E+04	2.494E+03	0.000E+00	4.842E+02	2.883E+10
11	5.500E+00	4.324E+00	-1.999E-02	6.623E+04	2.999E+03	0.000E+00	5.259E+02	2.883E+10
12	6.000E+00	4.205E+00	-1.998E-02	8.580E+04	3.545E+03	0.000E+00	5.659E+02	2.883E+10
13	6.500E+00	4.085E+00	-1.996E-02	1.088E+05	4.150E+03	0.000E+00	6.432E+02	2.883E+10
14	7.000E+00	3.965E+00	-1.993E-02	1.356E+05	4.830E+03	0.000E+00	7.168E+02	2.883E+10
15	7.500E+00	3.846E+00	-1.990E-02	1.667E+05	5.584E+03	0.000E+00	7.917E+02	2.883E+10
16	8.000E+00	3.726E+00	-1.986E-02	2.026E+05	6.412E+03	0.000E+00	8.652E+02	2.883E+10
17	8.500E+00	3.607E+00	-1.981E-02	2.437E+05	7.313E+03	0.000E+00	9.375E+02	2.883E+10
18	9.000E+00	3.489E+00	-1.976E-02	2.904E+05	8.287E+03	0.000E+00	1.009E+03	2.883E+10
19	9.500E+00	3.370E+00	-1.969E-02	3.431E+05	9.330E+03	0.000E+00	1.079E+03	2.883E+10
20	1.000E+01	3.252E+00	-1.961E-02	4.023E+05	1.044E+04	0.000E+00	1.148E+03	2.883E+10
21	1.050E+01	3.135E+00	-1.952E-02	4.684E+05	1.166E+04	0.000E+00	1.280E+03	2.883E+10
22	1.100E+01	3.018E+00	-1.942E-02	5.422E+05	1.297E+04	0.000E+00	1.349E+03	2.883E+10
23	1.150E+01	2.902E+00	-1.930E-02	6.241E+05	1.436E+04	0.000E+00	1.416E+03	2.883E+10
24	1.200E+01	2.786E+00	-1.916E-02	7.145E+05	1.580E+04	0.000E+00	1.483E+03	2.883E+10
25	1.250E+01	2.672E+00	-1.900E-02	8.138E+05	1.732E+04	0.000E+00	1.550E+03	2.883E+10
26	1.300E+01	2.558E+00	-1.882E-02	9.223E+05	1.890E+04	-4.928E-01	1.613E+03	2.883E+10
27	1.350E+01	2.446E+00	-1.861E-02	1.041E+06	2.043E+04	-2.779E+01	1.446E+03	2.883E+10
28	1.400E+01	2.335E+00	-1.838E-02	1.168E+06	2.174E+04	-7.207E+01	1.178E+03	2.883E+10
29	1.450E+01	2.225E+00	-1.813E-02	1.302E+06	2.203E+04	-1.388E+02	-6.141E+02	2.883E+10
30	1.500E+01	2.118E+00	-1.784E-02	1.432E+06	2.122E+04	-2.034E+02	-1.005E+03	2.883E+10
31	1.550E+01	2.011E+00	-1.753E-02	1.556E+06	2.002E+04	-2.660E+02	-1.385E+03	2.883E+10
32	1.600E+01	1.907E+00	-1.720E-02	1.672E+06	1.863E+04	-2.670E+02	-1.395E+03	2.883E+10
33	1.650E+01	1.805E+00	-1.684E-02	1.780E+06	1.723E+04	-2.679E+02	-1.405E+03	2.883E+10
34	1.700E+01	1.705E+00	-1.646E-02	1.879E+06	1.582E+04	-2.689E+02	-1.414E+03	2.883E+10
35	1.750E+01	1.608E+00	-1.606E-02	1.970E+06	1.441E+04	-2.683E+02	-1.414E+03	2.883E+10
36	1.800E+01	1.512E+00	-1.564E-02	2.052E+06	1.300E+04	-2.671E+02	-1.411E+03	2.883E+10
37	1.850E+01	1.420E+00	-1.520E-02	2.126E+06	1.159E+04	-2.660E+02	-1.409E+03	2.883E+10
38	1.900E+01	1.330E+00	-1.475E-02	2.191E+06	1.018E+04	-2.649E+02	-1.406E+03	2.883E+10
39	1.950E+01	1.243E+00	-1.429E-02	2.248E+06	8.774E+03	-2.638E+02	-1.404E+03	2.883E+10
40	2.000E+01	1.158E+00	-1.382E-02	2.296E+06	7.372E+03	-2.627E+02	-1.401E+03	2.883E+10
41	2.050E+01	1.077E+00	-1.334E-02	2.336E+06	5.910E+03	-2.823E+02	-1.523E+03	2.883E+10
42	2.100E+01	9.984E-01	-1.285E-02	2.367E+06	4.332E+03	-3.003E+02	-1.634E+03	2.883E+10
43	2.150E+01	9.228E-01	-1.235E-02	2.388E+06	2.646E+03	-3.170E+02	-1.738E+03	2.883E+10
44	2.200E+01	8.502E-01	-1.186E-02	2.399E+06	8.594E+02	-3.324E+02	-1.834E+03	2.883E+10
45	2.250E+01	7.805E-01	-1.136E-02	2.398E+06	-9.671E+02	-3.291E+02	-1.819E+03	2.883E+10
46	2.300E+01	7.139E-01	-1.086E-02	2.387E+06	-2.778E+03	-3.260E+02	-1.804E+03	2.883E+10
47	2.350E+01	6.502E-01	-1.036E-02	2.365E+06	-4.575E+03	-3.230E+02	-1.789E+03	2.883E+10
48	2.400E+01	5.895E-01	-9.875E-03	2.332E+06	-6.355E+03	-3.193E+02	-1.771E+03	2.883E+10
49	2.450E+01	5.317E-01	-9.395E-03	2.289E+06	-8.105E+03	-3.119E+02	-1.729E+03	2.883E+10
50	2.500E+01	4.768E-01	-8.924E-03	2.235E+06	-9.815E+03	-3.048E+02	-1.691E+03	2.883E+10
51	2.550E+01	4.246E-01	-8.466E-03	2.171E+06	-1.149E+04	-2.981E+02	-1.654E+03	2.883E+10
52	2.600E+01	3.752E-01	-8.022E-03	2.097E+06	-1.312E+04	-2.916E+02	-1.618E+03	2.883E+10
53	2.650E+01	3.284E-01	-7.594E-03	2.014E+06	-1.472E+04	-2.855E+02	-1.585E+03	2.883E+10
54	2.700E+01	2.841E-01	-7.185E-03	1.920E+06	-1.629E+04	-2.797E+02	-1.553E+03	2.883E+10
55	2.750E+01	2.422E-01	-6.796E-03	1.818E+06	-1.783E+04	-2.741E+02	-1.523E+03	2.883E+10
56	2.800E+01	2.025E-01	-6.429E-03	1.706E+06	-1.933E+04	-2.644E+02	-1.467E+03	2.883E+10
57	2.850E+01	1.650E-01	-6.086E-03	1.586E+06	-2.085E+04	-2.836E+02	-1.585E+03	2.883E+10
58	2.900E+01	1.295E-01	-5.770E-03	1.456E+06	-2.248E+04	-2.977E+02	-1.673E+03	2.883E+10
59	2.950E+01	9.578E-02	-5.481E-03	1.316E+06	-2.417E+04	-3.022E+02	-1.703E+03	2.883E+10
60	3.000E+01	6.372E-02	-5.223E-03	1.166E+06	-2.580E+04	-2.767E+02	-1.553E+03	2.883E+10
61	3.050E+01	3.311E-02	-4.997E-03	1.007E+06	-2.722E+04	-2.334E+02	-1.296E+03	2.883E+10
62	3.100E+01	3.754E-03	-4.805E-03	8.395E+05	-2.822E+04	-1.328E+02	-6.948E+02	2.883E+10
63	3.150E+01	-2.455E-02	-4.648E-03	6.681E+05	-2.737E+04	3.819E+02	2.391E+03	2.883E+10
64	3.200E+01	-5.202E-02	-4.525E-03	5.111E+05	-2.474E+04	4.610E+02	2.863E+03	2.883E+10
65	3.250E+01	-7.886E-02	-4.434E-03	3.712E+05	-2.171E+04	5.165E+02	3.194E+03	2.883E+10
66	3.300E+01	-1.052E-01	-4.369E-03	2.505E+05	-1.838E+04	5.622E+02	3.466E+03	2.883E+10
67	3.350E+01	-1.313E-01	-4.327E-03	1.506E+05	-1.480E+04	6.025E+02	3.705E+03	2.883E+10

68	3.400E+01	-1.571E-01	-4.304E-03	7.297E+04	-1.100E+04	6.355E+02	3.901E+03	2.883E+10
69	3.450E+01	-1.829E-01	-4.294E-03	1.871E+04	-6.081E+03	9.736E+02	5.927E+03	2.883E+10
70	3.500E+01	-2.087E-01	-4.292E-03	-2.223E-08	-1.559E+03	5.056E+02	3.118E+03	2.883E+10

END OF ANALYSIS



Wall 3

Long Term Stability and Load

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 3\  
Name of input data file : Wall 3 13 foot Ser Case W05.py7d  
Name of output file : Wall 3 13 foot Ser Case W05.py7o  
Name of plot output file : Wall 3 13 foot Ser Case W05.py7p

-----

Time and Date of Analysis

-----

Date: March 13, 2023 Time: 16:07:58

Wall 3 13 foot ATB-531-Service Load

\*\*\*\*\*  
\* 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 = 50.000 FT  
NUMBER OF INCREMENTS = 100  
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	50.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.100E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS FT	COHESION/STRENGTH PSI	PHI DEG	TOTAL WEIGHT PCI	UNIT DRAINED T OR F	ZTOP FT
1	6.0	0.0	34.0	0.071	T	0.00
2	7.0	0.0	34.0	0.071	T	6.00
3	10.0	0.0	34.0	0.071	T	13.00
4	9.0	0.0	31.0	0.067	T	23.00
5	4.0	3.5	0.0	0.065	F	32.00
6	10.0	5.6	0.0	0.067	F	36.00
7	7.0	6.9	0.0	0.067	F	46.00

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
0.000E+00	0.000E+00
6.000E+00	5.083E+00
1.300E+01	7.990E+00
2.300E+01	1.214E+01
3.200E+01	1.544E+01
3.600E+01	1.682E+01
4.600E+01	2.049E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	2.827E-01	3.537E+00	0.000E+00
3	2.827E-01	3.537E+00	0.000E+00
4	3.201E-01	3.124E+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	31.67	3.00	51.74	4.00	0.00	-0.00	0.00
2	161.76	9.50	34.51	10.67	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT

2      0.00    9.50    127.01   10.67

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
0.00000E+00	0.00000E+00
5.00000E-01	4.42818E+00
1.00000E+00	9.93113E+00
1.50000E+00	1.53895E+01
2.00000E+00	2.07765E+01
2.50000E+00	2.60678E+01
3.00000E+00	3.12423E+01
3.50000E+00	3.62858E+01
4.00000E+00	4.11871E+01
4.50000E+00	4.59379E+01
5.00000E+00	5.05353E+01
5.50000E+00	5.49794E+01
6.00000E+00	5.92757E+01
6.50000E+00	6.77512E+01
7.00000E+00	7.60901E+01
7.50000E+00	8.43035E+01
8.00000E+00	9.24027E+01
8.50000E+00	1.00393E+02
9.00000E+00	1.08289E+02
9.50000E+00	1.16098E+02
1.00000E+01	1.23829E+02
1.05000E+01	1.31490E+02
1.10000E+01	1.39091E+02
1.15000E+01	1.46638E+02
1.20000E+01	1.54137E+02
1.25000E+01	1.61595E+02
1.30000E+01	1.69020E+02
1.35000E+01	1.68755E+02
1.40000E+01	1.68465E+02
1.45000E+01	1.68155E+02
1.50000E+01	1.67826E+02
1.55000E+01	1.67481E+02
1.60000E+01	1.67127E+02
1.65000E+01	1.66761E+02
1.70000E+01	1.66388E+02
1.75000E+01	1.66011E+02
1.80000E+01	1.65630E+02
1.85000E+01	1.65248E+02
1.90000E+01	1.64866E+02
1.95000E+01	1.64484E+02
2.00000E+01	1.64102E+02
2.05000E+01	1.63725E+02
2.10000E+01	1.63352E+02
2.15000E+01	1.62981E+02
2.20000E+01	1.62616E+02
2.25000E+01	1.62253E+02
2.30000E+01	1.61899E+02
2.35000E+01	1.69876E+02
2.40000E+01	1.69533E+02
2.45000E+01	1.69195E+02
2.50000E+01	1.68866E+02
2.55000E+01	1.68543E+02
2.60000E+01	1.68225E+02
2.65000E+01	1.67916E+02
2.70000E+01	1.67612E+02
2.75000E+01	1.67313E+02
2.80000E+01	1.67024E+02
2.85000E+01	1.66742E+02
2.90000E+01	1.66466E+02
2.95000E+01	1.66195E+02

3.0000E+01	1.65933E+02
3.0500E+01	1.65677E+02
3.1000E+01	1.65426E+02
3.1500E+01	1.65183E+02
3.2000E+01	1.64946E+02
3.2500E+01	1.22558E+02
3.3000E+01	1.22332E+02
3.3500E+01	1.22114E+02
3.4000E+01	1.21900E+02
3.4500E+01	1.21693E+02
3.5000E+01	1.21490E+02
3.5500E+01	1.21295E+02
3.6000E+01	1.21102E+02
3.6500E+01	7.46097E+00
3.7000E+01	7.28003E+00
3.7500E+01	7.10410E+00
3.8000E+01	6.93264E+00
3.8500E+01	6.76620E+00
3.9000E+01	6.60394E+00
3.9500E+01	6.44641E+00
4.0000E+01	6.29307E+00
4.0500E+01	6.14392E+00
4.1000E+01	5.99894E+00
4.1500E+01	5.85787E+00
4.2000E+01	5.72070E+00
4.2500E+01	5.58715E+00
4.3000E+01	5.45723E+00
4.3500E+01	5.33093E+00
4.4000E+01	5.20826E+00
4.4500E+01	5.08866E+00
4.5000E+01	4.97240E+00
4.5500E+01	4.85921E+00
4.6000E+01	4.74908E+00
4.6500E+01	4.64202E+00
4.7000E+01	4.53775E+00
4.7500E+01	4.43654E+00
4.8000E+01	4.33785E+00
4.8500E+01	4.24166E+00
4.9000E+01	4.14827E+00
4.9500E+01	4.05738E+00
5.0000E+01	3.96872E+00

\*\*\*\*\*  
\* SOIL LAYERS AND STRENGTH DATA \*  
\*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

5 LAYER(S) OF SOIL

LAYER 1  
THE SOIL IS A SAND

LAYER 2  
THE SOIL IS A SAND

LAYER 3  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH

10 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.4602E-02
23.0000	3.4602E-02
23.0000	3.0551E-02
32.0000	3.0551E-02
32.0000	2.8815E-02
36.0000	2.8815E-02
36.0000	3.0551E-02
46.0000	3.0551E-02
46.0000	3.0551E-02
53.0000	3.0551E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
51.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	34.00	3.46E-02	6.00E+01	2.82	2.13	4.86E-01

Y IN	P LBS/IN
0.000	0.000
0.010	0.060
0.020	0.120
0.038	0.228
0.056	0.336
0.074	0.444
0.092	0.552
0.110	0.660
0.128	0.768
0.146	0.876
0.164	0.984
0.182	1.012
0.200	1.037
0.283	1.149
0.367	1.261
0.450	1.372
0.540	1.372

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
----------------	------	-----	-----------	-----	---	---	----

FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.01	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.51E+03

Y	P
IN	LBS/IN
0.000	0.000
0.010	91.934
0.020	183.868
0.038	273.265
0.056	346.654
0.074	411.114
0.092	469.612
0.110	523.740
0.128	574.474
0.146	622.469
0.164	668.187
0.182	711.969
0.200	754.080
0.283	945.114
0.367	1136.148
0.450	1327.181
0.540	1327.181

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
2.50	27.88	34.00	3.46E-02	6.00E+01	1.23	0.86	1.46E+02

Y	P
IN	LBS/IN
0.000	0.000
0.010	18.000
0.020	36.000
0.038	68.400
0.056	80.883
0.074	89.026
0.092	95.954
0.110	102.041
0.128	107.505
0.146	112.485
0.164	117.078
0.182	121.350
0.200	125.354
0.283	143.331
0.367	161.308
0.450	179.285
0.540	179.285

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
15.50	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.70E+03

Y	P
IN	LBS/IN
0.000	0.000
0.009	95.560
0.017	191.120
0.035	297.263



0.054	382.893
0.072	457.578
0.090	525.094
0.109	587.415
0.127	645.732
0.145	700.832
0.163	753.268
0.182	803.447
0.200	851.682
0.283	1067.442
0.367	1283.202
0.450	1498.961
0.540	1498.961

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
5.00	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.92E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	6.119
0.003	12.238
0.023	39.195
0.043	57.021
0.062	71.779
0.082	84.789
0.102	96.619
0.121	107.580
0.141	117.863
0.161	127.596
0.180	136.873
0.200	145.760
0.283	182.686
0.367	219.612
0.450	256.538
0.540	256.538

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
18.00	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.90E+03

Y	P
IN	LBS/IN
0.000	0.000
0.008	100.031
0.015	200.061
0.034	322.721
0.052	420.357
0.071	505.081
0.089	581.467
0.108	651.856
0.126	717.647
0.145	779.756
0.163	838.824
0.182	895.324
0.200	949.611

0.283	1190.179
0.367	1430.747
0.450	1671.315
0.540	1671.315

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
7.50	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	4.37E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	9.178
0.003	18.357
0.023	58.792
0.043	85.531
0.062	107.669
0.082	127.184
0.102	144.929
0.121	161.370
0.141	176.794
0.161	191.394
0.180	205.309
0.200	218.641
0.283	274.030
0.367	329.419
0.450	384.808
0.540	384.808

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
20.50	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.10E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	105.018
0.014	210.037
0.033	349.022
0.051	458.488
0.070	553.117
0.089	638.262
0.107	716.627
0.126	789.811
0.144	858.858
0.163	924.495
0.181	987.255
0.200	1047.540
0.283	1312.916
0.367	1578.293
0.450	1843.670
0.540	1843.670

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
9.99	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	5.83E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	12.228
0.003	24.455
0.023	78.324
0.043	113.947
0.062	143.439
0.082	169.437
0.102	193.078
0.121	214.980
0.141	235.529
0.161	254.980
0.180	273.518
0.200	291.278
0.283	365.068
0.367	438.859
0.450	512.649
0.540	512.649

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
22.99	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.29E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	110.330
0.013	220.660
0.032	375.783
0.051	496.923
0.069	601.335
0.088	695.140
0.107	781.394
0.125	861.895
0.144	937.811
0.163	1009.954
0.181	1078.914
0.200	1145.142
0.283	1435.244
0.367	1725.347
0.450	2015.450
0.540	2015.450

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
10.01	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	4.75E+02

Y	P
IN	LBS/IN
0.000	0.000

0.002	10.429
0.004	20.857
0.023	64.212
0.043	93.113
0.063	117.071
0.082	138.202
0.102	157.424
0.121	175.237
0.141	191.950
0.161	207.772
0.180	222.853
0.200	237.302
0.283	297.419
0.367	357.536
0.450	417.652
0.540	417.652

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
23.01	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	1.81E+03

Y	P
IN	LBS/IN
0.000	0.000
0.005	70.474
0.009	140.947
0.028	276.861
0.047	378.238
0.067	464.382
0.086	541.230
0.105	611.593
0.124	677.077
0.143	738.706
0.162	797.182
0.181	853.012
0.200	906.579
0.283	1136.245
0.367	1365.912
0.450	1595.579
0.540	1595.579

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
12.25	27.88	31.00	3.39E-02	6.00E+01	0.88	0.50	5.68E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	11.219
0.003	22.439
0.023	75.835
0.042	110.777
0.062	139.658
0.082	165.099
0.102	188.225
0.121	209.645
0.141	229.737

0.161	248.753
0.180	266.875
0.200	284.235
0.283	356.242
0.367	428.248
0.450	500.254
0.540	500.254

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
25.25	27.88	31.00	3.39E-02	6.00E+01	0.88	0.50	1.94E+03

Y	P
IN	LBS/IN
0.000	0.000
0.004	71.113
0.009	142.225
0.028	290.846
0.047	400.388
0.066	493.168
0.085	575.807
0.104	651.402
0.123	721.712
0.143	787.855
0.162	850.593
0.181	910.478
0.200	967.924
0.283	1213.131
0.367	1458.338
0.450	1703.546
0.540	1703.546

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
14.50	27.88	31.00	3.33E-02	6.00E+01	0.88	0.50	6.63E+02

Y	P
IN	LBS/IN
0.000	0.000
0.001	12.160
0.003	24.320
0.022	87.664
0.042	128.623
0.062	162.417
0.082	192.164
0.101	219.192
0.121	244.220
0.141	267.692
0.161	289.904
0.180	311.069
0.200	331.343
0.283	415.283
0.367	499.223
0.450	583.163
0.540	583.163

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.50	27.88	31.00	3.33E-02	6.00E+01	0.88	0.50	2.06E+03

Y IN	P LBS/IN
0.000	0.000
0.004	72.074
0.008	144.149
0.027	305.351
0.046	422.972
0.066	522.334
0.085	610.725
0.104	691.524
0.123	766.638
0.142	837.275
0.162	904.259
0.181	968.185
0.200	1029.497
0.283	1290.303
0.367	1551.108
0.450	1811.914
0.540	1811.914

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
16.75	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	7.57E+02

Y IN	P LBS/IN
0.000	0.000
0.001	13.178
0.002	26.356
0.022	99.576
0.042	146.526
0.062	185.220
0.081	219.263
0.101	250.186
0.121	278.815
0.141	305.660
0.160	331.064
0.180	355.267
0.200	378.450
0.283	474.324
0.367	570.199
0.450	666.073
0.540	666.073

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
29.75	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	2.18E+03

Y	P
IN	LBS/IN
0.000	0.000
0.004	73.275
0.007	146.549
0.027	320.196
0.046	445.812
0.065	551.699
0.084	645.799
0.104	731.766
0.123	811.653
0.142	886.759
0.161	957.966
0.181	1025.911
0.200	1091.070
0.283	1367.474
0.367	1643.878
0.450	1920.283
0.540	1920.283

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
18.99	27.88	31.00	3.27E-02	6.00E+01	0.88	0.50	8.51E+02

Y	P
IN	LBS/IN
0.000	0.000
0.001	14.238
0.002	28.475
0.022	111.491
0.042	164.397
0.062	207.964
0.081	246.281
0.101	281.079
0.121	313.292
0.141	343.496
0.160	372.076
0.180	399.304
0.200	425.383
0.283	533.147
0.367	640.911
0.450	748.675
0.540	748.675

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
31.99	27.88	31.00	3.27E-02	6.00E+01	0.88	0.50	2.30E+03

Y	P
IN	LBS/IN
0.000	0.000
0.003	74.651
0.007	149.302
0.026	335.242
0.046	468.757
0.065	581.101
0.084	680.858

0.103	771.947
0.123	856.569
0.142	936.107
0.161	1011.504
0.181	1083.438
0.200	1152.415
0.283	1444.360
0.367	1736.305
0.450	2028.250
0.540	2028.250

P-Multiplier = 1.000E+00 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
19.01	27.880	3.47E+00	3.47E+00	3.27E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	20.52616
0.00017	30.69376
0.00034	36.50124
0.00168	54.58209
0.00336	64.90940
0.01680	97.06220
0.03360	115.42706
0.08400	145.14184
0.16800	172.60371
0.25200	191.01741
0.33600	205.26156
0.84000	258.10275
1.68000	306.93762
3.36000	365.01240
3.78000	365.01240
4.20000	365.01240

P-Multiplier = 1.000E+00 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
32.01	27.880	3.47E+00	3.47E+00	3.27E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	35.10719
0.00017	52.49749
0.00034	62.43039
0.00168	93.35522
0.00336	111.01869
0.01680	166.01165
0.03360	197.42224
0.08400	248.24533
0.16800	295.21511
0.25200	326.70923
0.33600	351.07191
0.84000	441.44955
1.68000	524.97495
3.36000	624.30395
3.78000	624.30395



4.20000 624.30395

P-Multiplier = 1.000E+00 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
20.00	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	21.01496
0.00017	31.42470
0.00034	37.37047
0.00168	55.88189
0.00336	66.45515
0.01680	99.37362
0.03360	118.17582
0.08400	148.59822
0.16800	176.71406
0.25200	195.56626
0.33600	210.14962
0.84000	264.24916
1.68000	314.24698
3.36000	373.70474
3.78000	373.70474
4.20000	373.70474

P-Multiplier = 1.000E+00 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
33.00	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	36.31643
0.00017	54.30574
0.00034	64.58077
0.00168	96.57077
0.00336	114.84265
0.01680	171.72982
0.03360	204.22232
0.08400	256.79598
0.16800	305.38360
0.25200	337.96251
0.33600	363.16435
0.84000	456.65499
1.68000	543.05737
3.36000	645.80769
3.78000	645.80769
4.20000	645.80769

P-Multiplier = 1.000E+00 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	
21.00	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	21.50788
0.00017	32.16178
0.00034	38.24701
0.00168	57.19262
0.00336	68.01388
0.01680	101.70446
0.03360	120.94767
0.08400	152.08365
0.16800	180.85896
0.25200	200.15334
0.33600	215.07876
0.84000	270.44722
1.68000	321.61776
3.36000	382.47013
3.78000	382.47013
4.20000	382.47013

P-Multiplier = 1.000E+00 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	
34.00	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	37.53584
0.00017	56.12917
0.00034	66.74921
0.00168	99.81336
0.00336	118.69875
0.01680	177.49603
0.03360	211.07954
0.08400	265.41848
0.16800	315.63754
0.25200	349.31036
0.33600	375.35841
0.84000	471.98821
1.68000	561.29174
3.36000	667.49213
3.78000	667.49213
4.20000	667.49213

P-Multiplier = 1.000E+00 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	
22.00	27.880	3.47E+00	3.47E+00	3.22E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	22.00079
0.00017	32.89885
0.00034	39.12355

0.00168	58.50335
0.00336	69.57261
0.01680	104.03531
0.03360	123.71953
0.08400	155.56907
0.16800	185.00385
0.25200	204.74042
0.33600	220.00790
0.84000	276.64528
1.68000	328.98854
3.36000	391.23551
3.78000	391.23551
4.20000	391.23551

P-Multiplier = 1.000E+00 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
35.00	27.880	3.47E+00	3.47E+00	3.22E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	38.75525
0.00017	57.95261
0.00034	68.91766
0.00168	103.05594
0.00336	122.55485
0.01680	183.26225
0.03360	217.93677
0.08400	274.04098
0.16800	325.89148
0.25200	360.65821
0.33600	387.55247
0.84000	487.32143
1.68000	579.52611
3.36000	689.17658
3.78000	689.17658
4.20000	689.17658

P-Multiplier = 1.000E+00 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
22.99	27.880	3.47E+00	3.47E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	22.48960
0.00017	33.62979
0.00034	39.99278
0.00168	59.80316
0.00336	71.11835
0.01680	106.34673
0.03360	126.46829
0.08400	159.02546
0.16800	189.11420
0.25200	209.28927
0.33600	224.89596
0.84000	282.79169

1.68000	336.29789
3.36000	399.92785
3.78000	399.92785
4.20000	399.92785

P-Multiplier = 1.000E+00 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
35.99	27.880	3.47E+00	3.47E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	39.96449
0.00017	59.76085
0.00034	71.06803
0.00168	106.27150
0.00336	126.37882
0.01680	188.98041
0.03360	224.73685
0.08400	282.59163
0.16800	336.05997
0.25200	371.91150
0.33600	399.64491
0.84000	502.52687
1.68000	597.60853
3.36000	710.68032
3.78000	710.68032
4.20000	710.68032

P-Multiplier = 1.000E+00 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
23.01	27.880	5.56E+00	5.56E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	28.43773
0.00017	42.52433
0.00034	50.57023
0.00168	75.62014
0.00336	89.92801
0.01680	134.47373
0.03360	159.91712
0.08400	201.08513
0.16800	239.13187
0.25200	264.64292
0.33600	284.37732
0.84000	357.58555
1.68000	425.24328
3.36000	505.70234
3.78000	505.70234
4.20000	505.70234

P-Multiplier = 1.000E+00 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
36.01	27.880	5.56E+00	5.56E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	46.51762
0.00017	69.56006
0.00034	82.72132
0.00168	123.69723
0.00336	147.10163
0.01680	219.96824
0.03360	261.58779
0.08400	328.92924
0.16800	391.16499
0.25200	432.89522
0.33600	465.17619
0.84000	584.92809
1.68000	695.60064
3.36000	827.21323
3.78000	827.21323
4.20000	827.21323

P-Multiplier = 1.000E+00 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
25.50	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	29.73991
0.00017	44.47153
0.00034	52.88586
0.00168	79.08281
0.00336	94.04585
0.01680	140.63134
0.03360	167.23979
0.08400	210.29290
0.16800	250.08182
0.25200	276.76103
0.33600	297.39908
0.84000	373.95954
1.68000	444.71534
3.36000	528.85865
3.78000	528.85865
4.20000	528.85865

P-Multiplier = 1.000E+00 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
38.50	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000

0.00003	49.63736
0.00017	74.22516
0.00034	88.26909
0.00168	131.99308
0.00336	156.96710
0.01680	234.72056
0.03360	279.13137
0.08400	350.98911
0.16800	417.39875
0.25200	461.92765
0.33600	496.37356
0.84000	624.15671
1.68000	742.25160
3.36000	882.69089
3.78000	882.69089
4.20000	882.69089

