41-I 9911 1513

L.C.I.D. PERMIT APPLICATION

FOR

JERRY FRIDDLE

7965 WINFREE ROAD

SUMMERFIELD, NORTH CAROLINA 27358

PHONE (336) 643-3791

CONTACT: JERRY FRIDDLE

PREPARED BY
EVANS ENGINEERING, INC.
4609 DUNDAS DRIVE
GREENSBORO, NORTH CAROLINA 27407
PHONE (336) 854-8877
FAX (336) 854-8876
CONTACT: DAVE SOUTHARD
NOVEMBER 12, 2001

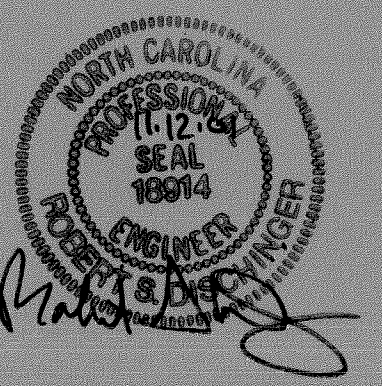


TABLE OF CONTENTS

SECTION A

LETTER TO N.C.D.E.N.R. REQUESTING PERMIT

EVANS ENGINEERING, INC.

ENGINEERS
PLANNERS
SURVEYORS
SINCE 1974

November 12, 2001

Mr. Timothy A. Jewett
Western Area Engineer
Solid Waste Section
N.C.D.E.N.R.
585 Waughtown Street
Winston-Salem, North Carolina 27107

Re: Jerry Friddle - L.C.I.D. Landfill in Guilford County

Dear Timothy:

On behalf of Jerry Friddle please except this request for a "Land Clearing and Inert Debri" Landfill Permit. We have compiled a package following the "Division of Waste Management Rules, 15 A NCAC 13B Section .0560-.0566" for your review. We have completed all Guilford County approvals and are ready for state approval.

Please review this package and should you have any questions or comments contact me.

Sincerely,

Dave Southard
EVANS ENGINEERING, INC.

DWS/lws

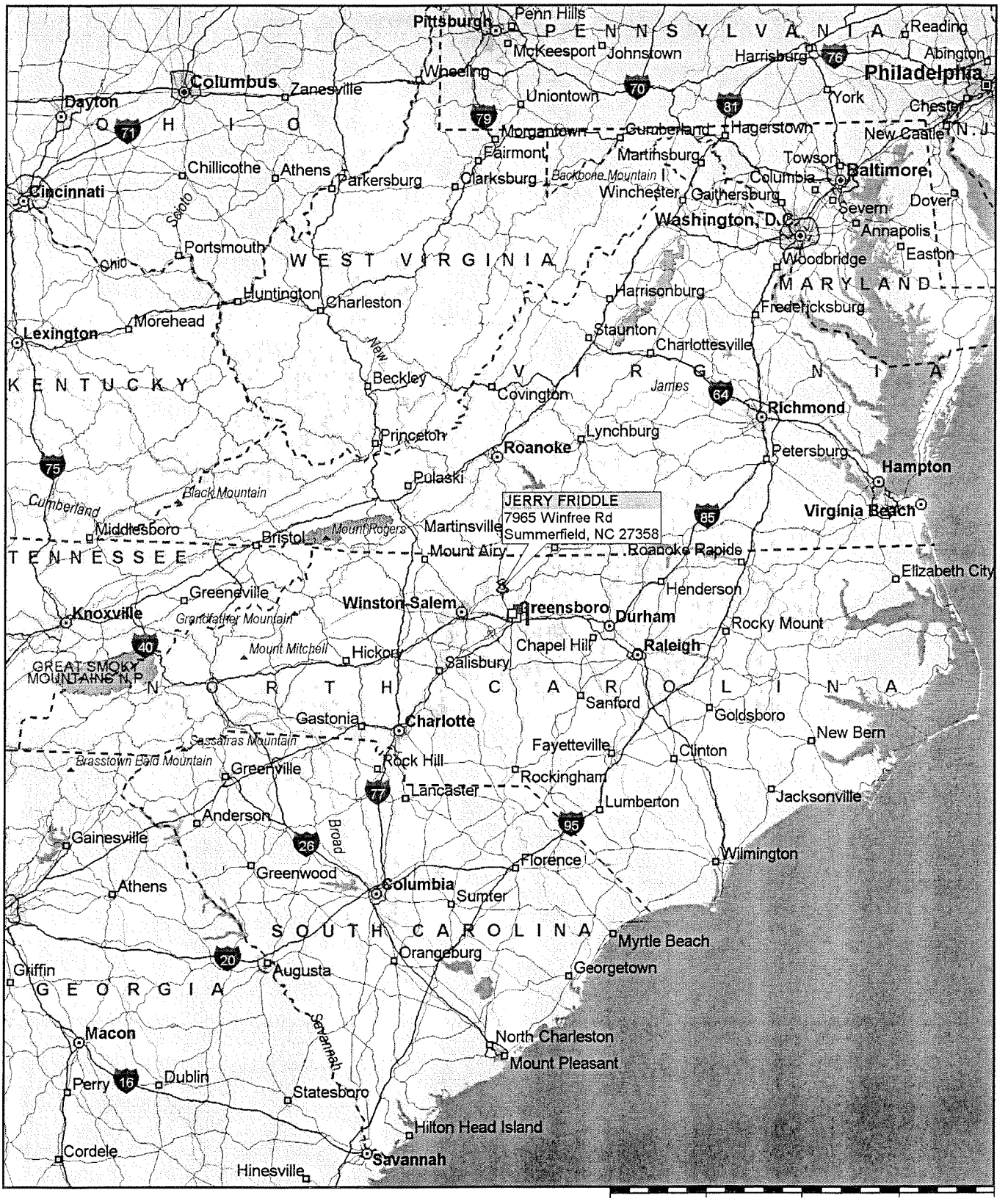
Phone: (336) 854-8877 * E-mail: (evans@evans-eng.com) * Fax: (336) 854-8876
4609 Dundas Drive, Greensboro, NC 27407 - P.O. Box 10285, Greensboro, NC 27404

SECTION B

VICINITY MAPS

STATE WIDE MAP

JERRY FRIDDLE - L.C.I.D. LANDFILL



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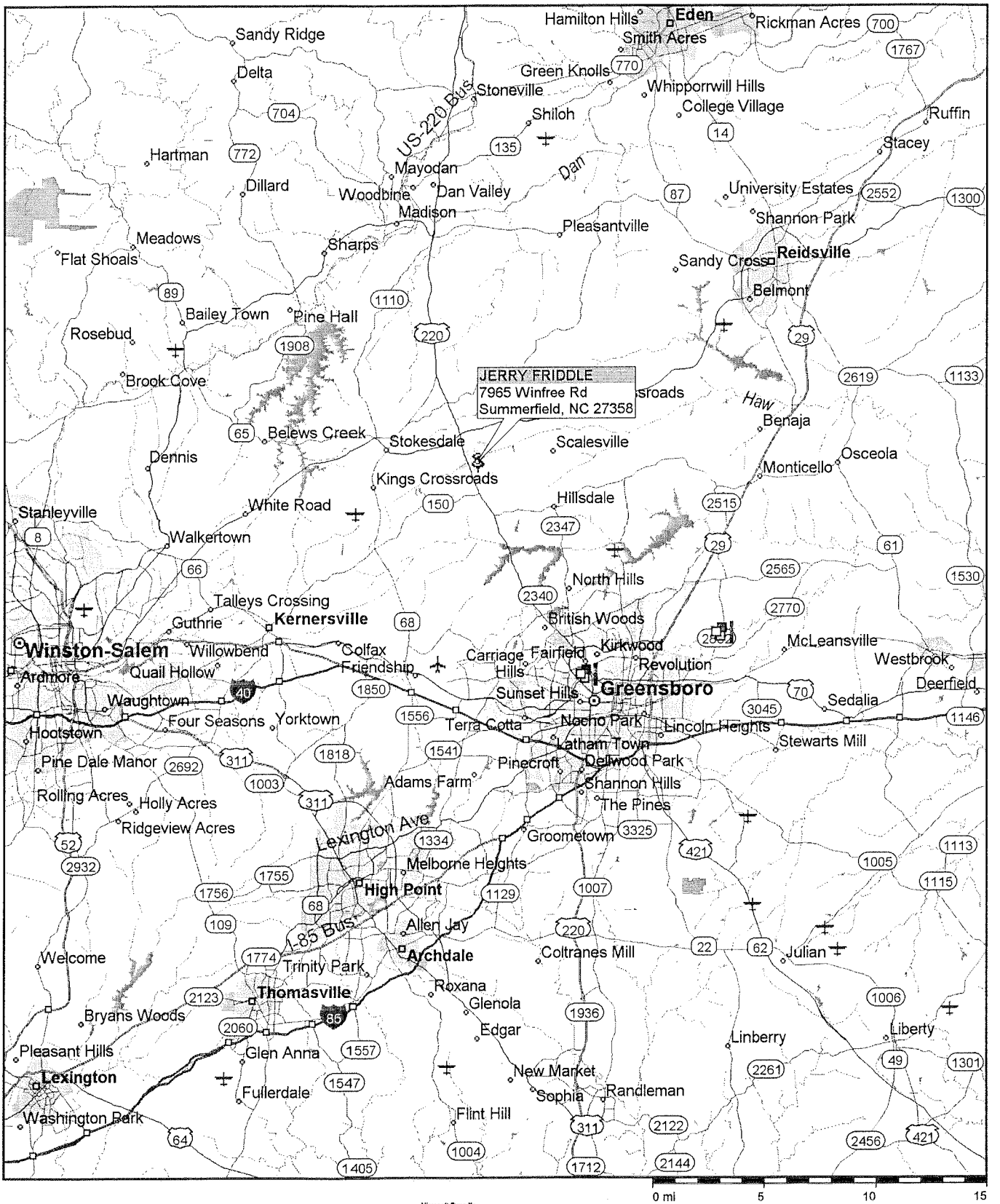
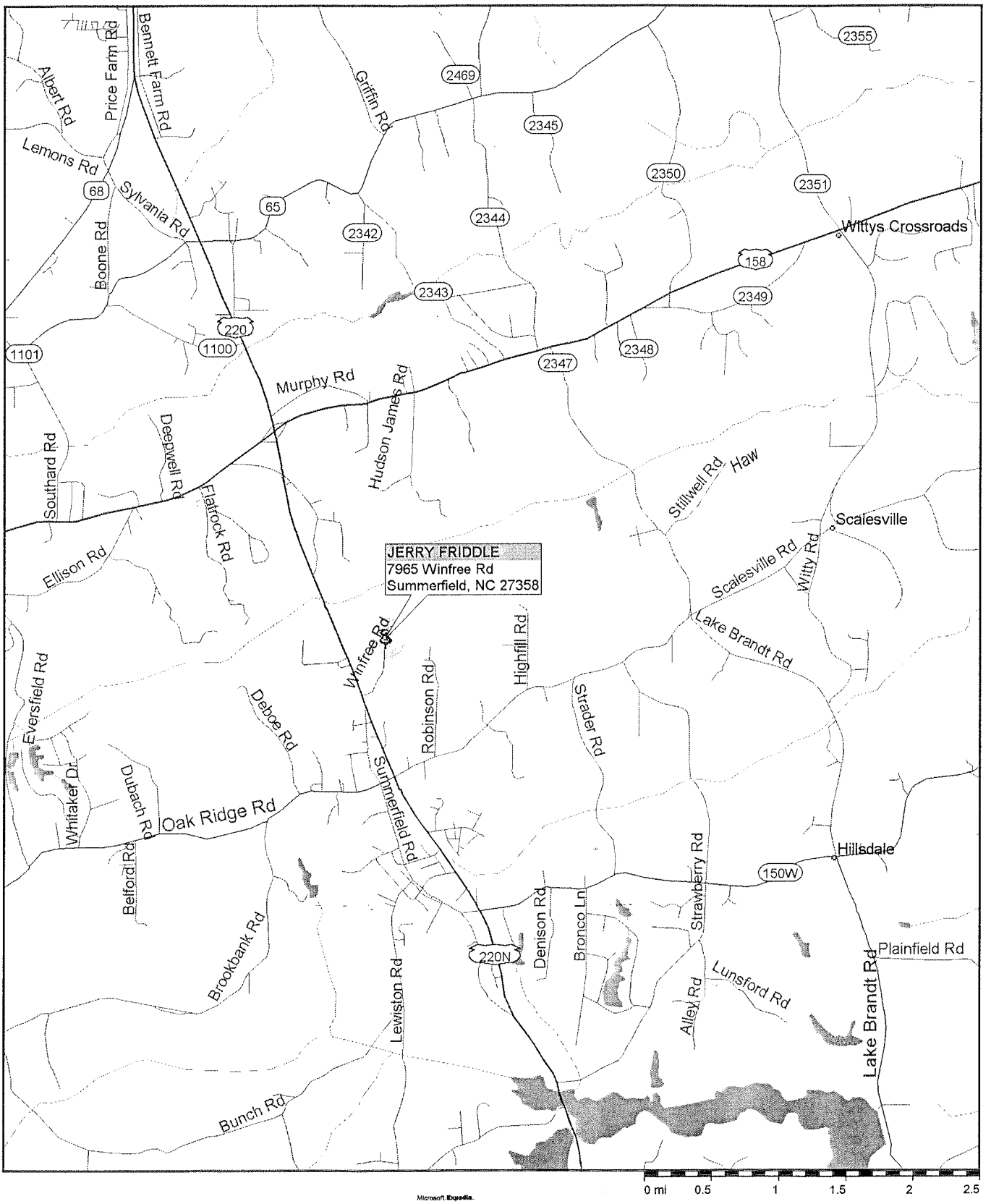
COUNTY WIDE MAP

JERRY FRIDDLE - L.C.I.D. LANDFILL



VICINITY MAP

JERRY FRIDDLE - L.C.I.D. LANDFILL



Microsoft Expedia
Streets98

SECTION C

SITING CRITERIA

SITING CRITERIA FOR L.C.I.D.

1. The L.C.I.D. Landfill area is not located in the 100-year flood plain as shown on Flood Insurance Rate Maps community panel number 370111 30-B (see site plan for location of 100-year flood plain) (100-year flood line is field located).

2. This facility does not cause or contribute to the taking of any endangered or threatened species of plants, fish or wildlife (see letter-Section E).

3. This facility does not result in the destruction or adverse modification of the critical habitat of endangered or threatened species (see letter-Section E).

4. This facility does not damage or destroy an archaeological or historical site (see letter-Section E).

5. This facility does not cause adverse impact on a state park, recreation or scenic area or any other lands included in the state nature and historic preserve (see letter-Section E).

6. The L.C.I.D. area is not located in any wetland as defined in the Clean Water Act, Section 404-b. Wetlands jurisdiction are from top-of-bank to top-of-bank defined by the Army Corps of Engineers (see map for location of wetlands).

7. Suitable soils available for cover are from onsite stockpile of topsoil, if this quantity should not be adequate then suitable soils will be brought in from offsite (see Final Grading and Erosion Control Plan for Volume).

8. a) The facility does not cause a discharge of pollutants into waters of the state.
   b) This facility does not cause discharge of dredged materials or fill material into waters of the state.
   c) This facility does not cause non-point source pollution of waters of the state.
   d) Waste will be placed a minimum of four feet above the seasonal high water table.

9. The facility meets all of the minimum buffer requirements as defined by the state and county (see Final Grading and Erosion Control Plan for buffer lines).

10. The facility meets all requirements of any zoning ordinance (see Zoning Verification Form-Section E).

SECTION D

OPERATIONS PLAN FOR L.C.I.D.

OPERATIONS PLAN FOR L.C.I.D.

OPERATOR: JERRY FRIDDLE
POST OFFICE BOX 603
SUMMERFIELD, NORTH CAROLINA 27358
PHONE : (336) 643-3791
JERRY FRIDDLE

Projected Use After Completion: Open field of grass

SYSTEMATIC USAGE OF DISPOSAL AREA:

1. This a private facility, no dumping allowed without owner's permission.
2. Vehicles enter thru front gate (gate is locked at the end of the day) and check-in at office. Any Non-L.C.I.D. material is refused and vehicle is instructed to leave. Vehicles with L.C.I.D. waste are instructed where to go to dump then proceed back thru front gate to leave.
3. Operator sits on a dozer and continually pushes waste around to fill voids and compact waste.
4. Adequate dirt is incoming with L.C.I.D. waste to help fill voids. If any additional dirt is required it is excavated from elsewhere on site or taken from this site. Haul roads into and out of disposal areas are constantly maintained with equipment and materials from onsite. Traffic flow patterns and dump areas are clearly defined by means of signs, fences and other visual points.
5. When an area has reached it's capacity, it will then be covered with a minimum of two feet of topsoil then seeded and closed.

WASTE STREAM:

1. The waste stream is primarily generated through owner's own business. Owner operates a grading company and waste is generated through this.
2. Waste excepted consists of; yard waste, brush, uncontaminated soil, stumps, concrete, leaves, brick, untreated wood and limbs resulting from landscape and land clearing activities. On an average the incoming waste stream is estimated at ± 625 CY/week or 312 tons/week.

EMERGENCY PLAN:

1. Summerfield Fire District, Summerfield Fire Department is located down the street from this site and provides fire protection for this property. (see letter - Section E).
2. All structures are inspected periodically by fire department for compliance.
3. In the event of a fire after hours, there is an emergency number on the front entrance sign to contact to unlock the front gate and assist.

SECTION E

APPROVAL LETTER FROM COUNTY
AND MISCELLANEOUS LETTERS

GUILFORD COUNTY
PLANNING AND DEVELOPMENT DEPARTMENT

ZONING VERIFICATION

The parcel(s) of land located at 7965 Wingfield Rd.

further identified as Tax Map 1-39 Block(s) 915-N Parcel(s) 2,8,9&10

is zoned AG · SP.

Permitted Uses include the following or see attached ☒ :

LCID

If the property is zoned Conditional Use (CU) the following use restrictions and conditions apply or see attached ☐ :

If the property has an approved Special Use Permit (SP) the following use is permitted and conditions apply or see attached ☒ : #31-97-SP

The property is located in the jurisdiction indicated below and subject to the rules and regulations found within the Development Ordinance adopted by that jurisdiction:

☐ Guilford County ☐ Town of Pleasant Garden ☐ Town of Oak Ridge
☐ Town of Stokesdale ☒ Town of Summerfield ☐ Town of Sedalia

The property is located in the following Overlay District(s) and additional development restrictions may apply (see attached ☐):

☐ General Watershed Area District
☐ Watershed Critical Area District
Tier I ___ II ___ III ___ IV ___
☐ Flood Hazard District
☐ Historic District
☐ Scenic Corridor District
☐ Airport District
Height Restriction ___ Noise Cone ___
In compliance Yes ___ No ___ Unknown ___
☐ Manufactured Housing District

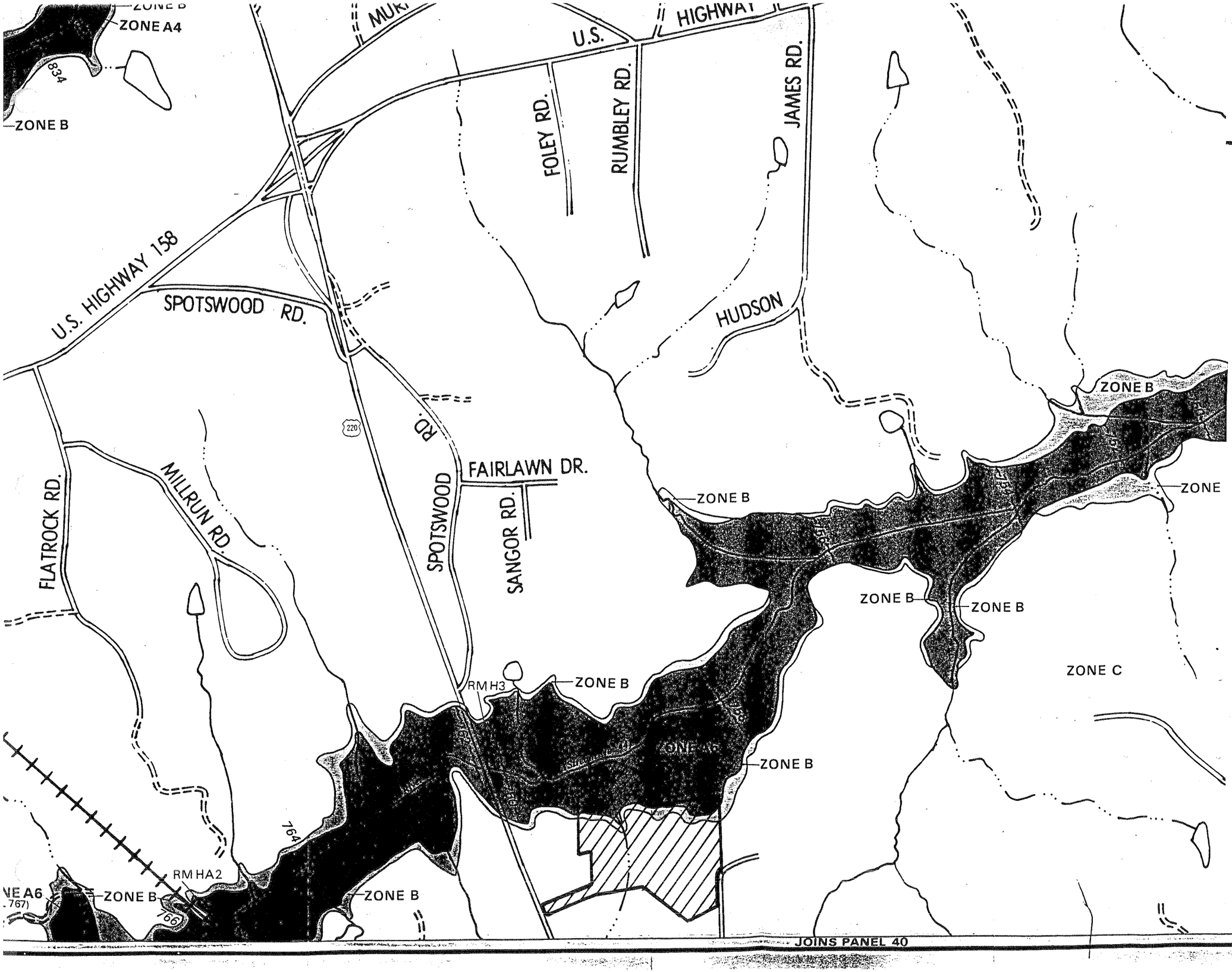
Based on the records contain in the Planning and Development Department, the current use of the property complies with the current zoning and there are no known violations against the property.
☒ Yes ☐ No ☐ No Certification Made - ☐ see attached

☐ The current use of the property is a legal nonconforming use and subject to provisions governing nonconforming uses contained in the Development Ordinance. see attached ☐

A copy of the zoning map ☒ and tax map ☒ is attached.

