



FARRAGUT BOARD OF MAYOR AND ALDERMEN
Farragut Town Hall
11408 Municipal Center Drive

AGENDA
October 26, 2023

BMA MEETING
6:00 PM

- I. Roll Call**
- II. Approval of Agenda**
- III. Approval of Minutes**
 - A. October 12, 2023**
- IV. Mayor's Report**
- V. Ordinances**
 - A. Public Hearing and Second Reading**
 - 1. Ordinance 23-15, Ordinance to amend the Equipment Fund Budget for Fiscal Year 2023-2024, passed by Ordinance 23-07**
- VI. Business Items**
 - A. Approval of a 2024 GMC Sierra 4-wheel drive crew cab**
 - B. Approval of Special Event Application the Farragut High School Christmas Parade**
 - C. Approval of (i) Ratification of the Real Estate Purchase and Donation Agreement that was executed by the Mayor as previously authorized by the Farragut Board of Mayor and Alderman on June 22, 2023 between the Town of Farragut and Timothy and Todd Scott for the purchase/donation of a total of 70 acres of land located off McFee Road and being a portion of Knox County Tax Map 162, parcels 24.02 and 24.03, (ii) affirm the Town moving forward with the transaction with knowledge of the information gathered during the due diligence period, and (iii) authorize the Mayor, Town Administrator and Town Attorney to negotiate and execute the final closing documents necessary, in their discretion and judgment, to close the transaction in accordance with the terms and conditions set forth in the Real Estate Purchase and Donation Agreement**
- VII. Citizens Forum**
- VIII. Town Administrator's Report**
- IX. Town Attorney's Report**

11408 MUNICIPAL CENTER DRIVE | FARRAGUT, TN 37934 | 865.966.7057 |
WWW.TOWNOFFARRAGUT.ORG

It is the policy of the Town of Farragut not to discriminate on the basis of race, color, natural origin, gender, gender identity, sexual orientation, age, religion, disability or veteran status pursuant to Title VI of the Civil Rights Act of 1964, Public Law 93-112 and 101-336 in its hiring, employment practices and programs. To request accommodations due to disabilities, please call 865-966-7057 in advance of the meeting

This meeting can be viewed live on the Farragut YouTube Channel and the Town of Farragut website www.townoffarragut.org/livestream.

The meeting will be held at the Farragut Town Hall, 11408 Municipal Center Drive

The Board of Mayor and Aldermen welcomes and invites Farragut residents to participate in public meetings.

At the end of each business meeting, there will be time reserved for public comment under the Citizen Forum agenda item. If you are interested in speaking, please fill out a blue comment card and turn it in to the Town Recorder or staff member. This time is set aside specifically for comments on items that are not on the Board of Mayor and Aldermen regular agenda for the meeting. Each speaker will be given five (5) minutes to speak on his/her topic.

During the regular agenda portion of the meeting there may be an allowance for public comment for each agenda item. The Mayor may recognize individuals for public comment based on the following guidelines.

1. The Mayor shall maintain and control the meeting to provide a professional and objective environment;
2. Any Farragut resident interested in speaking should fill out a blue comment card stating which agenda item they would like to comment on and turn in to the Town Recorder or a staff member;
3. Speakers shall come to the podium and identify themselves by name and street address;
4. Public comment shall be limited to five (5) minutes per individual. Time for public comment may be amended at the discretion of the Mayor. Time is not transferable to other speakers;
5. Speakers should strive to avoid redundancy; each speaker should have their own original viewpoint;
6. Comments shall address issues, not individuals or personalities;
7. Comments may support or oppose issues or measures, but the motives of those with differing views shall not be questioned or attacked;
8. Personal attacks and malicious comments shall not be tolerated;
9. An applicant, and/or their representative(s), for an item on the regular agenda shall be afforded the time necessary to present their request and respond to questions. The five (5) minute limitation shall not apply. However, the Mayor may ask an applicant to stay on point in order to facilitate the efficiency of the meeting.

Each speaker will be asked if they can agree to abide by the Comment Protocol. If so, please be prepared to speak when your name is called.

BMA MEETING MINUTES

October 12, 2023

Roll Call

Mayor Williams called the meeting to order at 6:00 PM. Roll Call for attendance: Alderman Burnette, yes; Alderman Meyer, yes; Vice-Mayor Povlin, yes; Alderman White, yes; Mayor Williams, yes; In addition to staff and member of the press.

Approval of Agenda

Motion was made to approve the agenda as presented. Moved by Vice-Mayor Povlin, seconded by Alderman Meyer; voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Burnette, Meyer and White; no nays; motion passed.

Approval of Minutes

Motion was made to approve the amend minutes of September 28, 2023. Moved by Vice-Mayor Povlin, seconded by Alderman Meyer; voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Burnette, Meyer and White; no nays; motion passed.

Mayor's Report

Mayor Williams announced that he had a number of calls thanking him for the McFee property presentation presented by David Smoak and Tom Hale.

Alderman White apologized for any missed emails while his Town email had been offline. He also apologized to Mayor Williams and Vice-Mayor Povlin for the interruptions and disrespect at the last meeting.

Ordinances

First Reading

Ordinance 23-15, Ordinance to amend the Equipment Fund Budget for Fiscal Year 2023-2024, passed by Ordinance 23-07

Motion was made to approve Ordinance 23-15 on first reading. Moved by Alderman Meyer, seconded by Alderman White; Roll call vote: Alderman Burnette, yes; Alderman Meyer, yes; Vice-Mayor Povlin, yes; Alderman White, yes; Mayor Williams, yes; motion passed.

Business Items

Approval of a variance from the distance between driveways requirement in the Driveways and Other Access Ways Ordinance associated with the removal of the existing access to McFee Road that services 1006, 1008, and 1010 McFee Road and the addition of a new access to service the same three lots roughly 168 feet north of the access to be removed. The proposed access would be 148 feet south of Scarlet Sage Drive in the Meadows on McFee Subdivision resulting in a variance request of 252 feet (Kevin Robson, Applicant)

Motion was made to approve the variance from the distance between driveways requirement in the Driveways and Other Access Ways Ordinance associated with the removal of the existing access to McFee Road that services 1006, 1008, and 1010 McFee Road and the addition of a new access to service the same three lots roughly 168 feet north of the access to be removed. The proposed access would be 148 feet south of Scarlet Sage Drive in the Meadows on McFee Subdivision resulting in a variance request of 252 feet. Moved by Vice-Mayor Povlin, seconded by Alderman Meyer; voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Burnette, Meyer and White; no nays; motion passed.

Alderman Burnette was absent for the remainder of the meeting.

