Geotechnical Data Report

East Leeville Marsh Creation and Nourishment (BA-194)

Lafourche Parish, Louisiana

for

Coastal Protection and Restoration Authority

October 8, 2018

GeoEngineers
Earth Science + Technology

Geotechnical Data Report

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GeoEngineers

11955 Lakeland Park Boulevard, Suite 100
Baton Rouge, Louisiana 70809
225.293.2460

Geotechnical Data Report

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

File No. 18274-004-01

October 8, 2018

Prepared for:

Coastal Protection and Restoration Authority
150 Terrace Street
Baton Rouge, Louisiana 70802

Attention: Bill Feazel, PE, PLS

Prepared by:

GeoEngineers, Inc.
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Staff Geotechnical Engineer

David S. Eley, PE
Principal

STATE OF LOUISIANA
DAVID S. ELEY
REG. No. 28373
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

ARS:JMP:kc

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INTRODUCTION AND PROJECT UNDERSTANDING

GeoEngineers, Inc. (GeoEngineers) is pleased to present this geotechnical data report to the Coastal Restoration and Protection Authority (CPRA) in support of the East Leeville Marsh Creation and Nourishment project located in Lafourche Parish, Louisiana. Our services were completed under our contract between CPRA and GeoEngineers (CPRA Contract No. 4400010334 "Geotechnical Services for CPRA") and were authorized by the Notice to Proceed document dated March 15, 2018, for Task 2.

Our understanding of the project is based on the information provided by CPRA and our March 6, 2018, proposal. The marsh creation site is located one to three miles east of the town of Leeville and Bayou Lafourche, as shown in Figure 1. The project area has experienced widespread and rapid land loss resulting from subsidence, wind erosion, storms, and altered hydrology. We understand the objective of this project is to create an arc of wetlands along the northern side of the Southwestern Louisiana Canal, Lake Jesse, and the west side of South Lake. The borrow material will be sourced from Caminada Bay approximately three miles east of the marsh creation area (Figure 1), and the project is estimated to create and/or nourish approximately 530 acres of marsh. The marsh creation areas and borrow area are shown in Figures 2 and 3, respectively.

This report contains discussions of our geotechnical exploration and laboratory testing. Our engineering recommendations will be presented under separate cover. All elevations described in this report, including figures and appendices, are referenced to the North American Vertical Datum of 1988 (NAVD88), Geoid 12A.

FIELD EXPLORATION

GeoEngineers performed field exploration soil borings and cone penetration test (CPT) soundings in the marsh creation and borrow areas of the East Leeville project. Field exploration was conducted on April 16, 2018, through April 26, 2018. The exploration locations are shown in Figures 2 and 3, and subsurface profiles are provided in Figures 4 through 6. Further details of our field exploration are discussed in Appendix A.

Survey

Prior to our field exploration, Lonnie G. Harper & Associates, Inc. (LGH) surveyed and staked the boring and CPT locations in the field. LGH performed a magnetometer survey at each proposed exploration location to clear a 30-foot radius of any detected anomalies. LGH's report is provided in Appendix B.

Marsh Creation Area

Our explorations in the marsh creation area consisted of 11 soil borings ranging in depths from 40 feet to 60 feet each below the mudline and 25 CPT soundings to a depth of about 40 feet (or shallower if refusal was encountered) each below the mudline. The soil borings were completed with a pontoon boat mounted drill rig and triple-engine airboat mounted drill rig, and the CPT soundings were completed with a single engine airboat mounted CPT rig. The marsh creation area soil boring logs and associated laboratory testing results are provided in Appendices C and D, respectively. The marsh creation area CPT logs are provided in Appendix E.

Borrow Area

Our explorations in the borrow area consisted of 8 soil borings each extending to a depth of about 20 feet below the mudline. The soil borings were completed with a pontoon boat mounted drill rig. The borrow area soil boring logs and associated laboratory testing results are provided in Appendices F and G, respectively.

LABORATORY TESTING

Intact soft to medium semi-cohesive and cohesive samples obtained from the marsh creation area were subjected to laboratory miniature vane (mini vane) shear testing prior to extrusion. Upon extrusion, each sample was examined to confirm or modify field classifications. Samples obtained from the borrow area were extruded and classified in the field.

Representative soil samples from each area were selected for laboratory testing consisting of moisture content, dry unit weight, unconsolidated-undrained triaxial compression, organic content, grain size analysis, consolidation testing, specific gravity, and/or Atterberg limits.

VARIATIONS

Interpretations of soil conditions, as described in the soil boring logs, are based on field and laboratory data described in this report. Variations in soil conditions are likely to exist between the exploration locations and seasonal variation in surface water and groundwater conditions will occur. Tidal influence should be expected in the project area and must be considered in the project design and construction.

LIMITATIONS

The information presented in this report is based on field explorations completed for this study and judgements made by GeoEngineers. This report is specific to the East Leeville project site and should not be used other than for the design of the East Leeville Marsh Creation and Nourishment (BA-194) project located in Lafourche Parish, Louisiana. We have provided the requested information for the geotechnical data report in this document.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in the field of geotechnical engineering in this area at the time this report was prepared. No warranty or other conditions expressed or implied should be understood.

Please refer to Appendix H titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

FIGURES

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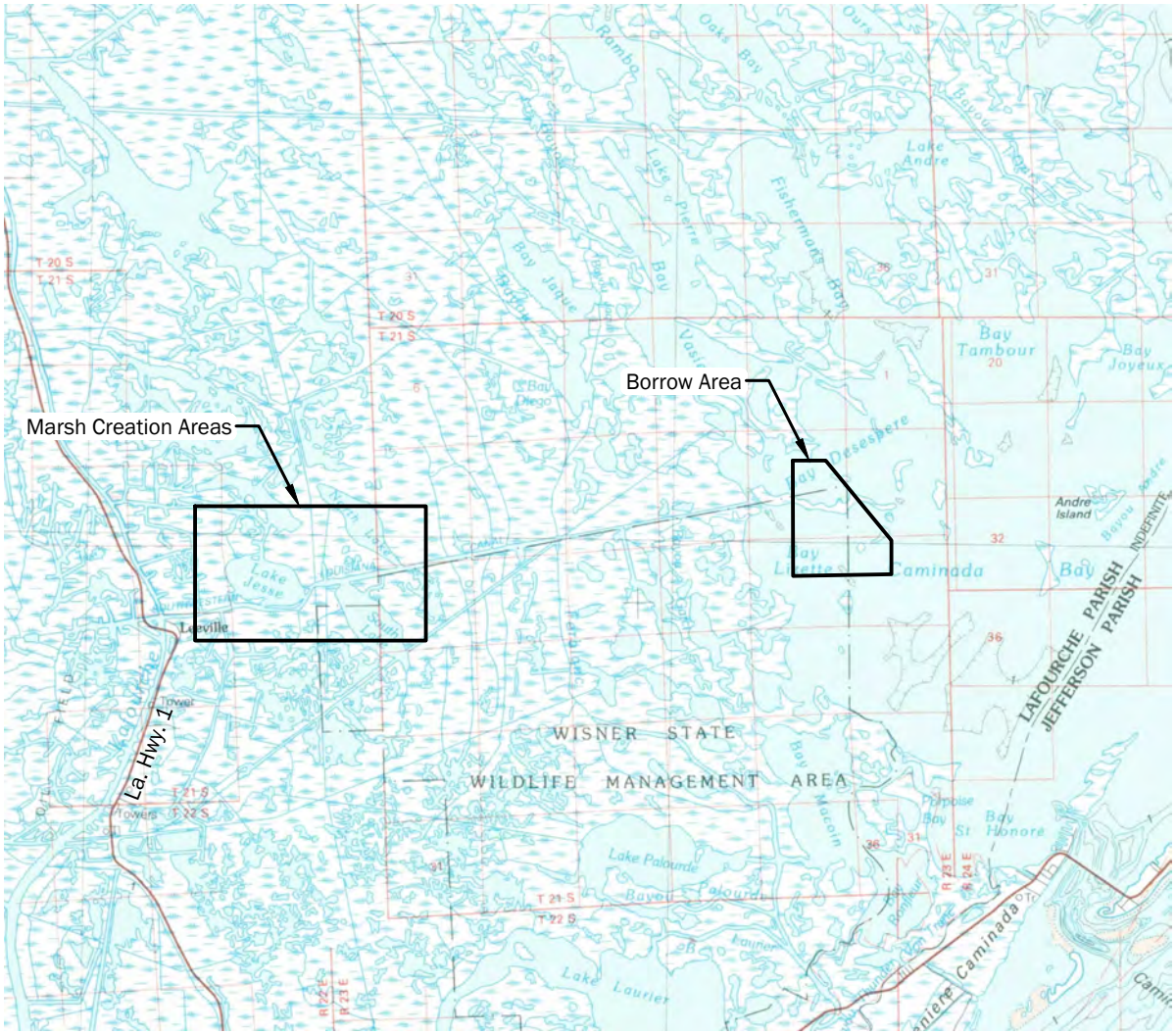

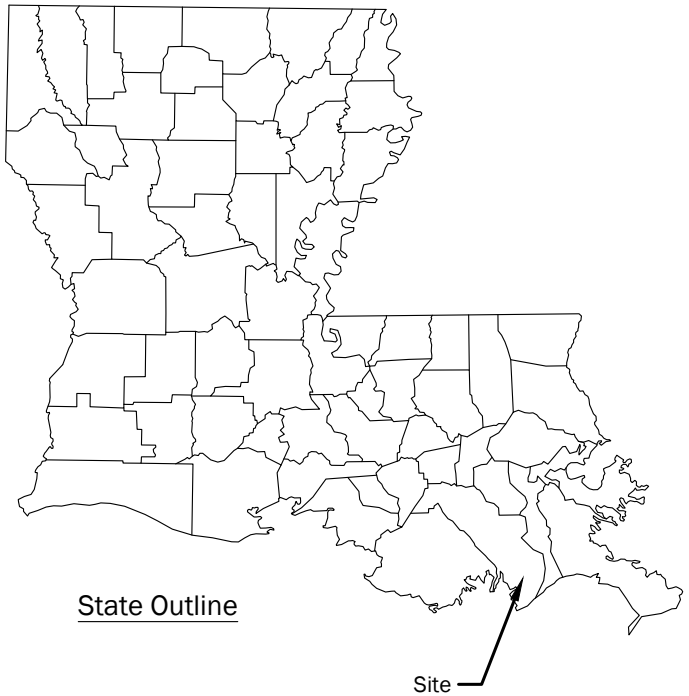

Notes:

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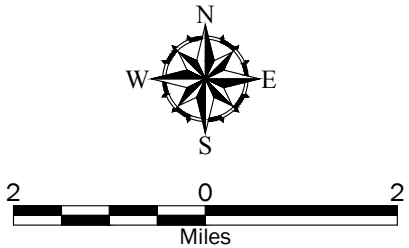
Data Source: Topographic image was taken from USGS, Quad: Terrebonne, Dated: 1983

Projection: LA State Plane, South Zone, NAD83, US Foot



Vicinity Map

East Leeville Marsh Creation and Nourishment
(BA-194)
Lafourche Parish, Louisiana

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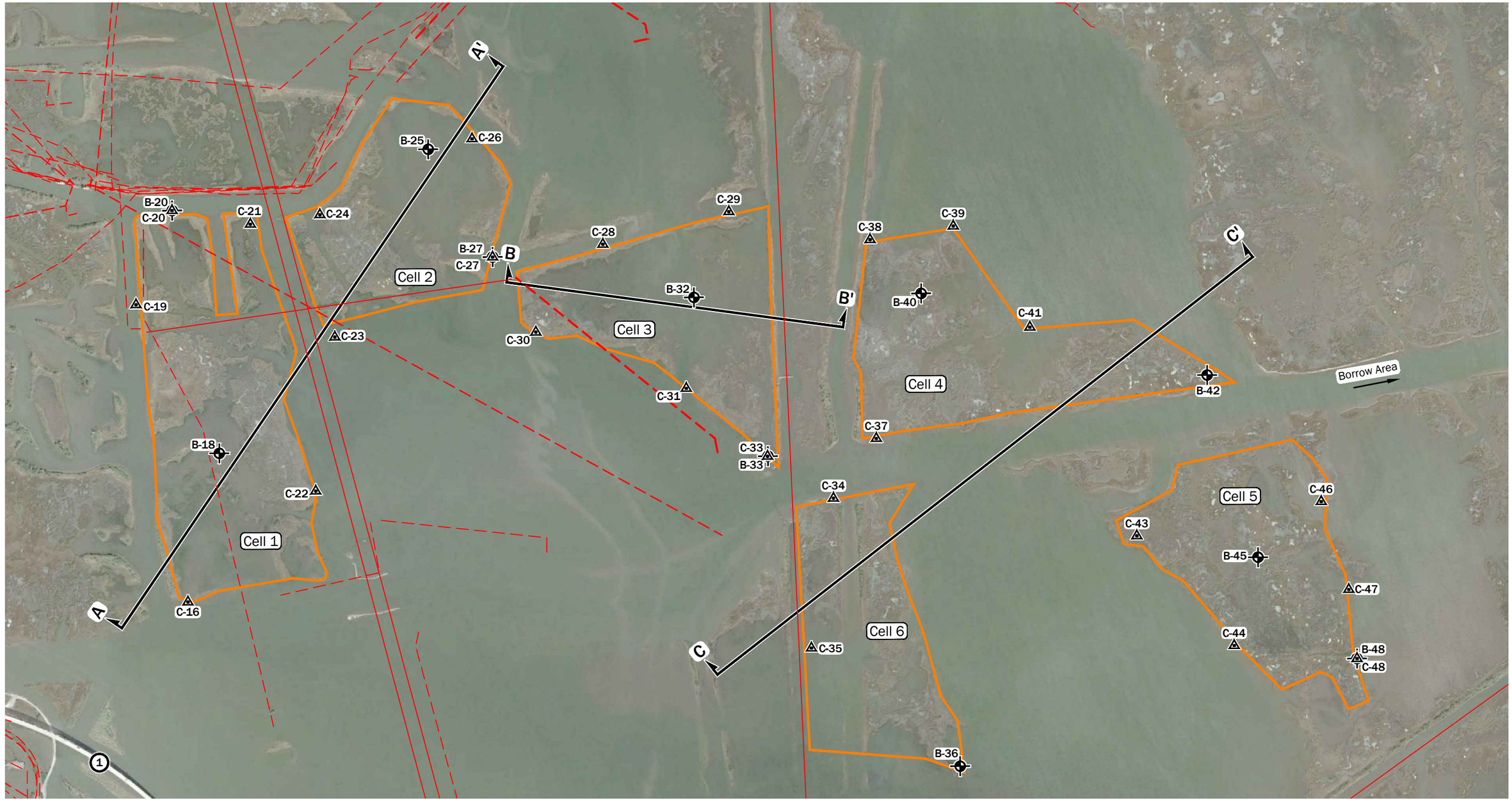
Figure 1



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Data Source: Aerial was taken from Google Earth, Imagery Dated: 1/25/2015
Pipelines were taken from Sonris (Dated 9/13/2018), and emails from Kinetica (Dated 4/10/2018), Hilcorp (Dated 4/10/2018), LOOP (Dated 4/9/2018), Shell (Dated 4/10/2018)

Projection: LA State Plane, South Zone, NAD83, US Foot

N W E S

1000 0 1000
Feet

Legend

- B-18 — Boring by GeoEngineers, 2018
- CPT-16 — Cone Penetrometer Test by GeoEngineers, 2018
- A A' — Cross Section Location
- Pipelines (from SONRIS)
- Pipelines (Verified by Surveyor & Pipeline entities)
- Marsh Creation Areas

Marsh Creation Area Site Plan

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

GeoEngineers

Figure 2

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Legend

- Pipelines (from SONRIS)
- Pipelines (Verified by Surveyor & Pipeline entities)
- B-1 Boring by GeoEngineers, 2018
- Borrow Area
- D D' Cross Section Location

Notes:

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Projection: LA State Plane, South Zone, NAD83, US Foot

N W E S

2000 0 2000
Feet

Borrow Area
Site Plan

East Leeville Marsh Creation and Nourishment
(BA-194)
Lafourche Parish, Louisiana

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Figure 3

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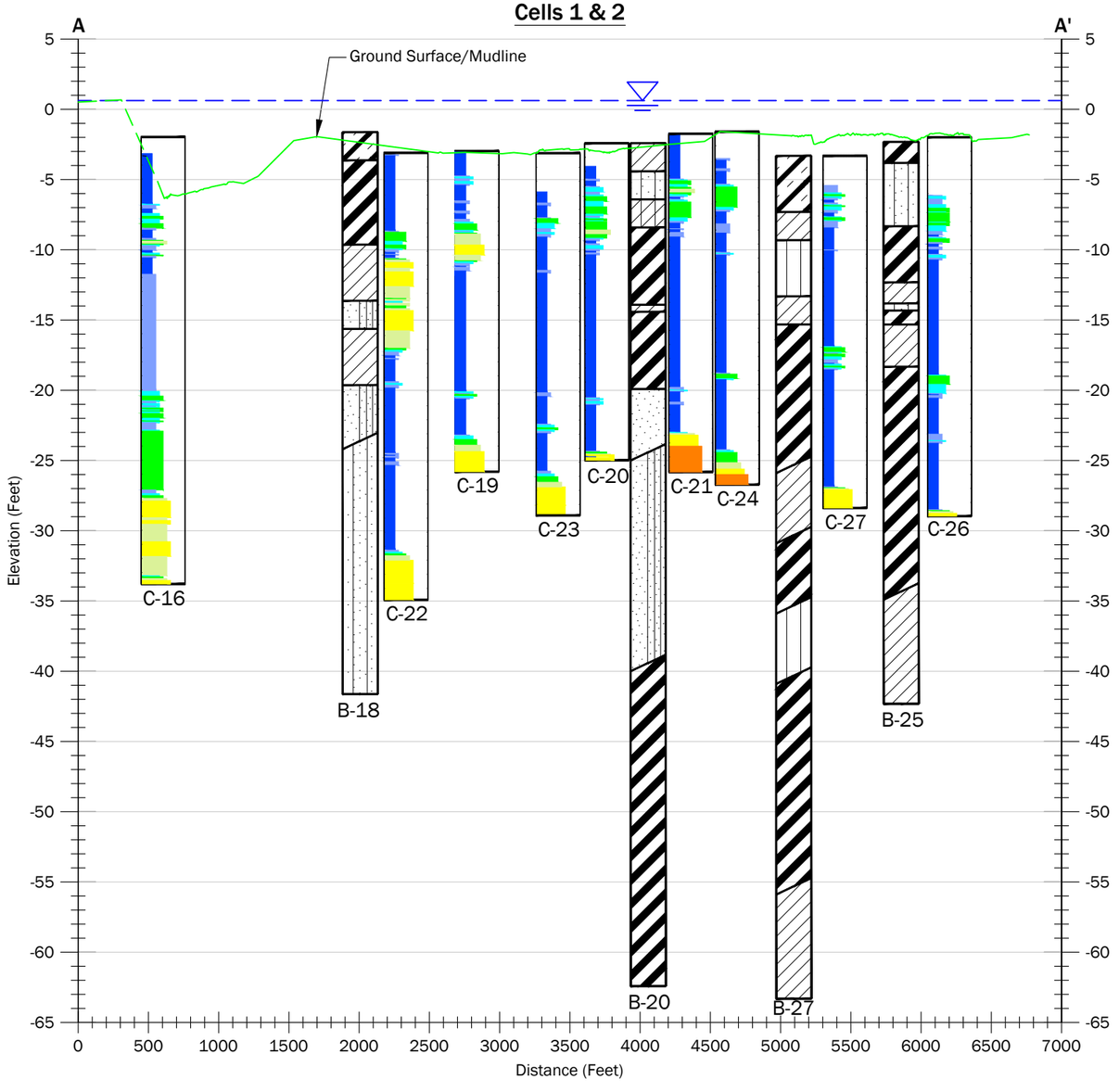

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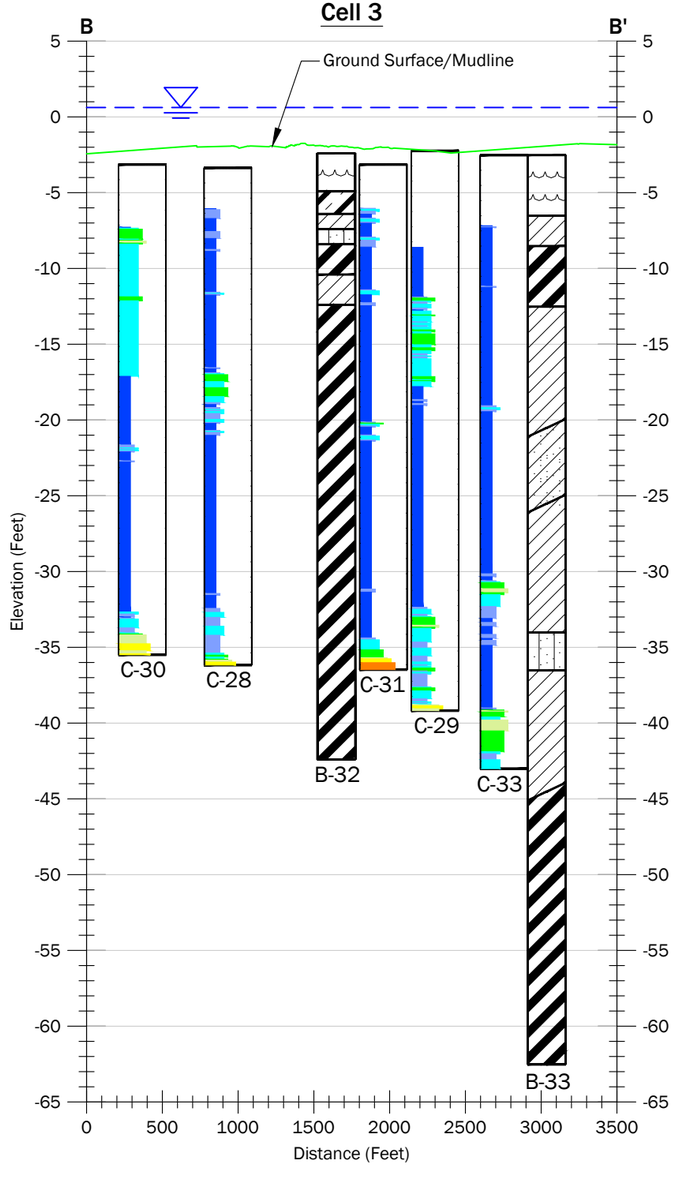

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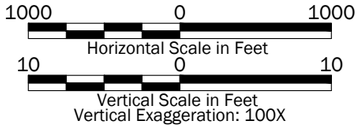
Data Source:

1. Boring and CPT mudline elevations were provided by Lonnie G Harper, Drawing: Boring Location Map_Final, Project # 2018-31, Sheet 3, Dated: 4/10/2018
2. Water elevation was provided by CPRA Dated: Sept. 31, 2018
3. Ground surface/mudline obtained from survey provided by CPRA on 7/31/18.



CPT Legend

- 1 - Sensitive, Fine Grained Soils
- 2 - Organic Soils, Peats
- 3 - Clay
- 4 - Clays & Silty Clays
- 5 - Silty Clays & Clayey Silts
- 6 - Clayey Silts & Sandy Silts
- 7 - Sandy Silts & Silty Sands
- 8 - Silty Sands & Sands
- 9 - Sands
- 10 - Sands & Gravelly Sands
- 11 - Very Stiff Fine Grained Soils*
- 12 - Sands & Clayey Sands*

*Overconsolidated or Cemented

Boring Legend

- Peat
- Organic Clay
- Silty Clay, Sandy Clay
- Silt
- Clay
- Sand
- Clayey Sand
- Silty Sand
- Sand with Silt
- Clayey Silt

Subsurface Profiles A-A' and B-B'

East Leeville Marsh Creation and Nourishment
(BA-194)
Lafourche Parish, Louisiana

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Figure 4

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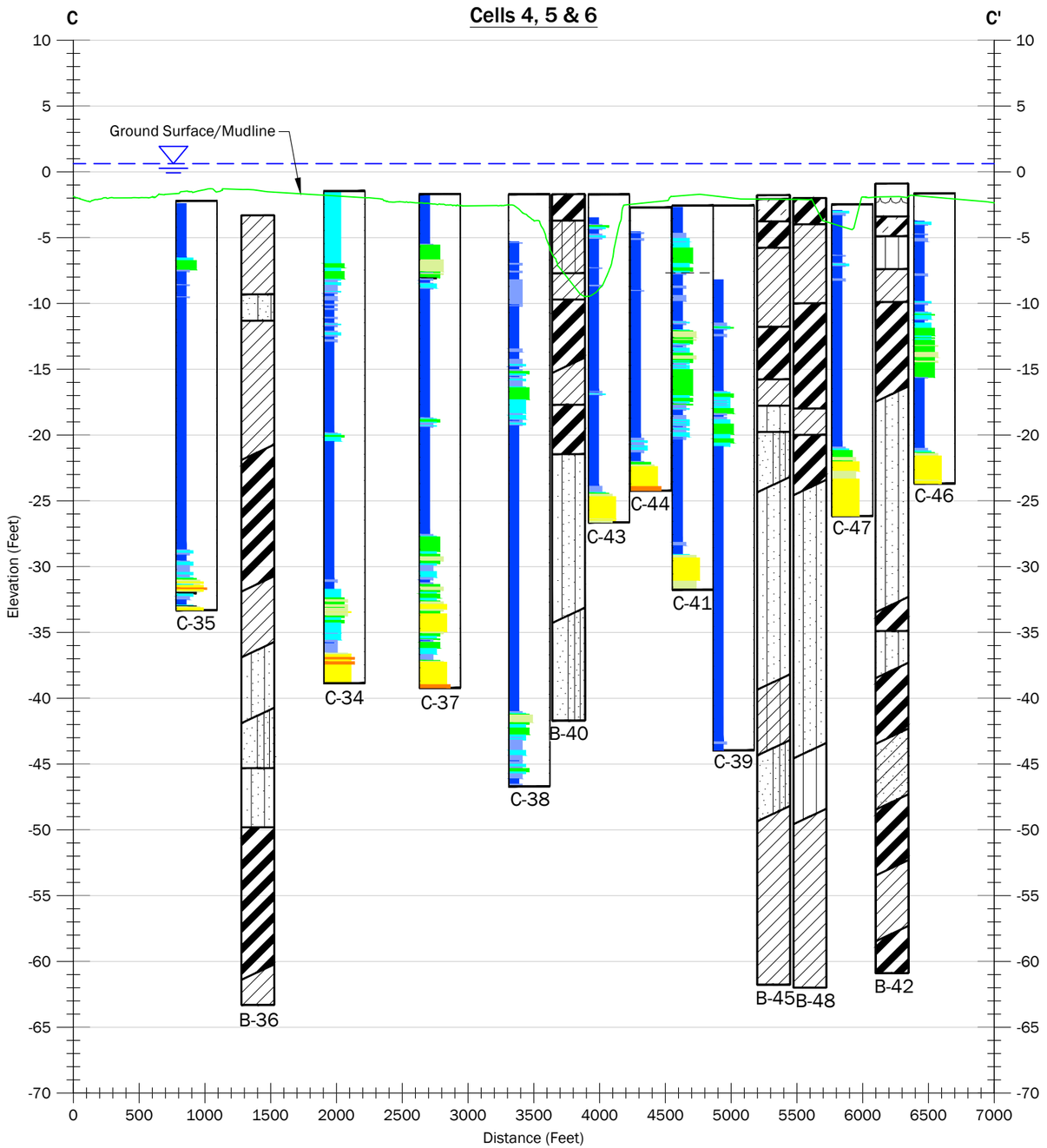
Cells 4, 5 & 6



CPT Legend

- 1 - Sensitive, Fine Grained Soils
- 2 - Organic Soils, Peats
- 3 - Clay
- 4 - Clays & Silty Clays
- 5 - Silty Clays & Clayey Silts
- 6 - Clayey Silts & Sandy Silts
- 7 - Sandy Silts & Silty Sands
- 8 - Silty Sands & Sands
- 9 - Sands
- 10 - Sands & Gravelly Sands
- 11 - Very Stiff Fine Grained Soils*
- 12 - Sands & Clayey Sands*

*Overconsolidated or Cemented

Boring Legend

- Peat
- Organic Clay
- Silty Clay, Sandy Clay
- Silt
- Clay
- Sand
- Clayey Sand
- Silty Sand
- Sand with Silt
- Clayey Silt

1000 0 1000
Horizontal Scale in Feet
10 0 10
Vertical Scale in Feet
Vertical Exaggeration: 100X

Notes:

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2. Water elevation was provided by CPRA Dated: Sept. 31, 2018
3. Ground surface/mudline obtained from survey provided by CPRA on 7/31/18.

Subsurface Profile C-C'

East Leeville Marsh Creation and Nourishment
(BA-194)
Lafourche Parish, Louisiana

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Figure 5

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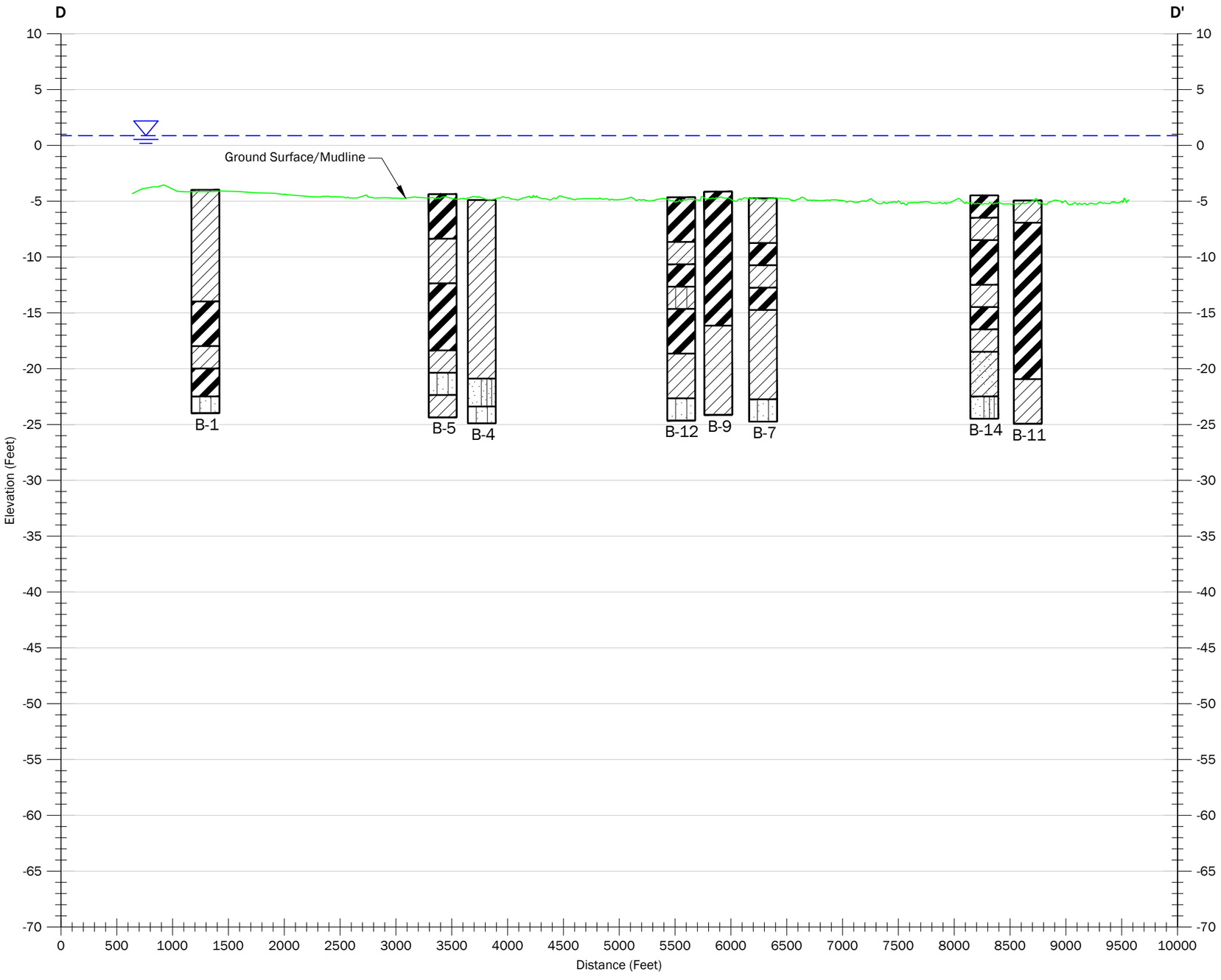

Boring Legend

- Peat
- Silty Clay, Sandy Clay
- Silt
- Clay
- Sand
- Clayey Sand
- Silty Sand
- Sand with Silt
- Clayey Silt

1000 0 1000
Horizontal Scale in Feet

10 0 10
Vertical Scale in Feet
Vertical Exaggeration: 100X

Notes:

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2. Water elevation was provided by CPRA Dated: Sept. 31, 2018
3. Ground surface/mudline obtained from survey provided by CPRA on 7/31/18.

Subsurface Profile D-D'

East Leeville Marsh Creation and Nourishment
(BA-194)
Lafourche Parish, Louisiana

GeoEngineers

Figure 6

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APPENDICES

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APPENDIX A
Details of Field Exploration

APPENDIX A
DETAILS OF FIELD EXPLORATION

This appendix provides additional information regarding the field exploration completed for the East Leeville Marsh Creation and Nourishment (BA-194) project located in Lafourche Parish, Louisiana.

Site Visit

Representatives from GeoEngineers, LGH, and Specialized Environmental Resources, Inc. (SER) attended a site visit of the East Leeville project site on April 10, 2018. The team worked to assess access conditions, water depths, and locations of soil borings and CPTs in relation to nearby infrastructure and intact marsh.

Exploration Coordination

GeoEngineers contacted the "One-Call" utility locator prior to performing the field exploration. CPRA provided the required permits to GeoEngineers for conducting our field exploration. Prior to performing the field exploration, LGH performed a magnetometer survey to clear the exploration locations and staked each soil boring and CPT location.

Soil Borings and CPTs

Soil borings were drilled using a drill rig mounted on either a triple-engine airboat or a pontoon boat, depending on the water depth at each location. CPTs were completed using a CPT rig mounted on a single-engine airboat. Marsh creation area soil borings were completed to depths varying from approximately 40 feet to 60 feet below the existing mudline, borrow soil borings were completed to 20 feet below the existing mudline, and the CPTs were performed up to 40 feet below the existing mudline. The majority of the CPTs, however, hit refusal before a depth of 40 feet. All soil borings and CPTs were advanced in open water and had water depths ranging from approximately 0.5 foot to 5.5 feet.

Soil sampling within our soil borings was conducted in general accordance with applicable ASTM standards, including collecting undisturbed-type cohesive and semi-cohesive samples with a three-inch outside diameter (O.D.) steel Shelby tube sampler using an Osterberg piston sampler. Cohesionless samples were obtained with a two-inch O.D. split barrel spoon sampler using the standard penetration test method.

Immediately upon retrieval from the subsurface, each soil sample was examined by our field representative and field classified. Samples collected with Shelby tubes in the marsh creation area were examined at the bottom end of the sample for field classification. The tubes were then plugged, capped, labeled, and stored upright to reduce the likelihood of sample disturbance during transport to the GeoEngineers soil mechanics laboratory in Baton Rouge, Louisiana. Samples collected with Shelby tubes in the borrow area were extruded, field classified, placed into a plastic bag, labeled, and transported to our laboratory. Samples collected with a split-spoon sampler in both locations were placed into a plastic bag, labeled, and transported to our laboratory for testing. Soil borings and CPTs were backfilled per Louisiana requirements.

The daily field reports detailing our field exploration activities are included with this appendix.

GeoEngineers

11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

			File Number: 18274-004-01
	Project: East Leeville Marsh Creation		Date: April 16, 2018
	Owner: CPRA	Time of Arrival: 10:30	Report Number: 1
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana	Time of Departure: 18:15	Page: 1 of 4
Purpose of visit: Geotechnical Exploration	Weather: Sunny, 60s to 70s °F	Travel Time: 1.0 Hours	Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: Johnny Gallow (driller), John Francis (roughneck), Harry Fonteneaux (roughneck) and Scotty Maturin (support boat driver)

Equipment:

Double Engine Support Boat
Pontoon Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	0	0.00
B-4	20	0	0	0.00
B-5	20	0	0	0.00
B-7	20	0	0	0.00
B-9	20	0	0	0.00
B-11	20	0	0	0.00
B-12	20	0	0	0.00
B-14	20	0	0	0.00
C-16	20	0	0	0.00
B-18	40	0	0	0.00
C-19	40	0	0	0.00

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/16/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/17/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	0	0.00
C-20	60	0	0	0.00
C-21	40	0	0	0.00
C-22	40	0	0	0.00
C-23	40	0	0	0.00
C-24	40	0	0	0.00
B-25	40	0	0	0.00
C-26	40	0	0	0.00
B-27	60	0	0	0.00
C-27	40	0	0	0.00
C-28	40	0	0	0.00
C-29	40	0	0	0.00
C-30	40	0	0	0.00
C-31	40	0	0	0.00
B-32	40	0	0	0.00
B-33	60	0	0	0.00
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	60	60	100
C-37	40	0	0	0.00
C-38	40	0	0	0.00
C-39	40	0	0	0.00
B-40	40	0	0	0.00
C-41	40	0	0	0.00
B-42	60	0	0	0.00
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	0	0.00
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	0	0.00
C-48	40	0	0	0.00

Activities:

1000 I (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch in Leeville, Louisiana, to begin today's subsurface exploration operations.

1015 While en route to the boat launch I receive a phone call from Craig Randazzo (Specialized Environmental Resources [SER's] Operations Manager) informing me that SER is running late to the site due to an equipment issue.

1030 I arrive at the Kayak Boat Launch. The SER pontoon boat is on site sitting on a transport truck.

1120 I speak with Bobby Comeaux (Comeaux Consulting's Field Manager) and inform him that we will be mobilizing to the water when SER arrives on site.

1205 Craig Randazzo, Johnny Gallow (SER's Driller), John Francis (SER's Roughneck), Harry Fonteneaux (SER's Roughneck) and Scotty Maturin (SER's Support Boat Driver) arrive on site with an aluminum support boat in tow. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

1220 The safety meeting concludes. SER begins launching the pontoon drill rig and support boat.

1255 SER finishes launching the pontoon drill rig and support boat and I begin to load my equipment and supplies needed for the day onto the support boat.

1310 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the location of Boring B-36.

1400 We arrive at the location of Boring B-36. Scotty positions the pontoon drill rig and support boat near soil boring B-36. I document the pre-drill condition of Boring B-36 in the photograph below.

FIGURE 1: PRE-DRILL CONDITION OF BORING B-36 (FACING SOUTH)

1415 The drill crew begins drilling Boring B-36 from the mudline. The current depth of the water is 36 inches.

1500 SER has drilled and sampled to 25 feet below the mudline and continues drilling and sampling.

1630 SER has drilled and sampled to 45 feet below the mudline and continues drilling and sampling.

1720 The drill crew completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions consist of very soft to soft clay with varying amounts of sand to a depth of 60 feet below mudline. The samples collected were left in the Shelby tubes, capped, and secured for transport. SER begins backfilling the boring with cement-bentonite grout full depth per Louisiana requirements.

1745 SER finishes backfilling the boring and leaves the pontoon drill rig staged at its current location at Boring B-36. All personnel mobilize to the Kayak Boat Launch on the support boat.

1815 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport. We plan to meet and depart from the Kayak Boat Launch tomorrow morning at 0700.

1845 I arrive at the Hotel in Cut Off, Louisiana, for the evening.

GeoEngineers
11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

			File Number: 18274-004-01
	Project: East Leeville Marsh Creation		Date: April 17, 2018
	Owner: CPRA	Time of Arrival: 06:55	Report Number: 2
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana	Time of Departure: 16:40	Page: 1 of 9
Purpose of visit: Geotechnical Exploration	Weather: Sunny, 60s to 70s °F	Travel Time: 1.25 Hours	Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: Johnny Gallow (driller), John Francis (roughneck), Harry Fonteneaux (roughneck) and Scotty Maturin (support boat driver)

Equipment:

Double Engine Support Boat
Pontoon Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	0	0.00
B-4	20	0	0	0.00
B-5	20	20	20	100
B-7	20	0	0	0.00
B-9	20	20	20	100
B-11	20	20	20	100
B-12	20	20	20	100
B-14	20	20	20	100
C-16	20	0	0	0.00
B-18	40	0	0	0.00
C-19	40	0	0	0.00

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/17/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/18/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

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B-20	60	0	0	0.00
C-20	60	0	0	0.00
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C-22	40	0	0	0.00
C-23	40	0	0	0.00
C-24	40	0	0	0.00
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C-27	40	0	0	0.00
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B-36	60	0	60	100
C-37	40	0	0	0.00
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C-39	40	0	0	0.00
B-40	40	0	0	0.00
C-41	40	0	0	0.00
B-42	60	0	0	0.00
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	0	0.00
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	0	0.00
C-48	40	0	0	0.00

Activities:

0630 I (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch in Leeville, Louisiana to begin today's subsurface exploration operations.

0655 I arrive at the Kayak Boat Launch. John Francis (Specialized Environmental Resource's [SER's] Roughneck), Johnny Gallow (SER's Driller), Harry Fonteneaux (SER's Roughneck) and Scotty Maturin (SER's Support Boat Driver) are on site with an aluminum support boat in the water. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

0710 The safety meeting concludes, and I begin to load my equipment and supplies needed for the day onto the support boat.

0715 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the location of Boring B-36.

0730 We arrive at the location of Boring B-36. SER positions the support boat near the pontoon drill rig located near Boring B-36 to begin transporting it to Boring B-5. I document the post-drill condition of Boring B-36 in the photograph below.

FIGURE 1: POST-DRILL CONDITION OF BORING B-36 (FACING SOUTH)

0740 SER finishes attaching the pontoon drill rig to the support boat and all personnel begin transporting the drill rig to the location of Boring B-5.

0830 We arrive at the location of Boring B-5. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-5 in the photograph below.

FIGURE 2: PRE-DRILL CONDITION OF BORING B-5 (FACING SOUTH)

0845 SER begins drilling Boring B-5 from the mudline. The current depth of the water is 52 inches.

0950 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill to the location of Boring B-12. I document the post-drill condition of Boring B-5 in the photograph below.

FIGURE 3: POST-DRILL CONDITION OF BORING B-5 (FACING SOUTH)

1005 We arrive at the location of Boring B-12. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-12 in the photograph below.

FIGURE 4: PRE-DRILL CONDITION OF BORING B-12 (FACING EAST)

1020 SER begins drilling Boring B-12 from the mudline. The current depth of the water is 60 inches.

1050 SER has drilled and sampled to 10 feet below the mud line. Scotty Maturin informs me that a gasket on the piston sampler has failed and a sample cannot be recovered. Scotty further informs me that a replacement gasket is located at the Kayak Boat Launch in SER's pickup truck. All personnel mobilize to the boat ramp in the support boat to retrieve the gasket while concurrently taking a lunch break.

1140 All personnel arrive back to the drill rig pontoon boat. SER begins replacing the faulty gasket on the piston sampler.

1145 SER finishes replacing the referenced gasket and resumes drilling and sampling Boring B-12 at 10 feet below the mud line.

1205 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill to the location of Boring B-9. I document the post-drill condition of Boring B-12 in the photograph below.

FIGURE 5: POST-DRILL CONDITION OF BORING B-12 (FACING SOUTH)

1220 We arrive at the location of Boring B-9. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-9 in the photograph below.

FIGURE 6: PRE-DRILL CONDITION OF BORING B-9 (FACING EAST)

1230 SER begins drilling Boring B-9 from the mudline. The current depth of the water is 60 inches.

1310 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill to the location of Boring B-14. I document the post-drill condition of Boring B-9 in the photograph below.

FIGURE 7: POST-DRILL CONDITION OF BORING B-9 (FACING EAST)

1345 We arrive at the location of Boring B-14. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-14 in the photograph below.

FIGURE 8: PRE-DRILL CONDITION OF BORING B-14 (FACING EAST)

1350 SER begins drilling Boring B-14 from the mudline. The current depth of the water is 60 inches.

1425 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill to the location of Boring B-11. I document the post-drill condition of Boring B-14 in the photograph below.

FIGURE 9: POST-DRILL CONDITION OF BORING B-14 (FACING EAST)

1445 We arrive at the location of Boring B-11. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-11 in the photograph below.

FIGURE 10: PRE-DRILL CONDITION OF BORING B-11 (FACING EAST)

1500 SER begins drilling Boring B-11 from the mudline. The current depth of the water is 60 inches.

1545 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill rig pontoon to a cove for storage overnight. I document the post-drill condition of Boring B-11 in the photograph below.

FIGURE 11: POST-DRILL CONDITION OF BORING B-11 (FACING EAST)

1615 SER mobilizes the drill rig pontoon to a nearby cove leaves the pontoon drill rig staged there for the night. All personnel mobilize to the Kayak Boat Launch on the support boat.

1630 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport. While SER begins loading the support boat on a trailer.

1640 SER finishes loading the boat and all personnel depart the site. I depart for a nearby paint store to purchase 5-gallon buckets for collecting seawater tomorrow. We plan to meet and depart from the Kayak Boat Launch tomorrow morning at 0700.

1730 I arrive at the hotel in Cut Off, Louisiana for the evening.

GeoEngineers

11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

			File Number: 18274-004-01
	Project: East Leeville Marsh Creation		Date: April 18, 2018
	Owner: CPRA	Time of Arrival: 07:00	Report Number: 3
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana	Time of Departure: 17:05	Page: 1 of 8
Purpose of visit: Geotechnical Exploration	Weather: Sunny, 60s to 70s °F	Travel Time: 1.0 Hours	Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: Johnny Gallow (driller), John Francis (roughneck), Harry Fonteneaux (roughneck) and Scotty Maturin (support boat driver)

Equipment:

Double Engine Support Boat
Pontoon Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

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B-4	20	20	20	100
B-5	20	0	20	100
B-7	20	20	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	0	0.00
B-18	40	0	0	0.00
C-19	40	0	0	0.00

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FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/18/2018

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REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/19/2018

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Attachments: N/A

Distribution: CPRA

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C-20	60	0	0	0.00
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C-22	40	0	0	0.00
C-23	40	0	0	0.00
C-24	40	0	0	0.00
B-25	40	0	0	0.00
C-26	40	0	0	0.00
B-27	60	0	0	0.00
C-27	40	0	0	0.00
C-28	40	0	0	0.00
C-29	40	0	0	0.00
C-30	40	0	0	0.00
C-31	40	0	0	0.00
B-32	40	0	0	0.00
B-33	60	60	60	100
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	0	60	100
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C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	0	0.00
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	0	0.00
C-48	40	0	0	0.00

Activities:

0635 I (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch in Leeville, Louisiana to begin today's subsurface exploration operations.

0700 I arrive at the Kayak Boat Launch. John Francis (Specialized Environmental Resource's [SER's] Roughneck), Johnny Gallow (SER's Driller), Harry Fonteneaux (SER's Roughneck) and Scotty Maturin (SER's Support Boat Driver) are on site with an aluminum support boat in the water. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

0710 The safety meeting concludes, and I begin to load my equipment and supplies needed for the day onto the support boat.

0715 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the pontoon drill rig located in a cove near the borrow area.

0730 We arrive at the location of the pontoon drill rig. SER positions the support boat near the pontoon drill rig located near borrow area to begin transporting it to Boring B-7.

0740 SER finishes attaching the pontoon drill rig to the support boat and all personnel begin transporting the drill rig to the location of Boring B-7.

0800 We arrive at the location of Boring B-7. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-7 in the photograph below.

FIGURE 1: PRE-DRILL CONDITION OF BORING B-7 (FACING EAST)

0810 SER begins drilling Boring B-7 from the mudline. The current depth of the water is 66 inches.

0850 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill to the location of Boring B-4. I document the post-drill condition of Boring B-7 in the photograph below.

FIGURE 2: POST-DRILL CONDITION OF BORING B-7 (FACING WEST)

0905 We arrive at the location of Boring B-4. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-4 in the photograph below.

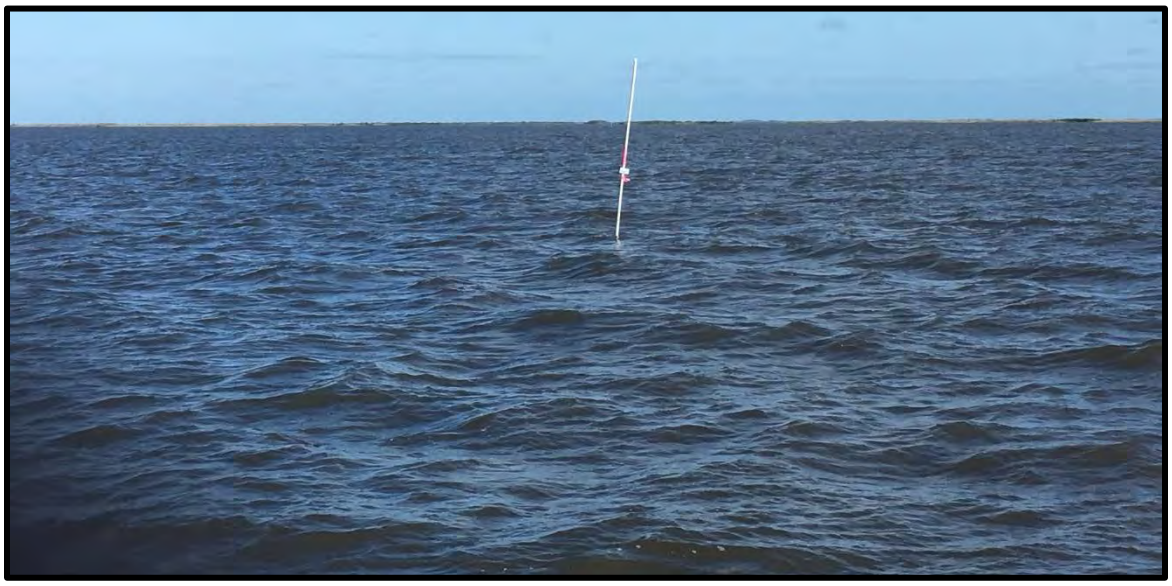

FIGURE 3: PRE-DRILL CONDITION OF BORING B-4 (FACING EAST)

0920 SER begins drilling Boring B-4 from the mudline while I collect and label a total of seven 5-gallon buckets of seawater from adjacent to the support boat. The current depth of the water is 66 inches.

1000 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand and clayey sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill to the location of Boring B-1. I document the post-drill condition of Boring B-4 in the photograph below.

FIGURE 4: POST-DRILL CONDITION OF BORING B-4 (FACING SOUTH)

1020 We arrive at the location of Boring B-1. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-1 in the photograph below.

FIGURE 5: PRE-DRILL CONDITION OF BORING B-1 (FACING WEST)

1020 SER begins drilling Boring B-1 from the mudline. The current depth of the water is 60 inches.

1110 SER completes drilling operations to a boring termination depth of 20 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand and clayey sand to a depth of 20 feet below mudline. The samples collected were bagged and secured for transport. SER begins mobilizing the drill rig to the location of Boring B-33. I document the post-drill condition of Boring B-1 in the photograph below.

FIGURE 6: POST-DRILL CONDITION OF BORING B-1 (FACING WEST)

1230 We arrive at the location of Boring B-33. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-33 in the photograph below.

FIGURE 7: PRE-DRILL CONDITION OF BORING B-33 (FACING EAST)

1255 SER begins drilling Boring B-33 from the mudline. The current depth of the water is 48 inches.

1525 SER completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions generally consist of very soft silt and very soft clay with varying amounts of silt and sand to a depth of 60 feet below mudline. The samples collected were collected in Shelby tubes and secured for transport. SER begins grouting the boring with cement grout.

15:50 SER finishes grouting Boring B-33 and begins mobilizing the drill to the location of Boring B-27. I document the post-drill condition of Boring B-33 in the photograph below.

FIGURE 8: POST-DRILL CONDITION OF BORING B-33 (FACING EAST)

1605 We arrive at the location of Boring B-27. SER lowers the mast on the drill rig and begins performing required greasing and fluid maintenance that Scotty Maturin informs me is required before drilling any further due to vibrating of the mast. I document the pre-drill condition of Boring B-27 in the photograph below.

FIGURE 9: PRE-DRILL CONDITION OF BORING B-27 (FACING NORTH)

1630 SER finishes performing maintenance on the drill rig and begins setting up to drill Boring B-27.

1640 SER finishes setting up to drill Boring B-27 and begins shutting down operations for the day.

1645 SER finishes shutting down operations and all personnel mobilize to the Kayak Boat Launch on the support boat.

1655 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport. While SER begins loading the support boat on a trailer.

1705 SER finishes loading the boat and all personnel depart the site. We plan to meet and depart from the Kayak Boat Launch tomorrow morning at 0700.

1730 I arrive at the hotel in Cut Off, Louisiana for the evening.

GeoEngineers
11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

File Number:	
18274-004-01	
Project: East Leeville Marsh Creation	Date: April 19, 2018
Owner: CPRA	Time of Arrival: 07:00 / Report Number: 4
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana / Time of Departure: 14:00 / Page: 1 of 5
Purpose of visit: Geotechnical Exploration	Weather: Sunny, 60s to 70s °F / Travel Time: 5.5 Hours / Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: John Francis (roughneck), Harry Fonteneaux (driller) and Scotty Maturin (support boat driver)

Equipment:

Double Engine Support Boat
Pontoon Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

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B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	0	0.00
B-18	40	0	0	0.00
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FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/19/2018

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A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/20/2018

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Attachments: N/A

Distribution: CPRA

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C-24	40	0	0	0.00
B-25	40	0	0	0.00
C-26	40	0	0	0.00
B-27	60	60	60	100
C-27	40	0	0	0.00
C-28	40	0	0	0.00
C-29	40	0	0	0.00
C-30	40	0	0	0.00
C-31	40	0	0	0.00
B-32	40	0	0	0.00
B-33	60	0	60	100
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	0	60	100
C-37	40	0	0	0.00
C-38	40	0	0	0.00
C-39	40	0	0	0.00
B-40	40	0	0	0.00
C-41	40	0	0	0.00
B-42	60	0	0	0.00
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	0	0.00
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	0	0.00
C-48	40	0	0	0.00

Activities:

0635 I (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch in Leeville, Louisiana to begin today's subsurface exploration operations.

0700 I arrive at the Kayak Boat Launch. John Francis (Specialized Environmental Resource's [SER's] Roughneck), Harry Fonteneaux (SER's Driller) and Scotty Maturin (SER's Support Boat Driver) are on site with an aluminum support boat in the water. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

0710 The safety meeting concludes, and I begin to load my equipment and supplies needed for the day onto the support boat.

0715 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the pontoon drill rig located at Boring B-27.

0730 We arrive at the location of Boring B-27. SER begins setting up to drill the boring

0740 SER begins drilling Boring B-27 from the mudline. The current depth of the water is 48 inches.

0945 SER completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions generally consist of very soft silt and very soft clay with varying amounts of silt and sand to a depth of 60 feet below mudline. The samples collected in Shelby tubes and secured for transport. SER begins grouting the boring.

1005 SER finishes grouting the boring and all personnel begin mobilizing the drill to the location of Boring B-20. I document the post-drill condition of Boring B-27 in the photograph below.

FIGURE 1: POST-DRILL CONDITION OF BORING B-27 (FACING WEST)

1020 We arrive at the location of Boring B-20. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-20 in the photograph below.

FIGURE 2: PRE-DRILL CONDITION OF BORING B-20 (FACING NORTH)

1030 SER begins drilling Boring B-20 from the mudline. The current depth of the water is 36 inches.

1255 SER completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 60 feet below mudline. The samples collected were bagged and also collected in Shelby tubes and secured for transport. SER begins grouting the boring.

1310 SER finishes grouting the boring and leaves the drill rig near the location for staging until pickup tomorrow. All personnel mobilize to the Kayak Boat Ramp in the support boat. I document the post-drill condition of Boring B-20 in the photograph below.

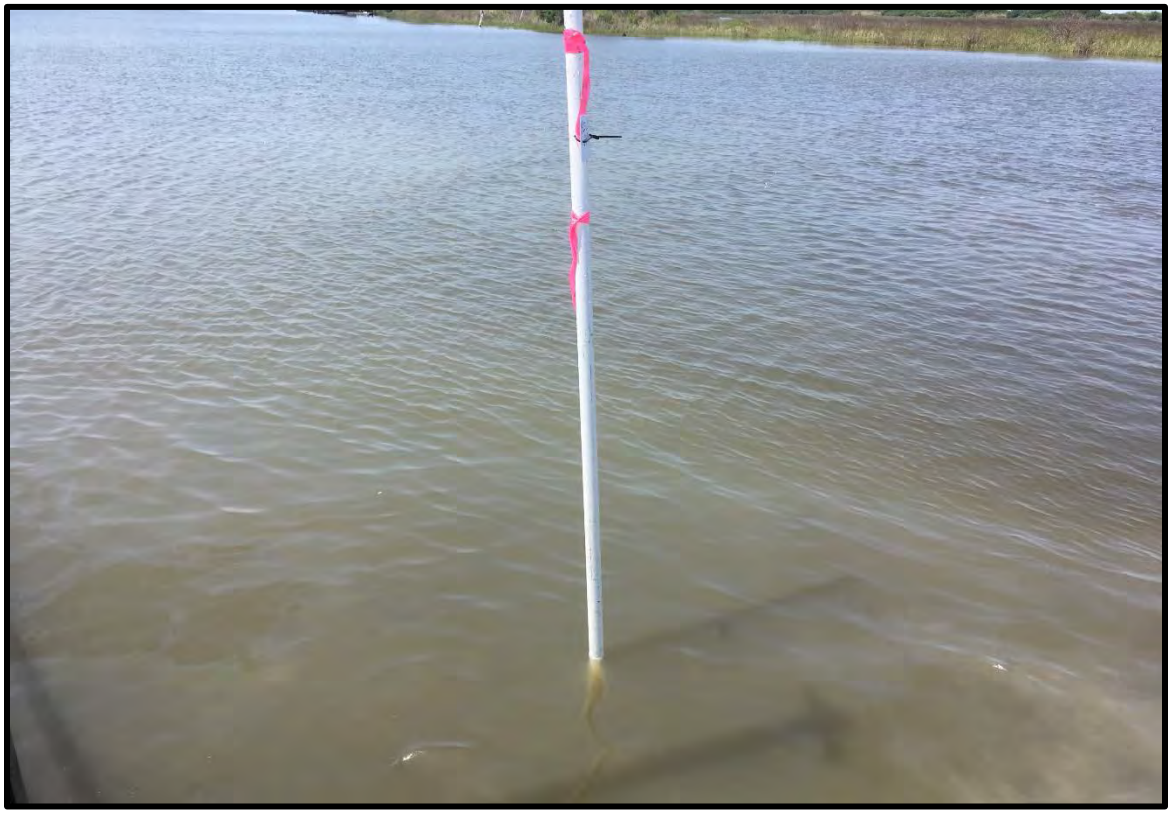

FIGURE 3: POST-DRILL CONDITION OF BORING B-20 (FACING NORTH)

1335 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport. While SER begins loading the support boat on a trailer.

1400 SER finishes loading the boat and all personnel depart the site. I travel to the GeoEngineers Baton Rouge, Louisiana office to drop off samples. We plan to meet and depart from the Kayak Boat Launch tomorrow morning at 0930.

1630 I arrive at the GeoEngineers Baton Rouge, Louisiana office and begin unloading samples.

1715 I finish unloading the referenced samples and travel back to the hotel in Cut Off, Louisiana.

1945 I arrive at the hotel in Cut Off, Louisiana.

GeoEngineers
11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

File Number:	
18274-004-01	
Project: East Leeville Marsh Creation	Date: April 20, 2018
Owner: CPRA	Time of Arrival: 11:10 / Report Number: 5
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana / Time of Departure: 17:40 / Page: 1 of 5
Purpose of visit: Geotechnical Exploration	Weather: Sunny, 60s °F / Travel Time: 1.0 Hours / Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: John Francis (roughneck), Harry Fonteneaux (driller) and Scotty Maturin (support boat driver)

Equipment:

Single Engine Support Air Boat
Triple Engine Air Boat Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	20	100
B-4	20	0	20	100
B-5	20	0	20	100
B-7	20	0	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	0	0.00
B-18	40	40	40	100
C-19	40	0	0	0.00

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/20/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/23/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	60	100
C-20	60	0	0	0.00
C-21	40	0	0	0.00
C-22	40	0	0	0.00
C-23	40	0	0	0.00
C-24	40	0	0	0.00
B-25	40	0	0	0.00
C-26	40	0	0	0.00
B-27	60	0	60	100
C-27	40	0	0	0.00
C-28	40	0	0	0.00
C-29	40	0	0	0.00
C-30	40	0	0	0.00
C-31	40	0	0	0.00
B-32	40	40	40	100
B-33	60	0	60	100
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	0	60	100
C-37	40	0	0	0.00
C-38	40	0	0	0.00
C-39	40	0	0	0.00
B-40	40	0	0	0.00
C-41	40	0	0	0.00
B-42	60	0	0	0.00
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	0	0.00
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	0	0.00
C-48	40	0	0	0.00

Activities:

1040 (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) receive a phone call from Scotty Maturin (Specialized Environmental Resource's [SER's] Boat Operator) informing me that the airboat support boat and drill rig air boat are approximately 20 minutes from being delivered to the Kayak Boat Launch in Leeville, Louisiana. I depart from the hotel for the Kayak Boat Launch to begin today's subsurface exploration operations.

1110 I arrive at the Kayak Boat Launch. John Francis (SER's Roughneck), Harry Fonteneaux (SER's Driller) and Scotty Maturin are on site with an aluminum support air boat and air boat drill rig in the water. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

1120 The safety meeting concludes, and I begin to load my equipment and supplies needed for the day onto the support air boat.

1130 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the location of Boring B-18 with the support air boat and air boat drill rig.

1200 We arrive at the location of Boring B-18. SER begins setting up to drill the boring**.** I document the pre-drill condition of Boring B-18 in the photograph below.

FIGURE 1: PRE-DRILL CONDITION OF BORING B-18 (FACING WEST)

1240 SER begins drilling Boring B-18 from the mudline. The current depth of the water is 24 inches.

1445 SER completes drilling operations to a boring termination depth of 40 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand and sand with varying amounts of silt to a depth of 40 feet below mudline. The samples collected in Shelby tubes and bags and secured for transport. SER begins grouting the boring.

1515 SER finishes grouting the boring and all personnel begin mobilizing the drill rig to the location of Boring B-32. I document the post-drill condition of Boring B-18 in the photograph below.

FIGURE 2: POST-DRILL CONDITION OF BORING B-18 (FACING NORTH)

1535 We arrive at the location of Boring B-32. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-32 in the photograph below.

FIGURE 3: PRE-DRILL CONDITION OF BORING B-32 (FACING WEST)

1550 SER begins drilling Boring B-32 from the mudline. The current depth of the water is 24 inches.

1645 SER completes drilling operations to a boring termination depth of 40 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and very soft to soft silt to a depth of 40 feet below mudline. The samples collected were collected in Shelby tubes and secured for transport. SER begins grouting the boring.

1710 SER finishes grouting the boring and leaves the drill rig near the location for staging until continuing drilling tomorrow. All personnel mobilize to the Kayak Boat Ramp in the support air boat. I document the post-drill condition of Boring B-32 in the photograph below.

FIGURE 4: POST-DRILL CONDITION OF BORING B-32 (FACING WEST)

1720 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport while SER begins loading the support boat on a trailer.

1740 SER finishes loading the boat and all personnel depart the site. I travel to the hotel. We plan to meet and depart from the Kayak Boat Launch tomorrow morning at 0700.

1805 I arrive at the hotel in Cut Off, Louisiana.

GeoEngineers

11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

			File Number: 18274-004-01
	Project: East Leeville Marsh Creation		Date: April 21, 2018
	Owner: CPRA	Time of Arrival: 07:00	Report Number: 6
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana	Time of Departure: 17:00	Page: 1 of 5
Purpose of visit: Geotechnical Exploration	Weather: Cloudy, 60s °F	Travel Time: 1.0 Hours	Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: John Francis (roughneck), Harry Fonteneaux (driller) and Scotty Maturin (support boat driver)

Equipment:

Single Engine Support Air Boat
Triple Engine Air Boat Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	20	100
B-4	20	0	20	100
B-5	20	0	20	100
B-7	20	0	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	0	0.00
B-18	40	0	40	100
C-19	40	0	0	0.00

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/21/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/23/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	60	100
C-20	60	0	0	0.00
C-21	40	0	0	0.00
C-22	40	0	0	0.00
C-23	40	0	0	0.00
C-24	40	0	0	0.00
B-25	40	0	0	0.00
C-26	40	0	0	0.00
B-27	60	0	60	100
C-27	40	0	0	0.00
C-28	40	0	0	0.00
C-29	40	0	0	0.00
C-30	40	0	0	0.00
C-31	40	0	0	0.00
B-32	40	0	40	100
B-33	60	0	60	100
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	0	60	100
C-37	40	0	0	0.00
C-38	40	0	0	0.00
C-39	40	0	0	0.00
B-40	40	0	0	0.00
C-41	40	0	0	0.00
B-42	60	60	60	100
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	60	60	100
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	0	0.00
C-48	40	0	0	0.00

Activities:

0635 (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch to begin today's subsurface exploration operations.

0700 I arrive at the Kayak Boat Launch. John Francis (SER's Roughneck), Harry Fonteneaux (SER's Driller) and Scotty Maturin (SER's Support Boat Driver) are on site with an aluminum support air boat in the water. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

0720 The safety meeting concludes, and I begin to load my equipment and supplies needed for the day onto the support air boat.

0730 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the location of Boring B-32 to collect the air boat drill rig.

0745 We arrive at the air boat drill rig and collect the drill rig and begin mobilizing to the location of Boring B-42

0810 We arrive at the location of Boring B-42. SER begins setting up to drill the boring**.** I document the pre-drill condition of Boring B-42 in the photograph below.

FIGURE 1: PRE-DRILL CONDITION OF BORING B-42 (FACING WEST)

0825 SER begins drilling Boring B-42 from the mudline. The current depth of the water is 12 inches.

1200 SER completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 60 feet below mudline. The samples were collected in Shelby tubes and bags and secured for transport. SER begins grouting the boring.

1225 SER finishes grouting the boring and all personnel begin mobilizing the drill rig to the location of Boring B-45. I document the post-drill condition of Boring B-42 in the photograph below.

FIGURE 2: POST-DRILL CONDITION OF BORING B-42 (FACING SOUTHWEST)

1245 We arrive at the location of Boring B-45. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-45 in the photograph below.

FIGURE 3: PRE-DRILL CONDITION OF BORING B-45 (FACING WEST)

13:00 SER begins drilling Boring B-45 from the mudline. The current depth of the water is 24 inches.

1615 SER completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt, very soft to soft silt, and firm to dense sand to a depth of 60 feet below mudline. The samples were collected in Shelby tubes and bags and secured for transport. SER begins grouting the boring.

1630 SER finishes grouting the boring and leaves the drill rig near the location for staging until continuing drilling on Monday, April 23, 2018. All personnel mobilize to the Kayak Boat Ramp in the support air boat. I document the post-drill condition of Boring B-45 in the photograph below.

FIGURE 4: POST-DRILL CONDITION OF BORING B-45 (FACING EAST)

1645 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport while SER begins loading the support boat on a trailer.

1700 SER finishes loading the boat and all personnel depart the site. I travel to the hotel. We plan to meet and depart from the Kayak Boat Launch Monday morning at 0630.

1725 I arrive at the hotel in Cut Off, Louisiana.

GeoEngineers

11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

			File Number: 18274-004-01
	Project: East Leeville Marsh Creation		Date: April 23, 2018
	Owner: CPRA	Time of Arrival: 06:30	Report Number: 7
Prepared by: Steven J. Worsley	Location: Lafourche Parish, Louisiana	Time of Departure: 17:00	Page: 1 of 6
Purpose of visit: Geotechnical Exploration	Weather: Sunny, 60s °F	Travel Time: 1.0 Hours	Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Geologist: Steven J. Worsley
SER Crew: John Francis (roughneck), Harry Fonteneaux (driller) and Scotty Maturin (support boat driver)

Equipment:

Single Engine Support Air Boat
Triple Engine Air Boat Drill Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	20	100
B-4	20	0	20	100
B-5	20	0	20	100
B-7	20	0	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	0	0.00
B-18	40	0	40	100
C-19	40	0	0	0.00

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Steven J. Worsley — **DATE** 04/23/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/24/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	60	100
C-20	60	0	0	0.00
C-21	40	0	0	0.00
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C-23	40	0	0	0.00
C-24	40	0	0	0.00
B-25	40	40	40	100
C-26	40	0	0	0.00
B-27	60	0	60	100
C-27	40	0	0	0.00
C-28	40	0	0	0.00
C-29	40	0	0	0.00
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B-32	40	0	40	100
B-33	60	0	60	100
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	0	60	100
C-37	40	0	0	0.00
C-38	40	0	0	0.00
C-39	40	0	0	0.00
B-40	40	40	40	100
C-41	40	0	0	0.00
B-42	60	0	60	100
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	60	100
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	60	60	100
C-48	40	0	0	0.00

Activities:

0605 I (Steven J. Worsley) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch to begin today's subsurface exploration operations.

0630 I arrive at the Kayak Boat Launch. Johnny Gallow (SER's Roughneck), Harry Fonteneaux (SER's Driller) and Scotty Maturin (SER's Support Boat Driver) are on site with an aluminum support air boat in the water. I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the drilling operations and sampling methods. Everyone reviews and signs the JHA.

0640 The safety meeting concludes, and I begin to load my equipment and supplies needed for the day onto the support air boat.

0655 I finish loading the referenced supplies. We depart from the Kayak Boat Launch for the location of Boring B-40 to begin drilling and sampling operations.

0720 We arrive at the location of Boring B-40. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-40 in the photograph below.

FIGURE 1: PRE-DRILL CONDITION OF BORING B-40 (FACING WEST)

0730 SER begins drilling Boring B-40 from the mudline. The current depth of the water is 6 inches.

0920 SER completes drilling operations to a boring termination depth of 40 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt and sand to a depth of 40 feet below mudline. The samples were collected in Shelby tubes and bags and secured for transport. SER begins grouting the boring.

0940 SER finishes grouting the boring and all personnel begin mobilizing the drill rig to the location of Boring B-48. I document the post-drill condition of Boring B-40 in the photograph below.

FIGURE 2: POST-DRILL CONDITION OF BORING B-40 (FACING SOUTH)

1000 We arrive at the location of Boring B-48. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-48 in the photograph below.

FIGURE 3: PRE-DRILL CONDITION OF BORING B-48 (FACING WEST)

10:15 SER begins drilling Boring B-48 from the mudline. The current depth of the water is 24 inches.

1230 SER completes drilling operations to a boring termination depth of 60 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt, very soft to soft silt, and firm to dense sand to a depth of 60 feet below mudline. The samples were collected in Shelby tubes and bags and secured for transport. SER begins grouting the boring.

1300 SER finishes grouting the boring and all personnel begin mobilizing the drill rig to the location of Boring B-25. I document the post-drill condition of Boring B-48 in the photograph below.

FIGURE 4: POST-DRILL CONDITION OF BORING B-48 (FACING SOUTH)

1350 We arrive at the location of Boring B-25. SER begins setting up to drill the boring. I document the pre-drill condition of Boring B-25 in the photograph below.

FIGURE 5: PRE-DRILL CONDITION OF BORING B-25 (FACING WEST)

1415 SER begins drilling Boring B-25 from the mudline. The current depth of the water is 12 inches.

1545 SER completes drilling operations to a boring termination depth of 40 feet. The encountered soil conditions generally consist of very soft clay with varying amounts of silt, very soft to soft silt, and firm to dense sand to a depth of 40 feet below mudline. The samples were collected in Shelby tubes and bags and secured for transport. SER begins grouting the boring.

1620 SER finishes grouting the boring and leaves the drill rig near the location for staging until pickup tomorrow. All personnel mobilize to the Kayak Boat Ramp in the support air boat. I document the post-drill condition of Boring B-25 in the photograph below.

FIGURE 6: POST-DRILL CONDITION OF BORING B-25 (FACING NORTH)

1645 We arrive at the Kayak Boat Launch. I unload the samples and secure them within the foam crate for transport while SER begins loading the support boat on a trailer.

1700 SER finishes loading the boat and all personnel depart the site. I travel to the hotel.

1725 I arrive at the hotel in Cut Off, Louisiana.

GeoEngineers
11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

File Number: 18274-004-01

Project: East Leeville Marsh Creation

Date: April 24, 2018

Owner: CPRA

Time of Arrival: 0645

Report Number: 8

Prepared by: Cody K. Hatch, PE

Location: Lafourche Parish, Louisiana

Time of Departure: 1745

Page: 1 of 14

Purpose of visit: CPT Soundings

Weather: Sunny, 70s °F

Travel Time: 1.0 Hours

Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Engineer: Cody K. Hatch
SER Crew: Johnny Gallow (roughneck), Harry Fonteneaux (driller) and Scotty Maturin (support boat driver)

Equipment:

Single Engine Support Air Boat
Single Engine Air Boat CPT Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	20	100
B-4	20	0	20	100
B-5	20	0	20	100
B-7	20	0	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	31.80	31.80	100
B-18	40	0	40	100
C-19	40	22.89	22.89	100

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Cody K. Hatch, PE — **DATE** 04/24/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/25/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	60	100
C-20	60	22.59	22.59	100
C-21	40	0	0	0.00
C-22	40	0	0	0.00
C-23	40	0	0	0.00
C-24	40	0	0	0.00
B-25	40	0	40	100
C-26	40	27.02	27.02	100
B-27	60	0	60	100
C-27	40	25.06	25.06	100
C-28	40	32.84	32.84	100
C-29	40	36.96	36.96	100
C-30	40	32.35	32.35	100
C-31	40	0	0	0.00
B-32	40	0	40	100
B-33	60	0	60	100
C-33	40	0	0	0.00
C-34	40	0	0	0.00
C-35	40	0	0	0.00
B-36	60	0	60	100
C-37	40	0	0	0.00
C-38	40	45.30	45.30	100
C-39	40	41.46	41.46	100
B-40	40	0	40	100
C-41	40	0	0	0.00
B-42	60	0	60	100
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	60	100
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	60	100
C-48	40	0	0	0.00

Activities:

0615 I (Cody K. Hatch) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch to meet the SER crew.

0645 I arrive at the Kayak Boat Launch. I observe Johnny Gallow (SER's Roughneck), Harry Fonteneaux (SER's Driller) and Scotty Maturin (SER's Support Boat Driver) departing the boat launch in the support air boat to retrieve the triple engine airboat drill rig.

0700 Craig (SER) arrives with the CPT airboat.

0730 The SER crew removes the triple-engine airboat from the water. Scotty and I set up the CPT equipment, connect all the wires, and test it to make sure it is working correctly.

0800 The SER crew launches the CPT airboat and loads the power pack onto the support boat.

0815 I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the sounding operations. Everyone reviews and signs the JHA.

0830 We depart the boat launch and travel to the CPT C-16 location.

0837 We arrive at the location CPT C-16. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-16 (FACING EAST)

0845 I conduct a zero test and begin the sounding at C-16. The water depth is 2.0 feet.

0908 I terminate the sounding when we hit refusal at 31.8 feet below ground surface (bgs). The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-16 (FACING SOUTHWEST)

0927 We travel to the CPT C-19 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-19 (FACING NORTHEAST)

0945 I conduct a zero test and begin the sounding at C-19. The water depth is 3.0 feet.

0959 I terminate the sounding when we hit refusal at 22.89 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-19 (FACING NORTH)

1008 We travel to the CPT C-20 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-20 (FACING SOUTHEAST)

1035 I conduct a zero test and begin the sounding at C-20. The water depth is 2.1 feet.

1047 I terminate the sounding when we hit refusal at 22.56 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-20 (FACING SOUTH)

1052 We travel to the CPT C-26 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-26 (FACING NORTHEAST)

1112 I conduct a zero test and begin the sounding at C-26. The water depth is 2.0 feet.

1129 I terminate the sounding when we hit refusal at 27.02 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-26 (FACING NORTH)

1130 We take a lunch break.

1200 We travel to the CPT C-27 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-27 (FACING SOUTHEAST)

1215 I conduct a zero test and begin the sounding at C-27. The water depth is 3.1 feet.

1231 I terminate the sounding when we hit refusal at 25.06 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-27 (FACING SOUTHWEST)

1237 We travel to the CPT C-30 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-30 (FACING SOUTHWEST)

1251 I conduct a zero test and begin the sounding at C-30. The water depth is 2.0 feet.

1313 I terminate the sounding when we hit refusal at 32.35 feet bgs. The SER crew trips the CPT rods out of the hole. Due to some strange behavior of the pore pressure sensor, I call Josh Pruett (GeoEngineers) and discuss what to do. He asks us to move over 10 to 15 feet and repeat the test to a depth of 15 feet to confirm the pore pressure readings.

1325 We move the CPT airboat over about 10 feet to the west and prepare to repeat the test to a depth of 15 feet bgs.

1330 I conduct a zero test and begin the sounding at C-30a.

1340 I terminate the sounding at 15.23 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-30 (FACING EAST)

1346 We travel to the CPT C-28 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-28 (FACING SOUTH)

1409 I conduct a zero test and begin the sounding at C-28. The water depth is 3.5 feet.

1432 I terminate the sounding when we hit refusal at 32.84 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-28 (FACING EAST)

1440 We travel to the CPT C-29 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-29 (FACING EAST)

1457 I conduct a zero test and begin the sounding at C-29. The water depth is 3.0 feet.

1517 I terminate the sounding when we hit refusal at 36.96 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-29 (FACING WEST)

1526 We travel to the CPT C-38 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-38 (FACING WEST)

1542 I conduct a zero test and begin the sounding at C-38. The water depth is 2.2 feet.

1608 I terminate the sounding at 45.30 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-38 (FACING WEST)

1620 We travel to the CPT C-39 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-39 (FACING NORTH)

1626 I conduct a zero test and begin the sounding at C-39. The water depth is 3.1 feet.

1651 I terminate the sounding at 41.46 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-39 (FACING WEST)

1700 The SER crew finishes tripping out the rods. The SER crew stations the CPT airboat in the marsh near CPT C-39. We transfer our equipment to the support boat.

CPT AIRBOAT LOCATION NEAR CPT C-39 (FACING SOUTH)

CPT AIRBOAT LOCATION NEAR CPT C-39 (FACING SOUTH)

1720 We depart the site and travel to the boat launch.

1730 We arrive at the boat launch and the SER crew de-launches the support boat.

1740 I call Matt Roberson (LOOP) and coordinate with him to meet at the boat launch tomorrow morning at 7 am so that he can observe us performing CPT soundings near the LOOP pipeline.

1745 I depart the boat launch and travel to the hotel in Cut Off, Louisiana.

GeoEngineers

11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

			File Number: 18274-004-01
	Project: East Leeville Marsh Creation		Date: April 25, 2018
	Owner: CPRA	Time of Arrival: 0700	Report Number: 9
Prepared by: Cody K. Hatch, PE	Location: Lafourche Parish, Louisiana	Time of Departure: 1745	Page: 1 of 12
Purpose of visit: CPT Soundings	Weather: Sunny, 70s °F	Travel Time: 1.0 Hours	Permit Number: See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Engineer: Cody Hatch
SER Crew: Johnny Gallow (roughneck), Harry Fonteneaux (driller) and Scotty Maturin (support boat driver)

Equipment:

Single Engine Support Air Boat
Single Engine Air Boat CPT Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	20	100
B-4	20	0	20	100
B-5	20	0	20	100
B-7	20	0	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	31.80	100
B-18	40	0	40	100
C-19	40	0	22.89	100

☐ **THIS FIELD REPORT IS PRELIMINARY**
A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Cody K. Hatch, PE — **DATE** 04/25/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/26/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	60	100
C-20	60	0	22.59	100
C-21	40	24.11	24.11	100
C-22	40	31.87	31.87	100
C-23	40	25.82	25.82	100
C-24	40	25.17	25.17	100
B-25	40	0	40	100
C-26	40	0	27.02	100
B-27	60	0	60	100
C-27	40	0	25.06	100
C-28	40	0	32.84	100
C-29	40	0	36.96	100
C-30	40	0	32.35	100
C-31	40	33.37	33.37	100
B-32	40	0	40	100
B-33	60	0	60	100
C-33	40	40.49	40.49	100
C-34	40	37.46	37.46	100
C-35	40	0	0	0.00
B-36	60	0	60	100
C-37	40	0	0	0.00
C-38	40	0	45.30	100
C-39	40	0	41.46	100
B-40	40	0	40	100
C-41	40	0	0	0.00
B-42	60	0	60	100
C-43	40	0	0	0.00
C-44	40	0	0	0.00
B-45	40	0	60	100
C-46	40	0	0	0.00
C-47	40	0	0	0.00
B-48	60	0	60	100
C-48	40	0	0	0.00

Activities:

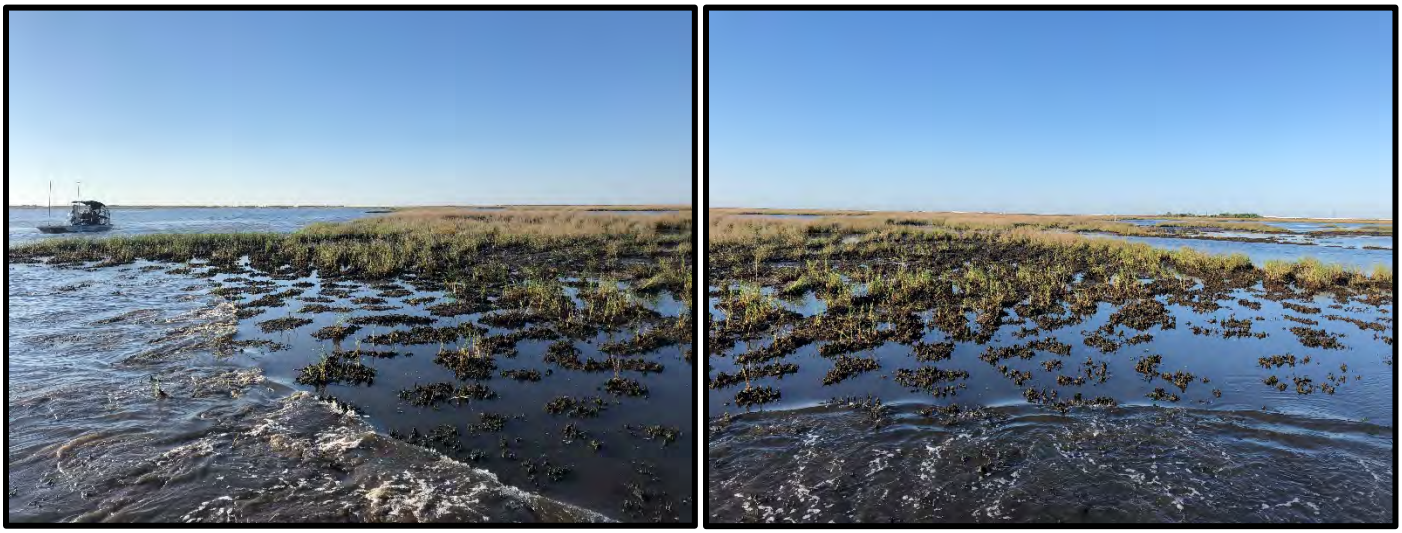
0630 I (Cody Hatch) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch to meet the SER crew.

0700 I arrive at the Kayak Boat Launch. The SER crew launches the support boat. I talk with Matthew Roberson (LOOP) and plan to meet him at CPT location C-21 after we retrieve the CPT airboat rig.

0715 I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the sounding operations. Everyone reviews and signs the JHA.

0730 The SER drill crew and I travel to the location where we had staged the CPT airboat yesterday.

CPT AIRBOAT LOCATION NEAR CPT C-38 (FACING SOUTH)



CPT AIRBOAT LOCATION NEAR CPT C-38 (FACING SOUTH)

0800 We meet Mat Roberson at the CPT C-21 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-21 (FACING SOUTH)

0821 I conduct a zero test and begin the sounding at C-21. The water depth is 1.0 foot.

0834 I terminate the sounding when we hit refusal at 24.11 feet below ground surface (bgs). The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-21 (FACING EAST)

0901 We travel to the CPT C-24 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-24 (FACING SOUTHEAST)

0914 I conduct a zero test and begin the sounding at C-24. The water depth is 1.1 feet.

0932 I terminate the sounding when we hit refusal at 25.17 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-24 (FACING SOUTH)

1002 We travel to the CPT C-23 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-23 (FACING SOUTH)

1013 I conduct a zero test and begin the sounding at C-23. The water depth is 3.0 feet.

1032 I terminate the sounding when we hit refusal at 25.82 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-23 (FACING SOUTH)

1038 We travel to the CPT C-22 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-22 (FACING SOUTH)

1049 I conduct a zero test and begin the sounding at C-22. The water depth is 2.5 feet.

1113 I terminate the sounding when we hit refusal at 31.87 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-22 (FACING NORTHWEST)

1130 We take a lunch break. Matthew Roberson departs the site.

1215 We travel to the CPT C-31 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-31 (FACING EAST)

1230 I conduct a zero test and begin the sounding at C-31. The water depth is 3.1 feet.

1241 I notice some anomalies in the data being collected by the CPT cone. I terminate the sounding at 18 feet bgs. The SER crew trips the CPT rods out of the hole.

1302 The SER crew moves the CPT airboat 10 feet north and we repeat the test at C-31a.

1327 I terminate the sounding when we hit refusal at 33.46 feet bgs. The SER crew trips the CPT rods out of the hole. I notice the same anomalies in the data as in the earlier test. I call Josh Pruett (GeoEngineers) to discuss the issue.

POST-DRILL CONDITION OF CPT C-31 (FACING EAST)

1340 We travel to the CPT C-33 location. The SER crew sets up the CPT airboat to conduct the sounding.

1400 Per my conversation with Josh, I take apart the cone and sensors and clean the sleeve, o-rings, and the cone.

PRE-DRILL CONDITION OF CPT C-33 (FACING EAST)

1410 I conduct a zero test and begin the sounding at C-33. The water depth is 2.7 feet.

1417 I notice the same anomalies as in earlier tests. I terminate the sounding at 15.2 feet bgs. The SER crew trips the CPT rods out of the hole. I call Josh and inform him of the issues.

1440 The SER crew and I check the cable for issues. While unwrapping the electrical tape from one part of the cable, we notice that one of the spliced wires has corroded and is mostly split. We repair the splice and re-wrap the area with electrical tape.

1450 We move the CPT airboat over about 10 feet to the west and prepare to repeat the test.

1456 I conduct a zero test and begin the sounding at C-33a.

1519 I terminate the sounding at 40.49 feet bgs. The test appears to be successful. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-33 (FACING SOUTHWEST)

1528 We travel back to the CPT C-31 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-31 (FACING NORTH)

1536 I conduct a zero test and repeat the sounding at C-31b, about 10 feet west of CPT C-31 and C-31a. The water depth is 3.5 feet.

1557 I terminate the sounding when we hit refusal at 33.37 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-31 (FACING SOUTHWEST)

1607 We travel to the CPT C-34 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-34 (FACING EAST)

1622 I conduct a zero test and begin the sounding at C-34. The water depth is 1.9 feet.

1645 I terminate the sounding when we hit refusal at 37.46 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-34 (FACING WEST)

1650 The SER crew finishes tripping out the rods. The SER crew stations the CPT airboat in the marsh near CPT C-38. We transfer our equipment to the support boat.

CPT AIRBOAT LOCATION NEAR CPT C-38 (FACING SOUTH)

CPT AIRBOAT LOCATION NEAR CPT C-38 (FACING WEST)

1730 We depart the site and travel to the boat launch.

1740 We arrive at the boat launch and the SER crew removes the support boat from the water.

1745 All personnel depart the site, and I travel to the hotel.

1810 I arrive at the hotel in Cut Off, Louisiana.

GeoEngineers

11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809
225.293.2460

Field Report

File Number:	
18274-004-01	

Project:	Date:
East Leeville Marsh Creation	April 26, 2018

Owner:	Time of Arrival:	Report Number:
CPRA	0700	10

Prepared by:	Location:	Time of Departure:	Page:
Cody K. Hatch, PE	Lafourche Parish, Louisiana	1630	1 of 15

Purpose of visit:	Weather:	Travel Time:	Permit Number:
CPT Soundings	AM: Rain, 70s °F PM: Sunny, 60s °F	3.0 Hours	See below

Upon arrival to the site I assessed personal safety hazards: ☒ Yes and/or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable

Safety Hazards Were Addressed by: ☒ Staying Alert to Construction and Equipment Hazards ☒ Donning PPE and observing safety standards

Personnel

GeoEngineers, Inc. Field Engineer: Cody Hatch
SER Crew: Johnny Gallow (roughneck), Harry Fonteneaux (driller)

Equipment:

Single Engine Support Air Boat
Single Engine Air Boat CPT Rig

Permits:

DNR Office of Coastal Management (Coastal Use) – Department of Natural Resources: P20170922
Department of The Army Corps of Engineers: MVN 2017-01479-CE (PGP II)

One Call Numbers:

180171832, 180171860, 180171868, 180171877, 180171880, 180171887, 180171898, 180171899, 180171900, 180171901, 180171902, 180171903

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-1	20	0	20	100
B-4	20	0	20	100
B-5	20	0	20	100
B-7	20	0	20	100
B-9	20	0	20	100
B-11	20	0	20	100
B-12	20	0	20	100
B-14	20	0	20	100
C-16	20	0	31.80	100
B-18	40	0	40	100
C-19	40	0	22.89	100

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A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

FIELD REPRESENTATIVE Cody K. Hatch, PE — **DATE** 04/26/2018

☑ **THIS FIELD REPORT IS FINAL**
A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

REVIEWED BY Alicia R. Sellers, EI — **DATE** 04/27/2018

This report presents opinions formed as a result of our observation of activities relating to our services only. We rely on the contractor to comply with the plans and specification throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the work of others. Our firm will not be responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments: N/A

Distribution: CPRA

BORING/CPT NUMBER	BORING/CPT DEPTH (FT)	TODAY (FT)	TO DATE (FT)	% COMPLETE
B-20	60	0	60	100
C-20	60	0	22.59	100
C-21	40	0	24.11	100
C-22	40	0	31.87	100
C-23	40	0	25.82	100
C-24	40	0	25.17	100
B-25	40	0	40	100
C-26	40	0	27.02	100
B-27	60	0	60	100
C-27	40	0	25.06	100
C-28	40	0	32.84	100
C-29	40	0	36.96	100
C-30	40	0	32.35	100
C-31	40	0	33.37	100
B-32	40	0	40	100
B-33	60	0	60	100
C-33	40	0	40.49	100
C-34	40	0	37.46	100
C-35	40	31.60	31.60	100
B-36	60	0	60	100
C-37	40	33.57	33.57	100
C-38	40	0	45.30	100
C-39	40	0	41.46	100
B-40	40	0	40	100
C-41	40	29.80	29.80	100
B-42	60	0	60	100
C-43	40	24.96	24.96	100
C-44	40	21.57	21.57	100
B-45	40	0	60	100
C-46	40	22.06	22.06	100
C-47	40	23.69	23.69	100
B-48	60	0	60	100
C-48	40	25.69	25.69	100

Activities:

0630 I (Cody Hatch) of GeoEngineers, Inc. (GeoEngineers) depart from the hotel for the Kayak Boat Launch to meet the SER crew.

0700 I arrive at the Kayak Boat Launch. The SER crew launches the support boat. I load my equipment into the support boat.

0710 I conduct a tailgate safety meeting with all personnel. I review potential job hazards (pinch points, slips, trips and falls, and general boat safety). We discuss proper PPE to be worn at all times including steel toe boots, hard hat, personal flotation device, gloves, eye protection, and ear protection. We discuss the sounding operations. Everyone reviews and signs the JHA.

0715 The SER drill crew and I travel to the location where we had staged the CPT airboat yesterday.

CPT AIRBOAT LOCATION NEAR CPT C-38 (FACING WEST)

0718 We travel to the CPT C-41 location. The SER crew sets up the CPT airboat to conduct the sounding. I set up the CPT equipment.

PRE-DRILL CONDITION OF CPT C-41 (FACING NORTH)

0800 I conduct a zero test and begin the sounding at C-41. The water depth is 2.7 feet. There are problems with connecting to the cone. I suspect that the wire that was repaired yesterday is the problem.

0810 We suspend CPT operations because of rain moving through the area. The SER drill crew stations the CPT airboat near C-41. We depart the site and travel back to the marina.

POST-DRILL CONDITION OF CPT C-41 (FACING NORTH)

CPT AIRBOAT LOCATION NEAR CPT C-41 (FACING EAST)

0825 We arrive at the dock and wait for the weather to clear. While waiting, I unwrap the cable and re-splice the yellow wire. I observe that the wire has become disconnected again since we repaired it yesterday.

0945 After the weather clears, the SER drill crew and I depart the dock and travel back to the spot where we stationed the CPT airboat near C-41.

CPT AIRBOAT LOCATION NEAR CPT C-41 (FACING EAST)

1000 We retrieve the CPT airboat and travel to the CPT C-41 location. The SER crew sets up the CPT airboat to conduct the sounding. I set up the CPT equipment.

PRE-DRILL CONDITION OF CPT C-41 (FACING NORTH)

1032 I conduct a zero test and begin the sounding at C-41. The water depth is 2.7 feet.

1054 I terminate the sounding when we hit refusal at 29.80 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-41 (FACING WEST)

1057 We travel to the CPT C-37 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-37 (FACING WEST)

1108 I conduct a zero test and begin the sounding at C-37. The water depth is 1.5 feet.

1127 I terminate the sounding when we hit refusal at 33.57 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-37 (FACING NORTHWEST)

1138 We travel to the CPT C-35 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-35 (FACING WEST)

1149 I conduct a zero test and begin the sounding at C-35. The water depth is 2.1 feet.

1203 I terminate the sounding when we hit refusal at 31.60 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-35 (FACING WEST)

1210 We travel to the CPT C-43 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-43 (FACING NORTH)

1220 I conduct a zero test and begin the sounding at C-43. The water depth is 2.0 feet.

1236 I terminate the sounding when we hit refusal at 24.96 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-43 (FACING WEST)

1241 We travel to the CPT C-44 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-44 (FACING SOUTHEAST)

1255 I conduct a zero test and begin the sounding at C-44. The water depth is 2.5 feet.

1307 I terminate the sounding when we hit refusal at 21.57 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-44 (FACING NORTHWEST)

1312 We travel to the CPT C-48 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-48 (FACING WEST)

1323 I conduct a zero test and repeat the sounding at C-48. The water depth is 2.3 feet.

1334 I terminate the sounding when we hit refusal at 24.66 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-48 (FACING WEST)

1338 We travel to the CPT C-47 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-47 (FACING NORTHWEST)

1346 I conduct a zero test and begin the sounding at C-47. The water depth is 2.3 feet.

1358 I terminate the sounding when we hit refusal at 23.69 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-47 (FACING WEST)

1403 We travel to the CPT C-46 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-46 (FACING NORTH)

1412 I conduct a zero test and begin the sounding at C-46. The water depth is 1.7 feet.

1423 I terminate the sounding when we hit refusal at 22.06 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-46 (FACING WEST)

1427 I call Josh Pruett (GeoEngineers) to let him know that we have finished the CPT soundings. He asks us to conduct new tests at CPT locations C-19 and C-20 to make sure that we hit refusal using the criteria of lifting up the boat, bowing the rods, etc.

1431 We travel to the CPT C-20 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-20 (FACING WEST)

1451 I conduct a zero test and begin the sounding at C-20a. The water depth is 3.6 feet.

1502 I terminate the sounding when we hit refusal at 24.47 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-20 (FACING WEST)

1509 We travel to the CPT C-19 location. The SER crew sets up the CPT airboat to conduct the sounding.

PRE-DRILL CONDITION OF CPT C-19 (FACING SOUTH)

1515 I conduct a zero test and begin the sounding at C-19a. The water depth is 2.0 feet.

1522 I terminate the sounding when we hit refusal at 25.69 feet bgs. The SER crew trips the CPT rods out of the hole.

POST-DRILL CONDITION OF CPT C-19 (FACING WEST)

1527 The SER crew finishes tripping out the rods. The SER crew prepares to take the CPT airboat and support airboat back to the boat landing.

1533 We depart the site and travel to the boat launch.

1537 We arrive at the boat launch and the SER crew removes the CPT airboat and support boat from the water.

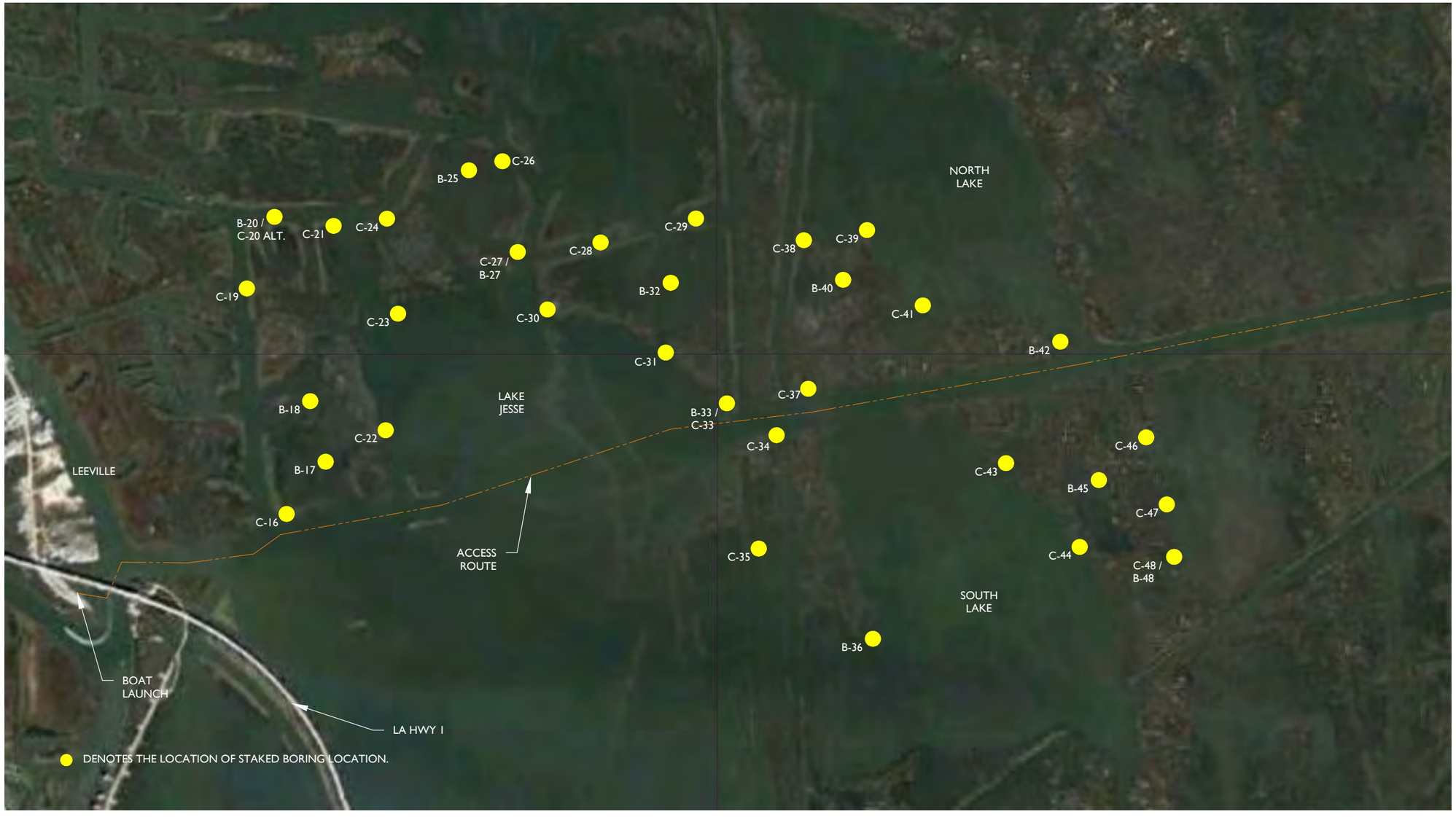
1550 The CPT crew and I unload our equipment from the airboats and prepare them to travel back to the shop.

1630 I depart the boat launch and travel to the hotel in New Iberia, Louisiana.

1900 I arrive at the hotel in New Iberia, Louisiana.

APPENDIX B
Lonnie G. Harper & Associates, Inc. Survey Report

LAFOURCHE PARISH, LOUISIANA



1 SOIL EXPLORATION LOCATIONS

SCALE: 1" = 1,500'

GENERAL NOTES

1. ALL DISTANCES AND ELEVATIONS ARE EXPRESSED IN TERMS OF FEET UNLESS OTHERWISE DENOTED.
2. THE HORIZONTAL COORDINATES AND ELEVATIONS ON THIS SURVEY ARE REFERENCED TO THE NATIONAL SPATIAL REFERENCE SYSTEM AND WERE DERIVED BY RECENT GPS OBSERVATIONS. THE HORIZONTAL AND VERTICAL DATUMS FOR THIS REFERENCE SYSTEM ARE NAD 83 AND NAVD 88, RESPECTIVELY. THE REFERENCE FRAME FOR NAD 83 AND NAVD 88 IS CURRENTLY 2011, MA11, PA11 (EPOCH 2010). THE NAVD 88 ELEVATIONS ARE BASED ON GEOID 12B. BASIS OF BEARINGS IS SPC LSZ-1702.
3. ALL COORDINATE CONVERSIONS FROM NAD 83 TO WGS84 LAT. & LONG. WERE PERFORMED USING NGS NADCON UTILITY SOFTWARE.
4. NO EASEMENTS OR UNDERGROUND UTILITIES WERE DETERMINED OR LOCATED DURING THIS SURVEY.
5. A MAGNETOMETER SURVEY WAS PERFORMED AROUND EACH OF THE BORING LOCATIONS SHOWN. NO UNDERGROUND UTILITIES OR OIL/GAS WELLS WERE DETECTED WITHIN 50 FEET OF THE LOCATIONS SHOWN.

NORTH ARROW

REVISION DATE	REVISED BY	DESCRIPTION

LONNIE G. HARPER & ASSOCIATES, INC.
CIVIL ENGINEERING AND LAND SURVEYING
2746 HWY. NO. 384, BELL CITY, LOUISIANA 70630
PHONE: (337) 905-1079 FAX: (337) 905-1076

SOIL EXPLORATION LOCATIONS

GEOENGINEERS, INC.
BA-194 EAST LEEVILLE MARSH CREATION PROJECT
LAFOURCHE PARISH, LOUISIANA

SEAL

STATE OF LOUISIANA
LONNIE G. HARPER
REG. NO. 4326
REGISTERED
04/10/2018

LONNIE G. HARPER, P.L.S.
REG. NO. 4326
LONNIE G. HARPER & ASSOC., INC.
GRAND CHENIER, LOUISIANA

DRAWN BY	DATE
C.L.W.	04/10/2018
DESIGNED BY	HOR. SCALE
C.L.W.	1" = 1,500'
APPROVED BY	VERT. SCALE
L.G.H.	N.A.
PROJECT NO.	SHEET
2018-31	01 OF 03

Figure B-1

LAFOURCHE PARISH, LOUISIANA

1 SOIL EXPLORATION LOCATIONS

SCALE: 1" = 1,500'

GENERAL NOTES

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NORTH ARROW

REVISION DATE	REVISED BY	DESCRIPTION

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2746 HWY. NO. 384, BELL CITY, LOUISIANA 70630
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C.L.W.	1" = 1,500'
APPROVED BY	VERT. SCALE
L.G.H.	N.A.
PROJECT NO.	SHEET
2018-31	02 OF 03

Figure B-2

LAFOURCHE PARISH, LOUISIANA

POINT NUMBER	NORTHING (US SURVEY FEET)	EASTING (US SURVEY FEET)	LATITUDE (NORTH)	LONGITUDE (WEST)	WATER BOTTOM ELEVATION	WATER DEPTH
B1	282930.95	3674847.48	29 16 19.71388	90 05 51.15259	-3.98	4.58
B4	281296.51	3676706.84	29 16 03.33553	90 05 30.35998	-4.89	5.59
B5	279681.10	3674849.14	29 15 47.54333	90 05 51.52953	-4.36	5.16
B7	279663.01	3678623.32	29 15 46.95942	90 05 08.92430	-4.74	5.27
B9	278055.45	3676706.52	29 15 31.25224	90 05 30.76003	-4.14	4.93
B11	278059.01	3680370.19	29 15 30.89273	90 04 49.40160	-4.93	5.72
B12	276423.60	3674860.50	29 15 15.29604	90 05 51.79784	-4.65	5.55
B14	276519.25	3678528.73	29 15 15.84949	90 05 10.37842	-4.48	5.44
C16	274651.60	3641900.95	29 15 01.12596	90 12 04.05299	-1.97	2.82
B17	275361.36	3642429.58	29 15 08.10021	90 11 58.00661	-1.86	2.67
B18	276182.68	3642220.15	29 15 16.25106	90 12 00.27898	-1.63	2.37
C19	277712.53	3641360.43	29 15 31.47929	90 12 09.81339	-2.97	3.73
B20/C20	NOT STAKED - TOO CLOSE TO PIPELINE					
B20/C20 ALT	278685.62	3641733.58	29 15 41.07556	90 12 05.49247	-2.41	3.09
C21	278564.21	3642536.32	29 15 39.79513	90 11 56.44382	-1.74	2.43
C22	275788.04	3643243.49	29 15 12.24414	90 11 48.77136	-3.10	3.89
C23	NOT STAKED - TOO CLOSE TO PIPELINE					
C23 ALT	277369.79	3643409.95	29 15 27.88571	90 11 46.71515	-3.12	3.73
C24	278661.43	3643260.53	29 15 40.68648	90 11 48.25728	-1.59	2.36
B25	279317.66	3644373.54	29 15 47.07312	90 11 35.61869	-2.32	3.01
C26	279440.41	3644829.44	29 15 48.24331	90 11 30.45810	-1.99	2.71
B27/C27	278207.05	3645037.21	29 15 36.01364	90 11 28.25131	-3.30	3.97
C28	278337.55	3646160.87	29 15 37.19443	90 11 15.55165	-3.36	4.07
C29	278664.76	3647456.17	29 15 40.30508	90 11 00.89198	-2.24	2.88

POINT NUMBER	NORHTING (US SURVEY FEET)	EASTING (US SURVEY FEET)	LATITUDE (NORTH)	LONGITUDE (WEST)	WATER BOTTOM ELEVATION	WATER DEPTH
C30	277429.57	3645464.29	29 15 28.27512	90 11 23.51762	-3.14	3.73
C31	276843.08	3647046.82	29 15 22.31272	90 11 05.71927	-3.08	3.07
C29	278664.76	3647456.17	29 15 40.30508	90 11 00.89198	-2.24	2.88
C30	277429.57	3645464.29	29 15 28.27512	90 11 23.51762	-3.14	3.73
C31	276843.08	3647046.82	29 15 22.31272	90 11 05.71927	-3.08	3.07
B32	277790.68	3647113.35	29 15 31.68651	90 11 04.86102	-2.40	2.46
B33/C33	276153.52	3647876.04	29 15 15.40434	90 10 56.43681	-2.51	2.66
C34	275719.68	3648551.77	29 15 11.04246	90 10 48.85826	-1.46	1.70
C35	274180.76	3648308.84	29 14 55.83273	90 10 51.77518	-2.21	2.39
B36	272957.69	3649857.99	29 14 43.57092	90 10 34.42829	-3.31	3.55
C37	276351.59	3648981.30	29 15 17.25498	90 10 43.93779	-1.69	1.91
C38	278368.21	3648918.74	29 15 37.22394	90 10 44.41466	-1.70	2.06
C39	278506.88	3649778.81	29 15 38.51078	90 10 34.68955	-2.56	2.58
B40	277831.87	3649455.72	29 15 31.86107	90 10 38.41380	-1.76	1.85
C41	277483.04	3650535.94	29 15 28.29993	90 10 26.25926	-2.83	3.07
B42	276990.12	3652403.90	29 15 23.23291	90 10 05.22904	-0.91	1.06
C43	275341.62	3651666.36	29 15 06.98843	90 10 13.74363	-1.71	2.04
C44	274202.38	3652667.17	29 14 55.61032	90 10 02.57733	-2.85	3.40
B45	275111.66	3652928.63	29 15 04.58501	90 09 59.52155	-1.77	1.97
C46	275691.01	3653569.76	29 15 10.25536	90 09 52.21780	-1.64	1.73
C47	274779.64	3653849.80	29 15 01.20535	90 09 49.16170	-2.47	2.63
B48/C48	274067.26	3653949.23	29 14 54.14340	90 09 48.12145	-1.99	2.42

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1 COORDINATE TABLE

SCALE: N.T.S.

REVISION DATE	REVISED BY	DESCRIPTION

LONNIE G. HARPER & ASSOCIATES, INC.
CIVIL ENGINEERING AND LAND SURVEYING
2746 HWY. NO. 384, BELL CITY, LOUISIANA 70630
PHONE: (337) 905-1079 FAX: (337) 905-1076

SOIL EXPLORATION LOCATIONS

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LAFOURCHE PARISH, LOUISIANA

SEAL

STATE OF LOUISIANA
LONNIE G. HARPER
REG. NO. 4326
REGISTERED
04/10/2018

LONNIE G. HARPER, P.L.S.
REG. NO. 4326
LONNIE G. HARPER & ASSOC., INC.
GRAND CHENIER, LOUISIANA

DRAWN BY	DATE
C.L.W.	04/10/2018
DESIGNED BY	HOR. SCALE
C.L.W.	1" = 4,000'
APPROVED BY	VERT. SCALE
L.G.H.	N.A.
PROJECT NO.	SHEET
2018-31	03 OF 03

Figure B-3

APPENDIX C
Marsh Creation Soil Boring Logs

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Water level observed at time of exploration

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

GeoEngineers

Figure C-1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
4/20/2018	4/20/2018	40	SJW / IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
-2 NAVD88	Cathead Hammer 140 (lbs) / 30 (in) Drop	Triple Engine Airboat Drill Rig

Latitude Longitude	System Datum	Depth of water to mudline at time of exploration (ft)
29.2545 -90.2001	Geographic NAD83 (feet)	2.0

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
0	0		21			1			OH	Gray organic clay with peat (very soft) (organic content = 3.9%)	133	39.5	0.1	5	6				0.12
-5			21			2			CH	Gray clay with peat and 1-inch silty sand layer (very soft)	49	65.9	0.06	5	10	58	39		0.10
	5		19			3				Gray clay with silty sand lenses (very soft)	90	53.6	0.22	5	7				0.23
			23			4				Gray clay with silty sand lenses (very soft to soft)	81	54.4	0.23	5	4				0.32
-10			15			5			CL	Gray sandy clay with shells	51					39	23		
	10		24			6				Gray sandy clay with shells (very soft)	68	66.4	0.08	5	9				0.15
-15			14			7			SP-SM	Gray sand with silt	31							12	
	15		25			8			CL	Gray silty clay with sand pockets and shell fragments (very soft) (specific gravity = 2.65)	35	83.5				36	18		0.18
			26			9				Gray sandy clay with shell fragments and roots (very soft)	51	72.8	0.23	6.8	15				
-20			13	39		10			SP-SM	Gray sand with silt (dense)	25							12	
	20																		
-25									SM										
			12	22		11				Gray silty sand with clay pockets (firm)	33								
	25																		
-30			13	31		12				Gray silty sand (dense)	25							14	
	30																		
-35			12	24		13				Gray silty sand (firm)	24								
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-18

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-2
Sheet 1 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	35																
-40		13	18	14				Gray silty sand (firm)	29							16	
	40																

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-18 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Drilled	Start 4/19/2018	End 4/19/2018	Total Depth (ft)	60	Logged By / Checked By	SJW / IAH	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) Vertical Datum	-2 NAVD88		Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Pontoon Drill Rig		
Latitude Longitude	29.2614 -90.2015		System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	3.0		

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-5	0		22			1			CL	Gray very silty clay with sand and roots (very soft to soft)	34	83.4	0.18	5	15	33	15		0.38
			12			2			SM	Dark gray silty sand	26							36	
	5		20			3			CL-ML	Gray sandy clayey silt with clay layers	39							62	0.12
			21			4			CH	Gray clay with sand lenses (very soft to soft)	73	60.1	0.22	5	5				0.30
-10			21			5				Gray clay with silt layer and shell fragments (very soft) (specific gravity = 2.68)	70	59.8	0.18	5	5	70	50		0.15
	10		22			7				Gray clay with sand layers and shell fragments (very soft)	71	61.2	0.2	5	11				
									CL	Gray sandy clay									
-15			24			8			CH	Gray clay									
			21			9				Gray clay with silt pockets and sand pockets (soft)	58	67.3							0.34
	15		25			10				Gray clay with sand lenses and shell fragments (very soft)	60	64.8	0.19	6.8	8				
-20			24			11			SP	Gray sand	22							4	
										Gray sand									
	20																		
-25									SP-SM										
			16	12		12				Gray sand with silt (firm)	27							11	
	25																		
-30			18	15		13				Gray sand with silt (firm)	27								
	30																		
-35			14	12		14				Gray sand with silt (firm)	24							7	
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-20

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-3
Sheet 1 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample	FIELD DATA: Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	LABORATORY DATA: Dry Density, (pcf)	LABORATORY DATA: Shear Strength, (KSF)	LABORATORY DATA: Confining Pressure, (PSI)	LABORATORY DATA: Strain, %	LABORATORY DATA: Liquid Limit (LL), %	LABORATORY DATA: Plasticity Index (PI), %	LABORATORY DATA: Passing No. 200 Sieve, %	LABORATORY DATA: Minivane Shear Strength (KSF)
	35																	
-40		23			15			CH	Gray clay with sand lenses and silt seams (soft to medium)	48	76.2	0.42	15.6	8				0.51
	40																	
-45		9			16				Gray clay with silt pockets and shell fragments (very soft)	56	73.5	0.09	17.6	11				0.02
	45																	
-50		24			17				Gray clay with silt and shells (medium)	40								0.66
	50																	
-55		24			18				Gray clay with sand lenses and shell fragments (soft to medium)	43	83.2	0.43	21.6	10				0.85
	55																	
-60		22			19				Gray clay with silt lenses (medium)	48	76.1	0.65	23.6	6				
	60																	

Date:7/3/18 Path:P:\18\18274004\GINT\18274004.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-20 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-3
Sheet 2 of 2

Drilled Start 4/23/2018 End 4/23/2018	Total Depth (ft) 40	Logged By SJW Checked By IAH	Driller Specialized Environmental Resources, LLC	Drilling Method Wet Rotary	
Surface Elevation (ft) Vertical Datum -2 NAVD88	Hammer Data Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment Triple Engine Airboat Drill Rig			
Latitude 29.2631 Longitude -90.1932	System Datum Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft) 1.0			

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		20			1			CH	Gray clay with silt layer and trace organic matter (very soft)	55	69.7	0.07	5	10				0.17
-5			12	12		2			SM	Gray silty sand (firm)	32							18	
	5		10	10		3				Gray silty sand (firm)									
			24			4			CH	Gray clay with silt layers, sand lenses and shell fragments (very soft to soft)	86	52.4	0.2	5	5				0.26
-10			24			5				Gray clay with silt layers, sand lenses and shell fragments (very soft)	71	58.5	0.15	5	9				0.67
	10		25			6			CL	Gray very sandy clay	35					34	19		
									SM	Dark gray and black silty sand with organic matter	47							34	
-15			26			7			CH	Gray clay with sand pockets and shell fragments (very soft)	73	65.3	0.12	5.2	13				
						8			CL	Gray sandy clay with wood and shells	56								
	15		24			9				Gray silty clay with sand, wood and shell fragments (very soft to soft)	41	80.8	0.24	6	9				0.38
			20			10			CH	Gray clay with silt lenses (very soft)	75								0.21
-20			22			11				Gray clay with silt lenses, sand lenses, and shell fragments (very soft to soft)	68	60.2	0.23	7.6	5				0.32
	20																		
-25			13			12				Gray clay with sand lenses (very soft)	49								0.12
	25																		
-30			21			13				Gray clay with sand pockets, silt lenses and organic matter (soft) (specific gravity = 2.64)	54	70.5				55	37		0.43
	30																		
-35			24			14			CL	Gray silty clay with sand lenses (soft)	42								0.43
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Date:7/3/18 Path:P:\18\18274004\GINT\18274004 GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-25

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	35																
-40		24		15				Gray silty clay with sand lenses (soft)	44	77.4	0.37	15.6	11				0.40
	40																

Date:7/3/18 Path:P:\18\18274004\GINT\18274004.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-25 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Drilled	Start 4/19/2018	End 4/19/2018	Total Depth (ft)	60	Logged By / Checked By	SJW / IAH	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) / Vertical Datum	-3 NAVD88		Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Pontoon Drill Rig		
Latitude / Longitude	29.26 -90.1912		System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	4.0		

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0	20			1			OH	Dark gray organic clay with peat pockets and shells (very soft)	143	33.3	0.19	5	0				
-5		22			2				Dark gray organic clay with peat pockets (organic content = 4.1%, specific gravity = 2.56)	154	31				153	90		
	5	22			3			CL	Dark gray and gray sandy clay with silty sand layers and peat layers (very soft)	109	46.9	0.14	5	9			75	0.02
-10		23	0.25		4			ML	Gray sandy silt with clay pockets and shell fragments	32							69	0.72
		17	0.25		5				Gray silt with clay layers	31							90	0.19
	10	21			6			CL	Gray silty clay with sand and shell fragments (very soft)	49	78.9	0.14	5	10				
-15		22			7			CH	Gray clay with sand lenses and shells (very soft)	79	57.1	0.19	5.2	7				
		21			8				Gray clay with sand lenses and shell fragments (very soft to soft)	69	61.6	0.24	6	4	71	51		0.25
	15	21			9				Gray clay (medium)	88								0.61
-20		19			10				Gray clay with sand pockets (soft)	42	81.9	0.29	7.6	6				0.34
	20																	
-25								CL										
		23			11				Gray clay with silt and shells (very soft)	49								0.23
	25																	
-30								CH										
		24			12				Gray clay with sand lenses (soft)	52	71.9	0.38	11.6	5				
	30																	
-35								ML										
		18	0.5		13				Gray sandy silt	29								
	35																	

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Date:7/3/18 Path:P:\18\18274004\GINT\18274004 GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-27

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample: Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-40	35																
		24	0.25	14			CH	Gray clay with sand lenses and 3-inch silty clay layer at bottom (soft to medium)	61	65.3	0.48	15.6	4				0.80
-45	40																
		24	0.25	15				Gray clay with sand lenses and 2-inch clayey sand layer at bottom	44								
-50	45																
		25		16				Gray clay with sand lenses (soft to medium)	50	78.9	0.35	19.6	13				0.60
-55	50						CL										
		25	2.0	17				Gray silty clay with sand pockets (medium)	33								0.56
-60	55																
		24		18				Gray silty clay with 2-inch clay layer at bottom (medium)	36	87.4	0.85	23.6	11				
	60																

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-27 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-5
Sheet 2 of 2

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	4/20/2018	4/20/2018	40	SJW	IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) Vertical Datum	-2 NAVD88	Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Airboat Drill Rig
Latitude Longitude	29.2588 -90.1847	System Datum	Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft)	2.0

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			PT	Black and dark brown peat (very soft) (organic content = 31.8%)	507								0.03
-5			21			2			OH	Gray organic clay with wood (very soft)	186	29.4	0.01	5	3				0.02
			20			3			CL	Gray sandy clay (very soft to soft)	39	85	0.15	5	14				0.43
	5					4			SM	Dark gray silty sand	29							44	
			24			5			CH	Gray clay with silt streaks, sand lenses and shells (very soft)	57	68.7	0.18	5	5				
-10			20			6			CL	Gray sandy clay with silt and shells (very soft)	41					42	23	66	0.13
	10		24			7			CH	Gray clay with silt streaks and shells (soft to medium)	35	89.9	0.3	5	5				0.59
-15			23			8				Gray clay with trace sand (soft)	51								0.40
	15		25			9				Gray clay with silt lenses (soft)	62	63.4	0.46	6	4				0.43
			25			10				Gray clay with sand pockets and 3-inch clayey sand layer at bottom	48								
-20			25			11				Gray clay with silt lenses and organic matter (soft to medium)	60	68.5	0.33	7.6	13				0.57
	20																		
-25			25			12				Gray clay with sand seams and sand layers (medium) (specific gravity = 2.75)	59	64.8				89	62		0.77
	25																		
-30			22			13				Gray clay with silt lenses and sand layers (soft to medium)	40	74.6	0.4	11.6	5				0.61
	30																		
-35			23			14				Gray clay with silty sand lenses (medium)	38								0.67
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-32

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample: Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	35																
-40		24	0.75	15				Gray clay with silt lenses (medium)	43	73.5	0.55	15.6	4				0.85
	40																

Date:7/3/18 Path:P:\18\18274004\GINT\18274004.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-32 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-6
Sheet 2 of 2

Drilled Start 4/18/2018 End 4/18/2018	Total Depth (ft) 60	Logged By SJW / Checked By IAH	Driller Specialized Environmental Resources, LLC	Drilling Method Wet Rotary	
Surface Elevation (ft) -3 / Vertical Datum NAVD88		Hammer Data Cathead Hammer 140 (lbs) / 30 (in) Drop		Drilling Equipment Pontoon Drill Rig	
Latitude 29.2543 / Longitude -90.1823		System Datum Geographic NAD83 (feet)		Depth of water to mudline at time of exploration (ft) 5.0	

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		22			1			PT	Dark brown peat with organic clay (organic content = 14.1%)	210								
-5			24			2				Dark brown peat with organic clay (very soft)	443	14.1	0.04	5	6	211	162		0.04
	5		22			3			CL	Gray clay with silt, sand lenses and silt layers (very soft) (specific gravity = 2.67)	50	68.6				43	21		0.06
-10			21			4			CH	Gray clay with silt layers, sand pockets, shells and organic matter (very soft)	102	48.5	0.12	5	5				
			23			5				Gray clay with silt layers and shell fragments (very soft)	72	59.4	0.13	5	4				0.16
	10		25			6			CL	Gray clay with silt, sand and shell fragments (very soft)	57	69.6	0.23	5	6				
-15																			
	15		25			7				Gray sandy clay (very soft)	31	85.2	0.2	6.4	6				
-20									SC										
	20		23			8				Gray clayey sand	30					26	9	36	0.07
-25									CL										
	25		24			9				Gray sandy clay (soft)	32	85.9	0.29	10.4	9				
-30																			
	30		25			10				Gray clay with silt and silty sand layer (very soft)	54	70.6	0.22	12.4	10				
-35									SM	Gray silty sand									
			23			11				Gray silty sand	36							33	0.47
	35					12			CL	Gray clay with silt and sand layers (soft)	55	68.9	0.29	14	9				

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Date:7/9/18 Path:P:\18\18274004\GINT\18274004 DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-33

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-7
Sheet 1 of 2

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample	FIELD DATA: Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-40	35																	
		24			13				Gray silty clay with sand layers and wood (very soft to soft)	54	70.4	0.19	15.6	13				0.26
	40																	
-45								CH										
		25			14				Gray clay with 2-inch sand layer and 4-inch sandy silt layer at bottom	53								
	45																	
-50																		
		24			15				Gray clay with sand layers (very soft)	35	79.9	0.24	19.6	9	54	36		
	50																	
-55																		
		24			16				Gray clay with sandy silt lenses (very soft)	54	69.3	0.19	21.6	13	65	44		
	55																	
-60																		
		21			18				Gray clay with sandy silt layers (very soft)	52	74.6	0.2	23.6	15				
	60																	

Date:7/9/18 Path:P:\18\18274004\GINT\18274004 01.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-33 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-7
Sheet 2 of 2

Drilled Start 4/16/2018 End 4/16/2018	Total Depth (ft) 60	Logged By SJW / Checked By IAH	Driller Specialized Environmental Resources, LLC	Drilling Method Wet Rotary
Surface Elevation (ft) -3 / Vertical Datum NAVD88		Hammer Data Cathead Hammer 140 (lbs) / 30 (in) Drop		Drilling Equipment Pontoon Drill Rig
Latitude 29.2454 / Longitude -90.1762		System Datum Geographic NAD83 (feet)		Depth of water to mudline at time of exploration (ft) 3.0

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-5	0		23			1			CL	Gray clay with silt, organic matter and 3-inch peat layer at top (very soft) (organic content = 4.4%)	121	41.1	0.08	5	6				
			22			2				Gray silty sandy clay with organic matter (soft)	48	78.8	0.31	5	15				
			22			3				Gray silty clay with sand and organic matter (very soft)	41					38	16		0.02
-10	5		20			4			SP-SM	Gray sand with silt, clay layer, clay pocket, organic matter and shells	28							12	0.12
			19			5			CL	Gray clay with sand, silt layers and organic matter (very soft)	52	69.2	0.11	5	6				0.11
-15	10																		
			22			6				Gray silty sandy clay with shells (very soft)	44	76.6	0.16	6.4	9				
-20	15								CH										
	20		24			7				Gray clay with shell fragment layers (very soft) (specific gravity = 2.63)	82	53.7				89	64		0.21
-25	25		24	0.5		8				Gray clay with silt layers, organic matter and sand layer at bottom (soft)	94	48.8	0.26	10.4	6				
-30									CL										
	30		25	0.5		9				Gray silty clay with sand pockets (soft)	33	88.9	0.34	13.2	14				
-35									SM										
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Date:7/3/18 Path:P:\18\18274004\GINT\18274004.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-36

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-8

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample	FIELD DATA: Sample Name	FIELD DATA: Water Level	FIELD DATA: Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-40	35	17			10				Gray silty sand with clay	30							16	
								SP-SM										
	40	24			11				Gray sand with silt	28							10	
-45		18	27		12			SM	Gray silty sand (firm)									
	45	19			13				Gray silty sand	26								
-50								CH	Gray clay (soft)									0.43
	50	23			14				Gray clay with silt layers (soft)	31	87.8	0.48	20.4	8				0.43
-55																		
	55	24	0.25		15				Gray clay with silt layers (medium)	39	83.1	0.64	22.4	8				0.73
-60								CL										
	60	24	0.25		16				Gray clay with silt (medium)	33	88.8	0.53	23.6	15				0.52

Date:7/3/18 Path:P:\18\18274004\GINT\18274004 01.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-36 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-8
Sheet 2 of 2

Drilled Start 4/23/2018 End 4/23/2018	Total Depth (ft) 40	Logged By SJW / Checked By IAH	Driller Specialized Environmental Resources, LLC	Drilling Method Wet Rotary	
Surface Elevation (ft) / Vertical Datum -2 NAVD88	Hammer Data Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment Triple Engine Airboat Drill Rig			
Latitude 29.2589 / Longitude -90.1773	System Datum Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft) 0.5			

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		23.5			1			CH	Gray clay with sand lenses and organic matter (very soft) (organic content = 3.9%)	92	52.8	0.08	5	10				0.13
-5			22			2			CL-ML	Gray clayey silt with sand	33					28	7		0.14
	5		21.5			3				Gray clayey silt with shell fragments and organic matter	43	78.7	0.15	5	14				
			16			4			CL	Gray silty clay with organic matter (very soft)	48	83.1	0.18	5	15				
-10			12.5			5			CH	Gray clay with silty sand pockets and silty sand layers (very soft)	95	52.7	0.12	5	7				
	10		22			6				Gray clay with 4-inch shell layer at bottom	77								
-15			0			7				No recovery									
									CL										
			21.5			8				Gray silty clay with shells (soft) (specific gravity = 2.65)	38	84.3				37	20		0.27
	15		20			9			CH	Gray clay with sand streaks and sand pockets (soft)	44	77.8	0.27	6.8	5				0.32
-20			24			10				Gray clay with silty sand pockets (soft)	52	74.2	0.26	7.6	7				
	20								SM										
-25			25			11				Gray silty sand with interbedded clay layers	32								
	25																		
-30			12	17		12				Dark gray silty sand (firm)	33							22	
	30																		
-35									SP-SM										
	35		13	16		13				Gray sand with silt (firm)	25							8	

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-40

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-9
Sheet 1 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample	FIELD DATA: Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	LABORATORY DATA: Dry Density, (pcf)	LABORATORY DATA: Shear Strength, (KSF)	LABORATORY DATA: Confining Pressure, (PSI)	LABORATORY DATA: Strain, %	LABORATORY DATA: Liquid Limit (LL), %	LABORATORY DATA: Plasticity Index (PI), %	LABORATORY DATA: Passing No. 200 Sieve, %	LABORATORY DATA: Minivane Shear Strength (KSF)
	35																	
-40		13	24		14				Gray sand with silt (firm)	26								
	40																	

Date:7/3/18 Path:P:\18\18274004\GINT\18274004.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-40 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-9
Sheet 2 of 2

Drilled Start 4/21/2018 End 4/21/2018	Total Depth (ft) 60	Logged By SJW / Checked By IAH	Driller Specialized Environmental Resources, LLC	Drilling Method Wet Rotary	
Surface Elevation (ft) / Vertical Datum -1 NAVD88	Hammer Data Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment Triple Engine Airboat Drill Rig			
Latitude 29.2565 / Longitude -90.1681	System Datum Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft) 1.0			

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			PT	Dark brown peat (very soft) (organic content = 50.4%)	941								0.02
			19			2			OH	Gray organic clay (very soft)	108	41.1	0.09	5	9	204	152		0.04
-5	5		16			3			ML	Gray sandy silt with clay lenses	37	85.6	0.88	5	15				0.04
			21			4			CL	Gray very silty clay with clay lenses and shell fragments (very soft)	38	81.8	0.17	5	14				0.05
-10			18.5			5				Gray silty clay with sand lenses	44					37	15		
						6			CH	Gray clay with sand lenses (very soft)	97	52.3	0.11	5	7				
	10		11			7				Gray clay with shells (very soft)	59								0.03
			19			8				Gray clay with sand pockets (soft)	65	65	0.31	5.2	3				0.33
-15			22			9				Gray clay with sand lenses and shells (very soft) (specific gravity = 2.73)	57	64.9				70	49		0.21
	15								SM										
			10	9		10				Dark gray silty sand with shell fragments (loose)	34							18	
-20			11	17		11				Dark gray silty sand (firm)	28								
	20																		
-25			12	10		12				Gray silty sand (firm)	30							34	
	25																		
-30			11	13		13				Dark gray silty sand (firm)	37							37	
	30																		
									CH										
-35			24			14				Gray clay with sand pockets and shells (very soft)	56	71.6	0.18	13.4	8				
	35					15			SM	Dark gray silty sand	34							18	

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-42

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-10
Sheet 1 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample	FIELD DATA: Sample Name	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-40	35																	
		23.5			16			CH	Gray clay with silt lenses and sand lenses (soft)	59					56	36		0.43
	40																	
-45								SC										
		21			17				Gray clayey sand with shells and silty sand seams	23								
	45																	
-50								CH										
		19			18				Gray clay with sand lenses (soft to medium)	45	77.3	0.27	19.6	12				0.51
	50																	
-55								CL										
		24			19				Gray silty clay with sand (medium)	33								0.52
	55																	
-60								CH										
		24			20				Gray clay with sand lenses (soft)	53	72.3	0.43	23.6	10				0.33
	60																	

Log of Boring B-42 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-10
Sheet 2 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled Start 4/21/2018 End 4/21/2018	Total Depth (ft) 60	Logged By SJW / Checked By IAH	Driller Specialized Environmental Resources, LLC	Drilling Method Wet Rotary	
Surface Elevation (ft) / Vertical Datum -2 NAVD88	Hammer Data Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment Triple Engine Airboat Drill Rig			
Latitude 29.2513 / Longitude -90.1665	System Datum Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft) 2.0			

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			PT	Black peat with organic clay	441								
						2			OH	Gray organic clay (very soft) (organic content = 26.2%)	240	22.7	0.1	5	14				0.14
-5			18			3			CH	Gray clay with organic matter (very soft)	70	64.4	0.11	5	9				0.11
	5		21.5			4			CL	Gray silty clay with sand seams (very soft) (specific gravity = 2.70)	44	77.4				35	12		0.07
			23			5				Gray silty clay with sand and shells (very soft)	41	78.1	0.18	5	8				0.24
-10			22			6				Gray clay with silt and sand (soft)	60								0.23
	10		22			7			CH	Gray clay with sand lenses and shell fragments (soft)	50	71.4	0.32	5	5				0.40
-15			21			8				Gray clay with silt pockets and shell fragments (soft)	52								0.26
	15		22.5			9			CL	Gray silty clay with sand and shell fragments (very soft)	35	88.4	0.23	5.6	7				0.22
			9	11		10			SM	Gray silty sand with shell fragments (firm)	22							20	
-20			13	30		11			SP-SM	Gray sand with silt (dense)	22							9	
	20																		
-25									SM										
			12	17		12				Gray silty sand (firm)	19								
	25																		
-30			12	42		13				Gray silty sand with trace clay (dense)	30							28	
	30																		
-35			13	19		14				Gray silty sand (firm)	26							14	
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-45

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-11
Sheet 1 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot or Pocket Pen (TSF)	FIELD DATA: Collected Sample	FIELD DATA: Sample Name	FIELD DATA: Water Level	FIELD DATA: Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-40	35																	
		13	10		15			CL-ML	Gray sandy clayey silt	37							52	
	40																	
-45		9.5			16			SP-SM	Gray sand with silt	23							11	0.26
	45																	
-50		24			17			CL	Gray silty clay with sand (medium)	28								0.85
	50																	
-55		24			18				Gray silty clay with sand and silt lenses (medium)	41	83.1	0.72	21.6	15				0.85
	55																	
-60		23			19				Gray silty clay with sand (medium)	45								0.81
	60																	

Date:7/3/18 Path:P:\18\18274004\GINT\18274004401.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-45 (continued)

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	4/23/2018	4/23/2018	60	SJW	IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) Vertical Datum	-2 NAVD88	Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Triple Engine Airboat Drill Rig
Latitude Longitude	29.2484 -90.1634	System Datum	Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft)	2.0

Notes: Cement-bentonite grout full depth

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-5	0		22			1			CH	Gray clay (very soft) (organic content = 0.4%)	66	61.6	0.07	5	11				0.02
			20			2			CL	Gray very silty clay with sand (very soft)	40					33	11		0.10
	5		22			3				Gray silty clay with with sand layers and shells (very soft)	39	83.4	0.12	5	11				
			22			4				Gray clay with sand, silty sand layers, shell fragments, and 3-inch silt layer at top (very soft)	53	78.5	0.22	5	15				0.17
-10			22			5			CH	Gray clay with silt pockets (very soft) (specific gravity = 2.66)	64	60.8				73	51		0.19
	10		24			6				Gray clay with sand pockets and silt lenses (very soft)	75	57.9	0.23	5	4	94	68		0.21
-15			23			7				Gray clay with sand pockets and silt lenses (soft)	62	69.7	0.29	5.2	5				0.29
			23			8				Dark gray clay with sand lenses, sand pockets, and shells (soft)	43	82.2	0.25	6	6				0.25
	15		23			9			CL	Gray sandy clay with shell fragments (soft)	33								0.22
-20			22			10			CH	Gray clay with sand lenses and shell fragments (medium)	50	72.6	0.93	7.6	7	66	44		0.43
	20																		
-25									SM										
			9	19		11				Gray silty sand (firm)	28							14	
	25																		
-30			13	19		12				Gray silty sand (firm)	25								
	30																		
-35			14	41		13				Gray silty sand (dense)	22							45	
	35																		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-48

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-12
Sheet 1 of 2

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample: Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
-40	35																
	40	15	39	14				Gray silty sand (dense)	21								
-45							ML										
	45	14	38	15				Gray sandy silt (dense)	29							59	
-50							CL										
	50	24		16				Gray clay with silt, sand lenses and shells (soft)	42	79.4	0.35	19.6	13				0.83
-55		24	1.5	17				Gray silty clay with sand lenses (soft)	36								0.43
-60	55																
	60	24		18				Gray clay with silt, sand lenses and sand layers (medium)	39	84.6	0.66	23.6	9				0.43

Date:7/3/18 Path:P:\18\18274004\GINT\18274004 01.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Log of Boring B-48 (continued)

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Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure C-12
Sheet 2 of 2

APPENDIX D
Marsh Creation Soil Boring Laboratory Testing Results

APPENDIX D
MARSH CREATION SOIL BORING LABORATORY TESTING RESULTS

This appendix provides additional information regarding the laboratory testing completed on soil boring samples obtained from the marsh creation areas for the East Leeville Marsh Creation and Nourishment (BA-194) project located in Lafourche Parish, Louisiana.

General

Soil samples obtained from the explorations were transported to our soil mechanics laboratory in Baton Rouge, Louisiana, and examined to confirm or modify field classifications. Representative soil samples were selected for laboratory testing consisting of moisture content determinations, organic content determinations, Atterberg Limits tests, specific gravity tests, sieve analyses, unconsolidated undrained triaxial tests, and/or one-dimensional consolidation tests. The laboratory testing procedures are discussed in more detail below.

Moisture Content

Moisture content tests were completed for representative samples in general accordance with ASTM D2216. The results of these tests are presented on the logs at the respective sample depths.

Organic Content

Organic content tests were completed for representative samples in general accordance with ASTM D2974. The results of these tests are presented on the logs at the respective sample depths.

Atterberg Limits

Atterberg Limits tests were performed on selected fine-grained soil samples in general accordance with ASTM D4318. The tests were used to classify the soil as well as to evaluate its index properties. The results of the Atterberg Limits testing are shown on the logs at the respective sample depths.

Specific Gravity

Specific gravity tests were performed on selected samples in general accordance with ASTM D854. The results of these tests are presented in the lab summary tables.

Grain Size Analysis

Sieve analyses were performed on selected samples in general accordance with ASTM D422, ASTM D1140, ASTM D6913. The results of these analyses were plotted and classified in general accordance with the Unified Soil Classification System (USCS) and are included with this appendix. The percentage passing the U.S. No. 200 sieve is shown on the boring logs at the respective sample depths.

Miniature Vane Shear Tests

Miniature vane shear (mini-vane) tests were completed on very soft to medium cohesive soils immediately prior to sample extrusion to provide shear strength information for undisturbed cohesive samples in general accordance with ASTM D4648. Test results are shown on the boring logs at the respective sample depth.

Unconsolidated Undrained Triaxial Compression Tests

Unconsolidated undrained (UU) triaxial compression tests were performed on selected cohesive soil samples obtained from the borings. The tests were used to evaluate shear strength characteristics and were completed in general accordance with ASTM D4767. The results of the testing are presented on the logs at their respective sample depths.

One-Dimensional Consolidation Tests

One-dimensional consolidation tests were performed on selected cohesive soil samples obtained from the borings. These tests were used to evaluate the deformation characteristics of the soil and were completed in general accordance with ASTM D2435. The results of the one-dimensional consolidation tests are included with this appendix.

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-18	0.0 - 2.0	Very soft gray organic clay with peat (OH)	UU ORG MV	133.4	92.3	39.5					0.10		6.3	5.0	B	0.12	TV=0.068, OC=3.87%
B-18	2.0 - 4.0	Very soft gray clay with peat and 1" silty sand layer (CH)	UU AL MV	48.9	98.2	65.9	58	19	39		0.06		10.2	5.0	B	0.10	TV=0.072
B-18	4.0 - 6.0	Very soft gray clay with silty sand lenses (CH)	UU MV	89.8	101.7	53.6					0.22		7.3	5.0	MS	0.23	TV=0.09
B-18	6.0 - 8.0	Very soft to soft gray clay with silty sand lenses (CH)	UU MV	80.8	98.5	54.4					0.23		3.7	5.0	SLS(40)	0.32	TV=0.092
B-18	8.0 - 10.0	Gray sandy clay with shells (CL)	AL EXT_MC	50.9			39	16	23								
B-18	10.0 - 12.0	Very soft gray sandy clay with shells (CL)	UU MV	67.9	111.5	66.4					0.08		9.1	5.0	B	0.15	TV=0.04
B-18	12.0 - 14.0	Gray sand with silt (SP-SM)	-200	31.2						11.7							
B-18	14.0 - 16.0	Very soft gray silty clay with sand pockets and shell fragments (CL)	AL CONS SG	34.6	112.4	83.5	36	18	18							0.18	TV=0.09, SG=2.651
B-18	16.0 - 18.0	Very soft gray sandy clay with shell fragments and roots (CL)	UU	51.3	110.2	72.8					0.23		14.5	6.8	B		
B-18	18.5 - 20.0	Gray sand with silt (SP-SM)	-200	24.9						11.7							
B-18	23.5 - 25.0	Gray silty sand with clay pockets (SM)	MC	32.9													
B-18	28.5 - 30.0	Gray silty sand (SM)	SV	25.0						13.6							
B-18	33.5 - 35.0	Gray silty sand (SM)	MC	24.3													
B-18	38.5 - 40.0	Gray silty sand (SM)	-200	29.2						15.6							

Disclaimer: The results presented relate only to those samples tested.
Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Vertical Shear = VS Angle Shear = AS
Slickensided = SLS Bulge = B Crumble = C

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Title: QAM
Date: 7/5/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure D-1

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-20	0.0 - 2.0	Very soft to soft gray very silty clay with sand and roots (CL)	UU AL MV	34.0	111.8	83.4	33	18	15		0.18		15.0	5.0	B	0.38	TV=0.1
B-20	2.0 - 4.0	Dark gray silty sand (SM)	SV	26.3						35.8							TV=NA
B-20	4.0 - 6.0	Gray sandy clayey silt with clay layer (CL-ML)	-200 MV	39.2						62.0						0.12	TV=0.09
B-20	6.0 - 8.0	Very soft to soft gray clay with sand lenses (CH)	UU MV	72.6	103.7	60.1					0.22		5.1	5.0	MS	0.30	TV=0.065
B-20	8.0 - 10.0	Very soft gray clay with silt layer and shell fragments (CH)	UU AL MV	70.0	101.7	59.8	70	20	50		0.18		4.9	5.0	B	0.15	TV=0.09
B-20	8.0 - 10.0	Gray clay with silt layer and shell fragments (CH)	CONS SG	62.7	100.5	61.7											SG=2.678
B-20	10.0 - 12.0	Very soft gray clay with sand layers and shell fragments (CH)	UU	70.8	104.5	61.2					0.20		10.6	5.0	AS(70)		TV=NA
B-20	14.0 - 16.0	Soft gray clay with silt pockets and sand pockets (CH)	MV UDW	58.0	106.3	67.3										0.34	TV=0.07
B-20	16.0 - 18.0	Very soft gray clay with sand lenses and shell fragments (CH)	UU	59.5	103.4	64.8					0.19		7.6	6.8	MS		TV=NA
B-20	18.0 - 20.0	Gray sand (SP)	SV	21.8						4.0							TV=NA
B-20	23.5 - 25.0	Gray sand with silt (SP-SM)	-200	26.9						10.5							
B-20	28.5 - 30.0	Gray sand with silt (SP-SM)	MC	26.5													
B-20	33.5 - 35.0	Gray sand with silt (SP-SM)	-200	23.5						6.6							
B-20	38.0 - 40.0	Soft to medium gray clay with sand lenses and silt seams (CH)	UU MV	47.7	112.5	76.2					0.42		8.1	15.6	AS(70)	0.51	TV=0.094
B-20	43.0 - 45.0	Very soft gray clay with silt pockets and shell fragments (CH)	UU MV	56.0	114.6	73.5					0.09		11.3	17.6	B	0.02	TV=0.07, HT to DIA ratio = 1.927
B-20	48.0 - 50.0	Medium gray clay with silt and shells (CL)	MV EXT_MC	39.7												0.66	TV=0.12
B-20	53.0 - 55.0	Soft to medium gray clay with sand lenses and shell fragments (CH)	UU MV	42.7	118.8	83.2					0.43		9.8	21.6	B	0.85	TV=0.13, maxed minivane
B-20	58.0 - 60.0	Medium gray clay with silt lenses (CH)	UU	47.5	112.3	76.1					0.65		6.4	23.6	MS		TV=0.13

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Summary of Lab Results
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East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure D-2

Soil Boring ID	Depth Interval (ft)	D2488	Test Type	D2216	D2166/D2850		D4318			D422/D1140 /D6913	D2166/D2850					D4648	Comments
		Visual Description		Moisture (%)	Unit Weight (PCF)		Atterberg Limits			%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
					Wet	Dry	LL	PL	PI								
B-25	0.0 - 2.0	Very soft gray clay with silt layer and trace organic matter (CH)	UU MV	55.4	108.4	69.7					0.07		9.8	5.0	B	0.17	TV=0.076
B-25	2.0 - 4.0	Gray silty sand (SM)	-200	32.3						18.1							
B-25	6.0 - 8.0	Very soft to soft gray clay with silt layers, sand lenses and shell fragments (CH)	UU MV	86.3	97.6	52.4					0.20		4.7	5.0	B	0.26	TV=0.078
B-25	8.0 - 10.0	Very soft gray clay with silt layers, sand lenses and shell fragments (CH)	UU MV	71.4	100.3	58.5					0.15		8.9	5.0	B	0.67	TV=0.094
B-25	10.0 - 11.0	Gray very sandy clay (CL)	AL EXT_MC	34.6			34	15	19								
B-25	11.5 - 12.0	Dark gray and black silty sand with organic matter (SM)	-200	46.7						34.3							
B-25	12.0 - 13.0	Very soft gray clay with sand pockets and shell fragments (CH)	UU	72.7	112.7	65.3					0.12		13.1	5.2	B		
B-25	13.0 - 14.0	Gray sandy clay with wood and shells (CL)	EXT_MC	56.4													
B-25	14.0 - 16.0	Very soft to soft gray silty clay with sand, wood and shell fragments (CL)	UU MV	40.7	113.7	80.8					0.24		8.6	6.0	B	0.38	TV=0.08
B-25	16.0 - 18.0	Very soft gray clay with silt lenses (CH)	MV EXT_MC	74.6												0.21	TV=0.076
B-25	18.0 - 20.0	Very soft to soft gray clay with silt lenses, sand lenses and shell fragments (CH)	UU MV	68.1	101.3	60.2					0.23		4.9	7.6	B	0.32	TV=0.084
B-25	23.0 - 25.0	Very soft gray clay with sand lenses (CH)	MV EXT_MC	48.9												0.12	TV=0.066
B-25	28.0 - 30.0	Soft gray clay with sand pockets, silt lenses and organic matter (CH)	AL CONS SG MV	53.9	108.6	70.5	55	18	37							0.43	TV=0.096, SG=2.643, Minivane maxed
B-25	33.0 - 35.0	Soft gray silty clay with sand lenses (CL)	MV EXT_MC	42.1												0.43	TV=0.056, Minivane maxed
B-25	38.0 - 40.0	Soft gray silty clay with sand lenses (CL)	UU MV	44.0	111.5	77.4					0.37		11.3	15.6	MS	0.40	TV=0.066

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East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure D-3

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-27	0.0 - 2.0	Very soft dark gray organic clay with peat pockets and shells (OH)	UU	142.6	80.8	33.3					0.19		0.4	5.0	B		TV=0.02
B-27	2.0 - 4.0	Dark gray organic clay with peat pockets (OH)	AL CONS SG ORG	153.8	78.7	31.0	153	63	90								TV=0.03, SG=2.558, OC=4.05%
B-27	4.0 - 6.0	Very soft dark gray and gray sandy clay with silty sand layers and peat layers (CL)	UU -200 MV	108.5	97.8	46.9				75.2	0.14		9.3	5.0	B	0.02	TV=NA
B-27	6.0 - 8.0	Gray sandy silt with clay pockets and shell fragments (ML)	SV MV EXT_MC	32.2						69.4						0.72	TV=0.12
B-27	8.0 - 10.0	Gray silt with clay layers (ML)	-200 MV EXT_MC	31.2						90.1						0.19	TV=0.09
B-27	10.0 - 12.0	Very soft gray silty clay with sand and shell fragments (CL)	UU MV	48.7	117.3	78.9					0.14		10.3	5.0	MS	0.07	TV=0.09
B-27	12.0 - 14.0	Very soft gray clay with silt lenses and shells (CH)	UU	79.1	102.2	57.1					0.19		6.6	5.2	MS		TV=NA
B-27	14.0 - 16.0	Very soft to soft gray clay with sand lenses and shell fragments (CH)	UU AL MV	68.9	104.0	61.6	71	20	51		0.24		4.4	6.0	MS	0.25	TV=0.105
B-27	16.0 - 18.0	Medium gray clay (CH)	MV EXT_MC	88.1												0.61	TV=0.13
B-27	18.0 - 20.0	Soft gray clay with sand pockets (CH)	UU MV	42.4	116.7	81.9					0.29		5.6	7.6	MS	0.34	TV=0.134
B-27	23.0 - 25.0	Very soft gray clay with silt and shells (CL)	MV EXT_MC	49.0												0.23	TV=0.07
B-27	28.0 - 30.0	Soft gray clay with sand lenses (CH)	UU	52.0	109.2	71.9					0.38		4.7	11.6	MS		TV=NA
B-27	33.0 - 35.0	Gray sandy silt (ML)	EXT_MC	29.2													TV=NA
B-27	38.0 - 40.0	Soft to medium gray clay with sand lenses and 3" silty clay layer at bottom (CH)	UU MV	60.9	105.0	65.3					0.48		4.1	15.6	MS	0.80	TV=0.145
B-27	43.0 - 45.0	Gray clay with sand lenses and 2" clayey sand layer at bottom (CH)	EXT_MC	44.3													TV=NA
B-27	48.0 - 50.0	Soft to medium gray clay with sand lenses (CH)	UU MV	49.6	118.1	78.9					0.35		13.1	19.6	B	0.60	TV=0.095
B-27	53.0 - 55.0	Medium gray silty clay with sand pockets (CL)	MV EXT_MC	32.7												0.56	TV=0.10
B-27	58.0 - 60.0	Medium gray silty clay with 2" clay layer at bottom (CL)	UU	35.8	118.7	87.4					0.85		10.6	23.6	B		TV=0.15

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Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure D-4

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-32	0.0 - 2.0	Very soft black and dark brown peat (PT)	ORG MV EXT_MC	506.5												0.03	TV=0.02, OC=31.8%
B-32	2.0 - 4.0	Very soft gray organic clay with wood (OH)	UU MV	186.4	84.2	29.4					0.01		3.2	5.0	B	0.02	TV=0.02
B-32	4.0 - 5.0	Very soft to soft gray sandy clay (CL)	UU MV	38.8	118.0	85.0					0.15		13.8	5.0	B	0.43	TV=0.05, maxed minivane
B-32	5.0 - 6.0	Dark gray silty sand (SM)	-200	29.2						43.8							
B-32	6.0 - 8.0	Very soft gray clay with silt streaks, sand lenses and shells (CH)	UU	56.7	107.7	68.7					0.18		4.5	5.0	B		
B-32	8.0 - 10.0	Very soft gray sandy clay with silt and shells (CL)	-200 AL MV	41.1			42	19	23	66.0						0.13	TV=0.05
B-32	10.0 - 12.0	Soft to medium gray clay with silt streaks and shells (CH)	UU MV	35.3	121.7	89.9					0.30		5.3	5.0	MS	0.59	TV=0.07
B-32	12.0 - 14.0	Soft gray clay with trace sand (CH)	MV EXT_MC	50.9												0.40	TV=0.10
B-32	14.0 - 16.0	Soft gray clay with silt lenses (CH)	UU MV	62.3	102.9	63.4					0.46		3.9	6.0	MS	0.43	TV=0.07, maxed minivane
B-32	16.0 - 18.0	Gray clay with sand pockets and 3" clayey sand layer at bottom (CH)	EXT_MC	47.7													
B-32	18.0 - 20.0	Soft to medium gray clay with silt lenses and organic matter (CH)	UU MV	59.6	109.3	68.5					0.33		12.8	7.6	B	0.57	TV=0.08
B-32	23.0 - 25.0	Medium gray clay with sand seams and sand layers (CH)	AL CONS SG MV	58.9	102.9	64.8	89	27	62							0.77	TV=0.12, SG=2.745
B-32	28.0 - 30.0	Soft to medium gray clay with silt lenses and sand layers (CH)	UU MV	39.5	104.0	74.6					0.40		5.0	11.6	MS	0.61	TV=0.08
B-32	33.0 - 35.0	Medium gray clay with silty sand lenses (CH)	MV EXT_MC	37.9												0.67	TV=0.07
B-32	38.0 - 40.0	Medium gray clay with silt lenses (CH)	UU MV	43.3	105.2	73.5					0.55		3.8	15.6	MS	0.85	TV=0.10, maxed minivane

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East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure D-5

Soil Boring ID	Depth Interval (ft)	D2488	Test Type	D2216	D2166/D2850		D4318			D422/D1140 /D6913	D2166/D2850					D4648	Comments
		Visual Description		Moisture (%)	Unit Weight (PCF)		Atterberg Limits			%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
					Wet	Dry	LL	PL	PI								
B-33	0.0 - 2.0	Dark brown peat with organic clay (PT)	ORG EXT_MC	210.0													TV=0.03, OC=14.06%
B-33	2.0 - 4.0	Very soft dark brown peat with organic clay (PT)	UU AL MV	442.7	76.6	14.1	211	49	162		0.04		5.8	5.0	B	0.04	TV=0.03
B-33	4.0 - 6.0	Very soft gray clay with silt, sand lenses and silt layers (CL)	AL CONS SG MV	50.2	103.0	68.6	43	22	21							0.06	TV=0.03, SG=2.668
B-33	6.0 - 8.0	Very soft gray clay with silt layers, sand pockets, shells and organic matter (CH)	UU	101.5	97.7	48.5					0.12		5.1	5.0	B		
B-33	8.0 - 10.0	Very soft gray clay with silt layers and shell fragments (CH)	UU MV	72.2	102.2	59.4					0.13		3.7	5.0	B	0.16	TV=0.04
B-33	10.0 - 12.0	Very soft gray clay with silt, sand and shell fragments (CL)	UU	57.0	109.3	69.6					0.23		5.6	5.0	B		TV=0.05
B-33	15.0 - 17.0	Very soft gray sandy clay (CL)	UU	31.1	111.7	85.2					0.20		6.1	6.4	B		TV=0.10
B-33	20.0 - 22.0	Gray clayey sand (SC)	-200 AL MV	29.8			26	17	9	35.8						0.07	TV=0.08
B-33	25.0 - 27.0	Soft gray sandy clay (CL)	UU	31.6	113.0	85.9					0.29		8.8	10.4	B		TV=0.13
B-33	30.0 - 32.0	Very soft gray clay with silt and silty sand layer (CL)	UU	54.0	108.7	70.6					0.22		9.8	12.4	B		TV=0.10
B-33	33.0 - 34.0	Gray silty sand (SM)	-200	35.6						33.5							
B-33	34.0 - 35.0	Soft gray clay with silt and sand layers (CL)	UU MV	54.9	106.8	68.9					0.29		9.3	14.0	B	0.47	TV=0.15
B-33	38.0 - 40.0	Very soft to soft gray silty clay with sand layers and wood (CL)	UU MV	53.6	108.1	70.4					0.19		12.6	15.6	B	0.26	TV=0.09
B-33	43.0 - 45.0	Gray clay with 2" sand layer and 4" sandy silt layer at bottom (CH)	EXT_MC	53.1													TV=0.08
B-33	48.0 - 50.0	Very soft gray clay with sand layers (CH)	UU AL	34.7	107.5	79.9	54	18	36		0.24		9.3	19.6	B		
B-33	53.0 - 55.0	Very soft gray clay with sandy silt lenses (CH)	UU AL	54.4	106.9	69.3	65	21	44		0.19		13.1	21.6	B		
B-33	53.0 - 55.0	Gray clay with silt and sandy silt lenses (CL)	AL CONS SG	41.0	109.2	77.4	46	20	26								SG=2.655
B-33	58.0 - 60.0	Very soft gray clay with sandy silt layers (CH)	UU	52.1	113.4	74.6					0.20		15.0	23.6	B		

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Figure D-6

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-36	0.0 - 2.0	Very soft gray clay with silt, organic matter and 3" peat layer at top (CL)	UU ORG	120.9	90.7	41.1					0.08		5.6	5.0	B		TV=0.06, OC=4.36%
B-36	2.0 - 4.0	Soft gray silty sandy clay with organic matter (CL)	UU	48.2	116.9	78.8					0.31		15.0	5.0	B		TV=0.034
B-36	4.0 - 6.0	Very soft gray silty clay with sand and organic matter (CL)	AL MV	41.3			38	22	16							0.02	TV=0.052, Unable to test UU
B-36	6.0 - 8.0	Gray sand with silt, clay layer, clay pocket, organic matter and shells (SP-SM)	-200 MV	28.3						11.9						0.12	TV=0.055
B-36	8.0 - 10.0	Very soft gray clay with sand, silt layers and organic matter (CL)	UU MV	52.3	105.4	69.2					0.11		6.3	5.0	B	0.11	TV=0.025
B-36	15.0 - 17.0	Very soft gray silty sandy clay with shells (CL)	UU	44.2	110.4	76.6					0.16		9.3	6.4	B		TV=0.10
B-36	20.0 - 22.0	Very soft gray clay with shell fragment layers (CH)	AL CONS SG MV	81.6	97.5	53.7	89	25	64							0.21	TV=0.15, SG=2.627
B-36	25.0 - 27.0	Soft gray clay with silt layers, organic matter and sand layer at bottom (CH)	UU	93.7	94.6	48.8					0.26		6.1	10.4	B		
B-36	30.0 - 32.0	Soft gray silty clay with sand pockets (CL)	UU	33.0	118.3	88.9					0.34		13.9	13.2	B		
B-36	35.0 - 37.0	Gray silty sand with clay (SM)	SV EXT_MC	29.6						16.2							
B-36	40.0 - 42.0	Gray sand with silt (SP-SM)	-200 EXT_MC	28.1						10.3							
B-36	45.0 - 47.0	Gray silty sand (SM)	MV EXT_MC	26.2												0.43	TV=0.14, maxed minivane
B-36	50.0 - 52.0	Soft gray clay with silt layers (CH)	UU MV	30.6	114.7	87.8					0.48		7.8	20.4	B	0.43	TV=0.12, maxed minivane
B-36	55.0 - 57.0	Medium gray clay with silt layers (CH)	UU MV	39.2	115.7	83.1					0.64		8.1	22.4	B	0.73	TV=0.16
B-36	58.0 - 60.0	Medium gray clay with silt (CL)	UU MV	32.7	117.9	88.8					0.53		15.0	23.6	B	0.52	TV=0.12

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Figure D-7

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-40	0.0 - 2.0	Very soft gray clay with sand lenses and organic matter (CH)	UU ORG MV	92.4	101.5	52.8					0.08		10.1	5.0	B	0.13	TV=0.052, OC=3.9%
B-40	2.0 - 4.0	Gray clayey silt with sand (CL-ML)	AL MV EXT_MC	32.9			28	21	7							0.14	TV=0.054
B-40	4.0 - 6.0	Gray clayey silt with shell fragments and organic matter (CL-ML)	UU	43.2	112.8	78.7					0.15		14.1	5.0	B		TV=0.046
B-40	6.0 - 8.0	Gray silty clay with organic matter (CL)	UU	47.9	122.9	83.1					0.18		15.0	5.0	B		
B-40	8.0 - 10.0	Very soft gray clay with silty sand pockets and silty sand layers (CH)	UU	94.5	102.5	52.7					0.12		6.6	5.0	B		
B-40	10.0 - 12.0	Gray clay with 4" shell layer at bottom (CH)	EXT_MC	76.8													
B-40	14.0 - 16.0	Soft gray silty clay with shells (CL)	AL CONS SG MV	38.0	116.3	84.3	37	17	20							0.27	TV=0.07, SG=2.652
B-40	16.0 - 18.0	Soft gray clay with sand streaks and sand pockets (CH)	UU MV	44.2	112.2	77.8					0.27		4.9	6.8	MS	0.32	TV=0.09
B-40	18.0 - 20.0	Soft gray clay with silty sand pockets (CH)	UU	52.0	112.7	74.2					0.26		6.6	7.6	MS		
B-40	23.0 - 25.0	Gray silty sand with interbedded clay layers (SM)	EXT_MC	32.1													TV=0.09
B-40	28.5 - 30.0	Dark gray silty sand (SM)	-200	33.0						21.9							
B-40	33.5 - 35.0	Gray sand with silt (SP-SM)	SV	25.4						8.1							
B-40	38.5 - 40.0	Gray sand with silt (SP-SM)	MC	26.3													

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Figure D-8

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-42	0.0 - 2.0	Very soft dark brown peat (PT)	ORG MV EXT_MC	940.8												0.02	TV=0.03, OC=50.41%
B-42	2.0 - 4.0	Very soft gray organic clay (OH)	UU AL MV	107.7	85.4	41.1	204	52	152		0.09		8.8	5.0	B	0.04	TV=0.01
B-42	4.0 - 6.0	Gray sandy silt with clay lenses (ML)	UU MV	36.5	116.9	85.6					0.88		15.0	5.0	B	0.04	TV=0.03
B-42	6.0 - 8.0	Very soft gray very silty clay with clay lenses and shell fragments (CL)	UU MV	37.6	112.5	81.8					0.17		14.1	5.0	B	0.05	TV=0.03
B-42	8.0 - 9.0	Gray silty clay with sand lenses (CL)	AL EXT_MC	44.3			37	22	15								
B-42	9.0 - 10.0	Very soft gray clay with sand lenses (CH)	UU	96.5	102.7	52.3					0.11		6.6	5.0	B		
B-42	10.0 - 12.0	Very soft gray clay with shells (CH)	MV EXT_MC	58.7												0.03	TV=0.03
B-42	12.0 - 14.0	Soft gray clay with sand pockets (CH)	UU MV	64.6	106.9	65.0					0.31		3.4	5.2	AS(50)	0.33	TV=0.02
B-42	14.0 - 16.0	Very soft gray clay with sand lenses and shells (CH)	AL CONS SG MV	57.1	102.0	64.9	70	21	49							0.21	TV=0.056, SG=2.728
B-42	16.5 - 18.0	Dark gray silty sand with shell fragments (SM)	-200	33.8						18.4							
B-42	18.5 - 20.0	Dark gray silty sand (SM)	MC	28.2													
B-42	23.5 - 25.0	Gray silty sand (SM)	SV	30.2						34.4							
B-42	28.5 - 30.0	Dark gray silty sand (SM)	-200 MC	36.6						36.9							
B-42	33.0 - 34.0	Very soft gray clay with sand pockets and shells (CH)	UU	56.3	111.8	71.6					0.18		7.6	13.4	B		
B-42	34.0 - 35.0	Dark gray silty sand (SM)	-200	33.6						18.1							
B-42	38.0 - 40.0	Soft gray clay with silt lenses and sand lenses (CH)	AL MV EXT_MC	58.5			56	20	36							0.43	TV=0.06, maxed minivane
B-42	43.0 - 45.0	Gray clayey sand with shells and silty sand seams (SC)	EXT_MC	22.8													
B-42	48.0 - 50.0	Soft to medium gray clay with sand lenses (CH)	UU MV	45.3	112.3	77.3					0.27		11.6	19.6	B	0.51	TV=0.106

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Figure D-9

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-42	53.0 - 55.0	Medium gray silty clay with sand (CL)	MV EXT_MC	32.8												0.52	TV=0.110
B-42	58.0 - 60.0	Soft gray clay with sand lenses (CH)	UU MV	53.4	110.9	72.3					0.43		10.3	23.6	B	0.33	TV=0.076

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Figure D-10

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-45	0.0 - 0.3	Black peat with organic clay (PT)	MC	440.5													
B-45	0.3 - 2.0	Very soft gray organic clay (OH)	UU ORG MV	239.8	77.3	22.7					0.10		14.3	5.0	B	0.14	TV=0.04, OC=26.17%
B-45	2.0 - 4.0	Very soft gray clay with organic matter (CH)	UU MV	70.3	109.7	64.4					0.11		9.1	5.0	B	0.11	TV=0.02
B-45	4.0 - 6.0	Very soft gray silty clay with sand seams (CL)	AL CONS SG MV	43.6	111.2	77.4	35	23	12							0.07	TV=0.056, SG=2.701
B-45	6.0 - 8.0	Very soft gray silty clay with sand and shells (CL)	UU MV	40.8	110.0	78.1					0.18		7.6	5.0	B	0.24	TV=0.04
B-45	8.0 - 10.0	Soft gray clay with silt and sand (CL)	MV EXT_MC	59.5												0.23	TV=0.08
B-45	10.0 - 12.0	Soft gray clay with sand lenses and shell fragments (CH)	UU MV	49.5	106.8	71.4					0.32		4.7	5.0	B	0.40	TV=0.13
B-45	12.0 - 14.0	Soft gray clay with silt pockets and shell fragments (CH)	MV EXT_MC	51.7												0.26	TV=0.06
B-45	14.0 - 16.0	Very soft gray silty clay with sand and shell fragments (CL)	UU MV	34.9	119.3	88.4					0.23		7.3	5.6	B	0.22	TV=0.076
B-45	16.5 - 18.0	Gray silty sand with shell fragments (SM)	-200	21.8						19.8							
B-45	18.5 - 20.0	Gray sand with silt (SP-SM)	-200	22.4						9.3							
B-45	23.5 - 25.0	Gray silty sand (SM)	MC	19.1													
B-45	28.5 - 30.0	Gray silty sand with trace clay (SM)	SV	29.6						27.6							
B-45	33.5 - 35.0	Gray silty sand (SM)	-200 AL MC	26.4			NP	NP	NP	14.3							
B-45	38.5 - 40.0	Gray sandy clayey silt (CL-ML)	-200	37.4						51.9							
B-45	43.0 - 45.0	Gray sand with silt (SP-SM)	SV MV EXT_MC	22.7						11.2						0.26	TV=0.08
B-45	48.0 - 50.0	Medium gray silty clay with sand (CL)	MV EXT_MC	28.4												0.85	TV=0.14, maxed minivane spring
B-45	53.0 - 55.0	Medium gray silty clay with sand and silt lenses (CL)	UU MV	40.5	116.7	83.1					0.72		15.0	21.6	B	0.85	TV=0.09, maxed minivane spring

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Figure D-11

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-45	58.0 - 60.0	Medium gray silty clay with sand (CL)	MV EXT_MC	45.0												0.81	TV=0.12

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Figure D-12

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-48	0.0 - 2.0	Very soft gray clay (CH)	UU ORG MV	65.5	101.9	61.6					0.07		10.8	5.0	B	0.02	TV=0.03, OC=0.36% UU: Slumping
B-48	2.0 - 4.0	Gray very silty clay with sand (CL)	AL MV EXT_MC	40.3			33	22	11							0.10	TV=0.02
B-48	4.0 - 6.0	Very soft gray silty clay with with sand layers and shells (CL)	UU	38.5	115.6	83.4					0.12		10.6	5.0	B		TV=0.065, UU: Slumping
B-48	6.0 - 8.0	Very soft gray clay with sand, silty sand layers, shell fragments and 3" silt layer at top (CL)	UU MV	53.3	120.3	78.5					0.22		15.0	5.0	B	0.17	TV=0.05
B-48	8.0 - 10.0	Very soft gray clay with silt pockets (CH)	AL CONS SG MV	63.9	99.6	60.8	73	22	51							0.19	TV=0.04, SG=2.663
B-48	10.0 - 12.0	Very soft gray clay with sand pockets and silt lenses (CH)	UU AL MV	75.4	101.6	57.9	94	26	68		0.23		3.7	5.0	AS(50)	0.21	TV=0.06
B-48	12.0 - 14.0	Soft gray clay with sand pockets and silt lenses (CH)	UU MV	62.1	112.9	69.7					0.29		5.1	5.2	AS(70)	0.29	TV=0.06
B-48	14.0 - 16.0	Soft dark gray clay with sand lenses, sand pockets, and shells (CH)	UU MV	43.1	117.6	82.2					0.25		5.8	6.0	AS(45)	0.25	TV=0.07
B-48	16.0 - 18.0	Soft gray sandy clay with shell fragments (CL)	MV EXT_MC	33.3												0.22	TV=0.05
B-48	18.0 - 20.0	Medium gray clay with sand lenses and shell fragments (CH)	UU AL MV	50.0	108.9	72.6	66	22	44		0.93		7.1	7.6	AS(60)	0.43	TV=0.06, maxed minivane spring
B-48	23.5 - 25.0	Dark gray silty sand (SM)	-200	28.0						13.9							
B-48	28.5 - 30.0	Gray silty sand (SM)	MC	25.4													
B-48	33.5 - 35.0	Gray silty sand (SM)	SV	22.4						45.2							
B-48	38.5 - 40.0	Gray silty sand (SM)	MC	20.9													
B-48	43.5 - 45.0	Gray sandy silt (ML)	-200	28.6						58.5							
B-48	48.0 - 50.0	Soft gray clay with silt, sand lenses and shells (CL)	UU MV	41.6	112.4	79.4					0.35		13.1	19.6	MS	0.83	TV=0.12
B-48	53.0 - 55.0	Gray silty clay with sand lenses (CL)	MV EXT_MC	35.8												0.43	TV=0.062, maxed minivane spring
B-48	58.0 - 60.0	Medium gray clay with silt, sand lenses and sand layers (CL)	UU MV	39.1	117.7	84.6					0.66		9.0	23.6	MS	0.43	TV=0.092, maxed minivane spring

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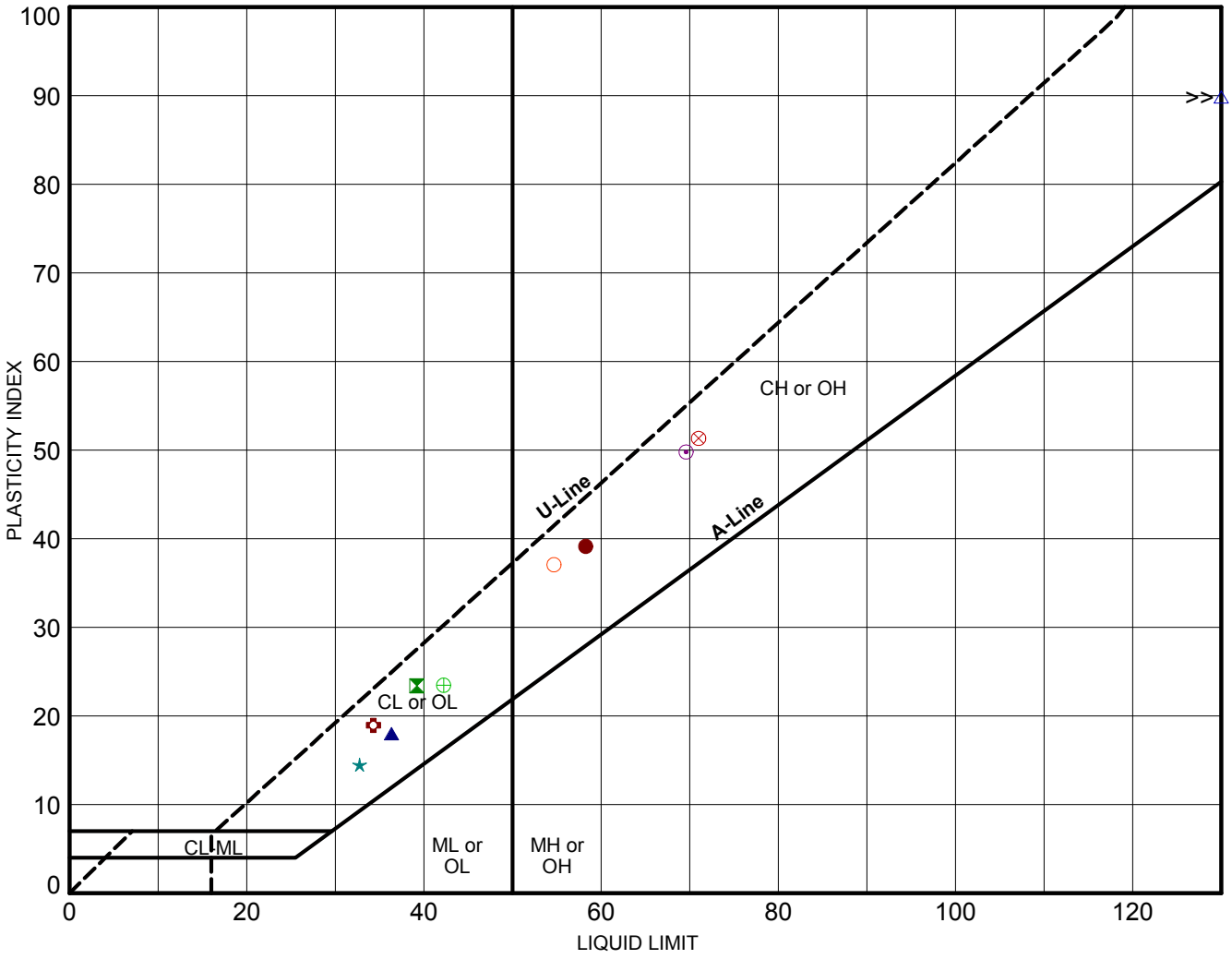
Figure D-13



Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
B-18	2.0 - 4.0	48.9	58	19	39		Very soft gray clay with peat and 1" silty sand layer (CH)
B-18	8.0 - 10.0	50.9	39	16	23		Gray sandy clay with shells (CL)
B-18	14.0 - 16.0	34.6	36	18	18		Very soft gray silty clay with sand pockets and shell fragments (CL)
B-20	0.0 - 2.0	34.0	33	18	15		Very soft to soft gray very silty clay (CL)
B-20	8.0 - 10.0	70.0	70	20	50		Very soft gray clay with silt layer and shell fragments (CH)
B-25	10.0 - 11.0	34.6	34	15	19		Gray very sandy clay (CL)
B-25	28.0 - 30.0	53.9	55	18	37		Soft gray clay with sand pockets, silt lenses and organic matter (CH)
B-27	2.0 - 4.0	153.8	153	63	90		Dark gray organic clay with peat pockets (OH)
B-27	14.0 - 16.0	68.9	71	20	51		Very soft to soft gray clay with sand lenses and shell fragments (CH)
B-32	8.0 - 10.0	41.1	42	19	23	66	Very soft gray sandy clay with silt and shells (CL)

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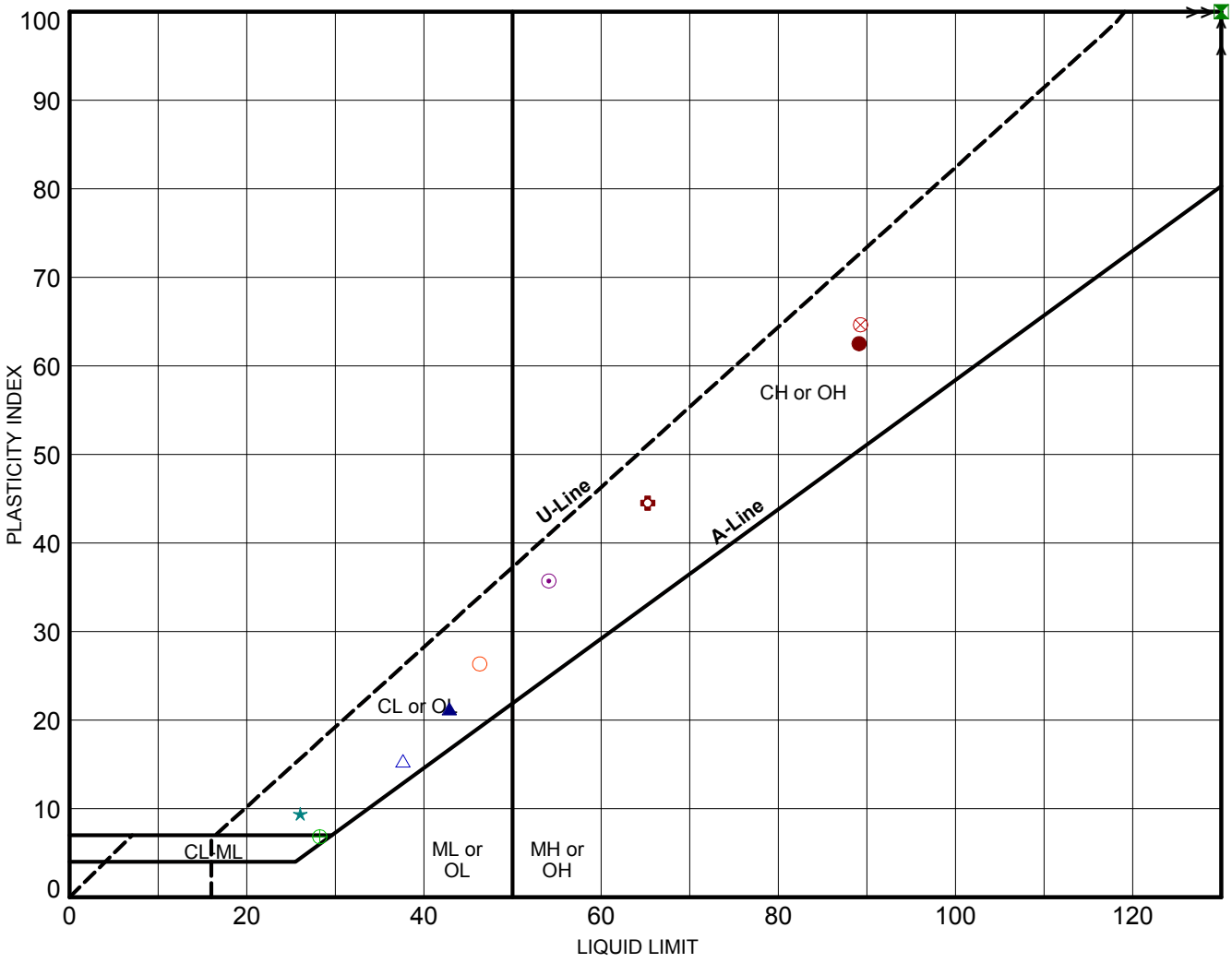
Tested By: CCA	Date Tested: 5/29/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers

Figure D-14

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 6/13/18 10:37 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



	Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
●	B-32	23.0 - 25.0	58.9	89	27	62		Medium gray clay with sand seams and sand pockets (CH)
⊠	B-33	2.0 - 4.0	442.7	211	49	162		Very soft dark brown peat with organic clay (PT)
▲	B-33	4.0 - 6.0	50.2	43	22	21		Very soft gray clay with silt, sand lenses and silt layers (CL)
★	B-33	20.0 - 22.0	29.8	26	17	9	36	Gray clayey sand (SC)
⊙	B-33	48.0 - 50.0	34.7	54	18	36		Very soft gray clay with sand layers (CH)
✿	B-33	53.0 - 55.0	54.4	65	21	44		Very soft gray clay with sandy silt lenses (CH)
○	B-33	53.0 - 55.0	41.0	46	20	26		Gray clay with silt and sandy silt lenses (CL)
△	B-36	4.0 - 6.0	41.3	38	22	16		Very soft gray silty clay with sand and organic matter (CL)
⊗	B-36	20.0 - 22.0	81.6	89	25	64		Very soft gray clay with shell fragment layers (CH)
⊕	B-40	2.0 - 4.0	32.9	28	21	7		Gray clayey silt with sand (CL-ML)

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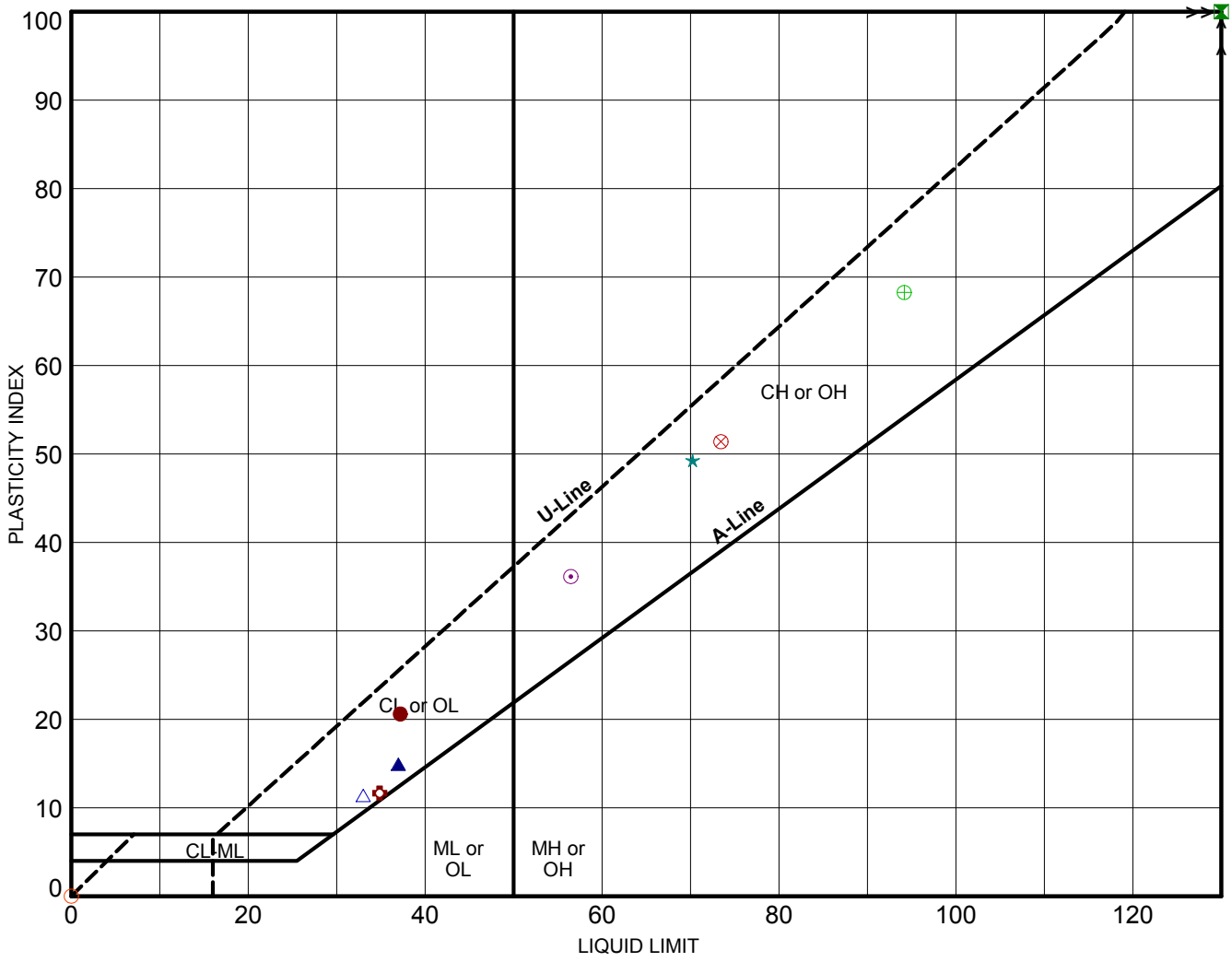
Tested By: CLP/SRT	Date Tested: 5/16/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 5/22/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-15

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 6/13/18 10:37 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



	Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
●	B-40	14.0 - 16.0	38.0	37	17	20		Soft gray silty clay with shells (CL)
▣	B-42	2.0 - 4.0	107.7	204	52	152		Very soft gray organic clay (OH)
▲	B-42	8.0 - 9.0	44.3	37	22	15		Gray silty clay with sand lenses (CL)
★	B-42	14.0 - 16.0	57.1	70	21	49		Very soft gray clay with sand lenses and shells (CH)
⊙	B-42	38.0 - 40.0	58.5	56	20	36		Soft gray clay with silt lenses and sand lenses (CH)
✿	B-45	4.0 - 6.0	43.6	35	23	12		Very soft gray silty clay with sand seams (CL)
○	B-45	33.0 - 35.0	26.4	NP	NP	NP	14	Gray silty sand (SM)
△	B-48	2.0 - 4.0	40.3	33	22	11		Gray very silty clay with sand (CL)
⊗	B-48	8.0 - 10.0	63.9	73	22	51		Very soft gray clay with silt pockets (CH)
⊕	B-48	10.0 - 12.0	75.4	94	26	68		Very soft gray clay with sand pockets and silt lenses (CH)

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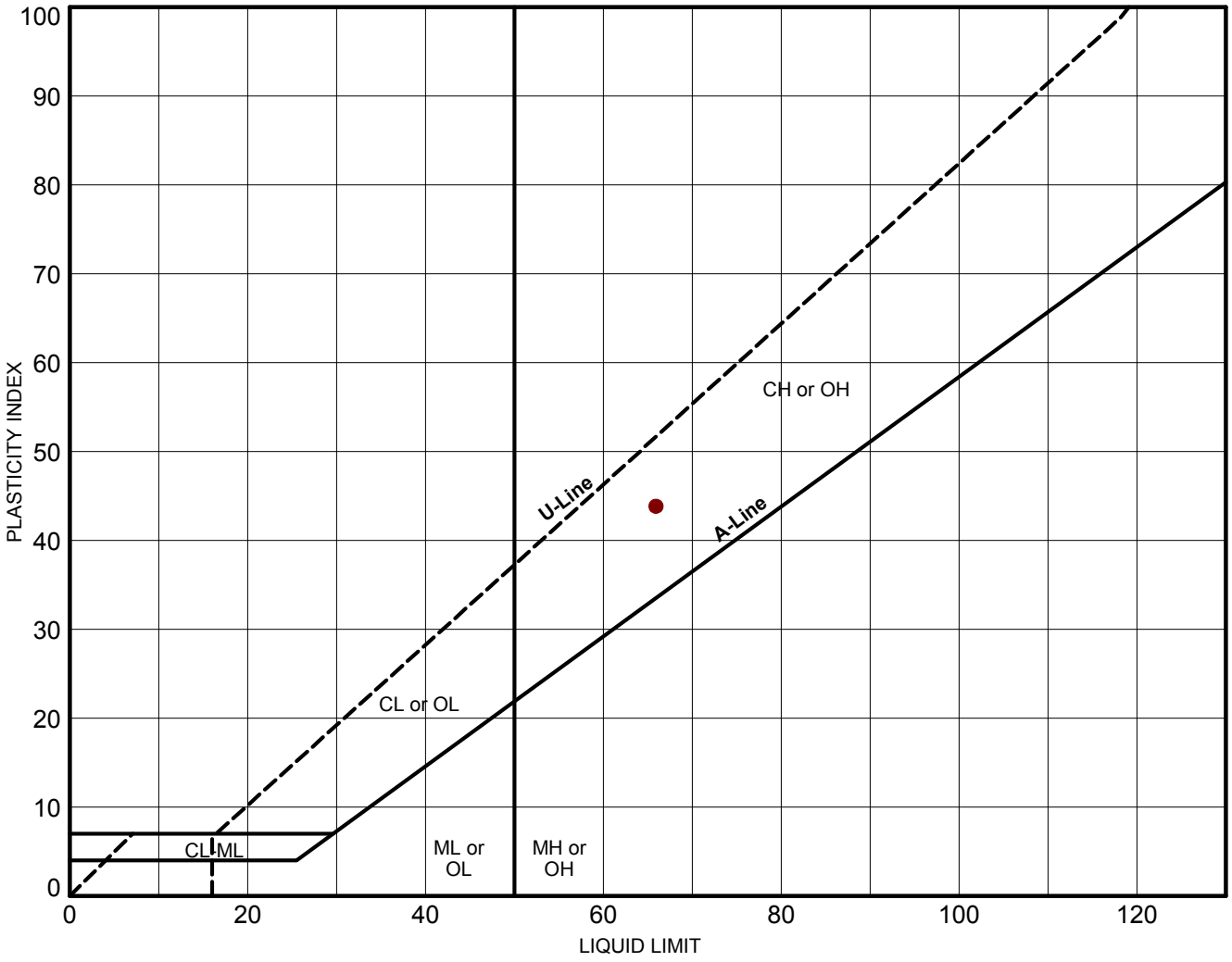
Tested By: CCA	Date Tested: 5/31/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-16

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 6/13/18 10:37 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
B-48	18.0 - 20.0	50.0	66	22	44		Medium gray clay with sand lenses and shell fragments (CH)

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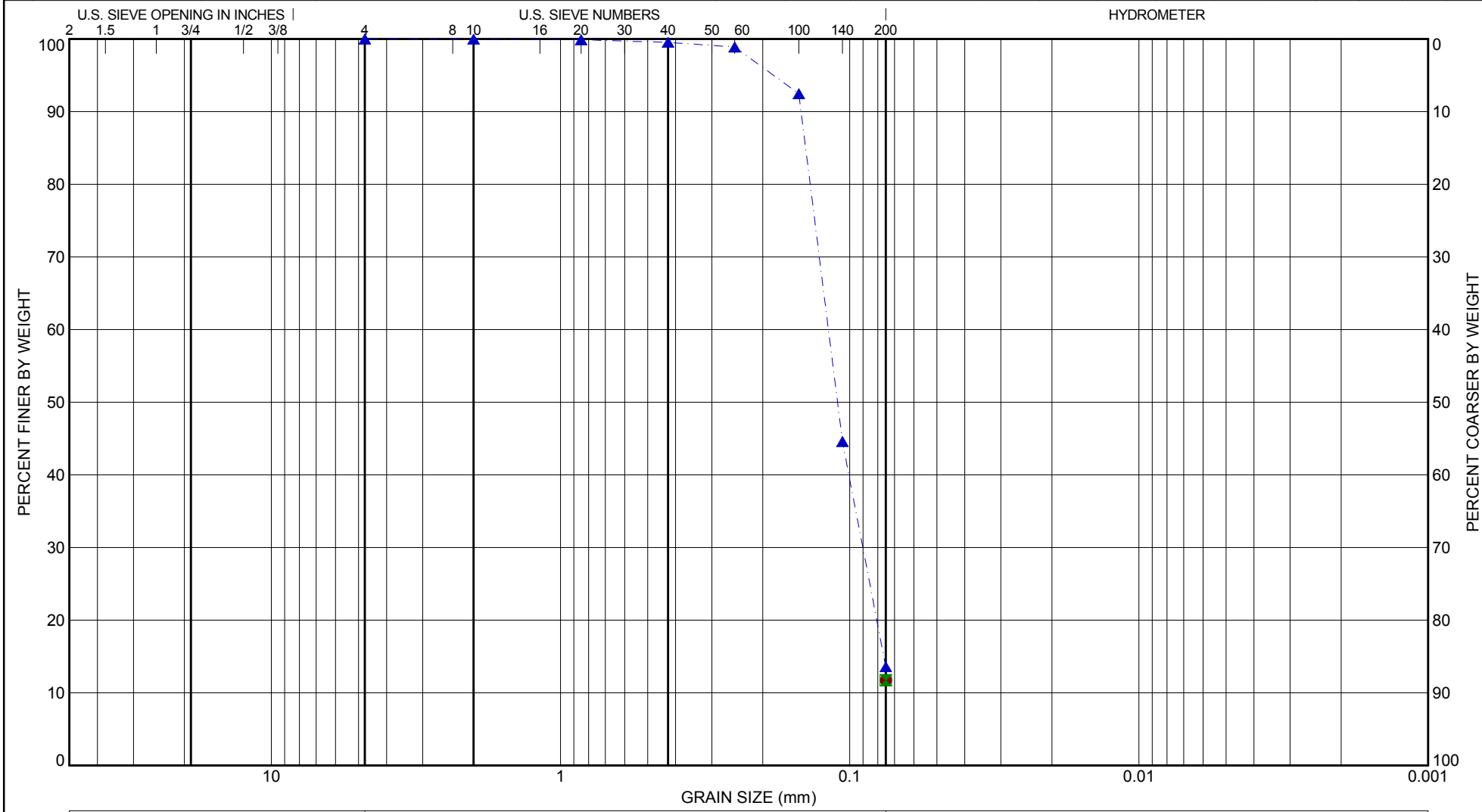
Tested By: WSW/SRT	Date Tested: 6/7/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-17

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 6/13/18 10:37 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-18	12.0	Gray sand with silt (SP-SM)			11.7											
⊠ B-18	18.5	Gray sand with silt (SP-SM)			11.7											
▲ B-18	28.5	Gray silty sand (SM)	0.0	86.4	13.6		0.147	0.119	0.11	0.09						



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP	5/21/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/5/2018		Figure D-18

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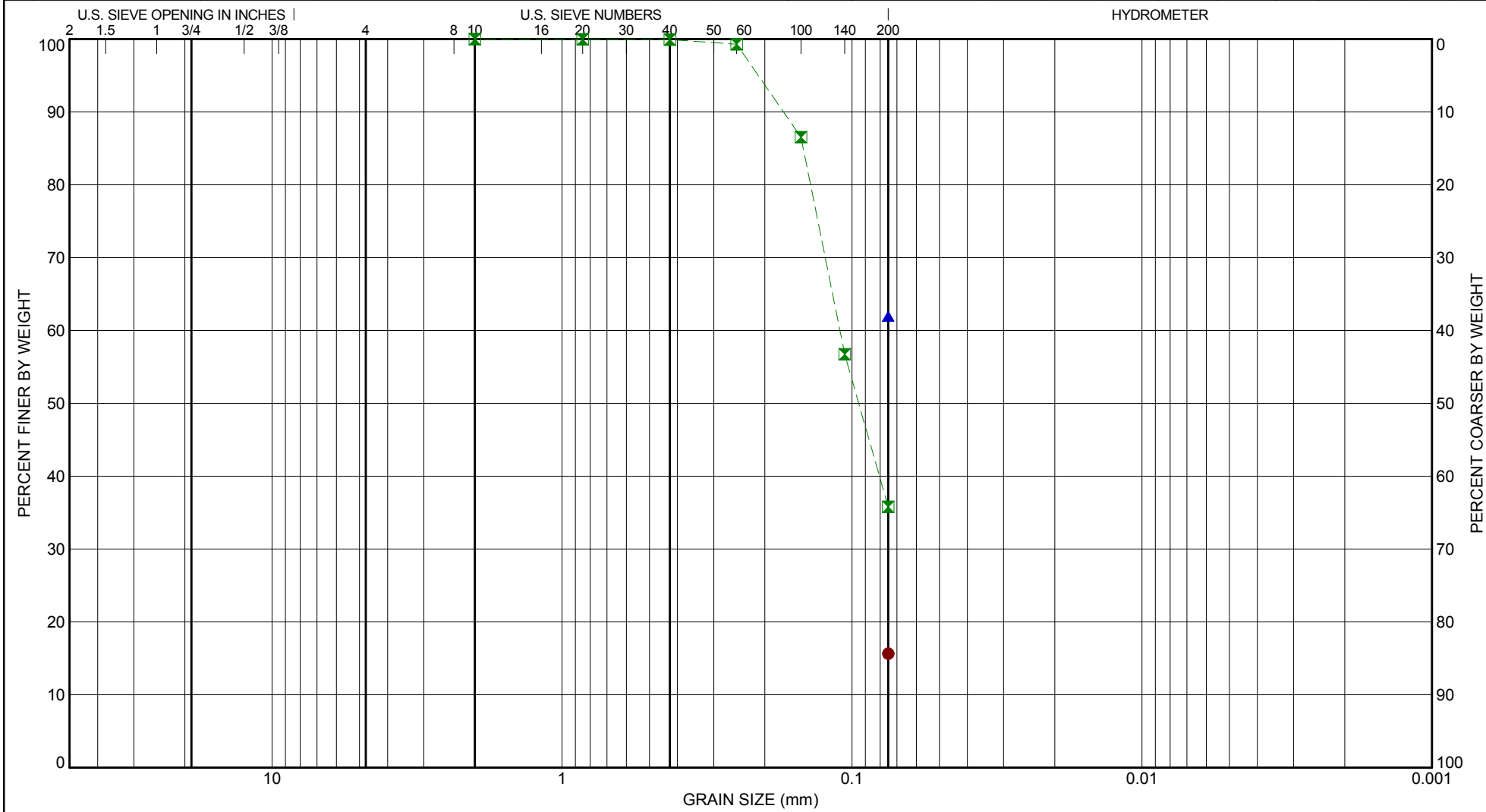
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-18	38.5	Gray silty sand (SM)			15.6											
⊠ B-20	2.0	Dark gray silty sand (SM)	0.0	64.2	35.8		0.172	0.11	0.095							
▲ B-20	4.0	Gray sandy clayey silt with clay layer (CL-ML)			62.0											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP	5/21/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/5/2018		Figure D-19