Signature Randy Stanley Title Zoning Technician Date 11-9-01

Note: This information is based on information available on the date shown. It is the responsibility of the land owner to comply with all requirements of the Development Ordinance for the jurisdiction where the property is located and the signer hereof does not have authority to waive the requirements of the Development Ordinance or other applicable laws. If it is discovered that information on this form is in conflict with the Development Ordinance, the requirements of the Development Ordinance govern.



N

APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

GUILFORD COUNTY, NORTH CAROLINA

(UNINCORPORATED AREAS)

PANEL 30 OF 220

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
370111 0030 B

EFFECTIVE DATE:
JUNE 4, 1980

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

SUMMERFIELD FIRE DISTRICT INC.
7400 SUMMERFIELD ROAD
P.O. BOX 429
SUMMERFIELD, NC 27358-0429
Phone (336) 643-4341
Fax (336) 643-4353

October 31, 2001

To: Mr. Dave Southard
From: R. W. Boykin
Ref: Friddle Property

Mr. Southard:

The Summerfield fire Department to my current knowledge and records has not responded to any type of Hazards on the property at any time. If there are any questions, please feel free to contact me at any time.

Sincerely,
R. W. Boykin

GUILFORD COUNTY, N.C.
Planning and Development Dept.
GRADING PERMIT

NOTICE

This Certifies that a grading permit has been issued.

Name of Project: Winfree RD. Landfill
Owned by: Jerry Friddle
Acreage to be graded: 23.5 (20.1 + 3.4)
Location: 7965 Winfree RD.
Date: 9-10-97
Permit Number: 101157

By: Earl Davis II
Office of Soil Scientist
P.O. Box 3427
Greensboro, N.C. 27402
(919) 373-3334

This notice must be posted in a conspicuous place on the job.

This grading permit also serves as floodplain development permit.
Earl Davis

NCDENR

North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross, Jr., Secretary

October 30, 2001

Mr. Dave Southard
Evans Engineering, Inc.
4609 Dundas Drive
Greensboro, NC 27407

Subject: Jerry Friddle Landfill - LCID facility, Guilford County

Dear Mr. Southard:

The Natural Heritage Program is aware of the location of a locally significant natural area identified in the Guilford County Natural Areas Inventory, Phase I that lies close to the project site. The Haw River Skunk Cabbage Swamp site, identified as "Piedmont Regional" significance in the report, lies in the floodplain of the Haw River, just northeast of the project site. The site is apparently unprotected. Information about this site is enclosed.

Sedimentation from work on the project needs to be kept to a minimum in order to avoid impacting the natural area in the floodplain. It is hoped that the project will also avoid impacting the aquatic resources in the Haw River.

You may wish to check the Natural Heritage Program database website at <www.ncsparks.net/nhp/search.html> for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Please do not hesitate to contact me at 919-715-8687 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr.

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

HEL/hel

Enclosure

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 \ Fax: 919-715-3060 \ Internet: www.enr.state.nc.us

SECTION F

DEED AND LEGAL DESCRIPTION

PIC Boring

SIDE NO 51991 DK 4530 PG 585

Grantee's address: 5515 US 220 North, Summerfield NC 27358

Drafted by Dennis E. Boring

STATE OF NORTH CAROLINA

COMBINATION INSTRUMENT

COUNTY OF GUILFORD

THIS INSTRUMENT OF COMBINATION, Made this the 23rd day of April, 1997, by JERRY W. FRIDDLE;

1/2 M

W I T N E S S E T H:

THAT WHEREAS, the maker of this Instrument of Combination owns certain tracts which were acquired by Deeds recorded in Deed Book 3938, at Page 1812, Deed Book 4085, at Page 786, Deed Book 4115, at Page 603, Deed Book 4460, at Page 150, and Deed Book 4529, at Page 1613, in the Office of the Register of Deeds of Guilford County, North Carolina, and

WHEREAS, said owner wishes to combine the above-mentioned tracts into a single tract of land which is described by one common boundary line for the purpose of complying with all applicable provisions of the Guilford County Zoning and Subdivision Ordinances; and

WHEREAS, this is a limited special purpose instrument for the purposes specified above and is not a conveyance and does not change or modify in any manner the ownership interests in the above-referenced property; and

WHEREAS, upon execution and recordation of this Instrument of Combination, the above-referenced properties are hereby combined and shall hereafter be described as follows:

BEGINNING AT a point in the northern (or western) right of way line of Winfree Road marking the intersection of said right of way line with the western line of Raymond Barham and running thence along the northern (or western) right of way line of Winfree Road along a curve bearing to the left South 27 degrees 52 minutes 10 seconds West a chord distance of 99.61 feet to an established iron pipe in the west right of way line of Winfree Road marking the southeast corner of the premises conveyed to Jerry Friddle in Deed Book 3938, at Page 1812; thence still with said right of way line South 01 degree 06 minutes 44 seconds East 89.68 feet to a point; thence continuing with said right of way line South 01 degree 18 minutes 17 seconds East 152.25 feet to a new iron pipe, a corner with 5300 North LLC; thence with the line of 5300 North LLC, North 84 degrees 51 minutes 47 seconds West 120.84 feet to a new iron pipe; thence still with the line of 5300 North LLC, South 63 degrees 57 minutes 27 seconds West 201.59 feet to a new iron pipe; thence still with the line of 5300 North LLC, South 84 degrees 53 minutes 05 seconds West 137.03 feet to a new iron pipe; thence still with the line of 5300 North

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North Carolina - Guilford County
The certificate (s) of
Mary A. Collins

A Notary (Notaries) Public is (are) certified to be correct. This instrument and this certificate are duly registered at the date and time shown herein.

KATHERINE LEE PAYNE, REGISTER OF DEEDS
Assistant/Deputy Register of Deeds

031891

RECORDED
KATHERINE LEE PAYNE
REGISTER OF DEEDS
GUILFORD COUNTY, NC

BOOK: 4530
PAGE(S):0585 TO 0587

04/23/1997 14:38:41

04/23/1997			
1 MISC DOCUMENTS	31891	$6.00	
2 MISC DOC ADDN PGS		$4.00	
1 PROBATE FEE		$2.00	

LLC, North 42 degrees 24 minutes 23 seconds West 307.27 feet to a new iron pipe, said iron pipe being located North 08 degrees 58 minutes 29 seconds East 2316.55 feet from the intersection of the east right of way line of U. S. Highway 220 (150 foot right of way) with the north right of way line of Winfree Road (having a 60 foot right of way) and being a corner of 5300 North LLC with the 4.289 acres tract conveyed to Jerry W. Friddle by said company in Deed Book 4460, at Page 150, Guilford County Registry; thence still with the line of 5300 North LLC, North 42 degrees 24 minutes 23 seconds West 235.38 feet to a point in the line of the tract conveyed to Friddle by Dennis E. Boring, Trustee for Alpha W. Winfree; thence continuing with the line of 5300 North LLC, South 81 degrees 19 minutes 59 seconds West 557.92 feet, more or less, to an established iron pipe, a corner with 5300 North LLC; thence with the line of the tract conveyed to Friddle by Dennis E. Boring, Trustee for Alpha Winfree North 01 degrees 15 minutes 23 seconds West 30 feet to an iron pipe; thence South 67 degrees 08 minutes 27 seconds West 160.25 feet to an iron pipe in the line of Lot 1 of the subdivision for Michael J. Andrews as shown in Plat Book 70, at Page 142, Guilford County Registry; thence with the line of the said Lot 1 South 21 degrees 44 minutes 58 seconds East 25.00 feet to the southeast corner of the said Lot 1; thence with the south line of the said Lot 1 South 68 degrees 15 minutes 24 seconds West 399.95 feet to an established iron pipe in the east right of way line of U. S. Highway 220, the southwest corner of Lot 1; thence with the east right of way line of U. S. Highway 220 North 19 degrees 30 minutes 28 seconds West 99.90 feet to an established iron pipe; thence continuing with the east right of way line of U. S. Highway 220 North 20 degrees 16 minutes 26 seconds West 20.20 feet to an iron pipe, the northwest corner of the said Lot 1; thence with the north line of the said Lot 1 North 69 degrees 15 minutes 28 seconds East 395.52 feet to the northeast corner of the said Lot 1; thence North 69 degrees 15 minutes 28 seconds East 184.56 feet to an iron pipe; thence with the line of the tract conveyed to Friddle by Dennis E. Boring, Trustee for Alpha Winfree the following twelve (12) courses and distances: (1) North 01 degrees 15 minutes 23 seconds West 342.09 feet to an established iron pipe, (2) South 77 degrees 49 minutes 30 seconds West 144.04 feet to a point, (3) North 02 degrees 20 minutes 10 seconds East 643.41 feet to a point, (4) North 60 degrees 28 minutes 19 seconds East 217.60 feet to a point, (5) North 14 degrees 28 minutes 19 seconds East 235.00 feet to a point, (6) North 68 degrees 48 minutes 19 seconds East 120.00 feet to a point, (7) South 66 degrees 46 minutes 41 seconds East 246.00 feet to a point, (8) South 63 degrees 31 minutes 41 seconds East 70.0 feet to a point, (9) South 36 degrees 31 minutes 42 seconds East 111.0 feet to a point, (10) South 35 degrees 56 minutes 41 seconds East 130.0 feet to a point, (11) South 34 degrees 01 minutes 42 seconds East 100.0 feet to a point, and (12) South 28 degrees 46 minutes 41 seconds East 112.0 feet to a point, a corner of the tract conveyed to Jerry Friddle by

Dennis E. Boring, Trustee for Alpha Winfree with the tract conveyed to Jerry Friddle by Alpha Winfree and now or formerly Robert H. Wray's southwest corner; thence with Wray's south line North 82 degrees 41 minutes 19 seconds East 200 feet to a point, a common corner of Wray with Julian K. Stafford; thence North 83 degrees 25 minutes 42 seconds East 420.83 feet with Stafford's line to a point, a corner with Stafford; thence South 00 degrees 41 minutes 26 seconds East 844.41 feet with the lines of Stafford and Barham to the point and place of BEGINNING, and being the identical property conveyed to Jerry W. Friddle by Alpha Winfree, Dennis E. Boring, Trustee for Alpha Winfree, Vineyard Associates, 5300 North LLC, and 5300 North LLC, in Deed Book 3938, at Page 1812, Deed Book 4085, at Page 786, Deed Book 4114, at Page 603, Deed Book 4460, at Page 150, and Deed Book 4529, at Page 1613, respectively, in the Office of the Register of Deeds of Guilford County, North Carolina, SAVE AND EXCEPT a small parcel conveyed to EMI, Inc. in Deed Book 4489, at Page 723, in the Office of the Register of Deeds of Guilford County, North Carolina. This description is made for the purpose of combining the 5 existing parcels into one tract and is taken from 6 maps by 3 different surveyors and should therefore be liberally construed to effect the purpose for which it is intended. A new survey of the combined tract is strongly recommended for new conveyances.

000587

IN WITNESS WHEREOF, the maker has set his hand and seal the day and year first above written.

_____(SEAL)
JERRY W. FRIDDLE

STATE OF NORTH CAROLINA

COUNTY OF GUILFORD

I, the undersigned, a Notary Public in and for the state aforesaid and Alamance county, do hereby certify that JERRY W. FRIDDLE personally appeared before me this day and acknowledged execution of the foregoing instrument.

Witness my hand and notarial seal-stamp, this the 23rd day of April, 1997.

MARY A. COLLINS NOTARY PUBLIC ALAMANCE COUNTY, NC

_____
Notary Public

My Commission expires: 7/12/99

SECTION G

SUBSURFACE EXPLORATION AND WELL ANALYSIS

REPORT OF HYDROGEOLOGIC ASSESSMENT
LAND CLEARING AND INERT DEBRIS LANDFILL

SUMMERFIELD GRADING
WINFREE ROAD (SR 2313)
GREENSBORO, GUILFORD COUNTY, NORTH CAROLINA

ECS PROJECT NUMBER G-4899

PREPARED FOR:

EVANS ENGINEERING, INC.
GREENSBORO, NORTH CAROLINA

NOVEMBER 12, 2001

ENGINEERING CONSULTING SERVICES, LTD.
Geotechnical • Construction Materials • Environmental

November 12, 2001

Mr. Dave Southard
Evans Engineering, Inc.
4609 Dundas Drive
Greensboro, North Carolina 27407

Reference: Report of Hydrogeologic Assessment
Land Clearing and Inert Debris (LCID) Landfill
Summerfield Grading
Winfree Road (SR 2313)
Greensboro, North Carolina
ECS Project No. G-4489

Dear Mr. Southard:

Engineering Consulting Services, Ltd. (ECS) is pleased to provide you with the report of hydrogeologic assessment for the subject site located in Greensboro, North Carolina. The purpose of this assessment was to provide information pertaining to groundwater conditions at the site.

We appreciate the opportunity to work with you on this project. If you have any questions or require any further information, please feel free to contact us at (336) 856-7150.

Sincerely,

ENGINEERING CONSULTING SERVICES, LTD.

John S. Lair
Project Geologist

Stephen J. Gosselin, P.G.
Principal Hydrogeologist
License NC #1445

NORTH CAROLINA LICENSED SEAL 1445 GEOLOGIST STEPHEN J GOSSELIN

TABLE OF CONTENTS

1.0 INTRODUCTION

The site is an approximate 43.34 acre site located on Winfree Road (SR 2313) in Guilford County, North Carolina (Figure 1). Currently, the site is used by Summerfield Grading as a sandrock quarry. A portion of the site is used by Summerfield Grading as a permitted Land Clearing and Inert Debris Landfill (LCID). The purpose of this investigation was to obtain hydrogeologic information for the existing LCID landfill at the site.

2.0 HYDROGEOLOGIC EVALUATION

2.1 General Site Conditions

The site is currently used by Summerfield Grading as a sandrock quarry and encompasses approximately 43.34 acres with the landfill area encompassing approximately 21.5 acres. The landfill area is divided into three fill areas (Phases) that are divided by a tributary of Haw River. Phase I and Phase II comprise approximately 17.2 acres and are located on the portion of the site east of the tributary and Phase III comprises approximately 4.3 acres and is located on the portion of the site west of the tributary. The site ranges in elevation from a low of approximately 745 feet above average mean sea level in the northern portions of the site to a high of approximately 840 feet above average mean sea level in the southeastern portion of the site.

According to the Geologic Map of North Carolina, the site is located in the Carolina Slate Belt of the Piedmont physiographic province. The soils encountered in this area are the residual product of in-place chemical weathering of rock presently underlying the site. In general, shallow unconfined groundwater movement within the overlying soils is controlled largely by topographic gradients. Recharge occurs primarily by infiltration along higher elevations and typically discharges into streams or other surface water bodies. The elevation of the shallow water table is transient and can vary with seasonal fluctuations in precipitation. Movement in this water table is generally from higher to lower elevations. As such, shallow groundwater would be expected to flow across the site towards the tributary of Haw River.

2.2 Site Geologic and Hydrogeologic Conditions

A subsurface investigation was performed on February 27 and 28, 2001. Nine borings and nine piezometers (B-1 through B-9, Figure 2) were installed on-site. A summary of the methods utilized for the advancement of the soil borings and the installation of the piezometers is included in Appendix A. The piezometer and construction details are summarized on Table 1.

Subsurface fill material was encountered in each of the borings except boring B-5 and ranged in depth from 5 feet bgs to a depth of 20 feet bgs. Residual subsurface soils encountered in the borings drilled for the piezometers varied from location to location and primarily consisted of orange and tan silty fine to medium sands and partially weathered rock (PWR). PWR was sampled predominantly as tan white brown silty fine to medium sand. The soil boring logs and piezometer construction diagrams are included in Appendix B.

Depths to PWR varied from a depth of 1.0 feet bgs in piezometer boring B-5 to a depth of 39.0 feet bgs in piezometer boring B-1. Rock (auger refusal) was encountered in piezometer borings B-1 through B-7 at depths ranging from a low of 7.0 feet to 40.9 feet bgs. A summary of the depth to PWR and competent bedrock from each boring is included in Table 2.

2.3 Groundwater Levels and Flow Direction

Piezometers were installed in February 2001 and provide subsurface data for the site. Water levels in the piezometers were measured at time of boring, 24 hours after completion and 7 days after completion. The water levels were measured from the top of casing. The groundwater level measurements are summarized on Table 3 and were used for the preparation of a potentiometric map for the site (Figure 3). Borings B-2, B-3 and B-7 were dry at 7 days and therefore were not used in the preparation of the potentiometric maps. Based on the water level measurements collected, groundwater beneath eastern portion of the site was determined to be flowing generally towards the west and northwest towards the tributary of Haw River. Groundwater beneath the western portion of the site was only detected from piezometer B-8, however based on the groundwater flow inferred from surface topography, groundwater beneath the western portion of the site is expected to flow east-northeast towards the tributary of Haw River.

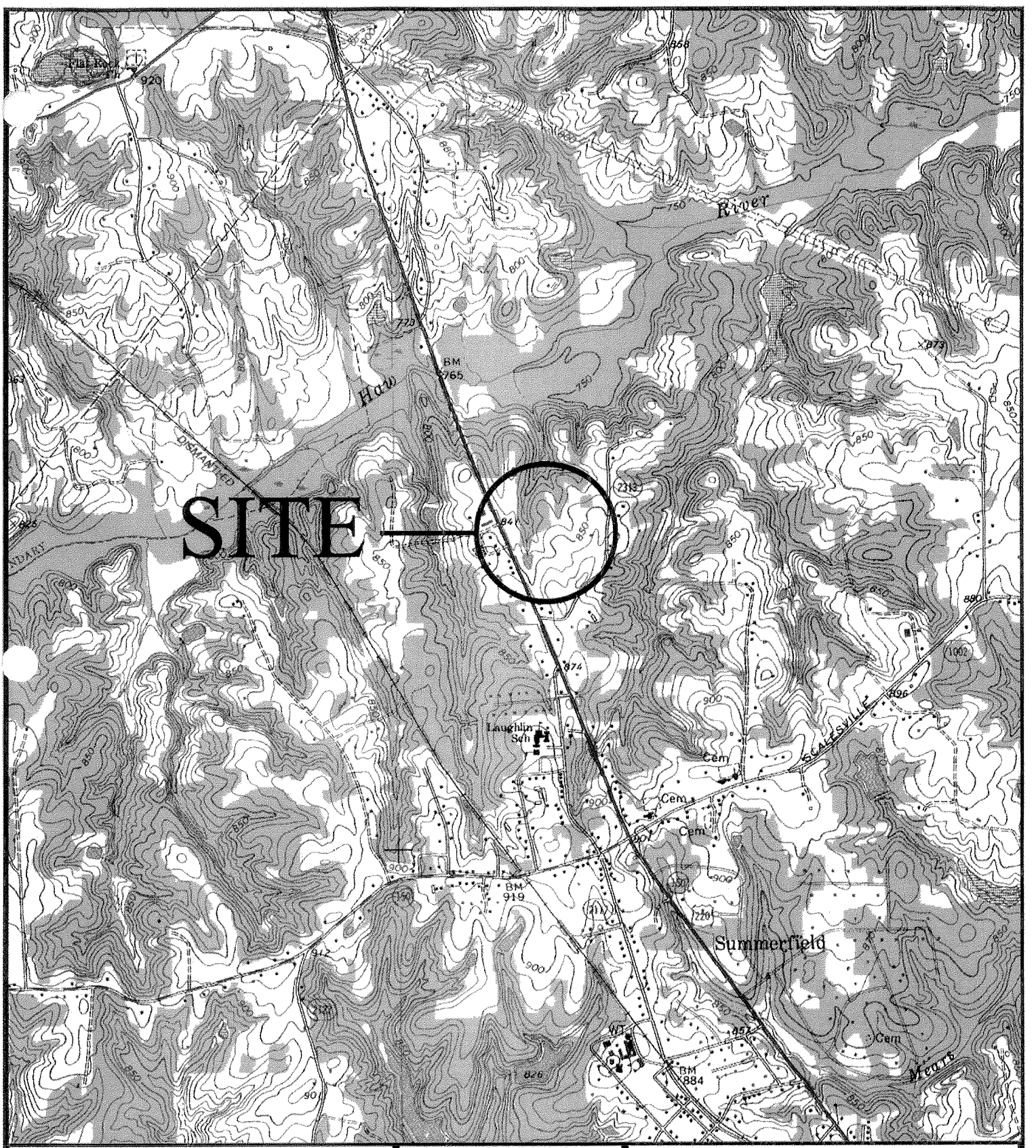
3.0 REFERENCES

Brown, P.M., III, Burt, E.R., III, Carpenter, P.A., III, Enos, R.M., Flynt, B.J., Jr., Gallagher, P.E., Hoffman, C.W., Merschat, C.E., Wilson, W.F., 1985, *Geologic Map of North Carolina*, North Carolina Geological Survey, Scale 1:500,000, 1 sheet.

