DOCKETED	
Docket Number:	24-OPT-02
Project Title:	Compass Battery Energy Storage
TN #:	255561-8
Document Title:	Appendix 4-4A_Geotechnical Evaluation Report Part 3
Description:	Evaluates the site geotechnical conditions in the context of the proposed grading and development to provide appropriate geotechnical design parameters and recommendations for the proposed Project.
Filer:	Erin Phillips
Organization:	Dudek
Submitter Role:	Applicant Consultant
Submission Date:	4/5/2024 6:28:35 PM
Docketed Date:	4/8/2024

BORING LOG NO. B- 1

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5328° Longitude: -117.6781° Surface Elev.: 217 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	LEAN CLAY WITH SAND (CL), olive-brown to brown *(continued)* medium stiff to stiff				2-2-6 N=8								
	wet, stiff	30			2-4-6 N=10								
	medium stiff	35			1-3-4 N=7								
	stiff	40			2-4-5 N=9								
	41.5 / 175.5												
	Boring Terminated at 41.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 2

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5328° Longitude: -117.6776°

Surface Elev.: 210 (Ft.)

DEPTH	ELEVATION (Ft.)
7.5	202.5

SILTY CLAY (CL-ML), trace sand, olive-brown to brown

olive-brown to gray-brown, very stiff

stiff

LEAN CLAY (CL)
trace silt and sand, olive-brown to gray-brown, stiff

medium stiff

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
5		15-14-14	13.4	110		
		5-7-7			27-20-7	
10		3-5-7				
		4-5-8	26.7	98		
15		3-4-4	33.9	88		
20		2-4-4				
25						

STRENGTH TEST: TEST TYPE | COMPRESSIVE STRENGTH (tsf) | STRAIN (%)

EXPANSION INDEX

WATER LEVEL OBSERVATIONS

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 2

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5328° Longitude: -117.6776°

Surface Elev.: 210 (Ft.)

DEPTH	ELEVATION (Ft.)	Description	DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	PERCENT FINES
		LEAN CLAY (CL) *(continued)* medium stiff			2-3-4 N=7	
			30		2-3-3 N=6	
31.5	178.5					
		SILTY SAND (SM), gray-brown loose	35		2-3-4 N=7	25
40.0	170					
		LEAN CLAY (CL), trace sand, olive-brown to gray-brown, stiff	40		3-4-6 N=10	
41.5	168.5					
		Boring Terminated at 41.5 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 3

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5328° Longitude: -117.6769°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	Description
2.5	206.5	**SILT WITH SAND (ML)**, trace clay, olive-brown to light-brown
7.5	201.5	**LEAN CLAY WITH SAND (CL)**, olive-brown to dark-brown, very stiff
		LEAN CLAY (CL), white mottling trace silt and sand, olive-brown to dark-brown, very stiff

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
5		9-16-16				
		5-8-12	17.4	103		
10		10-13-15			34-22-12	
		8-13-20	22.5	101		
15		5-8-10 N=18				
20		9-7-12				
25						

EXPANSION INDEX

STRENGTH TEST: TEST TYPE | COMPRESSIVE STRENGTH (tsf) | STRAIN (%)

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 3

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5328° Longitude: -117.6769°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
		LEAN CLAY (CL), white mottling *(continued)* stiff		
		4-5-7 N=12		
30		4-6-8	33.6	88
		and gray-brown, medium stiff		
35		2-2-3 N=5		
		stiff		
40		4-6-6		
		wet, medium stiff		
45		2-2-5 N=7		
50.0	159			
50				

GRAPHIC LOG | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | EXPANSION INDEX | STRENGTH TEST: TEST TYPE, COMPRESSIVE STRENGTH (tsf), STRAIN (%) | ATTERBERG LIMITS: LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 3

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5328° Longitude: -117.6769°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
SANDY LEAN CLAY (CL), gray-brown, stiff					5-8-8								
51.5	157.5												
POORLY GRADED SAND WITH SILT (SP-SM), gray-brown													
medium dense		55			7-7-4 N=11								10
trace clay		60			9-14-15								
65.0	144												
SANDY LEAN CLAY (CL), dark-brown to gray-brown, medium stiff		65			1-2-3 N=5								
stiff		70	▽		4-7-9								
		75											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021	Boring Completed: 09-17-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 3

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5328° Longitude: -117.6769° Surface Elev.: 209 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	SANDY LEAN CLAY (CL), dark-brown to gray-brown, medium stiff *(continued)* 76.5 132.5				2-5-5 N=10								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 4

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5325° Longitude: -117.6789°

Surface Elev.: 247 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
5.0	242			4-5-7				5.3			
		5		5-15-15						39-26-13	
				11-16-24							90
		10		9-14-21				16.7	99		
15.0	232										
		15		9-15-22							
20.0	227										
		20		2-3-8 N=11							
25.0	222	25									

LANDSLIDE DEPOSITS (Qls), SILTY CLAYEY SAND, trace gravel, light brown, loose

LANDSLIDE DEPOSITS (Qls), SILT, trace sand, olive-brown to gray-brown, very stiff

white mottling and orange rust staining

LANDSLIDE DEPOSITS (Qls), SILTY CLAY (CL-ML), trace sand, olive-brown with white mottling and orange rust staining, very stiff

LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown, stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 4

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5325° Longitude: -117.6789°

Surface Elev.: 247 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	DEPTH (Ft.)
SILTY CLAY (CL-ML), olive-brown, very stiff			8-14-21	
30.0	217			30
LEAN CLAY (CL), trace sand, light-gray to gray-brown with white mottling, very stiff			4-10-11 N=21	
			9-16-25	35
			2-6-11 N=17	40
			11-17-23	45
50.0	197			50

WATER LEVEL OBSERVATIONS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
					22.8	104		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 4

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5325° Longitude: -117.6789°

Surface Elev.: 247 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND, dark-brown to dark-gray
very stiff

3-10-20
N=30

hard

55

35-50/4"

60

9-19-27
N=46

65

42-50/3"

70

10-20-29
N=49

75

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 4

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5325° Longitude: -117.6789° Surface Elev.: 247 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND, dark-brown to dark-gray *(continued)* hard				27-50/5"								
		80			15-19-29 N=48								
		85			30-50/5"								
		90			17-23-35 N=58								
	91.5 / 155.5 ***Boring Terminated at 91.5 Feet***												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 5

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5324° Longitude: -117.6793°

Surface Elev.: 254 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
LANDSLIDE DEPOSITS (Qls), LEAN CLAY trace silt and sand, gray-brown to olive-brown												
very stiff				5-8-11								
	5			8-13-16					10.9	103		
				9-12-14								
light-brown to olive-brown with white mottling	10			5-8-12					12.4	97		
medium stiff	15			1-2-4 N=6							42-23-19	
very stiff	20			4-9-12					20.2	97		
	25											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 5

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5324° Longitude: -117.6793° Surface Elev.: 254 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	LANDSLIDE DEPOSITS (Qls), LEAN CLAY *(continued)* olive-brown with white mottling, medium stiff				1-2-4 N=6								
	stiff	30			4-7-9								
	medium stiff	35			1-2-3 N=5								
	very stiff	40			3-8-14								
	45.0 / 209 **LANDSLIDE DEPOSITS (Qls), SILTY CLAY**, trace sand, olive-brown to light-gray with white mottling and orange rust stains, stiff	45			2-3-8 N=11								
	50.0 / 204	50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 5

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5324° Longitude: -117.6793°

Surface Elev.: 254 (Ft.)

DEPTH	ELEVATION (Ft.)	FIELD TEST RESULTS	SAMPLE TYPE	TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)
		SILTY CLAY (CL-ML), trace sand, dark-gray to dark-brown with white mottling and orange rust stains, very stiff				
			9-14-22			
55		stiff to very stiff				
			2-5-10 N=15			
60		gray-brown, hard				
			13-27-45	UU		
62.0	192					
		CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND, dark-gray to dark-brown with white mottling, very stiff				
65						
			4-9-16 N=25			
70		dark-gray to dark-brown, hard				
			40-50/4"			
75						

GRAPHIC LOG | WATER LEVEL OBSERVATIONS | EXPANSION INDEX | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 5

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5324° Longitude: -117.6793° Surface Elev.: 254 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	76.5 / 177.5				11-21-43 N=64								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 6

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6786°

Surface Elev.: 234 (Ft.)

DEPTH	ELEVATION (Ft.)
0.0	234
10.0	224

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI
0		**LANDSLIDE DEPOSITS (Qls), LEAN CLAY**, trace silt and sand, olive-brown						
		orange rust staining, stiff						
		2-4-6				13.2	97	
5		very stiff						
		8-8-12				15.1	101	
		9-13-16						
10		**SILTY CLAY (CL-ML)** trace sand, olive-brown, very stiff						
		7-11-18						
15		medium stiff to stiff						
		2-4-4 N=8						
20		white mottling, very stiff						
		6-12-13						
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 6

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5323° Longitude: -117.6786° Surface Elev.: 234 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	SILTY CLAY (CL-ML) *(continued)* medium stiff to stiff				1-3-5 N=8								
	30.0 / 204 **LEAN CLAY (CL)**, trace silt and sand, olive-brown to gray-brown with white mottling and orange rust staining, very stiff	30			10-15-20								
	stiff	35			2-3-6 N=9								
	40.0 / 194 **CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND**, dark-brown to dark-gray, hard	40			20-50/5"								
		45			11-13-19 N=32								
		50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 6

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5323° Longitude: -117.6786° Surface Elev.: 234 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	50.9 / 183				15-50/5"								
	Boring Terminated at 50.9 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 7

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6781°

Surface Elev.: 222 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	SILTY CLAYEY SAND (SC-SM), olive-brown												
2.5	219.5												
	LEAN CLAY (CL), trace silt and sand, olive-brown with orange rust staining, stiff				3-4-6					11.8	91		
		5			3-4-6					16.5	99		
					4-8-9					14.7	104		
		10			5-8-9					13.4	104		
	white mottling	15			3-6-9								
20.0	202												
	SILTY CLAY (CL-ML) trace sand, olive-brown to gray-brown with white mottling and orange rust staining, soft to medium stiff	20			1-2-2 N=4								
		25											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021	Boring Completed: 09-10-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 7

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6781°

Surface Elev.: 222 (Ft.)

GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		SILTY CLAY (CL-ML) *(continued)* soft			X	1-1-2 N=3								
		soft to medium stiff	30		X	1-2-2 N=4								
	35.0	187												
		LEAN CLAY (CL), trace silt and sand, olive-brown with white mottling and orange rust staining, soft to medium stiff	35		X	1-2-2 N=4								
		medium stiff	40		X	1-2-3 N=5								
		stiff	45		X	1-3-5 N=8								
			50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021	Boring Completed: 09-10-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 7

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5323° Longitude: -117.6781° Surface Elev.: 222 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	medium stiff 51.5 / 170.5				1-2-4 N=6								
	Boring Terminated at 51.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-10-2021 | Boring Completed: 09-10-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 8

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6776°

Surface Elev.: 211 (Ft.)

DEPTH	ELEVATION (Ft.)
2.5	208.5

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
		SILT (ML), with clay, trace sand, light-brown to olive-brown							
		LEAN CLAY (CL) trace sand, light-brown to olive-brown, stiff						37-22-15	
		5-7-8							
5		trace silt, olive-brown to gray-brown							
		6-6-6				17.8	105		
		4-5-6				19.6	99		
10		white mottling							
		3-5-5							
15		medium stiff							
		3-3-3							
20		soft							
		1-1-2 N=3							
25									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 8

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION / DEPTH / ELEVATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	LOCATION See Exploration Plan Latitude: 33.5323° Longitude: -117.6776° Surface Elev.: 211 (Ft.) DEPTH / ELEVATION (Ft.)												
	LEAN CLAY (CL) *(continued)* medium stiff				1-2-3 N=5								
		30			1-2-3 N=5								
	stiff	35			3-4-5 N=9								
	41.5 / 169.5	40			2-4-6 N=10								
	Boring Terminated at 41.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-17-2021 | Boring Completed: 09-17-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 9

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6770°

Surface Elev.: 208 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
			7-8-12	18.0	93
4.0	204				
			8-11-11	17.9	104
			10-13-16		
			6-10-12		
			3-6-6		
			3-3-5 N=8		

SILT (ML), with clay, olive-brown to brown

very stiff

LEAN CLAY (CL)
trace silt and sand, olive-brown to dark-brown
very stiff

olive-brown to gray-brown

orange rust staining, stiff

medium stiff to stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B- 9

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6770°

Surface Elev.: 208 (Ft.)

DEPTH	ELEVATION (Ft.)	GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	LEAN CLAY (CL) *(continued)* white mottling, stiff					2-4-5 N=9								
	medium stiff		30			2-3-4 N=7								
	stiff		35			2-4-6 N=10								
	medium stiff		40			2-3-4 N=7								
41.5	166.5													
	Boring Terminated at 41.5 Feet													

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-10

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6766°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.0	209					
			LEAN CLAY WITH SAND (CL), olive-brown			
			very stiff			
			9-11-10			35-21-14
5			olive-brown to gray-brown, stiff			
			5-7-7	8.8	97	
			5-5-6			
10.0	199					
10			**LEAN CLAY (CL)** trace silt and sand, olive-brown to gray-brown to dark-brown, stiff			
			4-8-9	36.3	79	
15			5-7-9			
			white mottling			
20			3-6-8 N=14			
25						

STRENGTH TEST: TEST TYPE | COMPRESSIVE STRENGTH (tsf) | STRAIN (%)

EXPANSION INDEX | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-10

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6766°

Surface Elev.: 209 (Ft.)

DEPTH ELEVATION (Ft.)

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)
		LEAN CLAY (CL) *(continued)* very stiff			
		10-10-13			
30		stiff			
		3-3-6 N=9			
35					
		3-6-7			
40		medium stiff			
		3-3-3 N=6			
45		and light-gray, very stiff			
		4-9-11			
50					

WATER LEVEL OBSERVATIONS: ▽ While drilling

EXPANSION INDEX | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-10

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6766°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	FIELD TEST RESULTS	TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	LL-PL-PI	PERCENT FINES
51.5	157.5	**LEAN CLAY (CL)** *(continued)* medium stiff							
		3-3-4 N=7							
		SILTY SAND (SM), gray-brown							
55		medium dense 5-13-33				19.4	105		
60		9-12-15 N=27							16
65		very dense 9-32-50/4"							
70		medium dense 7-8-11 N=19							
75									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-10

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5323° Longitude: -117.6766°

Surface Elev.: 209 (Ft.)

GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	76.5	132.5				13-15-23								

SILTY SAND (SM), gray-brown *(continued)*
medium dense

Boring Terminated at 76.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-11

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5321° Longitude: -117.6789°

Surface Elev.: 240 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0						
			7-16-16			
5			6-9-14	12.7	96	
			7-11-14			38-22-16
10.0	230					
			7-10-14	13.0	105	
15			5-8-9			
20			2-3-4 N=7			
25.0	215					
25						

LANDSLIDE DEPOSITS (Qls), LEAN CLAY (CL), trace silt and sand, gray-brown to olive-brown

very stiff

LANDSLIDE DEPOSITS (Qls), SILTY CLAY, trace sand, light-brown to olive-brown with white mottling, very stiff

stiff

olive-brown, medium stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-11

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5321° Longitude: -117.6789°

Surface Elev.: 240 (Ft.)

DEPTH ELEVATION (Ft.)

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	ATTERBERG LIMITS: LL-PL-PI
0						
		4-8-11				
30						
		1-1-2 N=3				
35						
		4-7-9				
40						
		1-2-4 N=6				45-24-21
45						
		4-9-15				
50						

LANDSLIDE DEPOSITS (Qls), LEAN CLAY,
trace silt and sand, olive-brown, very stiff

soft

stiff

medium stiff

45.0 195

SILTY CLAY (CL-ML)
trace sand, olive-brown to gray-brown with white mottling and orange rust staining, very stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 Boring Completed: 09-08-2021

Drill Rig: CME-75 Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-11

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5321° Longitude: -117.6789° Surface Elev.: 240 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	SILTY CLAY (CL-ML) *(continued)* stiff				2-4-9 N=13								
	55.0 / 185	55											
	CAPISTRANO FORMATION (Tc) recovered as LEAN CLAY with trace SAND, dark-gray to dark-brown, hard				26-50/5"								
		60			11-21-36 N=57								
		65			49-50/3"								
		70			9-18-36 N=54								
		75											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-11

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5321° Longitude: -117.6789° Surface Elev.: 240 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	CAPISTRANO FORMATION (Tc) recovered as LEAN CLAY with trace SAND, dark-gray to dark-brown, hard *(continued)*				33-50/5"								
		80			7-22-31 N=53								
		85			17-50/5"								
		90			16-22-36 N=58								
	91.5 / 148.5												
	Boring Terminated at 91.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-08-2021 | Boring Completed: 09-08-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-12

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6786°

Surface Elev.: 232 (Ft.)

DEPTH	ELEVATION (Ft.)	Description	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
0	232	**LEAN CLAY (CL)**, trace silt and sand, olive-brown				
		very stiff		9-15-20		
5	227	orange rust staining, hard		15-20-31	13.7	114
				15-20-25		
10	222	olive-brown to gray-brown		15-22-26	15.9	110
15	217	very stiff		4-9-12 N=21		
20.0	212	**SILT (ML)** trace clay and sand, olive-brown to gray-brown, very stiff		5-11-15		
25	207					

GRAPHIC LOG | WATER LEVEL OBSERVATIONS | EXPANSION INDEX | STRENGTH TEST: TEST TYPE, COMPRESSIVE STRENGTH (tsf), STRAIN (%) | ATTERBERG LIMITS: LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-12

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5319° Longitude: -117.6786° Surface Elev.: 232 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	SILT (ML) *(continued)* medium stiff				1-3-4 N=7								
	30.0 / 202	30											
	LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown with orange rust staining, very stiff				8-11-14								
	white mottling, stiff	35			3-5-8 N=13								
	40.0 / 192	40											
	CAPISTRANO FORMATION (Tc) recovered as ELASTIC SILT with trace SAND, dark-brown to dark-gray, hard				25-47-50/4"								
		45			10-15-30 N=45								
		50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-12

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6786°

Surface Elev.: 232 (Ft.)

DEPTH / ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
				30-50/4"								
	55			12-17-34 N=51								
	60			39-50/4"								
	65			9-17-32 N=49							53-34-19	
	70			30-50/5"								
	75											

CAPISTRANO FORMATION (Tc) recovered as ELASTIC SILT with trace SAND,
dark-brown to dark-gray, hard *(continued)*

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-12

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5319° Longitude: -117.6786° Surface Elev.: 232 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	76.5 / 155.5				10-19-32 N=51								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-13

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5318° Longitude: -117.6790°

Surface Elev.: 249 (Ft.)

DEPTH ELEVATION (Ft.)

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0									
		12-14-15							
5									
		13-18-24				16.4	112		
		12-18-27							
10									
		12-21-26				21.6	105		
15									
		2-4-6 N=10						43-27-16	
20									
		12-16-21							
25									

LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown

white mottling, very stiff

hard

10.0 239

SILT (ML), trace sand, olive-brown with white mottling, hard

orange rust staining, stiff

olive-brown to gray-brown, very stiff

25.0 224

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-13

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5318° Longitude: -117.6790°

Surface Elev.: 249 (Ft.)

GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
						4-6-12 N=18								
			30			10-20-25		UU						
			35			10-11-11 N=22								
	40.0	209	40			8-17-26								
			45			4-7-12 N=19								
			50											

LEAN CLAY (CL), trace silt, olive-brown to gray-brown with white mottling, very stiff

and light-gray, hard

very stiff, thin interbedded layers of silty sand

SILTY CLAY (CL-ML), white mottling trace sand, gray-brown to light-gray, hard

very stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-13

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5318° Longitude: -117.6790°

Surface Elev.: 249 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS
			11-19-25
55			3-6-11 N=17
60.0	189		
60			13-26-33
65			4-10-19 N=29
70			38-50/4"
75			

SILTY CLAY (CL-ML), white mottling
(continued)
hard

very stiff

CAPISTRANO FORMATION (Tc) recovered as LEAN CLAY with trace SILT and SAND, dark-brown to dark-gray, hard

very stiff

hard

EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-13

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5318° Longitude: -117.6790° Surface Elev.: 249 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	hard 76.4 / 172.5				10-20-50/5"								
	Boring Terminated at 76.4 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-14

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5318° Longitude: -117.6782°

Surface Elev.: 224 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
LEAN CLAY (CL), trace silt and sand, light-brown to olive-brown													
light-brown to light-gray with white mottling and orange rust staining, stiff					5-6-8							47-27-20	
very stiff		5			7-13-18					27.8	95		
					6-13-18					25.5	95		
		10			8-13-16								
thin interbedded layers of silty sand		15			5-9-13								
20.0	204												
SILTY CLAY (CL-ML), trace sand, gray-brown to olive-brown with white mottling and orange rust staining, stiff, thin silty sand lens present		20			3-4-10 N=14								
25.0	199	25											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021	Boring Completed: 09-09-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-14

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5318° Longitude: -117.6782°

Surface Elev.: 224 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown with white mottling, stiff				2-3-6 N=9								
30.0	194	30											
	CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND, dark-brown to dark-gray, very stiff				4-8-16 N=24								
	hard	35			9-14-21 N=35								
		40			9-16-32 N=48								
		45			10-19-26 N=45								
		50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021	Boring Completed: 09-09-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-14

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5318° Longitude: -117.6782° Surface Elev.: 224 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	hard 51.5 / 172.5				9-18-32 N=50								
	Boring Terminated at 51.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-09-2021 | Boring Completed: 09-09-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-15

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6775°

Surface Elev.: 213 (Ft.)

DEPTH | ELEVATION (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
			6-8-8	11.6	93
5.0	208				
5			4-7-10		
			7-10-12		
10			6-8-12		
15			4-7-8		
20			1-2-3 N=5		
25					

SANDY SILTY CLAY (CL-ML), olive-brown to brown

stiff

LEAN CLAY (CL)
trace silt, olive-brown to gray-brown, stiff

orange rust staining, very stiff

white mottling, stiff

medium stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-16-2021 | Boring Completed: 09-16-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-15

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6775°

Surface Elev.: 213 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

LEAN CLAY (CL) *(continued)*
medium stiff

1-2-3
N=5

30

2-3-3
N=6

35

1-3-4
N=7

medium stiff to stiff

40

3-4-4
N=8

stiff

45

3-4-5
N=9

50

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-16-2021 | Boring Completed: 09-16-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-15

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6775°

Surface Elev.: 213 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS
	LEAN CLAY (CL) *(continued)*		
	very stiff, thin interbedded layers of silty sand		4-6-8 N=14
			5-7-9 N=16
60.0	153		
	CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND, dark-brown to dark-gray with white mottling, very stiff		6-8-13 N=21
	white mottling no longer apparent		6-10-13 N=23
			7-13-17 N=30

DEPTH (Ft.): 55, 60, 65, 70, 75

WATER LEVEL OBSERVATIONS

EXPANSION INDEX

STRENGTH TEST: TEST TYPE; COMPRESSIVE STRENGTH (tsf); STRAIN (%)

WATER CONTENT (%)

DRY UNIT WEIGHT (pcf)

ATTERBERG LIMITS: LL-PL-PI

PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-16-2021 | Boring Completed: 09-16-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-15

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6775°

Surface Elev.: 213 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND, dark-brown to dark-gray with white mottling, very stiff *(continued)*

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS
		8-12-18 N=30
80		13-19-23 N=42
85		17-21-30 N=51
90		16-26-28 N=54
95		12-19-31 N=50
100		

hard

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-16-2021 | Boring Completed: 09-16-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-15

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5319° Longitude: -117.6775° Surface Elev.: 213 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	101.5 / 111.5				11-17-25 N=42								
	Boring Terminated at 101.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-16-2021 | Boring Completed: 09-16-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-16

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6770°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)
7.5	201.5

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
		6-8-8	8.2	96
5				
		6-8-9	22.2	94
		7-12-15	15.8	105
10		9-12-15	15.3	108
15		5-7-9		
20		2-3-4 N=7		
25				

SILTY CLAY (CL-ML), olive-brown to brown

stiff

orange rust staining

LEAN CLAY (CL)
trace silt, olive-brown to gray-brown, very stiff

white mottling

stiff

medium stiff

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-16

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6770°

Surface Elev.: 209 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
LEAN CLAY (CL) *(continued)* medium stiff to stiff			X	3-4-4 N=8								
medium stiff	30		X	2-3-4 N=7								
thin lens of silty sand present	35		X	1-2-3 N=5								
thin lens of silty sand present 41.5 167.5	40		X	2-3-4 N=7								
Boring Terminated at 41.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 Boring Completed: 09-14-2021

Drill Rig: CME-75 Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-17

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6765°

Surface Elev.: 208 (Ft.)

DEPTH	ELEVATION (Ft.)
0.0	208
10.0	198

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.0		**LEAN CLAY WITH SAND (CL)**, trace gravel, olive-brown to brown								
			39						30-20-10	
		light brown, very stiff								
		5-10-10					19.2	88		
5		6-9-11					22.2	95		
		olive-brown to gray-brown, stiff								
		5-5-7					20.4	93		
10.0		**LEAN CLAY (CL)** trace silt and sand, olive-brown to gray-brown, very stiff								
10		5-9-10								
15		4-8-11 N=19								
		orange rust staining								
20		9-12-15								
25										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-17

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5319° Longitude: -117.6765°

Surface Elev.: 208 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	LEAN CLAY (CL) *(continued)* stiff				3-6-7 N=13								
	very stiff	30			7-10-12					32.1	88		
	stiff	35			2-4-7 N=11								
		40			6-6-8								
45.0	163 **LEAN CLAY WITH SAND (CL)**, wet, stiff	45	▽		3-7-7 N=14								
50.0	158	50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-17

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5319° Longitude: -117.6765° Surface Elev.: 208 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	POORLY GRADED SAND WITH CLAY (SP-SC), gray-brown, wet, medium dense				5-12-21								
	very dense	55			10-31-50/5"								9
	60.0 148 **CLAYEY SAND (SC)**, gray-brown, wet, medium dense	60			10-13-11								
	65.0 143 **POORLY GRADED SAND WITH CLAY (SP-SC)** gray-brown, wet, medium dense	65			4-9-12 N=21								
	very dense	70			14-29-50/2"								
		75											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-17

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5319° Longitude: -117.6765° Surface Elev.: 208 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	POORLY GRADED SAND WITH CLAY (SP-SC) *(continued)* 76.5 dense 131.5				8-17-29 N=46								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-15-2021 | Boring Completed: 09-15-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-19

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5314° Longitude: -117.6779°

Surface Elev.: 217 (Ft.)

DEPTH	ELEVATION (Ft.)	Description
0	217	**LEAN CLAY (CL)**, trace silt and sand, olive-brown
		very stiff
		gray-brown to light-gray with orange rust staining
7.5	209.5	
		SILT (ML), with clay, light olive to light gray-brown with white mottling, hard
10.0	207	
		SILTY CLAY WITH SAND (CL-ML), light olive to light gray-brown, hard, thin interbedded layers of silty sand
15.0	202	
		LEAN CLAY (CL) trace silt and sand, olive-brown with white mottling and orange rust staining, very stiff
		stiff

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
0						
		5-9-13				
5		2-10-10	19.3	108		
		12-24-29			37-27-10	
10		14-25-31	14.9	109		
15		12-14-20				
20		5-5-9 N=14				
25						

EXPANSION INDEX

STRENGTH TEST: TEST TYPE | COMPRESSIVE STRENGTH (tsf) | STRAIN (%)

WATER LEVEL OBSERVATIONS

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

At completion of drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-19

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5314° Longitude: -117.6779°

Surface Elev.: 217 (Ft.)

DEPTH	ELEVATION (Ft.)	GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
26.5	190.5													

LEAN CLAY (CL) *(continued)*
hard

CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND (CL-ML),
dark-gray to dark-brown with white mottling,
very stiff

hard, white mottling no longer apparent

			30			13-22-50/6"								
						9-13-16 N=29								
			35			23-50/6"								
			40			10-19-25 N=44								
			45			26-40-40		UU						
			50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

At completion of drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-19

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5314° Longitude: -117.6779° Surface Elev.: 217 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	hard 51.5 / 165.5				12-20-30 N=50								
	Boring Terminated at 51.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

At completion of drilling

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-20

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5314° Longitude: -117.6775°

Surface Elev.: 211 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	SANDY SILT (ML), with clay, light gray-brown												
	stiff				5-6-9					11.6	92		
5.0	206	5											
	LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown, stiff				4-6-6							37-22-15	
	white mottling and orange rust staining, very stiff				7-8-11					17.6	98		
		10			6-12-15								
15.0	196	15											
	SILTY CLAY (CL-ML) trace sand, olive-brown to gray-brown with white mottling, stiff				4-6-9								
	medium stiff to stiff	20			3-3-5 N=8								
		25											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021	Boring Completed: 09-13-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-20

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5314° Longitude: -117.6775°

Surface Elev.: 211 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS
SILTY CLAY (CL-ML) *(continued)* medium stiff				2-3-4 N=7
30.0	181	30		
LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown with white mottling, medium stiff				2-3-4 N=7
stiff		35		4-4-5 N=9
		40		3-4-5 N=9
41.5	169.5			
Boring Terminated at 41.5 Feet				

GRAPHIC LOG	WATER LEVEL OBSERVATIONS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-21

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5314° Longitude: -117.6770°

Surface Elev.: 206 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
SILTY CLAY (CL-ML), trace sand, olive-brown to brown					
white mottling, very stiff			8-11-15		
5.0	201				
LEAN CLAY (CL) trace silt and sand, olive-brown to gray-brown, very stiff			8-10-11	9.5	105
			12-16-18		
			11-16-16	17.6	105
white mottling			6-9-11		
medium stiff			2-3-4 N=7		

GRAPHIC LOG | WATER LEVEL OBSERVATIONS | EXPANSION INDEX | STRENGTH TEST: TEST TYPE, COMPRESSIVE STRENGTH (tsf), STRAIN (%) | ATTERBERG LIMITS: LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-21

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan
Latitude: 33.5314° Longitude: -117.6770°
Surface Elev.: 206 (Ft.)

DEPTH	ELEVATION (Ft.)	DESCRIPTION	FIELD TEST RESULTS
		LEAN CLAY (CL) *(continued)* medium stiff to stiff	3-4-4 N=8
30.0	176	**SILTY CLAY (CL-ML)**, trace sand, olive-brown to gray-brown, wet, medium stiff, thin silty sand lens present	3-3-4 N=7
		medium stiff to stiff	2-3-3 N=6
			3-4-4 N=8
45.0	161	**LEAN CLAY (CL)**, trace silt and sand, olive-brown to gray-brown with white mottling, wet, stiff	2-4-5 N=9
50.0	156		

DEPTH (Ft.): 30, 35, 40, 45, 50

WATER LEVEL OBSERVATIONS | SAMPLE TYPE | EXPANSION INDEX | STRENGTH TEST: TEST TYPE, COMPRESSIVE STRENGTH (tsf), STRAIN (%) | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS: LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021
Drill Rig: CME-75 | Driller: 2R Drilling
Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-21

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION / DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	See Exploration Plan Latitude: 33.5314° Longitude: -117.6770° Surface Elev.: 206 (Ft.)												
	SANDY LEAN CLAY (CL), gray-brown, wet, very stiff				6-10-16 N=26								
	medium stiff	55			2-3-4 N=7								
	60.0 / 146												
	LEAN CLAY (CL) trace silt and sand, olive-brown to gray-brown with white mottling, wet, stiff to very stiff	60			4-7-8 N=15								
	very stiff	65			5-8-11 N=19								
		70			6-9-11 N=20								
		75											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-21

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5314° Longitude: -117.6770° Surface Elev.: 206 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	LEAN CLAY (CL) *(continued)* dark-gray to dark-brown, very stiff 76.5 129.5				4-8-9 N=17								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-24

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5311° Longitude: -117.6779°

Surface Elev.: 216 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
			13-25-27		
5			17-28-30	11.1	120
			13-17-16		
10			10-13-16	13.2	110
15.0	201				
15			6-8-9 N=17		
20			11-15-20		
25					

LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown

hard

very stiff

white mottling and orange rust staining

SILTY CLAY (CL-ML)
olive-brown to light-gray with white mottling and orange rust staining, very stiff

thin lens of silty sand

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-24

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5311° Longitude: -117.6779°

Surface Elev.: 216 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS
			SILTY CLAY (CL-ML) *(continued)*
			5-10-11 N=21
30			wet, stiff
			6-8-10
35.0	181		
35			**CAPISTRANO FORMATION (Tc) recovered as ELASTIC SILT with trace SAND**, dark-gray to dark-brown, stiff
			5-5-8 N=13
40			hard
			28-50/5"
45			
			12-18-25 N=43
50			

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-24

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5311° Longitude: -117.6779°

Surface Elev.: 216 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
				33-50/3"								
	55			14-22-27 N=49								
	60			17-50/5"								
	65			12-20-25 N=45							56-36-20	
	70			17-50/6"								
	75											

CAPISTRANO FORMATION (Tc) recovered as ELASTIC SILT with trace SAND, dark-gray to dark-brown, stiff *(continued)*

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-24

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5311° Longitude: -117.6779° Surface Elev.: 216 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	hard 76.5 / 139.5				13-21-28 N=49								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-13-2021 | Boring Completed: 09-13-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-25

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5310° Longitude: -117.6776°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)
			6-9-9	14.0	96
5.0	204				
			5-7-11	17.6	109
			7-12-16		
			10-16-17		
			8-11-15		
			3-4-5 N=9		
25.0	184				

SANDY LEAN CLAY (CL), trace silt, olive-brown

stiff

LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown with white mottling, stiff

very stiff

stiff

GRAPHIC LOG | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | EXPANSION INDEX | STRENGTH TEST: TEST TYPE, COMPRESSIVE STRENGTH (tsf), STRAIN (%) | ATTERBERG LIMITS: LL-PL-PI | PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-25

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5310° Longitude: -117.6776°

Surface Elev.: 209 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	SILTY CLAY (CL-ML), trace sand, olive-brown to gray-brown with white mottling and orange rust staining, stiff				3-5-6 N=11								
		30			4-6-8 N=14								
	trace gravel												
35.0	174	35											
	LEAN CLAY (CL), trace silt and sand, olive-brown to gray-brown with white mottling, stiff				4-5-7 N=12								
	very stiff	40			5-10-12 N=22								
41.5	167.5												
	CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND dark-brown to dark-gray, very stiff												
		45			8-13-16 N=29								
		50											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021	Boring Completed: 09-14-2021
Drill Rig: CME-75	Driller: 2R Drilling
Project No.: 60215170	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-25

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

LOCATION See Exploration Plan

Latitude: 33.5310° Longitude: -117.6776°

Surface Elev.: 209 (Ft.)

DEPTH ELEVATION (Ft.)

GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES

CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND *(continued)*
hard

DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS
		13-19-23 N=42
55		9-14-19 N=33
60		13-16-24 N=40
65		14-23-25 N=48
70		13-21-28 N=49
75		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

BORING LOG NO. B-25

PROJECT: Broad Reach Power Compass BESS

CLIENT: Sargent & Lundy LLC
Chicago, IL

SITE: San Juan Capistrano, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.5310° Longitude: -117.6776° Surface Elev.: 209 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	EXPANSION INDEX	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	CAPISTRANO FORMATION (Tc) recovered as SILTY CLAY with trace SAND *(continued)* 76.5 hard 132.5				14-20-27 N=47								
	Boring Terminated at 76.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 09-14-2021 | Boring Completed: 09-14-2021

Drill Rig: CME-75 | Driller: 2R Drilling

Project No.: 60215170

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/19/21

Appendix C
Laboratory Test Results

APPENDIX C

Laboratory Test Results

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of site conditions were tested in general accordance with American Society for Testing and Materials (ASTM) procedure and/or California Test Methods (CTM), where applicable. The following summary is a brief outline of the test type and a table summarizing the test results.

Moisture and Density Determination Tests: Moisture content (ASTM D2216) and dry density determinations (ASTM D2937) were performed on driven samples obtained from the test borings. The results of these tests are presented in the boring logs. Where applicable, only moisture content was determined from undisturbed or disturbed samples.

Grain Size Distribution/Fines Content: Representative samples were dried, weighed, and soaked in water until individual soil particles were separated (per ASTM D421) and then washed on a No. 200 sieve (ASTM D1140). Where applicable, the portion retained on the No. 200 sieve was dried and then sieved on a U.S. Standard brass sieve set in accordance with ASTM D6913 (sieve).

Sample Location	**Description**	**% Passing # 200 Sieve**
HS-1 @ 5 ft	High Plasticity Clay	94
HS-1 @ 10 ft	Clay with Sand	71
HS-1 @ 20 ft	Clay	93
HS-2 @ 5 ft	Sandy Clay	55
HS-2 @ 20 ft	Clay with Sand	72
HS-3 @ 25 ft	Clay with Sand	75
HS-3 @ 40 ft	Clay with Sand	84
HS-4 @ 30 ft	Clay	78
HS-4 @ 40 ft	Clayey Sand	44
HS-4 @ 50 ft	Clayey Sand	44

Laboratory Test Results

Atterberg Limits: The liquid and plastic limits ("Atterberg Limits") were determined per ASTM D4318 for engineering classification of fine-grained material and presented in the table below. The USCS soil classification indicated in the table below is based on the portion of sample passing the No. 40 sieve and may not necessarily be representative of the entire sample. The plots are provided in this Appendix.

Sample Location	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	USCS Soil Classification
HS-1 @ 5 ft	51	23	29	CH
HS-1 @ 7.5 ft	46	22	24	CL
HS-1 @ 25 ft	46	19	27	CL
HS-1 @ 35 ft	38	28	10	ML
HS-2 @ 5 ft	28	20	8	CL
HS-2 @ 7.5 ft	36	18	18	CL
HS-2 @ 15 ft	35	20	15	CL
HS-3 @ 10 ft	60	24	36	CH
HS-3 @ 25 ft	47	19	28	CL
HS-3 @ 40 ft	45	18	27	CL
HS-4 @ 20 ft	46	20	26	CL
HS-4 @ 30 ft	39	18	21	CL
HS-4 @ 50 ft	31	19	12	CL
B-1 @ 28 ft (Grab)	68	34	34	MH
B-2 @ 84 ft (Grab)	72	28	44	CH
B-3 @ 67.5 ft (Grab)	63	26	37	CH
B-4 @ 24 ft (Grab)	59	31	28	MH
B-4 @ 55.5 ft (Grab)	60	30	30	CH
B-5 @ 49ft (Grab)	61	27	34	CH

Expansion Index: The expansion potential of selected representative samples was evaluated by the Expansion Index Test per ASTM D4829. The results are presented in the table below.

Sample Location	Expansion Index	Expansion Potential*
HS-1 @ 1-5 ft	73	Medium
HS-2 @ 1-5 ft	42	Low
HS-3 @ 1-5 ft	28	Low
HS-4 @ 1-5 ft	13	Very Low

* Per ASTM D4829

Laboratory Test Results

Direct Shear: Direct shear tests were performed on selected driven samples and remolded samples (remolded to 90 percent relative compaction), which were soaked for a minimum of 24 hours prior to testing. The samples were tested under various normal loads using a motor-driven, strain-controlled, direct-shear testing apparatus (ASTM D3080). The plots are provided in this Appendix.

Torsional Ring Shear for Residual Shear Strength: Drained, residual torsional ring shear tests were performed on site clay grab samples (B-2 @ 84 ft & B-1 @ 28 ft). The samples were tested under various normal loads (2, 4, 8 and 16 ksf) using a torsional ring-shear testing apparatus (ASTM D6467). The plots are presented in this Appendix.

Consolidation: Consolidation tests were performed per ASTM D2435. Samples (2.4 inches in diameter and 1 inch in height) were placed in a consolidometer and increasing loads were applied. The samples were allowed to consolidate under "double drainage" and total deformation for each loading step was recorded. The percent consolidation for each load step was recorded as the ratio of the amount of vertical compression to the original sample height. The consolidation pressure curves are provided in this Appendix.

Laboratory Compaction: The maximum dry density and optimum moisture content of typical materials were determined in accordance with ASTM D1557. Sample Locations B-1 through B-4 were obtained for thermal resistivity testing. The results are presented in the table below.

Sample Location	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
B-1 (NE) @ 0-8"	Dark Gray Sandy Silt	116.5	12.0
B-2 (SE) @ 0-8"	Brown Silty Sand	118.0	11.5
B-3 (NW) @ 4-12"	Brown Silty Clay	112.5	13.0
B-4 (SW) @ 0-8"	Dark Gray Silty Clay	112.0	12.5
B-5 at 0-5 ft	Grayish Brown Clay	113.5	13.0

Laboratory Test Results

Soluble Sulfates: The soluble sulfate contents of selected samples were determined by standard geochemical methods (CTM 417). The test results are presented in the table below.

Sample Location	Sulfate Content (ppm)	Sulfate Content (%)
HS-1 @ 1-5 ft	155	0.02
HS-2 @ 1-5 ft	118	< 0.02
HS-3 @ 1-5 ft	122	< 0.02
HS-4 @ 1-5 ft	78	< 0.01

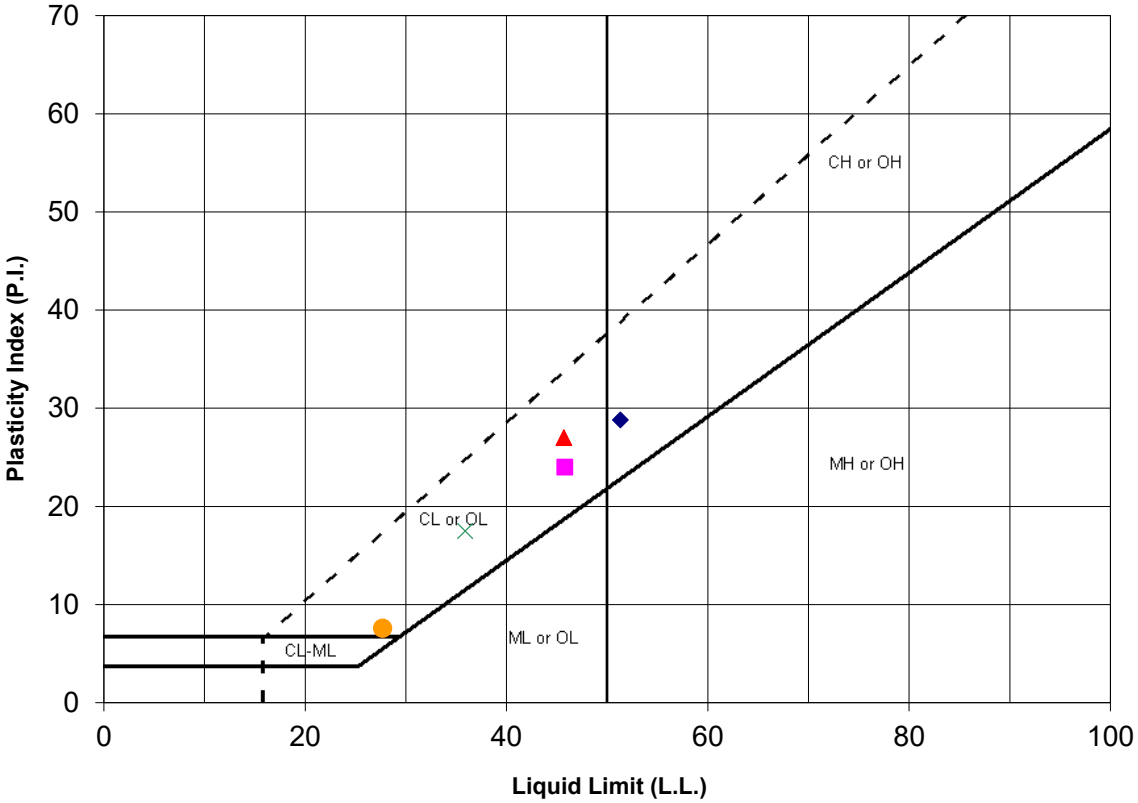
Chloride Content: Chloride content was tested per CTM 422. The results are presented below.

Sample Location	Chloride Content (ppm)
HS-1 @ 1-5 ft	64
HS-2 @ 1-5 ft	64
HS-3 @ 1-5 ft	176
HS-4 @ 1-5 ft	148

Minimum Resistivity and pH Tests: Minimum resistivity and pH tests were performed in general accordance with CTM 643 and standard geochemical methods. The results are presented in the table below.

Sample Location	pH	Minimum Resistivity (ohm-cm)
HS-1 @ 1-5 ft	8.2	1,345
HS-2 @ 1-5 ft	7.7	1,250
HS-3 @ 1-5 ft	8.0	1,800
HS-4 @ 1-5 ft	8.2	2,150

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-1	SPT-1	5'	94	51	23	29	CH
■	HS-1	R-2	7.5'	-	46	22	24	CL
▲	HS-1	R-4	25'	-	46	19	27	CL
●	HS-2	SPT-1	5'	55	28	20	8	CL
×	HS-2	R-2	7.5'	-	36	18	18	CL

LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 22011-01
Date: Aug-22

Compass BESS

ATTERBERG LIMITS

ASTM D 4318

Project Name:	Compass BESS - SJC	Tested By:	L. Parrella	Date:	10/26/22
Project No. :	22011-01	Input By:	J. Ward	Date:	10/28/22
Boring No.:	HS-1	Checked By:	J. Ward		
Sample No.:	R-5	Depth (ft.)	35.0		
Soil Identification:	Olive silt (ML)				

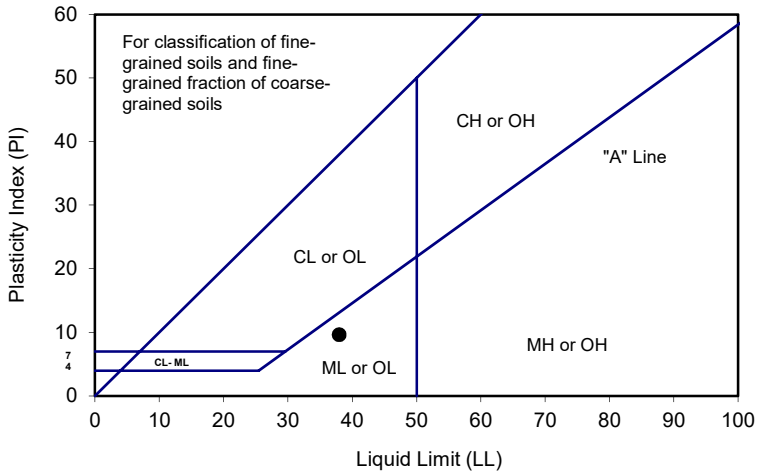
TEST	PLASTIC LIMIT		LIQUID LIMIT			
NO.	1	2	1	2	3	4
Number of Blows [N]			35	25	16	
Wet Wt. of Soil + Cont. (g)	25.89	26.10	22.05	22.14	21.99	
Dry Wt. of Soil + Cont. (g)	23.21	23.37	19.72	19.77	19.59	
Wt. of Container (g)	13.69	13.82	13.50	13.56	13.53	
Moisture Content (%) [Wn]	28.15	28.59	37.46	38.16	39.60	

Liquid Limit	**38**
Plastic Limit	**28**
Plasticity Index	**10**
Classification	**ML**

PI at "A" - Line = 0.73(LL-20) 13.14

One - Point Liquid Limit Calculation

$LL = Wn(N/25)^{0.121}$



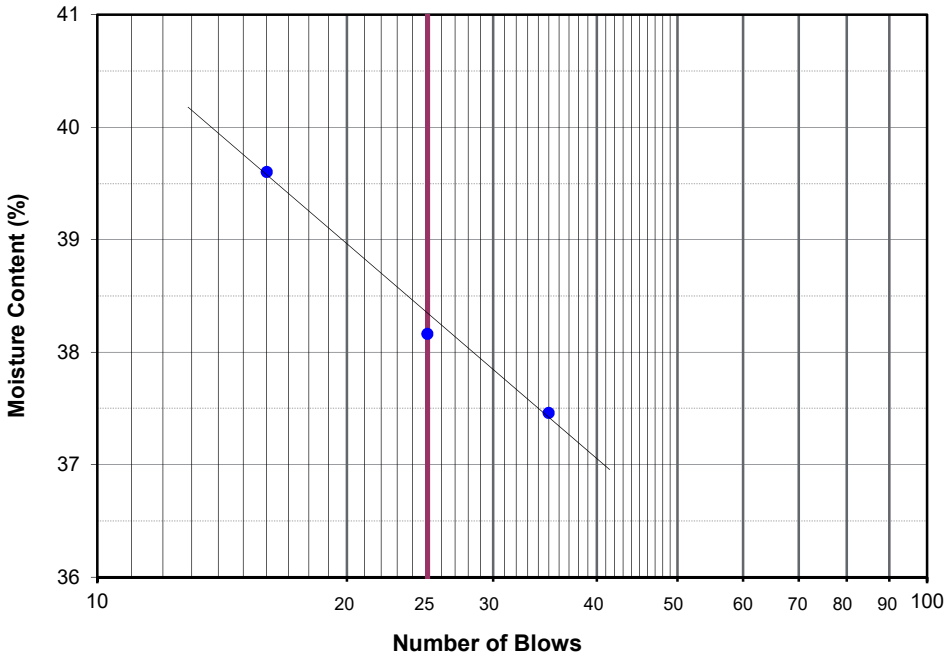
PROCEDURES USED

☐ Wet Preparation
Multipoint - Wet

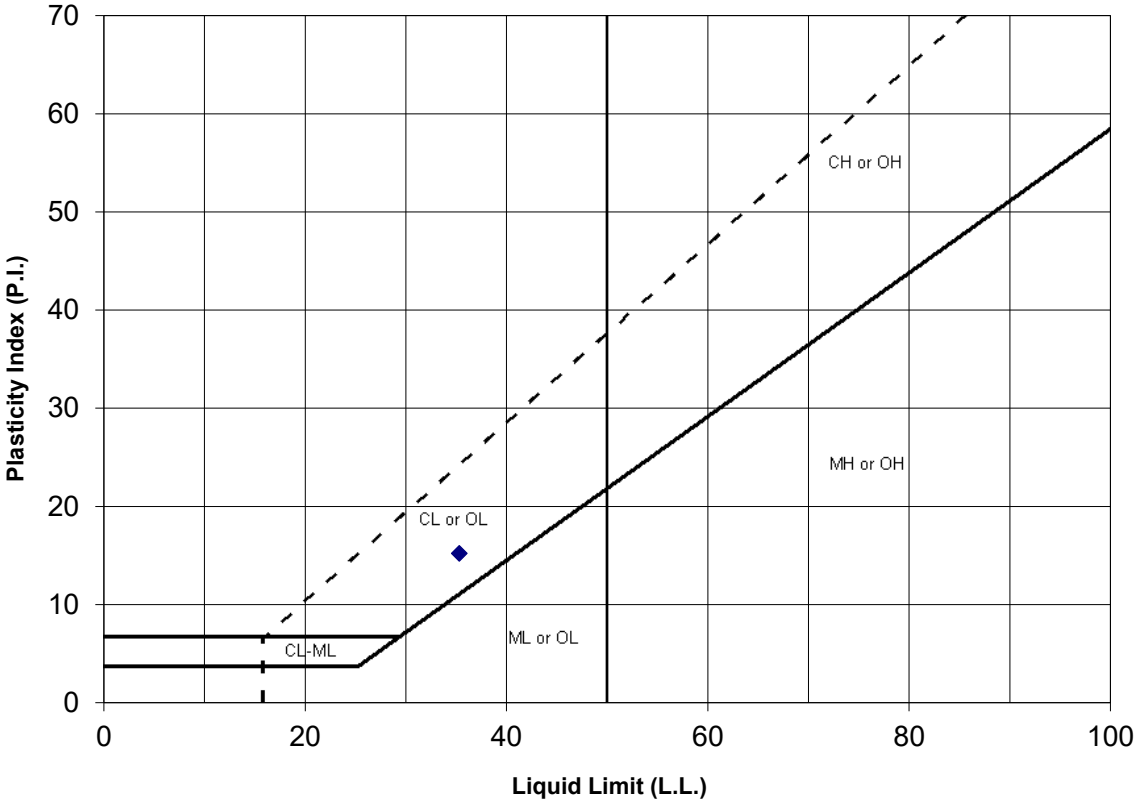
☒ Dry Preparation
Multipoint - Dry

☒ Procedure A
Multipoint Test

☐ Procedure B
One-point Test



PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-2	R-3	15'	-	35	20	15	CL

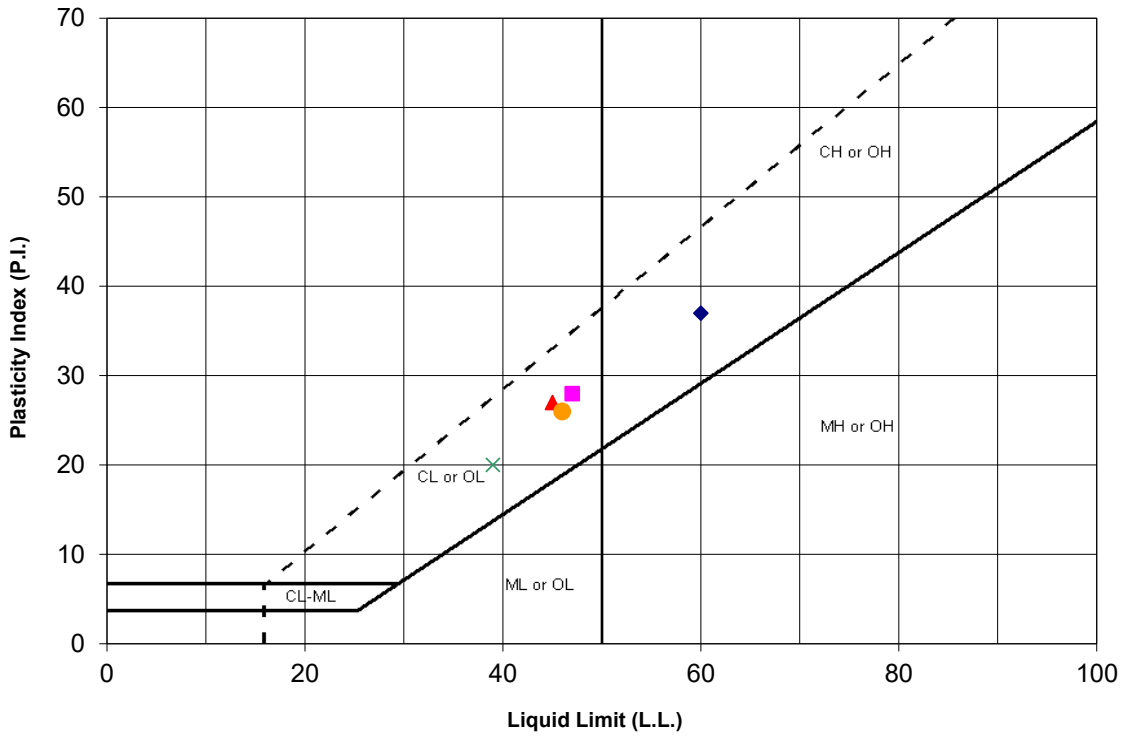
LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 22011-01
Date: Aug-22

Compass BESS

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-3	R-3	10'	-	60	24	36	CH
■	HS-3	SPT-3	25'	75	47	19	28	CL
▲	HS-3	R-6	40'	84	45	18	27	CL
●	HS-4	R-3	20'	-	46	20	26	CL
×	HS-4	SPT-5	30'	78	39	18	21	CL

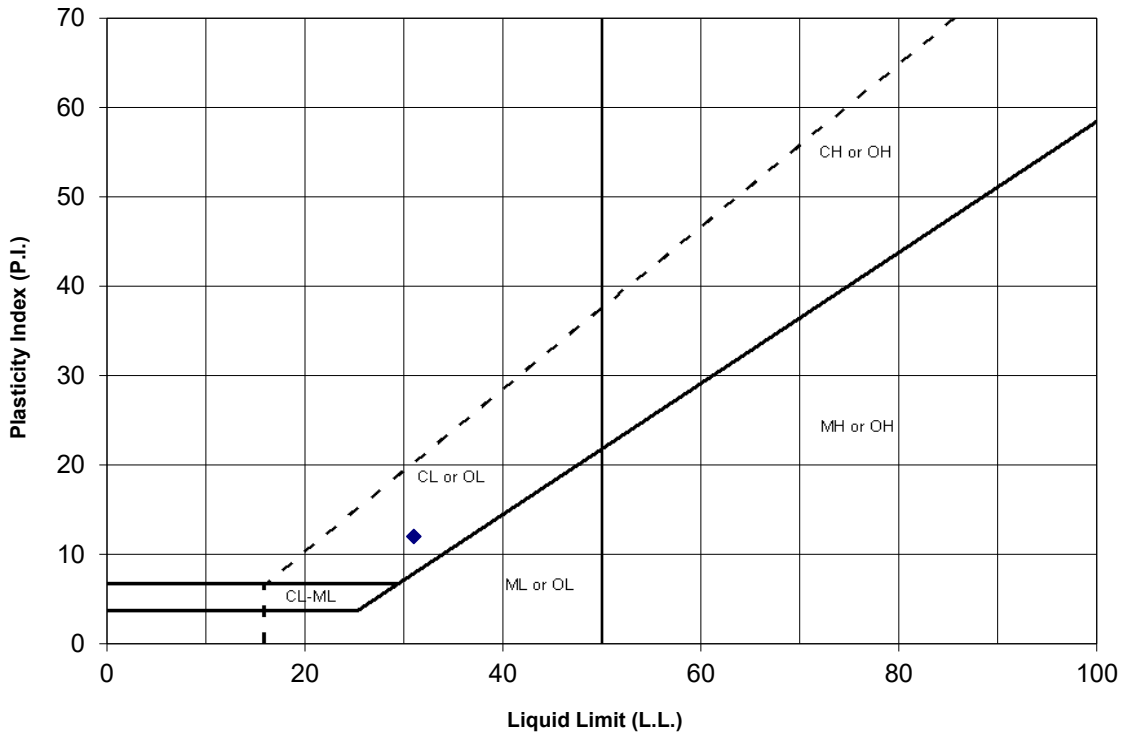
LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 22011-01
Date: Sep-23

Compass BESS

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-4	SPT-7	50'	44	31	19	12	CL

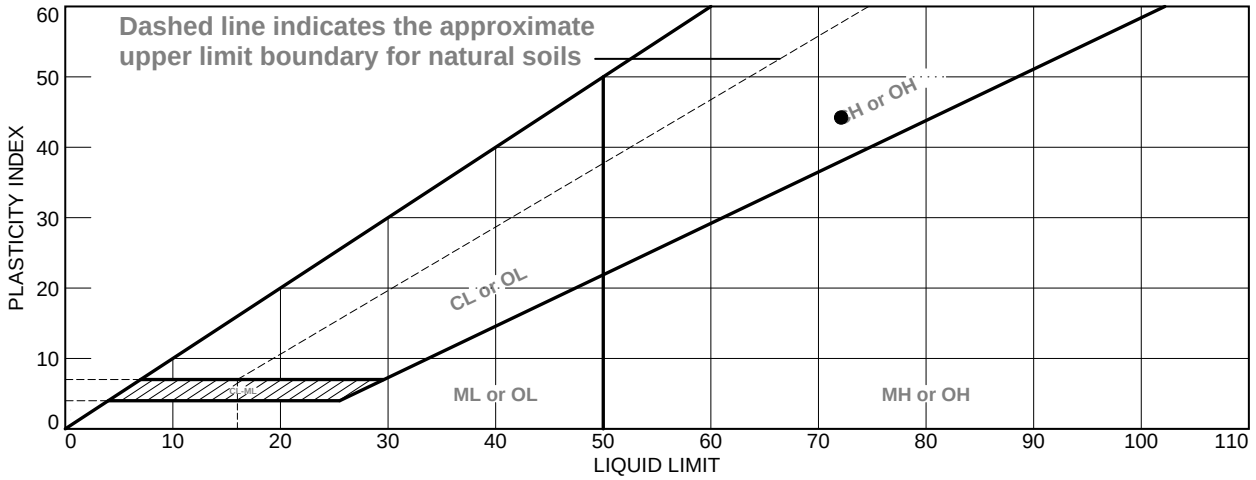
LGC Geotechnical, Inc.

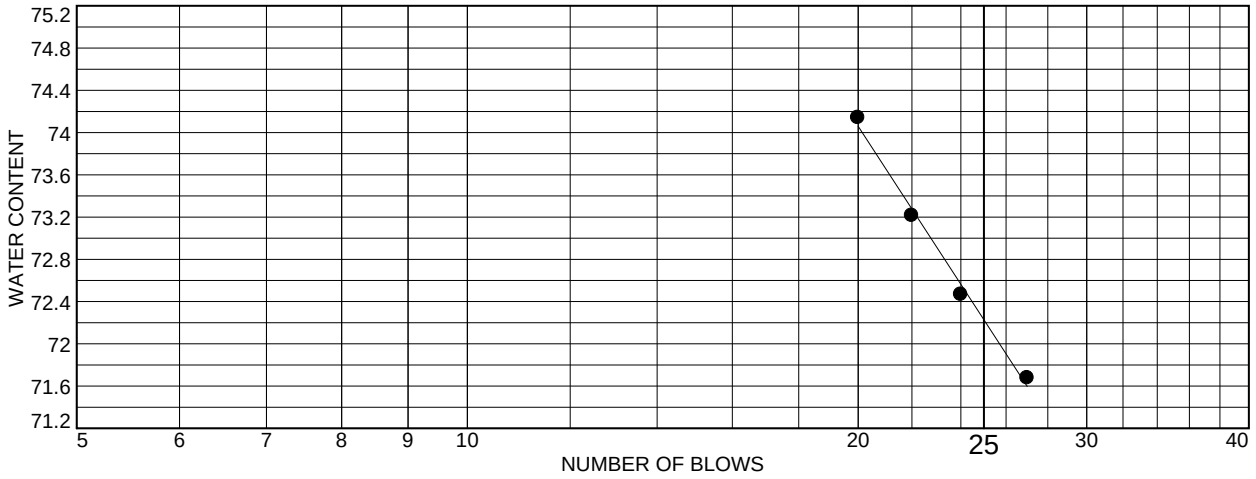
ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 22011-01
Date: Sep-23

Compass BESS

LIQUID AND PLASTIC LIMITS TEST REPORT





	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Very Dark Brown Fat CLAY	72.2	28.1	44.1			

Project No. 040-014 **Client:** LGC Geotechnical

Project: Compass, San Juan Capistrano - 22011-01

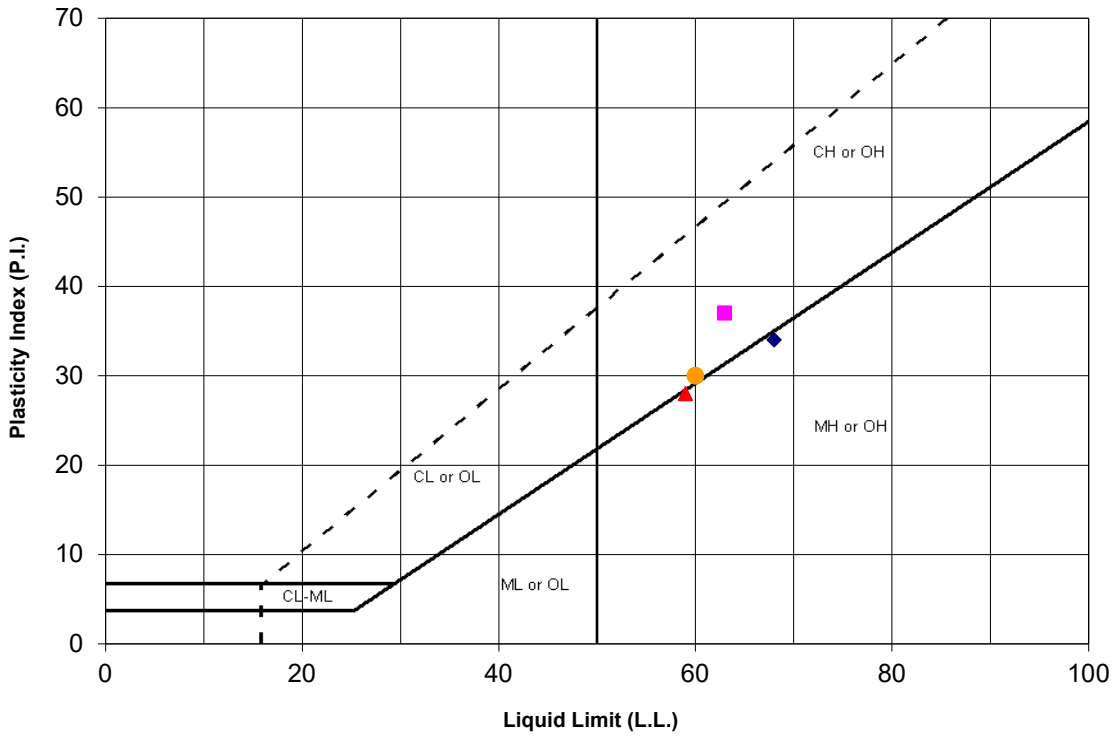
●**Source of Sample:** B-2 **Depth:** 84 **Sample Number:** G-2

Remarks:

Benchmark Geotechnical Labs, LLC

Figure

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	B-1	G-3	28'	-	68	34	34	MH
■	B-3	G-2	67.5'	-	63	26	37	CH
▲	B-4	G-1	24'	-	59	31	28	MH
●	B-4	G-2	55.5'	-	60	30	30	CH

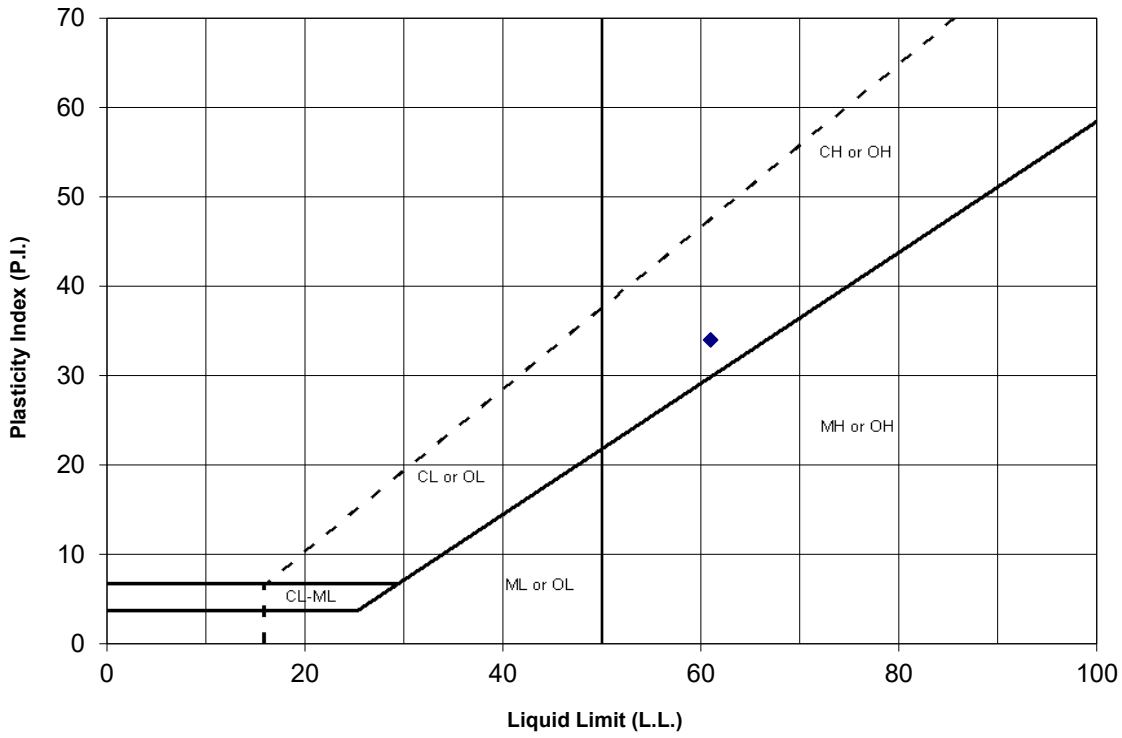
LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 22011-01
Date: Dec-22

Compass BESS

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	B-5	G-1	49'	-	61	27	34	CH

LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 22011-01
Date: Sep-23

Compass - San Juan Capistrano

Location	Sample No.	Depth (ft)	Molding Moisture Content (%)	Initial Dry Density (pcf)	Final Moisture Content (%)	Expansion Index	Expansion Classification[1]
HS-1	B-1	1-5'	12.0	100.8	25.4	73	Medium
HS-2	B-1	1-5'	12.0	102.8	21.9	42	Low

LGC Geotechnical, Inc.

EXPANSION INDEX
(ASTM D 4829)

Project Number: 22011-01
Date: Aug-22

Compass BESS

Location	Sample No.	Depth (ft)	Molding Moisture Content (%)	Initial Dry Density (pcf)	Final Moisture Content (%)	Expansion Index	Expansion Classification[1]
HS-3	B-1	0-5'	10.3	106.7	20.0	28	Low
HS-4	B-1	0-5'	9.3	111.2	19.0	13	Very Low

LGC Geotechnical, Inc.

EXPANSION INDEX
(ASTM D 4829)

Project Number: 22011-01
Date: Sep-23

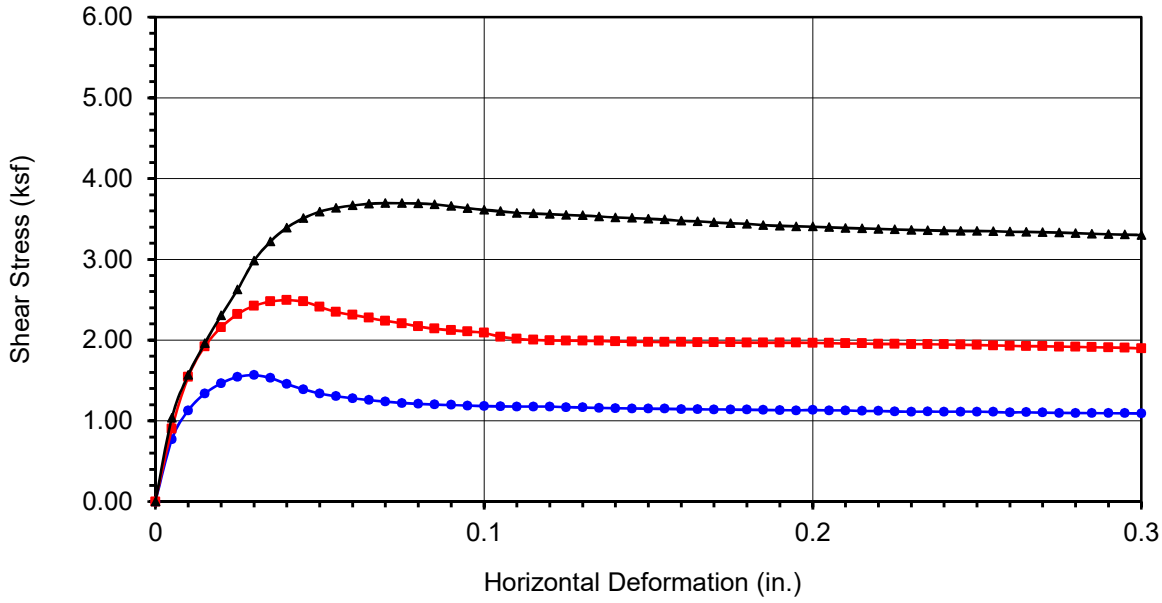
Compass BESS

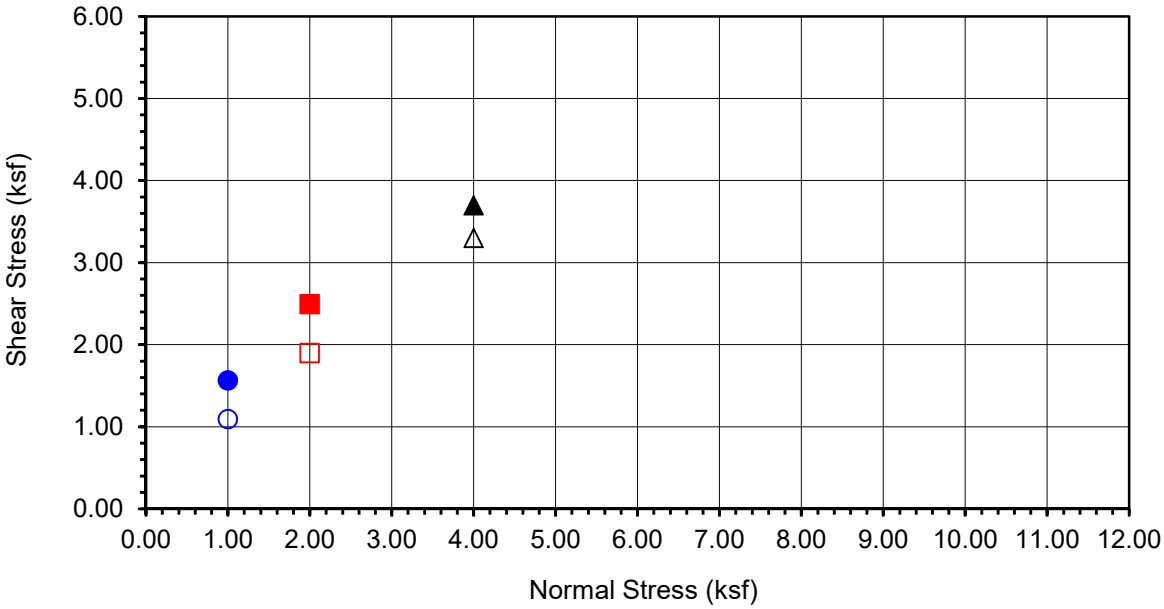
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass, San Juan Capistrano	Tested By:	G. Bathala	Date:	08/15/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/08/22
Boring No.:	B-2	Sample Type:	Ring		
Sample No.:	R-3	Depth (ft.):	30.0		
Soil Identification:	Olive lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	194.94	197.94	199.98
Weight of Ring(gm):	44.76	44.87	42.89
Before Shearing			
Weight of Wet Sample+Cont.(gm):	186.00	186.00	186.00
Weight of Dry Sample+Cont.(gm):	167.18	167.18	167.18
Weight of Container(gm):	55.80	55.80	55.80
Vertical Rdg.(in): Initial	0.2602	0.2656	0.0000
Vertical Rdg.(in): Final	0.2623	0.2712	-0.0132
After Shearing			
Weight of Wet Sample+Cont.(gm):	210.87	221.09	194.88
Weight of Dry Sample+Cont.(gm):	184.81	195.37	169.87
Weight of Container(gm):	57.50	66.06	37.73
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**B-2**
Sample No.	**R-3**
Depth (ft)	**30**
Sample Type:	
Ring	
Soil Identification:	
Olive lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.566	■ 2.493	▲ 3.697
Shear Stress @ End of Test (ksf)	○ 1.091	□ 1.896	△ 3.301
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	16.90	16.90	16.90
Dry Density (pcf)	106.8	108.9	111.8
Saturation (%)	79.0	83.3	89.8
Soil Height Before Shearing (in.)	0.9979	0.9944	0.9868
Final Moisture Content (%)	20.5	19.9	18.9

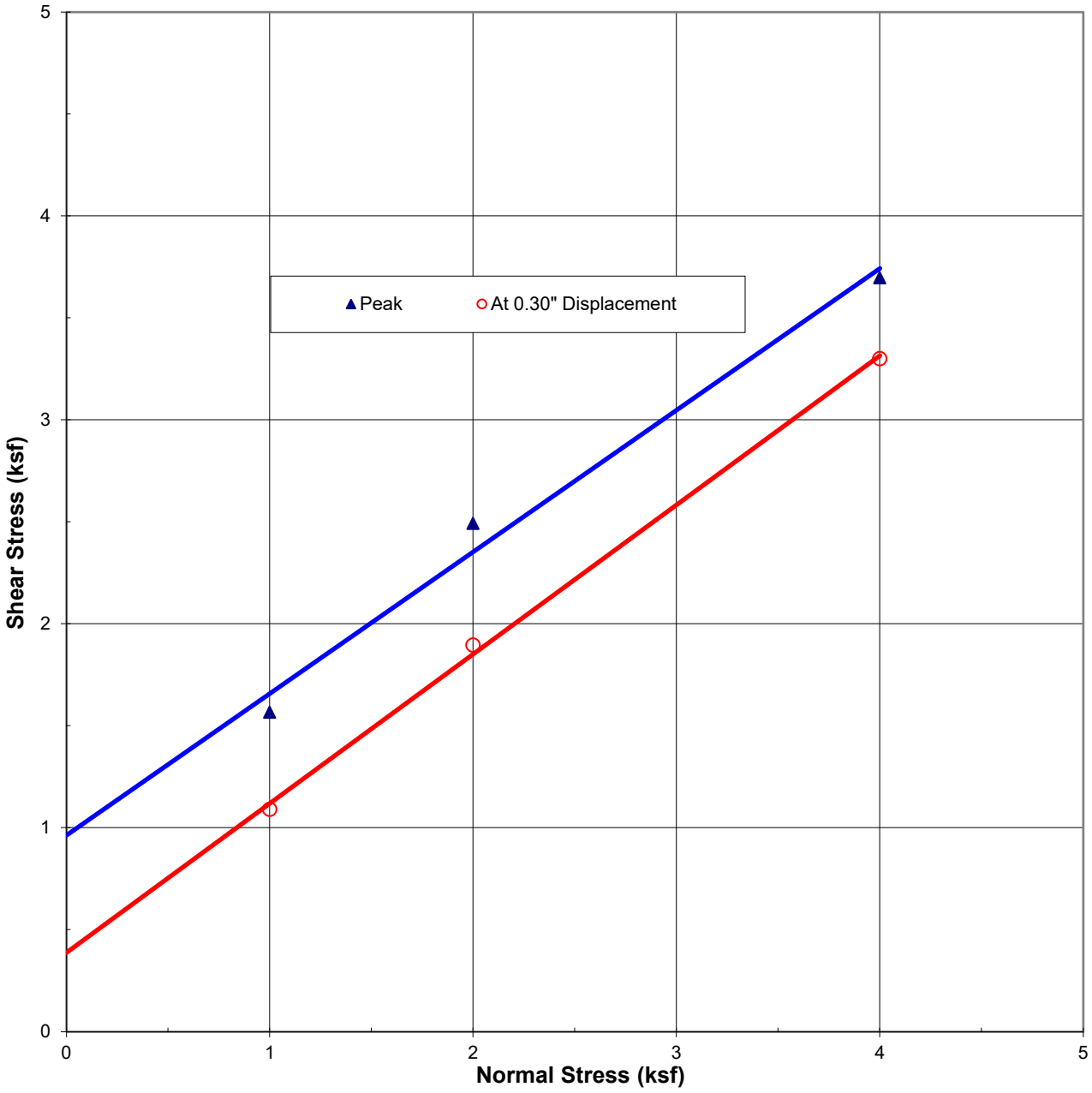
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass, San Juan Capistrano

08-22



Tested Sample:
B-2 at 30 ft

Peak:		At 0.30" Displacement:	
34.8	Degrees	36.2	Degrees
0.96	ksf	0.39	ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-22

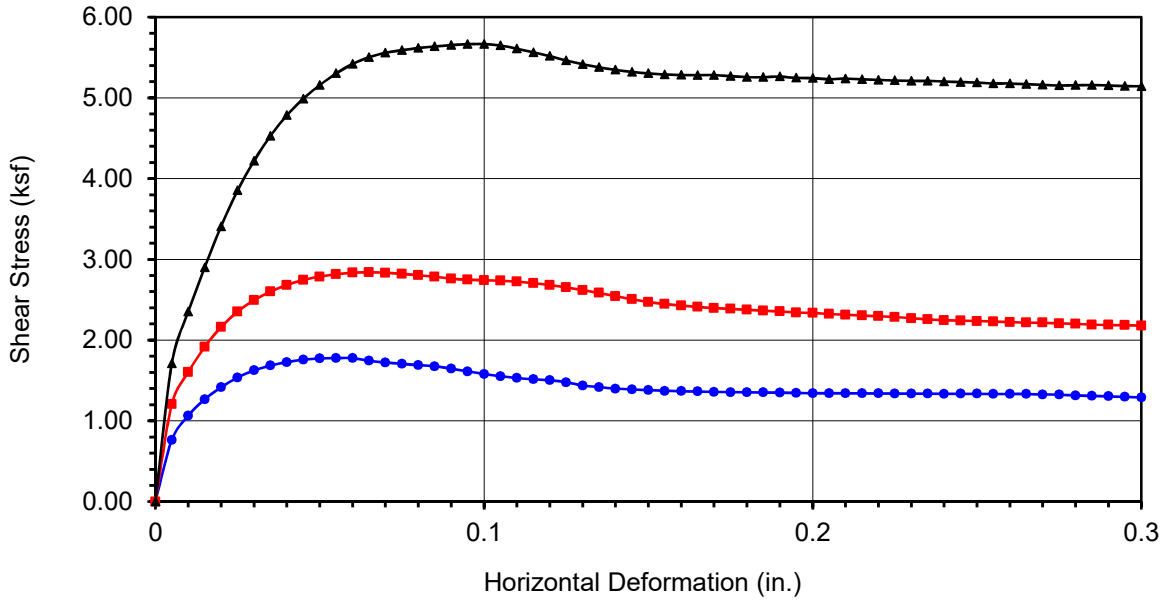
Compass, San Juan Capistrano

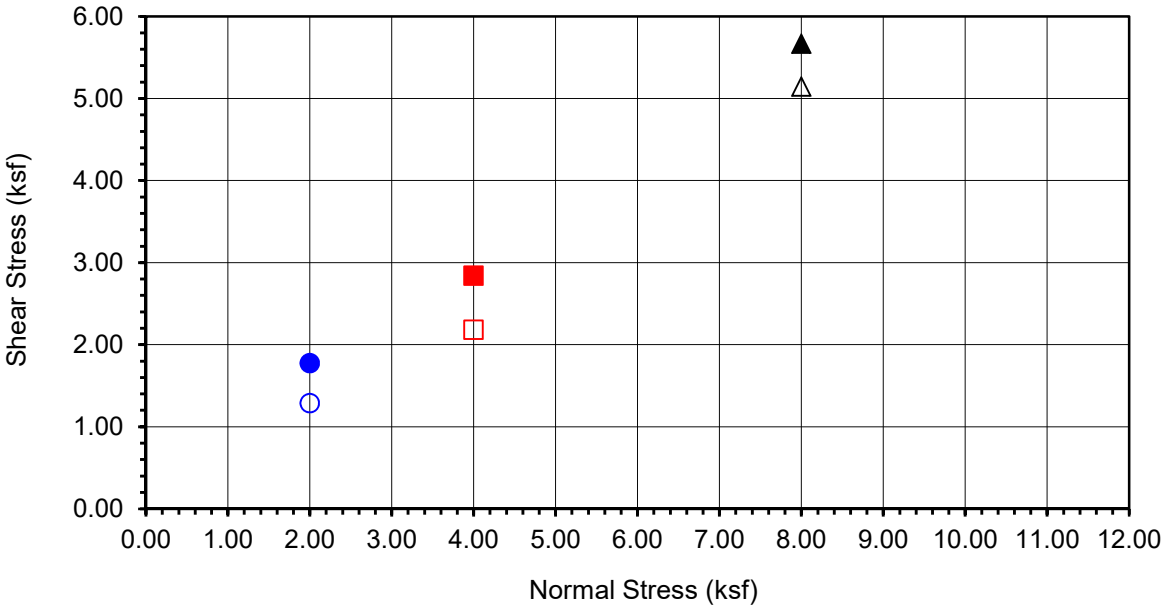
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass, San Juan Capistrano	Tested By:	G. Bathala	Date:	08/15/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/09/22
Boring No.:	B-3	Sample Type:	Ring		
Sample No.:	R-4	Depth (ft.):	40.0		
Soil Identification:	Olive gray lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	193.30	194.39	197.75
Weight of Ring(gm):	45.98	45.37	44.61
Before Shearing			
Weight of Wet Sample+Cont.(gm):	219.57	219.57	219.57
Weight of Dry Sample+Cont.(gm):	190.48	190.48	190.48
Weight of Container(gm):	69.10	69.10	69.10
Vertical Rdg.(in): Initial	0.0000	0.2453	0.2813
Vertical Rdg.(in): Final	-0.0145	0.2622	0.3112
After Shearing			
Weight of Wet Sample+Cont.(gm):	213.14	205.52	218.63
Weight of Dry Sample+Cont.(gm):	178.64	172.28	191.03
Weight of Container(gm):	64.60	56.65	65.86
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**B-3**
Sample No.	**R-4**
Depth (ft)	**40**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL)	

Normal Stress (kip/ft²)	2.000	4.000	8.000
Peak Shear Stress (kip/ft²)	● 1.776	■ 2.839	▲ 5.665
Shear Stress @ End of Test (ksf)	○ 1.289	□ 2.179	△ 5.143
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	23.97	23.97	23.97
Dry Density (pcf)	98.8	100.0	102.7
Saturation (%)	91.7	94.3	101.0
Soil Height Before Shearing (in.)	0.9855	0.9831	0.9701
Final Moisture Content (%)	30.3	28.7	22.1

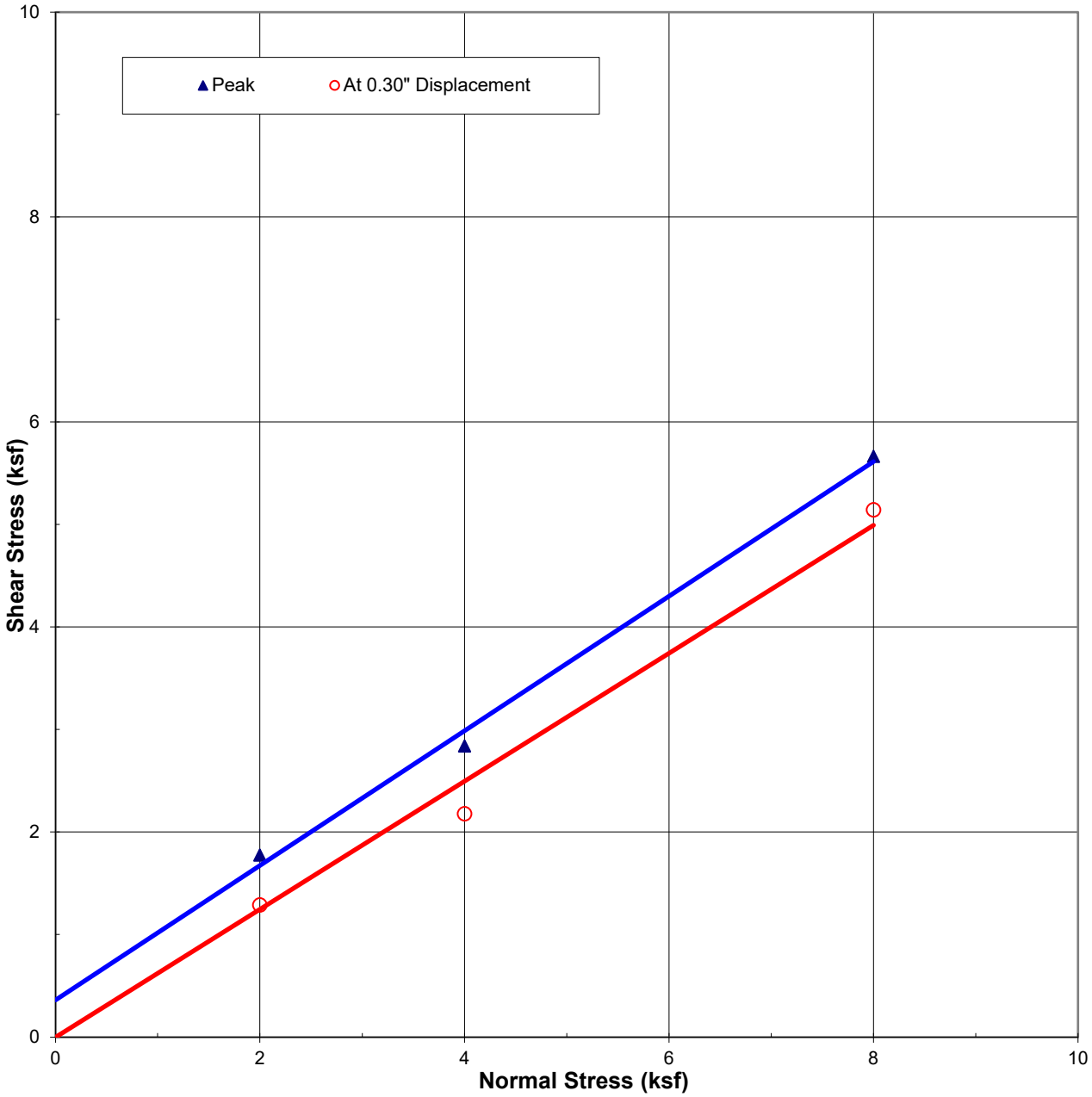
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass, San Juan Capistrano

08-22



Tested Sample:
B-3 at 40 ft

Peak:		At 0.30" Displacement:	
33.3	Degrees	32.0	Degrees
0.36	ksf	0.0	ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-22

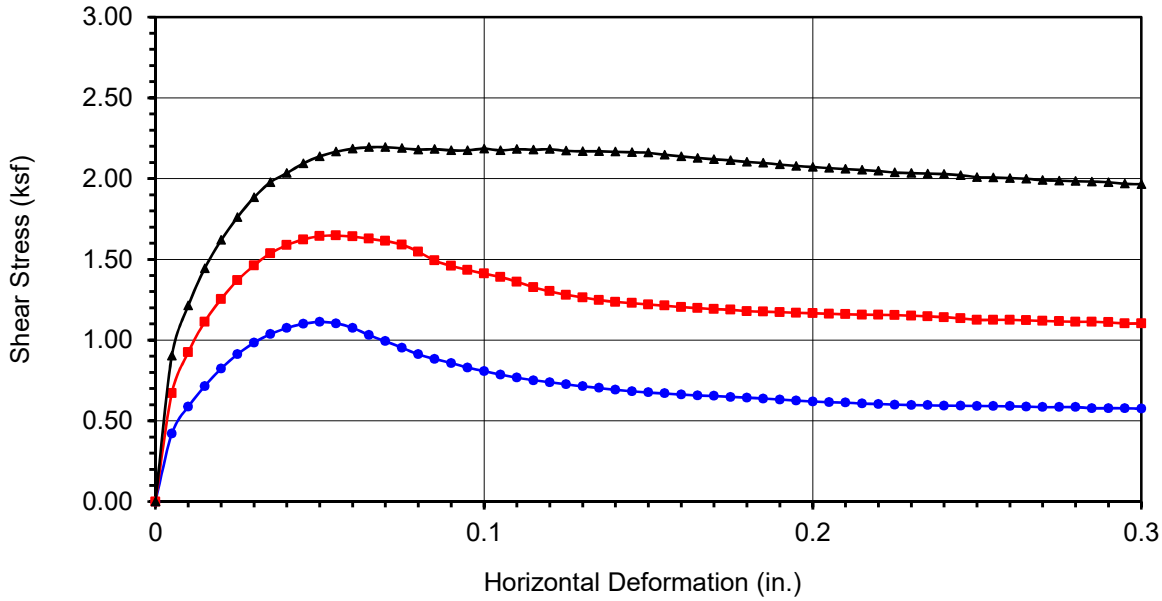
Compass, San Juan Capistrano

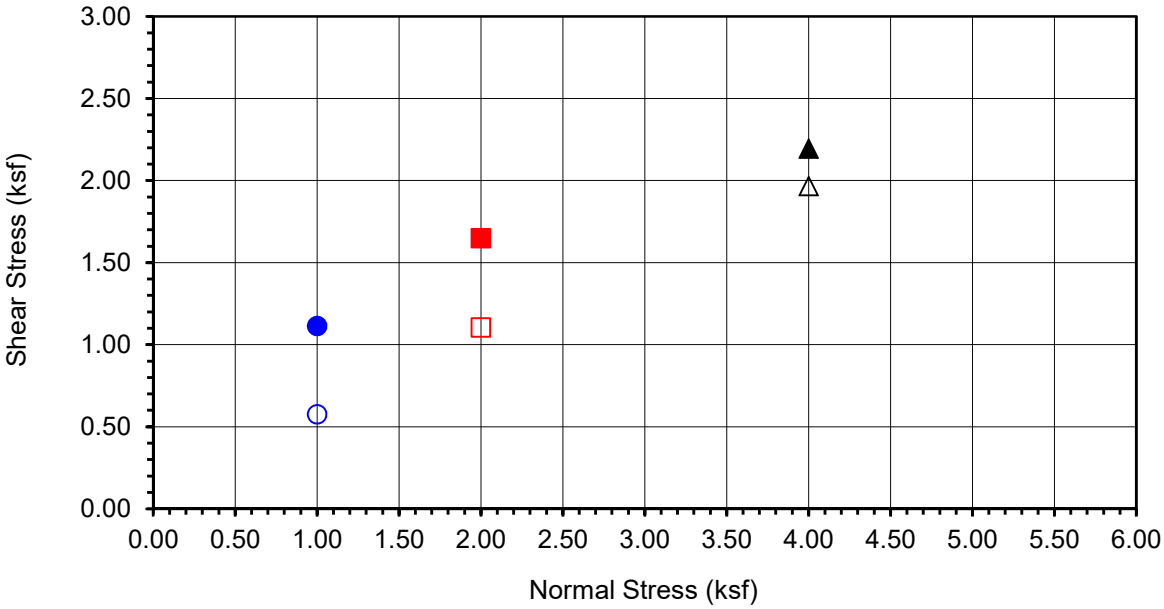
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass, San Juan Capistrano	Tested By:	G. Bathala	Date:	08/16/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/09/22
Boring No.:	B-4	Sample Type:	Ring		
Sample No.:	R-2	Depth (ft.):	20.0		
Soil Identification:	Olive lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	192.63	193.28	193.32
Weight of Ring(gm):	44.95	45.09	45.07
Before Shearing			
Weight of Wet Sample+Cont.(gm):	147.68	148.19	148.25
Weight of Dry Sample+Cont.(gm):	115.13	115.04	114.17
Weight of Container(gm):	0.00	0.00	0.00
Vertical Rdg.(in): Initial	0.0000	0.2347	0.2557
Vertical Rdg.(in): Final	-0.0028	0.2505	0.2769
After Shearing			
Weight of Wet Sample+Cont.(gm):	209.54	229.37	219.78
Weight of Dry Sample+Cont.(gm):	173.15	192.80	183.66
Weight of Container(gm):	58.02	77.76	69.49
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**B-4**
Sample No.	**R-2**
Depth (ft)	**20**
Sample Type:	
Ring	
Soil Identification:	
Olive lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.113	■ 1.647	▲ 2.194
Shear Stress @ End of Test (ksf)	○ 0.575	□ 1.103	△ 1.965
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	28.27	28.82	29.85
Dry Density (pcf)	95.7	95.7	95.0
Saturation (%)	100.4	102.1	104.0
Soil Height Before Shearing (in.)	0.9972	0.9842	0.9788
Final Moisture Content (%)	31.6	31.8	31.6

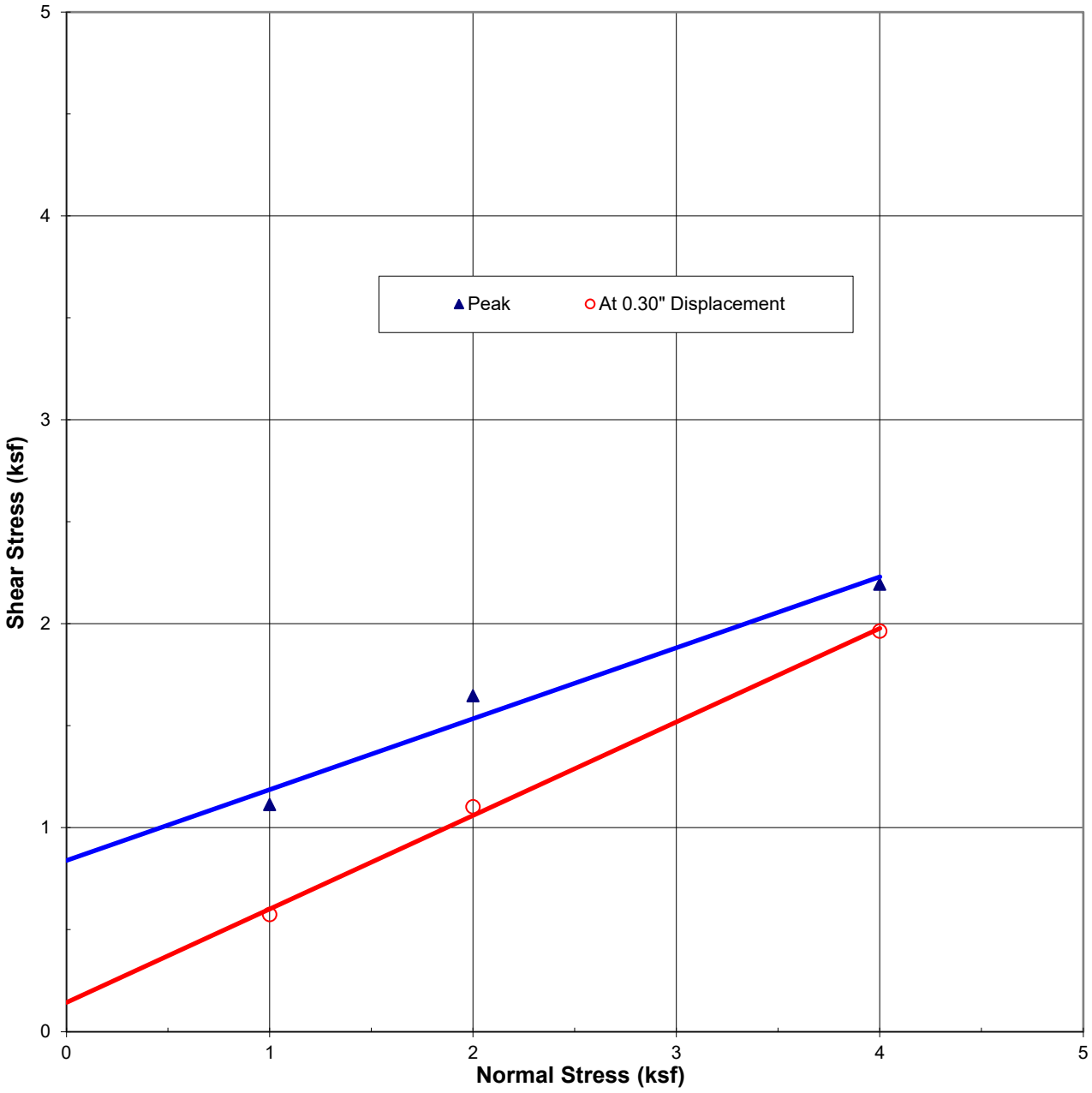
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass, San Juan Capistrano

08-22



Tested Sample:
B-4 at 20 ft

Peak:		At 0.30" Displacement:	
19.2	Degrees	24.6	Degrees
0.84	ksf	0.14	ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-22

Compass, San Juan Capistrano

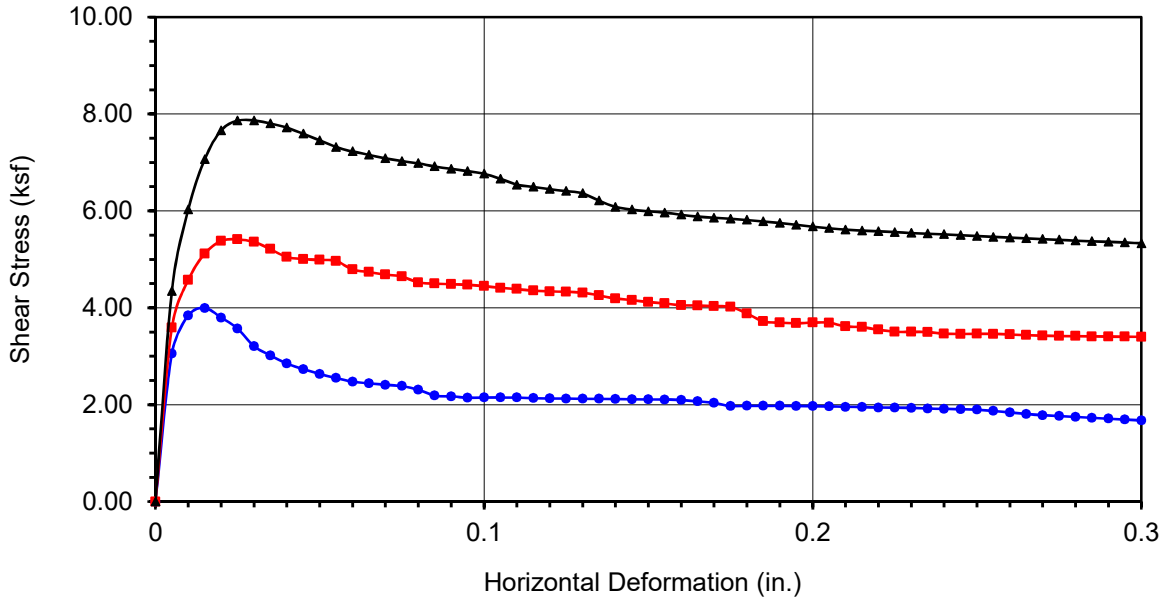
DIRECT SHEAR TEST

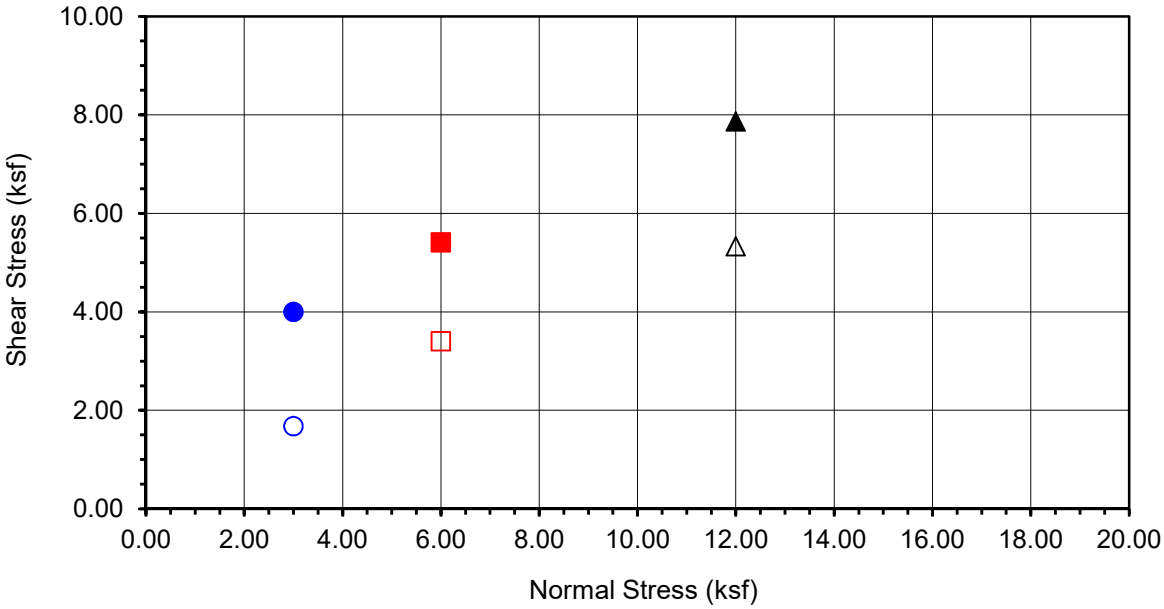
Consolidated Drained - ASTM D 3080

Project Name:	Compass, San Juan Capistrano	Tested By:	G. Bathala	Date:	08/16/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/09/22
Boring No.:	B-4	Sample Type:	Ring		
Sample No.:	R-7	Depth (ft.):	70.0		

Soil Identification: Olive gray lean clay (CL), noted as claystone

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	188.74	189.80	193.13
Weight of Ring(gm):	45.80	45.61	45.17
Before Shearing			
Weight of Wet Sample+Cont.(gm):	142.94	144.19	147.96
Weight of Dry Sample+Cont.(gm):	109.92	111.40	115.90
Weight of Container(gm):	0.00	0.00	0.00
Vertical Rdg.(in): Initial	0.2324	0.2550	0.0000
Vertical Rdg.(in): Final	0.2316	0.2600	-0.0171
After Shearing			
Weight of Wet Sample+Cont.(gm):	216.60	215.09	214.58
Weight of Dry Sample+Cont.(gm):	177.02	179.07	180.05
Weight of Container(gm):	67.10	67.67	64.15
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**B-4**
Sample No.	**R-7**
Depth (ft)	**70**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL), noted as claystone	

Normal Stress (kip/ft²)	3.000	6.000	12.000
Peak Shear Stress (kip/ft²)	● 3.996	■ 5.410	▲ 7.863
Shear Stress @ End of Test (ksf)	○ 1.676	□ 3.398	△ 5.329
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	30.04	29.43	27.66
Dry Density (pcf)	91.4	92.6	96.4
Saturation (%)	96.1	97.0	99.7
Soil Height Before Shearing (in.)	1.0008	0.9950	0.9829
Final Moisture Content (%)	36.0	32.3	29.8

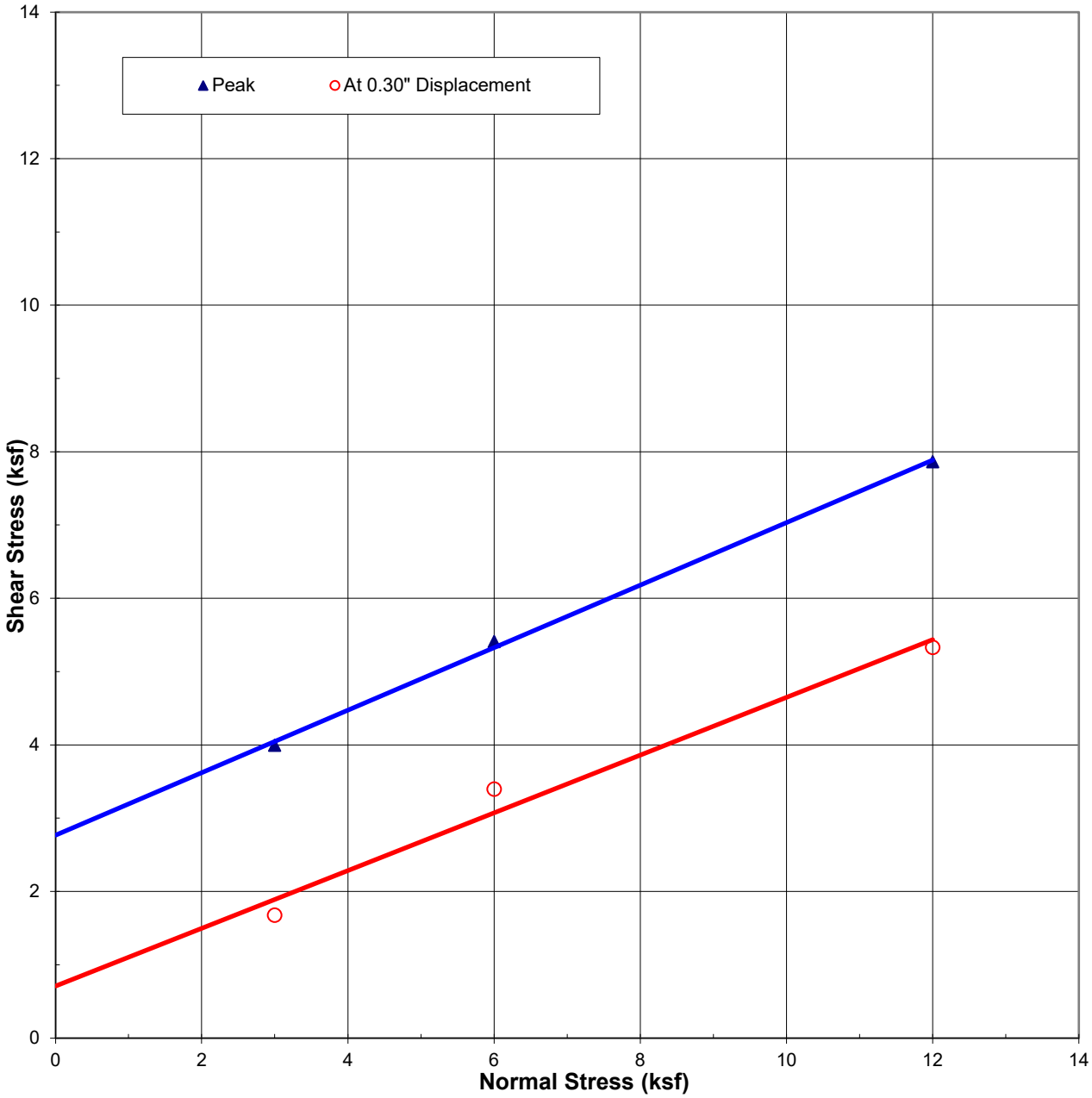
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass, San Juan Capistrano

08-22



Tested Sample:
B-4 at 70 ft

Peak:	At 0.30" Displacement:
23.1 Degrees	21.5 Degrees
2.77 ksf	0.71 ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-22

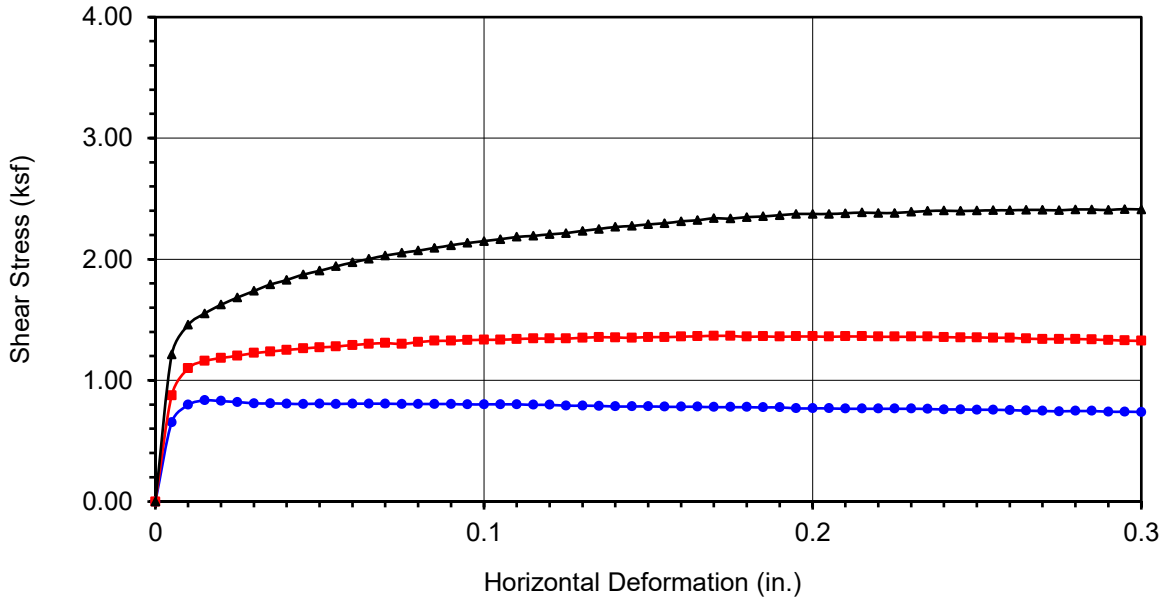
Compass, San Juan Capistrano

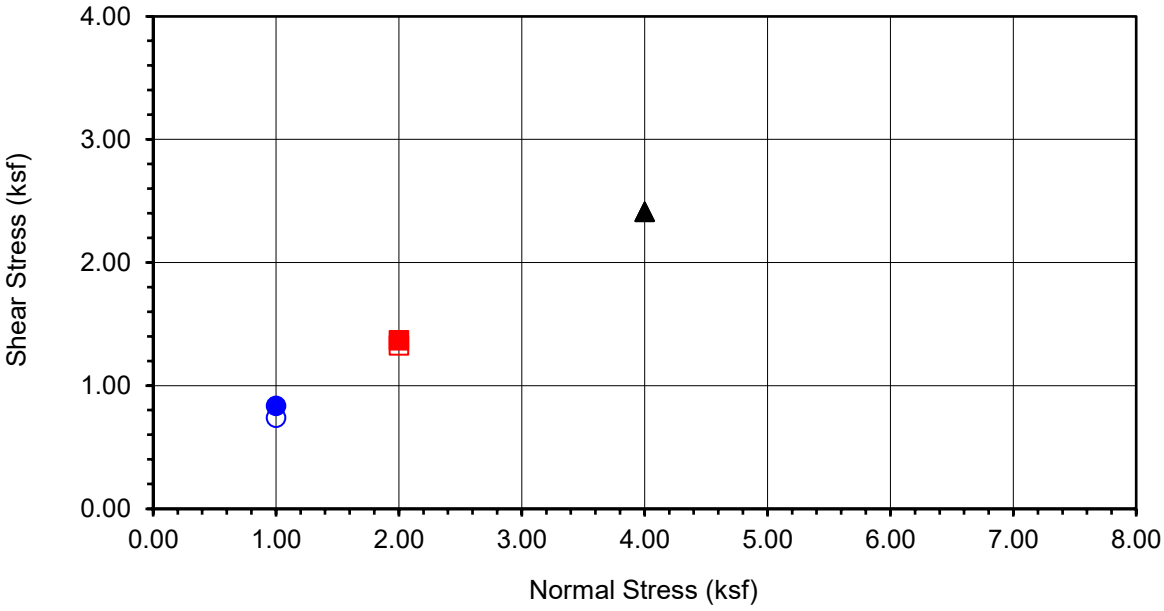
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass - San Juan Capistrano	Tested By:	G. Bathala	Date:	08/31/23
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/18/23
Boring No.:	B-5	Sample Type:	90% Remold		
Sample No.:	B-1	Depth (ft.):	0-5		
Soil Identification:	Grayish brown lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	185.12	184.37	185.31
Weight of Ring(gm):	45.51	44.55	45.34
Before Shearing			
Weight of Wet Sample+Cont.(gm):	155.89	155.89	155.89
Weight of Dry Sample+Cont.(gm):	144.62	144.62	144.62
Weight of Container(gm):	57.93	57.93	57.93
Vertical Rdg.(in): Initial	0.2384	0.2648	0.0000
Vertical Rdg.(in): Final	0.2207	N/A	N/A
After Shearing			
Weight of Wet Sample+Cont.(gm):	215.61	201.45	211.70
Weight of Dry Sample+Cont.(gm):	186.73	174.01	186.48
Weight of Container(gm):	65.42	52.00	64.00
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**B-5**
Sample No.	**B-1**
Depth (ft)	**0-5**
Sample Type: 90% Remold	
Soil Identification: Grayish brown lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 0.836	■ 1.368	▲ 2.414
Shear Stress @ End of Test (ksf)	○ 0.739	□ 1.327	△ 2.411
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	13.00	13.00	13.00
Dry Density (pcf)	102.8	102.9	103.0
Saturation (%)	54.8	55.0	55.2
Soil Height Before Shearing (in.)	1.0177	N/A	N/A
Final Moisture Content (%)	23.8	22.5	20.6

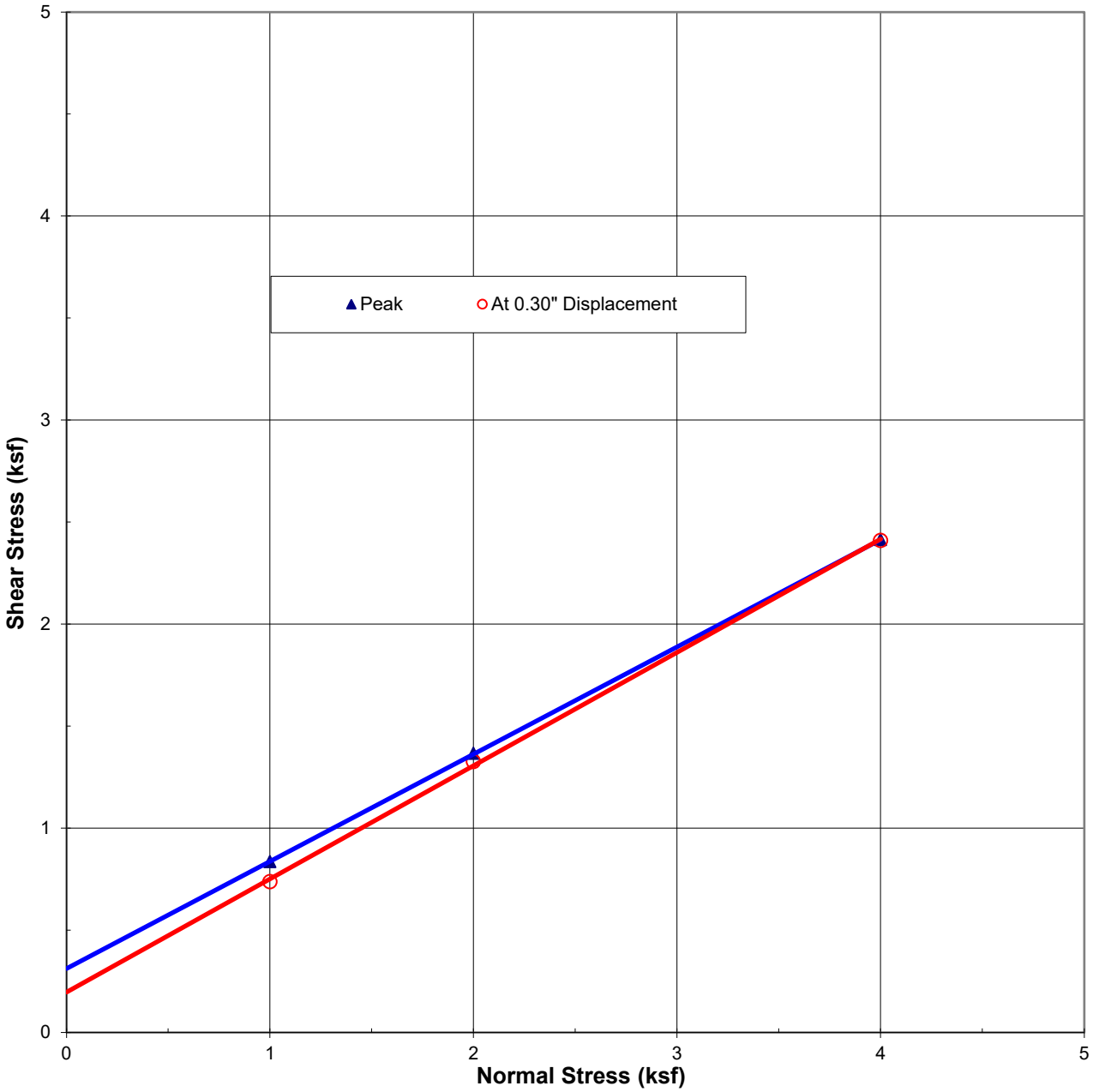
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass - San Juan Capistrano

08-23



Tested Sample:
B-5 at 0-5 ft

Peak:	At 0.30" Displacement:
27.7 Degrees	29.0 Degrees
0.31 ksf	0.20 ksf

Samples Remolded to 90% Relative Compaction

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-23

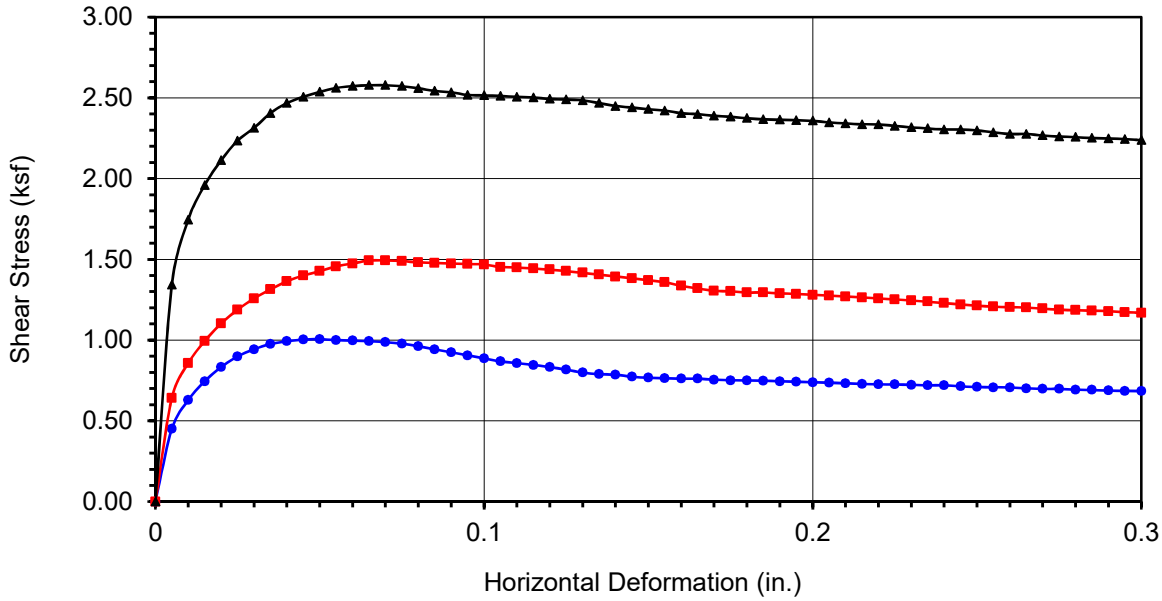
Compass, San Juan Capistrano

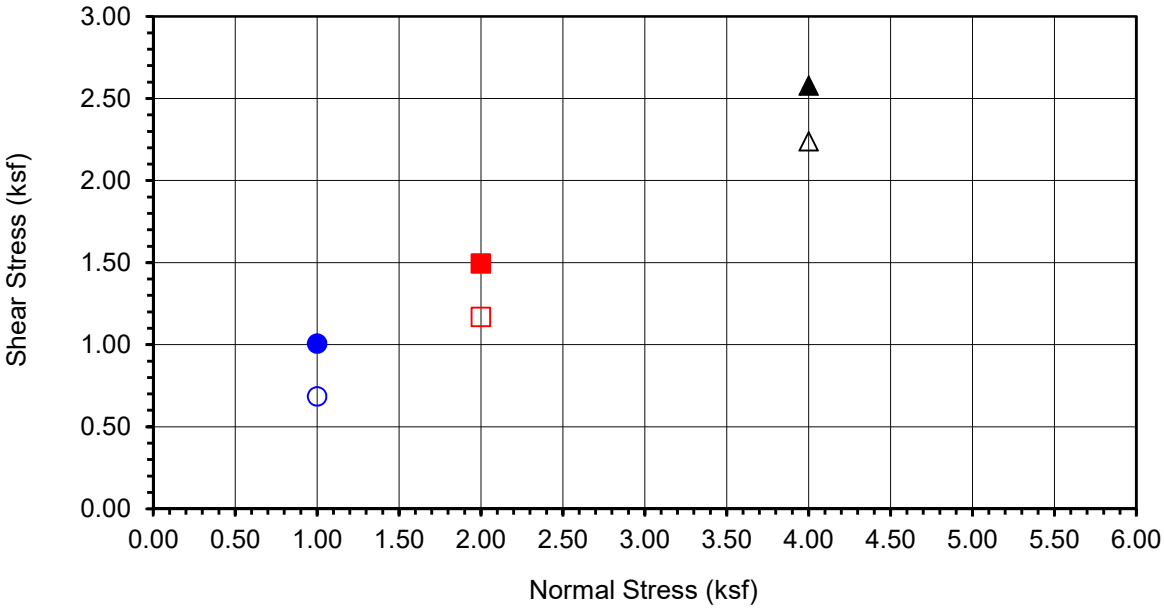
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass BESS - SJC	Tested By:	G. Bathala	Date:	10/15/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	10/19/22
Boring No.:	HS-1	Sample Type:	Ring		
Sample No.:	R-3	Depth (ft.):	15.0		
Soil Identification:	Olive lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	193.82	194.02	196.42
Weight of Ring(gm):	45.31	45.42	45.35
Before Shearing			
Weight of Wet Sample+Cont.(gm):	180.14	180.14	180.14
Weight of Dry Sample+Cont.(gm):	161.42	161.42	161.42
Weight of Container(gm):	57.62	57.62	57.62
Vertical Rdg.(in): Initial	0.2536	0.2638	0.0000
Vertical Rdg.(in): Final	0.2576	0.2751	-0.0122
After Shearing			
Weight of Wet Sample+Cont.(gm):	189.84	220.96	211.49
Weight of Dry Sample+Cont.(gm):	160.02	192.10	184.62
Weight of Container(gm):	38.37	69.44	60.28
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-1**
Sample No.	**R-3**
Depth (ft)	**15**
Sample Type:	
Ring	
Soil Identification:	
Olive lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.006	■ 1.493	▲ 2.578
Shear Stress @ End of Test (ksf)	○ 0.685	□ 1.169	△ 2.238
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	18.03	18.03	18.03
Dry Density (pcf)	104.6	104.7	106.4
Saturation (%)	79.7	79.8	83.4
Soil Height Before Shearing (in.)	0.9960	0.9887	0.9878
Final Moisture Content (%)	24.5	23.5	21.6

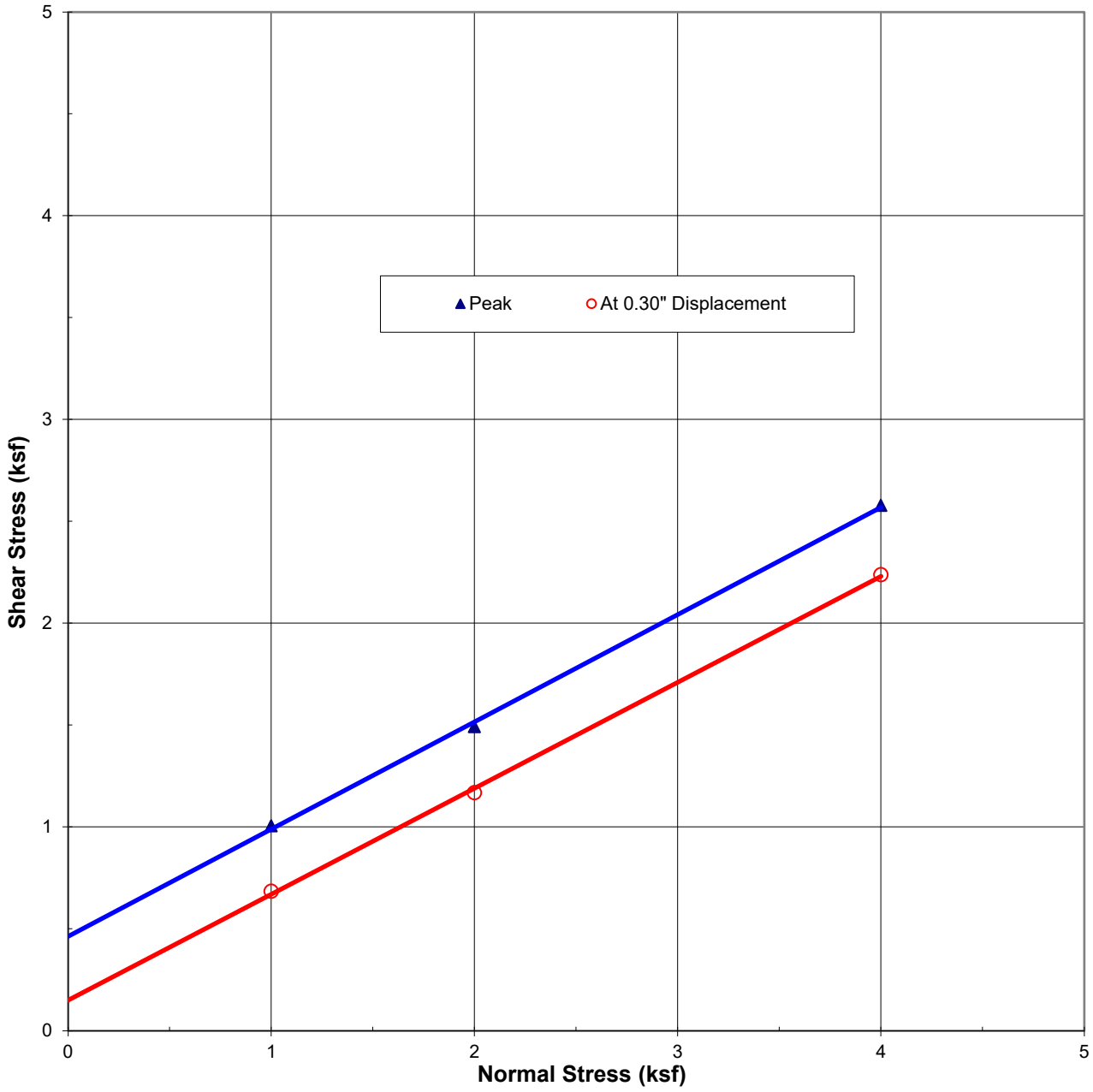
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass BESS - SJC

10-22



Tested Sample:
HS-1 at 15 ft

Peak:	At 0.30" Displacement:
27.8 Degrees	27.5 Degrees
0.46 ksf	0.15 ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Oct-22

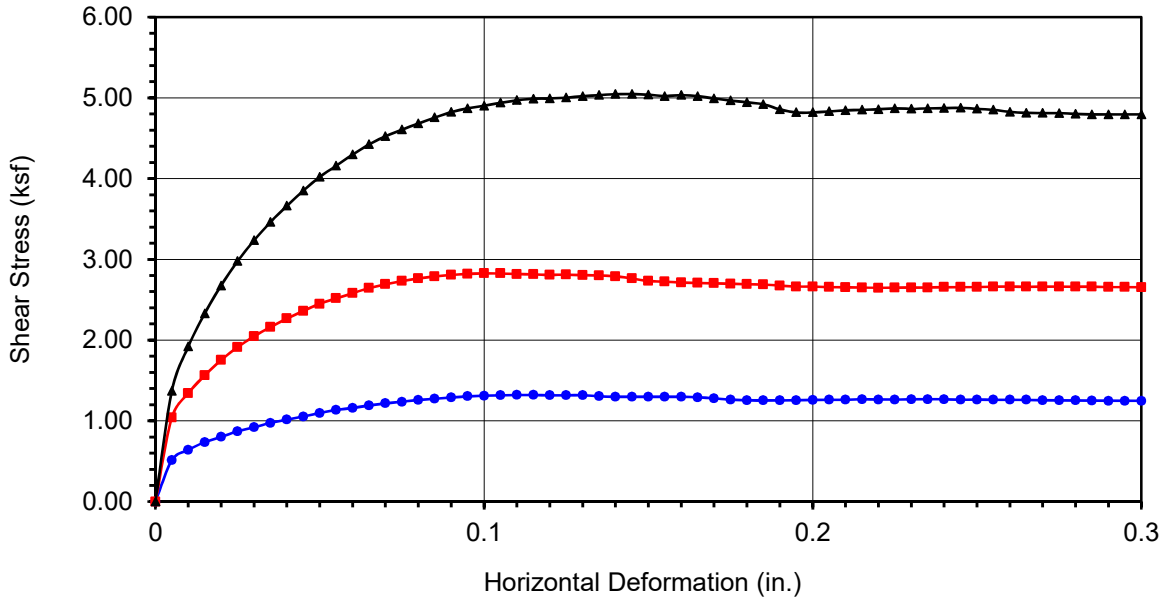
Compass, San Juan Capistrano

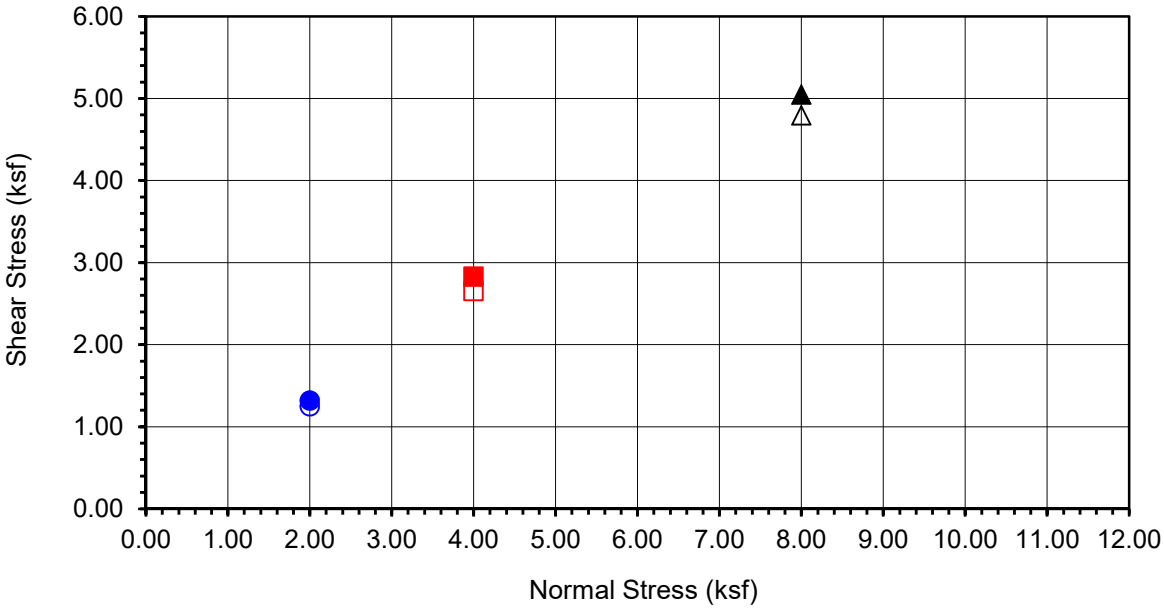
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass BESS - SJC	Tested By:	G. Bathala	Date:	10/15/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	10/19/22
Boring No.:	HS-1	Sample Type:	Ring		
Sample No.:	R-5	Depth (ft.):	35.0		
Soil Identification:	Olive silt (ML)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	184.98	190.05	191.25
Weight of Ring(gm):	42.99	46.48	46.11
Before Shearing			
Weight of Wet Sample+Cont.(gm):	188.82	188.82	188.82
Weight of Dry Sample+Cont.(gm):	159.36	159.36	159.36
Weight of Container(gm):	57.62	57.62	57.62
Vertical Rdg.(in): Initial	0.2475	0.2547	0.0000
Vertical Rdg.(in): Final	0.2684	0.2867	-0.0750
After Shearing			
Weight of Wet Sample+Cont.(gm):	196.78	209.04	207.42
Weight of Dry Sample+Cont.(gm):	164.09	181.37	179.98
Weight of Container(gm):	59.06	68.14	69.10
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-1**
Sample No.	**R-5**
Depth (ft)	**35**
Sample Type:	
Ring	
Soil Identification:	
Olive silt (ML)	

Normal Stress (kip/ft²)	2.000	4.000	8.000
Peak Shear Stress (kip/ft²)	● 1.320	■ 2.826	▲ 5.046
Shear Stress @ End of Test (ksf)	○ 1.248	□ 2.653	△ 4.794
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	28.96	28.96	28.96
Dry Density (pcf)	91.6	92.6	93.6
Saturation (%)	93.0	95.3	97.6
Soil Height Before Shearing (in.)	0.9791	0.9680	0.9250
Final Moisture Content (%)	31.1	24.4	24.7

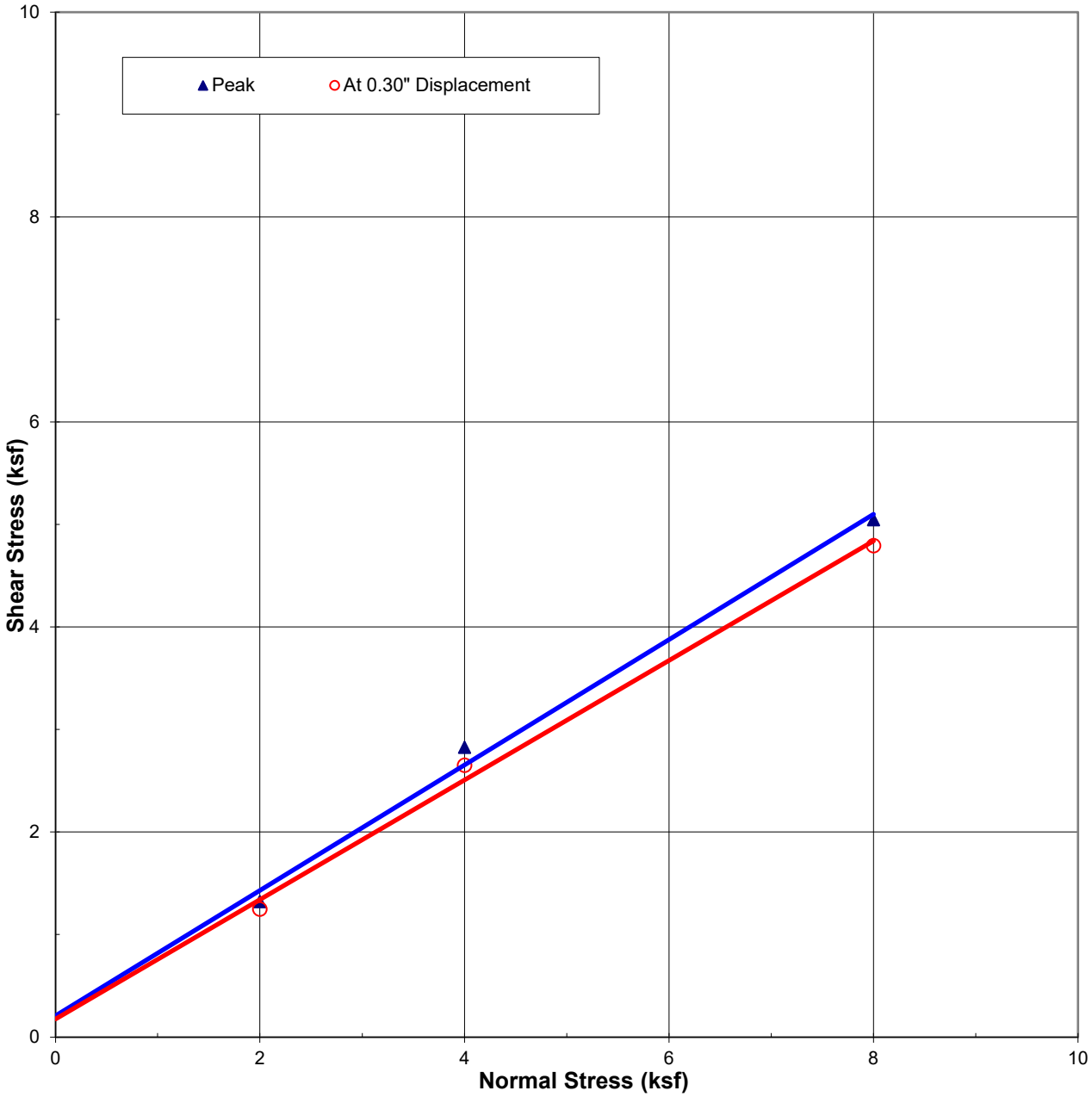
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass BESS - SJC

10-22



Tested Sample:
HS-1 at 35 ft

Peak:	At 0.30" Displacement:
31.4 Degrees	30.2 Degrees
0.21 ksf	0.18 ksf

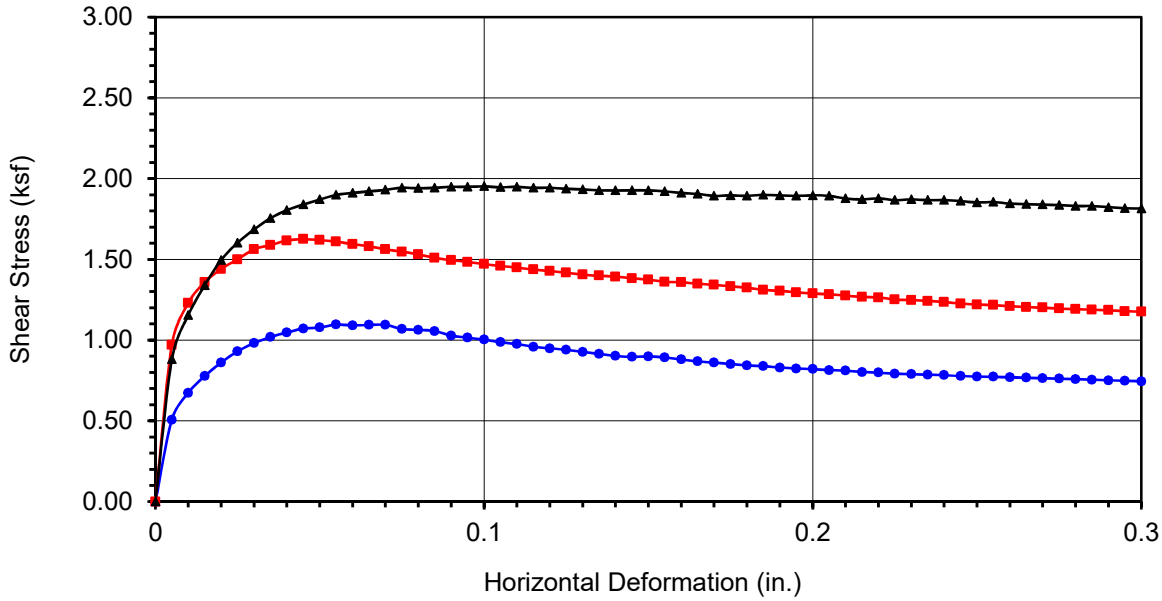
LGC Geotechnical, Inc.	**DIRECT SHEAR PLOT**	**Project Number:** 22011-01 **Date:** Oct-22
		Compass, San Juan Capistrano

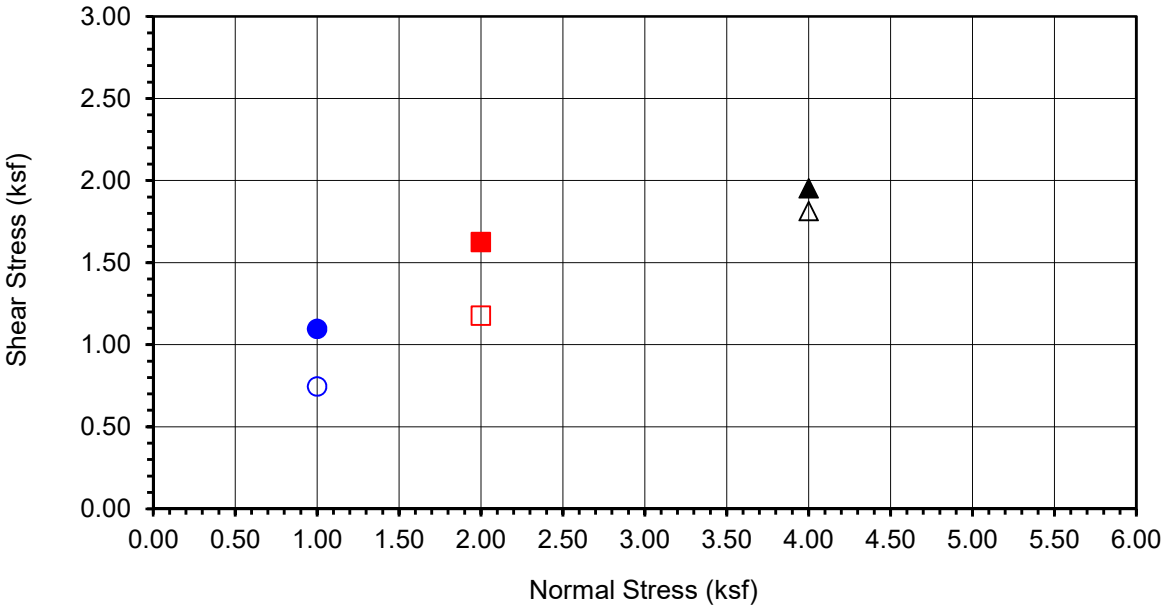
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass BESS - SJC	Tested By:	G. Bathala	Date:	10/15/22
Project No.:	22011-01	Checked By:	J. Ward	Date:	10/19/22
Boring No.:	HS-2	Sample Type:	Ring		
Sample No.:	R-4	Depth (ft.):	25.0		
Soil Identification:	Olive gray lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	196.66	196.77	197.43
Weight of Ring(gm):	45.37	45.12	45.17
Before Shearing			
Weight of Wet Sample+Cont.(gm):	198.17	198.17	198.17
Weight of Dry Sample+Cont.(gm):	173.10	173.10	173.10
Weight of Container(gm):	64.60	64.60	64.60
Vertical Rdg.(in): Initial	0.2348	0.2361	0.0000
Vertical Rdg.(in): Final	0.2431	0.2420	-0.0299
After Shearing			
Weight of Wet Sample+Cont.(gm):	210.80	207.40	209.83
Weight of Dry Sample+Cont.(gm):	180.58	177.44	180.25
Weight of Container(gm):	58.37	55.53	57.99
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-2**
Sample No.	**R-4**
Depth (ft)	**25**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.097	■ 1.625	▲ 1.952
Shear Stress @ End of Test (ksf)	○ 0.745	□ 1.176	△ 1.814
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	23.11	23.11	23.11
Dry Density (pcf)	102.2	102.4	102.9
Saturation (%)	96.1	96.7	97.7
Soil Height Before Shearing (in.)	0.9917	0.9941	0.9701
Final Moisture Content (%)	24.7	24.6	24.2

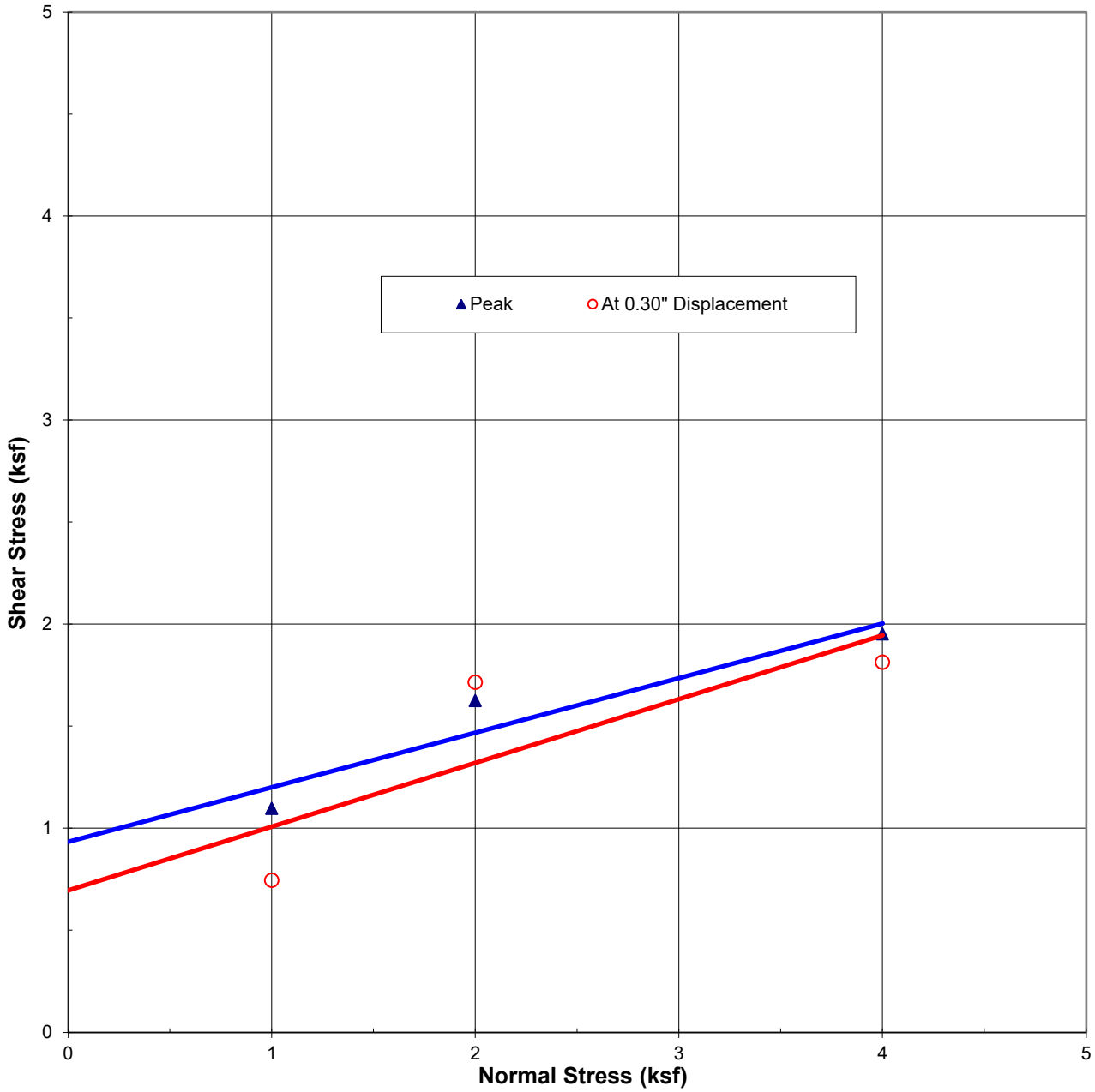
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass BESS - SJC

10-22



Tested Sample:
HS-2 at 25 ft

Peak:	At 0.30" Displacement:
15.0 Degrees	17.4 Degrees
0.93 ksf	0.70 ksf

LGC Geotechnical, Inc.

COMPOSITE DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Oct-22

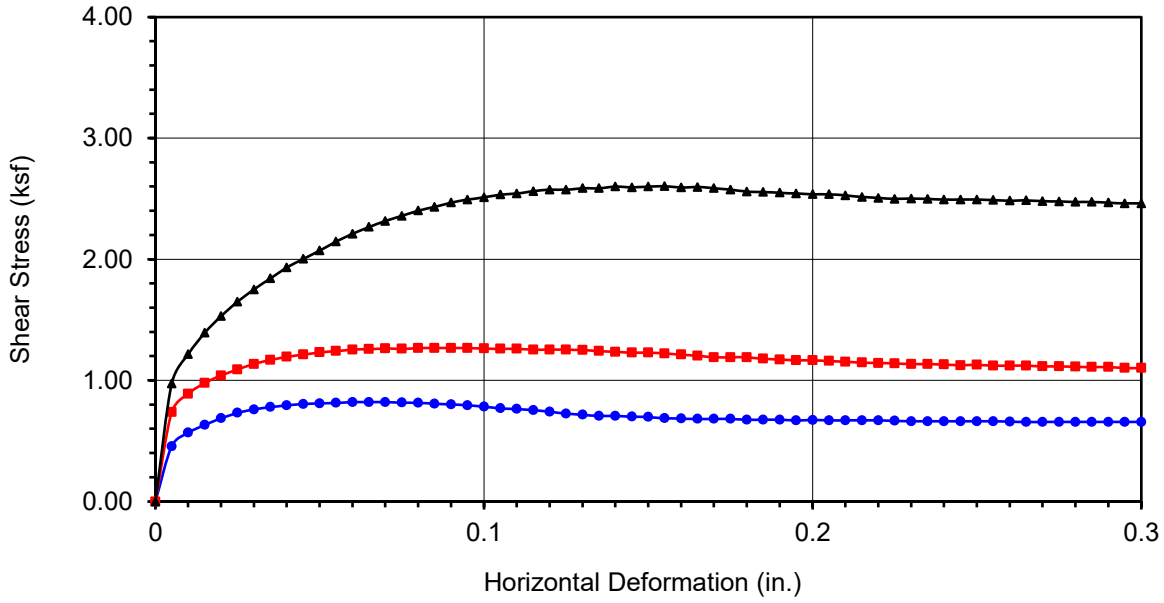
Compass, San Juan Capistrano

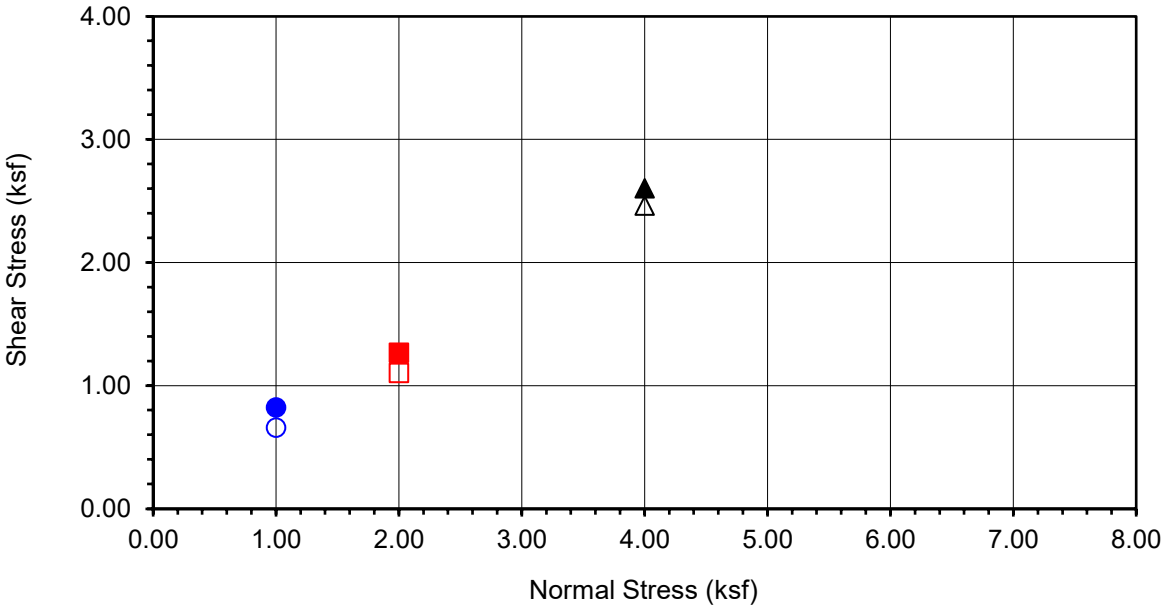
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass BESS - SJC	Tested By:	G. Bathala	Date:	09/01/23
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/18/23
Boring No.:	HS-3	Sample Type:	Ring		
Sample No.:	R-4	Depth (ft.):	20.0		
Soil Identification:	Olive gray lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	196.95	197.83	198.40
Weight of Ring(gm):	45.65	45.40	45.11
Before Shearing			
Weight of Wet Sample+Cont.(gm):	179.86	179.86	179.86
Weight of Dry Sample+Cont.(gm):	154.97	154.97	154.97
Weight of Container(gm):	64.60	64.60	64.60
Vertical Rdg.(in): Initial	0.0000	0.2504	0.2566
Vertical Rdg.(in): Final	-0.0105	0.2718	0.3025
After Shearing			
Weight of Wet Sample+Cont.(gm):	218.59	207.97	185.80
Weight of Dry Sample+Cont.(gm):	189.15	176.10	159.75
Weight of Container(gm):	68.08	56.66	36.58
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-3**
Sample No.	**R-4**
Depth (ft)	**20**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 0.821	■ 1.267	▲ 2.603
Shear Stress @ End of Test (ksf)	○ 0.657	□ 1.103	△ 2.462
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	27.54	27.54	27.54
Dry Density (pcf)	98.7	99.4	100.0
Saturation (%)	105.0	106.9	108.3
Soil Height Before Shearing (in.)	0.9895	0.9786	0.9541
Final Moisture Content (%)	24.3	26.7	21.1

DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass BESS - SJC

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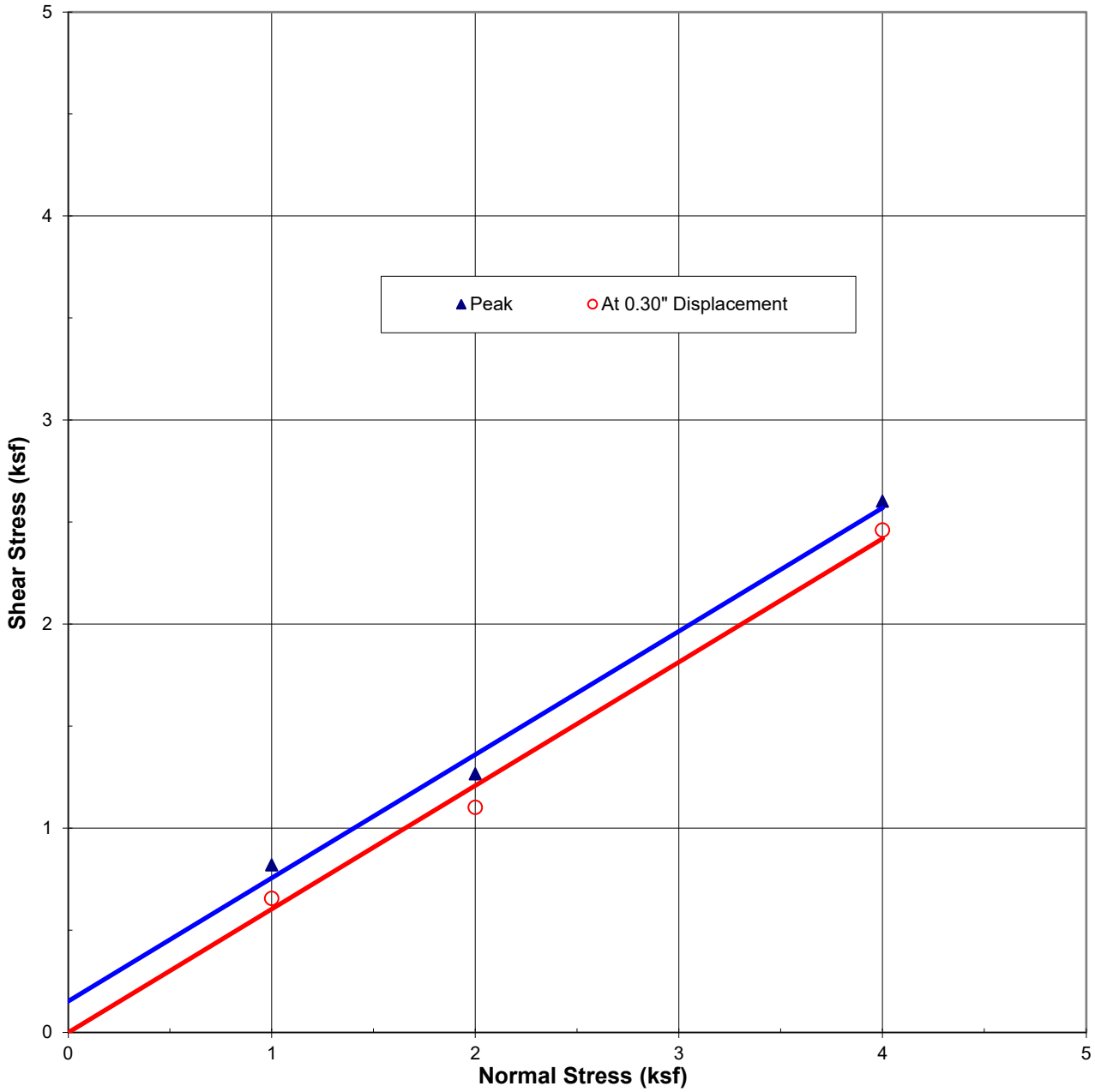


Tested Sample:
HS-3 at 20 ft

	Peak:	At 0.30" Displacement:
	31.2 Degrees	31.2 Degrees
	0.15 ksf	0.00 ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-23

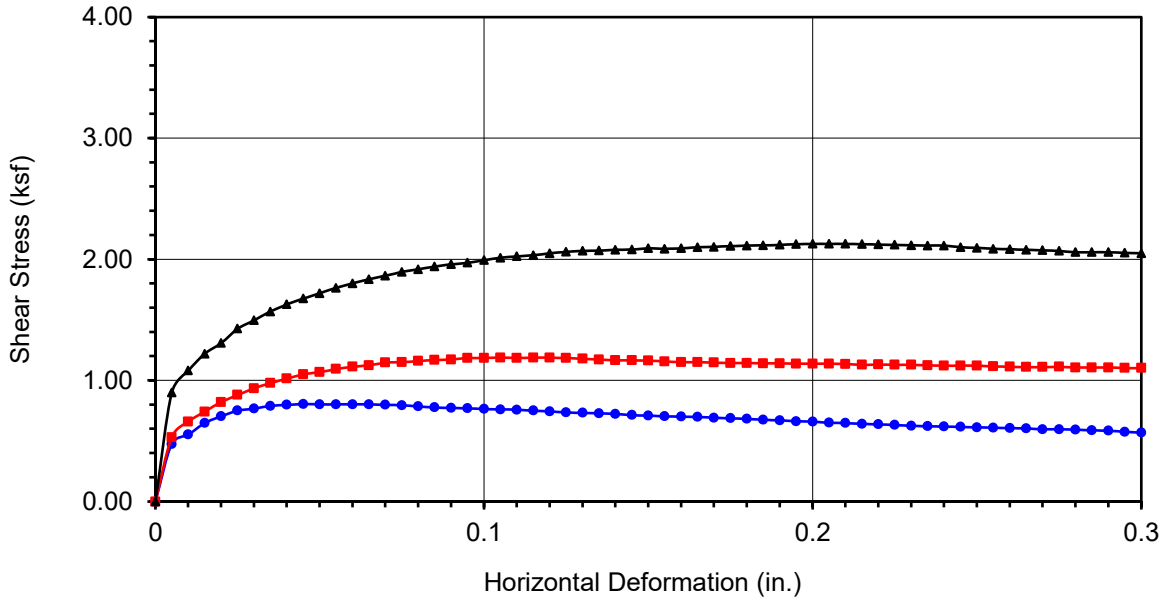
Compass, San Juan Capistrano

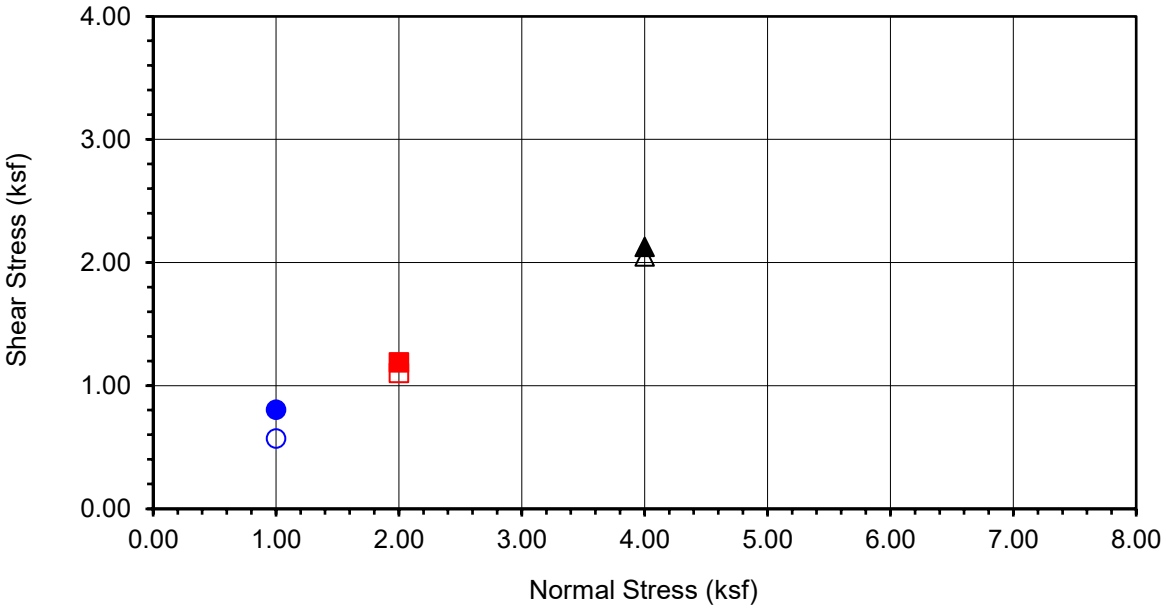
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass BESS - SJC	Tested By:	G. Bathala	Date:	09/01/23
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/18/23
Boring No.:	HS-3	Sample Type:	Ring		
Sample No.:	R-5	Depth (ft.):	30.0		
Soil Identification:	Olive gray lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	188.39	190.33	189.87
Weight of Ring(gm):	45.07	45.43	43.25
Before Shearing			
Weight of Wet Sample+Cont.(gm):	200.29	200.29	200.29
Weight of Dry Sample+Cont.(gm):	168.94	168.94	168.94
Weight of Container(gm):	66.15	66.15	66.15
Vertical Rdg.(in): Initial	0.2351	0.2624	0.0000
Vertical Rdg.(in): Final	0.2442	0.2940	-0.0537
After Shearing			
Weight of Wet Sample+Cont.(gm):	196.11	199.67	206.94
Weight of Dry Sample+Cont.(gm):	160.20	167.13	176.04
Weight of Container(gm):	53.31	56.95	65.80
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-3**
Sample No.	**R-5**
Depth (ft)	**30**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 0.805	■ 1.188	▲ 2.128
Shear Stress @ End of Test (ksf)	○ 0.569	□ 1.103	△ 2.050
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	30.50	30.50	30.50
Dry Density (pcf)	91.3	92.3	93.4
Saturation (%)	97.4	99.8	102.4
Soil Height Before Shearing (in.)	0.9909	0.9684	0.9463
Final Moisture Content (%)	33.6	29.5	28.0

DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass BESS - SJC

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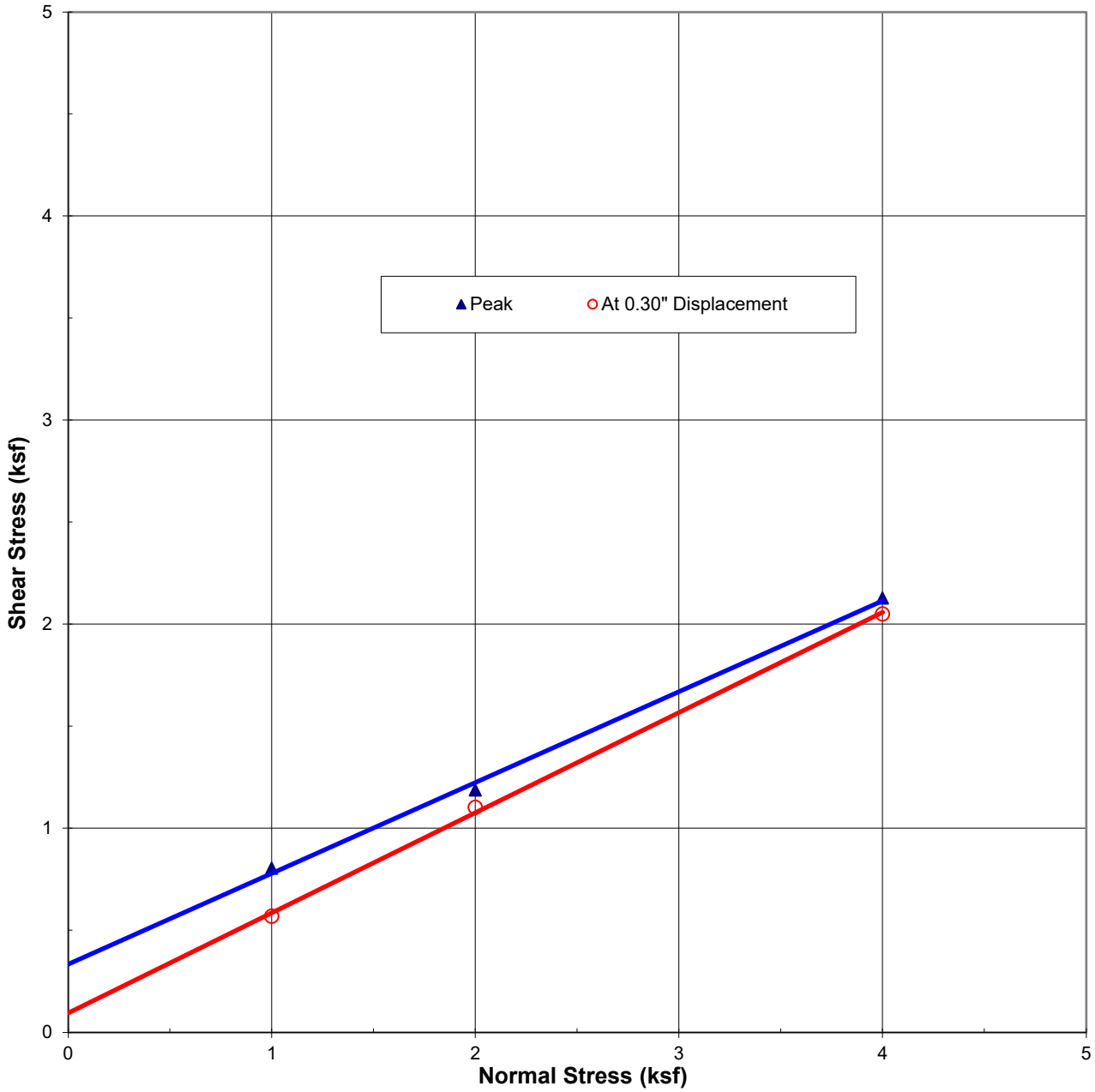


Tested Sample:
HS-3 at 30 ft

Peak:	At 0.30" Displacement:
24.0 Degrees	26.1 Degrees
0.34 ksf	0.10 ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-23

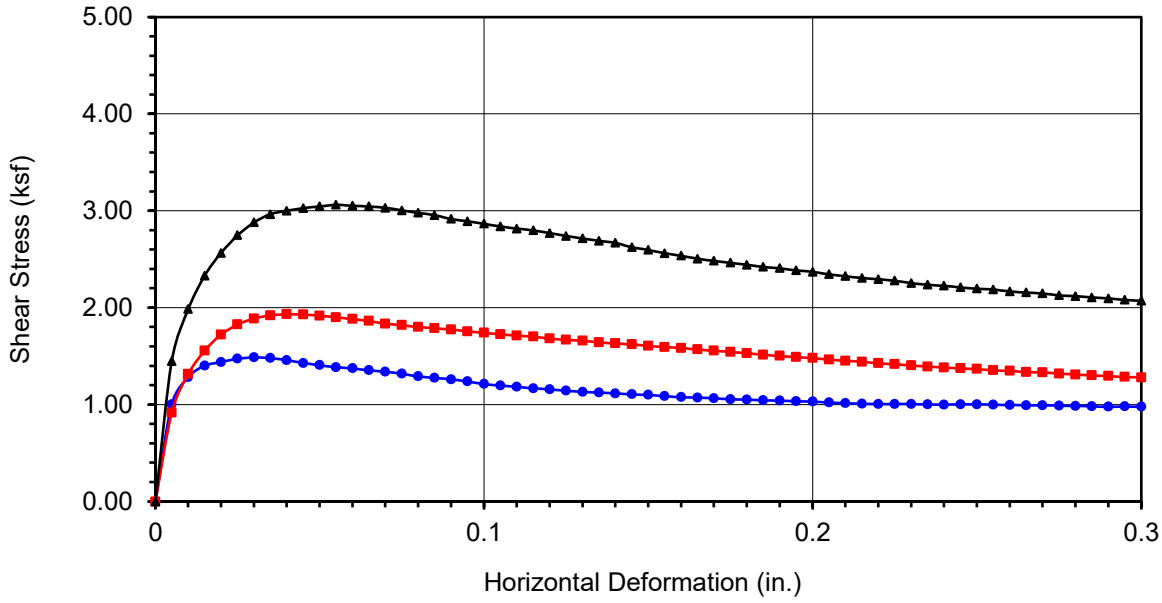
Compass, San Juan Capistrano

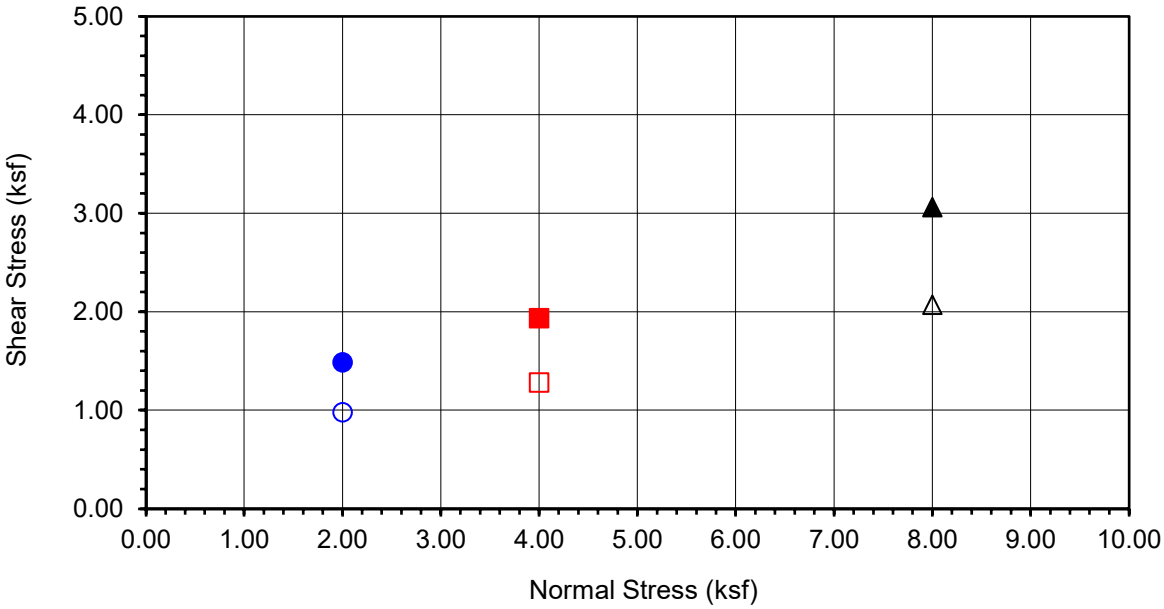
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass - San Juan Capistrano	Tested By:	G. Bathala	Date:	09/05/23
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/18/23
Boring No.:	HS-3	Sample Type:	Ring		
Sample No.:	R-7	Depth (ft.):	50.0		
Soil Identification:	Olive gray lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	173.55	177.60	178.36
Weight of Ring(gm):	44.33	44.95	45.36
Before Shearing			
Weight of Wet Sample+Cont.(gm):	161.41	161.41	161.41
Weight of Dry Sample+Cont.(gm):	125.84	125.84	125.84
Weight of Container(gm):	36.52	36.52	36.52
Vertical Rdg.(in): Initial	0.0000	0.2576	0.2533
Vertical Rdg.(in): Final	-0.0175	0.2969	0.3104
After Shearing			
Weight of Wet Sample+Cont.(gm):	196.43	198.21	199.71
Weight of Dry Sample+Cont.(gm):	156.62	158.37	163.58
Weight of Container(gm):	66.34	65.42	68.53
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-3**
Sample No.	**R-7**
Depth (ft)	**50**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL)	

Normal Stress (kip/ft²)	2.000	4.000	8.000
Peak Shear Stress (kip/ft²)	● 1.487	■ 1.933	▲ 3.062
Shear Stress @ End of Test (ksf)	○ 0.978	□ 1.280	△ 2.072
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	39.82	39.82	39.82
Dry Density (pcf)	76.9	78.9	79.1
Saturation (%)	90.1	94.6	95.1
Soil Height Before Shearing (in.)	0.9825	0.9607	0.9429
Final Moisture Content (%)	44.1	42.9	38.0

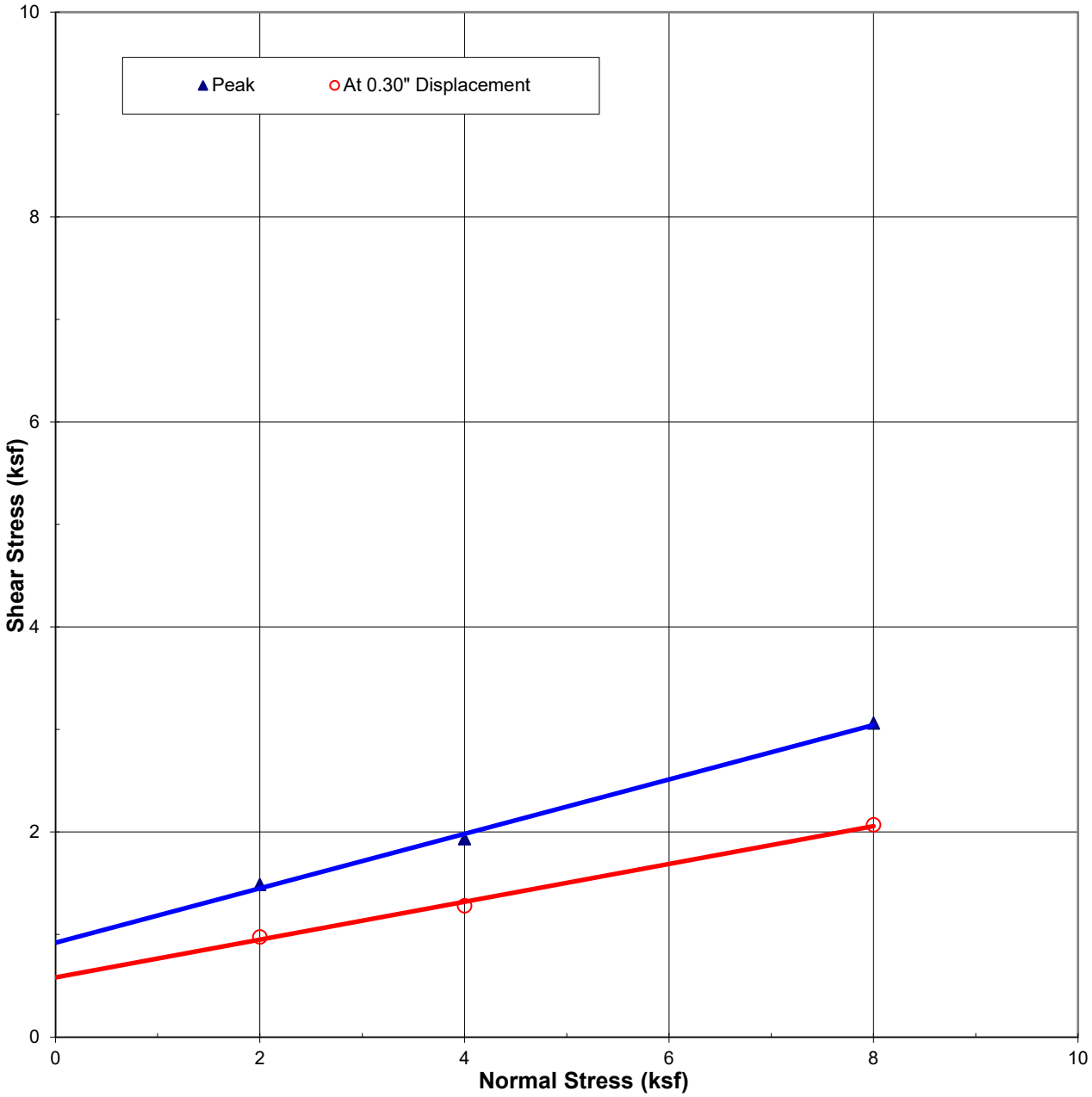
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass - San Juan Capistrano

09-23



Tested Sample:
HS-3 at 50 ft

	Peak:	At 0.30" Displacement:
	14.9 Degrees	10.5 Degrees
	0.92 ksf	0.58 ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-23

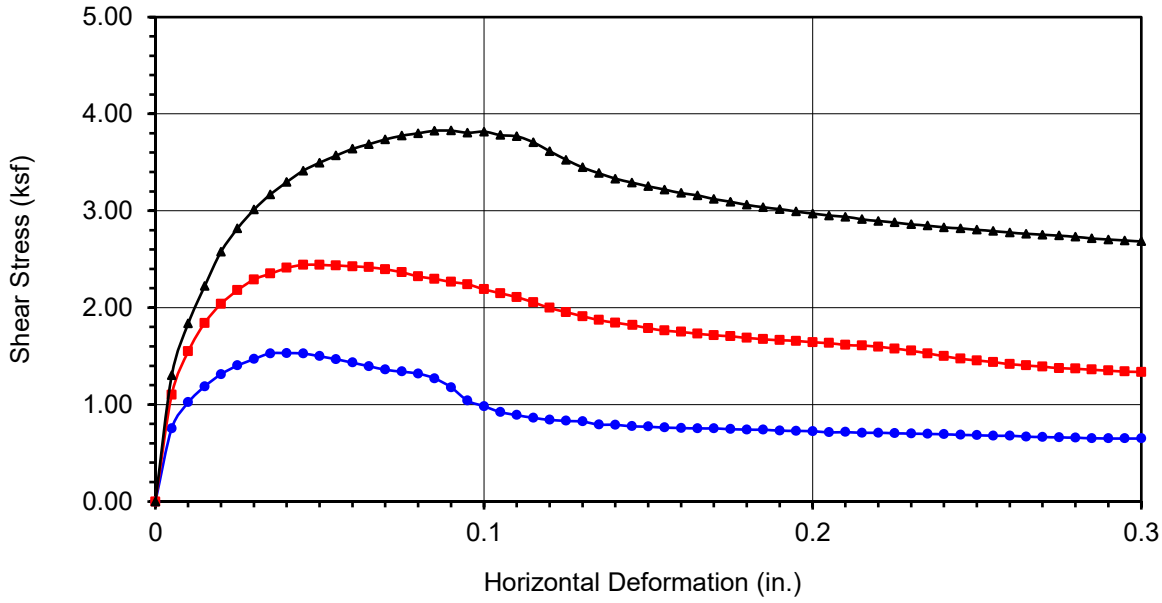
Compass, San Juan Capistrano

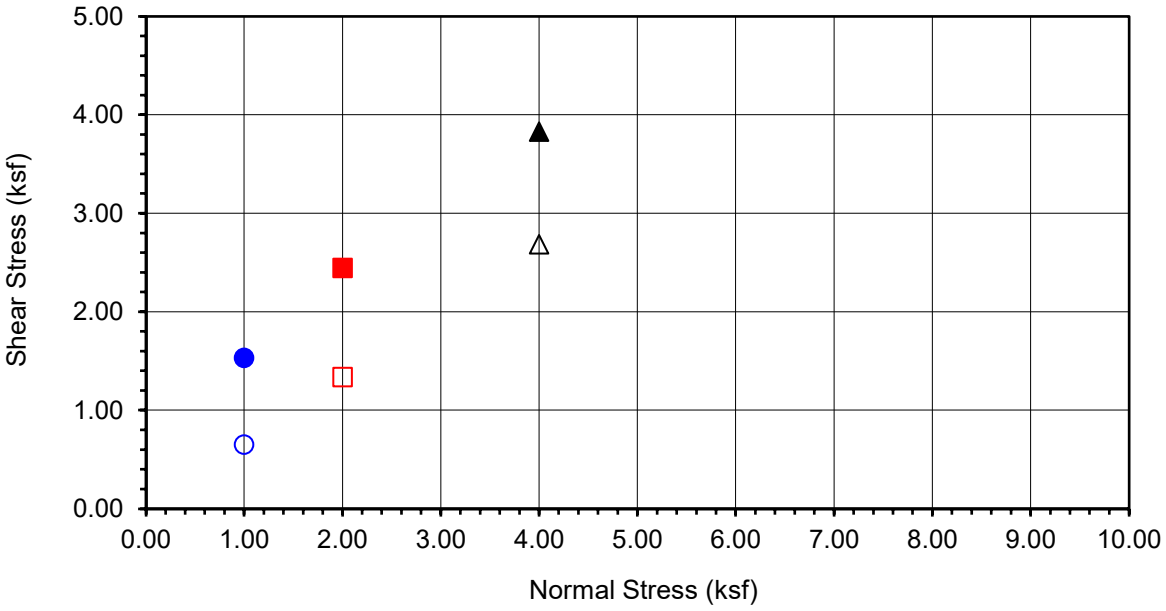
DIRECT SHEAR TEST

Consolidated Drained - ASTM D 3080

Project Name:	Compass - San Juan Capistrano	Tested By:	G. Bathala	Date:	09/05/23
Project No.:	22011-01	Checked By:	J. Ward	Date:	09/18/23
Boring No.:	HS-4	Sample Type:	Ring		
Sample No.:	R-2	Depth (ft.):	10.0		
Soil Identification:	Olive gray lean clay (CL)				

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	187.97	194.16	197.66
Weight of Ring(gm):	45.70	45.07	45.11
Before Shearing			
Weight of Wet Sample+Cont.(gm):	193.46	193.46	193.46
Weight of Dry Sample+Cont.(gm):	170.00	170.00	170.00
Weight of Container(gm):	58.12	58.12	58.12
Vertical Rdg.(in): Initial	0.0000	0.2550	0.2521
Vertical Rdg.(in): Final	0.0056	0.2632	0.2610
After Shearing			
Weight of Wet Sample+Cont.(gm):	206.13	193.06	226.10
Weight of Dry Sample+Cont.(gm):	173.82	163.04	198.98
Weight of Container(gm):	57.24	39.71	71.79
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HS-4**
Sample No.	**R-2**
Depth (ft)	**10**
Sample Type:	
Ring	
Soil Identification:	
Olive gray lean clay (CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.531	■ 2.443	▲ 3.829
Shear Stress @ End of Test (ksf)	○ 0.651	□ 1.336	△ 2.685
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	20.97	20.97	20.97
Dry Density (pcf)	97.8	102.5	104.9
Saturation (%)	78.3	87.8	93.2
Soil Height Before Shearing (in.)	1.0056	0.9918	0.9911
Final Moisture Content (%)	27.7	24.3	21.3

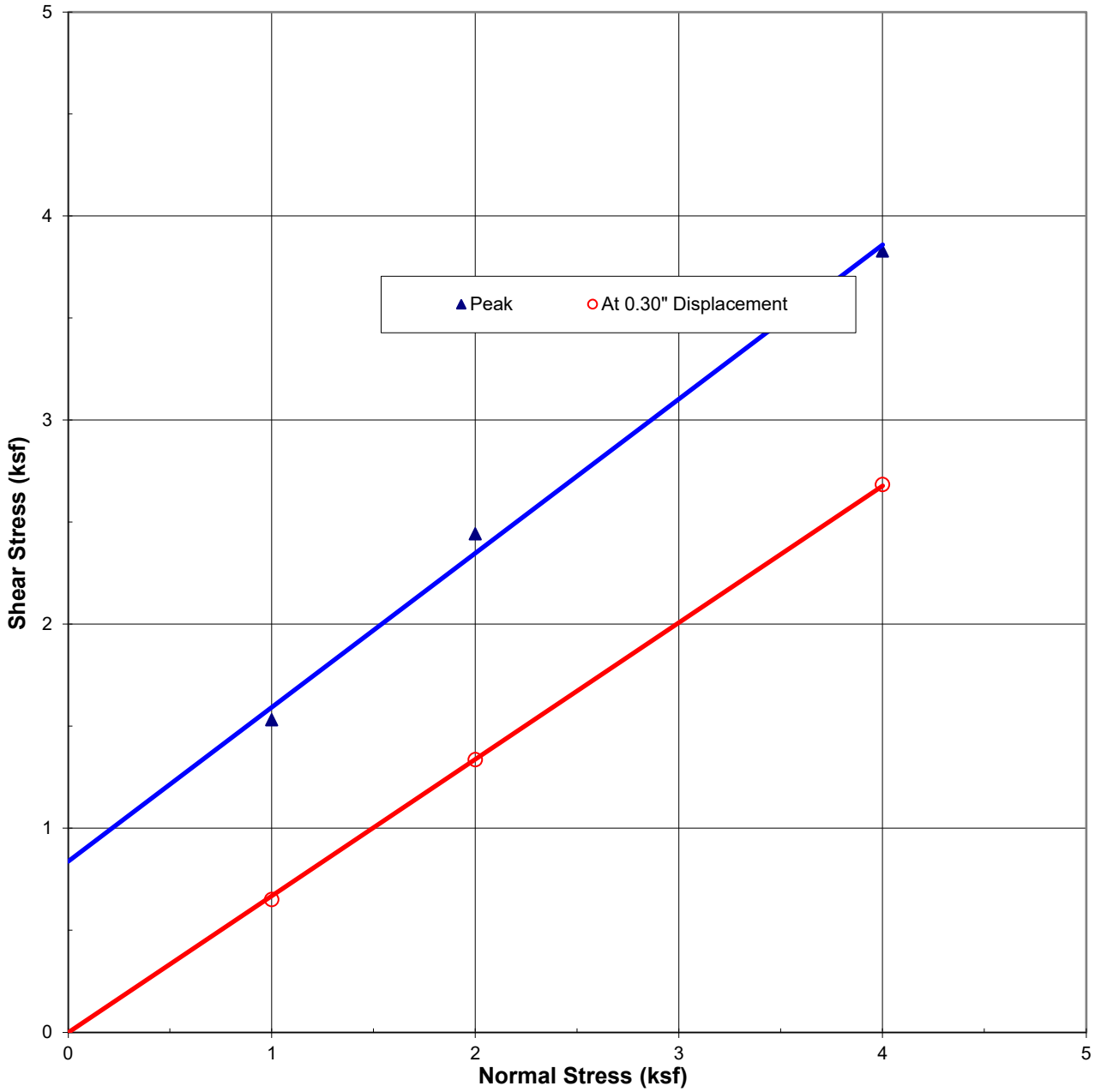
DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 22011-01

Compass - San Juan Capistrano

09-23



Tested Sample:
HS-4 at 10 ft

Peak:	At 0.30" Displacement:
37.1 Degrees	33.8 Degrees
0.84 ksf	0.00 ksf

LGC Geotechnical, Inc.

DIRECT SHEAR PLOT

Project Number: 22011-01
Date: Sep-23

Compass, San Juan Capistrano

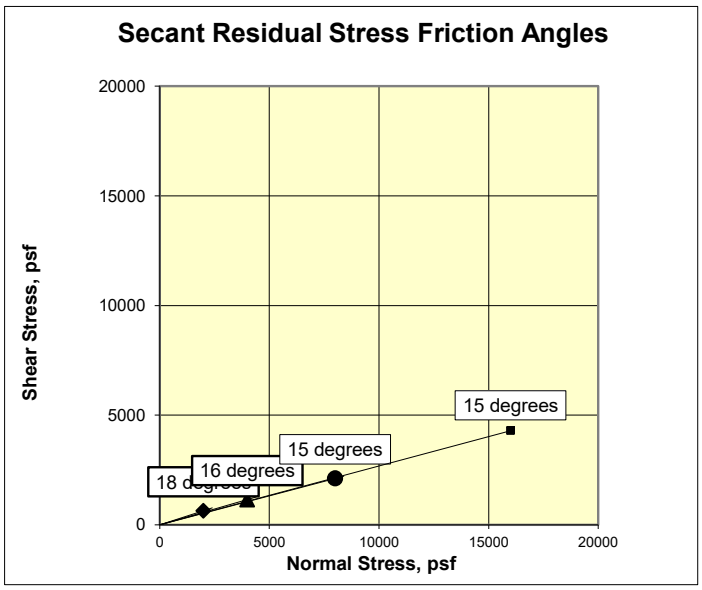
BENCHMARK GEOTECHNICAL LABS

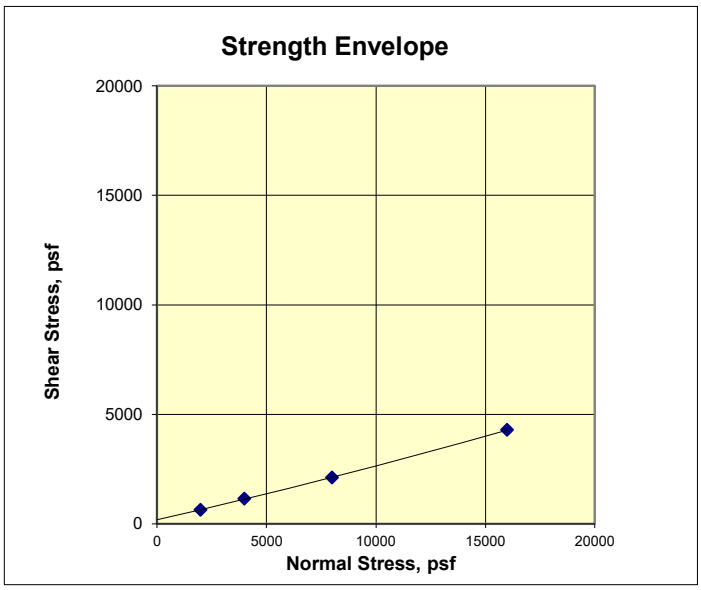
Drained Residual Torsional Shear Strength (ASTM D6467)

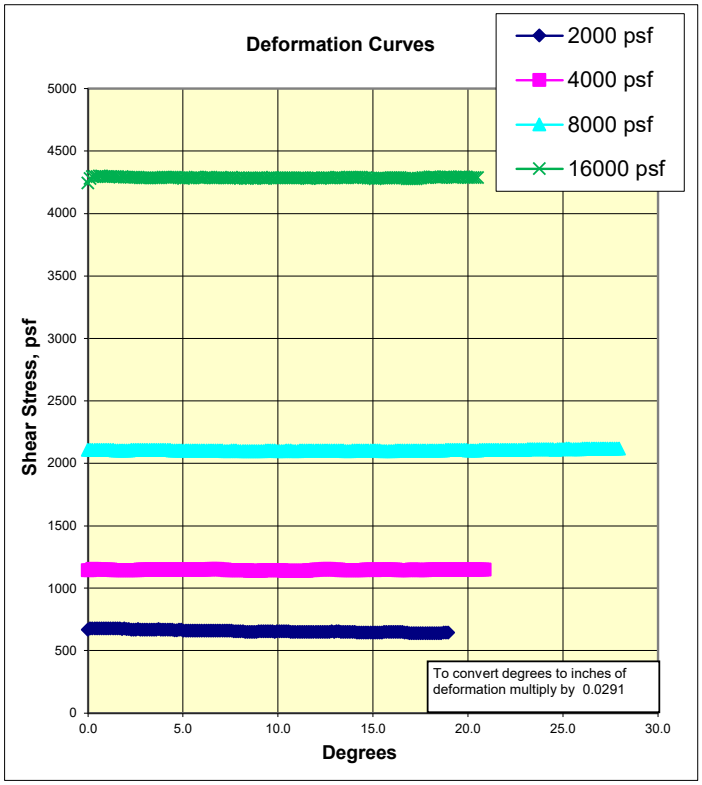
BGL Job No.:	040-0141	**Boring:**	B-2	**Date:**	9/10/2022	**Clay, %:**	
Client:	LGC Geotechnical	**Sample:**	G-2	**By:**	PJ	**LL:**	72.2
Project Name:	Compass, San Juan Capistrano	**Depth (ft):**	84	**Checked:**	PJ	**PL:**	28.1
Project Number:	22011-01	**Test Type:**	Reconstituted Residual			**Sample Preparation:**	<#40
Soil Type:	Very Dark Brown Fat CLAY						

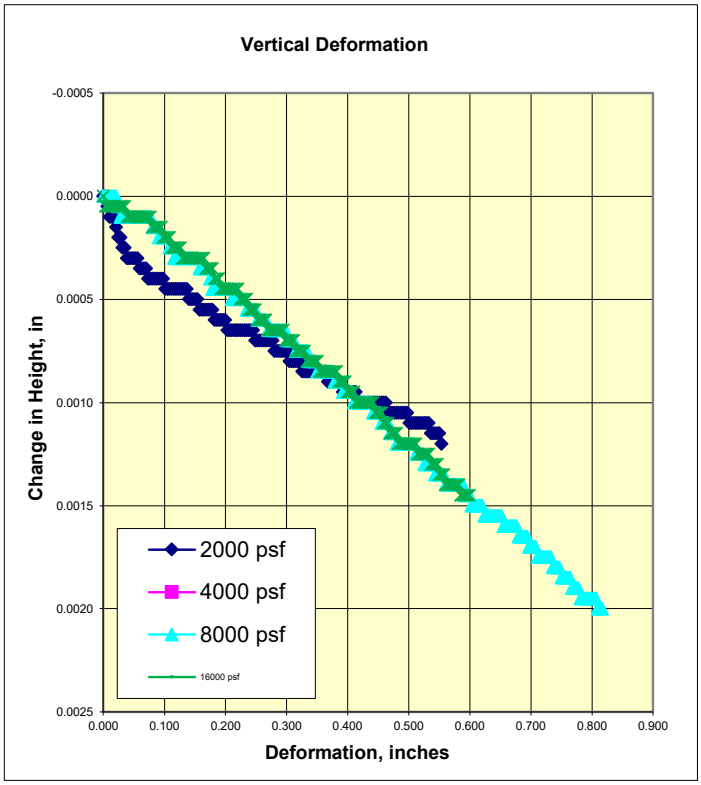
Normal Stress, psf	2000	4000	8000	16000
Secant Phi, deg.:	18	16	15	15

Remarks: A small friction correction was applied to each point. Sample prepared by the wet prep method.









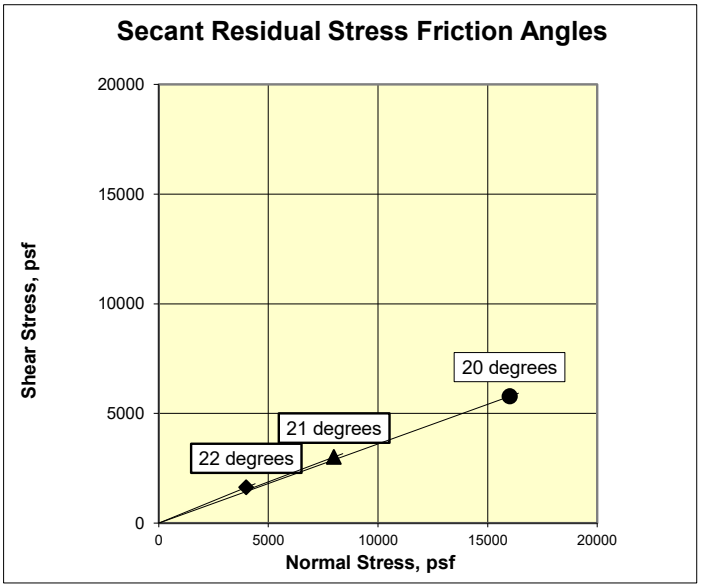
BENCHMARK GEOTECHNICAL LABS

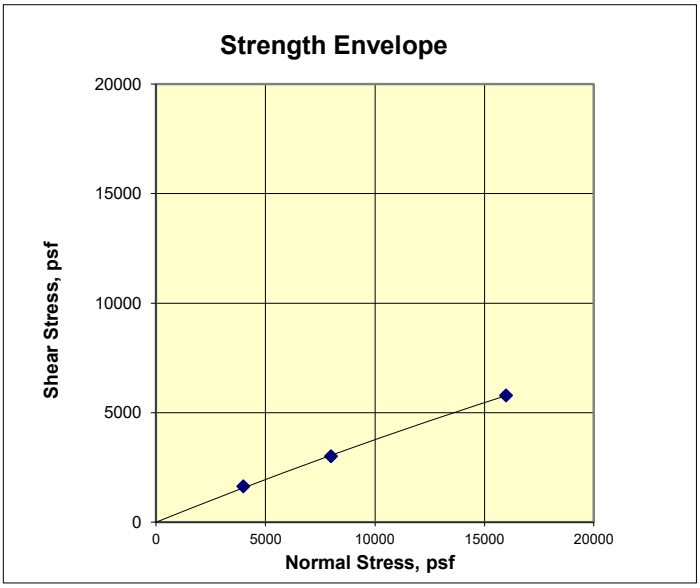
Drained Residual Torsional Shear Strength (ASTM D6467)

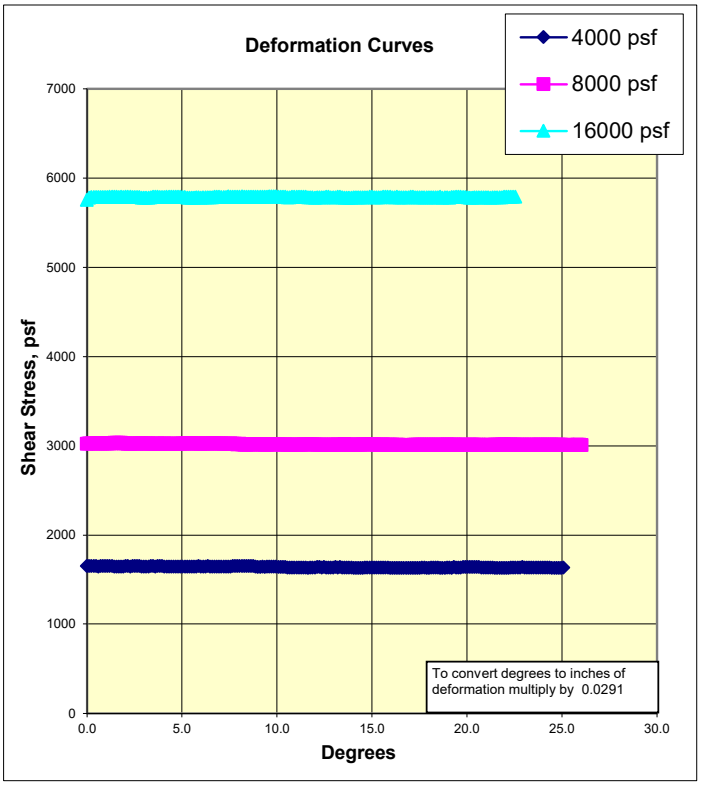
BGL Job No.:	040-015	**Boring:**	B-1	**Date:**	12/11/2022	**Clay, %:**	
Client:	LGC Geotechnical	**Sample:**	G-3	**By:**	PJ	**LL:**	62.7
Project Name:	Compass. San Juan Capistrano	**Depth (ft):**	28	**Checked:**	PJ	**PL:**	30.1
Project Number:	2211-01	**Test Type:**	Reconstituted Residual			**Sample Preparation:**	<#40
Soil Type:	Very Dark Brown Fat CLAY						

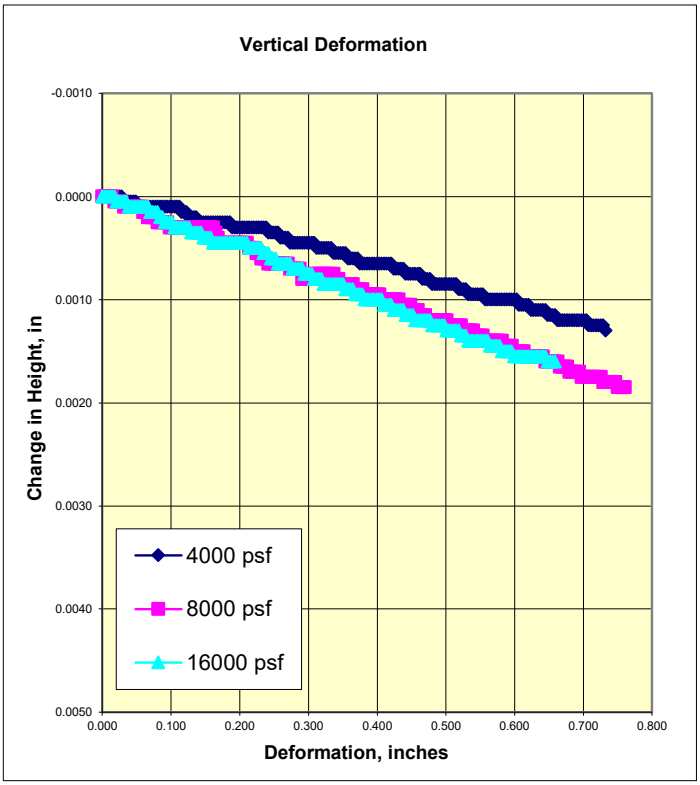
Normal Stress, psf	4000	8000	16000
Secant Phi, deg.:	22	21	20

Remarks: Sample prepared by the wet prep method. This material contained a noticeable amount of coarse silt and a small amount of very fine sand which gave it a slightly gritty consistency. A small friction corrrection was applied to each point.