Approval of Purchase for Seven (7) Vehicles through the Tennessee Statewide Contract #209

Motion was made to approve the purchase of vehicles through the Tennessee Statewide Contract #209, for three vehicles from Alan Jay Fleet Sales for \$104,197 and four vehicles from Wilson County Motors in the amount of \$121,182.10 for a total expense of \$225,379.10. Moved by Alderman Meyer, seconded by Alderman White; voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Meyer and White; Alderman Burnette was absent, no nays; motion passed.

Approval of Speed Cushions for Traffic Calming on Sonja Drive in Farragut View Subdivision

Motion was made to approve the speed cushions for traffic calming on Sonja Drive in Farragut View subdivision in the amount of \$15,000. Moved by Alderman Povlin, seconded by Mayor Williams. Larry Johnson, 11320 Sonja Drive, spoke in favor of the speed cushions. Voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Meyer and White; Alderman Burnette was absent, no nays; motion passed.

Approval of Speed Cushions for Traffic Calming on Admiral Road in Farragut View Subdivision

Motion was made to approve the speed cushions for traffic calming on Admiral Road in Farragut View subdivision in the amount of \$12,000. Moved by Alderman Meyer, seconded by Vice-Mayor Povlin; voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Meyer and White; Alderman Burnette was absent, no nays; motion passed.

Approval of appointment to the Farragut Education Relations Committee

Motion was made to appoint Betsy Swartzentruber to the Education Relations Committee. Moved by Alderman Meyer, seconded by Vice-Mayor Povlin; voting yes, Mayor Williams, Vice-Mayor Povlin, Aldermen Meyer and White; Alderman Burnette was absent, no nays; motion passed.

Citizens Forum

Kim Frasch, 853 Belle Grove, requested traffic calming on St. John Court.

Town Administrator's Report

David Smoak, Town Administrator, announced the following events:

- Howl-O-Woof event, October 19 at McFee Park

- Harvest Fest, October 22 from 2:00-6:00 PM in the Village Green shopping center
- Greg Norman will be retiring October 20 after 35 years of employment.

The meeting adjourned at 6:37 PM.

Ron Williams, Mayor

Allison Myers, Town Recorder

REPORT TO THE BOARD OF MAYOR AND ALDERMEN

PREPARED BY: Allison Myers, Town Recorder/Treasurer

SUBJECT: **Ordinance 23-15**, Ordinance on second reading to amend the Equipment Replacement Fund Budget for Fiscal Year 2023-2024, passed by Ordinance 23-07

INTRODUCTION:

The purpose of this agenda item is to approve Ordinance 23-15 on first reading to amend the Fiscal Year 2024 Equipment Replacement Fund Budget.

DISCUSSION:

The **Equipment Replacement Fund Budget** will be amended by increasing the appropriated expenditures from \$111,000 to \$339,020, an increase of \$1,500. This amendment is needed to budget for vehicle and equipment purchases that were budgeted in FY23, but the expenditure will be in the current fiscal year.

Since the first reading, a vehicle previously budgeted and approved is no longer available. A replacement has been identified, and an additional \$1,500 is needed for this purchase.

FINANCIAL SECTION: Equipment Replacement Fund

Account Number: 314-43949-9490		
<u>FY2024 Budget</u>	<u>Requested Amendment</u>	<u>FY2024 Amended Budget</u>
\$111,000	\$228,020	\$339,020
Approved By: <u>A. Myers</u>		

RECOMMENDATION BY: Allison Myers, Town Recorder/Treasurer, for approval.

PROPOSED MOTION: Motion to approve Ordinance 23-15 on second and final reading.

BOARD ACTION:

MOTION BY: _____ SECONDED BY: _____

<u>VOTE/TOTAL</u>	<u>BURNETTE</u>	<u>MEYER</u>	<u>POVLIN</u>	<u>WHITE</u>	<u>WILLIAMS</u>
YES	_____	_____	_____	_____	_____
NO	_____	_____	_____	_____	_____
ABSTAIN	_____	_____	_____	_____	_____

ORDINANCE	23-15
PREPARED BY	Myers
1 ST READING	October 12, 2023
2 ND READING	October 26, 2023
PUBLISHED IN	Farragut Press
DATE	

**AN ORDINANCE OF THE TOWN OF FARRAGUT, TENNESSEE AMENDING THE FISCAL
YEAR 2023-2024 EQUIPMENT REPLACEMENT FUND BUDGET, PASSED BY
ORDINANCE 23-07**

WHEREAS, the Town of Farragut adopted the fiscal year 2023-24 budget by passage of Ordinance Number 23-07 on June 8, 2023; and

WHEREAS, pursuant to the Tennessee State Constitution, Section 24 of Article II, no public money shall be expended except pursuant to appropriations made by law; and

WHEREAS, expenses for the Equipment Replacement Fund budget will be greater than budgeted; and

NOW THEREFORE BE IT ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE TOWN OF FARRAGUT, TENNESSEE THAT CHANGES BE MADE TO THE FISCAL YEAR 2023-2024 BUDGET AS FOLLOWS:

SECTION 1. Ordinance 23-07 is hereby amended by:

The **Equipment Replacement Fund** will be amended by increasing the appropriated expenditures from \$111,000 to \$339,020, an increase of \$228,020. This amendment is needed to budget for vehicle and equipment purchases that were budgeted in FY23, but the expenditure will be in the current fiscal year. The balance will be transferred from FY2023 to FY2024.

SECTION 2. The Board of Mayor and Aldermen authorizes the Town Recorder to make said changes in the accounting system.

SECTION 3. This ordinance shall take effect after its final passage and publication, the public welfare requiring it.

Ron Williams, Mayor

Allison Myers, Town Recorder

REPORT TO THE BOARD OF MAYOR AND ALDERMEN**PREPARED BY:** William E. McKelvey, Public Works Director**SUBJECT:** Approval of Purchase for One (1) vehicle through the Tennessee Statewide Contract #209**INTRODUCTION:** The purpose of this agenda item is to approve the purchase of one (1) vehicle through the Tennessee Statewide Contract #209.**STRATEGIC PLAN:** Quality and dependable vehicles keep the movement of our employees flowing smoothly and on time for commitments throughout the day.**BACKGROUND:** On October 12, 2023, the Board of Mayor and Aldermen approved the purchase of 2024 Chevy Silverado 1500 4wd Crew Cab pick-up in the amount of \$41,757.70 through the state contract from Wilson County Motors. Recently, staff received word the vehicle approved for purchase was no longer available.**DISCUSSION:**

A 2024 GMC Sierra 1500 4wd Crew Cab Pro (TK10543) will replace vehicle #6, the 2013 Ford F150 2wd in the Public Works Department in the amount of \$43,164.10, an additional increase of \$1,406.40.