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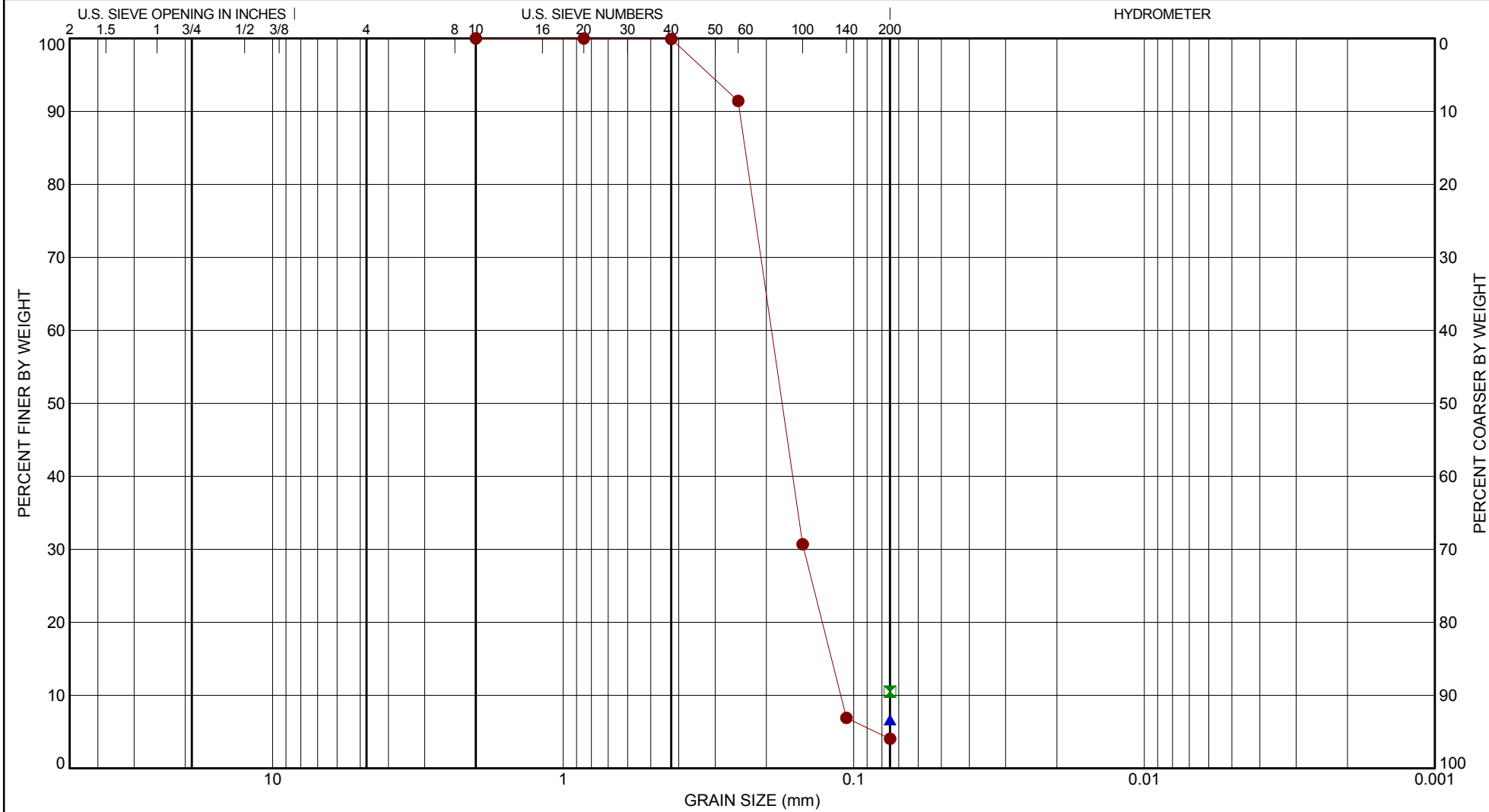
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-20	18.0	Gray sand (SP)	0.0	96.0	4.0		0.247	0.192	0.176	0.148	0.111	1.04	1.73			
⊠ B-20	23.5	Gray sand with silt (SP-SM)			10.5											
▲ B-20	33.5	Gray sand with silt (SP-SM)			6.6											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	**GRAIN SIZE DISTRIBUTION**	**East Leeville Marsh Creation and Nourishment (BA-194)**
CLP/CA/WSW	5/21/2018	**ASTM D422/D1140/D6913/T88**	**Lafourche Parish, Louisiana**
Reviewed By:	Date Reviewed:	**Project No.: 18274-004-01**	GeoEngineers
Karen Allen	6/5/2018		Figure D-20

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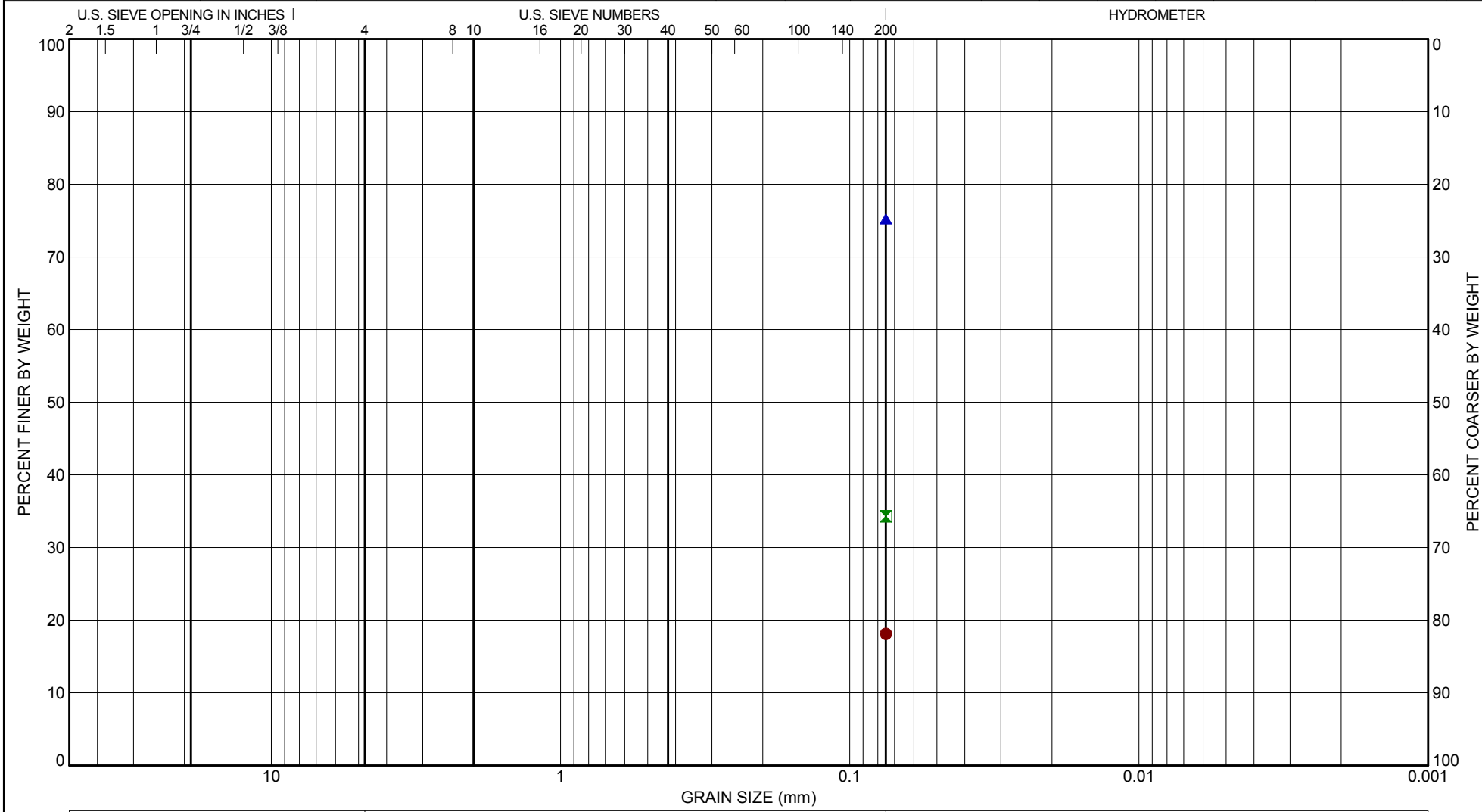
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-25	2.0	Gray silty sand (SM)			18.1											
⊠ B-25	11.5	Dark gray and black silty sand with organic matter (SM)			34.3											
▲ B-27	4.0	Very soft dark gray and gray sandy clay with silty sand layers and peat layers (CL)			75.2											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
SRT/CA	5/22/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/5/2018		Figure D-21

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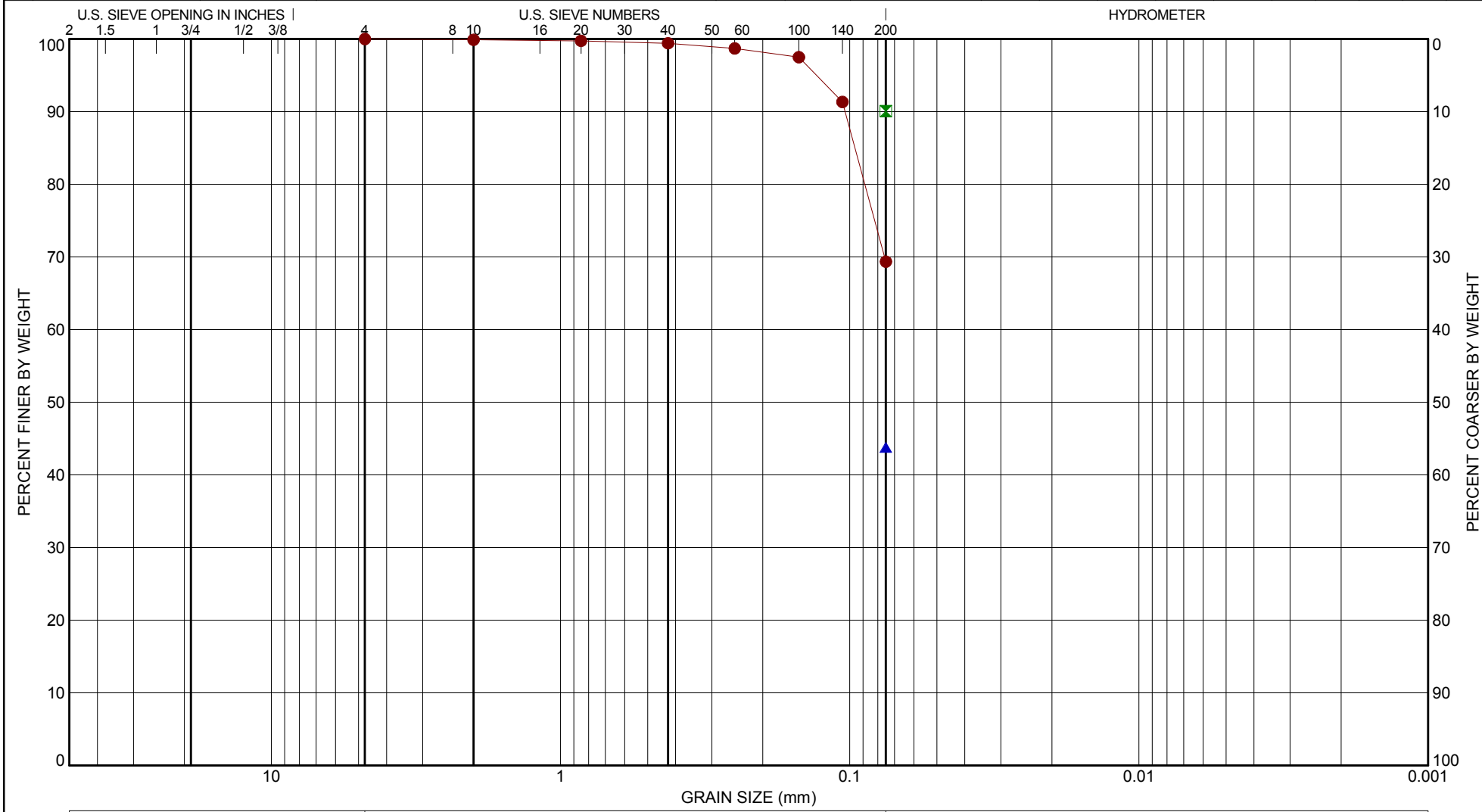
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-27	6.0	Gray sandy silt with clay pockets and shell fragments (ML)	0.0	30.6	69.4		0.104									
⊠ B-27	8.0	Gray silt with clay layers (ML)			90.1											
▲ B-32	5.0	Dark gray silty sand (SM)			43.8											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	**GRAIN SIZE DISTRIBUTION**	**East Leeville Marsh Creation and Nourishment (BA-194)**
CLP/CA/WSW	5/22/2018	**ASTM D422/D1140/D6913/T88**	**Lafourche Parish, Louisiana**
Reviewed By:	Date Reviewed:	**Project No.: 18274-004-01**	GeoEngineers
Karen Allen	6/6/2018		Figure D-22

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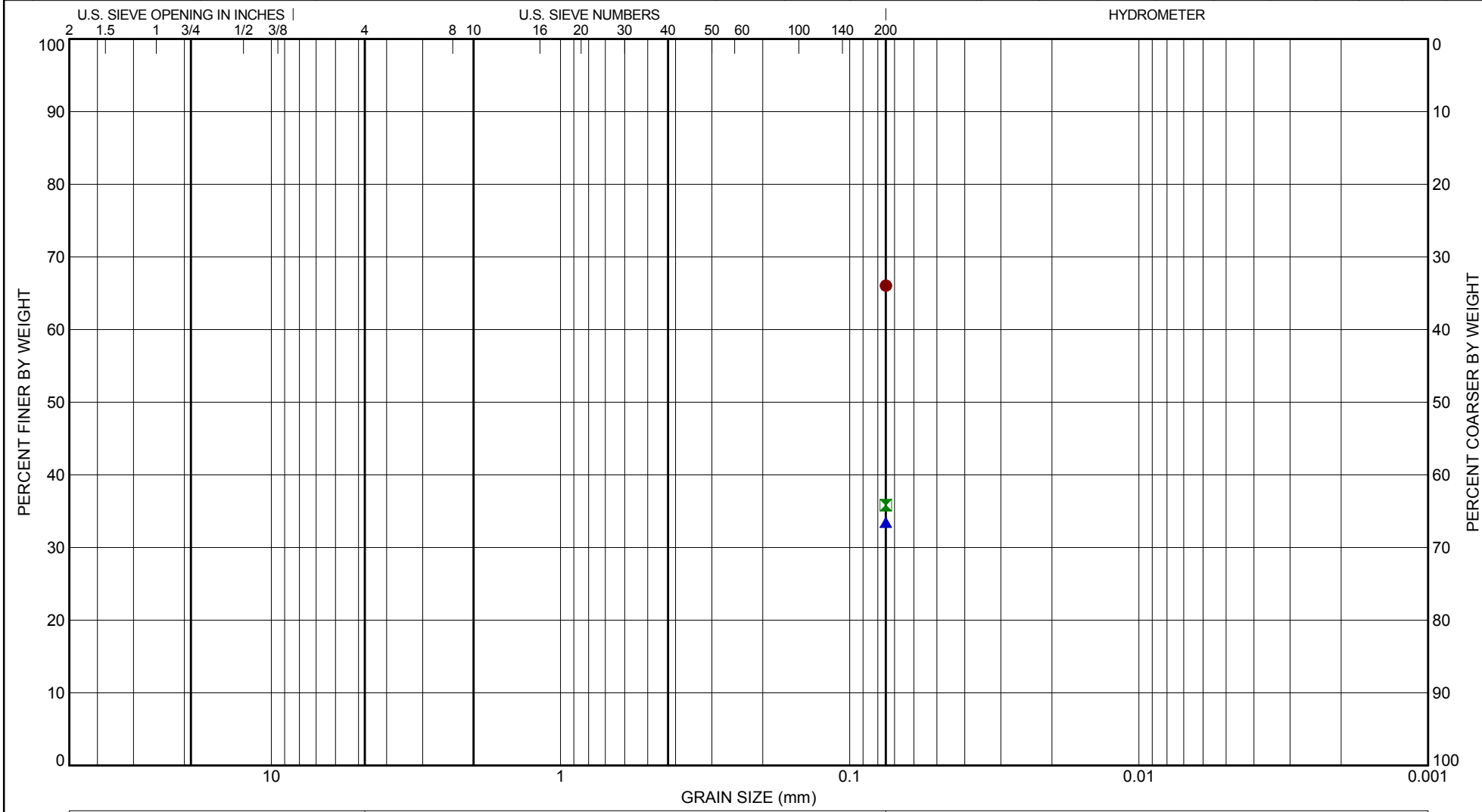
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-32	8.0	Very soft gray sandy clay with silt and shells (CL)			66.0									42	19	23
⊠ B-33	20.0	Gray clayey sand (SC)			35.8									26	17	9
▲ B-33	33.0	Gray silty sand (SM)			33.5											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
TRC	5/29/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/6/2018		Figure D-23

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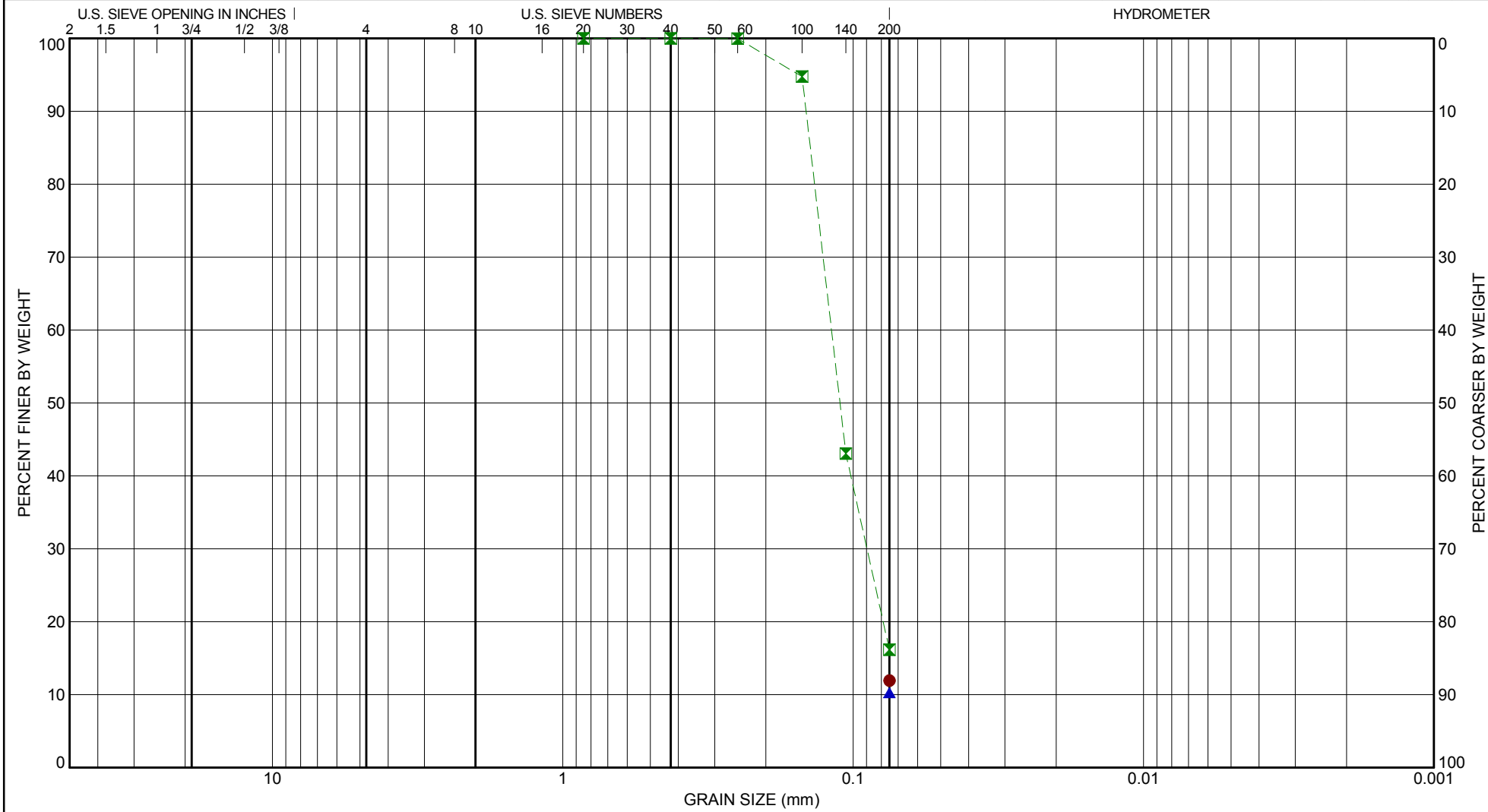
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-36	6.0	Gray sand with silt, clay layer, clay pocket, organic matter and shells (SP-SM)			11.9											
⊠ B-36	35.0	Gray silty sand with clay (SM)	0.0	83.8	16.2		0.145	0.119	0.111	0.09						
▲ B-36	40.0	Gray sand with silt (SP-SM)			10.3											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	**GRAIN SIZE DISTRIBUTION**	**East Leeville Marsh Creation and Nourishment (BA-194)**
SRT	5/24/2018	**ASTM D422/D1140/D6913/T88**	**Lafourche Parish, Louisiana**
Reviewed By:	Date Reviewed:	**Project No.: 18274-004-01**	GeoEngineers
WMA	6/5/2018		Figure D-24

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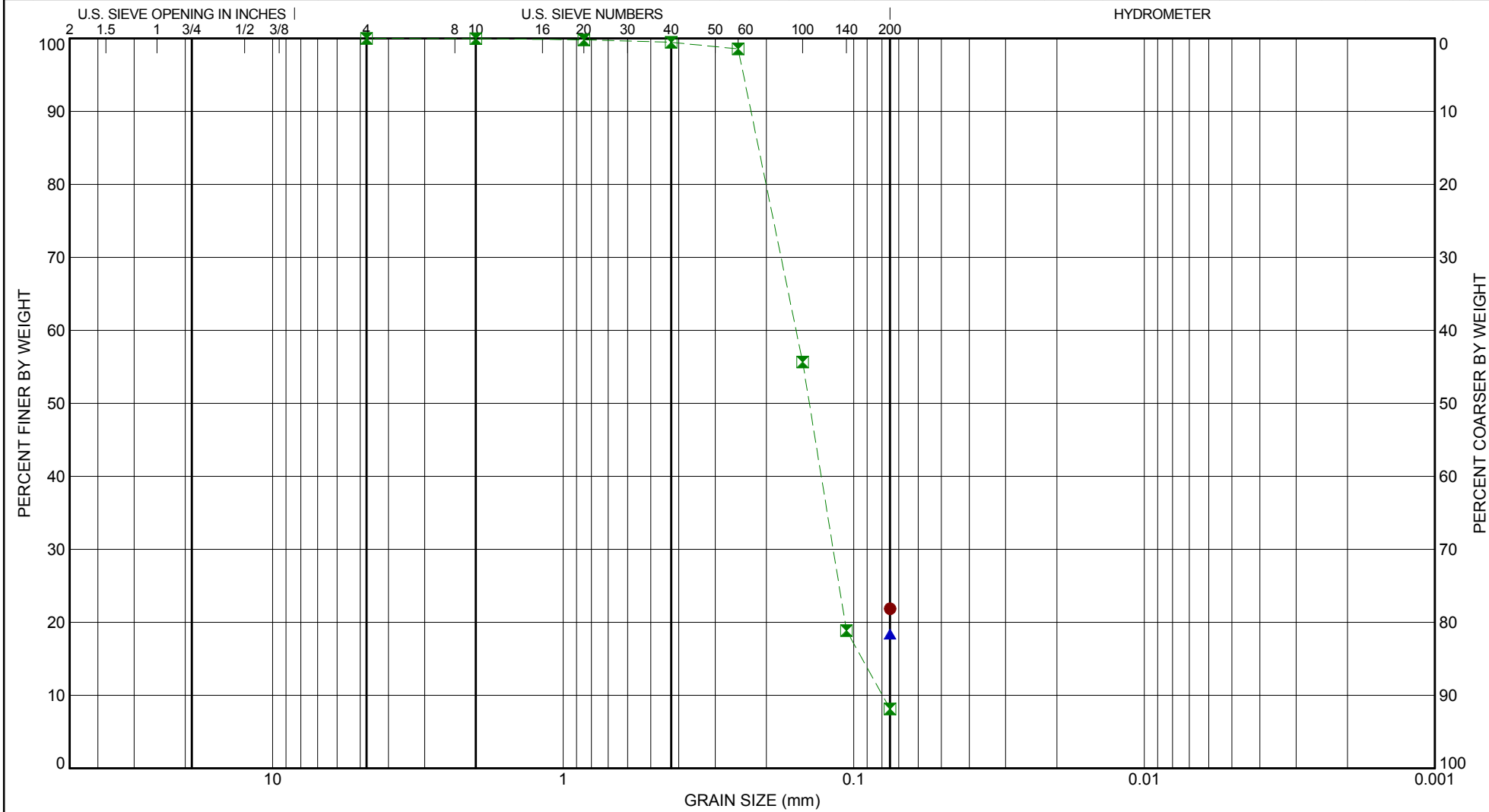
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-40	28.5	Dark gray silty sand (SM)			21.9											
⊠ B-40	33.5	Gray sand with silt (SP-SM)	0.0	91.9	8.1		0.226	0.158	0.142	0.118	0.08	1.10	1.98			
▲ B-42	16.5	Dark gray silty sand with shell fragments (SM)			18.4											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
TRC	5/24/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
WMA	6/5/2018		Figure D-25

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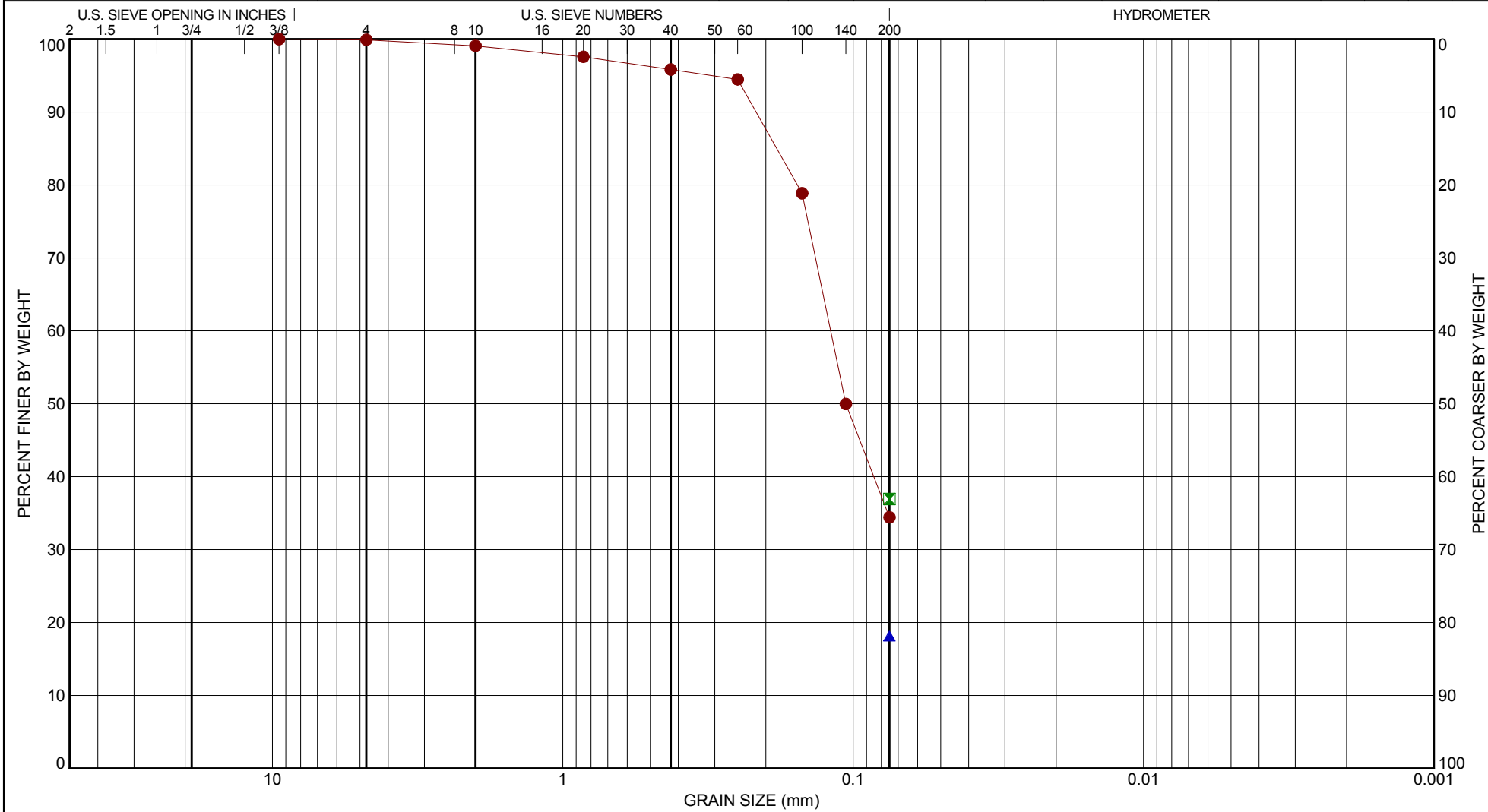
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-42	23.5	Gray silty sand (SM)	0.1	65.5	34.4		0.216	0.12	0.106							
⊠ B-42	28.5	Dark gray silty sand (SM)			36.9											
▲ B-42	34.0	Dark gray silty sand (SM)			18.1											



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By: CLP/SRT/WSW	Date Tested: 5/29/2018	**GRAIN SIZE DISTRIBUTION** **ASTM D422/D1140/D6913/T88** **Project No.: 18274-004-01**	**East Leeville Marsh Creation and Nourishment (BA-194)** **Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018		GeoEngineers — Figure D-26

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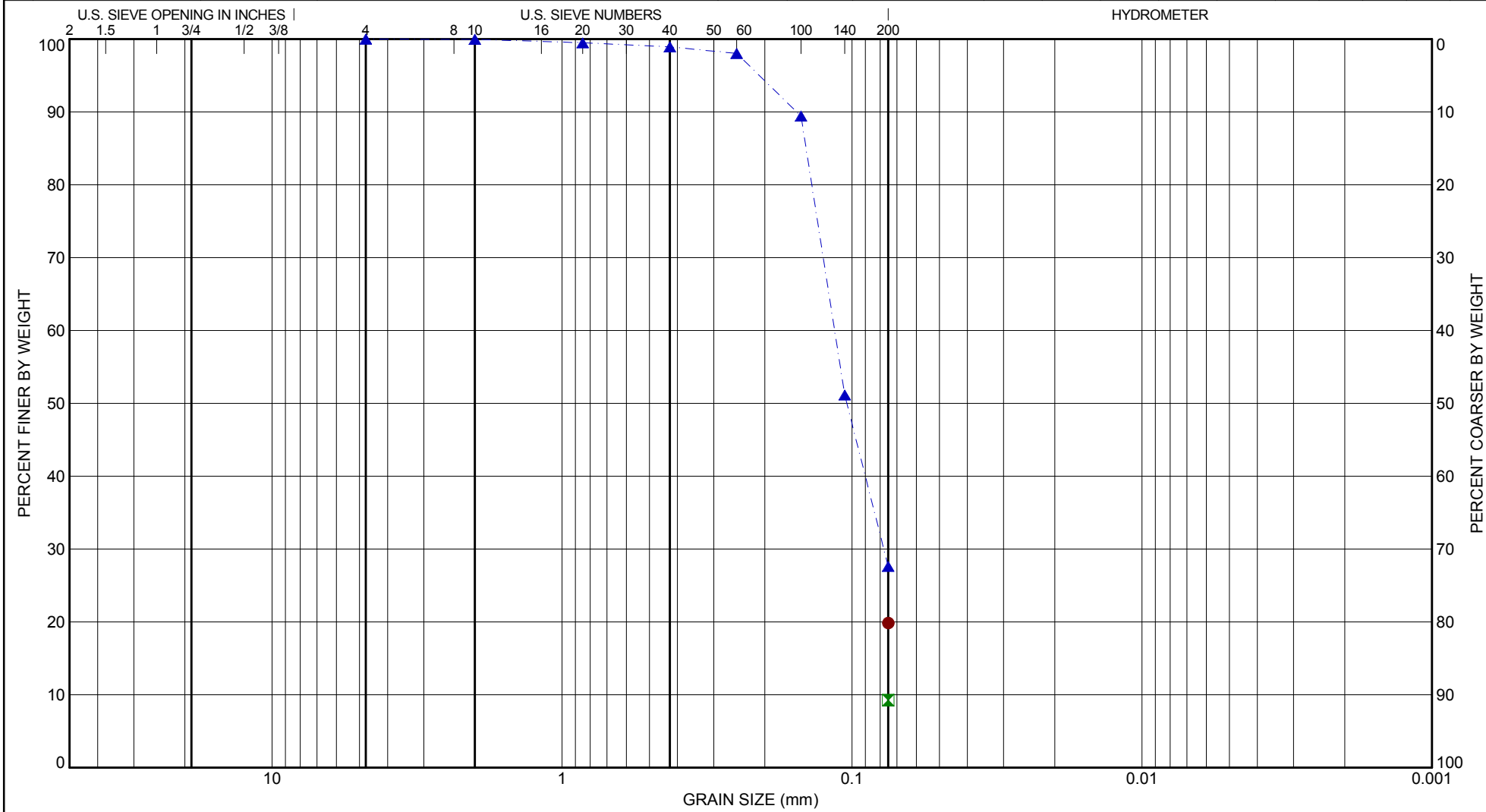
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-45	16.5	Gray silty sand with shell fragments (SM)			19.8											
⊠ B-45	18.5	Gray sand with silt (SP-SM)			9.3											
▲ B-45	28.5	Gray silty sand with trace clay (SM)	0.0	72.4	27.6		0.155	0.115	0.104	0.078						



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
SRT	5/30/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/11/2018		Figure D-27

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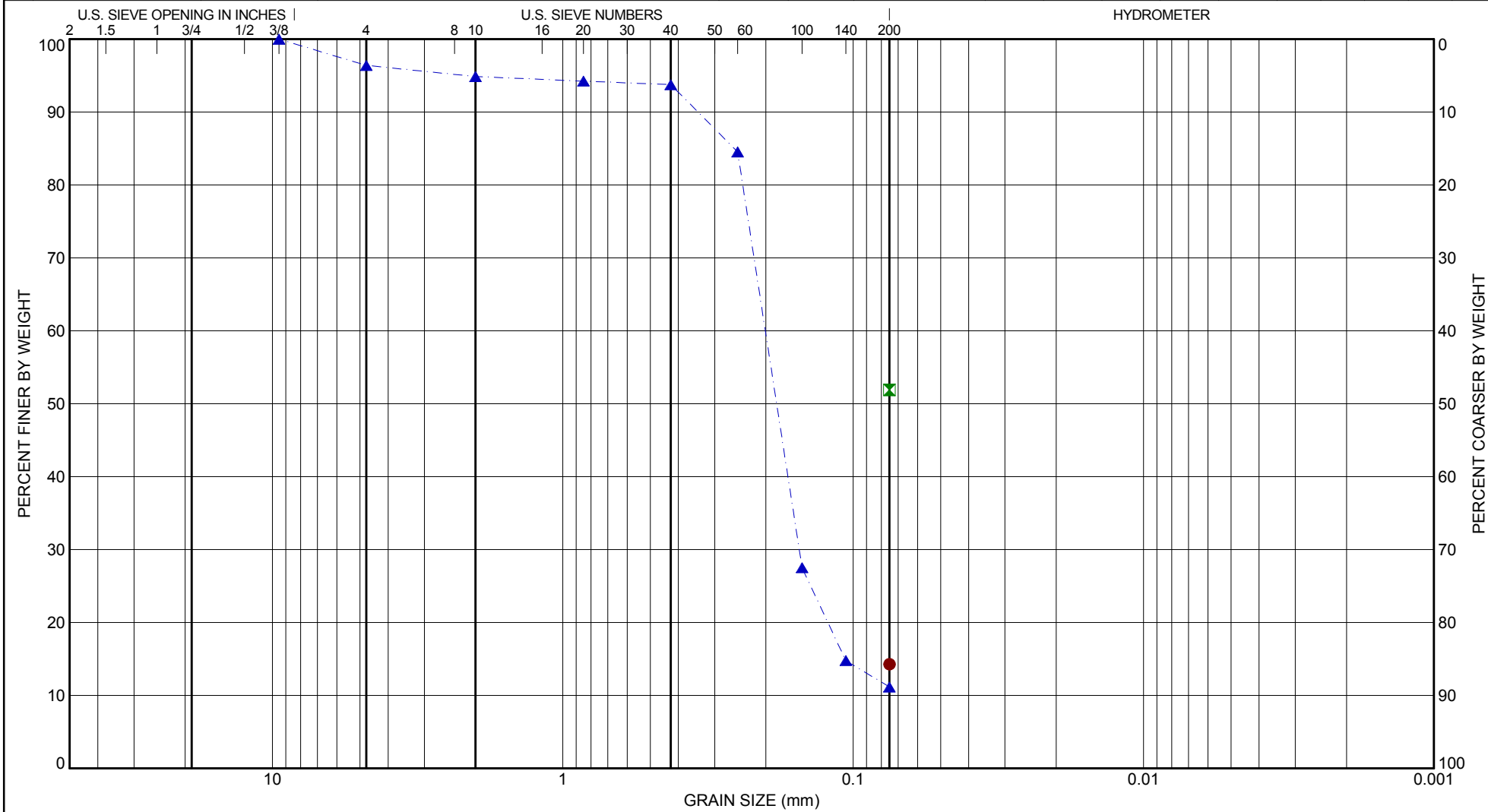
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-45	33.5	Gray silty sand (SM)			14.3									NP	NP	NP
⊠ B-45	38.5	Gray sandy clayey silt (CL-ML)			51.9											
▲ B-45	43.0	Gray sand with silt (SP-SM)	3.6	85.2	11.2		0.342	0.201	0.183	0.153		1.75	2.99			



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
SRT	5/30/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/11/2018		Figure D-28

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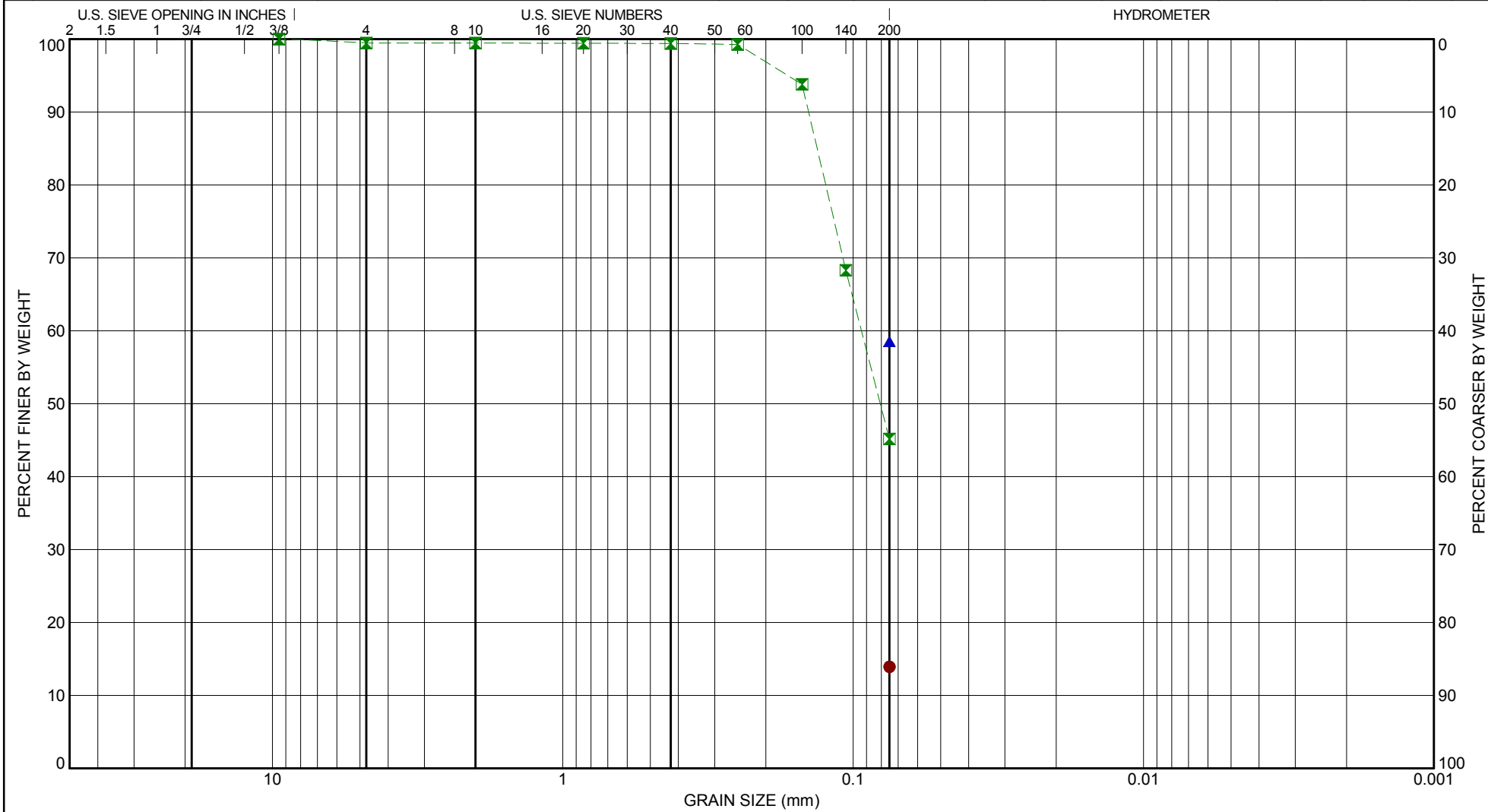
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-48	23.5	Dark gray silty sand (SM)			13.9											
⊠ B-48	33.5	Gray silty sand (SM)	0.5	54.3	45.2		0.142	0.094	0.081							
▲ B-48	43.5	Gray sandy silt (ML)			58.5											

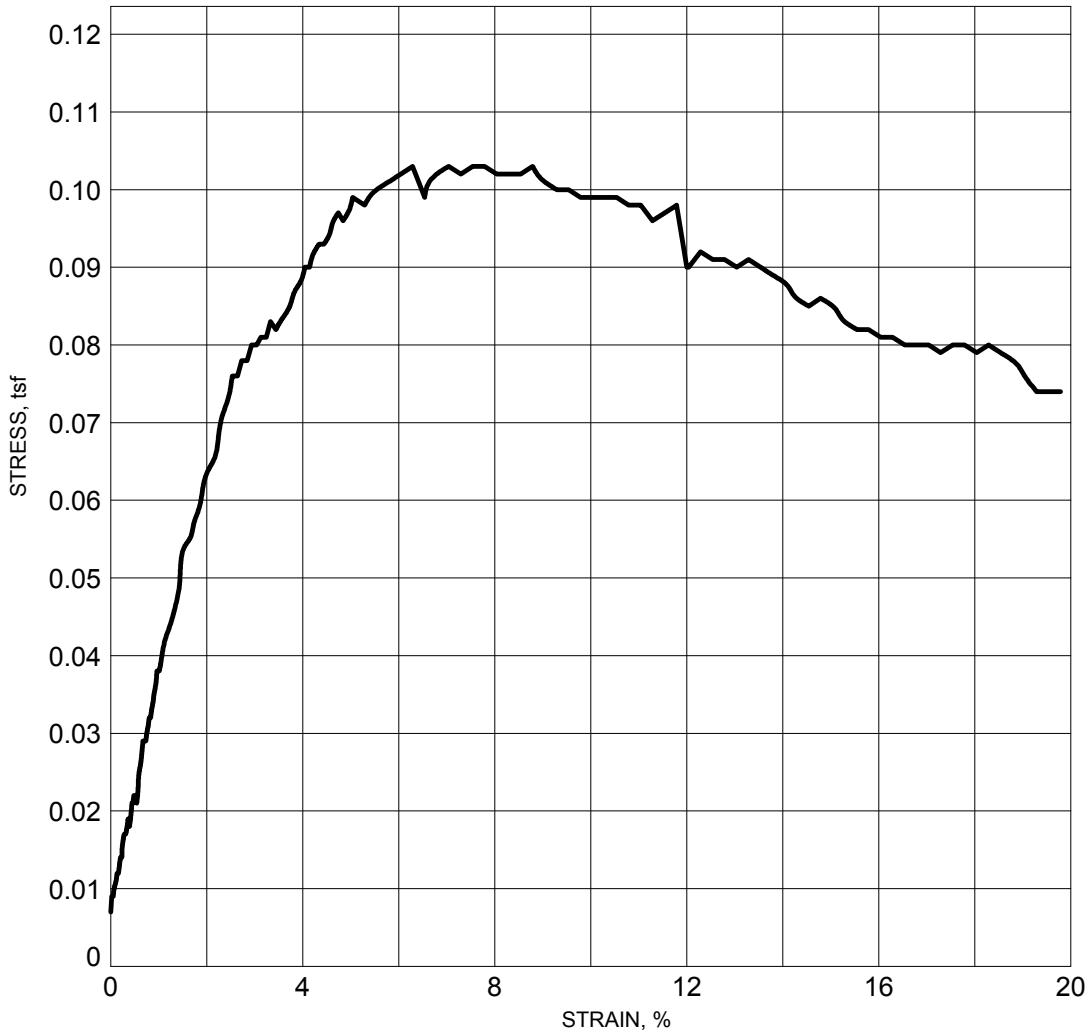


GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP/SRT	5/31/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/11/2018		Figure D-29

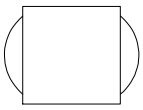
Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/5/18 11:06 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-18
Depth (ft)	0-2
Water Content, %	133.4
Wet Density, pcf	92.3
Dry Density, pcf	39.5
Saturation, %	109.9
Void Ratio	3.32
Specimen Diameter	2.715
Specimen Height	5.929
Height/diameter ratio	2.18
Deviator Stress, tsf	0.103
Strain, %	6.3
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

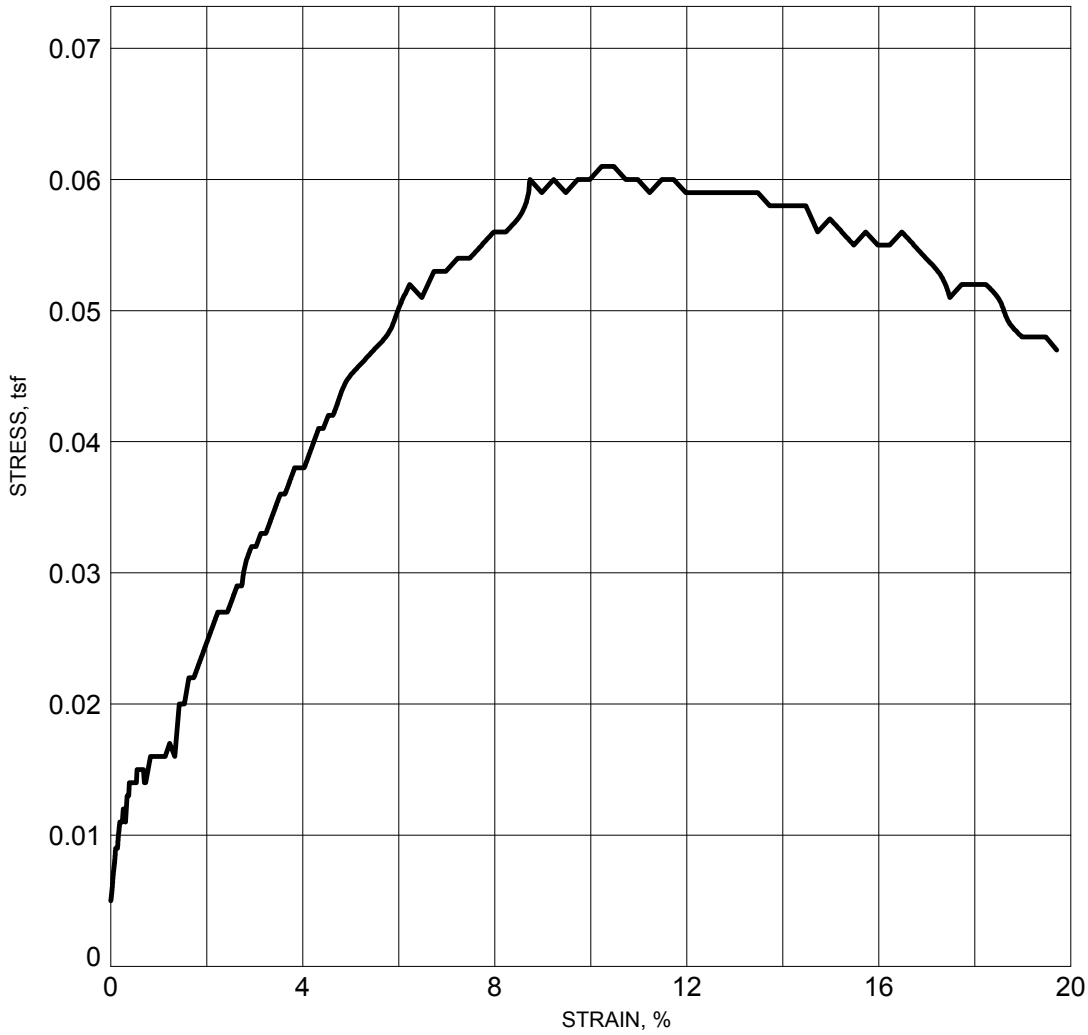
% 200= % Organic=3.9 Assumed Gs=2.74

Description: Very soft gray organic clay with peat (OH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

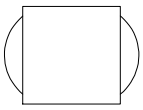
Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-30

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-18
Depth (ft)	2-4
Water Content, %	48.9
Wet Density, pcf	98.2
Dry Density, pcf	65.9
Saturation, %	84.2
Void Ratio	1.59
Specimen Diameter	2.855
Specimen Height	5.938
Height/diameter ratio	2.08
Deviator Stress, tsf	0.061
Strain, %	10.2
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = 58 PL = 19 PI = 39

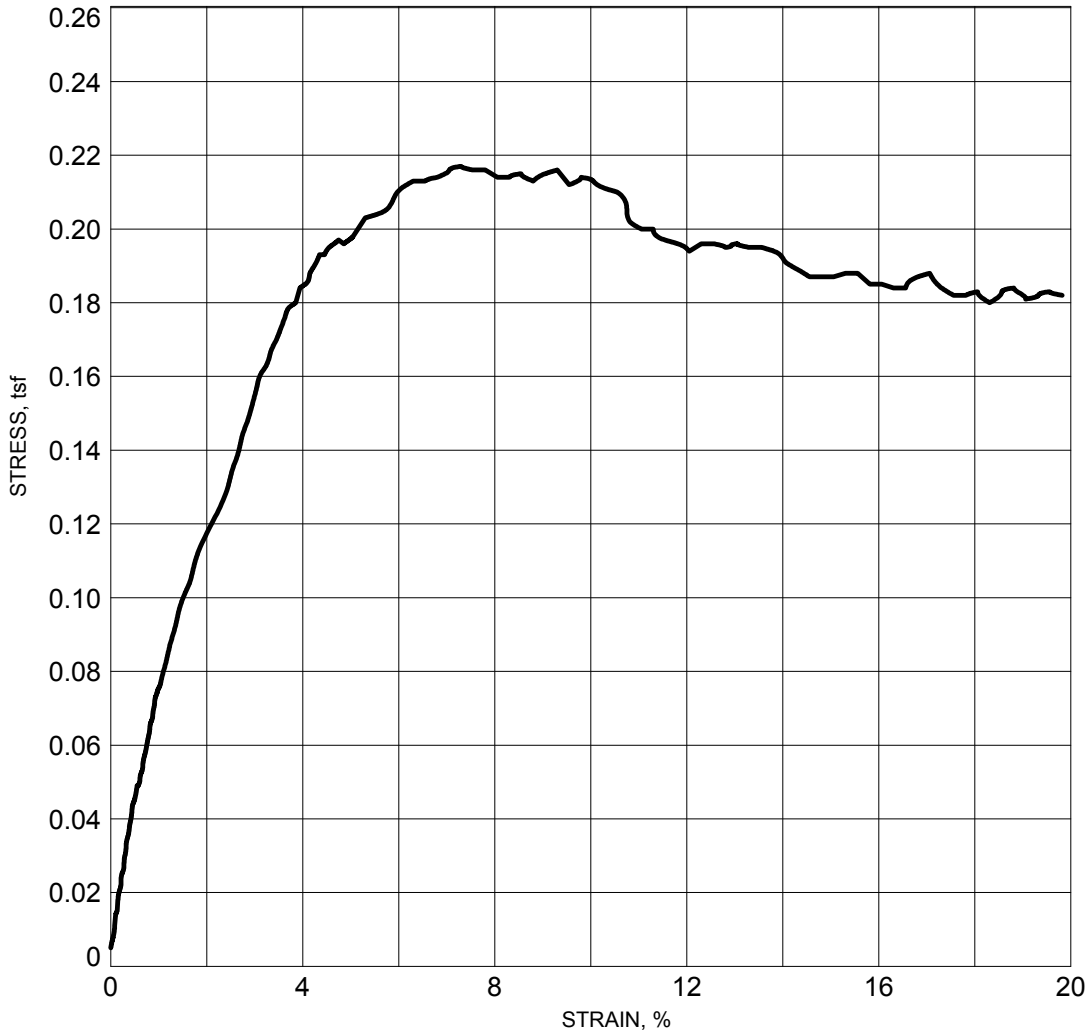
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with peat and 1" silty sand layer (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-31

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-18
Depth (ft)	4-6
Water Content, %	89.8
Wet Density, pcf	101.7
Dry Density, pcf	53.6
Saturation, %	112.4
Void Ratio	2.19
Specimen Diameter	2.802
Specimen Height	5.871
Height/diameter ratio	2.10
Deviator Stress, tsf	0.217
Strain, %	7.3
Confining Pressure (psi)	5.0

Multiple Shear

Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silty sand lenses (CH)

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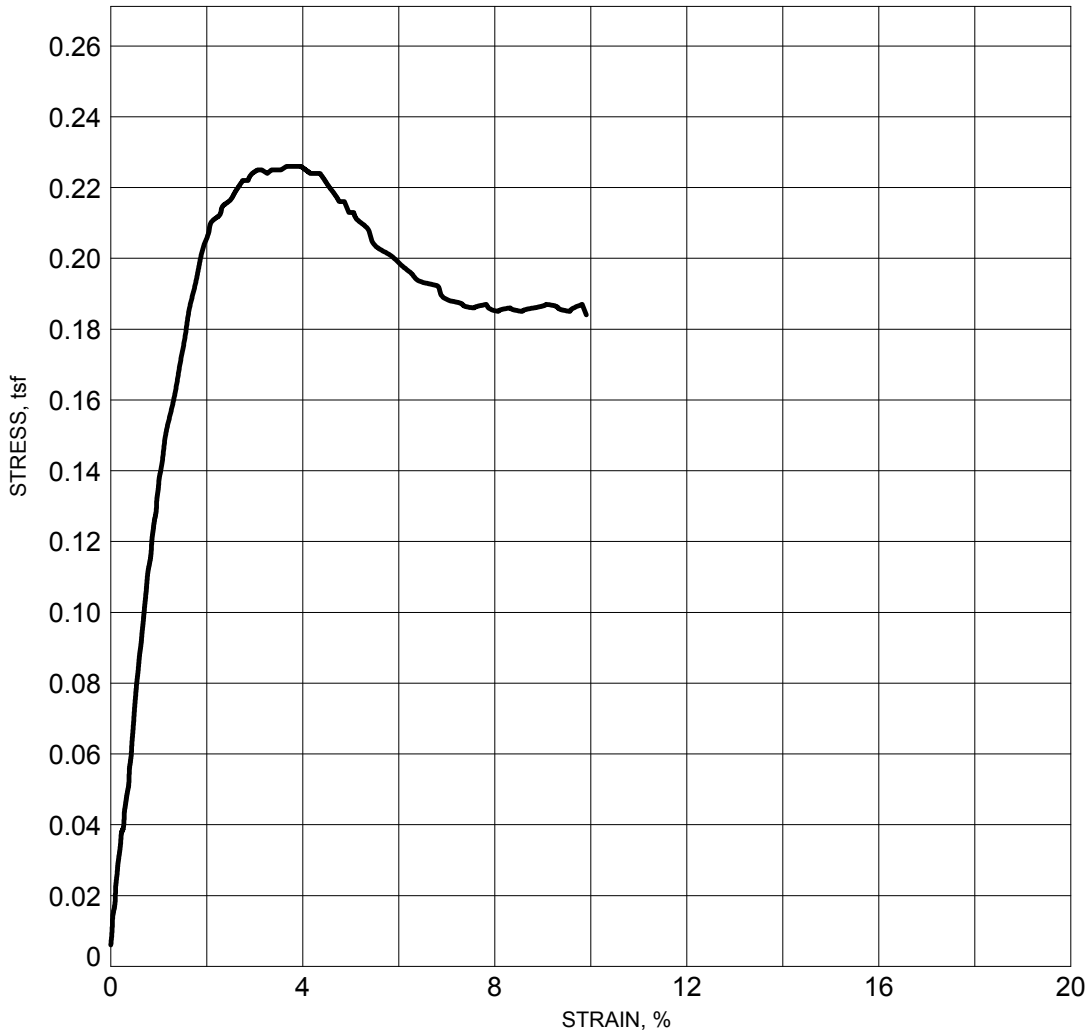
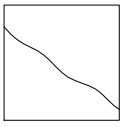
Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-32

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-18
Depth (ft)	6-8
Water Content, %	80.8
Wet Density, pcf	98.5
Dry Density, pcf	54.4
Saturation, %	103.5
Void Ratio	2.14
Specimen Diameter	2.807
Specimen Height	6.031
Height/diameter ratio	2.15
Deviator Stress, tsf	0.226
Strain, %	3.7
Confining Pressure (psi)	5.0

SLS 40º



Failure Sketch

LL = PL = PI =

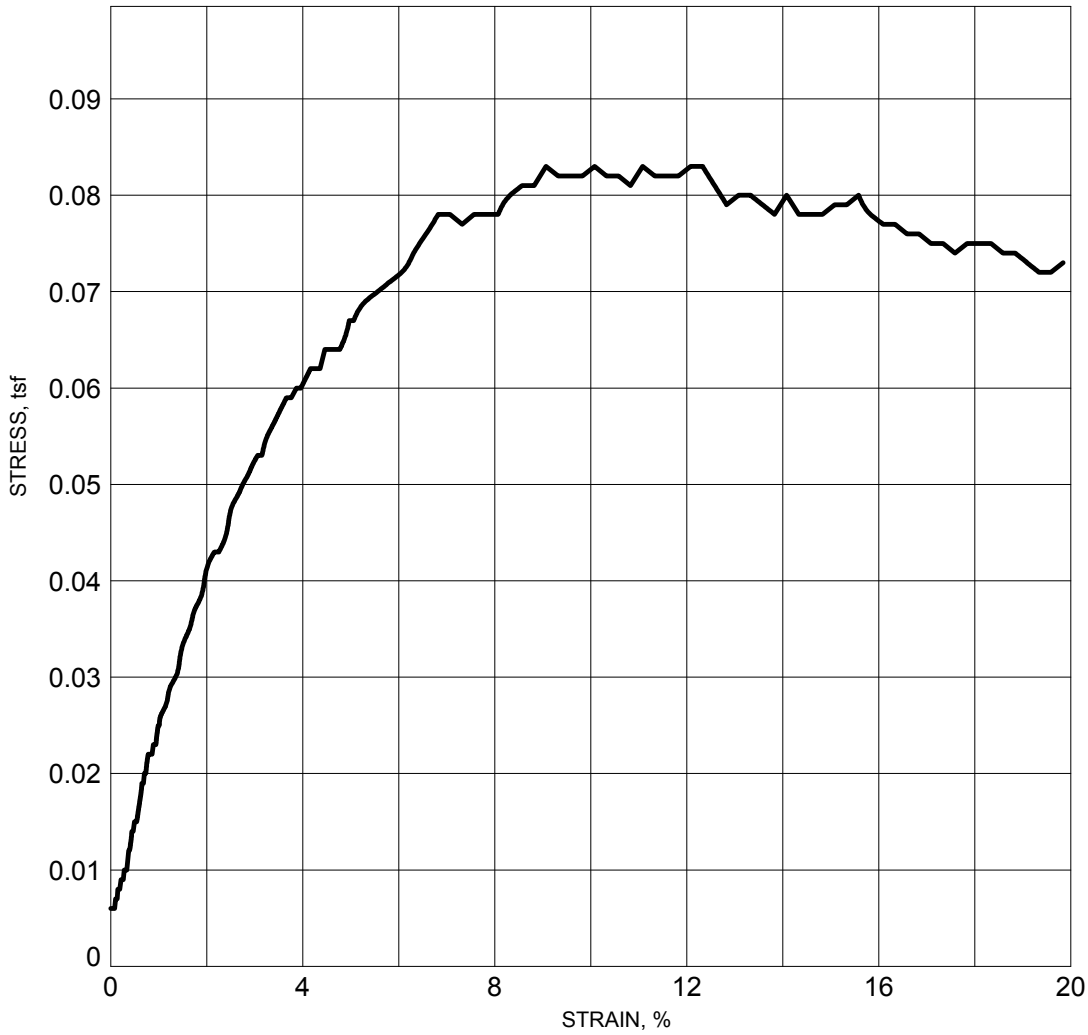
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray clay with silty sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

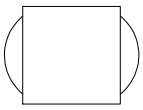
Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-33

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-18
Depth (ft)	10-12
Water Content, %	67.9
Wet Density, pcf	111.5
Dry Density, pcf	66.4
Saturation, %	118.2
Void Ratio	1.57
Specimen Diameter	2.828
Specimen Height	5.871
Height/diameter ratio	2.08
Deviator Stress, tsf	0.083
Strain, %	9.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray sandy clay with shells (CL)

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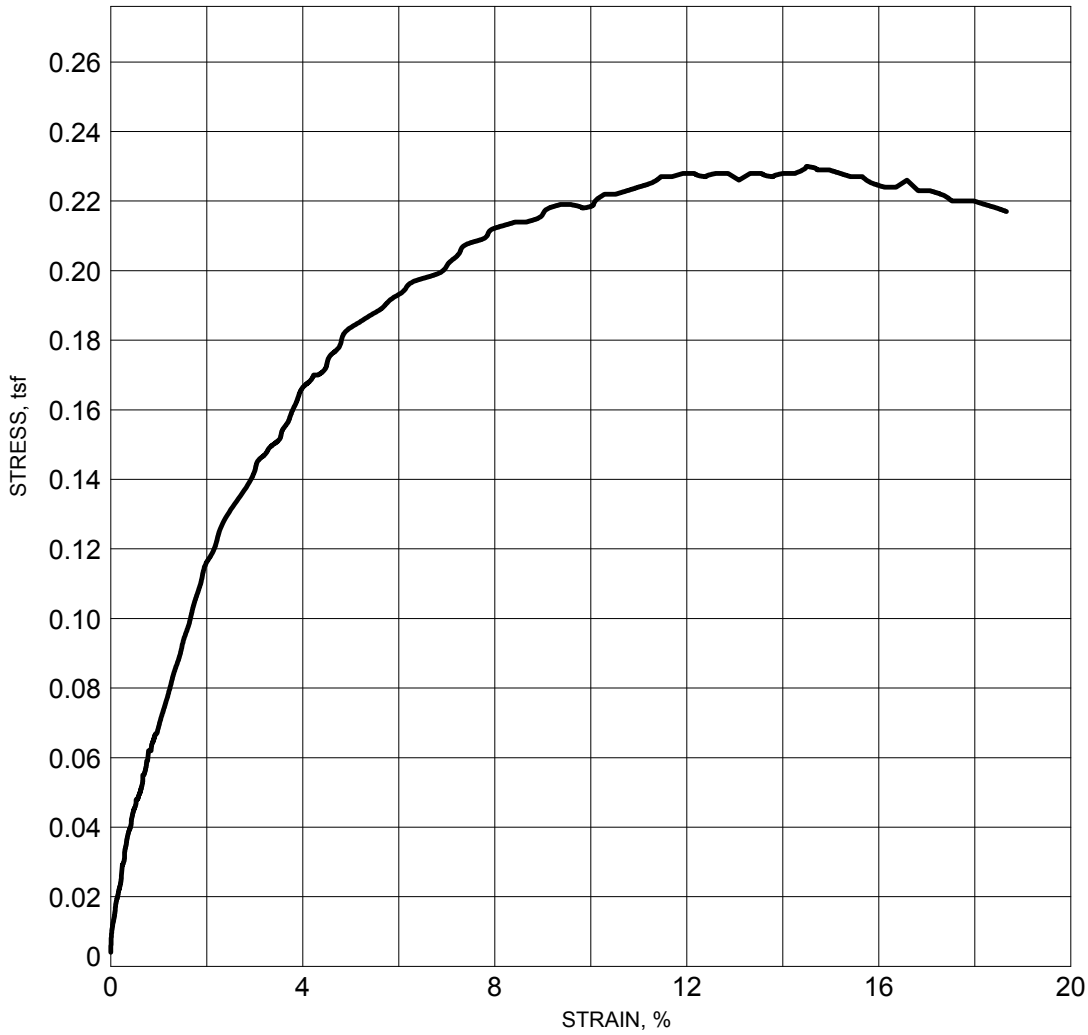
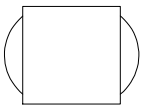
Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-34

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-18
Depth (ft)	16-18
Water Content, %	51.3
Wet Density, pcf	110.2
Dry Density, pcf	72.8
Saturation, %	104.3
Void Ratio	1.35
Specimen Diameter	2.806
Specimen Height	5.970
Height/diameter ratio	2.13
Deviator Stress, tsf	0.230
Strain, %	14.5
Confining Pressure (psi)	6.8

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray sandy clay with shell fragments and roots (CL)

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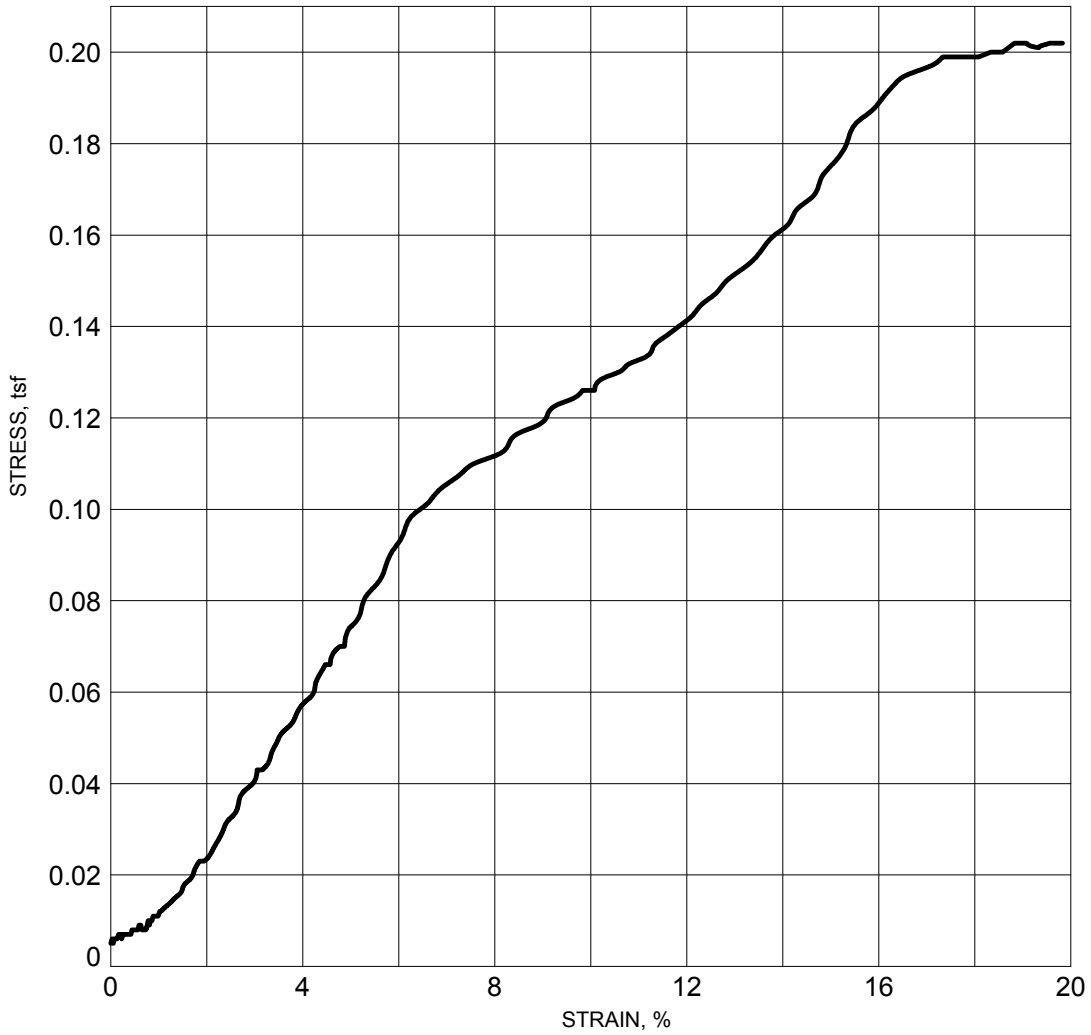
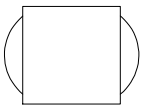
Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-35

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	0-2
Water Content, %	34.0
Wet Density, pcf	111.8
Dry Density, pcf	83.4
Saturation, %	88.7
Void Ratio	1.05
Specimen Diameter	2.855
Specimen Height	5.995
Height/diameter ratio	2.10
Deviator Stress, tsf	0.175
Strain, %	15.0
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = 33 PL = 18 PI = 15

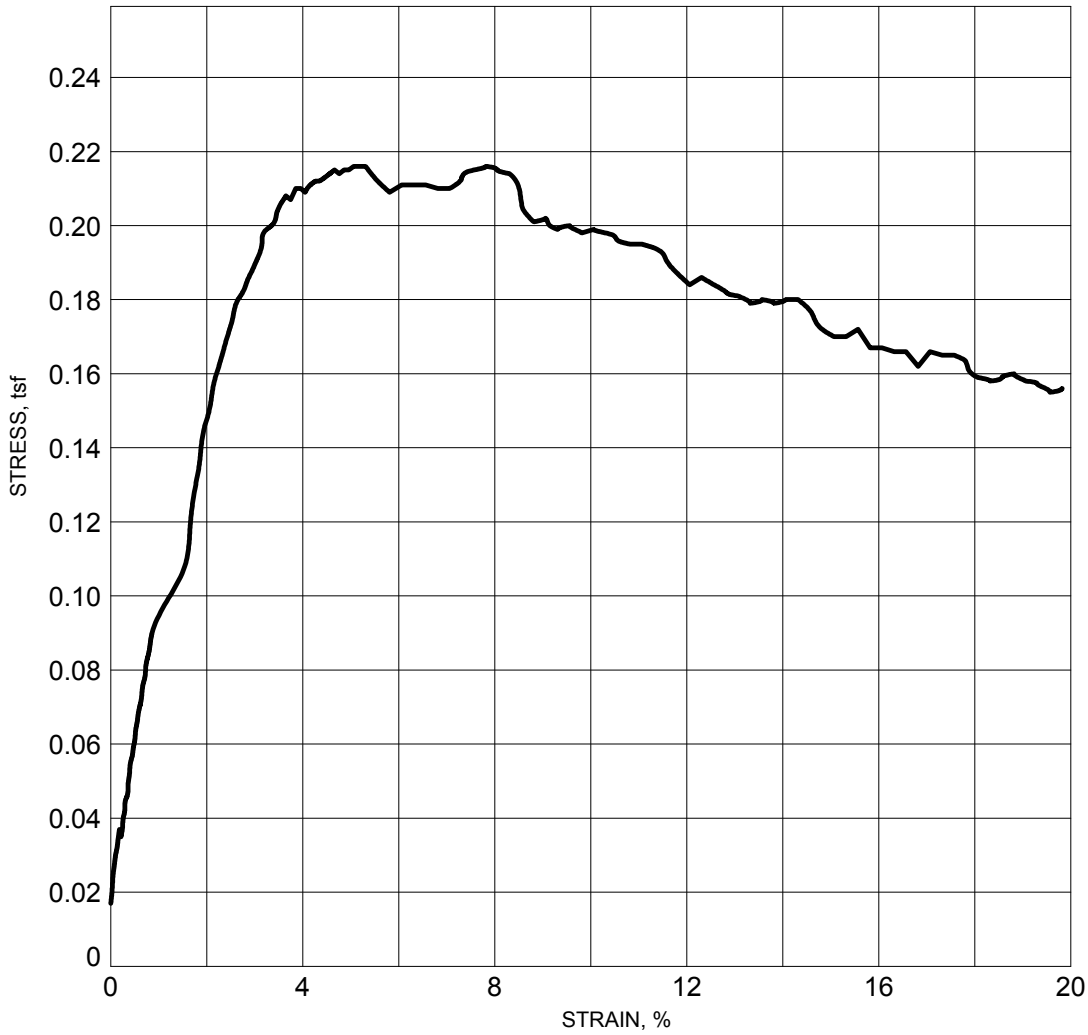
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray very silty clay with sand and roots (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-36

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	6-8
Water Content, %	72.6
Wet Density, pcf	103.7
Dry Density, pcf	60.1
Saturation, %	107.8
Void Ratio	1.85
Specimen Diameter	2.786
Specimen Height	6.016
Height/diameter ratio	2.16
Deviator Stress, tsf	0.216
Strain, %	5.1
Confining Pressure (psi)	5.0

Multiple Shear

Failure Sketch

LL = PL = PI =

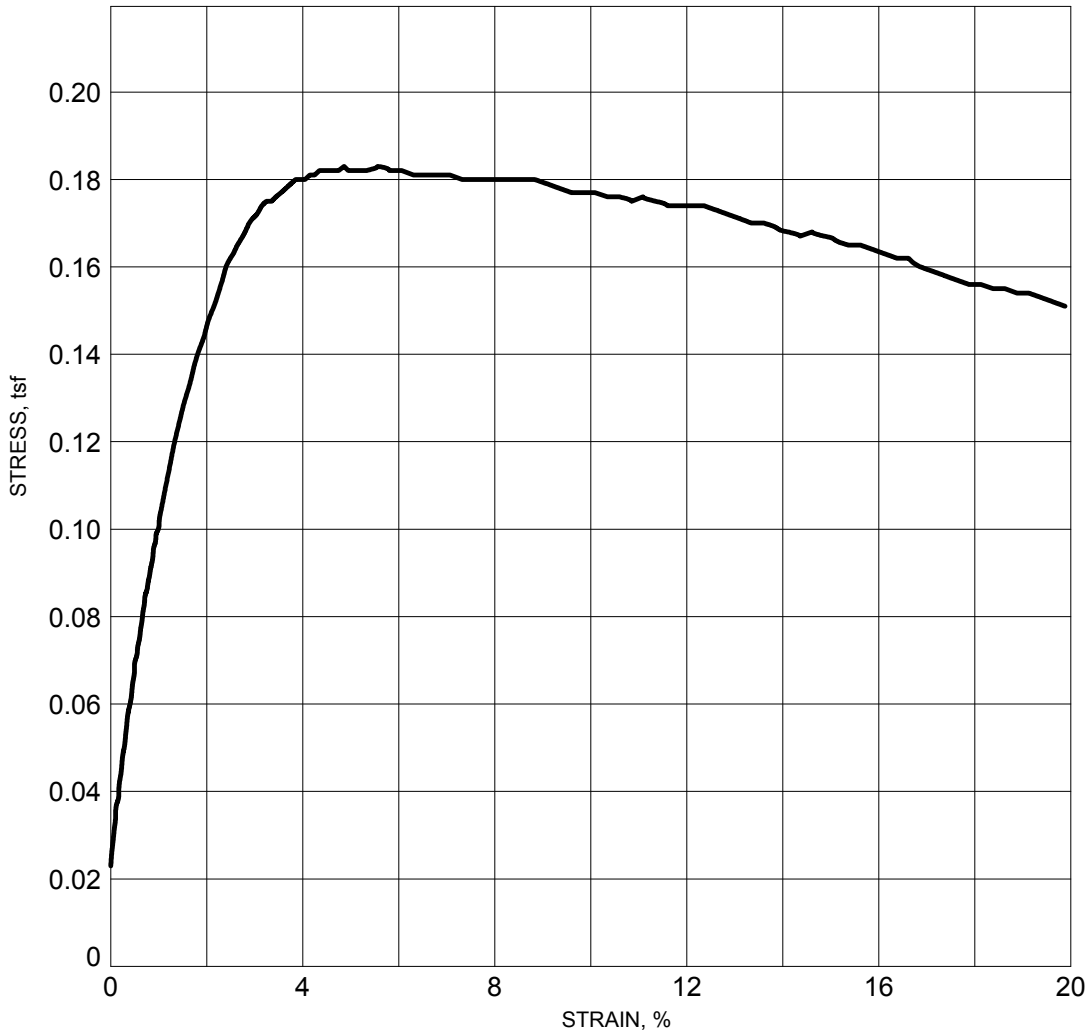
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray clay with sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

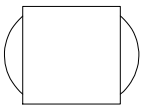
Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-37

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	8-10
Water Content, %	70.0
Wet Density, pcf	101.7
Dry Density, pcf	59.8
Saturation, %	104.6
Void Ratio	1.79
Specimen Diameter	2.817
Specimen Height	6.012
Height/diameter ratio	2.13
Deviator Stress, tsf	0.183
Strain, %	4.9
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = 70 PL = 20 PI = 50

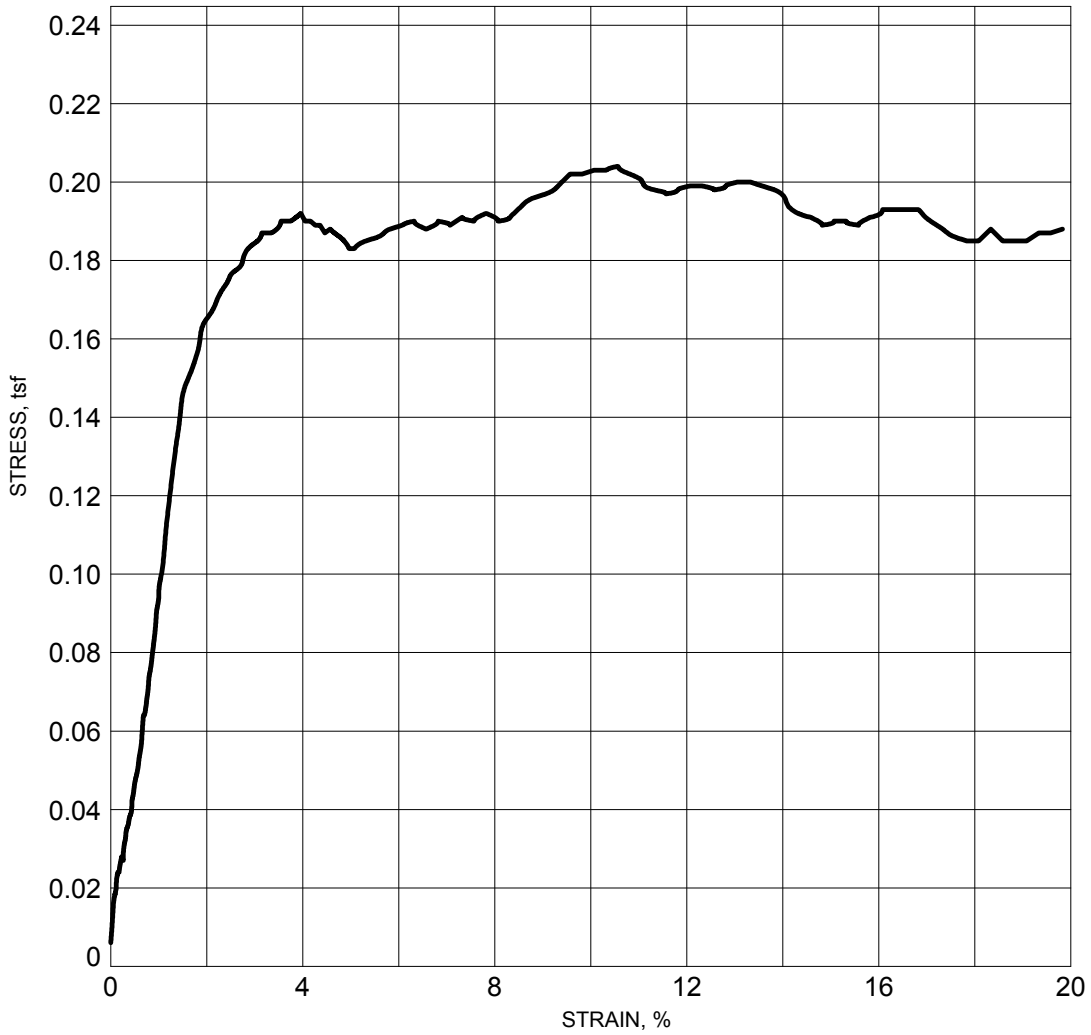
% 200= % Organic= Gs=2.678

Description: Very soft gray clay with silt layer and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

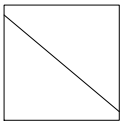
Tested By: SRT	Date Tested: 5/18/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-38

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	10-12
Water Content, %	70.8
Wet Density, pcf	104.5
Dry Density, pcf	61.2
Saturation, %	108.1
Void Ratio	1.79
Specimen Diameter	2.791
Specimen Height	6.011
Height/diameter ratio	2.15
Deviator Stress, tsf	0.204
Strain, %	10.6
Confining Pressure (psi)	5.0

Angle Shear 70º



Failure Sketch

LL = PL = PI =

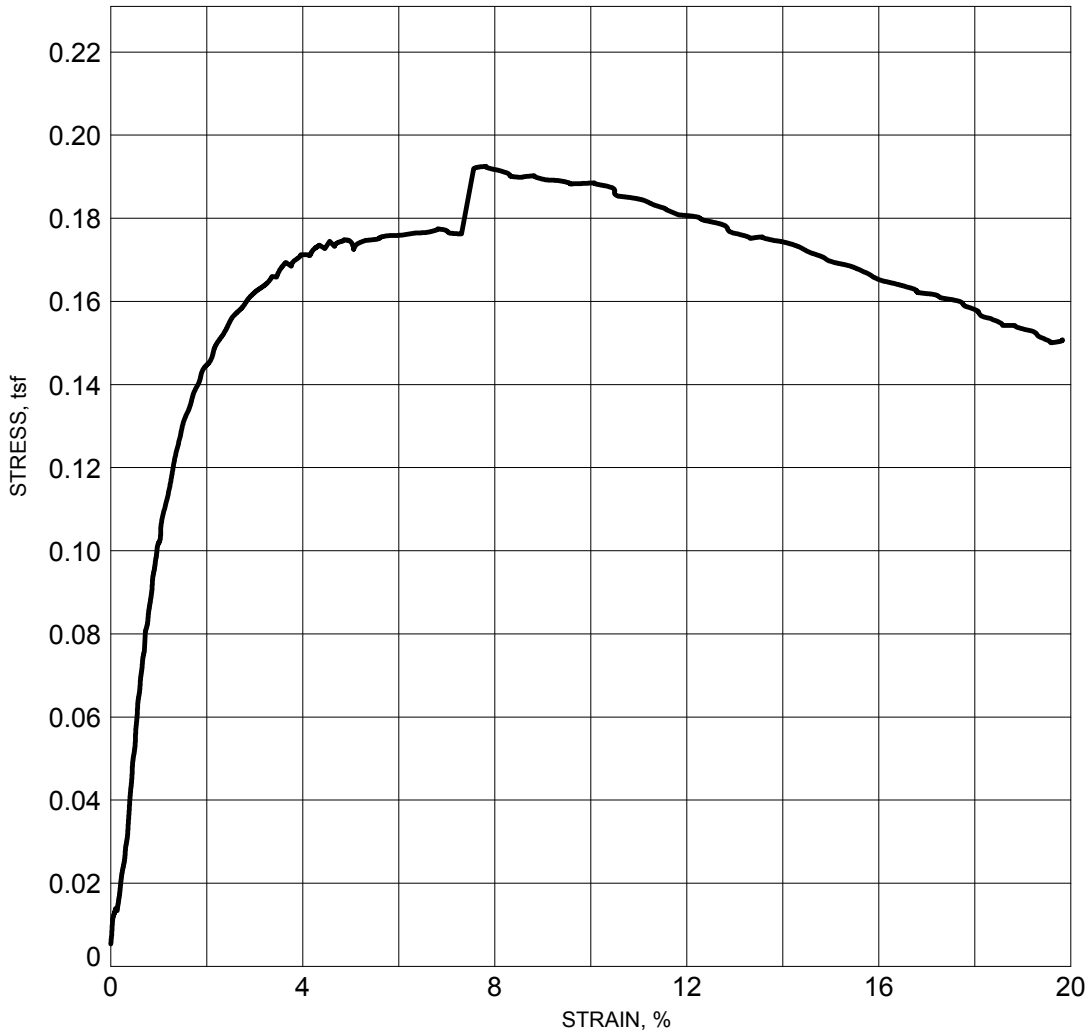
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand layers and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/21/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-39

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	16-18
Water Content, %	59.5
Wet Density, pcf	103.4
Dry Density, pcf	64.8
Saturation, %	99.6
Void Ratio	1.64
Specimen Diameter	2.824
Specimen Height	5.992
Height/diameter ratio	2.12
Deviator Stress, tsf	0.192
Strain, %	7.8
Confining Pressure (psi)	6.8

Multiple Shear

Failure Sketch

LL = PL = PI =

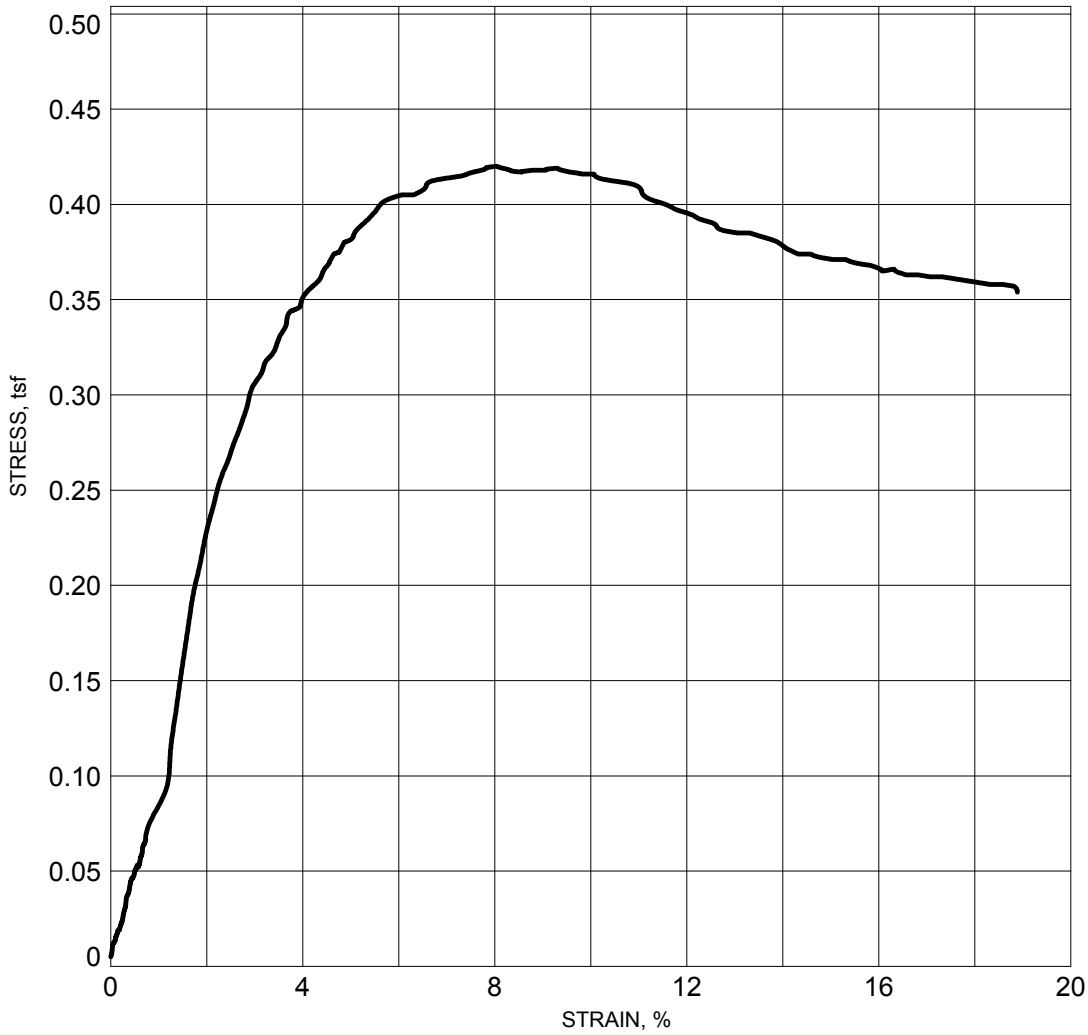
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

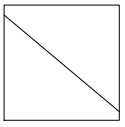
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-40

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	38-40
Water Content, %	47.7
Wet Density, pcf	112.5
Dry Density, pcf	76.2
Saturation, %	105.1
Void Ratio	1.24
Specimen Diameter	2.820
Specimen Height	5.954
Height/diameter ratio	2.11
Deviator Stress, tsf	0.420
Strain, %	8.1
Confining Pressure (psi)	15.6

Angle Shear 70º



Failure Sketch

LL = PL = PI =

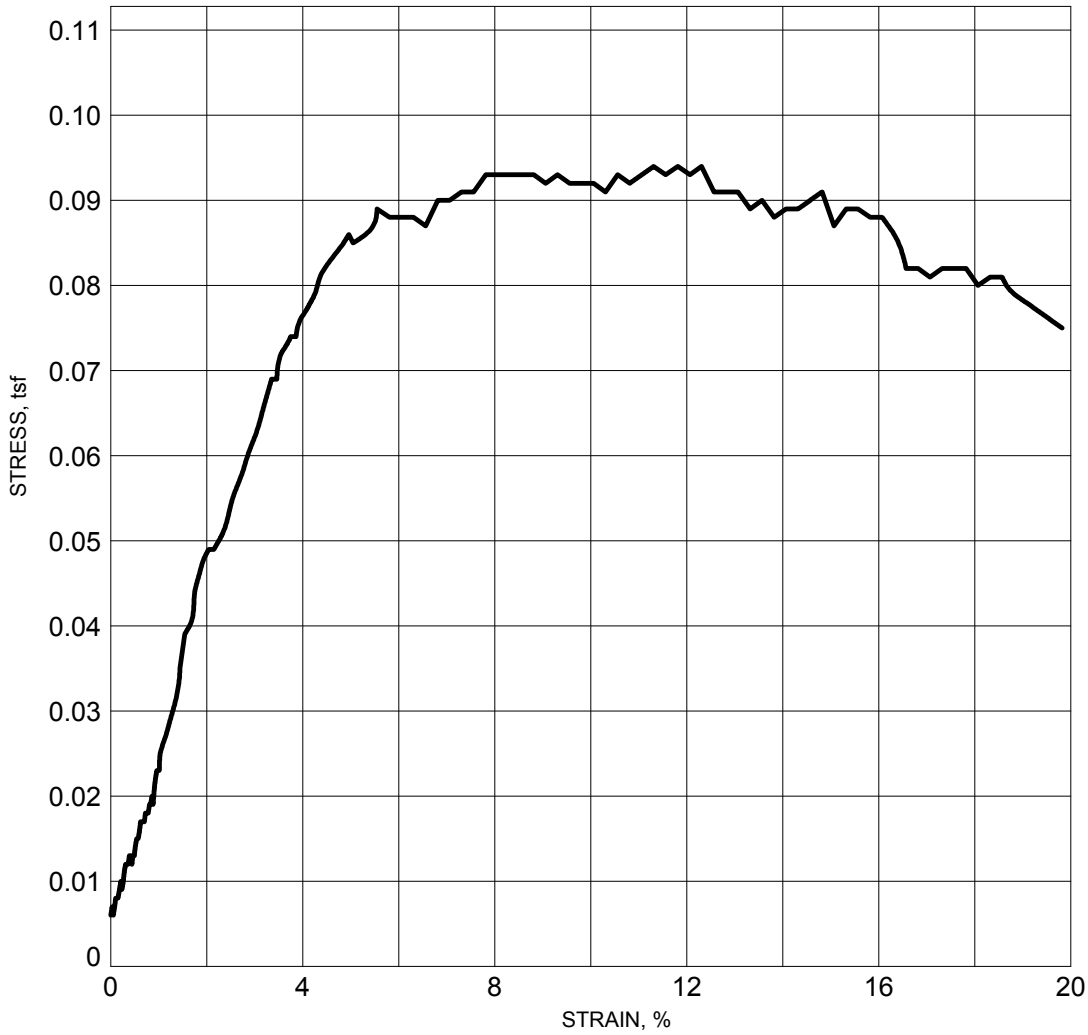
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with sand lenses and silt seams (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

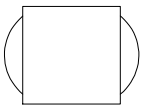
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-41

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	43-45
Water Content, %	56.0
Wet Density, pcf	114.6
Dry Density, pcf	73.5
Saturation, %	115.6
Void Ratio	1.33
Specimen Diameter	2.740
Specimen Height	5.280
Height/diameter ratio	1.93
Deviator Stress, tsf	0.094
Strain, %	11.3
Confining Pressure (psi)	17.6

Bulge



Failure Sketch

LL = PL = PI =

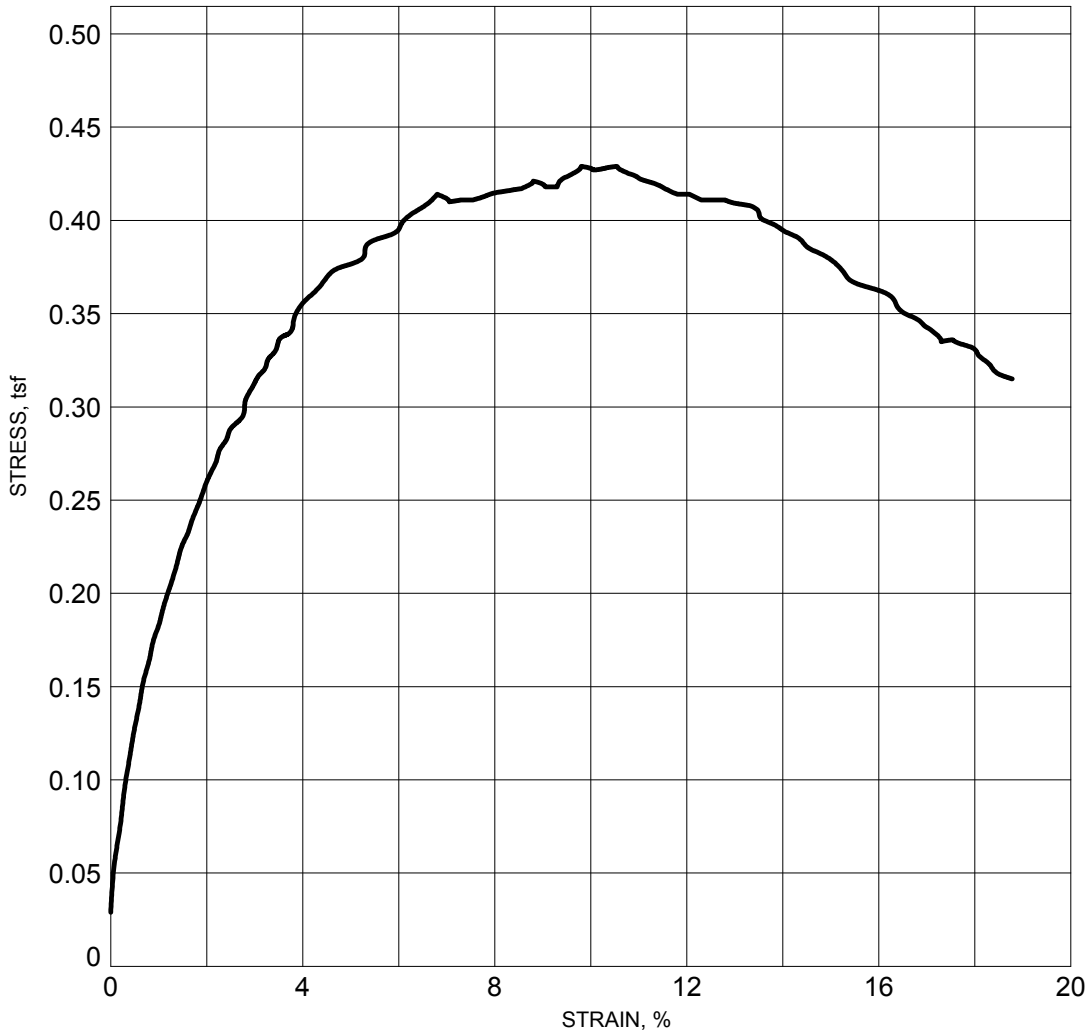
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt pockets and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

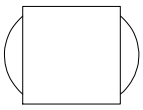
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-42

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	53-55
Water Content, %	42.7
Wet Density, pcf	118.8
Dry Density, pcf	83.2
Saturation, %	111.0
Void Ratio	1.05
Specimen Diameter	2.791
Specimen Height	5.996
Height/diameter ratio	2.15
Deviator Stress, tsf	0.429
Strain, %	9.8
Confining Pressure (psi)	21.6

Bulge



Failure Sketch

LL = PL = PI =

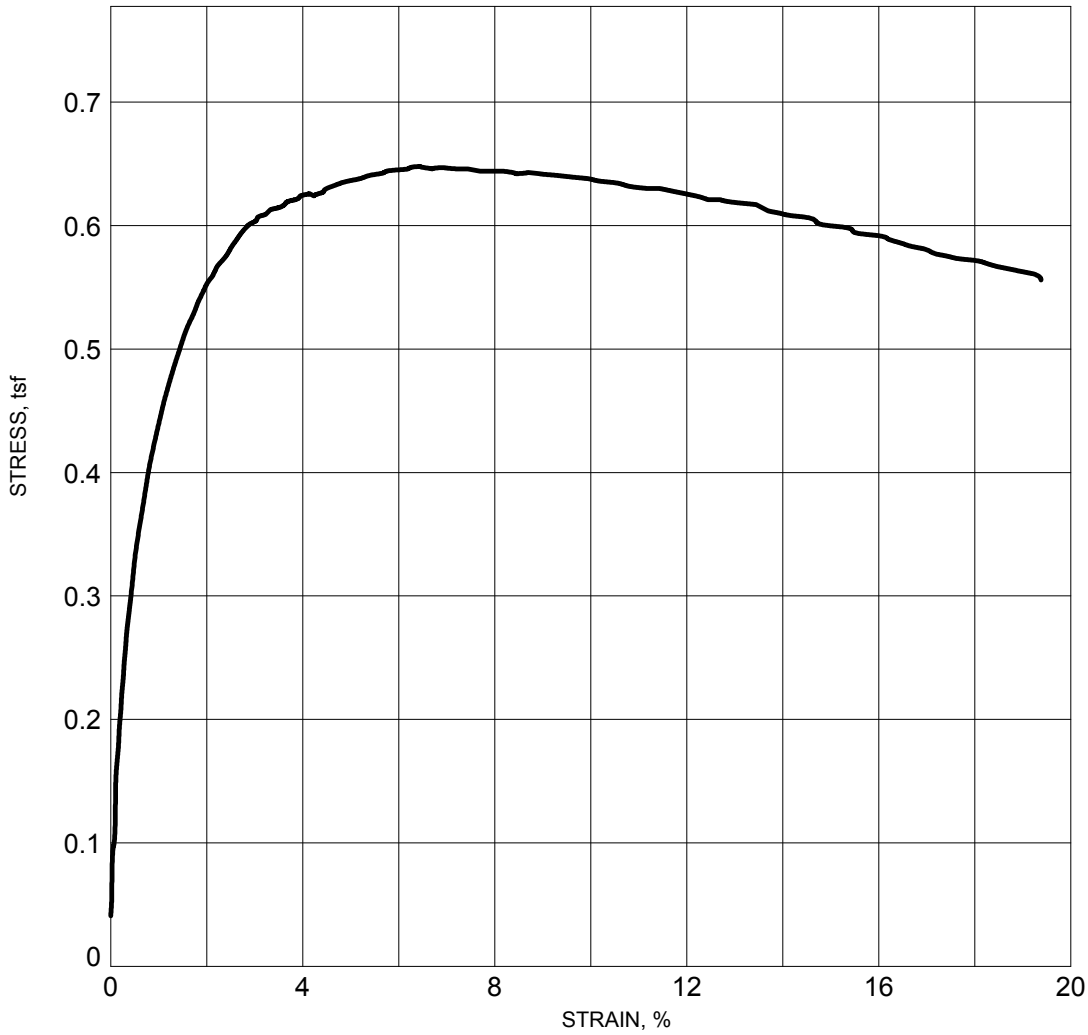
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-43

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-20
Depth (ft)	58-60
Water Content, %	47.5
Wet Density, pcf	112.3
Dry Density, pcf	76.1
Saturation, %	104.5
Void Ratio	1.25
Specimen Diameter	2.800
Specimen Height	6.013
Height/diameter ratio	2.15
Deviator Stress, tsf	0.648
Strain, %	6.4
Confining Pressure (psi)	23.6

Multiple Shear

Failure Sketch

LL = PL = PI =

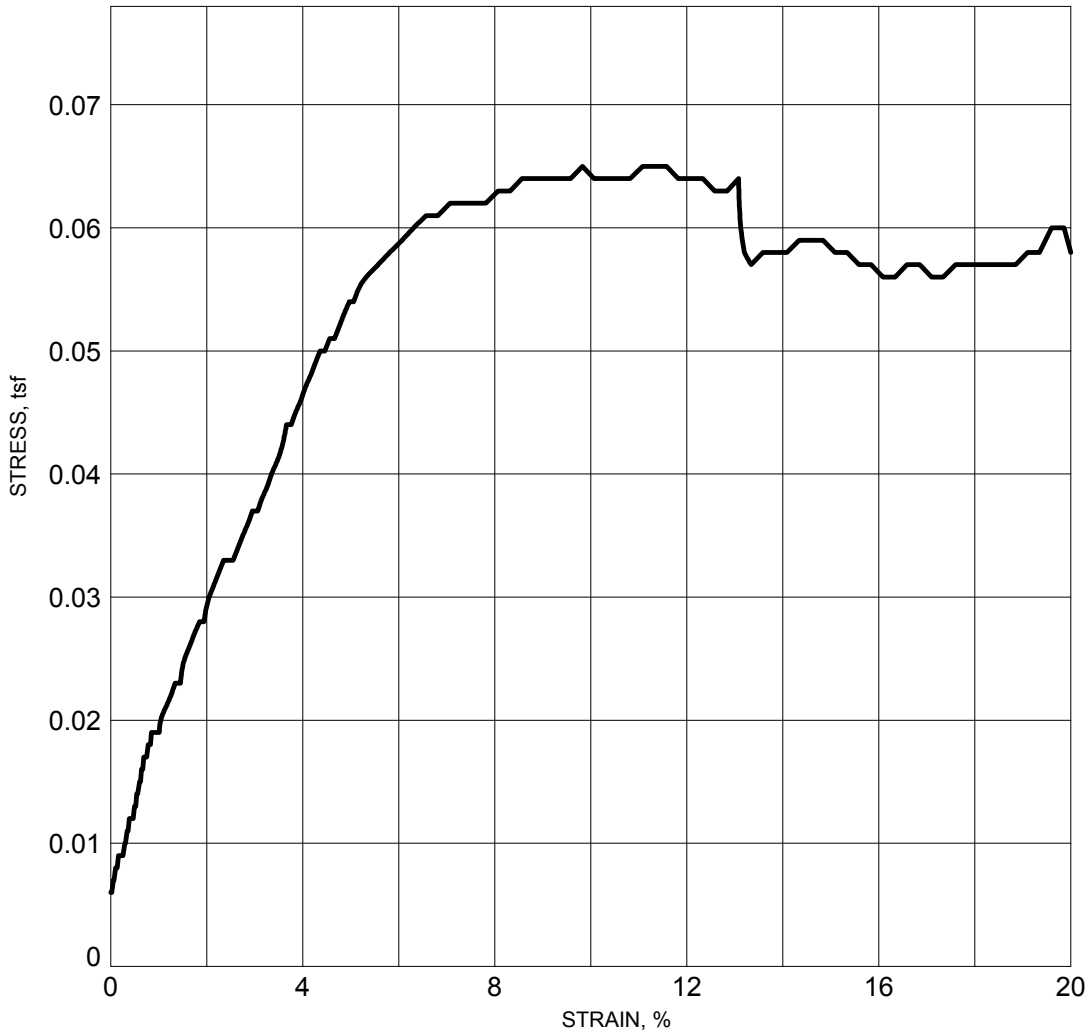
% 200= % Organic= Assumed Gs=2.74

Description: Medium gray clay with silt lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

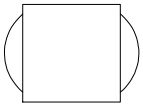
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-44

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	0-2
Water Content, %	55.4
Wet Density, pcf	108.4
Dry Density, pcf	69.7
Saturation, %	104.5
Void Ratio	1.45
Specimen Diameter	2.852
Specimen Height	5.913
Height/diameter ratio	2.07
Deviator Stress, tsf	0.065
Strain, %	9.8
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

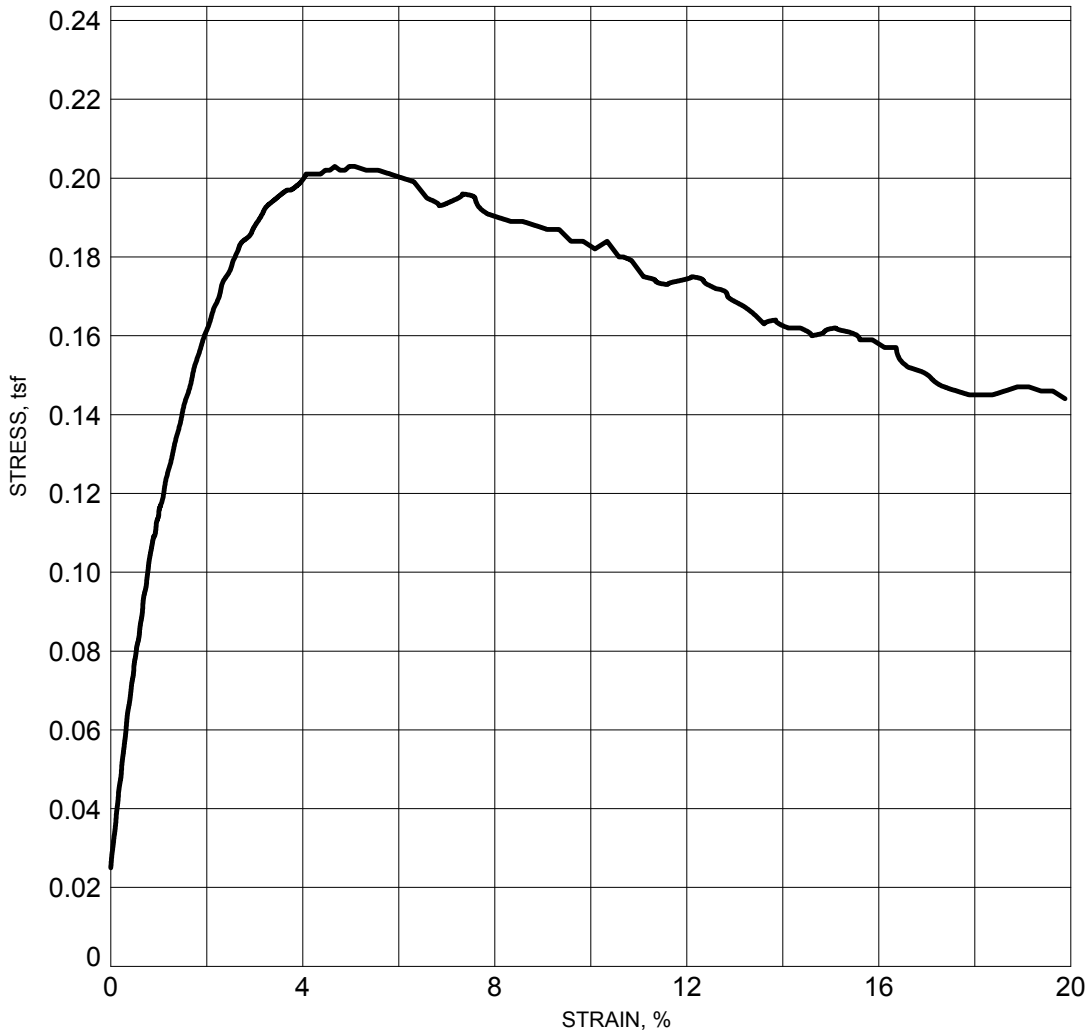
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt layer and trace organic matter (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

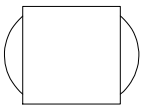
Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-45

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	6-8
Water Content, %	86.3
Wet Density, pcf	97.6
Dry Density, pcf	52.4
Saturation, %	104.5
Void Ratio	2.26
Specimen Diameter	2.810
Specimen Height	6.016
Height/diameter ratio	2.14
Deviator Stress, tsf	0.203
Strain, %	4.7
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

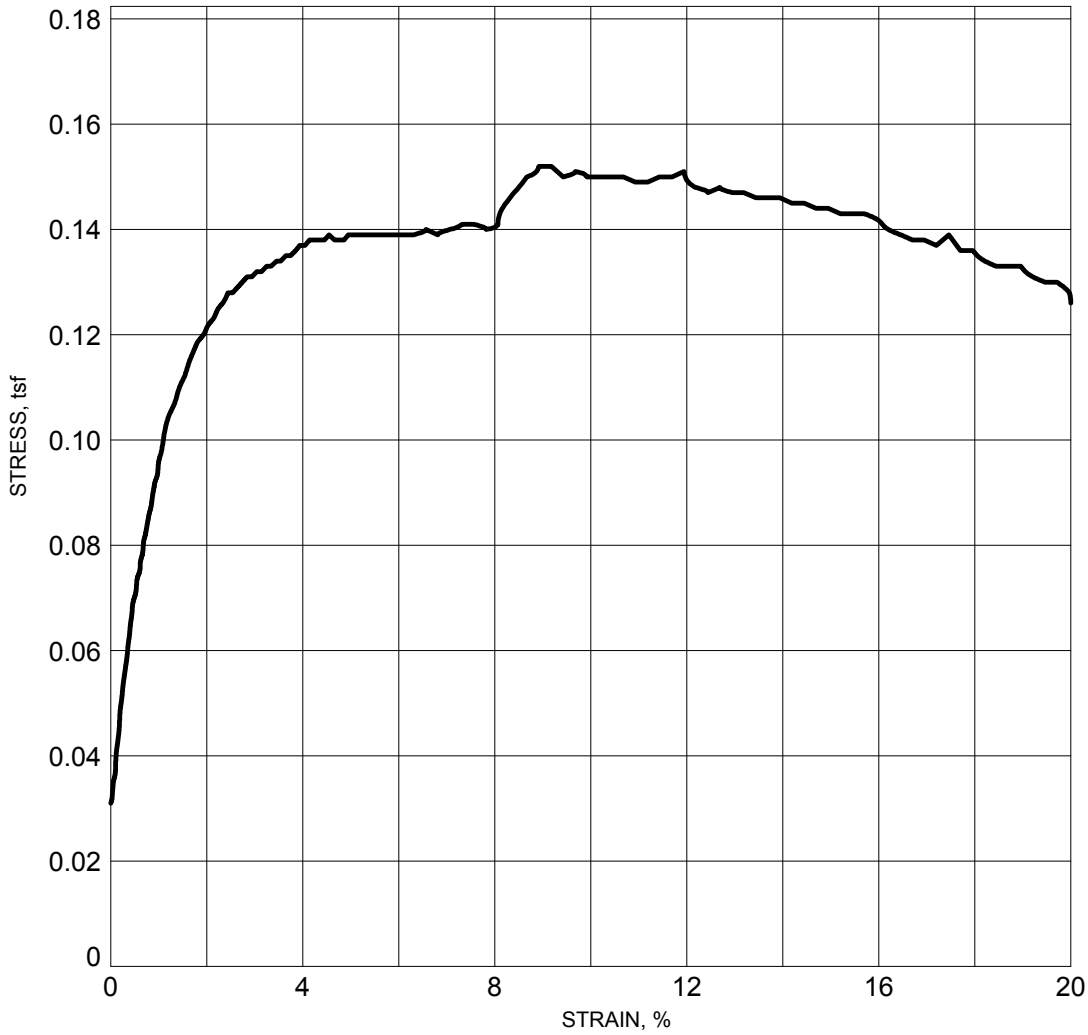
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray clay with silt layers, sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

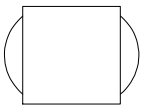
Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-46

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	8-10
Water Content, %	71.4
Wet Density, pcf	100.3
Dry Density, pcf	58.5
Saturation, %	101.8
Void Ratio	1.92
Specimen Diameter	2.829
Specimen Height	6.015
Height/diameter ratio	2.13
Deviator Stress, tsf	0.152
Strain, %	8.9
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

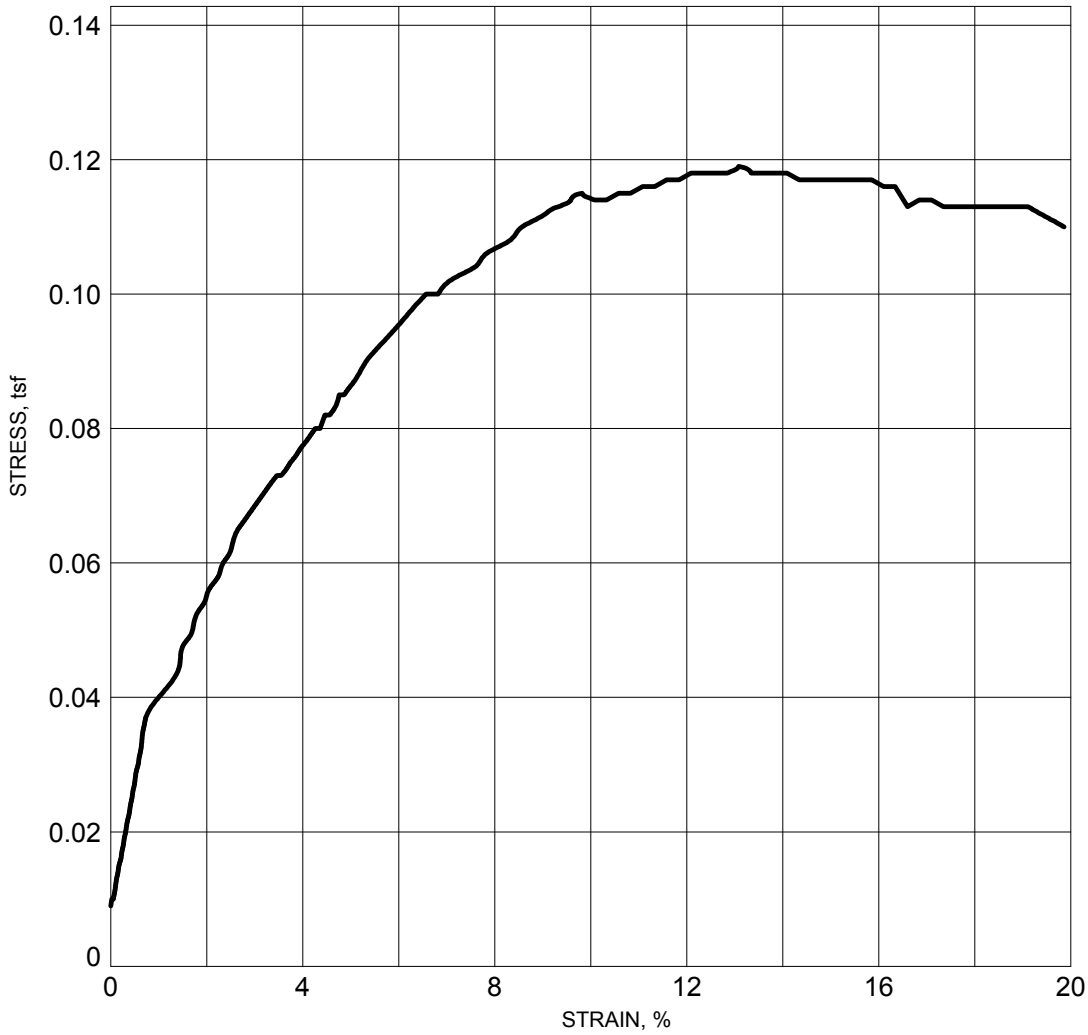
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt layers, sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

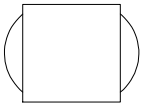
Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-47

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	12-13
Water Content, %	72.7
Wet Density, pcf	112.7
Dry Density, pcf	65.3
Saturation, %	123.0
Void Ratio	1.62
Specimen Diameter	2.825
Specimen Height	5.996
Height/diameter ratio	2.12
Deviator Stress, tsf	0.119
Strain, %	13.1
Confining Pressure (psi)	5.2

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand pockets and shell fragments (CH)

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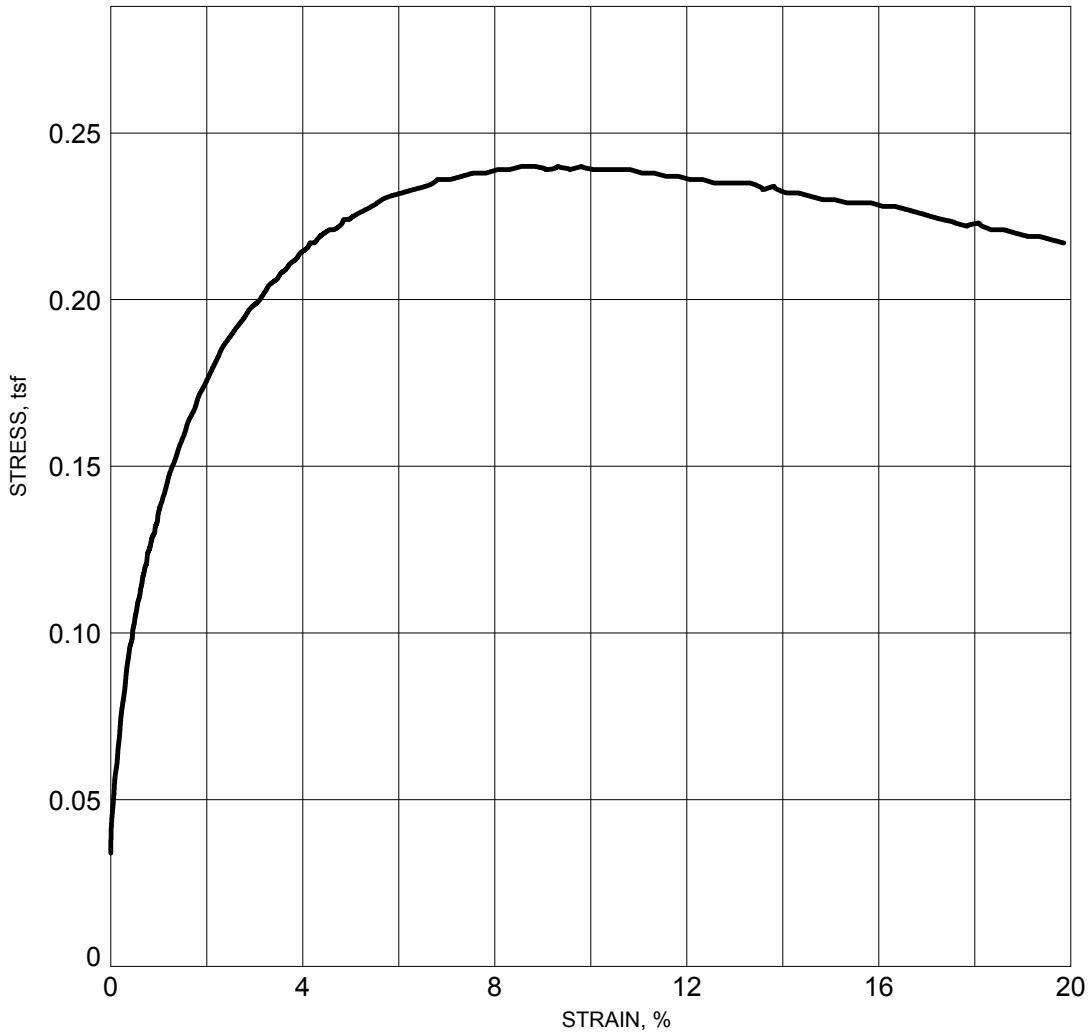
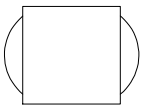
Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-48

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	14-16
Water Content, %	40.7
Wet Density, pcf	113.7
Dry Density, pcf	80.8
Saturation, %	99.9
Void Ratio	1.12
Specimen Diameter	2.816
Specimen Height	6.007
Height/diameter ratio	2.13
Deviator Stress, tsf	0.240
Strain, %	8.6
Confining Pressure (psi)	6.0

Bulge



Failure Sketch

LL = PL = PI =

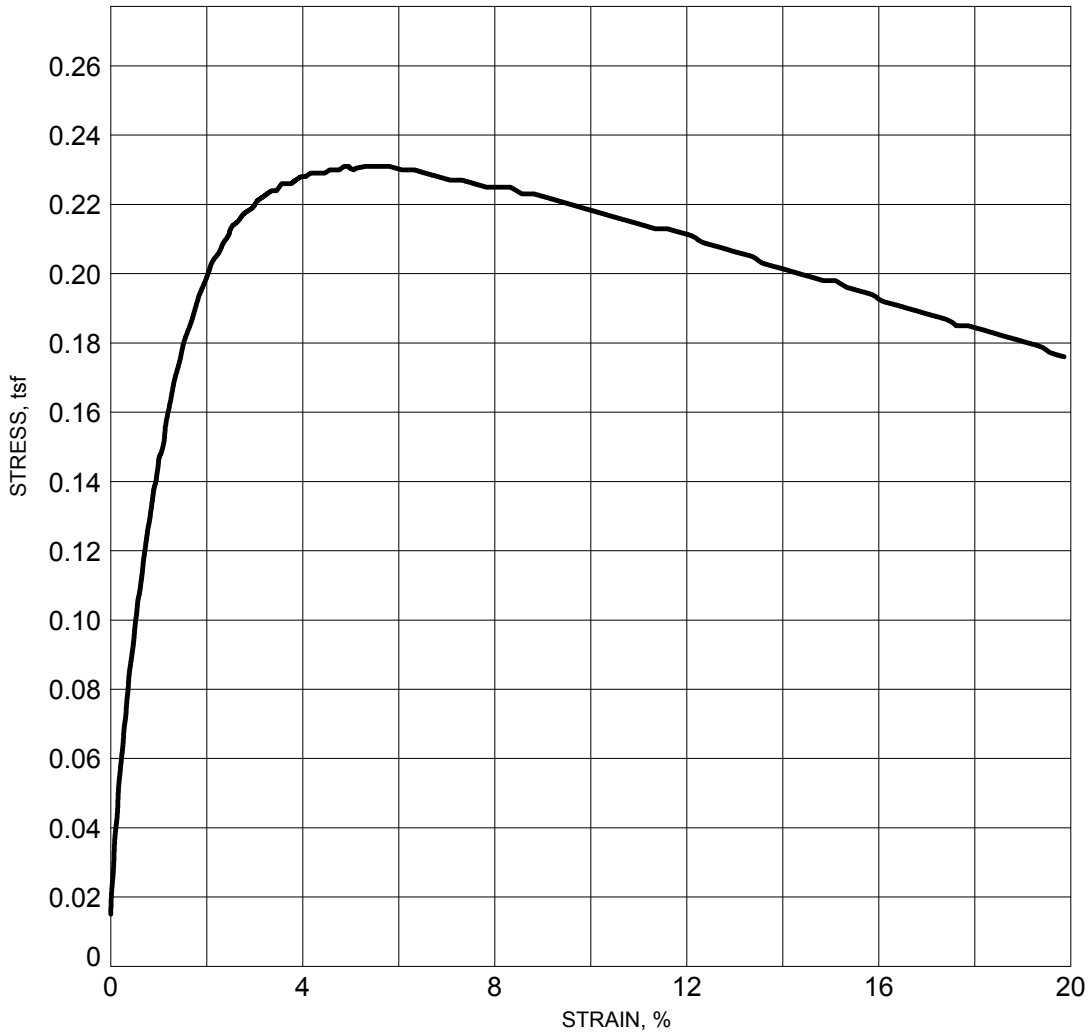
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray silty clay with sand, wood and shell fragments (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

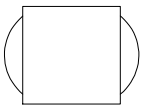
Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-49

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	18-20
Water Content, %	68.1
Wet Density, pcf	101.3
Dry Density, pcf	60.2
Saturation, %	101.6
Void Ratio	1.84
Specimen Diameter	2.815
Specimen Height	6.011
Height/diameter ratio	2.14
Deviator Stress, tsf	0.231
Strain, %	4.9
Confining Pressure (psi)	7.6

Bulge



Failure Sketch

LL = PL = PI =

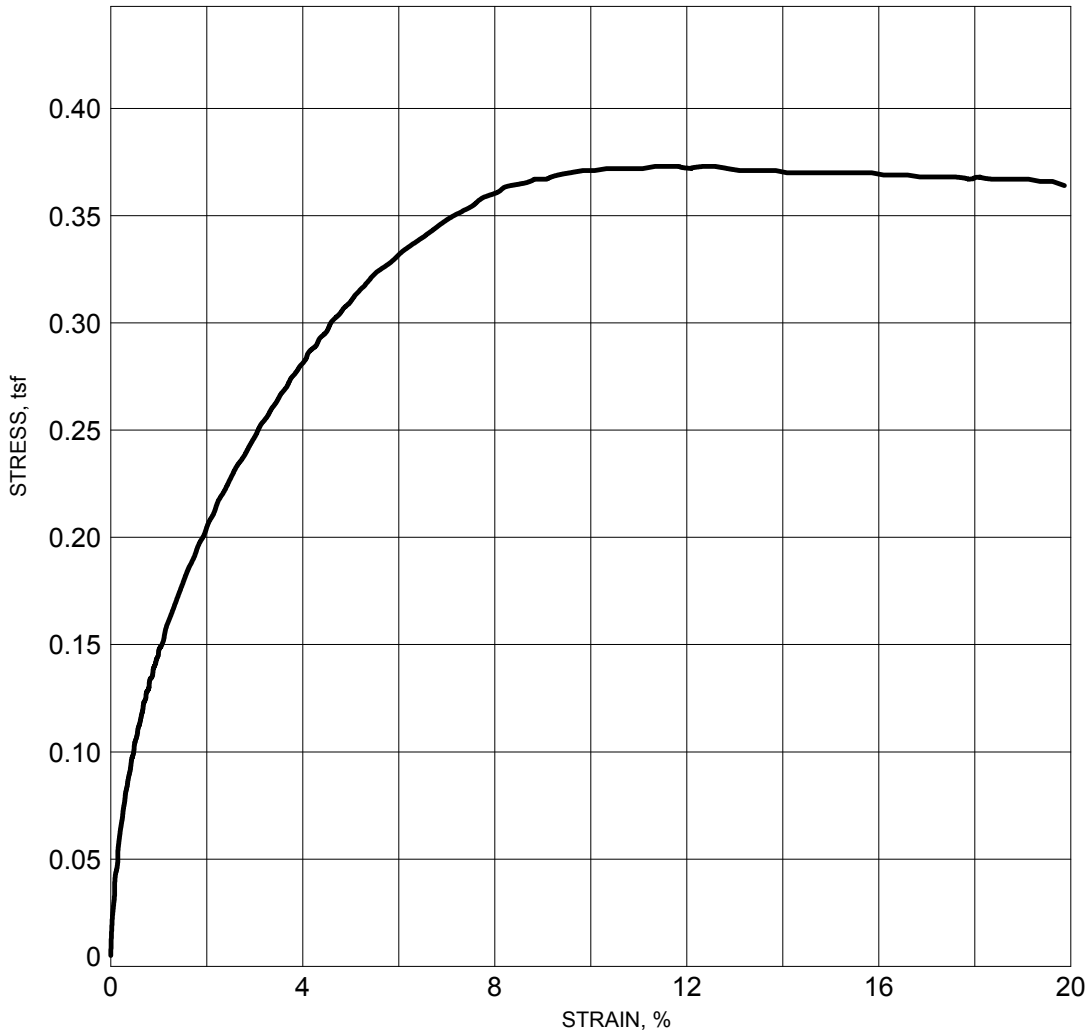
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray clay with silt lenses, sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-50

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-25
Depth (ft)	38-40
Water Content, %	44.0
Wet Density, pcf	111.5
Dry Density, pcf	77.4
Saturation, %	99.8
Void Ratio	1.21
Specimen Diameter	2.829
Specimen Height	6.024
Height/diameter ratio	2.13
Deviator Stress, tsf	0.373
Strain, %	11.3
Confining Pressure (psi)	15.6

Multiple Shear

Failure Sketch

LL = PL = PI =

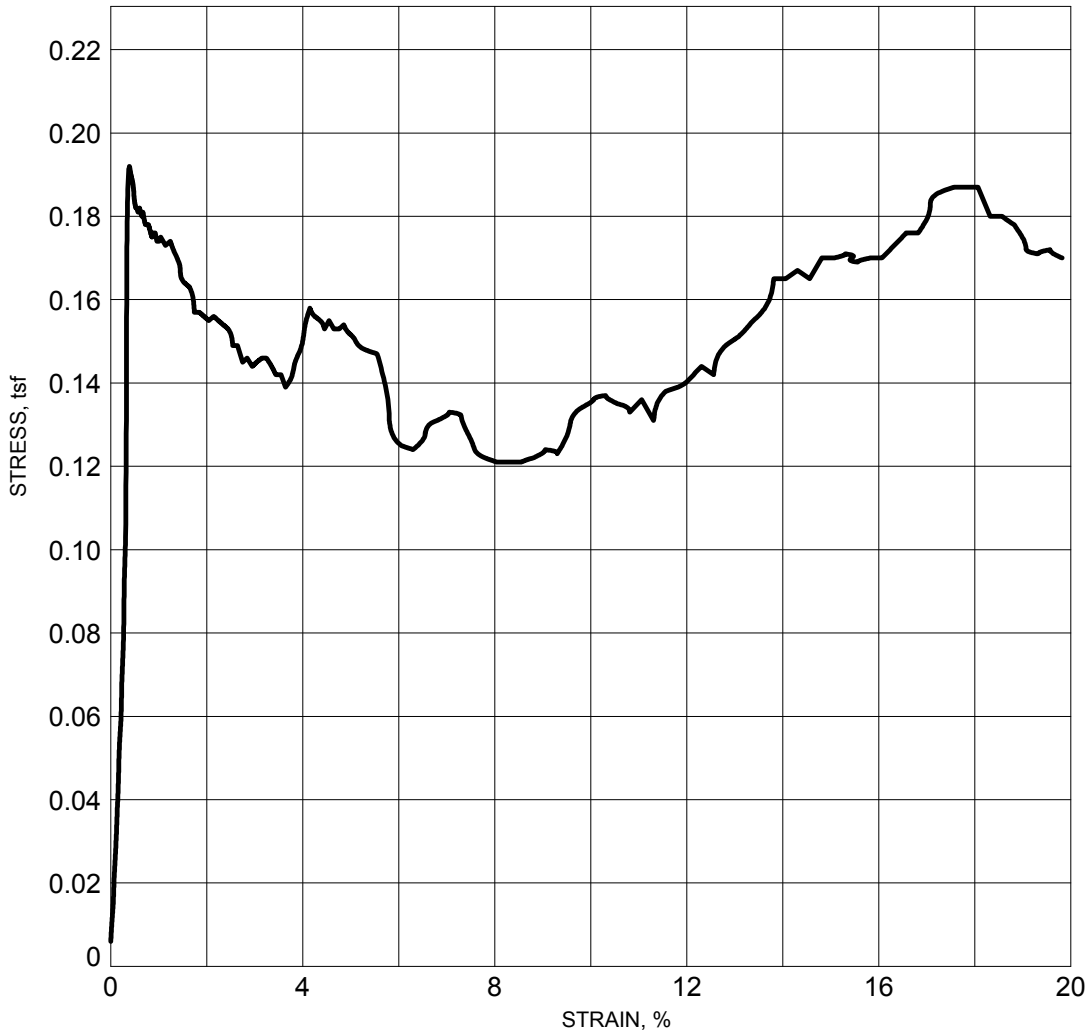
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray silty clay with sand lenses (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

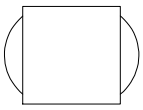
Tested By: SRT	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-51

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	0-2
Water Content, %	142.6
Wet Density, pcf	80.8
Dry Density, pcf	33.3
Saturation, %	94.5
Void Ratio	4.14
Specimen Diameter	2.855
Specimen Height	6.023
Height/diameter ratio	2.11
Deviator Stress, tsf	0.192
Strain, %	0.4
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

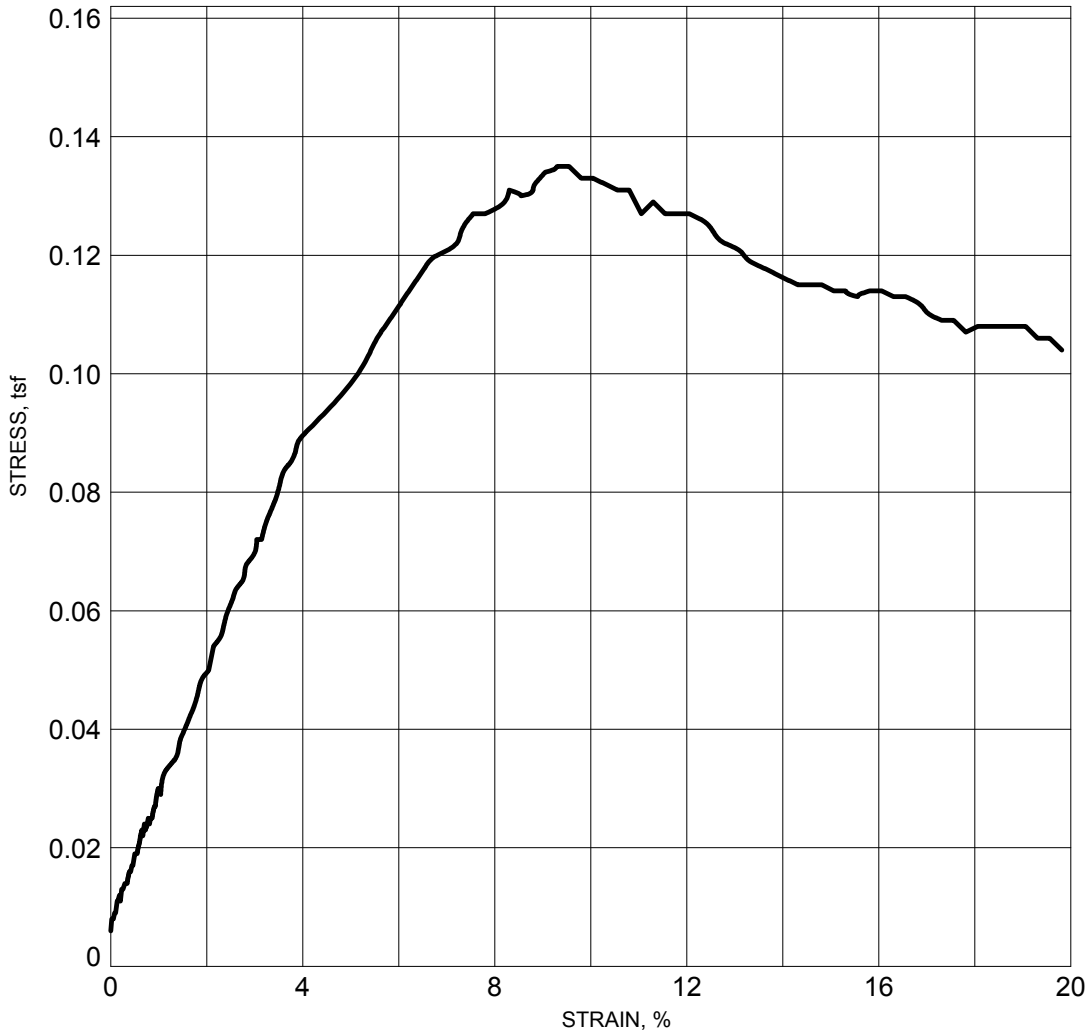
% 200= % Organic= Assumed Gs=2.74

Description: Very soft dark gray organic clay with peat pockets and shells (OH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

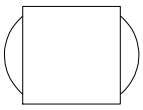
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-52

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:04 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	4-6
Water Content, %	108.5
Wet Density, pcf	97.8
Dry Density, pcf	46.9
Saturation, %	112.4
Void Ratio	2.64
Specimen Diameter	2.750
Specimen Height	5.853
Height/diameter ratio	2.13
Deviator Stress, tsf	0.135
Strain, %	9.3
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

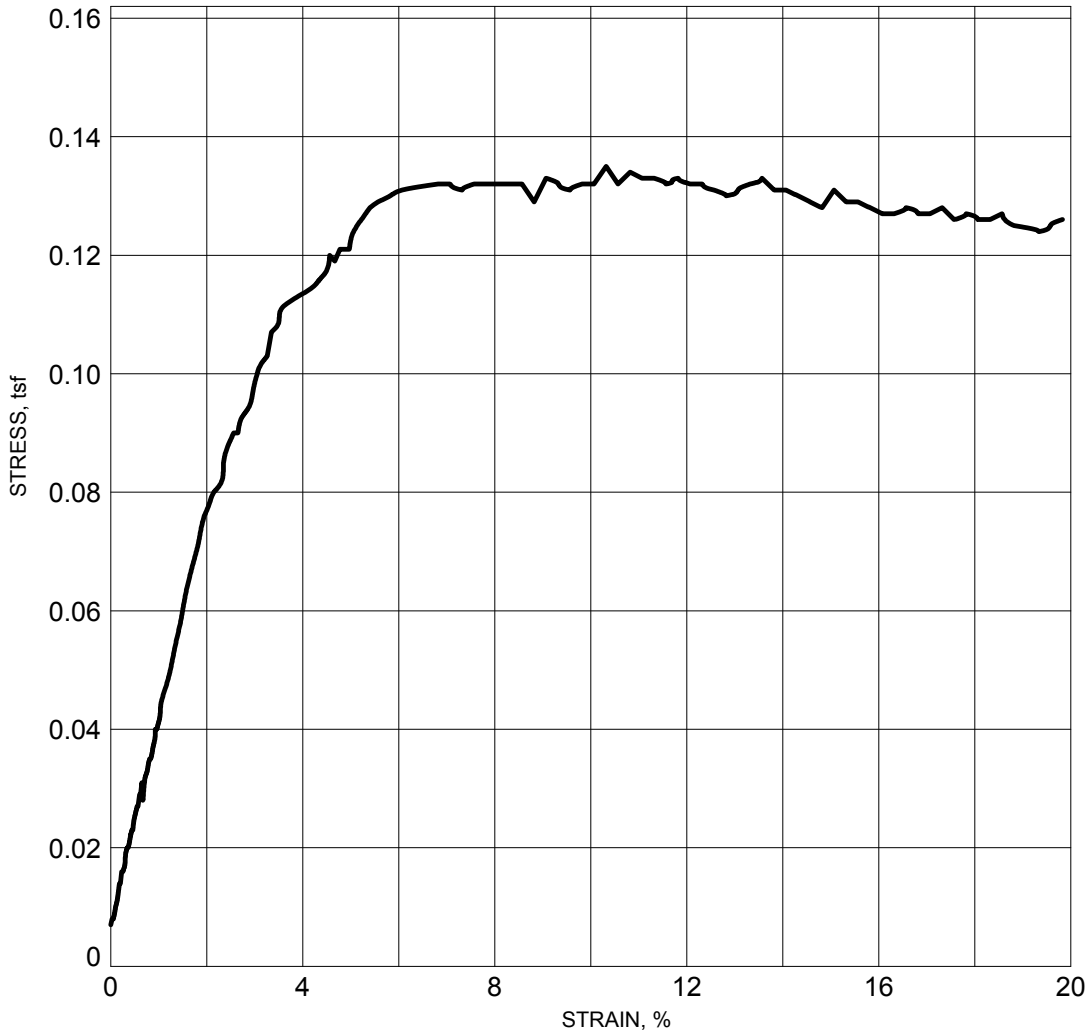
% 200=75 % Organic= Assumed Gs=2.74

Description: Very soft dark gray and gray sandy clay with silty sand layers and peat layers (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-53

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	10-12
Water Content, %	48.7
Wet Density, pcf	117.3
Dry Density, pcf	78.9
Saturation, %	114.3
Void Ratio	1.17
Specimen Diameter	2.725
Specimen Height	5.882
Height/diameter ratio	2.16
Deviator Stress, tsf	0.135
Strain, %	10.3
Confining Pressure (psi)	5.0

Multiple Shear

Failure Sketch

LL = PL = PI =

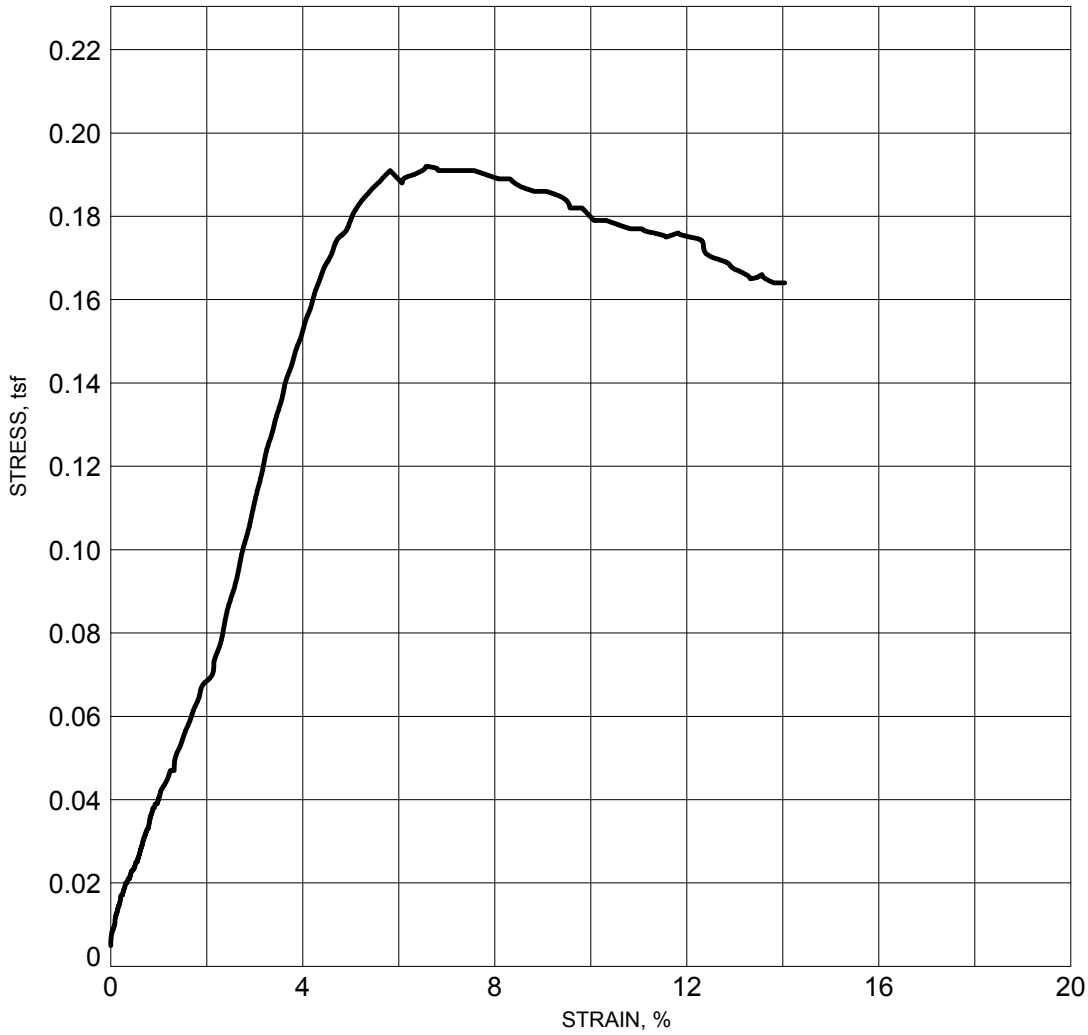
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray silty clay with sand and shell fragments (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-54

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	12-14
Water Content, %	79.1
Wet Density, pcf	102.2
Dry Density, pcf	57.1
Saturation, %	108.5
Void Ratio	2.00
Specimen Diameter	2.773
Specimen Height	6.024
Height/diameter ratio	2.17
Deviator Stress, tsf	0.192
Strain, %	6.6
Confining Pressure (psi)	5.2

Multiple Shear

Failure Sketch

LL = PL = PI =

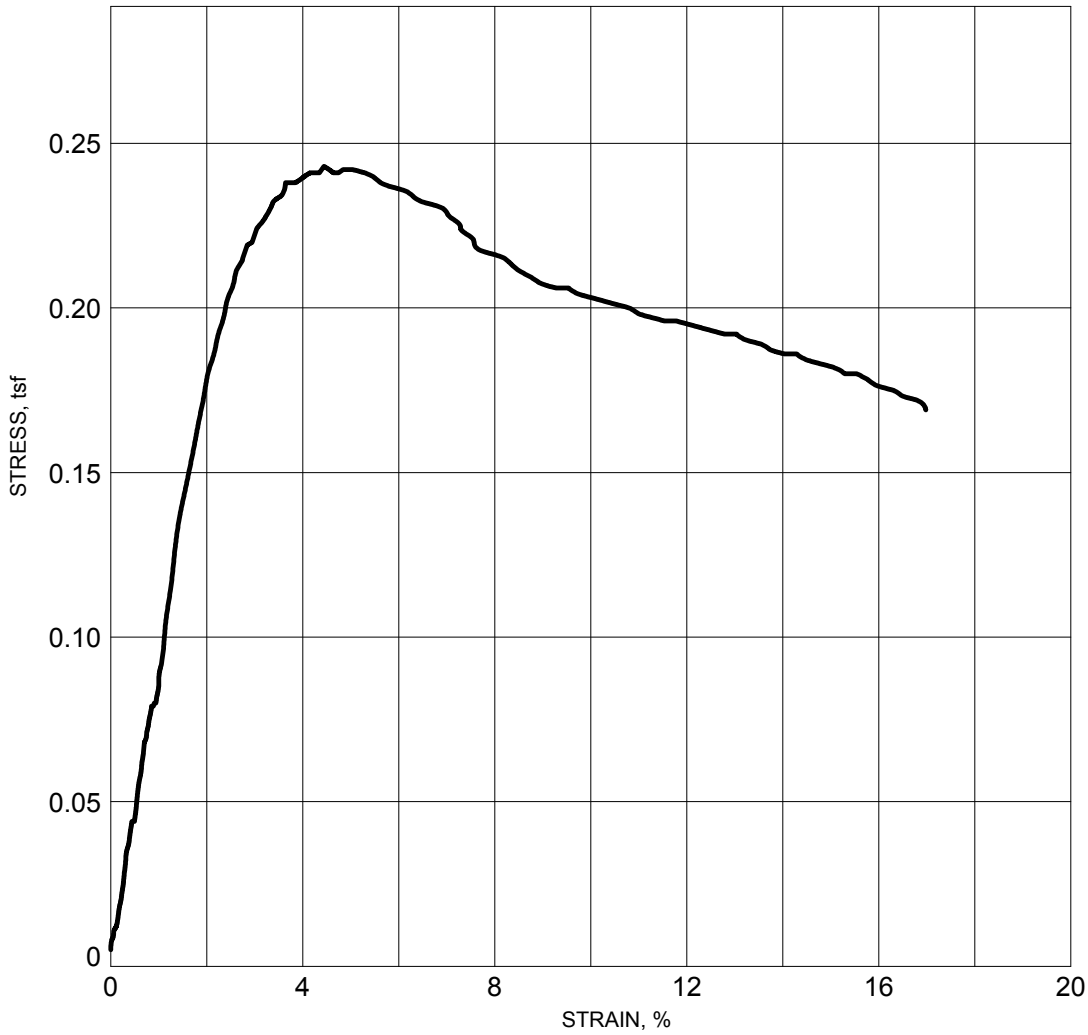
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt lenses and shells (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-55

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	14-16
Water Content, %	68.9
Wet Density, pcf	104.0
Dry Density, pcf	61.6
Saturation, %	106.2
Void Ratio	1.78
Specimen Diameter	2.781
Specimen Height	6.027
Height/diameter ratio	2.17
Deviator Stress, tsf	0.243
Strain, %	4.4
Confining Pressure (psi)	6.0

Multiple Shear

Failure Sketch

LL = 71 PL = 20 PI = 51

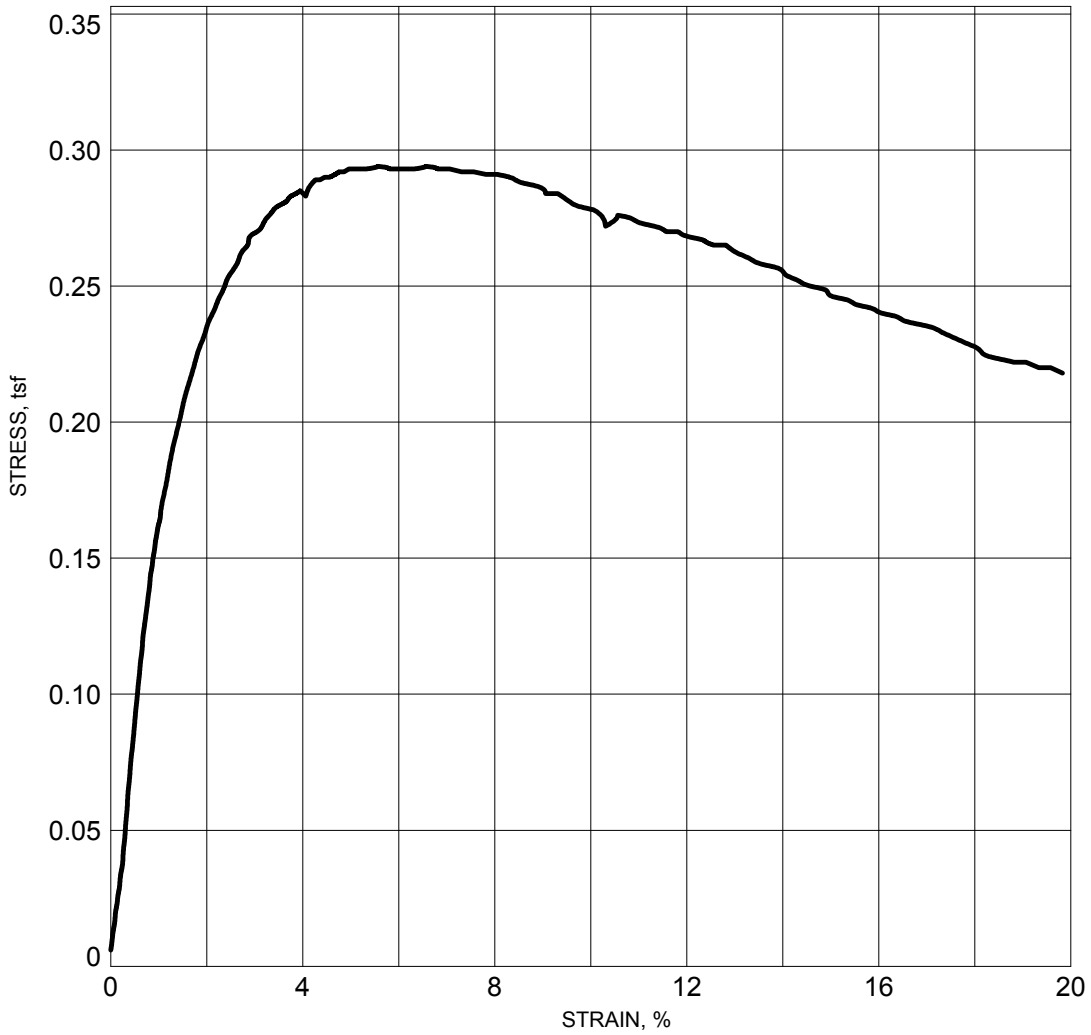
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray clay with sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-56

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	18-20
Water Content, %	42.4
Wet Density, pcf	116.7
Dry Density, pcf	81.9
Saturation, %	106.9
Void Ratio	1.09
Specimen Diameter	2.800
Specimen Height	6.066
Height/diameter ratio	2.17
Deviator Stress, tsf	0.294
Strain, %	5.6
Confining Pressure (psi)	7.6

Multiple Shear

Failure Sketch

LL = PL = PI =

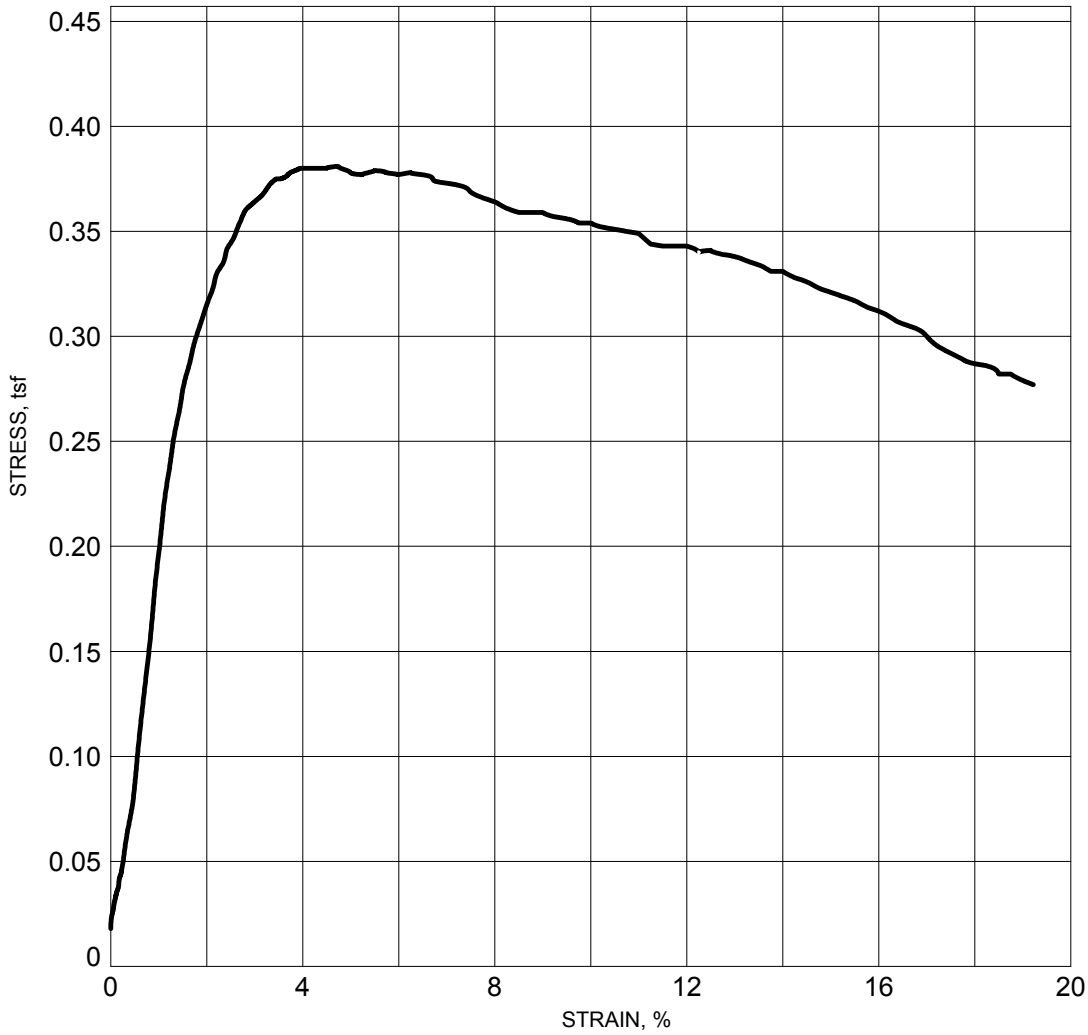
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand pockets (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-57

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	28-30
Water Content, %	52.0
Wet Density, pcf	109.2
Dry Density, pcf	71.9
Saturation, %	103.3
Void Ratio	1.38
Specimen Diameter	2.805
Specimen Height	6.041
Height/diameter ratio	2.15
Deviator Stress, tsf	0.381
Strain, %	4.7
Confining Pressure (psi)	11.6

Multiple Shear

Failure Sketch

LL = PL = PI =

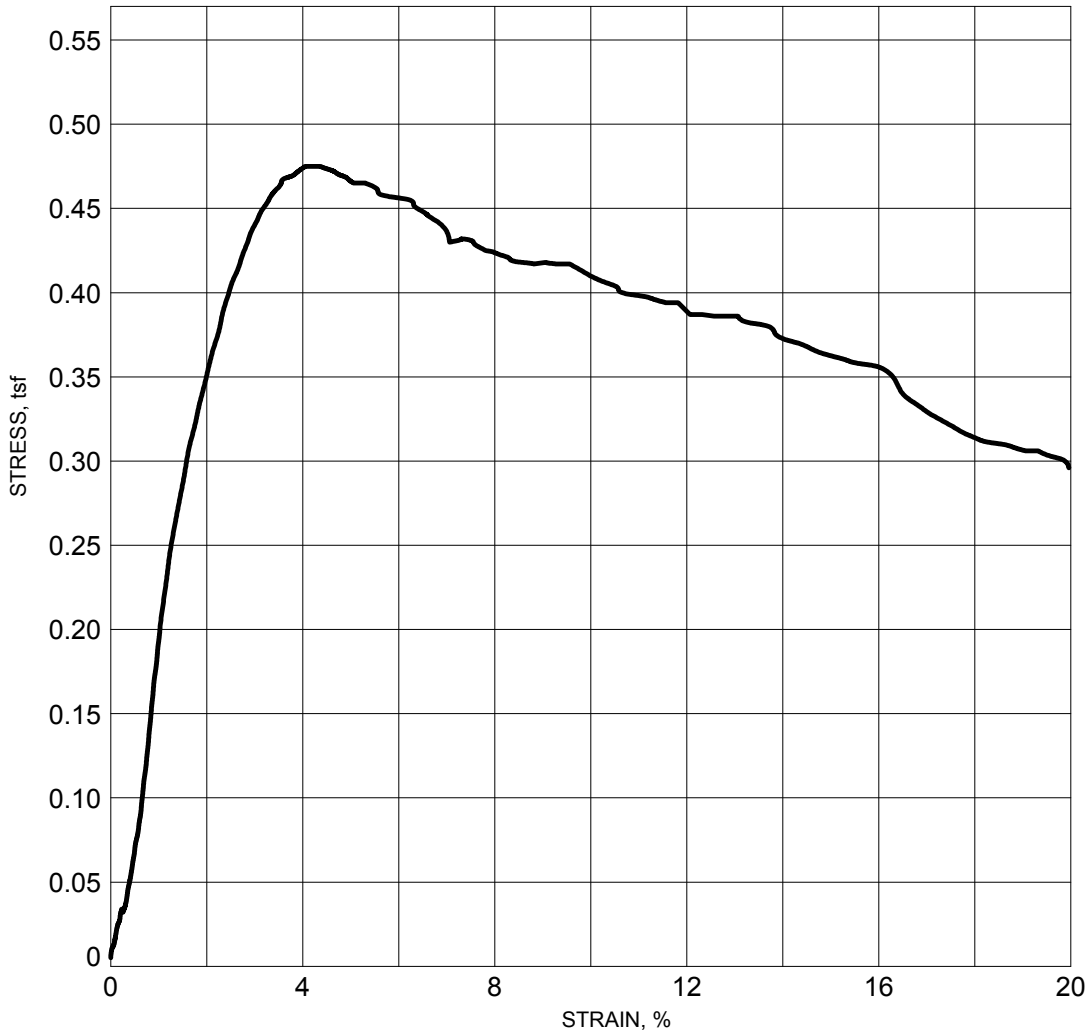
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-58

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	38-40
Water Content, %	60.9
Wet Density, pcf	105.0
Dry Density, pcf	65.3
Saturation, %	103.0
Void Ratio	1.62
Specimen Diameter	2.830
Specimen Height	6.042
Height/diameter ratio	2.14
Deviator Stress, tsf	0.475
Strain, %	4.1
Confining Pressure (psi)	15.6

Multiple Shear

Failure Sketch

LL = PL = PI =

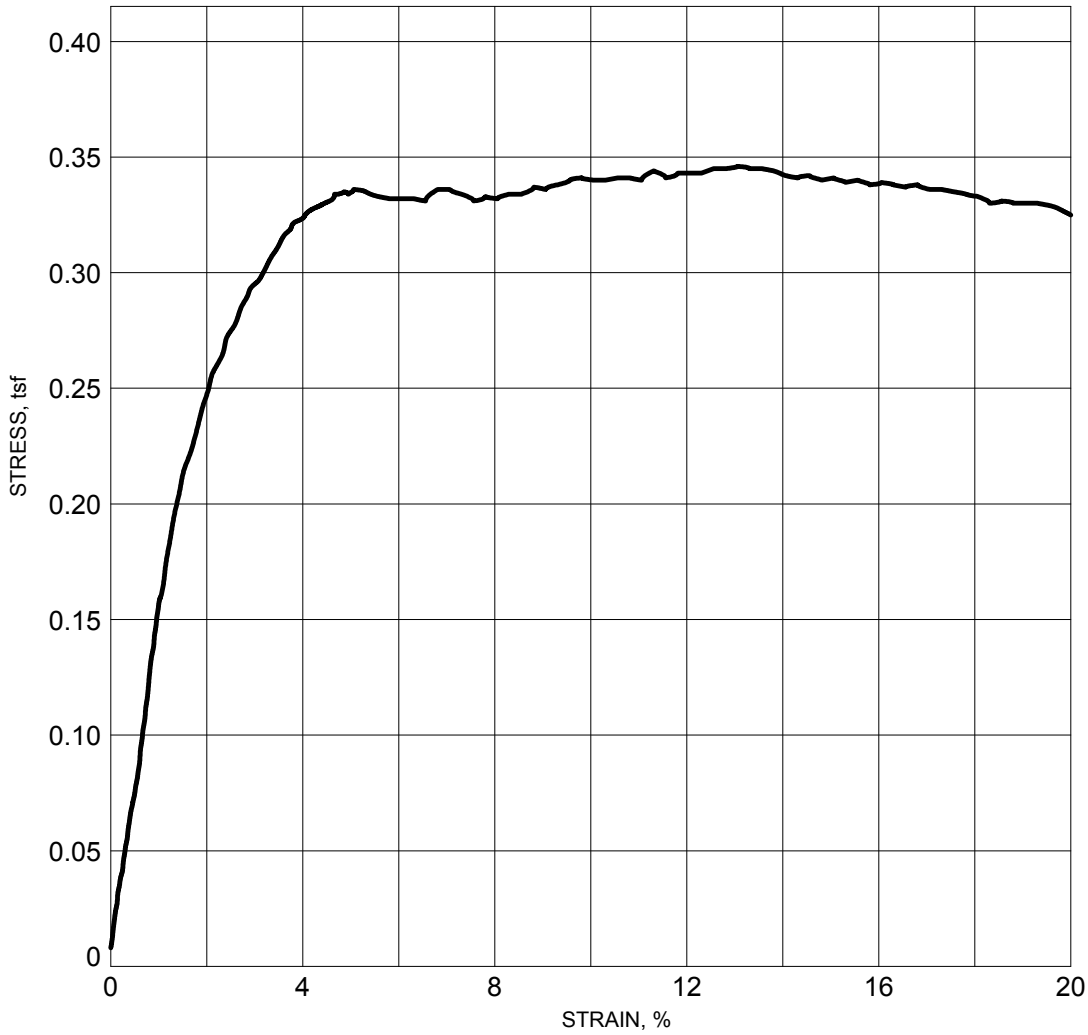
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with sand lenses and 3" silty clay layer at bottom (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

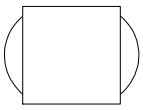
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-59

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	48-50
Water Content, %	49.6
Wet Density, pcf	118.1
Dry Density, pcf	78.9
Saturation, %	116.5
Void Ratio	1.17
Specimen Diameter	2.774
Specimen Height	6.046
Height/diameter ratio	2.18
Deviator Stress, tsf	0.346
Strain, %	13.1
Confining Pressure (psi)	19.6

Bulge



Failure Sketch

LL = PL = PI =

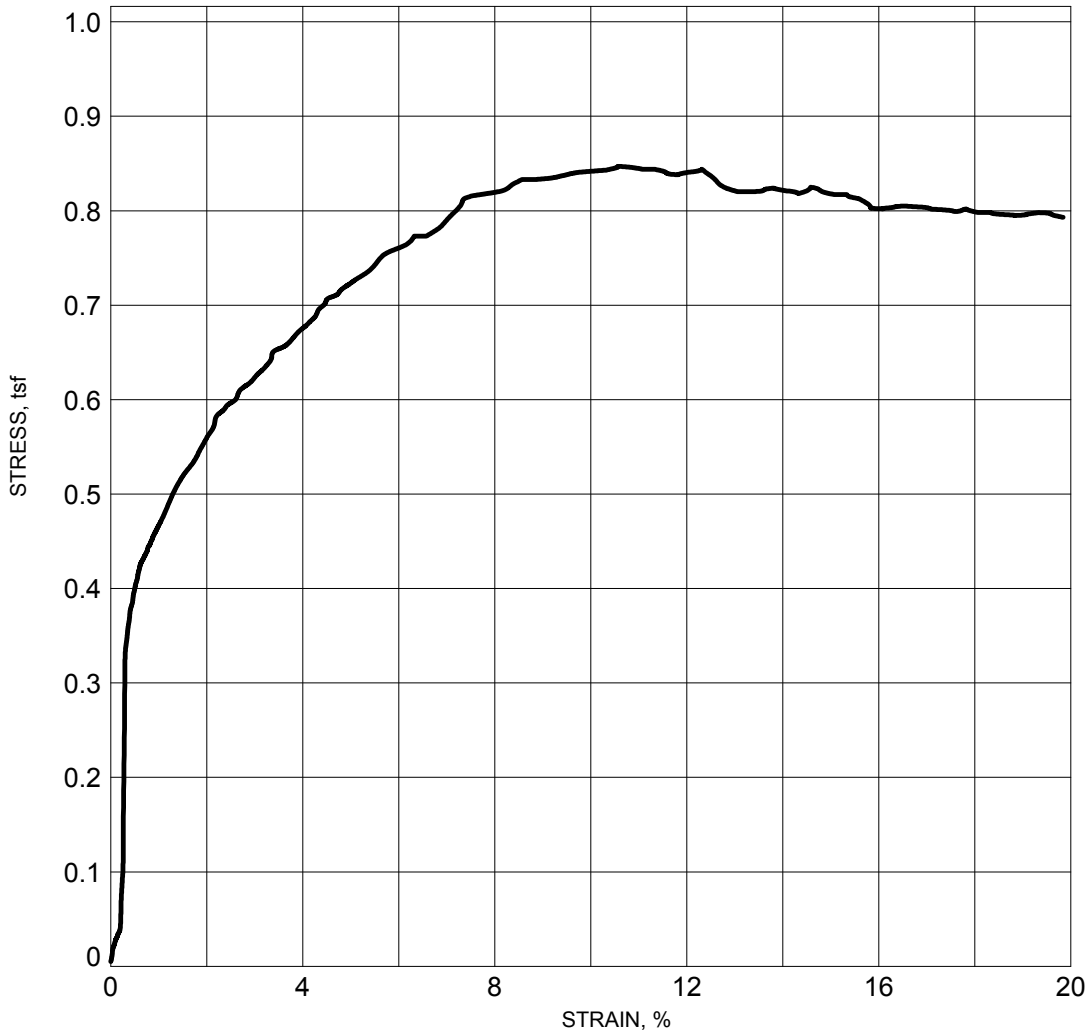
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

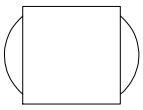
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-60

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-27
Depth (ft)	58-60
Water Content, %	35.8
Wet Density, pcf	118.7
Dry Density, pcf	87.4
Saturation, %	102.7
Void Ratio	0.96
Specimen Diameter	2.785
Specimen Height	5.920
Height/diameter ratio	2.13
Deviator Stress, tsf	0.847
Strain, %	10.6
Confining Pressure (psi)	23.6

Bulge



Failure Sketch

LL = PL = PI =

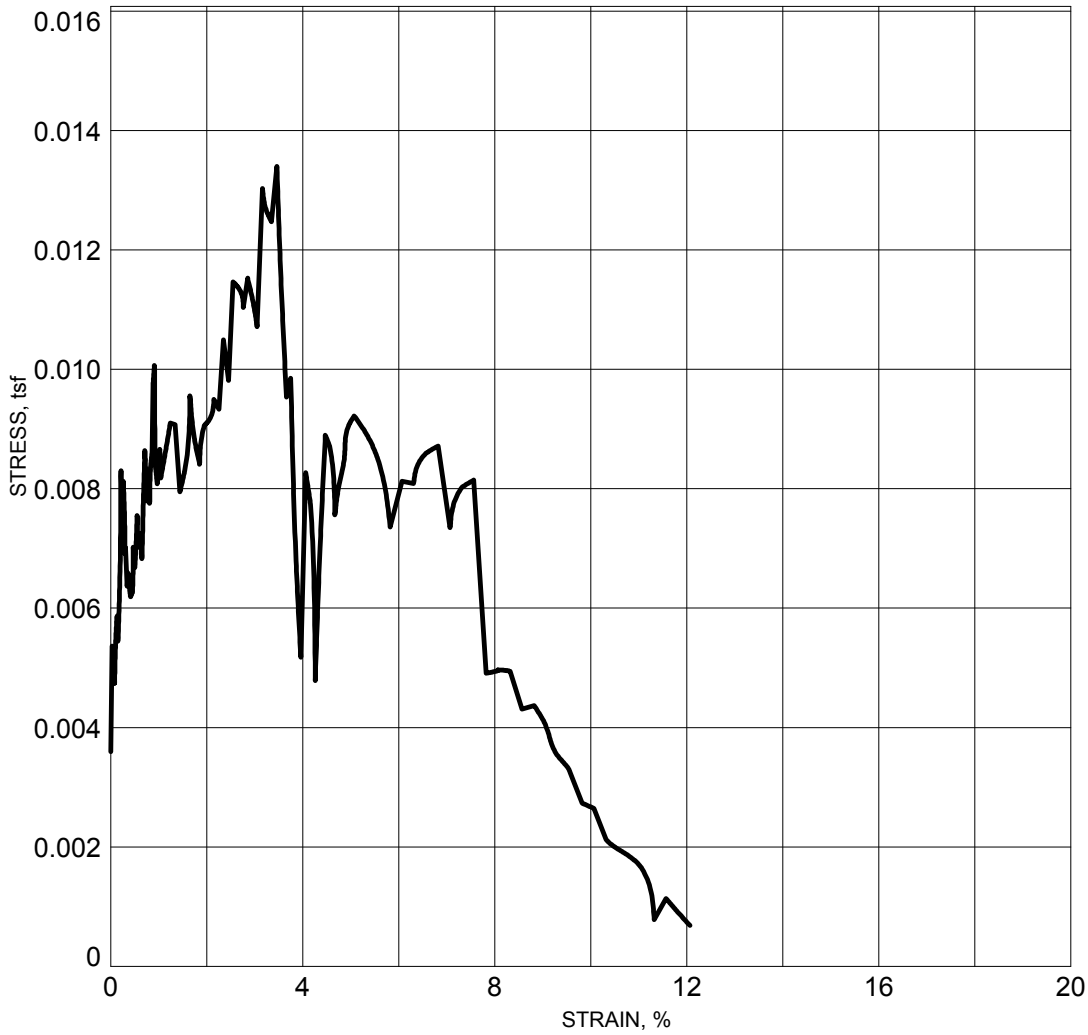
% 200= % Organic= Assumed Gs=2.74

Description: Medium gray silty clay with 2" clay layer at bottom (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

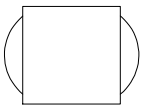
Tested By: CLP	Date Tested: 5/22/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-61

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	2-4
Water Content, %	186.4
Wet Density, pcf	84.2
Dry Density, pcf	29.4
Saturation, %	106.1
Void Ratio	4.81
Specimen Diameter	2.700
Specimen Height	5.628
Height/diameter ratio	2.08
Deviator Stress, tsf	0.013
Strain, %	3.5
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

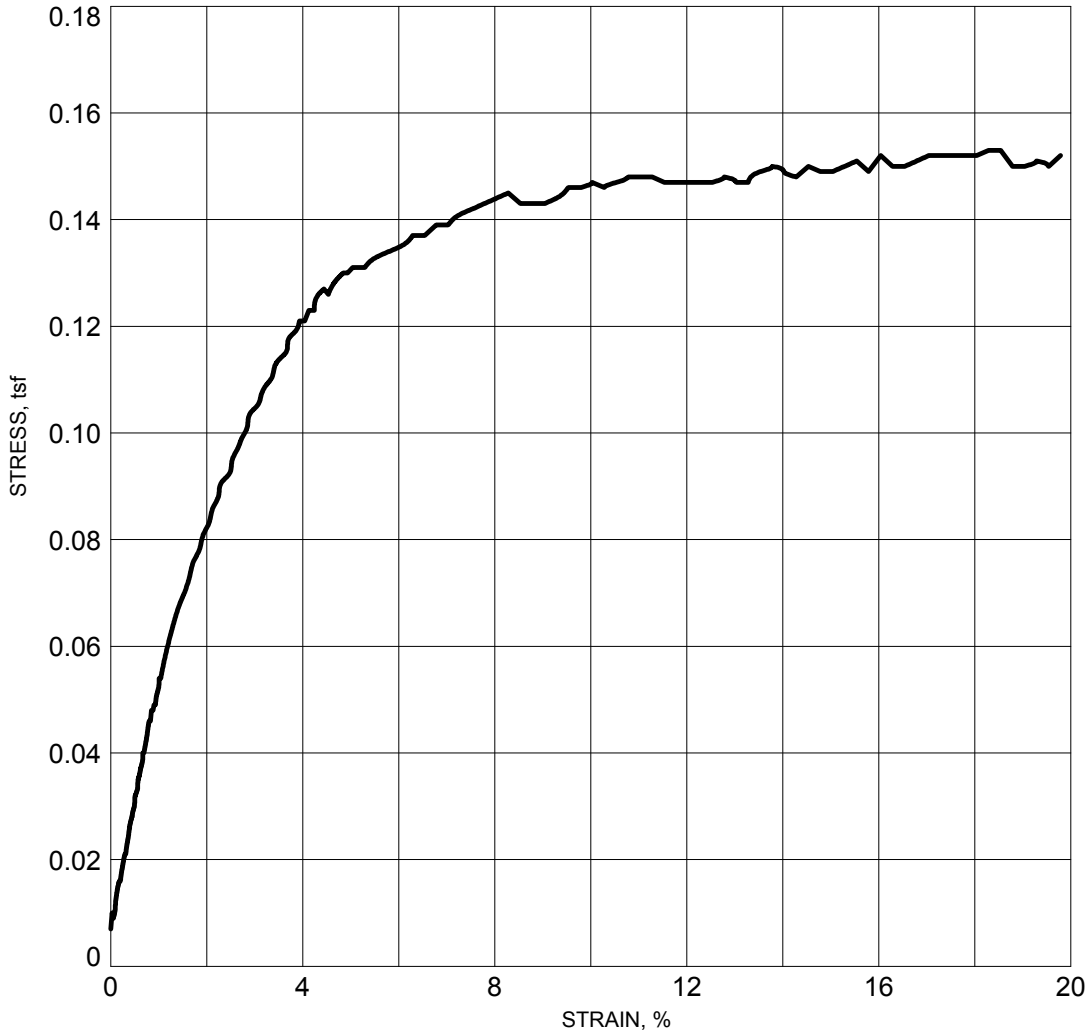
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray organic clay with wood (OH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

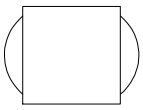
Tested By: TRC	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-62

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	4-5
Water Content, %	38.8
Wet Density, pcf	118.0
Dry Density, pcf	85.0
Saturation, %	105.2
Void Ratio	1.01
Specimen Diameter	2.738
Specimen Height	5.950
Height/diameter ratio	2.17
Deviator Stress, tsf	0.150
Strain, %	13.8
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

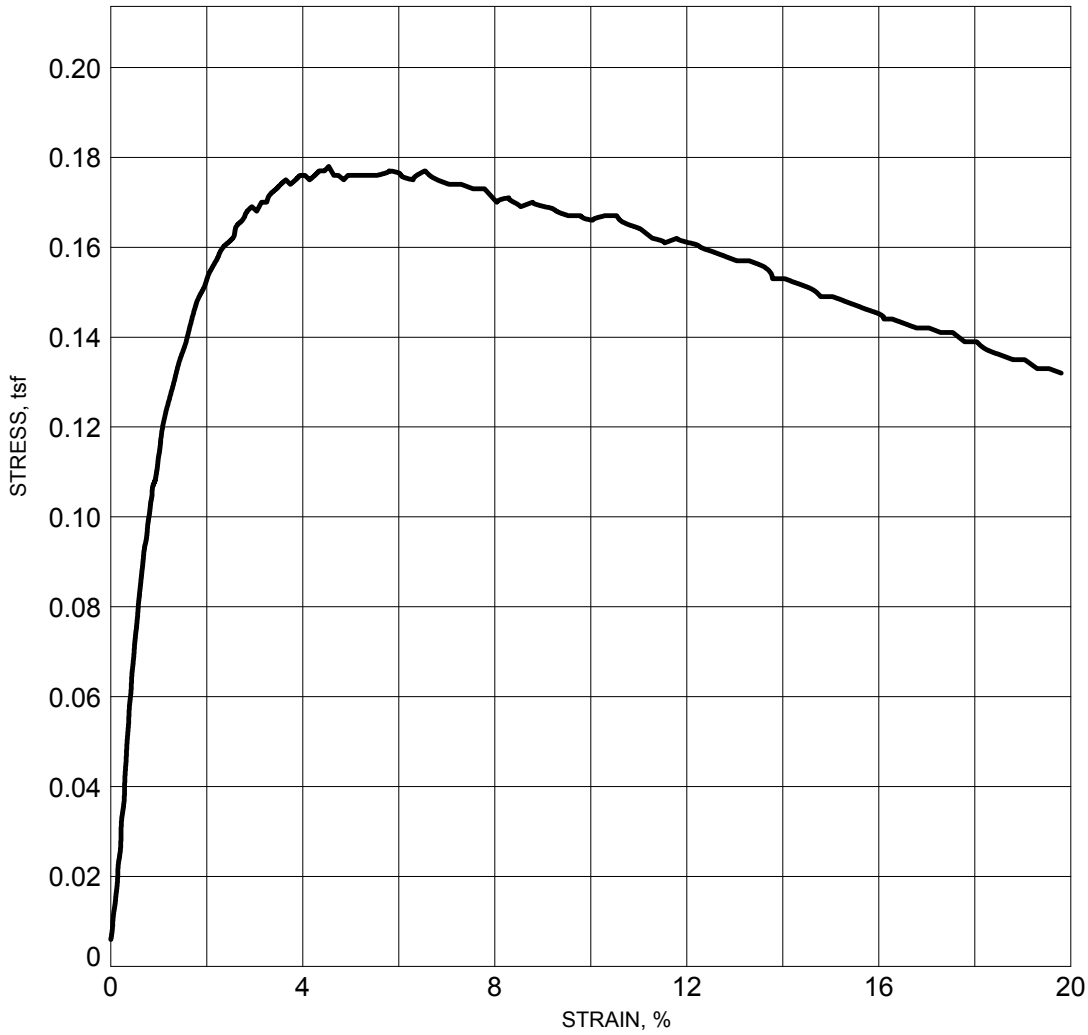
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray sandy clay (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

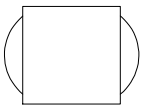
Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-63

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	6-8
Water Content, %	56.7
Wet Density, pcf	107.7
Dry Density, pcf	68.7
Saturation, %	104.4
Void Ratio	1.49
Specimen Diameter	2.766
Specimen Height	6.026
Height/diameter ratio	2.18
Deviator Stress, tsf	0.178
Strain, %	4.5
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

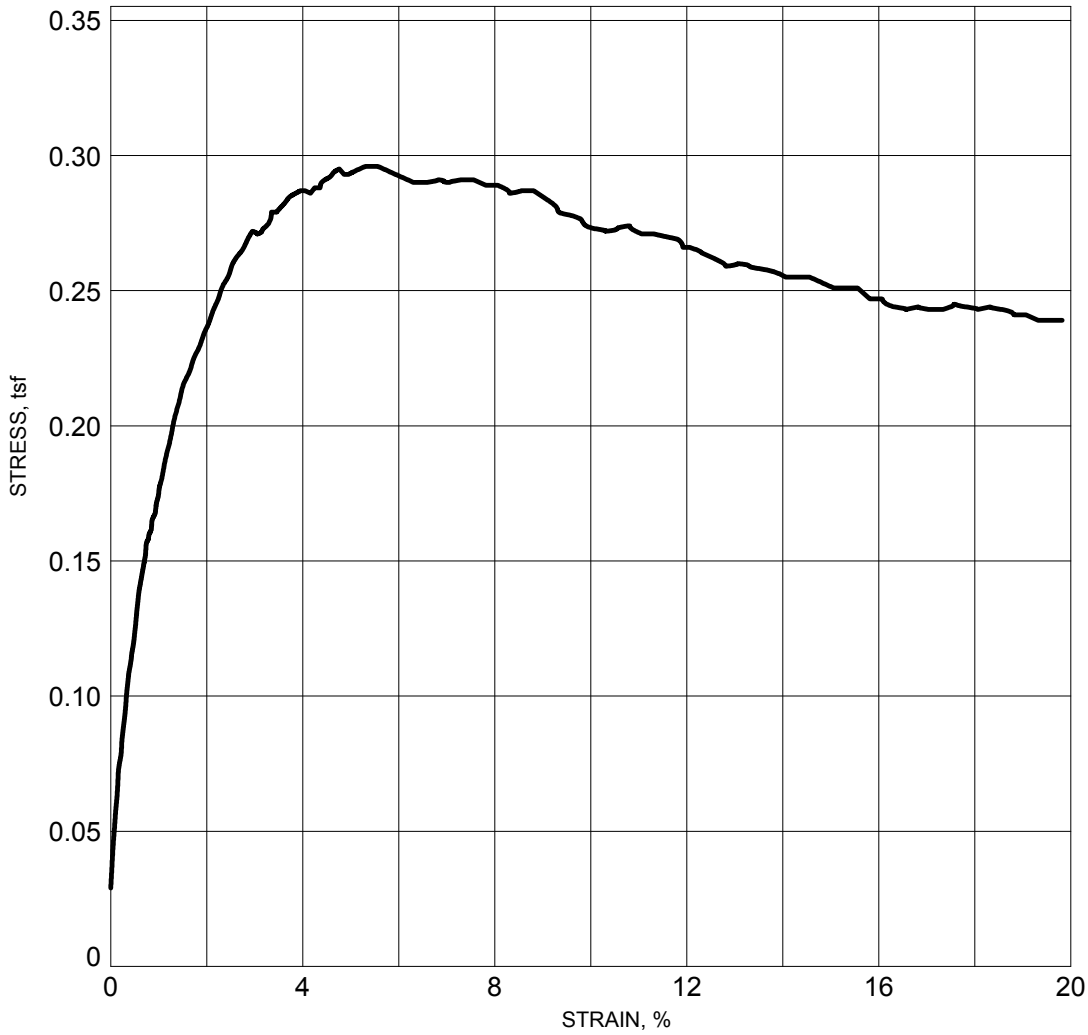
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt streaks, sand lenses and shells (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-64

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	10-12
Water Content, %	35.3
Wet Density, pcf	121.7
Dry Density, pcf	89.9
Saturation, %	107.3
Void Ratio	0.90
Specimen Diameter	2.782
Specimen Height	6.014
Height/diameter ratio	2.16
Deviator Stress, tsf	0.296
Strain, %	5.3
Confining Pressure (psi)	5.0

Multiple Shear

Failure Sketch

LL = PL = PI =

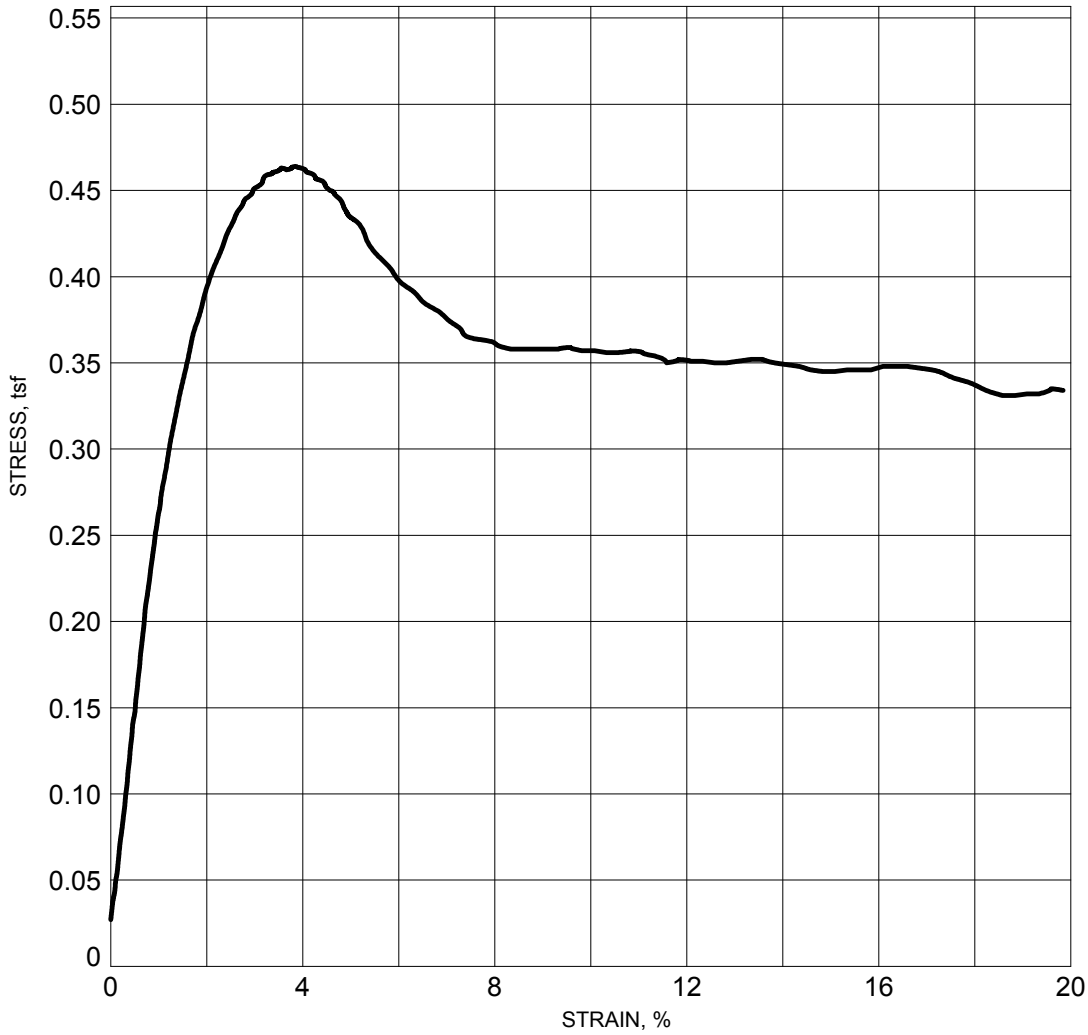
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with silt streaks and shells (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-65

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	14-16
Water Content, %	62.3
Wet Density, pcf	102.9
Dry Density, pcf	63.4
Saturation, %	100.6
Void Ratio	1.70
Specimen Diameter	2.825
Specimen Height	6.039
Height/diameter ratio	2.14
Deviator Stress, tsf	0.464
Strain, %	3.9
Confining Pressure (psi)	6.0

Multiple Shear

Failure Sketch

LL = PL = PI =

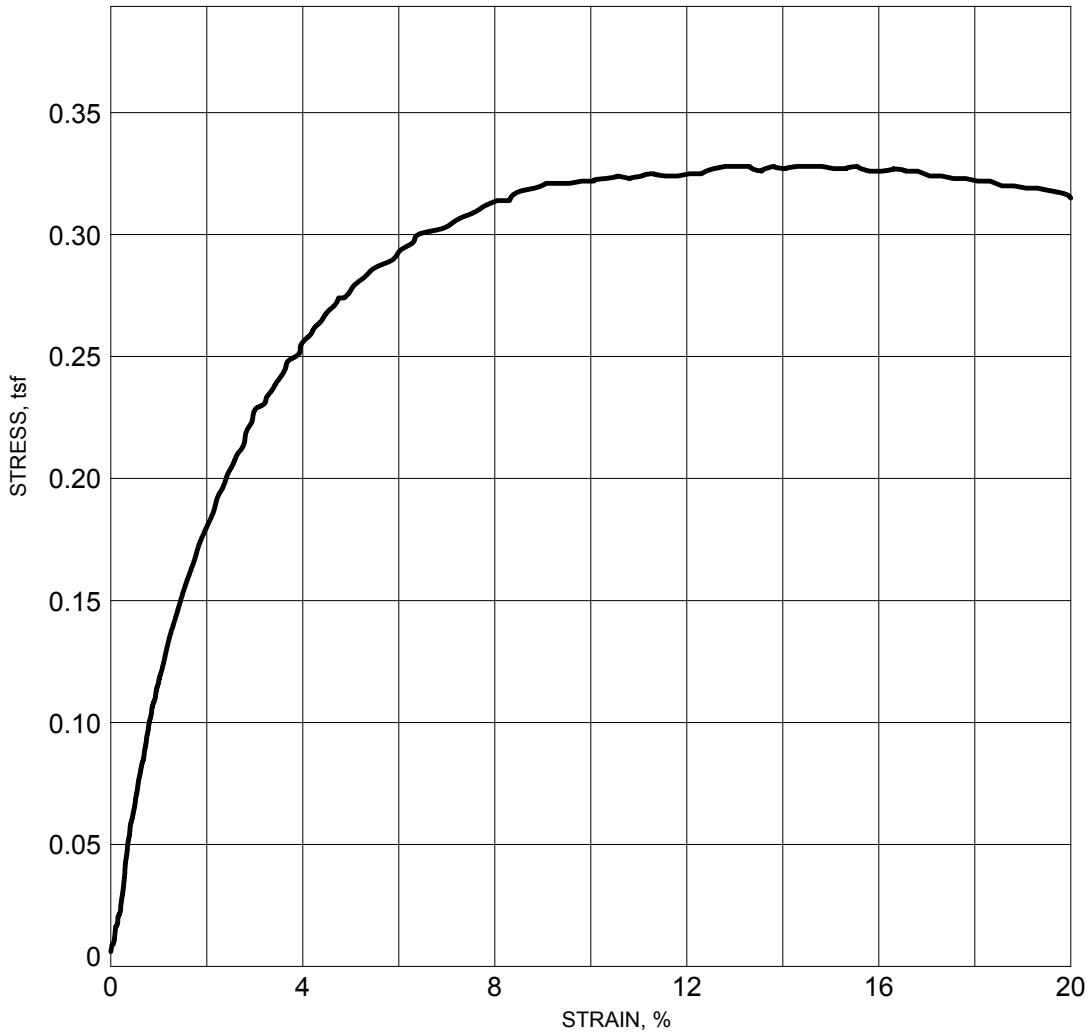
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with silt lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

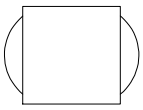
Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-66

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	18-20
Water Content, %	59.6
Wet Density, pcf	109.3
Dry Density, pcf	68.5
Saturation, %	109.1
Void Ratio	1.50
Specimen Diameter	2.827
Specimen Height	6.013
Height/diameter ratio	2.13
Deviator Stress, tsf	0.328
Strain, %	12.8
Confining Pressure (psi)	7.6