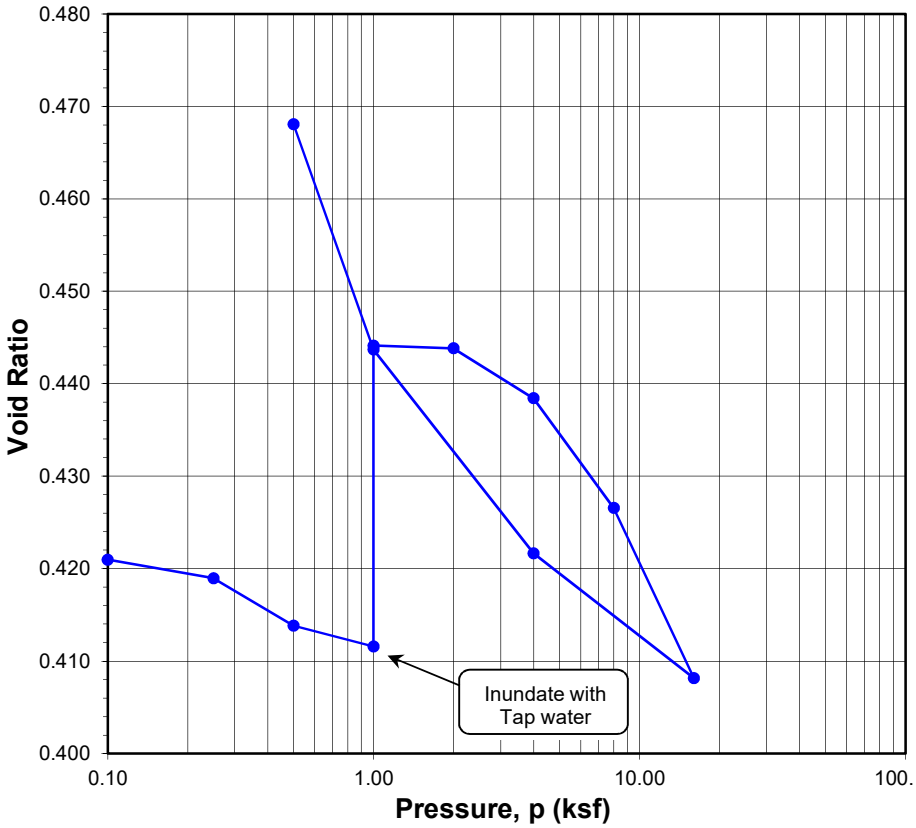
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name: Compass BESS - SJC
Project No.: 22011-01
Boring No.: HS-1
Sample No.: R-2
Soil Identification: Dark olive brown lean clay (CL)

Tested By: GB/JD Date: 08/08/22
Checked By: J. Ward Date: 09/16/22
Depth (ft.): 7.5
Sample Type: Ring

Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	208.27
Weight of Ring (g)	44.95
Height after consol. (in.)	1.0330
Before Test	
Wt.Wet Sample+Cont. (g)	211.31
Wt.of Dry Sample+Cont. (g)	193.83
Weight of Container (g)	66.06
Initial Moisture Content (%)	13.7
Initial Dry Density (pcf)	119.5
Initial Saturation (%)	88
Initial Vertical Reading (in.)	0.2578
After Test	
Wt.of Wet Sample+Cont. (g)	252.26
Wt. of Dry Sample+Cont. (g)	227.42
Weight of Container (g)	39.02
Final Moisture Content (%)	17.32
Final Dry Density (pcf)	115.5
Final Saturation (%)	100
Final Vertical Reading (in.)	0.2866
Specific Gravity (assumed)	2.72
Water Density (pcf)	62.43

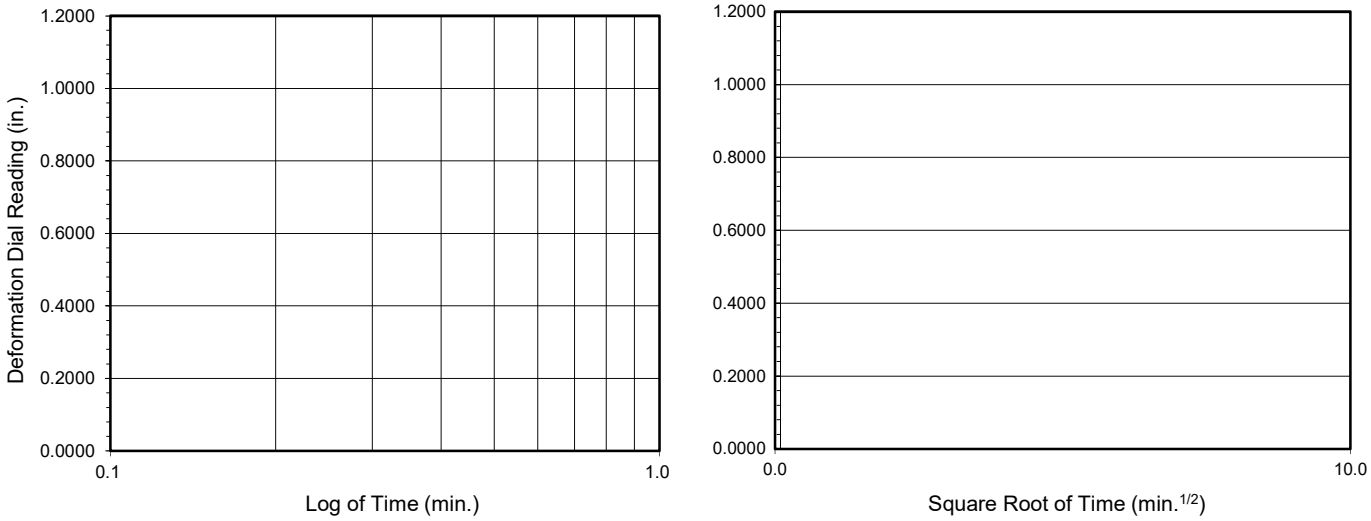


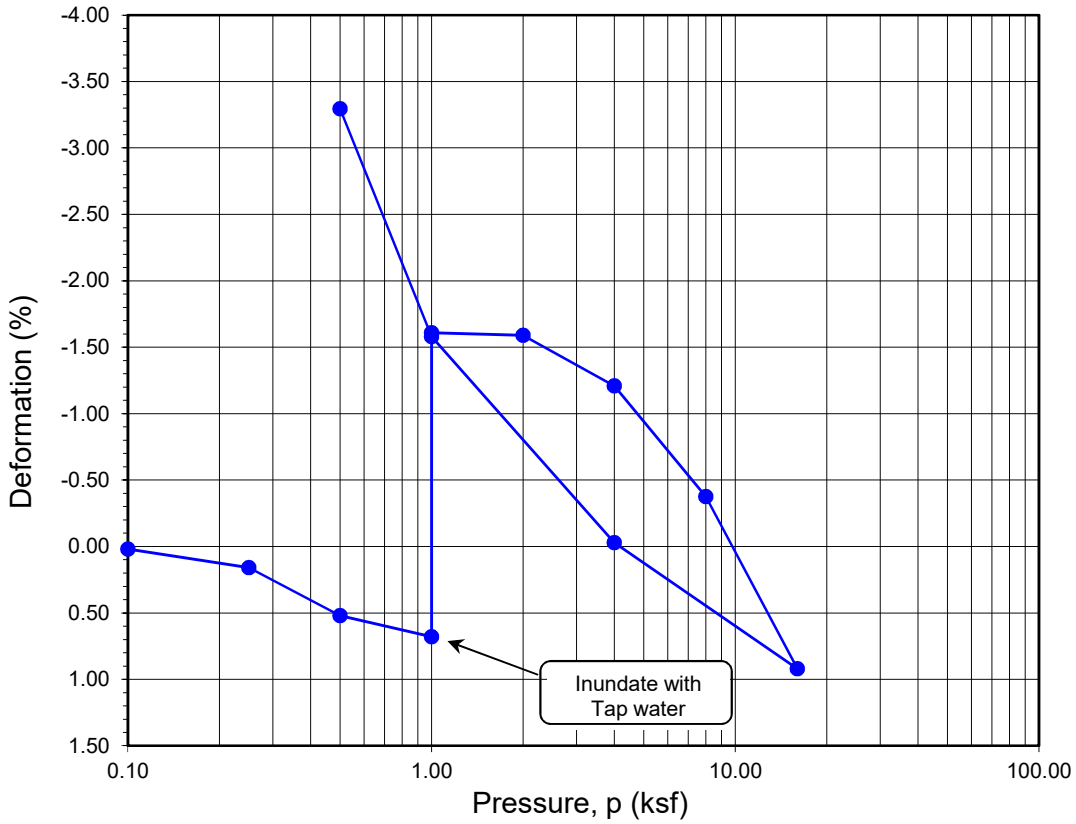
Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.2576	0.9998	0.00	0.02	0.421	0.02
0.25	0.2553	0.9975	0.09	0.25	0.419	0.16
0.50	0.2508	0.9930	0.18	0.70	0.414	0.52
1.00	0.2481	0.9903	0.29	0.97	0.412	0.68
1.00	0.2710	1.0132	0.29	-1.32	0.444	-1.61
2.00	0.2694	1.0116	0.43	-1.16	0.444	-1.59
4.00	0.2637	1.0059	0.62	-0.59	0.438	-1.21
8.00	0.2532	0.9954	0.84	0.47	0.427	-0.37
16.00	0.2379	0.9801	1.07	1.99	0.408	0.92
4.00	0.2498	0.9920	0.83	0.80	0.422	-0.03
1.00	0.2682	1.0104	0.54	-1.04	0.444	-1.58
0.50	0.2866	1.0288	0.42	-2.88	0.468	-3.30

Time Readings

Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-1	**R-2**	**7.5**	**13.7**	**17.3**	**119.5**	**115.5**	**0.421**	**0.468**	**88**	**100**

Soil Identification: Dark olive brown lean clay (CL)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 22011-01

Compass BESS - SJC

09-22

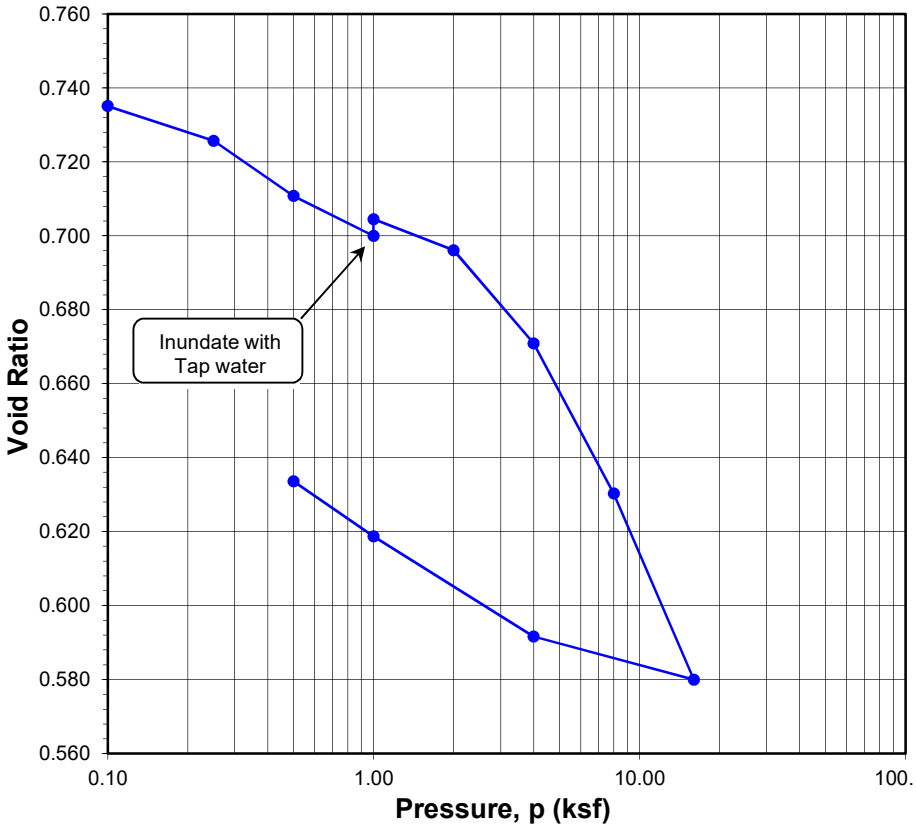
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name: Compass BESS - SJC
Project No.: 22011-01
Boring No.: HS-1
Sample No.: R-4
Soil Identification: Olive brown lean clay (CL)

Tested By: GB/JD Date: 08/08/22
Checked By: J. Ward Date: 09/16/22
Depth (ft.): 25.0
Sample Type: Ring

Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	198.43
Weight of Ring (g)	45.01
Height after consol. (in.)	0.9405
Before Test	
Wt.Wet Sample+Cont. (g)	173.40
Wt.of Dry Sample+Cont. (g)	150.61
Weight of Container (g)	56.15
Initial Moisture Content (%)	24.1
Initial Dry Density (pcf)	102.8
Initial Saturation (%)	94
Initial Vertical Reading (in.)	0.3022
After Test	
Wt.of Wet Sample+Cont. (g)	248.18
Wt. of Dry Sample+Cont. (g)	220.55
Weight of Container (g)	52.63
Final Moisture Content (%)	22.48
Final Dry Density (pcf)	108.7
Final Saturation (%)	100
Final Vertical Reading (in.)	0.2392
Specific Gravity (assumed)	2.86
Water Density (pcf)	62.43

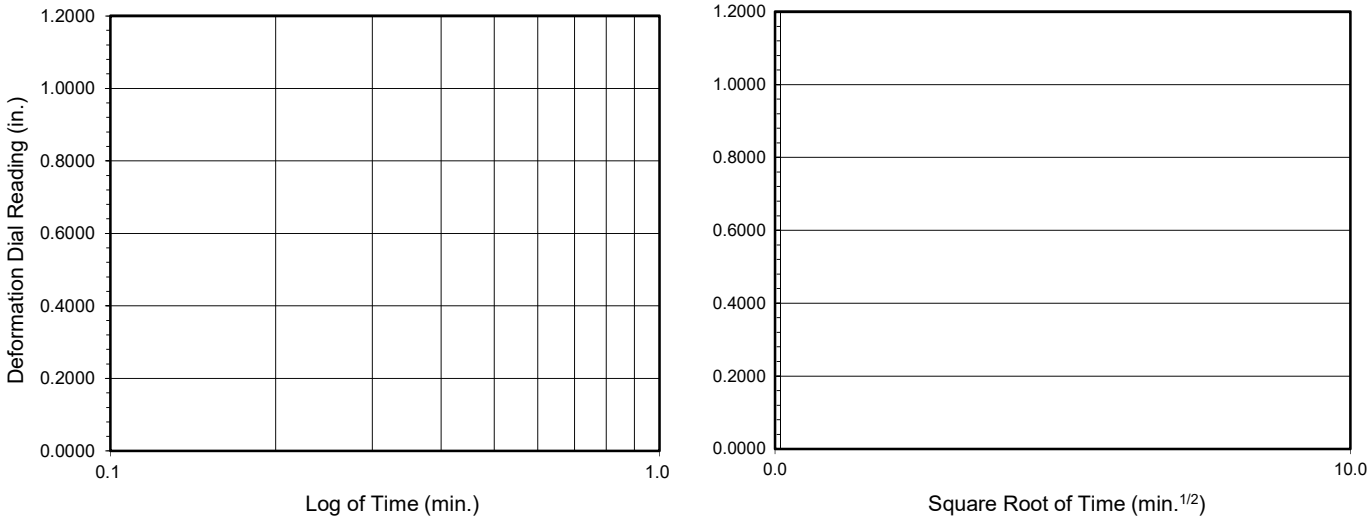


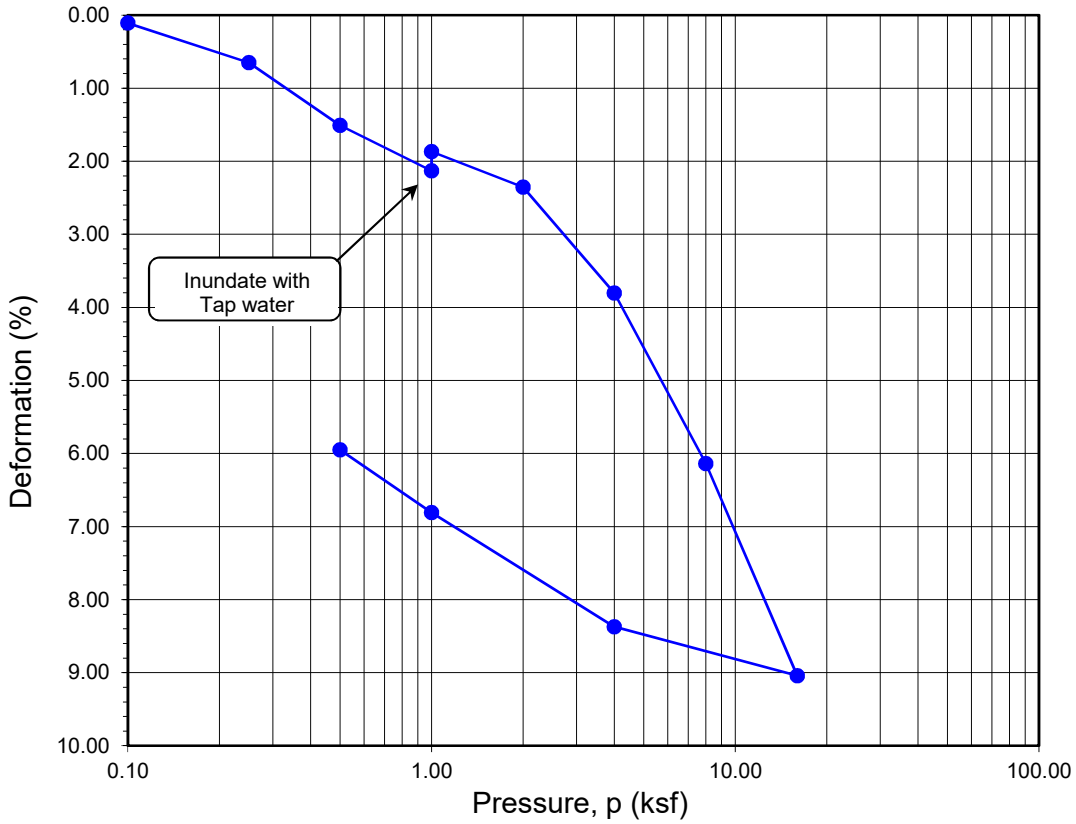
Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3011	0.9989	0.00	0.11	0.735	0.11
0.25	0.2954	0.9932	0.03	0.68	0.726	0.65
0.50	0.2865	0.9843	0.06	1.57	0.711	1.51
1.00	0.2798	0.9776	0.11	2.24	0.700	2.13
1.00	0.2824	0.9802	0.11	1.98	0.705	1.87
2.00	0.2767	0.9745	0.20	2.56	0.696	2.36
4.00	0.2609	0.9587	0.33	4.14	0.671	3.81
8.00	0.2360	0.9338	0.48	6.62	0.630	6.14
16.00	0.2051	0.9029	0.67	9.71	0.580	9.04
4.00	0.2135	0.9113	0.50	8.87	0.592	8.37
1.00	0.2302	0.9280	0.39	7.20	0.619	6.81
0.50	0.2392	0.9370	0.35	6.30	0.634	5.95

Time Readings

Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-1	**R-4**	**25.0**	**24.1**	**22.5**	**102.8**	**108.7**	**0.737**	**0.634**	**94**	**100**

Soil Identification: Olive brown lean clay (CL)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 22011-01

Compass BESS - SJC

09-22

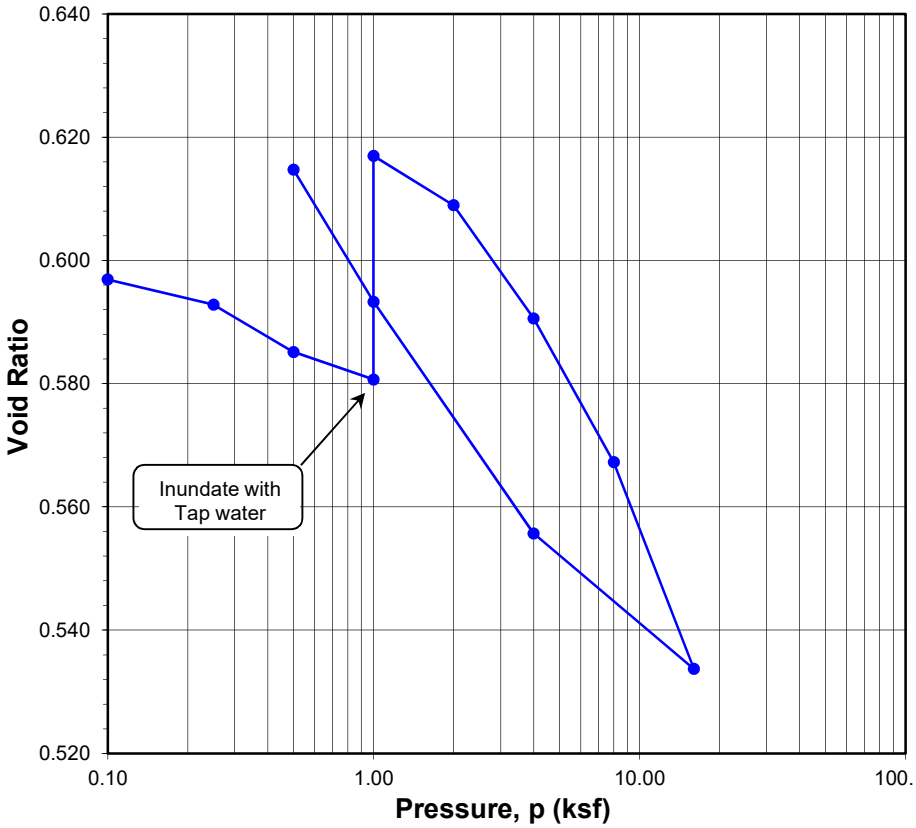
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name: Compass BESS - SJC
Project No.: 22011-01
Boring No.: HS-2
Sample No.: R-2
Soil Identification: Light olive brown silty clay (CL-ML)

Tested By: GB/JD Date: 08/08/22
Checked By: J. Ward Date: 09/16/22
Depth (ft.): 7.5
Sample Type: Ring

Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	188.52
Weight of Ring (g)	46.00
Height after consol. (in.)	1.0108
Before Test	
Wt.Wet Sample+Cont. (g)	157.43
Wt.of Dry Sample+Cont. (g)	144.29
Weight of Container (g)	37.72
Initial Moisture Content (%)	12.3
Initial Dry Density (pcf)	105.5
Initial Saturation (%)	56
Initial Vertical Reading (in.)	0.3220
After Test	
Wt.of Wet Sample+Cont. (g)	264.68
Wt. of Dry Sample+Cont. (g)	232.48
Weight of Container (g)	69.10
Final Moisture Content (%)	27.43
Final Dry Density (pcf)	96.6
Final Saturation (%)	99
Final Vertical Reading (in.)	0.3285
Specific Gravity (assumed)	2.70
Water Density (pcf)	62.43

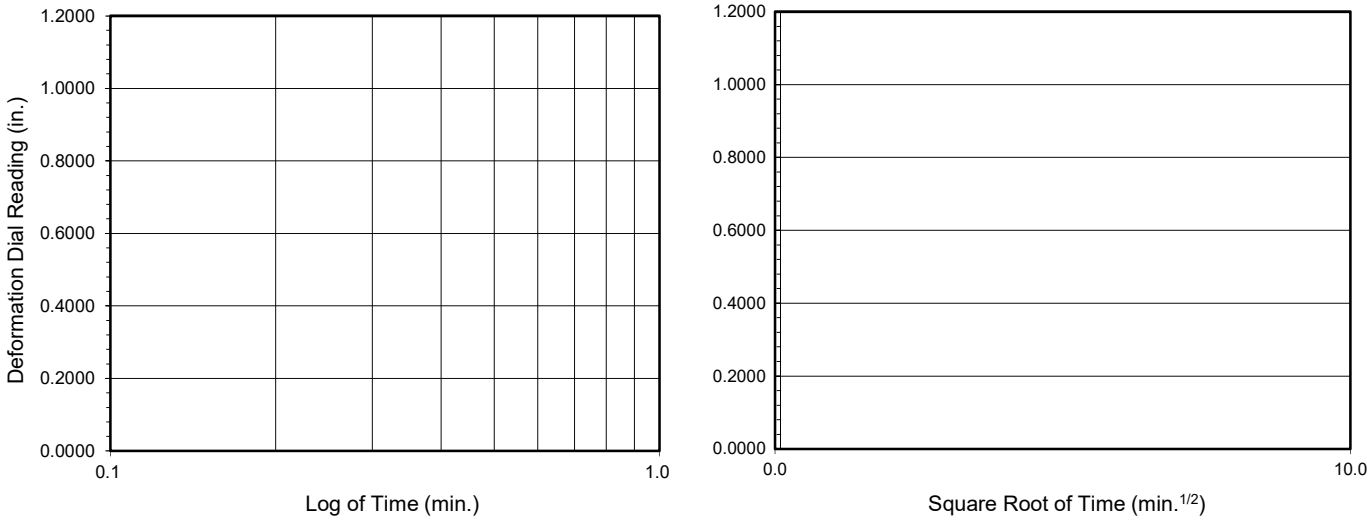


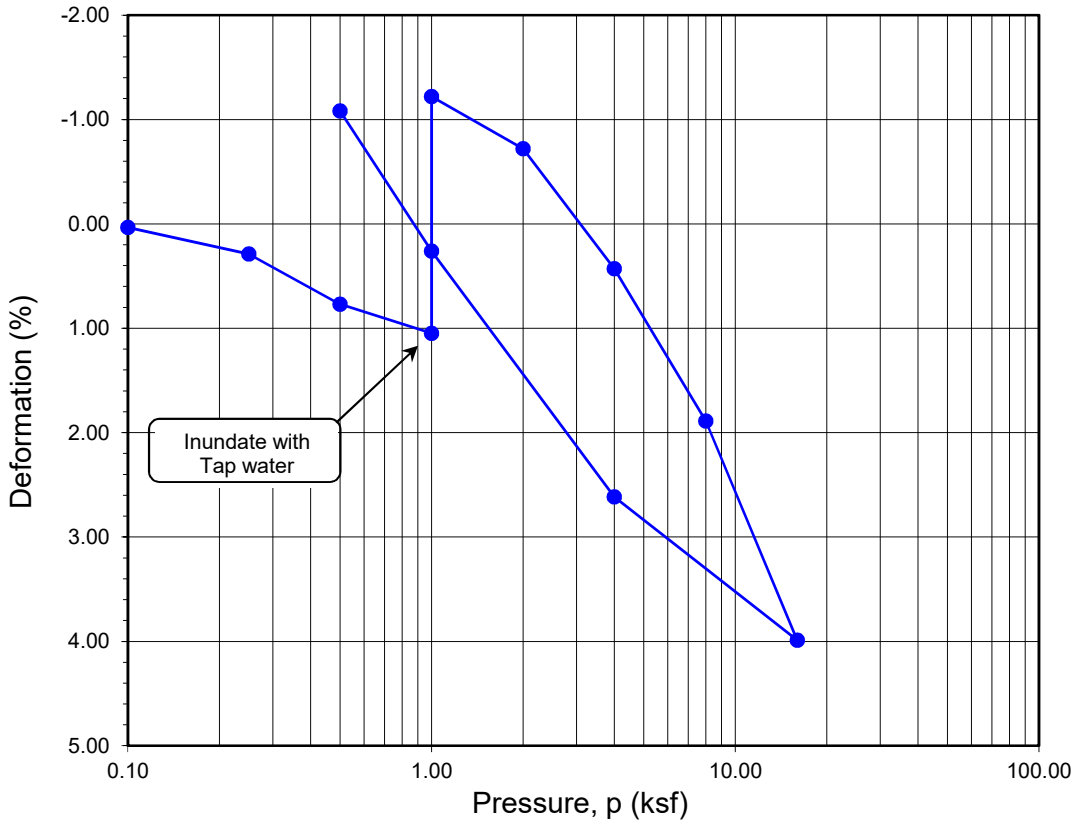
Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3217	0.9997	0.00	0.04	0.597	0.04
0.25	0.3184	0.9964	0.07	0.36	0.593	0.29
0.50	0.3130	0.9910	0.13	0.90	0.585	0.77
1.00	0.3094	0.9874	0.21	1.26	0.581	1.05
1.00	0.3321	1.0101	0.21	-1.01	0.617	-1.22
2.00	0.3259	1.0039	0.33	-0.39	0.609	-0.72
4.00	0.3131	0.9911	0.46	0.89	0.591	0.43
8.00	0.2967	0.9747	0.64	2.53	0.567	1.89
16.00	0.2735	0.9515	0.86	4.85	0.534	3.99
4.00	0.2891	0.9671	0.68	3.30	0.556	2.62
1.00	0.3144	0.9924	0.50	0.76	0.593	0.26
0.50	0.3285	1.0065	0.43	-0.65	0.615	-1.08

Time Readings

Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-2	**R-2**	**7.5**	**12.3**	**27.4**	**105.5**	**96.6**	**0.597**	**0.615**	**56**	**99**

Soil Identification: Light olive brown silty clay (CL-ML)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 22011-01

Compass BESS - SJC

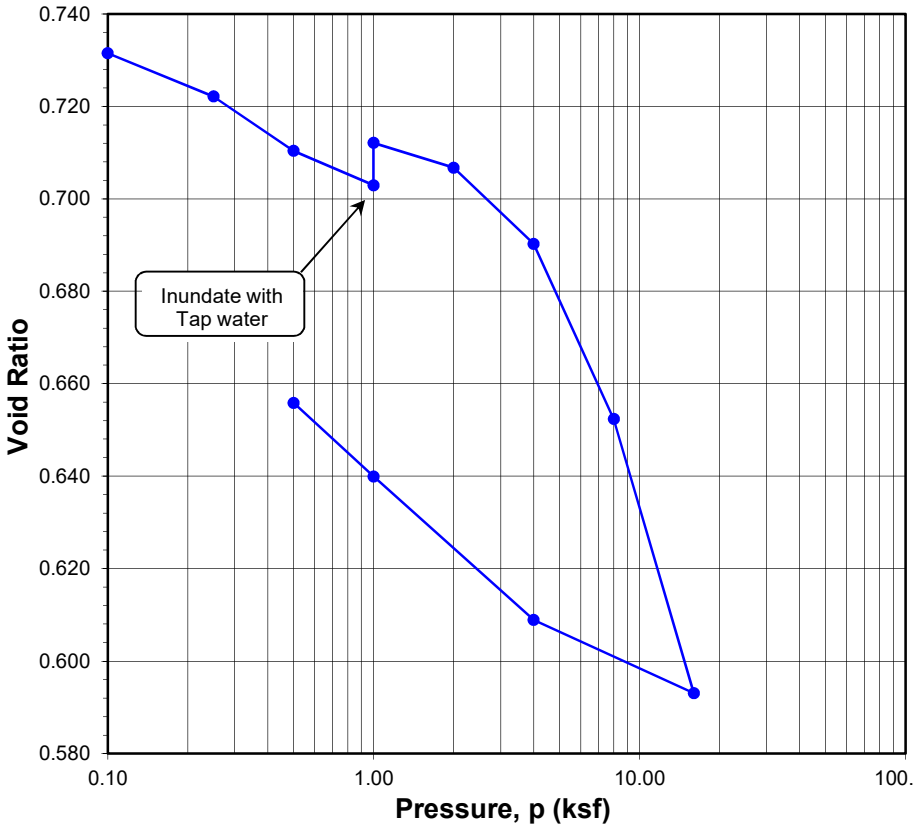
09-22

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name:	Compass BESS - SJC	Tested By: GB/JD	Date: 08/08/22
Project No.:	22011-01	Checked By: J. Ward	Date: 09/16/22
Boring No.:	HS-2	Depth (ft.): 15.0	
Sample No.:	R-3	Sample Type: Ring	
Soil Identification:	Olive brown lean clay (CL)		

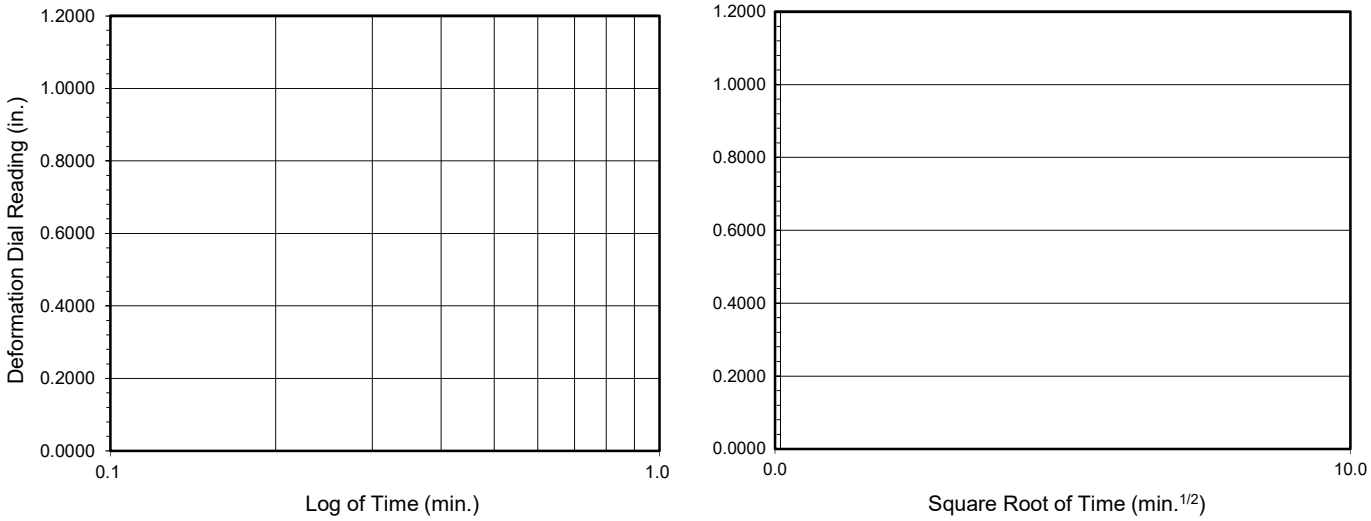
Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	188.88
Weight of Ring (g)	44.73
Height after consol. (in.)	0.9563
Before Test	
Wt.Wet Sample+Cont. (g)	187.75
Wt.of Dry Sample+Cont. (g)	162.95
Weight of Container (g)	55.81
Initial Moisture Content (%)	23.1
Initial Dry Density (pcf)	97.3
Initial Saturation (%)	85
Initial Vertical Reading (in.)	0.3383
After Test	
Wt.of Wet Sample+Cont. (g)	252.85
Wt. of Dry Sample+Cont. (g)	222.59
Weight of Container (g)	65.86
Final Moisture Content (%)	27.02
Final Dry Density (pcf)	97.4
Final Saturation (%)	100
Final Vertical Reading (in.)	0.2880
Specific Gravity (assumed)	2.70
Water Density (pcf)	62.43

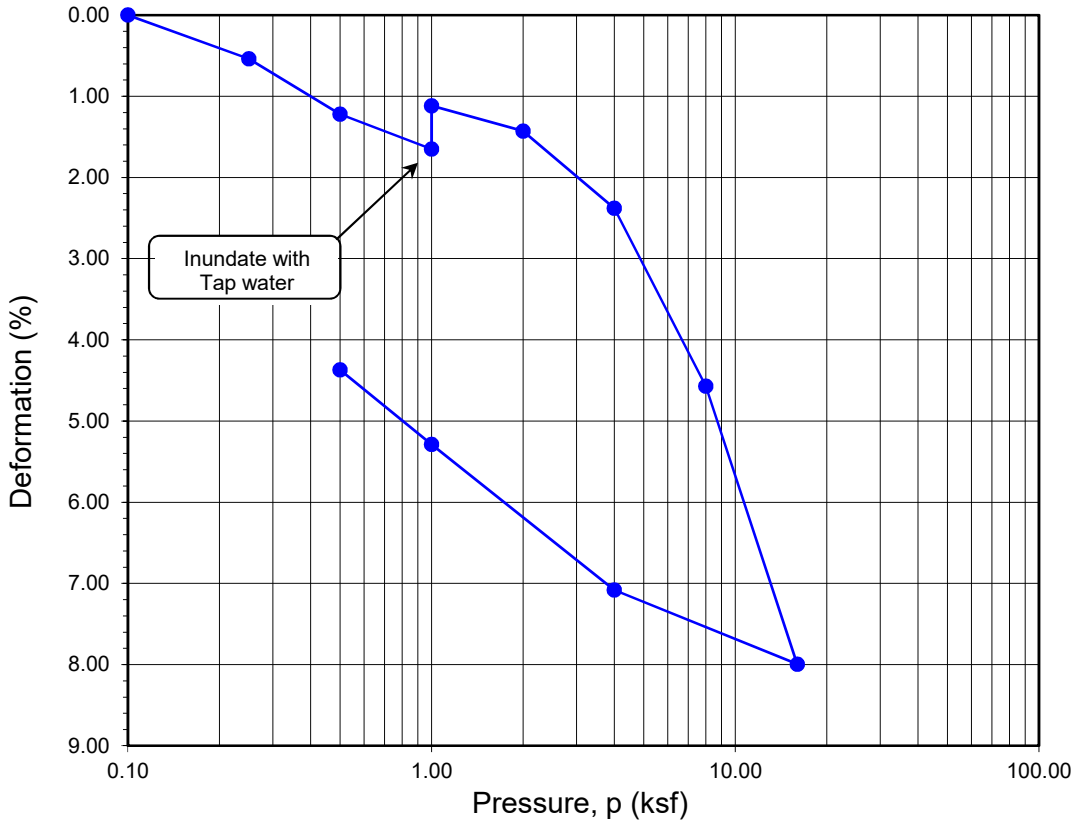


Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3383	1.0000	0.00	0.00	0.731	0.00
0.25	0.3322	0.9939	0.07	0.61	0.722	0.54
0.50	0.3245	0.9862	0.16	1.38	0.710	1.22
1.00	0.3191	0.9808	0.27	1.92	0.703	1.65
1.00	0.3244	0.9861	0.27	1.39	0.712	1.12
2.00	0.3193	0.9810	0.47	1.90	0.707	1.43
4.00	0.3072	0.9689	0.73	3.11	0.690	2.38
8.00	0.2826	0.9443	1.00	5.57	0.652	4.57
16.00	0.2449	0.9066	1.35	9.35	0.593	8.00
4.00	0.2574	0.9191	1.01	8.09	0.609	7.08
1.00	0.2778	0.9395	0.76	6.05	0.640	5.29
0.50	0.2880	0.9497	0.66	5.03	0.656	4.37

Time Readings				
Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-2	**R-3**	**15.0**	**23.1**	**27.0**	**97.3**	**97.4**	**0.731**	**0.656**	**85**	**100**

Soil Identification: Olive brown lean clay (CL)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 22011-01

Compass BESS - SJC

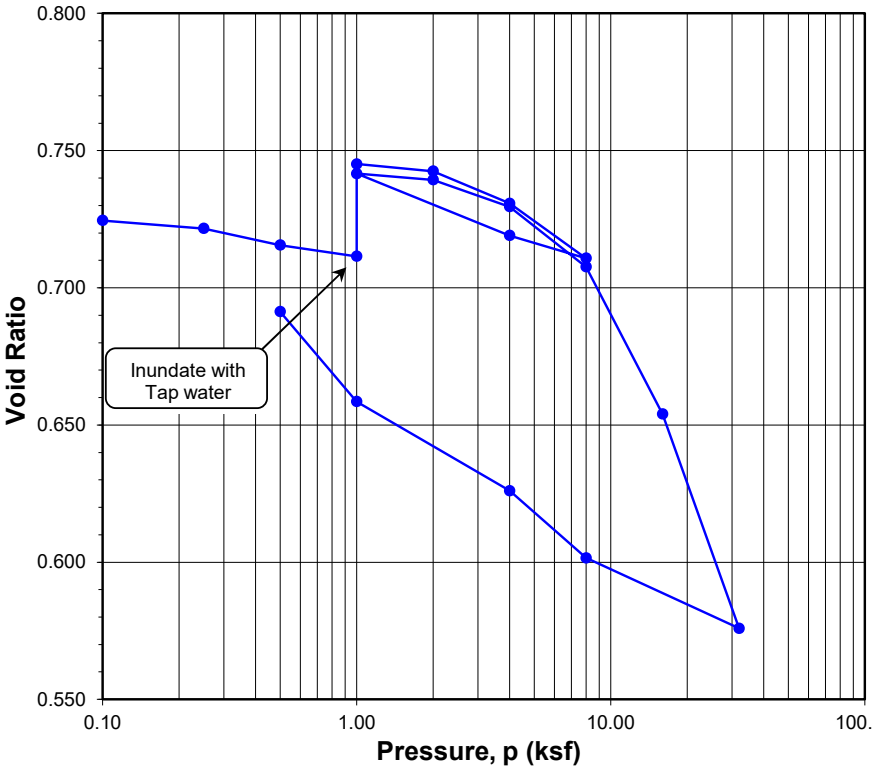
09-22

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name:	Compass BESS - SJC	Tested By: GB/JD	Date: 08/30/23
Project No.:	22011-01	Checked By: J. Ward	Date: 09/18/23
Boring No.:	HS-3	Depth (ft.): 10.0	
Sample No.:	R-3	Sample Type: Ring	
Soil Identification:	Dark olive gray lean clay (CL)		

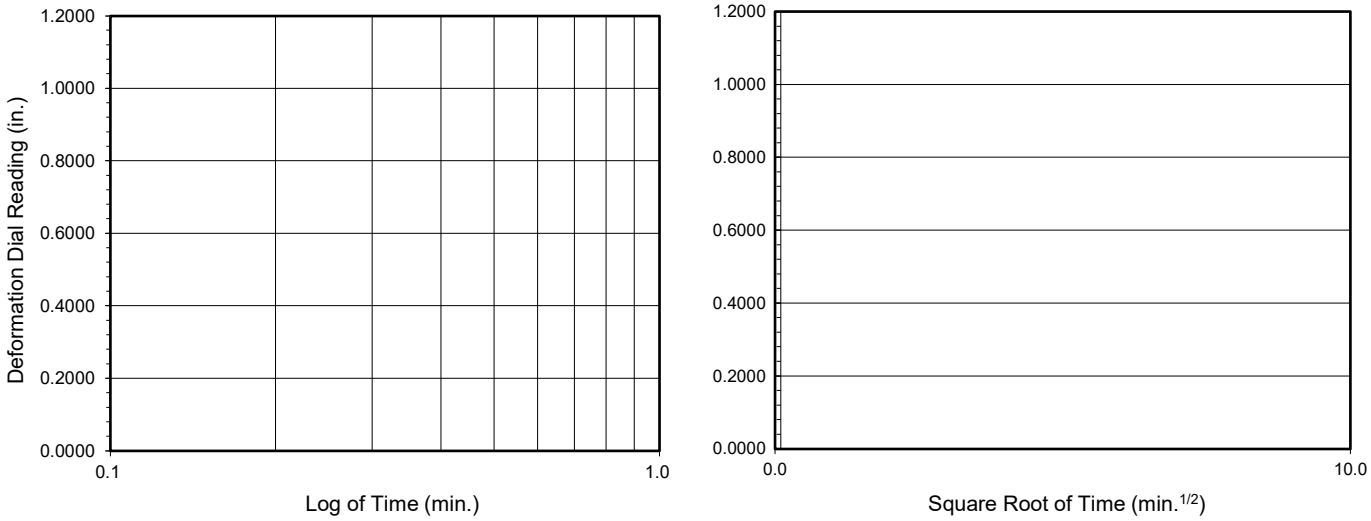
Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	189.78
Weight of Ring (g)	45.34
Height after consol. (in.)	0.9806
Before Test	
Wt.Wet Sample+Cont. (g)	182.45
Wt.of Dry Sample+Cont. (g)	159.47
Weight of Container (g)	59.17
Initial Moisture Content (%)	22.9
Initial Dry Density (pcf)	97.7
Initial Saturation (%)	85
Initial Vertical Reading (in.)	0.3119
After Test	
Wt.of Wet Sample+Cont. (g)	258.76
Wt. of Dry Sample+Cont. (g)	229.05
Weight of Container (g)	66.80
Final Moisture Content (%)	25.41
Final Dry Density (pcf)	99.2
Final Saturation (%)	98
Final Vertical Reading (in.)	0.2858
Specific Gravity (assumed)	2.70
Water Density (pcf)	62.43

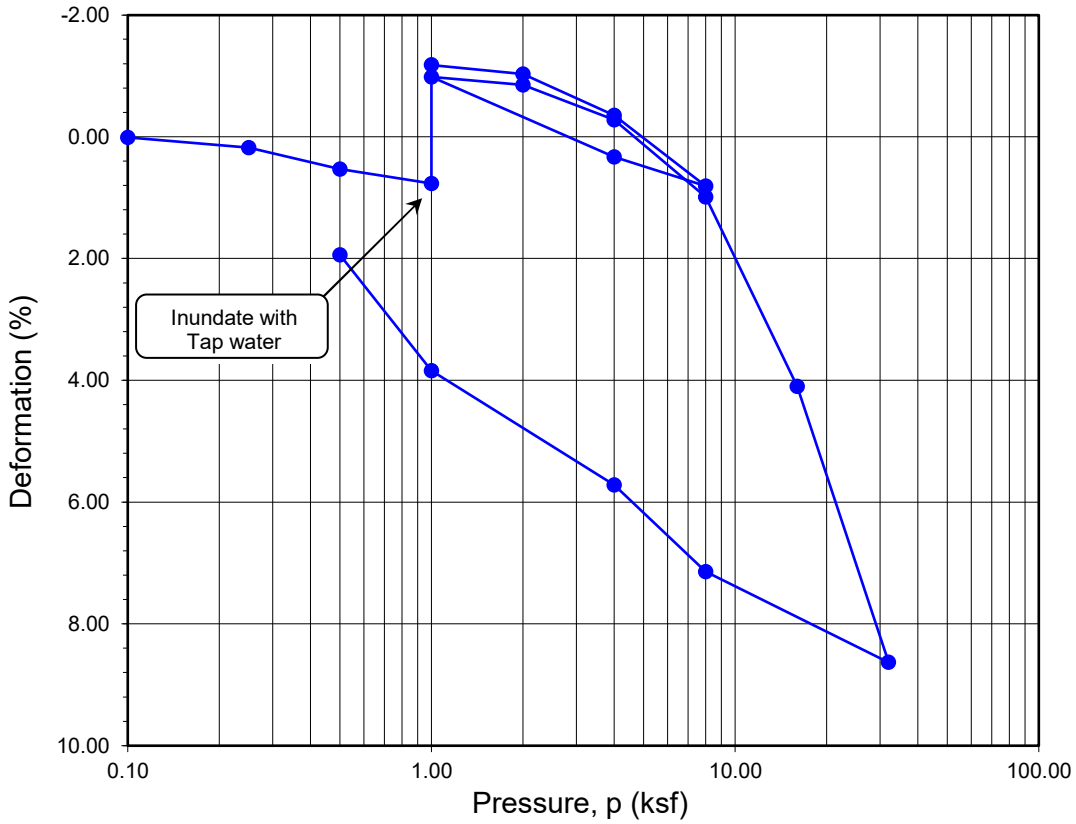


Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deforma-tion (%)
0.10	0.3118	0.9999	0.00	0.01	0.725	0.01
0.25	0.3096	0.9977	0.05	0.23	0.722	0.18
0.50	0.3057	0.9938	0.09	0.62	0.716	0.53
1.00	0.3027	0.9908	0.15	0.92	0.711	0.77
1.00	0.3222	1.0103	0.15	-1.03	0.745	-1.18
2.00	0.3195	1.0076	0.27	-0.76	0.742	-1.03
4.00	0.3111	0.9992	0.43	0.08	0.731	-0.35
8.00	0.2972	0.9853	0.66	1.47	0.711	0.81
4.00	0.3032	0.9913	0.54	0.87	0.719	0.33
1.00	0.3181	1.0062	0.36	-0.62	0.742	-0.98
2.00	0.3162	1.0043	0.42	-0.43	0.739	-0.85
4.00	0.3093	0.9974	0.54	0.26	0.730	-0.28
8.00	0.2954	0.9835	0.66	1.65	0.708	0.99
16.00	0.2616	0.9497	0.93	5.03	0.654	4.10
32.00	0.2132	0.9013	1.24	9.87	0.576	8.63
8.00	0.2310	0.9191	0.95	8.09	0.602	7.14
4.00	0.2464	0.9345	0.83	6.55	0.626	5.72
1.00	0.2664	0.9545	0.71	4.55	0.658	3.84
0.50	0.2858	0.9739	0.67	2.61	0.691	1.94

Time Readings				
Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-3	**R-3**	**10.0**	**22.9**	**25.4**	**97.7**	**99.2**	**0.725**	**0.691**	**85**	**98**

Soil Identification: Dark olive gray lean clay (CL)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 22011-01

Compass BESS - SJC

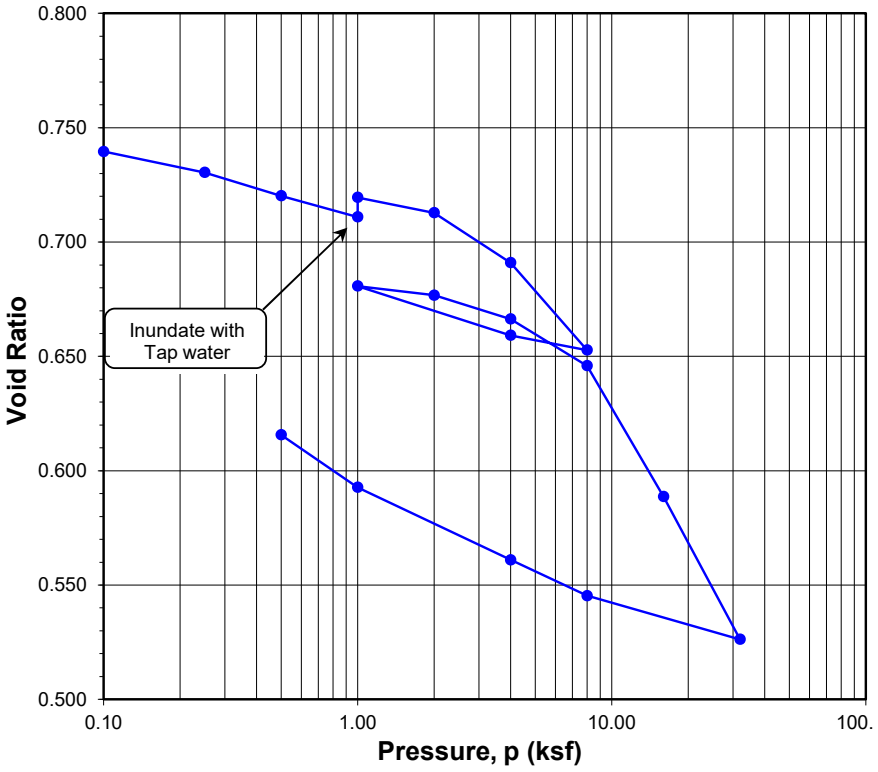
09-23

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name:	Compass BESS - SJC	Tested By: GB/JD	Date: 08/30/23
Project No.:	22011-01	Checked By: J. Ward	Date: 09/18/23
Boring No.:	HS-4	Depth (ft.): 20.0	
Sample No.:	R-3	Sample Type: Ring	
Soil Identification:	Olive brown lean clay (CL)		

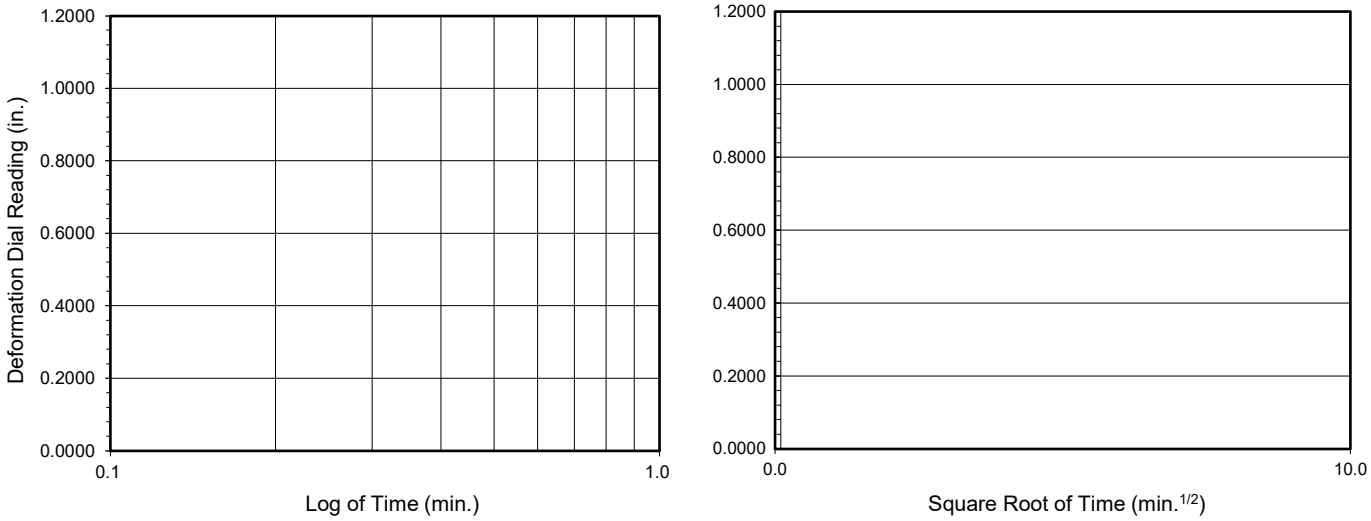
Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	190.27
Weight of Ring (g)	41.75
Height after consol. (in.)	0.9286
Before Test	
Wt.Wet Sample+Cont. (g)	202.69
Wt.of Dry Sample+Cont. (g)	173.83
Weight of Container (g)	57.10
Initial Moisture Content (%)	24.7
Initial Dry Density (pcf)	99.0
Initial Saturation (%)	92
Initial Vertical Reading (in.)	0.3129
After Test	
Wt.of Wet Sample+Cont. (g)	241.88
Wt. of Dry Sample+Cont. (g)	214.47
Weight of Container (g)	55.79
Final Moisture Content (%)	23.44
Final Dry Density (pcf)	104.7
Final Saturation (%)	100
Final Vertical Reading (in.)	0.2389
Specific Gravity (assumed)	2.76
Water Density (pcf)	62.43

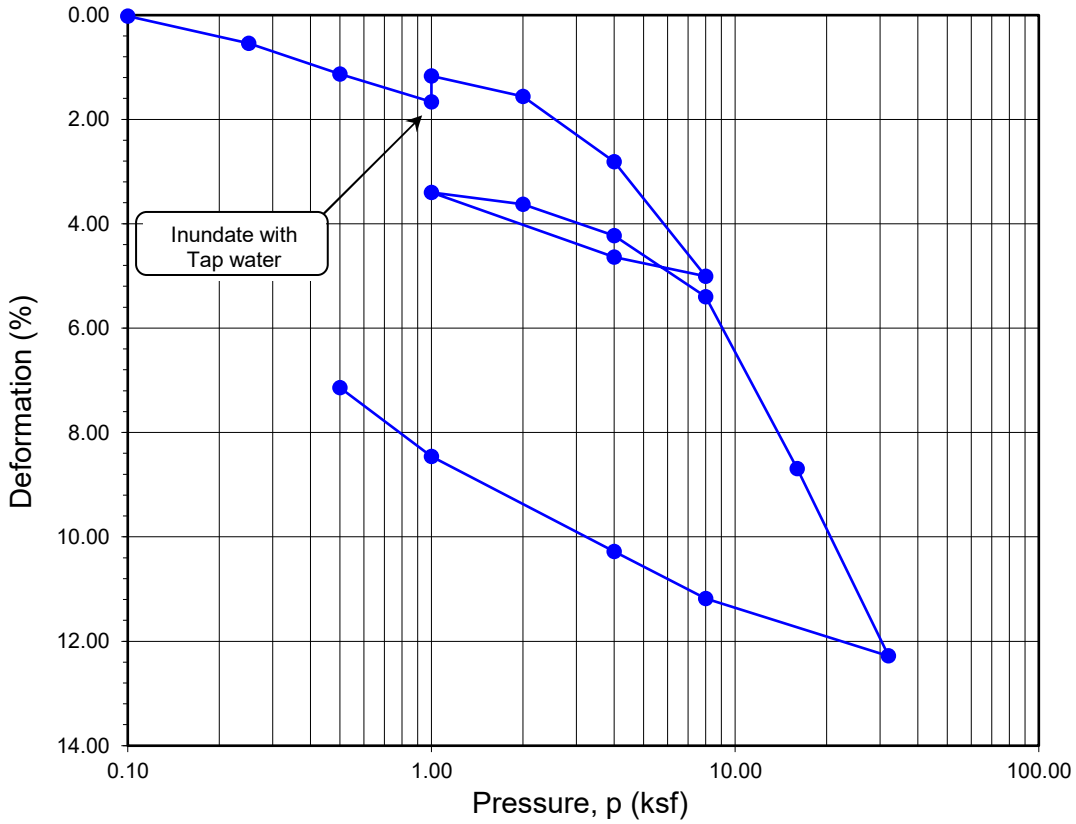


Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3127	0.9998	0.00	0.02	0.740	0.02
0.25	0.3073	0.9944	0.02	0.56	0.730	0.54
0.50	0.3012	0.9883	0.04	1.17	0.720	1.13
1.00	0.2956	0.9827	0.07	1.74	0.711	1.67
1.00	0.3005	0.9876	0.07	1.24	0.720	1.17
2.00	0.2961	0.9832	0.12	1.68	0.713	1.56
4.00	0.2828	0.9699	0.20	3.01	0.691	2.81
8.00	0.2595	0.9466	0.33	5.34	0.653	5.01
4.00	0.2638	0.9509	0.27	4.91	0.659	4.64
1.00	0.2775	0.9646	0.14	3.54	0.681	3.40
2.00	0.2747	0.9618	0.19	3.82	0.677	3.63
4.00	0.2679	0.9550	0.27	4.50	0.666	4.23
8.00	0.2556	0.9427	0.33	5.73	0.646	5.40
16.00	0.2208	0.9079	0.52	9.21	0.589	8.69
32.00	0.1825	0.8696	0.76	13.04	0.526	12.28
8.00	0.1958	0.8829	0.53	11.71	0.545	11.18
4.00	0.2059	0.8930	0.42	10.70	0.561	10.28
1.00	0.2254	0.9125	0.29	8.75	0.593	8.46
0.50	0.2389	0.9260	0.26	7.40	0.616	7.14

Time Readings				
Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings





Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-4	**R-3**	**20.0**	**24.7**	**23.4**	**99.0**	**104.7**	**0.740**	**0.616**	**92**	**100**

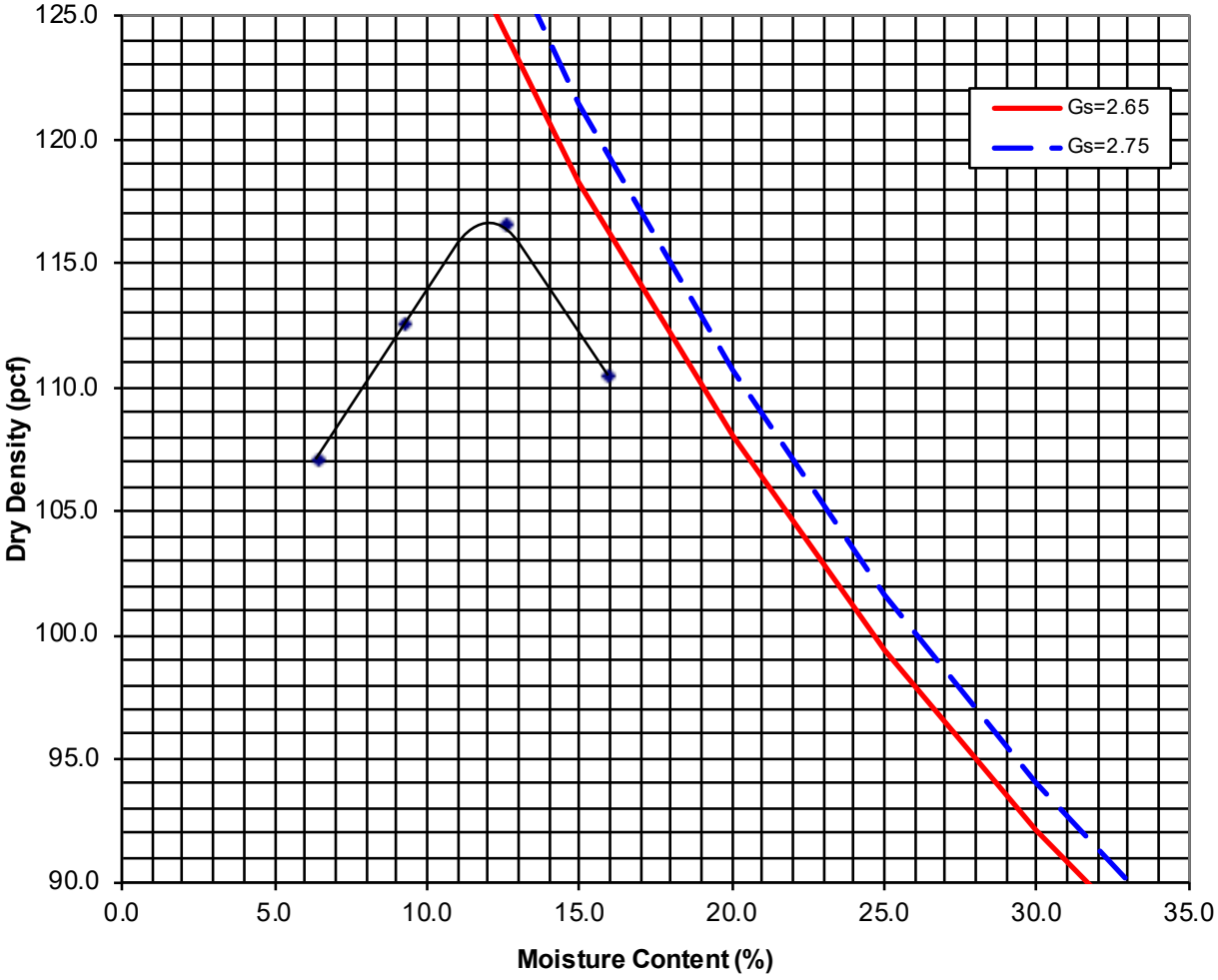
Soil Identification: Olive brown lean clay (CL)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 22011-01

Compass BESS - SJC

09-23



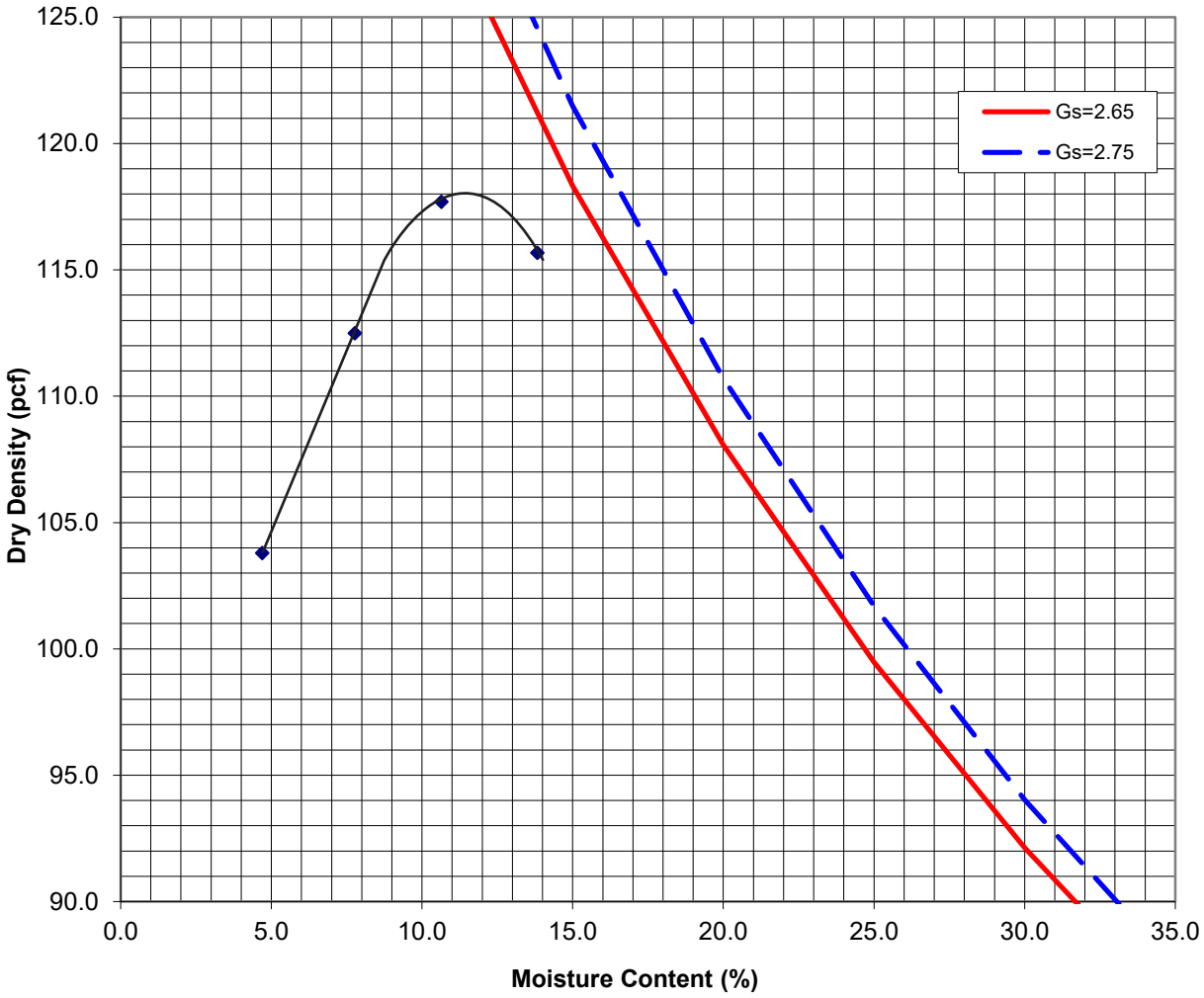
Location:	Sample No.:	Depth (ft)	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
NE Corner	B-1	0-8"	Dark gray sandy SILT (ML)	116.5	12.0

LGC Geotechnical, Inc.

LABORATORY COMPACTION
(ASTM D 1557)

Project Number: 22011-01
Date: Feb-23

Compass, San Juan Capistrano



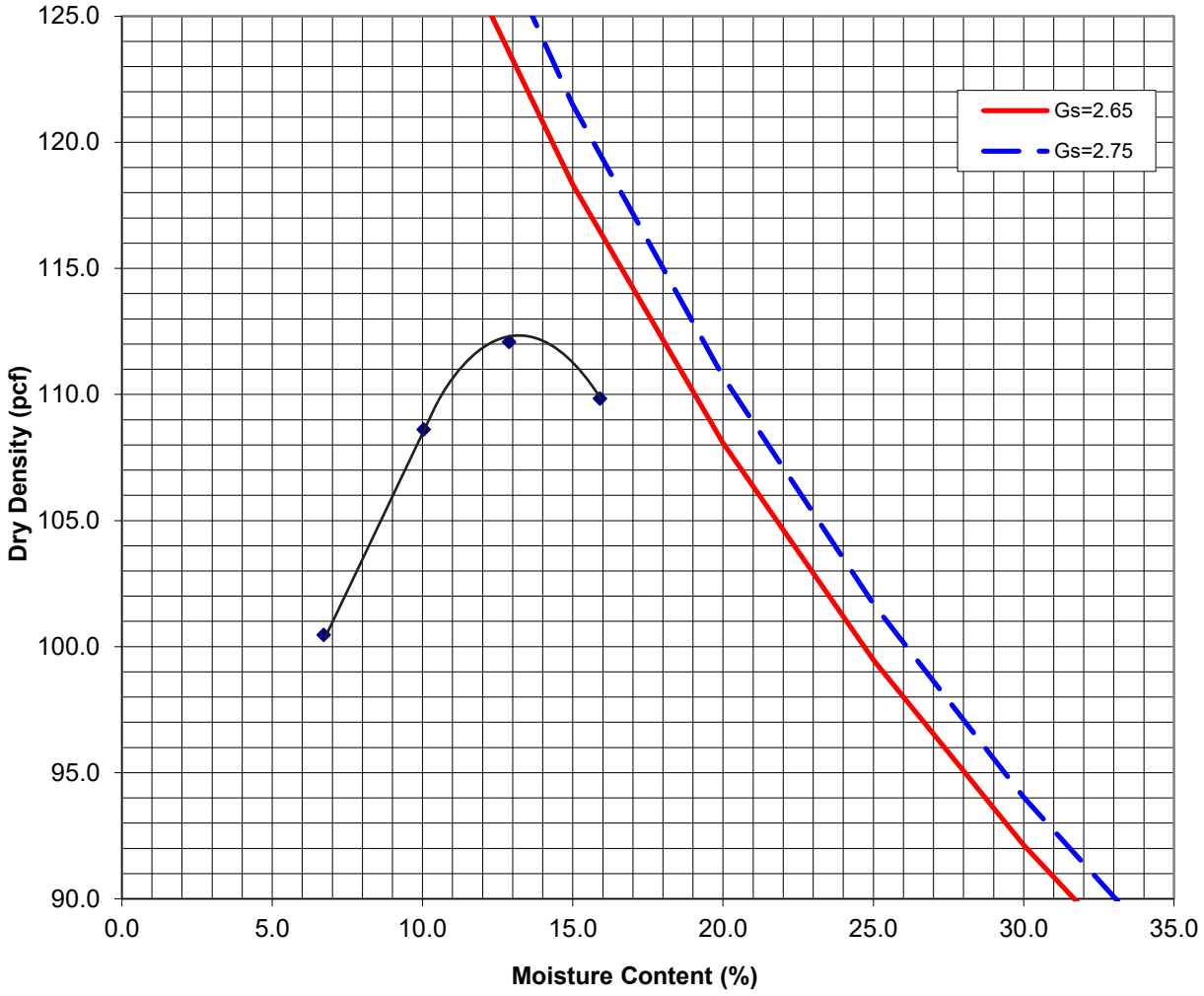
Location:	Sample No.:	Depth (ft)	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
SE Corner	B-2	0-8"	Brown silty SAND (SM)	118.0	11.5

LGC Geotechnical, Inc.

LABORATORY COMPACTION
(ASTM D 1557)

Project Number: 22011-01
Date: Feb-23

Compass, San Juan Capistrano



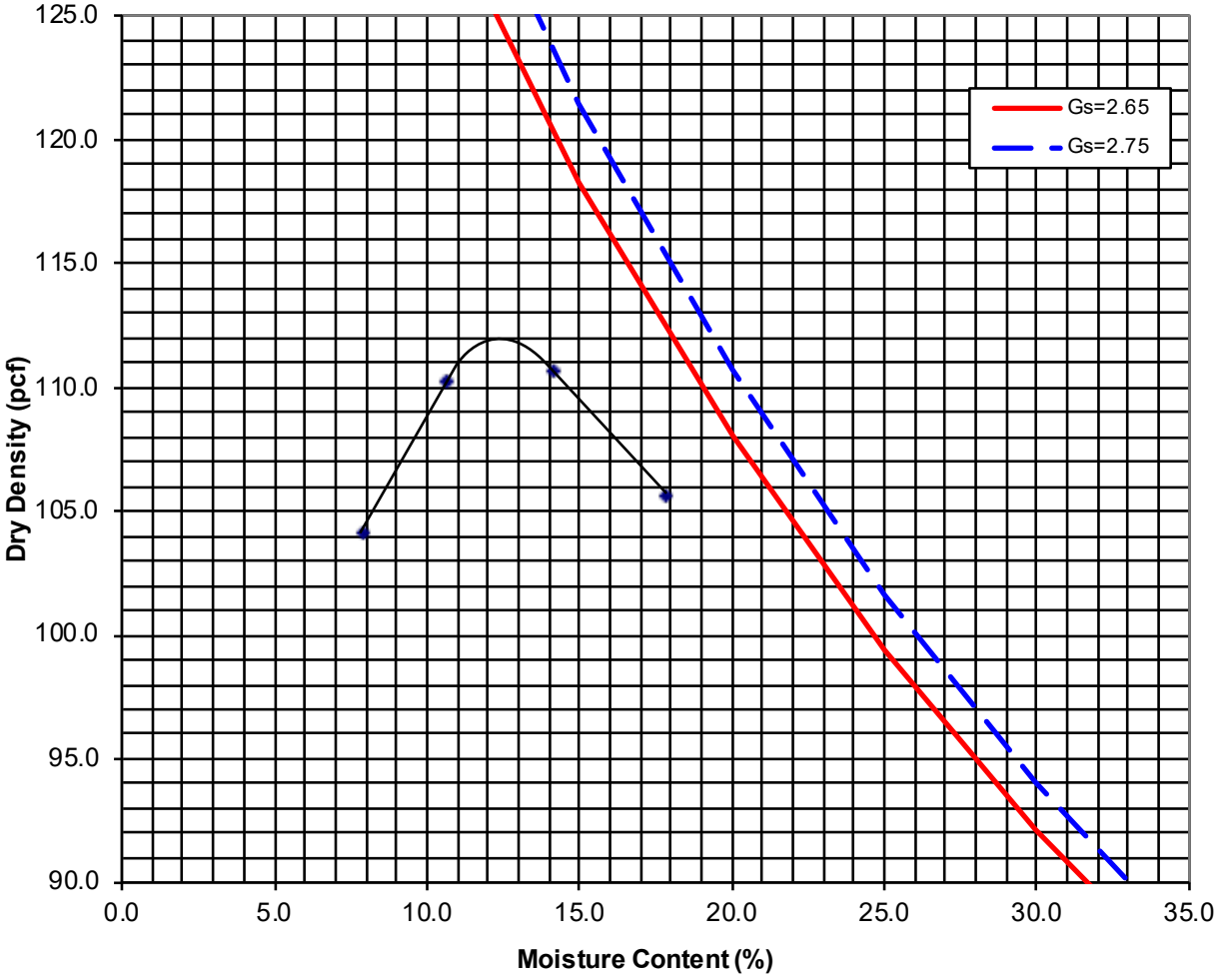
Location:	Sample No.:	Depth (ft)	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
NW Corner	B-3	4-12"	Brown SILT / CLAY (CL/ML)	112.5	13.0

LGC Geotechnical, Inc.

LABORATORY COMPACTION
(ASTM D 1557)

Project Number: 22011-01
Date: Feb-23

Compass, San Juan Capistrano



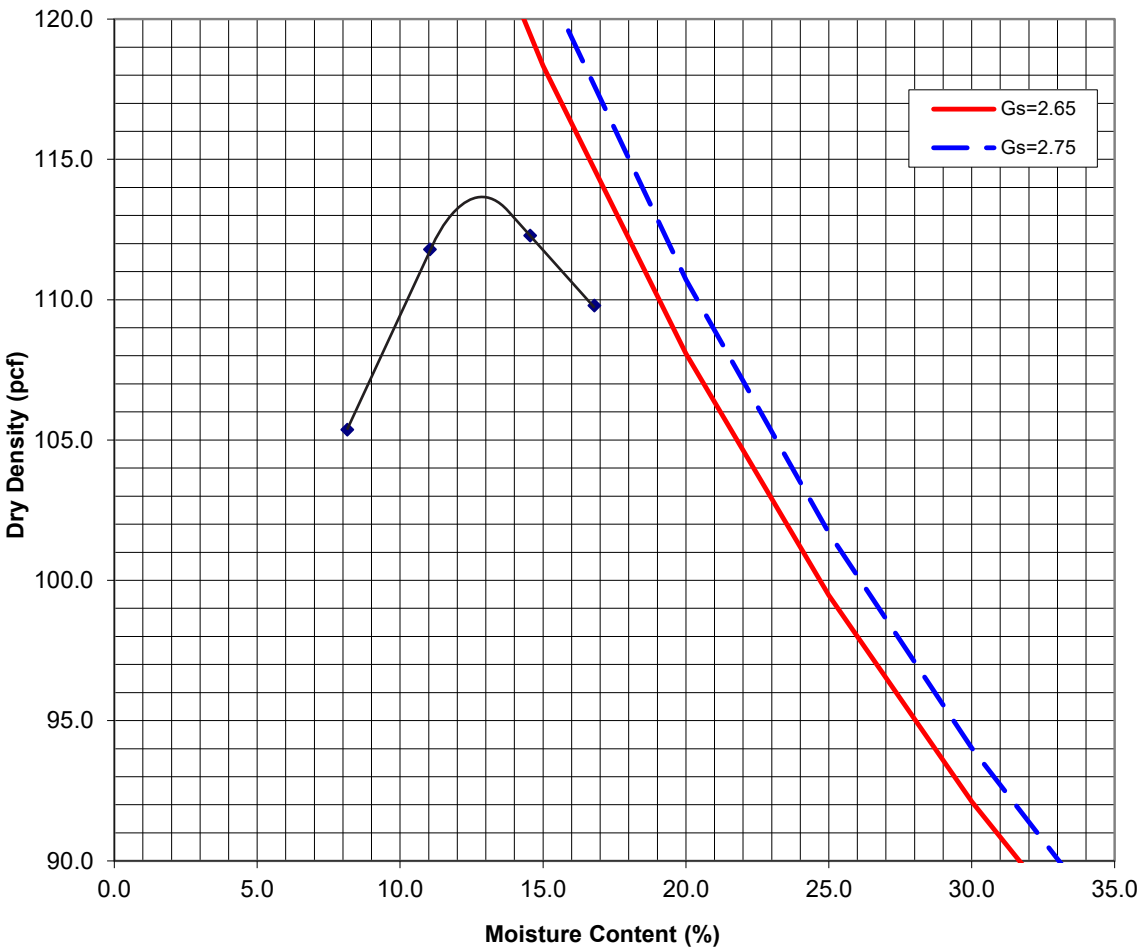
Location:	Sample No.:	Depth (ft)	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
SW Corner	B-4	0-8"	Dark gray SILT/CLAY (CL/ML)	112.0	12.5

LGC Geotechnical, Inc.

LABORATORY COMPACTION
(ASTM D 1557)

Project Number: 22011-01
Date: Feb-23

Compass, San Juan Capistrano



Location:	Sample No.:	Depth (ft)	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
B-5	**B-1**	**0-5'**	**Grayish brown CLAY (CL)**	**113.5**	**13.0**

LGC Geotechnical, Inc.

LABORATORY COMPACTION
(ASTM D 1557)

Project Number: 22011-01
Date: Aug-23

Compass

TESTS for SULFATE CONTENT
CHLORIDE CONTENT and pH of SOILS

Project Name: Compass BESS - SJC Tested By : G. Berdy Date: 08/08/22

Project No. : 22011-01 Checked By: J. Ward Date: 09/16/22

Boring No.	HS-1	HS-2		
Sample No.	B-1	B-1		
Sample Depth (ft)	1-5	1-5		
Soil Identification:	Grayish brown ML	Grayish brown ML		
Wet Weight of Soil + Container (g)	172.90	184.90		
Dry Weight of Soil + Container (g)	165.43	176.90		
Weight of Container (g)	56.34	39.39		
Moisture Content (%)	6.85	5.82		
Weight of Soaked Soil (g)	100.74	100.19		

SULFATE CONTENT, DOT California Test 417, Part II

Beaker No.	152	307		
Crucible No.	8	7		
Furnace Temperature (°C)	860	860		
Time In / Time Out	7:15/8:00	7:15/8:00		
Duration of Combustion (min)	45	45		
Wt. of Crucible + Residue (g)	20.3990	22.7019		
Wt. of Crucible (g)	20.3955	22.6992		
Wt. of Residue (g) (A)	0.0035	0.0027		
PPM of Sulfate (A) x 41150	144.03	111.10		
PPM of Sulfate, Dry Weight Basis	**155**	**118**		

CHLORIDE CONTENT, DOT California Test 422

ml of Extract For Titration (B)	5	15		
ml of AgNO3 Soln. Used in Titration (C)	0.3	0.5		
PPM of Chloride (C -0.2) * 100 * 30 / B	60	60		
PPM of Chloride, Dry Wt. Basis	**64**	**64**		

pH TEST, DOT California Test 643

pH Value	**8.20**	**7.73**		
Temperature °C	20.4	20.6		

SOIL RESISTIVITY TEST

DOT CA TEST 643

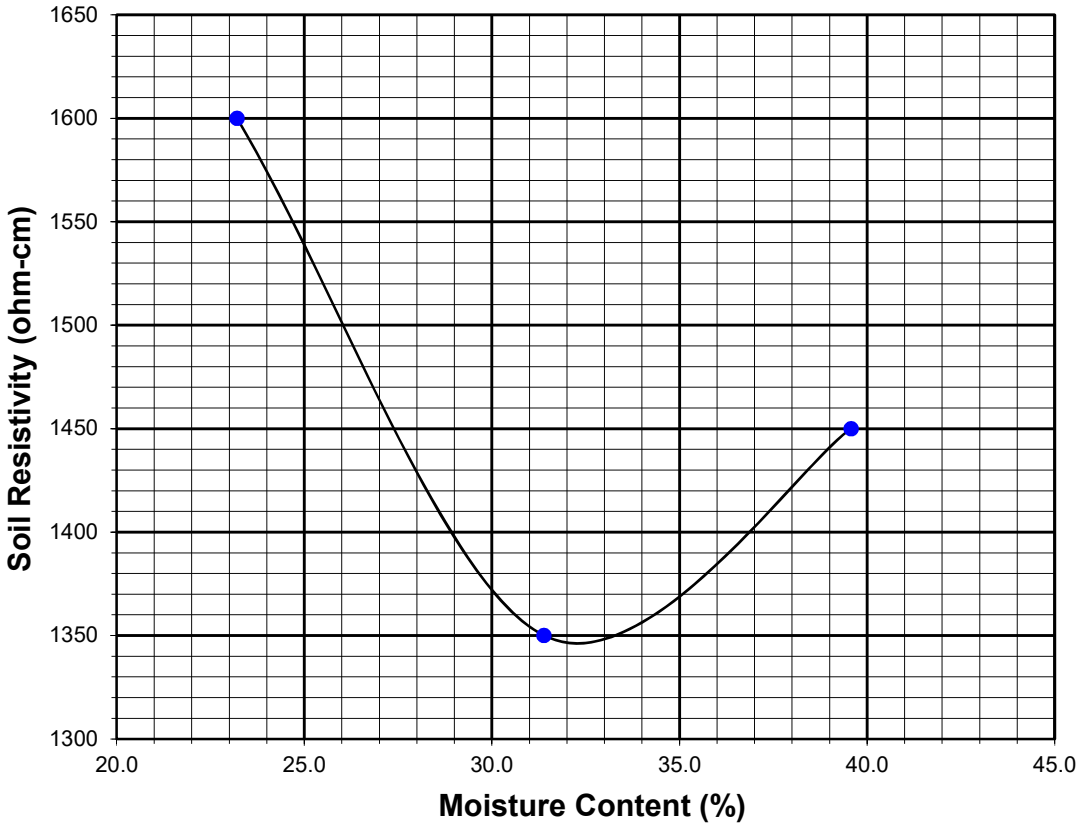
Project Name:	Compass BESS - SJC		Tested By :	J. Domingo	Date: 08/30/22
Project No. :	22011-01		Checked By:	J. Ward	Date: 09/16/22
Boring No.:	HS-1		Depth (ft.) :	1-5	
Sample No. :	B-1				
Soil Identification:*	Grayish brown ML				

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	20	23.21	1600	1600
2	30	31.39	1350	1350
3	40	39.57	1450	1450
4				
5				

Moisture Content (%) (MCi)	6.85
Wet Wt. of Soil + Cont. (g)	172.90
Dry Wt. of Soil + Cont. (g)	165.43
Wt. of Container (g)	56.34
Container No.	
Initial Soil Wt. (g) (Wt)	130.60
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
1345	**32.3**	**155**	**64**	**8.20**	**20.4**



SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Compass BESS - SJC		Tested By :	J. Domingo	Date: 08/30/22
Project No. :	22011-01		Checked By:	J. Ward	Date: 09/16/22
Boring No.:	HS-2		Depth (ft.) :	1-5	
Sample No. :	B-1				

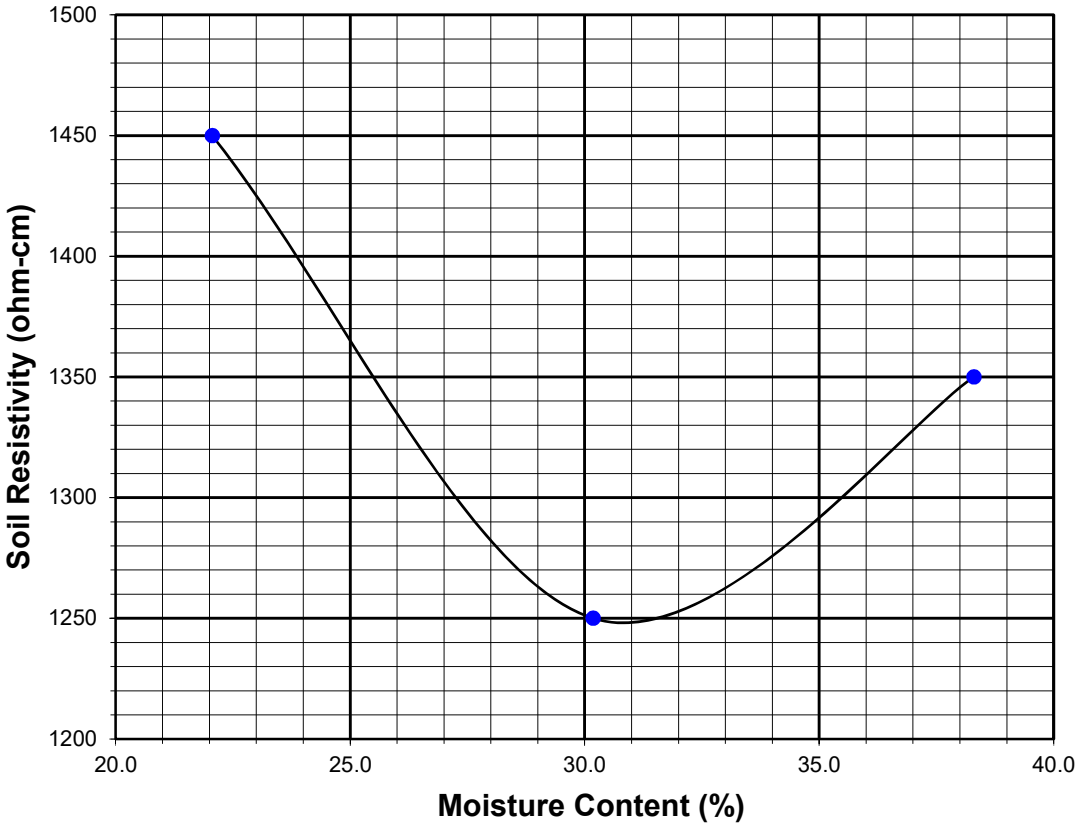
Soil Identification:* Grayish brown ML

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	20	22.06	1450	1450
2	30	30.18	1250	1250
3	40	38.30	1350	1350
4				
5				

Moisture Content (%) (MCi)	5.82
Wet Wt. of Soil + Cont. (g)	184.90
Dry Wt. of Soil + Cont. (g)	176.90
Wt. of Container (g)	39.39
Container No.	
Initial Soil Wt. (g) (Wt)	130.30
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
1250	**30.8**	**118**	**64**	**7.73**	**20.6**



TESTS for SULFATE CONTENT
CHLORIDE CONTENT and pH of SOILS

Project Name: Compass BESS - SJC Tested By : G. Berdy Date: 08/30/23

Project No. : 22011-01 Checked By: J. Ward Date: 09/18/23

Boring No.	HS-3	HS-4		
Sample No.	B-1	B-1		
Sample Depth (ft)	0-5	0-5		
Soil Identification:	Olive SC, organic material noted	Olive SC, organic material noted		
Wet Weight of Soil + Container (g)	182.04	183.56		
Dry Weight of Soil + Container (g)	171.63	177.34		
Weight of Container (g)	59.17	65.21		
Moisture Content (%)	9.26	5.55		
Weight of Soaked Soil (g)	100.86	100.19		

SULFATE CONTENT, DOT California Test 417, Part II

Beaker No.	7	401		
Crucible No.	2	4		
Furnace Temperature (°C)	860	860		
Time In / Time Out	7:45/8:30	7:45/8:30		
Duration of Combustion (min)	45	45		
Wt. of Crucible + Residue (g)	28.7221	21.6317		
Wt. of Crucible (g)	28.7194	21.6299		
Wt. of Residue (g) (A)	0.0027	0.0018		
PPM of Sulfate (A) x 41150	111.11	74.07		
PPM of Sulfate, Dry Weight Basis	**122**	**78**		

CHLORIDE CONTENT, DOT California Test 422

ml of Extract For Titration (B)	15	15		
ml of AgNO3 Soln. Used in Titration (C)	1.0	0.9		
PPM of Chloride (C -0.2) * 100 * 30 / B	160	140		
PPM of Chloride, Dry Wt. Basis	**176**	**148**		

pH TEST, DOT California Test 643

pH Value	**7.96**	**8.17**		
Temperature °C	21.8	21.8		

SOIL RESISTIVITY TEST

DOT CA TEST 643

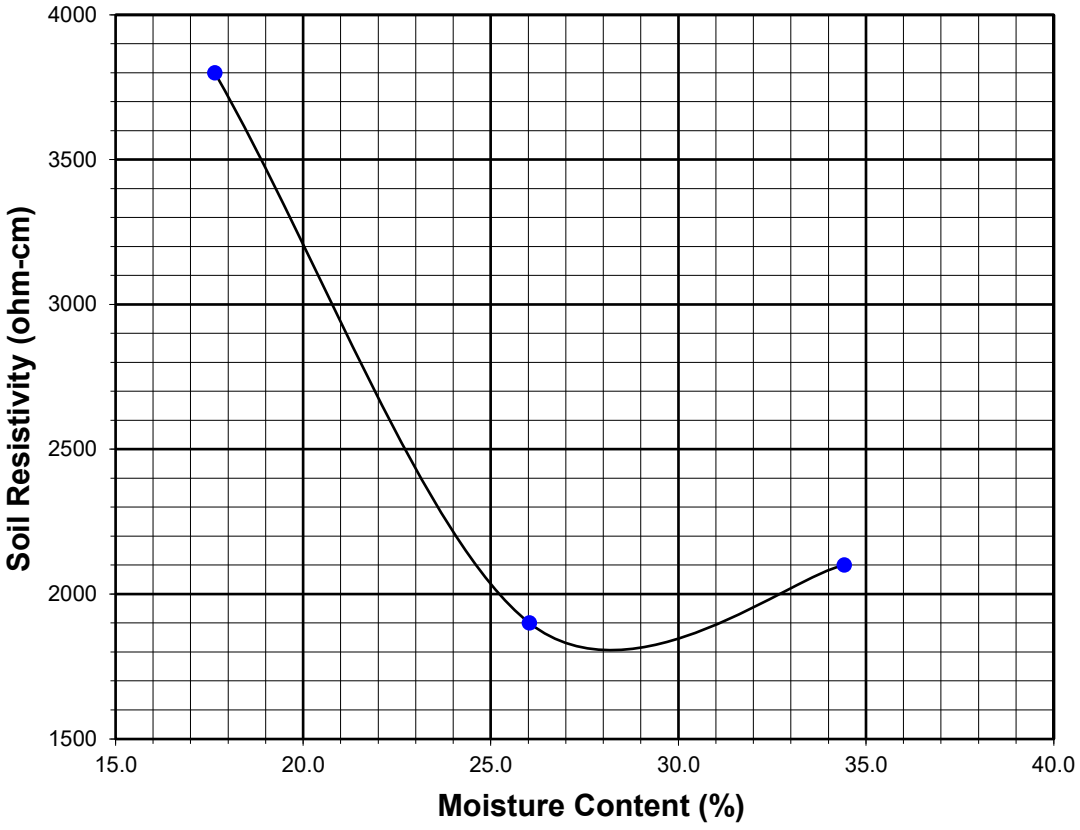
Project Name:	Compass BESS - SJC		Tested By :	G. Berdy	Date: 09/05/23
Project No. :	22011-01		Checked By:	J. Ward	Date: 09/18/23
Boring No.:	HS-3		Depth (ft.) :	0-5	
Sample No. :	B-1				
Soil Identification:*	Olive SC, organic material noted				

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	10	17.64	3800	3800
2	20	26.03	1900	1900
3	30	34.42	2100	2100
4				
5				

Moisture Content (%) (MCi)	9.26
Wet Wt. of Soil + Cont. (g)	182.04
Dry Wt. of Soil + Cont. (g)	171.63
Wt. of Container (g)	59.17
Container No.	
Initial Soil Wt. (g) (Wt)	130.27
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
1800	**28.3**	**122**	**176**	**7.96**	**21.8**



SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Compass BESS - SJC		Tested By :	G. Berdy	Date: 09/05/23
Project No. :	22011-01		Checked By:	J. Ward	Date: 09/18/23
Boring No.:	HS-4		Depth (ft.) :	0-5	
Sample No. :	B-1				

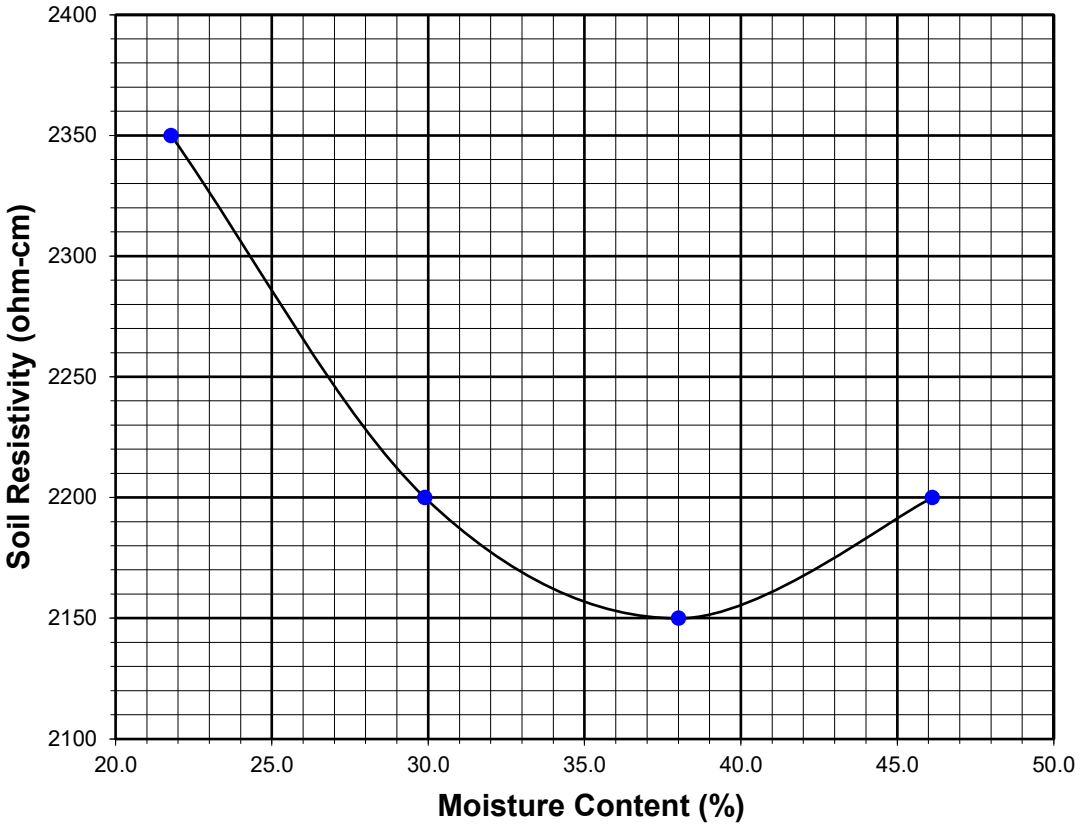
Soil Identification:* Olive SC, organic material noted

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	20	21.78	2350	2350
2	30	29.89	2200	2200
3	40	38.01	2150	2150
4	50	46.12	2200	2200
5				

Moisture Content (%) (MCi)	5.55
Wet Wt. of Soil + Cont. (g)	183.56
Dry Wt. of Soil + Cont. (g)	177.34
Wt. of Container (g)	65.21
Container No.	
Initial Soil Wt. (g) (Wt)	130.06
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
2150	**38.0**	**78**	**148**	**8.17**	**21.8**



Appendix C
Lab By Others

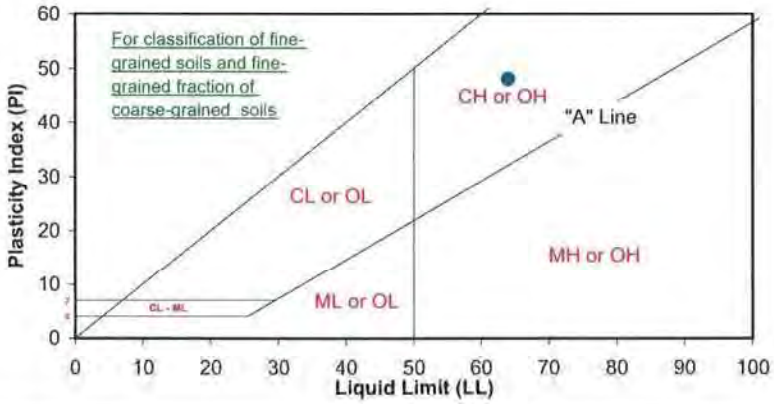
APPENDIX C

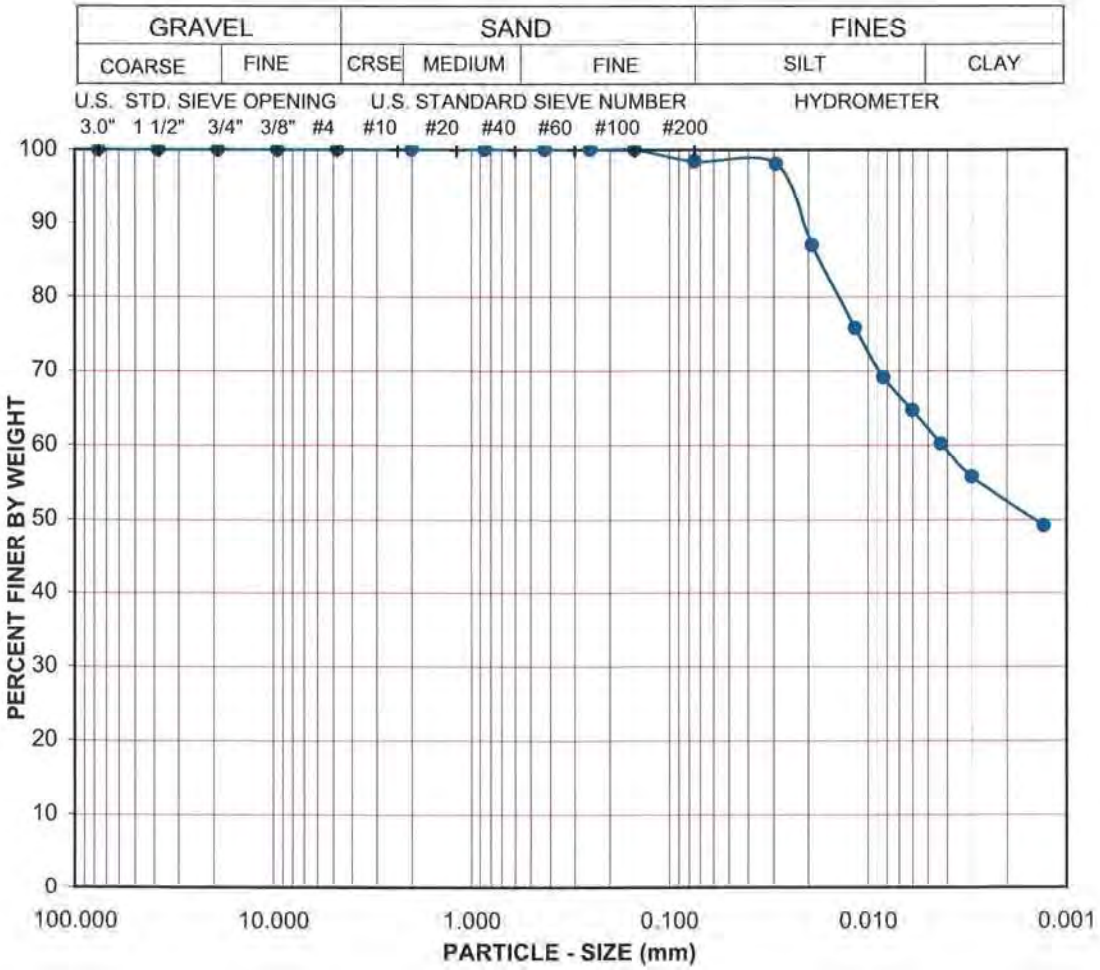
Laboratory Testing Procedures and Test Results

Classification or Grain Size Tests: Typical materials were subjected to mechanical grain-size analysis by sieving from U.S. Standard brass screens (ASTM Test Methods C136 or D422). Hydrometer analyses were performed on selected samples. The data was evaluated in determining the classification of the materials. Grain size distribution curves are attached.

Particle size analysis: Particle size analysis was performed by mechanical sieving and hydrometer methods according to ASTM D422 and D4318. the percent fines particle from these grading is summarized below.

Sample Location	USCS Soil Classification
LB-2 @ 58.5 feet	CH
LB-2 @ 58.5 feet	CH





Boring No.	Sample No.	Depth (m)	Soil Type	GR:SA:FI (%)	LL,PL,PI
LB-2	B8-A	58.5	CH	0,0,2	64,16,48

Sample Description:
CH: BLACK FAT CLAY

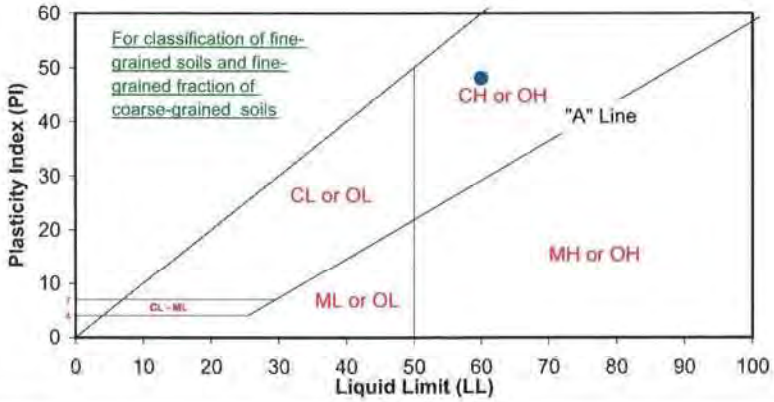
Project No. 012383-001

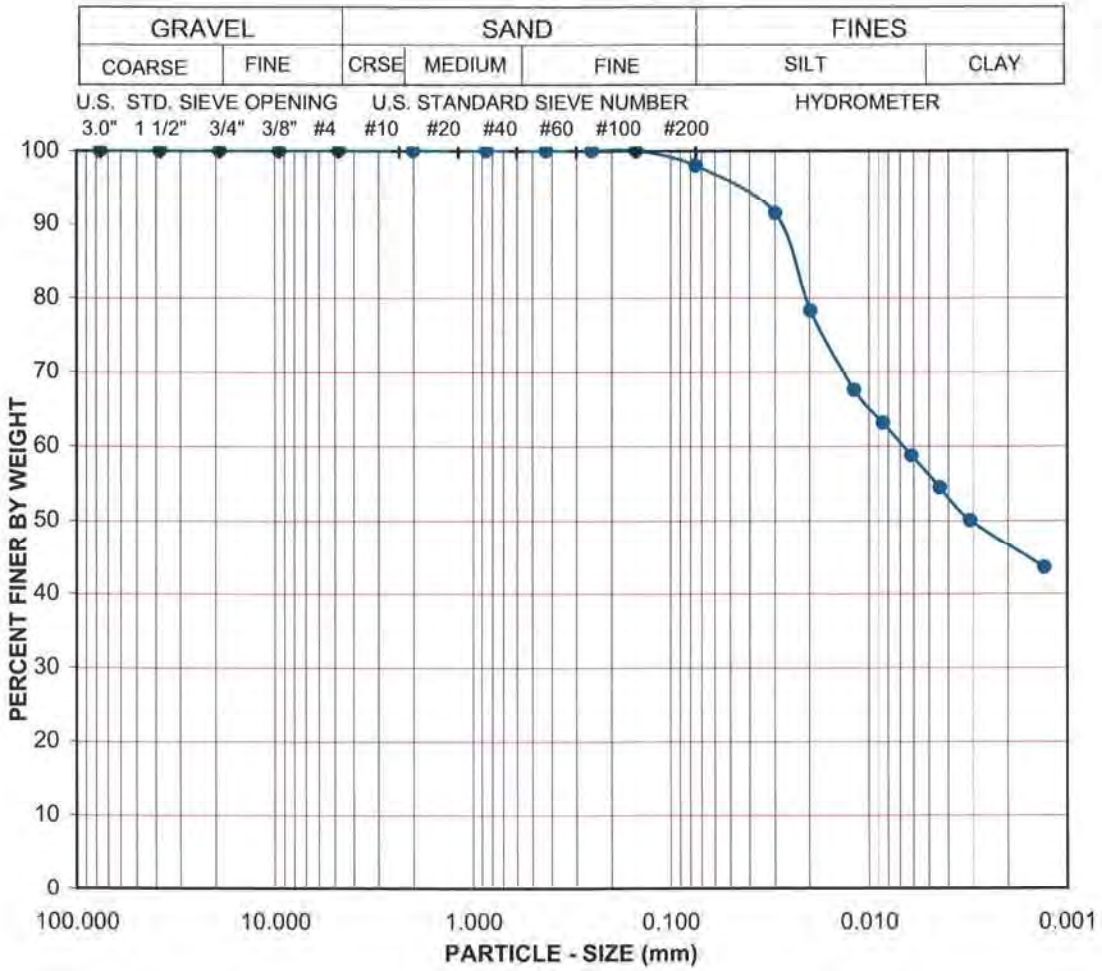
CONT. LIFE / ORCHARD

Leighton

ATTERBERG LIMITS, PARTICLE - SIZE CURVE
ASTM D 4318, D 422

Rev. 08-08





Boring No.	Sample No.	Depth (m)	Soil Type	GR:SA:FI (%)	LL,PL,PI
LB-2	B8-B	58.5	CH	0,0,2	60,12,48

Sample Description:
CH: GRAY-BLACK FAT CLAY

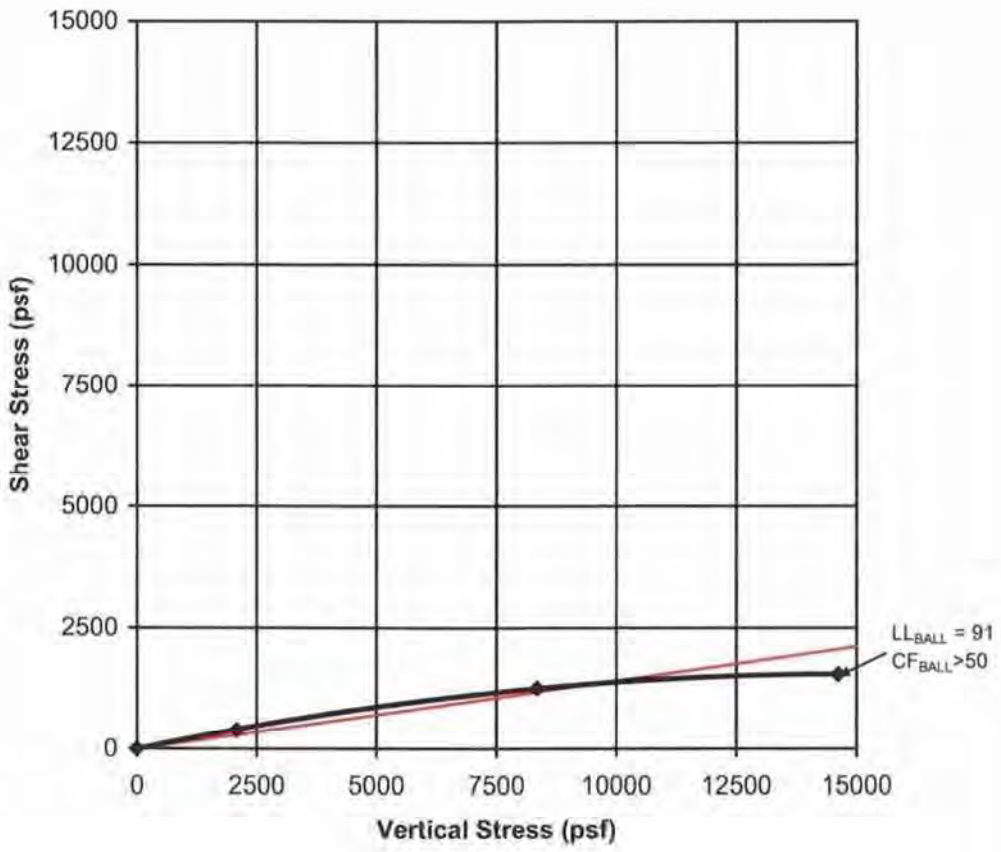
Leighton

Project No.: 012383-001

CONT. LIFE / ORCHARD

ATTERBERG LIMITS, PARTICLE - SIZE CURVE
ASTM D 4318, D 422

Rev. 08-08



Boring Location	**LB-2**
Sample Depth (feet)	**58.5**

Linear Strength Envelope

Friction Angle, ϕ'_{res} (deg)	**8**
Cohesion, c'_{res} (psf)	**0**

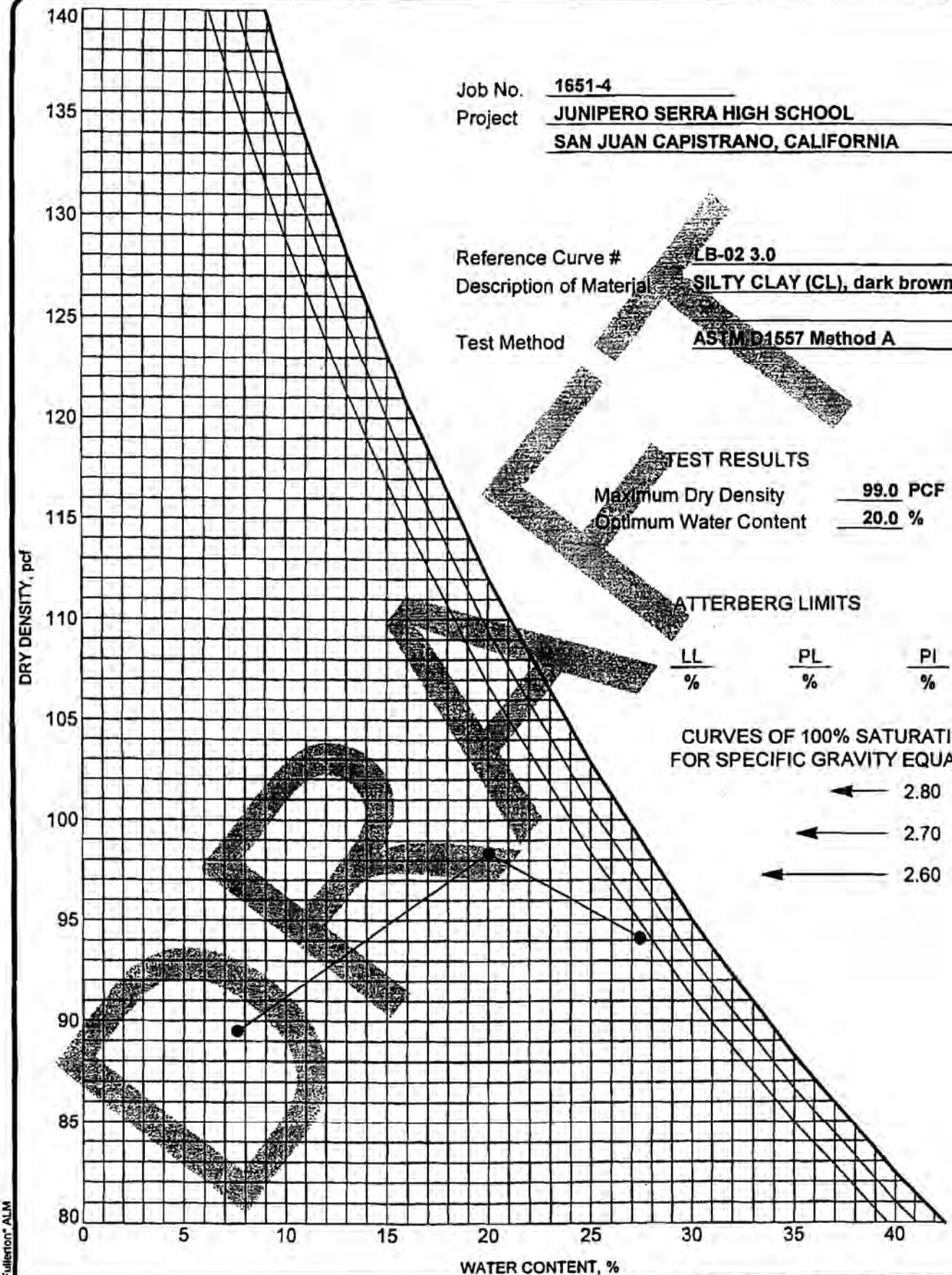
Legend

○ Shear Test Result — ◆ Envelope by Correlation (Stark, Choi, McCone, 2005) — / Linear Envelope

RESIDUAL STRENGTH
BY CORRELATION

Project No. 012383-001
Project Name Continuing Life

Leighton



Job No. 1651-4

Project JUNIPERO SERRA HIGH SCHOOL
SAN JUAN CAPISTRANO, CALIFORNIA

Reference Curve # LB-02 3.0

Description of Material SILTY CLAY (CL), dark brown

Test Method ASTM D1557 Method A

TEST RESULTS

Maximum Dry Density 99.0 PCF

Optimum Water Content 20.0 %

ATTERBERG LIMITS

LL	PL	PI
%	%	%

CURVES OF 100% SATURATION
FOR SPECIFIC GRAVITY EQUAL TO:

← 2.80

← 2.70

← 2.60

LA CORP.GDT 7/31/01 Fullerton* ALM

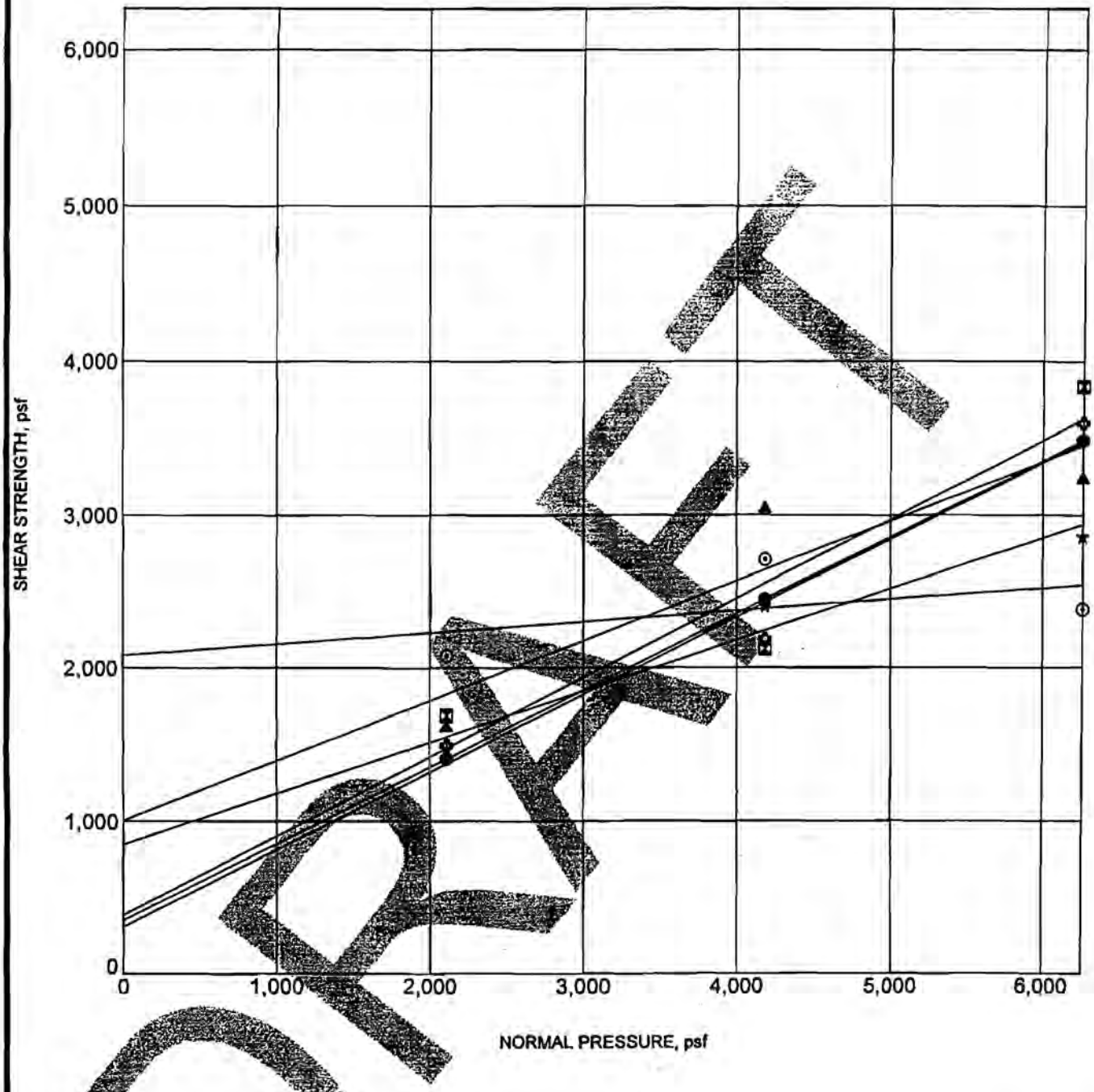
LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

MOISTURE-DENSITY RELATIONSHIP

Project: JUNIPERO SERRA HIGH SCHOOL

Location: SAN JUAN CAPISTRANO, CALIFORNIA

Project No.: 1651-4



DRAFT

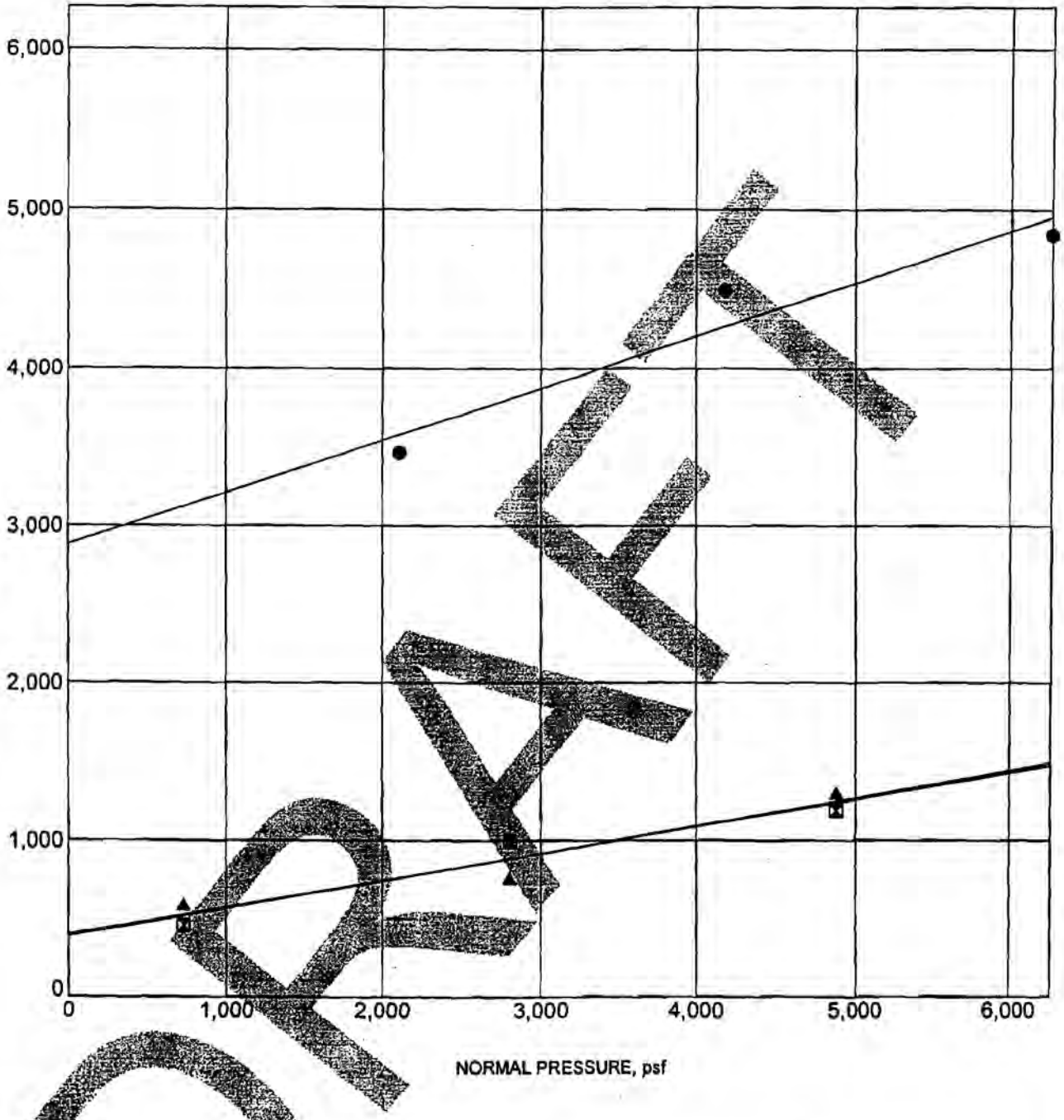
Exploration		Depth (feet)	Classification	γ_d	MOIST. (%)	c	ϕ
●	LB-01	30.0	CLAYEY SILT (ML), olive brown	100	26	350	27
⊡	LB-01	100.0	SILTSTONE (Tcsl), very dark gray	90	34	384	27
▲	LB-02	55.0	SILTSTONE (Tcsl), dark gray	89	36	1005	21
★	LB-03	25.0	CLAYEY SILT (ML), grayish brown-olive brown	93	28	848	18
⊙	LB-03	72.0	CLAYEY SILT (ML), grayish brown to gray	104	23	1925	4
✪	LB-04	20.0	CLAYEY SILT (ML), light brown	88	27	306	27

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

DIRECT SHEAR TEST

Project: JUNIPERO SERRA HIGH SCHOOL
Location: SAN JUAN CAPISTRANO, CALIFORNIA
Project No.: 1651-4

LA CORP.GDT 7/31/01 Fullerton* ALM



DRAFT

Exploration	Depth (feet)	Classification	γ_d	MOIST. (%)	c	ϕ
● LB-05	45.0	SILTSTONE (Tcsl), very dark gray	90	33	2883	18
⊠ LB-09	19.0	REMOLD: CLAY (CL), dark gray-brown	90	35	384	10
▲ LB-09	34.0	REMOLD: CLAY (CL), dark gray-brown	99	30	399	10

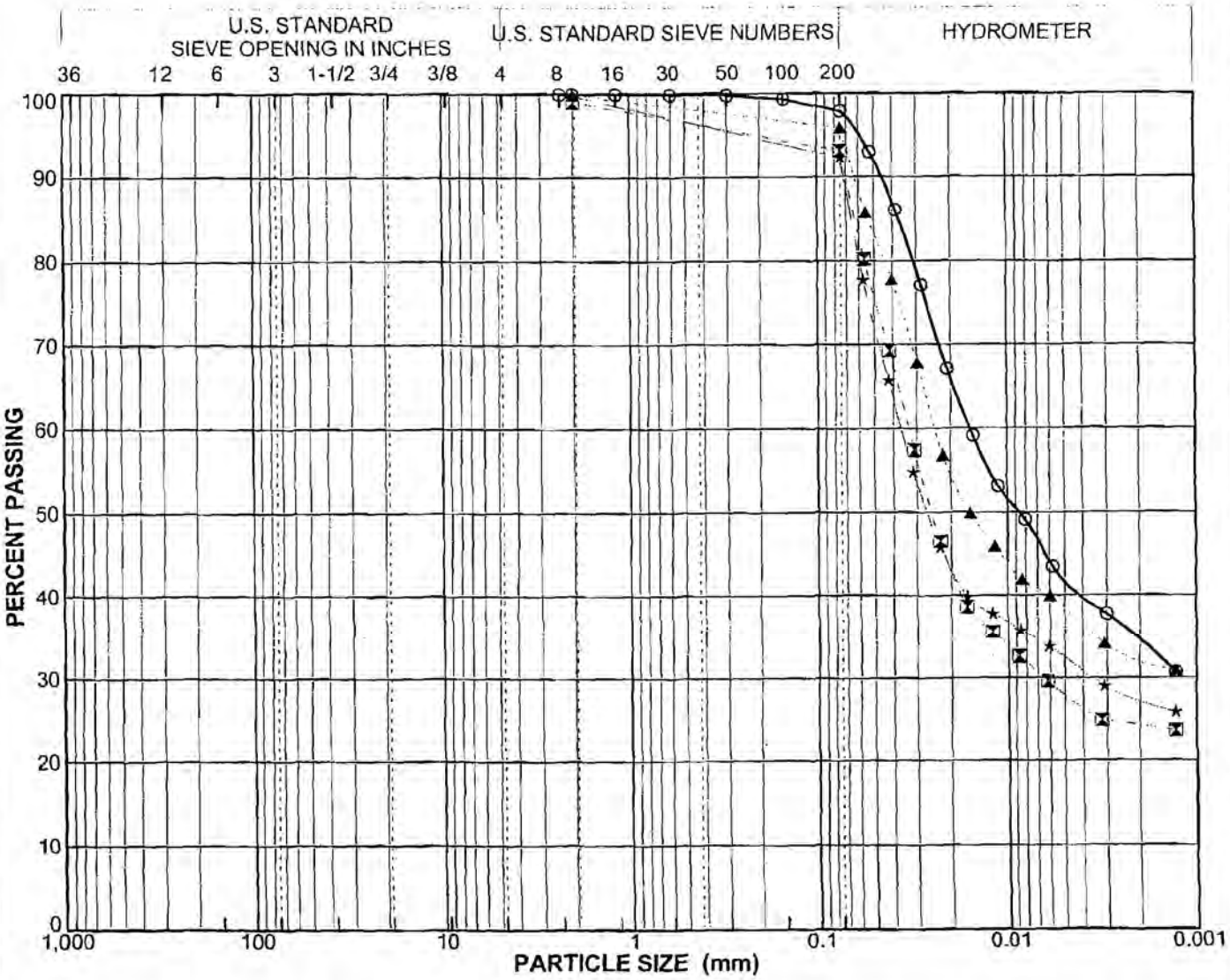
LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

DIRECT SHEAR TEST

Project: JUNIPERO SERRA HIGH SCHOOL
Location: SAN JUAN CAPISTRANO, CALIFORNIA
Project No.: 1651-4

LA CORP.GDT 7/31/01 Fullerton* ALM

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	



Symbol	Boring Number	Sample Number	Depth (feet)	Field Moisture (%)	LL	PI	Activity PI/-2μ	C_u	C_c	Passing No. 200 Sieve (%)	Passing 2μ (%)	USCS
○	B- 3	SB-3	71.5		56	30				98	34	CL
⊠	H- 1	D-9	45.0	29	44	24				93	24	CL
▲	H- 1	D-10	50.0	30	50	29				96	32	CH
★	H- 1	D-12	60.0	31	48	26				92	27	CL

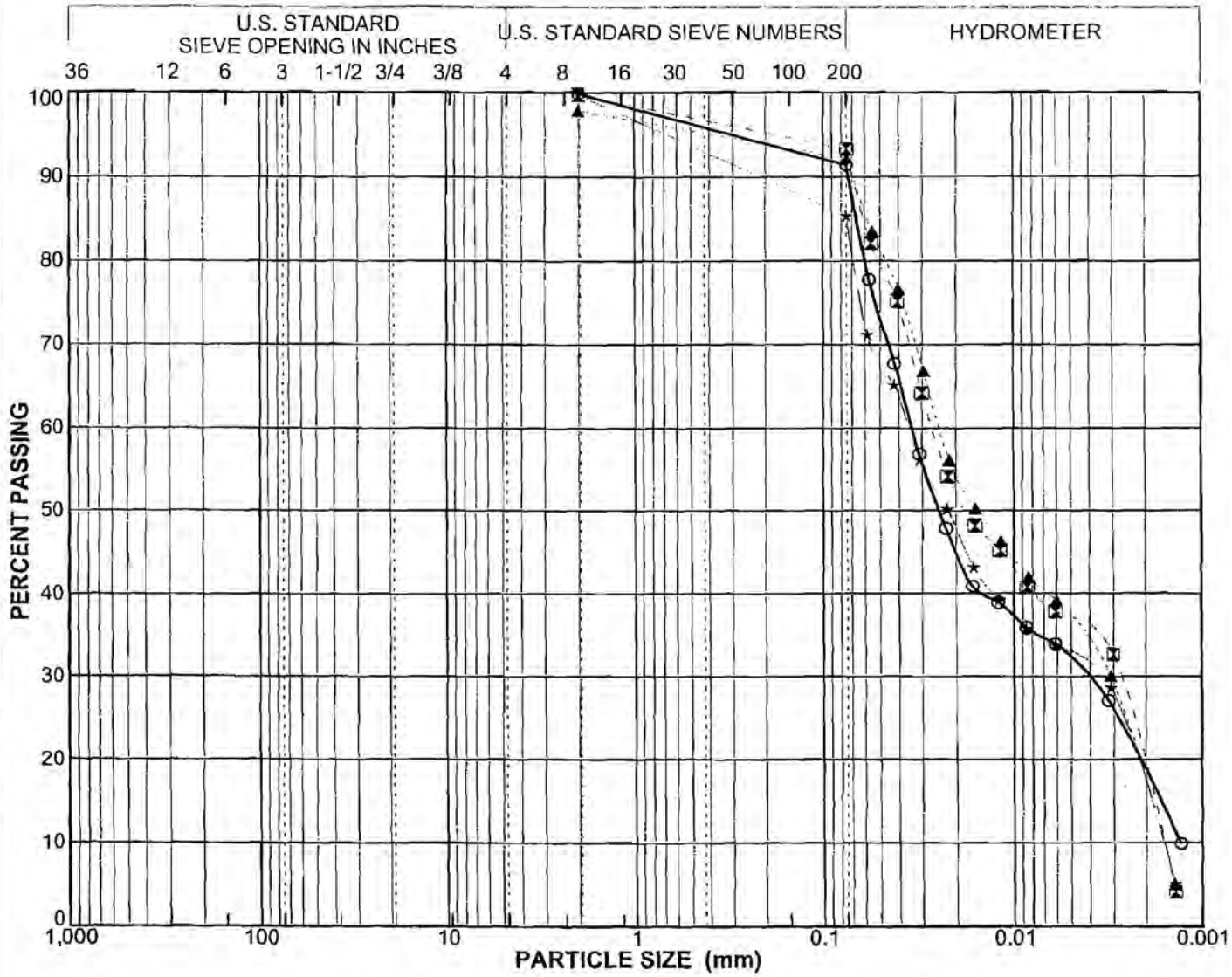
PARTICLE SIZE DISTRIBUTION

CUSD/Rancho Capistrano
San Juan Capistrano
PROJECT NO. 01012-02

NMG Geotechnical, Inc.

Template: NMSIV; Prj ID: 01012-02.GPJ; Printed: 9/28/01

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	



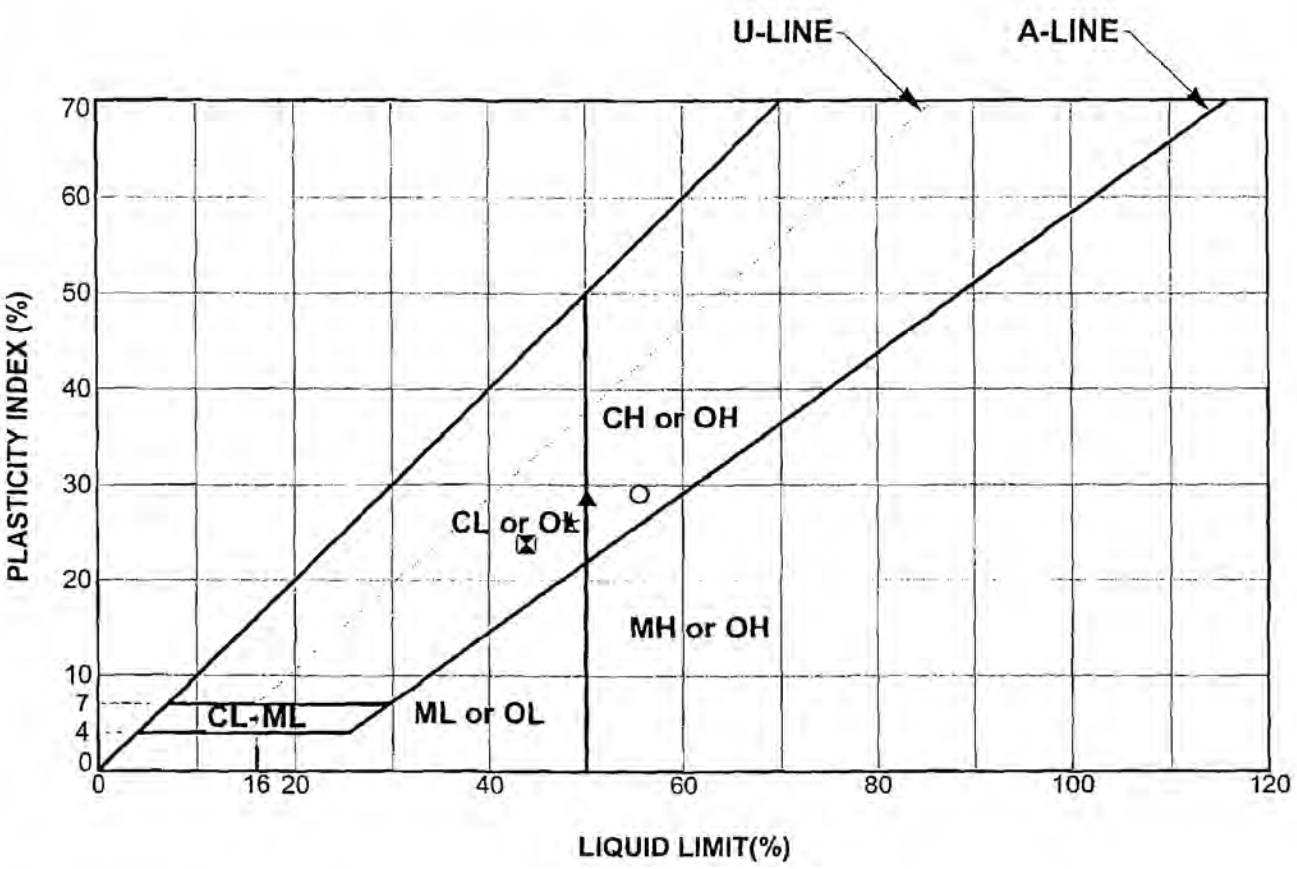
Symbol	Boring Number	Sample Number	Depth (feet)	Field Moisture (%)	LL	PI	Activity PI/-2μ	C_u	C_c	Passing No. 200 Sieve (%)	Passing 2μ (%)	USCS
○	H-2	D-2	10.0	27	44	24		25.99	0.40	91	18	CL
⊠	H-2	D-3	15.0	26	46	23		16.14	0.18	93	17	CL
▲	H-2	D-8	40.0	28	51	28		14.84	0.24	92	16	CH
★	H-2	D-9	45.0	26	48	26		21.43	0.23	85	16	CL

PARTICLE SIZE DISTRIBUTION

CUSD/Rancho Capistrano
San Juan Capistrano
PROJECT NO. 01012-02

NMG Geotechnical, Inc.

Template: NMSIV; Prj ID: 01012-02.GPJ; Printed: 9/28/01

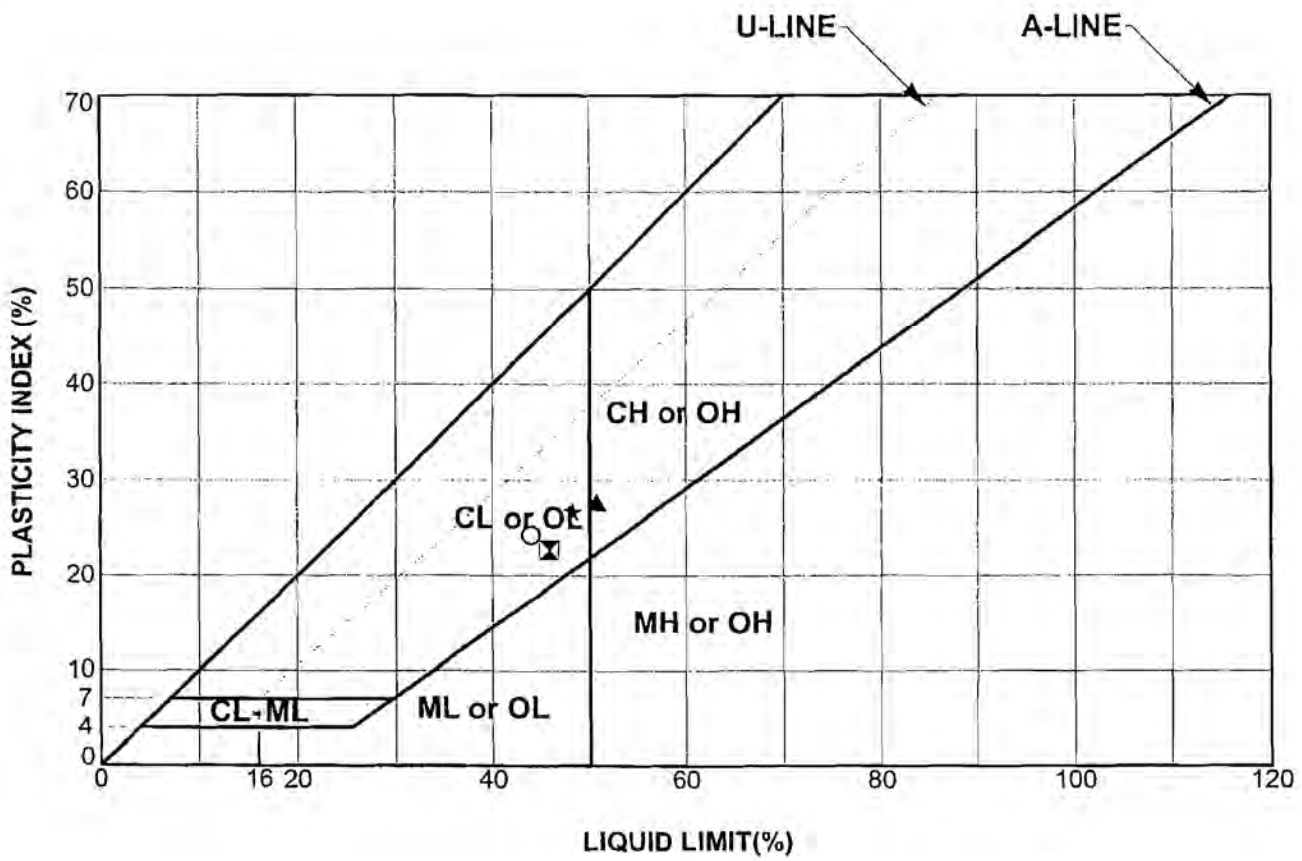


Symbol	Boring Number	Depth (feet)	Sample Number	Passing No. 200 Sieve (%)	LL	PI	USCS	Description
○	B- 3	71.5	SB-3	98	56	30	CL	CLAY
⊠	H- 1	45.0	D-9	93	44	24	CL	Silty CLAY
▲	H- 1	50.0	D-10	96	50	29	CH	Silty CLAY
★	H- 1	60.0	D-12	92	48	26	CL	CLAY

PLASTICITY CHART

CUSD/Rancho Capistrano
San Juan Capistrano
PROJECT NO. 01012-02

NMG Geotechnical, Inc.

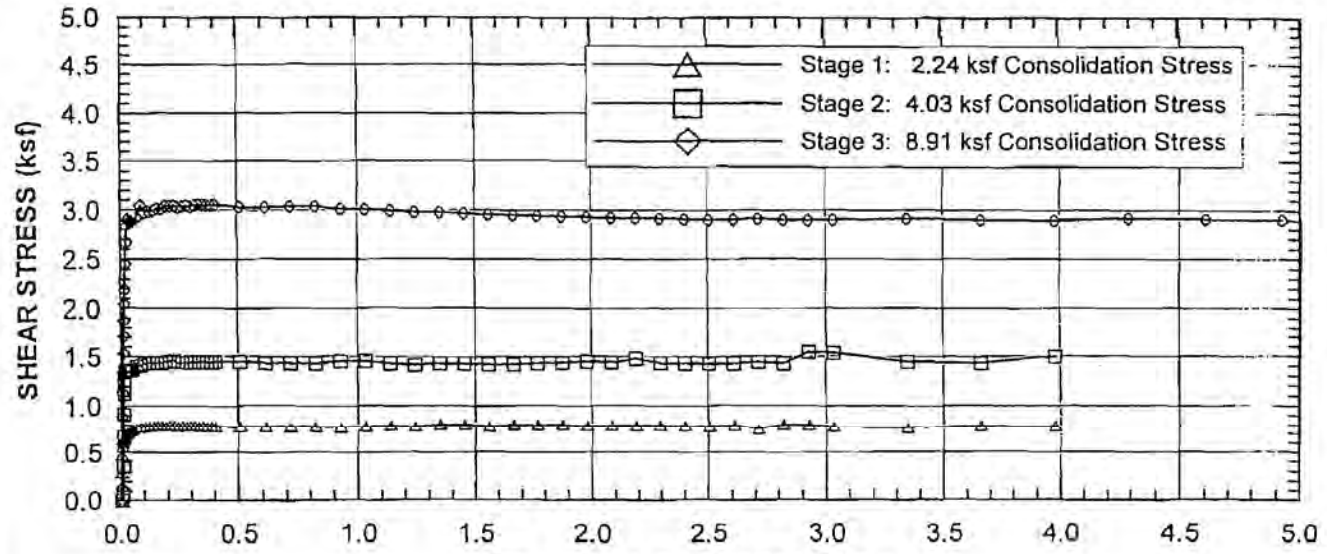


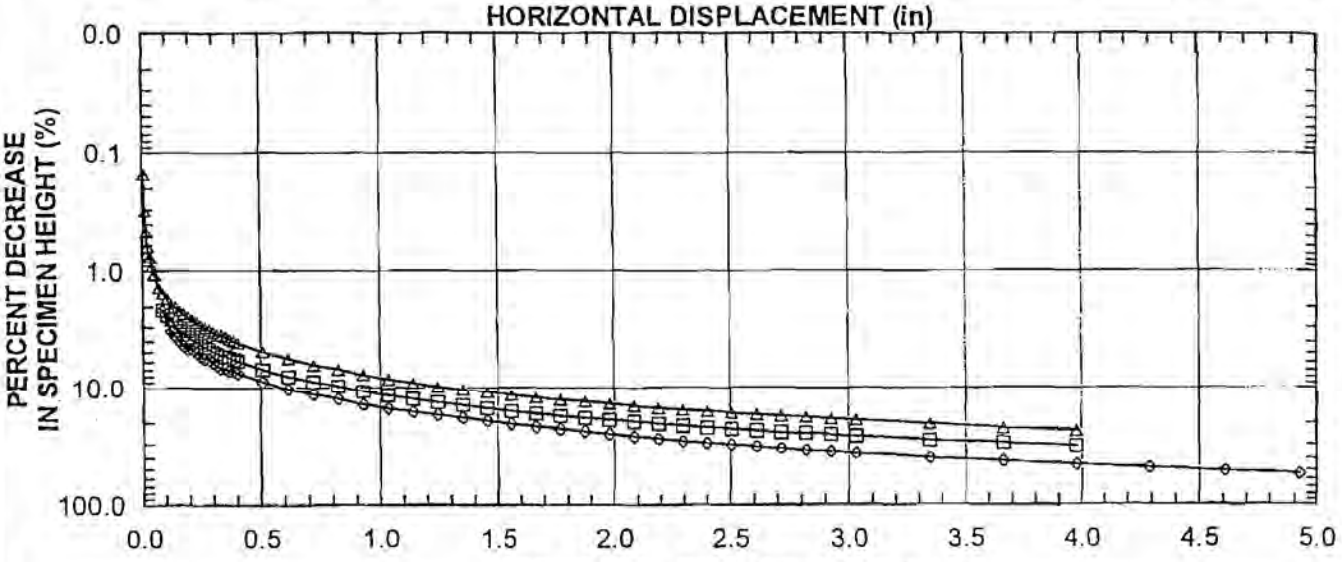
Symbol	Boring Number	Depth (feet)	Sample Number	Passing No. 200 Sieve (%)	LL	PI	USCS	Description
○	H- 2	10.0	D-2	91	44	24	CL	Silty CLAY
⊠	H- 2	15.0	D-3	93	46	23	CL	Silty CLAY
▲	H- 2	40.0	D-8	92	51	28	CH	CLAY
★	H- 2	45.0	D-9	85	48	26	CL	Silty CLAY

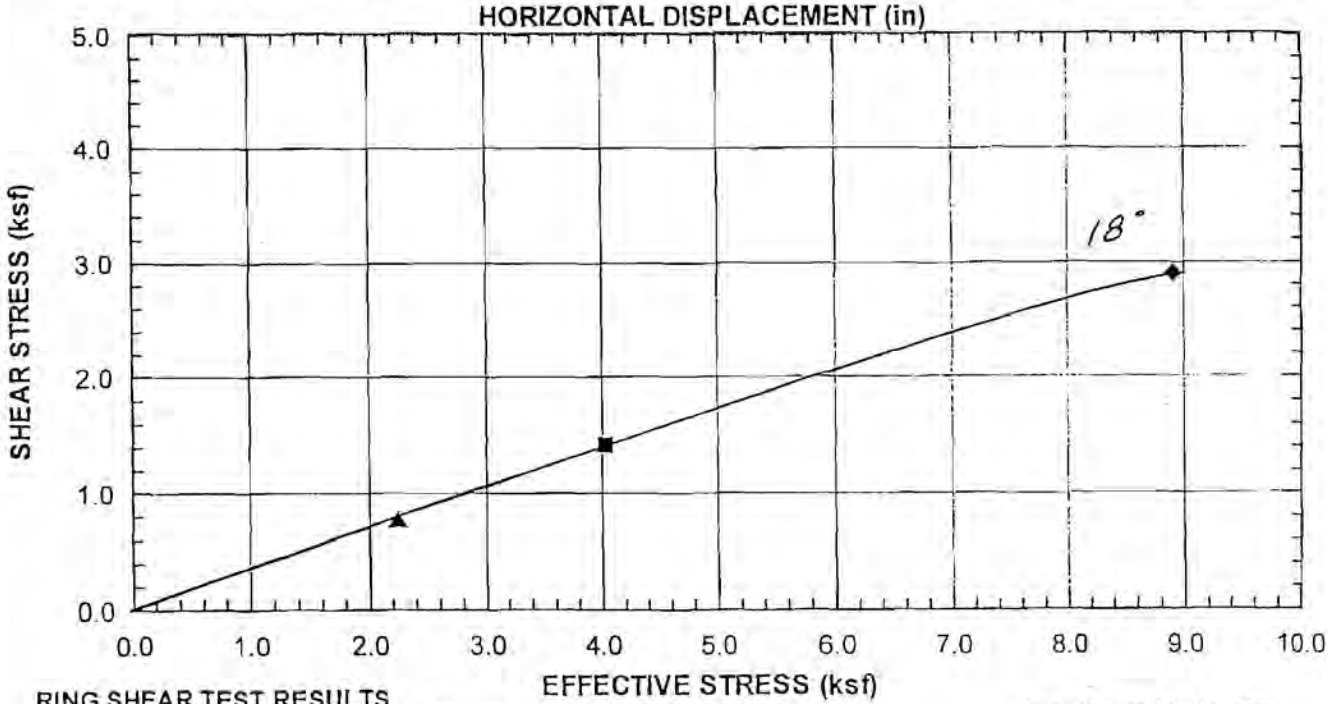
PLASTICITY CHART

CUSD/Rancho Capistrano
San Juan Capistrano
PROJECT NO. 01012-02

NMG Geotechnical, Inc.





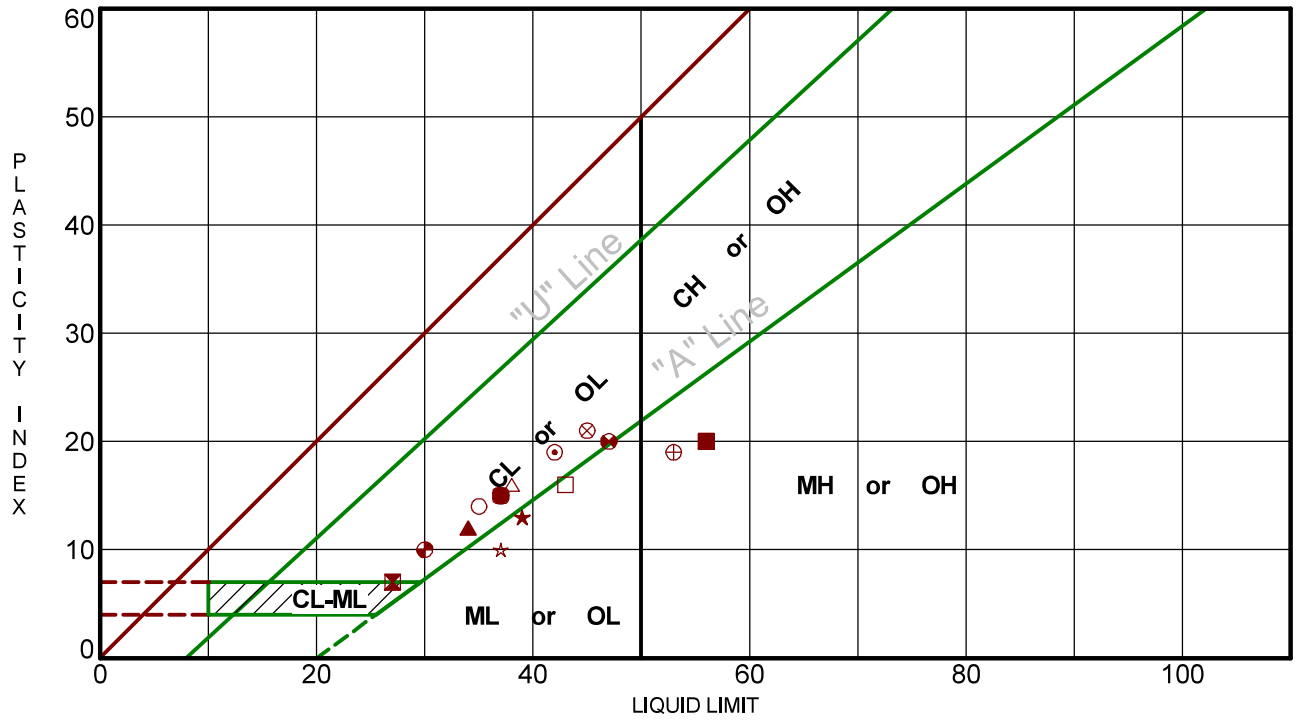


RING SHEAR TEST RESULTS
Project Name.: CUSD / Rancho Capistrano
Project Number: 01012-02
Exploration No.: B-3
Sample Number: SB-3 at 71.5 ft

Liquid Limit (%): 56
Clay Fraction (%): __
Test Number: RS20005r

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID		Depth	LL	PL	PI	Fines	USCS	Description
●	B- 1	0 - 4	37	22	15	84.5	CL	LEAN CLAY with SAND
⊠	B- 2	5 - 6.5	27	20	7		CL-ML	SILTY CLAY
▲	B- 3	7.5 - 9	34	22	12		CL	LEAN CLAY
★	B- 4	5 - 6.5	39	26	13		ML	SILT
⊙	B- 5	15 - 16.5	42	23	19		CL	LEAN CLAY
✿	B- 8	2.5 - 4	37	22	15		CL	LEAN CLAY
○	B-10	2.5 - 4	35	21	14		CL	LEAN CLAY with SAND
△	B-11	7.5 - 9	38	22	16		CL	LEAN CLAY
⊗	B-11	40 - 41.5	45	24	21		CL	LEAN CLAY
⊕	B-12	65 - 66.5	53	34	19		MH	ELASTIC SILT
□	B-13	15 - 16.5	43	27	16		ML	SILT
◍	B-14	2.5 - 4	47	27	20		CL	LEAN CLAY
◕	B-17	0 - 5	30	20	10		CL	LEAN CLAY with SAND
☆	B-19	7.5 - 9	37	27	10		ML	SILT
❀	B-20	5 - 6.5	37	22	15		CL	LEAN CLAY
■	B-24	65 - 66.5	56	36	20		MH	ELASTIC SILT

PROJECT: Broad Reach Power Compass BESS

PROJECT NUMBER: 60215170

SITE: San Juan Capistrano, CA

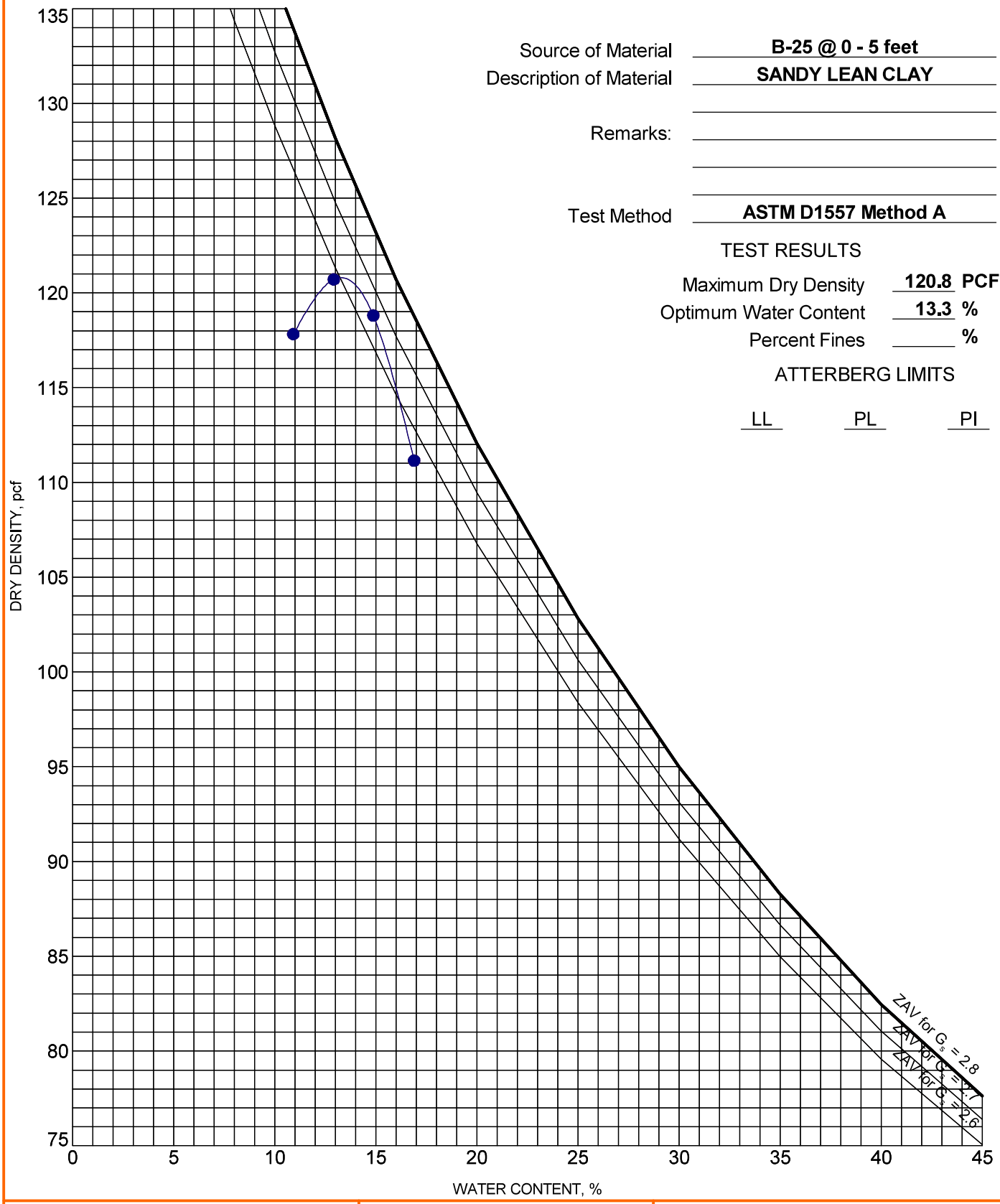
Terracon
1421 Edinger Ave, Ste C
Tustin, CA

CLIENT: Sargent & Lundy LLC
Chicago, IL

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/12/21

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: **B-25 @ 0 - 5 feet**

Description of Material: **SANDY LEAN CLAY**

Remarks:

Test Method: **ASTM D1557 Method A**

TEST RESULTS

Maximum Dry Density	**120.8**	**PCF**
Optimum Water Content	**13.3**	**%**
Percent Fines		**%**

ATTERBERG LIMITS

LL	PL	PI

PROJECT: Broad Reach Power Compass BESS

PROJECT NUMBER: 60215170

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Terracon
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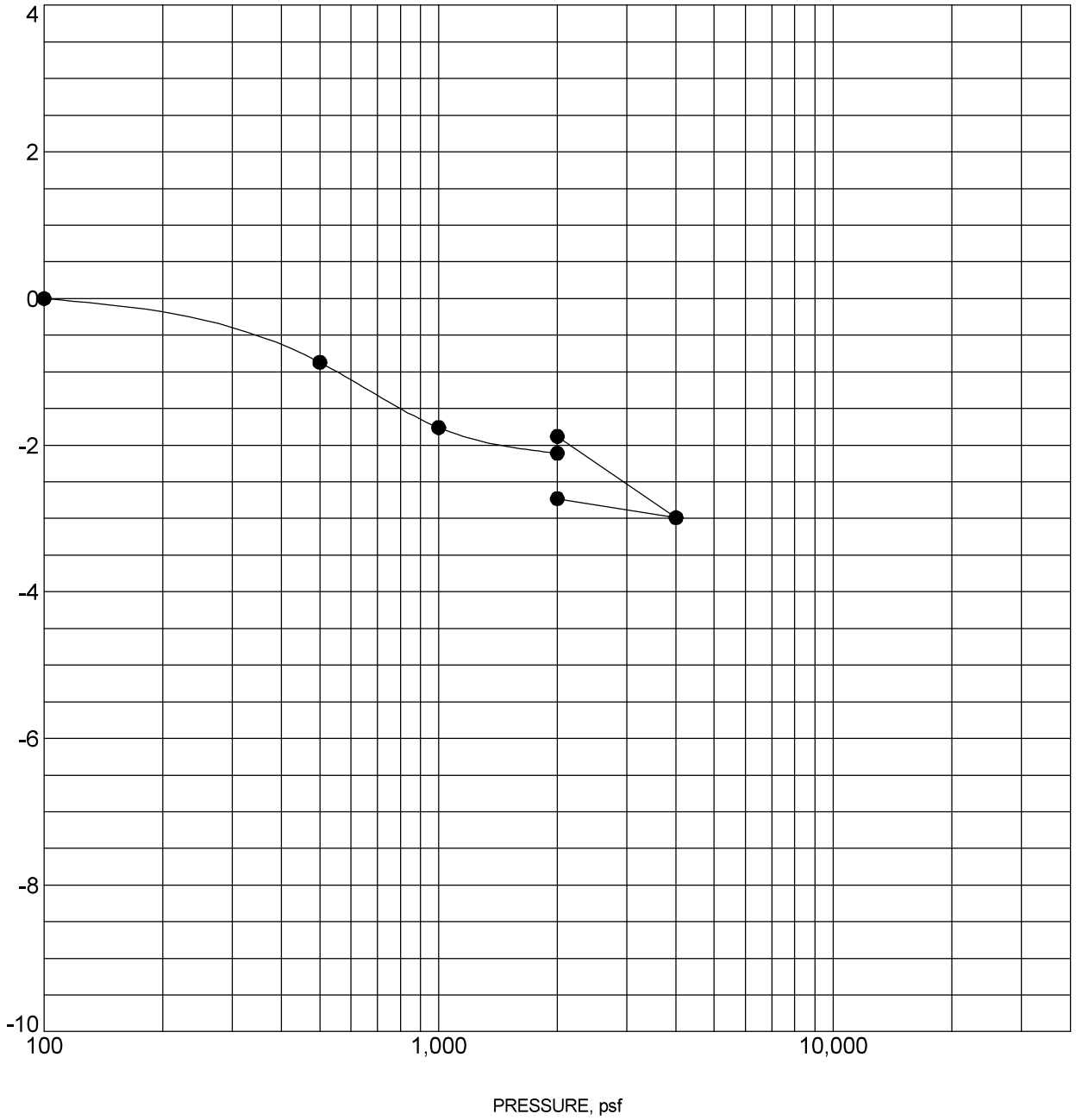
Tustin, CA

CLIENT: Sargent & Lundy LLC
Chicago, IL

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/12/21

SWELL CONSOLIDATION TEST

ASTM D4546



Specimen Identification			Classification	γ_d, pcf	WC, %
●	B- 1	5 - 6.5 ft	LEAN CLAY with SAND	100	18.7

NOTES: Water added at 2,000 psf

PROJECT: Broad Reach Power Compass BESS

PROJECT NUMBER: 60215170

SITE: San Juan Capistrano, CA

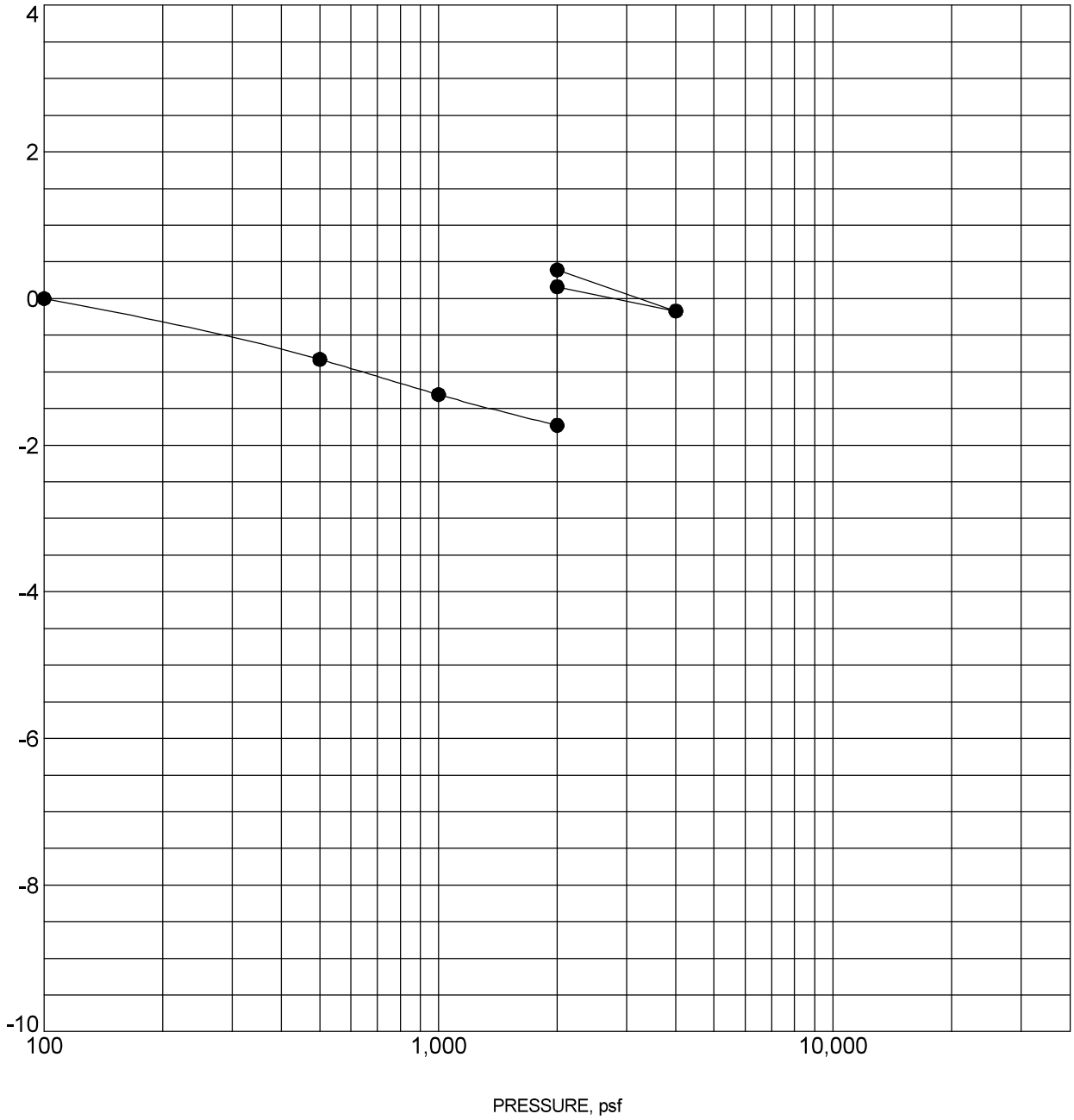
Terracon
1421 Edinger Ave, Ste C
Tustin, CA

CLIENT: Sargent & Lundy LLC
Chicago, IL

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. TC_CONSOL_STRAIN-USCS 60215170 COMPASS BESS.GPJ TERRACON_DATATEMPLATE.GDT 10/12/21

SWELL CONSOLIDATION TEST

ASTM D4546



Specimen Identification			Classification	γ_d, pcf	WC, %
●	B- 3	5 - 6.5 ft	LEAN CLAY with SAND	103	17.4

NOTES: Water added at 2,000 psf

PROJECT: Broad Reach Power Compass BESS

SITE: San Juan Capistrano, CA

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

PROJECT NUMBER: 60215170

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Chicago, IL

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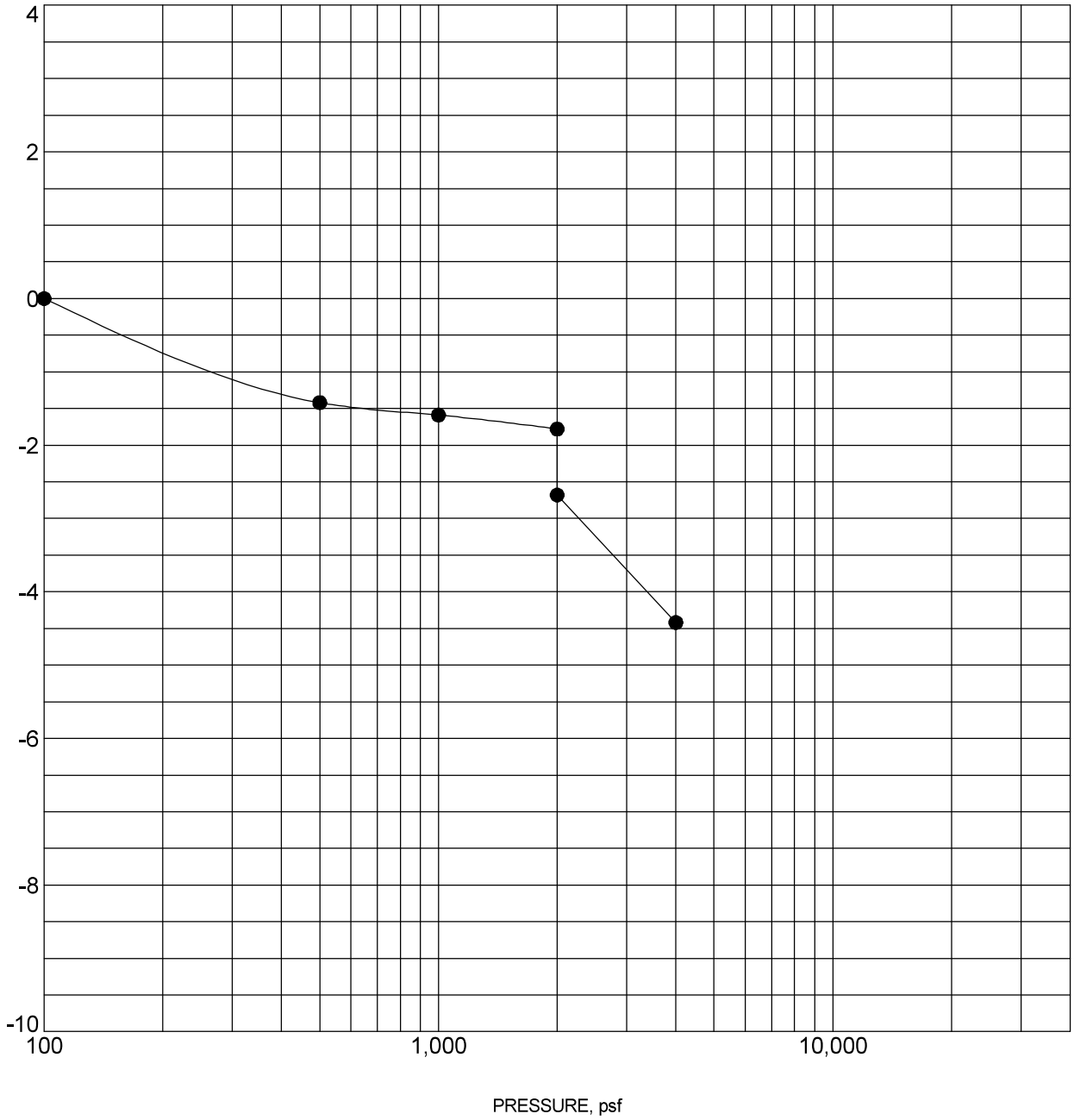
SWELL CONSOLIDATION TEST

ASTM D4546



Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-20	2.5 - 4 ft	SANDY SILT	92	11.6

NOTES: Water added at 2,000 psf

PROJECT: Broad Reach Power Compass BESS

SITE: San Juan Capistrano, CA

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

PROJECT NUMBER: 60215170

CLIENT: Sargent & Lundy LLC
Chicago, IL

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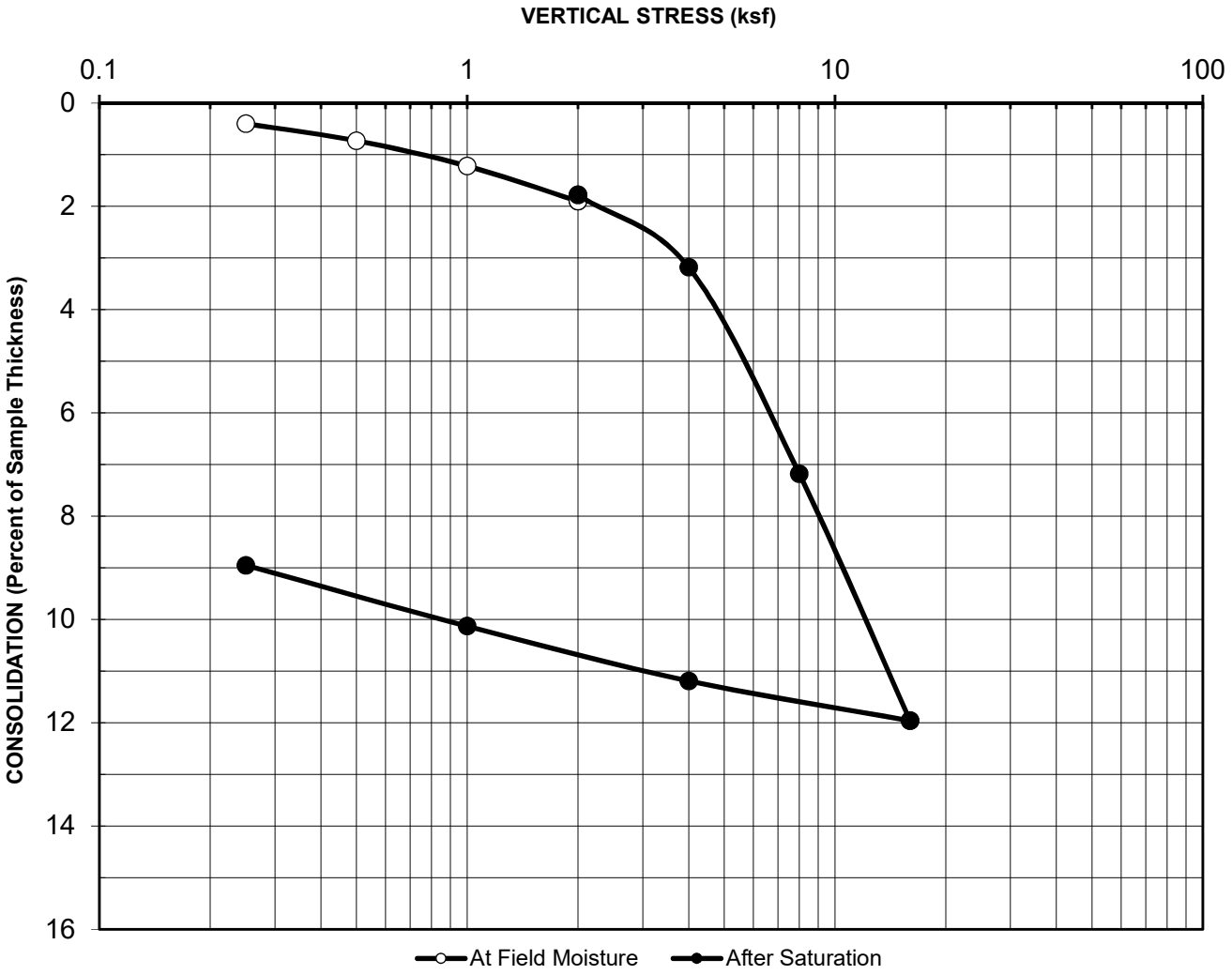

Boring No. :	B-15	Initial Dry Unit Weight (pcf):	96.3
Sample No.:	-	Initial Moisture Content (%):	14.2
Depth (feet):	7.5	Final Moisture Content (%):	22.2
Sample Type:	Mod Cal	Assumed Specific Gravity:	2.7
Soil Description:	Lean Clay	Initial Void Ratio:	0.75
Remarks:	Swell= 0.12% upon inundation		

CONSOLIDATION CURVE
ASTM D 2435

Project Name:	Compass BESS
Project No.:	6E+07
Date:	9/22/2021
AP No:	21-0953 **Sheet No:** 1

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CORROSION TEST RESULTS

Client Name: Terracon
Project Name: Compass BESS
Project No.: 60215170

AP Job No.: 21-0953
Date: 09/23/21

Boring No.	Sample No.	Depth (feet)	Soil Description	Minimum Resistivity (ohm-cm)	pH	Sulfate Content (ppm)	Chloride Content (ppm)
B-1	-	0	Lean Clay	1,867	8.0	50	27
B-3	-	0	Silty Clay	2,215	8.0	46	40
B-12	-	0	Lean Clay	1,461	8.0	64	23
B-25	-	0	Lean Clay	1,313	8.1	91	36

NOTES: Resistivity Test and pH: California Test Method 643
Sulfate Content : California Test Method 417
Chloride Content : California Test Method 422
ND = Not Detectable
NA = Not Sufficient Sample
NR = Not Requested

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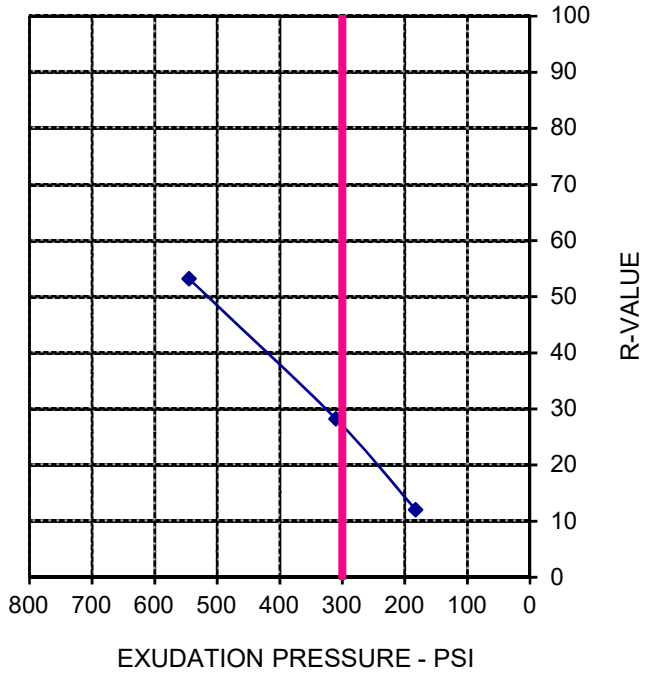
R-VALUE TEST DATA

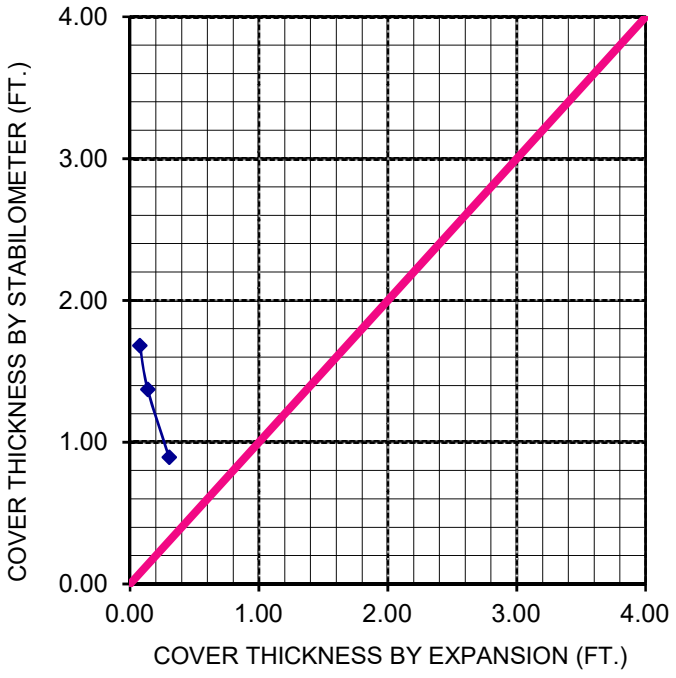
ASTM D2844

Project Name:	Compass BESS	Tested By:	ST	Date:	09/23/21
Project Number:	60215170	Computed By:	KM	Date:	09/24/21
Boring No.:	B-15	Checked By:	AP	Date:	09/28/21
Sample No.:	-	Depth (ft.):	0		
Location:	N/A				
Soil Description:	Sandy silty clay				

Mold Number	A	C	B	
Water Added, g	61	75	92	
Compact Moisture(%)	15.8	17.2	18.9	
Compaction Gage Pressure, psi	250	180	125	
Exudation Pressure, psi	545	310	183	
Sample Height, Inches	2.4	2.5	2.5	
Gross Weight Mold, g	2979	2989	3004	
Tare Weight Mold, g	1967	1968	1966	
Net Sample Weight, g	1012	1021	1038	
Expansion, inchesx10^{-4}	91	41	23	
Stability 2,000 (160 psi)	22/52	40/92	55/125	
Turns Displacement	4.11	4.70	5.11	
R-Value Uncorrected	56	28	12	
R-Value Corrected	53	28	12	
Dry Density, pcf	110.4	105.5	105.8	
Traffic Index	8.0	8.0	8.0	
G.E. by Stability	0.89	1.37	1.68	
G.E. by Expansion	0.30	0.14	0.08	

R-VALUE	By Exudation:	27
	By Expansion:	*N/A
	At Equilibrium: (by Exudation)	27
Remarks	Gf = 1.34, and 1.1 % Retained on the ¾" *Not Applicable	





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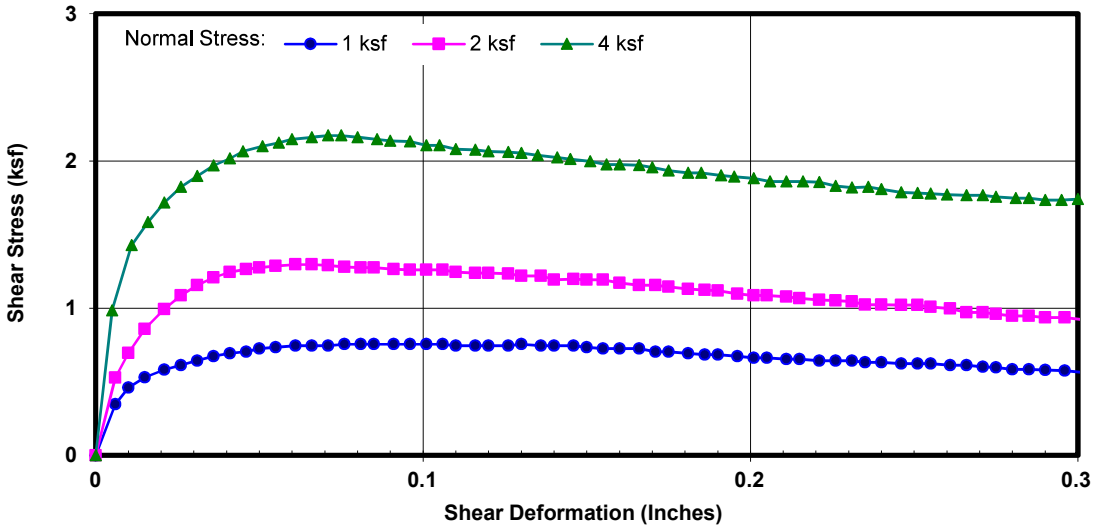
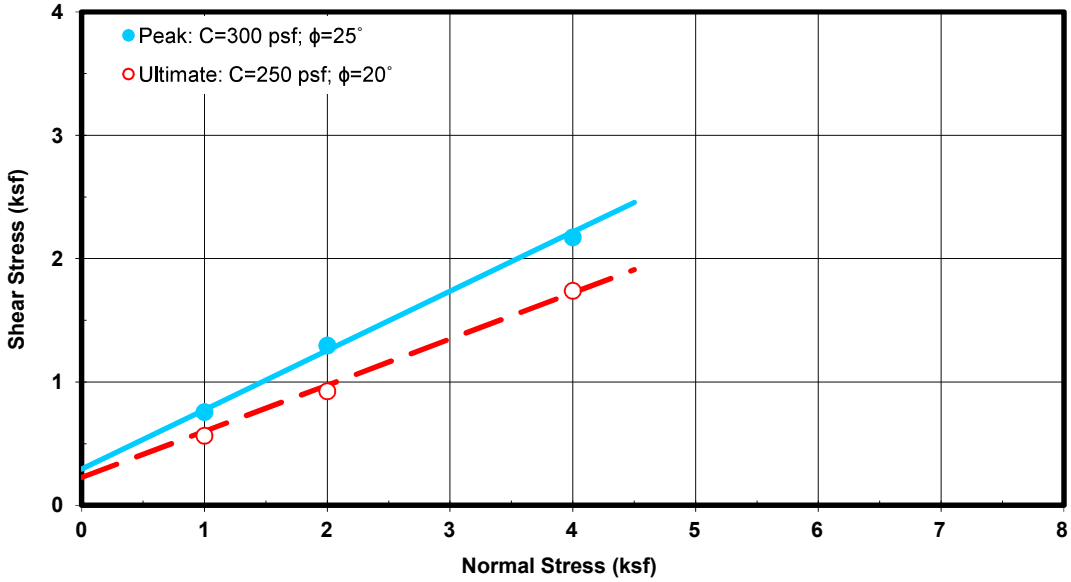
DIRECT SHEAR TEST RESULTS
ASTM D 3080

Client:	Terracon		**Tested By:**	LS	**Date:** 09/24/21
Project Name:	Compass BESS		**Computed By:**	NR	**Date:** 09/27/21
Project No.:	60215170		**Checked by:**	AP	**Date:** 09/28/21
Boring No.:	B-10				
Sample No.:	-	**Depth (ft):** 10			
Sample Type:	Mod. Cal.				
Soil Description:	Clay				
Test Condition:	Inundated	**Shear Type:** Regular			

Wet Unit Weight (pcf)	Dry Unit Weight (pcf)	Initial Moisture Content (%)	Final Moisture Content (%)	Initial Degree Saturation (%)	Final Degree Saturation (%)	Normal Stress (ksf)	Peak Shear Stress (ksf)	Ultimate Shear Stress (ksf)
108.4	79.5	36.3	41.5	88	100	1	0.755	0.564
						2	1.296	0.924
						4	2.172	1.740





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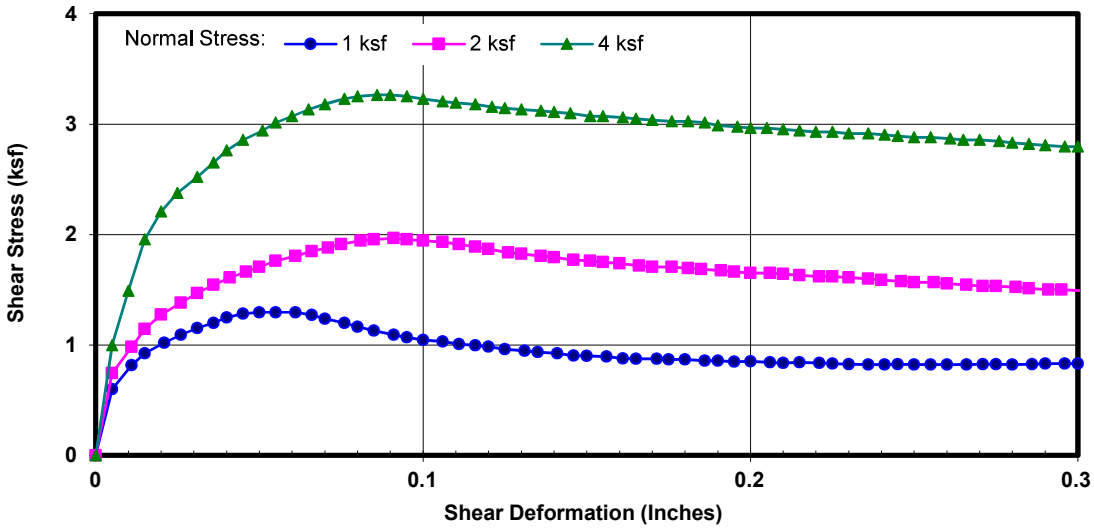
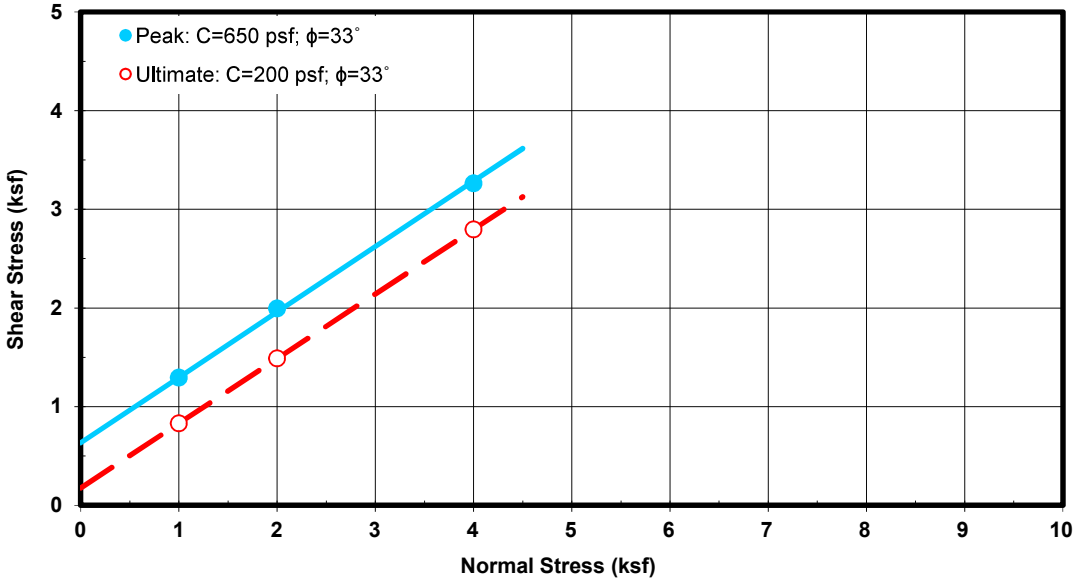
DIRECT SHEAR TEST RESULTS
ASTM D 3080

Client:	Terracon		**Tested By:**	LS	**Date:** 09/24/21
Project Name:	Compass BESS		**Computed By:**	NR	**Date:** 09/27/21
Project No.:	60215170		**Checked by:**	AP	**Date:** 09/28/21
Boring No.:	B-12				
Sample No.:	-	**Depth (ft):** 10			
Sample Type:	Mod. Cal.				
Soil Description:	Clay				
Test Condition:	Inundated	**Shear Type:** Regular			

Wet Unit Weight (pcf)	Dry Unit Weight (pcf)	Initial Moisture Content (%)	Final Moisture Content (%)	Initial Degree Saturation (%)	Final Degree Saturation (%)	Normal Stress (ksf)	Peak Shear Stress (ksf)	Ultimate Shear Stress (ksf)
124.4	107.3	15.9	21.2	75	100	1	1.296	0.831
						2	1.996	1.490
						4	3.264	2.796





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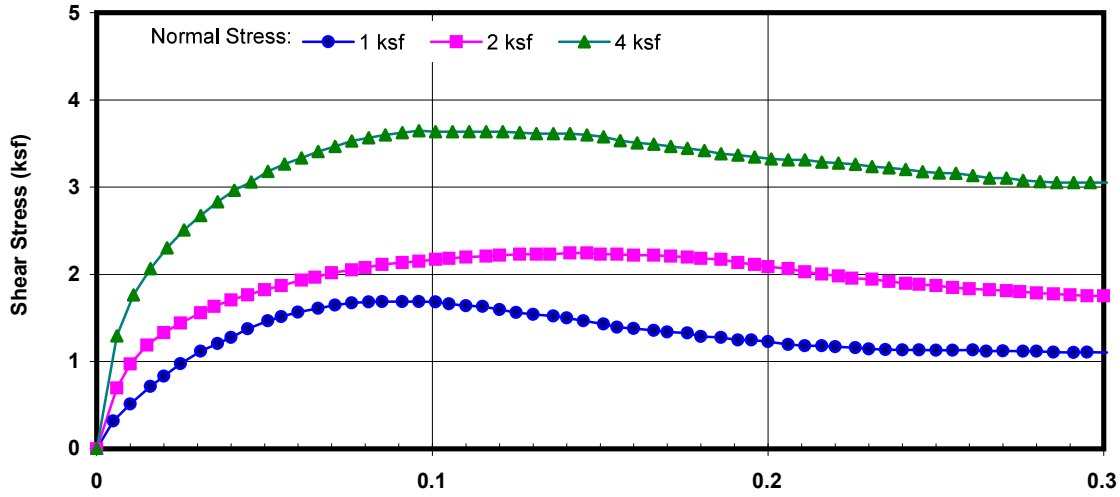
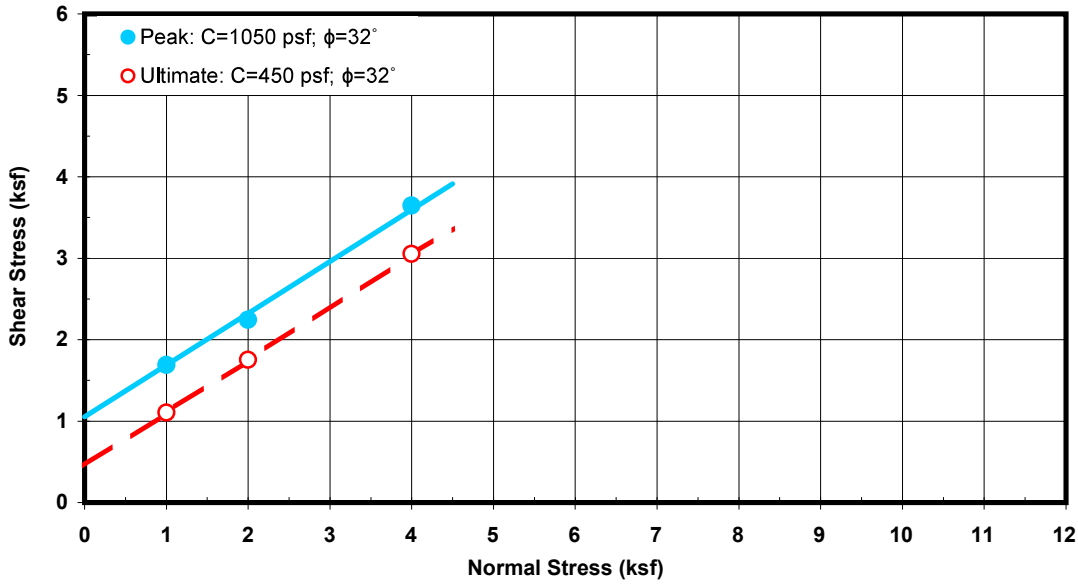
DIRECT SHEAR TEST RESULTS
ASTM D 3080

Client:	Terracon		**Tested By:**	LS	**Date:** 09/23/21
Project Name:	Compass BESS		**Computed By:**	NR	**Date:** 09/24/21
Project No.:	60215170		**Checked by:**	AP	**Date:** 09/28/21
Boring No.:	B-13				
Sample No.:	-	**Depth (ft):** 10			
Sample Type:	Mod. Cal.				
Soil Description:	Silt				
Test Condition:	Inundated	**Shear Type:** Regular			

Wet Unit Weight (pcf)	Dry Unit Weight (pcf)	Initial Moisture Content (%)	Final Moisture Content (%)	Initial Degree Saturation (%)	Final Degree Saturation (%)	Normal Stress (ksf)	Peak Shear Stress (ksf)	Ultimate Shear Stress (ksf)
128.3	105.5	21.6	22.0	98	100	1	1.688	1.103
						2	2.244	1.752
						4	3.648	3.052





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UNCONSOLIDATED UNDRAINED TRIAXIAL TEST (UU,Q)
ASTM D 2850

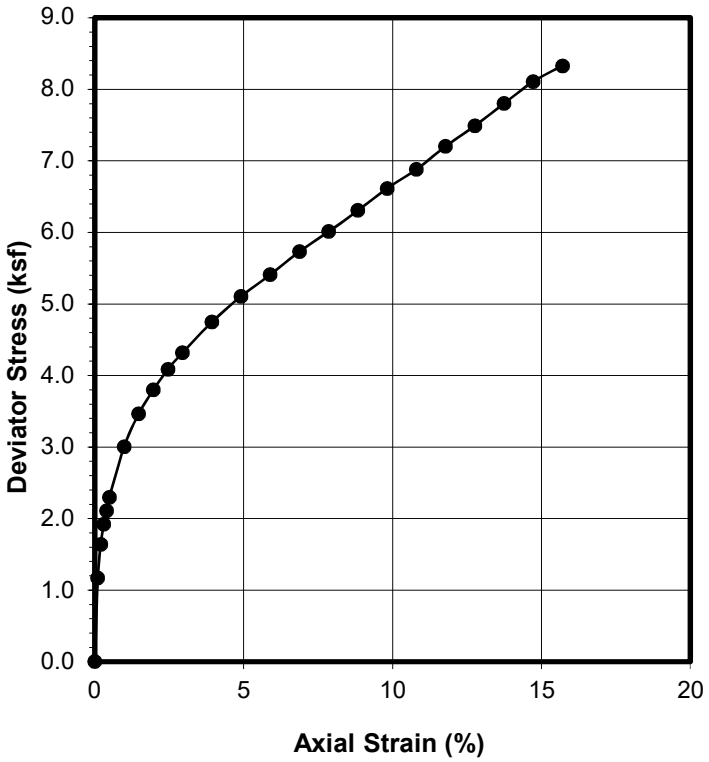
Client Name:	Terracon		Tested By:	ST	Date: 09/23/21
Project Name:	Compass BESS		Checked by:	AP	Date: 09/28/21
Project No.:	60215170				
Boring No.:	B-5				
Sample No.:	-	Depth (feet): 60			
Soil Description	Silty Clay		Sample Type:	Mod. Cal.	

Sample Diameter (inch):	2.409	Wet Unit Weight (pcf):	128.7
Sample Height (inch):	5.093	Dry Unit Weight (pcf):	107.9
Sample Weight (g):	784.51	Moisture Content (%):	19.3
Wt. of Wet Soil+Container (g):	125.17	Void Ratio for Gs=2.7:	0.56
Wt. of Dry Soil+Container (g):	113.09	% Saturation:	92.7
Wt. of Container (g):	50.47		

TEST DATA

Cell Pressure (ksf):	7.00
Back Pressure (ksf):	0.0
Tested Total Confining Pressure (ksf):	7.00
Shear Rate (%/min):	0.3
Maximum Deviator Stress (ksf):	8.33
Ultimate Deviator Stress (ksf):	8.33
Ultimate Undrained Shear Strength (ksf):	4.16
Axial Strain @ Maximum Stress (%)	15.71





Load (lbs)	Def. (inch)	Area (sq.in)	Deviator Stress (ksf)	Axial Strain (%)
0	0.000	4.56	0.00	0.00
37	0.005	4.56	1.17	0.10
52	0.010	4.57	1.64	0.20
61	0.015	4.57	1.92	0.29
67	0.020	4.57	2.11	0.39
73	0.025	4.58	2.30	0.49
96	0.050	4.60	3.00	0.98
111	0.075	4.62	3.47	1.47
123	0.100	4.65	3.80	1.96
133	0.125	4.67	4.09	2.45
141	0.150	4.69	4.32	2.95
156	0.200	4.74	4.75	3.93
170	0.250	4.79	5.11	4.91
182	0.300	4.84	5.41	5.89
195	0.350	4.89	5.73	6.87
207	0.400	4.95	6.01	7.85
219	0.450	5.00	6.31	8.84
232	0.500	5.05	6.61	9.82
244	0.550	5.11	6.88	10.80
258	0.600	5.17	7.20	11.78
272	0.650	5.22	7.49	12.76
286	0.700	5.28	7.80	13.74
301	0.750	5.34	8.11	14.73
313	0.800	5.41	8.33	15.71

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UNCONSOLIDATED UNDRAINED TRIAXIAL TEST (UU,Q)
ASTM D 2850

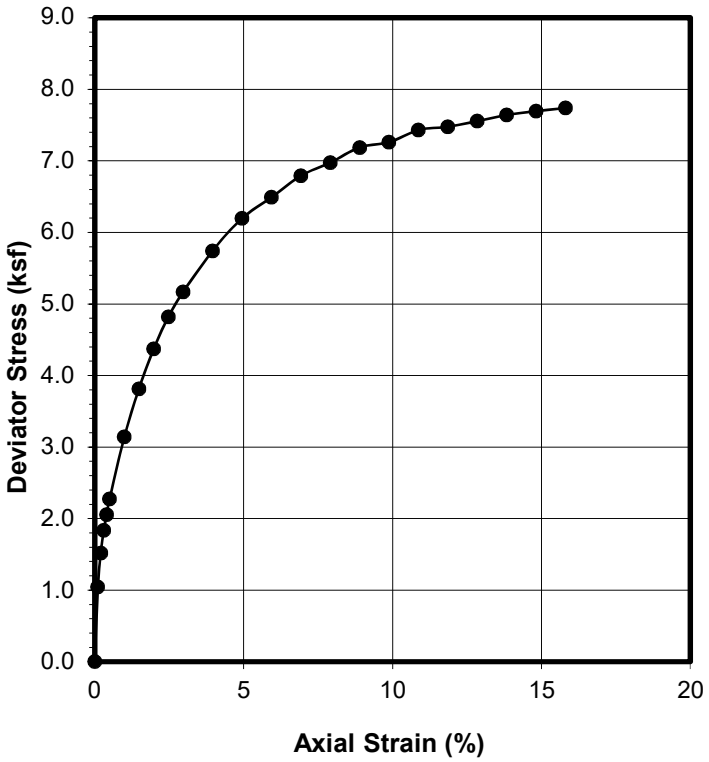
Client Name:	Terracon		Tested By:	ST	Date: 09/23/21
Project Name:	Compass BESS		Checked by:	AP	Date: 09/28/21
Project No.:	60215170				
Boring No.:	B-13				
Sample No.:	-	Depth (feet): 30			
Soil Description	Lean Clay		Sample Type:	Mod. Cal.	

Sample Diameter (inch):	2.404	Wet Unit Weight (pcf):	122.4
Sample Height (inch):	5.061	Dry Unit Weight (pcf):	95.9
Sample Weight (g):	738.50	Moisture Content (%):	27.7
Wt. of Wet Soil+Container (g):	152.54	Void Ratio for Gs=2.7:	0.76
Wt. of Dry Soil+Container (g):	130.29	% Saturation:	98.7
Wt. of Container (g):	49.92		

TEST DATA

Cell Pressure (ksf):	3.50
Back Pressure (ksf):	0.0
Tested Total Confining Pressure (ksf):	3.50
Shear Rate (%/min):	0.3
Maximum Deviator Stress (ksf):	7.74
Ultimate Deviator Stress (ksf):	7.74
Ultimate Undrained Shear Strength (ksf):	3.87
Axial Strain @ Maximum Stress (%)	15.81





Load (lbs)	Def. (inch)	Area (sq.in)	Deviator Stress (ksf)	Axial Strain (%)
0	0.000	4.54	0.00	0.00
33	0.005	4.54	1.05	0.10
48	0.010	4.55	1.52	0.20
58	0.015	4.55	1.84	0.30
65	0.020	4.56	2.05	0.40
72	0.025	4.56	2.27	0.49
100	0.050	4.58	3.14	0.99
122	0.075	4.61	3.81	1.48
141	0.100	4.63	4.37	1.98
156	0.125	4.65	4.82	2.47
168	0.150	4.68	5.17	2.96
188	0.200	4.72	5.74	3.95
205	0.250	4.77	6.20	4.94
217	0.300	4.82	6.49	5.93
230	0.350	4.87	6.79	6.92
239	0.400	4.93	6.98	7.90
249	0.450	4.98	7.19	8.89
254	0.500	5.04	7.26	9.88
263	0.550	5.09	7.43	10.87
267	0.600	5.15	7.48	11.86
273	0.650	5.21	7.56	12.84
280	0.700	5.27	7.64	13.83
285	0.750	5.33	7.70	14.82
290	0.800	5.39	7.74	15.81

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UNCONSOLIDATED UNDRAINED TRIAXIAL TEST (UU,Q)
ASTM D 2850

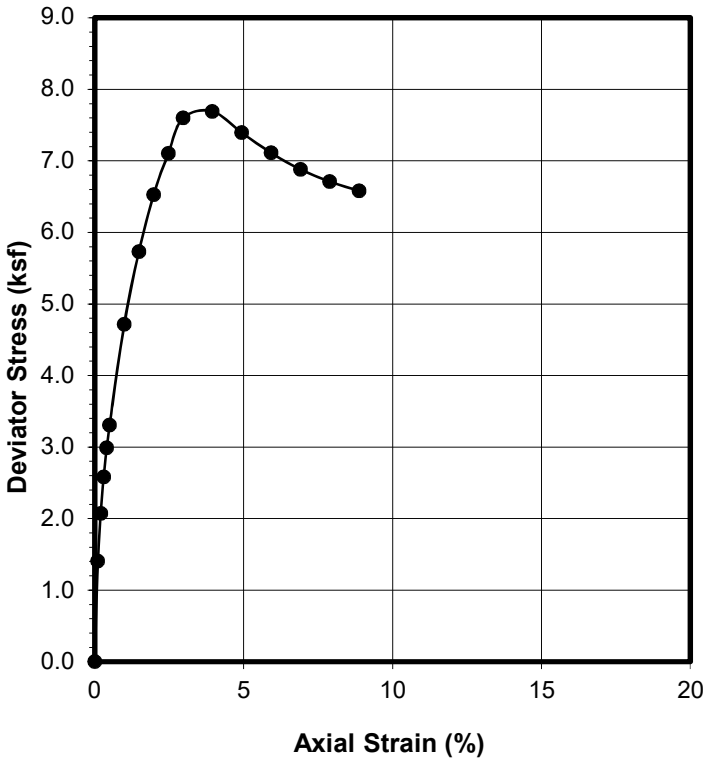
Client Name:	Terracon		Tested By:	ST	Date: 09/23/21
Project Name:	Compass BESS		Checked by:	AP	Date: 09/28/21
Project No.:	60215170				
Boring No.:	B-19				
Sample No.:	-	Depth (feet): 45			
Soil Description	Silty Clay		Sample Type:	Mod. Cal.	