Driscoll, Fletcher G., Ph. D., 1986, *Groundwater and Wells*, Second Edition, pp.66-68.

North Carolina Administrative Code, December 1, 1992, Title 15 A, Subchapter 2C, Section .0100, *Well Construction Standards, Criteria and Standards Applicable to Water Supply and Certain Other Wells.*

FIGURES



REFERENCE:

USGS TOPOGRAPHIC MAP
SUMMERFIELD, NC QUADRANGLE
DATED 1969, PHOTOREVISED 1994

SCALE: 1"= 2,000'

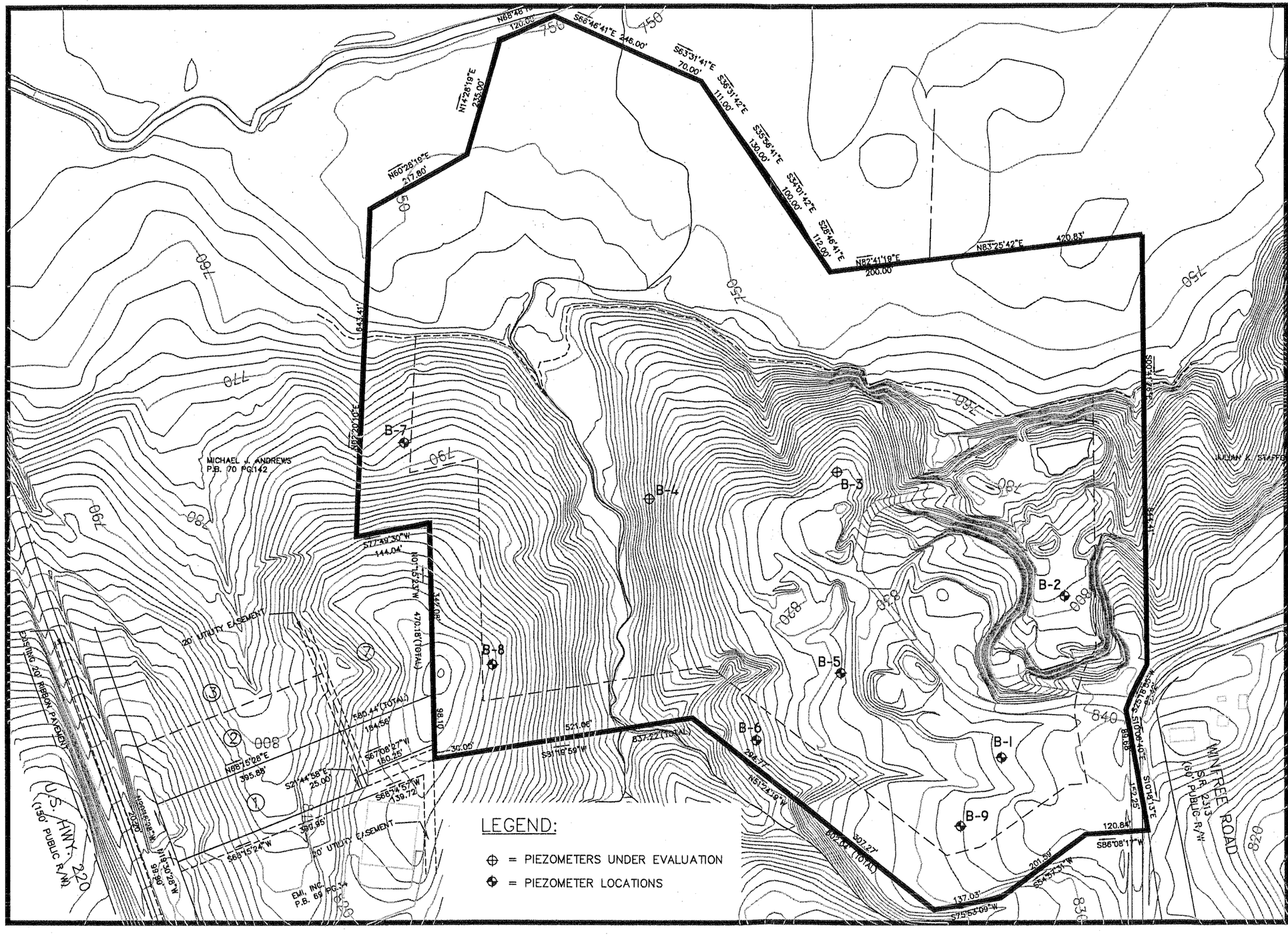
ECS LTD

ENGINEERING
CONSULTING
SERVICES, LTD

FIGURE 1
SITE LOCATION MAP

SUMMERFIELD GRADING
WINFREE ROAD (SR 2313)
GUILFORD COUNTY, NORTH CAROLINA

ECS PROJECT G-4899



LEGEND:

⊕ = PIEZOMETERS UNDER EVALUATION

⊕ = PIEZOMETER LOCATIONS

SCALE (IN FEET)

100 200

200 0

REFERENCE:

SITE PLAN BY
EVANS ENGINEERING,INC.
PROVIDED IN ELECTRONIC
FORMAT, DATED 3/7/97.

N
W E
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ECS LTD

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FIGURE 2
BASE SITE PLAN SHOWING PIEZOMETER LOCATIONS

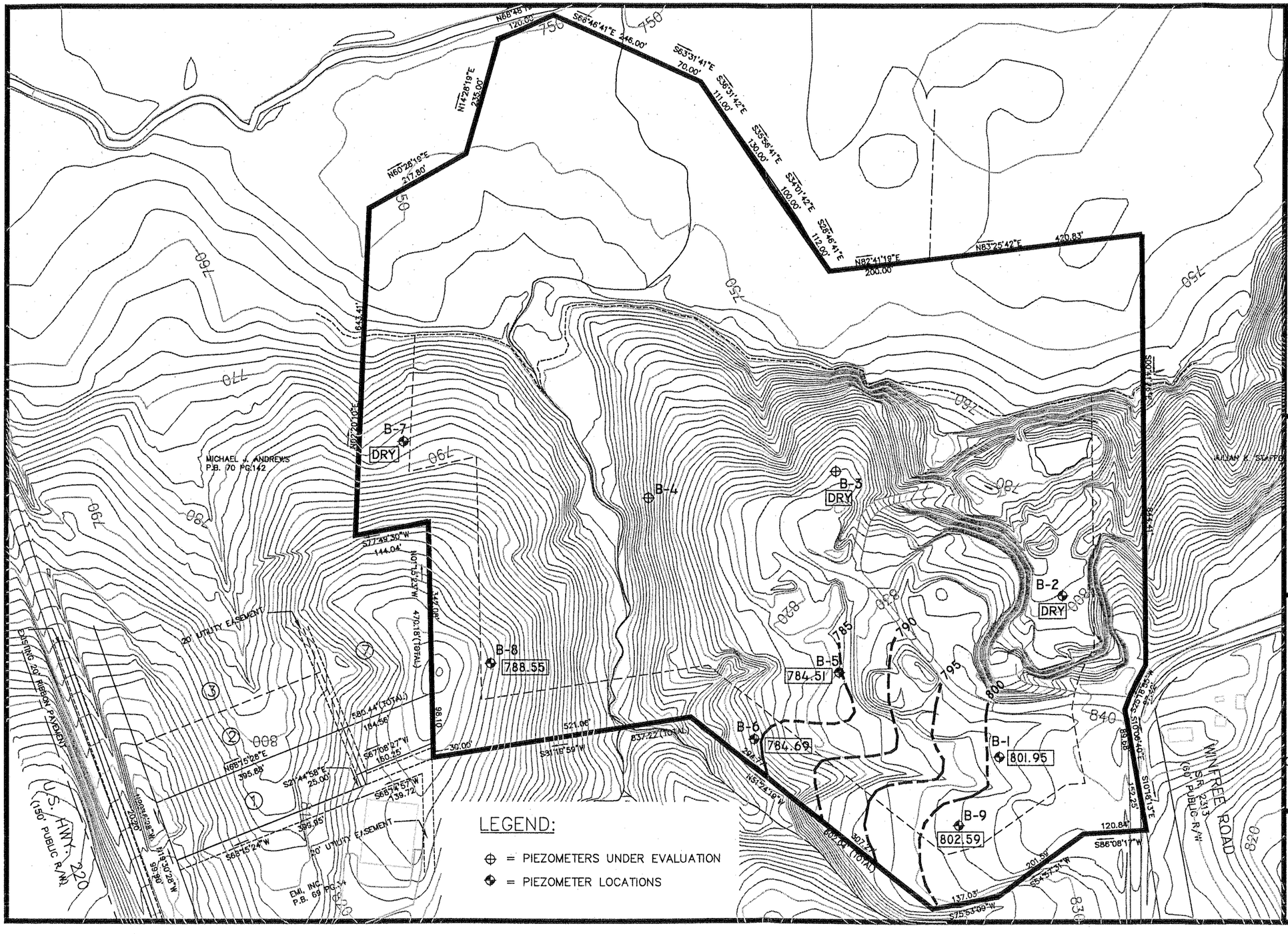
SUMMERFIELD GRADING
WINFREE ROAD (SR 2313)
GUILFORD COUNTY, NORTH CAROLINA

PROJECT NO. G-4899

DRAWN BY/DATE
VST/11-09-01

CHECKED BY/DATE
JBL 11/12/01

FILENAME: g4899 base site plan



SCALE (IN FEET)

100 200

200 0

REFERENCE:

SITE PLAN BY
EVANS ENGINEERING,INC.
PROVIDED IN ELECTRONIC
FORMAT, DATED 3/7/97.

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FIGURE 3

POTENTIOMETRIC MAP

SUMMERFIELD GRADING
WINFREE ROAD (SR 2313)
GUILFORD COUNTY, NORTH CAROLINA

PROJECT NO. G-4899

DRAWN BY/DATE
VST/11-09-01

CHECKED BY/DATE
JBL 11/12/01

FILENAME: g4899 base site plan

TABLES

TABLE 1
PIEZOMETER CONSTRUCTION DATA
Summerfield Grading
Winfree Road (SR 2313)
Guilford County, North Carolina
ECS Project G-4899

Piezometer ID	Date Constructed	Total Depth of Boring (feet)	Screen Interval (feet)	Casing Interval[1] (feet)	Sand Pack Interval (feet)	Bentonite Seal Interval (feet)
B-1	2-27-01	40.9	30.9 – 40.9	0 – 30.9	28.9 – 40.9	26.9 – 28.9
B-2	2-27-01	16.5	6.5 – 16.5	0 – 6.5	4.5 – 16.5	2.5 – 4.5
B-3	2-28-01	26.2	16.2 – 26.2	0 – 16.2	14.2 – 26.2	12.2 – 14.2
B-4	2-27-01	18.8	8.8 – 18.8	0 – 8.8	6.8 – 18.8	4.8 – 6.8
B-5	2-27-01	7.0	4.0 – 7.0	0 – 4.0	2.0 – 7.0	0 – 2.0
B-6	2-27-01	13.5	4.5 – 13.5	0 – 4.5	2.5 – 13.5	0 – 2.5
B-7	2-27-01	25.8	15.8 – 25.8	0 – 15.8	13.8 – 25.8	11.8 – 13.8
B-8	2-28-01	45.0	35.0 – 45.0	0 – 35.0	33.0 – 45.0	30.0 – 33.0
B-9	2-27-01	45.0	35.0 – 45.0	0 – 35.0	33.0 – 45.0	30.0 – 33.0

Notes:
All measurements are in feet below ground surface
[1] = Casing interval does not include length of pipe above ground surface

TABLE 2
DEPTH TO PARTIALLY WEATHERED ROCK
Summerfield Grading
Winfree Road (SR 2313)
Guilford County, North Carolina
ECS Project G-4899

Piezometer Identification	Depth to Partially Weathered Rock (feet)	Depth to Auger Refusal (feet)
B-1	39.0	40.9
B-2	16.5	16.5
B-3	14.5	26.2
B-4	7.0	18.8
B-5	1.0	7.0
B-6	6.5	13.5
B-7	19.0	25.8
B-8	9.5	Not Encountered
B-9	Not Encountered	Not Encountered

Notes:
All measurements are in feet below ground surface

TABLE 3
GROUNDWATER LEVELS IN PIEZOMETERS
Summerfield Grading
Winfree Road (SR 2313)
Guilford County, North Carolina
ECS Project G-4899

Piezometer ID	Referenced TOC Elevation	Water Level/ Elevation at Time of Boring (TOC)	Water Level/ Elevation at 24 Hours (TOC)	Water Level/ Elevation at 7 Days (TOC)
B-1	841.72	39.80 / 801.92	39.80 / 801.92	39.77 / 801.95
B-2	822.20	DRY	DRY	DRY
B-3	*	DRY	DRY	DRY
B-4	*	DRY	18.40 / *	18.04 / *
B-5	791.59	DRY	8.30 / 783.29	7.08 / 784.51
B-6	792.14	12.60 / 779.54	7.90 / 784.24	7.45 / 784.69
B-7	787.48	DRY	DRY	DRY
B-8	827.17	41.70 / 785.47	38.90 / 788.27	38.62 / 788.55
B-9	842.19	39.70 / 802.49	39.60 / 802.59	39.60 / 802.59

Notes:
All measurements are in feet measured from top of casing (TOC)
* = Elevations under evaluation
Referenced elevations measured by Evans Engineering, Inc.

APPENDIX

FIELD METHODS

Listed below are the standard field methods used during this project:

Soil Borings and Sampling

Soil borings were drilled using an ATV-mounted drilling rig equipped with 3¼-inch I.D. hollow stem augers. The borings for Piezometers P-1 through P-6 were drilled with the 3¼-inch I.D. hollow stem augers. The termination depth of each boring was selected based on encountering auger refusal or on indications of groundwater during drilling.

Soil samples were collected at 5-foot intervals starting at a depth of approximately 3.5 feet below the ground surface. The samples were collected in general accordance with ASTM D-1586 in several of the boreholes using a split-spoon sampler 18 inches long having an inside diameter of 1 3/4-inches. The sampler was initially seated 6 inches in the soil to penetrate any loose cuttings and then was driven an additional 12 inches with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final 12 inches was recorded and is designated the "penetration resistance". The penetration resistance, when properly evaluated, is an index to specific engineering properties of the soil (e.g., density). Soil test boring records showing soil descriptions (using the Unified Soil Classification System) and penetration resistances were completed for each of the borings and are included in Appendix B.

Piezometer Installation

The piezometers were installed in the existing borings drilled as discussed above. The borings for the piezometers were drilled to depths ranging from 7.0 feet below the ground surface (bgs) in boring B-5 to 45 feet bgs in borings B-8 and B-9. Upon completion of the borings, a 10-foot section of 1-inch diameter hand slotted PVC pipe with an end cap was lowered to the bottom of the borings to intersect the water table. Due to the shallow depth of auger refusal in borings B-5 (7.0 feet bgs) and B-6 (13.5 feet bgs), 3-foot and 9-foot sections were installed in the two borings, respectively. A solid section of 1-inch diameter PVC casing was placed above the slotted PVC and extended to a point just above the ground surface. The annular space around each well was filled with a washed and graded medium sand to approximately 1 to 2 feet above the top of the screen. A minimum 2-foot thick seal of bentonite pellets was placed immediately above the sand pack. After placement in the piezometer annulus, the bentonite pellets were allowed to hydrate approximately 30 minutes.

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-1	1 OF 2

PROJECT NAME	ARCHITECT-ENGINEER
SUMMERFIELD GRADING	EVANS ENGINEERING

SITE LOCATION
GREENSBORO, NORTH CAROLINA

ENGLISH UNITS

SURFACE ELEVATION 840.15

CALIBRATED PENETROMETER TONS/FT.^{2} (1 2 3 4 5+)

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % Δ (10 20 30 40 50+)

STANDARD PENETRATION BLOWS/FT. ⊗ (10 20 30 40 50+)

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0							
	1	SS	18	18	FILL: Medium Dense to Loose Greenish Brown Silty Fine to Medium SAND With Rock Fragments, Moist (FILL)		15
	2	SS	18	10			6
5						835	
	3	SS	18	18	RESIDUAL: Stiff to Medium Stiff Orangish Red Fine to Medium Sandy SILT With Mica, Moist (ML)		12
	4	SS	18	18			12
10						830	
	5	SS	18	18			7
15						825	
	6	SS	18	18	Loose Orangish Tan Silty Fine to Medium SAND, Moist (SM)		8
20						820	
	7	SS	18	18			7
25						815	
	8	SS	18	18	Loose to Medium Dense, Orangish Tan Silty Fine to Medium SAND With Trace Rock Fragments and Mica, Moist (SM)		9
30							

CONTINUED ON NEXT PAGE.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 39.8' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▼ 39.8' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 39.77' @ 24 HRS FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-1	2 OF 2
PROJECT NAME	**ARCHITECT-ENGINEER**		
SUMMERFIELD GRADING	EVANS ENGINEERING		

SITE LOCATION: GREENSBORO, NORTH CAROLINA

CALIBRATED PENETROMETER TONS/FT.^{2}: 1 2 3 4 5+

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % △: 10 20 30 40 50+

STANDARD PENETRATION BLOWS/FT. ⊗: 10 20 30 40 50+

ENGLISH UNITS

SURFACE ELEVATION 840.15

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)
30					Loose to Medium Dense, Orangish Tan Silty Fine to Medium SAND With Trace Rock Fragments and Mica, Moist (SM)	
35	9	SS	18	18		835
	10	SS	5	5	PARTIALLY WEATHERED ROCK: Tan Silty Fine to Medium SAND, Moist (PWR)	
40					AUGER REFUSAL @ 40.9'	830
45						825
50						820
55						815
60						

⊗ 14

⊗ 50/5"

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 39.8' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▼ 39.8' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 39.77' @ 24 HRS FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-2	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
SUMMERFIELD GRADING	EVANS ENGINEERING

SITE LOCATION
GREENSBORO, NORTH CAROLINA

ECS LTD

CALIBRATED PENETROMETER TONS/FT.^{2}
1 2 3 4 5+

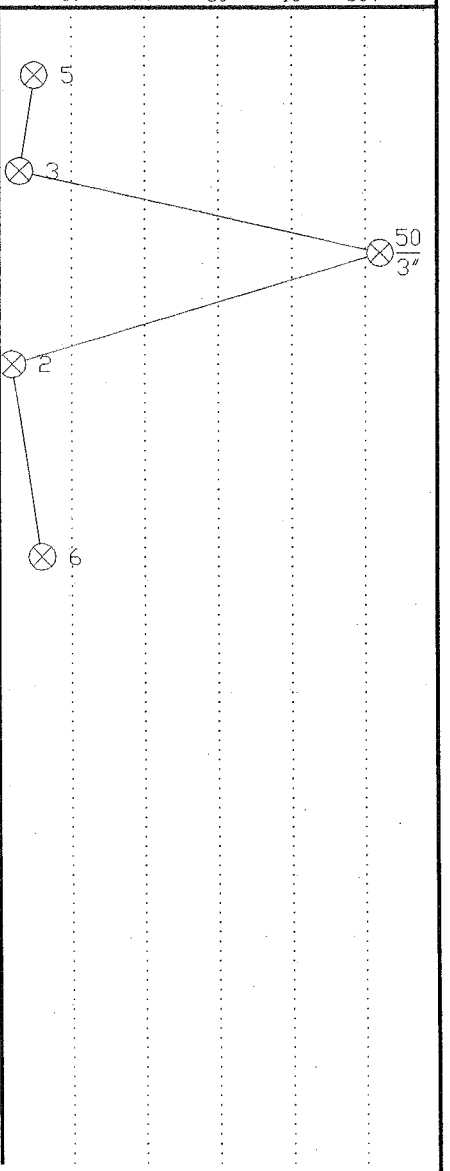
PLASTIC LIMIT % X — WATER CONTENT % ● — LIQUID LIMIT % △
10 20 30 40 50+