P-Multiplier = 1.000E+00 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
28.00	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	31.04644
0.00017	46.42525
0.00034	55.20924
0.00168	82.55707
0.00336	98.17746
0.01680	146.80954
0.03360	174.58695
0.08400	219.53147
0.16800	261.06838
0.25200	288.91966
0.33600	310.46438
0.84000	390.38829
1.68000	464.25253
3.36000	552.09241
3.78000	552.09241
4.20000	552.09241

P-Multiplier = 1.000E+00 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
41.00	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	52.76753
0.00017	78.90586
0.00034	93.83541
0.00168	140.31666
0.00336	166.86558
0.01680	249.52223
0.03360	296.73361
0.08400	373.12277
0.16800	443.72025

0.25200	491.05718
0.33600	527.67528
0.84000	663.51653
1.68000	789.05858
3.36000	938.35408
3.78000	938.35408
4.20000	938.35408

P-Multiplier = 1.000E+00 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
30.50	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	32.35297
0.00017	48.37897
0.00034	57.53262
0.00168	86.03133
0.00336	102.30907
0.01680	152.98774
0.03360	181.93411
0.08400	228.77003
0.16800	272.05495
0.25200	301.07829
0.33600	323.52968
0.84000	406.81703
1.68000	483.78971
3.36000	575.32617
3.78000	575.32617
4.20000	575.32617

P-Multiplier = 1.000E+00 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
43.50	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	55.89770
0.00017	83.58656
0.00034	99.40173
0.00168	148.64025
0.00336	176.76405
0.01680	264.32390
0.03360	314.33586
0.08400	395.25642
0.16800	470.04175
0.25200	520.18671
0.33600	558.97699
0.84000	702.87636
1.68000	835.86556
3.36000	994.01727
3.78000	994.01727
4.20000	994.01727

P-Multiplier = 1.000E+00 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
32.99	27.880	5.56E+00	5.56E+00	3.16E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	33.65514
0.00017	50.32618
0.00034	59.84825
0.00168	89.49401
0.00336	106.42691
0.01680	159.14535
0.03360	189.25678
0.08400	237.97780
0.16800	283.00489
0.25200	313.19640
0.33600	336.55143
0.84000	423.19102
1.68000	503.26177
3.36000	598.48248
3.78000	598.48248
4.20000	598.48248

P-Multiplier = 1.000E+00 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
45.99	27.880	5.56E+00	5.56E+00	3.16E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	59.01744
0.00017	88.25165
0.00034	104.94949
0.00168	156.93610
0.00336	186.62952
0.01680	279.07623
0.03360	331.87943
0.08400	417.31630
0.16800	496.27551
0.25200	549.21914
0.33600	590.17437
0.84000	742.10498
1.68000	882.51652
3.36000	1049.49492
3.78000	1049.49492
4.20000	1049.49492

P-Multiplier = 1.000E+00 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
33.01	27.880	6.94E+00	6.94E+00	3.16E-02	5.0000E-03



Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	37.62364
0.00012	56.26046
0.00024	66.90534
0.00120	100.04681
0.00240	118.97638
0.01200	177.91119
0.02400	211.57325
0.06000	266.03928
0.12000	316.37580
0.18000	350.12738
0.24000	376.23636
0.60000	473.09217
1.20000	562.60458
2.40000	669.05336
2.70000	669.05336
3.00000	669.05336

P-Multiplier = 1.000E+00 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	
46.01	27.880	6.94E+00	6.94E+00	3.16E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	63.39332
0.00012	94.79513
0.00024	112.73104
0.00120	168.57223
0.00240	200.46730
0.01200	299.76853
0.02400	356.48686
0.06000	448.25850
0.12000	533.07220
0.18000	589.94137
0.24000	633.93326
0.60000	797.12887
1.20000	947.95132
2.40000	1127.31045
2.70000	1127.31045
3.00000	1127.31045

P-Multiplier = 1.000E+00 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	
34.25	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	38.27255
0.00012	57.23080
0.00024	68.05928
0.00120	101.77236
0.00240	121.02842
0.01200	180.97969

0.02400	215.22234
0.06000	270.62777
0.12000	321.83247
0.18000	356.16617
0.24000	382.72546
0.60000	481.25178
1.20000	572.30804
2.40000	680.59280
2.70000	680.59280
3.00000	680.59280

P-Multiplier = 1.000E+00 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
47.25	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	64.94798
0.00012	97.11988
0.00024	115.49565
0.00120	172.70628
0.00240	205.38354
0.01200	307.12002
0.02400	365.22931
0.06000	459.25155
0.12000	546.14521
0.18000	604.40904
0.24000	649.47977
0.60000	816.67758
1.20000	971.19879
2.40000	1154.95651
2.70000	1154.95651
3.00000	1154.95651

P-Multiplier = 1.000E+00 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
35.50	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	38.92581
0.00012	58.20766
0.00024	69.22097
0.00120	103.50949
0.00240	123.09422
0.01200	184.06879
0.02400	218.89592
0.06000	275.24705
0.12000	327.32575
0.18000	362.24549
0.24000	389.25811
0.60000	489.46616
1.20000	582.07664
2.40000	692.20968
2.70000	692.20968

3.00000 692.20968

P-Multiplier = 1.000E+00 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
48.50	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	66.51306
0.00012	99.46023
0.00024	118.27881
0.00120	176.86808
0.00240	210.33278
0.01200	314.52085
0.02400	374.03044
0.06000	470.31838
0.12000	559.30596
0.18000	618.97380
0.24000	665.13063
0.60000	836.35749
1.20000	994.60228
2.40000	1182.78810
2.70000	1182.78810
3.00000	1182.78810

P-Multiplier = 1.000E+00 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
36.75	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	39.57908
0.00012	59.18452
0.00024	70.38266
0.00120	105.24662
0.00240	125.16003
0.01200	187.15789
0.02400	222.56950
0.06000	279.86633
0.12000	332.81903
0.18000	368.32481
0.24000	395.79076
0.60000	497.68053
1.20000	591.84523
2.40000	703.82656
2.70000	703.82656
3.00000	703.82656

P-Multiplier = 1.000E+00 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	
49.75	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	68.07815
0.00012	101.80058
0.00024	121.06197
0.00120	181.02987
0.00240	215.28201
0.01200	321.92169
0.02400	382.83156
0.06000	481.38521
0.12000	572.46671
0.18000	633.53857
0.24000	680.78149
0.60000	856.03740
1.20000	1018.00577
2.40000	1210.61970
2.70000	1210.61970
3.00000	1210.61970

P-Multiplier = 1.000E+00 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	
37.99	27.880	6.94E+00	6.94E+00	3.14E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	40.22799
0.00012	60.15487
0.00024	71.53660
0.00120	106.97217
0.00240	127.21206
0.01200	190.22640
0.02400	226.21859
0.06000	284.45482
0.12000	338.27569
0.18000	374.36360
0.24000	402.27986
0.60000	505.84014
1.20000	601.54870
2.40000	715.36599
2.70000	715.36599
3.00000	715.36599

P-Multiplier = 1.000E+00 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	
50.99	27.880	6.94E+00	6.94E+00	3.14E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	69.63280
0.00012	104.12532
0.00024	123.82657

0.00120	185.16392
0.00240	220.19825
0.01200	329.27318
0.02400	391.57401
0.06000	492.37826
0.12000	585.53973
0.18000	648.00623
0.24000	696.32801
0.60000	875.58611
1.20000	1041.25323
2.40000	1238.26575
2.70000	1238.26575
3.00000	1238.26575

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

Wall 3 13 foot ATB-531-Service Load

RESULTS

NUMBER OF ITERATIONS : 8

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	3.577E+00	-1.289E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	3.500E+00	-1.289E-02	0.000E+00	1.328E+01	0.000E+00	2.657E+01	2.883E+10
2	1.000E+00	3.423E+00	-1.289E-02	1.594E+02	5.636E+01	0.000E+00	5.959E+01	2.883E+10
3	1.500E+00	3.345E+00	-1.289E-02	6.763E+02	1.323E+02	0.000E+00	9.234E+01	2.883E+10
4	2.000E+00	3.268E+00	-1.289E-02	1.747E+03	2.408E+02	0.000E+00	1.247E+02	2.883E+10
5	2.500E+00	3.191E+00	-1.289E-02	3.566E+03	3.814E+02	0.000E+00	1.564E+02	2.883E+10
6	3.000E+00	3.113E+00	-1.289E-02	6.324E+03	5.533E+02	0.000E+00	1.875E+02	2.883E+10
7	3.500E+00	3.036E+00	-1.289E-02	1.021E+04	7.559E+02	0.000E+00	2.177E+02	2.883E+10
8	4.000E+00	2.959E+00	-1.288E-02	1.539E+04	9.883E+02	0.000E+00	2.471E+02	2.883E+10
9	4.500E+00	2.881E+00	-1.288E-02	2.207E+04	1.250E+03	0.000E+00	2.756E+02	2.883E+10
10	5.000E+00	2.804E+00	-1.287E-02	3.039E+04	1.539E+03	0.000E+00	3.032E+02	2.883E+10
11	5.500E+00	2.727E+00	-1.287E-02	4.053E+04	1.856E+03	0.000E+00	3.299E+02	2.883E+10
12	6.000E+00	2.650E+00	-1.286E-02	5.266E+04	2.198E+03	0.000E+00	3.557E+02	2.883E+10
13	6.500E+00	2.573E+00	-1.284E-02	6.691E+04	2.579E+03	0.000E+00	4.065E+02	2.883E+10
14	7.000E+00	2.496E+00	-1.283E-02	8.361E+04	3.011E+03	0.000E+00	4.565E+02	2.883E+10
15	7.500E+00	2.419E+00	-1.281E-02	1.039E+05	3.492E+03	0.000E+00	5.058E+02	2.883E+10
16	8.000E+00	2.342E+00	-1.278E-02	1.255E+05	4.022E+03	0.000E+00	5.544E+02	2.883E+10
17	8.500E+00	2.265E+00	-1.276E-02	1.513E+05	4.601E+03	0.000E+00	6.024E+02	2.883E+10
18	9.000E+00	2.189E+00	-1.272E-02	1.807E+05	5.227E+03	0.000E+00	6.497E+02	2.883E+10
19	9.500E+00	2.113E+00	-1.268E-02	2.140E+05	5.900E+03	0.000E+00	6.966E+02	2.883E+10
20	1.000E+01	2.037E+00	-1.263E-02	2.515E+05	6.620E+03	0.000E+00	7.430E+02	2.883E+10
21	1.050E+01	1.961E+00	-1.258E-02	2.935E+05	7.386E+03	0.000E+00	7.889E+02	2.883E+10
22	1.100E+01	1.886E+00	-1.251E-02	3.402E+05	8.197E+03	0.000E+00	8.345E+02	2.883E+10
23	1.150E+01	1.811E+00	-1.243E-02	3.918E+05	9.055E+03	0.000E+00	8.798E+02	2.883E+10
24	1.200E+01	1.737E+00	-1.235E-02	4.488E+05	9.957E+03	0.000E+00	9.248E+02	2.883E+10
25	1.250E+01	1.663E+00	-1.225E-02	5.113E+05	1.090E+04	0.000E+00	9.696E+02	2.883E+10
26	1.300E+01	1.590E+00	-1.213E-02	5.797E+05	1.189E+04	-6.860E-01	1.010E+03	2.883E+10
27	1.350E+01	1.517E+00	-1.200E-02	6.540E+05	1.279E+04	-3.696E+01	7.908E+02	2.883E+10
28	1.400E+01	1.446E+00	-1.186E-02	7.332E+05	1.348E+04	-7.254E+01	5.755E+02	2.883E+10
29	1.450E+01	1.375E+00	-1.170E-02	8.158E+05	1.395E+04	-1.081E+02	3.602E+02	2.883E+10
30	1.500E+01	1.305E+00	-1.152E-02	9.005E+05	1.420E+04	-1.437E+02	1.447E+02	2.883E+10
31	1.550E+01	1.237E+00	-1.132E-02	9.861E+05	1.423E+04	-1.793E+02	-7.092E+01	2.883E+10
32	1.600E+01	1.169E+00	-1.111E-02	1.071E+06	1.412E+04	-1.947E+02	-1.657E+02	2.883E+10
33	1.650E+01	1.103E+00	-1.088E-02	1.156E+06	1.390E+04	-2.102E+02	-2.605E+02	2.883E+10
34	1.700E+01	1.039E+00	-1.063E-02	1.238E+06	1.360E+04	-2.256E+02	-3.554E+02	2.883E+10
35	1.750E+01	9.758E-01	-1.036E-02	1.319E+06	1.319E+04	-2.411E+02	-4.503E+02	2.883E+10
36	1.800E+01	9.145E-01	-1.008E-02	1.396E+06	1.269E+04	-2.565E+02	-5.452E+02	2.883E+10
37	1.850E+01	8.549E-01	-9.782E-03	1.471E+06	1.207E+04	-2.822E+02	-7.015E+02	2.883E+10
38	1.900E+01	7.971E-01	-9.469E-03	1.541E+06	1.129E+04	-3.078E+02	-8.577E+02	2.883E+10
39	1.950E+01	7.412E-01	-9.141E-03	1.607E+06	1.036E+04	-3.335E+02	-1.014E+03	2.883E+10
40	2.000E+01	6.874E-01	-8.801E-03	1.666E+06	9.264E+03	-3.591E+02	-1.170E+03	2.883E+10
41	2.050E+01	6.356E-01	-8.449E-03	1.718E+06	8.015E+03	-3.848E+02	-1.326E+03	2.883E+10
42	2.100E+01	5.860E-01	-8.087E-03	1.762E+06	6.611E+03	-4.104E+02	-1.482E+03	2.883E+10

43	2.150E+01	5.386E-01	-7.716E-03	1.797E+06	5.051E+03	-4.359E+02	-1.638E+03	2.883E+10
44	2.200E+01	4.934E-01	-7.340E-03	1.822E+06	3.336E+03	-4.615E+02	-1.793E+03	2.883E+10
45	2.250E+01	4.505E-01	-6.959E-03	1.837E+06	1.465E+03	-4.870E+02	-1.949E+03	2.883E+10
46	2.300E+01	4.099E-01	-6.576E-03	1.840E+06	-4.551E+02	-4.771E+02	-1.891E+03	2.883E+10
47	2.350E+01	3.716E-01	-6.194E-03	1.832E+06	-2.214E+03	-4.411E+02	-1.627E+03	2.883E+10
48	2.400E+01	3.356E-01	-5.815E-03	1.813E+06	-3.741E+03	-4.073E+02	-1.427E+03	2.883E+10
49	2.450E+01	3.018E-01	-5.441E-03	1.787E+06	-5.075E+03	-3.759E+02	-1.240E+03	2.883E+10
50	2.500E+01	2.703E-01	-5.072E-03	1.753E+06	-6.228E+03	-3.467E+02	-1.067E+03	2.883E+10
51	2.550E+01	2.409E-01	-4.712E-03	1.712E+06	-7.215E+03	-3.196E+02	-9.062E+02	2.883E+10
52	2.600E+01	2.137E-01	-4.361E-03	1.666E+06	-8.088E+03	-3.083E+02	-8.407E+02	2.883E+10
53	2.650E+01	1.886E-01	-4.019E-03	1.615E+06	-8.896E+03	-2.969E+02	-7.740E+02	2.883E+10
54	2.700E+01	1.655E-01	-3.689E-03	1.559E+06	-9.634E+03	-2.848E+02	-7.029E+02	2.883E+10
55	2.750E+01	1.443E-01	-3.371E-03	1.499E+06	-1.030E+04	-2.717E+02	-6.263E+02	2.883E+10
56	2.800E+01	1.251E-01	-3.065E-03	1.436E+06	-1.088E+04	-2.560E+02	-5.339E+02	2.883E+10
57	2.850E+01	1.076E-01	-2.774E-03	1.369E+06	-1.137E+04	-2.400E+02	-4.393E+02	2.883E+10
58	2.900E+01	9.177E-02	-2.496E-03	1.299E+06	-1.176E+04	-2.237E+02	-3.432E+02	2.883E+10
59	2.950E+01	7.760E-02	-2.233E-03	1.228E+06	-1.205E+04	-2.073E+02	-2.465E+02	2.883E+10
60	3.000E+01	6.497E-02	-1.985E-03	1.155E+06	-1.225E+04	-1.908E+02	-1.490E+02	2.883E+10
61	3.050E+01	5.378E-02	-1.753E-03	1.081E+06	-1.235E+04	-1.749E+02	-5.506E+01	2.883E+10
62	3.100E+01	4.394E-02	-1.536E-03	1.006E+06	-1.236E+04	-1.596E+02	3.478E+01	2.883E+10
63	3.150E+01	3.535E-02	-1.334E-03	9.323E+05	-1.228E+04	-1.429E+02	1.337E+02	2.883E+10
64	3.200E+01	2.793E-02	-1.148E-03	8.591E+05	-1.210E+04	-1.271E+02	2.272E+02	2.883E+10
65	3.250E+01	2.158E-02	-9.763E-04	7.872E+05	-1.194E+04	-1.070E+02	9.330E+01	2.883E+10
66	3.300E+01	1.622E-02	-8.199E-04	7.158E+05	-1.182E+04	-9.794E+01	1.463E+02	2.883E+10
67	3.350E+01	1.174E-02	-6.783E-04	6.454E+05	-1.164E+04	-8.801E+01	2.046E+02	2.883E+10
68	3.400E+01	8.077E-03	-5.512E-04	5.761E+05	-1.141E+04	-7.984E+01	2.524E+02	2.883E+10
69	3.450E+01	5.130E-03	-4.383E-04	5.084E+05	-1.114E+04	-7.328E+01	2.905E+02	2.883E+10
70	3.500E+01	2.817E-03	-3.394E-04	4.424E+05	-1.083E+04	-6.600E+01	3.330E+02	2.883E+10
71	3.550E+01	1.057E-03	-2.540E-04	3.785E+05	-1.045E+04	-5.007E+01	4.274E+02	2.883E+10
72	3.600E+01	-2.305E-04	-1.816E-04	3.171E+05	-9.680E+03	6.395E+01	1.110E+03	2.883E+10
73	3.650E+01	-1.122E-03	-1.214E-04	2.623E+05	-8.814E+03	9.611E+01	6.215E+02	2.883E+10
74	3.700E+01	-1.687E-03	-7.208E-05	2.113E+05	-8.132E+03	1.167E+02	7.437E+02	2.883E+10
75	3.750E+01	-1.987E-03	-3.296E-05	1.647E+05	-7.361E+03	1.259E+02	7.982E+02	2.883E+10
76	3.800E+01	-2.082E-03	-3.030E-06	1.230E+05	-6.543E+03	1.326E+02	8.373E+02	2.883E+10
77	3.850E+01	-2.024E-03	1.873E-05	8.621E+04	-5.693E+03	1.371E+02	8.633E+02	2.883E+10
78	3.900E+01	-1.857E-03	3.339E-05	5.464E+04	-4.832E+03	1.363E+02	8.576E+02	2.883E+10
79	3.950E+01	-1.623E-03	4.201E-05	2.822E+04	-3.984E+03	1.334E+02	8.392E+02	2.883E+10
80	4.000E+01	-1.353E-03	4.565E-05	6.831E+03	-3.168E+03	1.260E+02	7.935E+02	2.883E+10
81	4.050E+01	-1.075E-03	4.534E-05	-9.794E+03	-2.398E+03	1.180E+02	7.447E+02	2.883E+10
82	4.100E+01	-8.093E-04	4.204E-05	-2.195E+04	-1.677E+03	1.102E+02	6.972E+02	2.883E+10
83	4.150E+01	-5.708E-04	3.664E-05	-2.992E+04	-1.002E+03	1.032E+02	6.541E+02	2.883E+10
84	4.200E+01	-3.696E-04	3.000E-05	-3.397E+04	-3.658E+02	9.725E+01	6.178E+02	2.883E+10
85	4.250E+01	-2.108E-04	2.289E-05	-3.431E+04	2.168E+02	8.565E+01	5.475E+02	2.883E+10
86	4.300E+01	-9.488E-05	1.606E-05	-3.137E+04	7.102E+02	6.775E+01	4.393E+02	2.883E+10
87	4.350E+01	-1.812E-05	1.011E-05	-2.579E+04	1.036E+03	3.014E+01	2.129E+02	2.883E+10
88	4.400E+01	2.644E-05	5.457E-06	-1.894E+04	1.081E+03	-2.566E+01	-1.227E+02	2.883E+10
89	4.450E+01	4.736E-05	2.154E-06	-1.282E+04	9.316E+02	-3.454E+01	-1.767E+02	2.883E+10
90	4.500E+01	5.229E-05	1.353E-08	-7.755E+03	7.519E+02	-3.542E+01	-1.827E+02	2.883E+10
91	4.550E+01	4.753E-05	-1.188E-06	-3.792E+03	5.698E+02	-3.511E+01	-1.815E+02	2.883E+10
92	4.600E+01	3.803E-05	-1.678E-06	-9.174E+02	3.907E+02	-3.421E+01	-1.768E+02	2.883E+10
93	4.650E+01	2.739E-05	-1.680E-06	8.966E+02	2.224E+02	-3.127E+01	-1.598E+02	2.883E+10
94	4.700E+01	1.787E-05	-1.404E-06	1.752E+03	8.125E+01	-2.496E+01	-1.226E+02	2.883E+10
95	4.750E+01	1.054E-05	-1.027E-06	1.872E+03	-1.714E+01	-1.680E+01	-7.421E+01	2.883E+10
96	4.800E+01	5.542E-06	-6.719E-07	1.546E+03	-6.797E+01	-8.911E+00	-2.745E+01	2.883E+10
97	4.850E+01	2.475E-06	-4.012E-07	1.056E+03	-8.102E+01	-4.015E+00	1.359E+00	2.883E+10
98	4.900E+01	7.272E-07	-2.317E-07	5.738E+02	-7.145E+01	-1.186E+00	1.777E+01	2.883E+10
99	4.950E+01	-3.046E-07	-1.513E-07	1.985E+02	-4.782E+01	8.561E-01	2.949E+01	2.883E+10
100	5.000E+01	-1.089E-06	-1.307E-07	-1.696E-13	-1.654E+01	1.543E+00	3.308E+01	2.883E+10

END OF ANALYSIS

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 3\  
Name of input data file : Wall 3 13 foot Str Case W05.py7d  
Name of output file : Wall 3 13 foot Str Case W05.py7o  
Name of plot output file : Wall 3 13 foot Str Case W05.py7p

-----

Time and Date of Analysis

-----

Date: March 13, 2023 Time: 16:12:45

Wall 3 13 foot ATB-531-Strength Load

\*\*\*\*\*  
\* 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 = 50.000 FT  
NUMBER OF INCREMENTS = 100  
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	50.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.175E+01



\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI	TOTAL WEIGHT	UNIT	DRAINED	ZTOP
	FT	PSI	DEG	PCI	T OR F	FT	
1	6.0	0.0	34.0	0.071	T	0.00	
2	7.0	0.0	34.0	0.071	T	6.00	
3	10.0	0.0	34.0	0.071	T	13.00	
4	9.0	0.0	31.0	0.067	T	23.00	
5	4.0	3.5	0.0	0.065	F	32.00	
6	10.0	5.6	0.0	0.067	F	36.00	
7	7.0	6.9	0.0	0.067	F	46.00	

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH	STRESS
FT	LBS/IN**2
0.000E+00	0.000E+00
6.000E+00	5.083E+00
1.300E+01	7.990E+00
2.300E+01	1.214E+01
3.200E+01	1.544E+01
3.600E+01	1.682E+01
4.600E+01	2.049E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	2.827E-01	3.537E+00	0.000E+00
3	2.827E-01	3.537E+00	0.000E+00
4	3.201E-01	3.124E+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	Z1	PA2	Z2	PA3	Z3	PA4
	LBS/IN	FT	LBS/IN	FT	LBS/IN	FT	LBS/IN
1	31.67	3.00	77.61	4.00	0.00	-0.00	0.00
2	222.12	9.50	51.77	10.67	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO	PW1	Z1	PW2	Z2
	LBS/IN	FT	LBS/IN	FT

2      0.00    9.50    190.51   10.67

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
0.00000E+00	0.00000E+00
5.00000E-01	6.91480E+00
1.00000E+00	1.57098E+01
1.50000E+00	2.44273E+01
2.00000E+00	3.30211E+01
2.50000E+00	4.14464E+01
3.00000E+00	4.96682E+01
3.50000E+00	5.76586E+01
4.00000E+00	6.53981E+01
4.50000E+00	7.28783E+01
5.00000E+00	8.00881E+01
5.50000E+00	8.70330E+01
6.00000E+00	9.37186E+01
6.50000E+00	1.06633E+02
7.00000E+00	1.19312E+02
7.50000E+00	1.31772E+02
8.00000E+00	1.44031E+02
8.50000E+00	1.56100E+02
9.00000E+00	1.68002E+02
9.50000E+00	1.79751E+02
1.00000E+01	1.91366E+02
1.05000E+01	2.02858E+02
1.10000E+01	2.14244E+02
1.15000E+01	2.25538E+02
1.20000E+01	2.36749E+02
1.25000E+01	2.47887E+02
1.30000E+01	2.58963E+02
1.35000E+01	2.58501E+02
1.40000E+01	2.57993E+02
1.45000E+01	2.57449E+02
1.50000E+01	2.56872E+02
1.55000E+01	2.56270E+02
1.60000E+01	2.55648E+02
1.65000E+01	2.55010E+02
1.70000E+01	2.54358E+02
1.75000E+01	2.53697E+02
1.80000E+01	2.53033E+02
1.85000E+01	2.52364E+02
1.90000E+01	2.51692E+02
1.95000E+01	2.51023E+02
2.00000E+01	2.50360E+02
2.05000E+01	2.49699E+02
2.10000E+01	2.49044E+02
2.15000E+01	2.48394E+02
2.20000E+01	2.47753E+02
2.25000E+01	2.47123E+02
2.30000E+01	2.46501E+02
2.35000E+01	2.45838E+02
2.40000E+01	2.45778E+02
2.45000E+01	2.45719E+02
2.50000E+01	2.45661E+02
2.55000E+01	2.45604E+02
2.60000E+01	2.45549E+02
2.65000E+01	2.45494E+02
2.70000E+01	2.45441E+02
2.75000E+01	2.45389E+02
2.80000E+01	2.45339E+02
2.85000E+01	2.45289E+02
2.90000E+01	2.45241E+02
2.95000E+01	2.45193E+02

3.0000E+01	2.51478E+02
3.0500E+01	2.51032E+02
3.1000E+01	2.50594E+02
3.1500E+01	2.50167E+02
3.2000E+01	2.49752E+02
3.2500E+01	1.86113E+02
3.3000E+01	1.85717E+02
3.3500E+01	1.85335E+02
3.4000E+01	1.84961E+02
3.4500E+01	1.84599E+02
3.5000E+01	1.84245E+02
3.5500E+01	1.83902E+02
3.6000E+01	1.83567E+02
3.6500E+01	1.30570E+01
3.7000E+01	1.27400E+01
3.7500E+01	1.24320E+01
3.8000E+01	1.21323E+01
3.8500E+01	1.18406E+01
3.9000E+01	1.15571E+01
3.9500E+01	1.12814E+01
4.0000E+01	1.10129E+01
4.0500E+01	1.07519E+01
4.1000E+01	1.04982E+01
4.1500E+01	1.02512E+01
4.2000E+01	1.00112E+01
4.2500E+01	9.77752E+00
4.3000E+01	9.55029E+00
4.3500E+01	9.32921E+00
4.4000E+01	9.11425E+00
4.4500E+01	8.90515E+00
4.5000E+01	8.70163E+00
4.5500E+01	8.50368E+00
4.6000E+01	8.31103E+00
4.6500E+01	8.12367E+00
4.7000E+01	7.94134E+00
4.7500E+01	7.76374E+00
4.8000E+01	7.59117E+00
4.8500E+01	7.42305E+00
4.9000E+01	7.25939E+00
4.9500E+01	7.10020E+00
5.0000E+01	6.94519E+00

\*\*\*\*\*  
\* SOIL LAYERS AND STRENGTH DATA \*  
\*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

5 LAYER(S) OF SOIL

LAYER 1  
THE SOIL IS A SAND

LAYER 2  
THE SOIL IS A SAND

LAYER 3  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH

10 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.4602E-02
23.0000	3.4602E-02
23.0000	3.0551E-02
32.0000	3.0551E-02
32.0000	2.8815E-02
36.0000	2.8815E-02
36.0000	3.0551E-02
46.0000	3.0551E-02
46.0000	3.0551E-02
53.0000	3.0551E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
51.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	34.00	3.46E-02	6.00E+01	2.82	2.13	4.86E-01

Y IN	P LBS/IN
0.000	0.000
0.010	0.060
0.020	0.120
0.038	0.228
0.056	0.336
0.074	0.444
0.092	0.552
0.110	0.660
0.128	0.768
0.146	0.876
0.164	0.984
0.182	1.012
0.200	1.037
0.283	1.149
0.367	1.261
0.450	1.372
0.540	1.372

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
----------------	------	-----	-----------	-----	---	---	----

FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.01	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.51E+03

Y	P
IN	LBS/IN
0.000	0.000
0.010	91.934
0.020	183.868
0.038	273.265
0.056	346.654
0.074	411.114
0.092	469.612
0.110	523.740
0.128	574.474
0.146	622.469
0.164	668.187
0.182	711.969
0.200	754.080
0.283	945.114
0.367	1136.148
0.450	1327.181
0.540	1327.181

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
2.50	27.88	34.00	3.46E-02	6.00E+01	1.23	0.86	1.46E+02

Y	P
IN	LBS/IN
0.000	0.000
0.010	18.000
0.020	36.000
0.038	68.400
0.056	80.883
0.074	89.026
0.092	95.954
0.110	102.041
0.128	107.505
0.146	112.485
0.164	117.078
0.182	121.350
0.200	125.354
0.283	143.331
0.367	161.308
0.450	179.285
0.540	179.285

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
15.50	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.70E+03