Bulge



Failure Sketch

LL = PL = PI =

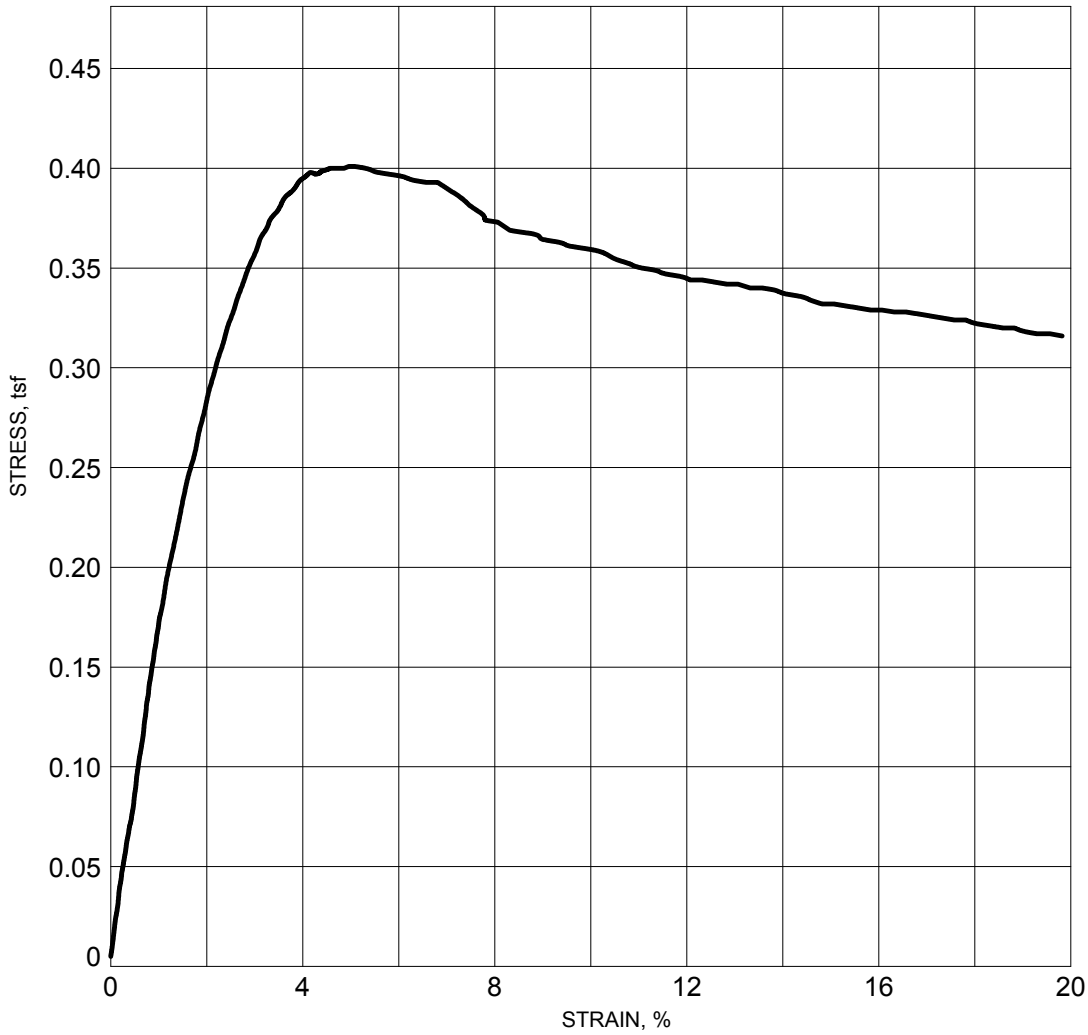
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with silt lenses and organic matter (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-67

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	28-30
Water Content, %	39.5
Wet Density, pcf	104.0
Dry Density, pcf	74.6
Saturation, %	83.7
Void Ratio	1.29
Specimen Diameter	2.871
Specimen Height	6.058
Height/diameter ratio	2.11
Deviator Stress, tsf	0.401
Strain, %	5.0
Confining Pressure (psi)	11.6

Multiple Shear

Failure Sketch

LL = PL = PI =

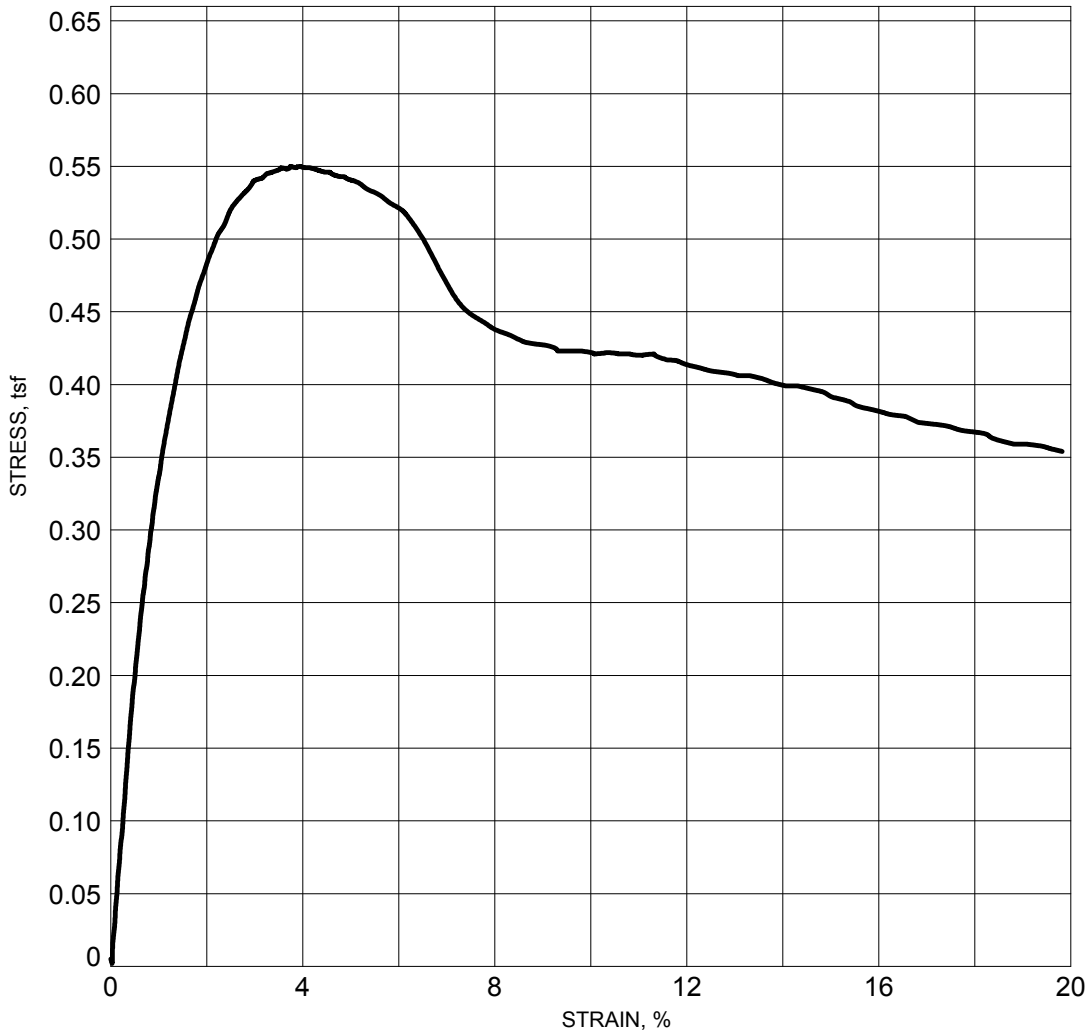
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with silt lenses and sand layers (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-68

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-32
Depth (ft)	38-40
Water Content, %	43.3
Wet Density, pcf	105.2
Dry Density, pcf	73.5
Saturation, %	89.3
Void Ratio	1.33
Specimen Diameter	2.851
Specimen Height	6.051
Height/diameter ratio	2.12
Deviator Stress, tsf	0.550
Strain, %	3.8
Confining Pressure (psi)	15.6

Multiple Shear

Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Medium gray clay with silt lenses (CH)

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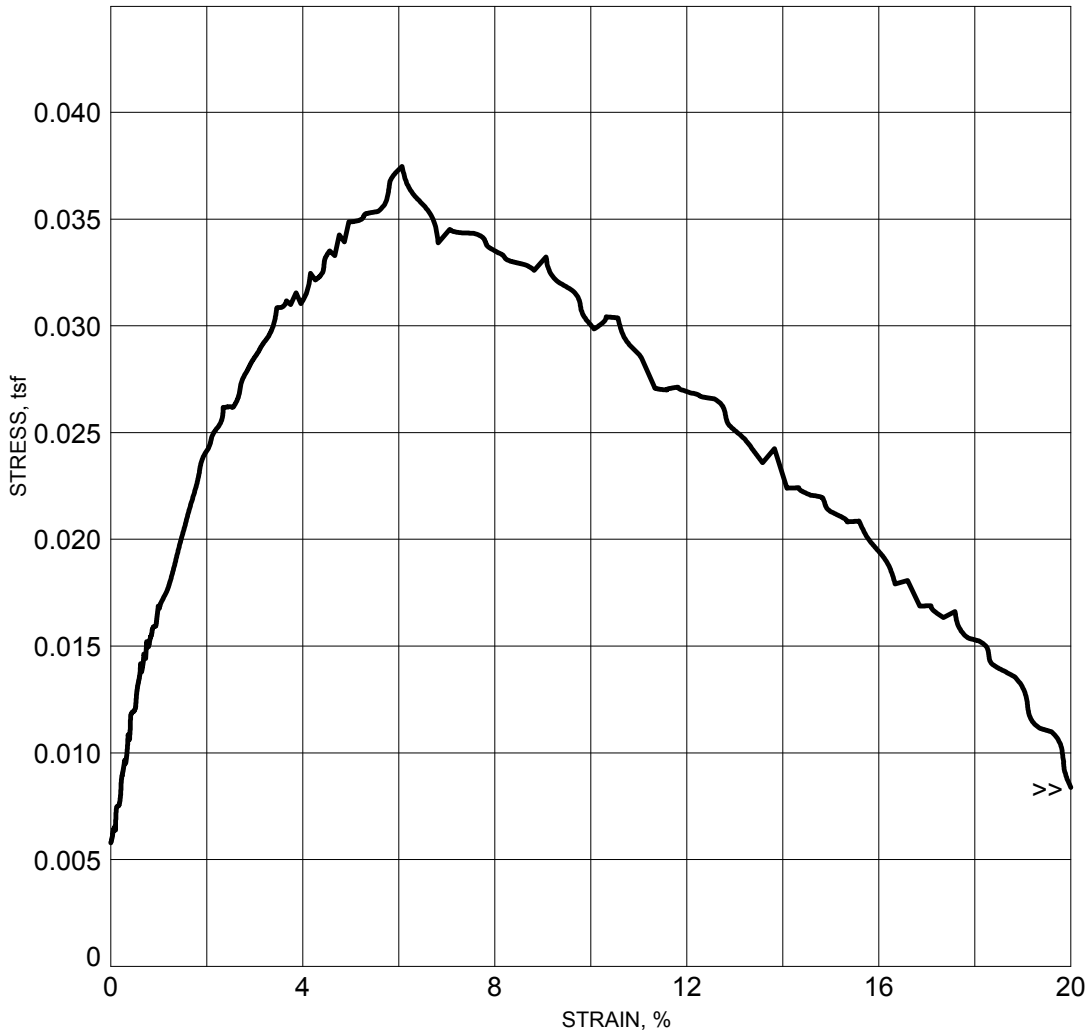
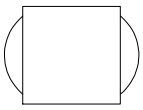
Tested By: TRC	Date Tested: 5/25/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-69

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	2-4
Water Content, %	442.7
Wet Density, pcf	76.6
Dry Density, pcf	14.1
Saturation, %	109.2
Void Ratio	11.11
Specimen Diameter	2.810
Specimen Height	5.976
Height/diameter ratio	2.13
Deviator Stress, tsf	0.037
Strain, %	6.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = 211 PL = 49 PI =162

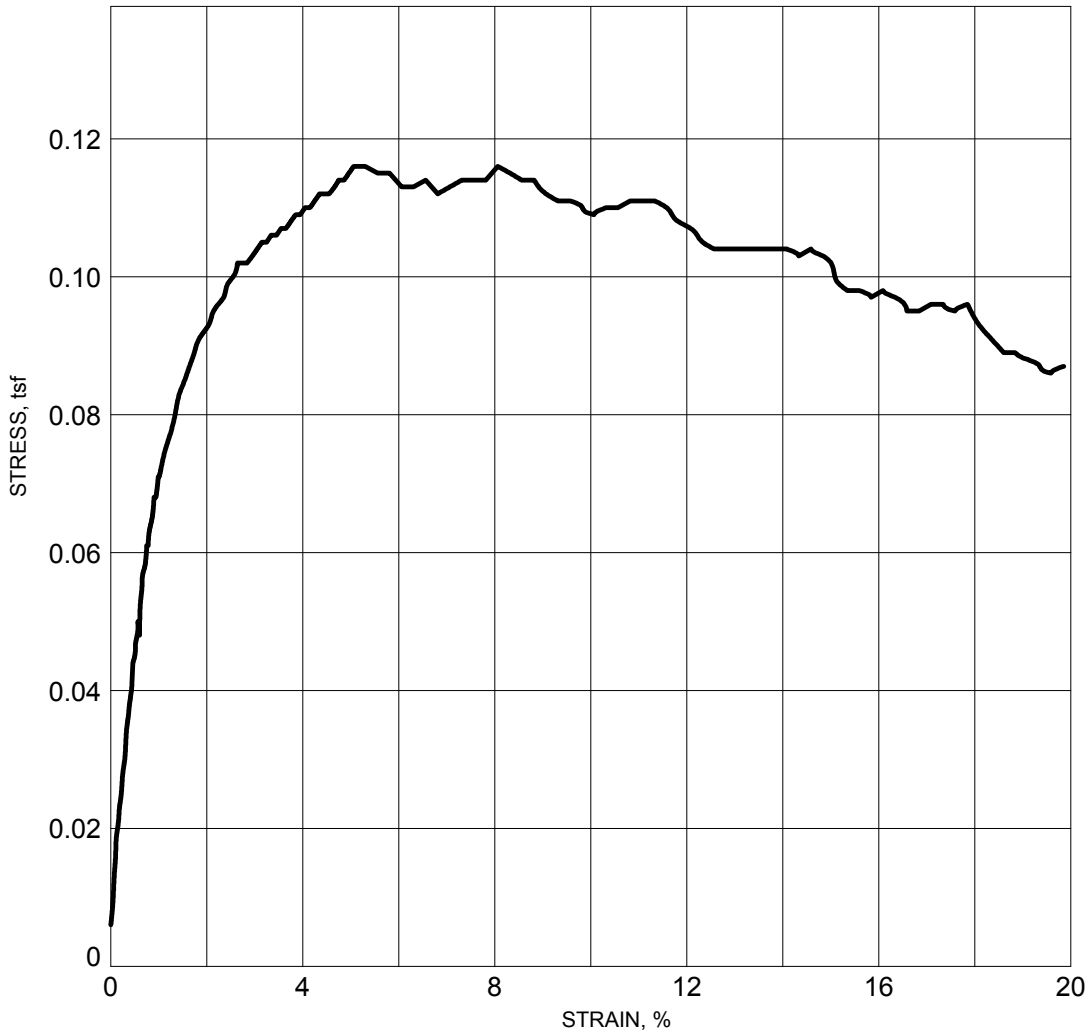
% 200= % Organic= Assumed Gs=2.74

Description: Very soft dark brown peat with organic clay (PT)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

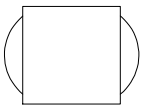
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-70

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 10/8/18 14:24 - P:\18\18274004101\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	6-8
Water Content, %	101.5
Wet Density, pcf	97.7
Dry Density, pcf	48.5
Saturation, %	110.2
Void Ratio	2.53
Specimen Diameter	2.817
Specimen Height	6.015
Height/diameter ratio	2.14
Deviator Stress, tsf	0.116
Strain, %	5.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

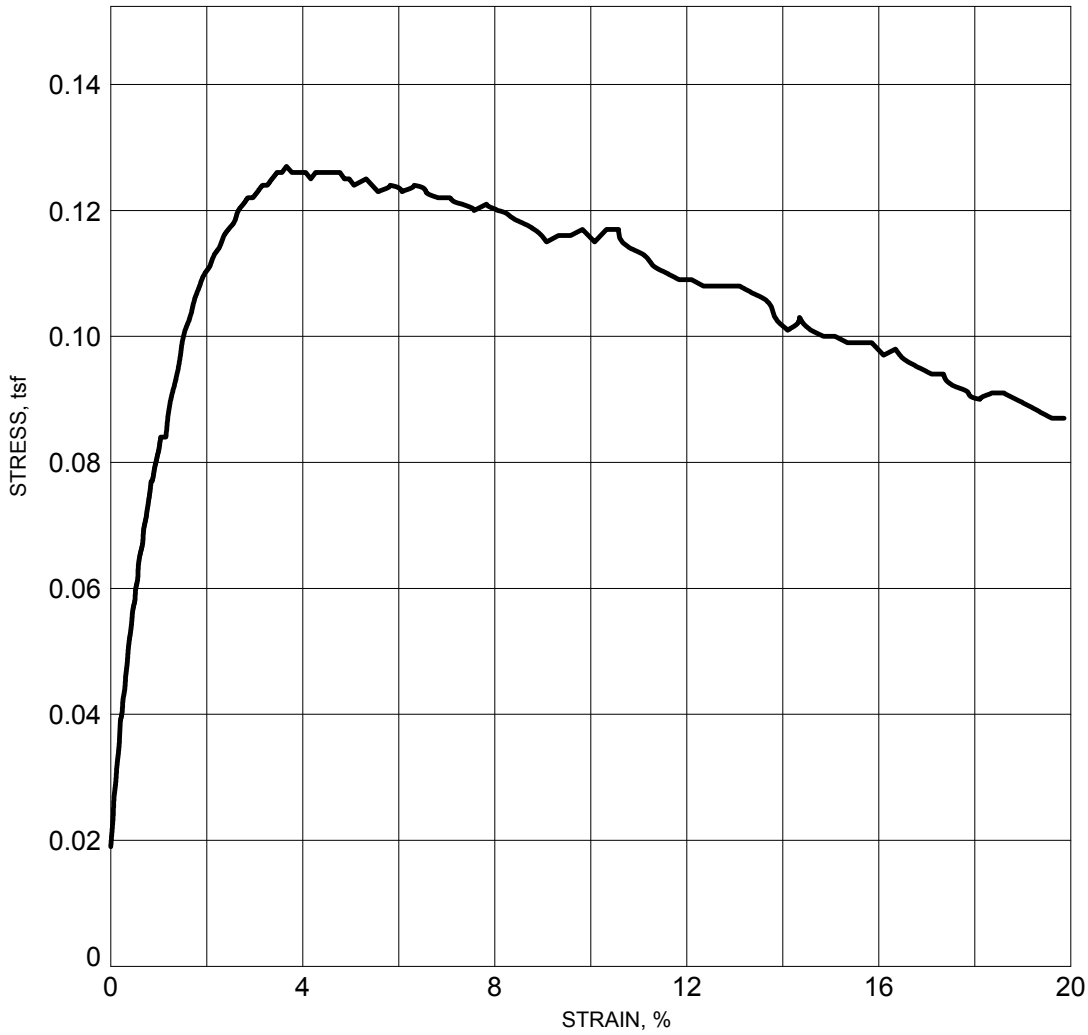
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt layers, sand pockets, shells and organic matter (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

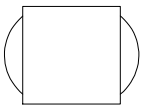
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-71

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	8-10
Water Content, %	72.2
Wet Density, pcf	102.2
Dry Density, pcf	59.4
Saturation, %	105.1
Void Ratio	1.88
Specimen Diameter	2.819
Specimen Height	6.022
Height/diameter ratio	2.14
Deviator Stress, tsf	0.127
Strain, %	3.7
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt layers and shell fragments (CH)

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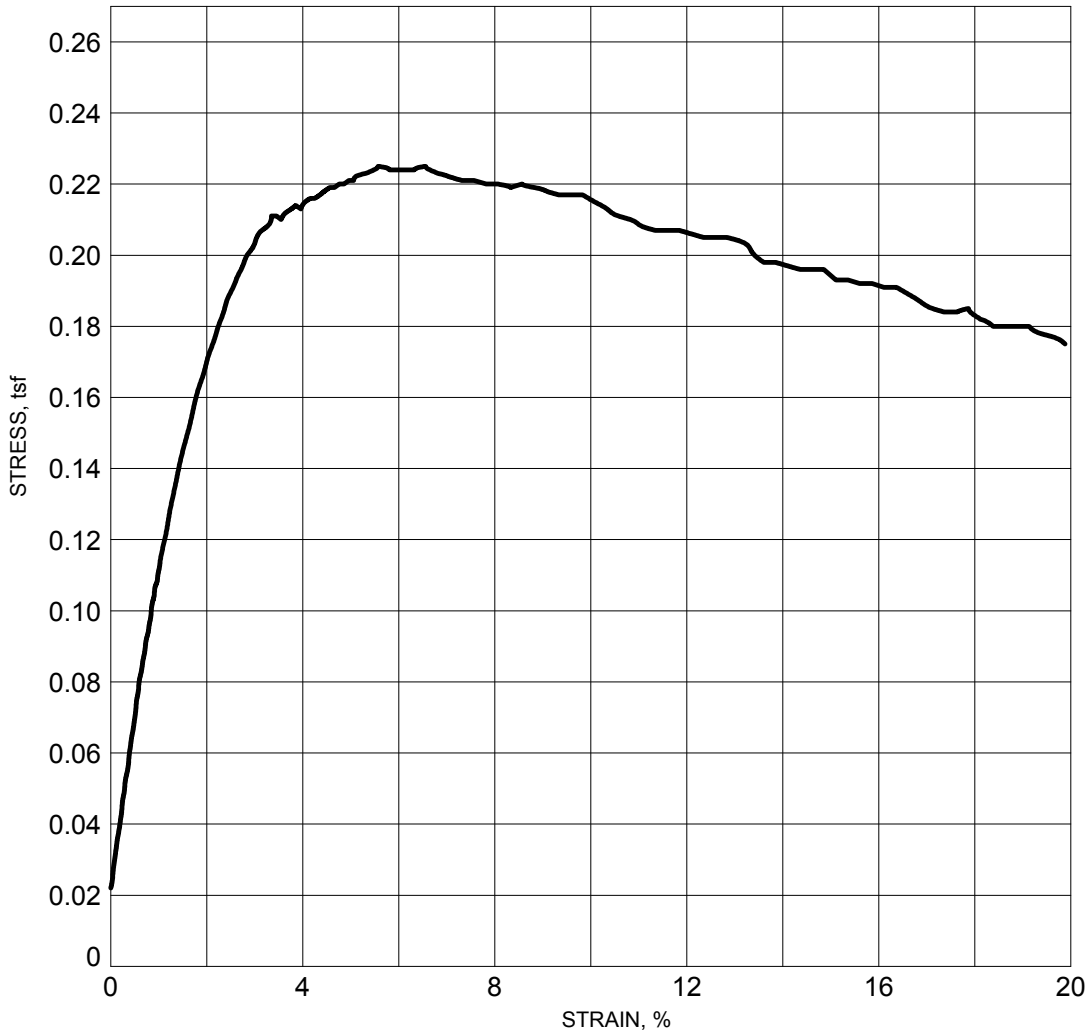
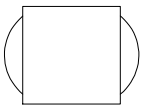
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-72

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	10-12
Water Content, %	57.0
Wet Density, pcf	109.3
Dry Density, pcf	69.6
Saturation, %	107.2
Void Ratio	1.46
Specimen Diameter	2.816
Specimen Height	6.007
Height/diameter ratio	2.13
Deviator Stress, tsf	0.225
Strain, %	5.6
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt, sand and shell fragments (CL)

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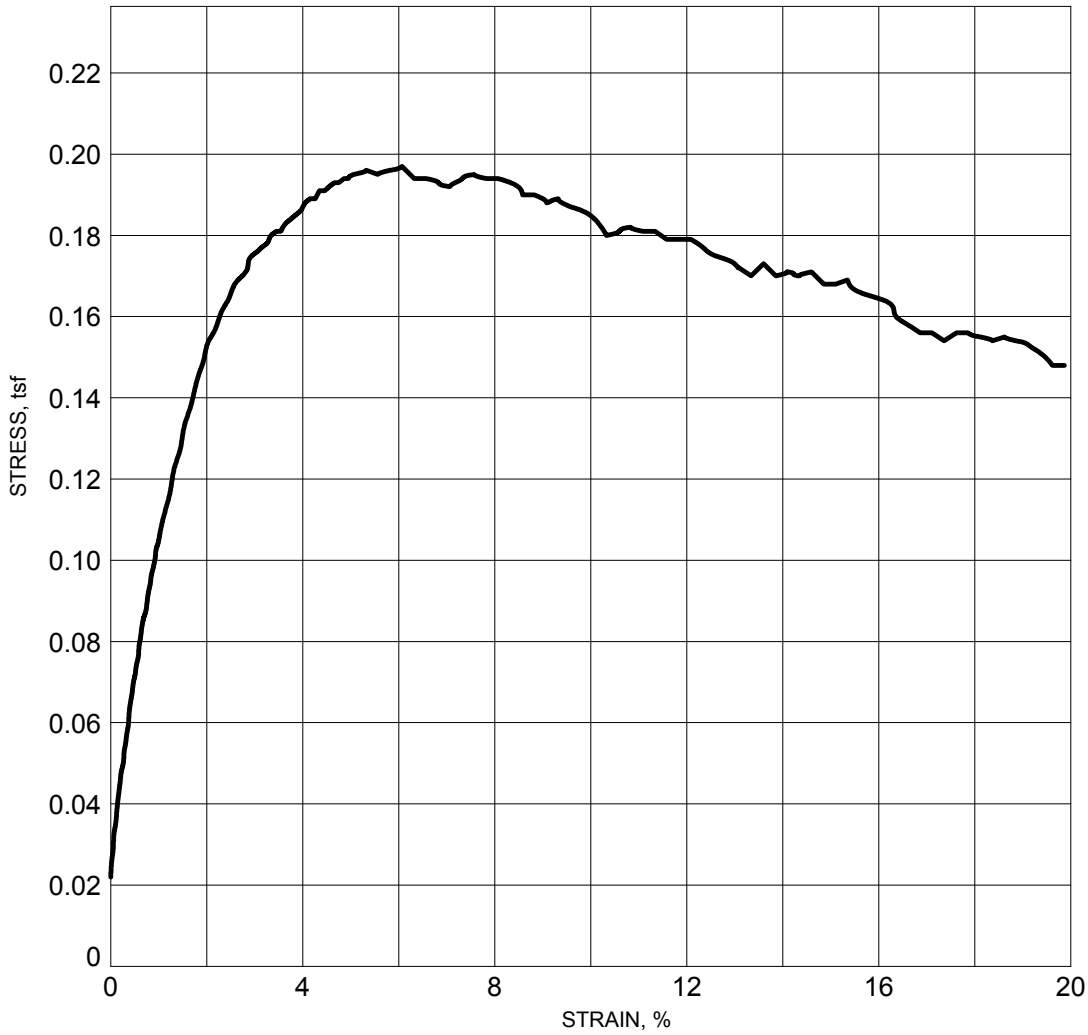
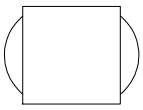
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-73

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	15-17
Water Content, %	31.1
Wet Density, pcf	111.7
Dry Density, pcf	85.2
Saturation, %	84.7
Void Ratio	1.01
Specimen Diameter	2.815
Specimen Height	6.004
Height/diameter ratio	2.13
Deviator Stress, tsf	0.197
Strain, %	6.1
Confining Pressure (psi)	6.4

Bulge



Failure Sketch

LL = PL = PI =

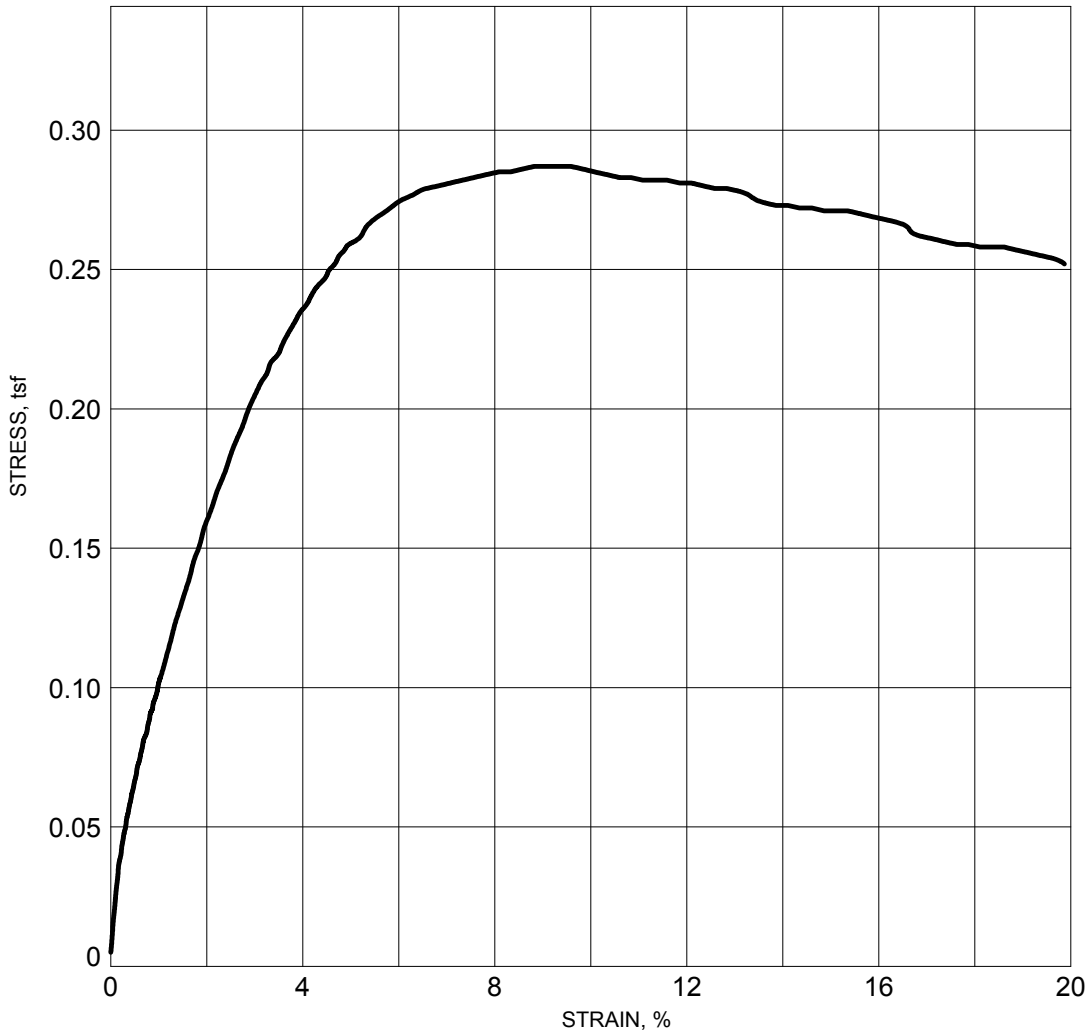
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray sandy clay (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

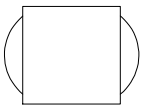
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-74

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	25-27
Water Content, %	31.6
Wet Density, pcf	113.0
Dry Density, pcf	85.9
Saturation, %	87.4
Void Ratio	0.99
Specimen Diameter	2.820
Specimen Height	6.008
Height/diameter ratio	2.13
Deviator Stress, tsf	0.287
Strain, %	8.8
Confining Pressure (psi)	10.4

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Soft gray sandy clay (CL)

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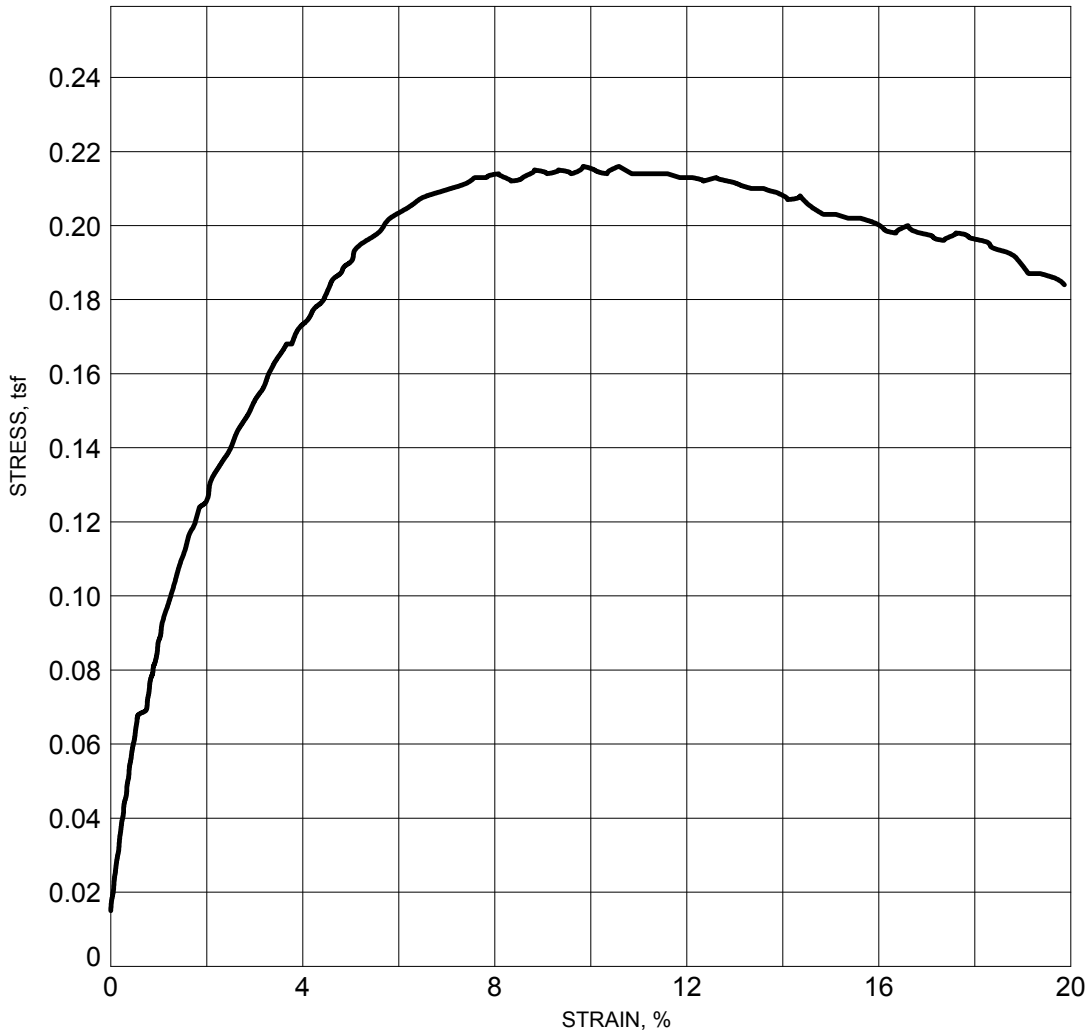
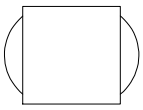
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-75

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	30-32
Water Content, %	54.0
Wet Density, pcf	108.7
Dry Density, pcf	70.6
Saturation, %	104.0
Void Ratio	1.42
Specimen Diameter	2.823
Specimen Height	6.026
Height/diameter ratio	2.13
Deviator Stress, tsf	0.216
Strain, %	9.8
Confining Pressure (psi)	12.4

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silt and silty sand layer (CL)

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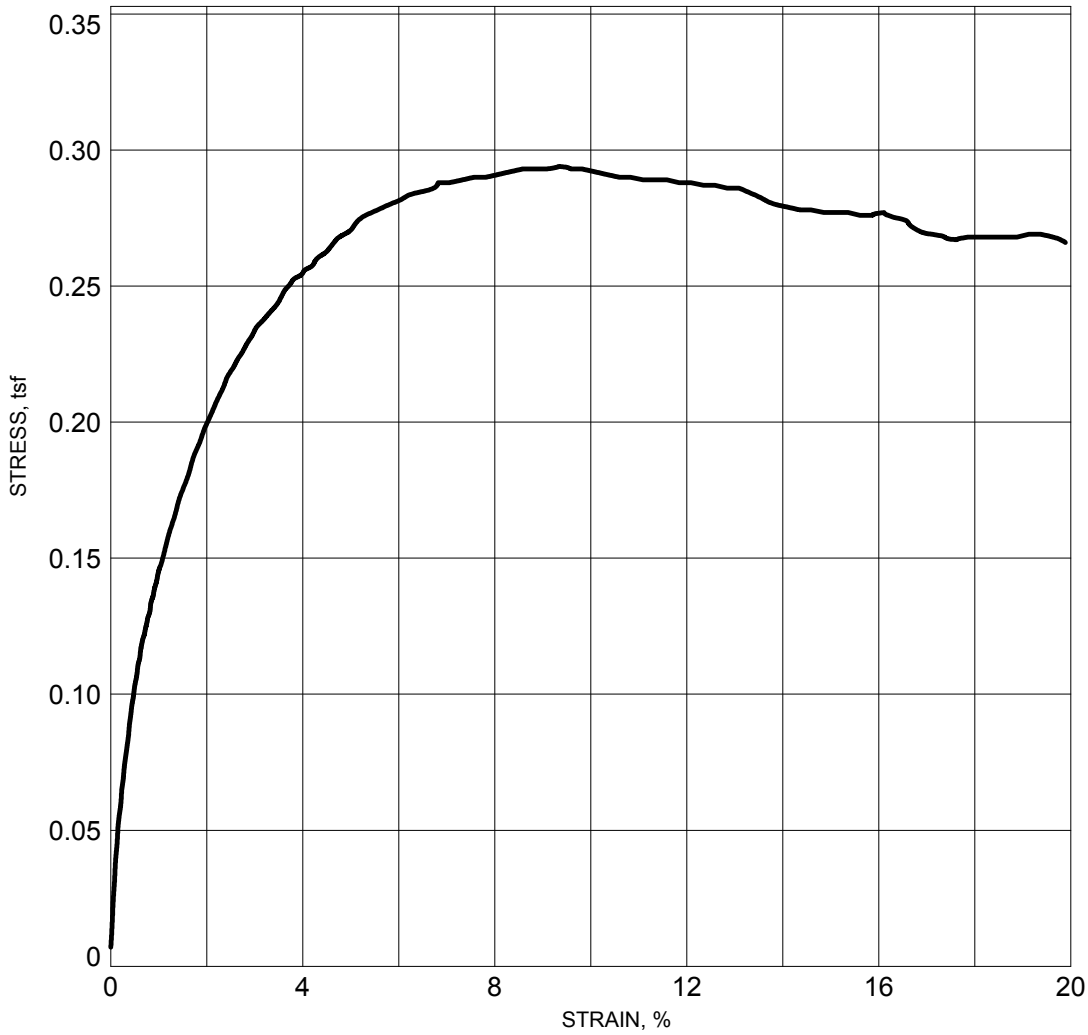
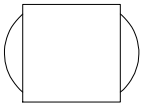
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-76

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	34-35
Water Content, %	54.9
Wet Density, pcf	106.8
Dry Density, pcf	68.9
Saturation, %	101.6
Void Ratio	1.48
Specimen Diameter	2.815
Specimen Height	6.017
Height/diameter ratio	2.14
Deviator Stress, tsf	0.294
Strain, %	9.3
Confining Pressure (psi)	14.0

Bulge



Failure Sketch

LL = PL = PI =

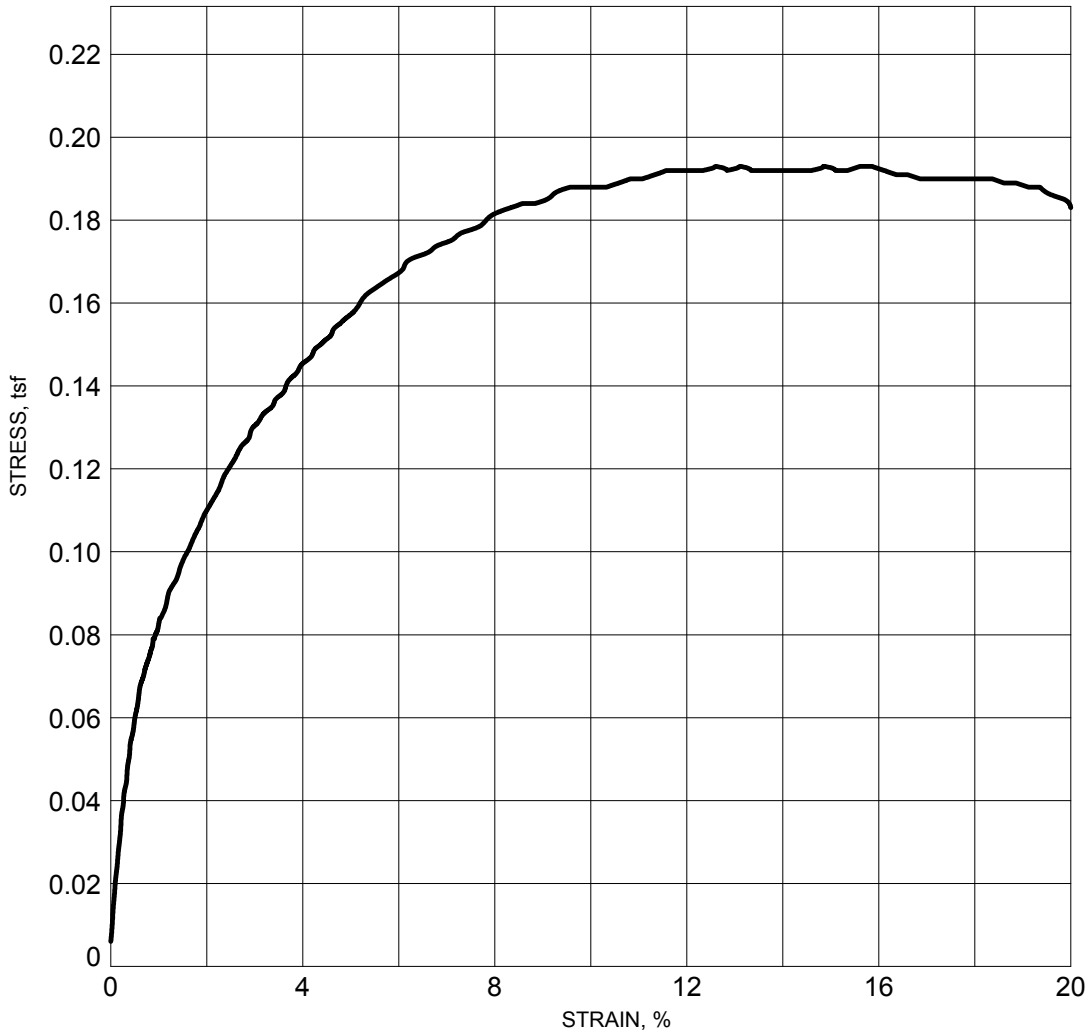
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with silt and sand layers (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

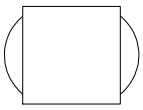
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-77

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	38-40
Water Content, %	53.6
Wet Density, pcf	108.1
Dry Density, pcf	70.4
Saturation, %	102.8
Void Ratio	1.43
Specimen Diameter	2.812
Specimen Height	6.020
Height/diameter ratio	2.14
Deviator Stress, tsf	0.193
Strain, %	12.6
Confining Pressure (psi)	15.6

Bulge



Failure Sketch

LL = PL = PI =

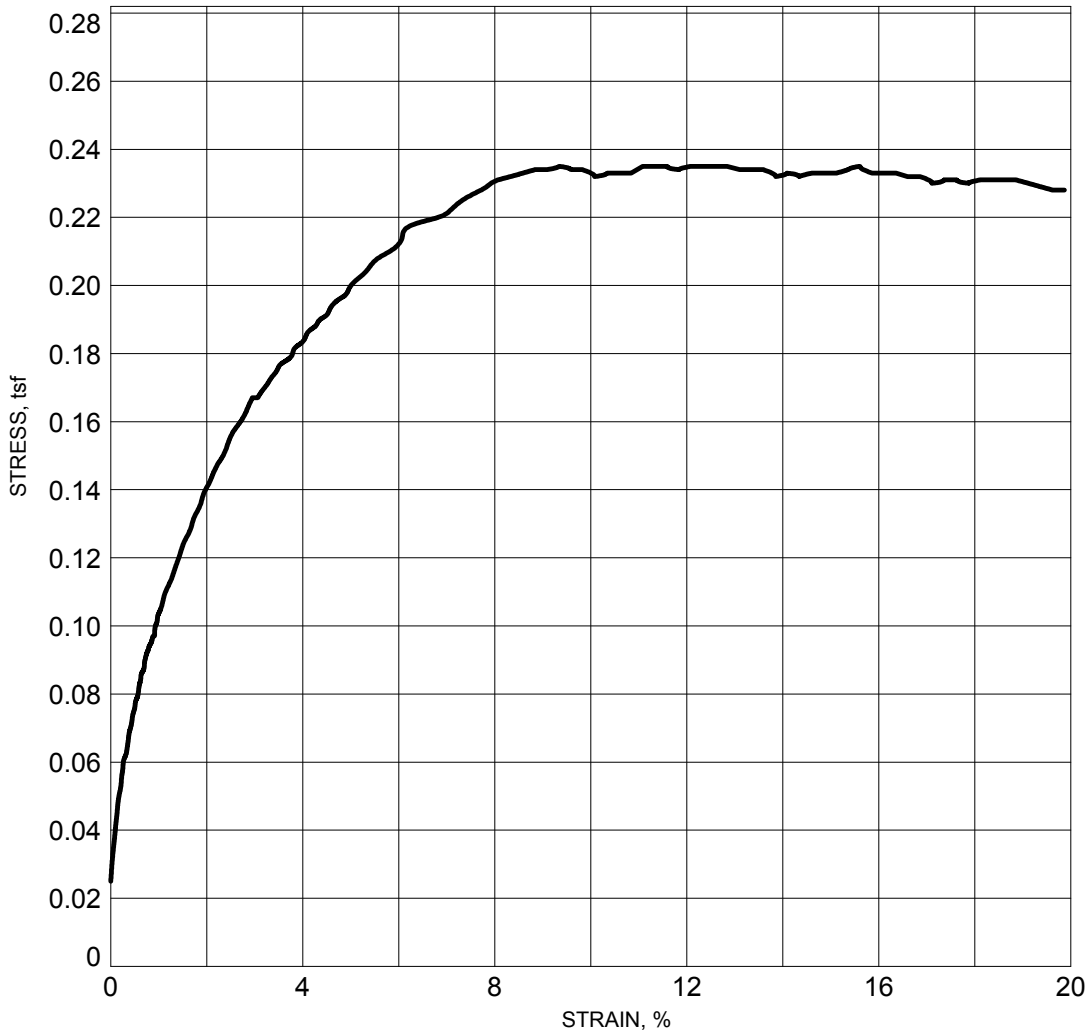
% 200= % Organic= Assumed Gs=2.74

Description: Very soft to soft gray silty clay with sand layers and wood (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

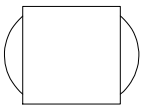
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-78

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	48-50
Water Content, %	34.7
Wet Density, pcf	107.5
Dry Density, pcf	79.9
Saturation, %	83.3
Void Ratio	1.14
Specimen Diameter	2.824
Specimen Height	6.021
Height/diameter ratio	2.13
Deviator Stress, tsf	0.235
Strain, %	9.3
Confining Pressure (psi)	19.6

Bulge



Failure Sketch

LL = 54 PL = 18 PI = 36

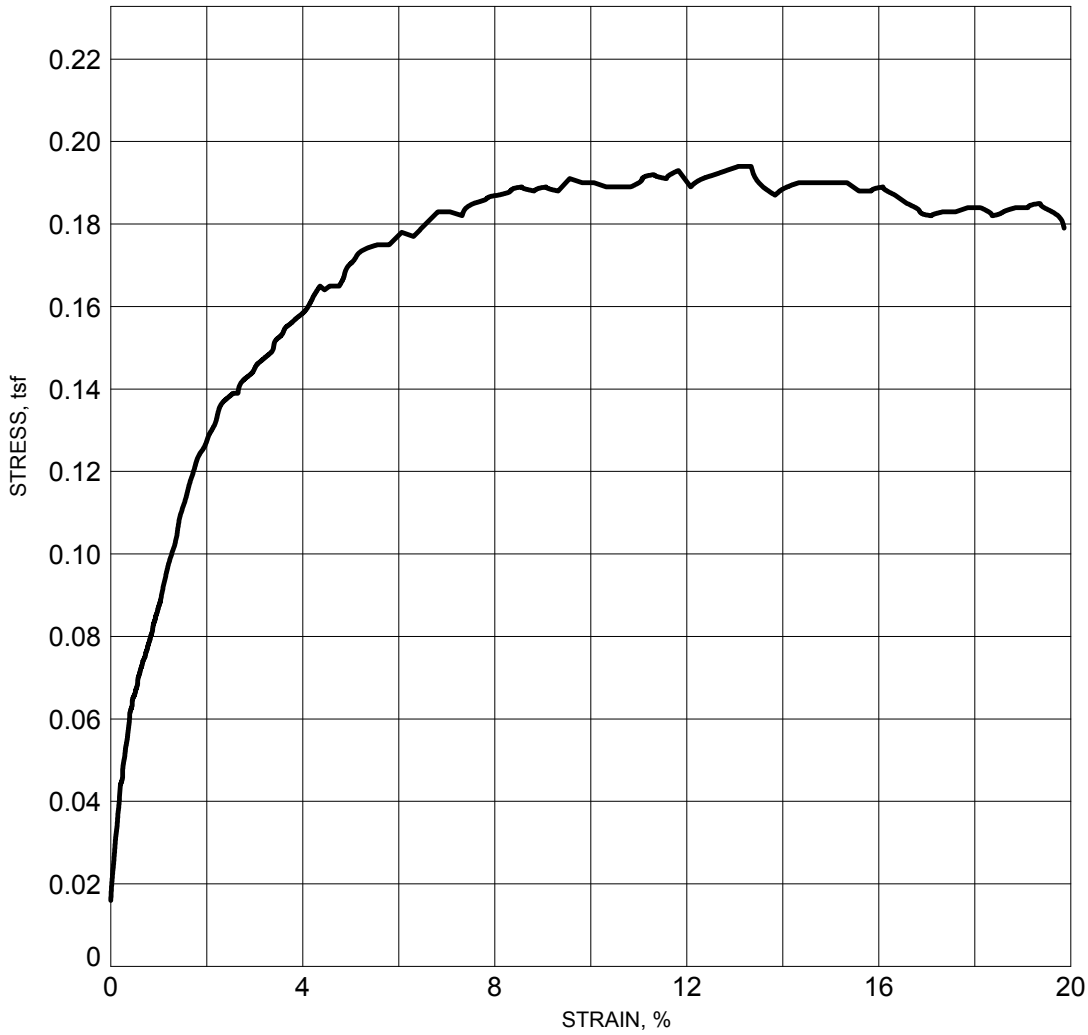
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand layers (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

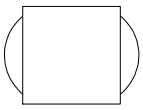
Tested By: SRT	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-79

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	53-55
Water Content, %	54.4
Wet Density, pcf	106.9
Dry Density, pcf	69.3
Saturation, %	101.4
Void Ratio	1.47
Specimen Diameter	2.837
Specimen Height	5.937
Height/diameter ratio	2.09
Deviator Stress, tsf	0.194
Strain, %	13.1
Confining Pressure (psi)	21.6

Bulge



Failure Sketch

LL = 65 PL = 21 PI = 44

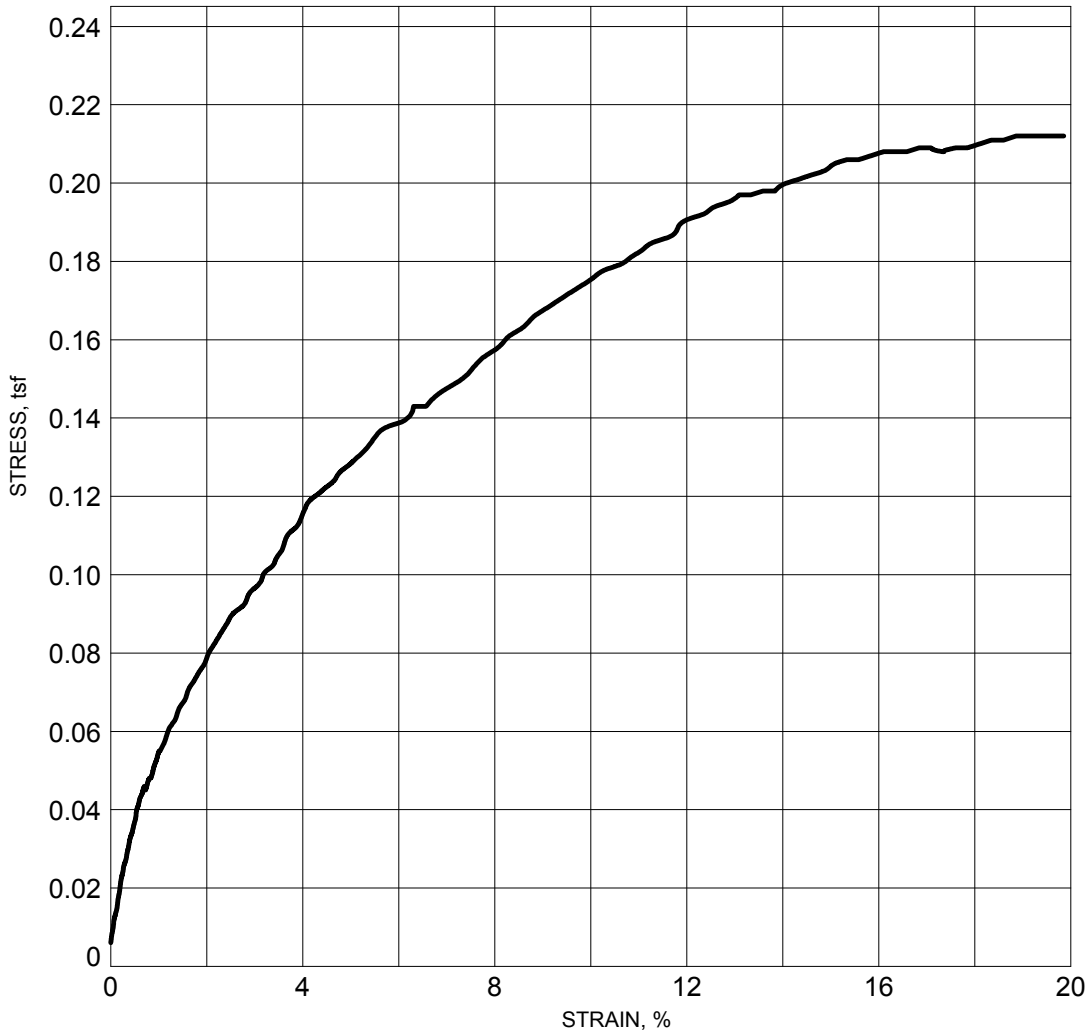
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sandy silt lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

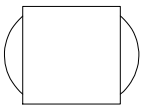
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-80

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-33
Depth (ft)	58-60
Water Content, %	52.1
Wet Density, pcf	113.4
Dry Density, pcf	74.6
Saturation, %	110.4
Void Ratio	1.29
Specimen Diameter	2.820
Specimen Height	6.005
Height/diameter ratio	2.13
Deviator Stress, tsf	0.204
Strain, %	15.0
Confining Pressure (psi)	23.6

Bulge



Failure Sketch

LL = PL = PI =

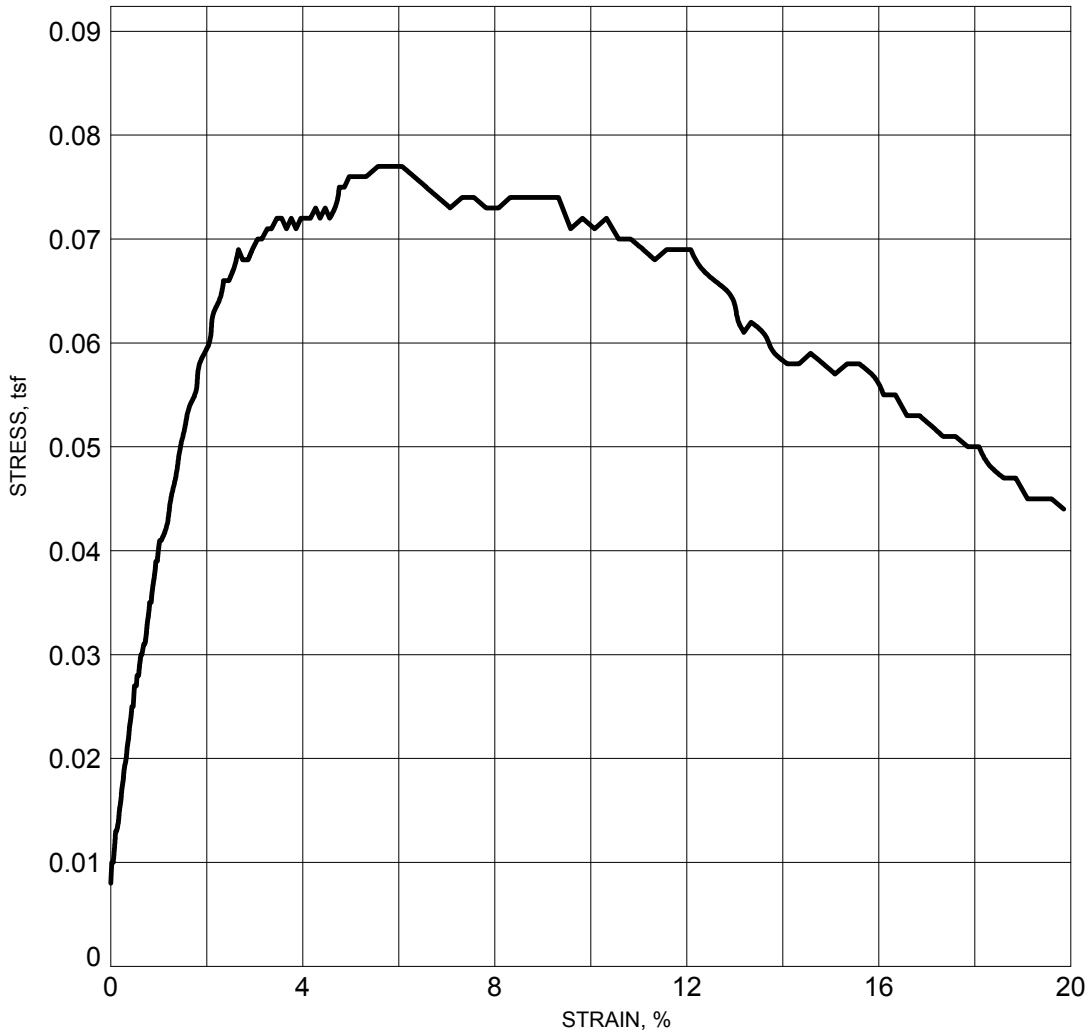
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sandy silt layers (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

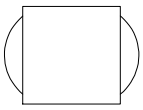
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/6/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-81

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	0-2
Water Content, %	120.9
Wet Density, pcf	90.7
Dry Density, pcf	41.1
Saturation, %	104.7
Void Ratio	3.16
Specimen Diameter	2.855
Specimen Height	5.993
Height/diameter ratio	2.10
Deviator Stress, tsf	0.077
Strain, %	5.6
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

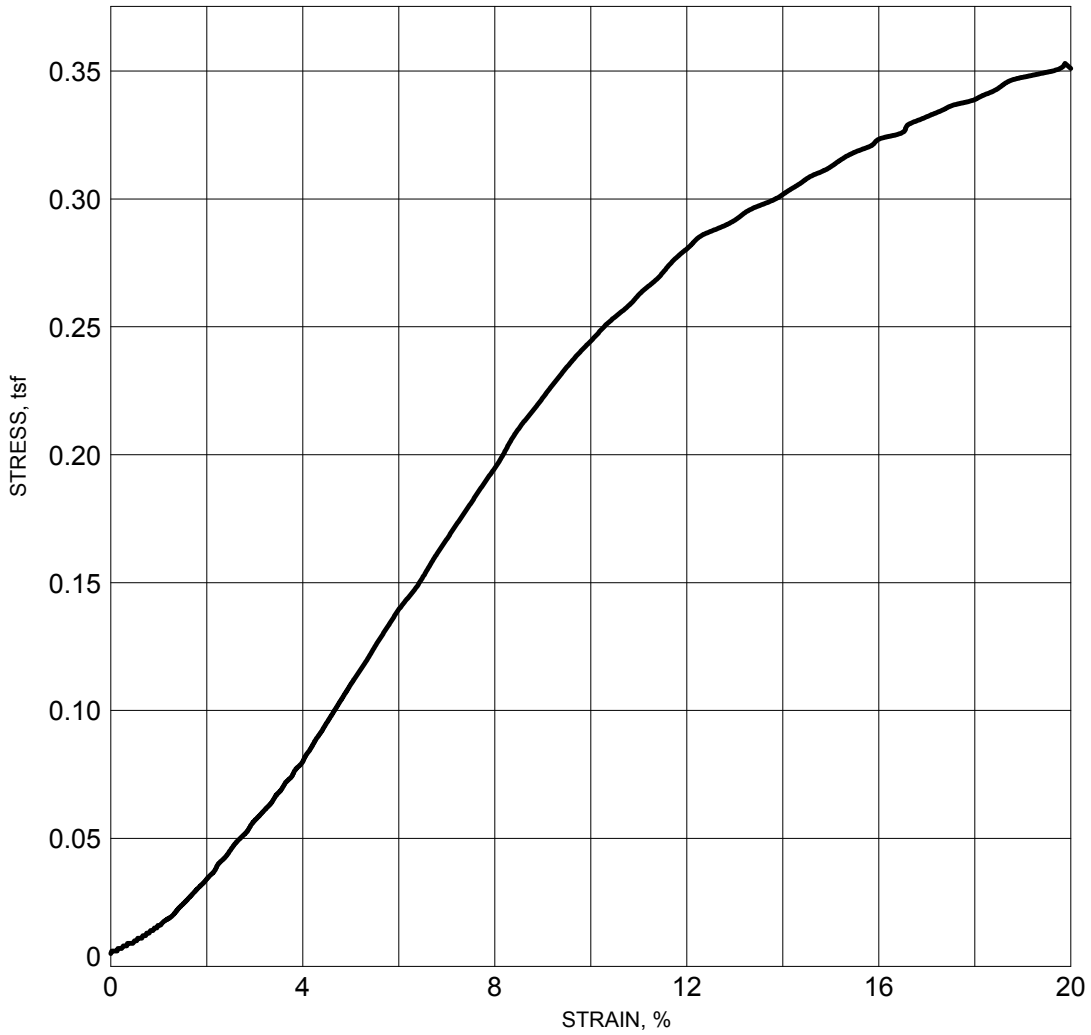
% 200= % Organic=4.4 Assumed Gs=2.74

Description: Very soft gray clay with silt, organic matter and 3" peat layer at top (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

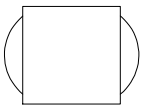
Tested By: SRT	Date Tested: 5/23/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA/KLA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-82

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	2-4
Water Content, %	48.2
Wet Density, pcf	116.9
Dry Density, pcf	78.8
Saturation, %	113.1
Void Ratio	1.17
Specimen Diameter	2.855
Specimen Height	5.987
Height/diameter ratio	2.10
Deviator Stress, tsf	0.313
Strain, %	15.0
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

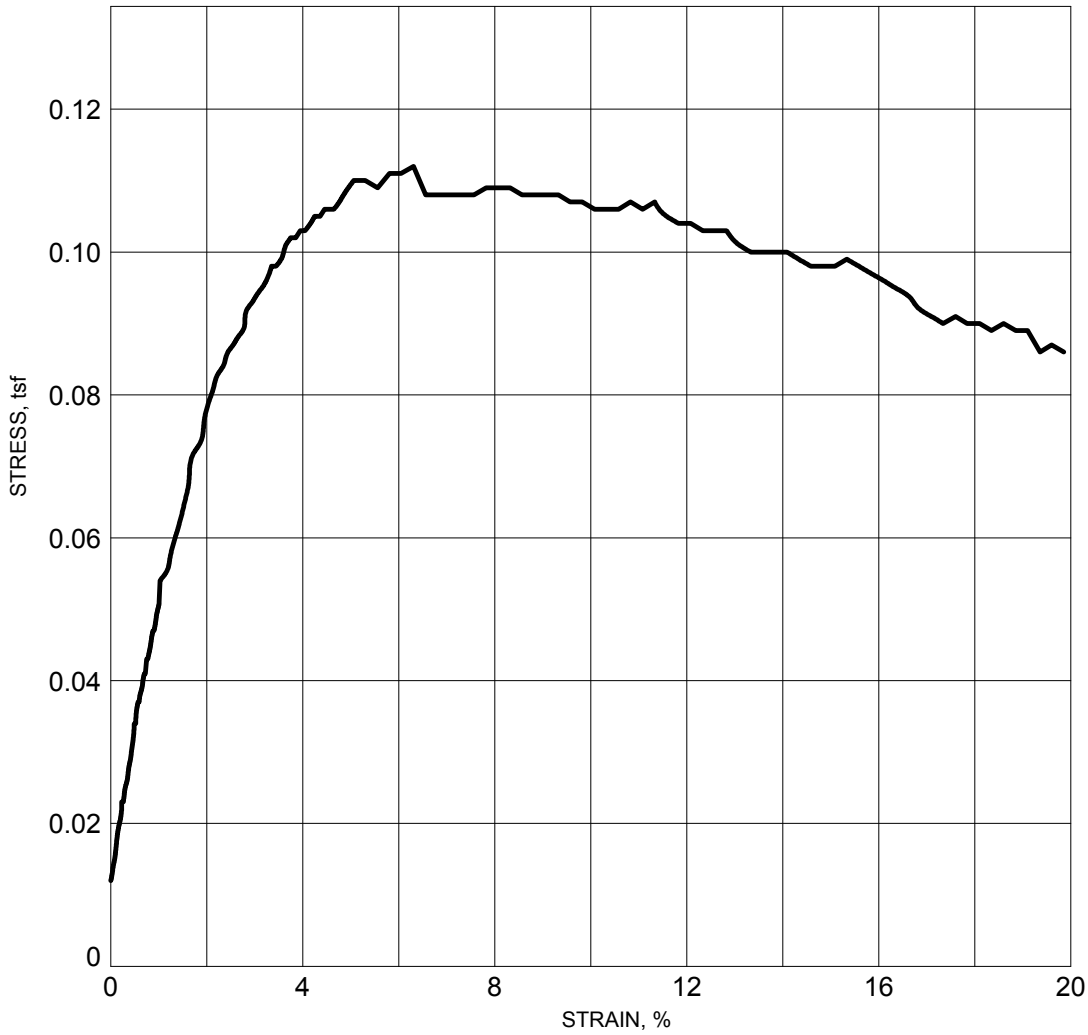
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray silty sandy clay with organic matter (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

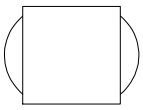
Tested By: SRT	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-83

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	8-10
Water Content, %	52.3
Wet Density, pcf	105.4
Dry Density, pcf	69.2
Saturation, %	97.5
Void Ratio	1.47
Specimen Diameter	2.823
Specimen Height	6.008
Height/diameter ratio	2.13
Deviator Stress, tsf	0.112
Strain, %	6.3
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

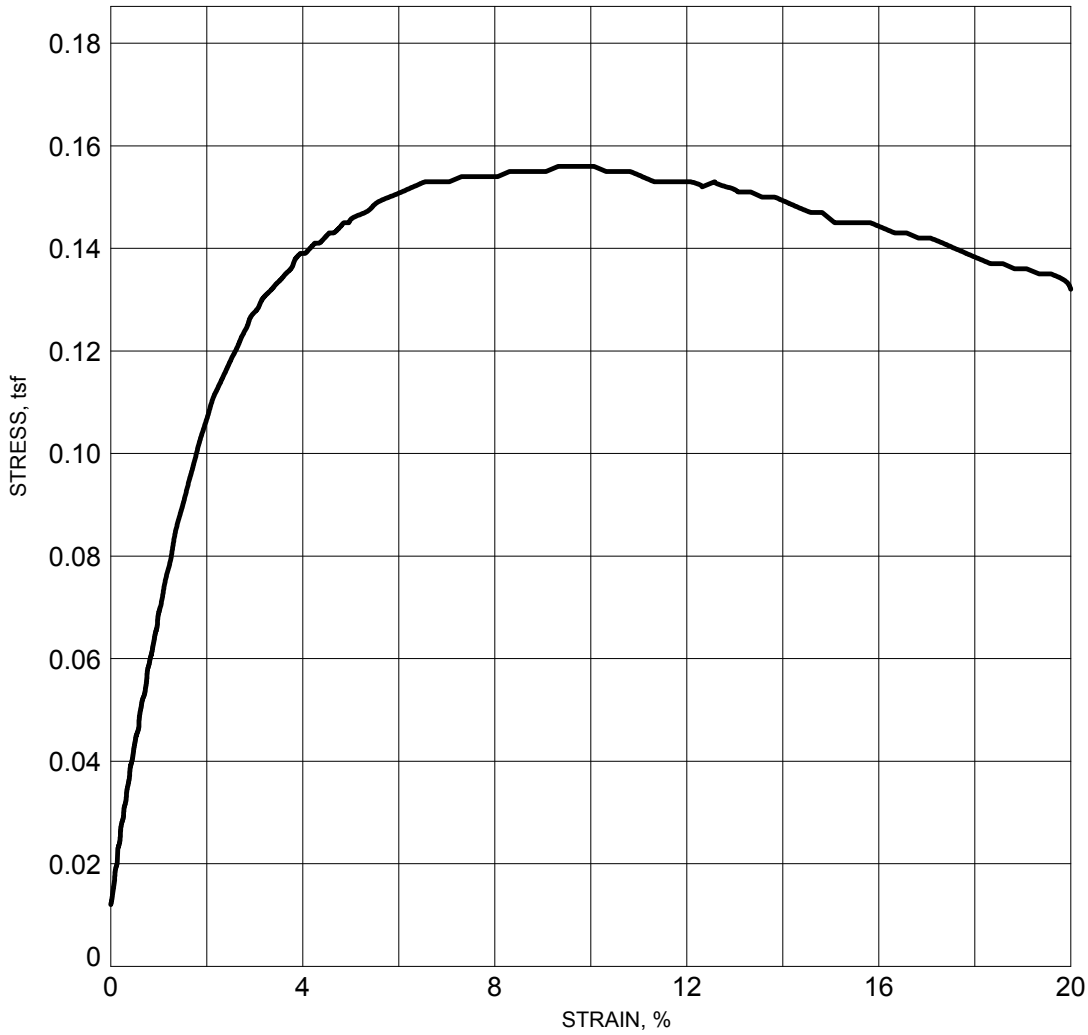
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand, silt layers and organic matter (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

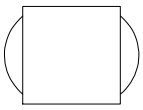
Tested By: SRT	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-84

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	15-17
Water Content, %	44.2
Wet Density, pcf	110.4
Dry Density, pcf	76.6
Saturation, %	98.2
Void Ratio	1.23
Specimen Diameter	2.816
Specimen Height	6.008
Height/diameter ratio	2.13
Deviator Stress, tsf	0.156
Strain, %	9.3
Confining Pressure (psi)	6.4

Bulge



Failure Sketch

LL = PL = PI =

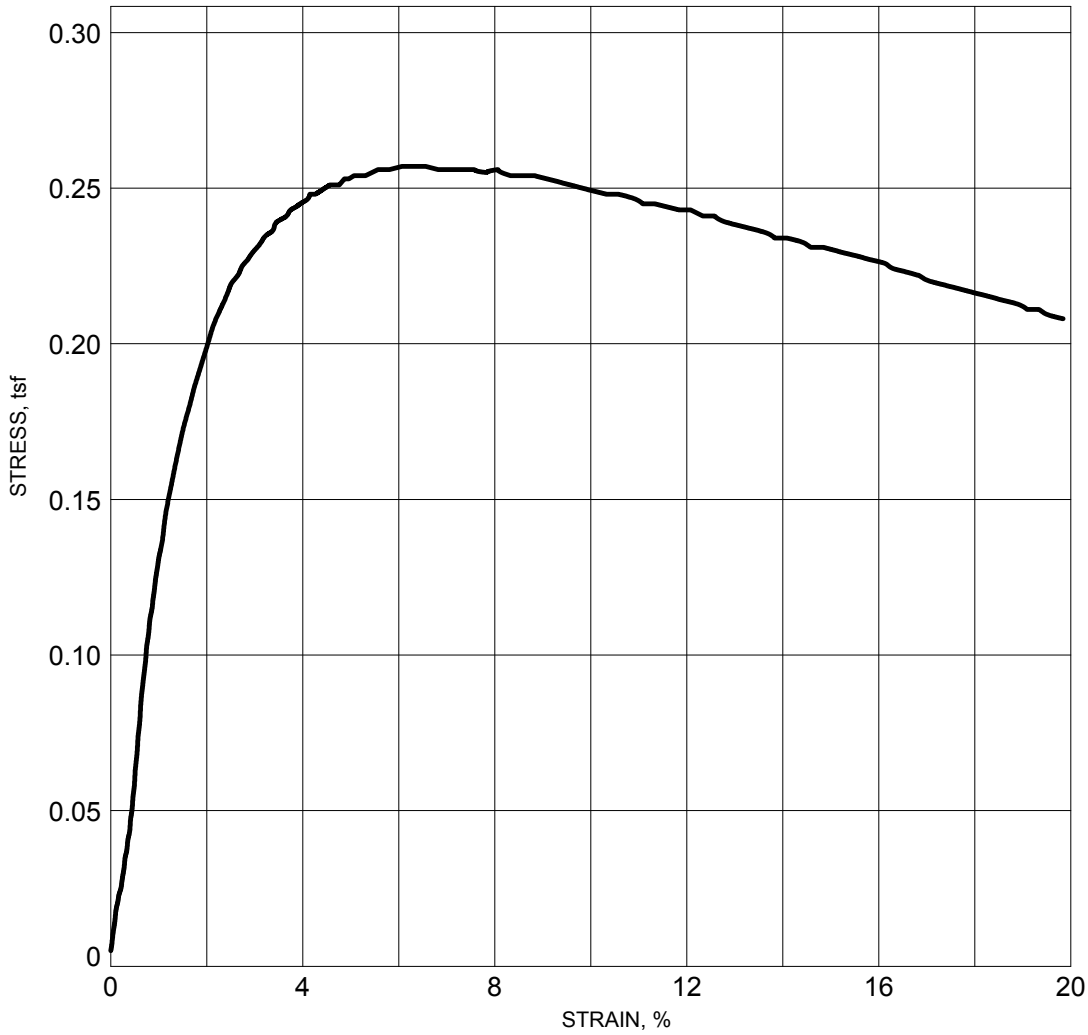
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray silty sandy clay with shells (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

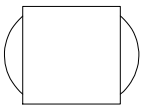
Tested By: SRT	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-85

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	25-27
Water Content, %	93.7
Wet Density, pcf	94.6
Dry Density, pcf	48.8
Saturation, %	102.6
Void Ratio	2.50
Specimen Diameter	2.825
Specimen Height	6.014
Height/diameter ratio	2.13
Deviator Stress, tsf	0.257
Strain, %	6.1
Confining Pressure (psi)	10.4

Bulge



Failure Sketch

LL = PL = PI =

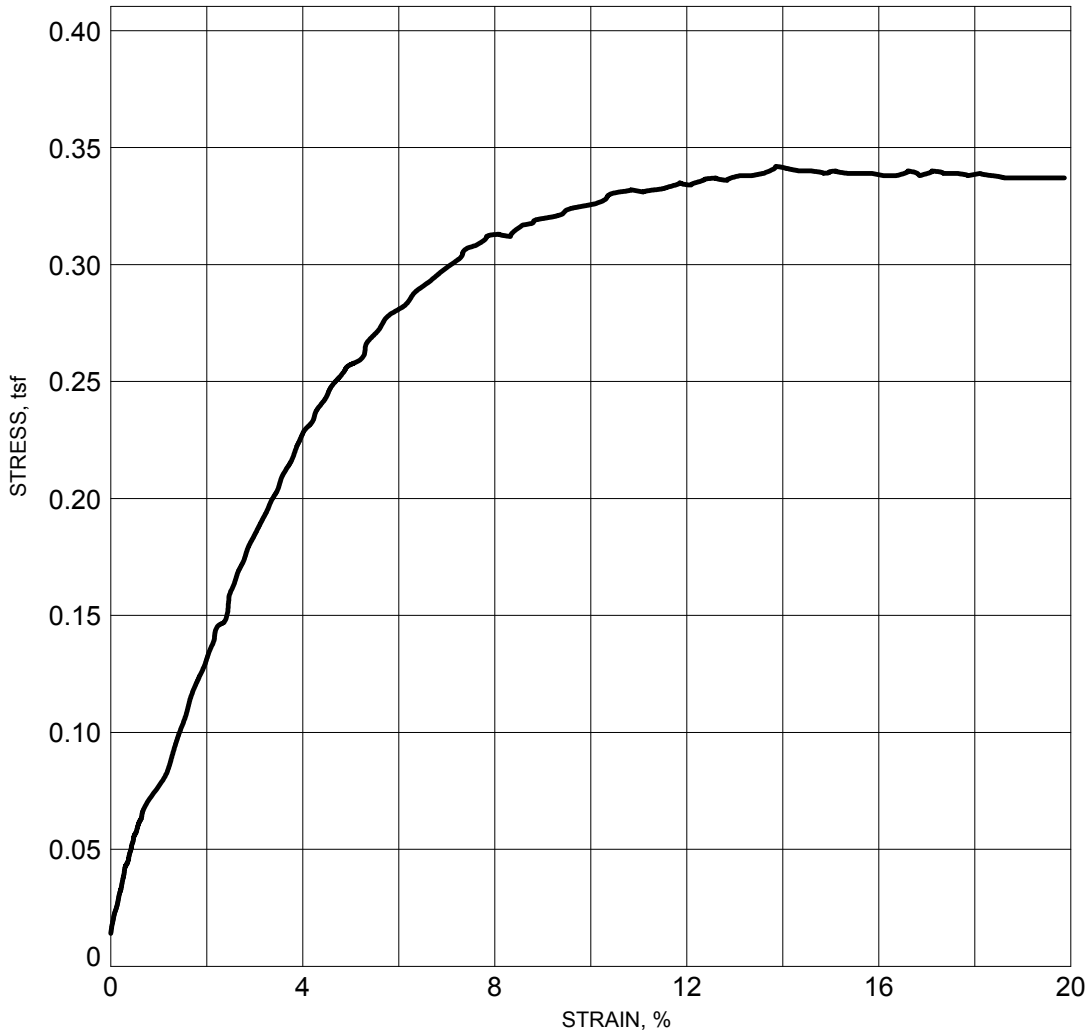
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with silt layers, organic matter and sand layer at bottom (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

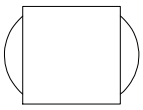
Tested By: SRT	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-86

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	30-32
Water Content, %	33.0
Wet Density, pcf	118.3
Dry Density, pcf	88.9
Saturation, %	98.2
Void Ratio	0.92
Specimen Diameter	2.820
Specimen Height	6.012
Height/diameter ratio	2.13
Deviator Stress, tsf	0.342
Strain, %	13.9
Confining Pressure (psi)	13.2

Bulge



Failure Sketch

LL = PL = PI =

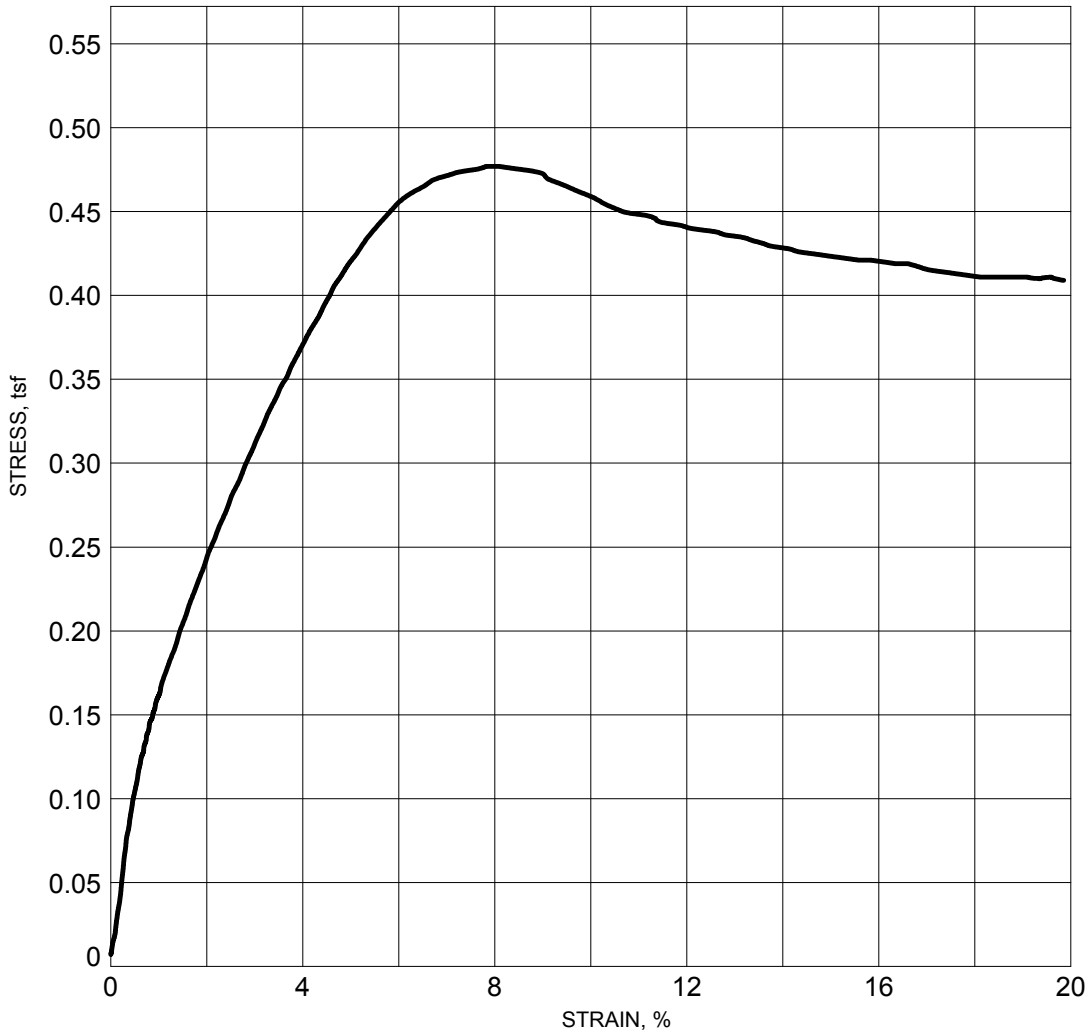
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray silty clay with sand pockets (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

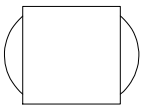
Tested By: SRT	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-87

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	50-52
Water Content, %	30.6
Wet Density, pcf	114.7
Dry Density, pcf	87.8
Saturation, %	88.7
Void Ratio	0.95
Specimen Diameter	2.818
Specimen Height	6.007
Height/diameter ratio	2.13
Deviator Stress, tsf	0.477
Strain, %	7.8
Confining Pressure (psi)	20.4

Bulge



Failure Sketch

LL = PL = PI =

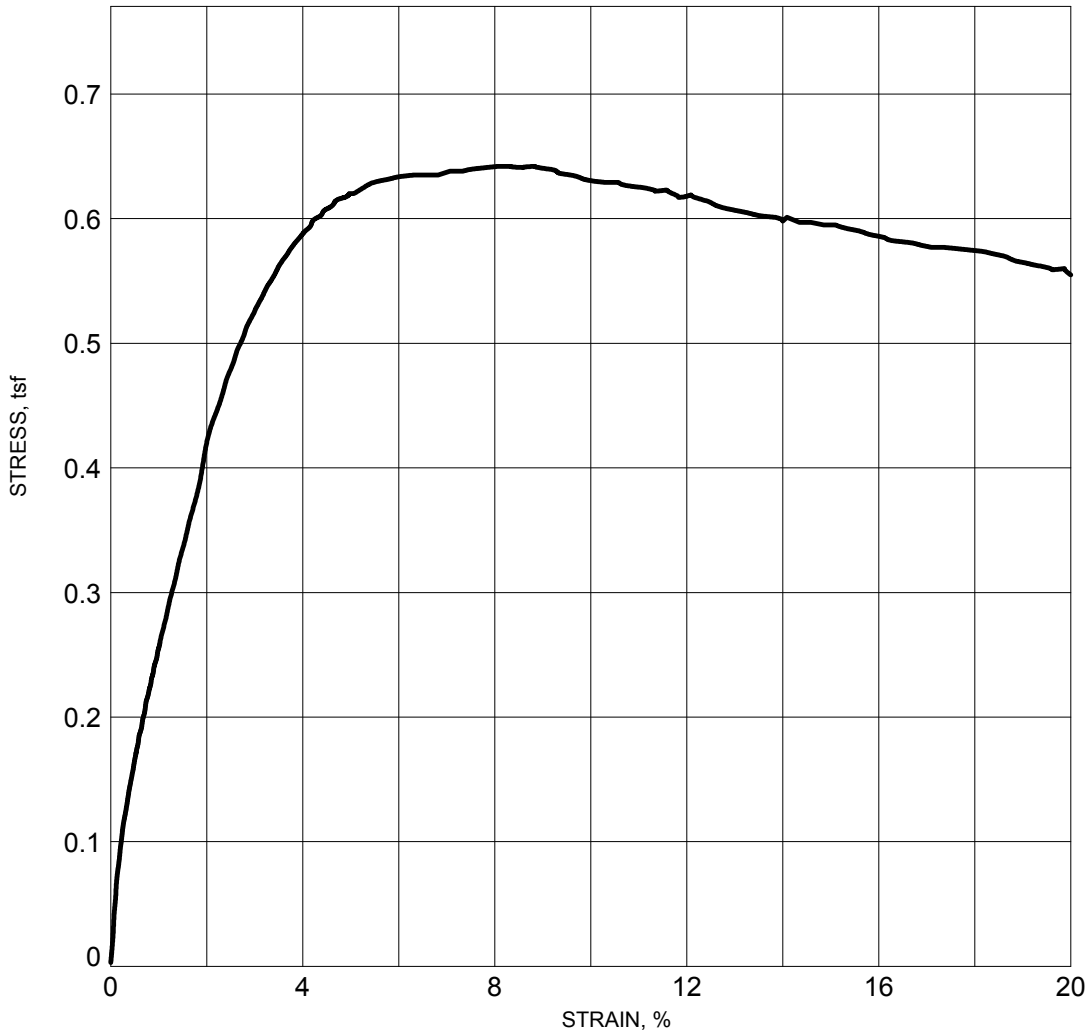
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with silt layers (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

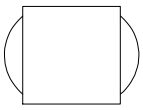
Tested By: SRT	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-88

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	55-57
Water Content, %	39.2
Wet Density, pcf	115.7
Dry Density, pcf	83.1
Saturation, %	101.6
Void Ratio	1.06
Specimen Diameter	2.829
Specimen Height	6.000
Height/diameter ratio	2.12
Deviator Stress, tsf	0.642
Strain, %	8.1
Confining Pressure (psi)	22.4

Bulge



Failure Sketch

LL = PL = PI =

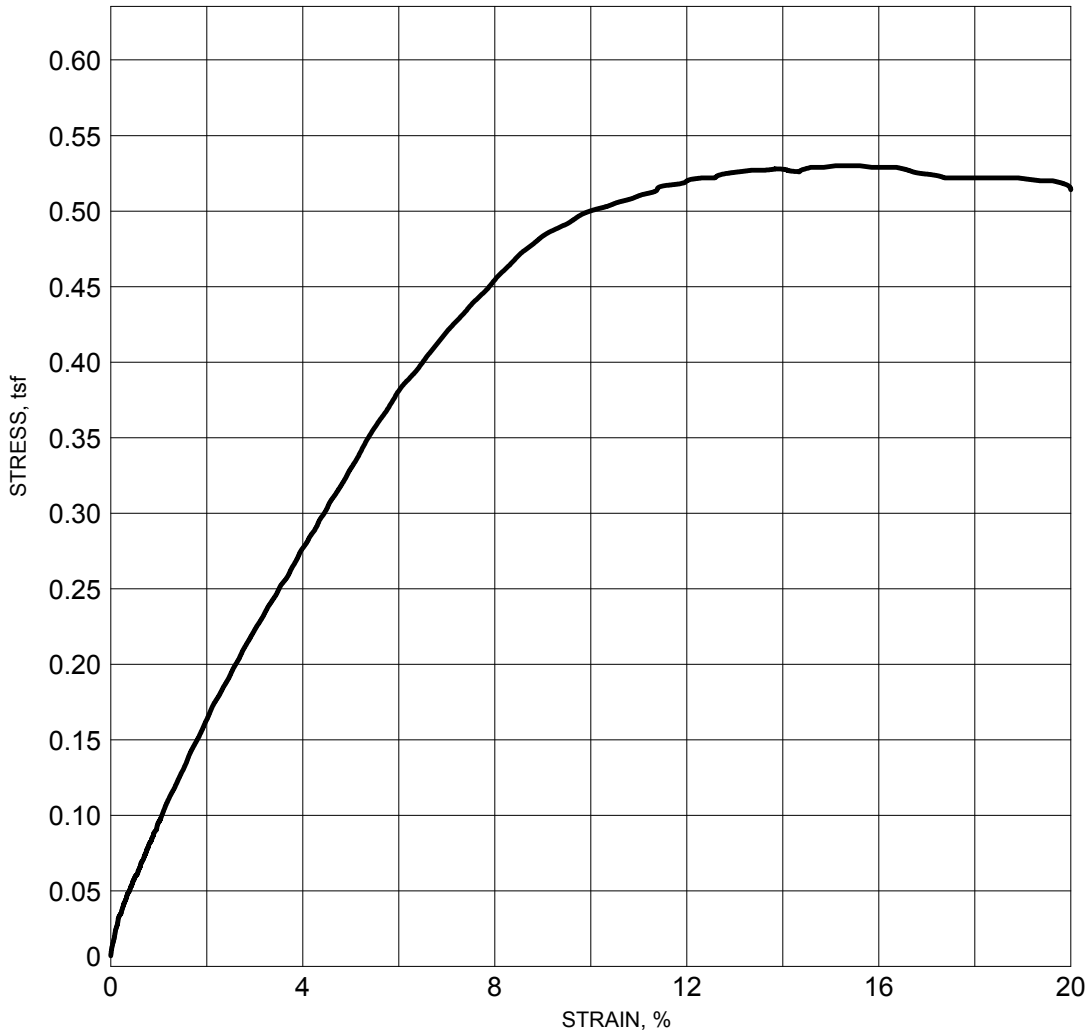
% 200= % Organic= Assumed Gs=2.74

Description: Medium gray clay with silt layers (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

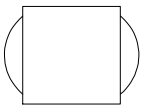
Tested By: SRT	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-89

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-36
Depth (ft)	58-60
Water Content, %	32.7
Wet Density, pcf	117.9
Dry Density, pcf	88.8
Saturation, %	97.0
Void Ratio	0.92
Specimen Diameter	2.816
Specimen Height	6.000
Height/diameter ratio	2.13
Deviator Stress, tsf	0.530
Strain, %	15.0
Confining Pressure (psi)	23.6

Bulge



Failure Sketch

LL = PL = PI =

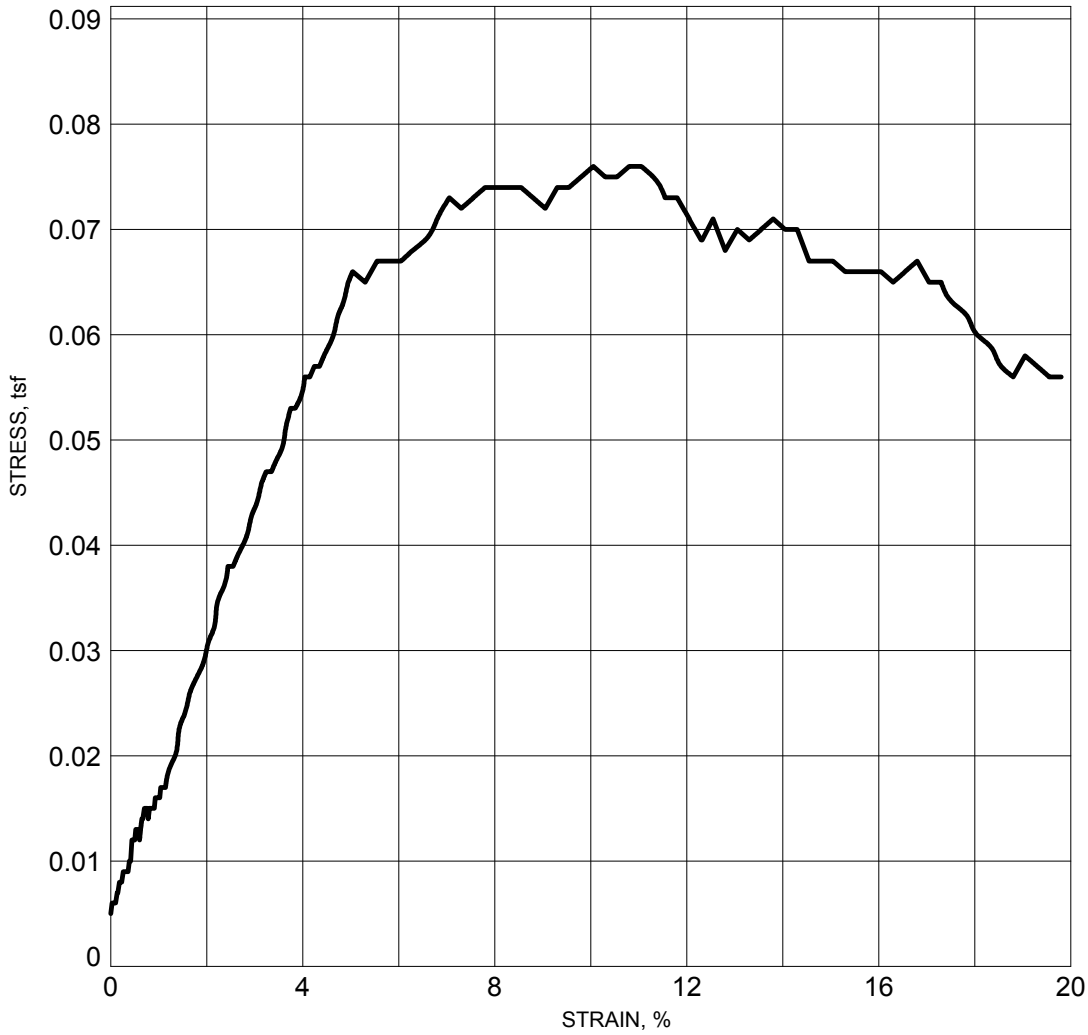
% 200= % Organic= Assumed Gs=2.74

Description: Medium gray clay with silt (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

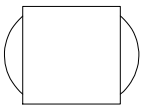
Tested By: SRT	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-90

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-40
Depth (ft)	0-2
Water Content, %	92.4
Wet Density, pcf	101.5
Dry Density, pcf	52.8
Saturation, %	113.0
Void Ratio	2.24
Specimen Diameter	2.855
Specimen Height	6.038
Height/diameter ratio	2.11
Deviator Stress, tsf	0.076
Strain, %	10.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

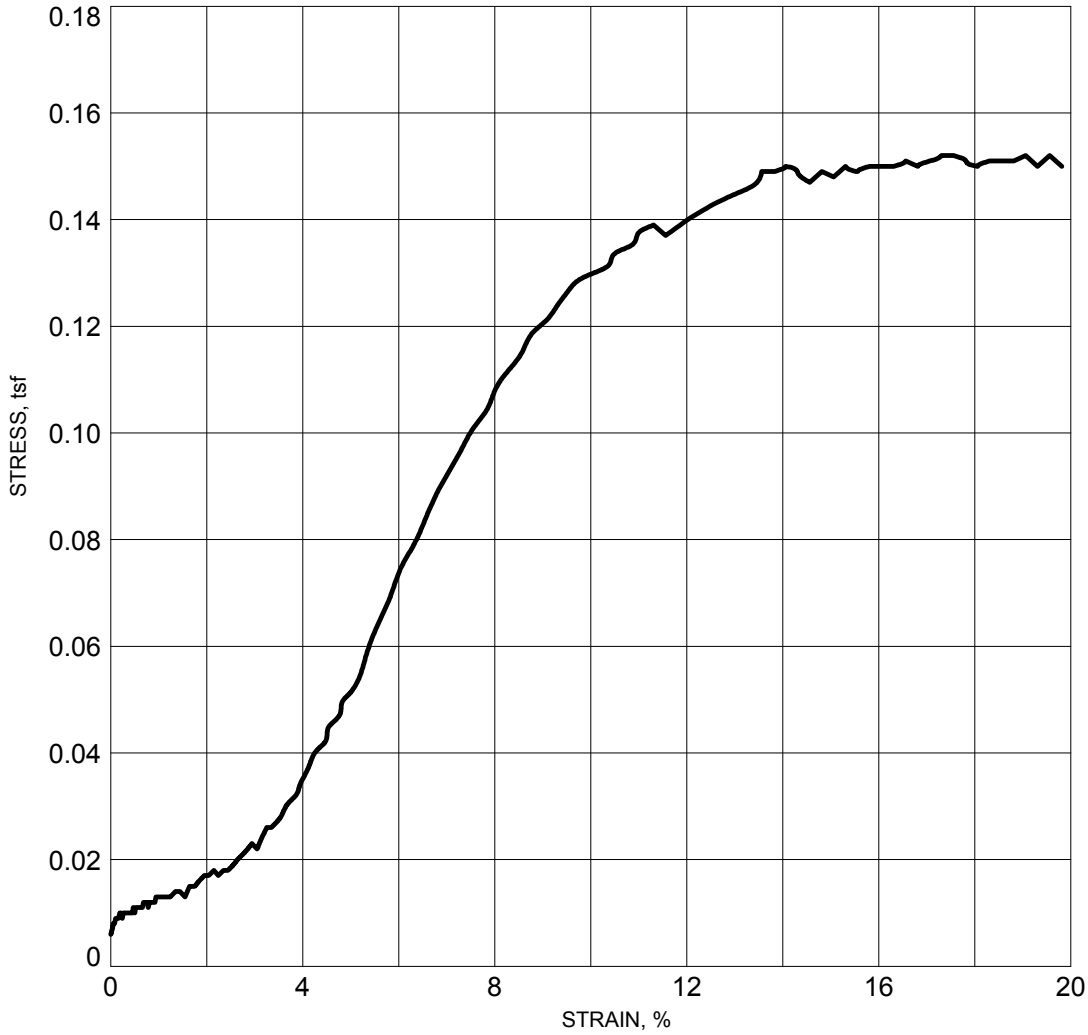
% 200= % Organic=3.9 Assumed Gs=2.74

Description: Very soft gray clay with sand lenses and organic matter (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

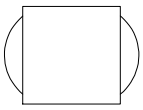
Tested By: CLP	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA/KLA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-91

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-40
Depth (ft)	4-6
Water Content, %	43.2
Wet Density, pcf	112.8
Dry Density, pcf	78.7
Saturation, %	101.2
Void Ratio	1.17
Specimen Diameter	2.855
Specimen Height	6.037
Height/diameter ratio	2.11
Deviator Stress, tsf	0.150
Strain, %	14.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

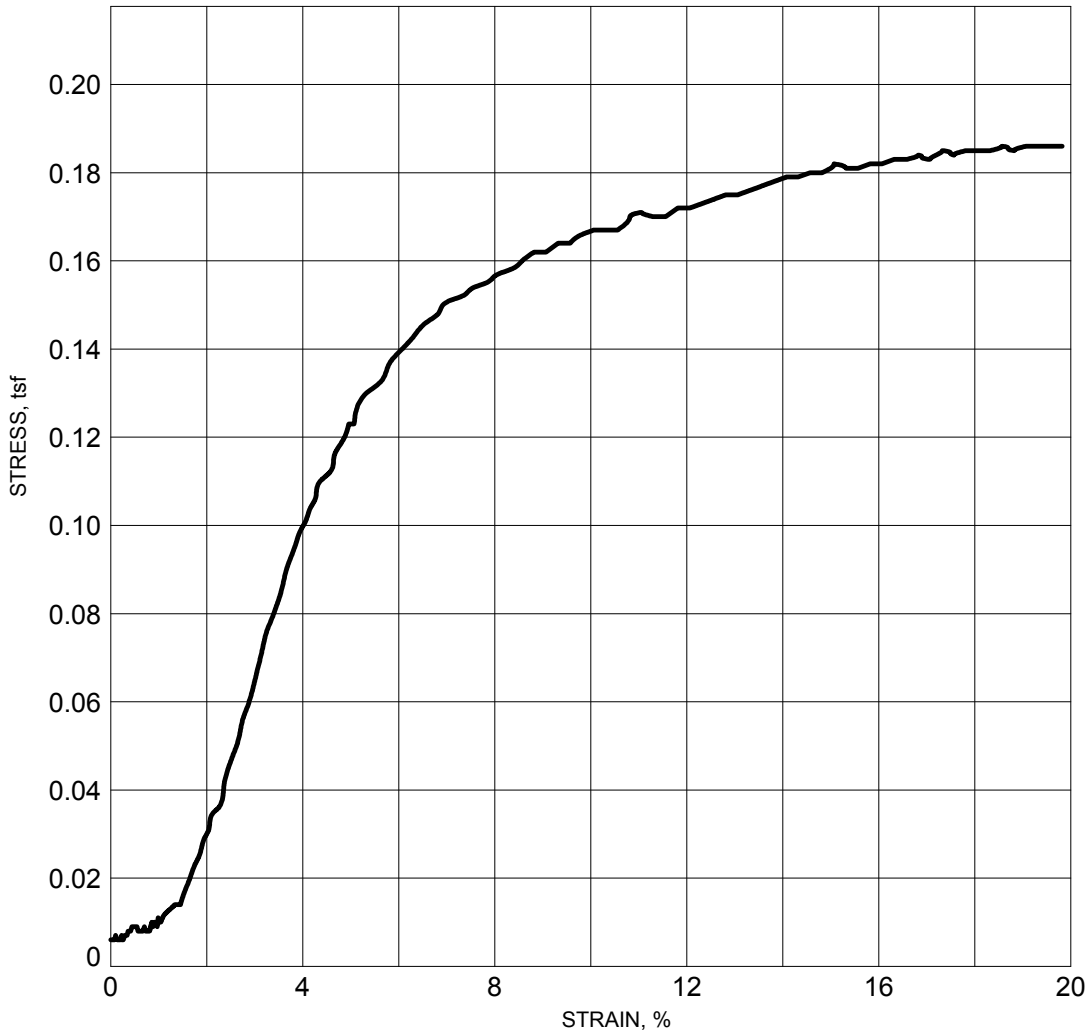
% 200= % Organic= Assumed Gs=2.74

Description: Gray clayey silt with shell fragments and organic matter (CL-ML)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

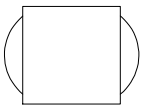
Tested By: CLP	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-92

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-40
Depth (ft)	6-8
Water Content, %	47.9
Wet Density, pcf	122.9
Dry Density, pcf	83.1
Saturation, %	124.0
Void Ratio	1.06
Specimen Diameter	2.773
Specimen Height	5.756
Height/diameter ratio	2.08
Deviator Stress, tsf	0.181
Strain, %	15.0
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

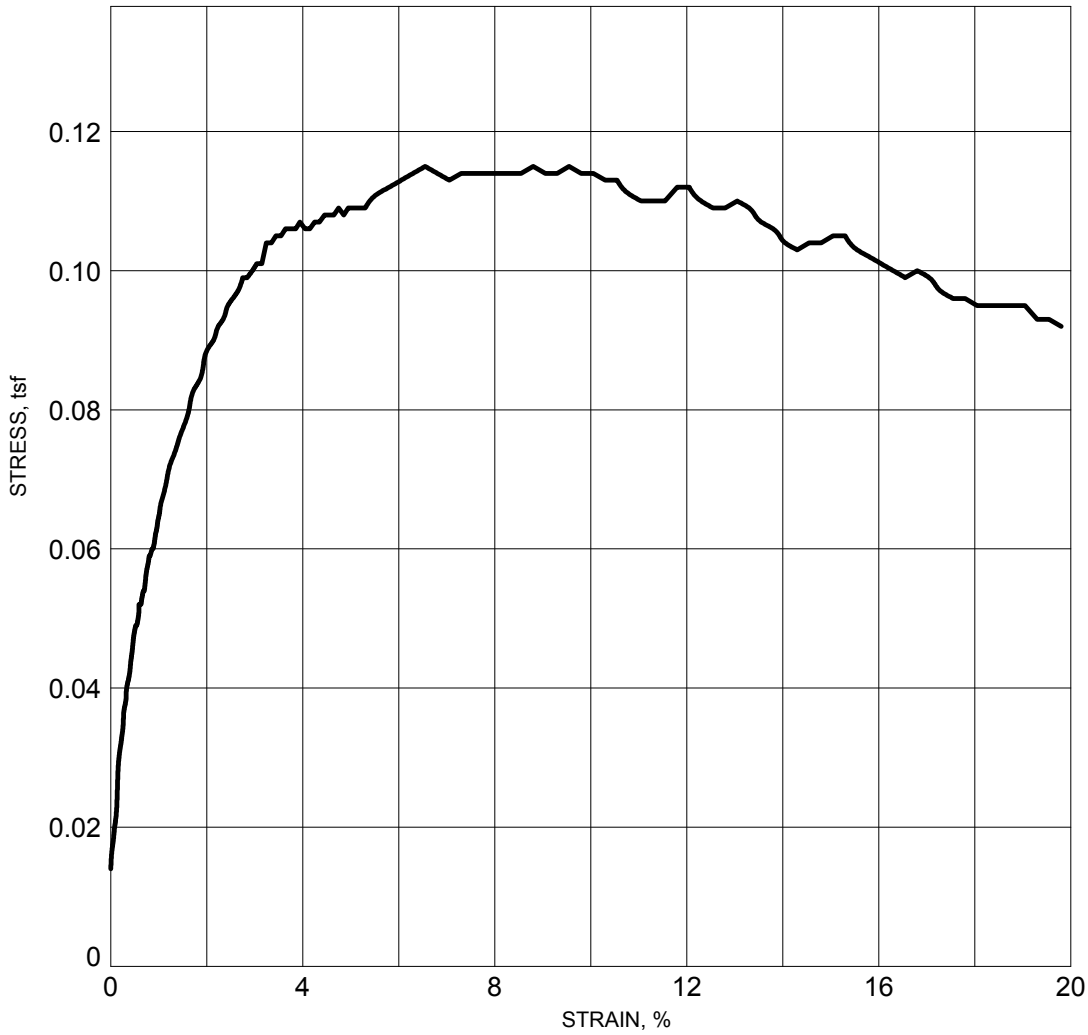
% 200= % Organic= Assumed Gs=2.74

Description: Gray silty clay with organic matter (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

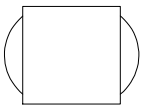
Tested By: CLP	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-93

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-40
Depth (ft)	8-10
Water Content, %	94.5
Wet Density, pcf	102.5
Dry Density, pcf	52.7
Saturation, %	115.4
Void Ratio	2.24
Specimen Diameter	2.761
Specimen Height	6.029
Height/diameter ratio	2.18
Deviator Stress, tsf	0.115
Strain, %	6.6
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

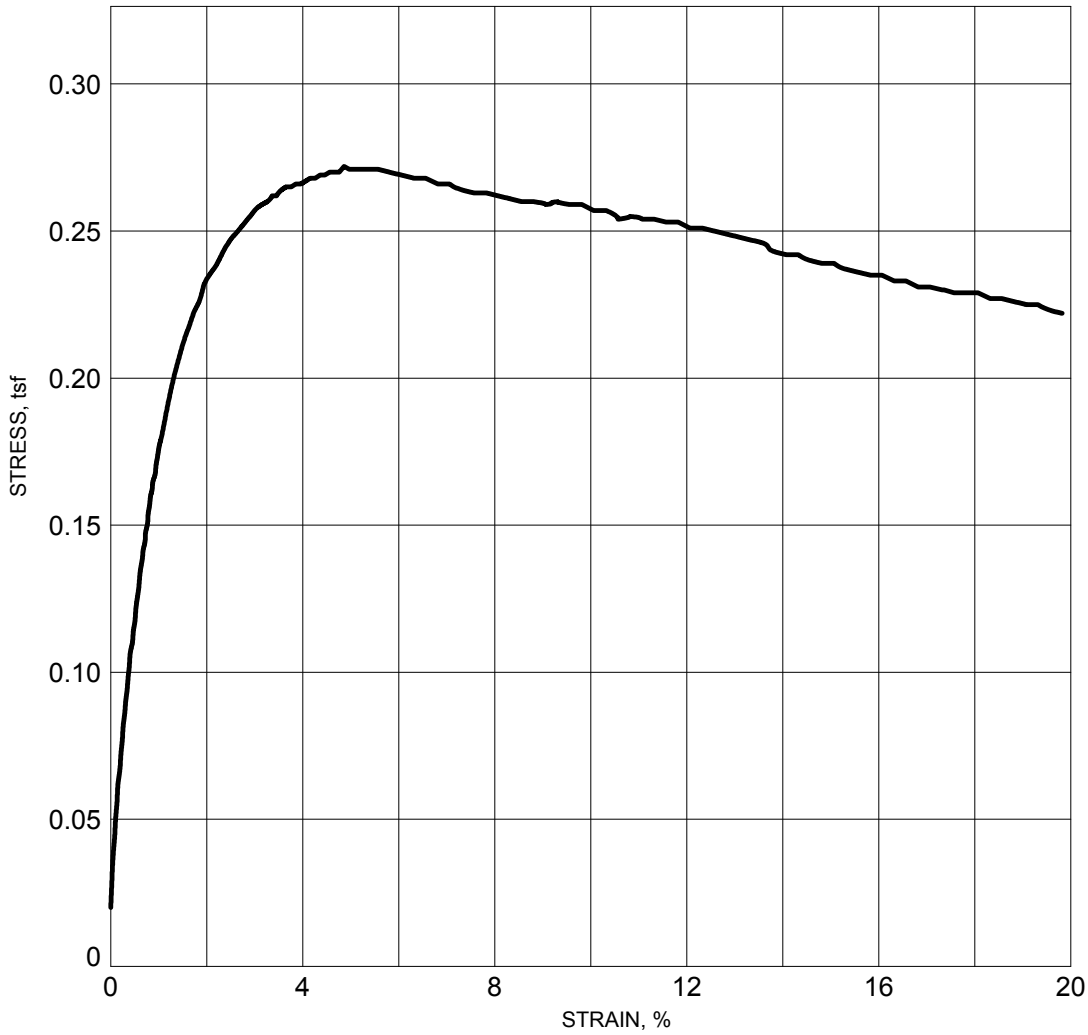
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with silty sand pockets and silty sand layers (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: TRC	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-94

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-40
Depth (ft)	16-18
Water Content, %	44.2
Wet Density, pcf	112.2
Dry Density, pcf	77.8
Saturation, %	101.1
Void Ratio	1.20
Specimen Diameter	2.839
Specimen Height	6.039
Height/diameter ratio	2.13
Deviator Stress, tsf	0.272
Strain, %	4.9
Confining Pressure (psi)	6.8

Multiple Shear

Failure Sketch

LL = PL = PI =

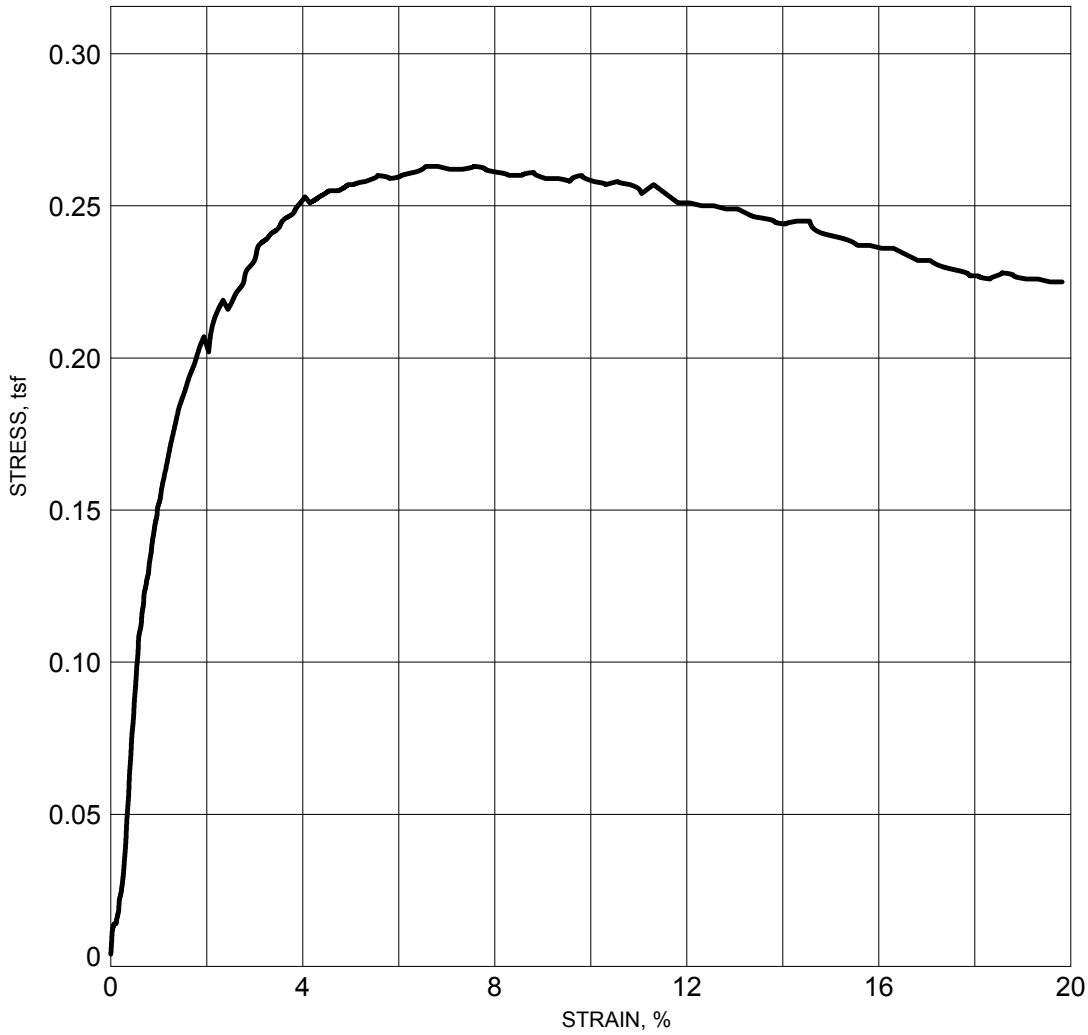
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand streaks and sand pockets (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

Tested By: TRC	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-95

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-40
Depth (ft)	18-20
Water Content, %	52.0
Wet Density, pcf	112.7
Dry Density, pcf	74.2
Saturation, %	109.1
Void Ratio	1.31
Specimen Diameter	2.789
Specimen Height	6.044
Height/diameter ratio	2.17
Deviator Stress, tsf	0.263
Strain, %	6.6
Confining Pressure (psi)	7.6

Multiple Shear

Failure Sketch

LL = PL = PI =

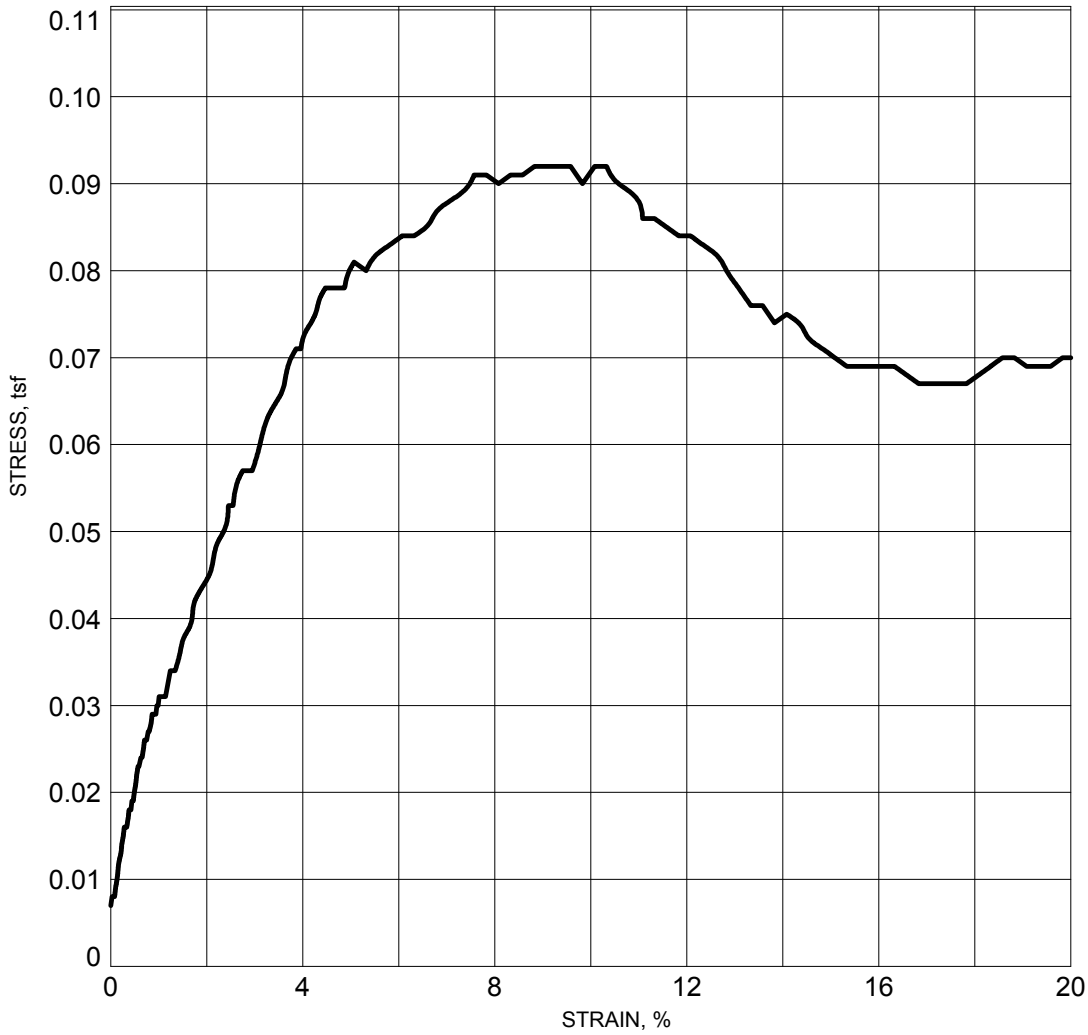
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with silty sand pockets (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

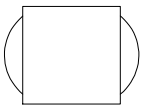
Tested By: TRC	Date Tested: 5/24/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: WMA	Date Reviewed: 6/5/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-96

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	2-4
Water Content, %	107.7
Wet Density, pcf	85.4
Dry Density, pcf	41.1
Saturation, %	93.5
Void Ratio	3.16
Specimen Diameter	2.740
Specimen Height	6.012
Height/diameter ratio	2.19
Deviator Stress, tsf	0.092
Strain, %	8.8
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = 204 PL = 52 PI =152

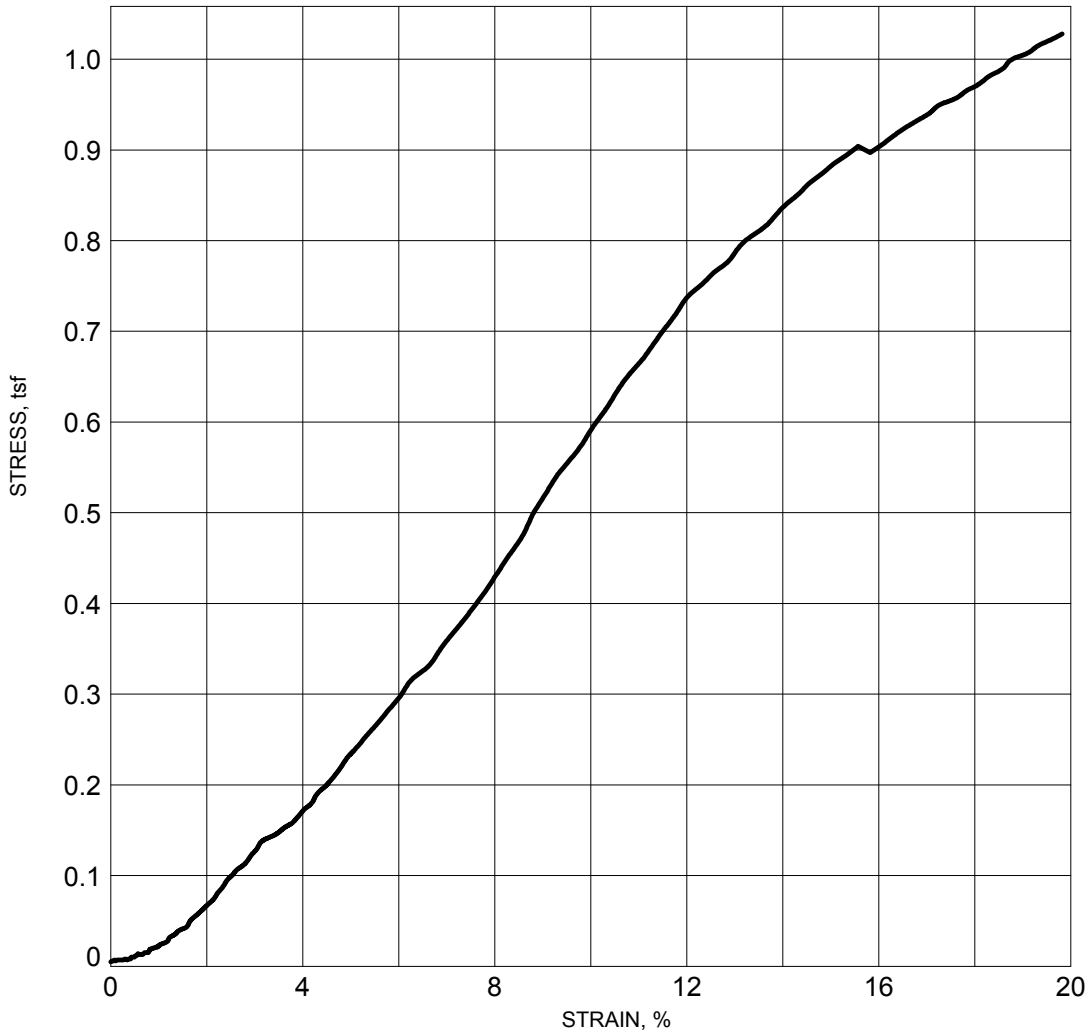
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray organic clay (OH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

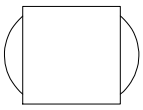
Tested By: CLP	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-97

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	4-6
Water Content, %	36.5
Wet Density, pcf	116.9
Dry Density, pcf	85.6
Saturation, %	100.3
Void Ratio	1.00
Specimen Diameter	2.855
Specimen Height	5.989
Height/diameter ratio	2.10
Deviator Stress, tsf	0.882
Strain, %	15.0
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

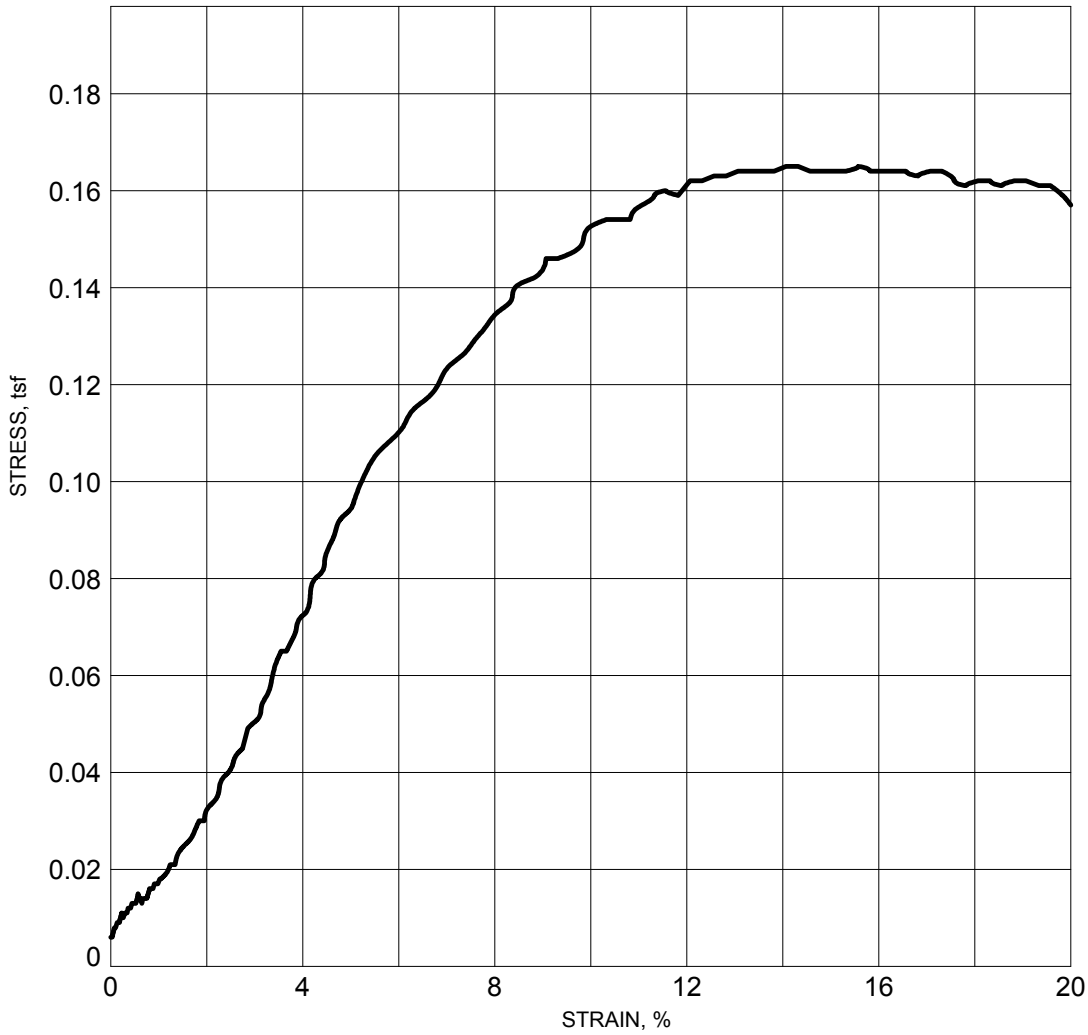
% 200= % Organic= Assumed Gs=2.74

Description: Gray sandy silt with clay lenses (ML)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

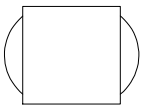
Tested By: CLP	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-98

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	6-8
Water Content, %	37.6
Wet Density, pcf	112.5
Dry Density, pcf	81.8
Saturation, %	94.5
Void Ratio	1.09
Specimen Diameter	2.855
Specimen Height	6.028
Height/diameter ratio	2.11
Deviator Stress, tsf	0.165
Strain, %	14.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

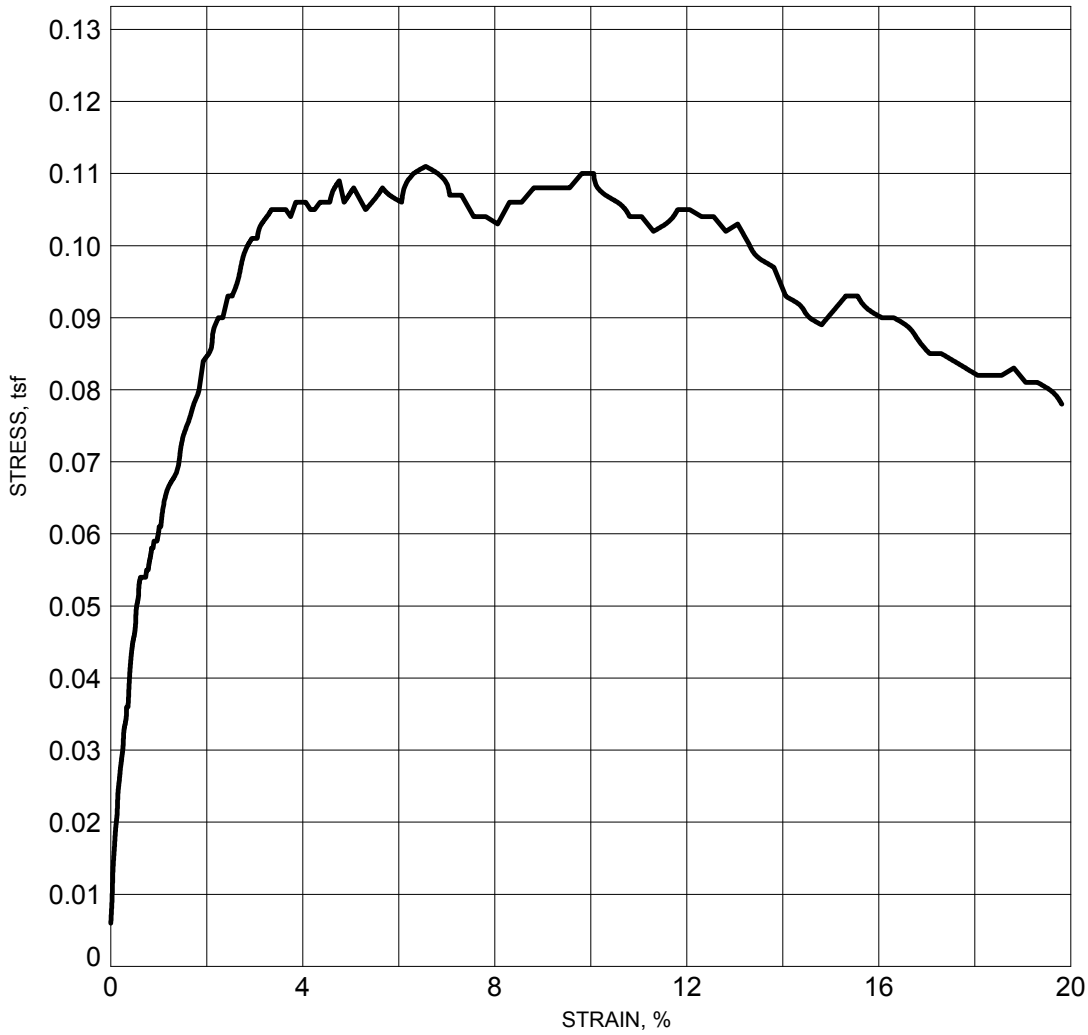
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray very silty clay with clay lenses and shell fragments (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

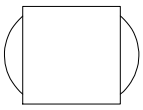
Tested By: CLP	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-99

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	9-10
Water Content, %	96.5
Wet Density, pcf	102.7
Dry Density, pcf	52.3
Saturation, %	116.4
Void Ratio	2.27
Specimen Diameter	2.801
Specimen Height	5.822
Height/diameter ratio	2.08
Deviator Stress, tsf	0.111
Strain, %	6.6
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

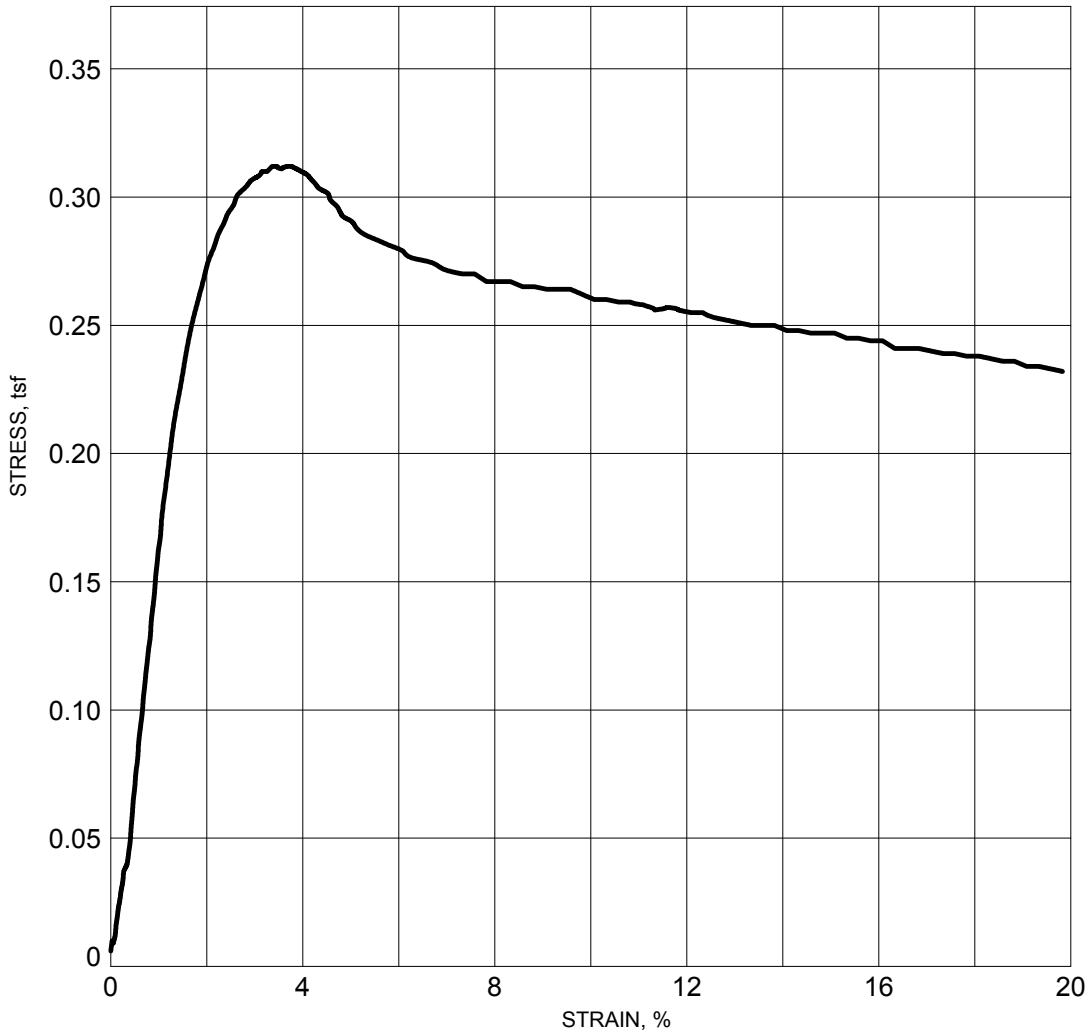
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

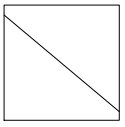
Tested By: CLP	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-100

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	12-14
Water Content, %	64.6
Wet Density, pcf	106.9
Dry Density, pcf	65.0
Saturation, %	108.4
Void Ratio	1.63
Specimen Diameter	2.786
Specimen Height	6.081
Height/diameter ratio	2.18
Deviator Stress, tsf	0.312
Strain, %	3.4
Confining Pressure (psi)	5.2

Angle Shear 50°



Failure Sketch

LL = PL = PI =

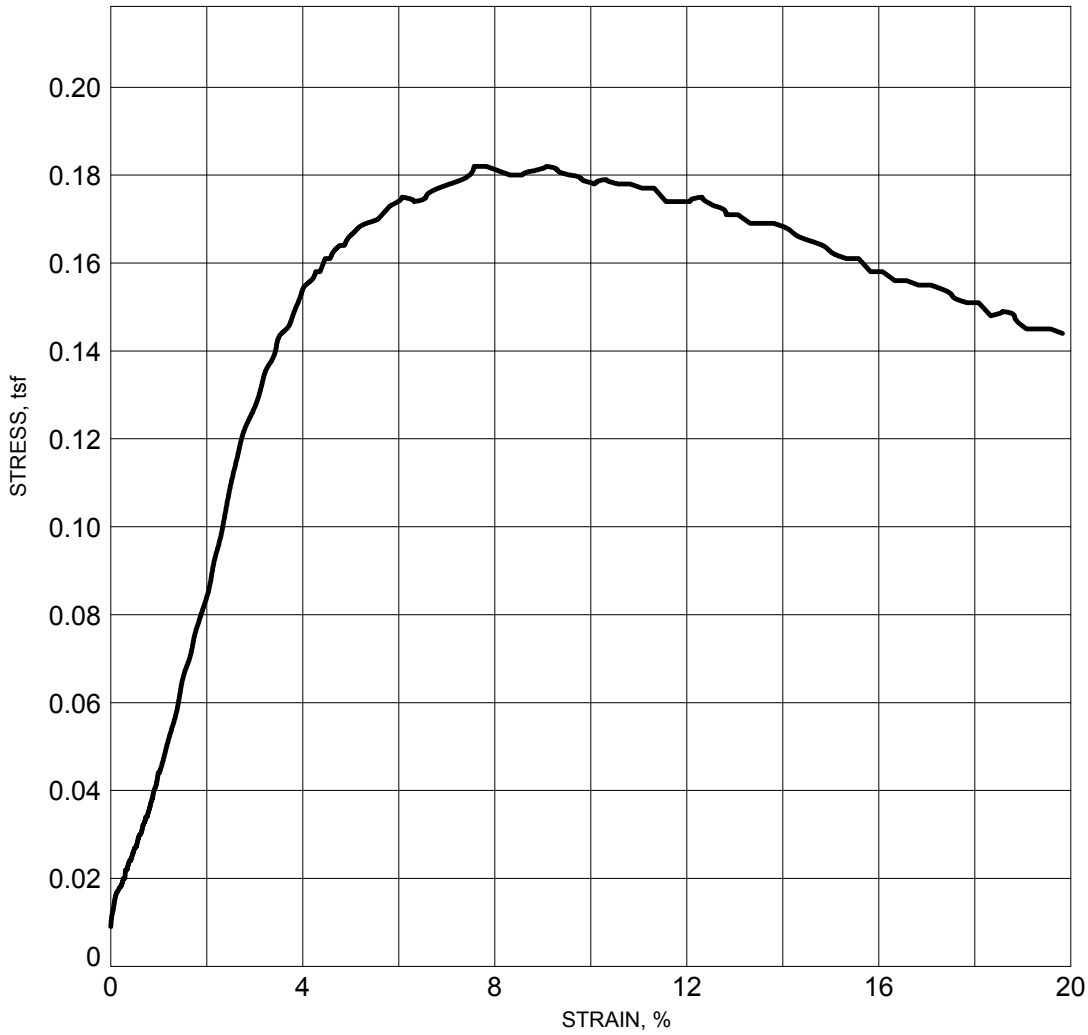
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand pockets (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

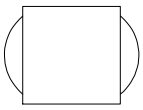
Tested By: CLP	Date Tested: 5/29/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/1/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-101

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	33-34
Water Content, %	56.3
Wet Density, pcf	111.8
Dry Density, pcf	71.6
Saturation, %	111.0
Void Ratio	1.39
Specimen Diameter	2.788
Specimen Height	5.874
Height/diameter ratio	2.11
Deviator Stress, tsf	0.182
Strain, %	7.6
Confining Pressure (psi)	13.4

Bulge



Failure Sketch

LL = PL = PI =

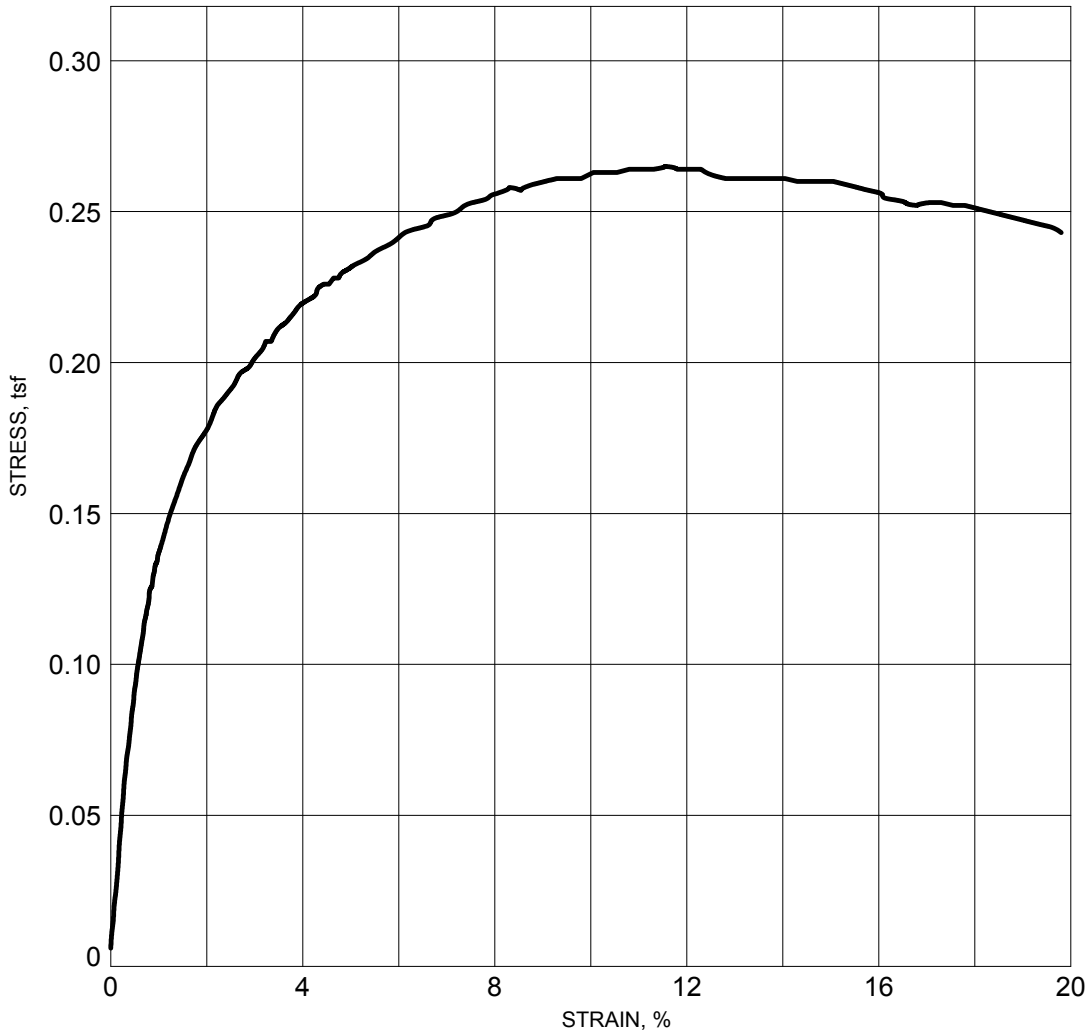
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand pockets and shells (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

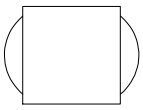
Tested By: CLP	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-102

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	48-50
Water Content, %	45.3
Wet Density, pcf	112.3
Dry Density, pcf	77.3
Saturation, %	102.5
Void Ratio	1.21
Specimen Diameter	2.791
Specimen Height	5.752
Height/diameter ratio	2.06
Deviator Stress, tsf	0.265
Strain, %	11.6
Confining Pressure (psi)	19.6

Bulge



Failure Sketch

LL = PL = PI =

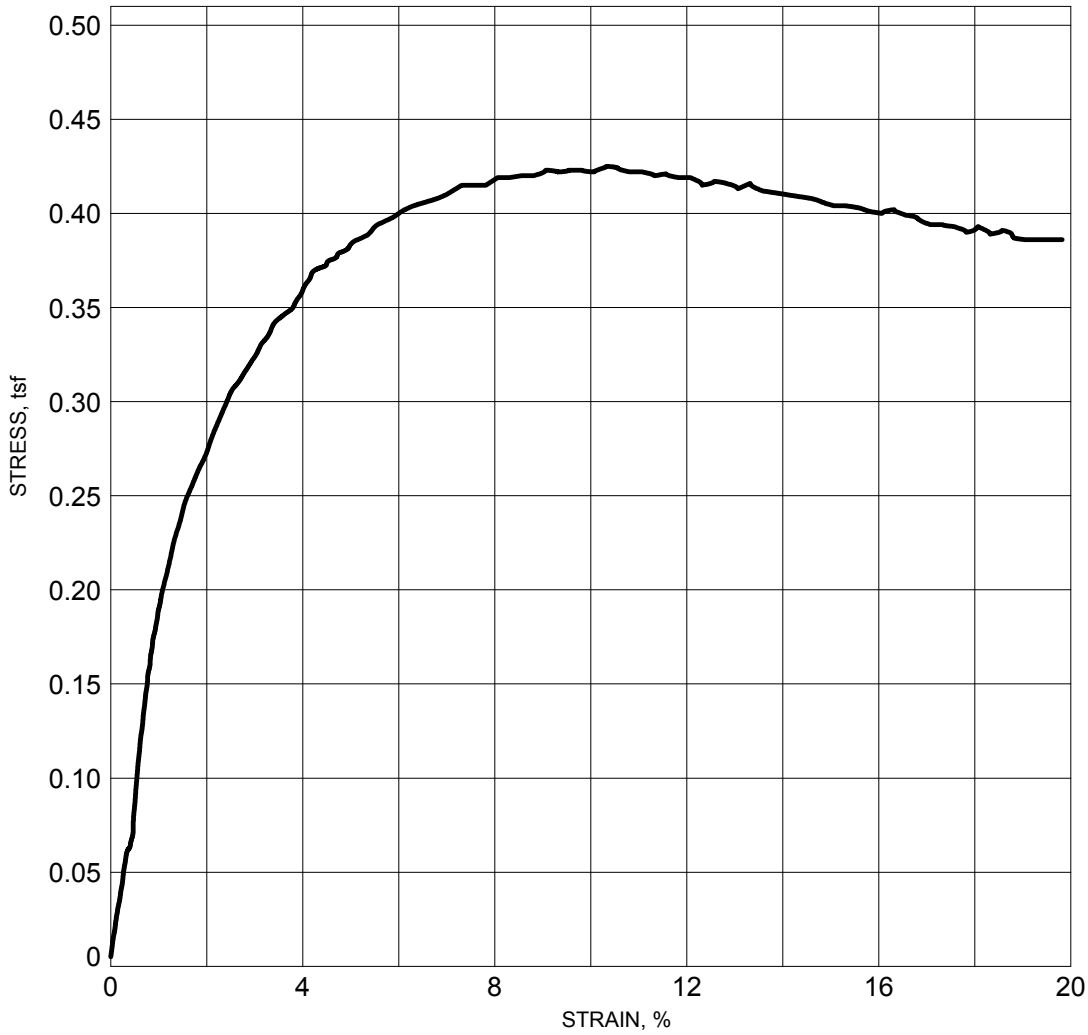
% 200= % Organic= Assumed Gs=2.74

Description: Soft to medium gray clay with sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

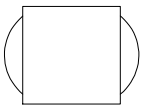
Tested By: CLP	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-103

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-42
Depth (ft)	58-60
Water Content, %	53.4
Wet Density, pcf	110.9
Dry Density, pcf	72.3
Saturation, %	107.1
Void Ratio	1.37
Specimen Diameter	2.803
Specimen Height	6.023
Height/diameter ratio	2.15
Deviator Stress, tsf	0.425
Strain, %	10.3
Confining Pressure (psi)	23.6

Bulge



Failure Sketch

LL = PL = PI =

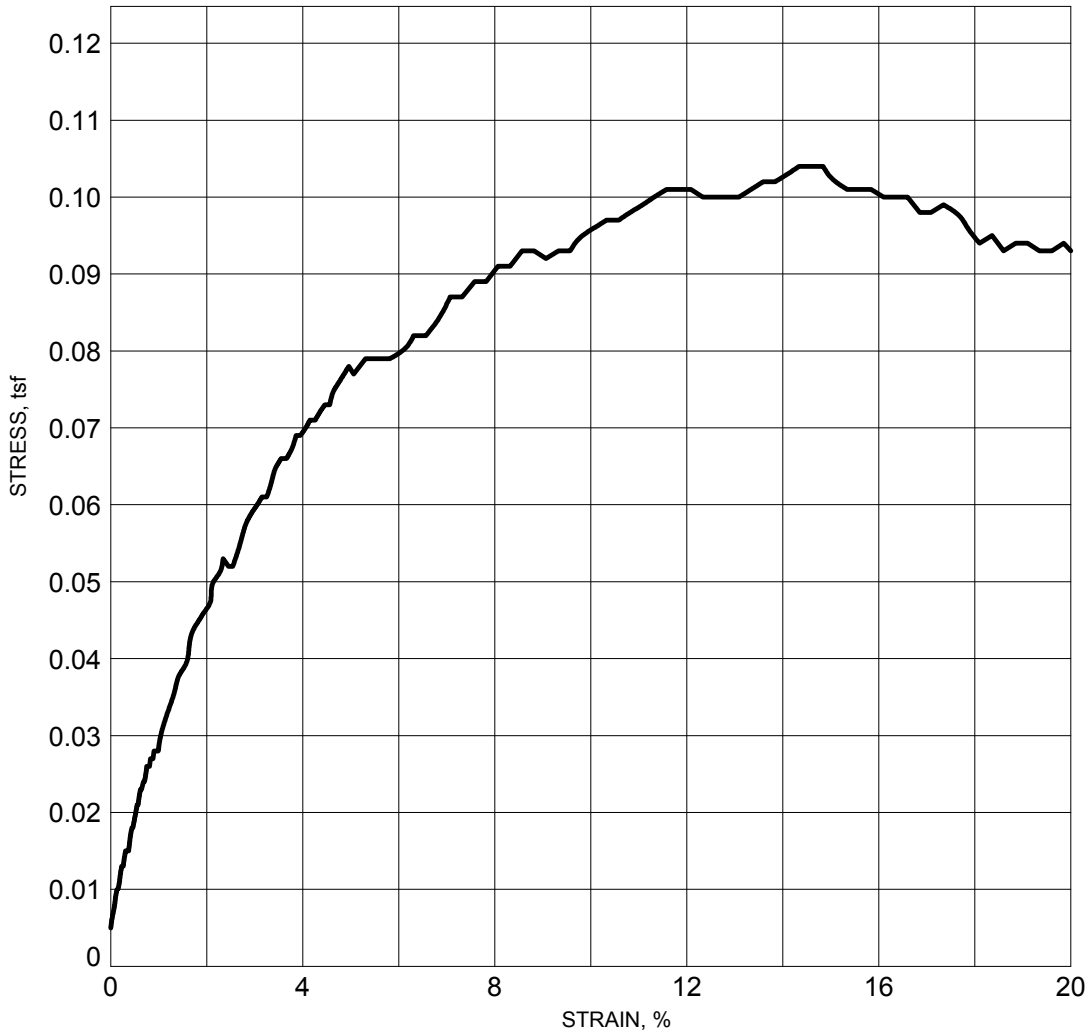
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand lenses (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

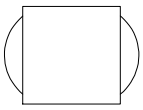
Tested By: CLP	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-104

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-45
Depth (ft)	0.33-2
Water Content, %	239.8
Wet Density, pcf	77.3
Dry Density, pcf	22.7
Saturation, %	100.8
Void Ratio	6.52
Specimen Diameter	2.815
Specimen Height	6.002
Height/diameter ratio	2.13
Deviator Stress, tsf	0.104
Strain, %	14.3
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic=26.2 Assumed Gs=2.74

Description: Very soft gray organic clay (OH)

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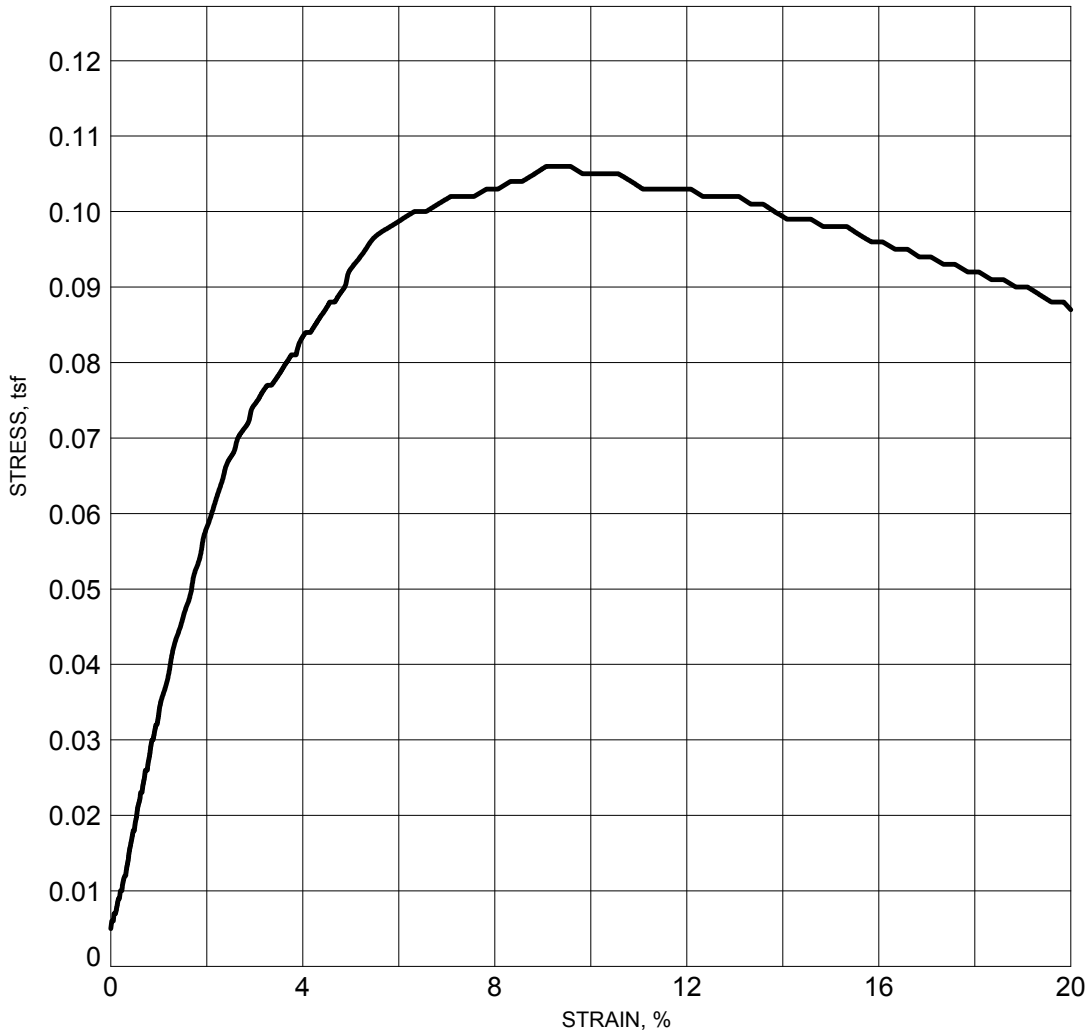
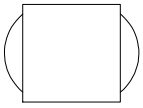
Tested By: SRT	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-105

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-45
Depth (ft)	2-4
Water Content, %	70.3
Wet Density, pcf	109.7
Dry Density, pcf	64.4
Saturation, %	116.4
Void Ratio	1.65
Specimen Diameter	2.855
Specimen Height	5.988
Height/diameter ratio	2.10
Deviator Stress, tsf	0.106
Strain, %	9.1
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

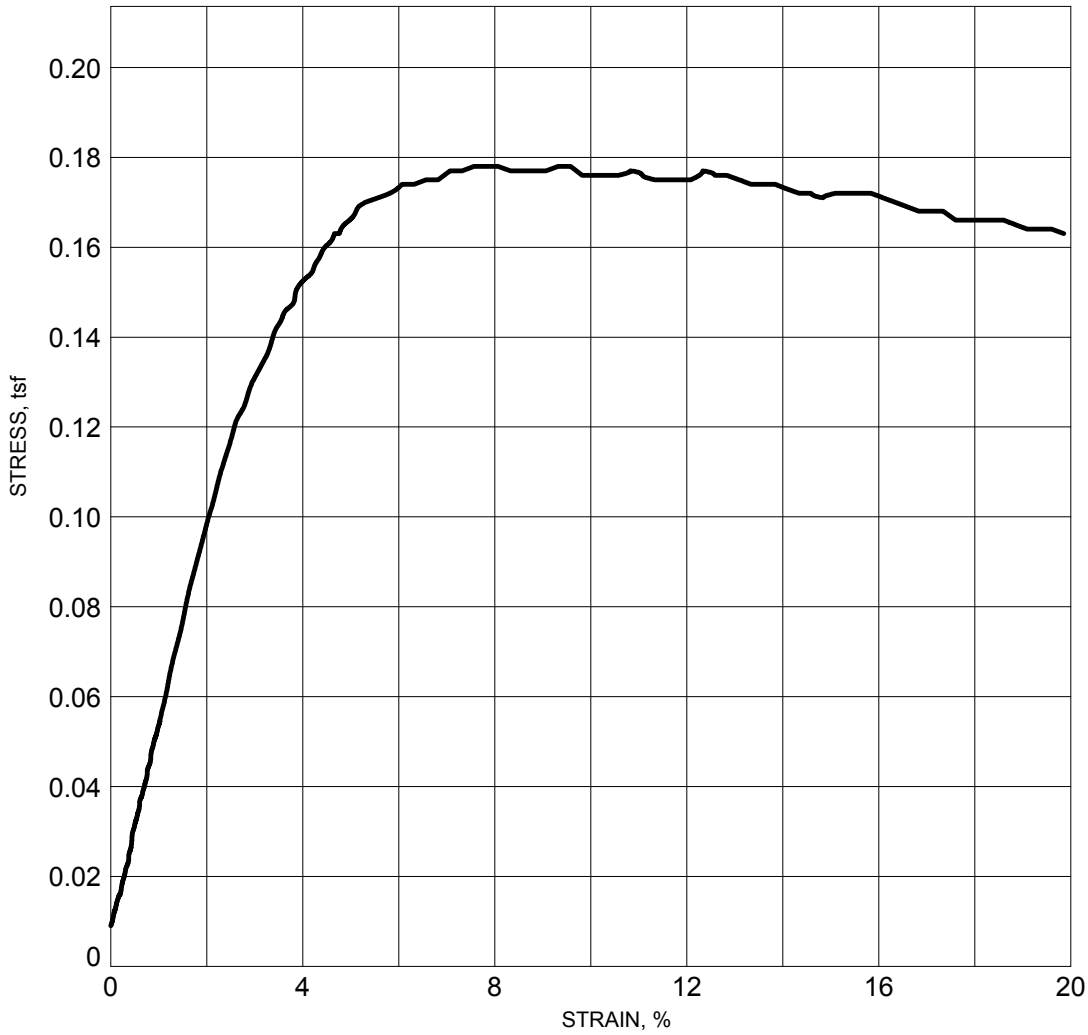
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with organic matter (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

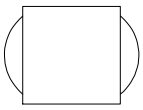
Tested By: SRT	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-106

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-45
Depth (ft)	6-8
Water Content, %	40.8
Wet Density, pcf	110.0
Dry Density, pcf	78.1
Saturation, %	94.1
Void Ratio	1.19
Specimen Diameter	2.818
Specimen Height	6.004
Height/diameter ratio	2.13
Deviator Stress, tsf	0.178
Strain, %	7.6
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

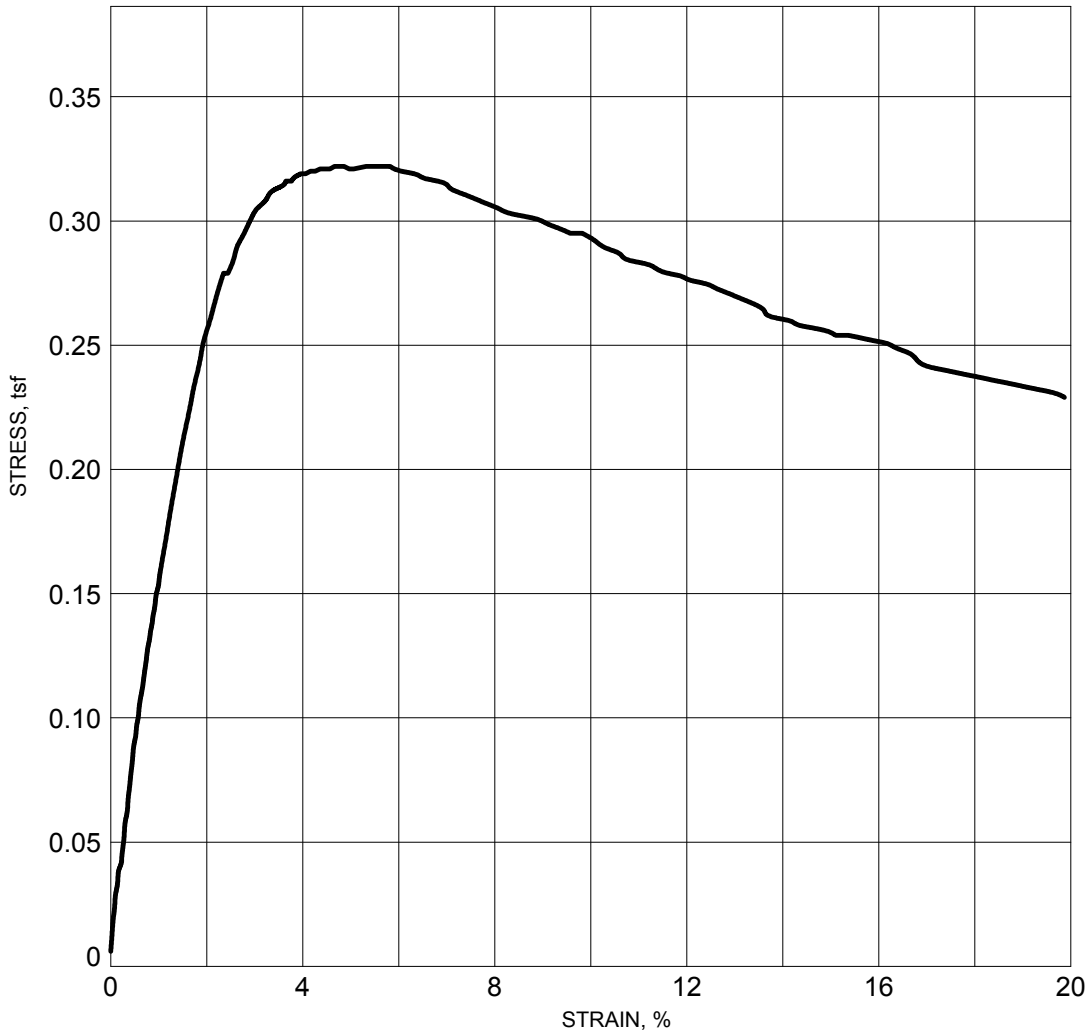
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray silty clay with sand and shells (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

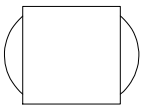
Tested By: SRT	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-107

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-45
Depth (ft)	10-12
Water Content, %	49.5
Wet Density, pcf	106.8
Dry Density, pcf	71.4
Saturation, %	97.3
Void Ratio	1.39
Specimen Diameter	2.822
Specimen Height	6.007
Height/diameter ratio	2.13
Deviator Stress, tsf	0.322
Strain, %	4.7
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

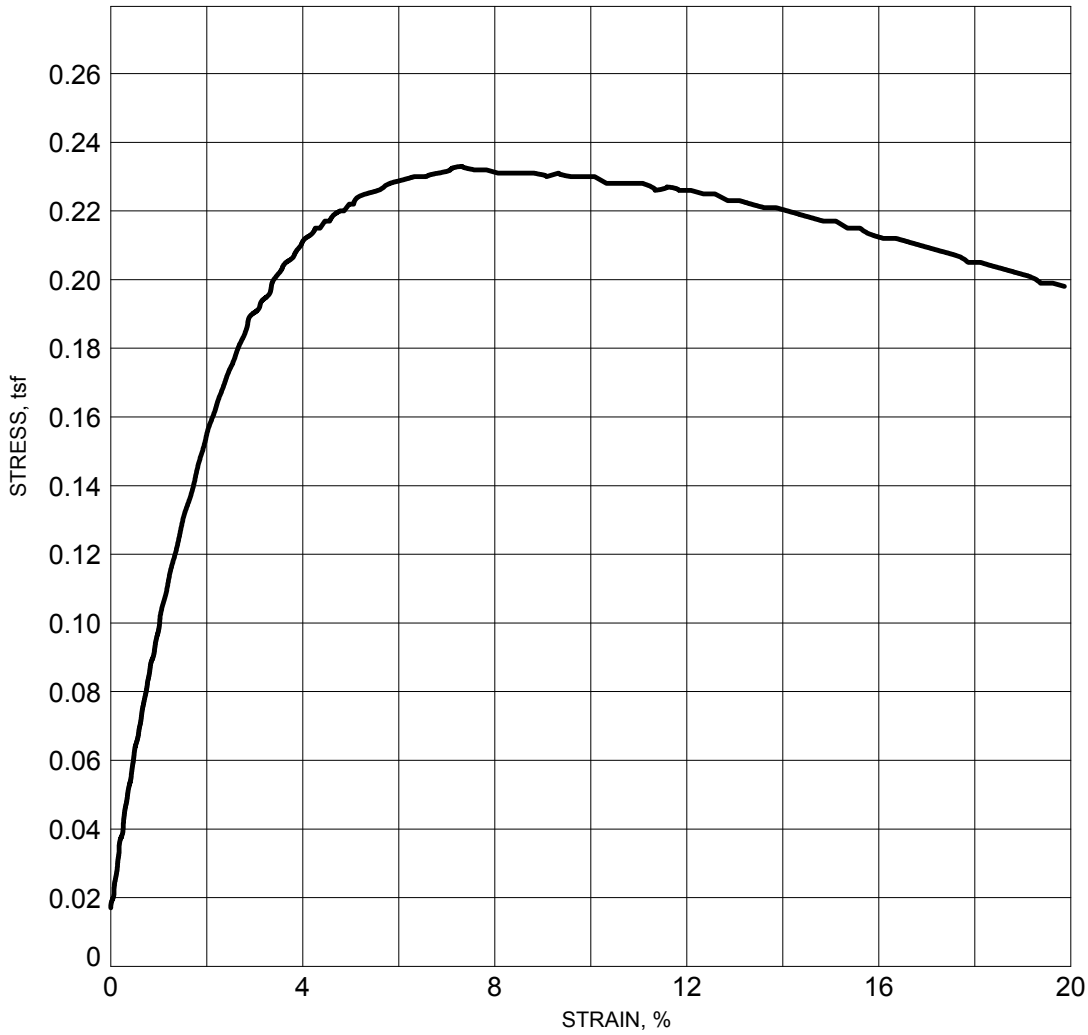
% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand lenses and shell fragments (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

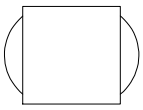
Tested By: SRT	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-108

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-45
Depth (ft)	14-16
Water Content, %	34.9
Wet Density, pcf	119.3
Dry Density, pcf	88.4
Saturation, %	102.4
Void Ratio	0.93
Specimen Diameter	2.815
Specimen Height	6.009
Height/diameter ratio	2.13
Deviator Stress, tsf	0.233
Strain, %	7.3
Confining Pressure (psi)	5.6

Bulge



Failure Sketch

LL = PL = PI =

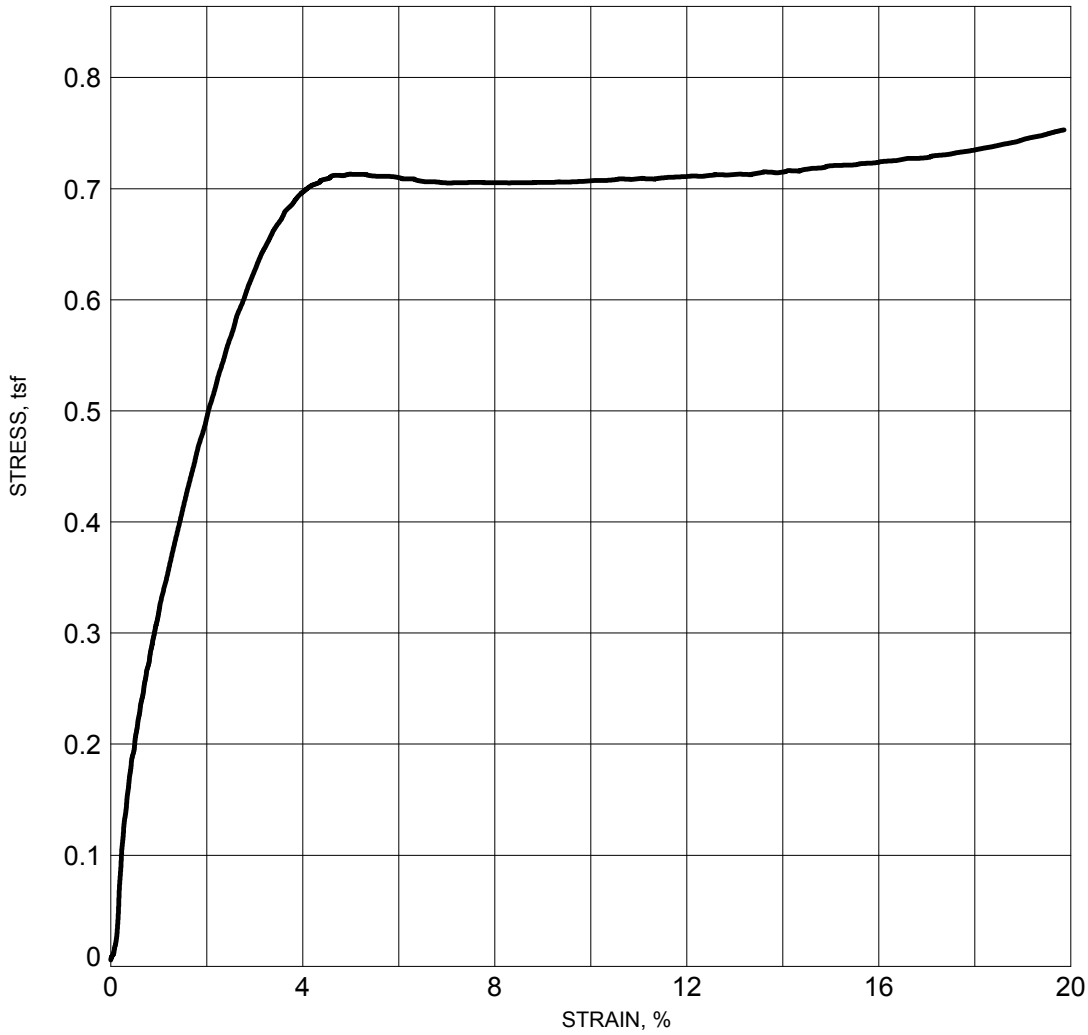
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray silty clay with sand and shell fragments (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

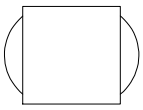
Tested By: SRT	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-109

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-45
Depth (ft)	53-55
Water Content, %	40.5
Wet Density, pcf	116.7
Dry Density, pcf	83.1
Saturation, %	104.8
Void Ratio	1.06
Specimen Diameter	2.823
Specimen Height	6.020
Height/diameter ratio	2.13
Deviator Stress, tsf	0.720
Strain, %	15.0
Confining Pressure (psi)	21.6

Bulge



Failure Sketch

LL = PL = PI =

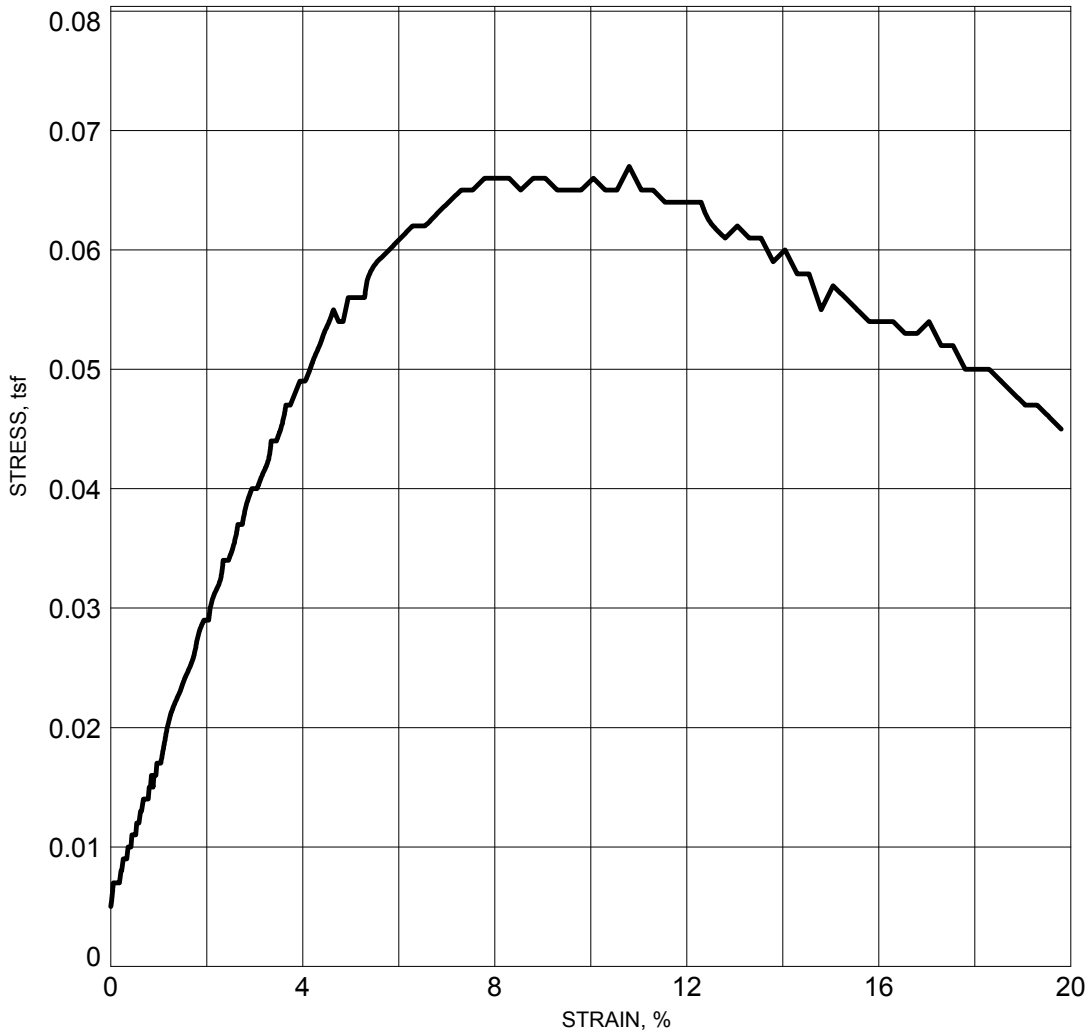
% 200= % Organic= Assumed Gs=2.74

Description: Medium gray silty clay with sand and silt lenses (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

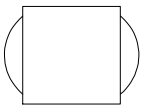
Tested By: SRT	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure D-110

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	0-2
Water Content, %	65.5
Wet Density, pcf	101.9
Dry Density, pcf	61.6
Saturation, %	100.9
Void Ratio	1.78
Specimen Diameter	2.855
Specimen Height	5.997
Height/diameter ratio	2.10
Deviator Stress, tsf	0.067
Strain, %	10.8
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

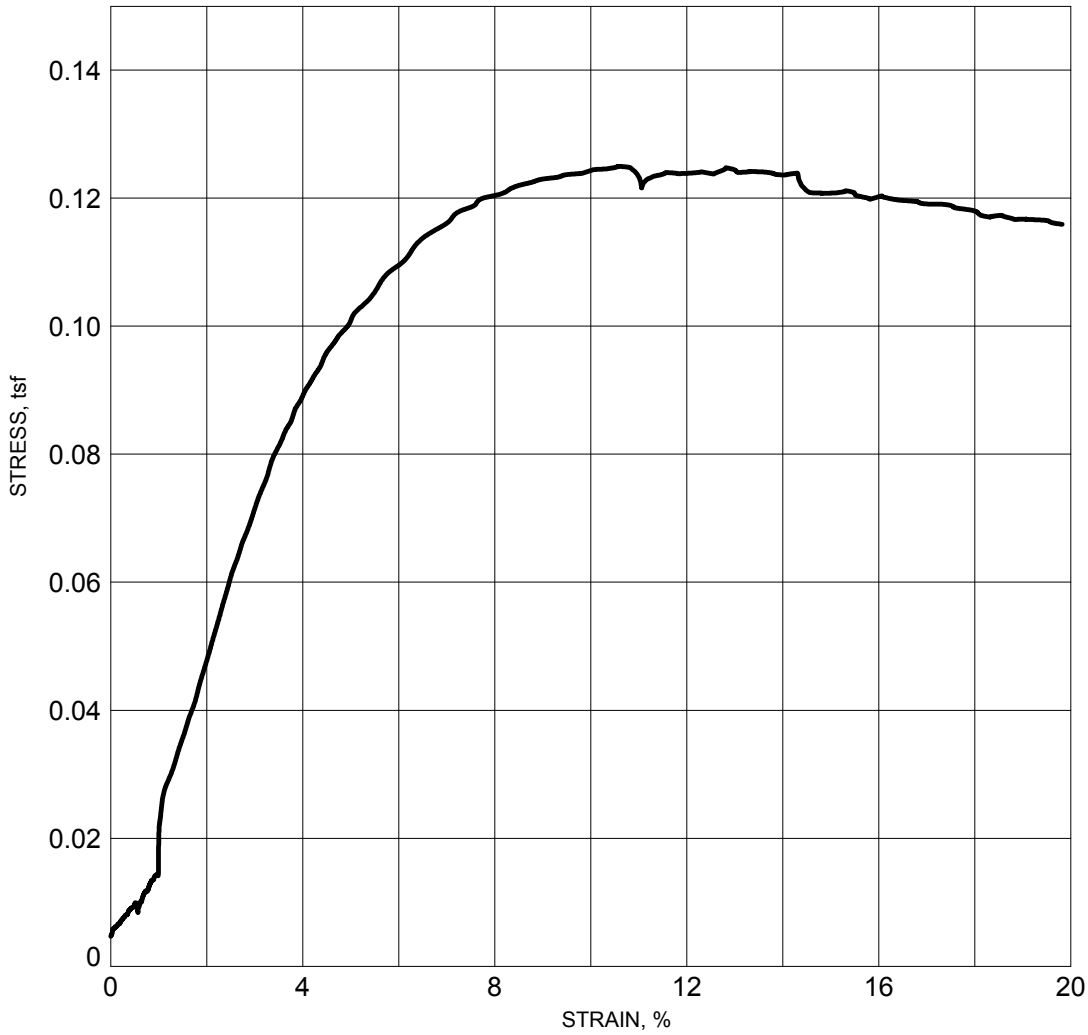
% 200= % Organic=0.4 Assumed Gs=2.74

Description: Very soft gray clay (CH)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

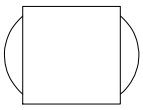
Tested By: CLP	Date Tested: 5/30/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-111

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	4-6
Water Content, %	38.5
Wet Density, pcf	115.6
Dry Density, pcf	83.4
Saturation, %	100.6
Void Ratio	1.05
Specimen Diameter	2.855
Specimen Height	5.832
Height/diameter ratio	2.04
Deviator Stress, tsf	0.125
Strain, %	10.6
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

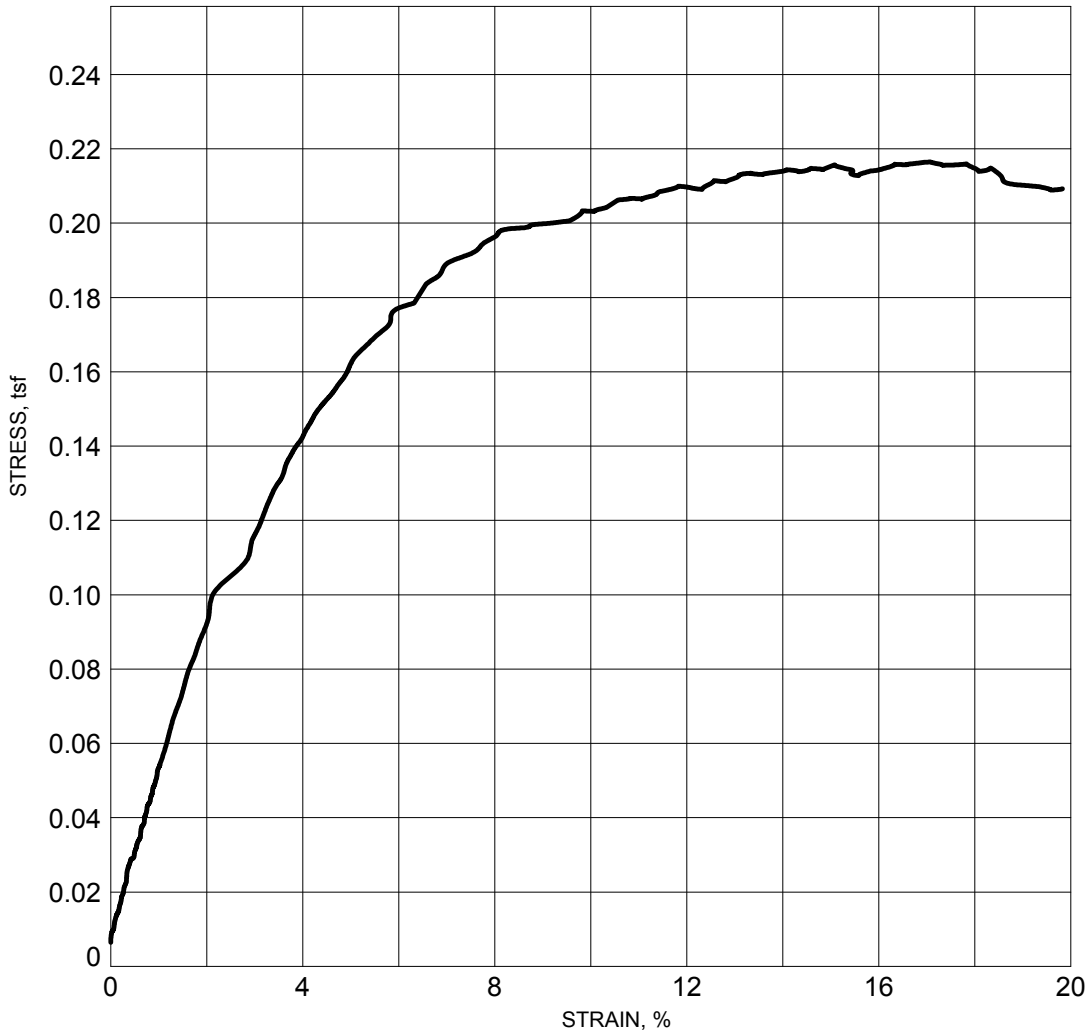
% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray silty clay with with sand layers and shells (CL)

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

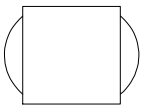
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-112

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	6-8
Water Content, %	53.3
Wet Density, pcf	120.3
Dry Density, pcf	78.5
Saturation, %	123.8
Void Ratio	1.18
Specimen Diameter	2.755
Specimen Height	5.952
Height/diameter ratio	2.16
Deviator Stress, tsf	0.215
Strain, %	15.0
Confining Pressure (psi)	5.0

Bulge



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand, silty sand layers, shell fragments and 3" silt layer at top (CL)

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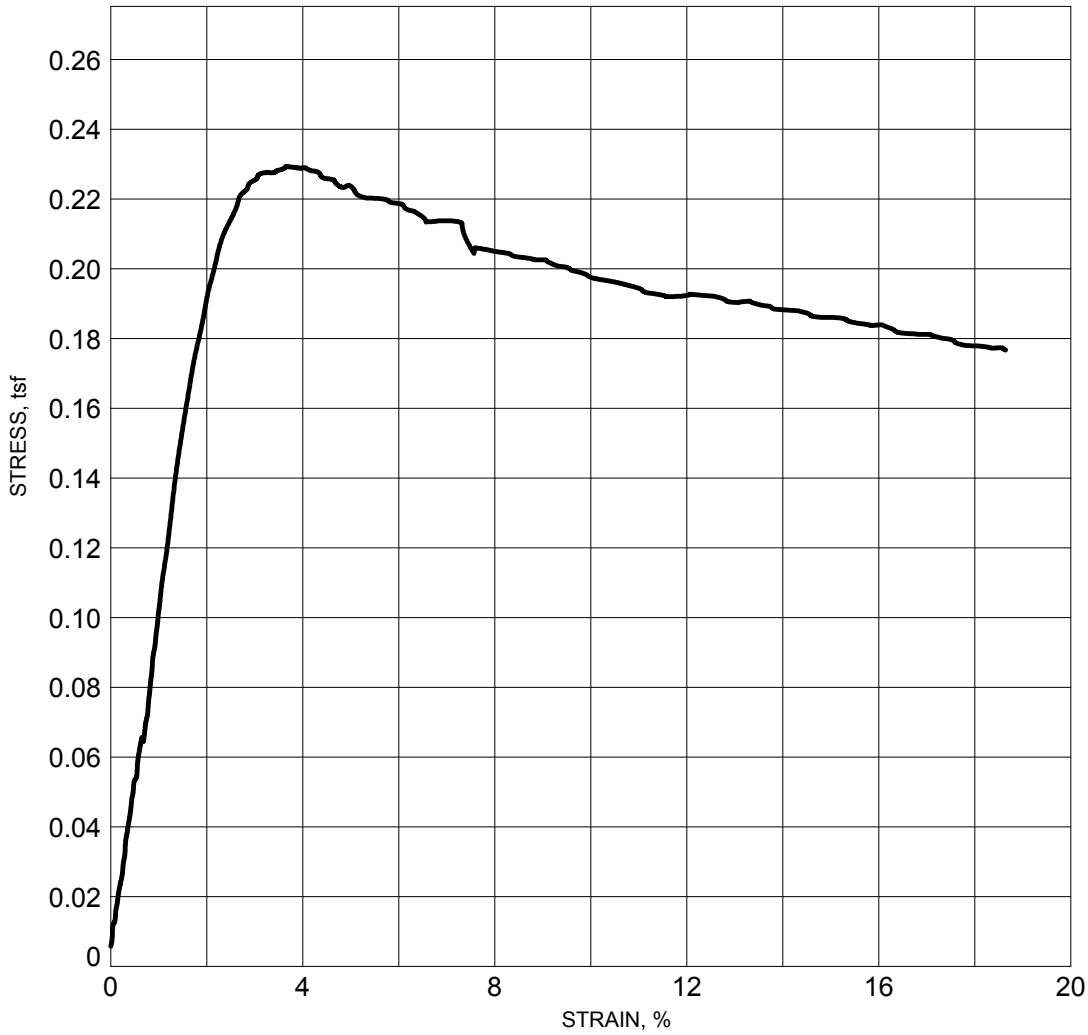
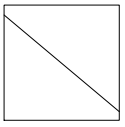
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-113

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	10-12
Water Content, %	75.4
Wet Density, pcf	101.6
Dry Density, pcf	57.9
Saturation, %	105.9
Void Ratio	1.95
Specimen Diameter	2.768
Specimen Height	6.006
Height/diameter ratio	2.17
Deviator Stress, tsf	0.229
Strain, %	3.7
Confining Pressure (psi)	5.0

Angle Shear 50º



Failure Sketch

LL = 94 PL = 26 PI = 68

% 200= % Organic= Assumed Gs=2.74

Description: Very soft gray clay with sand pockets and silt lenses (CH)

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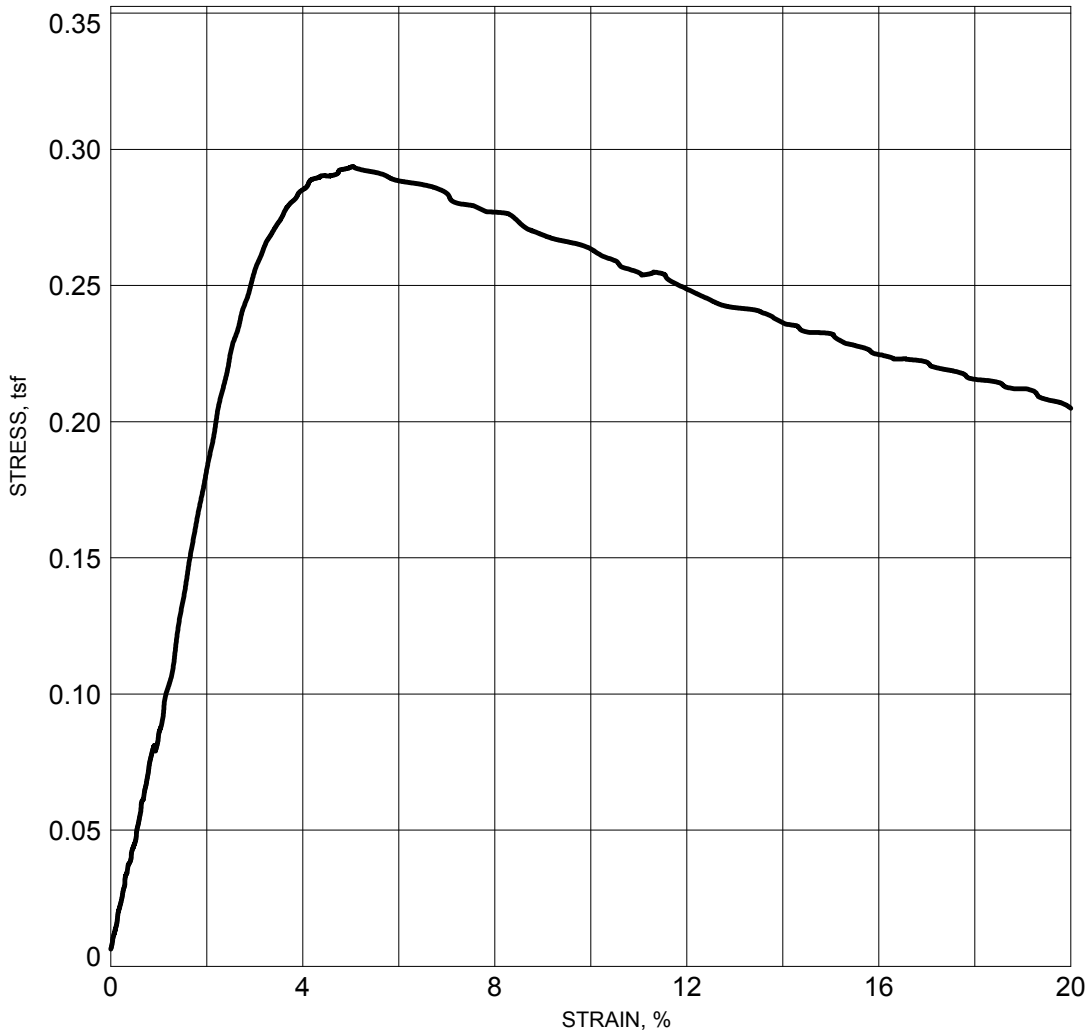
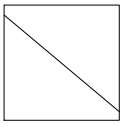
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-114

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	12-14
Water Content, %	62.1
Wet Density, pcf	112.9
Dry Density, pcf	69.7
Saturation, %	116.9
Void Ratio	1.45
Specimen Diameter	2.768
Specimen Height	5.689
Height/diameter ratio	2.06
Deviator Stress, tsf	0.294
Strain, %	5.1
Confining Pressure (psi)	5.2

Angle Shear 70º



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with sand pockets and silt lenses (CH)

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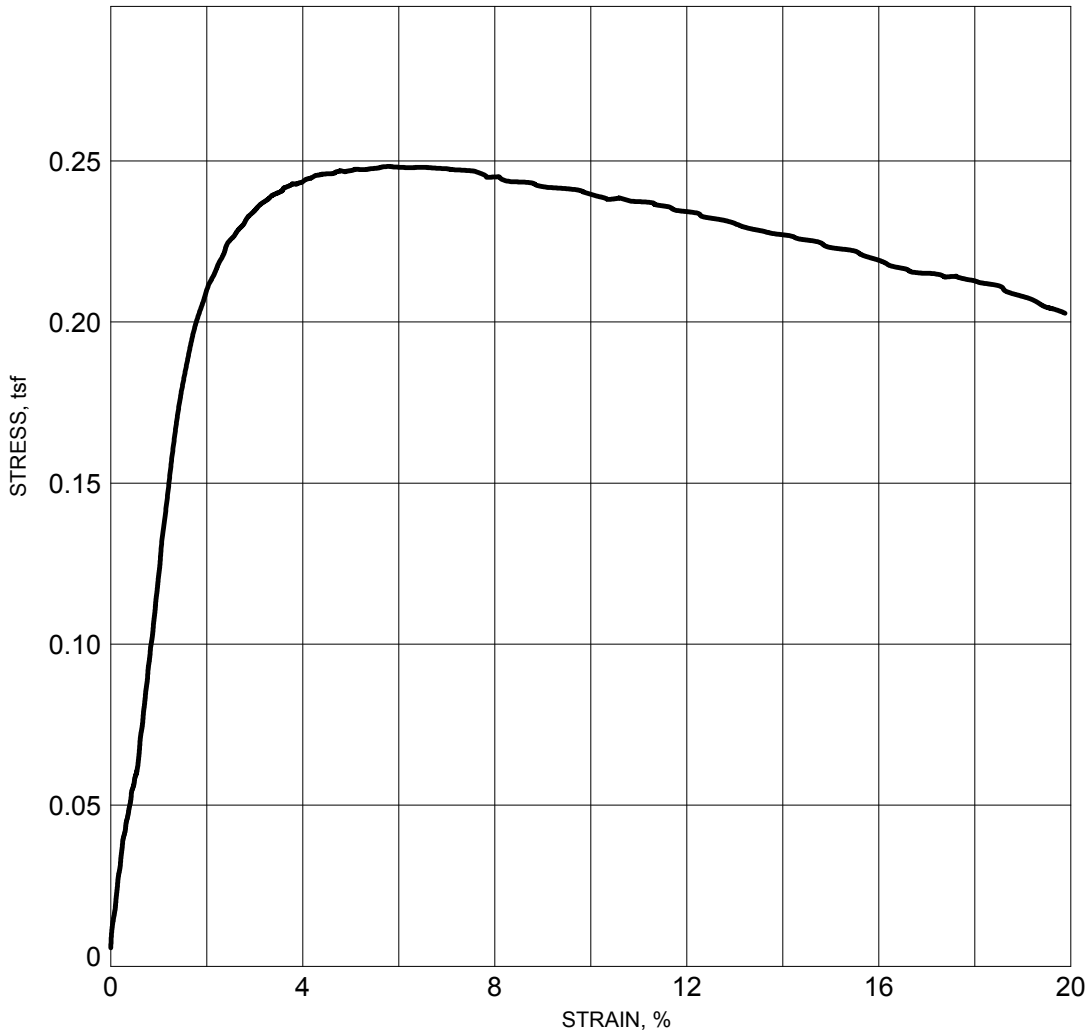
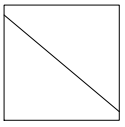
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-115

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	14-16
Water Content, %	43.1
Wet Density, pcf	117.6
Dry Density, pcf	82.2
Saturation, %	109.4
Void Ratio	1.08
Specimen Diameter	2.813
Specimen Height	6.002
Height/diameter ratio	2.13
Deviator Stress, tsf	0.248
Strain, %	5.8
Confining Pressure (psi)	6.0

Angle Shear 45º



Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Soft dark gray clay with sand lenses, sand pockets, and shells (CH)

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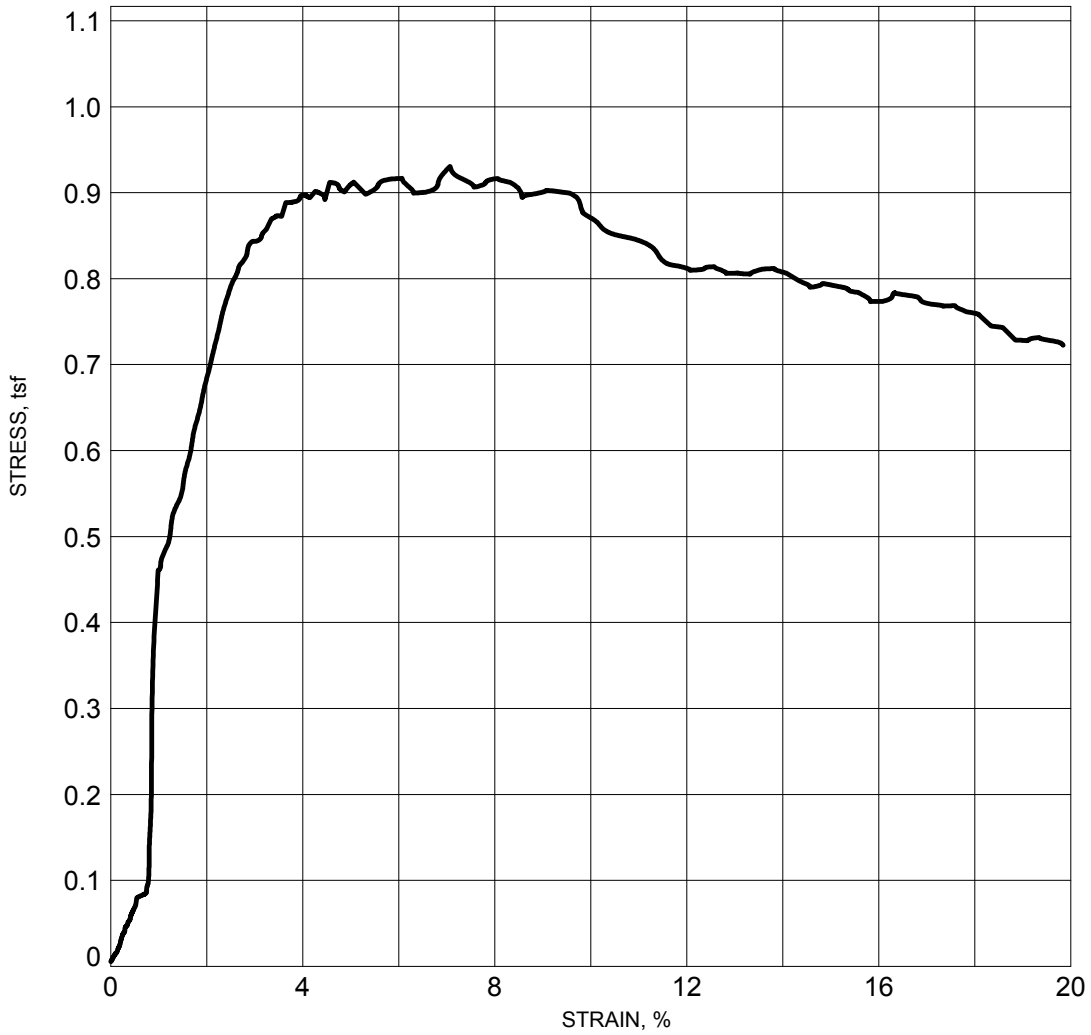
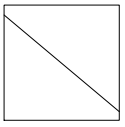
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-116

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	18-20
Water Content, %	50.0
Wet Density, pcf	108.9
Dry Density, pcf	72.6
Saturation, %	101.0
Void Ratio	1.35
Specimen Diameter	2.834
Specimen Height	6.005
Height/diameter ratio	2.12
Deviator Stress, tsf	0.931
Strain, %	7.1
Confining Pressure (psi)	7.6

Angle Shear 60º



Failure Sketch

LL = 66 PL = 22 PI = 44

% 200= % Organic= Assumed Gs=2.74

Description: Medium gray clay with sand lenses and shell fragments (CH)

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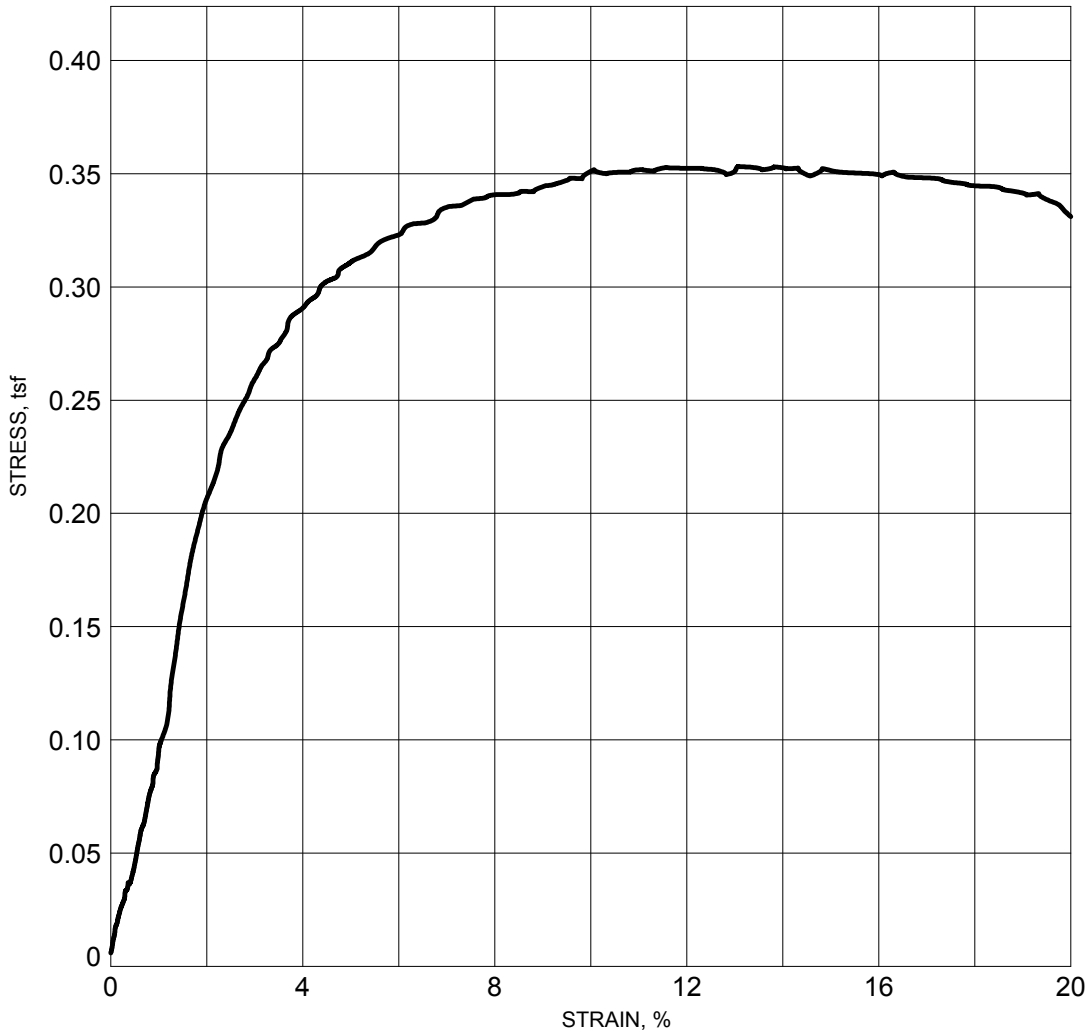
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-117

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	48-50
Water Content, %	41.6
Wet Density, pcf	112.4
Dry Density, pcf	79.4
Saturation, %	98.9
Void Ratio	1.15
Specimen Diameter	2.813
Specimen Height	6.020
Height/diameter ratio	2.14
Deviator Stress, tsf	0.353
Strain, %	13.1
Confining Pressure (psi)	19.6

Multiple Shear

Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Soft gray clay with silt, sand lenses and shells (CL)

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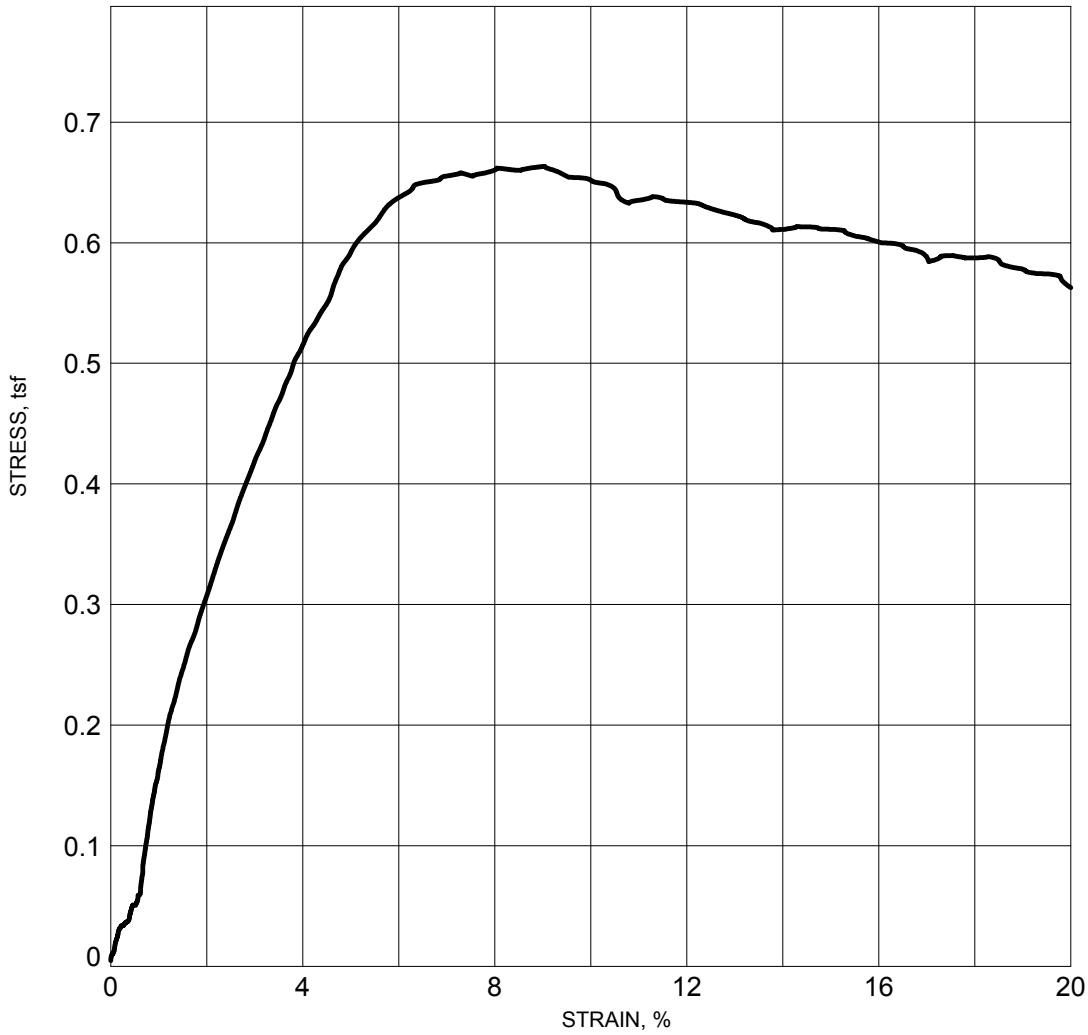
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-118

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Boring ID	B-48
Depth (ft)	58-60
Water Content, %	39.1
Wet Density, pcf	117.7
Dry Density, pcf	84.6
Saturation, %	105.0
Void Ratio	1.02
Specimen Diameter	2.838
Specimen Height	6.011
Height/diameter ratio	2.12
Deviator Stress, tsf	0.663
Strain, %	9.0
Confining Pressure (psi)	23.6

Multiple Shear

Failure Sketch

LL = PL = PI =

% 200= % Organic= Assumed Gs=2.74

Description: Medium gray clay with silt, sand lenses and sand layers (CL)

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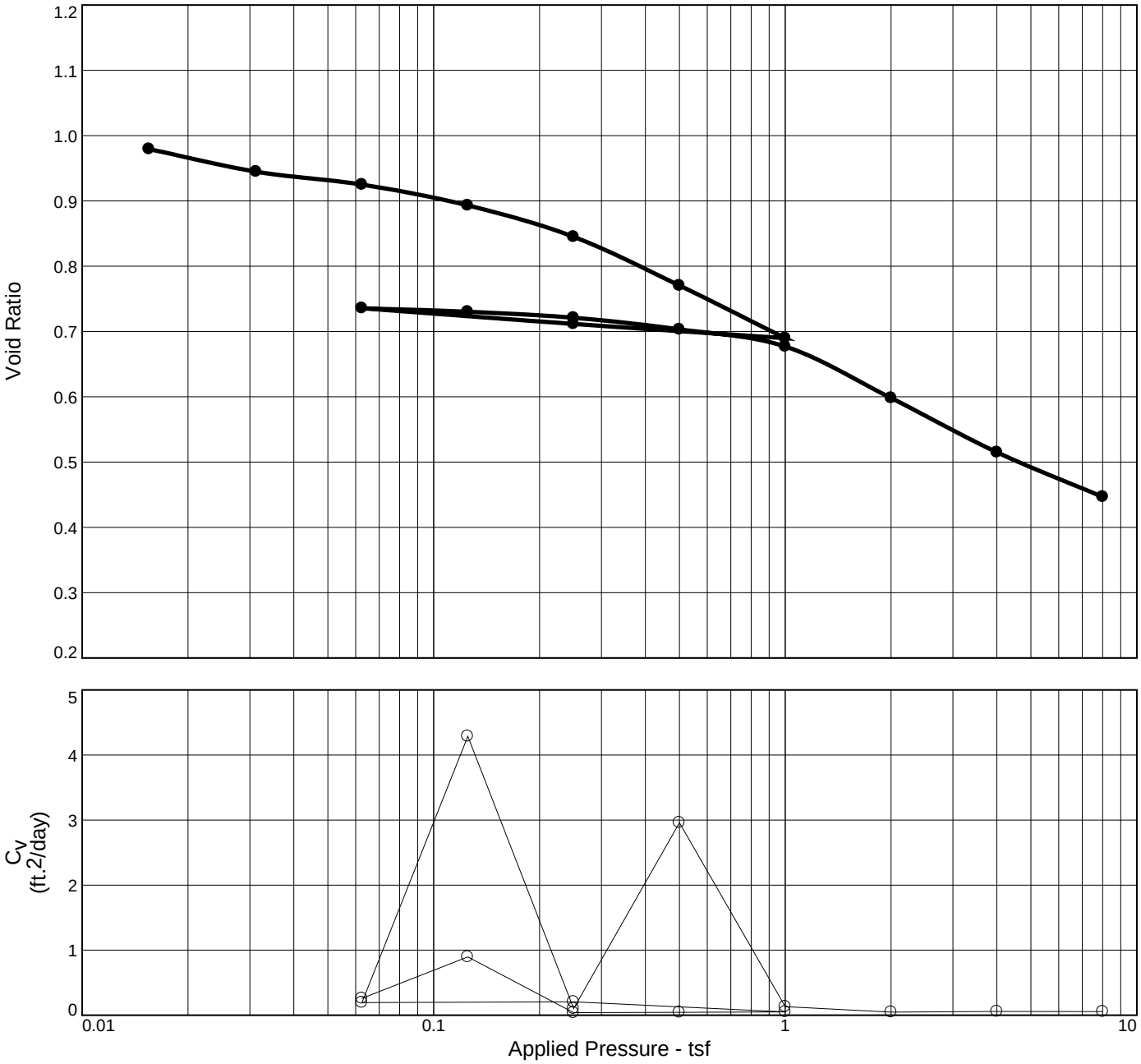
Tested By: CLP	Date Tested: 5/31/2018	**UNCONSOLIDATED UNDRAINED COMPRESSION TEST ASTM D2850**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers Figure D-119

GEI-UNCONSOLIDATED UNDRAINED GRAPH - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:05 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
93.5 %	34.6 %	83.6	36	18	2.651	0.2	0.31	0.980

MATERIAL DESCRIPTION	USCS	AASHTO
Gray silty clay with sand pockets and shell fragments	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-18 **Depth:** 4' - 6'

Remarks:
Specific Gravity is measured.