STANDARD PENETRATION BLOWS/FT. ⊗
10 20 30 40 50+

ENGLISH UNITS

SURFACE ELEVATION 820.40

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)
0							820
	1	SS	18	18	FILL: Medium Stiff, Yellowish Brown Fine to Medium Sandy SILT With Roots and Mica, Moist (FILL)		
	2	SS	18	0	FILL: Soft Brown Fine Sandy Clayey SILT With Asphalt Debris, (FILL)		
5							815
	3	SS	9	6	FILL: Moist Brown Silty Fine to Medium SAND With Trace Roots, Mica and Rock Fragments, Moist (FILL)		
	4	SS	18	8	FILL: Very Soft to Medium Stiff Brown and Gray Fine to Medium Sandy Clayey SILT With Debris and Mica, Moist (FILL)		
10							810
	5	SS	18	8			
15							805
					AUGER REFUSAL @ 16.5'		
20							800
25							795
30							



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ DRY @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▼ DRY @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ DRY @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-3	1 OF 1

PROJECT NAME: SUMMERFIELD GRADING

ARCHITECT-ENGINEER: EVANS ENGINEERING

SITE LOCATION: GREENSBORO, NORTH CAROLINA

ENGLISH UNITS

SURFACE ELEVATION: UNDER EVALUATION

CALIBRATED PENETROMETER TONS/FT.^{2} (1, 2, 3, 4, 5+)

PLASTIC LIMIT % X ——— WATER CONTENT % ——— LIQUID LIMIT % Δ (10, 20, 30, 40, 50+)

STANDARD PENETRATION BLOWS/FT. ⊗ (10, 20, 30, 40, 50+)

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0								
	1	SS	18	4	FILL: Soft to Medium Stiff Brownish Tan and White Fine to Medium Sandy Clayey SILT With Roots, Moist (FILL)			3
	2	SS	18	18				7
5					RESIDUAL: Medium Dense Orange and Tan Silty Fine to Medium SAND With Mica and Black Inclusions, Moist (SM)			
	3	SS	18	18				13
	4	SS	18	18				13
10								
	5	SS	11	8	PARTIALLY WEATHERED ROCK: Gray and Tan Silty Fine to Medium SAND With Mica, Moist (PWR)			50/5"
15								
					RESIDUAL: Dense Tan White Silty Fine to Medium SAND With Rock Fragments, Moist (SM)			
	6	SS	18	16				42
20								
					PARTIALLY WEATHERED ROCK: Tan and White Silty Fine to Medium SAND, Moist (PWR)			
	7	SS	5	5				50/5"
25								
					AUGER REFUSAL @ 26.2'			
30								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ DRY @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ DRY @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ DRY @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-4	1 OF 1
PROJECT NAME	**ARCHITECT-ENGINEER**		
SUMMERFIELD GRADING	EVANS ENGINEERING		

ECS LTD

SITE LOCATION
GREENSBORO, NORTH CAROLINA

ENGLISH UNITS

SURFACE ELEVATION UNDER EVALUATION

CALIBRATED PENETROMETER TONS/FT.^{2} (1 2 3 4 5+)

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % Δ (10 20 30 40 50+)

STANDARD PENETRATION BLOWS/FT. (⊗) (10 20 30 40 50+)

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0							
	1	SS	18	18	FILL: Loose Brown and Tan Silty Fine to Medium SAND With Mica, Moist (FILL)		4
	2	SS	18	18	RESIDUAL: Medium Dense Tan and White Silty Fine to Coarse SAND With Rock Fragments, Moist (SM)		22
5	3	SS	12	12	PARTIALLY WEATHERED ROCK: Brown and White Fine to Medium Sandy SILT With Mica, Moist (PWR)		50/6"
	4	SS	3	3	PARTIALLY WEATHERED ROCK: Tan Silty Fine to Medium SAND, Moist (PWR)		50/3"
10							
	5	SS	5	5			50/5"
15						▽	
	6	SS	0	0			50/0.5"
20					AUGER REFUSAL @ 18.8'		
25							
30							

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ DRY @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ 18.4' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 18.04' @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-5	1 OF 1
PROJECT NAME	**ARCHITECT-ENGINEER**		
SUMMERFIELD GRADING	EVANS ENGINEERING		

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SITE LOCATION
GREENSBORO, NORTH CAROLINA

CALIBRATED PENETROMETER TONS/FT.^{2}
1 2 3 4 5+

PLASTIC LIMIT % X — WATER CONTENT % ⊕ — LIQUID LIMIT % △
10 20 30 40 50+

STANDARD PENETRATION BLOWS/FT. ⊗
10 20 30 40 50+

ENGLISH UNITS

SURFACE ELEVATION 789.90

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0					PARTIALLY WEATHERED ROCK: Tan Silty Fine to Coarse SAND, Moist (PWR)			
	1	SS	1	1				50/1"
	2	SS	1	1				50/1"
5						▽	785	
	3	SS	0	0				50/0.5"
					AUGER REFUSAL @ 7.0'			
10							780	
15							775	
20							770	
25							765	
30								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ DRY @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ 8.3' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 7.08' @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-6	1 OF 1
PROJECT NAME	**ARCHITECT-ENGINEER**		
SUMMERFIELD GRADING	EVANS ENGINEERING		

SITE LOCATION: GREENSBORO, NORTH CAROLINA

ENGLISH UNITS

SURFACE ELEVATION 786.49

CALIBRATED PENETROMETER TONS/FT.^{2} (1 2 3 4 5+)

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % △ (10 20 30 40 50+)

STANDARD PENETRATION BLOWS/FT. ⊗ (10 20 30 40 50+)

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0						785	
	1	SS	18	18	FILL: Very Stiff Orangish Brown Fine to Medium Sandy SILT With Mica, Moist (FILL)		27
	2	SS	18	18			20
5							
	3	SS	5	5	PARTIALLY WEATHERED ROCK: Tan Silty Fine to Medium SAND With Trace Rock and Mica, Moist (PWR)	780	50/5"
	4	SS	18	16	RESIDUAL: Very Hard Orangish Tan and White Fine to Medium Sandy SILT, Moist (ML)		52
10						775	
	5	SS	0	0	AUGER REFUSAL @ 13.5'		50/0"
15						770	
20						765	
25						760	
30							

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 12.6' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ 7.9' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH ®
▽ 7.45' @ 7 HRS FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-7	1 OF 1
PROJECT NAME	**ARCHITECT-ENGINEER**		
SUMMERFIELD GRADING	EVANS ENGINEERING		

ECS LTD

SITE LOCATION: GREENSBORO, NORTH CAROLINA

CALIBRATED PENETROMETER TONS/FT.^{2}: 1 2 3 4 5+

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % △: 10 20 30 40 50+

STANDARD PENETRATION BLOWS/FT. ⊗: 10 20 30 40 50+

ENGLISH UNITS

SURFACE ELEVATION 785.16

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0					FILL: Medium Stiff Brownish Tan Fine to Medium Sandy Clayey SILT With Roots and Coarse Sand, Moist (FILL)		
	1	SS	18	18			7
	2	SS	18	18			8
5					RESIDUAL: Stiff to Hard Tan and White Silty Fine to Medium SAND, Moist (SM)	780	
	3	SS	18	10			15
	4	SS	18	16			16
10						775	
	5	SS	18	16			34
15					PARTIALLY WEATHERED ROCK: Tan and White Fine Silty Fine to Medium SAND, Moist (PWR)	770	
	6	SS	5	5			50/5"
20						765	
	7	SS	3	3			50/3"
25						760	
					AUGER REFUSAL @ 25.8'		
30							

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ DRY @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ DRY @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ DRY @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-8	1 OF 2

PROJECT NAME	ARCHITECT-ENGINEER
SUMMERFIELD GRADING	EVANS ENGINEERING

SITE LOCATION: GREENSBORO, NORTH CAROLINA

ENGLISH UNITS

SURFACE ELEVATION 825.36

CALIBRATED PENETROMETER TONS/FT.^{2} (1, 2, 3, 4, 5+)

PLASTIC LIMIT % (X) — WATER CONTENT % — LIQUID LIMIT % (Δ) (10, 20, 30, 40, 50+)

STANDARD PENETRATION BLOWS/FT. (⊗) (10, 20, 30, 40, 50+)

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0					FILL: Loose Orangish Tan Silty Fine to Medium SAND With Roots and Mica, Moist (FILL)	825	
	1	SS	18	18			6
	2	SS	18	18	RESIDUAL: Very Dense Orange and Gray Silty Fine to Medium SAND With Mica, Moist (SM)		60
5						820	
	3	SS	18	16			77
	4	SS	10	7	PARTIALLY WEATHERED ROCK: Tan and White Silty Fine to Medium SAND, Moist (PWR)		50/4"
10						815	
	5	SS	12	10			50/6"
15						810	
	6	SS	10	10			50/4"
20						805	
	7	SS	18	16	RESIDUAL: Very Dense Tan and White Silty Fine to Medium SAND, Moist (SM)		63
25					PARTIALLY WEATHERED ROCK: Tan, White and Gray Silty Fine to Medium SAND (PWR)	800	
	8	SS	11	8			50/5"
30							

CONTINUED ON NEXT PAGE.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 41.7' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▼ 38.9' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 36.62' @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-8	2 OF 2

PROJECT NAME	ARCHITECT-ENGINEER
SUMMERFIELD GRADING	EVANS ENGINEERING

SITE LOCATION
GREENSBORO, NORTH CAROLINA

ECS LTD

CALIBRATED PENETROMETER TONS/FT.^{2}
1 2 3 4 5+

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % △
10 20 30 40 50+

STANDARD PENETRATION BLOWS/FT. ⊗
10 20 30 40 50+

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)
					ENGLISH UNITS	
					SURFACE ELEVATION 825.36	
30					PARTIALLY WEATHERED ROCK: Tan, White and Gray Silty Fine to Medium SAND (PWR)	825
					RESIDUAL: Dense Red, White, Orange and Tan Silty Fine to Medium SAND With Quartz Fragments, Moist (SM)	
35	9	SS	18	18		820
	10	SS	18	18		815
40	11	SS	18	17		
45					END OF BORING @ 45.0'	810
50						805
55						800
60						

⊗ 32
⊗ 31
⊗ 40

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 41.7' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ 38.9' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 36.62' @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-9	1 OF 2
PROJECT NAME	ARCHITECT-ENGINEER		
SUMMERFIELD GRADING	EVANS ENGINEERING		

SITE LOCATION
GREENSBORO, NORTH CAROLINA

ENGLISH UNITS

SURFACE ELEVATION 839.70

CALIBRATED PENETROMETER TONS/FT.^{2} (1 2 3 4 5+)

PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % Δ (10 20 30 40 50+)

STANDARD PENETRATION BLOWS/FT. ⊗ (10 20 30 40 50+)

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)	STANDARD PENETRATION BLOWS/FT.
0					FILL: Very Stiff Red, Tan and Gray Fine to Medium Sandy Clayey SILT With Rock Fragments, Mica and Roots, Moist (FILL)		
	1	SS	18	18			28
	2	SS	18	18	FILL: Medium Stiff to Stiff Tan and Gray Fine to Medium Sandy Clayey SILT With Rock Fragments, Mica and Roots, Moist (FILL)	835	7
5	3	SS	18	18			9
	4	SS	18	18		830	11
10							
	5	SS	18	18		825	14
15							
	6	SS	18	10		820	6
20					RESIDUAL: Dense Orangish Tan Silty Fine to Medium SAND, Moist (SM)		
	7	SS	18	10		815	30
25					Medium Dense Gray Orange White Silty Fine to Medium SAND With Mica, Moist (SM)		
	8	SS	18	18		810	13
30							

CONTINUED ON NEXT PAGE.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 39.7' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ 39.6' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH ®
▽ 39.6' @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

CLIENT	JOB #	BORING #	SHEET
SUMMERFIELD GRADING	G-4899	B-9	2 OF 2
PROJECT NAME	**ARCHITECT-ENGINEER**		
SUMMERFIELD GRADING	EVANS ENGINEERING		

ECS LTD

SITE LOCATION
GREENSBORO, NORTH CAROLINA

CALIBRATED PENETROMETER TONS/FT.^{2}
1 2 3 4 5+
PLASTIC LIMIT % X — WATER CONTENT % — LIQUID LIMIT % Δ
10 20 30 40 50+
STANDARD PENETRATION BLOWS/FT.
10 20 30 40 50+

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS ELEVATION (FT)
					ENGLISH UNITS	
					SURFACE ELEVATION 839.70	
30					Medium Dense Gray Orange White Silty Fine to Medium SAND With Mica, Moist (SM)	
35	9	SS	18	18		835
	10	SS	18	9		830
40					Very Dense Gray, Orange and White Silty Fine to Medium SAND With Mica, Moist (SM)	
45	11	SS	18	10		825
					END OF BORING @ 45.0'	
50						820
55						815
60						810

25
10
53

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

▽ 39.7' @ TOB FROM TOC	BORING STARTED 02-27-01	TOPSOIL DEPTH 0"
▽ 39.6' @ 24 HRS FROM TOC	BORING COMPLETED 02-27-01	CAVE IN DEPTH @
▽ 39.6' @ 7 DAY FROM TOC	RIG CME550X FOREMAN AMERIDRILL	DRILLING METHOD HSA

JOB NAME: SUMMERFIELD GRADING

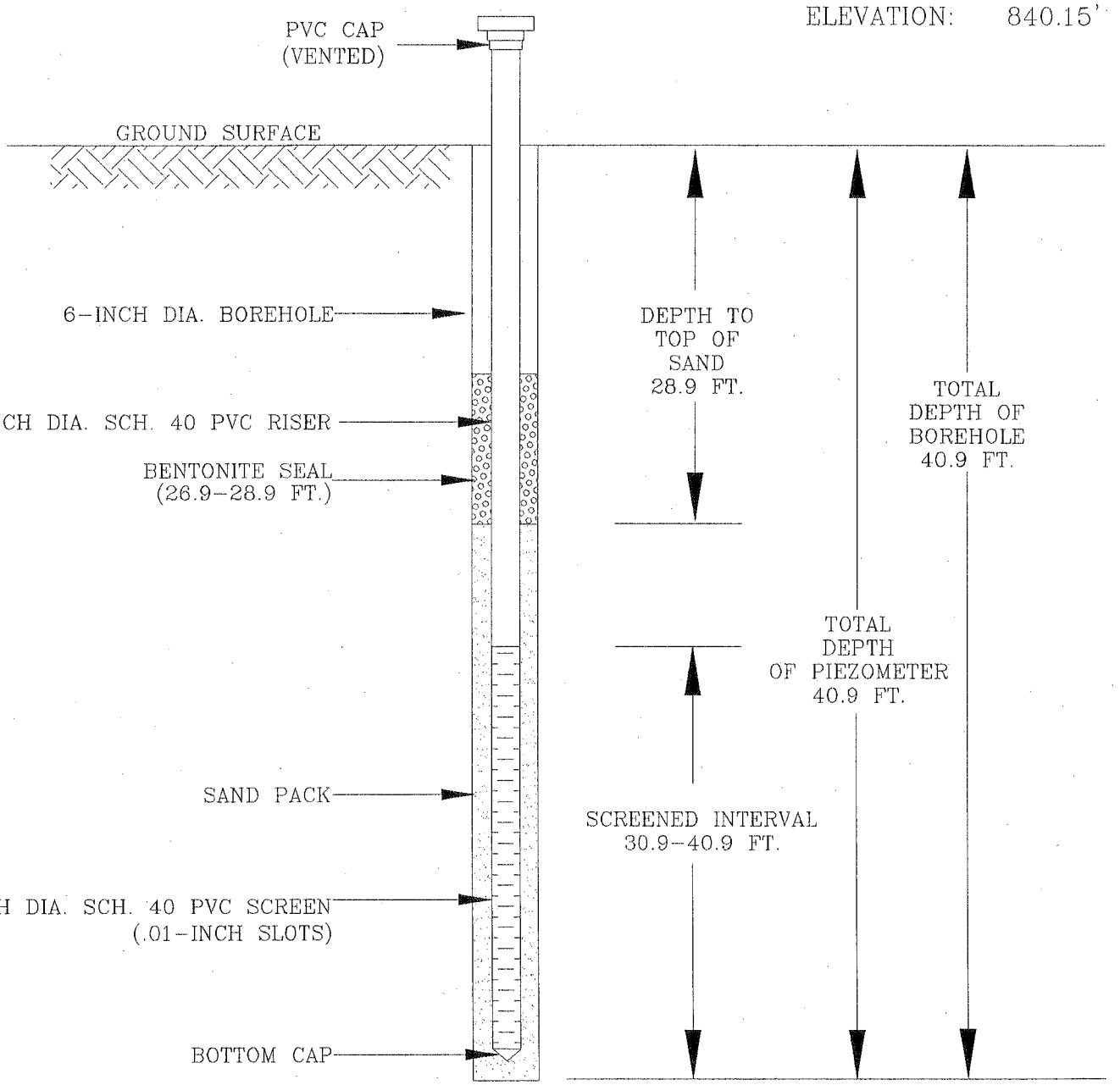
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-1

TOP OF CASING ELEVATION: 841.72' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 840.15'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

ECS LTD

ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

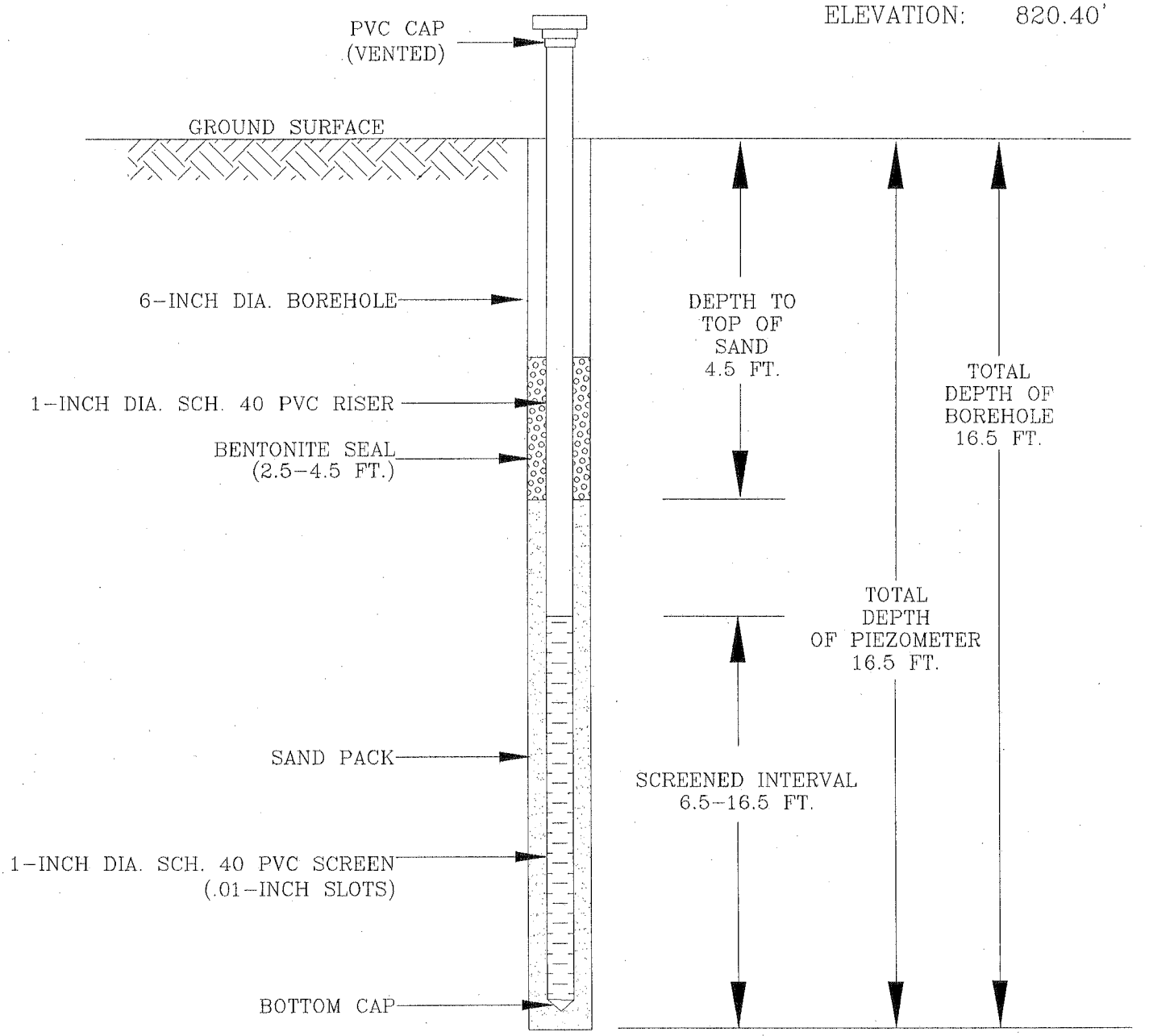
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-2