Y	P
IN	LBS/IN
0.000	0.000
0.009	95.560
0.017	191.120
0.035	297.263

0.054	382.893
0.072	457.578
0.090	525.094
0.109	587.415
0.127	645.732
0.145	700.832
0.163	753.268
0.182	803.447
0.200	851.682
0.283	1067.442
0.367	1283.202
0.450	1498.961
0.540	1498.961

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
5.00	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.92E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	6.119
0.003	12.238
0.023	39.195
0.043	57.021
0.062	71.779
0.082	84.789
0.102	96.619
0.121	107.580
0.141	117.863
0.161	127.596
0.180	136.873
0.200	145.760
0.283	182.686
0.367	219.612
0.450	256.538
0.540	256.538

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
18.00	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.90E+03

Y	P
IN	LBS/IN
0.000	0.000
0.008	100.031
0.015	200.061
0.034	322.721
0.052	420.357
0.071	505.081
0.089	581.467
0.108	651.856
0.126	717.647
0.145	779.756
0.163	838.824
0.182	895.324
0.200	949.611

0.283	1190.179
0.367	1430.747
0.450	1671.315
0.540	1671.315

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
7.50	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	4.37E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	9.178
0.003	18.357
0.023	58.792
0.043	85.531
0.062	107.669
0.082	127.184
0.102	144.929
0.121	161.370
0.141	176.794
0.161	191.394
0.180	205.309
0.200	218.641
0.283	274.030
0.367	329.419
0.450	384.808
0.540	384.808

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
20.50	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.10E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	105.018
0.014	210.037
0.033	349.022
0.051	458.488
0.070	553.117
0.089	638.262
0.107	716.627
0.126	789.811
0.144	858.858
0.163	924.495
0.181	987.255
0.200	1047.540
0.283	1312.916
0.367	1578.293
0.450	1843.670
0.540	1843.670

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
9.99	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	5.83E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	12.228
0.003	24.455
0.023	78.324
0.043	113.947
0.062	143.439
0.082	169.437
0.102	193.078
0.121	214.980
0.141	235.529
0.161	254.980
0.180	273.518
0.200	291.278
0.283	365.068
0.367	438.859
0.450	512.649
0.540	512.649

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
22.99	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.29E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	110.330
0.013	220.660
0.032	375.783
0.051	496.923
0.069	601.335
0.088	695.140
0.107	781.394
0.125	861.895
0.144	937.811
0.163	1009.954
0.181	1078.914
0.200	1145.142
0.283	1435.244
0.367	1725.347
0.450	2015.450
0.540	2015.450

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
10.01	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	4.75E+02

Y	P
IN	LBS/IN
0.000	0.000



0.002	10.429
0.004	20.857
0.023	64.212
0.043	93.113
0.063	117.071
0.082	138.202
0.102	157.424
0.121	175.237
0.141	191.950
0.161	207.772
0.180	222.853
0.200	237.302
0.283	297.419
0.367	357.536
0.450	417.652
0.540	417.652

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
23.01	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	1.81E+03

Y	P
IN	LBS/IN
0.000	0.000
0.005	70.474
0.009	140.947
0.028	276.861
0.047	378.238
0.067	464.382
0.086	541.230
0.105	611.593
0.124	677.077
0.143	738.706
0.162	797.182
0.181	853.012
0.200	906.579
0.283	1136.245
0.367	1365.912
0.450	1595.579
0.540	1595.579

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
12.25	27.88	31.00	3.39E-02	6.00E+01	0.88	0.50	5.68E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	11.219
0.003	22.439
0.023	75.835
0.042	110.777
0.062	139.658
0.082	165.099
0.102	188.225
0.121	209.645
0.141	229.737

0.161	248.753
0.180	266.875
0.200	284.235
0.283	356.242
0.367	428.248
0.450	500.254
0.540	500.254

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
25.25	27.88	31.00	3.39E-02	6.00E+01	0.88	0.50	1.94E+03

Y	P
IN	LBS/IN
0.000	0.000
0.004	71.113
0.009	142.225
0.028	290.846
0.047	400.388
0.066	493.168
0.085	575.807
0.104	651.402
0.123	721.712
0.143	787.855
0.162	850.593
0.181	910.478
0.200	967.924
0.283	1213.131
0.367	1458.338
0.450	1703.546
0.540	1703.546

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
14.50	27.88	31.00	3.33E-02	6.00E+01	0.88	0.50	6.63E+02

Y	P
IN	LBS/IN
0.000	0.000
0.001	12.160
0.003	24.320
0.022	87.664
0.042	128.623
0.062	162.417
0.082	192.164
0.101	219.192
0.121	244.220
0.141	267.692
0.161	289.904
0.180	311.069
0.200	331.343
0.283	415.283
0.367	499.223
0.450	583.163
0.540	583.163

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.50	27.88	31.00	3.33E-02	6.00E+01	0.88	0.50	2.06E+03

Y IN	P LBS/IN
0.000	0.000
0.004	72.074
0.008	144.149
0.027	305.351
0.046	422.972
0.066	522.334
0.085	610.725
0.104	691.524
0.123	766.638
0.142	837.275
0.162	904.259
0.181	968.185
0.200	1029.497
0.283	1290.303
0.367	1551.108
0.450	1811.914
0.540	1811.914

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
16.75	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	7.57E+02

Y IN	P LBS/IN
0.000	0.000
0.001	13.178
0.002	26.356
0.022	99.576
0.042	146.526
0.062	185.220
0.081	219.263
0.101	250.186
0.121	278.815
0.141	305.660
0.160	331.064
0.180	355.267
0.200	378.450
0.283	474.324
0.367	570.199
0.450	666.073
0.540	666.073

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
29.75	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	2.18E+03

Y	P
IN	LBS/IN
0.000	0.000
0.004	73.275
0.007	146.549
0.027	320.196
0.046	445.812
0.065	551.699
0.084	645.799
0.104	731.766
0.123	811.653
0.142	886.759
0.161	957.966
0.181	1025.911
0.200	1091.070
0.283	1367.474
0.367	1643.878
0.450	1920.283
0.540	1920.283

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
18.99	27.88	31.00	3.27E-02	6.00E+01	0.88	0.50	8.51E+02

Y	P
IN	LBS/IN
0.000	0.000
0.001	14.238
0.002	28.475
0.022	111.491
0.042	164.397
0.062	207.964
0.081	246.281
0.101	281.079
0.121	313.292
0.141	343.496
0.160	372.076
0.180	399.304
0.200	425.383
0.283	533.147
0.367	640.911
0.450	748.675
0.540	748.675

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
31.99	27.88	31.00	3.27E-02	6.00E+01	0.88	0.50	2.30E+03

Y	P
IN	LBS/IN
0.000	0.000
0.003	74.651
0.007	149.302
0.026	335.242
0.046	468.757
0.065	581.101
0.084	680.858

0.103	771.947
0.123	856.569
0.142	936.107
0.161	1011.504
0.181	1083.438
0.200	1152.415
0.283	1444.360
0.367	1736.305
0.450	2028.250
0.540	2028.250

P-Multiplier = 1.000E+00 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
19.01	27.880	3.47E+00	3.47E+00	3.27E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	20.52616
0.00017	30.69376
0.00034	36.50124
0.00168	54.58209
0.00336	64.90940
0.01680	97.06220
0.03360	115.42706
0.08400	145.14184
0.16800	172.60371
0.25200	191.01741
0.33600	205.26156
0.84000	258.10275
1.68000	306.93762
3.36000	365.01240
3.78000	365.01240
4.20000	365.01240

P-Multiplier = 1.000E+00 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
32.01	27.880	3.47E+00	3.47E+00	3.27E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	35.10719
0.00017	52.49749
0.00034	62.43039
0.00168	93.35522
0.00336	111.01869
0.01680	166.01165
0.03360	197.42224
0.08400	248.24533
0.16800	295.21511
0.25200	326.70923
0.33600	351.07191
0.84000	441.44955
1.68000	524.97495
3.36000	624.30395
3.78000	624.30395

4.20000 624.30395

P-Multiplier = 1.000E+00 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
20.00	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	21.01496
0.00017	31.42470
0.00034	37.37047
0.00168	55.88189
0.00336	66.45515
0.01680	99.37362
0.03360	118.17582
0.08400	148.59822
0.16800	176.71406
0.25200	195.56626
0.33600	210.14962
0.84000	264.24916
1.68000	314.24698
3.36000	373.70474
3.78000	373.70474
4.20000	373.70474

P-Multiplier = 1.000E+00 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
33.00	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	36.31643
0.00017	54.30574
0.00034	64.58077
0.00168	96.57077
0.00336	114.84265
0.01680	171.72982
0.03360	204.22232
0.08400	256.79598
0.16800	305.38360
0.25200	337.96251
0.33600	363.16435
0.84000	456.65499
1.68000	543.05737
3.36000	645.80769
3.78000	645.80769
4.20000	645.80769

P-Multiplier = 1.000E+00 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	
21.00	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	21.50788
0.00017	32.16178
0.00034	38.24701
0.00168	57.19262
0.00336	68.01388
0.01680	101.70446
0.03360	120.94767
0.08400	152.08365
0.16800	180.85896
0.25200	200.15334
0.33600	215.07876
0.84000	270.44722
1.68000	321.61776
3.36000	382.47013
3.78000	382.47013
4.20000	382.47013

P-Multiplier = 1.000E+00 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	
34.00	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	37.53584
0.00017	56.12917
0.00034	66.74921
0.00168	99.81336
0.00336	118.69875
0.01680	177.49603
0.03360	211.07954
0.08400	265.41848
0.16800	315.63754
0.25200	349.31036
0.33600	375.35841
0.84000	471.98821
1.68000	561.29174
3.36000	667.49213
3.78000	667.49213
4.20000	667.49213

P-Multiplier = 1.000E+00 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	
22.00	27.880	3.47E+00	3.47E+00	3.22E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	22.00079
0.00017	32.89885
0.00034	39.12355

0.00168	58.50335
0.00336	69.57261
0.01680	104.03531
0.03360	123.71953
0.08400	155.56907
0.16800	185.00385
0.25200	204.74042
0.33600	220.00790
0.84000	276.64528
1.68000	328.98854
3.36000	391.23551
3.78000	391.23551
4.20000	391.23551

P-Multiplier = 1.000E+00 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
35.00	27.880	3.47E+00	3.47E+00	3.22E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	38.75525
0.00017	57.95261
0.00034	68.91766
0.00168	103.05594
0.00336	122.55485
0.01680	183.26225
0.03360	217.93677
0.08400	274.04098
0.16800	325.89148
0.25200	360.65821
0.33600	387.55247
0.84000	487.32143
1.68000	579.52611
3.36000	689.17658
3.78000	689.17658
4.20000	689.17658

P-Multiplier = 1.000E+00 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
22.99	27.880	3.47E+00	3.47E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	22.48960
0.00017	33.62979
0.00034	39.99278
0.00168	59.80316
0.00336	71.11835
0.01680	106.34673
0.03360	126.46829
0.08400	159.02546
0.16800	189.11420
0.25200	209.28927
0.33600	224.89596
0.84000	282.79169



1.68000	336.29789
3.36000	399.92785
3.78000	399.92785
4.20000	399.92785

P-Multiplier = 1.000E+00 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
35.99	27.880	3.47E+00	3.47E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	39.96449
0.00017	59.76085
0.00034	71.06803
0.00168	106.27150
0.00336	126.37882
0.01680	188.98041
0.03360	224.73685
0.08400	282.59163
0.16800	336.05997
0.25200	371.91150
0.33600	399.64491
0.84000	502.52687
1.68000	597.60853
3.36000	710.68032
3.78000	710.68032
4.20000	710.68032

P-Multiplier = 1.000E+00 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
23.01	27.880	5.56E+00	5.56E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	28.43773
0.00017	42.52433
0.00034	50.57023
0.00168	75.62014
0.00336	89.92801
0.01680	134.47373
0.03360	159.91712
0.08400	201.08513
0.16800	239.13187
0.25200	264.64292
0.33600	284.37732
0.84000	357.58555
1.68000	425.24328
3.36000	505.70234
3.78000	505.70234
4.20000	505.70234

P-Multiplier = 1.000E+00 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
36.01	27.880	5.56E+00	5.56E+00	3.20E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	46.51762
0.00017	69.56006
0.00034	82.72132
0.00168	123.69723
0.00336	147.10163
0.01680	219.96824
0.03360	261.58779
0.08400	328.92924
0.16800	391.16499
0.25200	432.89522
0.33600	465.17619
0.84000	584.92809
1.68000	695.60064
3.36000	827.21323
3.78000	827.21323
4.20000	827.21323

P-Multiplier = 1.000E+00 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
25.50	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	29.73991
0.00017	44.47153
0.00034	52.88586
0.00168	79.08281
0.00336	94.04585
0.01680	140.63134
0.03360	167.23979
0.08400	210.29290
0.16800	250.08182
0.25200	276.76103
0.33600	297.39908
0.84000	373.95954
1.68000	444.71534
3.36000	528.85865
3.78000	528.85865
4.20000	528.85865

P-Multiplier = 1.000E+00 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
38.50	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000

0.00003	49.63736
0.00017	74.22516
0.00034	88.26909
0.00168	131.99308
0.00336	156.96710
0.01680	234.72056
0.03360	279.13137
0.08400	350.98911
0.16800	417.39875
0.25200	461.92765
0.33600	496.37356
0.84000	624.15671
1.68000	742.25160
3.36000	882.69089
3.78000	882.69089
4.20000	882.69089

P-Multiplier = 1.000E+00 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
28.00	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00003		31.04644		
	0.00017		46.42525		
	0.00034		55.20924		
	0.00168		82.55707		
	0.00336		98.17746		
	0.01680		146.80954		
	0.03360		174.58695		
	0.08400		219.53147		
	0.16800		261.06838		
	0.25200		288.91966		
	0.33600		310.46438		
	0.84000		390.38829		
	1.68000		464.25253		
	3.36000		552.09241		
	3.78000		552.09241		
	4.20000		552.09241		

P-Multiplier = 1.000E+00 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
41.00	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03
	Y IN		P LBS/IN		
	0.00000		0.00000		
	0.00003		52.76753		
	0.00017		78.90586		
	0.00034		93.83541		
	0.00168		140.31666		
	0.00336		166.86558		
	0.01680		249.52223		
	0.03360		296.73361		
	0.08400		373.12277		
	0.16800		443.72025		

0.25200	491.05718
0.33600	527.67528
0.84000	663.51653
1.68000	789.05858
3.36000	938.35408
3.78000	938.35408
4.20000	938.35408

P-Multiplier = 1.000E+00 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
30.50	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	32.35297
0.00017	48.37897
0.00034	57.53262
0.00168	86.03133
0.00336	102.30907
0.01680	152.98774
0.03360	181.93411
0.08400	228.77003
0.16800	272.05495
0.25200	301.07829
0.33600	323.52968
0.84000	406.81703
1.68000	483.78971
3.36000	575.32617
3.78000	575.32617
4.20000	575.32617

P-Multiplier = 1.000E+00 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
43.50	27.880	5.56E+00	5.56E+00	3.17E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	55.89770
0.00017	83.58656
0.00034	99.40173
0.00168	148.64025
0.00336	176.76405
0.01680	264.32390
0.03360	314.33586
0.08400	395.25642
0.16800	470.04175
0.25200	520.18671
0.33600	558.97699
0.84000	702.87636
1.68000	835.86556
3.36000	994.01727
3.78000	994.01727
4.20000	994.01727

P-Multiplier = 1.000E+00 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
32.99	27.880	5.56E+00	5.56E+00	3.16E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	33.65514
0.00017	50.32618
0.00034	59.84825
0.00168	89.49401
0.00336	106.42691
0.01680	159.14535
0.03360	189.25678
0.08400	237.97780
0.16800	283.00489
0.25200	313.19640
0.33600	336.55143
0.84000	423.19102
1.68000	503.26177
3.36000	598.48248
3.78000	598.48248
4.20000	598.48248

P-Multiplier = 1.000E+00 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
45.99	27.880	5.56E+00	5.56E+00	3.16E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	59.01744
0.00017	88.25165
0.00034	104.94949
0.00168	156.93610
0.00336	186.62952
0.01680	279.07623
0.03360	331.87943
0.08400	417.31630
0.16800	496.27551
0.25200	549.21914
0.33600	590.17437
0.84000	742.10498
1.68000	882.51652
3.36000	1049.49492
3.78000	1049.49492
4.20000	1049.49492

P-Multiplier = 1.000E+00 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
33.01	27.880	6.94E+00	6.94E+00	3.16E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	37.62364
0.00012	56.26046
0.00024	66.90534
0.00120	100.04681
0.00240	118.97638
0.01200	177.91119
0.02400	211.57325
0.06000	266.03928
0.12000	316.37580
0.18000	350.12738
0.24000	376.23636
0.60000	473.09217
1.20000	562.60458
2.40000	669.05336
2.70000	669.05336
3.00000	669.05336

P-Multiplier = 1.000E+00 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	
46.01	27.880	6.94E+00	6.94E+00	3.16E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	63.39332
0.00012	94.79513
0.00024	112.73104
0.00120	168.57223
0.00240	200.46730
0.01200	299.76853
0.02400	356.48686
0.06000	448.25850
0.12000	533.07220
0.18000	589.94137
0.24000	633.93326
0.60000	797.12887
1.20000	947.95132
2.40000	1127.31045
2.70000	1127.31045
3.00000	1127.31045

P-Multiplier = 1.000E+00 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	
34.25	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	38.27255
0.00012	57.23080
0.00024	68.05928
0.00120	101.77236
0.00240	121.02842
0.01200	180.97969

0.02400	215.22234
0.06000	270.62777
0.12000	321.83247
0.18000	356.16617
0.24000	382.72546
0.60000	481.25178
1.20000	572.30804
2.40000	680.59280
2.70000	680.59280
3.00000	680.59280

P-Multiplier = 1.000E+00 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
47.25	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	64.94798
0.00012	97.11988
0.00024	115.49565
0.00120	172.70628
0.00240	205.38354
0.01200	307.12002
0.02400	365.22931
0.06000	459.25155
0.12000	546.14521
0.18000	604.40904
0.24000	649.47977
0.60000	816.67758
1.20000	971.19879
2.40000	1154.95651
2.70000	1154.95651
3.00000	1154.95651

P-Multiplier = 1.000E+00 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
35.50	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	38.92581
0.00012	58.20766
0.00024	69.22097
0.00120	103.50949
0.00240	123.09422
0.01200	184.06879
0.02400	218.89592
0.06000	275.24705
0.12000	327.32575
0.18000	362.24549
0.24000	389.25811
0.60000	489.46616
1.20000	582.07664
2.40000	692.20968
2.70000	692.20968

3.00000 692.20968

P-Multiplier = 1.000E+00 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
48.50	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	66.51306
0.00012	99.46023
0.00024	118.27881
0.00120	176.86808
0.00240	210.33278
0.01200	314.52085
0.02400	374.03044
0.06000	470.31838
0.12000	559.30596
0.18000	618.97380
0.24000	665.13063
0.60000	836.35749
1.20000	994.60228
2.40000	1182.78810
2.70000	1182.78810
3.00000	1182.78810

P-Multiplier = 1.000E+00 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
36.75	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	39.57908
0.00012	59.18452
0.00024	70.38266
0.00120	105.24662
0.00240	125.16003
0.01200	187.15789
0.02400	222.56950
0.06000	279.86633
0.12000	332.81903
0.18000	368.32481
0.24000	395.79076
0.60000	497.68053
1.20000	591.84523
2.40000	703.82656
2.70000	703.82656
3.00000	703.82656

P-Multiplier = 1.000E+00 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	
49.75	27.880	6.94E+00	6.94E+00	3.15E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	68.07815
0.00012	101.80058
0.00024	121.06197
0.00120	181.02987
0.00240	215.28201
0.01200	321.92169
0.02400	382.83156
0.06000	481.38521
0.12000	572.46671
0.18000	633.53857
0.24000	680.78149
0.60000	856.03740
1.20000	1018.00577
2.40000	1210.61970
2.70000	1210.61970
3.00000	1210.61970

P-Multiplier = 1.000E+00 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	
37.99	27.880	6.94E+00	6.94E+00	3.14E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	40.22799
0.00012	60.15487
0.00024	71.53660
0.00120	106.97217
0.00240	127.21206
0.01200	190.22640
0.02400	226.21859
0.06000	284.45482
0.12000	338.27569
0.18000	374.36360
0.24000	402.27986
0.60000	505.84014
1.20000	601.54870
2.40000	715.36599
2.70000	715.36599
3.00000	715.36599

P-Multiplier = 1.000E+00 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	
50.99	27.880	6.94E+00	6.94E+00	3.14E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	69.63280
0.00012	104.12532
0.00024	123.82657

0.00120	185.16392
0.00240	220.19825
0.01200	329.27318
0.02400	391.57401
0.06000	492.37826
0.12000	585.53973
0.18000	648.00623
0.24000	696.32801
0.60000	875.58611
1.20000	1041.25323
2.40000	1238.26575
2.70000	1238.26575
3.00000	1238.26575

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

Wall 3 13 foot ATB-531-Strength Load

RESULTS

NUMBER OF ITERATIONS : 46

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	1.131E+01	-3.502E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	1.110E+01	-3.502E-02	0.000E+00	2.074E+01	0.000E+00	4.149E+01	2.883E+10
2	1.000E+00	1.089E+01	-3.502E-02	2.489E+02	8.862E+01	0.000E+00	9.426E+01	2.883E+10
3	1.500E+00	1.068E+01	-3.502E-02	1.063E+03	2.090E+02	0.000E+00	1.466E+02	2.883E+10
4	2.000E+00	1.047E+01	-3.502E-02	2.757E+03	3.814E+02	0.000E+00	1.981E+02	2.883E+10
5	2.500E+00	1.026E+01	-3.502E-02	5.640E+03	6.048E+02	0.000E+00	2.487E+02	2.883E+10
6	3.000E+00	1.005E+01	-3.502E-02	1.001E+04	8.781E+02	0.000E+00	2.980E+02	2.883E+10
7	3.500E+00	9.842E+00	-3.502E-02	1.618E+04	1.200E+03	0.000E+00	3.460E+02	2.883E+10
8	4.000E+00	9.631E+00	-3.501E-02	2.442E+04	1.569E+03	0.000E+00	3.924E+02	2.883E+10
9	4.500E+00	9.421E+00	-3.501E-02	3.501E+04	1.984E+03	0.000E+00	4.373E+02	2.883E+10
10	5.000E+00	9.211E+00	-3.500E-02	4.823E+04	2.443E+03	0.000E+00	4.805E+02	2.883E+10
11	5.500E+00	9.001E+00	-3.499E-02	6.432E+04	2.944E+03	0.000E+00	5.222E+02	2.883E+10
12	6.000E+00	8.791E+00	-3.497E-02	8.356E+04	3.487E+03	0.000E+00	5.623E+02	2.883E+10
13	6.500E+00	8.582E+00	-3.495E-02	1.062E+05	4.088E+03	0.000E+00	6.398E+02	2.883E+10
14	7.000E+00	8.372E+00	-3.493E-02	1.326E+05	4.766E+03	0.000E+00	7.159E+02	2.883E+10
15	7.500E+00	8.163E+00	-3.490E-02	1.634E+05	5.519E+03	0.000E+00	7.906E+02	2.883E+10
16	8.000E+00	7.953E+00	-3.486E-02	1.988E+05	6.346E+03	0.000E+00	8.642E+02	2.883E+10
17	8.500E+00	7.744E+00	-3.481E-02	2.395E+05	7.247E+03	0.000E+00	9.366E+02	2.883E+10
18	9.000E+00	7.535E+00	-3.476E-02	2.858E+05	8.219E+03	0.000E+00	1.008E+03	2.883E+10
19	9.500E+00	7.327E+00	-3.469E-02	3.381E+05	9.262E+03	0.000E+00	1.079E+03	2.883E+10
20	1.000E+01	7.119E+00	-3.462E-02	3.969E+05	1.038E+04	0.000E+00	1.148E+03	2.883E+10
21	1.050E+01	6.912E+00	-3.453E-02	4.626E+05	1.156E+04	0.000E+00	1.217E+03	2.883E+10
22	1.100E+01	6.705E+00	-3.442E-02	5.356E+05	1.281E+04	0.000E+00	1.285E+03	2.883E+10
23	1.150E+01	6.499E+00	-3.430E-02	6.163E+05	1.413E+04	0.000E+00	1.353E+03	2.883E+10
24	1.200E+01	6.293E+00	-3.417E-02	7.052E+05	1.552E+04	0.000E+00	1.420E+03	2.883E+10
25	1.250E+01	6.089E+00	-3.401E-02	8.025E+05	1.697E+04	0.000E+00	1.487E+03	2.883E+10
26	1.300E+01	5.885E+00	-3.383E-02	9.088E+05	1.849E+04	-6.860E-01	1.550E+03	2.883E+10
27	1.350E+01	5.683E+00	-3.363E-02	1.024E+06	1.993E+04	-3.696E+01	1.329E+03	2.883E+10
28	1.400E+01	5.481E+00	-3.340E-02	1.148E+06	2.115E+04	-7.254E+01	1.113E+03	2.883E+10
29	1.450E+01	5.282E+00	-3.315E-02	1.278E+06	2.215E+04	-1.081E+02	8.959E+02	2.883E+10
30	1.500E+01	5.084E+00	-3.287E-02	1.414E+06	2.294E+04	-1.437E+02	6.789E+02	2.883E+10
31	1.550E+01	4.887E+00	-3.256E-02	1.553E+06	2.351E+04	-1.793E+02	4.618E+02	2.883E+10
32	1.600E+01	4.693E+00	-3.223E-02	1.696E+06	2.392E+04	-1.947E+02	3.655E+02	2.883E+10
33	1.650E+01	4.501E+00	-3.186E-02	1.841E+06	2.424E+04	-2.102E+02	2.690E+02	2.883E+10
34	1.700E+01	4.311E+00	-3.146E-02	1.987E+06	2.446E+04	-2.256E+02	1.724E+02	2.883E+10
35	1.750E+01	4.123E+00	-3.103E-02	2.134E+06	2.459E+04	-2.411E+02	7.582E+01	2.883E+10
36	1.800E+01	3.938E+00	-3.057E-02	2.282E+06	2.461E+04	-2.565E+02	-2.080E+01	2.883E+10
37	1.850E+01	3.756E+00	-3.008E-02	2.429E+06	2.451E+04	-2.822E+02	-1.788E+02	2.883E+10
38	1.900E+01	3.577E+00	-2.956E-02	2.576E+06	2.426E+04	-3.078E+02	-3.368E+02	2.883E+10
39	1.950E+01	3.401E+00	-2.901E-02	2.721E+06	2.384E+04	-3.335E+02	-4.947E+02	2.883E+10
40	2.000E+01	3.229E+00	-2.843E-02	2.862E+06	2.327E+04	-3.591E+02	-6.527E+02	2.883E+10
41	2.050E+01	3.060E+00	-2.782E-02	3.000E+06	2.254E+04	-3.848E+02	-8.106E+02	2.883E+10
42	2.100E+01	2.895E+00	-2.718E-02	3.133E+06	2.165E+04	-4.104E+02	-9.679E+02	2.883E+10