Sample Diameter (inch):	2.395	Wet Unit Weight (pcf):	113.3
Sample Height (inch):	5.070	Dry Unit Weight (pcf):	85.6
Sample Weight (g):	679.89	Moisture Content (%):	32.4
Wt. of Wet Soil+Container (g):	105.81	Void Ratio for Gs=2.7:	0.97
Wt. of Dry Soil+Container (g):	92.53	% Saturation:	90.3
Wt. of Container (g):	51.56		

TEST DATA

Cell Pressure (ksf):	5.00
Back Pressure (ksf):	0.0
Tested Total Confining Pressure (ksf):	5.00
Shear Rate (%/min):	0.3
Maximum Deviator Stress (ksf):	7.69
Ultimate Deviator Stress (ksf):	6.58
Ultimate Undrained Shear Strength (ksf):	3.29
Axial Strain @ Maximum Stress (%)	3.94





Load (lbs)	Def. (inch)	Area (sq.in)	Deviator Stress (ksf)	Axial Strain (%)
0	0.000	4.51	0.00	0.00
44	0.005	4.51	1.40	0.10
65	0.010	4.52	2.07	0.20
81	0.015	4.52	2.58	0.30
94	0.020	4.52	2.99	0.39
104	0.025	4.53	3.31	0.49
149	0.050	4.55	4.71	0.99
182	0.075	4.57	5.73	1.48
208	0.100	4.60	6.53	1.97
228	0.125	4.62	7.11	2.47
245	0.150	4.64	7.60	2.96
251	0.200	4.69	7.69	3.94
243	0.250	4.74	7.39	4.93
237	0.300	4.79	7.11	5.92
231	0.350	4.84	6.88	6.90
228	0.400	4.89	6.71	7.89
226	0.450	4.95	6.58	8.88

Appendix D
Liquefaction

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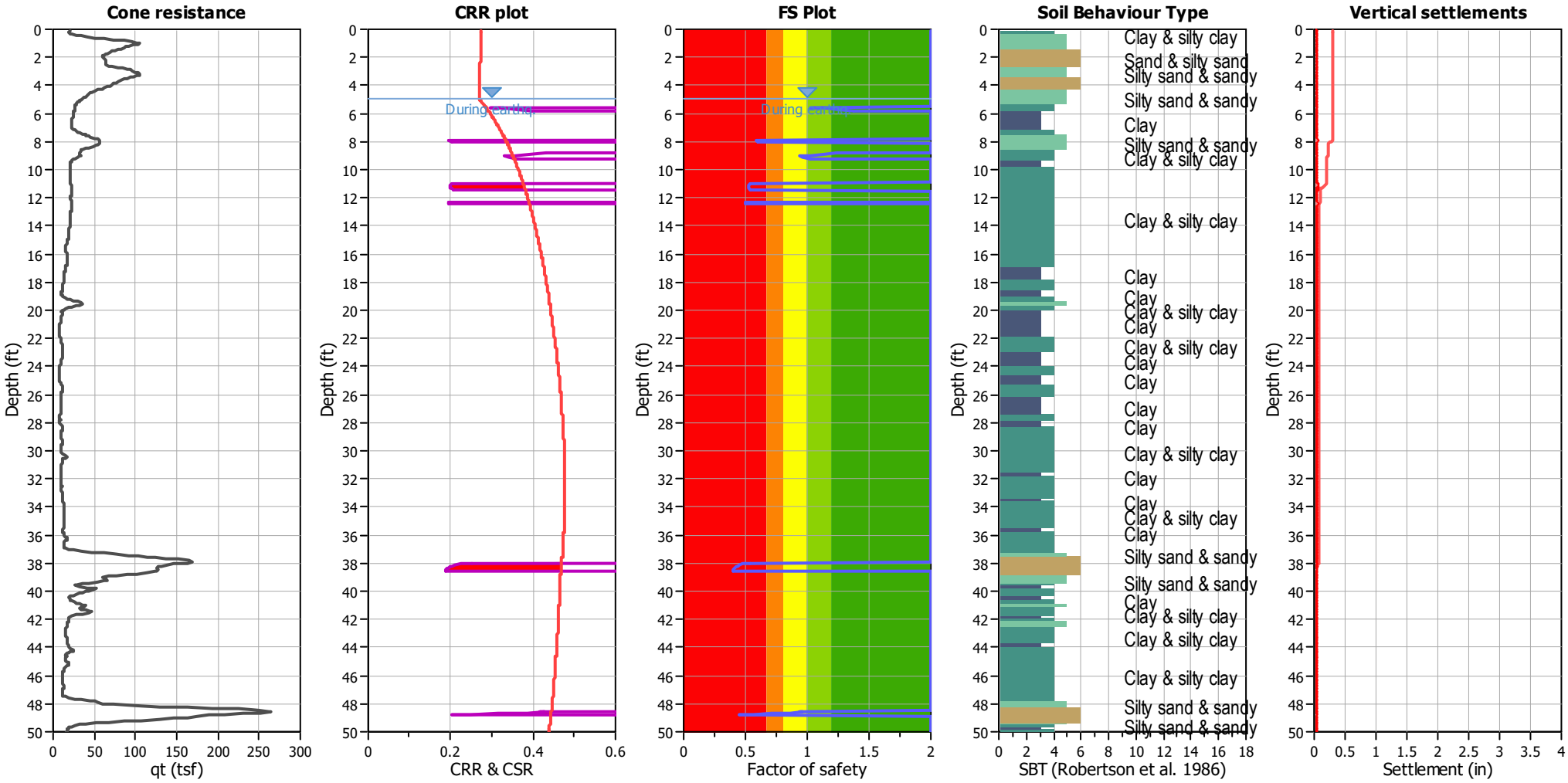
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-1
Total depth: 63.92 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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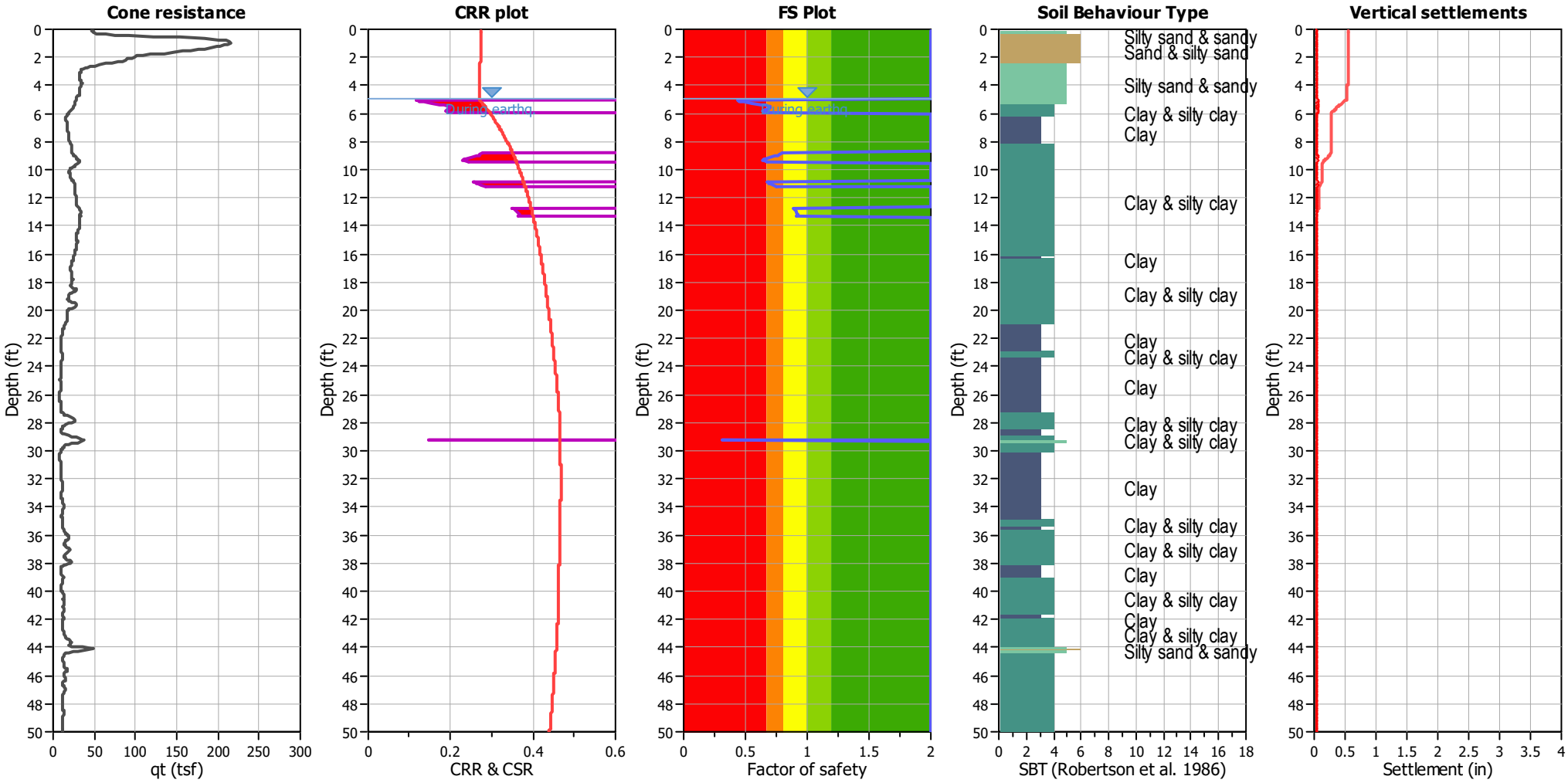
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-2
Total depth: 100.33 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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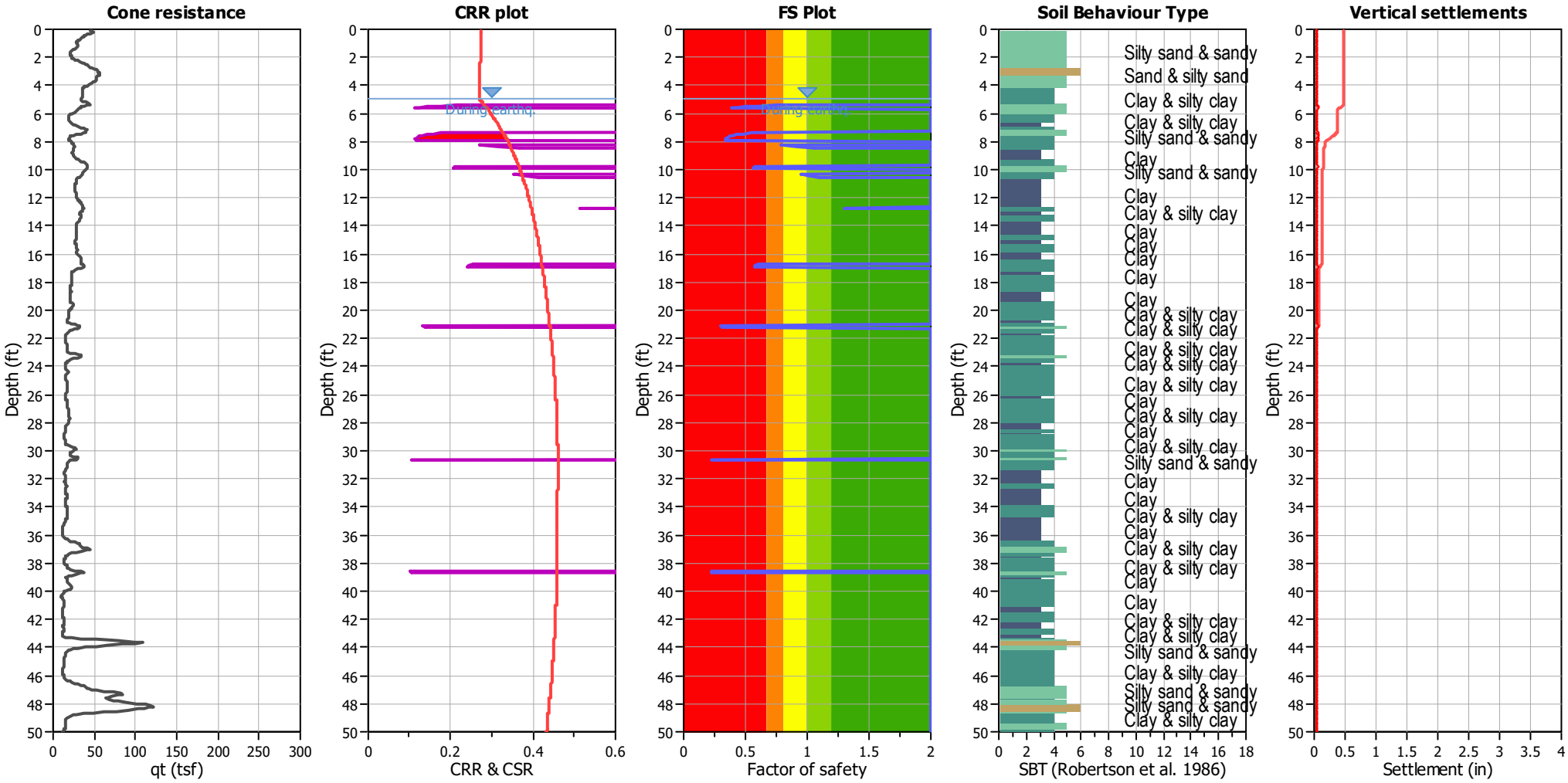
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-3
Total depth: 100.41 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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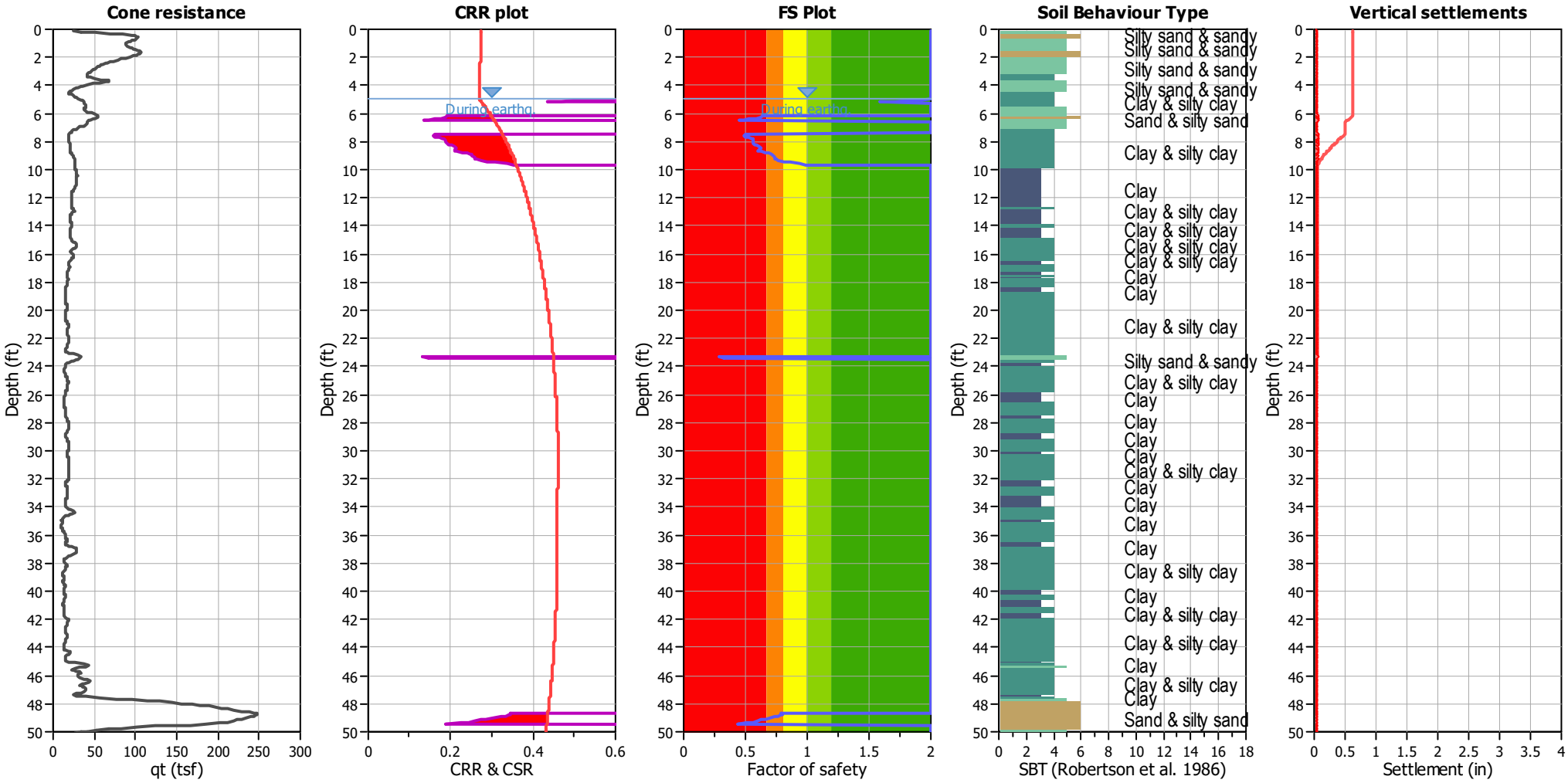
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-4
Total depth: 100.34 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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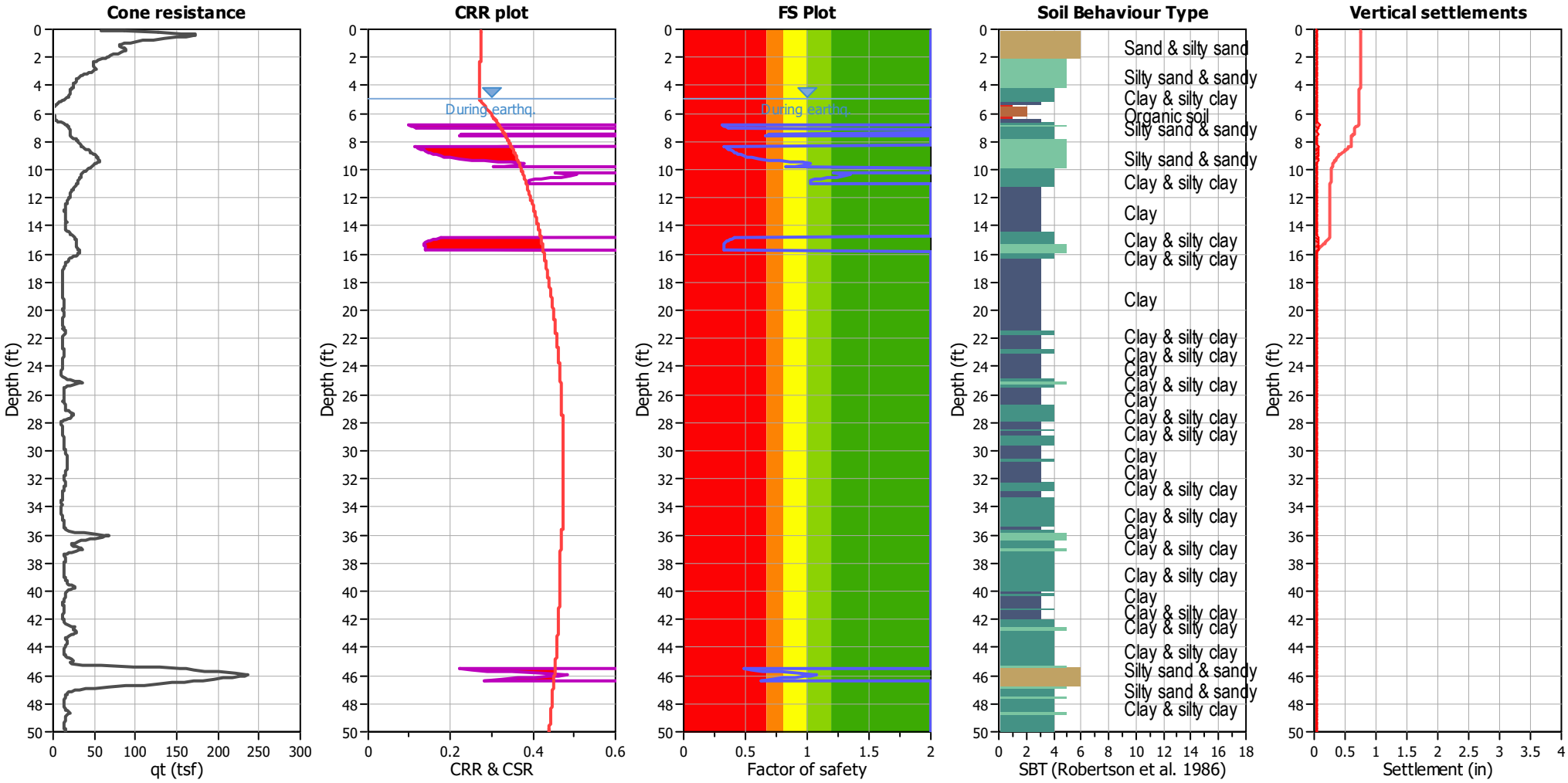
Project: **Compass 22011-01**
Location: **San Juan Capistrano**

CPT: CPT-5
Total depth: 100.41 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	45.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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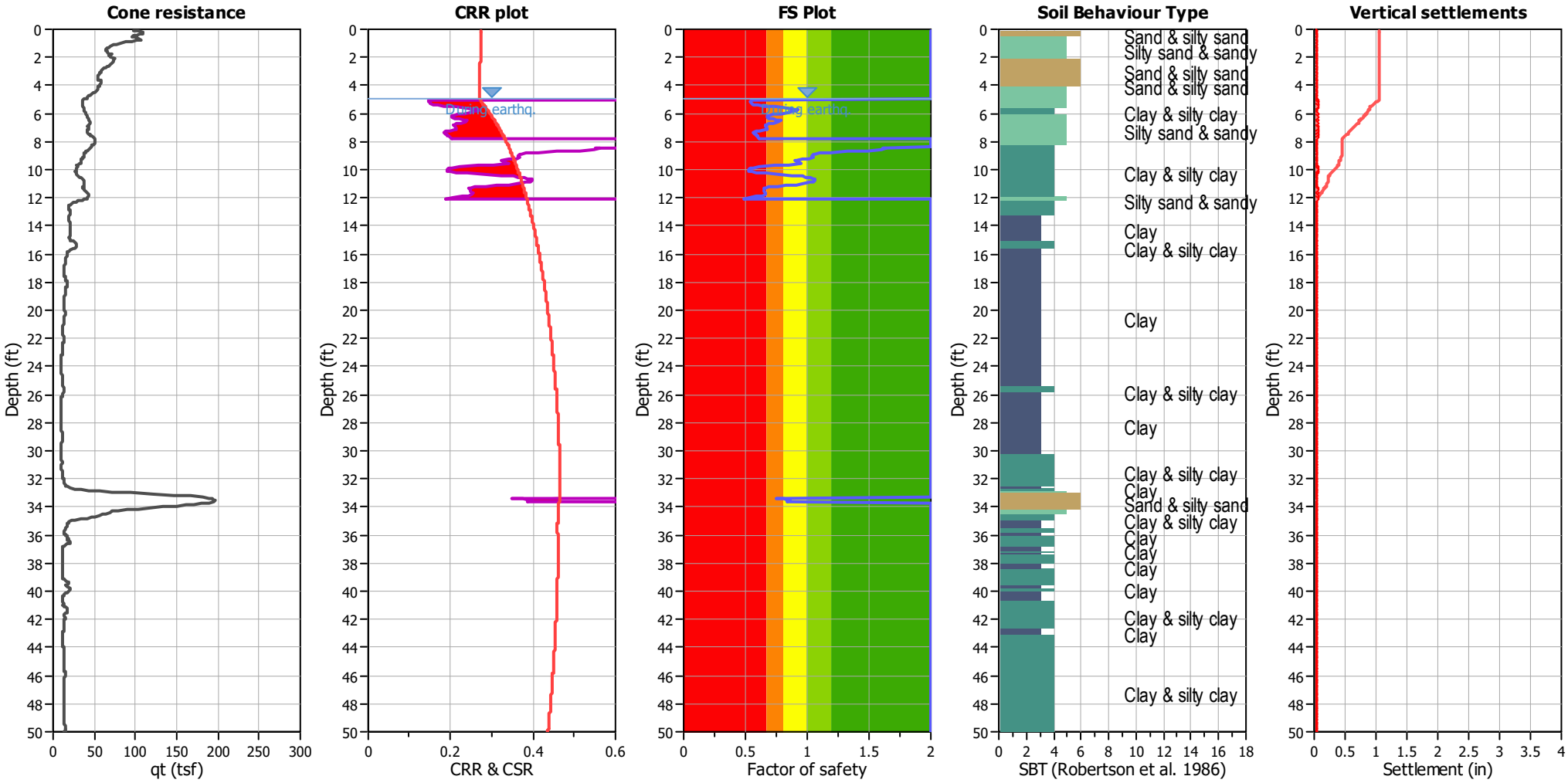
Project: **Compass 22011-01**
Location: **San Juan Capistrano**

CPT: CPT-6
Total depth: 93.05 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	45.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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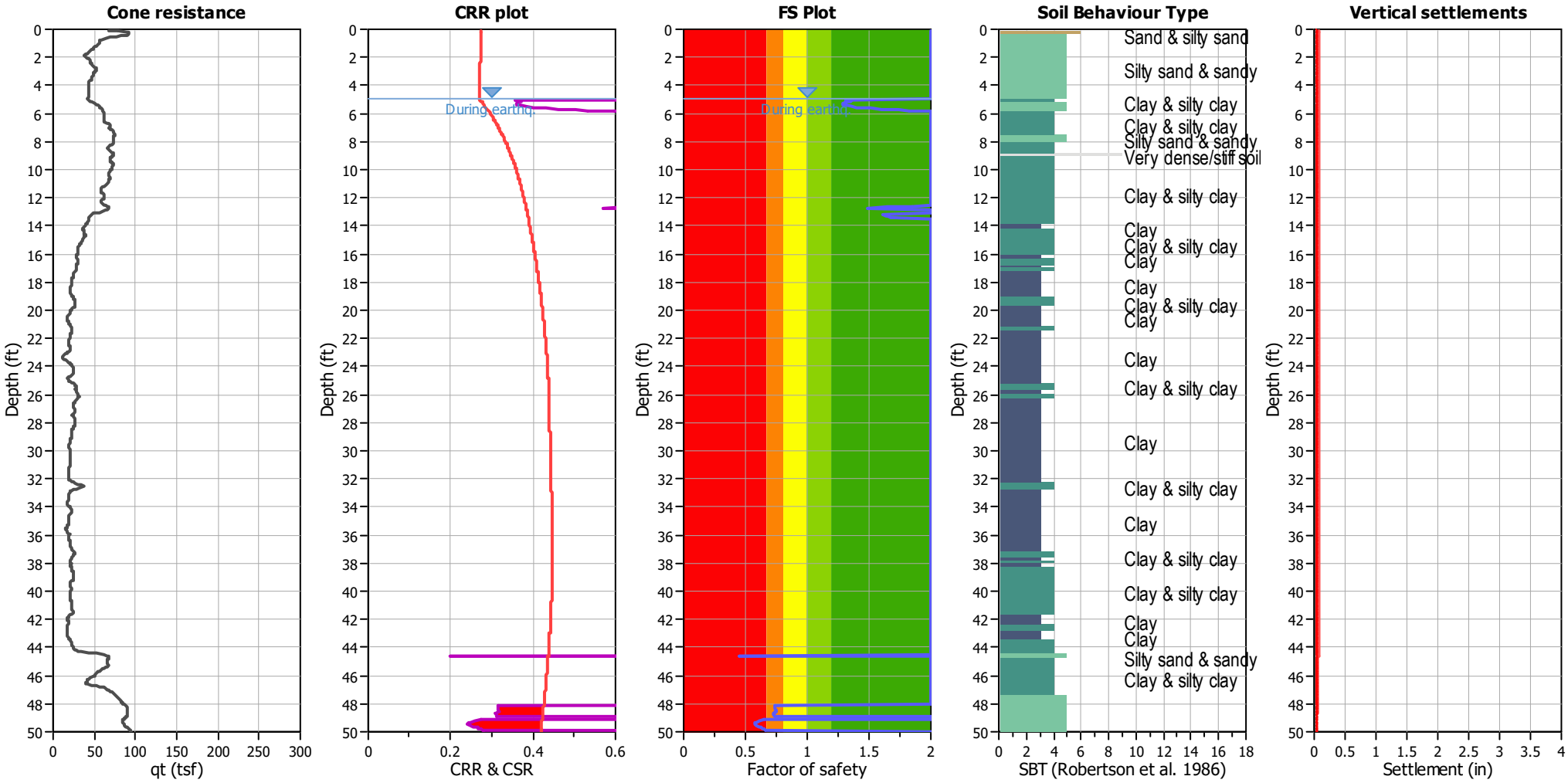
Project: **Compass 22011-01**
Location: **San Juan Capistrano**

CPT: CPT-7
Total depth: 68.78 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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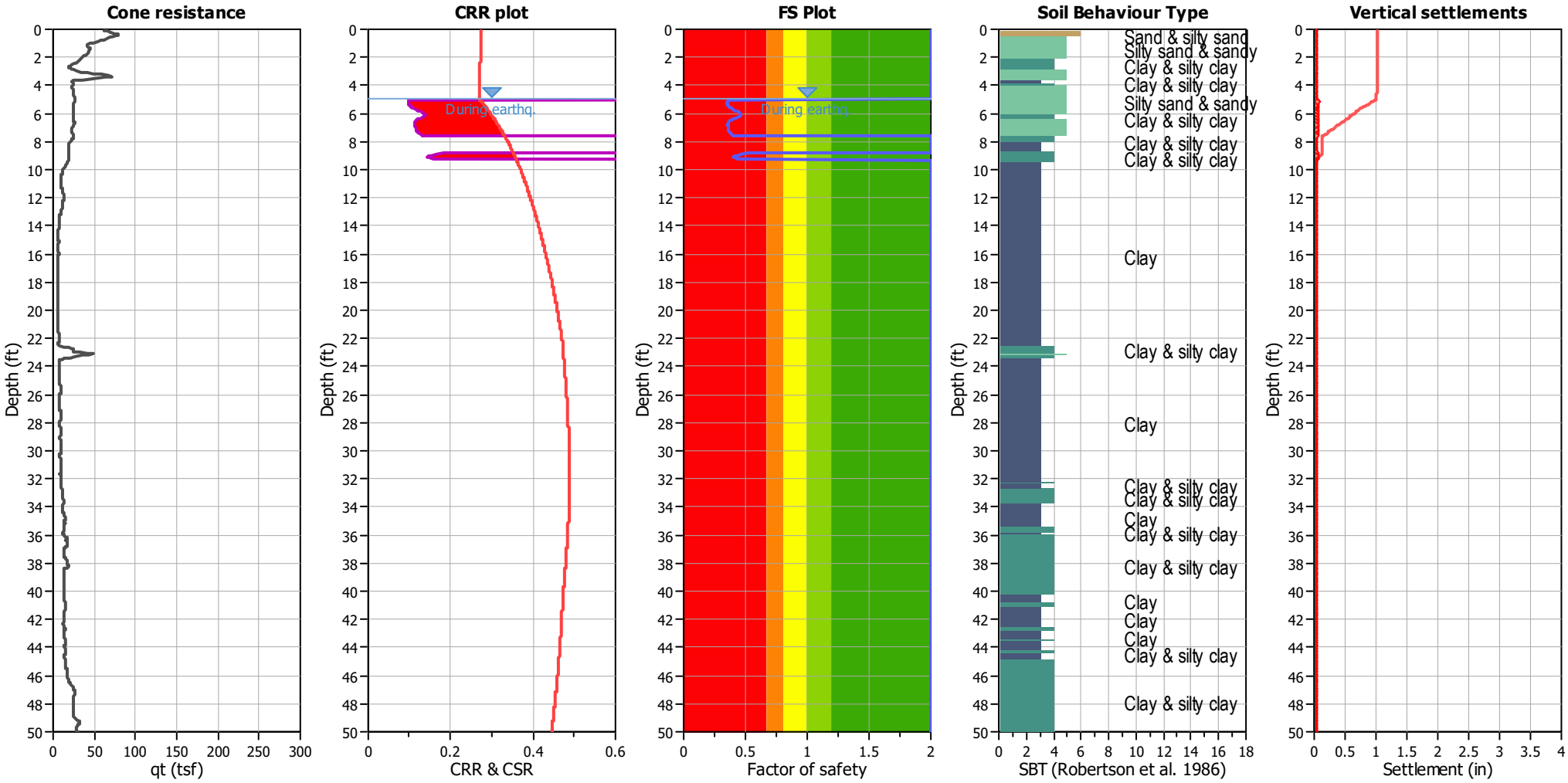
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-8
Total depth: 90.43 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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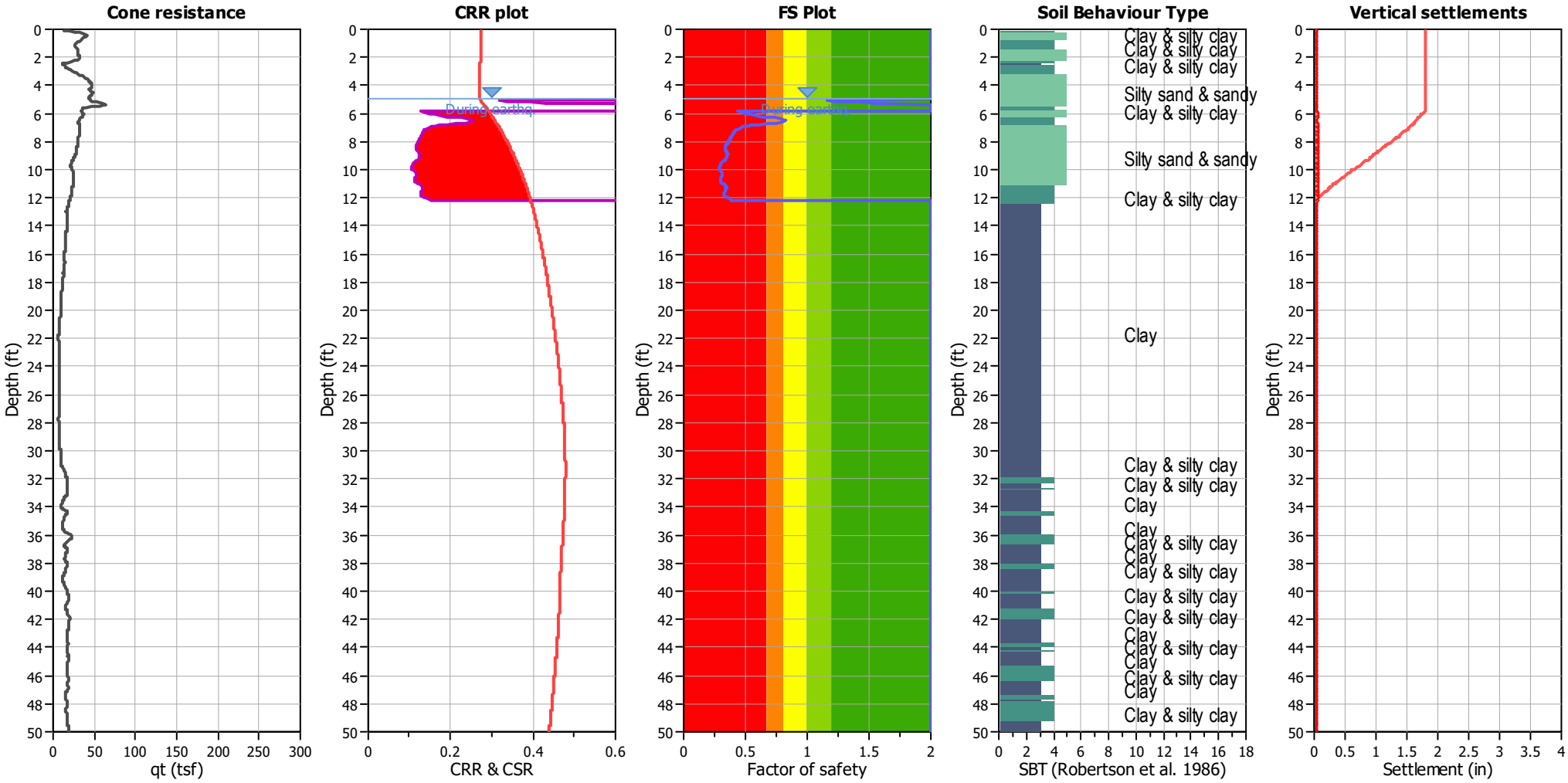
Project: **Compass 22011-01**
Location: **San Juan Capistrano**

CPT: CPT-9
Total depth: 95.56 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	48.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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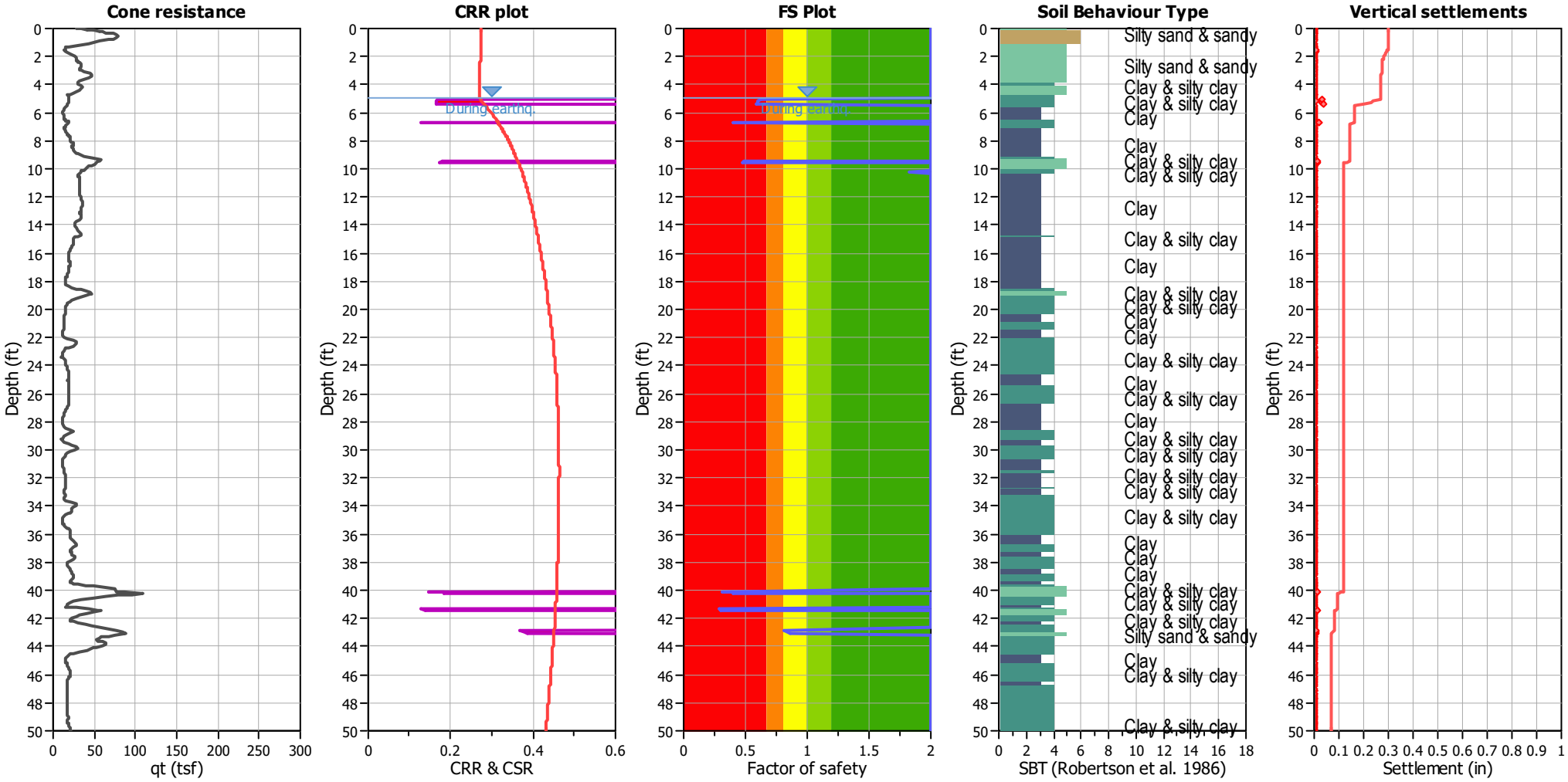
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-10
Total depth: 84.48 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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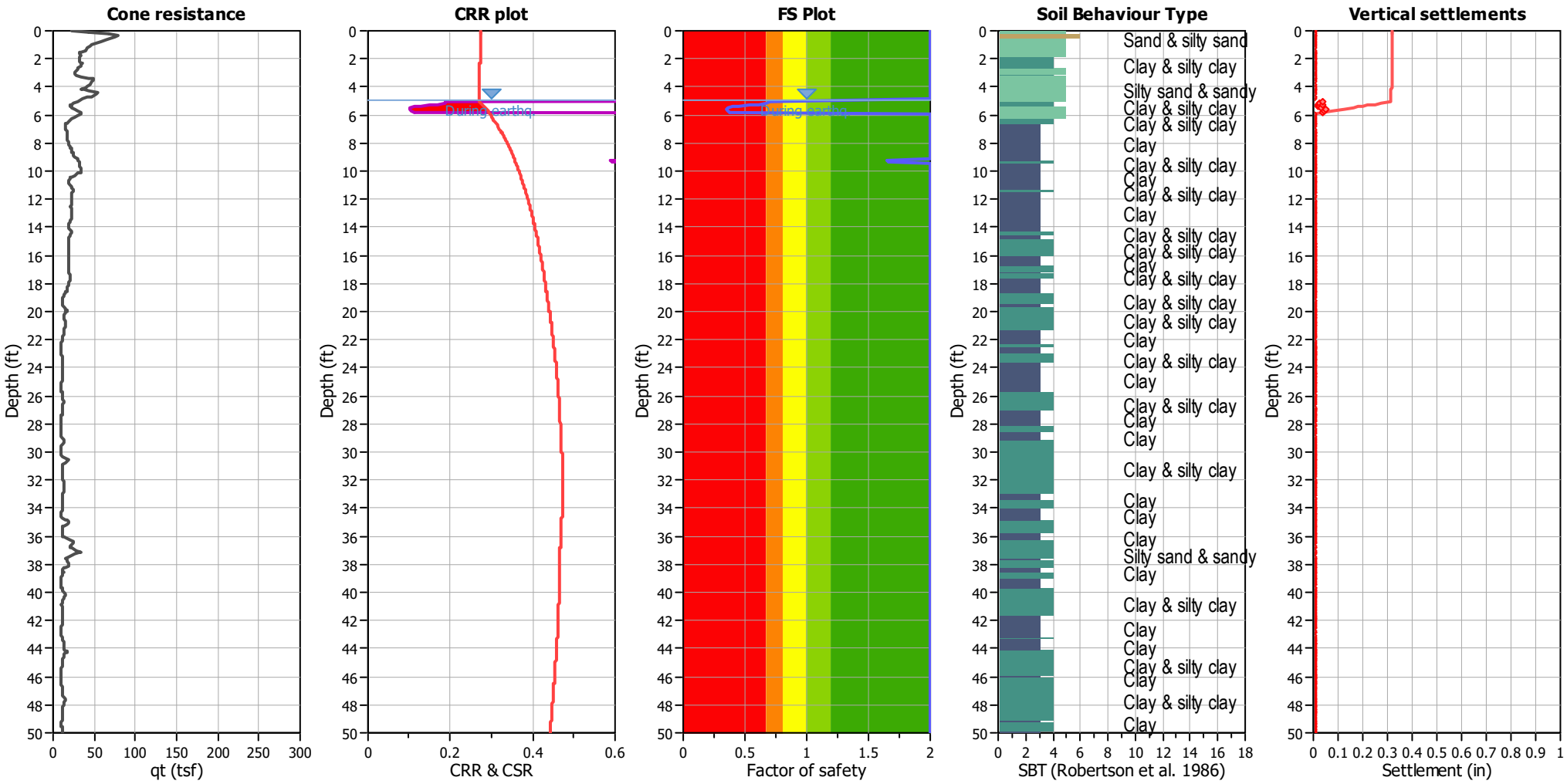
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-11
Total depth: 97.94 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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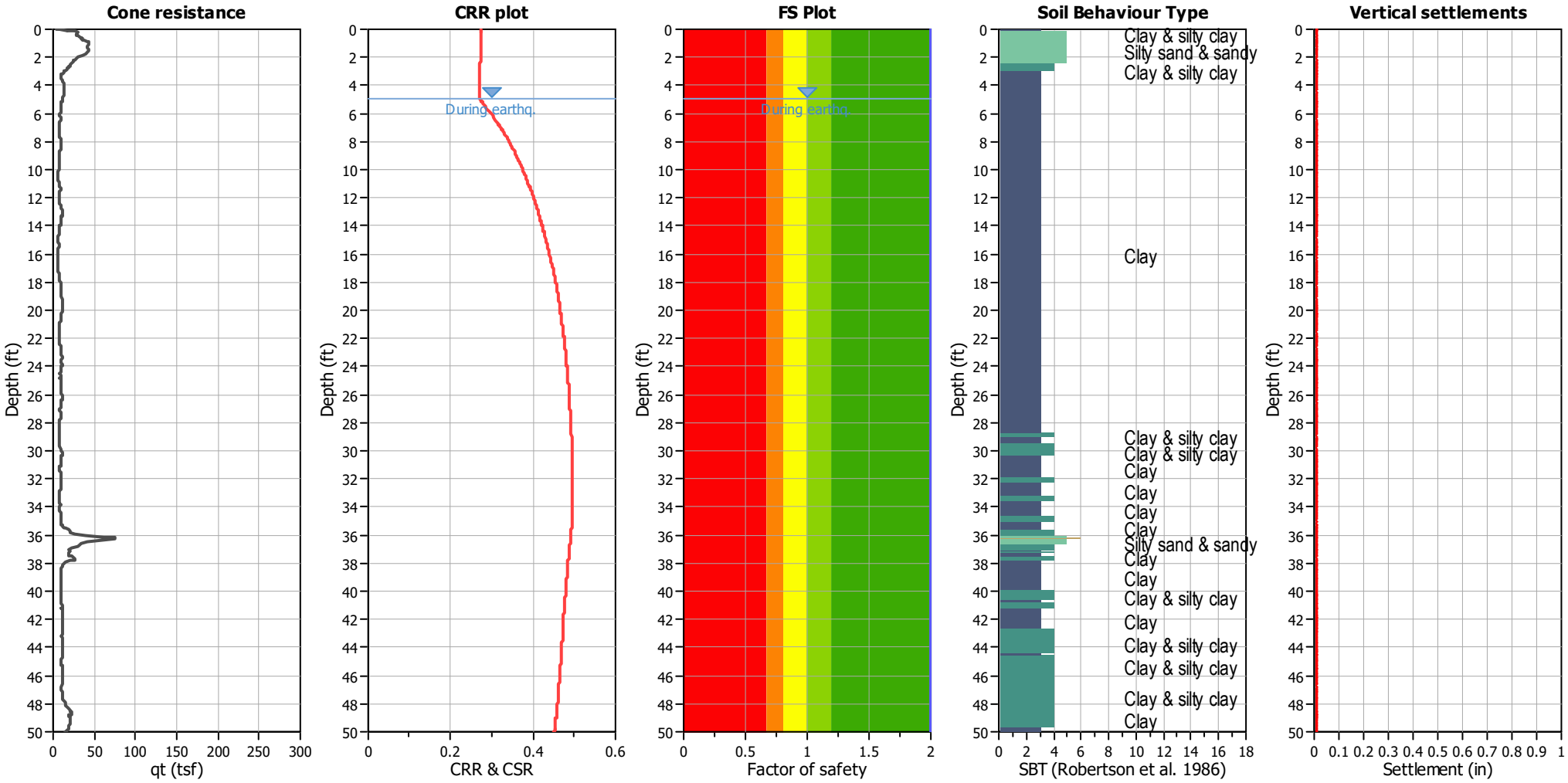
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-12
Total depth: 78.22 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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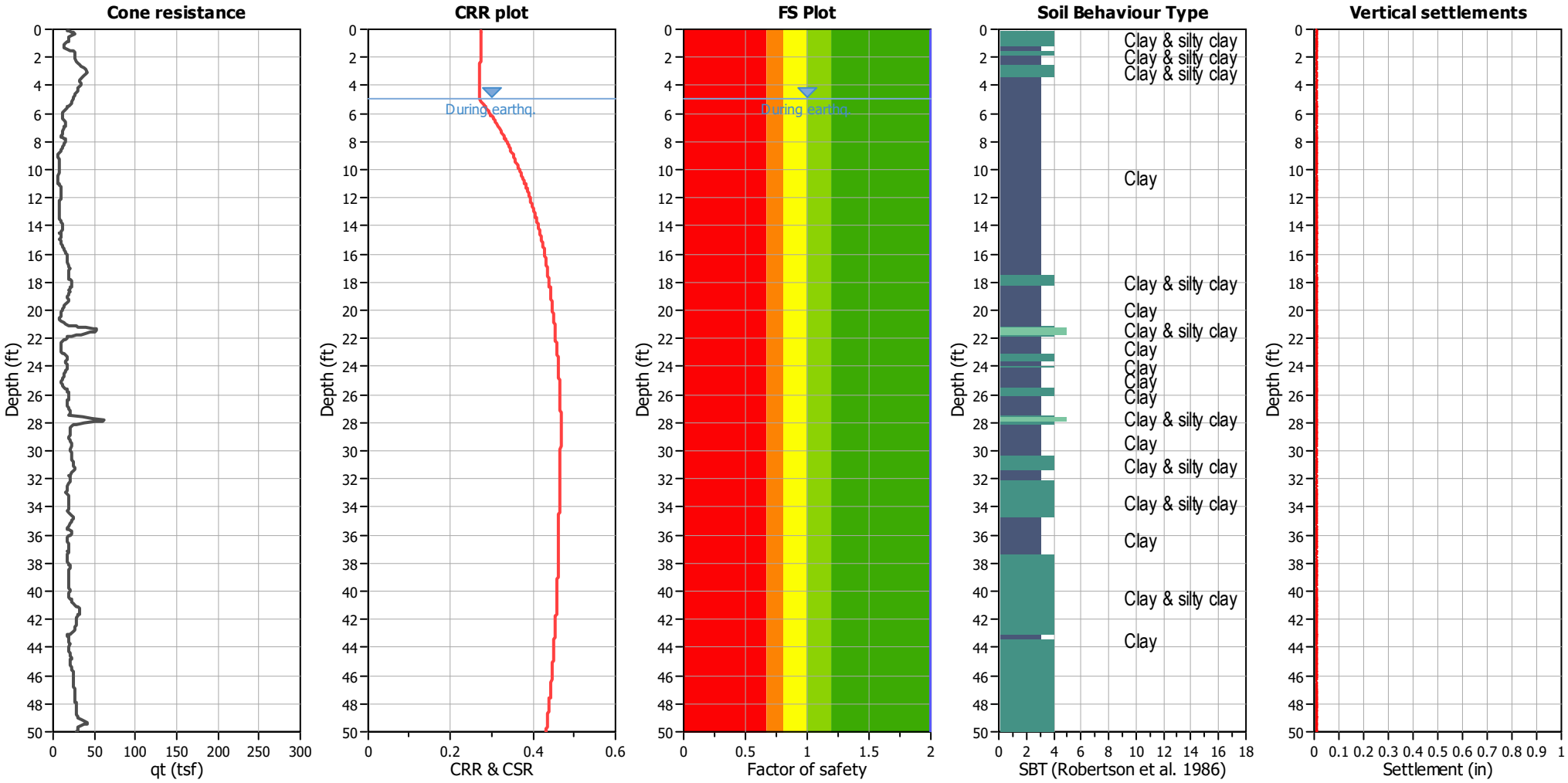
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-13
Total depth: 75.70 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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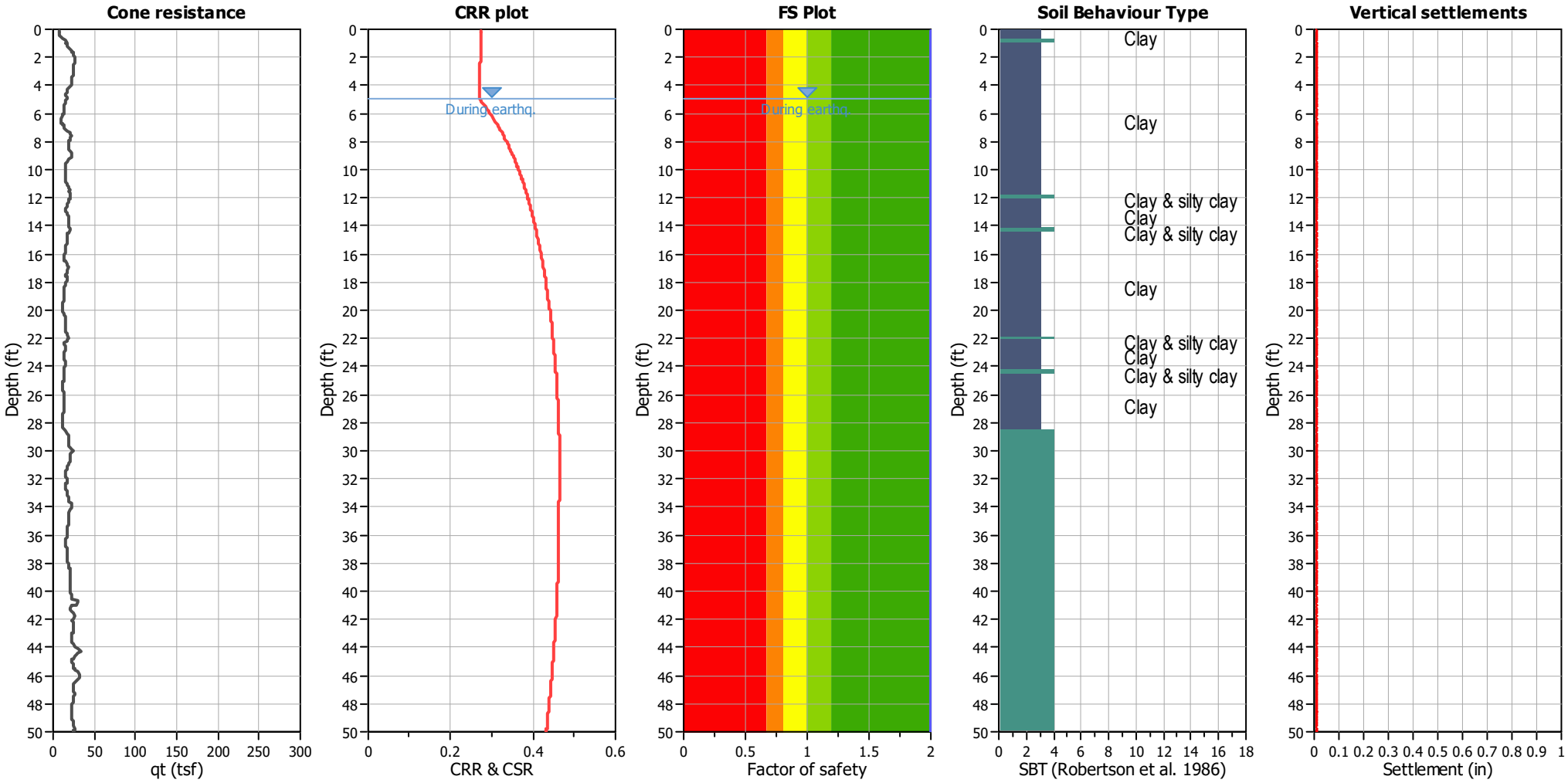
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-14
Total depth: 82.17 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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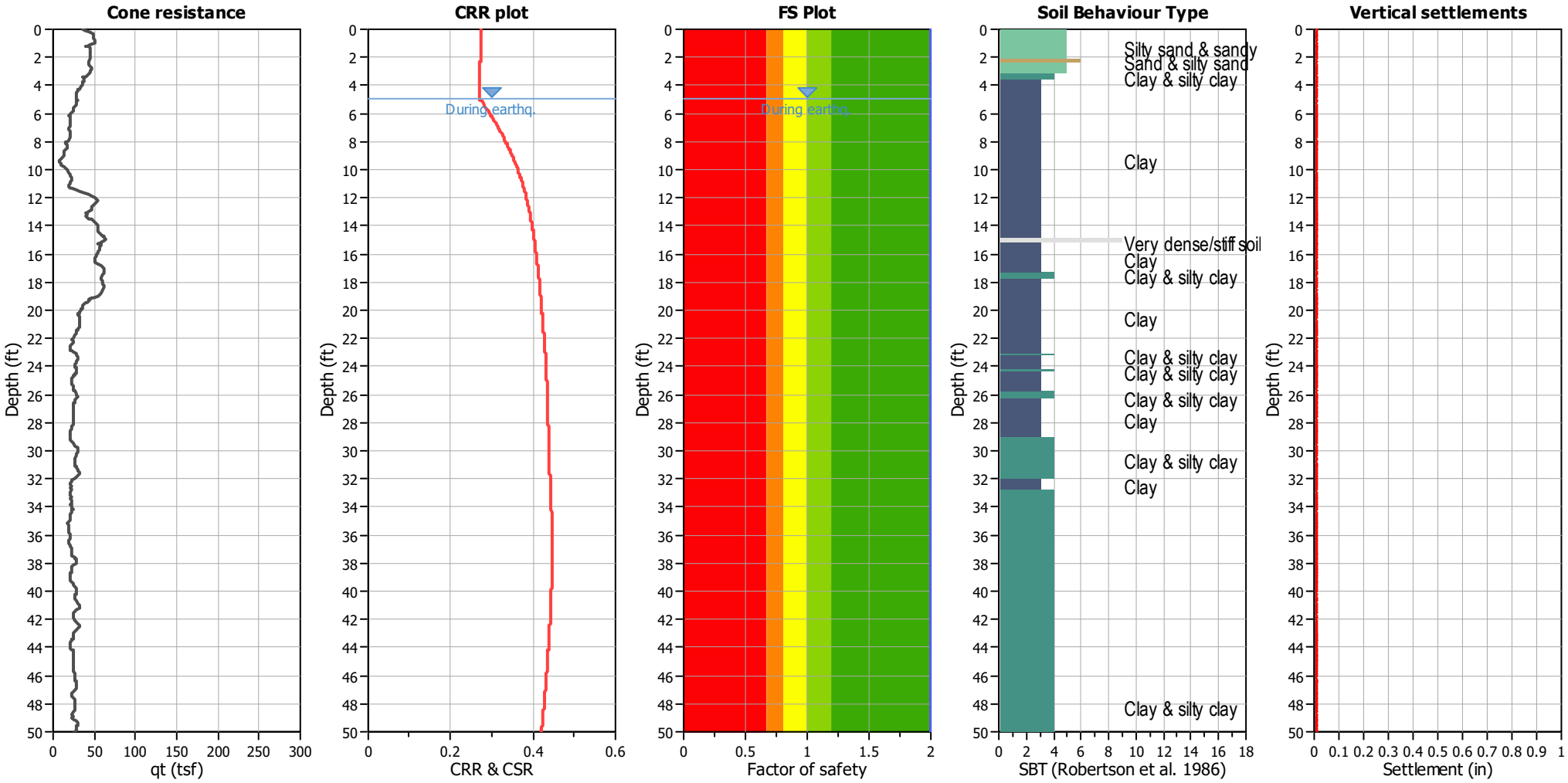
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-15
Total depth: 89.87 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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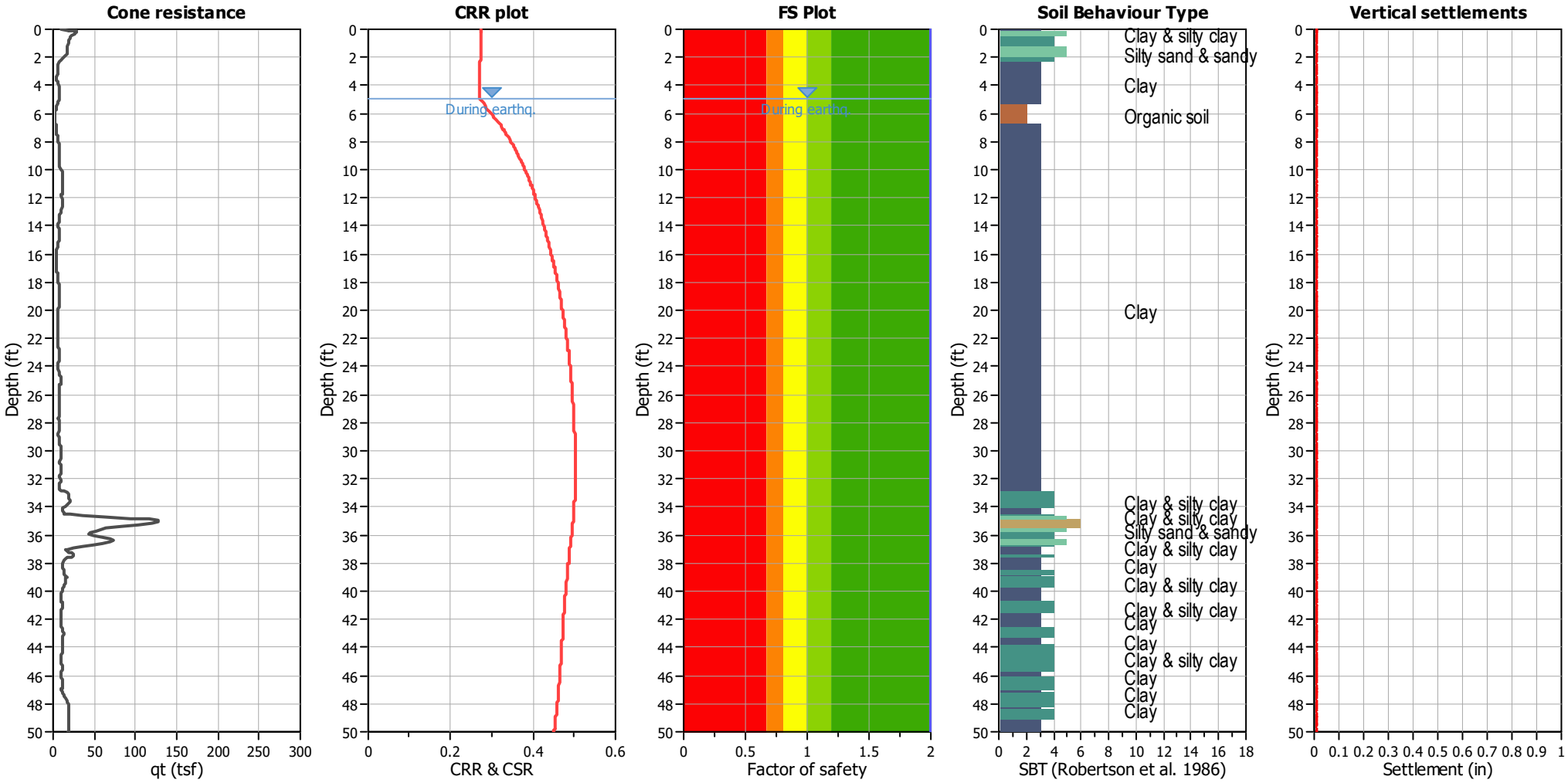
Project: Compass 22011-01
Location: San Juan Capistrano

CPT: CPT-16
Total depth: 92.63 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

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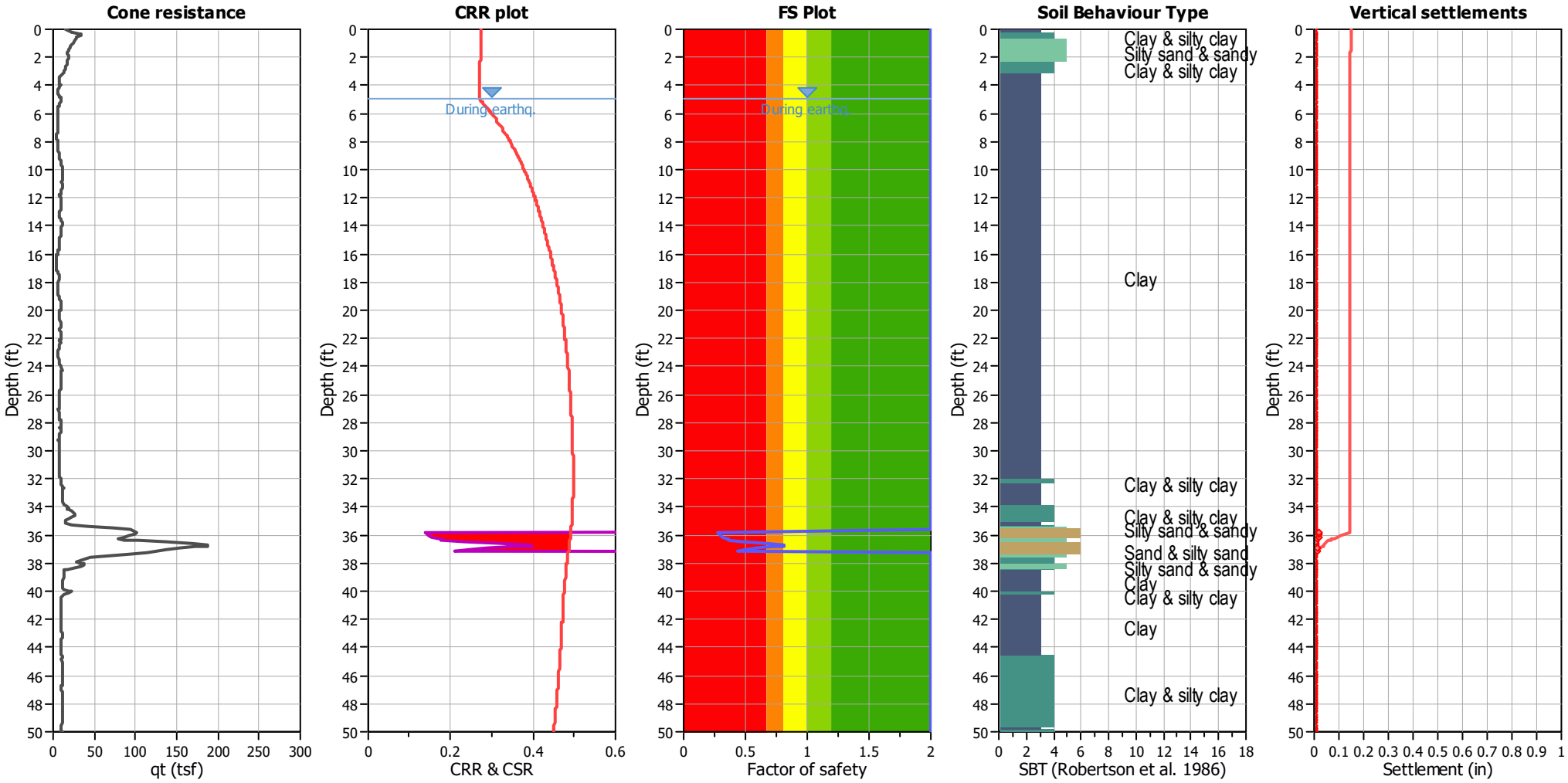
Project: **Compass 22011-01**
Location: **San Juan Capistrano**

CPT: CPT-17
Total depth: 100.18 ft



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	35.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.70	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.56	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

.

Appendix E
Slope Stability Analysis

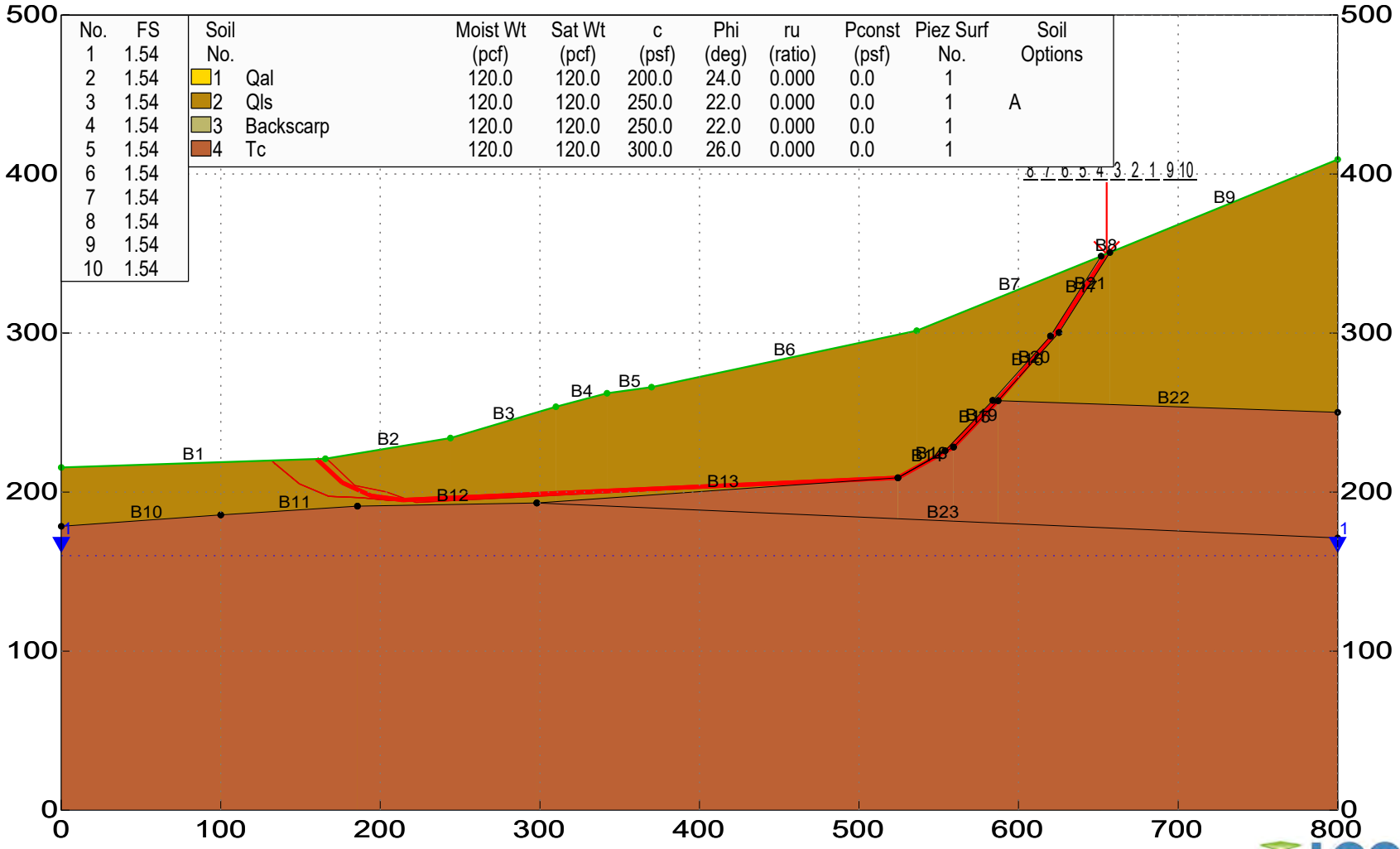
Summary of Slope Stability Analysis

Cross-Section	Folder Date	File Name	Factor of Safety	Description
A-A'	2024_03_29	xa	1.54	Existing Profile – Entire Qls - Static
	2024_03_29	xae	1.10	Existing Profile – Entire Qls - Seismic
	2024_03_29	xau	1.52	Existing Profile – Upper Claybed - Static
	2024_03_29	xaue	1.07	Existing Profile – Upper Claybed - Seismic
B-B'	2023_01_25	xb	2.06	Existing Profile – Entire Qls - Static
	2023_03_10	xbe	1.22	Existing Profile – Entire Qls - Seismic
C-C'	2024_04_04	xc	1.51	Oso Creek Channel Setback – Static
	2024_04_04	xce	1.12	Oso Creek Channel Setback - Seismic
H-H'	2023_10_27	xhLRG	1.42	Existing Profile - Larger Qls – Static
	2024_04_03	xhLRGe	1.05	Existing Profile - Larger Qls – Seismic
	2024_03_21	xh	1.47	Existing Profile - Smaller Qls - Static
	2024_04_03	xhe	0.94	Existing Profile - Smaller Qls - Seismic
	2024_03_21	xhLRGd	1.42	Design Profile – Larger Qls - Static
	2024_04_04	xhLRGde	1.05	Design Profile – Larger Qls - Seismic
	2024_03_21	xhd	1.47	Design Profile - Smaller Qls – Static
	2024_04_03	xhde	0.94	Design Profile - Smaller Qls – Seismic
Generic		----	2.03	Surficial Slope Stability

Soil Type	Static		Seismic		Total Soil Unit Weight (pcf)
	φ (Degrees)	Cohesion (psf)	φ (Degrees)	Cohesion (psf)	
Compacted Fill	26	300	26	300	120
Backscarp	22	250	30	300	120
Landslide Material (Qls)	22	250	30	300	120
Landslide Basal Rupture Surface	14	0	15	0	120
Clay Bed	18	0	18	0	120
Aggregate Base (CMB)	42	50	42	200	125
Capistrano Formation (Tc)	26	300	26	300	120

22011-01 - Compass Bess - SJC - Cross Section A-A'
Existing - Entire Qls - Static

LGC Geotechnical, Inc. \xa.gsd



GEOSTASE FS = 1.54

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 3/ 29/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xa.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xa.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section A-A'

DESCRIPTION: Existing - Entire Qls - Static

BOUNDARY DATA

9 Surface Boundaries
23 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.500	165.500	221.000	2
2	165.500	221.000	244.000	234.000	2
3	244.000	234.000	310.000	253.700	2
4	310.000	253.700	342.000	262.100	2
5	342.000	262.100	369.900	266.000	2
6	369.900	266.000	536.100	301.500	2
7	536.100	301.500	651.800	348.400	2
8	651.800	348.400	657.200	350.600	3
9	657.200	350.600	800.000	409.100	2
10	0.000	178.500	100.000	185.700	4
11	100.000	185.700	185.700	191.100	4
12	185.700	191.100	298.100	193.100	4
13	298.100	193.100	524.400	209.000	4
14	524.400	209.000	553.900	226.000	3
15	553.900	226.000	583.900	257.600	3
16	583.900	257.600	620.000	298.100	3
17	620.000	298.100	651.800	348.400	3
18	524.400	209.000	559.300	228.300	4
19	559.300	228.300	587.100	257.500	4
20	587.100	257.500	625.400	300.400	2
21	625.400	300.400	657.200	350.600	2
22	587.100	257.500	800.000	250.200	4
23	298.100	193.100	800.000	171.200	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	15.0	0.00	14.00
3	90.0	250.00	22.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	110.00	190.00	250.00	190.00	10.00
2	524.40	209.00	524.40	209.00	0.00
3	553.90	226.00	559.30	228.30	0.00
4	583.90	257.60	587.10	257.50	0.00
5	620.00	298.10	625.40	300.40	0.00
6	651.80	348.40	657.20	350.60	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 2.465 FS Min = 1.537 FS Ave = 1.748
Standard Deviation = 0.277 Coefficient of Variation = 15.86 %

Critical Surface is Sequence Number 203 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.537

Table 1 - Geometry Data on the 102 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	1.44	0.58	160.76	220.26	220.84	-37.74	1.90	1.82
2	4.02	3.11	163.49	217.82	220.93	-43.18	1.90	5.51
3	5.28	7.98	168.14	213.46	221.44	-43.18	9.40	7.24
4	5.28	13.81	173.42	208.50	222.31	-43.18	9.40	7.24
5	4.55	18.14	178.34	204.98	223.13	-24.54	9.40	5.00
6	4.55	20.97	182.89	202.90	223.88	-24.54	9.40	5.00
7	4.55	23.80	187.43	200.83	224.63	-24.54	9.40	5.00
8	4.55	26.63	191.98	198.75	225.39	-24.54	9.40	5.00
9	4.95	28.80	196.73	197.37	226.17	-7.87	9.40	5.00
10	4.95	30.31	201.69	196.69	226.99	-7.87	9.40	5.00
11	4.95	31.81	206.64	196.00	227.81	-7.87	9.40	5.00
12	4.95	33.32	211.59	195.32	228.63	-7.87	9.40	5.00
13	4.99	34.37	216.56	195.09	229.46	2.59	9.40	4.99
14	4.99	34.97	221.55	195.31	230.28	2.59	9.40	4.99
15	4.99	35.57	226.54	195.54	231.11	2.59	9.40	4.99
16	4.99	36.17	231.53	195.76	231.93	2.59	9.40	4.99
17	4.99	36.77	236.52	195.99	232.76	2.59	9.40	4.99
18	4.99	37.37	241.51	196.21	233.59	2.59	9.40	4.99
19	5.08	38.32	246.54	196.44	234.76	2.59	16.62	5.08
20	5.08	39.60	251.62	196.67	236.27	2.59	16.62	5.08
21	5.08	40.89	256.69	196.90	237.79	2.59	16.62	5.08
22	5.08	42.17	261.77	197.13	239.30	2.59	16.62	5.08
23	5.08	43.46	266.85	197.36	240.82	2.59	16.62	5.08
24	5.08	44.74	271.92	197.59	242.33	2.59	16.62	5.08
25	5.08	46.03	277.00	197.82	243.85	2.59	16.62	5.08
26	5.08	47.32	282.08	198.05	245.37	2.59	16.62	5.08
27	5.08	48.60	287.15	198.28	246.88	2.59	16.62	5.08
28	5.08	49.89	292.23	198.51	248.40	2.59	16.62	5.08
29	5.08	51.17	297.31	198.74	249.91	2.59	16.62	5.08
30	5.08	52.46	302.38	198.97	251.43	2.59	16.62	5.08
31	5.08	53.75	307.46	199.20	252.94	2.59	16.62	5.08
32	5.33	54.97	312.67	199.43	254.40	2.59	14.71	5.34
33	5.33	56.13	318.00	199.67	255.80	2.59	14.71	5.34
34	5.33	57.29	323.33	199.91	257.20	2.59	14.71	5.34
35	5.33	58.45	328.67	200.15	258.60	2.59	14.71	5.34
36	5.33	59.60	334.00	200.40	260.00	2.59	14.71	5.34
37	5.33	60.76	339.33	200.64	261.40	2.59	14.71	5.34
38	4.65	61.56	344.32	200.86	262.43	2.59	7.96	4.65
39	4.65	62.00	348.98	201.07	263.08	2.59	7.96	4.65
40	4.65	62.44	353.62	201.28	263.73	2.59	7.96	4.65
41	4.65	62.88	358.27	201.49	264.38	2.59	7.96	4.65
42	4.65	63.32	362.92	201.70	265.02	2.59	7.96	4.65
43	4.65	63.76	367.57	201.91	265.68	2.59	7.96	4.65
44	4.98	64.40	372.39	202.13	266.53	2.59	12.06	4.99
45	4.98	65.24	377.38	202.36	267.60	2.59	12.06	4.99
46	4.98	66.08	382.36	202.58	268.66	2.59	12.06	4.99
47	4.98	66.92	387.34	202.81	269.73	2.59	12.06	4.99
48	4.98	67.76	392.33	203.03	270.79	2.59	12.06	4.99
49	4.98	68.60	397.31	203.26	271.85	2.59	12.06	4.99
50	4.98	69.44	402.30	203.48	272.92	2.59	12.06	4.99
51	4.98	70.28	407.28	203.71	273.98	2.59	12.06	4.99
52	4.98	71.12	412.26	203.93	275.05	2.59	12.06	4.99
53	4.98	71.96	417.25	204.16	276.11	2.59	12.06	4.99
54	4.98	72.80	422.23	204.38	277.18	2.59	12.06	4.99

55	4.98	73.63	427.21	204.61	278.24	2.59	12.06	4.99
56	4.98	74.47	432.20	204.83	279.31	2.59	12.06	4.99
57	4.98	75.31	437.18	205.06	280.37	2.59	12.06	4.99
58	4.98	76.15	442.17	205.28	281.44	2.59	12.06	4.99
59	4.98	76.99	447.15	205.51	282.50	2.59	12.06	4.99
60	4.98	77.83	452.13	205.73	283.56	2.59	12.06	4.99
61	4.98	78.67	457.12	205.96	284.63	2.59	12.06	4.99
62	4.98	79.51	462.10	206.18	285.69	2.59	12.06	4.99
63	4.98	80.35	467.09	206.41	286.76	2.59	12.06	4.99
64	4.98	81.19	472.07	206.63	287.82	2.59	12.06	4.99
65	4.98	82.03	477.05	206.86	288.89	2.59	12.06	4.99
66	4.98	82.87	482.04	207.09	289.95	2.59	12.06	4.99
67	4.98	83.71	487.02	207.31	291.02	2.59	12.06	4.99
68	4.98	84.55	492.00	207.54	292.08	2.59	12.06	4.99
69	4.98	85.38	496.99	207.76	293.15	2.59	12.06	4.99
70	4.98	86.22	501.97	207.99	294.21	2.59	12.06	4.99
71	4.98	87.06	506.96	208.21	295.27	2.59	12.06	4.99
72	4.98	87.90	511.94	208.44	296.34	2.59	12.06	4.99
73	4.98	88.74	516.92	208.66	297.40	2.59	12.06	4.99
74	4.98	89.58	521.91	208.89	298.47	2.59	12.06	4.99
75	5.85	89.00	527.33	210.62	299.63	29.01	12.06	6.69
76	5.85	87.01	533.18	213.87	300.88	29.01	12.06	6.69
77	4.45	85.68	538.33	216.72	302.40	29.01	22.07	5.09
78	4.45	85.01	542.77	219.19	304.21	29.01	22.07	5.09
79	4.45	84.35	547.23	221.66	306.01	29.01	22.07	5.09
80	4.45	83.69	551.67	224.13	307.81	29.01	22.07	5.09
81	4.96	82.98	556.38	226.74	309.72	29.01	22.07	5.67
82	5.01	81.02	561.36	230.72	311.74	46.22	22.07	7.24
83	5.01	77.82	566.37	235.95	313.77	46.22	22.07	7.24
84	5.01	74.62	571.38	241.18	315.80	46.22	22.07	7.24
85	5.01	71.43	576.39	246.40	317.83	46.22	22.07	7.24
86	5.01	68.23	581.40	251.63	319.86	46.22	22.07	7.24
87	3.12	65.64	585.46	255.87	321.51	46.22	22.07	4.52
88	4.71	62.81	589.38	260.29	323.10	49.79	22.07	7.30
89	4.71	59.15	594.09	265.86	325.01	49.79	22.07	7.30
90	4.71	55.48	598.80	271.43	326.92	49.79	22.07	7.30
91	4.71	51.82	603.51	277.00	328.83	49.79	22.07	7.30
92	4.71	48.16	608.22	282.58	330.74	49.79	22.07	7.30
93	4.71	44.50	612.93	288.15	332.65	49.79	22.07	7.30
94	4.71	40.83	617.64	293.72	334.55	49.79	22.07	7.30
95	2.11	38.18	621.05	297.75	335.94	49.79	22.07	3.26
96	4.95	34.57	624.58	302.80	337.37	56.92	22.07	9.07
97	4.95	28.98	629.53	310.39	339.37	56.92	22.07	9.07
98	4.95	23.39	634.48	317.99	341.38	56.92	22.07	9.07
99	4.95	17.80	639.43	325.59	343.38	56.92	22.07	9.07
100	4.95	12.21	644.38	333.18	345.39	56.92	22.07	9.07
101	4.95	6.62	649.33	340.78	347.40	56.92	22.07	9.07
102	3.39	1.91	653.49	347.18	349.09	56.92	22.17	6.21

Table 2 - Force Data On The 102 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	99.9	0.0	0.0	0.0	0.0	0.0
2	1501.3	0.0	0.0	0.0	0.0	0.0
3	5058.9	0.0	0.0	0.0	0.0	0.0
4	8755.3	0.0	0.0	0.0	0.0	0.0
5	9903.2	0.0	0.0	0.0	0.0	0.0
6	11447.8	0.0	0.0	0.0	0.0	0.0
7	12992.4	0.0	0.0	0.0	0.0	0.0
8	14537.0	0.0	0.0	0.0	0.0	0.0
9	17118.5	0.0	0.0	0.0	0.0	0.0
10	18012.8	0.0	0.0	0.0	0.0	0.0
11	18907.1	0.0	0.0	0.0	0.0	0.0
12	19801.4	0.0	0.0	0.0	0.0	0.0
13	20574.0	0.0	0.0	0.0	0.0	0.0
14	20933.6	0.0	0.0	0.0	0.0	0.0
15	21293.2	0.0	0.0	0.0	0.0	0.0
16	21652.7	0.0	0.0	0.0	0.0	0.0
17	22012.3	0.0	0.0	0.0	0.0	0.0
18	22371.9	0.0	0.0	0.0	0.0	0.0
19	23342.8	0.0	0.0	0.0	0.0	0.0
20	24126.3	0.0	0.0	0.0	0.0	0.0
21	24909.7	0.0	0.0	0.0	0.0	0.0
22	25693.2	0.0	0.0	0.0	0.0	0.0
23	26476.6	0.0	0.0	0.0	0.0	0.0
24	27260.0	0.0	0.0	0.0	0.0	0.0
25	28043.5	0.0	0.0	0.0	0.0	0.0
26	28826.9	0.0	0.0	0.0	0.0	0.0
27	29610.3	0.0	0.0	0.0	0.0	0.0
28	30393.8	0.0	0.0	0.0	0.0	0.0
29	31177.2	0.0	0.0	0.0	0.0	0.0
30	31960.6	0.0	0.0	0.0	0.0	0.0
31	32744.1	0.0	0.0	0.0	0.0	0.0
32	35180.2	0.0	0.0	0.0	0.0	0.0
33	35921.9	0.0	0.0	0.0	0.0	0.0
34	36663.6	0.0	0.0	0.0	0.0	0.0
35	37405.4	0.0	0.0	0.0	0.0	0.0
36	38147.1	0.0	0.0	0.0	0.0	0.0
37	38888.9	0.0	0.0	0.0	0.0	0.0
38	34352.3	0.0	0.0	0.0	0.0	0.0
39	34597.7	0.0	0.0	0.0	0.0	0.0
40	34843.2	0.0	0.0	0.0	0.0	0.0
41	35088.6	0.0	0.0	0.0	0.0	0.0
42	35334.0	0.0	0.0	0.0	0.0	0.0
43	35579.5	0.0	0.0	0.0	0.0	0.0
44	38516.6	0.0	0.0	0.0	0.0	0.0
45	39018.6	0.0	0.0	0.0	0.0	0.0
46	39520.5	0.0	0.0	0.0	0.0	0.0
47	40022.5	0.0	0.0	0.0	0.0	0.0
48	40524.4	0.0	0.0	0.0	0.0	0.0
49	41026.4	0.0	0.0	0.0	0.0	0.0
50	41528.4	0.0	0.0	0.0	0.0	0.0
51	42030.3	0.0	0.0	0.0	0.0	0.0
52	42532.3	0.0	0.0	0.0	0.0	0.0
53	43034.2	0.0	0.0	0.0	0.0	0.0
54	43536.2	0.0	0.0	0.0	0.0	0.0
55	44038.1	0.0	0.0	0.0	0.0	0.0
56	44540.1	0.0	0.0	0.0	0.0	0.0
57	45042.1	0.0	0.0	0.0	0.0	0.0
58	45544.0	0.0	0.0	0.0	0.0	0.0
59	46046.0	0.0	0.0	0.0	0.0	0.0
60	46547.9	0.0	0.0	0.0	0.0	0.0
61	47049.9	0.0	0.0	0.0	0.0	0.0
62	47551.9	0.0	0.0	0.0	0.0	0.0

63	48053.8	0.0	0.0	0.0	0.0	0.0
64	48555.8	0.0	0.0	0.0	0.0	0.0
65	49057.7	0.0	0.0	0.0	0.0	0.0
66	49559.7	0.0	0.0	0.0	0.0	0.0
67	50061.7	0.0	0.0	0.0	0.0	0.0
68	50563.6	0.0	0.0	0.0	0.0	0.0
69	51065.6	0.0	0.0	0.0	0.0	0.0
70	51567.5	0.0	0.0	0.0	0.0	0.0
71	52069.5	0.0	0.0	0.0	0.0	0.0
72	52571.4	0.0	0.0	0.0	0.0	0.0
73	53073.4	0.0	0.0	0.0	0.0	0.0
74	53575.4	0.0	0.0	0.0	0.0	0.0
75	62480.4	0.0	0.0	0.0	0.0	0.0
76	61079.8	0.0	0.0	0.0	0.0	0.0
77	45752.4	0.0	0.0	0.0	0.0	0.0
78	45397.6	0.0	0.0	0.0	0.0	0.0
79	45042.9	0.0	0.0	0.0	0.0	0.0
80	44688.2	0.0	0.0	0.0	0.0	0.0
81	49372.0	0.0	0.0	0.0	0.0	0.0
82	48690.9	0.0	0.0	0.0	0.0	0.0
83	46770.1	0.0	0.0	0.0	0.0	0.0
84	44849.3	0.0	0.0	0.0	0.0	0.0
85	42928.5	0.0	0.0	0.0	0.0	0.0
86	41007.7	0.0	0.0	0.0	0.0	0.0
87	24606.1	0.0	0.0	0.0	0.0	0.0
88	35506.0	0.0	0.0	0.0	0.0	0.0
89	33435.6	0.0	0.0	0.0	0.0	0.0
90	31365.2	0.0	0.0	0.0	0.0	0.0
91	29294.8	0.0	0.0	0.0	0.0	0.0
92	27224.4	0.0	0.0	0.0	0.0	0.0
93	25154.0	0.0	0.0	0.0	0.0	0.0
94	23083.6	0.0	0.0	0.0	0.0	0.0
95	9645.8	0.0	0.0	0.0	0.0	0.0
96	20531.6	0.0	0.0	0.0	0.0	0.0
97	17211.2	0.0	0.0	0.0	0.0	0.0
98	13890.9	0.0	0.0	0.0	0.0	0.0
99	10570.5	0.0	0.0	0.0	0.0	0.0
100	7250.2	0.0	0.0	0.0	0.0	0.0
101	3929.8	0.0	0.0	0.0	0.0	0.0
102	777.1	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 3382503.00(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 3382503.00(lbs)

TOTAL AREA OF SLIDING MASS = 28187.53(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 102 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	2	250.00	22.00	A
2	2	250.00	22.00	A
3	2	250.00	22.00	A
4	2	250.00	22.00	A
5	2	250.00	22.00	A
6	2	250.00	22.00	A
7	2	250.00	22.00	A
8	2	250.00	22.00	A
9	2	0.00	14.00	A
10	2	0.00	14.00	A
11	2	0.00	14.00	A
12	2	0.00	14.00	A
13	2	0.00	14.00	A
14	2	0.00	14.00	A
15	2	0.00	14.00	A
16	2	0.00	14.00	A
17	2	0.00	14.00	A
18	2	0.00	14.00	A
19	2	0.00	14.00	A
20	2	0.00	14.00	A
21	2	0.00	14.00	A
22	2	0.00	14.00	A
23	2	0.00	14.00	A
24	2	0.00	14.00	A
25	2	0.00	14.00	A
26	2	0.00	14.00	A
27	2	0.00	14.00	A
28	2	0.00	14.00	A
29	2	0.00	14.00	A
30	2	0.00	14.00	A
31	2	0.00	14.00	A
32	2	0.00	14.00	A
33	2	0.00	14.00	A
34	2	0.00	14.00	A
35	2	0.00	14.00	A
36	2	0.00	14.00	A
37	2	0.00	14.00	A
38	2	0.00	14.00	A
39	2	0.00	14.00	A
40	2	0.00	14.00	A
41	2	0.00	14.00	A
42	2	0.00	14.00	A
43	2	0.00	14.00	A
44	2	0.00	14.00	A
45	2	0.00	14.00	A
46	2	0.00	14.00	A
47	2	0.00	14.00	A
48	2	0.00	14.00	A
49	2	0.00	14.00	A
50	2	0.00	14.00	A
51	2	0.00	14.00	A
52	2	0.00	14.00	A
53	2	0.00	14.00	A
54	2	0.00	14.00	A
55	2	0.00	14.00	A
56	2	0.00	14.00	A
57	2	0.00	14.00	A
58	2	0.00	14.00	A
59	2	0.00	14.00	A
60	2	0.00	14.00	A
61	2	0.00	14.00	A
62	2	0.00	14.00	A
63	2	0.00	14.00	A
64	2	0.00	14.00	A
65	2	0.00	14.00	A
66	2	0.00	14.00	A
67	2	0.00	14.00	A
68	2	0.00	14.00	A

69	2	0.00	14.00	A
70	2	0.00	14.00	A
71	2	0.00	14.00	A
72	2	0.00	14.00	A
73	2	0.00	14.00	A
74	2	0.00	14.00	A
75	3	250.00	22.00	
76	3	250.00	22.00	
77	3	250.00	22.00	
78	3	250.00	22.00	
79	3	250.00	22.00	
80	3	250.00	22.00	
81	3	250.00	22.00	
82	3	250.00	22.00	
83	3	250.00	22.00	
84	3	250.00	22.00	
85	3	250.00	22.00	
86	3	250.00	22.00	
87	3	250.00	22.00	
88	3	250.00	22.00	
89	3	250.00	22.00	
90	3	250.00	22.00	
91	3	250.00	22.00	
92	3	250.00	22.00	
93	3	250.00	22.00	
94	3	250.00	22.00	
95	3	250.00	22.00	
96	3	250.00	22.00	
97	3	250.00	22.00	
98	3	250.00	22.00	
99	3	250.00	22.00	
100	3	250.00	22.00	
101	3	250.00	22.00	
102	3	250.00	22.00	

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 102 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-37.74	160.76	1.82	261.57	355.68	232.34
1	-37.74	160.76	1.82	261.57	355.68	232.34
2	-43.18	163.49	5.51	730.23	545.03	356.03
2	-43.18	163.49	5.51	730.23	545.03	356.03
3	-43.18	168.14	7.24	1524.55	865.96	565.67
3	-43.18	168.14	7.24	1524.55	865.96	565.67
4	-43.18	173.42	7.24	2475.98	1250.36	816.77
4	-43.18	173.42	7.24	2475.98	1250.36	816.77
5	-24.54	178.34	5.00	2590.18	1296.50	846.91
5	-24.54	178.34	5.00	2590.18	1296.50	846.91
6	-24.54	182.89	5.00	2979.92	1453.97	949.77
6	-24.54	182.89	5.00	2979.92	1453.97	949.77
7	-24.54	187.43	5.00	3369.66	1611.43	1052.63
7	-24.54	187.43	5.00	3369.66	1611.43	1052.63
8	-24.54	191.98	5.00	3759.41	1768.90	1155.50
8	-24.54	191.98	5.00	3759.41	1768.90	1155.50
9	-7.87	196.73	5.00	3541.32	882.95	576.77
9	-7.87	196.73	5.00	3541.32	882.95	576.77
10	-7.87	201.69	5.00	3726.32	929.08	606.90
10	-7.87	201.69	5.00	3726.32	929.08	606.90
11	-7.87	206.64	5.00	3911.32	975.20	637.03
11	-7.87	206.64	5.00	3911.32	975.20	637.03
12	-7.87	211.59	5.00	4096.33	1021.33	667.16
12	-7.87	211.59	5.00	4096.33	1021.33	667.16
13	2.59	216.56	4.99	4092.07	1020.27	666.47
13	2.59	216.56	4.99	4092.07	1020.27	666.47
14	2.59	221.55	4.99	4163.59	1038.10	678.12
14	2.59	221.55	4.99	4163.59	1038.10	678.12
15	2.59	226.54	4.99	4235.11	1055.93	689.77
15	2.59	226.54	4.99	4235.11	1055.93	689.77
16	2.59	231.53	4.99	4306.63	1073.76	701.41
16	2.59	231.53	4.99	4306.63	1073.76	701.41
17	2.59	236.52	4.99	4378.15	1091.60	713.06
17	2.59	236.52	4.99	4378.15	1091.60	713.06
18	2.59	241.51	4.99	4449.67	1109.43	724.71
18	2.59	241.51	4.99	4449.67	1109.43	724.71
19	2.59	246.54	5.08	4561.99	1137.43	743.00
19	2.59	246.54	5.08	4561.99	1137.43	743.00
20	2.59	251.62	5.08	4715.10	1175.61	767.94
20	2.59	251.62	5.08	4715.10	1175.61	767.94
21	2.59	256.69	5.08	4868.21	1213.78	792.88
21	2.59	256.69	5.08	4868.21	1213.78	792.88
22	2.59	261.77	5.08	5021.32	1251.95	817.81
22	2.59	261.77	5.08	5021.32	1251.95	817.81
23	2.59	266.85	5.08	5174.43	1290.13	842.75
23	2.59	266.85	5.08	5174.43	1290.13	842.75
24	2.59	271.92	5.08	5327.54	1328.30	867.69
24	2.59	271.92	5.08	5327.54	1328.30	867.69
25	2.59	277.00	5.08	5480.64	1366.48	892.62
25	2.59	277.00	5.08	5480.64	1366.48	892.62
26	2.59	282.08	5.08	5633.75	1404.65	917.56
26	2.59	282.08	5.08	5633.75	1404.65	917.56
27	2.59	287.15	5.08	5786.86	1442.83	942.50
27	2.59	287.15	5.08	5786.86	1442.83	942.50
28	2.59	292.23	5.08	5939.97	1481.00	967.43
28	2.59	292.23	5.08	5939.97	1481.00	967.43
29	2.59	297.31	5.08	6093.08	1519.18	992.37
29	2.59	297.31	5.08	6093.08	1519.18	992.37
30	2.59	302.38	5.08	6246.19	1557.35	1017.31
30	2.59	302.38	5.08	6246.19	1557.35	1017.31
31	2.59	307.46	5.08	6399.30	1595.53	1042.24
31	2.59	307.46	5.08	6399.30	1595.53	1042.24
32	2.59	312.67	5.34	6544.85	1631.82	1065.95
32	2.59	312.67	5.34	6544.85	1631.82	1065.95
33	2.59	318.00	5.34	6682.85	1666.22	1088.42
33	2.59	318.00	5.34	6682.85	1666.22	1088.42
34	2.59	323.33	5.34	6820.84	1700.63	1110.90
34	2.59	323.33	5.34	6820.84	1700.63	1110.90
35	2.59	328.67	5.34	6958.83	1735.03	1133.37
35	2.59	328.67	5.34	6958.83	1735.03	1133.37
36	2.59	334.00	5.34	7096.82	1769.44	1155.85

36	2.59	334.00	5.34	7096.82	1769.44	1155.85
37	2.59	339.33	5.34	7234.81	1803.84	1178.32
37	2.59	339.33	5.34	7234.81	1803.84	1178.32
38	2.59	344.32	4.65	7329.99	1827.57	1193.82
38	2.59	344.32	4.65	7329.99	1827.57	1193.82
39	2.59	348.98	4.65	7382.36	1840.63	1202.35
39	2.59	348.98	4.65	7382.36	1840.63	1202.35
40	2.59	353.62	4.65	7434.73	1853.69	1210.88
40	2.59	353.62	4.65	7434.73	1853.69	1210.88
41	2.59	358.27	4.65	7487.10	1866.74	1219.41
41	2.59	358.27	4.65	7487.10	1866.74	1219.41
42	2.59	362.92	4.65	7539.47	1879.80	1227.94
42	2.59	362.92	4.65	7539.47	1879.80	1227.94
43	2.59	367.57	4.65	7591.85	1892.86	1236.47
43	2.59	367.57	4.65	7591.85	1892.86	1236.47
44	2.59	372.39	4.99	7668.00	1911.85	1248.87
44	2.59	372.39	4.99	7668.00	1911.85	1248.87
45	2.59	377.38	4.99	7767.93	1936.76	1265.15
45	2.59	377.38	4.99	7767.93	1936.76	1265.15
46	2.59	382.36	4.99	7867.86	1961.68	1281.42
46	2.59	382.36	4.99	7867.86	1961.68	1281.42
47	2.59	387.34	4.99	7967.79	1986.59	1297.70
47	2.59	387.34	4.99	7967.79	1986.59	1297.70
48	2.59	392.33	4.99	8067.72	2011.51	1313.98
48	2.59	392.33	4.99	8067.72	2011.51	1313.98
49	2.59	397.31	4.99	8167.65	2036.42	1330.25
49	2.59	397.31	4.99	8167.65	2036.42	1330.25
50	2.59	402.30	4.99	8267.58	2061.34	1346.53
50	2.59	402.30	4.99	8267.58	2061.34	1346.53
51	2.59	407.28	4.99	8367.52	2086.26	1362.80
51	2.59	407.28	4.99	8367.52	2086.26	1362.80
52	2.59	412.26	4.99	8467.45	2111.17	1379.08
52	2.59	412.26	4.99	8467.45	2111.17	1379.08
53	2.59	417.25	4.99	8567.38	2136.09	1395.35
53	2.59	417.25	4.99	8567.38	2136.09	1395.35
54	2.59	422.23	4.99	8667.31	2161.00	1411.63
54	2.59	422.23	4.99	8667.31	2161.00	1411.63
55	2.59	427.21	4.99	8767.24	2185.92	1427.90
55	2.59	427.21	4.99	8767.24	2185.92	1427.90
56	2.59	432.20	4.99	8867.17	2210.83	1444.18
56	2.59	432.20	4.99	8867.17	2210.83	1444.18
57	2.59	437.18	4.99	8967.10	2235.75	1460.46
57	2.59	437.18	4.99	8967.10	2235.75	1460.46
58	2.59	442.17	4.99	9067.04	2260.67	1476.73
58	2.59	442.17	4.99	9067.04	2260.67	1476.73
59	2.59	447.15	4.99	9166.97	2285.58	1493.01
59	2.59	447.15	4.99	9166.97	2285.58	1493.01
60	2.59	452.13	4.99	9266.90	2310.50	1509.28
60	2.59	452.13	4.99	9266.90	2310.50	1509.28
61	2.59	457.12	4.99	9366.83	2335.41	1525.56
61	2.59	457.12	4.99	9366.83	2335.41	1525.56
62	2.59	462.10	4.99	9466.76	2360.33	1541.83
62	2.59	462.10	4.99	9466.76	2360.33	1541.83
63	2.59	467.09	4.99	9566.69	2385.24	1558.11
63	2.59	467.09	4.99	9566.69	2385.24	1558.11
64	2.59	472.07	4.99	9666.62	2410.16	1574.39
64	2.59	472.07	4.99	9666.62	2410.16	1574.39
65	2.59	477.05	4.99	9766.56	2435.08	1590.66
65	2.59	477.05	4.99	9766.56	2435.08	1590.66
66	2.59	482.04	4.99	9866.49	2459.99	1606.94
66	2.59	482.04	4.99	9866.49	2459.99	1606.94
67	2.59	487.02	4.99	9966.42	2484.91	1623.21
67	2.59	487.02	4.99	9966.42	2484.91	1623.21
68	2.59	492.00	4.99	10066.35	2509.82	1639.49
68	2.59	492.00	4.99	10066.35	2509.82	1639.49
69	2.59	496.99	4.99	10166.28	2534.74	1655.76
69	2.59	496.99	4.99	10166.28	2534.74	1655.76
70	2.59	501.97	4.99	10266.21	2559.65	1672.04
70	2.59	501.97	4.99	10266.21	2559.65	1672.04
71	2.59	506.96	4.99	10366.15	2584.57	1688.31
71	2.59	506.96	4.99	10366.15	2584.57	1688.31
72	2.59	511.94	4.99	10466.08	2609.49	1704.59
72	2.59	511.94	4.99	10466.08	2609.49	1704.59
73	2.59	516.92	4.99	10566.01	2634.40	1720.87
73	2.59	516.92	4.99	10566.01	2634.40	1720.87
74	2.59	521.91	4.99	10665.94	2659.32	1737.14
74	2.59	521.91	4.99	10665.94	2659.32	1737.14
75	29.01	527.33	6.69	9153.33	3948.19	2579.07
75	29.01	527.33	6.69	9153.33	3948.19	2579.07
76	29.01	533.18	6.69	8946.28	3864.53	2524.42
76	29.01	533.18	6.69	8946.28	3864.53	2524.42
77	29.01	538.33	5.09	8808.28	3808.78	2488.00
77	29.01	538.33	5.09	8808.28	3808.78	2488.00
78	29.01	542.77	5.09	8739.34	3780.92	2469.81
78	29.01	542.77	5.09	8739.34	3780.92	2469.81
79	29.01	547.23	5.09	8670.40	3753.07	2451.61
79	29.01	547.23	5.09	8670.40	3753.07	2451.61
80	29.01	551.67	5.09	8601.46	3725.21	2433.42
80	29.01	551.67	5.09	8601.46	3725.21	2433.42
81	29.01	556.38	5.67	8528.58	3695.77	2414.18
81	29.01	556.38	5.67	8528.58	3695.77	2414.18
82	46.22	561.36	7.24	7372.45	3228.66	2109.05
82	46.22	561.36	7.24	7372.45	3228.66	2109.05
83	46.22	566.37	7.24	7076.07	3108.92	2030.83
83	46.22	566.37	7.24	7076.07	3108.92	2030.83
84	46.22	571.38	7.24	6779.69	2989.17	1952.61
84	46.22	571.38	7.24	6779.69	2989.17	1952.61
85	46.22	576.39	7.24	6483.31	2869.43	1874.39
85	46.22	576.39	7.24	6483.31	2869.43	1874.39
86	46.22	581.40	7.24	6186.93	2749.68	1796.17
86	46.22	581.40	7.24	6186.93	2749.68	1796.17
87	46.22	585.46	4.52	5946.31	2652.46	1732.66
87	46.22	585.46	4.52	5946.31	2652.46	1732.66
88	49.79	589.38	7.30	5498.47	2471.53	1614.47
88	49.79	589.38	7.30	5498.47	2471.53	1614.47
89	49.79	594.09	7.30	5168.83	2338.34	1527.47
89	49.79	594.09	7.30	5168.83	2338.34	1527.47
90	49.79	598.80	7.30	4839.19	2205.16	1440.47
90	49.79	598.80	7.30	4839.19	2205.16	1440.47
91	49.79	603.51	7.30	4509.55	2071.98	1353.47
91	49.79	603.51	7.30	4509.55	2071.98	1353.47
92	49.79	608.22	7.30	4179.91	1938.79	1266.47
92	49.79	608.22	7.30	4179.91	1938.79	1266.47
93	49.79	612.93	7.30	3850.27	1805.61	1179.47
93	49.79	612.93	7.30	3850.27	1805.61	1179.47
94	49.79	617.64	7.30	3520.63	1672.42	1092.48
94	49.79	617.64	7.30	3520.63	1672.42	1092.48
95	49.79	621.05	3.26	3282.15	1576.08	1029.54
95	49.79	621.05	3.26	3282.15	1576.08	1029.54
96	56.92	624.58	9.07	2709.21	1344.59	878.33

96	56.92	624.58	9.07	2709.21	1344.59	878.33
97	56.92	629.53	9.07	2240.87	1155.37	754.72
97	56.92	629.53	9.07	2240.87	1155.37	754.72
98	56.92	634.48	9.07	1772.53	966.15	631.11
98	56.92	634.48	9.07	1772.53	966.15	631.11
99	56.92	639.43	9.07	1304.18	776.92	507.51
99	56.92	639.43	9.07	1304.18	776.92	507.51
100	56.92	644.38	9.07	835.84	587.70	383.90
100	56.92	644.38	9.07	835.84	587.70	383.90
101	56.92	649.33	9.07	367.50	398.48	260.30
101	56.92	649.33	9.07	367.50	398.48	260.30
102	56.92	653.49	6.21	160.07	64.67	42.25
102	56.92	653.49	6.21	160.07	64.67	42.25

Table 4 - Base Force Data on the 102 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-37.74	160.76	1.82	475.12	646.07	422.03
1	-37.74	160.76	1.82	475.12	646.07	422.03
2	-43.18	163.49	5.51	4025.30	3004.42	1962.57
2	-43.18	163.49	5.51	4025.30	3004.42	1962.57
3	-43.18	168.14	7.24	11043.58	6272.85	4097.60
3	-43.18	168.14	7.24	11043.58	6272.85	4097.60
4	-43.18	173.42	7.24	17935.56	9057.39	5916.54
4	-43.18	173.42	7.24	17935.56	9057.39	5916.54
5	-24.54	178.34	5.00	12950.88	6482.49	4234.55
5	-24.54	178.34	5.00	12950.88	6482.49	4234.55
6	-24.54	182.89	5.00	14899.60	7269.83	4748.86
6	-24.54	182.89	5.00	14899.60	7269.83	4748.86
7	-24.54	187.43	5.00	16848.32	8057.16	5263.17
7	-24.54	187.43	5.00	16848.32	8057.16	5263.17
8	-24.54	191.98	5.00	18797.03	8844.49	5777.48
8	-24.54	191.98	5.00	18797.03	8844.49	5777.48
9	-7.87	196.73	5.00	17706.59	4414.75	2883.84
9	-7.87	196.73	5.00	17706.59	4414.75	2883.84
10	-7.87	201.69	5.00	18631.61	4645.38	3034.50
10	-7.87	201.69	5.00	18631.61	4645.38	3034.50
11	-7.87	206.64	5.00	19556.62	4876.01	3185.15
11	-7.87	206.64	5.00	19556.62	4876.01	3185.15
12	-7.87	211.59	5.00	20481.64	5106.65	3335.81
12	-7.87	211.59	5.00	20481.64	5106.65	3335.81
13	2.59	216.56	4.99	20434.42	5094.87	3328.12
13	2.59	216.56	4.99	20434.42	5094.87	3328.12
14	2.59	221.55	4.99	20791.56	5183.92	3386.28
14	2.59	221.55	4.99	20791.56	5183.92	3386.28
15	2.59	226.54	4.99	21148.71	5272.96	3444.45
15	2.59	226.54	4.99	21148.71	5272.96	3444.45
16	2.59	231.53	4.99	21505.85	5362.01	3502.62
16	2.59	231.53	4.99	21505.85	5362.01	3502.62
17	2.59	236.52	4.99	21863.00	5451.06	3560.79
17	2.59	236.52	4.99	21863.00	5451.06	3560.79
18	2.59	241.51	4.99	22220.14	5540.10	3618.95
18	2.59	241.51	4.99	22220.14	5540.10	3618.95
19	2.59	246.54	5.08	23184.50	5780.54	3776.02
19	2.59	246.54	5.08	23184.50	5780.54	3776.02
20	2.59	251.62	5.08	23962.62	5974.55	3902.75
20	2.59	251.62	5.08	23962.62	5974.55	3902.75
21	2.59	256.69	5.08	24740.74	6168.56	4029.48
21	2.59	256.69	5.08	24740.74	6168.56	4029.48
22	2.59	261.77	5.08	25518.86	6362.57	4156.21
22	2.59	261.77	5.08	25518.86	6362.57	4156.21
23	2.59	266.85	5.08	26296.97	6556.57	4282.94
23	2.59	266.85	5.08	26296.97	6556.57	4282.94
24	2.59	271.92	5.08	27075.09	6750.58	4409.67
24	2.59	271.92	5.08	27075.09	6750.58	4409.67
25	2.59	277.00	5.08	27853.21	6944.59	4536.40
25	2.59	277.00	5.08	27853.21	6944.59	4536.40
26	2.59	282.08	5.08	28631.33	7138.59	4663.13
26	2.59	282.08	5.08	28631.33	7138.59	4663.13
27	2.59	287.15	5.08	29409.45	7332.60	4789.86
27	2.59	287.15	5.08	29409.45	7332.60	4789.86
28	2.59	292.23	5.08	30187.57	7526.61	4916.59
28	2.59	292.23	5.08	30187.57	7526.61	4916.59
29	2.59	297.31	5.08	30965.69	7720.61	5043.33
29	2.59	297.31	5.08	30965.69	7720.61	5043.33
30	2.59	302.38	5.08	31743.81	7914.62	5170.06
30	2.59	302.38	5.08	31743.81	7914.62	5170.06
31	2.59	307.46	5.08	32521.93	8108.63	5296.79
31	2.59	307.46	5.08	32521.93	8108.63	5296.79
32	2.59	312.67	5.34	34941.51	8711.90	5690.86
32	2.59	312.67	5.34	34941.51	8711.90	5690.86
33	2.59	318.00	5.34	35678.22	8895.58	5810.85
33	2.59	318.00	5.34	35678.22	8895.58	5810.85
34	2.59	323.33	5.34	36414.93	9079.26	5930.83
34	2.59	323.33	5.34	36414.93	9079.26	5930.83
35	2.59	328.67	5.34	37151.64	9262.94	6050.82
35	2.59	328.67	5.34	37151.64	9262.94	6050.82
36	2.59	334.00	5.34	37888.34	9446.62	6170.80
36	2.59	334.00	5.34	37888.34	9446.62	6170.80
37	2.59	339.33	5.34	38625.05	9630.31	6290.79
37	2.59	339.33	5.34	38625.05	9630.31	6290.79
38	2.59	344.32	4.65	34119.26	8506.89	5556.94
38	2.59	344.32	4.65	34119.26	8506.89	5556.94
39	2.59	348.98	4.65	34363.03	8567.67	5596.64
39	2.59	348.98	4.65	34363.03	8567.67	5596.64
40	2.59	353.62	4.65	34606.80	8628.44	5636.35
40	2.59	353.62	4.65	34606.80	8628.44	5636.35
41	2.59	358.27	4.65	34850.57	8689.22	5676.05
41	2.59	358.27	4.65	34850.57	8689.22	5676.05
42	2.59	362.92	4.65	35094.34	8750.00	5715.75
42	2.59	362.92	4.65	35094.34	8750.00	5715.75
43	2.59	367.57	4.65	35338.11	8810.78	5755.45
43	2.59	367.57	4.65	35338.11	8810.78	5755.45
44	2.59	372.39	4.99	38255.31	9538.12	6230.57
44	2.59	372.39	4.99	38255.31	9538.12	6230.57
45	2.59	377.38	4.99	38753.87	9662.42	6311.77
45	2.59	377.38	4.99	38753.87	9662.42	6311.77
46	2.59	382.36	4.99	39252.42	9786.73	6392.97
46	2.59	382.36	4.99	39252.42	9786.73	6392.97
47	2.59	387.34	4.99	39750.97	9911.03	6474.17
47	2.59	387.34	4.99	39750.97	9911.03	6474.17
48	2.59	392.33	4.99	40249.53	10035.33	6555.37
48	2.59	392.33	4.99	40249.53	10035.33	6555.37
49	2.59	397.31	4.99	40748.08	10159.64	6636.56
49	2.59	397.31	4.99	40748.08	10159.64	6636.56

50	2.59	402.30	4.99	41246.63	10283.94	6717.76
50	2.59	402.30	4.99	41246.63	10283.94	6717.76
51	2.59	407.28	4.99	41745.19	10408.24	6798.96
51	2.59	407.28	4.99	41745.19	10408.24	6798.96
52	2.59	412.26	4.99	42243.74	10532.55	6880.16
52	2.59	412.26	4.99	42243.74	10532.55	6880.16
53	2.59	417.25	4.99	42742.30	10656.85	6961.36
53	2.59	417.25	4.99	42742.30	10656.85	6961.36
54	2.59	422.23	4.99	43240.85	10781.15	7042.56
54	2.59	422.23	4.99	43240.85	10781.15	7042.56
55	2.59	427.21	4.99	43739.40	10905.46	7123.76
55	2.59	427.21	4.99	43739.40	10905.46	7123.76
56	2.59	432.20	4.99	44237.96	11029.76	7204.95
56	2.59	432.20	4.99	44237.96	11029.76	7204.95
57	2.59	437.18	4.99	44736.51	11154.06	7286.15
57	2.59	437.18	4.99	44736.51	11154.06	7286.15
58	2.59	442.17	4.99	45235.06	11278.37	7367.35
58	2.59	442.17	4.99	45235.06	11278.37	7367.35
59	2.59	447.15	4.99	45733.62	11402.67	7448.55
59	2.59	447.15	4.99	45733.62	11402.67	7448.55
60	2.59	452.13	4.99	46232.17	11526.97	7529.75
60	2.59	452.13	4.99	46232.17	11526.97	7529.75
61	2.59	457.12	4.99	46730.73	11651.28	7610.95
61	2.59	457.12	4.99	46730.73	11651.28	7610.95
62	2.59	462.10	4.99	47229.28	11775.58	7692.15
62	2.59	462.10	4.99	47229.28	11775.58	7692.15
63	2.59	467.09	4.99	47727.83	11899.88	7773.34
63	2.59	467.09	4.99	47727.83	11899.88	7773.34
64	2.59	472.07	4.99	48226.39	12024.19	7854.54
64	2.59	472.07	4.99	48226.39	12024.19	7854.54
65	2.59	477.05	4.99	48724.94	12148.49	7935.74
65	2.59	477.05	4.99	48724.94	12148.49	7935.74
66	2.59	482.04	4.99	49223.49	12272.80	8016.94
66	2.59	482.04	4.99	49223.49	12272.80	8016.94
67	2.59	487.02	4.99	49722.05	12397.10	8098.14
67	2.59	487.02	4.99	49722.05	12397.10	8098.14
68	2.59	492.00	4.99	50220.60	12521.40	8179.34
68	2.59	492.00	4.99	50220.60	12521.40	8179.34
69	2.59	496.99	4.99	50719.16	12645.71	8260.54
69	2.59	496.99	4.99	50719.16	12645.71	8260.54
70	2.59	501.97	4.99	51217.71	12770.01	8341.73
70	2.59	501.97	4.99	51217.71	12770.01	8341.73
71	2.59	506.96	4.99	51716.26	12894.31	8422.93
71	2.59	506.96	4.99	51716.26	12894.31	8422.93
72	2.59	511.94	4.99	52214.82	13018.62	8504.13
72	2.59	511.94	4.99	52214.82	13018.62	8504.13
73	2.59	516.92	4.99	52713.37	13142.92	8585.33
73	2.59	516.92	4.99	52713.37	13142.92	8585.33
74	2.59	521.91	4.99	53211.92	13267.22	8666.53
74	2.59	521.91	4.99	53211.92	13267.22	8666.53
75	29.01	527.33	6.69	61231.74	26411.62	17252.82
75	29.01	527.33	6.69	61231.74	26411.62	17252.82
76	29.01	533.18	6.69	59846.64	25852.00	16887.26
76	29.01	533.18	6.69	59846.64	25852.00	16887.26
77	29.01	538.33	5.09	44822.14	19381.48	12660.54
77	29.01	538.33	5.09	44822.14	19381.48	12660.54
78	29.01	542.77	5.09	44471.32	19239.74	12567.95
78	29.01	542.77	5.09	44471.32	19239.74	12567.95
79	29.01	547.23	5.09	44120.50	19098.00	12475.36
79	29.01	547.23	5.09	44120.50	19098.00	12475.36
80	29.01	551.67	5.09	43769.68	18956.26	12382.77
80	29.01	551.67	5.09	43769.68	18956.26	12382.77
81	29.01	556.38	5.67	48353.32	20953.40	13687.36
81	29.01	556.38	5.67	48353.32	20953.40	13687.36
82	46.22	561.36	7.24	53365.91	23370.87	15266.52
82	46.22	561.36	7.24	53365.91	23370.87	15266.52
83	46.22	566.37	7.24	51220.55	22504.08	14700.31
83	46.22	566.37	7.24	51220.55	22504.08	14700.31
84	46.22	571.38	7.24	49075.18	21637.30	14134.10
84	46.22	571.38	7.24	49075.18	21637.30	14134.10
85	46.22	576.39	7.24	46929.82	20770.52	13567.89
85	46.22	576.39	7.24	46929.82	20770.52	13567.89
86	46.22	581.40	7.24	44784.46	19903.73	13001.69
86	46.22	581.40	7.24	44784.46	19903.73	13001.69
87	46.22	585.46	4.52	26848.19	11976.15	7823.16
87	46.22	585.46	4.52	26848.19	11976.15	7823.16
88	49.79	589.38	7.30	40119.94	18033.65	11780.09
88	49.79	589.38	7.30	40119.94	18033.65	11780.09
89	49.79	594.09	7.30	37714.69	17061.87	11145.30
89	49.79	594.09	7.30	37714.69	17061.87	11145.30
90	49.79	598.80	7.30	35309.45	16090.08	10510.50
90	49.79	598.80	7.30	35309.45	16090.08	10510.50
91	49.79	603.51	7.30	32904.20	15118.30	9875.71
91	49.79	603.51	7.30	32904.20	15118.30	9875.71
92	49.79	608.22	7.30	30498.96	14146.52	9240.91
92	49.79	608.22	7.30	30498.96	14146.52	9240.91
93	49.79	612.93	7.30	28093.71	13174.74	8606.11
93	49.79	612.93	7.30	28093.71	13174.74	8606.11
94	49.79	617.64	7.30	25688.46	12202.95	7971.32
94	49.79	617.64	7.30	25688.46	12202.95	7971.32
95	49.79	621.05	3.26	10701.59	5138.86	3356.85
95	49.79	621.05	3.26	10701.59	5138.86	3356.85
96	56.92	624.58	9.07	24564.03	12191.23	7963.66
96	56.92	624.58	9.07	24564.03	12191.23	7963.66
97	56.92	629.53	9.07	20317.63	10475.57	6842.94
97	56.92	629.53	9.07	20317.63	10475.57	6842.94
98	56.92	634.48	9.07	16071.23	8759.91	5722.23
98	56.92	634.48	9.07	16071.23	8759.91	5722.23
99	56.92	639.43	9.07	11824.83	7044.26	4601.51
99	56.92	639.43	9.07	11824.83	7044.26	4601.51
100	56.92	644.38	9.07	7578.43	5328.60	3480.79
100	56.92	644.38	9.07	7578.43	5328.60	3480.79
101	56.92	649.33	9.07	3332.03	3612.94	2360.08
101	56.92	649.33	9.07	3332.03	3612.94	2360.08
102	56.92	653.49	6.21	993.87	401.55	262.30
102	56.92	653.49	6.21	993.87	401.55	262.30

Sum of the Resisting Forces = 954645.01 (lbs)

Average Available Shear Strength = 1682.13(psf)

Sum of the Driving Forces = 665477.62 (lbs)

Average Mobilized Shear Stress = 1172.60(psf)

Total length of the failure surface = 567.52(ft)

Factor of Safety Balance Check: FS = 1.43453

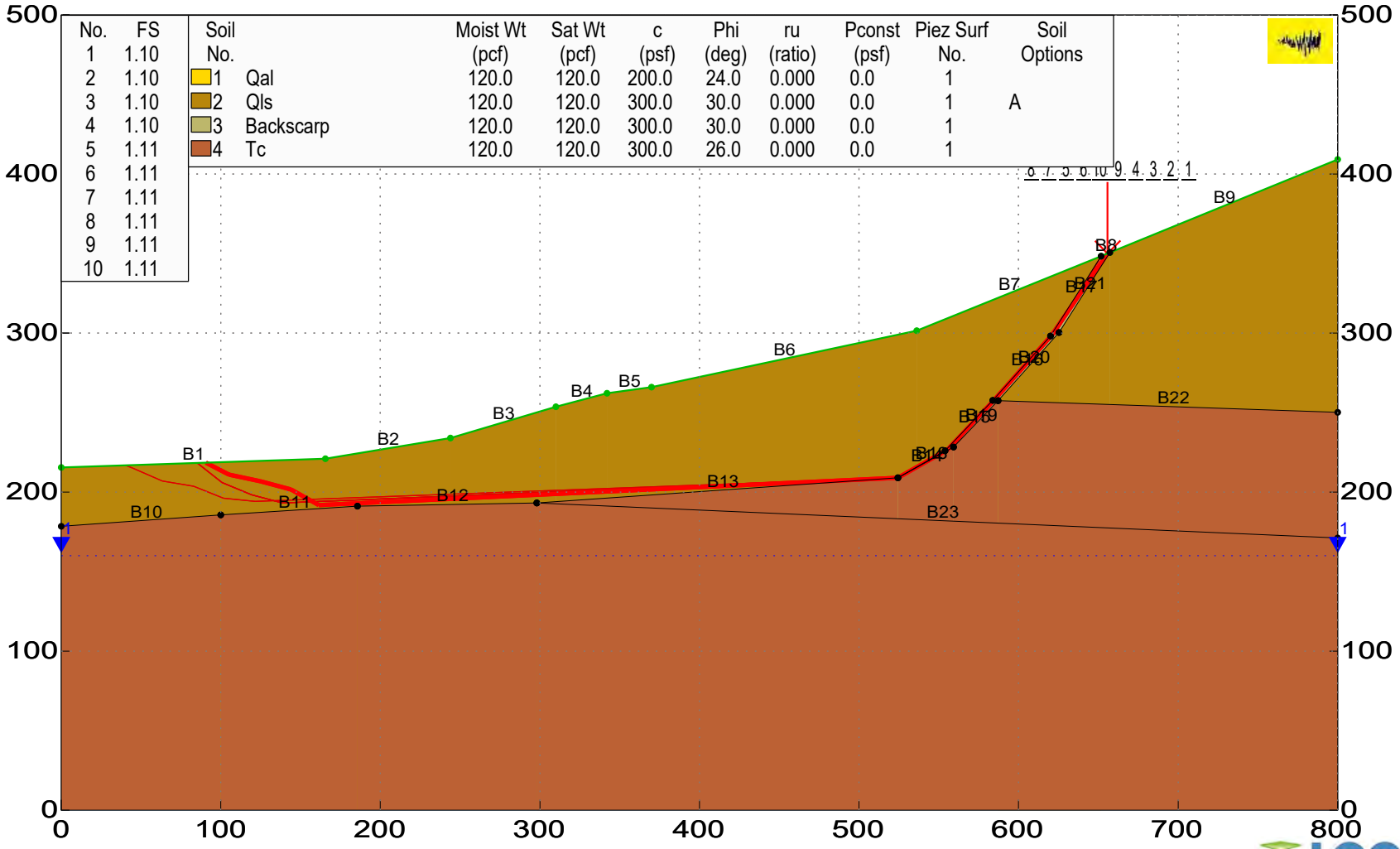
Janbu's Correction Factor (fo) = 1.0717

Janub's FS Corrected = 1.53741

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section A-A'
Existing - Entire Qls - Seismic

LGC Geotechnical, Inc. \xae.gsd



GEOSTASE FS = 1.10

Simplified Janbu (Corrected) Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 2/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xae.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xae.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section A-A'

DESCRIPTION: Existing - Entire Qls - Seismic

BOUNDARY DATA

9 Surface Boundaries
23 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.500	165.500	221.000	2
2	165.500	221.000	244.000	234.000	2
3	244.000	234.000	310.000	253.700	2
4	310.000	253.700	342.000	262.100	2
5	342.000	262.100	369.900	266.000	2
6	369.900	266.000	536.100	301.500	2
7	536.100	301.500	651.800	348.400	2
8	651.800	348.400	657.200	350.600	3
9	657.200	350.600	800.000	409.100	2
10	0.000	178.500	100.000	185.700	4
11	100.000	185.700	185.700	191.100	4
12	185.700	191.100	298.100	193.100	4
13	298.100	193.100	524.400	209.000	4
14	524.400	209.000	553.900	226.000	3
15	553.900	226.000	583.900	257.600	3
16	583.900	257.600	620.000	298.100	3
17	620.000	298.100	651.800	348.400	3
18	524.400	209.000	559.300	228.300	4
19	559.300	228.300	587.100	257.500	4
20	587.100	257.500	625.400	300.400	2
21	625.400	300.400	657.200	350.600	2
22	587.100	257.500	800.000	250.200	4
23	298.100	193.100	800.000	171.200	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	300.00	30.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	300.00	30.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	15.0	0.00	15.00
3	90.0	300.00	30.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	110.00	190.00	250.00	190.00	10.00
2	524.40	209.00	524.40	209.00	0.00
3	553.90	226.00	559.30	228.30	0.00
4	583.90	257.60	587.10	257.50	0.00
5	620.00	298.10	625.40	300.40	0.00
6	651.80	348.40	657.20	350.60	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.710 FS Min = 1.102 FS Ave = 1.254
Standard Deviation = 0.174 Coefficient of Variation = 13.86 %

Critical Surface is Sequence Number 151 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.102

Table 1 - Geometry Data on the 116 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	4.80	1.32	93.09	217.27	218.59	-27.40	1.90	5.40
2	4.80	3.97	97.89	214.78	218.75	-27.40	1.90	5.40
3	4.80	6.61	102.69	212.30	218.91	-27.40	1.90	5.40
4	4.88	8.55	107.53	210.52	219.07	-12.35	1.90	5.00
5	4.88	9.79	112.41	209.45	219.24	-12.35	1.90	5.00
6	4.88	11.02	117.30	208.38	219.40	-12.35	1.90	5.00
7	4.88	12.25	122.18	207.31	219.56	-12.35	1.90	5.00
8	4.83	13.58	127.04	206.14	219.72	-14.80	1.90	5.00
9	4.83	15.02	131.87	204.86	219.88	-14.80	1.90	5.00
10	4.83	16.46	136.71	203.58	220.04	-14.80	1.90	5.00
11	4.83	17.90	141.54	202.31	220.20	-14.80	1.90	5.00
12	5.80	20.35	146.86	200.03	220.38	-29.52	1.90	6.67
13	5.80	23.83	152.66	196.74	220.57	-29.52	1.90	6.67
14	5.80	27.31	158.46	193.46	220.77	-29.52	1.90	6.67
15	4.14	29.02	163.43	191.91	220.93	2.71	1.90	4.14
16	4.91	29.28	167.95	192.13	221.41	2.71	9.40	4.91
17	4.91	29.86	172.86	192.36	222.22	2.71	9.40	4.91
18	4.91	30.44	177.77	192.59	223.03	2.71	9.40	4.91
19	4.91	31.02	182.67	192.82	223.84	2.71	9.40	4.91
20	4.91	31.60	187.58	193.06	224.66	2.71	9.40	4.91
21	4.91	32.18	192.48	193.29	225.47	2.71	9.40	4.91
22	4.91	32.76	197.39	193.52	226.28	2.71	9.40	4.91
23	4.91	33.34	202.30	193.75	227.09	2.71	9.40	4.91
24	4.91	33.92	207.20	193.99	227.91	2.71	9.40	4.91
25	4.91	34.50	212.11	194.22	228.72	2.71	9.40	4.91
26	4.91	35.08	217.02	194.45	229.53	2.71	9.40	4.91
27	4.91	35.66	221.92	194.68	230.34	2.71	9.40	4.91
28	4.91	36.24	226.83	194.91	231.16	2.71	9.40	4.91
29	4.91	36.82	231.73	195.15	231.97	2.71	9.40	4.91
30	4.91	37.40	236.64	195.38	232.78	2.71	9.40	4.91
31	4.91	37.98	241.55	195.61	233.59	2.71	9.40	4.91
32	5.08	38.91	246.54	195.85	234.76	2.71	16.62	5.08
33	5.08	40.19	251.62	196.09	236.27	2.71	16.62	5.08
34	5.08	41.46	256.69	196.33	237.79	2.71	16.62	5.08
35	5.08	42.74	261.77	196.57	239.30	2.71	16.62	5.08
36	5.08	44.01	266.85	196.81	240.82	2.71	16.62	5.08
37	5.08	45.29	271.92	197.05	242.33	2.71	16.62	5.08
38	5.08	46.56	277.00	197.29	243.85	2.71	16.62	5.08
39	5.08	47.84	282.08	197.53	245.37	2.71	16.62	5.08
40	5.08	49.11	287.15	197.77	246.88	2.71	16.62	5.08
41	5.08	50.39	292.23	198.01	248.40	2.71	16.62	5.08
42	5.08	51.66	297.31	198.25	249.91	2.71	16.62	5.08
43	5.08	52.94	302.38	198.49	251.43	2.71	16.62	5.08

44	5.08	54.21	307.46	198.73	252.94	2.71	16.62	5.08
45	5.33	55.42	312.67	198.98	254.40	2.71	14.71	5.34
46	5.33	56.57	318.00	199.23	255.80	2.71	14.71	5.34
47	5.33	57.72	323.33	199.48	257.20	2.71	14.71	5.34
48	5.33	58.86	328.67	199.74	258.60	2.71	14.71	5.34
49	5.33	60.01	334.00	199.99	260.00	2.71	14.71	5.34
50	5.33	61.16	339.33	200.24	261.40	2.71	14.71	5.34
51	4.65	61.95	344.32	200.48	262.43	2.71	7.96	4.66
52	4.65	62.38	348.98	200.70	263.08	2.71	7.96	4.66
53	4.65	62.81	353.62	200.92	263.73	2.71	7.96	4.66
54	4.65	63.24	358.27	201.14	264.38	2.71	7.96	4.66
55	4.65	63.67	362.92	201.36	265.02	2.71	7.96	4.66
56	4.65	64.10	367.57	201.58	265.68	2.71	7.96	4.66
57	4.98	64.73	372.39	201.80	266.53	2.71	12.06	4.99
58	4.98	65.56	377.38	202.04	267.60	2.71	12.06	4.99
59	4.98	66.38	382.36	202.28	268.66	2.71	12.06	4.99
60	4.98	67.21	387.34	202.51	269.73	2.71	12.06	4.99
61	4.98	68.04	392.33	202.75	270.79	2.71	12.06	4.99
62	4.98	68.87	397.31	202.98	271.85	2.71	12.06	4.99
63	4.98	69.70	402.30	203.22	272.92	2.71	12.06	4.99
64	4.98	70.53	407.28	203.46	273.98	2.71	12.06	4.99
65	4.98	71.36	412.26	203.69	275.05	2.71	12.06	4.99
66	4.98	72.19	417.25	203.93	276.11	2.71	12.06	4.99
67	4.98	73.01	422.23	204.16	277.18	2.71	12.06	4.99
68	4.98	73.84	427.21	204.40	278.24	2.71	12.06	4.99
69	4.98	74.67	432.20	204.64	279.31	2.71	12.06	4.99
70	4.98	75.50	437.18	204.87	280.37	2.71	12.06	4.99
71	4.98	76.33	442.17	205.11	281.44	2.71	12.06	4.99
72	4.98	77.16	447.15	205.34	282.50	2.71	12.06	4.99
73	4.98	77.99	452.13	205.58	283.56	2.71	12.06	4.99
74	4.98	78.81	457.12	205.82	284.63	2.71	12.06	4.99
75	4.98	79.64	462.10	206.05	285.69	2.71	12.06	4.99
76	4.98	80.47	467.09	206.29	286.76	2.71	12.06	4.99
77	4.98	81.30	472.07	206.52	287.82	2.71	12.06	4.99
78	4.98	82.13	477.05	206.76	288.89	2.71	12.06	4.99
79	4.98	82.96	482.04	206.99	289.95	2.71	12.06	4.99
80	4.98	83.79	487.02	207.23	291.02	2.71	12.06	4.99
81	4.98	84.61	492.00	207.47	292.08	2.71	12.06	4.99
82	4.98	85.44	496.99	207.70	293.15	2.71	12.06	4.99
83	4.98	86.27	501.97	207.94	294.21	2.71	12.06	4.99
84	4.98	87.10	506.96	208.17	295.27	2.71	12.06	4.99
85	4.98	87.93	511.94	208.41	296.34	2.71	12.06	4.99
86	4.98	88.76	516.92	208.65	297.40	2.71	12.06	4.99
87	4.98	89.59	521.91	208.88	298.47	2.71	12.06	4.99
88	5.85	88.96	527.33	210.67	299.63	29.65	12.06	6.73
89	5.85	86.88	533.18	214.00	300.88	29.65	12.06	6.73
90	4.45	85.48	538.33	216.93	302.40	29.65	22.07	5.12
91	4.45	84.75	542.77	219.46	304.21	29.65	22.07	5.12
92	4.45	84.02	547.23	221.99	306.01	29.65	22.07	5.12
93	4.45	83.29	551.67	224.53	307.81	29.65	22.07	5.12
94	1.45	82.80	554.62	226.20	309.01	29.65	22.07	1.67
95	4.76	81.12	557.73	229.15	310.27	46.77	22.07	6.95
96	4.76	77.99	562.49	234.21	312.20	46.77	22.07	6.95
97	4.76	74.85	567.24	239.27	314.12	46.77	22.07	6.95
98	4.76	71.72	572.00	244.33	316.05	46.77	22.07	6.95
99	4.76	68.59	576.76	249.40	317.98	46.77	22.07	6.95
100	4.76	65.45	581.52	254.46	319.91	46.77	22.07	6.95
101	0.56	63.70	584.18	257.29	320.99	46.77	22.07	0.81
102	5.08	61.68	587.00	260.45	322.13	48.50	22.07	7.66
103	5.08	58.00	592.07	266.19	324.19	48.50	22.07	7.66
104	5.08	54.32	597.15	271.93	326.25	48.50	22.07	7.66
105	5.08	50.64	602.23	277.67	328.31	48.50	22.07	7.66
106	5.08	46.96	607.31	283.41	330.36	48.50	22.07	7.66
107	5.08	43.28	612.38	289.14	332.42	48.50	22.07	7.66
108	5.08	39.60	617.46	294.88	334.48	48.50	22.07	7.66
109	0.49	37.58	620.25	298.03	335.61	48.50	22.07	0.75
110	5.22	34.63	623.10	302.13	336.77	55.68	22.07	9.26
111	5.22	29.11	628.32	309.78	338.88	55.68	22.07	9.26
112	5.22	23.58	633.54	317.42	341.00	55.68	22.07	9.26
113	5.22	18.05	638.76	325.07	343.11	55.68	22.07	9.26
114	5.22	12.52	643.97	332.71	345.23	55.68	22.07	9.26
115	5.22	6.99	649.19	340.35	347.34	55.68	22.07	9.26
116	3.99	2.11	653.80	347.10	349.21	55.68	22.17	7.08

Table 2 - Force Data On The 116 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	761.5	0.0	0.0	114.2	0.0	0.0
2	2284.4	0.0	0.0	342.7	0.0	0.0
3	3807.4	0.0	0.0	571.1	0.0	0.0
4	5013.0	0.0	0.0	752.0	0.0	0.0
5	5735.1	0.0	0.0	860.3	0.0	0.0
6	6457.3	0.0	0.0	968.6	0.0	0.0
7	7179.4	0.0	0.0	1076.9	0.0	0.0
8	7880.2	0.0	0.0	1182.0	0.0	0.0
9	8714.1	0.0	0.0	1307.1	0.0	0.0
10	9548.0	0.0	0.0	1432.2	0.0	0.0
11	10381.9	0.0	0.0	1557.3	0.0	0.0
12	14170.0	0.0	0.0	2125.5	0.0	0.0
13	16590.7	0.0	0.0	2488.6	0.0	0.0
14	19011.4	0.0	0.0	2851.7	0.0	0.0
15	14403.7	0.0	0.0	2160.5	0.0	0.0
16	17237.7	0.0	0.0	2585.7	0.0	0.0
17	17579.4	0.0	0.0	2636.9	0.0	0.0
18	17921.0	0.0	0.0	2688.2	0.0	0.0
19	18262.6	0.0	0.0	2739.4	0.0	0.0
20	18604.3	0.0	0.0	2790.6	0.0	0.0
21	18945.9	0.0	0.0	2841.9	0.0	0.0
22	19287.5	0.0	0.0	2893.1	0.0	0.0
23	19629.2	0.0	0.0	2944.4	0.0	0.0
24	19970.8	0.0	0.0	2995.6	0.0	0.0
25	20312.4	0.0	0.0	3046.9	0.0	0.0
26	20654.0	0.0	0.0	3098.1	0.0	0.0
27	20995.7	0.0	0.0	3149.4	0.0	0.0
28	21337.3	0.0	0.0	3200.6	0.0	0.0
29	21678.9	0.0	0.0	3251.8	0.0	0.0
30	22020.6	0.0	0.0	3303.1	0.0	0.0
31	22362.2	0.0	0.0	3354.3	0.0	0.0
32	23705.3	0.0	0.0	3555.8	0.0	0.0
33	24482.1	0.0	0.0	3672.3	0.0	0.0
34	25258.9	0.0	0.0	3788.8	0.0	0.0
35	26035.7	0.0	0.0	3905.4	0.0	0.0
36	26812.5	0.0	0.0	4021.9	0.0	0.0
37	27589.3	0.0	0.0	4138.4	0.0	0.0

38	28366.1	0.0	0.0	4254.9	0.0	0.0
39	29143.0	0.0	0.0	4371.4	0.0	0.0
40	29919.8	0.0	0.0	4488.0	0.0	0.0
41	30696.6	0.0	0.0	4604.5	0.0	0.0
42	31473.4	0.0	0.0	4721.0	0.0	0.0
43	32250.2	0.0	0.0	4837.5	0.0	0.0
44	33027.0	0.0	0.0	4954.1	0.0	0.0
45	35470.3	0.0	0.0	5320.5	0.0	0.0
46	36204.7	0.0	0.0	5430.7	0.0	0.0
47	36939.1	0.0	0.0	5540.9	0.0	0.0
48	37673.6	0.0	0.0	5651.0	0.0	0.0
49	38408.0	0.0	0.0	5761.2	0.0	0.0
50	39142.4	0.0	0.0	5871.4	0.0	0.0
51	34567.4	0.0	0.0	5185.1	0.0	0.0
52	34807.3	0.0	0.0	5221.1	0.0	0.0
53	35047.2	0.0	0.0	5257.1	0.0	0.0
54	35287.1	0.0	0.0	5293.1	0.0	0.0
55	35526.9	0.0	0.0	5329.0	0.0	0.0
56	35766.8	0.0	0.0	5365.0	0.0	0.0
57	38711.2	0.0	0.0	5806.7	0.0	0.0
58	39206.8	0.0	0.0	5881.0	0.0	0.0
59	39702.4	0.0	0.0	5955.4	0.0	0.0
60	40198.0	0.0	0.0	6029.7	0.0	0.0
61	40693.5	0.0	0.0	6104.0	0.0	0.0
62	41189.1	0.0	0.0	6178.4	0.0	0.0
63	41684.7	0.0	0.0	6252.7	0.0	0.0
64	42180.3	0.0	0.0	6327.0	0.0	0.0
65	42675.9	0.0	0.0	6401.4	0.0	0.0
66	43171.4	0.0	0.0	6475.7	0.0	0.0
67	43667.0	0.0	0.0	6550.1	0.0	0.0
68	44162.6	0.0	0.0	6624.4	0.0	0.0
69	44658.2	0.0	0.0	6698.7	0.0	0.0
70	45153.7	0.0	0.0	6773.1	0.0	0.0
71	45649.3	0.0	0.0	6847.4	0.0	0.0
72	46144.9	0.0	0.0	6921.7	0.0	0.0
73	46640.5	0.0	0.0	6996.1	0.0	0.0
74	47136.1	0.0	0.0	7070.4	0.0	0.0
75	47631.6	0.0	0.0	7144.7	0.0	0.0
76	48127.2	0.0	0.0	7219.1	0.0	0.0
77	48622.8	0.0	0.0	7293.4	0.0	0.0
78	49118.4	0.0	0.0	7367.8	0.0	0.0
79	49613.9	0.0	0.0	7442.1	0.0	0.0
80	50109.5	0.0	0.0	7516.4	0.0	0.0
81	50605.1	0.0	0.0	7590.8	0.0	0.0
82	51100.7	0.0	0.0	7665.1	0.0	0.0
83	51596.2	0.0	0.0	7739.4	0.0	0.0
84	52091.8	0.0	0.0	7813.8	0.0	0.0
85	52587.4	0.0	0.0	7888.1	0.0	0.0
86	53083.0	0.0	0.0	7962.4	0.0	0.0
87	53578.6	0.0	0.0	8036.8	0.0	0.0
88	62450.4	0.0	0.0	9367.6	0.0	0.0
89	60989.9	0.0	0.0	9148.5	0.0	0.0
90	45643.8	0.0	0.0	6846.6	0.0	0.0
91	45254.4	0.0	0.0	6788.2	0.0	0.0
92	44865.0	0.0	0.0	6729.7	0.0	0.0
93	44475.6	0.0	0.0	6671.3	0.0	0.0
94	14393.5	0.0	0.0	2159.0	0.0	0.0
95	46321.3	0.0	0.0	6948.2	0.0	0.0
96	44532.1	0.0	0.0	6679.8	0.0	0.0
97	42742.9	0.0	0.0	6411.4	0.0	0.0
98	40953.7	0.0	0.0	6143.1	0.0	0.0
99	39164.5	0.0	0.0	5874.7	0.0	0.0
100	37375.3	0.0	0.0	5606.3	0.0	0.0
101	4256.6	0.0	0.0	638.5	0.0	0.0
102	37581.8	0.0	0.0	5637.3	0.0	0.0
103	35339.4	0.0	0.0	5300.9	0.0	0.0
104	33097.0	0.0	0.0	4964.5	0.0	0.0
105	30854.6	0.0	0.0	4628.2	0.0	0.0
106	28612.1	0.0	0.0	4291.8	0.0	0.0
107	26369.7	0.0	0.0	3955.5	0.0	0.0
108	24127.3	0.0	0.0	3619.1	0.0	0.0
109	2227.9	0.0	0.0	334.2	0.0	0.0
110	21685.5	0.0	0.0	3252.8	0.0	0.0
111	18223.4	0.0	0.0	2733.5	0.0	0.0
112	14761.4	0.0	0.0	2214.2	0.0	0.0
113	11299.4	0.0	0.0	1694.9	0.0	0.0
114	7837.4	0.0	0.0	1175.6	0.0	0.0
115	4375.3	0.0	0.0	656.3	0.0	0.0
116	1011.8	0.0	0.0	151.8	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 3553653.06(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 3553653.06(lbs)

TOTAL AREA OF SLIDING MASS = 29613.78(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 116 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	2	300.00	30.00	A
2	2	300.00	30.00	A
3	2	300.00	30.00	A
4	2	0.00	15.00	A
5	2	0.00	15.00	A
6	2	0.00	15.00	A
7	2	0.00	15.00	A
8	2	0.00	15.00	A
9	2	0.00	15.00	A
10	2	0.00	15.00	A
11	2	0.00	15.00	A
12	2	300.00	30.00	A
13	2	300.00	30.00	A
14	2	300.00	30.00	A
15	2	0.00	15.00	A
16	2	0.00	15.00	A
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	2	0.00	15.00	A
23	2	0.00	15.00	A
24	2	0.00	15.00	A
25	2	0.00	15.00	A
26	2	0.00	15.00	A
27	2	0.00	15.00	A
28	2	0.00	15.00	A
29	2	0.00	15.00	A

30	2	0.00	15.00	A
31	2	0.00	15.00	A
32	2	0.00	15.00	A
33	2	0.00	15.00	A
34	2	0.00	15.00	A
35	2	0.00	15.00	A
36	2	0.00	15.00	A
37	2	0.00	15.00	A
38	2	0.00	15.00	A
39	2	0.00	15.00	A
40	2	0.00	15.00	A
41	2	0.00	15.00	A
42	2	0.00	15.00	A
43	2	0.00	15.00	A
44	2	0.00	15.00	A
45	2	0.00	15.00	A
46	2	0.00	15.00	A
47	2	0.00	15.00	A
48	2	0.00	15.00	A
49	2	0.00	15.00	A
50	2	0.00	15.00	A
51	2	0.00	15.00	A
52	2	0.00	15.00	A
53	2	0.00	15.00	A
54	2	0.00	15.00	A
55	2	0.00	15.00	A
56	2	0.00	15.00	A
57	2	0.00	15.00	A
58	2	0.00	15.00	A
59	2	0.00	15.00	A
60	2	0.00	15.00	A
61	2	0.00	15.00	A
62	2	0.00	15.00	A
63	2	0.00	15.00	A
64	2	0.00	15.00	A
65	2	0.00	15.00	A
66	2	0.00	15.00	A
67	2	0.00	15.00	A
68	2	0.00	15.00	A
69	2	0.00	15.00	A
70	2	0.00	15.00	A
71	2	0.00	15.00	A
72	2	0.00	15.00	A
73	2	0.00	15.00	A
74	2	0.00	15.00	A
75	2	0.00	15.00	A
76	2	0.00	15.00	A
77	2	0.00	15.00	A
78	2	0.00	15.00	A
79	2	0.00	15.00	A
80	2	0.00	15.00	A
81	2	0.00	15.00	A
82	2	0.00	15.00	A
83	2	0.00	15.00	A
84	2	0.00	15.00	A
85	2	0.00	15.00	A
86	2	0.00	15.00	A
87	2	0.00	15.00	A
88	3	300.00	30.00	
89	3	300.00	30.00	
90	3	300.00	30.00	
91	3	300.00	30.00	
92	3	300.00	30.00	
93	3	300.00	30.00	
94	3	300.00	30.00	
95	3	300.00	30.00	
96	3	300.00	30.00	
97	3	300.00	30.00	
98	3	300.00	30.00	
99	3	300.00	30.00	
100	3	300.00	30.00	
101	3	300.00	30.00	
102	3	300.00	30.00	
103	3	300.00	30.00	
104	3	300.00	30.00	
105	3	300.00	30.00	
106	3	300.00	30.00	
107	3	300.00	30.00	
108	3	300.00	30.00	
109	3	300.00	30.00	
110	3	300.00	30.00	
111	3	300.00	30.00	
112	3	300.00	30.00	
113	3	300.00	30.00	
114	3	300.00	30.00	
115	3	300.00	30.00	
116	3	300.00	30.00	

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 116 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-27.40	93.09	5.40	436.19	551.84	501.28
1	-27.40	93.09	5.40	436.19	551.84	501.28
2	-27.40	97.89	5.40	883.53	810.11	735.89
2	-27.40	97.89	5.40	883.53	810.11	735.89
3	-27.40	102.69	5.40	1330.87	1068.38	970.50
3	-27.40	102.69	5.40	1330.87	1068.38	970.50
4	-12.35	107.53	5.00	1088.33	291.62	264.90
4	-12.35	107.53	5.00	1088.33	291.62	264.90
5	-12.35	112.41	5.00	1245.10	333.62	303.06
5	-12.35	112.41	5.00	1245.10	333.62	303.06
6	-12.35	117.30	5.00	1401.87	375.63	341.22
6	-12.35	117.30	5.00	1401.87	375.63	341.22
7	-12.35	122.18	5.00	1558.64	417.64	379.38
7	-12.35	122.18	5.00	1558.64	417.64	379.38
8	-14.80	127.04	5.00	1750.24	468.98	426.01
8	-14.80	127.04	5.00	1750.24	468.98	426.01
9	-14.80	131.87	5.00	1935.46	518.61	471.09
9	-14.80	131.87	5.00	1935.46	518.61	471.09

10	-14.80	136.71	5.00	2120.68	568.23	516.18
10	-14.80	136.71	5.00	2120.68	568.23	516.18
11	-14.80	141.54	5.00	2305.89	617.86	561.26
11	-14.80	141.54	5.00	2305.89	617.86	561.26
12	-29.52	146.86	6.67	3817.64	2504.11	2274.70
12	-29.52	146.86	6.67	3817.64	2504.11	2274.70
13	-29.52	152.66	6.67	4428.61	2856.86	2595.13
13	-29.52	152.66	6.67	4428.61	2856.86	2595.13
14	-29.52	158.46	6.67	5039.59	3209.61	2915.56
14	-29.52	158.46	6.67	5039.59	3209.61	2915.56
15	2.71	163.43	4.14	3439.79	921.69	837.25
15	2.71	163.43	4.14	3439.79	921.69	837.25
16	2.71	167.95	4.91	3470.72	929.98	844.78
16	2.71	167.95	4.91	3470.72	929.98	844.78
17	2.71	172.86	4.91	3539.51	948.41	861.52
17	2.71	172.86	4.91	3539.51	948.41	861.52
18	2.71	177.77	4.91	3608.29	966.84	878.26
18	2.71	177.77	4.91	3608.29	966.84	878.26
19	2.71	182.67	4.91	3677.08	985.27	895.01
19	2.71	182.67	4.91	3677.08	985.27	895.01
20	2.71	187.58	4.91	3745.86	1003.70	911.75
20	2.71	187.58	4.91	3745.86	1003.70	911.75
21	2.71	192.48	4.91	3814.65	1022.13	928.49
21	2.71	192.48	4.91	3814.65	1022.13	928.49
22	2.71	197.39	4.91	3883.44	1040.56	945.23
22	2.71	197.39	4.91	3883.44	1040.56	945.23
23	2.71	202.30	4.91	3952.22	1058.99	961.98
23	2.71	202.30	4.91	3952.22	1058.99	961.98
24	2.71	207.20	4.91	4021.01	1077.43	978.72
24	2.71	207.20	4.91	4021.01	1077.43	978.72
25	2.71	212.11	4.91	4089.79	1095.86	995.46
25	2.71	212.11	4.91	4089.79	1095.86	995.46
26	2.71	217.02	4.91	4158.58	1114.29	1012.20
26	2.71	217.02	4.91	4158.58	1114.29	1012.20
27	2.71	221.92	4.91	4227.36	1132.72	1028.95
27	2.71	221.92	4.91	4227.36	1132.72	1028.95
28	2.71	226.83	4.91	4296.15	1151.15	1045.69
28	2.71	226.83	4.91	4296.15	1151.15	1045.69
29	2.71	231.73	4.91	4364.93	1169.58	1062.43
29	2.71	231.73	4.91	4364.93	1169.58	1062.43
30	2.71	236.64	4.91	4433.72	1188.01	1079.17
30	2.71	236.64	4.91	4433.72	1188.01	1079.17
31	2.71	241.55	4.91	4502.50	1206.44	1095.92
31	2.71	241.55	4.91	4502.50	1206.44	1095.92
32	2.71	246.54	5.08	4612.47	1235.91	1122.68
32	2.71	246.54	5.08	4612.47	1235.91	1122.68
33	2.71	251.62	5.08	4763.62	1276.41	1159.47
33	2.71	251.62	5.08	4763.62	1276.41	1159.47
34	2.71	256.69	5.08	4914.77	1316.91	1196.26
34	2.71	256.69	5.08	4914.77	1316.91	1196.26
35	2.71	261.77	5.08	5065.92	1357.41	1233.05
35	2.71	261.77	5.08	5065.92	1357.41	1233.05
36	2.71	266.85	5.08	5217.07	1397.91	1269.84
36	2.71	266.85	5.08	5217.07	1397.91	1269.84
37	2.71	271.92	5.08	5368.22	1438.41	1306.63
37	2.71	271.92	5.08	5368.22	1438.41	1306.63
38	2.71	277.00	5.08	5519.36	1478.91	1343.42
38	2.71	277.00	5.08	5519.36	1478.91	1343.42
39	2.71	282.08	5.08	5670.51	1519.41	1380.21
39	2.71	282.08	5.08	5670.51	1519.41	1380.21
40	2.71	287.15	5.08	5821.66	1559.91	1417.00
40	2.71	287.15	5.08	5821.66	1559.91	1417.00
41	2.71	292.23	5.08	5972.81	1600.41	1453.79
41	2.71	292.23	5.08	5972.81	1600.41	1453.79
42	2.71	297.31	5.08	6123.96	1640.91	1490.58
42	2.71	297.31	5.08	6123.96	1640.91	1490.58
43	2.71	302.38	5.08	6275.11	1681.41	1527.37
43	2.71	302.38	5.08	6275.11	1681.41	1527.37
44	2.71	307.46	5.08	6426.26	1721.91	1564.16
44	2.71	307.46	5.08	6426.26	1721.91	1564.16
45	2.71	312.67	5.34	6569.85	1760.39	1599.11
45	2.71	312.67	5.34	6569.85	1760.39	1599.11
46	2.71	318.00	5.34	6705.88	1796.83	1632.22
46	2.71	318.00	5.34	6705.88	1796.83	1632.22
47	2.71	323.33	5.34	6841.91	1833.28	1665.33
47	2.71	323.33	5.34	6841.91	1833.28	1665.33
48	2.71	328.67	5.34	6977.94	1869.73	1698.44
48	2.71	328.67	5.34	6977.94	1869.73	1698.44
49	2.71	334.00	5.34	7113.98	1906.18	1731.55
49	2.71	334.00	5.34	7113.98	1906.18	1731.55
50	2.71	339.33	5.34	7250.01	1942.63	1764.66
50	2.71	339.33	5.34	7250.01	1942.63	1764.66
51	2.71	344.32	4.66	7343.50	1967.69	1787.42
51	2.71	344.32	4.66	7343.50	1967.69	1787.42
52	2.71	348.98	4.66	7394.46	1981.34	1799.82
52	2.71	348.98	4.66	7394.46	1981.34	1799.82
53	2.71	353.62	4.66	7445.42	1995.00	1812.23
53	2.71	353.62	4.66	7445.42	1995.00	1812.23
54	2.71	358.27	4.66	7496.38	2008.65	1824.63
54	2.71	358.27	4.66	7496.38	2008.65	1824.63
55	2.71	362.92	4.66	7547.35	2022.30	1837.03
55	2.71	362.92	4.66	7547.35	2022.30	1837.03
56	2.71	367.57	4.66	7598.31	2035.96	1849.44
56	2.71	367.57	4.66	7598.31	2035.96	1849.44
57	2.71	372.39	4.99	7672.90	2055.95	1867.59
57	2.71	372.39	4.99	7672.90	2055.95	1867.59
58	2.71	377.38	4.99	7771.13	2082.27	1891.50
58	2.71	377.38	4.99	7771.13	2082.27	1891.50
59	2.71	382.36	4.99	7869.35	2108.59	1915.41
59	2.71	382.36	4.99	7869.35	2108.59	1915.41
60	2.71	387.34	4.99	7967.58	2134.91	1939.32
60	2.71	387.34	4.99	7967.58	2134.91	1939.32
61	2.71	392.33	4.99	8065.81	2161.23	1963.23
61	2.71	392.33	4.99	8065.81	2161.23	1963.23
62	2.71	397.31	4.99	8164.04	2187.55	1987.14
62	2.71	397.31	4.99	8164.04	2187.55	1987.14
63	2.71	402.30	4.99	8262.27	2213.87	2011.05
63	2.71	402.30	4.99	8262.27	2213.87	2011.05
64	2.71	407.28	4.99	8360.49	2240.19	2034.96
64	2.71	407.28	4.99	8360.49	2240.19	2034.96
65	2.71	412.26	4.99	8458.72	2266.51	2058.86
65	2.71	412.26	4.99	8458.72	2266.51	2058.86
66	2.71	417.25	4.99	8556.95	2292.83	2082.77
66	2.71	417.25	4.99	8556.95	2292.83	2082.77
67	2.71	422.23	4.99	8655.18	2319.15	2106.68
67	2.71	422.23	4.99	8655.18	2319.15	2106.68
68	2.71	427.21	4.99	8753.40	2345.47	2130.59
68	2.71	427.21	4.99	8753.40	2345.47	2130.59
69	2.71	432.20	4.99	8851.63	2371.79	2154.50
69	2.71	432.20	4.99	8851.63	2371.79	2154.50

70	2.71	437.18	4.99	8949.86	2398.11	2178.41
70	2.71	437.18	4.99	8949.86	2398.11	2178.41
71	2.71	442.17	4.99	9048.09	2424.43	2202.32
71	2.71	442.17	4.99	9048.09	2424.43	2202.32
72	2.71	447.15	4.99	9146.32	2450.75	2226.23
72	2.71	447.15	4.99	9146.32	2450.75	2226.23
73	2.71	452.13	4.99	9244.54	2477.07	2250.13
73	2.71	452.13	4.99	9244.54	2477.07	2250.13
74	2.71	457.12	4.99	9342.77	2503.39	2274.04
74	2.71	457.12	4.99	9342.77	2503.39	2274.04
75	2.71	462.10	4.99	9441.00	2529.71	2297.95
75	2.71	462.10	4.99	9441.00	2529.71	2297.95
76	2.71	467.09	4.99	9539.23	2556.03	2321.86
76	2.71	467.09	4.99	9539.23	2556.03	2321.86
77	2.71	472.07	4.99	9637.45	2582.35	2345.77
77	2.71	472.07	4.99	9637.45	2582.35	2345.77
78	2.71	477.05	4.99	9735.68	2608.67	2369.68
78	2.71	477.05	4.99	9735.68	2608.67	2369.68
79	2.71	482.04	4.99	9833.91	2634.99	2393.59
79	2.71	482.04	4.99	9833.91	2634.99	2393.59
80	2.71	487.02	4.99	9932.14	2661.31	2417.50
80	2.71	487.02	4.99	9932.14	2661.31	2417.50
81	2.71	492.00	4.99	10030.36	2687.63	2441.40
81	2.71	492.00	4.99	10030.36	2687.63	2441.40
82	2.71	496.99	4.99	10128.59	2713.95	2465.31
82	2.71	496.99	4.99	10128.59	2713.95	2465.31
83	2.71	501.97	4.99	10226.82	2740.27	2489.22
83	2.71	501.97	4.99	10226.82	2740.27	2489.22
84	2.71	506.96	4.99	10325.05	2766.59	2513.13
84	2.71	506.96	4.99	10325.05	2766.59	2513.13
85	2.71	511.94	4.99	10423.28	2792.91	2537.04
85	2.71	511.94	4.99	10423.28	2792.91	2537.04
86	2.71	516.92	4.99	10521.50	2819.23	2560.95
86	2.71	516.92	4.99	10521.50	2819.23	2560.95
87	2.71	521.91	4.99	10619.73	2845.55	2584.86
87	2.71	521.91	4.99	10619.73	2845.55	2584.86
88	29.65	527.33	6.73	7969.05	4900.93	4451.94
88	29.65	527.33	6.73	7969.05	4900.93	4451.94
89	29.65	533.18	6.73	7779.74	4791.64	4352.66
89	29.65	533.18	6.73	7779.74	4791.64	4352.66
90	29.65	538.33	5.12	7651.91	4717.83	4285.62
90	29.65	538.33	5.12	7651.91	4717.83	4285.62
91	29.65	542.77	5.12	7585.56	4679.52	4250.81
91	29.65	542.77	5.12	7585.56	4679.52	4250.81
92	29.65	547.23	5.12	7519.20	4641.21	4216.01
92	29.65	547.23	5.12	7519.20	4641.21	4216.01
93	29.65	551.67	5.12	7452.85	4602.90	4181.21
93	29.65	551.67	5.12	7452.85	4602.90	4181.21
94	29.65	554.62	1.67	7408.87	4577.51	4158.15
94	29.65	554.62	1.67	7408.87	4577.51	4158.15
95	46.77	557.73	6.95	5905.95	3709.80	3369.93
95	46.77	557.73	6.95	5905.95	3709.80	3369.93
96	46.77	562.49	6.95	5670.33	3573.77	3246.36
96	46.77	562.49	6.95	5670.33	3573.77	3246.36
97	46.77	567.24	6.95	5434.72	3437.74	3122.79
97	46.77	567.24	6.95	5434.72	3437.74	3122.79
98	46.77	572.00	6.95	5199.10	3301.70	2999.22
98	46.77	572.00	6.95	5199.10	3301.70	2999.22
99	46.77	576.76	6.95	4963.49	3165.67	2875.65
99	46.77	576.76	6.95	4963.49	3165.67	2875.65
100	46.77	581.52	6.95	4727.87	3029.64	2752.08
100	46.77	581.52	6.95	4727.87	3029.64	2752.08
101	46.77	584.18	0.81	4596.28	2953.66	2683.07
101	46.77	584.18	0.81	4596.28	2953.66	2683.07
102	48.50	587.00	7.66	4331.16	2800.60	2544.02
102	48.50	587.00	7.66	4331.16	2800.60	2544.02
103	48.50	592.07	7.66	4060.71	2644.45	2402.19
103	48.50	592.07	7.66	4060.71	2644.45	2402.19
104	48.50	597.15	7.66	3790.26	2488.31	2260.35
104	48.50	597.15	7.66	3790.26	2488.31	2260.35
105	48.50	602.23	7.66	3519.82	2332.17	2118.51
105	48.50	602.23	7.66	3519.82	2332.17	2118.51
106	48.50	607.31	7.66	3249.37	2176.02	1976.67
106	48.50	607.31	7.66	3249.37	2176.02	1976.67
107	48.50	612.38	7.66	2978.92	2019.88	1834.83
107	48.50	612.38	7.66	2978.92	2019.88	1834.83
108	48.50	617.46	7.66	2708.47	1863.74	1692.99
108	48.50	617.46	7.66	2708.47	1863.74	1692.99
109	48.50	620.25	0.75	2560.09	1778.07	1615.17
109	48.50	620.25	0.75	2560.09	1778.07	1615.17
110	55.68	623.10	9.26	2048.73	1482.84	1346.99
110	55.68	623.10	9.26	2048.73	1482.84	1346.99
111	55.68	628.32	9.26	1684.27	1272.41	1155.84
111	55.68	628.32	9.26	1684.27	1272.41	1155.84
112	55.68	633.54	9.26	1319.80	1061.99	964.70
112	55.68	633.54	9.26	1319.80	1061.99	964.70
113	55.68	638.76	9.26	955.34	851.57	773.55
113	55.68	638.76	9.26	955.34	851.57	773.55
114	55.68	643.97	9.26	590.88	641.14	582.41
114	55.68	643.97	9.26	590.88	641.14	582.41
115	55.68	649.19	9.26	226.41	430.72	391.26
115	55.68	649.19	9.26	226.41	430.72	391.26
116	55.68	653.80	7.08	139.19	80.36	73.00
116	55.68	653.80	7.08	139.19	80.36	73.00

Table 4 - Base Force Data on the 116 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-27.40	93.09	5.40	2356.75	2981.57	2708.42
1	-27.40	93.09	5.40	2356.75	2981.57	2708.42
2	-27.40	97.89	5.40	4773.70	4376.99	3976.00
2	-27.40	97.89	5.40	4773.70	4376.99	3976.00
3	-27.40	102.69	5.40	7190.65	5772.42	5243.59
3	-27.40	102.69	5.40	7190.65	5772.42	5243.59
4	-12.35	107.53	5.00	5441.64	1458.08	1324.50
4	-12.35	107.53	5.00	5441.64	1458.08	1324.50
5	-12.35	112.41	5.00	6225.50	1668.12	1515.29
5	-12.35	112.41	5.00	6225.50	1668.12	1515.29
6	-12.35	117.30	5.00	7009.36	1878.15	1706.09
6	-12.35	117.30	5.00	7009.36	1878.15	1706.09
7	-12.35	122.18	5.00	7793.21	2088.19	1896.88
7	-12.35	122.18	5.00	7793.21	2088.19	1896.88
8	-14.80	127.04	5.00	8751.22	2344.88	2130.06
8	-14.80	127.04	5.00	8751.22	2344.88	2130.06
9	-14.80	131.87	5.00	9677.30	2593.03	2355.47

9	-14.80	131.87	5.00	9677.30	2593.03	2355.47
10	-14.80	136.71	5.00	10603.38	2841.17	2580.88
10	-14.80	136.71	5.00	10603.38	2841.17	2580.88
11	-14.80	141.54	5.00	11529.46	3089.31	2806.29
11	-14.80	141.54	5.00	11529.46	3089.31	2806.29
12	-29.52	146.86	6.67	25450.93	16694.10	15164.69
12	-29.52	146.86	6.67	25450.93	16694.10	15164.69
13	-29.52	152.66	6.67	29524.08	19045.74	17300.88
13	-29.52	152.66	6.67	29524.08	19045.74	17300.88
14	-29.52	158.46	6.67	33597.24	21397.37	19437.08
14	-29.52	158.46	6.67	33597.24	21397.37	19437.08
15	2.71	163.43	4.14	14244.52	3816.81	3467.14
15	2.71	163.43	4.14	14244.52	3816.81	3467.14
16	2.71	167.95	4.91	17047.30	4567.81	4149.34
16	2.71	167.95	4.91	17047.30	4567.81	4149.34
17	2.71	172.86	4.91	17385.16	4658.34	4231.57
17	2.71	172.86	4.91	17385.16	4658.34	4231.57
18	2.71	177.77	4.91	17723.01	4748.87	4313.80
18	2.71	177.77	4.91	17723.01	4748.87	4313.80
19	2.71	182.67	4.91	18060.87	4839.39	4396.04
19	2.71	182.67	4.91	18060.87	4839.39	4396.04
20	2.71	187.58	4.91	18398.72	4929.92	4478.27
20	2.71	187.58	4.91	18398.72	4929.92	4478.27
21	2.71	192.48	4.91	18736.58	5020.45	4560.51
21	2.71	192.48	4.91	18736.58	5020.45	4560.51
22	2.71	197.39	4.91	19074.44	5110.98	4642.74
22	2.71	197.39	4.91	19074.44	5110.98	4642.74
23	2.71	202.30	4.91	19412.29	5201.51	4724.98
23	2.71	202.30	4.91	19412.29	5201.51	4724.98
24	2.71	207.20	4.91	19750.15	5292.04	4807.21
24	2.71	207.20	4.91	19750.15	5292.04	4807.21
25	2.71	212.11	4.91	20088.01	5382.56	4889.45
25	2.71	212.11	4.91	20088.01	5382.56	4889.45
26	2.71	217.02	4.91	20425.86	5473.09	4971.68
26	2.71	217.02	4.91	20425.86	5473.09	4971.68
27	2.71	221.92	4.91	20763.72	5563.62	5053.92
27	2.71	221.92	4.91	20763.72	5563.62	5053.92
28	2.71	226.83	4.91	21101.58	5654.15	5136.15
28	2.71	226.83	4.91	21101.58	5654.15	5136.15
29	2.71	231.73	4.91	21439.43	5744.68	5218.39
29	2.71	231.73	4.91	21439.43	5744.68	5218.39
30	2.71	236.64	4.91	21777.29	5835.21	5300.62
30	2.71	236.64	4.91	21777.29	5835.21	5300.62
31	2.71	241.55	4.91	22115.14	5925.73	5382.86
31	2.71	241.55	4.91	22115.14	5925.73	5382.86
32	2.71	246.54	5.08	23443.38	6281.63	5706.15
32	2.71	246.54	5.08	23443.38	6281.63	5706.15
33	2.71	251.62	5.08	24211.61	6487.48	5893.14
33	2.71	251.62	5.08	24211.61	6487.48	5893.14
34	2.71	256.69	5.08	24979.84	6693.33	6080.13
34	2.71	256.69	5.08	24979.84	6693.33	6080.13
35	2.71	261.77	5.08	25748.07	6899.17	6267.12
35	2.71	261.77	5.08	25748.07	6899.17	6267.12
36	2.71	266.85	5.08	26516.30	7105.02	6454.10
36	2.71	266.85	5.08	26516.30	7105.02	6454.10
37	2.71	271.92	5.08	27284.53	7310.87	6641.09
37	2.71	271.92	5.08	27284.53	7310.87	6641.09
38	2.71	277.00	5.08	28052.76	7516.71	6828.08
38	2.71	277.00	5.08	28052.76	7516.71	6828.08
39	2.71	282.08	5.08	28820.99	7722.56	7015.07
39	2.71	282.08	5.08	28820.99	7722.56	7015.07
40	2.71	287.15	5.08	29589.22	7928.41	7202.06
40	2.71	287.15	5.08	29589.22	7928.41	7202.06
41	2.71	292.23	5.08	30357.45	8134.25	7389.04
41	2.71	292.23	5.08	30357.45	8134.25	7389.04
42	2.71	297.31	5.08	31125.68	8340.10	7576.03
42	2.71	297.31	5.08	31125.68	8340.10	7576.03
43	2.71	302.38	5.08	31893.91	8545.95	7763.02
43	2.71	302.38	5.08	31893.91	8545.95	7763.02
44	2.71	307.46	5.08	32662.14	8751.79	7950.01
44	2.71	307.46	5.08	32662.14	8751.79	7950.01
45	2.71	312.67	5.34	35078.42	9399.23	8538.13
45	2.71	312.67	5.34	35078.42	9399.23	8538.13
46	2.71	318.00	5.34	35804.73	9593.85	8714.92
46	2.71	318.00	5.34	35804.73	9593.85	8714.92
47	2.71	323.33	5.34	36531.05	9788.47	8891.71
47	2.71	323.33	5.34	36531.05	9788.47	8891.71
48	2.71	328.67	5.34	37257.37	9983.08	9068.49
48	2.71	328.67	5.34	37257.37	9983.08	9068.49
49	2.71	334.00	5.34	37983.68	10177.70	9245.28
49	2.71	334.00	5.34	37983.68	10177.70	9245.28
50	2.71	339.33	5.34	38710.00	10372.31	9422.07
50	2.71	339.33	5.34	38710.00	10372.31	9422.07
51	2.71	344.32	4.66	34185.53	9159.98	8320.80
51	2.71	344.32	4.66	34185.53	9159.98	8320.80
52	2.71	348.98	4.66	34422.76	9223.55	8378.55
52	2.71	348.98	4.66	34422.76	9223.55	8378.55
53	2.71	353.62	4.66	34659.99	9287.12	8436.29
53	2.71	353.62	4.66	34659.99	9287.12	8436.29
54	2.71	358.27	4.66	34897.22	9350.68	8494.03
54	2.71	358.27	4.66	34897.22	9350.68	8494.03
55	2.71	362.92	4.66	35134.45	9414.25	8551.77
55	2.71	362.92	4.66	35134.45	9414.25	8551.77
56	2.71	367.57	4.66	35371.68	9477.81	8609.51
56	2.71	367.57	4.66	35371.68	9477.81	8609.51
57	2.71	372.39	4.99	38283.56	10258.05	9318.27
57	2.71	372.39	4.99	38283.56	10258.05	9318.27
58	2.71	377.38	4.99	38773.66	10389.37	9437.56
58	2.71	377.38	4.99	38773.66	10389.37	9437.56
59	2.71	382.36	4.99	39263.76	10520.69	9556.85
59	2.71	382.36	4.99	39263.76	10520.69	9556.85
60	2.71	387.34	4.99	39753.86	10652.02	9676.14
60	2.71	387.34	4.99	39753.86	10652.02	9676.14
61	2.71	392.33	4.99	40243.97	10783.34	9795.44
61	2.71	392.33	4.99	40243.97	10783.34	9795.44
62	2.71	397.31	4.99	40734.07	10914.66	9914.73
62	2.71	397.31	4.99	40734.07	10914.66	9914.73
63	2.71	402.30	4.99	41224.17	11045.98	10034.02
63	2.71	402.30	4.99	41224.17	11045.98	10034.02
64	2.71	407.28	4.99	41714.27	11177.31	10153.31
64	2.71	407.28	4.99	41714.27	11177.31	10153.31
65	2.71	412.26	4.99	42204.38	11308.63	10272.60
65	2.71	412.26	4.99	42204.38	11308.63	10272.60
66	2.71	417.25	4.99	42694.48	11439.95	10391.89
66	2.71	417.25	4.99	42694.48	11439.95	10391.89
67	2.71	422.23	4.99	43184.58	11571.27	10511.19
67	2.71	422.23	4.99	43184.58	11571.27	10511.19
68	2.71	427.21	4.99	43674.68	11702.60	10630.48
68	2.71	427.21	4.99	43674.68	11702.60	10630.48
69	2.71	432.20	4.99	44164.79	11833.92	10749.77

69	2.71	432.20	4.99	44164.79	11833.92	10749.77
70	2.71	437.18	4.99	44654.89	11965.24	10869.06
70	2.71	437.18	4.99	44654.89	11965.24	10869.06
71	2.71	442.17	4.99	45144.99	12096.56	10988.35
71	2.71	442.17	4.99	45144.99	12096.56	10988.35
72	2.71	447.15	4.99	45635.09	12227.89	11107.64
72	2.71	447.15	4.99	45635.09	12227.89	11107.64
73	2.71	452.13	4.99	46125.20	12359.21	11226.93
73	2.71	452.13	4.99	46125.20	12359.21	11226.93
74	2.71	457.12	4.99	46615.30	12490.53	11346.23
74	2.71	457.12	4.99	46615.30	12490.53	11346.23
75	2.71	462.10	4.99	47105.40	12621.85	11465.52
75	2.71	462.10	4.99	47105.40	12621.85	11465.52
76	2.71	467.09	4.99	47595.50	12753.18	11584.81
76	2.71	467.09	4.99	47595.50	12753.18	11584.81
77	2.71	472.07	4.99	48085.60	12884.50	11704.10
77	2.71	472.07	4.99	48085.60	12884.50	11704.10
78	2.71	477.05	4.99	48575.71	13015.82	11823.39
78	2.71	477.05	4.99	48575.71	13015.82	11823.39
79	2.71	482.04	4.99	49065.81	13147.14	11942.68
79	2.71	482.04	4.99	49065.81	13147.14	11942.68
80	2.71	487.02	4.99	49555.91	13278.47	12061.98
80	2.71	487.02	4.99	49555.91	13278.47	12061.98
81	2.71	492.00	4.99	50046.01	13409.79	12181.27
81	2.71	492.00	4.99	50046.01	13409.79	12181.27
82	2.71	496.99	4.99	50536.12	13541.11	12300.56
82	2.71	496.99	4.99	50536.12	13541.11	12300.56
83	2.71	501.97	4.99	51026.22	13672.43	12419.85
83	2.71	501.97	4.99	51026.22	13672.43	12419.85
84	2.71	506.96	4.99	51516.32	13803.76	12539.14
84	2.71	506.96	4.99	51516.32	13803.76	12539.14
85	2.71	511.94	4.99	52006.42	13935.08	12658.43
85	2.71	511.94	4.99	52006.42	13935.08	12658.43
86	2.71	516.92	4.99	52496.53	14066.40	12777.73
86	2.71	516.92	4.99	52496.53	14066.40	12777.73
87	2.71	521.91	4.99	52986.63	14197.72	12897.02
87	2.71	521.91	4.99	52986.63	14197.72	12897.02
88	29.65	527.33	6.73	53642.72	32990.06	29967.71
88	29.65	527.33	6.73	53642.72	32990.06	29967.71
89	29.65	533.18	6.73	52368.44	32254.35	29299.40
89	29.65	533.18	6.73	52368.44	32254.35	29299.40
90	29.65	538.33	5.12	39181.27	24157.45	21944.30
90	29.65	538.33	5.12	39181.27	24157.45	21944.30
91	29.65	542.77	5.12	38841.50	23961.29	21766.10
91	29.65	542.77	5.12	38841.50	23961.29	21766.10
92	29.65	547.23	5.12	38501.74	23765.12	21587.91
92	29.65	547.23	5.12	38501.74	23765.12	21587.91
93	29.65	551.67	5.12	38161.97	23568.96	21409.72
93	29.65	551.67	5.12	38161.97	23568.96	21409.72
94	29.65	554.62	1.67	12349.04	7629.76	6930.77
94	29.65	554.62	1.67	12349.04	7629.76	6930.77
95	46.77	557.73	6.95	41032.52	25774.44	23413.14
95	46.77	557.73	6.95	41032.52	25774.44	23413.14
96	46.77	562.49	6.95	39395.55	24829.33	22554.62
96	46.77	562.49	6.95	39395.55	24829.33	22554.62
97	46.77	567.24	6.95	37758.58	23884.22	21696.10
97	46.77	567.24	6.95	37758.58	23884.22	21696.10
98	46.77	572.00	6.95	36121.60	22939.12	20837.58
98	46.77	572.00	6.95	36121.60	22939.12	20837.58
99	46.77	576.76	6.95	34484.63	21994.01	19979.05
99	46.77	576.76	6.95	34484.63	21994.01	19979.05
100	46.77	581.52	6.95	32847.66	21048.90	19120.53
100	46.77	581.52	6.95	32847.66	21048.90	19120.53
101	46.77	584.18	0.81	3736.76	2401.32	2181.33
101	46.77	584.18	0.81	3736.76	2401.32	2181.33
102	48.50	587.00	7.66	33187.06	21459.28	19493.31
102	48.50	587.00	7.66	33187.06	21459.28	19493.31
103	48.50	592.07	7.66	31114.79	20262.85	18406.49
103	48.50	592.07	7.66	31114.79	20262.85	18406.49
104	48.50	597.15	7.66	29042.51	19066.42	17319.67
104	48.50	597.15	7.66	29042.51	19066.42	17319.67
105	48.50	602.23	7.66	26970.23	17869.99	16232.85
105	48.50	602.23	7.66	26970.23	17869.99	16232.85
106	48.50	607.31	7.66	24897.95	16673.56	15146.03
106	48.50	607.31	7.66	24897.95	16673.56	15146.03
107	48.50	612.38	7.66	22825.67	15477.13	14059.21
107	48.50	612.38	7.66	22825.67	15477.13	14059.21
108	48.50	617.46	7.66	20753.40	14280.70	12972.39
108	48.50	617.46	7.66	20753.40	14280.70	12972.39
109	48.50	620.25	0.75	1908.70	1325.66	1204.21
109	48.50	620.25	0.75	1908.70	1325.66	1204.21
110	55.68	623.10	9.26	18961.61	13724.08	12466.76
110	55.68	623.10	9.26	18961.61	13724.08	12466.76
111	55.68	628.32	9.26	15588.39	11776.55	10697.66
111	55.68	628.32	9.26	15588.39	11776.55	10697.66
112	55.68	633.54	9.26	12215.18	9829.02	8928.55
112	55.68	633.54	9.26	12215.18	9829.02	8928.55
113	55.68	638.76	9.26	8841.96	7881.49	7159.44
113	55.68	638.76	9.26	8841.96	7881.49	7159.44
114	55.68	643.97	9.26	5468.74	5933.96	5390.33
114	55.68	643.97	9.26	5468.74	5933.96	5390.33
115	55.68	649.19	9.26	2095.52	3986.44	3621.22
115	55.68	649.19	9.26	2095.52	3986.44	3621.22
116	55.68	653.80	7.08	985.87	569.19	517.04
116	55.68	653.80	7.08	985.87	569.19	517.04

Sum of the Resisting Forces = 1116018.13 (lbs)

Average Available Shear Strength = 1758.18(psf)

Sum of the Driving Forces = 1081852.87 (lbs)

Average Mobilized Shear Stress = 1704.35(psf)

Total length of the failure surface = 634.76(ft)

Factor of Safety Balance Check: FS = 1.03158

Janbu's Correction Factor (fo) = 1.0686

Janub's FS Corrected = 1.10230

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.18429(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

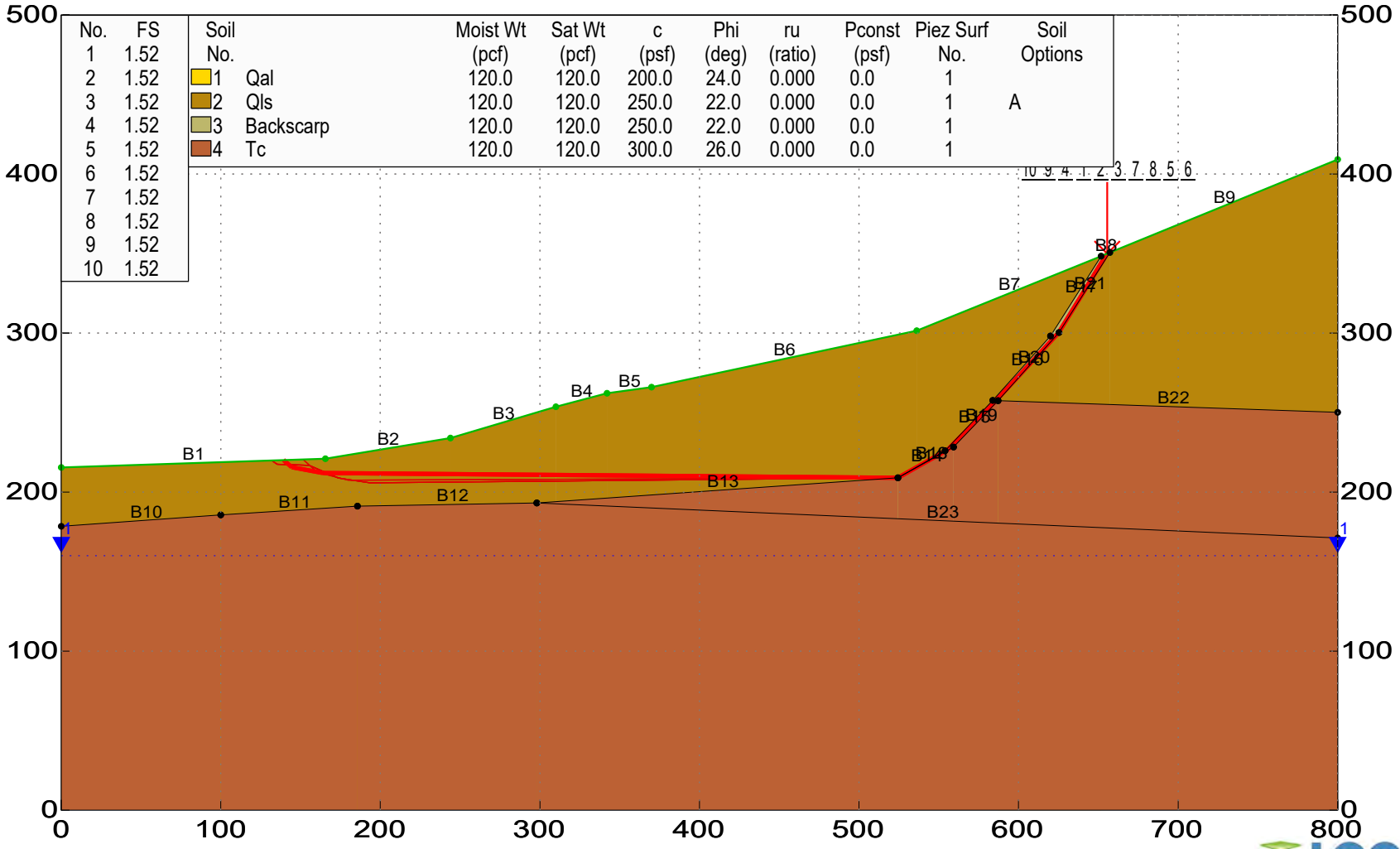
Average Elevation of Point of Application of kh on Sliding Mass = 217.873(ft)

Non-Symmetrical Sliding Resistance Has Been Specified
for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section A-A'
Existing - Upper Claybed - Static

LGC Geotechnical, Inc. \xau.gsd



GEOSTASE FS = 1.52

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 3/ 29/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xau.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xau.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section A-A'

DESCRIPTION: Existing - Upper Claybed - Static

BOUNDARY DATA

9 Surface Boundaries
23 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.500	165.500	221.000	2
2	165.500	221.000	244.000	234.000	2
3	244.000	234.000	310.000	253.700	2
4	310.000	253.700	342.000	262.100	2
5	342.000	262.100	369.900	266.000	2
6	369.900	266.000	536.100	301.500	2
7	536.100	301.500	651.800	348.400	2
8	651.800	348.400	657.200	350.600	3
9	657.200	350.600	800.000	409.100	2
10	0.000	178.500	100.000	185.700	4
11	100.000	185.700	185.700	191.100	4
12	185.700	191.100	298.100	193.100	4
13	298.100	193.100	524.400	209.000	4
14	524.400	209.000	553.900	226.000	3
15	553.900	226.000	583.900	257.600	3
16	583.900	257.600	620.000	298.100	3
17	620.000	298.100	651.800	348.400	3
18	524.400	209.000	559.300	228.300	4
19	559.300	228.300	587.100	257.500	4
20	587.100	257.500	625.400	300.400	2
21	625.400	300.400	657.200	350.600	2
22	587.100	257.500	800.000	250.200	4
23	298.100	193.100	800.000	171.200	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	15.0	0.00	14.00
3	90.0	250.00	22.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	147.10	209.90	300.10	196.60	15.00
2	524.40	209.00	524.40	209.00	0.00
3	553.90	226.00	559.30	228.30	0.00
4	583.90	257.60	587.10	257.50	0.00
5	620.00	298.10	625.40	300.40	0.00
6	651.80	348.40	657.20	350.60	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 2.433 FS Min = 1.520 FS Ave = 1.597
Standard Deviation = 0.163 Coefficient of Variation = 10.18 %

Critical Surface is Sequence Number 61 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.520

Table 1 - Geometry Data on the 108 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	2.57	1.14	140.62	219.03	220.17	-40.60	1.90	3.38
2	2.57	3.43	143.18	216.83	220.26	-40.60	1.90	3.38
3	4.91	5.11	146.92	215.27	220.38	-10.63	1.90	5.00
4	4.91	6.20	151.84	214.35	220.55	-10.63	1.90	5.00
5	4.91	7.28	156.75	213.42	220.71	-10.63	1.90	5.00
6	4.91	8.37	161.67	212.50	220.87	-10.63	1.90	5.00
7	1.38	8.94	164.81	212.04	220.98	-0.48	1.90	1.38
8	4.91	9.40	167.95	212.01	221.41	-0.48	9.40	4.91
9	4.91	10.25	172.86	211.97	222.22	-0.48	9.40	4.91
10	4.91	11.11	177.77	211.93	223.03	-0.48	9.40	4.91
11	4.91	11.96	182.67	211.88	223.84	-0.48	9.40	4.91
12	4.91	12.81	187.58	211.84	224.66	-0.48	9.40	4.91
13	4.91	13.67	192.48	211.80	225.47	-0.48	9.40	4.91
14	4.91	14.52	197.39	211.76	226.28	-0.48	9.40	4.91
15	4.91	15.37	202.30	211.72	227.09	-0.48	9.40	4.91
16	4.91	16.23	207.20	211.68	227.91	-0.48	9.40	4.91
17	4.91	17.08	212.11	211.64	228.72	-0.48	9.40	4.91
18	4.91	17.94	217.02	211.59	229.53	-0.48	9.40	4.91
19	4.91	18.79	221.92	211.55	230.34	-0.48	9.40	4.91
20	4.91	19.64	226.83	211.51	231.16	-0.48	9.40	4.91
21	4.91	20.50	231.73	211.47	231.97	-0.48	9.40	4.91
22	4.91	21.35	236.64	211.43	232.78	-0.48	9.40	4.91
23	4.91	22.21	241.55	211.39	233.59	-0.48	9.40	4.91
24	5.08	23.41	246.54	211.35	234.76	-0.48	16.62	5.08
25	5.08	24.97	251.62	211.30	236.27	-0.48	16.62	5.08
26	5.08	26.53	256.69	211.26	237.79	-0.48	16.62	5.08
27	5.08	28.09	261.77	211.22	239.30	-0.48	16.62	5.08
28	5.08	29.65	266.85	211.17	240.82	-0.48	16.62	5.08
29	5.08	31.20	271.92	211.13	242.33	-0.48	16.62	5.08
30	5.08	32.76	277.00	211.09	243.85	-0.48	16.62	5.08
31	5.08	34.32	282.08	211.05	245.37	-0.48	16.62	5.08
32	5.08	35.88	287.15	211.00	246.88	-0.48	16.62	5.08
33	5.08	37.44	292.23	210.96	248.40	-0.48	16.62	5.08
34	5.08	38.99	297.31	210.92	249.91	-0.48	16.62	5.08
35	5.08	40.55	302.38	210.87	251.43	-0.48	16.62	5.08
36	5.08	42.11	307.46	210.83	252.94	-0.48	16.62	5.08
37	5.33	43.61	312.67	210.79	254.40	-0.48	14.71	5.33
38	5.33	45.06	318.00	210.74	255.80	-0.48	14.71	5.33
39	5.33	46.50	323.33	210.70	257.20	-0.48	14.71	5.33
40	5.33	47.95	328.67	210.65	258.60	-0.48	14.71	5.33
41	5.33	49.39	334.00	210.61	260.00	-0.48	14.71	5.33
42	5.33	50.84	339.33	210.56	261.40	-0.48	14.71	5.33
43	4.65	51.91	344.32	210.52	262.43	-0.48	7.96	4.65
44	4.65	52.59	348.98	210.48	263.08	-0.48	7.96	4.65
45	4.65	53.28	353.62	210.44	263.73	-0.48	7.96	4.65
46	4.65	53.97	358.27	210.40	264.38	-0.48	7.96	4.65
47	4.65	54.66	362.92	210.36	265.02	-0.48	7.96	4.65
48	4.65	55.35	367.57	210.32	265.68	-0.48	7.96	4.65
49	4.98	56.25	372.39	210.28	266.53	-0.48	12.06	4.98
50	4.98	57.36	377.38	210.24	267.60	-0.48	12.06	4.98
51	4.98	58.46	382.36	210.20	268.66	-0.48	12.06	4.98
52	4.98	59.57	387.34	210.16	269.73	-0.48	12.06	4.98
53	4.98	60.68	392.33	210.11	270.79	-0.48	12.06	4.98
54	4.98	61.78	397.31	210.07	271.85	-0.48	12.06	4.98

55	4.98	62.89	402.30	210.03	272.92	-0.48	12.06	4.98
56	4.98	64.00	407.28	209.99	273.98	-0.48	12.06	4.98
57	4.98	65.10	412.26	209.95	275.05	-0.48	12.06	4.98
58	4.98	66.21	417.25	209.90	276.11	-0.48	12.06	4.98
59	4.98	67.32	422.23	209.86	277.18	-0.48	12.06	4.98
60	4.98	68.42	427.21	209.82	278.24	-0.48	12.06	4.98
61	4.98	69.53	432.20	209.78	279.31	-0.48	12.06	4.98
62	4.98	70.64	437.18	209.74	280.37	-0.48	12.06	4.98
63	4.98	71.74	442.17	209.69	281.44	-0.48	12.06	4.98
64	4.98	72.85	447.15	209.65	282.50	-0.48	12.06	4.98
65	4.98	73.96	452.13	209.61	283.56	-0.48	12.06	4.98
66	4.98	75.06	457.12	209.57	284.63	-0.48	12.06	4.98
67	4.98	76.17	462.10	209.53	285.69	-0.48	12.06	4.98
68	4.98	77.27	467.09	209.48	286.76	-0.48	12.06	4.98
69	4.98	78.38	472.07	209.44	287.82	-0.48	12.06	4.98
70	4.98	79.49	477.05	209.40	288.89	-0.48	12.06	4.98
71	4.98	80.59	482.04	209.36	289.95	-0.48	12.06	4.98
72	4.98	81.70	487.02	209.32	291.02	-0.48	12.06	4.98
73	4.98	82.81	492.00	209.27	292.08	-0.48	12.06	4.98
74	4.98	83.91	496.99	209.23	293.15	-0.48	12.06	4.98
75	4.98	85.02	501.97	209.19	294.21	-0.48	12.06	4.98
76	4.98	86.13	506.96	209.15	295.27	-0.48	12.06	4.98
77	4.98	87.23	511.94	209.11	296.34	-0.48	12.06	4.98
78	4.98	88.34	516.92	209.06	297.40	-0.48	12.06	4.98
79	4.98	89.45	521.91	209.02	298.47	-0.48	12.06	4.98
80	5.85	88.96	527.33	210.66	299.63	29.62	12.06	6.73
81	5.85	86.89	533.18	213.99	300.88	29.62	12.06	6.73
82	4.45	85.49	538.33	216.92	302.40	29.62	22.07	5.12
83	4.45	84.76	542.77	219.45	304.21	29.62	22.07	5.12
84	4.45	84.03	547.23	221.98	306.01	29.62	22.07	5.12
85	4.45	83.31	551.67	224.51	307.81	29.62	22.07	5.12
86	1.61	82.81	554.70	226.23	309.04	29.62	22.07	1.85
87	4.73	81.24	557.87	229.09	310.33	45.45	22.07	6.74
88	4.73	78.35	562.61	233.89	312.24	45.45	22.07	6.74
89	4.73	75.46	567.34	238.70	314.16	45.45	22.07	6.74
90	4.73	72.57	572.07	243.51	316.08	45.45	22.07	6.74
91	4.73	69.68	576.80	248.31	318.00	45.45	22.07	6.74
92	4.73	66.80	581.53	253.12	319.92	45.45	22.07	6.74
93	1.98	64.75	584.89	256.53	321.28	45.45	22.07	2.83
94	4.87	62.48	588.32	260.19	322.67	47.40	22.07	7.20
95	4.87	59.15	593.19	265.49	324.64	47.40	22.07	7.20
96	4.87	55.83	598.07	270.79	326.62	47.40	22.07	7.20
97	4.87	52.51	602.94	276.09	328.59	47.40	22.07	7.20
98	4.87	49.18	607.82	281.39	330.57	47.40	22.07	7.20
99	4.87	45.86	612.69	286.69	332.55	47.40	22.07	7.20
100	4.87	42.53	617.56	291.99	334.52	47.40	22.07	7.20
101	2.62	39.98	621.31	296.06	336.04	47.40	22.07	3.86
102	2.62	38.19	623.92	298.91	337.10	47.40	22.07	3.86
103	5.31	34.03	627.89	304.68	338.71	58.58	22.07	10.19
104	5.31	27.48	633.20	313.38	340.86	58.58	22.07	10.19
105	5.31	20.94	638.52	322.08	343.01	58.58	22.07	10.19
106	5.31	14.39	643.83	330.78	345.17	58.58	22.07	10.19
107	5.31	7.85	649.14	339.48	347.32	58.58	22.07	10.19
108	3.72	2.29	653.66	346.87	349.16	58.58	22.17	7.14

Table 2 - Force Data On The 108 Slices (Excluding Reinforcement)

Ubeta Ualpha Earthquake

Slice No.	Weight (lbs)	Force Top (lbs)	Force Bot (lbs)	Force Hor (lbs)	Force Ver (lbs)	Distributed Load (lbs)
1	352.0	0.0	0.0	0.0	0.0	0.0
2	1056.1	0.0	0.0	0.0	0.0	0.0
3	3015.7	0.0	0.0	0.0	0.0	0.0
4	3655.8	0.0	0.0	0.0	0.0	0.0
5	4296.0	0.0	0.0	0.0	0.0	0.0
6	4936.1	0.0	0.0	0.0	0.0	0.0
7	1476.6	0.0	0.0	0.0	0.0	0.0
8	5532.8	0.0	0.0	0.0	0.0	0.0
9	6035.5	0.0	0.0	0.0	0.0	0.0
10	6538.3	0.0	0.0	0.0	0.0	0.0
11	7041.0	0.0	0.0	0.0	0.0	0.0
12	7543.8	0.0	0.0	0.0	0.0	0.0
13	8046.5	0.0	0.0	0.0	0.0	0.0
14	8549.2	0.0	0.0	0.0	0.0	0.0
15	9052.0	0.0	0.0	0.0	0.0	0.0
16	9554.7	0.0	0.0	0.0	0.0	0.0
17	10057.5	0.0	0.0	0.0	0.0	0.0
18	10560.2	0.0	0.0	0.0	0.0	0.0
19	11062.9	0.0	0.0	0.0	0.0	0.0
20	11565.7	0.0	0.0	0.0	0.0	0.0
21	12068.4	0.0	0.0	0.0	0.0	0.0
22	12571.2	0.0	0.0	0.0	0.0	0.0
23	13073.9	0.0	0.0	0.0	0.0	0.0
24	14263.5	0.0	0.0	0.0	0.0	0.0
25	15212.8	0.0	0.0	0.0	0.0	0.0
26	16162.1	0.0	0.0	0.0	0.0	0.0
27	17111.5	0.0	0.0	0.0	0.0	0.0
28	18060.8	0.0	0.0	0.0	0.0	0.0
29	19010.1	0.0	0.0	0.0	0.0	0.0
30	19959.4	0.0	0.0	0.0	0.0	0.0
31	20908.8	0.0	0.0	0.0	0.0	0.0
32	21858.1	0.0	0.0	0.0	0.0	0.0
33	22807.4	0.0	0.0	0.0	0.0	0.0
34	23756.8	0.0	0.0	0.0	0.0	0.0
35	24706.1	0.0	0.0	0.0	0.0	0.0
36	25655.4	0.0	0.0	0.0	0.0	0.0
37	27912.2	0.0	0.0	0.0	0.0	0.0
38	28837.0	0.0	0.0	0.0	0.0	0.0
39	29761.8	0.0	0.0	0.0	0.0	0.0
40	30686.6	0.0	0.0	0.0	0.0	0.0
41	31611.4	0.0	0.0	0.0	0.0	0.0
42	32536.2	0.0	0.0	0.0	0.0	0.0
43	28963.0	0.0	0.0	0.0	0.0	0.0
44	29347.6	0.0	0.0	0.0	0.0	0.0
45	29732.2	0.0	0.0	0.0	0.0	0.0
46	30116.8	0.0	0.0	0.0	0.0	0.0
47	30501.4	0.0	0.0	0.0	0.0	0.0
48	30886.0	0.0	0.0	0.0	0.0	0.0
49	33640.6	0.0	0.0	0.0	0.0	0.0
50	34302.5	0.0	0.0	0.0	0.0	0.0
51	34964.3	0.0	0.0	0.0	0.0	0.0
52	35626.1	0.0	0.0	0.0	0.0	0.0
53	36287.9	0.0	0.0	0.0	0.0	0.0
54	36949.8	0.0	0.0	0.0	0.0	0.0
55	37611.6	0.0	0.0	0.0	0.0	0.0
56	38273.4	0.0	0.0	0.0	0.0	0.0

57	38935.3	0.0	0.0	0.0	0.0	0.0
58	39597.1	0.0	0.0	0.0	0.0	0.0
59	40258.9	0.0	0.0	0.0	0.0	0.0
60	40920.7	0.0	0.0	0.0	0.0	0.0
61	41582.6	0.0	0.0	0.0	0.0	0.0
62	42244.4	0.0	0.0	0.0	0.0	0.0
63	42906.2	0.0	0.0	0.0	0.0	0.0
64	43568.0	0.0	0.0	0.0	0.0	0.0
65	44229.9	0.0	0.0	0.0	0.0	0.0
66	44891.7	0.0	0.0	0.0	0.0	0.0
67	45553.5	0.0	0.0	0.0	0.0	0.0
68	46215.3	0.0	0.0	0.0	0.0	0.0
69	46877.2	0.0	0.0	0.0	0.0	0.0
70	47539.0	0.0	0.0	0.0	0.0	0.0
71	48200.8	0.0	0.0	0.0	0.0	0.0
72	48862.6	0.0	0.0	0.0	0.0	0.0
73	49524.5	0.0	0.0	0.0	0.0	0.0
74	50186.3	0.0	0.0	0.0	0.0	0.0
75	50848.1	0.0	0.0	0.0	0.0	0.0
76	51510.0	0.0	0.0	0.0	0.0	0.0
77	52171.8	0.0	0.0	0.0	0.0	0.0
78	52833.6	0.0	0.0	0.0	0.0	0.0
79	53495.4	0.0	0.0	0.0	0.0	0.0
80	62451.9	0.0	0.0	0.0	0.0	0.0
81	60994.4	0.0	0.0	0.0	0.0	0.0
82	45649.3	0.0	0.0	0.0	0.0	0.0
83	45261.6	0.0	0.0	0.0	0.0	0.0
84	44874.0	0.0	0.0	0.0	0.0	0.0
85	44486.3	0.0	0.0	0.0	0.0	0.0
86	15980.4	0.0	0.0	0.0	0.0	0.0
87	46130.1	0.0	0.0	0.0	0.0	0.0
88	44490.0	0.0	0.0	0.0	0.0	0.0
89	42849.9	0.0	0.0	0.0	0.0	0.0
90	41209.7	0.0	0.0	0.0	0.0	0.0
91	39569.6	0.0	0.0	0.0	0.0	0.0
92	37929.4	0.0	0.0	0.0	0.0	0.0
93	15404.2	0.0	0.0	0.0	0.0	0.0
94	36542.4	0.0	0.0	0.0	0.0	0.0
95	34597.9	0.0	0.0	0.0	0.0	0.0
96	32653.5	0.0	0.0	0.0	0.0	0.0
97	30709.1	0.0	0.0	0.0	0.0	0.0
98	28764.7	0.0	0.0	0.0	0.0	0.0
99	26820.3	0.0	0.0	0.0	0.0	0.0
100	24875.9	0.0	0.0	0.0	0.0	0.0
101	12547.3	0.0	0.0	0.0	0.0	0.0
102	11987.4	0.0	0.0	0.0	0.0	0.0
103	21699.0	0.0	0.0	0.0	0.0	0.0
104	17525.3	0.0	0.0	0.0	0.0	0.0
105	13351.5	0.0	0.0	0.0	0.0	0.0
106	9177.7	0.0	0.0	0.0	0.0	0.0
107	5004.0	0.0	0.0	0.0	0.0	0.0
108	1021.1	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 3033173.95(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 3033173.95(lbs)

TOTAL AREA OF SLIDING MASS = 25276.45(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 108 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	2	250.00	22.00	A
2	2	250.00	22.00	A
3	2	0.00	14.00	A
4	2	0.00	14.00	A
5	2	0.00	14.00	A
6	2	0.00	14.00	A
7	2	0.00	14.00	A
8	2	0.00	14.00	A
9	2	0.00	14.00	A
10	2	0.00	14.00	A
11	2	0.00	14.00	A
12	2	0.00	14.00	A
13	2	0.00	14.00	A
14	2	0.00	14.00	A
15	2	0.00	14.00	A
16	2	0.00	14.00	A
17	2	0.00	14.00	A
18	2	0.00	14.00	A
19	2	0.00	14.00	A
20	2	0.00	14.00	A
21	2	0.00	14.00	A
22	2	0.00	14.00	A
23	2	0.00	14.00	A
24	2	0.00	14.00	A
25	2	0.00	14.00	A
26	2	0.00	14.00	A
27	2	0.00	14.00	A
28	2	0.00	14.00	A
29	2	0.00	14.00	A
30	2	0.00	14.00	A
31	2	0.00	14.00	A
32	2	0.00	14.00	A
33	2	0.00	14.00	A
34	2	0.00	14.00	A
35	2	0.00	14.00	A
36	2	0.00	14.00	A
37	2	0.00	14.00	A
38	2	0.00	14.00	A
39	2	0.00	14.00	A
40	2	0.00	14.00	A
41	2	0.00	14.00	A
42	2	0.00	14.00	A
43	2	0.00	14.00	A
44	2	0.00	14.00	A
45	2	0.00	14.00	A
46	2	0.00	14.00	A
47	2	0.00	14.00	A
48	2	0.00	14.00	A
49	2	0.00	14.00	A
50	2	0.00	14.00	A
51	2	0.00	14.00	A
52	2	0.00	14.00	A
53	2	0.00	14.00	A
54	2	0.00	14.00	A
55	2	0.00	14.00	A
56	2	0.00	14.00	A

57	2	0.00	14.00	A
58	2	0.00	14.00	A
59	2	0.00	14.00	A
60	2	0.00	14.00	A
61	2	0.00	14.00	A
62	2	0.00	14.00	A
63	2	0.00	14.00	A
64	2	0.00	14.00	A
65	2	0.00	14.00	A
66	2	0.00	14.00	A
67	2	0.00	14.00	A
68	2	0.00	14.00	A
69	2	0.00	14.00	A
70	2	0.00	14.00	A
71	2	0.00	14.00	A
72	2	0.00	14.00	A
73	2	0.00	14.00	A
74	2	0.00	14.00	A
75	2	0.00	14.00	A
76	2	0.00	14.00	A
77	2	0.00	14.00	A
78	2	0.00	14.00	A
79	2	0.00	14.00	A
80	3	250.00	22.00	
81	3	250.00	22.00	
82	3	250.00	22.00	
83	3	250.00	22.00	
84	3	250.00	22.00	
85	3	250.00	22.00	
86	3	250.00	22.00	
87	3	250.00	22.00	
88	3	250.00	22.00	
89	3	250.00	22.00	
90	3	250.00	22.00	
91	3	250.00	22.00	
92	3	250.00	22.00	
93	3	250.00	22.00	
94	3	250.00	22.00	
95	3	250.00	22.00	
96	3	250.00	22.00	
97	3	250.00	22.00	
98	3	250.00	22.00	
99	3	250.00	22.00	
100	3	250.00	22.00	
101	3	250.00	22.00	
102	3	250.00	22.00	
103	3	250.00	22.00	
104	3	250.00	22.00	
105	3	250.00	22.00	
106	3	250.00	22.00	
107	3	250.00	22.00	
108	3	250.00	22.00	

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 108 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-40.60	140.62	3.38	381.24	404.03	264.81
1	-40.60	140.62	3.38	381.24	404.03	264.81
2	-40.60	143.18	3.38	744.08	550.63	360.90
2	-40.60	143.18	3.38	744.08	550.63	360.90
3	-10.63	146.92	5.00	634.60	158.22	103.70
3	-10.63	146.92	5.00	634.60	158.22	103.70
4	-10.63	151.84	5.00	769.30	191.81	125.72
4	-10.63	151.84	5.00	769.30	191.81	125.72
5	-10.63	156.75	5.00	904.01	225.39	147.73
5	-10.63	156.75	5.00	904.01	225.39	147.73
6	-10.63	161.67	5.00	1038.71	258.98	169.74
6	-10.63	161.67	5.00	1038.71	258.98	169.74
7	-0.48	164.81	1.38	1074.62	267.93	175.61
7	-0.48	164.81	1.38	1074.62	267.93	175.61
8	-0.48	167.95	4.91	1129.38	281.59	184.56
8	-0.48	167.95	4.91	1129.38	281.59	184.56
9	-0.48	172.86	4.91	1232.00	307.17	201.33
9	-0.48	172.86	4.91	1232.00	307.17	201.33
10	-0.48	177.77	4.91	1334.62	332.76	218.10
10	-0.48	177.77	4.91	1334.62	332.76	218.10
11	-0.48	182.67	4.91	1437.24	358.34	234.87
11	-0.48	182.67	4.91	1437.24	358.34	234.87
12	-0.48	187.58	4.91	1539.86	383.93	251.64
12	-0.48	187.58	4.91	1539.86	383.93	251.64
13	-0.48	192.48	4.91	1642.49	409.52	268.41
13	-0.48	192.48	4.91	1642.49	409.52	268.41
14	-0.48	197.39	4.91	1745.11	435.10	285.18
14	-0.48	197.39	4.91	1745.11	435.10	285.18
15	-0.48	202.30	4.91	1847.73	460.69	301.95
15	-0.48	202.30	4.91	1847.73	460.69	301.95
16	-0.48	207.20	4.91	1950.35	486.28	318.72
16	-0.48	207.20	4.91	1950.35	486.28	318.72
17	-0.48	212.11	4.91	2052.97	511.86	335.49
17	-0.48	212.11	4.91	2052.97	511.86	335.49
18	-0.48	217.02	4.91	2155.60	537.45	352.26
18	-0.48	217.02	4.91	2155.60	537.45	352.26
19	-0.48	221.92	4.91	2258.22	563.04	369.03
19	-0.48	221.92	4.91	2258.22	563.04	369.03
20	-0.48	226.83	4.91	2360.84	588.62	385.80
20	-0.48	226.83	4.91	2360.84	588.62	385.80
21	-0.48	231.73	4.91	2463.46	614.21	402.57
21	-0.48	231.73	4.91	2463.46	614.21	402.57
22	-0.48	236.64	4.91	2566.08	639.80	419.34
22	-0.48	236.64	4.91	2566.08	639.80	419.34
23	-0.48	241.55	4.91	2668.70	665.38	436.11
23	-0.48	241.55	4.91	2668.70	665.38	436.11
24	-0.48	246.54	5.08	2813.65	701.52	459.80
24	-0.48	246.54	5.08	2813.65	701.52	459.80
25	-0.48	251.62	5.08	3000.92	748.21	490.40
25	-0.48	251.62	5.08	3000.92	748.21	490.40
26	-0.48	256.69	5.08	3188.18	794.90	521.00
26	-0.48	256.69	5.08	3188.18	794.90	521.00
27	-0.48	261.77	5.08	3375.45	841.59	551.60

27	-0.48	261.77	5.08	3375.45	841.59	551.60
28	-0.48	266.85	5.08	3562.71	888.28	582.20
28	-0.48	266.85	5.08	3562.71	888.28	582.20
29	-0.48	271.92	5.08	3749.98	934.98	612.81
29	-0.48	271.92	5.08	3749.98	934.98	612.81
30	-0.48	277.00	5.08	3937.25	981.67	643.41
30	-0.48	277.00	5.08	3937.25	981.67	643.41
31	-0.48	282.08	5.08	4124.51	1028.36	674.01
31	-0.48	282.08	5.08	4124.51	1028.36	674.01
32	-0.48	287.15	5.08	4311.78	1075.05	704.61
32	-0.48	287.15	5.08	4311.78	1075.05	704.61
33	-0.48	292.23	5.08	4499.05	1121.74	735.22
33	-0.48	292.23	5.08	4499.05	1121.74	735.22
34	-0.48	297.31	5.08	4686.31	1168.43	765.82
34	-0.48	297.31	5.08	4686.31	1168.43	765.82
35	-0.48	302.38	5.08	4873.58	1215.12	796.42
35	-0.48	302.38	5.08	4873.58	1215.12	796.42
36	-0.48	307.46	5.08	5060.85	1261.81	827.02
36	-0.48	307.46	5.08	5060.85	1261.81	827.02
37	-0.48	312.67	5.33	5241.31	1306.81	856.51
37	-0.48	312.67	5.33	5241.31	1306.81	856.51
38	-0.48	318.00	5.33	5414.97	1350.10	884.89
38	-0.48	318.00	5.33	5414.97	1350.10	884.89
39	-0.48	323.33	5.33	5588.63	1393.40	913.27
39	-0.48	323.33	5.33	5588.63	1393.40	913.27
40	-0.48	328.67	5.33	5762.29	1436.70	941.65
40	-0.48	328.67	5.33	5762.29	1436.70	941.65
41	-0.48	334.00	5.33	5935.95	1480.00	970.03
41	-0.48	334.00	5.33	5935.95	1480.00	970.03
42	-0.48	339.33	5.33	6109.61	1523.30	998.41
42	-0.48	339.33	5.33	6109.61	1523.30	998.41
43	-0.48	344.32	4.65	6237.85	1555.27	1019.37
43	-0.48	344.32	4.65	6237.85	1555.27	1019.37
44	-0.48	348.98	4.65	6320.69	1575.92	1032.90
44	-0.48	348.98	4.65	6320.69	1575.92	1032.90
45	-0.48	353.62	4.65	6403.52	1596.58	1046.44
45	-0.48	353.62	4.65	6403.52	1596.58	1046.44
46	-0.48	358.27	4.65	6486.35	1617.23	1059.97
46	-0.48	358.27	4.65	6486.35	1617.23	1059.97
47	-0.48	362.92	4.65	6569.19	1637.88	1073.51
47	-0.48	362.92	4.65	6569.19	1637.88	1073.51
48	-0.48	367.57	4.65	6652.02	1658.53	1087.05
48	-0.48	367.57	4.65	6652.02	1658.53	1087.05
49	-0.48	372.39	4.98	6759.93	1685.44	1104.68
49	-0.48	372.39	4.98	6759.93	1685.44	1104.68
50	-0.48	377.38	4.98	6892.92	1718.60	1126.41
50	-0.48	377.38	4.98	6892.92	1718.60	1126.41
51	-0.48	382.36	4.98	7025.91	1751.76	1148.15
51	-0.48	382.36	4.98	7025.91	1751.76	1148.15
52	-0.48	387.34	4.98	7158.90	1784.92	1169.88
52	-0.48	387.34	4.98	7158.90	1784.92	1169.88
53	-0.48	392.33	4.98	7291.89	1818.07	1191.61
53	-0.48	392.33	4.98	7291.89	1818.07	1191.61
54	-0.48	397.31	4.98	7424.89	1851.23	1213.35
54	-0.48	397.31	4.98	7424.89	1851.23	1213.35
55	-0.48	402.30	4.98	7557.88	1884.39	1235.08
55	-0.48	402.30	4.98	7557.88	1884.39	1235.08
56	-0.48	407.28	4.98	7690.87	1917.55	1256.81
56	-0.48	407.28	4.98	7690.87	1917.55	1256.81
57	-0.48	412.26	4.98	7823.86	1950.71	1278.54
57	-0.48	412.26	4.98	7823.86	1950.71	1278.54
58	-0.48	417.25	4.98	7956.85	1983.87	1300.28
58	-0.48	417.25	4.98	7956.85	1983.87	1300.28
59	-0.48	422.23	4.98	8089.84	2017.02	1322.01
59	-0.48	422.23	4.98	8089.84	2017.02	1322.01
60	-0.48	427.21	4.98	8222.83	2050.18	1343.74
60	-0.48	427.21	4.98	8222.83	2050.18	1343.74
61	-0.48	432.20	4.98	8355.82	2083.34	1365.48
61	-0.48	432.20	4.98	8355.82	2083.34	1365.48
62	-0.48	437.18	4.98	8488.81	2116.50	1387.21
62	-0.48	437.18	4.98	8488.81	2116.50	1387.21
63	-0.48	442.17	4.98	8621.80	2149.66	1408.94
63	-0.48	442.17	4.98	8621.80	2149.66	1408.94
64	-0.48	447.15	4.98	8754.79	2182.82	1430.67
64	-0.48	447.15	4.98	8754.79	2182.82	1430.67
65	-0.48	452.13	4.98	8887.79	2215.97	1452.41
65	-0.48	452.13	4.98	8887.79	2215.97	1452.41
66	-0.48	457.12	4.98	9020.78	2249.13	1474.14
66	-0.48	457.12	4.98	9020.78	2249.13	1474.14
67	-0.48	462.10	4.98	9153.77	2282.29	1495.87
67	-0.48	462.10	4.98	9153.77	2282.29	1495.87
68	-0.48	467.09	4.98	9286.76	2315.45	1517.61
68	-0.48	467.09	4.98	9286.76	2315.45	1517.61
69	-0.48	472.07	4.98	9419.75	2348.61	1539.34
69	-0.48	472.07	4.98	9419.75	2348.61	1539.34
70	-0.48	477.05	4.98	9552.74	2381.77	1561.07
70	-0.48	477.05	4.98	9552.74	2381.77	1561.07
71	-0.48	482.04	4.98	9685.73	2414.92	1582.80
71	-0.48	482.04	4.98	9685.73	2414.92	1582.80
72	-0.48	487.02	4.98	9818.72	2448.08	1604.54
72	-0.48	487.02	4.98	9818.72	2448.08	1604.54
73	-0.48	492.00	4.98	9951.71	2481.24	1626.27
73	-0.48	492.00	4.98	9951.71	2481.24	1626.27
74	-0.48	496.99	4.98	10084.70	2514.40	1648.00
74	-0.48	496.99	4.98	10084.70	2514.40	1648.00
75	-0.48	501.97	4.98	10217.69	2547.56	1669.74
75	-0.48	501.97	4.98	10217.69	2547.56	1669.74
76	-0.48	506.96	4.98	10350.69	2580.72	1691.47
76	-0.48	506.96	4.98	10350.69	2580.72	1691.47
77	-0.48	511.94	4.98	10483.68	2613.87	1713.20
77	-0.48	511.94	4.98	10483.68	2613.87	1713.20
78	-0.48	516.92	4.98	10616.67	2647.03	1734.93
78	-0.48	516.92	4.98	10616.67	2647.03	1734.93
79	-0.48	521.91	4.98	10749.66	2680.19	1756.67
79	-0.48	521.91	4.98	10749.66	2680.19	1756.67
80	29.62	527.33	6.73	9101.73	3927.34	2574.08
80	29.62	527.33	6.73	9101.73	3927.34	2574.08
81	29.62	533.18	6.73	8887.30	3840.70	2517.30
81	29.62	533.18	6.73	8887.30	3840.70	2517.30
82	29.62	538.33	5.12	8742.60	3782.24	2478.98
82	29.62	538.33	5.12	8742.60	3782.24	2478.98
83	29.62	542.77	5.12	8667.63	3751.95	2459.12
83	29.62	542.77	5.12	8667.63	3751.95	2459.12
84	29.62	547.23	5.12	8592.65	3721.65	2439.27
84	29.62	547.23	5.12	8592.65	3721.65	2439.27
85	29.62	551.67	5.12	8517.67	3691.36	2419.41
85	29.62	551.67	5.12	8517.67	3691.36	2419.41
86	29.62	554.70	1.85	8466.63	3670.74	2405.90
86	29.62	554.70	1.85	8466.63	3670.74	2405.90
87	45.45	557.87	6.74	7422.40	3248.84	2129.38

87	45.45	557.87	6.74	7422.40	3248.84	2129.38
88	45.45	562.61	6.74	7153.56	3140.23	2058.19
88	45.45	562.61	6.74	7153.56	3140.23	2058.19
89	45.45	567.34	6.74	6884.73	3031.61	1987.00
89	45.45	567.34	6.74	6884.73	3031.61	1987.00
90	45.45	572.07	6.74	6615.89	2922.99	1915.81
90	45.45	572.07	6.74	6615.89	2922.99	1915.81
91	45.45	576.80	6.74	6347.05	2814.38	1844.61
91	45.45	576.80	6.74	6347.05	2814.38	1844.61
92	45.45	581.53	6.74	6078.21	2705.76	1773.42
92	45.45	581.53	6.74	6078.21	2705.76	1773.42
93	45.45	584.89	2.83	5887.48	2628.69	1722.92
93	45.45	584.89	2.83	5887.48	2628.69	1722.92
94	47.40	588.32	7.20	5578.28	2503.77	1641.04
94	47.40	588.32	7.20	5578.28	2503.77	1641.04
95	47.40	593.19	7.20	5273.67	2380.70	1560.37
95	47.40	593.19	7.20	5273.67	2380.70	1560.37
96	47.40	598.07	7.20	4969.07	2257.63	1479.71
96	47.40	598.07	7.20	4969.07	2257.63	1479.71
97	47.40	602.94	7.20	4664.46	2134.56	1399.05
97	47.40	602.94	7.20	4664.46	2134.56	1399.05
98	47.40	607.82	7.20	4359.86	2011.50	1318.39
98	47.40	607.82	7.20	4359.86	2011.50	1318.39
99	47.40	612.69	7.20	4055.25	1888.43	1237.72
99	47.40	612.69	7.20	4055.25	1888.43	1237.72
100	47.40	617.56	7.20	3750.65	1765.36	1157.06
100	47.40	617.56	7.20	3750.65	1765.36	1157.06
101	47.40	621.31	3.86	3516.61	1670.80	1095.09
101	47.40	621.31	3.86	3516.61	1670.80	1095.09
102	47.40	623.92	3.86	3353.15	1604.76	1051.80
102	47.40	623.92	3.86	3353.15	1604.76	1051.80
103	58.58	627.89	10.19	2588.24	1295.72	849.25
103	58.58	627.89	10.19	2588.24	1295.72	849.25
104	58.58	633.20	10.19	2052.55	1079.28	707.39
104	58.58	633.20	10.19	2052.55	1079.28	707.39
105	58.58	638.52	10.19	1516.86	862.85	565.54
105	58.58	638.52	10.19	1516.86	862.85	565.54
106	58.58	643.83	10.19	981.17	646.42	423.68
106	58.58	643.83	10.19	981.17	646.42	423.68
107	58.58	649.14	10.19	445.48	429.99	281.82
107	58.58	649.14	10.19	445.48	429.99	281.82
108	58.58	653.66	7.14	187.20	75.63	49.57
108	58.58	653.66	7.14	187.20	75.63	49.57

Table 4 - Base Force Data on the 108 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-40.60	140.62	3.38	1288.96	1366.01	895.32
1	-40.60	140.62	3.38	1288.96	1366.01	895.32
2	-40.60	143.18	3.38	2515.70	1861.65	1220.17
2	-40.60	143.18	3.38	2515.70	1861.65	1220.17
3	-10.63	146.92	5.00	3172.99	791.12	518.52
3	-10.63	146.92	5.00	3172.99	791.12	518.52
4	-10.63	151.84	5.00	3846.51	959.04	628.58
4	-10.63	151.84	5.00	3846.51	959.04	628.58
5	-10.63	156.75	5.00	4520.04	1126.97	738.65
5	-10.63	156.75	5.00	4520.04	1126.97	738.65
6	-10.63	161.67	5.00	5193.56	1294.90	848.71
6	-10.63	161.67	5.00	5193.56	1294.90	848.71
7	-0.48	164.81	1.38	1478.88	368.73	241.67
7	-0.48	164.81	1.38	1478.88	368.73	241.67
8	-0.48	167.95	4.91	5541.20	1381.58	905.52
8	-0.48	167.95	4.91	5541.20	1381.58	905.52
9	-0.48	172.86	4.91	6044.71	1507.12	987.80
9	-0.48	172.86	4.91	6044.71	1507.12	987.80
10	-0.48	177.77	4.91	6548.22	1632.65	1070.08
10	-0.48	177.77	4.91	6548.22	1632.65	1070.08
11	-0.48	182.67	4.91	7051.72	1758.19	1152.36
11	-0.48	182.67	4.91	7051.72	1758.19	1152.36
12	-0.48	187.58	4.91	7555.23	1883.73	1234.65
12	-0.48	187.58	4.91	7555.23	1883.73	1234.65
13	-0.48	192.48	4.91	8058.74	2009.27	1316.93
13	-0.48	192.48	4.91	8058.74	2009.27	1316.93
14	-0.48	197.39	4.91	8562.24	2134.81	1399.21
14	-0.48	197.39	4.91	8562.24	2134.81	1399.21
15	-0.48	202.30	4.91	9065.75	2260.34	1481.49
15	-0.48	202.30	4.91	9065.75	2260.34	1481.49
16	-0.48	207.20	4.91	9569.25	2385.88	1563.77
16	-0.48	207.20	4.91	9569.25	2385.88	1563.77
17	-0.48	212.11	4.91	10072.76	2511.42	1646.05
17	-0.48	212.11	4.91	10072.76	2511.42	1646.05
18	-0.48	217.02	4.91	10576.27	2636.96	1728.33
18	-0.48	217.02	4.91	10576.27	2636.96	1728.33
19	-0.48	221.92	4.91	11079.77	2762.50	1810.61
19	-0.48	221.92	4.91	11079.77	2762.50	1810.61
20	-0.48	226.83	4.91	11583.28	2888.04	1892.89
20	-0.48	226.83	4.91	11583.28	2888.04	1892.89
21	-0.48	231.73	4.91	12086.79	3013.57	1975.17
21	-0.48	231.73	4.91	12086.79	3013.57	1975.17
22	-0.48	236.64	4.91	12590.29	3139.11	2057.46
22	-0.48	236.64	4.91	12590.29	3139.11	2057.46
23	-0.48	241.55	4.91	13093.80	3264.65	2139.74
23	-0.48	241.55	4.91	13093.80	3264.65	2139.74
24	-0.48	246.54	5.08	14285.19	3561.70	2334.43
24	-0.48	246.54	5.08	14285.19	3561.70	2334.43
25	-0.48	251.62	5.08	15235.96	3798.75	2489.80
25	-0.48	251.62	5.08	15235.96	3798.75	2489.80
26	-0.48	256.69	5.08	16186.73	4035.80	2645.17
26	-0.48	256.69	5.08	16186.73	4035.80	2645.17
27	-0.48	261.77	5.08	17137.50	4272.86	2800.54
27	-0.48	261.77	5.08	17137.50	4272.86	2800.54
28	-0.48	266.85	5.08	18088.27	4509.91	2955.91
28	-0.48	266.85	5.08	18088.27	4509.91	2955.91
29	-0.48	271.92	5.08	19039.04	4746.97	3111.29
29	-0.48	271.92	5.08	19039.04	4746.97	3111.29
30	-0.48	277.00	5.08	19989.81	4984.02	3266.66
30	-0.48	277.00	5.08	19989.81	4984.02	3266.66
31	-0.48	282.08	5.08	20940.58	5221.07	3422.03
31	-0.48	282.08	5.08	20940.58	5221.07	3422.03
32	-0.48	287.15	5.08	21891.36	5458.13	3577.40
32	-0.48	287.15	5.08	21891.36	5458.13	3577.40
33	-0.48	292.23	5.08	22842.13	5695.18	3732.77
33	-0.48	292.23	5.08	22842.13	5695.18	3732.77
34	-0.48	297.31	5.08	23792.90	5932.24	3888.14
34	-0.48	297.31	5.08	23792.90	5932.24	3888.14