FINANCIAL SECTION: Equipment Replacement Fund**Account Number:** 314-43949-9490

<u>Total Amended Budget</u>	<u>Requested Amount</u>	<u>Expenditures to Date</u>	<u>Remaining Amount</u>
339,020.00	\$43,164.10	\$295,720.34	\$135.56

Approved By: A. Myers**RECOMMENDATION BY:** Public Works Director, Bud McKelvey for approval.**PROPOSED MOTION:** Utilizing Tennessee Statewide Contract #209, Public Works recommends the approval of the purchase of one (1) vehicle from Wilson County Motors for **\$43,164.10**.**BOARD ACTION:****MOTION BY:** _____ **SECONDED BY:** _____

<u>VOTE/TOTAL</u>	<u>BURNETTE</u>	<u>MEYER</u>	<u>POVLIN</u>	<u>WHITE</u>	<u>WILLIAMS</u>
YES	_____	_____	_____	_____	_____
NO	_____	_____	_____	_____	_____
ABSTAIN	_____	_____	_____	_____	_____



Wilson County Motors

Danielle Rodriguez | 615-444-9642 | danielle@wilsoncountyauto.com

2024 1500 Sierra Pro Crew

Vehicle: [Fleet] 2024 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" Pro





Wilson County Motors

Danielle Rodriguez | 615-444-9642 | danielle@wilsoncountyauto.com

Wilson County Motors

Prepared By:

Danielle Rodriguez
Wilson County Motors
615-444-9642
danielle@wilsoncountyauto.com

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Data Version: 20374. Data Updated: Sep 5, 2023 1:00:00 PM PDT.



Wilson County Motors

Danielle Rodriguez | 615-444-9642 | danielle@wilsoncountyauto.com

Vehicle: [Fleet] 2024 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" Pro (✔ Complete)

Price Summary

PRICE SUMMARY

	VQ2	MSRP
Base Price	\$43,477.70	\$46,700.00
Total Options	(\$2,308.60)	\$1,342.20
Vehicle Subtotal	\$41,169.10	\$48,042.20
Destination Charge	\$1,995.00	\$1,995.00
Grand Total	\$43,164.10	\$50,037.20

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Weight Ratings

WEIGHT RATINGS

Front Gross Axle Weight Rating:	3800 lbs
Rear Gross Axle Weight Rating:	3800 lbs
Gross Vehicle Weight Rating:	7000.00 lbs

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Vehicle: [Fleet] 2024 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" Pro (✔ Complete)

Selected Model and Options

MODEL

CODE	MODEL	VQ2	MSRP
TK10543	2024 GMC Sierra 1500 4WD Crew Cab 147" Pro	\$43,477.70	\$46,700.00

COLORS

CODE	DESCRIPTION
GAZ	Summit White

EMISSIONS

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
FE9	Emissions, Federal requirements	0.00 lbs	0.00 lbs	\$0.00	\$0.00

ENGINE

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
L3B	Engine, TurboMax (310 hp [231 kW] @ 5600 rpm, 430 lb -ft of torque [583 Nm] @ 3000 rpm) (Not available with (VYU) Snow Plow Prep Package, (ZW9) pickup bed delete, (KC4) external engine oil cooler or (X31) X31 Off-Road Package. Includes (KW5) 220-amp alternator.) (STD) *GROSS*	0.00 lbs	0.00 lbs	\$0.00	\$0.00

TRANSMISSION

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
MFC	Transmission, 8-speed automatic, (Column shifter) electronically controlled with overdrive and tow/haul mode. Includes Cruise Grade Braking and Powertrain Grade Braking (Standard and only available with (L3B) TurboMax engine.) (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

GVWR

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
C5W	GVWR, 7000 lbs. (3175 kg) (Requires Crew Cab or Double Cab 4WD model and (L3B) TurboMax engine. Requires Double Cab 4WD model and (L84) 5.3L EcoTec3 V8 engine.) (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

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Vehicle: [Fleet] 2024 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" Pro (✓ Complete)

AXLE

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
GU6	Rear axle, 3.42 ratio (Included and only available with (L3B) TurboMax engine.)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

PREFERRED EQUIPMENT GROUP

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
1SA	Pro Preferred Equipment Group includes standard equipment	0.00 lbs	0.00 lbs	\$0.00	\$0.00

WHEELS

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
RD6	Wheels, 17" x 8" (43.2 cm x 20.3 cm) painted steel, Silver (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

TIRES

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
QBN	Tires, 255/70R17 all-season, blackwall (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

SPARE TIRE

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
QBR	Tire, spare 255/70R17 all-season, blackwall (Included with (QBN) 255/70R17 all-season, blackwall tires.) (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

PAINT

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
GAZ	Summit White	0.00 lbs	0.00 lbs	\$0.00	\$0.00

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Wilson County Motors

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Vehicle: [Fleet] 2024 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" Pro (Complete)

SEAT TYPE

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
AZ3	Seats, front 40/20/40 split-bench with covered armrest storage and under-seat storage (lockable) (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

SEAT TRIM

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
H2G	Jet Black, Vinyl seat trim	0.00 lbs	0.00 lbs	\$0.00	\$0.00

RADIO

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
IOR	Audio system, GMC Infotainment System with 7" diagonal color touch-screen, AM/FM stereo with seek-and-scan and digital clock, includes Bluetooth streaming audio for music and select phones; featuring wireless Android Auto and Apple CarPlay capability for compatible phones (STD)	0.00 lbs	0.00 lbs	\$0.00	\$0.00

OPTION DISCOUNT

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
—	Option/package discount (Requires (L3B) 2.7L Turbo High-Output engine or (PEB) Pro Value Package or (WBP) Graphite Edition with (L3B) 2.7L Turbo High-Output engine.) *DISCOUNT	0.00 lbs	0.00 lbs	(\$1,188.00)	(\$1,350.00)

ADDITIONAL EQUIPMENT - PACKAGE

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
Z82	Trailer Package includes trailer hitch, 7-pin and 4-pin connectors and (CTT) Hitch Guidance (Requires (G80) auto-locking rear differential with (L84) 5.3L EcoTec3 V8 engine. Not available with (ZW9) pickup bed delete. Included with (PEB) Pro Value Package.)	0.00 lbs	0.00 lbs	\$347.60	\$395.00

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Vehicle: [Fleet] 2024 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" Pro (Complete)

ADDITIONAL EQUIPMENT - MECHANICAL

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
G80	Auto-locking rear differential (Included with (X31) X31 Off -Road Package.)	0.00 lbs	0.00 lbs	\$347.60	\$395.00
KW5	Alternator, 220 amps (Standard on (L3B) TurboMax engine. Included with (VYU) Snow Plow Prep Package and available with (L84) 5.3L EcoTec3 V8 engine. Not available as free flow on Regular Cab models with (L84) 5.3L EcoTec3 V8 engine.)	0.00 lbs	0.00 lbs	Inc.	Inc.
NZZ	Skid Plates (Included with (BAQ) Enhanced Capability Package, (X31) X31 Off-Road Package or (VYU) Snow Plow Prep Package.)	0.00 lbs	0.00 lbs	\$132.00	\$150.00

ADDITIONAL EQUIPMENT - SAFETY-INTERIOR

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
CTT	Hitch Guidance (Included and only available with (Z82) Trailing Package.)	0.00 lbs	0.00 lbs	Inc.	Inc.