43	2.150E+01	2.734E+00	-2.652E-02	3.259E+06	2.060E+04	-4.359E+02	-1.125E+03	2.883E+10
44	2.200E+01	2.577E+00	-2.582E-02	3.380E+06	1.940E+04	-4.615E+02	-1.282E+03	2.883E+10
45	2.250E+01	2.424E+00	-2.511E-02	3.492E+06	1.803E+04	-4.870E+02	-1.440E+03	2.883E+10
46	2.300E+01	2.276E+00	-2.437E-02	3.596E+06	1.652E+04	-5.126E+02	-1.597E+03	2.883E+10
47	2.350E+01	2.132E+00	-2.361E-02	3.690E+06	1.496E+04	-5.101E+02	-1.511E+03	2.883E+10
48	2.400E+01	1.992E+00	-2.284E-02	3.776E+06	1.346E+04	-5.077E+02	-1.499E+03	2.883E+10
49	2.450E+01	1.858E+00	-2.204E-02	3.852E+06	1.196E+04	-5.052E+02	-1.488E+03	2.883E+10
50	2.500E+01	1.728E+00	-2.124E-02	3.919E+06	1.048E+04	-5.028E+02	-1.477E+03	2.883E+10
51	2.550E+01	1.603E+00	-2.041E-02	3.978E+06	9.011E+03	-5.003E+02	-1.466E+03	2.883E+10
52	2.600E+01	1.483E+00	-1.958E-02	4.027E+06	7.481E+03	-5.210E+02	-1.593E+03	2.883E+10
53	2.650E+01	1.368E+00	-1.874E-02	4.067E+06	5.824E+03	-5.418E+02	-1.721E+03	2.883E+10
54	2.700E+01	1.258E+00	-1.789E-02	4.097E+06	4.040E+03	-5.625E+02	-1.848E+03	2.883E+10
55	2.750E+01	1.153E+00	-1.703E-02	4.116E+06	2.127E+03	-5.832E+02	-1.976E+03	2.883E+10
56	2.800E+01	1.054E+00	-1.618E-02	4.123E+06	1.004E+02	-5.998E+02	-2.078E+03	2.883E+10
57	2.850E+01	9.592E-01	-1.532E-02	4.117E+06	-2.029E+03	-6.164E+02	-2.181E+03	2.883E+10
58	2.900E+01	8.698E-01	-1.447E-02	4.098E+06	-4.261E+03	-6.329E+02	-2.283E+03	2.883E+10
59	2.950E+01	7.856E-01	-1.362E-02	4.066E+06	-6.595E+03	-6.495E+02	-2.385E+03	2.883E+10
60	3.000E+01	7.064E-01	-1.277E-02	4.019E+06	-9.032E+03	-6.661E+02	-2.488E+03	2.883E+10
61	3.050E+01	6.323E-01	-1.194E-02	3.958E+06	-1.158E+04	-6.868E+02	-2.614E+03	2.883E+10
62	3.100E+01	5.631E-01	-1.113E-02	3.880E+06	-1.426E+04	-7.074E+02	-2.741E+03	2.883E+10
63	3.150E+01	4.987E-01	-1.033E-02	3.787E+06	-1.706E+04	-7.281E+02	-2.867E+03	2.883E+10
64	3.200E+01	4.391E-01	-9.555E-03	3.676E+06	-1.995E+04	-7.346E+02	-2.909E+03	2.883E+10
65	3.250E+01	3.841E-01	-8.804E-03	3.547E+06	-2.217E+04	-4.393E+02	-1.519E+03	2.883E+10
66	3.300E+01	3.335E-01	-8.080E-03	3.410E+06	-2.300E+04	-2.097E+02	-1.437E+02	2.883E+10
67	3.350E+01	2.871E-01	-7.385E-03	3.271E+06	-2.313E+04	-2.040E+02	-1.123E+02	2.883E+10
68	3.400E+01	2.448E-01	-6.719E-03	3.132E+06	-2.322E+04	-1.986E+02	-8.157E+01	2.883E+10
69	3.450E+01	2.065E-01	-6.082E-03	2.992E+06	-2.329E+04	-1.919E+02	-4.371E+01	2.883E+10
70	3.500E+01	1.719E-01	-5.474E-03	2.853E+06	-2.331E+04	-1.859E+02	-9.969E+00	2.883E+10
71	3.550E+01	1.408E-01	-4.895E-03	2.713E+06	-2.330E+04	-1.774E+02	3.890E+01	2.883E+10
72	3.600E+01	1.131E-01	-4.345E-03	2.573E+06	-2.324E+04	-1.694E+02	8.477E+01	2.883E+10
73	3.650E+01	8.867E-02	-3.824E-03	2.434E+06	-2.367E+04	-1.710E+02	-9.479E+02	2.883E+10
74	3.700E+01	6.725E-02	-3.332E-03	2.289E+06	-2.461E+04	-1.673E+02	-9.274E+02	2.883E+10
75	3.750E+01	4.868E-02	-2.872E-03	2.139E+06	-2.552E+04	-1.625E+02	-9.007E+02	2.883E+10
76	3.800E+01	3.278E-02	-2.443E-03	1.983E+06	-2.641E+04	-1.578E+02	-8.742E+02	2.883E+10
77	3.850E+01	1.936E-02	-2.047E-03	1.822E+06	-2.724E+04	-1.447E+02	-7.969E+02	2.883E+10
78	3.900E+01	8.219E-03	-1.685E-03	1.656E+06	-2.794E+04	-1.119E+02	-6.018E+02	2.883E+10
79	3.950E+01	-8.596E-04	-1.358E-03	1.486E+06	-2.789E+04	1.079E+02	7.154E+02	2.883E+10
80	4.000E+01	-8.082E-03	-1.066E-03	1.321E+06	-2.692E+04	1.913E+02	1.214E+03	2.883E+10
81	4.050E+01	-1.366E-02	-8.078E-04	1.163E+06	-2.560E+04	2.274E+02	1.429E+03	2.883E+10
82	4.100E+01	-1.778E-02	-5.813E-04	1.014E+06	-2.410E+04	2.522E+02	1.576E+03	2.883E+10
83	4.150E+01	-2.063E-02	-3.849E-04	8.741E+05	-2.249E+04	2.633E+02	1.642E+03	2.883E+10
84	4.200E+01	-2.239E-02	-2.165E-04	7.441E+05	-2.082E+04	2.715E+02	1.689E+03	2.883E+10
85	4.250E+01	-2.323E-02	-7.412E-05	6.243E+05	-1.912E+04	2.771E+02	1.721E+03	2.883E+10
86	4.300E+01	-2.328E-02	4.438E-05	5.147E+05	-1.739E+04	2.804E+02	1.740E+03	2.883E+10
87	4.350E+01	-2.270E-02	1.412E-04	4.156E+05	-1.564E+04	2.818E+02	1.747E+03	2.883E+10
88	4.400E+01	-2.159E-02	2.184E-04	3.270E+05	-1.390E+04	2.817E+02	1.745E+03	2.883E+10
89	4.450E+01	-2.008E-02	2.784E-04	2.489E+05	-1.216E+04	2.802E+02	1.735E+03	2.883E+10
90	4.500E+01	-1.825E-02	3.231E-04	1.811E+05	-1.043E+04	2.776E+02	1.718E+03	2.883E+10
91	4.550E+01	-1.620E-02	3.548E-04	1.237E+05	-8.731E+03	2.720E+02	1.683E+03	2.883E+10
92	4.600E+01	-1.399E-02	3.756E-04	7.636E+04	-7.085E+03	2.598E+02	1.609E+03	2.883E+10
93	4.650E+01	-1.169E-02	3.876E-04	3.868E+04	-5.464E+03	2.639E+02	1.632E+03	2.883E+10
94	4.700E+01	-9.341E-03	3.927E-04	1.079E+04	-3.839E+03	2.619E+02	1.619E+03	2.883E+10
95	4.750E+01	-6.977E-03	3.931E-04	-7.391E+03	-2.245E+03	2.539E+02	1.570E+03	2.883E+10
96	4.800E+01	-4.623E-03	3.906E-04	-1.615E+04	-7.417E+02	2.317E+02	1.436E+03	2.883E+10
97	4.850E+01	-2.290E-03	3.873E-04	-1.629E+04	6.201E+02	2.073E+02	1.288E+03	2.883E+10
98	4.900E+01	2.385E-05	3.847E-04	-8.707E+03	1.169E+03	-3.514E+01	-1.899E+02	2.883E+10
99	4.950E+01	2.326E-03	3.835E-04	-2.262E+03	7.256E+02	-1.232E+02	-6.971E+02	2.883E+10
100	5.000E+01	4.626E-03	3.833E-04	0.000E+00	1.885E+02	-6.978E+01	-3.771E+02	2.883E+10

END OF ANALYSIS

Wall 3

Critical Stability and Load

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 3\  
Name of input data file : Wall 3 Critical Case ser.py7d  
Name of output file : Wall 3 Critical Case ser.py7o  
Name of plot output file : Wall 3 Critical Case ser.py7p

-----

Time and Date of Analysis

-----

Date: March 14, 2023 Time: 08:29:27

Wall 3 9.6 ft Cut Critical Case Service Loads

\*\*\*\*\*  
\* 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 = 50.000 FT  
NUMBER OF INCREMENTS = 100  
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	50.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 9.600E+00 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 9.600E+00 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.) = 2.180E+01  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.100E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS FT	COHESION/STRENGTH PSI	PHI DEG	TOTAL WEIGHT PCI	UNIT DRAINED T OR F	ZTOP FT
1	6.0	0.0	34.0	0.071	T	0.00
2	3.6	0.0	34.0	0.071	T	6.00
3	13.4	0.0	34.0	0.071	T	9.60
4	9.0	0.0	31.0	0.067	T	23.00
5	4.0	3.5	0.0	0.065	F	32.00
6	10.0	5.6	0.0	0.067	F	36.00
7	7.0	6.9	0.0	0.067	F	46.00

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
0.000E+00	0.000E+00
6.000E+00	5.083E+00
9.600E+00	6.578E+00
2.300E+01	1.214E+01
3.200E+01	1.544E+01
3.600E+01	1.682E+01
4.600E+01	2.049E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	2.827E-01	3.537E+00	0.000E+00
3	2.827E-01	3.537E+00	0.000E+00
4	3.201E-01	3.124E+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	31.67	3.00	51.74	4.00	0.00	-0.00	0.00
2	74.65	7.80	9.13	8.40	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT

2      0.00    7.80      33.59    8.40

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
0.00000E+00	0.00000E+00
5.00000E-01	4.42818E+00
1.00000E+00	9.93113E+00
1.50000E+00	1.53895E+01
2.00000E+00	2.07765E+01
2.50000E+00	2.60678E+01
3.00000E+00	3.12423E+01
3.50000E+00	3.62858E+01
4.00000E+00	4.11871E+01
4.50000E+00	4.59379E+01
5.00000E+00	5.05353E+01
5.50000E+00	5.49794E+01
6.00000E+00	5.92757E+01
6.50233E+00	6.81443E+01
7.00467E+00	7.64553E+01
7.50700E+00	8.46465E+01
8.00933E+00	9.27233E+01
8.51167E+00	1.00703E+02
9.01417E+00	1.08590E+02
9.51667E+00	1.16393E+02
1.00158E+01	1.17712E+02
1.05158E+01	1.17681E+02
1.10150E+01	1.17598E+02
1.15142E+01	1.17461E+02
1.20133E+01	1.17280E+02
1.25133E+01	1.17063E+02
1.30125E+01	1.16814E+02
1.35117E+01	1.16536E+02
1.40108E+01	1.16235E+02
1.45108E+01	1.15914E+02
1.50100E+01	1.15577E+02
1.55092E+01	1.15228E+02
1.60083E+01	1.14866E+02
1.65083E+01	1.14498E+02
1.70075E+01	1.14121E+02
1.75067E+01	1.13745E+02
1.80058E+01	1.13363E+02
1.85058E+01	1.12978E+02
1.90050E+01	1.12596E+02
1.95042E+01	1.12214E+02
2.00033E+01	1.11835E+02
2.05033E+01	1.11459E+02
2.10025E+01	1.11088E+02
2.15017E+01	1.10720E+02
2.20008E+01	1.10355E+02
2.25008E+01	1.09998E+02
2.30000E+01	1.09822E+02
2.35000E+01	1.16327E+02
2.40000E+01	1.15984E+02
2.45000E+01	1.15646E+02
2.50000E+01	1.15317E+02
2.55000E+01	1.14994E+02
2.60000E+01	1.14676E+02
2.65000E+01	1.14367E+02
2.70000E+01	1.14063E+02
2.75000E+01	1.13764E+02
2.80000E+01	1.13474E+02
2.85000E+01	1.13193E+02
2.90000E+01	1.12917E+02
2.95000E+01	1.12646E+02



3.0000E+01	1.12384E+02
3.0500E+01	1.12128E+02
3.1000E+01	1.11877E+02
3.1500E+01	1.11634E+02
3.2000E+01	1.11397E+02
3.2500E+01	4.22466E+01
3.3000E+01	4.20235E+01
3.3500E+01	4.18033E+01
3.4000E+01	4.15914E+01
3.4500E+01	4.13823E+01
3.5000E+01	4.11815E+01
3.5500E+01	4.09836E+01
3.6000E+01	4.07940E+01
3.6500E+01	7.46097E+00
3.7000E+01	7.28003E+00
3.7500E+01	7.10410E+00
3.8000E+01	6.93264E+00
3.8500E+01	6.76620E+00
3.9000E+01	6.60394E+00
3.9500E+01	6.44641E+00
4.0000E+01	6.29307E+00
4.0500E+01	6.14392E+00
4.1000E+01	5.99894E+00
4.1500E+01	5.85787E+00
4.2000E+01	5.72070E+00
4.2500E+01	5.58715E+00
4.3000E+01	5.45723E+00
4.3500E+01	5.33093E+00
4.4000E+01	5.20826E+00
4.4500E+01	5.08866E+00
4.5000E+01	4.97240E+00
4.5500E+01	4.85921E+00
4.6000E+01	4.74908E+00
4.6500E+01	4.64202E+00
4.7000E+01	4.53775E+00
4.7500E+01	4.43654E+00
4.8000E+01	4.33785E+00
4.8500E+01	4.24166E+00
4.9000E+01	4.14827E+00
4.9500E+01	4.05738E+00
5.0000E+01	3.96872E+00

\*\*\*\*\*  
 \* SOIL LAYERS AND STRENGTH DATA \*  
 \*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 9.60 FT

5 LAYER(S) OF SOIL

LAYER 1  
 THE SOIL IS A SAND

LAYER 2  
 THE SOIL IS A SAND

LAYER 3  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH

10 POINTS

X, FT	WEIGHT, LBS/IN**3
9.6000	3.4602E-02
23.0000	3.4602E-02
23.0000	3.0551E-02
32.0000	3.0551E-02
32.0000	2.8815E-02
36.0000	2.8815E-02
36.0000	3.0551E-02
46.0000	3.0551E-02
46.0000	3.0551E-02
53.0000	3.0551E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
9.60	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
51.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	34.00	3.46E-02	6.00E+01	2.82	2.13	2.13E-01
		Y		P			
		IN		LBS/IN			
		0.000		0.000			
		0.010		0.060			
		0.020		0.120			
		0.038		0.228			
		0.056		0.328			
		0.074		0.352			
		0.092		0.373			
		0.110		0.390			
		0.128		0.406			
		0.146		0.420			
		0.164		0.433			
		0.182		0.445			
		0.200		0.456			
		0.283		0.505			
		0.367		0.554			
		0.450		0.603			
		0.540		0.603			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
----------------	------	-----	-----------	-----	---	---	----

FT	IN	LBS/IN**3	LBS/IN**3	LB /IN
9.61	27.88	34.00	3.46E-02 6.00E+01	0.88 0.50 1.24E+03

Y	P
IN	LBS/IN
0.000	0.000
0.013	89.588
0.026	179.176
0.043	244.928
0.061	300.787
0.078	350.612
0.096	396.229
0.113	438.681
0.130	478.632
0.148	516.538
0.165	552.728
0.183	587.451
0.200	620.897
0.283	778.191
0.367	935.486
0.450	1092.780
0.540	1092.780

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
3.35	27.88	34.00	3.46E-02	6.00E+01	1.00	0.65	8.58E+01

Y	P
IN	LBS/IN
0.000	0.000
0.002	5.028
0.004	10.056
0.024	21.676
0.043	28.265
0.063	33.322
0.083	37.556
0.102	41.258
0.122	44.581
0.141	47.617
0.161	50.426
0.180	53.049
0.200	55.518
0.283	65.730
0.367	75.941
0.450	86.152
0.540	86.152

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
12.95	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.50E+03

Y	P
IN	LBS/IN
0.000	0.000
0.010	91.863
0.020	183.726
0.038	272.727

0.056	345.824
0.074	410.041
0.092	468.325
0.110	522.258
0.128	572.814
0.146	620.640
0.164	666.198
0.182	709.829
0.200	751.795
0.283	942.250
0.367	1132.705
0.450	1323.160
0.540	1323.160

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
6.70	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.72E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	1.006
0.000	2.012
0.020	21.401
0.040	32.415
0.060	41.391
0.080	49.250
0.100	56.371
0.120	62.953
0.140	69.117
0.160	74.946
0.180	80.496
0.200	85.809
0.283	107.547
0.367	129.285
0.450	151.023
0.540	151.023

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
16.30	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.77E+03

Y	P
IN	LBS/IN
0.000	0.000
0.008	96.919
0.017	193.838
0.035	305.292
0.053	394.788
0.072	472.704
0.090	543.074
0.108	607.990
0.127	668.710
0.145	726.062
0.163	780.630
0.182	832.840
0.200	883.020

0.283	1106.718
0.367	1330.416
0.450	1554.115
0.540	1554.115

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
10.05	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.57E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	1.509
0.000	3.017
0.020	32.102
0.040	48.623
0.060	62.086
0.080	73.875
0.100	84.556
0.120	94.429
0.140	103.676
0.160	112.419
0.180	120.743
0.200	128.713
0.283	161.321
0.367	193.928
0.450	226.535
0.540	226.535

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
19.65	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.03E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	103.277
0.015	206.555
0.033	340.007
0.052	445.466
0.070	536.739
0.089	618.916
0.107	694.577
0.126	765.254
0.144	831.948
0.163	895.357
0.181	955.993
0.200	1014.244
0.283	1271.186
0.367	1528.128
0.450	1785.069
0.540	1785.069

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.39	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	3.43E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	2.010
0.000	4.021
0.020	42.776
0.040	64.790
0.060	82.730
0.080	98.439
0.100	112.672
0.120	125.827
0.140	138.149
0.160	149.799
0.180	160.891
0.200	171.511
0.283	214.960
0.367	258.410
0.450	301.859
0.540	301.859

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
22.99	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.29E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	110.330
0.013	220.660
0.032	375.783
0.051	496.923
0.069	601.335
0.088	695.140
0.107	781.394
0.125	861.895
0.144	937.811
0.163	1009.954
0.181	1078.914
0.200	1145.142
0.283	1435.244
0.367	1725.347
0.450	2015.450
0.540	2015.450

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.41	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	2.89E+02

Y	P
IN	LBS/IN
0.000	0.000

0.001	3.503
0.001	7.006
0.021	36.955
0.041	55.207
0.061	70.160
0.081	83.283
0.101	95.186
0.121	106.197
0.140	116.516
0.160	126.276
0.180	135.572
0.200	144.473
0.283	181.073
0.367	217.673
0.450	254.273
0.540	254.273

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
23.01	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	1.81E+03

Y	P
IN	LBS/IN
0.000	0.000
0.008	100.199
0.017	200.398
0.035	314.371
0.053	406.024
0.072	485.864
0.090	557.993
0.108	624.544
0.127	686.801
0.145	745.612
0.163	801.570
0.182	855.115
0.200	906.579
0.283	1136.245
0.367	1365.912
0.450	1595.579
0.540	1595.579

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
15.65	27.88	31.00	3.40E-02	6.00E+01	0.88	0.50	3.32E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	3.245
0.001	6.491
0.021	41.962
0.041	63.050
0.061	80.287
0.081	95.401
0.100	109.103
0.120	121.774
0.140	133.646

0.160	144.872
0.180	155.564
0.200	165.801
0.283	207.804
0.367	249.807
0.450	291.810
0.540	291.810

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
25.25	27.88	31.00	3.40E-02	6.00E+01	0.88	0.50	1.94E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	97.357
0.014	194.715
0.033	322.912
0.051	423.952
0.070	511.319
0.089	589.941
0.107	662.307
0.126	729.893
0.144	793.660
0.163	854.281
0.181	912.244
0.200	967.924
0.283	1213.131
0.367	1458.338
0.450	1703.546
0.540	1703.546

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
17.90	27.88	31.00	3.36E-02	6.00E+01	0.88	0.50	3.74E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	3.161
0.001	6.323
0.021	47.120
0.041	71.012
0.061	90.520
0.080	107.616
0.100	123.112
0.120	137.438
0.140	150.860
0.160	163.551
0.180	175.637
0.200	187.208
0.283	234.634
0.367	282.060
0.450	329.486
0.540	329.486

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



AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.50	27.88	31.00	3.36E-02	6.00E+01	0.88	0.50	2.06E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.006		95.705			
		0.013		191.411			
		0.031		333.418			
		0.050		443.468			
		0.069		538.078			
		0.088		622.965			
		0.106		700.958			
		0.125		773.710			
		0.144		842.291			
		0.163		907.444			
		0.181		969.710			
		0.200		1029.497			
		0.283		1290.303			
		0.367		1551.108			
		0.450		1811.914			
		0.540		1811.914			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
20.15	27.88	31.00	3.32E-02	6.00E+01	0.88	0.50	4.17E+02
		Y IN		P LBS/IN			
		0.000		0.000			
		0.000		3.162			
		0.001		6.324			
		0.021		52.336			
		0.041		79.015			
		0.060		100.783			
		0.080		119.855			
		0.100		137.138			
		0.120		153.116			
		0.140		168.083			
		0.160		182.236			
		0.180		195.712			
		0.200		208.615			
		0.283		261.464			
		0.367		314.313			
		0.450		367.162			
		0.540		367.162			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
29.75	27.88	31.00	3.32E-02	6.00E+01	0.88	0.50	2.18E+03

Y	P
IN	LBS/IN
0.000	0.000
0.006	94.885
0.011	189.771
0.030	345.235
0.049	464.003
0.068	565.641
0.087	656.625
0.106	740.104
0.125	817.900
0.143	891.188
0.162	960.777
0.181	1027.257
0.200	1091.070
0.283	1367.474
0.367	1643.878
0.450	1920.283
0.540	1920.283

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
22.39	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	4.60E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	3.209
0.001	6.419
0.021	57.563
0.040	87.009
0.060	111.023
0.080	132.059
0.100	151.121
0.120	168.742
0.140	185.248
0.160	200.854
0.180	215.715
0.200	229.942
0.283	288.194
0.367	346.446
0.450	404.698
0.540	404.698

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
31.99	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	2.30E+03

Y	P
IN	LBS/IN
0.000	0.000
0.005	94.664
0.010	189.327
0.029	357.928
0.048	485.170
0.067	593.658
0.086	690.599

0.105	779.444
0.124	862.183
0.143	940.086
0.162	1014.029
0.181	1084.646
0.200	1152.415
0.283	1444.360
0.367	1736.305
0.450	2028.250
0.540	2028.250

P-Multiplier = 1.000E+00 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
22.41	27.880	3.47E+00	3.47E+00	3.30E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	17.70629
0.00017	26.47708
0.00034	31.48673
0.00168	47.08365
0.00336	55.99221
0.01680	83.72788
0.03360	99.56979
0.08400	125.20238
0.16800	148.89156
0.25200	164.77560
0.33600	177.06291
0.84000	222.64482
1.68000	264.77080
3.36000	314.86732
3.78000	314.86732
4.20000	314.86732

P-Multiplier = 1.000E+00 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
32.01	27.880	3.47E+00	3.47E+00	3.30E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	35.10719
0.00017	52.49749
0.00034	62.43039
0.00168	93.35522
0.00336	111.01869
0.01680	166.01165
0.03360	197.42224
0.08400	248.24533
0.16800	295.21511
0.25200	326.70923
0.33600	351.07191
0.84000	441.44955
1.68000	524.97495
3.36000	624.30395
3.78000	624.30395

4.20000 624.30395

P-Multiplier = 1.000E+00 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
23.40	27.880	3.47E+00	3.47E+00	3.28E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	18.09030
0.00017	27.05130
0.00034	32.16960
0.00168	48.10477
0.00336	57.20654
0.01680	85.54372
0.03360	101.72921
0.08400	127.91771
0.16800	152.12065
0.25200	168.34917
0.33600	180.90295
0.84000	227.47342
1.68000	270.51301
3.36000	321.69600
3.78000	321.69600
4.20000	321.69600

P-Multiplier = 1.000E+00 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
33.00	27.880	3.47E+00	3.47E+00	3.28E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	36.31643
0.00017	54.30574
0.00034	64.58077
0.00168	96.57077
0.00336	114.84265
0.01680	171.72982
0.03360	204.22232
0.08400	256.79598
0.16800	305.38360
0.25200	337.96251
0.33600	363.16435
0.84000	456.65499
1.68000	543.05737
3.36000	645.80769
3.78000	645.80769
4.20000	645.80769

P-Multiplier = 1.000E+00 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	
24.40	27.880	3.47E+00	3.47E+00	3.26E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	18.47753
0.00017	27.63035
0.00034	32.85821
0.00168	49.13448
0.00336	58.43107
0.01680	87.37483
0.03360	103.90677
0.08400	130.65585
0.16800	155.37686
0.25200	171.95277
0.33600	184.77527
0.84000	232.34260
1.68000	276.30347
3.36000	328.58206
3.78000	328.58206
4.20000	328.58206

P-Multiplier = 1.000E+00 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	
34.00	27.880	3.47E+00	3.47E+00	3.26E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	37.53584
0.00017	56.12917
0.00034	66.74921
0.00168	99.81336
0.00336	118.69875
0.01680	177.49603
0.03360	211.07954
0.08400	265.41848
0.16800	315.63754
0.25200	349.31036
0.33600	375.35841
0.84000	471.98821
1.68000	561.29174
3.36000	667.49213
3.78000	667.49213
4.20000	667.49213

P-Multiplier = 1.000E+00 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	
25.40	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	18.86476
0.00017	28.20939
0.00034	33.54681

0.00168	50.16418
0.00336	59.65560
0.01680	89.20593
0.03360	106.08433
0.08400	133.39399
0.16800	158.63308
0.25200	175.55636
0.33600	188.64759
0.84000	237.21178
1.68000	282.09394
3.36000	335.46812
3.78000	335.46812
4.20000	335.46812

P-Multiplier = 1.000E+00 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
35.00	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	38.75525
0.00017	57.95261
0.00034	68.91766
0.00168	103.05594
0.00336	122.55485
0.01680	183.26225
0.03360	217.93677
0.08400	274.04098
0.16800	325.89148
0.25200	360.65821
0.33600	387.55247
0.84000	487.32143
1.68000	579.52611
3.36000	689.17658
3.78000	689.17658
4.20000	689.17658

P-Multiplier = 1.000E+00 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
26.39	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	19.24876
0.00017	28.78361
0.00034	34.22968
0.00168	51.18531
0.00336	60.86993
0.01680	91.02178
0.03360	108.24375
0.08400	136.10931
0.16800	161.86216
0.25200	179.12993
0.33600	192.48763
0.84000	242.04038

1.68000	287.83614
3.36000	342.29679
3.78000	342.29679
4.20000	342.29679

P-Multiplier = 1.000E+00 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
35.99	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	39.96449
0.00017	59.76085
0.00034	71.06803
0.00168	106.27150
0.00336	126.37882
0.01680	188.98041
0.03360	224.73685
0.08400	282.59163
0.16800	336.05997
0.25200	371.91150
0.33600	399.64491
0.84000	502.52687
1.68000	597.60853
3.36000	710.68032
3.78000	710.68032
4.20000	710.68032

P-Multiplier = 1.000E+00 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
26.41	27.880	5.56E+00	5.56E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	23.92160
0.00017	35.77114
0.00034	42.53929
0.00168	63.61108
0.00336	75.64675
0.01680	113.11827
0.03360	134.52105
0.08400	169.15127
0.16800	201.15589
0.25200	222.61559
0.33600	239.21601
0.84000	300.79821
1.68000	357.71137
3.36000	425.39291
3.78000	425.39291
4.20000	425.39291

P-Multiplier = 1.000E+00 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
36.01	27.880	5.56E+00	5.56E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	46.51762
0.00017	69.56006
0.00034	82.72132
0.00168	123.69723
0.00336	147.10163
0.01680	219.96824
0.03360	261.58779
0.08400	328.92924
0.16800	391.16499
0.25200	432.89522
0.33600	465.17619
0.84000	584.92809
1.68000	695.60064
3.36000	827.21323
3.78000	827.21323
4.20000	827.21323

P-Multiplier = 1.000E+00 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
28.90	27.880	5.56E+00	5.56E+00	3.22E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	24.94459
0.00017	37.30086
0.00034	44.35844
0.00168	66.33135
0.00336	78.88171
0.01680	117.95566
0.03360	140.27372
0.08400	176.38486
0.16800	209.75813
0.25200	232.13553
0.33600	249.44586
0.84000	313.66156
1.68000	373.00856
3.36000	443.58444
3.78000	443.58444
4.20000	443.58444

P-Multiplier = 1.000E+00 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
38.50	27.880	5.56E+00	5.56E+00	3.22E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000



0.00003	49.63736
0.00017	74.22516
0.00034	88.26909
0.00168	131.99308
0.00336	156.96710
0.01680	234.72056
0.03360	279.13137
0.08400	350.98911
0.16800	417.39875
0.25200	461.92765
0.33600	496.37356
0.84000	624.15671
1.68000	742.25160
3.36000	882.69089
3.78000	882.69089
4.20000	882.69089

P-Multiplier = 1.000E+00 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
31.40	27.880	5.56E+00	5.56E+00	3.21E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	25.97099
0.00017	38.83569
0.00034	46.18368
0.00168	69.06071
0.00336	82.12749
0.01680	122.80924
0.03360	146.04562
0.08400	183.64265
0.16800	218.38914
0.25200	241.68732
0.33600	259.70992
0.84000	326.56794
1.68000	388.35692
3.36000	461.83681
3.78000	461.83681
4.20000	461.83681

P-Multiplier = 1.000E+00 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
41.00	27.880	5.56E+00	5.56E+00	3.21E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	52.76753
0.00017	78.90586
0.00034	93.83541
0.00168	140.31666
0.00336	166.86558
0.01680	249.52223
0.03360	296.73361
0.08400	373.12277
0.16800	443.72025

0.25200	491.05718
0.33600	527.67528
0.84000	663.51653
1.68000	789.05858
3.36000	938.35408
3.78000	938.35408
4.20000	938.35408

P-Multiplier = 1.000E+00 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
33.90	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	26.99740
0.00017	40.37053
0.00034	48.00892
0.00168	71.79008
0.00336	85.37327
0.01680	127.66282
0.03360	151.81753
0.08400	190.90044
0.16800	227.02016
0.25200	251.23911
0.33600	269.97399
0.84000	339.47432
1.68000	403.70527
3.36000	480.08918
3.78000	480.08918
4.20000	480.08918

P-Multiplier = 1.000E+00 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
43.50	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	55.89770
0.00017	83.58656
0.00034	99.40173
0.00168	148.64025
0.00336	176.76405
0.01680	264.32390
0.03360	314.33586
0.08400	395.25642
0.16800	470.04175
0.25200	520.18671
0.33600	558.97699
0.84000	702.87636
1.68000	835.86556
3.36000	994.01727
3.78000	994.01727
4.20000	994.01727

P-Multiplier = 1.000E+00 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
36.39	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	28.02038
0.00017	41.90025
0.00034	49.82807
0.00168	74.51035
0.00336	88.60823
0.01680	132.50021
0.03360	157.57020
0.08400	198.13403
0.16800	235.62240
0.25200	260.75905
0.33600	280.20384
0.84000	352.33767
1.68000	419.00246
3.36000	498.28071
3.78000	498.28071
4.20000	498.28071

P-Multiplier = 1.000E+00 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
45.99	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	59.01744
0.00017	88.25165
0.00034	104.94949
0.00168	156.93610
0.00336	186.62952
0.01680	279.07623
0.03360	331.87943
0.08400	417.31630
0.16800	496.27551
0.25200	549.21914
0.33600	590.17437
0.84000	742.10498
1.68000	882.51652
3.36000	1049.49492
3.78000	1049.49492
4.20000	1049.49492