35	-0.48	302.38	5.08	24743.67	6169.29	4043.51
35	-0.48	302.38	5.08	24743.67	6169.29	4043.51
36	-0.48	307.46	5.08	25694.44	6406.34	4198.88
36	-0.48	307.46	5.08	25694.44	6406.34	4198.88
37	-0.48	312.67	5.33	27954.64	6969.88	4568.24
37	-0.48	312.67	5.33	27954.64	6969.88	4568.24
38	-0.48	318.00	5.33	28880.86	7200.81	4719.60
38	-0.48	318.00	5.33	28880.86	7200.81	4719.60
39	-0.48	323.33	5.33	29807.08	7431.74	4870.96
39	-0.48	323.33	5.33	29807.08	7431.74	4870.96
40	-0.48	328.67	5.33	30733.30	7662.67	5022.31
40	-0.48	328.67	5.33	30733.30	7662.67	5022.31
41	-0.48	334.00	5.33	31659.52	7893.60	5173.67
41	-0.48	334.00	5.33	31659.52	7893.60	5173.67
42	-0.48	339.33	5.33	32585.74	8124.54	5325.03
42	-0.48	339.33	5.33	32585.74	8124.54	5325.03
43	-0.48	344.32	4.65	29007.06	7232.27	4740.22
43	-0.48	344.32	4.65	29007.06	7232.27	4740.22
44	-0.48	348.98	4.65	29392.24	7328.31	4803.16
44	-0.48	348.98	4.65	29392.24	7328.31	4803.16
45	-0.48	353.62	4.65	29777.43	7424.35	4866.11
45	-0.48	353.62	4.65	29777.43	7424.35	4866.11
46	-0.48	358.27	4.65	30162.62	7520.38	4929.06
46	-0.48	358.27	4.65	30162.62	7520.38	4929.06
47	-0.48	362.92	4.65	30547.80	7616.42	4992.00
47	-0.48	362.92	4.65	30547.80	7616.42	4992.00
48	-0.48	367.57	4.65	30932.99	7712.46	5054.95
48	-0.48	367.57	4.65	30932.99	7712.46	5054.95
49	-0.48	372.39	4.98	33691.82	8400.31	5505.78
49	-0.48	372.39	4.98	33691.82	8400.31	5505.78
50	-0.48	377.38	4.98	34354.66	8565.58	5614.10
50	-0.48	377.38	4.98	34354.66	8565.58	5614.10
51	-0.48	382.36	4.98	35017.49	8730.84	5722.42
51	-0.48	382.36	4.98	35017.49	8730.84	5722.42
52	-0.48	387.34	4.98	35680.32	8896.10	5830.74
52	-0.48	387.34	4.98	35680.32	8896.10	5830.74
53	-0.48	392.33	4.98	36343.16	9061.37	5939.05
53	-0.48	392.33	4.98	36343.16	9061.37	5939.05
54	-0.48	397.31	4.98	37005.99	9226.63	6047.37
54	-0.48	397.31	4.98	37005.99	9226.63	6047.37
55	-0.48	402.30	4.98	37668.82	9391.89	6155.69
55	-0.48	402.30	4.98	37668.82	9391.89	6155.69
56	-0.48	407.28	4.98	38331.65	9557.15	6264.01
56	-0.48	407.28	4.98	38331.65	9557.15	6264.01
57	-0.48	412.26	4.98	38994.49	9722.42	6372.33
57	-0.48	412.26	4.98	38994.49	9722.42	6372.33
58	-0.48	417.25	4.98	39657.32	9887.68	6480.64
58	-0.48	417.25	4.98	39657.32	9887.68	6480.64
59	-0.48	422.23	4.98	40320.15	10052.94	6588.96
59	-0.48	422.23	4.98	40320.15	10052.94	6588.96
60	-0.48	427.21	4.98	40982.99	10218.21	6697.28
60	-0.48	427.21	4.98	40982.99	10218.21	6697.28
61	-0.48	432.20	4.98	41645.82	10383.47	6805.60
61	-0.48	432.20	4.98	41645.82	10383.47	6805.60
62	-0.48	437.18	4.98	42308.65	10548.73	6913.91
62	-0.48	437.18	4.98	42308.65	10548.73	6913.91
63	-0.48	442.17	4.98	42971.49	10713.99	7022.23
63	-0.48	442.17	4.98	42971.49	10713.99	7022.23
64	-0.48	447.15	4.98	43634.32	10879.26	7130.55
64	-0.48	447.15	4.98	43634.32	10879.26	7130.55
65	-0.48	452.13	4.98	44297.15	11044.52	7238.87
65	-0.48	452.13	4.98	44297.15	11044.52	7238.87
66	-0.48	457.12	4.98	44959.99	11209.78	7347.18
66	-0.48	457.12	4.98	44959.99	11209.78	7347.18
67	-0.48	462.10	4.98	45622.82	11375.05	7455.50
67	-0.48	462.10	4.98	45622.82	11375.05	7455.50
68	-0.48	467.09	4.98	46285.65	11540.31	7563.82
68	-0.48	467.09	4.98	46285.65	11540.31	7563.82
69	-0.48	472.07	4.98	46948.49	11705.57	7672.14
69	-0.48	472.07	4.98	46948.49	11705.57	7672.14
70	-0.48	477.05	4.98	47611.32	11870.84	7780.45
70	-0.48	477.05	4.98	47611.32	11870.84	7780.45
71	-0.48	482.04	4.98	48274.15	12036.10	7888.77
71	-0.48	482.04	4.98	48274.15	12036.10	7888.77
72	-0.48	487.02	4.98	48936.99	12201.36	7997.09
72	-0.48	487.02	4.98	48936.99	12201.36	7997.09
73	-0.48	492.00	4.98	49599.82	12366.62	8105.41
73	-0.48	492.00	4.98	49599.82	12366.62	8105.41
74	-0.48	496.99	4.98	50262.65	12531.89	8213.72
74	-0.48	496.99	4.98	50262.65	12531.89	8213.72
75	-0.48	501.97	4.98	50925.49	12697.15	8322.04
75	-0.48	501.97	4.98	50925.49	12697.15	8322.04
76	-0.48	506.96	4.98	51588.32	12862.41	8430.36
76	-0.48	506.96	4.98	51588.32	12862.41	8430.36
77	-0.48	511.94	4.98	52251.15	13027.68	8538.68
77	-0.48	511.94	4.98	52251.15	13027.68	8538.68
78	-0.48	516.92	4.98	52913.99	13192.94	8646.99
78	-0.48	516.92	4.98	52913.99	13192.94	8646.99
79	-0.48	521.91	4.98	53576.82	13358.20	8755.31
79	-0.48	521.91	4.98	53576.82	13358.20	8755.31
80	29.62	527.33	6.73	61247.89	26428.07	17321.64
80	29.62	527.33	6.73	61247.89	26428.07	17321.64
81	29.62	533.18	6.73	59804.97	25845.09	16939.54
81	29.62	533.18	6.73	59804.97	25845.09	16939.54
82	29.62	538.33	5.12	44751.97	19360.68	12689.49
82	29.62	538.33	5.12	44751.97	19360.68	12689.49
83	29.62	542.77	5.12	44368.17	19205.61	12587.86
83	29.62	542.77	5.12	44368.17	19205.61	12587.86
84	29.62	547.23	5.12	43984.37	19050.55	12486.22
84	29.62	547.23	5.12	43984.37	19050.55	12486.22
85	29.62	551.67	5.12	43600.57	18895.48	12384.59
85	29.62	551.67	5.12	43600.57	18895.48	12384.59
86	29.62	554.70	1.85	15661.26	6790.00	4450.34
86	29.62	554.70	1.85	15661.26	6790.00	4450.34
87	45.45	557.87	6.74	50063.85	21913.35	14362.58
87	45.45	557.87	6.74	50063.85	21913.35	14362.58
88	45.45	562.61	6.74	48250.55	21180.73	13882.40
88	45.45	562.61	6.74	48250.55	21180.73	13882.40
89	45.45	567.34	6.74	46437.25	20448.11	13402.22
89	45.45	567.34	6.74	46437.25	20448.11	13402.22
90	45.45	572.07	6.74	44623.95	19715.49	12922.04
90	45.45	572.07	6.74	44623.95	19715.49	12922.04
91	45.45	576.80	6.74	42810.66	18982.87	12441.87
91	45.45	576.80	6.74	42810.66	18982.87	12441.87
92	45.45	581.53	6.74	40997.36	18250.25	11961.69
92	45.45	581.53	6.74	40997.36	18250.25	11961.69
93	45.45	584.89	2.83	16638.12	7428.74	4868.99
93	45.45	584.89	2.83	16638.12	7428.74	4868.99
94	47.40	588.32	7.20	40166.43	18028.42	11816.29
94	47.40	588.32	7.20	40166.43	18028.42	11816.29

95	47.40	593.19	7.20	37973.11	17142.26	11235.48
95	47.40	593.19	7.20	37973.11	17142.26	11235.48
96	47.40	598.07	7.20	35779.80	16256.10	10654.67
96	47.40	598.07	7.20	35779.80	16256.10	10654.67
97	47.40	602.94	7.20	33586.48	15369.95	10073.86
97	47.40	602.94	7.20	33586.48	15369.95	10073.86
98	47.40	607.82	7.20	31393.17	14483.79	9493.05
98	47.40	607.82	7.20	31393.17	14483.79	9493.05
99	47.40	612.69	7.20	29199.86	13597.63	8912.24
99	47.40	612.69	7.20	29199.86	13597.63	8912.24
100	47.40	617.56	7.20	27006.54	12711.48	8331.43
100	47.40	617.56	7.20	27006.54	12711.48	8331.43
101	47.40	621.31	3.86	13588.08	6455.93	4231.39
101	47.40	621.31	3.86	13588.08	6455.93	4231.39
102	47.40	623.92	3.86	12956.48	6200.75	4064.13
102	47.40	623.92	3.86	12956.48	6200.75	4064.13
103	58.58	627.89	10.19	26384.49	13208.52	8657.21
103	58.58	627.89	10.19	26384.49	13208.52	8657.21
104	58.58	633.20	10.19	20923.68	11002.21	7211.13
104	58.58	633.20	10.19	20923.68	11002.21	7211.13
105	58.58	638.52	10.19	15462.87	8795.90	5765.06
105	58.58	638.52	10.19	15462.87	8795.90	5765.06
106	58.58	643.83	10.19	10002.06	6589.59	4318.99
106	58.58	643.83	10.19	10002.06	6589.59	4318.99
107	58.58	649.14	10.19	4541.24	4383.28	2872.91
107	58.58	649.14	10.19	4541.24	4383.28	2872.91
108	58.58	653.66	7.14	1335.97	539.77	353.78
108	58.58	653.66	7.14	1335.97	539.77	353.78

Sum of the Resisting Forces = 848440.83 (lbs)

Average Available Shear Strength = 1456.88(psf)

Sum of the Driving Forces = 597650.48 (lbs)

Average Mobilized Shear Stress = 1026.24(psf)

Total length of the failure surface = 582.37(ft)

Factor of Safety Balance Check: FS = 1.41963

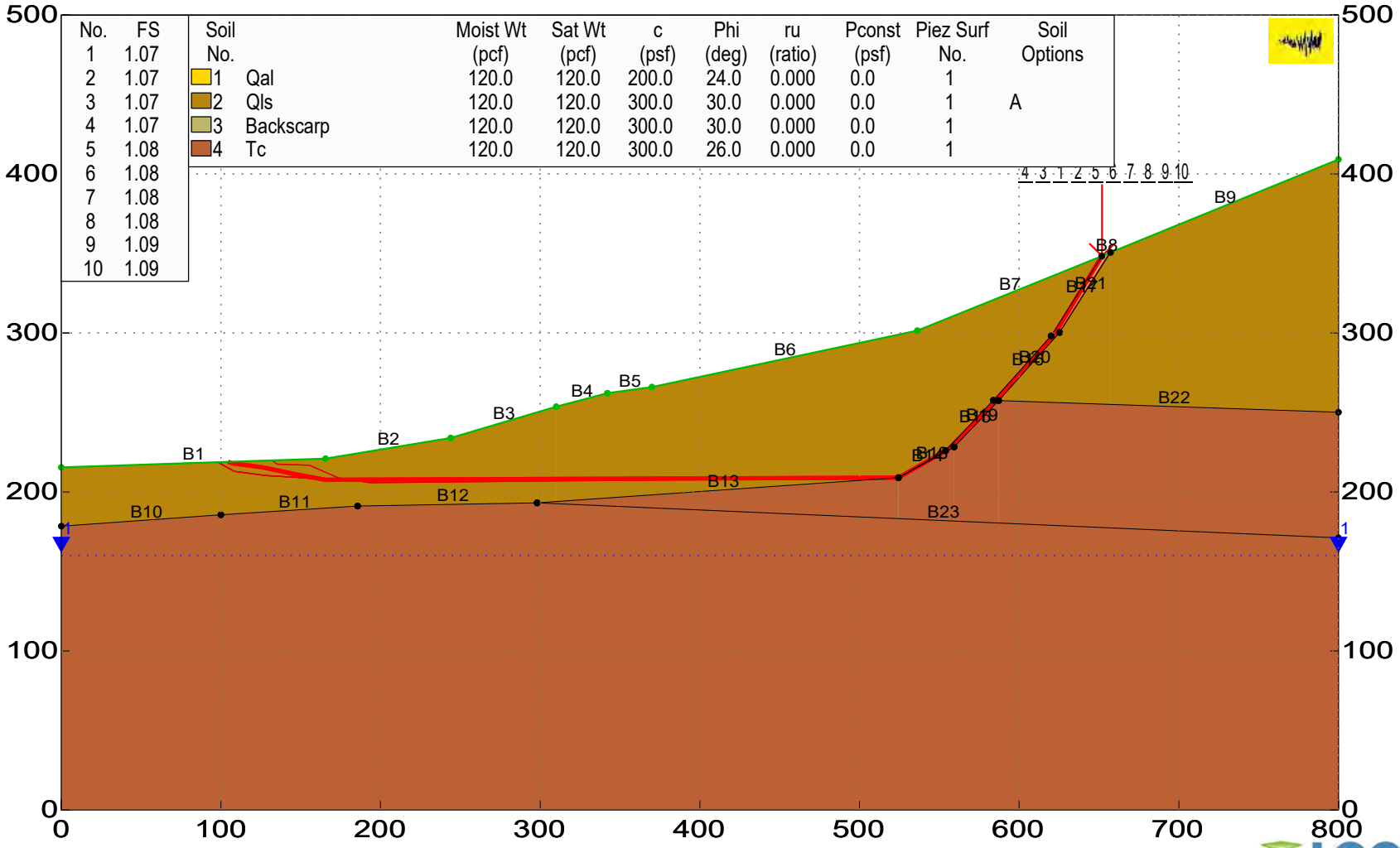
Janbu's Correction Factor (fo) = 1.0708

Janub's FS Corrected = 1.52008

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section A-A'
Existing - Upper Claybed - Seismic

LGC Geotechnical, Inc. \xaue.gsd



GEOSTASE FS = 1.07

Simplified Janbu (Corrected) Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 2/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xaue.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec A\2024_03_29\xaue.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section A-A'

DESCRIPTION: Existing - Upper Claybed - Seismic

BOUNDARY DATA

9 Surface Boundaries
23 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.500	165.500	221.000	2
2	165.500	221.000	244.000	234.000	2
3	244.000	234.000	310.000	253.700	2
4	310.000	253.700	342.000	262.100	2
5	342.000	262.100	369.900	266.000	2
6	369.900	266.000	536.100	301.500	2
7	536.100	301.500	651.800	348.400	2
8	651.800	348.400	657.200	350.600	3
9	657.200	350.600	800.000	409.100	2
10	0.000	178.500	100.000	185.700	4
11	100.000	185.700	185.700	191.100	4
12	185.700	191.100	298.100	193.100	4
13	298.100	193.100	524.400	209.000	4
14	524.400	209.000	553.900	226.000	3
15	553.900	226.000	583.900	257.600	3
16	583.900	257.600	620.000	298.100	3
17	620.000	298.100	651.800	348.400	3
18	524.400	209.000	559.300	228.300	4
19	559.300	228.300	587.100	257.500	4
20	587.100	257.500	625.400	300.400	2
21	625.400	300.400	657.200	350.600	2
22	587.100	257.500	800.000	250.200	4
23	298.100	193.100	800.000	171.200	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	300.00	30.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	300.00	30.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	15.0	0.00	15.00
3	90.0	300.00	30.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	147.10	209.90	300.10	196.60	15.00
2	524.40	209.00	524.40	209.00	0.00
3	553.90	226.00	559.30	228.30	0.00
4	583.90	257.60	587.10	257.50	0.00
5	620.00	298.10	625.40	300.40	0.00
6	651.80	348.40	657.20	350.60	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.765 FS Min = 1.074 FS Ave = 1.179
Standard Deviation = 0.123 Coefficient of Variation = 10.44 %

Critical Surface is Sequence Number 115 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.074

Table 1 - Geometry Data on the 115 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	2.01	0.43	105.45	218.58	219.00	-21.30	1.90	2.16
2	4.95	1.28	108.93	217.84	219.12	-7.93	1.90	5.00
3	4.95	2.13	113.88	217.15	219.28	-7.93	1.90	5.00
4	4.95	2.99	118.83	216.46	219.45	-7.93	1.90	5.00
5	4.95	3.84	123.79	215.77	219.61	-7.93	1.90	5.00
6	4.89	4.87	128.71	214.90	219.78	-12.03	1.90	5.00
7	4.89	6.08	133.60	213.86	219.94	-12.03	1.90	5.00
8	4.89	7.28	138.49	212.82	220.10	-12.03	1.90	5.00
9	4.89	8.49	143.38	211.78	220.26	-12.03	1.90	5.00
10	4.92	9.62	148.28	210.81	220.43	-10.22	1.90	5.00
11	4.92	10.67	153.20	209.92	220.59	-10.22	1.90	5.00
12	4.92	11.72	158.12	209.04	220.75	-10.22	1.90	5.00
13	4.92	12.77	163.04	208.15	220.92	-10.22	1.90	5.00
14	0.01	13.29	165.50	207.71	221.00	-10.22	9.40	0.01
15	4.91	13.69	167.96	207.71	221.41	0.21	9.40	4.91
16	4.91	14.49	172.86	207.73	222.22	0.21	9.40	4.91
17	4.91	15.28	177.77	207.75	223.03	0.21	9.40	4.91
18	4.91	16.08	182.68	207.77	223.84	0.21	9.40	4.91
19	4.91	16.87	187.58	207.79	224.66	0.21	9.40	4.91
20	4.91	17.67	192.49	207.80	225.47	0.21	9.40	4.91
21	4.91	18.46	197.39	207.82	226.28	0.21	9.40	4.91
22	4.91	19.26	202.30	207.84	227.09	0.21	9.40	4.91
23	4.91	20.05	207.21	207.86	227.91	0.21	9.40	4.91
24	4.91	20.85	212.11	207.87	228.72	0.21	9.40	4.91
25	4.91	21.64	217.02	207.89	229.53	0.21	9.40	4.91
26	4.91	22.43	221.92	207.91	230.34	0.21	9.40	4.91
27	4.91	23.23	226.83	207.93	231.16	0.21	9.40	4.91
28	4.91	24.02	231.74	207.94	231.97	0.21	9.40	4.91
29	4.91	24.82	236.64	207.96	232.78	0.21	9.40	4.91
30	4.91	25.61	241.55	207.98	233.59	0.21	9.40	4.91
31	5.08	26.76	246.54	208.00	234.76	0.21	16.62	5.08
32	5.08	28.26	251.62	208.02	236.27	0.21	16.62	5.08
33	5.08	29.75	256.69	208.03	237.79	0.21	16.62	5.08
34	5.08	31.25	261.77	208.05	239.30	0.21	16.62	5.08
35	5.08	32.75	266.85	208.07	240.82	0.21	16.62	5.08
36	5.08	34.25	271.92	208.09	242.33	0.21	16.62	5.08
37	5.08	35.74	277.00	208.11	243.85	0.21	16.62	5.08
38	5.08	37.24	282.08	208.13	245.37	0.21	16.62	5.08
39	5.08	38.74	287.15	208.14	246.88	0.21	16.62	5.08
40	5.08	40.23	292.23	208.16	248.40	0.21	16.62	5.08
41	5.08	41.73	297.31	208.18	249.91	0.21	16.62	5.08
42	5.08	43.23	302.38	208.20	251.43	0.21	16.62	5.08
43	5.08	44.72	307.46	208.22	252.94	0.21	16.62	5.08

44	5.33	46.16	312.67	208.24	254.40	0.21	14.71	5.33
45	5.33	47.54	318.00	208.26	255.80	0.21	14.71	5.33
46	5.33	48.93	323.33	208.27	257.20	0.21	14.71	5.33
47	5.33	50.31	328.67	208.29	258.60	0.21	14.71	5.33
48	5.33	51.69	334.00	208.31	260.00	0.21	14.71	5.33
49	5.33	53.07	339.33	208.33	261.40	0.21	14.71	5.33
50	4.65	54.07	344.32	208.35	262.43	0.21	7.96	4.65
51	4.65	54.71	348.98	208.37	263.08	0.21	7.96	4.65
52	4.65	55.34	353.62	208.38	263.73	0.21	7.96	4.65
53	4.65	55.97	358.27	208.40	264.38	0.21	7.96	4.65
54	4.65	56.61	362.92	208.42	265.02	0.21	7.96	4.65
55	4.65	57.24	367.57	208.43	265.68	0.21	7.96	4.65
56	4.98	58.08	372.39	208.45	266.53	0.21	12.06	4.98
57	4.98	59.13	377.38	208.47	267.60	0.21	12.06	4.98
58	4.98	60.17	382.36	208.49	268.66	0.21	12.06	4.98
59	4.98	61.22	387.34	208.51	269.73	0.21	12.06	4.98
60	4.98	62.27	392.33	208.52	270.79	0.21	12.06	4.98
61	4.98	63.31	397.31	208.54	271.85	0.21	12.06	4.98
62	4.98	64.36	402.30	208.56	272.92	0.21	12.06	4.98
63	4.98	65.41	407.28	208.58	273.98	0.21	12.06	4.98
64	4.98	66.45	412.26	208.60	275.05	0.21	12.06	4.98
65	4.98	67.50	417.25	208.61	276.11	0.21	12.06	4.98
66	4.98	68.55	422.23	208.63	277.18	0.21	12.06	4.98
67	4.98	69.59	427.21	208.65	278.24	0.21	12.06	4.98
68	4.98	70.64	432.20	208.67	279.31	0.21	12.06	4.98
69	4.98	71.69	437.18	208.69	280.37	0.21	12.06	4.98
70	4.98	72.73	442.17	208.70	281.44	0.21	12.06	4.98
71	4.98	73.78	447.15	208.72	282.50	0.21	12.06	4.98
72	4.98	74.83	452.13	208.74	283.56	0.21	12.06	4.98
73	4.98	75.87	457.12	208.76	284.63	0.21	12.06	4.98
74	4.98	76.92	462.10	208.78	285.69	0.21	12.06	4.98
75	4.98	77.97	467.09	208.79	286.76	0.21	12.06	4.98
76	4.98	79.01	472.07	208.81	287.82	0.21	12.06	4.98
77	4.98	80.06	477.05	208.83	288.89	0.21	12.06	4.98
78	4.98	81.11	482.04	208.85	289.95	0.21	12.06	4.98
79	4.98	82.15	487.02	208.87	291.02	0.21	12.06	4.98
80	4.98	83.20	492.00	208.88	292.08	0.21	12.06	4.98
81	4.98	84.24	496.99	208.90	293.15	0.21	12.06	4.98
82	4.98	85.29	501.97	208.92	294.21	0.21	12.06	4.98
83	4.98	86.34	506.96	208.94	295.27	0.21	12.06	4.98
84	4.98	87.38	511.94	208.96	296.34	0.21	12.06	4.98
85	4.98	88.43	516.92	208.97	297.40	0.21	12.06	4.98
86	4.98	89.48	521.91	208.99	298.47	0.21	12.06	4.98
87	5.85	88.96	527.33	210.66	299.63	29.59	12.06	6.73
88	5.85	86.89	533.18	213.98	300.88	29.59	12.06	6.73
89	4.45	85.50	538.33	216.91	302.40	29.59	22.07	5.12
90	4.45	84.77	542.77	219.43	304.21	29.59	22.07	5.12
91	4.45	84.05	547.23	221.96	306.01	29.59	22.07	5.12
92	4.45	83.33	551.67	224.49	307.81	29.59	22.07	5.12
93	1.76	82.82	554.78	226.25	309.07	29.59	22.07	2.03
94	4.71	81.23	558.02	229.16	310.38	45.63	22.07	6.73
95	4.71	78.32	562.72	233.97	312.29	45.63	22.07	6.73
96	4.71	75.42	567.43	238.78	314.20	45.63	22.07	6.73
97	4.71	72.52	572.13	243.59	316.11	45.63	22.07	6.73
98	4.71	69.61	576.84	248.40	318.01	45.63	22.07	6.73
99	4.71	66.71	581.55	253.21	319.92	45.63	22.07	6.73
100	1.88	64.68	584.84	256.58	321.26	45.63	22.07	2.69
101	4.89	62.28	588.22	260.35	322.63	48.94	22.07	7.44
102	4.89	58.65	593.11	265.96	324.61	48.94	22.07	7.44
103	4.89	55.02	598.00	271.57	326.59	48.94	22.07	7.44
104	4.89	51.40	602.89	277.18	328.57	48.94	22.07	7.44
105	4.89	47.77	607.78	282.79	330.56	48.94	22.07	7.44
106	4.89	44.14	612.67	288.40	332.54	48.94	22.07	7.44
107	4.89	40.51	617.56	294.01	334.52	48.94	22.07	7.44
108	1.78	38.03	620.89	297.84	335.87	48.94	22.07	2.71
109	5.00	34.27	624.28	302.97	337.24	58.72	22.07	9.64
110	5.00	28.06	629.28	311.21	339.27	58.72	22.07	9.64
111	5.00	21.86	634.29	319.44	341.30	58.72	22.07	9.64
112	5.00	15.65	639.29	327.68	343.33	58.72	22.07	9.64
113	5.00	9.44	644.29	335.91	345.36	58.72	22.07	9.64
114	5.00	3.24	649.30	344.15	347.39	58.72	22.07	9.64
115	0.11	0.07	651.85	348.35	348.42	58.72	22.17	0.21

Table 2 - Force Data On The 115 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	102.8	0.0	0.0	15.4	0.0	0.0
2	759.8	0.0	0.0	114.0	0.0	0.0
3	1267.7	0.0	0.0	190.2	0.0	0.0
4	1775.7	0.0	0.0	266.3	0.0	0.0
5	2283.6	0.0	0.0	342.5	0.0	0.0
6	2859.3	0.0	0.0	428.9	0.0	0.0
7	3566.5	0.0	0.0	535.0	0.0	0.0
8	4273.6	0.0	0.0	641.0	0.0	0.0
9	4980.7	0.0	0.0	747.1	0.0	0.0
10	5676.1	0.0	0.0	851.4	0.0	0.0
11	6296.3	0.0	0.0	944.4	0.0	0.0
12	6916.5	0.0	0.0	1037.5	0.0	0.0
13	7536.7	0.0	0.0	1130.5	0.0	0.0
14	9.5	0.0	0.0	1.4	0.0	0.0
15	8060.9	0.0	0.0	1209.1	0.0	0.0
16	8528.7	0.0	0.0	1279.3	0.0	0.0
17	8996.6	0.0	0.0	1349.5	0.0	0.0
18	9464.5	0.0	0.0	1419.7	0.0	0.0
19	9932.4	0.0	0.0	1489.9	0.0	0.0
20	10400.2	0.0	0.0	1560.0	0.0	0.0
21	10868.1	0.0	0.0	1630.2	0.0	0.0
22	11336.0	0.0	0.0	1700.4	0.0	0.0
23	11803.8	0.0	0.0	1770.6	0.0	0.0
24	12271.7	0.0	0.0	1840.8	0.0	0.0
25	12739.6	0.0	0.0	1910.9	0.0	0.0
26	13207.5	0.0	0.0	1981.1	0.0	0.0
27	13675.3	0.0	0.0	2051.3	0.0	0.0
28	14143.2	0.0	0.0	2121.5	0.0	0.0
29	14611.1	0.0	0.0	2191.7	0.0	0.0
30	15079.0	0.0	0.0	2261.8	0.0	0.0
31	16302.8	0.0	0.0	2445.4	0.0	0.0
32	17214.9	0.0	0.0	2582.2	0.0	0.0
33	18126.9	0.0	0.0	2719.0	0.0	0.0
34	19039.0	0.0	0.0	2855.9	0.0	0.0
35	19951.1	0.0	0.0	2992.7	0.0	0.0
36	20863.1	0.0	0.0	3129.5	0.0	0.0
37	21775.2	0.0	0.0	3266.3	0.0	0.0
38	22687.3	0.0	0.0	3403.1	0.0	0.0

39	23599.3	0.0	0.0	3539.9	0.0	0.0
40	24511.4	0.0	0.0	3676.7	0.0	0.0
41	25423.5	0.0	0.0	3813.5	0.0	0.0
42	26335.5	0.0	0.0	3950.3	0.0	0.0
43	27247.6	0.0	0.0	4087.1	0.0	0.0
44	29544.6	0.0	0.0	4431.7	0.0	0.0
45	30428.3	0.0	0.0	4564.3	0.0	0.0
46	31312.0	0.0	0.0	4696.8	0.0	0.0
47	32195.7	0.0	0.0	4829.4	0.0	0.0
48	33079.4	0.0	0.0	4961.9	0.0	0.0
49	33963.1	0.0	0.0	5094.5	0.0	0.0
50	30173.5	0.0	0.0	4526.0	0.0	0.0
51	30526.8	0.0	0.0	4579.0	0.0	0.0
52	30880.2	0.0	0.0	4632.0	0.0	0.0
53	31233.5	0.0	0.0	4685.0	0.0	0.0
54	31586.9	0.0	0.0	4738.0	0.0	0.0
55	31940.2	0.0	0.0	4791.0	0.0	0.0
56	34735.8	0.0	0.0	5210.4	0.0	0.0
57	35361.8	0.0	0.0	5304.3	0.0	0.0
58	35987.7	0.0	0.0	5398.2	0.0	0.0
59	36613.6	0.0	0.0	5492.0	0.0	0.0
60	37239.5	0.0	0.0	5585.9	0.0	0.0
61	37865.4	0.0	0.0	5679.8	0.0	0.0
62	38491.3	0.0	0.0	5773.7	0.0	0.0
63	39117.3	0.0	0.0	5867.6	0.0	0.0
64	39743.2	0.0	0.0	5961.5	0.0	0.0
65	40369.1	0.0	0.0	6055.4	0.0	0.0
66	40995.0	0.0	0.0	6149.3	0.0	0.0
67	41620.9	0.0	0.0	6243.1	0.0	0.0
68	42246.9	0.0	0.0	6337.0	0.0	0.0
69	42872.8	0.0	0.0	6430.9	0.0	0.0
70	43498.7	0.0	0.0	6524.8	0.0	0.0
71	44124.6	0.0	0.0	6618.7	0.0	0.0
72	44750.5	0.0	0.0	6712.6	0.0	0.0
73	45376.4	0.0	0.0	6806.5	0.0	0.0
74	46002.4	0.0	0.0	6900.4	0.0	0.0
75	46628.3	0.0	0.0	6994.2	0.0	0.0
76	47254.2	0.0	0.0	7088.1	0.0	0.0
77	47880.1	0.0	0.0	7182.0	0.0	0.0
78	48506.0	0.0	0.0	7275.9	0.0	0.0
79	49132.0	0.0	0.0	7369.8	0.0	0.0
80	49757.9	0.0	0.0	7463.7	0.0	0.0
81	50383.8	0.0	0.0	7557.6	0.0	0.0
82	51009.7	0.0	0.0	7651.5	0.0	0.0
83	51635.6	0.0	0.0	7745.3	0.0	0.0
84	52261.6	0.0	0.0	7839.2	0.0	0.0
85	52887.5	0.0	0.0	7933.1	0.0	0.0
86	53513.4	0.0	0.0	8027.0	0.0	0.0
87	62453.3	0.0	0.0	9368.0	0.0	0.0
88	60998.8	0.0	0.0	9149.8	0.0	0.0
89	45654.5	0.0	0.0	6848.2	0.0	0.0
90	45268.5	0.0	0.0	6790.3	0.0	0.0
91	44882.5	0.0	0.0	6732.4	0.0	0.0
92	44496.5	0.0	0.0	6674.5	0.0	0.0
93	17515.1	0.0	0.0	2627.3	0.0	0.0
94	45873.4	0.0	0.0	6881.0	0.0	0.0
95	44233.6	0.0	0.0	6635.0	0.0	0.0
96	42593.7	0.0	0.0	6389.1	0.0	0.0
97	40953.9	0.0	0.0	6143.1	0.0	0.0
98	39314.0	0.0	0.0	5897.1	0.0	0.0
99	37674.2	0.0	0.0	5651.1	0.0	0.0
100	14593.3	0.0	0.0	2189.0	0.0	0.0
101	36536.4	0.0	0.0	5480.5	0.0	0.0
102	34407.5	0.0	0.0	5161.1	0.0	0.0
103	32278.5	0.0	0.0	4841.8	0.0	0.0
104	30149.6	0.0	0.0	4522.4	0.0	0.0
105	28020.6	0.0	0.0	4203.1	0.0	0.0
106	25891.7	0.0	0.0	3883.8	0.0	0.0
107	23762.8	0.0	0.0	3564.4	0.0	0.0
108	8115.4	0.0	0.0	1217.3	0.0	0.0
109	20576.9	0.0	0.0	3086.5	0.0	0.0
110	16850.4	0.0	0.0	2527.6	0.0	0.0
111	13123.9	0.0	0.0	1968.6	0.0	0.0
112	9397.4	0.0	0.0	1409.6	0.0	0.0
113	5670.9	0.0	0.0	850.6	0.0	0.0
114	1944.4	0.0	0.0	291.7	0.0	0.0
115	0.9	0.0	0.0	0.1	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 3134460.55(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 3134460.55(lbs)

TOTAL AREA OF SLIDING MASS = 26120.50(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 115 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	2	300.00	30.00	A
2	2	0.00	15.00	A
3	2	0.00	15.00	A
4	2	0.00	15.00	A
5	2	0.00	15.00	A
6	2	0.00	15.00	A
7	2	0.00	15.00	A
8	2	0.00	15.00	A
9	2	0.00	15.00	A
10	2	0.00	15.00	A
11	2	0.00	15.00	A
12	2	0.00	15.00	A
13	2	0.00	15.00	A
14	2	0.00	15.00	A
15	2	0.00	15.00	A
16	2	0.00	15.00	A
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	2	0.00	15.00	A
23	2	0.00	15.00	A
24	2	0.00	15.00	A
25	2	0.00	15.00	A
26	2	0.00	15.00	A
27	2	0.00	15.00	A
28	2	0.00	15.00	A
29	2	0.00	15.00	A
30	2	0.00	15.00	A
31	2	0.00	15.00	A

32	2	0.00	15.00	A
33	2	0.00	15.00	A
34	2	0.00	15.00	A
35	2	0.00	15.00	A
36	2	0.00	15.00	A
37	2	0.00	15.00	A
38	2	0.00	15.00	A
39	2	0.00	15.00	A
40	2	0.00	15.00	A
41	2	0.00	15.00	A
42	2	0.00	15.00	A
43	2	0.00	15.00	A
44	2	0.00	15.00	A
45	2	0.00	15.00	A
46	2	0.00	15.00	A
47	2	0.00	15.00	A
48	2	0.00	15.00	A
49	2	0.00	15.00	A
50	2	0.00	15.00	A
51	2	0.00	15.00	A
52	2	0.00	15.00	A
53	2	0.00	15.00	A
54	2	0.00	15.00	A
55	2	0.00	15.00	A
56	2	0.00	15.00	A
57	2	0.00	15.00	A
58	2	0.00	15.00	A
59	2	0.00	15.00	A
60	2	0.00	15.00	A
61	2	0.00	15.00	A
62	2	0.00	15.00	A
63	2	0.00	15.00	A
64	2	0.00	15.00	A
65	2	0.00	15.00	A
66	2	0.00	15.00	A
67	2	0.00	15.00	A
68	2	0.00	15.00	A
69	2	0.00	15.00	A
70	2	0.00	15.00	A
71	2	0.00	15.00	A
72	2	0.00	15.00	A
73	2	0.00	15.00	A
74	2	0.00	15.00	A
75	2	0.00	15.00	A
76	2	0.00	15.00	A
77	2	0.00	15.00	A
78	2	0.00	15.00	A
79	2	0.00	15.00	A
80	2	0.00	15.00	A
81	2	0.00	15.00	A
82	2	0.00	15.00	A
83	2	0.00	15.00	A
84	2	0.00	15.00	A
85	2	0.00	15.00	A
86	2	0.00	15.00	A
87	3	300.00	30.00	
88	3	300.00	30.00	
89	3	300.00	30.00	
90	3	300.00	30.00	
91	3	300.00	30.00	
92	3	300.00	30.00	
93	3	300.00	30.00	
94	3	300.00	30.00	
95	3	300.00	30.00	
96	3	300.00	30.00	
97	3	300.00	30.00	
98	3	300.00	30.00	
99	3	300.00	30.00	
100	3	300.00	30.00	
101	3	300.00	30.00	
102	3	300.00	30.00	
103	3	300.00	30.00	
104	3	300.00	30.00	
105	3	300.00	30.00	
106	3	300.00	30.00	
107	3	300.00	30.00	
108	3	300.00	30.00	
109	3	300.00	30.00	
110	3	300.00	30.00	
111	3	300.00	30.00	
112	3	300.00	30.00	
113	3	300.00	30.00	
114	3	300.00	30.00	
115	3	300.00	30.00	

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 115 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-21.30	105.45	2.16	215.97	424.69	393.46
1	-21.30	105.45	2.16	215.97	424.69	393.46
2	-7.93	108.93	5.00	159.36	42.70	39.56
2	-7.93	108.93	5.00	159.36	42.70	39.56
3	-7.93	113.88	5.00	265.89	71.24	66.00
3	-7.93	113.88	5.00	265.89	71.24	66.00
4	-7.93	118.83	5.00	372.41	99.79	92.45
4	-7.93	118.83	5.00	372.41	99.79	92.45
5	-7.93	123.79	5.00	478.94	128.33	118.90
5	-7.93	123.79	5.00	478.94	128.33	118.90
6	-12.03	128.71	5.00	619.99	166.13	153.91
6	-12.03	128.71	5.00	619.99	166.13	153.91
7	-12.03	133.60	5.00	773.32	207.21	191.97
7	-12.03	133.60	5.00	773.32	207.21	191.97
8	-12.03	138.49	5.00	926.65	248.30	230.04
8	-12.03	138.49	5.00	926.65	248.30	230.04
9	-12.03	143.38	5.00	1079.98	289.38	268.10
9	-12.03	143.38	5.00	1079.98	289.38	268.10
10	-10.22	148.28	5.00	1212.23	324.82	300.93
10	-10.22	148.28	5.00	1212.23	324.82	300.93
11	-10.22	153.20	5.00	1344.69	360.31	333.81

11	-10.22	153.20	5.00	1344.69	360.31	333.81
12	-10.22	158.12	5.00	1477.15	395.80	366.69
12	-10.22	158.12	5.00	1477.15	395.80	366.69
13	-10.22	163.04	5.00	1609.61	431.29	399.58
13	-10.22	163.04	5.00	1609.61	431.29	399.58
14	-10.22	165.50	0.01	1675.97	449.08	416.05
14	-10.22	165.50	0.01	1675.97	449.08	416.05
15	0.21	167.96	4.91	1641.52	439.84	407.50
15	0.21	167.96	4.91	1641.52	439.84	407.50
16	0.21	172.86	4.91	1736.80	465.37	431.15
16	0.21	172.86	4.91	1736.80	465.37	431.15
17	0.21	177.77	4.91	1832.08	490.90	454.80
17	0.21	177.77	4.91	1832.08	490.90	454.80
18	0.21	182.68	4.91	1927.36	516.43	478.46
18	0.21	182.68	4.91	1927.36	516.43	478.46
19	0.21	187.58	4.91	2022.64	541.96	502.11
19	0.21	187.58	4.91	2022.64	541.96	502.11
20	0.21	192.49	4.91	2117.91	567.49	525.76
20	0.21	192.49	4.91	2117.91	567.49	525.76
21	0.21	197.39	4.91	2213.19	593.02	549.41
21	0.21	197.39	4.91	2213.19	593.02	549.41
22	0.21	202.30	4.91	2308.47	618.55	573.06
22	0.21	202.30	4.91	2308.47	618.55	573.06
23	0.21	207.21	4.91	2403.75	644.08	596.72
23	0.21	207.21	4.91	2403.75	644.08	596.72
24	0.21	212.11	4.91	2499.03	669.61	620.37
24	0.21	212.11	4.91	2499.03	669.61	620.37
25	0.21	217.02	4.91	2594.30	695.14	644.02
25	0.21	217.02	4.91	2594.30	695.14	644.02
26	0.21	221.92	4.91	2689.58	720.67	667.67
26	0.21	221.92	4.91	2689.58	720.67	667.67
27	0.21	226.83	4.91	2784.86	746.20	691.32
27	0.21	226.83	4.91	2784.86	746.20	691.32
28	0.21	231.74	4.91	2880.14	771.73	714.98
28	0.21	231.74	4.91	2880.14	771.73	714.98
29	0.21	236.64	4.91	2975.42	797.26	738.63
29	0.21	236.64	4.91	2975.42	797.26	738.63
30	0.21	241.55	4.91	3070.69	822.79	762.28
30	0.21	241.55	4.91	3070.69	822.79	762.28
31	0.21	246.54	5.08	3208.07	859.60	796.38
31	0.21	246.54	5.08	3208.07	859.60	796.38
32	0.21	251.62	5.08	3387.55	907.69	840.94
32	0.21	251.62	5.08	3387.55	907.69	840.94
33	0.21	256.69	5.08	3567.02	955.78	885.49
33	0.21	256.69	5.08	3567.02	955.78	885.49
34	0.21	261.77	5.08	3746.50	1003.87	930.05
34	0.21	261.77	5.08	3746.50	1003.87	930.05
35	0.21	266.85	5.08	3925.98	1051.96	974.60
35	0.21	266.85	5.08	3925.98	1051.96	974.60
36	0.21	271.92	5.08	4105.45	1100.05	1019.15
36	0.21	271.92	5.08	4105.45	1100.05	1019.15
37	0.21	277.00	5.08	4284.93	1148.14	1063.71
37	0.21	277.00	5.08	4284.93	1148.14	1063.71
38	0.21	282.08	5.08	4464.41	1196.23	1108.26
38	0.21	282.08	5.08	4464.41	1196.23	1108.26
39	0.21	287.15	5.08	4643.88	1244.32	1152.82
39	0.21	287.15	5.08	4643.88	1244.32	1152.82
40	0.21	292.23	5.08	4823.36	1292.42	1197.37
40	0.21	292.23	5.08	4823.36	1292.42	1197.37
41	0.21	297.31	5.08	5002.84	1340.51	1241.92
41	0.21	297.31	5.08	5002.84	1340.51	1241.92
42	0.21	302.38	5.08	5182.31	1388.60	1286.48
42	0.21	302.38	5.08	5182.31	1388.60	1286.48
43	0.21	307.46	5.08	5361.79	1436.69	1331.03
43	0.21	307.46	5.08	5361.79	1436.69	1331.03
44	0.21	312.67	5.33	5534.29	1482.91	1373.86
44	0.21	312.67	5.33	5534.29	1482.91	1373.86
45	0.21	318.00	5.33	5699.83	1527.26	1414.95
45	0.21	318.00	5.33	5699.83	1527.26	1414.95
46	0.21	323.33	5.33	5865.36	1571.62	1456.04
46	0.21	323.33	5.33	5865.36	1571.62	1456.04
47	0.21	328.67	5.33	6030.89	1615.97	1497.13
47	0.21	328.67	5.33	6030.89	1615.97	1497.13
48	0.21	334.00	5.33	6196.43	1660.33	1538.23
48	0.21	334.00	5.33	6196.43	1660.33	1538.23
49	0.21	339.33	5.33	6361.96	1704.68	1579.32
49	0.21	339.33	5.33	6361.96	1704.68	1579.32
50	0.21	344.32	4.65	6482.68	1737.03	1609.29
50	0.21	344.32	4.65	6482.68	1737.03	1609.29
51	0.21	348.98	4.65	6558.60	1757.37	1628.13
51	0.21	348.98	4.65	6558.60	1757.37	1628.13
52	0.21	353.62	4.65	6634.51	1777.71	1646.98
52	0.21	353.62	4.65	6634.51	1777.71	1646.98
53	0.21	358.27	4.65	6710.43	1798.05	1665.82
53	0.21	358.27	4.65	6710.43	1798.05	1665.82
54	0.21	362.92	4.65	6786.34	1818.39	1684.67
54	0.21	362.92	4.65	6786.34	1818.39	1684.67
55	0.21	367.57	4.65	6862.26	1838.74	1703.51
55	0.21	367.57	4.65	6862.26	1838.74	1703.51
56	0.21	372.39	4.98	6962.95	1865.72	1728.51
56	0.21	372.39	4.98	6962.95	1865.72	1728.51
57	0.21	377.38	4.98	7088.42	1899.34	1759.66
57	0.21	377.38	4.98	7088.42	1899.34	1759.66
58	0.21	382.36	4.98	7213.88	1932.95	1790.80
58	0.21	382.36	4.98	7213.88	1932.95	1790.80
59	0.21	387.34	4.98	7339.35	1966.57	1821.95
59	0.21	387.34	4.98	7339.35	1966.57	1821.95
60	0.21	392.33	4.98	7464.82	2000.19	1853.10
60	0.21	392.33	4.98	7464.82	2000.19	1853.10
61	0.21	397.31	4.98	7590.29	2033.81	1884.24
61	0.21	397.31	4.98	7590.29	2033.81	1884.24
62	0.21	402.30	4.98	7715.76	2067.43	1915.39
62	0.21	402.30	4.98	7715.76	2067.43	1915.39
63	0.21	407.28	4.98	7841.22	2101.05	1946.54
63	0.21	407.28	4.98	7841.22	2101.05	1946.54
64	0.21	412.26	4.98	7966.69	2134.67	1977.68
64	0.21	412.26	4.98	7966.69	2134.67	1977.68
65	0.21	417.25	4.98	8092.16	2168.29	2008.83
65	0.21	417.25	4.98	8092.16	2168.29	2008.83
66	0.21	422.23	4.98	8217.63	2201.91	2039.98
66	0.21	422.23	4.98	8217.63	2201.91	2039.98
67	0.21	427.21	4.98	8343.10	2235.53	2071.12
67	0.21	427.21	4.98	8343.10	2235.53	2071.12
68	0.21	432.20	4.98	8468.57	2269.15	2102.27
68	0.21	432.20	4.98	8468.57	2269.15	2102.27
69	0.21	437.18	4.98	8594.03	2302.76	2133.42
69	0.21	437.18	4.98	8594.03	2302.76	2133.42
70	0.21	442.17	4.98	8719.50	2336.38	2164.56
70	0.21	442.17	4.98	8719.50	2336.38	2164.56
71	0.21	447.15	4.98	8844.97	2370.00	2195.71

71	0.21	447.15	4.98	8844.97	2370.00	2195.71
72	0.21	452.13	4.98	8970.44	2403.62	2226.86
72	0.21	452.13	4.98	8970.44	2403.62	2226.86
73	0.21	457.12	4.98	9095.91	2437.24	2258.00
73	0.21	457.12	4.98	9095.91	2437.24	2258.00
74	0.21	462.10	4.98	9221.37	2470.86	2289.15
74	0.21	462.10	4.98	9221.37	2470.86	2289.15
75	0.21	467.09	4.98	9346.84	2504.48	2320.30
75	0.21	467.09	4.98	9346.84	2504.48	2320.30
76	0.21	472.07	4.98	9472.31	2538.10	2351.44
76	0.21	472.07	4.98	9472.31	2538.10	2351.44
77	0.21	477.05	4.98	9597.78	2571.72	2382.59
77	0.21	477.05	4.98	9597.78	2571.72	2382.59
78	0.21	482.04	4.98	9723.25	2605.34	2413.74
78	0.21	482.04	4.98	9723.25	2605.34	2413.74
79	0.21	487.02	4.98	9848.71	2638.95	2444.88
79	0.21	487.02	4.98	9848.71	2638.95	2444.88
80	0.21	492.00	4.98	9974.18	2672.57	2476.03
80	0.21	492.00	4.98	9974.18	2672.57	2476.03
81	0.21	496.99	4.98	10099.65	2706.19	2507.18
81	0.21	496.99	4.98	10099.65	2706.19	2507.18
82	0.21	501.97	4.98	10225.12	2739.81	2538.32
82	0.21	501.97	4.98	10225.12	2739.81	2538.32
83	0.21	506.96	4.98	10350.59	2773.43	2569.47
83	0.21	506.96	4.98	10350.59	2773.43	2569.47
84	0.21	511.94	4.98	10476.05	2807.05	2600.62
84	0.21	511.94	4.98	10476.05	2807.05	2600.62
85	0.21	516.92	4.98	10601.52	2840.67	2631.76
85	0.21	516.92	4.98	10601.52	2840.67	2631.76
86	0.21	521.91	4.98	10726.99	2874.29	2662.91
86	0.21	521.91	4.98	10726.99	2874.29	2662.91
87	29.59	527.33	6.73	7920.05	4872.64	4514.31
87	29.59	527.33	6.73	7920.05	4872.64	4514.31
88	29.59	533.18	6.73	7732.61	4764.42	4414.04
88	29.59	533.18	6.73	7732.61	4764.42	4414.04
89	29.59	538.33	5.12	7606.19	4691.44	4346.42
89	29.59	538.33	5.12	7606.19	4691.44	4346.42
90	29.59	542.77	5.12	7540.80	4653.68	4311.45
90	29.59	542.77	5.12	7540.80	4653.68	4311.45
91	29.59	547.23	5.12	7475.41	4615.93	4276.47
91	29.59	547.23	5.12	7475.41	4615.93	4276.47
92	29.59	551.67	5.12	7410.02	4578.18	4241.50
92	29.59	551.67	5.12	7410.02	4578.18	4241.50
93	29.59	554.78	2.03	7364.38	4551.82	4217.08
93	29.59	554.78	2.03	7364.38	4551.82	4217.08
94	45.63	558.02	6.73	5946.04	3732.95	3458.42
94	45.63	558.02	6.73	5946.04	3732.95	3458.42
95	45.63	562.72	6.73	5726.60	3606.26	3341.05
95	45.63	562.72	6.73	5726.60	3606.26	3341.05
96	45.63	567.43	6.73	5507.17	3479.57	3223.68
96	45.63	567.43	6.73	5507.17	3479.57	3223.68
97	45.63	572.13	6.73	5287.74	3352.88	3106.31
97	45.63	572.13	6.73	5287.74	3352.88	3106.31
98	45.63	576.84	6.73	5068.31	3226.19	2988.93
98	45.63	576.84	6.73	5068.31	3226.19	2988.93
99	45.63	581.55	6.73	4848.88	3099.50	2871.56
99	45.63	581.55	6.73	4848.88	3099.50	2871.56
100	45.63	584.84	2.69	4695.32	3010.85	2789.43
100	45.63	584.84	2.69	4695.32	3010.85	2789.43
101	48.94	588.22	7.44	4295.67	2780.11	2575.66
101	48.94	588.22	7.44	4295.67	2780.11	2575.66
102	48.94	593.11	7.44	4033.33	2628.64	2435.33
102	48.94	593.11	7.44	4033.33	2628.64	2435.33
103	48.94	598.00	7.44	3770.99	2477.18	2295.01
103	48.94	598.00	7.44	3770.99	2477.18	2295.01
104	48.94	602.89	7.44	3508.64	2325.72	2154.68
104	48.94	602.89	7.44	3508.64	2325.72	2154.68
105	48.94	607.78	7.44	3246.30	2174.25	2014.36
105	48.94	607.78	7.44	3246.30	2174.25	2014.36
106	48.94	612.67	7.44	2983.96	2022.79	1874.03
106	48.94	612.67	7.44	2983.96	2022.79	1874.03
107	48.94	617.56	7.44	2721.61	1871.32	1733.71
107	48.94	617.56	7.44	2721.61	1871.32	1733.71
108	48.94	620.89	2.71	2542.73	1768.05	1638.02
108	48.94	620.89	2.71	2542.73	1768.05	1638.02
109	58.72	624.28	9.64	1860.16	1373.96	1272.92
109	58.72	624.28	9.64	1860.16	1373.96	1272.92
110	58.72	629.28	9.64	1477.53	1153.05	1068.25
110	58.72	629.28	9.64	1477.53	1153.05	1068.25
111	58.72	634.29	9.64	1094.89	932.14	863.59
111	58.72	634.29	9.64	1094.89	932.14	863.59
112	58.72	639.29	9.64	712.26	711.22	658.92
112	58.72	639.29	9.64	712.26	711.22	658.92
113	58.72	644.29	9.64	329.63	490.31	454.25
113	58.72	644.29	9.64	329.63	490.31	454.25
114	58.72	649.30	9.64	199.65	115.27	106.79
114	58.72	649.30	9.64	199.65	115.27	106.79
115	58.72	651.85	0.21	4.16	2.40	2.23
115	58.72	651.85	0.21	4.16	2.40	2.23

Table 4 - Base Force Data on the 115 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-21.30	105.45	2.16	466.40	917.14	849.70
1	-21.30	105.45	2.16	466.40	917.14	849.70
2	-7.93	108.93	5.00	796.78	213.50	197.80
2	-7.93	108.93	5.00	796.78	213.50	197.80
3	-7.93	113.88	5.00	1329.43	356.22	330.02
3	-7.93	113.88	5.00	1329.43	356.22	330.02
4	-7.93	118.83	5.00	1862.07	498.94	462.25
4	-7.93	118.83	5.00	1862.07	498.94	462.25
5	-7.93	123.79	5.00	2394.72	641.66	594.48
5	-7.93	123.79	5.00	2394.72	641.66	594.48
6	-12.03	128.71	5.00	3099.97	830.63	769.55
6	-12.03	128.71	5.00	3099.97	830.63	769.55
7	-12.03	133.60	5.00	3866.62	1036.06	959.86
7	-12.03	133.60	5.00	3866.62	1036.06	959.86
8	-12.03	138.49	5.00	4633.27	1241.48	1150.18
8	-12.03	138.49	5.00	4633.27	1241.48	1150.18
9	-12.03	143.38	5.00	5399.92	1446.90	1340.50
9	-12.03	143.38	5.00	5399.92	1446.90	1340.50
10	-10.22	148.28	5.00	6059.33	1623.59	1504.19
10	-10.22	148.28	5.00	6059.33	1623.59	1504.19
11	-10.22	153.20	5.00	6721.43	1801.00	1668.55
11	-10.22	153.20	5.00	6721.43	1801.00	1668.55

12	-10.22	158.12	5.00	7383.53	1978.41	1832.92
12	-10.22	158.12	5.00	7383.53	1978.41	1832.92
13	-10.22	163.04	5.00	8045.63	2155.82	1997.28
13	-10.22	163.04	5.00	8045.63	2155.82	1997.28
14	-10.22	165.50	0.01	10.12	2.71	2.51
14	-10.22	165.50	0.01	10.12	2.71	2.51
15	0.21	167.96	4.91	8053.17	2157.84	1999.15
15	0.21	167.96	4.91	8053.17	2157.84	1999.15
16	0.21	172.86	4.91	8520.59	2283.09	2115.19
16	0.21	172.86	4.91	8520.59	2283.09	2115.19
17	0.21	177.77	4.91	8988.02	2408.33	2231.22
17	0.21	177.77	4.91	8988.02	2408.33	2231.22
18	0.21	182.68	4.91	9455.44	2533.58	2347.26
18	0.21	182.68	4.91	9455.44	2533.58	2347.26
19	0.21	187.58	4.91	9922.87	2658.83	2463.29
19	0.21	187.58	4.91	9922.87	2658.83	2463.29
20	0.21	192.49	4.91	10390.30	2784.07	2579.33
20	0.21	192.49	4.91	10390.30	2784.07	2579.33
21	0.21	197.39	4.91	10857.72	2909.32	2695.36
21	0.21	197.39	4.91	10857.72	2909.32	2695.36
22	0.21	202.30	4.91	11325.15	3034.56	2811.40
22	0.21	202.30	4.91	11325.15	3034.56	2811.40
23	0.21	207.21	4.91	11792.57	3159.81	2927.44
23	0.21	207.21	4.91	11792.57	3159.81	2927.44
24	0.21	212.11	4.91	12260.00	3285.06	3043.47
24	0.21	212.11	4.91	12260.00	3285.06	3043.47
25	0.21	217.02	4.91	12727.42	3410.30	3159.51
25	0.21	217.02	4.91	12727.42	3410.30	3159.51
26	0.21	221.92	4.91	13194.85	3535.55	3275.54
26	0.21	221.92	4.91	13194.85	3535.55	3275.54
27	0.21	226.83	4.91	13662.28	3660.80	3391.58
27	0.21	226.83	4.91	13662.28	3660.80	3391.58
28	0.21	231.74	4.91	14129.70	3786.04	3507.61
28	0.21	231.74	4.91	14129.70	3786.04	3507.61
29	0.21	236.64	4.91	14597.13	3911.29	3623.65
29	0.21	236.64	4.91	14597.13	3911.29	3623.65
30	0.21	241.55	4.91	15064.55	4036.53	3739.69
30	0.21	241.55	4.91	15064.55	4036.53	3739.69
31	0.21	246.54	5.08	16287.24	4364.15	4043.21
31	0.21	246.54	5.08	16287.24	4364.15	4043.21
32	0.21	251.62	5.08	17198.43	4608.31	4269.41
32	0.21	251.62	5.08	17198.43	4608.31	4269.41
33	0.21	256.69	5.08	18109.63	4852.46	4495.61
33	0.21	256.69	5.08	18109.63	4852.46	4495.61
34	0.21	261.77	5.08	19020.82	5096.61	4721.81
34	0.21	261.77	5.08	19020.82	5096.61	4721.81
35	0.21	266.85	5.08	19932.02	5340.77	4948.00
35	0.21	266.85	5.08	19932.02	5340.77	4948.00
36	0.21	271.92	5.08	20843.21	5584.92	5174.20
36	0.21	271.92	5.08	20843.21	5584.92	5174.20
37	0.21	277.00	5.08	21754.41	5829.08	5400.40
37	0.21	277.00	5.08	21754.41	5829.08	5400.40
38	0.21	282.08	5.08	22665.60	6073.23	5626.60
38	0.21	282.08	5.08	22665.60	6073.23	5626.60
39	0.21	287.15	5.08	23576.80	6317.38	5852.80
39	0.21	287.15	5.08	23576.80	6317.38	5852.80
40	0.21	292.23	5.08	24487.99	6561.54	6079.00
40	0.21	292.23	5.08	24487.99	6561.54	6079.00
41	0.21	297.31	5.08	25399.18	6805.69	6305.20
41	0.21	297.31	5.08	25399.18	6805.69	6305.20
42	0.21	302.38	5.08	26310.38	7049.84	6531.39
42	0.21	302.38	5.08	26310.38	7049.84	6531.39
43	0.21	307.46	5.08	27221.57	7294.00	6757.59
43	0.21	307.46	5.08	27221.57	7294.00	6757.59
44	0.21	312.67	5.33	29516.43	7908.90	7327.28
44	0.21	312.67	5.33	29516.43	7908.90	7327.28
45	0.21	318.00	5.33	30399.28	8145.46	7546.44
45	0.21	318.00	5.33	30399.28	8145.46	7546.44
46	0.21	323.33	5.33	31282.13	8382.02	7765.60
46	0.21	323.33	5.33	31282.13	8382.02	7765.60
47	0.21	328.67	5.33	32164.97	8618.58	7984.76
47	0.21	328.67	5.33	32164.97	8618.58	7984.76
48	0.21	334.00	5.33	33047.82	8855.14	8203.93
48	0.21	334.00	5.33	33047.82	8855.14	8203.93
49	0.21	339.33	5.33	33930.67	9091.70	8423.09
49	0.21	339.33	5.33	33930.67	9091.70	8423.09
50	0.21	344.32	4.65	30144.67	8077.24	7483.24
50	0.21	344.32	4.65	30144.67	8077.24	7483.24
51	0.21	348.98	4.65	30497.68	8171.83	7570.87
51	0.21	348.98	4.65	30497.68	8171.83	7570.87
52	0.21	353.62	4.65	30850.68	8266.42	7658.50
52	0.21	353.62	4.65	30850.68	8266.42	7658.50
53	0.21	358.27	4.65	31203.69	8361.00	7746.13
53	0.21	358.27	4.65	31203.69	8361.00	7746.13
54	0.21	362.92	4.65	31556.70	8455.59	7833.76
54	0.21	362.92	4.65	31556.70	8455.59	7833.76
55	0.21	367.57	4.65	31909.70	8550.18	7921.39
55	0.21	367.57	4.65	31909.70	8550.18	7921.39
56	0.21	372.39	4.98	34702.66	9298.55	8614.73
56	0.21	372.39	4.98	34702.66	9298.55	8614.73
57	0.21	377.38	4.98	35327.98	9466.10	8769.96
57	0.21	377.38	4.98	35327.98	9466.10	8769.96
58	0.21	382.36	4.98	35953.30	9633.66	8925.19
58	0.21	382.36	4.98	35953.30	9633.66	8925.19
59	0.21	387.34	4.98	36578.62	9801.21	9080.43
59	0.21	387.34	4.98	36578.62	9801.21	9080.43
60	0.21	392.33	4.98	37203.94	9968.77	9235.66
60	0.21	392.33	4.98	37203.94	9968.77	9235.66
61	0.21	397.31	4.98	37829.27	10136.32	9390.89
61	0.21	397.31	4.98	37829.27	10136.32	9390.89
62	0.21	402.30	4.98	38454.59	10303.87	9546.12
62	0.21	402.30	4.98	38454.59	10303.87	9546.12
63	0.21	407.28	4.98	39079.91	10471.43	9701.35
63	0.21	407.28	4.98	39079.91	10471.43	9701.35
64	0.21	412.26	4.98	39705.23	10638.98	9856.59
64	0.21	412.26	4.98	39705.23	10638.98	9856.59
65	0.21	417.25	4.98	40330.55	10806.54	10011.82
65	0.21	417.25	4.98	40330.55	10806.54	10011.82
66	0.21	422.23	4.98	40955.87	10974.09	10167.05
66	0.21	422.23	4.98	40955.87	10974.09	10167.05
67	0.21	427.21	4.98	41581.19	11141.65	10322.28
67	0.21	427.21	4.98	41581.19	11141.65	10322.28
68	0.21	432.20	4.98	42206.51	11309.20	10477.51
68	0.21	432.20	4.98	42206.51	11309.20	10477.51
69	0.21	437.18	4.98	42831.83	11476.75	10632.75
69	0.21	437.18	4.98	42831.83	11476.75	10632.75
70	0.21	442.17	4.98	43457.15	11644.31	10787.98
70	0.21	442.17	4.98	43457.15	11644.31	10787.98
71	0.21	447.15	4.98	44082.47	11811.86	10943.21
71	0.21	447.15	4.98	44082.47	11811.86	10943.21

72	0.21	452.13	4.98	44707.79	11979.42	11098.44
72	0.21	452.13	4.98	44707.79	11979.42	11098.44
73	0.21	457.12	4.98	45333.11	12146.97	11253.68
73	0.21	457.12	4.98	45333.11	12146.97	11253.68
74	0.21	462.10	4.98	45958.43	12314.52	11408.91
74	0.21	462.10	4.98	45958.43	12314.52	11408.91
75	0.21	467.09	4.98	46583.76	12482.08	11564.14
75	0.21	467.09	4.98	46583.76	12482.08	11564.14
76	0.21	472.07	4.98	47209.08	12649.63	11719.37
76	0.21	472.07	4.98	47209.08	12649.63	11719.37
77	0.21	477.05	4.98	47834.40	12817.19	11874.60
77	0.21	477.05	4.98	47834.40	12817.19	11874.60
78	0.21	482.04	4.98	48459.72	12984.74	12029.84
78	0.21	482.04	4.98	48459.72	12984.74	12029.84
79	0.21	487.02	4.98	49085.04	13152.30	12185.07
79	0.21	487.02	4.98	49085.04	13152.30	12185.07
80	0.21	492.00	4.98	49710.36	13319.85	12340.30
80	0.21	492.00	4.98	49710.36	13319.85	12340.30
81	0.21	496.99	4.98	50335.68	13487.40	12495.53
81	0.21	496.99	4.98	50335.68	13487.40	12495.53
82	0.21	501.97	4.98	50961.00	13654.96	12650.76
82	0.21	501.97	4.98	50961.00	13654.96	12650.76
83	0.21	506.96	4.98	51586.32	13822.51	12806.00
83	0.21	506.96	4.98	51586.32	13822.51	12806.00
84	0.21	511.94	4.98	52211.64	13990.07	12961.23
84	0.21	511.94	4.98	52211.64	13990.07	12961.23
85	0.21	516.92	4.98	52836.96	14157.62	13116.46
85	0.21	516.92	4.98	52836.96	14157.62	13116.46
86	0.21	521.91	4.98	53462.28	14325.17	13271.69
86	0.21	521.91	4.98	53462.28	14325.17	13271.69
87	29.59	527.33	6.73	53279.96	32779.37	30368.75
87	29.59	527.33	6.73	53279.96	32779.37	30368.75
88	29.59	533.18	6.73	52018.99	32051.35	29694.27
88	29.59	533.18	6.73	52018.99	32051.35	29694.27
89	29.59	538.33	5.12	38923.09	24007.44	22241.92
89	29.59	538.33	5.12	38923.09	24007.44	22241.92
90	29.59	542.77	5.12	38588.47	23814.25	22062.94
90	29.59	542.77	5.12	38588.47	23814.25	22062.94
91	29.59	547.23	5.12	38253.85	23621.06	21883.95
91	29.59	547.23	5.12	38253.85	23621.06	21883.95
92	29.59	551.67	5.12	37919.23	23427.87	21704.97
92	29.59	551.67	5.12	37919.23	23427.87	21704.97
93	29.59	554.78	2.03	14924.51	9224.65	8546.26
93	29.59	554.78	2.03	14924.51	9224.65	8546.26
94	45.63	558.02	6.73	40019.33	25124.30	23276.64
94	45.63	558.02	6.73	40019.33	25124.30	23276.64
95	45.63	562.72	6.73	38542.46	24271.63	22486.68
95	45.63	562.72	6.73	38542.46	24271.63	22486.68
96	45.63	567.43	6.73	37065.59	23418.95	21696.71
96	45.63	567.43	6.73	37065.59	23418.95	21696.71
97	45.63	572.13	6.73	35588.72	22566.28	20906.74
97	45.63	572.13	6.73	35588.72	22566.28	20906.74
98	45.63	576.84	6.73	34111.85	21713.61	20116.78
98	45.63	576.84	6.73	34111.85	21713.61	20116.78
99	45.63	581.55	6.73	32634.98	20860.94	19326.81
99	45.63	581.55	6.73	32634.98	20860.94	19326.81
100	45.63	584.84	2.69	12625.57	8096.07	7500.68
100	45.63	584.84	2.69	12625.57	8096.07	7500.68
101	48.94	588.22	7.44	31966.94	20688.62	19167.17
101	48.94	588.22	7.44	31966.94	20688.62	19167.17
102	48.94	593.11	7.44	30014.67	19561.48	18122.92
102	48.94	593.11	7.44	30014.67	19561.48	18122.92
103	48.94	598.00	7.44	28062.40	18434.33	17078.66
103	48.94	598.00	7.44	28062.40	18434.33	17078.66
104	48.94	602.89	7.44	26110.13	17307.19	16034.41
104	48.94	602.89	7.44	26110.13	17307.19	16034.41
105	48.94	607.78	7.44	24157.86	16180.05	14990.16
105	48.94	607.78	7.44	24157.86	16180.05	14990.16
106	48.94	612.67	7.44	22205.60	15052.90	13945.90
106	48.94	612.67	7.44	22205.60	15052.90	13945.90
107	48.94	617.56	7.44	20253.33	13925.76	12901.65
107	48.94	617.56	7.44	20253.33	13925.76	12901.65
108	48.94	620.89	2.71	6882.67	4785.75	4433.80
108	48.94	620.89	2.71	6882.67	4785.75	4433.80
109	58.72	624.28	9.64	17923.77	13238.98	12265.37
109	58.72	624.28	9.64	17923.77	13238.98	12265.37
110	58.72	629.28	9.64	14236.86	11110.34	10293.28
110	58.72	629.28	9.64	14236.86	11110.34	10293.28
111	58.72	634.29	9.64	10549.96	8981.70	8321.18
111	58.72	634.29	9.64	10549.96	8981.70	8321.18
112	58.72	639.29	9.64	6863.05	6853.07	6349.09
112	58.72	639.29	9.64	6863.05	6853.07	6349.09
113	58.72	644.29	9.64	3176.14	4724.43	4376.99
113	58.72	644.29	9.64	3176.14	4724.43	4376.99
114	58.72	649.30	9.64	1923.71	1110.65	1028.97
114	58.72	649.30	9.64	1923.71	1110.65	1028.97
115	58.72	651.85	0.21	0.87	0.51	0.47
115	58.72	651.85	0.21	0.87	0.51	0.47

Sum of the Resisting Forces = 962477.97 (lbs)

Average Available Shear Strength = 1570.37(psf)

Sum of the Driving Forces = 958339.19 (lbs)

Average Mobilized Shear Stress = 1563.61(psf)

Total length of the failure surface = 612.90(ft)

Factor of Safety Balance Check: FS = 1.00432

Janbu's Correction Factor (fo) = 1.0693

Janub's FS Corrected = 1.07390

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.17609(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

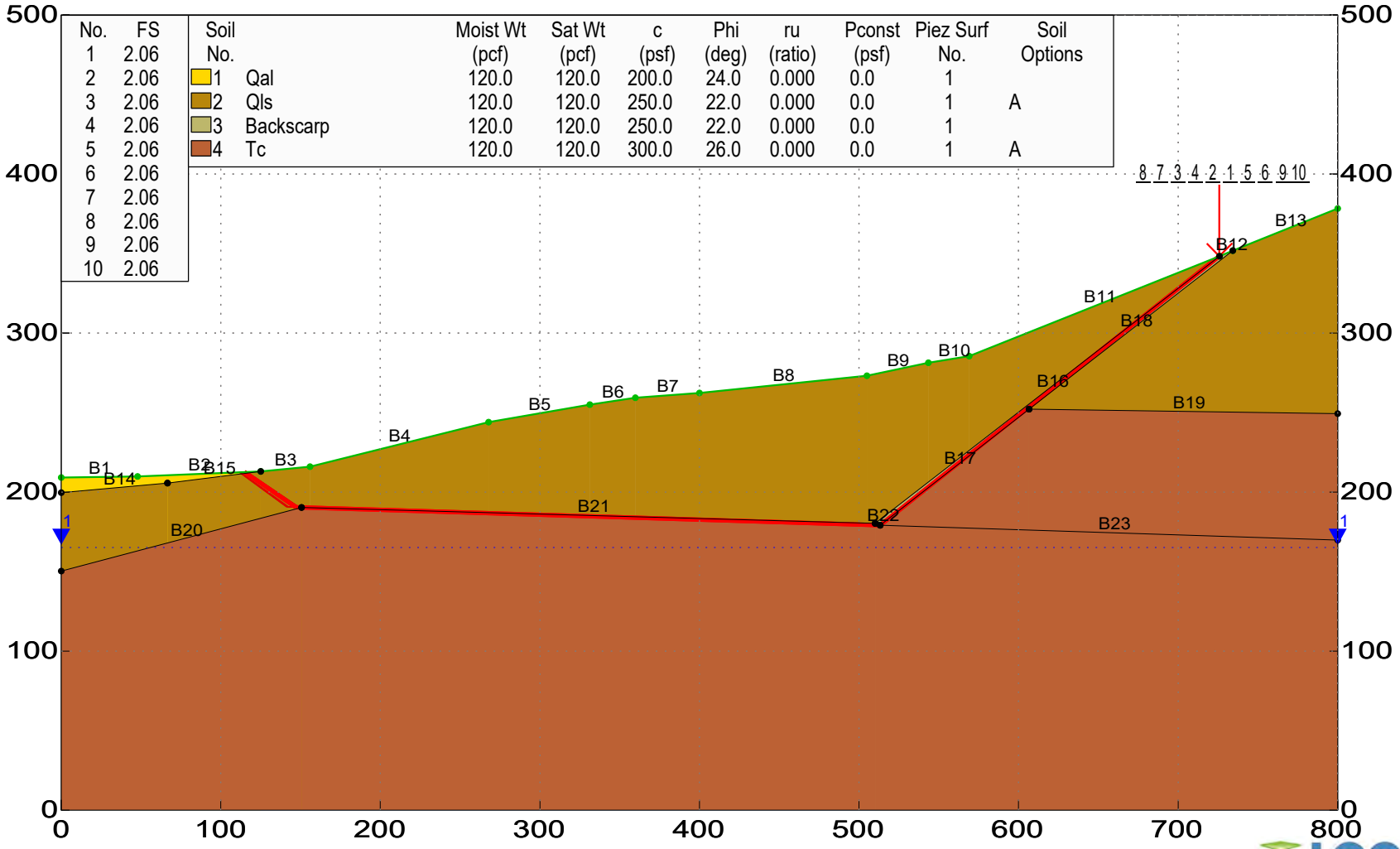
Average Elevation of Point of Application of kh on Sliding Mass = 223.925(ft)

Non-Symmetrical Sliding Resistance Has Been Specified
for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section B-B'
Existing - Entire Qls - Static

LGC Geotechnical, Inc. \xb.gsd



GEOSTASE FS = 2.06

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 2/ 2/ 2023
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec B\2023_01_25\xb.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec B\2023_01_25\xb.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section B-B'

DESCRIPTION: Existing - Entire Qls - Static

BOUNDARY DATA

13 Surface Boundaries
23 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	209.200	47.800	209.900	1
2	47.800	209.900	125.100	213.000	1
3	125.100	213.000	155.900	216.000	2
4	155.900	216.000	267.800	244.000	2
5	267.800	244.000	331.300	255.000	2
6	331.300	255.000	359.800	259.400	2
7	359.800	259.400	400.000	262.300	2
8	400.000	262.300	505.000	273.200	2
9	505.000	273.200	543.400	281.400	2
10	543.400	281.400	569.100	285.500	2
11	569.100	285.500	725.900	348.400	2
12	725.900	348.400	734.200	351.800	3
13	734.200	351.800	800.000	378.400	2
14	0.000	199.700	66.600	205.700	2
15	66.600	205.700	125.100	213.000	2
16	510.100	180.300	725.900	348.400	3
17	513.200	179.100	606.600	252.100	4
18	606.600	252.100	734.200	351.800	2
19	606.600	252.100	800.000	249.400	4
20	0.000	150.400	150.600	190.400	4
21	150.600	190.400	510.100	180.300	4
22	510.100	180.300	513.200	179.100	4
23	513.200	179.100	800.000	169.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-3.0	250.00	22.00
2	3.0	0.00	14.00
3	90.0	250.00	22.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)

1	-3.0	300.00	26.00
2	3.0	0.00	14.00
3	90.0	300.00	26.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	165.10
2	800.00	165.10

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

3 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 50.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	100.00	191.60	200.00	189.20	0.00
2	513.20	179.10	513.20	179.10	0.00
3	725.80	348.30	725.80	348.30	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 2.145 FS Min = 2.056 FS Ave = 2.076
Standard Deviation = 0.019 Coefficient of Variation = 0.92 %

Critical Surface is Sequence Number 208 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 2.056

Table 1 - Geometry Data on the 128 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	1.09	0.40	115.20	212.21	212.60	-34.38	2.30	1.32
2	4.68	2.49	118.09	210.23	212.72	-34.38	2.30	5.67
3	4.68	5.87	122.76	207.03	212.91	-34.38	2.30	5.67
4	5.47	9.70	127.83	203.56	213.27	-34.38	5.56	6.62
5	5.47	13.97	133.30	199.82	213.80	-34.38	5.56	6.62
6	5.47	18.25	138.77	196.08	214.33	-34.38	5.56	6.62
7	5.47	22.52	144.23	192.34	214.86	-34.38	5.56	6.62
8	3.50	24.88	148.72	190.42	215.30	-1.78	5.56	3.50
9	0.13	25.12	150.53	190.36	215.48	-1.78	5.56	0.13
10	2.65	25.29	151.93	190.32	215.61	-1.78	5.56	2.65
11	2.65	25.63	154.57	190.24	215.87	-1.78	5.56	2.65
12	5.09	26.52	158.44	190.12	216.64	-1.78	14.05	5.09
13	5.09	27.95	163.53	189.96	217.91	-1.78	14.05	5.09
14	5.09	29.38	168.62	189.80	219.18	-1.78	14.05	5.09
15	5.09	30.81	173.70	189.64	220.45	-1.78	14.05	5.09
16	5.09	32.24	178.79	189.48	221.73	-1.78	14.05	5.09
17	5.09	33.67	183.88	189.33	223.00	-1.78	14.05	5.09
18	5.09	35.10	188.96	189.17	224.27	-1.78	14.05	5.09
19	5.09	36.53	194.05	189.01	225.55	-1.78	14.05	5.09
20	5.09	37.97	199.13	188.85	226.82	-1.78	14.05	5.09
21	5.09	39.40	204.22	188.69	228.09	-1.78	14.05	5.09
22	5.09	40.83	209.31	188.54	229.36	-1.78	14.05	5.09
23	5.09	42.26	214.39	188.38	230.64	-1.78	14.05	5.09
24	5.09	43.69	219.48	188.22	231.91	-1.78	14.05	5.09
25	5.09	45.12	224.57	188.06	233.18	-1.78	14.05	5.09
26	5.09	46.55	229.65	187.91	234.45	-1.78	14.05	5.09
27	5.09	47.98	234.74	187.75	235.73	-1.78	14.05	5.09
28	5.09	49.41	239.83	187.59	237.00	-1.78	14.05	5.09
29	5.09	50.84	244.91	187.43	238.27	-1.78	14.05	5.09
30	5.09	52.27	250.00	187.27	239.55	-1.78	14.05	5.09
31	5.09	53.70	255.08	187.12	240.82	-1.78	14.05	5.09
32	5.09	55.13	260.17	186.96	242.09	-1.78	14.05	5.09
33	5.09	56.56	265.26	186.80	243.36	-1.78	14.05	5.09
34	4.88	57.78	270.24	186.64	244.42	-1.78	9.83	4.89
35	4.88	58.78	275.13	186.49	245.27	-1.78	9.83	4.89
36	4.88	59.77	280.01	186.34	246.12	-1.78	9.83	4.89
37	4.88	60.77	284.90	186.19	246.96	-1.78	9.83	4.89
38	4.88	61.77	289.78	186.04	247.81	-1.78	9.83	4.89
39	4.88	62.77	294.67	185.89	248.65	-1.78	9.83	4.89
40	4.88	63.77	299.55	185.73	249.50	-1.78	9.83	4.89
41	4.88	64.76	304.43	185.58	250.35	-1.78	9.83	4.89
42	4.88	65.76	309.32	185.43	251.19	-1.78	9.83	4.89
43	4.88	66.76	314.20	185.28	252.04	-1.78	9.83	4.89
44	4.88	67.76	319.09	185.13	252.88	-1.78	9.83	4.89

45	4.88	68.75	323.97	184.98	253.73	-1.78	9.83	4.89
46	4.88	69.75	328.86	184.82	254.58	-1.78	9.83	4.89
47	4.75	70.69	333.68	184.67	255.37	-1.78	8.78	4.75
48	4.75	71.57	338.43	184.53	256.10	-1.78	8.78	4.75
49	4.75	72.45	343.18	184.38	256.83	-1.78	8.78	4.75
50	4.75	73.33	347.93	184.23	257.57	-1.78	8.78	4.75
51	4.75	74.22	352.68	184.08	258.30	-1.78	8.78	4.75
52	4.75	75.10	357.43	183.94	259.03	-1.78	8.78	4.75
53	5.02	75.80	362.31	183.79	259.58	-1.78	4.13	5.03
54	5.03	76.31	367.34	183.63	259.94	-1.78	4.13	5.03
55	5.02	76.83	372.36	183.47	260.31	-1.78	4.13	5.03
56	5.02	77.35	377.39	183.32	260.67	-1.78	4.13	5.03
57	5.03	77.87	382.41	183.16	261.03	-1.78	4.13	5.03
58	5.02	78.39	387.44	183.01	261.39	-1.78	4.13	5.03
59	5.03	78.91	392.46	182.85	261.76	-1.78	4.13	5.03
60	5.02	79.43	397.49	182.69	262.12	-1.78	4.13	5.03
61	5.00	80.02	402.50	182.54	262.56	-1.78	5.93	5.00
62	5.00	80.70	407.50	182.38	263.08	-1.78	5.93	5.00
63	5.00	81.37	412.50	182.23	263.60	-1.78	5.93	5.00
64	5.00	82.04	417.50	182.07	264.12	-1.78	5.93	5.00
65	5.00	82.72	422.50	181.92	264.64	-1.78	5.93	5.00
66	5.00	83.39	427.50	181.76	265.15	-1.78	5.93	5.00
67	5.00	84.07	432.50	181.61	265.67	-1.78	5.93	5.00
68	5.00	84.74	437.50	181.45	266.19	-1.78	5.93	5.00
69	5.00	85.42	442.50	181.30	266.71	-1.78	5.93	5.00
70	5.00	86.09	447.50	181.14	267.23	-1.78	5.93	5.00
71	5.00	86.77	452.50	180.98	267.75	-1.78	5.93	5.00
72	5.00	87.44	457.50	180.83	268.27	-1.78	5.93	5.00
73	5.00	88.11	462.50	180.67	268.79	-1.78	5.93	5.00
74	5.00	88.79	467.50	180.52	269.31	-1.78	5.93	5.00
75	5.00	89.46	472.50	180.36	269.83	-1.78	5.93	5.00
76	5.00	90.14	477.50	180.21	270.35	-1.78	5.93	5.00
77	5.00	90.81	482.50	180.05	270.86	-1.78	5.93	5.00
78	5.00	91.49	487.50	179.90	271.38	-1.78	5.93	5.00
79	5.00	92.16	492.50	179.74	271.90	-1.78	5.93	5.00
80	5.00	92.83	497.50	179.59	272.42	-1.78	5.93	5.00
81	5.00	93.51	502.50	179.43	272.94	-1.78	5.93	5.00
82	2.55	94.16	506.27	179.32	273.47	-1.78	12.05	2.55
83	2.55	94.78	508.83	179.24	274.02	-1.78	12.05	2.55
84	3.10	95.47	511.65	179.15	274.62	-1.78	12.05	3.10
85	5.03	94.39	515.72	181.10	275.49	38.51	12.05	6.43
86	5.03	91.45	520.75	185.11	276.56	38.51	12.05	6.43
87	5.03	88.52	525.78	189.11	277.64	38.51	12.05	6.43
88	5.03	85.59	530.82	193.12	278.71	38.51	12.05	6.43
89	5.03	82.66	535.85	197.13	279.79	38.51	12.05	6.43
90	5.03	79.73	540.88	201.13	280.86	38.51	12.05	6.43
91	5.14	76.63	545.97	205.18	281.81	38.51	9.06	6.57
92	5.14	73.36	551.11	209.27	282.63	38.51	9.06	6.57
93	5.14	70.09	556.25	213.36	283.45	38.51	9.06	6.57
94	5.14	66.82	561.39	217.45	284.27	38.51	9.06	6.57
95	5.14	63.55	566.53	221.54	285.09	38.51	9.06	6.57
96	5.05	60.91	571.63	225.60	286.51	38.51	21.86	6.46
97	5.05	58.92	576.68	229.62	288.54	38.51	21.86	6.46
98	5.05	56.92	581.74	233.65	290.57	38.51	21.86	6.46
99	5.05	54.93	586.79	237.67	292.60	38.51	21.86	6.46
100	5.05	52.93	591.85	241.69	294.62	38.51	21.86	6.46
101	5.05	50.94	596.90	245.71	296.65	38.51	21.86	6.46
102	5.05	48.94	601.96	249.74	298.68	38.51	21.86	6.46
103	5.05	46.95	607.01	253.76	300.71	38.51	21.86	6.46
104	5.05	44.95	612.07	257.78	302.74	38.51	21.86	6.46
105	5.05	42.96	617.12	261.81	304.76	38.51	21.86	6.46
106	5.05	40.96	622.18	265.83	306.79	38.51	21.86	6.46
107	5.05	38.97	627.23	269.85	308.82	38.51	21.86	6.46
108	5.05	36.97	632.29	273.88	310.85	38.51	21.86	6.46
109	5.05	34.98	637.34	277.90	312.87	38.51	21.86	6.46
110	5.05	32.98	642.40	281.92	314.90	38.51	21.86	6.46
111	5.05	30.99	647.45	285.94	316.93	38.51	21.86	6.46
112	5.05	28.99	652.50	289.97	318.96	38.51	21.86	6.46
113	5.05	27.00	657.56	293.99	320.99	38.51	21.86	6.46
114	5.05	25.00	662.61	298.01	323.01	38.51	21.86	6.46
115	5.05	23.00	667.67	302.04	325.04	38.51	21.86	6.46
116	5.05	21.01	672.72	306.06	327.07	38.51	21.86	6.46
117	5.05	19.01	677.78	310.08	329.10	38.51	21.86	6.46
118	5.05	17.02	682.83	314.10	331.12	38.51	21.86	6.46
119	5.05	15.02	687.89	318.13	333.15	38.51	21.86	6.46
120	5.05	13.03	692.94	322.15	335.18	38.51	21.86	6.46
121	5.05	11.03	698.00	326.17	337.21	38.51	21.86	6.46
122	5.05	9.04	703.05	330.20	339.24	38.51	21.86	6.46
123	5.05	7.04	708.11	334.22	341.26	38.51	21.86	6.46
124	5.05	5.05	713.16	338.24	343.29	38.51	21.86	6.46
125	5.05	3.05	718.22	342.27	345.32	38.51	21.86	6.46
126	5.05	1.06	723.27	346.29	347.35	38.51	21.86	6.46
127	0.03	0.04	725.82	348.32	348.37	54.92	21.86	0.06
128	0.02	0.01	725.85	348.37	348.38	54.92	21.86	0.04

Table 2 - Force Data On The 128 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	51.9	0.0	0.0	0.0	0.0	0.0
2	1394.5	0.0	0.0	0.0	0.0	0.0
3	3294.9	0.0	0.0	0.0	0.0	0.0
4	6364.5	0.0	0.0	0.0	0.0	0.0
5	9167.5	0.0	0.0	0.0	0.0	0.0
6	11970.5	0.0	0.0	0.0	0.0	0.0
7	14773.5	0.0	0.0	0.0	0.0	0.0
8	10445.9	0.0	0.0	0.0	0.0	0.0
9	406.7	0.0	0.0	0.0	0.0	0.0
10	8043.5	0.0	0.0	0.0	0.0	0.0
11	8151.7	0.0	0.0	0.0	0.0	0.0
12	16186.8	0.0	0.0	0.0	0.0	0.0
13	17060.0	0.0	0.0	0.0	0.0	0.0
14	17933.3	0.0	0.0	0.0	0.0	0.0
15	18806.5	0.0	0.0	0.0	0.0	0.0
16	19679.7	0.0	0.0	0.0	0.0	0.0
17	20553.0	0.0	0.0	0.0	0.0	0.0
18	21426.2	0.0	0.0	0.0	0.0	0.0
19	22299.4	0.0	0.0	0.0	0.0	0.0
20	23172.7	0.0	0.0	0.0	0.0	0.0
21	24045.9	0.0	0.0	0.0	0.0	0.0
22	24919.1	0.0	0.0	0.0	0.0	0.0
23	25792.4	0.0	0.0	0.0	0.0	0.0
24	26665.6	0.0	0.0	0.0	0.0	0.0
25	27538.8	0.0	0.0	0.0	0.0	0.0
26	28412.1	0.0	0.0	0.0	0.0	0.0

27	29285.3	0.0	0.0	0.0	0.0	0.0
28	30158.5	0.0	0.0	0.0	0.0	0.0
29	31031.8	0.0	0.0	0.0	0.0	0.0
30	31905.0	0.0	0.0	0.0	0.0	0.0
31	32778.2	0.0	0.0	0.0	0.0	0.0
32	33651.5	0.0	0.0	0.0	0.0	0.0
33	34524.7	0.0	0.0	0.0	0.0	0.0
34	33867.0	0.0	0.0	0.0	0.0	0.0
35	34451.9	0.0	0.0	0.0	0.0	0.0
36	35036.8	0.0	0.0	0.0	0.0	0.0
37	35621.7	0.0	0.0	0.0	0.0	0.0
38	36206.6	0.0	0.0	0.0	0.0	0.0
39	36791.5	0.0	0.0	0.0	0.0	0.0
40	37376.4	0.0	0.0	0.0	0.0	0.0
41	37961.2	0.0	0.0	0.0	0.0	0.0
42	38546.1	0.0	0.0	0.0	0.0	0.0
43	39131.0	0.0	0.0	0.0	0.0	0.0
44	39715.9	0.0	0.0	0.0	0.0	0.0
45	40300.8	0.0	0.0	0.0	0.0	0.0
46	40885.7	0.0	0.0	0.0	0.0	0.0
47	40294.3	0.0	0.0	0.0	0.0	0.0
48	40796.4	0.0	0.0	0.0	0.0	0.0
49	41298.5	0.0	0.0	0.0	0.0	0.0
50	41800.6	0.0	0.0	0.0	0.0	0.0
51	42302.6	0.0	0.0	0.0	0.0	0.0
52	42804.7	0.0	0.0	0.0	0.0	0.0
53	45704.8	0.0	0.0	0.0	0.0	0.0
54	46017.5	0.0	0.0	0.0	0.0	0.0
55	46330.2	0.0	0.0	0.0	0.0	0.0
56	46642.8	0.0	0.0	0.0	0.0	0.0
57	46955.5	0.0	0.0	0.0	0.0	0.0
58	47268.2	0.0	0.0	0.0	0.0	0.0
59	47580.9	0.0	0.0	0.0	0.0	0.0
60	47893.6	0.0	0.0	0.0	0.0	0.0
61	48013.1	0.0	0.0	0.0	0.0	0.0
62	48417.7	0.0	0.0	0.0	0.0	0.0
63	48822.3	0.0	0.0	0.0	0.0	0.0
64	49226.9	0.0	0.0	0.0	0.0	0.0
65	49631.5	0.0	0.0	0.0	0.0	0.0
66	50036.1	0.0	0.0	0.0	0.0	0.0
67	50440.7	0.0	0.0	0.0	0.0	0.0
68	50845.3	0.0	0.0	0.0	0.0	0.0
69	51249.9	0.0	0.0	0.0	0.0	0.0
70	51654.4	0.0	0.0	0.0	0.0	0.0
71	52059.0	0.0	0.0	0.0	0.0	0.0
72	52463.6	0.0	0.0	0.0	0.0	0.0
73	52868.2	0.0	0.0	0.0	0.0	0.0
74	53272.8	0.0	0.0	0.0	0.0	0.0
75	53677.4	0.0	0.0	0.0	0.0	0.0
76	54082.0	0.0	0.0	0.0	0.0	0.0
77	54486.6	0.0	0.0	0.0	0.0	0.0
78	54891.2	0.0	0.0	0.0	0.0	0.0
79	55295.7	0.0	0.0	0.0	0.0	0.0
80	55700.3	0.0	0.0	0.0	0.0	0.0
81	56104.9	0.0	0.0	0.0	0.0	0.0
82	28812.1	0.0	0.0	0.0	0.0	0.0
83	29003.0	0.0	0.0	0.0	0.0	0.0
84	35515.6	0.0	0.0	0.0	0.0	0.0
85	57008.9	0.0	0.0	0.0	0.0	0.0
86	55238.5	0.0	0.0	0.0	0.0	0.0
87	53468.2	0.0	0.0	0.0	0.0	0.0
88	51697.9	0.0	0.0	0.0	0.0	0.0
89	49927.6	0.0	0.0	0.0	0.0	0.0
90	48157.2	0.0	0.0	0.0	0.0	0.0
91	47265.2	0.0	0.0	0.0	0.0	0.0
92	45247.8	0.0	0.0	0.0	0.0	0.0
93	43230.4	0.0	0.0	0.0	0.0	0.0
94	41213.0	0.0	0.0	0.0	0.0	0.0
95	39195.6	0.0	0.0	0.0	0.0	0.0
96	36949.1	0.0	0.0	0.0	0.0	0.0
97	35738.9	0.0	0.0	0.0	0.0	0.0
98	34528.6	0.0	0.0	0.0	0.0	0.0
99	33318.4	0.0	0.0	0.0	0.0	0.0
100	32108.1	0.0	0.0	0.0	0.0	0.0
101	30897.8	0.0	0.0	0.0	0.0	0.0
102	29687.6	0.0	0.0	0.0	0.0	0.0
103	28477.3	0.0	0.0	0.0	0.0	0.0
104	27267.1	0.0	0.0	0.0	0.0	0.0
105	26056.8	0.0	0.0	0.0	0.0	0.0
106	24846.6	0.0	0.0	0.0	0.0	0.0
107	23636.3	0.0	0.0	0.0	0.0	0.0
108	22426.1	0.0	0.0	0.0	0.0	0.0
109	21215.8	0.0	0.0	0.0	0.0	0.0
110	20005.5	0.0	0.0	0.0	0.0	0.0
111	18795.3	0.0	0.0	0.0	0.0	0.0
112	17585.0	0.0	0.0	0.0	0.0	0.0
113	16374.8	0.0	0.0	0.0	0.0	0.0
114	15164.5	0.0	0.0	0.0	0.0	0.0
115	13954.3	0.0	0.0	0.0	0.0	0.0
116	12744.0	0.0	0.0	0.0	0.0	0.0
117	11533.8	0.0	0.0	0.0	0.0	0.0
118	10323.5	0.0	0.0	0.0	0.0	0.0
119	9113.2	0.0	0.0	0.0	0.0	0.0
120	7903.0	0.0	0.0	0.0	0.0	0.0
121	6692.7	0.0	0.0	0.0	0.0	0.0
122	5482.5	0.0	0.0	0.0	0.0	0.0
123	4272.2	0.0	0.0	0.0	0.0	0.0
124	3062.0	0.0	0.0	0.0	0.0	0.0
125	1851.7	0.0	0.0	0.0	0.0	0.0
126	641.5	0.0	0.0	0.0	0.0	0.0
127	0.2	0.0	0.0	0.0	0.0	0.0
128	0.0	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 4042349.55(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 4042349.55(lbs)

TOTAL AREA OF SLIDING MASS = 33686.25(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 128 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	2	250.00	22.00	A
3	2	250.00	22.00	A
4	2	250.00	22.00	A
5	2	250.00	22.00	A
6	2	250.00	22.00	A

7	2	250.00	22.00	A
8	2	0.00	14.00	A
9	4	0.00	14.00	A
10	4	0.00	14.00	A
11	4	0.00	14.00	A
12	4	0.00	14.00	A
13	4	0.00	14.00	A
14	4	0.00	14.00	A
15	4	0.00	14.00	A
16	4	0.00	14.00	A
17	4	0.00	14.00	A
18	4	0.00	14.00	A
19	4	0.00	14.00	A
20	4	0.00	14.00	A
21	4	0.00	14.00	A
22	4	0.00	14.00	A
23	4	0.00	14.00	A
24	4	0.00	14.00	A
25	4	0.00	14.00	A
26	4	0.00	14.00	A
27	4	0.00	14.00	A
28	4	0.00	14.00	A
29	4	0.00	14.00	A
30	4	0.00	14.00	A
31	4	0.00	14.00	A
32	4	0.00	14.00	A
33	4	0.00	14.00	A
34	4	0.00	14.00	A
35	4	0.00	14.00	A
36	4	0.00	14.00	A
37	4	0.00	14.00	A
38	4	0.00	14.00	A
39	4	0.00	14.00	A
40	4	0.00	14.00	A
41	4	0.00	14.00	A
42	4	0.00	14.00	A
43	4	0.00	14.00	A
44	4	0.00	14.00	A
45	4	0.00	14.00	A
46	4	0.00	14.00	A
47	4	0.00	14.00	A
48	4	0.00	14.00	A
49	4	0.00	14.00	A
50	4	0.00	14.00	A
51	4	0.00	14.00	A
52	4	0.00	14.00	A
53	4	0.00	14.00	A
54	4	0.00	14.00	A
55	4	0.00	14.00	A
56	4	0.00	14.00	A
57	4	0.00	14.00	A
58	4	0.00	14.00	A
59	4	0.00	14.00	A
60	4	0.00	14.00	A
61	4	0.00	14.00	A
62	4	0.00	14.00	A
63	4	0.00	14.00	A
64	4	0.00	14.00	A
65	4	0.00	14.00	A
66	4	0.00	14.00	A
67	4	0.00	14.00	A
68	4	0.00	14.00	A
69	4	0.00	14.00	A
70	4	0.00	14.00	A
71	4	0.00	14.00	A
72	4	0.00	14.00	A
73	4	0.00	14.00	A
74	4	0.00	14.00	A
75	4	0.00	14.00	A
76	4	0.00	14.00	A
77	4	0.00	14.00	A
78	4	0.00	14.00	A
79	4	0.00	14.00	A
80	4	0.00	14.00	A
81	4	0.00	14.00	A
82	4	0.00	14.00	A
83	4	0.00	14.00	A
84	4	0.00	14.00	A
85	3	250.00	22.00	
86	3	250.00	22.00	
87	3	250.00	22.00	
88	3	250.00	22.00	
89	3	250.00	22.00	
90	3	250.00	22.00	
91	3	250.00	22.00	
92	3	250.00	22.00	
93	3	250.00	22.00	
94	3	250.00	22.00	
95	3	250.00	22.00	
96	3	250.00	22.00	
97	3	250.00	22.00	
98	3	250.00	22.00	
99	3	250.00	22.00	
100	3	250.00	22.00	
101	3	250.00	22.00	
102	3	250.00	22.00	
103	3	250.00	22.00	
104	3	250.00	22.00	
105	3	250.00	22.00	
106	3	250.00	22.00	
107	3	250.00	22.00	
108	3	250.00	22.00	
109	3	250.00	22.00	
110	3	250.00	22.00	
111	3	250.00	22.00	
112	3	250.00	22.00	
113	3	250.00	22.00	
114	3	250.00	22.00	
115	3	250.00	22.00	
116	3	250.00	22.00	
117	3	250.00	22.00	
118	3	250.00	22.00	
119	3	250.00	22.00	
120	3	250.00	22.00	
121	3	250.00	22.00	
122	3	250.00	22.00	
123	3	250.00	22.00	
124	3	250.00	22.00	
125	3	250.00	22.00	
126	3	250.00	22.00	

127	3	250.00	22.00	
128	2	250.00	22.00	A

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 128 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-34.38	115.20	1.32	141.09	262.82	127.84
1	-34.38	115.20	1.32	141.09	262.82	127.84
2	-34.38	118.09	5.67	452.32	432.75	210.50
2	-34.38	118.09	5.67	452.32	432.75	210.50
3	-34.38	122.76	5.67	927.02	624.54	303.79
3	-34.38	122.76	5.67	927.02	624.54	303.79
4	-34.38	127.83	6.62	1463.82	841.42	409.29
4	-34.38	127.83	6.62	1463.82	841.42	409.29
5	-34.38	133.30	6.62	2062.72	1083.39	526.99
5	-34.38	133.30	6.62	2062.72	1083.39	526.99
6	-34.38	138.77	6.62	2661.61	1325.36	644.68
6	-34.38	138.77	6.62	2661.61	1325.36	644.68
7	-34.38	144.23	6.62	3260.50	1567.33	762.38
7	-34.38	144.23	6.62	3260.50	1567.33	762.38
8	-1.78	148.72	3.50	2997.89	747.46	363.58
8	-1.78	148.72	3.50	2997.89	747.46	363.58
9	-1.78	150.53	0.13	3026.01	754.47	366.99
9	-1.78	150.53	0.13	3026.01	754.47	366.99
10	-1.78	151.93	2.65	3047.56	759.84	369.60
10	-1.78	151.93	2.65	3047.56	759.84	369.60
11	-1.78	154.57	2.65	3088.57	770.07	374.58
11	-1.78	154.57	2.65	3088.57	770.07	374.58
12	-1.78	158.44	5.09	3195.27	796.67	387.52
12	-1.78	158.44	5.09	3195.27	796.67	387.52
13	-1.78	163.53	5.09	3367.64	839.65	408.42
13	-1.78	163.53	5.09	3367.64	839.65	408.42
14	-1.78	168.62	5.09	3540.02	882.63	429.33
14	-1.78	168.62	5.09	3540.02	882.63	429.33
15	-1.78	173.70	5.09	3712.39	925.60	450.23
15	-1.78	173.70	5.09	3712.39	925.60	450.23
16	-1.78	178.79	5.09	3884.77	968.58	471.14
16	-1.78	178.79	5.09	3884.77	968.58	471.14
17	-1.78	183.88	5.09	4057.15	1011.56	492.05
17	-1.78	183.88	5.09	4057.15	1011.56	492.05
18	-1.78	188.96	5.09	4229.52	1054.54	512.95
18	-1.78	188.96	5.09	4229.52	1054.54	512.95
19	-1.78	194.05	5.09	4401.90	1097.52	533.86
19	-1.78	194.05	5.09	4401.90	1097.52	533.86
20	-1.78	199.13	5.09	4574.27	1140.49	554.76
20	-1.78	199.13	5.09	4574.27	1140.49	554.76
21	-1.78	204.22	5.09	4746.65	1183.47	575.67
21	-1.78	204.22	5.09	4746.65	1183.47	575.67
22	-1.78	209.31	5.09	4919.02	1226.45	596.57
22	-1.78	209.31	5.09	4919.02	1226.45	596.57
23	-1.78	214.39	5.09	5091.40	1269.43	617.48
23	-1.78	214.39	5.09	5091.40	1269.43	617.48
24	-1.78	219.48	5.09	5263.77	1312.41	638.38
24	-1.78	219.48	5.09	5263.77	1312.41	638.38
25	-1.78	224.57	5.09	5436.15	1355.38	659.29
25	-1.78	224.57	5.09	5436.15	1355.38	659.29
26	-1.78	229.65	5.09	5608.53	1398.36	680.19
26	-1.78	229.65	5.09	5608.53	1398.36	680.19
27	-1.78	234.74	5.09	5780.90	1441.34	701.10
27	-1.78	234.74	5.09	5780.90	1441.34	701.10
28	-1.78	239.83	5.09	5953.28	1484.32	722.01
28	-1.78	239.83	5.09	5953.28	1484.32	722.01
29	-1.78	244.91	5.09	6125.65	1527.30	742.91
29	-1.78	244.91	5.09	6125.65	1527.30	742.91
30	-1.78	250.00	5.09	6298.03	1570.27	763.82
30	-1.78	250.00	5.09	6298.03	1570.27	763.82
31	-1.78	255.08	5.09	6470.40	1613.25	784.72
31	-1.78	255.08	5.09	6470.40	1613.25	784.72
32	-1.78	260.17	5.09	6642.78	1656.23	805.63
32	-1.78	260.17	5.09	6642.78	1656.23	805.63
33	-1.78	265.26	5.09	6815.16	1699.21	826.53
33	-1.78	265.26	5.09	6815.16	1699.21	826.53
34	-1.78	270.24	4.89	6961.46	1735.69	844.28
34	-1.78	270.24	4.89	6961.46	1735.69	844.28
35	-1.78	275.13	4.89	7081.68	1765.66	858.86
35	-1.78	275.13	4.89	7081.68	1765.66	858.86
36	-1.78	280.01	4.89	7201.91	1795.64	873.44
36	-1.78	280.01	4.89	7201.91	1795.64	873.44
37	-1.78	284.90	4.89	7322.13	1825.61	888.02
37	-1.78	284.90	4.89	7322.13	1825.61	888.02
38	-1.78	289.78	4.89	7442.36	1855.59	902.60
38	-1.78	289.78	4.89	7442.36	1855.59	902.60
39	-1.78	294.67	4.89	7562.58	1885.56	917.18
39	-1.78	294.67	4.89	7562.58	1885.56	917.18
40	-1.78	299.55	4.89	7682.81	1915.54	931.76
40	-1.78	299.55	4.89	7682.81	1915.54	931.76
41	-1.78	304.43	4.89	7803.03	1945.51	946.34
41	-1.78	304.43	4.89	7803.03	1945.51	946.34
42	-1.78	309.32	4.89	7923.25	1975.49	960.92
42	-1.78	309.32	4.89	7923.25	1975.49	960.92
43	-1.78	314.20	4.89	8043.48	2005.46	975.50
43	-1.78	314.20	4.89	8043.48	2005.46	975.50
44	-1.78	319.09	4.89	8163.70	2035.44	990.08
44	-1.78	319.09	4.89	8163.70	2035.44	990.08
45	-1.78	323.97	4.89	8283.93	2065.42	1004.66
45	-1.78	323.97	4.89	8283.93	2065.42	1004.66
46	-1.78	328.86	4.89	8404.15	2095.39	1019.24
46	-1.78	328.86	4.89	8404.15	2095.39	1019.24
47	-1.78	333.68	4.75	8517.33	2123.61	1032.97
47	-1.78	333.68	4.75	8517.33	2123.61	1032.97
48	-1.78	338.43	4.75	8623.46	2150.07	1045.84
48	-1.78	338.43	4.75	8623.46	2150.07	1045.84
49	-1.78	343.18	4.75	8729.59	2176.53	1058.71
49	-1.78	343.18	4.75	8729.59	2176.53	1058.71
50	-1.78	347.93	4.75	8835.72	2202.99	1071.58
50	-1.78	347.93	4.75	8835.72	2202.99	1071.58
51	-1.78	352.68	4.75	8941.84	2229.45	1084.45
51	-1.78	352.68	4.75	8941.84	2229.45	1084.45
52	-1.78	357.43	4.75	9047.97	2255.91	1097.33

52	-1.78	357.43	4.75	9047.97	2255.91	1097.33
53	-1.78	362.31	5.03	9132.27	2276.93	1107.55
53	-1.78	362.31	5.03	9132.27	2276.93	1107.55
54	-1.78	367.34	5.03	9194.75	2292.51	1115.13
54	-1.78	367.34	5.03	9194.75	2292.51	1115.13
55	-1.78	372.36	5.03	9257.23	2308.09	1122.70
55	-1.78	372.36	5.03	9257.23	2308.09	1122.70
56	-1.78	377.39	5.03	9319.70	2323.66	1130.28
56	-1.78	377.39	5.03	9319.70	2323.66	1130.28
57	-1.78	382.41	5.03	9382.18	2339.24	1137.86
57	-1.78	382.41	5.03	9382.18	2339.24	1137.86
58	-1.78	387.44	5.03	9444.66	2354.82	1145.44
58	-1.78	387.44	5.03	9444.66	2354.82	1145.44
59	-1.78	392.46	5.03	9507.14	2370.39	1153.01
59	-1.78	392.46	5.03	9507.14	2370.39	1153.01
60	-1.78	397.49	5.03	9569.61	2385.97	1160.59
60	-1.78	397.49	5.03	9569.61	2385.97	1160.59
61	-1.78	402.50	5.00	9641.47	2403.89	1169.31
61	-1.78	402.50	5.00	9641.47	2403.89	1169.31
62	-1.78	407.50	5.00	9722.72	2424.15	1179.16
62	-1.78	407.50	5.00	9722.72	2424.15	1179.16
63	-1.78	412.50	5.00	9803.96	2444.40	1189.01
63	-1.78	412.50	5.00	9803.96	2444.40	1189.01
64	-1.78	417.50	5.00	9885.21	2464.66	1198.86
64	-1.78	417.50	5.00	9885.21	2464.66	1198.86
65	-1.78	422.50	5.00	9966.45	2484.92	1208.72
65	-1.78	422.50	5.00	9966.45	2484.92	1208.72
66	-1.78	427.50	5.00	10047.70	2505.17	1218.57
66	-1.78	427.50	5.00	10047.70	2505.17	1218.57
67	-1.78	432.50	5.00	10128.94	2525.43	1228.42
67	-1.78	432.50	5.00	10128.94	2525.43	1228.42
68	-1.78	437.50	5.00	10210.19	2545.69	1238.28
68	-1.78	437.50	5.00	10210.19	2545.69	1238.28
69	-1.78	442.50	5.00	10291.43	2565.94	1248.13
69	-1.78	442.50	5.00	10291.43	2565.94	1248.13
70	-1.78	447.50	5.00	10372.68	2586.20	1257.98
70	-1.78	447.50	5.00	10372.68	2586.20	1257.98
71	-1.78	452.50	5.00	10453.92	2606.46	1267.84
71	-1.78	452.50	5.00	10453.92	2606.46	1267.84
72	-1.78	457.50	5.00	10535.17	2626.71	1277.69
72	-1.78	457.50	5.00	10535.17	2626.71	1277.69
73	-1.78	462.50	5.00	10616.41	2646.97	1287.54
73	-1.78	462.50	5.00	10616.41	2646.97	1287.54
74	-1.78	467.50	5.00	10697.66	2667.23	1297.40
74	-1.78	467.50	5.00	10697.66	2667.23	1297.40
75	-1.78	472.50	5.00	10778.90	2687.48	1307.25
75	-1.78	472.50	5.00	10778.90	2687.48	1307.25
76	-1.78	477.50	5.00	10860.15	2707.74	1317.10
76	-1.78	477.50	5.00	10860.15	2707.74	1317.10
77	-1.78	482.50	5.00	10941.39	2728.00	1326.96
77	-1.78	482.50	5.00	10941.39	2728.00	1326.96
78	-1.78	487.50	5.00	11022.64	2748.25	1336.81
78	-1.78	487.50	5.00	11022.64	2748.25	1336.81
79	-1.78	492.50	5.00	11103.88	2768.51	1346.66
79	-1.78	492.50	5.00	11103.88	2768.51	1346.66
80	-1.78	497.50	5.00	11185.13	2788.77	1356.52
80	-1.78	497.50	5.00	11185.13	2788.77	1356.52
81	-1.78	502.50	5.00	11266.37	2809.02	1366.37
81	-1.78	502.50	5.00	11266.37	2809.02	1366.37
82	-1.78	506.27	2.55	11344.57	2828.52	1375.85
82	-1.78	506.27	2.55	11344.57	2828.52	1375.85
83	-1.78	508.83	2.55	11419.72	2847.26	1384.97
83	-1.78	508.83	2.55	11419.72	2847.26	1384.97
84	-1.78	511.65	3.10	11502.97	2868.01	1395.07
84	-1.78	511.65	3.10	11502.97	2868.01	1395.07
85	38.51	515.72	6.43	9614.11	4134.35	2011.04
85	38.51	515.72	6.43	9614.11	4134.35	2011.04
86	38.51	520.75	6.43	9312.80	4012.62	1951.83
86	38.51	520.75	6.43	9312.80	4012.62	1951.83
87	38.51	525.78	6.43	9011.50	3890.88	1892.61
87	38.51	525.78	6.43	9011.50	3890.88	1892.61
88	38.51	530.82	6.43	8710.19	3769.14	1833.40
88	38.51	530.82	6.43	8710.19	3769.14	1833.40
89	38.51	535.85	6.43	8408.88	3647.41	1774.18
89	38.51	535.85	6.43	8408.88	3647.41	1774.18
90	38.51	540.88	6.43	8107.58	3525.67	1714.97
90	38.51	540.88	6.43	8107.58	3525.67	1714.97
91	38.51	545.97	6.57	7788.81	3396.88	1652.32
91	38.51	545.97	6.57	7788.81	3396.88	1652.32
92	38.51	551.11	6.57	7452.58	3261.04	1586.24
92	38.51	551.11	6.57	7452.58	3261.04	1586.24
93	38.51	556.25	6.57	7116.35	3125.19	1520.16
93	38.51	556.25	6.57	7116.35	3125.19	1520.16
94	38.51	561.39	6.57	6780.12	2989.35	1454.08
94	38.51	561.39	6.57	6780.12	2989.35	1454.08
95	38.51	566.53	6.57	6443.89	2853.50	1388.01
95	38.51	566.53	6.57	6443.89	2853.50	1388.01
96	38.51	571.63	6.46	6173.22	2744.14	1334.81
96	38.51	571.63	6.46	6173.22	2744.14	1334.81
97	38.51	576.68	6.46	5968.12	2661.28	1294.50
97	38.51	576.68	6.46	5968.12	2661.28	1294.50
98	38.51	581.74	6.46	5763.01	2578.41	1254.19
98	38.51	581.74	6.46	5763.01	2578.41	1254.19
99	38.51	586.79	6.46	5557.90	2495.54	1213.89
99	38.51	586.79	6.46	5557.90	2495.54	1213.89
100	38.51	591.85	6.46	5352.80	2412.67	1173.58
100	38.51	591.85	6.46	5352.80	2412.67	1173.58
101	38.51	596.90	6.46	5147.69	2329.80	1133.27
101	38.51	596.90	6.46	5147.69	2329.80	1133.27
102	38.51	601.96	6.46	4942.58	2246.93	1092.96
102	38.51	601.96	6.46	4942.58	2246.93	1092.96
103	38.51	607.01	6.46	4737.48	2164.06	1052.65
103	38.51	607.01	6.46	4737.48	2164.06	1052.65
104	38.51	612.07	6.46	4532.37	2081.20	1012.34
104	38.51	612.07	6.46	4532.37	2081.20	1012.34
105	38.51	617.12	6.46	4327.26	1998.33	972.03
105	38.51	617.12	6.46	4327.26	1998.33	972.03
106	38.51	622.18	6.46	4122.15	1915.46	931.72
106	38.51	622.18	6.46	4122.15	1915.46	931.72
107	38.51	627.23	6.46	3917.05	1832.59	891.41
107	38.51	627.23	6.46	3917.05	1832.59	891.41
108	38.51	632.29	6.46	3711.94	1749.72	851.10
108	38.51	632.29	6.46	3711.94	1749.72	851.10
109	38.51	637.34	6.46	3506.83	1666.85	810.79
109	38.51	637.34	6.46	3506.83	1666.85	810.79
110	38.51	642.40	6.46	3301.73	1583.98	770.49
110	38.51	642.40	6.46	3301.73	1583.98	770.49
111	38.51	647.45	6.46	3096.62	1501.12	730.18
111	38.51	647.45	6.46	3096.62	1501.12	730.18
112	38.51	652.50	6.46	2891.51	1418.25	689.87

112	38.51	652.50	6.46	2891.51	1418.25	689.87
113	38.51	657.56	6.46	2686.41	1335.38	649.56
113	38.51	657.56	6.46	2686.41	1335.38	649.56
114	38.51	662.61	6.46	2481.30	1252.51	609.25
114	38.51	662.61	6.46	2481.30	1252.51	609.25
115	38.51	667.67	6.46	2276.19	1169.64	568.94
115	38.51	667.67	6.46	2276.19	1169.64	568.94
116	38.51	672.72	6.46	2071.09	1086.77	528.63
116	38.51	672.72	6.46	2071.09	1086.77	528.63
117	38.51	677.78	6.46	1865.98	1003.90	488.32
117	38.51	677.78	6.46	1865.98	1003.90	488.32
118	38.51	682.83	6.46	1660.87	921.04	448.01
118	38.51	682.83	6.46	1660.87	921.04	448.01
119	38.51	687.89	6.46	1455.77	838.17	407.70
119	38.51	687.89	6.46	1455.77	838.17	407.70
120	38.51	692.94	6.46	1250.66	755.30	367.39
120	38.51	692.94	6.46	1250.66	755.30	367.39
121	38.51	698.00	6.46	1045.55	672.43	327.09
121	38.51	698.00	6.46	1045.55	672.43	327.09
122	38.51	703.05	6.46	840.44	589.56	286.78
122	38.51	703.05	6.46	840.44	589.56	286.78
123	38.51	708.11	6.46	635.34	506.69	246.47
123	38.51	708.11	6.46	635.34	506.69	246.47
124	38.51	713.16	6.46	430.23	423.82	206.16
124	38.51	713.16	6.46	430.23	423.82	206.16
125	38.51	718.22	6.46	225.12	340.96	165.85
125	38.51	718.22	6.46	225.12	340.96	165.85
126	38.51	723.27	6.46	108.71	43.92	21.36
126	38.51	723.27	6.46	108.71	43.92	21.36
127	54.92	725.82	0.06	3.91	1.58	0.77
127	54.92	725.82	0.06	3.91	1.58	0.77
128	54.92	725.85	0.04	1.15	0.46	0.23
128	54.92	725.85	0.04	1.15	0.46	0.23

Table 4 - Base Force Data on the 128 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-34.38	115.20	1.32	186.91	348.17	169.36
1	-34.38	115.20	1.32	186.91	348.17	169.36
2	-34.38	118.09	5.67	2562.64	2451.77	1192.60
2	-34.38	118.09	5.67	2562.64	2451.77	1192.60
3	-34.38	122.76	5.67	5252.13	3538.40	1721.16
3	-34.38	122.76	5.67	5252.13	3538.40	1721.16
4	-34.38	127.83	6.62	9696.06	5573.41	2711.03
4	-34.38	127.83	6.62	9696.06	5573.41	2711.03
5	-34.38	133.30	6.62	13663.02	7176.17	3490.65
5	-34.38	133.30	6.62	13663.02	7176.17	3490.65
6	-34.38	138.77	6.62	17629.97	8778.92	4270.26
6	-34.38	138.77	6.62	17629.97	8778.92	4270.26
7	-34.38	144.23	6.62	21596.93	10381.68	5049.88
7	-34.38	144.23	6.62	21596.93	10381.68	5049.88
8	-1.78	148.72	3.50	10493.22	2616.25	1272.60
8	-1.78	148.72	3.50	10493.22	2616.25	1272.60
9	-1.78	150.53	0.13	408.50	101.85	49.54
9	-1.78	150.53	0.13	408.50	101.85	49.54
10	-1.78	151.93	2.65	8079.92	2014.55	979.92
10	-1.78	151.93	2.65	8079.92	2014.55	979.92
11	-1.78	154.57	2.65	8188.66	2041.66	993.11
11	-1.78	154.57	2.65	8188.66	2041.66	993.11
12	-1.78	158.44	5.09	16260.12	4054.10	1972.01
12	-1.78	158.44	5.09	16260.12	4054.10	1972.01
13	-1.78	163.53	5.09	17137.31	4272.81	2078.39
13	-1.78	163.53	5.09	17137.31	4272.81	2078.39
14	-1.78	168.62	5.09	18014.50	4491.52	2184.77
14	-1.78	168.62	5.09	18014.50	4491.52	2184.77
15	-1.78	173.70	5.09	18891.69	4710.23	2291.16
15	-1.78	173.70	5.09	18891.69	4710.23	2291.16
16	-1.78	178.79	5.09	19768.88	4928.93	2397.54
16	-1.78	178.79	5.09	19768.88	4928.93	2397.54
17	-1.78	183.88	5.09	20646.06	5147.64	2503.93
17	-1.78	183.88	5.09	20646.06	5147.64	2503.93
18	-1.78	188.96	5.09	21523.25	5366.35	2610.31
18	-1.78	188.96	5.09	21523.25	5366.35	2610.31
19	-1.78	194.05	5.09	22400.44	5585.06	2716.70
19	-1.78	194.05	5.09	22400.44	5585.06	2716.70
20	-1.78	199.13	5.09	23277.63	5803.76	2823.08
20	-1.78	199.13	5.09	23277.63	5803.76	2823.08
21	-1.78	204.22	5.09	24154.81	6022.47	2929.46
21	-1.78	204.22	5.09	24154.81	6022.47	2929.46
22	-1.78	209.31	5.09	25032.00	6241.18	3035.85
22	-1.78	209.31	5.09	25032.00	6241.18	3035.85
23	-1.78	214.39	5.09	25909.19	6459.89	3142.23
23	-1.78	214.39	5.09	25909.19	6459.89	3142.23
24	-1.78	219.48	5.09	26786.38	6678.59	3248.62
24	-1.78	219.48	5.09	26786.38	6678.59	3248.62
25	-1.78	224.57	5.09	27663.57	6897.30	3355.00
25	-1.78	224.57	5.09	27663.57	6897.30	3355.00
26	-1.78	229.65	5.09	28540.75	7116.01	3461.38
26	-1.78	229.65	5.09	28540.75	7116.01	3461.38
27	-1.78	234.74	5.09	29417.94	7334.72	3567.77
27	-1.78	234.74	5.09	29417.94	7334.72	3567.77
28	-1.78	239.83	5.09	30295.13	7553.42	3674.15
28	-1.78	239.83	5.09	30295.13	7553.42	3674.15
29	-1.78	244.91	5.09	31172.32	7772.13	3780.54
29	-1.78	244.91	5.09	31172.32	7772.13	3780.54
30	-1.78	250.00	5.09	32049.50	7990.84	3886.92
30	-1.78	250.00	5.09	32049.50	7990.84	3886.92
31	-1.78	255.08	5.09	32926.69	8209.55	3993.31
31	-1.78	255.08	5.09	32926.69	8209.55	3993.31
32	-1.78	260.17	5.09	33803.88	8428.25	4099.69
32	-1.78	260.17	5.09	33803.88	8428.25	4099.69
33	-1.78	265.26	5.09	34681.07	8646.96	4206.07
33	-1.78	265.26	5.09	34681.07	8646.96	4206.07
34	-1.78	270.24	4.89	34020.42	8482.24	4125.95
34	-1.78	270.24	4.89	34020.42	8482.24	4125.95
35	-1.78	275.13	4.89	34607.96	8628.73	4197.21
35	-1.78	275.13	4.89	34607.96	8628.73	4197.21
36	-1.78	280.01	4.89	35195.50	8775.22	4268.46
36	-1.78	280.01	4.89	35195.50	8775.22	4268.46
37	-1.78	284.90	4.89	35783.03	8921.71	4339.72
37	-1.78	284.90	4.89	35783.03	8921.71	4339.72
38	-1.78	289.78	4.89	36370.57	9068.20	4410.97
38	-1.78	289.78	4.89	36370.57	9068.20	4410.97
39	-1.78	294.67	4.89	36958.10	9214.69	4482.23
39	-1.78	294.67	4.89	36958.10	9214.69	4482.23

40	-1.78	299.55	4.89	37545.64	9361.18	4553.49
40	-1.78	299.55	4.89	37545.64	9361.18	4553.49
41	-1.78	304.43	4.89	38133.17	9507.67	4624.74
41	-1.78	304.43	4.89	38133.17	9507.67	4624.74
42	-1.78	309.32	4.89	38720.71	9654.16	4696.00
42	-1.78	309.32	4.89	38720.71	9654.16	4696.00
43	-1.78	314.20	4.89	39308.24	9800.65	4767.25
43	-1.78	314.20	4.89	39308.24	9800.65	4767.25
44	-1.78	319.09	4.89	39895.78	9947.13	4838.51
44	-1.78	319.09	4.89	39895.78	9947.13	4838.51
45	-1.78	323.97	4.89	40483.32	10093.62	4909.76
45	-1.78	323.97	4.89	40483.32	10093.62	4909.76
46	-1.78	328.86	4.89	41070.85	10240.11	4981.02
46	-1.78	328.86	4.89	41070.85	10240.11	4981.02
47	-1.78	333.68	4.75	40476.82	10092.01	4908.98
47	-1.78	333.68	4.75	40476.82	10092.01	4908.98
48	-1.78	338.43	4.75	40981.18	10217.75	4970.14
48	-1.78	338.43	4.75	40981.18	10217.75	4970.14
49	-1.78	343.18	4.75	41485.53	10343.50	5031.31
49	-1.78	343.18	4.75	41485.53	10343.50	5031.31
50	-1.78	347.93	4.75	41989.88	10469.25	5092.48
50	-1.78	347.93	4.75	41989.88	10469.25	5092.48
51	-1.78	352.68	4.75	42494.23	10595.00	5153.64
51	-1.78	352.68	4.75	42494.23	10595.00	5153.64
52	-1.78	357.43	4.75	42998.58	10720.75	5214.81
52	-1.78	357.43	4.75	42998.58	10720.75	5214.81
53	-1.78	362.31	5.03	45911.80	11447.10	5568.12
53	-1.78	362.31	5.03	45911.80	11447.10	5568.12
54	-1.78	367.34	5.03	46225.89	11525.41	5606.21
54	-1.78	367.34	5.03	46225.89	11525.41	5606.21
55	-1.78	372.36	5.03	46539.99	11603.72	5644.31
55	-1.78	372.36	5.03	46539.99	11603.72	5644.31
56	-1.78	377.39	5.03	46854.09	11682.04	5682.40
56	-1.78	377.39	5.03	46854.09	11682.04	5682.40
57	-1.78	382.41	5.03	47168.19	11760.35	5720.50
57	-1.78	382.41	5.03	47168.19	11760.35	5720.50
58	-1.78	387.44	5.03	47482.28	11838.66	5758.59
58	-1.78	387.44	5.03	47482.28	11838.66	5758.59
59	-1.78	392.46	5.03	47796.38	11916.98	5796.68
59	-1.78	392.46	5.03	47796.38	11916.98	5796.68
60	-1.78	397.49	5.03	48110.48	11995.29	5834.78
60	-1.78	397.49	5.03	48110.48	11995.29	5834.78
61	-1.78	402.50	5.00	48230.60	12025.24	5849.34
61	-1.78	402.50	5.00	48230.60	12025.24	5849.34
62	-1.78	407.50	5.00	48637.02	12126.57	5898.63
62	-1.78	407.50	5.00	48637.02	12126.57	5898.63
63	-1.78	412.50	5.00	49043.45	12227.90	5947.92
63	-1.78	412.50	5.00	49043.45	12227.90	5947.92
64	-1.78	417.50	5.00	49449.87	12329.24	5997.21
64	-1.78	417.50	5.00	49449.87	12329.24	5997.21
65	-1.78	422.50	5.00	49856.29	12430.57	6046.50
65	-1.78	422.50	5.00	49856.29	12430.57	6046.50
66	-1.78	427.50	5.00	50262.71	12531.90	6095.79
66	-1.78	427.50	5.00	50262.71	12531.90	6095.79
67	-1.78	432.50	5.00	50669.13	12633.23	6145.08
67	-1.78	432.50	5.00	50669.13	12633.23	6145.08
68	-1.78	437.50	5.00	51075.55	12734.57	6194.38
68	-1.78	437.50	5.00	51075.55	12734.57	6194.38
69	-1.78	442.50	5.00	51481.97	12835.90	6243.67
69	-1.78	442.50	5.00	51481.97	12835.90	6243.67
70	-1.78	447.50	5.00	51888.39	12937.23	6292.96
70	-1.78	447.50	5.00	51888.39	12937.23	6292.96
71	-1.78	452.50	5.00	52294.82	13038.56	6342.25
71	-1.78	452.50	5.00	52294.82	13038.56	6342.25
72	-1.78	457.50	5.00	52701.24	13139.89	6391.54
72	-1.78	457.50	5.00	52701.24	13139.89	6391.54
73	-1.78	462.50	5.00	53107.66	13241.23	6440.83
73	-1.78	462.50	5.00	53107.66	13241.23	6440.83
74	-1.78	467.50	5.00	53514.08	13342.56	6490.12
74	-1.78	467.50	5.00	53514.08	13342.56	6490.12
75	-1.78	472.50	5.00	53920.50	13443.89	6539.41
75	-1.78	472.50	5.00	53920.50	13443.89	6539.41
76	-1.78	477.50	5.00	54326.92	13545.22	6588.70
76	-1.78	477.50	5.00	54326.92	13545.22	6588.70
77	-1.78	482.50	5.00	54733.34	13646.55	6637.99
77	-1.78	482.50	5.00	54733.34	13646.55	6637.99
78	-1.78	487.50	5.00	55139.76	13747.89	6687.28
78	-1.78	487.50	5.00	55139.76	13747.89	6687.28
79	-1.78	492.50	5.00	55546.19	13849.22	6736.57
79	-1.78	492.50	5.00	55546.19	13849.22	6736.57
80	-1.78	497.50	5.00	55952.61	13950.55	6785.86
80	-1.78	497.50	5.00	55952.61	13950.55	6785.86
81	-1.78	502.50	5.00	56359.03	14051.88	6835.15
81	-1.78	502.50	5.00	56359.03	14051.88	6835.15
82	-1.78	506.27	2.55	28942.60	7216.20	3510.12
82	-1.78	506.27	2.55	28942.60	7216.20	3510.12
83	-1.78	508.83	2.55	29134.33	7264.00	3533.37
83	-1.78	508.83	2.55	29134.33	7264.00	3533.37
84	-1.78	511.65	3.10	35676.41	8895.13	4326.79
84	-1.78	511.65	3.10	35676.41	8895.13	4326.79
85	38.51	515.72	6.43	61845.81	26595.53	12936.66
85	38.51	515.72	6.43	61845.81	26595.53	12936.66
86	38.51	520.75	6.43	59907.56	25812.43	12555.74
86	38.51	520.75	6.43	59907.56	25812.43	12555.74
87	38.51	525.78	6.43	57969.31	25029.32	12174.82
87	38.51	525.78	6.43	57969.31	25029.32	12174.82
88	38.51	530.82	6.43	56031.06	24246.22	11793.90
88	38.51	530.82	6.43	56031.06	24246.22	11793.90
89	38.51	535.85	6.43	54092.81	23463.12	11412.98
89	38.51	535.85	6.43	54092.81	23463.12	11412.98
90	38.51	540.88	6.43	52154.56	22680.01	11032.06
90	38.51	540.88	6.43	52154.56	22680.01	11032.06
91	38.51	545.97	6.57	51165.79	22314.61	10854.32
91	38.51	545.97	6.57	51165.79	22314.61	10854.32
92	38.51	551.11	6.57	48957.05	21422.22	10420.24
92	38.51	551.11	6.57	48957.05	21422.22	10420.24
93	38.51	556.25	6.57	46748.31	20529.83	9986.17
93	38.51	556.25	6.57	46748.31	20529.83	9986.17
94	38.51	561.39	6.57	44539.58	19637.44	9552.09
94	38.51	561.39	6.57	44539.58	19637.44	9552.09
95	38.51	566.53	6.57	42330.84	18745.05	9118.01
95	38.51	566.53	6.57	42330.84	18745.05	9118.01
96	38.51	571.63	6.46	39880.89	17728.00	8623.29
96	38.51	571.63	6.46	39880.89	17728.00	8623.29
97	38.51	576.68	6.46	38555.84	17192.64	8362.88
97	38.51	576.68	6.46	38555.84	17192.64	8362.88
98	38.51	581.74	6.46	37230.78	16657.29	8102.47
98	38.51	581.74	6.46	37230.78	16657.29	8102.47
99	38.51	586.79	6.46	35905.73	16121.93	7842.07
99	38.51	586.79	6.46	35905.73	16121.93	7842.07

100	38.51	591.85	6.46	34580.68	15586.58	7581.66
100	38.51	591.85	6.46	34580.68	15586.58	7581.66
101	38.51	596.90	6.46	33255.63	15051.22	7321.25
101	38.51	596.90	6.46	33255.63	15051.22	7321.25
102	38.51	601.96	6.46	31930.57	14515.86	7060.84
102	38.51	601.96	6.46	31930.57	14515.86	7060.84
103	38.51	607.01	6.46	30605.52	13980.51	6800.43
103	38.51	607.01	6.46	30605.52	13980.51	6800.43
104	38.51	612.07	6.46	29280.47	13445.15	6540.02
104	38.51	612.07	6.46	29280.47	13445.15	6540.02
105	38.51	617.12	6.46	27955.42	12909.80	6279.61
105	38.51	617.12	6.46	27955.42	12909.80	6279.61
106	38.51	622.18	6.46	26630.36	12374.44	6019.20
106	38.51	622.18	6.46	26630.36	12374.44	6019.20
107	38.51	627.23	6.46	25305.31	11839.09	5758.79
107	38.51	627.23	6.46	25305.31	11839.09	5758.79
108	38.51	632.29	6.46	23980.26	11303.73	5498.38
108	38.51	632.29	6.46	23980.26	11303.73	5498.38
109	38.51	637.34	6.46	22655.21	10768.37	5237.98
109	38.51	637.34	6.46	22655.21	10768.37	5237.98
110	38.51	642.40	6.46	21330.16	10233.02	4977.57
110	38.51	642.40	6.46	21330.16	10233.02	4977.57
111	38.51	647.45	6.46	20005.10	9697.66	4717.16
111	38.51	647.45	6.46	20005.10	9697.66	4717.16
112	38.51	652.50	6.46	18680.05	9162.31	4456.75
112	38.51	652.50	6.46	18680.05	9162.31	4456.75
113	38.51	657.56	6.46	17355.00	8626.95	4196.34
113	38.51	657.56	6.46	17355.00	8626.95	4196.34
114	38.51	662.61	6.46	16029.95	8091.59	3935.93
114	38.51	662.61	6.46	16029.95	8091.59	3935.93
115	38.51	667.67	6.46	14704.89	7556.24	3675.52
115	38.51	667.67	6.46	14704.89	7556.24	3675.52
116	38.51	672.72	6.46	13379.84	7020.88	3415.11
116	38.51	672.72	6.46	13379.84	7020.88	3415.11
117	38.51	677.78	6.46	12054.79	6485.53	3154.70
117	38.51	677.78	6.46	12054.79	6485.53	3154.70
118	38.51	682.83	6.46	10729.74	5950.17	2894.29
118	38.51	682.83	6.46	10729.74	5950.17	2894.29
119	38.51	687.89	6.46	9404.68	5414.81	2633.89
119	38.51	687.89	6.46	9404.68	5414.81	2633.89
120	38.51	692.94	6.46	8079.63	4879.46	2373.48
120	38.51	692.94	6.46	8079.63	4879.46	2373.48
121	38.51	698.00	6.46	6754.58	4344.10	2113.07
121	38.51	698.00	6.46	6754.58	4344.10	2113.07
122	38.51	703.05	6.46	5429.53	3808.75	1852.66
122	38.51	703.05	6.46	5429.53	3808.75	1852.66
123	38.51	708.11	6.46	4104.47	3273.39	1592.25
123	38.51	708.11	6.46	4104.47	3273.39	1592.25
124	38.51	713.16	6.46	2779.42	2738.03	1331.84
124	38.51	713.16	6.46	2779.42	2738.03	1331.84
125	38.51	718.22	6.46	1454.37	2202.68	1071.43
125	38.51	718.22	6.46	1454.37	2202.68	1071.43
126	38.51	723.27	6.46	702.30	283.75	138.02
126	38.51	723.27	6.46	702.30	283.75	138.02
127	54.92	725.82	0.06	0.23	0.09	0.05
127	54.92	725.82	0.06	0.23	0.09	0.05
128	54.92	725.85	0.04	0.05	0.02	0.01
128	54.92	725.85	0.04	0.05	0.02	0.01

Sum of the Resisting Forces = 1182919.37 (lbs)

Average Available Shear Strength = 1746.33(psf)

Sum of the Driving Forces = 615378.38 (lbs)

Average Mobilized Shear Stress = 908.48(psf)

Total length of the failure surface = 677.38(ft)

Factor of Safety Balance Check: FS = 1.92226

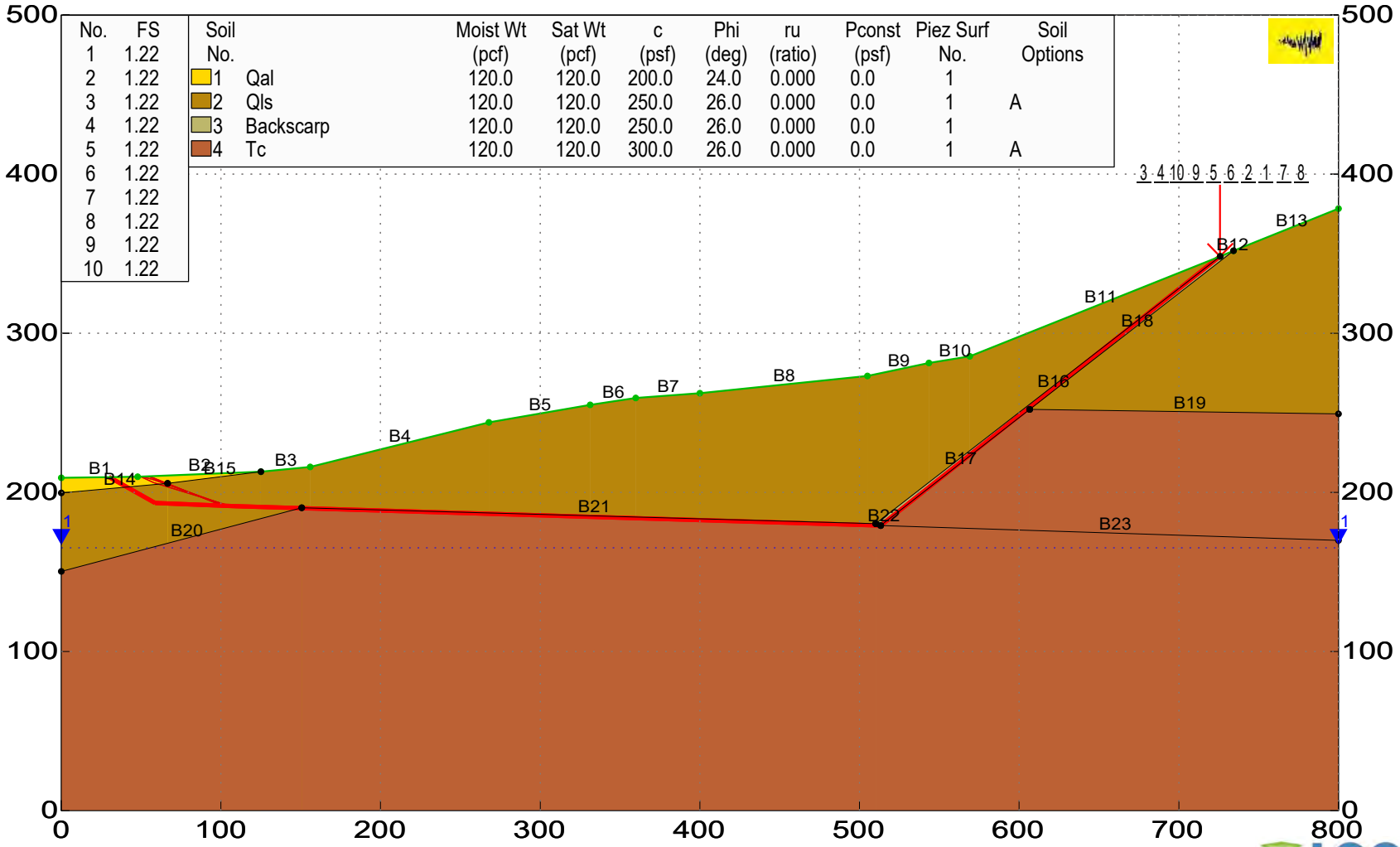
Janbu's Correction Factor (fo) = 1.0695

Janub's FS Corrected = 2.05591

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section B-B'
Existing - Entire Qls - Seismic

LGC Geotechnical, Inc. \xbe.gsd



GEOSTASE FS = 1.22

Spencer Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 3/ 17/ 2023
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec B\2023_03_10\xbe.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec B\2023_03_10\xbe.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section B-B'

DESCRIPTION: Existing - Entire Qls - Seismic

BOUNDARY DATA

13 Surface Boundaries
23 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	209.200	47.800	209.900	1
2	47.800	209.900	125.100	213.000	1
3	125.100	213.000	155.900	216.000	2
4	155.900	216.000	267.800	244.000	2
5	267.800	244.000	331.300	255.000	2
6	331.300	255.000	359.800	259.400	2
7	359.800	259.400	400.000	262.300	2
8	400.000	262.300	505.000	273.200	2
9	505.000	273.200	543.400	281.400	2
10	543.400	281.400	569.100	285.500	2
11	569.100	285.500	725.900	348.400	2
12	725.900	348.400	734.200	351.800	3
13	734.200	351.800	800.000	378.400	2
14	0.000	199.700	66.600	205.700	2
15	66.600	205.700	125.100	213.000	2
16	510.100	180.300	725.900	348.400	3
17	513.200	179.100	606.600	252.100	4
18	606.600	252.100	734.200	351.800	2
19	606.600	252.100	800.000	249.400	4
20	0.000	150.400	150.600	190.400	4
21	150.600	190.400	510.100	180.300	4
22	510.100	180.300	513.200	179.100	4
23	513.200	179.100	800.000	169.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	26.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	26.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-3.0	250.00	22.00
2	3.0	0.00	15.00
3	90.0	250.00	22.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)

1	-3.0	300.00	26.00
2	3.0	0.00	15.00
3	90.0	300.00	26.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	165.10
2	800.00	165.10

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

3 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 50.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	100.00	191.60	200.00	189.20	0.00
2	513.20	179.10	513.20	179.10	0.00
3	725.80	348.30	725.80	348.30	0.00

The Spencer Method Was Selected for FS Analysis.

Selected fx function = Bi-linear

SELECTED CONVERGENCE PARAMETERS FOR SPENCER METHOD:
Initial estimate of FS = 1.500
FS tolerance = 0.000001000
Initial estimate of theta(deg) = 5.00
Theta tolerance(radians) = 0.0001000
Minimum theta(deg) = -45.00 ; Maximum theta(deg) = 45.00
Theta convergence Step Factor = 5000.00
Maximum number of iterations = 50
Allowable negative side force = -1000.0(lbs)
Maximum force imbalance = 100.000000(lbs)
Maximum moment imbalance = 100.000000 (ft/lbs)

Selected Lambda Coefficient = 1.00

Specified Tension Crack Water Depth Factor = 0.000

Total Number of Trial Surfaces Attempted = 1000

WARNING! The Factor of Safety Calculation for one or More Trial Surfaces
Did Not Converge in 50 Iterations.

Number of Trial Surfaces with Non-Converged FS = 30

Number of Trial Surfaces With Valid FS = 970

Percentage of Trial Surfaces With Non-Converged and/or
Non-Valid FS Solutions of the Total Attempted = 3.0 %

Statistical Data On All Valid FS Values:
FS Max = 1.395 FS Min = 1.221 FS Ave = 1.272
Standard Deviation = 0.036 Coefficient of Variation = 2.86 %

Critical Surface is Sequence Number 155 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Iter. No.	Theta (deg) (fx=1.0)	FS (Moment)	FS (Force)	Lambda	Delta FS
1	5.0000	1.416449	1.148921	0.087	0.2675281E+00
2	6.6500	1.407480	1.156151	0.117	0.2513291E+00
3	32.2448	0.000000	1.334842	0.631	0.1334842E+01
4	10.7047	1.376188	1.174885	0.189	0.2013030E+00
5	13.5311	1.343187	1.188962	0.241	0.1542244E+00
6	22.7885	1.049990	1.244486	0.420	0.1944958E+00
7	17.6245	1.267042	1.211350	0.318	0.5569163E-01
8	18.7748	1.235855	1.218179	0.340	0.1767604E-01
9	19.3095	1.219173	1.221449	0.350	0.2275138E-02
10	19.2485	1.221156	1.221073	0.349	0.8294110E-04
11	19.2507	1.221086	1.221086	0.349	0.7333096E-07

Factor Of Safety For The Preceding Specified Surface = 1.221
Theta (fx = 1.0) = 19.25 Deg Lambda = 0.349

The Spencer Method Has Been Selected For Analysis.

Selected fx function = Bi-linear

SELECTED CONVERGENCE PARAMETERS FOR ANALYSIS METHOD:
Initial estimate of FS = 1.500
FS tolerance = 0.000001000
Initial estimate of theta(deg) = 5.00
Theta tolerance(radians) = 0.0001000
Minimum theta(deg) = -45.00 ; Maximum theta(deg) = 45.00
Theta convergence Step Factor = 5000.00
Maximum number of iterations = 50
Maximum force imbalance = 100.000000(lbs)
Maximum moment imbalance(if Applicable) = 100.000000 (ft/lbs)

Selected Lambda Coefficient = 1.00

Tension Crack Water Force = 0.00(lbs)

Specified Tension Crack Water Depth Factor = 0.000

Depth of Tension Crack (zo) at Side of Last Slice = 0.000(ft)

Depth of Water in Tension Crack = 0.000(ft)

Theoretical Tension Crack Depth = 6.177(ft)

NOTE: In Table 1 following, when a tension crack with water is present on the first slice (right facing slope) or on the last slice (left facing slope), the "side force" in the tension crack is set equal to the water pressure resultant.

*** Table 1 - Line of Thrust(if applicable) and Slice Force Data ***

Slice No.	X Coord.	Y Coord.	h/H	Side Force (lbs)	fx	Force Angle (Deg)	Vert. Shear Force(lbs)
1	35.42	209.04	0.790	4633.27	1.000	19.25	1527.6
2	40.97	207.61	0.659	13147.58	1.000	19.25	4334.8
3	44.38	206.73	0.628	20038.13	1.000	19.25	6606.6
4	47.80	205.84	0.608	28248.32	1.000	19.25	9313.5
5	53.29	204.40	0.581	44269.63	1.000	19.25	14595.8
6	58.77	202.92	0.563	63844.28	1.000	19.25	21049.6
7	62.69	203.95	0.621	64886.96	1.000	19.25	21393.4
8	66.60	204.96	0.677	65948.60	1.000	19.25	21743.4
9	71.87	206.28	0.746	67407.29	1.000	19.25	22224.3
10	77.13	207.57	0.810	68900.32	1.000	19.25	22716.6
11	82.40	208.81	0.869	70427.68	1.000	19.25	23220.2
12	87.67	210.02	0.923	71989.38	1.000	19.25	23735.1
13	92.93	211.19	0.974	73585.41	1.000	19.25	24261.3
14	98.20	212.33	1.000+	75215.78	1.000	19.25	24798.8
15	103.47	213.43	1.000+	76880.48	1.000	19.25	25347.7
16	108.73	214.50	1.000+	78579.52	1.000	19.25	25907.8
17	114.19	215.63	1.000+	80211.05	1.000	19.25	26445.8
18	119.64	216.72	1.000+	81872.24	1.000	19.25	26993.5
19	125.10	217.79	1.000+	83563.10	1.000	19.25	27550.9
20	130.01	218.72	1.000+	85119.96	1.000	19.25	28064.2
21	134.92	219.61	1.000+	86720.39	1.000	19.25	28591.9
22	139.83	220.47	1.000+	88364.38	1.000	19.25	29133.9
23	144.74	221.30	1.000+	90051.93	1.000	19.25	29690.3
24	149.65	222.10	1.000+	91783.05	1.000	19.25	30261.1
25	150.60	222.25	1.000+	92123.77	1.000	19.25	30373.4
26	153.25	222.66	1.000+	93080.82	1.000	19.25	30689.0
27	155.90	223.06	1.000+	94050.57	1.000	19.25	31008.7
28	160.99	223.79	1.000+	95975.40	1.000	19.25	31643.3
29	166.07	224.45	1.000+	98002.90	1.000	19.25	32311.8
30	171.16	225.04	1.000+	100133.09	1.000	19.25	33014.1
31	176.25	225.57	1.000+	102365.95	1.000	19.25	33750.3
32	181.33	226.03	1.000+	104701.49	1.000	19.25	34520.3
33	186.42	226.42	1.000+	107139.70	1.000	19.25	35324.2
34	191.50	226.76	1.000+	109680.59	1.000	19.25	36161.9
35	196.59	227.04	1.000+	112324.16	1.000	19.25	37033.5
36	201.68	227.26	0.995	115070.41	1.000	19.25	37939.0
37	206.76	227.44	0.968	117919.33	1.000	19.25	38878.3
38	211.85	227.56	0.942	120870.93	1.000	19.25	39851.4
39	216.94	227.64	0.916	123925.21	1.000	19.25	40858.4
40	222.02	227.67	0.891	127082.17	1.000	19.25	41899.3
41	227.11	227.67	0.866	130341.80	1.000	19.25	42974.0
42	232.20	227.63	0.843	133704.11	1.000	19.25	44082.5
43	237.28	227.55	0.820	137169.09	1.000	19.25	45224.9
44	242.37	227.44	0.797	140736.76	1.000	19.25	46401.2
45	247.45	227.30	0.776	144407.10	1.000	19.25	47611.3
46	252.54	227.13	0.754	148180.12	1.000	19.25	48855.3
47	257.63	226.93	0.734	152055.81	1.000	19.25	50133.1
48	262.71	226.71	0.714	156034.19	1.000	19.25	51444.8
49	267.80	226.47	0.695	160115.24	1.000	19.25	52790.3
50	272.68	226.22	0.681	164118.07	1.000	19.25	54110.1
51	277.57	225.98	0.668	168189.62	1.000	19.25	55452.5
52	282.45	225.74	0.656	172329.87	1.000	19.25	56817.5
53	287.34	225.50	0.644	176538.84	1.000	19.25	58205.2
54	292.22	225.26	0.632	180816.52	1.000	19.25	59615.6
55	297.11	225.02	0.621	185162.91	1.000	19.25	61048.6
56	301.99	224.79	0.610	189578.01	1.000	19.25	62504.3
57	306.88	224.56	0.599	194061.82	1.000	19.25	63982.6
58	311.76	224.32	0.589	198614.35	1.000	19.25	65483.6
59	316.65	224.09	0.579	203235.58	1.000	19.25	67007.2
60	321.53	223.87	0.569	207925.53	1.000	19.25	68553.5
61	326.42	223.64	0.560	212684.18	1.000	19.25	70122.4
62	331.30	223.42	0.551	217511.55	1.000	19.25	71714.0
63	336.05	223.21	0.543	222268.77	1.000	19.25	73282.5
64	340.80	223.00	0.536	227084.95	1.000	19.25	74870.4
65	345.55	222.80	0.529	231960.10	1.000	19.25	76477.7
66	350.30	222.60	0.522	236894.21	1.000	19.25	78104.5
67	355.05	222.42	0.515	241887.28	1.000	19.25	79750.8
68	359.80	222.23	0.509	246939.31	1.000	19.25	81416.4
69	364.82	222.05	0.505	252333.33	1.000	19.25	83194.8
70	369.85	221.89	0.501	257763.96	1.000	19.25	84985.3
71	374.88	221.75	0.498	263231.21	1.000	19.25	86787.9
72	379.90	221.63	0.495	268735.08	1.000	19.25	88602.5
73	384.93	221.52	0.493	274275.55	1.000	19.25	90429.2
74	389.95	221.44	0.490	279852.65	1.000	19.25	92268.0
75	394.98	221.37	0.488	285466.36	1.000	19.25	94118.9
76	400.00	221.31	0.486	291116.68	1.000	19.25	95981.8
77	405.00	221.27	0.483	296780.84	1.000	19.25	97849.3
78	410.00	221.24	0.481	302492.44	1.000	19.25	99732.4

79	415.00	221.21	0.479	308251.50	1.000	19.25	101631.2
80	420.00	221.19	0.476	314058.00	1.000	19.25	103545.6
81	425.00	221.18	0.474	319911.96	1.000	19.25	105475.7
82	430.00	221.18	0.472	325813.36	1.000	19.25	107421.4
83	435.00	221.18	0.470	331762.22	1.000	19.25	109382.7
84	440.00	221.19	0.468	337758.52	1.000	19.25	111359.7
85	445.00	221.21	0.467	343802.28	1.000	19.25	113352.4
86	450.00	221.23	0.465	349893.48	1.000	19.25	115360.6
87	455.00	221.26	0.464	356032.14	1.000	19.25	117384.6
88	460.00	221.29	0.462	362218.24	1.000	19.25	119424.1
89	465.00	221.33	0.461	368451.80	1.000	19.25	121479.4
90	470.00	221.37	0.459	374732.80	1.000	19.25	123550.2
91	475.00	221.42	0.458	381061.26	1.000	19.25	125636.7
92	480.00	221.48	0.457	387437.16	1.000	19.25	127738.9
93	485.00	221.53	0.456	393860.52	1.000	19.25	129856.7
94	490.00	221.59	0.455	400331.32	1.000	19.25	131990.1
95	495.00	221.66	0.454	406849.57	1.000	19.25	134139.2
96	500.00	221.73	0.453	413415.28	1.000	19.25	136303.9
97	505.00	221.80	0.452	420028.43	1.000	19.25	138484.3
98	507.55	221.84	0.451	423424.46	1.000	19.25	139604.0
99	510.10	221.88	0.449	426842.92	1.000	19.25	140731.0
100	513.20	221.91	0.447	431028.91	1.000	19.25	142111.2
101	518.23	225.02	0.451	407618.67	1.000	19.25	134392.8
102	523.27	228.13	0.456	384973.42	1.000	19.25	126926.6
103	528.30	231.26	0.461	363093.16	1.000	19.25	119712.6
104	533.33	234.40	0.467	341977.89	1.000	19.25	112750.9
105	538.37	237.55	0.473	321627.60	1.000	19.25	106041.3
106	543.40	240.72	0.480	302042.30	1.000	19.25	99584.0
107	548.54	243.96	0.490	282868.43	1.000	19.25	93262.3
108	553.68	247.22	0.501	264566.30	1.000	19.25	87228.1
109	558.82	250.50	0.513	247135.91	1.000	19.25	81481.2
110	563.96	253.78	0.526	230577.27	1.000	19.25	76021.8
111	569.10	257.07	0.541	214890.37	1.000	19.25	70849.8
112	574.15	260.33	0.546	200153.51	1.000	19.25	65991.0
113	579.21	263.61	0.552	185939.63	1.000	19.25	61304.7
114	584.26	266.92	0.559	172248.72	1.000	19.25	56790.8
115	589.32	270.19	0.566	159041.99	0.981	18.91	51538.5
116	594.37	273.40	0.572	146346.52	0.945	18.26	45843.9
117	599.43	276.57	0.578	134200.05	0.908	17.60	40573.1
118	604.48	279.72	0.583	122597.86	0.872	16.94	35711.4
119	609.54	282.84	0.589	111535.55	0.836	16.27	31244.2
120	614.59	285.93	0.595	101008.96	0.799	15.60	27156.5
121	619.65	289.00	0.600	91014.29	0.763	14.92	23432.9
122	624.70	292.03	0.605	81548.03	0.727	14.24	20058.2
123	629.76	295.04	0.610	72607.01	0.690	13.55	17016.7
124	634.81	298.02	0.615	64188.43	0.654	12.87	14292.6
125	639.87	300.97	0.620	56289.84	0.618	12.17	11869.7
126	644.92	303.89	0.624	48909.17	0.581	11.48	9731.7
127	649.98	306.79	0.628	42044.76	0.545	10.78	7862.2
128	655.03	309.67	0.632	35695.36	0.509	10.07	6244.2
129	660.09	312.52	0.635	29860.12	0.472	9.37	4860.9
130	665.14	315.35	0.638	24538.68	0.436	8.66	3694.8
131	670.20	318.16	0.641	19731.09	0.400	7.95	2728.5
132	675.25	320.96	0.644	15437.89	0.363	7.23	1944.1
133	680.31	323.76	0.647	11660.12	0.327	6.52	1323.7
134	685.36	326.56	0.652	8399.31	0.291	5.80	848.8
135	690.42	329.42	0.662	5657.49	0.255	5.08	501.0
136	695.47	332.41	0.686	3437.23	0.218	4.36	261.2
137	700.53	335.83	0.762	1741.66	0.182	3.64	110.4
138	705.58	341.40	1.000+	574.44	0.146	2.91	29.2
139	710.64	302.14	0.000-	-60.17	0.109	2.19	-2.3
140	715.69	331.91	0.000-	-157.37	0.073	1.46	-4.0
141	720.75	346.44	1.000+	288.29	0.037	0.73	3.7
142	725.80	346.29	0.000-	1282.82	0.000	0.01	0.2
143	725.83	346.31	0.000-	1294.40	0.000	0.00	0.1
144	725.85	348.38	0.000	1305.57	0.000	0.00	0.0

NOTE: A value of 0.000- for h/H indicates that the line of thrust is at or below the lower boundary of the sliding mass. A value of 1.000+ for h/H indicates that the line of thrust is at or above the upper boundary of the sliding mass.

Table 2 - Geometry Data on the 144 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.55	1.60	32.65	208.08	209.68	-29.39	0.84	6.37
2	5.55	4.81	38.19	204.95	209.76	-29.39	0.84	6.37
3	3.42	7.40	42.68	202.43	209.82	-29.39	0.84	3.92
4	3.42	9.37	46.09	200.50	209.87	-29.39	0.84	3.92
5	5.49	12.01	50.54	198.00	210.01	-29.39	2.30	6.30
6	5.49	15.32	56.03	194.91	210.23	-29.39	2.30	6.30
7	3.91	17.13	60.73	193.29	210.42	-2.26	2.30	3.92
8	3.91	17.44	64.64	193.13	210.58	-2.26	2.30	3.92
9	5.27	17.81	69.23	192.95	210.76	-2.26	2.30	5.27
10	5.27	18.23	74.50	192.74	210.97	-2.26	2.30	5.27
11	5.27	18.65	79.77	192.53	211.18	-2.26	2.30	5.27
12	5.27	19.07	85.03	192.33	211.39	-2.26	2.30	5.27
13	5.27	19.49	90.30	192.12	211.60	-2.26	2.30	5.27
14	5.27	19.91	95.57	191.91	211.82	-2.26	2.30	5.27
15	5.27	20.32	100.83	191.70	212.03	-2.26	2.30	5.27
16	5.27	20.74	106.10	191.49	212.24	-2.26	2.30	5.27
17	5.46	21.15	111.46	191.31	212.45	-1.74	2.30	5.46
18	5.46	21.53	116.92	191.14	212.67	-1.74	2.30	5.46
19	5.46	21.91	122.37	190.98	212.89	-1.74	2.30	5.46
20	4.91	22.42	127.55	190.82	213.24	-1.74	5.56	4.91
21	4.91	23.05	132.46	190.67	213.72	-1.74	5.56	4.91
22	4.91	23.68	137.37	190.52	214.20	-1.74	5.56	4.91
23	4.91	24.30	142.28	190.37	214.67	-1.74	5.56	4.91
24	4.91	24.93	147.19	190.22	215.15	-1.74	5.56	4.91
25	0.95	25.30	150.12	190.13	215.44	-1.74	5.56	0.95
26	2.65	25.53	151.93	190.08	215.61	-1.74	5.56	2.65
27	2.65	25.87	154.57	190.00	215.87	-1.74	5.56	2.65
28	5.09	26.76	158.44	189.88	216.64	-1.74	14.05	5.09
29	5.09	28.18	163.53	189.73	217.91	-1.74	14.05	5.09
30	5.09	29.61	168.62	189.57	219.18	-1.74	14.05	5.09
31	5.09	31.04	173.70	189.42	220.45	-1.74	14.05	5.09
32	5.09	32.47	178.79	189.26	221.73	-1.74	14.05	5.09
33	5.09	33.89	183.88	189.11	223.00	-1.74	14.05	5.09
34	5.09	35.32	188.96	188.95	224.27	-1.74	14.05	5.09
35	5.09	36.75	194.05	188.80	225.55	-1.74	14.05	5.09
36	5.09	38.17	199.13	188.64	226.82	-1.74	14.05	5.09
37	5.09	39.60	204.22	188.49	228.09	-1.74	14.05	5.09
38	5.09	41.03	209.31	188.33	229.36	-1.74	14.05	5.09
39	5.09	42.46	214.39	188.18	230.64	-1.74	14.05	5.09
40	5.09	43.88	219.48	188.03	231.91	-1.74	14.05	5.09
41	5.09	45.31	224.57	187.87	233.18	-1.74	14.05	5.09
42	5.09	46.74	229.65	187.72	234.45	-1.74	14.05	5.09

43	5.09	48.17	234.74	187.56	235.73	-1.74	14.05	5.09
44	5.09	49.59	239.83	187.41	237.00	-1.74	14.05	5.09
45	5.09	51.02	244.91	187.25	238.27	-1.74	14.05	5.09
46	5.09	52.45	250.00	187.10	239.55	-1.74	14.05	5.09
47	5.09	53.87	255.08	186.94	240.82	-1.74	14.05	5.09
48	5.09	55.30	260.17	186.79	242.09	-1.74	14.05	5.09
49	5.09	56.73	265.26	186.63	243.36	-1.74	14.05	5.09
50	4.88	57.94	270.24	186.48	244.42	-1.74	9.83	4.89
51	4.88	58.93	275.13	186.33	245.27	-1.74	9.83	4.89
52	4.88	59.93	280.01	186.19	246.12	-1.74	9.83	4.89
53	4.88	60.92	284.90	186.04	246.96	-1.74	9.83	4.89
54	4.88	61.92	289.78	185.89	247.81	-1.74	9.83	4.89
55	4.88	62.91	294.67	185.74	248.65	-1.74	9.83	4.89
56	4.88	63.91	299.55	185.59	249.50	-1.74	9.83	4.89
57	4.88	64.90	304.43	185.44	250.35	-1.74	9.83	4.89
58	4.88	65.90	309.32	185.30	251.19	-1.74	9.83	4.89
59	4.88	66.89	314.20	185.15	252.04	-1.74	9.83	4.89
60	4.88	67.89	319.09	185.00	252.88	-1.74	9.83	4.89
61	4.88	68.88	323.97	184.85	253.73	-1.74	9.83	4.89
62	4.88	69.88	328.86	184.70	254.58	-1.74	9.83	4.89
63	4.75	70.81	333.68	184.56	255.37	-1.74	8.78	4.75
64	4.75	71.69	338.43	184.41	256.10	-1.74	8.78	4.75
65	4.75	72.57	343.18	184.27	256.83	-1.74	8.78	4.75
66	4.75	73.44	347.93	184.12	257.57	-1.74	8.78	4.75
67	4.75	74.32	352.68	183.98	258.30	-1.74	8.78	4.75
68	4.75	75.20	357.43	183.83	259.03	-1.74	8.78	4.75
69	5.02	75.90	362.31	183.68	259.58	-1.74	4.13	5.03
70	5.03	76.41	367.34	183.53	259.94	-1.74	4.13	5.03
71	5.02	76.93	372.36	183.38	260.31	-1.74	4.13	5.03
72	5.02	77.44	377.39	183.23	260.67	-1.74	4.13	5.03
73	5.03	77.96	382.41	183.07	261.03	-1.74	4.13	5.03
74	5.02	78.47	387.44	182.92	261.39	-1.74	4.13	5.03
75	5.03	78.99	392.46	182.77	261.76	-1.74	4.13	5.03
76	5.02	79.50	397.49	182.62	262.12	-1.74	4.13	5.03
77	5.00	80.10	402.50	182.46	262.56	-1.74	5.93	5.00
78	5.00	80.77	407.50	182.31	263.08	-1.74	5.93	5.00
79	5.00	81.44	412.50	182.16	263.60	-1.74	5.93	5.00
80	5.00	82.11	417.50	182.01	264.12	-1.74	5.93	5.00
81	5.00	82.78	422.50	181.86	264.64	-1.74	5.93	5.00
82	5.00	83.45	427.50	181.70	265.15	-1.74	5.93	5.00
83	5.00	84.12	432.50	181.55	265.67	-1.74	5.93	5.00
84	5.00	84.79	437.50	181.40	266.19	-1.74	5.93	5.00
85	5.00	85.46	442.50	181.25	266.71	-1.74	5.93	5.00
86	5.00	86.13	447.50	181.10	267.23	-1.74	5.93	5.00
87	5.00	86.81	452.50	180.94	267.75	-1.74	5.93	5.00
88	5.00	87.48	457.50	180.79	268.27	-1.74	5.93	5.00
89	5.00	88.15	462.50	180.64	268.79	-1.74	5.93	5.00
90	5.00	88.82	467.50	180.49	269.31	-1.74	5.93	5.00
91	5.00	89.49	472.50	180.34	269.83	-1.74	5.93	5.00
92	5.00	90.16	477.50	180.18	270.35	-1.74	5.93	5.00
93	5.00	90.83	482.50	180.03	270.86	-1.74	5.93	5.00
94	5.00	91.50	487.50	179.88	271.38	-1.74	5.93	5.00
95	5.00	92.17	492.50	179.73	271.90	-1.74	5.93	5.00
96	5.00	92.84	497.50	179.58	272.42	-1.74	5.93	5.00
97	5.00	93.52	502.50	179.43	272.94	-1.74	5.93	5.00
98	2.55	94.16	506.27	179.31	273.47	-1.74	12.05	2.55
99	2.55	94.78	508.83	179.23	274.02	-1.74	12.05	2.55
100	3.10	95.47	511.65	179.15	274.62	-1.74	12.05	3.10
101	5.03	94.39	515.72	181.10	275.49	38.51	12.05	6.43
102	5.03	91.45	520.75	185.11	276.56	38.51	12.05	6.43
103	5.03	88.52	525.78	189.11	277.64	38.51	12.05	6.43
104	5.03	85.59	530.82	193.12	278.71	38.51	12.05	6.43
105	5.03	82.66	535.85	197.13	279.79	38.51	12.05	6.43
106	5.03	79.73	540.88	201.13	280.86	38.51	12.05	6.43
107	5.14	76.63	545.97	205.18	281.81	38.51	9.06	6.57
108	5.14	73.36	551.11	209.27	282.63	38.51	9.06	6.57
109	5.14	70.09	556.25	213.36	283.45	38.51	9.06	6.57
110	5.14	66.82	561.39	217.45	284.27	38.51	9.06	6.57
111	5.14	63.55	566.53	221.54	285.09	38.51	9.06	6.57
112	5.05	60.91	571.63	225.60	286.51	38.51	21.86	6.46
113	5.05	58.92	576.68	229.62	288.54	38.51	21.86	6.46
114	5.05	56.92	581.74	233.65	290.57	38.51	21.86	6.46
115	5.05	54.93	586.79	237.67	292.60	38.51	21.86	6.46
116	5.05	52.93	591.85	241.69	294.62	38.51	21.86	6.46
117	5.05	50.94	596.90	245.71	296.65	38.51	21.86	6.46
118	5.05	48.94	601.96	249.74	298.68	38.51	21.86	6.46
119	5.05	46.95	607.01	253.76	300.71	38.51	21.86	6.46
120	5.05	44.95	612.07	257.78	302.74	38.51	21.86	6.46
121	5.05	42.96	617.12	261.81	304.76	38.51	21.86	6.46
122	5.05	40.96	622.18	265.83	306.79	38.51	21.86	6.46
123	5.05	38.97	627.23	269.85	308.82	38.51	21.86	6.46
124	5.05	36.97	632.29	273.88	310.85	38.51	21.86	6.46
125	5.05	34.98	637.34	277.90	312.87	38.51	21.86	6.46
126	5.05	32.98	642.40	281.92	314.90	38.51	21.86	6.46
127	5.05	30.99	647.45	285.94	316.93	38.51	21.86	6.46
128	5.05	28.99	652.50	289.97	318.96	38.51	21.86	6.46
129	5.05	27.00	657.56	293.99	320.99	38.51	21.86	6.46
130	5.05	25.00	662.61	298.01	323.01	38.51	21.86	6.46
131	5.05	23.00	667.67	302.04	325.04	38.51	21.86	6.46
132	5.05	21.01	672.72	306.06	327.07	38.51	21.86	6.46
133	5.05	19.01	677.78	310.08	329.10	38.51	21.86	6.46
134	5.05	17.02	682.83	314.10	331.12	38.51	21.86	6.46
135	5.05	15.02	687.89	318.13	333.15	38.51	21.86	6.46
136	5.05	13.03	692.94	322.15	335.18	38.51	21.86	6.46
137	5.05	11.03	698.00	326.17	337.21	38.51	21.86	6.46
138	5.05	9.04	703.05	330.20	339.24	38.51	21.86	6.46
139	5.05	7.04	708.11	334.22	341.26	38.51	21.86	6.46
140	5.05	5.05	713.16	338.24	343.29	38.51	21.86	6.46
141	5.05	3.05	718.22	342.27	345.32	38.51	21.86	6.46
142	5.05	1.06	723.27	346.29	347.35	38.51	21.86	6.46
143	0.03	0.04	725.81	348.32	348.36	58.82	21.86	0.05
144	0.02	0.01	725.84	348.36	348.37	58.82	21.86	0.04

Table 2A - Coordinates of Slice Points Defining the Slip Surface

Point No.	X-Pt (ft)	Y-Pt (ft)
1	29.874568	209.637494
2	35.420866	206.514115
3	40.967165	203.390736
4	44.383582	201.466792
5	47.800000	199.542848
6	53.286537	196.453123
7	58.773074	193.363399
8	62.686537	193.208852
9	66.600000	193.054305
10	71.866766	192.846314

11	77.133533	192.638324
12	82.400299	192.430333
13	87.667065	192.222343
14	92.933832	192.014352
15	98.200598	191.806362
16	103.467365	191.598371
17	108.734131	191.390381
18	114.189421	191.224613
19	119.644710	191.058844
20	125.100000	190.893076
21	130.009599	190.743890
22	134.919198	190.594703
23	139.828798	190.445517
24	144.738397	190.296330
25	149.647996	190.147144
26	150.600000	190.118215
27	153.250000	190.037691
28	155.900000	189.957166
29	160.986364	189.802608
30	166.072727	189.648050
31	171.159091	189.493493
32	176.245455	189.338935
33	181.331818	189.184377
34	186.418182	189.029819
35	191.504545	188.875262
36	196.590909	188.720704
37	201.677273	188.566146
38	206.763636	188.411588
39	211.850000	188.257030
40	216.936364	188.102473
41	222.022727	187.947915
42	227.109091	187.793357
43	232.195455	187.638799
44	237.281818	187.484242
45	242.368182	187.329684
46	247.454545	187.175126
47	252.540909	187.020568
48	257.627273	186.866010
49	262.713636	186.711453
50	267.800000	186.556895
51	272.684615	186.408468
52	277.569231	186.260040
53	282.453846	186.111613
54	287.338462	185.963186
55	292.223077	185.814758
56	297.107692	185.666331
57	301.992308	185.517904
58	306.876923	185.369476
59	311.761538	185.221049
60	316.646154	185.072622
61	321.530769	184.924194
62	326.415385	184.775767
63	331.300000	184.627340
64	336.050000	184.483003
65	340.800000	184.338666
66	345.550000	184.194329
67	350.300000	184.049993
68	355.050000	183.905656
69	359.800000	183.761319
70	364.825000	183.608626
71	369.850000	183.455933
72	374.875000	183.303240
73	379.900000	183.150546
74	384.925000	182.997853
75	389.950000	182.845160
76	394.975000	182.692467
77	400.000000	182.539774
78	405.000000	182.387840
79	410.000000	182.235907
80	415.000000	182.083973
81	420.000000	181.932040
82	425.000000	181.780106
83	430.000000	181.628173
84	435.000000	181.476240
85	440.000000	181.324306
86	445.000000	181.172373
87	450.000000	181.020439
88	455.000000	180.868506
89	460.000000	180.716572
90	465.000000	180.564639
91	470.000000	180.412705
92	475.000000	180.260772
93	480.000000	180.108838
94	485.000000	179.956905
95	490.000000	179.804971
96	495.000000	179.653038
97	500.000000	179.501104
98	505.000000	179.349171
99	507.550000	179.271685
100	510.100000	179.194199
101	513.200000	179.100000
102	518.233333	183.105833
103	523.266667	187.111665
104	528.300000	191.117498
105	533.333333	195.123330
106	538.366667	199.129163
107	543.400000	203.134995
108	548.540000	207.225720
109	553.680000	211.316444
110	558.820000	215.407168
111	563.960000	219.497893
112	569.100000	223.588617
113	574.154839	227.611565
114	579.209677	231.634513
115	584.264516	235.657461
116	589.319355	239.680408
117	594.374194	243.703356
118	599.429032	247.726304
119	604.483871	251.749252
120	609.538710	255.772200
121	614.593548	259.795148
122	619.648387	263.818095
123	624.703226	267.841043
124	629.758065	271.863991
125	634.812903	275.886939
126	639.867742	279.909887
127	644.922581	283.932835
128	649.977419	287.955782
129	655.032258	291.978730
130	660.087097	296.001678

131	665.141935	300.024626
132	670.196774	304.047574
133	675.251613	308.070522
134	680.306452	312.093469
135	685.361290	316.116417
136	690.416129	320.139365
137	695.470968	324.162313
138	700.525806	328.185261
139	705.580645	332.208209
140	710.635484	336.231156
141	715.690323	340.254104
142	720.745161	344.277052
143	725.800000	348.300000
144	725.825307	348.341817
145	725.847861	348.379085

Table 3 - Force and Pore Pressure Data On The 144 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ubeta Stress Top (psf)	Ualpha Force Bot (lbs)	Pore Pressure (psf)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1066.4	0.0	0.0	0.0	0.0	160.0	0.0	0.00
2	3199.3	0.0	0.0	0.0	0.0	479.9	0.0	0.00
3	3032.2	0.0	0.0	0.0	0.0	454.8	0.0	0.00
4	3841.5	0.0	0.0	0.0	0.0	576.2	0.0	0.00
5	7908.5	0.0	0.0	0.0	0.0	1186.3	0.0	0.00
6	10087.6	0.0	0.0	0.0	0.0	1513.1	0.0	0.00
7	8045.6	0.0	0.0	0.0	0.0	1206.8	0.0	0.00
8	8191.9	0.0	0.0	0.0	0.0	1228.8	0.0	0.00
9	11255.7	0.0	0.0	0.0	0.0	1688.3	0.0	0.00
10	11520.6	0.0	0.0	0.0	0.0	1728.1	0.0	0.00
11	11785.5	0.0	0.0	0.0	0.0	1767.8	0.0	0.00
12	12050.5	0.0	0.0	0.0	0.0	1807.6	0.0	0.00
13	12315.4	0.0	0.0	0.0	0.0	1847.3	0.0	0.00
14	12580.4	0.0	0.0	0.0	0.0	1887.1	0.0	0.00
15	12845.3	0.0	0.0	0.0	0.0	1926.8	0.0	0.00
16	13110.3	0.0	0.0	0.0	0.0	1966.5	0.0	0.00
17	13842.6	0.0	0.0	0.0	0.0	2076.4	0.0	0.00
18	14094.4	0.0	0.0	0.0	0.0	2114.2	0.0	0.00
19	14346.1	0.0	0.0	0.0	0.0	2151.9	0.0	0.00
20	13209.2	0.0	0.0	0.0	0.0	1981.4	0.0	0.00
21	13578.8	0.0	0.0	0.0	0.0	2036.8	0.0	0.00
22	13948.4	0.0	0.0	0.0	0.0	2092.3	0.0	0.00
23	14318.0	0.0	0.0	0.0	0.0	2147.7	0.0	0.00
24	14687.7	0.0	0.0	0.0	0.0	2203.2	0.0	0.00
25	2890.8	0.0	0.0	0.0	0.0	433.6	0.0	0.00
26	8120.1	0.0	0.0	0.0	0.0	1218.0	0.0	0.00
27	8227.8	0.0	0.0	0.0	0.0	1234.2	0.0	0.00
28	16331.2	0.0	0.0	0.0	0.0	2449.7	0.0	0.00
29	17202.3	0.0	0.0	0.0	0.0	2580.4	0.0	0.00
30	18073.5	0.0	0.0	0.0	0.0	2711.0	0.0	0.00
31	18944.7	0.0	0.0	0.0	0.0	2841.7	0.0	0.00
32	19815.8	0.0	0.0	0.0	0.0	2972.4	0.0	0.00
33	20687.0	0.0	0.0	0.0	0.0	3103.0	0.0	0.00
34	21558.2	0.0	0.0	0.0	0.0	3233.7	0.0	0.00
35	22429.3	0.0	0.0	0.0	0.0	3364.4	0.0	0.00
36	23300.5	0.0	0.0	0.0	0.0	3495.1	0.0	0.00
37	24171.6	0.0	0.0	0.0	0.0	3625.7	0.0	0.00
38	25042.8	0.0	0.0	0.0	0.0	3756.4	0.0	0.00
39	25914.0	0.0	0.0	0.0	0.0	3887.1	0.0	0.00
40	26785.1	0.0	0.0	0.0	0.0	4017.8	0.0	0.00
41	27656.3	0.0	0.0	0.0	0.0	4148.4	0.0	0.00
42	28527.5	0.0	0.0	0.0	0.0	4279.1	0.0	0.00
43	29398.6	0.0	0.0	0.0	0.0	4409.8	0.0	0.00
44	30269.8	0.0	0.0	0.0	0.0	4540.5	0.0	0.00
45	31140.9	0.0	0.0	0.0	0.0	4671.1	0.0	0.00
46	32012.1	0.0	0.0	0.0	0.0	4801.8	0.0	0.00
47	32883.3	0.0	0.0	0.0	0.0	4932.5	0.0	0.00
48	33754.4	0.0	0.0	0.0	0.0	5063.2	0.0	0.00
49	34625.6	0.0	0.0	0.0	0.0	5193.8	0.0	0.00
50	33962.0	0.0	0.0	0.0	0.0	5094.3	0.0	0.00
51	34545.0	0.0	0.0	0.0	0.0	5181.7	0.0	0.00
52	35127.9	0.0	0.0	0.0	0.0	5269.2	0.0	0.00
53	35710.9	0.0	0.0	0.0	0.0	5356.6	0.0	0.00
54	36293.9	0.0	0.0	0.0	0.0	5444.1	0.0	0.00
55	36876.9	0.0	0.0	0.0	0.0	5531.5	0.0	0.00
56	37459.9	0.0	0.0	0.0	0.0	5619.0	0.0	0.00
57	38042.8	0.0	0.0	0.0	0.0	5706.4	0.0	0.00
58	38625.8	0.0	0.0	0.0	0.0	5793.9	0.0	0.00
59	39208.8	0.0	0.0	0.0	0.0	5881.3	0.0	0.00
60	39791.8	0.0	0.0	0.0	0.0	5968.8	0.0	0.00
61	40374.7	0.0	0.0	0.0	0.0	6056.2	0.0	0.00
62	40957.7	0.0	0.0	0.0	0.0	6143.7	0.0	0.00
63	40362.6	0.0	0.0	0.0	0.0	6054.4	0.0	0.00
64	40862.8	0.0	0.0	0.0	0.0	6129.4	0.0	0.00
65	41363.1	0.0	0.0	0.0	0.0	6204.5	0.0	0.00
66	41863.4	0.0	0.0	0.0	0.0	6279.5	0.0	0.00
67	42363.6	0.0	0.0	0.0	0.0	6354.5	0.0	0.00
68	42863.9	0.0	0.0	0.0	0.0	6429.6	0.0	0.00
69	45765.5	0.0	0.0	0.0	0.0	6864.8	0.0	0.00
70	46076.1	0.0	0.0	0.0	0.0	6911.4	0.0	0.00
71	46386.8	0.0	0.0	0.0	0.0	6958.0	0.0	0.00
72	46697.4	0.0	0.0	0.0	0.0	7004.6	0.0	0.00
73	47008.1	0.0	0.0	0.0	0.0	7051.2	0.0	0.00
74	47318.8	0.0	0.0	0.0	0.0	7097.8	0.0	0.00
75	47629.4	0.0	0.0	0.0	0.0	7144.4	0.0	0.00
76	47940.1	0.0	0.0	0.0	0.0	7191.0	0.0	0.00
77	48057.4	0.0	0.0	0.0	0.0	7208.6	0.0	0.00
78	48460.0	0.0	0.0	0.0	0.0	7269.0	0.0	0.00
79	48862.6	0.0	0.0	0.0	0.0	7329.4	0.0	0.00
80	49265.2	0.0	0.0	0.0	0.0	7389.8	0.0	0.00
81	49667.8	0.0	0.0	0.0	0.0	7450.2	0.0	0.00
82	50070.4	0.0	0.0	0.0	0.0	7510.6	0.0	0.00
83	50473.0	0.0	0.0	0.0	0.0	7570.9	0.0	0.00
84	50875.6	0.0	0.0	0.0	0.0	7631.3	0.0	0.00
85	51278.1	0.0	0.0	0.0	0.0	7691.7	0.0	0.00
86	51680.7	0.0	0.0	0.0	0.0	7752.1	0.0	0.00
87	52083.3	0.0	0.0	0.0	0.0	7812.5	0.0	0.00
88	52485.9	0.0	0.0	0.0	0.0	7872.9	0.0	0.00
89	52888.5	0.0	0.0	0.0	0.0	7933.3	0.0	0.00
90	53291.1	0.0	0.0	0.0	0.0	7993.7	0.0	0.00
91	53693.7	0.0	0.0	0.0	0.0	8054.1	0.0	0.00
92	54096.3	0.0	0.0	0.0	0.0	8114.4	0.0	0.00
93	54498.8	0.0	0.0	0.0	0.0	8174.8	0.0	0.00
94	54901.4	0.0	0.0	0.0	0.0	8235.2	0.0	0.00
95	55304.0	0.0	0.0	0.0	0.0	8295.6	0.0	0.00
96	55706.6	0.0	0.0	0.0	0.0	8356.0	0.0	0.00

97	56109.2	0.0	0.0	0.0	0.0	8416.4	0.0	0.00
98	28813.5	0.0	0.0	0.0	0.0	4322.0	0.0	0.00
99	29003.9	0.0	0.0	0.0	0.0	4350.6	0.0	0.00
100	35515.9	0.0	0.0	0.0	0.0	5327.4	0.0	0.00
101	57008.9	0.0	0.0	0.0	0.0	8551.3	0.0	0.00
102	55238.5	0.0	0.0	0.0	0.0	8285.8	0.0	0.00
103	53468.2	0.0	0.0	0.0	0.0	8020.2	0.0	0.00
104	51697.9	0.0	0.0	0.0	0.0	7754.7	0.0	0.00
105	49927.6	0.0	0.0	0.0	0.0	7489.1	0.0	0.00
106	48157.2	0.0	0.0	0.0	0.0	7223.6	0.0	0.00
107	47265.2	0.0	0.0	0.0	0.0	7089.8	0.0	0.00
108	45247.8	0.0	0.0	0.0	0.0	6787.2	0.0	0.00
109	43230.4	0.0	0.0	0.0	0.0	6484.6	0.0	0.00
110	41213.0	0.0	0.0	0.0	0.0	6182.0	0.0	0.00
111	39195.6	0.0	0.0	0.0	0.0	5879.3	0.0	0.00
112	36949.1	0.0	0.0	0.0	0.0	5542.4	0.0	0.00
113	35738.9	0.0	0.0	0.0	0.0	5360.8	0.0	0.00
114	34528.6	0.0	0.0	0.0	0.0	5179.3	0.0	0.00
115	33318.4	0.0	0.0	0.0	0.0	4997.8	0.0	0.00
116	32108.1	0.0	0.0	0.0	0.0	4816.2	0.0	0.00
117	30897.8	0.0	0.0	0.0	0.0	4634.7	0.0	0.00
118	29687.6	0.0	0.0	0.0	0.0	4453.1	0.0	0.00
119	28477.3	0.0	0.0	0.0	0.0	4271.6	0.0	0.00
120	27267.1	0.0	0.0	0.0	0.0	4090.1	0.0	0.00
121	26056.8	0.0	0.0	0.0	0.0	3908.5	0.0	0.00
122	24846.6	0.0	0.0	0.0	0.0	3727.0	0.0	0.00
123	23636.3	0.0	0.0	0.0	0.0	3545.4	0.0	0.00
124	22426.1	0.0	0.0	0.0	0.0	3363.9	0.0	0.00
125	21215.8	0.0	0.0	0.0	0.0	3182.4	0.0	0.00
126	20005.5	0.0	0.0	0.0	0.0	3000.8	0.0	0.00
127	18795.3	0.0	0.0	0.0	0.0	2819.3	0.0	0.00
128	17585.0	0.0	0.0	0.0	0.0	2637.8	0.0	0.00
129	16374.8	0.0	0.0	0.0	0.0	2456.2	0.0	0.00
130	15164.5	0.0	0.0	0.0	0.0	2274.7	0.0	0.00
131	13954.3	0.0	0.0	0.0	0.0	2093.1	0.0	0.00
132	12744.0	0.0	0.0	0.0	0.0	1911.6	0.0	0.00
133	11533.8	0.0	0.0	0.0	0.0	1730.1	0.0	0.00
134	10323.5	0.0	0.0	0.0	0.0	1548.5	0.0	0.00
135	9113.2	0.0	0.0	0.0	0.0	1367.0	0.0	0.00
136	7903.0	0.0	0.0	0.0	0.0	1185.4	0.0	0.00
137	6692.7	0.0	0.0	0.0	0.0	1003.9	0.0	0.00
138	5482.5	0.0	0.0	0.0	0.0	822.4	0.0	0.00
139	4272.2	0.0	0.0	0.0	0.0	640.8	0.0	0.00
140	3062.0	0.0	0.0	0.0	0.0	459.3	0.0	0.00
141	1851.7	0.0	0.0	0.0	0.0	277.8	0.0	0.00
142	641.5	0.0	0.0	0.0	0.0	96.2	0.0	0.00
143	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.00
144	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00

TOTAL WEIGHT OF SLIDING MASS = 4247492.08(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 4247492.08(lbs)

TOTAL AREA OF SLIDING MASS = 35395.77(ft2)

TABLE 4 - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 144 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	2	250.00	22.00	A
4	2	250.00	22.00	A
5	2	250.00	22.00	A
6	2	250.00	22.00	A
7	2	0.00	15.00	A
8	2	0.00	15.00	A
9	2	0.00	15.00	A
10	2	0.00	15.00	A
11	2	0.00	15.00	A
12	2	0.00	15.00	A
13	2	0.00	15.00	A
14	2	0.00	15.00	A
15	2	0.00	15.00	A
16	2	0.00	15.00	A
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	2	0.00	15.00	A
23	2	0.00	15.00	A
24	2	0.00	15.00	A
25	4	0.00	15.00	A
26	4	0.00	15.00	A
27	4	0.00	15.00	A
28	4	0.00	15.00	A
29	4	0.00	15.00	A
30	4	0.00	15.00	A
31	4	0.00	15.00	A
32	4	0.00	15.00	A
33	4	0.00	15.00	A
34	4	0.00	15.00	A
35	4	0.00	15.00	A
36	4	0.00	15.00	A
37	4	0.00	15.00	A
38	4	0.00	15.00	A
39	4	0.00	15.00	A
40	4	0.00	15.00	A
41	4	0.00	15.00	A
42	4	0.00	15.00	A
43	4	0.00	15.00	A
44	4	0.00	15.00	A
45	4	0.00	15.00	A
46	4	0.00	15.00	A
47	4	0.00	15.00	A
48	4	0.00	15.00	A
49	4	0.00	15.00	A
50	4	0.00	15.00	A
51	4	0.00	15.00	A
52	4	0.00	15.00	A
53	4	0.00	15.00	A
54	4	0.00	15.00	A
55	4	0.00	15.00	A
56	4	0.00	15.00	A
57	4	0.00	15.00	A
58	4	0.00	15.00	A
59	4	0.00	15.00	A
60	4	0.00	15.00	A

61	4	0.00	15.00	A
62	4	0.00	15.00	A
63	4	0.00	15.00	A
64	4	0.00	15.00	A
65	4	0.00	15.00	A
66	4	0.00	15.00	A
67	4	0.00	15.00	A
68	4	0.00	15.00	A
69	4	0.00	15.00	A
70	4	0.00	15.00	A
71	4	0.00	15.00	A
72	4	0.00	15.00	A
73	4	0.00	15.00	A
74	4	0.00	15.00	A
75	4	0.00	15.00	A
76	4	0.00	15.00	A
77	4	0.00	15.00	A
78	4	0.00	15.00	A
79	4	0.00	15.00	A
80	4	0.00	15.00	A
81	4	0.00	15.00	A
82	4	0.00	15.00	A
83	4	0.00	15.00	A
84	4	0.00	15.00	A
85	4	0.00	15.00	A
86	4	0.00	15.00	A
87	4	0.00	15.00	A
88	4	0.00	15.00	A
89	4	0.00	15.00	A
90	4	0.00	15.00	A
91	4	0.00	15.00	A
92	4	0.00	15.00	A
93	4	0.00	15.00	A
94	4	0.00	15.00	A
95	4	0.00	15.00	A
96	4	0.00	15.00	A
97	4	0.00	15.00	A
98	4	0.00	15.00	A
99	4	0.00	15.00	A
100	4	0.00	15.00	A
101	3	250.00	26.00	
102	3	250.00	26.00	
103	3	250.00	26.00	
104	3	250.00	26.00	
105	3	250.00	26.00	
106	3	250.00	26.00	
107	3	250.00	26.00	
108	3	250.00	26.00	
109	3	250.00	26.00	
110	3	250.00	26.00	
111	3	250.00	26.00	
112	3	250.00	26.00	
113	3	250.00	26.00	
114	3	250.00	26.00	
115	3	250.00	26.00	
116	3	250.00	26.00	
117	3	250.00	26.00	
118	3	250.00	26.00	
119	3	250.00	26.00	
120	3	250.00	26.00	
121	3	250.00	26.00	
122	3	250.00	26.00	
123	3	250.00	26.00	
124	3	250.00	26.00	
125	3	250.00	26.00	
126	3	250.00	26.00	
127	3	250.00	26.00	
128	3	250.00	26.00	
129	3	250.00	26.00	
130	3	250.00	26.00	
131	3	250.00	26.00	
132	3	250.00	26.00	
133	3	250.00	26.00	
134	3	250.00	26.00	
135	3	250.00	26.00	
136	3	250.00	26.00	
137	3	250.00	26.00	
138	3	250.00	26.00	
139	3	250.00	26.00	
140	3	250.00	26.00	
141	3	250.00	26.00	
142	3	250.00	26.00	
143	3	250.00	26.00	
144	2	250.00	22.00	A

SOIL OPTIONS:
A = ANISOTROPIC SHEAR STRENGTH
C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C)
F = FIBER-REINFORCED SOIL (FRS)
M = INDEPENDENT MULTI-STAGE SHEAR STRENGTH
N = NONLINEAR UNDRAINED SHEAR STRENGTH
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified Soil Options (if any).

TABLE 5 - Total Base Stress Data on the 144 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Total Normal Stress (psf)	Total Vert. Stress (psf)	Total Normal/Vert. Stress Ratio
1	-29.39	32.65	6.37	704.62	192.28	3.665
2	-29.39	38.19	6.37	1478.86	576.83	2.564
3	-29.39	42.68	3.92	2049.74	887.54	2.309
4	-29.39	46.09	3.92	2497.38	1124.42	2.221
5	-29.39	50.54	6.30	3096.48	1441.44	2.148
6	-29.39	56.03	6.30	3847.03	1838.61	2.092
7	-2.26	60.73	3.92	2162.47	2055.89	1.052
8	-2.26	64.64	3.92	2201.79	2093.27	1.052
9	-2.26	69.23	5.27	2247.90	2137.11	1.052
10	-2.26	74.50	5.27	2300.82	2187.41	1.052
11	-2.26	79.77	5.27	2353.73	2237.72	1.052
12	-2.26	85.03	5.27	2406.64	2288.02	1.052
13	-2.26	90.30	5.27	2459.55	2338.33	1.052
14	-2.26	95.57	5.27	2512.47	2388.63	1.052
15	-2.26	100.83	5.27	2565.38	2438.94	1.052
16	-2.26	106.10	5.27	2618.29	2489.24	1.052
17	-1.74	111.46	5.46	2653.77	2537.47	1.046

18	-1.74	116.92	5.46	2702.03	2583.61	1.046
19	-1.74	122.37	5.46	2750.29	2629.76	1.046
20	-1.74	127.55	4.91	2813.79	2690.47	1.046
21	-1.74	132.46	4.91	2892.52	2765.76	1.046
22	-1.74	137.37	4.91	2971.26	2841.05	1.046
23	-1.74	142.28	4.91	3050.00	2916.34	1.046
24	-1.74	147.19	4.91	3128.74	2991.62	1.046
25	-1.74	150.12	0.95	3175.74	3036.57	1.046
26	-1.74	151.93	2.65	3204.63	3064.18	1.046
27	-1.74	154.57	2.65	3247.12	3104.82	1.046
28	-1.74	158.44	5.09	3357.94	3210.78	1.046
29	-1.74	163.53	5.09	3537.06	3382.05	1.046
30	-1.74	168.62	5.09	3716.18	3553.33	1.046
31	-1.74	173.70	5.09	3895.31	3724.60	1.046
32	-1.74	178.79	5.09	4074.43	3895.87	1.046
33	-1.74	183.88	5.09	4253.56	4067.15	1.046
34	-1.74	188.96	5.09	4432.68	4238.42	1.046
35	-1.74	194.05	5.09	4611.81	4409.70	1.046
36	-1.74	199.13	5.09	4790.93	4580.97	1.046
37	-1.74	204.22	5.09	4970.05	4752.25	1.046
38	-1.74	209.31	5.09	5149.18	4923.52	1.046
39	-1.74	214.39	5.09	5328.30	5094.79	1.046
40	-1.74	219.48	5.09	5507.43	5266.07	1.046
41	-1.74	224.57	5.09	5686.55	5437.34	1.046
42	-1.74	229.65	5.09	5865.68	5608.62	1.046
43	-1.74	234.74	5.09	6044.80	5779.89	1.046
44	-1.74	239.83	5.09	6223.92	5951.16	1.046
45	-1.74	244.91	5.09	6403.05	6122.44	1.046
46	-1.74	250.00	5.09	6582.17	6293.71	1.046
47	-1.74	255.08	5.09	6761.30	6464.99	1.046
48	-1.74	260.17	5.09	6940.42	6636.26	1.046
49	-1.74	265.26	5.09	7119.54	6807.54	1.046
50	-1.74	270.24	4.89	7271.52	6952.85	1.046
51	-1.74	275.13	4.89	7396.34	7072.20	1.046
52	-1.74	280.01	4.89	7521.16	7191.55	1.046
53	-1.74	284.90	4.89	7645.98	7310.90	1.046
54	-1.74	289.78	4.89	7770.80	7430.25	1.046
55	-1.74	294.67	4.89	7895.62	7549.60	1.046
56	-1.74	299.55	4.89	8020.44	7668.95	1.046
57	-1.74	304.43	4.89	8145.26	7788.30	1.046
58	-1.74	309.32	4.89	8270.08	7907.65	1.046
59	-1.74	314.20	4.89	8394.90	8027.00	1.046
60	-1.74	319.09	4.89	8519.72	8146.34	1.046
61	-1.74	323.97	4.89	8644.54	8265.69	1.046
62	-1.74	328.86	4.89	8769.36	8385.04	1.046
63	-1.74	333.68	4.75	8886.84	8497.38	1.046
64	-1.74	338.43	4.75	8996.99	8602.70	1.046
65	-1.74	343.18	4.75	9107.13	8708.02	1.046
66	-1.74	347.93	4.75	9217.28	8813.34	1.046
67	-1.74	352.68	4.75	9327.43	8918.66	1.046
68	-1.74	357.43	4.75	9437.58	9023.98	1.046
69	-1.74	362.31	5.03	9524.98	9107.55	1.046
70	-1.74	367.34	5.03	9589.64	9169.38	1.046
71	-1.74	372.36	5.03	9654.29	9231.20	1.046
72	-1.74	377.39	5.03	9718.95	9293.02	1.046
73	-1.74	382.41	5.03	9783.61	9354.85	1.046
74	-1.74	387.44	5.03	9848.26	9416.67	1.046
75	-1.74	392.46	5.03	9912.92	9478.49	1.046
76	-1.74	397.49	5.03	9977.58	9540.32	1.046
77	-1.74	402.50	5.00	10052.01	9611.49	1.046
78	-1.74	407.50	5.00	10136.22	9692.00	1.046
79	-1.74	412.50	5.00	10220.42	9772.52	1.046
80	-1.74	417.50	5.00	10304.63	9853.04	1.046
81	-1.74	422.50	5.00	10388.84	9933.56	1.046
82	-1.74	427.50	5.00	10473.05	10014.07	1.046
83	-1.74	432.50	5.00	10557.26	10094.59	1.046
84	-1.74	437.50	5.00	10641.47	10175.11	1.046
85	-1.74	442.50	5.00	10725.67	10255.63	1.046
86	-1.74	447.50	5.00	10809.88	10336.15	1.046
87	-1.74	452.50	5.00	10894.09	10416.66	1.046
88	-1.74	457.50	5.00	10978.30	10497.18	1.046
89	-1.74	462.50	5.00	11062.51	10577.70	1.046
90	-1.74	467.50	5.00	11146.71	10658.22	1.046
91	-1.74	472.50	5.00	11230.92	10738.73	1.046
92	-1.74	477.50	5.00	11315.13	10819.25	1.046
93	-1.74	482.50	5.00	11399.34	10899.77	1.046
94	-1.74	487.50	5.00	11483.55	10980.29	1.046
95	-1.74	492.50	5.00	11567.75	11060.81	1.046
96	-1.74	497.50	5.00	11651.96	11141.32	1.046
97	-1.74	502.50	5.00	11736.17	11221.84	1.046
98	-1.74	506.27	2.55	11817.31	11299.42	1.046
99	-1.74	508.83	2.55	11895.37	11374.06	1.046
100	-1.74	511.65	3.10	11981.85	11456.75	1.046
101	38.51	515.72	6.43	7307.05	11326.26	0.645
102	38.51	520.75	6.43	7078.19	10974.54	0.645
103	38.51	525.78	6.43	6849.33	10622.82	0.645
104	38.51	530.82	6.43	6620.47	10271.10	0.645
105	38.51	535.85	6.43	6391.61	9919.38	0.644
106	38.51	540.88	6.43	6162.75	9567.66	0.644
107	38.51	545.97	6.57	5920.63	9195.56	0.644
108	38.51	551.11	6.57	5665.24	8803.07	0.644
109	38.51	556.25	6.57	5409.86	8410.58	0.643
110	38.51	561.39	6.57	5154.47	8018.10	0.643
111	38.51	566.53	6.57	4899.09	7625.61	0.642
112	38.51	571.63	6.46	4693.50	7309.65	0.642
113	38.51	576.68	6.46	4537.71	7070.23	0.642
114	38.51	581.74	6.46	4381.92	6830.80	0.641
115	38.51	586.79	6.46	4237.44	6591.38	0.643
116	38.51	591.85	6.46	4101.92	6351.95	0.646
117	38.51	596.90	6.46	3964.81	6112.53	0.649
118	38.51	601.96	6.46	3826.12	5873.10	0.651
119	38.51	607.01	6.46	3685.82	5633.68	0.654
120	38.51	612.07	6.46	3543.89	5394.25	0.657
121	38.51	617.12	6.46	3400.32	5154.83	0.660
122	38.51	622.18	6.46	3255.09	4915.40	0.662
123	38.51	627.23	6.46	3108.19	4675.98	0.665
124	38.51	632.29	6.46	2959.58	4436.55	0.667
125	38.51	637.34	6.46	2809.27	4197.13	0.669
126	38.51	642.40	6.46	2657.22	3957.70	0.671
127	38.51	647.45	6.46	2503.42	3718.28	0.673
128	38.51	652.50	6.46	2347.85	3478.85	0.675
129	38.51	657.56	6.46	2190.49	3239.43	0.676
130	38.51	662.61	6.46	2031.32	3000.00	0.677
131	38.51	667.67	6.46	1870.33	2760.58	0.678
132	38.51	672.72	6.46	1707.48	2521.15	0.677
133	38.51	677.78	6.46	1542.76	2281.73	0.676
134	38.51	682.83	6.46	1376.16	2042.30	0.674
135	38.51	687.89	6.46	1207.64	1802.87	0.670
136	38.51	692.94	6.46	1037.19	1563.45	0.663
137	38.51	698.00	6.46	864.79	1324.02	0.653

138	38.51	703.05	6.46	690.41	1084.60	0.637
139	38.51	708.11	6.46	514.03	845.17	0.608
140	38.51	713.16	6.46	335.63	605.75	0.554
141	38.51	718.22	6.46	155.18	366.32	0.424
142	38.51	723.27	6.46	-27.33	126.90	-0.215
143	58.82	725.81	0.05	-200.60	5.29	-37.946
144	58.82	725.84	0.04	-217.63	1.69	*******

TABLE 5A - Total Base Force Data on the 144 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Total Normal Force (lbs)	Total Vert. Force (lbs)	Total Normal/Vert. Force Ratio
1	-29.39	32.65	6.37	4485.12	1066.42	4.206
2	-29.39	38.19	6.37	9413.38	3199.26	2.942
3	-29.39	42.68	3.92	8036.84	3032.22	2.650
4	-29.39	46.09	3.92	9791.99	3841.49	2.549
5	-29.39	50.54	6.30	19497.60	7908.53	2.465
6	-29.39	56.03	6.30	24223.60	10087.62	2.401
7	-2.26	60.73	3.92	8469.35	8045.64	1.053
8	-2.26	64.64	3.92	8623.34	8191.92	1.053
9	-2.26	69.23	5.27	11848.41	11255.66	1.053
10	-2.26	74.50	5.27	12127.31	11520.60	1.053
11	-2.26	79.77	5.27	12406.20	11785.54	1.053
12	-2.26	85.03	5.27	12685.10	12050.49	1.053
13	-2.26	90.30	5.27	12964.00	12315.43	1.053
14	-2.26	95.57	5.27	13242.89	12580.37	1.053
15	-2.26	100.83	5.27	13521.79	12845.32	1.053
16	-2.26	106.10	5.27	13800.68	13110.26	1.053
17	-1.74	111.46	5.46	14483.75	13842.62	1.046
18	-1.74	116.92	5.46	14747.15	14094.36	1.046
19	-1.74	122.37	5.46	15010.54	14346.09	1.046
20	-1.74	127.55	4.91	13820.94	13209.15	1.046
21	-1.74	132.46	4.91	14207.69	13578.78	1.046
22	-1.74	137.37	4.91	14594.44	13948.41	1.046
23	-1.74	142.28	4.91	14981.19	14318.04	1.046
24	-1.74	147.19	4.91	15367.94	14687.67	1.046
25	-1.74	150.12	0.95	3024.71	2890.82	1.046
26	-1.74	151.93	2.65	8496.18	8120.09	1.046
27	-1.74	154.57	2.65	8608.85	8227.78	1.046
28	-1.74	158.44	5.09	17087.57	16331.18	1.046
29	-1.74	163.53	5.09	17999.08	17202.34	1.046
30	-1.74	168.62	5.09	18910.59	18073.51	1.046
31	-1.74	173.70	5.09	19822.10	18944.67	1.046
32	-1.74	178.79	5.09	20733.62	19815.83	1.046
33	-1.74	183.88	5.09	21645.13	20686.99	1.046
34	-1.74	188.96	5.09	22556.64	21558.16	1.046
35	-1.74	194.05	5.09	23468.15	22429.32	1.046
36	-1.74	199.13	5.09	24379.66	23300.48	1.046
37	-1.74	204.22	5.09	25291.17	24171.65	1.046
38	-1.74	209.31	5.09	26202.68	25042.81	1.046
39	-1.74	214.39	5.09	27114.20	25913.97	1.046
40	-1.74	219.48	5.09	28025.71	26785.14	1.046
41	-1.74	224.57	5.09	28937.22	27656.30	1.046
42	-1.74	229.65	5.09	29848.73	28527.46	1.046
43	-1.74	234.74	5.09	30760.24	29398.62	1.046
44	-1.74	239.83	5.09	31671.75	30269.79	1.046
45	-1.74	244.91	5.09	32583.26	31140.95	1.046
46	-1.74	250.00	5.09	33494.77	32012.11	1.046
47	-1.74	255.08	5.09	34406.29	32883.28	1.046
48	-1.74	260.17	5.09	35317.80	33754.44	1.046
49	-1.74	265.26	5.09	36229.31	34625.60	1.046
50	-1.74	270.24	4.89	35534.96	33961.99	1.046
51	-1.74	275.13	4.89	36144.94	34544.96	1.046
52	-1.74	280.01	4.89	36754.92	35127.94	1.046
53	-1.74	284.90	4.89	37364.89	35710.92	1.046
54	-1.74	289.78	4.89	37974.87	36293.90	1.046
55	-1.74	294.67	4.89	38584.85	36876.87	1.046
56	-1.74	299.55	4.89	39194.83	37459.85	1.046
57	-1.74	304.43	4.89	39804.81	38042.83	1.046
58	-1.74	309.32	4.89	40414.79	38625.81	1.046
59	-1.74	314.20	4.89	41024.77	39208.78	1.046
60	-1.74	319.09	4.89	41634.74	39791.76	1.046
61	-1.74	323.97	4.89	42244.72	40374.74	1.046
62	-1.74	328.86	4.89	42854.70	40957.72	1.046
63	-1.74	333.68	4.75	42231.97	40362.55	1.046
64	-1.74	338.43	4.75	42755.41	40862.82	1.046
65	-1.74	343.18	4.75	43278.86	41363.10	1.046
66	-1.74	347.93	4.75	43802.30	41863.37	1.046
67	-1.74	352.68	4.75	44325.74	42363.64	1.046
68	-1.74	357.43	4.75	44849.18	42863.91	1.046
69	-1.74	362.31	5.03	47885.11	45765.46	1.046
70	-1.74	367.34	5.03	48210.16	46076.12	1.046
71	-1.74	372.36	5.03	48535.21	46386.78	1.046
72	-1.74	377.39	5.03	48860.26	46697.44	1.046
73	-1.74	382.41	5.03	49185.31	47008.10	1.046
74	-1.74	387.44	5.03	49510.36	47318.76	1.046
75	-1.74	392.46	5.03	49835.41	47629.42	1.046
76	-1.74	397.49	5.03	50160.46	47940.09	1.046
77	-1.74	402.50	5.00	50283.24	48057.43	1.046
78	-1.74	407.50	5.00	50704.48	48460.02	1.046
79	-1.74	412.50	5.00	51125.71	48862.61	1.046
80	-1.74	417.50	5.00	51546.95	49265.20	1.046
81	-1.74	422.50	5.00	51968.18	49667.78	1.046
82	-1.74	427.50	5.00	52389.42	50070.37	1.046
83	-1.74	432.50	5.00	52810.65	50472.96	1.046
84	-1.74	437.50	5.00	53231.89	50875.55	1.046
85	-1.74	442.50	5.00	53653.12	51278.14	1.046
86	-1.74	447.50	5.00	54074.36	51680.73	1.046
87	-1.74	452.50	5.00	54495.59	52083.32	1.046
88	-1.74	457.50	5.00	54916.83	52485.91	1.046
89	-1.74	462.50	5.00	55338.06	52888.49	1.046
90	-1.74	467.50	5.00	55759.29	53291.08	1.046
91	-1.74	472.50	5.00	56180.53	53693.67	1.046
92	-1.74	477.50	5.00	56601.76	54096.26	1.046
93	-1.74	482.50	5.00	57023.00	54498.85	1.046
94	-1.74	487.50	5.00	57444.23	54901.44	1.046
95	-1.74	492.50	5.00	57865.47	55304.03	1.046
96	-1.74	497.50	5.00	58286.70	55706.61	1.046
97	-1.74	502.50	5.00	58707.94	56109.20	1.046
98	-1.74	506.27	2.55	30148.04	28813.52	1.046
99	-1.74	508.83	2.55	30347.19	29003.86	1.046
100	-1.74	511.65	3.10	37160.88	35515.94	1.046
101	38.51	515.72	6.43	47004.92	57008.87	0.825
102	38.51	520.75	6.43	45532.70	55238.54	0.824
103	38.51	525.78	6.43	44060.49	53468.21	0.824
104	38.51	530.82	6.43	42588.28	51697.88	0.824
105	38.51	535.85	6.43	41116.07	49927.55	0.824

106	38.51	540.88	6.43	39643.85	48157.23	0.823
107	38.51	545.97	6.57	38893.45	47265.16	0.823
108	38.51	551.11	6.57	37215.79	45247.78	0.822
109	38.51	556.25	6.57	35538.12	43230.40	0.822
110	38.51	561.39	6.57	33860.46	41213.02	0.822
111	38.51	566.53	6.57	32182.79	39195.63	0.821
112	38.51	571.63	6.46	30321.42	36949.12	0.821
113	38.51	576.68	6.46	29314.96	35738.86	0.820
114	38.51	581.74	6.46	28308.51	34528.61	0.820
115	38.51	586.79	6.46	27375.16	33318.35	0.822
116	38.51	591.85	6.46	26499.62	32108.10	0.825
117	38.51	596.90	6.46	25613.90	30897.84	0.829
118	38.51	601.96	6.46	24717.90	29687.59	0.833
119	38.51	607.01	6.46	23811.51	28477.33	0.836
120	38.51	612.07	6.46	22894.62	27267.07	0.840
121	38.51	617.12	6.46	21967.11	26056.82	0.843
122	38.51	622.18	6.46	21028.89	24846.56	0.846
123	38.51	627.23	6.46	20079.83	23636.31	0.850
124	38.51	632.29	6.46	19119.81	22426.05	0.853
125	38.51	637.34	6.46	18148.72	21215.80	0.855
126	38.51	642.40	6.46	17166.44	20005.54	0.858
127	38.51	647.45	6.46	16172.85	18795.29	0.860
128	38.51	652.50	6.46	15167.82	17585.03	0.863
129	38.51	657.56	6.46	14151.23	16374.77	0.864
130	38.51	662.61	6.46	13122.96	15164.52	0.865
131	38.51	667.67	6.46	12082.87	13954.26	0.866
132	38.51	672.72	6.46	11030.83	12744.01	0.866
133	38.51	677.78	6.46	9966.72	11533.75	0.864
134	38.51	682.83	6.46	8890.40	10323.50	0.861
135	38.51	687.89	6.46	7801.73	9113.24	0.856
136	38.51	692.94	6.46	6700.57	7902.99	0.848
137	38.51	698.00	6.46	5586.79	6692.73	0.835
138	38.51	703.05	6.46	4460.24	5482.48	0.814
139	38.51	708.11	6.46	3320.78	4272.22	0.777
140	38.51	713.16	6.46	2168.25	3061.96	0.708
141	38.51	718.22	6.46	1002.52	1851.71	0.541
142	38.51	723.27	6.46	-176.56	641.45	-0.275
143	58.82	725.81	0.05	-9.80	0.13	-73.290
144	58.82	725.84	0.04	-9.48	0.04	*******

TABLE 6 - Effective and Base Shear Stress Data on the 144 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-29.39	32.65	6.37	704.62	513.72	420.71
2	-29.39	38.19	6.37	1478.86	858.43	703.01
3	-29.39	42.68	3.92	2049.74	1078.15	882.94
4	-29.39	46.09	3.92	2497.38	1259.01	1031.06
5	-29.39	50.54	6.30	3096.48	1501.06	1229.28
6	-29.39	56.03	6.30	3847.03	1804.30	1477.62
7	-2.26	60.73	3.92	2162.47	579.43	474.52
8	-2.26	64.64	3.92	2201.79	589.97	483.15
9	-2.26	69.23	5.27	2247.90	602.32	493.27
10	-2.26	74.50	5.27	2300.82	616.50	504.88
11	-2.26	79.77	5.27	2353.73	630.68	516.49
12	-2.26	85.03	5.27	2406.64	644.86	528.10
13	-2.26	90.30	5.27	2459.55	659.04	539.71
14	-2.26	95.57	5.27	2512.47	673.21	551.32
15	-2.26	100.83	5.27	2565.38	687.39	562.93
16	-2.26	106.10	5.27	2618.29	701.57	574.55
17	-1.74	111.46	5.46	2653.77	711.07	582.33
18	-1.74	116.92	5.46	2702.03	724.01	592.92
19	-1.74	122.37	5.46	2750.29	736.94	603.51
20	-1.74	127.55	4.91	2813.79	753.95	617.44
21	-1.74	132.46	4.91	2892.52	775.05	634.72
22	-1.74	137.37	4.91	2971.26	796.15	652.00
23	-1.74	142.28	4.91	3050.00	817.25	669.28
24	-1.74	147.19	4.91	3128.74	838.34	686.56
25	-1.74	150.12	0.95	3175.74	850.94	696.87
26	-1.74	151.93	2.65	3204.63	858.68	703.21
27	-1.74	154.57	2.65	3247.12	870.06	712.53
28	-1.74	158.44	5.09	3357.94	899.76	736.85
29	-1.74	163.53	5.09	3537.06	947.75	776.16
30	-1.74	168.62	5.09	3716.18	995.75	815.46
31	-1.74	173.70	5.09	3895.31	1043.74	854.77
32	-1.74	178.79	5.09	4074.43	1091.74	894.07
33	-1.74	183.88	5.09	4253.56	1139.74	933.38
34	-1.74	188.96	5.09	4432.68	1187.73	972.69
35	-1.74	194.05	5.09	4611.81	1235.73	1011.99
36	-1.74	199.13	5.09	4790.93	1283.73	1051.30
37	-1.74	204.22	5.09	4970.05	1331.72	1090.60
38	-1.74	209.31	5.09	5149.18	1379.72	1129.91
39	-1.74	214.39	5.09	5328.30	1427.71	1169.22
40	-1.74	219.48	5.09	5507.43	1475.71	1208.52
41	-1.74	224.57	5.09	5686.55	1523.71	1247.83
42	-1.74	229.65	5.09	5865.68	1571.70	1287.14
43	-1.74	234.74	5.09	6044.80	1619.70	1326.44
44	-1.74	239.83	5.09	6223.92	1667.70	1365.75
45	-1.74	244.91	5.09	6403.05	1715.69	1405.05
46	-1.74	250.00	5.09	6582.17	1763.69	1444.36
47	-1.74	255.08	5.09	6761.30	1811.68	1483.67
48	-1.74	260.17	5.09	6940.42	1859.68	1522.97
49	-1.74	265.26	5.09	7119.54	1907.68	1562.28
50	-1.74	270.24	4.89	7271.52	1948.40	1595.63
51	-1.74	275.13	4.89	7396.34	1981.84	1623.02
52	-1.74	280.01	4.89	7521.16	2015.29	1650.41
53	-1.74	284.90	4.89	7645.98	2048.73	1677.80
54	-1.74	289.78	4.89	7770.80	2082.18	1705.19
55	-1.74	294.67	4.89	7895.62	2115.62	1732.58
56	-1.74	299.55	4.89	8020.44	2149.07	1759.97
57	-1.74	304.43	4.89	8145.26	2182.51	1787.36
58	-1.74	309.32	4.89	8270.08	2215.96	1814.75
59	-1.74	314.20	4.89	8394.90	2249.41	1842.14
60	-1.74	319.09	4.89	8519.72	2282.85	1869.53
61	-1.74	323.97	4.89	8644.54	2316.30	1896.92
62	-1.74	328.86	4.89	8769.36	2349.74	1924.31
63	-1.74	333.68	4.75	8886.84	2381.22	1950.09
64	-1.74	338.43	4.75	8996.99	2410.74	1974.26
65	-1.74	343.18	4.75	9107.13	2440.25	1998.43
66	-1.74	347.93	4.75	9217.28	2469.76	2022.60
67	-1.74	352.68	4.75	9327.43	2499.28	2046.77
68	-1.74	357.43	4.75	9437.58	2528.79	2070.94
69	-1.74	362.31	5.03	9524.98	2552.21	2090.12
70	-1.74	367.34	5.03	9589.64	2569.54	2104.30
71	-1.74	372.36	5.03	9654.29	2586.86	2118.49
72	-1.74	377.39	5.03	9718.95	2604.18	2132.68
73	-1.74	382.41	5.03	9783.61	2621.51	2146.87

74	-1.74	387.44	5.03	9848.26	2638.83	2161.06
75	-1.74	392.46	5.03	9912.92	2656.16	2175.24
76	-1.74	397.49	5.03	9977.58	2673.48	2189.43
77	-1.74	402.50	5.00	10052.01	2693.43	2205.76
78	-1.74	407.50	5.00	10136.22	2715.99	2224.24
79	-1.74	412.50	5.00	10220.42	2738.55	2242.72
80	-1.74	417.50	5.00	10304.63	2761.12	2261.20
81	-1.74	422.50	5.00	10388.84	2783.68	2279.68
82	-1.74	427.50	5.00	10473.05	2806.24	2298.16
83	-1.74	432.50	5.00	10557.26	2828.81	2316.63
84	-1.74	437.50	5.00	10641.47	2851.37	2335.11
85	-1.74	442.50	5.00	10725.67	2873.94	2353.59
86	-1.74	447.50	5.00	10809.88	2896.50	2372.07
87	-1.74	452.50	5.00	10894.09	2919.06	2390.55
88	-1.74	457.50	5.00	10978.30	2941.63	2409.02
89	-1.74	462.50	5.00	11062.51	2964.19	2427.50
90	-1.74	467.50	5.00	11146.71	2986.75	2445.98
91	-1.74	472.50	5.00	11230.92	3009.32	2464.46
92	-1.74	477.50	5.00	11315.13	3031.88	2482.94
93	-1.74	482.50	5.00	11399.34	3054.44	2501.42
94	-1.74	487.50	5.00	11483.55	3077.01	2519.89
95	-1.74	492.50	5.00	11567.75	3099.57	2538.37
96	-1.74	497.50	5.00	11651.96	3122.13	2556.85
97	-1.74	502.50	5.00	11736.17	3144.70	2575.33
98	-1.74	506.27	2.55	11817.31	3166.44	2593.13
99	-1.74	508.83	2.55	11895.37	3187.35	2610.26
100	-1.74	511.65	3.10	11981.85	3210.53	2629.24
101	38.51	515.72	6.43	7307.05	3813.89	3123.36
102	38.51	520.75	6.43	7078.19	3702.26	3031.94
103	38.51	525.78	6.43	6849.33	3590.64	2940.53
104	38.51	530.82	6.43	6620.47	3479.02	2849.12
105	38.51	535.85	6.43	6391.61	3367.40	2757.71
106	38.51	540.88	6.43	6162.75	3255.77	2666.29
107	38.51	545.97	6.57	5920.63	3137.68	2569.58
108	38.51	551.11	6.57	5665.24	3013.12	2467.58
109	38.51	556.25	6.57	5409.86	2888.56	2365.57
110	38.51	561.39	6.57	5154.47	2764.00	2263.56
111	38.51	566.53	6.57	4899.09	2639.44	2161.55
112	38.51	571.63	6.46	4693.50	2539.17	2079.44
113	38.51	576.68	6.46	4537.71	2463.19	2017.21
114	38.51	581.74	6.46	4381.92	2387.20	1954.98
115	38.51	586.79	6.46	4237.44	2316.74	1897.28
116	38.51	591.85	6.46	4101.92	2250.64	1843.15
117	38.51	596.90	6.46	3964.81	2183.77	1788.38
118	38.51	601.96	6.46	3826.12	2116.12	1732.99
119	38.51	607.01	6.46	3685.82	2047.69	1676.95
120	38.51	612.07	6.46	3543.89	1978.47	1620.26
121	38.51	617.12	6.46	3400.32	1908.45	1562.91
122	38.51	622.18	6.46	3255.09	1837.62	1504.90
123	38.51	627.23	6.46	3108.19	1765.96	1446.22
124	38.51	632.29	6.46	2959.58	1693.49	1386.87
125	38.51	637.34	6.46	2809.27	1620.17	1326.83
126	38.51	642.40	6.46	2657.22	1546.01	1266.10
127	38.51	647.45	6.46	2503.42	1471.00	1204.66
128	38.51	652.50	6.46	2347.85	1395.12	1142.53
129	38.51	657.56	6.46	2190.49	1318.37	1079.67
130	38.51	662.61	6.46	2031.32	1240.74	1016.10
131	38.51	667.67	6.46	1870.33	1162.22	951.79
132	38.51	672.72	6.46	1707.48	1082.79	886.75
133	38.51	677.78	6.46	1542.76	1002.46	820.95
134	38.51	682.83	6.46	1376.16	921.20	754.41
135	38.51	687.89	6.46	1207.64	839.01	687.10
136	38.51	692.94	6.46	1037.19	755.87	619.02
137	38.51	698.00	6.46	864.79	671.79	550.15
138	38.51	703.05	6.46	690.41	586.73	480.50
139	38.51	708.11	6.46	514.03	500.71	410.05
140	38.51	713.16	6.46	335.63	413.70	338.79
141	38.51	718.22	6.46	155.18	325.69	266.72
142	38.51	723.27	6.46	0.00	0.00	0.00
143	58.82	725.81	0.05	0.00	0.00	0.00
144	58.82	725.84	0.04	0.00	0.00	0.00

TABLE 6A - Effective and Base Shear Force Data on the 144 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-29.39	32.65	6.37	4485.12	3269.96	2677.91
2	-29.39	38.19	6.37	9413.38	5464.17	4474.84
3	-29.39	42.68	3.92	8036.84	4227.32	3461.94
4	-29.39	46.09	3.92	9791.99	4936.44	4042.67
5	-29.39	50.54	6.30	19497.60	9451.72	7740.42
6	-29.39	56.03	6.30	24223.60	11361.15	9304.13
7	-2.26	60.73	3.92	8469.35	2269.36	1858.47
8	-2.26	64.64	3.92	8623.34	2310.62	1892.26
9	-2.26	69.23	5.27	11848.41	3174.77	2599.96
10	-2.26	74.50	5.27	12127.31	3249.50	2661.16
11	-2.26	79.77	5.27	12406.20	3324.23	2722.36
12	-2.26	85.03	5.27	12685.10	3398.96	2783.56
13	-2.26	90.30	5.27	12964.00	3473.69	2844.76
14	-2.26	95.57	5.27	13242.89	3548.42	2905.96
15	-2.26	100.83	5.27	13521.79	3623.15	2967.16
16	-2.26	106.10	5.27	13800.68	3697.88	3028.36
17	-1.74	111.46	5.46	14483.75	3880.91	3178.24
18	-1.74	116.92	5.46	14747.15	3951.49	3236.04
19	-1.74	122.37	5.46	15010.54	4022.06	3293.84
20	-1.74	127.55	4.91	13820.94	3703.31	3032.80
21	-1.74	132.46	4.91	14207.69	3806.94	3117.67
22	-1.74	137.37	4.91	14594.44	3910.57	3202.53
23	-1.74	142.28	4.91	14981.19	4014.20	3287.40
24	-1.74	147.19	4.91	15367.94	4117.83	3372.27
25	-1.74	150.12	0.95	3024.71	810.47	663.73
26	-1.74	151.93	2.65	8496.18	2276.54	1864.36
27	-1.74	154.57	2.65	8608.85	2306.73	1889.09
28	-1.74	158.44	5.09	17087.57	4578.60	3749.61
29	-1.74	163.53	5.09	17999.08	4822.84	3949.63
30	-1.74	168.62	5.09	18910.59	5067.08	4149.65
31	-1.74	173.70	5.09	19822.10	5311.32	4349.67
32	-1.74	178.79	5.09	20733.62	5555.56	4549.68
33	-1.74	183.88	5.09	21645.13	5799.79	4749.70
34	-1.74	188.96	5.09	22556.64	6044.03	4949.72
35	-1.74	194.05	5.09	23468.15	6288.27	5149.74
36	-1.74	199.13	5.09	24379.66	6532.51	5349.76
37	-1.74	204.22	5.09	25291.17	6776.75	5549.77
38	-1.74	209.31	5.09	26202.68	7020.99	5749.79
39	-1.74	214.39	5.09	27114.20	7265.23	5949.81
40	-1.74	219.48	5.09	28025.71	7509.47	6149.83
41	-1.74	224.57	5.09	28937.22	7753.70	6349.84

42	-1.74	229.65	5.09	29848.73	7997.94	6549.86
43	-1.74	234.74	5.09	30760.24	8242.18	6749.88
44	-1.74	239.83	5.09	31671.75	8486.42	6949.90
45	-1.74	244.91	5.09	32583.26	8730.66	7149.91
46	-1.74	250.00	5.09	33494.77	8974.90	7349.93
47	-1.74	255.08	5.09	34406.29	9219.14	7549.95
48	-1.74	260.17	5.09	35317.80	9463.38	7749.97
49	-1.74	265.26	5.09	36229.31	9707.61	7949.98
50	-1.74	270.24	4.89	35534.96	9521.56	7797.62
51	-1.74	275.13	4.89	36144.94	9685.01	7931.47
52	-1.74	280.01	4.89	36754.92	9848.45	8065.32
53	-1.74	284.90	4.89	37364.89	10011.89	8199.17
54	-1.74	289.78	4.89	37974.87	10175.34	8333.02
55	-1.74	294.67	4.89	38584.85	10338.78	8466.87
56	-1.74	299.55	4.89	39194.83	10502.22	8600.72
57	-1.74	304.43	4.89	39804.81	10665.67	8734.58
58	-1.74	309.32	4.89	40414.79	10829.11	8868.43
59	-1.74	314.20	4.89	41024.77	10992.55	9002.28
60	-1.74	319.09	4.89	41634.74	11156.00	9136.13
61	-1.74	323.97	4.89	42244.72	11319.44	9269.98
62	-1.74	328.86	4.89	42854.70	11482.88	9403.83
63	-1.74	333.68	4.75	42231.97	11316.02	9267.18
64	-1.74	338.43	4.75	42755.41	11456.28	9382.04
65	-1.74	343.18	4.75	43278.86	11596.53	9496.90
66	-1.74	347.93	4.75	43802.30	11736.79	9611.77
67	-1.74	352.68	4.75	44325.74	11877.05	9726.63
68	-1.74	357.43	4.75	44849.18	12017.30	9841.49
69	-1.74	362.31	5.03	47885.11	12830.78	10507.68
70	-1.74	367.34	5.03	48210.16	12917.87	10579.01
71	-1.74	372.36	5.03	48535.21	13004.97	10650.33
72	-1.74	377.39	5.03	48860.26	13092.07	10721.66
73	-1.74	382.41	5.03	49185.31	13179.16	10792.99
74	-1.74	387.44	5.03	49510.36	13266.26	10864.32
75	-1.74	392.46	5.03	49835.41	13353.36	10935.64
76	-1.74	397.49	5.03	50160.46	13440.46	11006.97
77	-1.74	402.50	5.00	50283.24	13473.35	11033.91
78	-1.74	407.50	5.00	50704.48	13586.22	11126.35
79	-1.74	412.50	5.00	51125.71	13699.09	11218.78
80	-1.74	417.50	5.00	51546.95	13811.96	11311.21
81	-1.74	422.50	5.00	51968.18	13924.83	11403.65
82	-1.74	427.50	5.00	52389.42	14037.70	11496.08
83	-1.74	432.50	5.00	52810.65	14150.57	11588.51
84	-1.74	437.50	5.00	53231.89	14263.44	11680.95
85	-1.74	442.50	5.00	53653.12	14376.31	11773.38
86	-1.74	447.50	5.00	54074.36	14489.18	11865.82
87	-1.74	452.50	5.00	54495.59	14602.05	11958.25
88	-1.74	457.50	5.00	54916.83	14714.92	12050.68
89	-1.74	462.50	5.00	55338.06	14827.79	12143.12
90	-1.74	467.50	5.00	55759.29	14940.66	12235.55
91	-1.74	472.50	5.00	56180.53	15053.53	12327.98
92	-1.74	477.50	5.00	56601.76	15166.40	12420.42
93	-1.74	482.50	5.00	57023.00	15279.27	12512.85
94	-1.74	487.50	5.00	57444.23	15392.14	12605.29
95	-1.74	492.50	5.00	57865.47	15505.01	12697.72
96	-1.74	497.50	5.00	58286.70	15617.87	12790.15
97	-1.74	502.50	5.00	58707.94	15730.74	12882.59
98	-1.74	506.27	2.55	30148.04	8078.14	6615.54
99	-1.74	508.83	2.55	30347.19	8131.51	6659.24
100	-1.74	511.65	3.10	37160.88	9957.23	8154.40
101	38.51	515.72	6.43	47004.92	24534.03	20091.98
102	38.51	520.75	6.43	45532.70	23815.99	19503.94
103	38.51	525.78	6.43	44060.49	23097.94	18915.90
104	38.51	530.82	6.43	42588.28	22379.90	18327.86
105	38.51	535.85	6.43	41116.07	21661.85	17739.83
106	38.51	540.88	6.43	39643.85	20943.80	17151.79
107	38.51	545.97	6.57	38893.45	20611.89	16879.97
108	38.51	551.11	6.57	37215.79	19793.64	16209.87
109	38.51	556.25	6.57	35538.12	18975.38	15539.76
110	38.51	561.39	6.57	33860.46	18157.13	14869.66
111	38.51	566.53	6.57	32182.79	17338.88	14199.56
112	38.51	571.63	6.46	30321.42	16403.82	13433.80
113	38.51	576.68	6.46	29314.96	15912.94	13031.79
114	38.51	581.74	6.46	28308.51	15422.06	12629.79
115	38.51	586.79	6.46	27375.16	14966.84	12256.99
116	38.51	591.85	6.46	26499.62	14539.80	11907.27
117	38.51	596.90	6.46	25613.90	14107.81	11553.49
118	38.51	601.96	6.46	24717.90	13670.80	11195.61
119	38.51	607.01	6.46	23811.51	13228.72	10833.57
120	38.51	612.07	6.46	22894.62	12781.53	10467.34
121	38.51	617.12	6.46	21967.11	12329.15	10096.88
122	38.51	622.18	6.46	21028.89	11871.55	9722.13
123	38.51	627.23	6.46	20079.83	11408.66	9343.05
124	38.51	632.29	6.46	19119.81	10940.43	8959.59
125	38.51	637.34	6.46	18148.72	10466.80	8571.71
126	38.51	642.40	6.46	17166.44	9987.71	8179.37
127	38.51	647.45	6.46	16172.85	9503.10	7782.50
128	38.51	652.50	6.46	15167.82	9012.91	7381.07
129	38.51	657.56	6.46	14151.23	8517.09	6975.01
130	38.51	662.61	6.46	13122.96	8015.57	6564.30
131	38.51	667.67	6.46	12082.87	7508.28	6148.86
132	38.51	672.72	6.46	11030.83	6995.17	5728.65
133	38.51	677.78	6.46	9966.72	6476.17	5303.62
134	38.51	682.83	6.46	8890.40	5951.21	4873.71
135	38.51	687.89	6.46	7801.73	5420.23	4438.86
136	38.51	692.94	6.46	6700.57	4883.16	3999.03
137	38.51	698.00	6.46	5586.79	4339.93	3554.16
138	38.51	703.05	6.46	4460.24	3790.48	3104.19
139	38.51	708.11	6.46	3320.78	3234.73	2649.06
140	38.51	713.16	6.46	2168.25	2672.60	2188.71
141	38.51	718.22	6.46	1002.52	2104.04	1723.09
142	38.51	723.27	6.46	0.00	0.00	0.00
143	58.82	725.81	0.05	0.00	0.00	0.00
144	58.82	725.84	0.04	0.00	0.00	0.00

Average Effective Normal Stress = 5594.1250(psf)
Average Available Shear Strength = 1878.4695(psf)
Total Length of Failure Surface = 759.6228(ft)

SUM OF MOMENTS = 0.457635E+02 (ft/lbs);Imbalance (Fraction of Total Weight) = 0.1077423E-04
SUM OF FORCES = 0.236343E-01 (lbs);Imbalance (Fraction of Total Weight) = 0.5564300E-08

Sum of Available Shear Forces = 1426928.18(lbs)

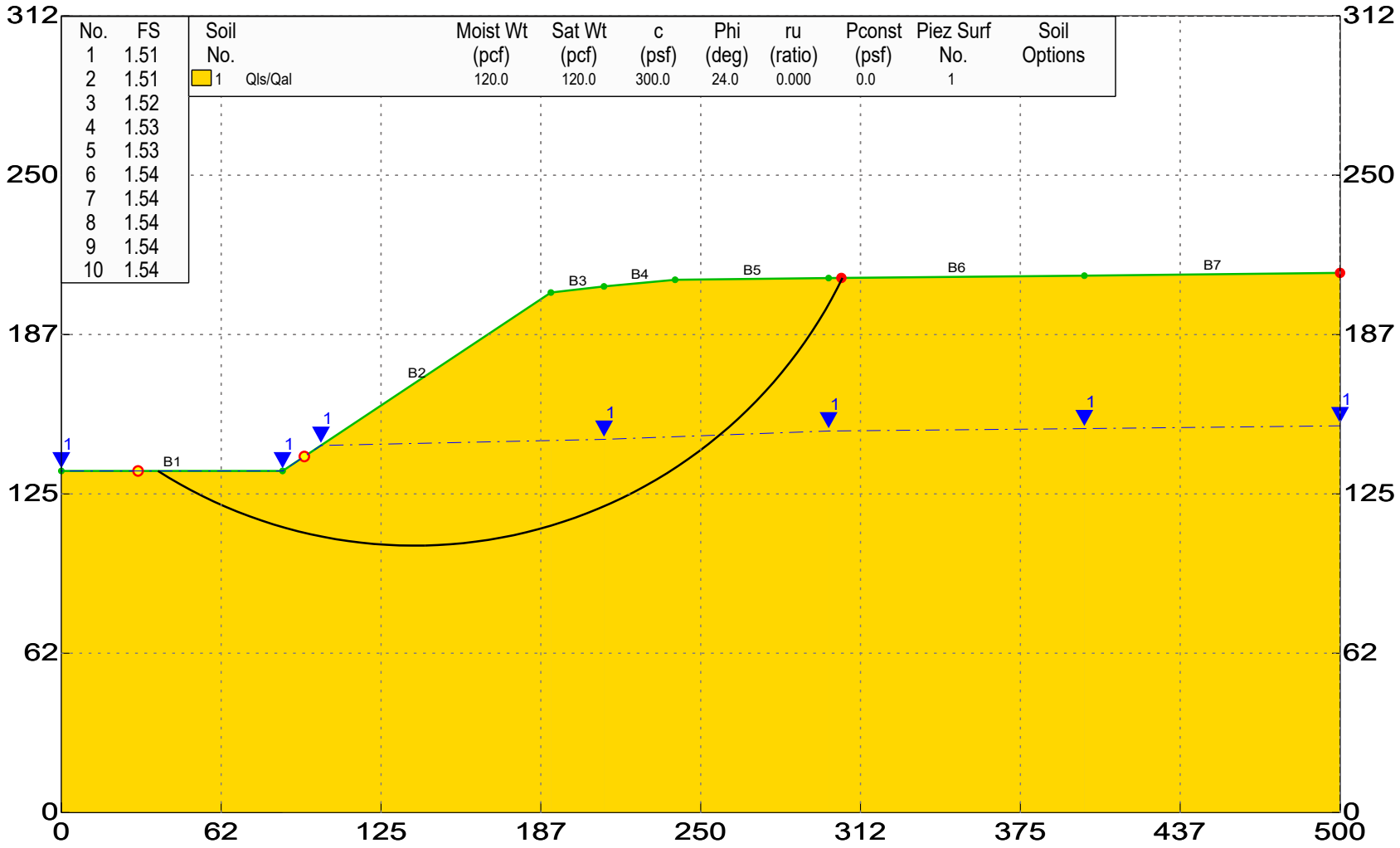
Sum of Mobilized Shear Forces = 1168573.21(lbs)

FS Balance Check: FS = 1.221086

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Section C-C'
115' Oso Creek Setback - Static

LGC Geotechnical \xc.gsd



GEOSTASE FS = 1.51

Simplified Bishop Method

GEOSTASE Slope Stability Analysis

*** GEOSTASE(R) ***

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** Current Version 4.30.31-Double Precision, August 2019 **
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SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.