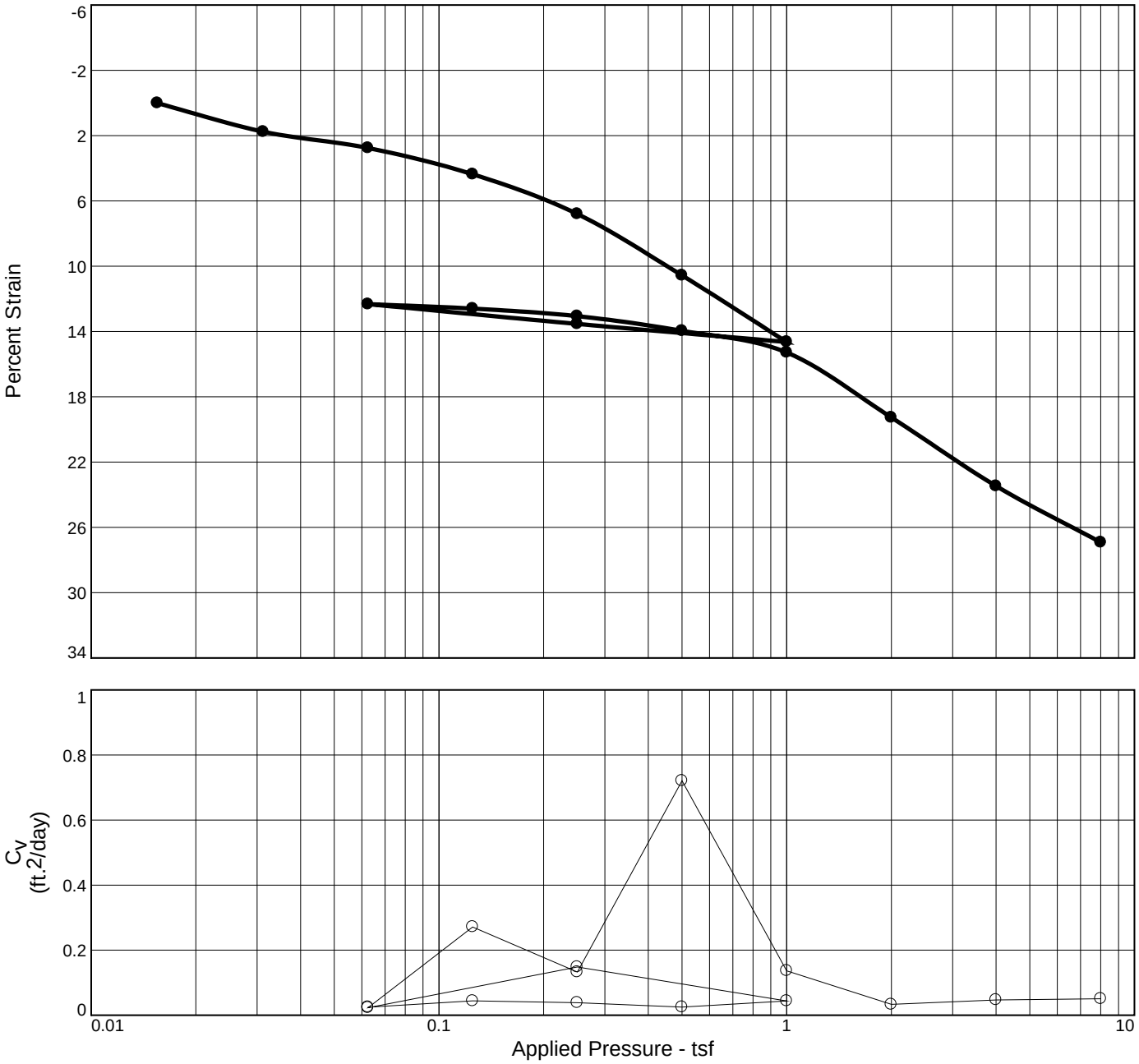
C_v at t_{90}

GeoEngineers

Tested By: KLA **Checked By:** ARS

Figure D-120

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
93.5 %	34.6 %	83.6	36	18	2.651	0.2	0.31	0.980

MATERIAL DESCRIPTION	USCS	AASHTO
Gray silty clay with sand pockets and shell fragments	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-18 **Depth:** 4' - 6'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: KLA **Checked By:** ARS

Figure D-121

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-18
Depth: 4' - 6'
Material Description: Gray silty clay with sand pockets and shell fragments
Liquid Limit: 36 **Plasticity Index:** 18
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	128.75 g.	Spec. Gr. =	2.651	Wet w+t =	169.26 g.
Dry w+t =	100.45 g.	Est. Ht. Solids =	0.505 in.	Dry w+t =	145.84 g.
Tare Wt. =	18.58 g.	Init. V.R. =	0.980	Tare Wt. =	40.58 g.
Moisture =	34.6 %	Init. Sat. =	93.5 %	Moisture =	22.2 %
UNIT WEIGHT		TEST START		Dry Wt. =	105.26 g.
Height =	1.000 in.	Height =	1.000 in.		
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	144.96 g.				
Dry Dens. =	83.6 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.2/day)	C_α	Void Ratio	% Strain
start	0.64879	0.00000			0.980	
31.00	0.64890	0.00011			0.979	0.0 Comprs.
62.50	0.66638	0.01759		0.001	0.945	1.8 Comprs.
125.00	0.67635	0.02756	0.025	0.001	0.925	2.8 Comprs.
250.00	0.69245	0.04366	0.044	0.006	0.893	4.4 Comprs.
500.00	0.71677	0.06798	0.038	0.005	0.845	6.8 Comprs.
1000.00	0.75442	0.10563	0.025	0.005	0.770	10.6 Comprs.
2000.00	0.79520	0.14641	0.044	0.014	0.690	14.6 Comprs.
500.00	0.78414	0.13535	0.148		0.712	13.5 Comprs.
125.00	0.77201	0.12322	0.023		0.736	12.3 Comprs.
250.00	0.77475	0.12596	0.271	0.001	0.730	12.6 Comprs.
500.00	0.77938	0.13059	0.133	0.000	0.721	13.1 Comprs.
1000.00	0.78838	0.13959	0.721	0.001	0.703	14.0 Comprs.
2000.00	0.80161	0.15282	0.137	0.005	0.677	15.3 Comprs.
4000.00	0.84146	0.19267	0.033	0.007	0.598	19.3 Comprs.
8000.00	0.88343	0.23464	0.047	0.008	0.515	23.5 Comprs.
16000.00	0.91794	0.26915	0.051	0.010	0.447	26.9 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.31 **Preconsolidation pressure (P_p), tsf =** 0.2 **Void ratio at P_p (e_m) =** 0.855
Recompression index (C_r) = 0.09

Pressure: 31.00 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64879	16	2.4500	0.64883	31	79.4000	0.64890
2	0.0333	0.64882	17	3.1000	0.64882	32	99.9667	0.64886
3	0.0500	0.64882	18	3.9333	0.64887	33	125.8667	0.64884
4	0.0833	0.64881	19	4.9500	0.64884	34	158.4500	0.64881
5	0.1333	0.64885	20	6.2500	0.64891	35	199.5000	0.64868
6	0.1833	0.64883	21	7.8833	0.64882	36	251.1667	0.64842
7	0.2500	0.64886	22	9.9500	0.64884	37	316.2000	0.64826
8	0.3333	0.64879	23	12.5333	0.64890	38	398.0833	0.64814
9	0.4333	0.64885	24	15.8000	0.64887	39	501.1667	0.64803
10	0.5667	0.64886	25	19.9000	0.64887	40	630.9500	0.64792
11	0.7333	0.64883	26	25.0667	0.64887	41	794.3167	0.64798
12	0.9333	0.64886	27	31.5833	0.64888	42	999.9833	0.64799
13	1.2000	0.64887	28	39.7667	0.64889	43	1258.9333	0.64880
14	1.5167	0.64883	29	50.0667	0.64887	44	1440.0167	0.64890
15	1.9333	0.64881	30	63.0500	0.64885			

Void Ratio = 0.979 **Compression =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

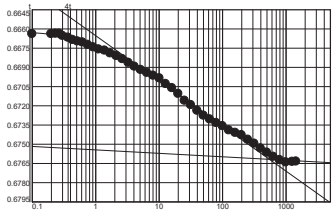
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64888	16	2.1167	0.65203	31	63.2333	0.66554
2	0.1000	0.64891	17	2.6333	0.65287	32	79.5667	0.66576
3	0.2000	0.64899	18	3.2833	0.66094	33	100.1333	0.66591
4	0.2333	0.64906	19	4.1000	0.66136	34	126.0333	0.66604
5	0.2667	0.64920	20	5.1333	0.66194	35	158.6333	0.66609
6	0.3000	0.64928	21	6.4333	0.66256	36	199.6667	0.66608
7	0.3500	0.64945	22	8.0667	0.66316	37	251.3333	0.66625
8	0.4167	0.64954	23	10.1333	0.66338	38	316.3833	0.66642
9	0.5000	0.64973	24	12.7167	0.66370	39	398.2667	0.66630
10	0.6167	0.64999	25	15.9833	0.66391	40	501.3500	0.66630
11	0.7333	0.65020	26	20.0833	0.66433	41	631.1167	0.66627
12	0.9000	0.65046	27	25.2500	0.66457	42	794.4833	0.66635
13	1.1167	0.65067	28	31.7667	0.66485	43	848.2167	0.66638
14	1.3667	0.65110	29	39.9500	0.66509			
15	1.7000	0.65152	30	50.2500	0.66530			

Void Ratio = 0.945 **Compression =** 1.8%

Figure D-122

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 3**

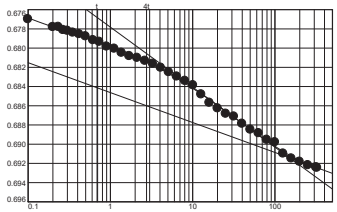
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.66635	24	12.7167	0.67030
2	0.1000	0.66640	25	15.9833	0.67062
3	0.2000	0.66639	26	20.0833	0.67106
4	0.2333	0.66637	27	25.2500	0.67160
5	0.2667	0.66637	28	31.7500	0.67194
6	0.3000	0.66653	29	39.9500	0.67238
7	0.3667	0.66668	30	50.2500	0.67276
8	0.4333	0.66685	31	63.2333	0.67306
9	0.5167	0.66697	32	79.5667	0.67334
10	0.6167	0.66705	33	100.1333	0.67359
11	0.7500	0.66724	34	126.0333	0.67391
12	0.9167	0.66743	35	158.6333	0.67411
13	1.1167	0.66760	36	199.6667	0.67429
14	1.3833	0.66769	37	251.3333	0.67465
15	1.7000	0.66790	38	316.3667	0.67495
16	2.1167	0.66811	39	398.2500	0.67532
17	2.6333	0.66835	40	501.3333	0.67565
18	3.2833	0.66864	41	631.1167	0.67598
19	4.1000	0.66894	42	794.4833	0.67623
20	5.1333	0.66920	43	1000.1500	0.67641
21	6.4333	0.66943	44	1259.1000	0.67637
22	8.0667	0.66964	45	1440.4833	0.67635
23	10.1333	0.66985			



Void Ratio = 0.925 **Compression =** 2.8%
D_0 = 0.6659 **D_{50} =** 0.6710 **D_{100} =** 0.6762 **C_v at 19.04 min. =** 0.025 ft.^{2}/day **C_α =** 0.001

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.67633	12	0.9000	0.67983
2	0.1000	0.67698	13	1.1167	0.68005
3	0.2000	0.67780	14	1.3667	0.68048
4	0.2333	0.67779	15	1.7000	0.68082
5	0.2667	0.67811	16	2.1167	0.68102
6	0.3000	0.67819	17	2.6333	0.68132
7	0.3500	0.67838	18	3.2833	0.68162
8	0.4167	0.67854	19	4.1000	0.68204
9	0.5000	0.67877	20	5.1333	0.68250
10	0.6167	0.67917	21	6.4333	0.68296
11	0.7333	0.67934	22	8.0667	0.68341



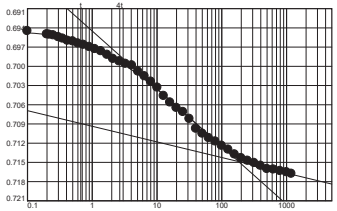
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.68386	33	100.1333	0.68980
24	12.7167	0.68481	34	126.0167	0.69098
25	15.9667	0.68569	35	158.6167	0.69149
26	20.0833	0.68627	36	199.6667	0.69183
27	25.2500	0.68683	37	251.3333	0.69219
28	31.7500	0.68712	38	316.3667	0.69240
29	39.9333	0.68787	39	324.9167	0.69245
30	50.2500	0.68849			
31	63.2333	0.68885			
32	79.5667	0.68954			

Void Ratio = 0.893 **Compression =** 4.4%
D_0 = 0.6771 **D_{50} =** 0.6843 **D_{100} =** 0.6914 **C_v at 10.39 min. =** 0.044 ft.^{2}/day **C_α =** 0.006

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69240	23	10.1167	0.70332
2	0.1000	0.69450	24	12.7167	0.70463
3	0.2000	0.69500	25	15.9667	0.70564
4	0.2167	0.69506	26	20.0667	0.70649
5	0.2500	0.69515	27	25.2500	0.70714
6	0.3000	0.69543	28	31.7500	0.70821
7	0.3500	0.69566	29	39.9333	0.70974
8	0.4167	0.69601	30	50.2500	0.71050
9	0.5000	0.69611	31	63.2167	0.71120
10	0.6000	0.69642	32	79.5667	0.71174
11	0.7333	0.69664	33	100.1333	0.71241
12	0.9000	0.69698	34	126.0167	0.71300
13	1.1000	0.69730	35	158.6167	0.71376
14	1.3667	0.69763	36	199.6667	0.71433
15	1.7000	0.69821	37	251.3333	0.71474
16	2.1000	0.69884	38	316.3667	0.71509
17	2.6167	0.69922	39	398.2500	0.71553
18	3.2667	0.69960	40	501.3333	0.71603
19	4.1000	0.69985	41	631.1167	0.71612
20	5.1333	0.70080	42	794.4833	0.71635
21	6.4167	0.70155	43	1000.1667	0.71653
22	8.0667	0.70240	44	1187.2333	0.71677

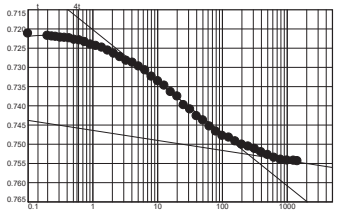


Void Ratio = 0.845 **Compression =** 6.8%
D_0 = 0.6933 **D_{50} =** 0.7041 **D_{100} =** 0.7149 **C_v at 11.44 min. =** 0.038 ft.^{2}/day **C_α =** 0.005

Figure D-123

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

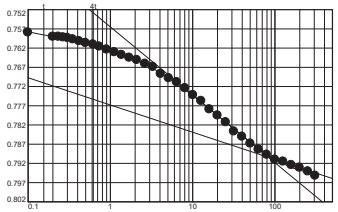
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.71675	24	12.7167	0.73476
2	0.1000	0.72119	25	15.9833	0.73643
3	0.2000	0.72180	26	20.0833	0.73757
4	0.2333	0.72196	27	25.2500	0.73981
5	0.2667	0.72203	28	31.7667	0.74095
6	0.3167	0.72226	29	39.9500	0.74267
7	0.3667	0.72228	30	50.2667	0.74378
8	0.4333	0.72244	31	63.2333	0.74536
9	0.5167	0.72279	32	79.5833	0.74667
10	0.6167	0.72296	33	100.1500	0.74782
11	0.7500	0.72342	34	126.0333	0.74826
12	0.9167	0.72404	35	158.6333	0.74923
13	1.1167	0.72441	36	199.6833	0.75009
14	1.3833	0.72487	37	251.3500	0.75059
15	1.7000	0.72561	38	316.4000	0.75122
16	2.1167	0.72644	39	398.2667	0.75205
17	2.6333	0.72733	40	501.3500	0.75277
18	3.2833	0.72825	41	631.1333	0.75353
19	4.1000	0.72878	42	794.5000	0.75402
20	5.1333	0.72976	43	1000.1833	0.75425
21	6.4333	0.73076	44	1259.1000	0.75429
22	8.0667	0.73239	45	1440.1333	0.75442
23	10.1333	0.73361			



Void Ratio = 0.770 **Compression =** 10.6%
D_0 = 0.7207 **D_{50} =** 0.7367 **D_{100} =** 0.7527 **C_v at 16.40 min. =** 0.025 ft.^{2}/day **C_α =** 0.005

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.75444	12	0.9000	0.76235
2	0.1000	0.75793	13	1.1167	0.76306
3	0.2000	0.75904	14	1.3667	0.76377
4	0.2333	0.75903	15	1.7000	0.76448
5	0.2667	0.75919	16	2.1000	0.76509
6	0.3000	0.75934	17	2.6333	0.76605
7	0.3500	0.75973	18	3.2833	0.76688
8	0.4167	0.76018	19	4.1000	0.76872
9	0.5000	0.76066	20	5.1333	0.76981
10	0.6167	0.76104	21	6.4333	0.77084
11	0.7333	0.76160	22	8.0667	0.77242



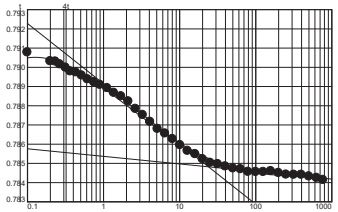
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.77420	33	100.1333	0.79102
24	12.7167	0.77574	34	126.0167	0.79151
25	15.9667	0.77791	35	158.6167	0.79241
26	20.0667	0.77952	36	199.6500	0.79310
27	25.2500	0.78128	37	251.3167	0.79410
28	31.7500	0.78366	38	308.6167	0.79520
29	39.9333	0.78505			
30	50.2500	0.78683			
31	63.2167	0.78836			
32	79.5667	0.78975			

Void Ratio = 0.690 **Compression =** 14.6%
D_0 = 0.7561 **D_{50} =** 0.7732 **D_{100} =** 0.7904 **C_v at 8.56 min. =** 0.044 ft.^{2}/day **C_α =** 0.014

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.79521	22	8.0667	0.78627
2	0.1000	0.79078	23	10.1333	0.78595
3	0.2000	0.79032	24	12.7167	0.78565
4	0.2333	0.79030	25	15.9833	0.78548
5	0.2667	0.79016	26	20.0833	0.78522
6	0.3167	0.78999	27	25.2500	0.78503
7	0.3667	0.78979	28	31.7500	0.78496
8	0.4333	0.78974	29	39.9500	0.78484
9	0.5167	0.78958	30	50.2500	0.78474
10	0.6167	0.78938	31	63.2333	0.78470
11	0.7500	0.78923	32	79.5667	0.78456
12	0.9000	0.78909	33	100.1333	0.78455
13	1.1167	0.78892	34	126.0333	0.78455
14	1.3667	0.78867	35	158.6333	0.78460
15	1.7000	0.78849	36	199.6833	0.78450
16	2.1167	0.78823	37	251.3333	0.78442
17	2.6333	0.78784	38	316.3833	0.78441
18	3.2833	0.78752	39	398.2667	0.78441
19	4.1000	0.78716	40	501.3500	0.78432
20	5.1333	0.78680	41	631.1167	0.78425
21	6.4333	0.78656	42	764.5167	0.78414

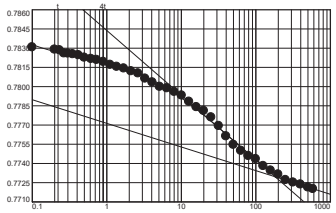


Void Ratio = 0.712 **Compression =** 13.5%
D_0 = 0.7907 **D_{50} =** 0.7878 **D_{100} =** 0.7848 **C_v at 2.45 min. =** 0.148 ft.^{2}/day

Figure D-124

Pressure: 125.00 psf — TEST READINGS — Load No. 9

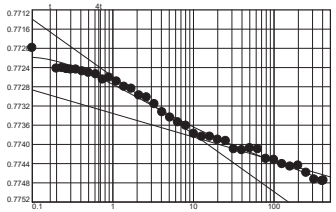
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.78415	22	8.0667	0.77959
2	0.1000	0.78307	23	10.1167	0.77931
3	0.2000	0.78289	24	12.7167	0.77882
4	0.2333	0.78284	25	15.9667	0.77840
5	0.2667	0.78259	26	20.0833	0.77810
6	0.3000	0.78258	27	25.2500	0.77760
7	0.3500	0.78253	28	31.7500	0.77693
8	0.4167	0.78245	29	39.9333	0.77612
9	0.5000	0.78226	30	50.2500	0.77546
10	0.6167	0.78216	31	63.2333	0.77499
11	0.7333	0.78208	32	79.5667	0.77459
12	0.9000	0.78193	33	100.1333	0.77435
13	1.1167	0.78170	34	126.0333	0.77380
14	1.3667	0.78155	35	158.6167	0.77345
15	1.7000	0.78142	36	199.6667	0.77314
16	2.1167	0.78120	37	251.3333	0.77271
17	2.6333	0.78103	38	316.3667	0.77252
18	3.2833	0.78062	39	398.2500	0.77236
19	4.1000	0.78033	40	501.3333	0.77213
20	5.1333	0.77999	41	584.8000	0.77201
21	6.4333	0.77987			



Void Ratio = 0.736 **Compression =** 12.3%
D_0 = 0.7834 **D_{50} =** 0.7782 **D_{100} =** 0.7730 **C_v at 16.29 min. =** 0.023 ft.^{2}/day

Pressure: 250.00 psf — TEST READINGS — Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77204	14	1.3833	0.77280
2	0.1000	0.77199	15	1.7000	0.77284
3	0.2000	0.77242	16	2.1167	0.77298
4	0.2333	0.77241	17	2.6333	0.77302
5	0.2667	0.77243	18	3.2833	0.77316
6	0.3000	0.77244	19	4.1000	0.77333
7	0.3500	0.77244	20	5.1333	0.77344
8	0.4167	0.77248	21	6.4333	0.77354
9	0.5000	0.77251	22	8.0667	0.77361
10	0.6167	0.77254	23	10.1167	0.77378
11	0.7500	0.77265	24	12.7167	0.77384
12	0.9000	0.77261	25	15.9833	0.77384
13	1.1167	0.77269	26	20.0833	0.77390



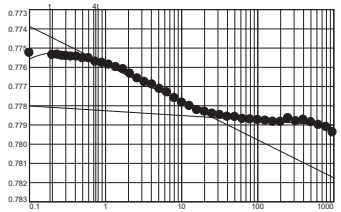
Pressure: 250.00 psf — TEST READINGS (continued) — Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	25.2500	0.77393	37	251.3333	0.77459
28	31.7500	0.77410	38	316.3667	0.77473
29	39.9500	0.77412	39	398.2500	0.77476
30	50.2500	0.77408	40	410.2167	0.77475
31	63.2333	0.77410			
32	79.5667	0.77430			
33	100.1333	0.77432			
34	126.0333	0.77441			
35	158.6333	0.77446			
36	199.6667	0.77444			

Void Ratio = 0.730 **Compression =** 12.6%
D_0 = 0.7719 **D_{50} =** 0.7729 **D_{100} =** 0.7739 **C_v at 1.39 min. =** 0.271 ft.^{2}/day **C_α =** 0.001

Pressure: 500.00 psf — TEST READINGS — Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77472	23	10.1167	0.77784
2	0.1000	0.77525	24	12.7000	0.77801
3	0.2000	0.77536	25	15.9667	0.77822
4	0.2333	0.77534	26	20.0667	0.77831
5	0.2667	0.77540	27	25.2333	0.77841
6	0.3000	0.77541	28	31.7500	0.77848
7	0.3500	0.77544	29	39.9333	0.77857
8	0.4167	0.77544	30	50.2333	0.77858
9	0.5000	0.77553	31	63.2167	0.77868
10	0.6000	0.77553	32	79.5667	0.77871
11	0.7333	0.77571	33	100.1333	0.77874
12	0.9000	0.77577	34	126.0333	0.77878
13	1.1000	0.77586	35	158.6333	0.77883
14	1.3667	0.77599	36	199.6667	0.77884
15	1.7000	0.77610	37	251.3333	0.77865
16	2.1000	0.77633	38	316.3667	0.77880
17	2.6167	0.77658	39	398.2500	0.77873
18	3.2667	0.77676	40	501.3333	0.77885
19	4.1000	0.77689	41	631.1167	0.77900
20	5.1167	0.77712	42	794.4833	0.77910
21	6.4167	0.77730	43	961.5833	0.77938
22	8.0500	0.77760			

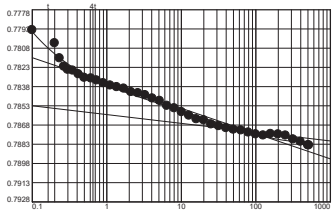


Void Ratio = 0.721 **Compression =** 13.1%
D_0 = 0.7748 **D_{50} =** 0.7767 **D_{100} =** 0.7786 **C_v at 2.82 min. =** 0.133 ft.^{2}/day **C_α =** 0.000

Figure D-125

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

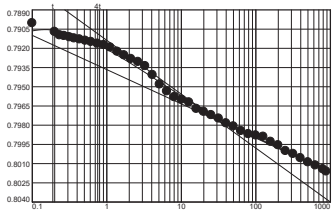
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77930	22	8.0667	0.78549
2	0.1000	0.77939	23	10.1167	0.78579
3	0.2000	0.78041	24	12.7167	0.78606
4	0.2333	0.78159	25	15.9667	0.78635
5	0.2667	0.78224	26	20.0833	0.78642
6	0.3000	0.78248	27	25.2500	0.78675
7	0.3500	0.78255	28	31.7500	0.78688
8	0.4167	0.78283	29	39.9333	0.78704
9	0.5000	0.78311	30	50.2500	0.78716
10	0.6167	0.78316	31	63.2333	0.78722
11	0.7333	0.78332	32	79.5667	0.78738
12	0.9000	0.78353	33	100.1333	0.78752
13	1.1167	0.78371	34	126.0167	0.78761
14	1.3667	0.78384	35	158.6167	0.78750
15	1.7000	0.78396	36	199.6667	0.78753
16	2.1167	0.78422	37	251.3333	0.78762
17	2.6333	0.78431	38	316.3667	0.78792
18	3.2833	0.78447	39	398.2500	0.78810
19	4.1000	0.78472	40	501.3333	0.78838
20	5.1333	0.78492	41	517.3167	0.78838
21	6.4333	0.78530			



Void Ratio = 0.703 **Compression =** 14.0%
D_0 = 0.7784 **D_{50} =** 0.7829 **D_{100} =** 0.7873 **C_v at 0.51 min. =** 0.721 ft.^{2}/day **C_α =** 0.001

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.78837	14	1.3833	0.79226
2	0.1000	0.79004	15	1.7167	0.79254
3	0.2000	0.79071	16	2.1167	0.79283
4	0.2333	0.79098	17	2.6333	0.79306
5	0.2667	0.79103	18	3.2833	0.79339
6	0.3167	0.79114	19	4.1167	0.79408
7	0.3667	0.79122	20	5.1500	0.79482
8	0.4333	0.79130	21	6.4333	0.79536
9	0.5167	0.79140	22	8.0833	0.79581
10	0.6167	0.79150	23	10.1333	0.79601
11	0.7500	0.79163	24	12.7167	0.79622
12	0.9167	0.79174	25	15.9833	0.79673
13	1.1167	0.79193	26	20.0833	0.79695



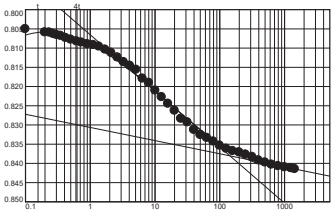
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	25.2500	0.79721	37	251.3333	0.80001
28	31.7667	0.79748	38	316.3833	0.80024
29	39.9500	0.79785	39	398.2667	0.80057
30	50.2500	0.79809	40	501.3500	0.80090
31	63.2333	0.79845	41	631.1167	0.80114
32	79.5667	0.79869	42	794.5000	0.80143
33	100.1333	0.79880	43	881.8000	0.80161
34	126.0333	0.79890			
35	158.6333	0.79930			
36	199.6667	0.79956			

Void Ratio = 0.677 **Compression =** 15.3%
D_0 = 0.7894 **D_{50} =** 0.7935 **D_{100} =** 0.7976 **C_v at 2.63 min. =** 0.137 ft.^{2}/day **C_α =** 0.005

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.80157	24	12.7167	0.82275
2	0.1000	0.80503	25	15.9833	0.82447
3	0.2000	0.80592	26	20.0833	0.82627
4	0.2333	0.80593	27	25.2500	0.82837
5	0.2667	0.80629	28	31.7500	0.82933
6	0.3000	0.80655	29	39.9500	0.83127
7	0.3500	0.80680	30	50.2500	0.83258
8	0.4167	0.80733	31	63.2333	0.83336
9	0.5000	0.80778	32	79.5667	0.83431
10	0.6167	0.80823	33	100.1333	0.83538
11	0.7333	0.80856	34	126.0333	0.83616
12	0.9000	0.80896	35	158.6333	0.83677
13	1.1167	0.80918	36	199.6667	0.83713
14	1.3667	0.80959	37	251.3333	0.83769
15	1.7000	0.81039	38	316.3667	0.83831
16	2.1167	0.81122	39	398.2500	0.83919
17	2.6333	0.81241	40	501.3500	0.83977
18	3.2833	0.81364	41	631.1167	0.84031
19	4.1000	0.81458	42	794.4833	0.84070
20	5.1333	0.81563	43	1000.1667	0.84101
21	6.4333	0.81794	44	1259.1000	0.84126
22	8.0667	0.81902	45	1440.4333	0.84146
23	10.1167	0.82103			

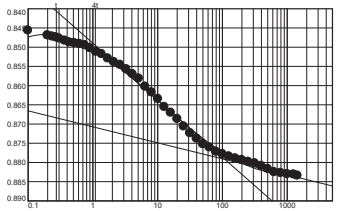


Void Ratio = 0.598 **Compression =** 19.3%
D_0 = 0.8045 **D_{50} =** 0.8212 **D_{100} =** 0.8380 **C_v at 10.12 min. =** 0.033 ft.^{2}/day **C_α =** 0.007

Figure D-126

Pressure: 8000.00 psf	TEST READINGS	Load No. 15

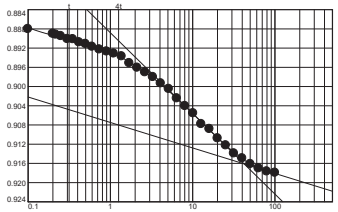
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.84141	24	12.7167	0.86554
2	0.1000	0.84564	25	15.9667	0.86703
3	0.2000	0.84690	26	20.0833	0.86866
4	0.2333	0.84722	27	25.2500	0.87064
5	0.2667	0.84741	28	31.7500	0.87237
6	0.3000	0.84771	29	39.9500	0.87378
7	0.3667	0.84826	30	50.2500	0.87525
8	0.4333	0.84873	31	63.2333	0.87607
9	0.5167	0.84890	32	79.5667	0.87718
10	0.6167	0.84912	33	100.1500	0.87777
11	0.7500	0.84947	34	126.0333	0.87843
12	0.9000	0.85022	35	158.6333	0.87895
13	1.1167	0.85117	36	199.6833	0.87935
14	1.3667	0.85177	37	251.3333	0.87982
15	1.7000	0.85294	38	316.3833	0.88023
16	2.1167	0.85388	39	398.2667	0.88090
17	2.6333	0.85459	40	501.3333	0.88168
18	3.2833	0.85573	41	631.1167	0.88252
19	4.1000	0.85703	42	794.4833	0.88274
20	5.1333	0.85815	43	1000.1667	0.88302
21	6.4333	0.86027	44	1259.1000	0.88311
22	8.0667	0.86177	45	1440.3167	0.88343
23	10.1167	0.86345			



Void Ratio = 0.515 **Compression =** 23.5%
D_0 = 0.8428 **D_{50} =** 0.8610 **D_{100} =** 0.8792 **C_v at 6.47 min. =** 0.047 ft.^{2}/day **C_α =** 0.008

Pressure: 16000.00 psf	TEST READINGS	Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.88343	12	0.9000	0.89271
2	0.1000	0.88802	13	1.1000	0.89312
3	0.2000	0.88901	14	1.3667	0.89370
4	0.2167	0.88917	15	1.7000	0.89513
5	0.2500	0.88949	16	2.1167	0.89608
6	0.3000	0.89010	17	2.6333	0.89704
7	0.3500	0.89014	18	3.2833	0.89803
8	0.4167	0.89078	19	4.1000	0.89933
9	0.5000	0.89112	20	5.1333	0.90049
10	0.6000	0.89172	21	6.4333	0.90244
11	0.7333	0.89227	22	8.0667	0.90407



Pressure: 16000.00 psf	TEST READINGS (continued)	Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1333	0.90555	33	100.1333	0.91794
24	12.7167	0.90782			
25	15.9833	0.90882			
26	20.0833	0.91078			
27	25.2500	0.91223			
28	31.7500	0.91391			
29	39.9500	0.91495			
30	50.2500	0.91613			
31	63.2333	0.91701			
32	79.5667	0.91767			

Void Ratio = 0.447 **Compression =** 26.9%
D_0 = 0.8866 **D_{50} =** 0.9014 **D_{100} =** 0.9161 **C_v at 5.44 min. =** 0.051 ft.^{2}/day **C_α =** 0.010

Figure D-127

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-18
Depth: 4' - 6'
Material Description: Gray silty clay with sand pockets and shell fragments
Liquid Limit: 36 **Plasticity Index:** 18
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	128.75 g.	Spec. Gr. =	2.651	Wet w+t =	169.26 g.
Dry w+t =	100.45 g.	Est. Ht. Solids =	0.505 in.	Dry w+t =	145.84 g.
Tare Wt. =	18.58 g.	Init. V.R. =	0.980	Tare Wt. =	40.58 g.
Moisture =	34.6 %	Init. Sat. =	93.5 %	Moisture =	22.2 %
UNIT WEIGHT		TEST START		Dry Wt. =	105.26 g.
Height =	1.000 in.	Height =	1.000 in.		
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	144.96 g.				
Dry Dens. =	83.6 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.64879	0.00000			0.980	
31.00	0.64890	0.00011			0.979	0.0 Comprs.
62.50	0.66638	0.01759		0.001	0.945	1.8 Comprs.
125.00	0.67635	0.02756	0.260		0.925	2.8 Comprs.
250.00	0.69245	0.04366	0.896		0.893	4.4 Comprs.
500.00	0.71677	0.06798	0.038	0.005	0.845	6.8 Comprs.
1000.00	0.75442	0.10563	0.043		0.770	10.6 Comprs.
2000.00	0.79520	0.14641	0.051		0.690	14.6 Comprs.
500.00	0.78414	0.13535	0.205		0.712	13.5 Comprs.
125.00	0.77201	0.12322	0.195		0.736	12.3 Comprs.
250.00	0.77475	0.12596	4.287		0.730	12.6 Comprs.
500.00	0.77938	0.13059	0.103		0.721	13.1 Comprs.
1000.00	0.78838	0.13959	2.960		0.703	14.0 Comprs.
2000.00	0.80161	0.15282	0.131		0.677	15.3 Comprs.
4000.00	0.84146	0.19267	0.047		0.598	19.3 Comprs.
8000.00	0.88343	0.23464	0.057		0.515	23.5 Comprs.
16000.00	0.91794	0.26915	0.056		0.447	26.9 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.31 **Preconsolidation pressure (P_p), tsf =** 0.2 **Void ratio at P_p (e_m) =** 0.867
Recompression index (C_r) = 0.09

Pressure: 31.00 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64879	16	2.4500	0.64883	31	79.4000	0.64890
2	0.0333	0.64882	17	3.1000	0.64882	32	99.9667	0.64886
3	0.0500	0.64882	18	3.9333	0.64887	33	125.8667	0.64884
4	0.0833	0.64881	19	4.9500	0.64884	34	158.4500	0.64881
5	0.1333	0.64885	20	6.2500	0.64891	35	199.5000	0.64868
6	0.1833	0.64883	21	7.8833	0.64882	36	251.1667	0.64842
7	0.2500	0.64886	22	9.9500	0.64884	37	316.2000	0.64826
8	0.3333	0.64879	23	12.5333	0.64890	38	398.0833	0.64814
9	0.4333	0.64885	24	15.8000	0.64887	39	501.1667	0.64803
10	0.5667	0.64886	25	19.9000	0.64887	40	630.9500	0.64792
11	0.7333	0.64883	26	25.0667	0.64887	41	794.3167	0.64798
12	0.9333	0.64886	27	31.5833	0.64888	42	999.9833	0.64799
13	1.2000	0.64887	28	39.7667	0.64889	43	1258.9333	0.64880
14	1.5167	0.64883	29	50.0667	0.64887	44	1440.0167	0.64890
15	1.9333	0.64881	30	63.0500	0.64885			

Void Ratio = 0.979 **Compression =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

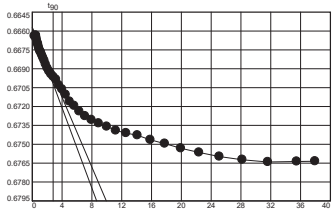
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64888	16	2.1167	0.65203	31	63.2333	0.66554
2	0.1000	0.64891	17	2.6333	0.65287	32	79.5667	0.66576
3	0.2000	0.64899	18	3.2833	0.66094	33	100.1333	0.66591
4	0.2333	0.64906	19	4.1000	0.66136	34	126.0333	0.66604
5	0.2667	0.64920	20	5.1333	0.66194	35	158.6333	0.66609
6	0.3000	0.64928	21	6.4333	0.66256	36	199.6667	0.66608
7	0.3500	0.64945	22	8.0667	0.66316	37	251.3333	0.66625
8	0.4167	0.64954	23	10.1333	0.66338	38	316.3833	0.66642
9	0.5000	0.64973	24	12.7167	0.66370	39	398.2667	0.66630
10	0.6167	0.64999	25	15.9833	0.66391	40	501.3500	0.66630
11	0.7333	0.65020	26	20.0833	0.66433	41	631.1167	0.66627
12	0.9000	0.65046	27	25.2500	0.66457	42	794.4833	0.66635
13	1.1167	0.65067	28	31.7667	0.66485	43	848.2167	0.66638
14	1.3667	0.65110	29	39.9500	0.66509			
15	1.7000	0.65152	30	50.2500	0.66530			

Void Ratio = 0.945 **Compression =** 1.8%

Figure D-128

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 3**

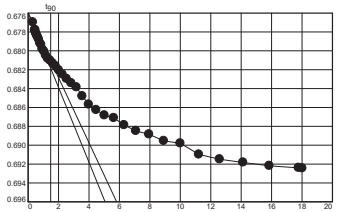
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.66635	24	12.7167	0.67030
2	0.1000	0.66640	25	15.9833	0.67062
3	0.2000	0.66639	26	20.0833	0.67106
4	0.2333	0.66637	27	25.2500	0.67160
5	0.2667	0.66637	28	31.7500	0.67194
6	0.3000	0.66653	29	39.9500	0.67238
7	0.3667	0.66668	30	50.2500	0.67276
8	0.4333	0.66685	31	63.2333	0.67306
9	0.5167	0.66697	32	79.5667	0.67334
10	0.6167	0.66705	33	100.1333	0.67359
11	0.7500	0.66724	34	126.0333	0.67391
12	0.9167	0.66743	35	158.6333	0.67411
13	1.1167	0.66760	36	199.6667	0.67429
14	1.3833	0.66769	37	251.3333	0.67465
15	1.7000	0.66790	38	316.3667	0.67495
16	2.1167	0.66811	39	398.2500	0.67532
17	2.6333	0.66835	40	501.3333	0.67565
18	3.2833	0.66864	41	631.1167	0.67598
19	4.1000	0.66894	42	794.4833	0.67623
20	5.1333	0.66920	43	1000.1500	0.67641
21	6.4333	0.66943	44	1259.1000	0.67637
22	8.0667	0.66964	45	1440.4833	0.67635
23	10.1333	0.66985			



Void Ratio = 0.925 **Compression =** 2.8%
D_0 = 0.6657 **D_{90} =** 0.6696 **D_{100} =** 0.6700 **C_v at 7.80 min. =** 0.260 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.67633	12	0.9000	0.67983
2	0.1000	0.67698	13	1.1167	0.68005
3	0.2000	0.67780	14	1.3667	0.68048
4	0.2333	0.67779	15	1.7000	0.68082
5	0.2667	0.67811	16	2.1167	0.68102
6	0.3000	0.67819	17	2.6333	0.68132
7	0.3500	0.67838	18	3.2833	0.68162
8	0.4167	0.67854	19	4.1000	0.68204
9	0.5000	0.67877	20	5.1333	0.68250
10	0.6167	0.67917	21	6.4333	0.68296
11	0.7333	0.67934	22	8.0667	0.68341



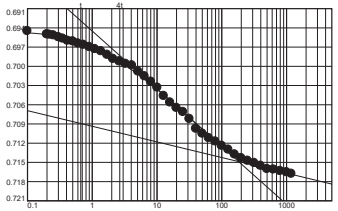
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.68386	33	100.1333	0.68980
24	12.7167	0.68481	34	126.0167	0.69098
25	15.9667	0.68569	35	158.6167	0.69149
26	20.0833	0.68627	36	199.6667	0.69183
27	25.2500	0.68683	37	251.3333	0.69219
28	31.7500	0.68712	38	316.3667	0.69240
29	39.9333	0.68787	39	324.9167	0.69245
30	50.2500	0.68849			
31	63.2333	0.68885			
32	79.5667	0.68954			

Void Ratio = 0.893 **Compression =** 4.4%
D_0 = 0.6760 **D_{90} =** 0.6811 **D_{100} =** 0.6816 **C_v at 2.20 min. =** 0.896 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69240	23	10.1167	0.70332
2	0.1000	0.69450	24	12.7167	0.70463
3	0.2000	0.69500	25	15.9667	0.70564
4	0.2167	0.69506	26	20.0667	0.70649
5	0.2500	0.69515	27	25.2500	0.70714
6	0.3000	0.69543	28	31.7500	0.70821
7	0.3500	0.69566	29	39.9333	0.70974
8	0.4167	0.69601	30	50.2500	0.71050
9	0.5000	0.69611	31	63.2167	0.71120
10	0.6000	0.69642	32	79.5667	0.71174
11	0.7333	0.69664	33	100.1333	0.71241
12	0.9000	0.69698	34	126.0167	0.71300
13	1.1000	0.69730	35	158.6167	0.71376
14	1.3667	0.69763	36	199.6667	0.71433
15	1.7000	0.69821	37	251.3333	0.71474
16	2.1000	0.69884	38	316.3667	0.71509
17	2.6167	0.69922	39	398.2500	0.71553
18	3.2667	0.69960	40	501.3333	0.71603
19	4.1000	0.69985	41	631.1167	0.71612
20	5.1333	0.70080	42	794.4833	0.71635
21	6.4167	0.70155	43	1000.1667	0.71653
22	8.0667	0.70240	44	1187.2333	0.71677

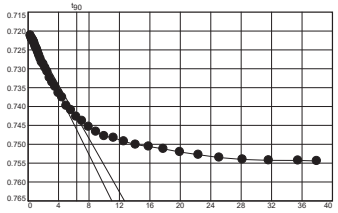


Void Ratio = 0.845 **Compression =** 6.8%
D_0 = 0.6933 **D_{50} =** 0.7041 **D_{100} =** 0.7149 **C_v at 11.44 min. =** 0.038 ft.^{2}/day **C_α =** 0.005

Figure D-129

Pressure: 1000.00 psf	TEST READINGS	Load No. 6

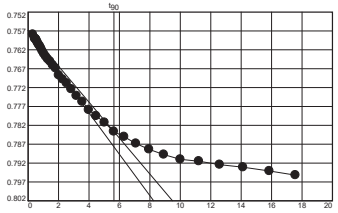
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.71675	24	12.7167	0.73476
2	0.1000	0.72119	25	15.9833	0.73643
3	0.2000	0.72180	26	20.0833	0.73757
4	0.2333	0.72196	27	25.2500	0.73981
5	0.2667	0.72203	28	31.7667	0.74095
6	0.3167	0.72226	29	39.9500	0.74267
7	0.3667	0.72228	30	50.2667	0.74378
8	0.4333	0.72244	31	63.2333	0.74536
9	0.5167	0.72279	32	79.5833	0.74667
10	0.6167	0.72296	33	100.1500	0.74782
11	0.7500	0.72342	34	126.0333	0.74826
12	0.9167	0.72404	35	158.6333	0.74923
13	1.1167	0.72441	36	199.6833	0.75009
14	1.3833	0.72487	37	251.3500	0.75059
15	1.7000	0.72561	38	316.4000	0.75122
16	2.1167	0.72644	39	398.2667	0.75205
17	2.6333	0.72733	40	501.3500	0.75277
18	3.2833	0.72825	41	631.1333	0.75353
19	4.1000	0.72878	42	794.5000	0.75402
20	5.1333	0.72976	43	1000.1833	0.75425
21	6.4333	0.73076	44	1259.1000	0.75429
22	8.0667	0.73239	45	1440.1333	0.75442
23	10.1333	0.73361			



Void Ratio = 0.770 **Compression =** 10.6%
D_0 = 0.7201 **D_{90} =** 0.7428 **D_{100} =** 0.7453 **C_v at 40.81 min. =** 0.043 ft.^{2}/day

Pressure: 2000.00 psf	TEST READINGS	Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.75444	12	0.9000	0.76235
2	0.1000	0.75793	13	1.1167	0.76306
3	0.2000	0.75904	14	1.3667	0.76377
4	0.2333	0.75903	15	1.7000	0.76448
5	0.2667	0.75919	16	2.1000	0.76509
6	0.3000	0.75934	17	2.6333	0.76605
7	0.3500	0.75973	18	3.2833	0.76688
8	0.4167	0.76018	19	4.1000	0.76872
9	0.5000	0.76066	20	5.1333	0.76981
10	0.6167	0.76104	21	6.4333	0.77084
11	0.7333	0.76160	22	8.0667	0.77242



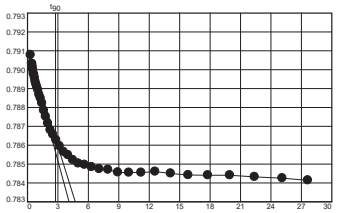
Pressure: 2000.00 psf	TEST READINGS (continued)	Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.77420	33	100.1333	0.79102
24	12.7167	0.77574	34	126.0167	0.79151
25	15.9667	0.77791	35	158.6167	0.79241
26	20.0667	0.77952	36	199.6500	0.79310
27	25.2500	0.78128	37	251.3167	0.79410
28	31.7500	0.78366	38	308.6167	0.79520
29	39.9333	0.78505			
30	50.2500	0.78683			
31	63.2167	0.78836			
32	79.5667	0.78975			

Void Ratio = 0.690 **Compression =** 14.6%
D_0 = 0.7568 **D_{90} =** 0.7837 **D_{100} =** 0.7867 **C_v at 31.79 min. =** 0.051 ft.^{2}/day

Pressure: 500.00 psf	TEST READINGS	Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.79521	22	8.0667	0.78627
2	0.1000	0.79078	23	10.1333	0.78595
3	0.2000	0.79032	24	12.7167	0.78565
4	0.2333	0.79030	25	15.9833	0.78548
5	0.2667	0.79016	26	20.0833	0.78522
6	0.3167	0.78999	27	25.2500	0.78503
7	0.3667	0.78979	28	31.7500	0.78496
8	0.4333	0.78974	29	39.9500	0.78484
9	0.5167	0.78958	30	50.2500	0.78474
10	0.6167	0.78938	31	63.2333	0.78470
11	0.7500	0.78923	32	79.5667	0.78456
12	0.9000	0.78909	33	100.1333	0.78455
13	1.1167	0.78892	34	126.0333	0.78455
14	1.3667	0.78867	35	158.6333	0.78460
15	1.7000	0.78849	36	199.6833	0.78450
16	2.1167	0.78823	37	251.3333	0.78442
17	2.6333	0.78784	38	316.3833	0.78441
18	3.2833	0.78752	39	398.2667	0.78441
19	4.1000	0.78716	40	501.3500	0.78432
20	5.1333	0.78680	41	631.1167	0.78425
21	6.4333	0.78656	42	764.5167	0.78414

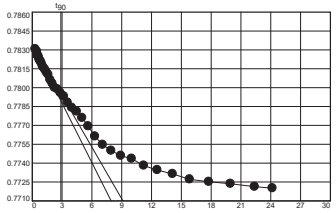


Void Ratio = 0.712 **Compression =** 13.5%
D_0 = 0.7911 **D_{90} =** 0.7863 **D_{100} =** 0.7858 **C_v at 7.64 min. =** 0.205 ft.^{2}/day

Figure D-130

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

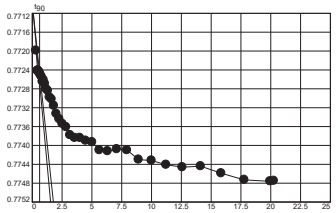
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.78415	22	8.0667	0.77959
2	0.1000	0.78307	23	10.1167	0.77931
3	0.2000	0.78289	24	12.7167	0.77882
4	0.2333	0.78284	25	15.9667	0.77840
5	0.2667	0.78259	26	20.0833	0.77810
6	0.3000	0.78258	27	25.2500	0.77760
7	0.3500	0.78253	28	31.7500	0.77693
8	0.4167	0.78245	29	39.9333	0.77612
9	0.5000	0.78226	30	50.2500	0.77546
10	0.6167	0.78216	31	63.2333	0.77499
11	0.7333	0.78208	32	79.5667	0.77459
12	0.9000	0.78193	33	100.1333	0.77435
13	1.1167	0.78170	34	126.0333	0.77380
14	1.3667	0.78155	35	158.6167	0.77345
15	1.7000	0.78142	36	199.6667	0.77314
16	2.1167	0.78120	37	251.3333	0.77271
17	2.6333	0.78103	38	316.3667	0.77252
18	3.2833	0.78062	39	398.2500	0.77236
19	4.1000	0.78033	40	501.3333	0.77213
20	5.1333	0.77999	41	584.8000	0.77201
21	6.4333	0.77987			



Void Ratio = 0.736 **Compression =** 12.3%
D_0 = 0.7835 **D_{90} =** 0.7796 **D_{100} =** 0.7791 **C_v at 8.26 min. =** 0.195 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77204	14	1.3833	0.77280
2	0.1000	0.77199	15	1.7000	0.77284
3	0.2000	0.77242	16	2.1167	0.77298
4	0.2333	0.77241	17	2.6333	0.77302
5	0.2667	0.77243	18	3.2833	0.77316
6	0.3000	0.77244	19	4.1000	0.77333
7	0.3500	0.77244	20	5.1333	0.77344
8	0.4167	0.77248	21	6.4333	0.77354
9	0.5000	0.77251	22	8.0667	0.77361
10	0.6167	0.77254	23	10.1167	0.77378
11	0.7500	0.77265	24	12.7167	0.77384
12	0.9000	0.77261	25	15.9833	0.77384
13	1.1167	0.77269	26	20.0833	0.77390



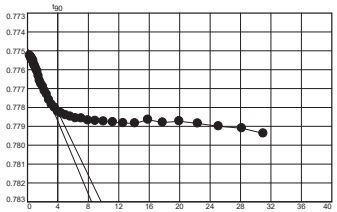
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	25.2500	0.77393	37	251.3333	0.77459
28	31.7500	0.77410	38	316.3667	0.77473
29	39.9500	0.77412	39	398.2500	0.77476
30	50.2500	0.77408	40	410.2167	0.77475
31	63.2333	0.77410			
32	79.5667	0.77430			
33	100.1333	0.77432			
34	126.0333	0.77441			
35	158.6333	0.77446			
36	199.6667	0.77444			

Void Ratio = 0.730 **Compression =** 12.6%
D_0 = 0.7710 **D_{90} =** 0.7725 **D_{100} =** 0.7726 **C_v at 0.38 min. =** 4.287 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77472	23	10.1167	0.77784
2	0.1000	0.77525	24	12.7000	0.77801
3	0.2000	0.77536	25	15.9667	0.77822
4	0.2333	0.77534	26	20.0667	0.77831
5	0.2667	0.77540	27	25.2333	0.77841
6	0.3000	0.77541	28	31.7500	0.77848
7	0.3500	0.77544	29	39.9333	0.77857
8	0.4167	0.77544	30	50.2333	0.77858
9	0.5000	0.77553	31	63.2167	0.77868
10	0.6000	0.77553	32	79.5667	0.77871
11	0.7333	0.77571	33	100.1333	0.77874
12	0.9000	0.77577	34	126.0333	0.77878
13	1.1000	0.77586	35	158.6333	0.77883
14	1.3667	0.77599	36	199.6667	0.77884
15	1.7000	0.77610	37	251.3333	0.77865
16	2.1000	0.77633	38	316.3667	0.77880
17	2.6167	0.77658	39	398.2500	0.77873
18	3.2667	0.77676	40	501.3333	0.77885
19	4.1000	0.77689	41	631.1167	0.77900
20	5.1167	0.77712	42	794.4833	0.77910
21	6.4167	0.77730	43	961.5833	0.77938
22	8.0500	0.77760			

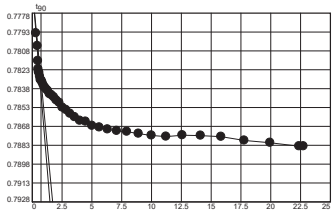


Void Ratio = 0.721 **Compression =** 13.1%
D_0 = 0.7749 **D_{90} =** 0.7782 **D_{100} =** 0.7786 **C_v at 15.67 min. =** 0.103 ft.^{2}/day

Figure D-131

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

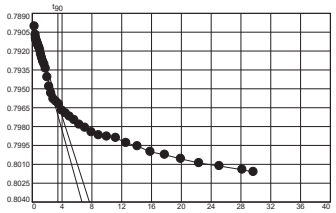
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77930	22	8.0667	0.78549
2	0.1000	0.77939	23	10.1167	0.78579
3	0.2000	0.78041	24	12.7167	0.78606
4	0.2333	0.78159	25	15.9667	0.78635
5	0.2667	0.78224	26	20.0833	0.78642
6	0.3000	0.78248	27	25.2500	0.78675
7	0.3500	0.78255	28	31.7500	0.78688
8	0.4167	0.78283	29	39.9333	0.78704
9	0.5000	0.78311	30	50.2500	0.78716
10	0.6167	0.78316	31	63.2333	0.78722
11	0.7333	0.78332	32	79.5667	0.78738
12	0.9000	0.78353	33	100.1333	0.78752
13	1.1167	0.78371	34	126.0167	0.78761
14	1.3667	0.78384	35	158.6167	0.78750
15	1.7000	0.78396	36	199.6667	0.78753
16	2.1167	0.78422	37	251.3333	0.78762
17	2.6333	0.78431	38	316.3667	0.78792
18	3.2833	0.78447	39	398.2500	0.78810
19	4.1000	0.78472	40	501.3333	0.78838
20	5.1333	0.78492	41	517.3167	0.78838
21	6.4333	0.78530			



Void Ratio = 0.703 **Compression =** 14.0%
D_0 = 0.7758 **D_{90} =** 0.7831 **D_{100} =** 0.7839 **C_v at 0.54 min. =** 2.960 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.78837	14	1.3833	0.79226
2	0.1000	0.79004	15	1.7167	0.79254
3	0.2000	0.79071	16	2.1167	0.79283
4	0.2333	0.79098	17	2.6333	0.79306
5	0.2667	0.79103	18	3.2833	0.79339
6	0.3167	0.79114	19	4.1167	0.79408
7	0.3667	0.79122	20	5.1500	0.79482
8	0.4333	0.79130	21	6.4333	0.79536
9	0.5167	0.79140	22	8.0833	0.79581
10	0.6167	0.79150	23	10.1333	0.79601
11	0.7500	0.79163	24	12.7167	0.79622
12	0.9167	0.79174	25	15.9833	0.79673
13	1.1167	0.79193	26	20.0833	0.79695



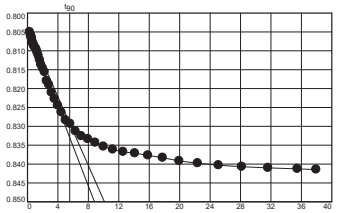
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	25.2500	0.79721	37	251.3333	0.80001
28	31.7667	0.79748	38	316.3833	0.80024
29	39.9500	0.79785	39	398.2667	0.80057
30	50.2500	0.79809	40	501.3500	0.80090
31	63.2333	0.79845	41	631.1167	0.80114
32	79.5667	0.79869	42	794.5000	0.80143
33	100.1333	0.79880	43	881.8000	0.80161
34	126.0333	0.79890			
35	158.6333	0.79930			
36	199.6667	0.79956			

Void Ratio = 0.677 **Compression =** 15.3%
D_0 = 0.7898 **D_{90} =** 0.7961 **D_{100} =** 0.7969 **C_v at 11.79 min. =** 0.131 ft.^{2}/day

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.80157	24	12.7167	0.82275
2	0.1000	0.80503	25	15.9833	0.82447
3	0.2000	0.80592	26	20.0833	0.82627
4	0.2333	0.80593	27	25.2500	0.82837
5	0.2667	0.80629	28	31.7500	0.82933
6	0.3000	0.80655	29	39.9500	0.83127
7	0.3500	0.80680	30	50.2500	0.83258
8	0.4167	0.80733	31	63.2333	0.83336
9	0.5000	0.80778	32	79.5667	0.83431
10	0.6167	0.80823	33	100.1333	0.83538
11	0.7333	0.80856	34	126.0333	0.83616
12	0.9000	0.80896	35	158.6333	0.83677
13	1.1167	0.80918	36	199.6667	0.83713
14	1.3667	0.80959	37	251.3333	0.83769
15	1.7000	0.81039	38	316.3667	0.83831
16	2.1167	0.81122	39	398.2500	0.83919
17	2.6333	0.81241	40	501.3500	0.83977
18	3.2833	0.81364	41	631.1167	0.84031
19	4.1000	0.81458	42	794.4833	0.84070
20	5.1333	0.81563	43	1000.1667	0.84101
21	6.4333	0.81794	44	1259.1000	0.84126
22	8.0667	0.81902	45	1440.4333	0.84146
23	10.1167	0.82103			

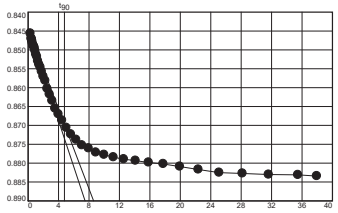


Void Ratio = 0.598 **Compression =** 19.3%
D_0 = 0.8039 **D_{90} =** 0.8292 **D_{100} =** 0.8320 **C_v at 30.75 min. =** 0.047 ft.^{2}/day

Figure D-132

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

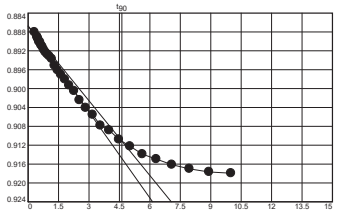
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.84141	24	12.7167	0.86554
2	0.1000	0.84564	25	15.9667	0.86703
3	0.2000	0.84690	26	20.0833	0.86866
4	0.2333	0.84722	27	25.2500	0.87064
5	0.2667	0.84741	28	31.7500	0.87237
6	0.3000	0.84771	29	39.9500	0.87378
7	0.3667	0.84826	30	50.2500	0.87525
8	0.4333	0.84873	31	63.2333	0.87607
9	0.5167	0.84890	32	79.5667	0.87718
10	0.6167	0.84912	33	100.1500	0.87777
11	0.7500	0.84947	34	126.0333	0.87843
12	0.9000	0.85022	35	158.6333	0.87895
13	1.1167	0.85117	36	199.6833	0.87935
14	1.3667	0.85177	37	251.3333	0.87982
15	1.7000	0.85294	38	316.3833	0.88023
16	2.1167	0.85388	39	398.2667	0.88090
17	2.6333	0.85459	40	501.3333	0.88168
18	3.2833	0.85573	41	631.1167	0.88252
19	4.1000	0.85703	42	794.4833	0.88274
20	5.1333	0.85815	43	1000.1667	0.88302
21	6.4333	0.86027	44	1259.1000	0.88311
22	8.0667	0.86177	45	1440.3167	0.88343
23	10.1167	0.86345			



Void Ratio = 0.515 **Compression =** 23.5%
D_0 = 0.8445 **D_{90} =** 0.8697 **D_{100} =** 0.8725 **C_v at 22.83 min. =** 0.057 ft.^{2}/day

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.88343	12	0.9000	0.89271
2	0.1000	0.88802	13	1.1000	0.89312
3	0.2000	0.88901	14	1.3667	0.89370
4	0.2167	0.88917	15	1.7000	0.89513
5	0.2500	0.88949	16	2.1167	0.89608
6	0.3000	0.89010	17	2.6333	0.89704
7	0.3500	0.89014	18	3.2833	0.89803
8	0.4167	0.89078	19	4.1000	0.89933
9	0.5000	0.89112	20	5.1333	0.90049
10	0.6000	0.89172	21	6.4333	0.90244
11	0.7333	0.89227	22	8.0667	0.90407



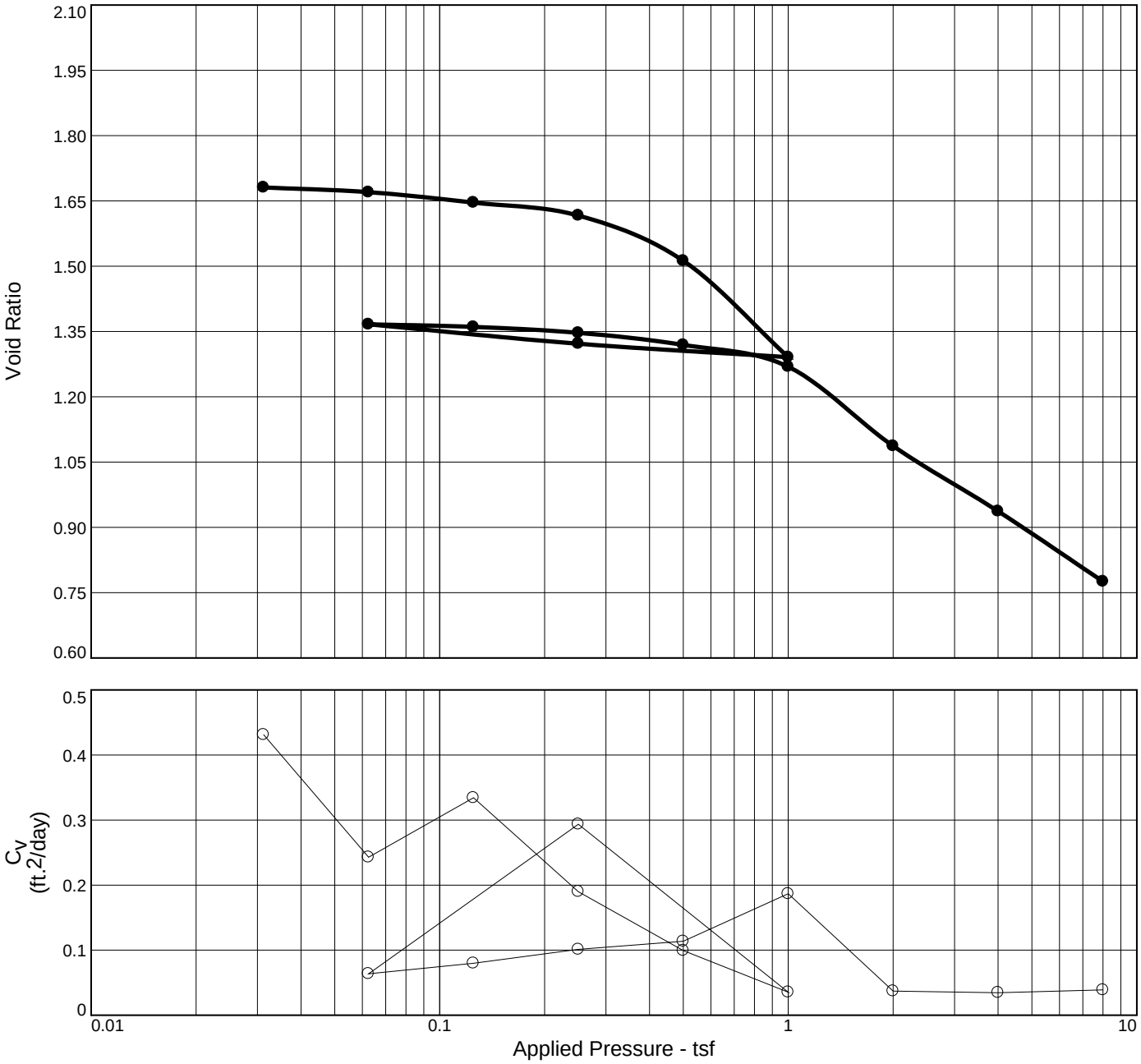
Pressure: 16000.00 psf — **TEST READINGS (continued)** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1333	0.90555	33	100.1333	0.91794
24	12.7167	0.90782			
25	15.9833	0.90882			
26	20.0833	0.91078			
27	25.2500	0.91223			
28	31.7500	0.91391			
29	39.9500	0.91495			
30	50.2500	0.91613			
31	63.2333	0.91701			
32	79.5667	0.91767			

Void Ratio = 0.447 **Compression =** 26.9%
D_0 = 0.8868 **D_{90} =** 0.9112 **D_{100} =** 0.9139 **C_v at 21.37 min. =** 0.056 ft.^{2}/day

Figure D-133

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.4 %	62.7 %	61.8	70	50	2.678	0.4	0.79	1.707

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with silt layers and shell fragments	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-20 **Depth:** 8' - 10'

GeoEngineers

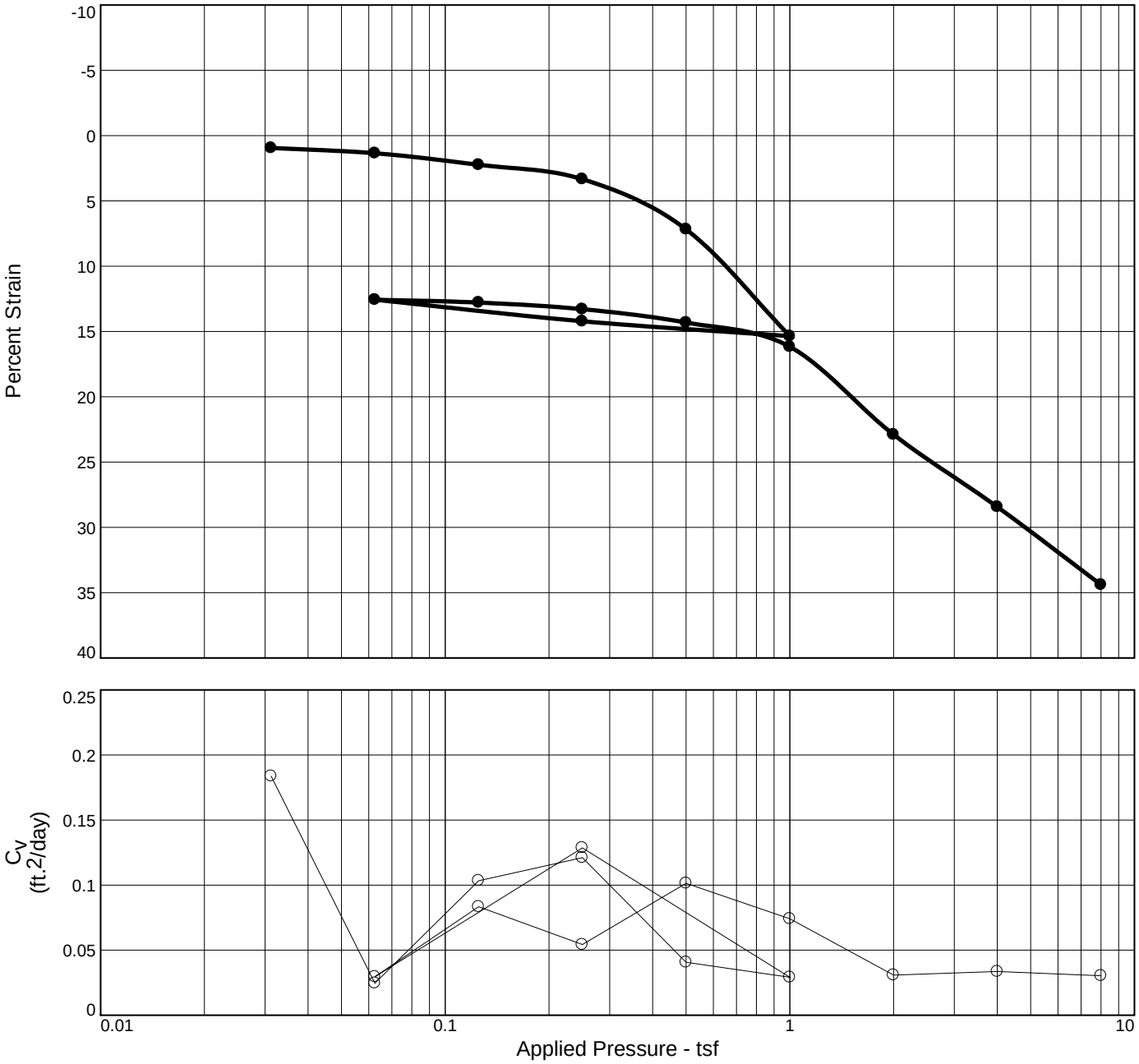
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-134

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.4 %	62.7 %	61.8	70	50	2.678	0.4	0.79	1.707

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with silt layers and shell fragments	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-20 **Depth:** 8' - 10'

Remarks:
Specific Gravity is measured.

C_v at t_{50}

GeoEngineers

Tested By: SLC/KLA **Checked By:** ARS

Figure D-135

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-20
Depth: 8' - 10'
Material Description: Gray clay with silt layers and shell fragments
Liquid Limit: 70 **Plasticity Index:** 50
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	153.26 g.	Spec. Gr. =	2.678	Wet w+t =	120.25 g.
Dry w+t =	109.98 g.	Est. Ht. Solids =	0.369 in.	Dry w+t =	94.28 g.
Tare Wt. =	40.99 g.	Init. V.R. =	1.707	Tare Wt. =	19.27 g.
Moisture =	62.7 %	Init. Sat. =	98.4 %	Moisture =	34.6 %

UNIT WEIGHT		TEST START			
Height =	0.998 in.	Height =	0.998 in.	Dry Wt. =	75.01 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	129.26 g.				
Dry Dens. =	61.8 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.55229	0.00000			1.707	
-10.16	0.55241	0.00012			1.706	0.0 Comprs.
62.50	0.56172	0.00943	0.184	0.002	1.681	0.9 Comprs.
125.00	0.56574	0.01345	0.025	0.003	1.670	1.3 Comprs.
250.00	0.57457	0.02228	0.103	0.002	1.646	2.2 Comprs.
500.00	0.58557	0.03328	0.121	0.002	1.616	3.3 Comprs.
1000.00	0.62387	0.07158	0.041	0.018	1.512	7.2 Comprs.
2000.00	0.70551	0.15322	0.029	0.031	1.291	15.4 Comprs.
500.00	0.69414	0.14185	0.129		1.322	14.2 Comprs.
125.00	0.67769	0.12540	0.030		1.367	12.6 Comprs.
250.00	0.67988	0.12759	0.083	0.000	1.361	12.8 Comprs.
500.00	0.68491	0.13262	0.054	0.001	1.347	13.3 Comprs.
1000.00	0.69514	0.14285	0.101	0.002	1.319	14.3 Comprs.
2000.00	0.71361	0.16132	0.074	0.008	1.269	16.2 Comprs.
4000.00	0.78077	0.22848	0.031	0.022	1.087	22.9 Comprs.
8000.00	0.83604	0.28375	0.034	0.010	0.937	28.4 Comprs.
16000.00	0.89554	0.34325	0.030	0.015	0.776	34.4 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.79 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.546
Recompression index (C_r) = 0.19

Pressure: -10.16 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.55229	14	1.5500	0.55231	27	31.6500	0.55235
2	0.0333	0.55231	15	1.9667	0.55230	28	39.8333	0.55237
3	0.0667	0.55229	16	2.4833	0.55231	29	50.1500	0.55237
4	0.1000	0.55229	17	3.1500	0.55230	30	63.1333	0.55237
5	0.1500	0.55230	18	3.9667	0.55230	31	79.4667	0.55239
6	0.2000	0.55231	19	5.0000	0.55230	32	100.0500	0.55238
7	0.2667	0.55232	20	6.3000	0.55233	33	125.9500	0.55239
8	0.3500	0.55230	21	7.9500	0.55231	34	158.5500	0.55240
9	0.4500	0.55231	22	10.0000	0.55234	35	199.5833	0.55242
10	0.5833	0.55231	23	12.6000	0.55234	36	251.2500	0.55239
11	0.7500	0.55231	24	15.8667	0.55235	37	316.3000	0.55241
12	0.9667	0.55228	25	19.9667	0.55234	38	398.1833	0.55243
13	1.2167	0.55230	26	25.1333	0.55237	39	483.6333	0.55241

Void Ratio = 1.706 **Compression =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.55174	20	5.2000	0.55878
2	0.1000	0.55200	21	6.5000	0.55904
3	0.2000	0.55241	22	8.1333	0.55929
4	0.2333	0.55262	23	10.1833	0.55950
5	0.2667	0.55282	24	12.7833	0.55970
6	0.3167	0.55298	25	16.0500	0.55985
7	0.3667	0.55316	26	20.1500	0.56007
8	0.4500	0.55338	27	25.3167	0.56034
9	0.5333	0.55356	28	31.8333	0.56053
10	0.6333	0.55380	29	40.0167	0.56064
11	0.7667	0.55420	30	50.3333	0.56080
12	0.9333	0.55457	31	63.3167	0.56095
13	1.1500	0.55504	32	79.6500	0.56097
14	1.4000	0.55533	33	100.2333	0.56101
15	1.7333	0.55580	34	126.1333	0.56102
16	2.1500	0.55690	35	158.7333	0.56108
17	2.6667	0.55772	36	199.7667	0.56116
18	3.3333	0.55839	37	251.4333	0.56124
19	4.1500	0.55857	38	316.4833	0.56141

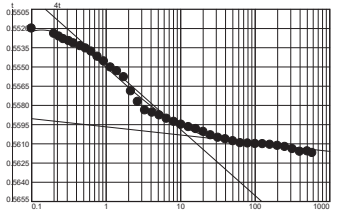


Figure D-136

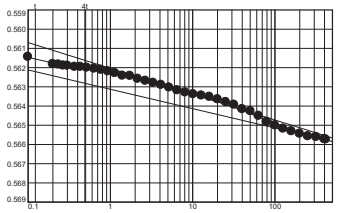
Pressure: 62.50 psf — **TEST READINGS (continued)** — **Load No. 2**

No.	Elapsed Time	Dial Reading
39	398.3667	0.56162
40	501.4500	0.56159
41	583.2167	0.56172

Void Ratio = 1.681 **Compression =** 0.9%
D_0 = 0.5540 **D_{50} =** 0.5572 **D_{100} =** 0.5604 **C_v at 2.65 min. =** 0.184 ft.^{2}/day **C_α =** 0.002

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 3**

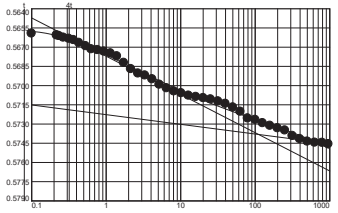
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.56108	21	6.4833	0.56318
2	0.1000	0.56144	22	8.1167	0.56329
3	0.2000	0.56181	23	10.1667	0.56338
4	0.2333	0.56184	24	12.7667	0.56345
5	0.2667	0.56189	25	16.0167	0.56352
6	0.3000	0.56190	26	20.1333	0.56365
7	0.3667	0.56196	27	25.3000	0.56379
8	0.4333	0.56196	28	31.8000	0.56393
9	0.5167	0.56200	29	40.0000	0.56416
10	0.6333	0.56205	30	50.3000	0.56426
11	0.7667	0.56211	31	63.2833	0.56451
12	0.9333	0.56219	32	79.6333	0.56482
13	1.1333	0.56228	33	100.2000	0.56500
14	1.4000	0.56242	34	126.1000	0.56517
15	1.7333	0.56243	35	158.7000	0.56531
16	2.1500	0.56258	36	199.7500	0.56544
17	2.6667	0.56268	37	251.4167	0.56557
18	3.3167	0.56279	38	316.4500	0.56561
19	4.1333	0.56290	39	398.3333	0.56572
20	5.1667	0.56303	40	415.6500	0.56574



Void Ratio = 1.670 **Compression =** 1.3%
D_0 = 0.5611 **D_{50} =** 0.5637 **D_{100} =** 0.5664 **C_v at 19.47 min. =** 0.025 ft.^{2}/day **C_α =** 0.003

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.56522	23	10.1833	0.57059
2	0.1000	0.56593	24	12.7833	0.57078
3	0.2167	0.56607	25	16.0333	0.57088
4	0.2333	0.56613	26	20.1500	0.57097
5	0.2667	0.56625	27	25.3167	0.57108
6	0.3167	0.56634	28	31.8167	0.57123
7	0.3667	0.56645	29	40.0167	0.57142
8	0.4333	0.56666	30	50.3333	0.57170
9	0.5333	0.56692	31	63.3000	0.57203
10	0.6333	0.56716	32	79.6500	0.57256
11	0.7667	0.56723	33	100.2333	0.57268
12	0.9333	0.56734	34	126.1333	0.57293
13	1.1500	0.56748	35	158.7333	0.57313
14	1.4000	0.56771	36	199.7667	0.57333
15	1.7333	0.56822	37	251.4333	0.57350
16	2.1500	0.56871	38	316.4833	0.57393
17	2.6833	0.56905	39	398.3667	0.57417
18	3.3333	0.56921	40	501.4500	0.57437
19	4.1500	0.56950	41	631.2167	0.57445
20	5.1833	0.56993	42	794.6000	0.57447
21	6.4833	0.57021	43	961.8167	0.57457
22	8.1333	0.57045			



Void Ratio = 1.646 **Compression =** 2.2%
D_0 = 0.5651 **D_{50} =** 0.5695 **D_{100} =** 0.5738 **C_v at 4.58 min. =** 0.103 ft.^{2}/day **C_α =** 0.002

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57297	13	1.1333	0.57643
2	0.1000	0.57434	14	1.4000	0.57657
3	0.2000	0.57503	15	1.7333	0.57680
4	0.2333	0.57510	16	2.1500	0.57758
5	0.2667	0.57520	17	2.6833	0.57808
6	0.3167	0.57530	18	3.3333	0.57856
7	0.3667	0.57545	19	4.1500	0.57930
8	0.4333	0.57557	20	5.1833	0.58002
9	0.5167	0.57580	21	6.5000	0.58053
10	0.6333	0.57591	22	8.1333	0.58096
11	0.7667	0.57608	23	10.1833	0.58133
12	0.9333	0.57621	24	12.7833	0.58159

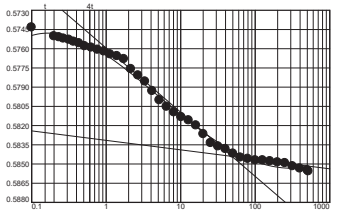


Figure D-137

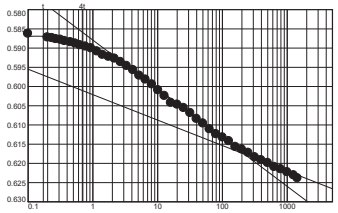
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	16.0500	0.58199	35	158.7167	0.58478
26	20.1500	0.58266	36	199.7500	0.58487
27	25.3167	0.58336	37	251.4167	0.58493
28	31.8333	0.58362	38	316.4667	0.58517
29	40.0167	0.58383	39	398.3500	0.58535
30	50.3333	0.58419	40	501.4333	0.58548
31	63.3167	0.58449	41	518.0167	0.58557
32	79.6500	0.58460			
33	100.2167	0.58471			
34	126.1167	0.58471			

Void Ratio = 1.616 **Compression =** 3.3%
D_0 = 0.5738 **D_{50} =** 0.5791 **D_{100} =** 0.5844 **C_v at 3.84 min. =** 0.121 ft.^{2}/day **C_α =** 0.002

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.58388	24	12.8000	0.60246
2	0.1000	0.58624	25	16.0500	0.60425
3	0.2000	0.58723	26	20.1667	0.60471
4	0.2333	0.58740	27	25.3333	0.60558
5	0.2667	0.58766	28	31.8500	0.60689
6	0.3167	0.58783	29	40.0333	0.60840
7	0.3667	0.58816	30	50.3500	0.60960
8	0.4500	0.58846	31	63.3333	0.61111
9	0.5333	0.58879	32	79.6667	0.61240
10	0.6333	0.58925	33	100.2500	0.61323
11	0.7667	0.58959	34	126.1500	0.61421
12	0.9333	0.59003	35	158.7500	0.61571
13	1.1500	0.59085	36	199.7833	0.61637
14	1.4167	0.59176	37	251.4500	0.61724
15	1.7500	0.59224	38	316.5000	0.61839
16	2.1667	0.59271	39	398.3833	0.61915
17	2.6833	0.59362	40	501.4667	0.61989
18	3.3333	0.59465	41	631.2500	0.62093
19	4.1667	0.59570	42	794.6167	0.62149
20	5.2000	0.59714	43	1000.3000	0.62226
21	6.5000	0.59817	44	1259.2333	0.62310
22	8.1500	0.59944	45	1440.4833	0.62387
23	10.2000	0.60097			



Void Ratio = 1.512 **Compression =** 7.2%
D_0 = 0.5846 **D_{50} =** 0.6011 **D_{100} =** 0.6176 **C_v at 10.84 min. =** 0.041 ft.^{2}/day **C_α =** 0.018

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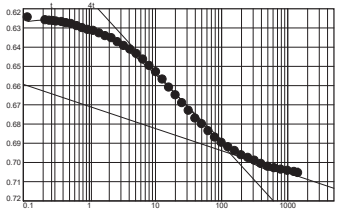
Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.62138	24	12.7833	0.65682
2	0.1167	0.62452	25	16.0500	0.66106
3	0.2167	0.62597	26	20.1667	0.66504
4	0.2500	0.62626	27	25.3333	0.66912
5	0.2833	0.62638	28	31.8333	0.67310
6	0.3167	0.62666	29	40.0333	0.67716
7	0.3833	0.62690	30	50.3333	0.68007
8	0.4500	0.62753	31	63.3167	0.68369
9	0.5333	0.62797	32	79.6667	0.68703
10	0.6500	0.62907	33	100.2333	0.68976
11	0.7833	0.63008	34	126.1333	0.69211
12	0.9500	0.63105	35	158.7500	0.69406
13	1.1500	0.63152	36	199.7833	0.69625
14	1.4167	0.63278	37	251.4500	0.69760
15	1.7500	0.63425	38	316.5000	0.69905
16	2.1667	0.63532	39	398.3833	0.70077
17	2.6833	0.63743	40	501.4667	0.70219
18	3.3333	0.63934	41	631.2333	0.70300
19	4.1667	0.64124	42	794.6167	0.70379
20	5.2000	0.64352	43	1000.2833	0.70432
21	6.5000	0.64642	44	1259.2167	0.70498
22	8.1333	0.64976	45	1440.4500	0.70551
23	10.2000	0.65298			



Void Ratio = 1.291 **Compression =** 15.4%
D_0 = 0.6211 **D_{50} =** 0.6583 **D_{100} =** 0.6954 **C_v at 13.29 min. =** 0.029 ft.^{2}/day **C_α =** 0.031

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.70780	12	0.9500	0.70359
2	0.1167	0.70560	13	1.1500	0.70321
3	0.2167	0.70518	14	1.4167	0.70263
4	0.2500	0.70511	15	1.7500	0.70200
5	0.2833	0.70502	16	2.1667	0.70157
6	0.3167	0.70492	17	2.6833	0.70121
7	0.3833	0.70480	18	3.3500	0.70048
8	0.4500	0.70467	19	4.1667	0.70003
9	0.5333	0.70452	20	5.2000	0.69980
10	0.6500	0.70415	21	6.5167	0.69948
11	0.7833	0.70386	22	8.1500	0.69891

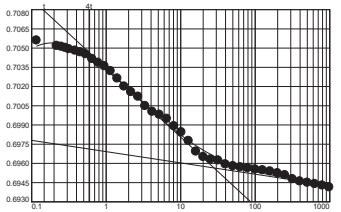


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Figure D-138

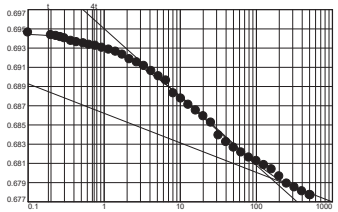
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.2167	0.69843	33	100.2500	0.69553	43	986.5833	0.69414
24	12.8000	0.69776	34	126.1500	0.69547			
25	16.0667	0.69692	35	158.7500	0.69537			
26	20.1833	0.69650	36	199.7833	0.69523			
27	25.3500	0.69631	37	251.4500	0.69508			
28	31.8500	0.69623	38	316.5000	0.69477			
29	40.0500	0.69592	39	398.3833	0.69460			
30	50.3500	0.69579	40	501.4667	0.69449			
31	63.3333	0.69569	41	631.2333	0.69439			
32	79.6833	0.69563	42	794.6167	0.69428			

Void Ratio = 1.322 **Compression =** 14.2%
D_0 = 0.7064 **D_{50} =** 0.7010 **D_{100} =** 0.6956 **C_v at 2.76 min. =** 0.129 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

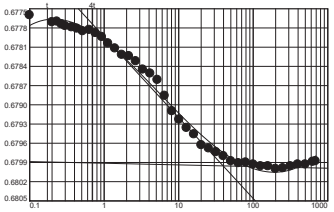
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69560	22	8.1333	0.68829
2	0.1000	0.69463	23	10.1833	0.68775
3	0.2000	0.69435	24	12.7833	0.68710
4	0.2333	0.69426	25	16.0500	0.68651
5	0.2667	0.69415	26	20.1500	0.68590
6	0.3000	0.69403	27	25.3333	0.68524
7	0.3667	0.69375	28	31.8333	0.68392
8	0.4333	0.69361	29	40.0167	0.68322
9	0.5333	0.69349	30	50.3333	0.68264
10	0.6333	0.69334	31	63.3167	0.68213
11	0.7667	0.69324	32	79.6667	0.68161
12	0.9333	0.69303	33	100.2333	0.68125
13	1.1500	0.69284	34	126.1333	0.68082
14	1.4167	0.69263	35	158.7333	0.68038
15	1.7333	0.69232	36	199.7833	0.67965
16	2.1500	0.69184	37	251.4500	0.67889
17	2.6833	0.69152	38	316.4833	0.67850
18	3.3333	0.69114	39	398.3667	0.67809
19	4.1500	0.69062	40	501.4500	0.67771
20	5.1833	0.69007	41	515.7333	0.67769
21	6.5000	0.68963			



Void Ratio = 1.367 **Compression =** 12.6%
D_0 = 0.6952 **D_{50} =** 0.6874 **D_{100} =** 0.6795 **C_v at 12.42 min. =** 0.030 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.67715	22	8.1333	0.67910
2	0.1000	0.67760	23	10.1833	0.67923
3	0.2000	0.67771	24	12.7833	0.67936
4	0.2333	0.67770	25	16.0333	0.67946
5	0.2667	0.67774	26	20.1500	0.67963
6	0.3000	0.67777	27	25.3167	0.67968
7	0.3667	0.67779	28	31.8333	0.67974
8	0.4333	0.67781	29	40.0167	0.67980
9	0.5167	0.67785	30	50.3333	0.67988
10	0.6333	0.67783	31	63.3167	0.67991
11	0.7667	0.67788	32	79.6500	0.67990
12	0.9333	0.67794	33	100.2333	0.67993
13	1.1333	0.67804	34	126.1333	0.67996
14	1.4000	0.67812	35	158.7333	0.67996
15	1.7333	0.67822	36	199.7833	0.68000
16	2.1500	0.67824	37	251.4500	0.67999
17	2.6667	0.67832	38	316.4833	0.67996
18	3.3167	0.67845	39	398.3667	0.67993
19	4.1500	0.67851	40	501.4500	0.67993
20	5.1833	0.67861	41	631.2333	0.67989
21	6.4833	0.67886	42	688.2833	0.67988



Void Ratio = 1.361 **Compression =** 12.8%
D_0 = 0.6775 **D_{50} =** 0.6787 **D_{100} =** 0.6800 **C_v at 4.49 min. =** 0.083 ft.^{2}/day **C_α =** 0.000

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.67936	14	1.4000	0.68071
2	0.1000	0.67998	15	1.7333	0.68096
3	0.2000	0.68010	16	2.1333	0.68118
4	0.2333	0.68022	17	2.6667	0.68140
5	0.2667	0.68023	18	3.3167	0.68155
6	0.3000	0.68027	19	4.1500	0.68173
7	0.3667	0.68028	20	5.1667	0.68199
8	0.4333	0.68037	21	6.4667	0.68216
9	0.5167	0.68042	22	8.1167	0.68236
10	0.6167	0.68044	23	10.1667	0.68254
11	0.7500	0.68050	24	12.7667	0.68286
12	0.9167	0.68056	25	16.0167	0.68319
13	1.1333	0.68065	26	20.1167	0.68355

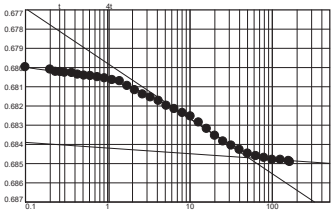


Figure D-139

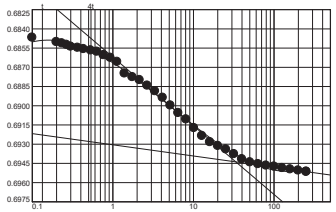
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading
27	25.2833	0.68385
28	31.8000	0.68406
29	39.9833	0.68428
30	50.3000	0.68448
31	63.2833	0.68461
32	79.6167	0.68470
33	100.2000	0.68480
34	126.0833	0.68480
35	158.6833	0.68486
36	163.8500	0.68491

Void Ratio = 1.347 **Compression =** 13.3%
D_0 = 0.6798 **D_{50} =** 0.6822 **D_{100} =** 0.6847 **C_v at 6.84 min. =** 0.054 ft.^{2}/day **C_α =** 0.001

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

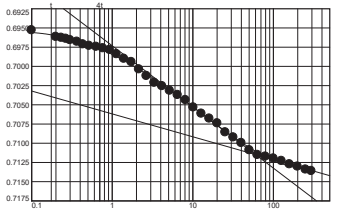
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.68374	20	5.1833	0.68998
2	0.1000	0.68468	21	6.4833	0.69057
3	0.2000	0.68503	22	8.1167	0.69106
4	0.2333	0.68513	23	10.1833	0.69174
5	0.2667	0.68524	24	12.7833	0.69236
6	0.3000	0.68538	25	16.0500	0.69284
7	0.3667	0.68547	26	20.1500	0.69313
8	0.4333	0.68557	27	25.3333	0.69340
9	0.5333	0.68568	28	31.8333	0.69378
10	0.6333	0.68578	29	40.0167	0.69417
11	0.7667	0.68605	30	50.3333	0.69441
12	0.9333	0.68625	31	63.3167	0.69455
13	1.1333	0.68657	32	79.6500	0.69467
14	1.4000	0.68748	33	100.2333	0.69475
15	1.7500	0.68776	34	126.1333	0.69486
16	2.1500	0.68799	35	158.7333	0.69497
17	2.6833	0.68843	36	199.7667	0.69506
18	3.3333	0.68886	37	251.4333	0.69516
19	4.1500	0.68938	38	252.4500	0.69514



Void Ratio = 1.319 **Compression =** 14.3%
D_0 = 0.6841 **D_{50} =** 0.6892 **D_{100} =** 0.6944 **C_v at 3.60 min. =** 0.101 ft.^{2}/day **C_α =** 0.002

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69342	20	5.1833	0.70316
2	0.1000	0.69530	21	6.4833	0.70372
3	0.2000	0.69616	22	8.1333	0.70437
4	0.2333	0.69627	23	10.1833	0.70534
5	0.2667	0.69640	24	12.7833	0.70615
6	0.3000	0.69657	25	16.0500	0.70678
7	0.3667	0.69679	26	20.1500	0.70740
8	0.4333	0.69712	27	25.3333	0.70858
9	0.5167	0.69732	28	31.8333	0.70924
10	0.6333	0.69745	29	40.0333	0.70997
11	0.7667	0.69764	30	50.3333	0.71090
12	0.9333	0.69785	31	63.3167	0.71152
13	1.1333	0.69841	32	79.6667	0.71174
14	1.4000	0.69900	33	100.2333	0.71198
15	1.7333	0.69943	34	126.1333	0.71230
16	2.1500	0.70038	35	158.7333	0.71273
17	2.6667	0.70124	36	199.7667	0.71303
18	3.3333	0.70213	37	251.4333	0.71342
19	4.1500	0.70257	38	296.0333	0.71361



Void Ratio = 1.269 **Compression =** 16.2%
D_0 = 0.6941 **D_{50} =** 0.7028 **D_{100} =** 0.7115 **C_v at 4.76 min. =** 0.074 ft.^{2}/day **C_α =** 0.008

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.71103	16	2.1500	0.72714
2	0.1000	0.71482	17	2.6667	0.72825
3	0.2000	0.71646	18	3.3333	0.73079
4	0.2333	0.71720	19	4.1500	0.73242
5	0.2667	0.71743	20	5.1833	0.73445
6	0.3167	0.71783	21	6.5000	0.73709
7	0.3667	0.71819	22	8.1333	0.73940
8	0.4333	0.71859	23	10.1833	0.74244
9	0.5167	0.71929	24	12.7833	0.74548
10	0.6333	0.72003	25	16.0500	0.74902
11	0.7667	0.72097	26	20.1500	0.75239
12	0.9333	0.72200	27	25.3167	0.75577
13	1.1333	0.72270	28	31.8333	0.75930
14	1.4000	0.72392	29	40.0167	0.76241
15	1.7333	0.72529	30	50.3333	0.76565

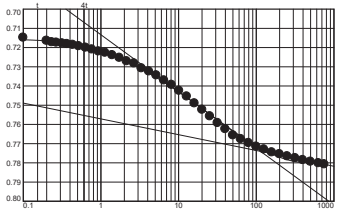


Figure D-140

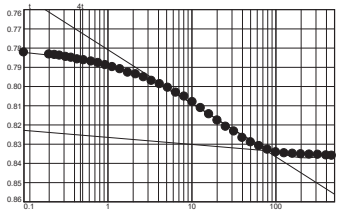
Pressure: 4000.00 psf — **TEST READINGS (continued)** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	63.3167	0.76760	41	631.2167	0.78014
32	79.6500	0.76966	42	753.0833	0.78077
33	100.2167	0.77152			
34	126.1167	0.77297			
35	158.7167	0.77452			
36	199.7667	0.77547			
37	251.4333	0.77660			
38	316.4667	0.77753			
39	398.3667	0.77854			
40	501.4500	0.77940			

Void Ratio = 1.087 **Compression =** 22.9%
D_0 = 0.7130 **D_{50} =** 0.7435 **D_{100} =** 0.7740 **C_v at 10.33 min. =** 0.031 ft.^{2}/day **C_α =** 0.022

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

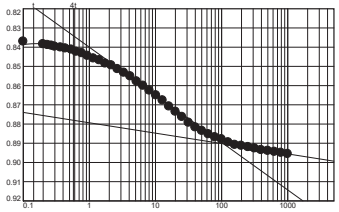
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77758	21	6.4833	0.80315
2	0.1000	0.78225	22	8.1333	0.80524
3	0.2000	0.78331	23	10.1833	0.80809
4	0.2333	0.78359	24	12.7833	0.81123
5	0.2667	0.78393	25	16.0500	0.81446
6	0.3167	0.78458	26	20.1500	0.81767
7	0.3667	0.78499	27	25.3333	0.82093
8	0.4333	0.78584	28	31.8333	0.82340
9	0.5167	0.78631	29	40.0333	0.82670
10	0.6333	0.78698	30	50.3333	0.82905
11	0.7667	0.78773	31	63.3167	0.83098
12	0.9333	0.78887	32	79.6667	0.83287
13	1.1333	0.78987	33	100.2333	0.83420
14	1.4000	0.79096	34	126.1333	0.83478
15	1.7333	0.79282	35	158.7333	0.83503
16	2.1500	0.79367	36	199.7833	0.83529
17	2.6667	0.79515	37	251.4500	0.83541
18	3.3167	0.79702	38	316.5000	0.83552
19	4.1500	0.79878	39	398.3667	0.83584
20	5.1833	0.80059	40	464.7500	0.83604



Void Ratio = 0.937 **Compression =** 28.4%
D_0 = 0.7794 **D_{50} =** 0.8064 **D_{100} =** 0.8334 **C_v at 8.10 min. =** 0.034 ft.^{2}/day **C_α =** 0.010

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.83203	23	10.1833	0.86502
2	0.1000	0.83708	24	12.7833	0.86770
3	0.2000	0.83847	25	16.0500	0.87082
4	0.2333	0.83885	26	20.1500	0.87356
5	0.2667	0.83922	27	25.3167	0.87627
6	0.3000	0.83968	28	31.8167	0.87928
7	0.3667	0.84011	29	40.0167	0.88171
8	0.4333	0.84067	30	50.3333	0.88357
9	0.5333	0.84126	31	63.3000	0.88530
10	0.6333	0.84236	32	79.6500	0.88687
11	0.7667	0.84314	33	100.2167	0.88790
12	0.9333	0.84452	34	126.1167	0.88952
13	1.1500	0.84587	35	158.7167	0.89084
14	1.4167	0.84678	36	199.7667	0.89133
15	1.7333	0.84850	37	251.4333	0.89197
16	2.1500	0.84941	38	316.4667	0.89271
17	2.6667	0.85138	39	398.3500	0.89349
18	3.3333	0.85328	40	501.4333	0.89397
19	4.1500	0.85513	41	631.2167	0.89450
20	5.1833	0.85780	42	794.5833	0.89500
21	6.4833	0.86005	43	1000.2667	0.89554
22	8.1167	0.86257			



Void Ratio = 0.776 **Compression =** 34.4%
D_0 = 0.8350 **D_{50} =** 0.8627 **D_{100} =** 0.8903 **C_v at 7.66 min. =** 0.030 ft.^{2}/day **C_α =** 0.015

Figure D-141

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-20
Depth: 8' - 10'
Material Description: Gray clay with silt layers and shell fragments
Liquid Limit: 70 **Plasticity Index:** 50
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	153.26 g.	Spec. Gr. =	2.678	Wet w+t =	120.25 g.
Dry w+t =	109.98 g.	Est. Ht. Solids =	0.369 in.	Dry w+t =	94.28 g.
Tare Wt. =	40.99 g.	Init. V.R. =	1.707	Tare Wt. =	19.27 g.
Moisture =	62.7 %	Init. Sat. =	98.4 %	Moisture =	34.6 %

UNIT WEIGHT		TEST START			
Height =	0.998 in.	Height =	0.998 in.	Dry Wt. =	75.01 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	129.26 g.				
Dry Dens. =	61.8 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.2/day)	C_α	Void Ratio	% Strain
start	0.55229	0.00000			1.707	
-10.16	0.55241	0.00012			1.706	0.0 Comprs.
62.50	0.56172	0.00943	0.431		1.681	0.9 Comprs.
125.00	0.56574	0.01345	0.243		1.670	1.3 Comprs.
250.00	0.57457	0.02228	0.334		1.646	2.2 Comprs.
500.00	0.58557	0.03328	0.190		1.616	3.3 Comprs.
1000.00	0.62387	0.07158	0.099		1.512	7.2 Comprs.
2000.00	0.70551	0.15322	0.035		1.291	15.4 Comprs.
500.00	0.69414	0.14185	0.294		1.322	14.2 Comprs.
125.00	0.67769	0.12540	0.064		1.367	12.6 Comprs.
250.00	0.67988	0.12759	0.080		1.361	12.8 Comprs.
500.00	0.68491	0.13262	0.101		1.347	13.3 Comprs.
1000.00	0.69514	0.14285	0.114		1.319	14.3 Comprs.
2000.00	0.71361	0.16132	0.187		1.269	16.2 Comprs.
4000.00	0.78077	0.22848	0.037		1.087	22.9 Comprs.
8000.00	0.83604	0.28375	0.035		0.937	28.4 Comprs.
16000.00	0.89554	0.34325	0.039		0.776	34.4 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.79 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.546
Recompression index (C_r) = 0.19

Pressure: -10.16 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.55229	14	1.5500	0.55231	27	31.6500	0.55235
2	0.0333	0.55231	15	1.9667	0.55230	28	39.8333	0.55237
3	0.0667	0.55229	16	2.4833	0.55231	29	50.1500	0.55237
4	0.1000	0.55229	17	3.1500	0.55230	30	63.1333	0.55237
5	0.1500	0.55230	18	3.9667	0.55230	31	79.4667	0.55239
6	0.2000	0.55231	19	5.0000	0.55230	32	100.0500	0.55238
7	0.2667	0.55232	20	6.3000	0.55233	33	125.9500	0.55239
8	0.3500	0.55230	21	7.9500	0.55231	34	158.5500	0.55240
9	0.4500	0.55231	22	10.0000	0.55234	35	199.5833	0.55242
10	0.5833	0.55231	23	12.6000	0.55234	36	251.2500	0.55239
11	0.7500	0.55231	24	15.8667	0.55235	37	316.3000	0.55241
12	0.9667	0.55228	25	19.9667	0.55234	38	398.1833	0.55243
13	1.2167	0.55230	26	25.1333	0.55237	39	483.6333	0.55241

Void Ratio = 1.706 **Compression =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.55174	20	5.2000	0.55878
2	0.1000	0.55200	21	6.5000	0.55904
3	0.2000	0.55241	22	8.1333	0.55929
4	0.2333	0.55262	23	10.1833	0.55950
5	0.2667	0.55282	24	12.7833	0.55970
6	0.3167	0.55298	25	16.0500	0.55985
7	0.3667	0.55316	26	20.1500	0.56007
8	0.4500	0.55338	27	25.3167	0.56034
9	0.5333	0.55356	28	31.8333	0.56053
10	0.6333	0.55380	29	40.0167	0.56064
11	0.7667	0.55420	30	50.3333	0.56080
12	0.9333	0.55457	31	63.3167	0.56095
13	1.1500	0.55504	32	79.6500	0.56097
14	1.4000	0.55533	33	100.2333	0.56101
15	1.7333	0.55580	34	126.1333	0.56102
16	2.1500	0.55690	35	158.7333	0.56108
17	2.6667	0.55772	36	199.7667	0.56116
18	3.3333	0.55839	37	251.4333	0.56124
19	4.1500	0.55857	38	316.4833	0.56141

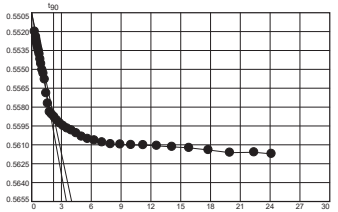


Figure D-142

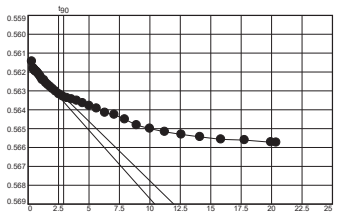
Pressure: 62.50 psf	TEST READINGS (continued)	Load No. 2

No.	Elapsed Time	Dial Reading
39	398.3667	0.56162
40	501.4500	0.56159
41	583.2167	0.56172

Void Ratio = 1.681 **Compression =** 0.9%
D_0 = 0.5505 **D_{90} =** 0.5587 **D_{100} =** 0.5596 **C_v at 4.85 min. =** 0.431 ft.^{2}/day

Pressure: 125.00 psf	TEST READINGS	Load No. 3

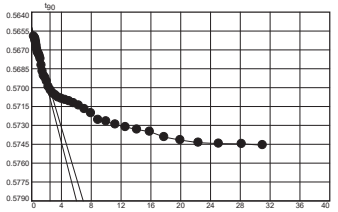
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.56108	21	6.4833	0.56318
2	0.1000	0.56144	22	8.1167	0.56329
3	0.2000	0.56181	23	10.1667	0.56338
4	0.2333	0.56184	24	12.7667	0.56345
5	0.2667	0.56189	25	16.0167	0.56352
6	0.3000	0.56190	26	20.1333	0.56365
7	0.3667	0.56196	27	25.3000	0.56379
8	0.4333	0.56196	28	31.8000	0.56393
9	0.5167	0.56200	29	40.0000	0.56416
10	0.6333	0.56205	30	50.3000	0.56426
11	0.7667	0.56211	31	63.2833	0.56451
12	0.9333	0.56219	32	79.6333	0.56482
13	1.1333	0.56228	33	100.2000	0.56500
14	1.4000	0.56242	34	126.1000	0.56517
15	1.7333	0.56243	35	158.7000	0.56531
16	2.1500	0.56258	36	199.7500	0.56544
17	2.6667	0.56268	37	251.4167	0.56557
18	3.3167	0.56279	38	316.4500	0.56561
19	4.1333	0.56290	39	398.3333	0.56572
20	5.1667	0.56303	40	415.6500	0.56574



Void Ratio = 1.670 **Compression =** 1.3%
D_0 = 0.5615 **D_{90} =** 0.5633 **D_{100} =** 0.5635 **C_v at 8.50 min. =** 0.243 ft.^{2}/day

Pressure: 250.00 psf	TEST READINGS	Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.56522	23	10.1833	0.57059
2	0.1000	0.56593	24	12.7833	0.57078
3	0.2167	0.56607	25	16.0333	0.57088
4	0.2333	0.56613	26	20.1500	0.57097
5	0.2667	0.56625	27	25.3167	0.57108
6	0.3167	0.56634	28	31.8167	0.57123
7	0.3667	0.56645	29	40.0167	0.57142
8	0.4333	0.56666	30	50.3333	0.57170
9	0.5333	0.56692	31	63.3000	0.57203
10	0.6333	0.56716	32	79.6500	0.57256
11	0.7667	0.56723	33	100.2333	0.57268
12	0.9333	0.56734	34	126.1333	0.57293
13	1.1500	0.56748	35	158.7333	0.57313
14	1.4000	0.56771	36	199.7667	0.57333
15	1.7333	0.56822	37	251.4333	0.57350
16	2.1500	0.56871	38	316.4833	0.57393
17	2.6833	0.56905	39	398.3667	0.57417
18	3.3333	0.56921	40	501.4500	0.57437
19	4.1500	0.56950	41	631.2167	0.57445
20	5.1833	0.56993	42	794.6000	0.57447
21	6.4833	0.57021	43	961.8167	0.57457
22	8.1333	0.57045			



Void Ratio = 1.646 **Compression =** 2.2%
D_0 = 0.5652 **D_{90} =** 0.5701 **D_{100} =** 0.5707 **C_v at 6.10 min. =** 0.334 ft.^{2}/day

Pressure: 500.00 psf	TEST READINGS	Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57297	13	1.1333	0.57643
2	0.1000	0.57434	14	1.4000	0.57657
3	0.2000	0.57503	15	1.7333	0.57680
4	0.2333	0.57510	16	2.1500	0.57758
5	0.2667	0.57520	17	2.6833	0.57808
6	0.3167	0.57530	18	3.3333	0.57856
7	0.3667	0.57545	19	4.1500	0.57930
8	0.4333	0.57557	20	5.1833	0.58002
9	0.5167	0.57580	21	6.5000	0.58053
10	0.6333	0.57591	22	8.1333	0.58096
11	0.7667	0.57608	23	10.1833	0.58133
12	0.9333	0.57621	24	12.7833	0.58159

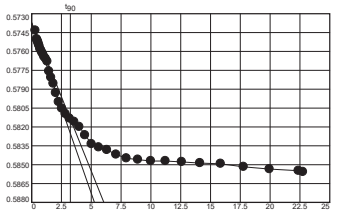


Figure D-143

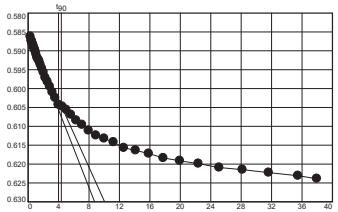
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	16.0500	0.58199	35	158.7167	0.58478
26	20.1500	0.58266	36	199.7500	0.58487
27	25.3167	0.58336	37	251.4167	0.58493
28	31.8333	0.58362	38	316.4667	0.58517
29	40.0167	0.58383	39	398.3500	0.58535
30	50.3333	0.58419	40	501.4333	0.58548
31	63.3167	0.58449	41	518.0167	0.58557
32	79.6500	0.58460			
33	100.2167	0.58471			
34	126.1167	0.58471			

Void Ratio = 1.616 **Compression =** 3.3%
D_0 = 0.5737 **D_{90} =** 0.5814 **D_{100} =** 0.5822 **C_v at 10.53 min. =** 0.190 ft.^{2}/day

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

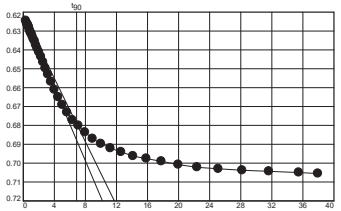
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.58388	24	12.8000	0.60246
2	0.1000	0.58624	25	16.0500	0.60425
3	0.2000	0.58723	26	20.1667	0.60471
4	0.2333	0.58740	27	25.3333	0.60558
5	0.2667	0.58766	28	31.8500	0.60689
6	0.3167	0.58783	29	40.0333	0.60840
7	0.3667	0.58816	30	50.3500	0.60960
8	0.4500	0.58846	31	63.3333	0.61111
9	0.5333	0.58879	32	79.6667	0.61240
10	0.6333	0.58925	33	100.2500	0.61323
11	0.7667	0.58959	34	126.1500	0.61421
12	0.9333	0.59003	35	158.7500	0.61571
13	1.1500	0.59085	36	199.7833	0.61637
14	1.4167	0.59176	37	251.4500	0.61724
15	1.7500	0.59224	38	316.5000	0.61839
16	2.1667	0.59271	39	398.3833	0.61915
17	2.6833	0.59362	40	501.4667	0.61989
18	3.3333	0.59465	41	631.2500	0.62093
19	4.1667	0.59570	42	794.6167	0.62149
20	5.2000	0.59714	43	1000.3000	0.62226
21	6.5000	0.59817	44	1259.2333	0.62310
22	8.1500	0.59944	45	1440.4833	0.62387
23	10.2000	0.60097			



Void Ratio = 1.512 **Compression =** 7.2%
D_0 = 0.5851 **D_{90} =** 0.6046 **D_{100} =** 0.6068 **C_v at 19.10 min. =** 0.099 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.62138	24	12.7833	0.65682
2	0.1167	0.62452	25	16.0500	0.66106
3	0.2167	0.62597	26	20.1667	0.66504
4	0.2500	0.62626	27	25.3333	0.66912
5	0.2833	0.62638	28	31.8333	0.67310
6	0.3167	0.62666	29	40.0333	0.67716
7	0.3833	0.62690	30	50.3333	0.68007
8	0.4500	0.62753	31	63.3167	0.68369
9	0.5333	0.62797	32	79.6667	0.68703
10	0.6500	0.62907	33	100.2333	0.68976
11	0.7833	0.63008	34	126.1333	0.69211
12	0.9500	0.63105	35	158.7500	0.69406
13	1.1500	0.63152	36	199.7833	0.69625
14	1.4167	0.63278	37	251.4500	0.69760
15	1.7500	0.63425	38	316.5000	0.69905
16	2.1667	0.63532	39	398.3833	0.70077
17	2.6833	0.63743	40	501.4667	0.70219
18	3.3333	0.63934	41	631.2333	0.70300
19	4.1667	0.64124	42	794.6167	0.70379
20	5.2000	0.64352	43	1000.2833	0.70432
21	6.5000	0.64642	44	1259.2167	0.70498
22	8.1333	0.64976	45	1440.4500	0.70551
23	10.2000	0.65298			



Void Ratio = 1.291 **Compression =** 15.4%
D_0 = 0.6215 **D_{90} =** 0.6792 **D_{100} =** 0.6856 **C_v at 47.13 min. =** 0.035 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.70780	12	0.9500	0.70359
2	0.1167	0.70560	13	1.1500	0.70321
3	0.2167	0.70518	14	1.4167	0.70263
4	0.2500	0.70511	15	1.7500	0.70200
5	0.2833	0.70502	16	2.1667	0.70157
6	0.3167	0.70492	17	2.6833	0.70121
7	0.3833	0.70480	18	3.3500	0.70048
8	0.4500	0.70467	19	4.1667	0.70003
9	0.5333	0.70452	20	5.2000	0.69980
10	0.6500	0.70415	21	6.5167	0.69948
11	0.7833	0.70386	22	8.1500	0.69891

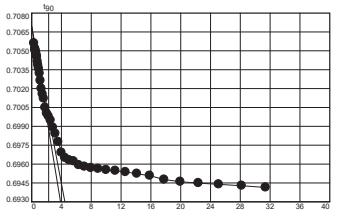


Figure D-144

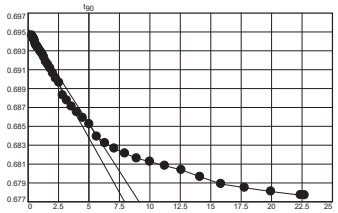
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.2167	0.69843	33	100.2500	0.69553	43	986.5833	0.69414
24	12.8000	0.69776	34	126.1500	0.69547			
25	16.0667	0.69692	35	158.7500	0.69537			
26	20.1833	0.69650	36	199.7833	0.69523			
27	25.3500	0.69631	37	251.4500	0.69508			
28	31.8500	0.69623	38	316.5000	0.69477			
29	40.0500	0.69592	39	398.3833	0.69460			
30	50.3500	0.69579	40	501.4667	0.69449			
31	63.3333	0.69569	41	631.2333	0.69439			
32	79.6833	0.69563	42	794.6167	0.69428			

Void Ratio = 1.322 **Compression =** 14.2%
D_0 = 0.7069 **D_{90} =** 0.6998 **D_{100} =** 0.6990 **C_v at 5.21 min. =** 0.294 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

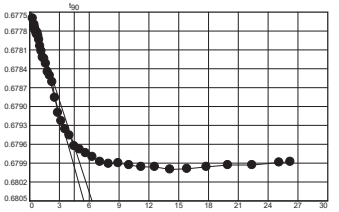
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69560	22	8.1333	0.68829
2	0.1000	0.69463	23	10.1833	0.68775
3	0.2000	0.69435	24	12.7833	0.68710
4	0.2333	0.69426	25	16.0500	0.68651
5	0.2667	0.69415	26	20.1500	0.68590
6	0.3000	0.69403	27	25.3333	0.68524
7	0.3667	0.69375	28	31.8333	0.68392
8	0.4333	0.69361	29	40.0167	0.68322
9	0.5333	0.69349	30	50.3333	0.68264
10	0.6333	0.69334	31	63.3167	0.68213
11	0.7667	0.69324	32	79.6667	0.68161
12	0.9333	0.69303	33	100.2333	0.68125
13	1.1500	0.69284	34	126.1333	0.68082
14	1.4167	0.69263	35	158.7333	0.68038
15	1.7333	0.69232	36	199.7833	0.67965
16	2.1500	0.69184	37	251.4500	0.67889
17	2.6833	0.69152	38	316.4833	0.67850
18	3.3333	0.69114	39	398.3667	0.67809
19	4.1500	0.69062	40	501.4500	0.67771
20	5.1833	0.69007	41	515.7333	0.67769
21	6.5000	0.68963			



Void Ratio = 1.367 **Compression =** 12.6%
D_0 = 0.6953 **D_{90} =** 0.6853 **D_{100} =** 0.6842 **C_v at 24.85 min. =** 0.064 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.67715	22	8.1333	0.67910
2	0.1000	0.67760	23	10.1833	0.67923
3	0.2000	0.67771	24	12.7833	0.67936
4	0.2333	0.67770	25	16.0333	0.67946
5	0.2667	0.67774	26	20.1500	0.67963
6	0.3000	0.67777	27	25.3167	0.67968
7	0.3667	0.67779	28	31.8333	0.67974
8	0.4333	0.67781	29	40.0167	0.67980
9	0.5167	0.67785	30	50.3333	0.67988
10	0.6333	0.67783	31	63.3167	0.67991
11	0.7667	0.67788	32	79.6500	0.67990
12	0.9333	0.67794	33	100.2333	0.67993
13	1.1333	0.67804	34	126.1333	0.67996
14	1.4000	0.67812	35	158.7333	0.67996
15	1.7333	0.67822	36	199.7833	0.68000
16	2.1500	0.67824	37	251.4500	0.67999
17	2.6667	0.67832	38	316.4833	0.67996
18	3.3167	0.67845	39	398.3667	0.67993
19	4.1500	0.67851	40	501.4500	0.67993
20	5.1833	0.67861	41	631.2333	0.67989
21	6.4833	0.67886	42	688.2833	0.67988



Void Ratio = 1.361 **Compression =** 12.8%
D_0 = 0.6774 **D_{90} =** 0.6796 **D_{100} =** 0.6799 **C_v at 20.18 min. =** 0.080 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.67936	14	1.4000	0.68071
2	0.1000	0.67998	15	1.7333	0.68096
3	0.2000	0.68010	16	2.1333	0.68118
4	0.2333	0.68022	17	2.6667	0.68140
5	0.2667	0.68023	18	3.3167	0.68155
6	0.3000	0.68027	19	4.1500	0.68173
7	0.3667	0.68028	20	5.1667	0.68199
8	0.4333	0.68037	21	6.4667	0.68216
9	0.5167	0.68042	22	8.1167	0.68236
10	0.6167	0.68044	23	10.1667	0.68254
11	0.7500	0.68050	24	12.7667	0.68286
12	0.9167	0.68056	25	16.0167	0.68319
13	1.1333	0.68065	26	20.1167	0.68355

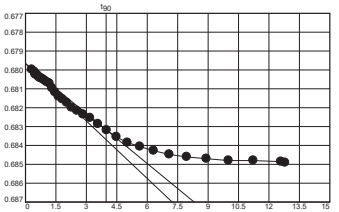


Figure D-145

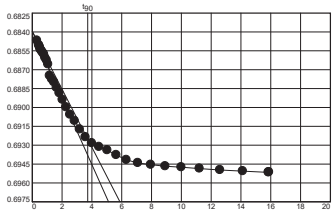
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading
27	25.2833	0.68385
28	31.8000	0.68406
29	39.9833	0.68428
30	50.3000	0.68448
31	63.2833	0.68461
32	79.6167	0.68470
33	100.2000	0.68480
34	126.0833	0.68480
35	158.6833	0.68486
36	163.8500	0.68491

Void Ratio = 1.347 **Compression =** 13.3%
D_0 = 0.6797 **D_{90} =** 0.6832 **D_{100} =** 0.6836 **C_V at 15.79 min. =** 0.101 ft.2/day

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

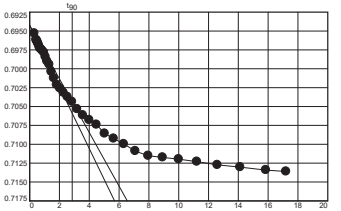
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.68374	20	5.1833	0.68998
2	0.1000	0.68468	21	6.4833	0.69057
3	0.2000	0.68503	22	8.1167	0.69106
4	0.2333	0.68513	23	10.1833	0.69174
5	0.2667	0.68524	24	12.7833	0.69236
6	0.3000	0.68538	25	16.0500	0.69284
7	0.3667	0.68547	26	20.1500	0.69313
8	0.4333	0.68557	27	25.3333	0.69340
9	0.5333	0.68568	28	31.8333	0.69378
10	0.6333	0.68578	29	40.0167	0.69417
11	0.7667	0.68605	30	50.3333	0.69441
12	0.9333	0.68625	31	63.3167	0.69455
13	1.1333	0.68657	32	79.6500	0.69467
14	1.4000	0.68748	33	100.2333	0.69475
15	1.7500	0.68776	34	126.1333	0.69486
16	2.1500	0.68799	35	158.7333	0.69497
17	2.6833	0.68843	36	199.7667	0.69506
18	3.3333	0.68886	37	251.4333	0.69516
19	4.1500	0.68938	38	252.4500	0.69514



Void Ratio = 1.319 **Compression =** 14.3%
D_0 = 0.6840 **D_{90} =** 0.6925 **D_{100} =** 0.6935 **C_V at 13.82 min. =** 0.114 ft.2/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69342	20	5.1833	0.70316
2	0.1000	0.69530	21	6.4833	0.70372
3	0.2000	0.69616	22	8.1333	0.70437
4	0.2333	0.69627	23	10.1833	0.70534
5	0.2667	0.69640	24	12.7833	0.70615
6	0.3000	0.69657	25	16.0500	0.70678
7	0.3667	0.69679	26	20.1500	0.70740
8	0.4333	0.69712	27	25.3333	0.70858
9	0.5167	0.69732	28	31.8333	0.70924
10	0.6333	0.69745	29	40.0333	0.70997
11	0.7667	0.69764	30	50.3333	0.71090
12	0.9333	0.69785	31	63.3167	0.71152
13	1.1333	0.69841	32	79.6667	0.71174
14	1.4000	0.69900	33	100.2333	0.71198
15	1.7333	0.69943	34	126.1333	0.71230
16	2.1500	0.70038	35	158.7333	0.71273
17	2.6667	0.70124	36	199.7667	0.71303
18	3.3333	0.70213	37	251.4333	0.71342
19	4.1500	0.70257	38	296.0333	0.71361



Void Ratio = 1.269 **Compression =** 16.2%
D_0 = 0.6942 **D_{90} =** 0.7044 **D_{100} =** 0.7055 **C_V at 8.14 min. =** 0.187 ft.2/day

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.71103	16	2.1500	0.72714
2	0.1000	0.71482	17	2.6667	0.72825
3	0.2000	0.71646	18	3.3333	0.73079
4	0.2333	0.71720	19	4.1500	0.73242
5	0.2667	0.71743	20	5.1833	0.73445
6	0.3167	0.71783	21	6.5000	0.73709
7	0.3667	0.71819	22	8.1333	0.73940
8	0.4333	0.71859	23	10.1833	0.74244
9	0.5167	0.71929	24	12.7833	0.74548
10	0.6333	0.72003	25	16.0500	0.74902
11	0.7667	0.72097	26	20.1500	0.75239
12	0.9333	0.72200	27	25.3167	0.75577
13	1.1333	0.72270	28	31.8333	0.75930
14	1.4000	0.72392	29	40.0167	0.76241
15	1.7333	0.72529	30	50.3333	0.76565

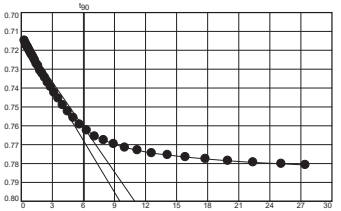


Figure D-146

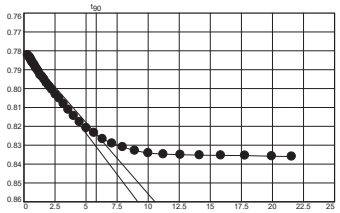
Pressure: 4000.00 psf — **TEST READINGS (continued)** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	63.3167	0.76760	41	631.2167	0.78014
32	79.6500	0.76966	42	753.0833	0.78077
33	100.2167	0.77152			
34	126.1167	0.77297			
35	158.7167	0.77452			
36	199.7667	0.77547			
37	251.4333	0.77660			
38	316.4667	0.77753			
39	398.3667	0.77854			
40	501.4500	0.77940			

Void Ratio = 1.087 **Compression =** 22.9%
D_0 = 0.7130 **D_{90} =** 0.7613 **D_{100} =** 0.7667 **C_v at 36.98 min. =** 0.037 ft.^{2}/day

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

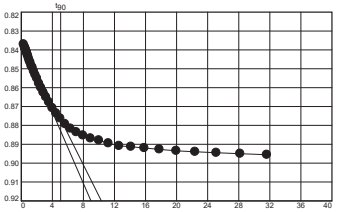
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77758	21	6.4833	0.80315
2	0.1000	0.78225	22	8.1333	0.80524
3	0.2000	0.78331	23	10.1833	0.80809
4	0.2333	0.78359	24	12.7833	0.81123
5	0.2667	0.78393	25	16.0500	0.81446
6	0.3167	0.78458	26	20.1500	0.81767
7	0.3667	0.78499	27	25.3333	0.82093
8	0.4333	0.78584	28	31.8333	0.82340
9	0.5167	0.78631	29	40.0333	0.82670
10	0.6333	0.78698	30	50.3333	0.82905
11	0.7667	0.78773	31	63.3167	0.83098
12	0.9333	0.78887	32	79.6667	0.83287
13	1.1333	0.78987	33	100.2333	0.83420
14	1.4000	0.79096	34	126.1333	0.83478
15	1.7333	0.79282	35	158.7333	0.83503
16	2.1500	0.79367	36	199.7833	0.83529
17	2.6667	0.79515	37	251.4500	0.83541
18	3.3167	0.79702	38	316.5000	0.83552
19	4.1500	0.79878	39	398.3667	0.83584
20	5.1833	0.80059	40	464.7500	0.83604



Void Ratio = 0.937 **Compression =** 28.4%
D_0 = 0.7802 **D_{90} =** 0.8243 **D_{100} =** 0.8292 **C_v at 33.89 min. =** 0.035 ft.^{2}/day

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

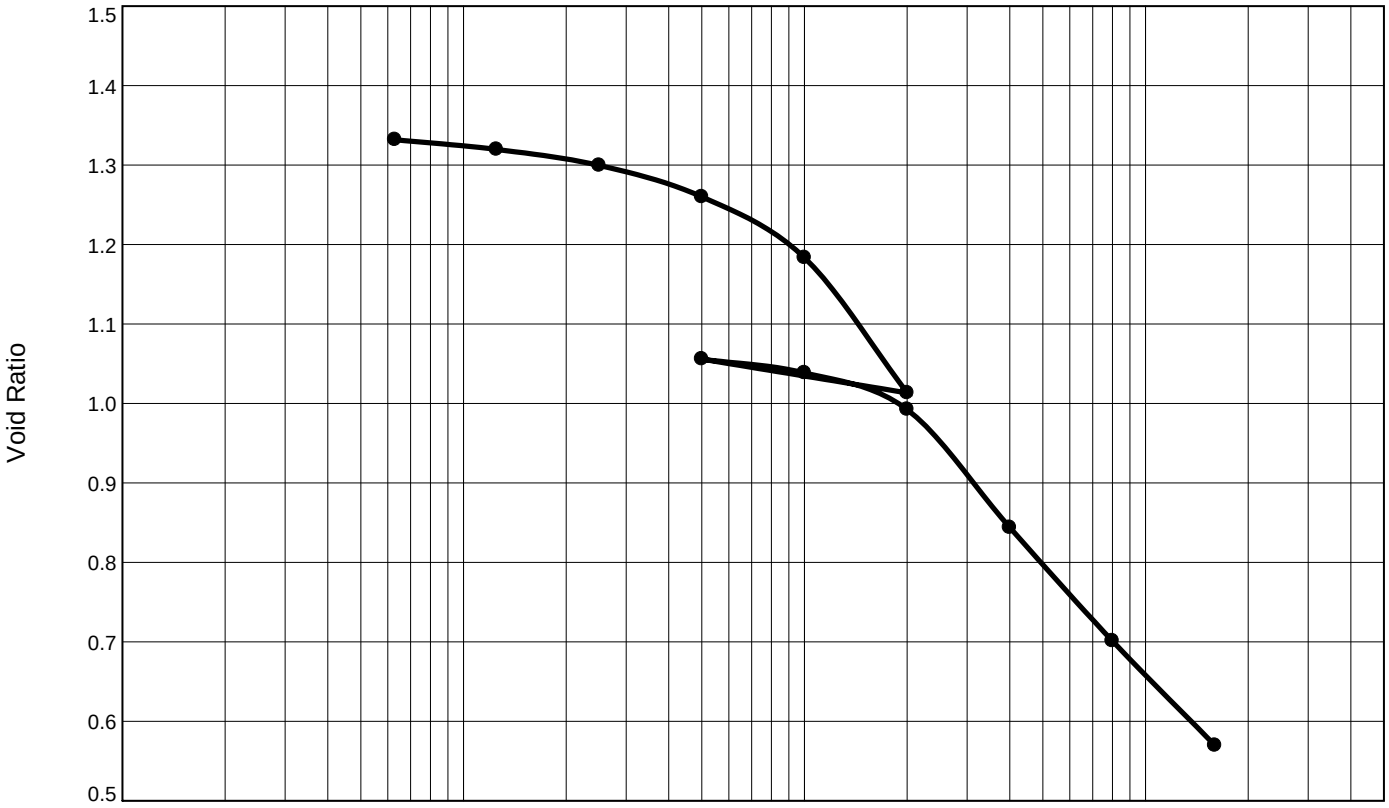
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.83203	23	10.1833	0.86502
2	0.1000	0.83708	24	12.7833	0.86770
3	0.2000	0.83847	25	16.0500	0.87082
4	0.2333	0.83885	26	20.1500	0.87356
5	0.2667	0.83922	27	25.3167	0.87627
6	0.3000	0.83968	28	31.8167	0.87928
7	0.3667	0.84011	29	40.0167	0.88171
8	0.4333	0.84067	30	50.3333	0.88357
9	0.5333	0.84126	31	63.3000	0.88530
10	0.6333	0.84236	32	79.6500	0.88687
11	0.7667	0.84314	33	100.2167	0.88790
12	0.9333	0.84452	34	126.1167	0.88952
13	1.1500	0.84587	35	158.7167	0.89084
14	1.4167	0.84678	36	199.7667	0.89133
15	1.7333	0.84850	37	251.4333	0.89197
16	2.1500	0.84941	38	316.4667	0.89271
17	2.6667	0.85138	39	398.3500	0.89349
18	3.3333	0.85328	40	501.4333	0.89397
19	4.1500	0.85513	41	631.2167	0.89450
20	5.1833	0.85780	42	794.5833	0.89500
21	6.4833	0.86005	43	1000.2667	0.89554
22	8.1167	0.86257			

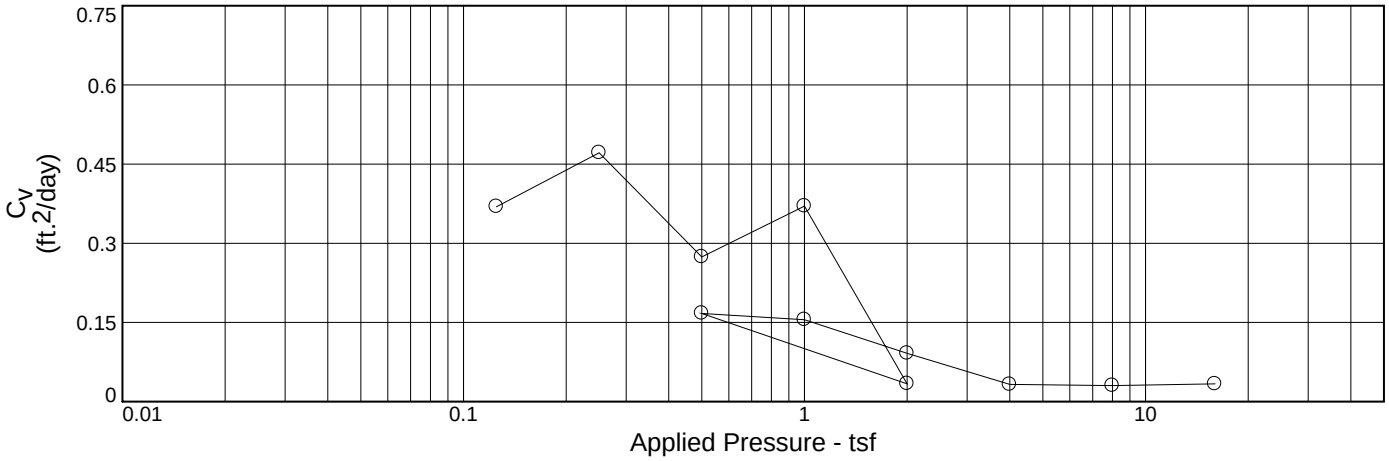


Void Ratio = 0.776 **Compression =** 34.4%
D_0 = 0.8350 **D_{90} =** 0.8764 **D_{100} =** 0.8811 **C_v at 25.68 min. =** 0.039 ft.^{2}/day

Figure D-147

CONSOLIDATION TEST REPORT





Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
106.5 %	53.9 %	70.6	55	37	2.643	1.0	0.57	1.338

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand pockets, silt lenses and organic matter	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-25 **Depth:** 28' - 30'

GeoEngineers

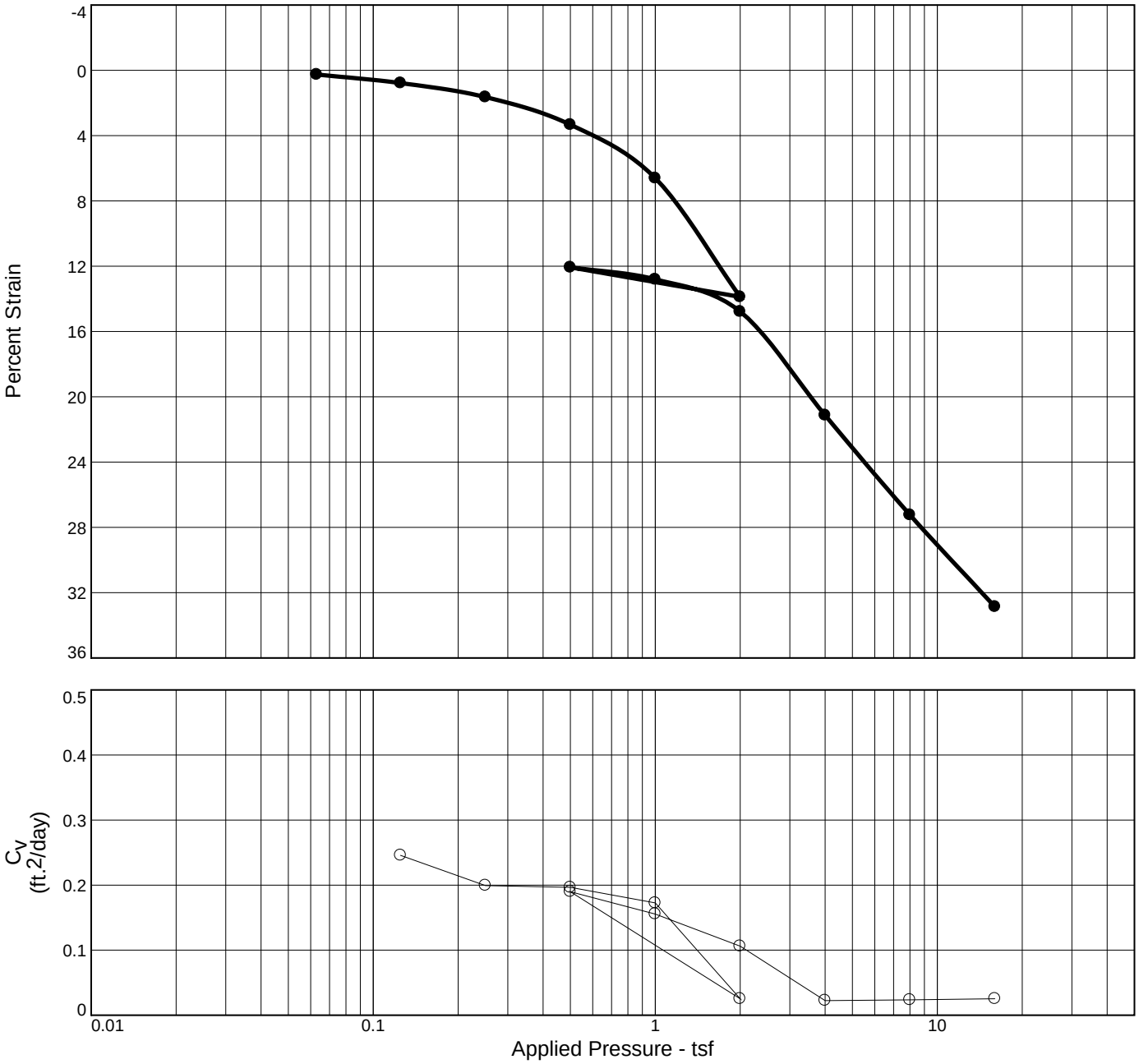
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: SLC/CLP **Checked By:** ARS

Figure D-148

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
106.5 %	53.9 %	70.6	55	37	2.643	1.0	0.57	1.338

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand pockets, silt lenses and organic matter	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-25 **Depth:** 28' - 30'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: SLC/CLP **Checked By:** ARS

Figure D-149

CONSOLIDATION TEST DATA

6/12/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-25
Depth: 28' - 30'
Material Description: Gray clay with sand pockets, silt lenses and organic matter
Liquid Limit: 55 **Plasticity Index:** 37
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	250.66 g.	Spec. Gr. =	2.643	Wet w+t =	100.70 g.
Dry w+t =	177.11 g.	Est. Ht. Solids =	0.319 in.	Dry w+t =	83.09 g.
Tare Wt. =	40.63 g.	Init. V.R. =	1.338	Tare Wt. =	18.34 g.
Moisture =	53.9 %	Init. Sat. =	106.5 %	Moisture =	27.2 %

UNIT WEIGHT		TEST START			
Height =	0.745 in.	Height =	0.745 in.	Dry Wt. =	64.75 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	104.26 g.				
Dry Dens. =	70.6 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00020	0.00000			1.338	
0.06	0.00210	0.00190		0.000	1.332	0.3 Comprs.
0.13	0.00600	0.00580	0.246	0.000	1.320	0.8 Comprs.
0.25	0.01240	0.01220	0.199	0.004	1.300	1.6 Comprs.
0.50	0.02500	0.02480	0.196	0.004	1.260	3.3 Comprs.
1.00	0.04940	0.04920	0.173	0.013	1.183	6.6 Comprs.
2.00	0.10360	0.10340	0.025	0.018	1.013	13.9 Comprs.
0.50	0.09010	0.08990	0.190		1.056	12.1 Comprs.
1.00	0.09560	0.09540	0.155	0.001	1.038	12.8 Comprs.
2.00	0.11030	0.11010	0.106	0.008	0.992	14.8 Comprs.
4.00	0.15760	0.15740	0.022	0.017	0.844	21.1 Comprs.
8.00	0.20310	0.20290	0.024	0.012	0.701	27.2 Comprs.
16.00	0.24500	0.24480	0.025	0.011	0.570	32.9 Comprs.

Compression index (C_c), tsf = 0.57 **Preconsolidation pressure (P_p), tsf =** 1.0 **Void ratio at P_p (e_m) =** 1.182
Recompression index (C_r) = 0.23

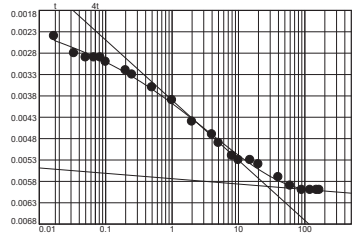
Pressure: 0.06 tsf — TEST READINGS — Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0002	11	1.0000	0.0015
2	0.0167	0.0011	12	2.0000	0.0017
3	0.0333	0.0011	13	4.0167	0.0020
4	0.0500	0.0011	14	5.0167	0.0020
5	0.0667	0.0012	15	8.0167	0.0021
6	0.0833	0.0012	16	10.0333	0.0021
7	0.1000	0.0012	17	15.0167	0.0021
8	0.2000	0.0013	18	20.0333	0.0021
9	0.2500	0.0013			
10	0.5000	0.0013			

Void Ratio = 1.332 **Compression =** 0.3%

Pressure: 0.13 tsf — TEST READINGS — Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0021	13	4.0000	0.0047
2	0.0167	0.0024	14	5.0000	0.0049
3	0.0333	0.0028	15	8.0000	0.0052
4	0.0500	0.0029	16	10.0000	0.0053
5	0.0667	0.0029	17	15.0000	0.0053
6	0.0833	0.0029	18	19.9833	0.0054
7	0.1000	0.0030	19	39.9833	0.0057
8	0.2000	0.0032	20	59.9833	0.0059
9	0.2500	0.0033	21	90.0000	0.0060
10	0.5000	0.0036	22	120.0333	0.0060
11	1.0000	0.0039	23	150.0667	0.0060
12	2.0000	0.0044	24	165.5167	0.00600

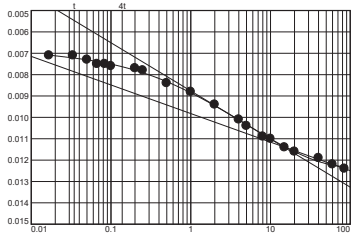


Void Ratio = 1.320 **Compression =** 0.8%
D_0 = 0.0021 **D_{50} =** 0.0040 **D_{100} =** 0.0059 **C_v at 1.10 min. =** 0.246 ft.^{2}/day **C_α =** 0.000

Figure D-150

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 3**

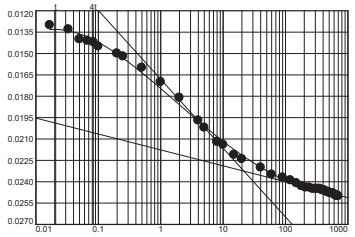
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.00600	12	2.0000	0.0094
2	0.0167	0.0071	13	4.0000	0.0101
3	0.0333	0.0071	14	5.0000	0.0104
4	0.0500	0.0073	15	8.0000	0.0109
5	0.0667	0.0075	16	10.0000	0.0110
6	0.0833	0.0075	17	15.0167	0.0114
7	0.1000	0.0076	18	20.0167	0.0116
8	0.2000	0.0077	19	40.0500	0.0119
9	0.2500	0.0078	20	60.0667	0.0122
10	0.5000	0.0084	21	84.7500	0.0124
11	1.0000	0.0088			



Void Ratio = 1.300 **Compression =** 1.6%
D_0 = 0.0068 **D_{50} =** 0.0091 **D_{100} =** 0.0114 **C_v at 1.34 min. =** 0.199 ft.^{2}/day **C_α =** 0.004

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 4**

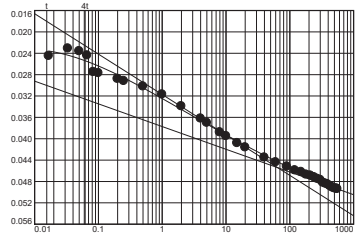
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0124	22	120.1500	0.0239
2	0.0167	0.0130	23	150.1833	0.0241
3	0.0333	0.0133	24	180.2167	0.0243
4	0.0500	0.0140	25	210.2667	0.0244
5	0.0667	0.0141	26	240.3000	0.0244
6	0.0833	0.0142	27	270.3333	0.0245
7	0.1000	0.0145	28	300.3833	0.0245
8	0.2000	0.0150	29	330.4167	0.0245
9	0.2500	0.0152	30	360.4500	0.0245
10	0.5000	0.0160	31	390.5000	0.0246
11	1.0000	0.0170	32	420.5333	0.0246
12	2.0000	0.0181	33	450.5667	0.0247
13	4.0000	0.0197	34	480.6000	0.0247
14	5.0000	0.0202	35	510.6500	0.0248
15	8.0000	0.0212	36	540.6833	0.0248
16	10.0167	0.0214	37	570.7167	0.0248
17	15.0167	0.0221	38	600.7500	0.0249
18	20.0167	0.0224	39	630.8000	0.0249
19	40.0500	0.0230	40	660.8333	0.0250
20	60.0667	0.0235	41	690.8667	0.0250
21	90.1167	0.0237	42	700.1333	0.0250



Void Ratio = 1.260 **Compression =** 3.3%
D_0 = 0.0126 **D_{50} =** 0.0179 **D_{100} =** 0.0233 **C_v at 1.32 min. =** 0.196 ft.^{2}/day **C_α =** 0.004

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0250	20	60.0833	0.0444
2	0.0167	0.0245	21	90.1167	0.0452
3	0.0333	0.0231	22	120.1500	0.0459
4	0.0500	0.0236	23	150.1833	0.0462
5	0.0667	0.0244	24	180.2333	0.0467
6	0.0833	0.0275	25	210.2667	0.0469
7	0.1000	0.0277	26	240.3000	0.0472
8	0.2000	0.0288	27	270.3500	0.0475
9	0.2500	0.0292	28	300.3833	0.0477
10	0.5000	0.0302	29	330.4167	0.0482
11	1.0000	0.0317	30	360.4667	0.0484
12	2.0000	0.0339	31	390.5000	0.0485
13	4.0000	0.0362	32	420.5333	0.0488
14	5.0167	0.0370	33	450.5667	0.0490
15	8.0167	0.0388	34	480.6167	0.0492
16	10.0167	0.0395	35	510.6500	0.0493
17	15.0167	0.0408	36	540.6833	0.0493
18	20.0333	0.0416	37	556.5667	0.0494
19	40.0500	0.0435			



Void Ratio = 1.183 **Compression =** 6.6%
D_0 = 0.0217 **D_{50} =** 0.0335 **D_{100} =** 0.0454 **C_v at 1.43 min. =** 0.173 ft.^{2}/day **C_α =** 0.013

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0494	16	10.0000	0.0764
2	0.0167	0.0516	17	15.0000	0.0807
3	0.0333	0.0522	18	20.0000	0.0841
4	0.0500	0.0525	19	39.9833	0.0902
5	0.0667	0.0527	20	60.0000	0.0931
6	0.0833	0.0531	21	90.0000	0.0956
7	0.1000	0.0532	22	119.9833	0.0971
8	0.2000	0.0541	23	149.9667	0.0981
9	0.2500	0.0547	24	179.9667	0.0989
10	0.5000	0.0564	25	209.9667	0.0996
11	1.0000	0.0588	26	239.9667	0.1000
12	2.0000	0.0622	27	269.9500	0.1004
13	4.0000	0.0673	28	299.9333	0.1007
14	5.0000	0.0692	29	329.9500	0.1011
15	8.0000	0.0740	30	359.9333	0.1013

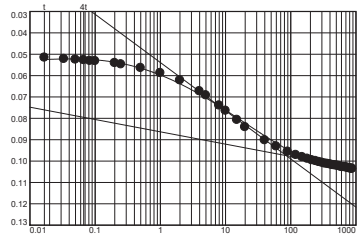


Figure D-151

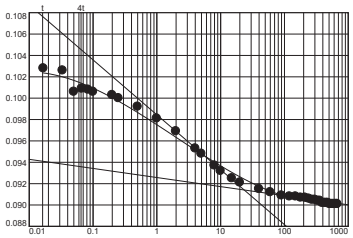
Pressure: 2.00 tsf	TEST READINGS (continued)	Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	389.9167	0.1014	41	689.8667	0.1029
32	419.9167	0.1017	42	719.8667	0.1030
33	449.9167	0.1019	43	749.8500	0.1031
34	479.9167	0.1020	44	779.8500	0.1033
35	509.9000	0.1021	45	809.8500	0.1034
36	539.8833	0.1023	46	839.8333	0.1035
37	569.9000	0.1025	47	869.8167	0.1036
38	599.8833	0.1027	48	876.0000	0.1036
39	629.8667	0.1028			
40	659.8667	0.1028			

Void Ratio = 1.013 **Compression =** 13.9%
D_0 = 0.0526 **D_{50} =** 0.0750 **D_{100} =** 0.0974 **C_v at 8.74 min. =** 0.025 ft.^{2}/day **C_α =** 0.018

Pressure: 0.50 tsf	TEST READINGS	Load No. 7

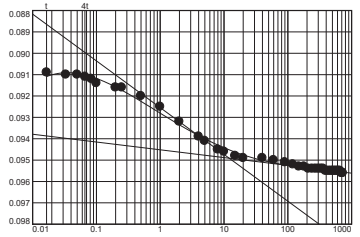
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1036	22	119.9833	0.0908
2	0.0167	0.1028	23	149.9833	0.0908
3	0.0333	0.1026	24	179.9833	0.0907
4	0.0500	0.1006	25	209.9667	0.0907
5	0.0667	0.1009	26	239.9500	0.0906
6	0.0833	0.1008	27	269.9667	0.0905
7	0.1000	0.1006	28	299.9500	0.0905
8	0.2000	0.1003	29	329.9333	0.0904
9	0.2500	0.1000	30	359.9333	0.0904
10	0.5000	0.0992	31	389.9333	0.0902
11	1.0000	0.0981	32	419.9333	0.0902
12	2.0000	0.0969	33	449.9167	0.0902
13	4.0000	0.0953	34	479.9167	0.0902
14	5.0000	0.0948	35	509.9167	0.0901
15	8.0000	0.0937	36	539.9000	0.0901
16	10.0000	0.0932	37	569.8833	0.0901
17	15.0000	0.0925	38	599.8833	0.0901
18	20.0000	0.0921	39	629.9000	0.0901
19	40.0167	0.0915	40	659.8833	0.0901
20	60.0000	0.0912	41	677.8167	0.0901
21	90.0000	0.0909			



Void Ratio = 1.056 **Compression =** 12.1%
D_0 = 0.1033 **D_{50} =** 0.0974 **D_{100} =** 0.0914 **C_v at 1.09 min. =** 0.190 ft.^{2}/day

Pressure: 1.00 tsf	TEST READINGS	Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0901	23	149.9667	0.0953
2	0.0167	0.0909	24	179.9667	0.0953
3	0.0333	0.0910	25	209.9667	0.0954
4	0.0500	0.0910	26	239.9500	0.0954
5	0.0667	0.0911	27	269.9500	0.0954
6	0.0833	0.0912	28	299.9500	0.0954
7	0.1000	0.0914	29	329.9500	0.0954
8	0.2000	0.0916	30	359.9333	0.0954
9	0.2500	0.0916	31	389.9333	0.0955
10	0.5000	0.0920	32	419.9333	0.0955
11	1.0000	0.0925	33	449.9167	0.0955
12	2.0000	0.0932	34	479.9000	0.0955
13	4.0000	0.0939	35	509.9167	0.0955
14	5.0000	0.0941	36	539.9000	0.0955
15	8.0000	0.0945	37	569.8833	0.0955
16	10.0000	0.0946	38	599.9000	0.0955
17	15.0000	0.0948	39	629.8833	0.0955
18	20.0000	0.0949	40	659.8833	0.0955
19	39.9833	0.0949	41	689.8667	0.0956
20	60.0000	0.0950	42	719.8667	0.0956
21	90.0000	0.0951	43	727.0667	0.0956
22	119.9833	0.0952			



Void Ratio = 1.038 **Compression =** 12.8%
D_0 = 0.0912 **D_{50} =** 0.0930 **D_{100} =** 0.0949 **C_v at 1.35 min. =** 0.155 ft.^{2}/day **C_α =** 0.001

Pressure: 2.00 tsf	TEST READINGS	Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0956	13	4.0000	0.1021
2	0.0167	0.0971	14	5.0000	0.1025
3	0.0333	0.0972	15	8.0000	0.1033
4	0.0500	0.0973	16	10.0000	0.1036
5	0.0667	0.0973	17	15.0000	0.1042
6	0.0833	0.0975	18	20.0000	0.1045
7	0.1000	0.0976	19	39.9833	0.1052
8	0.2000	0.0981	20	59.9667	0.1058
9	0.2500	0.0982	21	89.9833	0.1061
10	0.5000	0.0989	22	119.9833	0.1066
11	1.0000	0.0997	23	149.9667	0.1068
12	2.0000	0.1008	24	179.9500	0.1069

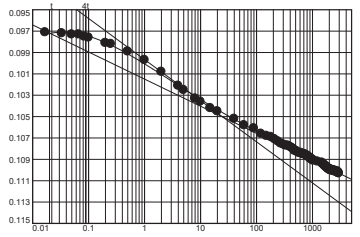


Figure D-152

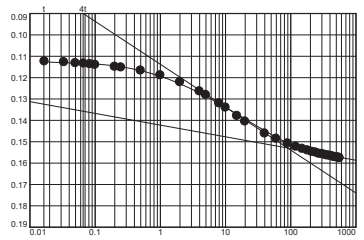
Pressure: 2.00 tsf	TEST READINGS (continued)	Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	209.9667	0.1071	51	1049.6667	0.1091	77	2279.4167	0.1100
26	239.9500	0.1073	52	1229.6333	0.1092	78	2309.4167	0.1100
27	269.9333	0.1075	53	1469.5833	0.1093	79	2339.4167	0.1100
28	299.9333	0.1076	54	1499.5667	0.1094	80	2369.4000	0.1101
29	329.9333	0.1077	55	1559.5667	0.1094	81	2399.3833	0.1101
30	359.9167	0.1077	56	1589.5667	0.1095	82	2429.4000	0.1101
31	389.9167	0.1078	57	1619.5500	0.1095	83	2459.3833	0.1101
32	419.9167	0.1079	58	1649.5500	0.1096	84	2489.3667	0.1101
33	449.9000	0.1080	59	1709.5333	0.1096	85	2519.3667	0.1101
34	479.8833	0.1082	60	1739.5167	0.1097	86	2549.3833	0.1101
35	509.9000	0.1082	61	1799.5167	0.1097	87	2579.3667	0.1101
36	539.9000	0.1083	62	1829.5000	0.1098	88	2609.3500	0.1101
37	569.8667	0.1084	63	1859.5000	0.1098	89	2639.3500	0.1101
38	629.8000	0.1084	64	1889.5000	0.1098	90	2669.3500	0.1101
39	659.7333	0.1085	65	1919.4833	0.1099	91	2699.3500	0.1101
40	719.7333	0.1085	66	1949.4833	0.1099	92	2729.3167	0.1102
41	749.7167	0.1086	67	1979.4833	0.1099	93	2759.3167	0.1102
42	779.7000	0.1086	68	2009.4833	0.1099	94	2789.3333	0.1102
43	809.7167	0.1087	69	2039.4667	0.1099	95	2819.3167	0.1102
44	839.7167	0.1087	70	2069.4667	0.1100	96	2849.3000	0.1102
45	869.6833	0.1088	71	2099.4667	0.1100	97	2879.3000	0.1102
46	899.6833	0.1089	72	2129.4500	0.1100	98	2909.3000	0.1102
47	929.7000	0.1089	73	2159.4333	0.1100	99	2939.2833	0.1103
48	959.6833	0.1090	74	2189.4500	0.1100	100	2947.9333	0.1103
49	989.6667	0.1090	75	2219.4333	0.1100			
50	1019.6667	0.1091	76	2249.4167	0.1100			

Void Ratio = 0.992 **Compression =** 14.8%
D_0 = 0.0970 **D_{50} =** 0.1010 **D_{100} =** 0.1050 **C_v at 1.92 min. =** 0.106 ft.^{2}/day **C_α =** 0.008

Pressure: 4.00 tsf	TEST READINGS	Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1103	20	60.0000	0.1486
2	0.0167	0.1124	21	90.0000	0.1508
3	0.0333	0.1128	22	119.9833	0.1523
4	0.0500	0.1132	23	149.9667	0.1533
5	0.0667	0.1134	24	179.9833	0.1540
6	0.0833	0.1137	25	209.9667	0.1547
7	0.1000	0.1140	26	239.9500	0.1550
8	0.2000	0.1149	27	269.9500	0.1556
9	0.2500	0.1152	28	299.9500	0.1557
10	0.5000	0.1167	29	329.9500	0.1561
11	1.0000	0.1189	30	359.9333	0.1564
12	2.0000	0.1221	31	389.9333	0.1565
13	4.0000	0.1264	32	419.9333	0.1567
14	5.0000	0.1281	33	449.9167	0.1570
15	8.0000	0.1320	34	479.9000	0.1572
16	10.0000	0.1340	35	509.9000	0.1573
17	15.0000	0.1379	36	539.9000	0.1574
18	20.0000	0.1405	37	559.9333	0.1576
19	40.0000	0.1461	38	559.9833	0.1576



Void Ratio = 0.844 **Compression =** 21.1%
D_0 = 0.1118 **D_{50} =** 0.1324 **D_{100} =** 0.1529 **C_v at 8.19 min. =** 0.022 ft.^{2}/day **C_α =** 0.017

Pressure: 8.00 tsf	TEST READINGS	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1576	16	10.0000	0.1821
2	0.0167	0.1597	17	15.0000	0.1860
3	0.0333	0.1604	18	19.9833	0.1884
4	0.0500	0.1609	19	39.9833	0.1937
5	0.0667	0.1612	20	59.9667	0.1959
6	0.0833	0.1614	21	89.9667	0.1977
7	0.1000	0.1618	22	119.9833	0.1987
8	0.2000	0.1629	23	149.9667	0.1994
9	0.2500	0.1633	24	179.9500	0.1998
10	0.5000	0.1650	25	209.9333	0.2003
11	1.0000	0.1674	26	239.9500	0.2005
12	2.0000	0.1706	27	269.9500	0.2009
13	4.0000	0.1748	28	299.9333	0.2012
14	5.0000	0.1765	29	329.9167	0.2013
15	8.0000	0.1804	30	359.9167	0.2015

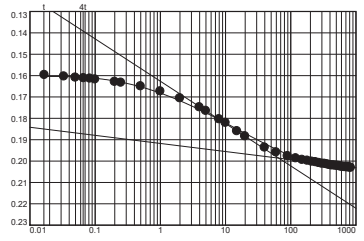


Figure D-153

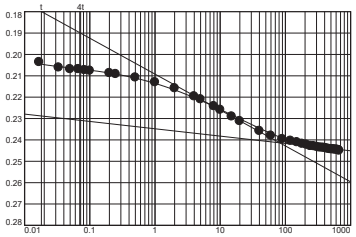
Pressure: 8.00 tsf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	389.9167	0.2018	41	689.8500	0.2028
32	419.9167	0.2020	42	719.8500	0.2029
33	449.9000	0.2020	43	749.8500	0.2029
34	479.9000	0.2021	44	779.8333	0.2029
35	509.9000	0.2022	45	809.8167	0.2030
36	539.8833	0.2023	46	836.2667	0.2031
37	569.8667	0.2025			
38	599.8667	0.2026			
39	629.8667	0.2027			
40	659.8667	0.2028			

Void Ratio = 0.701 **Compression =** 27.2%
D_0 = 0.1601 D_{50} = 0.1793 D_{100} = 0.1986 C_v **at 6.66 min. =** 0.024 ft.^{2}/day C_α = 0.012

Pressure: 16.00 tsf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2031	22	119.9667	0.2404
2	0.0167	0.2036	23	149.9833	0.2411
3	0.0333	0.2061	24	179.9667	0.2418
4	0.0500	0.2069	25	209.9500	0.2422
5	0.0667	0.2069	26	239.9500	0.2428
6	0.0833	0.2073	27	269.9500	0.2429
7	0.1000	0.2076	28	299.9500	0.2432
8	0.2000	0.2087	29	329.9167	0.2435
9	0.2500	0.2092	30	359.9167	0.2436
10	0.5000	0.2108	31	389.9333	0.2437
11	1.0000	0.2130	32	419.9167	0.2439
12	2.0000	0.2158	33	449.9000	0.2441
13	4.0000	0.2196	34	479.9000	0.2443
14	5.0000	0.2210	35	509.9000	0.2444
15	8.0000	0.2242	36	539.9000	0.2444
16	10.0000	0.2259	37	569.8833	0.2445
17	15.0000	0.2290	38	599.8667	0.2445
18	20.0000	0.2312	39	629.8833	0.2446
19	40.0000	0.2358	40	659.8833	0.2448
20	60.0000	0.2380	41	667.4333	0.2450
21	89.9667	0.2396			



Void Ratio = 0.570 **Compression =** 32.9%
D_0 = 0.2023 D_{50} = 0.2218 D_{100} = 0.2413 C_v **at 5.28 min. =** 0.025 ft.^{2}/day C_α = 0.011

Figure D-154

CONSOLIDATION TEST DATA

6/12/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-25
Depth: 28' - 30'
Material Description: Gray clay with sand pockets, silt lenses and organic matter
Liquid Limit: 55 **Plasticity Index:** 37
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	250.66 g.	Spec. Gr. =	2.643	Wet w+t =	100.70 g.
Dry w+t =	177.11 g.	Est. Ht. Solids =	0.319 in.	Dry w+t =	83.09 g.
Tare Wt. =	40.63 g.	Init. V.R. =	1.338	Tare Wt. =	18.34 g.
Moisture =	53.9 %	Init. Sat. =	106.5 %	Moisture =	27.2 %

UNIT WEIGHT		TEST START			
Height =	0.745 in.	Height =	0.745 in.	Dry Wt. =	64.75 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	104.26 g.				
Dry Dens. =	70.6 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00020	0.00000			1.338	
0.06	0.00210	0.00190		0.000	1.332	0.3 Comprs.
0.13	0.00600	0.00580	0.369		1.320	0.8 Comprs.
0.25	0.01240	0.01220	0.471		1.300	1.6 Comprs.
0.50	0.02500	0.02480	0.274		1.260	3.3 Comprs.
1.00	0.04940	0.04920	0.370		1.183	6.6 Comprs.
2.00	0.10360	0.10340	0.034		1.013	13.9 Comprs.
0.50	0.09010	0.08990	0.167		1.056	12.1 Comprs.
1.00	0.09560	0.09540	0.155		1.038	12.8 Comprs.
2.00	0.11030	0.11010	0.091		0.992	14.8 Comprs.
4.00	0.15760	0.15740	0.033		0.844	21.1 Comprs.
8.00	0.20310	0.20290	0.030		0.701	27.2 Comprs.
16.00	0.24500	0.24480	0.034		0.570	32.9 Comprs.

Compression index (C_c), tsf = 0.57 **Preconsolidation pressure (P_p), tsf =** 1.0 **Void ratio at P_p (e_m) =** 1.179
Recompression index (C_r) = 0.23

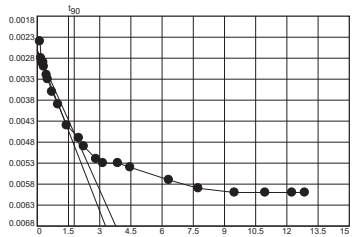
Pressure: 0.06 tsf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0002	11	1.0000	0.0015
2	0.0167	0.0011	12	2.0000	0.0017
3	0.0333	0.0011	13	4.0167	0.0020
4	0.0500	0.0011	14	5.0167	0.0020
5	0.0667	0.0012	15	8.0167	0.0021
6	0.0833	0.0012	16	10.0333	0.0021
7	0.1000	0.0012	17	15.0167	0.0021
8	0.2000	0.0013	18	20.0333	0.0021
9	0.2500	0.0013			
10	0.5000	0.0013			

Void Ratio = 1.332 **Compression =** 0.3%

Pressure: 0.13 tsf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0021	13	4.0000	0.0047
2	0.0167	0.0024	14	5.0000	0.0049
3	0.0333	0.0028	15	8.0000	0.0052
4	0.0500	0.0029	16	10.0000	0.0053
5	0.0667	0.0029	17	15.0000	0.0053
6	0.0833	0.0029	18	19.9833	0.0054
7	0.1000	0.0030	19	39.9833	0.0057
8	0.2000	0.0032	20	59.9833	0.0059
9	0.2500	0.0033	21	90.0000	0.0060
10	0.5000	0.0036	22	120.0333	0.0060
11	1.0000	0.0039	23	150.0667	0.0060
12	2.0000	0.0044	24	165.5167	0.00600

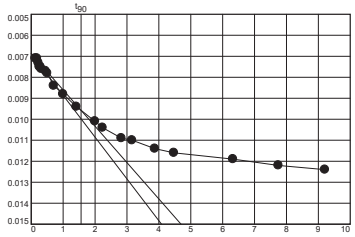


Void Ratio = 1.320 **Compression =** 0.8%
D_0 = 0.0026 **D_{90} =** 0.0046 **D_{100} =** 0.0048 **C_v at 3.15 min. =** 0.369 ft.^{2}/day

Figure D-155

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 3**

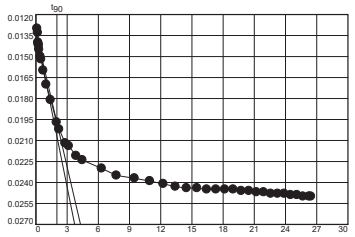
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.00600	12	2.0000	0.0094
2	0.0167	0.0071	13	4.0000	0.0101
3	0.0333	0.0071	14	5.0000	0.0104
4	0.0500	0.0073	15	8.0000	0.0109
5	0.0667	0.0075	16	10.0000	0.0110
6	0.0833	0.0075	17	15.0167	0.0114
7	0.1000	0.0076	18	20.0167	0.0116
8	0.2000	0.0077	19	40.0500	0.0119
9	0.2500	0.0078	20	60.0667	0.0122
10	0.5000	0.0084	21	84.7500	0.0124
11	1.0000	0.0088			



Void Ratio = 1.300 **Compression =** 1.6%
D_0 = 0.0069 **D_{90} =** 0.0096 **D_{100} =** 0.0099 **C_v at 2.44 min. =** 0.471 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 4**

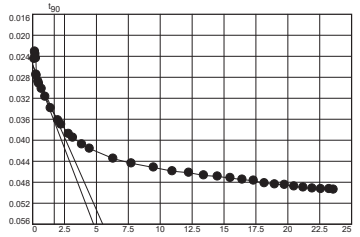
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0124	22	120.1500	0.0239
2	0.0167	0.0130	23	150.1833	0.0241
3	0.0333	0.0133	24	180.2167	0.0243
4	0.0500	0.0140	25	210.2667	0.0244
5	0.0667	0.0141	26	240.3000	0.0244
6	0.0833	0.0142	27	270.3333	0.0245
7	0.1000	0.0145	28	300.3833	0.0245
8	0.2000	0.0150	29	330.4167	0.0245
9	0.2500	0.0152	30	360.4500	0.0245
10	0.5000	0.0160	31	390.5000	0.0246
11	1.0000	0.0170	32	420.5333	0.0246
12	2.0000	0.0181	33	450.5667	0.0247
13	4.0000	0.0197	34	480.6000	0.0247
14	5.0000	0.0202	35	510.6500	0.0248
15	8.0000	0.0212	36	540.6833	0.0248
16	10.0167	0.0214	37	570.7167	0.0248
17	15.0167	0.0221	38	600.7500	0.0249
18	20.0167	0.0224	39	630.8000	0.0249
19	40.0500	0.0230	40	660.8333	0.0250
20	60.0667	0.0235	41	690.8667	0.0250
21	90.1167	0.0237	42	700.1333	0.0250



Void Ratio = 1.260 **Compression =** 3.3%
D_0 = 0.0133 **D_{90} =** 0.0197 **D_{100} =** 0.0205 **C_v at 4.08 min. =** 0.274 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0250	20	60.0833	0.0444
2	0.0167	0.0245	21	90.1167	0.0452
3	0.0333	0.0231	22	120.1500	0.0459
4	0.0500	0.0236	23	150.1833	0.0462
5	0.0667	0.0244	24	180.2333	0.0467
6	0.0833	0.0275	25	210.2667	0.0469
7	0.1000	0.0277	26	240.3000	0.0472
8	0.2000	0.0288	27	270.3500	0.0475
9	0.2500	0.0292	28	300.3833	0.0477
10	0.5000	0.0302	29	330.4167	0.0482
11	1.0000	0.0317	30	360.4667	0.0484
12	2.0000	0.0339	31	390.5000	0.0485
13	4.0000	0.0362	32	420.5333	0.0488
14	5.0167	0.0370	33	450.5667	0.0490
15	8.0167	0.0388	34	480.6167	0.0492
16	10.0167	0.0395	35	510.6500	0.0493
17	15.0167	0.0408	36	540.6833	0.0493
18	20.0333	0.0416	37	556.5667	0.0494
19	40.0500	0.0435			



Void Ratio = 1.183 **Compression =** 6.6%
D_0 = 0.0256 **D_{90} =** 0.0350 **D_{100} =** 0.0360 **C_v at 2.87 min. =** 0.370 ft.^{2}/day

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0494	16	10.0000	0.0764
2	0.0167	0.0516	17	15.0000	0.0807
3	0.0333	0.0522	18	20.0000	0.0841
4	0.0500	0.0525	19	39.9833	0.0902
5	0.0667	0.0527	20	60.0000	0.0931
6	0.0833	0.0531	21	90.0000	0.0956
7	0.1000	0.0532	22	119.9833	0.0971
8	0.2000	0.0541	23	149.9667	0.0981
9	0.2500	0.0547	24	179.9667	0.0989
10	0.5000	0.0564	25	209.9667	0.0996
11	1.0000	0.0588	26	239.9667	0.1000
12	2.0000	0.0622	27	269.9500	0.1004
13	4.0000	0.0673	28	299.9333	0.1007
14	5.0000	0.0692	29	329.9500	0.1011
15	8.0000	0.0740	30	359.9333	0.1013

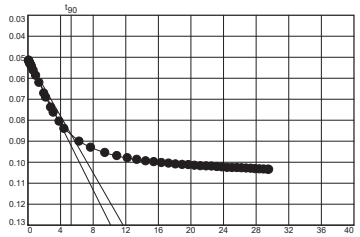


Figure D-156

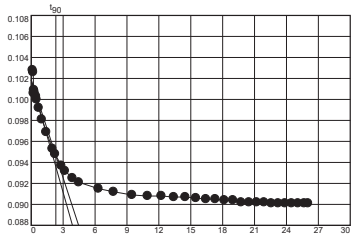
Pressure: 2.00 tsf — **TEST READINGS (continued)** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	389.9167	0.1014	41	689.8667	0.1029
32	419.9167	0.1017	42	719.8667	0.1030
33	449.9167	0.1019	43	749.8500	0.1031
34	479.9167	0.1020	44	779.8500	0.1033
35	509.9000	0.1021	45	809.8500	0.1034
36	539.8833	0.1023	46	839.8333	0.1035
37	569.9000	0.1025	47	869.8167	0.1036
38	599.8833	0.1027	48	876.0000	0.1036
39	629.8667	0.1028			
40	659.8667	0.1028			

Void Ratio = 1.013 **Compression =** 13.9%
D_0 = 0.0509 **D_{90} =** 0.0868 **D_{100} =** 0.0908 **C_v at 28.11 min. =** 0.034 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 7**

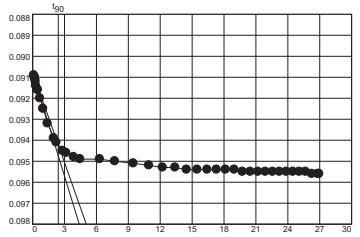
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1036	22	119.9833	0.0908
2	0.0167	0.1028	23	149.9833	0.0908
3	0.0333	0.1026	24	179.9833	0.0907
4	0.0500	0.1006	25	209.9667	0.0907
5	0.0667	0.1009	26	239.9500	0.0906
6	0.0833	0.1008	27	269.9667	0.0905
7	0.1000	0.1006	28	299.9500	0.0905
8	0.2000	0.1003	29	329.9333	0.0904
9	0.2500	0.1000	30	359.9333	0.0904
10	0.5000	0.0992	31	389.9333	0.0902
11	1.0000	0.0981	32	419.9333	0.0902
12	2.0000	0.0969	33	449.9167	0.0902
13	4.0000	0.0953	34	479.9167	0.0902
14	5.0000	0.0948	35	509.9167	0.0901
15	8.0000	0.0937	36	539.9000	0.0901
16	10.0000	0.0932	37	569.8833	0.0901
17	15.0000	0.0925	38	599.8833	0.0901
18	20.0000	0.0921	39	629.9000	0.0901
19	40.0167	0.0915	40	659.8833	0.0901
20	60.0000	0.0912	41	677.8167	0.0901
21	90.0000	0.0909			



Void Ratio = 1.056 **Compression =** 12.1%
D_0 = 0.1018 **D_{90} =** 0.0947 **D_{100} =** 0.0939 **C_v at 5.33 min. =** 0.167 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0901	23	149.9667	0.0953
2	0.0167	0.0909	24	179.9667	0.0953
3	0.0333	0.0910	25	209.9667	0.0954
4	0.0500	0.0910	26	239.9500	0.0954
5	0.0667	0.0911	27	269.9500	0.0954
6	0.0833	0.0912	28	299.9500	0.0954
7	0.1000	0.0914	29	329.9500	0.0954
8	0.2000	0.0916	30	359.9333	0.0954
9	0.2500	0.0916	31	389.9333	0.0955
10	0.5000	0.0920	32	419.9333	0.0955
11	1.0000	0.0925	33	449.9167	0.0955
12	2.0000	0.0932	34	479.9000	0.0955
13	4.0000	0.0939	35	509.9167	0.0955
14	5.0000	0.0941	36	539.9000	0.0955
15	8.0000	0.0945	37	569.8833	0.0955
16	10.0000	0.0946	38	599.9000	0.0955
17	15.0000	0.0948	39	629.8833	0.0955
18	20.0000	0.0949	40	659.8833	0.0955
19	39.9833	0.0949	41	689.8667	0.0956
20	60.0000	0.0950	42	719.8667	0.0956
21	90.0000	0.0951	43	727.0667	0.0956
22	119.9833	0.0952			



Void Ratio = 1.038 **Compression =** 12.8%
D_0 = 0.0908 **D_{90} =** 0.0942 **D_{100} =** 0.0946 **C_v at 5.82 min. =** 0.155 ft.^{2}/day

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0956	13	4.0000	0.1021
2	0.0167	0.0971	14	5.0000	0.1025
3	0.0333	0.0972	15	8.0000	0.1033
4	0.0500	0.0973	16	10.0000	0.1036
5	0.0667	0.0973	17	15.0000	0.1042
6	0.0833	0.0975	18	20.0000	0.1045
7	0.1000	0.0976	19	39.9833	0.1052
8	0.2000	0.0981	20	59.9667	0.1058
9	0.2500	0.0982	21	89.9833	0.1061
10	0.5000	0.0989	22	119.9833	0.1066
11	1.0000	0.0997	23	149.9667	0.1068
12	2.0000	0.1008	24	179.9500	0.1069

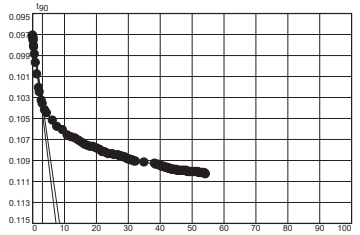


Figure D-157

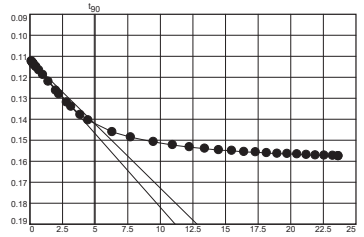
Pressure: 2.00 tsf — **TEST READINGS (continued)** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	209.9667	0.1071	51	1049.6667	0.1091	77	2279.4167	0.1100
26	239.9500	0.1073	52	1229.6333	0.1092	78	2309.4167	0.1100
27	269.9333	0.1075	53	1469.5833	0.1093	79	2339.4167	0.1100
28	299.9333	0.1076	54	1499.5667	0.1094	80	2369.4000	0.1101
29	329.9333	0.1077	55	1559.5667	0.1094	81	2399.3833	0.1101
30	359.9167	0.1077	56	1589.5667	0.1095	82	2429.4000	0.1101
31	389.9167	0.1078	57	1619.5500	0.1095	83	2459.3833	0.1101
32	419.9167	0.1079	58	1649.5500	0.1096	84	2489.3667	0.1101
33	449.9000	0.1080	59	1709.5333	0.1096	85	2519.3667	0.1101
34	479.8833	0.1082	60	1739.5167	0.1097	86	2549.3833	0.1101
35	509.9000	0.1082	61	1799.5167	0.1097	87	2579.3667	0.1101
36	539.9000	0.1083	62	1829.5000	0.1098	88	2609.3500	0.1101
37	569.8667	0.1084	63	1859.5000	0.1098	89	2639.3500	0.1101
38	629.8000	0.1084	64	1889.5000	0.1098	90	2669.3500	0.1101
39	659.7333	0.1085	65	1919.4833	0.1099	91	2699.3500	0.1101
40	719.7333	0.1085	66	1949.4833	0.1099	92	2729.3167	0.1102
41	749.7167	0.1086	67	1979.4833	0.1099	93	2759.3167	0.1102
42	779.7000	0.1086	68	2009.4833	0.1099	94	2789.3333	0.1102
43	809.7167	0.1087	69	2039.4667	0.1099	95	2819.3167	0.1102
44	839.7167	0.1087	70	2069.4667	0.1100	96	2849.3000	0.1102
45	869.6833	0.1088	71	2099.4667	0.1100	97	2879.3000	0.1102
46	899.6833	0.1089	72	2129.4500	0.1100	98	2909.3000	0.1102
47	929.7000	0.1089	73	2159.4333	0.1100	99	2939.2833	0.1103
48	959.6833	0.1090	74	2189.4500	0.1100	100	2947.9333	0.1103
49	989.6667	0.1090	75	2219.4333	0.1100			
50	1019.6667	0.1091	76	2249.4167	0.1100			

Void Ratio = 0.992 **Compression =** 14.8%
D_0 = 0.0969 **D_{90} =** 0.1035 **D_{100} =** 0.1043 **C_v at 9.56 min. =** 0.091 ft.^{2}/day

Pressure: 4.00 tsf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1103	20	60.0000	0.1486
2	0.0167	0.1124	21	90.0000	0.1508
3	0.0333	0.1128	22	119.9833	0.1523
4	0.0500	0.1132	23	149.9667	0.1533
5	0.0667	0.1134	24	179.9833	0.1540
6	0.0833	0.1137	25	209.9667	0.1547
7	0.1000	0.1140	26	239.9500	0.1550
8	0.2000	0.1149	27	269.9500	0.1556
9	0.2500	0.1152	28	299.9500	0.1557
10	0.5000	0.1167	29	329.9500	0.1561
11	1.0000	0.1189	30	359.9333	0.1564
12	2.0000	0.1221	31	389.9333	0.1565
13	4.0000	0.1264	32	419.9333	0.1567
14	5.0000	0.1281	33	449.9167	0.1570
15	8.0000	0.1320	34	479.9000	0.1572
16	10.0000	0.1340	35	509.9000	0.1573
17	15.0000	0.1379	36	539.9000	0.1574
18	20.0000	0.1405	37	559.9333	0.1576
19	40.0000	0.1461	38	559.9833	0.1576



Void Ratio = 0.844 **Compression =** 21.1%
D_0 = 0.1118 **D_{90} =** 0.1419 **D_{100} =** 0.1452 **C_v at 24.34 min. =** 0.033 ft.^{2}/day

Pressure: 8.00 tsf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1576	16	10.0000	0.1821
2	0.0167	0.1597	17	15.0000	0.1860
3	0.0333	0.1604	18	19.9833	0.1884
4	0.0500	0.1609	19	39.9833	0.1937
5	0.0667	0.1612	20	59.9667	0.1959
6	0.0833	0.1614	21	89.9667	0.1977
7	0.1000	0.1618	22	119.9833	0.1987
8	0.2000	0.1629	23	149.9667	0.1994
9	0.2500	0.1633	24	179.9500	0.1998
10	0.5000	0.1650	25	209.9333	0.2003
11	1.0000	0.1674	26	239.9500	0.2005
12	2.0000	0.1706	27	269.9500	0.2009
13	4.0000	0.1748	28	299.9333	0.2012
14	5.0000	0.1765	29	329.9167	0.2013
15	8.0000	0.1804	30	359.9167	0.2015

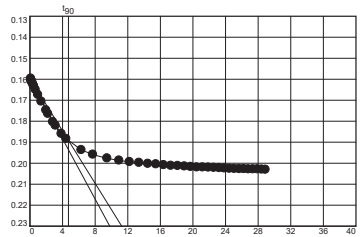


Figure D-158

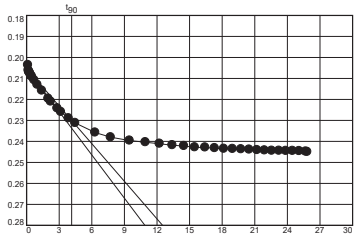
Pressure: 8.00 tsf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	389.9167	0.2018	41	689.8500	0.2028
32	419.9167	0.2020	42	719.8500	0.2029
33	449.9000	0.2020	43	749.8500	0.2029
34	479.9000	0.2021	44	779.8333	0.2029
35	509.9000	0.2022	45	809.8167	0.2030
36	539.8833	0.2023	46	836.2667	0.2031
37	569.8667	0.2025			
38	599.8667	0.2026			
39	629.8667	0.2027			
40	659.8667	0.2028			

Void Ratio = 0.701 **Compression =** 27.2%
D_0 = 0.1596 **D_{90} =** 0.1891 **D_{100} =** 0.1924 **C_v at 22.29 min. =** 0.030 ft.^{2}/day

Pressure: 16.00 tsf — **TEST READINGS** — **Load No. 12**

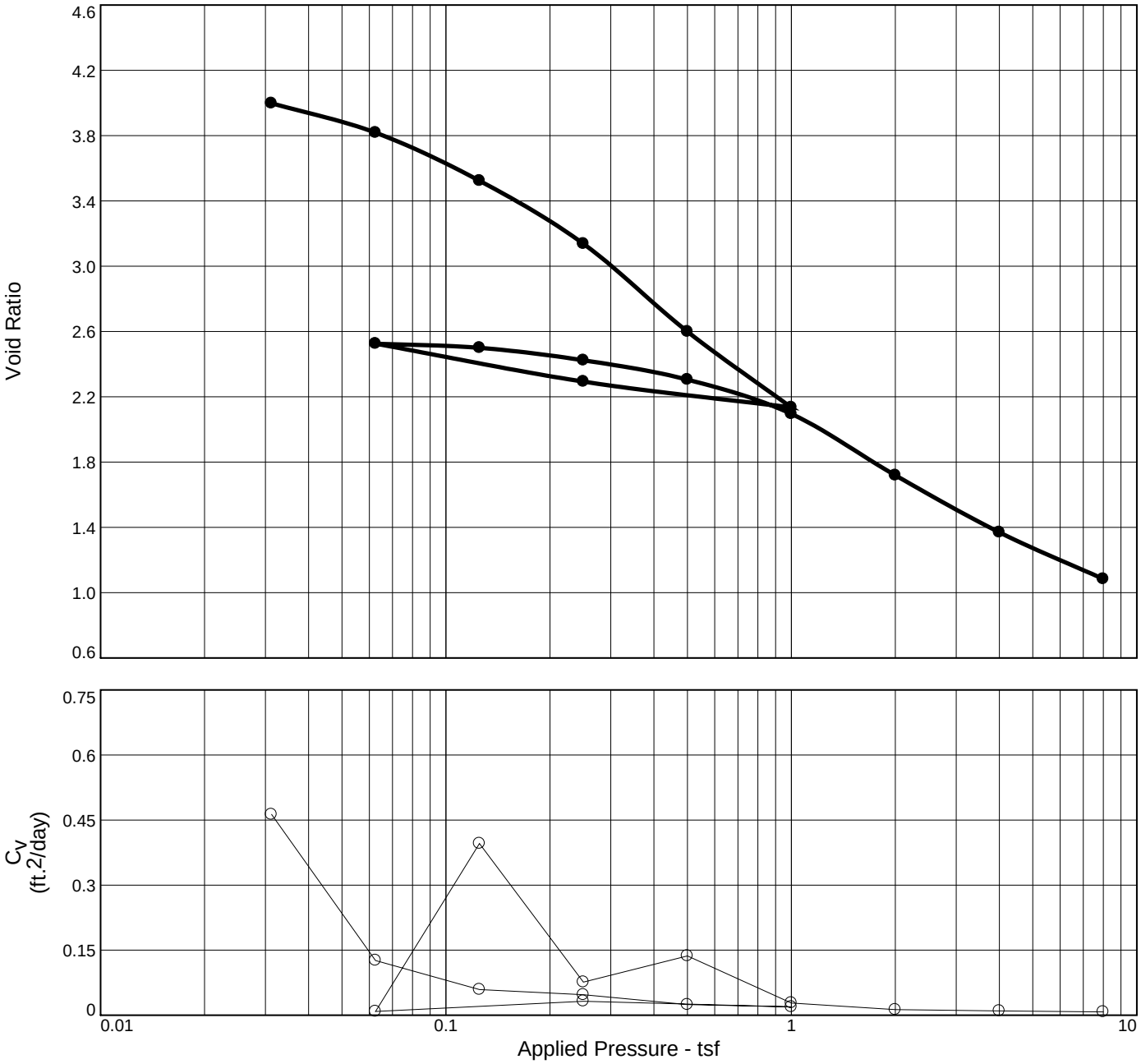
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2031	22	119.9667	0.2404
2	0.0167	0.2036	23	149.9833	0.2411
3	0.0333	0.2061	24	179.9667	0.2418
4	0.0500	0.2069	25	209.9500	0.2422
5	0.0667	0.2069	26	239.9500	0.2428
6	0.0833	0.2073	27	269.9500	0.2429
7	0.1000	0.2076	28	299.9500	0.2432
8	0.2000	0.2087	29	329.9167	0.2435
9	0.2500	0.2092	30	359.9167	0.2436
10	0.5000	0.2108	31	389.9333	0.2437
11	1.0000	0.2130	32	419.9167	0.2439
12	2.0000	0.2158	33	449.9000	0.2441
13	4.0000	0.2196	34	479.9000	0.2443
14	5.0000	0.2210	35	509.9000	0.2444
15	8.0000	0.2242	36	539.9000	0.2444
16	10.0000	0.2259	37	569.8833	0.2445
17	15.0000	0.2290	38	599.8667	0.2445
18	20.0000	0.2312	39	629.8833	0.2446
19	40.0000	0.2358	40	659.8833	0.2448
20	60.0000	0.2380	41	667.4333	0.2450
21	89.9667	0.2396			



Void Ratio = 0.570 **Compression =** 32.9%
D_0 = 0.2053 **D_{90} =** 0.2300 **D_{100} =** 0.2327 **C_v at 17.17 min. =** 0.034 ft.^{2}/day

Figure D-159

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
94.9 %	153.8 %	31.0	153	90	2.558	0.1	1.85	4.146

MATERIAL DESCRIPTION	USCS	AASHTO
Dark gray organic clay with peat pockets	(OH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-27 **Depth:** 2' - 4'

Remarks:
Specific Gravity is measured.