CUSTOM EQUIPMENT

CODE	DESCRIPTION	FRONT WEIGHT	REAR WEIGHT	VQ2	MSRP
Adjust	Adjustment SWC	0.00 lbs	0.00 lbs	\$1,742.20	\$1,742.20
Assist	Assistance	0.00 lbs	0.00 lbs	(\$3,700.00)	\$0.00
Fed Tire	Federal Tire Fee	0.00 lbs	0.00 lbs	\$10.00	\$10.00
Options Total		0.00 lbs	0.00 lbs	(\$2,308.60)	\$1,342.20

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Data Version: 20374. Data Updated: Sep 5, 2023 1:00:00 PM PDT.

REPORT TO THE BOARD OF MAYOR AND ALDERMEN**PREPARED BY:** Ron Oestreich, Parks and Recreation Director**SUBJECT:** Approval of FHS Christmas Parade

INTRODUCTION AND BACKGROUND: Included in your packet is a request for approval of an Event application for the Farragut High School Christmas Parade. The event is scheduled for Sunday, December 10 2pm to 6pm.

DISCUSSION: The event is being presented to the Board of Mayor and Aldermen because of the partial use of West End Ave.

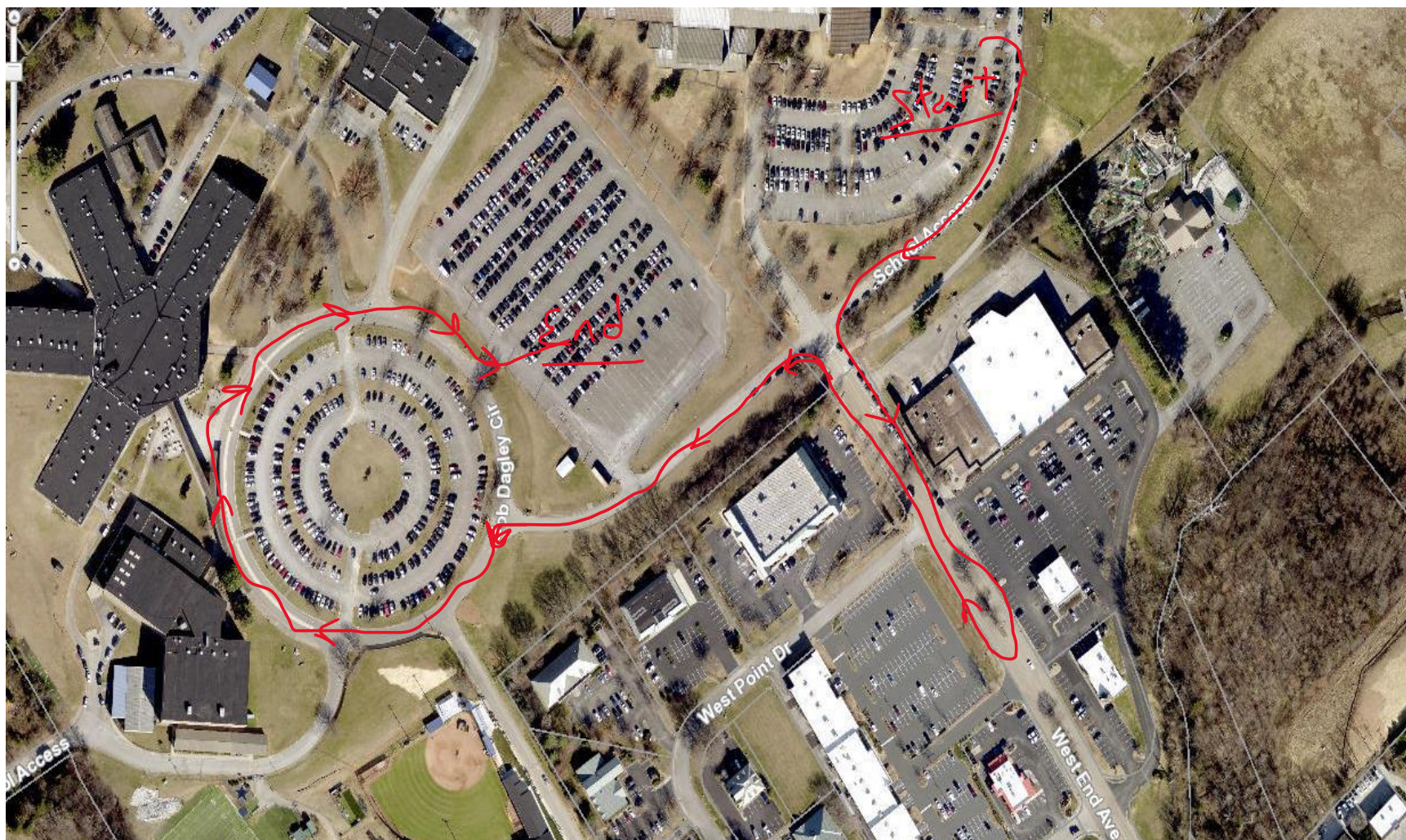
The FHS Christmas Parade will mostly happen on Middle School and High School property, however the parade will head south on West End Ave. for 650 feet and turn around heading back north on West End Ave. for 650 feet. Volunteers will be responsible for defining the route and cleaning up after the event. The Knox County Sheriff's Department will help provide traffic control.

RECOMMENDATION: Staff recommends approval of the event subject to proper notification to any affected entities and the provision of adequate traffic control.

PROPOSED MOTION: To approve the FHS Event Application involving use of the Town's public rights of ways and pedestrian facilities for the FHS Christmas Parade on December 10, 2023.