****

Analysis Date: 4/ 4/ 2024
Analysis Time:
Analysis By: LGC Geotechnical
Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano \Engineering\Slope Stability\Sec C\2024_04_04\xc.gsd
Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano \Engineering\Slope Stability\Sec C\2024_04_04\xc.OUT
Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Section C-C'

DESCRIPTION: 115' Oso Creek Setback - Static

BOUNDARY DATA

7 Surface Boundaries
7 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	134.000	86.500	134.000	1
2	86.500	134.000	191.400	204.000	1
3	191.400	204.000	212.200	206.400	1
4	212.200	206.400	240.000	209.000	1
5	240.000	209.000	300.000	209.700	1
6	300.000	209.700	400.000	210.600	1
7	400.000	210.600	500.000	211.700	1

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

1 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.
1 Qls/Qal	120.0	120.0	300.00	24.00	0.000	0.0	1 0

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 7 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	134.00
2	86.50	134.00
3	101.50	144.00
4	212.20	146.40
5	300.00	149.70
6	400.00	150.60
7	500.00	151.70

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Circular Trial Failure Surfaces Have Been Generated Using A Random Procedure.

2000 Trial Surfaces Have Been Generated.

2000 Surfaces Generated at Increments of 0.3902(in) Equally Spaced Within the Start Range

Along The Specified Surface Between X = 30.00(ft)
and X = 95.00(ft)

Each Surface Enters within a Range Between X = 305.00(ft)
and X = 500.00(ft)

Unless XCLUDE Lines Were Specified, The Minimum Elevation
To Which A Surface Extends Is Y = 0.00(ft)

Specified Maximum Radius = 10000.000(ft)

5.000(ft) Line Segments Were Used For Each Trial Failure Surface.

The Simplified Bishop Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 2000

Number of Trial Surfaces With Valid FS = 2000

Statistical Data On All Valid FS Values:
FS Max = 4.215 FS Min = 1.512 FS Ave = 2.475
Standard Deviation = 0.538 Coefficient of Variation = 21.73 %

Critical Surface is Sequence Number 240 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

BACK-CALCULATED CIRCULAR SURFACE PARAMETERS:

Circle Center At X = 137.972957(ft) ; Y = 290.710802(ft); and Radius = 186.007071(ft)

Circular Trial Failure Surface Generated With 64 Coordinate Points

Point No.	X-Coord. (ft)	Y-Coord. (ft)
1	37.771	134.000
2	42.020	131.363
3	46.337	128.842
4	50.721	126.437
5	55.168	124.152
6	59.675	121.986
7	64.238	119.942
8	68.855	118.022
9	73.521	116.227
10	78.234	114.558
11	82.991	113.016
12	87.787	111.602
13	92.619	110.318
14	97.484	109.164
15	102.378	108.141
16	107.298	107.250
17	112.241	106.492
18	117.201	105.867
19	122.177	105.376
20	127.164	105.018
21	132.159	104.795
22	137.158	104.706
23	142.158	104.751
24	147.155	104.931
25	152.145	105.244
26	157.125	105.692
27	162.091	106.274
28	167.040	106.989
29	171.967	107.837
30	176.870	108.816
31	181.745	109.927
32	186.589	111.169
33	191.397	112.541
34	196.167	114.041
35	200.894	115.669
36	205.576	117.424
37	210.209	119.303
38	214.790	121.307
39	219.316	123.433
40	223.783	125.680
41	228.187	128.046
42	232.527	130.529
43	236.798	133.128
44	240.998	135.842
45	245.124	138.667
46	249.171	141.602
47	253.139	144.644
48	257.023	147.793
49	260.822	151.044
50	264.531	154.397
51	268.150	157.848
52	271.674	161.394
53	275.101	165.035
54	278.430	168.766
55	281.657	172.585
56	284.780	176.490
57	287.797	180.477
58	290.705	184.544
59	293.504	188.687
60	296.190	192.905
61	298.762	197.193
62	301.217	201.548
63	303.555	205.968
64	305.426	209.749

Factor Of Safety For The Critical or Specified Surface = 1.512

Table 1 - Geometry Data on the 70 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	4.25	1.32	39.90	132.68	134.00	-31.82	0.00	5.00
2	4.32	3.90	44.18	130.10	134.00	-30.28	0.00	5.00
3	4.38	6.36	48.53	127.64	134.00	-28.74	0.00	5.00
4	4.45	8.71	52.94	125.29	134.00	-27.20	0.00	5.00
5	4.51	10.93	57.42	123.07	134.00	-25.66	0.00	5.00
6	4.56	13.04	61.96	120.96	134.00	-24.12	0.00	5.00
7	4.62	15.02	66.55	118.98	134.00	-22.58	0.00	5.00
8	4.67	16.88	71.19	117.12	134.00	-21.04	0.00	5.00
9	4.71	18.61	75.88	115.39	134.00	-19.50	0.00	5.00
10	4.76	20.21	80.61	113.79	134.00	-17.96	0.00	5.00
11	3.51	21.50	84.75	112.50	134.00	-16.42	0.00	3.66
12	1.29	22.64	87.14	111.79	134.43	-16.42	33.72	1.34
13	4.83	25.51	90.20	110.96	136.47	-14.88	33.72	5.00
14	4.87	29.97	95.05	109.74	139.71	-13.34	33.72	5.00
15	4.02	33.93	99.49	108.74	142.67	-11.80	33.72	4.10
16	0.88	36.07	101.94	108.23	144.30	-11.80	33.72	0.90
17	4.92	38.54	104.84	107.70	146.24	-10.26	33.72	5.00
18	4.94	42.66	109.77	106.87	149.53	-8.72	33.72	5.00
19	4.96	46.65	114.72	106.18	152.83	-7.18	33.72	5.00
20	4.98	50.53	119.69	105.62	156.15	-5.64	33.72	5.00
21	4.99	54.27	124.67	105.20	159.47	-4.10	33.72	5.00
22	5.00	57.90	129.66	104.91	162.80	-2.56	33.72	5.00
23	5.00	61.39	134.66	104.75	166.14	-1.02	33.72	5.00
24	5.00	64.74	139.66	104.73	169.47	0.52	33.72	5.00
25	5.00	67.97	144.66	104.84	172.81	2.06	33.72	5.00
26	4.99	71.05	149.65	105.09	176.14	3.60	33.72	5.00
27	4.98	74.00	154.64	105.47	179.47	5.14	33.72	5.00
28	4.97	76.80	159.61	105.98	182.79	6.68	33.72	5.00
29	4.95	79.46	164.57	106.63	186.09	8.22	33.72	5.00
30	4.93	81.98	169.50	107.41	189.39	9.76	33.72	5.00
31	4.90	84.34	174.42	108.33	192.67	11.30	33.72	5.00
32	4.87	86.56	179.31	109.37	195.93	12.84	33.72	5.00
33	4.84	88.63	184.17	110.55	199.17	14.38	33.72	5.00
34	4.81	90.54	188.99	111.86	202.39	15.92	33.72	5.00
35	0.00	91.46	191.40	112.54	204.00	17.46	33.72	0.00
36	4.77	90.98	193.78	113.29	204.27	17.46	6.58	5.00
37	4.73	89.97	198.53	114.86	204.82	19.00	6.58	5.00
38	4.68	88.82	203.24	116.55	205.37	20.54	6.58	5.00
39	4.63	87.54	207.89	118.36	205.90	22.08	6.58	5.00
40	1.99	86.55	211.20	119.74	206.29	23.62	6.58	2.17
41	2.59	85.78	213.50	120.74	206.52	23.62	5.34	2.83
42	4.53	84.48	217.05	122.37	206.85	25.16	5.34	5.00
43	4.47	82.72	221.55	124.56	207.27	26.70	5.34	5.00
44	4.40	80.83	225.99	126.86	207.69	28.24	5.34	5.00
45	4.34	78.81	230.36	129.29	208.10	29.78	5.34	5.00
46	4.27	76.67	234.66	131.83	208.50	31.32	5.34	5.00
47	3.20	74.69	238.40	134.16	208.85	32.86	5.34	3.81
48	1.00	73.49	240.50	135.52	209.01	32.86	0.67	1.19
49	4.13	71.78	243.06	137.25	209.04	34.40	0.67	5.00
50	4.05	68.95	247.15	140.13	209.08	35.94	0.67	5.00
51	3.97	66.01	251.16	143.12	209.13	37.48	0.67	5.00
52	3.88	62.96	255.08	146.22	209.18	39.02	0.67	5.00
53	0.36	61.26	257.20	147.95	209.20	40.56	0.67	0.47
54	3.44	59.65	259.10	149.57	209.22	40.56	0.67	4.53
55	3.71	56.54	262.68	152.72	209.26	42.10	0.67	5.00
56	3.62	53.19	266.34	156.12	209.31	43.64	0.67	5.00
57	3.52	49.73	269.91	159.62	209.35	45.18	0.67	5.00
58	3.43	46.17	273.39	163.21	209.39	46.73	0.67	5.00
59	3.33	42.53	276.77	166.90	209.43	48.27	0.67	5.00
60	3.23	38.79	280.04	170.68	209.47	49.81	0.67	5.00
61	3.12	34.97	283.22	174.54	209.50	51.35	0.67	5.00
62	3.02	31.06	286.29	178.48	209.54	52.89	0.67	5.00
63	2.91	27.06	289.25	182.51	209.57	54.43	0.67	5.00
64	2.80	22.99	292.10	186.62	209.61	55.97	0.67	5.00

65	2.69	18.84	294.85	190.80	209.64	57.51	0.67	5.00
66	2.57	14.62	297.48	195.05	209.67	59.05	0.67	5.00
67	1.24	11.40	299.38	198.29	209.69	60.59	0.67	2.52
68	1.22	9.24	300.61	200.47	209.71	60.59	0.52	2.48
69	2.34	5.96	302.39	203.76	209.72	62.13	0.52	5.00
70	1.87	1.88	304.49	207.86	209.74	63.67	0.52	4.22

Table 2 - Force Data On The 70 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	672.1	0.0	411.3	0.0	0.0	0.0
2	2019.3	0.0	1216.0	0.0	0.0	0.0
3	3346.0	0.0	1984.4	0.0	0.0	0.0
4	4645.5	0.0	2716.1	0.0	0.0	0.0
5	5911.7	0.0	3410.5	0.0	0.0	0.0
6	7138.3	0.0	4067.1	0.0	0.0	0.0
7	8319.6	0.0	4685.5	0.0	0.0	0.0
8	9449.9	0.0	5265.1	0.0	0.0	0.0
9	10524.0	0.0	5805.6	0.0	0.0	0.0
10	11536.8	0.0	6306.6	0.0	0.0	0.0
11	9054.7	0.0	4908.7	0.0	0.0	0.0
12	3495.4	0.0	1894.9	0.0	0.0	0.0
13	14793.1	0.0	7958.7	0.0	0.0	0.0
14	17494.1	0.0	9347.6	0.0	0.0	0.0
15	16349.2	0.0	8683.1	0.0	0.0	0.0
16	3801.6	0.0	2003.1	0.0	0.0	0.0
17	22754.9	0.0	11349.5	0.0	0.0	0.0
18	25297.8	0.0	11640.1	0.0	0.0	0.0
19	27771.7	0.0	11889.4	0.0	0.0	0.0
20	30168.6	0.0	12097.2	0.0	0.0	0.0
21	32481.3	0.0	12263.3	0.0	0.0	0.0
22	34702.7	0.0	12387.7	0.0	0.0	0.0
23	36826.0	0.0	12470.3	0.0	0.0	0.0
24	38845.1	0.0	12510.9	0.0	0.0	0.0
25	40754.1	0.0	12509.6	0.0	0.0	0.0
26	42547.5	0.0	12466.4	0.0	0.0	0.0
27	44220.5	0.0	12381.3	0.0	0.0	0.0
28	45768.4	0.0	12254.3	0.0	0.0	0.0
29	47187.3	0.0	12085.6	0.0	0.0	0.0
30	48473.5	0.0	11875.2	0.0	0.0	0.0
31	49624.1	0.0	11623.4	0.0	0.0	0.0
32	50636.6	0.0	11330.3	0.0	0.0	0.0
33	51508.8	0.0	10996.1	0.0	0.0	0.0
34	52239.3	0.0	10621.0	0.0	0.0	0.0
35	33.8	0.0	6.7	0.0	0.0	0.0
36	52040.9	0.0	10198.7	0.0	0.0	0.0
37	51039.1	0.0	9749.5	0.0	0.0	0.0
38	49903.0	0.0	9253.7	0.0	0.0	0.0
39	48670.9	0.0	8718.3	0.0	0.0	0.0
40	20673.7	0.0	3611.7	0.0	0.0	0.0
41	26665.0	0.0	4535.6	0.0	0.0	0.0
42	45880.3	0.0	7554.3	0.0	0.0	0.0
43	44337.9	0.0	6924.9	0.0	0.0	0.0
44	42722.6	0.0	6257.3	0.0	0.0	0.0
45	41040.6	0.0	5552.1	0.0	0.0	0.0
46	39298.2	0.0	4809.6	0.0	0.0	0.0
47	28695.5	0.0	3144.9	0.0	0.0	0.0
48	8801.7	0.0	885.7	0.0	0.0	0.0
49	35535.2	0.0	3215.4	0.0	0.0	0.0
50	33492.5	0.0	2364.7	0.0	0.0	0.0
51	31426.9	0.0	1479.2	0.0	0.0	0.0
52	29346.2	0.0	559.5	0.0	0.0	0.0
53	2623.1	0.0	4.3	0.0	0.0	0.0
54	24635.2	0.0	0.0	0.0	0.0	0.0
55	25170.9	0.0	0.0	0.0	0.0	0.0
56	23092.0	0.0	0.0	0.0	0.0	0.0
57	21029.6	0.0	0.0	0.0	0.0	0.0
58	18991.7	0.0	0.0	0.0	0.0	0.0
59	16986.3	0.0	0.0	0.0	0.0	0.0
60	15021.3	0.0	0.0	0.0	0.0	0.0
61	13104.5	0.0	0.0	0.0	0.0	0.0
62	11243.8	0.0	0.0	0.0	0.0	0.0
63	9446.8	0.0	0.0	0.0	0.0	0.0
64	7721.0	0.0	0.0	0.0	0.0	0.0
65	6073.8	0.0	0.0	0.0	0.0	0.0
66	4512.4	0.0	0.0	0.0	0.0	0.0
67	1694.4	0.0	0.0	0.0	0.0	0.0
68	1349.1	0.0	0.0	0.0	0.0	0.0
69	1672.8	0.0	0.0	0.0	0.0	0.0
70	422.6	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 1684754.74(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 1325223.45(lbs)

TOTAL AREA OF SLIDING MASS = 14039.62(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 70 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	300.00	24.00	
2	1	300.00	24.00	
3	1	300.00	24.00	
4	1	300.00	24.00	
5	1	300.00	24.00	
6	1	300.00	24.00	
7	1	300.00	24.00	
8	1	300.00	24.00	
9	1	300.00	24.00	
10	1	300.00	24.00	
11	1	300.00	24.00	
12	1	300.00	24.00	
13	1	300.00	24.00	
14	1	300.00	24.00	
15	1	300.00	24.00	
16	1	300.00	24.00	
17	1	300.00	24.00	
18	1	300.00	24.00	
19	1	300.00	24.00	
20	1	300.00	24.00	
21	1	300.00	24.00	
22	1	300.00	24.00	
23	1	300.00	24.00	
24	1	300.00	24.00	
25	1	300.00	24.00	
26	1	300.00	24.00	
27	1	300.00	24.00	
28	1	300.00	24.00	
29	1	300.00	24.00	
30	1	300.00	24.00	
31	1	300.00	24.00	
32	1	300.00	24.00	
33	1	300.00	24.00	
34	1	300.00	24.00	
35	1	300.00	24.00	
36	1	300.00	24.00	
37	1	300.00	24.00	
38	1	300.00	24.00	
39	1	300.00	24.00	
40	1	300.00	24.00	
41	1	300.00	24.00	
42	1	300.00	24.00	
43	1	300.00	24.00	
44	1	300.00	24.00	
45	1	300.00	24.00	
46	1	300.00	24.00	

47	1	300.00	24.00
48	1	300.00	24.00
49	1	300.00	24.00
50	1	300.00	24.00
51	1	300.00	24.00
52	1	300.00	24.00
53	1	300.00	24.00
54	1	300.00	24.00
55	1	300.00	24.00
56	1	300.00	24.00
57	1	300.00	24.00
58	1	300.00	24.00
59	1	300.00	24.00
60	1	300.00	24.00
61	1	300.00	24.00
62	1	300.00	24.00
63	1	300.00	24.00
64	1	300.00	24.00
65	1	300.00	24.00
66	1	300.00	24.00
67	1	300.00	24.00
68	1	300.00	24.00
69	1	300.00	24.00
70	1	300.00	24.00

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 70 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-31.82	39.90	5.00	243.57	408.44	270.08
1	-31.82	39.90	5.00	243.57	408.44	270.08
2	-30.28	44.18	5.00	411.02	483.00	319.38
2	-30.28	44.18	5.00	411.02	483.00	319.38
3	-28.74	48.53	5.00	566.69	552.31	365.21
3	-28.74	48.53	5.00	566.69	552.31	365.21
4	-27.20	52.94	5.00	711.03	616.57	407.70
4	-27.20	52.94	5.00	711.03	616.57	407.70
5	-25.66	57.42	5.00	844.43	675.96	446.97
5	-25.66	57.42	5.00	844.43	675.96	446.97
6	-24.12	61.96	5.00	967.23	730.64	483.13
6	-24.12	61.96	5.00	967.23	730.64	483.13
7	-22.58	66.55	5.00	1079.76	780.74	516.25
7	-22.58	66.55	5.00	1079.76	780.74	516.25
8	-21.04	71.19	5.00	1182.27	826.38	546.43
8	-21.04	71.19	5.00	1182.27	826.38	546.43
9	-19.50	75.88	5.00	1275.03	867.68	573.74
9	-19.50	75.88	5.00	1275.03	867.68	573.74
10	-17.96	80.61	5.00	1358.27	904.74	598.25
10	-17.96	80.61	5.00	1358.27	904.74	598.25
11	-16.42	84.75	3.66	1420.22	932.32	616.48
11	-16.42	84.75	3.66	1420.22	932.32	616.48
12	-16.42	87.14	1.34	1491.91	964.24	637.59
12	-16.42	87.14	1.34	1491.91	964.24	637.59
13	-14.88	90.20	5.00	1651.53	1035.31	684.58
13	-14.88	90.20	5.00	1651.53	1035.31	684.58
14	-13.34	95.05	5.00	1906.55	1148.85	759.66
14	-13.34	95.05	5.00	1906.55	1148.85	759.66
15	-11.80	99.49	4.10	2126.92	1246.96	824.54
15	-11.80	99.49	4.10	2126.92	1246.96	824.54
16	-11.80	101.94	0.90	2277.46	1313.99	868.86
16	-11.80	101.94	0.90	2277.46	1313.99	868.86
17	-10.26	104.84	5.00	2525.62	1424.48	941.92
17	-10.26	104.84	5.00	2525.62	1424.48	941.92
18	-8.72	109.77	5.00	2954.65	1615.49	1068.22
18	-8.72	109.77	5.00	2954.65	1615.49	1068.22
19	-7.18	114.72	5.00	3370.43	1800.61	1190.63
19	-7.18	114.72	5.00	3370.43	1800.61	1190.63
20	-5.64	119.69	5.00	3773.00	1979.85	1309.15
20	-5.64	119.69	5.00	3773.00	1979.85	1309.15
21	-4.10	124.67	5.00	4162.38	2153.21	1423.78
21	-4.10	124.67	5.00	4162.38	2153.21	1423.78
22	-2.56	129.66	5.00	4538.58	2320.70	1534.53
22	-2.56	129.66	5.00	4538.58	2320.70	1534.53
23	-1.02	134.66	5.00	4901.57	2482.32	1641.40
23	-1.02	134.66	5.00	4901.57	2482.32	1641.40
24	0.52	139.66	5.00	5251.35	2638.05	1744.37
24	0.52	139.66	5.00	5251.35	2638.05	1744.37
25	2.06	144.66	5.00	5587.87	2787.88	1843.45
25	2.06	144.66	5.00	5587.87	2787.88	1843.45
26	3.60	149.65	5.00	5911.08	2931.78	1938.60
26	3.60	149.65	5.00	5911.08	2931.78	1938.60
27	5.14	154.64	5.00	6220.95	3069.74	2029.82
27	5.14	154.64	5.00	6220.95	3069.74	2029.82
28	6.68	159.61	5.00	6517.40	3201.74	2117.10
28	6.68	159.61	5.00	6517.40	3201.74	2117.10
29	8.22	164.57	5.00	6800.39	3327.73	2200.41
29	8.22	164.57	5.00	6800.39	3327.73	2200.41
30	9.76	169.50	5.00	7069.85	3447.70	2279.74
30	9.76	169.50	5.00	7069.85	3447.70	2279.74
31	11.30	174.42	5.00	7325.71	3561.62	2355.07
31	11.30	174.42	5.00	7325.71	3561.62	2355.07
32	12.84	179.31	5.00	7567.90	3669.45	2426.37
32	12.84	179.31	5.00	7567.90	3669.45	2426.37
33	14.38	184.17	5.00	7796.35	3771.16	2493.63
33	14.38	184.17	5.00	7796.35	3771.16	2493.63
34	15.92	188.99	5.00	8011.00	3866.73	2556.82
34	15.92	188.99	5.00	8011.00	3866.73	2556.82
35	17.46	191.40	0.00	8079.58	3897.26	2577.01
35	17.46	191.40	0.00	8079.58	3897.26	2577.01
36	17.46	193.78	5.00	8067.39	3891.83	2573.42
36	17.46	193.78	5.00	8067.39	3891.83	2573.42
37	19.00	198.53	5.00	7969.83	3848.40	2544.70
37	19.00	198.53	5.00	7969.83	3848.40	2544.70
38	20.54	203.24	5.00	7865.45	3801.92	2513.97
38	20.54	203.24	5.00	7865.45	3801.92	2513.97
39	22.08	207.89	5.00	7754.37	3752.47	2481.27
39	22.08	207.89	5.00	7754.37	3752.47	2481.27
40	23.62	211.20	2.17	7651.25	3706.56	2450.91
40	23.62	211.20	2.17	7651.25	3706.56	2450.91
41	23.62	213.50	2.83	7621.34	3693.24	2442.10
41	23.62	213.50	2.83	7621.34	3693.24	2442.10
42	25.16	217.05	5.00	7497.09	3637.92	2405.52
42	25.16	217.05	5.00	7497.09	3637.92	2405.52
43	26.70	221.55	5.00	7352.51	3573.55	2362.96
43	26.70	221.55	5.00	7352.51	3573.55	2362.96
44	28.24	225.99	5.00	7202.12	3506.59	2318.68
44	28.24	225.99	5.00	7202.12	3506.59	2318.68
45	29.78	230.36	5.00	7046.05	3437.10	2272.74
45	29.78	230.36	5.00	7046.05	3437.10	2272.74
46	31.32	234.66	5.00	6884.44	3365.15	2225.16
46	31.32	234.66	5.00	6884.44	3365.15	2225.16
47	32.86	238.40	3.81	6729.32	3296.09	2179.49
47	32.86	238.40	3.81	6729.32	3296.09	2179.49
48	32.86	240.50	1.19	6675.21	3272.00	2163.56
48	32.86	240.50	1.19	6675.21	3272.00	2163.56
49	34.40	243.06	5.00	6520.20	3202.98	2117.92
49	34.40	243.06	5.00	6520.20	3202.98	2117.92
50	35.94	247.15	5.00	6310.07	3109.42	2056.06
50	35.94	247.15	5.00	6310.07	3109.42	2056.06
51	37.48	251.16	5.00	6096.35	3014.27	1993.14
51	37.48	251.16	5.00	6096.35	3014.27	1993.14
52	39.02	255.08	5.00	5879.24	2917.61	1929.23
52	39.02	255.08	5.00	5879.24	2917.61	1929.23
53	40.56	257.20	0.47	5728.01	2850.28	1884.70

53	40.56	257.20	0.47	5728.01	2850.28	1884.70
54	40.56	259.10	4.53	5581.60	2785.09	1841.60
54	40.56	259.10	4.53	5581.60	2785.09	1841.60
55	42.10	262.68	5.00	5217.69	2623.07	1734.47
55	42.10	262.68	5.00	5217.69	2623.07	1734.47
56	43.64	266.34	5.00	4835.19	2452.77	1621.86
56	43.64	266.34	5.00	4835.19	2452.77	1621.86
57	45.18	269.91	5.00	4449.22	2280.92	1508.23
57	45.18	269.91	5.00	4449.22	2280.92	1508.23
58	46.73	273.39	5.00	4060.50	2107.85	1393.79
58	46.73	273.39	5.00	4060.50	2107.85	1393.79
59	48.27	276.77	5.00	3669.79	1933.89	1278.76
59	48.27	276.77	5.00	3669.79	1933.89	1278.76
60	49.81	280.04	5.00	3277.90	1759.41	1163.39
60	49.81	280.04	5.00	3277.90	1759.41	1163.39
61	51.35	283.22	5.00	2885.70	1584.80	1047.93
61	51.35	283.22	5.00	2885.70	1584.80	1047.93
62	52.89	286.29	5.00	2494.12	1410.45	932.64
62	52.89	286.29	5.00	2494.12	1410.45	932.64
63	54.43	289.25	5.00	2104.14	1236.82	817.83
63	54.43	289.25	5.00	2104.14	1236.82	817.83
64	55.97	292.10	5.00	1716.84	1064.39	703.81
64	55.97	292.10	5.00	1716.84	1064.39	703.81
65	57.51	294.85	5.00	1333.38	893.66	590.92
65	57.51	294.85	5.00	1333.38	893.66	590.92
66	59.05	297.48	5.00	955.01	725.20	479.53
66	59.05	297.48	5.00	955.01	725.20	479.53
67	60.59	299.38	2.52	667.64	597.25	394.93
67	60.59	299.38	2.52	667.64	597.25	394.93
68	60.59	300.61	2.48	496.97	521.27	344.68
68	60.59	300.61	2.48	496.97	521.27	344.68
69	62.13	302.39	5.00	218.72	397.38	262.76
69	62.13	302.39	5.00	218.72	397.38	262.76
70	63.67	304.49	4.22	141.60	63.04	41.69
70	63.67	304.49	4.22	141.60	63.04	41.69

Table 4 - Base Force Data on the 70 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-31.82	39.90	5.00	1217.85	2042.22	1350.39
1	-31.82	39.90	5.00	1217.85	2042.22	1350.39
2	-30.28	44.18	5.00	2055.10	2414.99	1596.88
2	-30.28	44.18	5.00	2055.10	2414.99	1596.88
3	-28.74	48.53	5.00	2833.45	2761.53	1826.03
3	-28.74	48.53	5.00	2833.45	2761.53	1826.03
4	-27.20	52.94	5.00	3555.14	3082.85	2038.49
4	-27.20	52.94	5.00	3555.14	3082.85	2038.49
5	-25.66	57.42	5.00	4222.13	3379.81	2234.85
5	-25.66	57.42	5.00	4222.13	3379.81	2234.85
6	-24.12	61.96	5.00	4836.17	3653.20	2415.63
6	-24.12	61.96	5.00	4836.17	3653.20	2415.63
7	-22.58	66.55	5.00	5398.79	3903.69	2581.26
7	-22.58	66.55	5.00	5398.79	3903.69	2581.26
8	-21.04	71.19	5.00	5911.37	4131.91	2732.17
8	-21.04	71.19	5.00	5911.37	4131.91	2732.17
9	-19.50	75.88	5.00	6375.17	4338.41	2868.71
9	-19.50	75.88	5.00	6375.17	4338.41	2868.71
10	-17.96	80.61	5.00	6791.33	4523.70	2991.23
10	-17.96	80.61	5.00	6791.33	4523.70	2991.23
11	-16.42	84.75	3.66	5195.96	3410.96	2255.45
11	-16.42	84.75	3.66	5195.96	3410.96	2255.45
12	-16.42	87.14	1.34	2001.30	1293.47	855.29
12	-16.42	87.14	1.34	2001.30	1293.47	855.29
13	-14.88	90.20	5.00	8257.67	5176.55	3422.92
13	-14.88	90.20	5.00	8257.67	5176.55	3422.92
14	-13.34	95.05	5.00	9532.73	5744.25	3798.30
14	-13.34	95.05	5.00	9532.73	5744.25	3798.30
15	-11.80	99.49	4.10	8726.16	5115.95	3382.85
15	-11.80	99.49	4.10	8726.16	5115.95	3382.85
16	-11.80	101.94	0.90	2043.52	1179.01	779.61
16	-11.80	101.94	0.90	2043.52	1179.01	779.61
17	-10.26	104.84	5.00	12628.08	7122.38	4709.58
17	-10.26	104.84	5.00	12628.08	7122.38	4709.58
18	-8.72	109.77	5.00	14773.23	8077.47	5341.11
18	-8.72	109.77	5.00	14773.23	8077.47	5341.11
19	-7.18	114.72	5.00	16852.13	9003.05	5953.14
19	-7.18	114.72	5.00	16852.13	9003.05	5953.14
20	-5.64	119.69	5.00	18864.99	9899.24	6545.73
20	-5.64	119.69	5.00	18864.99	9899.24	6545.73
21	-4.10	124.67	5.00	20811.91	10766.06	7118.90
21	-4.10	124.67	5.00	20811.91	10766.06	7118.90
22	-2.56	129.66	5.00	22692.88	11603.52	7672.67
22	-2.56	129.66	5.00	22692.88	11603.52	7672.67
23	-1.02	134.66	5.00	24507.87	12411.61	8207.00
23	-1.02	134.66	5.00	24507.87	12411.61	8207.00
24	0.52	139.66	5.00	26256.74	13190.25	8721.87
24	0.52	139.66	5.00	26256.74	13190.25	8721.87
25	2.06	144.66	5.00	27939.33	13939.39	9217.23
25	2.06	144.66	5.00	27939.33	13939.39	9217.23
26	3.60	149.65	5.00	29555.41	14658.91	9693.00
26	3.60	149.65	5.00	29555.41	14658.91	9693.00
27	5.14	154.64	5.00	31104.73	15348.72	10149.12
27	5.14	154.64	5.00	31104.73	15348.72	10149.12
28	6.68	159.61	5.00	32587.02	16008.68	10585.51
28	6.68	159.61	5.00	32587.02	16008.68	10585.51
29	8.22	164.57	5.00	34001.97	16638.65	11002.07
29	8.22	164.57	5.00	34001.97	16638.65	11002.07
30	9.76	169.50	5.00	35349.25	17238.50	11398.72
30	9.76	169.50	5.00	35349.25	17238.50	11398.72
31	11.30	174.42	5.00	36628.54	17808.08	11775.34
31	11.30	174.42	5.00	36628.54	17808.08	11775.34
32	12.84	179.31	5.00	37839.50	18347.23	12131.85
32	12.84	179.31	5.00	37839.50	18347.23	12131.85
33	14.38	184.17	5.00	38981.77	18855.80	12468.13
33	14.38	184.17	5.00	38981.77	18855.80	12468.13
34	15.92	188.99	5.00	40055.00	19333.64	12784.10
34	15.92	188.99	5.00	40055.00	19333.64	12784.10
35	17.46	191.40	0.00	26.09	12.59	8.32
35	17.46	191.40	0.00	26.09	12.59	8.32
36	17.46	193.78	5.00	40310.91	19446.60	12858.79
36	17.46	193.78	5.00	40310.91	19446.60	12858.79
37	19.00	198.53	5.00	39849.13	19241.98	12723.49
37	19.00	198.53	5.00	39849.13	19241.98	12723.49
38	20.54	203.24	5.00	39327.25	19009.62	12569.84
38	20.54	203.24	5.00	39327.25	19009.62	12569.84
39	22.08	207.89	5.00	38771.83	18762.33	12406.33
39	22.08	207.89	5.00	38771.83	18762.33	12406.33
40	23.62	211.20	2.17	16623.65	8053.12	5325.02
40	23.62	211.20	2.17	16623.65	8053.12	5325.02
41	23.62	213.50	2.83	21548.03	10442.00	6904.63
41	23.62	213.50	2.83	21548.03	10442.00	6904.63
42	25.16	217.05	5.00	37485.46	18189.60	12027.62
42	25.16	217.05	5.00	37485.46	18189.60	12027.62
43	26.70	221.55	5.00	36762.57	17867.75	11814.80
43	26.70	221.55	5.00	36762.57	17867.75	11814.80
44	28.24	225.99	5.00	36010.60	17532.95	11593.42
44	28.24	225.99	5.00	36010.60	17532.95	11593.42
45	29.78	230.36	5.00	35230.23	17185.51	11363.68
45	29.78	230.36	5.00	35230.23	17185.51	11363.68
46	31.32	234.66	5.00	34422.18	16825.74	11125.79
46	31.32	234.66	5.00	34422.18	16825.74	11125.79
47	32.86	238.40	3.81	25650.33	12563.78	8307.62
47	32.86	238.40	3.81	25650.33	12563.78	8307.62
48	32.86	240.50	1.19	7931.98	3888.03	2570.90
48	32.86	240.50	1.19	7931.98	3888.03	2570.90
49	34.40	243.06	5.00	32600.98	16014.89	10589.62
49	34.40	243.06	5.00	32600.98	16014.89	10589.62
50	35.94	247.15	5.00	31550.35	15547.12	10280.32
50	35.94	247.15	5.00	31550.35	15547.12	10280.32

51	37.48	251.16	5.00	30481.76	15071.35	9965.72
51	37.48	251.16	5.00	30481.76	15071.35	9965.72
52	39.02	255.08	5.00	29396.20	14588.03	9646.13
52	39.02	255.08	5.00	29396.20	14588.03	9646.13
53	40.56	257.20	0.47	2690.71	1338.90	885.33
53	40.56	257.20	0.47	2690.71	1338.90	885.33
54	40.56	259.10	4.53	25286.05	12617.15	8342.92
54	40.56	259.10	4.53	25286.05	12617.15	8342.92
55	42.10	262.68	5.00	26088.46	13115.33	8672.33
55	42.10	262.68	5.00	26088.46	13115.33	8672.33
56	43.64	266.34	5.00	24175.96	12263.83	8109.29
56	43.64	266.34	5.00	24175.96	12263.83	8109.29
57	45.18	269.91	5.00	22246.10	11404.60	7541.13
57	45.18	269.91	5.00	22246.10	11404.60	7541.13
58	46.73	273.39	5.00	20302.48	10539.25	6968.93
58	46.73	273.39	5.00	20302.48	10539.25	6968.93
59	48.27	276.77	5.00	18348.93	9669.47	6393.80
59	48.27	276.77	5.00	18348.93	9669.47	6393.80
60	49.81	280.04	5.00	16389.50	8797.07	5816.94
60	49.81	280.04	5.00	16389.50	8797.07	5816.94
61	51.35	283.22	5.00	14428.51	7923.99	5239.63
61	51.35	283.22	5.00	14428.51	7923.99	5239.63
62	52.89	286.29	5.00	12470.60	7052.27	4663.21
62	52.89	286.29	5.00	12470.60	7052.27	4663.21
63	54.43	289.25	5.00	10520.71	6184.12	4089.16
63	54.43	289.25	5.00	10520.71	6184.12	4089.16
64	55.97	292.10	5.00	8584.21	5321.94	3519.06
64	55.97	292.10	5.00	8584.21	5321.94	3519.06
65	57.51	294.85	5.00	6666.88	4468.29	2954.59
65	57.51	294.85	5.00	6666.88	4468.29	2954.59
66	59.05	297.48	5.00	4775.03	3625.98	2397.63
66	59.05	297.48	5.00	4775.03	3625.98	2397.63
67	60.59	299.38	2.52	1683.58	1506.08	995.88
67	60.59	299.38	2.52	1683.58	1506.08	995.88
68	60.59	300.61	2.48	1231.65	1291.86	854.23
68	60.59	300.61	2.48	1231.65	1291.86	854.23
69	62.13	302.39	5.00	1093.58	1986.89	1313.81
69	62.13	302.39	5.00	1093.58	1986.89	1313.81
70	63.67	304.49	4.22	597.33	265.95	175.86
70	63.67	304.49	4.22	597.33	265.95	175.86

SUM OF MOMENTS = -0.301617E-01 (ft/lbs);Imbalance (Fraction of Total Weight) = -0.1790273E-07

Sum of the Resisting Forces = 686019.65 (lbs)

Average Available Shear Strength = 2183.26(psf)

Sum of the Driving Forces = 453620.87 (lbs)

Average Mobilized Shear Stress = 1443.65(psf)

Total length of the failure surface = 314.22(ft)

Factor of Safety Balance Check: FS = 1.51232

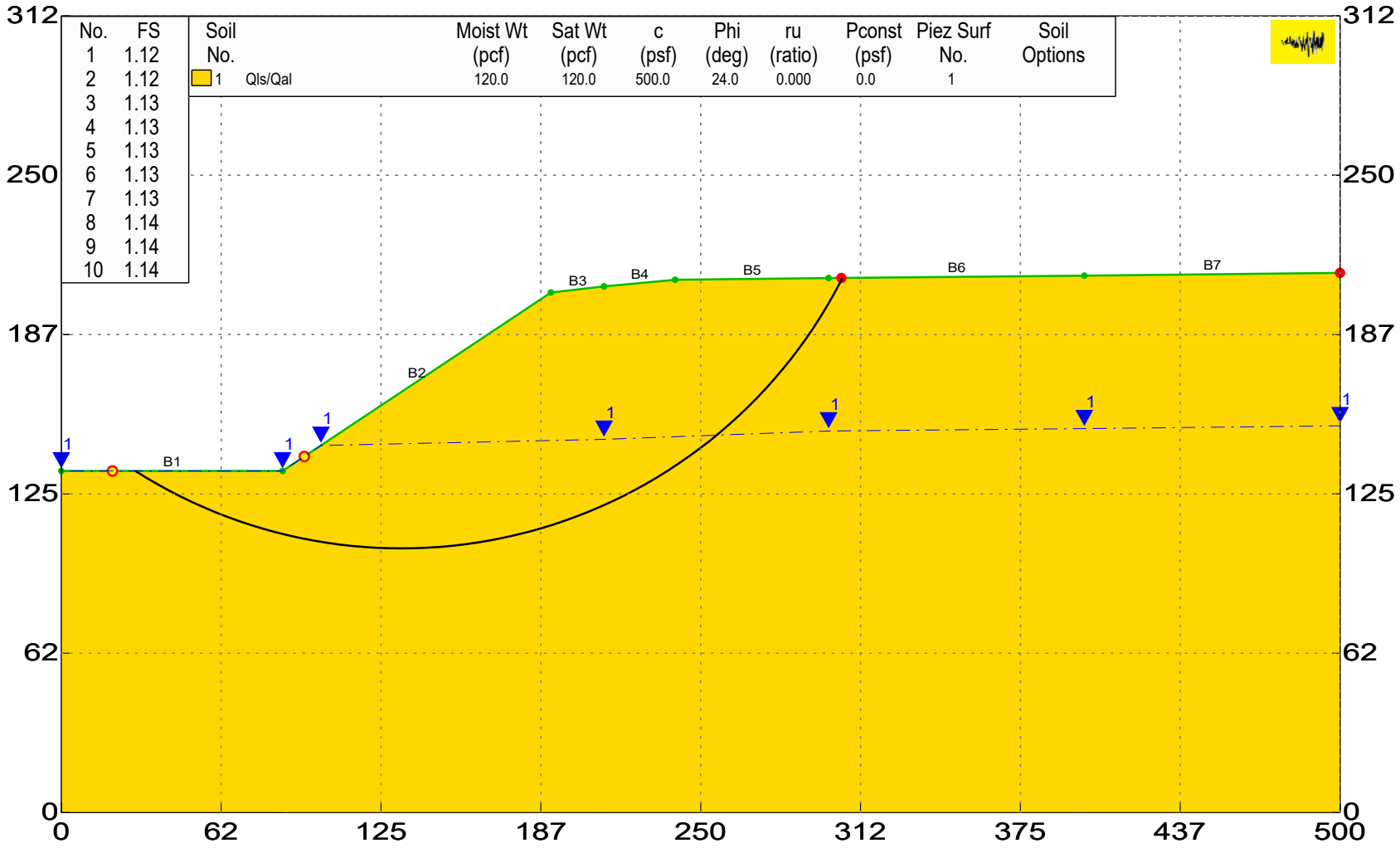
CAUTION - Factor Of Safety Is Calculated By The Simplified Bishop Method. This Method Is Valid Only If The Failure Surface Approximates A Circular Arc.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Section C-C'
115' Oso Creek Setback - Seismic

LGC Geotechnical

\xce.gsd



GEOSTASE FS = 1.12

Simplified Bishop Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

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** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 4/ 2024
Analysis Time:
Analysis By: LGC Geotechnical
Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano
\Engineering\Slope Stability\Sec C\2024_04_04\xce.gsd
Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano
\Engineering\Slope Stability\Sec C\2024_04_04\xce.OUT
Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Section C-C'

DESCRIPTION: 115' Oso Creek Setback - Seismic

BOUNDARY DATA

7 Surface Boundaries
7 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	134.000	86.500	134.000	1
2	86.500	134.000	191.400	204.000	1
3	191.400	204.000	212.200	206.400	1
4	212.200	206.400	240.000	209.000	1
5	240.000	209.000	300.000	209.700	1
6	300.000	209.700	400.000	210.600	1
7	400.000	210.600	500.000	211.700	1

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

1 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.
1 Qls/Qal	120.0	120.0	500.00	24.00	0.000	0.0	1
0							

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 7 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	134.00
2	86.50	134.00
3	101.50	144.00
4	212.20	146.40
5	300.00	149.70
6	400.00	150.60
7	500.00	151.70

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Circular Trial Failure Surfaces Have Been Generated Using A Random Procedure.

2000 Trial Surfaces Have Been Generated.

2000 Surfaces Generated at Increments of 0.4502(in) Equally Spaced Within the Start Range

Along The Specified Surface Between X = 20.00(ft)
and X = 95.00(ft)

Each Surface Enters within a Range Between X = 305.00(ft)
and X = 500.00(ft)

Unless XCLUDE Lines Were Specified, The Minimum Elevation
To Which A Surface Extends Is Y = 0.00(ft)

Specified Maximum Radius = 10000.000(ft)

5.000(ft) Line Segments Were Used For Each Trial Failure Surface.

The Simplified Bishop Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 2000

Number of Trial Surfaces With Valid FS = 2000

Statistical Data On All Valid FS Values:
FS Max = 2.069 FS Min = 1.119 FS Ave = 1.489
Standard Deviation = 0.180 Coefficient of Variation = 12.06 %

Critical Surface is Sequence Number 240 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

BACK-CALCULATED CIRCULAR SURFACE PARAMETERS:

Circle Center At X = 132.967935(ft) ; Y = 296.832627(ft); and Radius = 193.211444(ft)

Circular Trial Failure Surface Generated With 66 Coordinate Points

Point No.	X-Coord. (ft)	Y-Coord. (ft)
1	28.967	134.000
2	33.215	131.363
3	37.530	128.838
4	41.909	126.424
5	46.349	124.125
6	50.847	121.942
7	55.401	119.875
8	60.005	117.927
9	64.659	116.099
10	69.359	114.392
11	74.101	112.807
12	78.883	111.346
13	83.700	110.008
14	88.551	108.796
15	93.432	107.710
16	98.339	106.750
17	103.269	105.917
18	108.219	105.213
19	113.186	104.637
20	118.166	104.189
21	123.156	103.871
22	128.152	103.681
23	133.152	103.621
24	138.151	103.691
25	143.147	103.890
26	148.136	104.218
27	153.116	104.675
28	158.081	105.260
29	163.030	105.974
30	167.959	106.816
31	172.864	107.785
32	177.742	108.881
33	182.591	110.102
34	187.406	111.449
35	192.185	112.920
36	196.924	114.513
37	201.620	116.229
38	206.271	118.066
39	210.872	120.023
40	215.421	122.098
41	219.915	124.290
42	224.350	126.598
43	228.725	129.019
44	233.035	131.553
45	237.278	134.198
46	241.452	136.952
47	245.553	139.812
48	249.578	142.778
49	253.525	145.847
50	257.392	149.017
51	261.175	152.287
52	264.873	155.652
53	268.482	159.113
54	272.000	162.666
55	275.425	166.308
56	278.755	170.038
57	281.987	173.853
58	285.119	177.750
59	288.150	181.727
60	291.076	185.781
61	293.897	189.910
62	296.610	194.110
63	299.213	198.379
64	301.705	202.713
65	304.084	207.111
66	305.424	209.749

Factor Of Safety For The Critical or Specified Surface = 1.119

Table 1 - Geometry Data on the 72 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	4.25	1.32	31.09	132.68	134.00	-31.82	0.00	5.00
2	4.32	3.90	35.37	130.10	134.00	-30.34	0.00	5.00
3	4.38	6.37	39.72	127.63	134.00	-28.86	0.00	5.00
4	4.44	8.73	44.13	125.27	134.00	-27.38	0.00	5.00
5	4.50	10.97	48.60	123.03	134.00	-25.89	0.00	5.00
6	4.55	13.09	53.12	120.91	134.00	-24.41	0.00	5.00
7	4.60	15.10	57.70	118.90	134.00	-22.93	0.00	5.00
8	4.65	16.99	62.33	117.01	134.00	-21.45	0.00	5.00
9	4.70	18.75	67.01	115.25	134.00	-19.96	0.00	5.00
10	4.74	20.40	71.73	113.60	134.00	-18.48	0.00	5.00
11	4.78	21.92	76.49	112.08	134.00	-17.00	0.00	5.00
12	4.82	23.32	81.29	110.68	134.00	-15.51	0.00	5.00
13	2.80	24.34	85.10	109.66	134.00	-14.03	0.00	2.89
14	2.05	25.63	87.53	109.05	134.68	-14.03	33.72	2.11
15	4.88	28.74	90.99	108.25	137.00	-12.55	33.72	5.00
16	4.91	33.03	95.89	107.23	140.26	-11.07	33.72	5.00
17	3.16	36.47	99.92	106.48	142.95	-9.58	33.72	3.21
18	1.77	38.53	102.38	106.07	144.60	-9.58	33.72	1.79
19	4.95	41.28	105.74	105.57	146.84	-8.10	33.72	5.00
20	4.97	45.23	110.70	104.92	150.15	-6.62	33.72	5.00
21	4.98	49.06	115.68	104.41	153.47	-5.14	33.72	5.00
22	4.99	52.77	120.66	104.03	156.80	-3.65	33.72	5.00
23	5.00	56.35	125.65	103.78	160.13	-2.17	33.72	5.00
24	5.00	59.81	130.65	103.65	163.46	-0.69	33.72	5.00
25	5.00	63.14	135.65	103.66	166.80	0.80	33.72	5.00
26	5.00	66.34	140.65	103.79	170.13	2.28	33.72	5.00
27	4.99	69.41	145.64	104.05	173.47	3.76	33.72	5.00
28	4.98	72.35	150.63	104.45	176.79	5.24	33.72	5.00
29	4.97	75.14	155.60	104.97	180.11	6.73	33.72	5.00
30	4.95	77.80	160.56	105.62	183.42	8.21	33.72	5.00
31	4.93	80.32	165.49	106.40	186.71	9.69	33.72	5.00
32	4.91	82.69	170.41	107.30	189.99	11.18	33.72	5.00
33	4.88	84.93	175.30	108.33	193.26	12.66	33.72	5.00
34	4.85	87.01	180.17	109.49	196.50	14.14	33.72	5.00
35	4.82	88.95	185.00	110.78	199.73	15.62	33.72	5.00
36	3.99	90.60	189.40	112.06	202.67	17.11	33.72	4.18
37	0.78	91.25	191.79	112.80	204.05	17.11	6.58	0.82
38	4.74	90.65	194.55	113.72	204.36	18.59	6.58	5.00
39	4.70	89.54	199.27	115.37	204.91	20.07	6.58	5.00
40	4.65	88.30	203.95	117.15	205.45	21.55	6.58	5.00
41	4.60	86.94	208.57	119.04	205.98	23.04	6.58	5.00
42	1.33	86.00	211.54	120.33	206.32	24.52	6.58	1.46
43	3.22	85.19	213.81	121.36	206.55	24.52	5.34	3.54
44	4.49	83.72	217.67	123.19	206.91	26.00	5.34	5.00
45	4.44	81.89	222.13	125.44	207.33	27.49	5.34	5.00
46	4.37	79.93	226.54	127.81	207.74	28.97	5.34	5.00
47	4.31	77.86	230.88	130.29	208.15	30.45	5.34	5.00
48	4.24	75.67	235.16	132.88	208.55	31.93	5.34	5.00
49	2.72	73.78	238.64	135.10	208.87	33.42	5.34	3.26
50	1.45	72.54	240.73	136.47	209.01	33.42	0.67	1.74
51	4.10	70.66	243.50	138.38	209.04	34.90	0.67	5.00

52	4.03	67.79	247.57	141.30	209.09	36.38	0.67	5.00
53	3.95	64.82	251.55	144.31	209.13	37.86	0.67	5.00
54	2.69	62.22	254.87	146.95	209.17	39.35	0.67	3.48
55	1.17	60.66	256.80	148.54	209.20	39.35	0.67	1.52
56	3.78	58.57	259.28	150.65	209.22	40.83	0.67	5.00
57	3.70	55.30	263.02	153.97	209.27	42.31	0.67	5.00
58	3.61	51.93	266.68	157.38	209.31	43.80	0.67	5.00
59	3.52	48.46	270.24	160.89	209.35	45.28	0.67	5.00
60	3.43	44.91	273.71	164.49	209.39	46.76	0.67	5.00
61	3.33	41.26	277.09	168.17	209.43	48.24	0.67	5.00
62	3.23	37.53	280.37	171.95	209.47	49.73	0.67	5.00
63	3.13	33.71	283.55	175.80	209.51	51.21	0.67	5.00
64	3.03	29.81	286.63	179.74	209.54	52.69	0.67	5.00
65	2.93	25.82	289.61	183.75	209.58	54.18	0.67	5.00
66	2.82	21.77	292.49	187.85	209.61	55.66	0.67	5.00
67	2.71	17.63	295.25	192.01	209.64	57.14	0.67	5.00
68	2.60	13.43	297.91	196.24	209.68	58.62	0.67	5.00
69	0.79	10.63	299.61	199.06	209.70	60.11	0.67	1.58
70	1.71	8.48	300.85	201.23	209.71	60.11	0.52	3.42
71	2.38	4.81	302.89	204.91	209.73	61.59	0.52	5.00
72	1.34	1.31	304.75	208.43	209.74	63.07	0.52	2.96

Table 2 - Force Data On The 72 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	672.1	0.0	411.3	100.8	0.0	0.0
2	2019.2	0.0	1216.7	302.9	0.0	0.0
3	3346.9	0.0	1987.2	502.0	0.0	0.0
4	4648.9	0.0	2722.3	697.3	0.0	0.0
5	5919.4	0.0	3421.6	887.9	0.0	0.0
6	7152.8	0.0	4084.6	1072.9	0.0	0.0
7	8343.5	0.0	4710.8	1251.5	0.0	0.0
8	9486.4	0.0	5299.9	1423.0	0.0	0.0
9	10576.5	0.0	5851.4	1586.5	0.0	0.0
10	11609.0	0.0	6364.9	1741.4	0.0	0.0
11	12579.6	0.0	6840.2	1886.9	0.0	0.0
12	13484.0	0.0	7276.8	2022.6	0.0	0.0
13	8177.5	0.0	4383.1	1226.6	0.0	0.0
14	6309.4	0.0	3381.7	946.4	0.0	0.0
15	16834.7	0.0	8967.4	2525.2	0.0	0.0
16	19451.4	0.0	10304.5	2917.7	0.0	0.0
17	13835.2	0.0	7294.4	2075.3	0.0	0.0
18	8180.1	0.0	4248.8	1227.0	0.0	0.0
19	24518.8	0.0	12020.4	3677.8	0.0	0.0
20	26954.6	0.0	12253.8	4043.2	0.0	0.0
21	29315.6	0.0	12447.1	4397.3	0.0	0.0
22	31595.1	0.0	12600.3	4739.3	0.0	0.0
23	33786.7	0.0	12713.3	5068.0	0.0	0.0
24	35884.3	0.0	12786.0	5382.6	0.0	0.0
25	37882.1	0.0	12818.3	5682.3	0.0	0.0
26	39774.8	0.0	12810.3	5966.2	0.0	0.0
27	41557.5	0.0	12761.9	6233.6	0.0	0.0
28	43225.6	0.0	12673.1	6483.8	0.0	0.0
29	44774.9	0.0	12544.1	6716.2	0.0	0.0
30	46201.7	0.0	12374.9	6930.3	0.0	0.0
31	47502.9	0.0	12165.6	7125.4	0.0	0.0
32	48675.4	0.0	11916.4	7301.3	0.0	0.0
33	49716.9	0.0	11627.4	7457.5	0.0	0.0
34	50625.5	0.0	11298.8	7593.8	0.0	0.0
35	51399.6	0.0	10930.8	7709.9	0.0	0.0
36	43425.3	0.0	8824.9	6513.8	0.0	0.0
37	8592.6	0.0	1698.9	1288.9	0.0	0.0
38	51551.0	0.0	10077.9	7732.7	0.0	0.0
39	50459.2	0.0	9593.5	7568.9	0.0	0.0
40	49274.8	0.0	9070.8	7391.2	0.0	0.0
41	48002.1	0.0	8510.3	7200.3	0.0	0.0
42	13706.6	0.0	2373.9	2056.0	0.0	0.0
43	32925.3	0.0	5544.1	4938.8	0.0	0.0
44	45145.7	0.0	7304.4	6771.9	0.0	0.0
45	43585.4	0.0	6654.8	6537.8	0.0	0.0
46	41959.1	0.0	5968.7	6293.9	0.0	0.0
47	40272.4	0.0	5246.5	6040.9	0.0	0.0
48	38531.5	0.0	4488.8	5779.7	0.0	0.0
49	24094.8	0.0	2502.1	3614.2	0.0	0.0
50	12637.3	0.0	1193.9	1895.6	0.0	0.0
51	34770.8	0.0	2868.7	5215.6	0.0	0.0
52	32747.2	0.0	2007.4	4912.1	0.0	0.0
53	30704.6	0.0	1112.7	4605.7	0.0	0.0
54	20100.5	0.0	228.7	3015.1	0.0	0.0
55	8549.8	0.0	0.0	1282.5	0.0	0.0
56	26591.5	0.0	0.0	3988.7	0.0	0.0
57	24535.4	0.0	0.0	3680.3	0.0	0.0
58	22489.5	0.0	0.0	3373.4	0.0	0.0
59	20461.1	0.0	0.0	3069.2	0.0	0.0
60	18457.5	0.0	0.0	2768.6	0.0	0.0
61	16486.2	0.0	0.0	2472.9	0.0	0.0
62	14554.5	0.0	0.0	2183.2	0.0	0.0
63	12669.7	0.0	0.0	1900.5	0.0	0.0
64	10838.9	0.0	0.0	1625.8	0.0	0.0
65	9069.2	0.0	0.0	1360.4	0.0	0.0
66	7367.6	0.0	0.0	1105.1	0.0	0.0
67	5741.0	0.0	0.0	861.1	0.0	0.0
68	4195.9	0.0	0.0	629.4	0.0	0.0
69	1004.0	0.0	0.0	150.6	0.0	0.0
70	1734.5	0.0	0.0	260.2	0.0	0.0
71	1374.2	0.0	0.0	206.1	0.0	0.0
72	211.1	0.0	0.0	31.7	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 1714836.35(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 1337392.21(lbs)

TOTAL AREA OF SLIDING MASS = 14290.30(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 72 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	500.00	24.00	
2	1	500.00	24.00	
3	1	500.00	24.00	
4	1	500.00	24.00	
5	1	500.00	24.00	
6	1	500.00	24.00	
7	1	500.00	24.00	
8	1	500.00	24.00	
9	1	500.00	24.00	
10	1	500.00	24.00	
11	1	500.00	24.00	
12	1	500.00	24.00	
13	1	500.00	24.00	
14	1	500.00	24.00	
15	1	500.00	24.00	
16	1	500.00	24.00	
17	1	500.00	24.00	
18	1	500.00	24.00	
19	1	500.00	24.00	
20	1	500.00	24.00	
21	1	500.00	24.00	
22	1	500.00	24.00	
23	1	500.00	24.00	
24	1	500.00	24.00	
25	1	500.00	24.00	
26	1	500.00	24.00	
27	1	500.00	24.00	
28	1	500.00	24.00	
29	1	500.00	24.00	

30	1	500.00	24.00
31	1	500.00	24.00
32	1	500.00	24.00
33	1	500.00	24.00
34	1	500.00	24.00
35	1	500.00	24.00
36	1	500.00	24.00
37	1	500.00	24.00
38	1	500.00	24.00
39	1	500.00	24.00
40	1	500.00	24.00
41	1	500.00	24.00
42	1	500.00	24.00
43	1	500.00	24.00
44	1	500.00	24.00
45	1	500.00	24.00
46	1	500.00	24.00
47	1	500.00	24.00
48	1	500.00	24.00
49	1	500.00	24.00
50	1	500.00	24.00
51	1	500.00	24.00
52	1	500.00	24.00
53	1	500.00	24.00
54	1	500.00	24.00
55	1	500.00	24.00
56	1	500.00	24.00
57	1	500.00	24.00
58	1	500.00	24.00
59	1	500.00	24.00
60	1	500.00	24.00
61	1	500.00	24.00
62	1	500.00	24.00
63	1	500.00	24.00
64	1	500.00	24.00
65	1	500.00	24.00
66	1	500.00	24.00
67	1	500.00	24.00
68	1	500.00	24.00
69	1	500.00	24.00
70	1	500.00	24.00
71	1	500.00	24.00
72	1	500.00	24.00

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 72 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-31.82	31.09	5.00	459.25	704.47	629.73
1	-31.82	31.09	5.00	459.25	704.47	629.73
2	-30.34	35.37	5.00	623.71	777.69	695.19
2	-30.34	35.37	5.00	623.71	777.69	695.19
3	-28.86	39.72	5.00	775.20	845.14	755.48
3	-28.86	39.72	5.00	775.20	845.14	755.48
4	-27.38	44.13	5.00	914.40	907.12	810.88
4	-27.38	44.13	5.00	914.40	907.12	810.88
5	-25.89	48.60	5.00	1041.91	963.89	861.63
5	-25.89	48.60	5.00	1041.91	963.89	861.63
6	-24.41	53.12	5.00	1158.22	1015.67	907.92
6	-24.41	53.12	5.00	1158.22	1015.67	907.92
7	-22.93	57.70	5.00	1263.78	1062.67	949.93
7	-22.93	57.70	5.00	1263.78	1062.67	949.93
8	-21.45	62.33	5.00	1359.01	1105.07	987.83
8	-21.45	62.33	5.00	1359.01	1105.07	987.83
9	-19.96	67.01	5.00	1444.25	1143.02	1021.76
9	-19.96	67.01	5.00	1444.25	1143.02	1021.76
10	-18.48	71.73	5.00	1519.83	1176.67	1051.84
10	-18.48	71.73	5.00	1519.83	1176.67	1051.84
11	-17.00	76.49	5.00	1586.04	1206.15	1078.19
11	-17.00	76.49	5.00	1586.04	1206.15	1078.19
12	-15.51	81.29	5.00	1643.14	1231.58	1100.92
12	-15.51	81.29	5.00	1643.14	1231.58	1100.92
13	-14.03	85.10	2.89	1675.04	1245.77	1113.61
13	-14.03	85.10	2.89	1675.04	1245.77	1113.61
14	-14.03	87.53	2.11	1757.45	1282.47	1146.41
14	-14.03	87.53	2.11	1757.45	1282.47	1146.41
15	-12.55	90.99	5.00	1920.28	1354.97	1211.22
15	-12.55	90.99	5.00	1920.28	1354.97	1211.22
16	-11.07	95.89	5.00	2153.20	1458.67	1303.92
16	-11.07	95.89	5.00	2153.20	1458.67	1303.92
17	-9.58	99.92	3.21	2328.81	1536.85	1373.81
17	-9.58	99.92	3.21	2328.81	1536.85	1373.81
18	-9.58	102.38	1.79	2494.12	1610.45	1439.60
18	-9.58	102.38	1.79	2494.12	1610.45	1439.60
19	-8.10	105.74	5.00	2765.12	1731.11	1547.46
19	-8.10	105.74	5.00	2765.12	1731.11	1547.46
20	-6.62	110.70	5.00	3170.79	1911.73	1708.91
20	-6.62	110.70	5.00	3170.79	1911.73	1708.91
21	-5.14	115.68	5.00	3561.67	2085.76	1864.48
21	-5.14	115.68	5.00	3561.67	2085.76	1864.48
22	-3.65	120.66	5.00	3937.93	2253.28	2014.23
22	-3.65	120.66	5.00	3937.93	2253.28	2014.23
23	-2.17	125.65	5.00	4299.72	2414.36	2158.22
23	-2.17	125.65	5.00	4299.72	2414.36	2158.22
24	-0.69	130.65	5.00	4647.17	2569.05	2296.50
24	-0.69	130.65	5.00	4647.17	2569.05	2296.50
25	0.80	135.65	5.00	4980.38	2717.41	2429.12
25	0.80	135.65	5.00	4980.38	2717.41	2429.12
26	2.28	140.65	5.00	5299.44	2859.46	2556.11
26	2.28	140.65	5.00	5299.44	2859.46	2556.11
27	3.76	145.64	5.00	5604.42	2995.25	2677.48
27	3.76	145.64	5.00	5604.42	2995.25	2677.48
28	5.24	150.63	5.00	5895.37	3124.79	2793.28
28	5.24	150.63	5.00	5895.37	3124.79	2793.28
29	6.73	155.60	5.00	6172.35	3248.11	2903.52
29	6.73	155.60	5.00	6172.35	3248.11	2903.52
30	8.21	160.56	5.00	6435.39	3365.22	3008.20
30	8.21	160.56	5.00	6435.39	3365.22	3008.20
31	9.69	165.49	5.00	6684.51	3476.14	3107.36
31	9.69	165.49	5.00	6684.51	3476.14	3107.36
32	11.18	170.41	5.00	6919.75	3580.87	3200.98
32	11.18	170.41	5.00	6919.75	3580.87	3200.98
33	12.66	175.30	5.00	7141.11	3679.43	3289.08
33	12.66	175.30	5.00	7141.11	3679.43	3289.08
34	14.14	180.17	5.00	7348.62	3771.81	3371.67
34	14.14	180.17	5.00	7348.62	3771.81	3371.67
35	15.62	185.00	5.00	7542.27	3858.04	3448.74
35	15.62	185.00	5.00	7542.27	3858.04	3448.74
36	17.11	189.40	4.18	7700.72	3928.58	3511.80
36	17.11	189.40	4.18	7700.72	3928.58	3511.80
37	17.11	191.79	0.82	7807.63	3976.18	3554.35
37	17.11	191.79	0.82	7807.63	3976.18	3554.35
38	18.59	194.55	5.00	7703.39	3929.77	3512.86
38	18.59	194.55	5.00	7703.39	3929.77	3512.86
39	20.07	199.27	5.00	7583.91	3876.57	3465.31
39	20.07	199.27	5.00	7583.91	3876.57	3465.31
40	21.55	203.95	5.00	7458.61	3820.79	3415.44
40	21.55	203.95	5.00	7458.61	3820.79	3415.44
41	23.04	208.57	5.00	7327.62	3762.47	3363.31
41	23.04	208.57	5.00	7327.62	3762.47	3363.31
42	24.52	211.54	1.46	7209.88	3710.04	3316.45
42	24.52	211.54	1.46	7209.88	3710.04	3316.45
43	24.52	213.81	3.54	7178.33	3696.00	3303.89
43	24.52	213.81	3.54	7178.33	3696.00	3303.89

44	26.00	217.67	5.00	7032.38	3631.02	3245.80
44	26.00	217.67	5.00	7032.38	3631.02	3245.80
45	27.49	222.13	5.00	6871.73	3559.49	3181.87
45	27.49	222.13	5.00	6871.73	3559.49	3181.87
46	28.97	226.54	5.00	6706.34	3485.85	3116.04
46	28.97	226.54	5.00	6706.34	3485.85	3116.04
47	30.45	230.88	5.00	6536.32	3410.16	3048.38
47	30.45	230.88	5.00	6536.32	3410.16	3048.38
48	31.93	235.16	5.00	6361.85	3332.48	2978.94
48	31.93	235.16	5.00	6361.85	3332.48	2978.94
49	33.42	238.64	3.26	6199.87	3260.36	2914.47
49	33.42	238.64	3.26	6199.87	3260.36	2914.47
50	33.42	240.73	1.74	6145.87	3236.32	2892.98
50	33.42	240.73	1.74	6145.87	3236.32	2892.98
51	34.90	243.50	5.00	5973.07	3159.38	2824.21
51	34.90	243.50	5.00	5973.07	3159.38	2824.21
52	36.38	247.57	5.00	5755.46	3062.50	2737.60
52	36.38	247.57	5.00	5755.46	3062.50	2737.60
53	37.86	251.55	5.00	5535.37	2964.51	2650.00
53	37.86	251.55	5.00	5535.37	2964.51	2650.00
54	39.35	254.87	3.48	5334.43	2875.04	2570.03
54	39.35	254.87	3.48	5334.43	2875.04	2570.03
55	39.35	256.80	1.52	5242.16	2833.96	2533.31
55	39.35	256.80	1.52	5242.16	2833.96	2533.31
56	40.83	259.28	5.00	4972.71	2713.99	2426.07
56	40.83	259.28	5.00	4972.71	2713.99	2426.07
57	42.31	263.02	5.00	4601.66	2548.79	2278.39
57	42.31	263.02	5.00	4601.66	2548.79	2278.39
58	43.80	266.68	5.00	4228.52	2382.66	2129.88
58	43.80	266.68	5.00	4228.52	2382.66	2129.88
59	45.28	270.24	5.00	3853.94	2215.88	1980.80
59	45.28	270.24	5.00	3853.94	2215.88	1980.80
60	46.76	273.71	5.00	3478.60	2048.77	1831.42
60	46.76	273.71	5.00	3478.60	2048.77	1831.42
61	48.24	277.09	5.00	3103.23	1881.65	1682.02
61	48.24	277.09	5.00	3103.23	1881.65	1682.02
62	49.73	280.37	5.00	2728.58	1714.84	1532.92
62	49.73	280.37	5.00	2728.58	1714.84	1532.92
63	51.21	283.55	5.00	2355.45	1548.72	1384.41
63	51.21	283.55	5.00	2355.45	1548.72	1384.41
64	52.69	286.63	5.00	1984.70	1383.65	1236.86
64	52.69	286.63	5.00	1984.70	1383.65	1236.86
65	54.18	289.61	5.00	1617.23	1220.04	1090.60
65	54.18	289.61	5.00	1617.23	1220.04	1090.60
66	55.66	292.49	5.00	1254.00	1058.32	946.04
66	55.66	292.49	5.00	1254.00	1058.32	946.04
67	57.14	295.25	5.00	896.04	898.94	803.58
67	57.14	295.25	5.00	896.04	898.94	803.58
68	58.62	297.91	5.00	544.47	742.41	663.65
68	58.62	297.91	5.00	544.47	742.41	663.65
69	60.11	299.61	1.58	305.76	636.13	568.65
69	60.11	299.61	1.58	305.76	636.13	568.65
70	60.11	300.85	3.42	151.73	567.56	507.34
70	60.11	300.85	3.42	151.73	567.56	507.34
71	61.59	302.89	5.00	335.54	149.39	133.54
71	61.59	302.89	5.00	335.54	149.39	133.54
72	63.07	304.75	2.96	89.08	39.66	35.45
72	63.07	304.75	2.96	89.08	39.66	35.45

Table 4 - Base Force Data on the 72 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-31.82	31.09	5.00	2296.23	3522.35	3148.66
1	-31.82	31.09	5.00	2296.23	3522.35	3148.66
2	-30.34	35.37	5.00	3118.53	3888.46	3475.93
2	-30.34	35.37	5.00	3118.53	3888.46	3475.93
3	-28.86	39.72	5.00	3876.00	4225.71	3777.40
3	-28.86	39.72	5.00	3876.00	4225.71	3777.40
4	-27.38	44.13	5.00	4572.02	4535.59	4054.42
4	-27.38	44.13	5.00	4572.02	4535.59	4054.42
5	-25.89	48.60	5.00	5209.53	4819.43	4308.14
5	-25.89	48.60	5.00	5209.53	4819.43	4308.14
6	-24.41	53.12	5.00	5791.08	5078.35	4539.59
6	-24.41	53.12	5.00	5791.08	5078.35	4539.59
7	-22.93	57.70	5.00	6318.92	5313.36	4749.67
7	-22.93	57.70	5.00	6318.92	5313.36	4749.67
8	-21.45	62.33	5.00	6795.05	5525.35	4939.17
8	-21.45	62.33	5.00	6795.05	5525.35	4939.17
9	-19.96	67.01	5.00	7221.26	5715.11	5108.80
9	-19.96	67.01	5.00	7221.26	5715.11	5108.80
10	-18.48	71.73	5.00	7599.15	5883.36	5259.20
10	-18.48	71.73	5.00	7599.15	5883.36	5259.20
11	-17.00	76.49	5.00	7930.19	6030.75	5390.95
11	-17.00	76.49	5.00	7930.19	6030.75	5390.95
12	-15.51	81.29	5.00	8215.72	6157.88	5504.59
12	-15.51	81.29	5.00	8215.72	6157.88	5504.59
13	-14.03	85.10	2.89	4833.58	3594.87	3213.50
13	-14.03	85.10	2.89	4833.58	3594.87	3213.50
14	-14.03	87.53	2.11	3715.86	2711.58	2423.91
14	-14.03	87.53	2.11	3715.86	2711.58	2423.91
15	-12.55	90.99	5.00	9601.42	6774.83	6056.09
15	-12.55	90.99	5.00	9601.42	6774.83	6056.09
16	-11.07	95.89	5.00	10766.00	7293.33	6519.59
16	-11.07	95.89	5.00	10766.00	7293.33	6519.59
17	-9.58	99.92	3.21	7465.93	4927.00	4404.30
17	-9.58	99.92	3.21	7465.93	4927.00	4404.30
18	-9.58	102.38	1.79	4474.69	2889.31	2582.79
18	-9.58	102.38	1.79	4474.69	2889.31	2582.79
19	-8.10	105.74	5.00	13825.62	8655.56	7737.30
19	-8.10	105.74	5.00	13825.62	8655.56	7737.30
20	-6.62	110.70	5.00	15853.96	9558.64	8544.57
20	-6.62	110.70	5.00	15853.96	9558.64	8544.57
21	-5.14	115.68	5.00	17808.34	10428.78	9322.40
21	-5.14	115.68	5.00	17808.34	10428.78	9322.40
22	-3.65	120.66	5.00	19689.63	11266.39	10071.15
22	-3.65	120.66	5.00	19689.63	11266.39	10071.15
23	-2.17	125.65	5.00	21498.60	12071.79	10791.11
23	-2.17	125.65	5.00	21498.60	12071.79	10791.11
24	-0.69	130.65	5.00	23235.85	12845.27	11482.52
24	-0.69	130.65	5.00	23235.85	12845.27	11482.52
25	0.80	135.65	5.00	24901.91	13587.04	12145.61
25	0.80	135.65	5.00	24901.91	13587.04	12145.61
26	2.28	140.65	5.00	26497.21	14297.32	12780.53
26	2.28	140.65	5.00	26497.21	14297.32	12780.53
27	3.76	145.64	5.00	28022.10	14976.24	13387.42
27	3.76	145.64	5.00	28022.10	14976.24	13387.42
28	5.24	150.63	5.00	29476.87	15623.95	13966.41
28	5.24	150.63	5.00	29476.87	15623.95	13966.41
29	6.73	155.60	5.00	30861.75	16240.54	14517.59
29	6.73	155.60	5.00	30861.75	16240.54	14517.59
30	8.21	160.56	5.00	32176.93	16826.09	15041.02
30	8.21	160.56	5.00	32176.93	16826.09	15041.02
31	9.69	165.49	5.00	33422.55	17380.68	15536.78
31	9.69	165.49	5.00	33422.55	17380.68	15536.78
32	11.18	170.41	5.00	34598.73	17904.35	16004.89
32	11.18	170.41	5.00	34598.73	17904.35	16004.89
33	12.66	175.30	5.00	35705.55	18397.14	16445.40
33	12.66	175.30	5.00	35705.55	18397.14	16445.40
34	14.14	180.17	5.00	36743.08	18859.07	16858.33
34	14.14	180.17	5.00	36743.08	18859.07	16858.33
35	15.62	185.00	5.00	37711.36	19290.18	17243.70
35	15.62	185.00	5.00	37711.36	19290.18	17243.70
36	17.11	189.40	4.18	32180.76	16417.26	14675.57
36	17.11	189.40	4.18	32180.76	16417.26	14675.57
37	17.11	191.79	0.82	6410.60	3264.72	2918.37
37	17.11	191.79	0.82	6410.60	3264.72	2918.37
38	18.59	194.55	5.00	38516.94	19648.85	17564.32
38	18.59	194.55	5.00	38516.94	19648.85	17564.32
39	20.07	199.27	5.00	37919.53	19382.86	17326.55

39	20.07	199.27	5.00	37919.53	19382.86	17326.55
40	21.55	203.95	5.00	37293.07	19103.94	17077.22
40	21.55	203.95	5.00	37293.07	19103.94	17077.22
41	23.04	208.57	5.00	36638.10	18812.33	16816.55
41	23.04	208.57	5.00	36638.10	18812.33	16816.55
42	24.52	211.54	1.46	10525.38	5416.13	4841.54
42	24.52	211.54	1.46	10525.38	5416.13	4841.54
43	24.52	213.81	3.54	25412.32	13084.36	11696.25
43	24.52	213.81	3.54	25412.32	13084.36	11696.25
44	26.00	217.67	5.00	35161.89	18155.08	16229.02
44	26.00	217.67	5.00	35161.89	18155.08	16229.02
45	27.49	222.13	5.00	34358.67	17797.46	15909.34
45	27.49	222.13	5.00	34358.67	17797.46	15909.34
46	28.97	226.54	5.00	33531.68	17429.26	15580.21
46	28.97	226.54	5.00	33531.68	17429.26	15580.21
47	30.45	230.88	5.00	32681.62	17050.80	15241.89
47	30.45	230.88	5.00	32681.62	17050.80	15241.89
48	31.93	235.16	5.00	31809.24	16662.39	14894.69
48	31.93	235.16	5.00	31809.24	16662.39	14894.69
49	33.42	238.64	3.26	20215.34	10630.75	9502.94
49	33.42	238.64	3.26	20215.34	10630.75	9502.94
50	33.42	240.73	1.74	10690.09	5629.23	5032.03
50	33.42	240.73	1.74	10690.09	5629.23	5032.03
51	34.90	243.50	5.00	29865.36	15796.92	14121.03
51	34.90	243.50	5.00	29865.36	15796.92	14121.03
52	36.38	247.57	5.00	28777.31	15312.48	13687.99
52	36.38	247.57	5.00	28777.31	15312.48	13687.99
53	37.86	251.55	5.00	27676.86	14822.53	13250.02
53	37.86	251.55	5.00	27676.86	14822.53	13250.02
54	39.35	254.87	3.48	18569.96	10008.46	8946.67
54	39.35	254.87	3.48	18569.96	10008.46	8946.67
55	39.35	256.80	1.52	7962.04	4304.35	3847.71
55	39.35	256.80	1.52	7962.04	4304.35	3847.71
56	40.83	259.28	5.00	24863.57	13569.97	12130.35
56	40.83	259.28	5.00	24863.57	13569.97	12130.35
57	42.31	263.02	5.00	23008.30	12743.96	11391.96
57	42.31	263.02	5.00	23008.30	12743.96	11391.96
58	43.80	266.68	5.00	21142.59	11913.29	10649.42
58	43.80	266.68	5.00	21142.59	11913.29	10649.42
59	45.28	270.24	5.00	19269.68	11079.42	9904.01
59	45.28	270.24	5.00	19269.68	11079.42	9904.01
60	46.76	273.71	5.00	17393.01	10243.86	9157.10
60	46.76	273.71	5.00	17393.01	10243.86	9157.10
61	48.24	277.09	5.00	15516.15	9408.23	8410.12
61	48.24	277.09	5.00	15516.15	9408.23	8410.12
62	49.73	280.37	5.00	13642.90	8574.21	7664.58
62	49.73	280.37	5.00	13642.90	8574.21	7664.58
63	51.21	283.55	5.00	11777.27	7743.58	6922.07
63	51.21	283.55	5.00	11777.27	7743.58	6922.07
64	52.69	286.63	5.00	9923.52	6918.23	6184.28
64	52.69	286.63	5.00	9923.52	6918.23	6184.28
65	54.18	289.61	5.00	8086.15	6100.19	5453.02
65	54.18	289.61	5.00	8086.15	6100.19	5453.02
66	55.66	292.49	5.00	6270.00	5291.58	4730.20
66	55.66	292.49	5.00	6270.00	5291.58	4730.20
67	57.14	295.25	5.00	4480.22	4494.72	4017.88
67	57.14	295.25	5.00	4480.22	4494.72	4017.88
68	58.62	297.91	5.00	2722.36	3712.07	3318.26
68	58.62	297.91	5.00	2722.36	3712.07	3318.26
69	60.11	299.61	1.58	482.77	1004.39	897.84
69	60.11	299.61	1.58	482.77	1004.39	897.84
70	60.11	300.85	3.42	519.09	1941.66	1735.67
70	60.11	300.85	3.42	519.09	1941.66	1735.67
71	61.59	302.89	5.00	1677.71	746.96	667.72
71	61.59	302.89	5.00	1677.71	746.96	667.72
72	63.07	304.75	2.96	263.55	117.34	104.89
72	63.07	304.75	2.96	263.55	117.34	104.89

SUM OF MOMENTS = 0.101698E+01 (ft/lbs);Imbalance (Fraction of Total Weight) = 0.5930501E-06

Sum of the Resisting Forces = 731429.49 (lbs)

Average Available Shear Strength = 2264.78(psf)

Sum of the Driving Forces = 653832.70 (lbs)

Average Mobilized Shear Stress = 2024.51(psf)

Total length of the failure surface = 322.96(ft)

Factor of Safety Balance Check: FS = 1.11868

CAUTION - Factor Of Safety Is Calculated By The Simplified Bishop Method. This Method Is Valid Only If The Failure Surface Approximates A Circular Arc.

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.21726(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

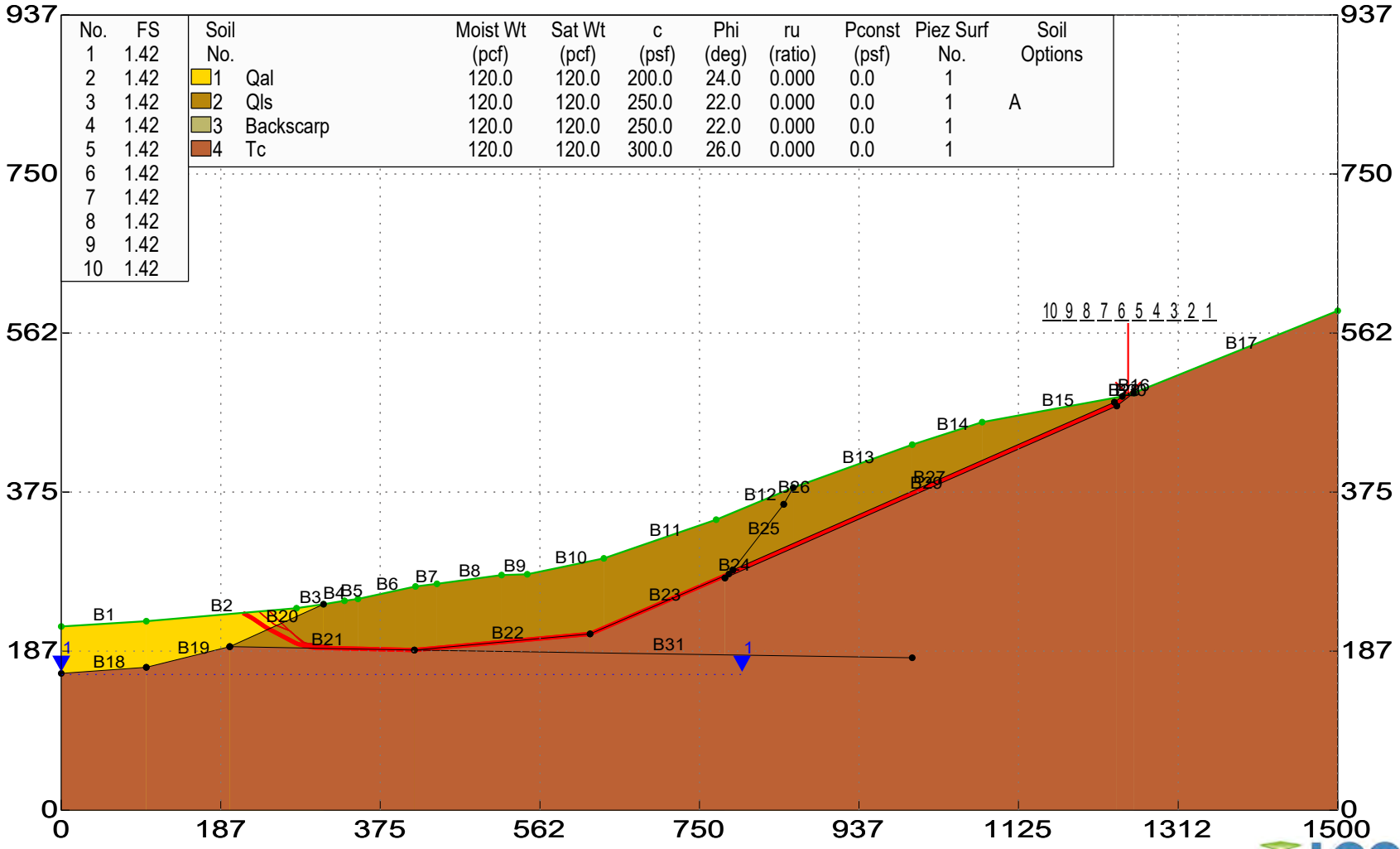
Average Elevation of Point of Application of kh on Sliding Mass = 156.956(ft)

Non-Symmetrical Sliding Resistance Has Been Specified for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Existing - Larger Qls - Static

LGC Geotechnical, Inc. \xhLRG.gsd



GEOSTASE FS = 1.42

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 10/ 27/ 2023
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2023_10_27\xhLRG.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2023_10_27\xhLRG.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Existing - Larger Qls - Static

BOUNDARY DATA

17 Surface Boundaries
31 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	216.400	100.000	222.900	1
2	100.000	222.900	276.400	238.000	1
3	276.400	238.000	308.300	242.900	1
4	308.300	242.900	332.700	247.000	2
5	332.700	247.000	348.800	249.000	2
6	348.800	249.000	416.400	263.600	2
7	416.400	263.600	441.400	267.000	2
8	441.400	267.000	517.400	277.100	2
9	517.400	277.100	547.500	278.000	2
10	547.500	278.000	637.700	297.000	2
11	637.700	297.000	769.500	342.600	2
12	769.500	342.600	860.200	380.200	2
13	860.200	380.200	1000.000	430.900	2
14	1000.000	430.900	1082.100	457.600	2
15	1082.100	457.600	1247.000	487.900	2
16	1247.000	487.900	1260.400	491.900	3
17	1260.400	491.900	1500.000	588.800	4
18	0.000	161.100	100.000	168.300	4
19	100.000	168.300	198.100	192.800	4
20	198.100	192.800	308.300	242.900	2
21	198.100	192.800	414.900	188.600	4
22	414.900	188.600	621.400	207.800	4
23	621.400	207.800	784.600	278.400	4
24	779.900	273.600	789.300	283.200	3
25	789.300	283.200	849.000	360.500	2
26	849.000	360.500	860.200	380.200	2
27	789.300	283.200	1237.700	480.800	3
28	1237.700	480.800	1247.000	487.900	3
29	779.900	273.600	1240.300	476.500	4
30	1240.300	476.500	1260.400	491.900	4
31	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	24.0	0.00	14.00
3	90.0	250.00	22.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	354.70	189.70	5.00
2	414.90	188.60	414.90	188.60	0.00
3	621.40	207.80	621.40	207.80	0.00
4	784.60	278.40	784.60	278.40	0.00
5	1239.00	478.60	1239.00	478.60	0.00
6	1253.70	489.90	1253.70	489.90	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.713 FS Min = 1.416 FS Ave = 1.517
Standard Deviation = 0.093 Coefficient of Variation = 6.11 %

Critical Surface is Sequence Number 126 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.416

Table 1 - Geometry Data on the 209 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.55	1.87	216.38	230.99	232.86	-30.48	4.89	6.44
2	5.55	5.61	221.93	227.72	233.34	-30.48	4.89	6.44
3	5.56	9.56	227.49	224.25	233.81	-33.45	4.89	6.67
4	5.56	13.71	233.05	220.58	234.29	-33.45	4.89	6.67
5	5.56	17.86	238.61	216.90	234.77	-33.45	4.89	6.67
6	2.60	20.75	242.69	214.36	235.11	-28.32	4.89	2.95
7	5.00	23.12	246.49	212.32	235.44	-28.32	4.89	5.68
8	5.00	26.25	251.50	209.62	235.87	-28.32	4.89	5.68
9	5.00	29.37	256.50	206.93	236.30	-28.32	4.89	5.68
10	5.80	32.73	261.90	204.03	236.76	-28.12	4.89	6.58
11	5.80	36.33	267.70	200.93	237.26	-28.12	4.89	6.58
12	5.80	39.92	273.50	197.83	237.75	-28.12	4.89	6.58
13	0.24	41.80	276.52	196.22	238.02	-28.12	8.73	0.27
14	4.87	42.83	279.07	195.58	238.41	-13.12	8.73	5.00
15	4.87	44.71	283.94	194.45	239.16	-13.12	8.73	5.00
16	4.87	46.59	288.81	193.31	239.91	-13.12	8.73	5.00
17	4.87	48.47	293.68	192.18	240.65	-13.12	8.73	5.00
18	6.09	49.96	299.16	191.54	241.50	-1.45	8.73	6.09
19	6.09	51.05	305.25	191.38	242.43	-1.45	8.73	6.09
20	4.88	52.07	310.74	191.24	243.31	-1.45	9.54	4.88
21	4.88	53.01	315.62	191.12	244.13	-1.45	9.54	4.88
22	4.88	53.96	320.50	190.99	244.95	-1.45	9.54	4.88
23	4.88	54.90	325.38	190.87	245.77	-1.45	9.54	4.88
24	4.88	55.84	330.26	190.75	246.59	-1.45	9.54	4.88
25	5.37	56.72	335.38	190.62	247.33	-1.45	7.08	5.37
26	5.37	57.52	340.75	190.48	248.00	-1.45	7.08	5.37
27	5.37	58.32	346.12	190.34	248.67	-1.45	7.08	5.37
28	5.08	59.34	351.34	190.21	249.55	-1.45	12.19	5.09
29	5.08	60.56	356.43	190.08	250.65	-1.45	12.19	5.09
30	5.08	61.79	361.51	189.95	251.75	-1.45	12.19	5.09
31	5.08	63.02	366.60	189.83	252.84	-1.45	12.19	5.09
32	5.08	64.25	371.68	189.70	253.94	-1.45	12.19	5.09
33	5.08	65.47	376.77	189.57	255.04	-1.45	12.19	5.09
34	5.08	66.70	381.85	189.44	256.14	-1.45	12.19	5.09
35	5.08	67.93	386.93	189.31	257.24	-1.45	12.19	5.09
36	5.08	69.15	392.02	189.18	258.33	-1.45	12.19	5.09
37	5.08	70.38	397.10	189.05	259.43	-1.45	12.19	5.09
38	5.08	71.61	402.19	188.92	260.53	-1.45	12.19	5.09
39	5.08	72.84	407.27	188.79	261.63	-1.45	12.19	5.09
40	5.08	74.06	412.36	188.66	262.73	-1.45	12.19	5.09
41	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
42	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
43	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
44	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
45	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
46	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02

47	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
48	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
49	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
50	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
51	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
52	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
53	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
54	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
55	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
56	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
57	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
58	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
59	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
60	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
61	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
62	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
63	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
64	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
65	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
66	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
67	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
68	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
69	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
70	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
71	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
72	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
73	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
74	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
75	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
76	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
77	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
78	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
79	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
80	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
81	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
82	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
83	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
84	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
85	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
86	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
87	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
88	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
89	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
90	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
91	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
92	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
93	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
94	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
95	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
96	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
97	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
98	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
99	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
100	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
101	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
102	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
103	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
104	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
105	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
106	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
107	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
108	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
109	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
110	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
111	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
112	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
113	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
114	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
115	4.70	70.40	786.95	279.44	349.83	23.78	22.52	5.14
116	4.98	70.27	791.79	281.57	351.84	23.78	22.52	5.44
117	4.98	70.14	796.76	283.76	353.90	23.78	22.52	5.44
118	4.97	70.01	801.74	285.95	355.96	23.78	22.52	5.44
119	4.98	69.88	806.71	288.14	358.03	23.78	22.52	5.44
120	4.98	69.75	811.69	290.33	360.09	23.78	22.52	5.44
121	4.98	69.63	816.66	292.53	362.15	23.78	22.52	5.44
122	4.98	69.50	821.64	294.72	364.21	23.78	22.52	5.44
123	4.98	69.37	826.61	296.91	366.28	23.78	22.52	5.44
124	4.98	69.24	831.59	299.10	368.34	23.78	22.52	5.44
125	4.97	69.11	836.56	301.29	370.40	23.78	22.52	5.44
126	4.98	68.98	841.54	303.49	372.46	23.78	22.52	5.44
127	4.98	68.85	846.51	305.68	374.53	23.78	22.52	5.44
128	5.60	68.71	851.80	308.01	376.72	23.78	22.52	6.12
129	5.60	68.56	857.40	310.47	379.04	23.78	22.52	6.12
130	4.99	68.30	862.70	312.81	381.11	23.78	19.93	5.46
131	4.99	67.91	867.69	315.01	382.92	23.78	19.93	5.46
132	4.99	67.52	872.68	317.21	384.73	23.78	19.93	5.46
133	4.99	67.13	877.67	319.41	386.54	23.78	19.93	5.46
134	4.99	66.74	882.67	321.61	388.35	23.78	19.93	5.46
135	4.99	66.35	887.66	323.81	390.16	23.78	19.93	5.46
136	4.99	65.96	892.65	326.01	391.97	23.78	19.93	5.46
137	4.99	65.57	897.65	328.21	393.78	23.78	19.93	5.46
138	4.99	65.19	902.64	330.41	395.59	23.78	19.93	5.46
139	4.99	64.80	907.63	332.61	397.40	23.78	19.93	5.46
140	4.99	64.41	912.62	334.81	399.21	23.78	19.93	5.46
141	4.99	64.02	917.62	337.01	401.02	23.78	19.93	5.46
142	4.99	63.63	922.61	339.20	402.83	23.78	19.93	5.46
143	4.99	63.24	927.60	341.40	404.64	23.78	19.93	5.46
144	4.99	62.85	932.60	343.60	406.46	23.78	19.93	5.46
145	4.99	62.46	937.59	345.80	408.27	23.78	19.93	5.46
146	4.99	62.07	942.58	348.00	410.08	23.78	19.93	5.46
147	4.99	61.68	947.58	350.20	411.89	23.78	19.93	5.46
148	4.99	61.29	952.57	352.40	413.70	23.78	19.93	5.46
149	4.99	60.91	957.56	354.60	415.51	23.78	19.93	5.46
150	4.99	60.52	962.55	356.80	417.32	23.78	19.93	5.46
151	4.99	60.13	967.55	359.00	419.13	23.78	19.93	5.46
152	4.99	59.74	972.54	361.20	420.94	23.78	19.93	5.46
153	4.99	59.35	977.53	363.40	422.75	23.78	19.93	5.46
154	4.99	58.96	982.53	365.60	424.56	23.78	19.93	5.46
155	4.99	58.57	987.52	367.80	426.37	23.78	19.93	5.46
156	4.99	58.18	992.51	370.00	428.18	23.78	19.93	5.46
157	4.99	57.79	997.50	372.20	429.99	23.78	19.93	5.46
158	5.13	57.30	1002.57	374.43	431.73	23.78	18.02	5.61
159	5.13	56.71	1007.70	376.69	433.40	23.78	18.02	5.61
160	5.13	56.12	1012.83	378.95	435.07	23.78	18.02	5.61
161	5.13	55.53	1017.96	381.21	436.74	23.78	18.02	5.61
162	5.13	54.93	1023.09	383.47	438.41	23.78	18.02	5.61
163	5.13	54.34	1028.22	385.74	440.08	23.78	18.02	5.61
164	5.13	53.75	1033.35	388.00	441.75	23.78	18.02	5.61
165	5.13	53.16	1038.48	390.26	443.42	23.78	18.02	5.61
166	5.13	52.57	1043.62	392.52	445.08	23.78	18.02	5.61

167	5.13	51.98	1048.75	394.78	446.75	23.78	18.02	5.61
168	5.13	51.38	1053.88	397.04	448.42	23.78	18.02	5.61
169	5.13	50.79	1059.01	399.30	450.09	23.78	18.02	5.61
170	5.13	50.20	1064.14	401.56	451.76	23.78	18.02	5.61
171	5.13	49.61	1069.27	403.82	453.43	23.78	18.02	5.61
172	5.13	49.02	1074.40	406.08	455.10	23.78	18.02	5.61
173	5.13	48.42	1079.53	408.34	456.77	23.78	18.02	5.61
174	5.02	47.48	1084.61	410.58	458.06	23.78	10.41	5.48
175	5.02	46.19	1089.63	412.79	458.98	23.78	10.41	5.48
176	5.02	44.90	1094.65	415.00	459.91	23.78	10.41	5.48
177	5.02	43.62	1099.67	417.21	460.83	23.78	10.41	5.48
178	5.02	42.33	1104.69	419.42	461.75	23.78	10.41	5.48
179	5.02	41.04	1109.71	421.64	462.67	23.78	10.41	5.48
180	5.02	39.75	1114.73	423.85	463.59	23.78	10.41	5.48
181	5.02	38.46	1119.75	426.06	464.52	23.78	10.41	5.48
182	5.02	37.17	1124.76	428.27	465.44	23.78	10.41	5.48
183	5.02	35.88	1129.78	430.48	466.36	23.78	10.41	5.48
184	5.02	34.59	1134.80	432.69	467.28	23.78	10.41	5.48
185	5.02	33.30	1139.82	434.90	468.21	23.78	10.41	5.48
186	5.02	32.01	1144.84	437.12	469.13	23.78	10.41	5.48
187	5.02	30.72	1149.86	439.33	470.05	23.78	10.41	5.48
188	5.02	29.43	1154.88	441.54	470.97	23.78	10.41	5.48
189	5.02	28.15	1159.90	443.75	471.90	23.78	10.41	5.48
190	5.02	26.86	1164.92	445.96	472.82	23.78	10.41	5.48
191	5.02	25.57	1169.94	448.17	473.74	23.78	10.41	5.48
192	5.02	24.28	1174.96	450.38	474.66	23.78	10.41	5.48
193	5.02	22.99	1179.98	452.60	475.58	23.78	10.41	5.48
194	5.02	21.70	1185.00	454.81	476.51	23.78	10.41	5.48
195	5.02	20.41	1190.02	457.02	477.43	23.78	10.41	5.48
196	5.02	19.12	1195.04	459.23	478.35	23.78	10.41	5.48
197	5.02	17.83	1200.05	461.44	479.27	23.78	10.41	5.48
198	5.02	16.54	1205.07	463.65	480.20	23.78	10.41	5.48
199	5.02	15.25	1210.09	465.86	481.12	23.78	10.41	5.48
200	5.02	13.97	1215.11	468.08	482.04	23.78	10.41	5.48
201	5.02	12.68	1220.13	470.29	482.96	23.78	10.41	5.48
202	5.02	11.39	1225.15	472.50	483.89	23.78	10.41	5.48
203	5.02	10.10	1230.17	474.71	484.81	23.78	10.41	5.48
204	5.02	8.81	1235.19	476.92	485.73	23.78	10.41	5.48
205	1.30	8.00	1238.35	478.31	486.31	23.78	10.41	1.42
206	4.00	6.66	1241.00	480.14	486.80	37.55	10.41	5.05
207	4.00	4.32	1245.00	483.21	487.53	37.55	10.41	5.05
208	3.35	2.36	1248.67	486.04	488.40	37.55	16.62	4.23
209	3.35	0.79	1252.03	488.61	489.40	37.55	16.62	4.23

Table 2 - Force Data On The 209 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1246.4	0.0	0.0	0.0	0.0	0.0
2	3739.1	0.0	0.0	0.0	0.0	0.0
3	6381.1	0.0	0.0	0.0	0.0	0.0
4	9151.9	0.0	0.0	0.0	0.0	0.0
5	11922.7	0.0	0.0	0.0	0.0	0.0
6	6471.6	0.0	0.0	0.0	0.0	0.0
7	13880.8	0.0	0.0	0.0	0.0	0.0
8	15756.0	0.0	0.0	0.0	0.0	0.0
9	17631.3	0.0	0.0	0.0	0.0	0.0
10	22780.0	0.0	0.0	0.0	0.0	0.0
11	25282.5	0.0	0.0	0.0	0.0	0.0
12	27785.0	0.0	0.0	0.0	0.0	0.0
13	1204.8	0.0	0.0	0.0	0.0	0.0
14	25025.8	0.0	0.0	0.0	0.0	0.0
15	26125.9	0.0	0.0	0.0	0.0	0.0
16	27226.0	0.0	0.0	0.0	0.0	0.0
17	28326.2	0.0	0.0	0.0	0.0	0.0
18	36516.6	0.0	0.0	0.0	0.0	0.0
19	37313.3	0.0	0.0	0.0	0.0	0.0
20	30491.2	0.0	0.0	0.0	0.0	0.0
21	31043.9	0.0	0.0	0.0	0.0	0.0
22	31596.5	0.0	0.0	0.0	0.0	0.0
23	32149.2	0.0	0.0	0.0	0.0	0.0
24	32701.9	0.0	0.0	0.0	0.0	0.0
25	36525.5	0.0	0.0	0.0	0.0	0.0
26	37042.5	0.0	0.0	0.0	0.0	0.0
27	37559.5	0.0	0.0	0.0	0.0	0.0
28	36204.8	0.0	0.0	0.0	0.0	0.0
29	36953.5	0.0	0.0	0.0	0.0	0.0
30	37702.2	0.0	0.0	0.0	0.0	0.0
31	38451.0	0.0	0.0	0.0	0.0	0.0
32	39199.7	0.0	0.0	0.0	0.0	0.0
33	39948.4	0.0	0.0	0.0	0.0	0.0
34	40697.1	0.0	0.0	0.0	0.0	0.0
35	41445.9	0.0	0.0	0.0	0.0	0.0
36	42194.6	0.0	0.0	0.0	0.0	0.0
37	42943.3	0.0	0.0	0.0	0.0	0.0
38	43692.1	0.0	0.0	0.0	0.0	0.0
39	44440.8	0.0	0.0	0.0	0.0	0.0
40	45189.5	0.0	0.0	0.0	0.0	0.0
41	13458.3	0.0	0.0	0.0	0.0	0.0
42	44980.9	0.0	0.0	0.0	0.0	0.0
43	45109.9	0.0	0.0	0.0	0.0	0.0
44	45239.0	0.0	0.0	0.0	0.0	0.0
45	45368.0	0.0	0.0	0.0	0.0	0.0
46	45497.1	0.0	0.0	0.0	0.0	0.0
47	46230.6	0.0	0.0	0.0	0.0	0.0
48	46353.6	0.0	0.0	0.0	0.0	0.0
49	46476.5	0.0	0.0	0.0	0.0	0.0
50	46599.5	0.0	0.0	0.0	0.0	0.0
51	46722.5	0.0	0.0	0.0	0.0	0.0
52	46845.4	0.0	0.0	0.0	0.0	0.0
53	46968.4	0.0	0.0	0.0	0.0	0.0
54	47091.4	0.0	0.0	0.0	0.0	0.0
55	47214.3	0.0	0.0	0.0	0.0	0.0
56	47337.3	0.0	0.0	0.0	0.0	0.0
57	47460.3	0.0	0.0	0.0	0.0	0.0
58	47583.2	0.0	0.0	0.0	0.0	0.0
59	47706.2	0.0	0.0	0.0	0.0	0.0
60	47829.2	0.0	0.0	0.0	0.0	0.0
61	47952.1	0.0	0.0	0.0	0.0	0.0
62	47444.5	0.0	0.0	0.0	0.0	0.0
63	47254.0	0.0	0.0	0.0	0.0	0.0
64	47063.5	0.0	0.0	0.0	0.0	0.0
65	46873.0	0.0	0.0	0.0	0.0	0.0
66	46682.5	0.0	0.0	0.0	0.0	0.0
67	46492.0	0.0	0.0	0.0	0.0	0.0

68	45735.8	0.0	0.0	0.0	0.0	0.0
69	46078.5	0.0	0.0	0.0	0.0	0.0
70	46421.2	0.0	0.0	0.0	0.0	0.0
71	46763.9	0.0	0.0	0.0	0.0	0.0
72	47106.6	0.0	0.0	0.0	0.0	0.0
73	47449.4	0.0	0.0	0.0	0.0	0.0
74	47792.1	0.0	0.0	0.0	0.0	0.0
75	48134.8	0.0	0.0	0.0	0.0	0.0
76	48477.5	0.0	0.0	0.0	0.0	0.0
77	48820.2	0.0	0.0	0.0	0.0	0.0
78	49162.9	0.0	0.0	0.0	0.0	0.0
79	49505.7	0.0	0.0	0.0	0.0	0.0
80	49848.4	0.0	0.0	0.0	0.0	0.0
81	50191.1	0.0	0.0	0.0	0.0	0.0
82	50533.8	0.0	0.0	0.0	0.0	0.0
83	55526.6	0.0	0.0	0.0	0.0	0.0
84	54740.3	0.0	0.0	0.0	0.0	0.0
85	53954.1	0.0	0.0	0.0	0.0	0.0
86	49838.1	0.0	0.0	0.0	0.0	0.0
87	49571.0	0.0	0.0	0.0	0.0	0.0
88	49303.9	0.0	0.0	0.0	0.0	0.0
89	49036.8	0.0	0.0	0.0	0.0	0.0
90	48769.7	0.0	0.0	0.0	0.0	0.0
91	48502.6	0.0	0.0	0.0	0.0	0.0
92	48235.5	0.0	0.0	0.0	0.0	0.0
93	47968.4	0.0	0.0	0.0	0.0	0.0
94	47701.3	0.0	0.0	0.0	0.0	0.0
95	47434.2	0.0	0.0	0.0	0.0	0.0
96	47167.1	0.0	0.0	0.0	0.0	0.0
97	46900.0	0.0	0.0	0.0	0.0	0.0
98	46632.9	0.0	0.0	0.0	0.0	0.0
99	46365.8	0.0	0.0	0.0	0.0	0.0
100	46098.7	0.0	0.0	0.0	0.0	0.0
101	45831.5	0.0	0.0	0.0	0.0	0.0
102	45564.4	0.0	0.0	0.0	0.0	0.0
103	45297.3	0.0	0.0	0.0	0.0	0.0
104	45030.2	0.0	0.0	0.0	0.0	0.0
105	44763.1	0.0	0.0	0.0	0.0	0.0
106	44496.0	0.0	0.0	0.0	0.0	0.0
107	44228.9	0.0	0.0	0.0	0.0	0.0
108	43961.8	0.0	0.0	0.0	0.0	0.0
109	43694.7	0.0	0.0	0.0	0.0	0.0
110	43427.6	0.0	0.0	0.0	0.0	0.0
111	43160.5	0.0	0.0	0.0	0.0	0.0
112	42694.8	0.0	0.0	0.0	0.0	0.0
113	42640.0	0.0	0.0	0.0	0.0	0.0
114	42585.1	0.0	0.0	0.0	0.0	0.0
115	39704.8	0.0	0.0	0.0	0.0	0.0
116	41952.8	0.0	0.0	0.0	0.0	0.0
117	41875.5	0.0	0.0	0.0	0.0	0.0
118	41798.2	0.0	0.0	0.0	0.0	0.0
119	41720.9	0.0	0.0	0.0	0.0	0.0
120	41643.6	0.0	0.0	0.0	0.0	0.0
121	41566.3	0.0	0.0	0.0	0.0	0.0
122	41489.0	0.0	0.0	0.0	0.0	0.0
123	41411.7	0.0	0.0	0.0	0.0	0.0
124	41334.4	0.0	0.0	0.0	0.0	0.0
125	41257.1	0.0	0.0	0.0	0.0	0.0
126	41179.8	0.0	0.0	0.0	0.0	0.0
127	41102.5	0.0	0.0	0.0	0.0	0.0
128	46173.6	0.0	0.0	0.0	0.0	0.0
129	46075.6	0.0	0.0	0.0	0.0	0.0
130	40920.0	0.0	0.0	0.0	0.0	0.0
131	40686.9	0.0	0.0	0.0	0.0	0.0
132	40453.8	0.0	0.0	0.0	0.0	0.0
133	40220.7	0.0	0.0	0.0	0.0	0.0
134	39987.6	0.0	0.0	0.0	0.0	0.0
135	39754.5	0.0	0.0	0.0	0.0	0.0
136	39521.4	0.0	0.0	0.0	0.0	0.0
137	39288.3	0.0	0.0	0.0	0.0	0.0
138	39055.3	0.0	0.0	0.0	0.0	0.0
139	38822.2	0.0	0.0	0.0	0.0	0.0
140	38589.1	0.0	0.0	0.0	0.0	0.0
141	38356.0	0.0	0.0	0.0	0.0	0.0
142	38122.9	0.0	0.0	0.0	0.0	0.0
143	37889.8	0.0	0.0	0.0	0.0	0.0
144	37656.7	0.0	0.0	0.0	0.0	0.0
145	37423.6	0.0	0.0	0.0	0.0	0.0
146	37190.5	0.0	0.0	0.0	0.0	0.0
147	36957.4	0.0	0.0	0.0	0.0	0.0
148	36724.3	0.0	0.0	0.0	0.0	0.0
149	36491.2	0.0	0.0	0.0	0.0	0.0
150	36258.1	0.0	0.0	0.0	0.0	0.0
151	36025.0	0.0	0.0	0.0	0.0	0.0
152	35792.0	0.0	0.0	0.0	0.0	0.0
153	35558.9	0.0	0.0	0.0	0.0	0.0
154	35325.8	0.0	0.0	0.0	0.0	0.0
155	35092.7	0.0	0.0	0.0	0.0	0.0
156	34859.6	0.0	0.0	0.0	0.0	0.0
157	34626.5	0.0	0.0	0.0	0.0	0.0
158	35284.2	0.0	0.0	0.0	0.0	0.0
159	34919.7	0.0	0.0	0.0	0.0	0.0
160	34555.2	0.0	0.0	0.0	0.0	0.0
161	34190.7	0.0	0.0	0.0	0.0	0.0
162	33826.2	0.0	0.0	0.0	0.0	0.0
163	33461.7	0.0	0.0	0.0	0.0	0.0
164	33097.2	0.0	0.0	0.0	0.0	0.0
165	32732.7	0.0	0.0	0.0	0.0	0.0
166	32368.1	0.0	0.0	0.0	0.0	0.0
167	32003.6	0.0	0.0	0.0	0.0	0.0
168	31639.1	0.0	0.0	0.0	0.0	0.0
169	31274.6	0.0	0.0	0.0	0.0	0.0
170	30910.1	0.0	0.0	0.0	0.0	0.0
171	30545.6	0.0	0.0	0.0	0.0	0.0
172	30181.1	0.0	0.0	0.0	0.0	0.0
173	29816.6	0.0	0.0	0.0	0.0	0.0
174	28599.8	0.0	0.0	0.0	0.0	0.0
175	27823.4	0.0	0.0	0.0	0.0	0.0
176	27046.9	0.0	0.0	0.0	0.0	0.0
177	26270.4	0.0	0.0	0.0	0.0	0.0
178	25493.9	0.0	0.0	0.0	0.0	0.0
179	24717.5	0.0	0.0	0.0	0.0	0.0
180	23941.0	0.0	0.0	0.0	0.0	0.0
181	23164.5	0.0	0.0	0.0	0.0	0.0
182	22388.0	0.0	0.0	0.0	0.0	0.0
183	21611.5	0.0	0.0	0.0	0.0	0.0
184	20835.1	0.0	0.0	0.0	0.0	0.0
185	20058.6	0.0	0.0	0.0	0.0	0.0
186	19282.1	0.0	0.0	0.0	0.0	0.0
187	18505.6	0.0	0.0	0.0	0.0	0.0

188	17729.2	0.0	0.0	0.0	0.0	0.0
189	16952.7	0.0	0.0	0.0	0.0	0.0
190	16176.2	0.0	0.0	0.0	0.0	0.0
191	15399.7	0.0	0.0	0.0	0.0	0.0
192	14623.3	0.0	0.0	0.0	0.0	0.0
193	13846.8	0.0	0.0	0.0	0.0	0.0
194	13070.3	0.0	0.0	0.0	0.0	0.0
195	12293.8	0.0	0.0	0.0	0.0	0.0
196	11517.4	0.0	0.0	0.0	0.0	0.0
197	10740.9	0.0	0.0	0.0	0.0	0.0
198	9964.4	0.0	0.0	0.0	0.0	0.0
199	9187.9	0.0	0.0	0.0	0.0	0.0
200	8411.4	0.0	0.0	0.0	0.0	0.0
201	7635.0	0.0	0.0	0.0	0.0	0.0
202	6858.5	0.0	0.0	0.0	0.0	0.0
203	6082.0	0.0	0.0	0.0	0.0	0.0
204	5305.5	0.0	0.0	0.0	0.0	0.0
205	1247.5	0.0	0.0	0.0	0.0	0.0
206	3196.8	0.0	0.0	0.0	0.0	0.0
207	2073.7	0.0	0.0	0.0	0.0	0.0
208	949.8	0.0	0.0	0.0	0.0	0.0
209	316.6	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 7334979.18(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 7334979.18(lbs)

TOTAL AREA OF SLIDING MASS = 61124.83(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 209 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	1	200.00	24.00	
7	2	250.00	22.00	A
8	2	250.00	22.00	A
9	2	250.00	22.00	A
10	2	250.00	22.00	A
11	2	250.00	22.00	A
12	2	250.00	22.00	A
13	2	250.00	22.00	A
14	2	0.00	14.00	A
15	2	0.00	14.00	A
16	2	0.00	14.00	A
17	2	0.00	14.00	A
18	2	0.00	14.00	A
19	2	0.00	14.00	A
20	2	0.00	14.00	A
21	2	0.00	14.00	A
22	2	0.00	14.00	A
23	2	0.00	14.00	A
24	2	0.00	14.00	A
25	2	0.00	14.00	A
26	2	0.00	14.00	A
27	2	0.00	14.00	A
28	2	0.00	14.00	A
29	2	0.00	14.00	A
30	2	0.00	14.00	A
31	2	0.00	14.00	A
32	2	0.00	14.00	A
33	2	0.00	14.00	A
34	2	0.00	14.00	A
35	2	0.00	14.00	A
36	2	0.00	14.00	A
37	2	0.00	14.00	A
38	2	0.00	14.00	A
39	2	0.00	14.00	A
40	2	0.00	14.00	A
41	2	0.00	14.00	A
42	2	0.00	14.00	A
43	2	0.00	14.00	A
44	2	0.00	14.00	A
45	2	0.00	14.00	A
46	2	0.00	14.00	A
47	2	0.00	14.00	A
48	2	0.00	14.00	A
49	2	0.00	14.00	A
50	2	0.00	14.00	A
51	2	0.00	14.00	A
52	2	0.00	14.00	A
53	2	0.00	14.00	A
54	2	0.00	14.00	A
55	2	0.00	14.00	A
56	2	0.00	14.00	A
57	2	0.00	14.00	A
58	2	0.00	14.00	A
59	2	0.00	14.00	A
60	2	0.00	14.00	A
61	2	0.00	14.00	A
62	2	0.00	14.00	A
63	2	0.00	14.00	A
64	2	0.00	14.00	A
65	2	0.00	14.00	A
66	2	0.00	14.00	A
67	2	0.00	14.00	A
68	2	0.00	14.00	A
69	2	0.00	14.00	A
70	2	0.00	14.00	A
71	2	0.00	14.00	A
72	2	0.00	14.00	A
73	2	0.00	14.00	A
74	2	0.00	14.00	A
75	2	0.00	14.00	A
76	2	0.00	14.00	A
77	2	0.00	14.00	A
78	2	0.00	14.00	A
79	2	0.00	14.00	A
80	2	0.00	14.00	A
81	2	0.00	14.00	A
82	2	0.00	14.00	A
83	2	0.00	14.00	A
84	2	0.00	14.00	A
85	2	0.00	14.00	A
86	2	0.00	14.00	A

87	2	0.00	14.00	A
88	2	0.00	14.00	A
89	2	0.00	14.00	A
90	2	0.00	14.00	A
91	2	0.00	14.00	A
92	2	0.00	14.00	A
93	2	0.00	14.00	A
94	2	0.00	14.00	A
95	2	0.00	14.00	A
96	2	0.00	14.00	A
97	2	0.00	14.00	A
98	2	0.00	14.00	A
99	2	0.00	14.00	A
100	2	0.00	14.00	A
101	2	0.00	14.00	A
102	2	0.00	14.00	A
103	2	0.00	14.00	A
104	2	0.00	14.00	A
105	2	0.00	14.00	A
106	2	0.00	14.00	A
107	2	0.00	14.00	A
108	2	0.00	14.00	A
109	2	0.00	14.00	A
110	2	0.00	14.00	A
111	2	0.00	14.00	A
112	2	0.00	14.00	A
113	2	0.00	14.00	A
114	2	0.00	14.00	A
115	3	250.00	22.00	
116	3	250.00	22.00	
117	3	250.00	22.00	
118	3	250.00	22.00	
119	3	250.00	22.00	
120	3	250.00	22.00	
121	3	250.00	22.00	
122	3	250.00	22.00	
123	3	250.00	22.00	
124	3	250.00	22.00	
125	3	250.00	22.00	
126	3	250.00	22.00	
127	3	250.00	22.00	
128	3	250.00	22.00	
129	3	250.00	22.00	
130	3	250.00	22.00	
131	3	250.00	22.00	
132	3	250.00	22.00	
133	3	250.00	22.00	
134	3	250.00	22.00	
135	3	250.00	22.00	
136	3	250.00	22.00	
137	3	250.00	22.00	
138	3	250.00	22.00	
139	3	250.00	22.00	
140	3	250.00	22.00	
141	3	250.00	22.00	
142	3	250.00	22.00	
143	3	250.00	22.00	
144	3	250.00	22.00	
145	3	250.00	22.00	
146	3	250.00	22.00	
147	3	250.00	22.00	
148	3	250.00	22.00	
149	3	250.00	22.00	
150	3	250.00	22.00	
151	3	250.00	22.00	
152	3	250.00	22.00	
153	3	250.00	22.00	
154	3	250.00	22.00	
155	3	250.00	22.00	
156	3	250.00	22.00	
157	3	250.00	22.00	
158	3	250.00	22.00	
159	3	250.00	22.00	
160	3	250.00	22.00	
161	3	250.00	22.00	
162	3	250.00	22.00	
163	3	250.00	22.00	
164	3	250.00	22.00	
165	3	250.00	22.00	
166	3	250.00	22.00	
167	3	250.00	22.00	
168	3	250.00	22.00	
169	3	250.00	22.00	
170	3	250.00	22.00	
171	3	250.00	22.00	
172	3	250.00	22.00	
173	3	250.00	22.00	
174	3	250.00	22.00	
175	3	250.00	22.00	
176	3	250.00	22.00	
177	3	250.00	22.00	
178	3	250.00	22.00	
179	3	250.00	22.00	
180	3	250.00	22.00	
181	3	250.00	22.00	
182	3	250.00	22.00	
183	3	250.00	22.00	
184	3	250.00	22.00	
185	3	250.00	22.00	
186	3	250.00	22.00	
187	3	250.00	22.00	
188	3	250.00	22.00	
189	3	250.00	22.00	
190	3	250.00	22.00	
191	3	250.00	22.00	
192	3	250.00	22.00	
193	3	250.00	22.00	
194	3	250.00	22.00	
195	3	250.00	22.00	
196	3	250.00	22.00	
197	3	250.00	22.00	
198	3	250.00	22.00	
199	3	250.00	22.00	
200	3	250.00	22.00	
201	3	250.00	22.00	
202	3	250.00	22.00	
203	3	250.00	22.00	
204	3	250.00	22.00	
205	3	250.00	22.00	
206	3	250.00	22.00	

207	3	250.00	22.00
208	3	250.00	22.00
209	3	250.00	22.00

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 209 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-30.48	216.38	6.44	387.02	372.31	263.02
1	-30.48	216.38	6.44	387.02	372.31	263.02
2	-30.48	221.93	6.44	944.40	620.47	438.33
2	-30.48	221.93	6.44	944.40	620.47	438.33
3	-33.45	227.49	6.67	1592.59	909.07	642.20
3	-33.45	227.49	6.67	1592.59	909.07	642.20
4	-33.45	233.05	6.67	2229.71	1192.73	842.60
4	-33.45	233.05	6.67	2229.71	1192.73	842.60
5	-33.45	238.61	6.67	2866.83	1476.40	1042.99
5	-33.45	238.61	6.67	2866.83	1476.40	1042.99
6	-28.32	242.69	2.95	3126.02	1591.79	1124.51
6	-28.32	242.69	2.95	3126.02	1591.79	1124.51
7	-28.32	246.49	5.68	3428.13	1635.05	1155.07
7	-28.32	246.49	5.68	3428.13	1635.05	1155.07
8	-28.32	251.50	5.68	3875.17	1815.67	1282.67
8	-28.32	251.50	5.68	3875.17	1815.67	1282.67
9	-28.32	256.50	5.68	4322.22	1996.29	1410.27
9	-28.32	256.50	5.68	4322.22	1996.29	1410.27
10	-28.12	261.90	6.58	4794.27	2187.01	1545.00
10	-28.12	261.90	6.58	4794.27	2187.01	1545.00
11	-28.12	267.70	6.58	5307.98	2394.56	1691.62
11	-28.12	267.70	6.58	5307.98	2394.56	1691.62
12	-28.12	273.50	6.58	5821.70	2602.12	1838.25
12	-28.12	273.50	6.58	5821.70	2602.12	1838.25
13	-28.12	276.52	0.27	6090.36	2710.67	1914.93
13	-28.12	276.52	0.27	6090.36	2710.67	1914.93
14	-13.12	279.07	5.00	5370.59	1339.04	945.95
14	-13.12	279.07	5.00	5370.59	1339.04	945.95
15	-13.12	283.94	5.00	5606.67	1397.90	987.54
15	-13.12	283.94	5.00	5606.67	1397.90	987.54
16	-13.12	288.81	5.00	5842.76	1456.76	1029.12
16	-13.12	288.81	5.00	5842.76	1456.76	1029.12
17	-13.12	293.68	5.00	6078.85	1515.63	1070.70
17	-13.12	293.68	5.00	6078.85	1515.63	1070.70
18	-1.45	299.16	6.09	6023.60	1501.85	1060.97
18	-1.45	299.16	6.09	6023.60	1501.85	1060.97
19	-1.45	305.25	6.09	6155.03	1534.62	1084.12
19	-1.45	305.25	6.09	6155.03	1534.62	1084.12
20	-1.45	310.74	4.88	6277.63	1565.19	1105.72
20	-1.45	310.74	4.88	6277.63	1565.19	1105.72
21	-1.45	315.62	4.88	6391.41	1593.56	1125.76
21	-1.45	315.62	4.88	6391.41	1593.56	1125.76
22	-1.45	320.50	4.88	6505.20	1621.93	1145.80
22	-1.45	320.50	4.88	6505.20	1621.93	1145.80
23	-1.45	325.38	4.88	6618.99	1650.30	1165.84
23	-1.45	325.38	4.88	6618.99	1650.30	1165.84
24	-1.45	330.26	4.88	6732.77	1678.67	1185.88
24	-1.45	330.26	4.88	6732.77	1678.67	1185.88
25	-1.45	335.38	5.37	6838.06	1704.92	1204.43
25	-1.45	335.38	5.37	6838.06	1704.92	1204.43
26	-1.45	340.75	5.37	6934.84	1729.05	1221.48
26	-1.45	340.75	5.37	6934.84	1729.05	1221.48
27	-1.45	346.12	5.37	7031.63	1753.18	1238.52
27	-1.45	346.12	5.37	7031.63	1753.18	1238.52
28	-1.45	351.34	5.09	7154.00	1783.69	1260.08
28	-1.45	351.34	5.09	7154.00	1783.69	1260.08
29	-1.45	356.43	5.09	7301.94	1820.58	1286.14
29	-1.45	356.43	5.09	7301.94	1820.58	1286.14
30	-1.45	361.51	5.09	7449.89	1857.47	1312.19
30	-1.45	361.51	5.09	7449.89	1857.47	1312.19
31	-1.45	366.60	5.09	7597.84	1894.35	1338.25
31	-1.45	366.60	5.09	7597.84	1894.35	1338.25
32	-1.45	371.68	5.09	7745.79	1931.24	1364.31
32	-1.45	371.68	5.09	7745.79	1931.24	1364.31
33	-1.45	376.77	5.09	7893.73	1968.13	1390.37
33	-1.45	376.77	5.09	7893.73	1968.13	1390.37
34	-1.45	381.85	5.09	8041.68	2005.02	1416.43
34	-1.45	381.85	5.09	8041.68	2005.02	1416.43
35	-1.45	386.93	5.09	8189.63	2041.90	1442.49
35	-1.45	386.93	5.09	8189.63	2041.90	1442.49
36	-1.45	392.02	5.09	8337.57	2078.79	1468.55
36	-1.45	392.02	5.09	8337.57	2078.79	1468.55
37	-1.45	397.10	5.09	8485.52	2115.68	1494.61
37	-1.45	397.10	5.09	8485.52	2115.68	1494.61
38	-1.45	402.19	5.09	8633.47	2152.57	1520.67
38	-1.45	402.19	5.09	8633.47	2152.57	1520.67
39	-1.45	407.27	5.09	8781.42	2189.45	1546.72
39	-1.45	407.27	5.09	8781.42	2189.45	1546.72
40	-1.45	412.36	5.09	8929.36	2226.34	1572.78
40	-1.45	412.36	5.09	8929.36	2226.34	1572.78
41	5.31	415.65	1.51	8820.58	2199.22	1553.62
41	5.31	415.65	1.51	8820.58	2199.22	1553.62
42	5.31	418.90	5.02	8844.15	2205.09	1557.77
42	5.31	418.90	5.02	8844.15	2205.09	1557.77
43	5.31	423.90	5.02	8869.53	2211.42	1562.24
43	5.31	423.90	5.02	8869.53	2211.42	1562.24
44	5.31	428.90	5.02	8894.91	2217.75	1566.71
44	5.31	428.90	5.02	8894.91	2217.75	1566.71
45	5.31	433.90	5.02	8920.28	2224.08	1571.18
45	5.31	433.90	5.02	8920.28	2224.08	1571.18
46	5.31	438.90	5.02	8945.66	2230.40	1575.65
46	5.31	438.90	5.02	8945.66	2230.40	1575.65
47	5.31	443.93	5.09	8970.28	2236.54	1579.99
47	5.31	443.93	5.09	8970.28	2236.54	1579.99
48	5.31	449.00	5.09	8994.14	2242.49	1584.19
48	5.31	449.00	5.09	8994.14	2242.49	1584.19
49	5.31	454.07	5.09	9018.00	2248.44	1588.39
49	5.31	454.07	5.09	9018.00	2248.44	1588.39
50	5.31	459.13	5.09	9041.86	2254.39	1592.60
50	5.31	459.13	5.09	9041.86	2254.39	1592.60
51	5.31	464.20	5.09	9065.72	2260.34	1596.80
51	5.31	464.20	5.09	9065.72	2260.34	1596.80

52	5.31	469.27	5.09	9089.57	2266.29	1601.00
52	5.31	469.27	5.09	9089.57	2266.29	1601.00
53	5.31	474.33	5.09	9113.43	2272.23	1605.20
53	5.31	474.33	5.09	9113.43	2272.23	1605.20
54	5.31	479.40	5.09	9137.29	2278.18	1609.41
54	5.31	479.40	5.09	9137.29	2278.18	1609.41
55	5.31	484.47	5.09	9161.15	2284.13	1613.61
55	5.31	484.47	5.09	9161.15	2284.13	1613.61
56	5.31	489.53	5.09	9185.01	2290.08	1617.81
56	5.31	489.53	5.09	9185.01	2290.08	1617.81
57	5.31	494.60	5.09	9208.87	2296.03	1622.01
57	5.31	494.60	5.09	9208.87	2296.03	1622.01
58	5.31	499.67	5.09	9232.73	2301.98	1626.22
58	5.31	499.67	5.09	9232.73	2301.98	1626.22
59	5.31	504.73	5.09	9256.59	2307.93	1630.42
59	5.31	504.73	5.09	9256.59	2307.93	1630.42
60	5.31	509.80	5.09	9280.45	2313.88	1634.62
60	5.31	509.80	5.09	9280.45	2313.88	1634.62
61	5.31	514.87	5.09	9304.31	2319.82	1638.82
61	5.31	514.87	5.09	9304.31	2319.82	1638.82
62	5.31	519.91	5.04	9297.57	2318.14	1637.64
62	5.31	519.91	5.04	9297.57	2318.14	1637.64
63	5.31	524.92	5.04	9260.24	2308.84	1631.06
63	5.31	524.92	5.04	9260.24	2308.84	1631.06
64	5.31	529.94	5.04	9222.91	2299.53	1624.49
64	5.31	529.94	5.04	9222.91	2299.53	1624.49
65	5.31	534.96	5.04	9185.58	2290.22	1617.91
65	5.31	534.96	5.04	9185.58	2290.22	1617.91
66	5.31	539.98	5.04	9148.25	2280.91	1611.34
66	5.31	539.98	5.04	9148.25	2280.91	1611.34
67	5.31	544.99	5.04	9110.91	2271.61	1604.76
67	5.31	544.99	5.04	9110.91	2271.61	1604.76
68	5.31	549.96	4.95	9126.44	2275.48	1607.50
68	5.31	549.96	4.95	9126.44	2275.48	1607.50
69	5.31	554.89	4.95	9194.83	2292.53	1619.54
69	5.31	554.89	4.95	9194.83	2292.53	1619.54
70	5.31	559.82	4.95	9263.22	2309.58	1631.59
70	5.31	559.82	4.95	9263.22	2309.58	1631.59
71	5.31	564.74	4.95	9331.61	2326.63	1643.63
71	5.31	564.74	4.95	9331.61	2326.63	1643.63
72	5.31	569.67	4.95	9399.99	2343.68	1655.68
72	5.31	569.67	4.95	9399.99	2343.68	1655.68
73	5.31	574.60	4.95	9468.38	2360.73	1667.72
73	5.31	574.60	4.95	9468.38	2360.73	1667.72
74	5.31	579.52	4.95	9536.77	2377.78	1679.77
74	5.31	579.52	4.95	9536.77	2377.78	1679.77
75	5.31	584.45	4.95	9605.16	2394.83	1691.81
75	5.31	584.45	4.95	9605.16	2394.83	1691.81
76	5.31	589.38	4.95	9673.55	2411.89	1703.86
76	5.31	589.38	4.95	9673.55	2411.89	1703.86
77	5.31	594.30	4.95	9741.93	2428.94	1715.91
77	5.31	594.30	4.95	9741.93	2428.94	1715.91
78	5.31	599.23	4.95	9810.32	2445.99	1727.95
78	5.31	599.23	4.95	9810.32	2445.99	1727.95
79	5.31	604.16	4.95	9878.71	2463.04	1740.00
79	5.31	604.16	4.95	9878.71	2463.04	1740.00
80	5.31	609.08	4.95	9947.10	2480.09	1752.04
80	5.31	609.08	4.95	9947.10	2480.09	1752.04
81	5.31	614.01	4.95	10015.49	2497.14	1764.09
81	5.31	614.01	4.95	10015.49	2497.14	1764.09
82	5.31	618.94	4.95	10083.87	2514.19	1776.13
82	5.31	618.94	4.95	10083.87	2514.19	1776.13
83	23.39	624.12	5.92	9462.86	2359.36	1666.75
83	23.39	624.12	5.92	9462.86	2359.36	1666.75
84	23.39	629.55	5.92	9328.86	2325.95	1643.15
84	23.39	629.55	5.92	9328.86	2325.95	1643.15
85	23.39	634.98	5.92	9194.86	2292.54	1619.55
85	23.39	634.98	5.92	9194.86	2292.54	1619.55
86	23.39	640.23	5.52	9103.47	2269.75	1603.45
86	23.39	640.23	5.52	9103.47	2269.75	1603.45
87	23.39	645.30	5.52	9054.68	2257.58	1594.85
87	23.39	645.30	5.52	9054.68	2257.58	1594.85
88	23.39	650.37	5.52	9005.89	2245.42	1586.26
88	23.39	650.37	5.52	9005.89	2245.42	1586.26
89	23.39	655.44	5.52	8957.10	2233.26	1577.67
89	23.39	655.44	5.52	8957.10	2233.26	1577.67
90	23.39	660.51	5.52	8908.31	2221.09	1569.07
90	23.39	660.51	5.52	8908.31	2221.09	1569.07
91	23.39	665.58	5.52	8859.52	2208.93	1560.48
91	23.39	665.58	5.52	8859.52	2208.93	1560.48
92	23.39	670.65	5.52	8810.73	2196.76	1551.89
92	23.39	670.65	5.52	8810.73	2196.76	1551.89
93	23.39	675.72	5.52	8761.94	2184.60	1543.29
93	23.39	675.72	5.52	8761.94	2184.60	1543.29
94	23.39	680.79	5.52	8713.15	2172.43	1534.70
94	23.39	680.79	5.52	8713.15	2172.43	1534.70
95	23.39	685.86	5.52	8664.36	2160.27	1526.11
95	23.39	685.86	5.52	8664.36	2160.27	1526.11
96	23.39	690.93	5.52	8615.57	2148.10	1517.51
96	23.39	690.93	5.52	8615.57	2148.10	1517.51
97	23.39	696.00	5.52	8566.78	2135.94	1508.92
97	23.39	696.00	5.52	8566.78	2135.94	1508.92
98	23.39	701.07	5.52	8517.99	2123.77	1500.33
98	23.39	701.07	5.52	8517.99	2123.77	1500.33
99	23.39	706.13	5.52	8469.20	2111.61	1491.73
99	23.39	706.13	5.52	8469.20	2111.61	1491.73
100	23.39	711.20	5.52	8420.41	2099.45	1483.14
100	23.39	711.20	5.52	8420.41	2099.45	1483.14
101	23.39	716.27	5.52	8371.62	2087.28	1474.55
101	23.39	716.27	5.52	8371.62	2087.28	1474.55
102	23.39	721.34	5.52	8322.84	2075.12	1465.95
102	23.39	721.34	5.52	8322.84	2075.12	1465.95
103	23.39	726.41	5.52	8274.05	2062.95	1457.36
103	23.39	726.41	5.52	8274.05	2062.95	1457.36
104	23.39	731.48	5.52	8225.26	2050.79	1448.76
104	23.39	731.48	5.52	8225.26	2050.79	1448.76
105	23.39	736.55	5.52	8176.47	2038.62	1440.17
105	23.39	736.55	5.52	8176.47	2038.62	1440.17
106	23.39	741.62	5.52	8127.68	2026.46	1431.58
106	23.39	741.62	5.52	8127.68	2026.46	1431.58
107	23.39	746.69	5.52	8078.89	2014.29	1422.98
107	23.39	746.69	5.52	8078.89	2014.29	1422.98
108	23.39	751.76	5.52	8030.10	2002.13	1414.39
108	23.39	751.76	5.52	8030.10	2002.13	1414.39
109	23.39	756.83	5.52	7981.31	1989.96	1405.80
109	23.39	756.83	5.52	7981.31	1989.96	1405.80
110	23.39	761.90	5.52	7932.52	1977.80	1397.20
110	23.39	761.90	5.52	7932.52	1977.80	1397.20
111	23.39	766.97	5.52	7883.73	1965.63	1388.61
111	23.39	766.97	5.52	7883.73	1965.63	1388.61

112	23.39	772.02	5.48	7854.29	1958.29	1383.42
112	23.39	772.02	5.48	7854.29	1958.29	1383.42
113	23.39	777.05	5.48	7844.20	1955.78	1381.65
113	23.39	777.05	5.48	7844.20	1955.78	1381.65
114	23.39	782.08	5.48	7834.11	1953.26	1379.87
114	23.39	782.08	5.48	7834.11	1953.26	1379.87
115	23.78	786.95	5.14	7390.71	3236.04	2286.08
115	23.78	786.95	5.14	7390.71	3236.04	2286.08
116	23.78	791.79	5.44	7377.36	3230.65	2282.27
116	23.78	791.79	5.44	7377.36	3230.65	2282.27
117	23.78	796.76	5.44	7363.64	3225.10	2278.35
117	23.78	796.76	5.44	7363.64	3225.10	2278.35
118	23.78	801.74	5.44	7349.91	3219.56	2274.43
118	23.78	801.74	5.44	7349.91	3219.56	2274.43
119	23.78	806.71	5.44	7336.18	3214.01	2270.52
119	23.78	806.71	5.44	7336.18	3214.01	2270.52
120	23.78	811.69	5.44	7322.46	3208.46	2266.60
120	23.78	811.69	5.44	7322.46	3208.46	2266.60
121	23.78	816.66	5.44	7308.73	3202.92	2262.68
121	23.78	816.66	5.44	7308.73	3202.92	2262.68
122	23.78	821.64	5.44	7295.00	3197.37	2258.76
122	23.78	821.64	5.44	7295.00	3197.37	2258.76
123	23.78	826.61	5.44	7281.28	3191.83	2254.84
123	23.78	826.61	5.44	7281.28	3191.83	2254.84
124	23.78	831.59	5.44	7267.55	3186.28	2250.93
124	23.78	831.59	5.44	7267.55	3186.28	2250.93
125	23.78	836.56	5.44	7253.82	3180.73	2247.01
125	23.78	836.56	5.44	7253.82	3180.73	2247.01
126	23.78	841.54	5.44	7240.10	3175.19	2243.09
126	23.78	841.54	5.44	7240.10	3175.19	2243.09
127	23.78	846.51	5.44	7226.37	3169.64	2239.17
127	23.78	846.51	5.44	7226.37	3169.64	2239.17
128	23.78	851.80	6.12	7211.78	3163.75	2235.01
128	23.78	851.80	6.12	7211.78	3163.75	2235.01
129	23.78	857.40	6.12	7196.33	3157.51	2230.60
129	23.78	857.40	6.12	7196.33	3157.51	2230.60
130	23.78	862.70	5.46	7167.98	3146.05	2222.51
130	23.78	862.70	5.46	7167.98	3146.05	2222.51
131	23.78	867.69	5.46	7126.74	3129.39	2210.74
131	23.78	867.69	5.46	7126.74	3129.39	2210.74
132	23.78	872.68	5.46	7085.50	3112.73	2198.96
132	23.78	872.68	5.46	7085.50	3112.73	2198.96
133	23.78	877.67	5.46	7044.26	3096.06	2187.19
133	23.78	877.67	5.46	7044.26	3096.06	2187.19
134	23.78	882.67	5.46	7003.01	3079.40	2175.42
134	23.78	882.67	5.46	7003.01	3079.40	2175.42
135	23.78	887.66	5.46	6961.77	3062.74	2163.65
135	23.78	887.66	5.46	6961.77	3062.74	2163.65
136	23.78	892.65	5.46	6920.53	3046.08	2151.88
136	23.78	892.65	5.46	6920.53	3046.08	2151.88
137	23.78	897.65	5.46	6879.29	3029.41	2140.11
137	23.78	897.65	5.46	6879.29	3029.41	2140.11
138	23.78	902.64	5.46	6838.05	3012.75	2128.34
138	23.78	902.64	5.46	6838.05	3012.75	2128.34
139	23.78	907.63	5.46	6796.80	2996.09	2116.57
139	23.78	907.63	5.46	6796.80	2996.09	2116.57
140	23.78	912.62	5.46	6755.56	2979.42	2104.79
140	23.78	912.62	5.46	6755.56	2979.42	2104.79
141	23.78	917.62	5.46	6714.32	2962.76	2093.02
141	23.78	917.62	5.46	6714.32	2962.76	2093.02
142	23.78	922.61	5.46	6673.08	2946.10	2081.25
142	23.78	922.61	5.46	6673.08	2946.10	2081.25
143	23.78	927.60	5.46	6631.84	2929.44	2069.48
143	23.78	927.60	5.46	6631.84	2929.44	2069.48
144	23.78	932.60	5.46	6590.59	2912.77	2057.71
144	23.78	932.60	5.46	6590.59	2912.77	2057.71
145	23.78	937.59	5.46	6549.35	2896.11	2045.94
145	23.78	937.59	5.46	6549.35	2896.11	2045.94
146	23.78	942.58	5.46	6508.11	2879.45	2034.17
146	23.78	942.58	5.46	6508.11	2879.45	2034.17
147	23.78	947.58	5.46	6466.87	2862.78	2022.39
147	23.78	947.58	5.46	6466.87	2862.78	2022.39
148	23.78	952.57	5.46	6425.63	2846.12	2010.62
148	23.78	952.57	5.46	6425.63	2846.12	2010.62
149	23.78	957.56	5.46	6384.38	2829.46	1998.85
149	23.78	957.56	5.46	6384.38	2829.46	1998.85
150	23.78	962.55	5.46	6343.14	2812.80	1987.08
150	23.78	962.55	5.46	6343.14	2812.80	1987.08
151	23.78	967.55	5.46	6301.90	2796.13	1975.31
151	23.78	967.55	5.46	6301.90	2796.13	1975.31
152	23.78	972.54	5.46	6260.66	2779.47	1963.54
152	23.78	972.54	5.46	6260.66	2779.47	1963.54
153	23.78	977.53	5.46	6219.42	2762.81	1951.77
153	23.78	977.53	5.46	6219.42	2762.81	1951.77
154	23.78	982.53	5.46	6178.17	2746.14	1939.99
154	23.78	982.53	5.46	6178.17	2746.14	1939.99
155	23.78	987.52	5.46	6136.93	2729.48	1928.22
155	23.78	987.52	5.46	6136.93	2729.48	1928.22
156	23.78	992.51	5.46	6095.69	2712.82	1916.45
156	23.78	992.51	5.46	6095.69	2712.82	1916.45
157	23.78	997.50	5.46	6054.45	2696.16	1904.68
157	23.78	997.50	5.46	6054.45	2696.16	1904.68
158	23.78	1002.57	5.61	6002.45	2675.15	1889.84
158	23.78	1002.57	5.61	6002.45	2675.15	1889.84
159	23.78	1007.70	5.61	5939.69	2649.79	1871.93
159	23.78	1007.70	5.61	5939.69	2649.79	1871.93
160	23.78	1012.83	5.61	5876.94	2624.44	1854.02
160	23.78	1012.83	5.61	5876.94	2624.44	1854.02
161	23.78	1017.96	5.61	5814.18	2599.08	1836.10
161	23.78	1017.96	5.61	5814.18	2599.08	1836.10
162	23.78	1023.09	5.61	5751.43	2573.73	1818.19
162	23.78	1023.09	5.61	5751.43	2573.73	1818.19
163	23.78	1028.22	5.61	5688.67	2548.37	1800.28
163	23.78	1028.22	5.61	5688.67	2548.37	1800.28
164	23.78	1033.35	5.61	5625.92	2523.02	1782.37
164	23.78	1033.35	5.61	5625.92	2523.02	1782.37
165	23.78	1038.48	5.61	5563.16	2497.66	1764.46
165	23.78	1038.48	5.61	5563.16	2497.66	1764.46
166	23.78	1043.62	5.61	5500.41	2472.31	1746.55
166	23.78	1043.62	5.61	5500.41	2472.31	1746.55
167	23.78	1048.75	5.61	5437.65	2446.95	1728.63
167	23.78	1048.75	5.61	5437.65	2446.95	1728.63
168	23.78	1053.88	5.61	5374.90	2421.60	1710.72
168	23.78	1053.88	5.61	5374.90	2421.60	1710.72
169	23.78	1059.01	5.61	5312.14	2396.25	1692.81
169	23.78	1059.01	5.61	5312.14	2396.25	1692.81
170	23.78	1064.14	5.61	5249.39	2370.89	1674.90
170	23.78	1064.14	5.61	5249.39	2370.89	1674.90
171	23.78	1069.27	5.61	5186.63	2345.54	1656.99
171	23.78	1069.27	5.61	5186.63	2345.54	1656.99

172	23.78	1074.40	5.61	5123.88	2320.18	1639.08
172	23.78	1074.40	5.61	5123.88	2320.18	1639.08
173	23.78	1079.53	5.61	5061.12	2294.83	1621.16
173	23.78	1079.53	5.61	5061.12	2294.83	1621.16
174	23.78	1084.61	5.48	4961.42	2254.54	1592.71
174	23.78	1084.61	5.48	4961.42	2254.54	1592.71
175	23.78	1089.63	5.48	4824.76	2199.33	1553.70
175	23.78	1089.63	5.48	4824.76	2199.33	1553.70
176	23.78	1094.65	5.48	4688.10	2144.11	1514.69
176	23.78	1094.65	5.48	4688.10	2144.11	1514.69
177	23.78	1099.67	5.48	4551.44	2088.90	1475.69
177	23.78	1099.67	5.48	4551.44	2088.90	1475.69
178	23.78	1104.69	5.48	4414.78	2033.69	1436.68
178	23.78	1104.69	5.48	4414.78	2033.69	1436.68
179	23.78	1109.71	5.48	4278.12	1978.47	1397.68
179	23.78	1109.71	5.48	4278.12	1978.47	1397.68
180	23.78	1114.73	5.48	4141.46	1923.26	1358.67
180	23.78	1114.73	5.48	4141.46	1923.26	1358.67
181	23.78	1119.75	5.48	4004.80	1868.04	1319.67
181	23.78	1119.75	5.48	4004.80	1868.04	1319.67
182	23.78	1124.76	5.48	3868.14	1812.83	1280.66
182	23.78	1124.76	5.48	3868.14	1812.83	1280.66
183	23.78	1129.78	5.48	3731.48	1757.62	1241.66
183	23.78	1129.78	5.48	3731.48	1757.62	1241.66
184	23.78	1134.80	5.48	3594.82	1702.40	1202.65
184	23.78	1134.80	5.48	3594.82	1702.40	1202.65
185	23.78	1139.82	5.48	3458.16	1647.19	1163.64
185	23.78	1139.82	5.48	3458.16	1647.19	1163.64
186	23.78	1144.84	5.48	3321.50	1591.97	1124.64
186	23.78	1144.84	5.48	3321.50	1591.97	1124.64
187	23.78	1149.86	5.48	3184.84	1536.76	1085.63
187	23.78	1149.86	5.48	3184.84	1536.76	1085.63
188	23.78	1154.88	5.48	3048.18	1481.55	1046.63
188	23.78	1154.88	5.48	3048.18	1481.55	1046.63
189	23.78	1159.90	5.48	2911.52	1426.33	1007.62
189	23.78	1159.90	5.48	2911.52	1426.33	1007.62
190	23.78	1164.92	5.48	2774.86	1371.12	968.62
190	23.78	1164.92	5.48	2774.86	1371.12	968.62
191	23.78	1169.94	5.48	2638.20	1315.90	929.61
191	23.78	1169.94	5.48	2638.20	1315.90	929.61
192	23.78	1174.96	5.48	2501.54	1260.69	890.61
192	23.78	1174.96	5.48	2501.54	1260.69	890.61
193	23.78	1179.98	5.48	2364.88	1205.47	851.60
193	23.78	1179.98	5.48	2364.88	1205.47	851.60
194	23.78	1185.00	5.48	2228.22	1150.26	812.59
194	23.78	1185.00	5.48	2228.22	1150.26	812.59
195	23.78	1190.02	5.48	2091.56	1095.05	773.59
195	23.78	1190.02	5.48	2091.56	1095.05	773.59
196	23.78	1195.04	5.48	1954.90	1039.83	734.58
196	23.78	1195.04	5.48	1954.90	1039.83	734.58
197	23.78	1200.05	5.48	1818.25	984.62	695.58
197	23.78	1200.05	5.48	1818.25	984.62	695.58
198	23.78	1205.07	5.48	1681.59	929.40	656.57
198	23.78	1205.07	5.48	1681.59	929.40	656.57
199	23.78	1210.09	5.48	1544.93	874.19	617.57
199	23.78	1210.09	5.48	1544.93	874.19	617.57
200	23.78	1215.11	5.48	1408.27	818.98	578.56
200	23.78	1215.11	5.48	1408.27	818.98	578.56
201	23.78	1220.13	5.48	1271.61	763.76	539.55
201	23.78	1220.13	5.48	1271.61	763.76	539.55
202	23.78	1225.15	5.48	1134.95	708.55	500.55
202	23.78	1225.15	5.48	1134.95	708.55	500.55
203	23.78	1230.17	5.48	998.29	653.33	461.54
203	23.78	1230.17	5.48	998.29	653.33	461.54
204	23.78	1235.19	5.48	861.63	598.12	422.54
204	23.78	1235.19	5.48	861.63	598.12	422.54
205	23.78	1238.35	1.42	775.60	563.36	397.98
205	23.78	1238.35	1.42	775.60	563.36	397.98
206	37.55	1241.00	5.05	533.80	465.67	328.97
206	37.55	1241.00	5.05	533.80	465.67	328.97
207	37.55	1245.00	5.05	305.57	373.46	263.83
207	37.55	1245.00	5.05	305.57	373.46	263.83
208	37.55	1248.67	4.23	114.64	296.32	209.33
208	37.55	1248.67	4.23	114.64	296.32	209.33
209	37.55	1252.03	4.23	76.82	31.04	21.93
209	37.55	1252.03	4.23	76.82	31.04	21.93

Table 4 - Base Force Data on the 209 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-30.48	216.38	6.44	2492.79	2398.06	1694.09
1	-30.48	216.38	6.44	2492.79	2398.06	1694.09
2	-30.48	221.93	6.44	6082.86	3996.46	2823.27
2	-30.48	221.93	6.44	6082.86	3996.46	2823.27
3	-33.45	227.49	6.67	10617.27	6060.45	4281.36
3	-33.45	227.49	6.67	10617.27	6060.45	4281.36
4	-33.45	233.05	6.67	14864.74	7951.54	5617.31
4	-33.45	233.05	6.67	14864.74	7951.54	5617.31
5	-33.45	238.61	6.67	19112.21	9842.64	6953.26
5	-33.45	238.61	6.67	19112.21	9842.64	6953.26
6	-28.32	242.69	2.95	9229.30	4699.63	3320.02
6	-28.32	242.69	2.95	9229.30	4699.63	3320.02
7	-28.32	246.49	5.68	19480.45	9291.24	6563.74
7	-28.32	246.49	5.68	19480.45	9291.24	6563.74
8	-28.32	251.50	5.68	22020.79	10317.61	7288.81
8	-28.32	251.50	5.68	22020.79	10317.61	7288.81
9	-28.32	256.50	5.68	24561.14	11343.98	8013.87
9	-28.32	256.50	5.68	24561.14	11343.98	8013.87
10	-28.12	261.90	6.58	31526.60	14381.55	10159.75
10	-28.12	261.90	6.58	31526.60	14381.55	10159.75
11	-28.12	267.70	6.58	34904.75	15746.41	11123.94
11	-28.12	267.70	6.58	34904.75	15746.41	11123.94
12	-28.12	273.50	6.58	38282.90	17111.27	12088.14
12	-28.12	273.50	6.58	38282.90	17111.27	12088.14
13	-28.12	276.52	0.27	1658.46	738.14	521.45
13	-28.12	276.52	0.27	1658.46	738.14	521.45
14	-13.12	279.07	5.00	26852.93	6695.19	4729.77
14	-13.12	279.07	5.00	26852.93	6695.19	4729.77
15	-13.12	283.94	5.00	28033.37	6989.50	4937.69
15	-13.12	283.94	5.00	28033.37	6989.50	4937.69
16	-13.12	288.81	5.00	29213.81	7283.82	5145.61
16	-13.12	288.81	5.00	29213.81	7283.82	5145.61
17	-13.12	293.68	5.00	30394.26	7578.14	5353.52
17	-13.12	293.68	5.00	30394.26	7578.14	5353.52
18	-1.45	299.16	6.09	36700.44	9150.45	6464.27

18	-1.45	299.16	6.09	36700.44	9150.45	6464.27
19	-1.45	305.25	6.09	37501.17	9350.09	6605.31
19	-1.45	305.25	6.09	37501.17	9350.09	6605.31
20	-1.45	310.74	4.88	30644.68	7640.58	5397.63
20	-1.45	310.74	4.88	30644.68	7640.58	5397.63
21	-1.45	315.62	4.88	31200.13	7779.07	5495.47
21	-1.45	315.62	4.88	31200.13	7779.07	5495.47
22	-1.45	320.50	4.88	31755.58	7917.56	5593.30
22	-1.45	320.50	4.88	31755.58	7917.56	5593.30
23	-1.45	325.38	4.88	32311.04	8056.05	5691.14
23	-1.45	325.38	4.88	32311.04	8056.05	5691.14
24	-1.45	330.26	4.88	32866.49	8194.54	5788.97
24	-1.45	330.26	4.88	32866.49	8194.54	5788.97
25	-1.45	335.38	5.37	36709.37	9152.67	6465.84
25	-1.45	335.38	5.37	36709.37	9152.67	6465.84
26	-1.45	340.75	5.37	37228.96	9282.22	6557.36
26	-1.45	340.75	5.37	37228.96	9282.22	6557.36
27	-1.45	346.12	5.37	37748.55	9411.77	6648.88
27	-1.45	346.12	5.37	37748.55	9411.77	6648.88
28	-1.45	351.34	5.09	36387.02	9072.30	6409.07
28	-1.45	351.34	5.09	36387.02	9072.30	6409.07
29	-1.45	356.43	5.09	37139.52	9259.92	6541.61
29	-1.45	356.43	5.09	37139.52	9259.92	6541.61
30	-1.45	361.51	5.09	37892.02	9447.54	6674.15
30	-1.45	361.51	5.09	37892.02	9447.54	6674.15
31	-1.45	366.60	5.09	38644.51	9635.16	6806.69
31	-1.45	366.60	5.09	38644.51	9635.16	6806.69
32	-1.45	371.68	5.09	39397.01	9822.78	6939.23
32	-1.45	371.68	5.09	39397.01	9822.78	6939.23
33	-1.45	376.77	5.09	40149.50	10010.40	7071.78
33	-1.45	376.77	5.09	40149.50	10010.40	7071.78
34	-1.45	381.85	5.09	40902.00	10198.01	7204.32
34	-1.45	381.85	5.09	40902.00	10198.01	7204.32
35	-1.45	386.93	5.09	41654.50	10385.63	7336.86
35	-1.45	386.93	5.09	41654.50	10385.63	7336.86
36	-1.45	392.02	5.09	42406.99	10573.25	7469.40
36	-1.45	392.02	5.09	42406.99	10573.25	7469.40
37	-1.45	397.10	5.09	43159.49	10760.87	7601.94
37	-1.45	397.10	5.09	43159.49	10760.87	7601.94
38	-1.45	402.19	5.09	43911.99	10948.49	7734.48
38	-1.45	402.19	5.09	43911.99	10948.49	7734.48
39	-1.45	407.27	5.09	44664.48	11136.11	7867.03
39	-1.45	407.27	5.09	44664.48	11136.11	7867.03
40	-1.45	412.36	5.09	45416.98	11323.72	7999.57
40	-1.45	412.36	5.09	45416.98	11323.72	7999.57
41	5.31	415.65	1.51	13287.94	3313.06	2340.49
41	5.31	415.65	1.51	13287.94	3313.06	2340.49
42	5.31	418.90	5.02	44411.50	11073.03	7822.47
42	5.31	418.90	5.02	44411.50	11073.03	7822.47
43	5.31	423.90	5.02	44538.93	11104.80	7844.91
43	5.31	423.90	5.02	44538.93	11104.80	7844.91
44	5.31	428.90	5.02	44666.36	11136.57	7867.36
44	5.31	428.90	5.02	44666.36	11136.57	7867.36
45	5.31	433.90	5.02	44793.79	11168.35	7889.80
45	5.31	433.90	5.02	44793.79	11168.35	7889.80
46	5.31	438.90	5.02	44921.22	11200.12	7912.25
46	5.31	438.90	5.02	44921.22	11200.12	7912.25
47	5.31	443.93	5.09	45645.44	11380.69	8039.81
47	5.31	443.93	5.09	45645.44	11380.69	8039.81
48	5.31	449.00	5.09	45766.85	11410.96	8061.19
48	5.31	449.00	5.09	45766.85	11410.96	8061.19
49	5.31	454.07	5.09	45888.26	11441.23	8082.58
49	5.31	454.07	5.09	45888.26	11441.23	8082.58
50	5.31	459.13	5.09	46009.67	11471.50	8103.96
50	5.31	459.13	5.09	46009.67	11471.50	8103.96
51	5.31	464.20	5.09	46131.07	11501.77	8125.35
51	5.31	464.20	5.09	46131.07	11501.77	8125.35
52	5.31	469.27	5.09	46252.48	11532.04	8146.73
52	5.31	469.27	5.09	46252.48	11532.04	8146.73
53	5.31	474.33	5.09	46373.89	11562.31	8168.11
53	5.31	474.33	5.09	46373.89	11562.31	8168.11
54	5.31	479.40	5.09	46495.30	11592.58	8189.50
54	5.31	479.40	5.09	46495.30	11592.58	8189.50
55	5.31	484.47	5.09	46616.70	11622.85	8210.88
55	5.31	484.47	5.09	46616.70	11622.85	8210.88
56	5.31	489.53	5.09	46738.11	11653.12	8232.27
56	5.31	489.53	5.09	46738.11	11653.12	8232.27
57	5.31	494.60	5.09	46859.52	11683.39	8253.65
57	5.31	494.60	5.09	46859.52	11683.39	8253.65
58	5.31	499.67	5.09	46980.93	11713.66	8275.04
58	5.31	499.67	5.09	46980.93	11713.66	8275.04
59	5.31	504.73	5.09	47102.34	11743.93	8296.42
59	5.31	504.73	5.09	47102.34	11743.93	8296.42
60	5.31	509.80	5.09	47223.74	11774.20	8317.80
60	5.31	509.80	5.09	47223.74	11774.20	8317.80
61	5.31	514.87	5.09	47345.15	11804.47	8339.19
61	5.31	514.87	5.09	47345.15	11804.47	8339.19
62	5.31	519.91	5.04	46843.99	11679.52	8250.92
62	5.31	519.91	5.04	46843.99	11679.52	8250.92
63	5.31	524.92	5.04	46655.90	11632.62	8217.79
63	5.31	524.92	5.04	46655.90	11632.62	8217.79
64	5.31	529.94	5.04	46467.82	11585.73	8184.66
64	5.31	529.94	5.04	46467.82	11585.73	8184.66
65	5.31	534.96	5.04	46279.73	11538.83	8151.53
65	5.31	534.96	5.04	46279.73	11538.83	8151.53
66	5.31	539.98	5.04	46091.65	11491.94	8118.40
66	5.31	539.98	5.04	46091.65	11491.94	8118.40
67	5.31	544.99	5.04	45903.56	11445.04	8085.27
67	5.31	544.99	5.04	45903.56	11445.04	8085.27
68	5.31	549.96	4.95	45156.87	11258.87	7953.75
68	5.31	549.96	4.95	45156.87	11258.87	7953.75
69	5.31	554.89	4.95	45495.25	11343.24	8013.35
69	5.31	554.89	4.95	45495.25	11343.24	8013.35
70	5.31	559.82	4.95	45833.63	11427.61	8072.95
70	5.31	559.82	4.95	45833.63	11427.61	8072.95
71	5.31	564.74	4.95	46172.01	11511.97	8132.56
71	5.31	564.74	4.95	46172.01	11511.97	8132.56
72	5.31	569.67	4.95	46510.39	11596.34	8192.16
72	5.31	569.67	4.95	46510.39	11596.34	8192.16
73	5.31	574.60	4.95	46848.76	11680.71	8251.76
73	5.31	574.60	4.95	46848.76	11680.71	8251.76
74	5.31	579.52	4.95	47187.14	11765.08	8311.36
74	5.31	579.52	4.95	47187.14	11765.08	8311.36
75	5.31	584.45	4.95	47525.52	11849.44	8370.96
75	5.31	584.45	4.95	47525.52	11849.44	8370.96
76	5.31	589.38	4.95	47863.90	11933.81	8430.56
76	5.31	589.38	4.95	47863.90	11933.81	8430.56
77	5.31	594.30	4.95	48202.27	12018.18	8490.16
77	5.31	594.30	4.95	48202.27	12018.18	8490.16
78	5.31	599.23	4.95	48540.65	12102.54	8549.76

78	5.31	599.23	4.95	48540.65	12102.54	8549.76
79	5.31	604.16	4.95	48879.03	12186.91	8609.36
79	5.31	604.16	4.95	48879.03	12186.91	8609.36
80	5.31	609.08	4.95	49217.41	12271.28	8668.96
80	5.31	609.08	4.95	49217.41	12271.28	8668.96
81	5.31	614.01	4.95	49555.79	12355.64	8728.56
81	5.31	614.01	4.95	49555.79	12355.64	8728.56
82	5.31	618.94	4.95	49894.16	12440.01	8788.16
82	5.31	618.94	4.95	49894.16	12440.01	8788.16
83	23.39	624.12	5.92	56019.57	13967.25	9867.07
83	23.39	624.12	5.92	56019.57	13967.25	9867.07
84	23.39	629.55	5.92	55226.31	13769.46	9727.34
84	23.39	629.55	5.92	55226.31	13769.46	9727.34
85	23.39	634.98	5.92	54433.04	13571.68	9587.62
85	23.39	634.98	5.92	54433.04	13571.68	9587.62
86	23.39	640.23	5.52	50280.54	12536.35	8856.22
86	23.39	640.23	5.52	50280.54	12536.35	8856.22
87	23.39	645.30	5.52	50011.07	12469.16	8808.75
87	23.39	645.30	5.52	50011.07	12469.16	8808.75
88	23.39	650.37	5.52	49741.60	12401.97	8761.29
88	23.39	650.37	5.52	49741.60	12401.97	8761.29
89	23.39	655.44	5.52	49472.12	12334.78	8713.82
89	23.39	655.44	5.52	49472.12	12334.78	8713.82
90	23.39	660.51	5.52	49202.65	12267.60	8666.36
90	23.39	660.51	5.52	49202.65	12267.60	8666.36
91	23.39	665.58	5.52	48933.17	12200.41	8618.90
91	23.39	665.58	5.52	48933.17	12200.41	8618.90
92	23.39	670.65	5.52	48663.70	12133.22	8571.43
92	23.39	670.65	5.52	48663.70	12133.22	8571.43
93	23.39	675.72	5.52	48394.22	12066.03	8523.97
93	23.39	675.72	5.52	48394.22	12066.03	8523.97
94	23.39	680.79	5.52	48124.75	11998.85	8476.50
94	23.39	680.79	5.52	48124.75	11998.85	8476.50
95	23.39	685.86	5.52	47855.27	11931.66	8429.04
95	23.39	685.86	5.52	47855.27	11931.66	8429.04
96	23.39	690.93	5.52	47585.80	11864.47	8381.57
96	23.39	690.93	5.52	47585.80	11864.47	8381.57
97	23.39	696.00	5.52	47316.32	11797.28	8334.11
97	23.39	696.00	5.52	47316.32	11797.28	8334.11
98	23.39	701.07	5.52	47046.85	11730.10	8286.65
98	23.39	701.07	5.52	47046.85	11730.10	8286.65
99	23.39	706.13	5.52	46777.37	11662.91	8239.18
99	23.39	706.13	5.52	46777.37	11662.91	8239.18
100	23.39	711.20	5.52	46507.90	11595.72	8191.72
100	23.39	711.20	5.52	46507.90	11595.72	8191.72
101	23.39	716.27	5.52	46238.42	11528.53	8144.25
101	23.39	716.27	5.52	46238.42	11528.53	8144.25
102	23.39	721.34	5.52	45968.95	11461.35	8096.79
102	23.39	721.34	5.52	45968.95	11461.35	8096.79
103	23.39	726.41	5.52	45699.47	11394.16	8049.32
103	23.39	726.41	5.52	45699.47	11394.16	8049.32
104	23.39	731.48	5.52	45430.00	11326.97	8001.86
104	23.39	731.48	5.52	45430.00	11326.97	8001.86
105	23.39	736.55	5.52	45160.52	11259.78	7954.40
105	23.39	736.55	5.52	45160.52	11259.78	7954.40
106	23.39	741.62	5.52	44891.05	11192.59	7906.93
106	23.39	741.62	5.52	44891.05	11192.59	7906.93
107	23.39	746.69	5.52	44621.57	11125.41	7859.47
107	23.39	746.69	5.52	44621.57	11125.41	7859.47
108	23.39	751.76	5.52	44352.10	11058.22	7812.00
108	23.39	751.76	5.52	44352.10	11058.22	7812.00
109	23.39	756.83	5.52	44082.62	10991.03	7764.54
109	23.39	756.83	5.52	44082.62	10991.03	7764.54
110	23.39	761.90	5.52	43813.15	10923.84	7717.07
110	23.39	761.90	5.52	43813.15	10923.84	7717.07
111	23.39	766.97	5.52	43543.67	10856.66	7669.61
111	23.39	766.97	5.52	43543.67	10856.66	7669.61
112	23.39	772.02	5.48	43073.86	10739.52	7586.86
112	23.39	772.02	5.48	43073.86	10739.52	7586.86
113	23.39	777.05	5.48	43018.52	10725.72	7577.11
113	23.39	777.05	5.48	43018.52	10725.72	7577.11
114	23.39	782.08	5.48	42963.17	10711.92	7567.36
114	23.39	782.08	5.48	42963.17	10711.92	7567.36
115	23.78	786.95	5.14	37958.27	16620.12	11741.17
115	23.78	786.95	5.14	37958.27	16620.12	11741.17
116	23.78	791.79	5.44	40106.67	17563.26	12407.45
116	23.78	791.79	5.44	40106.67	17563.26	12407.45
117	23.78	796.76	5.44	40032.05	17533.11	12386.15
117	23.78	796.76	5.44	40032.05	17533.11	12386.15
118	23.78	801.74	5.44	39957.43	17502.96	12364.85
118	23.78	801.74	5.44	39957.43	17502.96	12364.85
119	23.78	806.71	5.44	39882.80	17472.81	12343.55
119	23.78	806.71	5.44	39882.80	17472.81	12343.55
120	23.78	811.69	5.44	39808.18	17442.66	12322.25
120	23.78	811.69	5.44	39808.18	17442.66	12322.25
121	23.78	816.66	5.44	39733.55	17412.51	12300.95
121	23.78	816.66	5.44	39733.55	17412.51	12300.95
122	23.78	821.64	5.44	39658.93	17382.36	12279.65
122	23.78	821.64	5.44	39658.93	17382.36	12279.65
123	23.78	826.61	5.44	39584.30	17352.21	12258.35
123	23.78	826.61	5.44	39584.30	17352.21	12258.35
124	23.78	831.59	5.44	39509.68	17322.06	12237.05
124	23.78	831.59	5.44	39509.68	17322.06	12237.05
125	23.78	836.56	5.44	39435.05	17291.91	12215.75
125	23.78	836.56	5.44	39435.05	17291.91	12215.75
126	23.78	841.54	5.44	39360.43	17261.76	12194.45
126	23.78	841.54	5.44	39360.43	17261.76	12194.45
127	23.78	846.51	5.44	39285.80	17231.61	12173.15
127	23.78	846.51	5.44	39285.80	17231.61	12173.15
128	23.78	851.80	6.12	44131.93	19360.31	13676.96
128	23.78	851.80	6.12	44131.93	19360.31	13676.96
129	23.78	857.40	6.12	44037.38	19322.11	13649.97
129	23.78	857.40	6.12	44037.38	19322.11	13649.97
130	23.78	862.70	5.46	39108.26	17164.75	12125.92
130	23.78	862.70	5.46	39108.26	17164.75	12125.92
131	23.78	867.69	5.46	38883.24	17073.84	12061.70
131	23.78	867.69	5.46	38883.24	17073.84	12061.70
132	23.78	872.68	5.46	38658.23	16982.93	11997.47
132	23.78	872.68	5.46	38658.23	16982.93	11997.47
133	23.78	877.67	5.46	38433.21	16892.02	11933.25
133	23.78	877.67	5.46	38433.21	16892.02	11933.25
134	23.78	882.67	5.46	38208.20	16801.11	11869.03
134	23.78	882.67	5.46	38208.20	16801.11	11869.03
135	23.78	887.66	5.46	37983.19	16710.19	11804.80
135	23.78	887.66	5.46	37983.19	16710.19	11804.80
136	23.78	892.65	5.46	37758.17	16619.28	11740.58
136	23.78	892.65	5.46	37758.17	16619.28	11740.58
137	23.78	897.65	5.46	37533.16	16528.37	11676.35
137	23.78	897.65	5.46	37533.16	16528.37	11676.35
138	23.78	902.64	5.46	37308.14	16437.46	11612.13

138	23.78	902.64	5.46	37308.14	16437.46	11612.13
139	23.78	907.63	5.46	37083.13	16346.55	11547.91
139	23.78	907.63	5.46	37083.13	16346.55	11547.91
140	23.78	912.62	5.46	36858.11	16255.63	11483.68
140	23.78	912.62	5.46	36858.11	16255.63	11483.68
141	23.78	917.62	5.46	36633.10	16164.72	11419.46
141	23.78	917.62	5.46	36633.10	16164.72	11419.46
142	23.78	922.61	5.46	36408.08	16073.81	11355.23
142	23.78	922.61	5.46	36408.08	16073.81	11355.23
143	23.78	927.60	5.46	36183.07	15982.90	11291.01
143	23.78	927.60	5.46	36183.07	15982.90	11291.01
144	23.78	932.60	5.46	35958.05	15891.99	11226.79
144	23.78	932.60	5.46	35958.05	15891.99	11226.79
145	23.78	937.59	5.46	35733.04	15801.08	11162.56
145	23.78	937.59	5.46	35733.04	15801.08	11162.56
146	23.78	942.58	5.46	35508.02	15710.16	11098.34
146	23.78	942.58	5.46	35508.02	15710.16	11098.34
147	23.78	947.58	5.46	35283.01	15619.25	11034.11
147	23.78	947.58	5.46	35283.01	15619.25	11034.11
148	23.78	952.57	5.46	35057.99	15528.34	10969.89
148	23.78	952.57	5.46	35057.99	15528.34	10969.89
149	23.78	957.56	5.46	34832.98	15437.43	10905.67
149	23.78	957.56	5.46	34832.98	15437.43	10905.67
150	23.78	962.55	5.46	34607.96	15346.52	10841.44
150	23.78	962.55	5.46	34607.96	15346.52	10841.44
151	23.78	967.55	5.46	34382.95	15255.60	10777.22
151	23.78	967.55	5.46	34382.95	15255.60	10777.22
152	23.78	972.54	5.46	34157.93	15164.69	10712.99
152	23.78	972.54	5.46	34157.93	15164.69	10712.99
153	23.78	977.53	5.46	33932.92	15073.78	10648.77
153	23.78	977.53	5.46	33932.92	15073.78	10648.77
154	23.78	982.53	5.46	33707.91	14982.87	10584.55
154	23.78	982.53	5.46	33707.91	14982.87	10584.55
155	23.78	987.52	5.46	33482.89	14891.96	10520.32
155	23.78	987.52	5.46	33482.89	14891.96	10520.32
156	23.78	992.51	5.46	33257.88	14801.04	10456.10
156	23.78	992.51	5.46	33257.88	14801.04	10456.10
157	23.78	997.50	5.46	33032.86	14710.13	10391.87
157	23.78	997.50	5.46	33032.86	14710.13	10391.87
158	23.78	1002.57	5.61	33656.91	15000.07	10596.70
158	23.78	1002.57	5.61	33656.91	15000.07	10596.70
159	23.78	1007.70	5.61	33305.03	14857.90	10496.26
159	23.78	1007.70	5.61	33305.03	14857.90	10496.26
160	23.78	1012.83	5.61	32953.15	14715.73	10395.83
160	23.78	1012.83	5.61	32953.15	14715.73	10395.83
161	23.78	1017.96	5.61	32601.27	14573.56	10295.39
161	23.78	1017.96	5.61	32601.27	14573.56	10295.39
162	23.78	1023.09	5.61	32249.39	14431.40	10194.96
162	23.78	1023.09	5.61	32249.39	14431.40	10194.96
163	23.78	1028.22	5.61	31897.51	14289.23	10094.53
163	23.78	1028.22	5.61	31897.51	14289.23	10094.53
164	23.78	1033.35	5.61	31545.63	14147.06	9994.09
164	23.78	1033.35	5.61	31545.63	14147.06	9994.09
165	23.78	1038.48	5.61	31193.75	14004.89	9893.66
165	23.78	1038.48	5.61	31193.75	14004.89	9893.66
166	23.78	1043.62	5.61	30841.87	13862.72	9793.22
166	23.78	1043.62	5.61	30841.87	13862.72	9793.22
167	23.78	1048.75	5.61	30489.99	13720.55	9692.79
167	23.78	1048.75	5.61	30489.99	13720.55	9692.79
168	23.78	1053.88	5.61	30138.11	13578.38	9592.36
168	23.78	1053.88	5.61	30138.11	13578.38	9592.36
169	23.78	1059.01	5.61	29786.23	13436.21	9491.92
169	23.78	1059.01	5.61	29786.23	13436.21	9491.92
170	23.78	1064.14	5.61	29434.35	13294.05	9391.49
170	23.78	1064.14	5.61	29434.35	13294.05	9391.49
171	23.78	1069.27	5.61	29082.47	13151.88	9291.05
171	23.78	1069.27	5.61	29082.47	13151.88	9291.05
172	23.78	1074.40	5.61	28730.59	13009.71	9190.62
172	23.78	1074.40	5.61	28730.59	13009.71	9190.62
173	23.78	1079.53	5.61	28378.71	12867.54	9090.19
173	23.78	1079.53	5.61	28378.71	12867.54	9090.19
174	23.78	1084.61	5.48	27212.98	12365.99	8735.87
174	23.78	1084.61	5.48	27212.98	12365.99	8735.87
175	23.78	1089.63	5.48	26463.41	12063.14	8521.92
175	23.78	1089.63	5.48	26463.41	12063.14	8521.92
176	23.78	1094.65	5.48	25713.84	11760.30	8307.98
176	23.78	1094.65	5.48	25713.84	11760.30	8307.98
177	23.78	1099.67	5.48	24964.27	11457.45	8094.04
177	23.78	1099.67	5.48	24964.27	11457.45	8094.04
178	23.78	1104.69	5.48	24214.71	11154.61	7880.10
178	23.78	1104.69	5.48	24214.71	11154.61	7880.10
179	23.78	1109.71	5.48	23465.14	10851.76	7666.15
179	23.78	1109.71	5.48	23465.14	10851.76	7666.15
180	23.78	1114.73	5.48	22715.57	10548.92	7452.21
180	23.78	1114.73	5.48	22715.57	10548.92	7452.21
181	23.78	1119.75	5.48	21966.01	10246.07	7238.27
181	23.78	1119.75	5.48	21966.01	10246.07	7238.27
182	23.78	1124.76	5.48	21216.44	9943.23	7024.32
182	23.78	1124.76	5.48	21216.44	9943.23	7024.32
183	23.78	1129.78	5.48	20466.87	9640.38	6810.38
183	23.78	1129.78	5.48	20466.87	9640.38	6810.38
184	23.78	1134.80	5.48	19717.30	9337.54	6596.44
184	23.78	1134.80	5.48	19717.30	9337.54	6596.44
185	23.78	1139.82	5.48	18967.74	9034.69	6382.50
185	23.78	1139.82	5.48	18967.74	9034.69	6382.50
186	23.78	1144.84	5.48	18218.17	8731.85	6168.55
186	23.78	1144.84	5.48	18218.17	8731.85	6168.55
187	23.78	1149.86	5.48	17468.60	8429.00	5954.61
187	23.78	1149.86	5.48	17468.60	8429.00	5954.61
188	23.78	1154.88	5.48	16719.03	8126.16	5740.67
188	23.78	1154.88	5.48	16719.03	8126.16	5740.67
189	23.78	1159.90	5.48	15969.47	7823.31	5526.73
189	23.78	1159.90	5.48	15969.47	7823.31	5526.73
190	23.78	1164.92	5.48	15219.90	7520.47	5312.78
190	23.78	1164.92	5.48	15219.90	7520.47	5312.78
191	23.78	1169.94	5.48	14470.33	7217.62	5098.84
191	23.78	1169.94	5.48	14470.33	7217.62	5098.84
192	23.78	1174.96	5.48	13720.77	6914.78	4884.90
192	23.78	1174.96	5.48	13720.77	6914.78	4884.90
193	23.78	1179.98	5.48	12971.20	6611.93	4670.96
193	23.78	1179.98	5.48	12971.20	6611.93	4670.96
194	23.78	1185.00	5.48	12221.63	6309.09	4457.01
194	23.78	1185.00	5.48	12221.63	6309.09	4457.01
195	23.78	1190.02	5.48	11472.06	6006.24	4243.07
195	23.78	1190.02	5.48	11472.06	6006.24	4243.07
196	23.78	1195.04	5.48	10722.50	5703.40	4029.13
196	23.78	1195.04	5.48	10722.50	5703.40	4029.13
197	23.78	1200.05	5.48	9972.93	5400.56	3815.19
197	23.78	1200.05	5.48	9972.93	5400.56	3815.19
198	23.78	1205.07	5.48	9223.36	5097.71	3601.24

198	23.78	1205.07	5.48	9223.36	5097.71	3601.24
199	23.78	1210.09	5.48	8473.80	4794.87	3387.30
199	23.78	1210.09	5.48	8473.80	4794.87	3387.30
200	23.78	1215.11	5.48	7724.23	4492.02	3173.36
200	23.78	1215.11	5.48	7724.23	4492.02	3173.36
201	23.78	1220.13	5.48	6974.66	4189.18	2959.41
201	23.78	1220.13	5.48	6974.66	4189.18	2959.41
202	23.78	1225.15	5.48	6225.09	3886.33	2745.47
202	23.78	1225.15	5.48	6225.09	3886.33	2745.47
203	23.78	1230.17	5.48	5475.53	3583.49	2531.53
203	23.78	1230.17	5.48	5475.53	3583.49	2531.53
204	23.78	1235.19	5.48	4725.96	3280.64	2317.59
204	23.78	1235.19	5.48	4725.96	3280.64	2317.59
205	23.78	1238.35	1.42	1101.80	800.30	565.37
205	23.78	1238.35	1.42	1101.80	800.30	565.37
206	37.55	1241.00	5.05	2693.15	2349.42	1659.73
206	37.55	1241.00	5.05	2693.15	2349.42	1659.73
207	37.55	1245.00	5.05	1541.69	1884.20	1331.08
207	37.55	1245.00	5.05	1541.69	1884.20	1331.08
208	37.55	1248.67	4.23	484.40	1252.06	884.51
208	37.55	1248.67	4.23	484.40	1252.06	884.51
209	37.55	1252.03	4.23	324.60	131.15	92.65
209	37.55	1252.03	4.23	324.60	131.15	92.65

Sum of the Resisting Forces = 2251017.20 (lbs)

Average Available Shear Strength = 2024.30(psf)

Sum of the Driving Forces = 1669866.35 (lbs)

Average Mobilized Shear Stress = 1501.68(psf)

Total length of the failure surface = 1112.00(ft)

Factor of Safety Balance Check: FS = 1.34802

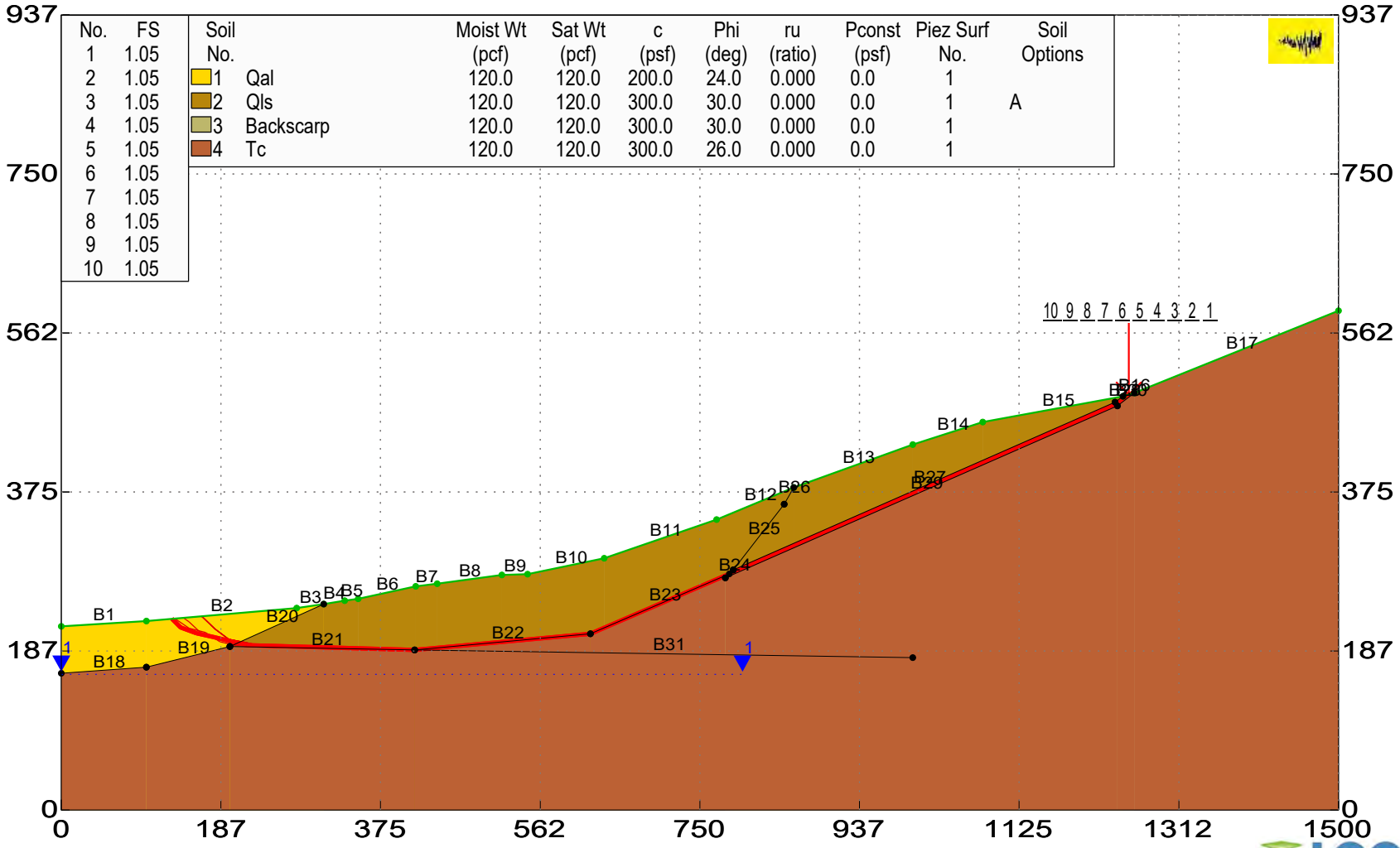
Janbu's Correction Factor (fo) = 1.0505

Janub's FS Corrected = 1.41609

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Existing - Larger Qls - Seismic

LGC Geotechnical, Inc. \xhLRGe.gsd



GEOSTASE FS = 1.05

Simplified Janbu (Corrected) Method

kh = 0.15000

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 4/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_03\xhLRGe.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_03\xhLRGe.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Existing - Larger Qls - Seismic

BOUNDARY DATA

17 Surface Boundaries
31 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	216.400	100.000	222.900	1
2	100.000	222.900	276.400	238.000	1
3	276.400	238.000	308.300	242.900	1
4	308.300	242.900	332.700	247.000	2
5	332.700	247.000	348.800	249.000	2
6	348.800	249.000	416.400	263.600	2
7	416.400	263.600	441.400	267.000	2
8	441.400	267.000	517.400	277.100	2
9	517.400	277.100	547.500	278.000	2
10	547.500	278.000	637.700	297.000	2
11	637.700	297.000	769.500	342.600	2
12	769.500	342.600	860.200	380.200	2
13	860.200	380.200	1000.000	430.900	2
14	1000.000	430.900	1082.100	457.600	2
15	1082.100	457.600	1247.000	487.900	2
16	1247.000	487.900	1260.400	491.900	3
17	1260.400	491.900	1500.000	588.800	4
18	0.000	161.100	100.000	168.300	4
19	100.000	168.300	198.100	192.800	4
20	198.100	192.800	308.300	242.900	2
21	198.100	192.800	414.900	188.600	4
22	414.900	188.600	621.400	207.800	4
23	621.400	207.800	784.600	278.400	4
24	779.900	273.600	789.300	283.200	3
25	789.300	283.200	849.000	360.500	2
26	849.000	360.500	860.200	380.200	2
27	789.300	283.200	1237.700	480.800	3
28	1237.700	480.800	1247.000	487.900	3
29	779.900	273.600	1240.300	476.500	4
30	1240.300	476.500	1260.400	491.900	4
31	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	300.00	30.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	300.00	30.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	24.0	0.00	15.00
3	90.0	300.00	30.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	354.70	189.70	5.00
2	414.90	188.60	414.90	188.60	0.00
3	621.40	207.80	621.40	207.80	0.00
4	784.60	278.40	784.60	278.40	0.00
5	1239.00	478.60	1239.00	478.60	0.00
6	1253.70	489.90	1253.70	489.90	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.221 FS Min = 1.046 FS Ave = 1.144
Standard Deviation = 0.055 Coefficient of Variation = 4.80 %

Critical Surface is Sequence Number 161 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.046

Table 1 - Geometry Data on the 226 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.12	2.76	132.37	222.91	225.67	-44.77	4.89	7.21
2	5.12	8.27	137.49	217.83	226.11	-44.77	4.89	7.21
3	4.69	12.09	142.39	214.44	226.53	-20.12	4.89	5.00
4	4.69	14.22	147.09	212.72	226.93	-20.12	4.89	5.00
5	4.69	16.34	151.78	211.00	227.33	-20.12	4.89	5.00
6	4.69	18.46	156.48	209.28	227.73	-20.12	4.89	5.00
7	4.88	20.27	161.27	207.87	228.14	-12.58	4.89	5.00
8	4.88	21.78	166.15	206.78	228.56	-12.58	4.89	5.00
9	4.88	23.29	171.03	205.69	228.98	-12.58	4.89	5.00
10	4.88	24.79	175.91	204.60	229.40	-12.58	4.89	5.00
11	4.86	26.34	180.78	203.47	229.81	-13.56	4.89	5.00
12	4.86	27.93	185.64	202.30	230.23	-13.56	4.89	5.00
13	4.86	29.52	190.50	201.13	230.65	-13.56	4.89	5.00
14	4.86	31.11	195.36	199.96	231.06	-13.56	4.89	5.00
15	4.73	32.70	200.15	198.77	231.47	-14.31	4.89	4.88
16	4.73	34.32	204.88	197.56	231.88	-14.31	4.89	4.88
17	4.96	35.97	209.73	196.33	232.29	-14.31	4.89	5.12
18	4.96	37.66	214.69	195.06	232.72	-14.31	4.89	5.12
19	4.94	38.78	219.64	194.36	233.14	-1.69	4.89	4.94
20	4.94	39.35	224.57	194.21	233.56	-1.69	4.89	4.94
21	4.94	39.92	229.51	194.07	233.99	-1.69	4.89	4.94
22	4.94	40.49	234.44	193.92	234.41	-1.69	4.89	4.94
23	4.94	41.06	239.38	193.77	234.83	-1.69	4.89	4.94
24	4.94	41.62	244.32	193.63	235.25	-1.69	4.89	4.94
25	4.94	42.19	249.25	193.48	235.68	-1.69	4.89	4.94
26	4.94	42.76	254.19	193.34	236.10	-1.69	4.89	4.94
27	4.94	43.33	259.12	193.19	236.52	-1.69	4.89	4.94
28	4.94	43.90	264.06	193.05	236.94	-1.69	4.89	4.94
29	4.94	44.47	269.00	192.90	237.37	-1.69	4.89	4.94
30	4.94	45.03	273.93	192.76	237.79	-1.69	4.89	4.94
31	5.32	45.80	279.06	192.60	238.41	-1.69	8.73	5.32
32	5.32	46.78	284.38	192.45	239.22	-1.69	8.73	5.32
33	5.32	47.75	289.69	192.29	240.04	-1.69	8.73	5.32
34	5.32	48.72	295.01	192.13	240.86	-1.69	8.73	5.32
35	5.32	49.70	300.33	191.98	241.68	-1.69	8.73	5.32

36	5.32	50.67	305.64	191.82	242.49	-1.69	8.73	5.32
37	4.88	51.64	310.74	191.67	243.31	-1.69	9.54	4.88
38	4.88	52.60	315.62	191.53	244.13	-1.69	9.54	4.88
39	4.88	53.57	320.50	191.38	244.95	-1.69	9.54	4.88
40	4.88	54.53	325.38	191.24	245.77	-1.69	9.54	4.88
41	4.88	55.49	330.26	191.10	246.59	-1.69	9.54	4.88
42	5.37	56.39	335.38	190.94	247.33	-1.69	7.08	5.37
43	5.37	57.21	340.75	190.79	248.00	-1.69	7.08	5.37
44	5.37	58.04	346.12	190.63	248.67	-1.69	7.08	5.37
45	5.08	59.08	351.34	190.47	249.55	-1.69	12.19	5.09
46	5.08	60.32	356.43	190.32	250.65	-1.69	12.19	5.09
47	5.08	61.57	361.51	190.17	251.75	-1.69	12.19	5.09
48	5.08	62.82	366.60	190.02	252.84	-1.69	12.19	5.09
49	5.08	64.07	371.68	189.87	253.94	-1.69	12.19	5.09
50	5.08	65.32	376.77	189.72	255.04	-1.69	12.19	5.09
51	5.08	66.56	381.85	189.57	256.14	-1.69	12.19	5.09
52	5.08	67.81	386.93	189.42	257.24	-1.69	12.19	5.09
53	5.08	69.06	392.02	189.27	258.33	-1.69	12.19	5.09
54	5.08	70.31	397.10	189.12	259.43	-1.69	12.19	5.09
55	5.08	71.56	402.19	188.97	260.53	-1.69	12.19	5.09
56	5.08	72.80	407.27	188.82	261.63	-1.69	12.19	5.09
57	5.08	74.05	412.36	188.67	262.73	-1.69	12.19	5.09
58	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
59	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
60	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
61	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
62	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
63	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
64	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
65	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
66	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
67	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
68	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
69	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
70	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
71	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
72	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
73	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
74	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
75	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
76	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
77	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
78	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
79	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
80	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
81	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
82	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
83	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
84	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
85	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
86	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
87	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
88	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
89	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
90	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
91	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
92	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
93	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
94	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
95	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
96	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
97	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
98	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
99	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
100	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
101	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
102	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
103	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
104	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
105	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
106	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
107	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
108	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
109	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
110	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
111	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
112	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
113	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
114	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
115	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
116	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
117	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
118	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
119	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
120	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
121	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
122	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
123	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
124	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
125	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
126	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
127	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
128	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
129	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
130	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
131	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
132	4.70	70.40	786.95	279.44	349.83	23.78	22.52	5.14
133	4.98	70.27	791.79	281.57	351.84	23.78	22.52	5.44
134	4.98	70.14	796.76	283.76	353.90	23.78	22.52	5.44
135	4.97	70.01	801.74	285.95	355.96	23.78	22.52	5.44
136	4.98	69.88	806.71	288.14	358.03	23.78	22.52	5.44
137	4.98	69.75	811.69	290.33	360.09	23.78	22.52	5.44
138	4.98	69.63	816.66	292.53	362.15	23.78	22.52	5.44
139	4.98	69.50	821.64	294.72	364.21	23.78	22.52	5.44
140	4.98	69.37	826.61	296.91	366.28	23.78	22.52	5.44
141	4.98	69.24	831.59	299.10	368.34	23.78	22.52	5.44
142	4.97	69.11	836.56	301.29	370.40	23.78	22.52	5.44
143	4.98	68.98	841.54	303.49	372.46	23.78	22.52	5.44
144	4.98	68.85	846.51	305.68	374.53	23.78	22.52	5.44
145	5.60	68.71	851.80	308.01	376.72	23.78	22.52	6.12
146	5.60	68.56	857.40	310.47	379.04	23.78	22.52	6.12
147	4.99	68.30	862.70	312.81	381.11	23.78	19.93	5.46
148	4.99	67.91	867.69	315.01	382.92	23.78	19.93	5.46
149	4.99	67.52	872.68	317.21	384.73	23.78	19.93	5.46
150	4.99	67.13	877.67	319.41	386.54	23.78	19.93	5.46
151	4.99	66.74	882.67	321.61	388.35	23.78	19.93	5.46
152	4.99	66.35	887.66	323.81	390.16	23.78	19.93	5.46
153	4.99	65.96	892.65	326.01	391.97	23.78	19.93	5.46
154	4.99	65.57	897.65	328.21	393.78	23.78	19.93	5.46
155	4.99	65.19	902.64	330.41	395.59	23.78	19.93	5.46