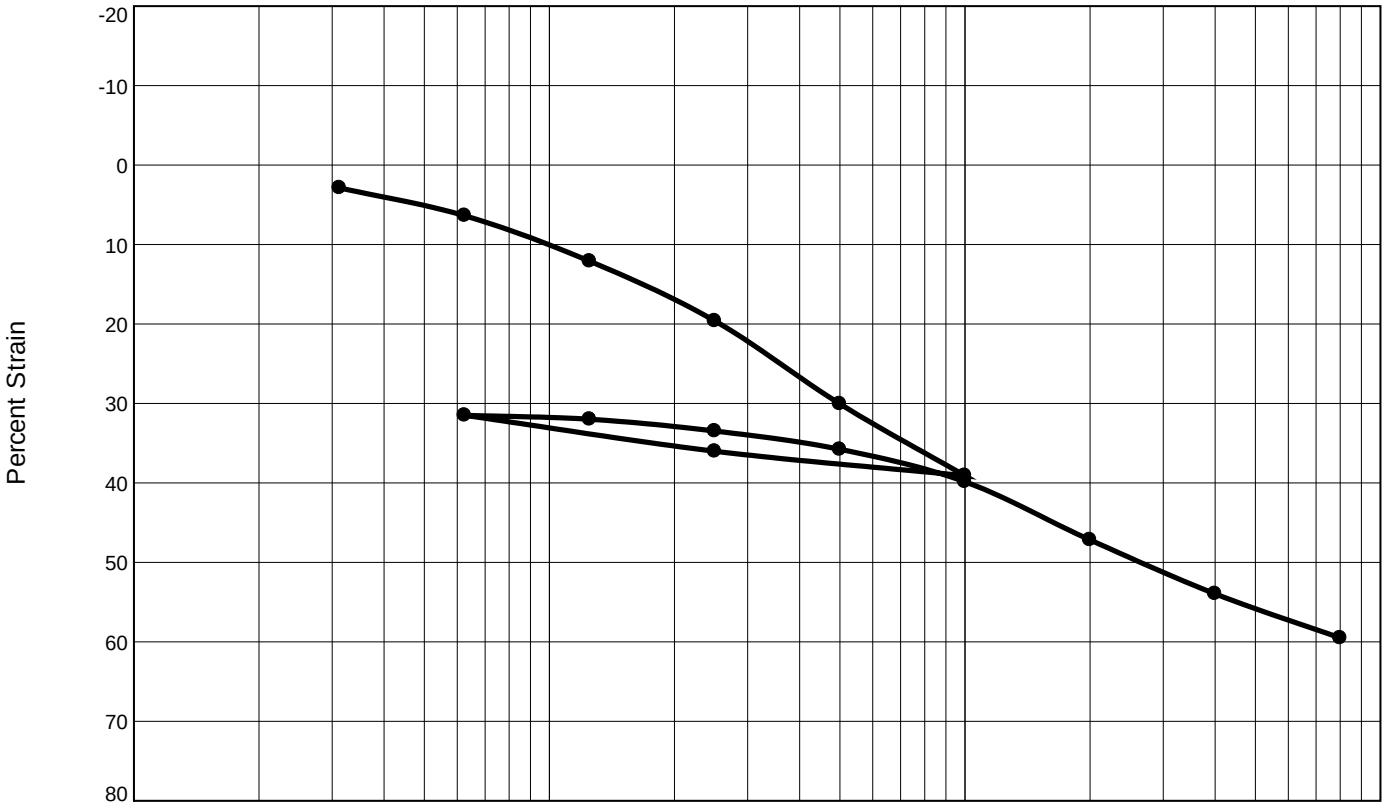
C_v at t_{90}

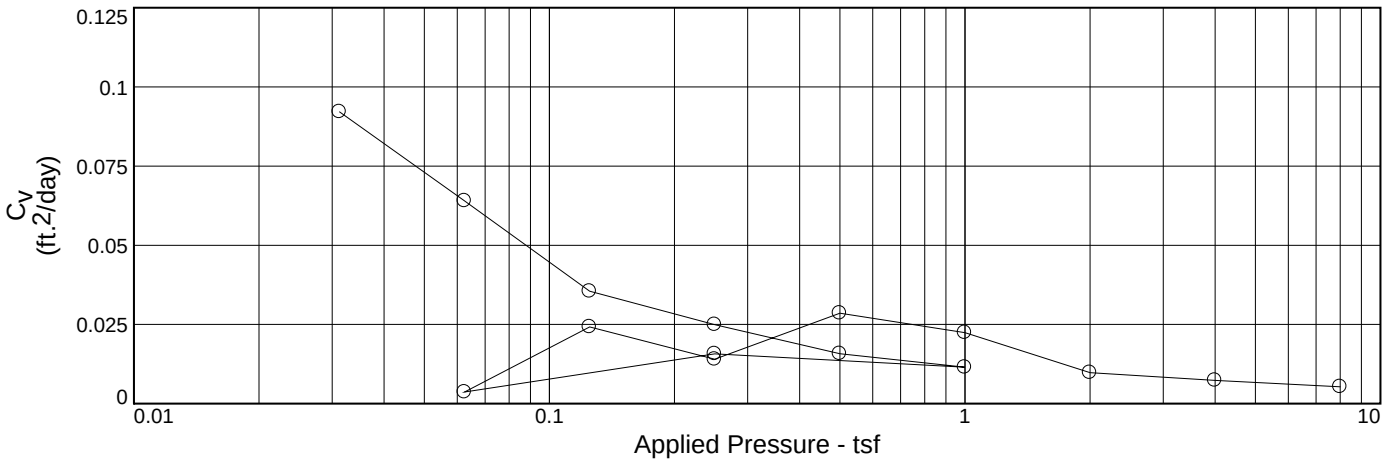
GeoEngineers

Tested By: KLA **Checked By:** ARS

Figure D-160

CONSOLIDATION TEST REPORT





Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
94.9 %	153.8 %	31.0	153	90	2.558	0.1	1.85	4.146

MATERIAL DESCRIPTION	USCS	AASHTO
Dark gray organic clay with peat pockets	(OH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-27 **Depth:** 2' - 4'

GeoEngineers

Remarks:
Specific Gravity is measured.

Cv at t_{50}

Tested By: KLA **Checked By:** ARS

Figure D-161

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-27
Depth: 2' - 4'
Material Description: Dark gray organic clay with peat pockets
Liquid Limit: 153 **Plasticity Index:** 90
USCS: (OH)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	78.66 g.	Spec. Gr. =	2.558	Wet w+t =	76.09 g.
Dry w+t =	42.14 g.	Est. Ht. Solids =	0.194 in.	Dry w+t =	57.16 g.
Tare Wt. =	18.39 g.	Init. V.R. =	4.146	Tare Wt. =	18.57 g.
Moisture =	153.8 %	Init. Sat. =	94.9 %	Moisture =	49.1 %

UNIT WEIGHT		TEST START			
Height =	1.000 in.	Height =	1.000 in.		
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	101.47 g.				
Dry Dens. =	31.0 pcf			Dry Wt. =	38.59 g.

End-Of-Load Summary

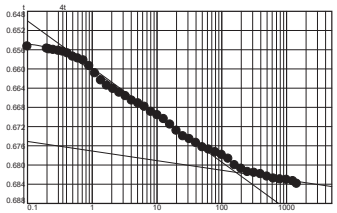
Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.65520	0.00000			4.146	
62.50	0.68391	0.02871	0.092	0.010	3.998	2.9 Comprs.
125.00	0.71890	0.06370	0.064	0.033	3.818	6.4 Comprs.
250.00	0.77615	0.12095	0.035	0.046	3.524	12.1 Comprs.
500.00	0.85119	0.19599	0.025	0.047	3.137	19.6 Comprs.
1000.00	0.95569	0.30049	0.016	0.103	2.600	30.0 Comprs.
2000.00	1.04604	0.39084	0.011	0.069	2.135	39.1 Comprs.
500.00	1.01526	0.36006	0.016		2.293	36.0 Comprs.
125.00	0.97007	0.31487	0.004		2.526	31.5 Comprs.
250.00	0.97506	0.31986	0.024	0.000	2.500	32.0 Comprs.
500.00	0.98987	0.33467	0.014	0.004	2.424	33.5 Comprs.
1000.00	1.01291	0.35771	0.029	0.030	2.305	35.8 Comprs.
2000.00	1.05367	0.39847	0.022	0.043	2.095	39.8 Comprs.
4000.00	1.12686	0.47166	0.010	0.054	1.719	47.2 Comprs.
8000.00	1.19466	0.53946	0.007	0.053	1.370	53.9 Comprs.
16000.00	1.25023	0.59503	0.005	0.043	1.084	59.5 Comprs.
0.00	1.25023	0.59503				

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 1.85 **Preconsolidation pressure (P_p), tsf =** 0.1 **Void ratio at P_p (e_m) =** 3.460
Recompression index (C_r) = 0.54

Pressure: 62.50 psf **TEST READINGS** **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.65520	24	12.7000	0.67043
2	0.1000	0.65531	25	15.9667	0.67158
3	0.2000	0.65576	26	20.0667	0.67287
4	0.2167	0.65592	27	25.2333	0.67401
5	0.2500	0.65603	28	31.7333	0.67459
6	0.3000	0.65622	29	39.9333	0.67540
7	0.3500	0.65637	30	50.2333	0.67630
8	0.4167	0.65676	31	63.2167	0.67677
9	0.5000	0.65743	32	79.5500	0.67732
10	0.6000	0.65781	33	100.1167	0.67789
11	0.7333	0.65821	34	126.0167	0.67869
12	0.9000	0.65940	35	158.6167	0.68004
13	1.1000	0.66090	36	199.6500	0.68078
14	1.3667	0.66238	37	251.3167	0.68144
15	1.6833	0.66348	38	316.3500	0.68162
16	2.1000	0.66417	39	398.2333	0.68191
17	2.6167	0.66493	40	501.3167	0.68241
18	3.2667	0.66567	41	631.1000	0.68281
19	4.0833	0.66657	42	794.4667	0.68300
20	5.1167	0.66716	43	1000.1500	0.68308
21	6.4167	0.66788	44	1259.0667	0.68337
22	8.0500	0.66893	45	1440.3833	0.68391
23	10.1167	0.66961			

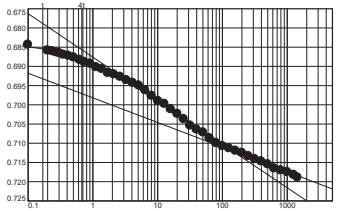


Void Ratio = 3.998 **Compression =** 2.9%
D_0 = 0.6529 **D_{50} =** 0.6672 **D_{100} =** 0.6815 **C_v at 5.19 min. =** 0.092 ft.^{2}/day **C_α =** 0.010

Figure D-162

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 2**

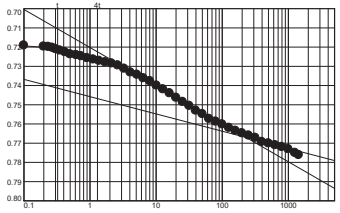
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.68390	24	12.7167	0.69972
2	0.1000	0.68436	25	15.9667	0.70113
3	0.2000	0.68585	26	20.0833	0.70234
4	0.2333	0.68603	27	25.2500	0.70372
5	0.2667	0.68630	28	31.7500	0.70539
6	0.3000	0.68653	29	39.9333	0.70645
7	0.3500	0.68695	30	50.2500	0.70718
8	0.4167	0.68722	31	63.2333	0.70868
9	0.5000	0.68765	32	79.5667	0.70992
10	0.6167	0.68826	33	100.1500	0.71072
11	0.7333	0.68881	34	126.0333	0.71129
12	0.9000	0.68927	35	158.6333	0.71193
13	1.1167	0.69020	36	199.6667	0.71248
14	1.3667	0.69064	37	251.3333	0.71332
15	1.7000	0.69170	38	316.3667	0.71413
16	2.1167	0.69208	39	398.2500	0.71470
17	2.6333	0.69270	40	501.3333	0.71548
18	3.2833	0.69355	41	631.1167	0.71655
19	4.1000	0.69426	42	794.4833	0.71704
20	5.1333	0.69497	43	1000.1667	0.71748
21	6.4333	0.69619	44	1259.1000	0.71820
22	8.0667	0.69766	45	1440.4333	0.71890
23	10.1167	0.69899			



Void Ratio = 3.818 **Compression =** 6.4%
D_0 = 0.6826 **D_{50} =** 0.6973 **D_{100} =** 0.7120 **C_v at 7.00 min. =** 0.064 ft.^{2}/day **C_α =** 0.033

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 3**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.71888	12	0.9000	0.72570
2	0.1000	0.71914	13	1.1167	0.72646
3	0.2000	0.71968	14	1.3667	0.72710
4	0.2333	0.71989	15	1.7000	0.72790
5	0.2667	0.72028	16	2.1167	0.72849
6	0.3000	0.72096	17	2.6333	0.72952
7	0.3500	0.72171	18	3.2833	0.73118
8	0.4167	0.72261	19	4.1000	0.73314
9	0.5000	0.72369	20	5.1333	0.73436
10	0.6167	0.72414	21	6.4333	0.73619
11	0.7333	0.72469	22	8.0667	0.73766



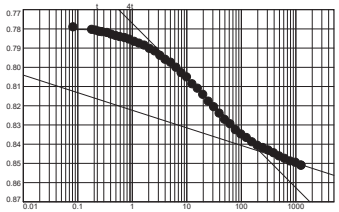
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 3**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.74001	33	100.1333	0.76022	43	1000.1833	0.77307
24	12.7167	0.74195	34	126.0333	0.76198	44	1259.1000	0.77501
25	15.9833	0.74400	35	158.6333	0.76350	45	1440.3167	0.77615
26	20.0833	0.74634	36	199.6667	0.76479			
27	25.2500	0.74855	37	251.3333	0.76600			
28	31.7500	0.75057	38	316.3833	0.76721			
29	39.9500	0.75305	39	398.2667	0.76930			
30	50.2500	0.75484	40	501.3500	0.77011			
31	63.2333	0.75734	41	631.1167	0.77105			
32	79.5667	0.75872	42	794.5000	0.77194			

Void Ratio = 3.524 **Compression =** 12.1%
D_0 = 0.7158 **D_{50} =** 0.7414 **D_{100} =** 0.7670 **C_v at 11.43 min. =** 0.035 ft.^{2}/day **C_α =** 0.046

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77609	24	12.7000	0.80882
2	0.0833	0.77920	25	15.9500	0.81117
3	0.1833	0.78050	26	20.0667	0.81434
4	0.2167	0.78091	27	25.2333	0.81789
5	0.2500	0.78150	28	31.7333	0.82074
6	0.2833	0.78169	29	39.9167	0.82410
7	0.3500	0.78215	30	50.2333	0.82736
8	0.4167	0.78301	31	63.2167	0.82962
9	0.5000	0.78369	32	79.5500	0.83269
10	0.6000	0.78428	33	100.1167	0.83492
11	0.7333	0.78478	34	126.0167	0.83684
12	0.8833	0.78552	35	158.6000	0.83903
13	1.1000	0.78671	36	199.6500	0.84079
14	1.3500	0.78766	37	251.3333	0.84200
15	1.6833	0.78872	38	316.3667	0.84332
16	2.1000	0.79042	39	398.2500	0.84477
17	2.6167	0.79174	40	501.3333	0.84633
18	3.2667	0.79396	41	631.1000	0.84762
19	4.0833	0.79609	42	794.4833	0.84897
20	5.1167	0.79762	43	1000.1500	0.84967
21	6.4167	0.80025	44	1259.0833	0.85111
22	8.0500	0.80301	45	1270.5667	0.85119
23	10.1000	0.80523			

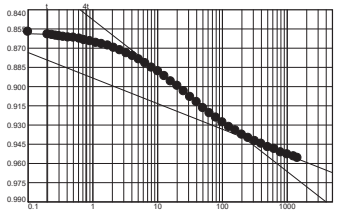


Void Ratio = 3.137 **Compression =** 19.6%
D_0 = 0.7762 **D_{50} =** 0.8099 **D_{100} =** 0.8437 **C_v at 13.98 min. =** 0.025 ft.^{2}/day **C_α =** 0.047

Figure D-163

Pressure: 1000.00 psf	TEST READINGS	Load No. 5

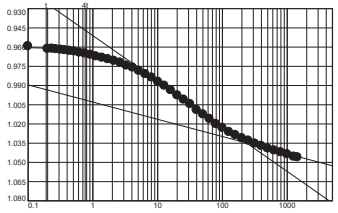
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.85120	24	12.7167	0.89176
2	0.1000	0.85716	25	15.9667	0.89592
3	0.2000	0.85925	26	20.0833	0.89941
4	0.2333	0.85965	27	25.2500	0.90360
5	0.2667	0.86018	28	31.7500	0.90804
6	0.3000	0.86063	29	39.9500	0.91208
7	0.3500	0.86109	30	50.2500	0.91682
8	0.4167	0.86169	31	63.2333	0.92069
9	0.5000	0.86172	32	79.5667	0.92423
10	0.6167	0.86250	33	100.1333	0.92790
11	0.7333	0.86365	34	126.0333	0.93145
12	0.9000	0.86452	35	158.6333	0.93419
13	1.1167	0.86583	36	199.6667	0.93751
14	1.3667	0.86675	37	251.3333	0.94006
15	1.7000	0.86796	38	316.3667	0.94247
16	2.1000	0.86974	39	398.2500	0.94460
17	2.6167	0.87159	40	501.3333	0.94722
18	3.2833	0.87392	41	631.1167	0.94861
19	4.1000	0.87614	42	794.5000	0.95126
20	5.1333	0.87872	43	1000.1667	0.95287
21	6.4333	0.88172	44	1259.1000	0.95445
22	8.0667	0.88521	45	1440.2500	0.95569
23	10.1167	0.88796			



Void Ratio = 2.600 **Compression =** 30.0%
D_0 = 0.8551 **D_{50} =** 0.8975 **D_{100} =** 0.9399 **C_v at 17.65 min. =** 0.016 ft.^{2}/day **C_α =** 0.103

Pressure: 2000.00 psf	TEST READINGS	Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.95570	12	0.9167	0.96589
2	0.1000	0.95923	13	1.1167	0.96723
3	0.2000	0.96127	14	1.3833	0.96820
4	0.2333	0.96122	15	1.7000	0.96938
5	0.2667	0.96156	16	2.1167	0.97072
6	0.3167	0.96198	17	2.6333	0.97202
7	0.3667	0.96232	18	3.2833	0.97440
8	0.4333	0.96285	19	4.1000	0.97588
9	0.5167	0.96332	20	5.1333	0.97844
10	0.6167	0.96431	21	6.4333	0.98106
11	0.7500	0.96496	22	8.0667	0.98367



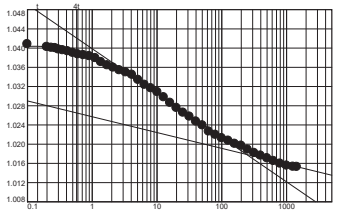
Pressure: 2000.00 psf	TEST READINGS (continued)	Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1333	0.98704	33	100.1500	1.02303	43	1000.1833	1.04354
24	12.7167	0.99016	34	126.0333	1.02618	44	1259.1000	1.04546
25	15.9833	0.99359	35	158.6333	1.02865	45	1440.0667	1.04604
26	20.0833	0.99763	36	199.6833	1.03109			
27	25.2500	1.00098	37	251.3500	1.03292			
28	31.7667	1.00439	38	316.3833	1.03528			
29	39.9500	1.00908	39	398.2667	1.03703			
30	50.2667	1.01245	40	501.3500	1.03914			
31	63.2333	1.01602	41	631.1333	1.04060			
32	79.5833	1.02003	42	794.5000	1.04205			

Void Ratio = 2.135 **Compression =** 39.1%
D_0 = 0.9573 **D_{50} =** 0.9960 **D_{100} =** 1.0348 **C_v at 18.35 min. =** 0.011 ft.^{2}/day **C_α =** 0.069

Pressure: 500.00 psf	TEST READINGS	Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.04603	24	12.7000	1.02976
2	0.1000	1.04081	25	15.9667	1.02860
3	0.2000	1.04024	26	20.0667	1.02755
4	0.2333	1.04006	27	25.2333	1.02656
5	0.2667	1.03999	28	31.7500	1.02574
6	0.3000	1.03973	29	39.9333	1.02471
7	0.3500	1.03956	30	50.2333	1.02392
8	0.4167	1.03936	31	63.2167	1.02265
9	0.5000	1.03900	32	79.5500	1.02195
10	0.6000	1.03872	33	100.1333	1.02126
11	0.7333	1.03853	34	126.0167	1.02073
12	0.9000	1.03834	35	158.6167	1.02007
13	1.1167	1.03791	36	199.6500	1.01969
14	1.3667	1.03711	37	251.3167	1.01887
15	1.7000	1.03643	38	316.3667	1.01818
16	2.1000	1.03596	39	398.2333	1.01762
17	2.6167	1.03541	40	501.3333	1.01707
18	3.2833	1.03495	41	631.1000	1.01649
19	4.1000	1.03446	42	794.4667	1.01596
20	5.1333	1.03338	43	1000.1500	1.01554
21	6.4333	1.03235	44	1259.0833	1.01531
22	8.0667	1.03165	45	1440.1833	1.01526
23	10.1167	1.03085			

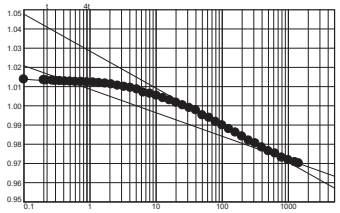


Void Ratio = 2.293 **Compression =** 36.0%
D_0 = 1.0417 **D_{50} =** 1.0298 **D_{100} =** 1.0179 **C_v at 12.23 min. =** 0.016 ft.^{2}/day

Figure D-164

Pressure: 125.00 psf	TEST READINGS	Load No. 8

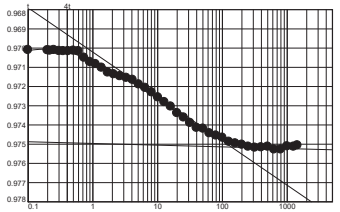
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.01519	24	12.7167	1.00405
2	0.1000	1.01378	25	15.9667	1.00295
3	0.2000	1.01338	26	20.0833	1.00161
4	0.2167	1.01323	27	25.2500	1.00029
5	0.2667	1.01311	28	31.7500	0.99889
6	0.3000	1.01301	29	39.9333	0.99774
7	0.3500	1.01289	30	50.2500	0.99509
8	0.4167	1.01272	31	63.2333	0.99375
9	0.5000	1.01264	32	79.5667	0.99166
10	0.6000	1.01250	33	100.1500	0.98990
11	0.7333	1.01248	34	126.0333	0.98791
12	0.9000	1.01225	35	158.6333	0.98612
13	1.1167	1.01212	36	199.6667	0.98404
14	1.3667	1.01189	37	251.3333	0.98192
15	1.7000	1.01160	38	316.3833	0.98052
16	2.1000	1.01120	39	398.2500	0.97836
17	2.6167	1.01051	40	501.3333	0.97638
18	3.2833	1.00991	41	631.1167	0.97523
19	4.1000	1.00940	42	794.4833	0.97306
20	5.1333	1.00855	43	1000.1667	0.97180
21	6.4333	1.00695	44	1259.1000	0.97066
22	8.0667	1.00634	45	1440.0167	0.97007
23	10.1167	1.00532			



Void Ratio = 2.526 **Compression =** 31.5%
D_0 = 1.0140 **D_{50} =** 0.9941 **D_{100} =** 0.9741 **C_v at 59.13 min. =** 0.004 ft.^{2}/day

Pressure: 250.00 psf	TEST READINGS	Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.97012	12	0.9000	0.97072
2	0.1000	0.97010	13	1.1000	0.97083
3	0.2000	0.97011	14	1.3667	0.97102
4	0.2167	0.97013	15	1.7000	0.97127
5	0.2500	0.97010	16	2.1000	0.97136
6	0.3000	0.97015	17	2.6167	0.97146
7	0.3500	0.97016	18	3.2833	0.97155
8	0.4167	0.97016	19	4.1000	0.97165
9	0.5000	0.97013	20	5.1333	0.97189
10	0.6000	0.97016	21	6.4333	0.97207
11	0.7333	0.97050	22	8.0667	0.97230



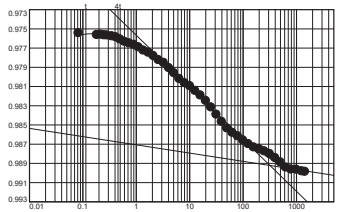
Pressure: 250.00 psf	TEST READINGS (continued)	Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.97256	33	100.1333	0.97466	43	1000.1500	0.97511
24	12.7167	0.97281	34	126.0167	0.97487	44	1259.0833	0.97513
25	15.9667	0.97304	35	158.6167	0.97496	45	1440.3833	0.97506
26	20.0667	0.97338	36	199.6500	0.97503			
27	25.2333	0.97361	37	251.3167	0.97513			
28	31.7500	0.97389	38	316.3667	0.97518			
29	39.9333	0.97415	39	398.2500	0.97516			
30	50.2500	0.97419	40	501.3333	0.97513			
31	63.2167	0.97443	41	631.1000	0.97527			
32	79.5667	0.97455	42	794.4833	0.97527			

Void Ratio = 2.500 **Compression =** 32.0%
D_0 = 0.9701 **D_{50} =** 0.9726 **D_{100} =** 0.9752 **C_v at 9.48 min. =** 0.024 ft.^{2}/day **C_α =** 0.000

Pressure: 500.00 psf	TEST READINGS	Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.97508	24	12.7000	0.98145
2	0.0833	0.97544	25	15.9667	0.98192
3	0.1833	0.97563	26	20.0667	0.98249
4	0.2167	0.97560	27	25.2333	0.98318
5	0.2500	0.97567	28	31.7333	0.98392
6	0.2833	0.97569	29	39.9333	0.98468
7	0.3500	0.97577	30	50.2333	0.98535
8	0.4167	0.97587	31	63.2167	0.98582
9	0.5000	0.97610	32	79.5500	0.98618
10	0.6000	0.97633	33	100.1167	0.98660
11	0.7333	0.97651	34	126.0167	0.98700
12	0.9000	0.97665	35	158.6167	0.98733
13	1.1000	0.97691	36	199.6500	0.98751
14	1.3667	0.97725	37	251.3167	0.98774
15	1.6833	0.97748	38	316.3667	0.98802
16	2.1000	0.97781	39	398.2333	0.98845
17	2.6167	0.97825	40	501.3333	0.98889
18	3.2667	0.97854	41	631.1000	0.98943
19	4.1000	0.97908	42	794.4833	0.98963
20	5.1167	0.97961	43	1000.1500	0.98965
21	6.4167	0.98021	44	1259.0833	0.98983
22	8.0667	0.98065	45	1440.3000	0.98987
23	10.1167	0.98096			

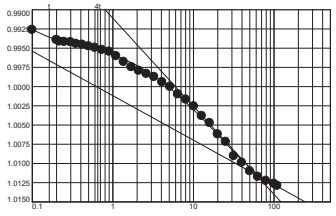


Void Ratio = 2.424 **Compression =** 33.5%
D_0 = 0.9751 **D_{50} =** 0.9822 **D_{100} =** 0.9892 **C_v at 15.91 min. =** 0.014 ft.^{2}/day **C_α =** 0.004

Figure D-165

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 11**

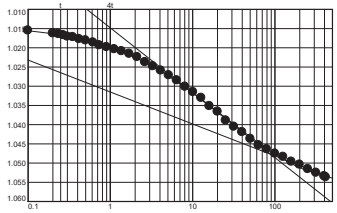
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.98982	18	3.2667	0.99875
2	0.1000	0.99263	19	4.1000	0.99943
3	0.2000	0.99393	20	5.1333	1.00002
4	0.2167	0.99414	21	6.4167	1.00100
5	0.2500	0.99418	22	8.0667	1.00169
6	0.3000	0.99423	23	10.1167	1.00256
7	0.3500	0.99444	24	12.7000	1.00381
8	0.4167	0.99454	25	15.9667	1.00474
9	0.5000	0.99476	26	20.0667	1.00621
10	0.6000	0.99494	27	25.2333	1.00718
11	0.7333	0.99522	28	31.7500	1.00905
12	0.9000	0.99545	29	39.9333	1.00990
13	1.1000	0.99604	30	50.2333	1.01100
14	1.3667	0.99679	31	63.2167	1.01172
15	1.7000	0.99746	32	79.5500	1.01226
16	2.1000	0.99793	33	100.1333	1.01265
17	2.6167	0.99834	34	109.6333	1.01291



Void Ratio = 2.305 **Compression =** 35.8%
D_0 = 0.9919 **D_{50} =** 1.0017 **D_{100} =** 1.0115 **C_v at 7.37 min. =** 0.029 ft.^{2}/day **C_α =** 0.030

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.01282	18	3.2833	1.02481
2	0.1000	1.01549	19	4.1000	1.02591
3	0.2000	1.01621	20	5.1333	1.02714
4	0.2333	1.01639	21	6.4333	1.02845
5	0.2667	1.01670	22	8.0667	1.03013
6	0.3000	1.01709	23	10.1167	1.03151
7	0.3500	1.01719	24	12.7167	1.03304
8	0.4167	1.01772	25	15.9667	1.03517
9	0.5000	1.01805	26	20.0833	1.03659
10	0.6167	1.01859	27	25.2500	1.03890
11	0.7333	1.01933	28	31.7500	1.04051
12	0.9000	1.01982	29	39.9500	1.04195
13	1.1167	1.02036	30	50.2500	1.04367
14	1.3667	1.02087	31	63.2333	1.04534
15	1.7000	1.02157	32	79.5667	1.04638
16	2.1167	1.02240	33	100.1333	1.04752
17	2.6333	1.02371	34	126.0333	1.04836



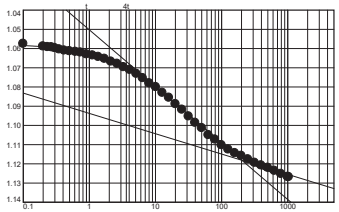
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 12**

No.	Elapsed Time	Dial Reading
35	158.6333	1.04963
36	199.6667	1.05040
37	251.3333	1.05155
38	316.3667	1.05251
39	398.2500	1.05341
40	414.7667	1.05367

Void Ratio = 2.095 **Compression =** 39.8%
D_0 = 1.0135 **D_{50} =** 1.0306 **D_{100} =** 1.0477 **C_v at 8.51 min. =** 0.022 ft.^{2}/day **C_α =** 0.043

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.05365	23	10.1333	1.08000
2	0.1000	1.05752	24	12.7167	1.08301
3	0.2000	1.05889	25	15.9833	1.08560
4	0.2333	1.05925	26	20.0833	1.08890
5	0.2667	1.05927	27	25.2500	1.09178
6	0.3000	1.05970	28	31.7500	1.09527
7	0.3500	1.06043	29	39.9500	1.09859
8	0.4167	1.06103	30	50.2500	1.10133
9	0.5000	1.06134	31	63.2333	1.10504
10	0.6167	1.06166	32	79.5667	1.10736
11	0.7333	1.06205	33	100.1333	1.11026
12	0.9000	1.06296	34	126.0333	1.11255
13	1.1167	1.06360	35	158.6333	1.11438
14	1.3667	1.06437	36	199.6833	1.11581
15	1.7000	1.06532	37	251.3500	1.11763
16	2.1167	1.06677	38	316.3833	1.11945
17	2.6333	1.06789	39	398.2667	1.12078
18	3.2833	1.06967	40	501.3500	1.12203
19	4.1000	1.07110	41	631.1167	1.12363
20	5.1333	1.07310	42	794.5000	1.12520
21	6.4333	1.07538	43	1000.1667	1.12677
22	8.0667	1.07804	44	1035.2333	1.12686

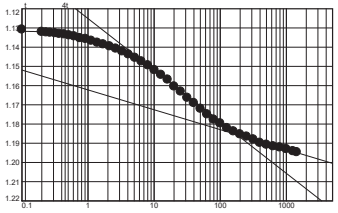


Void Ratio = 1.719 **Compression =** 47.2%
D_0 = 1.0541 **D_{50} =** 1.0861 **D_{100} =** 1.1181 **C_v at 16.09 min. =** 0.010 ft.^{2}/day **C_α =** 0.054

Figure D-166

Pressure: 8000.00 psf	TEST READINGS	Load No. 14

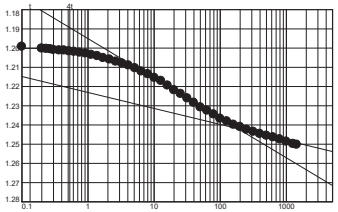
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.12688	24	12.7167	1.15441
2	0.1000	1.13080	25	15.9833	1.15684
3	0.2000	1.13202	26	20.0833	1.16042
4	0.2333	1.13232	27	25.2500	1.16311
5	0.2667	1.13243	28	31.7667	1.16630
6	0.3167	1.13270	29	39.9500	1.16908
7	0.3667	1.13307	30	50.2667	1.17207
8	0.4333	1.13329	31	63.2333	1.17491
9	0.5167	1.13382	32	79.5833	1.17767
10	0.6167	1.13434	33	100.1500	1.17963
11	0.7500	1.13525	34	126.0500	1.18206
12	0.9167	1.13570	35	158.6333	1.18381
13	1.1167	1.13664	36	199.6833	1.18531
14	1.3833	1.13763	37	251.3500	1.18654
15	1.7000	1.13848	38	316.3833	1.18798
16	2.1167	1.13951	39	398.2667	1.18975
17	2.6333	1.14073	40	501.3500	1.19075
18	3.2833	1.14221	41	631.1167	1.19155
19	4.1000	1.14372	42	794.5000	1.19213
20	5.1333	1.14548	43	1000.1833	1.19302
21	6.4333	1.14742	44	1259.1000	1.19409
22	8.0667	1.14946	45	1440.2000	1.19466
23	10.1333	1.15187			



Void Ratio = 1.370 **Compression =** 53.9%
D_0 = 1.1304 **D_{50} =** 1.1579 **D_{100} =** 1.1855 **C_v at 16.40 min. =** 0.007 ft.^{2}/day **C_α =** 0.053

Pressure: 16000.00 psf	TEST READINGS	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.19468	12	0.9167	1.20279
2	0.1000	1.19924	13	1.1167	1.20349
3	0.2000	1.20021	14	1.3833	1.20413
4	0.2333	1.20038	15	1.7000	1.20518
5	0.2667	1.20051	16	2.1167	1.20590
6	0.3000	1.20093	17	2.6333	1.20702
7	0.3667	1.20118	18	3.2833	1.20798
8	0.4333	1.20121	19	4.1000	1.20902
9	0.5167	1.20164	20	5.1333	1.21045
10	0.6167	1.20188	21	6.4333	1.21218
11	0.7500	1.20232	22	8.0667	1.21355



Pressure: 16000.00 psf	TEST READINGS (continued)	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1333	1.21548	33	100.1500	1.23674	43	1000.1667	1.24865
24	12.7167	1.21705	34	126.0333	1.23811	44	1259.1000	1.24984
25	15.9833	1.21951	35	158.6333	1.23987	45	1440.0667	1.25023
26	20.0833	1.22191	36	199.6667	1.24101			
27	25.2500	1.22382	37	251.3333	1.24246			
28	31.7667	1.22614	38	316.3833	1.24353			
29	39.9500	1.22843	39	398.2500	1.24465			
30	50.2500	1.23080	40	501.3500	1.24556			
31	63.2333	1.23249	41	631.1167	1.24646			
32	79.5667	1.23450	42	794.4833	1.24746			

Void Ratio = 1.084 **Compression =** 59.5%
D_0 = 1.1989 **D_{50} =** 1.2204 **D_{100} =** 1.2420 **C_v at 17.41 min. =** 0.005 ft.^{2}/day **C_α =** 0.043

Figure D-167

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-27
Depth: 2' - 4'
Material Description: Dark gray organic clay with peat pockets
Liquid Limit: 153 **Plasticity Index:** 90
USCS: (OH)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	78.66 g.	Spec. Gr. =	2.558	Wet w+t =	76.09 g.
Dry w+t =	42.14 g.	Est. Ht. Solids =	0.194 in.	Dry w+t =	57.16 g.
Tare Wt. =	18.39 g.	Init. V.R. =	4.146	Tare Wt. =	18.57 g.
Moisture =	153.8 %	Init. Sat. =	94.9 %	Moisture =	49.1 %
UNIT WEIGHT		TEST START		Dry Wt. =	38.59 g.
Height =	1.000 in.	Height =	1.000 in.		
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	101.47 g.				
Dry Dens. =	31.0 pcf				

End-Of-Load Summary

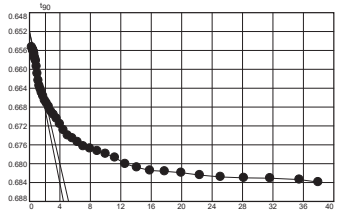
Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.65520	0.00000			4.146	
62.50	0.68391	0.02871	0.463		3.998	2.9 Comprs.
125.00	0.71890	0.06370	0.126		3.818	6.4 Comprs.
250.00	0.77615	0.12095	0.059		3.524	12.1 Comprs.
500.00	0.85119	0.19599	0.047		3.137	19.6 Comprs.
1000.00	0.95569	0.30049	0.024		2.600	30.0 Comprs.
2000.00	1.04604	0.39084	0.019		2.135	39.1 Comprs.
500.00	1.01526	0.36006	0.032		2.293	36.0 Comprs.
125.00	0.97007	0.31487	0.009		2.526	31.5 Comprs.
250.00	0.97506	0.31986	0.396		2.500	32.0 Comprs.
500.00	0.98987	0.33467	0.076		2.424	33.5 Comprs.
1000.00	1.01291	0.35771	0.137		2.305	35.8 Comprs.
2000.00	1.05367	0.39847	0.028		2.095	39.8 Comprs.
4000.00	1.12686	0.47166	0.013		1.719	47.2 Comprs.
8000.00	1.19466	0.53946	0.010		1.370	53.9 Comprs.
16000.00	1.25023	0.59503	0.008		1.084	59.5 Comprs.
0.00	1.25023	0.59503				

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 1.85 **Preconsolidation pressure (P_p), tsf =** 0.1 **Void ratio at P_p (e_m) =** 3.517
Recompression index (C_r) = 0.54

Pressure: 62.50 psf **TEST READINGS** **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.65520	24	12.7000	0.67043
2	0.1000	0.65531	25	15.9667	0.67158
3	0.2000	0.65576	26	20.0667	0.67287
4	0.2167	0.65592	27	25.2333	0.67401
5	0.2500	0.65603	28	31.7333	0.67459
6	0.3000	0.65622	29	39.9333	0.67540
7	0.3500	0.65637	30	50.2333	0.67630
8	0.4167	0.65676	31	63.2167	0.67677
9	0.5000	0.65743	32	79.5500	0.67732
10	0.6000	0.65781	33	100.1167	0.67789
11	0.7333	0.65821	34	126.0167	0.67869
12	0.9000	0.65940	35	158.6167	0.68004
13	1.1000	0.66090	36	199.6500	0.68078
14	1.3667	0.66238	37	251.3167	0.68144
15	1.6833	0.66348	38	316.3500	0.68162
16	2.1000	0.66417	39	398.2333	0.68191
17	2.6167	0.66493	40	501.3167	0.68241
18	3.2667	0.66567	41	631.1000	0.68281
19	4.0833	0.66657	42	794.4667	0.68300
20	5.1167	0.66716	43	1000.1500	0.68308
21	6.4167	0.66788	44	1259.0667	0.68337
22	8.0500	0.66893	45	1440.3833	0.68391
23	10.1167	0.66961			

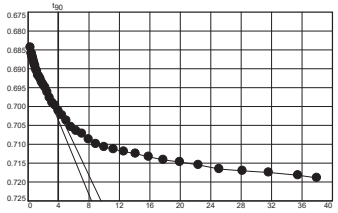


Void Ratio = 3.998 **Compression =** 2.9%
D_0 = 0.6520 **D_{90} =** 0.6668 **D_{100} =** 0.6684 **C_v at 4.45 min. =** 0.463 ft.^{2}/day

Figure D-168

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 2**

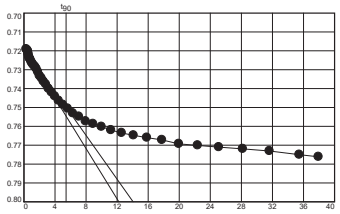
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.68390	24	12.7167	0.69972
2	0.1000	0.68436	25	15.9667	0.70113
3	0.2000	0.68585	26	20.0833	0.70234
4	0.2333	0.68603	27	25.2500	0.70372
5	0.2667	0.68630	28	31.7500	0.70539
6	0.3000	0.68653	29	39.9333	0.70645
7	0.3500	0.68695	30	50.2500	0.70718
8	0.4167	0.68722	31	63.2333	0.70868
9	0.5000	0.68765	32	79.5667	0.70992
10	0.6167	0.68826	33	100.1500	0.71072
11	0.7333	0.68881	34	126.0333	0.71129
12	0.9000	0.68927	35	158.6333	0.71193
13	1.1167	0.69020	36	199.6667	0.71248
14	1.3667	0.69064	37	251.3333	0.71332
15	1.7000	0.69170	38	316.3667	0.71413
16	2.1167	0.69208	39	398.2500	0.71470
17	2.6333	0.69270	40	501.3333	0.71548
18	3.2833	0.69355	41	631.1167	0.71655
19	4.1000	0.69426	42	794.4833	0.71704
20	5.1333	0.69497	43	1000.1667	0.71748
21	6.4333	0.69619	44	1259.1000	0.71820
22	8.0667	0.69766	45	1440.4333	0.71890
23	10.1167	0.69899			



Void Ratio = 3.818 **Compression =** 6.4%
D_0 = 0.6842 **D_{90} =** 0.7008 **D_{100} =** 0.7027 **C_v at 15.28 min. =** 0.126 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 3**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.71888	12	0.9000	0.72570
2	0.1000	0.71914	13	1.1167	0.72646
3	0.2000	0.71968	14	1.3667	0.72710
4	0.2333	0.71989	15	1.7000	0.72790
5	0.2667	0.72028	16	2.1167	0.72849
6	0.3000	0.72096	17	2.6333	0.72952
7	0.3500	0.72171	18	3.2833	0.73118
8	0.4167	0.72261	19	4.1000	0.73314
9	0.5000	0.72369	20	5.1333	0.73436
10	0.6167	0.72414	21	6.4333	0.73619
11	0.7333	0.72469	22	8.0667	0.73766



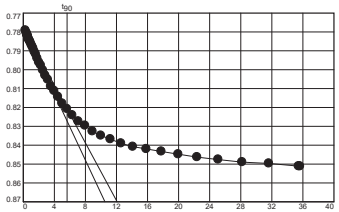
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 3**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.74001	33	100.1333	0.76022	43	1000.1833	0.77307
24	12.7167	0.74195	34	126.0333	0.76198	44	1259.1000	0.77501
25	15.9833	0.74400	35	158.6333	0.76350	45	1440.3167	0.77615
26	20.0833	0.74634	36	199.6667	0.76479			
27	25.2500	0.74855	37	251.3333	0.76600			
28	31.7500	0.75057	38	316.3833	0.76721			
29	39.9500	0.75305	39	398.2667	0.76930			
30	50.2500	0.75484	40	501.3500	0.77011			
31	63.2333	0.75734	41	631.1167	0.77105			
32	79.5667	0.75872	42	794.5000	0.77194			

Void Ratio = 3.524 **Compression =** 12.1%
D_0 = 0.7183 **D_{90} =** 0.7499 **D_{100} =** 0.7534 **C_v at 29.48 min. =** 0.059 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77609	24	12.7000	0.80882
2	0.0833	0.77920	25	15.9500	0.81117
3	0.1833	0.78050	26	20.0667	0.81434
4	0.2167	0.78091	27	25.2333	0.81789
5	0.2500	0.78150	28	31.7333	0.82074
6	0.2833	0.78169	29	39.9167	0.82410
7	0.3500	0.78215	30	50.2333	0.82736
8	0.4167	0.78301	31	63.2167	0.82962
9	0.5000	0.78369	32	79.5500	0.83269
10	0.6000	0.78428	33	100.1167	0.83492
11	0.7333	0.78478	34	126.0167	0.83684
12	0.8833	0.78552	35	158.6000	0.83903
13	1.1000	0.78671	36	199.6500	0.84079
14	1.3500	0.78766	37	251.3333	0.84200
15	1.6833	0.78872	38	316.3667	0.84332
16	2.1000	0.79042	39	398.2500	0.84477
17	2.6167	0.79174	40	501.3333	0.84633
18	3.2667	0.79396	41	631.1000	0.84762
19	4.0833	0.79609	42	794.4833	0.84897
20	5.1167	0.79762	43	1000.1500	0.84967
21	6.4167	0.80025	44	1259.0833	0.85111
22	8.0500	0.80301	45	1270.5667	0.85119
23	10.1000	0.80523			

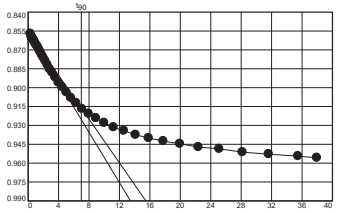


Void Ratio = 3.137 **Compression =** 19.6%
D_0 = 0.7777 **D_{90} =** 0.8208 **D_{100} =** 0.8255 **C_v at 31.79 min. =** 0.047 ft.^{2}/day

Figure D-169

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 5**

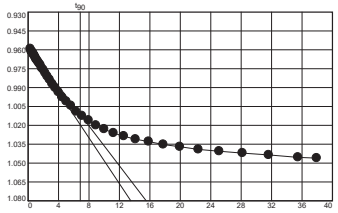
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.85120	24	12.7167	0.89176
2	0.1000	0.85716	25	15.9667	0.89592
3	0.2000	0.85925	26	20.0833	0.89941
4	0.2333	0.85965	27	25.2500	0.90360
5	0.2667	0.86018	28	31.7500	0.90804
6	0.3000	0.86063	29	39.9500	0.91208
7	0.3500	0.86109	30	50.2500	0.91682
8	0.4167	0.86169	31	63.2333	0.92069
9	0.5000	0.86172	32	79.5667	0.92423
10	0.6167	0.86250	33	100.1333	0.92790
11	0.7333	0.86365	34	126.0333	0.93145
12	0.9000	0.86452	35	158.6333	0.93419
13	1.1167	0.86583	36	199.6667	0.93751
14	1.3667	0.86675	37	251.3333	0.94006
15	1.7000	0.86796	38	316.3667	0.94247
16	2.1000	0.86974	39	398.2500	0.94460
17	2.6167	0.87159	40	501.3333	0.94722
18	3.2833	0.87392	41	631.1167	0.94861
19	4.1000	0.87614	42	794.5000	0.95126
20	5.1333	0.87872	43	1000.1667	0.95287
21	6.4333	0.88172	44	1259.1000	0.95445
22	8.0667	0.88521	45	1440.2500	0.95569
23	10.1167	0.88796			



Void Ratio = 2.600 **Compression =** 30.0%
D_0 = 0.8554 **D_{90} =** 0.9162 **D_{100} =** 0.9230 **C_v at 48.92 min. =** 0.024 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.95570	12	0.9167	0.96589
2	0.1000	0.95923	13	1.1167	0.96723
3	0.2000	0.96127	14	1.3833	0.96820
4	0.2333	0.96122	15	1.7000	0.96938
5	0.2667	0.96156	16	2.1167	0.97072
6	0.3167	0.96198	17	2.6333	0.97202
7	0.3667	0.96232	18	3.2833	0.97440
8	0.4333	0.96285	19	4.1000	0.97588
9	0.5167	0.96332	20	5.1333	0.97844
10	0.6167	0.96431	21	6.4333	0.98106
11	0.7500	0.96496	22	8.0667	0.98367



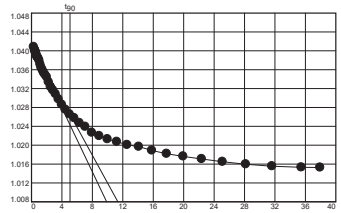
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1333	0.98704	33	100.1500	1.02303	43	1000.1833	1.04354
24	12.7167	0.99016	34	126.0333	1.02618	44	1259.1000	1.04546
25	15.9833	0.99359	35	158.6333	1.02865	45	1440.0667	1.04604
26	20.0833	0.99763	36	199.6833	1.03109			
27	25.2500	1.00098	37	251.3500	1.03292			
28	31.7667	1.00439	38	316.3833	1.03528			
29	39.9500	1.00908	39	398.2667	1.03703			
30	50.2667	1.01245	40	501.3500	1.03914			
31	63.2333	1.01602	41	631.1333	1.04060			
32	79.5833	1.02003	42	794.5000	1.04205			

Void Ratio = 2.135 **Compression =** 39.1%
D_0 = 0.9572 **D_{90} =** 1.0114 **D_{100} =** 1.0174 **C_v at 46.94 min. =** 0.019 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.04603	24	12.7000	1.02976
2	0.1000	1.04081	25	15.9667	1.02860
3	0.2000	1.04024	26	20.0667	1.02755
4	0.2333	1.04006	27	25.2333	1.02656
5	0.2667	1.03999	28	31.7500	1.02574
6	0.3000	1.03973	29	39.9333	1.02471
7	0.3500	1.03956	30	50.2333	1.02392
8	0.4167	1.03936	31	63.2167	1.02265
9	0.5000	1.03900	32	79.5500	1.02195
10	0.6000	1.03872	33	100.1333	1.02126
11	0.7333	1.03853	34	126.0167	1.02073
12	0.9000	1.03834	35	158.6167	1.02007
13	1.1167	1.03791	36	199.6500	1.01969
14	1.3667	1.03711	37	251.3167	1.01887
15	1.7000	1.03643	38	316.3667	1.01818
16	2.1000	1.03596	39	398.2333	1.01762
17	2.6167	1.03541	40	501.3333	1.01707
18	3.2833	1.03495	41	631.1000	1.01649
19	4.1000	1.03446	42	794.4667	1.01596
20	5.1333	1.03338	43	1000.1500	1.01554
21	6.4333	1.03235	44	1259.0833	1.01531
22	8.0667	1.03165	45	1440.1833	1.01526
23	10.1167	1.03085			

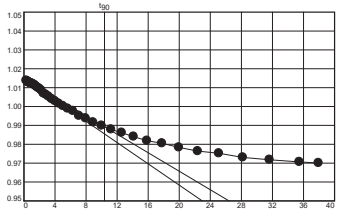


Void Ratio = 2.293 **Compression =** 36.0%
D_0 = 1.0414 **D_{90} =** 1.0265 **D_{100} =** 1.0248 **C_v at 25.67 min. =** 0.032 ft.^{2}/day

Figure D-170

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 8**

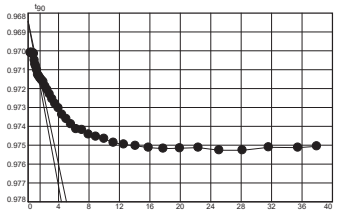
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.01519	24	12.7167	1.00405
2	0.1000	1.01378	25	15.9667	1.00295
3	0.2000	1.01338	26	20.0833	1.00161
4	0.2167	1.01323	27	25.2500	1.00029
5	0.2667	1.01311	28	31.7500	0.99889
6	0.3000	1.01301	29	39.9333	0.99774
7	0.3500	1.01289	30	50.2500	0.99509
8	0.4167	1.01272	31	63.2333	0.99375
9	0.5000	1.01264	32	79.5667	0.99166
10	0.6000	1.01250	33	100.1500	0.98990
11	0.7333	1.01248	34	126.0333	0.98791
12	0.9000	1.01225	35	158.6333	0.98612
13	1.1167	1.01212	36	199.6667	0.98404
14	1.3667	1.01189	37	251.3333	0.98192
15	1.7000	1.01160	38	316.3833	0.98052
16	2.1000	1.01120	39	398.2500	0.97836
17	2.6167	1.01051	40	501.3333	0.97638
18	3.2833	1.00991	41	631.1167	0.97523
19	4.1000	1.00940	42	794.4833	0.97306
20	5.1333	1.00855	43	1000.1667	0.97180
21	6.4333	1.00695	44	1259.1000	0.97066
22	8.0667	1.00634	45	1440.0167	0.97007
23	10.1167	1.00532			



Void Ratio = 2.526 **Compression =** 31.5%
D_0 = 1.0147 **D_{90} =** 0.9893 **D_{100} =** 0.9865 **C_v at 107.67 min. =** 0.009 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.97012	12	0.9000	0.97072
2	0.1000	0.97010	13	1.1000	0.97083
3	0.2000	0.97011	14	1.3667	0.97102
4	0.2167	0.97013	15	1.7000	0.97127
5	0.2500	0.97010	16	2.1000	0.97136
6	0.3000	0.97015	17	2.6167	0.97146
7	0.3500	0.97016	18	3.2833	0.97155
8	0.4167	0.97016	19	4.1000	0.97165
9	0.5000	0.97013	20	5.1333	0.97189
10	0.6000	0.97016	21	6.4333	0.97207
11	0.7333	0.97050	22	8.0667	0.97230



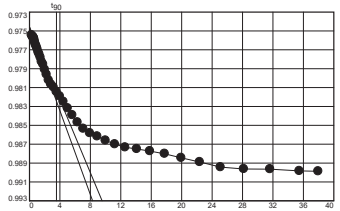
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1167	0.97256	33	100.1333	0.97466	43	1000.1500	0.97511
24	12.7167	0.97281	34	126.0167	0.97487	44	1259.0833	0.97513
25	15.9667	0.97304	35	158.6167	0.97496	45	1440.3833	0.97506
26	20.0667	0.97338	36	199.6500	0.97503			
27	25.2333	0.97361	37	251.3167	0.97513			
28	31.7500	0.97389	38	316.3667	0.97518			
29	39.9333	0.97415	39	398.2500	0.97516			
30	50.2500	0.97419	40	501.3333	0.97513			
31	63.2167	0.97443	41	631.1000	0.97527			
32	79.5667	0.97455	42	794.4833	0.97527			

Void Ratio = 2.500 **Compression =** 32.0%
D_0 = 0.9684 **D_{90} =** 0.9714 **D_{100} =** 0.9718 **C_v at 2.50 min. =** 0.396 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.97508	24	12.7000	0.98145
2	0.0833	0.97544	25	15.9667	0.98192
3	0.1833	0.97563	26	20.0667	0.98249
4	0.2167	0.97560	27	25.2333	0.98318
5	0.2500	0.97567	28	31.7333	0.98392
6	0.2833	0.97569	29	39.9333	0.98468
7	0.3500	0.97577	30	50.2333	0.98535
8	0.4167	0.97587	31	63.2167	0.98582
9	0.5000	0.97610	32	79.5500	0.98618
10	0.6000	0.97633	33	100.1167	0.98660
11	0.7333	0.97651	34	126.0167	0.98700
12	0.9000	0.97665	35	158.6167	0.98733
13	1.1000	0.97691	36	199.6500	0.98751
14	1.3667	0.97725	37	251.3167	0.98774
15	1.6833	0.97748	38	316.3667	0.98802
16	2.1000	0.97781	39	398.2333	0.98845
17	2.6167	0.97825	40	501.3333	0.98889
18	3.2667	0.97854	41	631.1000	0.98943
19	4.1000	0.97908	42	794.4833	0.98963
20	5.1167	0.97961	43	1000.1500	0.98965
21	6.4167	0.98021	44	1259.0833	0.98983
22	8.0667	0.98065	45	1440.3000	0.98987
23	10.1167	0.98096			

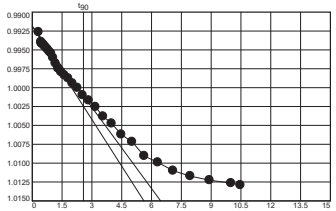


Void Ratio = 2.424 **Compression =** 33.5%
D_0 = 0.9746 **D_{90} =** 0.9814 **D_{100} =** 0.9822 **C_v at 12.57 min. =** 0.076 ft.^{2}/day

Figure D-171

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 11**

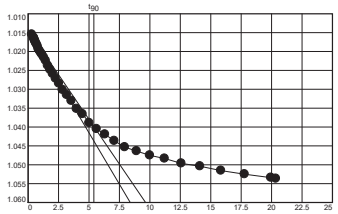
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.98982	18	3.2667	0.99875
2	0.1000	0.99263	19	4.1000	0.99943
3	0.2000	0.99393	20	5.1333	1.00002
4	0.2167	0.99414	21	6.4167	1.00100
5	0.2500	0.99418	22	8.0667	1.00169
6	0.3000	0.99423	23	10.1167	1.00256
7	0.3500	0.99444	24	12.7000	1.00381
8	0.4167	0.99454	25	15.9667	1.00474
9	0.5000	0.99476	26	20.0667	1.00621
10	0.6000	0.99494	27	25.2333	1.00718
11	0.7333	0.99522	28	31.7500	1.00905
12	0.9000	0.99545	29	39.9333	1.00990
13	1.1000	0.99604	30	50.2333	1.01100
14	1.3667	0.99679	31	63.2167	1.01172
15	1.7000	0.99746	32	79.5500	1.01226
16	2.1000	0.99793	33	100.1333	1.01265
17	2.6167	0.99834	34	109.6333	1.01291



Void Ratio = 2.305 **Compression =** 35.8%
D_0 = 0.9919 **D_{90} =** 1.0011 **D_{100} =** 1.0021 **C_V at 6.63 min. =** 0.137 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.01282	18	3.2833	1.02481
2	0.1000	1.01549	19	4.1000	1.02591
3	0.2000	1.01621	20	5.1333	1.02714
4	0.2333	1.01639	21	6.4333	1.02845
5	0.2667	1.01670	22	8.0667	1.03013
6	0.3000	1.01709	23	10.1167	1.03151
7	0.3500	1.01719	24	12.7167	1.03304
8	0.4167	1.01772	25	15.9667	1.03517
9	0.5000	1.01805	26	20.0833	1.03659
10	0.6167	1.01859	27	25.2500	1.03890
11	0.7333	1.01933	28	31.7500	1.04051
12	0.9000	1.01982	29	39.9500	1.04195
13	1.1167	1.02036	30	50.2500	1.04367
14	1.3667	1.02087	31	63.2333	1.04534
15	1.7000	1.02157	32	79.5667	1.04638
16	2.1167	1.02240	33	100.1333	1.04752
17	2.6333	1.02371	34	126.0333	1.04836



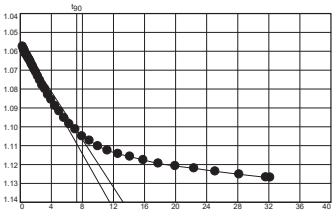
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 12**

No.	Elapsed Time	Dial Reading
35	158.6333	1.04963
36	199.6667	1.05040
37	251.3333	1.05155
38	316.3667	1.05251
39	398.2500	1.05341
40	414.7667	1.05367

Void Ratio = 2.095 **Compression =** 39.8%
D_0 = 1.0143 **D_{90} =** 1.0399 **D_{100} =** 1.0427 **C_V at 29.17 min. =** 0.028 ft.^{2}/day

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.05365	23	10.1333	1.08000
2	0.1000	1.05752	24	12.7167	1.08301
3	0.2000	1.05889	25	15.9833	1.08560
4	0.2333	1.05925	26	20.0833	1.08890
5	0.2667	1.05927	27	25.2500	1.09178
6	0.3000	1.05970	28	31.7500	1.09527
7	0.3500	1.06043	29	39.9500	1.09859
8	0.4167	1.06103	30	50.2500	1.10133
9	0.5000	1.06134	31	63.2333	1.10504
10	0.6167	1.06166	32	79.5667	1.10736
11	0.7333	1.06205	33	100.1333	1.11026
12	0.9000	1.06296	34	126.0333	1.11255
13	1.1167	1.06360	35	158.6333	1.11438
14	1.3667	1.06437	36	199.6833	1.11581
15	1.7000	1.06532	37	251.3500	1.11763
16	2.1167	1.06677	38	316.3833	1.11945
17	2.6333	1.06789	39	398.2667	1.12078
18	3.2833	1.06967	40	501.3500	1.12203
19	4.1000	1.07110	41	631.1167	1.12363
20	5.1333	1.07310	42	794.5000	1.12520
21	6.4333	1.07538	43	1000.1667	1.12677
22	8.0667	1.07804	44	1035.2333	1.12686

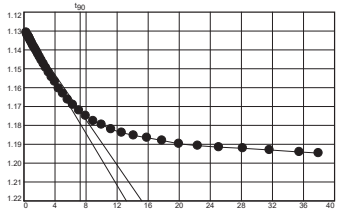


Void Ratio = 1.719 **Compression =** 47.2%
D_0 = 1.0561 **D_{90} =** 1.1021 **D_{100} =** 1.1072 **C_V at 52.73 min. =** 0.013 ft.^{2}/day

Figure D-172

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 14**

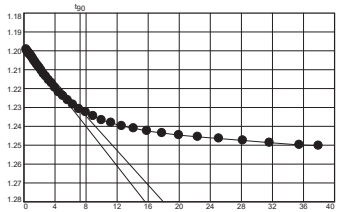
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.12688	24	12.7167	1.15441
2	0.1000	1.13080	25	15.9833	1.15684
3	0.2000	1.13202	26	20.0833	1.16042
4	0.2333	1.13232	27	25.2500	1.16311
5	0.2667	1.13243	28	31.7667	1.16630
6	0.3167	1.13270	29	39.9500	1.16908
7	0.3667	1.13307	30	50.2667	1.17207
8	0.4333	1.13329	31	63.2333	1.17491
9	0.5167	1.13382	32	79.5833	1.17767
10	0.6167	1.13434	33	100.1500	1.17963
11	0.7500	1.13525	34	126.0500	1.18206
12	0.9167	1.13570	35	158.6333	1.18381
13	1.1167	1.13664	36	199.6833	1.18531
14	1.3833	1.13763	37	251.3500	1.18654
15	1.7000	1.13848	38	316.3833	1.18798
16	2.1167	1.13951	39	398.2667	1.18975
17	2.6333	1.14073	40	501.3500	1.19075
18	3.2833	1.14221	41	631.1167	1.19155
19	4.1000	1.14372	42	794.5000	1.19213
20	5.1333	1.14548	43	1000.1833	1.19302
21	6.4333	1.14742	44	1259.1000	1.19409
22	8.0667	1.14946	45	1440.2000	1.19466
23	10.1333	1.15187			



Void Ratio = 1.370 **Compression =** 53.9%
D_0 = 1.1293 **D_{90} =** 1.1726 **D_{100} =** 1.1774 **C_v at 52.48 min. =** 0.010 ft.^{2}/day

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 15**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.19468	12	0.9167	1.20279
2	0.1000	1.19924	13	1.1167	1.20349
3	0.2000	1.20021	14	1.3833	1.20413
4	0.2333	1.20038	15	1.7000	1.20518
5	0.2667	1.20051	16	2.1167	1.20590
6	0.3000	1.20093	17	2.6333	1.20702
7	0.3667	1.20118	18	3.2833	1.20798
8	0.4333	1.20121	19	4.1000	1.20902
9	0.5167	1.20164	20	5.1333	1.21045
10	0.6167	1.20188	21	6.4333	1.21218
11	0.7500	1.20232	22	8.0667	1.21355



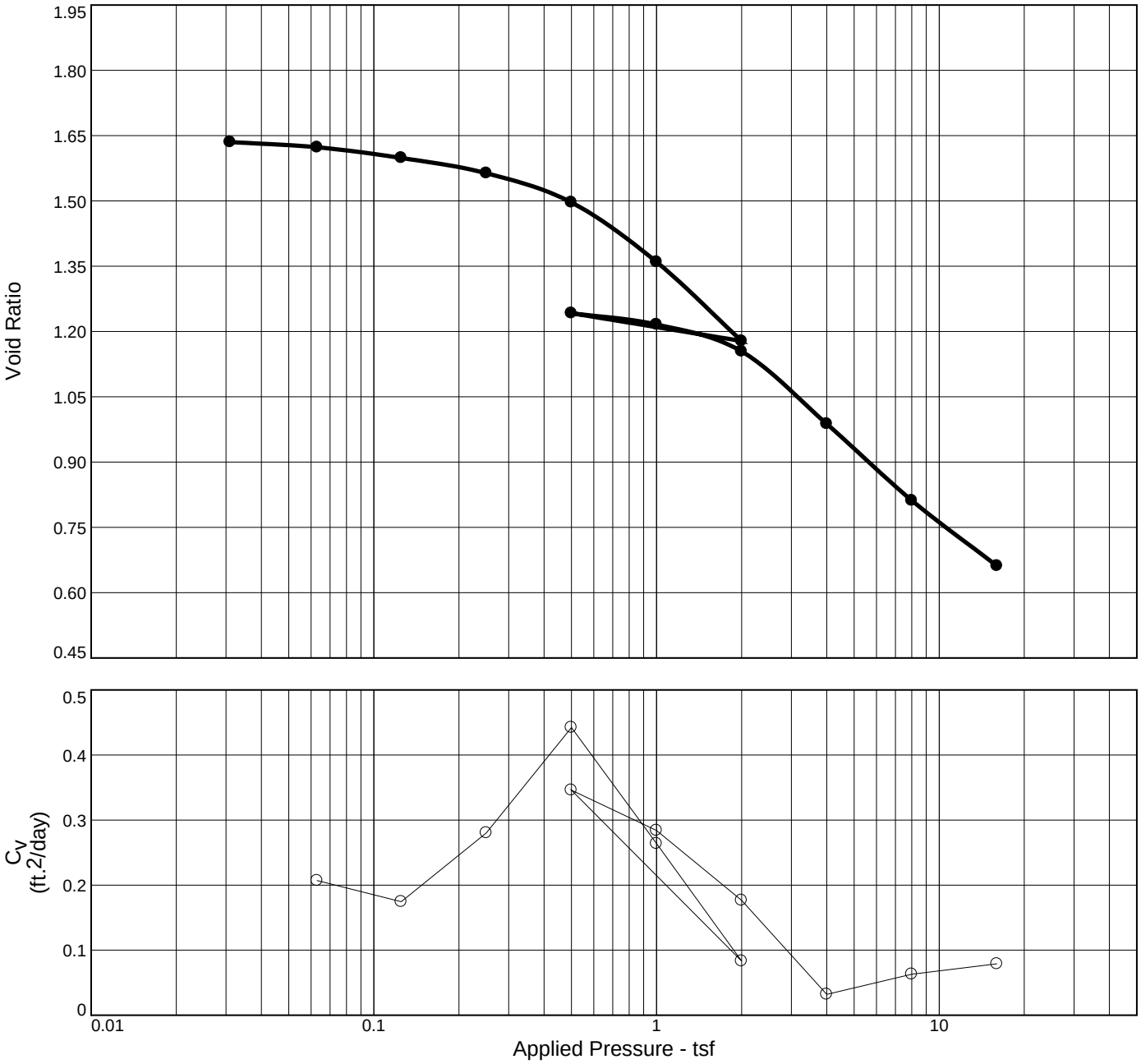
Pressure: 16000.00 psf — **TEST READINGS (continued)** — **Load No. 15**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1333	1.21548	33	100.1500	1.23674	43	1000.1667	1.24865
24	12.7167	1.21705	34	126.0333	1.23811	44	1259.1000	1.24984
25	15.9833	1.21951	35	158.6333	1.23987	45	1440.0667	1.25023
26	20.0833	1.22191	36	199.6667	1.24101			
27	25.2500	1.22382	37	251.3333	1.24246			
28	31.7667	1.22614	38	316.3833	1.24353			
29	39.9500	1.22843	39	398.2500	1.24465			
30	50.2500	1.23080	40	501.3500	1.24556			
31	63.2333	1.23249	41	631.1167	1.24646			
32	79.5667	1.23450	42	794.4833	1.24746			

Void Ratio = 1.084 **Compression =** 59.5%
D_0 = 1.1981 **D_{90} =** 1.2311 **D_{100} =** 1.2347 **C_v at 52.29 min. =** 0.008 ft.^{2}/day

Figure D-173

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.3 %	58.9 %	64.8	89	63	2.745	0.7	0.62	1.644

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand seams and sand pockets	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-32 **Depth:** 23' - 25'

GeoEngineers

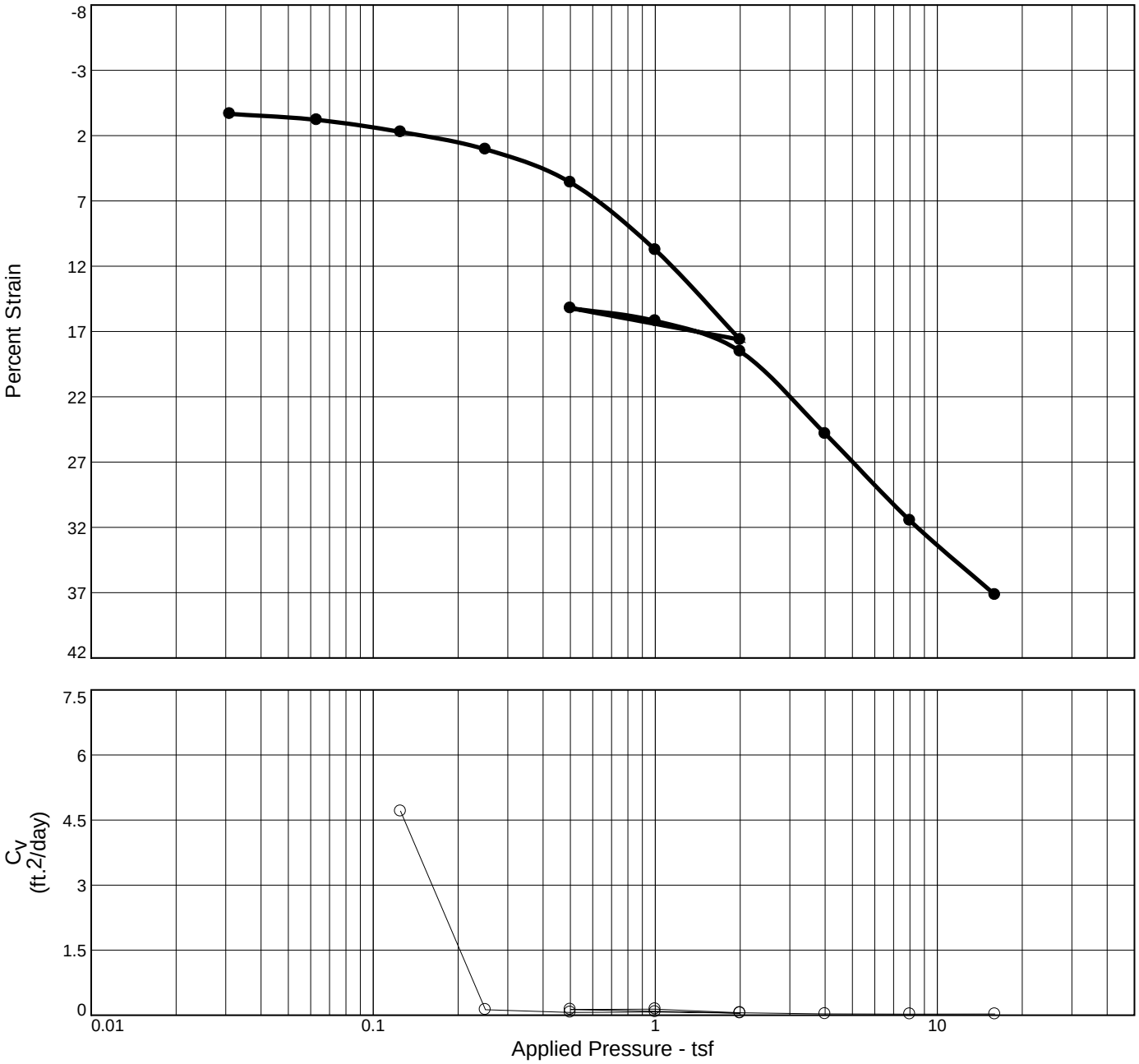
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: KLA/CLP **Checked By:** ARS

Figure D-174

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.3 %	58.9 %	64.8	89	63	2.745	0.7	0.62	1.644

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand seams and sand pockets	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-32 **Depth:** 23' - 25'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: KLA/CLP **Checked By:** ARS

Figure D-175

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-32
Depth: 23' - 25'
Material Description: Gray clay with sand seams and sand pockets
Liquid Limit: 89 **Plasticity Index:** 63
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	105.36 g.	Spec. Gr. =	2.745	Wet w+t =	104.13 g.
Dry w+t =	73.17 g.	Est. Ht. Solids =	0.282 in.	Dry w+t =	84.13 g.
Tare Wt. =	18.51 g.	Init. V.R. =	1.644	Tare Wt. =	22.51 g.
Moisture =	58.9 %	Init. Sat. =	98.3 %	Moisture =	32.5 %

UNIT WEIGHT		TEST START			
Height =	0.745 in.	Height =	0.745 in.	Dry Wt. =	61.62 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	98.85 g.				
Dry Dens. =	64.8 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00050	0.00000			1.644	
0.03	0.00300	0.00250			1.635	0.3 Comprs.
0.06	0.00640	0.00590		0.000	1.623	0.8 Comprs.
0.13	0.01330	0.01280	4.706	0.000	1.599	1.7 Comprs.
0.25	0.02320	0.02270	0.127	0.002	1.564	3.0 Comprs.
0.50	0.04210	0.04160	0.064	0.007	1.497	5.6 Comprs.
1.00	0.08060	0.08010	0.074	0.022	1.360	10.8 Comprs.
2.00	0.13180	0.13130	0.049	0.023	1.178	17.6 Comprs.
0.50	0.11380	0.11330	0.133		1.242	15.2 Comprs.
1.00	0.12110	0.12060	0.140	0.001	1.216	16.2 Comprs.
2.00	0.13850	0.13800	0.055	0.007	1.154	18.5 Comprs.
4.00	0.18540	0.18490	0.032	0.021	0.988	24.8 Comprs.
8.00	0.23500	0.23450	0.027	0.010	0.812	31.5 Comprs.
16.00	0.27730	0.27680	0.028	0.012	0.662	37.2 Comprs.

Compression index (C_c), tsf = 0.62 **Preconsolidation pressure (P_p), tsf =** 0.7 **Void ratio at P_p (e_m) =** 1.451
Recompression index (C_r) = 0.28

Pressure: 0.03 tsf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0005	11	1.0167	0.0026	21	90.1167	0.0030
2	0.0167	0.0023	12	2.0167	0.0030	22	120.1667	0.00300
3	0.0333	0.0025	13	4.0167	0.0030	23	127.3333	0.00300
4	0.0500	0.0025	14	5.0167	0.0030			
5	0.0667	0.0025	15	8.0167	0.0030			
6	0.0833	0.0025	16	10.0167	0.0030			
7	0.1000	0.0026	17	15.0333	0.0030			
8	0.2000	0.0026	18	20.0333	0.0030			
9	0.2500	0.0026	19	40.0500	0.0030			
10	0.5000	0.0026	20	60.0833	0.0030			

Void Ratio = 1.635 **Compression =** 0.3%

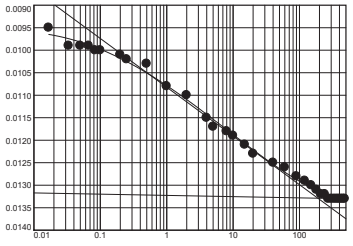
Pressure: 0.06 tsf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.00300	17	15.0167	0.0062	33	450.5667	0.0064
2	0.0167	0.0053	18	20.0167	0.0062	34	480.6000	0.0064
3	0.0333	0.0053	19	40.0500	0.0062	35	510.6333	0.0064
4	0.0500	0.0053	20	60.0667	0.0063	36	540.6833	0.0064
5	0.0667	0.0053	21	90.1000	0.0063	37	570.7167	0.0064
6	0.0833	0.0053	22	120.1500	0.0063	38	600.7500	0.0064
7	0.1000	0.0053	23	150.1833	0.0064	39	630.7833	0.0064
8	0.2000	0.0054	24	180.2167	0.0064	40	660.8333	0.0064
9	0.2500	0.0054	25	210.2667	0.0064	41	690.8667	0.0064
10	0.5000	0.0054	26	240.3000	0.0064	42	720.9000	0.0064
11	1.0000	0.0056	27	270.3333	0.0064	43	750.9333	0.0064
12	2.0000	0.0058	28	300.3667	0.0064	44	780.9833	0.0064
13	4.0000	0.0060	29	330.4167	0.0064	45	800.6500	0.0064
14	5.0000	0.0060	30	360.4500	0.0064	46	800.6833	0.0064
15	8.0000	0.0061	31	390.4833	0.0064			
16	10.0000	0.0061	32	420.5167	0.0064			

Void Ratio = 1.623 **Compression =** 0.8%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 3**

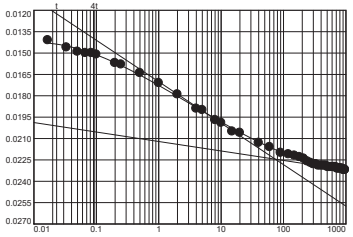
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0064	18	20.0167	0.0123
2	0.0167	0.0095	19	40.0333	0.0125
3	0.0333	0.0099	20	60.0667	0.0126
4	0.0500	0.0099	21	90.1000	0.0128
5	0.0667	0.0099	22	120.1500	0.0129
6	0.0833	0.0100	23	150.1833	0.0130
7	0.1000	0.0100	24	180.2167	0.0131
8	0.2000	0.0101	25	210.2500	0.0132
9	0.2500	0.0102	26	240.3000	0.0132
10	0.5000	0.0103	27	270.3333	0.0133
11	1.0000	0.0108	28	300.3667	0.0133
12	2.0000	0.0110	29	330.4167	0.0133
13	4.0000	0.0115	30	360.4500	0.0133
14	5.0000	0.0117	31	390.4833	0.0133
15	8.0000	0.0118	32	420.5167	0.0133
16	10.0000	0.0119	33	450.5667	0.0133
17	15.0167	0.0121	34	480.0500	0.0133



Void Ratio = 1.599 **Compression =** 1.7%
D_0 = 0.0064 **D_{50} =** 0.0098 **D_{100} =** 0.0133 **C_v at 0.06 min. =** 4.706 ft.^{2}/day **C_α =** 0.000

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0133	18	20.0333	0.0206
2	0.0167	0.0141	19	40.0500	0.0213
3	0.0333	0.0146	20	60.0833	0.0216
4	0.0500	0.0149	21	90.1167	0.0220
5	0.0667	0.0150	22	120.1500	0.0221
6	0.0833	0.0150	23	150.2000	0.0222
7	0.1000	0.0151	24	180.2333	0.0223
8	0.2000	0.0157	25	210.2667	0.0224
9	0.2500	0.0158	26	240.3000	0.0226
10	0.5000	0.0164	27	270.3500	0.0227
11	1.0000	0.0171	28	300.3833	0.0228
12	2.0000	0.0179	29	330.4167	0.0228
13	4.0000	0.0189	30	360.4500	0.0229
14	5.0000	0.0190	31	390.5000	0.0229
15	8.0167	0.0197	32	420.5333	0.0229
16	10.0167	0.0199	33	450.5667	0.0229
17	15.0167	0.0205	34	480.6000	0.0229



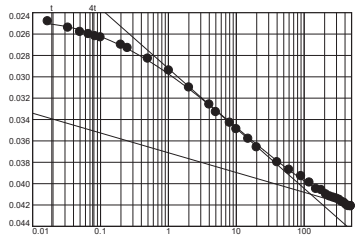
Pressure: 0.25 tsf — **TEST READINGS (continued)** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
35	510.6500	0.0230	45	811.0167	0.0231
36	540.6833	0.0230	46	841.0667	0.0231
37	570.7167	0.0230	47	871.1000	0.0231
38	600.7667	0.0230	48	901.1333	0.0232
39	630.8000	0.0230	49	931.1667	0.0232
40	660.8333	0.0230	50	961.2167	0.0232
41	690.8667	0.0230	51	964.8500	0.0232
42	720.9167	0.0231	52	964.8833	0.0232
43	750.9500	0.0231			
44	780.9833	0.0231			

Void Ratio = 1.564 **Compression =** 3.0%
D_0 = 0.0137 **D_{50} =** 0.0181 **D_{100} =** 0.0224 **C_v at 2.04 min. =** 0.127 ft.^{2}/day **C_α =** 0.002

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0232	19	40.0167	0.0380
2	0.0167	0.0248	20	60.0167	0.0387
3	0.0333	0.0254	21	90.0000	0.0393
4	0.0500	0.0258	22	120.0000	0.0399
5	0.0667	0.0260	23	150.0000	0.0405
6	0.0833	0.0262	24	179.9833	0.0406
7	0.1000	0.0263	25	209.9667	0.0410
8	0.2000	0.0270	26	239.9667	0.0412
9	0.2500	0.0273	27	269.9667	0.0413
10	0.5000	0.0283	28	299.9500	0.0414
11	1.0167	0.0294	29	329.9500	0.0415
12	2.0167	0.0310	30	359.9500	0.0417
13	4.0167	0.0326	31	389.9500	0.0418
14	5.0167	0.0333	32	419.9333	0.0420
15	8.0167	0.0343	33	449.9167	0.0421
16	10.0167	0.0349	34	479.9333	0.0421
17	15.0167	0.0358	35	485.9333	0.0421
18	20.0167	0.0366	36	485.9667	0.0421

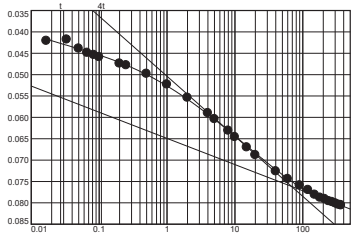


Void Ratio = 1.497 **Compression =** 5.6%
D_0 = 0.0242 **D_{50} =** 0.0326 **D_{100} =** 0.0410 **C_v at 3.91 min. =** 0.064 ft.^{2}/day **C_α =** 0.007

Figure D-177

Pressure: 1.00 tsf	TEST READINGS	Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0421	17	15.0000	0.0670
2	0.0167	0.0421	18	20.0000	0.0688
3	0.0333	0.0418	19	39.9833	0.0726
4	0.0500	0.0439	20	59.9833	0.0744
5	0.0667	0.0449	21	89.9833	0.0759
6	0.0833	0.0454	22	119.9833	0.0770
7	0.1000	0.0459	23	149.9833	0.0781
8	0.2000	0.0474	24	180.0167	0.0788
9	0.2500	0.0478	25	210.0500	0.0791
10	0.5000	0.0498	26	240.1000	0.0796
11	1.0000	0.0523	27	270.1333	0.0798
12	2.0000	0.0554	28	300.1667	0.0801
13	4.0000	0.0590	29	330.2167	0.0804
14	5.0000	0.0604	30	360.2500	0.0805
15	8.0000	0.0631	31	365.6500	0.0806
16	10.0000	0.0646			

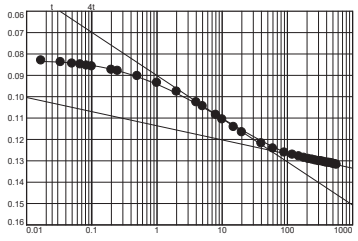


Void Ratio = 1.360 **Compression =** 10.8%

D_0 = 0.0398 **D_{50} =** 0.0580 **D_{100} =** 0.0762 **C_v at 3.12 min. =** 0.074 ft.^{2}/day **C_α =** 0.022

Pressure: 2.00 tsf	TEST READINGS	Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0806	19	40.0500	0.1218
2	0.0167	0.0830	20	60.0833	0.1242
3	0.0333	0.0838	21	90.1167	0.1261
4	0.0500	0.0845	22	120.1500	0.1271
5	0.0667	0.0849	23	150.2000	0.1279
6	0.0833	0.0854	24	180.2333	0.1286
7	0.1000	0.0858	25	210.2667	0.1291
8	0.2000	0.0874	26	240.3167	0.1294
9	0.2500	0.0879	27	270.3500	0.1298
10	0.5000	0.0903	28	300.3833	0.1301
11	1.0000	0.0935	29	330.4333	0.1302
12	2.0000	0.0976	30	360.4667	0.1305
13	4.0167	0.1026	31	390.5000	0.1308
14	5.0167	0.1044	32	420.5333	0.1309
15	8.0167	0.1085	33	450.5833	0.1310
16	10.0167	0.1106	34	480.6167	0.1312
17	15.0167	0.1142	35	510.6500	0.1314
18	20.0333	0.1166	36	540.6833	0.1316



Pressure: 2.00 tsf	TEST READINGS (continued)	Load No. 7

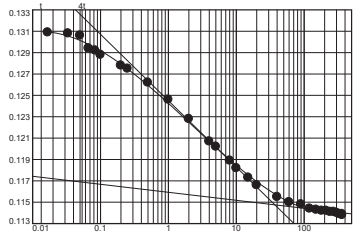
No.	Elapsed Time	Dial Reading
37	569.6000	0.1318

Void Ratio = 1.178 **Compression =** 17.6%

D_0 = 0.0820 **D_{50} =** 0.1035 **D_{100} =** 0.1250 **C_v at 4.15 min. =** 0.049 ft.^{2}/day **C_α =** 0.023

Pressure: 0.50 tsf	TEST READINGS	Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1318	17	15.0167	0.1173
2	0.0167	0.1309	18	20.0333	0.1166
3	0.0333	0.1308	19	40.0500	0.1155
4	0.0500	0.1306	20	60.0833	0.1150
5	0.0667	0.1294	21	90.1167	0.1148
6	0.0833	0.1292	22	120.1500	0.1144
7	0.1000	0.1288	23	150.2000	0.1143
8	0.2000	0.1278	24	180.2333	0.1142
9	0.2500	0.1275	25	210.2667	0.1142
10	0.5000	0.1262	26	240.3000	0.1141
11	1.0000	0.1246	27	270.3500	0.1141
12	2.0000	0.1228	28	300.3833	0.1140
13	4.0000	0.1207	29	330.4167	0.1139
14	5.0167	0.1202	30	360.4667	0.1139
15	8.0167	0.1189	31	362.9333	0.1138
16	10.0167	0.1182			



Void Ratio = 1.242 **Compression =** 15.2%

D_0 = 0.1319 **D_{50} =** 0.1233 **D_{100} =** 0.1148 **C_v at 1.44 min. =** 0.133 ft.^{2}/day

Pressure: 1.00 tsf	TEST READINGS	Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1138	12	2.0000	0.1180
2	0.0167	0.1147	13	4.0000	0.1188
3	0.0333	0.1149	14	5.0000	0.1190
4	0.0500	0.1150	15	8.0000	0.1195
5	0.0667	0.1151	16	10.0000	0.1197
6	0.0833	0.1153	17	15.0167	0.1199
7	0.1000	0.1155	18	20.0167	0.1201
8	0.2000	0.1157	19	40.0500	0.1205
9	0.2500	0.1158	20	60.0667	0.1205
10	0.5000	0.1165	21	90.1167	0.1206
11	1.0000	0.1173	22	120.1500	0.1206

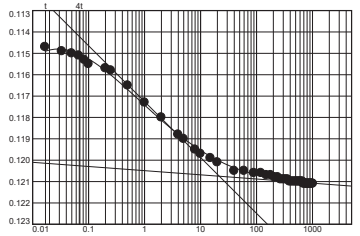


Figure D-178

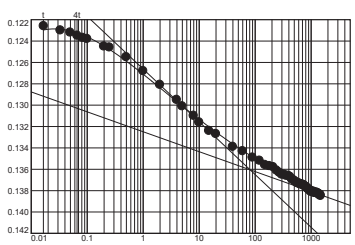
Pressure: 1.00 tsf — **TEST READINGS (continued)** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	150.1833	0.1207	33	450.5667	0.1210	43	750.9500	0.1211
24	180.2333	0.1207	34	480.6000	0.1210	44	780.9833	0.1211
25	210.2667	0.1208	35	510.6500	0.1210	45	811.0333	0.1211
26	240.3000	0.1208	36	540.6833	0.1210	46	841.0667	0.1211
27	270.3333	0.1209	37	570.7167	0.1210	47	871.1000	0.1211
28	300.3833	0.1209	38	600.7667	0.1210	48	901.1500	0.1211
29	330.4167	0.1209	39	630.8000	0.1210	49	931.1833	0.1211
30	360.4500	0.1209	40	660.8333	0.1210	50	961.2167	0.1211
31	390.5000	0.1210	41	690.8667	0.1211	51	991.2500	0.1211
32	420.5333	0.1210	42	720.9167	0.1211	52	1016.8833	0.1211

Void Ratio = 1.216 **Compression =** 16.2%
D_0 = 0.1148 **D_{50} =** 0.1178 **D_{100} =** 0.1207 **C_v at 1.39 min. =** 0.140 ft.^{2}/day **C_α =** 0.001

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1211	25	210.2667	0.1358
2	0.0167	0.1226	26	240.3000	0.1361
3	0.0333	0.1230	27	270.3500	0.1363
4	0.0500	0.1232	28	300.3833	0.1365
5	0.0667	0.1235	29	330.4167	0.1365
6	0.0833	0.1237	30	360.4500	0.1366
7	0.1000	0.1238	31	390.5000	0.1366
8	0.2000	0.1245	32	420.5333	0.1367
9	0.2500	0.1246	33	450.5667	0.1369
10	0.5000	0.1255	34	480.6167	0.1370
11	1.0000	0.1268	35	510.6500	0.1371
12	2.0000	0.1281	36	540.6833	0.1372
13	4.0000	0.1295	37	570.7167	0.1373
14	5.0000	0.1301	38	600.7667	0.1373
15	8.0000	0.1310	39	630.8000	0.1374
16	10.0167	0.1316	40	660.8333	0.1374
17	15.0167	0.1324	41	690.8833	0.1374
18	20.0167	0.1327	42	720.9167	0.1375
19	40.0500	0.1339	43	750.9500	0.1375
20	60.0667	0.1343	44	780.9833	0.1376
21	90.1167	0.1349	45	811.0333	0.1377
22	120.1500	0.1352	46	841.0667	0.1377
23	150.1833	0.1356	47	871.1000	0.1378
24	180.2333	0.1357	48	901.1500	0.1379



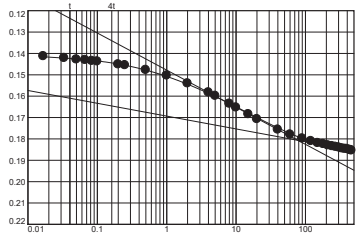
Pressure: 2.00 tsf — **TEST READINGS (continued)** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
49	931.1833	0.1379	59	1231.5667	0.1382
50	961.2167	0.1380	60	1261.6000	0.1382
51	991.2500	0.1381	61	1291.6333	0.1382
52	1021.3000	0.1381	62	1321.6833	0.1383
53	1051.3333	0.1381	63	1351.7167	0.1383
54	1081.3667	0.1381	64	1381.7500	0.1383
55	1111.4167	0.1381	65	1411.8000	0.1384
56	1141.4500	0.1382	66	1441.8333	0.1384
57	1171.4833	0.1382	67	1471.8667	0.1384
58	1201.5333	0.1382	68	1482.5000	0.1385

Void Ratio = 1.154 **Compression =** 18.5%
D_0 = 0.1227 **D_{50} =** 0.1294 **D_{100} =** 0.1361 **C_v at 3.41 min. =** 0.055 ft.^{2}/day **C_α =** 0.007

Pressure: 4.00 tsf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1385	18	20.0333	0.1707
2	0.0167	0.1413	19	40.0500	0.1756
3	0.0333	0.1421	20	60.0833	0.1779
4	0.0500	0.1428	21	90.1167	0.1798
5	0.0667	0.1430	22	120.1500	0.1810
6	0.0833	0.1435	23	150.2000	0.1819
7	0.1000	0.1437	24	180.2333	0.1824
8	0.2000	0.1451	25	210.2667	0.1830
9	0.2500	0.1455	26	240.3167	0.1834
10	0.5000	0.1477	27	270.3500	0.1837
11	1.0000	0.1503	28	300.3833	0.1840
12	2.0000	0.1540	29	330.4333	0.1844
13	4.0167	0.1582	30	360.4667	0.1846
14	5.0167	0.1598	31	390.5000	0.1847
15	8.0167	0.1635	32	420.5333	0.1850
16	10.0167	0.1653	33	450.5833	0.1852
17	15.0167	0.1684	34	460.1500	0.1854

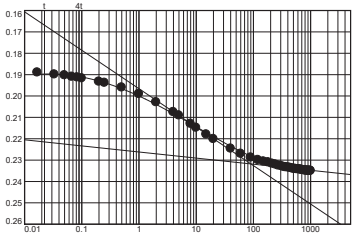


Void Ratio = 0.988 **Compression =** 24.8%
D_0 = 0.1403 **D_{50} =** 0.1605 **D_{100} =** 0.1807 **C_v at 5.25 min. =** 0.032 ft.^{2}/day **C_α =** 0.021

Figure D-179

Pressure: 8.00 tsf	TEST READINGS	Load No. 12

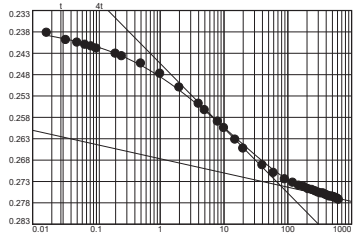
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1854	27	270.3333	0.2325
2	0.0167	0.1890	28	300.3667	0.2327
3	0.0333	0.1899	29	330.4000	0.2331
4	0.0500	0.1903	30	360.4333	0.2333
5	0.0667	0.1910	31	390.4833	0.2334
6	0.0833	0.1913	32	420.5167	0.2335
7	0.1000	0.1917	33	450.5500	0.2337
8	0.2000	0.1933	34	480.6000	0.2339
9	0.2500	0.1938	35	510.6333	0.2341
10	0.5000	0.1960	36	540.6667	0.2341
11	1.0000	0.1990	37	570.7000	0.2342
12	2.0000	0.2029	38	600.7500	0.2342
13	4.0000	0.2075	39	630.7833	0.2343
14	5.0000	0.2091	40	660.8167	0.2344
15	8.0000	0.2130	41	690.8667	0.2345
16	10.0000	0.2148	42	720.9000	0.2346
17	15.0167	0.2180	43	750.9333	0.2347
18	20.0167	0.2201	44	780.9833	0.2348
19	40.0500	0.2246	45	811.0167	0.2348
20	60.0667	0.2270	46	841.0500	0.2349
21	90.1000	0.2288	47	871.0833	0.2349
22	120.1333	0.2299	48	901.1333	0.2349
23	150.1667	0.2306	49	931.1667	0.2350
24	180.2167	0.2310	50	961.2000	0.2350
25	210.2500	0.2316	51	991.2500	0.2350
26	240.2833	0.2320	52	1005.3333	0.2350



Void Ratio = 0.812 **Compression =** 31.5%
D_0 = 0.1886 **D_{50} =** 0.2102 **D_{100} =** 0.2318 **C_v at 5.31 min. =** 0.027 ft.^{2}/day **C_α =** 0.010

Pressure: 16.00 tsf	TEST READINGS	Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2350	21	89.9833	0.2725
2	0.0167	0.2382	22	119.9833	0.2733
3	0.0333	0.2399	23	149.9833	0.2740
4	0.0500	0.2405	24	179.9667	0.2743
5	0.0667	0.2410	25	209.9667	0.2748
6	0.0833	0.2414	26	239.9667	0.2750
7	0.1000	0.2419	27	269.9500	0.2753
8	0.2000	0.2431	28	299.9500	0.2756
9	0.2500	0.2437	29	329.9500	0.2758
10	0.5000	0.2454	30	359.9500	0.2758
11	1.0000	0.2478	31	389.9333	0.2761
12	2.0000	0.2510	32	419.9333	0.2763
13	4.0000	0.2548	33	449.9333	0.2765
14	5.0000	0.2563	34	479.9333	0.2765
15	8.0000	0.2590	35	509.9167	0.2766
16	10.0000	0.2605	36	539.9167	0.2767
17	15.0000	0.2632	37	569.9167	0.2769
18	20.0000	0.2653	38	599.9000	0.2770
19	40.0000	0.2692	39	629.6333	0.2773
20	59.9833	0.2710			



Void Ratio = 0.662 **Compression =** 37.2%
D_0 = 0.2372 **D_{50} =** 0.2556 **D_{100} =** 0.2739 **C_v at 4.27 min. =** 0.028 ft.^{2}/day **C_α =** 0.012

Figure D-180

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-32
Depth: 23' - 25'
Material Description: Gray clay with sand seams and sand pockets
Liquid Limit: 89 **Plasticity Index:** 63
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	105.36 g.	Spec. Gr. =	2.745	Wet w+t =	104.13 g.
Dry w+t =	73.17 g.	Est. Ht. Solids =	0.282 in.	Dry w+t =	84.13 g.
Tare Wt. =	18.51 g.	Init. V.R. =	1.644	Tare Wt. =	22.51 g.
Moisture =	58.9 %	Init. Sat. =	98.3 %	Moisture =	32.5 %

UNIT WEIGHT		TEST START			
Height =	0.745 in.	Height =	0.745 in.	Dry Wt. =	61.62 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	98.85 g.				
Dry Dens. =	64.8 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00050	0.00000			1.644	
0.03	0.00300	0.00250			1.635	0.3 Comprs.
0.06	0.00640	0.00590	0.207		1.623	0.8 Comprs.
0.13	0.01330	0.01280	0.174		1.599	1.7 Comprs.
0.25	0.02320	0.02270	0.280		1.564	3.0 Comprs.
0.50	0.04210	0.04160	0.442		1.497	5.6 Comprs.
1.00	0.08060	0.08010	0.264		1.360	10.8 Comprs.
2.00	0.13180	0.13130	0.083		1.178	17.6 Comprs.
0.50	0.11380	0.11330	0.346		1.242	15.2 Comprs.
1.00	0.12110	0.12060	0.284		1.216	16.2 Comprs.
2.00	0.13850	0.13800	0.177		1.154	18.5 Comprs.
4.00	0.18540	0.18490	0.032	0.021	0.988	24.8 Comprs.
8.00	0.23500	0.23450	0.063		0.812	31.5 Comprs.
16.00	0.27730	0.27680	0.079		0.662	37.2 Comprs.

Compression index (C_c), tsf = 0.62 **Preconsolidation pressure (P_p), tsf =** 0.7 **Void ratio at P_p (e_m) =** 1.450
Recompression index (C_r) = 0.28

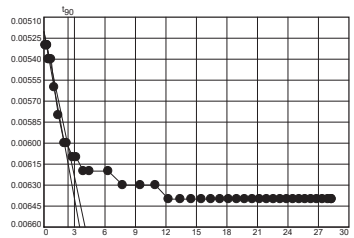
Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0005	11	1.0167	0.0026	21	90.1167	0.0030
2	0.0167	0.0023	12	2.0167	0.0030	22	120.1667	0.00300
3	0.0333	0.0025	13	4.0167	0.0030	23	127.3333	0.00300
4	0.0500	0.0025	14	5.0167	0.0030			
5	0.0667	0.0025	15	8.0167	0.0030			
6	0.0833	0.0025	16	10.0167	0.0030			
7	0.1000	0.0026	17	15.0333	0.0030			
8	0.2000	0.0026	18	20.0333	0.0030			
9	0.2500	0.0026	19	40.0500	0.0030			
10	0.5000	0.0026	20	60.0833	0.0030			

Void Ratio = 1.635 **Compression =** 0.3%

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.00300	24	180.2167	0.0064
2	0.0167	0.0053	25	210.2667	0.0064
3	0.0333	0.0053	26	240.3000	0.0064
4	0.0500	0.0053	27	270.3333	0.0064
5	0.0667	0.0053	28	300.3667	0.0064
6	0.0833	0.0053	29	330.4167	0.0064
7	0.1000	0.0053	30	360.4500	0.0064
8	0.2000	0.0054	31	390.4833	0.0064
9	0.2500	0.0054	32	420.5167	0.0064
10	0.5000	0.0054	33	450.5667	0.0064
11	1.0000	0.0056	34	480.6000	0.0064
12	2.0000	0.0058	35	510.6333	0.0064
13	4.0000	0.0060	36	540.6833	0.0064
14	5.0000	0.0060	37	570.7167	0.0064
15	8.0000	0.0061	38	600.7500	0.0064
16	10.0000	0.0061	39	630.7833	0.0064
17	15.0167	0.0062	40	660.8333	0.0064
18	20.0167	0.0062	41	690.8667	0.0064
19	40.0500	0.0062	42	720.9000	0.0064
20	60.0667	0.0063	43	750.9333	0.0064
21	90.1000	0.0063	44	780.9833	0.0064
22	120.1500	0.0063	45	800.6500	0.0064
23	150.1833	0.0064	46	800.6833	0.0064

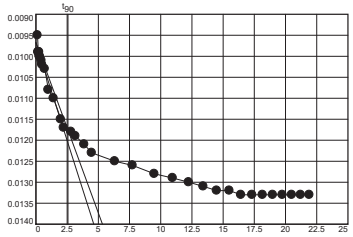


Void Ratio = 1.623 **Compression =** 0.8%
D_0 = 0.0052 **D_{90} =** 0.0060 **D_{100} =** 0.0061 **C_v at 5.62 min. =** 0.207 ft.^{2}/day

Figure D-181

Pressure: 0.13 tsf | **TEST READINGS** | **Load No. 3**

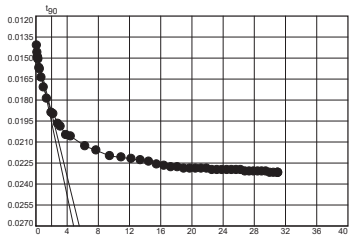
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0064	18	20.0167	0.0123
2	0.0167	0.0095	19	40.0333	0.0125
3	0.0333	0.0099	20	60.0667	0.0126
4	0.0500	0.0099	21	90.1000	0.0128
5	0.0667	0.0099	22	120.1500	0.0129
6	0.0833	0.0100	23	150.1833	0.0130
7	0.1000	0.0100	24	180.2167	0.0131
8	0.2000	0.0101	25	210.2500	0.0132
9	0.2500	0.0102	26	240.3000	0.0132
10	0.5000	0.0103	27	270.3333	0.0133
11	1.0000	0.0108	28	300.3667	0.0133
12	2.0000	0.0110	29	330.4167	0.0133
13	4.0000	0.0115	30	360.4500	0.0133
14	5.0000	0.0117	31	390.4833	0.0133
15	8.0000	0.0118	32	420.5167	0.0133
16	10.0000	0.0119	33	450.5667	0.0133
17	15.0167	0.0121	34	480.0500	0.0133



Void Ratio = 1.599 **Compression =** 1.7%
D_0 = 0.0097 **D_{90} =** 0.0118 **D_{100} =** 0.0120 **C_v at 6.58 min. =** 0.174 ft.^{2}/day

Pressure: 0.25 tsf | **TEST READINGS** | **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0133	18	20.0333	0.0206
2	0.0167	0.0141	19	40.0500	0.0213
3	0.0333	0.0146	20	60.0833	0.0216
4	0.0500	0.0149	21	90.1167	0.0220
5	0.0667	0.0150	22	120.1500	0.0221
6	0.0833	0.0150	23	150.2000	0.0222
7	0.1000	0.0151	24	180.2333	0.0223
8	0.2000	0.0157	25	210.2667	0.0224
9	0.2500	0.0158	26	240.3000	0.0226
10	0.5000	0.0164	27	270.3500	0.0227
11	1.0000	0.0171	28	300.3833	0.0228
12	2.0000	0.0179	29	330.4167	0.0228
13	4.0000	0.0189	30	360.4500	0.0229
14	5.0000	0.0190	31	390.5000	0.0229
15	8.0167	0.0197	32	420.5333	0.0229
16	10.0167	0.0199	33	450.5667	0.0229
17	15.0167	0.0205	34	480.6000	0.0229



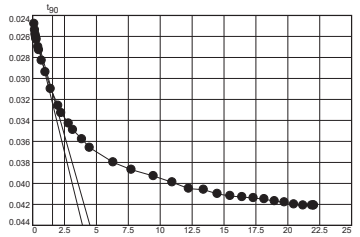
Pressure: 0.25 tsf | **TEST READINGS (continued)** | **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
35	510.6500	0.0230	45	811.0167	0.0231
36	540.6833	0.0230	46	841.0667	0.0231
37	570.7167	0.0230	47	871.1000	0.0231
38	600.7667	0.0230	48	901.1333	0.0232
39	630.8000	0.0230	49	931.1667	0.0232
40	660.8333	0.0230	50	961.2167	0.0232
41	690.8667	0.0230	51	964.8500	0.0232
42	720.9167	0.0231	52	964.8833	0.0232
43	750.9500	0.0231			
44	780.9833	0.0231			

Void Ratio = 1.564 **Compression =** 3.0%
D_0 = 0.0143 **D_{90} =** 0.0189 **D_{100} =** 0.0194 **C_v at 4.00 min. =** 0.280 ft.^{2}/day

Pressure: 0.50 tsf | **TEST READINGS** | **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0232	19	40.0167	0.0380
2	0.0167	0.0248	20	60.0167	0.0387
3	0.0333	0.0254	21	90.0000	0.0393
4	0.0500	0.0258	22	120.0000	0.0399
5	0.0667	0.0260	23	150.0000	0.0405
6	0.0833	0.0262	24	179.9833	0.0406
7	0.1000	0.0263	25	209.9667	0.0410
8	0.2000	0.0270	26	239.9667	0.0412
9	0.2500	0.0273	27	269.9667	0.0413
10	0.5000	0.0283	28	299.9500	0.0414
11	1.0167	0.0294	29	329.9500	0.0415
12	2.0167	0.0310	30	359.9500	0.0417
13	4.0167	0.0326	31	389.9500	0.0418
14	5.0167	0.0333	32	419.9333	0.0420
15	8.0167	0.0343	33	449.9167	0.0421
16	10.0167	0.0349	34	479.9333	0.0421
17	15.0167	0.0358	35	485.9333	0.0421
18	20.0167	0.0366	36	485.9667	0.0421

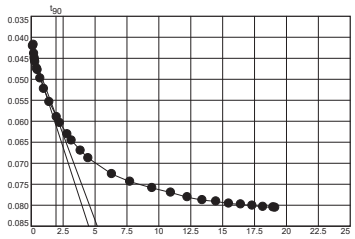


Void Ratio = 1.497 **Compression =** 5.6%
D_0 = 0.0247 **D_{90} =** 0.0314 **D_{100} =** 0.0321 **C_v at 2.44 min. =** 0.442 ft.^{2}/day

Figure D-182

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

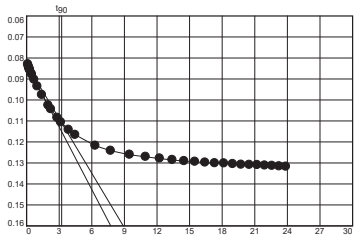
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0421	17	15.0000	0.0670
2	0.0167	0.0421	18	20.0000	0.0688
3	0.0333	0.0418	19	39.9833	0.0726
4	0.0500	0.0439	20	59.9833	0.0744
5	0.0667	0.0449	21	89.9833	0.0759
6	0.0833	0.0454	22	119.9833	0.0770
7	0.1000	0.0459	23	149.9833	0.0781
8	0.2000	0.0474	24	180.0167	0.0788
9	0.2500	0.0478	25	210.0500	0.0791
10	0.5000	0.0498	26	240.1000	0.0796
11	1.0000	0.0523	27	270.1333	0.0798
12	2.0000	0.0554	28	300.1667	0.0801
13	4.0000	0.0590	29	330.2167	0.0804
14	5.0000	0.0604	30	360.2500	0.0805
15	8.0000	0.0631	31	365.6500	0.0806
16	10.0000	0.0646			



Void Ratio = 1.360 **Compression =** 10.8%
D_0 = 0.0428 **D_{90} =** 0.0586 **D_{100} =** 0.0604 **C_v at 3.76 min. =** 0.264 ft.^{2}/day

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0806	19	40.0500	0.1218
2	0.0167	0.0830	20	60.0833	0.1242
3	0.0333	0.0838	21	90.1167	0.1261
4	0.0500	0.0845	22	120.1500	0.1271
5	0.0667	0.0849	23	150.2000	0.1279
6	0.0833	0.0854	24	180.2333	0.1286
7	0.1000	0.0858	25	210.2667	0.1291
8	0.2000	0.0874	26	240.3167	0.1294
9	0.2500	0.0879	27	270.3500	0.1298
10	0.5000	0.0903	28	300.3833	0.1301
11	1.0000	0.0935	29	330.4333	0.1302
12	2.0000	0.0976	30	360.4667	0.1305
13	4.0167	0.1026	31	390.5000	0.1308
14	5.0167	0.1044	32	420.5333	0.1309
15	8.0167	0.1085	33	450.5833	0.1310
16	10.0167	0.1106	34	480.6167	0.1312
17	15.0167	0.1142	35	510.6500	0.1314
18	20.0333	0.1166	36	540.6833	0.1316



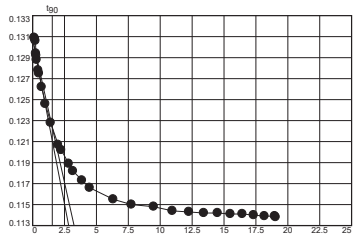
Pressure: 2.00 tsf — **TEST READINGS (continued)** — **Load No. 7**

No.	Elapsed Time	Dial Reading
37	569.6000	0.1318

Void Ratio = 1.178 **Compression =** 17.6%
D_0 = 0.0830 **D_{90} =** 0.1109 **D_{100} =** 0.1140 **C_v at 10.42 min. =** 0.083 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1318	17	15.0167	0.1173
2	0.0167	0.1309	18	20.0333	0.1166
3	0.0333	0.1308	19	40.0500	0.1155
4	0.0500	0.1306	20	60.0833	0.1150
5	0.0667	0.1294	21	90.1167	0.1148
6	0.0833	0.1292	22	120.1500	0.1144
7	0.1000	0.1288	23	150.2000	0.1143
8	0.2000	0.1278	24	180.2333	0.1142
9	0.2500	0.1275	25	210.2667	0.1142
10	0.5000	0.1262	26	240.3000	0.1141
11	1.0000	0.1246	27	270.3500	0.1141
12	2.0000	0.1228	28	300.3833	0.1140
13	4.0000	0.1207	29	330.4167	0.1139
14	5.0167	0.1202	30	360.4667	0.1139
15	8.0167	0.1189	31	362.9333	0.1138
16	10.0167	0.1182			



Void Ratio = 1.242 **Compression =** 15.2%
D_0 = 0.1308 **D_{90} =** 0.1223 **D_{100} =** 0.1214 **C_v at 2.38 min. =** 0.346 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1138	12	2.0000	0.1180
2	0.0167	0.1147	13	4.0000	0.1188
3	0.0333	0.1149	14	5.0000	0.1190
4	0.0500	0.1150	15	8.0000	0.1195
5	0.0667	0.1151	16	10.0000	0.1197
6	0.0833	0.1153	17	15.0167	0.1199
7	0.1000	0.1155	18	20.0167	0.1201
8	0.2000	0.1157	19	40.0500	0.1205
9	0.2500	0.1158	20	60.0667	0.1205
10	0.5000	0.1165	21	90.1167	0.1206
11	1.0000	0.1173	22	120.1500	0.1206

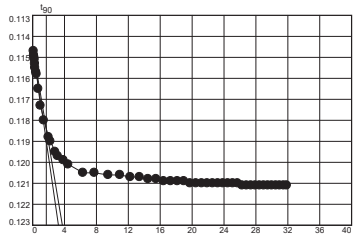


Figure D-183

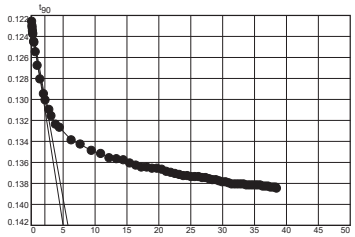
Pressure: 1.00 tsf	TEST READINGS (continued)	Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	150.1833	0.1207	33	450.5667	0.1210	43	750.9500	0.1211
24	180.2333	0.1207	34	480.6000	0.1210	44	780.9833	0.1211
25	210.2667	0.1208	35	510.6500	0.1210	45	811.0333	0.1211
26	240.3000	0.1208	36	540.6833	0.1210	46	841.0667	0.1211
27	270.3333	0.1209	37	570.7167	0.1210	47	871.1000	0.1211
28	300.3833	0.1209	38	600.7667	0.1210	48	901.1500	0.1211
29	330.4167	0.1209	39	630.8000	0.1210	49	931.1833	0.1211
30	360.4500	0.1209	40	660.8333	0.1210	50	961.2167	0.1211
31	390.5000	0.1210	41	690.8667	0.1211	51	991.2500	0.1211
32	420.5333	0.1210	42	720.9167	0.1211	52	1016.8833	0.1211

Void Ratio = 1.216 **Compression =** 16.2%
D_0 = 0.1145 **D_{90} =** 0.1184 **D_{100} =** 0.1188 **C_v at 2.94 min. =** 0.284 ft.^{2}/day

Pressure: 2.00 tsf	TEST READINGS	Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1211	25	210.2667	0.1358
2	0.0167	0.1226	26	240.3000	0.1361
3	0.0333	0.1230	27	270.3500	0.1363
4	0.0500	0.1232	28	300.3833	0.1365
5	0.0667	0.1235	29	330.4167	0.1365
6	0.0833	0.1237	30	360.4500	0.1366
7	0.1000	0.1238	31	390.5000	0.1366
8	0.2000	0.1245	32	420.5333	0.1367
9	0.2500	0.1246	33	450.5667	0.1369
10	0.5000	0.1255	34	480.6167	0.1370
11	1.0000	0.1268	35	510.6500	0.1371
12	2.0000	0.1281	36	540.6833	0.1372
13	4.0000	0.1295	37	570.7167	0.1373
14	5.0000	0.1301	38	600.7667	0.1373
15	8.0000	0.1310	39	630.8000	0.1374
16	10.0167	0.1316	40	660.8333	0.1374
17	15.0167	0.1324	41	690.8833	0.1374
18	20.0167	0.1327	42	720.9167	0.1375
19	40.0500	0.1339	43	750.9500	0.1375
20	60.0667	0.1343	44	780.9833	0.1376
21	90.1167	0.1349	45	811.0333	0.1377
22	120.1500	0.1352	46	841.0667	0.1377
23	150.1833	0.1356	47	871.1000	0.1378
24	180.2333	0.1357	48	901.1500	0.1379



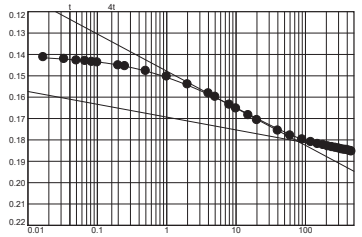
Pressure: 2.00 tsf	TEST READINGS (continued)	Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
49	931.1833	0.1379	59	1231.5667	0.1382
50	961.2167	0.1380	60	1261.6000	0.1382
51	991.2500	0.1381	61	1291.6333	0.1382
52	1021.3000	0.1381	62	1321.6833	0.1383
53	1051.3333	0.1381	63	1351.7167	0.1383
54	1081.3667	0.1381	64	1381.7500	0.1383
55	1111.4167	0.1381	65	1411.8000	0.1384
56	1141.4500	0.1382	66	1441.8333	0.1384
57	1171.4833	0.1382	67	1471.8667	0.1384
58	1201.5333	0.1382	68	1482.5000	0.1385

Void Ratio = 1.154 **Compression =** 18.5%
D_0 = 0.1227 **D_{90} =** 0.1298 **D_{100} =** 0.1306 **C_v at 4.55 min. =** 0.177 ft.^{2}/day

Pressure: 4.00 tsf	TEST READINGS	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1385	18	20.0333	0.1707
2	0.0167	0.1413	19	40.0500	0.1756
3	0.0333	0.1421	20	60.0833	0.1779
4	0.0500	0.1428	21	90.1167	0.1798
5	0.0667	0.1430	22	120.1500	0.1810
6	0.0833	0.1435	23	150.2000	0.1819
7	0.1000	0.1437	24	180.2333	0.1824
8	0.2000	0.1451	25	210.2667	0.1830
9	0.2500	0.1455	26	240.3167	0.1834
10	0.5000	0.1477	27	270.3500	0.1837
11	1.0000	0.1503	28	300.3833	0.1840
12	2.0000	0.1540	29	330.4333	0.1844
13	4.0167	0.1582	30	360.4667	0.1846
14	5.0167	0.1598	31	390.5000	0.1847
15	8.0167	0.1635	32	420.5333	0.1850
16	10.0167	0.1653	33	450.5833	0.1852
17	15.0167	0.1684	34	460.1500	0.1854

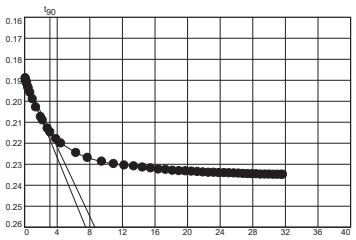


Void Ratio = 0.988 **Compression =** 24.8%
D_0 = 0.1403 **D_{50} =** 0.1605 **D_{100} =** 0.1807 **C_v at 5.25 min. =** 0.032 ft.^{2}/day **C_α =** 0.021

Figure D-184

Pressure: 8.00 tsf	TEST READINGS	Load No. 12

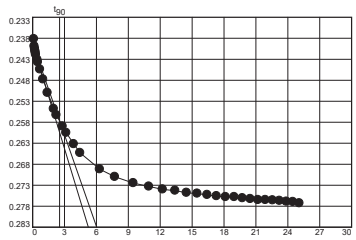
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1854	27	270.3333	0.2325
2	0.0167	0.1890	28	300.3667	0.2327
3	0.0333	0.1899	29	330.4000	0.2331
4	0.0500	0.1903	30	360.4333	0.2333
5	0.0667	0.1910	31	390.4833	0.2334
6	0.0833	0.1913	32	420.5167	0.2335
7	0.1000	0.1917	33	450.5500	0.2337
8	0.2000	0.1933	34	480.6000	0.2339
9	0.2500	0.1938	35	510.6333	0.2341
10	0.5000	0.1960	36	540.6667	0.2341
11	1.0000	0.1990	37	570.7000	0.2342
12	2.0000	0.2029	38	600.7500	0.2342
13	4.0000	0.2075	39	630.7833	0.2343
14	5.0000	0.2091	40	660.8167	0.2344
15	8.0000	0.2130	41	690.8667	0.2345
16	10.0000	0.2148	42	720.9000	0.2346
17	15.0167	0.2180	43	750.9333	0.2347
18	20.0167	0.2201	44	780.9833	0.2348
19	40.0500	0.2246	45	811.0167	0.2348
20	60.0667	0.2270	46	841.0500	0.2349
21	90.1000	0.2288	47	871.0833	0.2349
22	120.1333	0.2299	48	901.1333	0.2349
23	150.1667	0.2306	49	931.1667	0.2350
24	180.2167	0.2310	50	961.2000	0.2350
25	210.2500	0.2316	51	991.2500	0.2350
26	240.2833	0.2320	52	1005.3333	0.2350



Void Ratio = 0.812 **Compression =** 31.5%
D_0 = 0.1889 **D_{90} =** 0.2145 **D_{100} =** 0.2173 **C_v at 9.64 min. =** 0.063 ft.^{2}/day

Pressure: 16.00 tsf	TEST READINGS	Load No. 13

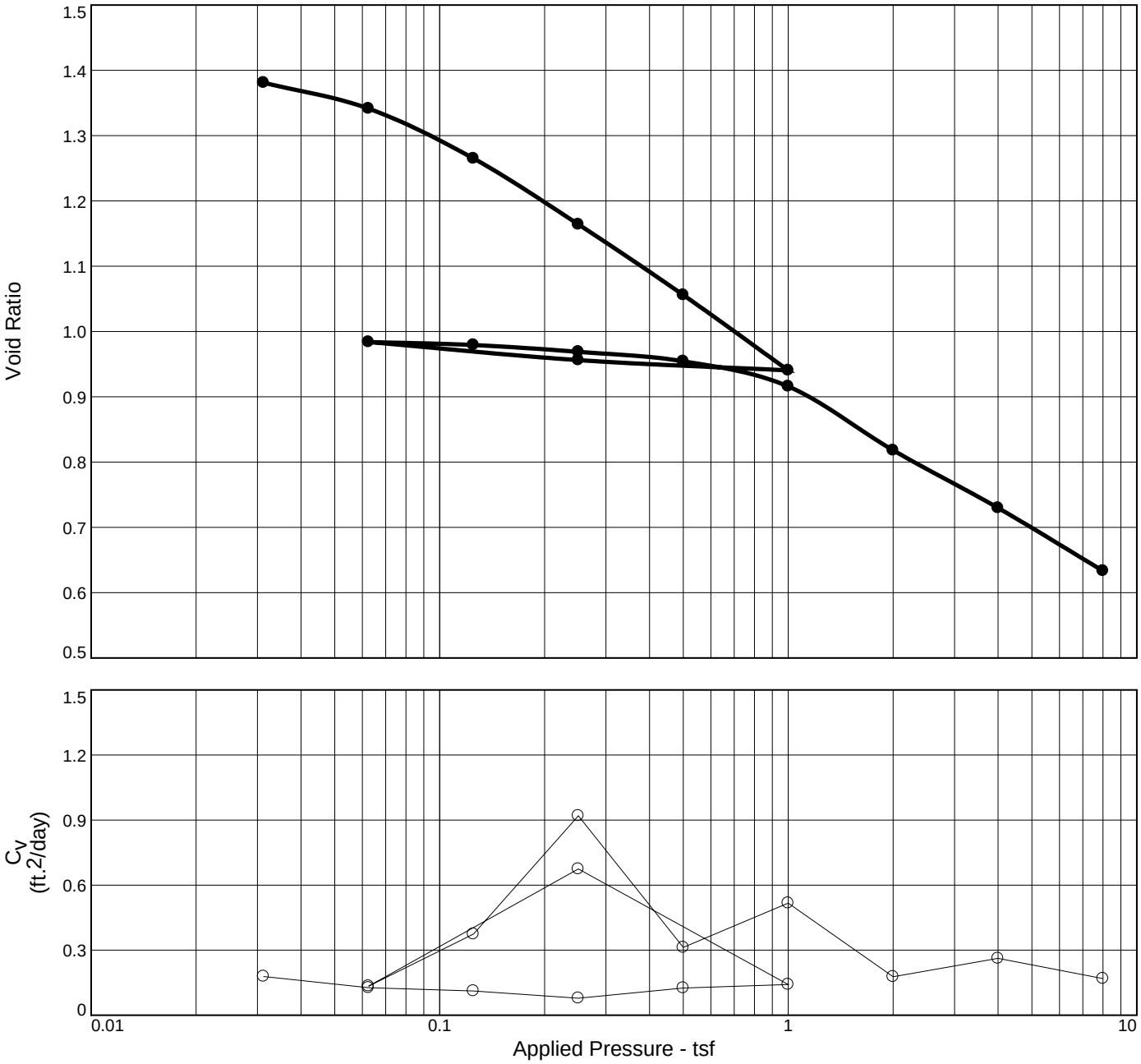
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2350	21	89.9833	0.2725
2	0.0167	0.2382	22	119.9833	0.2733
3	0.0333	0.2399	23	149.9833	0.2740
4	0.0500	0.2405	24	179.9667	0.2743
5	0.0667	0.2410	25	209.9667	0.2748
6	0.0833	0.2414	26	239.9667	0.2750
7	0.1000	0.2419	27	269.9500	0.2753
8	0.2000	0.2431	28	299.9500	0.2756
9	0.2500	0.2437	29	329.9500	0.2758
10	0.5000	0.2454	30	359.9500	0.2758
11	1.0000	0.2478	31	389.9333	0.2761
12	2.0000	0.2510	32	419.9333	0.2763
13	4.0000	0.2548	33	449.9333	0.2765
14	5.0000	0.2563	34	479.9333	0.2765
15	8.0000	0.2590	35	509.9167	0.2766
16	10.0000	0.2605	36	539.9167	0.2767
17	15.0000	0.2632	37	569.9167	0.2769
18	20.0000	0.2653	38	599.9000	0.2770
19	40.0000	0.2692	39	629.6333	0.2773
20	59.9833	0.2710			



Void Ratio = 0.662 **Compression =** 37.2%
D_0 = 0.2392 **D_{90} =** 0.2577 **D_{100} =** 0.2597 **C_v at 6.43 min. =** 0.079 ft.^{2}/day

Figure D-185

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
93.9 %	50.2 %	68.6	43	21	2.668	0.1	0.38	1.427

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with silt, silt layers and sand lenses	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-33 **Depth:** 4' - 6'

GeoEngineers

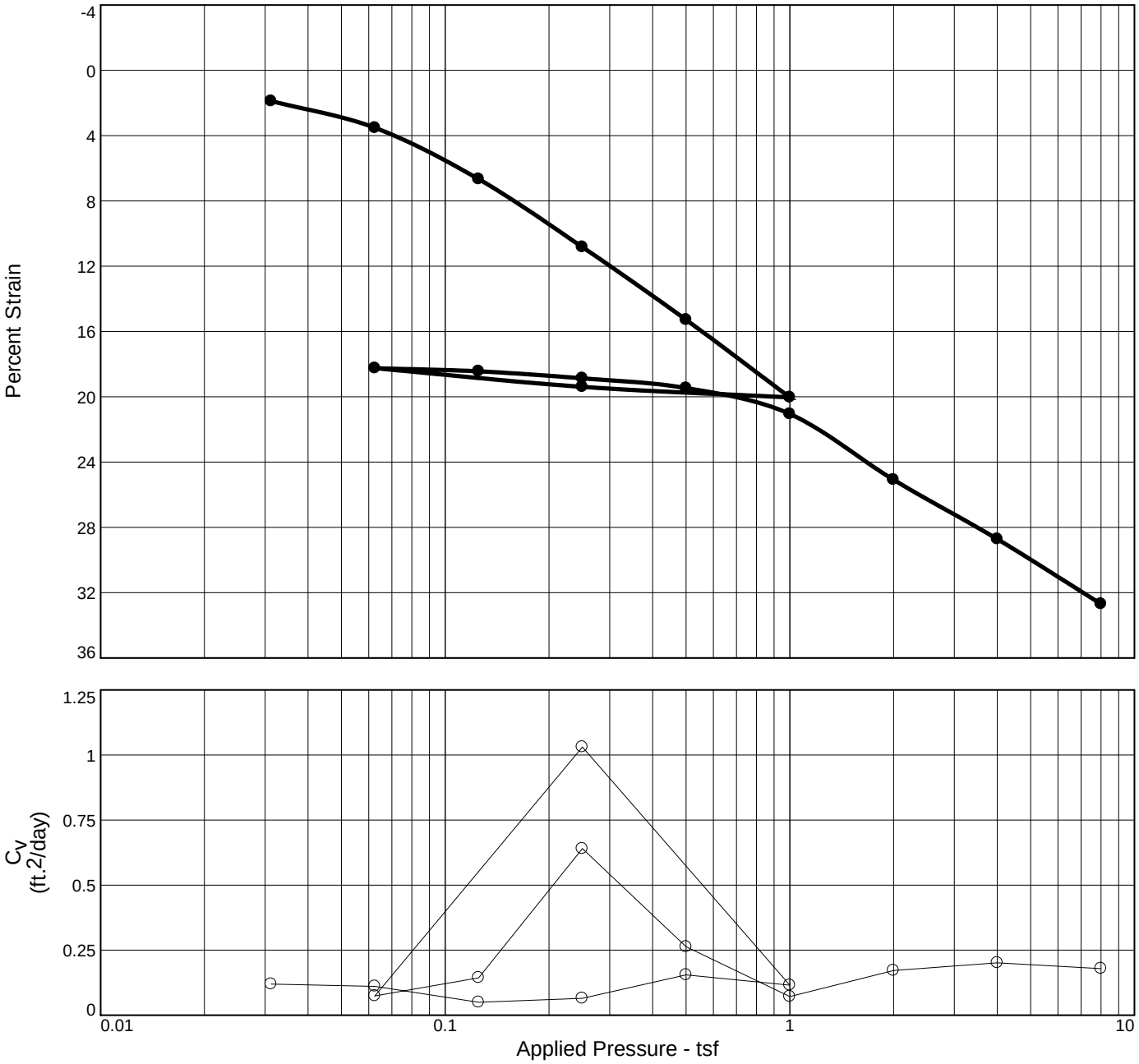
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-186

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
93.9 %	50.2 %	68.6	43	21	2.668	0.1	0.37	1.427

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with silt, silt layers and sand lenses	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-33 **Depth:** 4' - 6'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-187

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-33
Depth: 4' - 6'
Material Description: Gray clay with silt, silt layers and sand lenses
Liquid Limit: 43 **Plasticity Index:** 21
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	154.58 g.	Spec. Gr. =	2.668	Wet w+t =	128.14 g.
Dry w+t =	105.71 g.	Est. Ht. Solids =	0.411 in.	Dry w+t =	99.89 g.
Tare Wt. =	8.39 g.	Init. V.R. =	1.427	Tare Wt. =	19.14 g.
Moisture =	50.2 %	Init. Sat. =	93.9 %	Moisture =	35.0 %
				Dry Wt. =	80.75 g.

UNIT WEIGHT		TEST START	
Height =	0.998 in.	Height =	0.998 in.
Diameter =	2.500 in.	Diameter =	2.500 in.
Weight =	132.58 g.		
Dry Dens. =	68.6 pcf		

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.2/day)	C_α	Void Ratio	% Strain
start	0.62612	0.00000			1.427	
-3.40	0.62605	-0.00007			1.427	0.0 Swell
62.50	0.64490	0.01878	0.120	0.006	1.381	1.9 Comprs.
125.00	0.66122	0.03510	0.111	0.009	1.341	3.5 Comprs.
250.00	0.69261	0.06649	0.050	0.009	1.265	6.7 Comprs.
500.00	0.73416	0.10804	0.065	0.010	1.164	10.8 Comprs.
1000.00	0.77866	0.15254	0.155	0.027	1.056	15.3 Comprs.
2000.00	0.82609	0.19997	0.115	0.015	0.940	20.0 Comprs.
500.00	0.81963	0.19351	1.031		0.956	19.4 Comprs.
125.00	0.80823	0.18211	0.074		0.984	18.2 Comprs.
250.00	0.81015	0.18403	0.144	0.000	0.979	18.4 Comprs.
500.00	0.81443	0.18831	0.640	0.001	0.969	18.9 Comprs.
1000.00	0.82037	0.19425	0.263	0.001	0.954	19.5 Comprs.
2000.00	0.83620	0.21008	0.072	0.000	0.916	21.1 Comprs.
4000.00	0.87644	0.25032	0.172	0.015	0.818	25.1 Comprs.
8000.00	0.91274	0.28662	0.201	0.009	0.730	28.7 Comprs.
16000.00	0.95241	0.32629	0.179	0.009	0.633	32.7 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.37 **Preconsolidation pressure (P_p), tsf =** 0.1 **Void ratio at P_p (e_m) =** 1.292
Recompression index (C_r) = 0.11

Pressure: -3.40 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.62612	16	2.4833	0.62612	31	79.4500	0.62613
2	0.0167	0.62613	17	3.1333	0.62611	32	100.0333	0.62611
3	0.0500	0.62613	18	3.9667	0.62614	33	125.9333	0.62614
4	0.0833	0.62615	19	5.0000	0.62612	34	158.5167	0.62610
5	0.1333	0.62613	20	6.3000	0.62611	35	199.5667	0.62613
6	0.1833	0.62615	21	7.9333	0.62614	36	251.2333	0.62611
7	0.2500	0.62611	22	10.0000	0.62611	37	316.2667	0.62602
8	0.3333	0.62609	23	12.5833	0.62615	38	398.1500	0.62588
9	0.4500	0.62610	24	15.8500	0.62614	39	501.2500	0.62591
10	0.5833	0.62614	25	19.9500	0.62612	40	631.0167	0.62596
11	0.7500	0.62609	26	25.1333	0.62611	41	794.3833	0.62598
12	0.9500	0.62614	27	31.6333	0.62610	42	1000.0667	0.62602
13	1.2167	0.62610	28	39.8167	0.62611	43	1052.5500	0.62605
14	1.5500	0.62613	29	50.1333	0.62612			
15	1.9667	0.62611	30	63.1167	0.62610			

Void Ratio = 1.427 **Swell =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.62545	18	3.3333	0.63286
2	0.1000	0.62553	19	4.1500	0.63452
3	0.2000	0.62558	20	5.1833	0.63551
4	0.2333	0.62569	21	6.4833	0.63675
5	0.2667	0.62567	22	8.1333	0.63763
6	0.3167	0.62577	23	10.2000	0.63841
7	0.3667	0.62590	24	12.7833	0.63952
8	0.4333	0.62604	25	16.0500	0.64054
9	0.5333	0.62630	26	20.1667	0.64119
10	0.6333	0.62673	27	25.3333	0.64159
11	0.7667	0.62725	28	31.8333	0.64178
12	0.9333	0.62761	29	40.0333	0.64208
13	1.1500	0.62792	30	50.3500	0.64231
14	1.4000	0.62839	31	63.3333	0.64263
15	1.7333	0.62915	32	79.6667	0.64276
16	2.1500	0.63114	33	100.2500	0.64304
17	2.6667	0.63188	34	126.1333	0.64331

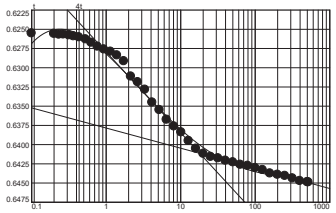


Figure D-188

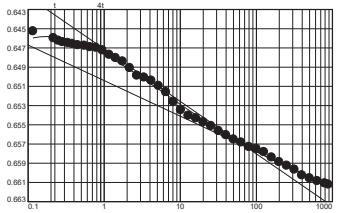
Pressure: 62.50 psf — **TEST READINGS (continued)** — **Load No. 2**

No.	Elapsed Time	Dial Reading
35	158.7333	0.64375
36	199.7833	0.64393
37	251.4500	0.64407
38	316.4833	0.64440
39	398.3667	0.64473
40	501.4500	0.64488
41	518.0667	0.64490

Void Ratio = 1.381 **Compression =** 1.9%
D_0 = 0.6274 D_{50} = 0.6343 D_{100} = 0.6411 C_v **at 4.02 min. =** 0.120 ft.^{2}/day C_α = 0.006

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 3**

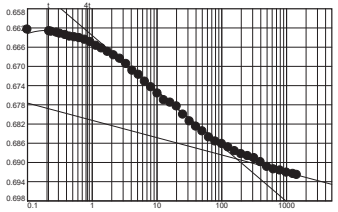
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64431	23	10.2000	0.65347
2	0.1167	0.64526	24	12.8000	0.65405
3	0.2167	0.64599	25	16.0667	0.65433
4	0.2500	0.64624	26	20.1667	0.65473
5	0.2833	0.64639	27	25.3500	0.65512
6	0.3333	0.64648	28	31.8500	0.65563
7	0.3833	0.64658	29	40.0500	0.65608
8	0.4500	0.64671	30	50.3500	0.65652
9	0.5500	0.64676	31	63.3333	0.65684
10	0.6500	0.64692	32	79.6833	0.65730
11	0.7833	0.64697	33	100.2500	0.65750
12	0.9500	0.64725	34	126.1500	0.65783
13	1.1667	0.64771	35	158.7500	0.65840
14	1.4167	0.64804	36	199.8000	0.65888
15	1.7500	0.64841	37	251.4500	0.65925
16	2.1667	0.64909	38	316.5000	0.65967
17	2.7000	0.64988	39	398.3833	0.66026
18	3.3500	0.65008	40	501.4667	0.66056
19	4.1667	0.65040	41	631.2500	0.66085
20	5.2000	0.65094	42	794.6167	0.66110
21	6.5000	0.65159	43	879.3333	0.66122
22	8.1333	0.65260			



Void Ratio = 1.341 **Compression =** 3.5%
D_0 = 0.6442 D_{50} = 0.6508 D_{100} = 0.6573 C_v **at 4.19 min. =** 0.111 ft.^{2}/day C_α = 0.009

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.66012	24	12.8000	0.67704
2	0.1000	0.66234	25	16.0500	0.67756
3	0.2167	0.66267	26	20.1667	0.67835
4	0.2333	0.66278	27	25.3333	0.68003
5	0.2833	0.66298	28	31.8333	0.68145
6	0.3167	0.66318	29	40.0333	0.68253
7	0.3833	0.66346	30	50.3500	0.68351
8	0.4500	0.66380	31	63.3333	0.68477
9	0.5333	0.66395	32	79.6667	0.68565
10	0.6333	0.66412	33	100.2500	0.68615
11	0.7667	0.66445	34	126.1500	0.68686
12	0.9333	0.66494	35	158.7500	0.68766
13	1.1500	0.66571	36	199.8000	0.68827
14	1.4000	0.66625	37	251.4667	0.68866
15	1.7333	0.66698	38	316.5000	0.68910
16	2.1500	0.66768	39	398.3833	0.68993
17	2.6833	0.66842	40	501.4667	0.69091
18	3.3500	0.66950	41	631.2500	0.69143
19	4.1667	0.67091	42	794.6167	0.69167
20	5.2000	0.67176	43	1000.3000	0.69212
21	6.5000	0.67319	44	1259.2333	0.69240
22	8.1333	0.67435	45	1440.1500	0.69261
23	10.2000	0.67563			



Void Ratio = 1.265 **Compression =** 6.7%
D_0 = 0.6602 D_{50} = 0.6747 D_{100} = 0.6893 C_v **at 8.93 min. =** 0.050 ft.^{2}/day C_α = 0.009

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69050	12	0.9333	0.69687
2	0.1000	0.69249	13	1.1333	0.69793
3	0.2000	0.69324	14	1.4000	0.69882
4	0.2333	0.69329	15	1.7333	0.69979
5	0.2667	0.69342	16	2.1500	0.70070
6	0.3000	0.69361	17	2.6833	0.70238
7	0.3667	0.69403	18	3.3333	0.70366
8	0.4333	0.69461	19	4.1500	0.70518
9	0.5167	0.69504	20	5.1833	0.70741
10	0.6333	0.69555	21	6.4833	0.70921
11	0.7667	0.69627	22	8.1167	0.71098

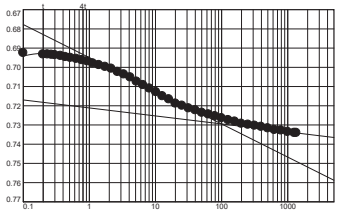


Figure D-189

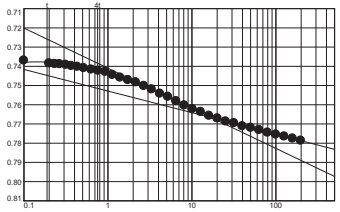
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.71288	33	100.2000	0.72648	43	1000.2500	0.73362
24	12.7667	0.71501	34	126.1000	0.72748	44	1259.1833	0.73412
25	16.0333	0.71667	35	158.7000	0.72824	45	1349.2667	0.73416
26	20.1333	0.71885	36	199.7500	0.72932			
27	25.3000	0.71999	37	251.4167	0.72988			
28	31.8167	0.72134	38	316.4500	0.73038			
29	40.0167	0.72231	39	398.3333	0.73095			
30	50.3167	0.72361	40	501.4333	0.73175			
31	63.3000	0.72448	41	631.2000	0.73256			
32	79.6500	0.72540	42	794.5667	0.73284			

Void Ratio = 1.164 **Compression =** 10.8%
D_0 = 0.6893 **D_{50} =** 0.7094 **D_{100} =** 0.7295 **C_v at 6.31 min. =** 0.065 ft.^{2}/day **C_α =** 0.010

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

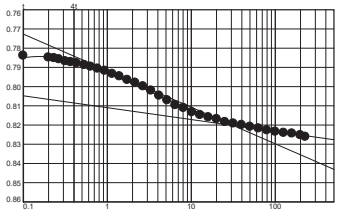
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.73250	19	4.1667	0.75421
2	0.1000	0.73695	20	5.2000	0.75580
3	0.2000	0.73843	21	6.5000	0.75814
4	0.2333	0.73878	22	8.1333	0.76033
5	0.2667	0.73888	23	10.2000	0.76219
6	0.3167	0.73917	24	12.7833	0.76372
7	0.3667	0.73979	25	16.0500	0.76576
8	0.4333	0.74026	26	20.1667	0.76710
9	0.5167	0.74087	27	25.3333	0.76869
10	0.6333	0.74164	28	31.8333	0.76953
11	0.7667	0.74226	29	40.0333	0.77118
12	0.9333	0.74288	30	50.3500	0.77199
13	1.1333	0.74447	31	63.3167	0.77312
14	1.4000	0.74585	32	79.6667	0.77451
15	1.7333	0.74714	33	100.2333	0.77549
16	2.1500	0.74836	34	126.1333	0.77651
17	2.6833	0.75021	35	158.7333	0.77757
18	3.3333	0.75197	36	198.3000	0.77866



Void Ratio = 1.056 **Compression =** 15.3%
D_0 = 0.7332 **D_{50} =** 0.7500 **D_{100} =** 0.7667 **C_v at 2.40 min. =** 0.155 ft.^{2}/day **C_α =** 0.027

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77655	20	5.1833	0.80711
2	0.1000	0.78391	21	6.4833	0.80963
3	0.2000	0.78485	22	8.1167	0.81109
4	0.2333	0.78515	23	10.1833	0.81330
5	0.2667	0.78579	24	12.7667	0.81479
6	0.3167	0.78678	25	16.0333	0.81596
7	0.3667	0.78725	26	20.1333	0.81689
8	0.4333	0.78780	27	25.3000	0.81845
9	0.5333	0.78876	28	31.8167	0.81921
10	0.6333	0.78963	29	40.0000	0.82000
11	0.7667	0.79063	30	50.3167	0.82092
12	0.9333	0.79171	31	63.3000	0.82173
13	1.1500	0.79334	32	79.6333	0.82270
14	1.4000	0.79463	33	100.2000	0.82346
15	1.7333	0.79653	34	126.1000	0.82407
16	2.1500	0.79798	35	158.7000	0.82443
17	2.6667	0.79981	36	199.7500	0.82526
18	3.3333	0.80205	37	228.3333	0.82609
19	4.1500	0.80472			



Void Ratio = 0.940 **Compression =** 20.0%
D_0 = 0.7831 **D_{50} =** 0.8017 **D_{100} =** 0.8202 **C_v at 2.89 min. =** 0.115 ft.^{2}/day **C_α =** 0.015

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.82781	16	2.1500	0.82163
2	0.1167	0.82520	17	2.6833	0.82145
3	0.2167	0.82455	18	3.3333	0.82125
4	0.2500	0.82424	19	4.1667	0.82101
5	0.2833	0.82421	20	5.2000	0.82085
6	0.3167	0.82411	21	6.5000	0.82073
7	0.3833	0.82390	22	8.1333	0.82064
8	0.4500	0.82359	23	10.2000	0.82058
9	0.5333	0.82325	24	12.7833	0.82050
10	0.6500	0.82304	25	16.0500	0.82043
11	0.7833	0.82282	26	20.1667	0.82037
12	0.9500	0.82260	27	25.3333	0.82033
13	1.1500	0.82240	28	31.8500	0.82020
14	1.4167	0.82200	29	40.0333	0.82010
15	1.7500	0.82170	30	50.3500	0.81998

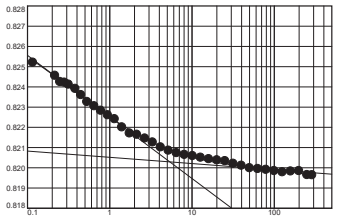


Figure D-190

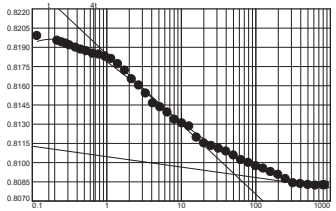
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 8**

No.	Elapsed Time	Dial Reading
31	63.3333	0.81994
32	79.6667	0.81990
33	100.2500	0.81984
34	126.1333	0.81978
35	158.7333	0.81982
36	199.7833	0.81984
37	251.4500	0.81964
38	289.2833	0.81963

Void Ratio = 0.956 **Compression =** 19.4%
D_0 = 0.8278 **D_{50} =** 0.8241 **D_{100} =** 0.8203 **C_v at 0.31 min. =** 1.031 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.82128	23	10.2167	0.81307
2	0.1167	0.81988	24	12.8167	0.81282
3	0.2167	0.81951	25	16.0833	0.81195
4	0.2500	0.81939	26	20.1833	0.81150
5	0.2833	0.81929	27	25.3500	0.81130
6	0.3167	0.81915	28	31.8667	0.81109
7	0.3833	0.81898	29	40.0500	0.81087
8	0.4500	0.81882	30	50.3667	0.81056
9	0.5333	0.81869	31	63.3500	0.81020
10	0.6500	0.81850	32	79.6833	0.80998
11	0.7833	0.81844	33	100.2500	0.80972
12	0.9500	0.81828	34	126.1500	0.80954
13	1.1500	0.81809	35	158.7500	0.80927
14	1.4167	0.81768	36	199.8000	0.80905
15	1.7500	0.81718	37	251.4667	0.80872
16	2.1667	0.81651	38	316.5000	0.80839
17	2.7000	0.81602	39	398.3833	0.80833
18	3.3500	0.81539	40	501.4667	0.80826
19	4.1667	0.81463	41	631.2500	0.80821
20	5.2167	0.81432	42	794.6167	0.80823
21	6.5167	0.81391	43	849.6667	0.80823
22	8.1667	0.81335			



Void Ratio = 0.984 **Compression =** 18.2%
D_0 = 0.8207 **D_{50} =** 0.8149 **D_{100} =** 0.8091 **C_v at 4.35 min. =** 0.074 ft.^{2}/day

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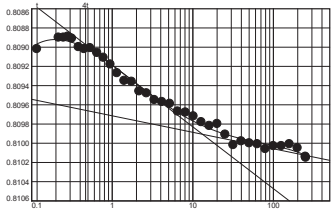
Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.80803	20	5.2000	0.80959
2	0.1167	0.80902	21	6.5167	0.80967
3	0.2167	0.80890	22	8.1500	0.80968
4	0.2500	0.80890	23	10.2167	0.80972
5	0.2833	0.80889	24	12.8000	0.80978
6	0.3167	0.80891	25	16.0667	0.80982
7	0.3833	0.80900	26	20.1833	0.80980
8	0.4500	0.80902	27	25.3500	0.80991
9	0.5333	0.80901	28	31.8500	0.81002
10	0.6500	0.80906	29	40.0500	0.80998
11	0.7833	0.80911	30	50.3667	0.81000
12	0.9500	0.80918	31	63.3333	0.81001
13	1.1500	0.80927	32	79.6833	0.81006
14	1.4167	0.80935	33	100.2500	0.81003
15	1.7500	0.80936	34	126.1500	0.81003
16	2.1667	0.80946	35	158.7500	0.81001
17	2.6833	0.80948	36	199.7833	0.81005
18	3.3500	0.80955	37	251.4500	0.81014
19	4.1667	0.80957	38	253.7000	0.81015



Void Ratio = 0.979 **Compression =** 18.4%
D_0 = 0.8089 **D_{50} =** 0.8094 **D_{100} =** 0.8099 **C_v at 2.28 min. =** 0.144 ft.^{2}/day **C_α =** 0.000

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.80951	16	2.1667	0.81261
2	0.1000	0.81024	17	2.6833	0.81275
3	0.2000	0.81049	18	3.3500	0.81292
4	0.2333	0.81059	19	4.1667	0.81302
5	0.2667	0.81062	20	5.2000	0.81313
6	0.3167	0.81068	21	6.5000	0.81320
7	0.3667	0.81080	22	8.1333	0.81329
8	0.4500	0.81096	23	10.2000	0.81333
9	0.5333	0.81120	24	12.7833	0.81339
10	0.6333	0.81152	25	16.0500	0.81349
11	0.7667	0.81188	26	20.1667	0.81356
12	0.9333	0.81199	27	25.3333	0.81363
13	1.1500	0.81213	28	31.8333	0.81365
14	1.4167	0.81220	29	40.0333	0.81366
15	1.7500	0.81242	30	50.3333	0.81367

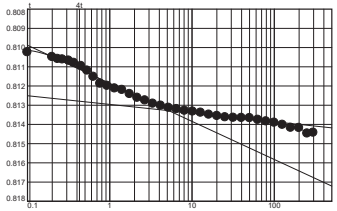


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Figure D-191

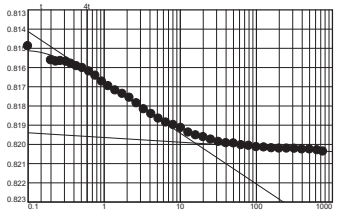
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading
31	63.3167	0.81376
32	79.6667	0.81384
33	100.2333	0.81391
34	126.1333	0.81402
35	158.7500	0.81417
36	199.7833	0.81418
37	251.4500	0.81447
38	298.2333	0.81443

Void Ratio = 0.969 **Compression =** 18.9%
D_0 = 0.8092 D_{50} = 0.8112 D_{100} = 0.8133 **C_v at 0.51 min. =** 0.640 ft.^{2}/day C_α = 0.001

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

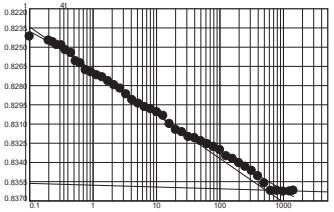
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.81296	22	8.1167	0.81899
2	0.1000	0.81489	23	10.1833	0.81914
3	0.2000	0.81562	24	12.7833	0.81938
4	0.2333	0.81569	25	16.0333	0.81953
5	0.2667	0.81566	26	20.1500	0.81962
6	0.3167	0.81570	27	25.3167	0.81975
7	0.3667	0.81580	28	31.8167	0.81987
8	0.4333	0.81593	29	40.0167	0.81994
9	0.5167	0.81602	30	50.3167	0.81995
10	0.6333	0.81620	31	63.3167	0.82004
11	0.7667	0.81642	32	79.6500	0.82007
12	0.9333	0.81673	33	100.2167	0.82014
13	1.1333	0.81697	34	126.1167	0.82016
14	1.4000	0.81719	35	158.7167	0.82020
15	1.7333	0.81737	36	199.7667	0.82022
16	2.1500	0.81757	37	251.4333	0.82022
17	2.6667	0.81786	38	316.4667	0.82023
18	3.3167	0.81817	39	398.3667	0.82026
19	4.1500	0.81842	40	501.4333	0.82026
20	5.1833	0.81866	41	631.2167	0.82030
21	6.4833	0.81886	42	751.2667	0.82037



Void Ratio = 0.954 **Compression =** 19.5%
D_0 = 0.8142 D_{50} = 0.8170 D_{100} = 0.8199 **C_v at 1.22 min. =** 0.263 ft.^{2}/day C_α = 0.001

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.81918	24	12.7833	0.83036
2	0.1000	0.82417	25	16.0500	0.83099
3	0.2000	0.82448	26	20.1500	0.83146
4	0.2333	0.82461	27	25.3167	0.83163
5	0.2667	0.82483	28	31.8333	0.83200
6	0.3167	0.82485	29	40.0167	0.83210
7	0.3667	0.82523	30	50.3333	0.83234
8	0.4500	0.82546	31	63.3167	0.83257
9	0.5333	0.82609	32	79.6667	0.83279
10	0.6333	0.82626	33	100.2333	0.83303
11	0.7667	0.82680	34	126.1333	0.83351
12	0.9333	0.82697	35	158.7333	0.83372
13	1.1500	0.82719	36	199.7667	0.83405
14	1.4000	0.82735	37	251.4333	0.83433
15	1.7333	0.82766	38	316.4833	0.83465
16	2.1500	0.82797	39	398.3667	0.83507
17	2.6833	0.82823	40	501.4500	0.83563
18	3.3333	0.82868	41	631.2167	0.83621
19	4.1500	0.82913	42	794.6000	0.83622
20	5.2000	0.82941	43	1000.2667	0.83628
21	6.5000	0.82968	44	1259.2167	0.83626
22	8.1333	0.82983	45	1440.2833	0.83620
23	10.2000	0.83007			



Void Ratio = 0.916 **Compression =** 21.1%
D_0 = 0.8219 D_{50} = 0.8290 D_{100} = 0.8362 **C_v at 4.37 min. =** 0.072 ft.^{2}/day C_α = 0.000

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.83324	12	0.9333	0.84505
2	0.1000	0.83685	13	1.1333	0.84603
3	0.2000	0.83857	14	1.4000	0.84786
4	0.2333	0.83900	15	1.7333	0.84918
5	0.2667	0.83935	16	2.1500	0.85063
6	0.3000	0.83993	17	2.6667	0.85189
7	0.3667	0.84071	18	3.3167	0.85314
8	0.4333	0.84159	19	4.1500	0.85505
9	0.5167	0.84242	20	5.1833	0.85624
10	0.6333	0.84325	21	6.4833	0.85787
11	0.7667	0.84415	22	8.1167	0.85919

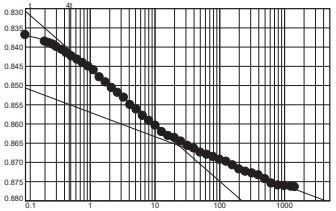


Figure D-192

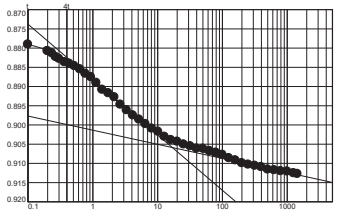
Pressure: 4000.00 psf — **TEST READINGS (continued)** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.86044	33	100.2333	0.86932	43	1000.2833	0.87614
24	12.7833	0.86211	34	126.1333	0.86984	44	1259.2167	0.87632
25	16.0500	0.86312	35	158.7167	0.87075	45	1440.3000	0.87644
26	20.1500	0.86364	36	199.7667	0.87181			
27	25.3167	0.86457	37	251.4333	0.87244			
28	31.8333	0.86570	38	316.4833	0.87287			
29	40.0167	0.86637	39	398.3667	0.87337			
30	50.3333	0.86742	40	501.4500	0.87436			
31	63.3167	0.86801	41	631.2333	0.87551			
32	79.6500	0.86859	42	794.6000	0.87600			

Void Ratio = 0.818 **Compression =** 25.1%
D_0 = 0.8328 **D_{50} =** 0.8492 **D_{100} =** 0.8657 **C_v at 1.70 min. =** 0.172 ft.^{2}/day **C_α =** 0.015

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

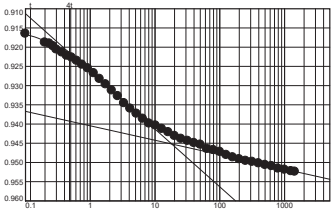
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.87361	24	12.7833	0.90308
2	0.1000	0.87905	25	16.0500	0.90391
3	0.2000	0.88076	26	20.1500	0.90436
4	0.2333	0.88131	27	25.3167	0.90507
5	0.2667	0.88228	28	31.8333	0.90555
6	0.3000	0.88277	29	40.0167	0.90613
7	0.3667	0.88366	30	50.3333	0.90618
8	0.4333	0.88403	31	63.3167	0.90679
9	0.5167	0.88465	32	79.6500	0.90719
10	0.6333	0.88551	33	100.2167	0.90774
11	0.7667	0.88664	34	126.1167	0.90863
12	0.9333	0.88753	35	158.7167	0.90922
13	1.1333	0.88904	36	199.7667	0.90994
14	1.4000	0.89082	37	251.4333	0.91033
15	1.7333	0.89172	38	316.4833	0.91061
16	2.1500	0.89279	39	398.3667	0.91097
17	2.6667	0.89469	40	501.4500	0.91159
18	3.3333	0.89616	41	631.2167	0.91178
19	4.1500	0.89750	42	794.6000	0.91202
20	5.1833	0.89858	43	1000.2833	0.91211
21	6.4833	0.89976	44	1259.2000	0.91255
22	8.1333	0.90095	45	1440.0667	0.91274
23	10.1833	0.90176			



Void Ratio = 0.730 **Compression =** 28.7%
D_0 = 0.8747 **D_{50} =** 0.8903 **D_{100} =** 0.9059 **C_v at 1.31 min. =** 0.201 ft.^{2}/day **C_α =** 0.009

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.90913	24	12.7833	0.94128
2	0.1000	0.91648	25	16.0500	0.94213
3	0.2000	0.91878	26	20.1500	0.94311
4	0.2333	0.91903	27	25.3333	0.94384
5	0.2667	0.91972	28	31.8500	0.94438
6	0.3000	0.92059	29	40.0333	0.94493
7	0.3667	0.92137	30	50.3500	0.94535
8	0.4333	0.92219	31	63.3333	0.94646
9	0.5167	0.92266	32	79.6667	0.94677
10	0.6167	0.92354	33	100.2500	0.94724
11	0.7500	0.92454	34	126.1500	0.94804
12	0.9167	0.92549	35	158.7500	0.94866
13	1.1333	0.92676	36	199.8000	0.94916
14	1.4000	0.92827	37	251.4667	0.94957
15	1.7333	0.92968	38	316.5000	0.94984
16	2.1500	0.93124	39	398.3833	0.95021
17	2.6667	0.93272	40	501.4667	0.95066
18	3.3333	0.93456	41	631.2500	0.95094
19	4.1500	0.93597	42	794.6167	0.95160
20	5.1833	0.93729	43	1000.3000	0.95189
21	6.4833	0.93862	44	1259.2333	0.95228
22	8.1333	0.93985	45	1440.1833	0.95241
23	10.1833	0.94035			



Void Ratio = 0.633 **Compression =** 32.7%
D_0 = 0.9117 **D_{50} =** 0.9284 **D_{100} =** 0.9452 **C_v at 1.32 min. =** 0.179 ft.^{2}/day **C_α =** 0.009

Figure D-193

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-33
Depth: 4' - 6'
Material Description: Gray clay with silt, silt layers and sand lenses
Liquid Limit: 43 **Plasticity Index:** 21
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	154.58 g.	Spec. Gr. =	2.668	Wet w+t =	128.14 g.
Dry w+t =	105.71 g.	Est. Ht. Solids =	0.411 in.	Dry w+t =	99.89 g.
Tare Wt. =	8.39 g.	Init. V.R. =	1.427	Tare Wt. =	19.14 g.
Moisture =	50.2 %	Init. Sat. =	93.9 %	Moisture =	35.0 %
				Dry Wt. =	80.75 g.

UNIT WEIGHT		TEST START	
Height =	0.998 in.	Height =	0.998 in.
Diameter =	2.500 in.	Diameter =	2.500 in.
Weight =	132.58 g.		
Dry Dens. =	68.6 pcf		

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.62612	0.00000			1.427	
-3.40	0.62605	-0.00007			1.427	0.0 Swell
62.50	0.64490	0.01878	0.179		1.381	1.9 Comprs.
125.00	0.66122	0.03510	0.127		1.341	3.5 Comprs.
250.00	0.69261	0.06649	0.112		1.265	6.7 Comprs.
500.00	0.73416	0.10804	0.078		1.164	10.8 Comprs.
1000.00	0.77866	0.15254	0.125		1.056	15.3 Comprs.
2000.00	0.82609	0.19997	0.142		0.940	20.0 Comprs.
500.00	0.81963	0.19351	0.674		0.956	19.4 Comprs.
125.00	0.80823	0.18211	0.134		0.984	18.2 Comprs.
250.00	0.81015	0.18403	0.374		0.979	18.4 Comprs.
500.00	0.81443	0.18831	0.920		0.969	18.9 Comprs.
1000.00	0.82037	0.19425	0.313		0.954	19.5 Comprs.
2000.00	0.83620	0.21008	0.517		0.916	21.1 Comprs.
4000.00	0.87644	0.25032	0.177		0.818	25.1 Comprs.
8000.00	0.91274	0.28662	0.262		0.730	28.7 Comprs.
16000.00	0.95241	0.32629	0.169		0.633	32.7 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.38 **Preconsolidation pressure (P_p), tsf =** 0.1 **Void ratio at P_p (e_m) =** 1.286
Recompression index (C_r) = 0.11

Pressure: -3.40 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.62612	16	2.4833	0.62612	31	79.4500	0.62613
2	0.0167	0.62613	17	3.1333	0.62611	32	100.0333	0.62611
3	0.0500	0.62613	18	3.9667	0.62614	33	125.9333	0.62614
4	0.0833	0.62615	19	5.0000	0.62612	34	158.5167	0.62610
5	0.1333	0.62613	20	6.3000	0.62611	35	199.5667	0.62613
6	0.1833	0.62615	21	7.9333	0.62614	36	251.2333	0.62611
7	0.2500	0.62611	22	10.0000	0.62611	37	316.2667	0.62602
8	0.3333	0.62609	23	12.5833	0.62615	38	398.1500	0.62588
9	0.4500	0.62610	24	15.8500	0.62614	39	501.2500	0.62591
10	0.5833	0.62614	25	19.9500	0.62612	40	631.0167	0.62596
11	0.7500	0.62609	26	25.1333	0.62611	41	794.3833	0.62598
12	0.9500	0.62614	27	31.6333	0.62610	42	1000.0667	0.62602
13	1.2167	0.62610	28	39.8167	0.62611	43	1052.5500	0.62605
14	1.5500	0.62613	29	50.1333	0.62612			
15	1.9667	0.62611	30	63.1167	0.62610			

Void Ratio = 1.427 **Swell =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.62545	18	3.3333	0.63286
2	0.1000	0.62553	19	4.1500	0.63452
3	0.2000	0.62558	20	5.1833	0.63551
4	0.2333	0.62569	21	6.4833	0.63675
5	0.2667	0.62567	22	8.1333	0.63763
6	0.3167	0.62577	23	10.2000	0.63841
7	0.3667	0.62590	24	12.7833	0.63952
8	0.4333	0.62604	25	16.0500	0.64054
9	0.5333	0.62630	26	20.1667	0.64119
10	0.6333	0.62673	27	25.3333	0.64159
11	0.7667	0.62725	28	31.8333	0.64178
12	0.9333	0.62761	29	40.0333	0.64208
13	1.1500	0.62792	30	50.3500	0.64231
14	1.4000	0.62839	31	63.3333	0.64263
15	1.7333	0.62915	32	79.6667	0.64276
16	2.1500	0.63114	33	100.2500	0.64304
17	2.6667	0.63188	34	126.1333	0.64331

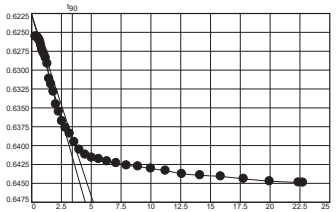


Figure D-194

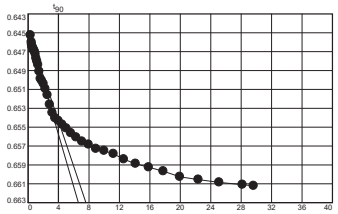
Pressure: 62.50 psf — **TEST READINGS (continued)** — **Load No. 2**

No.	Elapsed Time	Dial Reading
35	158.7333	0.64375
36	199.7833	0.64393
37	251.4500	0.64407
38	316.4833	0.64440
39	398.3667	0.64473
40	501.4500	0.64488
41	518.0667	0.64490

Void Ratio = 1.381 **Compression =** 1.9%
D_0 = 0.6226 D_{90} = 0.6390 D_{100} = 0.6409 C_v **at 11.62 min. =** 0.179 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 3**

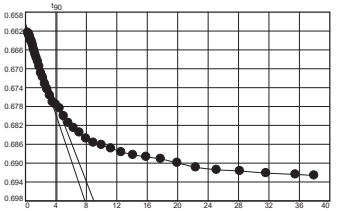
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64431	23	10.2000	0.65347
2	0.1167	0.64526	24	12.8000	0.65405
3	0.2167	0.64599	25	16.0667	0.65433
4	0.2500	0.64624	26	20.1667	0.65473
5	0.2833	0.64639	27	25.3500	0.65512
6	0.3333	0.64648	28	31.8500	0.65563
7	0.3833	0.64658	29	40.0500	0.65608
8	0.4500	0.64671	30	50.3500	0.65652
9	0.5500	0.64676	31	63.3333	0.65684
10	0.6500	0.64692	32	79.6833	0.65730
11	0.7833	0.64697	33	100.2500	0.65750
12	0.9500	0.64725	34	126.1500	0.65783
13	1.1667	0.64771	35	158.7500	0.65840
14	1.4167	0.64804	36	199.8000	0.65888
15	1.7500	0.64841	37	251.4500	0.65925
16	2.1667	0.64909	38	316.5000	0.65967
17	2.7000	0.64988	39	398.3833	0.66026
18	3.3500	0.65008	40	501.4667	0.66056
19	4.1667	0.65040	41	631.2500	0.66085
20	5.2000	0.65094	42	794.6167	0.66110
21	6.5000	0.65159	43	879.3333	0.66122
22	8.1333	0.65260			



Void Ratio = 1.341 **Compression =** 3.5%
D_0 = 0.6448 D_{90} = 0.6543 D_{100} = 0.6554 C_v **at 15.77 min. =** 0.127 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.66012	24	12.8000	0.67704
2	0.1000	0.66234	25	16.0500	0.67756
3	0.2167	0.66267	26	20.1667	0.67835
4	0.2333	0.66278	27	25.3333	0.68003
5	0.2833	0.66298	28	31.8333	0.68145
6	0.3167	0.66318	29	40.0333	0.68253
7	0.3833	0.66346	30	50.3500	0.68351
8	0.4500	0.66380	31	63.3333	0.68477
9	0.5333	0.66395	32	79.6667	0.68565
10	0.6333	0.66412	33	100.2500	0.68615
11	0.7667	0.66445	34	126.1500	0.68686
12	0.9333	0.66494	35	158.7500	0.68766
13	1.1500	0.66571	36	199.8000	0.68827
14	1.4000	0.66625	37	251.4667	0.68866
15	1.7333	0.66698	38	316.5000	0.68910
16	2.1500	0.66768	39	398.3833	0.68993
17	2.6833	0.66842	40	501.4667	0.69091
18	3.3500	0.66950	41	631.2500	0.69143
19	4.1667	0.67091	42	794.6167	0.69167
20	5.2000	0.67176	43	1000.3000	0.69212
21	6.5000	0.67319	44	1259.2333	0.69240
22	8.1333	0.67435	45	1440.1500	0.69261
23	10.2000	0.67563			



Void Ratio = 1.265 **Compression =** 6.7%
D_0 = 0.6605 D_{90} = 0.6778 D_{100} = 0.6797 C_v **at 17.04 min. =** 0.112 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.69050	12	0.9333	0.69687
2	0.1000	0.69249	13	1.1333	0.69793
3	0.2000	0.69324	14	1.4000	0.69882
4	0.2333	0.69329	15	1.7333	0.69979
5	0.2667	0.69342	16	2.1500	0.70070
6	0.3000	0.69361	17	2.6833	0.70238
7	0.3667	0.69403	18	3.3333	0.70366
8	0.4333	0.69461	19	4.1500	0.70518
9	0.5167	0.69504	20	5.1833	0.70741
10	0.6333	0.69555	21	6.4833	0.70921
11	0.7667	0.69627	22	8.1167	0.71098

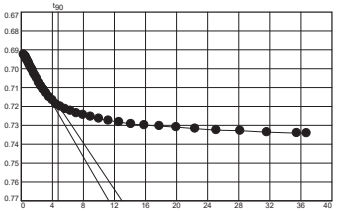


Figure D-195

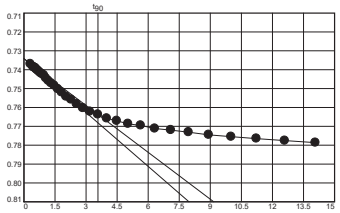
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.71288	33	100.2000	0.72648	43	1000.2500	0.73362
24	12.7667	0.71501	34	126.1000	0.72748	44	1259.1833	0.73412
25	16.0333	0.71667	35	158.7000	0.72824	45	1349.2667	0.73416
26	20.1333	0.71885	36	199.7500	0.72932			
27	25.3000	0.71999	37	251.4167	0.72988			
28	31.8167	0.72134	38	316.4500	0.73038			
29	40.0167	0.72231	39	398.3333	0.73095			
30	50.3167	0.72361	40	501.4333	0.73175			
31	63.3000	0.72448	41	631.2000	0.73256			
32	79.6500	0.72540	42	794.5667	0.73284			

Void Ratio = 1.164 **Compression =** 10.8%
D_0 = 0.6902 **D_{90} =** 0.7194 **D_{100} =** 0.7226 **C_v at 22.48 min. =** 0.078 ft.^{2}/day

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

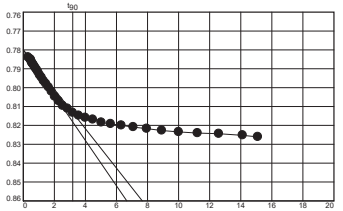
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.73250	19	4.1667	0.75421
2	0.1000	0.73695	20	5.2000	0.75580
3	0.2000	0.73843	21	6.5000	0.75814
4	0.2333	0.73878	22	8.1333	0.76033
5	0.2667	0.73888	23	10.2000	0.76219
6	0.3167	0.73917	24	12.7833	0.76372
7	0.3667	0.73979	25	16.0500	0.76576
8	0.4333	0.74026	26	20.1667	0.76710
9	0.5167	0.74087	27	25.3333	0.76869
10	0.6333	0.74164	28	31.8333	0.76953
11	0.7667	0.74226	29	40.0333	0.77118
12	0.9333	0.74288	30	50.3500	0.77199
13	1.1333	0.74447	31	63.3167	0.77312
14	1.4000	0.74585	32	79.6667	0.77451
15	1.7333	0.74714	33	100.2333	0.77549
16	2.1500	0.74836	34	126.1333	0.77651
17	2.6833	0.75021	35	158.7333	0.77757
18	3.3333	0.75197	36	198.3000	0.77866



Void Ratio = 1.056 **Compression =** 15.3%
D_0 = 0.7341 **D_{90} =** 0.7637 **D_{100} =** 0.7670 **C_v at 12.77 min. =** 0.125 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77655	20	5.1833	0.80711
2	0.1000	0.78391	21	6.4833	0.80963
3	0.2000	0.78485	22	8.1167	0.81109
4	0.2333	0.78515	23	10.1833	0.81330
5	0.2667	0.78579	24	12.7667	0.81479
6	0.3167	0.78678	25	16.0333	0.81596
7	0.3667	0.78725	26	20.1333	0.81689
8	0.4333	0.78780	27	25.3000	0.81845
9	0.5333	0.78876	28	31.8167	0.81921
10	0.6333	0.78963	29	40.0000	0.82000
11	0.7667	0.79063	30	50.3167	0.82092
12	0.9333	0.79171	31	63.3000	0.82173
13	1.1500	0.79334	32	79.6333	0.82270
14	1.4000	0.79463	33	100.2000	0.82346
15	1.7333	0.79653	34	126.1000	0.82407
16	2.1500	0.79798	35	158.7000	0.82443
17	2.6667	0.79981	36	199.7500	0.82526
18	3.3333	0.80205	37	228.3333	0.82609
19	4.1500	0.80472			



Void Ratio = 0.940 **Compression =** 20.0%
D_0 = 0.7800 **D_{90} =** 0.8133 **D_{100} =** 0.8170 **C_v at 10.14 min. =** 0.142 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.82781	16	2.1500	0.82163
2	0.1167	0.82520	17	2.6833	0.82145
3	0.2167	0.82455	18	3.3333	0.82125
4	0.2500	0.82424	19	4.1667	0.82101
5	0.2833	0.82421	20	5.2000	0.82085
6	0.3167	0.82411	21	6.5000	0.82073
7	0.3833	0.82390	22	8.1333	0.82064
8	0.4500	0.82359	23	10.2000	0.82058
9	0.5333	0.82325	24	12.7833	0.82050
10	0.6500	0.82304	25	16.0500	0.82043
11	0.7833	0.82282	26	20.1667	0.82037
12	0.9500	0.82260	27	25.3333	0.82033
13	1.1500	0.82240	28	31.8500	0.82020
14	1.4167	0.82200	29	40.0333	0.82010
15	1.7500	0.82170	30	50.3500	0.81998

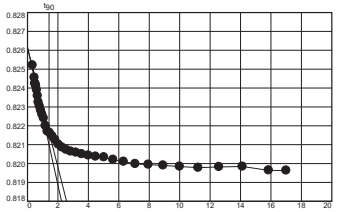


Figure D-196

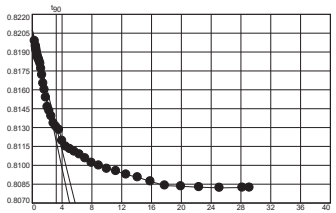
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 8**

No.	Elapsed Time	Dial Reading
31	63.3333	0.81994
32	79.6667	0.81990
33	100.2500	0.81984
34	126.1333	0.81978
35	158.7333	0.81982
36	199.7833	0.81984
37	251.4500	0.81964
38	289.2833	0.81963

Void Ratio = 0.956 **Compression =** 19.4%
D_0 = 0.8262 **D_{90} =** 0.8217 **D_{100} =** 0.8212 **C_v at 2.01 min. =** 0.674 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

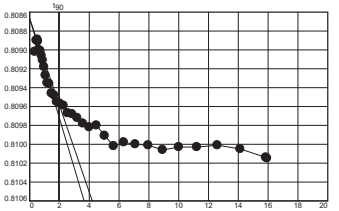
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.82128	23	10.2167	0.81307
2	0.1167	0.81988	24	12.8167	0.81282
3	0.2167	0.81951	25	16.0833	0.81195
4	0.2500	0.81939	26	20.1833	0.81150
5	0.2833	0.81929	27	25.3500	0.81130
6	0.3167	0.81915	28	31.8667	0.81109
7	0.3833	0.81898	29	40.0500	0.81087
8	0.4500	0.81882	30	50.3667	0.81056
9	0.5333	0.81869	31	63.3500	0.81020
10	0.6500	0.81850	32	79.6833	0.80998
11	0.7833	0.81844	33	100.2500	0.80972
12	0.9500	0.81828	34	126.1500	0.80954
13	1.1500	0.81809	35	158.7500	0.80927
14	1.4167	0.81768	36	199.8000	0.80905
15	1.7500	0.81718	37	251.4667	0.80872
16	2.1667	0.81651	38	316.5000	0.80839
17	2.7000	0.81602	39	398.3833	0.80833
18	3.3500	0.81539	40	501.4667	0.80826
19	4.1667	0.81463	41	631.2500	0.80821
20	5.2167	0.81432	42	794.6167	0.80823
21	6.5167	0.81391	43	849.6667	0.80823
22	8.1667	0.81335			



Void Ratio = 0.984 **Compression =** 18.2%
D_0 = 0.8207 **D_{90} =** 0.8131 **D_{100} =** 0.8122 **C_v at 10.35 min. =** 0.134 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.80803	20	5.2000	0.80959
2	0.1167	0.80902	21	6.5167	0.80967
3	0.2167	0.80890	22	8.1500	0.80968
4	0.2500	0.80890	23	10.2167	0.80972
5	0.2833	0.80889	24	12.8000	0.80978
6	0.3167	0.80891	25	16.0667	0.80982
7	0.3833	0.80900	26	20.1833	0.80980
8	0.4500	0.80902	27	25.3500	0.80991
9	0.5333	0.80901	28	31.8500	0.81002
10	0.6500	0.80906	29	40.0500	0.80998
11	0.7833	0.80911	30	50.3667	0.81000
12	0.9500	0.80918	31	63.3333	0.81001
13	1.1500	0.80927	32	79.6833	0.81006
14	1.4167	0.80935	33	100.2500	0.81003
15	1.7500	0.80936	34	126.1500	0.81003
16	2.1667	0.80946	35	158.7500	0.81001
17	2.6833	0.80948	36	199.7833	0.81005
18	3.3500	0.80955	37	251.4500	0.81014
19	4.1667	0.80957	38	253.7000	0.81015



Void Ratio = 0.979 **Compression =** 18.4%
D_0 = 0.8087 **D_{90} =** 0.8096 **D_{100} =** 0.8097 **C_v at 3.76 min. =** 0.374 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.80951	16	2.1667	0.81261
2	0.1000	0.81024	17	2.6833	0.81275
3	0.2000	0.81049	18	3.3500	0.81292
4	0.2333	0.81059	19	4.1667	0.81302
5	0.2667	0.81062	20	5.2000	0.81313
6	0.3167	0.81068	21	6.5000	0.81320
7	0.3667	0.81080	22	8.1333	0.81329
8	0.4500	0.81096	23	10.2000	0.81333
9	0.5333	0.81120	24	12.7833	0.81339
10	0.6333	0.81152	25	16.0500	0.81349
11	0.7667	0.81188	26	20.1667	0.81356
12	0.9333	0.81199	27	25.3333	0.81363
13	1.1500	0.81213	28	31.8333	0.81365
14	1.4167	0.81220	29	40.0333	0.81366
15	1.7500	0.81242	30	50.3333	0.81367

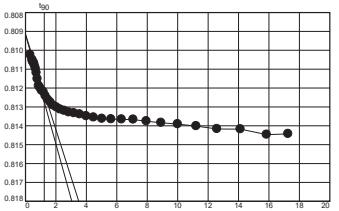


Figure D-197

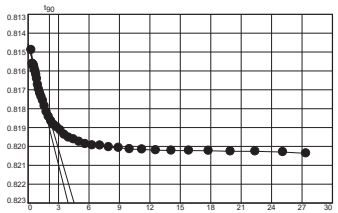
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading
31	63.3167	0.81376
32	79.6667	0.81384
33	100.2333	0.81391
34	126.1333	0.81402
35	158.7500	0.81417
36	199.7833	0.81418
37	251.4500	0.81447
38	298.2333	0.81443

Void Ratio = 0.969 **Compression =** 18.9%
D_0 = 0.8092 **D_{90} =** 0.8123 **D_{100} =** 0.8126 **C_v at 1.52 min. =** 0.920 ft.^{2}/day

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

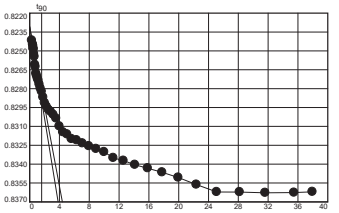
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.81296	22	8.1167	0.81899
2	0.1000	0.81489	23	10.1833	0.81914
3	0.2000	0.81562	24	12.7833	0.81938
4	0.2333	0.81569	25	16.0333	0.81953
5	0.2667	0.81566	26	20.1500	0.81962
6	0.3167	0.81570	27	25.3167	0.81975
7	0.3667	0.81580	28	31.8167	0.81987
8	0.4333	0.81593	29	40.0167	0.81994
9	0.5167	0.81602	30	50.3167	0.81995
10	0.6333	0.81620	31	63.3167	0.82004
11	0.7667	0.81642	32	79.6500	0.82007
12	0.9333	0.81673	33	100.2167	0.82014
13	1.1333	0.81697	34	126.1167	0.82016
14	1.4000	0.81719	35	158.7167	0.82020
15	1.7333	0.81737	36	199.7667	0.82022
16	2.1500	0.81757	37	251.4333	0.82022
17	2.6667	0.81786	38	316.4667	0.82023
18	3.3167	0.81817	39	398.3667	0.82026
19	4.1500	0.81842	40	501.4333	0.82026
20	5.1833	0.81866	41	631.2167	0.82030
21	6.4833	0.81886	42	751.2667	0.82037



Void Ratio = 0.954 **Compression =** 19.5%
D_0 = 0.8146 **D_{90} =** 0.8185 **D_{100} =** 0.8189 **C_v at 4.42 min. =** 0.313 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.81918	24	12.7833	0.83036
2	0.1000	0.82417	25	16.0500	0.83099
3	0.2000	0.82448	26	20.1500	0.83146
4	0.2333	0.82461	27	25.3167	0.83163
5	0.2667	0.82483	28	31.8333	0.83200
6	0.3167	0.82485	29	40.0167	0.83210
7	0.3667	0.82523	30	50.3333	0.83234
8	0.4500	0.82546	31	63.3167	0.83257
9	0.5333	0.82609	32	79.6667	0.83279
10	0.6333	0.82626	33	100.2333	0.83303
11	0.7667	0.82680	34	126.1333	0.83351
12	0.9333	0.82697	35	158.7333	0.83372
13	1.1500	0.82719	36	199.7667	0.83405
14	1.4000	0.82735	37	251.4333	0.83433
15	1.7333	0.82766	38	316.4833	0.83465
16	2.1500	0.82797	39	398.3667	0.83507
17	2.6833	0.82823	40	501.4500	0.83563
18	3.3333	0.82868	41	631.2167	0.83621
19	4.1500	0.82913	42	794.6000	0.83622
20	5.2000	0.82941	43	1000.2667	0.83628
21	6.5000	0.82968	44	1259.2167	0.83626
22	8.1333	0.82983	45	1440.2833	0.83620
23	10.2000	0.83007			



Void Ratio = 0.916 **Compression =** 21.1%
D_0 = 0.8231 **D_{90} =** 0.8282 **D_{100} =** 0.8288 **C_v at 2.60 min. =** 0.517 ft.^{2}/day

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.83324	12	0.9333	0.84505
2	0.1000	0.83685	13	1.1333	0.84603
3	0.2000	0.83857	14	1.4000	0.84786
4	0.2333	0.83900	15	1.7333	0.84918
5	0.2667	0.83935	16	2.1500	0.85063
6	0.3000	0.83993	17	2.6667	0.85189
7	0.3667	0.84071	18	3.3167	0.85314
8	0.4333	0.84159	19	4.1500	0.85505
9	0.5167	0.84242	20	5.1833	0.85624
10	0.6333	0.84325	21	6.4833	0.85787
11	0.7667	0.84415	22	8.1167	0.85919

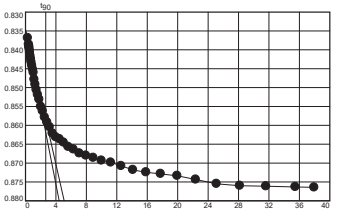


Figure D-198

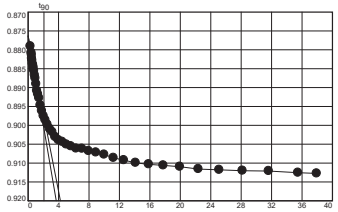
Pressure: 4000.00 psf — **TEST READINGS (continued)** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.86044	33	100.2333	0.86932	43	1000.2833	0.87614
24	12.7833	0.86211	34	126.1333	0.86984	44	1259.2167	0.87632
25	16.0500	0.86312	35	158.7167	0.87075	45	1440.3000	0.87644
26	20.1500	0.86364	36	199.7667	0.87181			
27	25.3167	0.86457	37	251.4333	0.87244			
28	31.8333	0.86570	38	316.4833	0.87287			
29	40.0167	0.86637	39	398.3667	0.87337			
30	50.3333	0.86742	40	501.4500	0.87436			
31	63.3167	0.86801	41	631.2333	0.87551			
32	79.6500	0.86859	42	794.6000	0.87600			

Void Ratio = 0.818 **Compression =** 25.1%
D_0 = 0.8347 **D_{90} =** 0.8584 **D_{100} =** 0.8610 **C_v at 7.07 min. =** 0.177 ft.^{2}/day

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

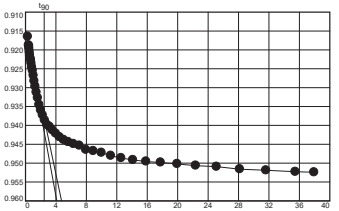
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.87361	24	12.7833	0.90308
2	0.1000	0.87905	25	16.0500	0.90391
3	0.2000	0.88076	26	20.1500	0.90436
4	0.2333	0.88131	27	25.3167	0.90507
5	0.2667	0.88228	28	31.8333	0.90555
6	0.3000	0.88277	29	40.0167	0.90613
7	0.3667	0.88366	30	50.3333	0.90618
8	0.4333	0.88403	31	63.3167	0.90679
9	0.5167	0.88465	32	79.6500	0.90719
10	0.6333	0.88551	33	100.2167	0.90774
11	0.7667	0.88664	34	126.1167	0.90863
12	0.9333	0.88753	35	158.7167	0.90922
13	1.1333	0.88904	36	199.7667	0.90994
14	1.4000	0.89082	37	251.4333	0.91033
15	1.7333	0.89172	38	316.4833	0.91061
16	2.1500	0.89279	39	398.3667	0.91097
17	2.6667	0.89469	40	501.4500	0.91159
18	3.3333	0.89616	41	631.2167	0.91178
19	4.1500	0.89750	42	794.6000	0.91202
20	5.1833	0.89858	43	1000.2833	0.91211
21	6.4833	0.89976	44	1259.2000	0.91255
22	8.1333	0.90095	45	1440.0667	0.91274
23	10.1833	0.90176			



Void Ratio = 0.730 **Compression =** 28.7%
D_0 = 0.8763 **D_{90} =** 0.8977 **D_{100} =** 0.9001 **C_v at 4.32 min. =** 0.262 ft.^{2}/day

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

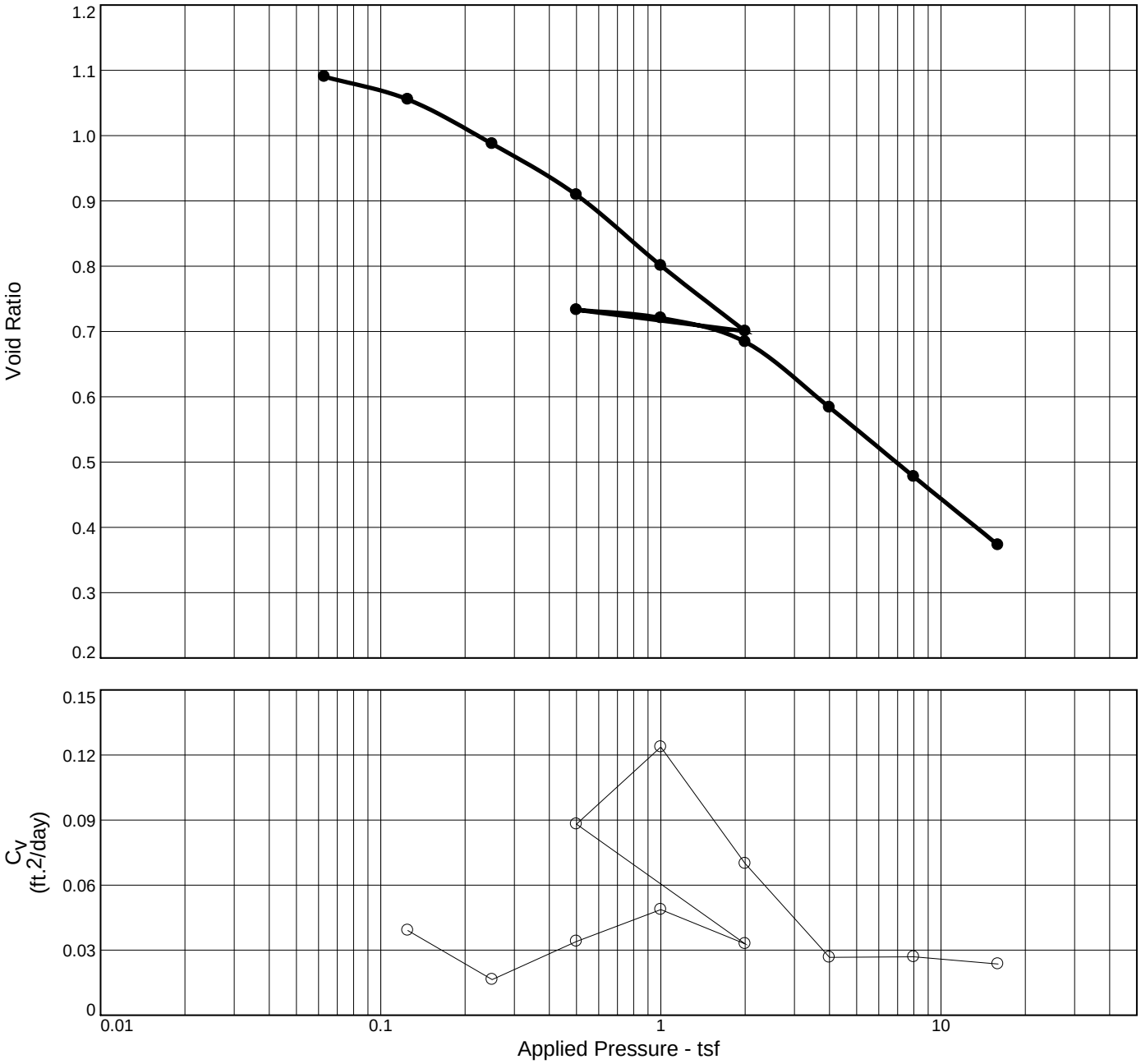
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.90913	24	12.7833	0.94128
2	0.1000	0.91648	25	16.0500	0.94213
3	0.2000	0.91878	26	20.1500	0.94311
4	0.2333	0.91903	27	25.3333	0.94384
5	0.2667	0.91972	28	31.8500	0.94438
6	0.3000	0.92059	29	40.0333	0.94493
7	0.3667	0.92137	30	50.3500	0.94535
8	0.4333	0.92219	31	63.3333	0.94646
9	0.5167	0.92266	32	79.6667	0.94677
10	0.6167	0.92354	33	100.2500	0.94724
11	0.7500	0.92454	34	126.1500	0.94804
12	0.9167	0.92549	35	158.7500	0.94866
13	1.1333	0.92676	36	199.8000	0.94916
14	1.4000	0.92827	37	251.4667	0.94957
15	1.7333	0.92968	38	316.5000	0.94984
16	2.1500	0.93124	39	398.3833	0.95021
17	2.6667	0.93272	40	501.4667	0.95066
18	3.3333	0.93456	41	631.2500	0.95094
19	4.1500	0.93597	42	794.6167	0.95160
20	5.1833	0.93729	43	1000.3000	0.95189
21	6.4833	0.93862	44	1259.2333	0.95228
22	8.1333	0.93985	45	1440.1833	0.95241
23	10.1833	0.94035			



Void Ratio = 0.633 **Compression =** 32.7%
D_0 = 0.9147 **D_{90} =** 0.9382 **D_{100} =** 0.9408 **C_v at 6.03 min. =** 0.169 ft.^{2}/day

Figure D-199

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
95.6 %	41.0 %	77.5	46	26	2.655	0.2	0.36	1.140

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sandy silt lenses	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-33 **Depth:** 53' - 55'

GeoEngineers

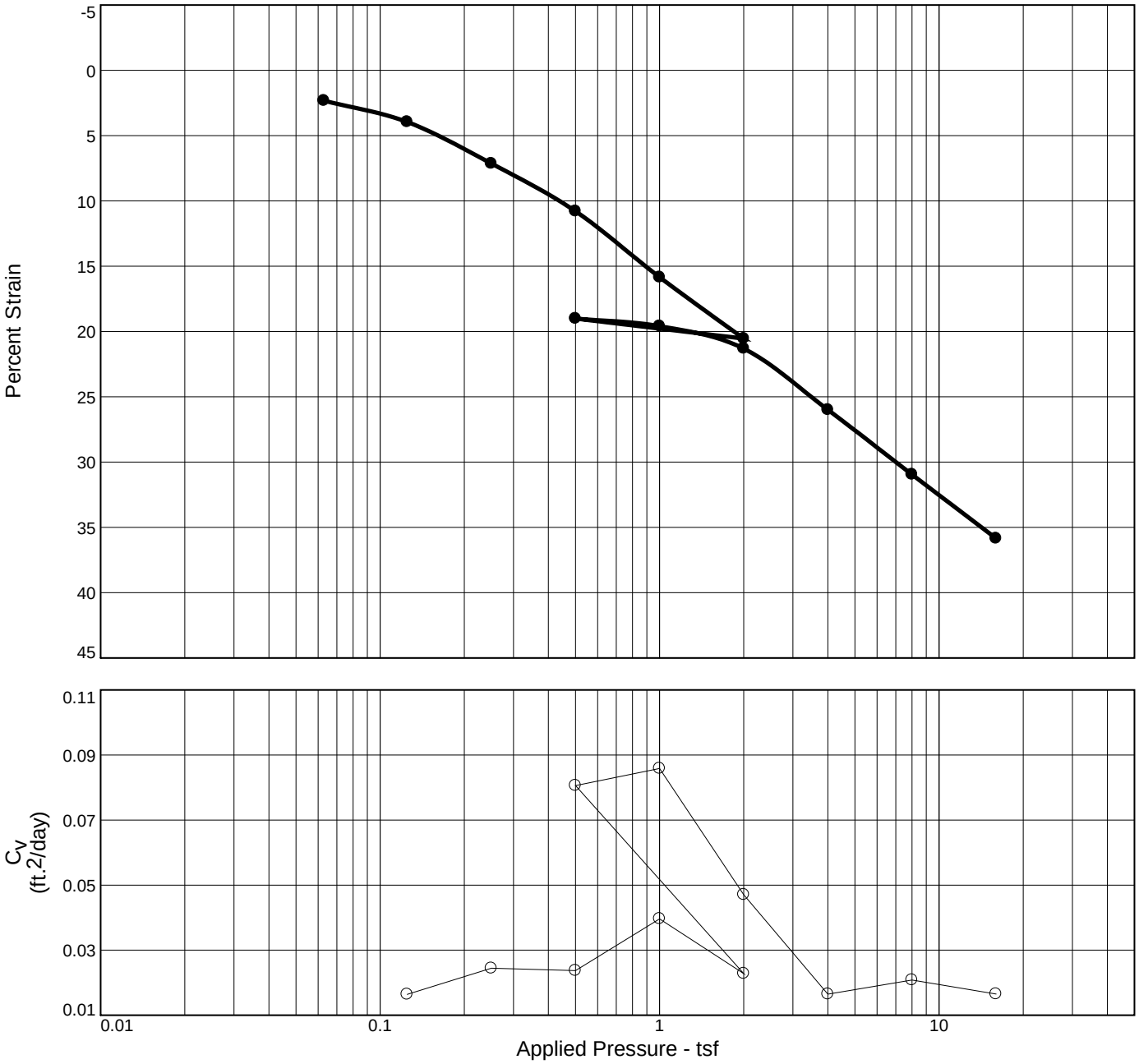
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: SLC/CLP **Checked By:** ARS

Figure D-200

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
95.6 %	41.0 %	77.5	46	26	2.655	0.2	0.36	1.140

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sandy silt lenses	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-33 **Depth:** 53' - 55'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: SLC/CLP **Checked By:** ARS

Figure D-201

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-33
Depth: 53' - 55'
Material Description: Gray clay with sandy silt lenses
Liquid Limit: 46 **Plasticity Index:** 26
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	245.14 g.	Spec. Gr. =	2.655	Wet w+t =	106.84 g.
Dry w+t =	185.66 g.	Est. Ht. Solids =	0.344 in.	Dry w+t =	88.54 g.
Tare Wt. =	40.73 g.	Init. V.R. =	1.140	Tare Wt. =	22.56 g.
Moisture =	41.0 %	Init. Sat. =	95.6 %	Moisture =	27.7 %

UNIT WEIGHT		TEST START			
Height =	0.736 in.	Height =	0.736 in.	Dry Wt. =	65.98 g.
Diameter =	2.498 in.	Diameter =	2.498 in.		
Weight =	103.43 g.				
Dry Dens. =	77.5 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00050	0.00000			1.140	
0.06	0.01760	0.01710		0.002	1.090	2.3 Comprs.
0.13	0.02960	0.02910	0.016	0.002	1.055	4.0 Comprs.
0.25	0.05300	0.05250	0.024	0.009	0.987	7.1 Comprs.
0.50	0.07990	0.07940	0.024	0.009	0.909	10.8 Comprs.
1.00	0.11710	0.11660	0.040	0.010	0.801	15.8 Comprs.
2.00	0.15170	0.15120	0.023	0.012	0.700	20.5 Comprs.
0.50	0.14040	0.13990	0.081		0.733	19.0 Comprs.
1.00	0.14470	0.14420	0.086	0.000	0.721	19.6 Comprs.
2.00	0.15730	0.15680	0.047	0.004	0.684	21.3 Comprs.
4.00	0.19180	0.19130	0.016	0.010	0.584	26.0 Comprs.
8.00	0.22830	0.22780	0.021	0.011	0.478	31.0 Comprs.
16.00	0.26430	0.26380	0.017	0.011	0.373	35.8 Comprs.