BOARD ACTION:**MOTION BY:** _____ **SECONDED BY:** _____

<u>VOTE/TOTAL</u>	<u>WILLIAMS</u>	<u>BURNETTE</u>	<u>MEYER</u>	<u>WHITE</u>	<u>POVLIN</u>
YES	_____	_____	_____	_____	_____
NO					
ABSTAIN					



Farragut
Special Event Permit Application
BP-2023-753

Submitted by Stephanie Thompson
ssthompson14@gmail.com
(865) 256-9065

Address of Proposed Work: **208 WEST END AVE**

City: **FARRAGUT** State: **TN** Zip: **37934**

Contact Information

Applicant's Contact Information

Title: First Name: **Stephanie** Last Name: **Thompson** Suffix:

Business Name:

Mailing Address: **308 Clover Fork Drive**

City: **Knoxville** State: **TN** Zip: **37934**

Email Address: **ssthompson14@gmail.com**

Cell Phone: Work Phone: Home Phone: **(865) 256-9065**

Contractor's Contact Information

Title: First Name: _ Last Name: Suffix:

Business Name:

Mailing Address:

City: State: **TN** Zip:

Email Address:

Cell Phone: Work Phone: Home Phone:



You can complete this application and view application updates online at
MyGovernmentOnline.org

Property Owner's Contact Information

Title: First Name: Last Name: Suffix:
Business Name:
Mailing Address:
City: State: **TN** Zip:
Email Address:
Cell Phone: Work Phone: Home Phone:

Application Questionnaire (* denotes required question)

Special Event

Will any Public Parks/Facilities be used in your event? * No

Please note that use of any public parks/facilities must be approved by the Farragut Parks and Recreation Department prior to applying for this permit. Please call 865-966-7057 for approval before proceeding with this permit.

Start Date of Event * 12/10/2023

Name of Event * Farragut Christmas Parade

Type of Event * Parade

Brief Description of Event * 20-30 Float/Entry Parade, mostly on FIS, FMS, FHS campuses, and hoping to wrap around West End Avenue

Is event private or open to the public? * Open to the public



You can complete this application and view application updates online at
MyGovernmentOnline.org

Is food being served? No

Will you have portable Sanitary Facilities? Yes

Will you have a solid waste dumpster? No

Will there be any temporary structures/stages? No

Upload Location in File Upload Section.

Will you need Temporary Power? No

PROVIDE LOCATION DRAWING IN FILE UPLOAD SECTION.

Will you have any other Air Supported Structures? No

UPLOAD LOCATION DRAWING IN FILE UPLOAD SECTION.

Will you need any public street closures? Yes

Please Note: Any public street closures must go before Board of Mayor and Aldermen for approval

Where are the parking areas located? Shopping Areas around West End Avenue

INCLUDE DRAWING IN FILE UPLOAD SECTION.

If this event is a parade/sporting event, where is the route, staging, and disbanding areas? FIS/FMS/FHS Parking lots

UPLOAD DRAWING IN FILE UPLOAD SECTION

In case of Rainout, state cancellation date and time: 1:00pm Sunday 12/10

(EXAMPLE-EVENT IS AT 2:00PM ON SATURDAY, RAINOUT CANCELLATION IS AT 1:00 PM SATURDAY OR POSTPONEMENT IS UNTIL 4:00 PM)

Will there be music, live or otherwise? No



You can complete this application and view application updates online at MyGovernmentOnline.org

Will you have Security/Police Officers at your event? Yes

Please note: The Town of Farragut does not provide Security or Police Officers.

Will you have any Emergency Medical Personnel/Apparatus On-Site? No

Please Note: The Town of Farragut does not provide Emergency Medical Personnel/Apparatus.

Name of Sanitary Facility Vendor: East Tennessee Portable

From what time to what time are they to be closed? 2:00pm-6:00pm

Include times to be manned: 2:00pm-6:00pm

How many Officers? 2

From what time to what time? 2:00pm-6:00pm

Will you have any Fire Officers/Apparatus at your event? No

Will you have Tents? No
If Yes, please list tents in order from largest to smallest.

Will you have Bounce Houses? No

Provide law enforcement contact for day of event. Ardo Ba



You can complete this application and view application updates online at MyGovernmentOnline.org

Have you applied for an insurance certificate of general liability insurance? * No

Naming the Town of Farragut, its employees and agents as additionally insured.

I hereby understand and agree that approval of event permit is contingent upon receipt of copy of insurance. Stephanie Thompson

Please Provide a Full Name Signature.

Do you want this event advertised on VisitFarragut.org? Yes

Will there be any animals at the event? No

Will alcoholic beverages be served? * No

How many people do you expect? 300

A Signed Letter of Approval from Property Owner must be uploaded in the document uploads section.

End Date of Event 12/10/2023

Please list the Streets to be Closed West End Avenue

Include drawing in file upload section

Event Start Time 2:00 PM



You can complete this application and view application updates online at MyGovernmentOnline.org

Event End Time

6:00 PM

Event Setup Time

12:00 PM

Event Teardown Time

6:00 PM

Documents Uploaded

The following documents are attached to the Application.

Site Plan

**farragut christmas parade site plan-208 west
end ave.docx**



You can complete this application and view application updates online at
MyGovernmentOnline.org

REPORT TO THE BOARD OF MAYOR AND ALDERMEN

PREPARED BY: David Smoak, Town Administrator



SUBJECT: Approval of (i) Ratification of the Real Estate Purchase and Donation Agreement that was executed by the Mayor as previously authorized by the Farragut Board of Mayor and Alderman on June 22, 2023 between the Town of Farragut and Timothy and Todd Scott for the purchase/donation of a total of 70 acres of land located off McFee Road and being a portion of Knox County Tax Map 162, parcels 24.02 and 24.03, (ii) affirm the Town moving forward with the transaction with knowledge of the information gathered during the due diligence period, and (iii) authorize the Mayor, Town Administrator and Town Attorney to negotiate and execute the final closing documents necessary, in their discretion and judgment, to close the transaction in accordance with the terms and conditions set forth in the Real Estate Purchase and Donation Agreement

INTRODUCTION: The purpose of this agenda item is to ratify the Real Estate Purchase and Donation Agreement to purchase, in part, and receive a donation, in part, of 70 acres of the Tim and Todd Scott property located off McFee Road that was previously authorized by the Board of Mayor and Aldermen on June 22, 2023, and to affirmatively move forward with closing.

BACKGROUND: The Town of Farragut has four main park facilities for its residents and the surrounding community. The most recent park addition at McFee Park has a variety of activities that include rectangular fields, tennis/pickleball courts, multipurpose court, splashpad, playground, great lawn and numerous walking trails. More open space, parks and town greenways are always high on the list of citizens requests each time we update our parks and recreation master plan.