P-Multiplier = 1.000E+00 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
36.41	27.880	6.94E+00	6.94E+00	3.19E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	31.13802
0.00012	46.56220
0.00024	55.37210
0.00120	82.80060
0.00240	98.46706
0.01200	147.24260
0.02400	175.10195
0.06000	220.17905
0.12000	261.83849
0.18000	289.77192
0.24000	311.38019
0.60000	391.53986
1.20000	465.62199
2.40000	553.72098
2.70000	553.72098
3.00000	553.72098

P-Multiplier = 1.000E+00 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	
46.01	27.880	6.94E+00	6.94E+00	3.19E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	63.39332
0.00012	94.79513
0.00024	112.73104
0.00120	168.57223
0.00240	200.46730
0.01200	299.76853
0.02400	356.48686
0.06000	448.25850
0.12000	533.07220
0.18000	589.94137
0.24000	633.93326
0.60000	797.12887
1.20000	947.95132
2.40000	1127.31045
2.70000	1127.31045
3.00000	1127.31045

P-Multiplier = 1.000E+00 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	
37.65	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	31.64780
0.00012	47.32450
0.00024	56.27863
0.00120	84.15619
0.00240	100.07914
0.01200	149.65321

0.02400	177.96866
0.06000	223.78375
0.12000	266.12522
0.18000	294.51598
0.24000	316.47801
0.60000	397.95003
1.20000	473.24501
2.40000	562.78633
2.70000	562.78633
3.00000	562.78633

P-Multiplier = 1.000E+00 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
47.25	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	64.94798
0.00012	97.11988
0.00024	115.49565
0.00120	172.70628
0.00240	205.38354
0.01200	307.12002
0.02400	365.22931
0.06000	459.25155
0.12000	546.14521
0.18000	604.40904
0.24000	649.47977
0.60000	816.67758
1.20000	971.19879
2.40000	1154.95651
2.70000	1154.95651
3.00000	1154.95651

P-Multiplier = 1.000E+00 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
38.90	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	32.16100
0.00012	48.09192
0.00024	57.19125
0.00120	85.52087
0.00240	101.70203
0.01200	152.08000
0.02400	180.85462
0.06000	227.41264
0.12000	270.44073
0.18000	299.29187
0.24000	321.61004
0.60000	404.40322
1.20000	480.91918
2.40000	571.91251
2.70000	571.91251

3.00000 571.91251

P-Multiplier = 1.000E+00 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
48.50	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	66.51306
0.00012	99.46023
0.00024	118.27881
0.00120	176.86808
0.00240	210.33278
0.01200	314.52085
0.02400	374.03044
0.06000	470.31838
0.12000	559.30596
0.18000	618.97380
0.24000	665.13063
0.60000	836.35749
1.20000	994.60228
2.40000	1182.78810
2.70000	1182.78810
3.00000	1182.78810

P-Multiplier = 1.000E+00 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
40.15	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	32.67421
0.00012	48.85934
0.00024	58.10387
0.00120	86.88555
0.00240	103.32492
0.01200	154.50679
0.02400	183.74057
0.06000	231.04154
0.12000	274.75624
0.18000	304.06776
0.24000	326.74207
0.60000	410.85640
1.20000	488.59336
2.40000	581.03870
2.70000	581.03870
3.00000	581.03870

P-Multiplier = 1.000E+00 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	
49.75	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	68.07815
0.00012	101.80058
0.00024	121.06197
0.00120	181.02987
0.00240	215.28201
0.01200	321.92169
0.02400	382.83156
0.06000	481.38521
0.12000	572.46671
0.18000	633.53857
0.24000	680.78149
0.60000	856.03740
1.20000	1018.00577
2.40000	1210.61970
2.70000	1210.61970
3.00000	1210.61970

P-Multiplier = 1.000E+00 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	
41.39	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	33.18399
0.00012	49.62164
0.00024	59.01040
0.00120	88.24114
0.00240	104.93699
0.01200	156.91739
0.02400	186.60728
0.06000	234.64624
0.12000	279.04297
0.18000	308.81182
0.24000	331.83989
0.60000	417.26657
1.20000	496.21637
2.40000	590.10404
2.70000	590.10404
3.00000	590.10404

P-Multiplier = 1.000E+00 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	
50.99	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	69.63280
0.00012	104.12532
0.00024	123.82657

0.00120	185.16392
0.00240	220.19825
0.01200	329.27318
0.02400	391.57401
0.06000	492.37826
0.12000	585.53973
0.18000	648.00623
0.24000	696.32801
0.60000	875.58611
1.20000	1041.25323
2.40000	1238.26575
2.70000	1238.26575
3.00000	1238.26575

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

Wall 3 9.6 ft Cut Critical Case Service Loads

RESULTS

NUMBER OF ITERATIONS : 9

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	3.044E+00	-1.074E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	2.979E+00	-1.074E-02	0.000E+00	1.328E+01	0.000E+00	2.657E+01	2.883E+10
2	1.000E+00	2.915E+00	-1.074E-02	1.594E+02	5.636E+01	0.000E+00	5.959E+01	2.883E+10
3	1.500E+00	2.850E+00	-1.074E-02	6.763E+02	1.323E+02	0.000E+00	9.234E+01	2.883E+10
4	2.000E+00	2.786E+00	-1.074E-02	1.747E+03	2.408E+02	0.000E+00	1.247E+02	2.883E+10
5	2.500E+00	2.721E+00	-1.074E-02	3.566E+03	3.814E+02	0.000E+00	1.564E+02	2.883E+10
6	3.000E+00	2.657E+00	-1.074E-02	6.324E+03	5.533E+02	0.000E+00	1.875E+02	2.883E+10
7	3.500E+00	2.592E+00	-1.074E-02	1.021E+04	7.559E+02	0.000E+00	2.177E+02	2.883E+10
8	4.000E+00	2.528E+00	-1.073E-02	1.539E+04	9.883E+02	0.000E+00	2.471E+02	2.883E+10
9	4.500E+00	2.464E+00	-1.073E-02	2.207E+04	1.250E+03	0.000E+00	2.756E+02	2.883E+10
10	5.000E+00	2.399E+00	-1.073E-02	3.039E+04	1.539E+03	0.000E+00	3.032E+02	2.883E+10
11	5.500E+00	2.335E+00	-1.072E-02	4.053E+04	1.856E+03	0.000E+00	3.299E+02	2.883E+10
12	6.000E+00	2.271E+00	-1.071E-02	5.266E+04	2.198E+03	0.000E+00	3.557E+02	2.883E+10
13	6.500E+00	2.206E+00	-1.070E-02	6.691E+04	2.581E+03	0.000E+00	4.086E+02	2.883E+10
14	7.000E+00	2.142E+00	-1.068E-02	8.362E+04	3.014E+03	0.000E+00	4.582E+02	2.883E+10
15	7.500E+00	2.078E+00	-1.066E-02	1.031E+05	3.497E+03	0.000E+00	5.071E+02	2.883E+10
16	8.000E+00	2.014E+00	-1.064E-02	1.256E+05	4.028E+03	0.000E+00	5.554E+02	2.883E+10
17	8.500E+00	1.951E+00	-1.061E-02	1.514E+05	4.607E+03	0.000E+00	6.030E+02	2.883E+10
18	9.000E+00	1.887E+00	-1.057E-02	1.809E+05	5.234E+03	0.000E+00	6.502E+02	2.883E+10
19	9.500E+00	1.824E+00	-1.053E-02	2.142E+05	5.906E+03	-3.014E-01	6.950E+02	2.883E+10
20	1.000E+01	1.761E+00	-1.048E-02	2.517E+05	6.568E+03	-1.282E+01	6.293E+02	2.883E+10
21	1.050E+01	1.698E+00	-1.043E-02	2.930E+05	7.161E+03	-2.504E+01	5.558E+02	2.883E+10
22	1.100E+01	1.636E+00	-1.036E-02	3.377E+05	7.680E+03	-3.727E+01	4.820E+02	2.883E+10
23	1.150E+01	1.574E+00	-1.029E-02	3.852E+05	8.125E+03	-4.949E+01	4.079E+02	2.883E+10
24	1.200E+01	1.512E+00	-1.020E-02	4.352E+05	8.496E+03	-6.171E+01	3.335E+02	2.883E+10
25	1.250E+01	1.451E+00	-1.011E-02	4.871E+05	8.792E+03	-7.393E+01	2.589E+02	2.883E+10
26	1.300E+01	1.391E+00	-9.998E-03	5.407E+05	9.013E+03	-8.615E+01	1.841E+02	2.883E+10
27	1.350E+01	1.331E+00	-9.880E-03	5.953E+05	9.169E+03	-9.541E+01	1.268E+02	2.883E+10
28	1.400E+01	1.272E+00	-9.750E-03	6.507E+05	9.267E+03	-1.047E+02	6.946E+01	2.883E+10
29	1.450E+01	1.214E+00	-9.609E-03	7.065E+05	9.308E+03	-1.139E+02	1.195E+01	2.883E+10
30	1.500E+01	1.157E+00	-9.456E-03	7.624E+05	9.291E+03	-1.232E+02	-4.566E+01	2.883E+10
31	1.550E+01	1.101E+00	-9.292E-03	8.180E+05	9.216E+03	-1.325E+02	-1.033E+02	2.883E+10
32	1.600E+01	1.045E+00	-9.116E-03	8.730E+05	9.084E+03	-1.417E+02	-1.611E+02	2.883E+10
33	1.650E+01	9.913E-01	-8.929E-03	9.270E+05	8.894E+03	-1.510E+02	-2.189E+02	2.883E+10
34	1.700E+01	9.383E-01	-8.730E-03	9.797E+05	8.636E+03	-1.636E+02	-2.967E+02	2.883E+10
35	1.750E+01	8.866E-01	-8.521E-03	1.031E+06	8.301E+03	-1.762E+02	-3.744E+02	2.883E+10
36	1.800E+01	8.361E-01	-8.302E-03	1.079E+06	7.887E+03	-1.888E+02	-4.522E+02	2.883E+10
37	1.850E+01	7.870E-01	-8.072E-03	1.125E+06	7.396E+03	-2.013E+02	-5.301E+02	2.883E+10
38	1.900E+01	7.392E-01	-7.834E-03	1.168E+06	6.827E+03	-2.139E+02	-6.079E+02	2.883E+10
39	1.950E+01	6.930E-01	-7.587E-03	1.207E+06	6.180E+03	-2.265E+02	-6.857E+02	2.883E+10
40	2.000E+01	6.482E-01	-7.332E-03	1.242E+06	5.461E+03	-2.373E+02	-7.526E+02	2.883E+10
41	2.050E+01	6.050E-01	-7.070E-03	1.273E+06	4.675E+03	-2.480E+02	-8.195E+02	2.883E+10
42	2.100E+01	5.633E-01	-6.803E-03	1.298E+06	3.822E+03	-2.588E+02	-8.863E+02	2.883E+10



43	2.150E+01	5.233E-01	-6.530E-03	1.319E+06	2.903E+03	-2.696E+02	-9.532E+02	2.883E+10
44	2.200E+01	4.850E-01	-6.254E-03	1.333E+06	1.916E+03	-2.804E+02	-1.020E+03	2.883E+10
45	2.250E+01	4.483E-01	-5.976E-03	1.342E+06	8.653E+02	-2.903E+02	-1.082E+03	2.883E+10
46	2.300E+01	4.133E-01	-5.697E-03	1.344E+06	-1.942E+02	-2.827E+02	-1.037E+03	2.883E+10
47	2.350E+01	3.799E-01	-5.418E-03	1.339E+06	-1.155E+03	-2.635E+02	-8.833E+02	2.883E+10
48	2.400E+01	3.483E-01	-5.140E-03	1.330E+06	-1.985E+03	-2.455E+02	-7.770E+02	2.883E+10
49	2.450E+01	3.182E-01	-4.865E-03	1.315E+06	-2.712E+03	-2.285E+02	-6.772E+02	2.883E+10
50	2.500E+01	2.899E-01	-4.593E-03	1.297E+06	-3.342E+03	-2.126E+02	-5.835E+02	2.883E+10
51	2.550E+01	2.631E-01	-4.325E-03	1.275E+06	-3.882E+03	-1.976E+02	-4.958E+02	2.883E+10
52	2.600E+01	2.380E-01	-4.062E-03	1.251E+06	-4.358E+03	-1.909E+02	-4.574E+02	2.883E+10
53	2.650E+01	2.144E-01	-3.805E-03	1.223E+06	-4.797E+03	-1.842E+02	-4.191E+02	2.883E+10
54	2.700E+01	1.923E-01	-3.554E-03	1.193E+06	-5.197E+03	-1.775E+02	-3.807E+02	2.883E+10
55	2.750E+01	1.717E-01	-3.309E-03	1.161E+06	-5.557E+03	-1.706E+02	-3.408E+02	2.883E+10
56	2.800E+01	1.526E-01	-3.071E-03	1.126E+06	-5.874E+03	-1.624E+02	-2.936E+02	2.883E+10
57	2.850E+01	1.349E-01	-2.840E-03	1.090E+06	-6.144E+03	-1.540E+02	-2.449E+02	2.883E+10
58	2.900E+01	1.185E-01	-2.617E-03	1.053E+06	-6.364E+03	-1.455E+02	-1.952E+02	2.883E+10
59	2.950E+01	1.035E-01	-2.402E-03	1.014E+06	-6.534E+03	-1.368E+02	-1.448E+02	2.883E+10
60	3.000E+01	8.970E-02	-2.196E-03	9.742E+05	-6.653E+03	-1.279E+02	-9.336E+01	2.883E+10
61	3.050E+01	7.713E-02	-1.997E-03	9.340E+05	-6.722E+03	-1.198E+02	-4.584E+01	2.883E+10
62	3.100E+01	6.573E-02	-1.807E-03	8.935E+05	-6.744E+03	-1.113E+02	3.718E+00	2.883E+10
63	3.150E+01	5.545E-02	-1.625E-03	8.531E+05	-6.715E+03	-1.026E+02	5.404E+01	2.883E+10
64	3.200E+01	4.623E-02	-1.452E-03	8.130E+05	-6.635E+03	-9.397E+01	1.045E+02	2.883E+10
65	3.250E+01	3.803E-02	-1.287E-03	7.735E+05	-6.738E+03	-9.372E+01	-3.089E+02	2.883E+10
66	3.300E+01	3.079E-02	-1.130E-03	7.321E+05	-7.063E+03	-9.900E+01	-3.418E+02	2.883E+10
67	3.350E+01	2.447E-02	-9.823E-04	6.887E+05	-7.390E+03	-9.391E+01	-3.127E+02	2.883E+10
68	3.400E+01	1.900E-02	-8.437E-04	6.434E+05	-7.690E+03	-8.954E+01	-2.877E+02	2.883E+10
69	3.450E+01	1.434E-02	-7.147E-04	5.964E+05	-7.959E+03	-8.294E+01	-2.493E+02	2.883E+10
70	3.500E+01	1.043E-02	-5.956E-04	5.479E+05	-8.185E+03	-7.519E+01	-2.041E+02	2.883E+10
71	3.550E+01	7.193E-03	-4.868E-04	4.982E+05	-8.371E+03	-6.878E+01	-1.668E+02	2.883E+10
72	3.600E+01	4.583E-03	-3.884E-04	4.475E+05	-8.523E+03	-6.361E+01	-1.369E+02	2.883E+10
73	3.650E+01	2.532E-03	-3.007E-04	3.959E+05	-8.747E+03	-5.942E+01	-3.118E+02	2.883E+10
74	3.700E+01	9.755E-04	-2.238E-04	3.425E+05	-9.023E+03	-4.731E+01	-2.402E+02	2.883E+10
75	3.750E+01	-1.537E-04	-1.583E-04	2.876E+05	-8.924E+03	6.596E+01	4.388E+02	2.883E+10
76	3.800E+01	-9.238E-04	-1.039E-04	2.354E+05	-8.374E+03	1.032E+02	6.609E+02	2.883E+10
77	3.850E+01	-1.400E-03	-5.989E-05	1.872E+05	-7.654E+03	1.229E+02	7.779E+02	2.883E+10
78	3.900E+01	-1.642E-03	-2.548E-05	1.436E+05	-6.848E+03	1.324E+02	8.342E+02	2.883E+10
79	3.950E+01	-1.706E-03	3.787E-07	1.050E+05	-6.005E+03	1.357E+02	8.530E+02	2.883E+10
80	4.000E+01	-1.638E-03	1.874E-05	7.151E+04	-5.153E+03	1.355E+02	8.511E+02	2.883E+10
81	4.050E+01	-1.481E-03	3.067E-05	4.314E+04	-4.313E+03	1.318E+02	8.279E+02	2.883E+10
82	4.100E+01	-1.270E-03	3.721E-05	1.975E+04	-3.503E+03	1.261E+02	7.927E+02	2.883E+10
83	4.150E+01	-1.034E-03	3.938E-05	1.107E+03	-2.731E+03	1.193E+02	7.514E+02	2.883E+10
84	4.200E+01	-7.973E-04	3.814E-05	-1.302E+04	-2.001E+03	1.123E+02	7.086E+02	2.883E+10
85	4.250E+01	-5.766E-04	3.440E-05	-2.290E+04	-1.313E+03	1.057E+02	6.682E+02	2.883E+10
86	4.300E+01	-3.845E-04	2.903E-05	-2.877E+04	-6.619E+02	1.000E+02	6.330E+02	2.883E+10
87	4.350E+01	-2.283E-04	2.282E-05	-3.085E+04	-6.162E+01	8.917E+01	5.675E+02	2.883E+10
88	4.400E+01	-1.106E-04	1.654E-05	-2.951E+04	4.555E+02	7.242E+01	4.666E+02	2.883E+10
89	4.450E+01	-2.972E-05	1.083E-05	-2.538E+04	8.557E+02	5.022E+01	3.339E+02	2.883E+10
90	4.500E+01	1.943E-05	6.190E-06	-1.925E+04	9.896E+02	-1.562E+01	-6.596E+01	2.883E+10
91	4.550E+01	4.455E-05	2.782E-06	-1.351E+04	8.844E+02	-2.884E+01	-1.445E+02	2.883E+10
92	4.600E+01	5.282E-05	4.790E-07	-8.633E+03	7.364E+02	-2.988E+01	-1.515E+02	2.883E+10
93	4.650E+01	5.030E-05	-9.050E-07	-4.669E+03	5.791E+02	-3.166E+01	-1.630E+02	2.883E+10
94	4.700E+01	4.196E-05	-1.566E-06	-1.683E+03	4.132E+02	-3.252E+01	-1.689E+02	2.883E+10
95	4.750E+01	3.151E-05	-1.711E-06	2.893E+02	2.434E+02	-3.273E+01	-1.706E+02	2.883E+10
96	4.800E+01	2.143E-05	-1.552E-06	1.238E+03	8.569E+01	-2.768E+01	-1.449E+02	2.883E+10
97	4.850E+01	1.289E-05	-1.286E-06	1.318E+03	-2.583E+01	-1.679E+01	-7.816E+01	2.883E+10
98	4.900E+01	5.993E-06	-1.052E-06	9.280E+02	-7.669E+01	-7.873E+00	-2.355E+01	2.883E+10
99	4.950E+01	2.574E-07	-9.146E-07	3.973E+02	-7.734E+01	-3.946E-01	2.225E+01	2.883E+10
100	5.000E+01	-4.982E-06	-8.733E-07	1.357E-12	-3.311E+01	6.777E+00	6.621E+01	2.883E+10

END OF ANALYSIS

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 3\  
Name of input data file : Wall 3 Critical Case Stregnth.py7d  
Name of output file : Wall 3 Critical Case Stregnth.py7o  
Name of plot output file : Wall 3 Critical Case Stregnth.py7p

-----

Time and Date of Analysis

-----

Date: March 14, 2023 Time: 08:32:53

Wall 3 9.6 ft Cut Critical Case Service Loads

\*\*\*\*\*  
\* 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 = 50.000 FT  
NUMBER OF INCREMENTS = 100  
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	50.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 9.600E+00 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 9.600E+00 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.) = 2.180E+01  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.175E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS FT	COHESION/STRENGTH PSI	PHI DEG	TOTAL WEIGHT PCI	UNIT DRAINED T OR F	ZTOP FT
1	6.0	0.0	34.0	0.071	T	0.00
2	3.6	0.0	34.0	0.071	T	6.00
3	13.4	0.0	34.0	0.071	T	9.60
4	9.0	0.0	31.0	0.067	T	23.00
5	4.0	3.5	0.0	0.065	F	32.00
6	10.0	5.6	0.0	0.067	F	36.00
7	7.0	6.9	0.0	0.067	F	46.00

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
0.000E+00	0.000E+00
6.000E+00	5.083E+00
9.600E+00	6.578E+00
2.300E+01	1.214E+01
3.200E+01	1.544E+01
3.600E+01	1.682E+01
4.600E+01	2.049E+01

\*\*\*\*\*  
 \* ACTIVE AND PASSIVE EARTH PRESSURE COEFFICIENT \*  
 \*\*\*\*\*

LAYER NO.	ACTIVE EARTH COEFFICIENT	PASSIVE EARTH(*) COEFFICIENT	OPTIONAL EARTH(**) COEFFICIENT
1	2.827E-01	3.537E+00	0.000E+00
2	2.827E-01	3.537E+00	0.000E+00
3	2.827E-01	3.537E+00	0.000E+00
4	3.201E-01	3.124E+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	31.67	3.00	77.61	4.00	0.00	-0.00	0.00
2	105.69	7.80	13.69	8.40	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT

2      0.00    7.80      50.39    8.40

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH FT	ACTIVE EARTH PRESSURE LBS/IN
0.00000E+00	0.00000E+00
5.00000E-01	6.91480E+00
1.00000E+00	1.57098E+01
1.50000E+00	2.44273E+01
2.00000E+00	3.30211E+01
2.50000E+00	4.14464E+01
3.00000E+00	4.96682E+01
3.50000E+00	5.76586E+01
4.00000E+00	6.53981E+01
4.50000E+00	7.28783E+01
5.00000E+00	8.00881E+01
5.50000E+00	8.70330E+01
6.00000E+00	9.37186E+01
6.50233E+00	1.07310E+02
7.00467E+00	1.19931E+02
7.50700E+00	1.32341E+02
8.00933E+00	1.44558E+02
8.51167E+00	1.56594E+02
9.01417E+00	1.68473E+02
9.51667E+00	1.80205E+02
1.00158E+01	1.82193E+02
1.05158E+01	1.82143E+02
1.10150E+01	1.81992E+02
1.15142E+01	1.81755E+02
1.20133E+01	1.81440E+02
1.25133E+01	1.81058E+02
1.30125E+01	1.80623E+02
1.35117E+01	1.80135E+02
1.40108E+01	1.79609E+02
1.45108E+01	1.79048E+02
1.50100E+01	1.78457E+02
1.55092E+01	1.77844E+02
1.60083E+01	1.77214E+02
1.65083E+01	1.76570E+02
1.70075E+01	1.75912E+02
1.75067E+01	1.75248E+02
1.80058E+01	1.74582E+02
1.85058E+01	1.73913E+02
1.90050E+01	1.73241E+02
1.95042E+01	1.72574E+02
2.00033E+01	1.71911E+02
2.05033E+01	1.71253E+02
2.10025E+01	1.70601E+02
2.15017E+01	1.69956E+02
2.20008E+01	1.69321E+02
2.25008E+01	1.68694E+02
2.30000E+01	1.68384E+02
2.35000E+01	1.78058E+02
2.40000E+01	1.77456E+02
2.45000E+01	1.76865E+02
2.50000E+01	1.76288E+02
2.55000E+01	1.75722E+02
2.60000E+01	1.75167E+02
2.65000E+01	1.74624E+02
2.70000E+01	1.74091E+02
2.75000E+01	1.73573E+02
2.80000E+01	1.73065E+02
2.85000E+01	1.72569E+02
2.90000E+01	1.72087E+02
2.95000E+01	1.71615E+02

3.0000E+01	1.7115E+02
3.0500E+01	1.7070E+02
3.1000E+01	1.7026E+02
3.1500E+01	1.6984E+02
3.2000E+01	1.6943E+02
3.2500E+01	6.5646E+01
3.3000E+01	6.5253E+01
3.3500E+01	6.4871E+01
3.4000E+01	6.4497E+01
3.4500E+01	6.4132E+01
3.5000E+01	6.3781E+01
3.5500E+01	6.3435E+01
3.6000E+01	6.3100E+01
3.6500E+01	1.3057E+01
3.7000E+01	1.2740E+01
3.7500E+01	1.2432E+01
3.8000E+01	1.2132E+01
3.8500E+01	1.1840E+01
3.9000E+01	1.1557E+01
3.9500E+01	1.1281E+01
4.0000E+01	1.1012E+01
4.0500E+01	1.0751E+01
4.1000E+01	1.0498E+01
4.1500E+01	1.0251E+01
4.2000E+01	1.0011E+01
4.2500E+01	9.7775E+00
4.3000E+01	9.5502E+00
4.3500E+01	9.3292E+00
4.4000E+01	9.1142E+00
4.4500E+01	8.9051E+00
4.5000E+01	8.7016E+00
4.5500E+01	8.5036E+00
4.6000E+01	8.3110E+00
4.6500E+01	8.1236E+00
4.7000E+01	7.9413E+00
4.7500E+01	7.7637E+00
4.8000E+01	7.5911E+00
4.8500E+01	7.4230E+00
4.9000E+01	7.2593E+00
4.9500E+01	7.1002E+00
5.0000E+01	6.9451E+00

\*\*\*\*\*  
\* SOIL LAYERS AND STRENGTH DATA \*  
\*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 9.60 FT

5 LAYER(S) OF SOIL

LAYER 1  
THE SOIL IS A SAND

LAYER 2  
THE SOIL IS A SAND

LAYER 3  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 4  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 5  
THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH

10 POINTS

X, FT	WEIGHT, LBS/IN**3
9.6000	3.4602E-02
23.0000	3.4602E-02
23.0000	3.0551E-02
32.0000	3.0551E-02
32.0000	2.8815E-02
36.0000	2.8815E-02
36.0000	3.0551E-02
46.0000	3.0551E-02
46.0000	3.0551E-02
53.0000	3.0551E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
10 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
9.60	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
23.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	0.0000E+00	31.000	0.0000E+00	6.0000E+01
32.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	3.4722E+00	0.000	7.0000E-03	0.0000E+00
36.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	5.5556E+00	0.000	7.0000E-03	0.0000E+00
46.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
51.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
0.01	27.88	34.00	3.46E-02	6.00E+01	2.82	2.13	2.13E-01
		Y		P			
		IN		LBS/IN			
		0.000		0.000			
		0.010		0.060			
		0.020		0.120			
		0.038		0.228			
		0.056		0.328			
		0.074		0.352			
		0.092		0.373			
		0.110		0.390			
		0.128		0.406			
		0.146		0.420			
		0.164		0.433			
		0.182		0.445			
		0.200		0.456			
		0.283		0.505			
		0.367		0.554			
		0.450		0.603			
		0.540		0.603			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
----------------	------	-----	-----------	-----	---	---	----

FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
9.61	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.24E+03

Y	P
IN	LBS/IN
0.000	0.000
0.013	89.588
0.026	179.176
0.043	244.928
0.061	300.787
0.078	350.612
0.096	396.229
0.113	438.681
0.130	478.632
0.148	516.538
0.165	552.728
0.183	587.451
0.200	620.897
0.283	778.191
0.367	935.486
0.450	1092.780
0.540	1092.780

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
3.35	27.88	34.00	3.46E-02	6.00E+01	1.00	0.65	8.58E+01

Y	P
IN	LBS/IN
0.000	0.000
0.002	5.028
0.004	10.056
0.024	21.676
0.043	28.265
0.063	33.322
0.083	37.556
0.102	41.258
0.122	44.581
0.141	47.617
0.161	50.426
0.180	53.049
0.200	55.518
0.283	65.730
0.367	75.941
0.450	86.152
0.540	86.152

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
12.95	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.50E+03

Y	P
IN	LBS/IN
0.000	0.000
0.010	91.863
0.020	183.726
0.038	272.727



0.056	345.824
0.074	410.041
0.092	468.325
0.110	522.258
0.128	572.814
0.146	620.640
0.164	666.198
0.182	709.829
0.200	751.795
0.283	942.250
0.367	1132.705
0.450	1323.160
0.540	1323.160

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
6.70	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.72E+02

Y IN	P LBS/IN
0.000	0.000
0.000	1.006
0.000	2.012
0.020	21.401
0.040	32.415
0.060	41.391
0.080	49.250
0.100	56.371
0.120	62.953
0.140	69.117
0.160	74.946
0.180	80.496
0.200	85.809
0.283	107.547
0.367	129.285
0.450	151.023
0.540	151.023

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
16.30	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	1.77E+03

Y IN	P LBS/IN
0.000	0.000
0.008	96.919
0.017	193.838
0.035	305.292
0.053	394.788
0.072	472.704
0.090	543.074
0.108	607.990
0.127	668.710
0.145	726.062
0.163	780.630
0.182	832.840
0.200	883.020

0.283	1106.718
0.367	1330.416
0.450	1554.115
0.540	1554.115

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
10.05	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.57E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	1.509
0.000	3.017
0.020	32.102
0.040	48.623
0.060	62.086
0.080	73.875
0.100	84.556
0.120	94.429
0.140	103.676
0.160	112.419
0.180	120.743
0.200	128.713
0.283	161.321
0.367	193.928
0.450	226.535
0.540	226.535

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
19.65	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.03E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	103.277
0.015	206.555
0.033	340.007
0.052	445.466
0.070	536.739
0.089	618.916
0.107	694.577
0.126	765.254
0.144	831.948
0.163	895.357
0.181	955.993
0.200	1014.244
0.283	1271.186
0.367	1528.128
0.450	1785.069
0.540	1785.069