TOP OF CASING ELEVATION: 822.20' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 820.40'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

ECS LTD

ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

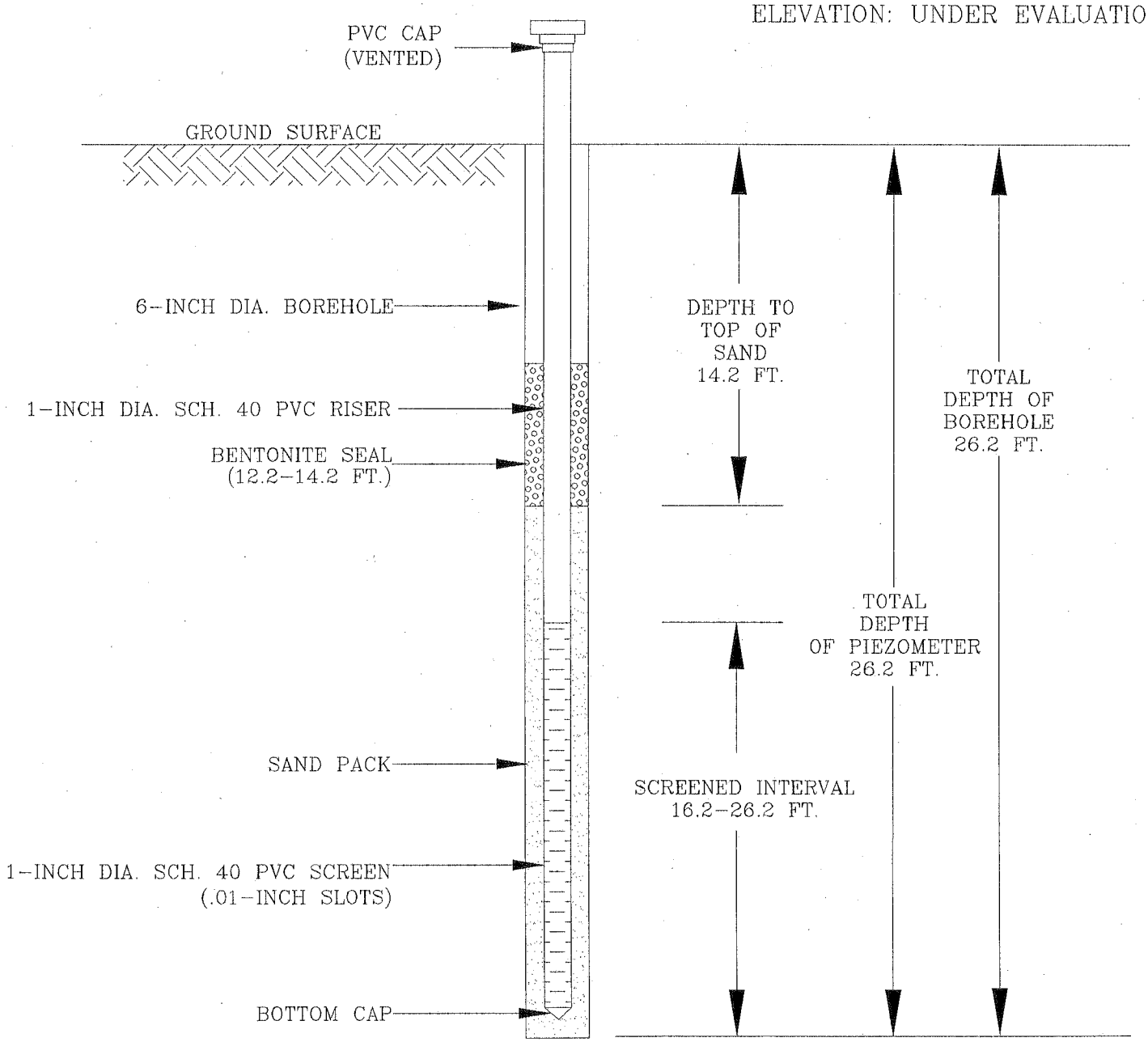
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-3

TOP OF CASING ELEVATION: UNDER EVALUATION (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: UNDER EVALUATION



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

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ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

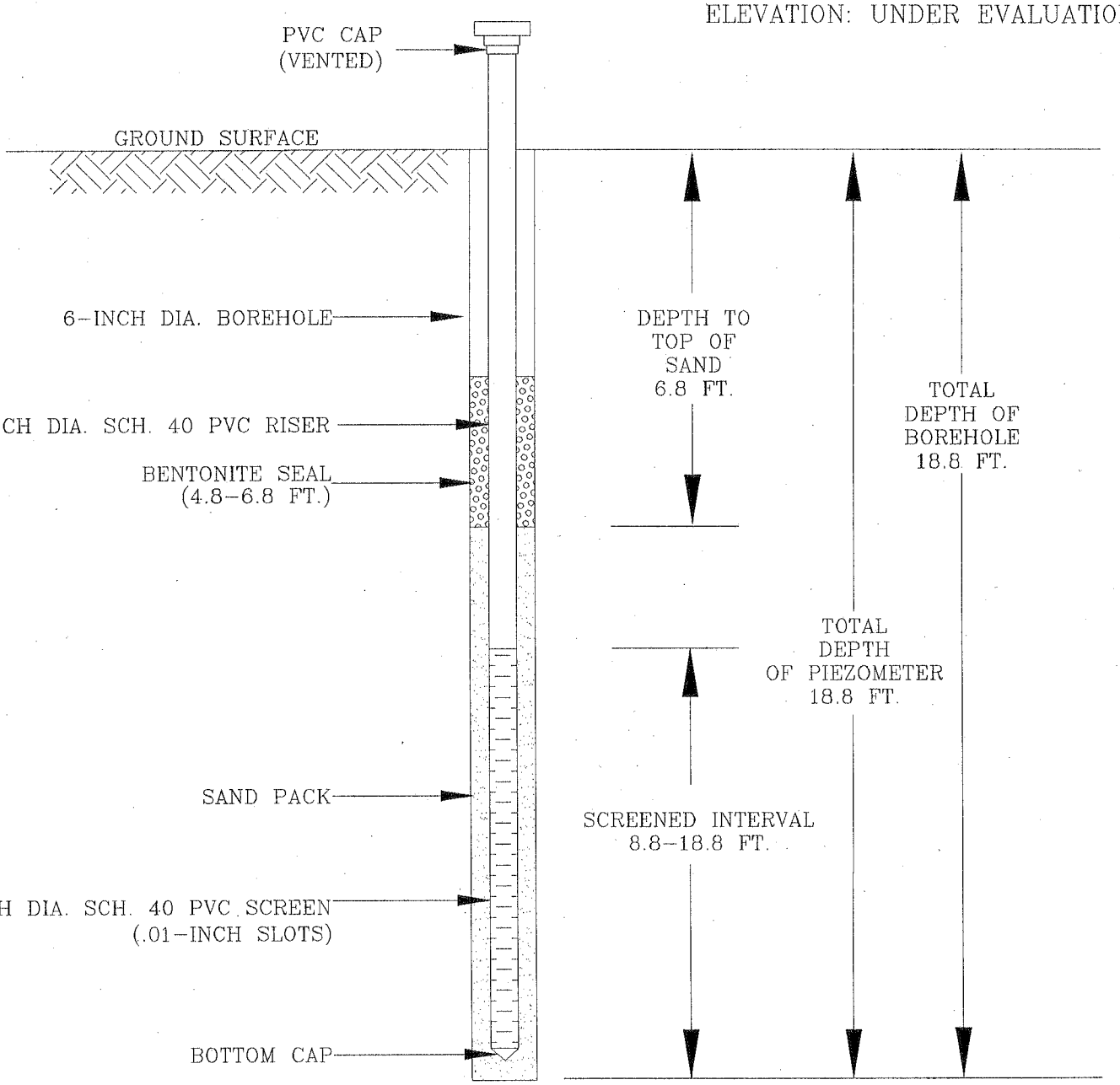
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-4

TOP OF CASING ELEVATION: UNDER EVALUATION (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: UNDER EVALUATION



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

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PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

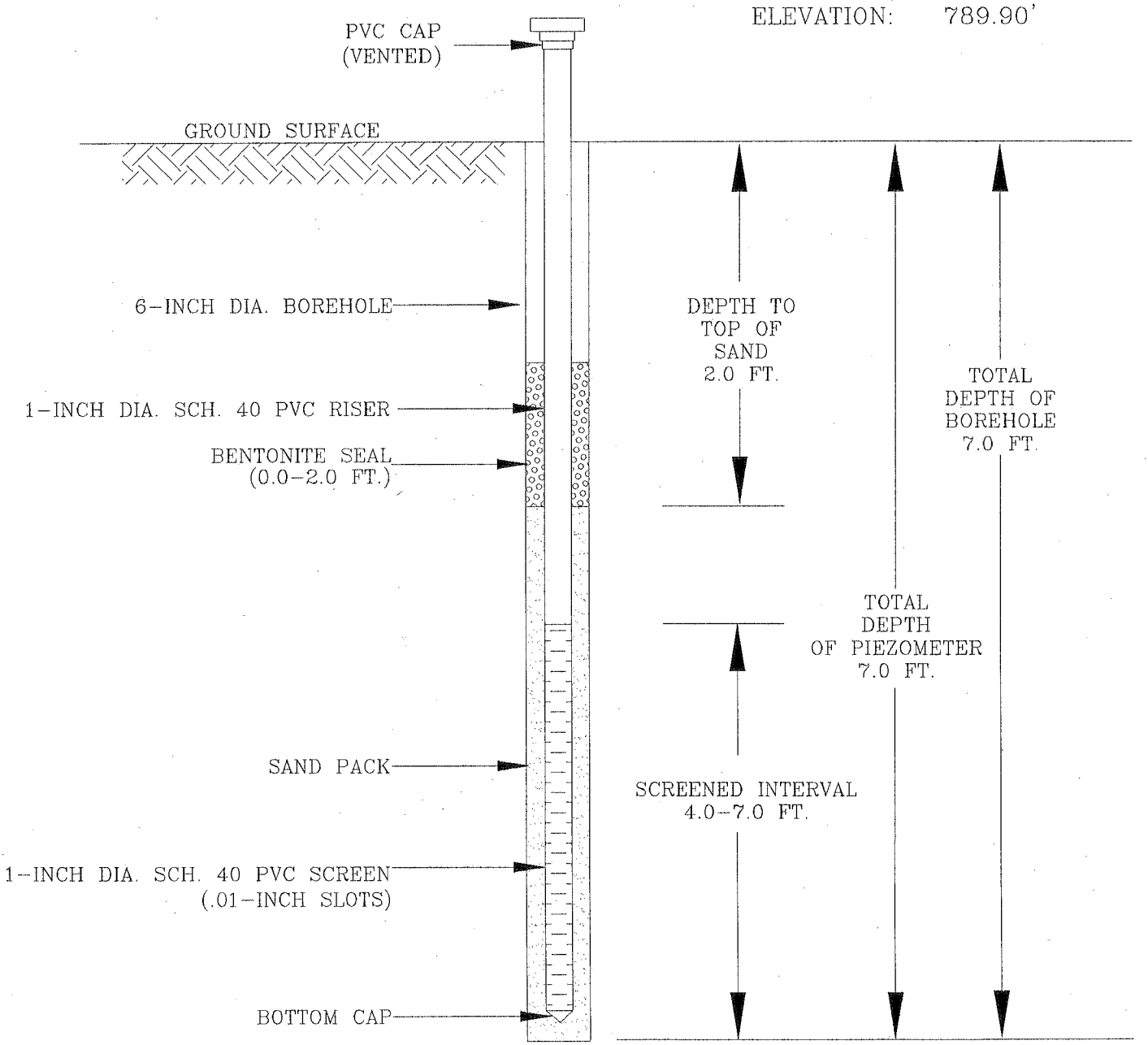
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-5

TOP OF CASING ELEVATION: 791.59' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 789.90'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

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ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

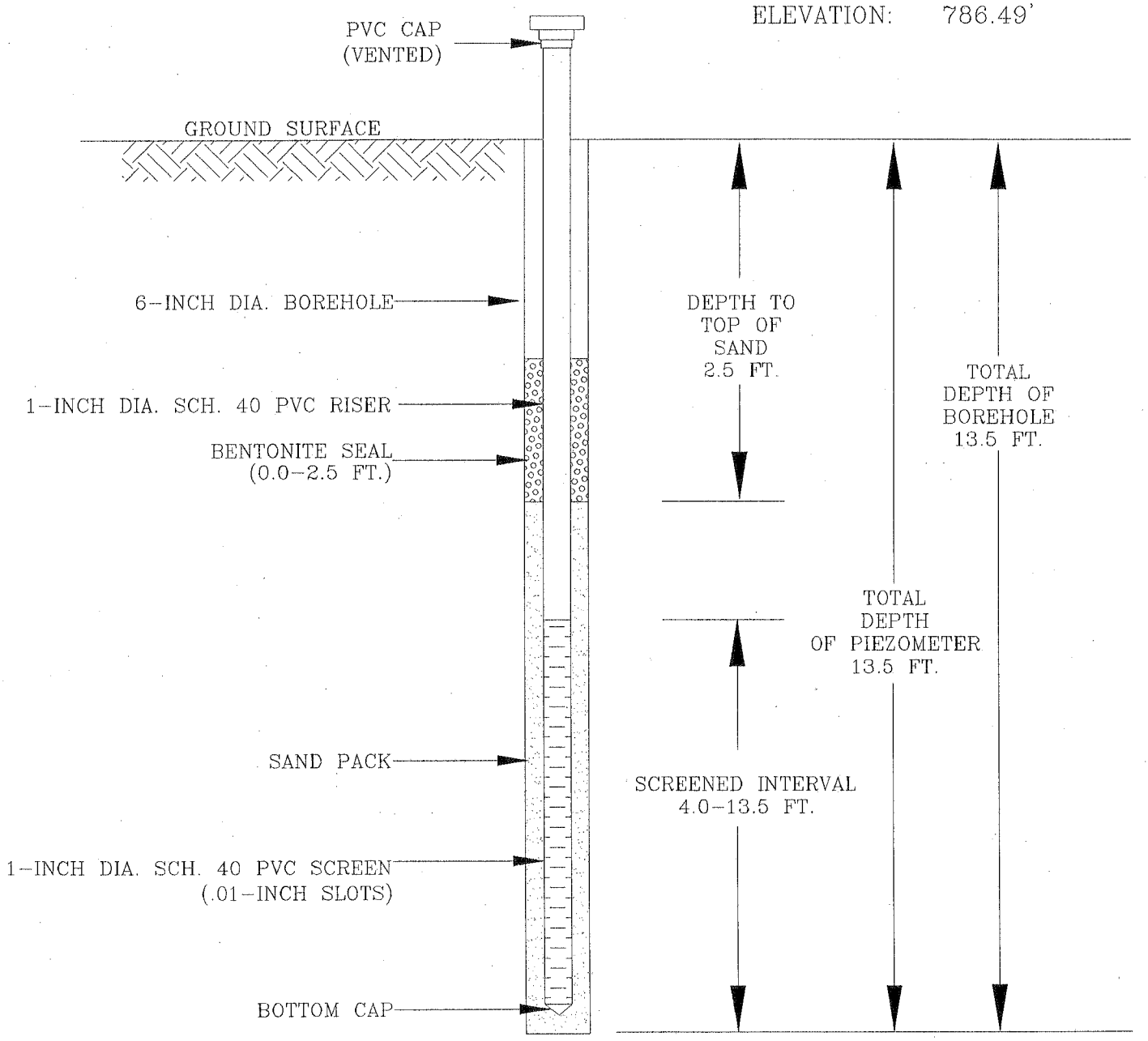
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-6

TOP OF CASING ELEVATION: 792.14' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 786.49'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

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PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

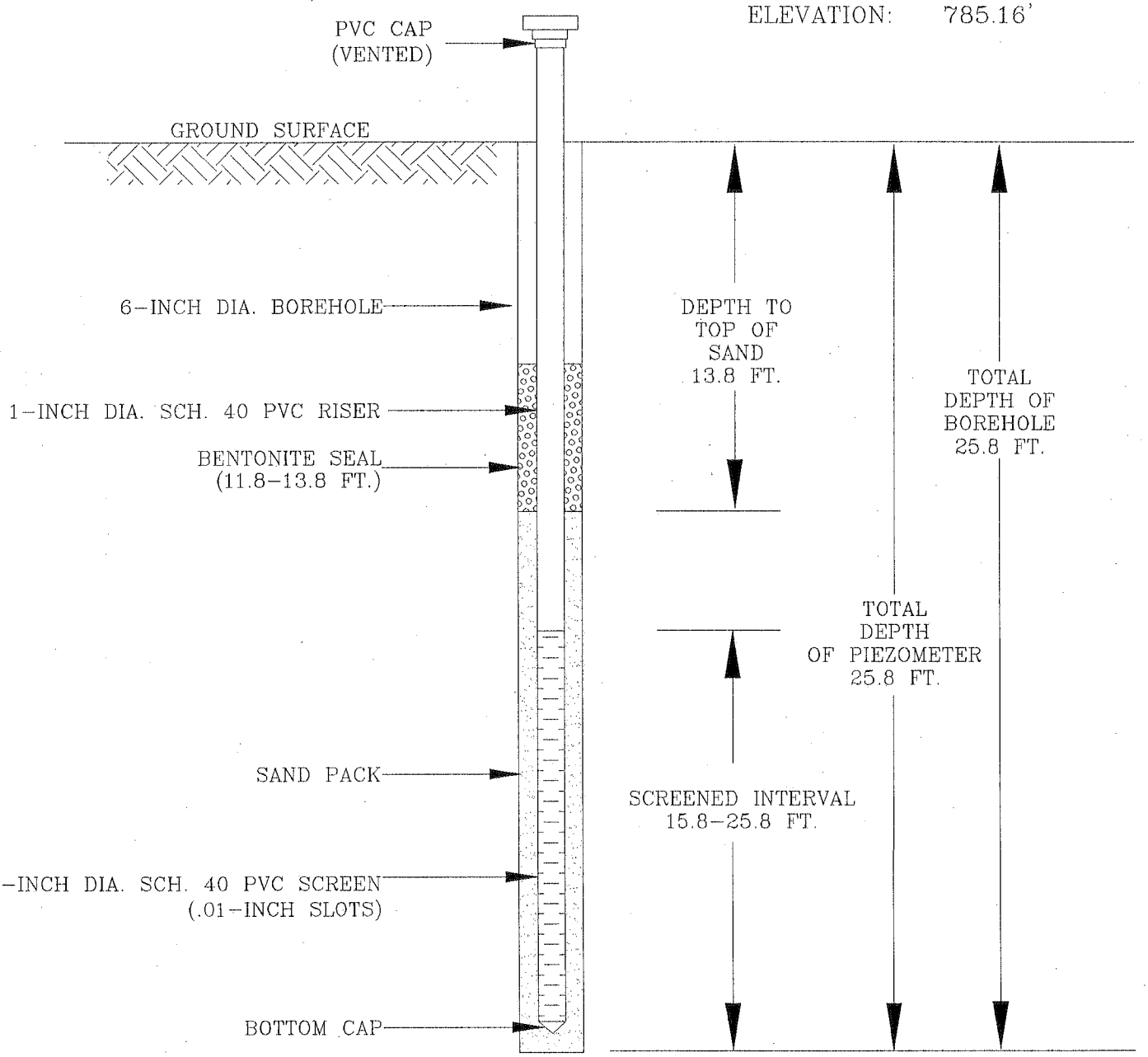
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-7

TOP OF CASING ELEVATION: 787.48' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 785.16'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