DISCUSSION: Currently, the Town of Farragut has no additional acreage to grow and enhance our park facilities for our citizens and the surrounding community. The Town has been in discussion with the Scott family about the potential purchase of a portion of their land located adjacent to McFee Road and directly north of the railroad tracks at the southwestern boundary of the Town of Farragut. The Board of Mayor and Aldermen approved a Letter of Intent (LOI) on June 22, 2023 to purchase 55 acres of land for a total of \$5,500,000 and receive an additional donation of land from the Scott family of 15 acres, for a total purchase/donation of 70 acres.

On August 30, 2023, as authorized by the LOI, Mayor Williams signed the attached Real Estate Purchase and Donation Agreement. This agreement formalizes the parameters that were included in the LOI and provides for a 60-day inspection period to perform engineering studies, surveys and other inspections. This inspection period provides the Town the right to terminate the agreement for any reason by October 29, 2023 without penalty.

The Board approved a contract with Cannon and Cannon who utilized SM&E consultants to perform an ALTA survey, geotechnical studies on the property, perform a Phase 1 environmental site assessment, jurisdictional waters assessment, and a threatened and endangered species report. The geotechnical report concludes in section 6.1 Site Assessment, "Based on the subsurface conditions encountered during this geotechnical exploration and our experience with similar projects, it is our professional opinion this site is adaptable for construction of a public recreational area development." A representative from SM&E will be available to review the overall analysis of the property as well as all findings in the reports.

If the Board of Mayor and Aldermen elect to move forward with the purchase of the property, a closing date would be set between the end of the inspection period and November 15, 2023.

STRATEGIC PLAN: The purchase of this property meets the Town of Farragut’s critical success factor of “Connecting our Community with Excellent Parks, Greenways, Trails, Sidewalks and Recreation Programs”. Meeting this goal will allow Farragut to provide a variety of experiences for residents and visitors through our parks, greenways and trails, community focused events and a growing portfolio of recreation programs that enhance the quality of life for people of all ages.

RECOMMENDATION BY: Town Administrator David Smoak and Town Attorney Tom Hale for approval.

PROPOSED MOTION: (i) To approve ratification of the Real Estate Purchase and Donation Agreement that was executed by the Mayor as previously authorized by the Farragut Board of Mayor and Alderman on June 22, 2023 between the Town of Farragut and Timothy and Todd Scott for the purchase/donation of a total of 70 acres of land located off McFee Road and being a portion of Knox County Tax Map 162, parcels 24.02 and 24.03, (ii) affirm the Town moving forward with the transaction with knowledge of the information gathered during the due diligence period, and (iii) authorize the Mayor, Town Administrator and Town Attorney to negotiate and execute the final closing documents necessary, in their discretion and judgment, to close the transaction in accordance with the terms and conditions set forth in the Real Estate Purchase and Donation Agreement.

BOARD ACTION:

MOTION BY: _____ **SECONDED BY:** _____

<u>VOTE/TOTAL</u>	<u>WHITE</u>	<u>MEYER</u>	<u>POVLIN</u>	<u>BURNETTE</u>	<u>WILLIAMS</u>
YES	_____	_____	_____	_____	_____
NO	_____	_____	_____	_____	_____
ABSTAIN	_____	_____	_____	_____	_____

KRAMER RAYSON LLP

ATTORNEYS AT LAW

POST OFFICE BOX 629
KNOXVILLE, TENNESSEE
37901-0629

FOUNDED 1948

Telephone Extension: 126
Email: tomhale@kramer-rayson.com

September 6, 2023

OF COUNSEL
WAYNE R. KRAMER
LESLIE L. SHIELDS

OFFICES

FIRST HORIZON PLAZA
SUITE 2500
800 SOUTH GAY STREET
KNOXVILLE, TENNESSEE 37929
TELEPHONE 865 525-5134
TELECOPIER 865 522-5723

105 DONNER DRIVE
SUITE A
OAK RIDGE, TENNESSEE 37830
TELEPHONE 865 220-5134
TELECOPIER 865 220-5132

R.R. KRAMER (1888-1966)
E.H. RAYSON (1923-2017)

JOHN T. JOHNSON, JR.
WARREN L. GOOCH
EDWARD G. PHILLIPS
THOMAS M. HALE
JACKSON G. KRAMER
BEECHER A. BARTLETT, JR.
JOHN C. BURGIN, JR.
CHARLES M. FINN
ROBERT A. CRAWFORD
JOHN E. WINTERS
ROBERT L. BOWMAN
STEVEN E. KRAMER
SHANNON COLEMAN EGLE
KATE E. TUCKER
BETSY J. BECK
WILLIAM J. CARVER
GEORGE R. ARRANTS, JR.
BRANDON L. MORROW
BRYCE E. FITZGERALD
NATHANIEL D. MOORE
CAMILLE H. SANDERS
ERICA D. GREEN
ANDREW M. HALE
LUCAS M. FISHMAN
JAMES T. SNODGRASS
KATHERINE R. OVERTON

Ms. Allison Myers
Town Recorder
Town of Farragut
11408 Municipal Center Drive
Farragut, Tennessee 37934

Via Hand Delivery

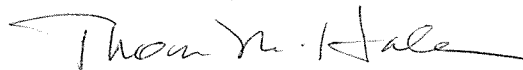
**Re: Real Estate Purchase and Donation Agreement between
Timothy C. Scott and Todd M. Scott and the Town of Farragut**

Dear Allison:

Enclosed herewith is the original of the above-referenced document that has now been signed by the two parties as well as Tennessee Valley Title Insurance Co. which is acting as escrow agent under the Agreement.

Please retain this in the Town's files.

Yours truly,



Thomas M. Hale

TMH/mat
Enclosure

cc: Dennis Ragsdale w- enclosure (via email)
David Smoak w- enclosure (via email)

REAL ESTATE PURCHASE AND DONATION AGREEMENT

30th **THIS PURCHASE AGREEMENT** is made and entered into as of the day of August, 2023, by and between TIMOTHY C. SCOTT and TODD M. SCOTT (collectively "Seller") and THE TOWN OF FARRAGUT, a municipal corporation organized and existing under the laws of the State of Tennessee ("Purchaser").

RECITALS:

Seller owns certain property in Farragut, Knox County, Tennessee which is identified on Knox County Tax Map 162, Parcels 24.02 and 24.03 and identified as "Seller Parcel" on Exhibit A attached hereto (the "Seller Parcel"). Purchaser desires to acquire approximately 55 acres of such property, and Seller has agreed to donate approximately 15 acres to Purchaser in a simultaneous closing on the terms and conditions set forth herein.