Compression index (C_c), tsf = 0.36 **Preconsolidation pressure (P_p), tsf =** 0.2 **Void ratio at P_p (e_m) =** 1.004
Recompression index (C_r) = 0.17

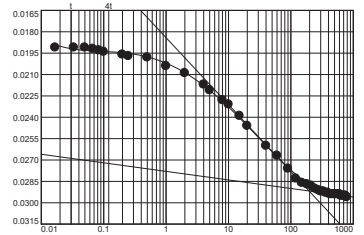
Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0005	11	1.0000	0.0097	21	90.0167	0.0172
2	0.0167	0.0042	12	2.0000	0.0104	22	120.0500	0.0174
3	0.0333	0.0063	13	4.0000	0.0116	23	150.0833	0.0175
4	0.0500	0.0068	14	5.0000	0.0119	24	154.1833	0.0176
5	0.0667	0.0070	15	8.0000	0.0130			
6	0.0833	0.0072	16	10.0000	0.0134			
7	0.1000	0.0075	17	15.0000	0.0143			
8	0.2000	0.0080	18	20.0000	0.0150			
9	0.2500	0.0086	19	40.0000	0.0163			
10	0.5000	0.0092	20	59.9833	0.0166			

Void Ratio = 1.090 **Compression =** 2.3%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0176	24	180.2333	0.0287
2	0.0167	0.0191	25	210.2833	0.0288
3	0.0333	0.0191	26	240.3167	0.0290
4	0.0500	0.0191	27	270.3500	0.0291
5	0.0667	0.0192	28	300.3833	0.0292
6	0.0833	0.0193	29	330.4333	0.0292
7	0.1000	0.0194	30	360.4667	0.0293
8	0.2000	0.0196	31	390.5000	0.0293
9	0.2500	0.0197	32	420.5500	0.0294
10	0.5000	0.0198	33	450.5833	0.0294
11	1.0000	0.0204	34	480.6167	0.0294
12	2.0000	0.0209	35	510.6500	0.0294
13	4.0167	0.0217	36	540.7000	0.0294
14	5.0167	0.0221	37	570.7333	0.0294
15	8.0167	0.0228	38	600.7667	0.0294
16	10.0167	0.0231	39	630.8000	0.0295
17	15.0333	0.0239	40	660.8500	0.0295
18	20.0333	0.0246	41	690.8833	0.0295
19	40.0667	0.0260	42	720.9167	0.0295
20	60.0833	0.0267	43	750.9667	0.0295
21	90.1167	0.0276	44	781.0000	0.0296
22	120.1667	0.0283	45	786.5167	0.0296
23	150.2000	0.0286			

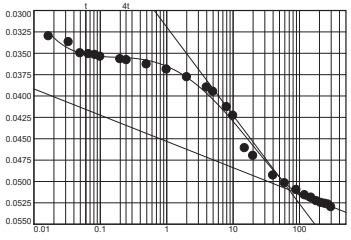


Void Ratio = 1.055 **Compression =** 4.0%
D_0 = 0.0190 **D_{50} =** 0.0241 **D_{100} =** 0.0292 **C_v at 15.26 min. =** 0.016 ft.^{2}/day **C_α =** 0.002

Figure D-202

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 3**

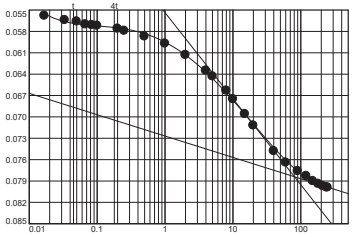
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0296	15	8.0167	0.0413
2	0.0167	0.0330	16	10.0167	0.0423
3	0.0333	0.0337	17	15.0167	0.0461
4	0.0500	0.0350	18	20.0333	0.0470
5	0.0667	0.0351	19	40.0500	0.0493
6	0.0833	0.0352	20	60.0833	0.0502
7	0.1000	0.0354	21	90.1167	0.0510
8	0.2000	0.0357	22	120.1500	0.0516
9	0.2500	0.0358	23	150.2000	0.0519
10	0.5000	0.0363	24	180.2333	0.0523
11	1.0000	0.0369	25	210.2667	0.0525
12	2.0167	0.0378	26	240.3167	0.0526
13	4.0167	0.0390	27	270.3500	0.0527
14	5.0167	0.0395	28	300.3833	0.0530



Void Ratio = 0.987 **Compression =** 7.1%
D_0 = 0.0348 **D_{50} =** 0.0429 **D_{100} =** 0.0510 **C_v at 9.74 min. =** 0.024 ft.^{2}/day **C_α =** 0.009

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 4**

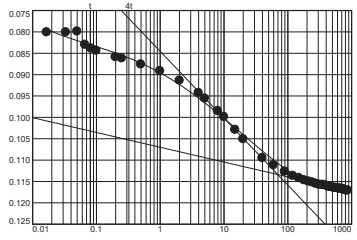
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0530	15	8.0000	0.0663
2	0.0167	0.0558	16	10.0167	0.0675
3	0.0333	0.0564	17	15.0167	0.0696
4	0.0500	0.0566	18	20.0167	0.0712
5	0.0667	0.0570	19	40.0500	0.0748
6	0.0833	0.0571	20	60.0667	0.0764
7	0.1000	0.0572	21	90.1167	0.0776
8	0.2000	0.0576	22	120.1500	0.0783
9	0.2500	0.0579	23	150.1833	0.0790
10	0.5000	0.0587	24	180.2167	0.0794
11	1.0000	0.0597	25	210.2667	0.0797
12	2.0000	0.0613	26	240.3000	0.0799
13	4.0000	0.0635	27	248.4333	0.0799
14	5.0000	0.0643			



Void Ratio = 0.909 **Compression =** 10.8%
D_0 = 0.0563 **D_{50} =** 0.0673 **D_{100} =** 0.0784 **C_v at 9.32 min. =** 0.024 ft.^{2}/day **C_α =** 0.009

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0799	25	209.9833	0.1150
2	0.0167	0.0801	26	239.9667	0.1152
3	0.0333	0.0801	27	269.9500	0.1155
4	0.0500	0.0799	28	299.9500	0.1157
5	0.0667	0.0830	29	329.9500	0.1158
6	0.0833	0.0839	30	359.9500	0.1158
7	0.1000	0.0844	31	389.9333	0.1159
8	0.2000	0.0859	32	419.9167	0.1161
9	0.2500	0.0862	33	449.9333	0.1163
10	0.5000	0.0876	34	479.9167	0.1163
11	1.0000	0.0892	35	509.9000	0.1164
12	2.0167	0.0914	36	539.9000	0.1165
13	4.0167	0.0943	37	569.9000	0.1165
14	5.0167	0.0956	38	599.9000	0.1166
15	8.0167	0.0985	39	629.8833	0.1166
16	10.0167	0.0999	40	659.8833	0.1167
17	15.0167	0.1029	41	689.8833	0.1167
18	20.0000	0.1051	42	719.8833	0.1167
19	40.0000	0.1095	43	749.8500	0.1169
20	60.0000	0.1112	44	779.8500	0.1170
21	90.0000	0.1127	45	809.8667	0.1171
22	120.0000	0.1137	46	839.8500	0.1171
23	149.9833	0.1142	47	869.8333	0.1171
24	179.9667	0.1147			



Void Ratio = 0.801 **Compression =** 15.8%
D_0 = 0.0799 **D_{50} =** 0.0967 **D_{100} =** 0.1134 **C_v at 5.06 min. =** 0.040 ft.^{2}/day **C_α =** 0.010

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1171	11	1.0000	0.1245
2	0.0167	0.1195	12	2.0000	0.1267
3	0.0333	0.1198	13	4.0000	0.1298
4	0.0500	0.1202	14	5.0000	0.1310
5	0.0667	0.1205	15	8.0000	0.1339
6	0.0833	0.1206	16	10.0000	0.1353
7	0.1000	0.1207	17	15.0000	0.1382
8	0.2000	0.1214	18	20.0000	0.1403
9	0.2500	0.1218	19	40.0000	0.1445
10	0.5000	0.1229	20	60.0000	0.1462

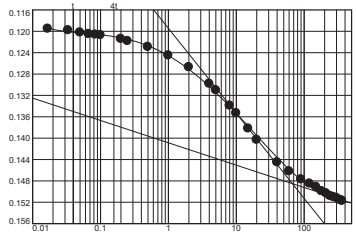


Figure D-203

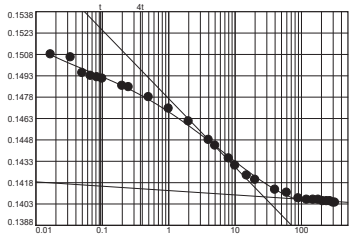
Pressure: 2.00 tsf — **TEST READINGS (continued)** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
21	89.9833	0.1477	31	361.2500	0.1517
22	119.9667	0.1485			
23	149.9833	0.1491			
24	179.9833	0.1499			
25	209.9667	0.1503			
26	239.9500	0.1508			
27	269.9500	0.1510			
28	299.9500	0.1512			
29	329.9333	0.1515			
30	359.9333	0.1517			

Void Ratio = 0.700 **Compression =** 20.5%
D_0 = 0.1194 **D_{50} =** 0.1339 **D_{100} =** 0.1485 **C_v at 7.83 min. =** 0.023 ft.^{2}/day **C_α =** 0.012

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 7**

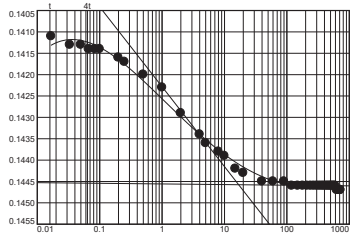
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1517	16	10.0167	0.1430
2	0.0167	0.1508	17	15.0167	0.1423
3	0.0333	0.1506	18	20.0167	0.1420
4	0.0500	0.1495	19	40.0167	0.1413
5	0.0667	0.1493	20	60.0000	0.1411
6	0.0833	0.1492	21	89.9833	0.1407
7	0.1000	0.1491	22	119.9833	0.1406
8	0.2000	0.1486	23	149.9833	0.1406
9	0.2500	0.1485	24	179.9833	0.1406
10	0.5000	0.1478	25	209.9667	0.1405
11	1.0000	0.1470	26	239.9667	0.1405
12	2.0000	0.1461	27	269.9667	0.1405
13	4.0000	0.1448	28	299.9667	0.1404
14	5.0000	0.1444	29	319.1000	0.1404
15	8.0167	0.1435			



Void Ratio = 0.733 **Compression =** 19.0%
D_0 = 0.1506 **D_{50} =** 0.1457 **D_{100} =** 0.1408 **C_v at 2.13 min. =** 0.081 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1404	23	149.9667	0.1446
2	0.0167	0.1411	24	179.9667	0.1446
3	0.0333	0.1413	25	209.9667	0.1446
4	0.0500	0.1413	26	239.9500	0.1446
5	0.0667	0.1414	27	269.9500	0.1446
6	0.0833	0.1414	28	299.9500	0.1446
7	0.1000	0.1414	29	329.9333	0.1446
8	0.2000	0.1416	30	359.9333	0.1446
9	0.2500	0.1417	31	389.9333	0.1446
10	0.5000	0.1420	32	419.9333	0.1446
11	1.0000	0.1423	33	449.9167	0.1446
12	2.0000	0.1429	34	479.9000	0.1446
13	4.0000	0.1434	35	509.9167	0.1446
14	5.0000	0.1436	36	539.9000	0.1446
15	8.0000	0.1438	37	569.8833	0.1446
16	10.0000	0.1439	38	599.8833	0.1446
17	15.0000	0.1442	39	629.8833	0.1447
18	20.0000	0.1443	40	659.8667	0.1447
19	39.9833	0.1445	41	689.8667	0.1447
20	60.0000	0.1445	42	719.8667	0.1447
21	90.0000	0.1445	43	723.4500	0.1447
22	119.9833	0.1446			



Void Ratio = 0.721 **Compression =** 19.6%
D_0 = 0.1414 **D_{50} =** 0.1430 **D_{100} =** 0.1446 **C_v at 2.02 min. =** 0.086 ft.^{2}/day **C_α =** 0.000

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1447	13	4.0000	0.1503
2	0.0167	0.1461	14	5.0000	0.1508
3	0.0333	0.1463	15	8.0000	0.1515
4	0.0500	0.1464	16	10.0000	0.1518
5	0.0667	0.1467	17	15.0000	0.1524
6	0.0833	0.1467	18	19.9833	0.1527
7	0.1000	0.1468	19	39.9833	0.1534
8	0.2000	0.1470	20	59.9667	0.1540
9	0.2500	0.1471	21	89.9667	0.1543
10	0.5000	0.1477	22	119.9667	0.1547
11	1.0000	0.1484	23	149.9500	0.1549
12	2.0000	0.1493	24	179.9500	0.1550

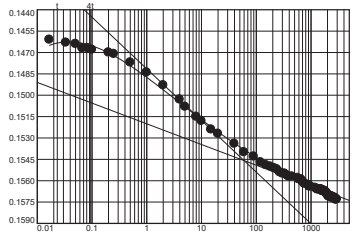


Figure D-204

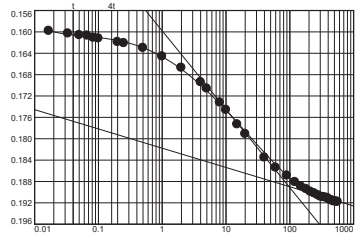
Pressure: 2.00 tsf | **TEST READINGS (continued)** | **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	209.9500	0.1551	51	1499.5667	0.1566	77	2279.4167	0.1571
26	239.9500	0.1552	52	1529.5500	0.1566	78	2309.4167	0.1571
27	269.9333	0.1554	53	1559.5667	0.1567	79	2339.4167	0.1571
28	299.9333	0.1555	54	1589.5667	0.1567	80	2369.4000	0.1571
29	329.9333	0.1555	55	1619.5500	0.1567	81	2399.3833	0.1571
30	359.9167	0.1556	56	1649.5333	0.1567	82	2429.4000	0.1572
31	389.9000	0.1557	57	1679.5500	0.1567	83	2459.3833	0.1572
32	449.9000	0.1557	58	1709.5333	0.1567	84	2489.3667	0.1572
33	569.8667	0.1558	59	1739.5167	0.1567	85	2519.3667	0.1572
34	599.8667	0.1559	60	1769.5167	0.1567	86	2549.3667	0.1572
35	659.7333	0.1559	61	1799.5167	0.1568	87	2579.3667	0.1572
36	689.7167	0.1560	62	1829.5000	0.1568	88	2609.3500	0.1572
37	719.7333	0.1561	63	1859.5000	0.1568	89	2639.3500	0.1572
38	749.7167	0.1562	64	1889.5000	0.1568	90	2669.3500	0.1572
39	779.7000	0.1562	65	1919.4833	0.1569	91	2699.3333	0.1572
40	899.6833	0.1563	66	1949.4833	0.1569	92	2729.3167	0.1572
41	929.6833	0.1564	67	1979.4833	0.1569	93	2759.3167	0.1573
42	989.6667	0.1564	68	2009.4833	0.1570	94	2789.3333	0.1573
43	1199.6167	0.1565	69	2039.4500	0.1570	95	2819.3167	0.1573
44	1289.6167	0.1566	70	2069.4500	0.1570	96	2849.3000	0.1573
45	1319.6000	0.1566	71	2099.4667	0.1571	97	2879.3000	0.1573
46	1349.6167	0.1566	72	2129.4500	0.1571	98	2909.3000	0.1573
47	1379.6000	0.1566	73	2159.4333	0.1571	99	2939.2833	0.1573
48	1409.5833	0.1566	74	2189.4333	0.1571	100	2945.8833	0.1573
49	1439.5833	0.1566	75	2219.4333	0.1571			
50	1469.5833	0.1566	76	2249.4167	0.1571			

Void Ratio = 0.684 **Compression =** 21.3%
D_0 = 0.1462 **D_{50} =** 0.1504 **D_{100} =** 0.1546 **C_v at 3.59 min. =** 0.047 ft.^{2}/day **C_α =** 0.004

Pressure: 4.00 tsf | **TEST READINGS** | **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1573	20	60.0000	0.1854
2	0.0167	0.1598	21	90.0000	0.1869
3	0.0333	0.1603	22	119.9833	0.1881
4	0.0500	0.1606	23	149.9667	0.1889
5	0.0667	0.1607	24	179.9833	0.1894
6	0.0833	0.1611	25	209.9667	0.1899
7	0.1000	0.1612	26	239.9500	0.1902
8	0.2000	0.1619	27	269.9500	0.1905
9	0.2500	0.1621	28	299.9500	0.1908
10	0.5000	0.1630	29	329.9500	0.1909
11	1.0000	0.1646	30	359.9333	0.1910
12	2.0000	0.1667	31	389.9167	0.1911
13	4.0000	0.1694	32	419.9333	0.1914
14	5.0000	0.1706	33	449.9167	0.1915
15	8.0000	0.1732	34	479.9000	0.1917
16	10.0000	0.1746	35	509.9000	0.1917
17	15.0000	0.1773	36	539.9000	0.1918
18	20.0000	0.1791	37	563.8000	0.1918
19	40.0000	0.1835			



Void Ratio = 0.584 **Compression =** 26.0%
D_0 = 0.1598 **D_{50} =** 0.1743 **D_{100} =** 0.1889 **C_v at 9.44 min. =** 0.016 ft.^{2}/day **C_α =** 0.010

Pressure: 8.00 tsf | **TEST READINGS** | **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1918	16	10.0000	0.2108
2	0.0167	0.1920	17	14.9833	0.2135
3	0.0333	0.1950	18	19.9833	0.2157
4	0.0500	0.1954	19	39.9667	0.2202
5	0.0667	0.1958	20	59.9667	0.2222
6	0.0833	0.1960	21	89.9667	0.2238
7	0.1000	0.1963	22	119.9667	0.2246
8	0.2000	0.1972	23	149.9667	0.2253
9	0.2500	0.1974	24	179.9500	0.2256
10	0.5000	0.1986	25	209.9333	0.2260
11	1.0000	0.2002	26	239.9500	0.2262
12	2.0000	0.2023	27	269.9500	0.2264
13	4.0000	0.2054	28	299.9333	0.2267
14	5.0000	0.2066	29	329.9167	0.2269
15	8.0000	0.2093	30	359.9167	0.2270

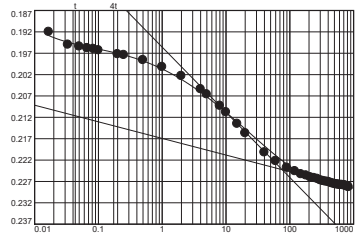


Figure D-205

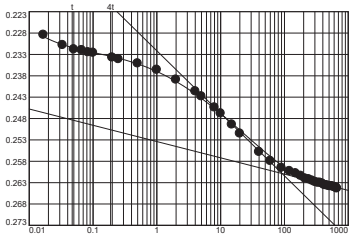
Pressure: 8.00 tsf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	389.9167	0.2271	41	689.8500	0.2279
32	419.9167	0.2272	42	719.8333	0.2279
33	449.8833	0.2274	43	749.8500	0.2280
34	479.8833	0.2275	44	779.8333	0.2281
35	509.9000	0.2276	45	809.8167	0.2282
36	539.8833	0.2277	46	836.0833	0.2283
37	569.8667	0.2277			
38	599.8667	0.2278			
39	629.8667	0.2278			
40	659.8667	0.2278			

Void Ratio = 0.478 **Compression =** 31.0%
D_0 = 0.1929 **D_{50} =** 0.2086 **D_{100} =** 0.2242 **C_v at 6.56 min. =** 0.021 ft.^{2}/day **C_α =** 0.011

Pressure: 16.00 tsf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2283	22	119.9667	0.2603
2	0.0167	0.2284	23	149.9833	0.2608
3	0.0333	0.2308	24	179.9667	0.2614
4	0.0500	0.2318	25	209.9500	0.2620
5	0.0667	0.2320	26	239.9500	0.2622
6	0.0833	0.2325	27	269.9500	0.2625
7	0.1000	0.2326	28	299.9500	0.2628
8	0.2000	0.2337	29	329.9333	0.2630
9	0.2500	0.2341	30	359.9333	0.2630
10	0.5000	0.2351	31	389.9333	0.2632
11	1.0000	0.2366	32	419.9167	0.2635
12	2.0000	0.2389	33	449.9000	0.2636
13	4.0000	0.2416	34	479.9000	0.2637
14	5.0000	0.2428	35	509.9000	0.2638
15	8.0000	0.2454	36	539.9000	0.2638
16	10.0000	0.2468	37	569.8833	0.2639
17	15.0000	0.2494	38	599.8667	0.2640
18	20.0000	0.2515	39	629.8833	0.2641
19	40.0000	0.2558	40	659.8833	0.2643
20	60.0000	0.2579	41	666.2667	0.2643
21	89.9833	0.2595			



Void Ratio = 0.373 **Compression =** 35.8%
D_0 = 0.2293 **D_{50} =** 0.2451 **D_{100} =** 0.2608 **C_v at 7.17 min. =** 0.017 ft.^{2}/day **C_α =** 0.011

Figure D-206

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-33
Depth: 53' - 55'
Material Description: Gray clay with sandy silt lenses
Liquid Limit: 46 **Plasticity Index:** 26
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	245.14 g.	Spec. Gr. =	2.655	Wet w+t =	106.84 g.
Dry w+t =	185.66 g.	Est. Ht. Solids =	0.344 in.	Dry w+t =	88.54 g.
Tare Wt. =	40.73 g.	Init. V.R. =	1.140	Tare Wt. =	22.56 g.
Moisture =	41.0 %	Init. Sat. =	95.6 %	Moisture =	27.7 %

UNIT WEIGHT		TEST START			
Height =	0.736 in.	Height =	0.736 in.	Dry Wt. =	65.98 g.
Diameter =	2.498 in.	Diameter =	2.498 in.		
Weight =	103.43 g.				
Dry Dens. =	77.5 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00050	0.00000			1.140	
0.06	0.01760	0.01710		0.002	1.090	2.3 Comprs.
0.13	0.02960	0.02910	0.039		1.055	4.0 Comprs.
0.25	0.05300	0.05250	0.016		0.987	7.1 Comprs.
0.50	0.07990	0.07940	0.034		0.909	10.8 Comprs.
1.00	0.11710	0.11660	0.049		0.801	15.8 Comprs.
2.00	0.15170	0.15120	0.033		0.700	20.5 Comprs.
0.50	0.14040	0.13990	0.088		0.733	19.0 Comprs.
1.00	0.14470	0.14420	0.124		0.721	19.6 Comprs.
2.00	0.15730	0.15680	0.070		0.684	21.3 Comprs.
4.00	0.19180	0.19130	0.027		0.584	26.0 Comprs.
8.00	0.22830	0.22780	0.027		0.478	31.0 Comprs.
16.00	0.26430	0.26380	0.024		0.373	35.8 Comprs.

Compression index (C_c), tsf = 0.36 **Preconsolidation pressure (P_p), tsf =** 0.2 **Void ratio at P_p (e_m) =** 1.003
Recompression index (C_r) = 0.17

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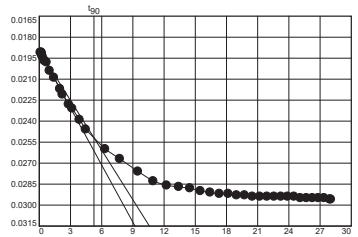
Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0005	11	1.0000	0.0097	21	90.0167	0.0172
2	0.0167	0.0042	12	2.0000	0.0104	22	120.0500	0.0174
3	0.0333	0.0063	13	4.0000	0.0116	23	150.0833	0.0175
4	0.0500	0.0068	14	5.0000	0.0119	24	154.1833	0.0176
5	0.0667	0.0070	15	8.0000	0.0130			
6	0.0833	0.0072	16	10.0000	0.0134			
7	0.1000	0.0075	17	15.0000	0.0143			
8	0.2000	0.0080	18	20.0000	0.0150			
9	0.2500	0.0086	19	40.0000	0.0163			
10	0.5000	0.0092	20	59.9833	0.0166			

Void Ratio = 1.090 **Compression =** 2.3%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0176	24	180.2333	0.0287
2	0.0167	0.0191	25	210.2833	0.0288
3	0.0333	0.0191	26	240.3167	0.0290
4	0.0500	0.0191	27	270.3500	0.0291
5	0.0667	0.0192	28	300.3833	0.0292
6	0.0833	0.0193	29	330.4333	0.0292
7	0.1000	0.0194	30	360.4667	0.0293
8	0.2000	0.0196	31	390.5000	0.0293
9	0.2500	0.0197	32	420.5500	0.0294
10	0.5000	0.0198	33	450.5833	0.0294
11	1.0000	0.0204	34	480.6167	0.0294
12	2.0000	0.0209	35	510.6500	0.0294
13	4.0167	0.0217	36	540.7000	0.0294
14	5.0167	0.0221	37	570.7333	0.0294
15	8.0167	0.0228	38	600.7667	0.0294
16	10.0167	0.0231	39	630.8000	0.0295
17	15.0333	0.0239	40	660.8500	0.0295
18	20.0333	0.0246	41	690.8833	0.0295
19	40.0667	0.0260	42	720.9167	0.0295
20	60.0833	0.0267	43	750.9667	0.0295
21	90.1167	0.0276	44	781.0000	0.0296
22	120.1667	0.0283	45	786.5167	0.0296
23	150.2000	0.0286			



Void Ratio = 1.055 **Compression =** 4.0%
D_0 = 0.0190 **D_{90} =** 0.0252 **D_{100} =** 0.0259 **C_v at 27.58 min. =** 0.039 ft.^{2}/day

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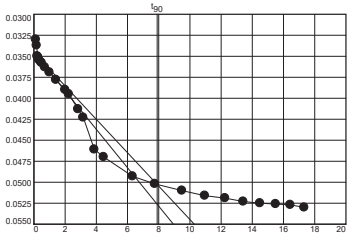
Figure D-207

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 3**

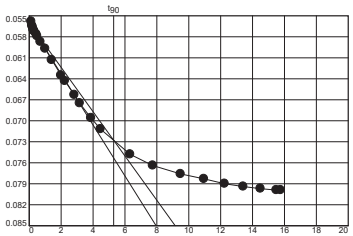
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0296	15	8.0167	0.0413
2	0.0167	0.0330	16	10.0167	0.0423
3	0.0333	0.0337	17	15.0167	0.0461
4	0.0500	0.0350	18	20.0333	0.0470
5	0.0667	0.0351	19	40.0500	0.0493
6	0.0833	0.0352	20	60.0833	0.0502
7	0.1000	0.0354	21	90.1167	0.0510
8	0.2000	0.0357	22	120.1500	0.0516
9	0.2500	0.0358	23	150.2000	0.0519
10	0.5000	0.0363	24	180.2333	0.0523
11	1.0000	0.0369	25	210.2667	0.0525
12	2.0167	0.0378	26	240.3167	0.0526
13	4.0167	0.0390	27	270.3500	0.0527
14	5.0167	0.0395	28	300.3833	0.0530



Void Ratio = 0.987 **Compression =** 7.1%
D_0 = 0.0346 **D_{90} =** 0.0503 **D_{100} =** 0.0520 **C_v at 62.38 min. =** 0.016 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0530	15	8.0000	0.0663
2	0.0167	0.0558	16	10.0167	0.0675
3	0.0333	0.0564	17	15.0167	0.0696
4	0.0500	0.0566	18	20.0167	0.0712
5	0.0667	0.0570	19	40.0500	0.0748
6	0.0833	0.0571	20	60.0667	0.0764
7	0.1000	0.0572	21	90.1167	0.0776
8	0.2000	0.0576	22	120.1500	0.0783
9	0.2500	0.0579	23	150.1833	0.0790
10	0.5000	0.0587	24	180.2167	0.0794
11	1.0000	0.0597	25	210.2667	0.0797
12	2.0000	0.0613	26	240.3000	0.0799
13	4.0000	0.0635	27	248.4333	0.0799
14	5.0000	0.0643			



Void Ratio = 0.909 **Compression =** 10.8%
D_0 = 0.0560 **D_{90} =** 0.0728 **D_{100} =** 0.0746 **C_v at 27.97 min. =** 0.034 ft.^{2}/day

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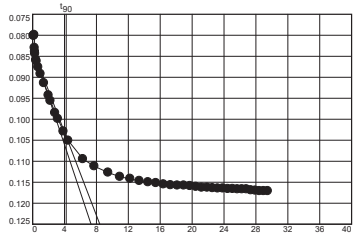
Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0799	25	209.9833	0.1150
2	0.0167	0.0801	26	239.9667	0.1152
3	0.0333	0.0801	27	269.9500	0.1155
4	0.0500	0.0799	28	299.9500	0.1157
5	0.0667	0.0830	29	329.9500	0.1158
6	0.0833	0.0839	30	359.9500	0.1158
7	0.1000	0.0844	31	389.9333	0.1159
8	0.2000	0.0859	32	419.9167	0.1161
9	0.2500	0.0862	33	449.9333	0.1163
10	0.5000	0.0876	34	479.9167	0.1163
11	1.0000	0.0892	35	509.9000	0.1164
12	2.0167	0.0914	36	539.9000	0.1165
13	4.0167	0.0943	37	569.9000	0.1165
14	5.0167	0.0956	38	599.9000	0.1166
15	8.0167	0.0985	39	629.8833	0.1166
16	10.0167	0.0999	40	659.8833	0.1167
17	15.0167	0.1029	41	689.8833	0.1167
18	20.0000	0.1051	42	719.8833	0.1167
19	40.0000	0.1095	43	749.8500	0.1169
20	60.0000	0.1112	44	779.8500	0.1170
21	90.0000	0.1127	45	809.8667	0.1171
22	120.0000	0.1137	46	839.8500	0.1171
23	149.9833	0.1142	47	869.8333	0.1171
24	179.9667	0.1147			



Void Ratio = 0.801 **Compression =** 15.8%
D_0 = 0.0833 **D_{90} =** 0.1041 **D_{100} =** 0.1064 **C_v at 17.71 min. =** 0.049 ft.^{2}/day

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1171	11	1.0000	0.1245
2	0.0167	0.1195	12	2.0000	0.1267
3	0.0333	0.1198	13	4.0000	0.1298
4	0.0500	0.1202	14	5.0000	0.1310
5	0.0667	0.1205	15	8.0000	0.1339
6	0.0833	0.1206	16	10.0000	0.1353
7	0.1000	0.1207	17	15.0000	0.1382
8	0.2000	0.1214	18	20.0000	0.1403
9	0.2500	0.1218	19	40.0000	0.1445
10	0.5000	0.1229	20	60.0000	0.1462

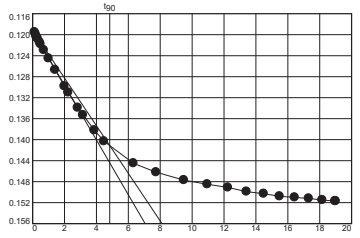


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Figure D-208

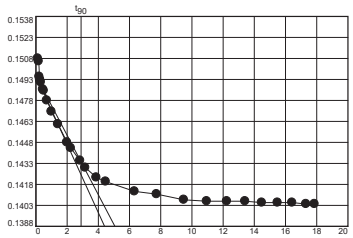
Pressure: 2.00 tsf — **TEST READINGS (continued)** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
21	89.9833	0.1477	31	361.2500	0.1517
22	119.9667	0.1485			
23	149.9833	0.1491			
24	179.9833	0.1499			
25	209.9667	0.1503			
26	239.9500	0.1508			
27	269.9500	0.1510			
28	299.9500	0.1512			
29	329.9333	0.1515			
30	359.9333	0.1517			

Void Ratio = 0.700 **Compression =** 20.5%
D_0 = 0.1192 **D_{90} =** 0.1411 **D_{100} =** 0.1436 **C_v at 23.36 min. =** 0.033 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 7**

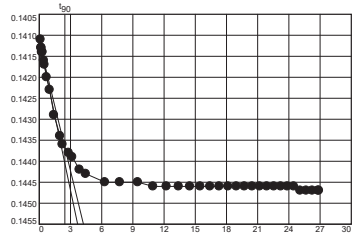
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1517	16	10.0167	0.1430
2	0.0167	0.1508	17	15.0167	0.1423
3	0.0333	0.1506	18	20.0167	0.1420
4	0.0500	0.1495	19	40.0167	0.1413
5	0.0667	0.1493	20	60.0000	0.1411
6	0.0833	0.1492	21	89.9833	0.1407
7	0.1000	0.1491	22	119.9833	0.1406
8	0.2000	0.1486	23	149.9833	0.1406
9	0.2500	0.1485	24	179.9833	0.1406
10	0.5000	0.1478	25	209.9667	0.1405
11	1.0000	0.1470	26	239.9667	0.1405
12	2.0000	0.1461	27	269.9667	0.1405
13	4.0000	0.1448	28	299.9667	0.1404
14	5.0000	0.1444	29	319.1000	0.1404
15	8.0167	0.1435			



Void Ratio = 0.733 **Compression =** 19.0%
D_0 = 0.1496 **D_{90} =** 0.1434 **D_{100} =** 0.1427 **C_v at 8.39 min. =** 0.088 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1404	23	149.9667	0.1446
2	0.0167	0.1411	24	179.9667	0.1446
3	0.0333	0.1413	25	209.9667	0.1446
4	0.0500	0.1413	26	239.9500	0.1446
5	0.0667	0.1414	27	269.9500	0.1446
6	0.0833	0.1414	28	299.9500	0.1446
7	0.1000	0.1414	29	329.9333	0.1446
8	0.2000	0.1416	30	359.9333	0.1446
9	0.2500	0.1417	31	389.9333	0.1446
10	0.5000	0.1420	32	419.9333	0.1446
11	1.0000	0.1423	33	449.9167	0.1446
12	2.0000	0.1429	34	479.9000	0.1446
13	4.0000	0.1434	35	509.9167	0.1446
14	5.0000	0.1436	36	539.9000	0.1446
15	8.0000	0.1438	37	569.8833	0.1446
16	10.0000	0.1439	38	599.8833	0.1446
17	15.0000	0.1442	39	629.8833	0.1447
18	20.0000	0.1443	40	659.8667	0.1447
19	39.9833	0.1445	41	689.8667	0.1447
20	60.0000	0.1445	42	719.8667	0.1447
21	90.0000	0.1445	43	723.4500	0.1447
22	119.9833	0.1446			



Void Ratio = 0.721 **Compression =** 19.6%
D_0 = 0.1412 **D_{90} =** 0.1437 **D_{100} =** 0.1440 **C_v at 6.05 min. =** 0.124 ft.^{2}/day

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1447	13	4.0000	0.1503
2	0.0167	0.1461	14	5.0000	0.1508
3	0.0333	0.1463	15	8.0000	0.1515
4	0.0500	0.1464	16	10.0000	0.1518
5	0.0667	0.1467	17	15.0000	0.1524
6	0.0833	0.1467	18	19.9833	0.1527
7	0.1000	0.1468	19	39.9833	0.1534
8	0.2000	0.1470	20	59.9667	0.1540
9	0.2500	0.1471	21	89.9667	0.1543
10	0.5000	0.1477	22	119.9667	0.1547
11	1.0000	0.1484	23	149.9500	0.1549
12	2.0000	0.1493	24	179.9500	0.1550

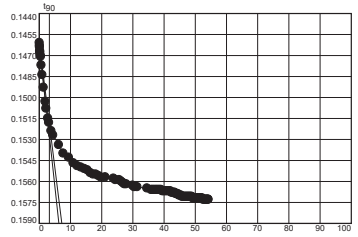


Figure D-209

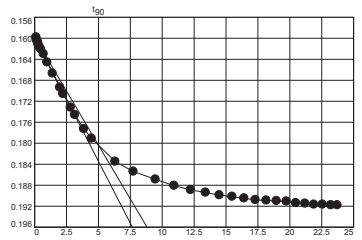
Pressure: 2.00 tsf | **TEST READINGS (continued)** | **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	209.9500	0.1551	51	1499.5667	0.1566	77	2279.4167	0.1571
26	239.9500	0.1552	52	1529.5500	0.1566	78	2309.4167	0.1571
27	269.9333	0.1554	53	1559.5667	0.1567	79	2339.4167	0.1571
28	299.9333	0.1555	54	1589.5667	0.1567	80	2369.4000	0.1571
29	329.9333	0.1555	55	1619.5500	0.1567	81	2399.3833	0.1571
30	359.9167	0.1556	56	1649.5333	0.1567	82	2429.4000	0.1572
31	389.9000	0.1557	57	1679.5500	0.1567	83	2459.3833	0.1572
32	449.9000	0.1557	58	1709.5333	0.1567	84	2489.3667	0.1572
33	569.8667	0.1558	59	1739.5167	0.1567	85	2519.3667	0.1572
34	599.8667	0.1559	60	1769.5167	0.1567	86	2549.3667	0.1572
35	659.7333	0.1559	61	1799.5167	0.1568	87	2579.3667	0.1572
36	689.7167	0.1560	62	1829.5000	0.1568	88	2609.3500	0.1572
37	719.7333	0.1561	63	1859.5000	0.1568	89	2639.3500	0.1572
38	749.7167	0.1562	64	1889.5000	0.1568	90	2669.3500	0.1572
39	779.7000	0.1562	65	1919.4833	0.1569	91	2699.3333	0.1572
40	899.6833	0.1563	66	1949.4833	0.1569	92	2729.3167	0.1572
41	929.6833	0.1564	67	1979.4833	0.1569	93	2759.3167	0.1573
42	989.6667	0.1564	68	2009.4833	0.1570	94	2789.3333	0.1573
43	1199.6167	0.1565	69	2039.4500	0.1570	95	2819.3167	0.1573
44	1289.6167	0.1566	70	2069.4500	0.1570	96	2849.3000	0.1573
45	1319.6000	0.1566	71	2099.4667	0.1571	97	2879.3000	0.1573
46	1349.6167	0.1566	72	2129.4500	0.1571	98	2909.3000	0.1573
47	1379.6000	0.1566	73	2159.4333	0.1571	99	2939.2833	0.1573
48	1409.5833	0.1566	74	2189.4333	0.1571	100	2945.8833	0.1573
49	1439.5833	0.1566	75	2219.4333	0.1571			
50	1469.5833	0.1566	76	2249.4167	0.1571			

Void Ratio = 0.684 **Compression =** 21.3%
D_0 = 0.1461 **D_{90} =** 0.1519 **D_{100} =** 0.1525 **C_v at 10.39 min. =** 0.070 ft.^{2}/day

Pressure: 4.00 tsf | **TEST READINGS** | **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1573	20	60.0000	0.1854
2	0.0167	0.1598	21	90.0000	0.1869
3	0.0333	0.1603	22	119.9833	0.1881
4	0.0500	0.1606	23	149.9667	0.1889
5	0.0667	0.1607	24	179.9833	0.1894
6	0.0833	0.1611	25	209.9667	0.1899
7	0.1000	0.1612	26	239.9500	0.1902
8	0.2000	0.1619	27	269.9500	0.1905
9	0.2500	0.1621	28	299.9500	0.1908
10	0.5000	0.1630	29	329.9500	0.1909
11	1.0000	0.1646	30	359.9333	0.1910
12	2.0000	0.1667	31	389.9167	0.1911
13	4.0000	0.1694	32	419.9333	0.1914
14	5.0000	0.1706	33	449.9167	0.1915
15	8.0000	0.1732	34	479.9000	0.1917
16	10.0000	0.1746	35	509.9000	0.1917
17	15.0000	0.1773	36	539.9000	0.1918
18	20.0000	0.1791	37	563.8000	0.1918
19	40.0000	0.1835			



Void Ratio = 0.584 **Compression =** 26.0%
D_0 = 0.1598 **D_{90} =** 0.1804 **D_{100} =** 0.1827 **C_v at 25.07 min. =** 0.027 ft.^{2}/day

Pressure: 8.00 tsf | **TEST READINGS** | **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1918	16	10.0000	0.2108
2	0.0167	0.1920	17	14.9833	0.2135
3	0.0333	0.1950	18	19.9833	0.2157
4	0.0500	0.1954	19	39.9667	0.2202
5	0.0667	0.1958	20	59.9667	0.2222
6	0.0833	0.1960	21	89.9667	0.2238
7	0.1000	0.1963	22	119.9667	0.2246
8	0.2000	0.1972	23	149.9667	0.2253
9	0.2500	0.1974	24	179.9500	0.2256
10	0.5000	0.1986	25	209.9333	0.2260
11	1.0000	0.2002	26	239.9500	0.2262
12	2.0000	0.2023	27	269.9500	0.2264
13	4.0000	0.2054	28	299.9333	0.2267
14	5.0000	0.2066	29	329.9167	0.2269
15	8.0000	0.2093	30	359.9167	0.2270

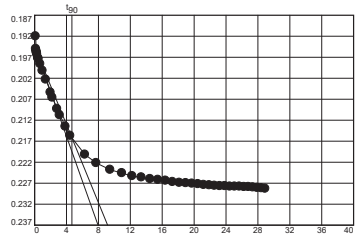


Figure D-210

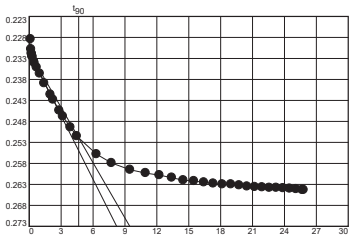
Pressure: 8.00 tsf	TEST READINGS (continued)	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	389.9167	0.2271	41	689.8500	0.2279
32	419.9167	0.2272	42	719.8333	0.2279
33	449.8833	0.2274	43	749.8500	0.2280
34	479.8833	0.2275	44	779.8333	0.2281
35	509.9000	0.2276	45	809.8167	0.2282
36	539.8833	0.2277	46	836.0833	0.2283
37	569.8667	0.2277			
38	599.8667	0.2278			
39	629.8667	0.2278			
40	659.8667	0.2278			

Void Ratio = 0.478 **Compression =** 31.0%
D_0 = 0.1945 **D_{90} =** 0.2162 **D_{100} =** 0.2186 **C_v at 21.83 min. =** 0.027 ft.^{2}/day

Pressure: 16.00 tsf	TEST READINGS	Load No. 12

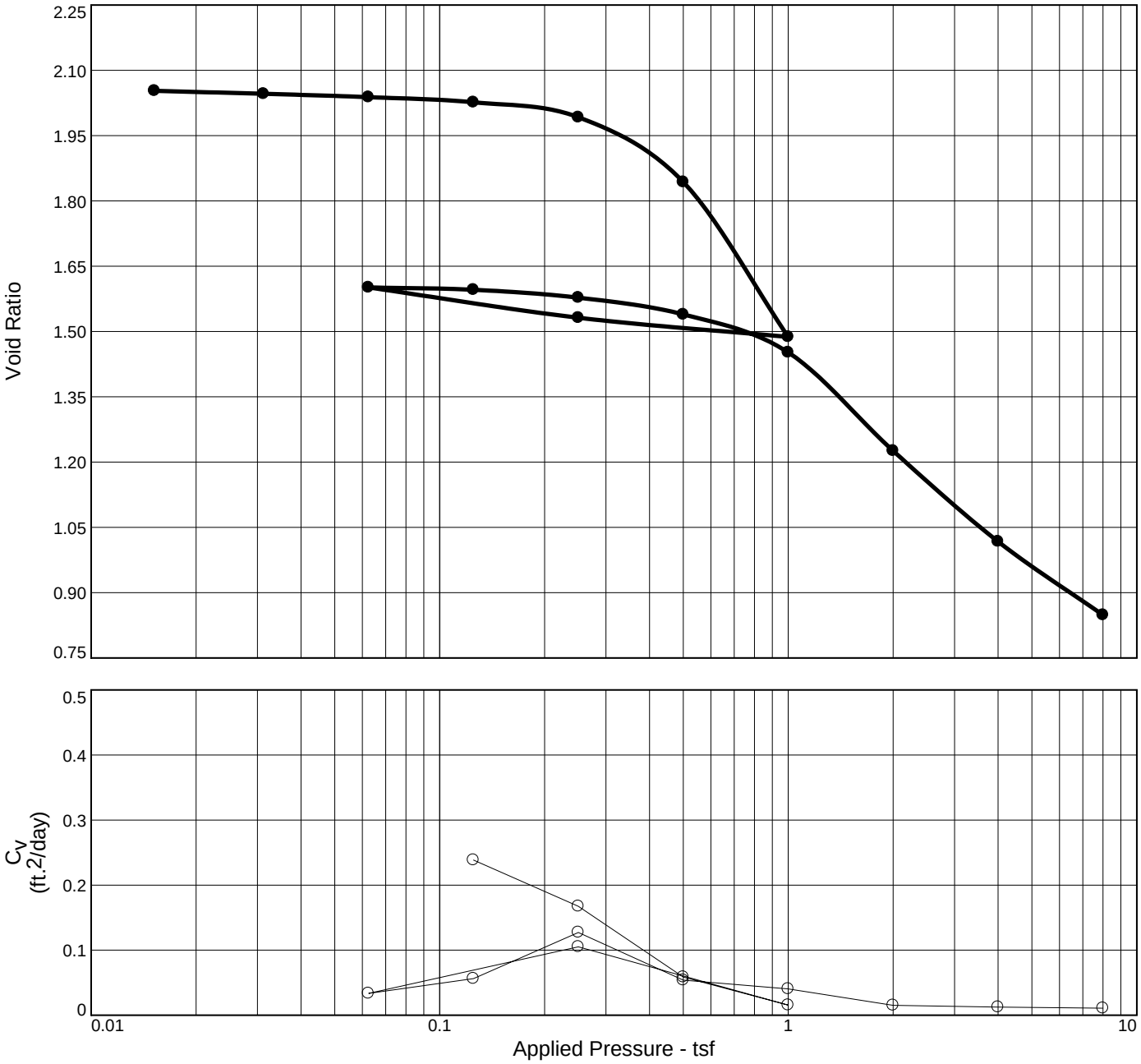
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2283	22	119.9667	0.2603
2	0.0167	0.2284	23	149.9833	0.2608
3	0.0333	0.2308	24	179.9667	0.2614
4	0.0500	0.2318	25	209.9500	0.2620
5	0.0667	0.2320	26	239.9500	0.2622
6	0.0833	0.2325	27	269.9500	0.2625
7	0.1000	0.2326	28	299.9500	0.2628
8	0.2000	0.2337	29	329.9333	0.2630
9	0.2500	0.2341	30	359.9333	0.2630
10	0.5000	0.2351	31	389.9333	0.2632
11	1.0000	0.2366	32	419.9167	0.2635
12	2.0000	0.2389	33	449.9000	0.2636
13	4.0000	0.2416	34	479.9000	0.2637
14	5.0000	0.2428	35	509.9000	0.2638
15	8.0000	0.2454	36	539.9000	0.2638
16	10.0000	0.2468	37	569.8833	0.2639
17	15.0000	0.2494	38	599.8667	0.2640
18	20.0000	0.2515	39	629.8833	0.2641
19	40.0000	0.2558	40	659.8833	0.2643
20	60.0000	0.2579	41	666.2667	0.2643
21	89.9833	0.2595			



Void Ratio = 0.373 **Compression =** 35.8%
D_0 = 0.2315 **D_{90} =** 0.2519 **D_{100} =** 0.2542 **C_v at 21.58 min. =** 0.024 ft.^{2}/day

Figure D-211

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
104.4 %	81.6 %	53.7	89	64	2.627	0.4	1.27	2.053

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with shell fragments layer	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-36 **Depth:** 20' - 22'

GeoEngineers

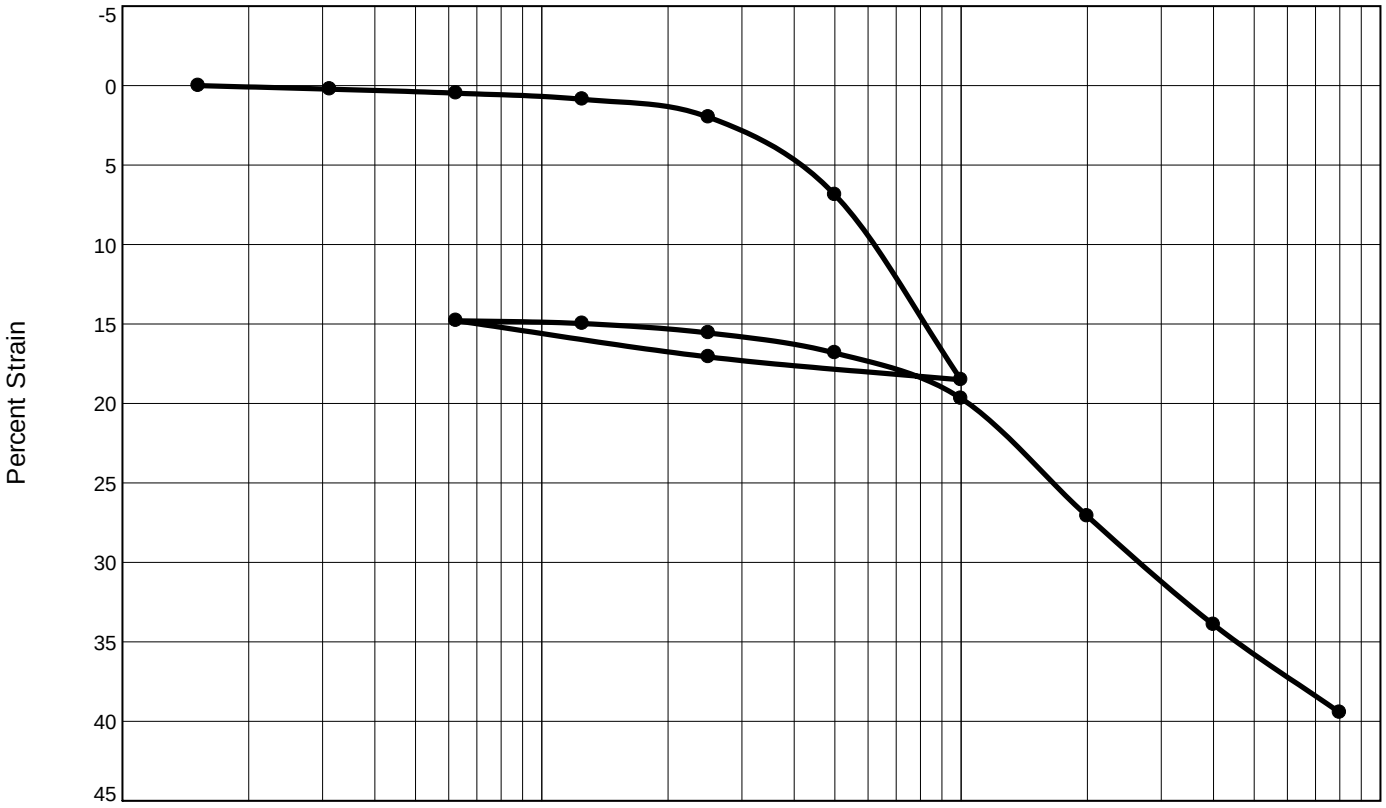
Remarks:
Specific Gravity is measured.

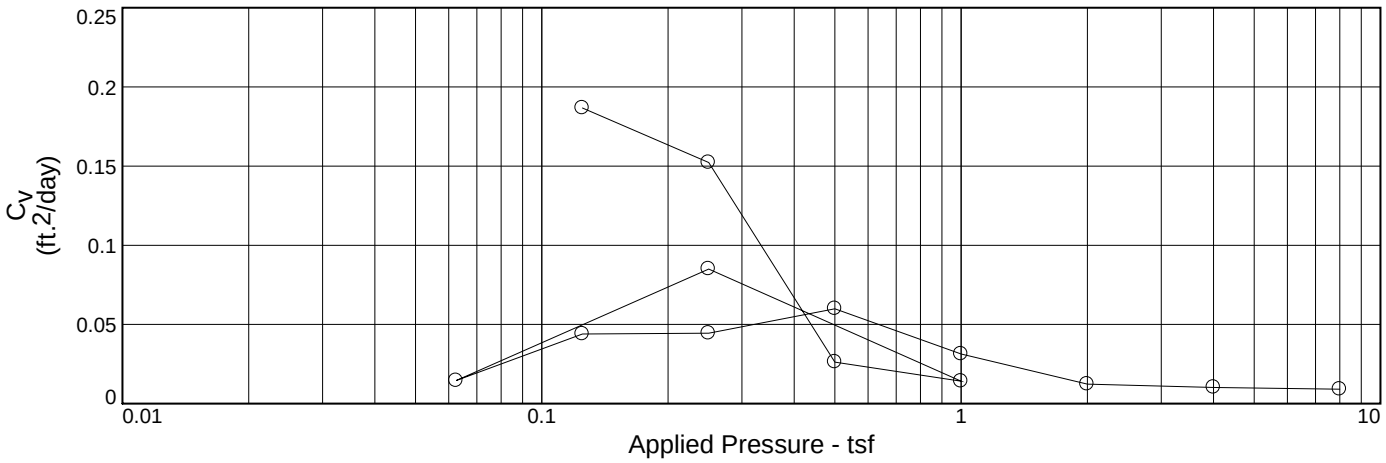
C_v at t_{90}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-212

CONSOLIDATION TEST REPORT





Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
104.4 %	81.6 %	53.7	89	64	2.627	0.4	1.27	2.053

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with shell fragments layer	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-36 **Depth:** 20' - 22'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-213

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-36
Depth: 20' - 22'
Material Description: Gray clay with shell fragments layer
Liquid Limit: 89 **Plasticity Index:** 64
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	155.41 g.	Spec. Gr. =	2.627	Wet w+t =	134.78 g.
Dry w+t =	89.11 g.	Est. Ht. Solids =	0.326 in.	Dry w+t =	110.95 g.
Tare Wt. =	7.83 g.	Init. V.R. =	2.053	Tare Wt. =	40.62 g.
Moisture =	81.6 %	Init. Sat. =	104.4 %	Moisture =	33.9 %

UNIT WEIGHT		TEST START			
Height =	0.995 in.	Height =	0.995 in.	Dry Wt. =	70.33 g.
Diameter =	2.501 in.	Diameter =	2.501 in.		
Weight =	125.15 g.				
Dry Dens. =	53.7 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.57879	0.00000			2.053	
30.37	0.57881	0.00002			2.053	0.0 Comprs.
62.50	0.58100	0.00221		0.001	2.046	0.2 Comprs.
125.00	0.58353	0.00474		0.002	2.038	0.5 Comprs.
250.00	0.58738	0.00859	0.187	0.001	2.027	0.9 Comprs.
500.00	0.59857	0.01978	0.152	0.005	1.992	2.0 Comprs.
1000.00	0.64710	0.06831	0.026	0.066	1.843	6.9 Comprs.
2000.00	0.76303	0.18424	0.014	0.035	1.488	18.5 Comprs.
500.00	0.74867	0.16988	0.085		1.532	17.1 Comprs.
125.00	0.72600	0.14721	0.015		1.601	14.8 Comprs.
250.00	0.72775	0.14896	0.044	0.000	1.596	15.0 Comprs.
500.00	0.73367	0.15488	0.044	0.002	1.578	15.6 Comprs.
1000.00	0.74620	0.16741	0.060	0.005	1.539	16.8 Comprs.
2000.00	0.77462	0.19583	0.031	0.010	1.452	19.7 Comprs.
4000.00	0.84837	0.26958	0.012	0.020	1.226	27.1 Comprs.
8000.00	0.91629	0.33750	0.010	0.022	1.017	33.9 Comprs.
16000.00	0.97127	0.39248	0.009	0.015	0.849	39.4 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 1.27 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.891
Recompression index (C_r) = 0.25

Pressure: 30.37 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57879	15	1.9833	0.57881	29	50.1500	0.57885
2	0.0333	0.57881	16	2.5000	0.57883	30	63.1333	0.57888
3	0.0667	0.57890	17	3.1500	0.57876	31	79.4833	0.57884
4	0.1000	0.57879	18	3.9833	0.57883	32	100.0500	0.57893
5	0.1500	0.57886	19	5.0167	0.57881	33	125.9500	0.57882
6	0.2000	0.57881	20	6.3167	0.57887	34	158.5667	0.57887
7	0.2667	0.57884	21	7.9500	0.57877	35	199.6000	0.57888
8	0.3500	0.57883	22	10.0167	0.57887	36	251.2667	0.57879
9	0.4500	0.57895	23	12.6167	0.57885	37	316.3000	0.57890
10	0.5833	0.57888	24	15.8833	0.57879	38	398.1833	0.57886
11	0.7667	0.57885	25	19.9833	0.57888	39	501.2667	0.57889
12	0.9667	0.57883	26	25.1500	0.57886	40	521.6000	0.57881
13	1.2333	0.57882	27	31.6500	0.57883			
14	1.5500	0.57878	28	39.8500	0.57882			

Void Ratio = 2.053 **Compression =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57853	15	1.7500	0.57906	29	40.0333	0.58044
2	0.1167	0.57845	16	2.1667	0.57915	30	50.3333	0.58049
3	0.2167	0.57847	17	2.6833	0.57938	31	63.3167	0.58060
4	0.2500	0.57843	18	3.3500	0.57973	32	79.6667	0.58059
5	0.2833	0.57845	19	4.1667	0.57981	33	100.2333	0.58061
6	0.3167	0.57847	20	5.2000	0.57998	34	126.1333	0.58072
7	0.3833	0.57856	21	6.5000	0.57997	35	158.7500	0.58072
8	0.4500	0.57845	22	8.1333	0.58008	36	199.7833	0.58068
9	0.5333	0.57845	23	10.2000	0.58009	37	251.4500	0.58082
10	0.6500	0.57841	24	12.7833	0.58028	38	316.5000	0.58081
11	0.7833	0.57849	25	16.0500	0.58034	39	398.3833	0.58089
12	0.9500	0.57843	26	20.1667	0.58034	40	501.4667	0.58100
13	1.1500	0.57837	27	25.3333	0.58043	41	502.3500	0.58100
14	1.4167	0.57848	28	31.8333	0.58045			

Void Ratio = 2.046 **Compression =** 0.2%

Figure D-214

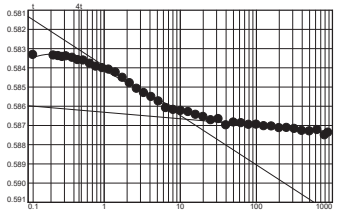
Pressure: 125.00 psf — **TEST READINGS** — **Load No. 3**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57981	15	1.7500	0.58125	29	40.0500	0.58267
2	0.1167	0.57986	16	2.1667	0.58140	30	50.3500	0.58272
3	0.2167	0.57981	17	2.7000	0.58147	31	63.3333	0.58283
4	0.2500	0.57982	18	3.3500	0.58164	32	79.6833	0.58288
5	0.2833	0.58005	19	4.1667	0.58170	33	100.2500	0.58294
6	0.3167	0.58046	20	5.2000	0.58182	34	126.1500	0.58301
7	0.3833	0.58056	21	6.5000	0.58202	35	158.7500	0.58306
8	0.4500	0.58064	22	8.1500	0.58209	36	199.8000	0.58312
9	0.5333	0.58071	23	10.2000	0.58220	37	251.4667	0.58313
10	0.6500	0.58076	24	12.8000	0.58234	38	316.5167	0.58326
11	0.7833	0.58087	25	16.0667	0.58234	39	398.4000	0.58344
12	0.9500	0.58103	26	20.1833	0.58244	40	501.4833	0.58347
13	1.1500	0.58107	27	25.3500	0.58251	41	518.3833	0.58353
14	1.4167	0.58114	28	31.8500	0.58264			

Void Ratio = 2.038 **Compression =** 0.5%

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.58224	22	8.1333	0.58619
2	0.1167	0.58333	23	10.2000	0.58624
3	0.2167	0.58336	24	12.7833	0.58630
4	0.2500	0.58339	25	16.0500	0.58645
5	0.2833	0.58344	26	20.1500	0.58656
6	0.3167	0.58340	27	25.3333	0.58673
7	0.3833	0.58348	28	31.8333	0.58667
8	0.4500	0.58360	29	40.0333	0.58699
9	0.5333	0.58362	30	50.3500	0.58685
10	0.6500	0.58379	31	63.3167	0.58688
11	0.7833	0.58394	32	79.6667	0.58697
12	0.9500	0.58402	33	100.2333	0.58696
13	1.1500	0.58409	34	126.1333	0.58704
14	1.4167	0.58425	35	158.7333	0.58705
15	1.7500	0.58452	36	199.7667	0.58714
16	2.1667	0.58480	37	251.4500	0.58713
17	2.6833	0.58509	38	316.4833	0.58718
18	3.3333	0.58531	39	398.3667	0.58728
19	4.1667	0.58552	40	501.4500	0.58731
20	5.2000	0.58575	41	631.2333	0.58724
21	6.5000	0.58610	42	794.6167	0.58751



Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 4**

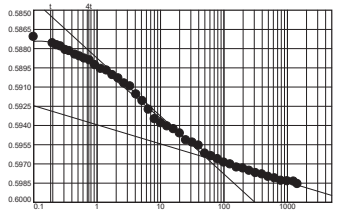
No.	Elapsed Time	Dial Reading
43	880.8667	0.58738

Void Ratio = 2.027 **Compression =** 0.9%

D_0 = 0.5834 D_{50} = 0.5850 D_{100} = 0.5867 C_v **at 2.58 min. =** 0.187 ft.2/day C_α = 0.001

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.58573	24	12.7833	0.59407
2	0.1000	0.58708	25	16.0500	0.59429
3	0.2000	0.58758	26	20.1667	0.59462
4	0.2333	0.58774	27	25.3333	0.59516
5	0.2667	0.58782	28	31.8500	0.59534
6	0.3167	0.58811	29	40.0333	0.59556
7	0.3667	0.58819	30	50.3500	0.59619
8	0.4500	0.58846	31	63.3333	0.59640
9	0.5333	0.58861	32	79.6833	0.59663
10	0.6333	0.58877	33	100.2500	0.59690
11	0.7667	0.58891	34	126.1500	0.59704
12	0.9333	0.58929	35	158.7500	0.59728
13	1.1500	0.58958	36	199.8000	0.59736
14	1.4167	0.58971	37	251.4667	0.59753
15	1.7500	0.59007	38	316.5000	0.59772
16	2.1667	0.59032	39	398.3833	0.59782
17	2.6833	0.59072	40	501.4833	0.59801
18	3.3333	0.59095	41	631.2500	0.59812
19	4.1500	0.59157	42	794.6333	0.59831
20	5.1833	0.59208	43	1000.3167	0.59835
21	6.5000	0.59276	44	1259.2500	0.59838
22	8.1333	0.59351	45	1440.4167	0.59857
23	10.2000	0.59383			



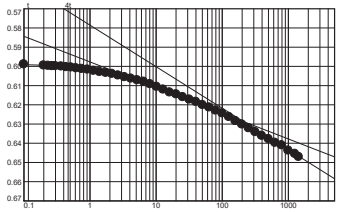
Void Ratio = 1.992 **Compression =** 2.0%

D_0 = 0.5861 D_{50} = 0.5913 D_{100} = 0.5965 C_v **at 3.12 min. =** 0.152 ft.2/day C_α = 0.005

Figure D-215

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

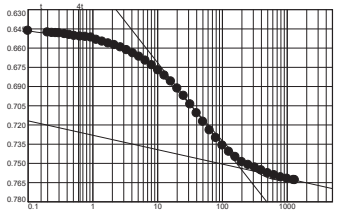
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.59701	24	12.7833	0.61203
2	0.1000	0.59895	25	16.0500	0.61355
3	0.2000	0.59953	26	20.1667	0.61451
4	0.2333	0.59970	27	25.3333	0.61599
5	0.2667	0.59983	28	31.8500	0.61725
6	0.3000	0.59983	29	40.0333	0.61846
7	0.3667	0.60000	30	50.3500	0.62005
8	0.4333	0.60038	31	63.3333	0.62135
9	0.5167	0.60055	32	79.6667	0.62300
10	0.6167	0.60098	33	100.2500	0.62444
11	0.7500	0.60134	34	126.1500	0.62628
12	0.9167	0.60168	35	158.7500	0.62841
13	1.1333	0.60229	36	199.7833	0.63021
14	1.4000	0.60289	37	251.4500	0.63215
15	1.7333	0.60334	38	316.5000	0.63419
16	2.1500	0.60384	39	398.3833	0.63608
17	2.6667	0.60470	40	501.4667	0.63781
18	3.3333	0.60555	41	631.2500	0.63980
19	4.1500	0.60635	42	794.6167	0.64105
20	5.1833	0.60718	43	1000.3000	0.64376
21	6.5000	0.60796	44	1259.2333	0.64553
22	8.1333	0.60926	45	1440.4667	0.64710
23	10.2000	0.61063			



Void Ratio = 1.843 **Compression =** 6.9%
D_0 = 0.5979 **D_{50} =** 0.6133 **D_{100} =** 0.6287 **C_v at 17.01 min. =** 0.026 ft.^{2}/day **C_α =** 0.066

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64480	12	0.9333	0.65179
2	0.1000	0.64651	13	1.1333	0.65353
3	0.2000	0.64776	14	1.4000	0.65495
4	0.2333	0.64811	15	1.7333	0.65636
5	0.2667	0.64829	16	2.1500	0.65767
6	0.3000	0.64842	17	2.6833	0.65940
7	0.3667	0.64901	18	3.3333	0.66158
8	0.4333	0.64969	19	4.1500	0.66402
9	0.5167	0.65042	20	5.1833	0.66672
10	0.6333	0.65092	21	6.4833	0.66976
11	0.7667	0.65124	22	8.1333	0.67334



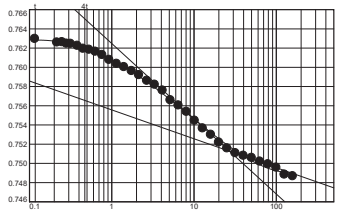
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.67731	33	100.2333	0.73599	43	1000.3000	0.76196
24	12.7833	0.68137	34	126.1333	0.74092	44	1259.2167	0.76296
25	16.0500	0.68603	35	158.7333	0.74503	45	1311.1000	0.76303
26	20.1500	0.69147	36	199.7833	0.74897			
27	25.3167	0.69727	37	251.4333	0.75119			
28	31.8333	0.70392	38	316.5000	0.75316			
29	40.0333	0.71089	39	398.3833	0.75541			
30	50.3500	0.71746	40	501.4667	0.75763			
31	63.3333	0.72416	41	631.2333	0.75921			
32	79.6667	0.73020	42	794.6167	0.76086			

Void Ratio = 1.488 **Compression =** 18.5%
D_0 = 0.6457 **D_{50} =** 0.6997 **D_{100} =** 0.7537 **C_v at 26.32 min. =** 0.014 ft.^{2}/day **C_α =** 0.035

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.76397	19	4.1500	0.75759
2	0.1167	0.76296	20	5.1833	0.75658
3	0.2167	0.76258	21	6.4833	0.75603
4	0.2500	0.76262	22	8.1333	0.75536
5	0.2833	0.76247	23	10.1833	0.75445
6	0.3167	0.76244	24	12.7833	0.75364
7	0.3833	0.76224	25	16.0500	0.75298
8	0.4500	0.76194	26	20.1500	0.75217
9	0.5333	0.76183	27	25.3333	0.75157
10	0.6333	0.76162	28	31.8333	0.75107
11	0.7667	0.76129	29	40.0333	0.75079
12	0.9333	0.76078	30	50.3500	0.75058
13	1.1500	0.76037	31	63.3333	0.75019
14	1.4167	0.76002	32	79.6833	0.74991
15	1.7500	0.75961	33	100.2500	0.74956
16	2.1500	0.75919	34	126.1500	0.74884
17	2.6833	0.75860	35	158.7500	0.74867
18	3.3333	0.75819			

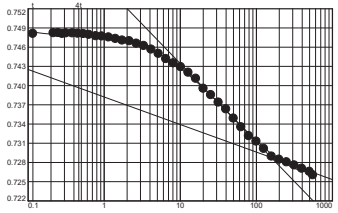


Void Ratio = 1.532 **Compression =** 17.1%
D_0 = 0.7637 **D_{50} =** 0.7575 **D_{100} =** 0.7513 **C_v at 3.87 min. =** 0.085 ft.^{2}/day

Figure D-216

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

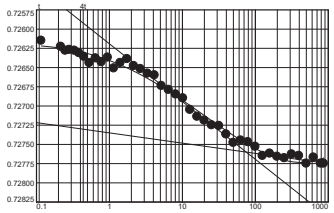
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.74867	22	8.1500	0.74348
2	0.1167	0.74808	23	10.2167	0.74289
3	0.2167	0.74818	24	12.8167	0.74201
4	0.2500	0.74820	25	16.0667	0.74108
5	0.2833	0.74807	26	20.1833	0.73951
6	0.3167	0.74815	27	25.3500	0.73851
7	0.3833	0.74816	28	31.8500	0.73735
8	0.4500	0.74811	29	40.0500	0.73630
9	0.5333	0.74806	30	50.3667	0.73486
10	0.6333	0.74792	31	63.3500	0.73350
11	0.7833	0.74771	32	79.7000	0.73212
12	0.9333	0.74767	33	100.2667	0.73126
13	1.1500	0.74751	34	126.1667	0.73013
14	1.4167	0.74729	35	158.7667	0.72892
15	1.7333	0.74703	36	199.8167	0.72844
16	2.1500	0.74694	37	251.4667	0.72803
17	2.6667	0.74654	38	316.5167	0.72753
18	3.3333	0.74619	39	398.4000	0.72703
19	4.1667	0.74563	40	501.5000	0.72654
20	5.2000	0.74497	41	554.1333	0.72600
21	6.5167	0.74414			



Void Ratio = 1.601 **Compression =** 14.8%
D_0 = 0.7488 **D_{50} =** 0.7388 **D_{100} =** 0.7288 **C_v at 23.66 min. =** 0.015 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.72619	14	1.4167	0.72644
2	0.1167	0.72615	15	1.7500	0.72639
3	0.2167	0.72623	16	2.1667	0.72648
4	0.2500	0.72628	17	2.6833	0.72652
5	0.2833	0.72627	18	3.3500	0.72658
6	0.3333	0.72628	19	4.1667	0.72660
7	0.3833	0.72631	20	5.2000	0.72674
8	0.4500	0.72636	21	6.5000	0.72679
9	0.5333	0.72644	22	8.1500	0.72685
10	0.6500	0.72638	23	10.2000	0.72690
11	0.7833	0.72643	24	12.8000	0.72705
12	0.9500	0.72637	25	16.0667	0.72714
13	1.1500	0.72651	26	20.1667	0.72719



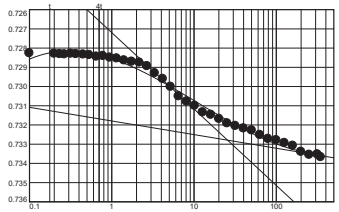
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	25.3333	0.72725	37	251.4500	0.72768
28	31.8500	0.72726	38	316.5000	0.72763
29	40.0333	0.72737	39	398.3833	0.72765
30	50.3500	0.72748	40	501.4667	0.72775
31	63.3333	0.72745	41	631.2500	0.72767
32	79.6667	0.72747	42	794.6167	0.72775
33	100.2500	0.72753	43	867.9167	0.72775
34	126.1500	0.72765			
35	158.7500	0.72762			
36	199.7833	0.72766			

Void Ratio = 1.596 **Compression =** 15.0%
D_0 = 0.7261 **D_{50} =** 0.7269 **D_{100} =** 0.7276 **C_v at 8.03 min. =** 0.044 ft.^{2}/day **C_α =** 0.000

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.72749	21	6.5000	0.73051
2	0.1000	0.72826	22	8.1333	0.73078
3	0.2000	0.72829	23	10.2000	0.73100
4	0.2333	0.72831	24	12.8000	0.73134
5	0.2667	0.72832	25	16.0667	0.73147
6	0.3167	0.72829	26	20.1667	0.73168
7	0.3667	0.72831	27	25.3333	0.73191
8	0.4500	0.72833	28	31.8500	0.73205
9	0.5333	0.72836	29	40.0333	0.73218
10	0.6500	0.72844	30	50.3500	0.73228
11	0.7833	0.72841	31	63.3333	0.73252
12	0.9500	0.72849	32	79.6667	0.73272
13	1.1500	0.72854	33	100.2500	0.73279
14	1.4167	0.72864	34	126.1500	0.73294
15	1.7500	0.72871	35	158.7500	0.73308
16	2.1667	0.72875	36	199.7833	0.73340
17	2.6833	0.72894	37	251.4667	0.73355
18	3.3333	0.72930	38	316.5000	0.73353
19	4.1667	0.72960	39	347.2333	0.73367
20	5.2000	0.73001			

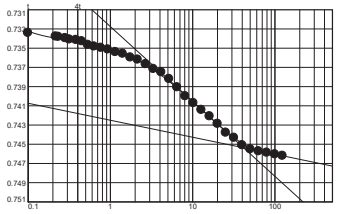


Void Ratio = 1.578 **Compression =** 15.6%
D_0 = 0.7281 **D_{50} =** 0.7305 **D_{100} =** 0.7328 **C_v at 7.87 min. =** 0.044 ft.^{2}/day **C_α =** 0.002

Figure D-217

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

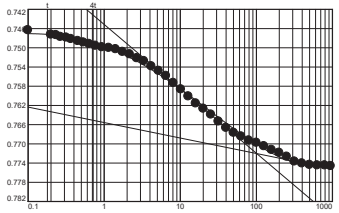
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.73247	18	3.3333	0.73716
2	0.1000	0.73341	19	4.1500	0.73750
3	0.2167	0.73378	20	5.1833	0.73820
4	0.2333	0.73382	21	6.4833	0.73907
5	0.2833	0.73395	22	8.1333	0.74000
6	0.3167	0.73409	23	10.1833	0.74070
7	0.3833	0.73414	24	12.7833	0.74143
8	0.4500	0.73428	25	16.0500	0.74209
9	0.5333	0.73465	26	20.1500	0.74288
10	0.6333	0.73482	27	25.3167	0.74380
11	0.7667	0.73496	28	31.8333	0.74433
12	0.9333	0.73513	29	40.0167	0.74510
13	1.1500	0.73540	30	50.3333	0.74551
14	1.4167	0.73557	31	63.3167	0.74573
15	1.7500	0.73597	32	79.6500	0.74587
16	2.1500	0.73619	33	100.2333	0.74604
17	2.6833	0.73666	34	123.4667	0.74620



Void Ratio = 1.539 **Compression =** 16.8%
D_0 = 0.7322 **D_{50} =** 0.7388 **D_{100} =** 0.7454 **C_v at 5.73 min. =** 0.060 ft.^{2}/day **C_α =** 0.005

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.74490	18	3.3333	0.75276
2	0.1000	0.74634	19	4.1667	0.75384
3	0.2000	0.74725	20	5.2000	0.75479
4	0.2333	0.74736	21	6.5000	0.75585
5	0.2667	0.74772	22	8.1333	0.75732
6	0.3167	0.74786	23	10.1833	0.75864
7	0.3667	0.74816	24	12.7833	0.76010
8	0.4500	0.74859	25	16.0500	0.76158
9	0.5333	0.74888	26	20.1500	0.76268
10	0.6333	0.74920	27	25.3333	0.76391
11	0.7667	0.74958	28	31.8333	0.76534
12	0.9333	0.74987	29	40.0167	0.76666
13	1.1500	0.75002	30	50.3333	0.76768
14	1.4167	0.75030	31	63.3167	0.76845
15	1.7500	0.75085	32	79.6500	0.76928
16	2.1667	0.75135	33	100.2333	0.76975
17	2.6833	0.75216	34	126.1167	0.77048



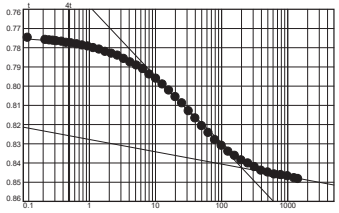
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 13**

No.	Elapsed Time	Dial Reading
35	158.7167	0.77125
36	199.7667	0.77184
37	251.4333	0.77265
38	316.4833	0.77367
39	398.3667	0.77406
40	501.4500	0.77438
41	631.2333	0.77447
42	794.6167	0.77447
43	947.3833	0.77462

Void Ratio = 1.452 **Compression =** 19.7%
D_0 = 0.7455 **D_{50} =** 0.7587 **D_{100} =** 0.7720 **C_v at 10.40 min. =** 0.031 ft.^{2}/day **C_α =** 0.010

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77193	24	12.7833	0.79911
2	0.1167	0.77486	25	16.0500	0.80231
3	0.2167	0.77592	26	20.1500	0.80572
4	0.2500	0.77618	27	25.3167	0.80891
5	0.2833	0.77636	28	31.8333	0.81305
6	0.3167	0.77663	29	40.0167	0.81678
7	0.3833	0.77685	30	50.3333	0.82077
8	0.4500	0.77748	31	63.3167	0.82434
9	0.5333	0.77773	32	79.6500	0.82808
10	0.6500	0.77826	33	100.2333	0.83103
11	0.7833	0.77884	34	126.1333	0.83408
12	0.9500	0.77933	35	158.7333	0.83628
13	1.1500	0.78017	36	199.7667	0.83861
14	1.4167	0.78100	37	251.4333	0.84021
15	1.7500	0.78217	38	316.4833	0.84213
16	2.1667	0.78309	39	398.3667	0.84396
17	2.6833	0.78411	40	501.4500	0.84492
18	3.3333	0.78581	41	631.2333	0.84596
19	4.1500	0.78759	42	794.6000	0.84629
20	5.1833	0.78925	43	1000.2833	0.84692
21	6.4833	0.79110	44	1259.2167	0.84792
22	8.1333	0.79390	45	1440.4667	0.84837
23	10.1833	0.79611			

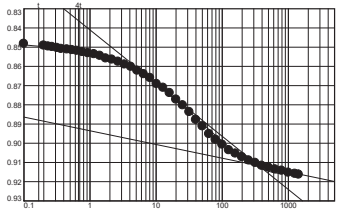


Void Ratio = 1.226 **Compression =** 27.1%
D_0 = 0.7738 **D_{50} =** 0.8082 **D_{100} =** 0.8425 **C_v at 23.26 min. =** 0.012 ft.^{2}/day **C_α =** 0.020

Figure D-218

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

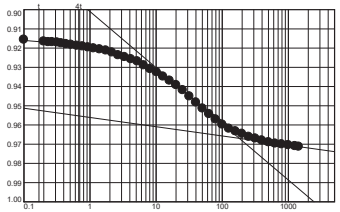
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.84482	24	12.7833	0.87115
2	0.1000	0.84825	25	16.0500	0.87385
3	0.2000	0.84916	26	20.1500	0.87723
4	0.2333	0.84966	27	25.3333	0.88022
5	0.2667	0.84989	28	31.8333	0.88372
6	0.3167	0.85043	29	40.0333	0.88781
7	0.3667	0.85091	30	50.3333	0.89120
8	0.4500	0.85119	31	63.3167	0.89521
9	0.5333	0.85152	32	79.6667	0.89812
10	0.6333	0.85189	33	100.2333	0.90072
11	0.7667	0.85249	34	126.1500	0.90359
12	0.9333	0.85310	35	158.7333	0.90536
13	1.1500	0.85367	36	199.7833	0.90720
14	1.4167	0.85445	37	251.4500	0.90894
15	1.7333	0.85582	38	316.4833	0.91022
16	2.1500	0.85642	39	398.3833	0.91169
17	2.6667	0.85753	40	501.4500	0.91254
18	3.3333	0.85897	41	631.2333	0.91359
19	4.1500	0.86020	42	794.6167	0.91429
20	5.1833	0.86221	43	1000.2833	0.91527
21	6.4833	0.86403	44	1259.2167	0.91590
22	8.1333	0.86600	45	1440.4000	0.91629
23	10.1833	0.86917			



Void Ratio = 1.017 **Compression =** 33.9%
D_0 = 0.8474 **D_{50} =** 0.8796 **D_{100} =** 0.9117 **C_v at 23.16 min. =** 0.010 ft.^{2}/day **C_α =** 0.022

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.91181	12	0.9333	0.91958
2	0.1000	0.91562	13	1.1333	0.92010
3	0.2000	0.91652	14	1.4000	0.92060
4	0.2333	0.91688	15	1.7333	0.92124
5	0.2667	0.91687	16	2.1500	0.92228
6	0.3167	0.91707	17	2.6667	0.92370
7	0.3667	0.91748	18	3.3333	0.92463
8	0.4333	0.91792	19	4.1500	0.92574
9	0.5167	0.91821	20	5.1833	0.92686
10	0.6333	0.91874	21	6.4833	0.92894
11	0.7667	0.91912	22	8.1167	0.93085



Pressure: 16000.00 psf — **TEST READINGS (continued)** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.93246	33	100.2333	0.95977	43	1000.3000	0.97048
24	12.7667	0.93478	34	126.1333	0.96194	44	1259.2333	0.97099
25	16.0333	0.93695	35	158.7500	0.96328	45	1440.0000	0.97127
26	20.1500	0.93923	36	199.7833	0.96459			
27	25.3167	0.94187	37	251.4500	0.96617			
28	31.8333	0.94513	38	316.5000	0.96705			
29	40.0167	0.94826	39	398.3833	0.96806			
30	50.3333	0.95141	40	501.4667	0.96895			
31	63.3167	0.95431	41	631.2500	0.96968			
32	79.6667	0.95709	42	794.6333	0.97005			

Void Ratio = 0.849 **Compression =** 39.4%
D_0 = 0.9149 **D_{50} =** 0.9409 **D_{100} =** 0.9669 **C_v at 21.63 min. =** 0.009 ft.^{2}/day **C_α =** 0.015

Figure D-219

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-36
Depth: 20' - 22'
Material Description: Gray clay with shell fragments layer
Liquid Limit: 89 **Plasticity Index:** 64
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	155.41 g.	Spec. Gr. =	2.627	Wet w+t =	134.78 g.
Dry w+t =	89.11 g.	Est. Ht. Solids =	0.326 in.	Dry w+t =	110.95 g.
Tare Wt. =	7.83 g.	Init. V.R. =	2.053	Tare Wt. =	40.62 g.
Moisture =	81.6 %	Init. Sat. =	104.4 %	Moisture =	33.9 %

UNIT WEIGHT		TEST START			
Height =	0.995 in.	Height =	0.995 in.	Dry Wt. =	70.33 g.
Diameter =	2.501 in.	Diameter =	2.501 in.		
Weight =	125.15 g.				
Dry Dens. =	53.7 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.2/day)	C_α	Void Ratio	% Strain
start	0.57879	0.00000			2.053	
30.37	0.57881	0.00002			2.053	0.0 Comprs.
62.50	0.58100	0.00221		0.001	2.046	0.2 Comprs.
125.00	0.58353	0.00474		0.002	2.038	0.5 Comprs.
250.00	0.58738	0.00859	0.238		2.027	0.9 Comprs.
500.00	0.59857	0.01978	0.167		1.992	2.0 Comprs.
1000.00	0.64710	0.06831	0.059		1.843	6.9 Comprs.
2000.00	0.76303	0.18424	0.015		1.488	18.5 Comprs.
500.00	0.74867	0.16988	0.105		1.532	17.1 Comprs.
125.00	0.72600	0.14721	0.034		1.601	14.8 Comprs.
250.00	0.72775	0.14896	0.056		1.596	15.0 Comprs.
500.00	0.73367	0.15488	0.127		1.578	15.6 Comprs.
1000.00	0.74620	0.16741	0.054		1.539	16.8 Comprs.
2000.00	0.77462	0.19583	0.040		1.452	19.7 Comprs.
4000.00	0.84837	0.26958	0.015		1.226	27.1 Comprs.
8000.00	0.91629	0.33750	0.012		1.017	33.9 Comprs.
16000.00	0.97127	0.39248	0.011		0.849	39.4 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 1.27 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.891
Recompression index (C_r) = 0.25

Pressure: 30.37 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57879	15	1.9833	0.57881	29	50.1500	0.57885
2	0.0333	0.57881	16	2.5000	0.57883	30	63.1333	0.57888
3	0.0667	0.57890	17	3.1500	0.57876	31	79.4833	0.57884
4	0.1000	0.57879	18	3.9833	0.57883	32	100.0500	0.57893
5	0.1500	0.57886	19	5.0167	0.57881	33	125.9500	0.57882
6	0.2000	0.57881	20	6.3167	0.57887	34	158.5667	0.57887
7	0.2667	0.57884	21	7.9500	0.57877	35	199.6000	0.57888
8	0.3500	0.57883	22	10.0167	0.57887	36	251.2667	0.57879
9	0.4500	0.57895	23	12.6167	0.57885	37	316.3000	0.57890
10	0.5833	0.57888	24	15.8833	0.57879	38	398.1833	0.57886
11	0.7667	0.57885	25	19.9833	0.57888	39	501.2667	0.57889
12	0.9667	0.57883	26	25.1500	0.57886	40	521.6000	0.57881
13	1.2333	0.57882	27	31.6500	0.57883			
14	1.5500	0.57878	28	39.8500	0.57882			

Void Ratio = 2.053 **Compression =** 0.0%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57853	15	1.7500	0.57906	29	40.0333	0.58044
2	0.1167	0.57845	16	2.1667	0.57915	30	50.3333	0.58049
3	0.2167	0.57847	17	2.6833	0.57938	31	63.3167	0.58060
4	0.2500	0.57843	18	3.3500	0.57973	32	79.6667	0.58059
5	0.2833	0.57845	19	4.1667	0.57981	33	100.2333	0.58061
6	0.3167	0.57847	20	5.2000	0.57998	34	126.1333	0.58072
7	0.3833	0.57856	21	6.5000	0.57997	35	158.7500	0.58072
8	0.4500	0.57845	22	8.1333	0.58008	36	199.7833	0.58068
9	0.5333	0.57845	23	10.2000	0.58009	37	251.4500	0.58082
10	0.6500	0.57841	24	12.7833	0.58028	38	316.5000	0.58081
11	0.7833	0.57849	25	16.0500	0.58034	39	398.3833	0.58089
12	0.9500	0.57843	26	20.1667	0.58034	40	501.4667	0.58100
13	1.1500	0.57837	27	25.3333	0.58043	41	502.3500	0.58100
14	1.4167	0.57848	28	31.8333	0.58045			

Void Ratio = 2.046 **Compression =** 0.2%

Figure D-220

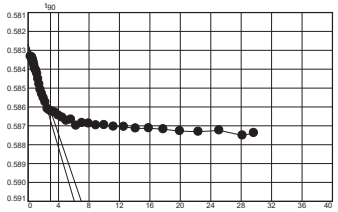
Pressure: 125.00 psf	TEST READINGS	Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.57981	15	1.7500	0.58125	29	40.0500	0.58267
2	0.1167	0.57986	16	2.1667	0.58140	30	50.3500	0.58272
3	0.2167	0.57981	17	2.7000	0.58147	31	63.3333	0.58283
4	0.2500	0.57982	18	3.3500	0.58164	32	79.6833	0.58288
5	0.2833	0.58005	19	4.1667	0.58170	33	100.2500	0.58294
6	0.3167	0.58046	20	5.2000	0.58182	34	126.1500	0.58301
7	0.3833	0.58056	21	6.5000	0.58202	35	158.7500	0.58306
8	0.4500	0.58064	22	8.1500	0.58209	36	199.8000	0.58312
9	0.5333	0.58071	23	10.2000	0.58220	37	251.4667	0.58313
10	0.6500	0.58076	24	12.8000	0.58234	38	316.5167	0.58326
11	0.7833	0.58087	25	16.0667	0.58234	39	398.4000	0.58344
12	0.9500	0.58103	26	20.1833	0.58244	40	501.4833	0.58347
13	1.1500	0.58107	27	25.3500	0.58251	41	518.3833	0.58353
14	1.4167	0.58114	28	31.8500	0.58264			

Void Ratio = 2.038 **Compression =** 0.5%

Pressure: 250.00 psf	TEST READINGS	Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.58224	22	8.1333	0.58619
2	0.1167	0.58333	23	10.2000	0.58624
3	0.2167	0.58336	24	12.7833	0.58630
4	0.2500	0.58339	25	16.0500	0.58645
5	0.2833	0.58344	26	20.1500	0.58656
6	0.3167	0.58340	27	25.3333	0.58673
7	0.3833	0.58348	28	31.8333	0.58667
8	0.4500	0.58360	29	40.0333	0.58699
9	0.5333	0.58362	30	50.3500	0.58685
10	0.6500	0.58379	31	63.3167	0.58688
11	0.7833	0.58394	32	79.6667	0.58697
12	0.9500	0.58402	33	100.2333	0.58696
13	1.1500	0.58409	34	126.1333	0.58704
14	1.4167	0.58425	35	158.7333	0.58705
15	1.7500	0.58452	36	199.7667	0.58714
16	2.1667	0.58480	37	251.4500	0.58713
17	2.6833	0.58509	38	316.4833	0.58718
18	3.3333	0.58531	39	398.3667	0.58728
19	4.1667	0.58552	40	501.4500	0.58731
20	5.2000	0.58575	41	631.2333	0.58724
21	6.5000	0.58610	42	794.6167	0.58751



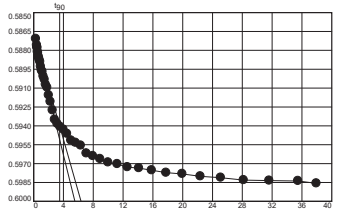
Pressure: 250.00 psf	TEST READINGS (continued)	Load No. 4

No.	Elapsed Time	Dial Reading
43	880.8667	0.58738

Void Ratio = 2.027 **Compression =** 0.9%
D_0 = 0.5827 **D_{90} =** 0.5862 **D_{100} =** 0.5866 **C_V at 8.70 min. =** 0.238 ft.2/day

Pressure: 500.00 psf	TEST READINGS	Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.58573	24	12.7833	0.59407
2	0.1000	0.58708	25	16.0500	0.59429
3	0.2000	0.58758	26	20.1667	0.59462
4	0.2333	0.58774	27	25.3333	0.59516
5	0.2667	0.58782	28	31.8500	0.59534
6	0.3167	0.58811	29	40.0333	0.59556
7	0.3667	0.58819	30	50.3500	0.59619
8	0.4500	0.58846	31	63.3333	0.59640
9	0.5333	0.58861	32	79.6833	0.59663
10	0.6333	0.58877	33	100.2500	0.59690
11	0.7667	0.58891	34	126.1500	0.59704
12	0.9333	0.58929	35	158.7500	0.59728
13	1.1500	0.58958	36	199.8000	0.59736
14	1.4167	0.58971	37	251.4667	0.59753
15	1.7500	0.59007	38	316.5000	0.59772
16	2.1667	0.59032	39	398.3833	0.59782
17	2.6833	0.59072	40	501.4833	0.59801
18	3.3333	0.59095	41	631.2500	0.59812
19	4.1500	0.59157	42	794.6333	0.59831
20	5.1833	0.59208	43	1000.3167	0.59835
21	6.5000	0.59276	44	1259.2500	0.59838
22	8.1333	0.59351	45	1440.4167	0.59857
23	10.2000	0.59383			

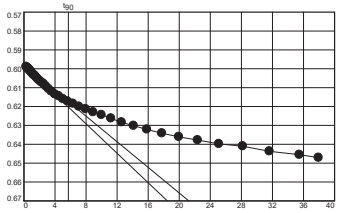


Void Ratio = 1.992 **Compression =** 2.0%
D_0 = 0.5867 **D_{90} =** 0.5940 **D_{100} =** 0.5948 **C_V at 12.20 min. =** 0.167 ft.2/day

Figure D-221

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

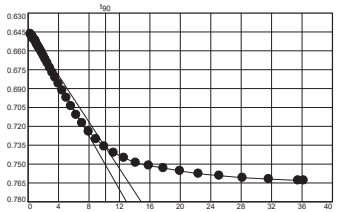
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.59701	24	12.7833	0.61203
2	0.1000	0.59895	25	16.0500	0.61355
3	0.2000	0.59953	26	20.1667	0.61451
4	0.2333	0.59970	27	25.3333	0.61599
5	0.2667	0.59983	28	31.8500	0.61725
6	0.3000	0.59983	29	40.0333	0.61846
7	0.3667	0.60000	30	50.3500	0.62005
8	0.4333	0.60038	31	63.3333	0.62135
9	0.5167	0.60055	32	79.6667	0.62300
10	0.6167	0.60098	33	100.2500	0.62444
11	0.7500	0.60134	34	126.1500	0.62628
12	0.9167	0.60168	35	158.7500	0.62841
13	1.1333	0.60229	36	199.7833	0.63021
14	1.4000	0.60289	37	251.4500	0.63215
15	1.7333	0.60334	38	316.5000	0.63419
16	2.1500	0.60384	39	398.3833	0.63608
17	2.6667	0.60470	40	501.4667	0.63781
18	3.3333	0.60555	41	631.2500	0.63980
19	4.1500	0.60635	42	794.6167	0.64105
20	5.1833	0.60718	43	1000.3000	0.64376
21	6.5000	0.60796	44	1259.2333	0.64553
22	8.1333	0.60926	45	1440.4667	0.64710
23	10.2000	0.61063			



Void Ratio = 1.843 **Compression =** 6.9%
D_0 = 0.5980 **D_{90} =** 0.6174 **D_{100} =** 0.6196 **C_v at 32.79 min. =** 0.059 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.64480	12	0.9333	0.65179
2	0.1000	0.64651	13	1.1333	0.65353
3	0.2000	0.64776	14	1.4000	0.65495
4	0.2333	0.64811	15	1.7333	0.65636
5	0.2667	0.64829	16	2.1500	0.65767
6	0.3000	0.64842	17	2.6833	0.65940
7	0.3667	0.64901	18	3.3333	0.66158
8	0.4333	0.64969	19	4.1500	0.66402
9	0.5167	0.65042	20	5.1833	0.66672
10	0.6333	0.65092	21	6.4833	0.66976
11	0.7667	0.65124	22	8.1333	0.67334



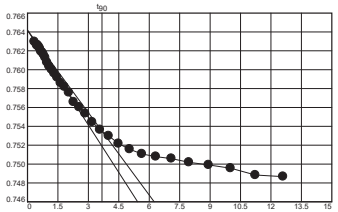
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.67731	33	100.2333	0.73599	43	1000.3000	0.76196
24	12.7833	0.68137	34	126.1333	0.74092	44	1259.2167	0.76296
25	16.0500	0.68603	35	158.7333	0.74503	45	1311.1000	0.76303
26	20.1500	0.69147	36	199.7833	0.74897			
27	25.3167	0.69727	37	251.4333	0.75119			
28	31.8333	0.70392	38	316.5000	0.75316			
29	40.0333	0.71089	39	398.3833	0.75541			
30	50.3500	0.71746	40	501.4667	0.75763			
31	63.3333	0.72416	41	631.2333	0.75921			
32	79.6667	0.73020	42	794.6167	0.76086			

Void Ratio = 1.488 **Compression =** 18.5%
D_0 = 0.6427 **D_{90} =** 0.7366 **D_{100} =** 0.7471 **C_v at 103.53 min. =** 0.015 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.76397	19	4.1500	0.75759
2	0.1167	0.76296	20	5.1833	0.75658
3	0.2167	0.76258	21	6.4833	0.75603
4	0.2500	0.76262	22	8.1333	0.75536
5	0.2833	0.76247	23	10.1833	0.75445
6	0.3167	0.76244	24	12.7833	0.75364
7	0.3833	0.76224	25	16.0500	0.75298
8	0.4500	0.76194	26	20.1500	0.75217
9	0.5333	0.76183	27	25.3333	0.75157
10	0.6333	0.76162	28	31.8333	0.75107
11	0.7667	0.76129	29	40.0333	0.75079
12	0.9333	0.76078	30	50.3500	0.75058
13	1.1500	0.76037	31	63.3333	0.75019
14	1.4167	0.76002	32	79.6833	0.74991
15	1.7500	0.75961	33	100.2500	0.74956
16	2.1500	0.75919	34	126.1500	0.74884
17	2.6833	0.75860	35	158.7500	0.74867
18	3.3333	0.75819			

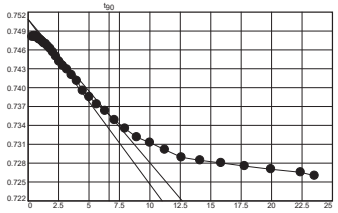


Void Ratio = 1.532 **Compression =** 17.1%
D_0 = 0.7642 **D_{90} =** 0.7535 **D_{100} =** 0.7523 **C_v at 13.48 min. =** 0.105 ft.^{2}/day

Figure D-222

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

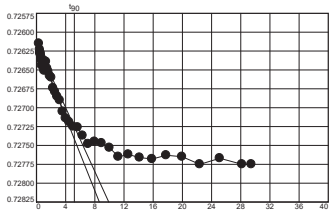
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.74867	22	8.1500	0.74348
2	0.1167	0.74808	23	10.2167	0.74289
3	0.2167	0.74818	24	12.8167	0.74201
4	0.2500	0.74820	25	16.0667	0.74108
5	0.2833	0.74807	26	20.1833	0.73951
6	0.3167	0.74815	27	25.3500	0.73851
7	0.3833	0.74816	28	31.8500	0.73735
8	0.4500	0.74811	29	40.0500	0.73630
9	0.5333	0.74806	30	50.3667	0.73486
10	0.6333	0.74792	31	63.3500	0.73350
11	0.7833	0.74771	32	79.7000	0.73212
12	0.9333	0.74767	33	100.2667	0.73126
13	1.1500	0.74751	34	126.1667	0.73013
14	1.4167	0.74729	35	158.7667	0.72892
15	1.7333	0.74703	36	199.8167	0.72844
16	2.1500	0.74694	37	251.4667	0.72803
17	2.6667	0.74654	38	316.5167	0.72753
18	3.3333	0.74619	39	398.4000	0.72703
19	4.1667	0.74563	40	501.5000	0.72654
20	5.2000	0.74497	41	554.1333	0.72600
21	6.5167	0.74414			



Void Ratio = 1.601 **Compression =** 14.8%
D_0 = 0.7508 **D_{90} =** 0.7357 **D_{100} =** 0.7340 **C_v at 44.24 min. =** 0.034 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.72619	14	1.4167	0.72644
2	0.1167	0.72615	15	1.7500	0.72639
3	0.2167	0.72623	16	2.1667	0.72648
4	0.2500	0.72628	17	2.6833	0.72652
5	0.2833	0.72627	18	3.3500	0.72658
6	0.3333	0.72628	19	4.1667	0.72660
7	0.3833	0.72631	20	5.2000	0.72674
8	0.4500	0.72636	21	6.5000	0.72679
9	0.5333	0.72644	22	8.1500	0.72685
10	0.6500	0.72638	23	10.2000	0.72690
11	0.7833	0.72643	24	12.8000	0.72705
12	0.9500	0.72637	25	16.0667	0.72714
13	1.1500	0.72651	26	20.1667	0.72719



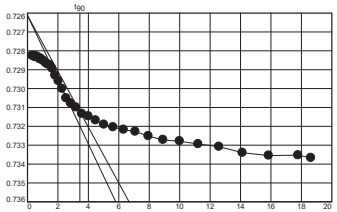
Pressure: 250.00 psf — **TEST READINGS (continued)** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	25.3333	0.72725	37	251.4500	0.72768
28	31.8500	0.72726	38	316.5000	0.72763
29	40.0333	0.72737	39	398.3833	0.72765
30	50.3500	0.72748	40	501.4667	0.72775
31	63.3333	0.72745	41	631.2500	0.72767
32	79.6667	0.72747	42	794.6167	0.72775
33	100.2500	0.72753	43	867.9167	0.72775
34	126.1500	0.72765			
35	158.7500	0.72762			
36	199.7833	0.72766			

Void Ratio = 1.596 **Compression =** 15.0%
D_0 = 0.7262 **D_{90} =** 0.7273 **D_{100} =** 0.7274 **C_v at 26.99 min. =** 0.056 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.72749	21	6.5000	0.73051
2	0.1000	0.72826	22	8.1333	0.73078
3	0.2000	0.72829	23	10.2000	0.73100
4	0.2333	0.72831	24	12.8000	0.73134
5	0.2667	0.72832	25	16.0667	0.73147
6	0.3167	0.72829	26	20.1667	0.73168
7	0.3667	0.72831	27	25.3333	0.73191
8	0.4500	0.72833	28	31.8500	0.73205
9	0.5333	0.72836	29	40.0333	0.73218
10	0.6500	0.72844	30	50.3500	0.73228
11	0.7833	0.72841	31	63.3333	0.73252
12	0.9500	0.72849	32	79.6667	0.73272
13	1.1500	0.72854	33	100.2500	0.73279
14	1.4167	0.72864	34	126.1500	0.73294
15	1.7500	0.72871	35	158.7500	0.73308
16	2.1667	0.72875	36	199.7833	0.73340
17	2.6833	0.72894	37	251.4667	0.73355
18	3.3333	0.72930	38	316.5000	0.73353
19	4.1667	0.72960	39	347.2333	0.73367
20	5.2000	0.73001			

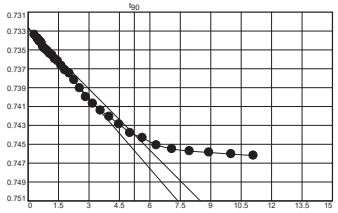


Void Ratio = 1.578 **Compression =** 15.6%
D_0 = 0.7261 **D_{90} =** 0.7312 **D_{100} =** 0.7318 **C_v at 11.85 min. =** 0.127 ft.^{2}/day

Figure D-223

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

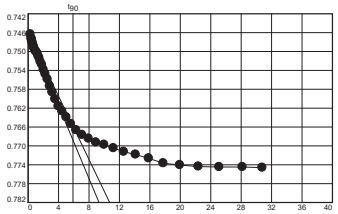
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.73247	18	3.3333	0.73716
2	0.1000	0.73341	19	4.1500	0.73750
3	0.2167	0.73378	20	5.1833	0.73820
4	0.2333	0.73382	21	6.4833	0.73907
5	0.2833	0.73395	22	8.1333	0.74000
6	0.3167	0.73409	23	10.1833	0.74070
7	0.3833	0.73414	24	12.7833	0.74143
8	0.4500	0.73428	25	16.0500	0.74209
9	0.5333	0.73465	26	20.1500	0.74288
10	0.6333	0.73482	27	25.3167	0.74380
11	0.7667	0.73496	28	31.8333	0.74433
12	0.9333	0.73513	29	40.0167	0.74510
13	1.1500	0.73540	30	50.3333	0.74551
14	1.4167	0.73557	31	63.3167	0.74573
15	1.7500	0.73597	32	79.6500	0.74587
16	2.1500	0.73619	33	100.2333	0.74604
17	2.6833	0.73666	34	123.4667	0.74620



Void Ratio = 1.539 **Compression =** 16.8%
D_0 = 0.7327 **D_{90} =** 0.7440 **D_{100} =** 0.7452 **C_v at 27.41 min. =** 0.054 ft.2/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.74490	18	3.3333	0.75276
2	0.1000	0.74634	19	4.1667	0.75384
3	0.2000	0.74725	20	5.2000	0.75479
4	0.2333	0.74736	21	6.5000	0.75585
5	0.2667	0.74772	22	8.1333	0.75732
6	0.3167	0.74786	23	10.1833	0.75864
7	0.3667	0.74816	24	12.7833	0.76010
8	0.4500	0.74859	25	16.0500	0.76158
9	0.5333	0.74888	26	20.1500	0.76268
10	0.6333	0.74920	27	25.3333	0.76391
11	0.7667	0.74958	28	31.8333	0.76534
12	0.9333	0.74987	29	40.0167	0.76666
13	1.1500	0.75002	30	50.3333	0.76768
14	1.4167	0.75030	31	63.3167	0.76845
15	1.7500	0.75085	32	79.6500	0.76928
16	2.1667	0.75135	33	100.2333	0.76975
17	2.6833	0.75216	34	126.1167	0.77048



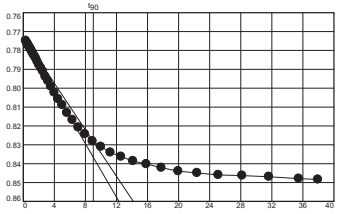
Pressure: 2000.00 psf — **TEST READINGS (continued)** — **Load No. 13**

No.	Elapsed Time	Dial Reading
35	158.7167	0.77125
36	199.7667	0.77184
37	251.4333	0.77265
38	316.4833	0.77367
39	398.3667	0.77406
40	501.4500	0.77438
41	631.2333	0.77447
42	794.6167	0.77447
43	947.3833	0.77462

Void Ratio = 1.452 **Compression =** 19.7%
D_0 = 0.7461 **D_{90} =** 0.7658 **D_{100} =** 0.7680 **C_v at 34.73 min. =** 0.040 ft.2/day

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.77193	24	12.7833	0.79911
2	0.1167	0.77486	25	16.0500	0.80231
3	0.2167	0.77592	26	20.1500	0.80572
4	0.2500	0.77618	27	25.3167	0.80891
5	0.2833	0.77636	28	31.8333	0.81305
6	0.3167	0.77663	29	40.0167	0.81678
7	0.3833	0.77685	30	50.3333	0.82077
8	0.4500	0.77748	31	63.3167	0.82434
9	0.5333	0.77773	32	79.6500	0.82808
10	0.6500	0.77826	33	100.2333	0.83103
11	0.7833	0.77884	34	126.1333	0.83408
12	0.9500	0.77933	35	158.7333	0.83628
13	1.1500	0.78017	36	199.7667	0.83861
14	1.4167	0.78100	37	251.4333	0.84021
15	1.7500	0.78217	38	316.4833	0.84213
16	2.1667	0.78309	39	398.3667	0.84396
17	2.6833	0.78411	40	501.4500	0.84492
18	3.3333	0.78581	41	631.2333	0.84596
19	4.1500	0.78759	42	794.6000	0.84629
20	5.1833	0.78925	43	1000.2833	0.84692
21	6.4833	0.79110	44	1259.2167	0.84792
22	8.1333	0.79390	45	1440.4667	0.84837
23	10.1833	0.79611			

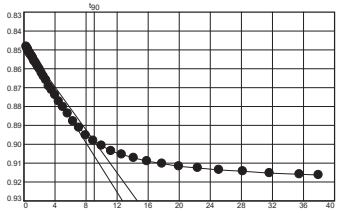


Void Ratio = 1.226 **Compression =** 27.1%
D_0 = 0.7728 **D_{90} =** 0.8283 **D_{100} =** 0.8345 **C_v at 81.33 min. =** 0.015 ft.2/day

Figure D-224

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

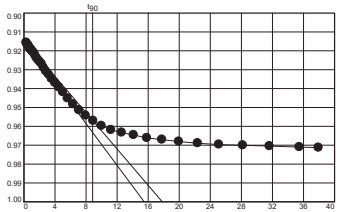
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.84482	24	12.7833	0.87115
2	0.1000	0.84825	25	16.0500	0.87385
3	0.2000	0.84916	26	20.1500	0.87723
4	0.2333	0.84966	27	25.3333	0.88022
5	0.2667	0.84989	28	31.8333	0.88372
6	0.3167	0.85043	29	40.0333	0.88781
7	0.3667	0.85091	30	50.3333	0.89120
8	0.4500	0.85119	31	63.3167	0.89521
9	0.5333	0.85152	32	79.6667	0.89812
10	0.6333	0.85189	33	100.2333	0.90072
11	0.7667	0.85249	34	126.1500	0.90359
12	0.9333	0.85310	35	158.7333	0.90536
13	1.1500	0.85367	36	199.7833	0.90720
14	1.4167	0.85445	37	251.4500	0.90894
15	1.7333	0.85582	38	316.4833	0.91022
16	2.1500	0.85642	39	398.3833	0.91169
17	2.6667	0.85753	40	501.4500	0.91254
18	3.3333	0.85897	41	631.2333	0.91359
19	4.1500	0.86020	42	794.6167	0.91429
20	5.1833	0.86221	43	1000.2833	0.91527
21	6.4833	0.86403	44	1259.2167	0.91590
22	8.1333	0.86600	45	1440.4000	0.91629
23	10.1833	0.86917			



Void Ratio = 1.017 **Compression =** 33.9%
D_0 = 0.8469 **D_{90} =** 0.8984 **D_{100} =** 0.9042 **C_v at 82.02 min. =** 0.012 ft.^{2}/day

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.91181	12	0.9333	0.91958
2	0.1000	0.91562	13	1.1333	0.92010
3	0.2000	0.91652	14	1.4000	0.92060
4	0.2333	0.91688	15	1.7333	0.92124
5	0.2667	0.91687	16	2.1500	0.92228
6	0.3167	0.91707	17	2.6667	0.92370
7	0.3667	0.91748	18	3.3333	0.92463
8	0.4333	0.91792	19	4.1500	0.92574
9	0.5167	0.91821	20	5.1833	0.92686
10	0.6333	0.91874	21	6.4833	0.92894
11	0.7667	0.91912	22	8.1167	0.93085



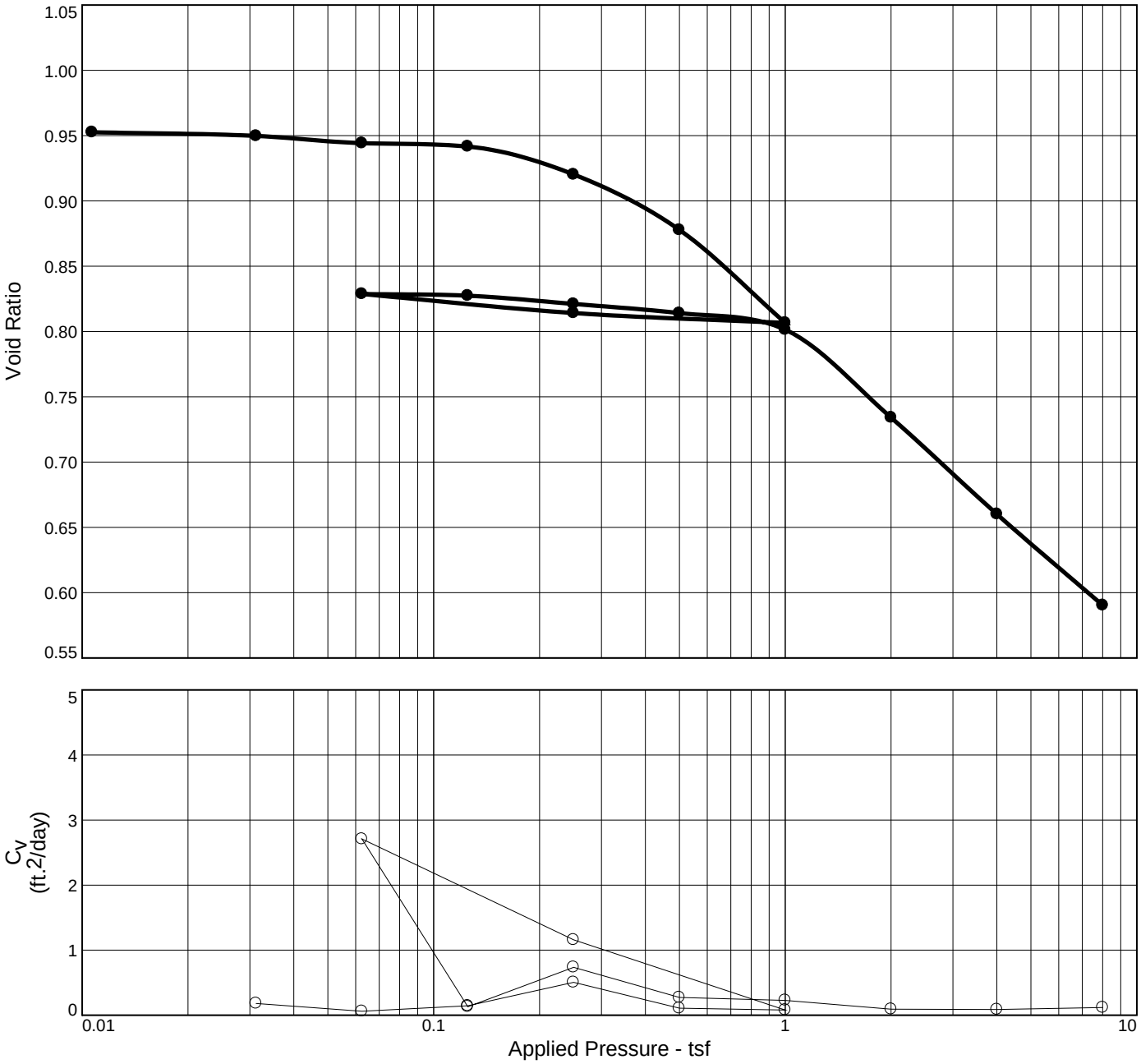
Pressure: 16000.00 psf — **TEST READINGS (continued)** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	0.93246	33	100.2333	0.95977	43	1000.3000	0.97048
24	12.7667	0.93478	34	126.1333	0.96194	44	1259.2333	0.97099
25	16.0333	0.93695	35	158.7500	0.96328	45	1440.0000	0.97127
26	20.1500	0.93923	36	199.7833	0.96459			
27	25.3167	0.94187	37	251.4500	0.96617			
28	31.8333	0.94513	38	316.5000	0.96705			
29	40.0167	0.94826	39	398.3833	0.96806			
30	50.3333	0.95141	40	501.4667	0.96895			
31	63.3167	0.95431	41	631.2500	0.96968			
32	79.6667	0.95709	42	794.6333	0.97005			

Void Ratio = 0.849 **Compression =** 39.4%
D_0 = 0.9143 **D_{90} =** 0.9569 **D_{100} =** 0.9616 **C_v at 78.25 min. =** 0.011 ft.^{2}/day

Figure D-225

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
105.3 %	38.0 %	84.6	37	20	2.652	0.3	0.20	0.957

MATERIAL DESCRIPTION	USCS	AASHTO
Gray silty clay with shell fragments	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-40 **Depth:** 14' - 16'

GeoEngineers

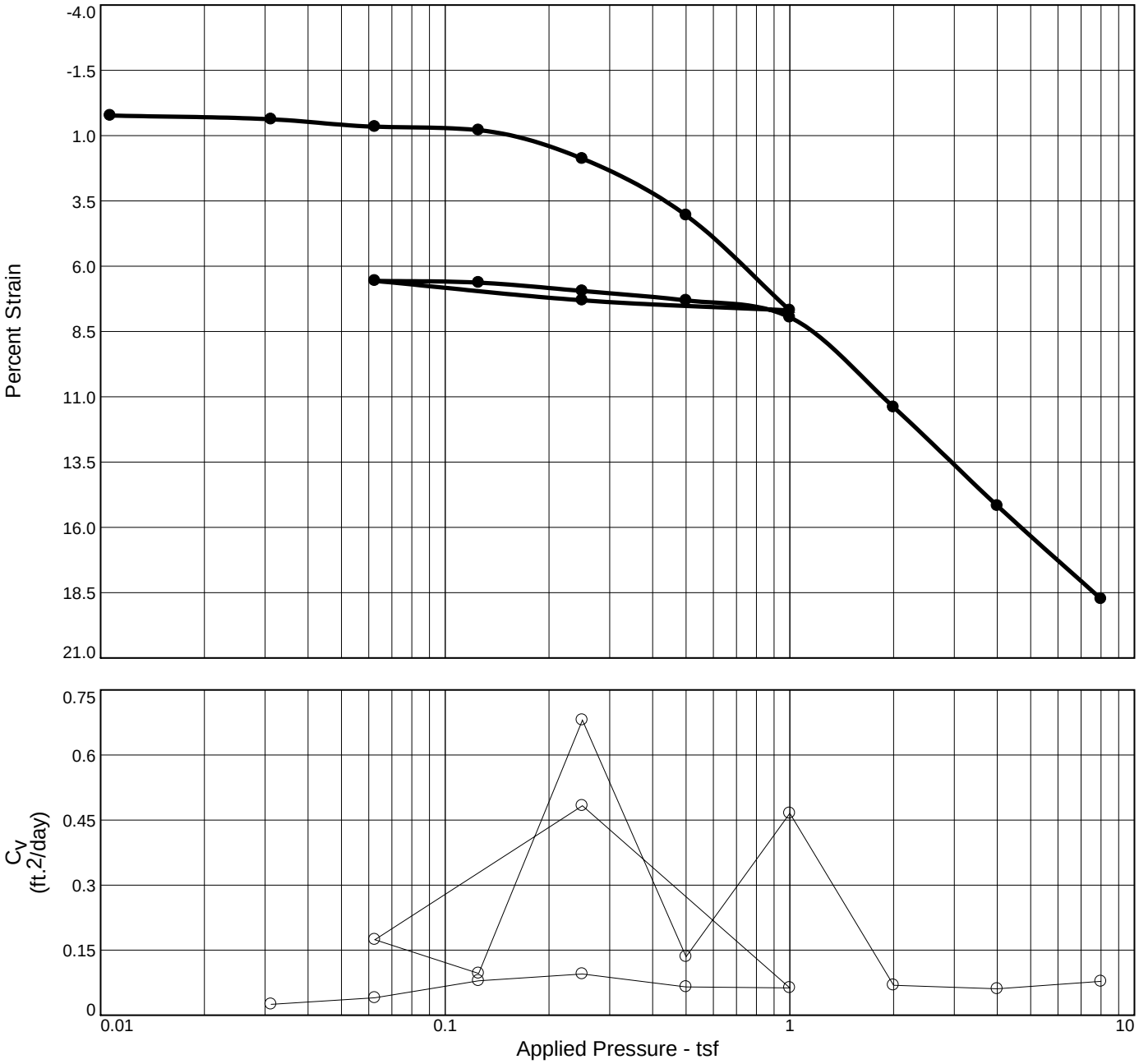
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-226

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
105.3 %	38.0 %	84.6	37	20	2.652	0.3	0.19	0.957

MATERIAL DESCRIPTION	USCS	AASHTO
Gray silty clay with shell fragments	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-40 **Depth:** 14' - 16'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: SLC/KLA **Checked By:** ARS

Figure D-227

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-40
Depth: 14' - 16'
Material Description: Gray silty clay with shell fragments
Liquid Limit: 37 **Plasticity Index:** 20
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	180.10 g.	Spec. Gr. =	2.652	Wet w+t =	155.87 g.
Dry w+t =	141.73 g.	Est. Ht. Solids =	0.508 in.	Dry w+t =	131.23 g.
Tare Wt. =	40.81 g.	Init. V.R. =	0.957	Tare Wt. =	22.57 g.
Moisture =	38.0 %	Init. Sat. =	105.3 %	Moisture =	22.7 %

UNIT WEIGHT		TEST START			
Height =	0.995 in.	Height =	0.995 in.	Dry Wt. =	108.66 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	149.69 g.				
Dry Dens. =	84.6 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.2/day)	C_α	Void Ratio	% Strain
start	1.35174	0.00000			0.957	
21.34	1.35404	0.00230			0.953	0.2 Comprs.
62.50	1.35546	0.00372	0.025	0.001	0.950	0.4 Comprs.
125.00	1.35828	0.00654	0.040	0.001	0.944	0.7 Comprs.
250.00	1.35961	0.00787	0.079	0.003	0.942	0.8 Comprs.
500.00	1.37048	0.01874	0.095	0.003	0.920	1.9 Comprs.
1000.00	1.39205	0.04031	0.065	0.004	0.878	4.1 Comprs.
2000.00	1.42828	0.07654	0.063	0.012	0.807	7.7 Comprs.
500.00	1.42443	0.07269	0.483		0.814	7.3 Comprs.
125.00	1.41702	0.06528	0.174		0.829	6.6 Comprs.
250.00	1.41769	0.06595	0.096	0.000	0.827	6.6 Comprs.
500.00	1.42088	0.06914	0.680	0.001	0.821	6.9 Comprs.
1000.00	1.42446	0.07272	0.135	0.000	0.814	7.3 Comprs.
2000.00	1.43089	0.07915	0.466	0.002	0.801	8.0 Comprs.
4000.00	1.46512	0.11338	0.069	0.013	0.734	11.4 Comprs.
8000.00	1.50271	0.15097	0.061	0.006	0.660	15.2 Comprs.
16000.00	1.53819	0.18645	0.078	0.006	0.590	18.7 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.19 Preconsolidation pressure (P_p), tsf = 0.3 Void ratio at P_p (e_m) = 0.916
Recompression index (C_r) = 0.06

Pressure: 21.34 psf — TEST READINGS — Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35174	14	1.5667	1.35175	27	31.6500	1.35177
2	0.0333	1.35178	15	1.9667	1.35176	28	39.8500	1.35178
3	0.0500	1.35179	16	2.4833	1.35176	29	50.1500	1.35178
4	0.1000	1.35176	17	3.1500	1.35173	30	63.1333	1.35176
5	0.1333	1.35176	18	3.9833	1.35175	31	79.4833	1.35178
6	0.2000	1.35177	19	5.0000	1.35174	32	100.0500	1.35178
7	0.2667	1.35174	20	6.3167	1.35176	33	125.9500	1.35181
8	0.3500	1.35176	21	7.9500	1.35176	34	158.5500	1.35175
9	0.4667	1.35179	22	10.0167	1.35178	35	199.5833	1.35176
10	0.5833	1.35177	23	12.6000	1.35174	36	251.2500	1.35404
11	0.7500	1.35174	24	15.8667	1.35173	37	316.3000	1.35401
12	0.9667	1.35177	25	19.9667	1.35177	38	398.1833	1.35405
13	1.2333	1.35175	26	25.1500	1.35176	39	461.0167	1.35404

Void Ratio = 0.953 Compression = 0.2%

Pressure: 62.50 psf — TEST READINGS — Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35340	20	5.1833	1.35410
2	0.1000	1.35345	21	6.5000	1.35417
3	0.2000	1.35344	22	8.1333	1.35424
4	0.2333	1.35350	23	10.2000	1.35436
5	0.2667	1.35348	24	12.8000	1.35441
6	0.3167	1.35348	25	16.0667	1.35445
7	0.3667	1.35350	26	20.1667	1.35453
8	0.4333	1.35350	27	25.3333	1.35458
9	0.5167	1.35356	28	31.8500	1.35472
10	0.6333	1.35360	29	40.0333	1.35477
11	0.7667	1.35362	30	50.3500	1.35480
12	0.9333	1.35367	31	63.3333	1.35489
13	1.1333	1.35366	32	79.6833	1.35491
14	1.4000	1.35375	33	100.2500	1.35501
15	1.7333	1.35377	34	126.1500	1.35504
16	2.1500	1.35388	35	158.7500	1.35514
17	2.6667	1.35393	36	199.8000	1.35522
18	3.3333	1.35393	37	251.4667	1.35529
19	4.1500	1.35399	38	316.5000	1.35534

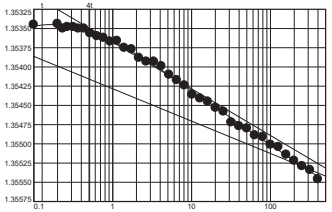


Figure D-228

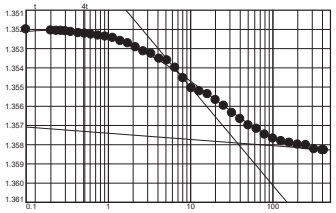
Pressure: 62.50 psf	TEST READINGS (continued)	Load No. 2

No.	Elapsed Time	Dial Reading
39	398.3833	1.35546

Void Ratio = 0.950 **Compression =** 0.4%
D_0 = 1.3534 **D_{50} =** 1.3545 **D_{100} =** 1.3557 **C_v at 19.29 min. =** 0.025 ft.2/day **C_α =** 0.001

Pressure: 125.00 psf	TEST READINGS	Load No. 3

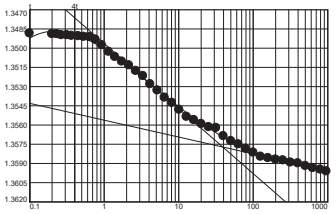
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35546	21	6.4833	1.35399
2	0.1000	1.35200	22	8.1167	1.35454
3	0.2000	1.35206	23	10.1833	1.35506
4	0.2333	1.35207	24	12.7833	1.35522
5	0.2667	1.35207	25	16.0500	1.35537
6	0.3000	1.35209	26	20.1500	1.35567
7	0.3500	1.35213	27	25.3333	1.35597
8	0.4333	1.35219	28	31.8333	1.35635
9	0.5167	1.35222	29	40.0333	1.35666
10	0.6167	1.35227	30	50.3333	1.35699
11	0.7500	1.35232	31	63.3333	1.35717
12	0.9167	1.35237	32	79.6667	1.35747
13	1.1333	1.35244	33	100.2333	1.35768
14	1.4000	1.35260	34	126.1333	1.35781
15	1.7333	1.35272	35	158.7333	1.35790
16	2.1500	1.35293	36	199.7667	1.35799
17	2.6667	1.35314	37	251.4333	1.35802
18	3.3167	1.35327	38	316.4833	1.35823
19	4.1500	1.35352	39	398.3667	1.35828
20	5.1833	1.35361	40	415.9000	1.35828



Void Ratio = 0.944 **Compression =** 0.7%
D_0 = 1.3520 **D_{50} =** 1.3550 **D_{100} =** 1.3579 **C_v at 12.04 min. =** 0.040 ft.2/day **C_α =** 0.001

Pressure: 250.00 psf	TEST READINGS	Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.34874	23	10.1833	1.35481
2	0.1000	1.34884	24	12.7833	1.35536
3	0.2000	1.34890	25	16.0500	1.35561
4	0.2333	1.34891	26	20.1500	1.35592
5	0.2667	1.34898	27	25.3333	1.35616
6	0.3167	1.34898	28	31.8333	1.35622
7	0.3667	1.34904	29	40.0333	1.35687
8	0.4500	1.34906	30	50.3333	1.35725
9	0.5333	1.34911	31	63.3167	1.35751
10	0.6333	1.34913	32	79.6667	1.35785
11	0.7667	1.34933	33	100.2333	1.35815
12	0.9333	1.34977	34	126.1333	1.35847
13	1.1500	1.35028	35	158.7333	1.35858
14	1.4000	1.35068	36	199.7667	1.35869
15	1.7333	1.35104	37	251.4333	1.35876
16	2.1500	1.35134	38	316.4833	1.35893
17	2.6667	1.35177	39	398.3667	1.35899
18	3.3333	1.35217	40	501.4500	1.35919
19	4.1500	1.35281	41	631.2167	1.35936
20	5.1833	1.35330	42	794.6000	1.35947
21	6.4833	1.35386	43	961.7333	1.35961
22	8.1333	1.35427			



Void Ratio = 0.942 **Compression =** 0.8%
D_0 = 1.3495 **D_{50} =** 1.3536 **D_{100} =** 1.3577 **C_v at 6.11 min. =** 0.079 ft.2/day **C_α =** 0.003

Pressure: 500.00 psf	TEST READINGS	Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35622	13	1.1333	1.35899
2	0.1000	1.35620	14	1.4000	1.35942
3	0.2000	1.35636	15	1.7333	1.35990
4	0.2333	1.35645	16	2.1500	1.36047
5	0.2667	1.35653	17	2.6667	1.36069
6	0.3000	1.35669	18	3.3333	1.36114
7	0.3667	1.35688	19	4.1500	1.36176
8	0.4333	1.35740	20	5.1833	1.36218
9	0.5167	1.35782	21	6.5000	1.36275
10	0.6333	1.35812	22	8.1333	1.36337
11	0.7667	1.35826	23	10.1833	1.36371
12	0.9333	1.35849	24	12.7833	1.36422

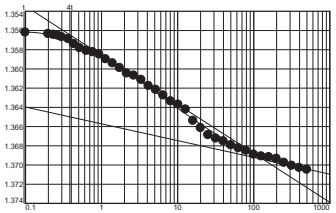


Figure D-229

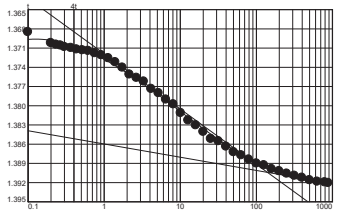
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	16.0500	1.36540	35	158.7167	1.36919
26	20.1500	1.36615	36	199.7667	1.36935
27	25.3167	1.36688	37	251.4333	1.36977
28	31.8333	1.36724	38	316.4667	1.37007
29	40.0167	1.36754	39	398.3667	1.37029
30	50.3333	1.36794	40	501.4500	1.37048
31	63.3167	1.36825			
32	79.6500	1.36851			
33	100.2333	1.36891			
34	126.1167	1.36910			

Void Ratio = 0.920 **Compression =** 1.9%
D_0 = 1.3553 **D_{50} =** 1.3624 **D_{100} =** 1.3694 **C_v at 5.02 min. =** 0.095 ft.^{2}/day **C_α =** 0.003

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

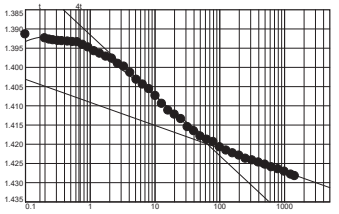
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.37048	23	10.1667	1.38113
2	0.1000	1.36850	24	12.7667	1.38227
3	0.2000	1.37020	25	16.0333	1.38304
4	0.2333	1.37047	26	20.1333	1.38408
5	0.2667	1.37059	27	25.3167	1.38517
6	0.3000	1.37081	28	31.8167	1.38552
7	0.3667	1.37097	29	40.0167	1.38638
8	0.4333	1.37121	30	50.3333	1.38725
9	0.5167	1.37133	31	63.3167	1.38772
10	0.6167	1.37144	32	79.6500	1.38840
11	0.7500	1.37179	33	100.2333	1.38902
12	0.9167	1.37210	34	126.1333	1.38929
13	1.1333	1.37257	35	158.7167	1.38988
14	1.4000	1.37319	36	199.7667	1.39022
15	1.7333	1.37404	37	251.4333	1.39059
16	2.1500	1.37511	38	316.4833	1.39093
17	2.6667	1.37564	39	398.3667	1.39124
18	3.3167	1.37621	40	501.4500	1.39162
19	4.1500	1.37736	41	631.2167	1.39186
20	5.1833	1.37802	42	794.6000	1.39196
21	6.4833	1.37903	43	878.4167	1.39205
22	8.1167	1.37978			



Void Ratio = 0.878 **Compression =** 4.1%
D_0 = 1.3686 **D_{50} =** 1.3795 **D_{100} =** 1.3904 **C_v at 7.04 min. =** 0.065 ft.^{2}/day **C_α =** 0.004

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.38880	24	12.7833	1.40948
2	0.1000	1.39142	25	16.0500	1.41124
3	0.2000	1.39244	26	20.1500	1.41231
4	0.2333	1.39277	27	25.3333	1.41346
5	0.2667	1.39293	28	31.8333	1.41553
6	0.3167	1.39310	29	40.0333	1.41662
7	0.3667	1.39317	30	50.3333	1.41797
8	0.4500	1.39326	31	63.3167	1.41882
9	0.5333	1.39342	32	79.6667	1.41940
10	0.6333	1.39345	33	100.2333	1.42077
11	0.7667	1.39412	34	126.1333	1.42163
12	0.9333	1.39480	35	158.7333	1.42236
13	1.1500	1.39579	36	199.7833	1.42294
14	1.4167	1.39645	37	251.4500	1.42376
15	1.7500	1.39720	38	316.4833	1.42420
16	2.1667	1.39773	39	398.3667	1.42474
17	2.6833	1.39909	40	501.4500	1.42532
18	3.3333	1.39981	41	631.2333	1.42597
19	4.1500	1.40140	42	794.6167	1.42648
20	5.1833	1.40321	43	1000.2833	1.42713
21	6.4833	1.40447	44	1259.2333	1.42789
22	8.1333	1.40566	45	1440.1833	1.42828
23	10.1833	1.40742			



Void Ratio = 0.807 **Compression =** 7.7%
D_0 = 1.3906 **D_{50} =** 1.4053 **D_{100} =** 1.4199 **C_v at 6.88 min. =** 0.063 ft.^{2}/day **C_α =** 0.012

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.43110	12	0.9333	1.42745
2	0.1000	1.42923	13	1.1333	1.42732
3	0.2000	1.42854	14	1.4000	1.42709
4	0.2333	1.42848	15	1.7333	1.42697
5	0.2667	1.42842	16	2.1500	1.42692
6	0.3167	1.42825	17	2.6667	1.42669
7	0.3667	1.42813	18	3.3333	1.42652
8	0.4333	1.42799	19	4.1500	1.42628
9	0.5167	1.42784	20	5.1833	1.42614
10	0.6333	1.42777	21	6.5000	1.42591
11	0.7667	1.42764	22	8.1333	1.42573

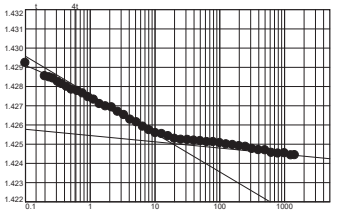


Figure D-230

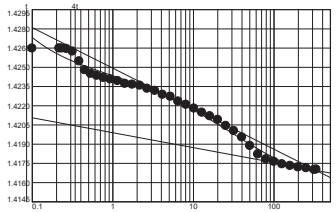
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	1.42558	33	100.2333	1.42506	43	1000.2833	1.42453
24	12.7833	1.42553	34	126.1333	1.42499	44	1259.2167	1.42442
25	16.0500	1.42542	35	158.7333	1.42496	45	1440.3000	1.42443
26	20.1500	1.42528	36	199.7667	1.42490			
27	25.3167	1.42523	37	251.4333	1.42486			
28	31.8333	1.42522	38	316.4833	1.42475			
29	40.0167	1.42519	39	398.3667	1.42469			
30	50.3333	1.42516	40	501.4500	1.42468			
31	63.3167	1.42511	41	631.2167	1.42455			
32	79.6667	1.42511	42	794.6000	1.42451			

Void Ratio = 0.814 **Compression =** 7.3%
D_0 = 1.4299 **D_{50} =** 1.4275 **D_{100} =** 1.4250 **C_v at 0.86 min. =** 0.483 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

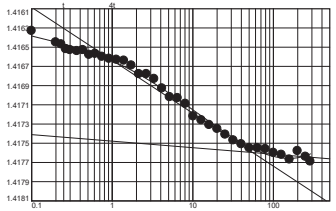
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.42647	21	6.5000	1.42233
2	0.1000	1.42647	22	8.1333	1.42208
3	0.2167	1.42648	23	10.2000	1.42178
4	0.2333	1.42647	24	12.7833	1.42146
5	0.2667	1.42644	25	16.0500	1.42118
6	0.3167	1.42623	26	20.1667	1.42090
7	0.3833	1.42546	27	25.3500	1.42043
8	0.4500	1.42478	28	31.8500	1.42003
9	0.5333	1.42449	29	40.0500	1.41953
10	0.6333	1.42434	30	50.3667	1.41887
11	0.7667	1.42417	31	63.3500	1.41820
12	0.9333	1.42406	32	79.6833	1.41781
13	1.1500	1.42393	33	100.2667	1.41762
14	1.4167	1.42371	34	126.1500	1.41743
15	1.7500	1.42365	35	158.7500	1.41730
16	2.1667	1.42357	36	199.8000	1.41719
17	2.6833	1.42333	37	251.4667	1.41713
18	3.3333	1.42316	38	316.5167	1.41699
19	4.1667	1.42286	39	336.5167	1.41702
20	5.2000	1.42270			



Void Ratio = 0.829 **Compression =** 6.6%
D_0 = 1.4300 **D_{50} =** 1.4235 **D_{100} =** 1.4170 **C_v at 2.42 min. =** 0.174 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.41627	20	5.1833	1.41702
2	0.1000	1.41633	21	6.4833	1.41703
3	0.2000	1.41645	22	8.1167	1.41709
4	0.2333	1.41647	23	10.1833	1.41722
5	0.2667	1.41652	24	12.7667	1.41726
6	0.3000	1.41653	25	16.0333	1.41731
7	0.3667	1.41654	26	20.1500	1.41735
8	0.4333	1.41653	27	25.3167	1.41741
9	0.5167	1.41658	28	31.8167	1.41747
10	0.6167	1.41657	29	40.0167	1.41751
11	0.7500	1.41660	30	50.3333	1.41755
12	0.9167	1.41662	31	63.3167	1.41755
13	1.1333	1.41663	32	79.6500	1.41756
14	1.4000	1.41664	33	100.2333	1.41760
15	1.7333	1.41669	34	126.1167	1.41762
16	2.1500	1.41678	35	158.7333	1.41767
17	2.6667	1.41678	36	199.7667	1.41758
18	3.3167	1.41683	37	251.4333	1.41764
19	4.1500	1.41693	38	288.1667	1.41769



Void Ratio = 0.827 **Compression =** 6.6%
D_0 = 1.4163 **D_{50} =** 1.4169 **D_{100} =** 1.4176 **C_v at 4.42 min. =** 0.096 ft.^{2}/day **C_α =** 0.000

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.41678	16	2.1500	1.41920
2	0.1000	1.41687	17	2.6833	1.41940
3	0.2000	1.41716	18	3.3333	1.41952
4	0.2333	1.41723	19	4.1500	1.41965
5	0.2667	1.41737	20	5.2000	1.41984
6	0.3000	1.41742	21	6.4833	1.41991
7	0.3667	1.41750	22	8.1333	1.41993
8	0.4333	1.41768	23	10.1833	1.42011
9	0.5333	1.41793	24	12.7667	1.42021
10	0.6333	1.41816	25	16.0333	1.42026
11	0.7667	1.41835	26	20.1500	1.42035
12	0.9333	1.41852	27	25.3167	1.42041
13	1.1500	1.41870	28	31.8167	1.42040
14	1.4167	1.41883	29	40.0167	1.42053
15	1.7333	1.41903	30	50.3167	1.42056

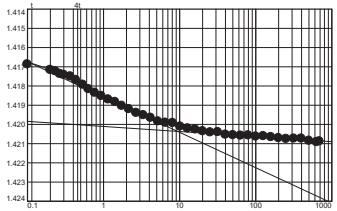


Figure D-231

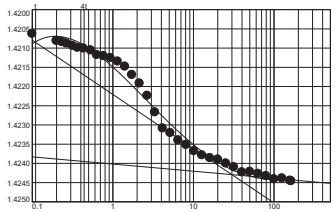
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	63.3000	1.42058	41	631.2167	1.42092
32	79.6500	1.42057	42	688.1833	1.42088
33	100.2333	1.42063			
34	126.1333	1.42061			
35	158.7333	1.42066			
36	199.7667	1.42071			
37	251.4333	1.42075			
38	316.4833	1.42074			
39	398.3667	1.42074			
40	501.4500	1.42085			

Void Ratio = 0.821 **Compression =** 6.9%
D_0 = 1.4158 **D_{50} =** 1.4181 **D_{100} =** 1.4204 **C_v at 0.62 min. =** 0.680 ft.^{2}/day **C_α =** 0.001

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

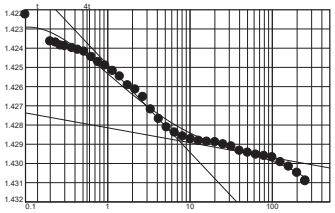
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.41971	19	4.1500	1.42309
2	0.1000	1.42063	20	5.1833	1.42321
3	0.2000	1.42081	21	6.5000	1.42340
4	0.2333	1.42084	22	8.1333	1.42352
5	0.2667	1.42088	23	10.2000	1.42368
6	0.3167	1.42094	24	12.7833	1.42379
7	0.3667	1.42099	25	16.0500	1.42386
8	0.4333	1.42101	26	20.1500	1.42390
9	0.5333	1.42106	27	25.3167	1.42400
10	0.6333	1.42118	28	31.8333	1.42410
11	0.7667	1.42121	29	40.0167	1.42423
12	0.9333	1.42126	30	50.3333	1.42422
13	1.1500	1.42135	31	63.3167	1.42427
14	1.4167	1.42148	32	79.6500	1.42433
15	1.7333	1.42170	33	100.2167	1.42441
16	2.1500	1.42192	34	126.1167	1.42439
17	2.6833	1.42224	35	158.7167	1.42445
18	3.3333	1.42267	36	163.4167	1.42446



Void Ratio = 0.814 **Compression =** 7.3%
D_0 = 1.4207 **D_{50} =** 1.4225 **D_{100} =** 1.4243 **C_v at 3.12 min. =** 0.135 ft.^{2}/day **C_α =** 0.000

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.42206	20	5.2000	1.42812
2	0.1000	1.42225	21	6.5000	1.42839
3	0.2000	1.42365	22	8.1333	1.42859
4	0.2333	1.42371	23	10.2000	1.42873
5	0.2667	1.42386	24	12.7833	1.42882
6	0.3000	1.42389	25	16.0500	1.42887
7	0.3667	1.42399	26	20.1667	1.42889
8	0.4333	1.42408	27	25.3333	1.42900
9	0.5167	1.42418	28	31.8333	1.42911
10	0.6333	1.42446	29	40.0333	1.42934
11	0.7667	1.42472	30	50.3333	1.42944
12	0.9333	1.42490	31	63.3167	1.42954
13	1.1500	1.42518	32	79.6667	1.42961
14	1.4000	1.42547	33	100.2333	1.42968
15	1.7500	1.42593	34	126.1333	1.42993
16	2.1667	1.42615	35	158.7333	1.43016
17	2.6833	1.42654	36	199.7833	1.43049
18	3.3333	1.42719	37	251.4500	1.43092
19	4.1667	1.42768	38	252.9167	1.43089



Void Ratio = 0.801 **Compression =** 8.0%
D_0 = 1.4215 **D_{50} =** 1.4252 **D_{100} =** 1.4288 **C_v at 0.90 min. =** 0.466 ft.^{2}/day **C_α =** 0.002

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.42810	16	2.1667	1.43876
2	0.1167	1.43135	17	2.6833	1.44006
3	0.2167	1.43219	18	3.3500	1.44104
4	0.2500	1.43244	19	4.1667	1.44231
5	0.2833	1.43257	20	5.2000	1.44363
6	0.3333	1.43283	21	6.5000	1.44554
7	0.3833	1.43296	22	8.1500	1.44744
8	0.4500	1.43336	23	10.2000	1.44919
9	0.5333	1.43405	24	12.8000	1.45056
10	0.6500	1.43453	25	16.0667	1.45182
11	0.7833	1.43493	26	20.1667	1.45385
12	0.9500	1.43565	27	25.3500	1.45510
13	1.1500	1.43631	28	31.8500	1.45678
14	1.4167	1.43732	29	40.0500	1.45835
15	1.7500	1.43808	30	50.3500	1.45876

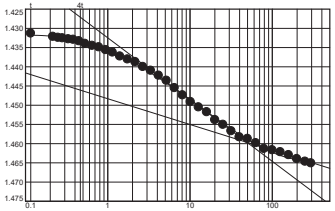


Figure D-232

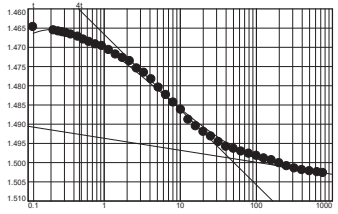
Pressure: 4000.00 psf — **TEST READINGS (continued)** — **Load No. 14**

No.	Elapsed Time	Dial Reading
31	63.3333	1.45986
32	79.6833	1.46136
33	100.2500	1.46171
34	126.1500	1.46222
35	158.7500	1.46298
36	199.7833	1.46400
37	251.4500	1.46471
38	296.7167	1.46512

Void Ratio = 0.734 **Compression =** 11.4%
D_0 = 1.4302 **D_{50} =** 1.4449 **D_{100} =** 1.4597 **C_v at 5.78 min. =** 0.069 ft.^{2}/day **C_α =** 0.013

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

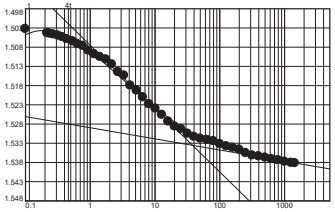
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.46126	22	8.1333	1.48438
2	0.1167	1.46470	23	10.2000	1.48624
3	0.2167	1.46558	24	12.7833	1.48886
4	0.2500	1.46584	25	16.0500	1.49053
5	0.2833	1.46609	26	20.1667	1.49201
6	0.3167	1.46629	27	25.3333	1.49318
7	0.3667	1.46666	28	31.8500	1.49465
8	0.4500	1.46722	29	40.0333	1.49586
9	0.5333	1.46797	30	50.3500	1.49640
10	0.6333	1.46860	31	63.3167	1.49711
11	0.7667	1.46921	32	79.6667	1.49766
12	0.9333	1.46967	33	100.2333	1.49824
13	1.1500	1.47070	34	126.1333	1.49889
14	1.4167	1.47186	35	158.7333	1.49937
15	1.7500	1.47276	36	199.7833	1.50016
16	2.1667	1.47357	37	251.4500	1.50093
17	2.6833	1.47548	38	316.4833	1.50150
18	3.3333	1.47662	39	398.3833	1.50192
19	4.1667	1.47831	40	501.4500	1.50225
20	5.2000	1.48049	41	631.2333	1.50249
21	6.5000	1.48242	42	752.4333	1.50271



Void Ratio = 0.660 **Compression =** 15.2%
D_0 = 1.4659 **D_{50} =** 1.4823 **D_{100} =** 1.4988 **C_v at 6.06 min. =** 0.061 ft.^{2}/day **C_α =** 0.006

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.49984	24	12.7833	1.52559
2	0.1000	1.50325	25	16.0500	1.52736
3	0.2167	1.50431	26	20.1500	1.52864
4	0.2333	1.50444	27	25.3167	1.52928
5	0.2667	1.50467	28	31.8333	1.53049
6	0.3167	1.50494	29	40.0167	1.53129
7	0.3667	1.50532	30	50.3333	1.53180
8	0.4333	1.50591	31	63.3167	1.53212
9	0.5333	1.50645	32	79.6500	1.53243
10	0.6333	1.50712	33	100.2333	1.53317
11	0.7667	1.50766	34	126.1333	1.53377
12	0.9333	1.50889	35	158.7333	1.53417
13	1.1500	1.50981	36	199.7667	1.53462
14	1.4167	1.51052	37	251.4333	1.53552
15	1.7500	1.51120	38	316.4833	1.53617
16	2.1667	1.51247	39	398.3667	1.53640
17	2.6833	1.51447	40	501.4500	1.53672
18	3.3333	1.51536	41	631.2167	1.53713
19	4.1500	1.51796	42	794.6000	1.53740
20	5.2000	1.51929	43	1000.2833	1.53778
21	6.5000	1.52105	44	1259.2167	1.53809
22	8.1333	1.52282	45	1440.2333	1.53819
23	10.1833	1.52399			



Void Ratio = 0.590 **Compression =** 18.7%
D_0 = 1.5032 **D_{50} =** 1.5184 **D_{100} =** 1.5335 **C_v at 4.32 min. =** 0.078 ft.^{2}/day **C_α =** 0.006

Figure D-233

CONSOLIDATION TEST DATA

6/14/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-40
Depth: 14' - 16'
Material Description: Gray silty clay with shell fragments
Liquid Limit: 37 **Plasticity Index:** 20
USCS: (CL)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	180.10 g.	Spec. Gr. =	2.652	Wet w+t =	155.87 g.
Dry w+t =	141.73 g.	Est. Ht. Solids =	0.508 in.	Dry w+t =	131.23 g.
Tare Wt. =	40.81 g.	Init. V.R. =	0.957	Tare Wt. =	22.57 g.
Moisture =	38.0 %	Init. Sat. =	105.3 %	Moisture =	22.7 %

UNIT WEIGHT		TEST START			
Height =	0.995 in.	Height =	0.995 in.	Dry Wt. =	108.66 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	149.69 g.				
Dry Dens. =	84.6 pcf				

End-Of-Load Summary

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	1.35174	0.00000			0.957	
21.34	1.35404	0.00230			0.953	0.2 Comprs.
62.50	1.35546	0.00372	0.181		0.950	0.4 Comprs.
125.00	1.35828	0.00654	0.062		0.944	0.7 Comprs.
250.00	1.35961	0.00787	0.145		0.942	0.8 Comprs.
500.00	1.37048	0.01874	0.505		0.920	1.9 Comprs.
1000.00	1.39205	0.04031	0.107		0.878	4.1 Comprs.
2000.00	1.42828	0.07654	0.080		0.807	7.7 Comprs.
500.00	1.42443	0.07269	1.159		0.814	7.3 Comprs.
125.00	1.41702	0.06528	2.709		0.829	6.6 Comprs.
250.00	1.41769	0.06595	0.130		0.827	6.6 Comprs.
500.00	1.42088	0.06914	0.737		0.821	6.9 Comprs.
1000.00	1.42446	0.07272	0.273		0.814	7.3 Comprs.
2000.00	1.43089	0.07915	0.228		0.801	8.0 Comprs.
4000.00	1.46512	0.11338	0.093		0.734	11.4 Comprs.
8000.00	1.50271	0.15097	0.088		0.660	15.2 Comprs.
16000.00	1.53819	0.18645	0.118		0.590	18.7 Comprs.

TEST RESULTS SUMMARY

Compression index (C_c), tsf = 0.20 **Preconsolidation pressure (P_p), tsf =** 0.3 **Void ratio at P_p (e_m) =** 0.914
Recompression index (C_r) = 0.06

Pressure: 21.34 psf — TEST READINGS — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35174	14	1.5667	1.35175	27	31.6500	1.35177
2	0.0333	1.35178	15	1.9667	1.35176	28	39.8500	1.35178
3	0.0500	1.35179	16	2.4833	1.35176	29	50.1500	1.35178
4	0.1000	1.35176	17	3.1500	1.35173	30	63.1333	1.35176
5	0.1333	1.35176	18	3.9833	1.35175	31	79.4833	1.35178
6	0.2000	1.35177	19	5.0000	1.35174	32	100.0500	1.35178
7	0.2667	1.35174	20	6.3167	1.35176	33	125.9500	1.35181
8	0.3500	1.35176	21	7.9500	1.35176	34	158.5500	1.35175
9	0.4667	1.35179	22	10.0167	1.35178	35	199.5833	1.35176
10	0.5833	1.35177	23	12.6000	1.35174	36	251.2500	1.35404
11	0.7500	1.35174	24	15.8667	1.35173	37	316.3000	1.35401
12	0.9667	1.35177	25	19.9667	1.35177	38	398.1833	1.35405
13	1.2333	1.35175	26	25.1500	1.35176	39	461.0167	1.35404

Void Ratio = 0.953 **Compression =** 0.2%

Pressure: 62.50 psf — TEST READINGS — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35340	20	5.1833	1.35410
2	0.1000	1.35345	21	6.5000	1.35417
3	0.2000	1.35344	22	8.1333	1.35424
4	0.2333	1.35350	23	10.2000	1.35436
5	0.2667	1.35348	24	12.8000	1.35441
6	0.3167	1.35348	25	16.0667	1.35445
7	0.3667	1.35350	26	20.1667	1.35453
8	0.4333	1.35350	27	25.3333	1.35458
9	0.5167	1.35356	28	31.8500	1.35472
10	0.6333	1.35360	29	40.0333	1.35477
11	0.7667	1.35362	30	50.3500	1.35480
12	0.9333	1.35367	31	63.3333	1.35489
13	1.1333	1.35366	32	79.6833	1.35491
14	1.4000	1.35375	33	100.2500	1.35501
15	1.7333	1.35377	34	126.1500	1.35504
16	2.1500	1.35388	35	158.7500	1.35514
17	2.6667	1.35393	36	199.8000	1.35522
18	3.3333	1.35393	37	251.4667	1.35529
19	4.1500	1.35399	38	316.5000	1.35534

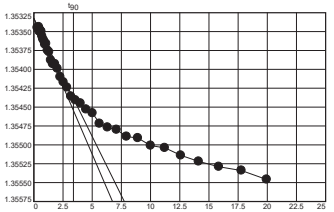


Figure D-234

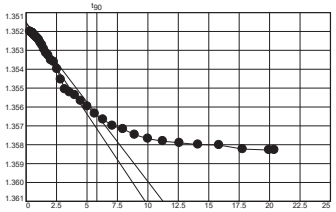
Pressure: 62.50 psf	TEST READINGS (continued)	Load No. 2

No.	Elapsed Time	Dial Reading
39	398.3833	1.35546

Void Ratio = 0.950 **Compression =** 0.4%
D_0 = 1.3533 **D_{90} =** 1.3544 **D_{100} =** 1.3545 **C_v at 11.53 min. =** 0.181 ft.2/day

Pressure: 125.00 psf	TEST READINGS	Load No. 3

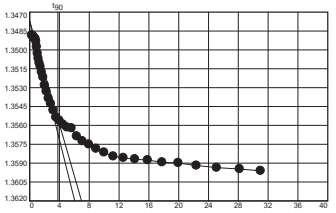
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35546	21	6.4833	1.35399
2	0.1000	1.35200	22	8.1167	1.35454
3	0.2000	1.35206	23	10.1833	1.35506
4	0.2333	1.35207	24	12.7833	1.35522
5	0.2667	1.35207	25	16.0500	1.35537
6	0.3000	1.35209	26	20.1500	1.35567
7	0.3500	1.35213	27	25.3333	1.35597
8	0.4333	1.35219	28	31.8333	1.35635
9	0.5167	1.35222	29	40.0333	1.35666
10	0.6167	1.35227	30	50.3333	1.35699
11	0.7500	1.35232	31	63.3333	1.35717
12	0.9167	1.35237	32	79.6667	1.35747
13	1.1333	1.35244	33	100.2333	1.35768
14	1.4000	1.35260	34	126.1333	1.35781
15	1.7333	1.35272	35	158.7333	1.35790
16	2.1500	1.35293	36	199.7667	1.35799
17	2.6667	1.35314	37	251.4333	1.35802
18	3.3167	1.35327	38	316.4833	1.35823
19	4.1500	1.35352	39	398.3667	1.35828
20	5.1833	1.35361	40	415.9000	1.35828



Void Ratio = 0.944 **Compression =** 0.7%
D_0 = 1.3515 **D_{90} =** 1.3564 **D_{100} =** 1.3570 **C_v at 33.77 min. =** 0.062 ft.2/day

Pressure: 250.00 psf	TEST READINGS	Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.34874	23	10.1833	1.35481
2	0.1000	1.34884	24	12.7833	1.35536
3	0.2000	1.34890	25	16.0500	1.35561
4	0.2333	1.34891	26	20.1500	1.35592
5	0.2667	1.34898	27	25.3333	1.35616
6	0.3167	1.34898	28	31.8333	1.35622
7	0.3667	1.34904	29	40.0333	1.35687
8	0.4500	1.34906	30	50.3333	1.35725
9	0.5333	1.34911	31	63.3167	1.35751
10	0.6333	1.34913	32	79.6667	1.35785
11	0.7667	1.34933	33	100.2333	1.35815
12	0.9333	1.34977	34	126.1333	1.35847
13	1.1500	1.35028	35	158.7333	1.35858
14	1.4000	1.35068	36	199.7667	1.35869
15	1.7333	1.35104	37	251.4333	1.35876
16	2.1500	1.35134	38	316.4833	1.35893
17	2.6667	1.35177	39	398.3667	1.35899
18	3.3333	1.35217	40	501.4500	1.35919
19	4.1500	1.35281	41	631.2167	1.35936
20	5.1833	1.35330	42	794.6000	1.35947
21	6.4833	1.35386	43	961.7333	1.35961
22	8.1333	1.35427			



Void Ratio = 0.942 **Compression =** 0.8%
D_0 = 1.3477 **D_{90} =** 1.3555 **D_{100} =** 1.3564 **C_v at 14.38 min. =** 0.145 ft.2/day

Pressure: 500.00 psf	TEST READINGS	Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.35622	13	1.1333	1.35899
2	0.1000	1.35620	14	1.4000	1.35942
3	0.2000	1.35636	15	1.7333	1.35990
4	0.2333	1.35645	16	2.1500	1.36047
5	0.2667	1.35653	17	2.6667	1.36069
6	0.3000	1.35669	18	3.3333	1.36114
7	0.3667	1.35688	19	4.1500	1.36176
8	0.4333	1.35740	20	5.1833	1.36218
9	0.5167	1.35782	21	6.5000	1.36275
10	0.6333	1.35812	22	8.1333	1.36337
11	0.7667	1.35826	23	10.1833	1.36371
12	0.9333	1.35849	24	12.7833	1.36422

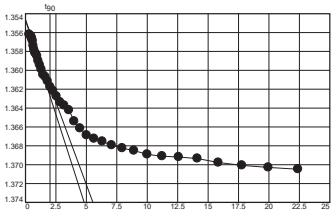


Figure D-235

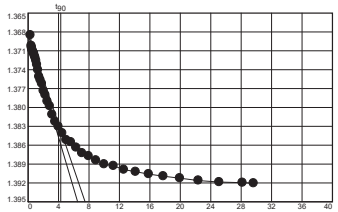
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	16.0500	1.36540	35	158.7167	1.36919
26	20.1500	1.36615	36	199.7667	1.36935
27	25.3167	1.36688	37	251.4333	1.36977
28	31.8333	1.36724	38	316.4667	1.37007
29	40.0167	1.36754	39	398.3667	1.37029
30	50.3333	1.36794	40	501.4500	1.37048
31	63.3167	1.36825			
32	79.6500	1.36851			
33	100.2333	1.36891			
34	126.1167	1.36910			

Void Ratio = 0.920 **Compression =** 1.9%
D_0 = 1.3547 **D_{90} =** 1.3617 **D_{100} =** 1.3625 **C_v at 4.06 min. =** 0.505 ft.^{2}/day

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 6**

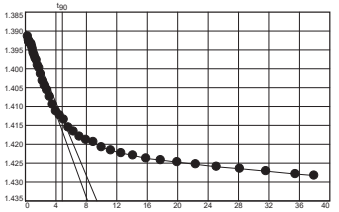
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.37048	23	10.1667	1.38113
2	0.1000	1.36850	24	12.7667	1.38227
3	0.2000	1.37020	25	16.0333	1.38304
4	0.2333	1.37047	26	20.1333	1.38408
5	0.2667	1.37059	27	25.3167	1.38517
6	0.3000	1.37081	28	31.8167	1.38552
7	0.3667	1.37097	29	40.0167	1.38638
8	0.4333	1.37121	30	50.3333	1.38725
9	0.5167	1.37133	31	63.3167	1.38772
10	0.6167	1.37144	32	79.6500	1.38840
11	0.7500	1.37179	33	100.2333	1.38902
12	0.9167	1.37210	34	126.1333	1.38929
13	1.1333	1.37257	35	158.7167	1.38988
14	1.4000	1.37319	36	199.7667	1.39022
15	1.7333	1.37404	37	251.4333	1.39059
16	2.1500	1.37511	38	316.4833	1.39093
17	2.6667	1.37564	39	398.3667	1.39124
18	3.3167	1.37621	40	501.4500	1.39162
19	4.1500	1.37736	41	631.2167	1.39186
20	5.1833	1.37802	42	794.6000	1.39196
21	6.4833	1.37903	43	878.4167	1.39205
22	8.1167	1.37978			



Void Ratio = 0.878 **Compression =** 4.1%
D_0 = 1.3684 **D_{90} =** 1.3837 **D_{100} =** 1.3853 **C_v at 18.41 min. =** 0.107 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.38880	24	12.7833	1.40948
2	0.1000	1.39142	25	16.0500	1.41124
3	0.2000	1.39244	26	20.1500	1.41231
4	0.2333	1.39277	27	25.3333	1.41346
5	0.2667	1.39293	28	31.8333	1.41553
6	0.3167	1.39310	29	40.0333	1.41662
7	0.3667	1.39317	30	50.3333	1.41797
8	0.4500	1.39326	31	63.3167	1.41882
9	0.5333	1.39342	32	79.6667	1.41940
10	0.6333	1.39345	33	100.2333	1.42077
11	0.7667	1.39412	34	126.1333	1.42163
12	0.9333	1.39480	35	158.7333	1.42236
13	1.1500	1.39579	36	199.7833	1.42294
14	1.4167	1.39645	37	251.4500	1.42376
15	1.7500	1.39720	38	316.4833	1.42420
16	2.1667	1.39773	39	398.3667	1.42474
17	2.6833	1.39909	40	501.4500	1.42532
18	3.3333	1.39981	41	631.2333	1.42597
19	4.1500	1.40140	42	794.6167	1.42648
20	5.1833	1.40321	43	1000.2833	1.42713
21	6.4833	1.40447	44	1259.2333	1.42789
22	8.1333	1.40566	45	1440.1833	1.42828
23	10.1833	1.40742			



Void Ratio = 0.807 **Compression =** 7.7%
D_0 = 1.3898 **D_{90} =** 1.4130 **D_{100} =** 1.4156 **C_v at 23.30 min. =** 0.080 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.43110	12	0.9333	1.42745
2	0.1000	1.42923	13	1.1333	1.42732
3	0.2000	1.42854	14	1.4000	1.42709
4	0.2333	1.42848	15	1.7333	1.42697
5	0.2667	1.42842	16	2.1500	1.42692
6	0.3167	1.42825	17	2.6667	1.42669
7	0.3667	1.42813	18	3.3333	1.42652
8	0.4333	1.42799	19	4.1500	1.42628
9	0.5167	1.42784	20	5.1833	1.42614
10	0.6333	1.42777	21	6.5000	1.42591
11	0.7667	1.42764	22	8.1333	1.42573

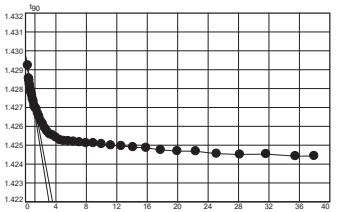


Figure D-236

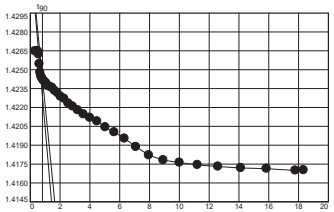
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	10.1833	1.42558	33	100.2333	1.42506	43	1000.2833	1.42453
24	12.7833	1.42553	34	126.1333	1.42499	44	1259.2167	1.42442
25	16.0500	1.42542	35	158.7333	1.42496	45	1440.3000	1.42443
26	20.1500	1.42528	36	199.7667	1.42490			
27	25.3167	1.42523	37	251.4333	1.42486			
28	31.8333	1.42522	38	316.4833	1.42475			
29	40.0167	1.42519	39	398.3667	1.42469			
30	50.3333	1.42516	40	501.4500	1.42468			
31	63.3167	1.42511	41	631.2167	1.42455			
32	79.6667	1.42511	42	794.6000	1.42451			

Void Ratio = 0.814 **Compression =** 7.3%
D_0 = 1.4297 **D_{90} =** 1.4270 **D_{100} =** 1.4267 **C_v at 1.54 min. =** 1.159 ft.^{2}/day

Pressure: 125.00 psf — **TEST READINGS** — **Load No. 9**

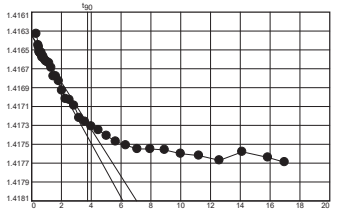
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.42647	21	6.5000	1.42233
2	0.1000	1.42647	22	8.1333	1.42208
3	0.2167	1.42648	23	10.2000	1.42178
4	0.2333	1.42647	24	12.7833	1.42146
5	0.2667	1.42644	25	16.0500	1.42118
6	0.3167	1.42623	26	20.1667	1.42090
7	0.3833	1.42546	27	25.3500	1.42043
8	0.4500	1.42478	28	31.8500	1.42003
9	0.5333	1.42449	29	40.0500	1.41953
10	0.6333	1.42434	30	50.3667	1.41887
11	0.7667	1.42417	31	63.3500	1.41820
12	0.9333	1.42406	32	79.6833	1.41781
13	1.1500	1.42393	33	100.2667	1.41762
14	1.4167	1.42371	34	126.1500	1.41743
15	1.7500	1.42365	35	158.7500	1.41730
16	2.1667	1.42357	36	199.8000	1.41719
17	2.6833	1.42333	37	251.4667	1.41713
18	3.3333	1.42316	38	316.5167	1.41699
19	4.1667	1.42286	39	336.5167	1.41702
20	5.2000	1.42270			



Void Ratio = 0.829 **Compression =** 6.6%
D_0 = 1.4341 **D_{90} =** 1.4243 **D_{100} =** 1.4232 **C_v at 0.67 min. =** 2.709 ft.^{2}/day

Pressure: 250.00 psf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.41627	20	5.1833	1.41702
2	0.1000	1.41633	21	6.4833	1.41703
3	0.2000	1.41645	22	8.1167	1.41709
4	0.2333	1.41647	23	10.1833	1.41722
5	0.2667	1.41652	24	12.7667	1.41726
6	0.3000	1.41653	25	16.0333	1.41731
7	0.3667	1.41654	26	20.1500	1.41735
8	0.4333	1.41653	27	25.3167	1.41741
9	0.5167	1.41658	28	31.8167	1.41747
10	0.6167	1.41657	29	40.0167	1.41751
11	0.7500	1.41660	30	50.3333	1.41755
12	0.9167	1.41662	31	63.3167	1.41755
13	1.1333	1.41663	32	79.6500	1.41756
14	1.4000	1.41664	33	100.2333	1.41760
15	1.7333	1.41669	34	126.1167	1.41762
16	2.1500	1.41678	35	158.7333	1.41767
17	2.6667	1.41678	36	199.7667	1.41758
18	3.3167	1.41683	37	251.4333	1.41764
19	4.1500	1.41693	38	288.1667	1.41769



Void Ratio = 0.827 **Compression =** 6.6%
D_0 = 1.4163 **D_{90} =** 1.4173 **D_{100} =** 1.4174 **C_v at 14.08 min. =** 0.130 ft.^{2}/day

Pressure: 500.00 psf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.41678	16	2.1500	1.41920
2	0.1000	1.41687	17	2.6833	1.41940
3	0.2000	1.41716	18	3.3333	1.41952
4	0.2333	1.41723	19	4.1500	1.41965
5	0.2667	1.41737	20	5.2000	1.41984
6	0.3000	1.41742	21	6.4833	1.41991
7	0.3667	1.41750	22	8.1333	1.41993
8	0.4333	1.41768	23	10.1833	1.42011
9	0.5333	1.41793	24	12.7667	1.42021
10	0.6333	1.41816	25	16.0333	1.42026
11	0.7667	1.41835	26	20.1500	1.42035
12	0.9333	1.41852	27	25.3167	1.42041
13	1.1500	1.41870	28	31.8167	1.42040
14	1.4167	1.41883	29	40.0167	1.42053
15	1.7333	1.41903	30	50.3167	1.42056

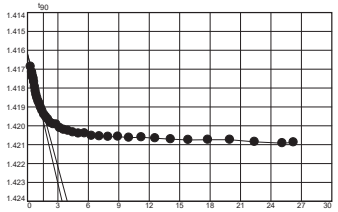


Figure D-237

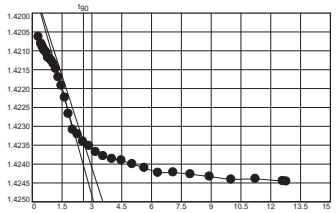
Pressure: 500.00 psf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	63.3000	1.42058	41	631.2167	1.42092
32	79.6500	1.42057	42	688.1833	1.42088
33	100.2333	1.42063			
34	126.1333	1.42061			
35	158.7333	1.42066			
36	199.7667	1.42071			
37	251.4333	1.42075			
38	316.4833	1.42074			
39	398.3667	1.42074			
40	501.4500	1.42085			

Void Ratio = 0.821 **Compression =** 6.9%
D_0 = 1.4162 **D_{90} =** 1.4193 **D_{100} =** 1.4197 **C_v at 2.48 min. =** 0.737 ft.^{2}/day

Pressure: 1000.00 psf — **TEST READINGS** — **Load No. 12**

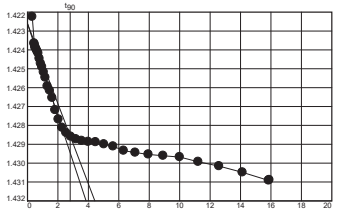
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.41971	19	4.1500	1.42309
2	0.1000	1.42063	20	5.1833	1.42321
3	0.2000	1.42081	21	6.5000	1.42340
4	0.2333	1.42084	22	8.1333	1.42352
5	0.2667	1.42088	23	10.2000	1.42368
6	0.3167	1.42094	24	12.7833	1.42379
7	0.3667	1.42099	25	16.0500	1.42386
8	0.4333	1.42101	26	20.1500	1.42390
9	0.5333	1.42106	27	25.3167	1.42400
10	0.6333	1.42118	28	31.8333	1.42410
11	0.7667	1.42121	29	40.0167	1.42423
12	0.9333	1.42126	30	50.3333	1.42422
13	1.1500	1.42135	31	63.3167	1.42427
14	1.4167	1.42148	32	79.6500	1.42433
15	1.7333	1.42170	33	100.2167	1.42441
16	2.1500	1.42192	34	126.1167	1.42439
17	2.6833	1.42224	35	158.7167	1.42445
18	3.3333	1.42267	36	163.4167	1.42446



Void Ratio = 0.814 **Compression =** 7.3%
D_0 = 1.4192 **D_{90} =** 1.4234 **D_{100} =** 1.4239 **C_v at 6.64 min. =** 0.273 ft.^{2}/day

Pressure: 2000.00 psf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.42206	20	5.2000	1.42812
2	0.1000	1.42225	21	6.5000	1.42839
3	0.2000	1.42365	22	8.1333	1.42859
4	0.2333	1.42371	23	10.2000	1.42873
5	0.2667	1.42386	24	12.7833	1.42882
6	0.3000	1.42389	25	16.0500	1.42887
7	0.3667	1.42399	26	20.1667	1.42889
8	0.4333	1.42408	27	25.3333	1.42900
9	0.5167	1.42418	28	31.8333	1.42911
10	0.6333	1.42446	29	40.0333	1.42934
11	0.7667	1.42472	30	50.3333	1.42944
12	0.9333	1.42490	31	63.3167	1.42954
13	1.1500	1.42518	32	79.6667	1.42961
14	1.4000	1.42547	33	100.2333	1.42968
15	1.7500	1.42593	34	126.1333	1.42993
16	2.1667	1.42615	35	158.7333	1.43016
17	2.6833	1.42654	36	199.7833	1.43049
18	3.3333	1.42719	37	251.4500	1.43092
19	4.1667	1.42768	38	252.9167	1.43089



Void Ratio = 0.801 **Compression =** 8.0%
D_0 = 1.4226 **D_{90} =** 1.4286 **D_{100} =** 1.4292 **C_v at 7.87 min. =** 0.228 ft.^{2}/day

Pressure: 4000.00 psf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.42810	16	2.1667	1.43876
2	0.1167	1.43135	17	2.6833	1.44006
3	0.2167	1.43219	18	3.3500	1.44104
4	0.2500	1.43244	19	4.1667	1.44231
5	0.2833	1.43257	20	5.2000	1.44363
6	0.3333	1.43283	21	6.5000	1.44554
7	0.3833	1.43296	22	8.1500	1.44744
8	0.4500	1.43336	23	10.2000	1.44919
9	0.5333	1.43405	24	12.8000	1.45056
10	0.6500	1.43453	25	16.0667	1.45182
11	0.7833	1.43493	26	20.1667	1.45385
12	0.9500	1.43565	27	25.3500	1.45510
13	1.1500	1.43631	28	31.8500	1.45678
14	1.4167	1.43732	29	40.0500	1.45835
15	1.7500	1.43808	30	50.3500	1.45876

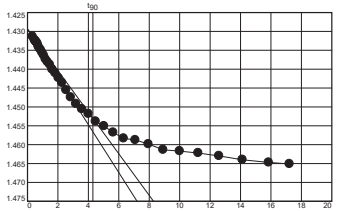


Figure D-238

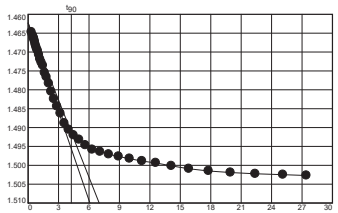
Pressure: 4000.00 psf — **TEST READINGS (continued)** — **Load No. 14**

No.	Elapsed Time	Dial Reading
31	63.3333	1.45986
32	79.6833	1.46136
33	100.2500	1.46171
34	126.1500	1.46222
35	158.7500	1.46298
36	199.7833	1.46400
37	251.4500	1.46471
38	296.7167	1.46512

Void Ratio = 0.734 **Compression =** 11.4%
D_0 = 1.4293 D_{90} = 1.4530 D_{100} = 1.4557 C_v **at 18.47 min. =** 0.093 ft.^{2}/day

Pressure: 8000.00 psf — **TEST READINGS** — **Load No. 15**

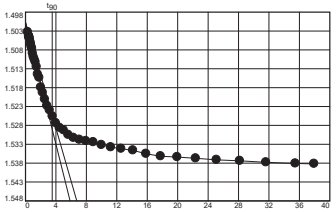
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.46126	22	8.1333	1.48438
2	0.1167	1.46470	23	10.2000	1.48624
3	0.2167	1.46558	24	12.7833	1.48886
4	0.2500	1.46584	25	16.0500	1.49053
5	0.2833	1.46609	26	20.1667	1.49201
6	0.3167	1.46629	27	25.3333	1.49318
7	0.3667	1.46666	28	31.8500	1.49465
8	0.4500	1.46722	29	40.0333	1.49586
9	0.5333	1.46797	30	50.3500	1.49640
10	0.6333	1.46860	31	63.3167	1.49711
11	0.7667	1.46921	32	79.6667	1.49766
12	0.9333	1.46967	33	100.2333	1.49824
13	1.1500	1.47070	34	126.1333	1.49889
14	1.4167	1.47186	35	158.7333	1.49937
15	1.7500	1.47276	36	199.7833	1.50016
16	2.1667	1.47357	37	251.4500	1.50093
17	2.6833	1.47548	38	316.4833	1.50150
18	3.3333	1.47662	39	398.3833	1.50192
19	4.1667	1.47831	40	501.4500	1.50225
20	5.2000	1.48049	41	631.2333	1.50249
21	6.5000	1.48242	42	752.4333	1.50271



Void Ratio = 0.660 **Compression =** 15.2%
D_0 = 1.4623 D_{90} = 1.4913 D_{100} = 1.4945 C_v **at 18.12 min. =** 0.088 ft.^{2}/day

Pressure: 16000.00 psf — **TEST READINGS** — **Load No. 16**

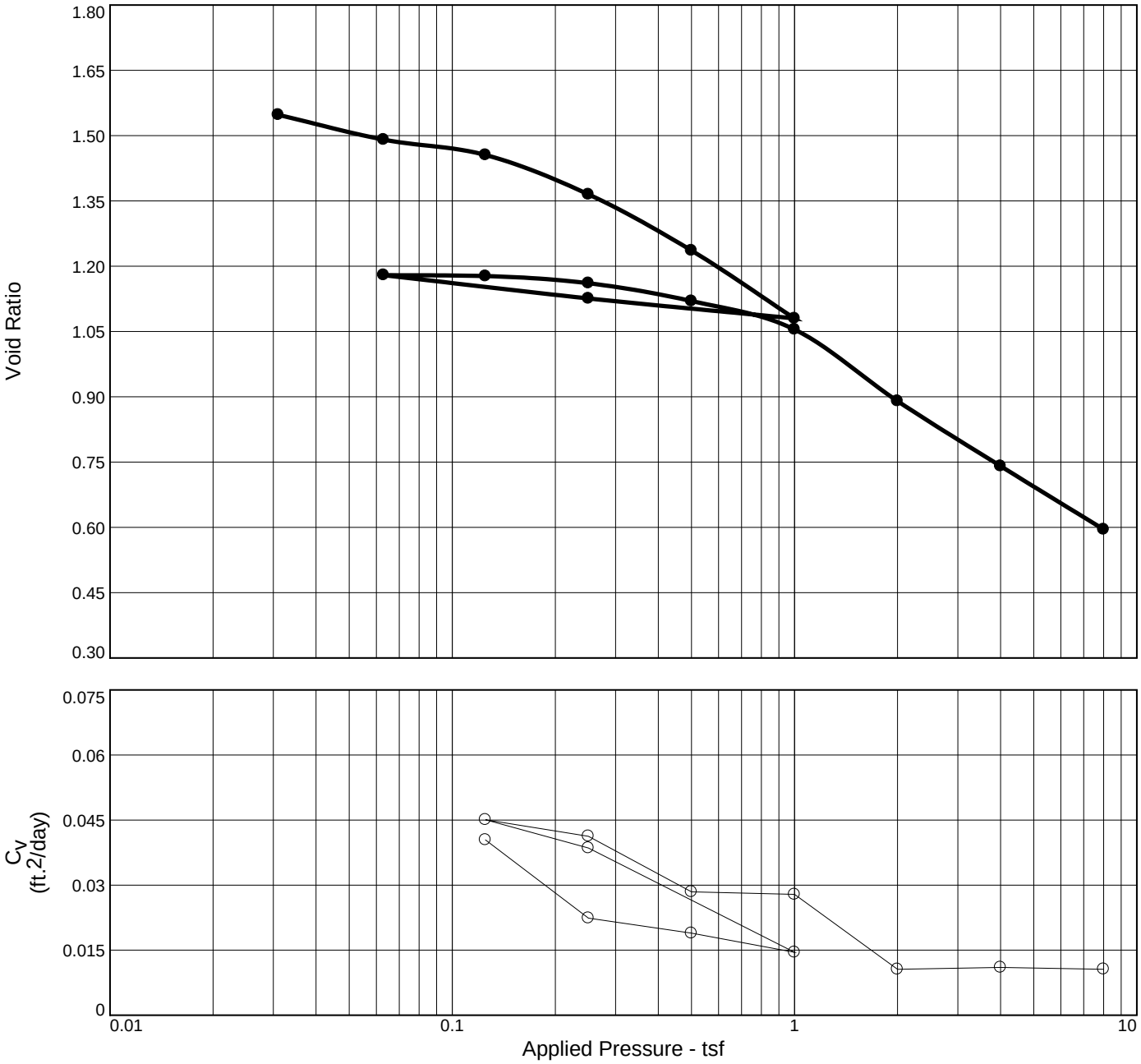
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.49984	24	12.7833	1.52559
2	0.1000	1.50325	25	16.0500	1.52736
3	0.2167	1.50431	26	20.1500	1.52864
4	0.2333	1.50444	27	25.3167	1.52928
5	0.2667	1.50467	28	31.8333	1.53049
6	0.3167	1.50494	29	40.0167	1.53129
7	0.3667	1.50532	30	50.3333	1.53180
8	0.4333	1.50591	31	63.3167	1.53212
9	0.5333	1.50645	32	79.6500	1.53243
10	0.6333	1.50712	33	100.2333	1.53317
11	0.7667	1.50766	34	126.1333	1.53377
12	0.9333	1.50889	35	158.7333	1.53417
13	1.1500	1.50981	36	199.7667	1.53462
14	1.4167	1.51052	37	251.4333	1.53552
15	1.7500	1.51120	38	316.4833	1.53617
16	2.1667	1.51247	39	398.3667	1.53640
17	2.6833	1.51447	40	501.4500	1.53672
18	3.3333	1.51536	41	631.2167	1.53713
19	4.1500	1.51796	42	794.6000	1.53740
20	5.2000	1.51929	43	1000.2833	1.53778
21	6.5000	1.52105	44	1259.2167	1.53809
22	8.1333	1.52282	45	1440.2333	1.53819
23	10.1833	1.52399			



Void Ratio = 0.590 **Compression =** 18.7%
D_0 = 1.5007 D_{90} = 1.5253 D_{100} = 1.5281 C_v **at 12.33 min. =** 0.118 ft.^{2}/day

Figure D-239

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
96.0 %	57.1 %	64.9	70	49	2.728	0.2	0.52	1.622

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand pockets	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-42 **Depth:** 14' - 16'

GeoEngineers

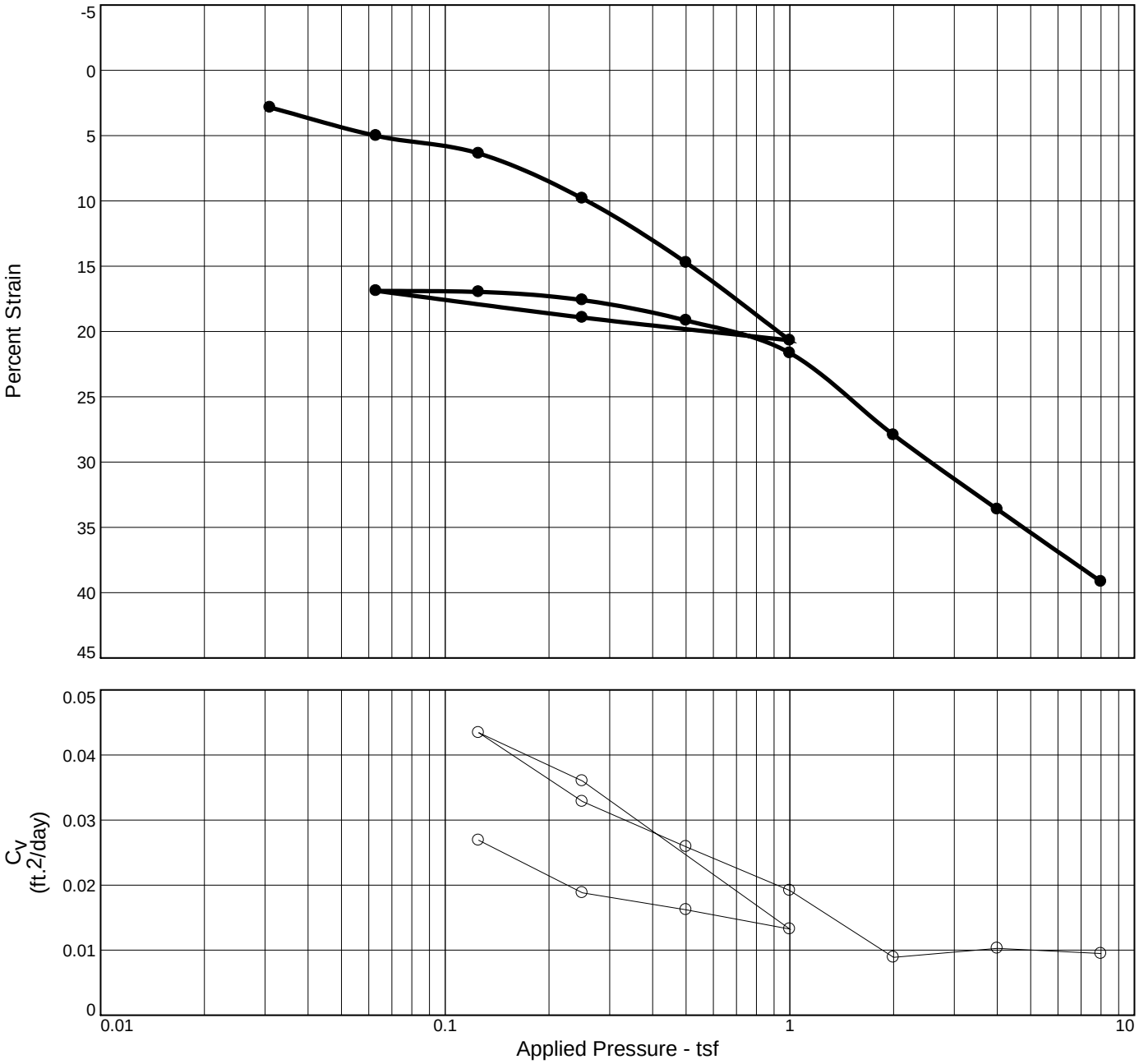
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: KLA/CLP **Checked By:** ARS

Figure D-240

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
96.0 %	57.1 %	64.9	70	49	2.728	0.2	0.53	1.622

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand pockets	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-42 **Depth:** 14' - 16'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: KLA/CLP **Checked By:** ARS

Figure D-241

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-42
Depth: 14' - 16'
Material Description: Gray clay with sand pockets
Liquid Limit: 70 **Plasticity Index:** 49
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	157.51 g.	Spec. Gr. =	2.728	Wet w+t =	91.73 g.
Dry w+t =	107.08 g.	Est. Ht. Solids =	0.281 in.	Dry w+t =	73.49 g.
Tare Wt. =	18.78 g.	Init. V.R. =	1.622	Tare Wt. =	13.43 g.
Moisture =	57.1 %	Init. Sat. =	96.0 %	Moisture =	30.4 %

UNIT WEIGHT		TEST START			
Height =	0.736 in.	Height =	0.736 in.	Dry Wt. =	60.06 g.
Diameter =	2.498 in.	Diameter =	2.498 in.		
Weight =	96.61 g.				
Dry Dens. =	64.9 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00060	0.00000			1.622	
0.03	0.02150	0.02090		0.001	1.548	2.8 Comprs.
0.06	0.03750	0.03690		0.002	1.491	5.0 Comprs.
0.13	0.04740	0.04680	0.027	0.002	1.456	6.4 Comprs.
0.25	0.07280	0.07220	0.019	0.007	1.365	9.8 Comprs.
0.50	0.10900	0.10840	0.016	0.020	1.236	14.7 Comprs.
1.00	0.15280	0.15220	0.013	0.029	1.080	20.7 Comprs.
0.25	0.13990	0.13930	0.036		1.126	18.9 Comprs.
0.06	0.12490	0.12430			1.179	16.9 Comprs.
0.13	0.12550	0.12490	0.043	0.000	1.177	17.0 Comprs.
0.25	0.13010	0.12950	0.033	0.002	1.161	17.6 Comprs.
0.50	0.14160	0.14100	0.026	0.002	1.120	19.2 Comprs.
1.00	0.15990	0.15930	0.019	0.014	1.055	21.6 Comprs.
2.00	0.20610	0.20550	0.009	0.016	0.890	27.9 Comprs.
4.00	0.24800	0.24740	0.010	0.027	0.741	33.6 Comprs.
8.00	0.28880	0.28820	0.009	0.024	0.595	39.2 Comprs.