156	4.99	64.80	907.63	332.61	397.40	23.78	19.93	5.46
157	4.99	64.41	912.62	334.81	399.21	23.78	19.93	5.46
158	4.99	64.02	917.62	337.01	401.02	23.78	19.93	5.46
159	4.99	63.63	922.61	339.20	402.83	23.78	19.93	5.46
160	4.99	63.24	927.60	341.40	404.64	23.78	19.93	5.46
161	4.99	62.85	932.60	343.60	406.46	23.78	19.93	5.46
162	4.99	62.46	937.59	345.80	408.27	23.78	19.93	5.46
163	4.99	62.07	942.58	348.00	410.08	23.78	19.93	5.46
164	4.99	61.68	947.58	350.20	411.89	23.78	19.93	5.46
165	4.99	61.29	952.57	352.40	413.70	23.78	19.93	5.46
166	4.99	60.91	957.56	354.60	415.51	23.78	19.93	5.46
167	4.99	60.52	962.55	356.80	417.32	23.78	19.93	5.46
168	4.99	60.13	967.55	359.00	419.13	23.78	19.93	5.46
169	4.99	59.74	972.54	361.20	420.94	23.78	19.93	5.46
170	4.99	59.35	977.53	363.40	422.75	23.78	19.93	5.46
171	4.99	58.96	982.53	365.60	424.56	23.78	19.93	5.46
172	4.99	58.57	987.52	367.80	426.37	23.78	19.93	5.46
173	4.99	58.18	992.51	370.00	428.18	23.78	19.93	5.46
174	4.99	57.79	997.50	372.20	429.99	23.78	19.93	5.46
175	5.13	57.30	1002.57	374.43	431.73	23.78	18.02	5.61
176	5.13	56.71	1007.70	376.69	433.40	23.78	18.02	5.61
177	5.13	56.12	1012.83	378.95	435.07	23.78	18.02	5.61
178	5.13	55.53	1017.96	381.21	436.74	23.78	18.02	5.61
179	5.13	54.93	1023.09	383.47	438.41	23.78	18.02	5.61
180	5.13	54.34	1028.22	385.74	440.08	23.78	18.02	5.61
181	5.13	53.75	1033.35	388.00	441.75	23.78	18.02	5.61
182	5.13	53.16	1038.48	390.26	443.42	23.78	18.02	5.61
183	5.13	52.57	1043.62	392.52	445.08	23.78	18.02	5.61
184	5.13	51.98	1048.75	394.78	446.75	23.78	18.02	5.61
185	5.13	51.38	1053.88	397.04	448.42	23.78	18.02	5.61
186	5.13	50.79	1059.01	399.30	450.09	23.78	18.02	5.61
187	5.13	50.20	1064.14	401.56	451.76	23.78	18.02	5.61
188	5.13	49.61	1069.27	403.82	453.43	23.78	18.02	5.61
189	5.13	49.02	1074.40	406.08	455.10	23.78	18.02	5.61
190	5.13	48.42	1079.53	408.34	456.77	23.78	18.02	5.61
191	5.02	47.48	1084.61	410.58	458.06	23.78	10.41	5.48
192	5.02	46.19	1089.63	412.79	458.98	23.78	10.41	5.48
193	5.02	44.90	1094.65	415.00	459.91	23.78	10.41	5.48
194	5.02	43.62	1099.67	417.21	460.83	23.78	10.41	5.48
195	5.02	42.33	1104.69	419.42	461.75	23.78	10.41	5.48
196	5.02	41.04	1109.71	421.64	462.67	23.78	10.41	5.48
197	5.02	39.75	1114.73	423.85	463.59	23.78	10.41	5.48
198	5.02	38.46	1119.75	426.06	464.52	23.78	10.41	5.48
199	5.02	37.17	1124.76	428.27	465.44	23.78	10.41	5.48
200	5.02	35.88	1129.78	430.48	466.36	23.78	10.41	5.48
201	5.02	34.59	1134.80	432.69	467.28	23.78	10.41	5.48
202	5.02	33.30	1139.82	434.90	468.21	23.78	10.41	5.48
203	5.02	32.01	1144.84	437.12	469.13	23.78	10.41	5.48
204	5.02	30.72	1149.86	439.33	470.05	23.78	10.41	5.48
205	5.02	29.43	1154.88	441.54	470.97	23.78	10.41	5.48
206	5.02	28.15	1159.90	443.75	471.90	23.78	10.41	5.48
207	5.02	26.86	1164.92	445.96	472.82	23.78	10.41	5.48
208	5.02	25.57	1169.94	448.17	473.74	23.78	10.41	5.48
209	5.02	24.28	1174.96	450.38	474.66	23.78	10.41	5.48
210	5.02	22.99	1179.98	452.60	475.58	23.78	10.41	5.48
211	5.02	21.70	1185.00	454.81	476.51	23.78	10.41	5.48
212	5.02	20.41	1190.02	457.02	477.43	23.78	10.41	5.48
213	5.02	19.12	1195.04	459.23	478.35	23.78	10.41	5.48
214	5.02	17.83	1200.05	461.44	479.27	23.78	10.41	5.48
215	5.02	16.54	1205.07	463.65	480.20	23.78	10.41	5.48
216	5.02	15.25	1210.09	465.86	481.12	23.78	10.41	5.48
217	5.02	13.97	1215.11	468.08	482.04	23.78	10.41	5.48
218	5.02	12.68	1220.13	470.29	482.96	23.78	10.41	5.48
219	5.02	11.39	1225.15	472.50	483.89	23.78	10.41	5.48
220	5.02	10.10	1230.17	474.71	484.81	23.78	10.41	5.48
221	5.02	8.81	1235.19	476.92	485.73	23.78	10.41	5.48
222	1.30	8.00	1238.35	478.31	486.31	23.78	10.41	1.42
223	4.00	6.66	1241.00	480.14	486.80	37.55	10.41	5.05
224	4.00	4.32	1245.00	483.21	487.53	37.55	10.41	5.05
225	3.35	2.36	1248.67	486.04	488.40	37.55	16.62	4.23
226	3.35	0.79	1252.03	488.61	489.40	37.55	16.62	4.23

Table 2 - Force Data On The 226 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1694.2	0.0	0.0	254.1	0.0	0.0
2	5082.7	0.0	0.0	762.4	0.0	0.0
3	6813.5	0.0	0.0	1022.0	0.0	0.0
4	8008.9	0.0	0.0	1201.3	0.0	0.0
5	9204.2	0.0	0.0	1380.6	0.0	0.0
6	10399.6	0.0	0.0	1559.9	0.0	0.0
7	11871.9	0.0	0.0	1780.8	0.0	0.0
8	12754.1	0.0	0.0	1913.1	0.0	0.0
9	13636.4	0.0	0.0	2045.5	0.0	0.0
10	14518.6	0.0	0.0	2177.8	0.0	0.0
11	15363.6	0.0	0.0	2304.5	0.0	0.0
12	16290.0	0.0	0.0	2443.5	0.0	0.0
13	17216.5	0.0	0.0	2582.5	0.0	0.0
14	18142.9	0.0	0.0	2721.4	0.0	0.0
15	18562.3	0.0	0.0	2784.3	0.0	0.0
16	19476.7	0.0	0.0	2921.5	0.0	0.0
17	21407.5	0.0	0.0	3211.1	0.0	0.0
18	22413.1	0.0	0.0	3362.0	0.0	0.0
19	22972.8	0.0	0.0	3445.9	0.0	0.0
20	23309.2	0.0	0.0	3496.4	0.0	0.0
21	23645.7	0.0	0.0	3546.9	0.0	0.0
22	23982.1	0.0	0.0	3597.3	0.0	0.0
23	24318.6	0.0	0.0	3647.8	0.0	0.0
24	24655.1	0.0	0.0	3698.3	0.0	0.0
25	24991.5	0.0	0.0	3748.7	0.0	0.0
26	25328.0	0.0	0.0	3799.2	0.0	0.0
27	25664.4	0.0	0.0	3849.7	0.0	0.0
28	26000.9	0.0	0.0	3900.1	0.0	0.0
29	26337.3	0.0	0.0	3950.6	0.0	0.0
30	26673.8	0.0	0.0	4001.1	0.0	0.0
31	29222.8	0.0	0.0	4383.4	0.0	0.0
32	29843.8	0.0	0.0	4476.6	0.0	0.0
33	30464.9	0.0	0.0	4569.7	0.0	0.0
34	31085.9	0.0	0.0	4662.9	0.0	0.0
35	31706.9	0.0	0.0	4756.0	0.0	0.0
36	32328.0	0.0	0.0	4849.2	0.0	0.0
37	30240.0	0.0	0.0	4536.0	0.0	0.0
38	30804.5	0.0	0.0	4620.7	0.0	0.0
39	31368.9	0.0	0.0	4705.3	0.0	0.0

40	31933.3	0.0	0.0	4790.0	0.0	0.0
41	32497.8	0.0	0.0	4874.7	0.0	0.0
42	36314.7	0.0	0.0	5447.2	0.0	0.0
43	36845.9	0.0	0.0	5526.9	0.0	0.0
44	37377.1	0.0	0.0	5606.6	0.0	0.0
45	36045.1	0.0	0.0	5406.8	0.0	0.0
46	36806.6	0.0	0.0	5521.0	0.0	0.0
47	37568.1	0.0	0.0	5635.2	0.0	0.0
48	38329.6	0.0	0.0	5749.4	0.0	0.0
49	39091.1	0.0	0.0	5863.7	0.0	0.0
50	39852.6	0.0	0.0	5977.9	0.0	0.0
51	40614.1	0.0	0.0	6092.1	0.0	0.0
52	41375.6	0.0	0.0	6206.3	0.0	0.0
53	42137.1	0.0	0.0	6320.6	0.0	0.0
54	42898.6	0.0	0.0	6434.8	0.0	0.0
55	43660.1	0.0	0.0	6549.0	0.0	0.0
56	44421.6	0.0	0.0	6663.2	0.0	0.0
57	45183.1	0.0	0.0	6777.5	0.0	0.0
58	13458.3	0.0	0.0	2018.7	0.0	0.0
59	44980.9	0.0	0.0	6747.1	0.0	0.0
60	45109.9	0.0	0.0	6766.5	0.0	0.0
61	45239.0	0.0	0.0	6785.8	0.0	0.0
62	45368.0	0.0	0.0	6805.2	0.0	0.0
63	45497.1	0.0	0.0	6824.6	0.0	0.0
64	46230.6	0.0	0.0	6934.6	0.0	0.0
65	46353.6	0.0	0.0	6953.0	0.0	0.0
66	46476.5	0.0	0.0	6971.5	0.0	0.0
67	46599.5	0.0	0.0	6989.9	0.0	0.0
68	46722.5	0.0	0.0	7008.4	0.0	0.0
69	46845.4	0.0	0.0	7026.8	0.0	0.0
70	46968.4	0.0	0.0	7045.3	0.0	0.0
71	47091.4	0.0	0.0	7063.7	0.0	0.0
72	47214.3	0.0	0.0	7082.1	0.0	0.0
73	47337.3	0.0	0.0	7100.6	0.0	0.0
74	47460.3	0.0	0.0	7119.0	0.0	0.0
75	47583.2	0.0	0.0	7137.5	0.0	0.0
76	47706.2	0.0	0.0	7155.9	0.0	0.0
77	47829.2	0.0	0.0	7174.4	0.0	0.0
78	47952.1	0.0	0.0	7192.8	0.0	0.0
79	47444.5	0.0	0.0	7116.7	0.0	0.0
80	47254.0	0.0	0.0	7088.1	0.0	0.0
81	47063.5	0.0	0.0	7059.5	0.0	0.0
82	46873.0	0.0	0.0	7031.0	0.0	0.0
83	46682.5	0.0	0.0	7002.4	0.0	0.0
84	46492.0	0.0	0.0	6973.8	0.0	0.0
85	45735.8	0.0	0.0	6860.4	0.0	0.0
86	46078.5	0.0	0.0	6911.8	0.0	0.0
87	46421.2	0.0	0.0	6963.2	0.0	0.0
88	46763.9	0.0	0.0	7014.6	0.0	0.0
89	47106.6	0.0	0.0	7066.0	0.0	0.0
90	47449.4	0.0	0.0	7117.4	0.0	0.0
91	47792.1	0.0	0.0	7168.8	0.0	0.0
92	48134.8	0.0	0.0	7220.2	0.0	0.0
93	48477.5	0.0	0.0	7271.6	0.0	0.0
94	48820.2	0.0	0.0	7323.0	0.0	0.0
95	49162.9	0.0	0.0	7374.4	0.0	0.0
96	49505.7	0.0	0.0	7425.8	0.0	0.0
97	49848.4	0.0	0.0	7477.3	0.0	0.0
98	50191.1	0.0	0.0	7528.7	0.0	0.0
99	50533.8	0.0	0.0	7580.1	0.0	0.0
100	55526.6	0.0	0.0	8329.0	0.0	0.0
101	54740.3	0.0	0.0	8211.1	0.0	0.0
102	53954.1	0.0	0.0	8093.1	0.0	0.0
103	49838.1	0.0	0.0	7475.7	0.0	0.0
104	49571.0	0.0	0.0	7435.7	0.0	0.0
105	49303.9	0.0	0.0	7395.6	0.0	0.0
106	49036.8	0.0	0.0	7355.5	0.0	0.0
107	48769.7	0.0	0.0	7315.5	0.0	0.0
108	48502.6	0.0	0.0	7275.4	0.0	0.0
109	48235.5	0.0	0.0	7235.3	0.0	0.0
110	47968.4	0.0	0.0	7195.3	0.0	0.0
111	47701.3	0.0	0.0	7155.2	0.0	0.0
112	47434.2	0.0	0.0	7115.1	0.0	0.0
113	47167.1	0.0	0.0	7075.1	0.0	0.0
114	46900.0	0.0	0.0	7035.0	0.0	0.0
115	46632.9	0.0	0.0	6994.9	0.0	0.0
116	46365.8	0.0	0.0	6954.9	0.0	0.0
117	46098.7	0.0	0.0	6914.8	0.0	0.0
118	45831.5	0.0	0.0	6874.7	0.0	0.0
119	45564.4	0.0	0.0	6834.7	0.0	0.0
120	45297.3	0.0	0.0	6794.6	0.0	0.0
121	45030.2	0.0	0.0	6754.5	0.0	0.0
122	44763.1	0.0	0.0	6714.5	0.0	0.0
123	44496.0	0.0	0.0	6674.4	0.0	0.0
124	44228.9	0.0	0.0	6634.3	0.0	0.0
125	43961.8	0.0	0.0	6594.3	0.0	0.0
126	43694.7	0.0	0.0	6554.2	0.0	0.0
127	43427.6	0.0	0.0	6514.1	0.0	0.0
128	43160.5	0.0	0.0	6474.1	0.0	0.0
129	42694.8	0.0	0.0	6404.2	0.0	0.0
130	42640.0	0.0	0.0	6396.0	0.0	0.0
131	42585.1	0.0	0.0	6387.8	0.0	0.0
132	39704.8	0.0	0.0	5955.7	0.0	0.0
133	41952.8	0.0	0.0	6292.9	0.0	0.0
134	41875.5	0.0	0.0	6281.3	0.0	0.0
135	41798.2	0.0	0.0	6269.7	0.0	0.0
136	41720.9	0.0	0.0	6258.1	0.0	0.0
137	41643.6	0.0	0.0	6246.5	0.0	0.0
138	41566.3	0.0	0.0	6234.9	0.0	0.0
139	41489.0	0.0	0.0	6223.3	0.0	0.0
140	41411.7	0.0	0.0	6211.8	0.0	0.0
141	41334.4	0.0	0.0	6200.2	0.0	0.0
142	41257.1	0.0	0.0	6188.6	0.0	0.0
143	41179.8	0.0	0.0	6177.0	0.0	0.0
144	41102.5	0.0	0.0	6165.4	0.0	0.0
145	46173.6	0.0	0.0	6926.0	0.0	0.0
146	46075.6	0.0	0.0	6911.3	0.0	0.0
147	40920.0	0.0	0.0	6138.0	0.0	0.0
148	40686.9	0.0	0.0	6103.0	0.0	0.0
149	40453.8	0.0	0.0	6068.1	0.0	0.0
150	40220.7	0.0	0.0	6033.1	0.0	0.0
151	39987.6	0.0	0.0	5998.1	0.0	0.0
152	39754.5	0.0	0.0	5963.2	0.0	0.0
153	39521.4	0.0	0.0	5928.2	0.0	0.0
154	39288.3	0.0	0.0	5893.3	0.0	0.0
155	39055.3	0.0	0.0	5858.3	0.0	0.0
156	38822.2	0.0	0.0	5823.3	0.0	0.0
157	38589.1	0.0	0.0	5788.4	0.0	0.0
158	38356.0	0.0	0.0	5753.4	0.0	0.0
159	38122.9	0.0	0.0	5718.4	0.0	0.0

160	37889.8	0.0	0.0	5683.5	0.0	0.0
161	37656.7	0.0	0.0	5648.5	0.0	0.0
162	37423.6	0.0	0.0	5613.5	0.0	0.0
163	37190.5	0.0	0.0	5578.6	0.0	0.0
164	36957.4	0.0	0.0	5543.6	0.0	0.0
165	36724.3	0.0	0.0	5508.6	0.0	0.0
166	36491.2	0.0	0.0	5473.7	0.0	0.0
167	36258.1	0.0	0.0	5438.7	0.0	0.0
168	36025.0	0.0	0.0	5403.8	0.0	0.0
169	35792.0	0.0	0.0	5368.8	0.0	0.0
170	35558.9	0.0	0.0	5333.8	0.0	0.0
171	35325.8	0.0	0.0	5298.9	0.0	0.0
172	35092.7	0.0	0.0	5263.9	0.0	0.0
173	34859.6	0.0	0.0	5228.9	0.0	0.0
174	34626.5	0.0	0.0	5194.0	0.0	0.0
175	35284.2	0.0	0.0	5292.6	0.0	0.0
176	34919.7	0.0	0.0	5238.0	0.0	0.0
177	34555.2	0.0	0.0	5183.3	0.0	0.0
178	34190.7	0.0	0.0	5128.6	0.0	0.0
179	33826.2	0.0	0.0	5073.9	0.0	0.0
180	33461.7	0.0	0.0	5019.3	0.0	0.0
181	33097.2	0.0	0.0	4964.6	0.0	0.0
182	32732.7	0.0	0.0	4909.9	0.0	0.0
183	32368.1	0.0	0.0	4855.2	0.0	0.0
184	32003.6	0.0	0.0	4800.5	0.0	0.0
185	31639.1	0.0	0.0	4745.9	0.0	0.0
186	31274.6	0.0	0.0	4691.2	0.0	0.0
187	30910.1	0.0	0.0	4636.5	0.0	0.0
188	30545.6	0.0	0.0	4581.8	0.0	0.0
189	30181.1	0.0	0.0	4527.2	0.0	0.0
190	29816.6	0.0	0.0	4472.5	0.0	0.0
191	28599.8	0.0	0.0	4290.0	0.0	0.0
192	27823.4	0.0	0.0	4173.5	0.0	0.0
193	27046.9	0.0	0.0	4057.0	0.0	0.0
194	26270.4	0.0	0.0	3940.6	0.0	0.0
195	25493.9	0.0	0.0	3824.1	0.0	0.0
196	24717.5	0.0	0.0	3707.6	0.0	0.0
197	23941.0	0.0	0.0	3591.1	0.0	0.0
198	23164.5	0.0	0.0	3474.7	0.0	0.0
199	22388.0	0.0	0.0	3358.2	0.0	0.0
200	21611.5	0.0	0.0	3241.7	0.0	0.0
201	20835.1	0.0	0.0	3125.3	0.0	0.0
202	20058.6	0.0	0.0	3008.8	0.0	0.0
203	19282.1	0.0	0.0	2892.3	0.0	0.0
204	18505.6	0.0	0.0	2775.8	0.0	0.0
205	17729.2	0.0	0.0	2659.4	0.0	0.0
206	16952.7	0.0	0.0	2542.9	0.0	0.0
207	16176.2	0.0	0.0	2426.4	0.0	0.0
208	15399.7	0.0	0.0	2310.0	0.0	0.0
209	14623.3	0.0	0.0	2193.5	0.0	0.0
210	13846.8	0.0	0.0	2077.0	0.0	0.0
211	13070.3	0.0	0.0	1960.5	0.0	0.0
212	12293.8	0.0	0.0	1844.1	0.0	0.0
213	11517.4	0.0	0.0	1727.6	0.0	0.0
214	10740.9	0.0	0.0	1611.1	0.0	0.0
215	9964.4	0.0	0.0	1494.7	0.0	0.0
216	9187.9	0.0	0.0	1378.2	0.0	0.0
217	8411.4	0.0	0.0	1261.7	0.0	0.0
218	7635.0	0.0	0.0	1145.2	0.0	0.0
219	6858.5	0.0	0.0	1028.8	0.0	0.0
220	6082.0	0.0	0.0	912.3	0.0	0.0
221	5305.5	0.0	0.0	795.8	0.0	0.0
222	1247.5	0.0	0.0	187.1	0.0	0.0
223	3196.8	0.0	0.0	479.5	0.0	0.0
224	2073.7	0.0	0.0	311.1	0.0	0.0
225	949.8	0.0	0.0	142.5	0.0	0.0
226	316.6	0.0	0.0	47.5	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 7713792.75(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 7713792.75(lbs)

TOTAL AREA OF SLIDING MASS = 64281.61(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 226 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	1	200.00	24.00	
7	1	200.00	24.00	
8	1	200.00	24.00	
9	1	200.00	24.00	
10	1	200.00	24.00	
11	1	200.00	24.00	
12	1	200.00	24.00	
13	1	200.00	24.00	
14	1	200.00	24.00	
15	1	200.00	24.00	
16	1	200.00	24.00	
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	2	0.00	15.00	A
23	2	0.00	15.00	A
24	2	0.00	15.00	A
25	2	0.00	15.00	A
26	2	0.00	15.00	A
27	2	0.00	15.00	A
28	2	0.00	15.00	A
29	2	0.00	15.00	A
30	2	0.00	15.00	A
31	2	0.00	15.00	A
32	2	0.00	15.00	A
33	2	0.00	15.00	A
34	2	0.00	15.00	A
35	2	0.00	15.00	A
36	2	0.00	15.00	A
37	2	0.00	15.00	A
38	2	0.00	15.00	A
39	2	0.00	15.00	A
40	2	0.00	15.00	A
41	2	0.00	15.00	A

42	2	0.00	15.00	A
43	2	0.00	15.00	A
44	2	0.00	15.00	A
45	2	0.00	15.00	A
46	2	0.00	15.00	A
47	2	0.00	15.00	A
48	2	0.00	15.00	A
49	2	0.00	15.00	A
50	2	0.00	15.00	A
51	2	0.00	15.00	A
52	2	0.00	15.00	A
53	2	0.00	15.00	A
54	2	0.00	15.00	A
55	2	0.00	15.00	A
56	2	0.00	15.00	A
57	2	0.00	15.00	A
58	2	0.00	15.00	A
59	2	0.00	15.00	A
60	2	0.00	15.00	A
61	2	0.00	15.00	A
62	2	0.00	15.00	A
63	2	0.00	15.00	A
64	2	0.00	15.00	A
65	2	0.00	15.00	A
66	2	0.00	15.00	A
67	2	0.00	15.00	A
68	2	0.00	15.00	A
69	2	0.00	15.00	A
70	2	0.00	15.00	A
71	2	0.00	15.00	A
72	2	0.00	15.00	A
73	2	0.00	15.00	A
74	2	0.00	15.00	A
75	2	0.00	15.00	A
76	2	0.00	15.00	A
77	2	0.00	15.00	A
78	2	0.00	15.00	A
79	2	0.00	15.00	A
80	2	0.00	15.00	A
81	2	0.00	15.00	A
82	2	0.00	15.00	A
83	2	0.00	15.00	A
84	2	0.00	15.00	A
85	2	0.00	15.00	A
86	2	0.00	15.00	A
87	2	0.00	15.00	A
88	2	0.00	15.00	A
89	2	0.00	15.00	A
90	2	0.00	15.00	A
91	2	0.00	15.00	A
92	2	0.00	15.00	A
93	2	0.00	15.00	A
94	2	0.00	15.00	A
95	2	0.00	15.00	A
96	2	0.00	15.00	A
97	2	0.00	15.00	A
98	2	0.00	15.00	A
99	2	0.00	15.00	A
100	2	0.00	15.00	A
101	2	0.00	15.00	A
102	2	0.00	15.00	A
103	2	0.00	15.00	A
104	2	0.00	15.00	A
105	2	0.00	15.00	A
106	2	0.00	15.00	A
107	2	0.00	15.00	A
108	2	0.00	15.00	A
109	2	0.00	15.00	A
110	2	0.00	15.00	A
111	2	0.00	15.00	A
112	2	0.00	15.00	A
113	2	0.00	15.00	A
114	2	0.00	15.00	A
115	2	0.00	15.00	A
116	2	0.00	15.00	A
117	2	0.00	15.00	A
118	2	0.00	15.00	A
119	2	0.00	15.00	A
120	2	0.00	15.00	A
121	2	0.00	15.00	A
122	2	0.00	15.00	A
123	2	0.00	15.00	A
124	2	0.00	15.00	A
125	2	0.00	15.00	A
126	2	0.00	15.00	A
127	2	0.00	15.00	A
128	2	0.00	15.00	A
129	2	0.00	15.00	A
130	2	0.00	15.00	A
131	2	0.00	15.00	A
132	3	300.00	30.00	
133	3	300.00	30.00	
134	3	300.00	30.00	
135	3	300.00	30.00	
136	3	300.00	30.00	
137	3	300.00	30.00	
138	3	300.00	30.00	
139	3	300.00	30.00	
140	3	300.00	30.00	
141	3	300.00	30.00	
142	3	300.00	30.00	
143	3	300.00	30.00	
144	3	300.00	30.00	
145	3	300.00	30.00	
146	3	300.00	30.00	
147	3	300.00	30.00	
148	3	300.00	30.00	
149	3	300.00	30.00	
150	3	300.00	30.00	
151	3	300.00	30.00	
152	3	300.00	30.00	
153	3	300.00	30.00	
154	3	300.00	30.00	
155	3	300.00	30.00	
156	3	300.00	30.00	
157	3	300.00	30.00	
158	3	300.00	30.00	
159	3	300.00	30.00	
160	3	300.00	30.00	
161	3	300.00	30.00	

162	3	300.00	30.00
163	3	300.00	30.00
164	3	300.00	30.00
165	3	300.00	30.00
166	3	300.00	30.00
167	3	300.00	30.00
168	3	300.00	30.00
169	3	300.00	30.00
170	3	300.00	30.00
171	3	300.00	30.00
172	3	300.00	30.00
173	3	300.00	30.00
174	3	300.00	30.00
175	3	300.00	30.00
176	3	300.00	30.00
177	3	300.00	30.00
178	3	300.00	30.00
179	3	300.00	30.00
180	3	300.00	30.00
181	3	300.00	30.00
182	3	300.00	30.00
183	3	300.00	30.00
184	3	300.00	30.00
185	3	300.00	30.00
186	3	300.00	30.00
187	3	300.00	30.00
188	3	300.00	30.00
189	3	300.00	30.00
190	3	300.00	30.00
191	3	300.00	30.00
192	3	300.00	30.00
193	3	300.00	30.00
194	3	300.00	30.00
195	3	300.00	30.00
196	3	300.00	30.00
197	3	300.00	30.00
198	3	300.00	30.00
199	3	300.00	30.00
200	3	300.00	30.00
201	3	300.00	30.00
202	3	300.00	30.00
203	3	300.00	30.00
204	3	300.00	30.00
205	3	300.00	30.00
206	3	300.00	30.00
207	3	300.00	30.00
208	3	300.00	30.00
209	3	300.00	30.00
210	3	300.00	30.00
211	3	300.00	30.00
212	3	300.00	30.00
213	3	300.00	30.00
214	3	300.00	30.00
215	3	300.00	30.00
216	3	300.00	30.00
217	3	300.00	30.00
218	3	300.00	30.00
219	3	300.00	30.00
220	3	300.00	30.00
221	3	300.00	30.00
222	3	300.00	30.00
223	3	300.00	30.00
224	3	300.00	30.00
225	3	300.00	30.00
226	3	300.00	30.00

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 226 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-44.77	132.37	7.21	953.04	624.32	597.09
1	-44.77	132.37	7.21	953.04	624.32	597.09
2	-44.77	137.49	7.21	2142.82	1154.05	1103.71
2	-44.77	137.49	7.21	2142.82	1154.05	1103.71
3	-20.12	142.39	5.00	1823.51	1011.88	967.74
3	-20.12	142.39	5.00	1823.51	1011.88	967.74
4	-20.12	147.09	5.00	2127.98	1147.44	1097.39
4	-20.12	147.09	5.00	2127.98	1147.44	1097.39
5	-20.12	151.78	5.00	2432.45	1283.00	1227.03
5	-20.12	151.78	5.00	2432.45	1283.00	1227.03
6	-20.12	156.48	5.00	2736.92	1418.56	1356.68
6	-20.12	156.48	5.00	2736.92	1418.56	1356.68
7	-12.58	161.27	5.00	2752.15	1425.34	1363.17
7	-12.58	161.27	5.00	2752.15	1425.34	1363.17
8	-12.58	166.15	5.00	2952.97	1514.75	1448.68
8	-12.58	166.15	5.00	2952.97	1514.75	1448.68
9	-12.58	171.03	5.00	3153.80	1604.16	1534.19
9	-12.58	171.03	5.00	3153.80	1604.16	1534.19
10	-12.58	175.91	5.00	3354.62	1693.57	1619.70
10	-12.58	175.91	5.00	3354.62	1693.57	1619.70
11	-13.56	180.78	5.00	3597.16	1801.56	1722.98
11	-13.56	180.78	5.00	3597.16	1801.56	1722.98
12	-13.56	185.64	5.00	3810.79	1896.67	1813.95
12	-13.56	185.64	5.00	3810.79	1896.67	1813.95
13	-13.56	190.50	5.00	4024.43	1991.79	1904.91
13	-13.56	190.50	5.00	4024.43	1991.79	1904.91
14	-13.56	195.36	5.00	4238.06	2086.91	1995.88
14	-13.56	195.36	5.00	4238.06	2086.91	1995.88
15	-14.31	200.15	4.88	4487.54	2197.98	2102.11
15	-14.31	200.15	4.88	4487.54	2197.98	2102.11
16	-14.31	204.88	4.88	4705.76	2295.14	2195.03
16	-14.31	204.88	4.88	4705.76	2295.14	2195.03
17	-14.31	209.73	5.12	4633.98	1241.67	1187.51
17	-14.31	209.73	5.12	4633.98	1241.67	1187.51
18	-14.31	214.69	5.12	4851.67	1300.00	1243.30
18	-14.31	214.69	5.12	4851.67	1300.00	1243.30
19	-1.69	219.64	4.94	4691.38	1257.05	1202.22
19	-1.69	219.64	4.94	4691.38	1257.05	1202.22
20	-1.69	224.57	4.94	4760.09	1275.46	1219.83
20	-1.69	224.57	4.94	4760.09	1275.46	1219.83

21	-1.69	229.51	4.94	4828.80	1293.87	1237.44
21	-1.69	229.51	4.94	4828.80	1293.87	1237.44
22	-1.69	234.44	4.94	4897.51	1312.28	1255.04
22	-1.69	234.44	4.94	4897.51	1312.28	1255.04
23	-1.69	239.38	4.94	4966.21	1330.69	1272.65
23	-1.69	239.38	4.94	4966.21	1330.69	1272.65
24	-1.69	244.32	4.94	5034.92	1349.10	1290.26
24	-1.69	244.32	4.94	5034.92	1349.10	1290.26
25	-1.69	249.25	4.94	5103.63	1367.51	1307.87
25	-1.69	249.25	4.94	5103.63	1367.51	1307.87
26	-1.69	254.19	4.94	5172.34	1385.92	1325.47
26	-1.69	254.19	4.94	5172.34	1385.92	1325.47
27	-1.69	259.12	4.94	5241.05	1404.34	1343.08
27	-1.69	259.12	4.94	5241.05	1404.34	1343.08
28	-1.69	264.06	4.94	5309.76	1422.75	1360.69
28	-1.69	264.06	4.94	5309.76	1422.75	1360.69
29	-1.69	269.00	4.94	5378.47	1441.16	1378.30
29	-1.69	269.00	4.94	5378.47	1441.16	1378.30
30	-1.69	273.93	4.94	5447.18	1459.57	1395.90
30	-1.69	273.93	4.94	5447.18	1459.57	1395.90
31	-1.69	279.06	5.32	5540.40	1484.55	1419.79
31	-1.69	279.06	5.32	5540.40	1484.55	1419.79
32	-1.69	284.38	5.32	5658.15	1516.10	1449.97
32	-1.69	284.38	5.32	5658.15	1516.10	1449.97
33	-1.69	289.69	5.32	5775.89	1547.64	1480.14
33	-1.69	289.69	5.32	5775.89	1547.64	1480.14
34	-1.69	295.01	5.32	5893.63	1579.19	1510.31
34	-1.69	295.01	5.32	5893.63	1579.19	1510.31
35	-1.69	300.33	5.32	6011.37	1610.74	1540.49
35	-1.69	300.33	5.32	6011.37	1610.74	1540.49
36	-1.69	305.64	5.32	6129.11	1642.29	1570.66
36	-1.69	305.64	5.32	6129.11	1642.29	1570.66
37	-1.69	310.74	4.88	6246.28	1673.69	1600.68
37	-1.69	310.74	4.88	6246.28	1673.69	1600.68
38	-1.69	315.62	4.88	6362.87	1704.93	1630.56
38	-1.69	315.62	4.88	6362.87	1704.93	1630.56
39	-1.69	320.50	4.88	6479.46	1736.16	1660.44
39	-1.69	320.50	4.88	6479.46	1736.16	1660.44
40	-1.69	325.38	4.88	6596.04	1767.40	1690.31
40	-1.69	325.38	4.88	6596.04	1767.40	1690.31
41	-1.69	330.26	4.88	6712.63	1798.64	1720.19
41	-1.69	330.26	4.88	6712.63	1798.64	1720.19
42	-1.69	335.38	5.37	6820.81	1827.63	1747.91
42	-1.69	335.38	5.37	6820.81	1827.63	1747.91
43	-1.69	340.75	5.37	6920.59	1854.37	1773.48
43	-1.69	340.75	5.37	6920.59	1854.37	1773.48
44	-1.69	346.12	5.37	7020.37	1881.10	1799.05
44	-1.69	346.12	5.37	7020.37	1881.10	1799.05
45	-1.69	351.34	5.09	7145.74	1914.69	1831.18
45	-1.69	351.34	5.09	7145.74	1914.69	1831.18
46	-1.69	356.43	5.09	7296.70	1955.14	1869.87
46	-1.69	356.43	5.09	7296.70	1955.14	1869.87
47	-1.69	361.51	5.09	7447.66	1995.60	1908.55
47	-1.69	361.51	5.09	7447.66	1995.60	1908.55
48	-1.69	366.60	5.09	7598.63	2036.05	1947.24
48	-1.69	366.60	5.09	7598.63	2036.05	1947.24
49	-1.69	371.68	5.09	7749.59	2076.50	1985.92
49	-1.69	371.68	5.09	7749.59	2076.50	1985.92
50	-1.69	376.77	5.09	7900.55	2116.95	2024.61
50	-1.69	376.77	5.09	7900.55	2116.95	2024.61
51	-1.69	381.85	5.09	8051.52	2157.40	2063.30
51	-1.69	381.85	5.09	8051.52	2157.40	2063.30
52	-1.69	386.93	5.09	8202.48	2197.85	2101.98
52	-1.69	386.93	5.09	8202.48	2197.85	2101.98
53	-1.69	392.02	5.09	8353.44	2238.30	2140.67
53	-1.69	392.02	5.09	8353.44	2238.30	2140.67
54	-1.69	397.10	5.09	8504.41	2278.75	2179.36
54	-1.69	397.10	5.09	8504.41	2278.75	2179.36
55	-1.69	402.19	5.09	8655.37	2319.20	2218.04
55	-1.69	402.19	5.09	8655.37	2319.20	2218.04
56	-1.69	407.27	5.09	8806.34	2359.65	2256.73
56	-1.69	407.27	5.09	8806.34	2359.65	2256.73
57	-1.69	412.36	5.09	8957.30	2400.10	2295.41
57	-1.69	412.36	5.09	8957.30	2400.10	2295.41
58	5.31	415.65	1.51	8753.19	2345.41	2243.11
58	5.31	415.65	1.51	8753.19	2345.41	2243.11
59	5.31	418.90	5.02	8776.58	2351.68	2249.10
59	5.31	418.90	5.02	8776.58	2351.68	2249.10
60	5.31	423.90	5.02	8801.76	2358.42	2255.56
60	5.31	423.90	5.02	8801.76	2358.42	2255.56
61	5.31	428.90	5.02	8826.94	2365.17	2262.01
61	5.31	428.90	5.02	8826.94	2365.17	2262.01
62	5.31	433.90	5.02	8852.13	2371.92	2268.46
62	5.31	433.90	5.02	8852.13	2371.92	2268.46
63	5.31	438.90	5.02	8877.31	2378.67	2274.92
63	5.31	438.90	5.02	8877.31	2378.67	2274.92
64	5.31	443.93	5.09	8901.74	2385.21	2281.18
64	5.31	443.93	5.09	8901.74	2385.21	2281.18
65	5.31	449.00	5.09	8925.42	2391.56	2287.24
65	5.31	449.00	5.09	8925.42	2391.56	2287.24
66	5.31	454.07	5.09	8949.09	2397.90	2293.31
66	5.31	454.07	5.09	8949.09	2397.90	2293.31
67	5.31	459.13	5.09	8972.77	2404.25	2299.38
67	5.31	459.13	5.09	8972.77	2404.25	2299.38
68	5.31	464.20	5.09	8996.45	2410.59	2305.45
68	5.31	464.20	5.09	8996.45	2410.59	2305.45
69	5.31	469.27	5.09	9020.12	2416.94	2311.51
69	5.31	469.27	5.09	9020.12	2416.94	2311.51
70	5.31	474.33	5.09	9043.80	2423.28	2317.58
70	5.31	474.33	5.09	9043.80	2423.28	2317.58
71	5.31	479.40	5.09	9067.48	2429.62	2323.65
71	5.31	479.40	5.09	9067.48	2429.62	2323.65
72	5.31	484.47	5.09	9091.16	2435.97	2329.72
72	5.31	484.47	5.09	9091.16	2435.97	2329.72
73	5.31	489.53	5.09	9114.83	2442.31	2335.78
73	5.31	489.53	5.09	9114.83	2442.31	2335.78
74	5.31	494.60	5.09	9138.51	2448.66	2341.85
74	5.31	494.60	5.09	9138.51	2448.66	2341.85
75	5.31	499.67	5.09	9162.19	2455.00	2347.92
75	5.31	499.67	5.09	9162.19	2455.00	2347.92
76	5.31	504.73	5.09	9185.86	2461.34	2353.99
76	5.31	504.73	5.09	9185.86	2461.34	2353.99
77	5.31	509.80	5.09	9209.54	2467.69	2360.05
77	5.31	509.80	5.09	9209.54	2467.69	2360.05
78	5.31	514.87	5.09	9233.22	2474.03	2366.12
78	5.31	514.87	5.09	9233.22	2474.03	2366.12
79	5.31	519.91	5.04	9226.53	2472.24	2364.41
79	5.31	519.91	5.04	9226.53	2472.24	2364.41
80	5.31	524.92	5.04	9189.49	2462.32	2354.91
80	5.31	524.92	5.04	9189.49	2462.32	2354.91

81	5.31	529.94	5.04	9152.44	2452.39	2345.42
81	5.31	529.94	5.04	9152.44	2452.39	2345.42
82	5.31	534.96	5.04	9115.39	2442.46	2335.93
82	5.31	534.96	5.04	9115.39	2442.46	2335.93
83	5.31	539.98	5.04	9078.35	2432.54	2326.43
83	5.31	539.98	5.04	9078.35	2432.54	2326.43
84	5.31	544.99	5.04	9041.30	2422.61	2316.94
84	5.31	544.99	5.04	9041.30	2422.61	2316.94
85	5.31	549.96	4.95	9056.71	2426.74	2320.89
85	5.31	549.96	4.95	9056.71	2426.74	2320.89
86	5.31	554.89	4.95	9124.58	2444.92	2338.28
86	5.31	554.89	4.95	9124.58	2444.92	2338.28
87	5.31	559.82	4.95	9192.44	2463.11	2355.67
87	5.31	559.82	4.95	9192.44	2463.11	2355.67
88	5.31	564.74	4.95	9260.31	2481.29	2373.06
88	5.31	564.74	4.95	9260.31	2481.29	2373.06
89	5.31	569.67	4.95	9328.17	2499.48	2390.46
89	5.31	569.67	4.95	9328.17	2499.48	2390.46
90	5.31	574.60	4.95	9396.04	2517.66	2407.85
90	5.31	574.60	4.95	9396.04	2517.66	2407.85
91	5.31	579.52	4.95	9463.90	2535.85	2425.24
91	5.31	579.52	4.95	9463.90	2535.85	2425.24
92	5.31	584.45	4.95	9531.77	2554.03	2442.63
92	5.31	584.45	4.95	9531.77	2554.03	2442.63
93	5.31	589.38	4.95	9599.63	2572.21	2460.02
93	5.31	589.38	4.95	9599.63	2572.21	2460.02
94	5.31	594.30	4.95	9667.50	2590.40	2477.41
94	5.31	594.30	4.95	9667.50	2590.40	2477.41
95	5.31	599.23	4.95	9735.37	2608.58	2494.80
95	5.31	599.23	4.95	9735.37	2608.58	2494.80
96	5.31	604.16	4.95	9803.23	2626.77	2512.19
96	5.31	604.16	4.95	9803.23	2626.77	2512.19
97	5.31	609.08	4.95	9871.10	2644.95	2529.59
97	5.31	609.08	4.95	9871.10	2644.95	2529.59
98	5.31	614.01	4.95	9938.96	2663.14	2546.98
98	5.31	614.01	4.95	9938.96	2663.14	2546.98
99	5.31	618.94	4.95	10006.83	2681.32	2564.37
99	5.31	618.94	4.95	10006.83	2681.32	2564.37
100	23.39	624.12	5.92	9154.00	2452.81	2345.82
100	23.39	624.12	5.92	9154.00	2452.81	2345.82
101	23.39	629.55	5.92	9024.37	2418.07	2312.60
101	23.39	629.55	5.92	9024.37	2418.07	2312.60
102	23.39	634.98	5.92	8894.75	2383.34	2279.38
102	23.39	634.98	5.92	8894.75	2383.34	2279.38
103	23.39	640.23	5.52	8806.34	2359.65	2256.73
103	23.39	640.23	5.52	8806.34	2359.65	2256.73
104	23.39	645.30	5.52	8759.14	2347.00	2244.63
104	23.39	645.30	5.52	8759.14	2347.00	2244.63
105	23.39	650.37	5.52	8711.94	2334.36	2232.54
105	23.39	650.37	5.52	8711.94	2334.36	2232.54
106	23.39	655.44	5.52	8664.75	2321.71	2220.44
106	23.39	655.44	5.52	8664.75	2321.71	2220.44
107	23.39	660.51	5.52	8617.55	2309.07	2208.35
107	23.39	660.51	5.52	8617.55	2309.07	2208.35
108	23.39	665.58	5.52	8570.35	2296.42	2196.25
108	23.39	665.58	5.52	8570.35	2296.42	2196.25
109	23.39	670.65	5.52	8523.16	2283.77	2184.16
109	23.39	670.65	5.52	8523.16	2283.77	2184.16
110	23.39	675.72	5.52	8475.96	2271.13	2172.07
110	23.39	675.72	5.52	8475.96	2271.13	2172.07
111	23.39	680.79	5.52	8428.76	2258.48	2159.97
111	23.39	680.79	5.52	8428.76	2258.48	2159.97
112	23.39	685.86	5.52	8381.56	2245.83	2147.88
112	23.39	685.86	5.52	8381.56	2245.83	2147.88
113	23.39	690.93	5.52	8334.37	2233.19	2135.78
113	23.39	690.93	5.52	8334.37	2233.19	2135.78
114	23.39	696.00	5.52	8287.17	2220.54	2123.69
114	23.39	696.00	5.52	8287.17	2220.54	2123.69
115	23.39	701.07	5.52	8239.97	2207.89	2111.59
115	23.39	701.07	5.52	8239.97	2207.89	2111.59
116	23.39	706.13	5.52	8192.78	2195.25	2099.50
116	23.39	706.13	5.52	8192.78	2195.25	2099.50
117	23.39	711.20	5.52	8145.58	2182.60	2087.40
117	23.39	711.20	5.52	8145.58	2182.60	2087.40
118	23.39	716.27	5.52	8098.38	2169.96	2075.31
118	23.39	716.27	5.52	8098.38	2169.96	2075.31
119	23.39	721.34	5.52	8051.19	2157.31	2063.21
119	23.39	721.34	5.52	8051.19	2157.31	2063.21
120	23.39	726.41	5.52	8003.99	2144.66	2051.12
120	23.39	726.41	5.52	8003.99	2144.66	2051.12
121	23.39	731.48	5.52	7956.79	2132.02	2039.02
121	23.39	731.48	5.52	7956.79	2132.02	2039.02
122	23.39	736.55	5.52	7909.60	2119.37	2026.93
122	23.39	736.55	5.52	7909.60	2119.37	2026.93
123	23.39	741.62	5.52	7862.40	2106.72	2014.83
123	23.39	741.62	5.52	7862.40	2106.72	2014.83
124	23.39	746.69	5.52	7815.20	2094.08	2002.74
124	23.39	746.69	5.52	7815.20	2094.08	2002.74
125	23.39	751.76	5.52	7768.00	2081.43	1990.64
125	23.39	751.76	5.52	7768.00	2081.43	1990.64
126	23.39	756.83	5.52	7720.81	2068.78	1978.55
126	23.39	756.83	5.52	7720.81	2068.78	1978.55
127	23.39	761.90	5.52	7673.61	2056.14	1966.45
127	23.39	761.90	5.52	7673.61	2056.14	1966.45
128	23.39	766.97	5.52	7626.41	2043.49	1954.36
128	23.39	766.97	5.52	7626.41	2043.49	1954.36
129	23.39	772.02	5.48	7597.93	2035.86	1947.06
129	23.39	772.02	5.48	7597.93	2035.86	1947.06
130	23.39	777.05	5.48	7588.17	2033.24	1944.56
130	23.39	777.05	5.48	7588.17	2033.24	1944.56
131	23.39	782.08	5.48	7578.41	2030.63	1942.06
131	23.39	782.08	5.48	7578.41	2030.63	1942.06
132	23.78	786.95	5.14	6623.14	4123.87	3944.00
132	23.78	786.95	5.14	6623.14	4123.87	3944.00
133	23.78	791.79	5.44	6611.11	4116.93	3937.35
133	23.78	791.79	5.44	6611.11	4116.93	3937.35
134	23.78	796.76	5.44	6598.73	4109.78	3930.52
134	23.78	796.76	5.44	6598.73	4109.78	3930.52
135	23.78	801.74	5.44	6586.36	4102.63	3923.69
135	23.78	801.74	5.44	6586.36	4102.63	3923.69
136	23.78	806.71	5.44	6573.98	4095.49	3916.85
136	23.78	806.71	5.44	6573.98	4095.49	3916.85
137	23.78	811.69	5.44	6561.60	4088.34	3910.02
137	23.78	811.69	5.44	6561.60	4088.34	3910.02
138	23.78	816.66	5.44	6549.23	4081.20	3903.18
138	23.78	816.66	5.44	6549.23	4081.20	3903.18
139	23.78	821.64	5.44	6536.85	4074.05	3896.35
139	23.78	821.64	5.44	6536.85	4074.05	3896.35
140	23.78	826.61	5.44	6524.47	4066.91	3889.52
140	23.78	826.61	5.44	6524.47	4066.91	3889.52

141	23.78	831.59	5.44	6512.10	4059.76	3882.68
141	23.78	831.59	5.44	6512.10	4059.76	3882.68
142	23.78	836.56	5.44	6499.72	4052.61	3875.85
142	23.78	836.56	5.44	6499.72	4052.61	3875.85
143	23.78	841.54	5.44	6487.34	4045.47	3869.01
143	23.78	841.54	5.44	6487.34	4045.47	3869.01
144	23.78	846.51	5.44	6474.97	4038.32	3862.18
144	23.78	846.51	5.44	6474.97	4038.32	3862.18
145	23.78	851.80	6.12	6461.81	4030.73	3854.92
145	23.78	851.80	6.12	6461.81	4030.73	3854.92
146	23.78	857.40	6.12	6447.88	4022.68	3847.23
146	23.78	857.40	6.12	6447.88	4022.68	3847.23
147	23.78	862.70	5.46	6422.32	4007.93	3833.11
147	23.78	862.70	5.46	6422.32	4007.93	3833.11
148	23.78	867.69	5.46	6385.14	3986.46	3812.58
148	23.78	867.69	5.46	6385.14	3986.46	3812.58
149	23.78	872.68	5.46	6347.95	3964.99	3792.05
149	23.78	872.68	5.46	6347.95	3964.99	3792.05
150	23.78	877.67	5.46	6310.76	3943.52	3771.51
150	23.78	877.67	5.46	6310.76	3943.52	3771.51
151	23.78	882.67	5.46	6273.58	3922.05	3750.98
151	23.78	882.67	5.46	6273.58	3922.05	3750.98
152	23.78	887.66	5.46	6236.39	3900.58	3730.45
152	23.78	887.66	5.46	6236.39	3900.58	3730.45
153	23.78	892.65	5.46	6199.21	3879.11	3709.92
153	23.78	892.65	5.46	6199.21	3879.11	3709.92
154	23.78	897.65	5.46	6162.02	3857.64	3689.38
154	23.78	897.65	5.46	6162.02	3857.64	3689.38
155	23.78	902.64	5.46	6124.83	3836.17	3668.85
155	23.78	902.64	5.46	6124.83	3836.17	3668.85
156	23.78	907.63	5.46	6087.65	3814.71	3648.32
156	23.78	907.63	5.46	6087.65	3814.71	3648.32
157	23.78	912.62	5.46	6050.46	3793.24	3627.78
157	23.78	912.62	5.46	6050.46	3793.24	3627.78
158	23.78	917.62	5.46	6013.28	3771.77	3607.25
158	23.78	917.62	5.46	6013.28	3771.77	3607.25
159	23.78	922.61	5.46	5976.09	3750.30	3586.72
159	23.78	922.61	5.46	5976.09	3750.30	3586.72
160	23.78	927.60	5.46	5938.91	3728.83	3566.19
160	23.78	927.60	5.46	5938.91	3728.83	3566.19
161	23.78	932.60	5.46	5901.72	3707.36	3545.65
161	23.78	932.60	5.46	5901.72	3707.36	3545.65
162	23.78	937.59	5.46	5864.53	3685.89	3525.12
162	23.78	937.59	5.46	5864.53	3685.89	3525.12
163	23.78	942.58	5.46	5827.35	3664.42	3504.59
163	23.78	942.58	5.46	5827.35	3664.42	3504.59
164	23.78	947.58	5.46	5790.16	3642.95	3484.06
164	23.78	947.58	5.46	5790.16	3642.95	3484.06
165	23.78	952.57	5.46	5752.98	3621.48	3463.52
165	23.78	952.57	5.46	5752.98	3621.48	3463.52
166	23.78	957.56	5.46	5715.79	3600.01	3442.99
166	23.78	957.56	5.46	5715.79	3600.01	3442.99
167	23.78	962.55	5.46	5678.61	3578.54	3422.46
167	23.78	962.55	5.46	5678.61	3578.54	3422.46
168	23.78	967.55	5.46	5641.42	3557.08	3401.92
168	23.78	967.55	5.46	5641.42	3557.08	3401.92
169	23.78	972.54	5.46	5604.23	3535.61	3381.39
169	23.78	972.54	5.46	5604.23	3535.61	3381.39
170	23.78	977.53	5.46	5567.05	3514.14	3360.86
170	23.78	977.53	5.46	5567.05	3514.14	3360.86
171	23.78	982.53	5.46	5529.86	3492.67	3340.33
171	23.78	982.53	5.46	5529.86	3492.67	3340.33
172	23.78	987.52	5.46	5492.68	3471.20	3319.79
172	23.78	987.52	5.46	5492.68	3471.20	3319.79
173	23.78	992.51	5.46	5455.49	3449.73	3299.26
173	23.78	992.51	5.46	5455.49	3449.73	3299.26
174	23.78	997.50	5.46	5418.31	3428.26	3278.73
174	23.78	997.50	5.46	5418.31	3428.26	3278.73
175	23.78	1002.57	5.61	5371.42	3401.19	3252.84
175	23.78	1002.57	5.61	5371.42	3401.19	3252.84
176	23.78	1007.70	5.61	5314.84	3368.52	3221.60
176	23.78	1007.70	5.61	5314.84	3368.52	3221.60
177	23.78	1012.83	5.61	5258.25	3335.85	3190.35
177	23.78	1012.83	5.61	5258.25	3335.85	3190.35
178	23.78	1017.96	5.61	5201.67	3303.19	3159.11
178	23.78	1017.96	5.61	5201.67	3303.19	3159.11
179	23.78	1023.09	5.61	5145.09	3270.52	3127.87
179	23.78	1023.09	5.61	5145.09	3270.52	3127.87
180	23.78	1028.22	5.61	5088.51	3237.85	3096.62
180	23.78	1028.22	5.61	5088.51	3237.85	3096.62
181	23.78	1033.35	5.61	5031.92	3205.18	3065.38
181	23.78	1033.35	5.61	5031.92	3205.18	3065.38
182	23.78	1038.48	5.61	4975.34	3172.51	3034.14
182	23.78	1038.48	5.61	4975.34	3172.51	3034.14
183	23.78	1043.62	5.61	4918.76	3139.85	3002.89
183	23.78	1043.62	5.61	4918.76	3139.85	3002.89
184	23.78	1048.75	5.61	4862.17	3107.18	2971.65
184	23.78	1048.75	5.61	4862.17	3107.18	2971.65
185	23.78	1053.88	5.61	4805.59	3074.51	2940.41
185	23.78	1053.88	5.61	4805.59	3074.51	2940.41
186	23.78	1059.01	5.61	4749.01	3041.84	2909.16
186	23.78	1059.01	5.61	4749.01	3041.84	2909.16
187	23.78	1064.14	5.61	4692.42	3009.17	2877.92
187	23.78	1064.14	5.61	4692.42	3009.17	2877.92
188	23.78	1069.27	5.61	4635.84	2976.50	2846.68
188	23.78	1069.27	5.61	4635.84	2976.50	2846.68
189	23.78	1074.40	5.61	4579.26	2943.84	2815.43
189	23.78	1074.40	5.61	4579.26	2943.84	2815.43
190	23.78	1079.53	5.61	4522.68	2911.17	2784.19
190	23.78	1079.53	5.61	4522.68	2911.17	2784.19
191	23.78	1084.61	5.48	4432.77	2859.26	2734.55
191	23.78	1084.61	5.48	4432.77	2859.26	2734.55
192	23.78	1089.63	5.48	4309.56	2788.12	2666.51
192	23.78	1089.63	5.48	4309.56	2788.12	2666.51
193	23.78	1094.65	5.48	4186.34	2716.98	2598.47
193	23.78	1094.65	5.48	4186.34	2716.98	2598.47
194	23.78	1099.67	5.48	4063.12	2645.84	2530.44
194	23.78	1099.67	5.48	4063.12	2645.84	2530.44
195	23.78	1104.69	5.48	3939.90	2574.70	2462.40
195	23.78	1104.69	5.48	3939.90	2574.70	2462.40
196	23.78	1109.71	5.48	3816.68	2503.56	2394.36
196	23.78	1109.71	5.48	3816.68	2503.56	2394.36
197	23.78	1114.73	5.48	3693.46	2432.42	2326.32
197	23.78	1114.73	5.48	3693.46	2432.42	2326.32
198	23.78	1119.75	5.48	3570.24	2361.28	2258.29
198	23.78	1119.75	5.48	3570.24	2361.28	2258.29
199	23.78	1124.76	5.48	3447.02	2290.14	2190.25
199	23.78	1124.76	5.48	3447.02	2290.14	2190.25
200	23.78	1129.78	5.48	3323.80	2219.00	2122.21
200	23.78	1129.78	5.48	3323.80	2219.00	2122.21

201	23.78	1134.80	5.48	3200.58	2147.86	2054.17
201	23.78	1134.80	5.48	3200.58	2147.86	2054.17
202	23.78	1139.82	5.48	3077.37	2076.72	1986.14
202	23.78	1139.82	5.48	3077.37	2076.72	1986.14
203	23.78	1144.84	5.48	2954.15	2005.58	1918.10
203	23.78	1144.84	5.48	2954.15	2005.58	1918.10
204	23.78	1149.86	5.48	2830.93	1934.44	1850.06
204	23.78	1149.86	5.48	2830.93	1934.44	1850.06
205	23.78	1154.88	5.48	2707.71	1863.30	1782.02
205	23.78	1154.88	5.48	2707.71	1863.30	1782.02
206	23.78	1159.90	5.48	2584.49	1792.16	1713.99
206	23.78	1159.90	5.48	2584.49	1792.16	1713.99
207	23.78	1164.92	5.48	2461.27	1721.02	1645.95
207	23.78	1164.92	5.48	2461.27	1721.02	1645.95
208	23.78	1169.94	5.48	2338.05	1649.87	1577.91
208	23.78	1169.94	5.48	2338.05	1649.87	1577.91
209	23.78	1174.96	5.48	2214.83	1578.73	1509.87
209	23.78	1174.96	5.48	2214.83	1578.73	1509.87
210	23.78	1179.98	5.48	2091.61	1507.59	1441.84
210	23.78	1179.98	5.48	2091.61	1507.59	1441.84
211	23.78	1185.00	5.48	1968.39	1436.45	1373.80
211	23.78	1185.00	5.48	1968.39	1436.45	1373.80
212	23.78	1190.02	5.48	1845.18	1365.31	1305.76
212	23.78	1190.02	5.48	1845.18	1365.31	1305.76
213	23.78	1195.04	5.48	1721.96	1294.17	1237.72
213	23.78	1195.04	5.48	1721.96	1294.17	1237.72
214	23.78	1200.05	5.48	1598.74	1223.03	1169.69
214	23.78	1200.05	5.48	1598.74	1223.03	1169.69
215	23.78	1205.07	5.48	1475.52	1151.89	1101.65
215	23.78	1205.07	5.48	1475.52	1151.89	1101.65
216	23.78	1210.09	5.48	1352.30	1080.75	1033.61
216	23.78	1210.09	5.48	1352.30	1080.75	1033.61
217	23.78	1215.11	5.48	1229.08	1009.61	965.57
217	23.78	1215.11	5.48	1229.08	1009.61	965.57
218	23.78	1220.13	5.48	1105.86	938.47	897.54
218	23.78	1220.13	5.48	1105.86	938.47	897.54
219	23.78	1225.15	5.48	982.64	867.33	829.50
219	23.78	1225.15	5.48	982.64	867.33	829.50
220	23.78	1230.17	5.48	859.42	796.19	761.46
220	23.78	1230.17	5.48	859.42	796.19	761.46
221	23.78	1235.19	5.48	736.20	725.05	693.42
221	23.78	1235.19	5.48	736.20	725.05	693.42
222	23.78	1238.35	1.42	658.64	680.27	650.59
222	23.78	1238.35	1.42	658.64	680.27	650.59
223	37.55	1241.00	5.05	392.62	526.68	503.70
223	37.55	1241.00	5.05	392.62	526.68	503.70
224	37.55	1245.00	5.05	198.40	414.55	396.46
224	37.55	1245.00	5.05	198.40	414.55	396.46
225	37.55	1248.67	4.23	35.92	320.74	306.75
225	37.55	1248.67	4.23	35.92	320.74	306.75
226	37.55	1252.03	4.23	65.37	37.74	36.10
226	37.55	1252.03	4.23	65.37	37.74	36.10

Table 4 - Base Force Data on the 226 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-44.77	132.37	7.21	6871.86	4501.63	4305.28
1	-44.77	132.37	7.21	6871.86	4501.63	4305.28
2	-44.77	137.49	7.21	15450.66	8321.16	7958.21
2	-44.77	137.49	7.21	15450.66	8321.16	7958.21
3	-20.12	142.39	5.00	9117.53	5059.39	4838.71
3	-20.12	142.39	5.00	9117.53	5059.39	4838.71
4	-20.12	147.09	5.00	10639.89	5737.18	5486.94
4	-20.12	147.09	5.00	10639.89	5737.18	5486.94
5	-20.12	151.78	5.00	12162.24	6414.98	6135.17
5	-20.12	151.78	5.00	12162.24	6414.98	6135.17
6	-20.12	156.48	5.00	13684.60	7092.78	6783.41
6	-20.12	156.48	5.00	13684.60	7092.78	6783.41
7	-12.58	161.27	5.00	13760.74	7126.68	6815.83
7	-12.58	161.27	5.00	13760.74	7126.68	6815.83
8	-12.58	166.15	5.00	14764.86	7573.74	7243.39
8	-12.58	166.15	5.00	14764.86	7573.74	7243.39
9	-12.58	171.03	5.00	15768.99	8020.81	7670.96
9	-12.58	171.03	5.00	15768.99	8020.81	7670.96
10	-12.58	175.91	5.00	16773.11	8467.87	8098.52
10	-12.58	175.91	5.00	16773.11	8467.87	8098.52
11	-13.56	180.78	5.00	17985.80	9007.79	8614.89
11	-13.56	180.78	5.00	17985.80	9007.79	8614.89
12	-13.56	185.64	5.00	19053.97	9483.37	9069.73
12	-13.56	185.64	5.00	19053.97	9483.37	9069.73
13	-13.56	190.50	5.00	20122.14	9958.95	9524.57
13	-13.56	190.50	5.00	20122.14	9958.95	9524.57
14	-13.56	195.36	5.00	21190.31	10434.53	9979.40
14	-13.56	195.36	5.00	21190.31	10434.53	9979.40
15	-14.31	200.15	4.88	21904.38	10728.69	10260.73
15	-14.31	200.15	4.88	21904.38	10728.69	10260.73
16	-14.31	204.88	4.88	22969.55	11202.93	10714.29
16	-14.31	204.88	4.88	22969.55	11202.93	10714.29
17	-14.31	209.73	5.12	23720.65	6355.93	6078.70
17	-14.31	209.73	5.12	23720.65	6355.93	6078.70
18	-14.31	214.69	5.12	24834.97	6654.51	6364.26
18	-14.31	214.69	5.12	24834.97	6654.51	6364.26
19	-1.69	219.64	4.94	23166.54	6207.45	5936.70
19	-1.69	219.64	4.94	23166.54	6207.45	5936.70
20	-1.69	224.57	4.94	23505.83	6298.37	6023.65
20	-1.69	224.57	4.94	23505.83	6298.37	6023.65
21	-1.69	229.51	4.94	23845.12	6389.28	6110.60
21	-1.69	229.51	4.94	23845.12	6389.28	6110.60
22	-1.69	234.44	4.94	24184.42	6480.19	6197.54
22	-1.69	234.44	4.94	24184.42	6480.19	6197.54
23	-1.69	239.38	4.94	24523.71	6571.11	6284.49
23	-1.69	239.38	4.94	24523.71	6571.11	6284.49
24	-1.69	244.32	4.94	24863.00	6662.02	6371.44
24	-1.69	244.32	4.94	24863.00	6662.02	6371.44
25	-1.69	249.25	4.94	25202.30	6752.93	6458.39
25	-1.69	249.25	4.94	25202.30	6752.93	6458.39
26	-1.69	254.19	4.94	25541.59	6843.85	6545.34
26	-1.69	254.19	4.94	25541.59	6843.85	6545.34
27	-1.69	259.12	4.94	25880.88	6934.76	6632.28
27	-1.69	259.12	4.94	25880.88	6934.76	6632.28
28	-1.69	264.06	4.94	26220.17	7025.67	6719.23
28	-1.69	264.06	4.94	26220.17	7025.67	6719.23
29	-1.69	269.00	4.94	26559.47	7116.59	6806.18
29	-1.69	269.00	4.94	26559.47	7116.59	6806.18
30	-1.69	273.93	4.94	26898.76	7207.50	6893.13

30	-1.69	273.93	4.94	26898.76	7207.50	6893.13
31	-1.69	279.06	5.32	29469.28	7896.27	7551.85
31	-1.69	279.06	5.32	29469.28	7896.27	7551.85
32	-1.69	284.38	5.32	30095.54	8064.08	7712.34
32	-1.69	284.38	5.32	30095.54	8064.08	7712.34
33	-1.69	289.69	5.32	30721.81	8231.88	7872.83
33	-1.69	289.69	5.32	30721.81	8231.88	7872.83
34	-1.69	295.01	5.32	31348.08	8399.69	8033.32
34	-1.69	295.01	5.32	31348.08	8399.69	8033.32
35	-1.69	300.33	5.32	31974.35	8567.50	8193.81
35	-1.69	300.33	5.32	31974.35	8567.50	8193.81
36	-1.69	305.64	5.32	32600.61	8735.31	8354.29
36	-1.69	305.64	5.32	32600.61	8735.31	8354.29
37	-1.69	310.74	4.88	30495.08	8171.13	7814.73
37	-1.69	310.74	4.88	30495.08	8171.13	7814.73
38	-1.69	315.62	4.88	31064.28	8323.65	7960.59
38	-1.69	315.62	4.88	31064.28	8323.65	7960.59
39	-1.69	320.50	4.88	31633.48	8476.16	8106.45
39	-1.69	320.50	4.88	31633.48	8476.16	8106.45
40	-1.69	325.38	4.88	32202.68	8628.68	8252.32
40	-1.69	325.38	4.88	32202.68	8628.68	8252.32
41	-1.69	330.26	4.88	32771.87	8781.20	8398.18
41	-1.69	330.26	4.88	32771.87	8781.20	8398.18
42	-1.69	335.38	5.37	36620.94	9812.55	9384.55
42	-1.69	335.38	5.37	36620.94	9812.55	9384.55
43	-1.69	340.75	5.37	37156.64	9956.09	9521.83
43	-1.69	340.75	5.37	37156.64	9956.09	9521.83
44	-1.69	346.12	5.37	37692.34	10099.63	9659.11
44	-1.69	346.12	5.37	37692.34	10099.63	9659.11
45	-1.69	351.34	5.09	36349.11	9739.71	9314.89
45	-1.69	351.34	5.09	36349.11	9739.71	9314.89
46	-1.69	356.43	5.09	37117.03	9945.48	9511.68
46	-1.69	356.43	5.09	37117.03	9945.48	9511.68
47	-1.69	361.51	5.09	37884.96	10151.24	9708.47
47	-1.69	361.51	5.09	37884.96	10151.24	9708.47
48	-1.69	366.60	5.09	38652.88	10357.01	9905.26
48	-1.69	366.60	5.09	38652.88	10357.01	9905.26
49	-1.69	371.68	5.09	39420.81	10562.77	10102.05
49	-1.69	371.68	5.09	39420.81	10562.77	10102.05
50	-1.69	376.77	5.09	40188.73	10768.54	10298.84
50	-1.69	376.77	5.09	40188.73	10768.54	10298.84
51	-1.69	381.85	5.09	40956.66	10974.30	10495.63
51	-1.69	381.85	5.09	40956.66	10974.30	10495.63
52	-1.69	386.93	5.09	41724.58	11180.07	10692.42
52	-1.69	386.93	5.09	41724.58	11180.07	10692.42
53	-1.69	392.02	5.09	42492.51	11385.83	10889.21
53	-1.69	392.02	5.09	42492.51	11385.83	10889.21
54	-1.69	397.10	5.09	43260.43	11591.60	11086.00
54	-1.69	397.10	5.09	43260.43	11591.60	11086.00
55	-1.69	402.19	5.09	44028.36	11797.36	11282.79
55	-1.69	402.19	5.09	44028.36	11797.36	11282.79
56	-1.69	407.27	5.09	44796.28	12003.13	11479.58
56	-1.69	407.27	5.09	44796.28	12003.13	11479.58
57	-1.69	412.36	5.09	45564.20	12208.89	11676.37
57	-1.69	412.36	5.09	45564.20	12208.89	11676.37
58	5.31	415.65	1.51	13186.41	3533.29	3379.17
58	5.31	415.65	1.51	13186.41	3533.29	3379.17
59	5.31	418.90	5.02	44072.17	11809.10	11294.02
59	5.31	418.90	5.02	44072.17	11809.10	11294.02
60	5.31	423.90	5.02	44198.63	11842.99	11326.42
60	5.31	423.90	5.02	44198.63	11842.99	11326.42
61	5.31	428.90	5.02	44325.08	11876.87	11358.83
61	5.31	428.90	5.02	44325.08	11876.87	11358.83
62	5.31	433.90	5.02	44451.54	11910.75	11391.24
62	5.31	433.90	5.02	44451.54	11910.75	11391.24
63	5.31	438.90	5.02	44578.00	11944.64	11423.64
63	5.31	438.90	5.02	44578.00	11944.64	11423.64
64	5.31	443.93	5.09	45296.68	12137.21	11607.81
64	5.31	443.93	5.09	45296.68	12137.21	11607.81
65	5.31	449.00	5.09	45417.17	12169.49	11638.69
65	5.31	449.00	5.09	45417.17	12169.49	11638.69
66	5.31	454.07	5.09	45537.65	12201.77	11669.56
66	5.31	454.07	5.09	45537.65	12201.77	11669.56
67	5.31	459.13	5.09	45658.13	12234.06	11700.44
67	5.31	459.13	5.09	45658.13	12234.06	11700.44
68	5.31	464.20	5.09	45778.61	12266.34	11731.31
68	5.31	464.20	5.09	45778.61	12266.34	11731.31
69	5.31	469.27	5.09	45899.09	12298.62	11762.19
69	5.31	469.27	5.09	45899.09	12298.62	11762.19
70	5.31	474.33	5.09	46019.57	12330.91	11793.06
70	5.31	474.33	5.09	46019.57	12330.91	11793.06
71	5.31	479.40	5.09	46140.05	12363.19	11823.94
71	5.31	479.40	5.09	46140.05	12363.19	11823.94
72	5.31	484.47	5.09	46260.53	12395.47	11854.81
72	5.31	484.47	5.09	46260.53	12395.47	11854.81
73	5.31	489.53	5.09	46381.01	12427.75	11885.68
73	5.31	489.53	5.09	46381.01	12427.75	11885.68
74	5.31	494.60	5.09	46501.49	12460.04	11916.56
74	5.31	494.60	5.09	46501.49	12460.04	11916.56
75	5.31	499.67	5.09	46621.97	12492.32	11947.43
75	5.31	499.67	5.09	46621.97	12492.32	11947.43
76	5.31	504.73	5.09	46742.45	12524.60	11978.31
76	5.31	504.73	5.09	46742.45	12524.60	11978.31
77	5.31	509.80	5.09	46862.93	12556.88	12009.18
77	5.31	509.80	5.09	46862.93	12556.88	12009.18
78	5.31	514.87	5.09	46983.41	12589.17	12040.06
78	5.31	514.87	5.09	46983.41	12589.17	12040.06
79	5.31	519.91	5.04	46486.08	12455.91	11912.61
79	5.31	519.91	5.04	46486.08	12455.91	11912.61
80	5.31	524.92	5.04	46299.43	12405.89	11864.78
80	5.31	524.92	5.04	46299.43	12405.89	11864.78
81	5.31	529.94	5.04	46112.78	12355.88	11816.95
81	5.31	529.94	5.04	46112.78	12355.88	11816.95
82	5.31	534.96	5.04	45926.13	12305.87	11769.12
82	5.31	534.96	5.04	45926.13	12305.87	11769.12
83	5.31	539.98	5.04	45739.48	12255.86	11721.29
83	5.31	539.98	5.04	45739.48	12255.86	11721.29
84	5.31	544.99	5.04	45552.83	12205.84	11673.45
84	5.31	544.99	5.04	45552.83	12205.84	11673.45
85	5.31	549.96	4.95	44811.85	12007.30	11483.57
85	5.31	549.96	4.95	44811.85	12007.30	11483.57
86	5.31	554.89	4.95	45147.64	12097.27	11569.62
86	5.31	554.89	4.95	45147.64	12097.27	11569.62
87	5.31	559.82	4.95	45483.44	12187.25	11655.67
87	5.31	559.82	4.95	45483.44	12187.25	11655.67
88	5.31	564.74	4.95	45819.23	12277.22	11741.72
88	5.31	564.74	4.95	45819.23	12277.22	11741.72
89	5.31	569.67	4.95	46155.02	12367.20	11827.77
89	5.31	569.67	4.95	46155.02	12367.20	11827.77
90	5.31	574.60	4.95	46490.81	12457.18	11913.82

90	5.31	574.60	4.95	46490.81	12457.18	11913.82
91	5.31	579.52	4.95	46826.60	12547.15	11999.87
91	5.31	579.52	4.95	46826.60	12547.15	11999.87
92	5.31	584.45	4.95	47162.40	12637.13	12085.92
92	5.31	584.45	4.95	47162.40	12637.13	12085.92
93	5.31	589.38	4.95	47498.19	12727.10	12171.98
93	5.31	589.38	4.95	47498.19	12727.10	12171.98
94	5.31	594.30	4.95	47833.98	12817.08	12258.03
94	5.31	594.30	4.95	47833.98	12817.08	12258.03
95	5.31	599.23	4.95	48169.77	12907.05	12344.08
95	5.31	599.23	4.95	48169.77	12907.05	12344.08
96	5.31	604.16	4.95	48505.57	12997.03	12430.13
96	5.31	604.16	4.95	48505.57	12997.03	12430.13
97	5.31	609.08	4.95	48841.36	13087.00	12516.18
97	5.31	609.08	4.95	48841.36	13087.00	12516.18
98	5.31	614.01	4.95	49177.15	13176.98	12602.23
98	5.31	614.01	4.95	49177.15	13176.98	12602.23
99	5.31	618.94	4.95	49512.94	13266.95	12688.28
99	5.31	618.94	4.95	49512.94	13266.95	12688.28
100	23.39	624.12	5.92	54191.14	14520.47	13887.12
100	23.39	624.12	5.92	54191.14	14520.47	13887.12
101	23.39	629.55	5.92	53423.77	14314.86	13690.48
101	23.39	629.55	5.92	53423.77	14314.86	13690.48
102	23.39	634.98	5.92	52656.40	14109.24	13493.83
102	23.39	634.98	5.92	52656.40	14109.24	13493.83
103	23.39	640.23	5.52	48639.44	13032.90	12464.43
103	23.39	640.23	5.52	48639.44	13032.90	12464.43
104	23.39	645.30	5.52	48378.76	12963.05	12397.63
104	23.39	645.30	5.52	48378.76	12963.05	12397.63
105	23.39	650.37	5.52	48118.08	12893.20	12330.83
105	23.39	650.37	5.52	48118.08	12893.20	12330.83
106	23.39	655.44	5.52	47857.40	12823.35	12264.03
106	23.39	655.44	5.52	47857.40	12823.35	12264.03
107	23.39	660.51	5.52	47596.72	12753.50	12197.22
107	23.39	660.51	5.52	47596.72	12753.50	12197.22
108	23.39	665.58	5.52	47336.04	12683.65	12130.42
108	23.39	665.58	5.52	47336.04	12683.65	12130.42
109	23.39	670.65	5.52	47075.36	12613.80	12063.62
109	23.39	670.65	5.52	47075.36	12613.80	12063.62
110	23.39	675.72	5.52	46814.68	12543.96	11996.82
110	23.39	675.72	5.52	46814.68	12543.96	11996.82
111	23.39	680.79	5.52	46554.00	12474.11	11930.02
111	23.39	680.79	5.52	46554.00	12474.11	11930.02
112	23.39	685.86	5.52	46293.32	12404.26	11863.21
112	23.39	685.86	5.52	46293.32	12404.26	11863.21
113	23.39	690.93	5.52	46032.64	12334.41	11796.41
113	23.39	690.93	5.52	46032.64	12334.41	11796.41
114	23.39	696.00	5.52	45771.96	12264.56	11729.61
114	23.39	696.00	5.52	45771.96	12264.56	11729.61
115	23.39	701.07	5.52	45511.28	12194.71	11662.81
115	23.39	701.07	5.52	45511.28	12194.71	11662.81
116	23.39	706.13	5.52	45250.60	12124.86	11596.00
116	23.39	706.13	5.52	45250.60	12124.86	11596.00
117	23.39	711.20	5.52	44989.92	12055.01	11529.20
117	23.39	711.20	5.52	44989.92	12055.01	11529.20
118	23.39	716.27	5.52	44729.24	11985.16	11462.40
118	23.39	716.27	5.52	44729.24	11985.16	11462.40
119	23.39	721.34	5.52	44468.56	11915.32	11395.60
119	23.39	721.34	5.52	44468.56	11915.32	11395.60
120	23.39	726.41	5.52	44207.88	11845.47	11328.80
120	23.39	726.41	5.52	44207.88	11845.47	11328.80
121	23.39	731.48	5.52	43947.20	11775.62	11261.99
121	23.39	731.48	5.52	43947.20	11775.62	11261.99
122	23.39	736.55	5.52	43686.52	11705.77	11195.19
122	23.39	736.55	5.52	43686.52	11705.77	11195.19
123	23.39	741.62	5.52	43425.85	11635.92	11128.39
123	23.39	741.62	5.52	43425.85	11635.92	11128.39
124	23.39	746.69	5.52	43165.17	11566.07	11061.59
124	23.39	746.69	5.52	43165.17	11566.07	11061.59
125	23.39	751.76	5.52	42904.49	11496.22	10994.78
125	23.39	751.76	5.52	42904.49	11496.22	10994.78
126	23.39	756.83	5.52	42643.81	11426.37	10927.98
126	23.39	756.83	5.52	42643.81	11426.37	10927.98
127	23.39	761.90	5.52	42383.13	11356.52	10861.18
127	23.39	761.90	5.52	42383.13	11356.52	10861.18
128	23.39	766.97	5.52	42122.45	11286.68	10794.38
128	23.39	766.97	5.52	42122.45	11286.68	10794.38
129	23.39	772.02	5.48	41667.97	11164.90	10677.91
129	23.39	772.02	5.48	41667.97	11164.90	10677.91
130	23.39	777.05	5.48	41614.44	11150.55	10664.19
130	23.39	777.05	5.48	41614.44	11150.55	10664.19
131	23.39	782.08	5.48	41560.90	11136.21	10650.47
131	23.39	782.08	5.48	41560.90	11136.21	10650.47
132	23.78	786.95	5.14	34016.10	21179.99	20256.17
132	23.78	786.95	5.14	34016.10	21179.99	20256.17
133	23.78	791.79	5.44	35940.97	22381.47	21405.24
133	23.78	791.79	5.44	35940.97	22381.47	21405.24
134	23.78	796.76	5.44	35873.69	22342.62	21368.09
134	23.78	796.76	5.44	35873.69	22342.62	21368.09
135	23.78	801.74	5.44	35806.40	22303.77	21330.94
135	23.78	801.74	5.44	35806.40	22303.77	21330.94
136	23.78	806.71	5.44	35739.12	22264.92	21293.78
136	23.78	806.71	5.44	35739.12	22264.92	21293.78
137	23.78	811.69	5.44	35671.83	22226.08	21256.63
137	23.78	811.69	5.44	35671.83	22226.08	21256.63
138	23.78	816.66	5.44	35604.55	22187.23	21219.48
138	23.78	816.66	5.44	35604.55	22187.23	21219.48
139	23.78	821.64	5.44	35537.26	22148.38	21182.32
139	23.78	821.64	5.44	35537.26	22148.38	21182.32
140	23.78	826.61	5.44	35469.98	22109.54	21145.17
140	23.78	826.61	5.44	35469.98	22109.54	21145.17
141	23.78	831.59	5.44	35402.69	22070.69	21108.02
141	23.78	831.59	5.44	35402.69	22070.69	21108.02
142	23.78	836.56	5.44	35335.41	22031.84	21070.87
142	23.78	836.56	5.44	35335.41	22031.84	21070.87
143	23.78	841.54	5.44	35268.12	21992.99	21033.71
143	23.78	841.54	5.44	35268.12	21992.99	21033.71
144	23.78	846.51	5.44	35200.84	21954.15	20996.56
144	23.78	846.51	5.44	35200.84	21954.15	20996.56
145	23.78	851.80	6.12	39542.56	24665.73	23589.87
145	23.78	851.80	6.12	39542.56	24665.73	23589.87
146	23.78	857.40	6.12	39457.30	24616.51	23542.80
146	23.78	857.40	6.12	39457.30	24616.51	23542.80
147	23.78	862.70	5.46	35039.96	21867.12	20913.33
147	23.78	862.70	5.46	35039.96	21867.12	20913.33
148	23.78	867.69	5.46	34837.08	21749.98	20801.30
148	23.78	867.69	5.46	34837.08	21749.98	20801.30
149	23.78	872.68	5.46	34634.19	21632.85	20689.28
149	23.78	872.68	5.46	34634.19	21632.85	20689.28
150	23.78	877.67	5.46	34431.31	21515.71	20577.25

150	23.78	877.67	5.46	34431.31	21515.71	20577.25
151	23.78	882.67	5.46	34228.42	21398.58	20465.22
151	23.78	882.67	5.46	34228.42	21398.58	20465.22
152	23.78	887.66	5.46	34025.54	21281.44	20353.20
152	23.78	887.66	5.46	34025.54	21281.44	20353.20
153	23.78	892.65	5.46	33822.66	21164.31	20241.17
153	23.78	892.65	5.46	33822.66	21164.31	20241.17
154	23.78	897.65	5.46	33619.77	21047.17	20129.15
154	23.78	897.65	5.46	33619.77	21047.17	20129.15
155	23.78	902.64	5.46	33416.89	20930.04	20017.12
155	23.78	902.64	5.46	33416.89	20930.04	20017.12
156	23.78	907.63	5.46	33214.00	20812.90	19905.09
156	23.78	907.63	5.46	33214.00	20812.90	19905.09
157	23.78	912.62	5.46	33011.12	20695.77	19793.07
157	23.78	912.62	5.46	33011.12	20695.77	19793.07
158	23.78	917.62	5.46	32808.23	20578.63	19681.04
158	23.78	917.62	5.46	32808.23	20578.63	19681.04
159	23.78	922.61	5.46	32605.35	20461.50	19569.02
159	23.78	922.61	5.46	32605.35	20461.50	19569.02
160	23.78	927.60	5.46	32402.47	20344.36	19456.99
160	23.78	927.60	5.46	32402.47	20344.36	19456.99
161	23.78	932.60	5.46	32199.58	20227.23	19344.96
161	23.78	932.60	5.46	32199.58	20227.23	19344.96
162	23.78	937.59	5.46	31996.70	20110.09	19232.94
162	23.78	937.59	5.46	31996.70	20110.09	19232.94
163	23.78	942.58	5.46	31793.81	19992.96	19120.91
163	23.78	942.58	5.46	31793.81	19992.96	19120.91
164	23.78	947.58	5.46	31590.93	19875.82	19008.88
164	23.78	947.58	5.46	31590.93	19875.82	19008.88
165	23.78	952.57	5.46	31388.04	19758.68	18896.86
165	23.78	952.57	5.46	31388.04	19758.68	18896.86
166	23.78	957.56	5.46	31185.16	19641.55	18784.83
166	23.78	957.56	5.46	31185.16	19641.55	18784.83
167	23.78	962.55	5.46	30982.28	19524.41	18672.81
167	23.78	962.55	5.46	30982.28	19524.41	18672.81
168	23.78	967.55	5.46	30779.39	19407.28	18560.78
168	23.78	967.55	5.46	30779.39	19407.28	18560.78
169	23.78	972.54	5.46	30576.51	19290.14	18448.75
169	23.78	972.54	5.46	30576.51	19290.14	18448.75
170	23.78	977.53	5.46	30373.62	19173.01	18336.73
170	23.78	977.53	5.46	30373.62	19173.01	18336.73
171	23.78	982.53	5.46	30170.74	19055.87	18224.70
171	23.78	982.53	5.46	30170.74	19055.87	18224.70
172	23.78	987.52	5.46	29967.85	18938.74	18112.68
172	23.78	987.52	5.46	29967.85	18938.74	18112.68
173	23.78	992.51	5.46	29764.97	18821.60	18000.65
173	23.78	992.51	5.46	29764.97	18821.60	18000.65
174	23.78	997.50	5.46	29562.09	18704.47	17888.62
174	23.78	997.50	5.46	29562.09	18704.47	17888.62
175	23.78	1002.57	5.61	30118.60	19071.14	18239.30
175	23.78	1002.57	5.61	30118.60	19071.14	18239.30
176	23.78	1007.70	5.61	29801.33	18887.96	18064.12
176	23.78	1007.70	5.61	29801.33	18887.96	18064.12
177	23.78	1012.83	5.61	29484.06	18704.79	17888.93
177	23.78	1012.83	5.61	29484.06	18704.79	17888.93
178	23.78	1017.96	5.61	29166.79	18521.61	17713.74
178	23.78	1017.96	5.61	29166.79	18521.61	17713.74
179	23.78	1023.09	5.61	28849.51	18338.43	17538.55
179	23.78	1023.09	5.61	28849.51	18338.43	17538.55
180	23.78	1028.22	5.61	28532.24	18155.26	17363.37
180	23.78	1028.22	5.61	28532.24	18155.26	17363.37
181	23.78	1033.35	5.61	28214.97	17972.08	17188.18
181	23.78	1033.35	5.61	28214.97	17972.08	17188.18
182	23.78	1038.48	5.61	27897.70	17788.90	17012.99
182	23.78	1038.48	5.61	27897.70	17788.90	17012.99
183	23.78	1043.62	5.61	27580.43	17605.72	16837.80
183	23.78	1043.62	5.61	27580.43	17605.72	16837.80
184	23.78	1048.75	5.61	27263.15	17422.55	16662.62
184	23.78	1048.75	5.61	27263.15	17422.55	16662.62
185	23.78	1053.88	5.61	26945.88	17239.37	16487.43
185	23.78	1053.88	5.61	26945.88	17239.37	16487.43
186	23.78	1059.01	5.61	26628.61	17056.19	16312.24
186	23.78	1059.01	5.61	26628.61	17056.19	16312.24
187	23.78	1064.14	5.61	26311.34	16873.02	16137.05
187	23.78	1064.14	5.61	26311.34	16873.02	16137.05
188	23.78	1069.27	5.61	25994.06	16689.84	15961.87
188	23.78	1069.27	5.61	25994.06	16689.84	15961.87
189	23.78	1074.40	5.61	25676.79	16506.66	15786.68
189	23.78	1074.40	5.61	25676.79	16506.66	15786.68
190	23.78	1079.53	5.61	25359.52	16323.48	15611.49
190	23.78	1079.53	5.61	25359.52	16323.48	15611.49
191	23.78	1084.61	5.48	24313.42	15682.83	14998.79
191	23.78	1084.61	5.48	24313.42	15682.83	14998.79
192	23.78	1089.63	5.48	23637.57	15292.63	14625.60
192	23.78	1089.63	5.48	23637.57	15292.63	14625.60
193	23.78	1094.65	5.48	22961.72	14902.43	14252.42
193	23.78	1094.65	5.48	22961.72	14902.43	14252.42
194	23.78	1099.67	5.48	22285.88	14512.23	13879.24
194	23.78	1099.67	5.48	22285.88	14512.23	13879.24
195	23.78	1104.69	5.48	21610.03	14122.03	13506.06
195	23.78	1104.69	5.48	21610.03	14122.03	13506.06
196	23.78	1109.71	5.48	20934.18	13731.83	13132.88
196	23.78	1109.71	5.48	20934.18	13731.83	13132.88
197	23.78	1114.73	5.48	20258.34	13341.63	12759.70
197	23.78	1114.73	5.48	20258.34	13341.63	12759.70
198	23.78	1119.75	5.48	19582.49	12951.43	12386.52
198	23.78	1119.75	5.48	19582.49	12951.43	12386.52
199	23.78	1124.76	5.48	18906.64	12561.23	12013.34
199	23.78	1124.76	5.48	18906.64	12561.23	12013.34
200	23.78	1129.78	5.48	18230.80	12171.03	11640.16
200	23.78	1129.78	5.48	18230.80	12171.03	11640.16
201	23.78	1134.80	5.48	17554.95	11780.83	11266.98
201	23.78	1134.80	5.48	17554.95	11780.83	11266.98
202	23.78	1139.82	5.48	16879.11	11390.63	10893.80
202	23.78	1139.82	5.48	16879.11	11390.63	10893.80
203	23.78	1144.84	5.48	16203.26	11000.43	10520.62
203	23.78	1144.84	5.48	16203.26	11000.43	10520.62
204	23.78	1149.86	5.48	15527.41	10610.23	10147.44
204	23.78	1149.86	5.48	15527.41	10610.23	10147.44
205	23.78	1154.88	5.48	14851.57	10220.03	9774.26
205	23.78	1154.88	5.48	14851.57	10220.03	9774.26
206	23.78	1159.90	5.48	14175.72	9829.83	9401.08
206	23.78	1159.90	5.48	14175.72	9829.83	9401.08
207	23.78	1164.92	5.48	13499.87	9439.63	9027.90
207	23.78	1164.92	5.48	13499.87	9439.63	9027.90
208	23.78	1169.94	5.48	12824.03	9049.43	8654.72
208	23.78	1169.94	5.48	12824.03	9049.43	8654.72
209	23.78	1174.96	5.48	12148.18	8659.23	8281.54
209	23.78	1174.96	5.48	12148.18	8659.23	8281.54
210	23.78	1179.98	5.48	11472.33	8269.03	7908.36

210	23.78	1179.98	5.48	11472.33	8269.03	7908.36
211	23.78	1185.00	5.48	10796.49	7878.83	7535.18
211	23.78	1185.00	5.48	10796.49	7878.83	7535.18
212	23.78	1190.02	5.48	10120.64	7488.63	7162.00
212	23.78	1190.02	5.48	10120.64	7488.63	7162.00
213	23.78	1195.04	5.48	9444.80	7098.43	6788.82
213	23.78	1195.04	5.48	9444.80	7098.43	6788.82
214	23.78	1200.05	5.48	8768.95	6708.23	6415.63
214	23.78	1200.05	5.48	8768.95	6708.23	6415.63
215	23.78	1205.07	5.48	8093.10	6318.03	6042.45
215	23.78	1205.07	5.48	8093.10	6318.03	6042.45
216	23.78	1210.09	5.48	7417.26	5927.83	5669.27
216	23.78	1210.09	5.48	7417.26	5927.83	5669.27
217	23.78	1215.11	5.48	6741.41	5537.63	5296.09
217	23.78	1215.11	5.48	6741.41	5537.63	5296.09
218	23.78	1220.13	5.48	6065.56	5147.43	4922.91
218	23.78	1220.13	5.48	6065.56	5147.43	4922.91
219	23.78	1225.15	5.48	5389.72	4757.23	4549.73
219	23.78	1225.15	5.48	5389.72	4757.23	4549.73
220	23.78	1230.17	5.48	4713.87	4367.03	4176.55
220	23.78	1230.17	5.48	4713.87	4367.03	4176.55
221	23.78	1235.19	5.48	4038.03	3976.83	3803.37
221	23.78	1235.19	5.48	4038.03	3976.83	3803.37
222	23.78	1238.35	1.42	935.65	966.37	924.22
222	23.78	1238.35	1.42	935.65	966.37	924.22
223	37.55	1241.00	5.05	1980.85	2657.22	2541.32
223	37.55	1241.00	5.05	1980.85	2657.22	2541.32
224	37.55	1245.00	5.05	1000.98	2091.49	2000.27
224	37.55	1245.00	5.05	1000.98	2091.49	2000.27
225	37.55	1248.67	4.23	151.78	1355.25	1296.14
225	37.55	1248.67	4.23	151.78	1355.25	1296.14
226	37.55	1252.03	4.23	276.23	159.48	152.52
226	37.55	1252.03	4.23	276.23	159.48	152.52

Sum of the Resisting Forces = 2720703.33 (lbs)

Average Available Shear Strength = 2281.45(psf)

Sum of the Driving Forces = 2732363.30 (lbs)

Average Mobilized Shear Stress = 2291.22(psf)

Total length of the failure surface = 1192.53(ft)

Factor of Safety Balance Check: FS = 0.99573

Janbu's Correction Factor (fo) = 1.0500

Janub's FS Corrected = 1.04555

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.16609(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

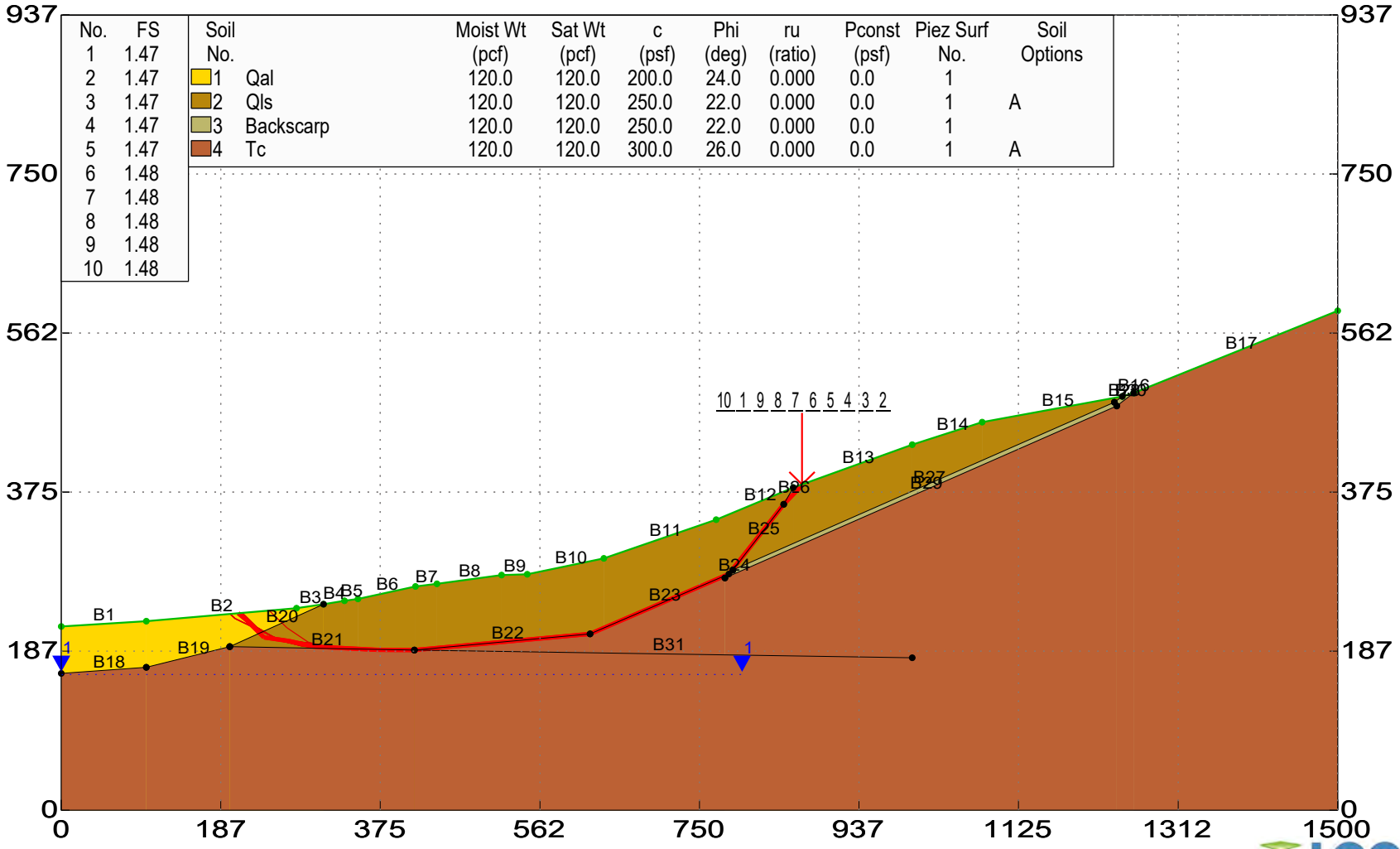
Average Elevation of Point of Application of kh on Sliding Mass = 281.992(ft)

Non-Symmetrical Sliding Resistance Has Been Specified for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Existing - Smaller Qls - Static

LGC Geotechnical, Inc. \xh.gsd



GEOSTASE FS = 1.47

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

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** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 3/ 29/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_03_21\xh.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_03_21\xh.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Existing - Smaller Qls - Static

BOUNDARY DATA

17 Surface Boundaries
31 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	216.400	100.000	222.900	1
2	100.000	222.900	276.400	238.000	1
3	276.400	238.000	308.300	242.900	1
4	308.300	242.900	332.700	247.000	2
5	332.700	247.000	348.800	249.000	2
6	348.800	249.000	416.400	263.600	2
7	416.400	263.600	441.400	267.000	2
8	441.400	267.000	517.400	277.100	2
9	517.400	277.100	547.500	278.000	2
10	547.500	278.000	637.700	297.000	2
11	637.700	297.000	769.500	342.600	2
12	769.500	342.600	860.200	380.200	2
13	860.200	380.200	1000.000	430.900	2
14	1000.000	430.900	1082.100	457.600	2
15	1082.100	457.600	1247.000	487.900	2
16	1247.000	487.900	1260.400	491.900	3
17	1260.400	491.900	1500.000	588.800	4
18	0.000	161.100	100.000	168.300	4
19	100.000	168.300	198.100	192.800	4
20	198.100	192.800	308.300	242.900	2
21	198.100	192.800	414.900	188.600	4
22	414.900	188.600	621.400	207.800	4
23	621.400	207.800	784.600	278.400	4
24	779.900	273.600	789.300	283.200	3
25	789.300	283.200	849.000	360.500	2
26	849.000	360.500	860.200	380.200	2
27	789.300	283.200	1237.700	480.800	3
28	1237.700	480.800	1247.000	487.900	3
29	779.900	273.600	1240.300	476.500	4
30	1240.300	476.500	1260.400	491.900	4
31	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	25.0	0.00	14.00
3	90.0	250.00	22.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	25.0	0.00	14.00
3	90.0	250.00	22.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 30.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	369.00	189.70	5.00
2	370.40	189.00	370.40	189.00	0.00
3	414.90	188.60	414.90	188.60	0.00
4	621.40	207.80	621.40	207.80	0.00
5	784.60	278.40	784.60	278.40	0.00
6	849.00	360.50	849.00	360.50	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.574 FS Min = 1.474 FS Ave = 1.523
Standard Deviation = 0.017 Coefficient of Variation = 1.12 %

Critical Surface is Sequence Number 2 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.474

Table 1 - Geometry Data on the 135 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	4.54	2.05	210.15	230.28	232.33	-39.24	4.89	5.86
2	4.54	6.14	214.69	226.58	232.72	-39.24	4.89	5.86
3	5.39	11.08	219.65	222.06	233.14	-44.66	4.89	7.58
4	5.39	16.88	225.05	216.73	233.60	-44.66	4.89	7.58
5	5.39	22.67	230.44	211.40	234.07	-44.66	4.89	7.58
6	2.58	26.95	234.43	207.46	234.41	-44.66	4.89	3.62
7	2.58	29.72	237.00	204.91	234.63	-44.66	4.89	3.62
8	4.95	31.66	240.77	203.29	234.95	-8.03	4.89	5.00
9	4.95	32.78	245.72	202.59	235.37	-8.03	4.89	5.00
10	4.95	33.91	250.67	201.89	235.80	-8.03	4.89	5.00
11	4.95	35.03	255.62	201.19	236.22	-8.03	4.89	5.00
12	4.95	36.15	260.57	200.50	236.65	-8.03	4.89	5.00
13	4.95	37.27	265.52	199.80	237.07	-8.03	4.89	5.00
14	4.20	38.50	270.10	198.96	237.46	-13.04	4.89	4.31
15	4.20	39.83	274.30	197.99	237.82	-13.04	4.89	4.31
16	5.21	41.50	279.00	196.90	238.40	-13.04	8.73	5.34
17	5.21	43.51	284.21	195.69	239.20	-13.04	8.73	5.34
18	5.21	45.51	289.42	194.49	240.00	-13.04	8.73	5.34
19	5.21	47.52	294.62	193.28	240.80	-13.04	8.73	5.34
20	5.54	49.09	299.99	192.54	241.62	-2.88	8.73	5.54
21	5.54	50.21	305.53	192.26	242.47	-2.88	8.73	5.54
22	4.88	51.31	310.74	192.00	243.31	-2.88	9.54	4.89
23	4.88	52.38	315.62	191.75	244.13	-2.88	9.54	4.89
24	4.88	53.44	320.50	191.51	244.95	-2.88	9.54	4.89
25	4.88	54.51	325.38	191.26	245.77	-2.88	9.54	4.89
26	4.88	55.57	330.26	191.02	246.59	-2.88	9.54	4.89
27	5.37	56.57	335.38	190.76	247.33	-2.88	7.08	5.37
28	5.37	57.51	340.75	190.49	248.00	-2.88	7.08	5.37
29	5.37	58.45	346.12	190.22	248.67	-2.88	7.08	5.37
30	3.32	59.36	350.46	190.00	249.36	-2.88	12.19	3.32
31	3.32	60.24	353.78	189.84	250.08	-2.88	12.19	3.32
32	4.99	61.35	357.93	189.63	250.97	-2.88	12.19	4.99
33	4.99	62.67	362.92	189.38	252.05	-2.88	12.19	4.99

34	4.99	64.00	367.91	189.13	253.13	-2.88	12.19	4.99
35	4.94	65.22	372.87	188.98	254.20	-0.52	12.19	4.94
36	4.94	66.33	377.82	188.93	255.27	-0.52	12.19	4.94
37	4.94	67.45	382.76	188.89	256.33	-0.52	12.19	4.94
38	4.94	68.56	387.71	188.84	257.40	-0.52	12.19	4.94
39	4.94	69.67	392.65	188.80	258.47	-0.52	12.19	4.94
40	4.94	70.78	397.59	188.76	259.54	-0.52	12.19	4.94
41	4.94	71.90	402.54	188.71	260.61	-0.52	12.19	4.94
42	4.94	73.01	407.48	188.67	261.67	-0.52	12.19	4.94
43	4.94	74.12	412.43	188.62	262.74	-0.52	12.19	4.94
44	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
45	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
46	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
47	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
48	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
49	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
50	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
51	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
52	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
53	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
54	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
55	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
56	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
57	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
58	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
59	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
60	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
61	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
62	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
63	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
64	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
65	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
66	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
67	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
68	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
69	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
70	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
71	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
72	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
73	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
74	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
75	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
76	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
77	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
78	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
79	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
80	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
81	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
82	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
83	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
84	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
85	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
86	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
87	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
88	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
89	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
90	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
91	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
92	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
93	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
94	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
95	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
96	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
97	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
98	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
99	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
100	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
101	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
102	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
103	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
104	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
105	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
106	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
107	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
108	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
109	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
110	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
111	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
112	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
113	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
114	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
115	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
116	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
117	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
118	4.95	68.33	787.08	281.56	349.89	51.89	22.52	8.03
119	4.95	64.07	792.03	287.87	351.94	51.89	22.52	8.03
120	4.95	59.81	796.98	294.19	353.99	51.89	22.52	8.03
121	4.95	55.54	801.94	300.50	356.05	51.89	22.52	8.03
122	4.95	51.28	806.89	306.82	358.10	51.89	22.52	8.03
123	4.95	47.02	811.85	313.13	360.15	51.89	22.52	8.03
124	4.95	42.76	816.80	319.45	362.21	51.89	22.52	8.03
125	4.95	38.50	821.75	325.77	364.26	51.89	22.52	8.03
126	4.95	34.23	826.71	332.08	366.32	51.89	22.52	8.03
127	4.95	29.97	831.66	338.40	368.37	51.89	22.52	8.03
128	4.95	25.71	836.62	344.71	370.42	51.89	22.52	8.03
129	4.95	21.45	841.57	351.03	372.48	51.89	22.52	8.03
130	4.95	17.19	846.52	357.34	374.53	51.89	22.52	8.03
131	5.60	13.25	851.80	363.46	376.72	46.63	22.52	8.16
132	5.60	9.65	857.40	369.39	379.04	46.63	22.52	8.16
133	4.70	6.21	862.55	374.85	381.05	46.63	19.93	6.84
134	4.70	2.93	867.25	379.82	382.76	46.63	19.93	6.84
135	0.83	0.65	870.02	383.11	383.76	62.55	19.93	1.80

Table 2 - Force Data On The 135 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1113.7	0.0	0.0	0.0	0.0	0.0
2	3341.2	0.0	0.0	0.0	0.0	0.0
3	7174.5	0.0	0.0	0.0	0.0	0.0
4	10925.1	0.0	0.0	0.0	0.0	0.0
5	14675.8	0.0	0.0	0.0	0.0	0.0
6	8332.4	0.0	0.0	0.0	0.0	0.0
7	9187.9	0.0	0.0	0.0	0.0	0.0
8	18811.0	0.0	0.0	0.0	0.0	0.0

9	19477.6	0.0	0.0	0.0	0.0	0.0
10	20144.2	0.0	0.0	0.0	0.0	0.0
11	20810.8	0.0	0.0	0.0	0.0	0.0
12	21477.4	0.0	0.0	0.0	0.0	0.0
13	22144.0	0.0	0.0	0.0	0.0	0.0
14	19406.3	0.0	0.0	0.0	0.0	0.0
15	20078.0	0.0	0.0	0.0	0.0	0.0
16	25927.7	0.0	0.0	0.0	0.0	0.0
17	27180.8	0.0	0.0	0.0	0.0	0.0
18	28433.9	0.0	0.0	0.0	0.0	0.0
19	29686.9	0.0	0.0	0.0	0.0	0.0
20	32617.6	0.0	0.0	0.0	0.0	0.0
21	33367.8	0.0	0.0	0.0	0.0	0.0
22	30048.1	0.0	0.0	0.0	0.0	0.0
23	30671.9	0.0	0.0	0.0	0.0	0.0
24	31295.7	0.0	0.0	0.0	0.0	0.0
25	31919.5	0.0	0.0	0.0	0.0	0.0
26	32543.3	0.0	0.0	0.0	0.0	0.0
27	36433.3	0.0	0.0	0.0	0.0	0.0
28	37036.3	0.0	0.0	0.0	0.0	0.0
29	37639.4	0.0	0.0	0.0	0.0	0.0
30	23643.7	0.0	0.0	0.0	0.0	0.0
31	23995.7	0.0	0.0	0.0	0.0	0.0
32	36712.0	0.0	0.0	0.0	0.0	0.0
33	37506.6	0.0	0.0	0.0	0.0	0.0
34	38301.1	0.0	0.0	0.0	0.0	0.0
35	38697.9	0.0	0.0	0.0	0.0	0.0
36	39357.9	0.0	0.0	0.0	0.0	0.0
37	40017.9	0.0	0.0	0.0	0.0	0.0
38	40677.9	0.0	0.0	0.0	0.0	0.0
39	41337.9	0.0	0.0	0.0	0.0	0.0
40	41997.8	0.0	0.0	0.0	0.0	0.0
41	42657.8	0.0	0.0	0.0	0.0	0.0
42	43317.8	0.0	0.0	0.0	0.0	0.0
43	43977.8	0.0	0.0	0.0	0.0	0.0
44	13458.3	0.0	0.0	0.0	0.0	0.0
45	44980.9	0.0	0.0	0.0	0.0	0.0
46	45109.9	0.0	0.0	0.0	0.0	0.0
47	45239.0	0.0	0.0	0.0	0.0	0.0
48	45368.0	0.0	0.0	0.0	0.0	0.0
49	45497.1	0.0	0.0	0.0	0.0	0.0
50	46230.6	0.0	0.0	0.0	0.0	0.0
51	46353.6	0.0	0.0	0.0	0.0	0.0
52	46476.5	0.0	0.0	0.0	0.0	0.0
53	46599.5	0.0	0.0	0.0	0.0	0.0
54	46722.5	0.0	0.0	0.0	0.0	0.0
55	46845.4	0.0	0.0	0.0	0.0	0.0
56	46968.4	0.0	0.0	0.0	0.0	0.0
57	47091.4	0.0	0.0	0.0	0.0	0.0
58	47214.3	0.0	0.0	0.0	0.0	0.0
59	47337.3	0.0	0.0	0.0	0.0	0.0
60	47460.3	0.0	0.0	0.0	0.0	0.0
61	47583.2	0.0	0.0	0.0	0.0	0.0
62	47706.2	0.0	0.0	0.0	0.0	0.0
63	47829.2	0.0	0.0	0.0	0.0	0.0
64	47952.1	0.0	0.0	0.0	0.0	0.0
65	47444.5	0.0	0.0	0.0	0.0	0.0
66	47254.0	0.0	0.0	0.0	0.0	0.0
67	47063.5	0.0	0.0	0.0	0.0	0.0
68	46873.0	0.0	0.0	0.0	0.0	0.0
69	46682.5	0.0	0.0	0.0	0.0	0.0
70	46492.0	0.0	0.0	0.0	0.0	0.0
71	45735.8	0.0	0.0	0.0	0.0	0.0
72	46078.5	0.0	0.0	0.0	0.0	0.0
73	46421.2	0.0	0.0	0.0	0.0	0.0
74	46763.9	0.0	0.0	0.0	0.0	0.0
75	47106.6	0.0	0.0	0.0	0.0	0.0
76	47449.4	0.0	0.0	0.0	0.0	0.0
77	47792.1	0.0	0.0	0.0	0.0	0.0
78	48134.8	0.0	0.0	0.0	0.0	0.0
79	48477.5	0.0	0.0	0.0	0.0	0.0
80	48820.2	0.0	0.0	0.0	0.0	0.0
81	49162.9	0.0	0.0	0.0	0.0	0.0
82	49505.7	0.0	0.0	0.0	0.0	0.0
83	49848.4	0.0	0.0	0.0	0.0	0.0
84	50191.1	0.0	0.0	0.0	0.0	0.0
85	50533.8	0.0	0.0	0.0	0.0	0.0
86	55526.6	0.0	0.0	0.0	0.0	0.0
87	54740.3	0.0	0.0	0.0	0.0	0.0
88	53954.1	0.0	0.0	0.0	0.0	0.0
89	49838.1	0.0	0.0	0.0	0.0	0.0
90	49571.0	0.0	0.0	0.0	0.0	0.0
91	49303.9	0.0	0.0	0.0	0.0	0.0
92	49036.8	0.0	0.0	0.0	0.0	0.0
93	48769.7	0.0	0.0	0.0	0.0	0.0
94	48502.6	0.0	0.0	0.0	0.0	0.0
95	48235.5	0.0	0.0	0.0	0.0	0.0
96	47968.4	0.0	0.0	0.0	0.0	0.0
97	47701.3	0.0	0.0	0.0	0.0	0.0
98	47434.2	0.0	0.0	0.0	0.0	0.0
99	47167.1	0.0	0.0	0.0	0.0	0.0
100	46900.0	0.0	0.0	0.0	0.0	0.0
101	46632.9	0.0	0.0	0.0	0.0	0.0
102	46365.8	0.0	0.0	0.0	0.0	0.0
103	46098.7	0.0	0.0	0.0	0.0	0.0
104	45831.5	0.0	0.0	0.0	0.0	0.0
105	45564.4	0.0	0.0	0.0	0.0	0.0
106	45297.3	0.0	0.0	0.0	0.0	0.0
107	45030.2	0.0	0.0	0.0	0.0	0.0
108	44763.1	0.0	0.0	0.0	0.0	0.0
109	44496.0	0.0	0.0	0.0	0.0	0.0
110	44228.9	0.0	0.0	0.0	0.0	0.0
111	43961.8	0.0	0.0	0.0	0.0	0.0
112	43694.7	0.0	0.0	0.0	0.0	0.0
113	43427.6	0.0	0.0	0.0	0.0	0.0
114	43160.5	0.0	0.0	0.0	0.0	0.0
115	42694.8	0.0	0.0	0.0	0.0	0.0
116	42640.0	0.0	0.0	0.0	0.0	0.0
117	42585.1	0.0	0.0	0.0	0.0	0.0
118	40618.9	0.0	0.0	0.0	0.0	0.0
119	38085.4	0.0	0.0	0.0	0.0	0.0
120	35552.0	0.0	0.0	0.0	0.0	0.0
121	33018.6	0.0	0.0	0.0	0.0	0.0
122	30485.1	0.0	0.0	0.0	0.0	0.0
123	27951.7	0.0	0.0	0.0	0.0	0.0
124	25418.2	0.0	0.0	0.0	0.0	0.0
125	22884.8	0.0	0.0	0.0	0.0	0.0
126	20351.3	0.0	0.0	0.0	0.0	0.0
127	17817.9	0.0	0.0	0.0	0.0	0.0
128	15284.4	0.0	0.0	0.0	0.0	0.0

129	12751.0	0.0	0.0	0.0	0.0	0.0
130	10217.5	0.0	0.0	0.0	0.0	0.0
131	8906.2	0.0	0.0	0.0	0.0	0.0
132	6481.9	0.0	0.0	0.0	0.0	0.0
133	3500.0	0.0	0.0	0.0	0.0	0.0
134	1655.0	0.0	0.0	0.0	0.0	0.0
135	64.8	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 4996124.99(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 4996124.99(lbs)

TOTAL AREA OF SLIDING MASS = 41634.37(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 135 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	2	250.00	22.00	A
7	2	250.00	22.00	A
8	2	0.00	14.00	A
9	2	0.00	14.00	A
10	2	0.00	14.00	A
11	2	0.00	14.00	A
12	2	0.00	14.00	A
13	2	0.00	14.00	A
14	2	0.00	14.00	A
15	2	0.00	14.00	A
16	2	0.00	14.00	A
17	2	0.00	14.00	A
18	2	0.00	14.00	A
19	2	0.00	14.00	A
20	2	0.00	14.00	A
21	2	0.00	14.00	A
22	2	0.00	14.00	A
23	2	0.00	14.00	A
24	2	0.00	14.00	A
25	2	0.00	14.00	A
26	2	0.00	14.00	A
27	2	0.00	14.00	A
28	2	0.00	14.00	A
29	2	0.00	14.00	A
30	2	0.00	14.00	A
31	2	0.00	14.00	A
32	4	0.00	14.00	A
33	4	0.00	14.00	A
34	4	0.00	14.00	A
35	4	0.00	14.00	A
36	4	0.00	14.00	A
37	4	0.00	14.00	A
38	4	0.00	14.00	A
39	4	0.00	14.00	A
40	4	0.00	14.00	A
41	4	0.00	14.00	A
42	4	0.00	14.00	A
43	4	0.00	14.00	A
44	2	0.00	14.00	A
45	2	0.00	14.00	A
46	2	0.00	14.00	A
47	2	0.00	14.00	A
48	2	0.00	14.00	A
49	2	0.00	14.00	A
50	2	0.00	14.00	A
51	2	0.00	14.00	A
52	2	0.00	14.00	A
53	2	0.00	14.00	A
54	2	0.00	14.00	A
55	2	0.00	14.00	A
56	2	0.00	14.00	A
57	2	0.00	14.00	A
58	2	0.00	14.00	A
59	2	0.00	14.00	A
60	2	0.00	14.00	A
61	2	0.00	14.00	A
62	2	0.00	14.00	A
63	2	0.00	14.00	A
64	2	0.00	14.00	A
65	2	0.00	14.00	A
66	2	0.00	14.00	A
67	2	0.00	14.00	A
68	2	0.00	14.00	A
69	2	0.00	14.00	A
70	2	0.00	14.00	A
71	2	0.00	14.00	A
72	2	0.00	14.00	A
73	2	0.00	14.00	A
74	2	0.00	14.00	A
75	2	0.00	14.00	A
76	2	0.00	14.00	A
77	2	0.00	14.00	A
78	2	0.00	14.00	A
79	2	0.00	14.00	A
80	2	0.00	14.00	A
81	2	0.00	14.00	A
82	2	0.00	14.00	A
83	2	0.00	14.00	A
84	2	0.00	14.00	A
85	2	0.00	14.00	A
86	2	0.00	14.00	A
87	2	0.00	14.00	A
88	2	0.00	14.00	A
89	2	0.00	14.00	A
90	2	0.00	14.00	A
91	2	0.00	14.00	A
92	2	0.00	14.00	A
93	2	0.00	14.00	A
94	2	0.00	14.00	A
95	2	0.00	14.00	A
96	2	0.00	14.00	A
97	2	0.00	14.00	A
98	2	0.00	14.00	A
99	2	0.00	14.00	A
100	2	0.00	14.00	A
101	2	0.00	14.00	A

102	2	0.00	14.00	A
103	2	0.00	14.00	A
104	2	0.00	14.00	A
105	2	0.00	14.00	A
106	2	0.00	14.00	A
107	2	0.00	14.00	A
108	2	0.00	14.00	A
109	2	0.00	14.00	A
110	2	0.00	14.00	A
111	2	0.00	14.00	A
112	2	0.00	14.00	A
113	2	0.00	14.00	A
114	2	0.00	14.00	A
115	2	0.00	14.00	A
116	2	0.00	14.00	A
117	2	0.00	14.00	A
118	2	250.00	22.00	A
119	2	250.00	22.00	A
120	2	250.00	22.00	A
121	2	250.00	22.00	A
122	2	250.00	22.00	A
123	2	250.00	22.00	A
124	2	250.00	22.00	A
125	2	250.00	22.00	A
126	2	250.00	22.00	A
127	2	250.00	22.00	A
128	2	250.00	22.00	A
129	2	250.00	22.00	A
130	2	250.00	22.00	A
131	2	250.00	22.00	A
132	2	250.00	22.00	A
133	2	250.00	22.00	A
134	2	250.00	22.00	A
135	2	250.00	22.00	A

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 135 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-39.24	210.15	5.86	493.57	419.75	284.57
1	-39.24	210.15	5.86	493.57	419.75	284.57
2	-39.24	214.69	5.86	1160.04	716.48	485.73
2	-39.24	214.69	5.86	1160.04	716.48	485.73
3	-44.66	219.65	7.58	2160.53	1161.93	787.71
3	-44.66	219.65	7.58	2160.53	1161.93	787.71
4	-44.66	225.05	7.58	3180.36	1615.99	1095.54
4	-44.66	225.05	7.58	3180.36	1615.99	1095.54
5	-44.66	230.44	7.58	4200.19	2070.05	1403.36
5	-44.66	230.44	7.58	4200.19	2070.05	1403.36
6	-44.66	234.43	3.62	4798.74	2188.81	1483.87
6	-44.66	234.43	3.62	4798.74	2188.81	1483.87
7	-44.66	237.00	3.62	5265.62	2377.45	1611.76
7	-44.66	237.00	3.62	5265.62	2377.45	1611.76
8	-8.03	240.77	5.00	3898.57	972.02	658.97
8	-8.03	240.77	5.00	3898.57	972.02	658.97
9	-8.03	245.72	5.00	4036.72	1006.47	682.32
9	-8.03	245.72	5.00	4036.72	1006.47	682.32
10	-8.03	250.67	5.00	4174.88	1040.91	705.67
10	-8.03	250.67	5.00	4174.88	1040.91	705.67
11	-8.03	255.62	5.00	4313.03	1075.36	729.02
11	-8.03	255.62	5.00	4313.03	1075.36	729.02
12	-8.03	260.57	5.00	4451.19	1109.81	752.38
12	-8.03	260.57	5.00	4451.19	1109.81	752.38
13	-8.03	265.52	5.00	4589.34	1144.25	775.73
13	-8.03	265.52	5.00	4589.34	1144.25	775.73
14	-13.04	270.10	4.31	4821.32	1202.09	814.94
14	-13.04	270.10	4.31	4821.32	1202.09	814.94
15	-13.04	274.30	4.31	4988.21	1243.70	843.15
15	-13.04	274.30	4.31	4988.21	1243.70	843.15
16	-13.04	279.00	5.34	5197.24	1295.82	878.48
16	-13.04	279.00	5.34	5197.24	1295.82	878.48
17	-13.04	284.21	5.34	5448.42	1358.44	920.94
17	-13.04	284.21	5.34	5448.42	1358.44	920.94
18	-13.04	289.42	5.34	5699.61	1421.07	963.39
18	-13.04	289.42	5.34	5699.61	1421.07	963.39
19	-13.04	294.62	5.34	5950.79	1483.70	1005.85
19	-13.04	294.62	5.34	5950.79	1483.70	1005.85
20	-2.88	299.99	5.54	5944.15	1482.04	1004.73
20	-2.88	299.99	5.54	5944.15	1482.04	1004.73
21	-2.88	305.53	5.54	6080.85	1516.13	1027.84
21	-2.88	305.53	5.54	6080.85	1516.13	1027.84
22	-2.88	310.74	4.89	6213.71	1549.25	1050.29
22	-2.88	310.74	4.89	6213.71	1549.25	1050.29
23	-2.88	315.62	4.89	6342.71	1581.41	1072.10
23	-2.88	315.62	4.89	6342.71	1581.41	1072.10
24	-2.88	320.50	4.89	6471.71	1613.58	1093.90
24	-2.88	320.50	4.89	6471.71	1613.58	1093.90
25	-2.88	325.38	4.89	6600.71	1645.74	1115.71
25	-2.88	325.38	4.89	6600.71	1645.74	1115.71
26	-2.88	330.26	4.89	6729.71	1677.90	1137.51
26	-2.88	330.26	4.89	6729.71	1677.90	1137.51
27	-2.88	335.38	5.37	6850.91	1708.12	1158.00
27	-2.88	335.38	5.37	6850.91	1708.12	1158.00
28	-2.88	340.75	5.37	6964.30	1736.40	1177.16
28	-2.88	340.75	5.37	6964.30	1736.40	1177.16
29	-2.88	346.12	5.37	7077.69	1764.67	1196.33
29	-2.88	346.12	5.37	7077.69	1764.67	1196.33
30	-2.88	350.46	3.32	7187.90	1792.15	1214.96
30	-2.88	350.46	3.32	7187.90	1792.15	1214.96
31	-2.88	353.78	3.32	7294.92	1818.83	1233.05
31	-2.88	353.78	3.32	7294.92	1818.83	1233.05
32	-2.88	357.93	4.99	7428.82	1852.21	1255.68
32	-2.88	357.93	4.99	7428.82	1852.21	1255.68
33	-2.88	362.92	4.99	7589.61	1892.30	1282.86
33	-2.88	362.92	4.99	7589.61	1892.30	1282.86
34	-2.88	367.91	4.99	7750.39	1932.39	1310.03
34	-2.88	367.91	4.99	7750.39	1932.39	1310.03
35	-0.52	372.87	4.94	7839.26	1954.55	1325.06
35	-0.52	372.87	4.94	7839.26	1954.55	1325.06
36	-0.52	377.82	4.94	7972.95	1987.88	1347.65

36	-0.52	377.82	4.94	7972.95	1987.88	1347.65
37	-0.52	382.76	4.94	8106.65	2021.21	1370.25
37	-0.52	382.76	4.94	8106.65	2021.21	1370.25
38	-0.52	387.71	4.94	8240.35	2054.55	1392.85
38	-0.52	387.71	4.94	8240.35	2054.55	1392.85
39	-0.52	392.65	4.94	8374.04	2087.88	1415.45
39	-0.52	392.65	4.94	8374.04	2087.88	1415.45
40	-0.52	397.59	4.94	8507.74	2121.22	1438.05
40	-0.52	397.59	4.94	8507.74	2121.22	1438.05
41	-0.52	402.54	4.94	8641.43	2154.55	1460.65
41	-0.52	402.54	4.94	8641.43	2154.55	1460.65
42	-0.52	407.48	4.94	8775.13	2187.89	1483.24
42	-0.52	407.48	4.94	8775.13	2187.89	1483.24
43	-0.52	412.43	4.94	8908.83	2221.22	1505.84
43	-0.52	412.43	4.94	8908.83	2221.22	1505.84
44	5.31	415.65	1.51	8824.24	2200.13	1491.54
44	5.31	415.65	1.51	8824.24	2200.13	1491.54
45	5.31	418.90	5.02	8847.82	2206.01	1495.53
45	5.31	418.90	5.02	8847.82	2206.01	1495.53
46	5.31	423.90	5.02	8873.20	2212.34	1499.82
46	5.31	423.90	5.02	8873.20	2212.34	1499.82
47	5.31	428.90	5.02	8898.59	2218.67	1504.11
47	5.31	428.90	5.02	8898.59	2218.67	1504.11
48	5.31	433.90	5.02	8923.98	2225.00	1508.40
48	5.31	433.90	5.02	8923.98	2225.00	1508.40
49	5.31	438.90	5.02	8949.37	2231.33	1512.70
49	5.31	438.90	5.02	8949.37	2231.33	1512.70
50	5.31	443.93	5.09	8973.99	2237.47	1516.86
50	5.31	443.93	5.09	8973.99	2237.47	1516.86
51	5.31	449.00	5.09	8997.86	2243.42	1520.89
51	5.31	449.00	5.09	8997.86	2243.42	1520.89
52	5.31	454.07	5.09	9021.73	2249.37	1524.93
52	5.31	454.07	5.09	9021.73	2249.37	1524.93
53	5.31	459.13	5.09	9045.60	2255.32	1528.96
53	5.31	459.13	5.09	9045.60	2255.32	1528.96
54	5.31	464.20	5.09	9069.47	2261.27	1533.00
54	5.31	464.20	5.09	9069.47	2261.27	1533.00
55	5.31	469.27	5.09	9093.34	2267.22	1537.03
55	5.31	469.27	5.09	9093.34	2267.22	1537.03
56	5.31	474.33	5.09	9117.21	2273.18	1541.07
56	5.31	474.33	5.09	9117.21	2273.18	1541.07
57	5.31	479.40	5.09	9141.08	2279.13	1545.10
57	5.31	479.40	5.09	9141.08	2279.13	1545.10
58	5.31	484.47	5.09	9164.95	2285.08	1549.13
58	5.31	484.47	5.09	9164.95	2285.08	1549.13
59	5.31	489.53	5.09	9188.82	2291.03	1553.17
59	5.31	489.53	5.09	9188.82	2291.03	1553.17
60	5.31	494.60	5.09	9212.68	2296.98	1557.20
60	5.31	494.60	5.09	9212.68	2296.98	1557.20
61	5.31	499.67	5.09	9236.55	2302.93	1561.24
61	5.31	499.67	5.09	9236.55	2302.93	1561.24
62	5.31	504.73	5.09	9260.42	2308.88	1565.27
62	5.31	504.73	5.09	9260.42	2308.88	1565.27
63	5.31	509.80	5.09	9284.29	2314.83	1569.31
63	5.31	509.80	5.09	9284.29	2314.83	1569.31
64	5.31	514.87	5.09	9308.16	2320.79	1573.34
64	5.31	514.87	5.09	9308.16	2320.79	1573.34
65	5.31	519.91	5.04	9301.42	2319.10	1572.20
65	5.31	519.91	5.04	9301.42	2319.10	1572.20
66	5.31	524.92	5.04	9264.08	2309.79	1565.89
66	5.31	524.92	5.04	9264.08	2309.79	1565.89
67	5.31	529.94	5.04	9226.73	2300.48	1559.58
67	5.31	529.94	5.04	9226.73	2300.48	1559.58
68	5.31	534.96	5.04	9189.38	2291.17	1553.26
68	5.31	534.96	5.04	9189.38	2291.17	1553.26
69	5.31	539.98	5.04	9152.04	2281.86	1546.95
69	5.31	539.98	5.04	9152.04	2281.86	1546.95
70	5.31	544.99	5.04	9114.69	2272.55	1540.64
70	5.31	544.99	5.04	9114.69	2272.55	1540.64
71	5.31	549.96	4.95	9130.22	2276.42	1543.27
71	5.31	549.96	4.95	9130.22	2276.42	1543.27
72	5.31	554.89	4.95	9198.64	2293.48	1554.83
72	5.31	554.89	4.95	9198.64	2293.48	1554.83
73	5.31	559.82	4.95	9267.06	2310.54	1566.39
73	5.31	559.82	4.95	9267.06	2310.54	1566.39
74	5.31	564.74	4.95	9335.47	2327.59	1577.96
74	5.31	564.74	4.95	9335.47	2327.59	1577.96
75	5.31	569.67	4.95	9403.89	2344.65	1589.52
75	5.31	569.67	4.95	9403.89	2344.65	1589.52
76	5.31	574.60	4.95	9472.31	2361.71	1601.09
76	5.31	574.60	4.95	9472.31	2361.71	1601.09
77	5.31	579.52	4.95	9540.72	2378.77	1612.65
77	5.31	579.52	4.95	9540.72	2378.77	1612.65
78	5.31	584.45	4.95	9609.14	2395.83	1624.22
78	5.31	584.45	4.95	9609.14	2395.83	1624.22
79	5.31	589.38	4.95	9677.55	2412.89	1635.78
79	5.31	589.38	4.95	9677.55	2412.89	1635.78
80	5.31	594.30	4.95	9745.97	2429.94	1647.34
80	5.31	594.30	4.95	9745.97	2429.94	1647.34
81	5.31	599.23	4.95	9814.39	2447.00	1658.91
81	5.31	599.23	4.95	9814.39	2447.00	1658.91
82	5.31	604.16	4.95	9882.80	2464.06	1670.47
82	5.31	604.16	4.95	9882.80	2464.06	1670.47
83	5.31	609.08	4.95	9951.22	2481.12	1682.04
83	5.31	609.08	4.95	9951.22	2481.12	1682.04
84	5.31	614.01	4.95	10019.64	2498.18	1693.60
84	5.31	614.01	4.95	10019.64	2498.18	1693.60
85	5.31	618.94	4.95	10088.05	2515.23	1705.17
85	5.31	618.94	4.95	10088.05	2515.23	1705.17
86	23.39	624.12	5.92	9480.06	2363.64	1602.40
86	23.39	624.12	5.92	9480.06	2363.64	1602.40
87	23.39	629.55	5.92	9345.82	2330.17	1579.71
87	23.39	629.55	5.92	9345.82	2330.17	1579.71
88	23.39	634.98	5.92	9211.58	2296.70	1557.02
88	23.39	634.98	5.92	9211.58	2296.70	1557.02
89	23.39	640.23	5.52	9120.02	2273.88	1541.54
89	23.39	640.23	5.52	9120.02	2273.88	1541.54
90	23.39	645.30	5.52	9071.14	2261.69	1533.28
90	23.39	645.30	5.52	9071.14	2261.69	1533.28
91	23.39	650.37	5.52	9022.26	2249.50	1525.02
91	23.39	650.37	5.52	9022.26	2249.50	1525.02
92	23.39	655.44	5.52	8973.38	2237.32	1516.75
92	23.39	655.44	5.52	8973.38	2237.32	1516.75
93	23.39	660.51	5.52	8924.50	2225.13	1508.49
93	23.39	660.51	5.52	8924.50	2225.13	1508.49
94	23.39	665.58	5.52	8875.62	2212.94	1500.23
94	23.39	665.58	5.52	8875.62	2212.94	1500.23
95	23.39	670.65	5.52	8826.75	2200.76	1491.97
95	23.39	670.65	5.52	8826.75	2200.76	1491.97
96	23.39	675.72	5.52	8777.87	2188.57	1483.71

96	23.39	675.72	5.52	8777.87	2188.57	1483.71
97	23.39	680.79	5.52	8728.99	2176.38	1475.45
97	23.39	680.79	5.52	8728.99	2176.38	1475.45
98	23.39	685.86	5.52	8680.11	2164.20	1467.18
98	23.39	685.86	5.52	8680.11	2164.20	1467.18
99	23.39	690.93	5.52	8631.23	2152.01	1458.92
99	23.39	690.93	5.52	8631.23	2152.01	1458.92
100	23.39	696.00	5.52	8582.36	2139.82	1450.66
100	23.39	696.00	5.52	8582.36	2139.82	1450.66
101	23.39	701.07	5.52	8533.48	2127.64	1442.40
101	23.39	701.07	5.52	8533.48	2127.64	1442.40
102	23.39	706.13	5.52	8484.60	2115.45	1434.14
102	23.39	706.13	5.52	8484.60	2115.45	1434.14
103	23.39	711.20	5.52	8435.72	2103.26	1425.87
103	23.39	711.20	5.52	8435.72	2103.26	1425.87
104	23.39	716.27	5.52	8386.84	2091.08	1417.61
104	23.39	716.27	5.52	8386.84	2091.08	1417.61
105	23.39	721.34	5.52	8337.97	2078.89	1409.35
105	23.39	721.34	5.52	8337.97	2078.89	1409.35
106	23.39	726.41	5.52	8289.09	2066.70	1401.09
106	23.39	726.41	5.52	8289.09	2066.70	1401.09
107	23.39	731.48	5.52	8240.21	2054.52	1392.83
107	23.39	731.48	5.52	8240.21	2054.52	1392.83
108	23.39	736.55	5.52	8191.33	2042.33	1384.57
108	23.39	736.55	5.52	8191.33	2042.33	1384.57
109	23.39	741.62	5.52	8142.45	2030.14	1376.30
109	23.39	741.62	5.52	8142.45	2030.14	1376.30
110	23.39	746.69	5.52	8093.58	2017.96	1368.04
110	23.39	746.69	5.52	8093.58	2017.96	1368.04
111	23.39	751.76	5.52	8044.70	2005.77	1359.78
111	23.39	751.76	5.52	8044.70	2005.77	1359.78
112	23.39	756.83	5.52	7995.82	1993.58	1351.52
112	23.39	756.83	5.52	7995.82	1993.58	1351.52
113	23.39	761.90	5.52	7946.94	1981.40	1343.26
113	23.39	761.90	5.52	7946.94	1981.40	1343.26
114	23.39	766.97	5.52	7898.06	1969.21	1335.00
114	23.39	766.97	5.52	7898.06	1969.21	1335.00
115	23.39	772.02	5.48	7868.57	1961.85	1330.01
115	23.39	772.02	5.48	7868.57	1961.85	1330.01
116	23.39	777.05	5.48	7858.46	1959.33	1328.30
116	23.39	777.05	5.48	7858.46	1959.33	1328.30
117	23.39	782.08	5.48	7848.35	1956.81	1326.59
117	23.39	782.08	5.48	7848.35	1956.81	1326.59
118	51.89	787.08	8.03	5805.97	2595.76	1759.76
118	51.89	787.08	8.03	5805.97	2595.76	1759.76
119	51.89	792.03	8.03	5433.37	2445.22	1657.70
119	51.89	792.03	8.03	5433.37	2445.22	1657.70
120	51.89	796.98	8.03	5060.77	2294.68	1555.65
120	51.89	796.98	8.03	5060.77	2294.68	1555.65
121	51.89	801.94	8.03	4688.17	2144.14	1453.59
121	51.89	801.94	8.03	4688.17	2144.14	1453.59
122	51.89	806.89	8.03	4315.57	1993.60	1351.53
122	51.89	806.89	8.03	4315.57	1993.60	1351.53
123	51.89	811.85	8.03	3942.97	1843.06	1249.48
123	51.89	811.85	8.03	3942.97	1843.06	1249.48
124	51.89	816.80	8.03	3570.37	1692.52	1147.42
124	51.89	816.80	8.03	3570.37	1692.52	1147.42
125	51.89	821.75	8.03	3197.77	1541.98	1045.36
125	51.89	821.75	8.03	3197.77	1541.98	1045.36
126	51.89	826.71	8.03	2825.17	1391.44	943.31
126	51.89	826.71	8.03	2825.17	1391.44	943.31
127	51.89	831.66	8.03	2452.57	1240.90	841.25
127	51.89	831.66	8.03	2452.57	1240.90	841.25
128	51.89	836.62	8.03	2079.97	1090.36	739.19
128	51.89	836.62	8.03	2079.97	1090.36	739.19
129	51.89	841.57	8.03	1707.37	939.82	637.14
129	51.89	841.57	8.03	1707.37	939.82	637.14
130	51.89	846.52	8.03	1334.77	789.28	535.08
130	51.89	846.52	8.03	1334.77	789.28	535.08
131	46.63	851.80	8.16	1068.38	681.65	462.12
131	46.63	851.80	8.16	1068.38	681.65	462.12
132	46.63	857.40	8.16	737.76	548.08	371.56
132	46.63	857.40	8.16	737.76	548.08	371.56
133	46.63	862.55	6.84	422.55	420.72	285.22
133	46.63	862.55	6.84	422.55	420.72	285.22
134	46.63	867.25	6.84	122.74	299.59	203.10
134	46.63	867.25	6.84	122.74	299.59	203.10
135	62.55	870.02	1.80	49.88	20.15	13.66
135	62.55	870.02	1.80	49.88	20.15	13.66

Table 4 - Base Force Data on the 135 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-39.24	210.15	5.86	2890.39	2458.09	1666.42
1	-39.24	210.15	5.86	2890.39	2458.09	1666.42
2	-39.24	214.69	5.86	6793.20	4195.73	2844.43
2	-39.24	214.69	5.86	6793.20	4195.73	2844.43
3	-44.66	219.65	7.58	16387.61	8813.23	5974.80
3	-44.66	219.65	7.58	16387.61	8813.23	5974.80
4	-44.66	225.05	7.58	24122.99	12257.24	8309.62
4	-44.66	225.05	7.58	24122.99	12257.24	8309.62
5	-44.66	230.44	7.58	31858.37	15701.25	10644.43
5	-44.66	230.44	7.58	31858.37	15701.25	10644.43
6	-44.66	234.43	3.62	17383.55	7929.04	5375.38
6	-44.66	234.43	3.62	17383.55	7929.04	5375.38
7	-44.66	237.00	3.62	19074.87	8612.38	5838.63
7	-44.66	237.00	3.62	19074.87	8612.38	5838.63
8	-8.03	240.77	5.00	19492.83	4860.11	3294.84
8	-8.03	240.77	5.00	19492.83	4860.11	3294.84
9	-8.03	245.72	5.00	20183.61	5032.34	3411.60
9	-8.03	245.72	5.00	20183.61	5032.34	3411.60
10	-8.03	250.67	5.00	20874.38	5204.57	3528.36
10	-8.03	250.67	5.00	20874.38	5204.57	3528.36
11	-8.03	255.62	5.00	21565.16	5376.80	3645.12
11	-8.03	255.62	5.00	21565.16	5376.80	3645.12
12	-8.03	260.57	5.00	22255.94	5549.03	3761.88
12	-8.03	260.57	5.00	22255.94	5549.03	3761.88
13	-8.03	265.52	5.00	22946.71	5721.26	3878.64
13	-8.03	265.52	5.00	22946.71	5721.26	3878.64
14	-13.04	270.10	4.31	20788.62	5183.18	3513.86
14	-13.04	270.10	4.31	20788.62	5183.18	3513.86
15	-13.04	274.30	4.31	21508.21	5362.60	3635.49
15	-13.04	274.30	4.31	21508.21	5362.60	3635.49
16	-13.04	279.00	5.34	27774.56	6924.98	4694.68
16	-13.04	279.00	5.34	27774.56	6924.98	4694.68

17	-13.04	284.21	5.34	29116.90	7259.66	4921.58
17	-13.04	284.21	5.34	29116.90	7259.66	4921.58
18	-13.04	289.42	5.34	30459.23	7594.34	5148.47
18	-13.04	289.42	5.34	30459.23	7594.34	5148.47
19	-13.04	294.62	5.34	31801.57	7929.02	5375.36
19	-13.04	294.62	5.34	31801.57	7929.02	5375.36
20	-2.88	299.99	5.54	32957.49	8217.22	5570.74
20	-2.88	299.99	5.54	32957.49	8217.22	5570.74
21	-2.88	305.53	5.54	33715.46	8406.21	5698.86
21	-2.88	305.53	5.54	33715.46	8406.21	5698.86
22	-2.88	310.74	4.89	30361.16	7569.89	5131.89
22	-2.88	310.74	4.89	30361.16	7569.89	5131.89
23	-2.88	315.62	4.89	30991.48	7727.04	5238.43
23	-2.88	315.62	4.89	30991.48	7727.04	5238.43
24	-2.88	320.50	4.89	31621.80	7884.20	5344.98
24	-2.88	320.50	4.89	31621.80	7884.20	5344.98
25	-2.88	325.38	4.89	32252.11	8041.35	5451.52
25	-2.88	325.38	4.89	32252.11	8041.35	5451.52
26	-2.88	330.26	4.89	32882.43	8198.51	5558.06
26	-2.88	330.26	4.89	32882.43	8198.51	5558.06
27	-2.88	335.38	5.37	36812.94	9178.50	6222.42
27	-2.88	335.38	5.37	36812.94	9178.50	6222.42
28	-2.88	340.75	5.37	37422.25	9330.42	6325.42
28	-2.88	340.75	5.37	37422.25	9330.42	6325.42
29	-2.88	346.12	5.37	38031.57	9482.33	6428.41
29	-2.88	346.12	5.37	38031.57	9482.33	6428.41
30	-2.88	350.46	3.32	23890.03	5956.45	4038.09
30	-2.88	350.46	3.32	23890.03	5956.45	4038.09
31	-2.88	353.78	3.32	24245.72	6045.14	4098.21
31	-2.88	353.78	3.32	24245.72	6045.14	4098.21
32	-2.88	357.93	4.99	37094.54	9248.71	6270.02
32	-2.88	357.93	4.99	37094.54	9248.71	6270.02
33	-2.88	362.92	4.99	37897.38	9448.88	6405.73
33	-2.88	362.92	4.99	37897.38	9448.88	6405.73
34	-2.88	367.91	4.99	38700.23	9649.05	6541.43
34	-2.88	367.91	4.99	38700.23	9649.05	6541.43
35	-0.52	372.87	4.94	38762.34	9664.54	6551.93
35	-0.52	372.87	4.94	38762.34	9664.54	6551.93
36	-0.52	377.82	4.94	39423.42	9829.36	6663.67
36	-0.52	377.82	4.94	39423.42	9829.36	6663.67
37	-0.52	382.76	4.94	40084.50	9994.19	6775.41
37	-0.52	382.76	4.94	40084.50	9994.19	6775.41
38	-0.52	387.71	4.94	40745.58	10159.01	6887.15
38	-0.52	387.71	4.94	40745.58	10159.01	6887.15
39	-0.52	392.65	4.94	41406.66	10323.84	6998.89
39	-0.52	392.65	4.94	41406.66	10323.84	6998.89
40	-0.52	397.59	4.94	42067.74	10488.66	7110.63
40	-0.52	397.59	4.94	42067.74	10488.66	7110.63
41	-0.52	402.54	4.94	42728.82	10653.49	7222.37
41	-0.52	402.54	4.94	42728.82	10653.49	7222.37
42	-0.52	407.48	4.94	43389.89	10818.32	7334.12
42	-0.52	407.48	4.94	43389.89	10818.32	7334.12
43	-0.52	412.43	4.94	44050.97	10983.14	7445.86
43	-0.52	412.43	4.94	44050.97	10983.14	7445.86
44	5.31	415.65	1.51	13293.44	3314.43	2246.97
44	5.31	415.65	1.51	13293.44	3314.43	2246.97
45	5.31	418.90	5.02	44429.89	11077.62	7509.91
45	5.31	418.90	5.02	44429.89	11077.62	7509.91
46	5.31	423.90	5.02	44557.38	11109.40	7531.45
46	5.31	423.90	5.02	44557.38	11109.40	7531.45
47	5.31	428.90	5.02	44684.86	11141.19	7553.00
47	5.31	428.90	5.02	44684.86	11141.19	7553.00
48	5.31	433.90	5.02	44812.35	11172.97	7574.55
48	5.31	433.90	5.02	44812.35	11172.97	7574.55
49	5.31	438.90	5.02	44939.83	11204.76	7596.10
49	5.31	438.90	5.02	44939.83	11204.76	7596.10
50	5.31	443.93	5.09	45664.35	11385.40	7718.56
50	5.31	443.93	5.09	45664.35	11385.40	7718.56
51	5.31	449.00	5.09	45785.81	11415.68	7739.09
51	5.31	449.00	5.09	45785.81	11415.68	7739.09
52	5.31	454.07	5.09	45907.27	11445.97	7759.62
52	5.31	454.07	5.09	45907.27	11445.97	7759.62
53	5.31	459.13	5.09	46028.73	11476.25	7780.15
53	5.31	459.13	5.09	46028.73	11476.25	7780.15
54	5.31	464.20	5.09	46150.18	11506.53	7800.68
54	5.31	464.20	5.09	46150.18	11506.53	7800.68
55	5.31	469.27	5.09	46271.64	11536.82	7821.21
55	5.31	469.27	5.09	46271.64	11536.82	7821.21
56	5.31	474.33	5.09	46393.10	11567.10	7841.74
56	5.31	474.33	5.09	46393.10	11567.10	7841.74
57	5.31	479.40	5.09	46514.56	11597.38	7862.27
57	5.31	479.40	5.09	46514.56	11597.38	7862.27
58	5.31	484.47	5.09	46636.02	11627.66	7882.80
58	5.31	484.47	5.09	46636.02	11627.66	7882.80
59	5.31	489.53	5.09	46757.47	11657.95	7903.33
59	5.31	489.53	5.09	46757.47	11657.95	7903.33
60	5.31	494.60	5.09	46878.93	11688.23	7923.86
60	5.31	494.60	5.09	46878.93	11688.23	7923.86
61	5.31	499.67	5.09	47000.39	11718.51	7944.39
61	5.31	499.67	5.09	47000.39	11718.51	7944.39
62	5.31	504.73	5.09	47121.85	11748.80	7964.92
62	5.31	504.73	5.09	47121.85	11748.80	7964.92
63	5.31	509.80	5.09	47243.31	11779.08	7985.45
63	5.31	509.80	5.09	47243.31	11779.08	7985.45
64	5.31	514.87	5.09	47364.76	11809.36	8005.98
64	5.31	514.87	5.09	47364.76	11809.36	8005.98
65	5.31	519.91	5.04	46863.40	11684.36	7921.24
65	5.31	519.91	5.04	46863.40	11684.36	7921.24
66	5.31	524.92	5.04	46675.23	11637.44	7889.43
66	5.31	524.92	5.04	46675.23	11637.44	7889.43
67	5.31	529.94	5.04	46487.07	11590.53	7857.63
67	5.31	529.94	5.04	46487.07	11590.53	7857.63
68	5.31	534.96	5.04	46298.90	11543.61	7825.82
68	5.31	534.96	5.04	46298.90	11543.61	7825.82
69	5.31	539.98	5.04	46110.74	11496.70	7794.02
69	5.31	539.98	5.04	46110.74	11496.70	7794.02
70	5.31	544.99	5.04	45922.58	11449.78	7762.21
70	5.31	544.99	5.04	45922.58	11449.78	7762.21
71	5.31	549.96	4.95	45175.58	11263.54	7635.95
71	5.31	549.96	4.95	45175.58	11263.54	7635.95
72	5.31	554.89	4.95	45514.10	11347.94	7693.17
72	5.31	554.89	4.95	45514.10	11347.94	7693.17
73	5.31	559.82	4.95	45852.62	11432.34	7750.39
73	5.31	559.82	4.95	45852.62	11432.34	7750.39
74	5.31	564.74	4.95	46191.14	11516.74	7807.60
74	5.31	564.74	4.95	46191.14	11516.74	7807.60
75	5.31	569.67	4.95	46529.65	11601.15	7864.82
75	5.31	569.67	4.95	46529.65	11601.15	7864.82
76	5.31	574.60	4.95	46868.17	11685.55	7922.04
76	5.31	574.60	4.95	46868.17	11685.55	7922.04

77	5.31	579.52	4.95	47206.69	11769.95	7979.26
77	5.31	579.52	4.95	47206.69	11769.95	7979.26
78	5.31	584.45	4.95	47545.21	11854.35	8036.48
78	5.31	584.45	4.95	47545.21	11854.35	8036.48
79	5.31	589.38	4.95	47883.73	11938.75	8093.70
79	5.31	589.38	4.95	47883.73	11938.75	8093.70
80	5.31	594.30	4.95	48222.24	12023.16	8150.92
80	5.31	594.30	4.95	48222.24	12023.16	8150.92
81	5.31	599.23	4.95	48560.76	12107.56	8208.14
81	5.31	599.23	4.95	48560.76	12107.56	8208.14
82	5.31	604.16	4.95	48899.28	12191.96	8265.36
82	5.31	604.16	4.95	48899.28	12191.96	8265.36
83	5.31	609.08	4.95	49237.80	12276.36	8322.58
83	5.31	609.08	4.95	49237.80	12276.36	8322.58
84	5.31	614.01	4.95	49576.32	12360.76	8379.80
84	5.31	614.01	4.95	49576.32	12360.76	8379.80
85	5.31	618.94	4.95	49914.83	12445.17	8437.01
85	5.31	618.94	4.95	49914.83	12445.17	8437.01
86	23.39	624.12	5.92	56121.41	13992.64	9486.10
86	23.39	624.12	5.92	56121.41	13992.64	9486.10
87	23.39	629.55	5.92	55326.70	13794.50	9351.77
87	23.39	629.55	5.92	55326.70	13794.50	9351.77
88	23.39	634.98	5.92	54532.00	13596.35	9217.45
88	23.39	634.98	5.92	54532.00	13596.35	9217.45
89	23.39	640.23	5.52	50371.95	12559.14	8514.28
89	23.39	640.23	5.52	50371.95	12559.14	8514.28
90	23.39	645.30	5.52	50101.99	12491.83	8468.65
90	23.39	645.30	5.52	50101.99	12491.83	8468.65
91	23.39	650.37	5.52	49832.02	12424.52	8423.02
91	23.39	650.37	5.52	49832.02	12424.52	8423.02
92	23.39	655.44	5.52	49562.06	12357.21	8377.39
92	23.39	655.44	5.52	49562.06	12357.21	8377.39
93	23.39	660.51	5.52	49292.09	12289.90	8331.75
93	23.39	660.51	5.52	49292.09	12289.90	8331.75
94	23.39	665.58	5.52	49022.13	12222.59	8286.12
94	23.39	665.58	5.52	49022.13	12222.59	8286.12
95	23.39	670.65	5.52	48752.16	12155.28	8240.49
95	23.39	670.65	5.52	48752.16	12155.28	8240.49
96	23.39	675.72	5.52	48482.20	12087.97	8194.86
96	23.39	675.72	5.52	48482.20	12087.97	8194.86
97	23.39	680.79	5.52	48212.23	12020.66	8149.23
97	23.39	680.79	5.52	48212.23	12020.66	8149.23
98	23.39	685.86	5.52	47942.27	11953.35	8103.60
98	23.39	685.86	5.52	47942.27	11953.35	8103.60
99	23.39	690.93	5.52	47672.30	11886.04	8057.96
99	23.39	690.93	5.52	47672.30	11886.04	8057.96
100	23.39	696.00	5.52	47402.34	11818.73	8012.33
100	23.39	696.00	5.52	47402.34	11818.73	8012.33
101	23.39	701.07	5.52	47132.37	11751.42	7966.70
101	23.39	701.07	5.52	47132.37	11751.42	7966.70
102	23.39	706.13	5.52	46862.41	11684.11	7921.07
102	23.39	706.13	5.52	46862.41	11684.11	7921.07
103	23.39	711.20	5.52	46592.45	11616.80	7875.44
103	23.39	711.20	5.52	46592.45	11616.80	7875.44
104	23.39	716.27	5.52	46322.48	11549.49	7829.81
104	23.39	716.27	5.52	46322.48	11549.49	7829.81
105	23.39	721.34	5.52	46052.52	11482.18	7784.17
105	23.39	721.34	5.52	46052.52	11482.18	7784.17
106	23.39	726.41	5.52	45782.55	11414.87	7738.54
106	23.39	726.41	5.52	45782.55	11414.87	7738.54
107	23.39	731.48	5.52	45512.59	11347.56	7692.91
107	23.39	731.48	5.52	45512.59	11347.56	7692.91
108	23.39	736.55	5.52	45242.62	11280.25	7647.28
108	23.39	736.55	5.52	45242.62	11280.25	7647.28
109	23.39	741.62	5.52	44972.66	11212.94	7601.65
109	23.39	741.62	5.52	44972.66	11212.94	7601.65
110	23.39	746.69	5.52	44702.69	11145.63	7556.02
110	23.39	746.69	5.52	44702.69	11145.63	7556.02
111	23.39	751.76	5.52	44432.73	11078.32	7510.38
111	23.39	751.76	5.52	44432.73	11078.32	7510.38
112	23.39	756.83	5.52	44162.76	11011.01	7464.75
112	23.39	756.83	5.52	44162.76	11011.01	7464.75
113	23.39	761.90	5.52	43892.80	10943.70	7419.12
113	23.39	761.90	5.52	43892.80	10943.70	7419.12
114	23.39	766.97	5.52	43622.83	10876.39	7373.49
114	23.39	766.97	5.52	43622.83	10876.39	7373.49
115	23.39	772.02	5.48	43152.17	10759.04	7293.93
115	23.39	772.02	5.48	43152.17	10759.04	7293.93
116	23.39	777.05	5.48	43096.72	10745.22	7284.56
116	23.39	777.05	5.48	43096.72	10745.22	7284.56
117	23.39	782.08	5.48	43041.28	10731.40	7275.19
117	23.39	782.08	5.48	43041.28	10731.40	7275.19
118	51.89	787.08	8.03	46601.62	20834.90	14124.71
118	51.89	787.08	8.03	46601.62	20834.90	14124.71
119	51.89	792.03	8.03	43610.94	19626.59	13305.55
119	51.89	792.03	8.03	43610.94	19626.59	13305.55
120	51.89	796.98	8.03	40620.26	18418.28	12486.40
120	51.89	796.98	8.03	40620.26	18418.28	12486.40
121	51.89	801.94	8.03	37629.59	17209.96	11667.24
121	51.89	801.94	8.03	37629.59	17209.96	11667.24
122	51.89	806.89	8.03	34638.91	16001.65	10848.08
122	51.89	806.89	8.03	34638.91	16001.65	10848.08
123	51.89	811.85	8.03	31648.24	14793.34	10028.93
123	51.89	811.85	8.03	31648.24	14793.34	10028.93
124	51.89	816.80	8.03	28657.56	13585.03	9209.77
124	51.89	816.80	8.03	28657.56	13585.03	9209.77
125	51.89	821.75	8.03	25666.89	12376.72	8390.61
125	51.89	821.75	8.03	25666.89	12376.72	8390.61
126	51.89	826.71	8.03	22676.21	11168.41	7571.46
126	51.89	826.71	8.03	22676.21	11168.41	7571.46
127	51.89	831.66	8.03	19685.53	9960.10	6752.30
127	51.89	831.66	8.03	19685.53	9960.10	6752.30
128	51.89	836.62	8.03	16694.86	8751.78	5933.14
128	51.89	836.62	8.03	16694.86	8751.78	5933.14
129	51.89	841.57	8.03	13704.18	7543.47	5113.99
129	51.89	841.57	8.03	13704.18	7543.47	5113.99
130	51.89	846.52	8.03	10713.51	6335.16	4294.83
130	51.89	846.52	8.03	10713.51	6335.16	4294.83
131	46.63	851.80	8.16	8713.31	5559.31	3768.85
131	46.63	851.80	8.16	8713.31	5559.31	3768.85
132	46.63	857.40	8.16	6016.92	4469.90	3030.30
132	46.63	857.40	8.16	6016.92	4469.90	3030.30
133	46.63	862.55	6.84	2892.09	2879.58	1952.17
133	46.63	862.55	6.84	2892.09	2879.58	1952.17
134	46.63	867.25	6.84	840.06	2050.50	1390.11
134	46.63	867.25	6.84	840.06	2050.50	1390.11
135	62.55	870.02	1.80	89.96	36.35	24.64
135	62.55	870.02	1.80	89.96	36.35	24.64

Sum of the Resisting Forces = 1275468.08 (lbs)

Average Available Shear Strength =   1721.66(psf)

Sum of the Driving Forces =   922091.09 (lbs)

Average Mobilized Shear Stress =   1244.66(psf)

Total length of the failure surface =   740.84(ft)

Factor of Safety Balance Check: FS = 1.38323

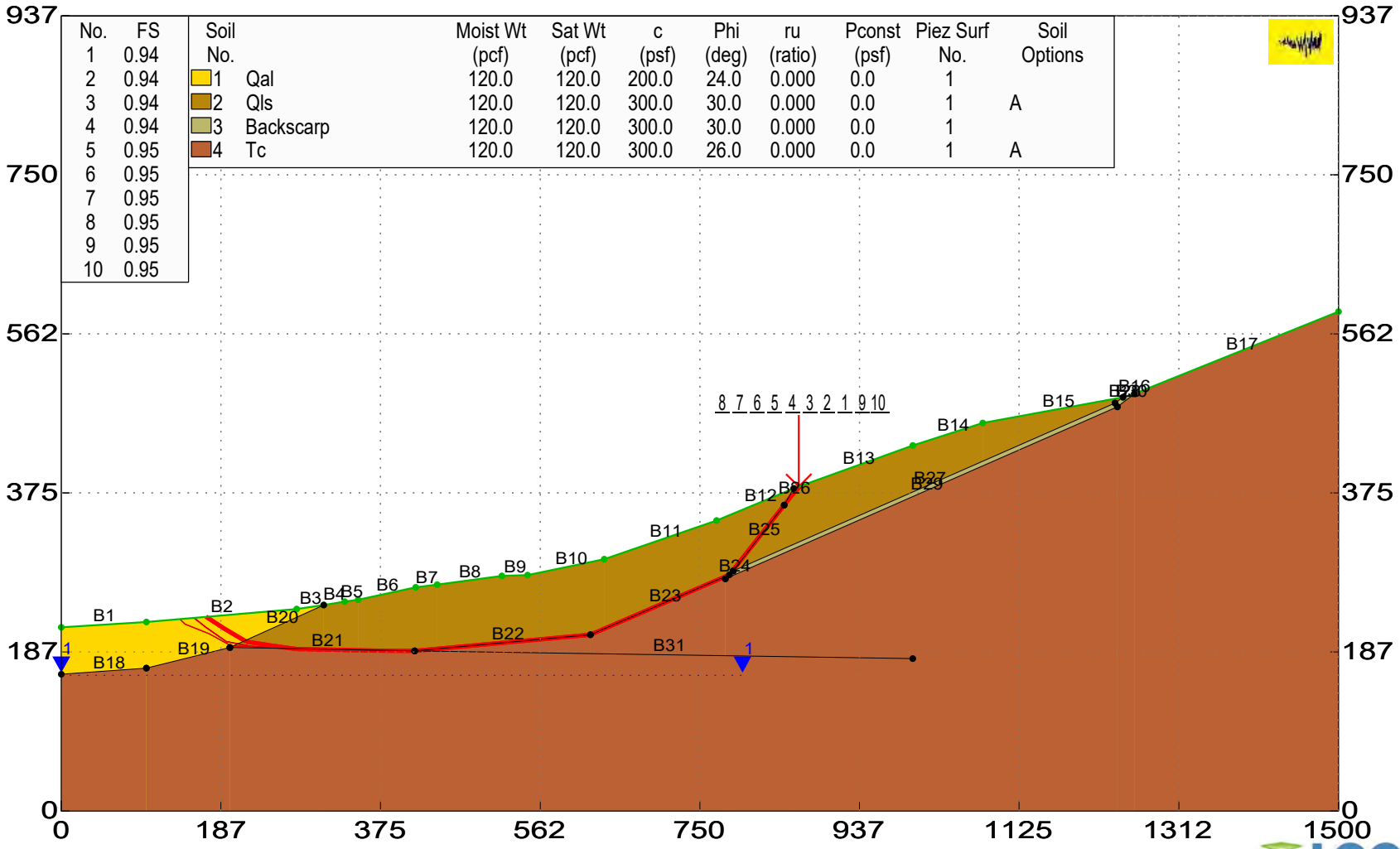
Janbu's Correction Factor (fo) = 1.0655

Janub's FS Corrected = 1.47377

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Existing - Smaller Qls - Seismic

LGC Geotechnical, Inc. \xhe.gsd



No.	FS
1	0.94
2	0.94
3	0.94
4	0.94
5	0.95
6	0.95
7	0.95
8	0.95
9	0.95
10	0.95

Soil No.		Moist Wt (pcf)	Sat Wt (pcf)	c (psf)	Phi (deg)	ru (ratio)	Pconst (psf)	Piez Surf No.	Soil Options
1	Qal	120.0	120.0	200.0	24.0	0.000	0.0	1	
2	Qls	120.0	120.0	300.0	30.0	0.000	0.0	1	A
3	Backscarp	120.0	120.0	300.0	30.0	0.000	0.0	1	
4	Tc	120.0	120.0	300.0	26.0	0.000	0.0	1	A

GEOSTASE FS = 0.94

Simplified Janbu (Corrected) Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 3/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_03\xhe.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_03\xhe.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Existing - Smaller Qls - Seismic

BOUNDARY DATA

17 Surface Boundaries
31 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	216.400	100.000	222.900	1
2	100.000	222.900	276.400	238.000	1
3	276.400	238.000	308.300	242.900	1
4	308.300	242.900	332.700	247.000	2
5	332.700	247.000	348.800	249.000	2
6	348.800	249.000	416.400	263.600	2
7	416.400	263.600	441.400	267.000	2
8	441.400	267.000	517.400	277.100	2
9	517.400	277.100	547.500	278.000	2
10	547.500	278.000	637.700	297.000	2
11	637.700	297.000	769.500	342.600	2
12	769.500	342.600	860.200	380.200	2
13	860.200	380.200	1000.000	430.900	2
14	1000.000	430.900	1082.100	457.600	2
15	1082.100	457.600	1247.000	487.900	2
16	1247.000	487.900	1260.400	491.900	3
17	1260.400	491.900	1500.000	588.800	4
18	0.000	161.100	100.000	168.300	4
19	100.000	168.300	198.100	192.800	4
20	198.100	192.800	308.300	242.900	2
21	198.100	192.800	414.900	188.600	4
22	414.900	188.600	621.400	207.800	4
23	621.400	207.800	784.600	278.400	4
24	779.900	273.600	789.300	283.200	3
25	789.300	283.200	849.000	360.500	2
26	849.000	360.500	860.200	380.200	2
27	789.300	283.200	1237.700	480.800	3
28	1237.700	480.800	1247.000	487.900	3
29	779.900	273.600	1240.300	476.500	4
30	1240.300	476.500	1260.400	491.900	4
31	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	300.00	30.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	300.00	30.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	25.0	0.00	15.00
3	90.0	300.00	30.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	25.0	0.00	15.00
3	90.0	300.00	30.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 30.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	369.00	189.70	5.00
2	370.40	189.00	370.40	189.00	0.00
3	414.90	188.60	414.90	188.60	0.00
4	621.40	207.80	621.40	207.80	0.00
5	784.60	278.40	784.60	278.40	0.00
6	849.00	360.50	849.00	360.50	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.201 FS Min = 0.944 FS Ave = 1.042
Standard Deviation = 0.056 Coefficient of Variation = 5.40 %

Critical Surface is Sequence Number 233 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 0.944

Table 1 - Geometry Data on the 141 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.35	1.97	172.74	227.16	229.13	-33.05	4.89	6.38
2	5.35	5.90	178.08	223.68	229.58	-33.05	4.89	6.38
3	5.35	9.84	183.43	220.20	230.04	-33.05	4.89	6.38
4	5.35	13.77	188.77	216.73	230.50	-33.05	4.89	6.38
5	4.78	17.38	193.84	213.55	230.93	-30.94	4.89	5.58
6	4.78	20.66	198.62	210.69	231.34	-30.94	4.89	5.58
7	4.78	23.93	203.40	207.82	231.75	-30.94	4.89	5.58
8	4.78	27.21	208.19	204.95	232.16	-30.94	4.89	5.58
9	4.78	30.49	212.97	202.08	232.57	-30.94	4.89	5.58
10	1.81	32.75	216.27	200.11	232.85	-30.94	4.89	2.11
11	4.94	33.97	219.64	199.17	233.14	-8.98	4.89	5.00
12	4.94	35.17	224.58	198.39	233.56	-8.98	4.89	5.00
13	4.94	36.37	229.52	197.61	233.99	-8.98	4.89	5.00
14	4.94	37.58	234.46	196.83	234.41	-8.98	4.89	5.00
15	4.94	38.78	239.40	196.05	234.83	-8.98	4.89	5.00
16	4.94	39.98	244.34	195.27	235.26	-8.98	4.89	5.00
17	5.14	41.16	249.38	194.53	235.69	-7.81	4.89	5.19
18	5.14	42.30	254.52	193.83	236.13	-7.81	4.89	5.19
19	5.14	43.45	259.66	193.12	236.57	-7.81	4.89	5.19
20	5.14	44.59	264.80	192.42	237.01	-7.81	4.89	5.19
21	5.14	45.74	269.94	191.71	237.45	-7.81	4.89	5.19
22	3.89	46.74	274.45	191.09	237.83	-7.81	4.89	3.93

23	0.13	47.19	276.46	190.82	238.01	-7.81	8.73	0.13
24	5.30	47.67	279.18	190.76	238.43	-1.10	8.73	5.30
25	5.30	48.59	284.47	190.65	239.24	-1.10	8.73	5.30
26	5.30	49.50	289.77	190.55	240.05	-1.10	8.73	5.30
27	5.30	50.42	295.06	190.45	240.87	-1.10	8.73	5.30
28	5.30	51.33	300.36	190.35	241.68	-1.10	8.73	5.30
29	5.30	52.25	305.65	190.25	242.49	-1.10	8.73	5.30
30	4.88	53.16	310.74	190.15	243.31	-1.10	9.54	4.88
31	4.88	54.08	315.62	190.05	244.13	-1.10	9.54	4.88
32	4.88	54.99	320.50	189.96	244.95	-1.10	9.54	4.88
33	4.88	55.90	325.38	189.87	245.77	-1.10	9.54	4.88
34	4.88	56.82	330.26	189.77	246.59	-1.10	9.54	4.88
35	5.37	57.66	335.38	189.67	247.33	-1.10	7.08	5.37
36	5.37	58.43	340.75	189.57	248.00	-1.10	7.08	5.37
37	5.37	59.20	346.12	189.47	248.67	-1.10	7.08	5.37
38	5.40	60.22	351.50	189.36	249.58	-1.10	12.19	5.40
39	5.40	61.49	356.90	189.26	250.75	-1.10	12.19	5.40
40	5.40	62.76	362.30	189.16	251.92	-1.10	12.19	5.40
41	5.40	64.03	367.70	189.05	253.08	-1.10	12.19	5.40
42	4.94	65.22	372.87	188.98	254.20	-0.52	12.19	4.94
43	4.94	66.33	377.82	188.93	255.27	-0.52	12.19	4.94
44	4.94	67.45	382.76	188.89	256.33	-0.52	12.19	4.94
45	4.94	68.56	387.71	188.84	257.40	-0.52	12.19	4.94
46	4.94	69.67	392.65	188.80	258.47	-0.52	12.19	4.94
47	4.94	70.78	397.59	188.76	259.54	-0.52	12.19	4.94
48	4.94	71.90	402.54	188.71	260.61	-0.52	12.19	4.94
49	4.94	73.01	407.48	188.67	261.67	-0.52	12.19	4.94
50	4.94	74.12	412.43	188.62	262.74	-0.52	12.19	4.94
51	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
52	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
53	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
54	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
55	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
56	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
57	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
58	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
59	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
60	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
61	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
62	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
63	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
64	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
65	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
66	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
67	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
68	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
69	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
70	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
71	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
72	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
73	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
74	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
75	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
76	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
77	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
78	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
79	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
80	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
81	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
82	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
83	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
84	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
85	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
86	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
87	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
88	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
89	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
90	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
91	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
92	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
93	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
94	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
95	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
96	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
97	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
98	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
99	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
100	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
101	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
102	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
103	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
104	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
105	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
106	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
107	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
108	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
109	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
110	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
111	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
112	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
113	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
114	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
115	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
116	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
117	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
118	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
119	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
120	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
121	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
122	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
123	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
124	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
125	4.95	68.33	787.08	281.56	349.89	51.89	22.52	8.03
126	4.95	64.07	792.03	287.87	351.94	51.89	22.52	8.03
127	4.95	59.81	796.98	294.19	353.99	51.89	22.52	8.03
128	4.95	55.54	801.94	300.50	356.05	51.89	22.52	8.03
129	4.95	51.28	806.89	306.82	358.10	51.89	22.52	8.03
130	4.95	47.02	811.85	313.13	360.15	51.89	22.52	8.03
131	4.95	42.76	816.80	319.45	362.21	51.89	22.52	8.03
132	4.95	38.50	821.75	325.77	364.26	51.89	22.52	8.03
133	4.95	34.23	826.71	332.08	366.32	51.89	22.52	8.03
134	4.95	29.97	831.66	338.40	368.37	51.89	22.52	8.03
135	4.95	25.71	836.62	344.71	370.42	51.89	22.52	8.03
136	4.95	21.45	841.57	351.03	372.48	51.89	22.52	8.03
137	4.95	17.19	846.52	357.34	374.53	51.89	22.52	8.03
138	5.60	12.64	851.80	364.08	376.72	51.99	22.52	9.09
139	5.60	7.79	857.40	371.25	379.04	51.99	22.52	9.09
140	2.93	4.03	861.66	376.70	380.73	51.99	19.93	4.76
141	2.93	1.34	864.59	380.45	381.79	51.99	19.93	4.76

Table 2 - Force Data On The 141 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1262.1	0.0	0.0	189.3	0.0	0.0
2	3786.2	0.0	0.0	567.9	0.0	0.0
3	6310.3	0.0	0.0	946.5	0.0	0.0
4	8834.4	0.0	0.0	1325.2	0.0	0.0
5	9977.7	0.0	0.0	1496.7	0.0	0.0
6	11859.1	0.0	0.0	1778.9	0.0	0.0
7	13740.4	0.0	0.0	2061.1	0.0	0.0
8	15621.8	0.0	0.0	2343.3	0.0	0.0
9	17503.1	0.0	0.0	2625.5	0.0	0.0
10	7116.6	0.0	0.0	1067.5	0.0	0.0
11	20131.4	0.0	0.0	3019.7	0.0	0.0
12	20844.3	0.0	0.0	3126.6	0.0	0.0
13	21557.2	0.0	0.0	3233.6	0.0	0.0
14	22270.1	0.0	0.0	3340.5	0.0	0.0
15	22983.1	0.0	0.0	3447.5	0.0	0.0
16	23696.0	0.0	0.0	3554.4	0.0	0.0
17	25385.0	0.0	0.0	3807.7	0.0	0.0
18	26091.0	0.0	0.0	3913.7	0.0	0.0
19	26797.1	0.0	0.0	4019.6	0.0	0.0
20	27503.2	0.0	0.0	4125.5	0.0	0.0
21	28209.2	0.0	0.0	4231.4	0.0	0.0
22	21833.1	0.0	0.0	3275.0	0.0	0.0
23	736.2	0.0	0.0	110.4	0.0	0.0
24	30289.9	0.0	0.0	4543.5	0.0	0.0
25	30871.5	0.0	0.0	4630.7	0.0	0.0
26	31453.0	0.0	0.0	4718.0	0.0	0.0
27	32034.6	0.0	0.0	4805.2	0.0	0.0
28	32616.2	0.0	0.0	4892.4	0.0	0.0
29	33197.7	0.0	0.0	4979.7	0.0	0.0
30	31131.4	0.0	0.0	4669.7	0.0	0.0
31	31666.6	0.0	0.0	4750.0	0.0	0.0
32	32201.8	0.0	0.0	4830.3	0.0	0.0
33	32737.0	0.0	0.0	4910.6	0.0	0.0
34	33272.2	0.0	0.0	4990.8	0.0	0.0
35	37132.6	0.0	0.0	5569.9	0.0	0.0
36	37628.4	0.0	0.0	5644.3	0.0	0.0
37	38124.3	0.0	0.0	5718.6	0.0	0.0
38	39022.1	0.0	0.0	5853.3	0.0	0.0
39	39845.2	0.0	0.0	5976.8	0.0	0.0
40	40668.3	0.0	0.0	6100.2	0.0	0.0
41	41491.4	0.0	0.0	6223.7	0.0	0.0
42	38697.9	0.0	0.0	5804.7	0.0	0.0
43	39357.9	0.0	0.0	5903.7	0.0	0.0
44	40017.9	0.0	0.0	6002.7	0.0	0.0
45	40677.9	0.0	0.0	6101.7	0.0	0.0
46	41337.9	0.0	0.0	6200.7	0.0	0.0
47	41997.8	0.0	0.0	6299.7	0.0	0.0
48	42657.8	0.0	0.0	6398.7	0.0	0.0
49	43317.8	0.0	0.0	6497.7	0.0	0.0
50	43977.8	0.0	0.0	6596.7	0.0	0.0
51	13458.3	0.0	0.0	2018.7	0.0	0.0
52	44980.9	0.0	0.0	6747.1	0.0	0.0
53	45109.9	0.0	0.0	6766.5	0.0	0.0
54	45239.0	0.0	0.0	6785.8	0.0	0.0
55	45368.0	0.0	0.0	6805.2	0.0	0.0
56	45497.1	0.0	0.0	6824.6	0.0	0.0
57	46230.6	0.0	0.0	6934.6	0.0	0.0
58	46353.6	0.0	0.0	6953.0	0.0	0.0
59	46476.5	0.0	0.0	6971.5	0.0	0.0
60	46599.5	0.0	0.0	6989.9	0.0	0.0
61	46722.5	0.0	0.0	7008.4	0.0	0.0
62	46845.4	0.0	0.0	7026.8	0.0	0.0
63	46968.4	0.0	0.0	7045.3	0.0	0.0
64	47091.4	0.0	0.0	7063.7	0.0	0.0
65	47214.3	0.0	0.0	7082.1	0.0	0.0
66	47337.3	0.0	0.0	7100.6	0.0	0.0
67	47460.3	0.0	0.0	7119.0	0.0	0.0
68	47583.2	0.0	0.0	7137.5	0.0	0.0
69	47706.2	0.0	0.0	7155.9	0.0	0.0
70	47829.2	0.0	0.0	7174.4	0.0	0.0
71	47952.1	0.0	0.0	7192.8	0.0	0.0
72	47444.5	0.0	0.0	7116.7	0.0	0.0
73	47254.0	0.0	0.0	7088.1	0.0	0.0
74	47063.5	0.0	0.0	7059.5	0.0	0.0
75	46873.0	0.0	0.0	7031.0	0.0	0.0
76	46682.5	0.0	0.0	7002.4	0.0	0.0
77	46492.0	0.0	0.0	6973.8	0.0	0.0
78	45735.8	0.0	0.0	6860.4	0.0	0.0
79	46078.5	0.0	0.0	6911.8	0.0	0.0
80	46421.2	0.0	0.0	6963.2	0.0	0.0
81	46763.9	0.0	0.0	7014.6	0.0	0.0
82	47106.6	0.0	0.0	7066.0	0.0	0.0
83	47449.4	0.0	0.0	7117.4	0.0	0.0
84	47792.1	0.0	0.0	7168.8	0.0	0.0
85	48134.8	0.0	0.0	7220.2	0.0	0.0
86	48477.5	0.0	0.0	7271.6	0.0	0.0
87	48820.2	0.0	0.0	7323.0	0.0	0.0
88	49162.9	0.0	0.0	7374.4	0.0	0.0
89	49505.7	0.0	0.0	7425.8	0.0	0.0
90	49848.4	0.0	0.0	7477.3	0.0	0.0
91	50191.1	0.0	0.0	7528.7	0.0	0.0
92	50533.8	0.0	0.0	7580.1	0.0	0.0
93	55526.6	0.0	0.0	8329.0	0.0	0.0
94	54740.3	0.0	0.0	8211.1	0.0	0.0
95	53954.1	0.0	0.0	8093.1	0.0	0.0
96	49838.1	0.0	0.0	7475.7	0.0	0.0
97	49571.0	0.0	0.0	7435.7	0.0	0.0
98	49303.9	0.0	0.0	7395.6	0.0	0.0
99	49036.8	0.0	0.0	7355.5	0.0	0.0
100	48769.7	0.0	0.0	7315.5	0.0	0.0
101	48502.6	0.0	0.0	7275.4	0.0	0.0
102	48235.5	0.0	0.0	7235.3	0.0	0.0
103	47968.4	0.0	0.0	7195.3	0.0	0.0
104	47701.3	0.0	0.0	7155.2	0.0	0.0
105	47434.2	0.0	0.0	7115.1	0.0	0.0
106	47167.1	0.0	0.0	7075.1	0.0	0.0
107	46900.0	0.0	0.0	7035.0	0.0	0.0
108	46632.9	0.0	0.0	6994.9	0.0	0.0
109	46365.8	0.0	0.0	6954.9	0.0	0.0
110	46098.7	0.0	0.0	6914.8	0.0	0.0
111	45831.5	0.0	0.0	6874.7	0.0	0.0

112	45564.4	0.0	0.0	6834.7	0.0	0.0
113	45297.3	0.0	0.0	6794.6	0.0	0.0
114	45030.2	0.0	0.0	6754.5	0.0	0.0
115	44763.1	0.0	0.0	6714.5	0.0	0.0
116	44496.0	0.0	0.0	6674.4	0.0	0.0
117	44228.9	0.0	0.0	6634.3	0.0	0.0
118	43961.8	0.0	0.0	6594.3	0.0	0.0
119	43694.7	0.0	0.0	6554.2	0.0	0.0
120	43427.6	0.0	0.0	6514.1	0.0	0.0
121	43160.5	0.0	0.0	6474.1	0.0	0.0
122	42694.8	0.0	0.0	6404.2	0.0	0.0
123	42640.0	0.0	0.0	6396.0	0.0	0.0
124	42585.1	0.0	0.0	6387.8	0.0	0.0
125	40618.9	0.0	0.0	6092.8	0.0	0.0
126	38085.4	0.0	0.0	5712.8	0.0	0.0
127	35552.0	0.0	0.0	5332.8	0.0	0.0
128	33018.6	0.0	0.0	4952.8	0.0	0.0
129	30485.1	0.0	0.0	4572.8	0.0	0.0
130	27951.7	0.0	0.0	4192.7	0.0	0.0
131	25418.2	0.0	0.0	3812.7	0.0	0.0
132	22884.8	0.0	0.0	3432.7	0.0	0.0
133	20351.3	0.0	0.0	3052.7	0.0	0.0
134	17817.9	0.0	0.0	2672.7	0.0	0.0
135	15284.4	0.0	0.0	2292.7	0.0	0.0
136	12751.0	0.0	0.0	1912.6	0.0	0.0
137	10217.5	0.0	0.0	1532.6	0.0	0.0
138	8491.1	0.0	0.0	1273.7	0.0	0.0
139	5236.7	0.0	0.0	785.5	0.0	0.0
140	1416.2	0.0	0.0	212.4	0.0	0.0
141	472.1	0.0	0.0	70.8	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 5178504.91(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 5178504.91(lbs)

TOTAL AREA OF SLIDING MASS = 43154.21(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 141 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	1	200.00	24.00	
7	1	200.00	24.00	
8	1	200.00	24.00	
9	1	200.00	24.00	
10	2	300.00	30.00	A
11	2	0.00	15.00	A
12	2	0.00	15.00	A
13	2	0.00	15.00	A
14	2	0.00	15.00	A
15	2	0.00	15.00	A
16	2	0.00	15.00	A
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	4	0.00	15.00	A
23	4	0.00	15.00	A
24	4	0.00	15.00	A
25	4	0.00	15.00	A
26	4	0.00	15.00	A
27	4	0.00	15.00	A
28	4	0.00	15.00	A
29	4	0.00	15.00	A
30	4	0.00	15.00	A
31	4	0.00	15.00	A
32	4	0.00	15.00	A
33	4	0.00	15.00	A
34	4	0.00	15.00	A
35	4	0.00	15.00	A
36	4	0.00	15.00	A
37	4	0.00	15.00	A
38	4	0.00	15.00	A
39	4	0.00	15.00	A
40	4	0.00	15.00	A
41	4	0.00	15.00	A
42	4	0.00	15.00	A
43	4	0.00	15.00	A
44	4	0.00	15.00	A
45	4	0.00	15.00	A
46	4	0.00	15.00	A
47	4	0.00	15.00	A
48	4	0.00	15.00	A
49	4	0.00	15.00	A
50	4	0.00	15.00	A
51	2	0.00	15.00	A
52	2	0.00	15.00	A
53	2	0.00	15.00	A
54	2	0.00	15.00	A
55	2	0.00	15.00	A
56	2	0.00	15.00	A
57	2	0.00	15.00	A
58	2	0.00	15.00	A
59	2	0.00	15.00	A
60	2	0.00	15.00	A
61	2	0.00	15.00	A
62	2	0.00	15.00	A
63	2	0.00	15.00	A
64	2	0.00	15.00	A
65	2	0.00	15.00	A
66	2	0.00	15.00	A
67	2	0.00	15.00	A
68	2	0.00	15.00	A
69	2	0.00	15.00	A
70	2	0.00	15.00	A
71	2	0.00	15.00	A
72	2	0.00	15.00	A
73	2	0.00	15.00	A
74	2	0.00	15.00	A
75	2	0.00	15.00	A
76	2	0.00	15.00	A
77	2	0.00	15.00	A
78	2	0.00	15.00	A

79	2	0.00	15.00	A
80	2	0.00	15.00	A
81	2	0.00	15.00	A
82	2	0.00	15.00	A
83	2	0.00	15.00	A
84	2	0.00	15.00	A
85	2	0.00	15.00	A
86	2	0.00	15.00	A
87	2	0.00	15.00	A
88	2	0.00	15.00	A
89	2	0.00	15.00	A
90	2	0.00	15.00	A
91	2	0.00	15.00	A
92	2	0.00	15.00	A
93	2	0.00	15.00	A
94	2	0.00	15.00	A
95	2	0.00	15.00	A
96	2	0.00	15.00	A
97	2	0.00	15.00	A
98	2	0.00	15.00	A
99	2	0.00	15.00	A
100	2	0.00	15.00	A
101	2	0.00	15.00	A
102	2	0.00	15.00	A
103	2	0.00	15.00	A
104	2	0.00	15.00	A
105	2	0.00	15.00	A
106	2	0.00	15.00	A
107	2	0.00	15.00	A
108	2	0.00	15.00	A
109	2	0.00	15.00	A
110	2	0.00	15.00	A
111	2	0.00	15.00	A
112	2	0.00	15.00	A
113	2	0.00	15.00	A
114	2	0.00	15.00	A
115	2	0.00	15.00	A
116	2	0.00	15.00	A
117	2	0.00	15.00	A
118	2	0.00	15.00	A
119	2	0.00	15.00	A
120	2	0.00	15.00	A
121	2	0.00	15.00	A
122	2	0.00	15.00	A
123	2	0.00	15.00	A
124	2	0.00	15.00	A
125	2	300.00	30.00	A
126	2	300.00	30.00	A
127	2	300.00	30.00	A
128	2	300.00	30.00	A
129	2	300.00	30.00	A
130	2	300.00	30.00	A
131	2	300.00	30.00	A
132	2	300.00	30.00	A
133	2	300.00	30.00	A
134	2	300.00	30.00	A
135	2	300.00	30.00	A
136	2	300.00	30.00	A
137	2	300.00	30.00	A
138	2	300.00	30.00	A
139	2	300.00	30.00	A
140	2	300.00	30.00	A
141	2	300.00	30.00	A

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 141 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-33.05	172.74	6.38	568.86	453.27	479.32
1	-33.05	172.74	6.38	568.86	453.27	479.32
2	-33.05	178.08	6.38	1270.38	765.61	809.61
2	-33.05	178.08	6.38	1270.38	765.61	809.61
3	-33.05	183.43	6.38	1971.90	1077.94	1139.89
3	-33.05	183.43	6.38	1971.90	1077.94	1139.89
4	-33.05	188.77	6.38	2673.41	1390.28	1470.18
4	-33.05	188.77	6.38	2673.41	1390.28	1470.18
5	-30.94	193.84	5.58	3177.49	1614.71	1707.51
5	-30.94	193.84	5.58	3177.49	1614.71	1707.51
6	-30.94	198.62	5.58	3740.13	1865.21	1972.41
6	-30.94	198.62	5.58	3740.13	1865.21	1972.41
7	-30.94	203.40	5.58	4302.78	2115.72	2237.31
7	-30.94	203.40	5.58	4302.78	2115.72	2237.31
8	-30.94	208.19	5.58	4865.42	2366.22	2502.21
8	-30.94	208.19	5.58	4865.42	2366.22	2502.21
9	-30.94	212.97	5.58	5428.06	2616.73	2767.11
9	-30.94	212.97	5.58	5428.06	2616.73	2767.11
10	-30.94	216.27	2.11	6779.24	4214.00	4456.18
10	-30.94	216.27	2.11	6779.24	4214.00	4456.18
11	-8.98	219.64	5.00	4280.63	1146.99	1212.91
11	-8.98	219.64	5.00	4280.63	1146.99	1212.91
12	-8.98	224.58	5.00	4432.22	1187.61	1255.86
12	-8.98	224.58	5.00	4432.22	1187.61	1255.86
13	-8.98	229.52	5.00	4583.81	1228.23	1298.82
13	-8.98	229.52	5.00	4583.81	1228.23	1298.82
14	-8.98	234.46	5.00	4735.40	1268.85	1341.77
14	-8.98	234.46	5.00	4735.40	1268.85	1341.77
15	-8.98	239.40	5.00	4887.00	1309.47	1384.72
15	-8.98	239.40	5.00	4887.00	1309.47	1384.72
16	-8.98	244.34	5.00	5038.59	1350.09	1427.68
16	-8.98	244.34	5.00	5038.59	1350.09	1427.68
17	-7.81	249.38	5.19	5152.41	1380.58	1459.93
17	-7.81	249.38	5.19	5152.41	1380.58	1459.93
18	-7.81	254.52	5.19	5295.72	1418.98	1500.53
18	-7.81	254.52	5.19	5295.72	1418.98	1500.53
19	-7.81	259.66	5.19	5439.03	1457.38	1541.14
19	-7.81	259.66	5.19	5439.03	1457.38	1541.14
20	-7.81	264.80	5.19	5582.34	1495.78	1581.75
20	-7.81	264.80	5.19	5582.34	1495.78	1581.75
21	-7.81	269.94	5.19	5725.65	1534.18	1622.35
21	-7.81	269.94	5.19	5725.65	1534.18	1622.35

22	-7.81	274.45	3.93	5851.57	1567.92	1658.03
22	-7.81	274.45	3.93	5851.57	1567.92	1658.03
23	-7.81	276.46	0.13	5908.20	1583.10	1674.08
23	-7.81	276.46	0.13	5908.20	1583.10	1674.08
24	-1.10	279.18	5.30	5753.96	1541.77	1630.37
24	-1.10	279.18	5.30	5753.96	1541.77	1630.37
25	-1.10	284.47	5.30	5864.44	1571.37	1661.68
25	-1.10	284.47	5.30	5864.44	1571.37	1661.68
26	-1.10	289.77	5.30	5974.91	1600.97	1692.98
26	-1.10	289.77	5.30	5974.91	1600.97	1692.98
27	-1.10	295.06	5.30	6085.39	1630.57	1724.28
27	-1.10	295.06	5.30	6085.39	1630.57	1724.28
28	-1.10	300.36	5.30	6195.86	1660.18	1755.59
28	-1.10	300.36	5.30	6195.86	1660.18	1755.59
29	-1.10	305.65	5.30	6306.33	1689.78	1786.89
29	-1.10	305.65	5.30	6306.33	1689.78	1786.89
30	-1.10	310.74	4.88	6416.73	1719.36	1818.17
30	-1.10	310.74	4.88	6416.73	1719.36	1818.17
31	-1.10	315.62	4.88	6527.04	1748.92	1849.43
31	-1.10	315.62	4.88	6527.04	1748.92	1849.43
32	-1.10	320.50	4.88	6637.36	1778.47	1880.68
32	-1.10	320.50	4.88	6637.36	1778.47	1880.68
33	-1.10	325.38	4.88	6747.67	1808.03	1911.94
33	-1.10	325.38	4.88	6747.67	1808.03	1911.94
34	-1.10	330.26	4.88	6857.99	1837.59	1943.20
34	-1.10	330.26	4.88	6857.99	1837.59	1943.20
35	-1.10	335.38	5.37	6959.61	1864.82	1971.99
35	-1.10	335.38	5.37	6959.61	1864.82	1971.99
36	-1.10	340.75	5.37	7052.55	1889.73	1998.33
36	-1.10	340.75	5.37	7052.55	1889.73	1998.33
37	-1.10	346.12	5.37	7145.49	1914.63	2024.66
37	-1.10	346.12	5.37	7145.49	1914.63	2024.66
38	-1.10	351.50	5.40	7268.62	1947.62	2059.55
38	-1.10	351.50	5.40	7268.62	1947.62	2059.55
39	-1.10	356.90	5.40	7421.94	1988.70	2102.99
39	-1.10	356.90	5.40	7421.94	1988.70	2102.99
40	-1.10	362.30	5.40	7575.25	2029.78	2146.44
40	-1.10	362.30	5.40	7575.25	2029.78	2146.44
41	-1.10	367.70	5.40	7728.57	2070.86	2189.88
41	-1.10	367.70	5.40	7728.57	2070.86	2189.88
42	-0.52	372.87	4.94	7847.88	2102.83	2223.68
42	-0.52	372.87	4.94	7847.88	2102.83	2223.68
43	-0.52	377.82	4.94	7981.72	2138.70	2261.61
43	-0.52	377.82	4.94	7981.72	2138.70	2261.61
44	-0.52	382.76	4.94	8115.56	2174.56	2299.53
44	-0.52	382.76	4.94	8115.56	2174.56	2299.53
45	-0.52	387.71	4.94	8249.41	2210.42	2337.45
45	-0.52	387.71	4.94	8249.41	2210.42	2337.45
46	-0.52	392.65	4.94	8383.25	2246.28	2375.38
46	-0.52	392.65	4.94	8383.25	2246.28	2375.38
47	-0.52	397.59	4.94	8517.09	2282.15	2413.30
47	-0.52	397.59	4.94	8517.09	2282.15	2413.30
48	-0.52	402.54	4.94	8650.93	2318.01	2451.23
48	-0.52	402.54	4.94	8650.93	2318.01	2451.23
49	-0.52	407.48	4.94	8784.78	2353.87	2489.15
49	-0.52	407.48	4.94	8784.78	2353.87	2489.15
50	-0.52	412.43	4.94	8918.62	2389.74	2527.08
50	-0.52	412.43	4.94	8918.62	2389.74	2527.08
51	5.31	415.65	1.51	8726.90	2338.36	2472.75
51	5.31	415.65	1.51	8726.90	2338.36	2472.75
52	5.31	418.90	5.02	8750.22	2344.61	2479.36
52	5.31	418.90	5.02	8750.22	2344.61	2479.36
53	5.31	423.90	5.02	8775.32	2351.34	2486.47
53	5.31	423.90	5.02	8775.32	2351.34	2486.47
54	5.31	428.90	5.02	8800.43	2358.07	2493.59
54	5.31	428.90	5.02	8800.43	2358.07	2493.59
55	5.31	433.90	5.02	8825.54	2364.80	2500.70
55	5.31	433.90	5.02	8825.54	2364.80	2500.70
56	5.31	438.90	5.02	8850.65	2371.52	2507.82
56	5.31	438.90	5.02	8850.65	2371.52	2507.82
57	5.31	443.93	5.09	8875.00	2378.05	2514.72
57	5.31	443.93	5.09	8875.00	2378.05	2514.72
58	5.31	449.00	5.09	8898.61	2384.37	2521.41
58	5.31	449.00	5.09	8898.61	2384.37	2521.41
59	5.31	454.07	5.09	8922.21	2390.70	2528.09
59	5.31	454.07	5.09	8922.21	2390.70	2528.09
60	5.31	459.13	5.09	8945.82	2397.03	2534.78
60	5.31	459.13	5.09	8945.82	2397.03	2534.78
61	5.31	464.20	5.09	8969.43	2403.35	2541.47
61	5.31	464.20	5.09	8969.43	2403.35	2541.47
62	5.31	469.27	5.09	8993.03	2409.68	2548.16
62	5.31	469.27	5.09	8993.03	2409.68	2548.16
63	5.31	474.33	5.09	9016.64	2416.00	2554.85
63	5.31	474.33	5.09	9016.64	2416.00	2554.85
64	5.31	479.40	5.09	9040.24	2422.33	2561.54
64	5.31	479.40	5.09	9040.24	2422.33	2561.54
65	5.31	484.47	5.09	9063.85	2428.65	2568.23
65	5.31	484.47	5.09	9063.85	2428.65	2568.23
66	5.31	489.53	5.09	9087.45	2434.98	2574.91
66	5.31	489.53	5.09	9087.45	2434.98	2574.91
67	5.31	494.60	5.09	9111.06	2441.30	2581.60
67	5.31	494.60	5.09	9111.06	2441.30	2581.60
68	5.31	499.67	5.09	9134.67	2447.63	2588.29
68	5.31	499.67	5.09	9134.67	2447.63	2588.29
69	5.31	504.73	5.09	9158.27	2453.95	2594.98
69	5.31	504.73	5.09	9158.27	2453.95	2594.98
70	5.31	509.80	5.09	9181.88	2460.28	2601.67
70	5.31	509.80	5.09	9181.88	2460.28	2601.67
71	5.31	514.87	5.09	9205.48	2466.60	2608.36
71	5.31	514.87	5.09	9205.48	2466.60	2608.36
72	5.31	519.91	5.04	9198.82	2464.82	2606.47
72	5.31	519.91	5.04	9198.82	2464.82	2606.47
73	5.31	524.92	5.04	9161.88	2454.92	2596.00
73	5.31	524.92	5.04	9161.88	2454.92	2596.00
74	5.31	529.94	5.04	9124.95	2445.02	2585.54
74	5.31	529.94	5.04	9124.95	2445.02	2585.54
75	5.31	534.96	5.04	9088.01	2435.13	2575.07
75	5.31	534.96	5.04	9088.01	2435.13	2575.07
76	5.31	539.98	5.04	9051.08	2425.23	2564.61
76	5.31	539.98	5.04	9051.08	2425.23	2564.61
77	5.31	544.99	5.04	9014.15	2415.33	2554.14
77	5.31	544.99	5.04	9014.15	2415.33	2554.14
78	5.31	549.96	4.95	9029.51	2419.45	2558.50
78	5.31	549.96	4.95	9029.51	2419.45	2558.50
79	5.31	554.89	4.95	9097.17	2437.58	2577.67
79	5.31	554.89	4.95	9097.17	2437.58	2577.67
80	5.31	559.82	4.95	9164.83	2455.71	2596.84
80	5.31	559.82	4.95	9164.83	2455.71	2596.84
81	5.31	564.74	4.95	9232.49	2473.84	2616.01
81	5.31	564.74	4.95	9232.49	2473.84	2616.01

82	5.31	569.67	4.95	9300.15	2491.97	2635.18
82	5.31	569.67	4.95	9300.15	2491.97	2635.18
83	5.31	574.60	4.95	9367.82	2510.10	2654.35
83	5.31	574.60	4.95	9367.82	2510.10	2654.35
84	5.31	579.52	4.95	9435.48	2528.23	2673.53
84	5.31	579.52	4.95	9435.48	2528.23	2673.53
85	5.31	584.45	4.95	9503.14	2546.36	2692.70
85	5.31	584.45	4.95	9503.14	2546.36	2692.70
86	5.31	589.38	4.95	9570.80	2564.49	2711.87
86	5.31	589.38	4.95	9570.80	2564.49	2711.87
87	5.31	594.30	4.95	9638.46	2582.62	2731.04
87	5.31	594.30	4.95	9638.46	2582.62	2731.04
88	5.31	599.23	4.95	9706.12	2600.75	2750.21
88	5.31	599.23	4.95	9706.12	2600.75	2750.21
89	5.31	604.16	4.95	9773.79	2618.88	2769.39
89	5.31	604.16	4.95	9773.79	2618.88	2769.39
90	5.31	609.08	4.95	9841.45	2637.01	2788.56
90	5.31	609.08	4.95	9841.45	2637.01	2788.56
91	5.31	614.01	4.95	9909.11	2655.14	2807.73
91	5.31	614.01	4.95	9909.11	2655.14	2807.73
92	5.31	618.94	4.95	9976.77	2673.27	2826.90
92	5.31	618.94	4.95	9976.77	2673.27	2826.90
93	23.39	624.12	5.92	9037.69	2421.64	2560.81
93	23.39	624.12	5.92	9037.69	2421.64	2560.81
94	23.39	629.55	5.92	8909.71	2387.35	2524.55
94	23.39	629.55	5.92	8909.71	2387.35	2524.55
95	23.39	634.98	5.92	8781.73	2353.06	2488.29
95	23.39	634.98	5.92	8781.73	2353.06	2488.29
96	23.39	640.23	5.52	8694.44	2329.67	2463.56
96	23.39	640.23	5.52	8694.44	2329.67	2463.56
97	23.39	645.30	5.52	8647.85	2317.18	2450.35
97	23.39	645.30	5.52	8647.85	2317.18	2450.35
98	23.39	650.37	5.52	8601.25	2304.70	2437.15
98	23.39	650.37	5.52	8601.25	2304.70	2437.15
99	23.39	655.44	5.52	8554.65	2292.21	2423.95
99	23.39	655.44	5.52	8554.65	2292.21	2423.95
100	23.39	660.51	5.52	8508.05	2279.73	2410.74
100	23.39	660.51	5.52	8508.05	2279.73	2410.74
101	23.39	665.58	5.52	8461.46	2267.24	2397.54
101	23.39	665.58	5.52	8461.46	2267.24	2397.54
102	23.39	670.65	5.52	8414.86	2254.75	2384.34
102	23.39	670.65	5.52	8414.86	2254.75	2384.34
103	23.39	675.72	5.52	8368.26	2242.27	2371.13
103	23.39	675.72	5.52	8368.26	2242.27	2371.13
104	23.39	680.79	5.52	8321.66	2229.78	2357.93
104	23.39	680.79	5.52	8321.66	2229.78	2357.93
105	23.39	685.86	5.52	8275.07	2217.30	2344.73
105	23.39	685.86	5.52	8275.07	2217.30	2344.73
106	23.39	690.93	5.52	8228.47	2204.81	2331.52
106	23.39	690.93	5.52	8228.47	2204.81	2331.52
107	23.39	696.00	5.52	8181.87	2192.33	2318.32
107	23.39	696.00	5.52	8181.87	2192.33	2318.32
108	23.39	701.07	5.52	8135.28	2179.84	2305.12
108	23.39	701.07	5.52	8135.28	2179.84	2305.12
109	23.39	706.13	5.52	8088.68	2167.35	2291.91
109	23.39	706.13	5.52	8088.68	2167.35	2291.91
110	23.39	711.20	5.52	8042.08	2154.87	2278.71
110	23.39	711.20	5.52	8042.08	2154.87	2278.71
111	23.39	716.27	5.52	7995.48	2142.38	2265.51
111	23.39	716.27	5.52	7995.48	2142.38	2265.51
112	23.39	721.34	5.52	7948.89	2129.90	2252.30
112	23.39	721.34	5.52	7948.89	2129.90	2252.30
113	23.39	726.41	5.52	7902.29	2117.41	2239.10
113	23.39	726.41	5.52	7902.29	2117.41	2239.10
114	23.39	731.48	5.52	7855.69	2104.93	2225.90
114	23.39	731.48	5.52	7855.69	2104.93	2225.90
115	23.39	736.55	5.52	7809.10	2092.44	2212.69
115	23.39	736.55	5.52	7809.10	2092.44	2212.69
116	23.39	741.62	5.52	7762.50	2079.96	2199.49
116	23.39	741.62	5.52	7762.50	2079.96	2199.49
117	23.39	746.69	5.52	7715.90	2067.47	2186.29
117	23.39	746.69	5.52	7715.90	2067.47	2186.29
118	23.39	751.76	5.52	7669.30	2054.98	2173.08
118	23.39	751.76	5.52	7669.30	2054.98	2173.08
119	23.39	756.83	5.52	7622.71	2042.50	2159.88
119	23.39	756.83	5.52	7622.71	2042.50	2159.88
120	23.39	761.90	5.52	7576.11	2030.01	2146.68
120	23.39	761.90	5.52	7576.11	2030.01	2146.68
121	23.39	766.97	5.52	7529.51	2017.53	2133.47
121	23.39	766.97	5.52	7529.51	2017.53	2133.47
122	23.39	772.02	5.48	7501.39	2009.99	2125.51
122	23.39	772.02	5.48	7501.39	2009.99	2125.51
123	23.39	777.05	5.48	7491.76	2007.41	2122.78
123	23.39	777.05	5.48	7491.76	2007.41	2122.78
124	23.39	782.08	5.48	7482.12	2004.83	2120.05
124	23.39	782.08	5.48	7482.12	2004.83	2120.05
125	51.89	787.08	8.03	4243.82	2750.17	2908.22
125	51.89	787.08	8.03	4243.82	2750.17	2908.22
126	51.89	792.03	8.03	3964.42	2588.86	2737.64
126	51.89	792.03	8.03	3964.42	2588.86	2737.64
127	51.89	796.98	8.03	3685.03	2427.55	2567.06
127	51.89	796.98	8.03	3685.03	2427.55	2567.06
128	51.89	801.94	8.03	3405.63	2266.24	2396.48
128	51.89	801.94	8.03	3405.63	2266.24	2396.48
129	51.89	806.89	8.03	3126.24	2104.93	2225.91
129	51.89	806.89	8.03	3126.24	2104.93	2225.91
130	51.89	811.85	8.03	2846.84	1943.63	2055.33
130	51.89	811.85	8.03	2846.84	1943.63	2055.33
131	51.89	816.80	8.03	2567.45	1782.32	1884.75
131	51.89	816.80	8.03	2567.45	1782.32	1884.75
132	51.89	821.75	8.03	2288.05	1621.01	1714.17
132	51.89	821.75	8.03	2288.05	1621.01	1714.17
133	51.89	826.71	8.03	2008.66	1459.70	1543.59
133	51.89	826.71	8.03	2008.66	1459.70	1543.59
134	51.89	831.66	8.03	1729.26	1298.39	1373.01
134	51.89	831.66	8.03	1729.26	1298.39	1373.01
135	51.89	836.62	8.03	1449.87	1137.08	1202.43
135	51.89	836.62	8.03	1449.87	1137.08	1202.43
136	51.89	841.57	8.03	1170.47	975.77	1031.85
136	51.89	841.57	8.03	1170.47	975.77	1031.85
137	51.89	846.52	8.03	891.08	814.46	861.27
137	51.89	846.52	8.03	891.08	814.46	861.27
138	51.99	851.80	9.09	590.85	641.13	677.97
138	51.99	851.80	9.09	590.85	641.13	677.97
139	51.99	857.40	9.09	273.87	458.12	484.45
139	51.99	857.40	9.09	273.87	458.12	484.45
140	51.99	861.66	4.76	27.48	315.87	334.02
140	51.99	861.66	4.76	27.48	315.87	334.02
141	51.99	864.59	4.76	87.89	50.74	53.66
141	51.99	864.59	4.76	87.89	50.74	53.66

Table 4 - Base Force Data on the 141 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-33.05	172.74	6.38	3627.54	2890.46	3056.57
1	-33.05	172.74	6.38	3627.54	2890.46	3056.57
2	-33.05	178.08	6.38	8101.02	4882.18	5162.76
2	-33.05	178.08	6.38	8101.02	4882.18	5162.76
3	-33.05	183.43	6.38	12574.50	6873.90	7268.95
3	-33.05	183.43	6.38	12574.50	6873.90	7268.95
4	-33.05	188.77	6.38	17047.99	8865.62	9375.13
4	-33.05	188.77	6.38	17047.99	8865.62	9375.13
5	-30.94	193.84	5.58	17723.13	9006.39	9523.99
5	-30.94	193.84	5.58	17723.13	9006.39	9523.99
6	-30.94	198.62	5.58	20861.40	10403.64	11001.54
6	-30.94	198.62	5.58	20861.40	10403.64	11001.54
7	-30.94	203.40	5.58	23999.67	11800.89	12479.09
7	-30.94	203.40	5.58	23999.67	11800.89	12479.09
8	-30.94	208.19	5.58	27137.95	13198.14	13956.64
8	-30.94	208.19	5.58	27137.95	13198.14	13956.64
9	-30.94	212.97	5.58	30276.22	14595.38	15434.18
9	-30.94	212.97	5.58	30276.22	14595.38	15434.18
10	-30.94	216.27	2.11	14313.72	8897.45	9408.79
10	-30.94	216.27	2.11	14313.72	8897.45	9408.79
11	-8.98	219.64	5.00	21403.13	5734.95	6064.54
11	-8.98	219.64	5.00	21403.13	5734.95	6064.54
12	-8.98	224.58	5.00	22161.09	5938.05	6279.31
12	-8.98	224.58	5.00	22161.09	5938.05	6279.31
13	-8.98	229.52	5.00	22919.06	6141.14	6494.08
13	-8.98	229.52	5.00	22919.06	6141.14	6494.08
14	-8.98	234.46	5.00	23677.02	6344.24	6708.84
14	-8.98	234.46	5.00	23677.02	6344.24	6708.84
15	-8.98	239.40	5.00	24434.98	6547.33	6923.61
15	-8.98	239.40	5.00	24434.98	6547.33	6923.61
16	-8.98	244.34	5.00	25192.94	6750.43	7138.38
16	-8.98	244.34	5.00	25192.94	6750.43	7138.38
17	-7.81	249.38	5.19	26730.53	7162.42	7574.05
17	-7.81	249.38	5.19	26730.53	7162.42	7574.05
18	-7.81	254.52	5.19	27474.02	7361.64	7784.72
18	-7.81	254.52	5.19	27474.02	7361.64	7784.72
19	-7.81	259.66	5.19	28217.51	7560.86	7995.38
19	-7.81	259.66	5.19	28217.51	7560.86	7995.38
20	-7.81	264.80	5.19	28961.01	7760.08	8206.05
20	-7.81	264.80	5.19	28961.01	7760.08	8206.05
21	-7.81	269.94	5.19	29704.50	7959.30	8416.72
21	-7.81	269.94	5.19	29704.50	7959.30	8416.72
22	-7.81	274.45	3.93	22990.44	6160.27	6514.30
22	-7.81	274.45	3.93	22990.44	6160.27	6514.30
23	-7.81	276.46	0.13	775.25	207.73	219.66
23	-7.81	276.46	0.13	775.25	207.73	219.66
24	-1.10	279.18	5.30	30472.87	8165.18	8634.43
24	-1.10	279.18	5.30	30472.87	8165.18	8634.43
25	-1.10	284.47	5.30	31057.94	8321.95	8800.21
25	-1.10	284.47	5.30	31057.94	8321.95	8800.21
26	-1.10	289.77	5.30	31643.01	8478.72	8965.99
26	-1.10	289.77	5.30	31643.01	8478.72	8965.99
27	-1.10	295.06	5.30	32228.08	8635.49	9131.77
27	-1.10	295.06	5.30	32228.08	8635.49	9131.77
28	-1.10	300.36	5.30	32813.16	8792.26	9297.55
28	-1.10	300.36	5.30	32813.16	8792.26	9297.55
29	-1.10	305.65	5.30	33398.23	8949.03	9463.33
29	-1.10	305.65	5.30	33398.23	8949.03	9463.33
30	-1.10	310.74	4.88	31319.44	8392.02	8874.31
30	-1.10	310.74	4.88	31319.44	8392.02	8874.31
31	-1.10	315.62	4.88	31857.87	8536.29	9026.87
31	-1.10	315.62	4.88	31857.87	8536.29	9026.87
32	-1.10	320.50	4.88	32396.31	8680.56	9179.44
32	-1.10	320.50	4.88	32396.31	8680.56	9179.44
33	-1.10	325.38	4.88	32934.74	8824.84	9332.00
33	-1.10	325.38	4.88	32934.74	8824.84	9332.00
34	-1.10	330.26	4.88	33473.18	8969.11	9484.57
34	-1.10	330.26	4.88	33473.18	8969.11	9484.57
35	-1.10	335.38	5.37	37356.85	10009.74	10585.00
35	-1.10	335.38	5.37	37356.85	10009.74	10585.00
36	-1.10	340.75	5.37	37855.70	10143.40	10726.35
36	-1.10	340.75	5.37	37855.70	10143.40	10726.35
37	-1.10	346.12	5.37	38354.56	10277.07	10867.70
37	-1.10	346.12	5.37	38354.56	10277.07	10867.70
38	-1.10	351.50	5.40	39257.80	10519.10	11123.63
38	-1.10	351.50	5.40	39257.80	10519.10	11123.63
39	-1.10	356.90	5.40	40085.88	10740.98	11358.26
39	-1.10	356.90	5.40	40085.88	10740.98	11358.26
40	-1.10	362.30	5.40	40913.95	10962.86	11592.90
40	-1.10	362.30	5.40	40913.95	10962.86	11592.90
41	-1.10	367.70	5.40	41742.02	11184.74	11827.53
41	-1.10	367.70	5.40	41742.02	11184.74	11827.53
42	-0.52	372.87	4.94	38804.95	10397.76	10995.32
42	-0.52	372.87	4.94	38804.95	10397.76	10995.32
43	-0.52	377.82	4.94	39466.76	10575.09	11182.84
43	-0.52	377.82	4.94	39466.76	10575.09	11182.84
44	-0.52	382.76	4.94	40128.57	10752.42	11370.36
44	-0.52	382.76	4.94	40128.57	10752.42	11370.36
45	-0.52	387.71	4.94	40790.37	10929.75	11557.88
45	-0.52	387.71	4.94	40790.37	10929.75	11557.88
46	-0.52	392.65	4.94	41452.18	11107.08	11745.40
46	-0.52	392.65	4.94	41452.18	11107.08	11745.40
47	-0.52	397.59	4.94	42113.98	11284.41	11932.93
47	-0.52	397.59	4.94	42113.98	11284.41	11932.93
48	-0.52	402.54	4.94	42775.79	11461.74	12120.45
48	-0.52	402.54	4.94	42775.79	11461.74	12120.45
49	-0.52	407.48	4.94	43437.60	11639.07	12307.97
49	-0.52	407.48	4.94	43437.60	11639.07	12307.97
50	-0.52	412.43	4.94	44099.40	11816.40	12495.49
50	-0.52	412.43	4.94	44099.40	11816.40	12495.49
51	5.31	415.65	1.51	13146.80	3522.68	3725.12
51	5.31	415.65	1.51	13146.80	3522.68	3725.12
52	5.31	418.90	5.02	43939.79	11773.63	12450.26
52	5.31	418.90	5.02	43939.79	11773.63	12450.26
53	5.31	423.90	5.02	44065.87	11807.41	12485.99
53	5.31	423.90	5.02	44065.87	11807.41	12485.99
54	5.31	428.90	5.02	44191.95	11841.20	12521.71
54	5.31	428.90	5.02	44191.95	11841.20	12521.71
55	5.31	433.90	5.02	44318.02	11874.98	12557.44
55	5.31	433.90	5.02	44318.02	11874.98	12557.44
56	5.31	438.90	5.02	44444.10	11908.76	12593.16