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.39	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	3.43E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	2.010
0.000	4.021
0.020	42.776
0.040	64.790
0.060	82.730
0.080	98.439
0.100	112.672
0.120	125.827
0.140	138.149
0.160	149.799
0.180	160.891
0.200	171.511
0.283	214.960
0.367	258.410
0.450	301.859
0.540	301.859

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
22.99	27.88	34.00	3.46E-02	6.00E+01	0.88	0.50	2.29E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	110.330
0.013	220.660
0.032	375.783
0.051	496.923
0.069	601.335
0.088	695.140
0.107	781.394
0.125	861.895
0.144	937.811
0.163	1009.954
0.181	1078.914
0.200	1145.142
0.283	1435.244
0.367	1725.347
0.450	2015.450
0.540	2015.450

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.41	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	2.89E+02

Y	P
IN	LBS/IN
0.000	0.000

0.001	3.503
0.001	7.006
0.021	36.955
0.041	55.207
0.061	70.160
0.081	83.283
0.101	95.186
0.121	106.197
0.140	116.516
0.160	126.276
0.180	135.572
0.200	144.473
0.283	181.073
0.367	217.673
0.450	254.273
0.540	254.273

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
23.01	27.88	31.00	3.46E-02	6.00E+01	0.88	0.50	1.81E+03

Y	P
IN	LBS/IN
0.000	0.000
0.008	100.199
0.017	200.398
0.035	314.371
0.053	406.024
0.072	485.864
0.090	557.993
0.108	624.544
0.127	686.801
0.145	745.612
0.163	801.570
0.182	855.115
0.200	906.579
0.283	1136.245
0.367	1365.912
0.450	1595.579
0.540	1595.579

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
15.65	27.88	31.00	3.40E-02	6.00E+01	0.88	0.50	3.32E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	3.245
0.001	6.491
0.021	41.962
0.041	63.050
0.061	80.287
0.081	95.401
0.100	109.103
0.120	121.774
0.140	133.646

0.160	144.872
0.180	155.564
0.200	165.801
0.283	207.804
0.367	249.807
0.450	291.810
0.540	291.810

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
25.25	27.88	31.00	3.40E-02	6.00E+01	0.88	0.50	1.94E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	97.357
0.014	194.715
0.033	322.912
0.051	423.952
0.070	511.319
0.089	589.941
0.107	662.307
0.126	729.893
0.144	793.660
0.163	854.281
0.181	912.244
0.200	967.924
0.283	1213.131
0.367	1458.338
0.450	1703.546
0.540	1703.546

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
17.90	27.88	31.00	3.36E-02	6.00E+01	0.88	0.50	3.74E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	3.161
0.001	6.323
0.021	47.120
0.041	71.012
0.061	90.520
0.080	107.616
0.100	123.112
0.120	137.438
0.140	150.860
0.160	163.551
0.180	175.637
0.200	187.208
0.283	234.634
0.367	282.060
0.450	329.486
0.540	329.486

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.50	27.88	31.00	3.36E-02	6.00E+01	0.88	0.50	2.06E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.006		95.705			
		0.013		191.411			
		0.031		333.418			
		0.050		443.468			
		0.069		538.078			
		0.088		622.965			
		0.106		700.958			
		0.125		773.710			
		0.144		842.291			
		0.163		907.444			
		0.181		969.710			
		0.200		1029.497			
		0.283		1290.303			
		0.367		1551.108			
		0.450		1811.914			
		0.540		1811.914			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
20.15	27.88	31.00	3.32E-02	6.00E+01	0.88	0.50	4.17E+02
		Y IN		P LBS/IN			
		0.000		0.000			
		0.000		3.162			
		0.001		6.324			
		0.021		52.336			
		0.041		79.015			
		0.060		100.783			
		0.080		119.855			
		0.100		137.138			
		0.120		153.116			
		0.140		168.083			
		0.160		182.236			
		0.180		195.712			
		0.200		208.615			
		0.283		261.464			
		0.367		314.313			
		0.450		367.162			
		0.540		367.162			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
29.75	27.88	31.00	3.32E-02	6.00E+01	0.88	0.50	2.18E+03

Y	P
IN	LBS/IN
0.000	0.000
0.006	94.885
0.011	189.771
0.030	345.235
0.049	464.003
0.068	565.641
0.087	656.625
0.106	740.104
0.125	817.900
0.143	891.188
0.162	960.777
0.181	1027.257
0.200	1091.070
0.283	1367.474
0.367	1643.878
0.450	1920.283
0.540	1920.283

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
22.39	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	4.60E+02

Y	P
IN	LBS/IN
0.000	0.000
0.000	3.209
0.001	6.419
0.021	57.563
0.040	87.009
0.060	111.023
0.080	132.059
0.100	151.121
0.120	168.742
0.140	185.248
0.160	200.854
0.180	215.715
0.200	229.942
0.283	288.194
0.367	346.446
0.450	404.698
0.540	404.698

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
31.99	27.88	31.00	3.30E-02	6.00E+01	0.88	0.50	2.30E+03

Y	P
IN	LBS/IN
0.000	0.000
0.005	94.664
0.010	189.327
0.029	357.928
0.048	485.170
0.067	593.658
0.086	690.599

0.105	779.444
0.124	862.183
0.143	940.086
0.162	1014.029
0.181	1084.646
0.200	1152.415
0.283	1444.360
0.367	1736.305
0.450	2028.250
0.540	2028.250

P-Multiplier = 1.000E+00 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
22.41	27.880	3.47E+00	3.47E+00	3.30E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	17.70629
0.00017	26.47708
0.00034	31.48673
0.00168	47.08365
0.00336	55.99221
0.01680	83.72788
0.03360	99.56979
0.08400	125.20238
0.16800	148.89156
0.25200	164.77560
0.33600	177.06291
0.84000	222.64482
1.68000	264.77080
3.36000	314.86732
3.78000	314.86732
4.20000	314.86732

P-Multiplier = 1.000E+00 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
32.01	27.880	3.47E+00	3.47E+00	3.30E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	35.10719
0.00017	52.49749
0.00034	62.43039
0.00168	93.35522
0.00336	111.01869
0.01680	166.01165
0.03360	197.42224
0.08400	248.24533
0.16800	295.21511
0.25200	326.70923
0.33600	351.07191
0.84000	441.44955
1.68000	524.97495
3.36000	624.30395
3.78000	624.30395



4.20000 624.30395

P-Multiplier = 1.000E+00 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
23.40	27.880	3.47E+00	3.47E+00	3.28E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	18.09030
0.00017	27.05130
0.00034	32.16960
0.00168	48.10477
0.00336	57.20654
0.01680	85.54372
0.03360	101.72921
0.08400	127.91771
0.16800	152.12065
0.25200	168.34917
0.33600	180.90295
0.84000	227.47342
1.68000	270.51301
3.36000	321.69600
3.78000	321.69600
4.20000	321.69600

P-Multiplier = 1.000E+00 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
33.00	27.880	3.47E+00	3.47E+00	3.28E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	36.31643
0.00017	54.30574
0.00034	64.58077
0.00168	96.57077
0.00336	114.84265
0.01680	171.72982
0.03360	204.22232
0.08400	256.79598
0.16800	305.38360
0.25200	337.96251
0.33600	363.16435
0.84000	456.65499
1.68000	543.05737
3.36000	645.80769
3.78000	645.80769
4.20000	645.80769

P-Multiplier = 1.000E+00 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	
24.40	27.880	3.47E+00	3.47E+00	3.26E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	18.47753
0.00017	27.63035
0.00034	32.85821
0.00168	49.13448
0.00336	58.43107
0.01680	87.37483
0.03360	103.90677
0.08400	130.65585
0.16800	155.37686
0.25200	171.95277
0.33600	184.77527
0.84000	232.34260
1.68000	276.30347
3.36000	328.58206
3.78000	328.58206
4.20000	328.58206

P-Multiplier = 1.000E+00 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	
34.00	27.880	3.47E+00	3.47E+00	3.26E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	37.53584
0.00017	56.12917
0.00034	66.74921
0.00168	99.81336
0.00336	118.69875
0.01680	177.49603
0.03360	211.07954
0.08400	265.41848
0.16800	315.63754
0.25200	349.31036
0.33600	375.35841
0.84000	471.98821
1.68000	561.29174
3.36000	667.49213
3.78000	667.49213
4.20000	667.49213

P-Multiplier = 1.000E+00 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	
25.40	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00003	18.86476
0.00017	28.20939
0.00034	33.54681

0.00168	50.16418
0.00336	59.65560
0.01680	89.20593
0.03360	106.08433
0.08400	133.39399
0.16800	158.63308
0.25200	175.55636
0.33600	188.64759
0.84000	237.21178
1.68000	282.09394
3.36000	335.46812
3.78000	335.46812
4.20000	335.46812

P-Multiplier = 1.000E+00 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
35.00	27.880	3.47E+00	3.47E+00	3.25E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	38.75525
0.00017	57.95261
0.00034	68.91766
0.00168	103.05594
0.00336	122.55485
0.01680	183.26225
0.03360	217.93677
0.08400	274.04098
0.16800	325.89148
0.25200	360.65821
0.33600	387.55247
0.84000	487.32143
1.68000	579.52611
3.36000	689.17658
3.78000	689.17658
4.20000	689.17658

P-Multiplier = 1.000E+00 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
26.39	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	19.24876
0.00017	28.78361
0.00034	34.22968
0.00168	51.18531
0.00336	60.86993
0.01680	91.02178
0.03360	108.24375
0.08400	136.10931
0.16800	161.86216
0.25200	179.12993
0.33600	192.48763
0.84000	242.04038

1.68000	287.83614
3.36000	342.29679
3.78000	342.29679
4.20000	342.29679

P-Multiplier = 1.000E+00 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
35.99	27.880	3.47E+00	3.47E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	39.96449
0.00017	59.76085
0.00034	71.06803
0.00168	106.27150
0.00336	126.37882
0.01680	188.98041
0.03360	224.73685
0.08400	282.59163
0.16800	336.05997
0.25200	371.91150
0.33600	399.64491
0.84000	502.52687
1.68000	597.60853
3.36000	710.68032
3.78000	710.68032
4.20000	710.68032

P-Multiplier = 1.000E+00 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
26.41	27.880	5.56E+00	5.56E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	23.92160
0.00017	35.77114
0.00034	42.53929
0.00168	63.61108
0.00336	75.64675
0.01680	113.11827
0.03360	134.52105
0.08400	169.15127
0.16800	201.15589
0.25200	222.61559
0.33600	239.21601
0.84000	300.79821
1.68000	357.71137
3.36000	425.39291
3.78000	425.39291
4.20000	425.39291

P-Multiplier = 1.000E+00 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
36.01	27.880	5.56E+00	5.56E+00	3.23E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	46.51762
0.00017	69.56006
0.00034	82.72132
0.00168	123.69723
0.00336	147.10163
0.01680	219.96824
0.03360	261.58779
0.08400	328.92924
0.16800	391.16499
0.25200	432.89522
0.33600	465.17619
0.84000	584.92809
1.68000	695.60064
3.36000	827.21323
3.78000	827.21323
4.20000	827.21323

P-Multiplier = 1.000E+00 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
28.90	27.880	5.56E+00	5.56E+00	3.22E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	24.94459
0.00017	37.30086
0.00034	44.35844
0.00168	66.33135
0.00336	78.88171
0.01680	117.95566
0.03360	140.27372
0.08400	176.38486
0.16800	209.75813
0.25200	232.13553
0.33600	249.44586
0.84000	313.66156
1.68000	373.00856
3.36000	443.58444
3.78000	443.58444
4.20000	443.58444

P-Multiplier = 1.000E+00 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
38.50	27.880	5.56E+00	5.56E+00	3.22E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000

0.00003	49.63736
0.00017	74.22516
0.00034	88.26909
0.00168	131.99308
0.00336	156.96710
0.01680	234.72056
0.03360	279.13137
0.08400	350.98911
0.16800	417.39875
0.25200	461.92765
0.33600	496.37356
0.84000	624.15671
1.68000	742.25160
3.36000	882.69089
3.78000	882.69089
4.20000	882.69089

P-Multiplier = 1.000E+00 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
31.40	27.880	5.56E+00	5.56E+00	3.21E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	25.97099
0.00017	38.83569
0.00034	46.18368
0.00168	69.06071
0.00336	82.12749
0.01680	122.80924
0.03360	146.04562
0.08400	183.64265
0.16800	218.38914
0.25200	241.68732
0.33600	259.70992
0.84000	326.56794
1.68000	388.35692
3.36000	461.83681
3.78000	461.83681
4.20000	461.83681

P-Multiplier = 1.000E+00 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
41.00	27.880	5.56E+00	5.56E+00	3.21E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	52.76753
0.00017	78.90586
0.00034	93.83541
0.00168	140.31666
0.00336	166.86558
0.01680	249.52223
0.03360	296.73361
0.08400	373.12277
0.16800	443.72025

0.25200	491.05718
0.33600	527.67528
0.84000	663.51653
1.68000	789.05858
3.36000	938.35408
3.78000	938.35408
4.20000	938.35408

P-Multiplier = 1.000E+00 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
33.90	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	26.99740
0.00017	40.37053
0.00034	48.00892
0.00168	71.79008
0.00336	85.37327
0.01680	127.66282
0.03360	151.81753
0.08400	190.90044
0.16800	227.02016
0.25200	251.23911
0.33600	269.97399
0.84000	339.47432
1.68000	403.70527
3.36000	480.08918
3.78000	480.08918
4.20000	480.08918

P-Multiplier = 1.000E+00 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
43.50	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	55.89770
0.00017	83.58656
0.00034	99.40173
0.00168	148.64025
0.00336	176.76405
0.01680	264.32390
0.03360	314.33586
0.08400	395.25642
0.16800	470.04175
0.25200	520.18671
0.33600	558.97699
0.84000	702.87636
1.68000	835.86556
3.36000	994.01727
3.78000	994.01727
4.20000	994.01727

P-Multiplier = 1.000E+00 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
36.39	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	28.02038
0.00017	41.90025
0.00034	49.82807
0.00168	74.51035
0.00336	88.60823
0.01680	132.50021
0.03360	157.57020
0.08400	198.13403
0.16800	235.62240
0.25200	260.75905
0.33600	280.20384
0.84000	352.33767
1.68000	419.00246
3.36000	498.28071
3.78000	498.28071
4.20000	498.28071

P-Multiplier = 1.000E+00 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
45.99	27.880	5.56E+00	5.56E+00	3.19E-02	7.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00003	59.01744
0.00017	88.25165
0.00034	104.94949
0.00168	156.93610
0.00336	186.62952
0.01680	279.07623
0.03360	331.87943
0.08400	417.31630
0.16800	496.27551
0.25200	549.21914
0.33600	590.17437
0.84000	742.10498
1.68000	882.51652
3.36000	1049.49492
3.78000	1049.49492
4.20000	1049.49492

P-Multiplier = 1.000E+00 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
36.41	27.880	6.94E+00	6.94E+00	3.19E-02	5.0000E-03



Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	31.13802
0.00012	46.56220
0.00024	55.37210
0.00120	82.80060
0.00240	98.46706
0.01200	147.24260
0.02400	175.10195
0.06000	220.17905
0.12000	261.83849
0.18000	289.77192
0.24000	311.38019
0.60000	391.53986
1.20000	465.62199
2.40000	553.72098
2.70000	553.72098
3.00000	553.72098

P-Multiplier = 1.000E+00 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	
46.01	27.880	6.94E+00	6.94E+00	3.19E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	63.39332
0.00012	94.79513
0.00024	112.73104
0.00120	168.57223
0.00240	200.46730
0.01200	299.76853
0.02400	356.48686
0.06000	448.25850
0.12000	533.07220
0.18000	589.94137
0.24000	633.93326
0.60000	797.12887
1.20000	947.95132
2.40000	1127.31045
2.70000	1127.31045
3.00000	1127.31045

P-Multiplier = 1.000E+00 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	
37.65	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	31.64780
0.00012	47.32450
0.00024	56.27863
0.00120	84.15619
0.00240	100.07914
0.01200	149.65321

0.02400	177.96866
0.06000	223.78375
0.12000	266.12522
0.18000	294.51598
0.24000	316.47801
0.60000	397.95003
1.20000	473.24501
2.40000	562.78633
2.70000	562.78633
3.00000	562.78633

P-Multiplier = 1.000E+00 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
47.25	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	64.94798
0.00012	97.11988
0.00024	115.49565
0.00120	172.70628
0.00240	205.38354
0.01200	307.12002
0.02400	365.22931
0.06000	459.25155
0.12000	546.14521
0.18000	604.40904
0.24000	649.47977
0.60000	816.67758
1.20000	971.19879
2.40000	1154.95651
2.70000	1154.95651
3.00000	1154.95651

P-Multiplier = 1.000E+00 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
38.90	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	32.16100
0.00012	48.09192
0.00024	57.19125
0.00120	85.52087
0.00240	101.70203
0.01200	152.08000
0.02400	180.85462
0.06000	227.41264
0.12000	270.44073
0.18000	299.29187
0.24000	321.61004
0.60000	404.40322
1.20000	480.91918
2.40000	571.91251
2.70000	571.91251

3.00000 571.91251

P-Multiplier = 1.000E+00 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
48.50	27.880	6.94E+00	6.94E+00	3.18E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	66.51306
0.00012	99.46023
0.00024	118.27881
0.00120	176.86808
0.00240	210.33278
0.01200	314.52085
0.02400	374.03044
0.06000	470.31838
0.12000	559.30596
0.18000	618.97380
0.24000	665.13063
0.60000	836.35749
1.20000	994.60228
2.40000	1182.78810
2.70000	1182.78810
3.00000	1182.78810

P-Multiplier = 1.000E+00 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
40.15	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	32.67421
0.00012	48.85934
0.00024	58.10387
0.00120	86.88555
0.00240	103.32492
0.01200	154.50679
0.02400	183.74057
0.06000	231.04154
0.12000	274.75624
0.18000	304.06776
0.24000	326.74207
0.60000	410.85640
1.20000	488.59336
2.40000	581.03870
2.70000	581.03870
3.00000	581.03870

P-Multiplier = 1.000E+00 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	
49.75	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	68.07815
0.00012	101.80058
0.00024	121.06197
0.00120	181.02987
0.00240	215.28201
0.01200	321.92169
0.02400	382.83156
0.06000	481.38521
0.12000	572.46671
0.18000	633.53857
0.24000	680.78149
0.60000	856.03740
1.20000	1018.00577
2.40000	1210.61970
2.70000	1210.61970
3.00000	1210.61970

P-Multiplier = 1.000E+00 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	
41.39	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	33.18399
0.00012	49.62164
0.00024	59.01040
0.00120	88.24114
0.00240	104.93699
0.01200	156.91739
0.02400	186.60728
0.06000	234.64624
0.12000	279.04297
0.18000	308.81182
0.24000	331.83989
0.60000	417.26657
1.20000	496.21637
2.40000	590.10404
2.70000	590.10404
3.00000	590.10404

P-Multiplier = 1.000E+00 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	
50.99	27.880	6.94E+00	6.94E+00	3.17E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	69.63280
0.00012	104.12532
0.00024	123.82657

0.00120	185.16392
0.00240	220.19825
0.01200	329.27318
0.02400	391.57401
0.06000	492.37826
0.12000	585.53973
0.18000	648.00623
0.24000	696.32801
0.60000	875.58611
1.20000	1041.25323
2.40000	1238.26575
2.70000	1238.26575
3.00000	1238.26575

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

Wall 3 9.6 ft Cut Critical Case Service Loads

RESULTS

NUMBER OF ITERATIONS : 81

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	1.227E+01	-3.517E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	1.205E+01	-3.517E-02	0.000E+00	2.074E+01	0.000E+00	4.149E+01	2.883E+10
2	1.000E+00	1.184E+01	-3.517E-02	2.489E+02	8.862E+01	0.000E+00	9.426E+01	2.883E+10
3	1.500E+00	1.163E+01	-3.517E-02	1.063E+03	2.090E+02	0.000E+00	1.466E+02	2.883E+10
4	2.000E+00	1.142E+01	-3.517E-02	2.757E+03	3.814E+02	0.000E+00	1.981E+02	2.883E+10
5	2.500E+00	1.121E+01	-3.517E-02	5.640E+03	6.048E+02	0.000E+00	2.487E+02	2.883E+10
6	3.000E+00	1.100E+01	-3.517E-02	1.001E+04	8.781E+02	0.000E+00	2.980E+02	2.883E+10
7	3.500E+00	1.079E+01	-3.517E-02	1.618E+04	1.200E+03	0.000E+00	3.460E+02	2.883E+10
8	4.000E+00	1.058E+01	-3.516E-02	2.442E+04	1.569E+03	0.000E+00	3.924E+02	2.883E+10
9	4.500E+00	1.037E+01	-3.515E-02	3.501E+04	1.984E+03	0.000E+00	4.373E+02	2.883E+10
10	5.000E+00	1.016E+01	-3.515E-02	4.823E+04	2.443E+03	0.000E+00	4.805E+02	2.883E+10
11	5.500E+00	9.944E+00	-3.513E-02	6.432E+04	2.944E+03	0.000E+00	5.222E+02	2.883E+10
12	6.000E+00	9.734E+00	-3.512E-02	8.356E+04	3.487E+03	0.000E+00	5.623E+02	2.883E+10
13	6.500E+00	9.523E+00	-3.510E-02	1.062E+05	4.089E+03	0.000E+00	6.434E+02	2.883E+10
14	7.000E+00	9.312E+00	-3.507E-02	1.326E+05	4.771E+03	0.000E+00	7.188E+02	2.883E+10
15	7.500E+00	9.102E+00	-3.504E-02	1.634E+05	5.526E+03	0.000E+00	7.929E+02	2.883E+10
16	8.000E+00	8.892E+00	-3.501E-02	1.989E+05	6.356E+03	0.000E+00	8.658E+02	2.883E+10
17	8.500E+00	8.682E+00	-3.496E-02	2.397E+05	7.258E+03	0.000E+00	9.378E+02	2.883E+10
18	9.000E+00	8.472E+00	-3.491E-02	2.860E+05	8.231E+03	0.000E+00	1.009E+03	2.883E+10
19	9.500E+00	8.263E+00	-3.484E-02	3.385E+05	9.274E+03	-3.014E-01	1.077E+03	2.883E+10
20	1.000E+01	8.054E+00	-3.476E-02	3.973E+05	1.032E+04	-1.282E+01	1.016E+03	2.883E+10
21	1.050E+01	7.846E+00	-3.467E-02	4.623E+05	1.130E+04	-2.504E+01	9.426E+02	2.883E+10
22	1.100E+01	7.638E+00	-3.457E-02	5.329E+05	1.221E+04	-3.727E+01	8.685E+02	2.883E+10
23	1.150E+01	7.431E+00	-3.445E-02	6.088E+05	1.304E+04	-4.949E+01	7.937E+02	2.883E+10
24	1.200E+01	7.225E+00	-3.432E-02	6.894E+05	1.379E+04	-6.171E+01	7.186E+02	2.883E+10
25	1.250E+01	7.019E+00	-3.417E-02	7.743E+05	1.447E+04	-7.393E+01	6.430E+02	2.883E+10
26	1.300E+01	6.815E+00	-3.399E-02	8.630E+05	1.508E+04	-8.615E+01	5.670E+02	2.883E+10
27	1.350E+01	6.611E+00	-3.381E-02	9.552E+05	1.562E+04	-9.541E+01	5.085E+02	2.883E+10
28	1.400E+01	6.409E+00	-3.360E-02	1.050E+06	1.610E+04	-1.047E+02	4.498E+02	2.883E+10
29	1.450E+01	6.208E+00	-3.337E-02	1.148E+06	1.652E+04	-1.139E+02	3.909E+02	2.883E+10
30	1.500E+01	6.009E+00	-3.312E-02	1.249E+06	1.688E+04	-1.232E+02	3.317E+02	2.883E+10
31	1.550E+01	5.811E+00	-3.285E-02	1.351E+06	1.718E+04	-1.325E+02	2.724E+02	2.883E+10
32	1.600E+01	5.615E+00	-3.256E-02	1.455E+06	1.742E+04	-1.417E+02	2.131E+02	2.883E+10
33	1.650E+01	5.420E+00	-3.224E-02	1.560E+06	1.761E+04	-1.510E+02	1.536E+02	2.883E+10
34	1.700E+01	5.228E+00	-3.191E-02	1.666E+06	1.772E+04	-1.636E+02	7.415E+01	2.883E+10
35	1.750E+01	5.037E+00	-3.155E-02	1.773E+06	1.775E+04	-1.762E+02	-5.351E+00	2.883E+10
36	1.800E+01	4.849E+00	-3.117E-02	1.879E+06	1.771E+04	-1.888E+02	-8.487E+01	2.883E+10
37	1.850E+01	4.663E+00	-3.077E-02	1.985E+06	1.758E+04	-2.013E+02	-1.644E+02	2.883E+10
38	1.900E+01	4.480E+00	-3.034E-02	2.090E+06	1.738E+04	-2.139E+02	-2.439E+02	2.883E+10
39	1.950E+01	4.299E+00	-2.990E-02	2.194E+06	1.710E+04	-2.265E+02	-3.235E+02	2.883E+10
40	2.000E+01	4.121E+00	-2.943E-02	2.295E+06	1.674E+04	-2.373E+02	-3.921E+02	2.883E+10
41	2.050E+01	3.946E+00	-2.894E-02	2.394E+06	1.631E+04	-2.480E+02	-4.607E+02	2.883E+10
42	2.100E+01	3.774E+00	-2.843E-02	2.491E+06	1.582E+04	-2.588E+02	-5.292E+02	2.883E+10

43	2.150E+01	3.605E+00	-2.791E-02	2.584E+06	1.525E+04	-2.696E+02	-5.977E+02	2.883E+10
44	2.200E+01	3.439E+00	-2.736E-02	2.674E+06	1.462E+04	-2.804E+02	-6.662E+02	2.883E+10
45	2.250E+01	3.276E+00	-2.679E-02	2.760E+06	1.392E+04	-2.911E+02	-7.346E+02	2.883E+10
46	2.300E+01	3.117E+00	-2.621E-02	2.841E+06	1.315E+04	-3.019E+02	-8.011E+02	2.883E+10
47	2.350E+01	2.962E+00	-2.561E-02	2.918E+06	1.239E+04	-2.999E+02	-7.309E+02	2.883E+10
48	2.400E+01	2.810E+00	-2.500E-02	2.990E+06	1.166E+04	-2.979E+02	-7.224E+02	2.883E+10
49	2.450E+01	2.662E+00	-2.437E-02	3.057E+06	1.094E+04	-2.958E+02	-7.138E+02	2.883E+10
50	2.500E+01	2.518E+00	-2.373E-02	3.121E+06	1.023E+04	-2.938E+02	-7.052E+02	2.883E+10
51	2.550E+01	2.377E+00	-2.307E-02	3.180E+06	9.532E+03	-2.918E+02	-6.965E+02	2.883E+10
52	2.600E+01	2.241E+00	-2.240E-02	3.235E+06	8.805E+03	-3.012E+02	-7.563E+02	2.883E+10
53	2.650E+01	2.108E+00	-2.172E-02	3.286E+06	8.019E+03	-3.107E+02	-8.162E+02	2.883E+10
54	2.700E+01	1.980E+00	-2.104E-02	3.332E+06	7.173E+03	-3.201E+02	-8.759E+02	2.883E+10
55	2.750E+01	1.856E+00	-2.034E-02	3.372E+06	6.267E+03	-3.295E+02	-9.356E+02	2.883E+10
56	2.800E+01	1.736E+00	-1.963E-02	3.407E+06	5.308E+03	-3.370E+02	-9.838E+02	2.883E+10
57	2.850E+01	1.620E+00	-1.892E-02	3.436E+06	4.300E+03	-3.446E+02	-1.032E+03	2.883E+10
58	2.900E+01	1.509E+00	-1.820E-02	3.458E+06	3.244E+03	-3.521E+02	-1.080E+03	2.883E+10
59	2.950E+01	1.402E+00	-1.748E-02	3.475E+06	2.139E+03	-3.597E+02	-1.128E+03	2.883E+10
60	3.000E+01	1.299E+00	-1.676E-02	3.484E+06	9.871E+02	-3.672E+02	-1.176E+03	2.883E+10
61	3.050E+01	1.201E+00	-1.603E-02	3.486E+06	-2.187E+02	-3.766E+02	-1.235E+03	2.883E+10
62	3.100E+01	1.107E+00	-1.531E-02	3.481E+06	-1.483E+03	-3.859E+02	-1.294E+03	2.883E+10
63	3.150E+01	1.017E+00	-1.459E-02	3.469E+06	-2.807E+03	-3.953E+02	-1.353E+03	2.883E+10
64	3.200E+01	9.317E-01	-1.387E-02	3.448E+06	-4.189E+03	-4.047E+02	-1.412E+03	2.883E+10
65	3.250E+01	8.507E-01	-1.315E-02	3.418E+06	-5.647E+03	-3.164E+02	-1.504E+03	2.883E+10
66	3.300E+01	7.739E-01	-1.244E-02	3.380E+06	-6.868E+03	-2.214E+02	-9.368E+02	2.883E+10
67	3.350E+01	7.013E-01	-1.175E-02	3.336E+06	-7.792E+03	-2.170E+02	-9.125E+02	2.883E+10
68	3.400E+01	6.329E-01	-1.106E-02	3.287E+06	-8.693E+03	-2.128E+02	-8.897E+02	2.883E+10
69	3.450E+01	5.687E-01	-1.038E-02	3.232E+06	-9.573E+03	-2.089E+02	-8.685E+02	2.883E+10
70	3.500E+01	5.084E-01	-9.712E-03	3.172E+06	-1.043E+04	-2.052E+02	-8.487E+02	2.883E+10
71	3.550E+01	4.521E-01	-9.058E-03	3.107E+06	-1.127E+04	-2.019E+02	-8.305E+02	2.883E+10
72	3.600E+01	3.997E-01	-8.419E-03	3.036E+06	-1.209E+04	-1.988E+02	-8.139E+02	2.883E+10
73	3.650E+01	3.511E-01	-7.795E-03	2.961E+06	-1.308E+04	-2.055E+02	-1.154E+03	2.883E+10
74	3.700E+01	3.062E-01	-7.188E-03	2.879E+06	-1.425E+04	-2.099E+02	-1.183E+03	2.883E+10
75	3.750E+01	2.648E-01	-6.598E-03	2.790E+06	-1.544E+04	-2.133E+02	-1.205E+03	2.883E+10
76	3.800E+01	2.270E-01	-6.027E-03	2.694E+06	-1.665E+04	-2.152E+02	-1.218E+03	2.883E+10
77	3.850E+01	1.925E-01	-5.477E-03	2.591E+06	-1.787E+04	-2.163E+02	-1.227E+03	2.883E+10
78	3.900E+01	1.613E-01	-4.950E-03	2.480E+06	-1.908E+04	-2.088E+02	-1.184E+03	2.883E+10
79	3.950E+01	1.331E-01	-4.446E-03	2.362E+06	-2.023E+04	-1.991E+02	-1.127E+03	2.883E+10
80	4.000E+01	1.079E-01	-3.968E-03	2.237E+06	-2.134E+04	-1.905E+02	-1.077E+03	2.883E+10
81	4.050E+01	8.551E-02	-3.516E-03	2.106E+06	-2.239E+04	-1.828E+02	-1.032E+03	2.883E+10
82	4.100E+01	6.573E-02	-3.092E-03	1.968E+06	-2.339E+04	-1.700E+02	-9.568E+02	2.883E+10
83	4.150E+01	4.840E-02	-2.697E-03	1.825E+06	-2.431E+04	-1.583E+02	-8.882E+02	2.883E+10
84	4.200E+01	3.336E-02	-2.333E-03	1.676E+06	-2.517E+04	-1.480E+02	-8.278E+02	2.883E+10
85	4.250E+01	2.041E-02	-2.000E-03	1.523E+06	-2.594E+04	-1.308E+02	-7.264E+02	2.883E+10
86	4.300E+01	9.356E-03	-1.700E-03	1.365E+06	-2.659E+04	-1.035E+02	-5.635E+02	2.883E+10
87	4.350E+01	1.075E-05	-1.432E-03	1.204E+06	-2.687E+04	-8.639E+00	4.143E+00	2.883E+10
88	4.400E+01	-7.832E-03	-1.199E-03	1.043E+06	-2.621E+04	2.082E+02	1.304E+03	2.883E+10
89	4.450E+01	-1.437E-02	-9.976E-04	8.894E+05	-2.477E+04	2.541E+02	1.578E+03	2.883E+10
90	4.500E+01	-1.980E-02	-8.275E-04	7.455E+05	-2.311E+04	2.824E+02	1.747E+03	2.883E+10
91	4.550E+01	-2.430E-02	-6.862E-04	6.120E+05	-2.131E+04	2.995E+02	1.848E+03	2.883E+10
92	4.600E+01	-2.804E-02	-5.716E-04	4.897E+05	-1.942E+04	3.144E+02	1.936E+03	2.883E+10
93	4.650E+01	-3.116E-02	-4.812E-04	3.790E+05	-1.740E+04	3.441E+02	2.114E+03	2.883E+10
94	4.700E+01	-3.381E-02	-4.126E-04	2.809E+05	-1.520E+04	3.713E+02	2.276E+03	2.883E+10
95	4.750E+01	-3.611E-02	-3.629E-04	1.966E+05	-1.285E+04	3.969E+02	2.428E+03	2.883E+10
96	4.800E+01	-3.817E-02	-3.293E-04	1.267E+05	-1.039E+04	4.071E+02	2.488E+03	2.883E+10
97	4.850E+01	-4.006E-02	-3.086E-04	7.185E+04	-7.875E+03	4.170E+02	2.546E+03	2.883E+10
98	4.900E+01	-4.187E-02	-2.978E-04	3.224E+04	-5.305E+03	4.251E+02	2.594E+03	2.883E+10
99	4.950E+01	-4.364E-02	-2.936E-04	8.195E+03	-2.687E+03	4.332E+02	2.642E+03	2.883E+10
100	5.000E+01	-4.539E-02	-2.927E-04	0.000E+00	-6.829E+02	2.207E+02	1.366E+03	2.883E+10