ECS LTD

ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

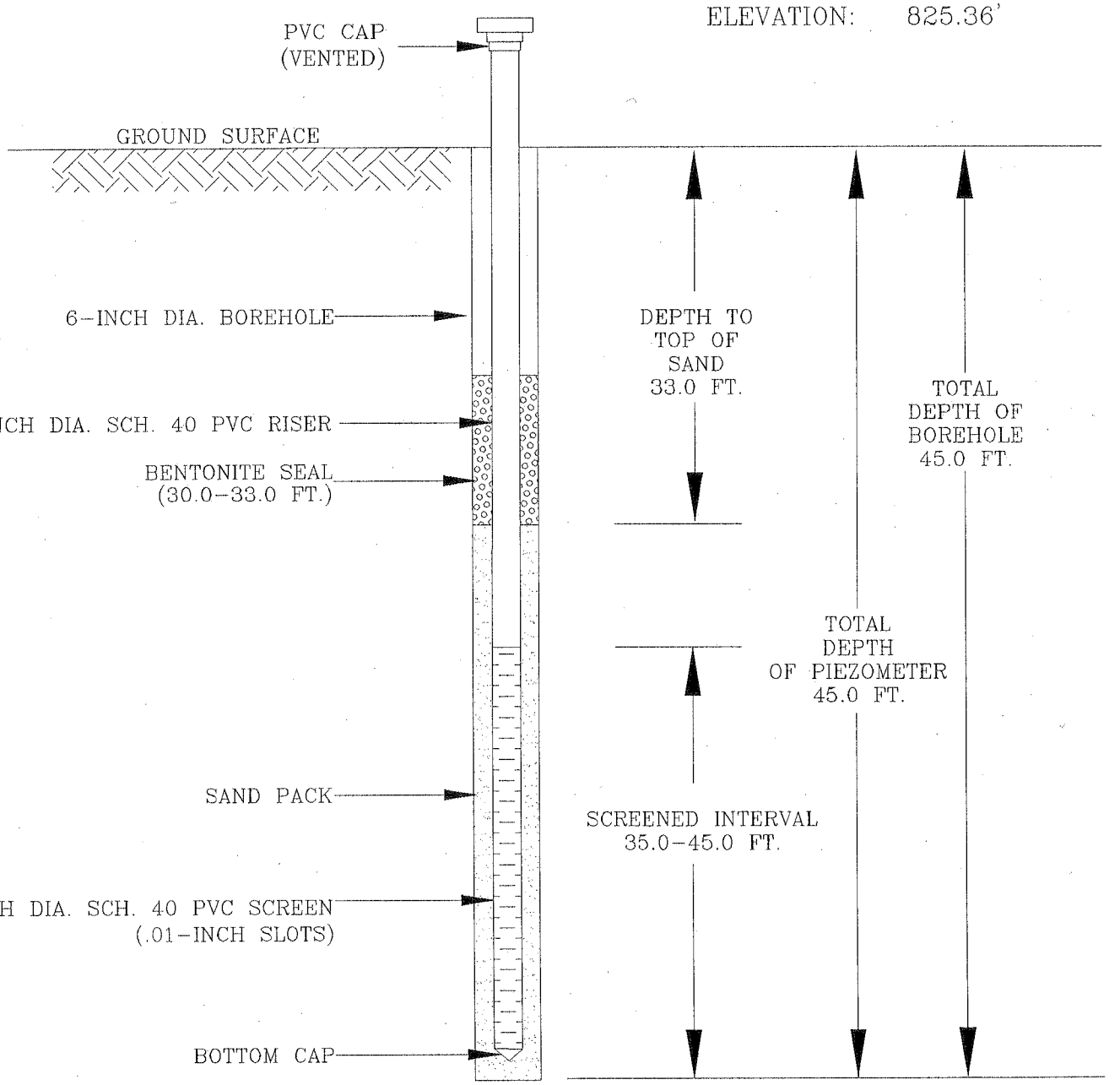
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-8

TOP OF CASING ELEVATION: 827.17' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 825.36'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

ECS LTD

ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

JOB NAME: SUMMERFIELD GRADING

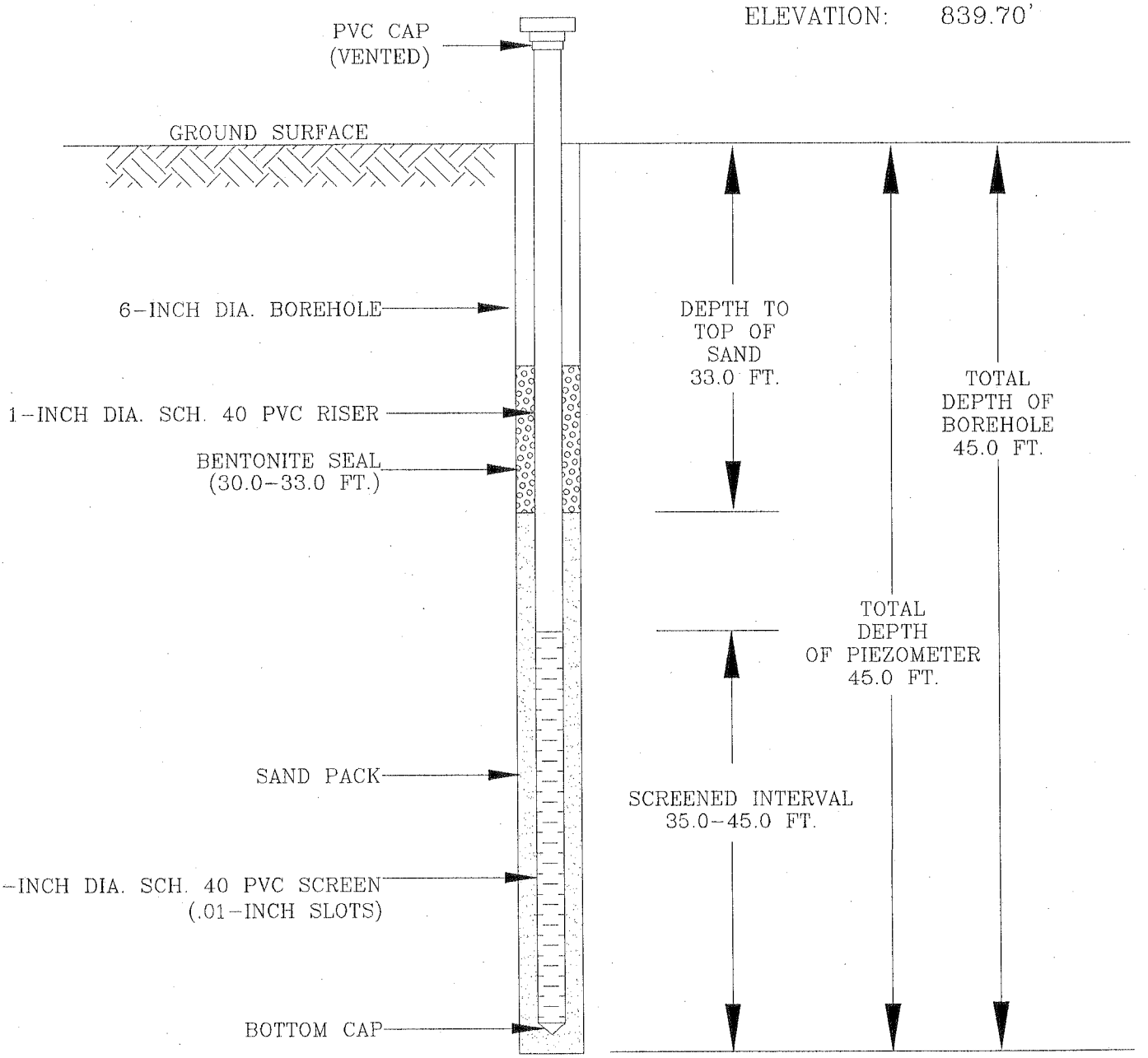
JOB NUMBER: G-4899

PIEZOMETER NUMBER: B-9

TOP OF CASING ELEVATION: 842.19' (T.O.C.)

LOCATION: GUILFORD COUNTY, NORTH CAROLINA

GROUND SURFACE ELEVATION: 839.70'



NOTE: ALL PVC JOINTS ARE FLUSH THREADED

ECS LTD

ENGINEERING CONSULTING SERVICES, LTD

PIEZOMETER CONSTRUCTION DIAGRAM

OPERATIONAL REQUIREMENTS FOR THIS L.C.I.D. LANDFILL

1. OPERATIONAL PLANS SHALL BE APPROVED AND FOLLOWED AS SPECIFIED FOR THIS FACILITY.
2. THIS FACILITY IS PERMITTED TO EXCEPT DISPOSAL OF LAND CLEARING WASTE, CONCRETE, BRICK, CONCRETE BLOCK, UNCONTAMINATED SOIL, GRAVEL AND ROCK, UNTREATED AND UNPAINTED WOOD, AND YARD TRASH. YARD TRASH IS DEFINED AS SOLID WASTE RESULTING FROM LANDSCAPING AND YARD MAINTENANCE SUCH AS GRASS, TREE LIMBS AND SIMILAR MATERIAL.
3. WASTE SHALL BE RESTRICTED TO THE SMALLEST AREA FEASIBLE AND COMPACTED AS DENSELY AS PRACTICAL INTO CELLS.
4. ADEQUATE SOIL COVER SHALL BE APPLIED MONTHLY, OR WHEN THE ACTIVE AREA REACHES ONE ACRE IN SIZE, WHICHEVER OCCURS FIRST.
5. 120 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF DISPOSAL OPERATIONS, OR UPON REVOCATION OF A PERMIT, THE DISPOSAL AREA SHALL BE COVERED WITH A MINIMUM OF (2) TWO FEET* OF SUITABLE SOIL COVER SLOPED TO ALLOW SURFACE WATER RUNOFF IN A CONTROLLED MANNER. THE DIVISION MAY REQUIRE FURTHER ACTION IN ORDER TO CORRECT ANY CONDITION WHICH IS OR MAY BECOME INJURIOUS TO THE PUBLIC HEALTH, OR A NUISANCE TO THE COMMUNITY (*GUILFORD COUNTY REQUIRES (2) TWO FEET OF COVER).
6. ADEQUATE EROSION CONTROL MEASURES, STRUCTURES, OR DEVICES SHALL BE UTILIZED TO PREVENT SILT FROM LEAVING THE SITE AND TO PREVENT EXCESSIVE ON-SITE EROSION.
7. THE DEADLINES FOR THE ESTABLISHMENT OF A GROUND COVER SHALL BE 15 WORKING DAYS AND 30 CALENDAR DAYS FOR TEMPORARY GROUND COVER (SLOPES) AND 15 WORKING DAYS AND 90 CALENDAR DAYS FOR PERMANENT GROUND COVER.
8. THIS FACILITY SHALL BE ADEQUATELY SECURED BY MEANS OF GATES, CHAINS, BERMS, FENCES, ETC. TO PREVENT UNAUTHORIZED ACCESS EXCEPT WHEN AN OPERATOR IS ON DUTY. AN ATTENTENT SHALL BE ON DUTY AT ALL TIMES WHILE THE LANDFILL IS OPEN FOR PUBLIC USE TO ASSURE COMPLIANCE WITH THE OPERATIONAL REQUIREMENTS AND TO PREVENT ACCEPTANCE OF UNAUTHORIZED WASTES.
9. ACCESS ROADS SHALL BE OF ALL-WEATHER CONSTRUCTION AND PROPERLY MAINTAINED.
10. ANY SURFACE WATER SHALL BE DIVERTED FROM THE WORKING FACE AND SHALL NOT BE IMPOUNDED OVER WASTE.
11. SOLID WASTE SHALL NOT BE DISPOSED OF IN WATER.
12. OPEN BURNING OF SOLID WASTE IS PROHIBITED.
13. THE CONSENTRATION OF EXPLOSIVE GASES GENERATED BY THIS FACILITY SHALL NOT EXCEED:
    (a) TWENTY-FIVE PERCENT OF THE LOWER LIMIT FOR THE GASES IN THE FACILITY STRUCTURES.
    (b) THE LOWER EXPLOSIVE LIMIT FOR THE GASES AT THE PROPERTY BOUNDARY.
14. LEACHATE SHALL BE PROPERLY MANAGED ON-SITE THROUGH THE USE OF CURRENT BEST MANAGEMENT PRATICES.
15. SHOULD THE DIVISION DEEM IT NECESSARY, GROUND WATER OR SURFACE WATER MONITORING, OR BOTH, MAY BE REQUIRED AS PROVIDED FRO UNDER RULES .0601 AND .0602 OF THE NORTH CAROLINA SOLID WASTE MANAGEMENT RULES.
16. A SIGN SHALL BE POSTED AT THE FACILITY ENTRANCE SHOWING THE CONTACT NAME AND NUMBER IN CASE OF AN EMERGENCY AND THE PERMIT NUMBER.
17. OPERATION OF THIS FACILITY SHALL CONFORM TO THE NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT RULES AND REGULATIONS.
18. THE FINAL SLOPE OF THE L.C.I.D. LANDFILL SHALL BE A MAXIMIN OF A 3:1 SLOPE.
19. VEHICLES SHALL NOT EXCEED SAFE SPEEDS FOR THE MATERIALS BEING HAULED AND SHALL BE COVERED OR SECURED WITH SUITABLE DEVICES WHEN ON THE PUBLIC ROADWAY.
20. THE SITE MUST BE INSPECTED BY THE OWNER/OPERATOR AT LEAST ONCE EVERY TEN WORKING DAYS.
21. EFFECTIVE VECTOR CONTROL MEASURES SHALL BE APPLIED TO CONTROL FLIES, RODENTS AND OTHER INSECTS OR VERMON WHEN NECESSARY.
22. NO HAZARDOUS MATERIALS OR INFECTIOUS WASTE SHALL BE ACCEPTED OR DISPOSED OF IN THE LANDFILL.

CLOSURE REQUIREMENTS FOR THIS L.C.I.D. LANDFILL

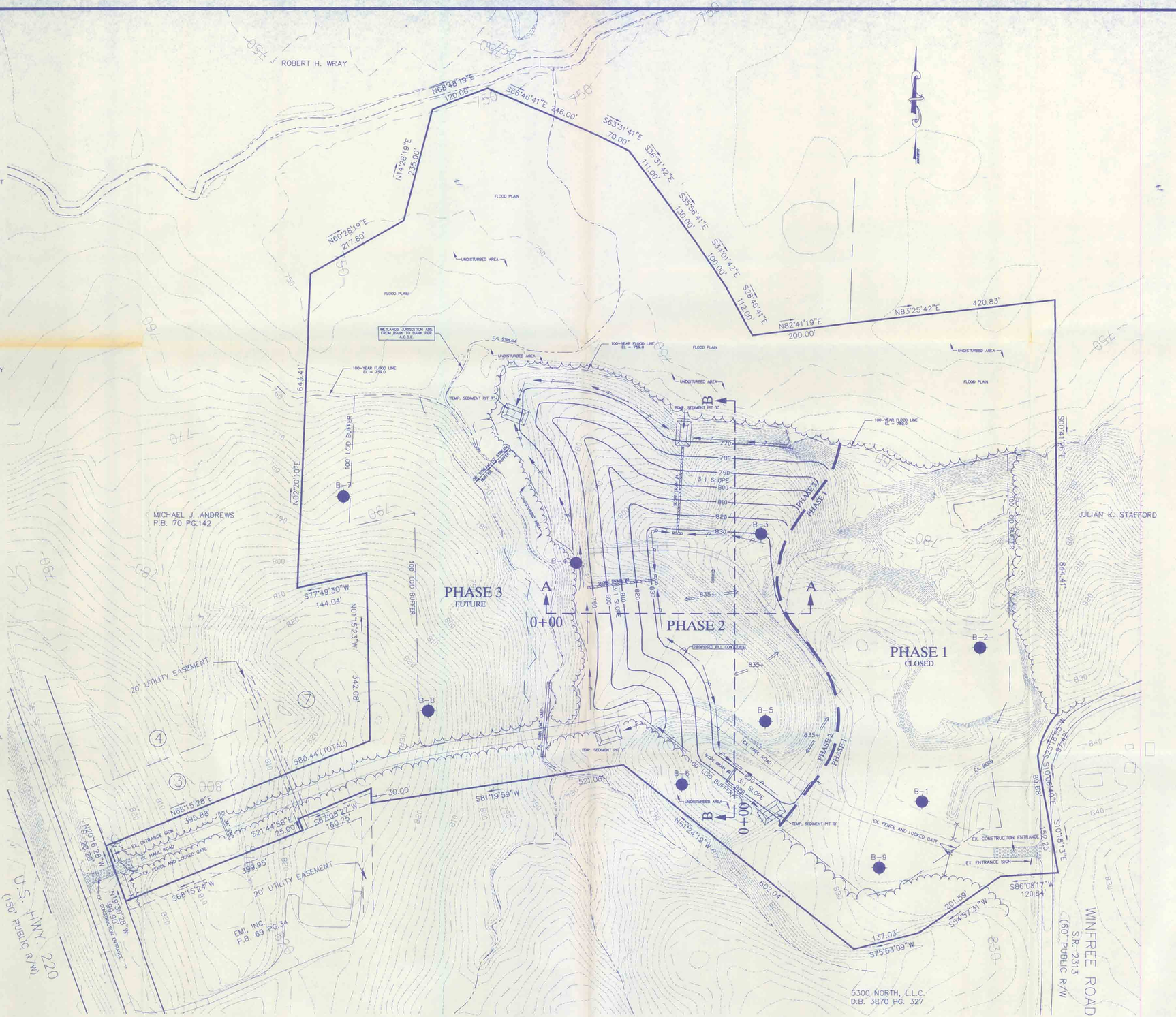
ANY PERSON OPERATING OR HAVING OPERATED A LCID WASTE DISPOSAL OR A PERSON WHO OWNS LAND ON WHICH SUCH A LANDFILL IS OR HAS BEEN IN OPERATION SHALL CLOSE THE SITE IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

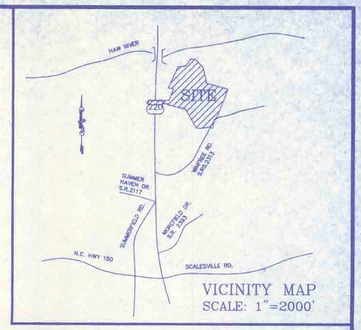
1. IF THE SITE IS DEEMED SUITABLE BY THE NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT, COMPACT AND COVER EXISTING SOLID WASTE IN PLACE WITH (2) TWO FEET* OR MORE OF SUITABLE COMPACTED EARTH.
2. IF THE SITE IS DEEMED UNSUITABLE BY NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT, REMOVE AND PLACE SOLID WASTE IN AN APPROVED DISPOSAL SITE OR FACILITY.
3. IMPLEMENT EROSION CONTROL MEASURES BY GRADING AND SEEDING IN ACCORDANCE WITH THE PROVISIONS OF NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT AND GUILFORD COUNTY PLANNING AND DEVELOPMENT DEPARTMENT.
4. THE AREA MUST BE SECURED TO PREVENT FUTURE DUMPING AT THE SITE.
5. POST SIGNS INDICATING CLOSURE.
6. ESTABLISH FINAL SLOPE GRADES AT NO STEEPER THAN 3:1 SLOPE AND STABILIZE SLOPES WITH VEGETATIVE COVER OR MECHANICAL METHODS.

* GUILFORD COUNTY REGULATIONS REQUIRE TWO (2) FEET OF FINAL SOIL COVER.

JERRY FRIDDLE
PRIVATE
LAND CLEARING & INERT DEBRIS LANDFILL
PERMIT NUMBER:
APPROVED DISPOSAL MATERIALS:
LAND CLEARING WASTE, CONCRETE, BRICK, CONCRETE BLOCK, UNCONTAMINATED SOIL, GRAVEL AND ROCK, UNTREATED AND UNPAINTED WOOD, AND YARD TRASH. YARD TRASH IS DEFINED AS SOLID WASTE RESULTING FROM LANDSCAPING AND YARD MAINTENANCE SUCH AS GRASS, TREE LIMBS AND SIMILAR MATERIAL.
HOURS OF OPERATION:
6:00 AM. – 7:00 PM, MONDAY – FRIDAY
EMERGENCY CONTACT PERSON:
JERRY FRIDDLE – (336) 643-3791
NO UNAUTHORIZED DUMPING

ENTRANCE SIGN DETAIL
NOT TO SCALE





VICINITY MAP
SCALE: 1"=2000'

SITE DATA:

1. TOTAL AREA = 43.54 ACRES.
2. TAX MAP NO.: ACL-1-39-915N-2
3. CURRENT ZONING: AG-SP (CASE# 31-97-SP)
4. DEED REFERENCE: DB. 4530, PG. 0585
5. SOIL TYPES: CeB2– CECIL SANDY CLAY LOAM
   Ch – CHEWACLA SANDY LOAM
   WkC – WILKES SANDY LOAM
   WkE – WILKES SANDY LOAM
   MoC – MADISON SANDY LOAM
6. TOTAL L.C.I.D. LANDFILL AREA = ±21.5 ACRES
7. TOTAL L.C.I.D. LANDFILL VOLUME = XXX,XXX CF
8. DISTURBED AREA = ±23.5 ACRES
9. USE AFTER COMPLETION = PASTURE
10. DISTANCE TO FLOODWAY = 0'
11. WATERSHED = UNPROTECTED
12. BOUNDARY INFORMATION WAS TAKEN FROM DEEDS. NO FIELD RUN BOUNDARY HAS BEEN PERFORMED BY EVANS ENGINEERING AT THIS TIME. BUILDINGS AND TOPOGRAPHIC INFORMATION WERE TAKEN FROM GUILFORD COUNTY DIGITAL PLANIMETRICS.
13. 100-YEAR FLOOD PLAIN INFORMATION TAKEN FROM FIRM PANEL #370111-30-B. FLOOD LINE SHOWN ON MAP IS FROM AN ACTUAL FIELD SURVEY BY EVANS ENGINEERING, INC.
14. ALL EXISTING STRUCTURES TO REMAIN.
15. ACCESS IN AND OUT OF SITE IS CONTROLLED BY AN EXISTING LOCKABLE GATE.
16. PERIMETER ACCESS IS CONTROLLED BY EXISTING WOODS AND FENCE.
17. WETLANDS JURISDICTION ARE DEFINED FROM TOP-OF-BANK TO TOP-OF-BANK BY ARMY CORPS OF ENGINEERS.
18. NO FILL PERMITTED WITHIN THE 100-YEAR FLOOD PLAIN BOUNDARY.

