

BORING LOG NO. R-07									
PROJECT: Salisbury National Cemetery					CLIENT: FourFront Design, Inc. Rapid City, SD				
SITE: 501 Statesville Blvd Salisbury, NC					LOCATION: See Exhibit A-2				
DEPTH	DESCRIPTION	DEPTH (ft)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	LL-PL-P1	ATTERBERG LIMITS	PERCENT FINES	REMARKS
0.0	3.5' TOPSOIL								
0.0 - 1.0	FILL - SANDY LEAN CLAY (CL) tan and dark brown, stiff	2-4	N=10						
1.0 - 2.0	SANDY SILT (ML) tan and white, very stiff, residuum	5-9	N=25						
2.0 - 3.0	SILTY SAND (SM) tan, white and orange, very dense, residuum	23-35	N=80						
3.0 - 4.0	PARTIALLY WEATHERED ROCK, sampled as tan, white, and gray SILTY SAND	25-43	50.3*						
Boring Terminated at 5.8 Feet									
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
Advancement Method: Borings backfilled with soil cuttings upon completion.			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
WATER LEVEL OBSERVATIONS		Boring Started: 11/8/2016		Boring Completed: 11/8/2016					
No free water observed		Dirt Rig: D-50		Dirt Rig: D-50					
Terracon		Project No: 71155005		Exhibit: A-17					

BORING LOG NO. R-08									
PROJECT: Salisbury National Cemetery					CLIENT: FourFront Design, Inc. Rapid City, SD				
SITE: 501 Statesville Blvd Salisbury, NC					LOCATION: See Exhibit A-2				
DEPTH	DESCRIPTION	DEPTH (ft)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	LL-PL-P1	ATTERBERG LIMITS	PERCENT FINES	REMARKS
0.0	3.5' TOPSOIL								
0.0 - 1.0	SILTY SAND (SM) brown, tan, and gray, loose to medium dense, residuum	4-5	N=14						
1.0 - 2.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
2.0 - 3.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
3.0 - 4.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
4.0 - 5.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
5.0 - 6.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
6.0 - 7.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
7.0 - 8.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
8.0 - 9.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
9.0 - 10.0	SANDY SILT (ML) tan, white, very stiff, residuum	6-4	N=9						
Boring Terminated at 10 Feet									
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
Advancement Method: Borings backfilled with soil cuttings upon completion.			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
WATER LEVEL OBSERVATIONS		Boring Started: 11/8/2016		Boring Completed: 11/8/2016					
No free water observed		Dirt Rig: D-50		Dirt Rig: D-50					
Terracon		Project No: 71155005		Exhibit: A-18					

BORING LOG NO. R-09									
PROJECT: Salisbury National Cemetery					CLIENT: FourFront Design, Inc. Rapid City, SD				
SITE: 501 Statesville Blvd Salisbury, NC					LOCATION: See Exhibit A-2				
DEPTH	DESCRIPTION	DEPTH (ft)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	LL-PL-P1	ATTERBERG LIMITS	PERCENT FINES	REMARKS
0.0	3.5' TOPSOIL								
0.0 - 1.0	SILTY SAND (SM) brown, tan, and gray, loose to dense, residuum	3-3	N=8				27		
1.0 - 2.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
2.0 - 3.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
3.0 - 4.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
4.0 - 5.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
5.0 - 6.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
6.0 - 7.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
7.0 - 8.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
8.0 - 9.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
9.0 - 10.0	SANDY SILT (ML) tan and brown, stiff	6-10	N=21						
Boring Terminated at 10 Feet									
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
Advancement Method: Borings backfilled with soil cuttings upon completion.			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
WATER LEVEL OBSERVATIONS		Boring Started: 11/8/2016		Boring Completed: 11/8/2016					
No free water observed		Dirt Rig: D-50		Dirt Rig: D-50					
Terracon		Project No: 71155005		Exhibit: A-19					

BORING LOG NO. R-10									
PROJECT: Salisbury National Cemetery					CLIENT: FourFront Design, Inc. Rapid City, SD				
SITE: 501 Statesville Blvd Salisbury, NC					LOCATION: See Exhibit A-2				
DEPTH	DESCRIPTION	DEPTH (ft)	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	LL-PL-P1	ATTERBERG LIMITS	PERCENT FINES	REMARKS
0.0	3.5' TOPSOIL								
0.0 - 1.0	SANDY SILT (ML) tan and brown, stiff	4-4	N=9				21		
1.0 - 2.0	No recovery	0-0	N=0						
2.0 - 3.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
3.0 - 4.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
4.0 - 5.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
5.0 - 6.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
6.0 - 7.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
7.0 - 8.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
8.0 - 9.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
9.0 - 10.0	SILTY SAND (SM) gray and brown, medium dense	4-6	N=20						
Boring Terminated at 9.8 Feet									
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
Advancement Method: Borings backfilled with soil cuttings upon completion.			Notes: See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.						
WATER LEVEL OBSERVATIONS		Boring Started: 11/8/2016		Boring Completed: 11/8/2016					
No free water observed		Dirt Rig: D-50		Dirt Rig: D-50					
Terracon		Project No: 71155005		Exhibit: A-20					

NOTE: REFER TO GEOTECHNICAL REPORT IN SPECIFICATIONS FOR MORE INFORMATION.

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

10-1696 VA NCA IDCA 1696.044 Salisbury NC Gravesite Expansion Drawings Civil Sheet Files 876CM3021-B-102-104.dwg 7-21-16 01:05:44 PM jmalby

Revisions	Date

CONSULTANTS:

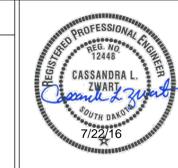
Terracon
Consulting Engineers and Scientists
110 7th St, Rapid City, SD 57701
605.342.3196
605.342.3197
1.800.443.5302

SWINBURGER SIMPSON COMPANY, INC.

PEAKS TO PLAINS DESIGN
404 NORTH 3137 STREET, SUITE 405
BRINGERS, MONTANA 59101
(406) 284-9800 | (406) 284-9870 FAX
WWW.PEAKSTOPLAINS.COM

Aqua Engineering Inc.
375 E. Woodworth Street, Building 200
Fort Collins, CO 80526-2196
970.226.8888 office
970.226.8888 cell
970.226.8888 fax
www.aquaengineering.com

Albertson Engineering Inc.
3202 West Main
Rapid City, South Dakota 57702
phone: 605.343.9608 fax: 605.341.7395



ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC.
517 7th street
rapid city sd 57701
p 605.342.9470
f 605.342.2377
www.4front.biz

Drawing Title BORING LOGS (R-07 TO R-10)
Approved Project Director

Project Title SALISBURY NATIONAL CEMETERY GRAVESITE EXPANSION	Project Number 876CM3021
Location SALISBURY NATIONAL CEMETERY SALISBURY, NC	Building Number N/A
Date 7/22/16	Drawing Number B-104
Checked CZ	Drawn JM
Dwg. 7 of 63	

BID DOCUMENTS

NCA DESIGN AND CONSTRUCTION SERVICE

Department of Veterans Affairs