END OF ANALYSIS

Wall 4

Long Term Stability and Load

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 4\  
Name of input data file : Wall 4 13 foot Ser Case W05.py7d  
Name of output file : Wall 4 13 foot Ser Case W05.py7o  
Name of plot output file : Wall 4 13 foot Ser Case W05.py7p

-----

Time and Date of Analysis

-----

Date: March 13, 2023 Time: 17:28:10

Wall 4 13 foot ATB-531-Service Load

\*\*\*\*\*  
\* 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 = 40.000 FT  
NUMBER OF INCREMENTS = 80  
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	40.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1



SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
80	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.000E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.100E+01

\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI DEG	TOTAL WEIGHT PCI	UNIT DRAINED T OR F	ZTOP FT
	FT	PSI				
1	3.0	6.9	0.0	0.067	T	3.00
2	7.0	6.9	0.0	0.067	T	6.00
3	13.0	6.9	0.0	0.067	F	13.00
4	17.0	0.0	34.0	0.069	T	26.00
5	26.0	20.8	0.0	0.069	F	43.00

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
3.000E+00	0.000E+00
6.000E+00	2.396E+00
1.300E+01	4.962E+00
2.600E+01	9.728E+00
4.300E+01	1.655E+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	3.333E-01
2	1.000E+00	1.000E+00	3.333E-01
3	1.000E+00	1.000E+00	0.000E+00
4	2.827E-01	3.537E+00	0.000E+00
5	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	8.89	4.50	14.37	5.00	0.00	-0.00	0.00
2	108.12	9.50	35.92	10.67	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO.	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT
-----------	------------	-------	------------	-------

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH	ACTIVE EARTH PRESSURE
-------	-----------------------

FT	LBS/IN
-----	-----
3.00000E+00	0.00000E+00
3.50000E+00	1.71086E+01
4.00000E+00	2.20444E+01
4.50000E+00	2.74119E+01
5.00000E+00	3.21038E+01
5.50000E+00	3.71083E+01
6.00000E+00	4.15607E+01
6.50000E+00	5.02314E+01
7.00000E+00	5.84811E+01
7.50000E+00	6.68451E+01
8.00000E+00	7.49052E+01
8.50000E+00	8.30043E+01
9.00000E+00	9.09055E+01
9.50000E+00	9.87928E+01
1.00000E+01	1.06563E+02
1.05000E+01	1.14277E+02
1.10000E+01	1.21947E+02
1.15000E+01	1.29525E+02
1.20000E+01	1.37117E+02
1.25000E+01	1.44594E+02
1.30000E+01	1.52127E+02
1.35000E+01	2.13854E+01
1.40000E+01	2.11495E+01
1.45000E+01	2.07712E+01
1.50000E+01	2.05052E+01
1.55000E+01	2.00895E+01
1.60000E+01	1.98032E+01
1.65000E+01	1.93632E+01
1.70000E+01	1.90646E+01
1.75000E+01	1.86113E+01
1.80000E+01	1.83063E+01
1.85000E+01	1.78474E+01
1.90000E+01	1.75413E+01
1.95000E+01	1.70829E+01
2.00000E+01	1.67790E+01
2.05000E+01	1.63265E+01
2.10000E+01	1.60274E+01
2.15000E+01	1.55841E+01
2.20000E+01	1.52922E+01
2.25000E+01	1.48606E+01
2.30000E+01	1.45773E+01
2.35000E+01	1.41594E+01
2.40000E+01	1.38856E+01
2.45000E+01	1.34828E+01
2.50000E+01	1.32196E+01
2.55000E+01	1.28323E+01
2.60000E+01	1.25797E+01
2.65000E+01	1.35631E+02
2.70000E+01	1.35388E+02
2.75000E+01	1.35034E+02
2.80000E+01	1.34803E+02
2.85000E+01	1.34465E+02
2.90000E+01	1.34245E+02
2.95000E+01	1.33924E+02
3.00000E+01	1.33715E+02
3.05000E+01	1.33409E+02
3.10000E+01	1.33211E+02
3.15000E+01	1.32918E+02
3.20000E+01	1.32731E+02
3.25000E+01	1.32455E+02
3.30000E+01	1.32277E+02
3.35000E+01	1.32015E+02
3.40000E+01	1.31845E+02
3.45000E+01	1.31596E+02
3.50000E+01	1.31435E+02
3.55000E+01	1.31200E+02
3.60000E+01	1.31050E+02

3.65000E+01	1.30827E+02
3.70000E+01	1.30682E+02
3.75000E+01	1.30473E+02
3.80000E+01	1.30336E+02
3.85000E+01	1.30138E+02
3.90000E+01	1.30010E+02
3.95000E+01	1.29820E+02
4.00000E+01	1.29698E+02

\*\*\*\*\*  
 \* SOIL LAYERS AND STRENGTH DATA \*  
 \*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

2 LAYER(S) OF SOIL

LAYER 1  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 2  
 THE SOIL IS A SAND

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH  
 6 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.0551E-02
26.0000	3.0551E-02
26.0000	3.3444E-02
43.0000	3.3444E-02
43.0000	3.3444E-02
69.0000	3.3444E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
 4 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
26.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
26.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
41.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
0.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	19.80327
0.00012	29.61279
0.00024	35.21574
0.00120	52.65982
0.00240	62.62343
0.01200	93.64387
0.02400	111.36195

0.06000	140.03025
0.12000	166.52497
0.18000	184.29017
0.24000	198.03267
0.60000	249.01290
1.20000	296.12792
2.40000	352.15742
2.70000	352.15742
3.00000	352.15742

P-Multiplier = 1.000E+00 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
10.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	34.30623
0.00012	51.29977
0.00024	61.00605
0.00120	91.22533
0.00240	108.48581
0.01200	162.22412
0.02400	192.91808
0.06000	242.58165
0.12000	288.47982
0.18000	319.25540
0.24000	343.06225
0.60000	431.37795
1.20000	512.99772
2.40000	610.06054
2.70000	610.06054
3.00000	610.06054

P-Multiplier = 1.000E+00 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
3.25	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	21.49740
0.00012	32.14611
0.00024	38.22839
0.00120	57.16477
0.00240	67.98075
0.01200	101.65493
0.02400	120.88877
0.06000	152.00958
0.12000	180.77088
0.18000	200.05587
0.24000	214.97402
0.60000	270.31551
1.20000	321.46113
2.40000	382.28387
2.70000	382.28387
3.00000	382.28387

P-Multiplier = 1.000E+00 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
13.25	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	38.36501
0.00012	57.36908
0.00024	68.22371
0.00120	102.01825
0.00240	121.32083
0.01200	181.41695
0.02400	215.74233
0.06000	271.28162
0.12000	322.61003
0.18000	357.02669
0.24000	383.65014
0.60000	482.41452
1.20000	573.69077
2.40000	682.23715
2.70000	682.23715
3.00000	682.23715

P-Multiplier = 1.000E+00 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
6.50	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	23.19589
0.00012	34.68595
0.00024	41.24877
0.00120	61.68131
0.00240	73.35185
0.01200	109.68660
0.02400	130.44008
0.06000	164.01972
0.12000	195.05342
0.18000	215.86209
0.24000	231.95891
0.60000	291.67289
1.20000	346.85947
2.40000	412.48775
2.70000	412.48775
3.00000	412.48775

P-Multiplier = 1.000E+00 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
----------------------	------------	----------------	-------------------	------------------------	-----

16.50 27.880 6.94E+00 6.94E+00 3.06E-02 5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	42.43424
0.00012	63.45398
0.00024	75.45993
0.00120	112.83892
0.00240	134.18884
0.01200	200.65912
0.02400	238.62525
0.06000	300.05537
0.12000	356.82798
0.18000	394.89508
0.24000	424.34237
0.60000	533.58228
1.20000	634.53985
2.40000	754.59930
2.70000	754.59930
3.00000	754.59930

P-Multiplier = 1.000E+00 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
9.75	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	24.89438
0.00012	37.22578
0.00024	44.26916
0.00120	66.19784
0.00240	78.72294
0.01200	117.71826
0.02400	139.99139
0.06000	176.02985
0.12000	209.33595
0.18000	231.66831
0.24000	248.94380
0.60000	313.03026
1.20000	372.25781
2.40000	442.69164
2.70000	442.69164
3.00000	442.69164

P-Multiplier = 1.000E+00 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
19.75	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	46.50346
0.00012	69.53889
0.00024	82.69615
0.00120	123.65958

0.00240	147.05685
0.01200	219.90128
0.02400	261.50817
0.06000	328.82912
0.12000	391.04593
0.18000	432.76346
0.24000	465.03460
0.60000	584.75005
1.20000	695.38892
2.40000	826.96146
2.70000	826.96146
3.00000	826.96146

P-Multiplier = 1.000E+00 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
12.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	26.58851
0.00012	39.75910
0.00024	47.28181
0.00120	70.70279
0.00240	84.08027
0.01200	125.72932
0.02400	149.51820
0.06000	188.00919
0.12000	223.58187
0.18000	247.43401
0.24000	265.88515
0.60000	334.33287
1.20000	397.59103
2.40000	472.81808
2.70000	472.81808
3.00000	472.81808

P-Multiplier = 1.000E+00 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
22.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	50.56225
0.00012	75.60820
0.00024	89.91381
0.00120	134.45250
0.00240	159.89187
0.01200	239.09411
0.02400	284.33242
0.06000	357.52909
0.12000	425.17614
0.18000	470.53475
0.24000	505.62249
0.60000	635.78662
1.20000	756.08198



2.40000 899.13807  
 2.70000 899.13807  
 3.00000 899.13807

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.01	27.88	34.00	3.06E-02	6.00E+01	0.88	0.50	6.70E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	17.519
0.005	35.039
0.024	93.174
0.044	133.191
0.063	166.557
0.083	196.062
0.102	222.939
0.122	247.869
0.141	271.276
0.161	293.446
0.180	314.585
0.200	334.844
0.283	419.671
0.367	504.499
0.450	589.326
0.540	589.326

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
23.01	27.88	34.00	3.06E-02	6.00E+01	0.88	0.50	2.08E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	107.492
0.015	214.983
0.033	350.787
0.052	458.440
0.070	551.717
0.089	635.747
0.107	713.143
0.126	785.459
0.144	853.711
0.163	918.610
0.181	980.677
0.200	1040.308
0.283	1303.853
0.367	1567.397
0.450	1830.942
0.540	1830.942

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
16.75	27.88	34.00	3.12E-02	6.00E+01	0.88	0.50	8.81E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	21.481
0.004	42.961
0.024	121.048
0.043	174.097
0.063	218.219
0.083	257.192
0.102	292.672
0.122	325.568
0.141	356.446
0.161	385.686
0.180	413.561
0.200	440.273
0.283	551.809
0.367	663.345
0.450	774.881
0.540	774.881

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
26.75	27.88	34.00	3.12E-02	6.00E+01	0.88	0.50	2.36E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	114.055
0.013	228.109
0.032	388.094
0.051	513.072
0.069	620.804
0.088	717.598
0.107	806.603
0.125	889.674
0.144	968.015
0.163	1042.462
0.181	1113.627
0.200	1181.972
0.283	1481.405
0.367	1780.838
0.450	2080.271
0.540	2080.271

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
20.50	27.88	34.00	3.16E-02	6.00E+01	0.88	0.50	1.09E+03

Y	P
IN	LBS/IN
0.000	0.000
0.002	25.555

0.004	51.110
0.024	149.112
0.043	215.186
0.063	270.066
0.082	318.513
0.102	362.602
0.122	403.472
0.141	441.827
0.161	478.145
0.180	512.764
0.200	545.937
0.283	684.241
0.367	822.545
0.450	960.849
0.540	960.849

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
30.50	27.88	34.00	3.16E-02	6.00E+01	0.88	0.50	2.65E+03

Y	P
IN	LBS/IN
0.000	0.000
0.006	121.303
0.012	242.606
0.031	426.554
0.050	568.661
0.069	690.706
0.087	800.153
0.106	900.679
0.125	994.430
0.144	1082.793
0.162	1166.730
0.181	1246.940
0.200	1323.951
0.283	1659.352
0.367	1994.753
0.450	2330.154
0.540	2330.154

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
24.25	27.88	34.00	3.19E-02	6.00E+01	0.88	0.50	1.30E+03

Y	P
IN	LBS/IN
0.000	0.000
0.002	29.677
0.004	59.354
0.023	177.234
0.043	256.316
0.063	321.945
0.082	379.858
0.102	432.551
0.122	481.390
0.141	527.219
0.161	570.611

0.180	611.970
0.200	651.600
0.283	816.672
0.367	981.745
0.450	1146.817
0.540	1146.817

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
34.25	27.88	34.00	3.19E-02	6.00E+01	0.88	0.50	2.93E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.006		128.973			
		0.011		257.946			
		0.030		465.674			
		0.049		624.764			
		0.068		761.013			
		0.087		883.028			
		0.106		995.003			
		0.125		1099.373			
		0.143		1197.706			
		0.162		1291.084			
		0.181		1380.294			
		0.200		1465.931			
		0.283		1837.300			
		0.367		2208.669			
		0.450		2580.038			
		0.540		2580.038			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.99	27.88	34.00	3.21E-02	6.00E+01	0.88	0.50	1.51E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.002		33.816			
		0.004		67.631			
		0.023		205.324			
		0.043		297.378			
		0.063		373.726			
		0.082		441.080			
		0.102		502.355			
		0.122		559.142			
		0.141		612.427			
		0.161		662.874			
		0.180		710.958			
		0.200		757.029			
		0.283		948.810			
		0.367		1140.591			
		0.450		1332.371			
		0.540		1332.371			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS DIAM PHI GAMMA AVG KPY A B PC  
 FT IN LBS/IN\*\*3 LBS/IN\*\*3 LB /IN  
 37.99 27.88 34.00 3.21E-02 6.00E+01 0.88 0.50 3.22E+03

Y	P
IN	LBS/IN
0.000	0.000
0.005	136.907
0.011	273.814
0.030	505.143
0.049	681.076
0.068	831.427
0.087	965.927
0.105	1089.280
0.124	1204.205
0.143	1312.449
0.162	1415.216
0.181	1513.378
0.200	1607.595
0.283	2014.852
0.367	2422.109
0.450	2829.367
0.540	2829.367

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

Wall 4 13 foot ATB-531-Service Load

RESULTS

-----

NUMBER OF ITERATIONS : 8

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
-----	----	----	-----	-----	-----	-----	-----	-----
0	0.000E+00	6.808E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	6.618E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
2	1.000E+00	6.428E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
3	1.500E+00	6.238E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
4	2.000E+00	6.048E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
5	2.500E+00	5.857E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
6	3.000E+00	5.667E-01	-3.171E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
7	3.500E+00	5.477E-01	-3.171E-03	0.000E+00	5.133E+01	0.000E+00	1.027E+02	2.883E+10
8	4.000E+00	5.287E-01	-3.171E-03	6.159E+02	1.688E+02	0.000E+00	1.323E+02	2.883E+10
9	4.500E+00	5.096E-01	-3.170E-03	2.025E+03	3.172E+02	0.000E+00	1.645E+02	2.883E+10
10	5.000E+00	4.906E-01	-3.170E-03	4.422E+03	4.957E+02	0.000E+00	1.926E+02	2.883E+10
11	5.500E+00	4.716E-01	-3.168E-03	7.974E+03	7.033E+02	0.000E+00	2.226E+02	2.883E+10
12	6.000E+00	4.526E-01	-3.166E-03	1.286E+04	9.393E+02	0.000E+00	2.494E+02	2.883E+10
13	6.500E+00	4.336E-01	-3.163E-03	1.925E+04	1.215E+03	0.000E+00	3.014E+02	2.883E+10
14	7.000E+00	4.146E-01	-3.158E-03	2.744E+04	1.541E+03	0.000E+00	3.509E+02	2.883E+10
15	7.500E+00	3.957E-01	-3.151E-03	3.774E+04	1.917E+03	0.000E+00	4.011E+02	2.883E+10
16	8.000E+00	3.768E-01	-3.142E-03	5.044E+04	2.342E+03	0.000E+00	4.494E+02	2.883E+10
17	8.500E+00	3.580E-01	-3.130E-03	6.584E+04	2.816E+03	0.000E+00	4.980E+02	2.883E+10
18	9.000E+00	3.393E-01	-3.114E-03	8.423E+04	3.338E+03	0.000E+00	5.454E+02	2.883E+10
19	9.500E+00	3.206E-01	-3.095E-03	1.059E+05	3.907E+03	0.000E+00	5.928E+02	2.883E+10
20	1.000E+01	3.021E-01	-3.070E-03	1.311E+05	4.523E+03	0.000E+00	6.394E+02	2.883E+10
21	1.050E+01	2.838E-01	-3.040E-03	1.602E+05	5.185E+03	0.000E+00	6.857E+02	2.883E+10
22	1.100E+01	2.657E-01	-3.003E-03	1.933E+05	5.894E+03	0.000E+00	7.317E+02	2.883E+10
23	1.150E+01	2.478E-01	-2.959E-03	2.309E+05	6.648E+03	0.000E+00	7.771E+02	2.883E+10
24	1.200E+01	2.302E-01	-2.906E-03	2.731E+05	7.448E+03	0.000E+00	8.227E+02	2.883E+10
25	1.250E+01	2.129E-01	-2.844E-03	3.203E+05	8.293E+03	0.000E+00	8.676E+02	2.883E+10
26	1.300E+01	1.960E-01	-2.772E-03	3.726E+05	8.902E+03	-9.398E+01	3.489E+02	2.883E+10
27	1.350E+01	1.796E-01	-2.689E-03	4.271E+05	8.581E+03	-1.864E+02	-9.903E+02	2.883E+10
28	1.400E+01	1.637E-01	-2.595E-03	4.756E+05	7.598E+03	-1.839E+02	-9.764E+02	2.883E+10

29	1.450E+01	1.485E-01	-2.492E-03	5.183E+05	6.628E+03	-1.814E+02	-9.637E+02	2.883E+10
30	1.500E+01	1.338E-01	-2.380E-03	5.551E+05	5.670E+03	-1.790E+02	-9.508E+02	2.883E+10
31	1.550E+01	1.199E-01	-2.261E-03	5.863E+05	4.725E+03	-1.767E+02	-9.395E+02	2.883E+10
32	1.600E+01	1.067E-01	-2.137E-03	6.118E+05	3.797E+03	-1.724E+02	-9.159E+02	2.883E+10
33	1.650E+01	9.427E-02	-2.007E-03	6.319E+05	2.892E+03	-1.684E+02	-8.945E+02	2.883E+10
34	1.700E+01	8.262E-02	-1.874E-03	6.465E+05	2.007E+03	-1.650E+02	-8.756E+02	2.883E+10
35	1.750E+01	7.178E-02	-1.739E-03	6.560E+05	1.140E+03	-1.618E+02	-8.592E+02	2.883E+10
36	1.800E+01	6.175E-02	-1.602E-03	6.602E+05	2.885E+02	-1.589E+02	-8.434E+02	2.883E+10
37	1.850E+01	5.255E-02	-1.465E-03	6.594E+05	-5.394E+02	-1.532E+02	-8.123E+02	2.883E+10
38	1.900E+01	4.418E-02	-1.328E-03	6.537E+05	-1.335E+03	-1.474E+02	-7.793E+02	2.883E+10
39	1.950E+01	3.662E-02	-1.193E-03	6.434E+05	-2.100E+03	-1.422E+02	-7.506E+02	2.883E+10
40	2.000E+01	2.986E-02	-1.061E-03	6.285E+05	-2.837E+03	-1.373E+02	-7.231E+02	2.883E+10
41	2.050E+01	2.389E-02	-9.319E-04	6.094E+05	-3.548E+03	-1.329E+02	-6.997E+02	2.883E+10
42	2.100E+01	1.868E-02	-8.076E-04	5.860E+05	-4.225E+03	-1.250E+02	-6.540E+02	2.883E+10
43	2.150E+01	1.420E-02	-6.885E-04	5.587E+05	-4.860E+03	-1.182E+02	-6.159E+02	2.883E+10
44	2.200E+01	1.042E-02	-5.754E-04	5.276E+05	-5.450E+03	-1.091E+02	-5.629E+02	2.883E+10
45	2.250E+01	7.294E-03	-4.692E-04	4.933E+05	-5.979E+03	-9.763E+01	-4.966E+02	2.883E+10
46	2.300E+01	4.786E-03	-3.705E-04	4.559E+05	-6.449E+03	-8.841E+01	-4.430E+02	2.883E+10
47	2.350E+01	2.848E-03	-2.798E-04	4.159E+05	-6.873E+03	-8.145E+01	-4.038E+02	2.883E+10
48	2.400E+01	1.429E-03	-1.977E-04	3.734E+05	-7.243E+03	-7.014E+01	-3.376E+02	2.883E+10
49	2.450E+01	4.762E-04	-1.246E-04	3.290E+05	-7.526E+03	-5.135E+01	-2.272E+02	2.883E+10
50	2.500E+01	-6.595E-05	-6.091E-05	2.831E+05	-7.420E+03	5.987E+01	4.385E+02	2.883E+10
51	2.550E+01	-2.546E-04	-6.490E-06	2.399E+05	-6.894E+03	8.938E+01	6.133E+02	2.883E+10
52	2.600E+01	-1.438E-04	3.932E-05	2.004E+05	-6.314E+03	7.845E+01	5.462E+02	2.883E+10
53	2.650E+01	2.172E-04	7.725E-05	1.641E+05	-5.756E+03	-4.039E+01	5.715E+02	2.883E+10
54	2.700E+01	7.831E-04	1.080E-04	1.313E+05	-5.206E+03	-4.733E+01	5.283E+02	2.883E+10
55	2.750E+01	1.513E-03	1.322E-04	1.017E+05	-4.692E+03	-5.197E+01	4.984E+02	2.883E+10
56	2.800E+01	2.370E-03	1.506E-04	7.501E+04	-4.199E+03	-5.357E+01	4.874E+02	2.883E+10
57	2.850E+01	3.320E-03	1.637E-04	5.128E+04	-3.713E+03	-5.351E+01	4.857E+02	2.883E+10
58	2.900E+01	4.335E-03	1.723E-04	3.046E+04	-3.233E+03	-5.520E+01	4.743E+02	2.883E+10
59	2.950E+01	5.387E-03	1.767E-04	1.249E+04	-2.754E+03	-5.333E+01	4.836E+02	2.883E+10
60	3.000E+01	6.455E-03	1.778E-04	-2.586E+03	-2.265E+03	-5.135E+01	4.942E+02	2.883E+10
61	3.050E+01	7.520E-03	1.760E-04	-1.469E+04	-1.790E+03	-5.742E+01	4.559E+02	2.883E+10
62	3.100E+01	8.567E-03	1.719E-04	-2.406E+04	-1.353E+03	-6.372E+01	4.169E+02	2.883E+10
63	3.150E+01	9.583E-03	1.662E-04	-3.094E+04	-9.569E+02	-7.020E+01	3.763E+02	2.883E+10
64	3.200E+01	1.056E-02	1.593E-04	-3.555E+04	-6.009E+02	-7.679E+01	3.356E+02	2.883E+10
65	3.250E+01	1.149E-02	1.516E-04	-3.815E+04	-2.861E+02	-8.346E+01	2.940E+02	2.883E+10
66	3.300E+01	1.238E-02	1.436E-04	-3.898E+04	-1.273E+01	-9.016E+01	2.527E+02	2.883E+10
67	3.350E+01	1.322E-02	1.356E-04	-3.830E+04	2.190E+02	-9.688E+01	2.108E+02	2.883E+10
68	3.400E+01	1.401E-02	1.278E-04	-3.635E+04	4.102E+02	-1.032E+02	1.716E+02	2.883E+10
69	3.450E+01	1.475E-02	1.205E-04	-3.338E+04	5.621E+02	-1.096E+02	1.322E+02	2.883E+10
70	3.500E+01	1.545E-02	1.140E-04	-2.961E+04	6.749E+02	-1.159E+02	9.347E+01	2.883E+10
71	3.550E+01	1.612E-02	1.083E-04	-2.528E+04	7.489E+02	-1.221E+02	5.449E+01	2.883E+10
72	3.600E+01	1.675E-02	1.035E-04	-2.062E+04	7.842E+02	-1.284E+02	1.608E+01	2.883E+10
73	3.650E+01	1.736E-02	9.970E-05	-1.587E+04	7.808E+02	-1.346E+02	-2.284E+01	2.883E+10
74	3.700E+01	1.795E-02	9.687E-05	-1.125E+04	7.387E+02	-1.409E+02	-6.151E+01	2.883E+10
75	3.750E+01	1.852E-02	9.498E-05	-7.002E+03	6.574E+02	-1.473E+02	-1.009E+02	2.883E+10
76	3.800E+01	1.909E-02	9.390E-05	-3.360E+03	5.354E+02	-1.542E+02	-1.431E+02	2.883E+10
77	3.850E+01	1.965E-02	9.349E-05	-5.771E+02	3.706E+02	-1.612E+02	-1.864E+02	2.883E+10
78	3.900E+01	2.021E-02	9.354E-05	1.087E+03	1.623E+02	-1.684E+02	-2.303E+02	2.883E+10
79	3.950E+01	2.077E-02	9.380E-05	1.370E+03	-9.062E+01	-1.757E+02	-2.755E+02	2.883E+10
80	4.000E+01	2.134E-02	9.394E-05	-2.779E-09	-1.142E+02	-9.163E+01	2.284E+02	2.883E+10

END OF ANALYSIS

=====

PYWALL for Windows, Version 2022.7.2

Serial Number : 562484315

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

=====

This program is licensed to :

Gannett Fleming, Inc.  
Akron, OH, USA

Path to file locations : C:\Users\tmonaco\OneDrive - Gannett Fleming Inc\Desktop\atb 531\W0 5  
ATB-531\Wall 4\  
Name of input data file : Wall 4 13 foot str Case W05.py7d  
Name of output file : Wall 4 13 foot str Case W05.py7o  
Name of plot output file : Wall 4 13 foot str Case W05.py7p