PHASE 2: 5-YEAR PHASE

FORMULA: BASED ON PAST OPERATING FIGURES FOR THIS FACILITY (±62.5 TPD)(5 DAYS)(50 WEEKS) = 15,625 TPY

5-YEAR = (15,625 TPY)(5-YEARS) = 78,125 TONS (156,250 CY)
ESTIMATED CUBIC YARDS IN PHASE 2 & PHASE 3 = XXX,XXX CY
ESTIMATED TONAGE IN PHASE 2 & PHASE 3 = XXX,XXX TONS
ESTIMATED LIFE SPAN OF PHASE 2 & PHASE 3 = ±10 YEARS
NUMBER OF 5-YEAR PHASES REMAINING = 2
PHASE 1 = 9.7 ACRES (CLOSED)
PHASE 2 AREA = 8.8 ACRES
PHASE 3 AREA = 4.3 ACRES (FUTURE)

PHASE 2 DISTURBED AREA = ±8.8 ACRES

TOTAL DISTURBED AREA = ±23.5 ACRES

LEGEND:
- TEMPORARY DIVERSION BERM
- TEMPORARY SEDIMENT PIT
- PERMANENT DIVERSION BERM
- EXISTING CONTOURS
- 720 PROPOSED CONTOURS
- DISTURBED AREA LIMIT LINE
- EXISITNG TREE LINE
- PROPOSED TREE LINE
- TEMPORARY SLOPE DRAIN
- BORING / PIEZOMETER
- BENCH MARK
- DRAINAGE FLOW ARROW

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

JERRY FRIDDLE
7965 Winfree Road
Summerfield, North Carolina 27358

PROJECT TITLE:
PHASE 2
MAJOR L.C.I.D. FACILITY
7965 WINFREE ROAD
BRUCE TOWNSHIP GUILFORD COUNTY
SUMMERFIELD, NORTH CAROLINA 27358

APPLICANT/OWNER/OPERATOR:
JERRY FRIDDLE
P.O. BOX 603
SUMMERFIELD, NORTH CAROLINA 27358
CONTACT PERSON/S: JERRY FRIDDLE
PHONE: 336-643-3791

CIVIL ENGINEER:
EVANS ENGINEERING, INC.
4609 DUNDAS DRIVE
GREENSBORO, NORTH CAROLINA 27407
PHONE: 336-854-8877 FAX: 336-854-8876

NORTH CAROLINA PROFESSIONAL SEAL 18614 ENGINEER ROBERT A. EVANS

PROJECT: 476-01
FRIDDLE\LCID-PLAN.DWG
DRAWN BY: DWS
DESIGN BY: DWS

SHEET DESCRIPTION:
FINAL LANDFILL GRADING & EROSION CONTROL PLAN
SCALE: 1"= 100' DATE: NOVEMBER 12 2001
REVISIONS:
SHEET NO.: 1/4

OPERATIONAL REQUIREMENTS FOR THIS L.C.I.D. LANDFILL

1. OPERATIONAL PLANS SHALL BE APPROVED AND FOLLOWED AS SPECIFIED FOR THIS FACILITY.
2. THIS FACILITY IS PERMITTED TO EXCEPT DISPOSAL OF LAND CLEARING WASTE, CONCRETE, BRICK, CONCRETE BLOCK, UNCONTAMINATED SOIL, GRAVEL AND ROCK; UNTREATED AND UNPAINTED WOOD, AND YARD TRASH. YARD TRASH IS DEFINED AS SOLID WASTE RESULTING FROM LANDSCAPING AND YARD MAINTENANCE SUCH AS GRASS, TREE LIMBS AND SIMILAR MATERIAL.
3. WASTE SHALL BE RESTRICTED TO THE SMALLEST AREA FEASIBLE AND COMPACTED AS DENSELY AS PRACTICAL INTO CELLS.
4. ADEQUATE SOIL COVER SHALL BE APPLIED MONTHLY, OR WHEN THE ACTIVE AREA REACHES ONE ACRE IN SIZE, WHICHEVER OCCURS FIRST.
5. 120 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF DISPOSAL OPERATIONS, OR UPON REVOCATION OF A PERMIT, THE DISPOSAL AREA SHALL BE COVERED WITH A MINIMUM OF (2) TWO FEET* OF SUITABLE SOIL COVER SLOPED TO ALLOW SURFACE WATER RUNOFF IN A CONTROLLED MANNER. THE DIVISION MAY REQUIRE FURTHER ACTION IN ORDER TO CORRECT ANY CONDITION WHICH IS OR MAY BECOME INJURIOUS TO THE PUBLIC HEALTH, OR A NUISANCE TO THE COMMUNITY (*GUILFORD COUNTY REQUIRES (2) TWO FEET OF COVER).
6. ADEQUATE EROSION CONTROL MEASURES, STRUCTURES, OR DEVICES SHALL BE UTILIZED TO PREVENT SILT FROM LEAVING THE SITE AND TO PREVENT EXCESSIVE ON-SITE EROSION.
7. THE DEADLINES FOR THE ESTABLISHMENT OF A GROUND COVER SHALL BE 15 WORKING DAYS AND 30 CALENDAR DAYS FOR TEMPORARY GROUND COVER (SLOPES) AND 15 WORKING DAYS AND 90 CALENDAR DAYS FOR PERMANENT GROUND COVER.
8. THIS FACILITY SHALL BE ADEQUATELY SECURED BY MEANS OF GATES, CHAINS, BERMS, FENCES, ETC. TO PREVENT UNAUTHORIZED ACCESS EXCEPT WHEN AN OPERATOR IS ON DUTY. AN ATTENTENT SHALL BE ON DUTY AT ALL TIMES WHILE THE LANDFILL IS OPEN FOR PUBLIC USE TO ASSURE COMPLIANCE WITH THE OPERATIONAL REQUIREMENTS AND TO PREVENT ACCEPTANCE OF UNAUTHORIZED WASTES.
9. ACCESS ROADS SHALL BE OF ALL-WEATHER CONSTRUCTION AND PROPERLY MAINTAINED.
10. ANY SURFACE WATER SHALL BE DIVERTED FROM THE WORKING FACE AND SHALL NOT BE IMPOUNDED OVER WASTE.
11. SOLID WASTE SHALL NOT BE DISPOSED OF IN WATER.
12. OPEN BURNING OF SOLID WASTE IS PROHIBITED.
13. THE CONSENTRATION OF EXPLOSIVE GASES GENERATED BY THIS FACILITY SHALL NOT EXCEED:
    (a) TWENTY-FIVE PERCENT OF THE LOWER LIMIT FOR THE GASES IN THE FACILITY STRUCTURES.
    (b) THE LOWER EXPLOSIVE LIMIT FOR THE GASES AT THE PROPERTY BOUNDARY.
14. LEACHATE SHALL BE PROPERLY MANAGED ON-SITE THROUGH THE USE OF CURRENT BEST MANAGEMENT PRATICES.
15. SHOULD THE DIVISION DEEM IT NECESSARY, GROUND WATER OR SURFACE WATER MONITORING, OR BOTH, MAY BE REQUIRED AS PROVIDED PRO UNDER RULES .0601 AND .0602 OF THE NORTH CAROLINA SOLID WASTE MANAGEMENT RULES.
16. A SIGN SHALL BE POSTED AT THE FACILITY ENTRANCE SHOWING THE CONTACT NAME AND NUMBER IN CASE OF AN EMERGENCY AND THE PERMIT NUMBER.
17. OPERATION OF THIS FACILITY SHALL CONFORM TO THE NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT RULES AND REGULATIONS.
18. THE FINAL SLOPE OF THE L.C.I.D. LANDFILL SHALL BE A MAXIMIN OF A 3:1 SLOPE.
19. VEHICLES SHALL NOT EXCEED SAFE SPEEDS FOR THE MATERIALS BEING HAULED AND SHALL BE COVERED OR SECURED WITH SUITABLE DEVICES WHEN ON THE PUBLIC ROADWAY.
20. THE SITE MUST BE INSPECTED BY THE OWNER/OPERATOR AT LEAST ONCE EVERY TEN WORKING DAYS.
21. EFFECTIVE VECTOR CONTROL MEASURES SHALL BE APPLIED TO CONTROL FLIES, RODENTS AND OTHER INSECTS OR VERMON WHEN NECESSARY.
22. NO HAZARDOUS MATERIALS OR INFECTIOUS WASTE SHALL BE ACCEPTED OR DISPOSED OF IN THE LANDFILL.

CLOSURE REQUIREMENTS FOR THIS L.C.I.D. LANDFILL

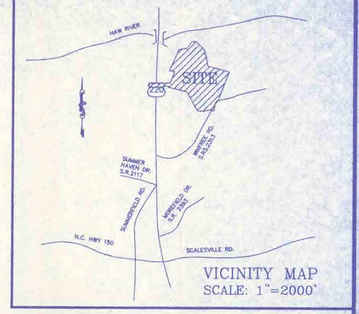
ANY PERSON OPERATING OR HAVING OPERATED A LCID WASTE DISPOSAL OR A PERSON WHO OWNS LAND ON WHICH SUCH A LANDFILL IS OR HAS BEEN IN OPERATION SHALL CLOSE THE SITE IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

1. IF THE SITE IS DEEMED SUITABLE BY THE NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT, COMPACT AND COVER EXISTING SOLID WASTE IN PLACE WITH (2) TWO FEET* OR MORE OF SUITABLE COMPACTED EARTH.
2. IF THE SITE IS DEEMED UNSUITABLE BY NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT, REMOVE AND PLACE SOLID WASTE IN AN APPROVED DISPOSAL SITE OR FACILITY.
3. IMPLEMENT EROSION CONTROL MEASURES BY GRADING AND SEEDING IN ACCORDANCE WITH THE PROVISIONS OF NORTH CAROLINA DIVISION OF SOLID WASTE MANAGEMENT AND GUILFORD COUNTY PLANNING AND DEVELOPMENT DEPARTMENT.
4. THE AREA MUST BE SECURED TO PREVENT FUTURE DUMPING AT THE SITE.
5. POST SIGNS INDICATING CLOSURE.
6. ESTABLISH FINAL SLOPE GRADES AT NO STEEPER THAN 3:1 SLOPE AND STABILIZE SLOPES WITH VEGETATIVE COVER OR MECHANICAL METHODS.

* GUILFORD COUNTY REGULATIONS REQUIRE TWO (2) FEET OF FINAL SOIL COVER.

JERRY FRIDDLE
PRIVATE
LAND CLEARING & INERT DEBRIS LANDFILL
PERMIT NUMBER:
APPROVED DISPOSAL MATERIALS:
LAND CLEARING WASTE, CONCRETE, BRICK, CONCRETE BLOCK, UNCONTAMINATED SOIL, GRAVEL AND ROCK; UNTREATED AND UNPAINTED WOOD, AND YARD TRASH. YARD TRASH IS DEFINED AS SOLID WASTE RESULTING FROM LANDSCAPING AND YARD MAINTENANCE SUCH AS GRASS, TREE LIMBS AND SIMILAR MATERIAL.
HOURS OF OPERATION:
6:00 AM. – 7:00 PM, MONDAY – FRIDAY
EMERGENCY CONTACT PERSON:
JERRY FRIDDLE – (336) 643-3791
NO UNAUTHORIZED DUMPING

ENTRANCE SIGN DETAIL
NOT TO SCALE



VICINITY MAP
SCALE: 1"=2000'

SITE DATA:

1. TOTAL AREA = 43.54 ACRES
2. TAX MAP NO.: ACL-1-39-015N-2
3. CURRENT ZONING: AG-SP (CASE# 31-97-SP)
4. DEED REFERENCE: DB. 4530, PG. 0585
5. SOIL TYPES: CeB2- CECIL SANDY CLAY LOAM
   Ch - CHEWACLA SANDY LOAM
   WkC - WILKES SANDY LOAM
   WkE - WILKES SANDY LOAM
   MoC - MADISON SANDY LOAM
6. TOTAL L.C.I.D. LANDFILL AREA = ±21.5 ACRES
7. TOTAL L.C.I.D. LANDFILL VOLUME = XXX,XXX CF
8. DISTURBED AREA = ±23.5 ACRES
9. USE AFTER COMPLETION = PASTURE
10. DISTANCE TO FLOODWAY = 0'
11. WATERSHED = UNPROTECTED
12. BOUNDARY INFORMATION WAS TAKEN FROM DEEDS. NO FIELD RUN BOUNDARY HAS BEEN PERFORMED BY EVANS ENGINEERING AT THIS TIME. BUILDINGS AND TOPOGRAPHIC INFORMATION WERE TAKEN FROM GUILFORD COUNTY DIGITAL PLANIMETRICS.
13. 100-YEAR FLOOD PLAIN INFORMATION TAKEN FROM FIRM PANEL #3701111-30-B. FLOOD LINE SHOWN ON MAP IS FROM AN ACTUAL FIELD SURVEY BY EVANS ENGINEERING, INC.
14. ALL EXISTING STRUCTURES TO REMAIN.
15. ACCESS IN AND OUT OF SITE IS CONTROLLED BY AN EXISTING LOCKABLE GATE.
16. PERIMETER ACCESS IS CONTROLLED BY EXISTING WOODS AND FENCE.
17. WETLANDS JURISDICTION ARE DEFINED FROM TOP-OF-BANK TO TOP-OF-BANK BY ARMY CORPS OF ENGINEERS.
18. NO FILL PERMITTED WITHIN THE 100-YEAR FLOOD PLAIN BOUNDARY.

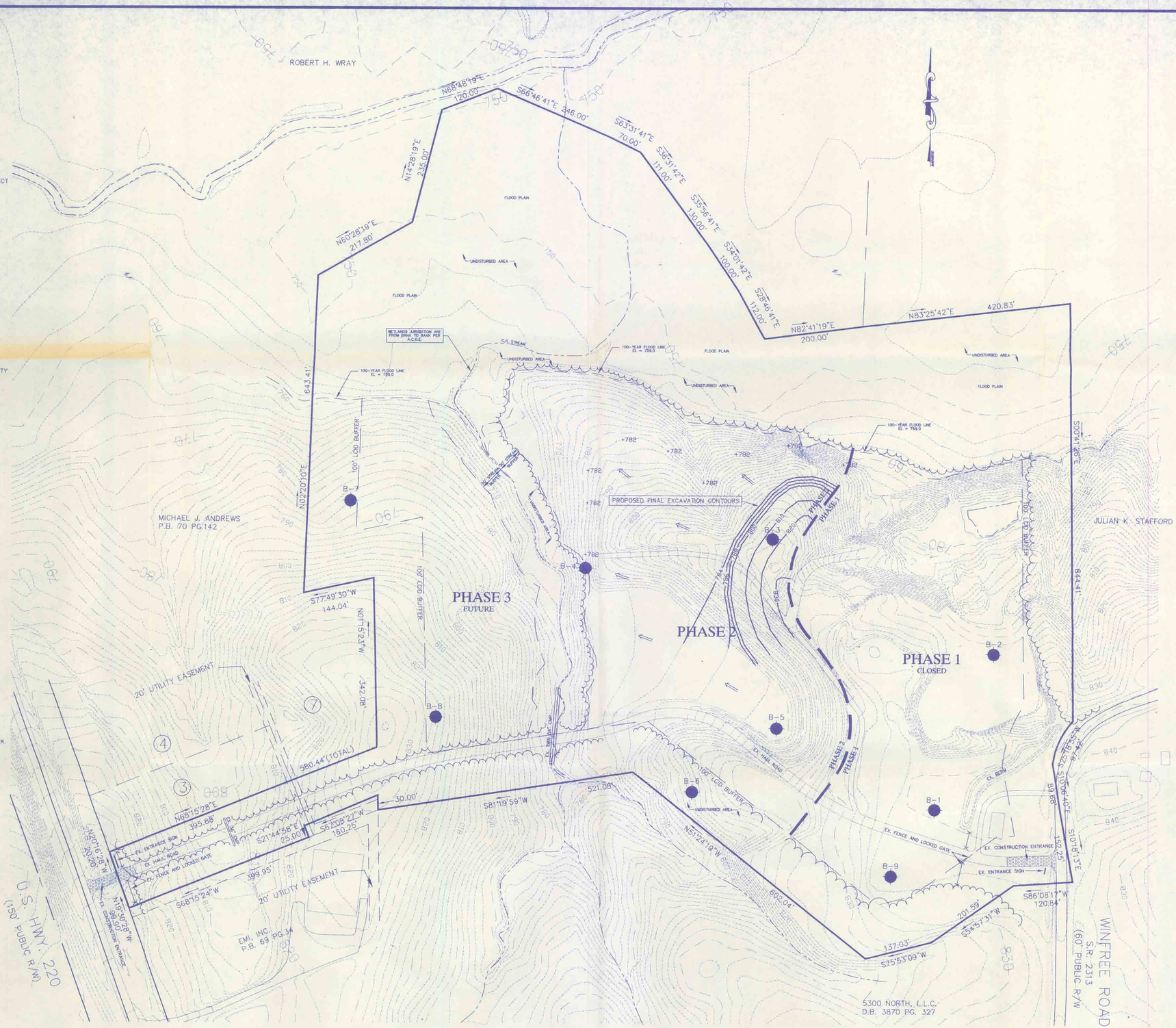
PHASE 2: 5-YEAR PHASE

FORMULA: BASED ON PAST OPERATING FIGURES FOR THIS FACILITY (462.5 TPD)(5 DAYS)(50 WEEKS) = 15,625 TPY

5-YEAR = (15,625 TPY)(5-YEARS) = 78,125 TONS (156,250 CY)
ESTIMATED CUBIC YARDS IN PHASE 2 & PHASE 3 = XXX,XXX CY
ESTIMATED TONAGE IN PHASE 2 & PHASE 3 = XXX,XXX TONS
ESTIMATED LIFE SPAN OF PHASE 2 & PHASE 3 = ±10 YEARS
NUMBER OF 5-YEAR PHASES REMAINING = 2
PHASE 1 = 9.7 ACRES (CLOSED)
PHASE 2 AREA = 8.8 ACRES
PHASE 3 AREA = 4.3 ACRES (FUTURE)

PHASE 2 DISTURBED AREA = ±8.8 ACRES

TOTAL DISTURBED AREA = ±23.5 ACRES



LEGEND:
- TEMPORARY DIVERSION BERM
- TEMPORARY SEDIMENT PIT
- PERMANENT DIVERSION BERM
- EXISTING CONTOURS
- 720 PROPOSED CONTOURS
- DISTURBED AREA LIMIT LINE
- EXISITNG TREE LINE
- PROPOSED TREE LINE
- TEMPORARY SLOPE DRAIN
- BORING / PIEZOMETER
- BENCH MARK
- DRAINAGE FLOW ARROW

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

JERRY FRIDDLE
7965 Winfree Road
Summerfield, North Carolina 27358

PROJECT TITLE:
PHASE 2
MAJOR L.C.I.D. FACILITY
7965 WINFREE ROAD
BRUCE TOWNSHIP GUILFORD COUNTY
SUMMERFIELD, NORTH CAROLINA 27358