56	5.31	438.90	5.02	44444.10	11908.76	12593.16
57	5.31	443.93	5.09	45160.63	12100.75	12796.19
57	5.31	443.93	5.09	45160.63	12100.75	12796.19
58	5.31	449.00	5.09	45280.75	12132.94	12830.22
58	5.31	449.00	5.09	45280.75	12132.94	12830.22
59	5.31	454.07	5.09	45400.87	12165.13	12864.26
59	5.31	454.07	5.09	45400.87	12165.13	12864.26
60	5.31	459.13	5.09	45520.98	12197.31	12898.29
60	5.31	459.13	5.09	45520.98	12197.31	12898.29
61	5.31	464.20	5.09	45641.10	12229.50	12932.33
61	5.31	464.20	5.09	45641.10	12229.50	12932.33
62	5.31	469.27	5.09	45761.22	12261.68	12966.36
62	5.31	469.27	5.09	45761.22	12261.68	12966.36
63	5.31	474.33	5.09	45881.34	12293.87	13000.40
63	5.31	474.33	5.09	45881.34	12293.87	13000.40
64	5.31	479.40	5.09	46001.46	12326.05	13034.43
64	5.31	479.40	5.09	46001.46	12326.05	13034.43
65	5.31	484.47	5.09	46121.58	12358.24	13068.47
65	5.31	484.47	5.09	46121.58	12358.24	13068.47
66	5.31	489.53	5.09	46241.69	12390.42	13102.50
66	5.31	489.53	5.09	46241.69	12390.42	13102.50
67	5.31	494.60	5.09	46361.81	12422.61	13136.54
67	5.31	494.60	5.09	46361.81	12422.61	13136.54
68	5.31	499.67	5.09	46481.93	12454.80	13170.58
68	5.31	499.67	5.09	46481.93	12454.80	13170.58
69	5.31	504.73	5.09	46602.05	12486.98	13204.61
69	5.31	504.73	5.09	46602.05	12486.98	13204.61
70	5.31	509.80	5.09	46722.17	12519.17	13238.65
70	5.31	509.80	5.09	46722.17	12519.17	13238.65
71	5.31	514.87	5.09	46842.29	12551.35	13272.68
71	5.31	514.87	5.09	46842.29	12551.35	13272.68
72	5.31	519.91	5.04	46346.45	12418.49	13132.19
72	5.31	519.91	5.04	46346.45	12418.49	13132.19
73	5.31	524.92	5.04	46160.36	12368.63	13079.46
73	5.31	524.92	5.04	46160.36	12368.63	13079.46
74	5.31	529.94	5.04	45974.27	12318.77	13026.73
74	5.31	529.94	5.04	45974.27	12318.77	13026.73
75	5.31	534.96	5.04	45788.18	12268.91	12974.00
75	5.31	534.96	5.04	45788.18	12268.91	12974.00
76	5.31	539.98	5.04	45602.10	12219.04	12921.28
76	5.31	539.98	5.04	45602.10	12219.04	12921.28
77	5.31	544.99	5.04	45416.01	12169.18	12868.55
77	5.31	544.99	5.04	45416.01	12169.18	12868.55
78	5.31	549.96	4.95	44677.25	11971.23	12659.22
78	5.31	549.96	4.95	44677.25	11971.23	12659.22
79	5.31	554.89	4.95	45012.04	12060.94	12754.08
79	5.31	554.89	4.95	45012.04	12060.94	12754.08
80	5.31	559.82	4.95	45346.82	12150.64	12848.94
80	5.31	559.82	4.95	45346.82	12150.64	12848.94
81	5.31	564.74	4.95	45681.60	12240.35	12943.80
81	5.31	564.74	4.95	45681.60	12240.35	12943.80
82	5.31	569.67	4.95	46016.39	12330.05	13038.66
82	5.31	569.67	4.95	46016.39	12330.05	13038.66
83	5.31	574.60	4.95	46351.17	12419.76	13133.52
83	5.31	574.60	4.95	46351.17	12419.76	13133.52
84	5.31	579.52	4.95	46685.95	12509.46	13228.39
84	5.31	579.52	4.95	46685.95	12509.46	13228.39
85	5.31	584.45	4.95	47020.74	12599.17	13323.25
85	5.31	584.45	4.95	47020.74	12599.17	13323.25
86	5.31	589.38	4.95	47355.52	12688.87	13418.11
86	5.31	589.38	4.95	47355.52	12688.87	13418.11
87	5.31	594.30	4.95	47690.31	12778.58	13512.97
87	5.31	594.30	4.95	47690.31	12778.58	13512.97
88	5.31	599.23	4.95	48025.09	12868.28	13607.83
88	5.31	599.23	4.95	48025.09	12868.28	13607.83
89	5.31	604.16	4.95	48359.87	12957.99	13702.69
89	5.31	604.16	4.95	48359.87	12957.99	13702.69
90	5.31	609.08	4.95	48694.66	13047.69	13797.55
90	5.31	609.08	4.95	48694.66	13047.69	13797.55
91	5.31	614.01	4.95	49029.44	13137.40	13892.41
91	5.31	614.01	4.95	49029.44	13137.40	13892.41
92	5.31	618.94	4.95	49364.23	13227.10	13987.27
92	5.31	618.94	4.95	49364.23	13227.10	13987.27
93	23.39	624.12	5.92	53502.59	14335.97	15159.87
93	23.39	624.12	5.92	53502.59	14335.97	15159.87
94	23.39	629.55	5.92	52744.96	14132.97	14945.20
94	23.39	629.55	5.92	52744.96	14132.97	14945.20
95	23.39	634.98	5.92	51987.34	13929.97	14730.52
95	23.39	634.98	5.92	51987.34	13929.97	14730.52
96	23.39	640.23	5.52	48021.42	12867.30	13606.79
96	23.39	640.23	5.52	48021.42	12867.30	13606.79
97	23.39	645.30	5.52	47764.05	12798.34	13533.86
97	23.39	645.30	5.52	47764.05	12798.34	13533.86
98	23.39	650.37	5.52	47506.68	12729.38	13460.94
98	23.39	650.37	5.52	47506.68	12729.38	13460.94
99	23.39	655.44	5.52	47249.32	12660.42	13388.01
99	23.39	655.44	5.52	47249.32	12660.42	13388.01
100	23.39	660.51	5.52	46991.95	12591.45	13315.09
100	23.39	660.51	5.52	46991.95	12591.45	13315.09
101	23.39	665.58	5.52	46734.58	12522.49	13242.16
101	23.39	665.58	5.52	46734.58	12522.49	13242.16
102	23.39	670.65	5.52	46477.21	12453.53	13169.24
102	23.39	670.65	5.52	46477.21	12453.53	13169.24
103	23.39	675.72	5.52	46219.85	12384.57	13096.31
103	23.39	675.72	5.52	46219.85	12384.57	13096.31
104	23.39	680.79	5.52	45962.48	12315.61	13023.39
104	23.39	680.79	5.52	45962.48	12315.61	13023.39
105	23.39	685.86	5.52	45705.11	12246.65	12950.47
105	23.39	685.86	5.52	45705.11	12246.65	12950.47
106	23.39	690.93	5.52	45447.75	12177.69	12877.54
106	23.39	690.93	5.52	45447.75	12177.69	12877.54
107	23.39	696.00	5.52	45190.38	12108.72	12804.62
107	23.39	696.00	5.52	45190.38	12108.72	12804.62
108	23.39	701.07	5.52	44933.01	12039.76	12731.69
108	23.39	701.07	5.52	44933.01	12039.76	12731.69
109	23.39	706.13	5.52	44675.64	11970.80	12658.77
109	23.39	706.13	5.52	44675.64	11970.80	12658.77
110	23.39	711.20	5.52	44418.28	11901.84	12585.84
110	23.39	711.20	5.52	44418.28	11901.84	12585.84
111	23.39	716.27	5.52	44160.91	11832.88	12512.92
111	23.39	716.27	5.52	44160.91	11832.88	12512.92
112	23.39	721.34	5.52	43903.54	11763.92	12439.99
112	23.39	721.34	5.52	43903.54	11763.92	12439.99
113	23.39	726.41	5.52	43646.17	11694.96	12367.07
113	23.39	726.41	5.52	43646.17	11694.96	12367.07
114	23.39	731.48	5.52	43388.81	11626.00	12294.14
114	23.39	731.48	5.52	43388.81	11626.00	12294.14
115	23.39	736.55	5.52	43131.44	11557.03	12221.22
115	23.39	736.55	5.52	43131.44	11557.03	12221.22
116	23.39	741.62	5.52	42874.07	11488.07	12148.29

116	23.39	741.62	5.52	42874.07	11488.07	12148.29
117	23.39	746.69	5.52	42616.70	11419.11	12075.37
117	23.39	746.69	5.52	42616.70	11419.11	12075.37
118	23.39	751.76	5.52	42359.34	11350.15	12002.45
118	23.39	751.76	5.52	42359.34	11350.15	12002.45
119	23.39	756.83	5.52	42101.97	11281.19	11929.52
119	23.39	756.83	5.52	42101.97	11281.19	11929.52
120	23.39	761.90	5.52	41844.60	11212.23	11856.60
120	23.39	761.90	5.52	41844.60	11212.23	11856.60
121	23.39	766.97	5.52	41587.24	11143.27	11783.67
121	23.39	766.97	5.52	41587.24	11143.27	11783.67
122	23.39	772.02	5.48	41138.54	11023.04	11656.53
122	23.39	772.02	5.48	41138.54	11023.04	11656.53
123	23.39	777.05	5.48	41085.68	11008.87	11641.56
123	23.39	777.05	5.48	41085.68	11008.87	11641.56
124	23.39	782.08	5.48	41032.82	10994.71	11626.58
124	23.39	782.08	5.48	41032.82	10994.71	11626.58
125	51.89	787.08	8.03	34063.00	22074.23	23342.84
125	51.89	787.08	8.03	34063.00	22074.23	23342.84
126	51.89	792.03	8.03	31820.44	20779.49	21973.69
126	51.89	792.03	8.03	31820.44	20779.49	21973.69
127	51.89	796.98	8.03	29577.88	19484.74	20604.54
127	51.89	796.98	8.03	29577.88	19484.74	20604.54
128	51.89	801.94	8.03	27335.31	18190.00	19235.38
128	51.89	801.94	8.03	27335.31	18190.00	19235.38
129	51.89	806.89	8.03	25092.75	16895.25	17866.23
129	51.89	806.89	8.03	25092.75	16895.25	17866.23
130	51.89	811.85	8.03	22850.19	15600.51	16497.07
130	51.89	811.85	8.03	22850.19	15600.51	16497.07
131	51.89	816.80	8.03	20607.62	14305.76	15127.92
131	51.89	816.80	8.03	20607.62	14305.76	15127.92
132	51.89	821.75	8.03	18365.06	13011.02	13758.77
132	51.89	821.75	8.03	18365.06	13011.02	13758.77
133	51.89	826.71	8.03	16122.49	11716.28	12389.61
133	51.89	826.71	8.03	16122.49	11716.28	12389.61
134	51.89	831.66	8.03	13879.93	10421.53	11020.46
134	51.89	831.66	8.03	13879.93	10421.53	11020.46
135	51.89	836.62	8.03	11637.37	9126.79	9651.30
135	51.89	836.62	8.03	11637.37	9126.79	9651.30
136	51.89	841.57	8.03	9394.80	7832.04	8282.15
136	51.89	841.57	8.03	9394.80	7832.04	8282.15
137	51.89	846.52	8.03	7152.24	6537.30	6913.00
137	51.89	846.52	8.03	7152.24	6537.30	6913.00
138	51.99	851.80	9.09	5372.80	5829.98	6165.03
138	51.99	851.80	9.09	5372.80	5829.98	6165.03
139	51.99	857.40	9.09	2490.36	4165.81	4405.22
139	51.99	857.40	9.09	2490.36	4165.81	4405.22
140	51.99	861.66	4.76	130.74	1502.66	1589.01
140	51.99	861.66	4.76	130.74	1502.66	1589.01
141	51.99	864.59	4.76	418.12	241.40	255.28
141	51.99	864.59	4.76	418.12	241.40	255.28

Sum of the Resisting Forces = 1413116.27 (lbs)

Average Available Shear Strength = 1832.48(psf)

Sum of the Driving Forces = 1593537.03 (lbs)

Average Mobilized Shear Stress = 2066.44(psf)

Total length of the failure surface = 771.15(ft)

Factor of Safety Balance Check: FS = 0.88678

Janbu's Correction Factor (fo) = 1.0642

Janub's FS Corrected = 0.94372

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.13150(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

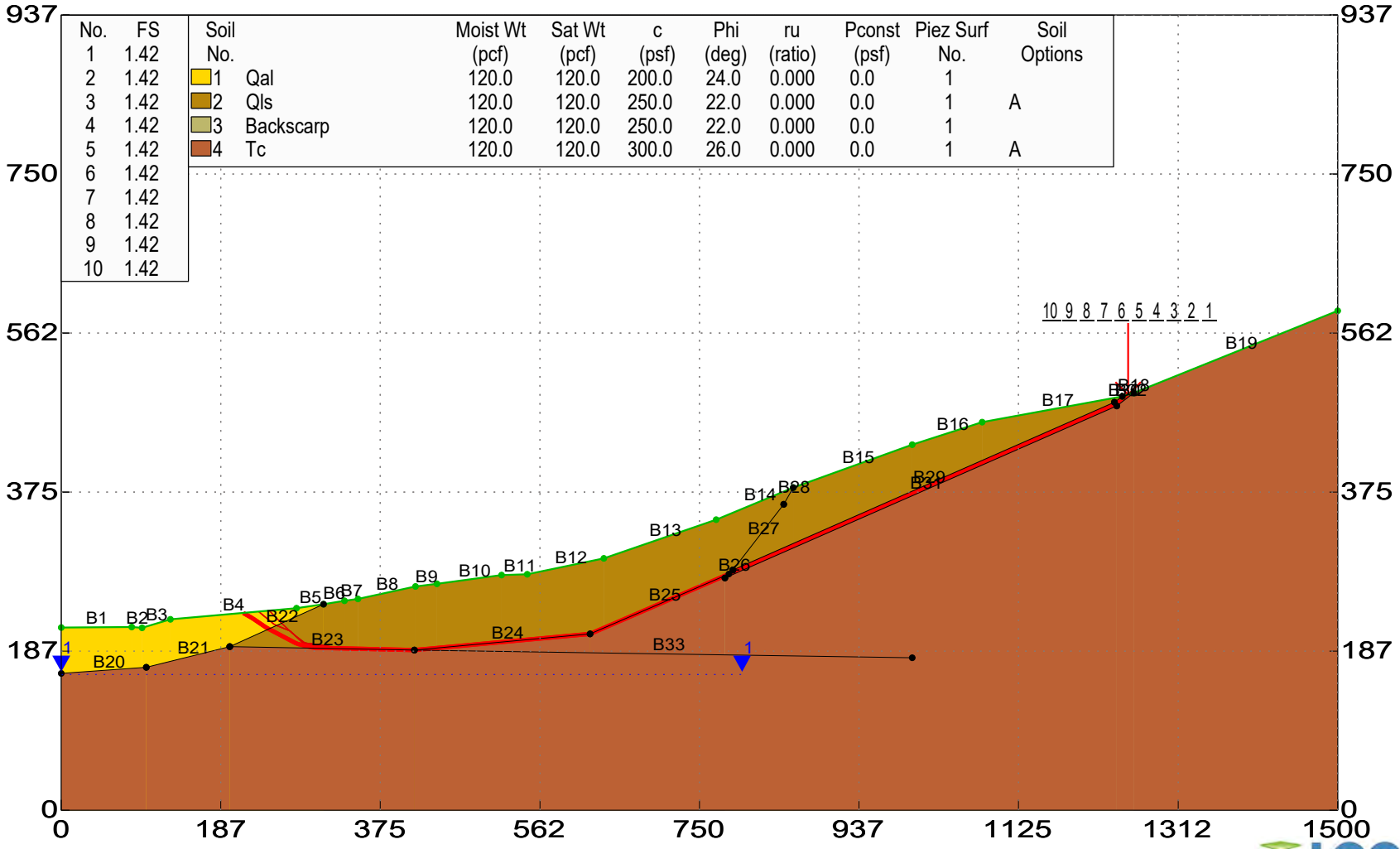
Average Elevation of Point of Application of kh on Sliding Mass = 223.597(ft)

Non-Symmetrical Sliding Resistance Has Been Specified
for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Design - Larger Qls - Static

LGC Geotechnical, Inc. \xhLRGd.gsd



GEOSTASE FS = 1.42

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 3/ 29/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_03_21\xhLRGd.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_03_21\xhLRGd.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Design - Larger Qls - Static

BOUNDARY DATA

19 Surface Boundaries
33 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.200	82.800	216.000	1
2	82.800	216.000	95.100	215.000	1
3	95.100	215.000	128.300	225.100	1
4	128.300	225.100	276.400	238.000	1
5	276.400	238.000	308.300	242.900	1
6	308.300	242.900	332.700	247.000	2
7	332.700	247.000	348.800	249.000	2
8	348.800	249.000	416.400	263.600	2
9	416.400	263.600	441.400	267.000	2
10	441.400	267.000	517.400	277.100	2
11	517.400	277.100	547.500	278.000	2
12	547.500	278.000	637.700	297.000	2
13	637.700	297.000	769.500	342.600	2
14	769.500	342.600	860.200	380.200	2
15	860.200	380.200	1000.000	430.900	2
16	1000.000	430.900	1082.100	457.600	2
17	1082.100	457.600	1247.000	487.900	2
18	1247.000	487.900	1260.400	491.900	3
19	1260.400	491.900	1500.000	588.800	4
20	0.000	161.100	100.000	168.300	4
21	100.000	168.300	198.100	192.800	4
22	198.100	192.800	308.300	242.900	2
23	198.100	192.800	414.900	188.600	4
24	414.900	188.600	621.400	207.800	4
25	621.400	207.800	784.600	278.400	4
26	779.900	273.600	789.300	283.200	3
27	789.300	283.200	849.000	360.500	2
28	849.000	360.500	860.200	380.200	2
29	789.300	283.200	1237.700	480.800	3
30	1237.700	480.800	1247.000	487.900	3
31	779.900	273.600	1240.300	476.500	4
32	1240.300	476.500	1260.400	491.900	4
33	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	25.0	0.00	14.00
3	90.0	250.00	22.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	25.0	0.00	14.00
3	90.0	250.00	22.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 20.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	354.70	189.70	5.00
2	414.90	188.60	414.90	188.60	0.00
3	621.40	207.80	621.40	207.80	0.00
4	784.60	278.40	784.60	278.40	0.00
5	1239.00	478.60	1239.00	478.60	0.00
6	1253.70	489.90	1253.70	489.90	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.465 FS Min = 1.416 FS Ave = 1.437
Standard Deviation = 0.008 Coefficient of Variation = 0.58 %

Critical Surface is Sequence Number 126 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.416

Table 1 - Geometry Data on the 209 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.48	1.85	216.49	230.93	232.78	-30.48	4.98	6.36
2	5.48	5.56	221.97	227.70	233.26	-30.48	4.98	6.36
3	5.56	9.49	227.49	224.25	233.74	-33.45	4.98	6.67
4	5.56	13.65	233.05	220.58	234.22	-33.45	4.98	6.67
5	5.56	17.81	238.61	216.90	234.71	-33.45	4.98	6.67
6	2.60	20.70	242.69	214.36	235.06	-28.32	4.98	2.95
7	5.00	23.08	246.49	212.32	235.40	-28.32	4.98	5.68
8	5.00	26.21	251.50	209.62	235.83	-28.32	4.98	5.68
9	5.00	29.34	256.50	206.93	236.27	-28.32	4.98	5.68
10	5.80	32.71	261.90	204.03	236.74	-28.12	4.98	6.58
11	5.80	36.31	267.70	200.93	237.24	-28.12	4.98	6.58
12	5.80	39.92	273.50	197.83	237.75	-28.12	4.98	6.58
13	0.24	41.80	276.52	196.22	238.02	-28.12	8.73	0.27
14	4.87	42.83	279.07	195.58	238.41	-13.12	8.73	5.00
15	4.87	44.71	283.94	194.45	239.16	-13.12	8.73	5.00
16	4.87	46.59	288.81	193.31	239.91	-13.12	8.73	5.00
17	4.87	48.47	293.68	192.18	240.65	-13.12	8.73	5.00
18	6.09	49.96	299.16	191.54	241.50	-1.45	8.73	6.09
19	6.09	51.05	305.25	191.38	242.43	-1.45	8.73	6.09
20	4.88	52.07	310.74	191.24	243.31	-1.45	9.54	4.88
21	4.88	53.01	315.62	191.12	244.13	-1.45	9.54	4.88
22	4.88	53.96	320.50	190.99	244.95	-1.45	9.54	4.88
23	4.88	54.90	325.38	190.87	245.77	-1.45	9.54	4.88
24	4.88	55.84	330.26	190.75	246.59	-1.45	9.54	4.88
25	5.37	56.72	335.38	190.62	247.33	-1.45	7.08	5.37
26	5.37	57.52	340.75	190.48	248.00	-1.45	7.08	5.37
27	5.37	58.32	346.12	190.34	248.67	-1.45	7.08	5.37
28	5.08	59.34	351.34	190.21	249.55	-1.45	12.19	5.09
29	5.08	60.56	356.43	190.08	250.65	-1.45	12.19	5.09
30	5.08	61.79	361.51	189.95	251.75	-1.45	12.19	5.09
31	5.08	63.02	366.60	189.83	252.84	-1.45	12.19	5.09

32	5.08	64.25	371.68	189.70	253.94	-1.45	12.19	5.09
33	5.08	65.47	376.77	189.57	255.04	-1.45	12.19	5.09
34	5.08	66.70	381.85	189.44	256.14	-1.45	12.19	5.09
35	5.08	67.93	386.93	189.31	257.24	-1.45	12.19	5.09
36	5.08	69.15	392.02	189.18	258.33	-1.45	12.19	5.09
37	5.08	70.38	397.10	189.05	259.43	-1.45	12.19	5.09
38	5.08	71.61	402.19	188.92	260.53	-1.45	12.19	5.09
39	5.08	72.84	407.27	188.79	261.63	-1.45	12.19	5.09
40	5.08	74.06	412.36	188.66	262.73	-1.45	12.19	5.09
41	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
42	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
43	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
44	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
45	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
46	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
47	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
48	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
49	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
50	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
51	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
52	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
53	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
54	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
55	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
56	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
57	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
58	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
59	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
60	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
61	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
62	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
63	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
64	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
65	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
66	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
67	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
68	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
69	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
70	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
71	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
72	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
73	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
74	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
75	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
76	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
77	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
78	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
79	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
80	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
81	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
82	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
83	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
84	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
85	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
86	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
87	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
88	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
89	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
90	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
91	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
92	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
93	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
94	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
95	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
96	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
97	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
98	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
99	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
100	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
101	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
102	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
103	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
104	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
105	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
106	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
107	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
108	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
109	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
110	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
111	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
112	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
113	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
114	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
115	4.70	70.40	786.95	279.44	349.83	23.78	22.52	5.14
116	4.98	70.27	791.79	281.57	351.84	23.78	22.52	5.44
117	4.98	70.14	796.76	283.76	353.90	23.78	22.52	5.44
118	4.97	70.01	801.74	285.95	355.96	23.78	22.52	5.44
119	4.98	69.88	806.71	288.14	358.03	23.78	22.52	5.44
120	4.98	69.75	811.69	290.33	360.09	23.78	22.52	5.44
121	4.98	69.63	816.66	292.53	362.15	23.78	22.52	5.44
122	4.98	69.50	821.64	294.72	364.21	23.78	22.52	5.44
123	4.98	69.37	826.61	296.91	366.28	23.78	22.52	5.44
124	4.98	69.24	831.59	299.10	368.34	23.78	22.52	5.44
125	4.97	69.11	836.56	301.29	370.40	23.78	22.52	5.44
126	4.98	68.98	841.54	303.49	372.46	23.78	22.52	5.44
127	4.98	68.85	846.51	305.68	374.53	23.78	22.52	5.44
128	5.60	68.71	851.80	308.01	376.72	23.78	22.52	6.12
129	5.60	68.56	857.40	310.47	379.04	23.78	22.52	6.12
130	4.99	68.30	862.70	312.81	381.11	23.78	19.93	5.46
131	4.99	67.91	867.69	315.01	382.92	23.78	19.93	5.46
132	4.99	67.52	872.68	317.21	384.73	23.78	19.93	5.46
133	4.99	67.13	877.67	319.41	386.54	23.78	19.93	5.46
134	4.99	66.74	882.67	321.61	388.35	23.78	19.93	5.46
135	4.99	66.35	887.66	323.81	390.16	23.78	19.93	5.46
136	4.99	65.96	892.65	326.01	391.97	23.78	19.93	5.46
137	4.99	65.57	897.65	328.21	393.78	23.78	19.93	5.46
138	4.99	65.19	902.64	330.41	395.59	23.78	19.93	5.46
139	4.99	64.80	907.63	332.61	397.40	23.78	19.93	5.46
140	4.99	64.41	912.62	334.81	399.21	23.78	19.93	5.46
141	4.99	64.02	917.62	337.01	401.02	23.78	19.93	5.46
142	4.99	63.63	922.61	339.20	402.83	23.78	19.93	5.46
143	4.99	63.24	927.60	341.40	404.64	23.78	19.93	5.46
144	4.99	62.85	932.60	343.60	406.46	23.78	19.93	5.46
145	4.99	62.46	937.59	345.80	408.27	23.78	19.93	5.46
146	4.99	62.07	942.58	348.00	410.08	23.78	19.93	5.46
147	4.99	61.68	947.58	350.20	411.89	23.78	19.93	5.46
148	4.99	61.29	952.57	352.40	413.70	23.78	19.93	5.46
149	4.99	60.91	957.56	354.60	415.51	23.78	19.93	5.46
150	4.99	60.52	962.55	356.80	417.32	23.78	19.93	5.46
151	4.99	60.13	967.55	359.00	419.13	23.78	19.93	5.46

152	4.99	59.74	972.54	361.20	420.94	23.78	19.93	5.46
153	4.99	59.35	977.53	363.40	422.75	23.78	19.93	5.46
154	4.99	58.96	982.53	365.60	424.56	23.78	19.93	5.46
155	4.99	58.57	987.52	367.80	426.37	23.78	19.93	5.46
156	4.99	58.18	992.51	370.00	428.18	23.78	19.93	5.46
157	4.99	57.79	997.50	372.20	429.99	23.78	19.93	5.46
158	5.13	57.30	1002.57	374.43	431.73	23.78	18.02	5.61
159	5.13	56.71	1007.70	376.69	433.40	23.78	18.02	5.61
160	5.13	56.12	1012.83	378.95	435.07	23.78	18.02	5.61
161	5.13	55.53	1017.96	381.21	436.74	23.78	18.02	5.61
162	5.13	54.93	1023.09	383.47	438.41	23.78	18.02	5.61
163	5.13	54.34	1028.22	385.74	440.08	23.78	18.02	5.61
164	5.13	53.75	1033.35	388.00	441.75	23.78	18.02	5.61
165	5.13	53.16	1038.48	390.26	443.42	23.78	18.02	5.61
166	5.13	52.57	1043.62	392.52	445.08	23.78	18.02	5.61
167	5.13	51.98	1048.75	394.78	446.75	23.78	18.02	5.61
168	5.13	51.38	1053.88	397.04	448.42	23.78	18.02	5.61
169	5.13	50.79	1059.01	399.30	450.09	23.78	18.02	5.61
170	5.13	50.20	1064.14	401.56	451.76	23.78	18.02	5.61
171	5.13	49.61	1069.27	403.82	453.43	23.78	18.02	5.61
172	5.13	49.02	1074.40	406.08	455.10	23.78	18.02	5.61
173	5.13	48.42	1079.53	408.34	456.77	23.78	18.02	5.61
174	5.02	47.48	1084.61	410.58	458.06	23.78	10.41	5.48
175	5.02	46.19	1089.63	412.79	458.98	23.78	10.41	5.48
176	5.02	44.90	1094.65	415.00	459.91	23.78	10.41	5.48
177	5.02	43.62	1099.67	417.21	460.83	23.78	10.41	5.48
178	5.02	42.33	1104.69	419.42	461.75	23.78	10.41	5.48
179	5.02	41.04	1109.71	421.64	462.67	23.78	10.41	5.48
180	5.02	39.75	1114.73	423.85	463.59	23.78	10.41	5.48
181	5.02	38.46	1119.75	426.06	464.52	23.78	10.41	5.48
182	5.02	37.17	1124.76	428.27	465.44	23.78	10.41	5.48
183	5.02	35.88	1129.78	430.48	466.36	23.78	10.41	5.48
184	5.02	34.59	1134.80	432.69	467.28	23.78	10.41	5.48
185	5.02	33.30	1139.82	434.90	468.21	23.78	10.41	5.48
186	5.02	32.01	1144.84	437.12	469.13	23.78	10.41	5.48
187	5.02	30.72	1149.86	439.33	470.05	23.78	10.41	5.48
188	5.02	29.43	1154.88	441.54	470.97	23.78	10.41	5.48
189	5.02	28.15	1159.90	443.75	471.90	23.78	10.41	5.48
190	5.02	26.86	1164.92	445.96	472.82	23.78	10.41	5.48
191	5.02	25.57	1169.94	448.17	473.74	23.78	10.41	5.48
192	5.02	24.28	1174.96	450.38	474.66	23.78	10.41	5.48
193	5.02	22.99	1179.98	452.60	475.58	23.78	10.41	5.48
194	5.02	21.70	1185.00	454.81	476.51	23.78	10.41	5.48
195	5.02	20.41	1190.02	457.02	477.43	23.78	10.41	5.48
196	5.02	19.12	1195.04	459.23	478.35	23.78	10.41	5.48
197	5.02	17.83	1200.05	461.44	479.27	23.78	10.41	5.48
198	5.02	16.54	1205.07	463.65	480.20	23.78	10.41	5.48
199	5.02	15.25	1210.09	465.86	481.12	23.78	10.41	5.48
200	5.02	13.97	1215.11	468.08	482.04	23.78	10.41	5.48
201	5.02	12.68	1220.13	470.29	482.96	23.78	10.41	5.48
202	5.02	11.39	1225.15	472.50	483.89	23.78	10.41	5.48
203	5.02	10.10	1230.17	474.71	484.81	23.78	10.41	5.48
204	5.02	8.81	1235.19	476.92	485.73	23.78	10.41	5.48
205	1.30	8.00	1238.35	478.31	486.31	23.78	10.41	1.42
206	4.00	6.66	1241.00	480.14	486.80	37.55	10.41	5.05
207	4.00	4.32	1245.00	483.21	487.53	37.55	10.41	5.05
208	3.35	2.36	1248.67	486.04	488.40	37.55	16.62	4.23
209	3.35	0.79	1252.03	488.61	489.40	37.55	16.62	4.23

Table 2 - Force Data On The 209 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1217.9	0.0	0.0	0.0	0.0	0.0
2	3653.8	0.0	0.0	0.0	0.0	0.0
3	6332.1	0.0	0.0	0.0	0.0	0.0
4	9108.4	0.0	0.0	0.0	0.0	0.0
5	11884.8	0.0	0.0	0.0	0.0	0.0
6	6455.8	0.0	0.0	0.0	0.0	0.0
7	13853.8	0.0	0.0	0.0	0.0	0.0
8	15733.6	0.0	0.0	0.0	0.0	0.0
9	17613.4	0.0	0.0	0.0	0.0	0.0
10	22764.9	0.0	0.0	0.0	0.0	0.0
11	25273.4	0.0	0.0	0.0	0.0	0.0
12	27782.0	0.0	0.0	0.0	0.0	0.0
13	1204.8	0.0	0.0	0.0	0.0	0.0
14	25025.8	0.0	0.0	0.0	0.0	0.0
15	26125.9	0.0	0.0	0.0	0.0	0.0
16	27226.0	0.0	0.0	0.0	0.0	0.0
17	28326.2	0.0	0.0	0.0	0.0	0.0
18	36516.6	0.0	0.0	0.0	0.0	0.0
19	37313.3	0.0	0.0	0.0	0.0	0.0
20	30491.2	0.0	0.0	0.0	0.0	0.0
21	31043.9	0.0	0.0	0.0	0.0	0.0
22	31596.5	0.0	0.0	0.0	0.0	0.0
23	32149.2	0.0	0.0	0.0	0.0	0.0
24	32701.9	0.0	0.0	0.0	0.0	0.0
25	36525.5	0.0	0.0	0.0	0.0	0.0
26	37042.5	0.0	0.0	0.0	0.0	0.0
27	37559.5	0.0	0.0	0.0	0.0	0.0
28	36204.8	0.0	0.0	0.0	0.0	0.0
29	36953.5	0.0	0.0	0.0	0.0	0.0
30	37702.2	0.0	0.0	0.0	0.0	0.0
31	38451.0	0.0	0.0	0.0	0.0	0.0
32	39199.7	0.0	0.0	0.0	0.0	0.0
33	39948.4	0.0	0.0	0.0	0.0	0.0
34	40697.1	0.0	0.0	0.0	0.0	0.0
35	41445.9	0.0	0.0	0.0	0.0	0.0
36	42194.6	0.0	0.0	0.0	0.0	0.0
37	42943.3	0.0	0.0	0.0	0.0	0.0
38	43692.1	0.0	0.0	0.0	0.0	0.0
39	44440.8	0.0	0.0	0.0	0.0	0.0
40	45189.5	0.0	0.0	0.0	0.0	0.0
41	13458.3	0.0	0.0	0.0	0.0	0.0
42	44980.9	0.0	0.0	0.0	0.0	0.0
43	45109.9	0.0	0.0	0.0	0.0	0.0
44	45239.0	0.0	0.0	0.0	0.0	0.0
45	45368.0	0.0	0.0	0.0	0.0	0.0
46	45497.1	0.0	0.0	0.0	0.0	0.0
47	46230.6	0.0	0.0	0.0	0.0	0.0
48	46353.6	0.0	0.0	0.0	0.0	0.0
49	46476.5	0.0	0.0	0.0	0.0	0.0
50	46599.5	0.0	0.0	0.0	0.0	0.0
51	46722.5	0.0	0.0	0.0	0.0	0.0
52	46845.4	0.0	0.0	0.0	0.0	0.0

53	46968.4	0.0	0.0	0.0	0.0	0.0
54	47091.4	0.0	0.0	0.0	0.0	0.0
55	47214.3	0.0	0.0	0.0	0.0	0.0
56	47337.3	0.0	0.0	0.0	0.0	0.0
57	47460.3	0.0	0.0	0.0	0.0	0.0
58	47583.2	0.0	0.0	0.0	0.0	0.0
59	47706.2	0.0	0.0	0.0	0.0	0.0
60	47829.2	0.0	0.0	0.0	0.0	0.0
61	47952.1	0.0	0.0	0.0	0.0	0.0
62	47444.5	0.0	0.0	0.0	0.0	0.0
63	47254.0	0.0	0.0	0.0	0.0	0.0
64	47063.5	0.0	0.0	0.0	0.0	0.0
65	46873.0	0.0	0.0	0.0	0.0	0.0
66	46682.5	0.0	0.0	0.0	0.0	0.0
67	46492.0	0.0	0.0	0.0	0.0	0.0
68	45735.8	0.0	0.0	0.0	0.0	0.0
69	46078.5	0.0	0.0	0.0	0.0	0.0
70	46421.2	0.0	0.0	0.0	0.0	0.0
71	46763.9	0.0	0.0	0.0	0.0	0.0
72	47106.6	0.0	0.0	0.0	0.0	0.0
73	47449.4	0.0	0.0	0.0	0.0	0.0
74	47792.1	0.0	0.0	0.0	0.0	0.0
75	48134.8	0.0	0.0	0.0	0.0	0.0
76	48477.5	0.0	0.0	0.0	0.0	0.0
77	48820.2	0.0	0.0	0.0	0.0	0.0
78	49162.9	0.0	0.0	0.0	0.0	0.0
79	49505.7	0.0	0.0	0.0	0.0	0.0
80	49848.4	0.0	0.0	0.0	0.0	0.0
81	50191.1	0.0	0.0	0.0	0.0	0.0
82	50533.8	0.0	0.0	0.0	0.0	0.0
83	55526.6	0.0	0.0	0.0	0.0	0.0
84	54740.3	0.0	0.0	0.0	0.0	0.0
85	53954.1	0.0	0.0	0.0	0.0	0.0
86	49838.1	0.0	0.0	0.0	0.0	0.0
87	49571.0	0.0	0.0	0.0	0.0	0.0
88	49303.9	0.0	0.0	0.0	0.0	0.0
89	49036.8	0.0	0.0	0.0	0.0	0.0
90	48769.7	0.0	0.0	0.0	0.0	0.0
91	48502.6	0.0	0.0	0.0	0.0	0.0
92	48235.5	0.0	0.0	0.0	0.0	0.0
93	47968.4	0.0	0.0	0.0	0.0	0.0
94	47701.3	0.0	0.0	0.0	0.0	0.0
95	47434.2	0.0	0.0	0.0	0.0	0.0
96	47167.1	0.0	0.0	0.0	0.0	0.0
97	46900.0	0.0	0.0	0.0	0.0	0.0
98	46632.9	0.0	0.0	0.0	0.0	0.0
99	46365.8	0.0	0.0	0.0	0.0	0.0
100	46098.7	0.0	0.0	0.0	0.0	0.0
101	45831.5	0.0	0.0	0.0	0.0	0.0
102	45564.4	0.0	0.0	0.0	0.0	0.0
103	45297.3	0.0	0.0	0.0	0.0	0.0
104	45030.2	0.0	0.0	0.0	0.0	0.0
105	44763.1	0.0	0.0	0.0	0.0	0.0
106	44496.0	0.0	0.0	0.0	0.0	0.0
107	44228.9	0.0	0.0	0.0	0.0	0.0
108	43961.8	0.0	0.0	0.0	0.0	0.0
109	43694.7	0.0	0.0	0.0	0.0	0.0
110	43427.6	0.0	0.0	0.0	0.0	0.0
111	43160.5	0.0	0.0	0.0	0.0	0.0
112	42694.8	0.0	0.0	0.0	0.0	0.0
113	42640.0	0.0	0.0	0.0	0.0	0.0
114	42585.1	0.0	0.0	0.0	0.0	0.0
115	39704.8	0.0	0.0	0.0	0.0	0.0
116	41952.8	0.0	0.0	0.0	0.0	0.0
117	41875.5	0.0	0.0	0.0	0.0	0.0
118	41798.2	0.0	0.0	0.0	0.0	0.0
119	41720.9	0.0	0.0	0.0	0.0	0.0
120	41643.6	0.0	0.0	0.0	0.0	0.0
121	41566.3	0.0	0.0	0.0	0.0	0.0
122	41489.0	0.0	0.0	0.0	0.0	0.0
123	41411.7	0.0	0.0	0.0	0.0	0.0
124	41334.4	0.0	0.0	0.0	0.0	0.0
125	41257.1	0.0	0.0	0.0	0.0	0.0
126	41179.8	0.0	0.0	0.0	0.0	0.0
127	41102.5	0.0	0.0	0.0	0.0	0.0
128	46173.6	0.0	0.0	0.0	0.0	0.0
129	46075.6	0.0	0.0	0.0	0.0	0.0
130	40920.0	0.0	0.0	0.0	0.0	0.0
131	40686.9	0.0	0.0	0.0	0.0	0.0
132	40453.8	0.0	0.0	0.0	0.0	0.0
133	40220.7	0.0	0.0	0.0	0.0	0.0
134	39987.6	0.0	0.0	0.0	0.0	0.0
135	39754.5	0.0	0.0	0.0	0.0	0.0
136	39521.4	0.0	0.0	0.0	0.0	0.0
137	39288.3	0.0	0.0	0.0	0.0	0.0
138	39055.3	0.0	0.0	0.0	0.0	0.0
139	38822.2	0.0	0.0	0.0	0.0	0.0
140	38589.1	0.0	0.0	0.0	0.0	0.0
141	38356.0	0.0	0.0	0.0	0.0	0.0
142	38122.9	0.0	0.0	0.0	0.0	0.0
143	37889.8	0.0	0.0	0.0	0.0	0.0
144	37656.7	0.0	0.0	0.0	0.0	0.0
145	37423.6	0.0	0.0	0.0	0.0	0.0
146	37190.5	0.0	0.0	0.0	0.0	0.0
147	36957.4	0.0	0.0	0.0	0.0	0.0
148	36724.3	0.0	0.0	0.0	0.0	0.0
149	36491.2	0.0	0.0	0.0	0.0	0.0
150	36258.1	0.0	0.0	0.0	0.0	0.0
151	36025.0	0.0	0.0	0.0	0.0	0.0
152	35792.0	0.0	0.0	0.0	0.0	0.0
153	35558.9	0.0	0.0	0.0	0.0	0.0
154	35325.8	0.0	0.0	0.0	0.0	0.0
155	35092.7	0.0	0.0	0.0	0.0	0.0
156	34859.6	0.0	0.0	0.0	0.0	0.0
157	34626.5	0.0	0.0	0.0	0.0	0.0
158	35284.2	0.0	0.0	0.0	0.0	0.0
159	34919.7	0.0	0.0	0.0	0.0	0.0
160	34555.2	0.0	0.0	0.0	0.0	0.0
161	34190.7	0.0	0.0	0.0	0.0	0.0
162	33826.2	0.0	0.0	0.0	0.0	0.0
163	33461.7	0.0	0.0	0.0	0.0	0.0
164	33097.2	0.0	0.0	0.0	0.0	0.0
165	32732.7	0.0	0.0	0.0	0.0	0.0
166	32368.1	0.0	0.0	0.0	0.0	0.0
167	32003.6	0.0	0.0	0.0	0.0	0.0
168	31639.1	0.0	0.0	0.0	0.0	0.0
169	31274.6	0.0	0.0	0.0	0.0	0.0
170	30910.1	0.0	0.0	0.0	0.0	0.0
171	30545.6	0.0	0.0	0.0	0.0	0.0
172	30181.1	0.0	0.0	0.0	0.0	0.0

173	29816.6	0.0	0.0	0.0	0.0	0.0
174	28599.8	0.0	0.0	0.0	0.0	0.0
175	27823.4	0.0	0.0	0.0	0.0	0.0
176	27046.9	0.0	0.0	0.0	0.0	0.0
177	26270.4	0.0	0.0	0.0	0.0	0.0
178	25493.9	0.0	0.0	0.0	0.0	0.0
179	24717.5	0.0	0.0	0.0	0.0	0.0
180	23941.0	0.0	0.0	0.0	0.0	0.0
181	23164.5	0.0	0.0	0.0	0.0	0.0
182	22388.0	0.0	0.0	0.0	0.0	0.0
183	21611.5	0.0	0.0	0.0	0.0	0.0
184	20835.1	0.0	0.0	0.0	0.0	0.0
185	20058.6	0.0	0.0	0.0	0.0	0.0
186	19282.1	0.0	0.0	0.0	0.0	0.0
187	18505.6	0.0	0.0	0.0	0.0	0.0
188	17729.2	0.0	0.0	0.0	0.0	0.0
189	16952.7	0.0	0.0	0.0	0.0	0.0
190	16176.2	0.0	0.0	0.0	0.0	0.0
191	15399.7	0.0	0.0	0.0	0.0	0.0
192	14623.3	0.0	0.0	0.0	0.0	0.0
193	13846.8	0.0	0.0	0.0	0.0	0.0
194	13070.3	0.0	0.0	0.0	0.0	0.0
195	12293.8	0.0	0.0	0.0	0.0	0.0
196	11517.4	0.0	0.0	0.0	0.0	0.0
197	10740.9	0.0	0.0	0.0	0.0	0.0
198	9964.4	0.0	0.0	0.0	0.0	0.0
199	9187.9	0.0	0.0	0.0	0.0	0.0
200	8411.4	0.0	0.0	0.0	0.0	0.0
201	7635.0	0.0	0.0	0.0	0.0	0.0
202	6858.5	0.0	0.0	0.0	0.0	0.0
203	6082.0	0.0	0.0	0.0	0.0	0.0
204	5305.5	0.0	0.0	0.0	0.0	0.0
205	1247.5	0.0	0.0	0.0	0.0	0.0
206	3196.8	0.0	0.0	0.0	0.0	0.0
207	2073.7	0.0	0.0	0.0	0.0	0.0
208	949.8	0.0	0.0	0.0	0.0	0.0
209	316.6	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 7334624.52(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 7334624.52(lbs)

TOTAL AREA OF SLIDING MASS = 61121.87(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 209 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	1	200.00	24.00	
7	2	250.00	22.00	A
8	2	250.00	22.00	A
9	2	250.00	22.00	A
10	2	250.00	22.00	A
11	2	250.00	22.00	A
12	2	250.00	22.00	A
13	2	250.00	22.00	A
14	2	0.00	14.00	A
15	2	0.00	14.00	A
16	2	0.00	14.00	A
17	2	0.00	14.00	A
18	2	0.00	14.00	A
19	2	0.00	14.00	A
20	2	0.00	14.00	A
21	2	0.00	14.00	A
22	2	0.00	14.00	A
23	2	0.00	14.00	A
24	2	0.00	14.00	A
25	2	0.00	14.00	A
26	2	0.00	14.00	A
27	2	0.00	14.00	A
28	2	0.00	14.00	A
29	2	0.00	14.00	A
30	2	0.00	14.00	A
31	2	0.00	14.00	A
32	2	0.00	14.00	A
33	2	0.00	14.00	A
34	2	0.00	14.00	A
35	2	0.00	14.00	A
36	2	0.00	14.00	A
37	2	0.00	14.00	A
38	2	0.00	14.00	A
39	2	0.00	14.00	A
40	2	0.00	14.00	A
41	2	0.00	14.00	A
42	2	0.00	14.00	A
43	2	0.00	14.00	A
44	2	0.00	14.00	A
45	2	0.00	14.00	A
46	2	0.00	14.00	A
47	2	0.00	14.00	A
48	2	0.00	14.00	A
49	2	0.00	14.00	A
50	2	0.00	14.00	A
51	2	0.00	14.00	A
52	2	0.00	14.00	A
53	2	0.00	14.00	A
54	2	0.00	14.00	A
55	2	0.00	14.00	A
56	2	0.00	14.00	A
57	2	0.00	14.00	A
58	2	0.00	14.00	A
59	2	0.00	14.00	A
60	2	0.00	14.00	A
61	2	0.00	14.00	A
62	2	0.00	14.00	A
63	2	0.00	14.00	A
64	2	0.00	14.00	A
65	2	0.00	14.00	A
66	2	0.00	14.00	A
67	2	0.00	14.00	A
68	2	0.00	14.00	A
69	2	0.00	14.00	A
70	2	0.00	14.00	A
71	2	0.00	14.00	A

72	2	0.00	14.00	A
73	2	0.00	14.00	A
74	2	0.00	14.00	A
75	2	0.00	14.00	A
76	2	0.00	14.00	A
77	2	0.00	14.00	A
78	2	0.00	14.00	A
79	2	0.00	14.00	A
80	2	0.00	14.00	A
81	2	0.00	14.00	A
82	2	0.00	14.00	A
83	2	0.00	14.00	A
84	2	0.00	14.00	A
85	2	0.00	14.00	A
86	2	0.00	14.00	A
87	2	0.00	14.00	A
88	2	0.00	14.00	A
89	2	0.00	14.00	A
90	2	0.00	14.00	A
91	2	0.00	14.00	A
92	2	0.00	14.00	A
93	2	0.00	14.00	A
94	2	0.00	14.00	A
95	2	0.00	14.00	A
96	2	0.00	14.00	A
97	2	0.00	14.00	A
98	2	0.00	14.00	A
99	2	0.00	14.00	A
100	2	0.00	14.00	A
101	2	0.00	14.00	A
102	2	0.00	14.00	A
103	2	0.00	14.00	A
104	2	0.00	14.00	A
105	2	0.00	14.00	A
106	2	0.00	14.00	A
107	2	0.00	14.00	A
108	2	0.00	14.00	A
109	2	0.00	14.00	A
110	2	0.00	14.00	A
111	2	0.00	14.00	A
112	2	0.00	14.00	A
113	2	0.00	14.00	A
114	2	0.00	14.00	A
115	3	250.00	22.00	
116	3	250.00	22.00	
117	3	250.00	22.00	
118	3	250.00	22.00	
119	3	250.00	22.00	
120	3	250.00	22.00	
121	3	250.00	22.00	
122	3	250.00	22.00	
123	3	250.00	22.00	
124	3	250.00	22.00	
125	3	250.00	22.00	
126	3	250.00	22.00	
127	3	250.00	22.00	
128	3	250.00	22.00	
129	3	250.00	22.00	
130	3	250.00	22.00	
131	3	250.00	22.00	
132	3	250.00	22.00	
133	3	250.00	22.00	
134	3	250.00	22.00	
135	3	250.00	22.00	
136	3	250.00	22.00	
137	3	250.00	22.00	
138	3	250.00	22.00	
139	3	250.00	22.00	
140	3	250.00	22.00	
141	3	250.00	22.00	
142	3	250.00	22.00	
143	3	250.00	22.00	
144	3	250.00	22.00	
145	3	250.00	22.00	
146	3	250.00	22.00	
147	3	250.00	22.00	
148	3	250.00	22.00	
149	3	250.00	22.00	
150	3	250.00	22.00	
151	3	250.00	22.00	
152	3	250.00	22.00	
153	3	250.00	22.00	
154	3	250.00	22.00	
155	3	250.00	22.00	
156	3	250.00	22.00	
157	3	250.00	22.00	
158	3	250.00	22.00	
159	3	250.00	22.00	
160	3	250.00	22.00	
161	3	250.00	22.00	
162	3	250.00	22.00	
163	3	250.00	22.00	
164	3	250.00	22.00	
165	3	250.00	22.00	
166	3	250.00	22.00	
167	3	250.00	22.00	
168	3	250.00	22.00	
169	3	250.00	22.00	
170	3	250.00	22.00	
171	3	250.00	22.00	
172	3	250.00	22.00	
173	3	250.00	22.00	
174	3	250.00	22.00	
175	3	250.00	22.00	
176	3	250.00	22.00	
177	3	250.00	22.00	
178	3	250.00	22.00	
179	3	250.00	22.00	
180	3	250.00	22.00	
181	3	250.00	22.00	
182	3	250.00	22.00	
183	3	250.00	22.00	
184	3	250.00	22.00	
185	3	250.00	22.00	
186	3	250.00	22.00	
187	3	250.00	22.00	
188	3	250.00	22.00	
189	3	250.00	22.00	
190	3	250.00	22.00	
191	3	250.00	22.00	

192	3	250.00	22.00
193	3	250.00	22.00
194	3	250.00	22.00
195	3	250.00	22.00
196	3	250.00	22.00
197	3	250.00	22.00
198	3	250.00	22.00
199	3	250.00	22.00
200	3	250.00	22.00
201	3	250.00	22.00
202	3	250.00	22.00
203	3	250.00	22.00
204	3	250.00	22.00
205	3	250.00	22.00
206	3	250.00	22.00
207	3	250.00	22.00
208	3	250.00	22.00
209	3	250.00	22.00

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 209 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-30.48	216.49	6.36	384.18	371.05	262.20
1	-30.48	216.49	6.36	384.18	371.05	262.20
2	-30.48	221.97	6.36	935.81	616.65	435.75
2	-30.48	221.97	6.36	935.81	616.65	435.75
3	-33.45	227.49	6.67	1581.45	904.11	638.88
3	-33.45	227.49	6.67	1581.45	904.11	638.88
4	-33.45	233.05	6.67	2219.90	1188.36	839.74
4	-33.45	233.05	6.67	2219.90	1188.36	839.74
5	-33.45	238.61	6.67	2858.35	1472.62	1040.61
5	-33.45	238.61	6.67	2858.35	1472.62	1040.61
6	-28.32	242.69	2.95	3118.82	1588.59	1122.56
6	-28.32	242.69	2.95	3118.82	1588.59	1122.56
7	-28.32	246.49	5.68	3421.89	1632.53	1153.61
7	-28.32	246.49	5.68	3421.89	1632.53	1153.61
8	-28.32	251.50	5.68	3870.03	1813.60	1281.56
8	-28.32	251.50	5.68	3870.03	1813.60	1281.56
9	-28.32	256.50	5.68	4318.18	1994.66	1409.50
9	-28.32	256.50	5.68	4318.18	1994.66	1409.50
10	-28.12	261.90	6.58	4791.41	2185.85	1544.61
10	-28.12	261.90	6.58	4791.41	2185.85	1544.61
11	-28.12	267.70	6.58	5306.40	2393.92	1691.64
11	-28.12	267.70	6.58	5306.40	2393.92	1691.64
12	-28.12	273.50	6.58	5821.38	2601.99	1838.67
12	-28.12	273.50	6.58	5821.38	2601.99	1838.67
13	-28.12	276.52	0.27	6090.68	2710.79	1915.55
13	-28.12	276.52	0.27	6090.68	2710.79	1915.55
14	-13.12	279.07	5.00	5370.64	1339.05	946.23
14	-13.12	279.07	5.00	5370.64	1339.05	946.23
15	-13.12	283.94	5.00	5606.74	1397.92	987.82
15	-13.12	283.94	5.00	5606.74	1397.92	987.82
16	-13.12	288.81	5.00	5842.83	1456.78	1029.42
16	-13.12	288.81	5.00	5842.83	1456.78	1029.42
17	-13.12	293.68	5.00	6078.92	1515.64	1071.01
17	-13.12	293.68	5.00	6078.92	1515.64	1071.01
18	-1.45	299.16	6.09	6023.61	1501.85	1061.27
18	-1.45	299.16	6.09	6023.61	1501.85	1061.27
19	-1.45	305.25	6.09	6155.03	1534.62	1084.42
19	-1.45	305.25	6.09	6155.03	1534.62	1084.42
20	-1.45	310.74	4.88	6277.64	1565.19	1106.03
20	-1.45	310.74	4.88	6277.64	1565.19	1106.03
21	-1.45	315.62	4.88	6391.42	1593.56	1126.07
21	-1.45	315.62	4.88	6391.42	1593.56	1126.07
22	-1.45	320.50	4.88	6505.21	1621.93	1146.12
22	-1.45	320.50	4.88	6505.21	1621.93	1146.12
23	-1.45	325.38	4.88	6618.99	1650.30	1166.17
23	-1.45	325.38	4.88	6618.99	1650.30	1166.17
24	-1.45	330.26	4.88	6732.78	1678.67	1186.21
24	-1.45	330.26	4.88	6732.78	1678.67	1186.21
25	-1.45	335.38	5.37	6838.07	1704.92	1204.76
25	-1.45	335.38	5.37	6838.07	1704.92	1204.76
26	-1.45	340.75	5.37	6934.85	1729.05	1221.82
26	-1.45	340.75	5.37	6934.85	1729.05	1221.82
27	-1.45	346.12	5.37	7031.64	1753.18	1238.87
27	-1.45	346.12	5.37	7031.64	1753.18	1238.87
28	-1.45	351.34	5.09	7154.01	1783.69	1260.43
28	-1.45	351.34	5.09	7154.01	1783.69	1260.43
29	-1.45	356.43	5.09	7301.95	1820.58	1286.49
29	-1.45	356.43	5.09	7301.95	1820.58	1286.49
30	-1.45	361.51	5.09	7449.90	1857.47	1312.56
30	-1.45	361.51	5.09	7449.90	1857.47	1312.56
31	-1.45	366.60	5.09	7597.85	1894.36	1338.63
31	-1.45	366.60	5.09	7597.85	1894.36	1338.63
32	-1.45	371.68	5.09	7745.80	1931.24	1364.69
32	-1.45	371.68	5.09	7745.80	1931.24	1364.69
33	-1.45	376.77	5.09	7893.74	1968.13	1390.76
33	-1.45	376.77	5.09	7893.74	1968.13	1390.76
34	-1.45	381.85	5.09	8041.69	2005.02	1416.83
34	-1.45	381.85	5.09	8041.69	2005.02	1416.83
35	-1.45	386.93	5.09	8189.64	2041.91	1442.89
35	-1.45	386.93	5.09	8189.64	2041.91	1442.89
36	-1.45	392.02	5.09	8337.58	2078.79	1468.96
36	-1.45	392.02	5.09	8337.58	2078.79	1468.96
37	-1.45	397.10	5.09	8485.53	2115.68	1495.02
37	-1.45	397.10	5.09	8485.53	2115.68	1495.02
38	-1.45	402.19	5.09	8633.48	2152.57	1521.09
38	-1.45	402.19	5.09	8633.48	2152.57	1521.09
39	-1.45	407.27	5.09	8781.43	2189.46	1547.16
39	-1.45	407.27	5.09	8781.43	2189.46	1547.16
40	-1.45	412.36	5.09	8929.37	2226.34	1573.22
40	-1.45	412.36	5.09	8929.37	2226.34	1573.22
41	5.31	415.65	1.51	8820.54	2199.21	1554.05
41	5.31	415.65	1.51	8820.54	2199.21	1554.05
42	5.31	418.90	5.02	8844.12	2205.09	1558.20
42	5.31	418.90	5.02	8844.12	2205.09	1558.20
43	5.31	423.90	5.02	8869.49	2211.41	1562.67
43	5.31	423.90	5.02	8869.49	2211.41	1562.67
44	5.31	428.90	5.02	8894.87	2217.74	1567.14

44	5.31	428.90	5.02	8894.87	2217.74	1567.14
45	5.31	433.90	5.02	8920.25	2224.07	1571.61
45	5.31	433.90	5.02	8920.25	2224.07	1571.61
46	5.31	438.90	5.02	8945.62	2230.39	1576.09
46	5.31	438.90	5.02	8945.62	2230.39	1576.09
47	5.31	443.93	5.09	8970.24	2236.53	1580.42
47	5.31	443.93	5.09	8970.24	2236.53	1580.42
48	5.31	449.00	5.09	8994.10	2242.48	1584.63
48	5.31	449.00	5.09	8994.10	2242.48	1584.63
49	5.31	454.07	5.09	9017.96	2248.43	1588.83
49	5.31	454.07	5.09	9017.96	2248.43	1588.83
50	5.31	459.13	5.09	9041.82	2254.38	1593.03
50	5.31	459.13	5.09	9041.82	2254.38	1593.03
51	5.31	464.20	5.09	9065.68	2260.33	1597.24
51	5.31	464.20	5.09	9065.68	2260.33	1597.24
52	5.31	469.27	5.09	9089.54	2266.28	1601.44
52	5.31	469.27	5.09	9089.54	2266.28	1601.44
53	5.31	474.33	5.09	9113.40	2272.22	1605.64
53	5.31	474.33	5.09	9113.40	2272.22	1605.64
54	5.31	479.40	5.09	9137.25	2278.17	1609.85
54	5.31	479.40	5.09	9137.25	2278.17	1609.85
55	5.31	484.47	5.09	9161.11	2284.12	1614.05
55	5.31	484.47	5.09	9161.11	2284.12	1614.05
56	5.31	489.53	5.09	9184.97	2290.07	1618.25
56	5.31	489.53	5.09	9184.97	2290.07	1618.25
57	5.31	494.60	5.09	9208.83	2296.02	1622.46
57	5.31	494.60	5.09	9208.83	2296.02	1622.46
58	5.31	499.67	5.09	9232.69	2301.97	1626.66
58	5.31	499.67	5.09	9232.69	2301.97	1626.66
59	5.31	504.73	5.09	9256.55	2307.92	1630.87
59	5.31	504.73	5.09	9256.55	2307.92	1630.87
60	5.31	509.80	5.09	9280.41	2313.87	1635.07
60	5.31	509.80	5.09	9280.41	2313.87	1635.07
61	5.31	514.87	5.09	9304.27	2319.81	1639.27
61	5.31	514.87	5.09	9304.27	2319.81	1639.27
62	5.31	519.91	5.04	9297.53	2318.13	1638.09
62	5.31	519.91	5.04	9297.53	2318.13	1638.09
63	5.31	524.92	5.04	9260.20	2308.83	1631.51
63	5.31	524.92	5.04	9260.20	2308.83	1631.51
64	5.31	529.94	5.04	9222.87	2299.52	1624.93
64	5.31	529.94	5.04	9222.87	2299.52	1624.93
65	5.31	534.96	5.04	9185.54	2290.21	1618.35
65	5.31	534.96	5.04	9185.54	2290.21	1618.35
66	5.31	539.98	5.04	9148.21	2280.90	1611.78
66	5.31	539.98	5.04	9148.21	2280.90	1611.78
67	5.31	544.99	5.04	9110.88	2271.60	1605.20
67	5.31	544.99	5.04	9110.88	2271.60	1605.20
68	5.31	549.96	4.95	9126.40	2275.47	1607.94
68	5.31	549.96	4.95	9126.40	2275.47	1607.94
69	5.31	554.89	4.95	9194.79	2292.52	1619.98
69	5.31	554.89	4.95	9194.79	2292.52	1619.98
70	5.31	559.82	4.95	9263.18	2309.57	1632.03
70	5.31	559.82	4.95	9263.18	2309.57	1632.03
71	5.31	564.74	4.95	9331.57	2326.62	1644.08
71	5.31	564.74	4.95	9331.57	2326.62	1644.08
72	5.31	569.67	4.95	9399.96	2343.67	1656.13
72	5.31	569.67	4.95	9399.96	2343.67	1656.13
73	5.31	574.60	4.95	9468.34	2360.72	1668.18
73	5.31	574.60	4.95	9468.34	2360.72	1668.18
74	5.31	579.52	4.95	9536.73	2377.77	1680.23
74	5.31	579.52	4.95	9536.73	2377.77	1680.23
75	5.31	584.45	4.95	9605.12	2394.82	1692.28
75	5.31	584.45	4.95	9605.12	2394.82	1692.28
76	5.31	589.38	4.95	9673.51	2411.88	1704.33
76	5.31	589.38	4.95	9673.51	2411.88	1704.33
77	5.31	594.30	4.95	9741.89	2428.93	1716.38
77	5.31	594.30	4.95	9741.89	2428.93	1716.38
78	5.31	599.23	4.95	9810.28	2445.98	1728.42
78	5.31	599.23	4.95	9810.28	2445.98	1728.42
79	5.31	604.16	4.95	9878.67	2463.03	1740.47
79	5.31	604.16	4.95	9878.67	2463.03	1740.47
80	5.31	609.08	4.95	9947.06	2480.08	1752.52
80	5.31	609.08	4.95	9947.06	2480.08	1752.52
81	5.31	614.01	4.95	10015.44	2497.13	1764.57
81	5.31	614.01	4.95	10015.44	2497.13	1764.57
82	5.31	618.94	4.95	10083.83	2514.18	1776.62
82	5.31	618.94	4.95	10083.83	2514.18	1776.62
83	23.39	624.12	5.92	9462.68	2359.31	1667.18
83	23.39	624.12	5.92	9462.68	2359.31	1667.18
84	23.39	629.55	5.92	9328.69	2325.90	1643.58
84	23.39	629.55	5.92	9328.69	2325.90	1643.58
85	23.39	634.98	5.92	9194.69	2292.49	1619.97
85	23.39	634.98	5.92	9194.69	2292.49	1619.97
86	23.39	640.23	5.52	9103.30	2269.71	1603.87
86	23.39	640.23	5.52	9103.30	2269.71	1603.87
87	23.39	645.30	5.52	9054.51	2257.54	1595.27
87	23.39	645.30	5.52	9054.51	2257.54	1595.27
88	23.39	650.37	5.52	9005.72	2245.38	1586.67
88	23.39	650.37	5.52	9005.72	2245.38	1586.67
89	23.39	655.44	5.52	8956.93	2233.21	1578.08
89	23.39	655.44	5.52	8956.93	2233.21	1578.08
90	23.39	660.51	5.52	8908.14	2221.05	1569.48
90	23.39	660.51	5.52	8908.14	2221.05	1569.48
91	23.39	665.58	5.52	8859.36	2208.89	1560.89
91	23.39	665.58	5.52	8859.36	2208.89	1560.89
92	23.39	670.65	5.52	8810.57	2196.72	1552.29
92	23.39	670.65	5.52	8810.57	2196.72	1552.29
93	23.39	675.72	5.52	8761.78	2184.56	1543.69
93	23.39	675.72	5.52	8761.78	2184.56	1543.69
94	23.39	680.79	5.52	8712.99	2172.39	1535.10
94	23.39	680.79	5.52	8712.99	2172.39	1535.10
95	23.39	685.86	5.52	8664.20	2160.23	1526.50
95	23.39	685.86	5.52	8664.20	2160.23	1526.50
96	23.39	690.93	5.52	8615.41	2148.06	1517.91
96	23.39	690.93	5.52	8615.41	2148.06	1517.91
97	23.39	696.00	5.52	8566.63	2135.90	1509.31
97	23.39	696.00	5.52	8566.63	2135.90	1509.31
98	23.39	701.07	5.52	8517.84	2123.74	1500.72
98	23.39	701.07	5.52	8517.84	2123.74	1500.72
99	23.39	706.13	5.52	8469.05	2111.57	1492.12
99	23.39	706.13	5.52	8469.05	2111.57	1492.12
100	23.39	711.20	5.52	8420.26	2099.41	1483.52
100	23.39	711.20	5.52	8420.26	2099.41	1483.52
101	23.39	716.27	5.52	8371.47	2087.24	1474.93
101	23.39	716.27	5.52	8371.47	2087.24	1474.93
102	23.39	721.34	5.52	8322.68	2075.08	1466.33
102	23.39	721.34	5.52	8322.68	2075.08	1466.33
103	23.39	726.41	5.52	8273.89	2062.91	1457.74
103	23.39	726.41	5.52	8273.89	2062.91	1457.74
104	23.39	731.48	5.52	8225.11	2050.75	1449.14

104	23.39	731.48	5.52	8225.11	2050.75	1449.14
105	23.39	736.55	5.52	8176.32	2038.58	1440.54
105	23.39	736.55	5.52	8176.32	2038.58	1440.54
106	23.39	741.62	5.52	8127.53	2026.42	1431.95
106	23.39	741.62	5.52	8127.53	2026.42	1431.95
107	23.39	746.69	5.52	8078.74	2014.26	1423.35
107	23.39	746.69	5.52	8078.74	2014.26	1423.35
108	23.39	751.76	5.52	8029.95	2002.09	1414.76
108	23.39	751.76	5.52	8029.95	2002.09	1414.76
109	23.39	756.83	5.52	7981.16	1989.93	1406.16
109	23.39	756.83	5.52	7981.16	1989.93	1406.16
110	23.39	761.90	5.52	7932.38	1977.76	1397.57
110	23.39	761.90	5.52	7932.38	1977.76	1397.57
111	23.39	766.97	5.52	7883.59	1965.60	1388.97
111	23.39	766.97	5.52	7883.59	1965.60	1388.97
112	23.39	772.02	5.48	7854.15	1958.26	1383.78
112	23.39	772.02	5.48	7854.15	1958.26	1383.78
113	23.39	777.05	5.48	7844.06	1955.74	1382.01
113	23.39	777.05	5.48	7844.06	1955.74	1382.01
114	23.39	782.08	5.48	7833.96	1953.23	1380.23
114	23.39	782.08	5.48	7833.96	1953.23	1380.23
115	23.78	786.95	5.14	7390.48	3235.95	2286.65
115	23.78	786.95	5.14	7390.48	3235.95	2286.65
116	23.78	791.79	5.44	7377.13	3230.55	2282.84
116	23.78	791.79	5.44	7377.13	3230.55	2282.84
117	23.78	796.76	5.44	7363.41	3225.01	2278.92
117	23.78	796.76	5.44	7363.41	3225.01	2278.92
118	23.78	801.74	5.44	7349.68	3219.46	2275.00
118	23.78	801.74	5.44	7349.68	3219.46	2275.00
119	23.78	806.71	5.44	7335.95	3213.92	2271.08
119	23.78	806.71	5.44	7335.95	3213.92	2271.08
120	23.78	811.69	5.44	7322.23	3208.37	2267.16
120	23.78	811.69	5.44	7322.23	3208.37	2267.16
121	23.78	816.66	5.44	7308.50	3202.83	2263.24
121	23.78	816.66	5.44	7308.50	3202.83	2263.24
122	23.78	821.64	5.44	7294.77	3197.28	2259.32
122	23.78	821.64	5.44	7294.77	3197.28	2259.32
123	23.78	826.61	5.44	7281.05	3191.73	2255.41
123	23.78	826.61	5.44	7281.05	3191.73	2255.41
124	23.78	831.59	5.44	7267.32	3186.19	2251.49
124	23.78	831.59	5.44	7267.32	3186.19	2251.49
125	23.78	836.56	5.44	7253.59	3180.64	2247.57
125	23.78	836.56	5.44	7253.59	3180.64	2247.57
126	23.78	841.54	5.44	7239.87	3175.10	2243.65
126	23.78	841.54	5.44	7239.87	3175.10	2243.65
127	23.78	846.51	5.44	7226.14	3169.55	2239.73
127	23.78	846.51	5.44	7226.14	3169.55	2239.73
128	23.78	851.80	6.12	7211.55	3163.66	2235.57
128	23.78	851.80	6.12	7211.55	3163.66	2235.57
129	23.78	857.40	6.12	7196.10	3157.41	2231.15
129	23.78	857.40	6.12	7196.10	3157.41	2231.15
130	23.78	862.70	5.46	7167.76	3145.96	2223.06
130	23.78	862.70	5.46	7167.76	3145.96	2223.06
131	23.78	867.69	5.46	7126.52	3129.30	2211.29
131	23.78	867.69	5.46	7126.52	3129.30	2211.29
132	23.78	872.68	5.46	7085.28	3112.64	2199.51
132	23.78	872.68	5.46	7085.28	3112.64	2199.51
133	23.78	877.67	5.46	7044.03	3095.97	2187.74
133	23.78	877.67	5.46	7044.03	3095.97	2187.74
134	23.78	882.67	5.46	7002.79	3079.31	2175.96
134	23.78	882.67	5.46	7002.79	3079.31	2175.96
135	23.78	887.66	5.46	6961.55	3062.65	2164.19
135	23.78	887.66	5.46	6961.55	3062.65	2164.19
136	23.78	892.65	5.46	6920.31	3045.99	2152.42
136	23.78	892.65	5.46	6920.31	3045.99	2152.42
137	23.78	897.65	5.46	6879.07	3029.33	2140.64
137	23.78	897.65	5.46	6879.07	3029.33	2140.64
138	23.78	902.64	5.46	6837.83	3012.66	2128.87
138	23.78	902.64	5.46	6837.83	3012.66	2128.87
139	23.78	907.63	5.46	6796.59	2996.00	2117.09
139	23.78	907.63	5.46	6796.59	2996.00	2117.09
140	23.78	912.62	5.46	6755.35	2979.34	2105.32
140	23.78	912.62	5.46	6755.35	2979.34	2105.32
141	23.78	917.62	5.46	6714.11	2962.68	2093.54
141	23.78	917.62	5.46	6714.11	2962.68	2093.54
142	23.78	922.61	5.46	6672.87	2946.01	2081.77
142	23.78	922.61	5.46	6672.87	2946.01	2081.77
143	23.78	927.60	5.46	6631.63	2929.35	2070.00
143	23.78	927.60	5.46	6631.63	2929.35	2070.00
144	23.78	932.60	5.46	6590.39	2912.69	2058.22
144	23.78	932.60	5.46	6590.39	2912.69	2058.22
145	23.78	937.59	5.46	6549.15	2896.03	2046.45
145	23.78	937.59	5.46	6549.15	2896.03	2046.45
146	23.78	942.58	5.46	6507.90	2879.36	2034.67
146	23.78	942.58	5.46	6507.90	2879.36	2034.67
147	23.78	947.58	5.46	6466.66	2862.70	2022.90
147	23.78	947.58	5.46	6466.66	2862.70	2022.90
148	23.78	952.57	5.46	6425.42	2846.04	2011.12
148	23.78	952.57	5.46	6425.42	2846.04	2011.12
149	23.78	957.56	5.46	6384.18	2829.38	1999.35
149	23.78	957.56	5.46	6384.18	2829.38	1999.35
150	23.78	962.55	5.46	6342.94	2812.71	1987.58
150	23.78	962.55	5.46	6342.94	2812.71	1987.58
151	23.78	967.55	5.46	6301.70	2796.05	1975.80
151	23.78	967.55	5.46	6301.70	2796.05	1975.80
152	23.78	972.54	5.46	6260.46	2779.39	1964.03
152	23.78	972.54	5.46	6260.46	2779.39	1964.03
153	23.78	977.53	5.46	6219.22	2762.73	1952.25
153	23.78	977.53	5.46	6219.22	2762.73	1952.25
154	23.78	982.53	5.46	6177.98	2746.07	1940.48
154	23.78	982.53	5.46	6177.98	2746.07	1940.48
155	23.78	987.52	5.46	6136.74	2729.40	1928.70
155	23.78	987.52	5.46	6136.74	2729.40	1928.70
156	23.78	992.51	5.46	6095.50	2712.74	1916.93
156	23.78	992.51	5.46	6095.50	2712.74	1916.93
157	23.78	997.50	5.46	6054.26	2696.08	1905.16
157	23.78	997.50	5.46	6054.26	2696.08	1905.16
158	23.78	1002.57	5.61	6002.26	2675.07	1890.31
158	23.78	1002.57	5.61	6002.26	2675.07	1890.31
159	23.78	1007.70	5.61	5939.51	2649.72	1872.39
159	23.78	1007.70	5.61	5939.51	2649.72	1872.39
160	23.78	1012.83	5.61	5876.75	2624.36	1854.48
160	23.78	1012.83	5.61	5876.75	2624.36	1854.48
161	23.78	1017.96	5.61	5814.00	2599.01	1836.56
161	23.78	1017.96	5.61	5814.00	2599.01	1836.56
162	23.78	1023.09	5.61	5751.25	2573.65	1818.65
162	23.78	1023.09	5.61	5751.25	2573.65	1818.65
163	23.78	1028.22	5.61	5688.49	2548.30	1800.73
163	23.78	1028.22	5.61	5688.49	2548.30	1800.73
164	23.78	1033.35	5.61	5625.74	2522.95	1782.81

164	23.78	1033.35	5.61	5625.74	2522.95	1782.81
165	23.78	1038.48	5.61	5562.99	2497.59	1764.90
165	23.78	1038.48	5.61	5562.99	2497.59	1764.90
166	23.78	1043.62	5.61	5500.23	2472.24	1746.98
166	23.78	1043.62	5.61	5500.23	2472.24	1746.98
167	23.78	1048.75	5.61	5437.48	2446.88	1729.07
167	23.78	1048.75	5.61	5437.48	2446.88	1729.07
168	23.78	1053.88	5.61	5374.73	2421.53	1711.15
168	23.78	1053.88	5.61	5374.73	2421.53	1711.15
169	23.78	1059.01	5.61	5311.97	2396.18	1693.23
169	23.78	1059.01	5.61	5311.97	2396.18	1693.23
170	23.78	1064.14	5.61	5249.22	2370.82	1675.32
170	23.78	1064.14	5.61	5249.22	2370.82	1675.32
171	23.78	1069.27	5.61	5186.47	2345.47	1657.40
171	23.78	1069.27	5.61	5186.47	2345.47	1657.40
172	23.78	1074.40	5.61	5123.71	2320.11	1639.48
172	23.78	1074.40	5.61	5123.71	2320.11	1639.48
173	23.78	1079.53	5.61	5060.96	2294.76	1621.57
173	23.78	1079.53	5.61	5060.96	2294.76	1621.57
174	23.78	1084.61	5.48	4961.26	2254.48	1593.10
174	23.78	1084.61	5.48	4961.26	2254.48	1593.10
175	23.78	1089.63	5.48	4824.60	2199.26	1554.09
175	23.78	1089.63	5.48	4824.60	2199.26	1554.09
176	23.78	1094.65	5.48	4687.94	2144.05	1515.07
176	23.78	1094.65	5.48	4687.94	2144.05	1515.07
177	23.78	1099.67	5.48	4551.29	2088.84	1476.06
177	23.78	1099.67	5.48	4551.29	2088.84	1476.06
178	23.78	1104.69	5.48	4414.63	2033.63	1437.04
178	23.78	1104.69	5.48	4414.63	2033.63	1437.04
179	23.78	1109.71	5.48	4277.98	1978.41	1398.03
179	23.78	1109.71	5.48	4277.98	1978.41	1398.03
180	23.78	1114.73	5.48	4141.32	1923.20	1359.01
180	23.78	1114.73	5.48	4141.32	1923.20	1359.01
181	23.78	1119.75	5.48	4004.67	1867.99	1320.00
181	23.78	1119.75	5.48	4004.67	1867.99	1320.00
182	23.78	1124.76	5.48	3868.01	1812.78	1280.98
182	23.78	1124.76	5.48	3868.01	1812.78	1280.98
183	23.78	1129.78	5.48	3731.35	1757.56	1241.97
183	23.78	1129.78	5.48	3731.35	1757.56	1241.97
184	23.78	1134.80	5.48	3594.70	1702.35	1202.95
184	23.78	1134.80	5.48	3594.70	1702.35	1202.95
185	23.78	1139.82	5.48	3458.04	1647.14	1163.93
185	23.78	1139.82	5.48	3458.04	1647.14	1163.93
186	23.78	1144.84	5.48	3321.39	1591.93	1124.92
186	23.78	1144.84	5.48	3321.39	1591.93	1124.92
187	23.78	1149.86	5.48	3184.73	1536.72	1085.90
187	23.78	1149.86	5.48	3184.73	1536.72	1085.90
188	23.78	1154.88	5.48	3048.08	1481.50	1046.89
188	23.78	1154.88	5.48	3048.08	1481.50	1046.89
189	23.78	1159.90	5.48	2911.42	1426.29	1007.87
189	23.78	1159.90	5.48	2911.42	1426.29	1007.87
190	23.78	1164.92	5.48	2774.76	1371.08	968.86
190	23.78	1164.92	5.48	2774.76	1371.08	968.86
191	23.78	1169.94	5.48	2638.11	1315.87	929.84
191	23.78	1169.94	5.48	2638.11	1315.87	929.84
192	23.78	1174.96	5.48	2501.45	1260.65	890.83
192	23.78	1174.96	5.48	2501.45	1260.65	890.83
193	23.78	1179.98	5.48	2364.80	1205.44	851.81
193	23.78	1179.98	5.48	2364.80	1205.44	851.81
194	23.78	1185.00	5.48	2228.14	1150.23	812.80
194	23.78	1185.00	5.48	2228.14	1150.23	812.80
195	23.78	1190.02	5.48	2091.49	1095.02	773.78
195	23.78	1190.02	5.48	2091.49	1095.02	773.78
196	23.78	1195.04	5.48	1954.83	1039.80	734.77
196	23.78	1195.04	5.48	1954.83	1039.80	734.77
197	23.78	1200.05	5.48	1818.17	984.59	695.75
197	23.78	1200.05	5.48	1818.17	984.59	695.75
198	23.78	1205.07	5.48	1681.52	929.38	656.74
198	23.78	1205.07	5.48	1681.52	929.38	656.74
199	23.78	1210.09	5.48	1544.86	874.17	617.72
199	23.78	1210.09	5.48	1544.86	874.17	617.72
200	23.78	1215.11	5.48	1408.21	818.95	578.70
200	23.78	1215.11	5.48	1408.21	818.95	578.70
201	23.78	1220.13	5.48	1271.55	763.74	539.69
201	23.78	1220.13	5.48	1271.55	763.74	539.69
202	23.78	1225.15	5.48	1134.90	708.53	500.67
202	23.78	1225.15	5.48	1134.90	708.53	500.67
203	23.78	1230.17	5.48	998.24	653.32	461.66
203	23.78	1230.17	5.48	998.24	653.32	461.66
204	23.78	1235.19	5.48	861.59	598.10	422.64
204	23.78	1235.19	5.48	861.59	598.10	422.64
205	23.78	1238.35	1.42	775.56	563.35	398.08
205	23.78	1238.35	1.42	775.56	563.35	398.08
206	37.55	1241.00	5.05	533.74	465.65	329.04
206	37.55	1241.00	5.05	533.74	465.65	329.04
207	37.55	1245.00	5.05	305.53	373.44	263.89
207	37.55	1245.00	5.05	305.53	373.44	263.89
208	37.55	1248.67	4.23	114.61	296.30	209.38
208	37.55	1248.67	4.23	114.61	296.30	209.38
209	37.55	1252.03	4.23	76.82	31.04	21.93
209	37.55	1252.03	4.23	76.82	31.04	21.93

Table 4 - Base Force Data on the 209 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-30.48	216.49	6.36	2443.37	2359.85	1667.56
1	-30.48	216.49	6.36	2443.37	2359.85	1667.56
2	-30.48	221.97	6.36	5951.71	3921.87	2771.35
2	-30.48	221.97	6.36	5951.71	3921.87	2771.35
3	-33.45	227.49	6.67	10543.01	6027.39	4259.19
3	-33.45	227.49	6.67	10543.01	6027.39	4259.19
4	-33.45	233.05	6.67	14799.33	7922.42	5598.29
4	-33.45	233.05	6.67	14799.33	7922.42	5598.29
5	-33.45	238.61	6.67	19055.64	9817.45	6937.40
5	-33.45	238.61	6.67	19055.64	9817.45	6937.40
6	-28.32	242.69	2.95	9208.04	4690.17	3314.26
6	-28.32	242.69	2.95	9208.04	4690.17	3314.26
7	-28.32	246.49	5.68	19445.01	9276.92	6555.44
7	-28.32	246.49	5.68	19445.01	9276.92	6555.44
8	-28.32	251.50	5.68	21991.58	10305.81	7282.49
8	-28.32	251.50	5.68	21991.58	10305.81	7282.49
9	-28.32	256.50	5.68	24538.16	11334.69	8009.54
9	-28.32	256.50	5.68	24538.16	11334.69	8009.54
10	-28.12	261.90	6.58	31507.81	14373.96	10157.21
10	-28.12	261.90	6.58	31507.81	14373.96	10157.21

11	-28.12	267.70	6.58	34894.31	15742.19	11124.06
11	-28.12	267.70	6.58	34894.31	15742.19	11124.06
12	-28.12	273.50	6.58	38280.80	17110.42	12090.90
12	-28.12	273.50	6.58	38280.80	17110.42	12090.90
13	-28.12	276.52	0.27	1658.54	738.17	521.62
13	-28.12	276.52	0.27	1658.54	738.17	521.62
14	-13.12	279.07	5.00	26853.22	6695.26	4731.14
14	-13.12	279.07	5.00	26853.22	6695.26	4731.14
15	-13.12	283.94	5.00	28033.68	6989.58	4939.12
15	-13.12	283.94	5.00	28033.68	6989.58	4939.12
16	-13.12	288.81	5.00	29214.14	7283.90	5147.09
16	-13.12	288.81	5.00	29214.14	7283.90	5147.09
17	-13.12	293.68	5.00	30394.60	7578.22	5355.07
17	-13.12	293.68	5.00	30394.60	7578.22	5355.07
18	-1.45	299.16	6.09	36700.48	9150.46	6466.08
18	-1.45	299.16	6.09	36700.48	9150.46	6466.08
19	-1.45	305.25	6.09	37501.21	9350.10	6607.15
19	-1.45	305.25	6.09	37501.21	9350.10	6607.15
20	-1.45	310.74	4.88	30644.72	7640.59	5399.14
20	-1.45	310.74	4.88	30644.72	7640.59	5399.14
21	-1.45	315.62	4.88	31200.17	7779.08	5497.00
21	-1.45	315.62	4.88	31200.17	7779.08	5497.00
22	-1.45	320.50	4.88	31755.62	7917.57	5594.87
22	-1.45	320.50	4.88	31755.62	7917.57	5594.87
23	-1.45	325.38	4.88	32311.07	8056.06	5692.73
23	-1.45	325.38	4.88	32311.07	8056.06	5692.73
24	-1.45	330.26	4.88	32866.53	8194.54	5790.59
24	-1.45	330.26	4.88	32866.53	8194.54	5790.59
25	-1.45	335.38	5.37	36709.42	9152.69	6467.65
25	-1.45	335.38	5.37	36709.42	9152.69	6467.65
26	-1.45	340.75	5.37	37229.01	9282.23	6559.19
26	-1.45	340.75	5.37	37229.01	9282.23	6559.19
27	-1.45	346.12	5.37	37748.60	9411.78	6650.74
27	-1.45	346.12	5.37	37748.60	9411.78	6650.74
28	-1.45	351.34	5.09	36387.07	9072.31	6410.86
28	-1.45	351.34	5.09	36387.07	9072.31	6410.86
29	-1.45	356.43	5.09	37139.56	9259.93	6543.44
29	-1.45	356.43	5.09	37139.56	9259.93	6543.44
30	-1.45	361.51	5.09	37892.06	9447.55	6676.01
30	-1.45	361.51	5.09	37892.06	9447.55	6676.01
31	-1.45	366.60	5.09	38644.56	9635.17	6808.59
31	-1.45	366.60	5.09	38644.56	9635.17	6808.59
32	-1.45	371.68	5.09	39397.05	9822.79	6941.17
32	-1.45	371.68	5.09	39397.05	9822.79	6941.17
33	-1.45	376.77	5.09	40149.55	10010.41	7073.75
33	-1.45	376.77	5.09	40149.55	10010.41	7073.75
34	-1.45	381.85	5.09	40902.05	10198.03	7206.33
34	-1.45	381.85	5.09	40902.05	10198.03	7206.33
35	-1.45	386.93	5.09	41654.55	10385.64	7338.91
35	-1.45	386.93	5.09	41654.55	10385.64	7338.91
36	-1.45	392.02	5.09	42407.04	10573.26	7471.49
36	-1.45	392.02	5.09	42407.04	10573.26	7471.49
37	-1.45	397.10	5.09	43159.54	10760.88	7604.07
37	-1.45	397.10	5.09	43159.54	10760.88	7604.07
38	-1.45	402.19	5.09	43912.04	10948.50	7736.64
38	-1.45	402.19	5.09	43912.04	10948.50	7736.64
39	-1.45	407.27	5.09	44664.53	11136.12	7869.22
39	-1.45	407.27	5.09	44664.53	11136.12	7869.22
40	-1.45	412.36	5.09	45417.03	11323.74	8001.80
40	-1.45	412.36	5.09	45417.03	11323.74	8001.80
41	5.31	415.65	1.51	13287.88	3313.04	2341.13
41	5.31	415.65	1.51	13287.88	3313.04	2341.13
42	5.31	418.90	5.02	44411.31	11072.98	7824.61
42	5.31	418.90	5.02	44411.31	11072.98	7824.61
43	5.31	423.90	5.02	44538.74	11104.76	7847.06
43	5.31	423.90	5.02	44538.74	11104.76	7847.06
44	5.31	428.90	5.02	44666.17	11136.53	7869.51
44	5.31	428.90	5.02	44666.17	11136.53	7869.51
45	5.31	433.90	5.02	44793.60	11168.30	7891.96
45	5.31	433.90	5.02	44793.60	11168.30	7891.96
46	5.31	438.90	5.02	44921.04	11200.07	7914.41
46	5.31	438.90	5.02	44921.04	11200.07	7914.41
47	5.31	443.93	5.09	45645.25	11380.64	8042.01
47	5.31	443.93	5.09	45645.25	11380.64	8042.01
48	5.31	449.00	5.09	45766.66	11410.91	8063.40
48	5.31	449.00	5.09	45766.66	11410.91	8063.40
49	5.31	454.07	5.09	45888.07	11441.18	8084.79
49	5.31	454.07	5.09	45888.07	11441.18	8084.79
50	5.31	459.13	5.09	46009.47	11471.45	8106.18
50	5.31	459.13	5.09	46009.47	11471.45	8106.18
51	5.31	464.20	5.09	46130.88	11501.72	8127.57
51	5.31	464.20	5.09	46130.88	11501.72	8127.57
52	5.31	469.27	5.09	46252.29	11531.99	8148.96
52	5.31	469.27	5.09	46252.29	11531.99	8148.96
53	5.31	474.33	5.09	46373.69	11562.26	8170.35
53	5.31	474.33	5.09	46373.69	11562.26	8170.35
54	5.31	479.40	5.09	46495.10	11592.53	8191.74
54	5.31	479.40	5.09	46495.10	11592.53	8191.74
55	5.31	484.47	5.09	46616.51	11622.80	8213.13
55	5.31	484.47	5.09	46616.51	11622.80	8213.13
56	5.31	489.53	5.09	46737.92	11653.07	8234.52
56	5.31	489.53	5.09	46737.92	11653.07	8234.52
57	5.31	494.60	5.09	46859.32	11683.34	8255.91
57	5.31	494.60	5.09	46859.32	11683.34	8255.91
58	5.31	499.67	5.09	46980.73	11713.61	8277.30
58	5.31	499.67	5.09	46980.73	11713.61	8277.30
59	5.31	504.73	5.09	47102.14	11743.88	8298.69
59	5.31	504.73	5.09	47102.14	11743.88	8298.69
60	5.31	509.80	5.09	47223.55	11774.15	8320.08
60	5.31	509.80	5.09	47223.55	11774.15	8320.08
61	5.31	514.87	5.09	47344.95	11804.42	8341.47
61	5.31	514.87	5.09	47344.95	11804.42	8341.47
62	5.31	519.91	5.04	46843.79	11679.47	8253.18
62	5.31	519.91	5.04	46843.79	11679.47	8253.18
63	5.31	524.92	5.04	46655.71	11632.57	8220.04
63	5.31	524.92	5.04	46655.71	11632.57	8220.04
64	5.31	529.94	5.04	46467.62	11585.68	8186.90
64	5.31	529.94	5.04	46467.62	11585.68	8186.90
65	5.31	534.96	5.04	46279.54	11538.78	8153.76
65	5.31	534.96	5.04	46279.54	11538.78	8153.76
66	5.31	539.98	5.04	46091.45	11491.89	8120.62
66	5.31	539.98	5.04	46091.45	11491.89	8120.62
67	5.31	544.99	5.04	45903.37	11444.99	8087.49
67	5.31	544.99	5.04	45903.37	11444.99	8087.49
68	5.31	549.96	4.95	45156.69	11258.83	7955.93
68	5.31	549.96	4.95	45156.69	11258.83	7955.93
69	5.31	554.89	4.95	45495.06	11343.19	8015.55
69	5.31	554.89	4.95	45495.06	11343.19	8015.55
70	5.31	559.82	4.95	45833.44	11427.56	8075.17
70	5.31	559.82	4.95	45833.44	11427.56	8075.17

71	5.31	564.74	4.95	46171.82	11511.93	8134.78
71	5.31	564.74	4.95	46171.82	11511.93	8134.78
72	5.31	569.67	4.95	46510.19	11596.29	8194.40
72	5.31	569.67	4.95	46510.19	11596.29	8194.40
73	5.31	574.60	4.95	46848.57	11680.66	8254.02
73	5.31	574.60	4.95	46848.57	11680.66	8254.02
74	5.31	579.52	4.95	47186.94	11765.03	8313.63
74	5.31	579.52	4.95	47186.94	11765.03	8313.63
75	5.31	584.45	4.95	47525.32	11849.39	8373.25
75	5.31	584.45	4.95	47525.32	11849.39	8373.25
76	5.31	589.38	4.95	47863.70	11933.76	8432.87
76	5.31	589.38	4.95	47863.70	11933.76	8432.87
77	5.31	594.30	4.95	48202.07	12018.13	8492.48
77	5.31	594.30	4.95	48202.07	12018.13	8492.48
78	5.31	599.23	4.95	48540.45	12102.49	8552.10
78	5.31	599.23	4.95	48540.45	12102.49	8552.10
79	5.31	604.16	4.95	48878.83	12186.86	8611.72
79	5.31	604.16	4.95	48878.83	12186.86	8611.72
80	5.31	609.08	4.95	49217.20	12271.23	8671.34
80	5.31	609.08	4.95	49217.20	12271.23	8671.34
81	5.31	614.01	4.95	49555.58	12355.59	8730.95
81	5.31	614.01	4.95	49555.58	12355.59	8730.95
82	5.31	618.94	4.95	49893.96	12439.96	8790.57
82	5.31	618.94	4.95	49893.96	12439.96	8790.57
83	23.39	624.12	5.92	56018.54	13966.99	9869.63
83	23.39	624.12	5.92	56018.54	13966.99	9869.63
84	23.39	629.55	5.92	55225.29	13769.21	9729.87
84	23.39	629.55	5.92	55225.29	13769.21	9729.87
85	23.39	634.98	5.92	54432.05	13571.43	9590.11
85	23.39	634.98	5.92	54432.05	13571.43	9590.11
86	23.39	640.23	5.52	50279.62	12536.12	8858.52
86	23.39	640.23	5.52	50279.62	12536.12	8858.52
87	23.39	645.30	5.52	50010.15	12468.93	8811.04
87	23.39	645.30	5.52	50010.15	12468.93	8811.04
88	23.39	650.37	5.52	49740.68	12401.75	8763.56
88	23.39	650.37	5.52	49740.68	12401.75	8763.56
89	23.39	655.44	5.52	49471.21	12334.56	8716.09
89	23.39	655.44	5.52	49471.21	12334.56	8716.09
90	23.39	660.51	5.52	49201.74	12267.37	8668.61
90	23.39	660.51	5.52	49201.74	12267.37	8668.61
91	23.39	665.58	5.52	48932.27	12200.19	8621.14
91	23.39	665.58	5.52	48932.27	12200.19	8621.14
92	23.39	670.65	5.52	48662.80	12133.00	8573.66
92	23.39	670.65	5.52	48662.80	12133.00	8573.66
93	23.39	675.72	5.52	48393.33	12065.81	8526.18
93	23.39	675.72	5.52	48393.33	12065.81	8526.18
94	23.39	680.79	5.52	48123.86	11998.63	8478.71
94	23.39	680.79	5.52	48123.86	11998.63	8478.71
95	23.39	685.86	5.52	47854.39	11931.44	8431.23
95	23.39	685.86	5.52	47854.39	11931.44	8431.23
96	23.39	690.93	5.52	47584.92	11864.25	8383.75
96	23.39	690.93	5.52	47584.92	11864.25	8383.75
97	23.39	696.00	5.52	47315.45	11797.07	8336.28
97	23.39	696.00	5.52	47315.45	11797.07	8336.28
98	23.39	701.07	5.52	47045.98	11729.88	8288.80
98	23.39	701.07	5.52	47045.98	11729.88	8288.80
99	23.39	706.13	5.52	46776.51	11662.69	8241.32
99	23.39	706.13	5.52	46776.51	11662.69	8241.32
100	23.39	711.20	5.52	46507.04	11595.51	8193.85
100	23.39	711.20	5.52	46507.04	11595.51	8193.85

101	23.39	716.27	5.52	46237.57	11528.32	8146.37
101	23.39	716.27	5.52	46237.57	11528.32	8146.37
102	23.39	721.34	5.52	45968.10	11461.14	8098.89
102	23.39	721.34	5.52	45968.10	11461.14	8098.89
103	23.39	726.41	5.52	45698.63	11393.95	8051.42
103	23.39	726.41	5.52	45698.63	11393.95	8051.42
104	23.39	731.48	5.52	45429.16	11326.76	8003.94
104	23.39	731.48	5.52	45429.16	11326.76	8003.94
105	23.39	736.55	5.52	45159.69	11259.58	7956.46
105	23.39	736.55	5.52	45159.69	11259.58	7956.46
106	23.39	741.62	5.52	44890.22	11192.39	7908.99
106	23.39	741.62	5.52	44890.22	11192.39	7908.99
107	23.39	746.69	5.52	44620.75	11125.20	7861.51
107	23.39	746.69	5.52	44620.75	11125.20	7861.51
108	23.39	751.76	5.52	44351.28	11058.02	7814.03
108	23.39	751.76	5.52	44351.28	11058.02	7814.03
109	23.39	756.83	5.52	44081.81	10990.83	7766.56
109	23.39	756.83	5.52	44081.81	10990.83	7766.56
110	23.39	761.90	5.52	43812.34	10923.64	7719.08
110	23.39	761.90	5.52	43812.34	10923.64	7719.08
111	23.39	766.97	5.52	43542.87	10856.46	7671.60
111	23.39	766.97	5.52	43542.87	10856.46	7671.60
112	23.39	772.02	5.48	43073.08	10739.32	7588.83
112	23.39	772.02	5.48	43073.08	10739.32	7588.83
113	23.39	777.05	5.48	43017.73	10725.52	7579.08
113	23.39	777.05	5.48	43017.73	10725.52	7579.08
114	23.39	782.08	5.48	42962.39	10711.73	7569.33
114	23.39	782.08	5.48	42962.39	10711.73	7569.33
115	23.78	786.95	5.14	37957.09	16619.64	11744.10
115	23.78	786.95	5.14	37957.09	16619.64	11744.10
116	23.78	791.79	5.44	40105.42	17562.75	12410.54
116	23.78	791.79	5.44	40105.42	17562.75	12410.54
117	23.78	796.76	5.44	40030.80	17532.61	12389.23
117	23.78	796.76	5.44	40030.80	17532.61	12389.23
118	23.78	801.74	5.44	39956.18	17502.46	12367.93
118	23.78	801.74	5.44	39956.18	17502.46	12367.93
119	23.78	806.71	5.44	39881.55	17472.31	12346.62
119	23.78	806.71	5.44	39881.55	17472.31	12346.62
120	23.78	811.69	5.44	39806.93	17442.16	12325.32
120	23.78	811.69	5.44	39806.93	17442.16	12325.32
121	23.78	816.66	5.44	39732.31	17412.01	12304.01
121	23.78	816.66	5.44	39732.31	17412.01	12304.01
122	23.78	821.64	5.44	39657.69	17381.86	12282.71
122	23.78	821.64	5.44	39657.69	17381.86	12282.71
123	23.78	826.61	5.44	39583.06	17351.71	12261.41
123	23.78	826.61	5.44	39583.06	17351.71	12261.41
124	23.78	831.59	5.44	39508.44	17321.56	12240.10
124	23.78	831.59	5.44	39508.44	17321.56	12240.10
125	23.78	836.56	5.44	39433.82	17291.41	12218.80
125	23.78	836.56	5.44	39433.82	17291.41	12218.80
126	23.78	841.54	5.44	39359.20	17261.26	12197.49
126	23.78	841.54	5.44	39359.20	17261.26	12197.49
127	23.78	846.51	5.44	39284.57	17231.11	12176.19
127	23.78	846.51	5.44	39284.57	17231.11	12176.19
128	23.78	851.80	6.12	44130.55	19359.75	13680.37
128	23.78	851.80	6.12	44130.55	19359.75	13680.37
129	23.78	857.40	6.12	44036.00	19321.55	13653.38
129	23.78	857.40	6.12	44036.00	19321.55	13653.38
130	23.78	862.70	5.46	39107.03	17164.26	12128.95
130	23.78	862.70	5.46	39107.03	17164.26	12128.95

131	23.78	867.69	5.46	38882.03	17073.35	12064.71
131	23.78	867.69	5.46	38882.03	17073.35	12064.71
132	23.78	872.68	5.46	38657.02	16982.44	12000.47
132	23.78	872.68	5.46	38657.02	16982.44	12000.47
133	23.78	877.67	5.46	38432.01	16891.53	11936.23
133	23.78	877.67	5.46	38432.01	16891.53	11936.23
134	23.78	882.67	5.46	38207.00	16800.62	11871.99
134	23.78	882.67	5.46	38207.00	16800.62	11871.99
135	23.78	887.66	5.46	37981.99	16709.71	11807.75
135	23.78	887.66	5.46	37981.99	16709.71	11807.75
136	23.78	892.65	5.46	37756.99	16618.80	11743.51
136	23.78	892.65	5.46	37756.99	16618.80	11743.51
137	23.78	897.65	5.46	37531.98	16527.89	11679.26
137	23.78	897.65	5.46	37531.98	16527.89	11679.26
138	23.78	902.64	5.46	37306.97	16436.98	11615.02
138	23.78	902.64	5.46	37306.97	16436.98	11615.02
139	23.78	907.63	5.46	37081.96	16346.08	11550.78
139	23.78	907.63	5.46	37081.96	16346.08	11550.78
140	23.78	912.62	5.46	36856.95	16255.17	11486.54
140	23.78	912.62	5.46	36856.95	16255.17	11486.54
141	23.78	917.62	5.46	36631.94	16164.26	11422.30
141	23.78	917.62	5.46	36631.94	16164.26	11422.30
142	23.78	922.61	5.46	36406.94	16073.35	11358.06
142	23.78	922.61	5.46	36406.94	16073.35	11358.06
143	23.78	927.60	5.46	36181.93	15982.44	11293.82
143	23.78	927.60	5.46	36181.93	15982.44	11293.82
144	23.78	932.60	5.46	35956.92	15891.53	11229.58
144	23.78	932.60	5.46	35956.92	15891.53	11229.58
145	23.78	937.59	5.46	35731.91	15800.62	11165.34
145	23.78	937.59	5.46	35731.91	15800.62	11165.34
146	23.78	942.58	5.46	35506.90	15709.71	11101.10
146	23.78	942.58	5.46	35506.90	15709.71	11101.10
147	23.78	947.58	5.46	35281.89	15618.80	11036.86
147	23.78	947.58	5.46	35281.89	15618.80	11036.86
148	23.78	952.57	5.46	35056.89	15527.89	10972.62
148	23.78	952.57	5.46	35056.89	15527.89	10972.62
149	23.78	957.56	5.46	34831.88	15436.98	10908.38
149	23.78	957.56	5.46	34831.88	15436.98	10908.38
150	23.78	962.55	5.46	34606.87	15346.07	10844.14
150	23.78	962.55	5.46	34606.87	15346.07	10844.14
151	23.78	967.55	5.46	34381.86	15255.16	10779.90
151	23.78	967.55	5.46	34381.86	15255.16	10779.90
152	23.78	972.54	5.46	34156.85	15164.26	10715.66
152	23.78	972.54	5.46	34156.85	15164.26	10715.66
153	23.78	977.53	5.46	33931.84	15073.35	10651.42
153	23.78	977.53	5.46	33931.84	15073.35	10651.42
154	23.78	982.53	5.46	33706.84	14982.44	10587.18
154	23.78	982.53	5.46	33706.84	14982.44	10587.18
155	23.78	987.52	5.46	33481.83	14891.53	10522.94
155	23.78	987.52	5.46	33481.83	14891.53	10522.94
156	23.78	992.51	5.46	33256.82	14800.62	10458.70
156	23.78	992.51	5.46	33256.82	14800.62	10458.70
157	23.78	997.50	5.46	33031.81	14709.71	10394.46
157	23.78	997.50	5.46	33031.81	14709.71	10394.46
158	23.78	1002.57	5.61	33655.84	14999.64	10599.34
158	23.78	1002.57	5.61	33655.84	14999.64	10599.34
159	23.78	1007.70	5.61	33303.97	14857.47	10498.88
159	23.78	1007.70	5.61	33303.97	14857.47	10498.88
160	23.78	1012.83	5.61	32952.10	14715.31	10398.42
160	23.78	1012.83	5.61	32952.10	14715.31	10398.42
161	23.78	1017.96	5.61	32600.23	14573.14	10297.96
161	23.78	1017.96	5.61	32600.23	14573.14	10297.96
162	23.78	1023.09	5.61	32248.36	14430.98	10197.50
162	23.78	1023.09	5.61	32248.36	14430.98	10197.50
163	23.78	1028.22	5.61	31896.49	14288.82	10097.04
163	23.78	1028.22	5.61	31896.49	14288.82	10097.04
164	23.78	1033.35	5.61	31544.62	14146.65	9996.58
164	23.78	1033.35	5.61	31544.62	14146.65	9996.58
165	23.78	1038.48	5.61	31192.75	14004.49	9896.12
165	23.78	1038.48	5.61	31192.75	14004.49	9896.12
166	23.78	1043.62	5.61	30840.88	13862.32	9795.67
166	23.78	1043.62	5.61	30840.88	13862.32	9795.67
167	23.78	1048.75	5.61	30489.01	13720.16	9695.21
167	23.78	1048.75	5.61	30489.01	13720.16	9695.21
168	23.78	1053.88	5.61	30137.14	13577.99	9594.75
168	23.78	1053.88	5.61	30137.14	13577.99	9594.75
169	23.78	1059.01	5.61	29785.27	13435.83	9494.29
169	23.78	1059.01	5.61	29785.27	13435.83	9494.29
170	23.78	1064.14	5.61	29433.40	13293.66	9393.83
170	23.78	1064.14	5.61	29433.40	13293.66	9393.83
171	23.78	1069.27	5.61	29081.53	13151.50	9293.37
171	23.78	1069.27	5.61	29081.53	13151.50	9293.37
172	23.78	1074.40	5.61	28729.66	13009.33	9192.91
172	23.78	1074.40	5.61	28729.66	13009.33	9192.91
173	23.78	1079.53	5.61	28377.79	12867.17	9092.45
173	23.78	1079.53	5.61	28377.79	12867.17	9092.45
174	23.78	1084.61	5.48	27212.09	12365.63	8738.04
174	23.78	1084.61	5.48	27212.09	12365.63	8738.04
175	23.78	1089.63	5.48	26462.55	12062.79	8524.05
175	23.78	1089.63	5.48	26462.55	12062.79	8524.05
176	23.78	1094.65	5.48	25713.00	11759.96	8310.05
176	23.78	1094.65	5.48	25713.00	11759.96	8310.05
177	23.78	1099.67	5.48	24963.46	11457.12	8096.06
177	23.78	1099.67	5.48	24963.46	11457.12	8096.06
178	23.78	1104.69	5.48	24213.91	11154.28	7882.06
178	23.78	1104.69	5.48	24213.91	11154.28	7882.06
179	23.78	1109.71	5.48	23464.37	10851.45	7668.06
179	23.78	1109.71	5.48	23464.37	10851.45	7668.06
180	23.78	1114.73	5.48	22714.82	10548.61	7454.07
180	23.78	1114.73	5.48	22714.82	10548.61	7454.07
181	23.78	1119.75	5.48	21965.27	10245.78	7240.07
181	23.78	1119.75	5.48	21965.27	10245.78	7240.07
182	23.78	1124.76	5.48	21215.73	9942.94	7026.08
182	23.78	1124.76	5.48	21215.73	9942.94	7026.08
183	23.78	1129.78	5.48	20466.18	9640.10	6812.08
183	23.78	1129.78	5.48	20466.18	9640.10	6812.08
184	23.78	1134.80	5.48	19716.64	9337.27	6598.08
184	23.78	1134.80	5.48	19716.64	9337.27	6598.08
185	23.78	1139.82	5.48	18967.09	9034.43	6384.09
185	23.78	1139.82	5.48	18967.09	9034.43	6384.09
186	23.78	1144.84	5.48	18217.55	8731.60	6170.09
186	23.78	1144.84	5.48	18217.55	8731.60	6170.09
187	23.78	1149.86	5.48	17468.00	8428.76	5956.10
187	23.78	1149.86	5.48	17468.00	8428.76	5956.10
188	23.78	1154.88	5.48	16718.46	8125.92	5742.10
188	23.78	1154.88	5.48	16718.46	8125.92	5742.10
189	23.78	1159.90	5.48	15968.91	7823.09	5528.10
189	23.78	1159.90	5.48	15968.91	7823.09	5528.10
190	23.78	1164.92	5.48	15219.36	7520.25	5314.11
190	23.78	1164.92	5.48	15219.36	7520.25	5314.11

191	23.78	1169.94	5.48	14469.82	7217.42	5100.11
191	23.78	1169.94	5.48	14469.82	7217.42	5100.11
192	23.78	1174.96	5.48	13720.27	6914.58	4886.12
192	23.78	1174.96	5.48	13720.27	6914.58	4886.12
193	23.78	1179.98	5.48	12970.73	6611.74	4672.12
193	23.78	1179.98	5.48	12970.73	6611.74	4672.12
194	23.78	1185.00	5.48	12221.18	6308.91	4458.12
194	23.78	1185.00	5.48	12221.18	6308.91	4458.12
195	23.78	1190.02	5.48	11471.64	6006.07	4244.13
195	23.78	1190.02	5.48	11471.64	6006.07	4244.13
196	23.78	1195.04	5.48	10722.09	5703.24	4030.13
196	23.78	1195.04	5.48	10722.09	5703.24	4030.13
197	23.78	1200.05	5.48	9972.54	5400.40	3816.14
197	23.78	1200.05	5.48	9972.54	5400.40	3816.14
198	23.78	1205.07	5.48	9223.00	5097.56	3602.14
198	23.78	1205.07	5.48	9223.00	5097.56	3602.14
199	23.78	1210.09	5.48	8473.45	4794.73	3388.14
199	23.78	1210.09	5.48	8473.45	4794.73	3388.14
200	23.78	1215.11	5.48	7723.91	4491.89	3174.15
200	23.78	1215.11	5.48	7723.91	4491.89	3174.15
201	23.78	1220.13	5.48	6974.36	4189.06	2960.15
201	23.78	1220.13	5.48	6974.36	4189.06	2960.15
202	23.78	1225.15	5.48	6224.82	3886.22	2746.16
202	23.78	1225.15	5.48	6224.82	3886.22	2746.16
203	23.78	1230.17	5.48	5475.27	3583.38	2532.16
203	23.78	1230.17	5.48	5475.27	3583.38	2532.16
204	23.78	1235.19	5.48	4725.73	3280.55	2318.16
204	23.78	1235.19	5.48	4725.73	3280.55	2318.16
205	23.78	1238.35	1.42	1101.75	800.28	565.51
205	23.78	1238.35	1.42	1101.75	800.28	565.51
206	37.55	1241.00	5.05	2692.88	2349.31	1660.11
206	37.55	1241.00	5.05	2692.88	2349.31	1660.11
207	37.55	1245.00	5.05	1541.48	1884.11	1331.39
207	37.55	1245.00	5.05	1541.48	1884.11	1331.39
208	37.55	1248.67	4.23	484.26	1252.00	884.72
208	37.55	1248.67	4.23	484.26	1252.00	884.72
209	37.55	1252.03	4.23	324.58	131.14	92.67
209	37.55	1252.03	4.23	324.58	131.14	92.67

Sum of the Resisting Forces = 2250757.45 (lbs)

Average Available Shear Strength = 2024.36(psf)

Sum of the Driving Forces = 1670086.22 (lbs)

Average Mobilized Shear Stress = 1502.10(psf)

Total length of the failure surface = 1111.84(ft)

Factor of Safety Balance Check: FS = 1.34769

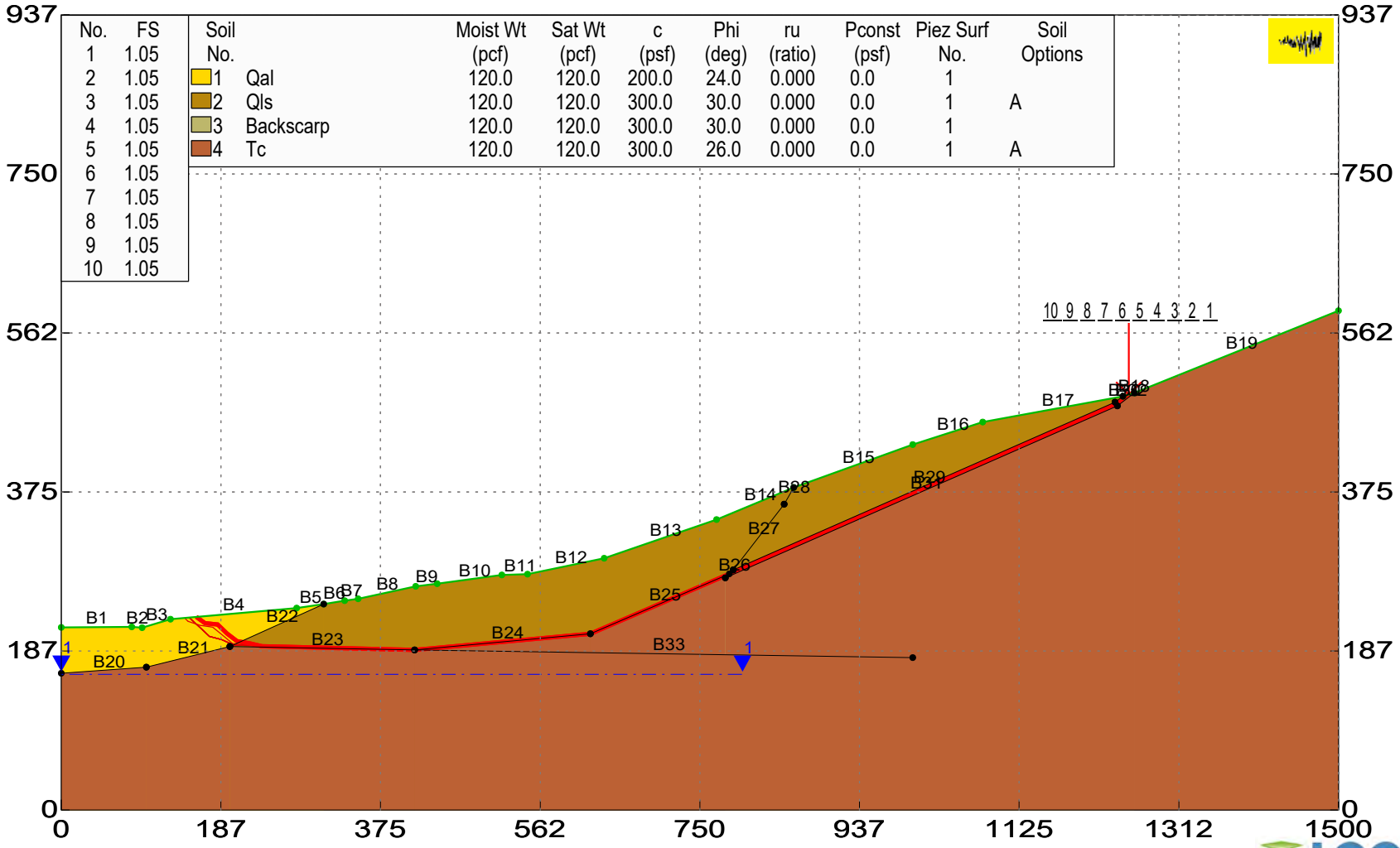
Janbu's Correction Factor (fo) = 1.0505

Janub's FS Corrected = 1.41571

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Design - Larger Qls - Seismic

LGC Geotechnical, Inc. \xhLRGde.gsd



GEOSTASE FS = 1.05

Simplified Janbu (Corrected) Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 4/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_04\xhLRGde.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_04\xhLRGde.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Design - Larger Qls - Seismic

BOUNDARY DATA

19 Surface Boundaries
33 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.200	82.800	216.000	1
2	82.800	216.000	95.100	215.000	1
3	95.100	215.000	128.300	225.100	1
4	128.300	225.100	276.400	238.000	1
5	276.400	238.000	308.300	242.900	1
6	308.300	242.900	332.700	247.000	2
7	332.700	247.000	348.800	249.000	2
8	348.800	249.000	416.400	263.600	2
9	416.400	263.600	441.400	267.000	2
10	441.400	267.000	517.400	277.100	2
11	517.400	277.100	547.500	278.000	2
12	547.500	278.000	637.700	297.000	2
13	637.700	297.000	769.500	342.600	2
14	769.500	342.600	860.200	380.200	2
15	860.200	380.200	1000.000	430.900	2
16	1000.000	430.900	1082.100	457.600	2
17	1082.100	457.600	1247.000	487.900	2
18	1247.000	487.900	1260.400	491.900	3
19	1260.400	491.900	1500.000	588.800	4
20	0.000	161.100	100.000	168.300	4
21	100.000	168.300	198.100	192.800	4
22	198.100	192.800	308.300	242.900	2
23	198.100	192.800	414.900	188.600	4
24	414.900	188.600	621.400	207.800	4
25	621.400	207.800	784.600	278.400	4
26	779.900	273.600	789.300	283.200	3
27	789.300	283.200	849.000	360.500	2
28	849.000	360.500	860.200	380.200	2
29	789.300	283.200	1237.700	480.800	3
30	1237.700	480.800	1247.000	487.900	3
31	779.900	273.600	1240.300	476.500	4
32	1240.300	476.500	1260.400	491.900	4
33	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	300.00	30.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	300.00	30.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	25.0	0.00	15.00
3	90.0	300.00	30.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	25.0	0.00	15.00
3	90.0	300.00	30.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 15.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	354.70	189.70	5.00
2	414.90	188.60	414.90	188.60	0.00
3	621.40	207.80	621.40	207.80	0.00
4	784.60	278.40	784.60	278.40	0.00
5	1239.00	478.60	1239.00	478.60	0.00
6	1253.70	489.90	1253.70	489.90	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.160 FS Min = 1.047 FS Ave = 1.095
Standard Deviation = 0.027 Coefficient of Variation = 2.51 %

Critical Surface is Sequence Number 121 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.047

Table 1 - Geometry Data on the 219 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.12	2.07	161.10	225.88	227.96	-35.85	4.98	6.32
2	5.12	6.22	166.22	222.18	228.40	-35.85	4.98	6.32
3	4.97	8.80	171.26	220.05	228.84	-6.56	4.98	5.00
4	4.97	9.80	176.23	219.47	229.27	-6.56	4.98	5.00
5	4.97	10.80	181.20	218.90	229.71	-6.56	4.98	5.00
6	5.41	14.14	186.38	216.02	230.16	-43.87	4.98	7.50
7	5.41	19.81	191.79	210.82	230.63	-43.87	4.98	7.50
8	5.97	25.17	197.48	205.95	231.13	-37.25	4.98	7.50
9	5.97	30.23	203.45	201.41	231.65	-37.25	4.98	7.50
10	4.01	33.30	208.44	198.78	232.08	-10.34	4.98	4.08
11	5.37	34.57	213.13	197.92	232.49	-10.34	4.98	5.46
12	5.37	36.02	218.50	196.94	232.96	-10.34	4.98	5.46
13	4.87	37.53	223.62	195.88	233.40	-13.30	4.98	5.00
14	4.87	39.10	228.49	194.73	233.83	-13.30	4.98	5.00
15	4.87	40.68	233.35	193.57	234.25	-13.30	4.98	5.00
16	5.08	41.75	238.33	192.94	234.68	-1.41	4.98	5.08
17	5.08	42.31	243.40	192.81	235.13	-1.41	4.98	5.08
18	5.08	42.88	248.48	192.69	235.57	-1.41	4.98	5.08
19	5.08	43.45	253.56	192.56	236.01	-1.41	4.98	5.08
20	5.08	44.01	258.63	192.44	236.45	-1.41	4.98	5.08

21	5.08	44.58	263.71	192.31	236.89	-1.41	4.98	5.08
22	5.08	45.15	268.79	192.19	237.34	-1.41	4.98	5.08
23	5.08	45.71	273.86	192.06	237.78	-1.41	4.98	5.08
24	5.32	46.47	279.06	191.94	238.41	-1.41	8.73	5.32
25	5.32	47.42	284.38	191.81	239.22	-1.41	8.73	5.32
26	5.32	48.37	289.69	191.68	240.04	-1.41	8.73	5.32
27	5.32	49.31	295.01	191.55	240.86	-1.41	8.73	5.32
28	5.32	50.26	300.33	191.41	241.68	-1.41	8.73	5.32
29	5.32	51.21	305.64	191.28	242.49	-1.41	8.73	5.32
30	4.88	52.15	310.74	191.16	243.31	-1.41	9.54	4.88
31	4.88	53.09	315.62	191.04	244.13	-1.41	9.54	4.88
32	4.88	54.03	320.50	190.92	244.95	-1.41	9.54	4.88
33	4.88	54.97	325.38	190.80	245.77	-1.41	9.54	4.88
34	4.88	55.91	330.26	190.68	246.59	-1.41	9.54	4.88
35	5.37	56.78	335.38	190.55	247.33	-1.41	7.08	5.37
36	5.37	57.58	340.75	190.42	248.00	-1.41	7.08	5.37
37	5.37	58.38	346.12	190.29	248.67	-1.41	7.08	5.37
38	5.08	59.39	351.34	190.16	249.55	-1.41	12.19	5.09
39	5.08	60.61	356.43	190.04	250.65	-1.41	12.19	5.09
40	5.08	61.83	361.51	189.91	251.75	-1.41	12.19	5.09
41	5.08	63.06	366.60	189.79	252.84	-1.41	12.19	5.09
42	5.08	64.28	371.68	189.66	253.94	-1.41	12.19	5.09
43	5.08	65.50	376.77	189.54	255.04	-1.41	12.19	5.09
44	5.08	66.73	381.85	189.41	256.14	-1.41	12.19	5.09
45	5.08	67.95	386.93	189.29	257.24	-1.41	12.19	5.09
46	5.08	69.17	392.02	189.16	258.33	-1.41	12.19	5.09
47	5.08	70.40	397.10	189.04	259.43	-1.41	12.19	5.09
48	5.08	71.62	402.19	188.91	260.53	-1.41	12.19	5.09
49	5.08	72.84	407.27	188.79	261.63	-1.41	12.19	5.09
50	5.08	74.06	412.36	188.66	262.73	-1.41	12.19	5.09
51	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
52	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
53	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
54	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
55	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
56	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
57	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
58	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
59	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
60	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
61	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
62	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
63	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
64	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
65	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
66	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
67	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
68	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
69	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
70	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
71	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
72	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
73	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
74	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
75	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
76	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
77	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
78	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
79	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
80	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
81	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
82	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
83	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
84	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
85	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
86	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
87	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
88	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
89	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
90	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
91	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
92	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
93	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
94	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
95	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
96	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
97	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
98	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
99	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
100	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
101	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
102	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
103	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
104	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
105	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
106	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
107	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
108	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
109	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
110	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
111	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
112	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
113	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
114	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
115	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
116	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
117	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
118	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
119	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
120	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
121	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
122	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
123	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
124	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
125	4.70	70.40	786.95	279.44	349.83	23.78	22.52	5.14
126	4.98	70.27	791.79	281.57	351.84	23.78	22.52	5.44
127	4.98	70.14	796.76	283.76	353.90	23.78	22.52	5.44
128	4.97	70.01	801.74	285.95	355.96	23.78	22.52	5.44
129	4.98	69.88	806.71	288.14	358.03	23.78	22.52	5.44
130	4.98	69.75	811.69	290.33	360.09	23.78	22.52	5.44
131	4.98	69.63	816.66	292.53	362.15	23.78	22.52	5.44
132	4.98	69.50	821.64	294.72	364.21	23.78	22.52	5.44
133	4.98	69.37	826.61	296.91	366.28	23.78	22.52	5.44
134	4.98	69.24	831.59	299.10	368.34	23.78	22.52	5.44
135	4.97	69.11	836.56	301.29	370.40	23.78	22.52	5.44
136	4.98	68.98	841.54	303.49	372.46	23.78	22.52	5.44
137	4.98	68.85	846.51	305.68	374.53	23.78	22.52	5.44
138	5.60	68.71	851.80	308.01	376.72	23.78	22.52	6.12
139	5.60	68.56	857.40	310.47	379.04	23.78	22.52	6.12
140	4.99	68.30	862.70	312.81	381.11	23.78	19.93	5.46

141	4.99	67.91	867.69	315.01	382.92	23.78	19.93	5.46
142	4.99	67.52	872.68	317.21	384.73	23.78	19.93	5.46
143	4.99	67.13	877.67	319.41	386.54	23.78	19.93	5.46
144	4.99	66.74	882.67	321.61	388.35	23.78	19.93	5.46
145	4.99	66.35	887.66	323.81	390.16	23.78	19.93	5.46
146	4.99	65.96	892.65	326.01	391.97	23.78	19.93	5.46
147	4.99	65.57	897.65	328.21	393.78	23.78	19.93	5.46
148	4.99	65.19	902.64	330.41	395.59	23.78	19.93	5.46
149	4.99	64.80	907.63	332.61	397.40	23.78	19.93	5.46
150	4.99	64.41	912.62	334.81	399.21	23.78	19.93	5.46
151	4.99	64.02	917.62	337.01	401.02	23.78	19.93	5.46
152	4.99	63.63	922.61	339.20	402.83	23.78	19.93	5.46
153	4.99	63.24	927.60	341.40	404.64	23.78	19.93	5.46
154	4.99	62.85	932.60	343.60	406.46	23.78	19.93	5.46
155	4.99	62.46	937.59	345.80	408.27	23.78	19.93	5.46
156	4.99	62.07	942.58	348.00	410.08	23.78	19.93	5.46
157	4.99	61.68	947.58	350.20	411.89	23.78	19.93	5.46
158	4.99	61.29	952.57	352.40	413.70	23.78	19.93	5.46
159	4.99	60.91	957.56	354.60	415.51	23.78	19.93	5.46
160	4.99	60.52	962.55	356.80	417.32	23.78	19.93	5.46
161	4.99	60.13	967.55	359.00	419.13	23.78	19.93	5.46
162	4.99	59.74	972.54	361.20	420.94	23.78	19.93	5.46
163	4.99	59.35	977.53	363.40	422.75	23.78	19.93	5.46
164	4.99	58.96	982.53	365.60	424.56	23.78	19.93	5.46
165	4.99	58.57	987.52	367.80	426.37	23.78	19.93	5.46
166	4.99	58.18	992.51	370.00	428.18	23.78	19.93	5.46
167	4.99	57.79	997.50	372.20	429.99	23.78	19.93	5.46
168	5.13	57.30	1002.57	374.43	431.73	23.78	18.02	5.61
169	5.13	56.71	1007.70	376.69	433.40	23.78	18.02	5.61
170	5.13	56.12	1012.83	378.95	435.07	23.78	18.02	5.61
171	5.13	55.53	1017.96	381.21	436.74	23.78	18.02	5.61
172	5.13	54.93	1023.09	383.47	438.41	23.78	18.02	5.61
173	5.13	54.34	1028.22	385.74	440.08	23.78	18.02	5.61
174	5.13	53.75	1033.35	388.00	441.75	23.78	18.02	5.61
175	5.13	53.16	1038.48	390.26	443.42	23.78	18.02	5.61
176	5.13	52.57	1043.62	392.52	445.08	23.78	18.02	5.61
177	5.13	51.98	1048.75	394.78	446.75	23.78	18.02	5.61
178	5.13	51.38	1053.88	397.04	448.42	23.78	18.02	5.61
179	5.13	50.79	1059.01	399.30	450.09	23.78	18.02	5.61
180	5.13	50.20	1064.14	401.56	451.76	23.78	18.02	5.61
181	5.13	49.61	1069.27	403.82	453.43	23.78	18.02	5.61
182	5.13	49.02	1074.40	406.08	455.10	23.78	18.02	5.61
183	5.13	48.42	1079.53	408.34	456.77	23.78	18.02	5.61
184	5.02	47.48	1084.61	410.58	458.06	23.78	10.41	5.48
185	5.02	46.19	1089.63	412.79	458.98	23.78	10.41	5.48
186	5.02	44.90	1094.65	415.00	459.91	23.78	10.41	5.48
187	5.02	43.62	1099.67	417.21	460.83	23.78	10.41	5.48
188	5.02	42.33	1104.69	419.42	461.75	23.78	10.41	5.48
189	5.02	41.04	1109.71	421.64	462.67	23.78	10.41	5.48
190	5.02	39.75	1114.73	423.85	463.59	23.78	10.41	5.48
191	5.02	38.46	1119.75	426.06	464.52	23.78	10.41	5.48
192	5.02	37.17	1124.76	428.27	465.44	23.78	10.41	5.48
193	5.02	35.88	1129.78	430.48	466.36	23.78	10.41	5.48
194	5.02	34.59	1134.80	432.69	467.28	23.78	10.41	5.48
195	5.02	33.30	1139.82	434.90	468.21	23.78	10.41	5.48
196	5.02	32.01	1144.84	437.12	469.13	23.78	10.41	5.48
197	5.02	30.72	1149.86	439.33	470.05	23.78	10.41	5.48
198	5.02	29.43	1154.88	441.54	470.97	23.78	10.41	5.48
199	5.02	28.15	1159.90	443.75	471.90	23.78	10.41	5.48
200	5.02	26.86	1164.92	445.96	472.82	23.78	10.41	5.48
201	5.02	25.57	1169.94	448.17	473.74	23.78	10.41	5.48
202	5.02	24.28	1174.96	450.38	474.66	23.78	10.41	5.48
203	5.02	22.99	1179.98	452.60	475.58	23.78	10.41	5.48
204	5.02	21.70	1185.00	454.81	476.51	23.78	10.41	5.48
205	5.02	20.41	1190.02	457.02	477.43	23.78	10.41	5.48
206	5.02	19.12	1195.04	459.23	478.35	23.78	10.41	5.48
207	5.02	17.83	1200.05	461.44	479.27	23.78	10.41	5.48
208	5.02	16.54	1205.07	463.65	480.20	23.78	10.41	5.48
209	5.02	15.25	1210.09	465.86	481.12	23.78	10.41	5.48
210	5.02	13.97	1215.11	468.08	482.04	23.78	10.41	5.48
211	5.02	12.68	1220.13	470.29	482.96	23.78	10.41	5.48
212	5.02	11.39	1225.15	472.50	483.89	23.78	10.41	5.48
213	5.02	10.10	1230.17	474.71	484.81	23.78	10.41	5.48
214	5.02	8.81	1235.19	476.92	485.73	23.78	10.41	5.48
215	1.30	8.00	1238.35	478.31	486.31	23.78	10.41	1.42
216	4.00	6.66	1241.00	480.14	486.80	37.55	10.41	5.05
217	4.00	4.32	1245.00	483.21	487.53	37.55	10.41	5.05
218	3.35	2.36	1248.67	486.04	488.40	37.55	16.62	4.23
219	3.35	0.79	1252.03	488.61	489.40	37.55	16.62	4.23

Table 2 - Force Data On The 219 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1274.4	0.0	0.0	191.2	0.0	0.0
2	3823.2	0.0	0.0	573.5	0.0	0.0
3	5243.1	0.0	0.0	786.5	0.0	0.0
4	5841.5	0.0	0.0	876.2	0.0	0.0
5	6439.8	0.0	0.0	966.0	0.0	0.0
6	9174.2	0.0	0.0	1376.1	0.0	0.0
7	12852.1	0.0	0.0	1927.8	0.0	0.0
8	18033.8	0.0	0.0	2705.1	0.0	0.0
9	21658.6	0.0	0.0	3248.8	0.0	0.0
10	16023.6	0.0	0.0	2403.5	0.0	0.0
11	22289.6	0.0	0.0	3343.4	0.0	0.0
12	23223.6	0.0	0.0	3483.5	0.0	0.0
13	21912.4	0.0	0.0	3286.9	0.0	0.0
14	22831.6	0.0	0.0	3424.7	0.0	0.0
15	23750.7	0.0	0.0	3562.6	0.0	0.0
16	25431.2	0.0	0.0	3814.7	0.0	0.0
17	25776.6	0.0	0.0	3866.5	0.0	0.0
18	26121.9	0.0	0.0	3918.3	0.0	0.0
19	26467.3	0.0	0.0	3970.1	0.0	0.0
20	26812.6	0.0	0.0	4021.9	0.0	0.0
21	27157.9	0.0	0.0	4073.7	0.0	0.0
22	27503.3	0.0	0.0	4125.5	0.0	0.0
23	27848.6	0.0	0.0	4177.3	0.0	0.0
24	29648.8	0.0	0.0	4447.3	0.0	0.0
25	30253.2	0.0	0.0	4538.0	0.0	0.0
26	30857.6	0.0	0.0	4628.6	0.0	0.0
27	31461.9	0.0	0.0	4719.3	0.0	0.0
28	32066.3	0.0	0.0	4809.9	0.0	0.0
29	32670.6	0.0	0.0	4900.6	0.0	0.0
30	30539.9	0.0	0.0	4581.0	0.0	0.0
31	31090.3	0.0	0.0	4663.5	0.0	0.0

32	31640.7	0.0	0.0	4746.1	0.0	0.0
33	32191.0	0.0	0.0	4828.7	0.0	0.0
34	32741.4	0.0	0.0	4911.2	0.0	0.0
35	36566.4	0.0	0.0	5485.0	0.0	0.0
36	37080.6	0.0	0.0	5562.1	0.0	0.0
37	37594.8	0.0	0.0	5639.2	0.0	0.0
38	36235.7	0.0	0.0	5435.4	0.0	0.0
39	36982.0	0.0	0.0	5547.3	0.0	0.0
40	37728.2	0.0	0.0	5659.2	0.0	0.0
41	38474.5	0.0	0.0	5771.2	0.0	0.0
42	39220.7	0.0	0.0	5883.1	0.0	0.0
43	39967.0	0.0	0.0	5995.0	0.0	0.0
44	40713.2	0.0	0.0	6107.0	0.0	0.0
45	41459.5	0.0	0.0	6218.9	0.0	0.0
46	42205.7	0.0	0.0	6330.9	0.0	0.0
47	42952.0	0.0	0.0	6442.8	0.0	0.0
48	43698.2	0.0	0.0	6554.7	0.0	0.0
49	44444.5	0.0	0.0	6666.7	0.0	0.0
50	45190.7	0.0	0.0	6778.6	0.0	0.0
51	13458.3	0.0	0.0	2018.7	0.0	0.0
52	44980.9	0.0	0.0	6747.1	0.0	0.0
53	45109.9	0.0	0.0	6766.5	0.0	0.0
54	45239.0	0.0	0.0	6785.8	0.0	0.0
55	45368.0	0.0	0.0	6805.2	0.0	0.0
56	45497.1	0.0	0.0	6824.6	0.0	0.0
57	46230.6	0.0	0.0	6934.6	0.0	0.0
58	46353.6	0.0	0.0	6953.0	0.0	0.0
59	46476.5	0.0	0.0	6971.5	0.0	0.0
60	46599.5	0.0	0.0	6989.9	0.0	0.0
61	46722.5	0.0	0.0	7008.4	0.0	0.0
62	46845.4	0.0	0.0	7026.8	0.0	0.0
63	46968.4	0.0	0.0	7045.3	0.0	0.0
64	47091.4	0.0	0.0	7063.7	0.0	0.0
65	47214.3	0.0	0.0	7082.1	0.0	0.0
66	47337.3	0.0	0.0	7100.6	0.0	0.0
67	47460.3	0.0	0.0	7119.0	0.0	0.0
68	47583.2	0.0	0.0	7137.5	0.0	0.0
69	47706.2	0.0	0.0	7155.9	0.0	0.0
70	47829.2	0.0	0.0	7174.4	0.0	0.0
71	47952.1	0.0	0.0	7192.8	0.0	0.0
72	47444.5	0.0	0.0	7116.7	0.0	0.0
73	47254.0	0.0	0.0	7088.1	0.0	0.0
74	47063.5	0.0	0.0	7059.5	0.0	0.0
75	46873.0	0.0	0.0	7031.0	0.0	0.0
76	46682.5	0.0	0.0	7002.4	0.0	0.0
77	46492.0	0.0	0.0	6973.8	0.0	0.0
78	45735.8	0.0	0.0	6860.4	0.0	0.0
79	46078.5	0.0	0.0	6911.8	0.0	0.0
80	46421.2	0.0	0.0	6963.2	0.0	0.0
81	46763.9	0.0	0.0	7014.6	0.0	0.0
82	47106.6	0.0	0.0	7066.0	0.0	0.0
83	47449.4	0.0	0.0	7117.4	0.0	0.0
84	47792.1	0.0	0.0	7168.8	0.0	0.0
85	48134.8	0.0	0.0	7220.2	0.0	0.0
86	48477.5	0.0	0.0	7271.6	0.0	0.0
87	48820.2	0.0	0.0	7323.0	0.0	0.0
88	49162.9	0.0	0.0	7374.4	0.0	0.0
89	49505.7	0.0	0.0	7425.8	0.0	0.0
90	49848.4	0.0	0.0	7477.3	0.0	0.0
91	50191.1	0.0	0.0	7528.7	0.0	0.0
92	50533.8	0.0	0.0	7580.1	0.0	0.0
93	55526.6	0.0	0.0	8329.0	0.0	0.0
94	54740.3	0.0	0.0	8211.1	0.0	0.0
95	53954.1	0.0	0.0	8093.1	0.0	0.0
96	49838.1	0.0	0.0	7475.7	0.0	0.0
97	49571.0	0.0	0.0	7435.7	0.0	0.0
98	49303.9	0.0	0.0	7395.6	0.0	0.0
99	49036.8	0.0	0.0	7355.5	0.0	0.0
100	48769.7	0.0	0.0	7315.5	0.0	0.0
101	48502.6	0.0	0.0	7275.4	0.0	0.0
102	48235.5	0.0	0.0	7235.3	0.0	0.0
103	47968.4	0.0	0.0	7195.3	0.0	0.0
104	47701.3	0.0	0.0	7155.2	0.0	0.0
105	47434.2	0.0	0.0	7115.1	0.0	0.0
106	47167.1	0.0	0.0	7075.1	0.0	0.0
107	46900.0	0.0	0.0	7035.0	0.0	0.0
108	46632.9	0.0	0.0	6994.9	0.0	0.0
109	46365.8	0.0	0.0	6954.9	0.0	0.0
110	46098.7	0.0	0.0	6914.8	0.0	0.0
111	45831.5	0.0	0.0	6874.7	0.0	0.0
112	45564.4	0.0	0.0	6834.7	0.0	0.0
113	45297.3	0.0	0.0	6794.6	0.0	0.0
114	45030.2	0.0	0.0	6754.5	0.0	0.0
115	44763.1	0.0	0.0	6714.5	0.0	0.0
116	44496.0	0.0	0.0	6674.4	0.0	0.0
117	44228.9	0.0	0.0	6634.3	0.0	0.0
118	43961.8	0.0	0.0	6594.3	0.0	0.0
119	43694.7	0.0	0.0	6554.2	0.0	0.0
120	43427.6	0.0	0.0	6514.1	0.0	0.0
121	43160.5	0.0	0.0	6474.1	0.0	0.0
122	42694.8	0.0	0.0	6404.2	0.0	0.0
123	42640.0	0.0	0.0	6396.0	0.0	0.0
124	42585.1	0.0	0.0	6387.8	0.0	0.0
125	39704.8	0.0	0.0	5955.7	0.0	0.0
126	41952.8	0.0	0.0	6292.9	0.0	0.0
127	41875.5	0.0	0.0	6281.3	0.0	0.0
128	41798.2	0.0	0.0	6269.7	0.0	0.0
129	41720.9	0.0	0.0	6258.1	0.0	0.0
130	41643.6	0.0	0.0	6246.5	0.0	0.0
131	41566.3	0.0	0.0	6234.9	0.0	0.0
132	41489.0	0.0	0.0	6223.3	0.0	0.0
133	41411.7	0.0	0.0	6211.8	0.0	0.0
134	41334.4	0.0	0.0	6200.2	0.0	0.0
135	41257.1	0.0	0.0	6188.6	0.0	0.0
136	41179.8	0.0	0.0	6177.0	0.0	0.0
137	41102.5	0.0	0.0	6165.4	0.0	0.0
138	46173.6	0.0	0.0	6926.0	0.0	0.0
139	46075.6	0.0	0.0	6911.3	0.0	0.0
140	40920.0	0.0	0.0	6138.0	0.0	0.0
141	40686.9	0.0	0.0	6103.0	0.0	0.0
142	40453.8	0.0	0.0	6068.1	0.0	0.0
143	40220.7	0.0	0.0	6033.1	0.0	0.0
144	39987.6	0.0	0.0	5998.1	0.0	0.0
145	39754.5	0.0	0.0	5963.2	0.0	0.0
146	39521.4	0.0	0.0	5928.2	0.0	0.0
147	39288.3	0.0	0.0	5893.3	0.0	0.0
148	39055.3	0.0	0.0	5858.3	0.0	0.0
149	38822.2	0.0	0.0	5823.3	0.0	0.0
150	38589.1	0.0	0.0	5788.4	0.0	0.0
151	38356.0	0.0	0.0	5753.4	0.0	0.0

152	38122.9	0.0	0.0	5718.4	0.0	0.0
153	37889.8	0.0	0.0	5683.5	0.0	0.0
154	37656.7	0.0	0.0	5648.5	0.0	0.0
155	37423.6	0.0	0.0	5613.5	0.0	0.0
156	37190.5	0.0	0.0	5578.6	0.0	0.0
157	36957.4	0.0	0.0	5543.6	0.0	0.0
158	36724.3	0.0	0.0	5508.6	0.0	0.0
159	36491.2	0.0	0.0	5473.7	0.0	0.0
160	36258.1	0.0	0.0	5438.7	0.0	0.0
161	36025.0	0.0	0.0	5403.8	0.0	0.0
162	35792.0	0.0	0.0	5368.8	0.0	0.0
163	35558.9	0.0	0.0	5333.8	0.0	0.0
164	35325.8	0.0	0.0	5298.9	0.0	0.0
165	35092.7	0.0	0.0	5263.9	0.0	0.0
166	34859.6	0.0	0.0	5228.9	0.0	0.0
167	34626.5	0.0	0.0	5194.0	0.0	0.0
168	35284.2	0.0	0.0	5292.6	0.0	0.0
169	34919.7	0.0	0.0	5238.0	0.0	0.0
170	34555.2	0.0	0.0	5183.3	0.0	0.0
171	34190.7	0.0	0.0	5128.6	0.0	0.0
172	33826.2	0.0	0.0	5073.9	0.0	0.0
173	33461.7	0.0	0.0	5019.3	0.0	0.0
174	33097.2	0.0	0.0	4964.6	0.0	0.0
175	32732.7	0.0	0.0	4909.9	0.0	0.0
176	32368.1	0.0	0.0	4855.2	0.0	0.0
177	32003.6	0.0	0.0	4800.5	0.0	0.0
178	31639.1	0.0	0.0	4745.9	0.0	0.0
179	31274.6	0.0	0.0	4691.2	0.0	0.0
180	30910.1	0.0	0.0	4636.5	0.0	0.0
181	30545.6	0.0	0.0	4581.8	0.0	0.0
182	30181.1	0.0	0.0	4527.2	0.0	0.0
183	29816.6	0.0	0.0	4472.5	0.0	0.0
184	28599.8	0.0	0.0	4290.0	0.0	0.0
185	27823.4	0.0	0.0	4173.5	0.0	0.0
186	27046.9	0.0	0.0	4057.0	0.0	0.0
187	26270.4	0.0	0.0	3940.6	0.0	0.0
188	25493.9	0.0	0.0	3824.1	0.0	0.0
189	24717.5	0.0	0.0	3707.6	0.0	0.0
190	23941.0	0.0	0.0	3591.1	0.0	0.0
191	23164.5	0.0	0.0	3474.7	0.0	0.0
192	22388.0	0.0	0.0	3358.2	0.0	0.0
193	21611.5	0.0	0.0	3241.7	0.0	0.0
194	20835.1	0.0	0.0	3125.3	0.0	0.0
195	20058.6	0.0	0.0	3008.8	0.0	0.0
196	19282.1	0.0	0.0	2892.3	0.0	0.0
197	18505.6	0.0	0.0	2775.8	0.0	0.0
198	17729.2	0.0	0.0	2659.4	0.0	0.0
199	16952.7	0.0	0.0	2542.9	0.0	0.0
200	16176.2	0.0	0.0	2426.4	0.0	0.0
201	15399.7	0.0	0.0	2310.0	0.0	0.0
202	14623.3	0.0	0.0	2193.5	0.0	0.0
203	13846.8	0.0	0.0	2077.0	0.0	0.0
204	13070.3	0.0	0.0	1960.5	0.0	0.0
205	12293.8	0.0	0.0	1844.1	0.0	0.0
206	11517.4	0.0	0.0	1727.6	0.0	0.0
207	10740.9	0.0	0.0	1611.1	0.0	0.0
208	9964.4	0.0	0.0	1494.7	0.0	0.0
209	9187.9	0.0	0.0	1378.2	0.0	0.0
210	8411.4	0.0	0.0	1261.7	0.0	0.0
211	7635.0	0.0	0.0	1145.2	0.0	0.0
212	6858.5	0.0	0.0	1028.8	0.0	0.0
213	6082.0	0.0	0.0	912.3	0.0	0.0
214	5305.5	0.0	0.0	795.8	0.0	0.0
215	1247.5	0.0	0.0	187.1	0.0	0.0
216	3196.8	0.0	0.0	479.5	0.0	0.0
217	2073.7	0.0	0.0	311.1	0.0	0.0
218	949.8	0.0	0.0	142.5	0.0	0.0
219	316.6	0.0	0.0	47.5	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 7606205.88(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 7606205.88(lbs)

TOTAL AREA OF SLIDING MASS = 63385.05(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 219 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	1	200.00	24.00	
7	1	200.00	24.00	
8	1	200.00	24.00	
9	1	200.00	24.00	
10	1	200.00	24.00	
11	2	0.00	15.00	A
12	2	0.00	15.00	A
13	2	0.00	15.00	A
14	2	0.00	15.00	A
15	2	0.00	15.00	A
16	2	0.00	15.00	A
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	2	0.00	15.00	A
23	2	0.00	15.00	A
24	2	0.00	15.00	A
25	2	0.00	15.00	A
26	2	0.00	15.00	A
27	2	0.00	15.00	A
28	2	0.00	15.00	A
29	2	0.00	15.00	A
30	2	0.00	15.00	A
31	2	0.00	15.00	A
32	2	0.00	15.00	A
33	2	0.00	15.00	A
34	2	0.00	15.00	A
35	2	0.00	15.00	A
36	2	0.00	15.00	A
37	2	0.00	15.00	A
38	2	0.00	15.00	A
39	2	0.00	15.00	A
40	2	0.00	15.00	A

41	2	0.00	15.00	A
42	2	0.00	15.00	A
43	2	0.00	15.00	A
44	2	0.00	15.00	A
45	2	0.00	15.00	A
46	2	0.00	15.00	A
47	2	0.00	15.00	A
48	2	0.00	15.00	A
49	2	0.00	15.00	A
50	2	0.00	15.00	A
51	2	0.00	15.00	A
52	2	0.00	15.00	A
53	2	0.00	15.00	A
54	2	0.00	15.00	A
55	2	0.00	15.00	A
56	2	0.00	15.00	A
57	2	0.00	15.00	A
58	2	0.00	15.00	A
59	2	0.00	15.00	A
60	2	0.00	15.00	A
61	2	0.00	15.00	A
62	2	0.00	15.00	A
63	2	0.00	15.00	A
64	2	0.00	15.00	A
65	2	0.00	15.00	A
66	2	0.00	15.00	A
67	2	0.00	15.00	A
68	2	0.00	15.00	A
69	2	0.00	15.00	A
70	2	0.00	15.00	A
71	2	0.00	15.00	A
72	2	0.00	15.00	A
73	2	0.00	15.00	A
74	2	0.00	15.00	A
75	2	0.00	15.00	A
76	2	0.00	15.00	A
77	2	0.00	15.00	A
78	2	0.00	15.00	A
79	2	0.00	15.00	A
80	2	0.00	15.00	A
81	2	0.00	15.00	A
82	2	0.00	15.00	A
83	2	0.00	15.00	A
84	2	0.00	15.00	A
85	2	0.00	15.00	A
86	2	0.00	15.00	A
87	2	0.00	15.00	A
88	2	0.00	15.00	A
89	2	0.00	15.00	A
90	2	0.00	15.00	A
91	2	0.00	15.00	A
92	2	0.00	15.00	A
93	2	0.00	15.00	A
94	2	0.00	15.00	A
95	2	0.00	15.00	A
96	2	0.00	15.00	A
97	2	0.00	15.00	A
98	2	0.00	15.00	A
99	2	0.00	15.00	A
100	2	0.00	15.00	A
101	2	0.00	15.00	A
102	2	0.00	15.00	A
103	2	0.00	15.00	A
104	2	0.00	15.00	A
105	2	0.00	15.00	A
106	2	0.00	15.00	A
107	2	0.00	15.00	A
108	2	0.00	15.00	A
109	2	0.00	15.00	A
110	2	0.00	15.00	A
111	2	0.00	15.00	A
112	2	0.00	15.00	A
113	2	0.00	15.00	A
114	2	0.00	15.00	A
115	2	0.00	15.00	A
116	2	0.00	15.00	A
117	2	0.00	15.00	A
118	2	0.00	15.00	A
119	2	0.00	15.00	A
120	2	0.00	15.00	A
121	2	0.00	15.00	A
122	2	0.00	15.00	A
123	2	0.00	15.00	A
124	2	0.00	15.00	A
125	3	300.00	30.00	
126	3	300.00	30.00	
127	3	300.00	30.00	
128	3	300.00	30.00	
129	3	300.00	30.00	
130	3	300.00	30.00	
131	3	300.00	30.00	
132	3	300.00	30.00	
133	3	300.00	30.00	
134	3	300.00	30.00	
135	3	300.00	30.00	
136	3	300.00	30.00	
137	3	300.00	30.00	
138	3	300.00	30.00	
139	3	300.00	30.00	
140	3	300.00	30.00	
141	3	300.00	30.00	
142	3	300.00	30.00	
143	3	300.00	30.00	
144	3	300.00	30.00	
145	3	300.00	30.00	
146	3	300.00	30.00	
147	3	300.00	30.00	
148	3	300.00	30.00	
149	3	300.00	30.00	
150	3	300.00	30.00	
151	3	300.00	30.00	
152	3	300.00	30.00	
153	3	300.00	30.00	
154	3	300.00	30.00	
155	3	300.00	30.00	
156	3	300.00	30.00	
157	3	300.00	30.00	
158	3	300.00	30.00	
159	3	300.00	30.00	
160	3	300.00	30.00	

161	3	300.00	30.00
162	3	300.00	30.00
163	3	300.00	30.00
164	3	300.00	30.00
165	3	300.00	30.00
166	3	300.00	30.00
167	3	300.00	30.00
168	3	300.00	30.00
169	3	300.00	30.00
170	3	300.00	30.00
171	3	300.00	30.00
172	3	300.00	30.00
173	3	300.00	30.00
174	3	300.00	30.00
175	3	300.00	30.00
176	3	300.00	30.00
177	3	300.00	30.00
178	3	300.00	30.00
179	3	300.00	30.00
180	3	300.00	30.00
181	3	300.00	30.00
182	3	300.00	30.00
183	3	300.00	30.00
184	3	300.00	30.00
185	3	300.00	30.00
186	3	300.00	30.00
187	3	300.00	30.00
188	3	300.00	30.00
189	3	300.00	30.00
190	3	300.00	30.00
191	3	300.00	30.00
192	3	300.00	30.00
193	3	300.00	30.00
194	3	300.00	30.00
195	3	300.00	30.00
196	3	300.00	30.00
197	3	300.00	30.00
198	3	300.00	30.00
199	3	300.00	30.00
200	3	300.00	30.00
201	3	300.00	30.00
202	3	300.00	30.00
203	3	300.00	30.00
204	3	300.00	30.00
205	3	300.00	30.00
206	3	300.00	30.00
207	3	300.00	30.00
208	3	300.00	30.00
209	3	300.00	30.00
210	3	300.00	30.00
211	3	300.00	30.00
212	3	300.00	30.00
213	3	300.00	30.00
214	3	300.00	30.00
215	3	300.00	30.00
216	3	300.00	30.00
217	3	300.00	30.00
218	3	300.00	30.00
219	3	300.00	30.00

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 219 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-35.85	161.10	6.32	581.49	458.89	438.37
1	-35.85	161.10	6.32	581.49	458.89	438.37
2	-35.85	166.22	6.32	1316.31	786.06	750.91
2	-35.85	166.22	6.32	1316.31	786.06	750.91
3	-6.56	171.26	5.00	1136.99	706.22	674.64
3	-6.56	171.26	5.00	1136.99	706.22	674.64
4	-6.56	176.23	5.00	1263.97	762.75	728.65
4	-6.56	176.23	5.00	1263.97	762.75	728.65
5	-6.56	181.20	5.00	1390.94	819.29	782.65
5	-6.56	181.20	5.00	1390.94	819.29	782.65
6	-43.87	186.38	7.50	3311.65	1674.44	1599.57
6	-43.87	186.38	7.50	3311.65	1674.44	1599.57
7	-43.87	191.79	7.50	4503.78	2205.21	2106.60
7	-43.87	191.79	7.50	4503.78	2205.21	2106.60
8	-37.25	197.48	7.50	4805.50	2339.55	2234.93
8	-37.25	197.48	7.50	4805.50	2339.55	2234.93
9	-37.25	203.45	7.50	5724.97	2748.92	2626.00
9	-37.25	203.45	7.50	5724.97	2748.92	2626.00
10	-10.34	208.44	4.08	4390.78	2154.90	2058.54
10	-10.34	208.44	4.08	4390.78	2154.90	2058.54
11	-10.34	213.13	5.46	4362.04	1168.81	1116.54
11	-10.34	213.13	5.46	4362.04	1168.81	1116.54
12	-10.34	218.50	5.46	4544.82	1217.78	1163.33
12	-10.34	218.50	5.46	4544.82	1217.78	1163.33
13	-13.30	223.62	5.00	4808.88	1288.54	1230.92
13	-13.30	223.62	5.00	4808.88	1288.54	1230.92
14	-13.30	228.49	5.00	5010.60	1342.59	1282.55
14	-13.30	228.49	5.00	5010.60	1342.59	1282.55
15	-13.30	233.35	5.00	5212.33	1396.64	1334.19
15	-13.30	233.35	5.00	5212.33	1396.64	1334.19
16	-1.41	238.33	5.08	5042.85	1351.23	1290.81
16	-1.41	238.33	5.08	5042.85	1351.23	1290.81
17	-1.41	243.40	5.08	5111.33	1369.58	1308.33
17	-1.41	243.40	5.08	5111.33	1369.58	1308.33
18	-1.41	248.48	5.08	5179.81	1387.93	1325.86
18	-1.41	248.48	5.08	5179.81	1387.93	1325.86
19	-1.41	253.56	5.08	5248.29	1406.27	1343.39
19	-1.41	253.56	5.08	5248.29	1406.27	1343.39
20	-1.41	258.63	5.08	5316.76	1424.62	1360.92
20	-1.41	258.63	5.08	5316.76	1424.62	1360.92
21	-1.41	263.71	5.08	5385.24	1442.97	1378.45
21	-1.41	263.71	5.08	5385.24	1442.97	1378.45
22	-1.41	268.79	5.08	5453.72	1461.32	1395.98
22	-1.41	268.79	5.08	5453.72	1461.32	1395.98
23	-1.41	273.86	5.08	5522.20	1479.67	1413.50
23	-1.41	273.86	5.08	5522.20	1479.67	1413.50

24	-1.41	279.06	5.32	5613.65	1504.17	1436.91
24	-1.41	279.06	5.32	5613.65	1504.17	1436.91
25	-1.41	284.38	5.32	5728.08	1534.83	1466.20
25	-1.41	284.38	5.32	5728.08	1534.83	1466.20
26	-1.41	289.69	5.32	5842.51	1565.49	1495.49
26	-1.41	289.69	5.32	5842.51	1565.49	1495.49
27	-1.41	295.01	5.32	5956.93	1596.16	1524.78
27	-1.41	295.01	5.32	5956.93	1596.16	1524.78
28	-1.41	300.33	5.32	6071.36	1626.82	1554.07
28	-1.41	300.33	5.32	6071.36	1626.82	1554.07
29	-1.41	305.64	5.32	6185.79	1657.48	1583.36
29	-1.41	305.64	5.32	6185.79	1657.48	1583.36
30	-1.41	310.74	4.88	6299.77	1688.02	1612.54
30	-1.41	310.74	4.88	6299.77	1688.02	1612.54
31	-1.41	315.62	4.88	6413.30	1718.44	1641.60
31	-1.41	315.62	4.88	6413.30	1718.44	1641.60
32	-1.41	320.50	4.88	6526.84	1748.86	1670.66
32	-1.41	320.50	4.88	6526.84	1748.86	1670.66
33	-1.41	325.38	4.88	6640.37	1779.28	1699.72
33	-1.41	325.38	4.88	6640.37	1779.28	1699.72
34	-1.41	330.26	4.88	6753.90	1809.70	1728.78
34	-1.41	330.26	4.88	6753.90	1809.70	1728.78
35	-1.41	335.38	5.37	6858.90	1837.84	1755.66
35	-1.41	335.38	5.37	6858.90	1837.84	1755.66
36	-1.41	340.75	5.37	6955.36	1863.68	1780.35
36	-1.41	340.75	5.37	6955.36	1863.68	1780.35
37	-1.41	346.12	5.37	7051.81	1889.53	1805.03
37	-1.41	346.12	5.37	7051.81	1889.53	1805.03
38	-1.41	351.34	5.09	7173.91	1922.24	1836.29
38	-1.41	351.34	5.09	7173.91	1922.24	1836.29
39	-1.41	356.43	5.09	7321.65	1961.83	1874.11
39	-1.41	356.43	5.09	7321.65	1961.83	1874.11
40	-1.41	361.51	5.09	7469.40	2001.42	1911.92
40	-1.41	361.51	5.09	7469.40	2001.42	1911.92
41	-1.41	366.60	5.09	7617.14	2041.01	1949.74
41	-1.41	366.60	5.09	7617.14	2041.01	1949.74
42	-1.41	371.68	5.09	7764.88	2080.59	1987.56
42	-1.41	371.68	5.09	7764.88	2080.59	1987.56
43	-1.41	376.77	5.09	7912.62	2120.18	2025.37
43	-1.41	376.77	5.09	7912.62	2120.18	2025.37
44	-1.41	381.85	5.09	8060.36	2159.77	2063.19
44	-1.41	381.85	5.09	8060.36	2159.77	2063.19
45	-1.41	386.93	5.09	8208.11	2199.36	2101.01
45	-1.41	386.93	5.09	8208.11	2199.36	2101.01
46	-1.41	392.02	5.09	8355.85	2238.94	2138.83
46	-1.41	392.02	5.09	8355.85	2238.94	2138.83
47	-1.41	397.10	5.09	8503.59	2278.53	2176.64
47	-1.41	397.10	5.09	8503.59	2278.53	2176.64
48	-1.41	402.19	5.09	8651.33	2318.12	2214.46
48	-1.41	402.19	5.09	8651.33	2318.12	2214.46
49	-1.41	407.27	5.09	8799.07	2357.70	2252.28
49	-1.41	407.27	5.09	8799.07	2357.70	2252.28
50	-1.41	412.36	5.09	8946.82	2397.29	2290.09
50	-1.41	412.36	5.09	8946.82	2397.29	2290.09
51	5.31	415.65	1.51	8753.42	2345.47	2240.59
51	5.31	415.65	1.51	8753.42	2345.47	2240.59
52	5.31	418.90	5.02	8776.81	2351.74	2246.58
52	5.31	418.90	5.02	8776.81	2351.74	2246.58
53	5.31	423.90	5.02	8802.00	2358.49	2253.03
53	5.31	423.90	5.02	8802.00	2358.49	2253.03
54	5.31	428.90	5.02	8827.18	2365.24	2259.47
54	5.31	428.90	5.02	8827.18	2365.24	2259.47
55	5.31	433.90	5.02	8852.36	2371.98	2265.92
55	5.31	433.90	5.02	8852.36	2371.98	2265.92
56	5.31	438.90	5.02	8877.55	2378.73	2272.36
56	5.31	438.90	5.02	8877.55	2378.73	2272.36
57	5.31	443.93	5.09	8901.98	2385.28	2278.62
57	5.31	443.93	5.09	8901.98	2385.28	2278.62
58	5.31	449.00	5.09	8925.66	2391.62	2284.68
58	5.31	449.00	5.09	8925.66	2391.62	2284.68
59	5.31	454.07	5.09	8949.33	2397.97	2290.74
59	5.31	454.07	5.09	8949.33	2397.97	2290.74
60	5.31	459.13	5.09	8973.01	2404.31	2296.80
60	5.31	459.13	5.09	8973.01	2404.31	2296.80
61	5.31	464.20	5.09	8996.69	2410.66	2302.86
61	5.31	464.20	5.09	8996.69	2410.66	2302.86
62	5.31	469.27	5.09	9020.37	2417.00	2308.92
62	5.31	469.27	5.09	9020.37	2417.00	2308.92
63	5.31	474.33	5.09	9044.04	2423.34	2314.98
63	5.31	474.33	5.09	9044.04	2423.34	2314.98
64	5.31	479.40	5.09	9067.72	2429.69	2321.04
64	5.31	479.40	5.09	9067.72	2429.69	2321.04
65	5.31	484.47	5.09	9091.40	2436.03	2327.10
65	5.31	484.47	5.09	9091.40	2436.03	2327.10
66	5.31	489.53	5.09	9115.08	2442.38	2333.16
66	5.31	489.53	5.09	9115.08	2442.38	2333.16
67	5.31	494.60	5.09	9138.75	2448.72	2339.22
67	5.31	494.60	5.09	9138.75	2448.72	2339.22
68	5.31	499.67	5.09	9162.43	2455.07	2345.28
68	5.31	499.67	5.09	9162.43	2455.07	2345.28
69	5.31	504.73	5.09	9186.11	2461.41	2351.35
69	5.31	504.73	5.09	9186.11	2461.41	2351.35
70	5.31	509.80	5.09	9209.79	2467.75	2357.41
70	5.31	509.80	5.09	9209.79	2467.75	2357.41
71	5.31	514.87	5.09	9233.46	2474.10	2363.47
71	5.31	514.87	5.09	9233.46	2474.10	2363.47
72	5.31	519.91	5.04	9226.78	2472.31	2361.76
72	5.31	519.91	5.04	9226.78	2472.31	2361.76
73	5.31	524.92	5.04	9189.73	2462.38	2352.27
73	5.31	524.92	5.04	9189.73	2462.38	2352.27
74	5.31	529.94	5.04	9152.68	2452.45	2342.79
74	5.31	529.94	5.04	9152.68	2452.45	2342.79
75	5.31	534.96	5.04	9115.64	2442.53	2333.31
75	5.31	534.96	5.04	9115.64	2442.53	2333.31
76	5.31	539.98	5.04	9078.59	2432.60	2323.82
76	5.31	539.98	5.04	9078.59	2432.60	2323.82
77	5.31	544.99	5.04	9041.54	2422.67	2314.34
77	5.31	544.99	5.04	9041.54	2422.67	2314.34
78	5.31	549.96	4.95	9056.95	2426.80	2318.29
78	5.31	549.96	4.95	9056.95	2426.80	2318.29
79	5.31	554.89	4.95	9124.82	2444.99	2335.66
79	5.31	554.89	4.95	9124.82	2444.99	2335.66
80	5.31	559.82	4.95	9192.69	2463.17	2353.03
80	5.31	559.82	4.95	9192.69	2463.17	2353.03
81	5.31	564.74	4.95	9260.56	2481.36	2370.40
81	5.31	564.74	4.95	9260.56	2481.36	2370.40
82	5.31	569.67	4.95	9328.42	2499.54	2387.77
82	5.31	569.67	4.95	9328.42	2499.54	2387.77
83	5.31	574.60	4.95	9396.29	2517.73	2405.14
83	5.31	574.60	4.95	9396.29	2517.73	2405.14

84	5.31	579.52	4.95	9464.16	2535.91	2422.52
84	5.31	579.52	4.95	9464.16	2535.91	2422.52
85	5.31	584.45	4.95	9532.02	2554.10	2439.89
85	5.31	584.45	4.95	9532.02	2554.10	2439.89
86	5.31	589.38	4.95	9599.89	2572.28	2457.26
86	5.31	589.38	4.95	9599.89	2572.28	2457.26
87	5.31	594.30	4.95	9667.76	2590.47	2474.63
87	5.31	594.30	4.95	9667.76	2590.47	2474.63
88	5.31	599.23	4.95	9735.63	2608.65	2492.00
88	5.31	599.23	4.95	9735.63	2608.65	2492.00
89	5.31	604.16	4.95	9803.49	2626.84	2509.38
89	5.31	604.16	4.95	9803.49	2626.84	2509.38
90	5.31	609.08	4.95	9871.36	2645.02	2526.75
90	5.31	609.08	4.95	9871.36	2645.02	2526.75
91	5.31	614.01	4.95	9939.23	2663.21	2544.12
91	5.31	614.01	4.95	9939.23	2663.21	2544.12
92	5.31	618.94	4.95	10007.09	2681.39	2561.49
92	5.31	618.94	4.95	10007.09	2681.39	2561.49
93	23.39	624.12	5.92	9155.04	2453.09	2343.39
93	23.39	624.12	5.92	9155.04	2453.09	2343.39
94	23.39	629.55	5.92	9025.40	2418.35	2310.21
94	23.39	629.55	5.92	9025.40	2418.35	2310.21
95	23.39	634.98	5.92	8895.76	2383.61	2277.03
95	23.39	634.98	5.92	8895.76	2383.61	2277.03
96	23.39	640.23	5.52	8807.34	2359.92	2254.39
96	23.39	640.23	5.52	8807.34	2359.92	2254.39
97	23.39	645.30	5.52	8760.14	2347.27	2242.31
97	23.39	645.30	5.52	8760.14	2347.27	2242.31
98	23.39	650.37	5.52	8712.94	2334.62	2230.23
98	23.39	650.37	5.52	8712.94	2334.62	2230.23
99	23.39	655.44	5.52	8665.74	2321.98	2218.15
99	23.39	655.44	5.52	8665.74	2321.98	2218.15
100	23.39	660.51	5.52	8618.53	2309.33	2206.06
100	23.39	660.51	5.52	8618.53	2309.33	2206.06
101	23.39	665.58	5.52	8571.33	2296.68	2193.98
101	23.39	665.58	5.52	8571.33	2296.68	2193.98
102	23.39	670.65	5.52	8524.13	2284.03	2181.90
102	23.39	670.65	5.52	8524.13	2284.03	2181.90
103	23.39	675.72	5.52	8476.93	2271.39	2169.82
103	23.39	675.72	5.52	8476.93	2271.39	2169.82
104	23.39	680.79	5.52	8429.72	2258.74	2157.74
104	23.39	680.79	5.52	8429.72	2258.74	2157.74
105	23.39	685.86	5.52	8382.52	2246.09	2145.65
105	23.39	685.86	5.52	8382.52	2246.09	2145.65
106	23.39	690.93	5.52	8335.32	2233.44	2133.57
106	23.39	690.93	5.52	8335.32	2233.44	2133.57
107	23.39	696.00	5.52	8288.12	2220.79	2121.49
107	23.39	696.00	5.52	8288.12	2220.79	2121.49
108	23.39	701.07	5.52	8240.91	2208.15	2109.41
108	23.39	701.07	5.52	8240.91	2208.15	2109.41
109	23.39	706.13	5.52	8193.71	2195.50	2097.32
109	23.39	706.13	5.52	8193.71	2195.50	2097.32
110	23.39	711.20	5.52	8146.51	2182.85	2085.24
110	23.39	711.20	5.52	8146.51	2182.85	2085.24
111	23.39	716.27	5.52	8099.31	2170.20	2073.16
111	23.39	716.27	5.52	8099.31	2170.20	2073.16
112	23.39	721.34	5.52	8052.11	2157.56	2061.08
112	23.39	721.34	5.52	8052.11	2157.56	2061.08
113	23.39	726.41	5.52	8004.90	2144.91	2049.00
113	23.39	726.41	5.52	8004.90	2144.91	2049.00
114	23.39	731.48	5.52	7957.70	2132.26	2036.91
114	23.39	731.48	5.52	7957.70	2132.26	2036.91
115	23.39	736.55	5.52	7910.50	2119.61	2024.83
115	23.39	736.55	5.52	7910.50	2119.61	2024.83
116	23.39	741.62	5.52	7863.30	2106.96	2012.75
116	23.39	741.62	5.52	7863.30	2106.96	2012.75
117	23.39	746.69	5.52	7816.09	2094.32	2000.67
117	23.39	746.69	5.52	7816.09	2094.32	2000.67
118	23.39	751.76	5.52	7768.89	2081.67	1988.58
118	23.39	751.76	5.52	7768.89	2081.67	1988.58
119	23.39	756.83	5.52	7721.69	2069.02	1976.50
119	23.39	756.83	5.52	7721.69	2069.02	1976.50
120	23.39	761.90	5.52	7674.49	2056.37	1964.42
120	23.39	761.90	5.52	7674.49	2056.37	1964.42
121	23.39	766.97	5.52	7627.28	2043.72	1952.34
121	23.39	766.97	5.52	7627.28	2043.72	1952.34
122	23.39	772.02	5.48	7598.80	2036.09	1945.05
122	23.39	772.02	5.48	7598.80	2036.09	1945.05
123	23.39	777.05	5.48	7589.04	2033.48	1942.55
123	23.39	777.05	5.48	7589.04	2033.48	1942.55
124	23.39	782.08	5.48	7579.27	2030.86	1940.05
124	23.39	782.08	5.48	7579.27	2030.86	1940.05
125	23.78	786.95	5.14	6624.73	4124.79	3940.35
125	23.78	786.95	5.14	6624.73	4124.79	3940.35
126	23.78	791.79	5.44	6612.70	4117.84	3933.71
126	23.78	791.79	5.44	6612.70	4117.84	3933.71
127	23.78	796.76	5.44	6600.32	4110.70	3926.88
127	23.78	796.76	5.44	6600.32	4110.70	3926.88
128	23.78	801.74	5.44	6587.94	4103.55	3920.05
128	23.78	801.74	5.44	6587.94	4103.55	3920.05
129	23.78	806.71	5.44	6575.56	4096.40	3913.23
129	23.78	806.71	5.44	6575.56	4096.40	3913.23
130	23.78	811.69	5.44	6563.18	4089.25	3906.40
130	23.78	811.69	5.44	6563.18	4089.25	3906.40
131	23.78	816.66	5.44	6550.80	4082.11	3899.57
131	23.78	816.66	5.44	6550.80	4082.11	3899.57
132	23.78	821.64	5.44	6538.42	4074.96	3892.74
132	23.78	821.64	5.44	6538.42	4074.96	3892.74
133	23.78	826.61	5.44	6526.04	4067.81	3885.91
133	23.78	826.61	5.44	6526.04	4067.81	3885.91
134	23.78	831.59	5.44	6513.66	4060.66	3879.09
134	23.78	831.59	5.44	6513.66	4060.66	3879.09
135	23.78	836.56	5.44	6501.28	4053.52	3872.26
135	23.78	836.56	5.44	6501.28	4053.52	3872.26
136	23.78	841.54	5.44	6488.90	4046.37	3865.43
136	23.78	841.54	5.44	6488.90	4046.37	3865.43
137	23.78	846.51	5.44	6476.52	4039.22	3858.60
137	23.78	846.51	5.44	6476.52	4039.22	3858.60
138	23.78	851.80	6.12	6463.37	4031.63	3851.35
138	23.78	851.80	6.12	6463.37	4031.63	3851.35
139	23.78	857.40	6.12	6449.43	4023.58	3843.66
139	23.78	857.40	6.12	6449.43	4023.58	3843.66
140	23.78	862.70	5.46	6423.87	4008.82	3829.56
140	23.78	862.70	5.46	6423.87	4008.82	3829.56
141	23.78	867.69	5.46	6386.67	3987.35	3809.05
141	23.78	867.69	5.46	6386.67	3987.35	3809.05
142	23.78	872.68	5.46	6349.48	3965.87	3788.53
142	23.78	872.68	5.46	6349.48	3965.87	3788.53
143	23.78	877.67	5.46	6312.29	3944.40	3768.02
143	23.78	877.67	5.46	6312.29	3944.40	3768.02

144	23.78	882.67	5.46	6275.09	3922.93	3747.51
144	23.78	882.67	5.46	6275.09	3922.93	3747.51
145	23.78	887.66	5.46	6237.90	3901.45	3726.99
145	23.78	887.66	5.46	6237.90	3901.45	3726.99
146	23.78	892.65	5.46	6200.70	3879.98	3706.48
146	23.78	892.65	5.46	6200.70	3879.98	3706.48
147	23.78	897.65	5.46	6163.51	3858.50	3685.97
147	23.78	897.65	5.46	6163.51	3858.50	3685.97
148	23.78	902.64	5.46	6126.32	3837.03	3665.45
148	23.78	902.64	5.46	6126.32	3837.03	3665.45
149	23.78	907.63	5.46	6089.12	3815.56	3644.94
149	23.78	907.63	5.46	6089.12	3815.56	3644.94
150	23.78	912.62	5.46	6051.93	3794.08	3624.42
150	23.78	912.62	5.46	6051.93	3794.08	3624.42
151	23.78	917.62	5.46	6014.73	3772.61	3603.91
151	23.78	917.62	5.46	6014.73	3772.61	3603.91
152	23.78	922.61	5.46	5977.54	3751.13	3583.40
152	23.78	922.61	5.46	5977.54	3751.13	3583.40
153	23.78	927.60	5.46	5940.35	3729.66	3562.88
153	23.78	927.60	5.46	5940.35	3729.66	3562.88
154	23.78	932.60	5.46	5903.15	3708.19	3542.37
154	23.78	932.60	5.46	5903.15	3708.19	3542.37
155	23.78	937.59	5.46	5865.96	3686.71	3521.86
155	23.78	937.59	5.46	5865.96	3686.71	3521.86
156	23.78	942.58	5.46	5828.76	3665.24	3501.34
156	23.78	942.58	5.46	5828.76	3665.24	3501.34
157	23.78	947.58	5.46	5791.57	3643.76	3480.83
157	23.78	947.58	5.46	5791.57	3643.76	3480.83
158	23.78	952.57	5.46	5754.37	3622.29	3460.31
158	23.78	952.57	5.46	5754.37	3622.29	3460.31
159	23.78	957.56	5.46	5717.18	3600.82	3439.80
159	23.78	957.56	5.46	5717.18	3600.82	3439.80
160	23.78	962.55	5.46	5679.99	3579.34	3419.29
160	23.78	962.55	5.46	5679.99	3579.34	3419.29
161	23.78	967.55	5.46	5642.79	3557.87	3398.77
161	23.78	967.55	5.46	5642.79	3557.87	3398.77
162	23.78	972.54	5.46	5605.60	3536.39	3378.26
162	23.78	972.54	5.46	5605.60	3536.39	3378.26
163	23.78	977.53	5.46	5568.40	3514.92	3357.75
163	23.78	977.53	5.46	5568.40	3514.92	3357.75
164	23.78	982.53	5.46	5531.21	3493.45	3337.23
164	23.78	982.53	5.46	5531.21	3493.45	3337.23
165	23.78	987.52	5.46	5494.02	3471.97	3316.72
165	23.78	987.52	5.46	5494.02	3471.97	3316.72
166	23.78	992.51	5.46	5456.82	3450.50	3296.20
166	23.78	992.51	5.46	5456.82	3450.50	3296.20
167	23.78	997.50	5.46	5419.63	3429.02	3275.69
167	23.78	997.50	5.46	5419.63	3429.02	3275.69
168	23.78	1002.57	5.61	5372.73	3401.95	3249.83
168	23.78	1002.57	5.61	5372.73	3401.95	3249.83
169	23.78	1007.70	5.61	5316.14	3369.27	3218.61
169	23.78	1007.70	5.61	5316.14	3369.27	3218.61
170	23.78	1012.83	5.61	5259.54	3336.60	3187.40
170	23.78	1012.83	5.61	5259.54	3336.60	3187.40
171	23.78	1017.96	5.61	5202.95	3303.92	3156.18
171	23.78	1017.96	5.61	5202.95	3303.92	3156.18
172	23.78	1023.09	5.61	5146.35	3271.25	3124.97
172	23.78	1023.09	5.61	5146.35	3271.25	3124.97
173	23.78	1028.22	5.61	5089.76	3238.57	3093.75
173	23.78	1028.22	5.61	5089.76	3238.57	3093.75
174	23.78	1033.35	5.61	5033.16	3205.90	3062.54
174	23.78	1033.35	5.61	5033.16	3205.90	3062.54
175	23.78	1038.48	5.61	4976.56	3173.22	3031.33
175	23.78	1038.48	5.61	4976.56	3173.22	3031.33
176	23.78	1043.62	5.61	4919.97	3140.54	3000.11
176	23.78	1043.62	5.61	4919.97	3140.54	3000.11
177	23.78	1048.75	5.61	4863.37	3107.87	2968.90
177	23.78	1048.75	5.61	4863.37	3107.87	2968.90
178	23.78	1053.88	5.61	4806.78	3075.19	2937.68
178	23.78	1053.88	5.61	4806.78	3075.19	2937.68
179	23.78	1059.01	5.61	4750.18	3042.52	2906.47
179	23.78	1059.01	5.61	4750.18	3042.52	2906.47
180	23.78	1064.14	5.61	4693.59	3009.84	2875.25
180	23.78	1064.14	5.61	4693.59	3009.84	2875.25
181	23.78	1069.27	5.61	4636.99	2977.17	2844.04
181	23.78	1069.27	5.61	4636.99	2977.17	2844.04
182	23.78	1074.40	5.61	4580.39	2944.49	2812.83
182	23.78	1074.40	5.61	4580.39	2944.49	2812.83
183	23.78	1079.53	5.61	4523.80	2911.82	2781.61
183	23.78	1079.53	5.61	4523.80	2911.82	2781.61
184	23.78	1084.61	5.48	4433.88	2859.90	2732.02
184	23.78	1084.61	5.48	4433.88	2859.90	2732.02
185	23.78	1089.63	5.48	4310.63	2788.74	2664.04
185	23.78	1089.63	5.48	4310.63	2788.74	2664.04
186	23.78	1094.65	5.48	4187.38	2717.59	2596.07
186	23.78	1094.65	5.48	4187.38	2717.59	2596.07
187	23.78	1099.67	5.48	4064.14	2646.43	2528.09
187	23.78	1099.67	5.48	4064.14	2646.43	2528.09
188	23.78	1104.69	5.48	3940.89	2575.27	2460.12
188	23.78	1104.69	5.48	3940.89	2575.27	2460.12
189	23.78	1109.71	5.48	3817.65	2504.12	2392.14
189	23.78	1109.71	5.48	3817.65	2504.12	2392.14
190	23.78	1114.73	5.48	3694.40	2432.96	2324.17
190	23.78	1114.73	5.48	3694.40	2432.96	2324.17
191	23.78	1119.75	5.48	3571.15	2361.81	2256.19
191	23.78	1119.75	5.48	3571.15	2361.81	2256.19
192	23.78	1124.76	5.48	3447.91	2290.65	2188.22
192	23.78	1124.76	5.48	3447.91	2290.65	2188.22
193	23.78	1129.78	5.48	3324.66	2219.49	2120.25
193	23.78	1129.78	5.48	3324.66	2219.49	2120.25
194	23.78	1134.80	5.48	3201.41	2148.34	2052.27
194	23.78	1134.80	5.48	3201.41	2148.34	2052.27
195	23.78	1139.82	5.48	3078.17	2077.18	1984.30
195	23.78	1139.82	5.48	3078.17	2077.18	1984.30
196	23.78	1144.84	5.48	2954.92	2006.02	1916.32
196	23.78	1144.84	5.48	2954.92	2006.02	1916.32
197	23.78	1149.86	5.48	2831.67	1934.87	1848.35
197	23.78	1149.86	5.48	2831.67	1934.87	1848.35
198	23.78	1154.88	5.48	2708.43	1863.71	1780.37
198	23.78	1154.88	5.48	2708.43	1863.71	1780.37
199	23.78	1159.90	5.48	2585.18	1792.55	1712.40
199	23.78	1159.90	5.48	2585.18	1792.55	1712.40
200	23.78	1164.92	5.48	2461.93	1721.40	1644.42
200	23.78	1164.92	5.48	2461.93	1721.40	1644.42
201	23.78	1169.94	5.48	2338.69	1650.24	1576.45
201	23.78	1169.94	5.48	2338.69	1650.24	1576.45
202	23.78	1174.96	5.48	2215.44	1579.09	1508.48
202	23.78	1174.96	5.48	2215.44	1579.09	1508.48
203	23.78	1179.98	5.48	2092.20	1507.93	1440.50
203	23.78	1179.98	5.48	2092.20	1507.93	1440.50

204	23.78	1185.00	5.48	1968.95	1436.77	1372.53
204	23.78	1185.00	5.48	1968.95	1436.77	1372.53
205	23.78	1190.02	5.48	1845.70	1365.62	1304.55
205	23.78	1190.02	5.48	1845.70	1365.62	1304.55
206	23.78	1195.04	5.48	1722.46	1294.46	1236.58
206	23.78	1195.04	5.48	1722.46	1294.46	1236.58
207	23.78	1200.05	5.48	1599.21	1223.30	1168.60
207	23.78	1200.05	5.48	1599.21	1223.30	1168.60
208	23.78	1205.07	5.48	1475.96	1152.15	1100.63
208	23.78	1205.07	5.48	1475.96	1152.15	1100.63
209	23.78	1210.09	5.48	1352.72	1080.99	1032.65
209	23.78	1210.09	5.48	1352.72	1080.99	1032.65
210	23.78	1215.11	5.48	1229.47	1009.84	964.68
210	23.78	1215.11	5.48	1229.47	1009.84	964.68
211	23.78	1220.13	5.48	1106.22	938.68	896.70
211	23.78	1220.13	5.48	1106.22	938.68	896.70
212	23.78	1225.15	5.48	982.98	867.52	828.73
212	23.78	1225.15	5.48	982.98	867.52	828.73
213	23.78	1230.17	5.48	859.73	796.37	760.76
213	23.78	1230.17	5.48	859.73	796.37	760.76
214	23.78	1235.19	5.48	736.48	725.21	692.78
214	23.78	1235.19	5.48	736.48	725.21	692.78
215	23.78	1238.35	1.42	658.90	680.42	649.99
215	23.78	1238.35	1.42	658.90	680.42	649.99
216	37.55	1241.00	5.05	392.92	526.85	503.30
216	37.55	1241.00	5.05	392.92	526.85	503.30
217	37.55	1245.00	5.05	198.64	414.69	396.14
217	37.55	1245.00	5.05	198.64	414.69	396.14
218	37.55	1248.67	4.23	36.11	320.85	306.50
218	37.55	1248.67	4.23	36.11	320.85	306.50
219	37.55	1252.03	4.23	65.39	37.76	36.07
219	37.55	1252.03	4.23	65.39	37.76	36.07

Table 4 - Base Force Data on the 219 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-35.85	161.10	6.32	3674.39	2899.73	2770.07
1	-35.85	161.10	6.32	3674.39	2899.73	2770.07
2	-35.85	166.22	6.32	8317.68	4967.06	4744.95
2	-35.85	166.22	6.32	8317.68	4967.06	4744.95
3	-6.56	171.26	5.00	5684.96	3531.11	3373.21
3	-6.56	171.26	5.00	5684.96	3531.11	3373.21
4	-6.56	176.23	5.00	6319.84	3813.77	3643.23
4	-6.56	176.23	5.00	6319.84	3813.77	3643.23
5	-6.56	181.20	5.00	6954.71	4096.44	3913.26
5	-6.56	181.20	5.00	6954.71	4096.44	3913.26
6	-43.87	186.38	7.50	24837.38	12558.31	11996.75
6	-43.87	186.38	7.50	24837.38	12558.31	11996.75
7	-43.87	191.79	7.50	33778.37	16539.10	15799.53
7	-43.87	191.79	7.50	33778.37	16539.10	15799.53
8	-37.25	197.48	7.50	36041.25	17546.60	16761.98
8	-37.25	197.48	7.50	36041.25	17546.60	16761.98
9	-37.25	203.45	7.50	42937.27	20616.90	19694.99
9	-37.25	203.45	7.50	42937.27	20616.90	19694.99
10	-10.34	208.44	4.08	17895.60	8782.78	8390.05
10	-10.34	208.44	4.08	17895.60	8782.78	8390.05
11	-10.34	213.13	5.46	23826.07	6384.18	6098.70
11	-10.34	213.13	5.46	23826.07	6384.18	6098.70
12	-10.34	218.50	5.46	24824.41	6651.68	6354.24
12	-10.34	218.50	5.46	24824.41	6651.68	6354.24
13	-13.30	223.62	5.00	24044.41	6442.68	6154.59
13	-13.30	223.62	5.00	24044.41	6442.68	6154.59
14	-13.30	228.49	5.00	25053.02	6712.94	6412.76
14	-13.30	228.49	5.00	25053.02	6712.94	6412.76
15	-13.30	233.35	5.00	26061.63	6983.19	6670.93
15	-13.30	233.35	5.00	26061.63	6983.19	6670.93
16	-1.41	238.33	5.08	25608.00	6861.64	6554.82
16	-1.41	238.33	5.08	25608.00	6861.64	6554.82
17	-1.41	243.40	5.08	25955.74	6954.82	6643.83
17	-1.41	243.40	5.08	25955.74	6954.82	6643.83
18	-1.41	248.48	5.08	26303.48	7047.99	6732.83
18	-1.41	248.48	5.08	26303.48	7047.99	6732.83
19	-1.41	253.56	5.08	26651.21	7141.17	6821.84
19	-1.41	253.56	5.08	26651.21	7141.17	6821.84
20	-1.41	258.63	5.08	26998.95	7234.35	6910.85
20	-1.41	258.63	5.08	26998.95	7234.35	6910.85
21	-1.41	263.71	5.08	27346.69	7327.52	6999.86
21	-1.41	263.71	5.08	27346.69	7327.52	6999.86
22	-1.41	268.79	5.08	27694.43	7420.70	7088.87
22	-1.41	268.79	5.08	27694.43	7420.70	7088.87
23	-1.41	273.86	5.08	28042.16	7513.87	7177.88
23	-1.41	273.86	5.08	28042.16	7513.87	7177.88
24	-1.41	279.06	5.32	29854.91	7999.60	7641.89
24	-1.41	279.06	5.32	29854.91	7999.60	7641.89
25	-1.41	284.38	5.32	30463.47	8162.66	7797.66
25	-1.41	284.38	5.32	30463.47	8162.66	7797.66
26	-1.41	289.69	5.32	31072.02	8325.72	7953.43
26	-1.41	289.69	5.32	31072.02	8325.72	7953.43
27	-1.41	295.01	5.32	31680.58	8488.79	8109.20
27	-1.41	295.01	5.32	31680.58	8488.79	8109.20
28	-1.41	300.33	5.32	32289.13	8651.85	8264.97
28	-1.41	300.33	5.32	32289.13	8651.85	8264.97
29	-1.41	305.64	5.32	32897.69	8814.91	8420.74
29	-1.41	305.64	5.32	32897.69	8814.91	8420.74
30	-1.41	310.74	4.88	30752.14	8240.01	7871.55
30	-1.41	310.74	4.88	30752.14	8240.01	7871.55
31	-1.41	315.62	4.88	31306.36	8388.51	8013.41
31	-1.41	315.62	4.88	31306.36	8388.51	8013.41
32	-1.41	320.50	4.88	31860.57	8537.01	8155.27
32	-1.41	320.50	4.88	31860.57	8537.01	8155.27
33	-1.41	325.38	4.88	32414.78	8685.51	8297.13
33	-1.41	325.38	4.88	32414.78	8685.51	8297.13
34	-1.41	330.26	4.88	32969.00	8834.02	8438.99
34	-1.41	330.26	4.88	32969.00	8834.02	8438.99
35	-1.41	335.38	5.37	36820.53	9866.03	9424.86
35	-1.41	335.38	5.37	36820.53	9866.03	9424.86
36	-1.41	340.75	5.37	37338.34	10004.78	9557.40
36	-1.41	340.75	5.37	37338.34	10004.78	9557.40
37	-1.41	346.12	5.37	37856.14	10143.52	9689.94
37	-1.41	346.12	5.37	37856.14	10143.52	9689.94
38	-1.41	351.34	5.09	36487.58	9776.82	9339.64
38	-1.41	351.34	5.09	36487.58	9776.82	9339.64
39	-1.41	356.43	5.09	37239.02	9978.16	9531.98
39	-1.41	356.43	5.09	37239.02	9978.16	9531.98
40	-1.41	361.51	5.09	37990.46	10179.51	9724.32

40	-1.41	361.51	5.09	37990.46	10179.51	9724.32
41	-1.41	366.60	5.09	38741.90	10380.86	9916.67
41	-1.41	366.60	5.09	38741.90	10380.86	9916.67
42	-1.41	371.68	5.09	39493.33	10582.21	10109.01
42	-1.41	371.68	5.09	39493.33	10582.21	10109.01
43	-1.41	376.77	5.09	40244.77	10783.55	10301.35
43	-1.41	376.77	5.09	40244.77	10783.55	10301.35
44	-1.41	381.85	5.09	40996.21	10984.90	10493.70
44	-1.41	381.85	5.09	40996.21	10984.90	10493.70
45	-1.41	386.93	5.09	41747.65	11186.25	10686.04
45	-1.41	386.93	5.09	41747.65	11186.25	10686.04
46	-1.41	392.02	5.09	42499.09	11387.60	10878.38
46	-1.41	392.02	5.09	42499.09	11387.60	10878.38
47	-1.41	397.10	5.09	43250.52	11588.94	11070.73
47	-1.41	397.10	5.09	43250.52	11588.94	11070.73
48	-1.41	402.19	5.09	44001.96	11790.29	11263.07
48	-1.41	402.19	5.09	44001.96	11790.29	11263.07
49	-1.41	407.27	5.09	44753.40	11991.64	11455.42
49	-1.41	407.27	5.09	44753.40	11991.64	11455.42
50	-1.41	412.36	5.09	45504.84	12192.98	11647.76
50	-1.41	412.36	5.09	45504.84	12192.98	11647.76
51	5.31	415.65	1.51	13186.76	3533.38	3375.38
51	5.31	415.65	1.51	13186.76	3533.38	3375.38
52	5.31	418.90	5.02	44073.35	11809.42	11281.34
52	5.31	418.90	5.02	44073.35	11809.42	11281.34
53	5.31	423.90	5.02	44199.81	11843.30	11313.71
53	5.31	423.90	5.02	44199.81	11843.30	11313.71
54	5.31	428.90	5.02	44326.27	11877.19	11346.08
54	5.31	428.90	5.02	44326.27	11877.19	11346.08
55	5.31	433.90	5.02	44452.73	11911.07	11378.45
55	5.31	433.90	5.02	44452.73	11911.07	11378.45
56	5.31	438.90	5.02	44579.19	11944.96	11410.82
56	5.31	438.90	5.02	44579.19	11944.96	11410.82
57	5.31	443.93	5.09	45297.90	12137.53	11594.79
57	5.31	443.93	5.09	45297.90	12137.53	11594.79
58	5.31	449.00	5.09	45418.38	12169.82	11625.63
58	5.31	449.00	5.09	45418.38	12169.82	11625.63
59	5.31	454.07	5.09	45538.86	12202.10	11656.47
59	5.31	454.07	5.09	45538.86	12202.10	11656.47
60	5.31	459.13	5.09	45659.35	12234.38	11687.31
60	5.31	459.13	5.09	45659.35	12234.38	11687.31
61	5.31	464.20	5.09	45779.83	12266.67	11718.15
61	5.31	464.20	5.09	45779.83	12266.67	11718.15
62	5.31	469.27	5.09	45900.31	12298.95	11748.99
62	5.31	469.27	5.09	45900.31	12298.95	11748.99
63	5.31	474.33	5.09	46020.80	12331.23	11779.83
63	5.31	474.33	5.09	46020.80	12331.23	11779.83
64	5.31	479.40	5.09	46141.28	12363.52	11810.67
64	5.31	479.40	5.09	46141.28	12363.52	11810.67
65	5.31	484.47	5.09	46261.76	12395.80	11841.51
65	5.31	484.47	5.09	46261.76	12395.80	11841.51
66	5.31	489.53	5.09	46382.25	12428.08	11872.35
66	5.31	489.53	5.09	46382.25	12428.08	11872.35
67	5.31	494.60	5.09	46502.73	12460.37	11903.19
67	5.31	494.60	5.09	46502.73	12460.37	11903.19
68	5.31	499.67	5.09	46623.21	12492.65	11934.03
68	5.31	499.67	5.09	46623.21	12492.65	11934.03
69	5.31	504.73	5.09	46743.70	12524.94	11964.87
69	5.31	504.73	5.09	46743.70	12524.94	11964.87
70	5.31	509.80	5.09	46864.18	12557.22	11995.71
70	5.31	509.80	5.09	46864.18	12557.22	11995.71
71	5.31	514.87	5.09	46984.66	12589.50	12026.55
71	5.31	514.87	5.09	46984.66	12589.50	12026.55
72	5.31	519.91	5.04	46487.32	12456.24	11899.24
72	5.31	519.91	5.04	46487.32	12456.24	11899.24
73	5.31	524.92	5.04	46300.66	12406.23	11851.47
73	5.31	524.92	5.04	46300.66	12406.23	11851.47
74	5.31	529.94	5.04	46114.01	12356.21	11803.69
74	5.31	529.94	5.04	46114.01	12356.21	11803.69
75	5.31	534.96	5.04	45927.36	12306.20	11755.91
75	5.31	534.96	5.04	45927.36	12306.20	11755.91
76	5.31	539.98	5.04	45740.70	12256.18	11708.13
76	5.31	539.98	5.04	45740.70	12256.18	11708.13
77	5.31	544.99	5.04	45554.05	12206.17	11660.36
77	5.31	544.99	5.04	45554.05	12206.17	11660.36
78	5.31	549.96	4.95	44813.05	12007.62	11470.68
78	5.31	549.96	4.95	44813.05	12007.62	11470.68
79	5.31	554.89	4.95	45148.85	12097.60	11556.64
79	5.31	554.89	4.95	45148.85	12097.60	11556.64
80	5.31	559.82	4.95	45484.65	12187.58	11642.59
80	5.31	559.82	4.95	45484.65	12187.58	11642.59
81	5.31	564.74	4.95	45820.45	12277.55	11728.55
81	5.31	564.74	4.95	45820.45	12277.55	11728.55
82	5.31	569.67	4.95	46156.25	12367.53	11814.50
82	5.31	569.67	4.95	46156.25	12367.53	11814.50
83	5.31	574.60	4.95	46492.05	12457.51	11900.46
83	5.31	574.60	4.95	46492.05	12457.51	11900.46
84	5.31	579.52	4.95	46827.86	12547.49	11986.41
84	5.31	579.52	4.95	46827.86	12547.49	11986.41
85	5.31	584.45	4.95	47163.66	12637.46	12072.36
85	5.31	584.45	4.95	47163.66	12637.46	12072.36
86	5.31	589.38	4.95	47499.46	12727.44	12158.32
86	5.31	589.38	4.95	47499.46	12727.44	12158.32
87	5.31	594.30	4.95	47835.26	12817.42	12244.27
87	5.31	594.30	4.95	47835.26	12817.42	12244.27
88	5.31	599.23	4.95	48171.06	12907.40	12330.23
88	5.31	599.23	4.95	48171.06	12907.40	12330.23
89	5.31	604.16	4.95	48506.86	12997.37	12416.18
89	5.31	604.16	4.95	48506.86	12997.37	12416.18
90	5.31	609.08	4.95	48842.66	13087.35	12502.14
90	5.31	609.08	4.95	48842.66	13087.35	12502.14
91	5.31	614.01	4.95	49178.47	13177.33	12588.09
91	5.31	614.01	4.95	49178.47	13177.33	12588.09
92	5.31	618.94	4.95	49514.27	13267.31	12674.04
92	5.31	618.94	4.95	49514.27	13267.31	12674.04
93	23.39	624.12	5.92	54197.33	14522.13	13872.76
93	23.39	624.12	5.92	54197.33	14522.13	13872.76
94	23.39	629.55	5.92	53429.87	14316.49	13676.31
94	23.39	629.55	5.92	53429.87	14316.49	13676.31
95	23.39	634.98	5.92	52662.41	14110.85	13479.87
95	23.39	634.98	5.92	52662.41	14110.85	13479.87
96	23.39	640.23	5.52	48644.99	13034.39	12451.54
96	23.39	640.23	5.52	48644.99	13034.39	12451.54
97	23.39	645.30	5.52	48384.28	12964.53	12384.80
97	23.39	645.30	5.52	48384.28	12964.53	12384.80
98	23.39	650.37	5.52	48123.57	12894.67	12318.07
98	23.39	650.37	5.52	48123.57	12894.67	12318.07
99	23.39	655.44	5.52	47862.86	12824.81	12251.34
99	23.39	655.44	5.52	47862.86	12824.81	12251.34
100	23.39	660.51	5.52	47602.15	12754.96	12184.60

100	23.39	660.51	5.52	47602.15	12754.96	12184.60
101	23.39	665.58	5.52	47341.44	12685.10	12117.87
101	23.39	665.58	5.52	47341.44	12685.10	12117.87
102	23.39	670.65	5.52	47080.73	12615.24	12051.14
102	23.39	670.65	5.52	47080.73	12615.24	12051.14
103	23.39	675.72	5.52	46820.02	12545.39	11984.40
103	23.39	675.72	5.52	46820.02	12545.39	11984.40
104	23.39	680.79	5.52	46559.32	12475.53	11917.67
104	23.39	680.79	5.52	46559.32	12475.53	11917.67
105	23.39	685.86	5.52	46298.61	12405.67	11850.94
105	23.39	685.86	5.52	46298.61	12405.67	11850.94
106	23.39	690.93	5.52	46037.90	12335.82	11784.21
106	23.39	690.93	5.52	46037.90	12335.82	11784.21
107	23.39	696.00	5.52	45777.19	12265.96	11717.47
107	23.39	696.00	5.52	45777.19	12265.96	11717.47
108	23.39	701.07	5.52	45516.48	12196.10	11650.74
108	23.39	701.07	5.52	45516.48	12196.10	11650.74
109	23.39	706.13	5.52	45255.77	12126.25	11584.01
109	23.39	706.13	5.52	45255.77	12126.25	11584.01
110	23.39	711.20	5.52	44995.06	12056.39	11517.27
110	23.39	711.20	5.52	44995.06	12056.39	11517.27
111	23.39	716.27	5.52	44734.35	11986.53	11450.54
111	23.39	716.27	5.52	44734.35	11986.53	11450.54
112	23.39	721.34	5.52	44473.64	11916.68	11383.81
112	23.39	721.34	5.52	44473.64	11916.68	11383.81
113	23.39	726.41	5.52	44212.93	11846.82	11317.07
113	23.39	726.41	5.52	44212.93	11846.82	11317.07
114	23.39	731.48	5.52	43952.22	11776.96	11250.34
114	23.39	731.48	5.52	43952.22	11776.96	11250.34
115	23.39	736.55	5.52	43691.51	11707.11	11183.61
115	23.39	736.55	5.52	43691.51	11707.11	11183.61
116	23.39	741.62	5.52	43430.80	11637.25	11116.87
116	23.39	741.62	5.52	43430.80	11637.25	11116.87
117	23.39	746.69	5.52	43170.09	11567.39	11050.14
117	23.39	746.69	5.52	43170.09	11567.39	11050.14
118	23.39	751.76	5.52	42909.38	11497.53	10983.41
118	23.39	751.76	5.52	42909.38	11497.53	10983.41
119	23.39	756.83	5.52	42648.68	11427.68	10916.68
119	23.39	756.83	5.52	42648.68	11427.68	10916.68
120	23.39	761.90	5.52	42387.97	11357.82	10849.94
120	23.39	761.90	5.52	42387.97	11357.82	10849.94
121	23.39	766.97	5.52	42127.26	11287.96	10783.21
121	23.39	766.97	5.52	42127.26	11287.96	10783.21
122	23.39	772.02	5.48	41672.73	11166.17	10666.87
122	23.39	772.02	5.48	41672.73	11166.17	10666.87
123	23.39	777.05	5.48	41619.19	11151.83	10653.16
123	23.39	777.05	5.48	41619.19	11151.83	10653.16
124	23.39	782.08	5.48	41565.64	11137.48	10639.45
124	23.39	782.08	5.48	41565.64	11137.48	10639.45
125	23.78	786.95	5.14	34024.27	21184.70	20237.40
125	23.78	786.95	5.14	34024.27	21184.70	20237.40
126	23.78	791.79	5.44	35949.61	22386.45	21385.42
126	23.78	791.79	5.44	35949.61	22386.45	21385.42
127	23.78	796.76	5.44	35882.31	22347.60	21348.30
127	23.78	796.76	5.44	35882.31	22347.60	21348.30
128	23.78	801.74	5.44	35815.01	22308.74	21311.18
128	23.78	801.74	5.44	35815.01	22308.74	21311.18
129	23.78	806.71	5.44	35747.71	22269.89	21274.06
129	23.78	806.71	5.44	35747.71	22269.89	21274.06
130	23.78	811.69	5.44	35680.41	22231.03	21236.94
130	23.78	811.69	5.44	35680.41	22231.03	21236.94
131	23.78	816.66	5.44	35613.11	22192.17	21199.82
131	23.78	816.66	5.44	35613.11	22192.17	21199.82
132	23.78	821.64	5.44	35545.81	22153.32	21162.71
132	23.78	821.64	5.44	35545.81	22153.32	21162.71
133	23.78	826.61	5.44	35478.51	22114.46	21125.59
133	23.78	826.61	5.44	35478.51	22114.46	21125.59
134	23.78	831.59	5.44	35411.21	22075.61	21088.47
134	23.78	831.59	5.44	35411.21	22075.61	21088.47
135	23.78	836.56	5.44	35343.91	22036.75	21051.35
135	23.78	836.56	5.44	35343.91	22036.75	21051.35
136	23.78	841.54	5.44	35276.61	21997.90	21014.23
136	23.78	841.54	5.44	35276.61	21997.90	21014.23
137	23.78	846.51	5.44	35209.31	21959.04	20977.11
137	23.78	846.51	5.44	35209.31	21959.04	20977.11
138	23.78	851.80	6.12	39552.08	24671.23	23568.02
138	23.78	851.80	6.12	39552.08	24671.23	23568.02
139	23.78	857.40	6.12	39466.80	24622.00	23520.99
139	23.78	857.40	6.12	39466.80	24622.00	23520.99
140	23.78	862.70	5.46	35048.40	21871.99	20893.96
140	23.78	862.70	5.46	35048.40	21871.99	20893.96
141	23.78	867.69	5.46	34845.47	21754.83	20782.04
141	23.78	867.69	5.46	34845.47	21754.83	20782.04
142	23.78	872.68	5.46	34642.54	21637.67	20670.11
142	23.78	872.68	5.46	34642.54	21637.67	20670.11
143	23.78	877.67	5.46	34439.61	21520.51	20558.19
143	23.78	877.67	5.46	34439.61	21520.51	20558.19
144	23.78	882.67	5.46	34236.68	21403.35	20446.27
144	23.78	882.67	5.46	34236.68	21403.35	20446.27
145	23.78	887.66	5.46	34033.75	21286.19	20334.35
145	23.78	887.66	5.46	34033.75	21286.19	20334.35
146	23.78	892.65	5.46	33830.82	21169.02	20222.42
146	23.78	892.65	5.46	33830.82	21169.02	20222.42
147	23.78	897.65	5.46	33627.89	21051.86	20110.50
147	23.78	897.65	5.46	33627.89	21051.86	20110.50
148	23.78	902.64	5.46	33424.96	20934.70	19998.58
148	23.78	902.64	5.46	33424.96	20934.70	19998.58
149	23.78	907.63	5.46	33222.03	20817.54	19886.66
149	23.78	907.63	5.46	33222.03	20817.54	19886.66
150	23.78	912.62	5.46	33019.11	20700.38	19774.74
150	23.78	912.62	5.46	33019.11	20700.38	19774.74
151	23.78	917.62	5.46	32816.18	20583.22	19662.81
151	23.78	917.62	5.46	32816.18	20583.22	19662.81
152	23.78	922.61	5.46	32613.25	20466.06	19550.89
152	23.78	922.61	5.46	32613.25	20466.06	19550.89
153	23.78	927.60	5.46	32410.32	20348.89	19438.97
153	23.78	927.60	5.46	32410.32	20348.89	19438.97
154	23.78	932.60	5.46	32207.39	20231.73	19327.05
154	23.78	932.60	5.46	32207.39	20231.73	19327.05
155	23.78	937.59	5.46	32004.46	20114.57	19215.12
155	23.78	937.59	5.46	32004.46	20114.57	19215.12
156	23.78	942.58	5.46	31801.53	19997.41	19103.20
156	23.78	942.58	5.46	31801.53	19997.41	19103.20
157	23.78	947.58	5.46	31598.60	19880.25	18991.28
157	23.78	947.58	5.46	31598.60	19880.25	18991.28
158	23.78	952.57	5.46	31395.67	19763.09	18879.36
158	23.78	952.57	5.46	31395.67	19763.09	18879.36
159	23.78	957.56	5.46	31192.74	19645.93	18767.43
159	23.78	957.56	5.46	31192.74	19645.93	18767.43
160	23.78	962.55	5.46	30989.81	19528.76	18655.51

160	23.78	962.55	5.46	30989.81	19528.76	18655.51
161	23.78	967.55	5.46	30786.88	19411.60	18543.59
161	23.78	967.55	5.46	30786.88	19411.60	18543.59
162	23.78	972.54	5.46	30583.95	19294.44	18431.67
162	23.78	972.54	5.46	30583.95	19294.44	18431.67
163	23.78	977.53	5.46	30381.02	19177.28	18319.74
163	23.78	977.53	5.46	30381.02	19177.28	18319.74
164	23.78	982.53	5.46	30178.09	19060.12	18207.82
164	23.78	982.53	5.46	30178.09	19060.12	18207.82
165	23.78	987.52	5.46	29975.16	18942.96	18095.90
165	23.78	987.52	5.46	29975.16	18942.96	18095.90
166	23.78	992.51	5.46	29772.23	18825.80	17983.98
166	23.78	992.51	5.46	29772.23	18825.80	17983.98
167	23.78	997.50	5.46	29569.30	18708.63	17872.06
167	23.78	997.50	5.46	29569.30	18708.63	17872.06
168	23.78	1002.57	5.61	30125.96	19075.39	18222.41
168	23.78	1002.57	5.61	30125.96	19075.39	18222.41
169	23.78	1007.70	5.61	29808.62	18892.17	18047.39
169	23.78	1007.70	5.61	29808.62	18892.17	18047.39
170	23.78	1012.83	5.61	29491.28	18708.95	17872.36
170	23.78	1012.83	5.61	29491.28	18708.95	17872.36
171	23.78	1017.96	5.61	29173.93	18525.74	17697.34
171	23.78	1017.96	5.61	29173.93	18525.74	17697.34
172	23.78	1023.09	5.61	28856.59	18342.52	17522.31
172	23.78	1023.09	5.61	28856.59	18342.52	17522.31
173	23.78	1028.22	5.61	28539.25	18159.30	17347.29
173	23.78	1028.22	5.61	28539.25	18159.30	17347.29
174	23.78	1033.35	5.61	28221.91	17976.08	17172.26
174	23.78	1033.35	5.61	28221.91	17976.08	17172.26
175	23.78	1038.48	5.61	27904.56	17792.86	16997.23
175	23.78	1038.48	5.61	27904.56	17792.86	16997.23
176	23.78	1043.62	5.61	27587.22	17609.65	16822.21
176	23.78	1043.62	5.61	27587.22	17609.65	16822.21
177	23.78	1048.75	5.61	27269.88	17426.43	16647.18
177	23.78	1048.75	5.61	27269.88	17426.43	16647.18
178	23.78	1053.88	5.61	26952.53	17243.21	16472.16
178	23.78	1053.88	5.61	26952.53	17243.21	16472.16
179	23.78	1059.01	5.61	26635.19	17059.99	16297.13
179	23.78	1059.01	5.61	26635.19	17059.99	16297.13
180	23.78	1064.14	5.61	26317.85	16876.77	16122.11
180	23.78	1064.14	5.61	26317.85	16876.77	16122.11
181	23.78	1069.27	5.61	26000.51	16693.56	15947.08
181	23.78	1069.27	5.61	26000.51	16693.56	15947.08
182	23.78	1074.40	5.61	25683.16	16510.34	15772.06
182	23.78	1074.40	5.61	25683.16	16510.34	15772.06
183	23.78	1079.53	5.61	25365.82	16327.12	15597.03
183	23.78	1079.53	5.61	25365.82	16327.12	15597.03
184	23.78	1084.61	5.48	24319.47	15686.33	14984.89
184	23.78	1084.61	5.48	24319.47	15686.33	14984.89
185	23.78	1089.63	5.48	23643.47	15296.04	14612.06
185	23.78	1089.63	5.48	23643.47	15296.04	14612.06
186	23.78	1094.65	5.48	22967.47	14905.75	14239.22
186	23.78	1094.65	5.48	22967.47	14905.75	14239.22
187	23.78	1099.67	5.48	22291.48	14515.47	13866.39
187	23.78	1099.67	5.48	22291.48	14515.47	13866.39
188	23.78	1104.69	5.48	21615.48	14125.18	13493.55
188	23.78	1104.69	5.48	21615.48	14125.18	13493.55
189	23.78	1109.71	5.48	20939.48	13734.89	13120.72
189	23.78	1109.71	5.48	20939.48	13734.89	13120.72
190	23.78	1114.73	5.48	20263.49	13344.60	12747.88
190	23.78	1114.73	5.48	20263.49	13344.60	12747.88
191	23.78	1119.75	5.48	19587.49	12954.32	12375.05
191	23.78	1119.75	5.48	19587.49	12954.32	12375.05
192	23.78	1124.76	5.48	18911.49	12564.03	12002.21
192	23.78	1124.76	5.48	18911.49	12564.03	12002.21
193	23.78	1129.78	5.48	18235.50	12173.74	11629.38
193	23.78	1129.78	5.48	18235.50	12173.74	11629.38
194	23.78	1134.80	5.48	17559.50	11783.46	11256.55
194	23.78	1134.80	5.48	17559.50	11783.46	11256.55
195	23.78	1139.82	5.48	16883.50	11393.17	10883.71
195	23.78	1139.82	5.48	16883.50	11393.17	10883.71
196	23.78	1144.84	5.48	16207.50	11002.88	10510.88
196	23.78	1144.84	5.48	16207.50	11002.88	10510.88
197	23.78	1149.86	5.48	15531.51	10612.60	10138.04
197	23.78	1149.86	5.48	15531.51	10612.60	10138.04
198	23.78	1154.88	5.48	14855.51	10222.31	9765.21
198	23.78	1154.88	5.48	14855.51	10222.31	9765.21
199	23.78	1159.90	5.48	14179.51	9832.02	9392.37
199	23.78	1159.90	5.48	14179.51	9832.02	9392.37
200	23.78	1164.92	5.48	13503.52	9441.74	9019.54
200	23.78	1164.92	5.48	13503.52	9441.74	9019.54
201	23.78	1169.94	5.48	12827.52	9051.45	8646.70
201	23.78	1169.94	5.48	12827.52	9051.45	8646.70
202	23.78	1174.96	5.48	12151.52	8661.16	8273.87
202	23.78	1174.96	5.48	12151.52	8661.16	8273.87
203	23.78	1179.98	5.48	11475.53	8270.87	7901.03
203	23.78	1179.98	5.48	11475.53	8270.87	7901.03
204	23.78	1185.00	5.48	10799.53	7880.59	7528.20
204	23.78	1185.00	5.48	10799.53	7880.59	7528.20
205	23.78	1190.02	5.48	10123.53	7490.30	7155.36
205	23.78	1190.02	5.48	10123.53	7490.30	7155.36
206	23.78	1195.04	5.48	9447.54	7100.01	6782.53
206	23.78	1195.04	5.48	9447.54	7100.01	6782.53
207	23.78	1200.05	5.48	8771.54	6709.73	6409.69
207	23.78	1200.05	5.48	8771.54	6709.73	6409.69
208	23.78	1205.07	5.48	8095.54	6319.44	6036.86
208	23.78	1205.07	5.48	8095.54	6319.44	6036.86
209	23.78	1210.09	5.48	7419.54	5929.15	5664.02
209	23.78	1210.09	5.48	7419.54	5929.15	5664.02
210	23.78	1215.11	5.48	6743.55	5538.87	5291.19
210	23.78	1215.11	5.48	6743.55	5538.87	5291.19
211	23.78	1220.13	5.48	6067.55	5148.58	4918.35
211	23.78	1220.13	5.48	6067.55	5148.58	4918.35
212	23.78	1225.15	5.48	5391.55	4758.29	4545.52
212	23.78	1225.15	5.48	5391.55	4758.29	4545.52
213	23.78	1230.17	5.48	4715.56	4368.00	4172.68
213	23.78	1230.17	5.48	4715.56	4368.00	4172.68
214	23.78	1235.19	5.48	4039.56	3977.72	3799.85
214	23.78	1235.19	5.48	4039.56	3977.72	3799.85
215	23.78	1238.35	1.42	936.02	966.59	923.36
215	23.78	1238.35	1.42	936.02	966.59	923.36
216	37.55	1241.00	5.05	1982.40	2658.12	2539.25
216	37.55	1241.00	5.05	1982.40	2658.12	2539.25
217	37.55	1245.00	5.05	1002.20	2092.20	1998.64
217	37.55	1245.00	5.05	1002.20	2092.20	1998.64
218	37.55	1248.67	4.23	152.57	1355.71	1295.08
218	37.55	1248.67	4.23	152.57	1355.71	1295.08
219	37.55	1252.03	4.23	276.32	159.53	152.40
219	37.55	1252.03	4.23	276.32	159.53	152.40

Sum of the Resisting Forces = 2675401.69 (lbs)

Average Available Shear Strength = 2292.35(psf)

Sum of the Driving Forces = 2684171.62 (lbs)

Average Mobilized Shear Stress = 2299.86(psf)

Total length of the failure surface = 1167.10(ft)

Factor of Safety Balance Check: FS = 0.99673

Janbu's Correction Factor (fo) = 1.0502

Janub's FS Corrected = 1.04676

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.16680(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

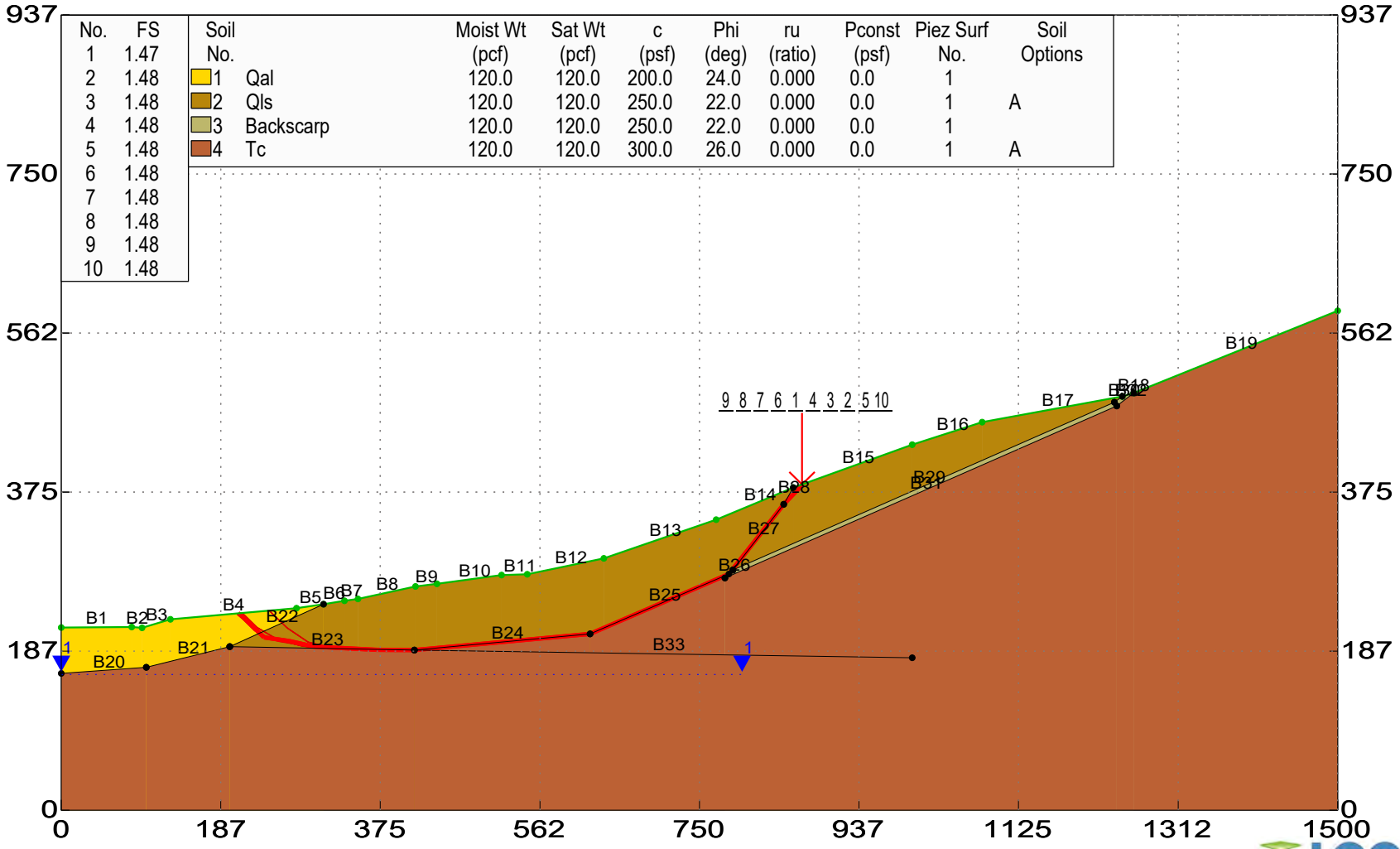
Average Elevation of Point of Application of kh on Sliding Mass = 284.699(ft)