-----

Time and Date of Analysis

-----

Date: March 13, 2023 Time: 17:25:41

Wall 4 13 foot ATB-531-Strength Load

\*\*\*\*\*  
\* 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 = 40.000 FT  
NUMBER OF INCREMENTS = 80  
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	40.0000	1

\* CROSS SECTIONS \*

CROSS SECTION : 1

SECTION NAME : Section  
 TYPE : ELASTIC  
 CROSS SECTION TYPE : GENERAL SECTION  
 EQUIVALENT DIAMETER : 27.8800 IN  
 YOUNG MODULUS : 2.90000E+07 LBS/IN\*\*2

\* CROSS SECTIONS PROPERTIES \*

ELASTIC SECTIONS

SECT	DIAM, IN	I, IN**4
1	27.8800	994.300

\*\*\*\*\*  
 \* 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		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
80	0		2.883E+10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

\*\*\*\*\*  
 \* WALL INFORMATION \*  
 \*\*\*\*\*

FREE HEIGHT OF WALL = 1.300E+01 FT  
 WIDTH FOR EARTH PRESSURE, WA = 2.788E+01 IN  
 WIDTH FOR SOIL RESISTANCE, WP = 2.788E+01 IN  
 DEPTH TO THE WATER TABLE AT BACKFILL = 6.000E+00 FT  
 DEPTH TO THE WATER TABLE AT EXCAVATION = 1.300E+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.) = 5.700E+00  
 MODIFICATION FOR ACTIVE EARTH PRESSURE = 1.500E+00

\*\*\*\*\*  
 \* SURCHARGE INFORMATION \*  
 \*\*\*\*\*

UNIFORM SURFACE PRESSURE = 0.000E+00 LBS/IN\*\*2  
 SURCHARGE LOADING NO. = 1  
 STRIP LOAD = 0.174E+01 LBS/IN\*\*2  
 WIDTH OF THE STRIP LOAD = 0.288E+03 IN  
 HORIZONTAL DISTANCE BETWEEN WALL AND MIDDLE OF STRIP WIDTH = 0.264E+03 IN  
 VERTICAL DISTANCE BETWEEN THE WALL AND SURCHARGE = 0.000E+00 IN  
 FACTOR FOR SURCHARGE LOAD = 0.175E+01



\*\*\*\*\*  
 \* SOIL INFORMATION \*  
 \*\*\*\*\*

LAYER NO.	TOTAL THICKNESS	COHESION/ STRENGTH	PHI DEG	TOTAL UNIT WEIGHT PCI	DRAINED T OR F	ZTOP FT
	FT	PSI				
1	3.0	6.9	0.0	0.067	T	3.00
2	7.0	6.9	0.0	0.067	T	6.00
3	13.0	6.9	0.0	0.067	F	13.00
4	17.0	0.0	34.0	0.069	T	26.00
5	26.0	20.8	0.0	0.069	F	43.00

\*\*\*\*\*  
 \* EFFECTIVE OVERBURDEN STRESS \*  
 \*\*\*\*\*

DEPTH FT	STRESS LBS/IN**2
3.000E+00	0.000E+00
6.000E+00	2.396E+00
1.300E+01	4.962E+00
2.600E+01	9.728E+00
4.300E+01	1.655E+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	3.333E-01
2	1.000E+00	1.000E+00	3.333E-01
3	1.000E+00	1.000E+00	0.000E+00
4	2.827E-01	3.537E+00	0.000E+00
5	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	8.89	4.50	21.56	5.00	0.00	-0.00	0.00
2	141.65	9.50	53.89	10.67	0.00	-0.00	0.00

\*\*\*\*\*  
 \* ACTIVE WATER PRESSURE OF EACH LAYER \*  
 \*\*\*\*\*

LAYER NO.	PW1 LBS/IN	Z1 FT	PW2 LBS/IN	Z2 FT
-----------	------------	-------	------------	-------

\* GENERATED TRIANGULAR-DISTRIBUTION EARTH PRESSURE

DEPTH ACTIVE EARTH PRESSURE

FT	LBS/IN
-----	-----
3.00000E+00	0.00000E+00
3.50000E+00	2.90119E+01
4.00000E+00	3.67235E+01
4.50000E+00	4.51879E+01
5.00000E+00	5.24729E+01
5.50000E+00	6.02989E+01
6.00000E+00	6.71657E+01
6.50000E+00	8.04087E+01
7.00000E+00	9.29157E+01
7.50000E+00	1.05618E+02
8.00000E+00	1.17790E+02
8.50000E+00	1.30038E+02
9.00000E+00	1.41932E+02
9.50000E+00	1.53800E+02
1.00000E+01	1.65468E+02
1.05000E+01	1.77035E+02
1.10000E+01	1.88527E+02
1.15000E+01	1.99861E+02
1.20000E+01	2.11213E+02
1.25000E+01	2.22368E+02
1.30000E+01	2.33620E+02
1.35000E+01	3.74233E+01
1.40000E+01	3.70107E+01
1.45000E+01	3.63499E+01
1.50000E+01	3.58843E+01
1.55000E+01	3.51567E+01
1.60000E+01	3.46548E+01
1.65000E+01	3.38854E+01
1.70000E+01	3.33640E+01
1.75000E+01	3.25694E+01
1.80000E+01	3.20369E+01
1.85000E+01	3.12340E+01
1.90000E+01	3.06959E+01
1.95000E+01	2.98957E+01
2.00000E+01	2.93632E+01
2.05000E+01	2.85714E+01
2.10000E+01	2.80473E+01
2.15000E+01	2.72722E+01
2.20000E+01	2.67615E+01
2.25000E+01	2.60062E+01
2.30000E+01	2.55102E+01
2.35000E+01	2.47789E+01
2.40000E+01	2.42999E+01
2.45000E+01	2.35948E+01
2.50000E+01	2.31340E+01
2.55000E+01	2.24565E+01
2.60000E+01	2.20143E+01
2.65000E+01	2.06496E+02
2.70000E+01	2.06075E+02
2.75000E+01	2.05453E+02
2.80000E+01	2.05049E+02
2.85000E+01	2.04458E+02
2.90000E+01	2.04073E+02
2.95000E+01	2.03510E+02
3.00000E+01	2.03145E+02
3.05000E+01	2.02610E+02
3.10000E+01	2.02261E+02
3.15000E+01	2.01754E+02
3.20000E+01	2.01422E+02
3.25000E+01	2.00940E+02
3.30000E+01	2.00627E+02
3.35000E+01	2.00170E+02
3.40000E+01	1.99872E+02
3.45000E+01	1.99440E+02
3.50000E+01	1.99158E+02
3.55000E+01	1.98748E+02
3.60000E+01	1.98481E+02

3.65000E+01	1.98093E+02
3.70000E+01	1.97839E+02
3.75000E+01	1.97471E+02
3.80000E+01	1.97234E+02
3.85000E+01	1.96886E+02
3.90000E+01	1.96660E+02
3.95000E+01	1.96331E+02
4.00000E+01	1.96119E+02

\*\*\*\*\*  
 \* SOIL LAYERS AND STRENGTH DATA \*  
 \*\*\*\*\*

X AT THE SURFACE OF EXCAVATION SIDE = 13.00 FT

2 LAYER(S) OF SOIL

LAYER 1  
 THE SOIL IS A STIFF CLAY WITHOUT FREE WATER

LAYER 2  
 THE SOIL IS A SAND

DISTRIBUTION OF EFFECTIVE UNIT WEIGHT WITH DEPTH  
 6 POINTS

X, FT	WEIGHT, LBS/IN**3
13.0000	3.0551E-02
26.0000	3.0551E-02
26.0000	3.3444E-02
43.0000	3.3444E-02
43.0000	3.3444E-02
69.0000	3.3444E-02

DISTRIBUTION OF STRENGTH PARAMETERS WITH DEPTH  
 4 POINTS

X, FT	C, LBS/IN**2	PHI, DEGREE	E50	KPY, LBS/IN**3
13.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
26.00	6.9444E+00	0.000	5.0000E-03	0.0000E+00
26.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01
41.00	0.0000E+00	34.000	0.0000E+00	6.0000E+01

P-Y CURVES DATA

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	C	CAVG	GAMMA AVG	E50
FT	IN	LBS/IN**2	LBS/IN**2	LBS/IN**3	
0.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y	P
IN	LBS/IN
0.00000	0.00000
0.00002	19.80327
0.00012	29.61279
0.00024	35.21574
0.00120	52.65982
0.00240	62.62343
0.01200	93.64387
0.02400	111.36195

0.06000	140.03025
0.12000	166.52497
0.18000	184.29017
0.24000	198.03267
0.60000	249.01290
1.20000	296.12792
2.40000	352.15742
2.70000	352.15742
3.00000	352.15742

P-Multiplier = 1.000E+00 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
10.01	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	34.30623
0.00012	51.29977
0.00024	61.00605
0.00120	91.22533
0.00240	108.48581
0.01200	162.22412
0.02400	192.91808
0.06000	242.58165
0.12000	288.47982
0.18000	319.25540
0.24000	343.06225
0.60000	431.37795
1.20000	512.99772
2.40000	610.06054
2.70000	610.06054
3.00000	610.06054

P-Multiplier = 1.000E+00 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
3.25	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	21.49740
0.00012	32.14611
0.00024	38.22839
0.00120	57.16477
0.00240	67.98075
0.01200	101.65493
0.02400	120.88877
0.06000	152.00958
0.12000	180.77088
0.18000	200.05587
0.24000	214.97402
0.60000	270.31551
1.20000	321.46113
2.40000	382.28387
2.70000	382.28387
3.00000	382.28387

P-Multiplier = 1.000E+00 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
13.25	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	38.36501
0.00012	57.36908
0.00024	68.22371
0.00120	102.01825
0.00240	121.32083
0.01200	181.41695
0.02400	215.74233
0.06000	271.28162
0.12000	322.61003
0.18000	357.02669
0.24000	383.65014
0.60000	482.41452
1.20000	573.69077
2.40000	682.23715
2.70000	682.23715
3.00000	682.23715

P-Multiplier = 1.000E+00 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
6.50	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	23.19589
0.00012	34.68595
0.00024	41.24877
0.00120	61.68131
0.00240	73.35185
0.01200	109.68660
0.02400	130.44008
0.06000	164.01972
0.12000	195.05342
0.18000	215.86209
0.24000	231.95891
0.60000	291.67289
1.20000	346.85947
2.40000	412.48775
2.70000	412.48775
3.00000	412.48775

P-Multiplier = 1.000E+00 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
----------------------	------------	----------------	-------------------	------------------------	-----

16.50 27.880 6.94E+00 6.94E+00 3.06E-02 5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	42.43424
0.00012	63.45398
0.00024	75.45993
0.00120	112.83892
0.00240	134.18884
0.01200	200.65912
0.02400	238.62525
0.06000	300.05537
0.12000	356.82798
0.18000	394.89508
0.24000	424.34237
0.60000	533.58228
1.20000	634.53985
2.40000	754.59930
2.70000	754.59930
3.00000	754.59930

P-Multiplier = 1.000E+00 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
9.75	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	24.89438
0.00012	37.22578
0.00024	44.26916
0.00120	66.19784
0.00240	78.72294
0.01200	117.71826
0.02400	139.99139
0.06000	176.02985
0.12000	209.33595
0.18000	231.66831
0.24000	248.94380
0.60000	313.03026
1.20000	372.25781
2.40000	442.69164
2.70000	442.69164
3.00000	442.69164

P-Multiplier = 1.000E+00 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
19.75	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	46.50346
0.00012	69.53889
0.00024	82.69615
0.00120	123.65958

0.00240	147.05685
0.01200	219.90128
0.02400	261.50817
0.06000	328.82912
0.12000	391.04593
0.18000	432.76346
0.24000	465.03460
0.60000	584.75005
1.20000	695.38892
2.40000	826.96146
2.70000	826.96146
3.00000	826.96146

P-Multiplier = 1.000E+00 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
12.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	26.58851
0.00012	39.75910
0.00024	47.28181
0.00120	70.70279
0.00240	84.08027
0.01200	125.72932
0.02400	149.51820
0.06000	188.00919
0.12000	223.58187
0.18000	247.43401
0.24000	265.88515
0.60000	334.33287
1.20000	397.59103
2.40000	472.81808
2.70000	472.81808
3.00000	472.81808

P-Multiplier = 1.000E+00 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
22.99	27.880	6.94E+00	6.94E+00	3.06E-02	5.0000E-03

Y IN	P LBS/IN
0.00000	0.00000
0.00002	50.56225
0.00012	75.60820
0.00024	89.91381
0.00120	134.45250
0.00240	159.89187
0.01200	239.09411
0.02400	284.33242
0.06000	357.52909
0.12000	425.17614
0.18000	470.53475
0.24000	505.62249
0.60000	635.78662
1.20000	756.08198

2.40000 899.13807  
 2.70000 899.13807  
 3.00000 899.13807

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
13.01	27.88	34.00	3.06E-02	6.00E+01	0.88	0.50	6.70E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	17.519
0.005	35.039
0.024	93.174
0.044	133.191
0.063	166.557
0.083	196.062
0.102	222.939
0.122	247.869
0.141	271.276
0.161	293.446
0.180	314.585
0.200	334.844
0.283	419.671
0.367	504.499
0.450	589.326
0.540	589.326

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
23.01	27.88	34.00	3.06E-02	6.00E+01	0.88	0.50	2.08E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	107.492
0.015	214.983
0.033	350.787
0.052	458.440
0.070	551.717
0.089	635.747
0.107	713.143
0.126	785.459
0.144	853.711
0.163	918.610
0.181	980.677
0.200	1040.308
0.283	1303.853
0.367	1567.397
0.450	1830.942
0.540	1830.942

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

AT THE EXCAVATION SIDE



DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
16.75	27.88	34.00	3.12E-02	6.00E+01	0.88	0.50	8.81E+02

Y	P
IN	LBS/IN
0.000	0.000
0.002	21.481
0.004	42.961
0.024	121.048
0.043	174.097
0.063	218.219
0.083	257.192
0.102	292.672
0.122	325.568
0.141	356.446
0.161	385.686
0.180	413.561
0.200	440.273
0.283	551.809
0.367	663.345
0.450	774.881
0.540	774.881

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
26.75	27.88	34.00	3.12E-02	6.00E+01	0.88	0.50	2.36E+03

Y	P
IN	LBS/IN
0.000	0.000
0.007	114.055
0.013	228.109
0.032	388.094
0.051	513.072
0.069	620.804
0.088	717.598
0.107	806.603
0.125	889.674
0.144	968.015
0.163	1042.462
0.181	1113.627
0.200	1181.972
0.283	1481.405
0.367	1780.838
0.450	2080.271
0.540	2080.271

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
20.50	27.88	34.00	3.16E-02	6.00E+01	0.88	0.50	1.09E+03

Y	P
IN	LBS/IN
0.000	0.000
0.002	25.555

0.004	51.110
0.024	149.112
0.043	215.186
0.063	270.066
0.082	318.513
0.102	362.602
0.122	403.472
0.141	441.827
0.161	478.145
0.180	512.764
0.200	545.937
0.283	684.241
0.367	822.545
0.450	960.849
0.540	960.849

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

AT THE BACKFILL SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
30.50	27.88	34.00	3.16E-02	6.00E+01	0.88	0.50	2.65E+03

Y	P
IN	LBS/IN
0.000	0.000
0.006	121.303
0.012	242.606
0.031	426.554
0.050	568.661
0.069	690.706
0.087	800.153
0.106	900.679
0.125	994.430
0.144	1082.793
0.162	1166.730
0.181	1246.940
0.200	1323.951
0.283	1659.352
0.367	1994.753
0.450	2330.154
0.540	2330.154

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS	DIAM	PHI	GAMMA AVG	KPY	A	B	PC
FT	IN		LBS/IN**3	LBS/IN**3			LB /IN
24.25	27.88	34.00	3.19E-02	6.00E+01	0.88	0.50	1.30E+03

Y	P
IN	LBS/IN
0.000	0.000
0.002	29.677
0.004	59.354
0.023	177.234
0.043	256.316
0.063	321.945
0.082	379.858
0.102	432.551
0.122	481.390
0.141	527.219
0.161	570.611

0.180	611.970
0.200	651.600
0.283	816.672
0.367	981.745
0.450	1146.817
0.540	1146.817

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

AT THE BACKFILL SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
34.25	27.88	34.00	3.19E-02	6.00E+01	0.88	0.50	2.93E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.006		128.973			
		0.011		257.946			
		0.030		465.674			
		0.049		624.764			
		0.068		761.013			
		0.087		883.028			
		0.106		995.003			
		0.125		1099.373			
		0.143		1197.706			
		0.162		1291.084			
		0.181		1380.294			
		0.200		1465.931			
		0.283		1837.300			
		0.367		2208.669			
		0.450		2580.038			
		0.540		2580.038			

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

AT THE EXCAVATION SIDE

DEPTH BELOW GS FT	DIAM IN	PHI	GAMMA AVG LBS/IN**3	KPY LBS/IN**3	A	B	PC LB /IN
27.99	27.88	34.00	3.21E-02	6.00E+01	0.88	0.50	1.51E+03
		Y IN		P LBS/IN			
		0.000		0.000			
		0.002		33.816			
		0.004		67.631			
		0.023		205.324			
		0.043		297.378			
		0.063		373.726			
		0.082		441.080			
		0.102		502.355			
		0.122		559.142			
		0.141		612.427			
		0.161		662.874			
		0.180		710.958			
		0.200		757.029			
		0.283		948.810			
		0.367		1140.591			
		0.450		1332.371			
		0.540		1332.371			

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

AT THE BACKFILL SIDE

DEPTH BELOW GS DIAM PHI GAMMA AVG KPY A B PC  
 FT IN LBS/IN\*\*3 LBS/IN\*\*3 LB /IN  
 37.99 27.88 34.00 3.21E-02 6.00E+01 0.88 0.50 3.22E+03

Y P  
 IN LBS/IN  
 0.000 0.000  
 0.005 136.907  
 0.011 273.814  
 0.030 505.143  
 0.049 681.076  
 0.068 831.427  
 0.087 965.927  
 0.105 1089.280  
 0.124 1204.205  
 0.143 1312.449  
 0.162 1415.216  
 0.181 1513.378  
 0.200 1607.595  
 0.283 2014.852  
 0.367 2422.109  
 0.450 2829.367  
 0.540 2829.367

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

Wall 4 13 foot ATB-531-Strength Load

RESULTS

-----

NUMBER OF ITERATIONS : 9

STA I	X FT	DEFL. IN	SLOPE RAD	MOMENT LBS-IN	SHEAR LBS	SOIL_REACT LBS/IN	NET_FORCE/STA LBS	EI LBS-IN**2
0	0.000E+00	1.542E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
1	5.000E-01	1.502E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
2	1.000E+00	1.463E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
3	1.500E+00	1.424E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
4	2.000E+00	1.384E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
5	2.500E+00	1.345E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
6	3.000E+00	1.305E+00	-6.575E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.883E+10
7	3.500E+00	1.266E+00	-6.575E-03	0.000E+00	8.704E+01	0.000E+00	1.741E+02	2.883E+10
8	4.000E+00	1.226E+00	-6.575E-03	1.044E+03	2.842E+02	0.000E+00	2.203E+02	2.883E+10
9	4.500E+00	1.187E+00	-6.574E-03	3.411E+03	5.300E+02	0.000E+00	2.711E+02	2.883E+10
10	5.000E+00	1.147E+00	-6.573E-03	7.404E+03	8.230E+02	0.000E+00	3.148E+02	2.883E+10
11	5.500E+00	1.108E+00	-6.571E-03	1.329E+04	1.161E+03	0.000E+00	3.618E+02	2.883E+10
12	6.000E+00	1.069E+00	-6.567E-03	2.134E+04	1.544E+03	0.000E+00	4.030E+02	2.883E+10
13	6.500E+00	1.029E+00	-6.562E-03	3.181E+04	1.986E+03	0.000E+00	4.825E+02	2.883E+10
14	7.000E+00	9.899E-01	-6.554E-03	4.518E+04	2.506E+03	0.000E+00	5.575E+02	2.883E+10
15	7.500E+00	9.506E-01	-6.543E-03	6.189E+04	3.102E+03	0.000E+00	6.337E+02	2.883E+10
16	8.000E+00	9.114E-01	-6.528E-03	8.240E+04	3.772E+03	0.000E+00	7.067E+02	2.883E+10
17	8.500E+00	8.722E-01	-6.508E-03	1.072E+05	4.516E+03	0.000E+00	7.802E+02	2.883E+10
18	9.000E+00	8.333E-01	-6.482E-03	1.366E+05	5.332E+03	0.000E+00	8.516E+02	2.883E+10
19	9.500E+00	7.945E-01	-6.450E-03	1.711E+05	6.219E+03	0.000E+00	9.228E+02	2.883E+10
20	1.000E+01	7.559E-01	-6.411E-03	2.112E+05	7.177E+03	0.000E+00	9.928E+02	2.883E+10
21	1.050E+01	7.175E-01	-6.362E-03	2.573E+05	8.204E+03	0.000E+00	1.062E+03	2.883E+10
22	1.100E+01	6.795E-01	-6.303E-03	3.097E+05	9.301E+03	0.000E+00	1.131E+03	2.883E+10
23	1.150E+01	6.419E-01	-6.232E-03	3.689E+05	1.047E+04	0.000E+00	1.199E+03	2.883E+10
24	1.200E+01	6.047E-01	-6.149E-03	4.353E+05	1.170E+04	0.000E+00	1.267E+03	2.883E+10
25	1.250E+01	5.681E-01	-6.050E-03	5.093E+05	1.300E+04	0.000E+00	1.334E+03	2.883E+10
26	1.300E+01	5.321E-01	-5.936E-03	5.913E+05	1.401E+04	-1.197E+02	6.836E+02	2.883E+10
27	1.350E+01	4.969E-01	-5.804E-03	6.774E+05	1.375E+04	-2.373E+02	-1.199E+03	2.883E+10
28	1.400E+01	4.625E-01	-5.655E-03	7.563E+05	1.256E+04	-2.351E+02	-1.189E+03	2.883E+10

29	1.450E+01	4.290E-01	-5.490E-03	8.280E+05	1.137E+04	-2.330E+02	-1.180E+03	2.883E+10
30	1.500E+01	3.966E-01	-5.311E-03	8.927E+05	1.020E+04	-2.310E+02	-1.170E+03	2.883E+10
31	1.550E+01	3.653E-01	-5.119E-03	9.504E+05	9.031E+03	-2.290E+02	-1.163E+03	2.883E+10
32	1.600E+01	3.352E-01	-4.916E-03	1.001E+06	7.872E+03	-2.270E+02	-1.154E+03	2.883E+10
33	1.650E+01	3.063E-01	-4.703E-03	1.045E+06	6.721E+03	-2.252E+02	-1.148E+03	2.883E+10
34	1.700E+01	2.787E-01	-4.482E-03	1.082E+06	5.576E+03	-2.239E+02	-1.143E+03	2.883E+10
35	1.750E+01	2.525E-01	-4.254E-03	1.112E+06	4.434E+03	-2.226E+02	-1.140E+03	2.883E+10
36	1.800E+01	2.277E-01	-4.020E-03	1.135E+06	3.299E+03	-2.203E+02	-1.130E+03	2.883E+10
37	1.850E+01	2.043E-01	-3.782E-03	1.151E+06	2.177E+03	-2.170E+02	-1.115E+03	2.883E+10
38	1.900E+01	1.823E-01	-3.542E-03	1.161E+06	1.070E+03	-2.139E+02	-1.099E+03	2.883E+10
39	1.950E+01	1.618E-01	-3.300E-03	1.164E+06	-1.832E+01	-2.096E+02	-1.078E+03	2.883E+10
40	2.000E+01	1.427E-01	-3.058E-03	1.161E+06	-1.085E+03	-2.051E+02	-1.054E+03	2.883E+10
41	2.050E+01	1.251E-01	-2.817E-03	1.151E+06	-2.129E+03	-2.010E+02	-1.034E+03	2.883E+10
42	2.100E+01	1.089E-01	-2.579E-03	1.135E+06	-3.148E+03	-1.953E+02	-1.003E+03	2.883E+10
43	2.150E+01	9.413E-02	-2.345E-03	1.113E+06	-4.135E+03	-1.893E+02	-9.719E+02	2.883E+10
44	2.200E+01	8.075E-02	-2.117E-03	1.086E+06	-5.093E+03	-1.839E+02	-9.427E+02	2.883E+10
45	2.250E+01	6.873E-02	-1.894E-03	1.052E+06	-6.023E+03	-1.791E+02	-9.185E+02	2.883E+10
46	2.300E+01	5.802E-02	-1.679E-03	1.013E+06	-6.928E+03	-1.740E+02	-8.911E+02	2.883E+10
47	2.350E+01	4.858E-02	-1.473E-03	9.692E+05	-7.798E+03	-1.664E+02	-8.500E+02	2.883E+10
48	2.400E+01	4.035E-02	-1.276E-03	9.199E+05	-8.630E+03	-1.599E+02	-8.136E+02	2.883E+10
49	2.450E+01	3.326E-02	-1.091E-03	8.656E+05	-9.429E+03	-1.543E+02	-7.844E+02	2.883E+10
50	2.500E+01	2.726E-02	-9.166E-04	8.067E+05	-1.020E+04	-1.497E+02	-7.597E+02	2.883E+10
51	2.550E+01	2.226E-02	-7.553E-04	7.432E+05	-1.095E+04	-1.445E+02	-7.323E+02	2.883E+10
52	2.600E+01	1.820E-02	-6.077E-04	6.753E+05	-1.166E+04	-1.380E+02	-6.959E+02	2.883E+10
53	2.650E+01	1.497E-02	-4.747E-04	6.033E+05	-1.177E+04	-1.258E+02	4.841E+02	2.883E+10
54	2.700E+01	1.250E-02	-3.564E-04	5.341E+05	-1.125E+04	-1.139E+02	5.532E+02	2.883E+10
55	2.750E+01	1.070E-02	-2.521E-04	4.683E+05	-1.066E+04	-1.006E+02	6.290E+02	2.883E+10
56	2.800E+01	9.476E-03	-1.611E-04	4.062E+05	-9.995E+03	-8.907E+01	6.959E+02	2.883E+10
57	2.850E+01	8.763E-03	-8.257E-05	3.484E+05	-9.273E+03	-7.972E+01	7.484E+02	2.883E+10
58	2.900E+01	8.485E-03	-1.564E-05	2.950E+05	-8.503E+03	-7.219E+01	7.913E+02	2.883E+10
59	2.950E+01	8.575E-03	4.068E-05	2.463E+05	-7.695E+03	-6.618E+01	8.240E+02	2.883E+10
60	3.000E+01	8.973E-03	8.739E-05	2.026E+05	-6.858E+03	-6.139E+01	8.506E+02	2.883E+10
61	3.050E+01	9.624E-03	1.255E-04	1.640E+05	-6.023E+03	-6.611E+01	8.190E+02	2.883E+10
62	3.100E+01	1.048E-02	1.562E-04	1.303E+05	-5.223E+03	-7.191E+01	7.821E+02	2.883E+10
63	3.150E+01	1.150E-02	1.803E-04	1.013E+05	-4.463E+03	-7.866E+01	7.385E+02	2.883E+10
64	3.200E+01	1.264E-02	1.988E-04	7.679E+04	-3.748E+03	-8.630E+01	6.908E+02	2.883E+10
65	3.250E+01	1.388E-02	2.127E-04	5.637E+04	-3.084E+03	-9.471E+01	6.374E+02	2.883E+10
66	3.300E+01	1.519E-02	2.227E-04	3.978E+04	-2.475E+03	-1.038E+02	5.808E+02	2.883E+10
67	3.350E+01	1.656E-02	2.296E-04	2.668E+04	-1.924E+03	-1.136E+02	5.196E+02	2.883E+10
68	3.400E+01	1.795E-02	2.341E-04	1.669E+04	-1.435E+03	-1.235E+02	4.585E+02	2.883E+10
69	3.450E+01	1.936E-02	2.368E-04	9.453E+03	-1.009E+03	-1.338E+02	3.938E+02	2.883E+10
70	3.500E+01	2.079E-02	2.383E-04	4.579E+03	-6.485E+02	-1.446E+02	3.276E+02	2.883E+10
71	3.550E+01	2.222E-02	2.389E-04	1.670E+03	-3.557E+02	-1.557E+02	2.582E+02	2.883E+10
72	3.600E+01	2.366E-02	2.391E-04	3.107E+02	-1.323E+02	-1.671E+02	1.885E+02	2.883E+10
73	3.650E+01	2.509E-02	2.392E-04	8.240E+01	2.762E+01	-1.762E+02	1.313E+02	2.883E+10
74	3.700E+01	2.653E-02	2.392E-04	6.422E+02	1.301E+02	-1.856E+02	7.354E+01	2.883E+10
75	3.750E+01	2.796E-02	2.395E-04	1.643E+03	1.736E+02	-1.952E+02	1.360E+01	2.883E+10
76	3.800E+01	2.940E-02	2.399E-04	2.726E+03	1.552E+02	-2.056E+02	-5.049E+01	2.883E+10
77	3.850E+01	3.084E-02	2.406E-04	3.505E+03	7.147E+01	-2.164E+02	-1.170E+02	2.883E+10
78	3.900E+01	3.229E-02	2.413E-04	3.583E+03	-7.924E+01	-2.274E+02	-1.844E+02	2.883E+10
79	3.950E+01	3.374E-02	2.420E-04	2.555E+03	-2.986E+02	-2.387E+02	-2.543E+02	2.883E+10
80	4.000E+01	3.519E-02	2.422E-04	5.558E-09	-2.129E+02	-1.252E+02	4.258E+02	2.883E+10

END OF ANALYSIS