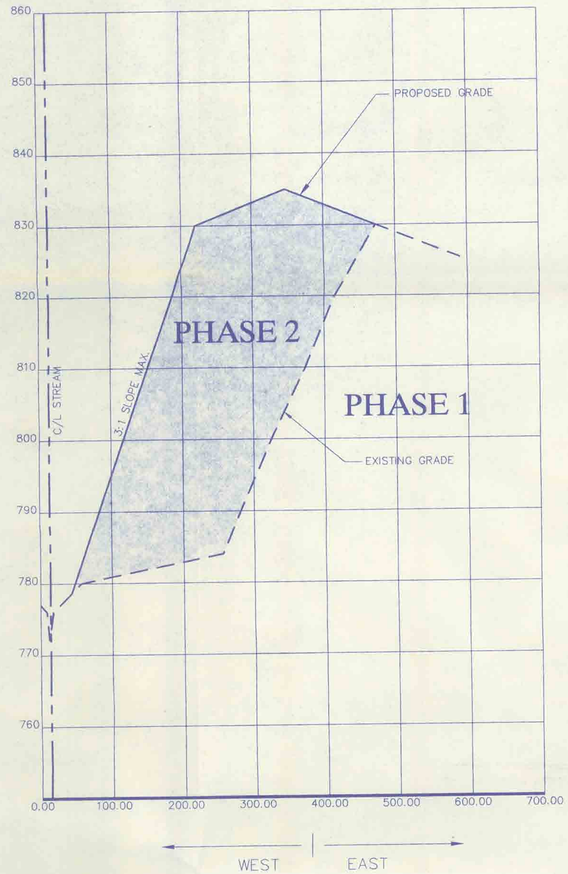
APPLICANT/OWNER/OPERATOR:
JERRY FRIDDLE
P.O. BOX 603
SUMMERFIELD, NORTH CAROLINA 27358
CONTACT PERSON/S: JERRY FRIDDLE
PHONE: 336-643-3791

CIVIL ENGINEER:
EVANS ENGINEERING, INC.
4609 DUNDAS DRIVE
GREENSBORO, NORTH CAROLINA 27407
PHONE: 336-854-8877 FAX: 336-854-8876

NORTH CAROLINA PROFESSIONAL SEAL 16174 ENGINEER ROBERT W. EVANS
11-12-01

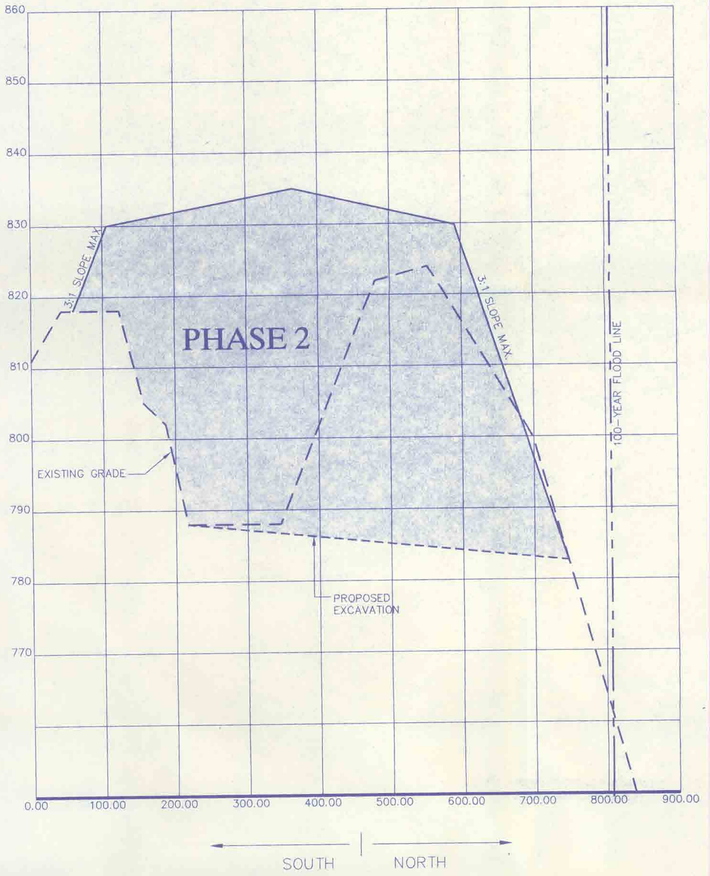
PROJECT: 476-01
FRIDDLE\LCID-PLAN.DWG
DRAWN BY: DWS
DESIGN BY: DWS

SHEET DESCRIPTION:
FINAL EXCAVATION PLAN
SCALE: 1"= 100' DATE: NOVEMBER 12 2001
REVISIONS:
SHEET NO.: 2/4



SECTION A - A

SCALES: HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'



SECTION B - B

SCALES: HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

NOTES:

1. GROUND WATER INFORMATION OBTAINED FROM HYDROGEOLOGIC ASSESSMENT REPORT BY ECS, LTD. DATED 11-12-2001 .

JERRY FRIDDLE
7965 Winfree Road
Summerfield, North Carolina 27358

PROJECT TITLE:

PHASE 2
MAJOR L.C.I.D. FACILITY

7965 WINFREE ROAD
BRUCE TOWNSHIP GUILFORD COUNTY
SUMMERFIELD, NORTH CAROLINA 27358

APPLICANT/OWNER/OPERATOR:
JERRY FRIDDLE
P.O. BOX 603
SUMMERFIELD, NORTH CAROLINA 27358
CONTACT PERSON/S: JERRY FRIDDLE
PHONE: 336-643-3791

CIVIL ENGINEER:
EVANS ENGINEERING, INC.
4609 DUNDAS DRIVE
GREENSBORO, NORTH CAROLINA 27407
PHONE: 336-854-8877 FAX: 336-854-8876

NORTH CAROLINA PROFESSIONAL SEAL 19014 ENGINEER 11-12-01

PROJECT: 476-01 FRIDDLE\LCID-PLAN.DWG
DRAWN BY: DWS
DESIGN BY: DWS

SHEET DESCRIPTION:

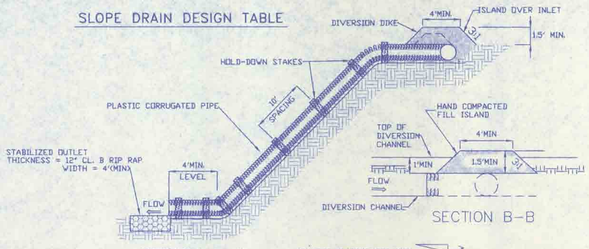
SECTION A-A
SECTION B-B

SCALE: HORIZONTAL: 1"=100', VERTICAL: 1"=10' DATE: NOVEMBER 12 2001

REVISIONS:

SHEET NO.: 3 / 4

SLOPE DRAIN DESIGN TABLE



TEMPORARY SLOPE DRAIN
NTS

10-YR STORM i= 5.75	SLOPE DRAIN CALC'S n= 0.024 c= 0.35		
SLOPE DRAIN #	DRAIN. AREA	Q10	USE
2	1.4 AC	2.8 CFS	18" @ 0.50% = 4.02 CFS
3	0.6 AC	1.2 CFS	12" @ 0.50% = 1.4 CFS
4	0.6 AC	1.2 CFS	12" @ 0.50% = 1.4 CFS

EROSION CONTROL NOTES:

1. SOIL EROSION CONTROL DEVICES MUST BE INSTALLED INITIALLY AFTER THE GRADING PERMIT IS ISSUED AND ROUGH GRADING STARTS. PLANNING AND DEVELOPMENT STAFF WILL CHECK THESE DEVICES FOR PROPER INSTALLATION AND COMPLIANCE WITH THIS PLAN. A CERTIFICATE OF PERFORMANCE WILL BE ISSUED.

2. DURING THE DEVELOPMENT OF THIS SITE, THE PERSON RESPONSIBLE FOR THE LAND-DISTURBING ACTIVITY SHALL INSTALL AND MAINTAIN ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY THE APPROVED PLAN OR BY ANY PROVISION OF THE GUILFORD COUNTY DEVELOPMENT ORDINANCE, ADDITIONAL DEVICES WILL BE REQUIRED IF NECESSARY.

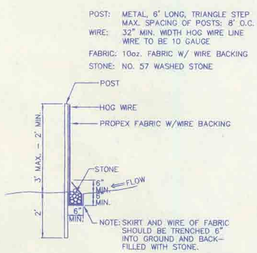
3. UNDER THE GUILFORD COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE (SECTION 19); AGENTS, OFFICALS, OR OTHER QUALIFIED PERSONS ARE AUTHORIZED TO PERIODICALLY INSPECT THE SITES OF LAND-DISTURBING ACTIVITIES. OBSTRUCTING, HAMPERING OR INTERFERING WITH SUCH INSPECTIONS CARRIES A $500 PER DAY CIVIL PENALTY. THE INSTIGATION OF THIS CIVIL PENALTY REQUIRES NO PROIR NOTICE.

4. NO LAND-DISTURBING ACTIVITY SHALL BE PERMITTED IN PROXIMITY TO A LAKE OR NATURAL WATERCOURSE UNLESS A BUFFER ZONE IS PROVIDED ALONG THE MARGIN OF THE WATER BODY OF SUFFICIENT WIDTH TO CONFINE VISABLE SILTATION WITHIN THE TWENTY-FIVE PERCENT OF THE BUFFER ZONE NEAREST THE LAND-DISTURBING ACTIVITY.

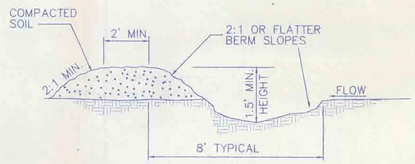
5. CONSTRUCTION ACTIVITIES DISTURBING FIVE OR MORE ACRES WILL BE ISSUED A NPDES STORMWATER DISCHARGE PERMIT AS REQUIRED BY THE FEDERAL CLEAN WATER ACT. SECTION B OF THIS PERMIT REQUIRES THE PERMITEE TO PERIODICALLY INSPECT ALL SEDIMENT AND EROSION CONTROL DEVICES AND TO KEEP A RECORD OF THESE INSPECTIONS.

6. IF FILL MATERIALS ARE BEING BROUGHT ONTO THIS PROPERTY OR IF WASTE MATERIALS ARE TAKEN FROM THIS PROJECT, THIS INFORMATION MUST BE DISCLOSED AND SHOWN ON THE EROSION CONTROL AND GRADING PLAN. BORROW AREAS AND DUMP SITES ARE CONSIDERED TO BE PART OF THIS SITE. (THIS NOTES PERTAINS TO THE CLOSING OF THIS DUMP SITE.)

7. THE DEADLINES FOR THE ESTABLISHMENT OF GROUND COVER SHALL BE 15 WORKING DAYS AND 30 CALENDAR DAYS FOR TEMPORARY GROUND COVER (SLOPES) AND 15 WORKING DAYS AND 90 CALENDAR DAYS FOR PERMANENT GROUND COVER.

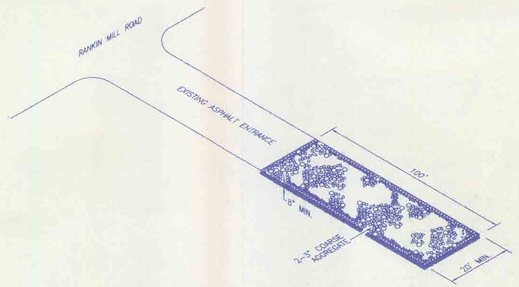


(IF NEEDED)
SILT FENCE DETAIL
NTS



NOTE: DIVERSIONS MUST BE MAINTAINED.

DIVERSION BERM
SCALE: NOT TO SCALE



MINIMUM CONSTRUCTION ENTRANCE
NTS

TEMPORARY SEEDING SPECIFICATIONS

DEFINITION:
SEEDING DISTURBED AREAS WITH ANNUAL GRASSES OR LEGUMES TO PROVIDE TEMPORARY GROUND COVER TO LESSEN SOIL EROSION.

PURPOSE:
TO TEMPORARILY STABILIZE GRADED CUT AND FILL SLOPES THAT CANNOT BE SEEDED WITH PERMANENT VEGITATION WITHIN THIRTY DAYS AFTER COMPLETION.

TO TEMPORARILY STABILIZE GRADED AREAS OF BARE SOIL WHERE PERMANENT VEGATATIVE COVER IS NOT NEEDED OR WHERE GRADING HAS NOT BEEN COMPLETED AND PERMANENT SEEDING WILL BE DONE LATER.

CONDITIONS WHERE PRACTICE APPLIES:
WHERE BARE SOIL HAS BEEN EXPOSED BY GRADING, AND VEGETATIVE COVER IS NEEDED FOR ONE YEAR OR LESS. MAY INCLUDE SUCH AREAS AS TEMPORARY SEDIMENT POND, DIVERSIONS, SOIL STOCKPILES, BUILDING PADS, ROUGH-GRADED ROAD BANKS, ETC.. IT IS ALSO USED TO PROVIDE A TEMPORARY PERIMETER BUFFER.

PREPARATION:
PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO A DEPTH OF AT LEAST SIX INCHES SO AS TO PRODUCE A LOOSE, FRIABLE SURFACE. INCORPORATE 750-1,000 POUNDS 10-10-10 FERTILIZER AND UP TO TWO TONS OF DOLOMITIC LIME PER ACRE(NOTE: LIME MAY NOT BE NEEDED IF A SOIL TEST INDICATES A pH OF 6.5 OR HIGHER).MULCHING IS REQUIRED ACCORDING TO THE SAME SPECIFICATIONS AS FOR PERMANENT SEEDING UNLESS WAIVED BY SOIL SCIENTIST. SELECT SEEDING MIXTURE AND BEST PLANTING DATES FROM TABLE 12 (BELOW).

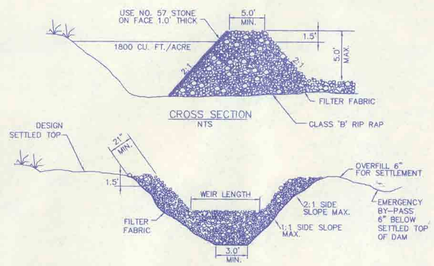
TABLE 12
TEMPORARY SEEDING

SEEDING MIXTURE	SEEDING RATE (LB/ACRE)	PLANTING DATES
RYE GRAIN	120 LBS	JAN. 1 - MAY 1
KOBE LESPEDEZA	50 LBS	JAN. 1 - MAY 1
GERMAN MILLET OR SUDAN GRASS	40-50 LBS	MAY 1 - AUG. 15
RYE (GRAIN) (MAY SUBSTITUTE OATS BEFORE OCT. 1 OR WHEAT FROM OCT.1-NOV. 15)	120 LBS	AUG. 15 - DEC. 30
ANNUAL RYEGRASS	40 LBS	AUG. 15 - NOV. 30
*WEEPING LOVEGRASS	5 LBS	MAY 1 - AUG. 15

*WEEPING LOVEGRASS IS A PERENNIAL GRASS BUT IS INCLUDED HERE BECAUSE OF ITS ADAPTABILITY TO POOR SOIL CONDITIONS AND DROUGHTY SITES.

CONSTRUCTION SEQUENCE FOR PHASE 1:

1. CLEAR AND GRUB AS NEEDED.
2. CONSTRUCT TEMP. SED. PITS 'A', 'B', AND 'C' AS SHOWN ON PLAN.
3. CONSTRUCT TEMP. DIVERSION BERMS TO TEMP. SED. PITS 'A', 'B', AND 'C' AS SHOWN ON PLANS.
4. EXCAVATE AS NEEDED.
5. BACKFILL WITH L.C.I.D. MATERIAL WITHIN LIMITS SHOWN.
6. AS FILL IS BEING PLACED- BE SURE THAT FILL SLOPES DO NOT EXCEED A 3:1 SLOPE.
7. COVER L.C.I.D. MATERIAL AS REQUIRED.
8. SEED SLOPES AND/OR TOP AS REQUIRED.



TEMP. SEDIMENT PIT
NTS

TEMPORARY SEDIMENT PIT DESIGN						
PIT #	DRAIN.	DIST.	(CF) REQ'D.	(CF) PROV'D	BOTTOM DIM.	WEIR
B	3.4 AC	3.4 AC	6,120	6,432	L=56', W=20' 3' DEEP	10'
C	2.0 AC	2.0 AC	3,600	3,696	L=40', W=20' 3' DEEP	6'
E	3.0 AC	3.0 AC	5,400	5,676	L=52', W=26' 3' DEEP	8'
F	4.4 AC	4.4 AC	7,920	8,088	L=64', W=32' 3' DEEP	12'

PERMANENT SEEDING SPECIFICATIONS

DEFINITION:
SEEDING DISTURBED AREAS WITH PERENNIAL GRASSES OR LEGUMES TO PROVIDE PERMANENT VEGETATIVE COVER TO LESSEN RUNOFF AND SOIL EROSION.

PURPOSE:
TO LESSEN SOIL EROSION AND PERMANENTLY STABILIZE DISTURBED AREAS CREATED BY GRADING OF CONSTRUCTION SITES.

CONDITIONS WHERE PRACTICE APPLIES:
ALL BARE AREAS ON CONSTRUCTION SITES WHICH ARE NOT COVERED BY STRUCTURES OR OTHER EROSION CONTROL DEVICES.

PREPARATION:
PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO A DEPTH OF AT LEAST SIX INCHES SO AS TO PRODUCE A LOOSE, FRIABLE SURFACE. REMOVE ALL STONES, BOULDERS, STUMPS OR DEBRI FROM THE SURFACE WHICH WOULD PROHIBIT GERMINATION OR PLANT GROWTH.

INCORPORATE INTO THE SOIL 800 TO 1,000 POUNDS OF 10-10-10 FERTILIZER PLUS 500 POUNDS OF TWENTY PERCENT (20%) SUPERPHOSPHATE PER ACRE AND TWO TONS OF DOLOMITIC LIME PER ACRE UNLESS SOIL TESTS INDICATED THAT A LOWER RATE OF LIME CAN BE USED.

MULCH AFTER SEEDING WITH 1.5 TONS OF GRAIN STRAW PER ACRE AND EITHER CRIMP STRAW INTO SOIL OR TACK WITH LIQUID ASPHALT AT 400 GALLONS PER ACRE OR AMULSIFIED ASPHALT AT 300 GALLONS PER ACRE.

SELECT SEEDING MIXTURE AND BEST PLANTING DATES FROM TABLE 13.

TABLE 13
PERMANENT SEEDING

SEEDING MIXTURE	SEEDING RATE (LB/ACRE)	PLANTING DATES
TALL FESCUE (LOW MAINTENANCE)	100 - 150 LBS	AUG. 15 - OCT. 15 FEB. 15- MAY 1
TALL FESCUE- WATERWAYS AND LAWNS (HIGH MAINTENANCE)	200 - 250 LBS	AUG. 15 - OCT. 15 FEB. 15 - MAY 1
BLEND OF TWO TURF-TYPE TALL FESCUES (90%) AND TWO OR MORE IMPROVED KENTUCKY BLUEGRASS VARIETIES (10%) (HIGH MAINTENANCE)	200 - 250 LBS	AUG. 15 - OCT. 15 FEB. 15 - MAY 1
TALL FESCUE AND KOBE OR KOREAN LESPEDEZA*	100 LBS 20 -25 LBS	FEB. 15 - MAY 1 AUG. 15 - OCT. 15
TALL FESCUE AND SERICEA LESPEDEZA	50 LBS 60 LBS	NOV. 1 - FEB. 1 (UNSCARIFIED)
TALL FESCUE AND GERMAN MILLET OR SUNDANGRASS**	60 LBS 30 LBS	JULY AND AUGUST NOV. 1 - JAN. 30
TALL FESCUE AND RYEGRAIN**	70 LBS 25 LBS	
COMMON BERMUDAGRASS	8 LBS (HULLED) 15 - 20 LBS	APRIL 15 - JUNE 30 FEB. 1 - MARCH 30

* FOR SPRING SEEDINGS, USE SCARIFIED LESPEDEZA SEED. FOR LATE FALL AND WINTER SEEDINGS, USE UNSCARIFIED SEED.

** ANNUALS SUCH AS MILLET, SUNDANGRASS AND RYEGRAIN MUST BE KEPT AT 10-12" MAXIMUM HEIGHT.

JERRY FRIDDLE
7965 Winfree Road
Summerfield, North Carolina 27358

PROJECT TITLE:
PHASE 2
MAJOR L.C.I.D. FACILITY
7965 WINFREE ROAD
BRUCE TOWNSHIP GUILFORD COUNTY
SUMMERFIELD, NORTH CAROLINA 27358

APPLICANT/OWNER/OPERATOR:
JERRY FRIDDLE
P.O. BOX 803
SUMMERFIELD, NORTH CAROLINA 27358
CONTACT PERSON/S: JERRY FRIDDLE
PHONE: 336-643-3791

CIVIL ENGINEER:
EVANS ENGINEERING, INC.
4609 DUNDAS DRIVE
GREENSBORO, NORTH CAROLINA 27407
PHONE: 336-854-8877 FAX: 336-854-8876

NORTH CAROLINA PROFESSIONAL SEAL 19914 ENGINEER ROBERT A. WINCHESTER

PROJECT: 476-01
FRIDDLE\LCID-PLAN.DWG

DRAWN BY: DWS
DESIGN BY: DWS

SHEET DESCRIPTION:
SITE DETAILS

SCALE: AS NOTED

DATE: NOVEMBER 12 2001

REVISIONS:

SHEET NO.: 4 / 4