In consideration of the promises hereinafter contained, the parties hereby agree as follows:

ARTICLE ONE

PROPERTY; EASEMENT

Subject to the terms, conditions and provisions set forth below, (a) Seller agrees to sell and convey to Purchaser, and Purchaser agrees to buy from Seller all of Seller's right, title and interest in approximately 55 acres of the Seller Parcel substantially as shown as "55 acres" on Exhibit A hereto with the final boundaries to be determined by the Survey and the Plat to be delivered under Section 5.2, together with all improvements thereon, and all easements, rights and appurtenances thereto (the "Purchase Tract"), and (b) Seller agrees to donate approximately 15 acres of the Seller Parcel to Purchaser substantially as shown as "15 acres" on Exhibit A hereto with the final boundaries to be determined by the Plat to be delivered under Section 5.2, together with all improvements thereon, and all easement rights and appurtenances thereto (the "Donation Tract") (the Purchase Tract and the Donation Tract being collectively referred to herein as the "Property"). The portion of the Seller Parcel to be retained by Seller shall be referred to herein as the "Retained Tract."

As additional consideration, (a) Purchaser shall grant to Seller an easement for access to McFee Road from the Retained Tract and (b) Purchaser shall agree to certain restrictions on the

Donation Tract all to be provided in easements, covenants and restrictions executed by Purchaser and Seller at Closing, as defined below (the "ECR"). The parties shall in good faith negotiate and agree upon the form of the ECR based on the terms described in Section 4.2 below during the Inspection Period as defined below.

ARTICLE TWO

REPRESENTATIONS, WARRANTIES AND COVENANTS

Section 2.1. To induce the Purchaser to enter into this Agreement, Seller makes the representations, warranties and covenants hereinafter contained in addition to the representations, warranties and covenants elsewhere contained in this Agreement, each of which is material to and is relied upon by Purchaser. Seller represents, warrants and covenants as follows:

(a) Title to Property. Seller is the sole owner of good, fee simple, marketable title to all of the Property, subject to (i) real property taxes for 2023 and subsequent years, and (ii) easements, covenants and restrictions of record in the Register's Office for Knox County, Tennessee.

(b) Hazardous Materials. Although Seller has conducted no investigations or environmental studies of the property, Seller has no actual knowledge of the presence of any contaminants on the property in forms or concentrations which violate applicable environmental laws or regulations. The property has been used for agricultural purposes before and after Seller's acquisition.

(c) Not a Foreign Person. The Seller is not a "Foreign Person" as defined in the Internal Revenue Service Code Withholding Section.

(d) No Liens. Except for real property taxes for 2023 and subsequent years and any easements, covenants and restrictions of record, there are no liens, claims, actions, suits or proceedings (including, without limitation, any condemnation or similar proceeding) relating to the Property or the transaction contemplated by this Agreement or any pending or to the best of Seller's knowledge, threatened liens, claims, actions, suits or proceedings (including, without limitation, any condemnation or similar proceeding) against Seller or the Property.

(e) Leases. There are currently no leases or occupancy agreements in effect with respect to any portion of the Property

except a year-to-year lease which can be terminated as of December 31 of each year. Seller will give notice of termination to the tenant upon the expiration of the Inspection Period if Purchaser has not exercised its right to terminate this Agreement.

(f) Status of Seller. Seller has the full and unrestricted authority to enter into and carry out the terms of this Agreement and the person signing this Agreement on behalf of Seller has the authority to do so.

Section 2.2: Purchaser's Representations. Purchaser represents and warrants to Seller that neither the execution nor the delivery of this Agreement, nor the consummation of the purchase and sale contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement conflict with or will result in the breach of any of the terms, conditions, or provisions of any agreement or instrument to which Purchaser is a party or by which Purchaser or any of Purchaser's assets is bound.

Section 2.3: Survival. All of the representations, warranties and agreements of the parties set forth in Sections 2.1 and 2.2 and elsewhere in this Agreement shall be true upon the execution of this Agreement in all material respects, shall be deemed to be repeated at and as of the Closing Date (except as set forth in written notice delivered from one party to the other prior to the Closing Date, provided that if there is a material adverse change in the representations, warranties and agreements of Seller, Purchaser may terminate this Agreement and receive a refund of the Earnest Money). However, all representations, warranties and covenants contained in this Agreement shall expire and terminate six (6) months after the Closing Date.

ARTICLE THREE

PURCHASE PRICE

The purchase price (the "Purchase Price") to be paid by Purchaser for all of the Purchase Tract shall be One Hundred Thousand Dollars (\$100,000.00) per acre based on the Survey described in Section 5.2. The Purchase Price shall be payable as follows:

(a) Within five (5) business days after execution of this Agreement, Purchaser shall deposit the sum of Fifteen Thousand Dollars (\$15,000.00) (such deposit and any additional funds

deposited under Section 4.3 shall be referred to herein as the "Earnest Money") with Tennessee Valley Title Insurance Co. (the "Escrow Agent") which shall be paid to Seller and applied to the Purchase Price at Closing;

(b) At Closing, Purchaser shall deliver to Seller the balance of the Purchase Price, subject to credit for the Earnest Money and any adjustments provided herein, immediately available funds.

(c) The parties agree that the value of the Donation Tract is One Hundred Thousand Dollars (\$100,000.00) per acre.

ARTICLE FOUR

PRE-CLOSING EXAMINATIONS, INSPECTIONS, STUDIES AND TESTS

Section 4.1. Physical Tests and Studies. Within seven (7) business days after the execution of this Agreement, Seller will deliver to Purchaser copies of any title insurance policies, surveys, environmental reports, geotechnical reports and real estate tax bills, related to the Property which are available to Seller. Purchaser and its representatives shall have the right, at Purchaser's sole cost, expense and risk, to conduct such physical tests and studies of the Property and obtain such samples thereof as the Purchaser may deem appropriate, including without limitation intended, soils tests, groundwater tests, waste water system tests and inspections, engineering inspections, hazardous substances tests and inspections and air quality tests. Purchaser shall promptly repair any damage to the Property which may result from the exercise of Purchaser's rights under this Section 4.1 to the condition substantially similar to that as of the date hereof and shall, to the extent permitted by law, indemnify and save Seller harmless from and against any claims relating to personal injury, property damage and mechanics liens arising from Purchaser's activities under this Section 4.1, except claims, costs, expenses and liabilities arising out of the discovery of, or the non-negligent, accidental or inadvertent release of, any hazardous substances or waste resulting from the investigations (unless such hazardous substances or waste are brought onto the Property by Purchaser or Purchaser's agents, employees, consultants or contractors). The foregoing indemnity shall survive Closing or the termination of this Agreement.

Section 4.2. Easements with Covenants and Restrictions.