Compression index (C_c), tsf = 0.53 **Preconsolidation pressure (P_p), tsf =** 0.2 **Void ratio at P_p (e_m) =** 1.391
Recompression index (C_r) = 0.19

Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0006	11	1.0000	0.0162	21	90.1000	0.0214
2	0.0167	0.0114	12	2.0000	0.0168	22	120.1333	0.0215
3	0.0333	0.0114	13	4.0000	0.0172	23	150.1833	0.0215
4	0.0500	0.0114	14	5.0000	0.0172	24	168.0833	0.0215
5	0.0667	0.0124	15	8.0167	0.0173			
6	0.0833	0.0132	16	10.0167	0.0173			
7	0.1000	0.0135	17	15.0167	0.0173			
8	0.2000	0.0136	18	20.0167	0.0208			
9	0.2500	0.0136	19	40.0333	0.0214			
10	0.5000	0.0138	20	60.0667	0.0214			

Void Ratio = 1.548 **Compression =** 2.8%

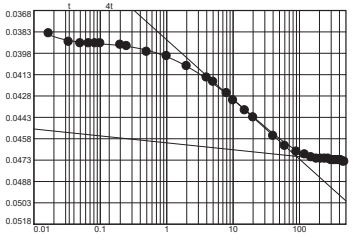
Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0215	15	20.0333	0.0369	29	420.5333	0.0373
2	0.0333	0.0264	16	40.0500	0.0371	30	450.5833	0.0373
3	0.0833	0.0357	17	60.0833	0.0372	31	480.6167	0.0373
4	0.1000	0.0357	18	90.1167	0.0373	32	510.6500	0.0373
5	0.2000	0.0357	19	120.1667	0.0373	33	540.6833	0.0373
6	0.2500	0.0357	20	150.2000	0.0373	34	570.7333	0.0374
7	0.5000	0.0359	21	180.2333	0.0373	35	600.7667	0.0374
8	1.0167	0.0360	22	210.2667	0.0373	36	630.8000	0.0374
9	2.0167	0.0362	23	240.3167	0.0373	37	660.8500	0.0375
10	4.0167	0.0364	24	270.3500	0.0373	38	690.8833	0.0375
11	5.0167	0.0365	25	300.3833	0.0373	39	720.9167	0.0375
12	8.0167	0.0366	26	330.4333	0.0373	40	750.9500	0.0375
13	10.0167	0.0367	27	360.4667	0.0373	41	781.0000	0.0375
14	15.0333	0.0368	28	390.5000	0.0373	42	807.0333	0.0375

Void Ratio = 1.491 **Compression =** 5.0%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 3**

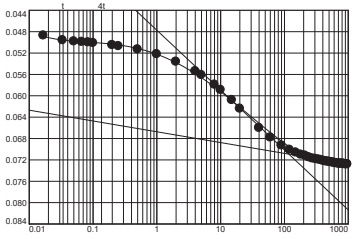
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0375	18	20.0167	0.0443
2	0.0167	0.0384	19	40.0333	0.0456
3	0.0333	0.0390	20	60.0667	0.0463
4	0.0500	0.0391	21	90.1000	0.0467
5	0.0667	0.0391	22	120.1500	0.0469
6	0.0833	0.0391	23	150.1833	0.0471
7	0.1000	0.0391	24	180.2167	0.0472
8	0.2000	0.0392	25	210.2500	0.0472
9	0.2500	0.0393	26	240.3000	0.0472
10	0.5000	0.0397	27	270.3333	0.0472
11	1.0000	0.0400	28	300.3667	0.0473
12	2.0000	0.0407	29	330.4167	0.0473
13	4.0000	0.0415	30	360.4500	0.0473
14	5.0000	0.0418	31	390.4833	0.0473
15	8.0000	0.0426	32	420.5167	0.0473
16	10.0000	0.0431	33	450.5667	0.0474
17	15.0167	0.0438	34	473.6667	0.0474



Void Ratio = 1.456 **Compression =** 6.4%
D_0 = 0.0386 **D_{50} =** 0.0428 **D_{100} =** 0.0470 **C_v at 8.83 min. =** 0.027 ft.^{2}/day **C_α =** 0.002

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0474	18	20.0167	0.0624
2	0.0167	0.0487	19	40.0500	0.0660
3	0.0333	0.0496	20	60.0667	0.0678
4	0.0500	0.0498	21	90.1167	0.0693
5	0.0667	0.0499	22	120.1500	0.0701
6	0.0833	0.0500	23	150.1833	0.0706
7	0.1000	0.0501	24	180.2167	0.0710
8	0.2000	0.0505	25	210.2667	0.0712
9	0.2500	0.0507	26	240.3000	0.0715
10	0.5000	0.0513	27	270.3333	0.0717
11	1.0000	0.0522	28	300.3833	0.0718
12	2.0000	0.0536	29	330.4167	0.0719
13	4.0000	0.0554	30	360.4500	0.0720
14	5.0000	0.0561	31	390.4833	0.0721
15	8.0000	0.0579	32	420.5333	0.0722
16	10.0000	0.0589	33	450.5667	0.0723
17	15.0167	0.0608	34	480.6000	0.0723



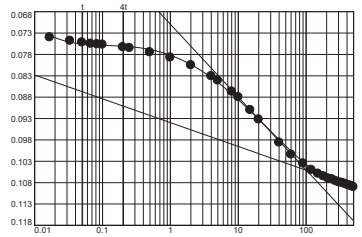
Pressure: 0.25 tsf — **TEST READINGS (continued)** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
35	510.6333	0.0724	45	811.0167	0.0727
36	540.6833	0.0724	46	841.0500	0.0727
37	570.7167	0.0725	47	871.0833	0.0728
38	600.7500	0.0725	48	901.1333	0.0728
39	630.8000	0.0726	49	931.1667	0.0728
40	660.8333	0.0726	50	961.2000	0.0728
41	690.8667	0.0727	51	964.4167	0.0728
42	720.9000	0.0727			
43	750.9333	0.0727			
44	780.9833	0.0727			

Void Ratio = 1.365 **Compression =** 9.8%
D_0 = 0.0490 **D_{50} =** 0.0600 **D_{100} =** 0.0709 **C_v at 11.98 min. =** 0.019 ft.^{2}/day **C_α =** 0.007

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0728	19	40.0167	0.0986
2	0.0167	0.0740	20	60.0167	0.1014
3	0.0333	0.0748	21	90.0000	0.1035
4	0.0500	0.0752	22	120.0000	0.1050
5	0.0667	0.0755	23	150.0000	0.1059
6	0.0833	0.0756	24	179.9833	0.1065
7	0.1000	0.0757	25	209.9667	0.1070
8	0.2000	0.0763	26	239.9667	0.1072
9	0.2500	0.0765	27	269.9667	0.1076
10	0.5000	0.0775	28	299.9667	0.1079
11	1.0000	0.0787	29	329.9500	0.1080
12	2.0167	0.0805	30	359.9500	0.1082
13	4.0167	0.0831	31	389.9500	0.1084
14	5.0167	0.0841	32	419.9333	0.1086
15	8.0167	0.0867	33	449.9333	0.1087
16	10.0167	0.0880	34	479.9333	0.1089
17	15.0167	0.0910	35	498.0000	0.1090
18	20.0167	0.0932			

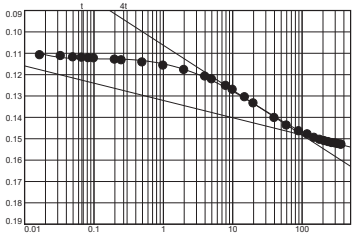


Void Ratio = 1.236 **Compression =** 14.7%
D_0 = 0.0751 **D_{50} =** 0.0901 **D_{100} =** 0.1051 **C_v at 12.67 min. =** 0.016 ft.^{2}/day **C_α =** 0.020

Figure D-243

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1090	17	14.9833	0.1306
2	0.0167	0.1109	18	19.9833	0.1335
3	0.0333	0.1113	19	39.9667	0.1403
4	0.0500	0.1119	20	59.9667	0.1438
5	0.0667	0.1121	21	89.9833	0.1465
6	0.0833	0.1123	22	119.9667	0.1480
7	0.1000	0.1124	23	149.9833	0.1496
8	0.2000	0.1130	24	180.0167	0.1505
9	0.2500	0.1133	25	210.0500	0.1511
10	0.5000	0.1143	26	240.1000	0.1516
11	1.0000	0.1158	27	270.1333	0.1520
12	2.0000	0.1178	28	300.1667	0.1522
13	4.0000	0.1209	29	330.2167	0.1525
14	5.0000	0.1222	30	360.2500	0.1527
15	8.0000	0.1253	31	369.9833	0.1528
16	9.9833	0.1271			

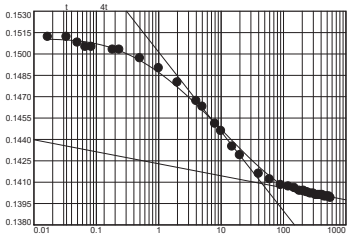


Void Ratio = 1.080 **Compression =** 20.7%

D_0 = 0.1123 **D_{50} =** 0.1303 **D_{100} =** 0.1483 **C_v at 13.64 min. =** 0.013 ft.^{2}/day C_α = 0.029

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1528	19	60.0667	0.1412
2	0.0167	0.1512	20	90.1000	0.1408
3	0.0333	0.1512	21	120.1500	0.1407
4	0.0500	0.1508	22	150.1833	0.1406
5	0.0667	0.1505	23	180.2167	0.1404
6	0.0833	0.1505	24	210.2667	0.1404
7	0.1833	0.1503	25	240.3000	0.1403
8	0.2333	0.1503	26	270.3333	0.1402
9	0.5000	0.1497	27	300.3833	0.1402
10	1.0000	0.1490	28	330.4167	0.1401
11	2.0000	0.1480	29	360.4500	0.1401
12	4.0000	0.1467	30	390.4833	0.1401
13	5.0000	0.1463	31	420.5333	0.1401
14	8.0000	0.1451	32	450.5667	0.1400
15	10.0000	0.1446	33	480.6000	0.1400
16	15.0167	0.1435	34	510.6500	0.1400
17	20.0167	0.1429	35	540.6833	0.1400
18	40.0500	0.1416	36	567.3000	0.1399



Void Ratio = 1.126 **Compression =** 18.9%

D_0 = 0.1514 **D_{50} =** 0.1461 **D_{100} =** 0.1409 **C_v at 4.76 min. =** 0.036 ft.^{2}/day

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1399	11	1.0000	0.1378	21	90.1167	0.1274
2	0.0167	0.1391	12	2.0000	0.1371	22	120.1500	0.1267
3	0.0333	0.1391	13	4.0167	0.1361	23	150.2000	0.1263
4	0.0500	0.1390	14	5.0167	0.1358	24	180.2333	0.1259
5	0.0667	0.1389	15	8.0167	0.1348	25	210.2667	0.1256
6	0.0833	0.1389	16	10.0167	0.1343	26	240.3000	0.1255
7	0.1000	0.1388	17	15.0167	0.1331	27	270.3500	0.1253
8	0.2000	0.1386	18	20.0333	0.1322	28	300.3833	0.1252
9	0.2500	0.1385	19	40.0500	0.1299	29	330.4167	0.1250
10	0.5000	0.1383	20	60.0833	0.1286	30	357.1500	0.1249

Void Ratio = 1.179 **Compression =** 16.9%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1249	26	240.3167	0.1254
2	0.0167	0.1249	27	270.3500	0.1254
3	0.0333	0.1250	28	300.3833	0.1254
4	0.0500	0.1250	29	330.4167	0.1255
5	0.0667	0.1250	30	360.4667	0.1255
6	0.0833	0.1249	31	390.5000	0.1255
7	0.1000	0.1249	32	420.5333	0.1255
8	0.2000	0.1250	33	450.5833	0.1255
9	0.2500	0.1250	34	480.6167	0.1255
10	0.5000	0.1250	35	510.6500	0.1255
11	1.0000	0.1251	36	540.7000	0.1255
12	2.0000	0.1251	37	570.7333	0.1255
13	4.0000	0.1252	38	600.7667	0.1255
14	5.0167	0.1253	39	630.8000	0.1255
15	8.0167	0.1253	40	660.8500	0.1255
16	10.0167	0.1253	41	690.8833	0.1255
17	15.0167	0.1254	42	720.9167	0.1255
18	20.0333	0.1254	43	750.9667	0.1255
19	40.0500	0.1254	44	781.0000	0.1255
20	60.0833	0.1254	45	811.0333	0.1255
21	90.1167	0.1254	46	841.0833	0.1255
22	120.1500	0.1254	47	871.1167	0.1255
23	150.2000	0.1254	48	901.1500	0.1255
24	180.2333	0.1254	49	931.1833	0.1255
25	210.2667	0.1254	50	961.2333	0.1255

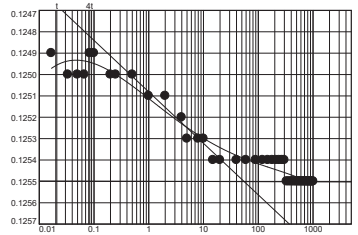


Figure D-244

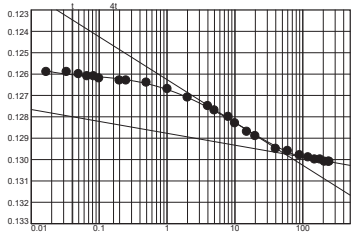
Pressure: 0.13 tsf — **TEST READINGS (continued)** — **Load No. 9**

No.	Elapsed Time	Dial Reading
51	991.2667	0.1255
52	1009.5500	0.1255

Void Ratio = 1.177 **Compression =** 17.0%
D_0 = 0.1250 **D_{50} =** 0.1252 **D_{100} =** 0.1255 **C_v at 4.24 min. =** 0.043 ft.^{2}/day C_α = 0.000

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 10**

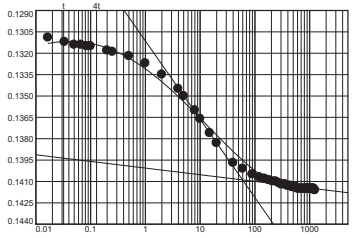
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1255	15	8.0167	0.1280
2	0.0167	0.1259	16	10.0167	0.1283
3	0.0333	0.1259	17	15.0333	0.1287
4	0.0500	0.1260	18	20.0333	0.1289
5	0.0667	0.1261	19	40.0500	0.1295
6	0.0833	0.1261	20	60.0833	0.1296
7	0.1000	0.1262	21	90.1167	0.1298
8	0.2000	0.1263	22	120.1667	0.1299
9	0.2500	0.1263	23	150.2000	0.1300
10	0.5000	0.1264	24	180.2333	0.1300
11	1.0167	0.1267	25	210.2833	0.1301
12	2.0167	0.1271	26	240.3167	0.1301
13	4.0167	0.1275	27	246.0333	0.1301
14	5.0167	0.1277			



Void Ratio = 1.161 **Compression =** 17.6%
D_0 = 0.1259 **D_{50} =** 0.1278 **D_{100} =** 0.1297 **C_v at 5.56 min. =** 0.033 ft.^{2}/day C_α = 0.002

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1301	13	4.0000	0.1345
2	0.0167	0.1309	14	5.0000	0.1350
3	0.0333	0.1312	15	8.0167	0.1360
4	0.0500	0.1314	16	10.0167	0.1366
5	0.0667	0.1314	17	15.0167	0.1376
6	0.0833	0.1315	18	20.0333	0.1383
7	0.1000	0.1315	19	40.0500	0.1397
8	0.2000	0.1318	20	60.0833	0.1401
9	0.2500	0.1319	21	90.1167	0.1405
10	0.5000	0.1322	22	120.1500	0.1407
11	1.0000	0.1327	23	150.2000	0.1408
12	2.0000	0.1335	24	180.2333	0.1409



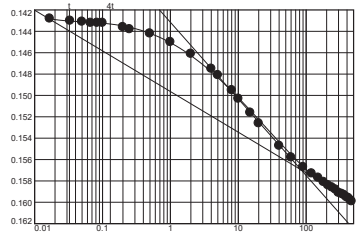
Pressure: 0.50 tsf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	210.2667	0.1410	38	600.7667	0.1415	51	991.2667	0.1415
26	240.3000	0.1410	39	630.8000	0.1415	52	1021.3000	0.1415
27	270.3500	0.1411	40	660.8333	0.1415	53	1051.3333	0.1415
28	300.3833	0.1412	41	690.8833	0.1415	54	1081.3833	0.1415
29	330.4167	0.1412	42	720.9167	0.1415	55	1111.4167	0.1415
30	360.4667	0.1412	43	750.9500	0.1415	56	1141.4500	0.1415
31	390.5000	0.1413	44	781.0000	0.1415	57	1171.4833	0.1415
32	420.5333	0.1413	45	811.0333	0.1415	58	1201.5333	0.1415
33	450.5667	0.1413	46	841.0667	0.1415	59	1231.5667	0.1416
34	480.6167	0.1414	47	871.1167	0.1415	60	1240.2500	0.1416
35	510.6500	0.1414	48	901.1500	0.1415	61	1240.2833	0.1416
36	540.6833	0.1414	49	931.1833	0.1415			
37	570.7333	0.1414	50	961.2167	0.1415			

Void Ratio = 1.120 **Compression =** 19.2%
D_0 = 0.1310 **D_{50} =** 0.1359 **D_{100} =** 0.1409 **C_v at 6.86 min. =** 0.026 ft.^{2}/day C_α = 0.002

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1416	18	20.0333	0.1526
2	0.0167	0.1428	19	40.0500	0.1547
3	0.0333	0.1430	20	60.0833	0.1558
4	0.0500	0.1431	21	90.1167	0.1567
5	0.0667	0.1432	22	120.1500	0.1573
6	0.0833	0.1432	23	150.2000	0.1577
7	0.1000	0.1432	24	180.2333	0.1581
8	0.2000	0.1436	25	210.2667	0.1584
9	0.2500	0.1438	26	240.3167	0.1586
10	0.5000	0.1442	27	270.3500	0.1588
11	1.0000	0.1450	28	300.3833	0.1591
12	2.0000	0.1461	29	330.4167	0.1592
13	4.0167	0.1475	30	360.4667	0.1593
14	5.0167	0.1481	31	390.5000	0.1595
15	8.0167	0.1495	32	420.5333	0.1596
16	10.0167	0.1503	33	450.5833	0.1598
17	15.0167	0.1516	34	467.0833	0.1599

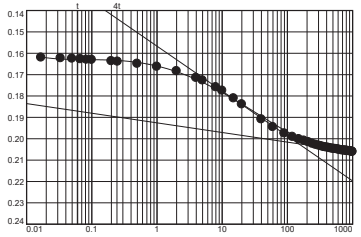


Void Ratio = 1.055 **Compression =** 21.6%
D_0 = 0.1428 **D_{50} =** 0.1499 **D_{100} =** 0.1570 **C_v at 8.82 min. =** 0.019 ft.^{2}/day C_α = 0.014

Figure D-245

Pressure: 2.00 tsf	TEST READINGS	Load No. 13

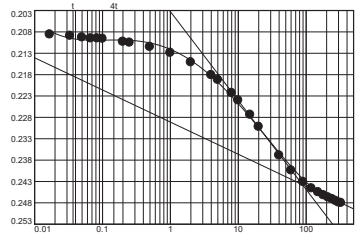
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1599	27	270.3333	0.2028
2	0.0167	0.1620	28	300.3667	0.2032
3	0.0333	0.1623	29	330.4000	0.2035
4	0.0500	0.1625	30	360.4500	0.2039
5	0.0667	0.1628	31	390.4833	0.2040
6	0.0833	0.1630	32	420.5167	0.2042
7	0.1000	0.1631	33	450.5667	0.2044
8	0.2000	0.1637	34	480.6000	0.2046
9	0.2500	0.1639	35	510.6333	0.2047
10	0.5000	0.1649	36	540.6833	0.2048
11	1.0000	0.1663	37	570.7167	0.2049
12	2.0000	0.1684	38	600.7500	0.2050
13	4.0000	0.1715	39	630.8000	0.2052
14	5.0000	0.1727	40	660.8333	0.2053
15	8.0167	0.1759	41	690.8667	0.2054
16	10.0167	0.1775	42	720.9000	0.2055
17	15.0167	0.1811	43	750.9500	0.2055
18	20.0167	0.1839	44	780.9833	0.2056
19	40.0500	0.1909	45	811.0167	0.2056
20	60.0667	0.1945	46	841.0667	0.2057
21	90.1167	0.1975	47	871.1000	0.2058
22	120.1333	0.1991	48	901.1333	0.2058
23	150.1833	0.2002	49	931.1667	0.2059
24	180.2167	0.2009	50	961.2167	0.2060
25	210.2500	0.2016	51	991.2500	0.2061
26	240.3000	0.2023	52	997.1000	0.2061



Void Ratio = 0.890 **Compression =** 27.9%
D_0 = 0.1625 **D_{50} =** 0.1825 **D_{100} =** 0.2024 **C_v at 16.98 min. =** 0.009 ft.^{2}/day **C_α =** 0.016

Pressure: 4.00 tsf	TEST READINGS	Load No. 14

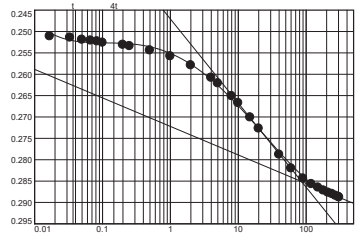
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2061	16	10.0000	0.2240
2	0.0167	0.2086	17	15.0000	0.2274
3	0.0333	0.2089	18	20.0000	0.2302
4	0.0500	0.2093	19	40.0000	0.2369
5	0.0667	0.2095	20	60.0000	0.2404
6	0.0833	0.2095	21	90.0000	0.2431
7	0.1000	0.2096	22	119.9833	0.2446
8	0.2000	0.2103	23	149.9833	0.2455
9	0.2500	0.2105	24	179.9833	0.2462
10	0.5000	0.2115	25	209.9667	0.2467
11	1.0000	0.2129	26	239.9667	0.2471
12	2.0000	0.2151	27	269.9667	0.2475
13	4.0000	0.2181	28	299.9667	0.2479
14	5.0000	0.2192	29	326.3833	0.2480
15	8.0000	0.2223			



Void Ratio = 0.741 **Compression =** 33.6%
D_0 = 0.2093 **D_{50} =** 0.2265 **D_{100} =** 0.2437 **C_v at 12.45 min. =** 0.010 ft.^{2}/day **C_α =** 0.027

Pressure: 8.00 tsf	TEST READINGS	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2480	16	10.0000	0.2667
2	0.0167	0.2511	17	15.0000	0.2701
3	0.0333	0.2514	18	20.0000	0.2727
4	0.0500	0.2519	19	39.9833	0.2788
5	0.0667	0.2521	20	59.9833	0.2820
6	0.0833	0.2523	21	89.9833	0.2844
7	0.1000	0.2526	22	119.9833	0.2857
8	0.2000	0.2531	23	149.9667	0.2865
9	0.2500	0.2534	24	179.9667	0.2872
10	0.5000	0.2544	25	209.9667	0.2877
11	1.0000	0.2558	26	239.9500	0.2880
12	2.0000	0.2579	27	269.9500	0.2884
13	4.0000	0.2608	28	299.9500	0.2887
14	5.0000	0.2621	29	306.1833	0.2888
15	8.0000	0.2651			



Void Ratio = 0.595 **Compression =** 39.2%
D_0 = 0.2516 **D_{50} =** 0.2683 **D_{100} =** 0.2851 **C_v at 11.39 min. =** 0.009 ft.^{2}/day **C_α =** 0.024

Figure D-246

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-42
Depth: 14' - 16'
Material Description: Gray clay with sand pockets
Liquid Limit: 70 **Plasticity Index:** 49
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: KLA/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	157.51 g.	Spec. Gr. =	2.728	Wet w+t =	91.73 g.
Dry w+t =	107.08 g.	Est. Ht. Solids =	0.281 in.	Dry w+t =	73.49 g.
Tare Wt. =	18.78 g.	Init. V.R. =	1.622	Tare Wt. =	13.43 g.
Moisture =	57.1 %	Init. Sat. =	96.0 %	Moisture =	30.4 %

UNIT WEIGHT		TEST START			
Height =	0.736 in.	Height =	0.736 in.	Dry Wt. =	60.06 g.
Diameter =	2.498 in.	Diameter =	2.498 in.		
Weight =	96.61 g.				
Dry Dens. =	64.9 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00060	0.00000			1.622	
0.03	0.02150	0.02090		0.001	1.548	2.8 Comprs.
0.06	0.03750	0.03690		0.002	1.491	5.0 Comprs.
0.13	0.04740	0.04680	0.040		1.456	6.4 Comprs.
0.25	0.07280	0.07220	0.022		1.365	9.8 Comprs.
0.50	0.10900	0.10840	0.019		1.236	14.7 Comprs.
1.00	0.15280	0.15220	0.014		1.080	20.7 Comprs.
0.25	0.13990	0.13930	0.039		1.126	18.9 Comprs.
0.06	0.12490	0.12430			1.179	16.9 Comprs.
0.13	0.12550	0.12490	0.045		1.177	17.0 Comprs.
0.25	0.13010	0.12950	0.041		1.161	17.6 Comprs.
0.50	0.14160	0.14100	0.028		1.120	19.2 Comprs.
1.00	0.15990	0.15930	0.028		1.055	21.6 Comprs.
2.00	0.20610	0.20550	0.011		0.890	27.9 Comprs.
4.00	0.24800	0.24740	0.011		0.741	33.6 Comprs.
8.00	0.28880	0.28820	0.011		0.595	39.2 Comprs.

Compression index (C_c), tsf = 0.52 **Preconsolidation pressure (P_p), tsf =** 0.2 **Void ratio at P_p (e_m) =** 1.392
Recompression index (C_r) = 0.19

Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0006	11	1.0000	0.0162	21	90.1000	0.0214
2	0.0167	0.0114	12	2.0000	0.0168	22	120.1333	0.0215
3	0.0333	0.0114	13	4.0000	0.0172	23	150.1833	0.0215
4	0.0500	0.0114	14	5.0000	0.0172	24	168.0833	0.0215
5	0.0667	0.0124	15	8.0167	0.0173			
6	0.0833	0.0132	16	10.0167	0.0173			
7	0.1000	0.0135	17	15.0167	0.0173			
8	0.2000	0.0136	18	20.0167	0.0208			
9	0.2500	0.0136	19	40.0333	0.0214			
10	0.5000	0.0138	20	60.0667	0.0214			

Void Ratio = 1.548 **Compression =** 2.8%

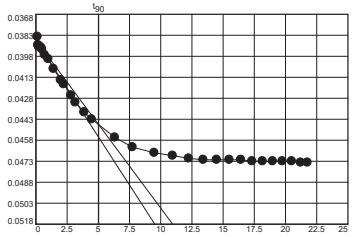
Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0215	15	20.0333	0.0369	29	420.5333	0.0373
2	0.0333	0.0264	16	40.0500	0.0371	30	450.5833	0.0373
3	0.0833	0.0357	17	60.0833	0.0372	31	480.6167	0.0373
4	0.1000	0.0357	18	90.1167	0.0373	32	510.6500	0.0373
5	0.2000	0.0357	19	120.1667	0.0373	33	540.6833	0.0373
6	0.2500	0.0357	20	150.2000	0.0373	34	570.7333	0.0374
7	0.5000	0.0359	21	180.2333	0.0373	35	600.7667	0.0374
8	1.0167	0.0360	22	210.2667	0.0373	36	630.8000	0.0374
9	2.0167	0.0362	23	240.3167	0.0373	37	660.8500	0.0375
10	4.0167	0.0364	24	270.3500	0.0373	38	690.8833	0.0375
11	5.0167	0.0365	25	300.3833	0.0373	39	720.9167	0.0375
12	8.0167	0.0366	26	330.4333	0.0373	40	750.9500	0.0375
13	10.0167	0.0367	27	360.4667	0.0373	41	781.0000	0.0375
14	15.0333	0.0368	28	390.5000	0.0373	42	807.0333	0.0375

Void Ratio = 1.491 **Compression =** 5.0%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 3**

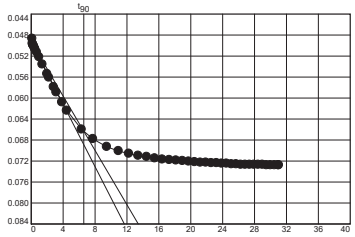
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0375	18	20.0167	0.0443
2	0.0167	0.0384	19	40.0333	0.0456
3	0.0333	0.0390	20	60.0667	0.0463
4	0.0500	0.0391	21	90.1000	0.0467
5	0.0667	0.0391	22	120.1500	0.0469
6	0.0833	0.0391	23	150.1833	0.0471
7	0.1000	0.0391	24	180.2167	0.0472
8	0.2000	0.0392	25	210.2500	0.0472
9	0.2500	0.0393	26	240.3000	0.0472
10	0.5000	0.0397	27	270.3333	0.0472
11	1.0000	0.0400	28	300.3667	0.0473
12	2.0000	0.0407	29	330.4167	0.0473
13	4.0000	0.0415	30	360.4500	0.0473
14	5.0000	0.0418	31	390.4833	0.0473
15	8.0000	0.0426	32	420.5167	0.0473
16	10.0000	0.0431	33	450.5667	0.0474
17	15.0167	0.0438	34	473.6667	0.0474



Void Ratio = 1.456 **Compression =** 6.4%
D_0 = 0.0387 **D_{90} =** 0.0447 **D_{100} =** 0.0454 **C_v at 25.27 min. =** 0.040 ft.^{2}/day

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0474	18	20.0167	0.0624
2	0.0167	0.0487	19	40.0500	0.0660
3	0.0333	0.0496	20	60.0667	0.0678
4	0.0500	0.0498	21	90.1167	0.0693
5	0.0667	0.0499	22	120.1500	0.0701
6	0.0833	0.0500	23	150.1833	0.0706
7	0.1000	0.0501	24	180.2167	0.0710
8	0.2000	0.0505	25	210.2667	0.0712
9	0.2500	0.0507	26	240.3000	0.0715
10	0.5000	0.0513	27	270.3333	0.0717
11	1.0000	0.0522	28	300.3833	0.0718
12	2.0000	0.0536	29	330.4167	0.0719
13	4.0000	0.0554	30	360.4500	0.0720
14	5.0000	0.0561	31	390.4833	0.0721
15	8.0000	0.0579	32	420.5333	0.0722
16	10.0000	0.0589	33	450.5667	0.0723
17	15.0167	0.0608	34	480.6000	0.0723



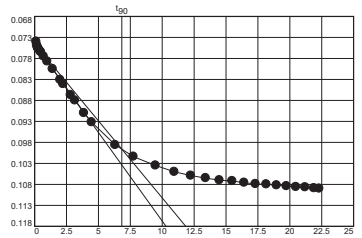
Pressure: 0.25 tsf — **TEST READINGS (continued)** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
35	510.6333	0.0724	45	811.0167	0.0727
36	540.6833	0.0724	46	841.0500	0.0727
37	570.7167	0.0725	47	871.0833	0.0728
38	600.7500	0.0725	48	901.1333	0.0728
39	630.8000	0.0726	49	931.1667	0.0728
40	660.8333	0.0726	50	961.2000	0.0728
41	690.8667	0.0727	51	964.4167	0.0728
42	720.9000	0.0727			
43	750.9333	0.0727			
44	780.9833	0.0727			

Void Ratio = 1.365 **Compression =** 9.8%
D_0 = 0.0493 **D_{90} =** 0.0663 **D_{100} =** 0.0682 **C_v at 43.36 min. =** 0.022 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0728	19	40.0167	0.0986
2	0.0167	0.0740	20	60.0167	0.1014
3	0.0333	0.0748	21	90.0000	0.1035
4	0.0500	0.0752	22	120.0000	0.1050
5	0.0667	0.0755	23	150.0000	0.1059
6	0.0833	0.0756	24	179.9833	0.1065
7	0.1000	0.0757	25	209.9667	0.1070
8	0.2000	0.0763	26	239.9667	0.1072
9	0.2500	0.0765	27	269.9667	0.1076
10	0.5000	0.0775	28	299.9667	0.1079
11	1.0000	0.0787	29	329.9500	0.1080
12	2.0167	0.0805	30	359.9500	0.1082
13	4.0167	0.0831	31	389.9500	0.1084
14	5.0167	0.0841	32	419.9333	0.1086
15	8.0167	0.0867	33	449.9333	0.1087
16	10.0167	0.0880	34	479.9333	0.1089
17	15.0167	0.0910	35	498.0000	0.1090
18	20.0167	0.0932			

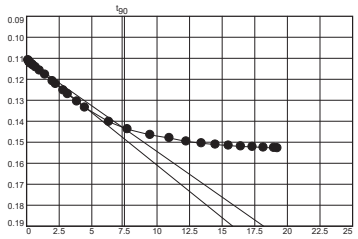


Void Ratio = 1.236 **Compression =** 14.7%
D_0 = 0.0745 **D_{90} =** 0.0996 **D_{100} =** 0.1024 **C_v at 46.72 min. =** 0.019 ft.^{2}/day

Figure D-248

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1090	17	14.9833	0.1306
2	0.0167	0.1109	18	19.9833	0.1335
3	0.0333	0.1113	19	39.9667	0.1403
4	0.0500	0.1119	20	59.9667	0.1438
5	0.0667	0.1121	21	89.9833	0.1465
6	0.0833	0.1123	22	119.9667	0.1480
7	0.1000	0.1124	23	149.9833	0.1496
8	0.2000	0.1130	24	180.0167	0.1505
9	0.2500	0.1133	25	210.0500	0.1511
10	0.5000	0.1143	26	240.1000	0.1516
11	1.0000	0.1158	27	270.1333	0.1520
12	2.0000	0.1178	28	300.1667	0.1522
13	4.0000	0.1209	29	330.2167	0.1525
14	5.0000	0.1222	30	360.2500	0.1527
15	8.0000	0.1253	31	369.9833	0.1528
16	9.9833	0.1271			

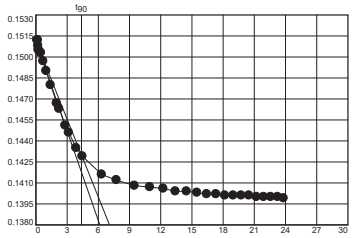


Void Ratio = 1.080 **Compression =** 20.7%

D_0 = 0.1109 **D_{90} =** 0.1428 **D_{100} =** 0.1463 **C_v at 53.65 min. =** 0.014 ft.2/day

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 7**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1528	19	60.0667	0.1412
2	0.0167	0.1512	20	90.1000	0.1408
3	0.0333	0.1512	21	120.1500	0.1407
4	0.0500	0.1508	22	150.1833	0.1406
5	0.0667	0.1505	23	180.2167	0.1404
6	0.0833	0.1505	24	210.2667	0.1404
7	0.1833	0.1503	25	240.3000	0.1403
8	0.2333	0.1503	26	270.3333	0.1402
9	0.5000	0.1497	27	300.3833	0.1402
10	1.0000	0.1490	28	330.4167	0.1401
11	2.0000	0.1480	29	360.4500	0.1401
12	4.0000	0.1467	30	390.4833	0.1401
13	5.0000	0.1463	31	420.5333	0.1401
14	8.0000	0.1451	32	450.5667	0.1400
15	10.0000	0.1446	33	480.6000	0.1400
16	15.0167	0.1435	34	510.6500	0.1400
17	20.0167	0.1429	35	540.6833	0.1400
18	40.0500	0.1416	36	567.3000	0.1399



Void Ratio = 1.126 **Compression =** 18.9%

D_0 = 0.1511 **D_{90} =** 0.1430 **D_{100} =** 0.1421 **C_v at 19.15 min. =** 0.039 ft.2/day

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Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1399	11	1.0000	0.1378	21	90.1167	0.1274
2	0.0167	0.1391	12	2.0000	0.1371	22	120.1500	0.1267
3	0.0333	0.1391	13	4.0167	0.1361	23	150.2000	0.1263
4	0.0500	0.1390	14	5.0167	0.1358	24	180.2333	0.1259
5	0.0667	0.1389	15	8.0167	0.1348	25	210.2667	0.1256
6	0.0833	0.1389	16	10.0167	0.1343	26	240.3000	0.1255
7	0.1000	0.1388	17	15.0167	0.1331	27	270.3500	0.1253
8	0.2000	0.1386	18	20.0333	0.1322	28	300.3833	0.1252
9	0.2500	0.1385	19	40.0500	0.1299	29	330.4167	0.1250
10	0.5000	0.1383	20	60.0833	0.1286	30	357.1500	0.1249

Void Ratio = 1.179 **Compression =** 16.9%

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1249	26	240.3167	0.1254
2	0.0167	0.1249	27	270.3500	0.1254
3	0.0333	0.1250	28	300.3833	0.1254
4	0.0500	0.1250	29	330.4167	0.1255
5	0.0667	0.1250	30	360.4667	0.1255
6	0.0833	0.1249	31	390.5000	0.1255
7	0.1000	0.1249	32	420.5333	0.1255
8	0.2000	0.1250	33	450.5833	0.1255
9	0.2500	0.1250	34	480.6167	0.1255
10	0.5000	0.1250	35	510.6500	0.1255
11	1.0000	0.1251	36	540.7000	0.1255
12	2.0000	0.1251	37	570.7333	0.1255
13	4.0000	0.1252	38	600.7667	0.1255
14	5.0167	0.1253	39	630.8000	0.1255
15	8.0167	0.1253	40	660.8500	0.1255
16	10.0167	0.1253	41	690.8833	0.1255
17	15.0167	0.1254	42	720.9167	0.1255
18	20.0333	0.1254	43	750.9667	0.1255
19	40.0500	0.1254	44	781.0000	0.1255
20	60.0833	0.1254	45	811.0333	0.1255
21	90.1167	0.1254	46	841.0833	0.1255
22	120.1500	0.1254	47	871.1167	0.1255
23	150.2000	0.1254	48	901.1500	0.1255
24	180.2333	0.1254	49	931.1833	0.1255
25	210.2667	0.1254	50	961.2333	0.1255

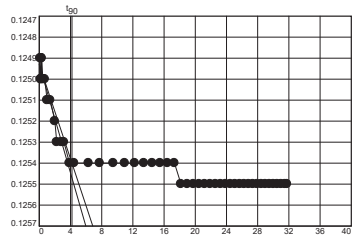

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Figure D-249

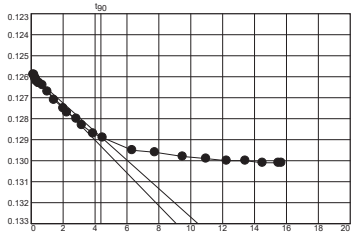
Pressure: 0.13 tsf	TEST READINGS (continued)	Load No. 9

No.	Elapsed Time	Dial Reading
51	991.2667	0.1255
52	1009.5500	0.1255

Void Ratio = 1.177 **Compression =** 17.0%
D_0 = 0.1249 **D_{90} =** 0.1254 **D_{100} =** 0.1255 **C_v at 17.58 min. =** 0.045 ft.^{2}/day

Pressure: 0.25 tsf	TEST READINGS	Load No. 10

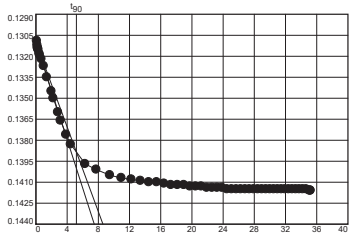
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1255	15	8.0167	0.1280
2	0.0167	0.1259	16	10.0167	0.1283
3	0.0333	0.1259	17	15.0333	0.1287
4	0.0500	0.1260	18	20.0333	0.1289
5	0.0667	0.1261	19	40.0500	0.1295
6	0.0833	0.1261	20	60.0833	0.1296
7	0.1000	0.1262	21	90.1167	0.1298
8	0.2000	0.1263	22	120.1667	0.1299
9	0.2500	0.1263	23	150.2000	0.1300
10	0.5000	0.1264	24	180.2333	0.1300
11	1.0167	0.1267	25	210.2833	0.1301
12	2.0167	0.1271	26	240.3167	0.1301
13	4.0167	0.1275	27	246.0333	0.1301
14	5.0167	0.1277			



Void Ratio = 1.161 **Compression =** 17.6%
D_0 = 0.1259 **D_{90} =** 0.1289 **D_{100} =** 0.1292 **C_v at 19.04 min. =** 0.041 ft.^{2}/day

Pressure: 0.50 tsf	TEST READINGS	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1301	13	4.0000	0.1345
2	0.0167	0.1309	14	5.0000	0.1350
3	0.0333	0.1312	15	8.0167	0.1360
4	0.0500	0.1314	16	10.0167	0.1366
5	0.0667	0.1314	17	15.0167	0.1376
6	0.0833	0.1315	18	20.0333	0.1383
7	0.1000	0.1315	19	40.0500	0.1397
8	0.2000	0.1318	20	60.0833	0.1401
9	0.2500	0.1319	21	90.1167	0.1405
10	0.5000	0.1322	22	120.1500	0.1407
11	1.0000	0.1327	23	150.2000	0.1408
12	2.0000	0.1335	24	180.2333	0.1409



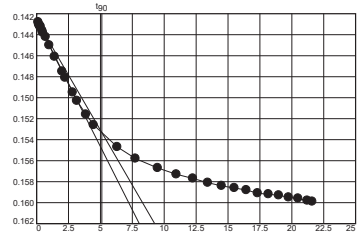
Pressure: 0.50 tsf	TEST READINGS (continued)	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	210.2667	0.1410	38	600.7667	0.1415	51	991.2667	0.1415
26	240.3000	0.1410	39	630.8000	0.1415	52	1021.3000	0.1415
27	270.3500	0.1411	40	660.8333	0.1415	53	1051.3333	0.1415
28	300.3833	0.1412	41	690.8833	0.1415	54	1081.3833	0.1415
29	330.4167	0.1412	42	720.9167	0.1415	55	1111.4167	0.1415
30	360.4667	0.1412	43	750.9500	0.1415	56	1141.4500	0.1415
31	390.5000	0.1413	44	781.0000	0.1415	57	1171.4833	0.1415
32	420.5333	0.1413	45	811.0333	0.1415	58	1201.5333	0.1415
33	450.5667	0.1413	46	841.0667	0.1415	59	1231.5667	0.1416
34	480.6167	0.1414	47	871.1167	0.1415	60	1240.2500	0.1416
35	510.6500	0.1414	48	901.1500	0.1415	61	1240.2833	0.1416
36	540.6833	0.1414	49	931.1833	0.1415			
37	570.7333	0.1414	50	961.2167	0.1415			

Void Ratio = 1.120 **Compression =** 19.2%
D_0 = 0.1310 **D_{90} =** 0.1388 **D_{100} =** 0.1397 **C_v at 26.89 min. =** 0.028 ft.^{2}/day

Pressure: 1.00 tsf	TEST READINGS	Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1416	18	20.0333	0.1526
2	0.0167	0.1428	19	40.0500	0.1547
3	0.0333	0.1430	20	60.0833	0.1558
4	0.0500	0.1431	21	90.1167	0.1567
5	0.0667	0.1432	22	120.1500	0.1573
6	0.0833	0.1432	23	150.2000	0.1577
7	0.1000	0.1432	24	180.2333	0.1581
8	0.2000	0.1436	25	210.2667	0.1584
9	0.2500	0.1438	26	240.3167	0.1586
10	0.5000	0.1442	27	270.3500	0.1588
11	1.0000	0.1450	28	300.3833	0.1591
12	2.0000	0.1461	29	330.4167	0.1592
13	4.0167	0.1475	30	360.4667	0.1593
14	5.0167	0.1481	31	390.5000	0.1595
15	8.0167	0.1495	32	420.5333	0.1596
16	10.0167	0.1503	33	450.5833	0.1598
17	15.0167	0.1516	34	467.0833	0.1599

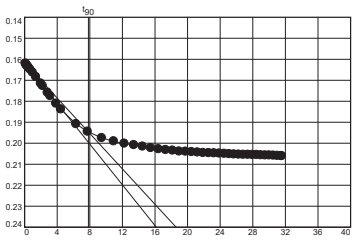


Void Ratio = 1.055 **Compression =** 21.6%
D_0 = 0.1426 **D_{90} =** 0.1533 **D_{100} =** 0.1545 **C_v at 26.12 min. =** 0.028 ft.^{2}/day

Figure D-250

Pressure: 2.00 tsf	TEST READINGS	Load No. 13

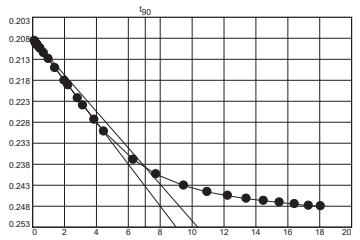
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1599	27	270.3333	0.2028
2	0.0167	0.1620	28	300.3667	0.2032
3	0.0333	0.1623	29	330.4000	0.2035
4	0.0500	0.1625	30	360.4500	0.2039
5	0.0667	0.1628	31	390.4833	0.2040
6	0.0833	0.1630	32	420.5167	0.2042
7	0.1000	0.1631	33	450.5667	0.2044
8	0.2000	0.1637	34	480.6000	0.2046
9	0.2500	0.1639	35	510.6333	0.2047
10	0.5000	0.1649	36	540.6833	0.2048
11	1.0000	0.1663	37	570.7167	0.2049
12	2.0000	0.1684	38	600.7500	0.2050
13	4.0000	0.1715	39	630.8000	0.2052
14	5.0000	0.1727	40	660.8333	0.2053
15	8.0167	0.1759	41	690.8667	0.2054
16	10.0167	0.1775	42	720.9000	0.2055
17	15.0167	0.1811	43	750.9500	0.2055
18	20.0167	0.1839	44	780.9833	0.2056
19	40.0500	0.1909	45	811.0167	0.2056
20	60.0667	0.1945	46	841.0667	0.2057
21	90.1167	0.1975	47	871.1000	0.2058
22	120.1333	0.1991	48	901.1333	0.2058
23	150.1833	0.2002	49	931.1667	0.2059
24	180.2167	0.2009	50	961.2167	0.2060
25	210.2500	0.2016	51	991.2500	0.2061
26	240.3000	0.2023	52	997.1000	0.2061



Void Ratio = 0.890 **Compression =** 27.9%
D_0 = 0.1616 **D_{90} =** 0.1946 **D_{100} =** 0.1983 **C_v at 61.35 min. =** 0.011 ft.^{2}/day

Pressure: 4.00 tsf	TEST READINGS	Load No. 14

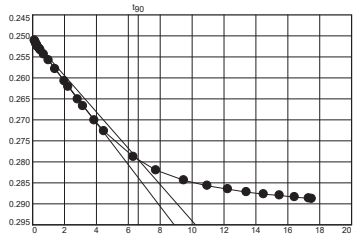
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2061	16	10.0000	0.2240
2	0.0167	0.2086	17	15.0000	0.2274
3	0.0333	0.2089	18	20.0000	0.2302
4	0.0500	0.2093	19	40.0000	0.2369
5	0.0667	0.2095	20	60.0000	0.2404
6	0.0833	0.2095	21	90.0000	0.2431
7	0.1000	0.2096	22	119.9833	0.2446
8	0.2000	0.2103	23	149.9833	0.2455
9	0.2500	0.2105	24	179.9833	0.2462
10	0.5000	0.2115	25	209.9667	0.2467
11	1.0000	0.2129	26	239.9667	0.2471
12	2.0000	0.2151	27	269.9667	0.2475
13	4.0000	0.2181	28	299.9667	0.2479
14	5.0000	0.2192	29	326.3833	0.2480
15	8.0000	0.2223			



Void Ratio = 0.741 **Compression =** 33.6%
D_0 = 0.2081 **D_{90} =** 0.2387 **D_{100} =** 0.2421 **C_v at 49.91 min. =** 0.011 ft.^{2}/day

Pressure: 8.00 tsf	TEST READINGS	Load No. 15

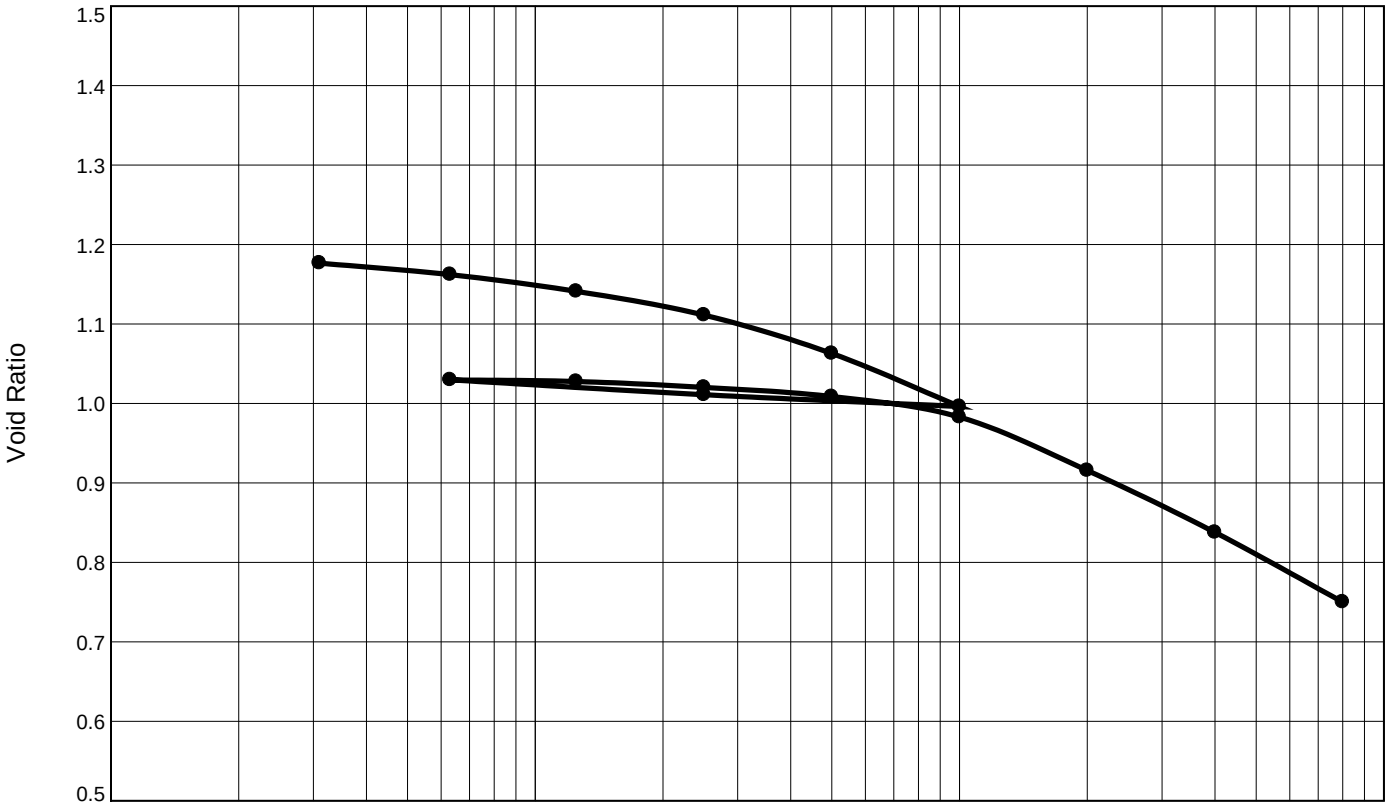
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2480	16	10.0000	0.2667
2	0.0167	0.2511	17	15.0000	0.2701
3	0.0333	0.2514	18	20.0000	0.2727
4	0.0500	0.2519	19	39.9833	0.2788
5	0.0667	0.2521	20	59.9833	0.2820
6	0.0833	0.2523	21	89.9833	0.2844
7	0.1000	0.2526	22	119.9833	0.2857
8	0.2000	0.2531	23	149.9667	0.2865
9	0.2500	0.2534	24	179.9667	0.2872
10	0.5000	0.2544	25	209.9667	0.2877
11	1.0000	0.2558	26	239.9500	0.2880
12	2.0000	0.2579	27	269.9500	0.2884
13	4.0000	0.2608	28	299.9500	0.2887
14	5.0000	0.2621	29	306.1833	0.2888
15	8.0000	0.2651			

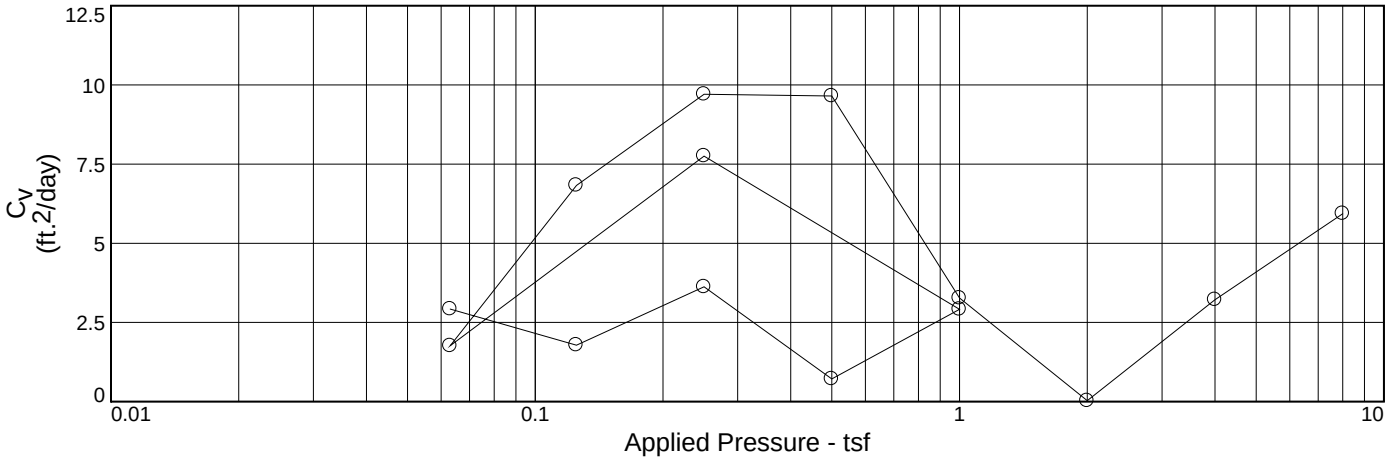


Void Ratio = 0.595 **Compression =** 39.2%
D_0 = 0.2508 **D_{90} =** 0.2795 **D_{100} =** 0.2827 **C_v at 43.85 min. =** 0.011 ft.^{2}/day

Figure D-251

CONSOLIDATION TEST REPORT





Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
100.0 %	43.6 %	77.4	35	12	2.701	0.4	0.26	1.177

MATERIAL DESCRIPTION	USCS	AASHTO
Gray silty clay with sand seams	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-45 **Depth:** 4'-6'

GeoEngineers

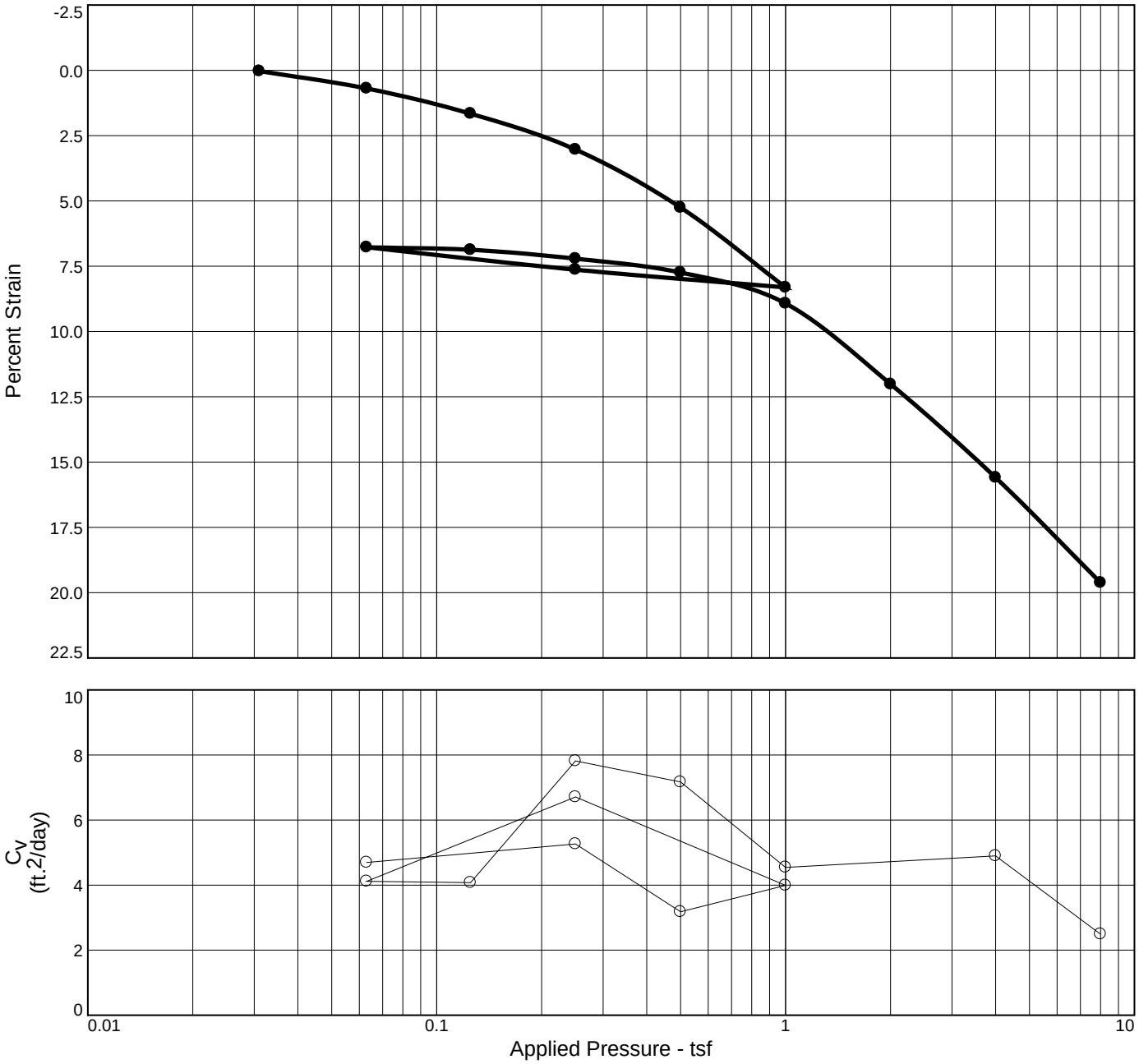
Remarks:
Specific gravity is measured.

C_v at t_{90}

Tested By: KLA **Checked By:** ARS

Figure D-252

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
100.0 %	43.6 %	77.4	35	12	2.701	0.4	0.26	1.177

MATERIAL DESCRIPTION	USCS	AASHTO
Gray silty clay with sand seams	(CL)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-45 **Depth:** 4'-6'

GeoEngineers

Remarks:
Specific gravity is measured.

C_v at t_{50}

Tested By: KLA **Checked By:** ARS

Figure D-253

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-45
Depth: 4'-6'
Material Description: Gray silty clay with sand seams
Liquid Limit: 35 **Plasticity Index:** 12
USCS: (CL)
Tested by: KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	148.18 g.	Spec. Gr. =	2.701	Wet w+t =	111.57 g.
Dry w+t =	108.85 g.	Est. Ht. Solids =	0.338 in.	Dry w+t =	89.41 g.
Tare Wt. =	18.63 g.	Init. V.R. =	1.177	Tare Wt. =	18.23 g.
Moisture =	43.6 %	Init. Sat. =	100.0 %	Moisture =	31.1 %

UNIT WEIGHT		TEST START			
Height =	0.735 in.	Height =	0.735 in.	Dry Wt. =	71.18 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	105.32 g.				
Dry Dens. =	77.4 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.01160	0.00000			1.177	
0.03	0.01180	0.00020		0.000	1.177	0.0 Comprs.
0.06	0.01670	0.00510	4.696	0.001	1.162	0.7 Comprs.
0.13	0.02380	0.01220		0.001	1.141	1.7 Comprs.
0.25	0.03390	0.02230	5.265	0.004	1.111	3.0 Comprs.
0.50	0.05020	0.03860	3.182	0.007	1.063	5.3 Comprs.
1.00	0.07270	0.06110	3.992	0.008	0.996	8.3 Comprs.
0.25	0.06770	0.05610	6.710		1.011	7.6 Comprs.
0.06	0.06140	0.04980	4.117		1.030	6.8 Comprs.
0.13	0.06210	0.05050	4.074	0.000	1.028	6.9 Comprs.
0.25	0.06460	0.05300	7.818	0.000	1.020	7.2 Comprs.
0.50	0.06850	0.05690	7.171	0.001	1.009	7.7 Comprs.
1.00	0.07720	0.06560	4.545	0.002	0.983	8.9 Comprs.
2.00	0.09990	0.08830		0.004	0.916	12.0 Comprs.
4.00	0.12620	0.11460	4.896	0.007	0.838	15.6 Comprs.
8.00	0.15580	0.14420	2.490	0.005	0.750	19.6 Comprs.

Compression index (C_c), tsf = 0.26 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.083
Recompression index (C_r) = 0.08

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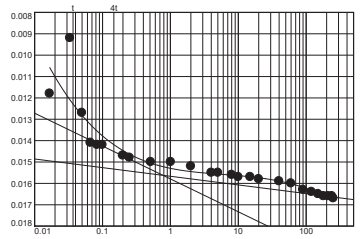
Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0116	11	1.0167	0.0117
2	0.0167	0.0117	12	2.0167	0.0118
3	0.0333	0.0117	13	4.0333	0.0118
4	0.0500	0.0117	14	5.0333	0.0118
5	0.0667	0.0117	15	8.0333	0.0118
6	0.0833	0.0117	16	10.0333	0.0118
7	0.1000	0.0117			
8	0.2167	0.0117			
9	0.2667	0.0117			
10	0.5167	0.0117			

Void Ratio = 1.177 **Compression =** 0.0%

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0118	15	8.0500	0.0156
2	0.0167	0.0118	16	10.0500	0.0157
3	0.0333	0.0092	17	15.0500	0.0157
4	0.0500	0.0127	18	20.0667	0.0158
5	0.0667	0.0141	19	40.1333	0.0159
6	0.0833	0.0142	20	60.1667	0.0160
7	0.1000	0.0142	21	90.2500	0.0163
8	0.2000	0.0147	22	120.3333	0.0164
9	0.2500	0.0148	23	150.3833	0.0165
10	0.5167	0.0150	24	180.4167	0.0166
11	1.0167	0.0150	25	210.4500	0.0166
12	2.0167	0.0152	26	240.4833	0.0166
13	4.0333	0.0155	27	252.6500	0.0167
14	5.0333	0.0155			



Void Ratio = 1.162 **Compression =** 0.7%
D_0 = 0.0104 **D_{50} =** 0.0130 **D_{100} =** 0.0156 **C_v at 0.06 min. =** 4.696 ft.^{2}/day **C_α =** 0.001

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Figure D-254

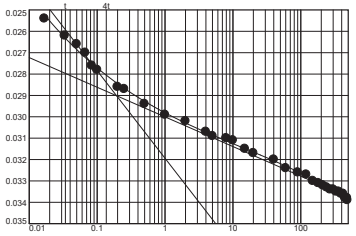
Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 3**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0167	17	20.0167	0.0222	33	480.6000	0.0237
2	0.0167	0.0196	18	40.0500	0.0224	34	510.6333	0.0237
3	0.0333	0.0197	19	60.0667	0.0227	35	540.6833	0.0237
4	0.0500	0.0198	20	90.1000	0.0229	36	570.7167	0.0237
5	0.0667	0.0198	21	120.1500	0.0230	37	600.7500	0.0237
6	0.0833	0.0199	22	150.1833	0.0230	38	630.8000	0.0237
7	0.1833	0.0204	23	180.2167	0.0231	39	660.8333	0.0238
8	0.2333	0.0205	24	210.2667	0.0232	40	690.8667	0.0238
9	0.4833	0.0206	25	240.3000	0.0233	41	720.9000	0.0238
10	1.0000	0.0210	26	270.3333	0.0234	42	750.9500	0.0238
11	2.0000	0.0213	27	300.3833	0.0235	43	780.9833	0.0238
12	4.0000	0.0215	28	330.4167	0.0235	44	811.0167	0.0238
13	5.0000	0.0215	29	360.4500	0.0236	45	841.0500	0.0238
14	8.0000	0.0219	30	390.4833	0.0236	46	859.7333	0.0238
15	10.0000	0.0219	31	420.5333	0.0236			
16	15.0167	0.0221	32	450.5667	0.0237			

Void Ratio = 1.141 **Compression =** 1.7%

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0238	19	40.0500	0.0320
2	0.0167	0.0254	20	60.0667	0.0324
3	0.0333	0.0262	21	90.1167	0.0326
4	0.0500	0.0266	22	120.1500	0.0327
5	0.0667	0.0270	23	150.1833	0.0330
6	0.0833	0.0276	24	180.2167	0.0331
7	0.1000	0.0278	25	210.2667	0.0332
8	0.2000	0.0286	26	240.3000	0.0333
9	0.2500	0.0287	27	270.3333	0.0334
10	0.5000	0.0294	28	300.3667	0.0334
11	1.0000	0.0299	29	330.4167	0.0335
12	2.0000	0.0302	30	360.4500	0.0335
13	4.0000	0.0307	31	390.4833	0.0336
14	5.0000	0.0309	32	420.5333	0.0336
15	8.0000	0.0310	33	450.5667	0.0338
16	10.0000	0.0311	34	480.6000	0.0338
17	15.0167	0.0315	35	485.5167	0.0339
18	20.0167	0.0317			



Void Ratio = 1.111 **Compression =** 3.0%
D_0 = 0.0246 **D_{50} =** 0.0268 **D_{100} =** 0.0290 **C_v at 0.05 min. =** 5.265 ft.^{2}/day **C_α =** 0.004

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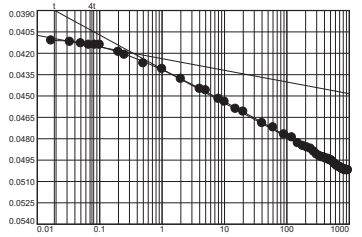
Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0339	26	240.3000	0.0487
2	0.0167	0.0411	27	270.3500	0.0489
3	0.0333	0.0412	28	300.3833	0.0491
4	0.0500	0.0413	29	330.4167	0.0492
5	0.0667	0.0414	30	360.4667	0.0493
6	0.0833	0.0414	31	390.5000	0.0493
7	0.1000	0.0414	32	420.5333	0.0494
8	0.2000	0.0419	33	450.5667	0.0494
9	0.2500	0.0421	34	480.6167	0.0495
10	0.5000	0.0427	35	510.6500	0.0495
11	1.0000	0.0431	36	540.6833	0.0496
12	2.0000	0.0438	37	570.7167	0.0497
13	4.0167	0.0445	38	600.7667	0.0498
14	5.0167	0.0446	39	630.8000	0.0499
15	8.0167	0.0452	40	660.8333	0.0499
16	10.0167	0.0454	41	690.8833	0.0500
17	15.0167	0.0459	42	720.9167	0.0500
18	20.0333	0.0461	43	750.9500	0.0501
19	40.0500	0.0469	44	780.9833	0.0501
20	60.0833	0.0472	45	811.0333	0.0501
21	90.1167	0.0477	46	841.0667	0.0502
22	120.1500	0.0479	47	871.1000	0.0502
23	150.2000	0.0483	48	901.1333	0.0502
24	180.2333	0.0485	49	931.1833	0.0502
25	210.2667	0.0486	50	951.5833	0.0502



Void Ratio = 1.063 **Compression =** 5.3%
D_0 = 0.0408 **D_{50} =** 0.0414 **D_{100} =** 0.0420 **C_v at 0.08 min. =** 3.182 ft.^{2}/day **C_α =** 0.007

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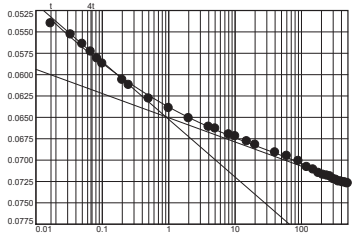
Figure D-255

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

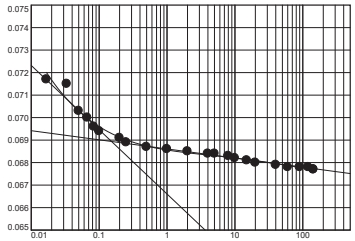
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0502	19	40.0167	0.0691
2	0.0167	0.0540	20	60.0167	0.0695
3	0.0333	0.0553	21	90.0000	0.0701
4	0.0500	0.0564	22	119.9833	0.0708
5	0.0667	0.0573	23	150.0000	0.0711
6	0.0833	0.0581	24	179.9833	0.0715
7	0.1000	0.0587	25	209.9667	0.0717
8	0.2000	0.0606	26	239.9667	0.0718
9	0.2500	0.0612	27	269.9667	0.0719
10	0.5000	0.0628	28	299.9667	0.0722
11	1.0000	0.0639	29	329.9500	0.0723
12	2.0000	0.0651	30	359.9500	0.0725
13	4.0000	0.0661	31	389.9500	0.0725
14	5.0000	0.0663	32	419.9333	0.0726
15	8.0167	0.0670	33	449.9167	0.0726
16	10.0167	0.0672	34	479.9333	0.0727
17	15.0167	0.0678	35	497.0167	0.0727
18	20.0167	0.0682			



Void Ratio = 0.996 **Compression =** 8.3%
D_0 = 0.0495 **D_{50} =** 0.0572 **D_{100} =** 0.0649 **C_v at 0.06 min. =** 3.992 ft.^{2}/day **C_α =** 0.008

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 7**

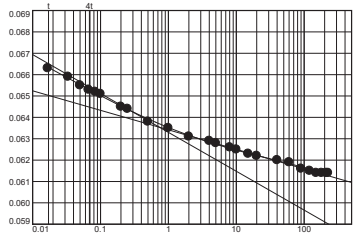
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0727	13	4.0000	0.0684
2	0.0167	0.0717	14	5.0000	0.0684
3	0.0333	0.0715	15	8.0000	0.0683
4	0.0500	0.0703	16	10.0000	0.0682
5	0.0667	0.0700	17	15.0000	0.0681
6	0.0833	0.0696	18	20.0000	0.0680
7	0.1000	0.0694	19	39.9833	0.0679
8	0.2000	0.0691	20	59.9833	0.0678
9	0.2500	0.0689	21	89.9833	0.0678
10	0.5000	0.0687	22	119.9833	0.0678
11	1.0000	0.0686	23	142.9000	0.0677
12	2.0000	0.0685	24	142.9333	0.0677



Void Ratio = 1.011 **Compression =** 7.6%
D_0 = 0.0727 **D_{50} =** 0.0708 **D_{100} =** 0.0689 **C_v at 0.03 min. =** 6.710 ft.^{2}/day

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 8**

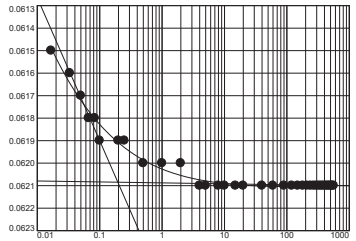
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0677	14	5.0167	0.0628
2	0.0167	0.0663	15	8.0167	0.0626
3	0.0333	0.0659	16	10.0167	0.0625
4	0.0500	0.0655	17	15.0167	0.0623
5	0.0667	0.0653	18	20.0333	0.0622
6	0.0833	0.0652	19	40.0500	0.0620
7	0.1000	0.0651	20	60.0833	0.0619
8	0.2000	0.0645	21	90.1167	0.0616
9	0.2500	0.0644	22	120.1500	0.0615
10	0.5000	0.0638	23	150.2000	0.0614
11	1.0000	0.0635	24	180.2333	0.0614
12	2.0000	0.0631	25	210.2667	0.0614
13	4.0167	0.0629	26	225.0667	0.0614



Void Ratio = 1.030 **Compression =** 6.8%
D_0 = 0.0674 **D_{50} =** 0.0655 **D_{100} =** 0.0635 **C_v at 0.06 min. =** 4.117 ft.^{2}/day

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0614	20	60.0667	0.0621
2	0.0167	0.0615	21	90.1167	0.0621
3	0.0333	0.0616	22	120.1500	0.0621
4	0.0500	0.0617	23	150.1833	0.0621
5	0.0667	0.0618	24	180.2167	0.0621
6	0.0833	0.0618	25	210.2667	0.0621
7	0.1000	0.0619	26	240.3000	0.0621
8	0.2000	0.0619	27	270.3333	0.0621
9	0.2500	0.0619	28	300.3833	0.0621
10	0.5000	0.0620	29	330.4167	0.0621
11	1.0000	0.0620	30	360.4500	0.0621
12	2.0000	0.0620	31	390.5000	0.0621
13	4.0000	0.0621	32	420.5333	0.0621
14	5.0000	0.0621	33	450.5667	0.0621
15	8.0000	0.0621	34	480.6167	0.0621
16	10.0167	0.0621	35	510.6500	0.0621
17	15.0167	0.0621	36	540.6833	0.0621
18	20.0167	0.0621	37	564.7333	0.0621
19	40.0500	0.0621			

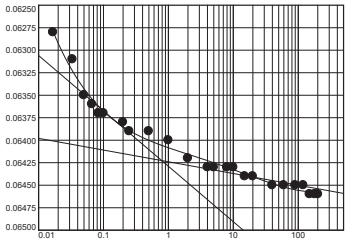


Void Ratio = 1.028 **Compression =** 6.9%
D_0 = 0.0614 **D_{50} =** 0.0617 **D_{100} =** 0.0621 **C_v at 0.06 min. =** 4.074 ft.^{2}/day **C_α =** 0.000

Figure D-256

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 10**

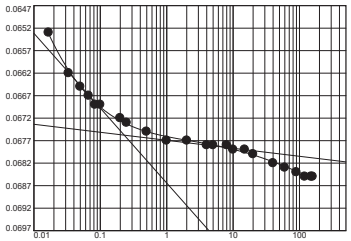
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0621	14	5.0167	0.0643
2	0.0167	0.0628	15	8.0167	0.0643
3	0.0333	0.0631	16	10.0167	0.0643
4	0.0500	0.0635	17	15.0167	0.0644
5	0.0667	0.0636	18	20.0333	0.0644
6	0.0833	0.0637	19	40.0500	0.0645
7	0.1000	0.0637	20	60.0833	0.0645
8	0.2000	0.0638	21	90.1167	0.0645
9	0.2500	0.0639	22	120.1500	0.0645
10	0.5000	0.0639	23	150.2000	0.0646
11	1.0000	0.0640	24	180.2333	0.0646
12	2.0000	0.0642	25	202.2833	0.0646
13	4.0167	0.0643			



Void Ratio = 1.020 **Compression =** 7.2%
D_0 = 0.0621 **D_{50} =** 0.0632 **D_{100} =** 0.0642 **C_v at 0.03 min. =** 7.818 ft.^{2}/day **C_α =** 0.000

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 11**

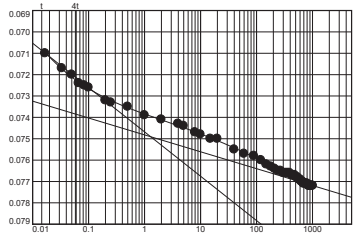
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0646	13	4.0167	0.0678
2	0.0167	0.0653	14	5.0167	0.0678
3	0.0333	0.0662	15	8.0167	0.0678
4	0.0500	0.0665	16	10.0167	0.0679
5	0.0667	0.0667	17	15.0167	0.0679
6	0.0833	0.0669	18	20.0333	0.0680
7	0.1000	0.0669	19	40.0500	0.0682
8	0.2000	0.0672	20	60.0833	0.0683
9	0.2500	0.0673	21	90.1167	0.0684
10	0.5000	0.0675	22	120.1667	0.0685
11	1.0000	0.0677	23	150.2000	0.0685
12	2.0167	0.0677	24	157.5500	0.0685



Void Ratio = 1.009 **Compression =** 7.7%
D_0 = 0.0646 **D_{50} =** 0.0661 **D_{100} =** 0.0676 **C_v at 0.03 min. =** 7.171 ft.^{2}/day **C_α =** 0.001

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0685	27	270.3333	0.0765
2	0.0167	0.0710	28	300.3833	0.0766
3	0.0333	0.0717	29	330.4167	0.0766
4	0.0500	0.0720	30	360.4500	0.0766
5	0.0667	0.0724	31	390.5000	0.0766
6	0.0833	0.0725	32	420.5333	0.0767
7	0.1000	0.0726	33	450.5667	0.0767
8	0.2000	0.0732	34	480.6000	0.0767
9	0.2500	0.0733	35	510.6500	0.0768
10	0.5000	0.0735	36	540.6833	0.0768
11	1.0000	0.0739	37	570.7167	0.0769
12	2.0000	0.0741	38	600.7667	0.0769
13	4.0000	0.0743	39	630.8000	0.0770
14	5.0000	0.0744	40	660.8333	0.0770
15	8.0000	0.0747	41	690.8667	0.0771
16	10.0000	0.0748	42	720.9167	0.0771
17	15.0167	0.0750	43	750.9500	0.0771
18	20.0167	0.0750	44	780.9833	0.0771
19	40.0500	0.0755	45	811.0333	0.0771
20	60.0667	0.0757	46	841.0667	0.0772
21	90.1167	0.0758	47	871.1000	0.0772
22	120.1500	0.0760	48	901.1333	0.0772
23	150.1833	0.0762	49	931.1833	0.0772
24	180.2333	0.0763	50	961.2167	0.0772
25	210.2667	0.0764	51	991.2500	0.0772
26	240.3000	0.0765	52	1014.4167	0.0772



Void Ratio = 0.983 **Compression =** 8.9%
D_0 = 0.0693 **D_{50} =** 0.0721 **D_{100} =** 0.0749 **C_v at 0.05 min. =** 4.545 ft.^{2}/day **C_α =** 0.002

Figure D-257

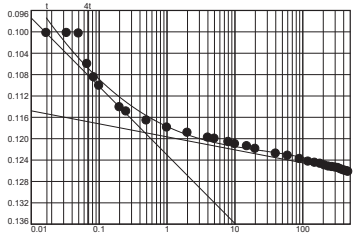
Pressure: 2.00 tsf	TEST READINGS	Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0772	23	150.2000	0.0971	45	841.0667	0.0994
2	0.0167	0.0920	24	180.2333	0.0973	46	871.1167	0.0994
3	0.0333	0.0923	25	210.2667	0.0974	47	901.1500	0.0995
4	0.0500	0.0923	26	240.3000	0.0976	48	931.1833	0.0995
5	0.0667	0.0923	27	270.3500	0.0979	49	961.2167	0.0996
6	0.0833	0.0923	28	300.3833	0.0980	50	991.2667	0.0996
7	0.1000	0.0923	29	330.4167	0.0981	51	1021.3000	0.0997
8	0.2000	0.0923	30	360.4667	0.0982	52	1051.3333	0.0997
9	0.2500	0.0923	31	390.5000	0.0982	53	1081.3833	0.0997
10	0.5000	0.0924	32	420.5333	0.0983	54	1111.4167	0.0997
11	1.0000	0.0925	33	450.5833	0.0985	55	1141.4500	0.0998
12	2.0000	0.0927	34	480.6167	0.0986	56	1171.4833	0.0998
13	4.0000	0.0933	35	510.6500	0.0987	57	1201.5333	0.0998
14	5.0167	0.0934	36	540.6833	0.0988	58	1231.5667	0.0998
15	8.0167	0.0938	37	600.7667	0.0989	59	1261.6000	0.0998
16	10.0167	0.0940	38	630.8000	0.0990	60	1291.6500	0.0998
17	15.0167	0.0943	39	660.8500	0.0990	61	1321.6833	0.0998
18	20.0333	0.0947	40	690.8833	0.0990	62	1351.7167	0.0999
19	40.0500	0.0955	41	720.9167	0.0991	63	1381.7667	0.0999
20	60.0833	0.0959	42	750.9500	0.0991	64	1411.8000	0.0999
21	90.1167	0.0965	43	781.0000	0.0992	65	1441.8333	0.0999
22	120.1500	0.0967	44	811.0333	0.0992	66	1471.8667	0.0999

Void Ratio = 0.916 **Compression =** 12.0%

Pressure: 4.00 tsf	TEST READINGS	Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0999	14	5.0167	0.1200
2	0.0167	0.1002	15	8.0167	0.1206
3	0.0333	0.1002	16	10.0167	0.1210
4	0.0500	0.1003	17	15.0333	0.1214
5	0.0667	0.1060	18	20.0333	0.1219
6	0.0833	0.1085	19	40.0500	0.1228
7	0.1000	0.1101	20	60.0833	0.1232
8	0.2000	0.1141	21	90.1167	0.1238
9	0.2500	0.1149	22	120.1667	0.1243
10	0.5000	0.1166	23	150.2000	0.1245
11	1.0000	0.1179	24	180.2333	0.1247
12	2.0000	0.1189	25	210.2667	0.1250
13	4.0167	0.1198	26	240.3167	0.1252



Pressure: 4.00 tsf	TEST READINGS (continued)	Load No. 14

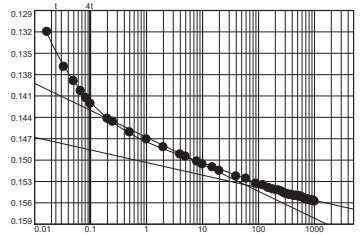
No.	Elapsed Time	Dial Reading
27	270.3500	0.1253
28	300.3833	0.1254
29	330.4333	0.1255
30	360.4667	0.1257
31	390.5000	0.1259
32	420.5333	0.1260
33	450.5833	0.1261
34	467.2667	0.1262

Void Ratio = 0.838 **Compression =** 15.6%

D_0 = 0.0883 **D_{50} =** 0.1036 **D_{100} =** 0.1189 **C_v at 0.04 min. =** 4.896 ft.^{2}/day **C_α =** 0.007

Pressure: 8.00 tsf	TEST READINGS	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1262	27	270.3333	0.1545
2	0.0167	0.1320	28	300.3667	0.1547
3	0.0333	0.1369	29	330.4000	0.1548
4	0.0500	0.1389	30	360.4500	0.1549
5	0.0667	0.1403	31	390.4833	0.1549
6	0.0833	0.1413	32	420.5167	0.1550
7	0.1000	0.1421	33	450.5500	0.1550
8	0.2000	0.1442	34	480.6000	0.1550
9	0.2500	0.1446	35	510.6333	0.1551
10	0.5000	0.1461	36	540.6667	0.1551
11	1.0000	0.1471	37	570.7167	0.1551
12	2.0000	0.1482	38	600.7500	0.1552
13	4.0000	0.1492	39	630.7833	0.1553
14	5.0000	0.1495	40	660.8333	0.1554
15	8.0000	0.1502	41	690.8667	0.1555
16	10.0000	0.1506	42	720.9000	0.1555
17	15.0167	0.1510	43	750.9333	0.1555
18	20.0167	0.1515	44	780.9833	0.1556
19	40.0500	0.1523	45	811.0167	0.1556
20	60.0667	0.1526	46	841.0500	0.1556
21	90.1167	0.1533	47	871.1000	0.1557
22	120.1333	0.1535	48	901.1333	0.1557
23	150.1833	0.1539	49	931.1667	0.1557
24	180.2167	0.1541	50	961.2000	0.1557
25	210.2500	0.1542	51	991.2500	0.1558
26	240.2833	0.1543	52	1001.2000	0.1558



Void Ratio = 0.750 **Compression =** 19.6%

D_0 = 0.1278 **D_{50} =** 0.1406 **D_{100} =** 0.1534 **C_v at 0.07 min. =** 2.490 ft.^{2}/day **C_α =** 0.005

Figure D-258

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-45
Depth: 4'-6'
Material Description: Gray silty clay with sand seams
Liquid Limit: 35 **Plasticity Index:** 12
USCS: (CL)
Testing Remarks: Specific gravity is measured.
Tested by: KLA **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	148.18 g.	Spec. Gr. =	2.701	Wet w+t =	111.57 g.
Dry w+t =	108.85 g.	Est. Ht. Solids =	0.338 in.	Dry w+t =	89.41 g.
Tare Wt. =	18.63 g.	Init. V.R. =	1.177	Tare Wt. =	18.23 g.
Moisture =	43.6 %	Init. Sat. =	100.0 %	Moisture =	31.1 %

UNIT WEIGHT		TEST START			
Height =	0.735 in.	Height =	0.735 in.	Dry Wt. =	71.18 g.
Diameter =	2.500 in.	Diameter =	2.500 in.		
Weight =	105.32 g.				
Dry Dens. =	77.4 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.01160	0.00000			1.177	
0.03	0.01180	0.00020		0.000	1.177	0.0 Comprs.
0.06	0.01670	0.00510	2.922		1.162	0.7 Comprs.
0.13	0.02380	0.01220	1.783		1.141	1.7 Comprs.
0.25	0.03390	0.02230	3.625		1.111	3.0 Comprs.
0.50	0.05020	0.03860	0.715		1.063	5.3 Comprs.
1.00	0.07270	0.06110	2.915		0.996	8.3 Comprs.
0.25	0.06770	0.05610	7.752		1.011	7.6 Comprs.
0.06	0.06140	0.04980	1.764		1.030	6.8 Comprs.
0.13	0.06210	0.05050	6.826		1.028	6.9 Comprs.
0.25	0.06460	0.05300	9.705		1.020	7.2 Comprs.
0.50	0.06850	0.05690	9.649		1.009	7.7 Comprs.
1.00	0.07720	0.06560	3.270		0.983	8.9 Comprs.
2.00	0.09990	0.08830	0.028		0.916	12.0 Comprs.
4.00	0.12620	0.11460	3.219		0.838	15.6 Comprs.
8.00	0.15580	0.14420	5.935		0.750	19.6 Comprs.

Compression index (C_c), tsf = 0.26 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.081
Recompression index (C_r) = 0.08

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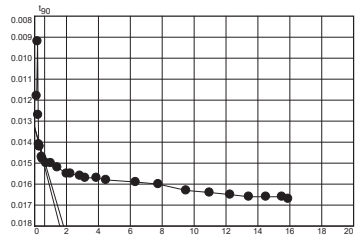
Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0116	11	1.0167	0.0117
2	0.0167	0.0117	12	2.0167	0.0118
3	0.0333	0.0117	13	4.0333	0.0118
4	0.0500	0.0117	14	5.0333	0.0118
5	0.0667	0.0117	15	8.0333	0.0118
6	0.0833	0.0117	16	10.0333	0.0118
7	0.1000	0.0117			
8	0.2167	0.0117			
9	0.2667	0.0117			
10	0.5167	0.0117			

Void Ratio = 1.177 **Compression =** 0.0%

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0118	15	8.0500	0.0156
2	0.0167	0.0118	16	10.0500	0.0157
3	0.0333	0.0092	17	15.0500	0.0157
4	0.0500	0.0127	18	20.0667	0.0158
5	0.0667	0.0141	19	40.1333	0.0159
6	0.0833	0.0142	20	60.1667	0.0160
7	0.1000	0.0142	21	90.2500	0.0163
8	0.2000	0.0147	22	120.3333	0.0164
9	0.2500	0.0148	23	150.3833	0.0165
10	0.5167	0.0150	24	180.4167	0.0166
11	1.0167	0.0150	25	210.4500	0.0166
12	2.0167	0.0152	26	240.4833	0.0166
13	4.0333	0.0155	27	252.6500	0.0167
14	5.0333	0.0155			



Void Ratio = 1.162 **Compression =** 0.7%
D_0 = 0.0133 **D_{90} =** 0.0149 **D_{100} =** 0.0151 **C_v at 0.39 min. =** 2.922 ft.^{2}/day

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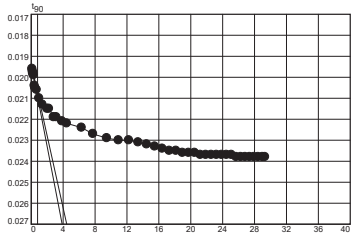
Figure D-259

Pressure: 0.13 tsf	TEST READINGS	Load No. 3

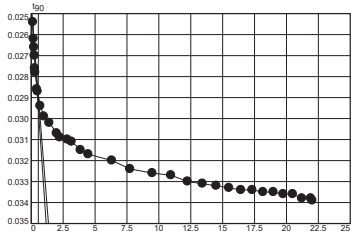
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0167	24	210.2667	0.0232
2	0.0167	0.0196	25	240.3000	0.0233
3	0.0333	0.0197	26	270.3333	0.0234
4	0.0500	0.0198	27	300.3833	0.0235
5	0.0667	0.0198	28	330.4167	0.0235
6	0.0833	0.0199	29	360.4500	0.0236
7	0.1833	0.0204	30	390.4833	0.0236
8	0.2333	0.0205	31	420.5333	0.0236
9	0.4833	0.0206	32	450.5667	0.0237
10	1.0000	0.0210	33	480.6000	0.0237
11	2.0000	0.0213	34	510.6333	0.0237
12	4.0000	0.0215	35	540.6833	0.0237
13	5.0000	0.0215	36	570.7167	0.0237
14	8.0000	0.0219	37	600.7500	0.0237
15	10.0000	0.0219	38	630.8000	0.0237
16	15.0167	0.0221	39	660.8333	0.0238
17	20.0167	0.0222	40	690.8667	0.0238
18	40.0500	0.0224	41	720.9000	0.0238
19	60.0667	0.0227	42	750.9500	0.0238
20	90.1000	0.0229	43	780.9833	0.0238
21	120.1500	0.0230	44	811.0167	0.0238
22	150.1833	0.0230	45	841.0500	0.0238
23	180.2167	0.0231	46	859.7333	0.0238



Void Ratio = 1.141 **Compression =** 1.7%
D_0 = 0.0194 **D_{90} =** 0.0207 **D_{100} =** 0.0209 **C_v at 0.63 min. =** 1.783 ft.^{2}/day

Pressure: 0.25 tsf	TEST READINGS	Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0238	12	2.0000	0.0302
2	0.0167	0.0254	13	4.0000	0.0307
3	0.0333	0.0262	14	5.0000	0.0309
4	0.0500	0.0266	15	8.0000	0.0310
5	0.0667	0.0270	16	10.0000	0.0311
6	0.0833	0.0276	17	15.0167	0.0315
7	0.1000	0.0278	18	20.0167	0.0317
8	0.2000	0.0286	19	40.0500	0.0320
9	0.2500	0.0287	20	60.0667	0.0324
10	0.5000	0.0294	21	90.1167	0.0326
11	1.0000	0.0299	22	120.1500	0.0327



Pressure: 0.25 tsf	TEST READINGS (continued)	Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
23	150.1833	0.0330	33	450.5667	0.0338
24	180.2167	0.0331	34	480.6000	0.0338
25	210.2667	0.0332	35	485.5167	0.0339
26	240.3000	0.0333			
27	270.3333	0.0334			
28	300.3667	0.0334			
29	330.4167	0.0335			
30	360.4500	0.0335			
31	390.4833	0.0336			
32	420.5333	0.0336			

Void Ratio = 1.111 **Compression =** 3.0%
D_0 = 0.0246 **D_{90} =** 0.0289 **D_{100} =** 0.0293 **C_v at 0.30 min. =** 3.625 ft.^{2}/day

Pressure: 0.50 tsf	TEST READINGS	Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0339	25	210.2667	0.0486
2	0.0167	0.0411	26	240.3000	0.0487
3	0.0333	0.0412	27	270.3500	0.0489
4	0.0500	0.0413	28	300.3833	0.0491
5	0.0667	0.0414	29	330.4167	0.0492
6	0.0833	0.0414	30	360.4667	0.0493
7	0.1000	0.0414	31	390.5000	0.0493
8	0.2000	0.0419	32	420.5333	0.0494
9	0.2500	0.0421	33	450.5667	0.0494
10	0.5000	0.0427	34	480.6167	0.0495
11	1.0000	0.0431	35	510.6500	0.0495
12	2.0000	0.0438	36	540.6833	0.0496
13	4.0167	0.0445	37	570.7167	0.0497
14	5.0167	0.0446	38	600.7667	0.0498
15	8.0167	0.0452	39	630.8000	0.0499
16	10.0167	0.0454	40	660.8333	0.0499
17	15.0167	0.0459	41	690.8833	0.0500
18	20.0333	0.0461	42	720.9167	0.0500
19	40.0500	0.0469	43	750.9500	0.0501
20	60.0833	0.0472	44	780.9833	0.0501
21	90.1167	0.0477	45	811.0333	0.0501
22	120.1500	0.0479	46	841.0667	0.0502
23	150.2000	0.0483	47	871.1000	0.0502
24	180.2333	0.0485	48	901.1333	0.0502

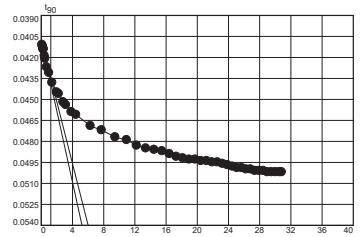


Figure D-260

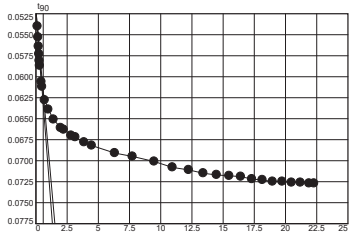
Pressure: 0.50 tsf — **TEST READINGS (continued)** — **Load No. 5**

No.	Elapsed Time	Dial Reading
49	931.1833	0.0502
50	951.5833	0.0502

Void Ratio = 1.063 **Compression =** 5.3%
D_0 = 0.0408 **D_{90} =** 0.0435 **D_{100} =** 0.0438 **C_v at 1.47 min. =** 0.715 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

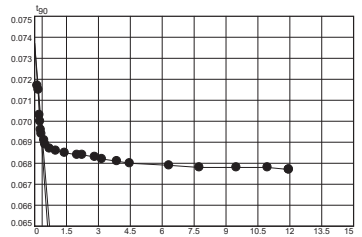
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0502	19	40.0167	0.0691
2	0.0167	0.0540	20	60.0167	0.0695
3	0.0333	0.0553	21	90.0000	0.0701
4	0.0500	0.0564	22	119.9833	0.0708
5	0.0667	0.0573	23	150.0000	0.0711
6	0.0833	0.0581	24	179.9833	0.0715
7	0.1000	0.0587	25	209.9667	0.0717
8	0.2000	0.0606	26	239.9667	0.0718
9	0.2500	0.0612	27	269.9667	0.0719
10	0.5000	0.0628	28	299.9667	0.0722
11	1.0000	0.0639	29	329.9500	0.0723
12	2.0000	0.0651	30	359.9500	0.0725
13	4.0000	0.0661	31	389.9500	0.0725
14	5.0000	0.0663	32	419.9333	0.0726
15	8.0167	0.0670	33	449.9167	0.0726
16	10.0167	0.0672	34	479.9333	0.0727
17	15.0167	0.0678	35	497.0167	0.0727
18	20.0167	0.0682			



Void Ratio = 0.996 **Compression =** 8.3%
D_0 = 0.0520 **D_{90} =** 0.0619 **D_{100} =** 0.0629 **C_v at 0.34 min. =** 2.915 ft.^{2}/day

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 7**

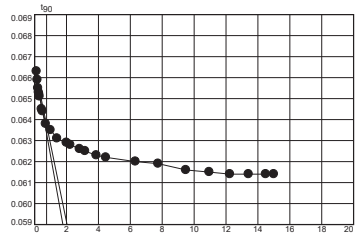
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0727	13	4.0000	0.0684
2	0.0167	0.0717	14	5.0000	0.0684
3	0.0333	0.0715	15	8.0000	0.0683
4	0.0500	0.0703	16	10.0000	0.0682
5	0.0667	0.0700	17	15.0000	0.0681
6	0.0833	0.0696	18	20.0000	0.0680
7	0.1000	0.0694	19	39.9833	0.0679
8	0.2000	0.0691	20	59.9833	0.0678
9	0.2500	0.0689	21	89.9833	0.0678
10	0.5000	0.0687	22	119.9833	0.0678
11	1.0000	0.0686	23	142.9000	0.0677
12	2.0000	0.0685	24	142.9333	0.0677



Void Ratio = 1.011 **Compression =** 7.6%
D_0 = 0.0737 **D_{90} =** 0.0693 **D_{100} =** 0.0688 **C_v at 0.13 min. =** 7.752 ft.^{2}/day

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 8**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0677	14	5.0167	0.0628
2	0.0167	0.0663	15	8.0167	0.0626
3	0.0333	0.0659	16	10.0167	0.0625
4	0.0500	0.0655	17	15.0167	0.0623
5	0.0667	0.0653	18	20.0333	0.0622
6	0.0833	0.0652	19	40.0500	0.0620
7	0.1000	0.0651	20	60.0833	0.0619
8	0.2000	0.0645	21	90.1167	0.0616
9	0.2500	0.0644	22	120.1500	0.0615
10	0.5000	0.0638	23	150.2000	0.0614
11	1.0000	0.0635	24	180.2333	0.0614
12	2.0000	0.0631	25	210.2667	0.0614
13	4.0167	0.0629	26	225.0667	0.0614

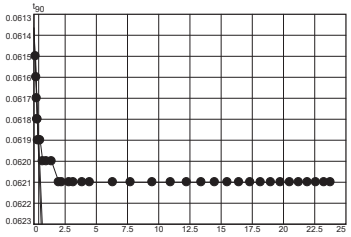


Void Ratio = 1.030 **Compression =** 6.8%
D_0 = 0.0665 **D_{90} =** 0.0638 **D_{100} =** 0.0635 **C_v at 0.56 min. =** 1.764 ft.^{2}/day

Figure D-261

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 9**

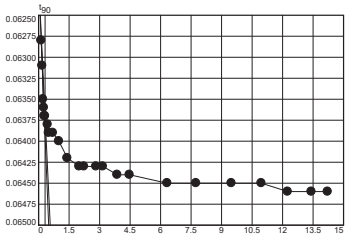
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0614	20	60.0667	0.0621
2	0.0167	0.0615	21	90.1167	0.0621
3	0.0333	0.0616	22	120.1500	0.0621
4	0.0500	0.0617	23	150.1833	0.0621
5	0.0667	0.0618	24	180.2167	0.0621
6	0.0833	0.0618	25	210.2667	0.0621
7	0.1000	0.0619	26	240.3000	0.0621
8	0.2000	0.0619	27	270.3333	0.0621
9	0.2500	0.0619	28	300.3833	0.0621
10	0.5000	0.0620	29	330.4167	0.0621
11	1.0000	0.0620	30	360.4500	0.0621
12	2.0000	0.0620	31	390.5000	0.0621
13	4.0000	0.0621	32	420.5333	0.0621
14	5.0000	0.0621	33	450.5667	0.0621
15	8.0000	0.0621	34	480.6167	0.0621
16	10.0167	0.0621	35	510.6500	0.0621
17	15.0167	0.0621	36	540.6833	0.0621
18	20.0167	0.0621	37	564.7333	0.0621
19	40.0500	0.0621			



Void Ratio = 1.028 **Compression =** 6.9%
D_0 = 0.0614 **D_{90} =** 0.0619 **D_{100} =** 0.0620 **C_v at 0.15 min. =** 6.826 ft.^{2}/day

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 10**

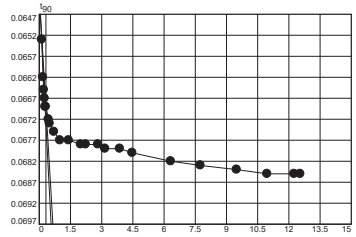
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0621	14	5.0167	0.0643
2	0.0167	0.0628	15	8.0167	0.0643
3	0.0333	0.0631	16	10.0167	0.0643
4	0.0500	0.0635	17	15.0167	0.0644
5	0.0667	0.0636	18	20.0333	0.0644
6	0.0833	0.0637	19	40.0500	0.0645
7	0.1000	0.0637	20	60.0833	0.0645
8	0.2000	0.0638	21	90.1167	0.0645
9	0.2500	0.0639	22	120.1500	0.0645
10	0.5000	0.0639	23	150.2000	0.0646
11	1.0000	0.0640	24	180.2333	0.0646
12	2.0000	0.0642	25	202.2833	0.0646
13	4.0167	0.0643			



Void Ratio = 1.020 **Compression =** 7.2%
D_0 = 0.0621 **D_{90} =** 0.0637 **D_{100} =** 0.0639 **C_v at 0.10 min. =** 9.705 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0646	13	4.0167	0.0678
2	0.0167	0.0653	14	5.0167	0.0678
3	0.0333	0.0662	15	8.0167	0.0678
4	0.0500	0.0665	16	10.0167	0.0679
5	0.0667	0.0667	17	15.0167	0.0679
6	0.0833	0.0669	18	20.0333	0.0680
7	0.1000	0.0669	19	40.0500	0.0682
8	0.2000	0.0672	20	60.0833	0.0683
9	0.2500	0.0673	21	90.1167	0.0684
10	0.5000	0.0675	22	120.1667	0.0685
11	1.0000	0.0677	23	150.2000	0.0685
12	2.0167	0.0677	24	157.5500	0.0685



Void Ratio = 1.009 **Compression =** 7.7%
D_0 = 0.0642 **D_{90} =** 0.0669 **D_{100} =** 0.0672 **C_v at 0.10 min. =** 9.649 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0685	23	150.1833	0.0762
2	0.0167	0.0710	24	180.2333	0.0763
3	0.0333	0.0717	25	210.2667	0.0764
4	0.0500	0.0720	26	240.3000	0.0765
5	0.0667	0.0724	27	270.3333	0.0765
6	0.0833	0.0725	28	300.3833	0.0766
7	0.1000	0.0726	29	330.4167	0.0766
8	0.2000	0.0732	30	360.4500	0.0766
9	0.2500	0.0733	31	390.5000	0.0766
10	0.5000	0.0735	32	420.5333	0.0767
11	1.0000	0.0739	33	450.5667	0.0767
12	2.0000	0.0741	34	480.6000	0.0767
13	4.0000	0.0743	35	510.6500	0.0768
14	5.0000	0.0744	36	540.6833	0.0768
15	8.0000	0.0747	37	570.7167	0.0769
16	10.0000	0.0748	38	600.7667	0.0769
17	15.0167	0.0750	39	630.8000	0.0770
18	20.0167	0.0750	40	660.8333	0.0770
19	40.0500	0.0755	41	690.8667	0.0771
20	60.0667	0.0757	42	720.9167	0.0771
21	90.1167	0.0758	43	750.9500	0.0771
22	120.1500	0.0760	44	780.9833	0.0771

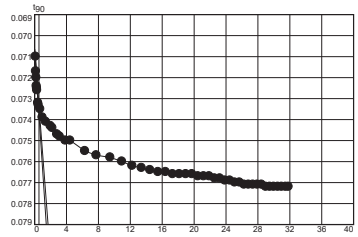


Figure D-262

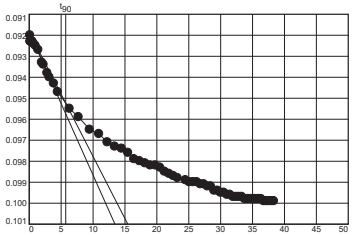
Pressure: 1.00 tsf	TEST READINGS (continued)	Load No. 12

No.	Elapsed Time	Dial Reading
45	811.0333	0.0771
46	841.0667	0.0772
47	871.1000	0.0772
48	901.1333	0.0772
49	931.1833	0.0772
50	961.2167	0.0772
51	991.2500	0.0772
52	1014.4167	0.0772

Void Ratio = 0.983 **Compression =** 8.9%
D_0 = 0.0706 **D_{90} =** 0.0733 **D_{100} =** 0.0736 **C_v at 0.29 min. =** 3.270 ft.^{2}/day

Pressure: 2.00 tsf	TEST READINGS	Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0772	27	270.3500	0.0979
2	0.0167	0.0920	28	300.3833	0.0980
3	0.0333	0.0923	29	330.4167	0.0981
4	0.0500	0.0923	30	360.4667	0.0982
5	0.0667	0.0923	31	390.5000	0.0982
6	0.0833	0.0923	32	420.5333	0.0983
7	0.1000	0.0923	33	450.5833	0.0985
8	0.2000	0.0923	34	480.6167	0.0986
9	0.2500	0.0923	35	510.6500	0.0987
10	0.5000	0.0924	36	540.6833	0.0988
11	1.0000	0.0925	37	600.7667	0.0989
12	2.0000	0.0927	38	630.8000	0.0990
13	4.0000	0.0933	39	660.8500	0.0990
14	5.0167	0.0934	40	690.8833	0.0990
15	8.0167	0.0938	41	720.9167	0.0991
16	10.0167	0.0940	42	750.9500	0.0991
17	15.0167	0.0943	43	781.0000	0.0992
18	20.0333	0.0947	44	811.0333	0.0992
19	40.0500	0.0955	45	841.0667	0.0994
20	60.0833	0.0959	46	871.1167	0.0994
21	90.1167	0.0965	47	901.1500	0.0995
22	120.1500	0.0967	48	931.1833	0.0995
23	150.2000	0.0971	49	961.2167	0.0996
24	180.2333	0.0973	50	991.2667	0.0996
25	210.2667	0.0974	51	1021.3000	0.0997
26	240.3000	0.0976	52	1051.3333	0.0997



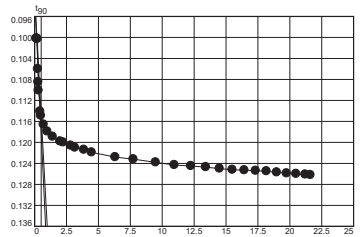
Pressure: 2.00 tsf	TEST READINGS (continued)	Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
53	1081.3833	0.0997	63	1381.7667	0.0999
54	1111.4167	0.0997	64	1411.8000	0.0999
55	1141.4500	0.0998	65	1441.8333	0.0999
56	1171.4833	0.0998	66	1471.8667	0.0999
57	1201.5333	0.0998			
58	1231.5667	0.0998			
59	1261.6000	0.0998			
60	1291.6500	0.0998			
61	1321.6833	0.0998			
62	1351.7167	0.0999			

Void Ratio = 0.916 **Compression =** 12.0%
D_0 = 0.0919 **D_{90} =** 0.0952 **D_{100} =** 0.0956 **C_v at 32.62 min. =** 0.028 ft.^{2}/day

Pressure: 4.00 tsf	TEST READINGS	Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0999	18	20.0333	0.1219
2	0.0167	0.1002	19	40.0500	0.1228
3	0.0333	0.1002	20	60.0833	0.1232
4	0.0500	0.1003	21	90.1167	0.1238
5	0.0667	0.1060	22	120.1667	0.1243
6	0.0833	0.1085	23	150.2000	0.1245
7	0.1000	0.1101	24	180.2333	0.1247
8	0.2000	0.1141	25	210.2667	0.1250
9	0.2500	0.1149	26	240.3167	0.1252
10	0.5000	0.1166	27	270.3500	0.1253
11	1.0000	0.1179	28	300.3833	0.1254
12	2.0000	0.1189	29	330.4333	0.1255
13	4.0167	0.1198	30	360.4667	0.1257
14	5.0167	0.1200	31	390.5000	0.1259
15	8.0167	0.1206	32	420.5333	0.1260
16	10.0167	0.1210	33	450.5833	0.1261
17	15.0333	0.1214	34	467.2667	0.1262

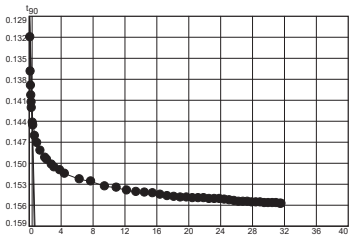


Void Ratio = 0.838 **Compression =** 15.6%
D_0 = 0.0921 **D_{90} =** 0.1150 **D_{100} =** 0.1176 **C_v at 0.26 min. =** 3.219 ft.^{2}/day

Figure D-263

Pressure: 8.00 tsf	TEST READINGS	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1262	27	270.3333	0.1545
2	0.0167	0.1320	28	300.3667	0.1547
3	0.0333	0.1369	29	330.4000	0.1548
4	0.0500	0.1389	30	360.4500	0.1549
5	0.0667	0.1403	31	390.4833	0.1549
6	0.0833	0.1413	32	420.5167	0.1550
7	0.1000	0.1421	33	450.5500	0.1550
8	0.2000	0.1442	34	480.6000	0.1550
9	0.2500	0.1446	35	510.6333	0.1551
10	0.5000	0.1461	36	540.6667	0.1551
11	1.0000	0.1471	37	570.7167	0.1551
12	2.0000	0.1482	38	600.7500	0.1552
13	4.0000	0.1492	39	630.7833	0.1553
14	5.0000	0.1495	40	660.8333	0.1554
15	8.0000	0.1502	41	690.8667	0.1555
16	10.0000	0.1506	42	720.9000	0.1555
17	15.0167	0.1510	43	750.9333	0.1555
18	20.0167	0.1515	44	780.9833	0.1556
19	40.0500	0.1523	45	811.0167	0.1556
20	60.0667	0.1526	46	841.0500	0.1556
21	90.1167	0.1533	47	871.1000	0.1557
22	120.1333	0.1535	48	901.1333	0.1557
23	150.1833	0.1539	49	931.1667	0.1557
24	180.2167	0.1541	50	961.2000	0.1557
25	210.2500	0.1542	51	991.2500	0.1558
26	240.2833	0.1543	52	1001.2000	0.1558

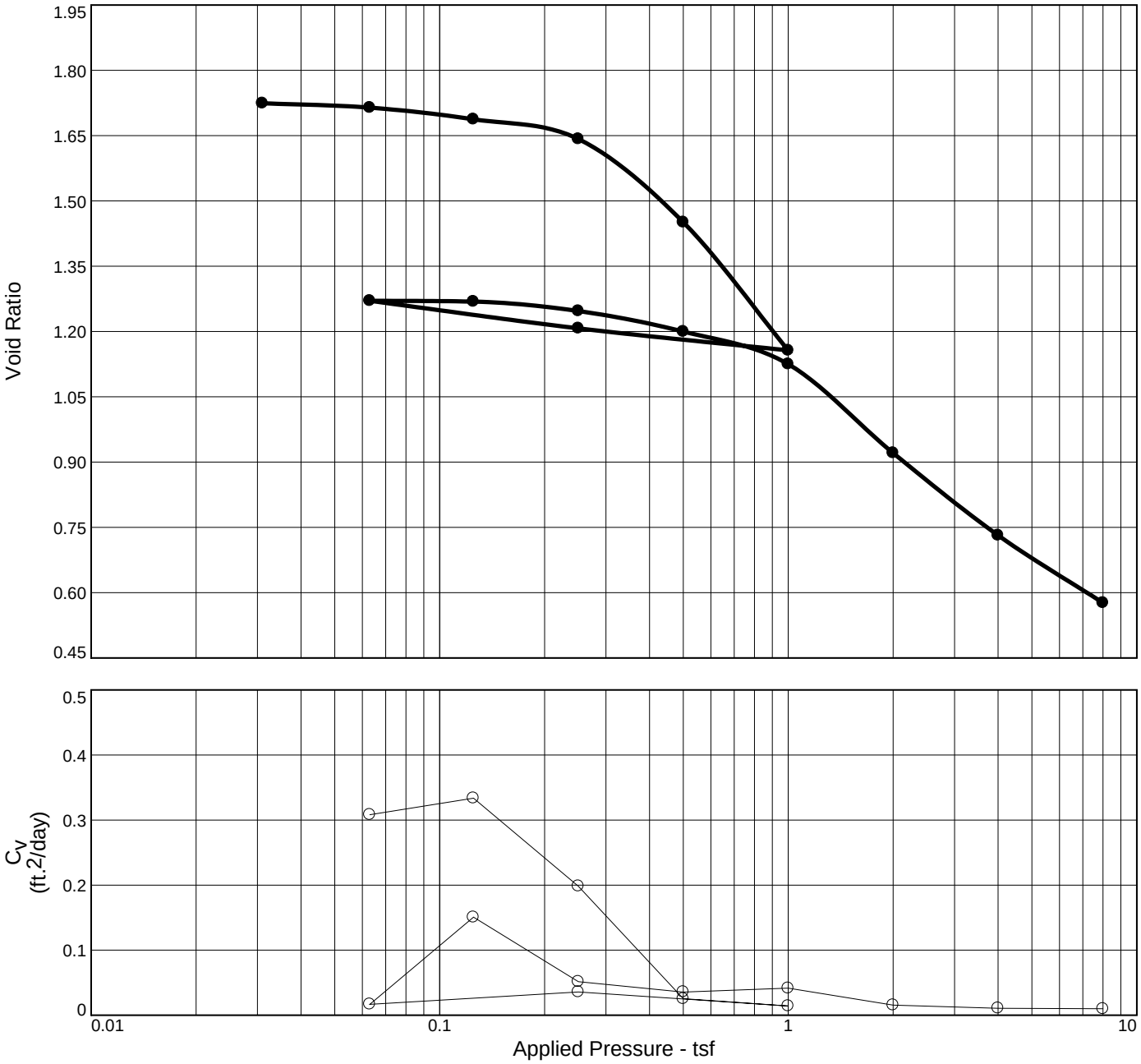


Void Ratio = 0.750 **Compression =** 19.6%

D_0 = 0.1265 **D_{90} =** 0.1428 **D_{100} =** 0.1447 **C_v at 0.13 min. =** 5.935 ft.^{2}/day

Figure D-264

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.1 %	63.9 %	60.8	73	51	2.663	0.4	1.01	1.734

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand pockets and shells	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-48 **Depth:** 8' - 10'

GeoEngineers

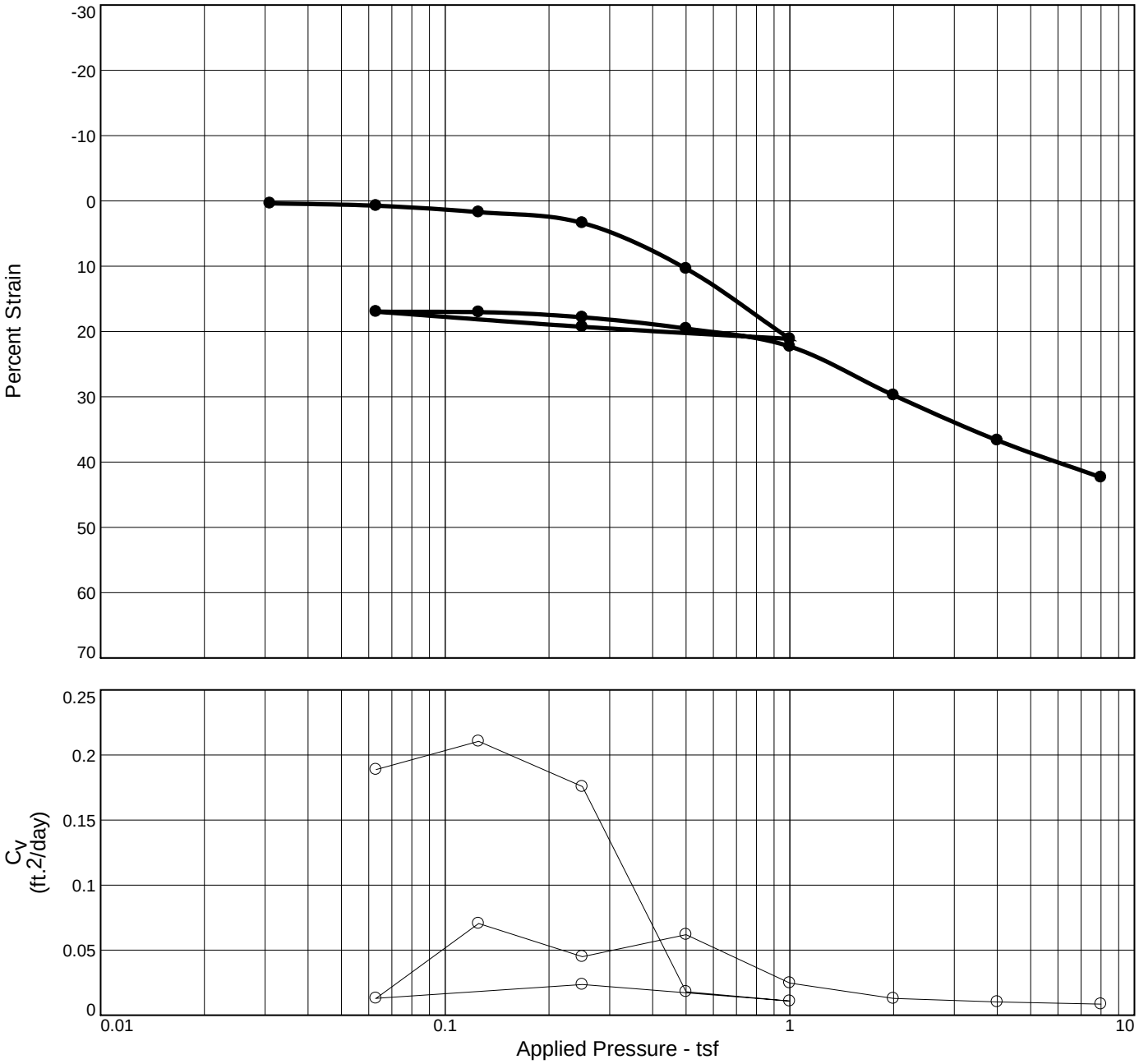
Remarks:
Specific Gravity is measured.

C_v at t_{90}

Tested By: SLC/CLP **Checked By:** ARS

Figure D-265

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.1 %	63.9 %	60.8	73	51	2.663	0.4	1.01	1.734

MATERIAL DESCRIPTION	USCS	AASHTO
Gray clay with sand pockets and shells	(CH)	

Project No. 18274-004-01 **Client:** CPRA

Project: East Leeville Marsh Creation and Nourishment
Leeville, LA

Source of Sample: B-48 **Depth:** 8' - 10'

GeoEngineers

Remarks:
Specific Gravity is measured.

C_v at t_{50}

Tested By: SLC/CLP **Checked By:** ARS

Figure D-266

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-48
Depth: 8' - 10'
Material Description: Gray clay with sand pockets and shells
Liquid Limit: 73 **Plasticity Index:** 51
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	189.39 g.	Spec. Gr. =	2.663	Wet w+t =	89.91 g.
Dry w+t =	131.50 g.	Est. Ht. Solids =	0.269 in.	Dry w+t =	72.21 g.
Tare Wt. =	40.85 g.	Init. V.R. =	1.734	Tare Wt. =	18.34 g.
Moisture =	63.9 %	Init. Sat. =	98.1 %	Moisture =	32.9 %

UNIT WEIGHT		TEST START			
Height =	0.735 in.	Height =	0.735 in.	Dry Wt. =	53.87 g.
Diameter =	2.502 in.	Diameter =	2.502 in.		
Weight =	94.50 g.				
Dry Dens. =	60.8 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00020	0.00000			1.734	
0.03	0.00290	0.00270		0.000	1.724	0.4 Comprs.
0.06	0.00560	0.00540	0.189	0.002	1.714	0.7 Comprs.
0.13	0.01280	0.01260	0.211	0.001	1.688	1.7 Comprs.
0.25	0.02500	0.02480	0.176	0.002	1.642	3.4 Comprs.
0.50	0.07640	0.07620	0.018	0.065	1.451	10.4 Comprs.
1.00	0.15550	0.15530	0.011	0.024	1.157	21.1 Comprs.
0.25	0.14190	0.14170	0.024		1.207	19.3 Comprs.
0.06	0.12490	0.12470	0.013		1.271	17.0 Comprs.
0.13	0.12540	0.12520	0.070	0.000	1.269	17.0 Comprs.
0.25	0.13120	0.13100	0.045	0.001	1.247	17.8 Comprs.
0.50	0.14390	0.14370	0.062	0.003	1.200	19.6 Comprs.
1.00	0.16400	0.16380	0.025	0.015	1.125	22.3 Comprs.
2.00	0.21890	0.21870	0.013	0.021	0.921	29.8 Comprs.
4.00	0.26970	0.26950	0.010	0.024	0.732	36.7 Comprs.
8.00	0.31140	0.31120	0.009	0.016	0.577	42.3 Comprs.

Compression index (C_c), tsf = 1.01 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.568
Recompression index (C_r) = 0.23

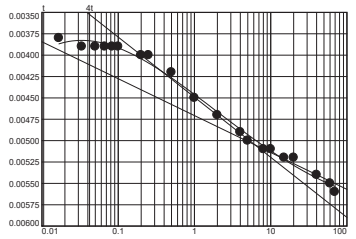
Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0002	11	1.0000	0.0029
2	0.0167	0.0027	12	2.0000	0.0029
3	0.0333	0.0028	13	4.0000	0.0029
4	0.0500	0.0028	14	5.0000	0.0029
5	0.0667	0.0029	15	8.0167	0.0029
6	0.0833	0.0029	16	8.2667	0.0029
7	0.1000	0.0029			
8	0.2000	0.0029			
9	0.2500	0.0029			
10	0.5000	0.0029			

Void Ratio = 1.724 **Compression =** 0.4%

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0029	12	2.0000	0.0047
2	0.0167	0.0038	13	4.0000	0.0049
3	0.0333	0.0039	14	5.0000	0.0050
4	0.0500	0.0039	15	8.0167	0.0051
5	0.0667	0.0039	16	10.0167	0.0051
6	0.0833	0.0039	17	15.0167	0.0052
7	0.1000	0.0039	18	20.0333	0.0052
8	0.2000	0.0040	19	40.0500	0.0054
9	0.2500	0.0040	20	60.0833	0.0055
10	0.5000	0.0042	21	69.5333	0.0056
11	1.0000	0.0045			

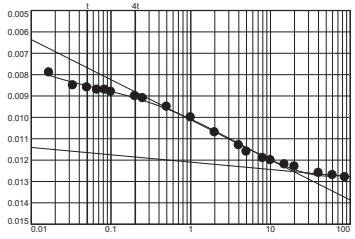


Void Ratio = 1.714 **Compression =** 0.7%
D_0 = 0.0041 **D_{50} =** 0.0046 **D_{100} =** 0.0050 **C_v at 1.39 min. =** 0.189 ft.^{2}/day **C_α =** 0.002

Figure D-267

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 3**

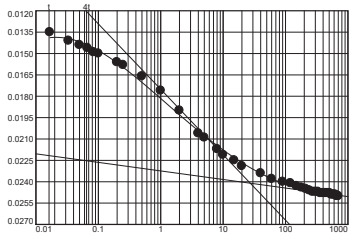
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0056	12	2.0000	0.0107
2	0.0167	0.0079	13	4.0000	0.0113
3	0.0333	0.0085	14	5.0000	0.0116
4	0.0500	0.0086	15	8.0000	0.0119
5	0.0667	0.0087	16	10.0167	0.0120
6	0.0833	0.0087	17	15.0167	0.0122
7	0.1000	0.0088	18	20.0167	0.0123
8	0.2000	0.0090	19	40.0500	0.0126
9	0.2500	0.0091	20	60.0833	0.0127
10	0.5000	0.0095	21	86.0667	0.0128
11	1.0000	0.0100			



Void Ratio = 1.688 **Compression =** 1.7%
D_0 = 0.0079 **D_{50} =** 0.0102 **D_{100} =** 0.0125 **C_v at 1.23 min. =** 0.211 ft.^{2}/day **C_α =** 0.001

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 4**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0128	22	120.1500	0.0241
2	0.0167	0.0135	23	150.1833	0.0243
3	0.0333	0.0141	24	180.2167	0.0244
4	0.0500	0.0144	25	210.2667	0.0245
5	0.0667	0.0146	26	240.3000	0.0246
6	0.0833	0.0149	27	270.3333	0.0247
7	0.1000	0.0150	28	300.3667	0.0247
8	0.2000	0.0156	29	330.4167	0.0247
9	0.2500	0.0158	30	360.4500	0.0248
10	0.5000	0.0166	31	390.4833	0.0248
11	1.0000	0.0176	32	420.5167	0.0248
12	2.0000	0.0190	33	450.5667	0.0248
13	4.0000	0.0206	34	480.6000	0.0248
14	5.0000	0.0209	35	510.6333	0.0248
15	8.0000	0.0217	36	540.6667	0.0249
16	10.0000	0.0221	37	570.7167	0.0249
17	15.0167	0.0225	38	600.7500	0.0249
18	20.0167	0.0229	39	630.7833	0.0249
19	40.0500	0.0234	40	660.8333	0.0250
20	60.0667	0.0238	41	690.8667	0.0250
21	90.1000	0.0240	42	699.0833	0.0250



Void Ratio = 1.642 **Compression =** 3.4%
D_0 = 0.0134 **D_{50} =** 0.0188 **D_{100} =** 0.0241 **C_v at 1.44 min. =** 0.176 ft.^{2}/day **C_α =** 0.002

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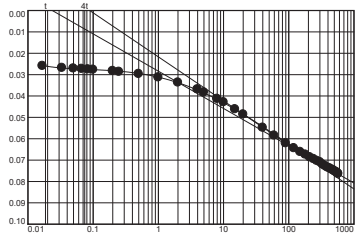
Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0250	20	60.0667	0.0585
2	0.0167	0.0259	21	90.1000	0.0621
3	0.0333	0.0268	22	120.1500	0.0644
4	0.0500	0.0271	23	150.1833	0.0662
5	0.0667	0.0273	24	180.2167	0.0674
6	0.0833	0.0275	25	210.2500	0.0686
7	0.1000	0.0277	26	240.3000	0.0695
8	0.2000	0.0283	27	270.3333	0.0703
9	0.2500	0.0287	28	300.3667	0.0709
10	0.5000	0.0297	29	330.4167	0.0720
11	1.0000	0.0313	30	360.4500	0.0727
12	2.0000	0.0337	31	390.4833	0.0734
13	4.0000	0.0369	32	420.5333	0.0738
14	5.0000	0.0383	33	450.5667	0.0743
15	8.0000	0.0413	34	480.6000	0.0747
16	10.0000	0.0429	35	510.6333	0.0752
17	15.0167	0.0462	36	540.6833	0.0756
18	20.0167	0.0486	37	570.7000	0.0763
19	40.0333	0.0548	38	574.8000	0.0764



Void Ratio = 1.451 **Compression =** 10.4%
D_0 = 0.0245 **D_{50} =** 0.0450 **D_{100} =** 0.0655 **C_v at 12.82 min. =** 0.018 ft.^{2}/day **C_α =** 0.065

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0764	16	14.9833	0.1121
2	0.0167	0.0786	17	19.9833	0.1176
3	0.0333	0.0790	18	39.9833	0.1308
4	0.0500	0.0792	19	59.9833	0.1372
5	0.0667	0.0793	20	89.9833	0.1431
6	0.0833	0.0796	21	119.9667	0.1460
7	0.1833	0.0804	22	149.9500	0.1479
8	0.2333	0.0808	23	179.9500	0.1491
9	0.4833	0.0823	24	209.9667	0.1501
10	0.9833	0.0845	25	239.9500	0.1508
11	1.9833	0.0880	26	269.9333	0.1513
12	3.9833	0.0936	27	299.9333	0.1518
13	4.9833	0.0959	28	329.9333	0.1521
14	7.9833	0.1018	29	359.9167	0.1526
15	9.9833	0.1052	30	389.9000	0.1528

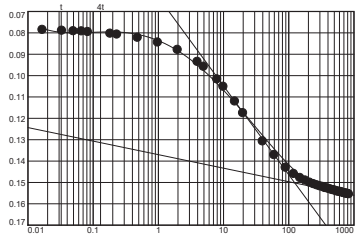


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Figure D-268

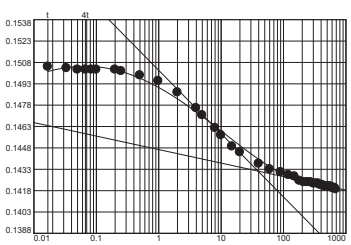
Pressure: 1.00 tsf — **TEST READINGS (continued)** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	419.9167	0.1531	41	719.8500	0.1551
32	449.9167	0.1534	42	749.8333	0.1552
33	479.9000	0.1536	43	779.8500	0.1552
34	509.8833	0.1538	44	809.8333	0.1554
35	539.8833	0.1541	45	839.8167	0.1555
36	569.8833	0.1543			
37	599.8667	0.1544			
38	629.8500	0.1545			
39	659.8667	0.1547			
40	689.8667	0.1549			

Void Ratio = 1.157 **Compression =** 21.1%
D_0 = 0.0798 **D_{50} =** 0.1150 **D_{100} =** 0.1502 **C_v at 17.38 min. =** 0.011 ft.^{2}/day **C_α =** 0.024

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 7**

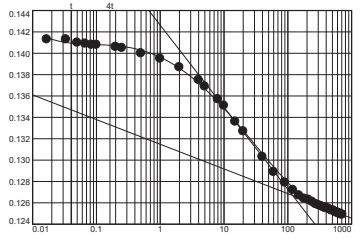
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1555	22	119.9667	0.1429
2	0.0167	0.1505	23	149.9667	0.1428
3	0.0333	0.1504	24	179.9667	0.1425
4	0.0500	0.1503	25	209.9667	0.1424
5	0.0667	0.1503	26	239.9500	0.1424
6	0.0833	0.1503	27	269.9500	0.1424
7	0.1000	0.1503	28	299.9500	0.1423
8	0.2000	0.1503	29	329.9333	0.1423
9	0.2500	0.1502	30	359.9167	0.1423
10	0.5000	0.1499	31	389.9333	0.1422
11	0.9833	0.1495	32	419.9167	0.1422
12	2.0000	0.1487	33	449.9000	0.1421
13	3.9833	0.1476	34	479.9000	0.1421
14	4.9833	0.1471	35	509.9000	0.1421
15	7.9833	0.1462	36	539.9000	0.1421
16	9.9833	0.1457	37	569.8833	0.1421
17	15.0000	0.1449	38	599.8667	0.1420
18	20.0000	0.1445	39	629.8833	0.1420
19	40.0000	0.1437	40	659.8833	0.1420
20	60.0000	0.1433	41	686.2167	0.1419
21	89.9833	0.1431			



Void Ratio = 1.207 **Compression =** 19.3%
D_0 = 0.1498 **D_{50} =** 0.1465 **D_{100} =** 0.1432 **C_v at 7.18 min. =** 0.024 ft.^{2}/day

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 8**

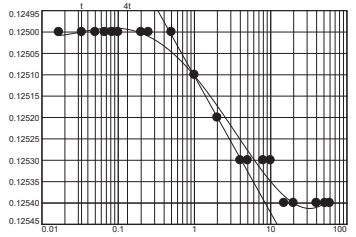
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1419	22	119.9667	0.1272
2	0.0167	0.1413	23	149.9667	0.1267
3	0.0333	0.1413	24	179.9667	0.1264
4	0.0500	0.1410	25	209.9667	0.1263
5	0.0667	0.1409	26	239.9500	0.1261
6	0.0833	0.1408	27	269.9500	0.1259
7	0.1000	0.1408	28	299.9500	0.1258
8	0.2000	0.1406	29	329.9333	0.1257
9	0.2500	0.1405	30	359.9167	0.1256
10	0.5000	0.1400	31	389.9333	0.1255
11	1.0000	0.1395	32	419.9167	0.1255
12	2.0000	0.1387	33	449.9000	0.1254
13	4.0000	0.1375	34	479.9000	0.1253
14	5.0000	0.1369	35	509.9000	0.1253
15	8.0000	0.1357	36	539.9000	0.1252
16	9.9833	0.1351	37	569.8833	0.1251
17	14.9833	0.1336	38	599.8833	0.1251
18	19.9833	0.1327	39	629.8833	0.1250
19	39.9833	0.1303	40	659.8667	0.1250
20	59.9833	0.1289	41	689.8500	0.1249
21	89.9833	0.1279	42	719.2500	0.1249



Void Ratio = 1.271 **Compression =** 17.0%
D_0 = 0.1411 **D_{50} =** 0.1339 **D_{100} =** 0.1267 **C_v at 13.74 min. =** 0.013 ft.^{2}/day

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1249	12	2.0000	0.1252
2	0.0167	0.1250	13	4.0000	0.1253
3	0.0333	0.1250	14	5.0000	0.1253
4	0.0500	0.1250	15	8.0000	0.1253
5	0.0667	0.1250	16	10.0000	0.1253
6	0.0833	0.1250	17	14.9833	0.1254
7	0.1000	0.1250	18	19.9833	0.1254
8	0.2000	0.1250	19	39.9833	0.1254
9	0.2500	0.1250	20	51.6000	0.1254
10	0.5000	0.1250	21	59.70	0.1254
11	1.0000	0.1251			

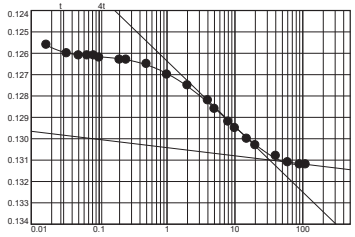


Void Ratio = 1.269 **Compression =** 17.0%
D_0 = 0.1250 **D_{50} =** 0.1252 **D_{100} =** 0.1254 **C_v at 2.60 min. =** 0.070 ft.^{2}/day **C_α =** 0.000

Figure D-269

Pressure: 0.25 tsf	TEST READINGS	Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1254	12	2.0000	0.1275
2	0.0167	0.1256	13	4.0000	0.1282
3	0.0333	0.1260	14	5.0000	0.1286
4	0.0500	0.1261	15	8.0000	0.1292
5	0.0667	0.1261	16	10.0000	0.1295
6	0.0833	0.1261	17	15.0000	0.1300
7	0.1000	0.1262	18	20.0000	0.1303
8	0.2000	0.1263	19	40.0000	0.1308
9	0.2500	0.1263	20	60.0000	0.1311
10	0.5000	0.1265	21	89.9833	0.1312
11	1.0000	0.1270	22	109.9000	0.1312

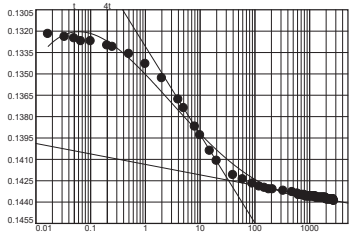


Void Ratio = 1.247 **Compression =** 17.8%

D_0 = 0.1256 **D_{50} =** 0.1283 **D_{100} =** 0.1310 **C_v at 4.03 min. =** 0.045 ft.^{2}/day **C_α =** 0.001

Pressure: 0.50 tsf	TEST READINGS	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1312	24	209.9500	0.1431
2	0.0167	0.1322	25	329.9333	0.1432
3	0.0333	0.1324	26	479.8333	0.1433
4	0.0500	0.1325	27	599.7667	0.1434
5	0.0667	0.1327	28	629.7500	0.1435
6	0.1000	0.1327	29	659.7500	0.1435
7	0.2000	0.1330	30	689.7500	0.1435
8	0.2500	0.1331	31	719.7333	0.1435
9	0.5000	0.1336	32	749.7333	0.1435
10	1.0000	0.1343	33	779.7333	0.1435
11	2.0000	0.1353	34	809.7167	0.1435
12	4.0000	0.1368	35	839.7000	0.1436
13	5.0000	0.1374	36	869.7167	0.1436
14	8.0000	0.1387	37	899.7000	0.1436
15	10.0000	0.1393	38	929.6833	0.1436
16	15.0000	0.1404	39	959.7000	0.1436
17	20.0000	0.1411	40	989.7000	0.1436
18	40.0000	0.1421	41	1019.6833	0.1436
19	60.0000	0.1424	42	1049.6667	0.1436
20	89.9833	0.1427	43	1079.6667	0.1436
21	119.9667	0.1429	44	1109.6667	0.1436
22	149.9833	0.1430	45	1139.6500	0.1436
23	179.9667	0.1431	46	1169.6500	0.1436



Pressure: 0.50 tsf	TEST READINGS (continued)	Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
47	1199.6500	0.1436	65	1739.5500	0.1437	83	2279.4333	0.1438
48	1229.6333	0.1436	66	1769.5333	0.1437	84	2309.4333	0.1438
49	1259.6167	0.1436	67	1799.5167	0.1437	85	2339.4167	0.1438
50	1289.6333	0.1436	68	1829.5333	0.1437	86	2369.4167	0.1438
51	1319.6333	0.1437	69	1859.5167	0.1437	87	2399.4167	0.1438
52	1349.6167	0.1437	70	1889.5000	0.1437	88	2429.4000	0.1438
53	1379.6000	0.1437	71	1919.5000	0.1437	89	2459.3833	0.1438
54	1409.6167	0.1437	72	1949.5000	0.1437	90	2489.4000	0.1438
55	1439.6000	0.1437	73	1979.4833	0.1437	91	2519.4000	0.1438
56	1469.5833	0.1437	74	2009.4833	0.1438	92	2549.3833	0.1438
57	1499.5833	0.1437	75	2039.4833	0.1438	93	2579.3667	0.1438
58	1529.5833	0.1437	76	2069.4833	0.1438	94	2609.3667	0.1438
59	1559.5667	0.1437	77	2099.4667	0.1438	95	2639.3667	0.1438
60	1589.5667	0.1437	78	2129.4500	0.1438	96	2669.3500	0.1438
61	1619.5667	0.1437	79	2159.4667	0.1438	97	2699.3333	0.1438
62	1649.5500	0.1437	80	2189.4500	0.1438	98	2729.3500	0.1439
63	1679.5500	0.1437	81	2219.4333	0.1438	99	2759.3500	0.1439
64	1709.5500	0.1437	82	2249.4333	0.1438	100	2780.4333	0.1439

Void Ratio = 1.200 **Compression =** 19.6%

D_0 = 0.1314 **D_{50} =** 0.1369 **D_{100} =** 0.1425 **C_v at 2.84 min. =** 0.062 ft.^{2}/day **C_α =** 0.003

Pressure: 1.00 tsf	TEST READINGS	Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1439	17	14.9833	0.1551
2	0.0167	0.1450	18	19.9833	0.1560
3	0.0333	0.1452	19	39.9833	0.1579
4	0.0500	0.1452	20	59.9833	0.1589
5	0.0667	0.1453	21	89.9833	0.1598
6	0.0833	0.1455	22	119.9667	0.1606
7	0.1000	0.1455	23	149.9667	0.1612
8	0.2000	0.1459	24	179.9667	0.1616
9	0.2500	0.1461	25	209.9667	0.1620
10	0.5000	0.1467	26	239.9500	0.1623
11	1.0000	0.1476	27	269.9333	0.1625
12	2.0000	0.1489	28	299.9500	0.1627
13	4.0000	0.1508	29	329.9333	0.1630
14	5.0000	0.1515	30	359.9167	0.1631
15	7.9833	0.1530	31	389.9167	0.1632
16	9.9833	0.1538	32	419.9167	0.1634

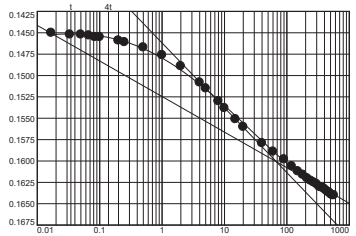


Figure D-270

Pressure: 1.00 tsf — **TEST READINGS (continued)** — **Load No. 12**

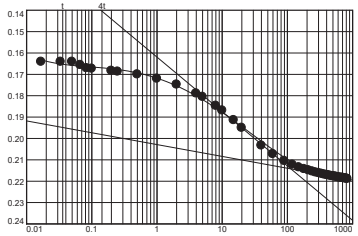
No.	Elapsed Time	Dial Reading
33	449.9167	0.1636
34	479.9000	0.1637
35	509.8833	0.1639
36	539.9000	0.1640
37	566.8333	0.1640

Void Ratio = 1.125 **Compression =** 22.3%

D_0 = 0.1447 **D_{50} =** 0.1524 **D_{100} =** 0.1601 **C_v at 6.74 min. =** 0.025 ft.^{2}/day **C_α =** 0.015

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 13**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1640	24	179.9500	0.2143
2	0.0167	0.1641	25	209.9500	0.2149
3	0.0333	0.1641	26	239.9500	0.2154
4	0.0500	0.1641	27	269.9500	0.2159
5	0.0667	0.1656	28	299.9333	0.2162
6	0.0833	0.1671	29	329.9167	0.2165
7	0.1000	0.1673	30	359.9167	0.2168
8	0.2000	0.1683	31	389.9333	0.2170
9	0.2500	0.1687	32	419.9167	0.2172
10	0.5000	0.1700	33	449.9000	0.2174
11	1.0000	0.1720	34	479.9000	0.2176
12	2.0000	0.1748	35	509.9000	0.2177
13	4.0000	0.1789	36	539.9000	0.2178
14	5.0000	0.1805	37	569.8833	0.2180
15	8.0000	0.1847	38	599.8667	0.2181
16	10.0000	0.1869	39	629.8833	0.2183
17	15.0000	0.1914	40	659.8667	0.2183
18	20.0000	0.1950	41	689.8500	0.2184
19	39.9833	0.2033	42	719.8500	0.2185
20	59.9667	0.2073	43	749.8500	0.2186
21	89.9667	0.2105	44	779.8500	0.2187
22	119.9833	0.2123	45	809.8333	0.2188
23	149.9667	0.2135	46	835.6333	0.2189

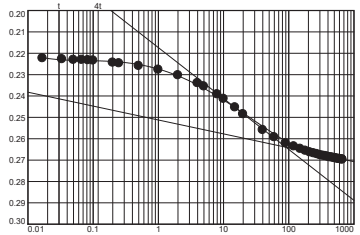


Void Ratio = 0.921 **Compression =** 29.8%

D_0 = 0.1636 **D_{50} =** 0.1889 **D_{100} =** 0.2142 **C_v at 11.30 min. =** 0.013 ft.^{2}/day **C_α =** 0.021

Pressure: 4.00 tsf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2189	22	119.9667	0.2636
2	0.0167	0.2223	23	149.9833	0.2647
3	0.0333	0.2228	24	179.9667	0.2656
4	0.0500	0.2231	25	209.9500	0.2663
5	0.0667	0.2231	26	239.9500	0.2668
6	0.0833	0.2232	27	269.9500	0.2672
7	0.1000	0.2234	28	299.9500	0.2676
8	0.2000	0.2244	29	329.9333	0.2679
9	0.2500	0.2247	30	359.9167	0.2681
10	0.5000	0.2259	31	389.9333	0.2683
11	1.0000	0.2277	32	419.9167	0.2686
12	2.0000	0.2303	33	449.9000	0.2687
13	4.0000	0.2340	34	479.9000	0.2689
14	5.0000	0.2355	35	509.9000	0.2691
15	8.0000	0.2392	36	539.9000	0.2692
16	10.0000	0.2413	37	569.8833	0.2694
17	15.0000	0.2453	38	599.8667	0.2695
18	20.0000	0.2485	39	629.8833	0.2696
19	40.0000	0.2559	40	659.8833	0.2697
20	60.0000	0.2593	41	666.7500	0.2697
21	89.9833	0.2621			



Void Ratio = 0.732 **Compression =** 36.7%

D_0 = 0.2224 **D_{50} =** 0.2432 **D_{100} =** 0.2640 **C_v at 11.64 min. =** 0.010 ft.^{2}/day **C_α =** 0.024

Pressure: 8.00 tsf — **TEST READINGS** — **Load No. 15**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2697	14	5.0000	0.2837
2	0.0167	0.2724	15	8.0000	0.2867
3	0.0333	0.2728	16	10.0000	0.2884
4	0.0500	0.2731	17	15.0167	0.2917
5	0.0667	0.2735	18	20.0167	0.2944
6	0.0833	0.2735	19	40.0500	0.3005
7	0.1000	0.2737	20	60.0833	0.3035
8	0.2000	0.2744	21	90.1333	0.3057
9	0.2500	0.2746	22	120.1667	0.3070
10	0.5000	0.2757	23	150.2167	0.3078
11	1.0000	0.2772	24	180.2667	0.3083
12	2.0000	0.2793	25	210.3000	0.3088
13	4.0000	0.2824	26	240.3500	0.3091

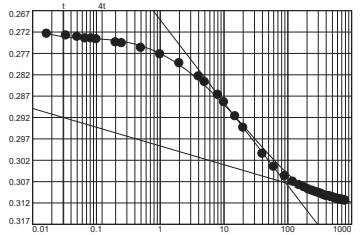


Figure D-271

Pressure: 8.00 tsf	TEST READINGS (continued)	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	270.4000	0.3094	37	570.8500	0.3110
28	300.4500	0.3096	38	600.9000	0.3111
29	330.4833	0.3098	39	630.9333	0.3111
30	360.5333	0.3101	40	660.9833	0.3112
31	390.5833	0.3103	41	691.0333	0.3112
32	420.6167	0.3104	42	721.0667	0.3113
33	450.6667	0.3104	43	751.1167	0.3113
34	480.7167	0.3106	44	781.1667	0.3114
35	510.7500	0.3107	45	791.6833	0.3114
36	540.8000	0.3108			

Void Ratio = 0.577 **Compression =** 42.3%
D_0 = 0.2725 D_{50} = 0.2899 D_{100} = 0.3073 C_v **at 11.44 min. =** 0.009 $ft.^2/day$ C_α = 0.016

GeoEngineers, Inc.

Figure D-272

CONSOLIDATION TEST DATA

6/13/2018

Client: CPRA
Project: East Leeville Marsh Creation and Nourishment
Leeville, LA
Project Number: 18274-004-01
Location: B-48
Depth: 8' - 10'
Material Description: Gray clay with sand pockets and shells
Liquid Limit: 73 **Plasticity Index:** 51
USCS: (CH)
Testing Remarks: Specific Gravity is measured.
Tested by: SLC/CLP **Checked by:** ARS

Test Specimen Data

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	189.39 g.	Spec. Gr. =	2.663	Wet w+t =	89.91 g.
Dry w+t =	131.50 g.	Est. Ht. Solids =	0.269 in.	Dry w+t =	72.21 g.
Tare Wt. =	40.85 g.	Init. V.R. =	1.734	Tare Wt. =	18.34 g.
Moisture =	63.9 %	Init. Sat. =	98.1 %	Moisture =	32.9 %

UNIT WEIGHT		TEST START			
Height =	0.735 in.	Height =	0.735 in.	Dry Wt. =	53.87 g.
Diameter =	2.502 in.	Diameter =	2.502 in.		
Weight =	94.50 g.				
Dry Dens. =	60.8 pcf				

End-Of-Load Summary

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Strain
start	0.00020	0.00000			1.734	
0.03	0.00290	0.00270		0.000	1.724	0.4 Comprs.
0.06	0.00560	0.00540	0.308		1.714	0.7 Comprs.
0.13	0.01280	0.01260	0.334		1.688	1.7 Comprs.
0.25	0.02500	0.02480	0.198		1.642	3.4 Comprs.
0.50	0.07640	0.07620	0.025		1.451	10.4 Comprs.
1.00	0.15550	0.15530	0.014		1.157	21.1 Comprs.
0.25	0.14190	0.14170	0.036		1.207	19.3 Comprs.
0.06	0.12490	0.12470	0.017		1.271	17.0 Comprs.
0.13	0.12540	0.12520	0.151		1.269	17.0 Comprs.
0.25	0.13120	0.13100	0.051		1.247	17.8 Comprs.
0.50	0.14390	0.14370	0.036		1.200	19.6 Comprs.
1.00	0.16400	0.16380	0.042		1.125	22.3 Comprs.
2.00	0.21890	0.21870	0.016		0.921	29.8 Comprs.
4.00	0.26970	0.26950	0.011		0.732	36.7 Comprs.
8.00	0.31140	0.31120	0.010		0.577	42.3 Comprs.

Compression index (C_c), tsf = 1.01 **Preconsolidation pressure (P_p), tsf =** 0.4 **Void ratio at P_p (e_m) =** 1.568
Recompression index (C_r) = 0.23

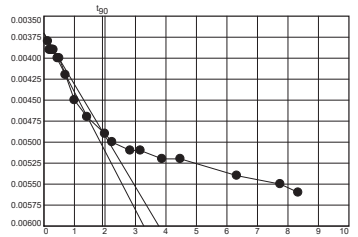
Pressure: 0.03 tsf — **TEST READINGS** — **Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0002	11	1.0000	0.0029
2	0.0167	0.0027	12	2.0000	0.0029
3	0.0333	0.0028	13	4.0000	0.0029
4	0.0500	0.0028	14	5.0000	0.0029
5	0.0667	0.0029	15	8.0167	0.0029
6	0.0833	0.0029	16	8.2667	0.0029
7	0.1000	0.0029			
8	0.2000	0.0029			
9	0.2500	0.0029			
10	0.5000	0.0029			

Void Ratio = 1.724 **Compression =** 0.4%

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0029	12	2.0000	0.0047
2	0.0167	0.0038	13	4.0000	0.0049
3	0.0333	0.0039	14	5.0000	0.0050
4	0.0500	0.0039	15	8.0167	0.0051
5	0.0667	0.0039	16	10.0167	0.0051
6	0.0833	0.0039	17	15.0167	0.0052
7	0.1000	0.0039	18	20.0333	0.0052
8	0.2000	0.0040	19	40.0500	0.0054
9	0.2500	0.0040	20	60.0833	0.0055
10	0.5000	0.0042	21	69.5333	0.0056
11	1.0000	0.0045			

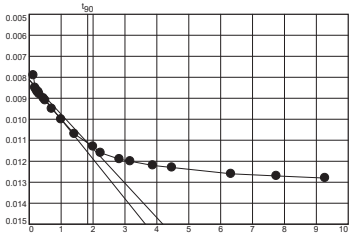


Void Ratio = 1.714 **Compression =** 0.7%
D_0 = 0.0037 **D_{90} =** 0.0049 **D_{100} =** 0.0050 **C_v at 3.67 min. =** 0.308 ft.^{2}/day

Figure D-273

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 3**

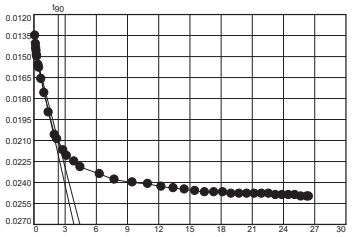
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0056	12	2.0000	0.0107
2	0.0167	0.0079	13	4.0000	0.0113
3	0.0333	0.0085	14	5.0000	0.0116
4	0.0500	0.0086	15	8.0000	0.0119
5	0.0667	0.0087	16	10.0167	0.0120
6	0.0833	0.0087	17	15.0167	0.0122
7	0.1000	0.0088	18	20.0167	0.0123
8	0.2000	0.0090	19	40.0500	0.0126
9	0.2500	0.0091	20	60.0833	0.0127
10	0.5000	0.0095	21	86.0667	0.0128
11	1.0000	0.0100			



Void Ratio = 1.688 **Compression =** 1.7%
D_0 = 0.0081 **D_{90} =** 0.0111 **D_{100} =** 0.0115 **C_v at 3.35 min. =** 0.334 ft.^{2}/day

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 4**

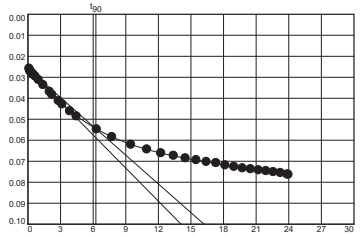
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0128	22	120.1500	0.0241
2	0.0167	0.0135	23	150.1833	0.0243
3	0.0333	0.0141	24	180.2167	0.0244
4	0.0500	0.0144	25	210.2667	0.0245
5	0.0667	0.0146	26	240.3000	0.0246
6	0.0833	0.0149	27	270.3333	0.0247
7	0.1000	0.0150	28	300.3667	0.0247
8	0.2000	0.0156	29	330.4167	0.0247
9	0.2500	0.0158	30	360.4500	0.0248
10	0.5000	0.0166	31	390.4833	0.0248
11	1.0000	0.0176	32	420.5167	0.0248
12	2.0000	0.0190	33	450.5667	0.0248
13	4.0000	0.0206	34	480.6000	0.0248
14	5.0000	0.0209	35	510.6333	0.0248
15	8.0000	0.0217	36	540.6667	0.0249
16	10.0000	0.0221	37	570.7167	0.0249
17	15.0167	0.0225	38	600.7500	0.0249
18	20.0167	0.0229	39	630.7833	0.0249
19	40.0500	0.0234	40	660.8333	0.0250
20	60.0667	0.0238	41	690.8667	0.0250
21	90.1000	0.0240	42	699.0833	0.0250



Void Ratio = 1.642 **Compression =** 3.4%
D_0 = 0.0143 **D_{90} =** 0.0210 **D_{100} =** 0.0218 **C_v at 5.49 min. =** 0.198 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 5**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0250	20	60.0667	0.0585
2	0.0167	0.0259	21	90.1000	0.0621
3	0.0333	0.0268	22	120.1500	0.0644
4	0.0500	0.0271	23	150.1833	0.0662
5	0.0667	0.0273	24	180.2167	0.0674
6	0.0833	0.0275	25	210.2500	0.0686
7	0.1000	0.0277	26	240.3000	0.0695
8	0.2000	0.0283	27	270.3333	0.0703
9	0.2500	0.0287	28	300.3667	0.0709
10	0.5000	0.0297	29	330.4167	0.0720
11	1.0000	0.0313	30	360.4500	0.0727
12	2.0000	0.0337	31	390.4833	0.0734
13	4.0000	0.0369	32	420.5333	0.0738
14	5.0000	0.0383	33	450.5667	0.0743
15	8.0000	0.0413	34	480.6000	0.0747
16	10.0000	0.0429	35	510.6333	0.0752
17	15.0167	0.0462	36	540.6833	0.0756
18	20.0167	0.0486	37	570.7000	0.0763
19	40.0333	0.0548	38	574.8000	0.0764



Void Ratio = 1.451 **Compression =** 10.4%
D_0 = 0.0260 **D_{90} =** 0.0545 **D_{100} =** 0.0577 **C_v at 39.08 min. =** 0.025 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0764	16	14.9833	0.1121
2	0.0167	0.0786	17	19.9833	0.1176
3	0.0333	0.0790	18	39.9833	0.1308
4	0.0500	0.0792	19	59.9833	0.1372
5	0.0667	0.0793	20	89.9833	0.1431
6	0.0833	0.0796	21	119.9667	0.1460
7	0.1833	0.0804	22	149.9500	0.1479
8	0.2333	0.0808	23	179.9500	0.1491
9	0.4833	0.0823	24	209.9667	0.1501
10	0.9833	0.0845	25	239.9500	0.1508
11	1.9833	0.0880	26	269.9333	0.1513
12	3.9833	0.0936	27	299.9333	0.1518
13	4.9833	0.0959	28	329.9333	0.1521
14	7.9833	0.1018	29	359.9167	0.1526
15	9.9833	0.1052	30	389.9000	0.1528

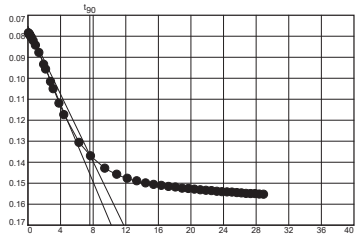


Figure D-274

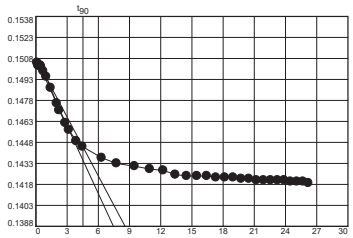
Pressure: 1.00 tsf — **TEST READINGS (continued)** — **Load No. 6**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	419.9167	0.1531	41	719.8500	0.1551
32	449.9167	0.1534	42	749.8333	0.1552
33	479.9000	0.1536	43	779.8500	0.1552
34	509.8833	0.1538	44	809.8333	0.1554
35	539.8833	0.1541	45	839.8167	0.1555
36	569.8833	0.1543			
37	599.8667	0.1544			
38	629.8500	0.1545			
39	659.8667	0.1547			
40	689.8667	0.1549			

Void Ratio = 1.157 **Compression =** 21.1%
D_0 = 0.0754 **D_{90} =** 0.1365 **D_{100} =** 0.1433 **C_v at 57.65 min. =** 0.014 ft.^{2}/day

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 7**

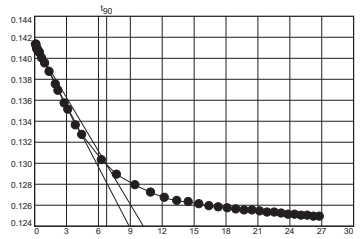
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1555	22	119.9667	0.1429
2	0.0167	0.1505	23	149.9667	0.1428
3	0.0333	0.1504	24	179.9667	0.1425
4	0.0500	0.1503	25	209.9667	0.1424
5	0.0667	0.1503	26	239.9500	0.1424
6	0.0833	0.1503	27	269.9500	0.1424
7	0.1000	0.1503	28	299.9500	0.1423
8	0.2000	0.1503	29	329.9333	0.1423
9	0.2500	0.1502	30	359.9167	0.1423
10	0.5000	0.1499	31	389.9333	0.1422
11	0.9833	0.1495	32	419.9167	0.1422
12	2.0000	0.1487	33	449.9000	0.1421
13	3.9833	0.1476	34	479.9000	0.1421
14	4.9833	0.1471	35	509.9000	0.1421
15	7.9833	0.1462	36	539.9000	0.1421
16	9.9833	0.1457	37	569.8833	0.1421
17	15.0000	0.1449	38	599.8667	0.1420
18	20.0000	0.1445	39	629.8833	0.1420
19	40.0000	0.1437	40	659.8833	0.1420
20	60.0000	0.1433	41	686.2167	0.1419
21	89.9833	0.1431			



Void Ratio = 1.207 **Compression =** 19.3%
D_0 = 0.1508 **D_{90} =** 0.1445 **D_{100} =** 0.1438 **C_v at 20.43 min. =** 0.036 ft.^{2}/day

Pressure: 0.06 tsf — **TEST READINGS** — **Load No. 8**

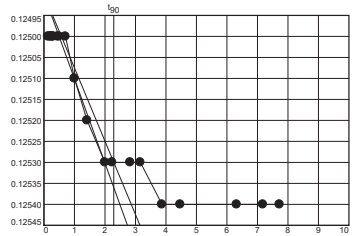
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1419	22	119.9667	0.1272
2	0.0167	0.1413	23	149.9667	0.1267
3	0.0333	0.1413	24	179.9667	0.1264
4	0.0500	0.1410	25	209.9667	0.1263
5	0.0667	0.1409	26	239.9500	0.1261
6	0.0833	0.1408	27	269.9500	0.1259
7	0.1000	0.1408	28	299.9500	0.1258
8	0.2000	0.1406	29	329.9333	0.1257
9	0.2500	0.1405	30	359.9167	0.1256
10	0.5000	0.1400	31	389.9333	0.1255
11	1.0000	0.1395	32	419.9167	0.1255
12	2.0000	0.1387	33	449.9000	0.1254
13	4.0000	0.1375	34	479.9000	0.1253
14	5.0000	0.1369	35	509.9000	0.1253
15	8.0000	0.1357	36	539.9000	0.1252
16	9.9833	0.1351	37	569.8833	0.1251
17	14.9833	0.1336	38	599.8833	0.1251
18	19.9833	0.1327	39	629.8833	0.1250
19	39.9833	0.1303	40	659.8667	0.1250
20	59.9833	0.1289	41	689.8500	0.1249
21	89.9833	0.1279	42	719.2500	0.1249



Void Ratio = 1.271 **Compression =** 17.0%
D_0 = 0.1413 **D_{90} =** 0.1299 **D_{100} =** 0.1286 **C_v at 45.86 min. =** 0.017 ft.^{2}/day

Pressure: 0.13 tsf — **TEST READINGS** — **Load No. 9**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1249	12	2.0000	0.1252
2	0.0167	0.1250	13	4.0000	0.1253
3	0.0333	0.1250	14	5.0000	0.1253
4	0.0500	0.1250	15	8.0000	0.1253
5	0.0667	0.1250	16	10.0000	0.1253
6	0.0833	0.1250	17	14.9833	0.1254
7	0.1000	0.1250	18	19.9833	0.1254
8	0.2000	0.1250	19	39.9833	0.1254
9	0.2500	0.1250	20	51.6000	0.1254
10	0.5000	0.1250	21	59.70	0.1254
11	1.0000	0.1251			

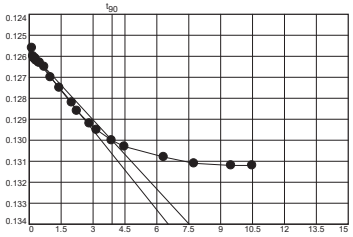


Void Ratio = 1.269 **Compression =** 17.0%
D_0 = 0.1249 **D_{90} =** 0.1253 **D_{100} =** 0.1253 **C_v at 5.24 min. =** 0.151 ft.^{2}/day

Figure D-275

Pressure: 0.25 tsf — **TEST READINGS** — **Load No. 10**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1254	12	2.0000	0.1275
2	0.0167	0.1256	13	4.0000	0.1282
3	0.0333	0.1260	14	5.0000	0.1286
4	0.0500	0.1261	15	8.0000	0.1292
5	0.0667	0.1261	16	10.0000	0.1295
6	0.0833	0.1261	17	15.0000	0.1300
7	0.1000	0.1262	18	20.0000	0.1303
8	0.2000	0.1263	19	40.0000	0.1308
9	0.2500	0.1263	20	60.0000	0.1311
10	0.5000	0.1265	21	89.9833	0.1312
11	1.0000	0.1270	22	109.9000	0.1312

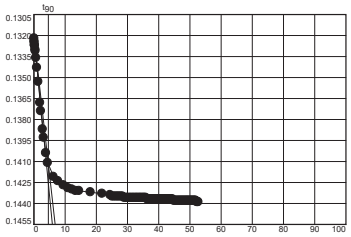


Void Ratio = 1.247 **Compression =** 17.8%

D_0 = 0.1257 **D_{90} =** 0.1300 **D_{100} =** 0.1305 **C_v at 15.17 min. =** 0.051 ft.^{2}/day

Pressure: 0.50 tsf — **TEST READINGS** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1312	24	209.9500	0.1431
2	0.0167	0.1322	25	329.9333	0.1432
3	0.0333	0.1324	26	479.8333	0.1433
4	0.0500	0.1325	27	599.7667	0.1434
5	0.0667	0.1327	28	629.7500	0.1435
6	0.1000	0.1327	29	659.7500	0.1435
7	0.2000	0.1330	30	689.7500	0.1435
8	0.2500	0.1331	31	719.7333	0.1435
9	0.5000	0.1336	32	749.7333	0.1435
10	1.0000	0.1343	33	779.7333	0.1435
11	2.0000	0.1353	34	809.7167	0.1435
12	4.0000	0.1368	35	839.7000	0.1436
13	5.0000	0.1374	36	869.7167	0.1436
14	8.0000	0.1387	37	899.7000	0.1436
15	10.0000	0.1393	38	929.6833	0.1436
16	15.0000	0.1404	39	959.7000	0.1436
17	20.0000	0.1411	40	989.7000	0.1436
18	40.0000	0.1421	41	1019.6833	0.1436
19	60.0000	0.1424	42	1049.6667	0.1436
20	89.9833	0.1427	43	1079.6667	0.1436
21	119.9667	0.1429	44	1109.6667	0.1436
22	149.9833	0.1430	45	1139.6500	0.1436
23	179.9667	0.1431	46	1169.6500	0.1436



Pressure: 0.50 tsf — **TEST READINGS (continued)** — **Load No. 11**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
47	1199.6500	0.1436	65	1739.5500	0.1437	83	2279.4333	0.1438
48	1229.6333	0.1436	66	1769.5333	0.1437	84	2309.4333	0.1438
49	1259.6167	0.1436	67	1799.5167	0.1437	85	2339.4167	0.1438
50	1289.6333	0.1436	68	1829.5333	0.1437	86	2369.4167	0.1438
51	1319.6333	0.1437	69	1859.5167	0.1437	87	2399.4167	0.1438
52	1349.6167	0.1437	70	1889.5000	0.1437	88	2429.4000	0.1438
53	1379.6000	0.1437	71	1919.5000	0.1437	89	2459.3833	0.1438
54	1409.6167	0.1437	72	1949.5000	0.1437	90	2489.4000	0.1438
55	1439.6000	0.1437	73	1979.4833	0.1437	91	2519.4000	0.1438
56	1469.5833	0.1437	74	2009.4833	0.1438	92	2549.3833	0.1438
57	1499.5833	0.1437	75	2039.4833	0.1438	93	2579.3667	0.1438
58	1529.5833	0.1437	76	2069.4833	0.1438	94	2609.3667	0.1438
59	1559.5667	0.1437	77	2099.4667	0.1438	95	2639.3667	0.1438
60	1589.5667	0.1437	78	2129.4500	0.1438	96	2669.3500	0.1438
61	1619.5667	0.1437	79	2159.4667	0.1438	97	2699.3333	0.1438
62	1649.5500	0.1437	80	2189.4500	0.1438	98	2729.3500	0.1439
63	1679.5500	0.1437	81	2219.4333	0.1438	99	2759.3500	0.1439
64	1709.5500	0.1437	82	2249.4333	0.1438	100	2780.4333	0.1439

Void Ratio = 1.200 **Compression =** 19.6%

D_0 = 0.1320 **D_{90} =** 0.1412 **D_{100} =** 0.1422 **C_v at 21.28 min. =** 0.036 ft.^{2}/day

Pressure: 1.00 tsf — **TEST READINGS** — **Load No. 12**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1439	17	14.9833	0.1551
2	0.0167	0.1450	18	19.9833	0.1560
3	0.0333	0.1452	19	39.9833	0.1579
4	0.0500	0.1452	20	59.9833	0.1589
5	0.0667	0.1453	21	89.9833	0.1598
6	0.0833	0.1455	22	119.9667	0.1606
7	0.1000	0.1455	23	149.9667	0.1612
8	0.2000	0.1459	24	179.9667	0.1616
9	0.2500	0.1461	25	209.9667	0.1620
10	0.5000	0.1467	26	239.9500	0.1623
11	1.0000	0.1476	27	269.9333	0.1625
12	2.0000	0.1489	28	299.9500	0.1627
13	4.0000	0.1508	29	329.9333	0.1630
14	5.0000	0.1515	30	359.9167	0.1631
15	7.9833	0.1530	31	389.9167	0.1632
16	9.9833	0.1538	32	419.9167	0.1634

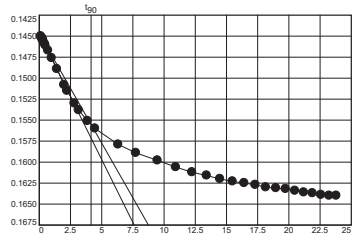


Figure D-276

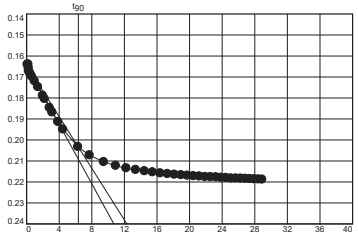
Pressure: 1.00 tsf — **TEST READINGS (continued)** — **Load No. 12**

No.	Elapsed Time	Dial Reading
33	449.9167	0.1636
34	479.9000	0.1637
35	509.8833	0.1639
36	539.9000	0.1640
37	566.8333	0.1640

Void Ratio = 1.125 **Compression =** 22.3%
D_0 = 0.1447 **D_{90} =** 0.1555 **D_{100} =** 0.1567 **C_v at 17.23 min. =** 0.042 ft.^{2}/day

Pressure: 2.00 tsf — **TEST READINGS** — **Load No. 13**

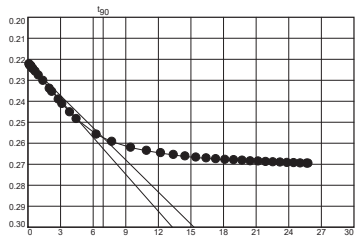
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1640	24	179.9500	0.2143
2	0.0167	0.1641	25	209.9500	0.2149
3	0.0333	0.1641	26	239.9500	0.2154
4	0.0500	0.1641	27	269.9500	0.2159
5	0.0667	0.1656	28	299.9333	0.2162
6	0.0833	0.1671	29	329.9167	0.2165
7	0.1000	0.1673	30	359.9167	0.2168
8	0.2000	0.1683	31	389.9333	0.2170
9	0.2500	0.1687	32	419.9167	0.2172
10	0.5000	0.1700	33	449.9000	0.2174
11	1.0000	0.1720	34	479.9000	0.2176
12	2.0000	0.1748	35	509.9000	0.2177
13	4.0000	0.1789	36	539.9000	0.2178
14	5.0000	0.1805	37	569.8833	0.2180
15	8.0000	0.1847	38	599.8667	0.2181
16	10.0000	0.1869	39	629.8833	0.2183
17	15.0000	0.1914	40	659.8667	0.2183
18	20.0000	0.1950	41	689.8500	0.2184
19	39.9833	0.2033	42	719.8500	0.2185
20	59.9667	0.2073	43	749.8500	0.2186
21	89.9667	0.2105	44	779.8500	0.2187
22	119.9833	0.2123	45	809.8333	0.2188
23	149.9667	0.2135	46	835.6333	0.2189



Void Ratio = 0.921 **Compression =** 29.8%
D_0 = 0.1643 **D_{90} =** 0.2034 **D_{100} =** 0.2077 **C_v at 40.35 min. =** 0.016 ft.^{2}/day

Pressure: 4.00 tsf — **TEST READINGS** — **Load No. 14**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2189	22	119.9667	0.2636
2	0.0167	0.2223	23	149.9833	0.2647
3	0.0333	0.2228	24	179.9667	0.2656
4	0.0500	0.2231	25	209.9500	0.2663
5	0.0667	0.2231	26	239.9500	0.2668
6	0.0833	0.2232	27	269.9500	0.2672
7	0.1000	0.2234	28	299.9500	0.2676
8	0.2000	0.2244	29	329.9333	0.2679
9	0.2500	0.2247	30	359.9167	0.2681
10	0.5000	0.2259	31	389.9333	0.2683
11	1.0000	0.2277	32	419.9167	0.2686
12	2.0000	0.2303	33	449.9000	0.2687
13	4.0000	0.2340	34	479.9000	0.2689
14	5.0000	0.2355	35	509.9000	0.2691
15	8.0000	0.2392	36	539.9000	0.2692
16	10.0000	0.2413	37	569.8833	0.2694
17	15.0000	0.2453	38	599.8667	0.2695
18	20.0000	0.2485	39	629.8833	0.2696
19	40.0000	0.2559	40	659.8833	0.2697
20	60.0000	0.2593	41	666.7500	0.2697
21	89.9833	0.2621			



Void Ratio = 0.732 **Compression =** 36.7%
D_0 = 0.2220 **D_{90} =** 0.2573 **D_{100} =** 0.2613 **C_v at 47.94 min. =** 0.011 ft.^{2}/day

Pressure: 8.00 tsf — **TEST READINGS** — **Load No. 15**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2697	14	5.0000	0.2837
2	0.0167	0.2724	15	8.0000	0.2867
3	0.0333	0.2728	16	10.0000	0.2884
4	0.0500	0.2731	17	15.0167	0.2917
5	0.0667	0.2735	18	20.0167	0.2944
6	0.0833	0.2735	19	40.0500	0.3005
7	0.1000	0.2737	20	60.0833	0.3035
8	0.2000	0.2744	21	90.1333	0.3057
9	0.2500	0.2746	22	120.1667	0.3070
10	0.5000	0.2757	23	150.2167	0.3078
11	1.0000	0.2772	24	180.2667	0.3083
12	2.0000	0.2793	25	210.3000	0.3088
13	4.0000	0.2824	26	240.3500	0.3091

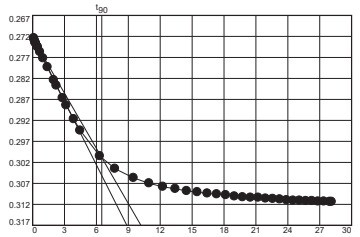


Figure D-277

Pressure: 8.00 tsf	TEST READINGS (continued)	Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	270.4000	0.3094	37	570.8500	0.3110
28	300.4500	0.3096	38	600.9000	0.3111
29	330.4833	0.3098	39	630.9333	0.3111
30	360.5333	0.3101	40	660.9833	0.3112
31	390.5833	0.3103	41	691.0333	0.3112
32	420.6167	0.3104	42	721.0667	0.3113
33	450.6667	0.3104	43	751.1167	0.3113
34	480.7167	0.3106	44	781.1667	0.3114
35	510.7500	0.3107	45	791.6833	0.3114
36	540.8000	0.3108			

Void Ratio = 0.577 **Compression =** 42.3%
D_0 = 0.2724 **D_{90} =** 0.3009 **D_{100} =** 0.3040 **C_v at 42.34 min. =** 0.010 $ft.^2/day$

Figure D-278

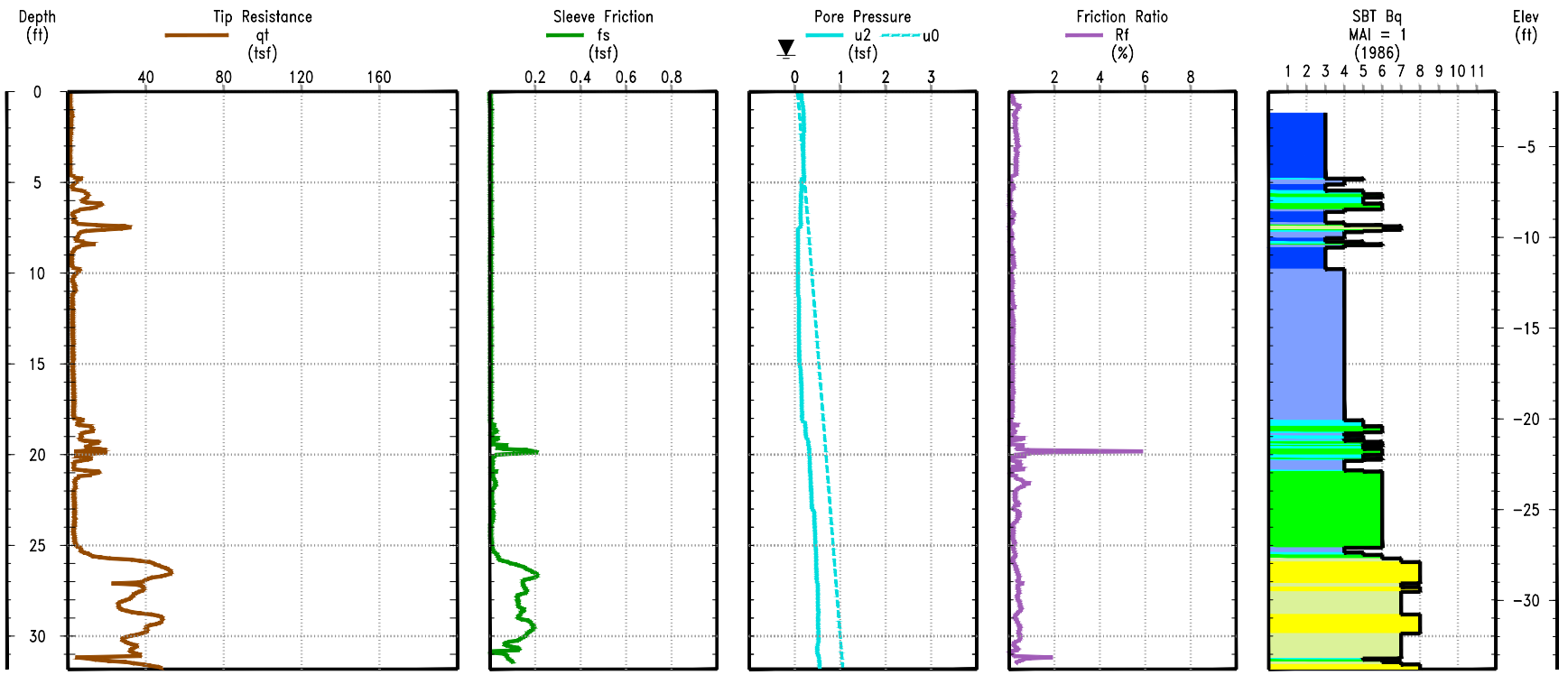
APPENDIX E
Marsh Creation CPT Logs

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE01_CPT 16.dwg TAB:C-16 Date Exported: 07/11/18 - 14:55 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.250306
Longitude: -90.2011389

Elevation: -1.97
Water Depth: -2.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*

*Overconsolidated or Cemented

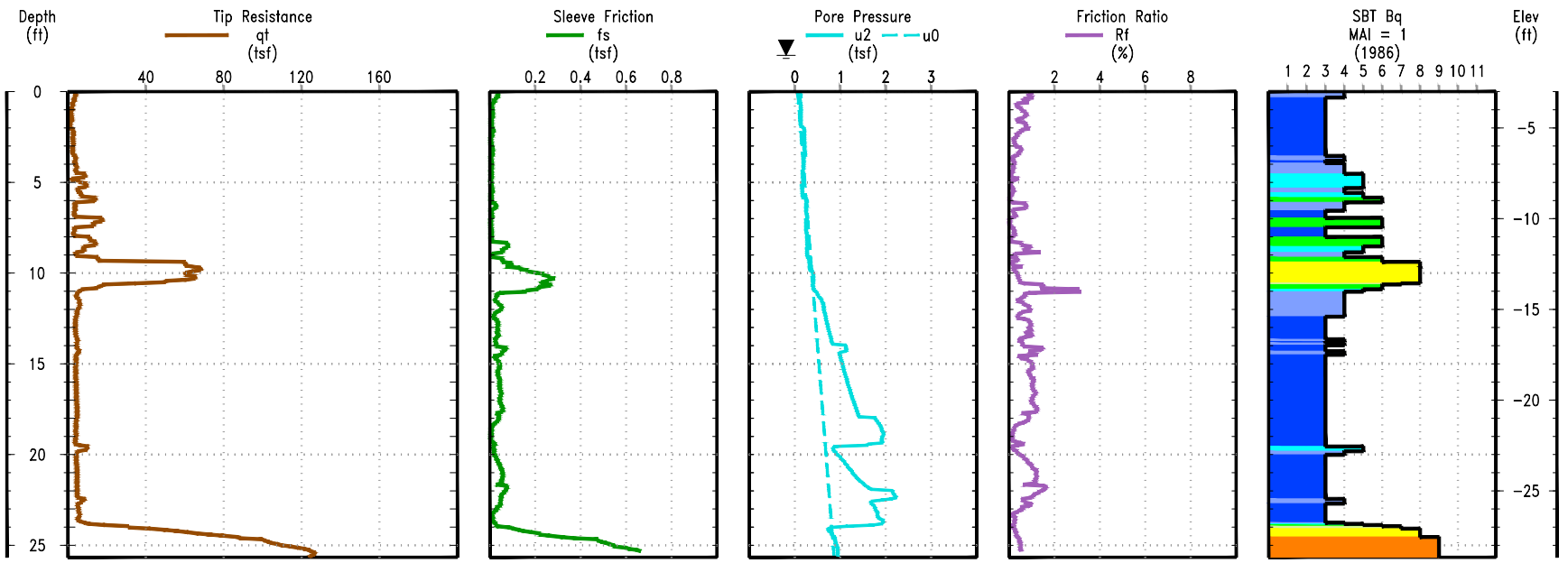
Cone Penetration Test C-16	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-1**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE02_CPT 19.dwg TAB:8x11 Landscape Date Exported: 07/11/18 - 15:31 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.258861
Longitude: -90.2026667

Elevation: -2.97
Water Depth: -2.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

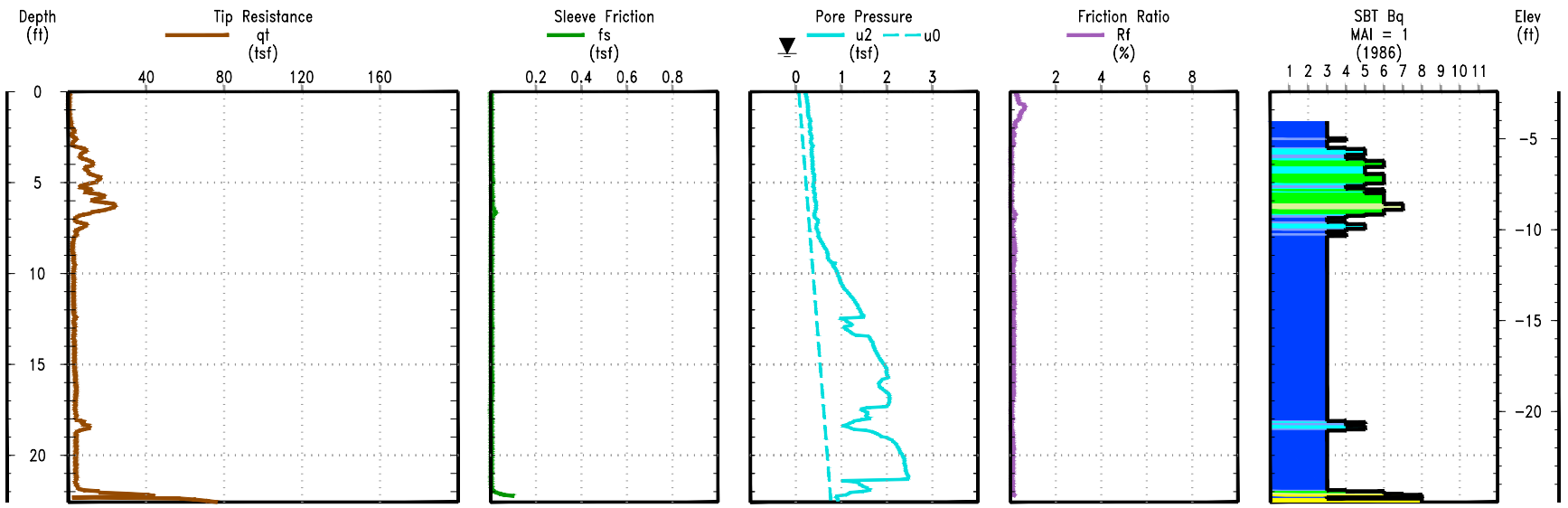
Cone Penetration Test C-19	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-2**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE03_CPT 20.dwg TAB:C-20 Date Exported: 07/11/18 - 14:58 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.261472
Longitude: -90.2016111

Elevation: -2.41
Water Depth: -2.1



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

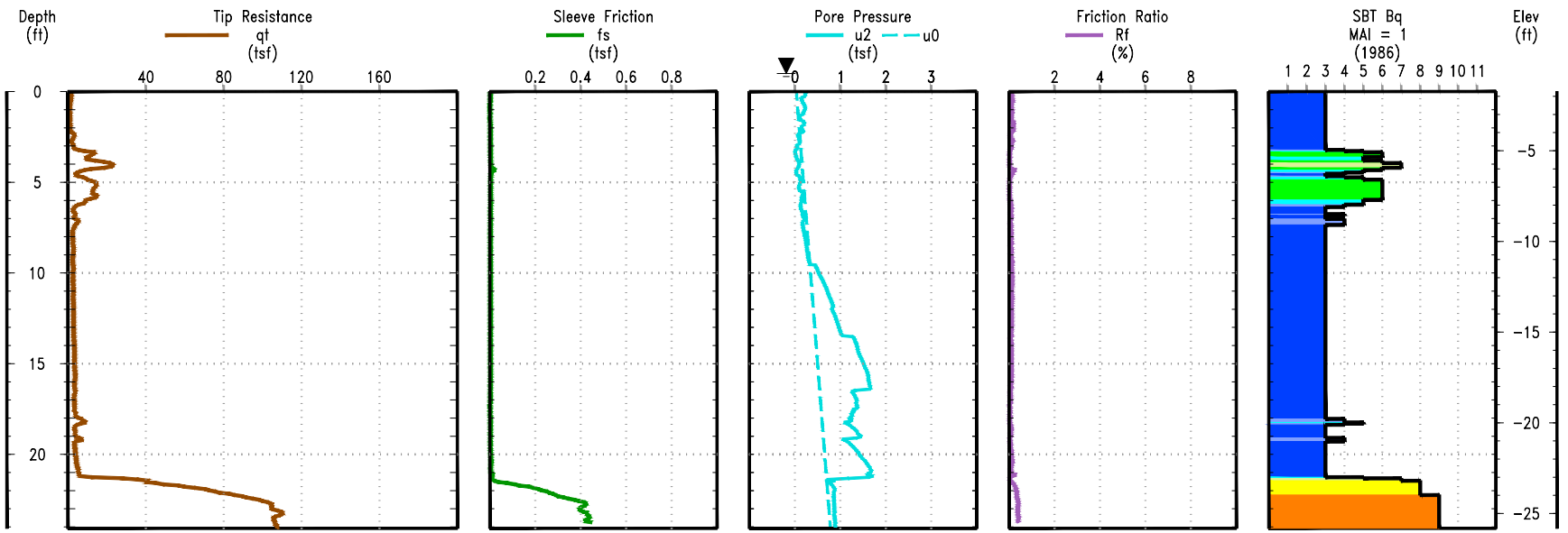
Cone Penetration Test C-20	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-3**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE04_CPT 21.dwg TAB:C21 Date Exported: 07/11/18 - 14:59 by kcook

Project #: 18274-004-01
Date: Apr. 25, 2018

Latitude: 29.261
Longitude: -90.199

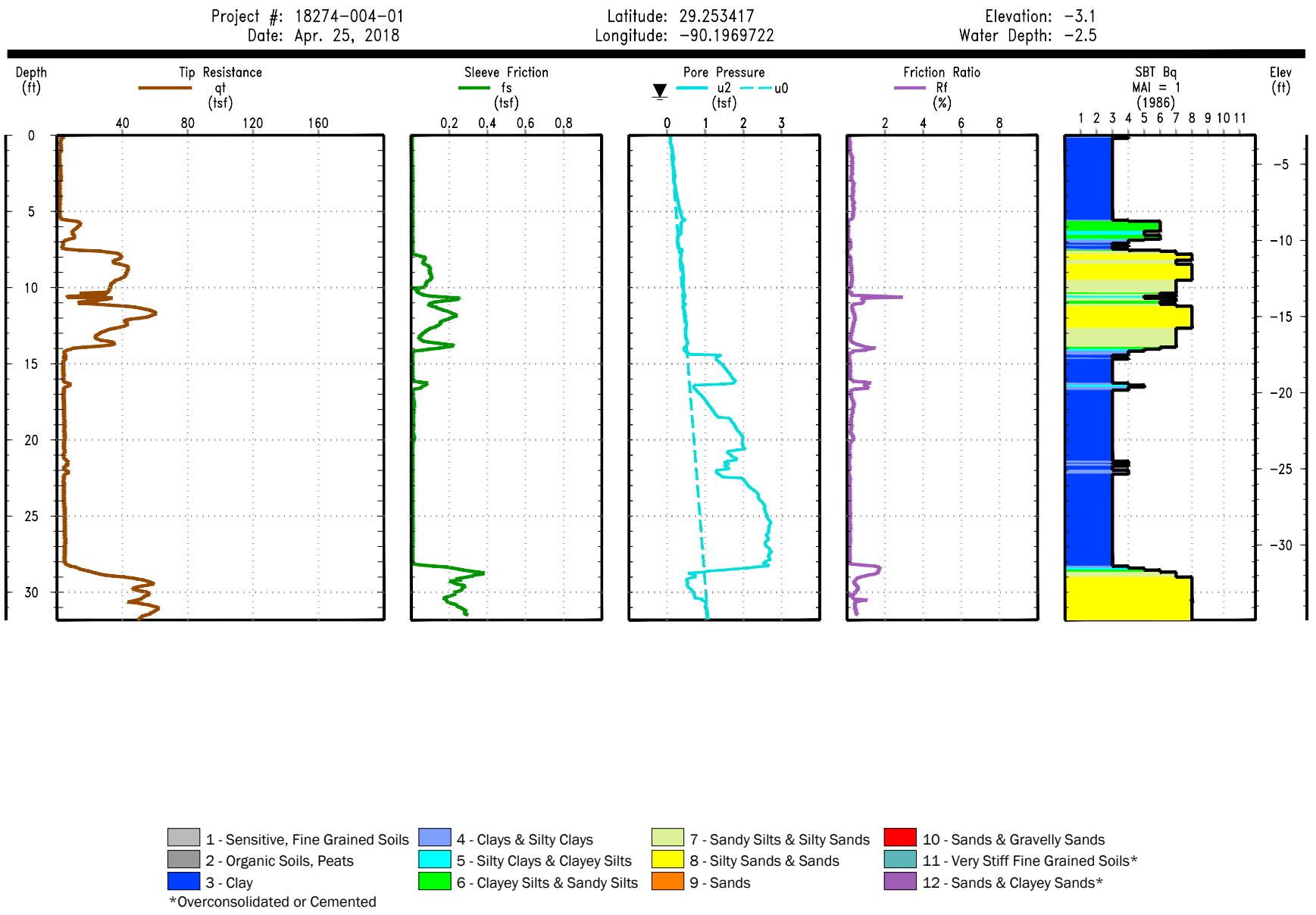
Elevation: -1.74
Water Depth: -1.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

Cone Penetration Test C-21	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-4**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE05_CPT 22.dwg TAB:C-22 Date Exported: 07/11/18 - 15:03 by kcook



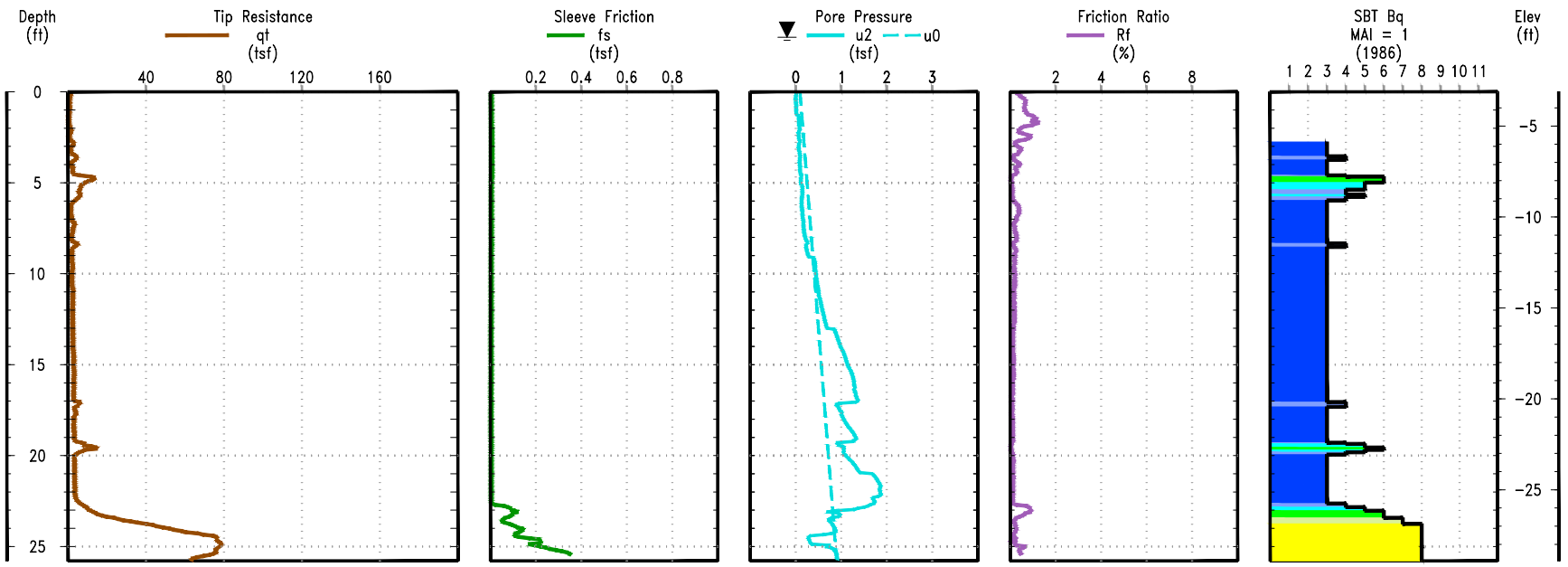
Cone Penetration Test C-22	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-5**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE06_CPT 23.dwg TAB:8x11 Landscape Date Exported: 07/11/18 - 15:05 by kcook

Project #: 18274-004-01
Date: Apr. 25, 2018

Latitude: 29.257778
Longitude: -90.1963056

Elevation: -3.12
Water Depth: -3.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