Non-Symmetrical Sliding Resistance Has Been Specified
for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Design - Smaller Qls - Static

LGC Geotechnical, Inc. \xhd.gsd



GEOSTASE FS = 1.47

Simplified Janbu (Corrected) Method

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
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Analysis Date: 3/ 29/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_03_21\xhd.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_03_21\xhd.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Design - Smaller Qls - Static

BOUNDARY DATA

19 Surface Boundaries
33 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.200	82.800	216.000	1
2	82.800	216.000	95.100	215.000	1
3	95.100	215.000	128.300	225.100	1
4	128.300	225.100	276.400	238.000	1
5	276.400	238.000	308.300	242.900	1
6	308.300	242.900	332.700	247.000	2
7	332.700	247.000	348.800	249.000	2
8	348.800	249.000	416.400	263.600	2
9	416.400	263.600	441.400	267.000	2
10	441.400	267.000	517.400	277.100	2
11	517.400	277.100	547.500	278.000	2
12	547.500	278.000	637.700	297.000	2
13	637.700	297.000	769.500	342.600	2
14	769.500	342.600	860.200	380.200	2
15	860.200	380.200	1000.000	430.900	2
16	1000.000	430.900	1082.100	457.600	2
17	1082.100	457.600	1247.000	487.900	2
18	1247.000	487.900	1260.400	491.900	3
19	1260.400	491.900	1500.000	588.800	4
20	0.000	161.100	100.000	168.300	4
21	100.000	168.300	198.100	192.800	4
22	198.100	192.800	308.300	242.900	2
23	198.100	192.800	414.900	188.600	4
24	414.900	188.600	621.400	207.800	4
25	621.400	207.800	784.600	278.400	4
26	779.900	273.600	789.300	283.200	3
27	789.300	283.200	849.000	360.500	2
28	849.000	360.500	860.200	380.200	2
29	789.300	283.200	1237.700	480.800	3
30	1237.700	480.800	1247.000	487.900	3
31	779.900	273.600	1240.300	476.500	4
32	1240.300	476.500	1260.400	491.900	4
33	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	250.00	22.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	250.00	22.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	25.0	0.00	14.00
3	90.0	250.00	22.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	250.00	22.00
2	25.0	0.00	14.00
3	90.0	250.00	22.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 30.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	369.00	189.70	5.00
2	370.40	189.00	370.40	189.00	0.00
3	414.90	188.60	414.90	188.60	0.00
4	621.40	207.80	621.40	207.80	0.00
5	784.60	278.40	784.60	278.40	0.00
6	849.00	360.50	849.00	360.50	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.574 FS Min = 1.473 FS Ave = 1.523
Standard Deviation = 0.017 Coefficient of Variation = 1.12 %

Critical Surface is Sequence Number 2 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 1.473

Table 1 - Geometry Data on the 135 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	4.48	2.02	210.24	230.21	232.24	-39.24	4.98	5.78
2	4.48	6.07	214.72	226.55	232.63	-39.24	4.98	5.78
3	5.39	11.00	219.65	222.06	233.06	-44.66	4.98	7.58
4	5.39	16.80	225.05	216.73	233.53	-44.66	4.98	7.58
5	5.39	22.60	230.44	211.40	234.00	-44.66	4.98	7.58
6	2.58	26.89	234.43	207.46	234.34	-44.66	4.98	3.62
7	2.58	29.66	237.00	204.91	234.57	-44.66	4.98	3.62
8	4.95	31.61	240.77	203.29	234.90	-8.03	4.98	5.00
9	4.95	32.74	245.72	202.59	235.33	-8.03	4.98	5.00
10	4.95	33.87	250.67	201.89	235.76	-8.03	4.98	5.00
11	4.95	35.00	255.62	201.19	236.19	-8.03	4.98	5.00
12	4.95	36.13	260.57	200.50	236.62	-8.03	4.98	5.00
13	4.95	37.26	265.52	199.80	237.05	-8.03	4.98	5.00
14	4.20	38.49	270.10	198.96	237.45	-13.04	4.98	4.31
15	4.20	39.83	274.30	197.99	237.82	-13.04	4.98	4.31
16	5.21	41.50	279.00	196.90	238.40	-13.04	8.73	5.34
17	5.21	43.51	284.21	195.69	239.20	-13.04	8.73	5.34
18	5.21	45.51	289.42	194.49	240.00	-13.04	8.73	5.34
19	5.21	47.52	294.62	193.28	240.80	-13.04	8.73	5.34
20	5.54	49.09	299.99	192.54	241.62	-2.88	8.73	5.54
21	5.54	50.21	305.53	192.26	242.47	-2.88	8.73	5.54
22	4.88	51.31	310.74	192.00	243.31	-2.88	9.54	4.89
23	4.88	52.38	315.62	191.75	244.13	-2.88	9.54	4.89
24	4.88	53.44	320.50	191.51	244.95	-2.88	9.54	4.89
25	4.88	54.51	325.38	191.26	245.77	-2.88	9.54	4.89
26	4.88	55.57	330.26	191.02	246.59	-2.88	9.54	4.89
27	5.37	56.57	335.38	190.76	247.33	-2.88	7.08	5.37
28	5.37	57.51	340.75	190.49	248.00	-2.88	7.08	5.37
29	5.37	58.45	346.12	190.22	248.67	-2.88	7.08	5.37
30	3.32	59.36	350.46	190.00	249.36	-2.88	12.19	3.32
31	3.32	60.24	353.78	189.84	250.08	-2.88	12.19	3.32

32	4.99	61.35	357.93	189.63	250.97	-2.88	12.19	4.99
33	4.99	62.67	362.92	189.38	252.05	-2.88	12.19	4.99
34	4.99	64.00	367.91	189.13	253.13	-2.88	12.19	4.99
35	4.94	65.22	372.87	188.98	254.20	-0.52	12.19	4.94
36	4.94	66.33	377.82	188.93	255.27	-0.52	12.19	4.94
37	4.94	67.45	382.76	188.89	256.33	-0.52	12.19	4.94
38	4.94	68.56	387.71	188.84	257.40	-0.52	12.19	4.94
39	4.94	69.67	392.65	188.80	258.47	-0.52	12.19	4.94
40	4.94	70.78	397.59	188.76	259.54	-0.52	12.19	4.94
41	4.94	71.90	402.54	188.71	260.61	-0.52	12.19	4.94
42	4.94	73.01	407.48	188.67	261.67	-0.52	12.19	4.94
43	4.94	74.12	412.43	188.62	262.74	-0.52	12.19	4.94
44	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
45	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
46	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
47	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
48	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
49	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
50	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
51	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
52	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
53	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
54	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
55	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
56	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
57	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
58	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
59	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
60	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
61	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
62	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
63	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
64	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
65	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
66	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
67	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
68	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
69	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
70	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
71	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
72	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
73	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
74	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
75	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
76	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
77	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
78	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
79	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
80	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
81	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
82	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
83	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
84	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
85	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
86	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
87	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
88	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
89	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
90	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
91	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
92	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
93	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
94	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
95	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
96	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
97	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
98	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
99	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
100	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
101	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
102	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
103	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
104	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
105	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
106	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
107	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
108	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
109	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
110	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
111	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
112	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
113	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
114	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
115	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
116	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
117	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
118	4.95	68.33	787.08	281.56	349.89	51.89	22.52	8.03
119	4.95	64.07	792.03	287.87	351.94	51.89	22.52	8.03
120	4.95	59.81	796.98	294.19	353.99	51.89	22.52	8.03
121	4.95	55.54	801.94	300.50	356.05	51.89	22.52	8.03
122	4.95	51.28	806.89	306.82	358.10	51.89	22.52	8.03
123	4.95	47.02	811.85	313.13	360.15	51.89	22.52	8.03
124	4.95	42.76	816.80	319.45	362.21	51.89	22.52	8.03
125	4.95	38.50	821.75	325.77	364.26	51.89	22.52	8.03
126	4.95	34.23	826.71	332.08	366.32	51.89	22.52	8.03
127	4.95	29.97	831.66	338.40	368.37	51.89	22.52	8.03
128	4.95	25.71	836.62	344.71	370.42	51.89	22.52	8.03
129	4.95	21.45	841.57	351.03	372.48	51.89	22.52	8.03
130	4.95	17.19	846.52	357.34	374.53	51.89	22.52	8.03
131	5.60	13.25	851.80	363.46	376.72	46.63	22.52	8.16
132	5.60	9.65	857.40	369.39	379.04	46.63	22.52	8.16
133	4.70	6.21	862.55	374.85	381.05	46.63	19.93	6.84
134	4.70	2.93	867.25	379.82	382.76	46.63	19.93	6.84
135	0.83	0.65	870.02	383.11	383.76	62.55	19.93	1.80

Table 2 - Force Data On The 135 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1087.8	0.0	0.0	0.0	0.0	0.0
2	3263.3	0.0	0.0	0.0	0.0	0.0
3	7119.3	0.0	0.0	0.0	0.0	0.0
4	10875.2	0.0	0.0	0.0	0.0	0.0
5	14631.1	0.0	0.0	0.0	0.0	0.0
6	8312.9	0.0	0.0	0.0	0.0	0.0

7	9169.6	0.0	0.0	0.0	0.0	0.0
8	18779.2	0.0	0.0	0.0	0.0	0.0
9	19450.2	0.0	0.0	0.0	0.0	0.0
10	20121.2	0.0	0.0	0.0	0.0	0.0
11	20792.3	0.0	0.0	0.0	0.0	0.0
12	21463.3	0.0	0.0	0.0	0.0	0.0
13	22134.3	0.0	0.0	0.0	0.0	0.0
14	19401.5	0.0	0.0	0.0	0.0	0.0
15	20076.4	0.0	0.0	0.0	0.0	0.0
16	25927.7	0.0	0.0	0.0	0.0	0.0
17	27180.8	0.0	0.0	0.0	0.0	0.0
18	28433.9	0.0	0.0	0.0	0.0	0.0
19	29686.9	0.0	0.0	0.0	0.0	0.0
20	32617.6	0.0	0.0	0.0	0.0	0.0
21	33367.8	0.0	0.0	0.0	0.0	0.0
22	30048.1	0.0	0.0	0.0	0.0	0.0
23	30671.9	0.0	0.0	0.0	0.0	0.0
24	31295.7	0.0	0.0	0.0	0.0	0.0
25	31919.5	0.0	0.0	0.0	0.0	0.0
26	32543.3	0.0	0.0	0.0	0.0	0.0
27	36433.3	0.0	0.0	0.0	0.0	0.0
28	37036.3	0.0	0.0	0.0	0.0	0.0
29	37639.4	0.0	0.0	0.0	0.0	0.0
30	23643.7	0.0	0.0	0.0	0.0	0.0
31	23995.7	0.0	0.0	0.0	0.0	0.0
32	36712.0	0.0	0.0	0.0	0.0	0.0
33	37506.6	0.0	0.0	0.0	0.0	0.0
34	38301.1	0.0	0.0	0.0	0.0	0.0
35	38697.9	0.0	0.0	0.0	0.0	0.0
36	39357.9	0.0	0.0	0.0	0.0	0.0
37	40017.9	0.0	0.0	0.0	0.0	0.0
38	40677.9	0.0	0.0	0.0	0.0	0.0
39	41337.9	0.0	0.0	0.0	0.0	0.0
40	41997.8	0.0	0.0	0.0	0.0	0.0
41	42657.8	0.0	0.0	0.0	0.0	0.0
42	43317.8	0.0	0.0	0.0	0.0	0.0
43	43977.8	0.0	0.0	0.0	0.0	0.0
44	13458.3	0.0	0.0	0.0	0.0	0.0
45	44980.9	0.0	0.0	0.0	0.0	0.0
46	45109.9	0.0	0.0	0.0	0.0	0.0
47	45239.0	0.0	0.0	0.0	0.0	0.0
48	45368.0	0.0	0.0	0.0	0.0	0.0
49	45497.1	0.0	0.0	0.0	0.0	0.0
50	46230.6	0.0	0.0	0.0	0.0	0.0
51	46353.6	0.0	0.0	0.0	0.0	0.0
52	46476.5	0.0	0.0	0.0	0.0	0.0
53	46599.5	0.0	0.0	0.0	0.0	0.0
54	46722.5	0.0	0.0	0.0	0.0	0.0
55	46845.4	0.0	0.0	0.0	0.0	0.0
56	46968.4	0.0	0.0	0.0	0.0	0.0
57	47091.4	0.0	0.0	0.0	0.0	0.0
58	47214.3	0.0	0.0	0.0	0.0	0.0
59	47337.3	0.0	0.0	0.0	0.0	0.0
60	47460.3	0.0	0.0	0.0	0.0	0.0
61	47583.2	0.0	0.0	0.0	0.0	0.0
62	47706.2	0.0	0.0	0.0	0.0	0.0
63	47829.2	0.0	0.0	0.0	0.0	0.0
64	47952.1	0.0	0.0	0.0	0.0	0.0
65	47444.5	0.0	0.0	0.0	0.0	0.0
66	47254.0	0.0	0.0	0.0	0.0	0.0
67	47063.5	0.0	0.0	0.0	0.0	0.0
68	46873.0	0.0	0.0	0.0	0.0	0.0
69	46682.5	0.0	0.0	0.0	0.0	0.0
70	46492.0	0.0	0.0	0.0	0.0	0.0
71	45735.8	0.0	0.0	0.0	0.0	0.0
72	46078.5	0.0	0.0	0.0	0.0	0.0
73	46421.2	0.0	0.0	0.0	0.0	0.0
74	46763.9	0.0	0.0	0.0	0.0	0.0
75	47106.6	0.0	0.0	0.0	0.0	0.0
76	47449.4	0.0	0.0	0.0	0.0	0.0
77	47792.1	0.0	0.0	0.0	0.0	0.0
78	48134.8	0.0	0.0	0.0	0.0	0.0
79	48477.5	0.0	0.0	0.0	0.0	0.0
80	48820.2	0.0	0.0	0.0	0.0	0.0
81	49162.9	0.0	0.0	0.0	0.0	0.0
82	49505.7	0.0	0.0	0.0	0.0	0.0
83	49848.4	0.0	0.0	0.0	0.0	0.0
84	50191.1	0.0	0.0	0.0	0.0	0.0
85	50533.8	0.0	0.0	0.0	0.0	0.0
86	55526.6	0.0	0.0	0.0	0.0	0.0
87	54740.3	0.0	0.0	0.0	0.0	0.0
88	53954.1	0.0	0.0	0.0	0.0	0.0
89	49838.1	0.0	0.0	0.0	0.0	0.0
90	49571.0	0.0	0.0	0.0	0.0	0.0
91	49303.9	0.0	0.0	0.0	0.0	0.0
92	49036.8	0.0	0.0	0.0	0.0	0.0
93	48769.7	0.0	0.0	0.0	0.0	0.0
94	48502.6	0.0	0.0	0.0	0.0	0.0
95	48235.5	0.0	0.0	0.0	0.0	0.0
96	47968.4	0.0	0.0	0.0	0.0	0.0
97	47701.3	0.0	0.0	0.0	0.0	0.0
98	47434.2	0.0	0.0	0.0	0.0	0.0
99	47167.1	0.0	0.0	0.0	0.0	0.0
100	46900.0	0.0	0.0	0.0	0.0	0.0
101	46632.9	0.0	0.0	0.0	0.0	0.0
102	46365.8	0.0	0.0	0.0	0.0	0.0
103	46098.7	0.0	0.0	0.0	0.0	0.0
104	45831.5	0.0	0.0	0.0	0.0	0.0
105	45564.4	0.0	0.0	0.0	0.0	0.0
106	45297.3	0.0	0.0	0.0	0.0	0.0
107	45030.2	0.0	0.0	0.0	0.0	0.0
108	44763.1	0.0	0.0	0.0	0.0	0.0
109	44496.0	0.0	0.0	0.0	0.0	0.0
110	44228.9	0.0	0.0	0.0	0.0	0.0
111	43961.8	0.0	0.0	0.0	0.0	0.0
112	43694.7	0.0	0.0	0.0	0.0	0.0
113	43427.6	0.0	0.0	0.0	0.0	0.0
114	43160.5	0.0	0.0	0.0	0.0	0.0
115	42694.8	0.0	0.0	0.0	0.0	0.0
116	42640.0	0.0	0.0	0.0	0.0	0.0
117	42585.1	0.0	0.0	0.0	0.0	0.0
118	40618.9	0.0	0.0	0.0	0.0	0.0
119	38085.4	0.0	0.0	0.0	0.0	0.0
120	35552.0	0.0	0.0	0.0	0.0	0.0
121	33018.6	0.0	0.0	0.0	0.0	0.0
122	30485.1	0.0	0.0	0.0	0.0	0.0
123	27951.7	0.0	0.0	0.0	0.0	0.0
124	25418.2	0.0	0.0	0.0	0.0	0.0
125	22884.8	0.0	0.0	0.0	0.0	0.0
126	20351.3	0.0	0.0	0.0	0.0	0.0

127	17817.9	0.0	0.0	0.0	0.0	0.0
128	15284.4	0.0	0.0	0.0	0.0	0.0
129	12751.0	0.0	0.0	0.0	0.0	0.0
130	10217.5	0.0	0.0	0.0	0.0	0.0
131	8906.2	0.0	0.0	0.0	0.0	0.0
132	6481.9	0.0	0.0	0.0	0.0	0.0
133	3500.0	0.0	0.0	0.0	0.0	0.0
134	1655.0	0.0	0.0	0.0	0.0	0.0
135	64.8	0.0	0.0	0.0	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 4995702.53(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 4995702.53(lbs)

TOTAL AREA OF SLIDING MASS = 41630.85(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 135 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	2	250.00	22.00	A
7	2	250.00	22.00	A
8	2	0.00	14.00	A
9	2	0.00	14.00	A
10	2	0.00	14.00	A
11	2	0.00	14.00	A
12	2	0.00	14.00	A
13	2	0.00	14.00	A
14	2	0.00	14.00	A
15	2	0.00	14.00	A
16	2	0.00	14.00	A
17	2	0.00	14.00	A
18	2	0.00	14.00	A
19	2	0.00	14.00	A
20	2	0.00	14.00	A
21	2	0.00	14.00	A
22	2	0.00	14.00	A
23	2	0.00	14.00	A
24	2	0.00	14.00	A
25	2	0.00	14.00	A
26	2	0.00	14.00	A
27	2	0.00	14.00	A
28	2	0.00	14.00	A
29	2	0.00	14.00	A
30	2	0.00	14.00	A
31	2	0.00	14.00	A
32	4	0.00	14.00	A
33	4	0.00	14.00	A
34	4	0.00	14.00	A
35	4	0.00	14.00	A
36	4	0.00	14.00	A
37	4	0.00	14.00	A
38	4	0.00	14.00	A
39	4	0.00	14.00	A
40	4	0.00	14.00	A
41	4	0.00	14.00	A
42	4	0.00	14.00	A
43	4	0.00	14.00	A
44	2	0.00	14.00	A
45	2	0.00	14.00	A
46	2	0.00	14.00	A
47	2	0.00	14.00	A
48	2	0.00	14.00	A
49	2	0.00	14.00	A
50	2	0.00	14.00	A
51	2	0.00	14.00	A
52	2	0.00	14.00	A
53	2	0.00	14.00	A
54	2	0.00	14.00	A
55	2	0.00	14.00	A
56	2	0.00	14.00	A
57	2	0.00	14.00	A
58	2	0.00	14.00	A
59	2	0.00	14.00	A
60	2	0.00	14.00	A
61	2	0.00	14.00	A
62	2	0.00	14.00	A
63	2	0.00	14.00	A
64	2	0.00	14.00	A
65	2	0.00	14.00	A
66	2	0.00	14.00	A
67	2	0.00	14.00	A
68	2	0.00	14.00	A
69	2	0.00	14.00	A
70	2	0.00	14.00	A
71	2	0.00	14.00	A
72	2	0.00	14.00	A
73	2	0.00	14.00	A
74	2	0.00	14.00	A
75	2	0.00	14.00	A
76	2	0.00	14.00	A
77	2	0.00	14.00	A
78	2	0.00	14.00	A
79	2	0.00	14.00	A
80	2	0.00	14.00	A
81	2	0.00	14.00	A
82	2	0.00	14.00	A
83	2	0.00	14.00	A
84	2	0.00	14.00	A
85	2	0.00	14.00	A
86	2	0.00	14.00	A
87	2	0.00	14.00	A
88	2	0.00	14.00	A
89	2	0.00	14.00	A
90	2	0.00	14.00	A
91	2	0.00	14.00	A
92	2	0.00	14.00	A
93	2	0.00	14.00	A
94	2	0.00	14.00	A
95	2	0.00	14.00	A
96	2	0.00	14.00	A
97	2	0.00	14.00	A
98	2	0.00	14.00	A
99	2	0.00	14.00	A

100	2	0.00	14.00	A
101	2	0.00	14.00	A
102	2	0.00	14.00	A
103	2	0.00	14.00	A
104	2	0.00	14.00	A
105	2	0.00	14.00	A
106	2	0.00	14.00	A
107	2	0.00	14.00	A
108	2	0.00	14.00	A
109	2	0.00	14.00	A
110	2	0.00	14.00	A
111	2	0.00	14.00	A
112	2	0.00	14.00	A
113	2	0.00	14.00	A
114	2	0.00	14.00	A
115	2	0.00	14.00	A
116	2	0.00	14.00	A
117	2	0.00	14.00	A
118	2	250.00	22.00	A
119	2	250.00	22.00	A
120	2	250.00	22.00	A
121	2	250.00	22.00	A
122	2	250.00	22.00	A
123	2	250.00	22.00	A
124	2	250.00	22.00	A
125	2	250.00	22.00	A
126	2	250.00	22.00	A
127	2	250.00	22.00	A
128	2	250.00	22.00	A
129	2	250.00	22.00	A
130	2	250.00	22.00	A
131	2	250.00	22.00	A
132	2	250.00	22.00	A
133	2	250.00	22.00	A
134	2	250.00	22.00	A
135	2	250.00	22.00	A

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 135 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-39.24	210.24	5.78	490.12	418.22	283.68
1	-39.24	210.24	5.78	490.12	418.22	283.68
2	-39.24	214.72	5.78	1149.44	711.77	482.80
2	-39.24	214.72	5.78	1149.44	711.77	482.80
3	-44.66	219.65	7.58	2146.20	1155.55	783.82
3	-44.66	219.65	7.58	2146.20	1155.55	783.82
4	-44.66	225.05	7.58	3167.72	1610.36	1092.33
4	-44.66	225.05	7.58	3167.72	1610.36	1092.33
5	-44.66	230.44	7.58	4189.23	2065.17	1400.83
5	-44.66	230.44	7.58	4189.23	2065.17	1400.83
6	-44.66	234.43	3.62	4789.31	2185.01	1482.12
6	-44.66	234.43	3.62	4789.31	2185.01	1482.12
7	-44.66	237.00	3.62	5256.96	2373.95	1610.28
7	-44.66	237.00	3.62	5256.96	2373.95	1610.28
8	-8.03	240.77	5.00	3892.03	970.39	658.23
8	-8.03	240.77	5.00	3892.03	970.39	658.23
9	-8.03	245.72	5.00	4031.10	1005.07	681.75
9	-8.03	245.72	5.00	4031.10	1005.07	681.75
10	-8.03	250.67	5.00	4170.18	1039.74	705.27
10	-8.03	250.67	5.00	4170.18	1039.74	705.27
11	-8.03	255.62	5.00	4309.25	1074.42	728.79
11	-8.03	255.62	5.00	4309.25	1074.42	728.79
12	-8.03	260.57	5.00	4448.32	1109.09	752.31
12	-8.03	260.57	5.00	4448.32	1109.09	752.31
13	-8.03	265.52	5.00	4587.40	1143.77	775.83
13	-8.03	265.52	5.00	4587.40	1143.77	775.83
14	-13.04	270.10	4.31	4820.25	1201.82	815.21
14	-13.04	270.10	4.31	4820.25	1201.82	815.21
15	-13.04	274.30	4.31	4987.93	1243.63	843.57
15	-13.04	274.30	4.31	4987.93	1243.63	843.57
16	-13.04	279.00	5.34	5197.37	1295.85	878.99
16	-13.04	279.00	5.34	5197.37	1295.85	878.99
17	-13.04	284.21	5.34	5448.56	1358.48	921.47
17	-13.04	284.21	5.34	5448.56	1358.48	921.47
18	-13.04	289.42	5.34	5699.74	1421.11	963.95
18	-13.04	289.42	5.34	5699.74	1421.11	963.95
19	-13.04	294.62	5.34	5950.93	1483.73	1006.43
19	-13.04	294.62	5.34	5950.93	1483.73	1006.43
20	-2.88	299.99	5.54	5944.18	1482.05	1005.29
20	-2.88	299.99	5.54	5944.18	1482.05	1005.29
21	-2.88	305.53	5.54	6080.88	1516.13	1028.41
21	-2.88	305.53	5.54	6080.88	1516.13	1028.41
22	-2.88	310.74	4.89	6213.74	1549.26	1050.88
22	-2.88	310.74	4.89	6213.74	1549.26	1050.88
23	-2.88	315.62	4.89	6342.74	1581.42	1072.70
23	-2.88	315.62	4.89	6342.74	1581.42	1072.70
24	-2.88	320.50	4.89	6471.74	1613.59	1094.52
24	-2.88	320.50	4.89	6471.74	1613.59	1094.52
25	-2.88	325.38	4.89	6600.74	1645.75	1116.33
25	-2.88	325.38	4.89	6600.74	1645.75	1116.33
26	-2.88	330.26	4.89	6729.74	1677.91	1138.15
26	-2.88	330.26	4.89	6729.74	1677.91	1138.15
27	-2.88	335.38	5.37	6850.94	1708.13	1158.65
27	-2.88	335.38	5.37	6850.94	1708.13	1158.65
28	-2.88	340.75	5.37	6964.34	1736.40	1177.82
28	-2.88	340.75	5.37	6964.34	1736.40	1177.82
29	-2.88	346.12	5.37	7077.73	1764.68	1197.00
29	-2.88	346.12	5.37	7077.73	1764.68	1197.00
30	-2.88	350.46	3.32	7187.94	1792.15	1215.64
30	-2.88	350.46	3.32	7187.94	1792.15	1215.64
31	-2.88	353.78	3.32	7294.96	1818.84	1233.74
31	-2.88	353.78	3.32	7294.96	1818.84	1233.74
32	-2.88	357.93	4.99	7428.86	1852.22	1256.39
32	-2.88	357.93	4.99	7428.86	1852.22	1256.39
33	-2.88	362.92	4.99	7589.65	1892.31	1283.58
33	-2.88	362.92	4.99	7589.65	1892.31	1283.58
34	-2.88	367.91	4.99	7750.43	1932.40	1310.77
34	-2.88	367.91	4.99	7750.43	1932.40	1310.77
35	-0.52	372.87	4.94	7839.26	1954.55	1325.79

35	-0.52	372.87	4.94	7839.26	1954.55	1325.79
36	-0.52	377.82	4.94	7972.96	1987.88	1348.41
36	-0.52	377.82	4.94	7972.96	1987.88	1348.41
37	-0.52	382.76	4.94	8106.66	2021.22	1371.02
37	-0.52	382.76	4.94	8106.66	2021.22	1371.02
38	-0.52	387.71	4.94	8240.35	2054.55	1393.63
38	-0.52	387.71	4.94	8240.35	2054.55	1393.63
39	-0.52	392.65	4.94	8374.05	2087.88	1416.24
39	-0.52	392.65	4.94	8374.05	2087.88	1416.24
40	-0.52	397.59	4.94	8507.75	2121.22	1438.85
40	-0.52	397.59	4.94	8507.75	2121.22	1438.85
41	-0.52	402.54	4.94	8641.44	2154.55	1461.46
41	-0.52	402.54	4.94	8641.44	2154.55	1461.46
42	-0.52	407.48	4.94	8775.14	2187.89	1484.07
42	-0.52	407.48	4.94	8775.14	2187.89	1484.07
43	-0.52	412.43	4.94	8908.83	2221.22	1506.68
43	-0.52	412.43	4.94	8908.83	2221.22	1506.68
44	5.31	415.65	1.51	8824.16	2200.11	1492.36
44	5.31	415.65	1.51	8824.16	2200.11	1492.36
45	5.31	418.90	5.02	8847.74	2205.99	1496.35
45	5.31	418.90	5.02	8847.74	2205.99	1496.35
46	5.31	423.90	5.02	8873.12	2212.32	1500.64
46	5.31	423.90	5.02	8873.12	2212.32	1500.64
47	5.31	428.90	5.02	8898.51	2218.65	1504.94
47	5.31	428.90	5.02	8898.51	2218.65	1504.94
48	5.31	433.90	5.02	8923.90	2224.98	1509.23
48	5.31	433.90	5.02	8923.90	2224.98	1509.23
49	5.31	438.90	5.02	8949.28	2231.31	1513.52
49	5.31	438.90	5.02	8949.28	2231.31	1513.52
50	5.31	443.93	5.09	8973.91	2237.45	1517.69
50	5.31	443.93	5.09	8973.91	2237.45	1517.69
51	5.31	449.00	5.09	8997.78	2243.40	1521.73
51	5.31	449.00	5.09	8997.78	2243.40	1521.73
52	5.31	454.07	5.09	9021.65	2249.35	1525.76
52	5.31	454.07	5.09	9021.65	2249.35	1525.76
53	5.31	459.13	5.09	9045.52	2255.30	1529.80
53	5.31	459.13	5.09	9045.52	2255.30	1529.80
54	5.31	464.20	5.09	9069.39	2261.25	1533.84
54	5.31	464.20	5.09	9069.39	2261.25	1533.84
55	5.31	469.27	5.09	9093.26	2267.20	1537.87
55	5.31	469.27	5.09	9093.26	2267.20	1537.87
56	5.31	474.33	5.09	9117.13	2273.15	1541.91
56	5.31	474.33	5.09	9117.13	2273.15	1541.91
57	5.31	479.40	5.09	9140.99	2279.11	1545.95
57	5.31	479.40	5.09	9140.99	2279.11	1545.95
58	5.31	484.47	5.09	9164.86	2285.06	1549.98
58	5.31	484.47	5.09	9164.86	2285.06	1549.98
59	5.31	489.53	5.09	9188.73	2291.01	1554.02
59	5.31	489.53	5.09	9188.73	2291.01	1554.02
60	5.31	494.60	5.09	9212.60	2296.96	1558.06
60	5.31	494.60	5.09	9212.60	2296.96	1558.06
61	5.31	499.67	5.09	9236.47	2302.91	1562.09
61	5.31	499.67	5.09	9236.47	2302.91	1562.09
62	5.31	504.73	5.09	9260.34	2308.86	1566.13
62	5.31	504.73	5.09	9260.34	2308.86	1566.13
63	5.31	509.80	5.09	9284.21	2314.81	1570.17
63	5.31	509.80	5.09	9284.21	2314.81	1570.17
64	5.31	514.87	5.09	9308.08	2320.76	1574.20
64	5.31	514.87	5.09	9308.08	2320.76	1574.20
65	5.31	519.91	5.04	9301.34	2319.08	1573.06
65	5.31	519.91	5.04	9301.34	2319.08	1573.06
66	5.31	524.92	5.04	9263.99	2309.77	1566.75
66	5.31	524.92	5.04	9263.99	2309.77	1566.75
67	5.31	529.94	5.04	9226.64	2300.46	1560.43
67	5.31	529.94	5.04	9226.64	2300.46	1560.43
68	5.31	534.96	5.04	9189.30	2291.15	1554.11
68	5.31	534.96	5.04	9189.30	2291.15	1554.11
69	5.31	539.98	5.04	9151.95	2281.84	1547.80
69	5.31	539.98	5.04	9151.95	2281.84	1547.80
70	5.31	544.99	5.04	9114.61	2272.53	1541.48
70	5.31	544.99	5.04	9114.61	2272.53	1541.48
71	5.31	549.96	4.95	9130.14	2276.40	1544.11
71	5.31	549.96	4.95	9130.14	2276.40	1544.11
72	5.31	554.89	4.95	9198.56	2293.46	1555.68
72	5.31	554.89	4.95	9198.56	2293.46	1555.68
73	5.31	559.82	4.95	9266.97	2310.52	1567.25
73	5.31	559.82	4.95	9266.97	2310.52	1567.25
74	5.31	564.74	4.95	9335.39	2327.57	1578.82
74	5.31	564.74	4.95	9335.39	2327.57	1578.82
75	5.31	569.67	4.95	9403.80	2344.63	1590.39
75	5.31	569.67	4.95	9403.80	2344.63	1590.39
76	5.31	574.60	4.95	9472.22	2361.69	1601.96
76	5.31	574.60	4.95	9472.22	2361.69	1601.96
77	5.31	579.52	4.95	9540.63	2378.75	1613.53
77	5.31	579.52	4.95	9540.63	2378.75	1613.53
78	5.31	584.45	4.95	9609.05	2395.81	1625.10
78	5.31	584.45	4.95	9609.05	2395.81	1625.10
79	5.31	589.38	4.95	9677.47	2412.86	1636.67
79	5.31	589.38	4.95	9677.47	2412.86	1636.67
80	5.31	594.30	4.95	9745.88	2429.92	1648.25
80	5.31	594.30	4.95	9745.88	2429.92	1648.25
81	5.31	599.23	4.95	9814.30	2446.98	1659.82
81	5.31	599.23	4.95	9814.30	2446.98	1659.82
82	5.31	604.16	4.95	9882.71	2464.04	1671.39
82	5.31	604.16	4.95	9882.71	2464.04	1671.39
83	5.31	609.08	4.95	9951.13	2481.09	1682.96
83	5.31	609.08	4.95	9951.13	2481.09	1682.96
84	5.31	614.01	4.95	10019.54	2498.15	1694.53
84	5.31	614.01	4.95	10019.54	2498.15	1694.53
85	5.31	618.94	4.95	10087.96	2515.21	1706.10
85	5.31	618.94	4.95	10087.96	2515.21	1706.10
86	23.39	624.12	5.92	9479.68	2363.55	1603.22
86	23.39	624.12	5.92	9479.68	2363.55	1603.22
87	23.39	629.55	5.92	9345.44	2330.08	1580.52
87	23.39	629.55	5.92	9345.44	2330.08	1580.52
88	23.39	634.98	5.92	9211.21	2296.61	1557.82
88	23.39	634.98	5.92	9211.21	2296.61	1557.82
89	23.39	640.23	5.52	9119.65	2273.78	1542.34
89	23.39	640.23	5.52	9119.65	2273.78	1542.34
90	23.39	645.30	5.52	9070.77	2261.60	1534.07
90	23.39	645.30	5.52	9070.77	2261.60	1534.07
91	23.39	650.37	5.52	9021.90	2249.41	1525.80
91	23.39	650.37	5.52	9021.90	2249.41	1525.80
92	23.39	655.44	5.52	8973.02	2237.23	1517.54
92	23.39	655.44	5.52	8973.02	2237.23	1517.54
93	23.39	660.51	5.52	8924.15	2225.04	1509.27
93	23.39	660.51	5.52	8924.15	2225.04	1509.27
94	23.39	665.58	5.52	8875.27	2212.85	1501.01
94	23.39	665.58	5.52	8875.27	2212.85	1501.01
95	23.39	670.65	5.52	8826.39	2200.67	1492.74

95	23.39	670.65	5.52	8826.39	2200.67	1492.74
96	23.39	675.72	5.52	8777.52	2188.48	1484.47
96	23.39	675.72	5.52	8777.52	2188.48	1484.47
97	23.39	680.79	5.52	8728.64	2176.29	1476.21
97	23.39	680.79	5.52	8728.64	2176.29	1476.21
98	23.39	685.86	5.52	8679.77	2164.11	1467.94
98	23.39	685.86	5.52	8679.77	2164.11	1467.94
99	23.39	690.93	5.52	8630.89	2151.92	1459.68
99	23.39	690.93	5.52	8630.89	2151.92	1459.68
100	23.39	696.00	5.52	8582.01	2139.74	1451.41
100	23.39	696.00	5.52	8582.01	2139.74	1451.41
101	23.39	701.07	5.52	8533.14	2127.55	1443.14
101	23.39	701.07	5.52	8533.14	2127.55	1443.14
102	23.39	706.13	5.52	8484.26	2115.36	1434.88
102	23.39	706.13	5.52	8484.26	2115.36	1434.88
103	23.39	711.20	5.52	8435.38	2103.18	1426.61
103	23.39	711.20	5.52	8435.38	2103.18	1426.61
104	23.39	716.27	5.52	8386.51	2090.99	1418.35
104	23.39	716.27	5.52	8386.51	2090.99	1418.35
105	23.39	721.34	5.52	8337.63	2078.81	1410.08
105	23.39	721.34	5.52	8337.63	2078.81	1410.08
106	23.39	726.41	5.52	8288.76	2066.62	1401.81
106	23.39	726.41	5.52	8288.76	2066.62	1401.81
107	23.39	731.48	5.52	8239.88	2054.43	1393.55
107	23.39	731.48	5.52	8239.88	2054.43	1393.55
108	23.39	736.55	5.52	8191.00	2042.25	1385.28
108	23.39	736.55	5.52	8191.00	2042.25	1385.28
109	23.39	741.62	5.52	8142.13	2030.06	1377.01
109	23.39	741.62	5.52	8142.13	2030.06	1377.01
110	23.39	746.69	5.52	8093.25	2017.87	1368.75
110	23.39	746.69	5.52	8093.25	2017.87	1368.75
111	23.39	751.76	5.52	8044.38	2005.69	1360.48
111	23.39	751.76	5.52	8044.38	2005.69	1360.48
112	23.39	756.83	5.52	7995.50	1993.50	1352.22
112	23.39	756.83	5.52	7995.50	1993.50	1352.22
113	23.39	761.90	5.52	7946.62	1981.32	1343.95
113	23.39	761.90	5.52	7946.62	1981.32	1343.95
114	23.39	766.97	5.52	7897.75	1969.13	1335.68
114	23.39	766.97	5.52	7897.75	1969.13	1335.68
115	23.39	772.02	5.48	7868.25	1961.78	1330.70
115	23.39	772.02	5.48	7868.25	1961.78	1330.70
116	23.39	777.05	5.48	7858.14	1959.26	1328.99
116	23.39	777.05	5.48	7858.14	1959.26	1328.99
117	23.39	782.08	5.48	7848.03	1956.73	1327.28
117	23.39	782.08	5.48	7848.03	1956.73	1327.28
118	51.89	787.08	8.03	5805.01	2595.37	1760.47
118	51.89	787.08	8.03	5805.01	2595.37	1760.47
119	51.89	792.03	8.03	5432.46	2444.86	1658.38
119	51.89	792.03	8.03	5432.46	2444.86	1658.38
120	51.89	796.98	8.03	5059.92	2294.34	1556.28
120	51.89	796.98	8.03	5059.92	2294.34	1556.28
121	51.89	801.94	8.03	4687.37	2143.82	1454.18
121	51.89	801.94	8.03	4687.37	2143.82	1454.18
122	51.89	806.89	8.03	4314.83	1993.30	1352.08
122	51.89	806.89	8.03	4314.83	1993.30	1352.08
123	51.89	811.85	8.03	3942.28	1842.79	1249.98
123	51.89	811.85	8.03	3942.28	1842.79	1249.98
124	51.89	816.80	8.03	3569.74	1692.27	1147.89
124	51.89	816.80	8.03	3569.74	1692.27	1147.89
125	51.89	821.75	8.03	3197.20	1541.75	1045.79
125	51.89	821.75	8.03	3197.20	1541.75	1045.79
126	51.89	826.71	8.03	2824.65	1391.23	943.69
126	51.89	826.71	8.03	2824.65	1391.23	943.69
127	51.89	831.66	8.03	2452.11	1240.72	841.59
127	51.89	831.66	8.03	2452.11	1240.72	841.59
128	51.89	836.62	8.03	2079.56	1090.20	739.49
128	51.89	836.62	8.03	2079.56	1090.20	739.49
129	51.89	841.57	8.03	1707.02	939.68	637.40
129	51.89	841.57	8.03	1707.02	939.68	637.40
130	51.89	846.52	8.03	1334.47	789.16	535.30
130	51.89	846.52	8.03	1334.47	789.16	535.30
131	46.63	851.80	8.16	1068.16	681.56	462.31
131	46.63	851.80	8.16	1068.16	681.56	462.31
132	46.63	857.40	8.16	737.59	548.00	371.72
132	46.63	857.40	8.16	737.59	548.00	371.72
133	46.63	862.55	6.84	422.41	420.67	285.34
133	46.63	862.55	6.84	422.41	420.67	285.34
134	46.63	867.25	6.84	122.64	299.55	203.19
134	46.63	867.25	6.84	122.64	299.55	203.19
135	62.55	870.02	1.80	49.87	20.15	13.67
135	62.55	870.02	1.80	49.87	20.15	13.67

Table 4 - Base Force Data on the 135 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-39.24	210.24	5.78	2834.15	2418.35	1640.39
1	-39.24	210.24	5.78	2834.15	2418.35	1640.39
2	-39.24	214.72	5.78	6646.67	4115.79	2791.79
2	-39.24	214.72	5.78	6646.67	4115.79	2791.79
3	-44.66	219.65	7.58	16278.87	8764.81	5945.28
3	-44.66	219.65	7.58	16278.87	8764.81	5945.28
4	-44.66	225.05	7.58	24027.07	12214.54	8285.27
4	-44.66	225.05	7.58	24027.07	12214.54	8285.27
5	-44.66	230.44	7.58	31775.27	15664.26	10625.26
5	-44.66	230.44	7.58	31775.27	15664.26	10625.26
6	-44.66	234.43	3.62	17349.41	7915.25	5369.01
6	-44.66	234.43	3.62	17349.41	7915.25	5369.01
7	-44.66	237.00	3.62	19043.47	8599.69	5833.28
7	-44.66	237.00	3.62	19043.47	8599.69	5833.28
8	-8.03	240.77	5.00	19460.15	4851.96	3291.14
8	-8.03	240.77	5.00	19460.15	4851.96	3291.14
9	-8.03	245.72	5.00	20155.52	5025.34	3408.75
9	-8.03	245.72	5.00	20155.52	5025.34	3408.75
10	-8.03	250.67	5.00	20850.89	5198.71	3526.35
10	-8.03	250.67	5.00	20850.89	5198.71	3526.35
11	-8.03	255.62	5.00	21546.25	5372.08	3643.95
11	-8.03	255.62	5.00	21546.25	5372.08	3643.95
12	-8.03	260.57	5.00	22241.62	5545.46	3761.55
12	-8.03	260.57	5.00	22241.62	5545.46	3761.55
13	-8.03	265.52	5.00	22936.98	5718.83	3879.15
13	-8.03	265.52	5.00	22936.98	5718.83	3879.15
14	-13.04	270.10	4.31	20784.01	5182.04	3515.04
14	-13.04	270.10	4.31	20784.01	5182.04	3515.04
15	-13.04	274.30	4.31	21507.03	5362.30	3637.32
15	-13.04	274.30	4.31	21507.03	5362.30	3637.32

16	-13.04	279.00	5.34	27775.23	6925.14	4697.41
16	-13.04	279.00	5.34	27775.23	6925.14	4697.41
17	-13.04	284.21	5.34	29117.60	7259.83	4924.43
17	-13.04	284.21	5.34	29117.60	7259.83	4924.43
18	-13.04	289.42	5.34	30459.97	7594.52	5151.46
18	-13.04	289.42	5.34	30459.97	7594.52	5151.46
19	-13.04	294.62	5.34	31802.34	7929.21	5378.48
19	-13.04	294.62	5.34	31802.34	7929.21	5378.48
20	-2.88	299.99	5.54	32957.65	8217.27	5573.87
20	-2.88	299.99	5.54	32957.65	8217.27	5573.87
21	-2.88	305.53	5.54	33715.64	8406.25	5702.06
21	-2.88	305.53	5.54	33715.64	8406.25	5702.06
22	-2.88	310.74	4.89	30361.32	7569.93	5134.77
22	-2.88	310.74	4.89	30361.32	7569.93	5134.77
23	-2.88	315.62	4.89	30991.64	7727.08	5241.37
23	-2.88	315.62	4.89	30991.64	7727.08	5241.37
24	-2.88	320.50	4.89	31621.96	7884.24	5347.98
24	-2.88	320.50	4.89	31621.96	7884.24	5347.98
25	-2.88	325.38	4.89	32252.28	8041.40	5454.58
25	-2.88	325.38	4.89	32252.28	8041.40	5454.58
26	-2.88	330.26	4.89	32882.60	8198.55	5561.18
26	-2.88	330.26	4.89	32882.60	8198.55	5561.18
27	-2.88	335.38	5.37	36813.12	9178.54	6225.92
27	-2.88	335.38	5.37	36813.12	9178.54	6225.92
28	-2.88	340.75	5.37	37422.44	9330.46	6328.97
28	-2.88	340.75	5.37	37422.44	9330.46	6328.97
29	-2.88	346.12	5.37	38031.76	9482.38	6432.02
29	-2.88	346.12	5.37	38031.76	9482.38	6432.02
30	-2.88	350.46	3.32	23890.15	5956.48	4040.36
30	-2.88	350.46	3.32	23890.15	5956.48	4040.36
31	-2.88	353.78	3.32	24245.85	6045.17	4100.51
31	-2.88	353.78	3.32	24245.85	6045.17	4100.51
32	-2.88	357.93	4.99	37094.72	9248.75	6273.54
32	-2.88	357.93	4.99	37094.72	9248.75	6273.54
33	-2.88	362.92	4.99	37897.57	9448.93	6409.32
33	-2.88	362.92	4.99	37897.57	9448.93	6409.32
34	-2.88	367.91	4.99	38700.42	9649.10	6545.10
34	-2.88	367.91	4.99	38700.42	9649.10	6545.10
35	-0.52	372.87	4.94	38762.37	9664.55	6555.58
35	-0.52	372.87	4.94	38762.37	9664.55	6555.58
36	-0.52	377.82	4.94	39423.45	9829.37	6667.38
36	-0.52	377.82	4.94	39423.45	9829.37	6667.38
37	-0.52	382.76	4.94	40084.53	9994.20	6779.19
37	-0.52	382.76	4.94	40084.53	9994.20	6779.19
38	-0.52	387.71	4.94	40745.61	10159.02	6890.99
38	-0.52	387.71	4.94	40745.61	10159.02	6890.99
39	-0.52	392.65	4.94	41406.69	10323.85	7002.79
39	-0.52	392.65	4.94	41406.69	10323.85	7002.79
40	-0.52	397.59	4.94	42067.77	10488.67	7114.60
40	-0.52	397.59	4.94	42067.77	10488.67	7114.60
41	-0.52	402.54	4.94	42728.85	10653.50	7226.40
41	-0.52	402.54	4.94	42728.85	10653.50	7226.40
42	-0.52	407.48	4.94	43389.93	10818.33	7338.20
42	-0.52	407.48	4.94	43389.93	10818.33	7338.20
43	-0.52	412.43	4.94	44051.01	10983.15	7450.01
43	-0.52	412.43	4.94	44051.01	10983.15	7450.01
44	5.31	415.65	1.51	13293.32	3314.40	2248.20
44	5.31	415.65	1.51	13293.32	3314.40	2248.20
45	5.31	418.90	5.02	44429.49	11077.52	7514.01
45	5.31	418.90	5.02	44429.49	11077.52	7514.01
46	5.31	423.90	5.02	44556.97	11109.30	7535.58
46	5.31	423.90	5.02	44556.97	11109.30	7535.58
47	5.31	428.90	5.02	44684.46	11141.09	7557.14
47	5.31	428.90	5.02	44684.46	11141.09	7557.14
48	5.31	433.90	5.02	44811.94	11172.87	7578.70
48	5.31	433.90	5.02	44811.94	11172.87	7578.70
49	5.31	438.90	5.02	44939.42	11204.66	7600.26
49	5.31	438.90	5.02	44939.42	11204.66	7600.26
50	5.31	443.93	5.09	45663.93	11385.30	7722.79
50	5.31	443.93	5.09	45663.93	11385.30	7722.79
51	5.31	449.00	5.09	45785.39	11415.58	7743.33
51	5.31	449.00	5.09	45785.39	11415.58	7743.33
52	5.31	454.07	5.09	45906.85	11445.86	7763.87
52	5.31	454.07	5.09	45906.85	11445.86	7763.87
53	5.31	459.13	5.09	46028.31	11476.15	7784.41
53	5.31	459.13	5.09	46028.31	11476.15	7784.41
54	5.31	464.20	5.09	46149.76	11506.43	7804.95
54	5.31	464.20	5.09	46149.76	11506.43	7804.95
55	5.31	469.27	5.09	46271.22	11536.71	7825.49
55	5.31	469.27	5.09	46271.22	11536.71	7825.49
56	5.31	474.33	5.09	46392.68	11566.99	7846.03
56	5.31	474.33	5.09	46392.68	11566.99	7846.03
57	5.31	479.40	5.09	46514.13	11597.28	7866.57
57	5.31	479.40	5.09	46514.13	11597.28	7866.57
58	5.31	484.47	5.09	46635.59	11627.56	7887.12
58	5.31	484.47	5.09	46635.59	11627.56	7887.12
59	5.31	489.53	5.09	46757.05	11657.84	7907.66
59	5.31	489.53	5.09	46757.05	11657.84	7907.66
60	5.31	494.60	5.09	46878.50	11688.12	7928.20
60	5.31	494.60	5.09	46878.50	11688.12	7928.20
61	5.31	499.67	5.09	46999.96	11718.41	7948.74
61	5.31	499.67	5.09	46999.96	11718.41	7948.74
62	5.31	504.73	5.09	47121.42	11748.69	7969.28
62	5.31	504.73	5.09	47121.42	11748.69	7969.28
63	5.31	509.80	5.09	47242.88	11778.97	7989.82
63	5.31	509.80	5.09	47242.88	11778.97	7989.82
64	5.31	514.87	5.09	47364.33	11809.25	8010.36
64	5.31	514.87	5.09	47364.33	11809.25	8010.36
65	5.31	519.91	5.04	46862.97	11684.25	7925.57
65	5.31	519.91	5.04	46862.97	11684.25	7925.57
66	5.31	524.92	5.04	46674.81	11637.34	7893.75
66	5.31	524.92	5.04	46674.81	11637.34	7893.75
67	5.31	529.94	5.04	46486.64	11590.42	7861.93
67	5.31	529.94	5.04	46486.64	11590.42	7861.93
68	5.31	534.96	5.04	46298.48	11543.51	7830.10
68	5.31	534.96	5.04	46298.48	11543.51	7830.10
69	5.31	539.98	5.04	46110.32	11496.59	7798.28
69	5.31	539.98	5.04	46110.32	11496.59	7798.28
70	5.31	544.99	5.04	45922.16	11449.68	7766.46
70	5.31	544.99	5.04	45922.16	11449.68	7766.46
71	5.31	549.96	4.95	45175.17	11263.43	7640.13
71	5.31	549.96	4.95	45175.17	11263.43	7640.13
72	5.31	554.89	4.95	45513.68	11347.84	7697.38
72	5.31	554.89	4.95	45513.68	11347.84	7697.38
73	5.31	559.82	4.95	45852.20	11432.24	7754.63
73	5.31	559.82	4.95	45852.20	11432.24	7754.63
74	5.31	564.74	4.95	46190.71	11516.64	7811.88
74	5.31	564.74	4.95	46190.71	11516.64	7811.88
75	5.31	569.67	4.95	46529.23	11601.04	7869.13
75	5.31	569.67	4.95	46529.23	11601.04	7869.13

76	5.31	574.60	4.95	46867.74	11685.44	7926.38
76	5.31	574.60	4.95	46867.74	11685.44	7926.38
77	5.31	579.52	4.95	47206.26	11769.84	7983.63
77	5.31	579.52	4.95	47206.26	11769.84	7983.63
78	5.31	584.45	4.95	47544.77	11854.24	8040.88
78	5.31	584.45	4.95	47544.77	11854.24	8040.88
79	5.31	589.38	4.95	47883.29	11938.64	8098.13
79	5.31	589.38	4.95	47883.29	11938.64	8098.13
80	5.31	594.30	4.95	48221.80	12023.05	8155.38
80	5.31	594.30	4.95	48221.80	12023.05	8155.38
81	5.31	599.23	4.95	48560.32	12107.45	8212.63
81	5.31	599.23	4.95	48560.32	12107.45	8212.63
82	5.31	604.16	4.95	48898.83	12191.85	8269.88
82	5.31	604.16	4.95	48898.83	12191.85	8269.88
83	5.31	609.08	4.95	49237.35	12276.25	8327.13
83	5.31	609.08	4.95	49237.35	12276.25	8327.13
84	5.31	614.01	4.95	49575.86	12360.65	8384.38
84	5.31	614.01	4.95	49575.86	12360.65	8384.38
85	5.31	618.94	4.95	49914.38	12445.05	8441.63
85	5.31	618.94	4.95	49914.38	12445.05	8441.63
86	23.39	624.12	5.92	56119.16	13992.08	9491.00
86	23.39	624.12	5.92	56119.16	13992.08	9491.00
87	23.39	629.55	5.92	55324.49	13793.94	9356.60
87	23.39	629.55	5.92	55324.49	13793.94	9356.60
88	23.39	634.98	5.92	54529.82	13595.81	9222.20
88	23.39	634.98	5.92	54529.82	13595.81	9222.20
89	23.39	640.23	5.52	50369.94	12558.64	8518.68
89	23.39	640.23	5.52	50369.94	12558.64	8518.68
90	23.39	645.30	5.52	50099.98	12491.33	8473.02
90	23.39	645.30	5.52	50099.98	12491.33	8473.02
91	23.39	650.37	5.52	49830.03	12424.02	8427.37
91	23.39	650.37	5.52	49830.03	12424.02	8427.37
92	23.39	655.44	5.52	49560.07	12356.71	8381.71
92	23.39	655.44	5.52	49560.07	12356.71	8381.71
93	23.39	660.51	5.52	49290.12	12289.41	8336.06
93	23.39	660.51	5.52	49290.12	12289.41	8336.06
94	23.39	665.58	5.52	49020.17	12222.10	8290.40
94	23.39	665.58	5.52	49020.17	12222.10	8290.40
95	23.39	670.65	5.52	48750.21	12154.79	8244.75
95	23.39	670.65	5.52	48750.21	12154.79	8244.75
96	23.39	675.72	5.52	48480.26	12087.49	8199.09
96	23.39	675.72	5.52	48480.26	12087.49	8199.09
97	23.39	680.79	5.52	48210.30	12020.18	8153.43
97	23.39	680.79	5.52	48210.30	12020.18	8153.43
98	23.39	685.86	5.52	47940.35	11952.87	8107.78
98	23.39	685.86	5.52	47940.35	11952.87	8107.78
99	23.39	690.93	5.52	47670.40	11885.56	8062.12
99	23.39	690.93	5.52	47670.40	11885.56	8062.12
100	23.39	696.00	5.52	47400.44	11818.26	8016.47
100	23.39	696.00	5.52	47400.44	11818.26	8016.47
101	23.39	701.07	5.52	47130.49	11750.95	7970.81
101	23.39	701.07	5.52	47130.49	11750.95	7970.81
102	23.39	706.13	5.52	46860.53	11683.64	7925.16
102	23.39	706.13	5.52	46860.53	11683.64	7925.16
103	23.39	711.20	5.52	46590.58	11616.34	7879.50
103	23.39	711.20	5.52	46590.58	11616.34	7879.50
104	23.39	716.27	5.52	46320.63	11549.03	7833.85
104	23.39	716.27	5.52	46320.63	11549.03	7833.85
105	23.39	721.34	5.52	46050.67	11481.72	7788.19
105	23.39	721.34	5.52	46050.67	11481.72	7788.19
106	23.39	726.41	5.52	45780.72	11414.41	7742.54
106	23.39	726.41	5.52	45780.72	11414.41	7742.54
107	23.39	731.48	5.52	45510.76	11347.11	7696.88
107	23.39	731.48	5.52	45510.76	11347.11	7696.88
108	23.39	736.55	5.52	45240.81	11279.80	7651.23
108	23.39	736.55	5.52	45240.81	11279.80	7651.23
109	23.39	741.62	5.52	44970.86	11212.49	7605.57
109	23.39	741.62	5.52	44970.86	11212.49	7605.57
110	23.39	746.69	5.52	44700.90	11145.19	7559.92
110	23.39	746.69	5.52	44700.90	11145.19	7559.92
111	23.39	751.76	5.52	44430.95	11077.88	7514.26
111	23.39	751.76	5.52	44430.95	11077.88	7514.26
112	23.39	756.83	5.52	44160.99	11010.57	7468.61
112	23.39	756.83	5.52	44160.99	11010.57	7468.61
113	23.39	761.90	5.52	43891.04	10943.26	7422.95
113	23.39	761.90	5.52	43891.04	10943.26	7422.95
114	23.39	766.97	5.52	43621.09	10875.96	7377.30
114	23.39	766.97	5.52	43621.09	10875.96	7377.30
115	23.39	772.02	5.48	43150.44	10758.61	7297.70
115	23.39	772.02	5.48	43150.44	10758.61	7297.70
116	23.39	777.05	5.48	43095.00	10744.79	7288.32
116	23.39	777.05	5.48	43095.00	10744.79	7288.32
117	23.39	782.08	5.48	43039.56	10730.97	7278.95
117	23.39	782.08	5.48	43039.56	10730.97	7278.95
118	51.89	787.08	8.03	46593.87	20831.77	14130.45
118	51.89	787.08	8.03	46593.87	20831.77	14130.45
119	51.89	792.03	8.03	43603.64	19623.64	13310.96
119	51.89	792.03	8.03	43603.64	19623.64	13310.96
120	51.89	796.98	8.03	40613.42	18415.51	12491.47
120	51.89	796.98	8.03	40613.42	18415.51	12491.47
121	51.89	801.94	8.03	37623.19	17207.38	11671.98
121	51.89	801.94	8.03	37623.19	17207.38	11671.98
122	51.89	806.89	8.03	34632.97	15999.25	10852.49
122	51.89	806.89	8.03	34632.97	15999.25	10852.49
123	51.89	811.85	8.03	31642.74	14791.12	10033.00
123	51.89	811.85	8.03	31642.74	14791.12	10033.00
124	51.89	816.80	8.03	28652.51	13582.99	9213.51
124	51.89	816.80	8.03	28652.51	13582.99	9213.51
125	51.89	821.75	8.03	25662.29	12374.86	8394.02
125	51.89	821.75	8.03	25662.29	12374.86	8394.02
126	51.89	826.71	8.03	22672.06	11166.73	7574.53
126	51.89	826.71	8.03	22672.06	11166.73	7574.53
127	51.89	831.66	8.03	19681.83	9958.60	6755.04
127	51.89	831.66	8.03	19681.83	9958.60	6755.04
128	51.89	836.62	8.03	16691.61	8750.47	5935.55
128	51.89	836.62	8.03	16691.61	8750.47	5935.55
129	51.89	841.57	8.03	13701.38	7542.34	5116.06
129	51.89	841.57	8.03	13701.38	7542.34	5116.06
130	51.89	846.52	8.03	10711.15	6334.21	4296.57
130	51.89	846.52	8.03	10711.15	6334.21	4296.57
131	46.63	851.80	8.16	8711.51	5558.58	3770.45
131	46.63	851.80	8.16	8711.51	5558.58	3770.45
132	46.63	857.40	8.16	6015.47	4469.31	3031.59
132	46.63	857.40	8.16	6015.47	4469.31	3031.59
133	46.63	862.55	6.84	2891.16	2879.20	1953.00
133	46.63	862.55	6.84	2891.16	2879.20	1953.00
134	46.63	867.25	6.84	839.40	2050.23	1390.70
134	46.63	867.25	6.84	839.40	2050.23	1390.70
135	62.55	870.02	1.80	89.94	36.34	24.65
135	62.55	870.02	1.80	89.94	36.34	24.65

Sum of the Resisting Forces = 1275198.05 (lbs)

Average Available Shear Strength = 1721.64(psf)

Sum of the Driving Forces = 922405.09 (lbs)

Average Mobilized Shear Stress = 1245.33(psf)

Total length of the failure surface = 740.69(ft)

Factor of Safety Balance Check: FS = 1.38247

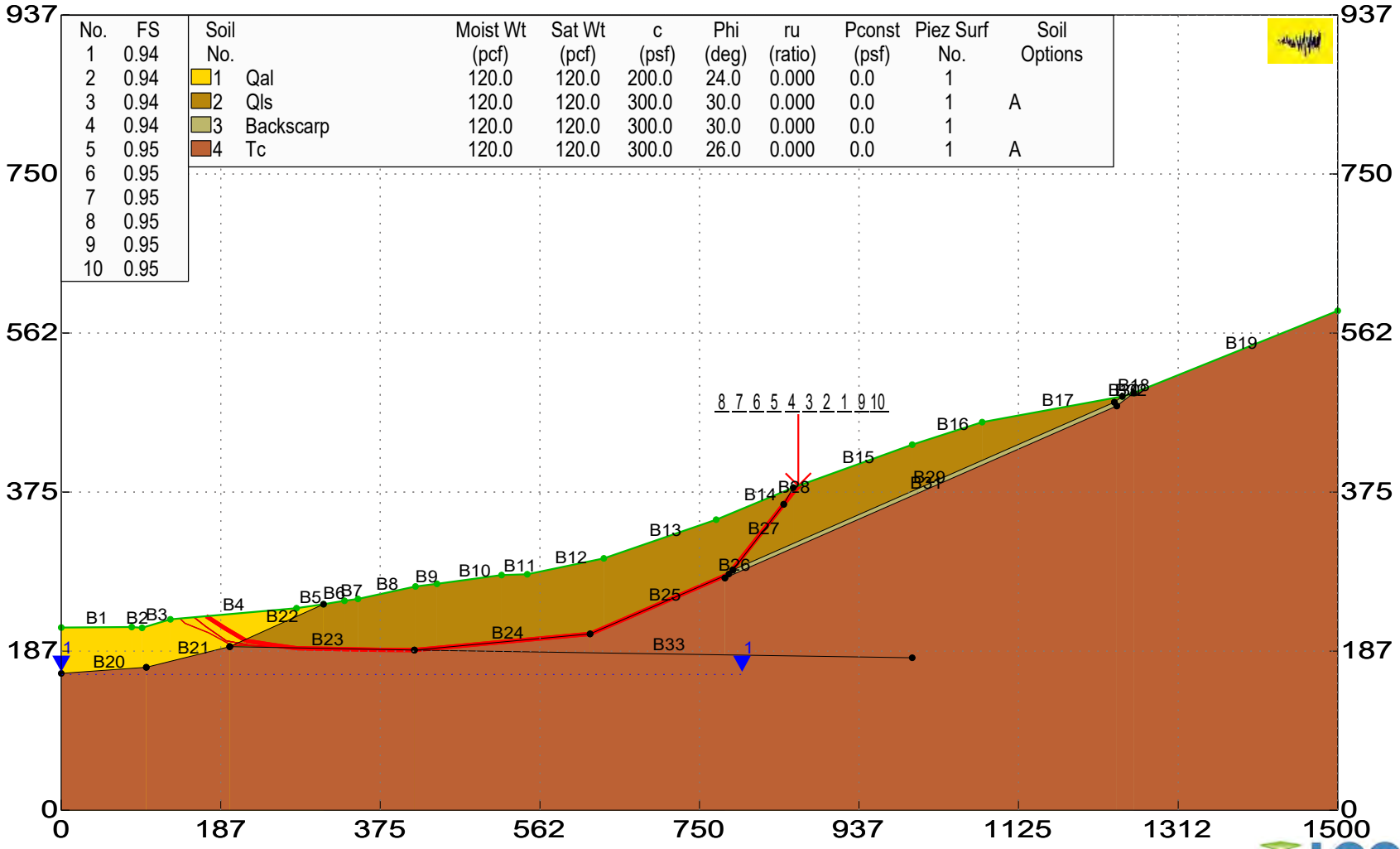
Janbu's Correction Factor (fo) = 1.0654

Janub's FS Corrected = 1.47294

**** END OF GEOSTASE OUTPUT ****

22011-01 - Compass Bess - SJC - Cross Section H-H'
Design - Smaller Qls - Seismic

LGC Geotechnical, Inc. \xhde.gsd



GEOSTASE FS = 0.94

Simplified Janbu (Corrected) Method

kh = 0.15000

GEOSTASE Slope Stability Analysis

GEOSTASE® by GREGORY GEOTECHNICAL SOFTWARE

PLATE C.1

*** GEOSTASE(R) ***

** GEOSTASE(R) (c)Copyright by Garry H. Gregory, Ph.D., P.E.,D.GE **

** Current Version 4.30.31-Double Precision, August 2019 **
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****
SLOPE STABILITY ANALYSIS SOFTWARE
Simplified Bishop, Simplified Janbu, or General Equilibrium (GE) Options.
(Spencer, Morgenstern-Price, USACE, and Lowe & Karafiath)
Including Pier/Pile, Planar Reinf, Nail, Tieback, Line Loads
Applied Forces, Fiber-Reinforced Soil (FRS), Distributed Loads
Nonlinear Undrained Shear Strength, Curved Strength Envelope,
Anisotropic Strengths, Water Surfaces, 3-Stage Rapid Drawdown
2- or 3-Stage Pseudo-Static & Simplified Newmark Seismic Analyses.
****

Analysis Date: 4/ 3/ 2024
Analysis Time:
Analysis By: LGC Geotechnical, Inc.

Input File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_03\xhde.gsd

Output File Name: Z:\2022\22011-01 Compass BESS - San Juan Capistrano\Engineering\Slope Stability\Sec H\2024_04_03\xhde.OUT

Unit System: English

PROJECT: 22011-01 - Compass Bess - SJC - Cross Section H-H'

DESCRIPTION: Design - Smaller Qls - Seismic

BOUNDARY DATA

19 Surface Boundaries
33 Total Boundaries

Boundary No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Soil Type Below Bnd
1	0.000	215.200	82.800	216.000	1
2	82.800	216.000	95.100	215.000	1
3	95.100	215.000	128.300	225.100	1
4	128.300	225.100	276.400	238.000	1
5	276.400	238.000	308.300	242.900	1
6	308.300	242.900	332.700	247.000	2
7	332.700	247.000	348.800	249.000	2
8	348.800	249.000	416.400	263.600	2
9	416.400	263.600	441.400	267.000	2
10	441.400	267.000	517.400	277.100	2
11	517.400	277.100	547.500	278.000	2
12	547.500	278.000	637.700	297.000	2
13	637.700	297.000	769.500	342.600	2
14	769.500	342.600	860.200	380.200	2
15	860.200	380.200	1000.000	430.900	2
16	1000.000	430.900	1082.100	457.600	2
17	1082.100	457.600	1247.000	487.900	2
18	1247.000	487.900	1260.400	491.900	3
19	1260.400	491.900	1500.000	588.800	4
20	0.000	161.100	100.000	168.300	4
21	100.000	168.300	198.100	192.800	4
22	198.100	192.800	308.300	242.900	2
23	198.100	192.800	414.900	188.600	4
24	414.900	188.600	621.400	207.800	4
25	621.400	207.800	784.600	278.400	4
26	779.900	273.600	789.300	283.200	3
27	789.300	283.200	849.000	360.500	2
28	849.000	360.500	860.200	380.200	2
29	789.300	283.200	1237.700	480.800	3
30	1237.700	480.800	1247.000	487.900	3
31	779.900	273.600	1240.300	476.500	4
32	1240.300	476.500	1260.400	491.900	4
33	414.900	188.600	1000.000	179.800	4

User Specified X-Origin = 0.000(ft)

User Specified Y-Origin = 0.000(ft)

MOHR-COULOMB SOIL PARAMETERS

4 Type(s) of Soil Defined

Soil Number and Description	Moist Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Ratio(ru)	Pressure Constant (psf)	Water Surface No.	Water Option
1 Qal	120.0	120.0	200.00	24.00	0.000	0.0	1	0
2 Qls	120.0	120.0	300.00	30.00	0.000	0.0	1	0
3 Backscarp	120.0	120.0	300.00	30.00	0.000	0.0	1	0
4 Tc	120.0	120.0	300.00	26.00	0.000	0.0	1	0

ANISOTROPIC STRENGTH PARAMETERS

2 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	25.0	0.00	15.00
3	90.0	300.00	30.00

Soil Type 4 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	-15.0	300.00	30.00
2	25.0	0.00	15.00
3	90.0	300.00	30.00

WATER SURFACE DATA

1 Water Surface(s) Defined

Unit Weight of Water = 62.400 (pcf)

Water Surface No. 1 Specified by 2 Coordinate Points
Pore Pressure Inclination Factor = 1.00

Point No.	X-Water (ft)	Y-Water (ft)
1	0.00	160.00
2	800.00	160.00

Drained Shear Strength Reduction Factor applied after first stage = 1.0000

SEISMIC (EARTHQUAKE) DATA

Specified Peak Ground Acceleration Coefficient (PGA) = 0.000(g)
Default Velocity = 0.000(ft) per second
Specified Horizontal Earthquake Coefficient (kh) = 0.15000(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
(NOTE:Input Velocity = 0.0 will result in default Peak
Velocity = 2 times(PGA) times 2.5 fps or 0.762 mps)
Specified Seismic Pore-Pressure Factor = 0.000
Horizontal Seismic Force is Applied at Center of Gravity of Slices

TRIAL FAILURE SURFACE DATA

Janbus Correction Factor is being used for the case of c & phi both > 0

A Non-Circular Zone Search Has Been Selected For Analysis
Using Random Generation Within Specified Zones.

6 Zones Defined For Generation Of Non-Circular Surfaces

1000 Trial Surfaces Have Been Generated.

Length Of Line Segments For Active And Passive Portions Of
Non-Circular Zone Search = 30.00(ft)

Zone No.	X - 1 (ft)	Y - 1 (ft)	X - 2 (ft)	Y - 2 (ft)	Height (ft)
1	198.10	192.80	369.00	189.70	5.00
2	370.40	189.00	370.40	189.00	0.00
3	414.90	188.60	414.90	188.60	0.00
4	621.40	207.80	621.40	207.80	0.00
5	784.60	278.40	784.60	278.40	0.00
6	849.00	360.50	849.00	360.50	0.00

The Simplified Janbu (Corrected) Method Was Selected for FS Analysis.

Total Number of Trial Surfaces Attempted = 1000

Number of Trial Surfaces With Valid FS = 1000

Statistical Data On All Valid FS Values:
FS Max = 1.201 FS Min = 0.943 FS Ave = 1.043
Standard Deviation = 0.058 Coefficient of Variation = 5.54 %

Critical Surface is Sequence Number 233 of Those Analyzed.

*****BEGINNING OF DETAILED GEOSTASE OUTPUT FOR CRITICAL SURFACE FROM A SEARCH*****

Factor Of Safety For The Critical or Specified Surface = 0.943

Table 1 - Geometry Data on the 141 Slices

Slice No.	Width (ft)	Height (ft)	X-Cntr (ft)	Y-Cntr-Base (ft)	Y-Cntr-Top (ft)	Alpha (deg)	Beta (deg)	Base Length (ft)
1	5.29	1.95	172.93	227.04	228.99	-33.05	4.98	6.31
2	5.29	5.86	178.22	223.59	229.45	-33.05	4.98	6.31
3	5.29	9.76	183.51	220.15	229.91	-33.05	4.98	6.31
4	5.29	13.66	188.80	216.71	230.37	-33.05	4.98	6.31
5	4.78	17.26	193.84	213.55	230.81	-30.94	4.98	5.58
6	4.78	20.54	198.62	210.69	231.23	-30.94	4.98	5.58
7	4.78	23.82	203.40	207.82	231.64	-30.94	4.98	5.58
8	4.78	27.11	208.19	204.95	232.06	-30.94	4.98	5.58
9	4.78	30.39	212.97	202.08	232.48	-30.94	4.98	5.58
10	1.81	32.66	216.27	200.11	232.76	-30.94	4.98	2.11
11	4.94	33.88	219.64	199.17	233.06	-8.98	4.98	5.00
12	4.94	35.09	224.58	198.39	233.49	-8.98	4.98	5.00
13	4.94	36.30	229.52	197.61	233.92	-8.98	4.98	5.00
14	4.94	37.51	234.46	196.83	234.35	-8.98	4.98	5.00
15	4.94	38.72	239.40	196.05	234.78	-8.98	4.98	5.00
16	4.94	39.93	244.34	195.27	235.21	-8.98	4.98	5.00
17	5.14	41.12	249.38	194.53	235.65	-7.81	4.98	5.19
18	5.14	42.27	254.52	193.83	236.09	-7.81	4.98	5.19
19	5.14	43.42	259.66	193.12	236.54	-7.81	4.98	5.19
20	5.14	44.57	264.80	192.42	236.99	-7.81	4.98	5.19

21	5.14	45.73	269.94	191.71	237.44	-7.81	4.98	5.19
22	3.89	46.74	274.45	191.09	237.83	-7.81	4.98	3.93
23	0.13	47.19	276.46	190.82	238.01	-7.81	8.73	0.13
24	5.30	47.67	279.18	190.76	238.43	-1.10	8.73	5.30
25	5.30	48.59	284.47	190.65	239.24	-1.10	8.73	5.30
26	5.30	49.50	289.77	190.55	240.05	-1.10	8.73	5.30
27	5.30	50.42	295.06	190.45	240.87	-1.10	8.73	5.30
28	5.30	51.33	300.36	190.35	241.68	-1.10	8.73	5.30
29	5.30	52.25	305.65	190.25	242.49	-1.10	8.73	5.30
30	4.88	53.16	310.74	190.15	243.31	-1.10	9.54	4.88
31	4.88	54.08	315.62	190.05	244.13	-1.10	9.54	4.88
32	4.88	54.99	320.50	189.96	244.95	-1.10	9.54	4.88
33	4.88	55.90	325.38	189.87	245.77	-1.10	9.54	4.88
34	4.88	56.82	330.26	189.77	246.59	-1.10	9.54	4.88
35	5.37	57.66	335.38	189.67	247.33	-1.10	7.08	5.37
36	5.37	58.43	340.75	189.57	248.00	-1.10	7.08	5.37
37	5.37	59.20	346.12	189.47	248.67	-1.10	7.08	5.37
38	5.40	60.22	351.50	189.36	249.58	-1.10	12.19	5.40
39	5.40	61.49	356.90	189.26	250.75	-1.10	12.19	5.40
40	5.40	62.76	362.30	189.16	251.92	-1.10	12.19	5.40
41	5.40	64.03	367.70	189.05	253.08	-1.10	12.19	5.40
42	4.94	65.22	372.87	188.98	254.20	-0.52	12.19	4.94
43	4.94	66.33	377.82	188.93	255.27	-0.52	12.19	4.94
44	4.94	67.45	382.76	188.89	256.33	-0.52	12.19	4.94
45	4.94	68.56	387.71	188.84	257.40	-0.52	12.19	4.94
46	4.94	69.67	392.65	188.80	258.47	-0.52	12.19	4.94
47	4.94	70.78	397.59	188.76	259.54	-0.52	12.19	4.94
48	4.94	71.90	402.54	188.71	260.61	-0.52	12.19	4.94
49	4.94	73.01	407.48	188.67	261.67	-0.52	12.19	4.94
50	4.94	74.12	412.43	188.62	262.74	-0.52	12.19	4.94
51	1.50	74.77	415.65	188.67	263.44	5.31	12.19	1.51
52	5.00	74.97	418.90	188.97	263.94	5.31	7.74	5.02
53	5.00	75.18	423.90	189.44	264.62	5.31	7.74	5.02
54	5.00	75.40	428.90	189.90	265.30	5.31	7.74	5.02
55	5.00	75.61	433.90	190.37	265.98	5.31	7.74	5.02
56	5.00	75.83	438.90	190.83	266.66	5.31	7.74	5.02
57	5.07	76.04	443.93	191.30	267.34	5.31	7.57	5.09
58	5.07	76.24	449.00	191.77	268.01	5.31	7.57	5.09
59	5.07	76.44	454.07	192.24	268.68	5.31	7.57	5.09
60	5.07	76.64	459.13	192.71	269.36	5.31	7.57	5.09
61	5.07	76.85	464.20	193.18	270.03	5.31	7.57	5.09
62	5.07	77.05	469.27	193.65	270.70	5.31	7.57	5.09
63	5.07	77.25	474.33	194.13	271.38	5.31	7.57	5.09
64	5.07	77.45	479.40	194.60	272.05	5.31	7.57	5.09
65	5.07	77.66	484.47	195.07	272.72	5.31	7.57	5.09
66	5.07	77.86	489.53	195.54	273.40	5.31	7.57	5.09
67	5.07	78.06	494.60	196.01	274.07	5.31	7.57	5.09
68	5.07	78.26	499.67	196.48	274.74	5.31	7.57	5.09
69	5.07	78.46	504.73	196.95	275.42	5.31	7.57	5.09
70	5.07	78.67	509.80	197.42	276.09	5.31	7.57	5.09
71	5.07	78.87	514.87	197.89	276.76	5.31	7.57	5.09
72	5.02	78.81	519.91	198.36	277.18	5.31	1.71	5.04
73	5.02	78.50	524.92	198.83	277.32	5.31	1.71	5.04
74	5.02	78.18	529.94	199.30	277.48	5.31	1.71	5.04
75	5.02	77.86	534.96	199.76	277.62	5.31	1.71	5.04
76	5.02	77.55	539.98	200.23	277.78	5.31	1.71	5.04
77	5.02	77.23	544.99	200.70	277.93	5.31	1.71	5.04
78	4.93	77.36	549.96	201.16	278.52	5.31	11.90	4.95
79	4.93	77.94	554.89	201.62	279.56	5.31	11.90	4.95
80	4.93	78.52	559.82	202.07	280.59	5.31	11.90	4.95
81	4.93	79.10	564.74	202.53	281.63	5.31	11.90	4.95
82	4.93	79.68	569.67	202.99	282.67	5.31	11.90	4.95
83	4.93	80.26	574.60	203.45	283.71	5.31	11.90	4.95
84	4.93	80.84	579.52	203.91	284.75	5.31	11.90	4.95
85	4.93	81.42	584.45	204.36	285.78	5.31	11.90	4.95
86	4.93	82.00	589.38	204.82	286.82	5.31	11.90	4.95
87	4.93	82.58	594.30	205.28	287.86	5.31	11.90	4.95
88	4.93	83.16	599.23	205.74	288.90	5.31	11.90	4.95
89	4.93	83.74	604.16	206.20	289.93	5.31	11.90	4.95
90	4.93	84.32	609.08	206.65	290.97	5.31	11.90	4.95
91	4.93	84.90	614.01	207.11	292.01	5.31	11.90	4.95
92	4.93	85.48	618.94	207.57	293.05	5.31	11.90	4.95
93	5.43	85.16	624.12	208.98	294.14	23.39	11.90	5.92
94	5.43	83.96	629.55	211.33	295.28	23.39	11.90	5.92
95	5.43	82.75	634.98	213.68	296.43	23.39	11.90	5.92
96	5.07	81.93	640.23	215.95	297.88	23.39	19.08	5.52
97	5.07	81.49	645.30	218.14	299.63	23.39	19.08	5.52
98	5.07	81.05	650.37	220.33	301.38	23.39	19.08	5.52
99	5.07	80.61	655.44	222.53	303.14	23.39	19.08	5.52
100	5.07	80.17	660.51	224.72	304.89	23.39	19.08	5.52
101	5.07	79.73	665.58	226.91	306.65	23.39	19.08	5.52
102	5.07	79.29	670.65	229.11	308.40	23.39	19.08	5.52
103	5.07	78.86	675.72	231.30	310.15	23.39	19.08	5.52
104	5.07	78.42	680.79	233.49	311.91	23.39	19.08	5.52
105	5.07	77.98	685.86	235.68	313.66	23.39	19.08	5.52
106	5.07	77.54	690.93	237.88	315.42	23.39	19.08	5.52
107	5.07	77.10	696.00	240.07	317.17	23.39	19.08	5.52
108	5.07	76.66	701.07	242.26	318.92	23.39	19.08	5.52
109	5.07	76.22	706.13	244.46	320.68	23.39	19.08	5.52
110	5.07	75.78	711.20	246.65	322.43	23.39	19.08	5.52
111	5.07	75.34	716.27	248.84	324.18	23.39	19.08	5.52
112	5.07	74.90	721.34	251.03	325.94	23.39	19.08	5.52
113	5.07	74.46	726.41	253.23	327.69	23.39	19.08	5.52
114	5.07	74.03	731.48	255.42	329.45	23.39	19.08	5.52
115	5.07	73.59	736.55	257.61	331.20	23.39	19.08	5.52
116	5.07	73.15	741.62	259.81	332.95	23.39	19.08	5.52
117	5.07	72.71	746.69	262.00	334.71	23.39	19.08	5.52
118	5.07	72.27	751.76	264.19	336.46	23.39	19.08	5.52
119	5.07	71.83	756.83	266.39	338.22	23.39	19.08	5.52
120	5.07	71.39	761.90	268.58	339.97	23.39	19.08	5.52
121	5.07	70.95	766.97	270.77	341.72	23.39	19.08	5.52
122	5.03	70.69	772.02	272.96	343.64	23.39	22.52	5.48
123	5.03	70.60	777.05	275.13	345.73	23.39	22.52	5.48
124	5.03	70.51	782.08	277.31	347.82	23.39	22.52	5.48
125	4.95	68.33	787.08	281.56	349.89	51.89	22.52	8.03
126	4.95	64.07	792.03	287.87	351.94	51.89	22.52	8.03
127	4.95	59.81	796.98	294.19	353.99	51.89	22.52	8.03
128	4.95	55.54	801.94	300.50	356.05	51.89	22.52	8.03
129	4.95	51.28	806.89	306.82	358.10	51.89	22.52	8.03
130	4.95	47.02	811.85	313.13	360.15	51.89	22.52	8.03
131	4.95	42.76	816.80	319.45	362.21	51.89	22.52	8.03
132	4.95	38.50	821.75	325.77	364.26	51.89	22.52	8.03
133	4.95	34.23	826.71	332.08	366.32	51.89	22.52	8.03
134	4.95	29.97	831.66	338.40	368.37	51.89	22.52	8.03
135	4.95	25.71	836.62	344.71	370.42	51.89	22.52	8.03
136	4.95	21.45	841.57	351.03	372.48	51.89	22.52	8.03
137	4.95	17.19	846.52	357.34	374.53	51.89	22.52	8.03
138	5.60	12.64	851.80	364.08	376.72	51.99	22.52	9.09
139	5.60	7.79	857.40	371.25	379.04	51.99	22.52	9.09
140	2.93	4.03	861.66	376.70	380.73	51.99	19.93	4.76

141	2.93	1.34	864.59	380.45	381.79	51.99	19.93	4.76

Table 2 - Force Data On The 141 Slices (Excluding Reinforcement)

Slice No.	Weight (lbs)	Ubeta Force Top (lbs)	Ualpha Force Bot (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Distributed Load (lbs)
1	1239.1	0.0	0.0	185.9	0.0	0.0
2	3717.4	0.0	0.0	557.6	0.0	0.0
3	6195.7	0.0	0.0	929.4	0.0	0.0
4	8674.0	0.0	0.0	1301.1	0.0	0.0
5	9906.5	0.0	0.0	1486.0	0.0	0.0
6	11792.0	0.0	0.0	1768.8	0.0	0.0
7	13677.5	0.0	0.0	2051.6	0.0	0.0
8	15562.9	0.0	0.0	2334.4	0.0	0.0
9	17448.4	0.0	0.0	2617.3	0.0	0.0
10	7096.9	0.0	0.0	1064.5	0.0	0.0
11	20080.8	0.0	0.0	3012.1	0.0	0.0
12	20798.1	0.0	0.0	3119.7	0.0	0.0
13	21515.5	0.0	0.0	3227.3	0.0	0.0
14	22232.8	0.0	0.0	3334.9	0.0	0.0
15	22950.1	0.0	0.0	3442.5	0.0	0.0
16	23667.4	0.0	0.0	3550.1	0.0	0.0
17	25359.9	0.0	0.0	3804.0	0.0	0.0
18	26070.7	0.0	0.0	3910.6	0.0	0.0
19	26781.6	0.0	0.0	4017.2	0.0	0.0
20	27492.4	0.0	0.0	4123.9	0.0	0.0
21	28203.2	0.0	0.0	4230.5	0.0	0.0
22	21831.8	0.0	0.0	3274.8	0.0	0.0
23	736.2	0.0	0.0	110.4	0.0	0.0
24	30289.9	0.0	0.0	4543.5	0.0	0.0
25	30871.5	0.0	0.0	4630.7	0.0	0.0
26	31453.0	0.0	0.0	4718.0	0.0	0.0
27	32034.6	0.0	0.0	4805.2	0.0	0.0
28	32616.2	0.0	0.0	4892.4	0.0	0.0
29	33197.7	0.0	0.0	4979.7	0.0	0.0
30	31131.4	0.0	0.0	4669.7	0.0	0.0
31	31666.6	0.0	0.0	4750.0	0.0	0.0
32	32201.8	0.0	0.0	4830.3	0.0	0.0
33	32737.0	0.0	0.0	4910.6	0.0	0.0
34	33272.2	0.0	0.0	4990.8	0.0	0.0
35	37132.6	0.0	0.0	5569.9	0.0	0.0
36	37628.4	0.0	0.0	5644.3	0.0	0.0
37	38124.3	0.0	0.0	5718.6	0.0	0.0
38	39022.1	0.0	0.0	5853.3	0.0	0.0
39	39845.2	0.0	0.0	5976.8	0.0	0.0
40	40668.3	0.0	0.0	6100.2	0.0	0.0
41	41491.4	0.0	0.0	6223.7	0.0	0.0
42	38697.9	0.0	0.0	5804.7	0.0	0.0
43	39357.9	0.0	0.0	5903.7	0.0	0.0
44	40017.9	0.0	0.0	6002.7	0.0	0.0
45	40677.9	0.0	0.0	6101.7	0.0	0.0
46	41337.9	0.0	0.0	6200.7	0.0	0.0
47	41997.8	0.0	0.0	6299.7	0.0	0.0
48	42657.8	0.0	0.0	6398.7	0.0	0.0
49	43317.8	0.0	0.0	6497.7	0.0	0.0
50	43977.8	0.0	0.0	6596.7	0.0	0.0
51	13458.3	0.0	0.0	2018.7	0.0	0.0
52	44980.9	0.0	0.0	6747.1	0.0	0.0
53	45109.9	0.0	0.0	6766.5	0.0	0.0
54	45239.0	0.0	0.0	6785.8	0.0	0.0
55	45368.0	0.0	0.0	6805.2	0.0	0.0
56	45497.1	0.0	0.0	6824.6	0.0	0.0
57	46230.6	0.0	0.0	6934.6	0.0	0.0
58	46353.6	0.0	0.0	6953.0	0.0	0.0
59	46476.5	0.0	0.0	6971.5	0.0	0.0
60	46599.5	0.0	0.0	6989.9	0.0	0.0
61	46722.5	0.0	0.0	7008.4	0.0	0.0
62	46845.4	0.0	0.0	7026.8	0.0	0.0
63	46968.4	0.0	0.0	7045.3	0.0	0.0
64	47091.4	0.0	0.0	7063.7	0.0	0.0
65	47214.3	0.0	0.0	7082.1	0.0	0.0
66	47337.3	0.0	0.0	7100.6	0.0	0.0
67	47460.3	0.0	0.0	7119.0	0.0	0.0
68	47583.2	0.0	0.0	7137.5	0.0	0.0
69	47706.2	0.0	0.0	7155.9	0.0	0.0
70	47829.2	0.0	0.0	7174.4	0.0	0.0
71	47952.1	0.0	0.0	7192.8	0.0	0.0
72	47444.5	0.0	0.0	7116.7	0.0	0.0
73	47254.0	0.0	0.0	7088.1	0.0	0.0
74	47063.5	0.0	0.0	7059.5	0.0	0.0
75	46873.0	0.0	0.0	7031.0	0.0	0.0
76	46682.5	0.0	0.0	7002.4	0.0	0.0
77	46492.0	0.0	0.0	6973.8	0.0	0.0
78	45735.8	0.0	0.0	6860.4	0.0	0.0
79	46078.5	0.0	0.0	6911.8	0.0	0.0
80	46421.2	0.0	0.0	6963.2	0.0	0.0
81	46763.9	0.0	0.0	7014.6	0.0	0.0
82	47106.6	0.0	0.0	7066.0	0.0	0.0
83	47449.4	0.0	0.0	7117.4	0.0	0.0
84	47792.1	0.0	0.0	7168.8	0.0	0.0
85	48134.8	0.0	0.0	7220.2	0.0	0.0
86	48477.5	0.0	0.0	7271.6	0.0	0.0
87	48820.2	0.0	0.0	7323.0	0.0	0.0
88	49162.9	0.0	0.0	7374.4	0.0	0.0
89	49505.7	0.0	0.0	7425.8	0.0	0.0
90	49848.4	0.0	0.0	7477.3	0.0	0.0
91	50191.1	0.0	0.0	7528.7	0.0	0.0
92	50533.8	0.0	0.0	7580.1	0.0	0.0
93	55526.6	0.0	0.0	8329.0	0.0	0.0
94	54740.3	0.0	0.0	8211.1	0.0	0.0
95	53954.1	0.0	0.0	8093.1	0.0	0.0
96	49838.1	0.0	0.0	7475.7	0.0	0.0
97	49571.0	0.0	0.0	7435.7	0.0	0.0
98	49303.9	0.0	0.0	7395.6	0.0	0.0
99	49036.8	0.0	0.0	7355.5	0.0	0.0
100	48769.7	0.0	0.0	7315.5	0.0	0.0
101	48502.6	0.0	0.0	7275.4	0.0	0.0
102	48235.5	0.0	0.0	7235.3	0.0	0.0
103	47968.4	0.0	0.0	7195.3	0.0	0.0
104	47701.3	0.0	0.0	7155.2	0.0	0.0
105	47434.2	0.0	0.0	7115.1	0.0	0.0
106	47167.1	0.0	0.0	7075.1	0.0	0.0
107	46900.0	0.0	0.0	7035.0	0.0	0.0
108	46632.9	0.0	0.0	6994.9	0.0	0.0
109	46365.8	0.0	0.0	6954.9	0.0	0.0

110	46098.7	0.0	0.0	6914.8	0.0	0.0
111	45831.5	0.0	0.0	6874.7	0.0	0.0
112	45564.4	0.0	0.0	6834.7	0.0	0.0
113	45297.3	0.0	0.0	6794.6	0.0	0.0
114	45030.2	0.0	0.0	6754.5	0.0	0.0
115	44763.1	0.0	0.0	6714.5	0.0	0.0
116	44496.0	0.0	0.0	6674.4	0.0	0.0
117	44228.9	0.0	0.0	6634.3	0.0	0.0
118	43961.8	0.0	0.0	6594.3	0.0	0.0
119	43694.7	0.0	0.0	6554.2	0.0	0.0
120	43427.6	0.0	0.0	6514.1	0.0	0.0
121	43160.5	0.0	0.0	6474.1	0.0	0.0
122	42694.8	0.0	0.0	6404.2	0.0	0.0
123	42640.0	0.0	0.0	6396.0	0.0	0.0
124	42585.1	0.0	0.0	6387.8	0.0	0.0
125	40618.9	0.0	0.0	6092.8	0.0	0.0
126	38085.4	0.0	0.0	5712.8	0.0	0.0
127	35552.0	0.0	0.0	5332.8	0.0	0.0
128	33018.6	0.0	0.0	4952.8	0.0	0.0
129	30485.1	0.0	0.0	4572.8	0.0	0.0
130	27951.7	0.0	0.0	4192.7	0.0	0.0
131	25418.2	0.0	0.0	3812.7	0.0	0.0
132	22884.8	0.0	0.0	3432.7	0.0	0.0
133	20351.3	0.0	0.0	3052.7	0.0	0.0
134	17817.9	0.0	0.0	2672.7	0.0	0.0
135	15284.4	0.0	0.0	2292.7	0.0	0.0
136	12751.0	0.0	0.0	1912.6	0.0	0.0
137	10217.5	0.0	0.0	1532.6	0.0	0.0
138	8491.1	0.0	0.0	1273.7	0.0	0.0
139	5236.7	0.0	0.0	785.5	0.0	0.0
140	1416.2	0.0	0.0	212.4	0.0	0.0
141	472.1	0.0	0.0	70.8	0.0	0.0

TOTAL WEIGHT OF SLIDING MASS = 5177487.69(lbs)

EFFECTIVE WEIGHT OF SLIDING MASS = 5177487.69(lbs)

TOTAL AREA OF SLIDING MASS = 43145.73(ft2)

TABLE 2A - SOIL STRENGTH & SOIL OPTIONS DATA ON THE 141 SLICES

Slice No.	Soil Type	Cohesion (psf)	Phi(Deg)	Options
1	1	200.00	24.00	
2	1	200.00	24.00	
3	1	200.00	24.00	
4	1	200.00	24.00	
5	1	200.00	24.00	
6	1	200.00	24.00	
7	1	200.00	24.00	
8	1	200.00	24.00	
9	1	200.00	24.00	
10	2	300.00	30.00	A
11	2	0.00	15.00	A
12	2	0.00	15.00	A
13	2	0.00	15.00	A
14	2	0.00	15.00	A
15	2	0.00	15.00	A
16	2	0.00	15.00	A
17	2	0.00	15.00	A
18	2	0.00	15.00	A
19	2	0.00	15.00	A
20	2	0.00	15.00	A
21	2	0.00	15.00	A
22	4	0.00	15.00	A
23	4	0.00	15.00	A
24	4	0.00	15.00	A
25	4	0.00	15.00	A
26	4	0.00	15.00	A
27	4	0.00	15.00	A
28	4	0.00	15.00	A
29	4	0.00	15.00	A
30	4	0.00	15.00	A
31	4	0.00	15.00	A
32	4	0.00	15.00	A
33	4	0.00	15.00	A
34	4	0.00	15.00	A
35	4	0.00	15.00	A
36	4	0.00	15.00	A
37	4	0.00	15.00	A
38	4	0.00	15.00	A
39	4	0.00	15.00	A
40	4	0.00	15.00	A
41	4	0.00	15.00	A
42	4	0.00	15.00	A
43	4	0.00	15.00	A
44	4	0.00	15.00	A
45	4	0.00	15.00	A
46	4	0.00	15.00	A
47	4	0.00	15.00	A
48	4	0.00	15.00	A
49	4	0.00	15.00	A
50	4	0.00	15.00	A
51	2	0.00	15.00	A
52	2	0.00	15.00	A
53	2	0.00	15.00	A
54	2	0.00	15.00	A
55	2	0.00	15.00	A
56	2	0.00	15.00	A
57	2	0.00	15.00	A
58	2	0.00	15.00	A
59	2	0.00	15.00	A
60	2	0.00	15.00	A
61	2	0.00	15.00	A
62	2	0.00	15.00	A
63	2	0.00	15.00	A
64	2	0.00	15.00	A
65	2	0.00	15.00	A
66	2	0.00	15.00	A
67	2	0.00	15.00	A
68	2	0.00	15.00	A
69	2	0.00	15.00	A
70	2	0.00	15.00	A
71	2	0.00	15.00	A
72	2	0.00	15.00	A
73	2	0.00	15.00	A
74	2	0.00	15.00	A
75	2	0.00	15.00	A
76	2	0.00	15.00	A

77	2	0.00	15.00	A
78	2	0.00	15.00	A
79	2	0.00	15.00	A
80	2	0.00	15.00	A
81	2	0.00	15.00	A
82	2	0.00	15.00	A
83	2	0.00	15.00	A
84	2	0.00	15.00	A
85	2	0.00	15.00	A
86	2	0.00	15.00	A
87	2	0.00	15.00	A
88	2	0.00	15.00	A
89	2	0.00	15.00	A
90	2	0.00	15.00	A
91	2	0.00	15.00	A
92	2	0.00	15.00	A
93	2	0.00	15.00	A
94	2	0.00	15.00	A
95	2	0.00	15.00	A
96	2	0.00	15.00	A
97	2	0.00	15.00	A
98	2	0.00	15.00	A
99	2	0.00	15.00	A
100	2	0.00	15.00	A
101	2	0.00	15.00	A
102	2	0.00	15.00	A
103	2	0.00	15.00	A
104	2	0.00	15.00	A
105	2	0.00	15.00	A
106	2	0.00	15.00	A
107	2	0.00	15.00	A
108	2	0.00	15.00	A
109	2	0.00	15.00	A
110	2	0.00	15.00	A
111	2	0.00	15.00	A
112	2	0.00	15.00	A
113	2	0.00	15.00	A
114	2	0.00	15.00	A
115	2	0.00	15.00	A
116	2	0.00	15.00	A
117	2	0.00	15.00	A
118	2	0.00	15.00	A
119	2	0.00	15.00	A
120	2	0.00	15.00	A
121	2	0.00	15.00	A
122	2	0.00	15.00	A
123	2	0.00	15.00	A
124	2	0.00	15.00	A
125	2	300.00	30.00	A
126	2	300.00	30.00	A
127	2	300.00	30.00	A
128	2	300.00	30.00	A
129	2	300.00	30.00	A
130	2	300.00	30.00	A
131	2	300.00	30.00	A
132	2	300.00	30.00	A
133	2	300.00	30.00	A
134	2	300.00	30.00	A
135	2	300.00	30.00	A
136	2	300.00	30.00	A
137	2	300.00	30.00	A
138	2	300.00	30.00	A
139	2	300.00	30.00	A
140	2	300.00	30.00	A
141	2	300.00	30.00	A

SOIL OPTIONS: A = ANISOTROPIC, C = CURVED STRENGTH ENVELOPE (TANGENT PHI & C),
F = FIBER-REINFORCED SOIL (FRS), N = NONLINEAR UNDRAINED SHEAR STRENGTH,
R = RAPID DRAWDOWN OR RAPID LOADING (SEISMIC) SHEAR STRENGTH
NOTE: Phi and C in Table 4 are modified values based on specified
Soil Options (if any).

TABLE 3 - Effective and Base Shear Stress Data on the 141 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Stress (psf)	Available Shear Strength (psf)	Mobilized Shear Stress (psf)
1	-33.05	172.93	6.31	566.37	452.16	478.50
1	-33.05	172.93	6.31	566.37	452.16	478.50
2	-33.05	178.22	6.31	1262.44	762.07	806.45
2	-33.05	178.22	6.31	1262.44	762.07	806.45
3	-33.05	183.51	6.31	1958.51	1071.99	1134.41
3	-33.05	183.51	6.31	1958.51	1071.99	1134.41
4	-33.05	188.80	6.31	2654.58	1381.90	1462.37
4	-33.05	188.80	6.31	2654.58	1381.90	1462.37
5	-30.94	193.84	5.58	3157.30	1605.72	1699.23
5	-30.94	193.84	5.58	3157.30	1605.72	1699.23
6	-30.94	198.62	5.58	3721.35	1856.85	1964.99
6	-30.94	198.62	5.58	3721.35	1856.85	1964.99
7	-30.94	203.40	5.58	4285.41	2107.99	2230.75
7	-30.94	203.40	5.58	4285.41	2107.99	2230.75
8	-30.94	208.19	5.58	4849.46	2359.12	2496.50
8	-30.94	208.19	5.58	4849.46	2359.12	2496.50
9	-30.94	212.97	5.58	5413.51	2610.25	2762.26
9	-30.94	212.97	5.58	5413.51	2610.25	2762.26
10	-30.94	216.27	2.11	6764.80	4205.66	4450.58
10	-30.94	216.27	2.11	6764.80	4205.66	4450.58
11	-8.98	219.64	5.00	4270.03	1144.15	1210.78
11	-8.98	219.64	5.00	4270.03	1144.15	1210.78
12	-8.98	224.58	5.00	4422.57	1185.02	1254.03
12	-8.98	224.58	5.00	4422.57	1185.02	1254.03
13	-8.98	229.52	5.00	4575.10	1225.89	1297.29
13	-8.98	229.52	5.00	4575.10	1225.89	1297.29
14	-8.98	234.46	5.00	4727.63	1266.77	1340.54
14	-8.98	234.46	5.00	4727.63	1266.77	1340.54
15	-8.98	239.40	5.00	4880.17	1307.64	1383.79
15	-8.98	239.40	5.00	4880.17	1307.64	1383.79
16	-8.98	244.34	5.00	5032.70	1348.51	1427.04
16	-8.98	244.34	5.00	5032.70	1348.51	1427.04
17	-7.81	249.38	5.19	5147.48	1379.26	1459.59
17	-7.81	249.38	5.19	5147.48	1379.26	1459.59
18	-7.81	254.52	5.19	5291.77	1417.92	1500.50
18	-7.81	254.52	5.19	5291.77	1417.92	1500.50
19	-7.81	259.66	5.19	5436.05	1456.58	1541.41
19	-7.81	259.66	5.19	5436.05	1456.58	1541.41
20	-7.81	264.80	5.19	5580.33	1495.24	1582.32
20	-7.81	264.80	5.19	5580.33	1495.24	1582.32

21	-7.81	269.94	5.19	5724.61	1533.90	1623.23
21	-7.81	269.94	5.19	5724.61	1533.90	1623.23
22	-7.81	274.45	3.93	5851.39	1567.87	1659.18
22	-7.81	274.45	3.93	5851.39	1567.87	1659.18
23	-7.81	276.46	0.13	5908.39	1583.15	1675.34
23	-7.81	276.46	0.13	5908.39	1583.15	1675.34
24	-1.10	279.18	5.30	5753.98	1541.78	1631.56
24	-1.10	279.18	5.30	5753.98	1541.78	1631.56
25	-1.10	284.47	5.30	5864.46	1571.38	1662.89
25	-1.10	284.47	5.30	5864.46	1571.38	1662.89
26	-1.10	289.77	5.30	5974.94	1600.98	1694.21
26	-1.10	289.77	5.30	5974.94	1600.98	1694.21
27	-1.10	295.06	5.30	6085.41	1630.58	1725.54
27	-1.10	295.06	5.30	6085.41	1630.58	1725.54
28	-1.10	300.36	5.30	6195.89	1660.18	1756.87
28	-1.10	300.36	5.30	6195.89	1660.18	1756.87
29	-1.10	305.65	5.30	6306.36	1689.78	1788.19
29	-1.10	305.65	5.30	6306.36	1689.78	1788.19
30	-1.10	310.74	4.88	6416.76	1719.36	1819.49
30	-1.10	310.74	4.88	6416.76	1719.36	1819.49
31	-1.10	315.62	4.88	6527.07	1748.92	1850.77
31	-1.10	315.62	4.88	6527.07	1748.92	1850.77
32	-1.10	320.50	4.88	6637.39	1778.48	1882.05
32	-1.10	320.50	4.88	6637.39	1778.48	1882.05
33	-1.10	325.38	4.88	6747.70	1808.04	1913.33
33	-1.10	325.38	4.88	6747.70	1808.04	1913.33
34	-1.10	330.26	4.88	6858.02	1837.60	1944.61
34	-1.10	330.26	4.88	6858.02	1837.60	1944.61
35	-1.10	335.38	5.37	6959.64	1864.83	1973.43
35	-1.10	335.38	5.37	6959.64	1864.83	1973.43
36	-1.10	340.75	5.37	7052.58	1889.73	1999.78
36	-1.10	340.75	5.37	7052.58	1889.73	1999.78
37	-1.10	346.12	5.37	7145.52	1914.64	2026.14
37	-1.10	346.12	5.37	7145.52	1914.64	2026.14
38	-1.10	351.50	5.40	7268.65	1947.63	2061.05
38	-1.10	351.50	5.40	7268.65	1947.63	2061.05
39	-1.10	356.90	5.40	7421.97	1988.71	2104.52
39	-1.10	356.90	5.40	7421.97	1988.71	2104.52
40	-1.10	362.30	5.40	7575.29	2029.79	2148.00
40	-1.10	362.30	5.40	7575.29	2029.79	2148.00
41	-1.10	367.70	5.40	7728.61	2070.87	2191.47
41	-1.10	367.70	5.40	7728.61	2070.87	2191.47
42	-0.52	372.87	4.94	7847.89	2102.84	2225.30
42	-0.52	372.87	4.94	7847.89	2102.84	2225.30
43	-0.52	377.82	4.94	7981.73	2138.70	2263.25
43	-0.52	377.82	4.94	7981.73	2138.70	2263.25
44	-0.52	382.76	4.94	8115.58	2174.56	2301.20
44	-0.52	382.76	4.94	8115.58	2174.56	2301.20
45	-0.52	387.71	4.94	8249.42	2210.43	2339.15
45	-0.52	387.71	4.94	8249.42	2210.43	2339.15
46	-0.52	392.65	4.94	8383.26	2246.29	2377.10
46	-0.52	392.65	4.94	8383.26	2246.29	2377.10
47	-0.52	397.59	4.94	8517.11	2282.15	2415.06
47	-0.52	397.59	4.94	8517.11	2282.15	2415.06
48	-0.52	402.54	4.94	8650.95	2318.02	2453.01
48	-0.52	402.54	4.94	8650.95	2318.02	2453.01
49	-0.52	407.48	4.94	8784.79	2353.88	2490.96
49	-0.52	407.48	4.94	8784.79	2353.88	2490.96
50	-0.52	412.43	4.94	8918.64	2389.74	2528.91
50	-0.52	412.43	4.94	8918.64	2389.74	2528.91

51	5.31	415.65	1.51	8726.73	2338.32	2474.49
51	5.31	415.65	1.51	8726.73	2338.32	2474.49
52	5.31	418.90	5.02	8750.05	2344.57	2481.11
52	5.31	418.90	5.02	8750.05	2344.57	2481.11
53	5.31	423.90	5.02	8775.15	2351.29	2488.23
53	5.31	423.90	5.02	8775.15	2351.29	2488.23
54	5.31	428.90	5.02	8800.26	2358.02	2495.34
54	5.31	428.90	5.02	8800.26	2358.02	2495.34
55	5.31	433.90	5.02	8825.37	2364.75	2502.46
55	5.31	433.90	5.02	8825.37	2364.75	2502.46
56	5.31	438.90	5.02	8850.47	2371.48	2509.58
56	5.31	438.90	5.02	8850.47	2371.48	2509.58
57	5.31	443.93	5.09	8874.83	2378.00	2516.49
57	5.31	443.93	5.09	8874.83	2378.00	2516.49
58	5.31	449.00	5.09	8898.43	2384.33	2523.18
58	5.31	449.00	5.09	8898.43	2384.33	2523.18
59	5.31	454.07	5.09	8922.04	2390.65	2529.88
59	5.31	454.07	5.09	8922.04	2390.65	2529.88
60	5.31	459.13	5.09	8945.65	2396.98	2536.57
60	5.31	459.13	5.09	8945.65	2396.98	2536.57
61	5.31	464.20	5.09	8969.25	2403.30	2543.26
61	5.31	464.20	5.09	8969.25	2403.30	2543.26
62	5.31	469.27	5.09	8992.86	2409.63	2549.96
62	5.31	469.27	5.09	8992.86	2409.63	2549.96
63	5.31	474.33	5.09	9016.46	2415.95	2556.65
63	5.31	474.33	5.09	9016.46	2415.95	2556.65
64	5.31	479.40	5.09	9040.07	2422.28	2563.34
64	5.31	479.40	5.09	9040.07	2422.28	2563.34
65	5.31	484.47	5.09	9063.67	2428.60	2570.04
65	5.31	484.47	5.09	9063.67	2428.60	2570.04
66	5.31	489.53	5.09	9087.28	2434.93	2576.73
66	5.31	489.53	5.09	9087.28	2434.93	2576.73
67	5.31	494.60	5.09	9110.88	2441.25	2583.42
67	5.31	494.60	5.09	9110.88	2441.25	2583.42
68	5.31	499.67	5.09	9134.49	2447.58	2590.12
68	5.31	499.67	5.09	9134.49	2447.58	2590.12
69	5.31	504.73	5.09	9158.09	2453.90	2596.81
69	5.31	504.73	5.09	9158.09	2453.90	2596.81
70	5.31	509.80	5.09	9181.70	2460.23	2603.50
70	5.31	509.80	5.09	9181.70	2460.23	2603.50
71	5.31	514.87	5.09	9205.30	2466.55	2610.20
71	5.31	514.87	5.09	9205.30	2466.55	2610.20
72	5.31	519.91	5.04	9198.64	2464.77	2608.31
72	5.31	519.91	5.04	9198.64	2464.77	2608.31
73	5.31	524.92	5.04	9161.70	2454.87	2597.83
73	5.31	524.92	5.04	9161.70	2454.87	2597.83
74	5.31	529.94	5.04	9124.77	2444.97	2587.36
74	5.31	529.94	5.04	9124.77	2444.97	2587.36
75	5.31	534.96	5.04	9087.84	2435.08	2576.89
75	5.31	534.96	5.04	9087.84	2435.08	2576.89
76	5.31	539.98	5.04	9050.90	2425.18	2566.42
76	5.31	539.98	5.04	9050.90	2425.18	2566.42
77	5.31	544.99	5.04	9013.97	2415.29	2555.94
77	5.31	544.99	5.04	9013.97	2415.29	2555.94
78	5.31	549.96	4.95	9029.33	2419.40	2560.30
78	5.31	549.96	4.95	9029.33	2419.40	2560.30
79	5.31	554.89	4.95	9096.99	2437.53	2579.48
79	5.31	554.89	4.95	9096.99	2437.53	2579.48
80	5.31	559.82	4.95	9164.65	2455.66	2598.67
80	5.31	559.82	4.95	9164.65	2455.66	2598.67

81	5.31	564.74	4.95	9232.31	2473.79	2617.85
81	5.31	564.74	4.95	9232.31	2473.79	2617.85
82	5.31	569.67	4.95	9299.97	2491.92	2637.04
82	5.31	569.67	4.95	9299.97	2491.92	2637.04
83	5.31	574.60	4.95	9367.63	2510.05	2656.23
83	5.31	574.60	4.95	9367.63	2510.05	2656.23
84	5.31	579.52	4.95	9435.29	2528.18	2675.41
84	5.31	579.52	4.95	9435.29	2528.18	2675.41
85	5.31	584.45	4.95	9502.95	2546.31	2694.60
85	5.31	584.45	4.95	9502.95	2546.31	2694.60
86	5.31	589.38	4.95	9570.61	2564.44	2713.78
86	5.31	589.38	4.95	9570.61	2564.44	2713.78
87	5.31	594.30	4.95	9638.27	2582.57	2732.97
87	5.31	594.30	4.95	9638.27	2582.57	2732.97
88	5.31	599.23	4.95	9705.93	2600.70	2752.15
88	5.31	599.23	4.95	9705.93	2600.70	2752.15
89	5.31	604.16	4.95	9773.59	2618.83	2771.34
89	5.31	604.16	4.95	9773.59	2618.83	2771.34
90	5.31	609.08	4.95	9841.25	2636.96	2790.52
90	5.31	609.08	4.95	9841.25	2636.96	2790.52
91	5.31	614.01	4.95	9908.92	2655.09	2809.71
91	5.31	614.01	4.95	9908.92	2655.09	2809.71
92	5.31	618.94	4.95	9976.58	2673.22	2828.89
92	5.31	618.94	4.95	9976.58	2673.22	2828.89
93	23.39	624.12	5.92	9036.94	2421.44	2562.46
93	23.39	624.12	5.92	9036.94	2421.44	2562.46
94	23.39	629.55	5.92	8908.97	2387.15	2526.17
94	23.39	629.55	5.92	8908.97	2387.15	2526.17
95	23.39	634.98	5.92	8781.00	2352.86	2489.88
95	23.39	634.98	5.92	8781.00	2352.86	2489.88
96	23.39	640.23	5.52	8693.72	2329.48	2465.14
96	23.39	640.23	5.52	8693.72	2329.48	2465.14
97	23.39	645.30	5.52	8647.13	2316.99	2451.92
97	23.39	645.30	5.52	8647.13	2316.99	2451.92
98	23.39	650.37	5.52	8600.54	2304.51	2438.71
98	23.39	650.37	5.52	8600.54	2304.51	2438.71
99	23.39	655.44	5.52	8553.94	2292.02	2425.50
99	23.39	655.44	5.52	8553.94	2292.02	2425.50
100	23.39	660.51	5.52	8507.35	2279.54	2412.29
100	23.39	660.51	5.52	8507.35	2279.54	2412.29
101	23.39	665.58	5.52	8460.76	2267.05	2399.08
101	23.39	665.58	5.52	8460.76	2267.05	2399.08
102	23.39	670.65	5.52	8414.16	2254.57	2385.87
102	23.39	670.65	5.52	8414.16	2254.57	2385.87
103	23.39	675.72	5.52	8367.57	2242.08	2372.65
103	23.39	675.72	5.52	8367.57	2242.08	2372.65
104	23.39	680.79	5.52	8320.98	2229.60	2359.44
104	23.39	680.79	5.52	8320.98	2229.60	2359.44
105	23.39	685.86	5.52	8274.38	2217.11	2346.23
105	23.39	685.86	5.52	8274.38	2217.11	2346.23
106	23.39	690.93	5.52	8227.79	2204.63	2333.02
106	23.39	690.93	5.52	8227.79	2204.63	2333.02
107	23.39	696.00	5.52	8181.20	2192.14	2319.81
107	23.39	696.00	5.52	8181.20	2192.14	2319.81
108	23.39	701.07	5.52	8134.60	2179.66	2306.60
108	23.39	701.07	5.52	8134.60	2179.66	2306.60
109	23.39	706.13	5.52	8088.01	2167.18	2293.38
109	23.39	706.13	5.52	8088.01	2167.18	2293.38
110	23.39	711.20	5.52	8041.42	2154.69	2280.17
110	23.39	711.20	5.52	8041.42	2154.69	2280.17
111	23.39	716.27	5.52	7994.82	2142.21	2266.96
111	23.39	716.27	5.52	7994.82	2142.21	2266.96
112	23.39	721.34	5.52	7948.23	2129.72	2253.75
112	23.39	721.34	5.52	7948.23	2129.72	2253.75
113	23.39	726.41	5.52	7901.64	2117.24	2240.54
113	23.39	726.41	5.52	7901.64	2117.24	2240.54
114	23.39	731.48	5.52	7855.04	2104.75	2227.33
114	23.39	731.48	5.52	7855.04	2104.75	2227.33
115	23.39	736.55	5.52	7808.45	2092.27	2214.11
115	23.39	736.55	5.52	7808.45	2092.27	2214.11
116	23.39	741.62	5.52	7761.86	2079.78	2200.90
116	23.39	741.62	5.52	7761.86	2079.78	2200.90
117	23.39	746.69	5.52	7715.26	2067.30	2187.69
117	23.39	746.69	5.52	7715.26	2067.30	2187.69
118	23.39	751.76	5.52	7668.67	2054.81	2174.48
118	23.39	751.76	5.52	7668.67	2054.81	2174.48
119	23.39	756.83	5.52	7622.08	2042.33	2161.27
119	23.39	756.83	5.52	7622.08	2042.33	2161.27
120	23.39	761.90	5.52	7575.48	2029.84	2148.05
120	23.39	761.90	5.52	7575.48	2029.84	2148.05
121	23.39	766.97	5.52	7528.89	2017.36	2134.84
121	23.39	766.97	5.52	7528.89	2017.36	2134.84
122	23.39	772.02	5.48	7500.77	2009.83	2126.87
122	23.39	772.02	5.48	7500.77	2009.83	2126.87
123	23.39	777.05	5.48	7491.14	2007.24	2124.14
123	23.39	777.05	5.48	7491.14	2007.24	2124.14
124	23.39	782.08	5.48	7481.50	2004.66	2121.41
124	23.39	782.08	5.48	7481.50	2004.66	2121.41
125	51.89	787.08	8.03	4242.27	2749.28	2909.38
125	51.89	787.08	8.03	4242.27	2749.28	2909.38
126	51.89	792.03	8.03	3962.97	2588.02	2738.74
126	51.89	792.03	8.03	3962.97	2588.02	2738.74
127	51.89	796.98	8.03	3683.66	2426.76	2568.09
127	51.89	796.98	8.03	3683.66	2426.76	2568.09
128	51.89	801.94	8.03	3404.36	2265.51	2397.44
128	51.89	801.94	8.03	3404.36	2265.51	2397.44
129	51.89	806.89	8.03	3125.06	2104.25	2226.80
129	51.89	806.89	8.03	3125.06	2104.25	2226.80
130	51.89	811.85	8.03	2845.75	1943.00	2056.15
130	51.89	811.85	8.03	2845.75	1943.00	2056.15
131	51.89	816.80	8.03	2566.45	1781.74	1885.50
131	51.89	816.80	8.03	2566.45	1781.74	1885.50
132	51.89	821.75	8.03	2287.14	1620.48	1714.85
132	51.89	821.75	8.03	2287.14	1620.48	1714.85
133	51.89	826.71	8.03	2007.84	1459.23	1544.21
133	51.89	826.71	8.03	2007.84	1459.23	1544.21
134	51.89	831.66	8.03	1728.53	1297.97	1373.56
134	51.89	831.66	8.03	1728.53	1297.97	1373.56
135	51.89	836.62	8.03	1449.23	1136.71	1202.91
135	51.89	836.62	8.03	1449.23	1136.71	1202.91
136	51.89	841.57	8.03	1169.92	975.46	1032.26
136	51.89	841.57	8.03	1169.92	975.46	1032.26
137	51.89	846.52	8.03	890.62	814.20	861.62
137	51.89	846.52	8.03	890.62	814.20	861.62
138	51.99	851.80	9.09	590.49	640.92	678.24
138	51.99	851.80	9.09	590.49	640.92	678.24
139	51.99	857.40	9.09	273.61	457.97	484.64
139	51.99	857.40	9.09	273.61	457.97	484.64
140	51.99	861.66	4.76	27.31	315.76	334.15
140	51.99	861.66	4.76	27.31	315.76	334.15

141	51.99	864.59	4.76	87.86	50.73	53.68
141	51.99	864.59	4.76	87.86	50.73	53.68

Table 4 - Base Force Data on the 141 Slices

Slice No. *	Alpha (deg)	X-Coord. Slice Cntr (ft)	Base Leng. (ft)	Effective Normal Force (lbs)	Available Shear Force (lbs)	Mobilized Shear Force (lbs)
1	-33.05	172.93	6.31	3575.07	2854.18	3020.40
1	-33.05	172.93	6.31	3575.07	2854.18	3020.40
2	-33.05	178.22	6.31	7968.87	4810.42	5090.56
2	-33.05	178.22	6.31	7968.87	4810.42	5090.56
3	-33.05	183.51	6.31	12362.66	6766.66	7160.73
3	-33.05	183.51	6.31	12362.66	6766.66	7160.73
4	-33.05	188.80	6.31	16756.45	8722.91	9230.90
4	-33.05	188.80	6.31	16756.45	8722.91	9230.90
5	-30.94	193.84	5.58	17610.53	8956.26	9477.84
5	-30.94	193.84	5.58	17610.53	8956.26	9477.84
6	-30.94	198.62	5.58	20756.66	10357.00	10960.16
6	-30.94	198.62	5.58	20756.66	10357.00	10960.16
7	-30.94	203.40	5.58	23902.79	11757.75	12442.48
7	-30.94	203.40	5.58	23902.79	11757.75	12442.48
8	-30.94	208.19	5.58	27048.91	13158.50	13924.80
8	-30.94	208.19	5.58	27048.91	13158.50	13924.80
9	-30.94	212.97	5.58	30195.04	14559.24	15407.12
9	-30.94	212.97	5.58	30195.04	14559.24	15407.12
10	-30.94	216.27	2.11	14283.22	8879.84	9396.97
10	-30.94	216.27	2.11	14283.22	8879.84	9396.97
11	-8.98	219.64	5.00	21350.17	5720.76	6053.92
11	-8.98	219.64	5.00	21350.17	5720.76	6053.92
12	-8.98	224.58	5.00	22112.83	5925.12	6270.17
12	-8.98	224.58	5.00	22112.83	5925.12	6270.17
13	-8.98	229.52	5.00	22875.50	6129.47	6486.43
13	-8.98	229.52	5.00	22875.50	6129.47	6486.43
14	-8.98	234.46	5.00	23638.16	6333.83	6702.68
14	-8.98	234.46	5.00	23638.16	6333.83	6702.68
15	-8.98	239.40	5.00	24400.83	6538.18	6918.94
15	-8.98	239.40	5.00	24400.83	6538.18	6918.94
16	-8.98	244.34	5.00	25163.49	6742.54	7135.20
16	-8.98	244.34	5.00	25163.49	6742.54	7135.20
17	-7.81	249.38	5.19	26704.99	7155.58	7572.29
17	-7.81	249.38	5.19	26704.99	7155.58	7572.29
18	-7.81	254.52	5.19	27453.52	7356.15	7784.54
18	-7.81	254.52	5.19	27453.52	7356.15	7784.54
19	-7.81	259.66	5.19	28202.05	7556.72	7996.79
19	-7.81	259.66	5.19	28202.05	7556.72	7996.79
20	-7.81	264.80	5.19	28950.58	7757.28	8209.04
20	-7.81	264.80	5.19	28950.58	7757.28	8209.04
21	-7.81	269.94	5.19	29699.11	7957.85	8421.29
21	-7.81	269.94	5.19	29699.11	7957.85	8421.29
22	-7.81	274.45	3.93	22989.71	6160.07	6518.81
22	-7.81	274.45	3.93	22989.71	6160.07	6518.81
23	-7.81	276.46	0.13	775.27	207.73	219.83
23	-7.81	276.46	0.13	775.27	207.73	219.83
24	-1.10	279.18	5.30	30473.00	8165.21	8640.73
24	-1.10	279.18	5.30	30473.00	8165.21	8640.73
25	-1.10	284.47	5.30	31058.07	8321.98	8806.63
25	-1.10	284.47	5.30	31058.07	8321.98	8806.63
26	-1.10	289.77	5.30	31643.15	8478.75	8972.53
26	-1.10	289.77	5.30	31643.15	8478.75	8972.53
27	-1.10	295.06	5.30	32228.22	8635.53	9138.43
27	-1.10	295.06	5.30	32228.22	8635.53	9138.43
28	-1.10	300.36	5.30	32813.29	8792.30	9304.33
28	-1.10	300.36	5.30	32813.29	8792.30	9304.33
29	-1.10	305.65	5.30	33398.37	8949.07	9470.23
29	-1.10	305.65	5.30	33398.37	8949.07	9470.23
30	-1.10	310.74	4.88	31319.57	8392.05	8880.77
30	-1.10	310.74	4.88	31319.57	8392.05	8880.77
31	-1.10	315.62	4.88	31858.01	8536.33	9033.45
31	-1.10	315.62	4.88	31858.01	8536.33	9033.45
32	-1.10	320.50	4.88	32396.45	8680.60	9186.13
32	-1.10	320.50	4.88	32396.45	8680.60	9186.13
33	-1.10	325.38	4.88	32934.88	8824.87	9338.80
33	-1.10	325.38	4.88	32934.88	8824.87	9338.80
34	-1.10	330.26	4.88	33473.32	8969.15	9491.48
34	-1.10	330.26	4.88	33473.32	8969.15	9491.48
35	-1.10	335.38	5.37	37357.00	10009.78	10592.71
35	-1.10	335.38	5.37	37357.00	10009.78	10592.71
36	-1.10	340.75	5.37	37855.86	10143.45	10734.16
36	-1.10	340.75	5.37	37855.86	10143.45	10734.16
37	-1.10	346.12	5.37	38354.72	10277.12	10875.62
37	-1.10	346.12	5.37	38354.72	10277.12	10875.62
38	-1.10	351.50	5.40	39257.97	10519.14	11131.73
38	-1.10	351.50	5.40	39257.97	10519.14	11131.73
39	-1.10	356.90	5.40	40086.04	10741.02	11366.54
39	-1.10	356.90	5.40	40086.04	10741.02	11366.54
40	-1.10	362.30	5.40	40914.12	10962.91	11601.34
40	-1.10	362.30	5.40	40914.12	10962.91	11601.34
41	-1.10	367.70	5.40	41742.20	11184.79	11836.15
41	-1.10	367.70	5.40	41742.20	11184.79	11836.15
42	-0.52	372.87	4.94	38805.03	10397.78	11003.30
42	-0.52	372.87	4.94	38805.03	10397.78	11003.30
43	-0.52	377.82	4.94	39466.84	10575.11	11190.96
43	-0.52	377.82	4.94	39466.84	10575.11	11190.96
44	-0.52	382.76	4.94	40128.65	10752.44	11378.62
44	-0.52	382.76	4.94	40128.65	10752.44	11378.62
45	-0.52	387.71	4.94	40790.45	10929.77	11566.28
45	-0.52	387.71	4.94	40790.45	10929.77	11566.28
46	-0.52	392.65	4.94	41452.26	11107.10	11753.93
46	-0.52	392.65	4.94	41452.26	11107.10	11753.93
47	-0.52	397.59	4.94	42114.07	11284.43	11941.59
47	-0.52	397.59	4.94	42114.07	11284.43	11941.59
48	-0.52	402.54	4.94	42775.87	11461.76	12129.25
48	-0.52	402.54	4.94	42775.87	11461.76	12129.25
49	-0.52	407.48	4.94	43437.68	11639.09	12316.91
49	-0.52	407.48	4.94	43437.68	11639.09	12316.91
50	-0.52	412.43	4.94	44099.49	11816.42	12504.57
50	-0.52	412.43	4.94	44099.49	11816.42	12504.57
51	5.31	415.65	1.51	13146.55	3522.61	3727.75
51	5.31	415.65	1.51	13146.55	3522.61	3727.75
52	5.31	418.90	5.02	43938.93	11773.40	12459.04
52	5.31	418.90	5.02	43938.93	11773.40	12459.04
53	5.31	423.90	5.02	44065.01	11807.18	12494.79
53	5.31	423.90	5.02	44065.01	11807.18	12494.79
54	5.31	428.90	5.02	44191.08	11840.96	12530.54
54	5.31	428.90	5.02	44191.08	11840.96	12530.54
55	5.31	433.90	5.02	44317.16	11874.75	12566.29

55	5.31	433.90	5.02	44317.16	11874.75	12566.29
56	5.31	438.90	5.02	44443.23	11908.53	12602.04
56	5.31	438.90	5.02	44443.23	11908.53	12602.04
57	5.31	443.93	5.09	45159.75	12100.52	12805.21
57	5.31	443.93	5.09	45159.75	12100.52	12805.21
58	5.31	449.00	5.09	45279.86	12132.70	12839.26
58	5.31	449.00	5.09	45279.86	12132.70	12839.26
59	5.31	454.07	5.09	45399.98	12164.89	12873.32
59	5.31	454.07	5.09	45399.98	12164.89	12873.32
60	5.31	459.13	5.09	45520.09	12197.07	12907.38
60	5.31	459.13	5.09	45520.09	12197.07	12907.38
61	5.31	464.20	5.09	45640.21	12229.26	12941.44
61	5.31	464.20	5.09	45640.21	12229.26	12941.44
62	5.31	469.27	5.09	45760.33	12261.44	12975.50
62	5.31	469.27	5.09	45760.33	12261.44	12975.50
63	5.31	474.33	5.09	45880.44	12293.63	13009.56
63	5.31	474.33	5.09	45880.44	12293.63	13009.56
64	5.31	479.40	5.09	46000.56	12325.81	13043.62
64	5.31	479.40	5.09	46000.56	12325.81	13043.62
65	5.31	484.47	5.09	46120.67	12358.00	13077.68
65	5.31	484.47	5.09	46120.67	12358.00	13077.68
66	5.31	489.53	5.09	46240.79	12390.18	13111.74
66	5.31	489.53	5.09	46240.79	12390.18	13111.74
67	5.31	494.60	5.09	46360.91	12422.37	13145.80
67	5.31	494.60	5.09	46360.91	12422.37	13145.80
68	5.31	499.67	5.09	46481.02	12454.55	13179.86
68	5.31	499.67	5.09	46481.02	12454.55	13179.86
69	5.31	504.73	5.09	46601.14	12486.74	13213.92
69	5.31	504.73	5.09	46601.14	12486.74	13213.92
70	5.31	509.80	5.09	46721.25	12518.92	13247.98
70	5.31	509.80	5.09	46721.25	12518.92	13247.98
71	5.31	514.87	5.09	46841.37	12551.11	13282.04
71	5.31	514.87	5.09	46841.37	12551.11	13282.04
72	5.31	519.91	5.04	46345.54	12418.25	13141.44
72	5.31	519.91	5.04	46345.54	12418.25	13141.44
73	5.31	524.92	5.04	46159.46	12368.39	13088.68
73	5.31	524.92	5.04	46159.46	12368.39	13088.68
74	5.31	529.94	5.04	45973.37	12318.53	13035.91
74	5.31	529.94	5.04	45973.37	12318.53	13035.91
75	5.31	534.96	5.04	45787.29	12268.67	12983.15
75	5.31	534.96	5.04	45787.29	12268.67	12983.15
76	5.31	539.98	5.04	45601.20	12218.81	12930.38
76	5.31	539.98	5.04	45601.20	12218.81	12930.38
77	5.31	544.99	5.04	45415.12	12168.94	12877.62
77	5.31	544.99	5.04	45415.12	12168.94	12877.62
78	5.31	549.96	4.95	44676.38	11971.00	12668.14
78	5.31	549.96	4.95	44676.38	11971.00	12668.14
79	5.31	554.89	4.95	45011.15	12060.70	12763.07
79	5.31	554.89	4.95	45011.15	12060.70	12763.07
80	5.31	559.82	4.95	45345.93	12150.41	12858.00
80	5.31	559.82	4.95	45345.93	12150.41	12858.00
81	5.31	564.74	4.95	45680.71	12240.11	12952.93
81	5.31	564.74	4.95	45680.71	12240.11	12952.93
82	5.31	569.67	4.95	46015.49	12329.81	13047.85
82	5.31	569.67	4.95	46015.49	12329.81	13047.85
83	5.31	574.60	4.95	46350.26	12419.52	13142.78
83	5.31	574.60	4.95	46350.26	12419.52	13142.78
84	5.31	579.52	4.95	46685.04	12509.22	13237.71
84	5.31	579.52	4.95	46685.04	12509.22	13237.71
85	5.31	584.45	4.95	47019.82	12598.92	13332.64
85	5.31	584.45	4.95	47019.82	12598.92	13332.64
86	5.31	589.38	4.95	47354.60	12688.63	13427.56
86	5.31	589.38	4.95	47354.60	12688.63	13427.56
87	5.31	594.30	4.95	47689.37	12778.33	13522.49
87	5.31	594.30	4.95	47689.37	12778.33	13522.49
88	5.31	599.23	4.95	48024.15	12868.03	13617.42
88	5.31	599.23	4.95	48024.15	12868.03	13617.42
89	5.31	604.16	4.95	48358.93	12957.74	13712.34
89	5.31	604.16	4.95	48358.93	12957.74	13712.34
90	5.31	609.08	4.95	48693.71	13047.44	13807.27
90	5.31	609.08	4.95	48693.71	13047.44	13807.27
91	5.31	614.01	4.95	49028.48	13137.14	13902.20
91	5.31	614.01	4.95	49028.48	13137.14	13902.20
92	5.31	618.94	4.95	49363.26	13226.85	13997.13
92	5.31	618.94	4.95	49363.26	13226.85	13997.13
93	23.39	624.12	5.92	53498.16	14334.79	15169.59
93	23.39	624.12	5.92	53498.16	14334.79	15169.59
94	23.39	629.55	5.92	52740.60	14131.80	14954.78
94	23.39	629.55	5.92	52740.60	14131.80	14954.78
95	23.39	634.98	5.92	51983.04	13928.81	14739.97
95	23.39	634.98	5.92	51983.04	13928.81	14739.97
96	23.39	640.23	5.52	48017.45	12866.24	13615.52
96	23.39	640.23	5.52	48017.45	12866.24	13615.52
97	23.39	645.30	5.52	47760.10	12797.28	13542.54
97	23.39	645.30	5.52	47760.10	12797.28	13542.54
98	23.39	650.37	5.52	47502.75	12728.32	13469.57
98	23.39	650.37	5.52	47502.75	12728.32	13469.57
99	23.39	655.44	5.52	47245.41	12659.37	13396.60
99	23.39	655.44	5.52	47245.41	12659.37	13396.60
100	23.39	660.51	5.52	46988.06	12590.41	13323.63
100	23.39	660.51	5.52	46988.06	12590.41	13323.63
101	23.39	665.58	5.52	46730.72	12521.46	13250.66
101	23.39	665.58	5.52	46730.72	12521.46	13250.66
102	23.39	670.65	5.52	46473.37	12452.50	13177.69
102	23.39	670.65	5.52	46473.37	12452.50	13177.69
103	23.39	675.72	5.52	46216.02	12383.55	13104.72
103	23.39	675.72	5.52	46216.02	12383.55	13104.72
104	23.39	680.79	5.52	45958.68	12314.59	13031.74
104	23.39	680.79	5.52	45958.68	12314.59	13031.74
105	23.39	685.86	5.52	45701.33	12245.63	12958.77
105	23.39	685.86	5.52	45701.33	12245.63	12958.77
106	23.39	690.93	5.52	45443.98	12176.68	12885.80
106	23.39	690.93	5.52	45443.98	12176.68	12885.80
107	23.39	696.00	5.52	45186.64	12107.72	12812.83
107	23.39	696.00	5.52	45186.64	12107.72	12812.83
108	23.39	701.07	5.52	44929.29	12038.77	12739.86
108	23.39	701.07	5.52	44929.29	12038.77	12739.86
109	23.39	706.13	5.52	44671.95	11969.81	12666.89
109	23.39	706.13	5.52	44671.95	11969.81	12666.89
110	23.39	711.20	5.52	44414.60	11900.86	12593.92
110	23.39	711.20	5.52	44414.60	11900.86	12593.92
111	23.39	716.27	5.52	44157.25	11831.90	12520.95
111	23.39	716.27	5.52	44157.25	11831.90	12520.95
112	23.39	721.34	5.52	43899.91	11762.94	12447.97
112	23.39	721.34	5.52	43899.91	11762.94	12447.97
113	23.39	726.41	5.52	43642.56	11693.99	12375.00
113	23.39	726.41	5.52	43642.56	11693.99	12375.00
114	23.39	731.48	5.52	43385.22	11625.03	12302.03
114	23.39	731.48	5.52	43385.22	11625.03	12302.03
115	23.39	736.55	5.52	43127.87	11556.08	12229.06

115	23.39	736.55	5.52	43127.87	11556.08	12229.06
116	23.39	741.62	5.52	42870.52	11487.12	12156.09
116	23.39	741.62	5.52	42870.52	11487.12	12156.09
117	23.39	746.69	5.52	42613.18	11418.17	12083.12
117	23.39	746.69	5.52	42613.18	11418.17	12083.12
118	23.39	751.76	5.52	42355.83	11349.21	12010.15
118	23.39	751.76	5.52	42355.83	11349.21	12010.15
119	23.39	756.83	5.52	42098.49	11280.26	11937.17
119	23.39	756.83	5.52	42098.49	11280.26	11937.17
120	23.39	761.90	5.52	41841.14	11211.30	11864.20
120	23.39	761.90	5.52	41841.14	11211.30	11864.20
121	23.39	766.97	5.52	41583.79	11142.34	11791.23
121	23.39	766.97	5.52	41583.79	11142.34	11791.23
122	23.39	772.02	5.48	41135.13	11022.13	11664.01
122	23.39	772.02	5.48	41135.13	11022.13	11664.01
123	23.39	777.05	5.48	41082.28	11007.96	11649.02
123	23.39	777.05	5.48	41082.28	11007.96	11649.02
124	23.39	782.08	5.48	41029.42	10993.80	11634.04
124	23.39	782.08	5.48	41029.42	10993.80	11634.04
125	51.89	787.08	8.03	34050.60	22067.07	23352.17
125	51.89	787.08	8.03	34050.60	22067.07	23352.17
126	51.89	792.03	8.03	31808.76	20772.75	21982.47
126	51.89	792.03	8.03	31808.76	20772.75	21982.47
127	51.89	796.98	8.03	29566.93	19478.42	20612.77
127	51.89	796.98	8.03	29566.93	19478.42	20612.77
128	51.89	801.94	8.03	27325.09	18184.10	19243.07
128	51.89	801.94	8.03	27325.09	18184.10	19243.07
129	51.89	806.89	8.03	25083.25	16889.77	17873.37
129	51.89	806.89	8.03	25083.25	16889.77	17873.37
130	51.89	811.85	8.03	22841.42	15595.45	16503.67
130	51.89	811.85	8.03	22841.42	15595.45	16503.67
131	51.89	816.80	8.03	20599.58	14301.12	15133.97
131	51.89	816.80	8.03	20599.58	14301.12	15133.97
132	51.89	821.75	8.03	18357.74	13006.80	13764.26
132	51.89	821.75	8.03	18357.74	13006.80	13764.26
133	51.89	826.71	8.03	16115.91	11712.47	12394.56
133	51.89	826.71	8.03	16115.91	11712.47	12394.56
134	51.89	831.66	8.03	13874.07	10418.15	11024.86
134	51.89	831.66	8.03	13874.07	10418.15	11024.86
135	51.89	836.62	8.03	11632.24	9123.82	9655.16
135	51.89	836.62	8.03	11632.24	9123.82	9655.16
136	51.89	841.57	8.03	9390.40	7829.50	8285.46
136	51.89	841.57	8.03	9390.40	7829.50	8285.46
137	51.89	846.52	8.03	7148.56	6535.17	6915.76
137	51.89	846.52	8.03	7148.56	6535.17	6915.76
138	51.99	851.80	9.09	5369.52	5828.09	6167.49
138	51.99	851.80	9.09	5369.52	5828.09	6167.49
139	51.99	857.40	9.09	2488.02	4164.45	4406.97
139	51.99	857.40	9.09	2488.02	4164.45	4406.97
140	51.99	861.66	4.76	129.90	1502.17	1589.65
140	51.99	861.66	4.76	129.90	1502.17	1589.65
141	51.99	864.59	4.76	417.99	241.32	255.38
141	51.99	864.59	4.76	417.99	241.32	255.38

Sum of the Resisting Forces = 1412451.89 (lbs)

Average Available Shear Strength = 1832.23(psf)

Sum of the Driving Forces = 1593935.10 (lbs)

Average Mobilized Shear Stress = 2067.65(psf)

Total length of the failure surface = 770.89(ft)

Factor of Safety Balance Check: FS = 0.88614

Janbu's Correction Factor (fo) = 1.0642

Janub's FS Corrected = 0.94303

*** SEISMIC SLOPE DISPLACEMENT DATA ***
(Note: kv is set = zero for displacement calculations)
Seismic Yield Coefficient (ky) = 0.13126(g)
Calculated Newmark Seismic Displacement = 0.000(ft)

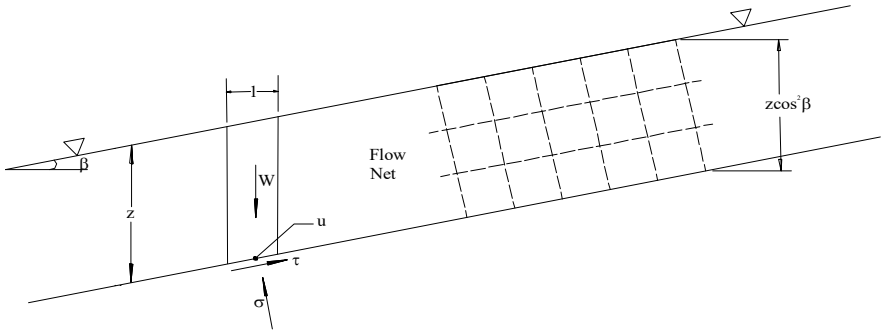
Average Elevation of Point of Application of kh on Sliding Mass = 223.595(ft)

Non-Symmetrical Sliding Resistance Has Been Specified
for Downhill Sliding.

**** END OF GEOSTASE OUTPUT ****

3H:1V SLOPE

INFINITE SLOPE CONDITION



ASSUMPTION

Depth of Saturation (ft), z (and steady seepage parallel to slope face)	4

SOIL PARAMETERS

Angle of Internal Friction, ϕ	24
Cohesion (psf), c	200
Saturated Unit Weight of Soil (pcf), γ_{sat}	120
Unit Weight of Water (pcf), γ_w	62.4
Slope Angle (3H:1V), β	18.43

CALCULATIONS

Normal Stress Along Failure Plane

$$\sigma = \gamma_{sat} * z * \cos^2 \beta \qquad \sigma = 432.025 \text{ lb/ft}^2$$

Shear Stress Along Failure Plane

$$\tau_d = \gamma_{sat} * z * \sin \beta * \cos \beta \qquad \tau_d = 143.967 \text{ lb/ft}^2$$

Pore Pressure Along Failure Plane

$$u = \gamma_w * z * \cos^2 \beta \qquad u = 224.653 \text{ lb/ft}^2$$

Resisting Shear Stress Along Failure Plane

$$\tau_r = c + (\sigma - u) \tan \phi \qquad \tau_r = 292.328 \text{ lb/ft}^2$$

FACTOR OF SAFETY

$$\textbf{FS} = \frac{\tau_r}{\tau_d}$$

FS = 2.03

LGC Geotechnical, Inc.	SURFICIAL STABILITY	Project Name : Project Number : Designed/Checked : Date:	Compass, San Juan Capistrano 22011-01 BTZ April, 2024

Appendix F
General Earthwork and Grading Specifications for Grading

General Earthwork and Grading Specifications for Rough Grading

1.0 General

1.1 Intent

These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to confirm that the attained level of compaction is being accomplished as specified. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor

The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the project plans and specifications. The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of “equipment” of work and the estimated quantities of daily earthwork

contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the
Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified. It is the contractor's sole responsibility to provide proper fill compaction.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed. The contractor is responsible for all hazardous waste relating to his work. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Client should acquire the services of a qualified environmental assessor.

2.2 Processing

Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be over-excavated as specified in the following section. Scarification shall continue until soils are broken down and free of oversize material and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Over-excavation

In addition to removals and over-excavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be over-excavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise over-excavated to provide a flat subgrade for the fill.

2.5 Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 General

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of the geotechnical consultant. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing

Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing

Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations

The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than
5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 The Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

7.2 All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over

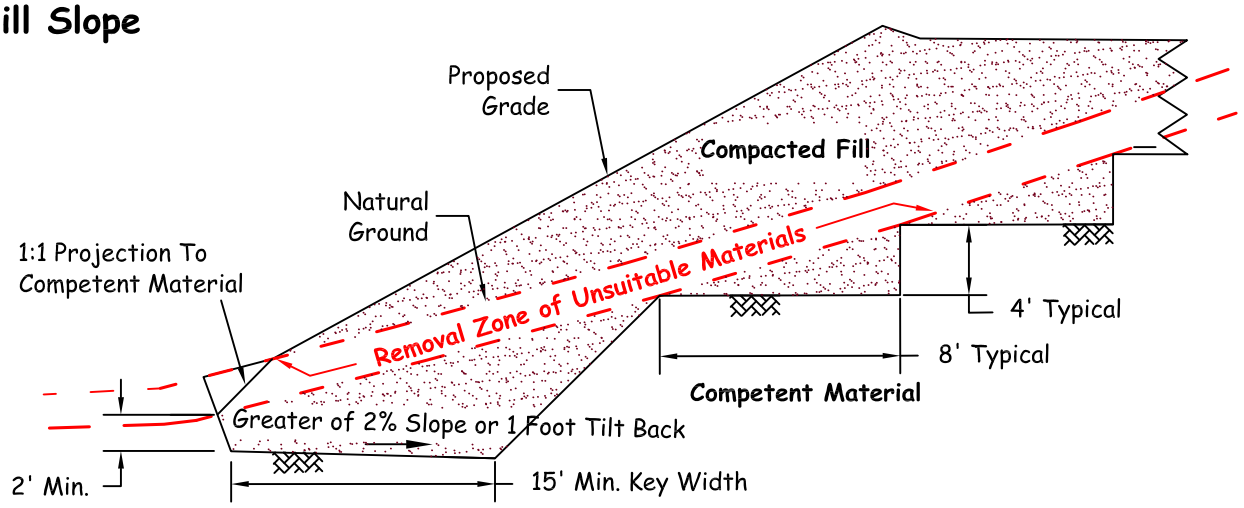
the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of maximum from 1 foot above the top of the conduit to the surface.

7.3 The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

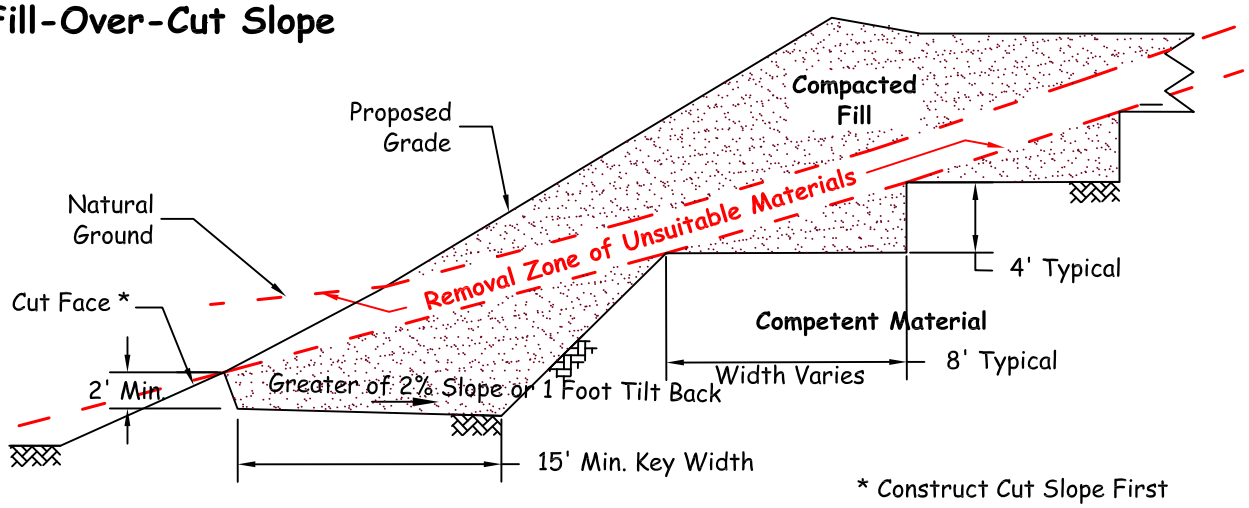
7.4 The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

Fill Slope

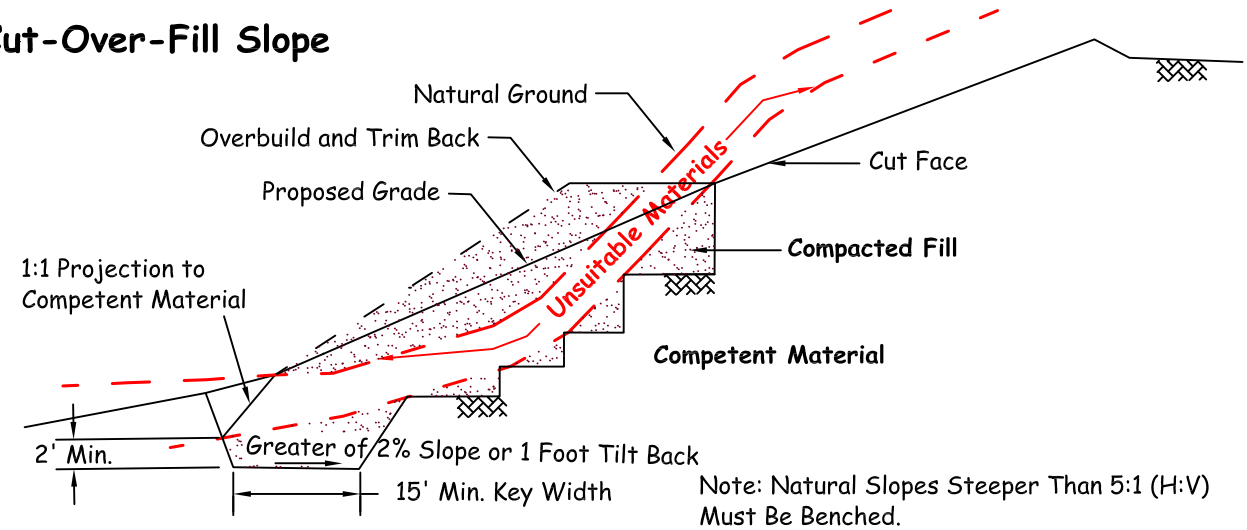


Fill-Over-Cut Slope



* Construct Cut Slope First

Cut-Over-Fill Slope



Note: Natural Slopes Steeper Than 5:1 (H:V) Must Be Benched.

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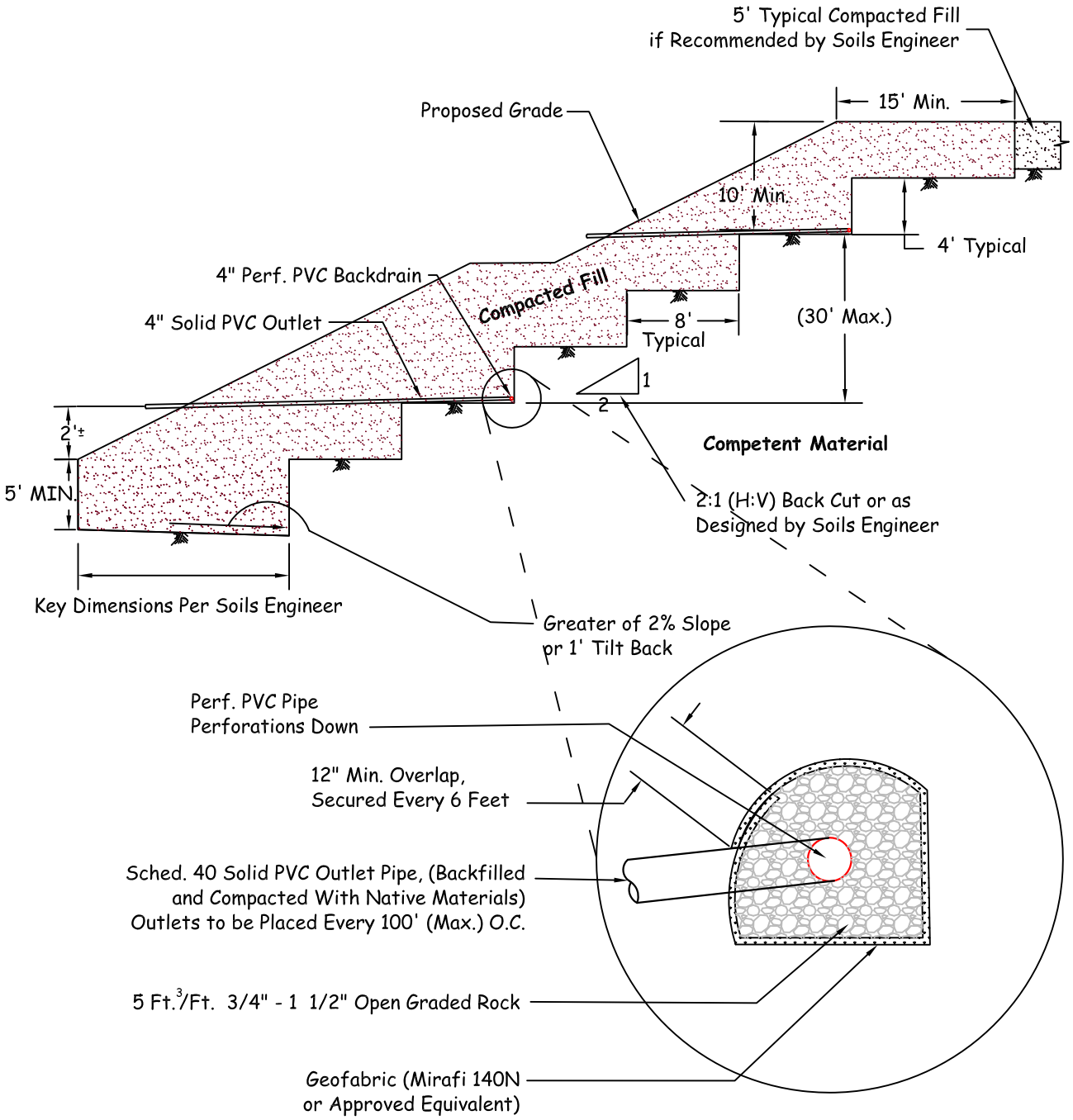
KEYING AND BENCHING



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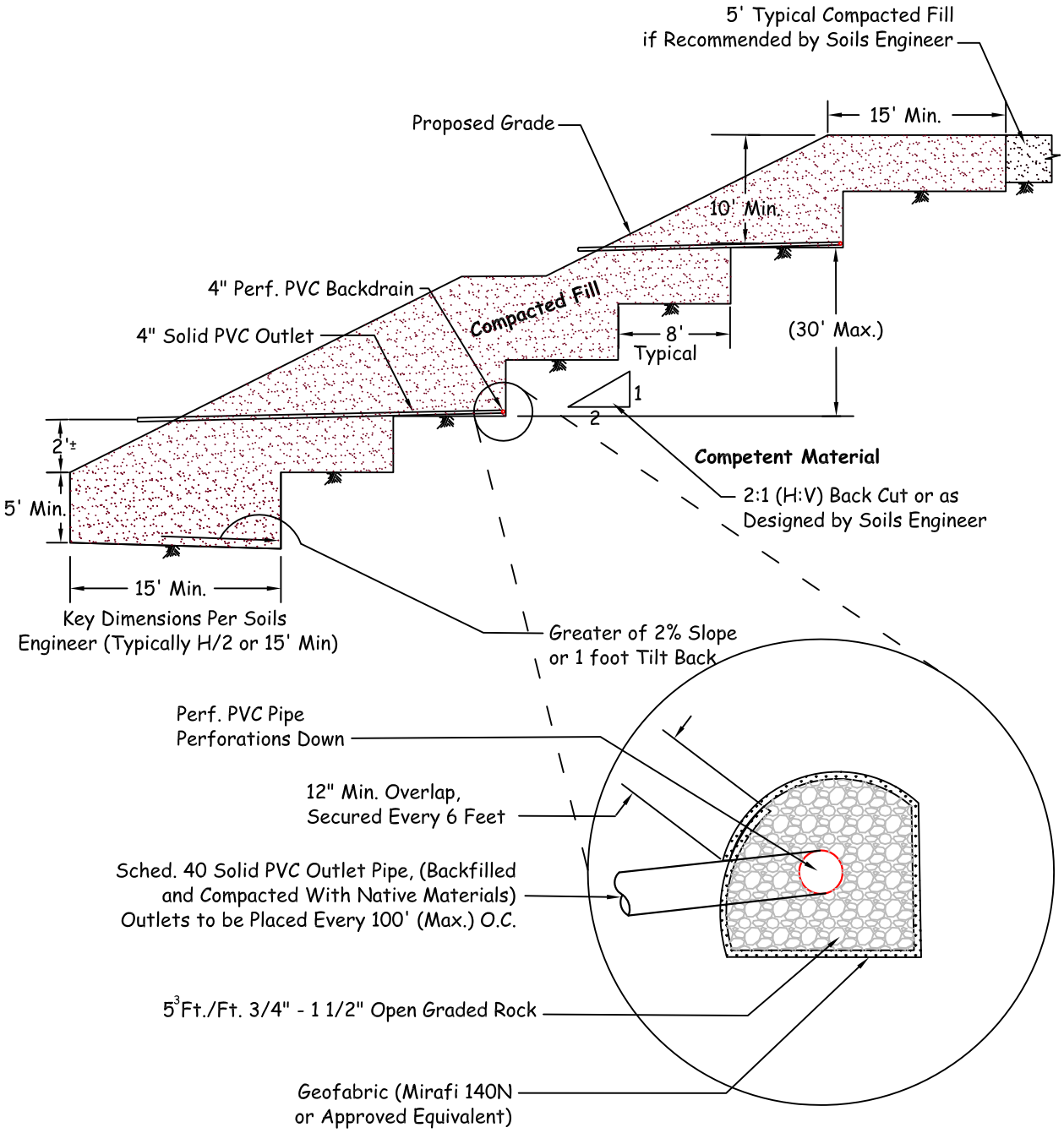
TYPICAL BUTTRESS DETAIL



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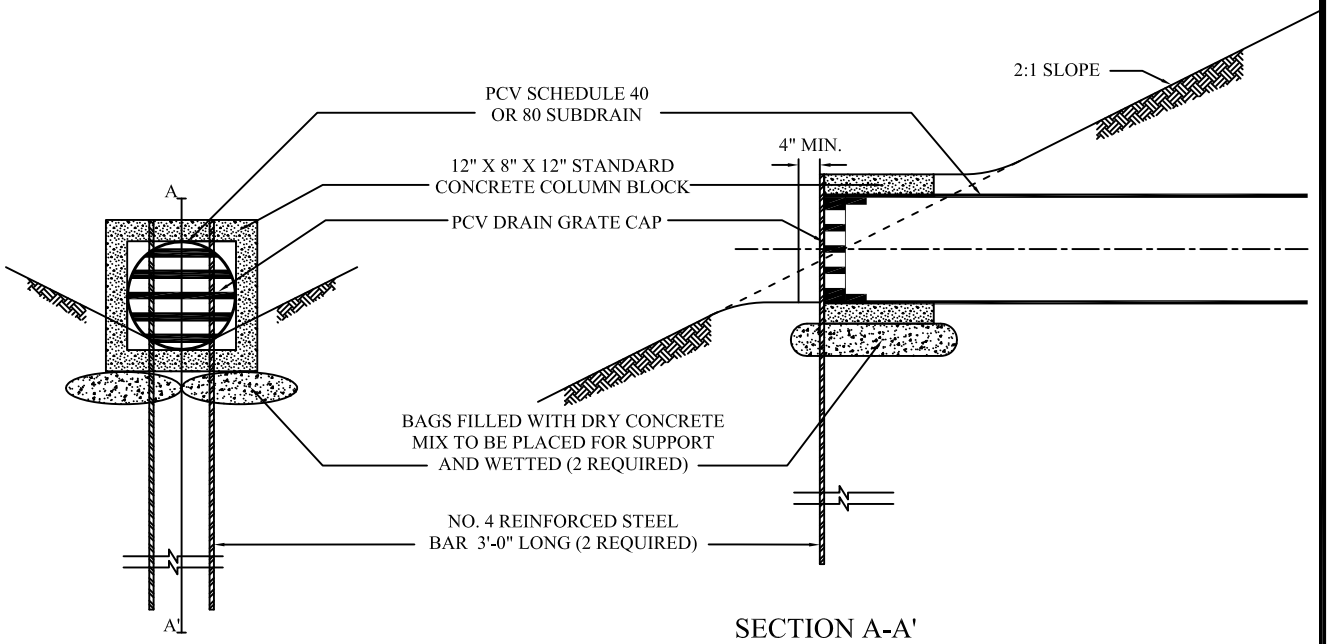
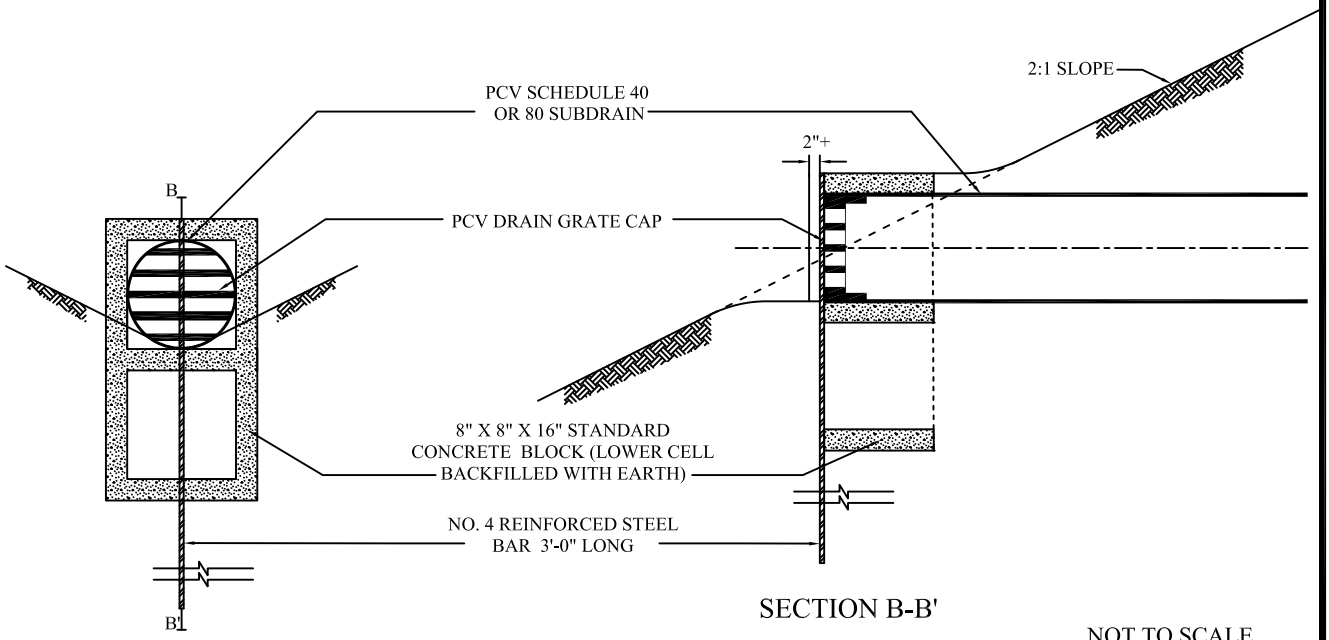
TYPICAL STABILIZATION FILL DETAIL

SUBDRAIN OUTLET MARKER -6" & 8" PIPE



SECTION A-A'

SUBDRAIN OUTLET MARKER -4" PIPE



SECTION B-B'

NOT TO SCALE

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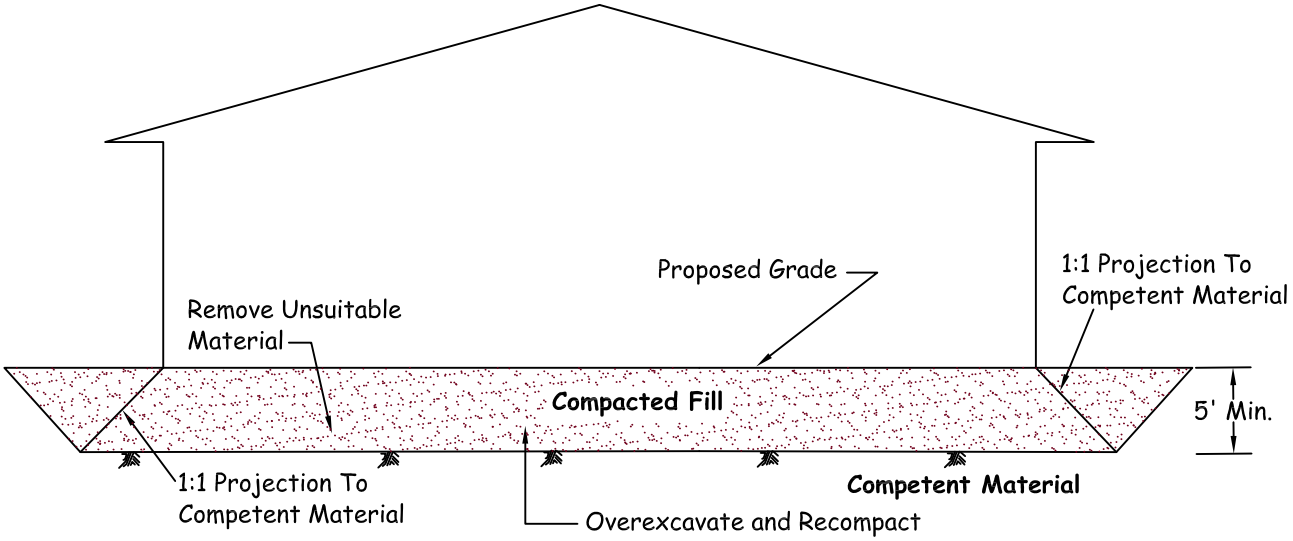
SUBDRAIN OUTLET MARKER DETAIL

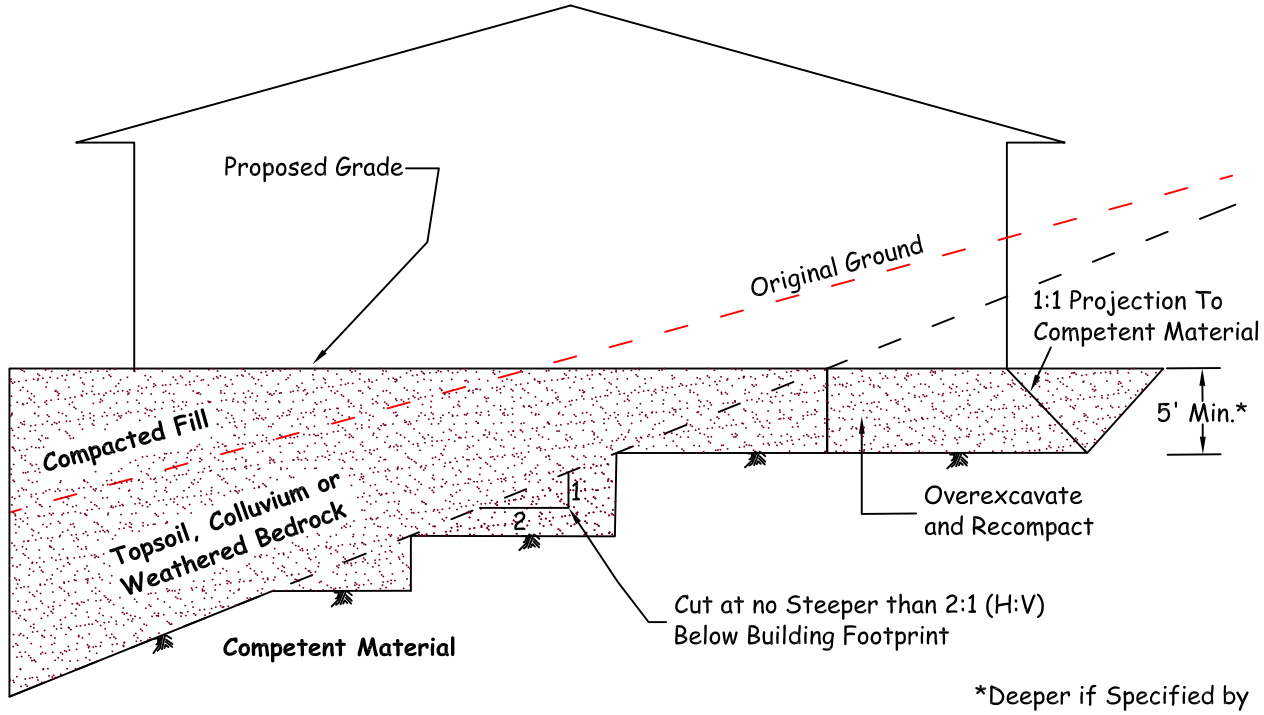
Cut Lot
(Exposing Unsuitable Soils at Design Grade)



Note 1: Removal Bottom Should be Graded With Minimum 2% Fall Towards Street or Other Suitable Area (as Determined by Soils Engineer) to Avoid Ponding Below Building

Note 2: Where Design Cut Lots are Excavated Entirely Into Competent Material, Overexcavation May Still be Required for Hard-Rock Conditions or for Materials With Variable Expansion Characteristics.

Cut/Fill Transition Lot



*Deeper if Specified by Soils Engineer

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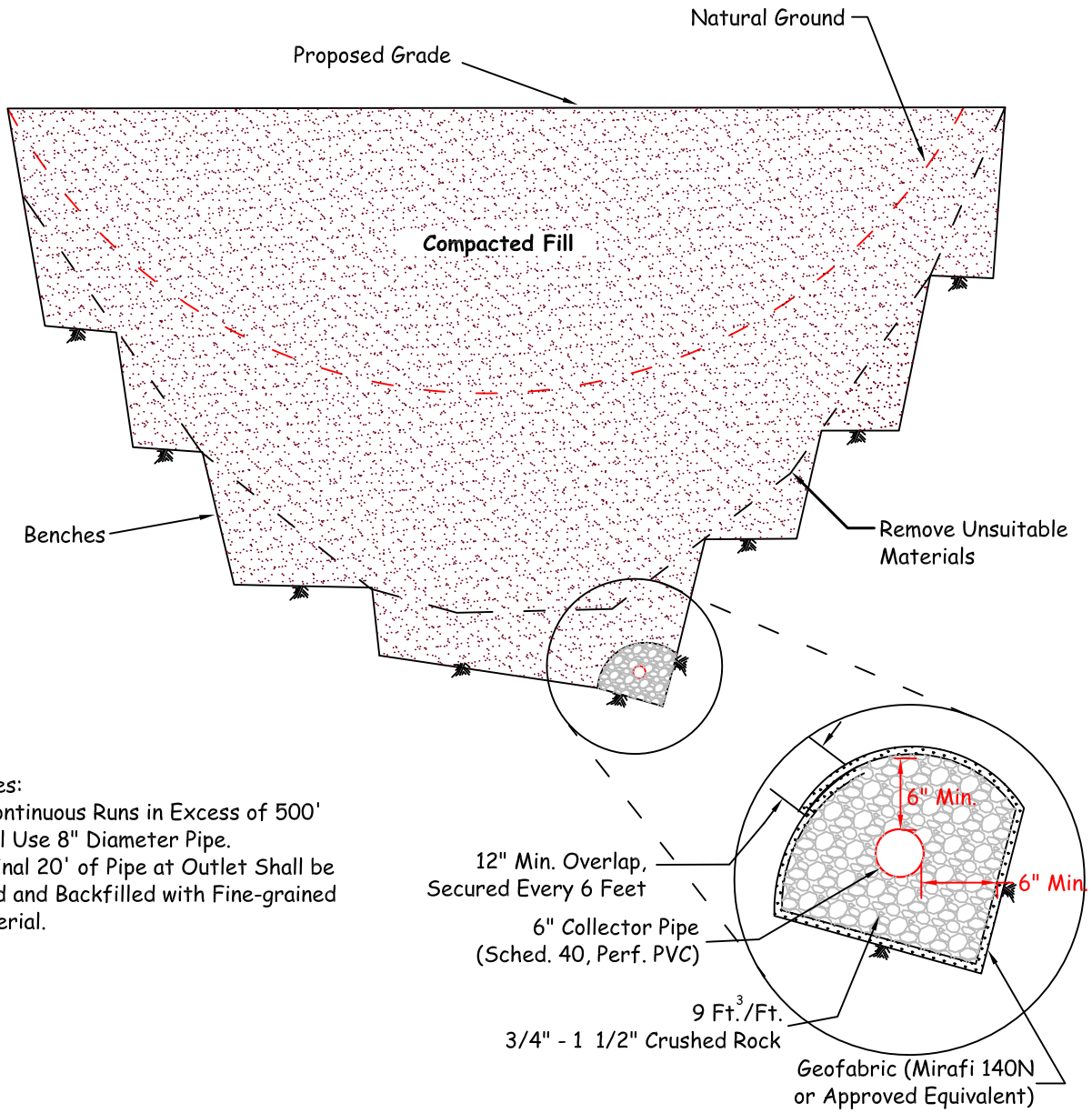
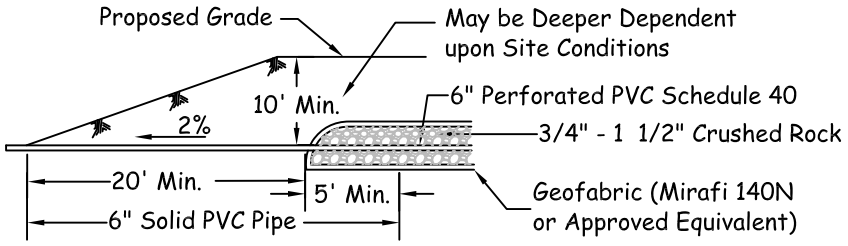
CUT AND TRANSITION LOT OVEREXCAVATION DETAIL



Notes:
1) Continuous Runs in Excess of 500' Shall Use 8" Diameter Pipe.
2) Final 20' of Pipe at Outlet Shall be Solid and Backfilled with Fine-grained Material.

Proposed Outlet Detail



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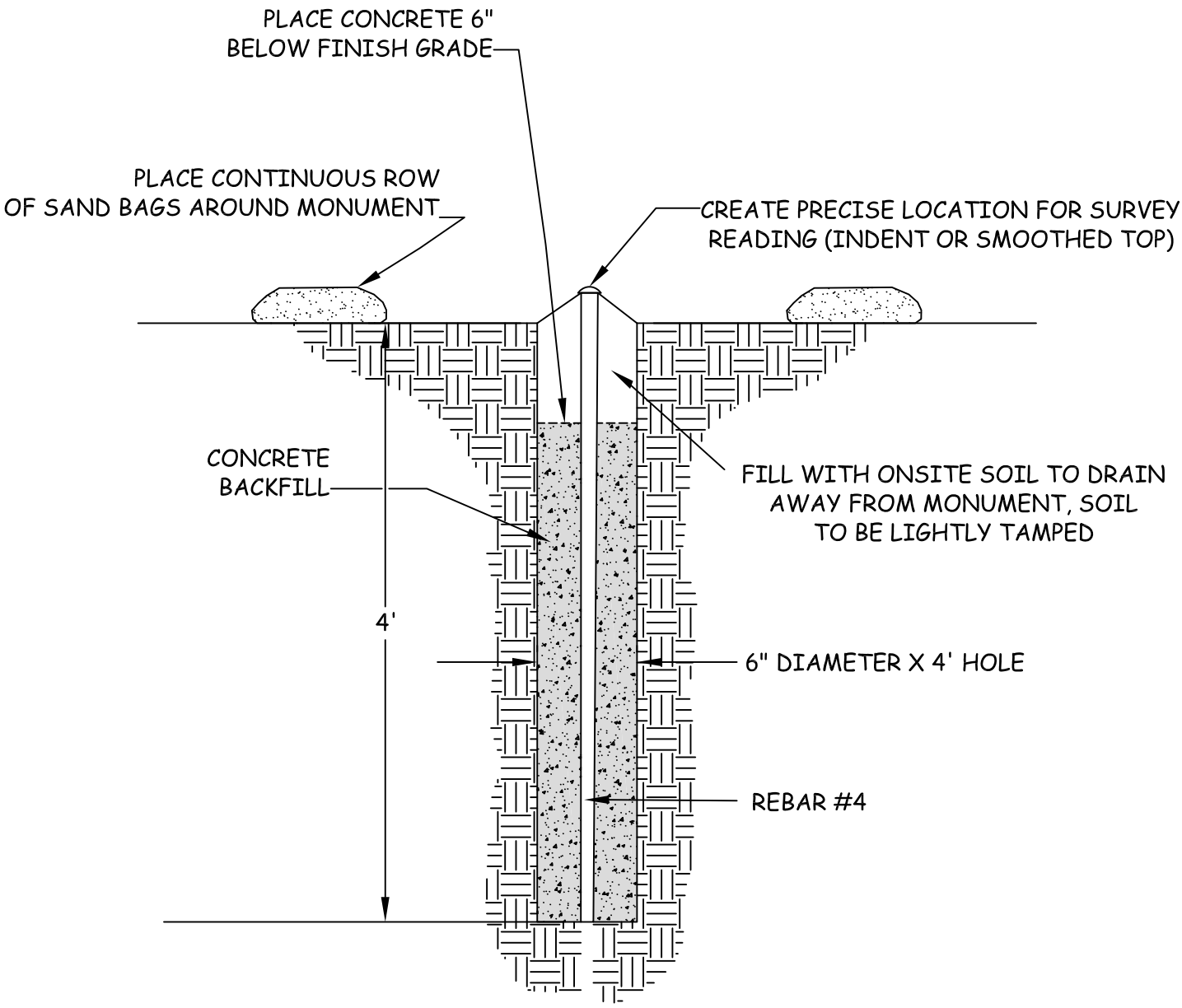
CANYON SUBDRAINS



NO CONSTRUCTION EQUIPMENT WITHIN 25 FEET
OF ANY INSTALLED SETTLEMENT MONUMENTS

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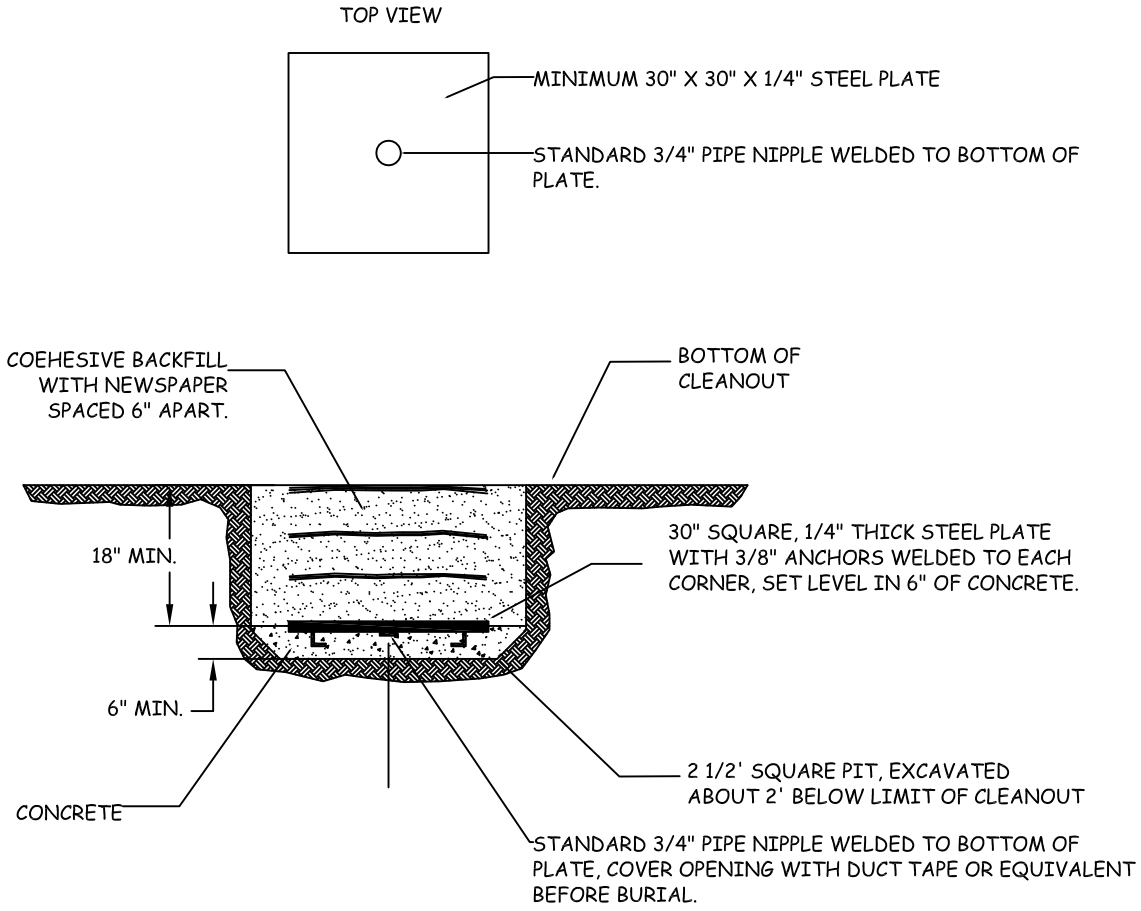
TYPICAL SURFACE SETTLEMENT MONUMENT



1. SURVEY FOR HORIZONTAL AND VERTICAL LOCATION TO NEAREST .01 INCH PRIOR TO BACKFILL USING KNOW LOCATIONS THAT WILL REMAIN INTACT DURING THE DURATION OF THE MONITORING PROGRAM. KNOW POINTS EXPLICITELY NOT ALLOWED ARE THOSE LOCATED ON FILL OR THAT WILL BE DESTROYED DURING GRADING.
2. IN THE EVENT OF DAMAGE TO SETTLEMENT PLATE DURING GRADING, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE GEOTECHNICAL ENGINEER AND SHALL BE RESPONSIBLE FOR RESTORING THE SETTLEMENT PLATES TO WORKING ORDER.
3. DRILL TO RECOVER AND ATTACH RISER PIPE.

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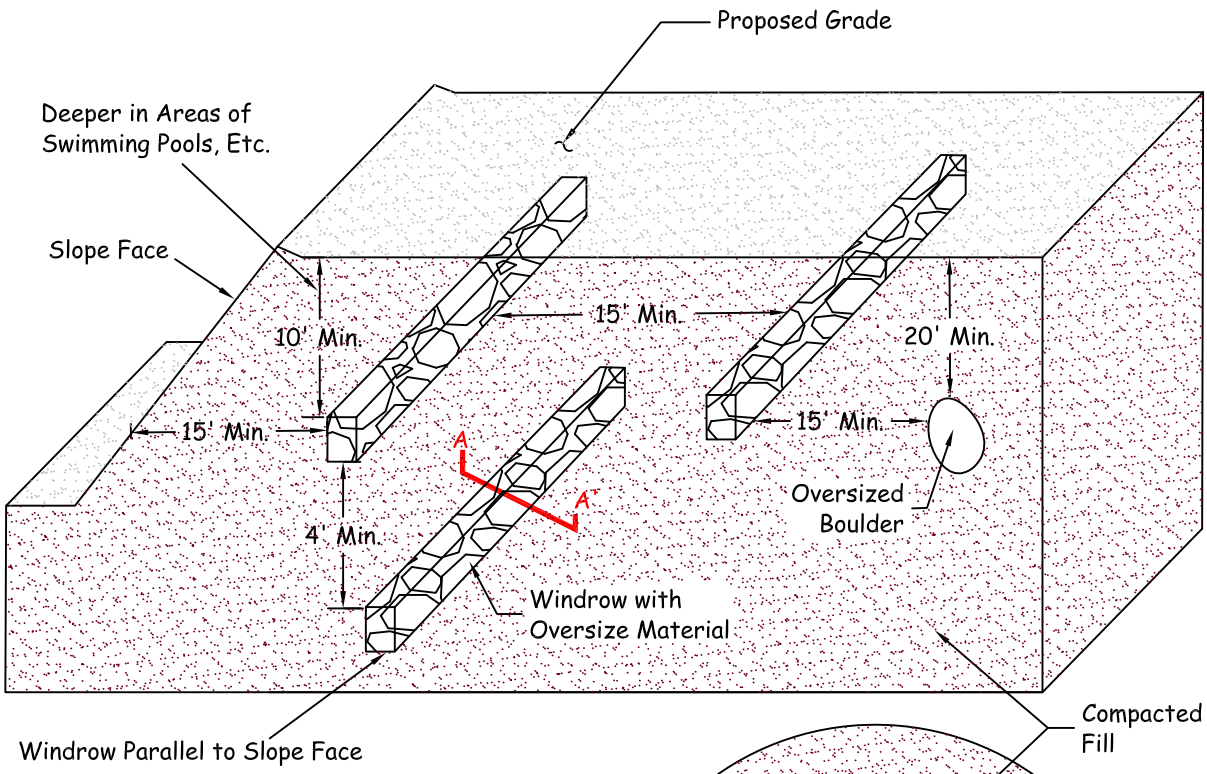
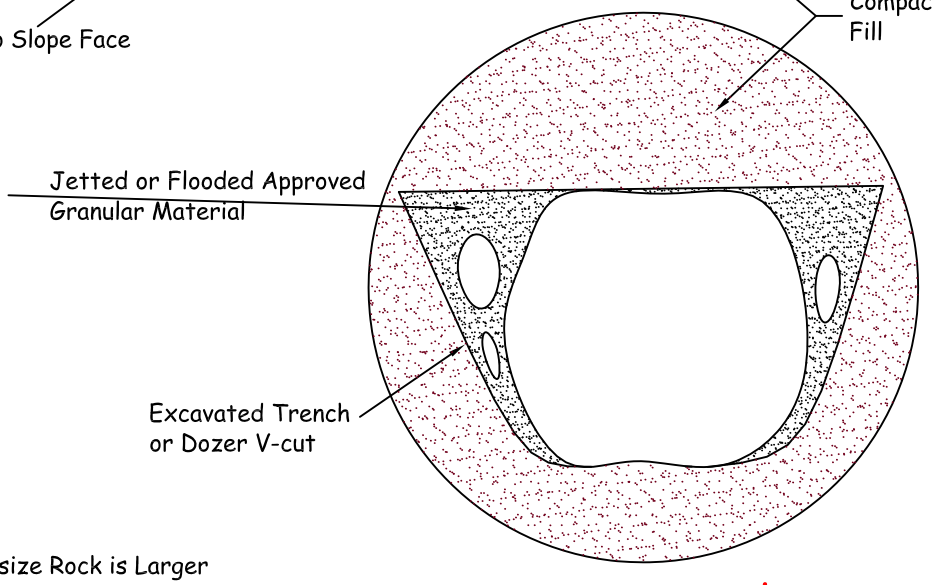
TYPICAL SETTLEMENT PLATE AND RISER





Note: Oversize Rock is Larger
than 8" in Maximum Dimension.

Section A-A'

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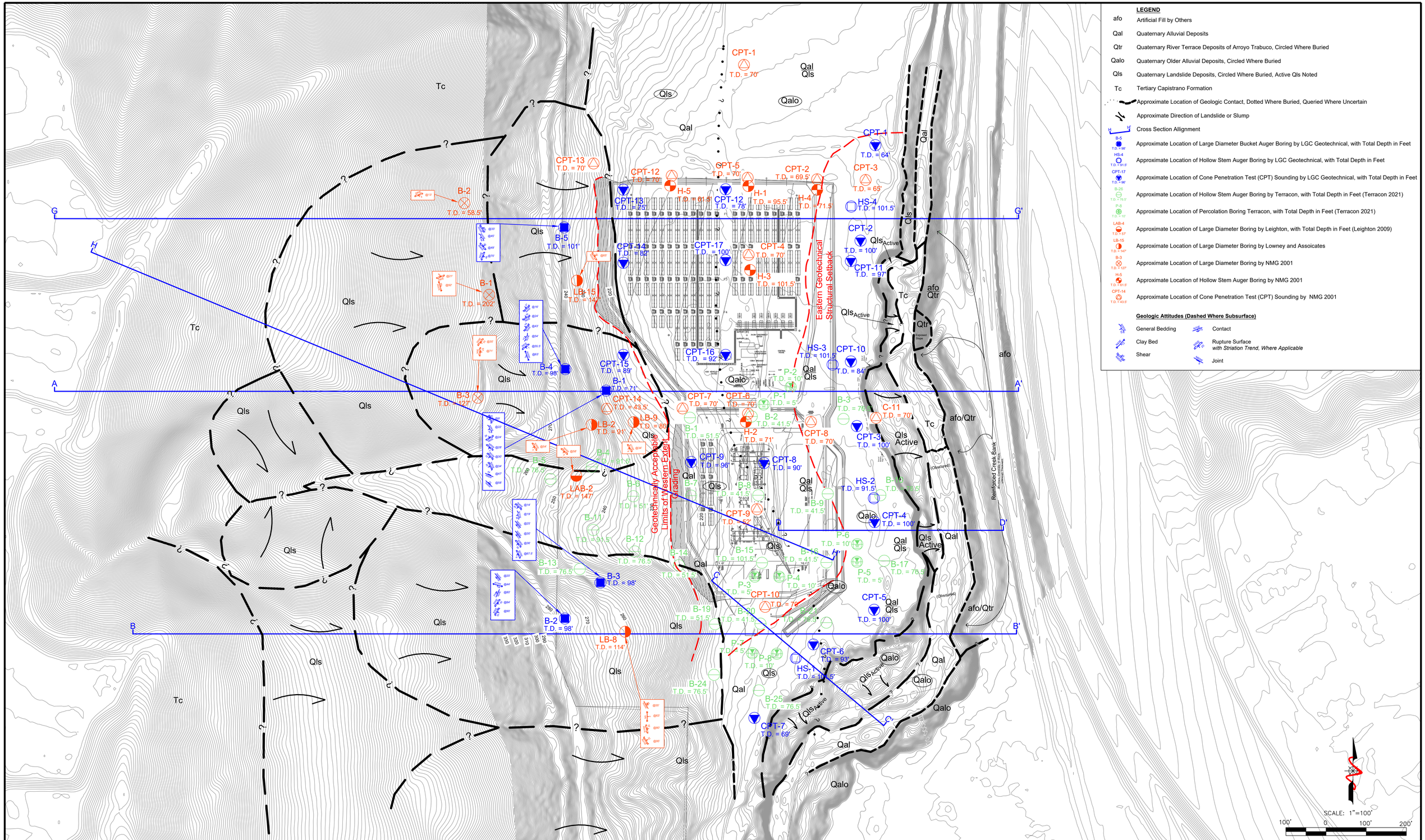
OVERSIZE ROCK DISPOSAL DETAIL



LEGEND

afo	Artificial Fill by Others
Qal	Quaternary Alluvial Deposits
Qtr	Quaternary River Terrace Deposits of Arroyo Trabuco, Circled Where Buried
Qalo	Quaternary Older Alluvial Deposits, Circled Where Buried
Qls	Quaternary Landslide Deposits, Circled Where Buried, Active Qls Noted
Tc	Tertiary Capistrano Formation
	Approximate Location of Geologic Contact, Dotted Where Buried, Queried Where Uncertain
	Approximate Direction of Landslide or Slump
H H'	Cross Section Allignment
B-5 T.D. = 98'	Approximate Location of Large Diameter Bucket Auger Boring by LGC Geotechnical, with Total Depth in Feet
HS-4 T.D. = 91.5'	Approximate Location of Hollow Stem Auger Boring by LGC Geotechnical, with Total Depth in Feet
CPT-17 T.D. = 98'	Approximate Location of Cone Penetration Test (CPT) Sounding by LGC Geotechnical, with Total Depth in Feet
B-26 T.D. = 76.5'	Approximate Location of Hollow Stem Auger Boring by Terracon, with Total Depth in Feet (Terracon 2021)
P-8 T.D. = 10'	Approximate Location of Percolation Boring Terracon, with Total Depth in Feet (Terracon 2021)
LAB-4 T.D. = 57'	Approximate Location of Large Diameter Boring by Leighton, with Total Depth in Feet (Leighton 2009)
LB-15 T.D. = 147'	Approximate Location of Large Diameter Boring by Lowney and Assoicates
B-3 T.D. = 127'	Approximate Location of Large Diameter Boring by NMG 2001
H-5 T.D. = 61.5'	Approximate Location of Hollow Stem Auger Boring by NMG 2001
CPT-14 T.D. = 43.5'	Approximate Location of Cone Penetration Test (CPT) Sounding by NMG 2001

Geologic Attitudes (Dashed Where Subsurface)

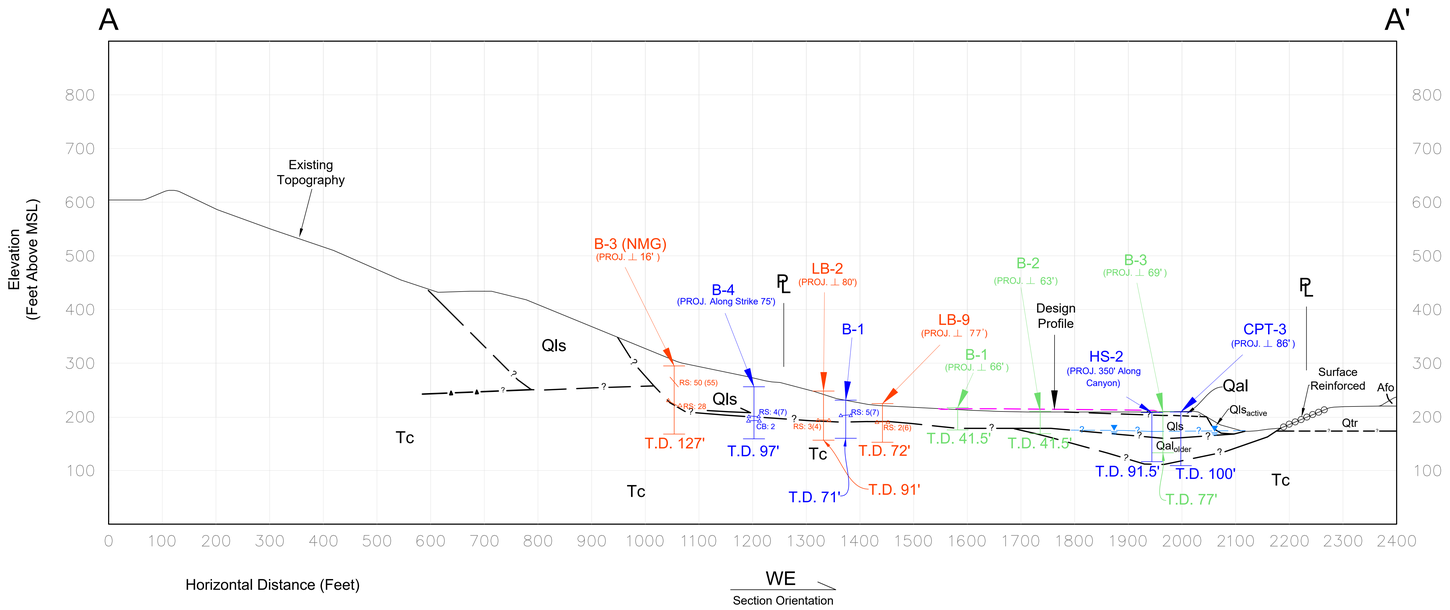
General Bedding	Contact
Clay Bed	Rupture Surface *with Striation Trend, Where Applicable*
Shear	Joint

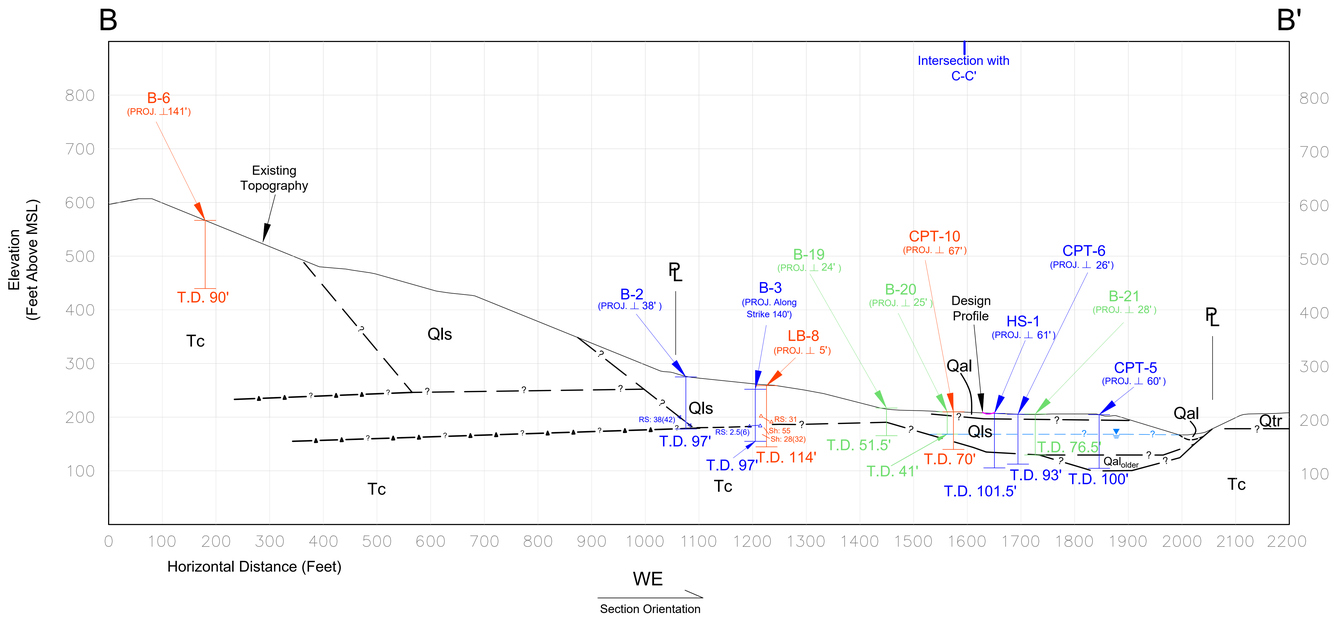
LGC Geotechnical, Inc.
131 Calle Iglesia, Ste. 200
San Clemente, CA 92672
TEL (949) 369-6141 FAX (949) 369-6142

Geotechnical Map

PROJECT NAME	Compass BESS - SJC
PROJECT NO.	22011-01
ENG. / GEOL.	BTZ / KBC
SCALE	1" = 100'
DATE	April 2024

SHEET 1 of 4





SCALE: 1"=100'

100' 0 100' 200'

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131 Calle Iglesia, Ste. 200
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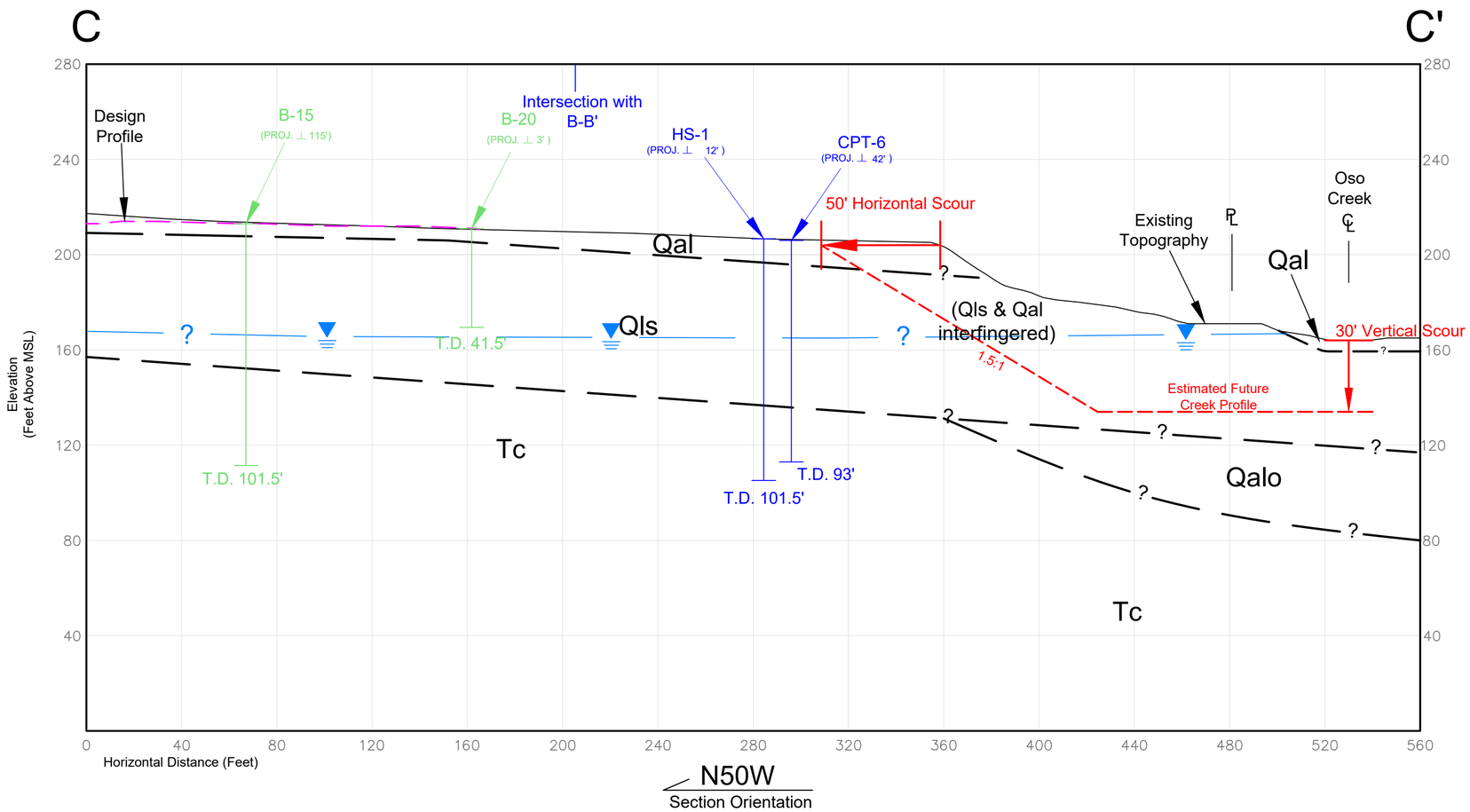
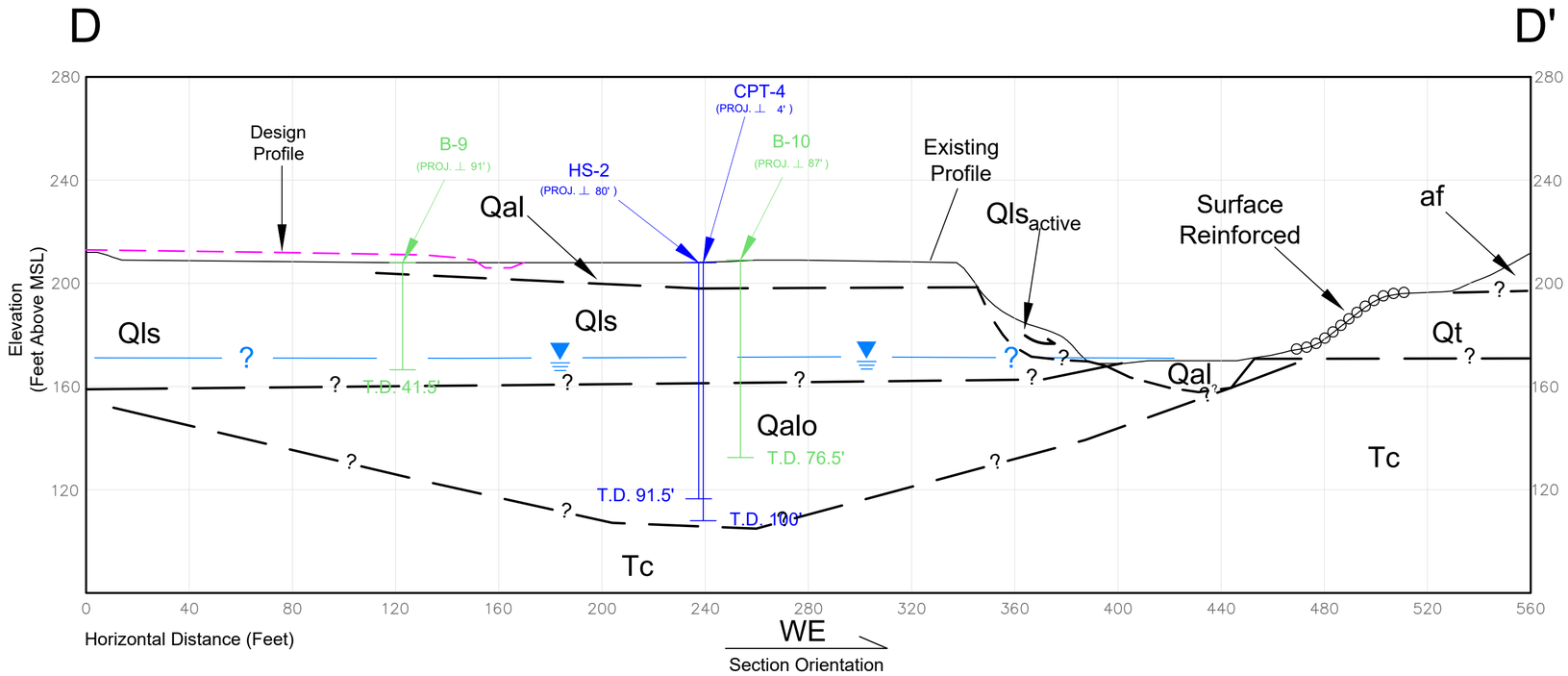
Cross Sections A-A' and B-B'

PROJECT NAME	Compass BESS - SJC
PROJECT NO.	22011-01
ENG. / GEOL.	BTZ / KBC
SCALE	1" = 100'
DATE	April 2024





SCALE: 1"=40'

40' 0 40' 80'

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131 Calle Iglesia, Ste. 200
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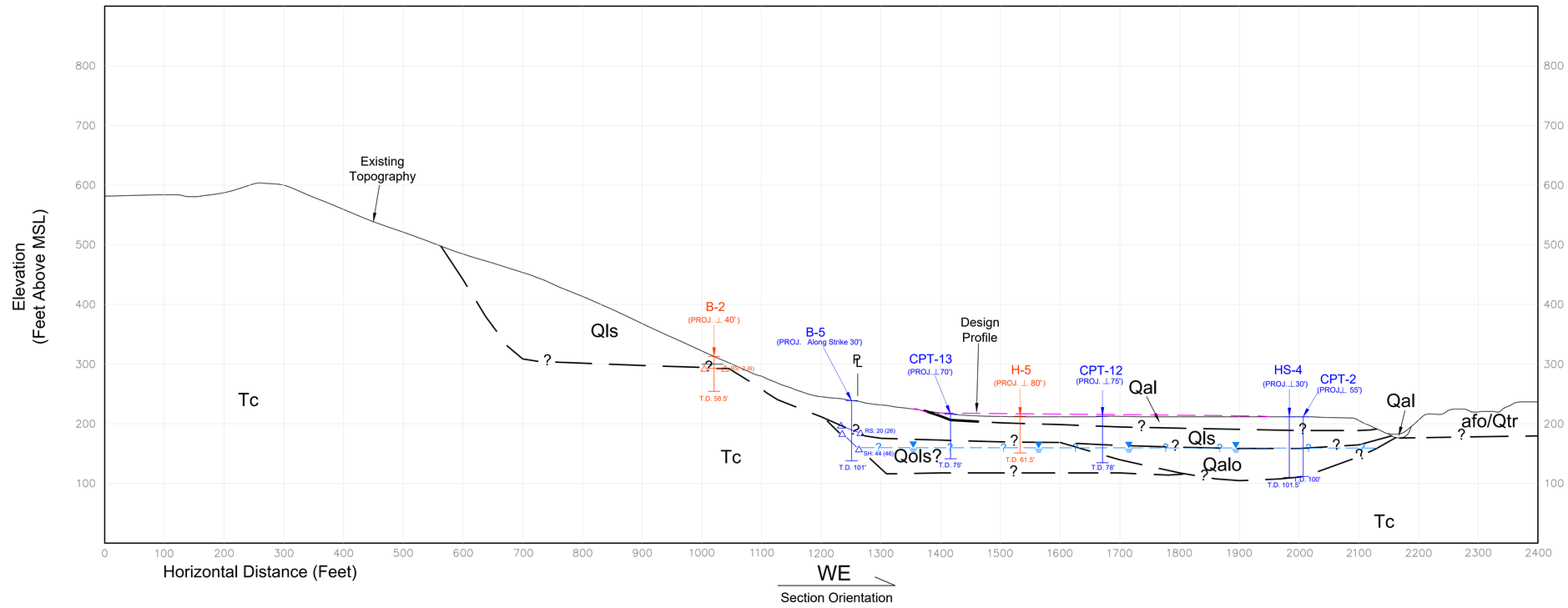
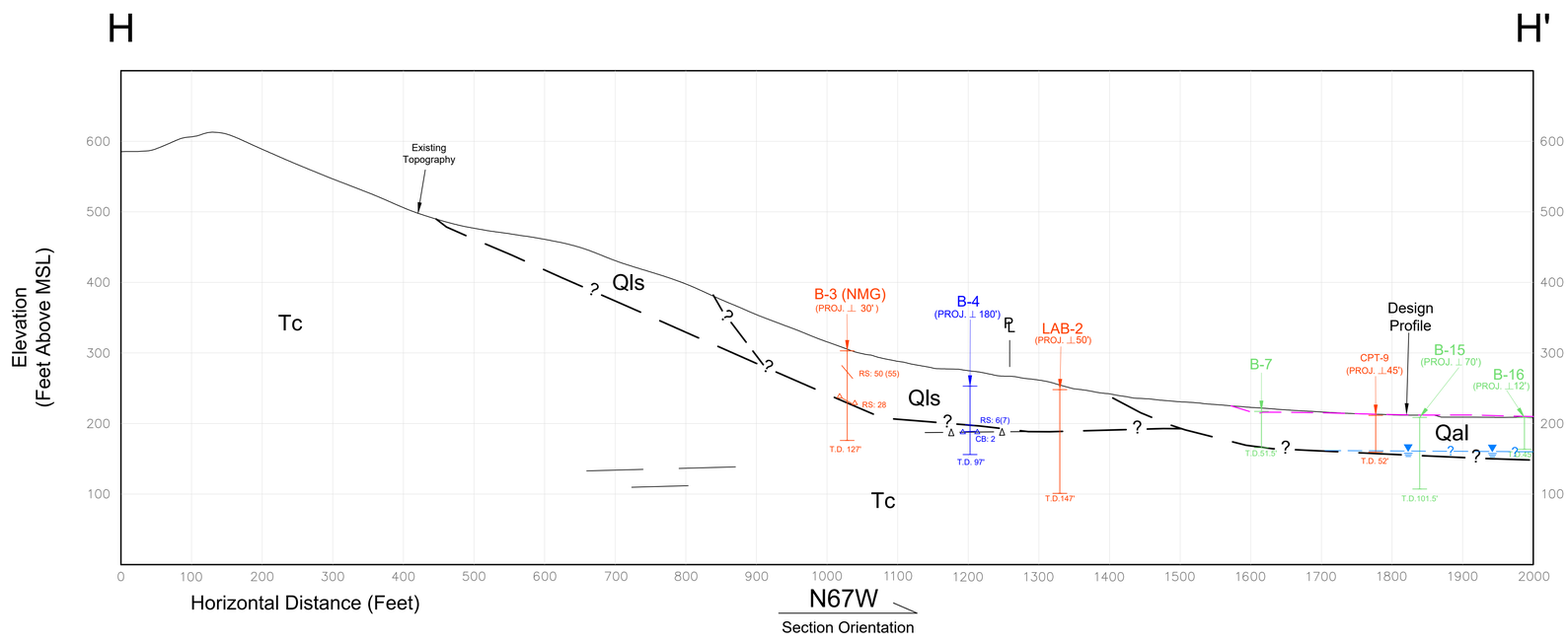
TEL (949) 369-6141 FAX (949) 369-6142

Cross Sections C-C' and D-D'

PROJECT NAME	Compass BESS - SJC
PROJECT NO.	22011-01
ENG. / GEOL.	BTZ / KBC
SCALE	1" = 40'
DATE	April 2024





SCALE: 1"=100'

100' 0 100' 200'

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LGC Geotechnical, Inc.
131 Calle Iglesia, Ste. 200
San Clemente, CA 92672
TEL (949) 369-6141 FAX (949) 369-6142

Cross Sections G-G' and H-H'

PROJECT NAME	Compass BESS - SJC
PROJECT NO.	22011-01
ENG. / GEOL.	BTZ / KBC
SCALE	1" = 100'
DATE	April 2024

SHEET 4 of 4