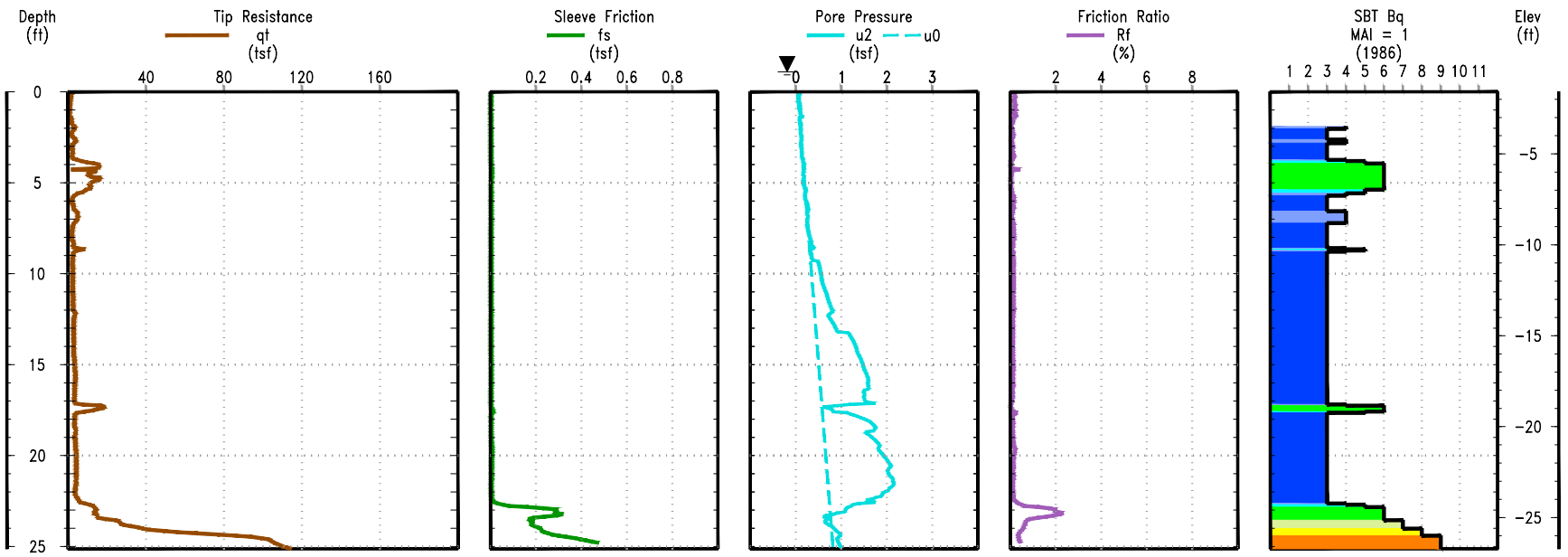
Cone Penetration Test C-23	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-6**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE07_CPT 24.dwg TAB:C-24 Date Exported: 07/11/18 - 15:06 by kcook

Project #: 18274-004-01
Date: Apr. 25, 2018

Latitude: 29.26125
Longitude: -90.19675

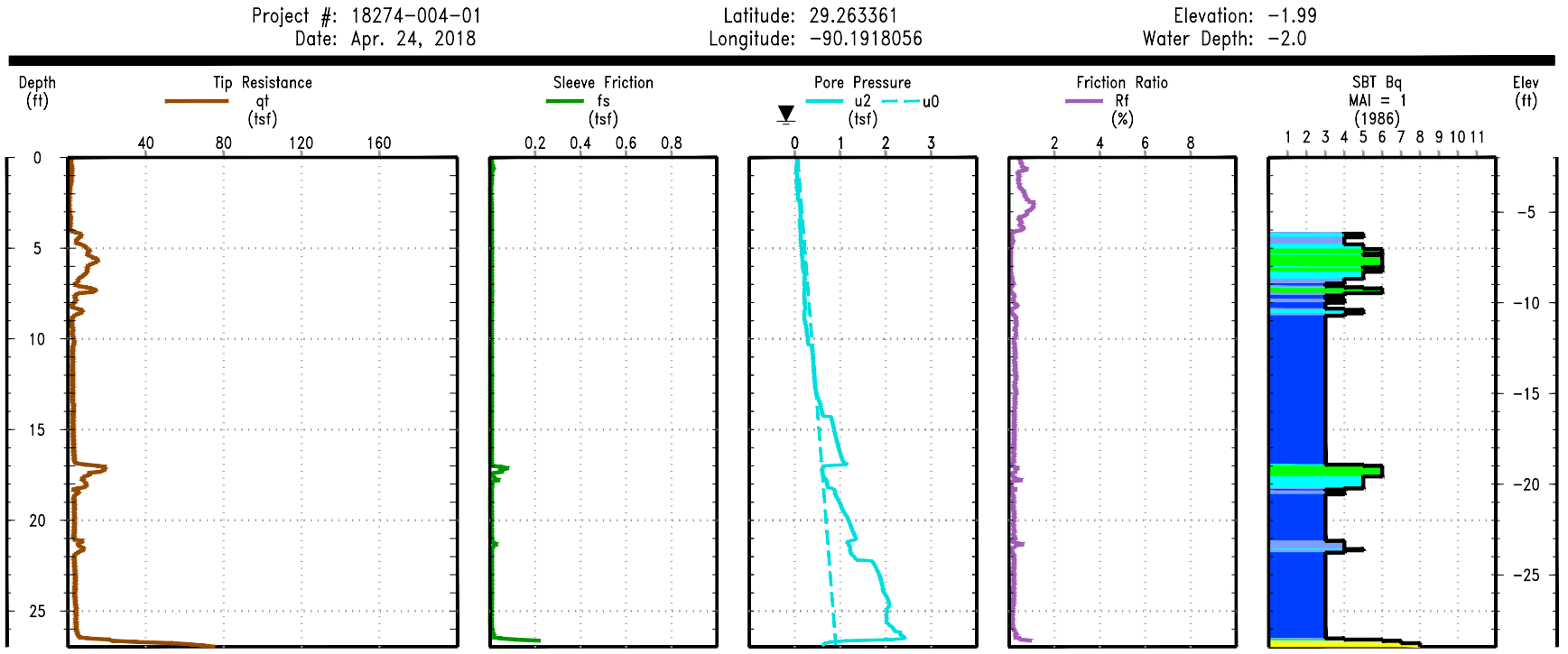
Elevation: -1.59
Water Depth: -1.1



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

Cone Penetration Test C-24	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-7**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE08_CPT 26.dwg TAB:C-8 Date Exported: 07/11/18 - 15:07 by kcook

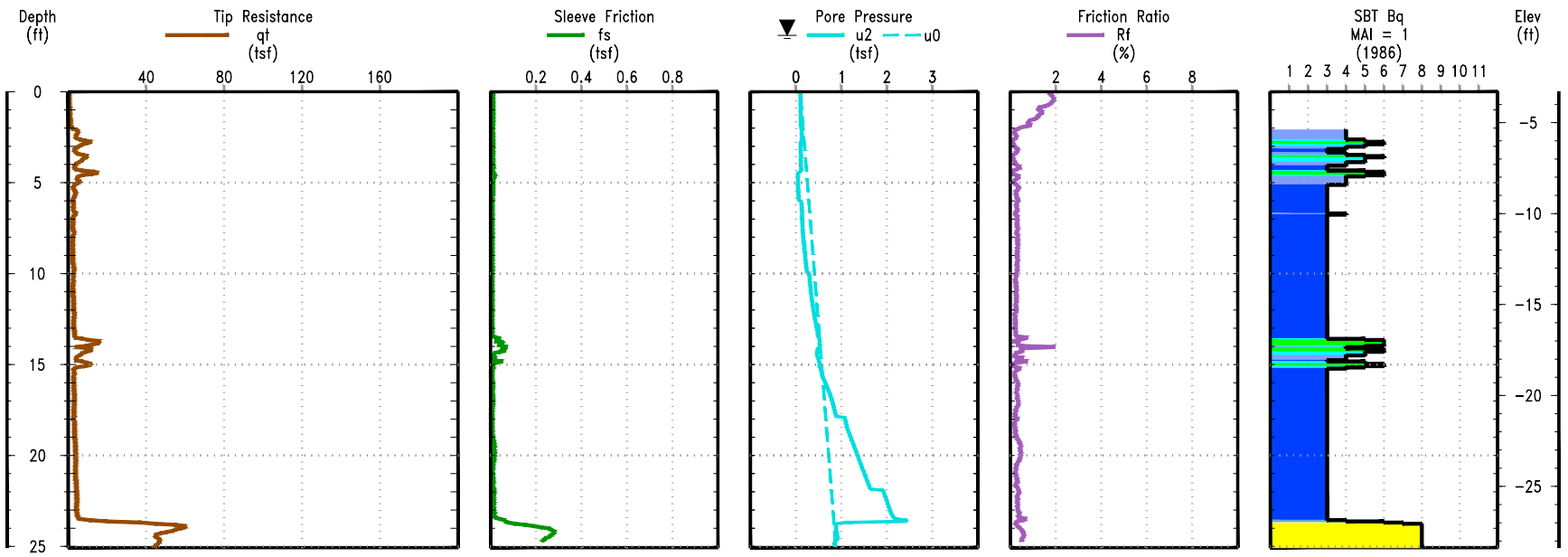


Cone Penetration Test C-26	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-8**

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.26
Longitude: -90.1911944

Elevation: -3.3
Water Depth: -3.1



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

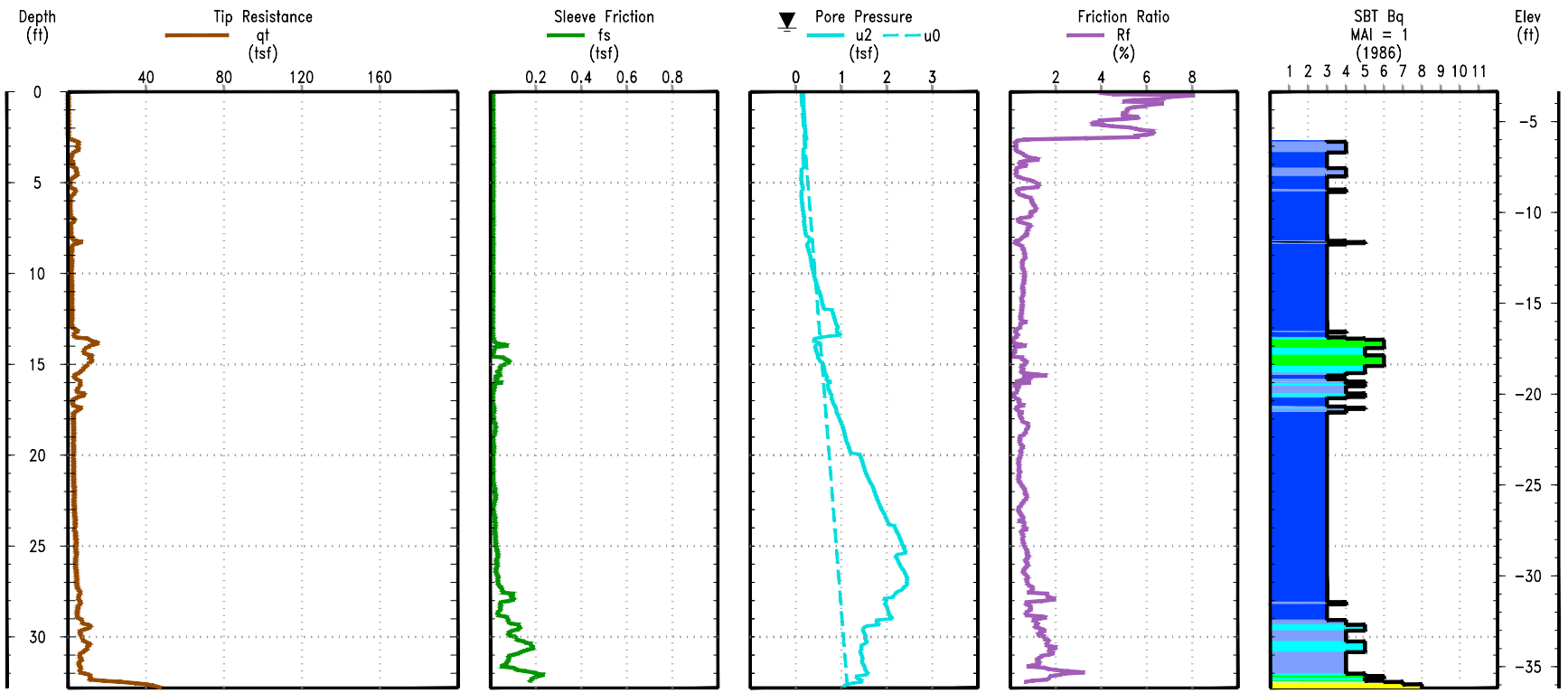
Cone Penetration Test C-27	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-9**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE10_CPT 28.dwg TAB:C28 Date Exported: 07/11/18 - 15:13 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.260333
Longitude: -90.1876111

Elevation: -3.36
Water Depth: -3.5



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

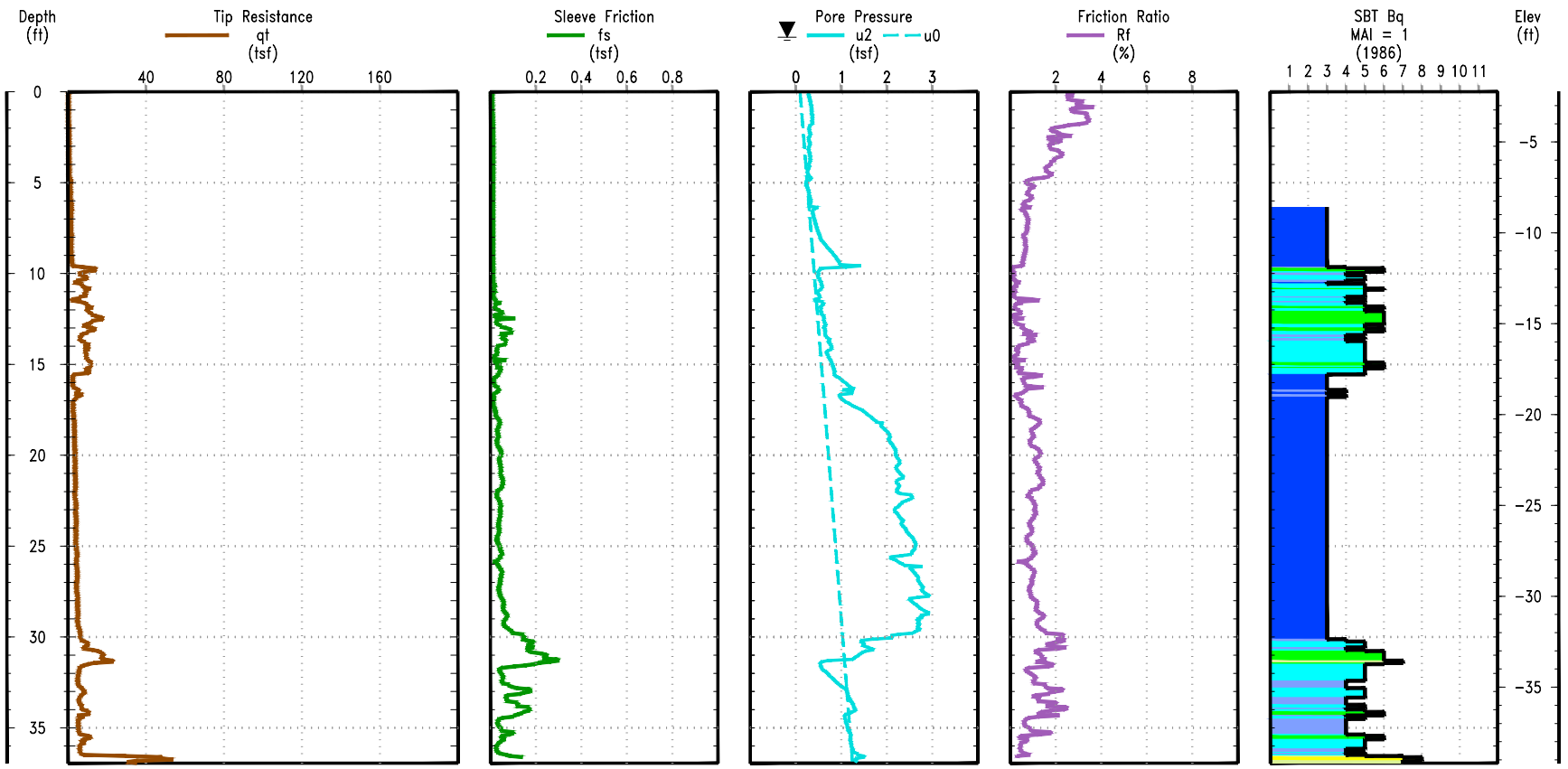
Cone Penetration Test C-28	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-10**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE11_CPT 29.dwg TAB:C29 Date Exported: 07/11/18 - 15:15 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.261222
Longitude: -90.1835278

Elevation: -2.24
Water Depth: -3.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

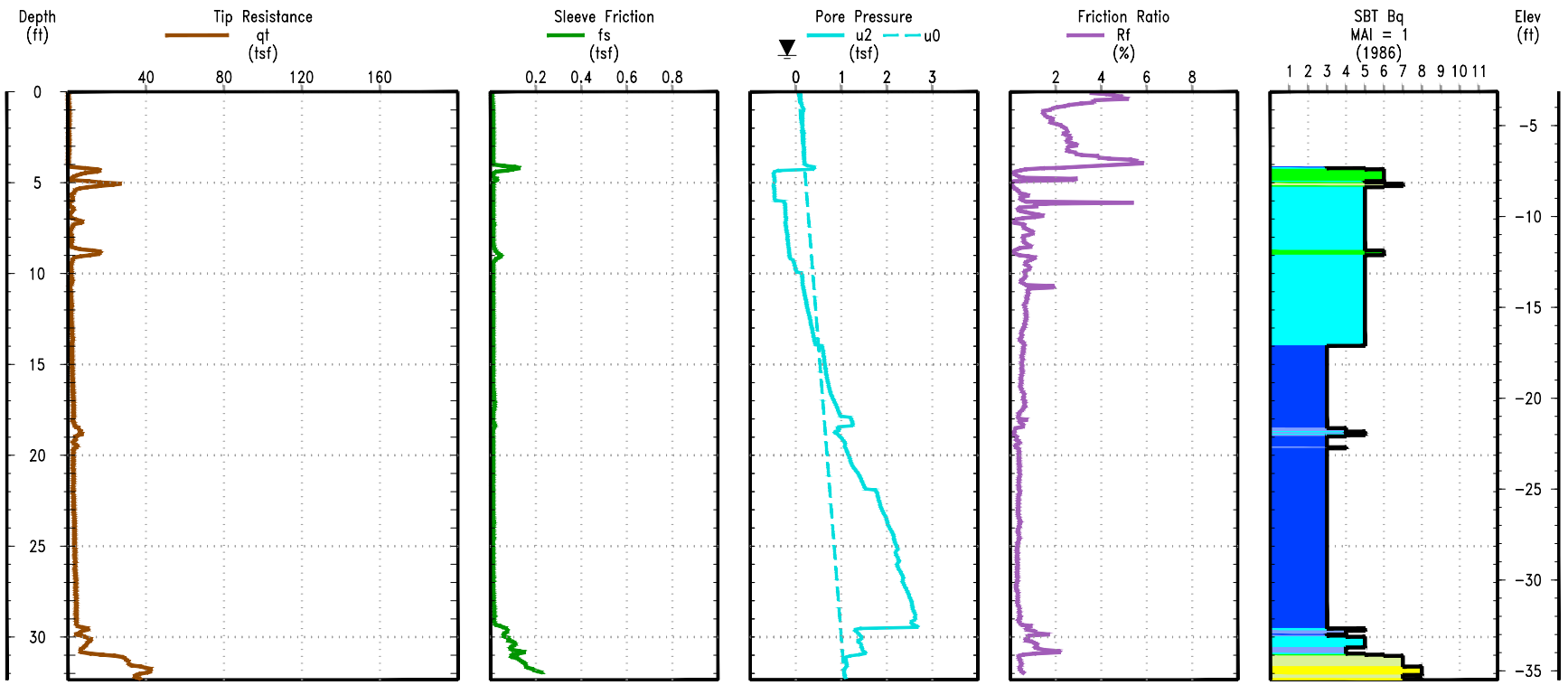
Cone Penetration Test C-29	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-11**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE12_CPT 30.dwg TAB:C30 Date Exported: 07/11/18 - 15:17 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.257861
Longitude: -90.1898056

Elevation: -3.14
Water Depth: -2.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*

*Overconsolidated or Cemented

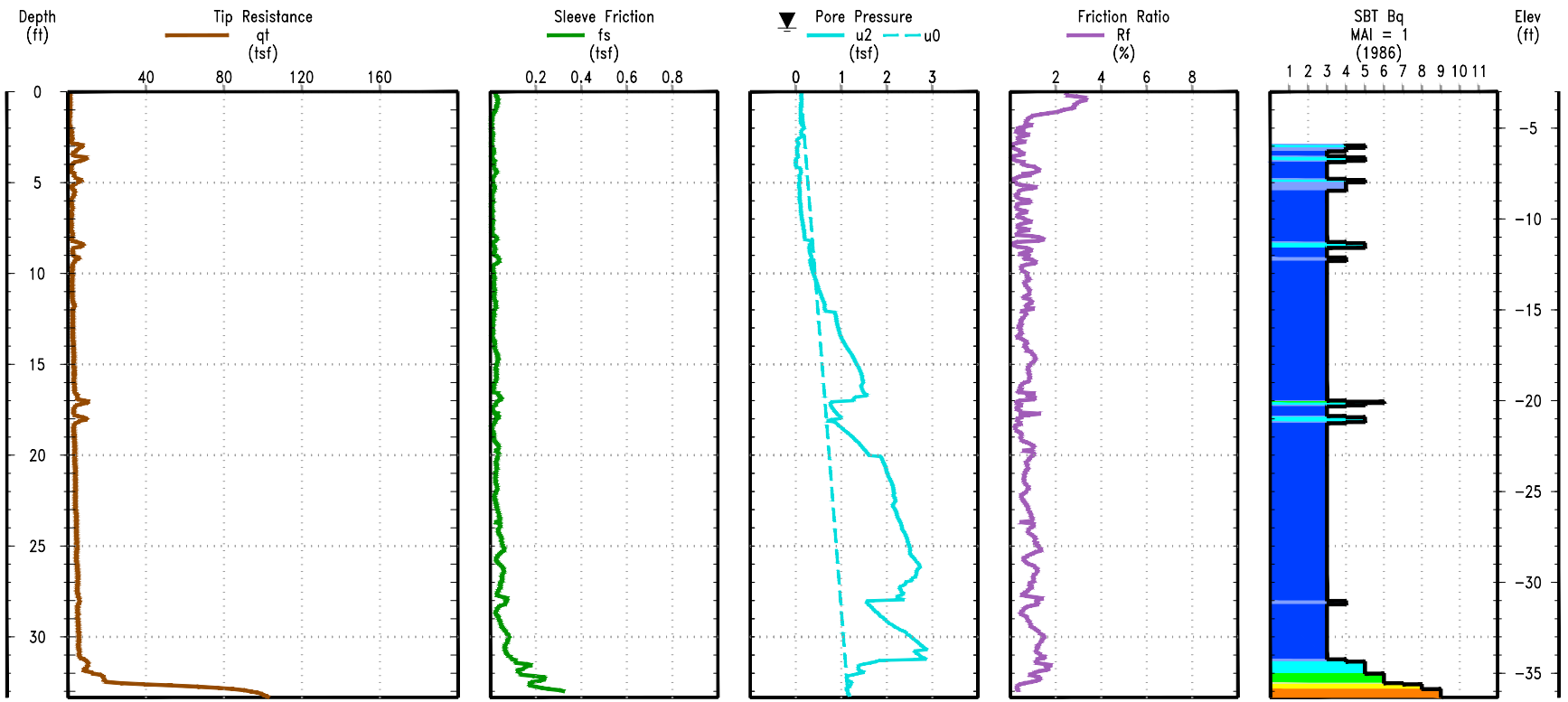
Cone Penetration Test C-30	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-12**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE13_CPT 31.dwg TAB:C31 Date Exported: 07/11/18 - 15:18 by kcook

Project #: 18274-004-01
Date: Apr. 25, 2018

Latitude: 29.256306
Longitude: -90.1849444

Elevation: -3
Water Depth: -3.5



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

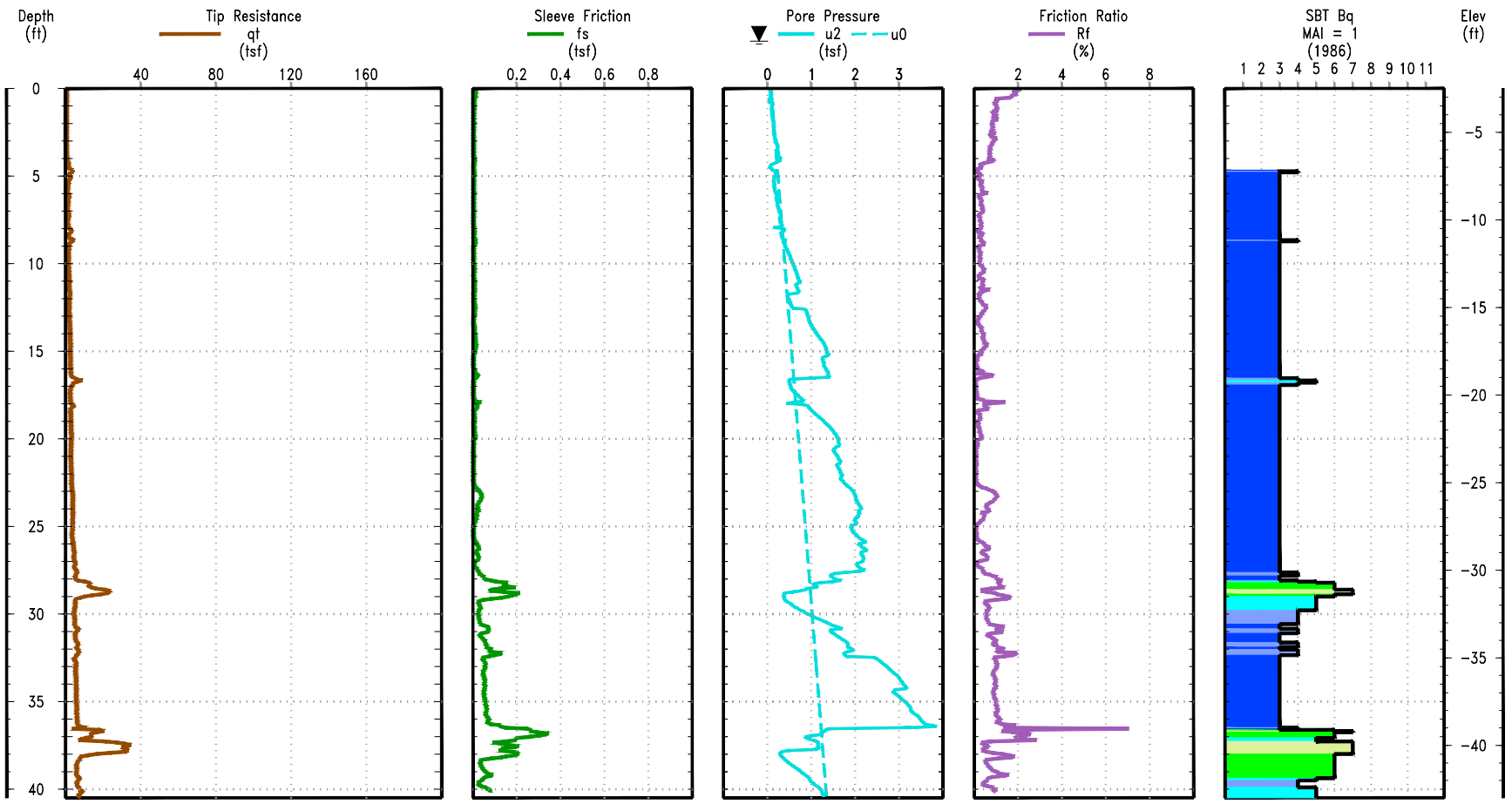
Cone Penetration Test C-31	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-13**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE14_CPT 33.dwg TAB:C-33 Date Exported: 07/11/18 - 15:19 by kcook

Project #: 18274-004-01
Date: Apr. 25, 2018

Latitude: 29.25425
Longitude: -90.1823056

Elevation: -2.5
Water Depth: -2.7



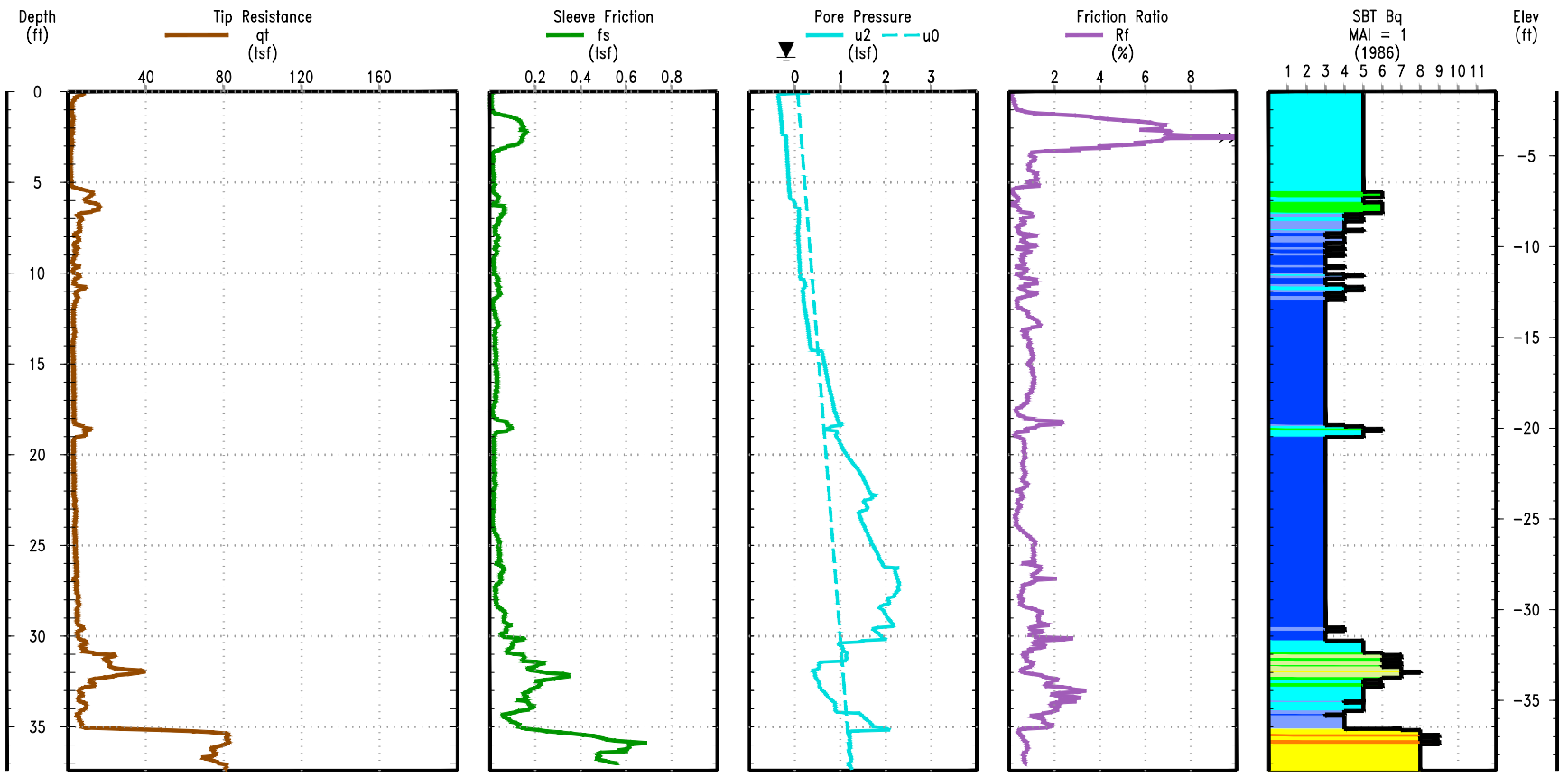
Cone Penetration Test C-33	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-14**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE15_CPT 34.dwg TAB:8x11 Landscape Date Exported: 07/11/18 - 15:20 by kcook

Project #: 18274-004-01
Date: Apr. 25, 2018

Latitude: 29.253083
Longitude: -90.1801944

Elevation: -1.46
Water Depth: -1.9



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

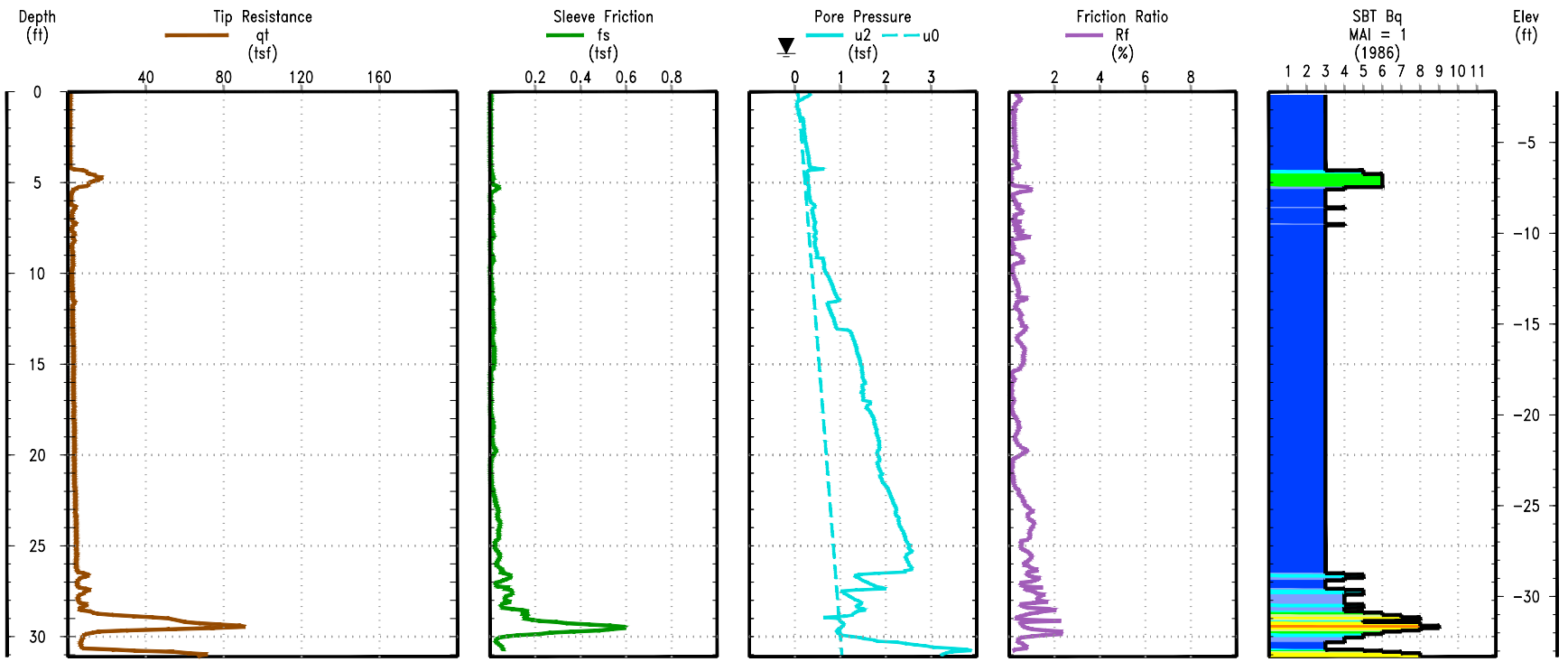
Cone Penetration Test C-34	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-15**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE16_CPT 35.dwg TAB:C35 Date Exported: 07/11/18 - 15:21 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.248833
Longitude: -90.181

Elevation: -2.21
Water Depth: -2.1



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

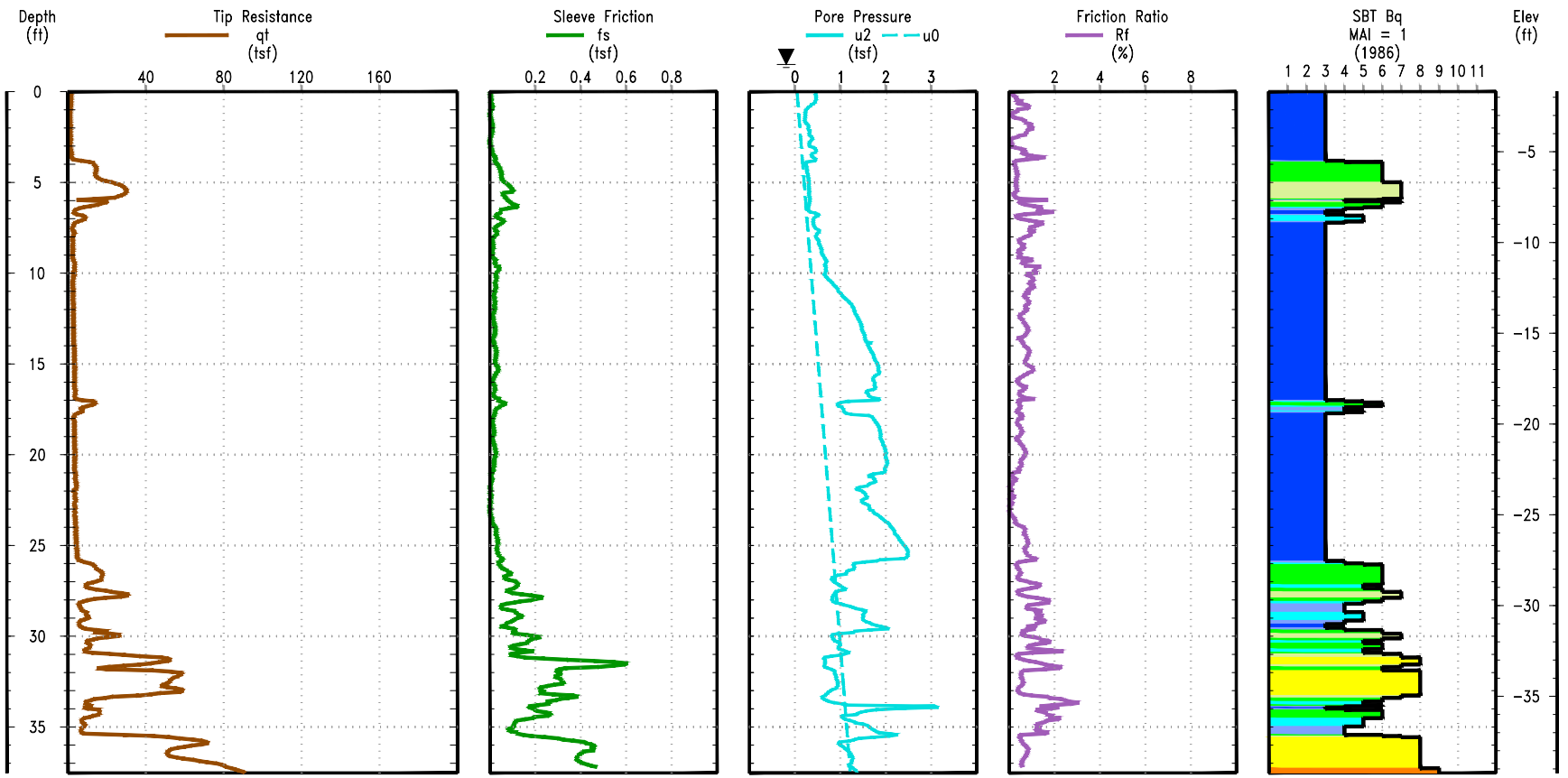
Cone Penetration Test C-35	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-16**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE17_CPT 37.dwg TAB:C37 Date Exported: 07/11/18 - 15:22 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.25475
Longitude: -90.1788333

Elevation: -1.69
Water Depth: -1.5



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

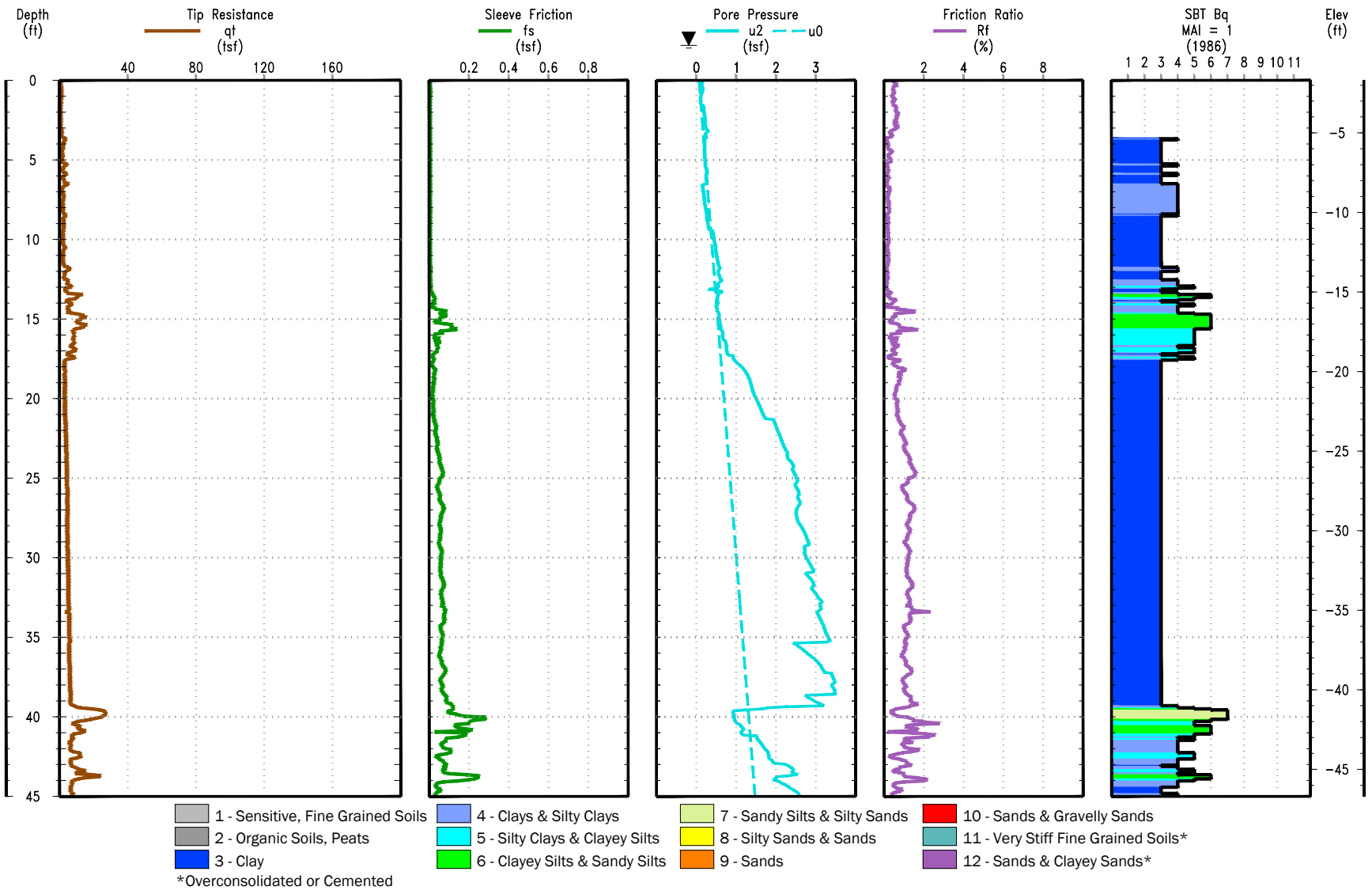
Cone Penetration Test C-37	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-17**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE18_CPT 38.dwg TAB:C-38 Date Exported: 07/11/18 - 15:23 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.260389
Longitude: -90.1789722

Elevation: -1.7
Water Depth: -2.2



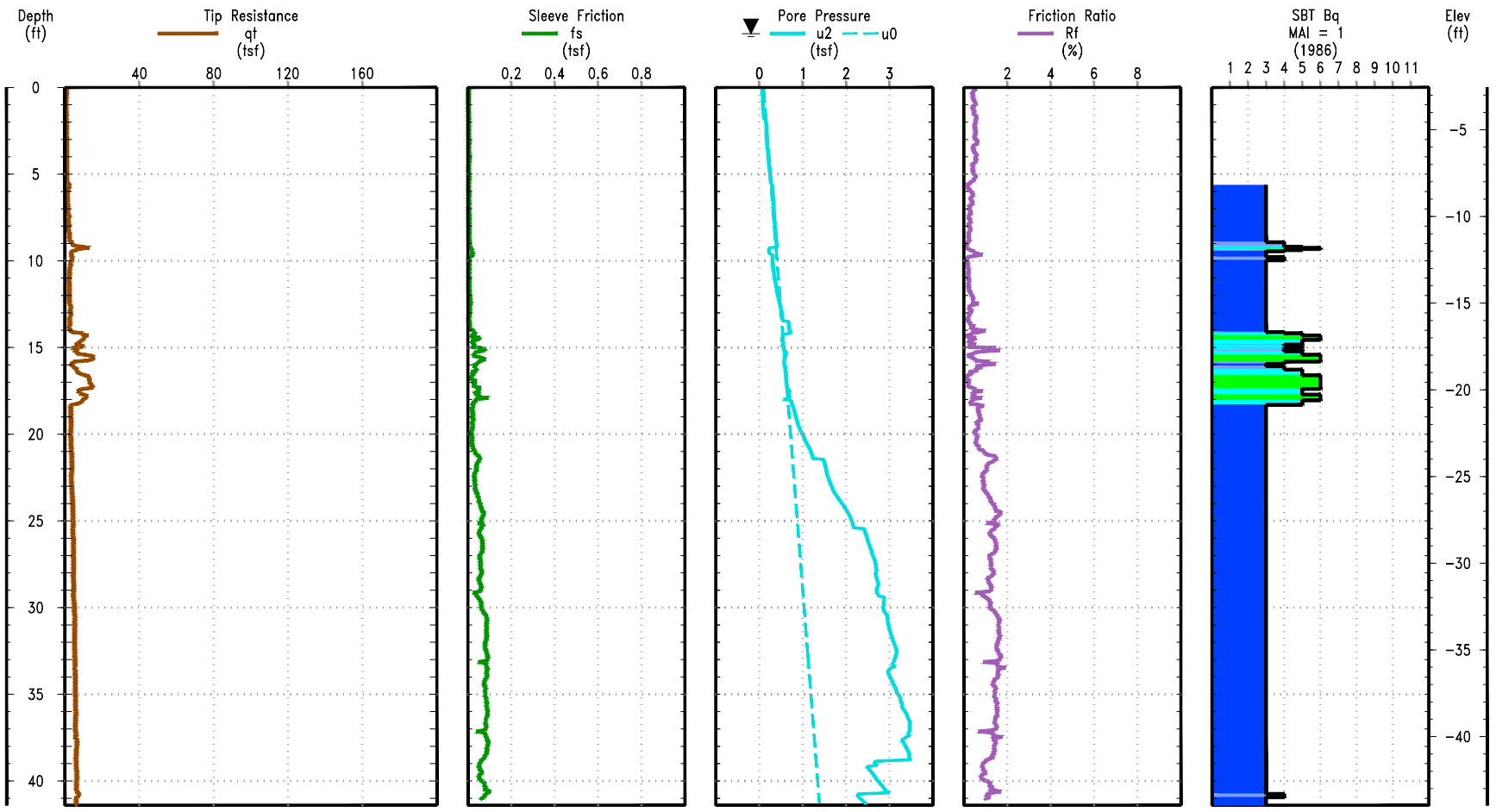
Cone Penetration Test C-38	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-18**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE19_CPT 39.dwg TAB:C-39 Date Exported: 07/11/18 - 15:24 by kcook

Project #: 18274-004-01
Date: Apr. 24, 2018

Latitude: 29.26075
Longitude: -90.1762778

Elevation: -2.56
Water Depth: -3.1



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

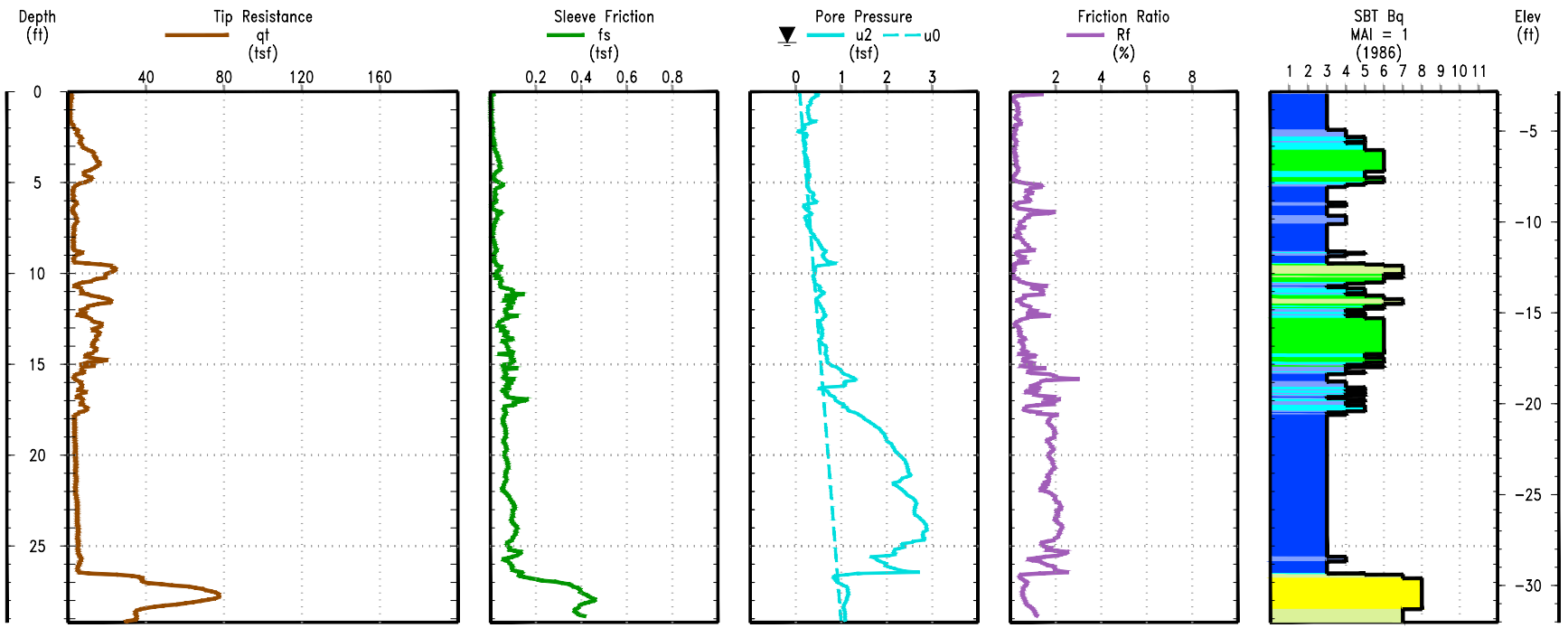
Cone Penetration Test C-39	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-19**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE20_CPT 41.dwg TAB:8x11 Landscape Date Exported: 07/11/18 - 15:25 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.257861
Longitude: -90.1738333

Elevation: -2.83
Water Depth: -2.7



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*

*Overconsolidated or Cemented

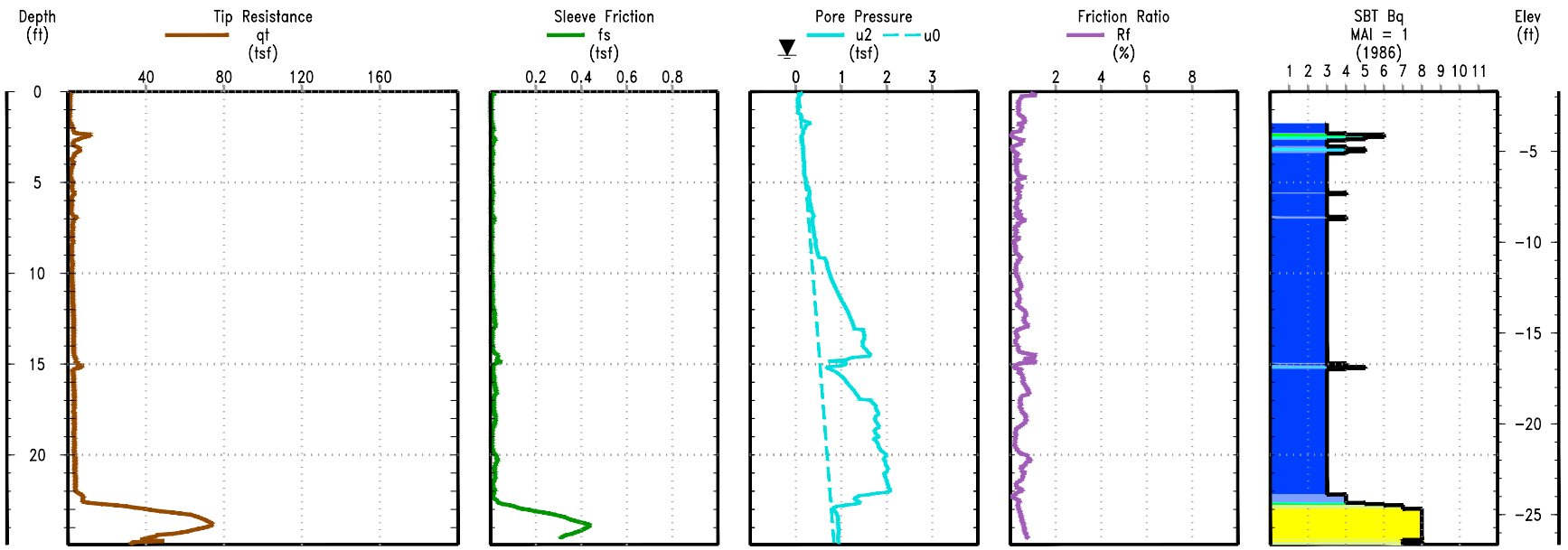
Cone Penetration Test C-41	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-20**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE21_CPT 43.dwg TAB:8x11 Landscape Date Exported: 07/11/18 - 15:26 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.251917
Longitude: -90.1704444

Elevation: -1.71
Water Depth: -2.0



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

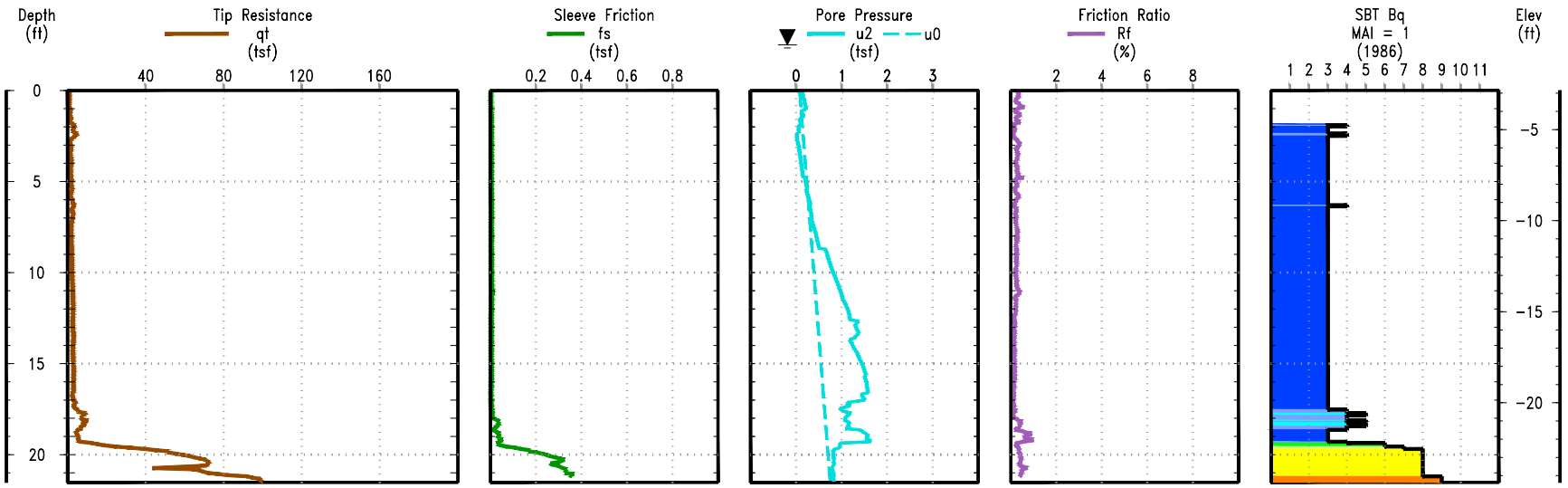
Cone Penetration Test C-43	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-21**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE22_CPT 44.dwg TAB:8x11 Landscape Date Exported: 07/11/18 - 16:22 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.248778
Longitude: -90.1673333

Elevation: -2.85
Water Depth: -2.5



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

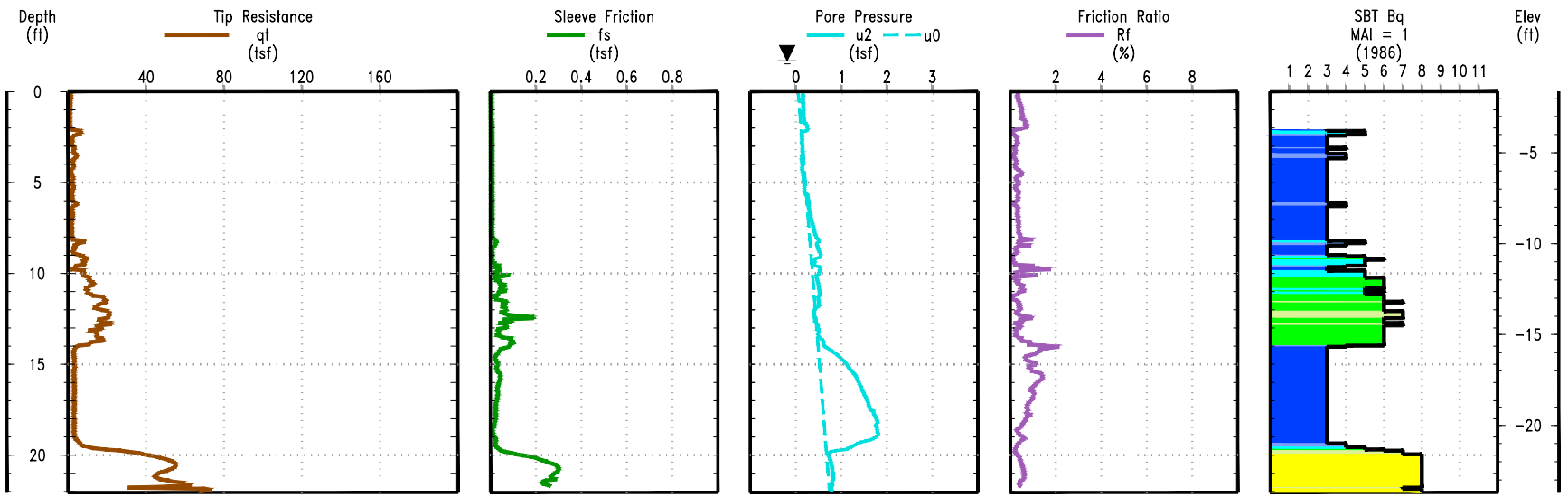
Cone Penetration Test C-44	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-22**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE23_CPT 46.dwg TAB:C-46 Date Exported: 07/11/18 - 15:28 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.252833
Longitude: -90.1644722

Elevation: -1.64
Water Depth: -1.7



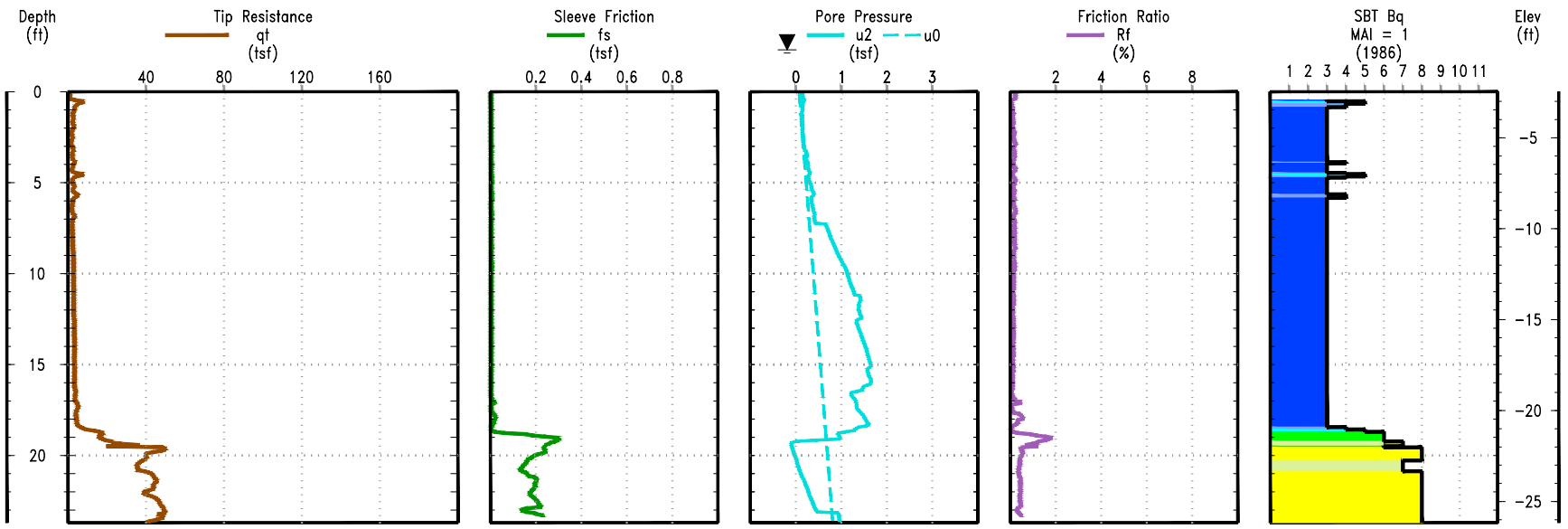
1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

Cone Penetration Test C-46	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-23**

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.250333
Longitude: -90.1636111

Elevation: -2.47
Water Depth: -2.3



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

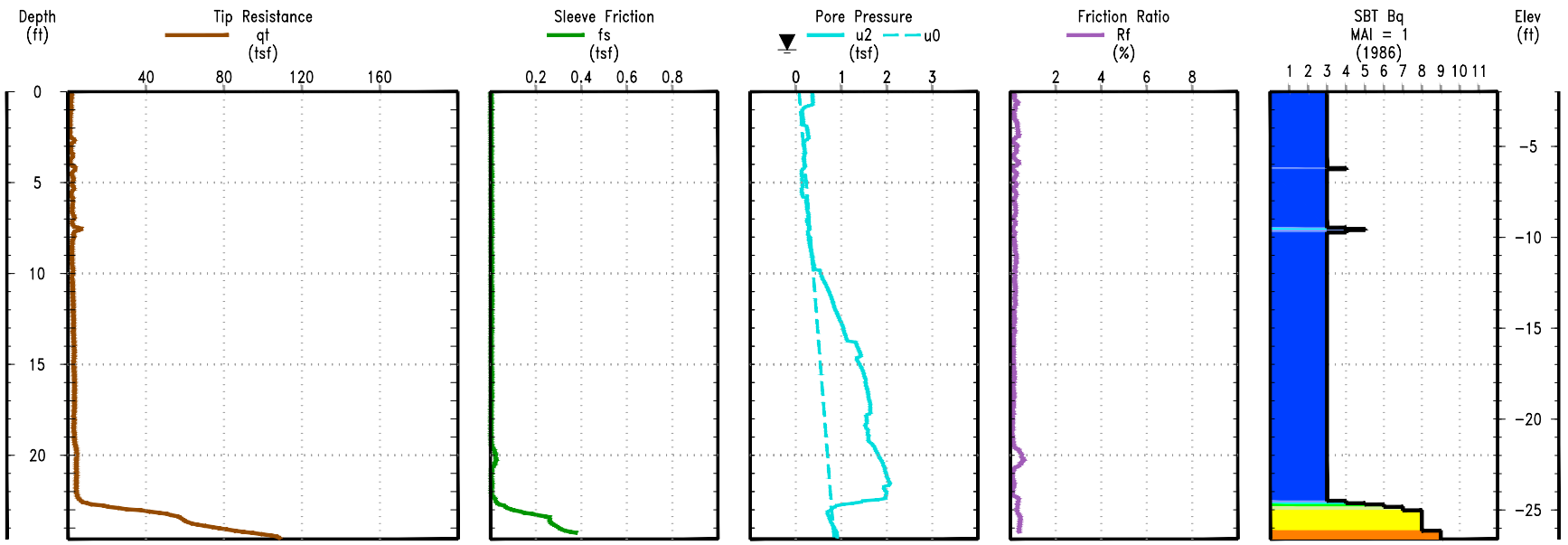
Cone Penetration Test C-47	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-24**

P:\18\18274004\CAD\01\Geotech - Final Report\1827400401_FE25_CPT 48.dwg TAB:C-48 Date Exported: 07/11/18 - 15:30 by kcook

Project #: 18274-004-01
Date: Apr. 26, 2018

Latitude: 29.248417
Longitude: -90.1633333

Elevation: -1.99
Water Depth: -2.3



1 - Sensitive, Fine Grained Soils
2 - Organic Soils, Peats
3 - Clay
4 - Clays & Silty Clays
5 - Silty Clays & Clayey Silts
6 - Clayey Silts & Sandy Silts
7 - Sandy Silts & Silty Sands
8 - Silty Sands & Sands
9 - Sands
10 - Sands & Gravelly Sands
11 - Very Stiff Fine Grained Soils*
12 - Sands & Clayey Sands*
*Overconsolidated or Cemented

Cone Penetration Test C-48	East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana	GeoEngineers	**Figure E-25**

APPENDIX F
Borrow Area Soil Boring Logs

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Water level observed at time of exploration

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

GeoEngineers

Figure F-1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
4/18/2016	4/18/2018	20	SJW / IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) / Vertical Datum	Hammer Data	Drilling Equipment
-4 NAVD88	Cathead Hammer 140 (lbs) / 30 (in) Drop	Pontoon Drill Rig

Latitude / Longitude	System Datum	Depth of water to mudline at time of exploration (ft)
29.2721 / -90.0975	Geographic NAD83 (feet)	5.0

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
5	0		24			1			CL	Dark gray clay with sand and shells	47								
			24			2				Dark gray sandy clay with shells	44					38	17		
			24			3				Dark gray sandy clay	36							67	
10	5		24			4				Dark gray very silty clay with sand and shells	40					34	15		
			24			5				Dark gray clay with sand and shells	47								
15	10		24			6			CH	Gray clay with sand lenses	70					60	41		
			24			7				Gray clay with sand lenses	60								
	15		24			8			CL	Gray clay with silt and sand lenses	46					48	26		
20			24			9			CH	Gray clay	72								
	20		18	23		10			SM	Dark gray silty sand (firm)	27							38	

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-1

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-2
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	4/18/2018	4/18/2018	20	SJW	IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) Vertical Datum	-5 NAVD88	Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Pontoon Drill Rig
Latitude Longitude	29.2676 -90.0918	System Datum	Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft)	5.0

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			CL	Gray sandy clay with shells	47					41	18		
			24			2				Gray sandy clay with shells	43								
-10	5		24			3				Gray sandy clay with shells	45					41	23		
			24			4				Gray clay with sand and shells	49								
			24			5				Gray clay with sand and shells	50					48	30		
-15	10		24			6				Gray sandy clay with shells	47								
			24			7				Gray sandy clay with shells									
-20	15		24			8				Gray very sandy clay	39					26	9		
			24			9			SP-SM	Gray sand with silt	28							11	
-25	20		18	18		10			SM	Gray silty sand (firm)	30							14	

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-4

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-3
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004 01.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
4/17/2018	4/17/2018	20	SJW / IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) / Vertical Datum	Hammer Data	Drilling Equipment
-4 NAVD88	Cathead Hammer 140 (lbs) / 30 (in) Drop	Pontoon Drill Rig

Latitude / Longitude	System Datum	Depth of water to mudline at time of exploration (ft)
29.2632 / -90.0976	Geographic NAD83 (feet)	4.3

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			CH	Gray clay with sand pockets and organic matter	51					53	33		
5			24			2				Gray clay with silt pockets and organic matter	109								
			24			3			CL	Gray clay with silt	47								
10	5		24			4				Gray silty clay with shells	41					38	19		
			24			5			CH	Gray clay with sand pockets and shells	70								
15	10		24			6				Gray clay with sand pockets and shells	75					61	40		
			24			7				Gray clay with silt lenses	62								
20	15		24			8			CL	Gray clay with silt and sand lenses	43					42	25		
			24			9			SM	Gray silty sand	28							16	
	20		24			10			CL	Gray silty clay with sand pockets	42					40	21		

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-5

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-4
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled	Start 4/18/2018	End 4/18/2018	Total Depth (ft)	20	Logged By / Checked By	SJW / IAH	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) / Vertical Datum	-5 NAVD88		Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Pontoon Drill Rig		
Latitude / Longitude	29.263 -90.0858		System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	5.5		
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
0	0		24			1			CL	Gray clay with sand and shells	55								
			24			2				Gray clay with sand and shells	49					47	27		
-10	5		24			3			CH	Gray clay with silty sand lenses	41								
			24			4			CL	Gray very silty clay with shells	44					34	15		
			24			5			CH	Gray clay with sand lenses	54								
-15	10		24			6			CL	Gray clay with silt, sand lenses and shell fragments	50					43	24		
			24			7				Gray clay with silt, sand lenses and shell fragments	53								
-20	15		24			8				Gray silty clay with sand lenses	41					38	20		
			24			9				Gray silty clay with sand lenses	33								
-25	20		24			10			SM	Gray silty sand	32					NP	NP		

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-7

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-5
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
4/17/2018	4/17/2018	20	SJW / IAH	Specialized Environmental Resources, LLC	Wet Rotarty

Surface Elevation (ft) / Vertical Datum	Hammer Data	Drilling Equipment
-4 NAVD88	Cathead Hammer 140 (lbs) / 30 (in) Drop	Pontoon Drill Rig

Latitude / Longitude	System Datum	Depth of water to mudline at time of exploration (ft)
29.2587 / -90.0919	Geographic NAD83 (feet)	5.0

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
5	0		24			1			CH	Gray clay with sand lenses and shell fragments	55					50	28		
			24			2				Gray clay	53								
			24			3				Gray clay with shell fragments and a shell layer	63					52	34		
10	5		24			4				Gray clay with sand lenses	67								
			24			5				Gray clay	68					65	45		
15	10		24			6				Gray clay	69								
			24			7			CL	Gray silty clay with sand	40					37	19		
	15		24			8				Gray very sandy clay with silt	30								
20			24			9				Gray very sandy clay with silt	35					28	11		
	20		24			10				Gray clay with silt, sand and shell fragments	37								

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-9

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-6
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	4/17/2018	4/17/2018	20	SJW	IAH	Specialized Environmental Resources, LLC	Wet Rotarty

Surface Elevation (ft) Vertical Datum	-5 NAVD88	Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Pontoon Drill Rig
Latitude Longitude	29.2586 -90.0804	System Datum	Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft)	5.0

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			CL	Gray clay with silt and shells	49								
			24			2			CH	Gray clay	94					105	77		
-10	5		24			3				Gray clay with silty sand lenses	76								
			24			4				Gray clay with silty sand lenses	71					60	38		
			24			5				Gray clay with silty sand lenses	65								
-15	10		24			6				Gray clay with silty sand lenses	68					57	37		
			24			7				Gray clay with silty sand lenses	47								
-20	15		24			8				Gray clay with silty sand lenses	58								
			24			9			CL	Gray clay with silt and silty sand lenses	45					46	29		
-25	20		24			10				Gray clay with silt and silty sand lenses	42								

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-11

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-7
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004 01.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	4/17/2018	4/17/2018	20	SJW	IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) Vertical Datum	-5 NAVD88	Hammer Data	Cathead Hammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Pontoon Drill Rig
Latitude Longitude	29.2542 -90.0977	System Datum	Geographic NAD83 (feet)	Depth of water to mudline at time of exploration (ft)	5.0

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
	0		24			1			CH	Gray clay with organic matter and shells	71					66	44		
			24			2				Gray clay with shells	61								
-10	5		24			3			CL	Gray silty clay with silty sand pockets	45					40	23		
			24			4			CH	Gray clay with silty sand pockets	45								
			24			5			CL-ML	Gray clayey silt with sand and shells	30					24	7		
-15	10		24			6			CH	Gray clay with silt lenses	51								
			24			7				Gray clay with sand pockets	41								
-20	15		24			8			CL	Gray clay with silt and silty sand lenses	52					45	23		
			24			9				Gray sandy clay with shells	35								
-25	20		24			10			SM	Gray silty sand	28					NP	NP		

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-12

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-8
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
4/17/2018	4/17/2018	20	SJW / IAH	Specialized Environmental Resources, LLC	Wet Rotary

Surface Elevation (ft) / Vertical Datum	Hammer Data	Drilling Equipment
-4 NAVD88	Cathead Hammer 140 (lbs) / 30 (in) Drop	Pontoon Drill Rig

Latitude / Longitude	System Datum	Depth of water to mudline at time of exploration (ft)
29.2544 / -90.0862	Geographic NAD83 (feet)	5.0

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA: Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
5	0		24			1			CH	Dark gray clay with sand lenses and shells	68								
			24			2			CL	Gray silty clay	48					39	17		
			24			3			CH	Gray clay	69								
10	5		24			4				Gray clay	70								
			24			5			CL	Gray clay with sand and shell fragments	48					44	22		
15	10		24			6			CH	Gray clay	74								
			24			7			CL	Gray clay with sand and shells	47					45	27		
20	15		24			8			SC	Gray clayey sand	33							34	
			24			9				Gray clayey sand	37					28	6		
	20		24			10			SP-SM	Gray sand with silt	25							9	

Note: See Figure F-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on GPS (Rec), Vertical approximated based on DEM
*Indicates a remold was used for strength testing.

Log of Boring B-14

GeoEngineers

Project: East Leeville Marsh Creation and Nourishment (BA-194)
Project Location: Lafourche Parish, Louisiana
Project Number: 18274-004-01

Figure F-9
Sheet 1 of 1

Date:7/3/18 Path:P:\18\18274004\GINT\18274004GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_LAB_MUDLINE

APPENDIX G
Borrow Area Soil Boring Laboratory Testing Results

APPENDIX G
BORROW AREA SOIL BORING LABORATORY TESTING RESULTS

This appendix provides additional information regarding the laboratory testing completed on soil boring samples obtained from the borrow area for the East Leeville Marsh Creation and Nourishment (BA-194) project located in Lafourche Parish, Louisiana.

General

Soil samples obtained from the explorations were transported to our soil mechanics laboratory in Baton Rouge, Louisiana, and examined to confirm or modify field classifications. Representative soil samples were selected for laboratory testing consisting of moisture content determinations, organic content determinations, Atterberg Limits tests, specific gravity tests, sieve analyses, settling column tests, and/or low-stress consolidation tests. The laboratory testing procedures are discussed in more detail below.

Moisture Content

Moisture content tests were completed for representative samples in general accordance with ASTM D2216. The results of these tests are presented on the logs at the respective sample depths.

Organic Content

Organic content tests were completed for representative samples in general accordance with ASTM D2974. The results of these tests are presented on the logs at the respective sample depths.

Atterberg Limits

Atterberg Limits tests were performed on selected fine-grained soil samples in general accordance with ASTM D4318. The tests were used to classify the soil as well as to evaluate its index properties. The results of the Atterberg Limits testing are shown on the logs at the respective sample depths.

Specific Gravity

Specific gravity tests were performed on selected samples in general accordance with ASTM D854. The results of these tests are presented in the lab summary tables.

Grain Size Analysis

Hydrometer and sieve analyses were performed on selected samples in general accordance with ASTM D422, ASTM D1140, ASTM D6913, and ASTM D7928. The results of these analyses were plotted and classified in general accordance with the Unified Soil Classification System (USCS) and are included with this appendix. The percentage passing the U.S. No. 200 sieve is shown on the boring logs at the respective sample depths.

Composite Samples

Composite samples were prepared by mixing equal portions, by volume, from each two-foot sample interval for each individual boring to the approximate depth of dredging of 16 feet; the bottom four feet of each soil boring was not included in the composite mix. A suite of tests including moisture content, Atterberg limits, and/or grain size distribution was performed on select individual composite samples. Additional composite

samples were mixed using multiple borings. Laboratory testing on the multi-boring composite samples included moisture content, Atterberg limits, grain size distribution, organic content, specific gravity, settling column tests, and/or low stress consolidation tests. The results of these test are provided in the composite lab summary tables.

The multi-boring composite samples were prepared by combining equal volumes of each individual soil boring composite sample as follows:

- Composite No. 1: Borings B-1, B-4, B-5;
- Composite No. 2: Borings B-5, B-9, B-12;
- Composite No. 3: Borings B-7, B-11, B-14; and
- Composite No. 4: Borings B-1, B-4, B-5, B-7, B-9, B-11, B-12, B-14.

Settling Column Test

One settling column test was performed by Ardaman & Associates, Inc. (Ardaman) on a composite sample (Composite S#4) in general accordance with the method specified in USACE Manual No. 1110-2-5027. The settling column test results are presented in the Ardaman report, which is included in this appendix.

Low Stress Consolidation Tests

Low stress consolidation tests were performed for multi-boring composite samples No. 1, No. 2, and No. 3 following the method in the U.S. Army Corps of Engineers Manual No. 1110-2-5027 (USACE, 1987) and the University of Texas Method (Pederson, 2001). To simplify sample preparation, each composite sample was diluted to a moisture content approximately three times its liquid limit to allow free flow of the soil. One-dimensional incremental loading was used to consolidate the samples, with stresses ranging from about 1 pound per square foot (psf) to 640 psf, with stress doubling between each load increment. The coefficient of consolidation was determined using the square root of time method, and hydraulic conductivity was determined at t_{90}.

The results of each low-stress consolidation test are summarized below in the tables and figures. The figures presented in this document include best-fit logarithmic trend lines with correlation equations and correlation strength indicated on the plot.

TABLE 1. DEFINITION OF SYMBOLS

Symbol	Definition
σ'v	Vertical effective stress
δ100	Deformation at t100
e0	Initial void ratio
e100	Void ratio at t100
ε100	Strain at t100
Cc	Virgin compression index
Δe(C_α)	Change in void ratio based on Secondary Compression
t90	Time for 90% consolidation

Symbol	Definition
t100	Time for 100% consolidation
Hdr	Vertical drainage distance
Cv	Coefficient of consolidation (vertical)
K	Permeability

TABLE 2. COMPOSITE NO. 1 RESULTS

σ'v (psf)	δ100 (in)	e100	ε100 (%)	Δe(C_α)	t90 (min)	Hdr (in)	Cv (ft2/day)	K (ft/day)
1.16	0.157	3.311	15.70	0.08	1296	0.457	0.0014	0.0145
2.20	0.207	3.056	20.67	0.05	4970	0.404	0.0003	0.0010
5.00	0.287	2.648	28.65	0.09	1211	0.373	0.0010	0.0023
10.00	0.364	2.254	36.36	0.08	784	0.333	0.0012	0.0017
20	0.427	1.929	42.72	0.05	380	0.300	0.0020	0.0013
30	0.468	1.723	46.75	0.03	149	0.273	0.0042	0.0016
40	0.497	1.573	49.68	0.01	324	0.257	0.0017	0.0006
80	0.550	1.300	55.01	0.01	174	0.237	0.0027	0.0005
160	0.593	1.079	59.35	0.01	121	0.212	0.0031	0.0002
320	0.626	0.911	62.62	0.01	62	0.193	0.0051	0.0002
640	0.658	0.751	65.76	0.01	36	0.177	0.0161	0.0003

Note: e_0 = 4.113 and C_c = 0.976

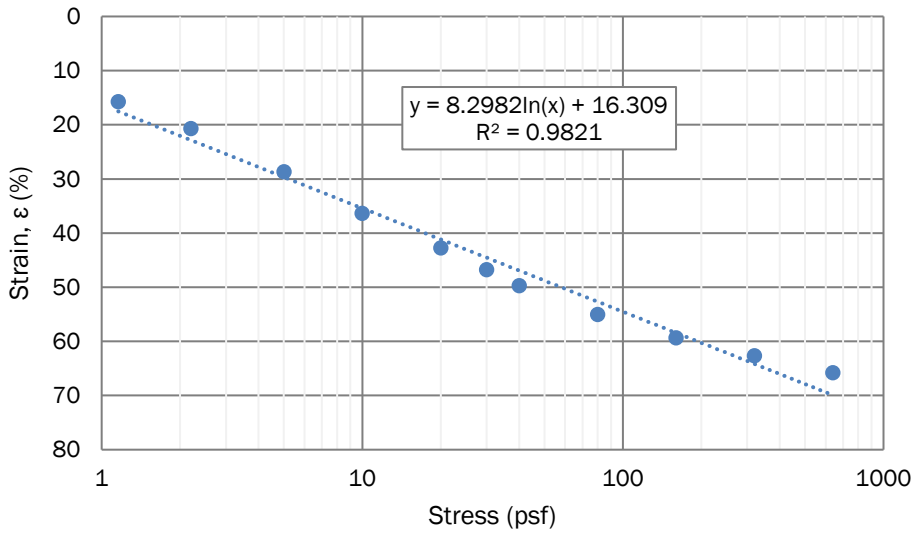


Figure 1a. Composite No. 1 Axial Strain vs. Stress

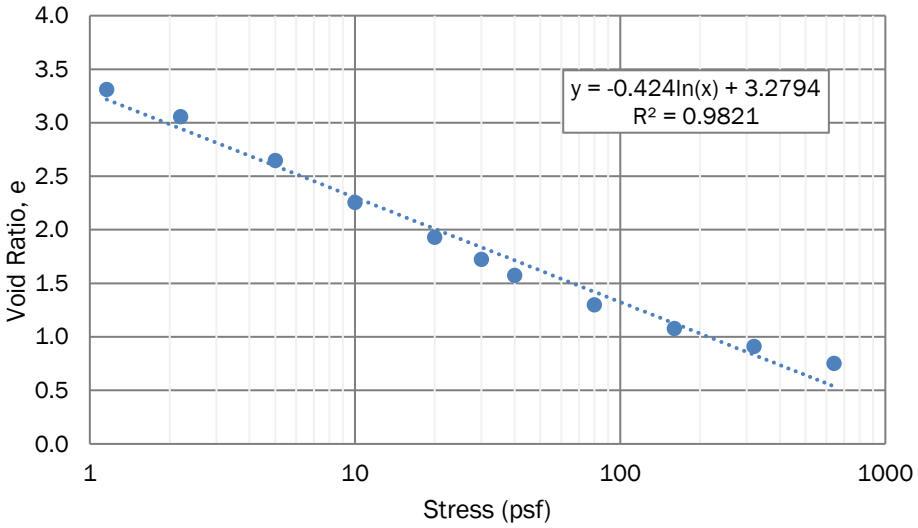


Figure 1b. Composite No. 1 Void Ratio vs. Stress

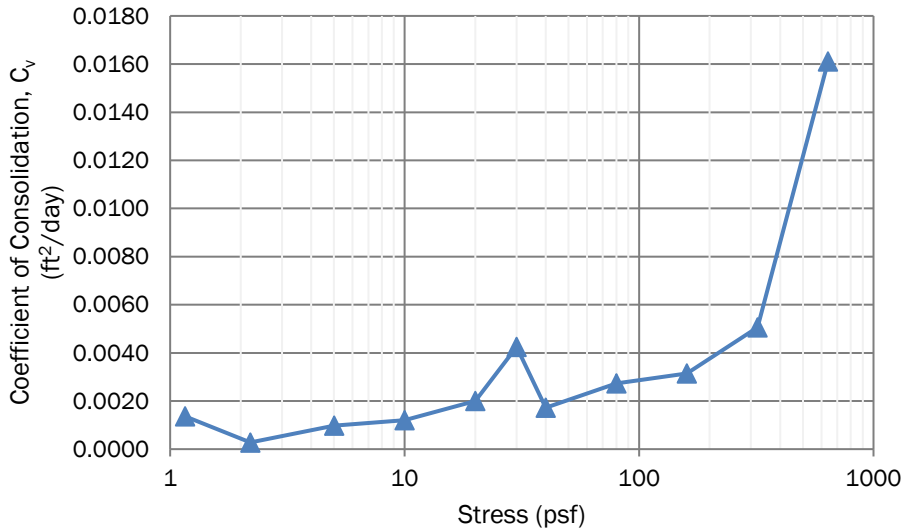


Figure 1c. Composite No. 1 Coefficient of Consolidation vs. Stress

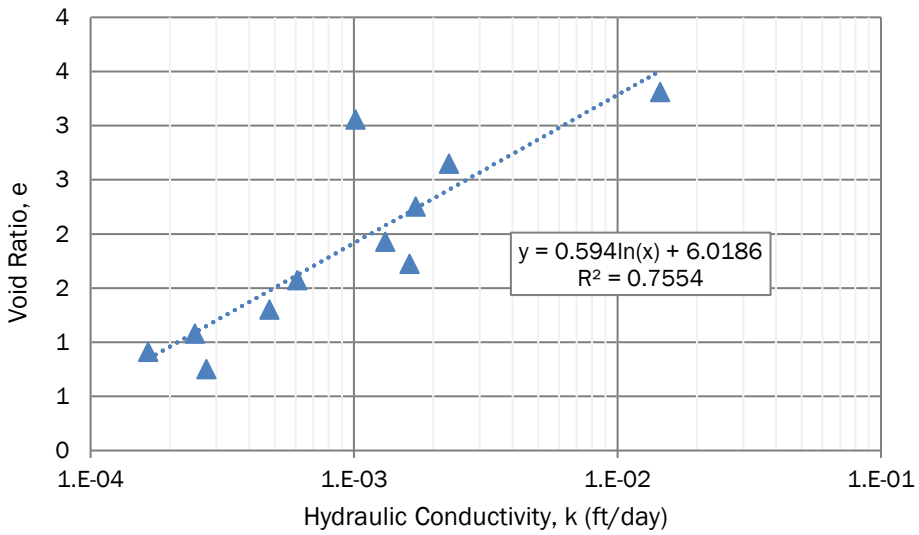


Figure 1d. Composite No. 1 Void Ratio vs. Hydraulic Conductivity

TABLE 3. COMPOSITE NO. 2 RESULTS

σ'v (psf)	δ100 (in)	e100	ε100 (%)	Δe(C_α)	t90 (min)	Hdr (in)	Cv (ft2/day)	K (ft/day)
1.04	0.107	3.744	10.70	0.13	676	0.467	0.0027	0.0193
2.08	0.167	3.425	16.71	0.05	4134	0.424	0.0004	0.0015
5.00	0.253	2.967	25.34	0.09	888	0.392	0.0015	0.0034
10.00	0.341	2.500	34.12	0.04	666	0.347	0.0015	0.0024
20	0.407	2.151	40.69	0.05	361	0.311	0.0023	0.0015
30	0.473	1.802	47.25	0.01	829	0.268	0.0007	0.0002
40	0.482	1.750	48.24	0.01	506	0.261	0.0011	0.0001
80	0.529	1.504	52.87	0.03	199	0.245	0.0026	0.0004
160	0.571	1.277	57.15	0.02	117	0.222	0.0036	0.0003
320	0.608	1.085	60.76	0.01	72	0.203	0.0048	0.0002
640	0.641	0.906	64.13	0.01	46	0.186	0.0138	0.0002

Note: e_0 = 4.313 and C_c = 1.059

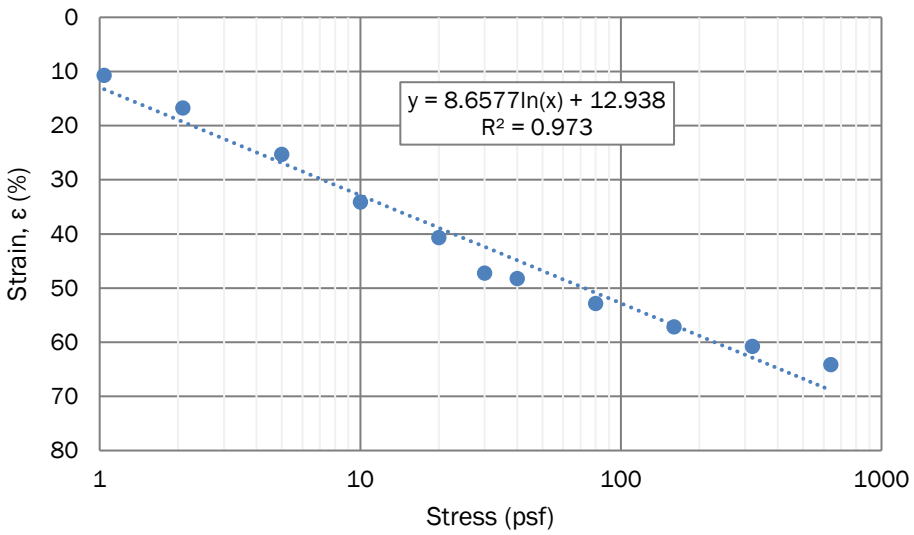


Figure 2a. Composite No. 2 Axial Strain vs. Stress

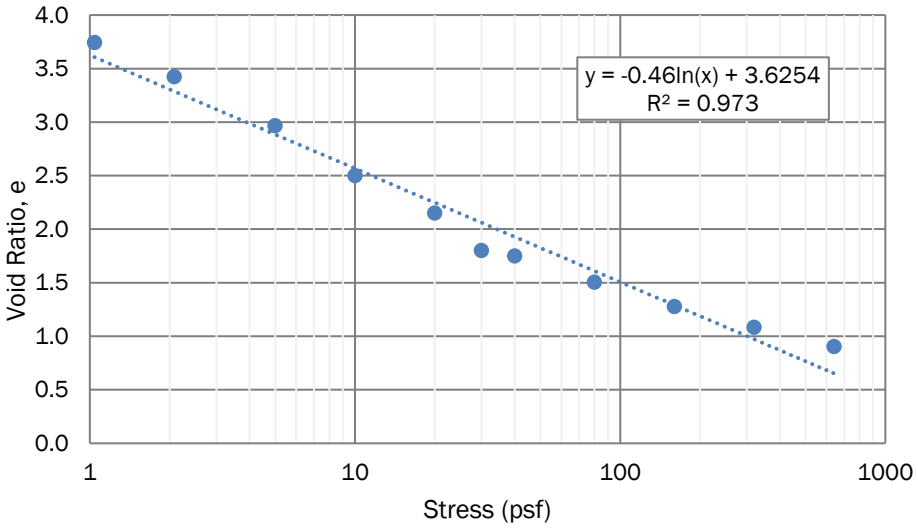


Figure 2b. Composite No. 2 Void Ratio vs. Stress

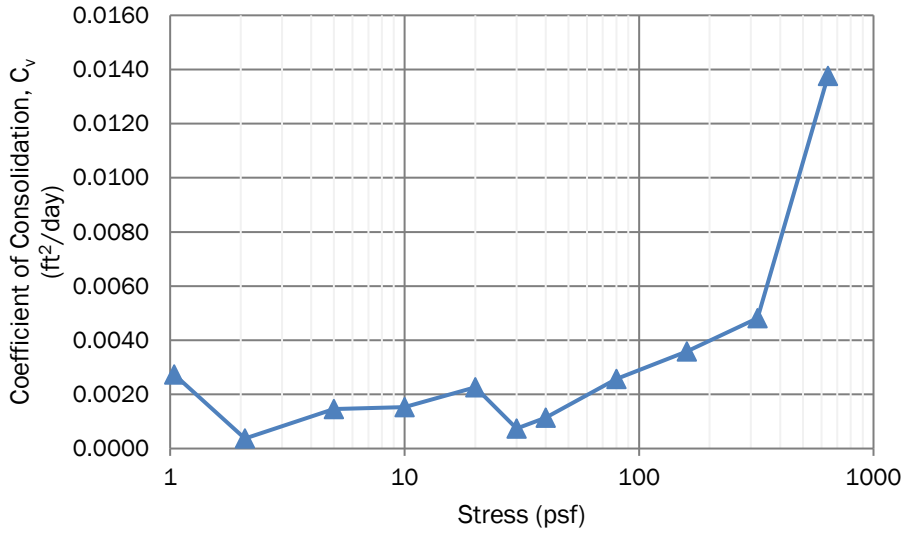


Figure 2c. Composite No. 2 Coefficient of Consolidation vs. Stress

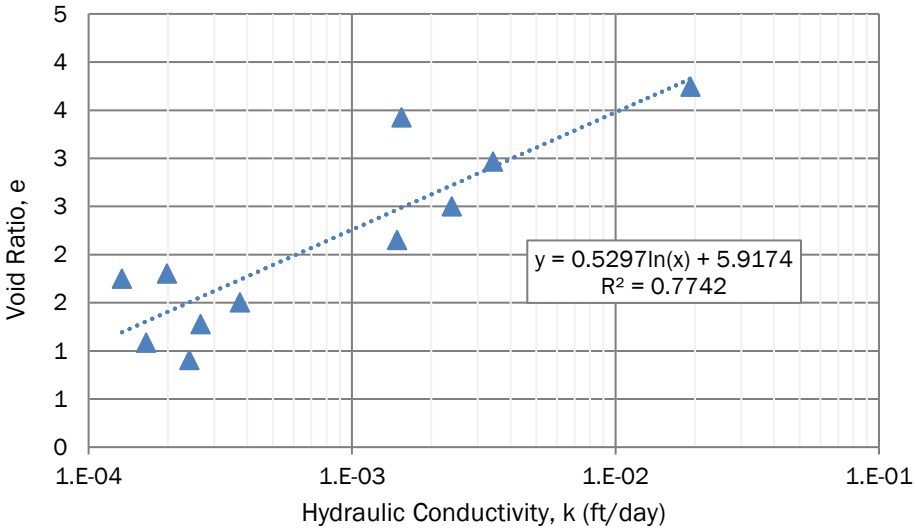


Figure 2d. Composite No. 2 Void Ratio vs. Hydraulic Conductivity

TABLE 4. COMPOSITE NO. 3 RESULTS

σ'_v (psf)	δ_{100} (in)	e_{100}	ε_{100} (%)	$\Delta e(C_\alpha)$	t_{90} (min)	H_{dr} (in)	C_v (ft²/day)	K (ft/day)
1.01	0.178	3.874	17.80	0.21	1056	0.451	0.0016	0.0199
2.18	0.300	3.149	30.02	0.15	13689	0.375	0.0001	0.0007
5.00	0.334	2.948	33.42	0.05	562	0.340	0.0017	0.0019
10.00	0.375	2.708	37.46	0.04	361	0.321	0.0024	0.0019
20	0.425	2.407	42.55	0.05	163	0.298	0.0046	0.0025
30	0.466	2.168	46.58	0.01	615	0.271	0.0010	0.0002
40	0.486	2.048	48.60	0.01	841	0.261	0.0007	0.0002
80	0.529	1.794	52.88	0.01	190	0.245	0.0027	0.0004
160	0.567	1.567	56.71	0.02	106	0.224	0.0040	0.0003
320	0.603	1.352	60.33	0.01	62	0.205	0.0057	0.0002
640	0.636	1.158	63.61	0.01	38	0.188	0.0169	0.0003

Note: e_0 = 4.929 and C_c = 0.926

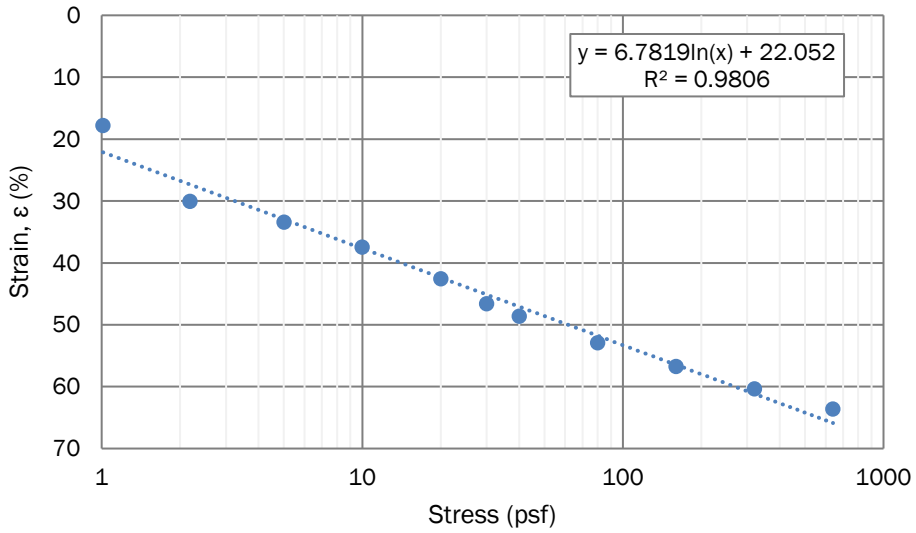


Figure 3a. Composite No. 3 Axial Strain vs. Stress

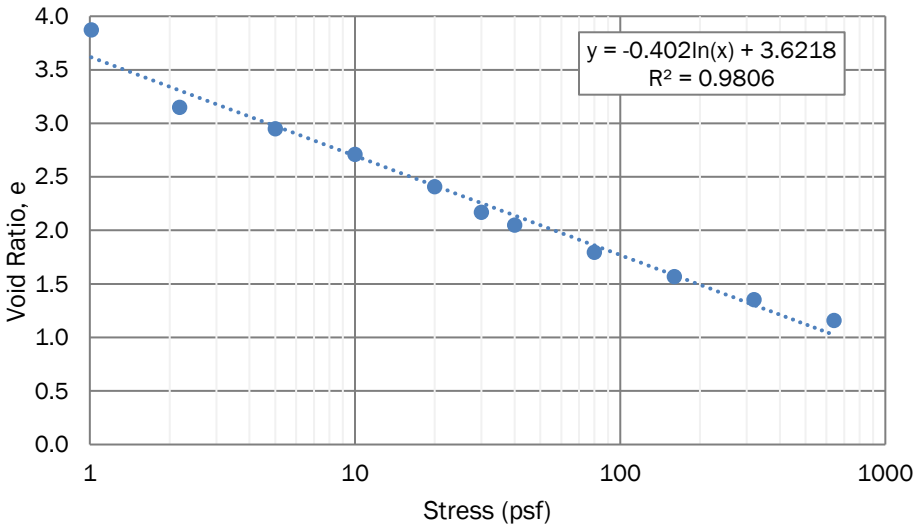


Figure 3b. Composite No. 3 Void Ratio vs. Stress

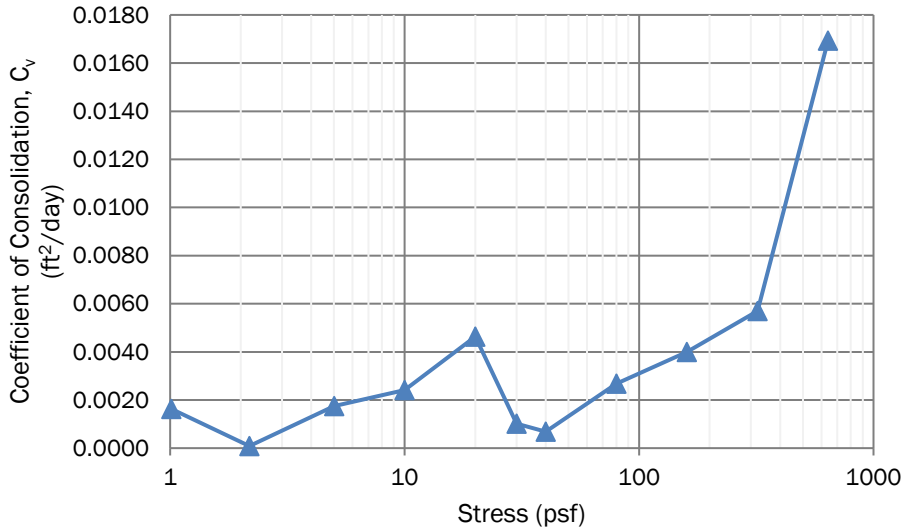


Figure 3c. Composite No. 3 Coefficient of Consolidation vs. Stress

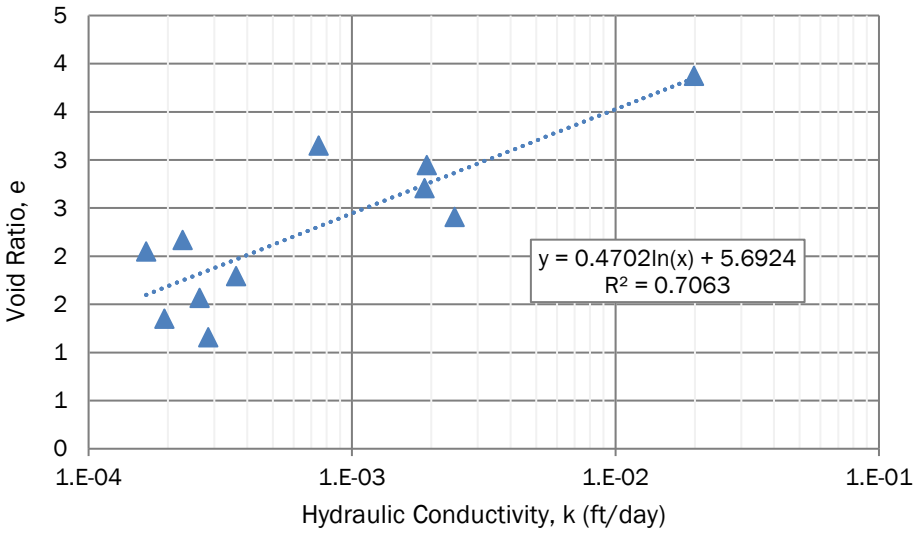


Figure 3d. Composite No. 3 Void Ratio vs. Hydraulic Conductivity

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140/D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-01	0.0 - 2.0	Dark gray clay with sand and shells (CL)	MC	47.3													
B-01	2.0 - 4.0	Dark gray sandy clay with shells (CL)	AL MC	44.3			38	21	17								
B-01	4.0 - 6.0	Dark gray sandy clay (CL)	-200	35.9						67.4							
B-01	6.0 - 8.0	Dark gray very silty clay with sand and shells (CL)	AL MC	39.6			34	19	15								
B-01	8.0 - 10.0	Dark gray clay with sand and shells (CL)	MC	47.0													
B-01	10.0 - 12.0	Gray clay with sand lenses (CH)	AL MC	70.0			60	19	41								
B-01	12.0 - 14.0	Gray clay with sand lenses (CH)	MC	59.6													
B-01	14.0 - 16.0	Gray clay with silt and sand lenses (CL)	AL MC	45.7			48	22	26								
B-01	16.0 - 18.0	Gray clay (CH)	MC	72.4													
B-01	18.5 - 20.0	Dark gray silty sand (SM)	-200	27.1						38.3							

Disclaimer: The results presented relate only to those samples tested.
Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Slickensided = SLS | Vertical Shear = VS Bulge = B | Angle Shear = AS Crumble = C

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Technical Responsibility: Karen Allen

Title: QAM

Date: 7/5/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure G-1

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-04	0.0 - 2.0	Gray sandy clay with shells (CL)	AL MC	46.8			41	23	18								
B-04	2.0 - 4.0	Gray sandy clay with shells (CL)	MC	42.7													
B-04	4.0 - 6.0	Gray sandy clay with shells (CL)	AL MC	45.1			41	18	23								
B-04	6.0 - 8.0	Gray clay with sand and shells (CL)	MC	48.7													
B-04	8.0 - 10.0	Gray clay with sand and shells (CL)	AL MC	50.1			48	18	30								
B-04	10.0 - 12.0	Gray sandy clay with shells (CL)	MC	47.2													
B-04	14.0 - 16.0	Gray very sandy clay (CL)	AL MC	38.6			26	17	9								
B-04	16.0 - 18.0	Gray sand with silt (SP-SM)	-200	27.7						11.1							
B-04	18.5 - 20.0	Gray silty sand (SM)	-200	30.2						13.7							

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Figure G-2

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-05	0.0 - 2.0	Gray clay with sand pockets and organic matter (CH)	AL MC	51.3			53	20	33								
B-05	2.0 - 4.0	Gray clay with silt pockets and organic matter (CH)	MC	109.4													
B-05	4.0 - 6.0	Gray clay with silt (CL)	MC	47.3													
B-05	6.0 - 8.0	Gray silty clay with shells (CL)	AL MC	41.4			38	19	19								
B-05	8.0 - 10.0	Gray clay with sand pockets and shells (CH)	MC	70.0													
B-05	10.0 - 12.0	Gray clay with sand pockets and shells (CH)	AL MC	74.5			61	21	40								
B-05	12.0 - 14.0	Gray clay with silt lenses (CH)	MC	62.1													
B-05	14.0 - 16.0	Gray clay with silt and sand lenses (CL)	AL MC	42.6			42	17	25								
B-05	16.0 - 18.0	Gray silty sand (SM)	-200	27.9						15.9							
B-05	18.0 - 20.0	Gray silty clay with sand pockets (CL)	AL MC	41.6			40	19	21								

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Figure G-3

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-07	0.0 - 2.0	Gray clay with sand and shells (CL)	MC	54.9													
B-07	2.0 - 4.0	Gray clay with sand and shells (CL)	AL MC	48.5			47	20	27								
B-07	4.0 - 6.0	Gray clay with silty sand lenses (CH)	MC	41.4													
B-07	6.0 - 8.0	Gray very silty clay with shells (CL)	AL MC	44.0			34	19	15								
B-07	8.0 - 10.0	Gray clay with sand lenses (CH)	MC	54.3													
B-07	10.0 - 12.0	Gray clay with silt, sand lenses and shell fragments (CL)	AL MC	50.1			43	19	24								
B-07	12.0 - 14.0	Gray clay with silt, sand lenses and shell fragments (CL)	MC	53.0													
B-07	14.0 - 16.0	Gray silty clay with sand lenses (CL)	AL MC	41.1			38	18	20								
B-07	16.0 - 18.0	Gray silty clay with sand lenses (CL)	MC	32.5													
B-07	18.0 - 20.0	Gray silty sand (SM)	AL MC	31.5			NP	NP	NP								

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Figure G-4

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-09	0.0 - 2.0	Gray clay with sand lenses and shell fragments (CH)	AL MC	54.8			50	22	28								
B-09	2.0 - 4.0	Gray clay (CH)	MC	53.0													
B-09	4.0 - 6.0	Gray clay with shell fragments and a shell layer (CH)	AL MC	62.8			52	18	34								
B-09	6.0 - 8.0	Gray clay with sand lenses (CH)	MC	67.3													
B-09	8.0 - 10.0	Gray clay (CH)	AL MC	68.4			65	20	45								
B-09	10.0 - 12.0	Gray clay (CH)	MC	69.1													
B-09	12.0 - 14.0	Gray silty clay with sand (CL)	AL MC	39.9			37	18	19								
B-09	14.0 - 16.0	Dark gray very sandy clay with silt (CL)	MC	30.2													
B-09	16.0 - 18.0	Gray very sandy clay with silt (CL)	AL MC	35.2			28	17	11								
B-09	18.0 - 20.0	Gray clay with silt, sand and shell fragments (CL)	MC	37.1													

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Title: QAM
Date: 7/5/18

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Figure G-5

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-11	0.0 - 2.0	Gray clay with silt and shells (CL)	MC	48.9													
B-11	2.0 - 4.0	Gray clay (CH)	AL MC	94.2			105	28	77								
B-11	4.0 - 6.0	Gray clay with silty sand lenses (CH)	MC	76.0													
B-11	6.0 - 8.0	Gray clay with silty sand lenses (CH)	AL MC	70.9			60	22	38								
B-11	8.0 - 10.0	Gray clay with silty sand lenses (CH)	MC	65.0													
B-11	10.0 - 12.0	Gray clay with silty sand lenses (CH)	AL MC	68.3			57	20	37								
B-11	12.0 - 14.0	Gray clay with silty sand lenses (CH)	MC	47.0													
B-11	14.0 - 16.0	Gray clay with silty sand lenses (CH)	MC	57.6													
B-11	16.0 - 18.0	Gray clay with silt and silty sand lenses (CL)	AL MC	44.5			46	17	29								
B-11	18.0 - 20.0	Gray clay with silt and silty sand lenses (CL)	MC	42.2													

Disclaimer: The results presented relate only to those samples tested.
Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Slickensided = SLS | Vertical Shear = VS Bulge = B | Angle Shear = AS Crumble = C

AASHTO ACCREDITED

Technical Responsibility: Karen Allen

Title: QAM

Date: 7/5/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure G-6

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-12	0.0 - 2.0	Gray clay with organic matter and shells (CH)	AL MC	70.9			66	22	44								
B-12	2.0 - 4.0	Gray clay with shells (CH)	MC	60.6													
B-12	4.0 - 6.0	Gray silty clay with silty sand pockets (CL)	AL MC	44.5			40	17	23								
B-12	6.0 - 8.0	Gray clay with silty sand pockets (CH)	MC	44.9													
B-12	8.0 - 10.0	Gray clayey silt with sand and shells (CL-ML)	AL MC	29.8			24	17	7								
B-12	10.0 - 12.0	Gray clay with silt lenses (CH)	MC	51.3													
B-12	12.0 - 14.0	Gray clay with sand pockets (CH)	MC	41.0													
B-12	14.0 - 16.0	Gray clay with silt and silty sand lenses (CL)	AL MC	51.5			45	22	23								
B-12	16.0 - 18.0	Gray sandy clay with shells (CL)	MC	35.1													
B-12	18.0 - 20.0	Gray silty sand (SM)	AL MC	28.4			NP	NP	NP								

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Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Slickensided = SLS | Vertical Shear = VS Bulge = B | Angle Shear = AS Crumble = C

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Technical Responsibility: Karen Allen
Title: QAM
Date: 7/5/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure G-7

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF)		D4318 Atterberg Limits			D422/D1140 /D6913	D2166/D2850					D4648	Comments
					Wet	Dry	LL	PL	PI	%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	
B-14	0.0 - 2.0	Dark gray clay with sand lenses and shells (CH)	MC	68.4													
B-14	2.0 - 4.0	Gray silty clay (CL)	AL MC	48.2			39	22	17								
B-14	4.0 - 6.0	Gray clay (CH)	MC	68.9													
B-14	6.0 - 8.0	Gray clay (CH)	MC	70.1													
B-14	8.0 - 10.0	Gray clay with sand and shell fragments (CL)	AL MC	48.3			44	22	22								
B-14	10.0 - 12.0	Gray clay (CH)	MC	74.0													
B-14	12.0 - 14.0	Gray clay with sand and shells (CL)	AL MC	47.0			45	18	27								
B-14	14.0 - 16.0	Gray clayey sand (SC)	-200	33.0						34.5							
B-14	16.0 - 18.0	Gray clayey sand (SC)	AL MC	37.1			28	22	6								
B-14	18.0 - 20.0	Gray sand with silt (SP-SM)	-200	24.9						9.4							

Disclaimer: The results presented relate only to those samples tested.
Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Slickensided = SLS Vertical Shear = VS Bulge = B Angle Shear = AS Crumble = C

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Technical Responsibility: Karen Allen
Title: QAM
Date: 7/5/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure G-8

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
B-01 Composite	0.0 - 16.0	Gray silty clay with sand (CL)	AL HYD SG ORG MC	41.6			39	18	21	77.3							OC=2.36%, SG=2.668
B-04 Composite	0.0 - 16.0	Gray sandy clay (CL)	AL HYD SG ORG MC	43.6			39	18	21	66.2							OC=2.23%, SG=2.725
B-05 Composite	0.0 - 16.0	Gray clay (CH)	AL HYD SG ORG MC	61.5			53	18	35	85.5							SG=2.685, OC=3.56%
B-07 Composite	0.0 - 16.0	Gray silty clay with sand (CL)	AL HYD SG ORG MC	47.4			41	19	22	75.5							SG=2.705, OC=2.62%
B-09 Composite	0.0 - 16.0	Gray clay with sand (CL)	AL HYD SG ORG MC	51.6			46	17	29	74.8							OC=2.44%, SG=2.725
B-11 Composite	0.0 - 16.0	Gray clay (CH)	AL HYD SG ORG MC	64.3			59	20	39	87.2							SG=2.727, OC=4.23%
B-12 Composite	0.0 - 16.0	Gray clay with sand (CL)	AL HYD SG ORG MC	50.2			44	19	25	72.5							OC=2.75%, SG=2.678
B-14 Composite	0.0 - 16.0	Gray clay with sand (CL)	AL HYD SG ORG MC	56.1			49	18	31	81.7							SG=2.770, OC=2.67%

Disclaimer: The results presented relate only to those samples tested.
Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Slickensided = SLS Vertical Shear = VS Bulge = B Angle Shear = AS Crumble = C

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Technical Responsibility: Karen Allen

Title: QAM

Date: 7/10/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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Figure G-9

Soil Boring ID	Depth Interval (ft)	D2488 Visual Description	Test Type	D2216 Moisture (%)	D2166/D2850 Unit Weight (PCF) Wet	D2166/D2850 Unit Weight (PCF) Dry	D4318 Atterberg Limits LL	D4318 Atterberg Limits PL	D4318 Atterberg Limits PI	D422/D1140 /D6913 %<#200 Sieve	D2166/D2850 Shear Strength (KSF)	D2166/D2850 Remolded Strength (KSF)	D2166/D2850 Failure Strain (%)	D2166/D2850 Confining Pressure (PSI)	D2166/D2850 Failure Type	D4648 Mini Vane Shear Strength (KSF)	Comments
Composite #1	0.0 - 16.0	Gray clay with silt and sand (CL)	AL HYD SG SV ORG MC	54.7			48	21	27	79.6							OC: 2.71%, SG: 2.725
Composite #1	0.0 - 16.0		CONS	142.8	113.1	46.6											
Composite #2	0.0 - 16.0	Gray clay with silt and sand (CL)	AL HYD SG SV ORG MC	54.4			45	19	26	76.7							OC: 2.73%, SG: 2.705
Composite #2	0.0 - 16.0		CONS	152.5	81.8	32.4											
Composite #3	0.0 - 16.0	Gray clay with silt and sand (CL)	AL HYD SG ORG MC	56.5			47	20	27	79.6							OC: 2.60%, SG: 2.706
Composite #3	0.0 - 16.0		CONS	164.5	77.9	29.5											
Composite #4	0.0 - 16.0	Gray clay with silt and sand (CL)	AL HYD SG ORG MC	53.4			46	19	27	78.6							OC: 2.48%, SG: 2.728

Disclaimer: The results presented relate only to those samples tested.
Note: ASTM standard identification numbers shown above each test description.

Multiple Shear = MS Slickensided = SLS Vertical Shear = VS Bulge = B Angle Shear = AS Crumble = C

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Technical Responsibility: Karen Allen
Title: QAM
Date: 7/10/18

Summary of Lab Results
Project No.: 18274-004-01

East Leeville Marsh Creation and Nourishment (BA-194)
Lafourche Parish, Louisiana

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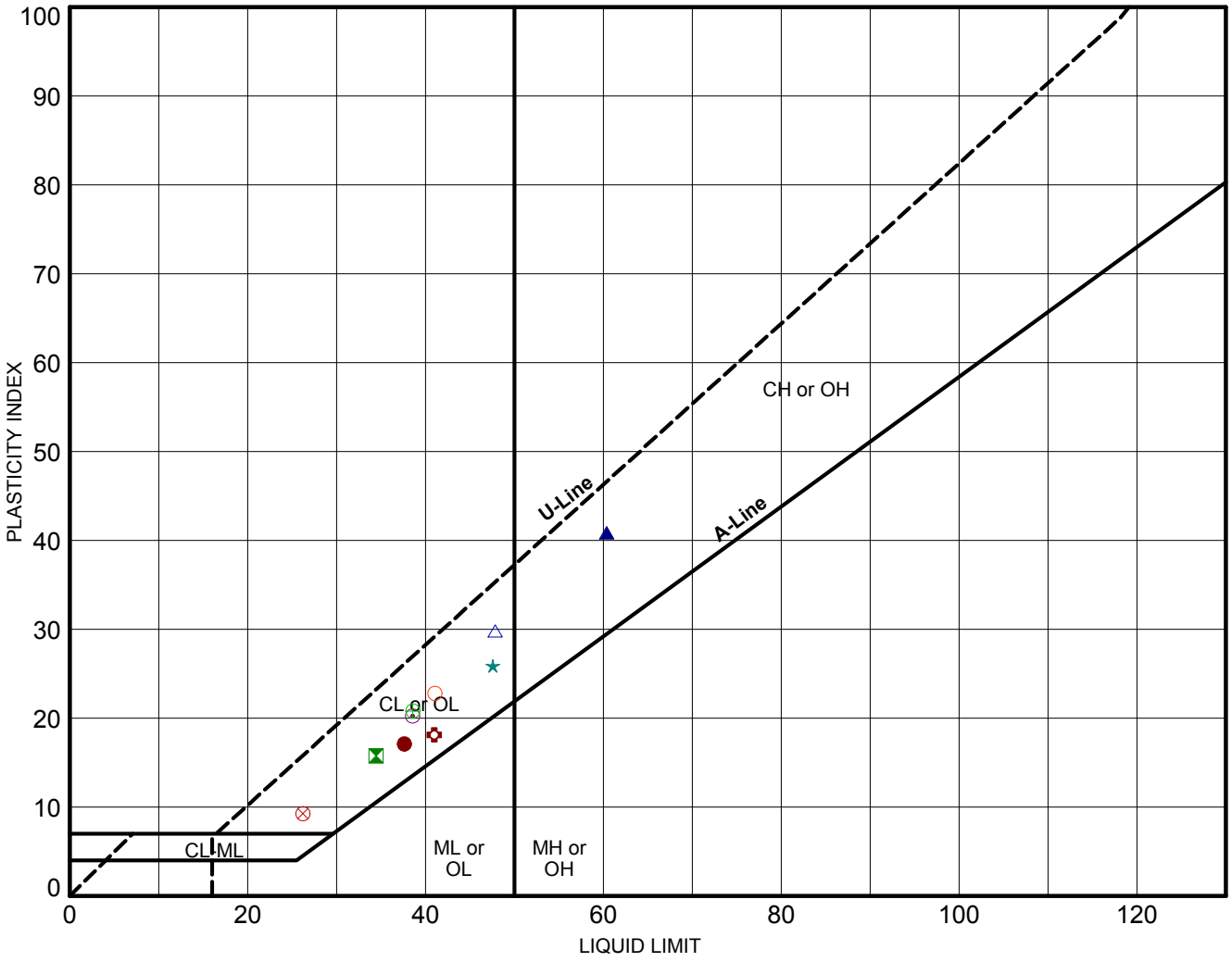
Figure G-10



Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
B-01	2.0 - 4.0	44.3	38	21	17		Dark gray sandy clay with shells (CL)
B-01	6.0 - 8.0	39.6	34	19	15		Dark gray very silty clay with sand and shells (CL)
B-01	10.0 - 12.0	70.0	60	19	41		Gray clay with sand lenses (CH)
B-01	14.0 - 16.0	45.7	48	22	26		Gray clay with silt and sand lenses (CL)
B-01 Composite	0.0 - 16.0	41.6	39	18	21	77	Gray silty clay with sand (CL)
B-04	0.0 - 2.0	46.8	41	23	18		Gray sandy clay with shells (CL)
B-04	4.0 - 6.0	45.1	41	18	23		Gray sandy clay with shells (CL)
B-04	8.0 - 10.0	50.1	48	18	30		Gray clay with sand and shells (CL)
B-04	14.0 - 16.0	38.6	26	17	9		Gray very sandy clay (CL)
B-04 Composite	0.0 - 16.0	43.6	39	18	21	66	Gray sandy clay (CL)

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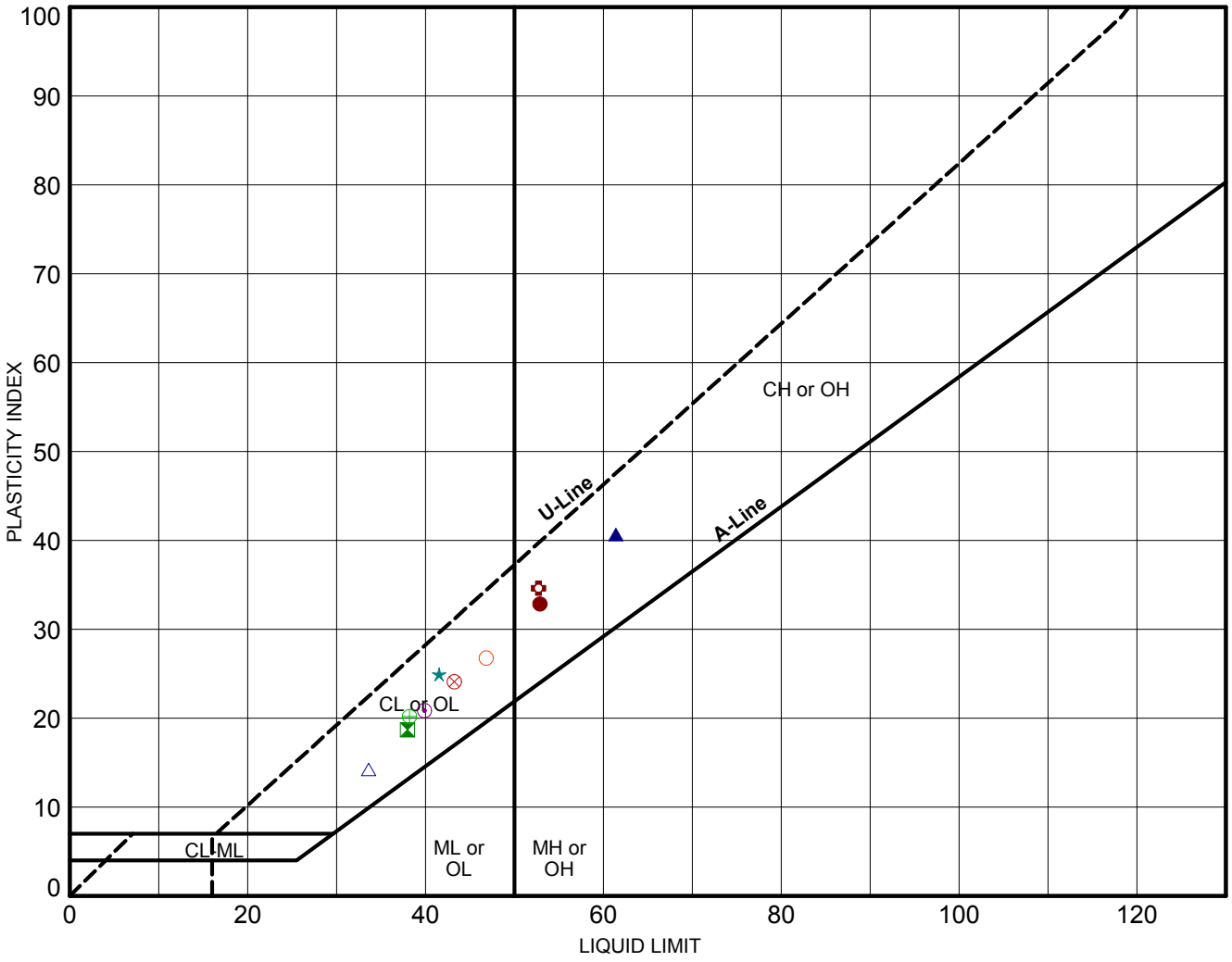
Tested By:	Date Tested:	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
CA/SLC/SRT	6/5/2018		
Reviewed By:	Date Reviewed:		
Karen Allen	6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure G-11

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 7/10/18 13:11 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



	Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
●	B-05	0.0 - 2.0	51.3	53	20	33		Gray clay with sand pockets and organic matter (CH)
⊠	B-05	6.0 - 8.0	41.4	38	19	19		Gray silty clay with shells (CL)
▲	B-05	10.0 - 12.0	74.5	61	21	40		Gray clay with sand pockets and shells (CH)
★	B-05	14.0 - 16.0	42.6	42	17	25		Gray clay with silt and sand lenses (CL)
⊙	B-05	18.0 - 20.0	41.6	40	19	21		Gray silty clay with sand pockets (CL)
✿	B-05 Composite	0.0 - 16.0	61.5	53	18	35	86	Gray clay (CH)
○	B-07	2.0 - 4.0	48.5	47	20	27		Gray clay with sand and shells (CL)
△	B-07	6.0 - 8.0	44.0	34	19	15		Gray very silty clay with shells (CL)
⊗	B-07	10.0 - 12.0	50.1	43	19	24		Gray clay with silt, sand lenses and shell fragments (CL)
⊕	B-07	14.0 - 16.0	41.1	38	18	20		Gray silty clay with sand lenses (CL)

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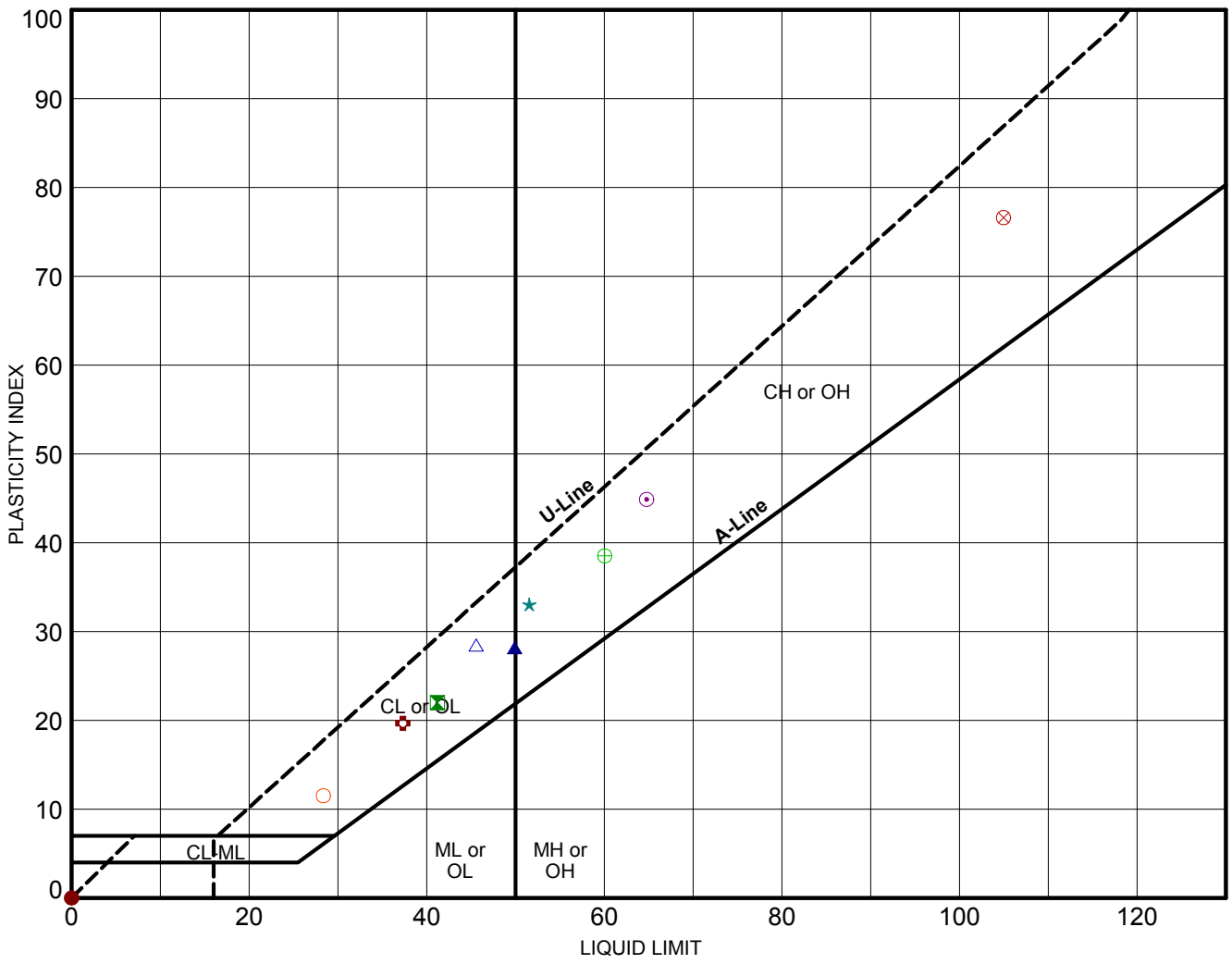
Tested By: CA/SLC/SRT	Date Tested: 6/7/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure G-12

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 7/10/18 13:11 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
B-07	18.0 - 20.0	31.5	NP	NP	NP		Gray silty sand (SM)
B-07 Composite	0.0 - 16.0	47.4	41	19	22	76	Gray silty clay with sand (CL)
B-09	0.0 - 2.0	54.8	50	22	28		Gray clay with sand lenses and shell fragments (CH)
B-09	4.0 - 6.0	62.8	52	18	34		Gray clay with shell fragments and a shell layer (CH)
B-09	8.0 - 10.0	68.4	65	20	45		Gray clay (CH)
B-09	12.0 - 14.0	39.9	37	18	19		Gray silty clay with sand (CL)
B-09	16.0 - 18.0	35.2	28	17	11		Gray very sandy clay with silt (CL)
B-09 Composite	0.0 - 16.0	51.6	46	17	29	75	Gray clay with sand (CL)
B-11	2.0 - 4.0	94.2	105	28	77		Gray clay (CH)
B-11	6.0 - 8.0	70.9	60	22	38		Gray clay with silty sand lenses (CH)

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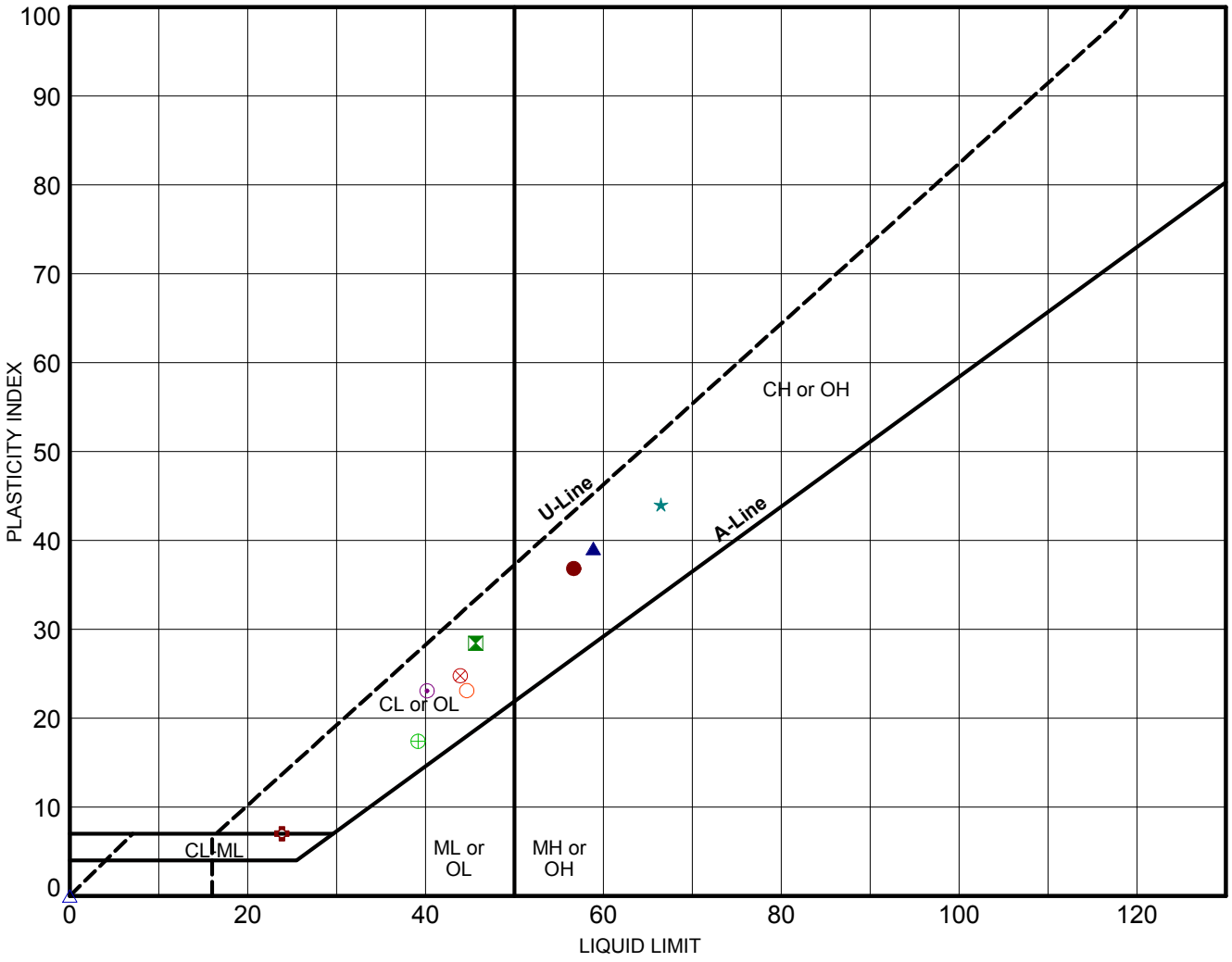
Tested By:	Date Tested:	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
HF	5/30/2018		
Reviewed By:	Date Reviewed:		
Karen Allen	6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure G-13

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 7/10/18 13:11 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



	Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
●	B-11	10.0 - 12.0	68.3	57	20	37		Gray clay with silty sand lenses (CH)
⊠	B-11	16.0 - 18.0	44.5	46	17	29		Gray clay with silt and silty sand lenses (CL)
▲	B-11 Composite	0.0 - 16.0	64.3	59	20	39	87	Gray clay (CH)
★	B-12	0.0 - 2.0	70.9	66	22	44		Gray clay with organic matter and shells (CH)
⊙	B-12	4.0 - 6.0	44.5	40	17	23		Gray silty clay with silty sand pockets (CL)
✿	B-12	8.0 - 10.0	29.8	24	17	7		Gray clayey silt with sand and shells (CL-ML)
○	B-12	14.0 - 16.0	51.5	45	22	23		Gray clay with silt and silty sand lenses (CL)
△	B-12	18.0 - 20.0	28.4	NP	NP	NP		Gray silty sand (SM)
⊗	B-12 Composite	0.0 - 16.0	50.2	44	19	25	73	Gray clay with sand (CL)
⊕	B-14	2.0 - 4.0	48.2	39	22	17		Gray silty clay (CL)

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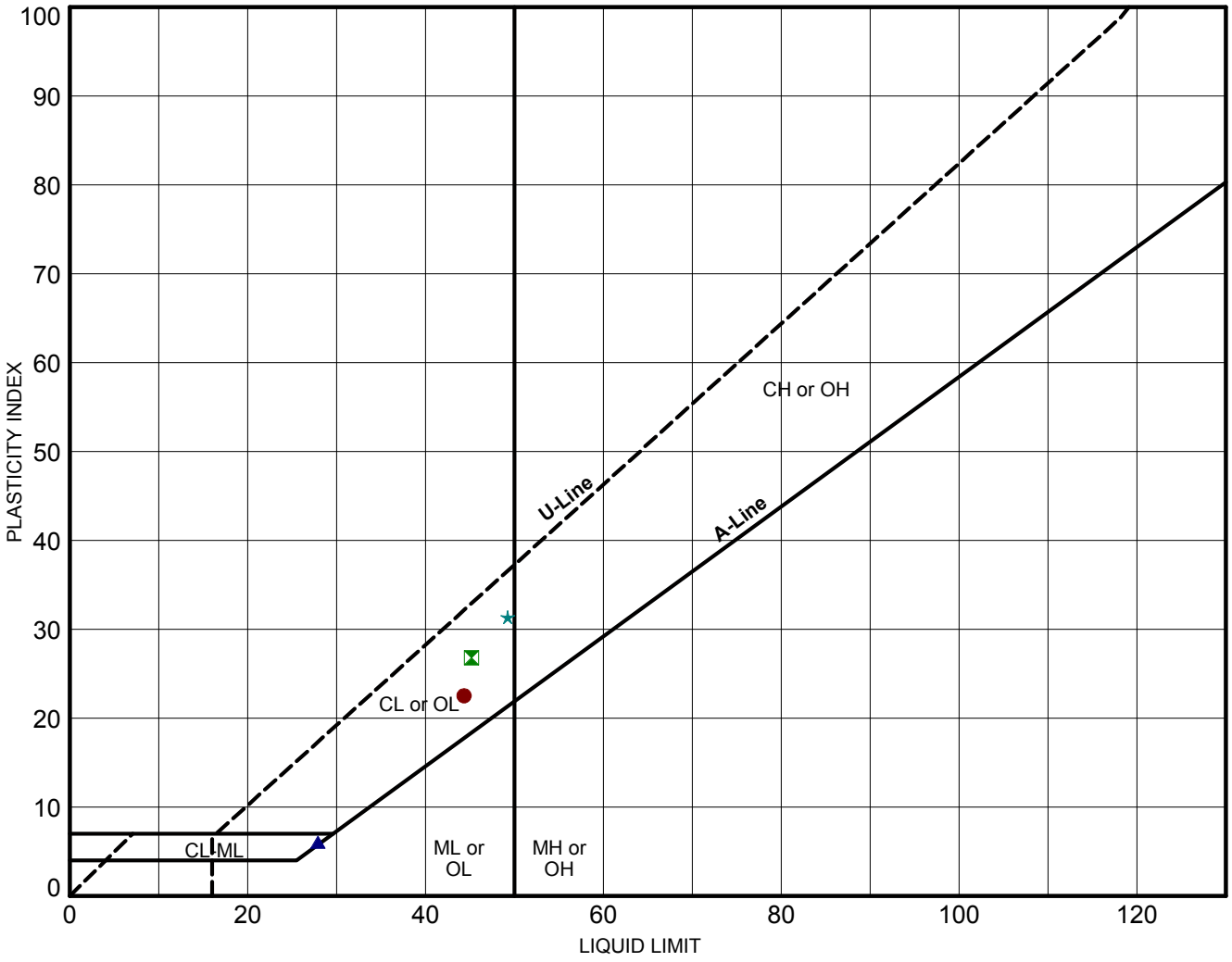
Tested By: HF/SRT	Date Tested: 6/7/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure G-14

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 7/10/18 13:11 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



	Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
●	B-14	8.0 - 10.0	48.3	44	22	22		Gray clay with sand and shell fragments (CL)
⊠	B-14	12.0 - 14.0	47.0	45	18	27		Gray clay with sand and shells (CL)
▲	B-14	16.0 - 18.0	37.1	28	22	6		Gray clayey sand (SC)
★	B-14 Composite	0.0 - 16.0	56.1	49	18	31	82	Gray clay with sand (CL)

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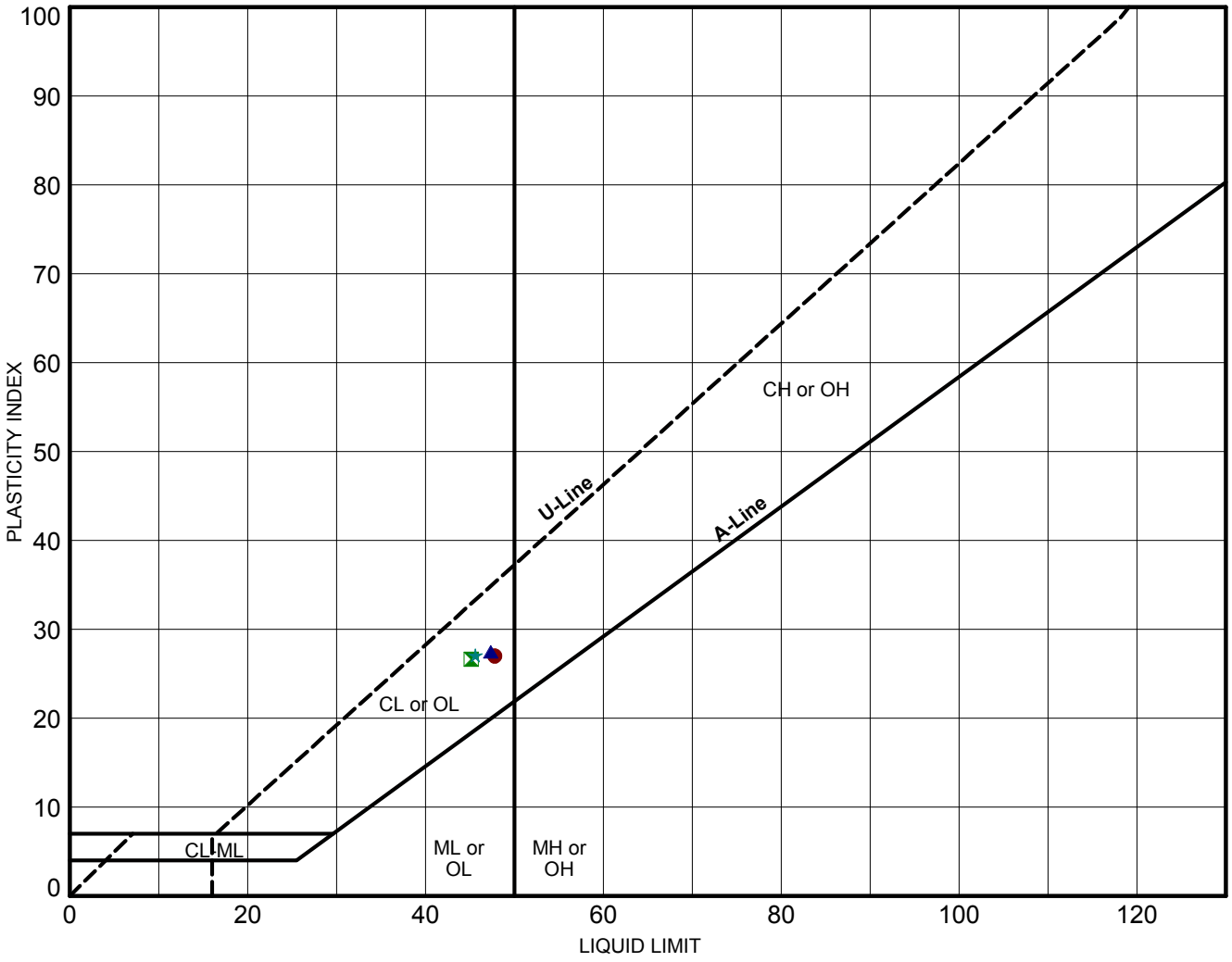
Tested By: WSW/SLC/SRT	Date Tested: 6/8/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/11/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure G-15

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 7/10/18 13:11 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ



	Soil Boring ID	Depth (ft)	WC	LL	PL	PI	Fines	Classification
●	Composite #1	0.0 - 16.0	54.7	48	21	27	80	Gray clay with silt and sand (CL)
⊠	Composite #2	0.0 - 16.0	54.4	45	19	26	77	Gray clay with silt and sand (CL)
▲	Composite #3	0.0 - 16.0	56.5	47	20	27	80	Gray clay with silt and sand (CL)
★	Composite #4	0.0 - 16.0	53.4	46	19	27	79	Gray clay with silt and sand (CL)

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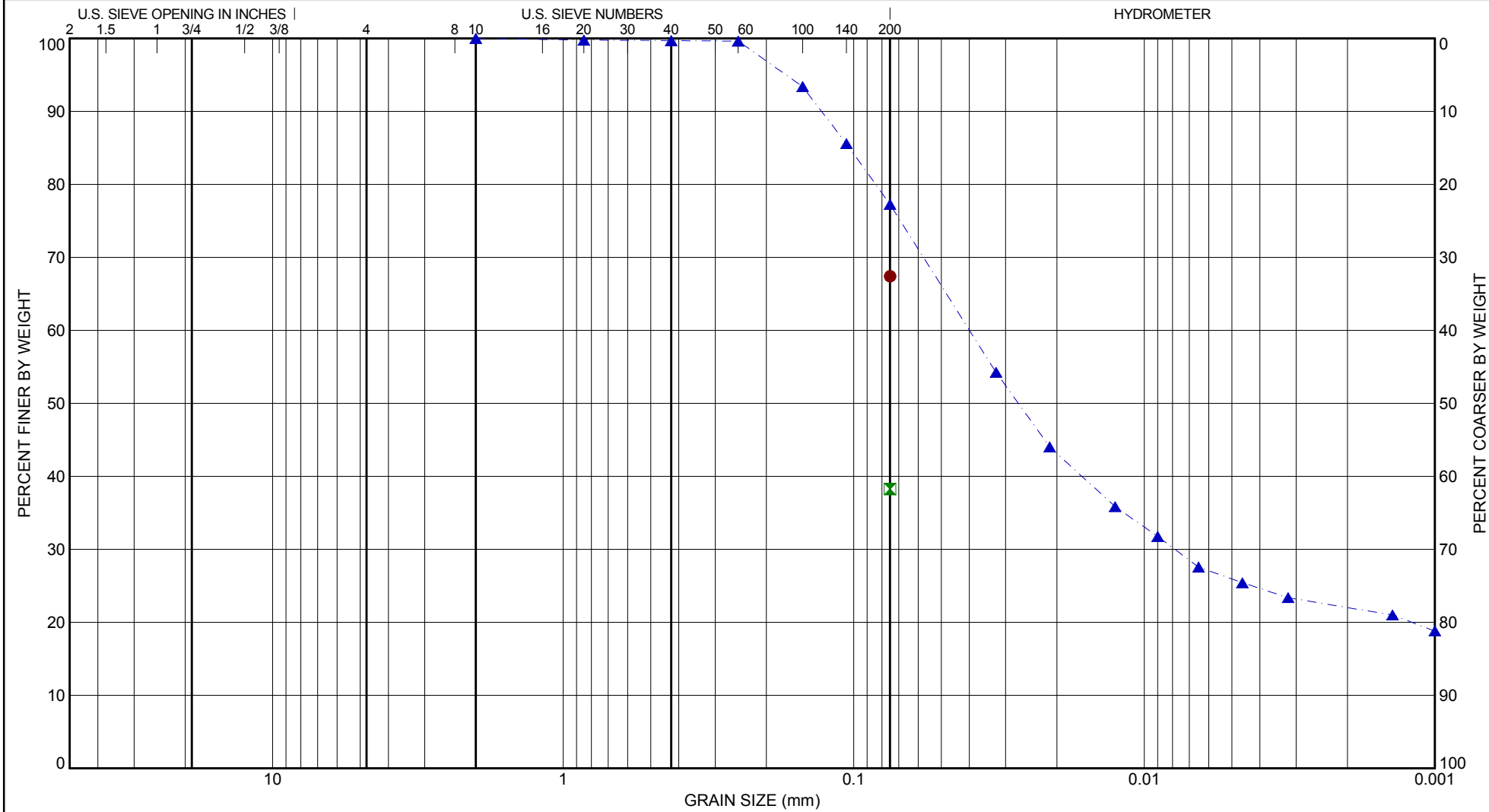
Tested By: SLC/SRT	Date Tested: 6/12/2018	**ATTERBERG LIMITS RESULTS ASTM D4318**	**East Leeville Marsh Creation and Nourishment (BA-194) Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/13/2018	**Project No.: 18274-004-01**	GeoEngineers — Figure G-16

GEI - ATT PORTRAIT - GEO TEMPLATE WITH LAB.GDT - 7/10/18 13:20 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-01	4.0	Dark gray sandy clay (CL)			67.4											
⊠ B-01	18.5	Dark gray silty sand (SM)			38.3											
▲ B-01 Composite	0.0	Gray silty clay with sand (CL)	0.0	22.7	51.3	25.9	0.129	0.04	0.027	0.008				39	18	21



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP	5/29/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
WMA	6/5/2018		Figure G-17

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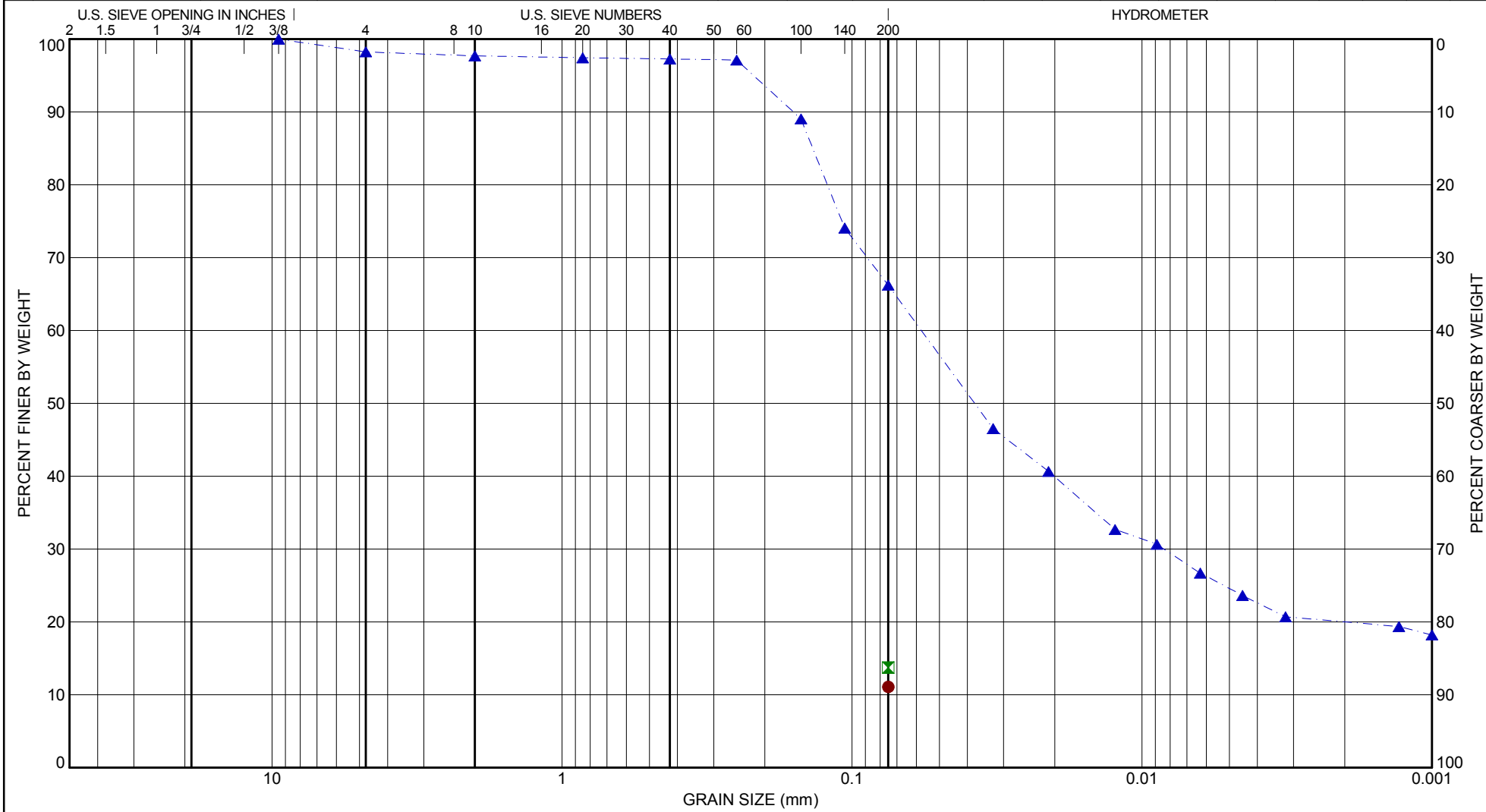
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-04	16.0	Gray sand with silt (SP-SM)			11.1											
⊠ B-04	18.5	Gray silty sand (SM)			13.7											
▲ B-04 Composite	0.0	Gray sandy clay (CL)	1.8	32.0	41.7	24.6	0.159	0.058	0.038	0.008				39	18	21



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Tested By:	Date Tested:	**GRAIN SIZE DISTRIBUTION**	**East Leeville Marsh Creation and Nourishment (BA-194)**
CLP	5/29/2018	**ASTM D422/D1140/D6913/T88**	**Lafourche Parish, Louisiana**
Reviewed By:	Date Reviewed:	**Project No.: 18274-004-01**	GeoEngineers
WMA	6/5/2018		Figure G-18

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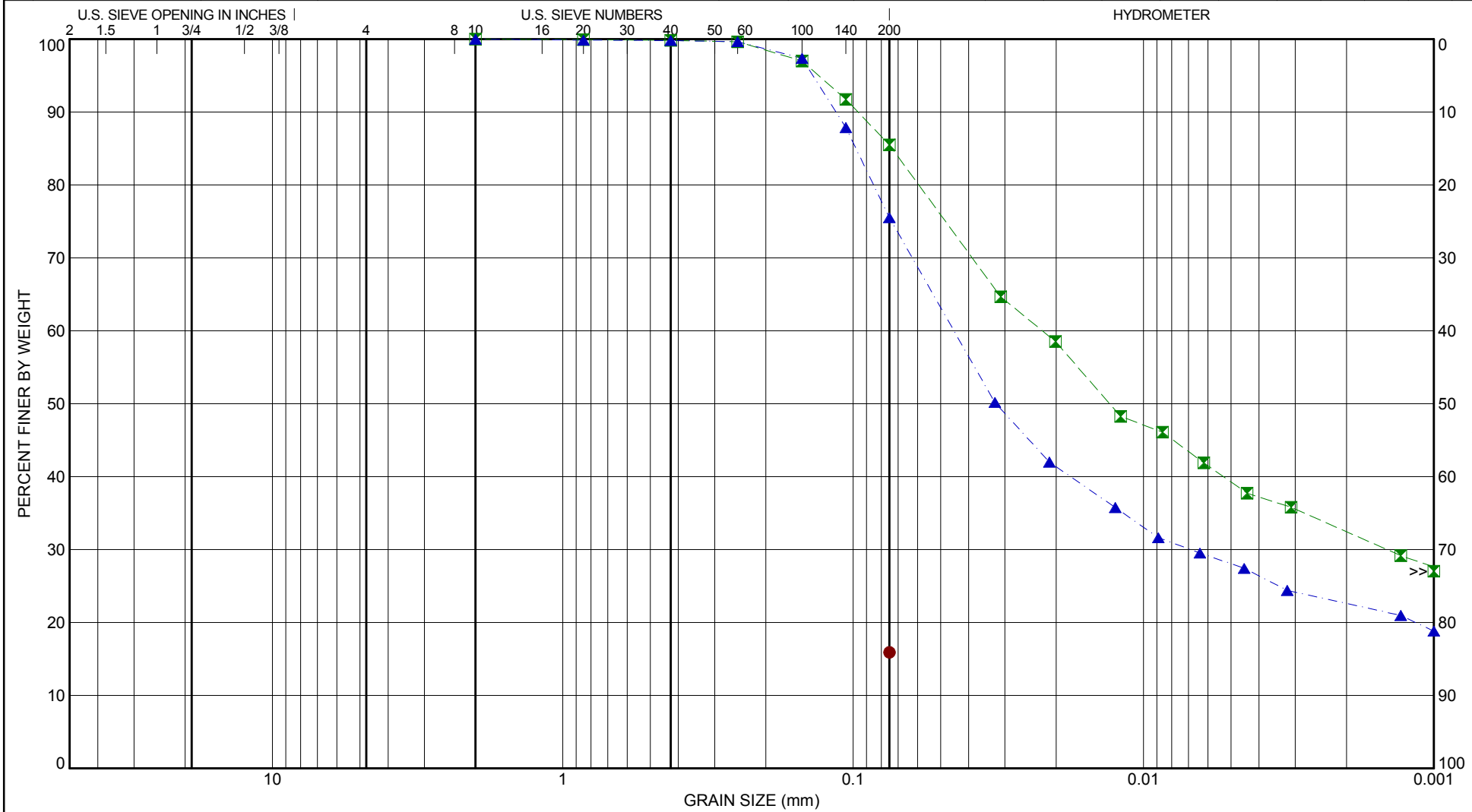
Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-05	16.0	Gray silty sand (SM)			15.9											
⊠ B-05 Composite	0.0	Gray clay (CH)	0.0	14.5	46.2	39.3	0.096	0.022	0.013	0.001				53	18	35
▲ B-07 Composite	0.0	Gray silty clay with sand (CL)	0.0	24.5	47.5	28.0	0.115	0.045	0.032	0.007				41	19	22



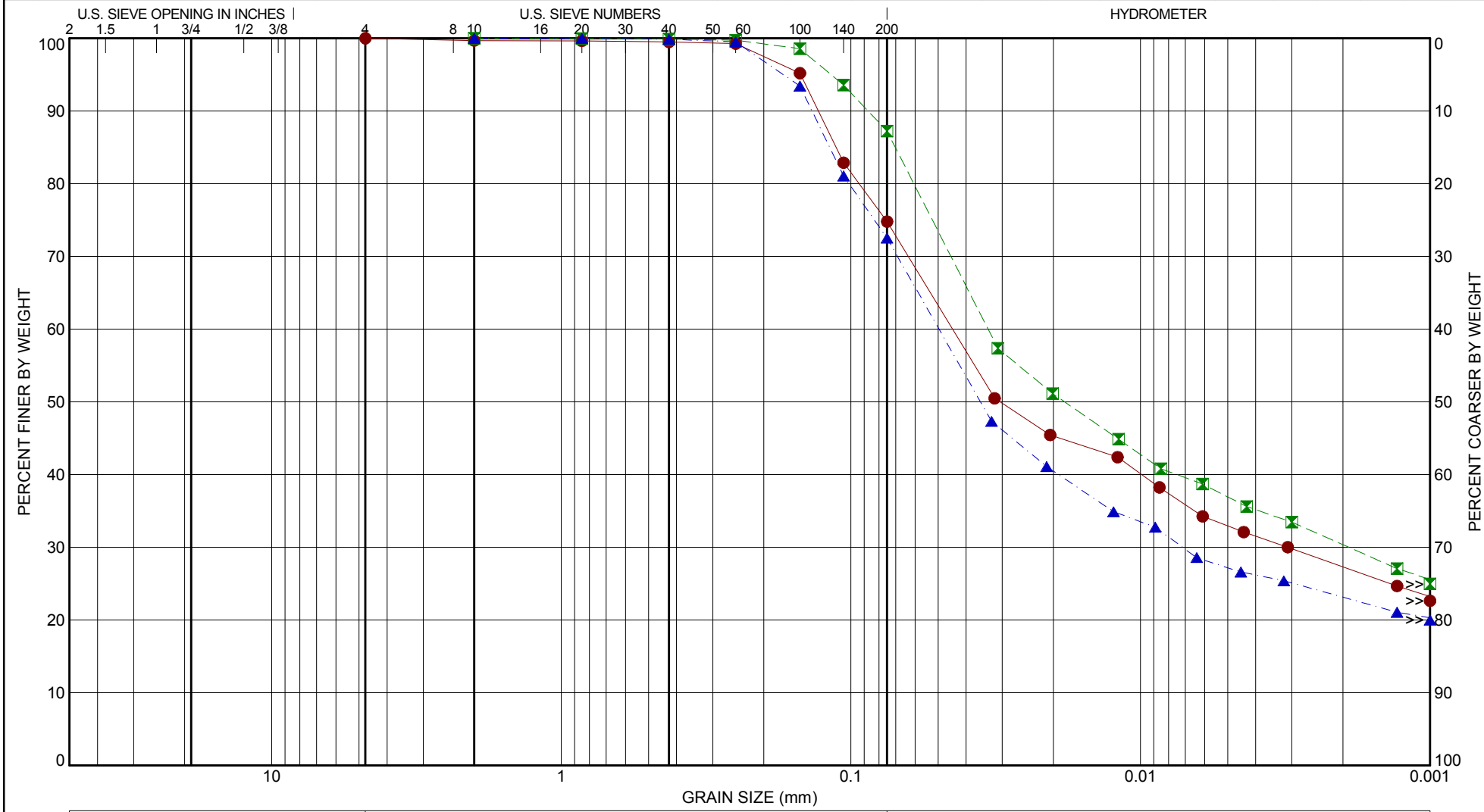
GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
HF/SRT	5/29/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
WMA	6/5/2018		Figure G-19

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-09 Composite	0.0	Gray clay with sand (CL)	0.0	25.2	41.9	32.9	0.13	0.045	0.031	0.003				46	17	29
⊠ B-11 Composite	0.0	Gray clay (CH)	0.0	12.8	50.3	36.9	0.087	0.034	0.018	0.002				59	20	39
▲ B-12 Composite	0.0	Gray clay with sand (CL)	0.0	27.5	45.3	27.2	0.136	0.05	0.036	0.007				44	19	25



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By: CLP/MGW	Date Tested: 6/10/2018	**GRAIN SIZE DISTRIBUTION** **ASTM D422/D1140/D6913/T88** **Project No.: 18274-004-01**	**East Leeville Marsh Creation and Nourishment (BA-194)** **Lafourche Parish, Louisiana**
Reviewed By: Karen Allen	Date Reviewed: 6/14/2018		GeoEngineers — Figure G-20

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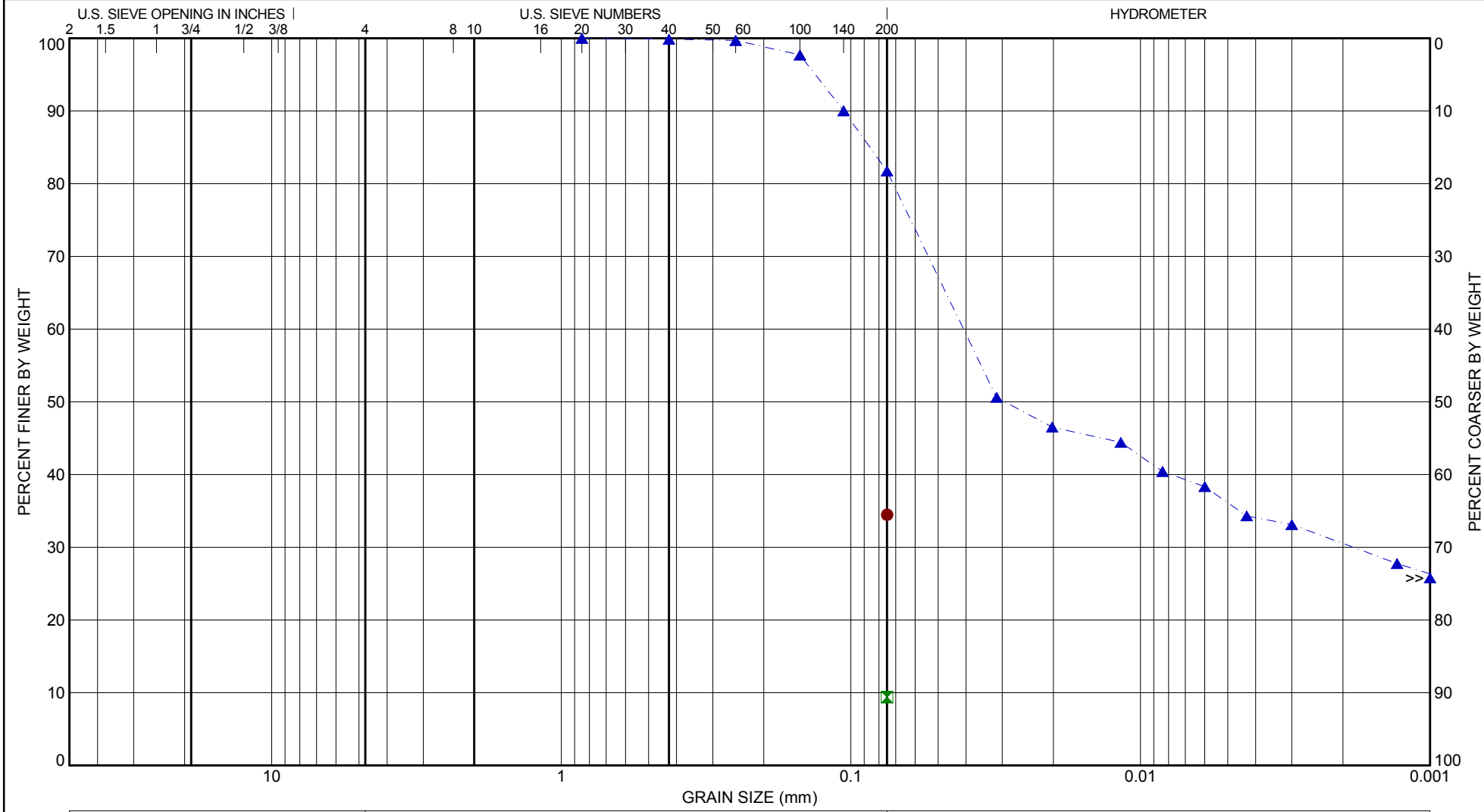
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● B-14	14.0	Gray clayey sand (SC)			34.5											
⊠ B-14	18.0	Gray sand with silt (SP-SM)			9.4											
▲ B-14 Composite	0.0	Gray clay with sand (CL)	0.0	18.3	45.6	36.1	0.106	0.041	0.029	0.002				49	18	31



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP/SLC	6/4/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/11/2018		Figure G-21

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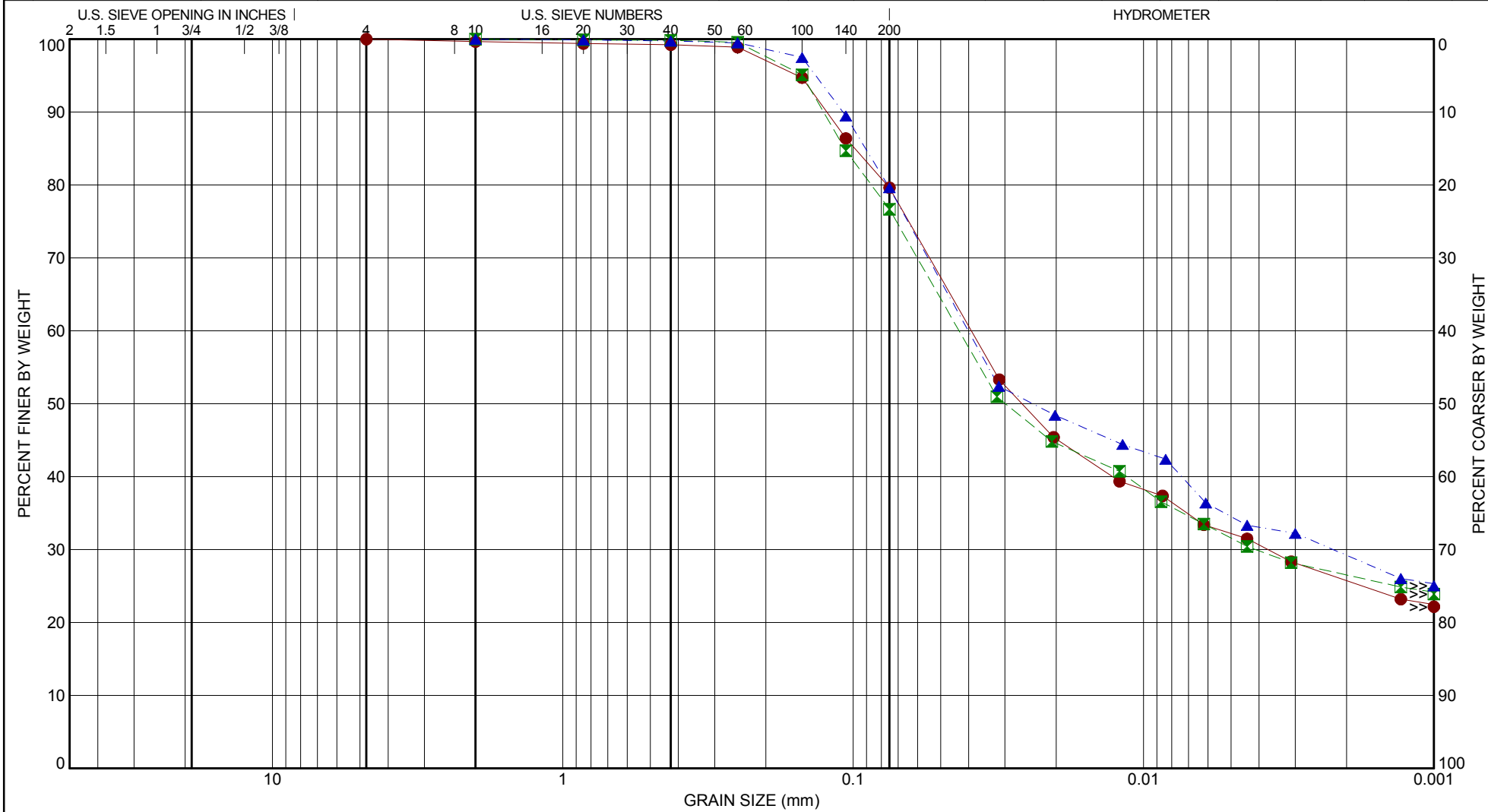
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● Composite #1	0.0	Gray clay with silt and sand (CL)	0.0	20.4	47.4	32.2	0.123	0.039	0.026	0.004				48	21	27
⊠ Composite #2	0.0	Gray clay with silt and sand (CL)	0.0	23.3	45.1	31.6	0.127	0.043	0.03	0.004				45	19	26
▲ Composite #3	0.0	Gray clay with silt and sand (CL)	0.0	20.4	45.1	34.5	0.109	0.04	0.024	0.002				47	20	27



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP/MGW	6/14/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/14/2018		Figure G-22

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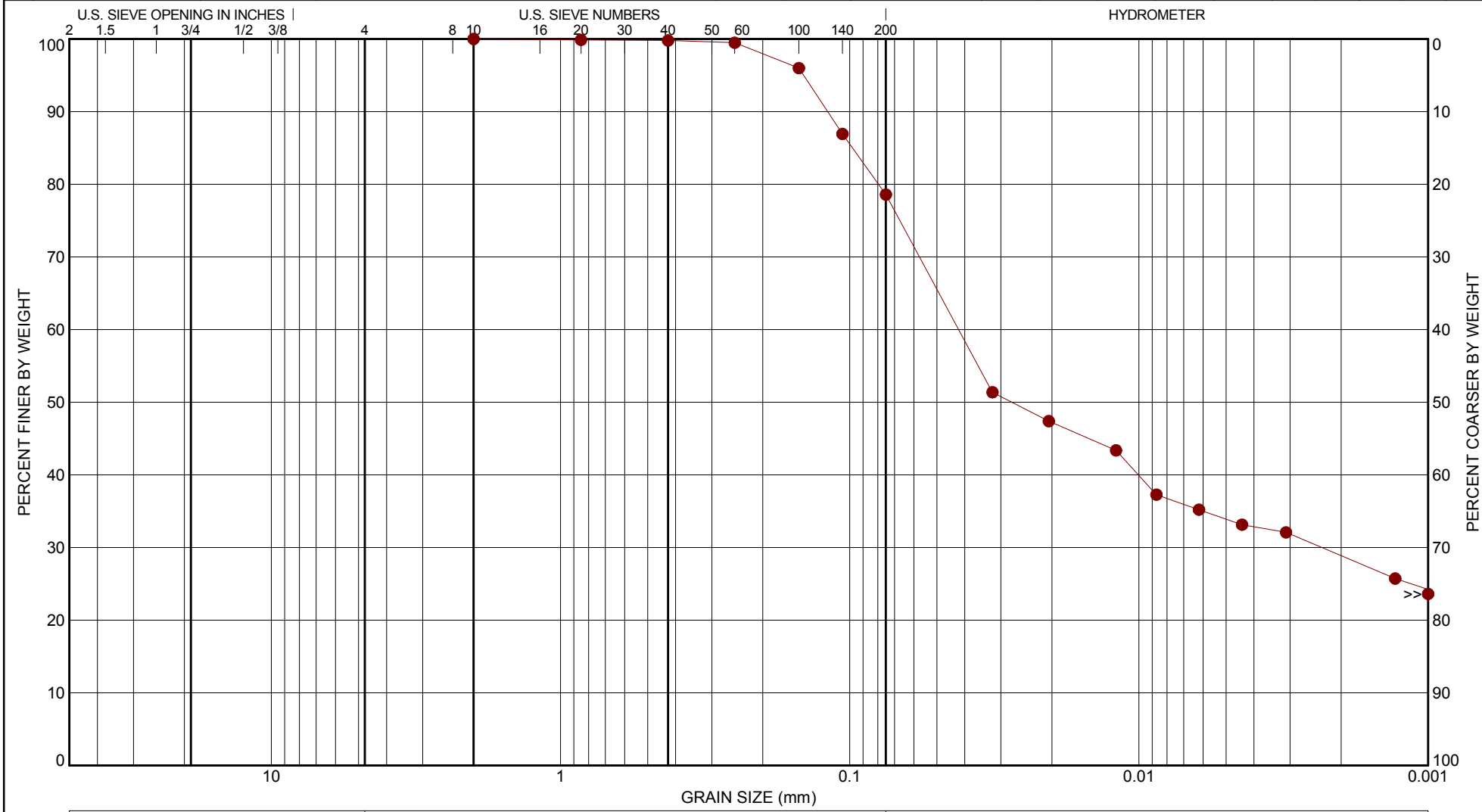
GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Soil Boring ID	Depth (ft)	Classification	%Gravel	%Sand	%Silt	%Clay	D90	D60	D50	D30	D10	Cc	Cu	LL	PL	PI
● Composite #4	0.0	Gray clay with silt and sand (CL)	0.0	21.4	44.7	33.9	0.119	0.042	0.027	0.002				46	19	27



GRAVEL		SAND			SILT OR CLAY
coarse	fine	coarse	medium	fine	

Tested By:	Date Tested:	GRAIN SIZE DISTRIBUTION	East Leeville Marsh Creation and Nourishment (BA-194)
CLP/MGW	6/10/2018	ASTM D422/D1140/D6913/T88	Lafourche Parish, Louisiana
Reviewed By:	Date Reviewed:	Project No.: 18274-004-01	GeoEngineers
Karen Allen	6/14/2018		Figure G-23

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GEI - GRAIN SIZE - GEO TEMPLATE WITH LAB.GDT - 7/9/18 17:08 - P:\18\18274004\01\LAB\GINT LAB\18274-004-01 BR LAB.GPJ

Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

October 1, 2018
Ardaman File Number: 18-2842

GeoEngineers, Inc.
11955 Lakeland Park Blvd., Suite 100
Baton Rouge, LA 70809

Attention: Joshua M. Pruett, P.E.
Geotechnical Engineer

Subject: Laboratory Testing Services – East Leeville Marsh Creation & Nourishment (BA-194)

Dear Mr. Pruett:

As requested, one settling column test has been completed on a sample of sediment provided for testing by your firm.

Sediment Sample

Two 5-gallon bucket samples of sediment were received for testing. The two samples were homogenized to produce one composite sample for testing. The solids content measured on the composite sample (ASTM Standard D2216 "Laboratory Determination of Water (Moisture) Content of Soil and Rock by Dry Mass" using Method B and an oven temperature of 107.5±2.5°C) is tabulated below.

Specimen	Water Content, M_c (%)		Solids Content, S (%)	
	Uncorrected	Corrected*	Uncorrected	Corrected*
1	43.1	43.7	69.9	69.6
*Corrected for total dissolved solids concentration of 32.62 g/L.				

The as-received uncorrected water content, calculated as the ratio of the mass of water (excluding salt) to the mass of dry solids (including salt) equaled 43.1 percent. The corresponding uncorrected solids content, where $S=[1/(1+M_c)]$, equaled 69.9 percent. The water content corrected for the total dissolved solids concentration of 32.62 g/L [or fluid content], calculated as the ratio of the mass of salt water to the mass of solids (excluding salt) equaled 43.7 percent with a corresponding solids content of 69.6 percent.

Settling Column Test

A settling column test was performed using a target initial solids contents of 13 percent, corresponding to a sediment concentration of 135 grams/liter. The test was performed in an 8-inch diameter by 6-foot high clear Plexiglas settling column fitted with 1-inch diameter rubber septums on 6-inch centers (on one line along the length of the column) for sampling water or sediment with a syringe. The dimensions of the settling column and use of septums for sampling at various depths were consistent with the test equipment and procedures described in the USACE Confined Disposal of Dredge Material Engineering Manual (EM 1110-2-5027 dated 10/30/87).

The settling test was performed on the composite sediment sample diluted with source water from the E. Leeville Marsh Creation site to an initial solids content of 12.5 percent. The source water had a pH of 6.6 and a total dissolved solids contents (TDS) of 32.62 g/L. The sediment was uniformly mixed through

the full height of the settling column using a perforated plunger-type agitator. After mixing, the agitator was withdrawn from the column, and the height of the settled sediment interface monitored with time. The settling test was performed over a period of 10 days. At the Client's request, the test was ended earlier than the standard 14 – 30 day settling period. At the end of the test, water above the settled sediment was decanted, and the bulk solids content of the settled sediment measured.

The settling column test initial and final (after 10 days) conditions are tabulated below.

Parameter	Initial Sediment Slurry	Final Settled Sediment
Time (days)	0	10
Sediment Height (cm)	170.5	50.5
Sediment Volume (cm^3)	55,183	16,345
Corrected Water [Fluid] Content (%)	702	182
Corrected Solids Content (%)	12.5	35.5
Total Unit Weight (lb/ft^3)	67.7	80.4
Dry Density (lb/ft^3)	8.4	28.5

The settling test results (settled height versus time; settled height versus log time; compression settling velocity versus time; and concentration versus time) are presented on the attached graphs. The table presents the average void ratio, water [fluid] content, solids content, dry density, total unit weight and concentration of the settled sediment for each time reading.

The test samples were reported to be from the client-specified designations herein. The test results are indicative of only the specimens that were actually tested. The test results presented are based upon accepted industry practice as well as the test method listed. Ardaman & Associates, Inc. neither accepts responsibility for, nor makes claims to the final use and purpose of the test results.

Please contact us if you have any questions about the test results or require additional information.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.

ROBERT E. ROUSSET, P.E.
Assistant Vice President/Branch Manager

GEORGE F. SEGRÉ QUILICHINI, P.E.
Project Engineer

STATE OF LOUISIANA
GEORGE F. SEGRE QUILICHINI
License No. 42229
PROFESSIONAL ENGINEER
CIVIL ENGINEERING

Encls.

Ardaman & Associates, Inc.
Settling Column Test Data

Project:	E. Leevile Marsh Creation	Sample ID:	Composite #1
File Number:	18-2842	Target Initial Solids Content:	13%
Engineer:	GFS	Sample Description:	Gray clay w/ sand & shell
Column:	BSC-1	Mass Dry Soil (g):	7,464.24
Diameter (cm):	20.30	Mass Wet Soil (g):	13,176.86
Area (cm^2):	323.65	Mass Water (g):	52,418.00
Specific Gravity:	2.70 (Assumed)	Total Mass (g):	59,882.24
Sediment Mc (%):	43.1	Initial Solids Content (%):	12.46% by mass

Time (minutes)	Settled Height (cm)	Settled Volume (cm^3)	Void Ratio	Water Content (%)	Solids Content (%)	Dry Density (lb/ft^3)	Total Unit Weight (lb/ft^3)	Conc. (g/L)
0	170.5	55,183.1	18.96	702.3	12.5	8.4	67.7	135.3
1	169.9	54,988.9	18.89	699.7	12.5	8.5	67.8	135.7
2	169.8	54,956.6	18.88	699.2	12.5	8.5	67.8	135.8
4	169.4	54,827.1	18.83	697.5	12.5	8.5	67.8	136.1
8	168.6	54,568.2	18.74	694.0	12.6	8.5	67.8	136.8
15	167.3	54,147.4	18.59	688.4	12.7	8.6	67.8	137.9
30	164.8	53,338.3	18.29	677.5	12.9	8.7	67.9	139.9
60	160.2	51,849.5	17.76	657.6	13.2	9.0	68.1	144.0
120	153.2	49,583.9	16.94	627.2	13.8	9.4	68.3	150.5
177	147.7	47,803.8	16.29	603.4	14.2	9.7	68.6	156.1
243	140.2	45,376.4	15.41	570.9	14.9	10.3	68.9	164.5
509	114.7	37,123.2	12.43	460.3	17.8	12.6	70.3	201.1
1,268	76.4	24,727.2	7.94	294.2	25.4	18.8	74.3	301.9
2,927	67.9	21,976.2	6.95	257.4	28.0	21.2	75.8	339.7
4,541	63.4	20,519.7	6.42	237.9	29.6	22.7	76.7	363.8
5,542	61.3	19,840.0	6.18	228.8	30.4	23.5	77.2	376.2
7,207	58.3	18,869.1	5.83	215.8	31.7	24.7	78.0	395.6
8,550	56.3	18,221.8	5.59	207.1	32.6	25.6	78.5	409.6
9,957	54.5	17,639.2	5.38	199.3	33.4	26.4	79.1	423.2
11,294	53.3	17,250.8	5.24	194.1	34.0	27.0	79.4	432.7
14,633	50.5	16,344.6	4.91	181.9	35.5	28.5	80.4	456.7
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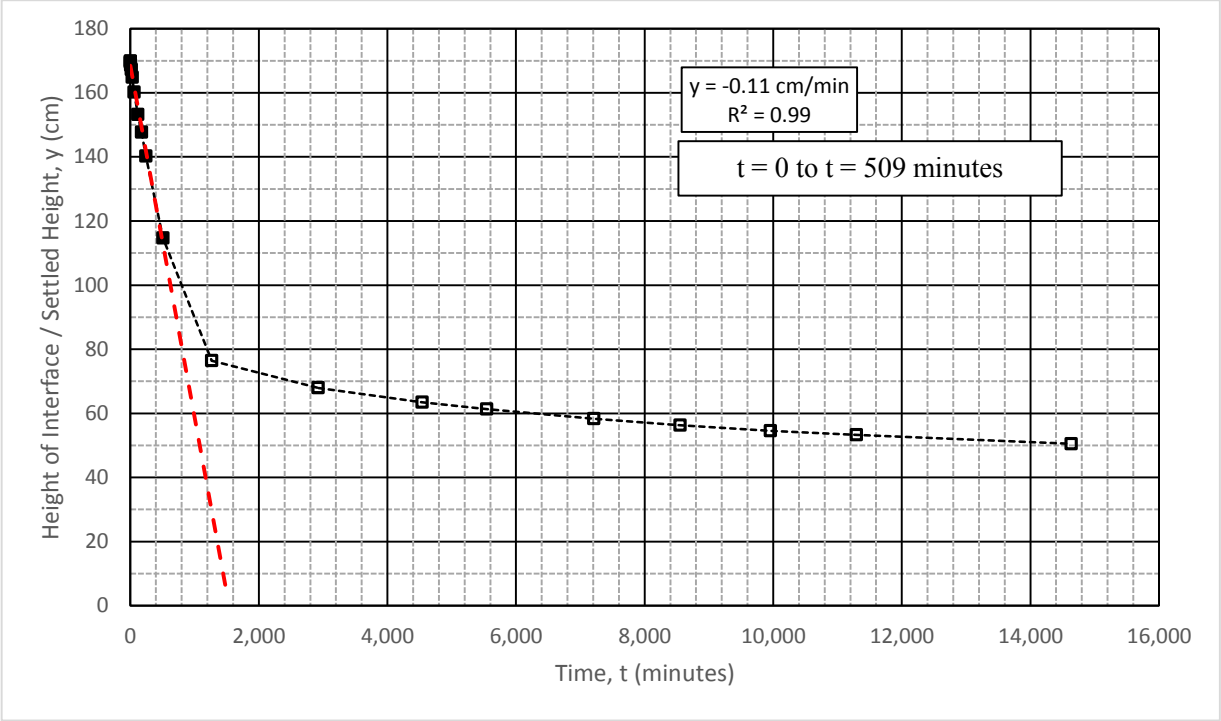
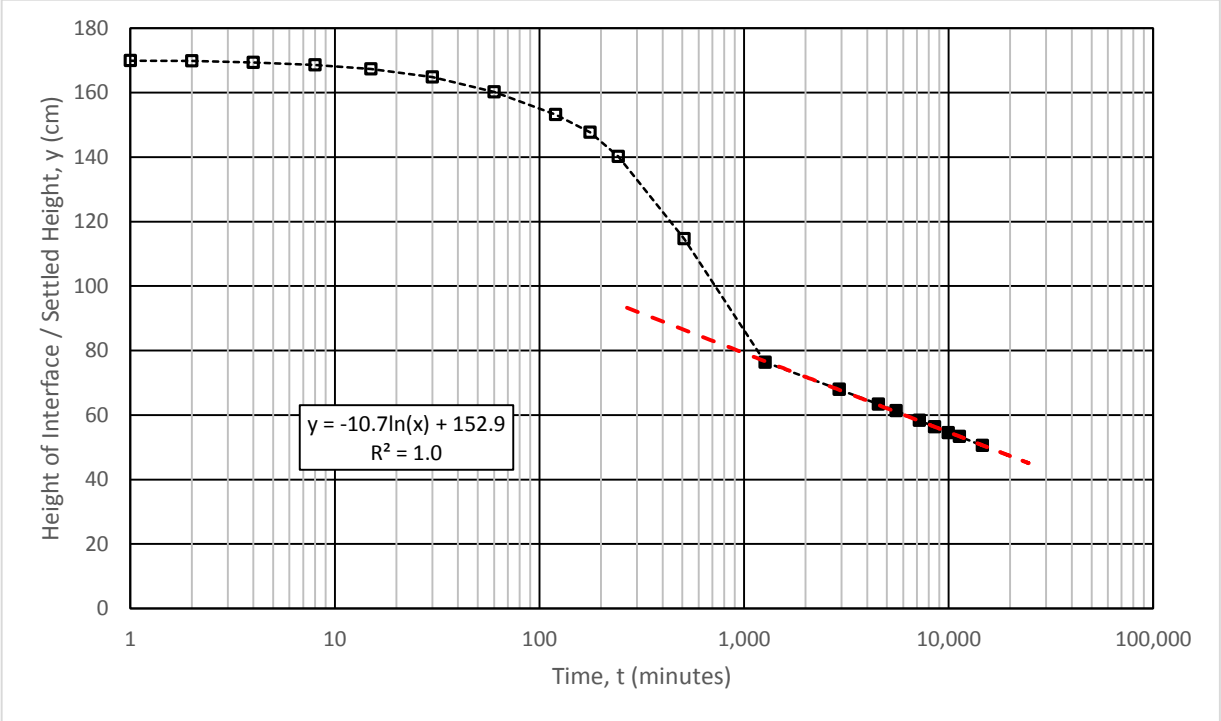
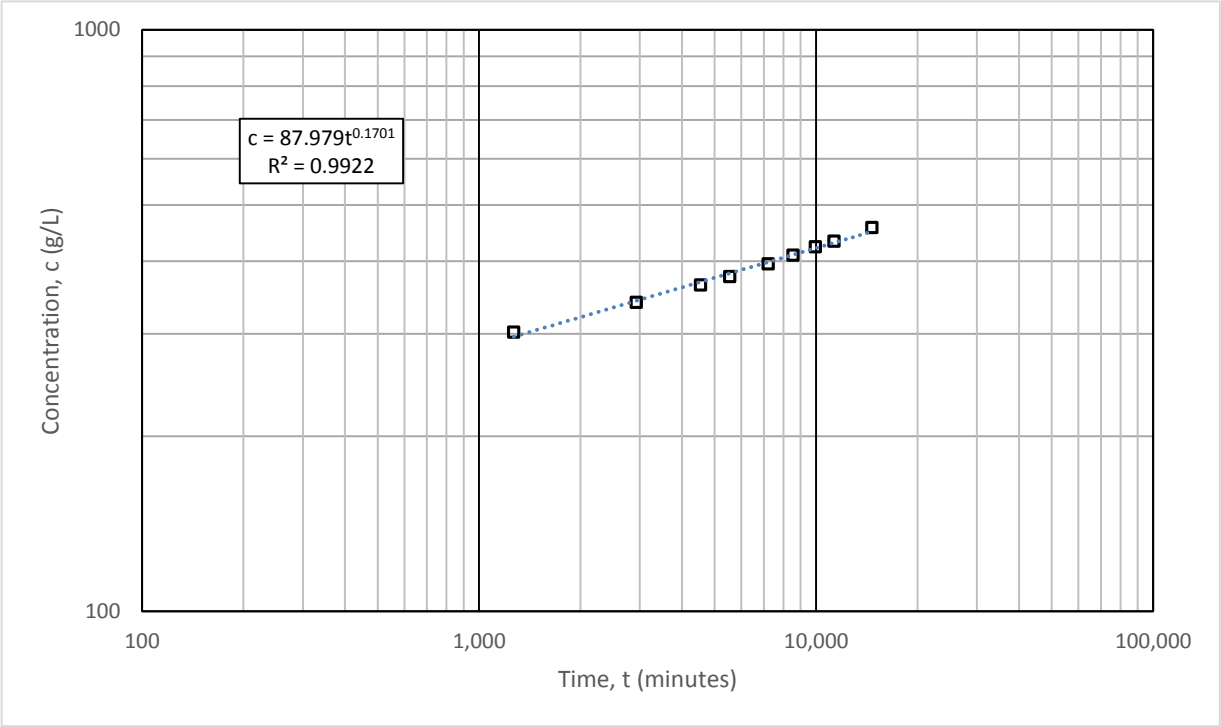
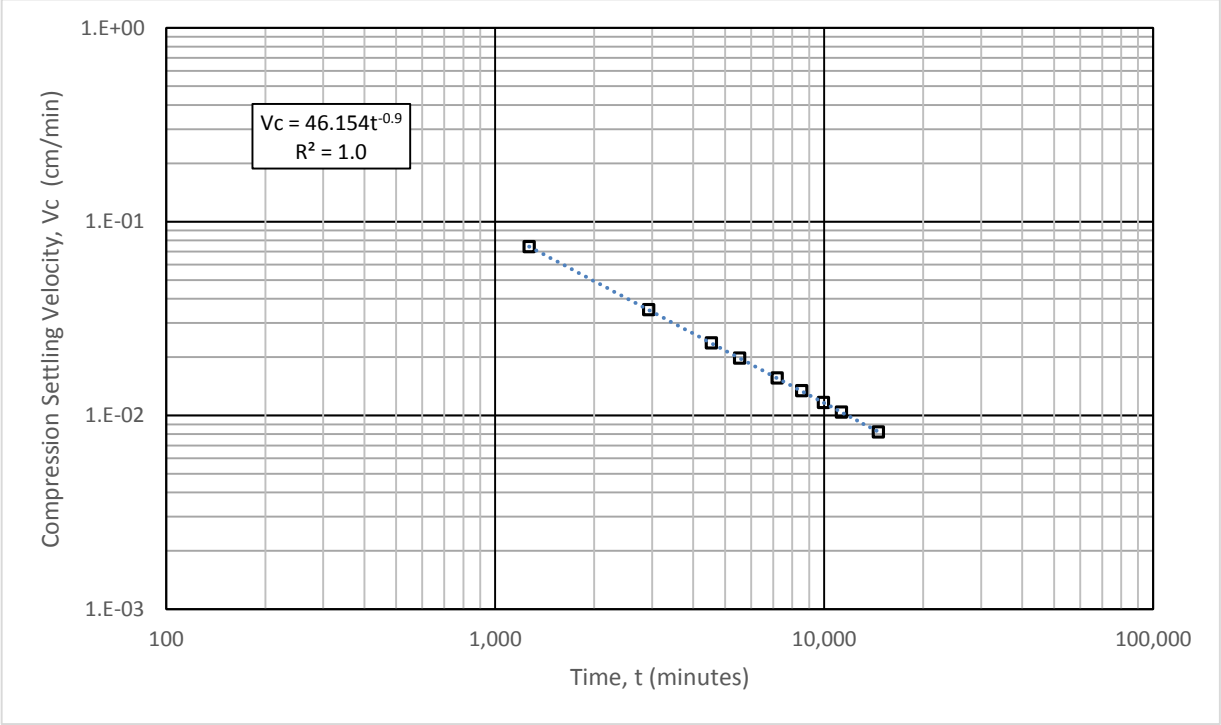
Ardaman & Associates, Inc.


y = -0.11 cm/min
R² = 0.99
t = 0 to t = 509 minutes
Height of Interface / Settled Height, y (cm)
Time, t (minutes)
0
20
40
60
80
100
120
140
160
180
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000


y = -10.7ln(x) + 152.9
R² = 1.0
Height of Interface / Settled Height, y (cm)
Time, t (minutes)
0
20
40
60
80
100
120
140
160
180
1
10
100
1,000
10,000
100,000


1000
100
c = 87.979t^0.1701
R² = 0.9922
Concentration, c (g/L)
100
1,000
10,000
100,000
Time, t (minutes)


1.E+00
1.E-01
1.E-02
1.E-03
Vc = 46.154t^-0.9
R² = 1.0
Compression Settling Velocity, Vc (cm/min)
100
1,000
10,000
100,000
Time, t (minutes)

APPENDIX H
Report Limitations and Guidelines for Use

APPENDIX H
REPORT LIMITATIONS AND GUIDELINES FOR USE

This appendix provides information to help you manage your risks with respect to the use of this report.

Geotechnical Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared exclusively for the Coastal Protection and Restoration Authority. The information contained herein is not applicable to other sites.

GeoEngineers, Inc. (GeoEngineers) structures our services to meet the specific needs of our clients. No party other than CPRA may rely on the product of our services unless we agree to such reliance in advance and in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted geotechnical practices in this area at the time this report was prepared. Use of this report is not recommended for any purpose or project except the one originally contemplated.

A Geotechnical Engineering or Geologic Report Is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the East Leeville Marsh Creation and Nourishment (BA-194) project located in Lafourche Parish, Louisiana. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

For example, changes that can affect the applicability of this report include those that affect:

- the function of the proposed structure;
- elevation, configuration, location, orientation or weight of the proposed structure;
- composition of the design team; or
- project ownership.

If important changes are made after the date of this report, we recommend that GeoEngineers be given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

Subsurface Conditions Can Change

This geotechnical or geologic report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the site, or by natural events such as hurricanes, floods,

earthquakes, slope instability or groundwater fluctuations. If more than a few months have passed since issuance of our report or work product, or if any of the described events may have occurred, please contact GeoEngineers before applying this report for its intended purpose so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Most Geotechnical and Geologic Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations from widely spaced sampling locations at the site. Site exploration identifies the specific subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ, sometimes significantly, from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Geotechnical engineers and geologists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. The logs included in a geotechnical engineering or geologic report should never be redrawn for inclusion in architectural or other design drawings. Photographic or electronic reproduction is acceptable, but separating logs from the report can create a risk of misinterpretation.

Give Contractors a Complete Report and Guidance

To help prevent costly problems associated with unanticipated subsurface conditions, we recommend giving contractors the complete geotechnical engineering or geologic report but preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report's accuracy is limited. In addition, encourage them to confer with GeoEngineers and/or to conduct additional study to obtain the specific types of information they need or prefer.

Contractors Are Responsible for Site Safety on Their Own Construction Projects

Our geotechnical recommendations are not intended to direct the contractor's procedures, methods, schedule or management of the work site. The contractor is solely responsible for job site safety and for managing construction operations to minimize risks to on-site personnel and adjacent properties.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. Without this understanding, there may be expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you need to know more how these "Report Limitations and Guidelines for Use" apply to your project or site.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations,

recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

GeoEngineers