During the Inspection Period as defined in Section 4.3, the parties shall negotiate in good faith and approve such ECR and related documents in recordable form, and with terms that shall run with the land and bind the Purchaser, and any of Purchaser's successors and assigns, (i) from using the Donation Tract, or any part thereof for the development of any commercial or residential use or purpose, but limiting such use to governmental conservation or park purposes, except that any building constructed for use in connection with such purposes shall not exceed a footprint greater than 6,000 square feet or a maximum total square footage of all buildings on the Donation Tract of 12,000 square feet, and (ii) requiring the Purchaser to (a) plant and maintain landscape screening along the westerly boundary of the Donation Tract to serve as a buffer between the Donation Tract and the Retained Tract that shall be in compliance with the Purchaser's regulations governing landscaped buffers and (b) provide an easement at least fifty (50) feet in width for ingress and egress from McFee Road, over and across the Purchase Tract and the Donation Tract, to the Retained Tract (the "Access Easement "), the location of which shall be subject to change at the election of the Purchaser to fit with or accommodate the needs of the access approved in the initial Master Plan approved for the Purchaser's use of the Property. After such initial Master Plan is approved, the location of the Access Easement shall not be further changed without the prior written consent of the owner of the Retained Tract, which consent shall not be unreasonably withheld if such changes do not materially adversely affect the access of the Retained Tract to McFee Road and do not materially increase the cost of constructing the driveway from the Retained Tract. The road and any related improvements constructed in the Access Easement (the "Road Improvements") shall comply with the Purchaser's regulations for a public road. When the Purchaser develops and constructs the public park on the Property, Purchaser shall construct the Road Improvements in the Access Easement at its expense to the point reasonably determined by the Purchaser as required to provide access for such park improvement to McFee Road. The owner of the Retained Tract may, at its option and expense, construct the Road Improvements in the Access Easement to connect to the Road Improvements constructed by Purchaser, or in the event that Purchaser has not constructed any Road Improvements, the owner of the Retained Tract may construct the Road Improvements through the entire Access Easement to McFee Road at its expense. Upon completion, the Road Improvements shall be maintained by the Purchaser as a public road.

Section 4.3. Right to Terminate. The parties acknowledge that, following their execution of a letter of intent dated as of June 22, 2023, the Purchaser, with Seller's consent, commenced its inspection of the Property, including, but not limited to, surveying, engineering and other inspections of the Property. Purchaser shall have the right to terminate this Agreement for any reason or for no reason without any liability or obligation under this Agreement, by notice given to the Seller during the period commencing on the date of execution of this Agreement and ending sixty (60) days after the date of this Agreement (as such may be extended by Purchaser, the "Inspection Period"), provided that Purchaser may extend the Inspection Period for an additional thirty (30) days by delivering written notice of extension to Purchaser and additional Earnest Money of Ten Thousand Dollars (\$10,000.00) to Escrow Agent prior to the expiration of the initial Inspection Period. If Purchaser does not terminate this Agreement as provided in this Section 4.3, the Earnest Money shall be non-refundable except in the event of a material breach of Seller's obligations or termination under Section 7.2.

Section 4.4. As Is. Purchaser acknowledges and agrees that Purchaser has a full right of inspection with respect to the Property and will have full opportunity to satisfy itself as to the condition of the Property and agrees that, except as otherwise expressly set forth herein, or in the documents to be executed and delivered by Seller at Closing, Seller has not made and will not make any representations or warranties, express or implied, pertaining to the Property, its condition, suitability for a particular purpose, or any other matters whatsoever, and that Purchaser will be relying solely on its own inspections and investigations with respect to the Property, its condition, suitability for a particular purpose, and all other matters whatsoever. IN ADDITION, PURCHASER ACKNOWLEDGES AND AGREES THAT THE PROPERTY IS BEING PURCHASED AND WILL BE CONVEYED "AS IS, WHERE IS," WITH ALL FAULTS AND DEFECTS, WHETHER PATENT OR LATENT, AS OF THE CLOSING DATE; PROVIDED, HOWEVER, SELLER SHALL NOT BE RELIEVED FROM ANY LIABILITY SELLER MAY HAVE TO PURCHASER UNDER THE SPECIFIC TERMS OF THIS AGREEMENT IF ANY WARRANTY MADE BY SELLER IN THIS AGREEMENT OR ANY OF THE CLOSING DOCUMENTS IS UNTRUE IN ANY MATERIAL RESPECT, SUBJECT TO THE LIMITATIONS CONTAINED HEREIN.

ARTICLE FIVE

SURVEY, TITLE, HAZARDOUS SUBSTANCE REPORT, ACCESS

Section 5.1. Title Insurance Commitment/Policy. No later than fifteen (15) days before the expiration of the Inspection Period, Purchaser may obtain, at Purchaser's option and expense, and deliver to Seller, a current title insurance commitment (the "Commitment") for an extended coverage policy of title insurance (the "Title Policy"), on an ALTA Form acceptable to Purchaser from a title insurance company acceptable to Purchaser (the "Title Insurance Company"), in the amount of the Purchase Price, insuring Purchaser as the owner of fee simple title to the Property subject only to the Permitted Encumbrances (as defined in Section 5.4).

Section 5.2. Survey; Plat. Within seven (7) business days after the date of this Agreement, Seller shall deliver to Purchaser a copy of Seller's most recent survey of the Property. Before the expiration of the initial Inspection Period, the Purchaser shall obtain, at Purchaser's expense, a survey of the Property, including the boundaries of the Purchase Tract and the Donation Tract (the "Survey") and a subdivision plat that complies with applicable subdivision regulations (the "Plat"). The Plat and the Survey shall be delivered to Seller no later than fifteen (15) days prior to the expiration of the initial Inspection Period, and Seller shall notify Purchaser of any objections within ten (10) days after such delivery. The Survey and the Plat, as approved by the parties, will establish the boundaries and acreage of the Property (including the boundaries of the Purchase Tract and the Donation Tract), provided that such boundaries are substantially as shown on Exhibit A. Upon the parties' approval of the Survey, a copy of such Survey shall be substituted for Exhibit A to this Agreement. The Purchase Price shall be adjusted based on the actual acreage shown on the Survey as approved by Seller and Purchaser.

Section 5.3. Hazardous Materials Report. Purchaser may, at Purchaser's option and expense, obtain on or before the expiration of the Inspection Period, a Phase I Environmental Survey (the "Environmental Survey") of the Property, and if necessary, a Phase II Environmental Survey. The Environmental Survey shall be addressed to both Seller and Purchaser, and a copy of the Environmental Survey shall be delivered to Seller.

Section 5.4. Purchaser's Objections. If the Purchaser has any objection to the Commitment, the Survey or the Environmental Report, or the state of title or facts reflected in the Commitment, the Purchaser shall give the Seller written notice (the "Objection Notice") of such objection at least ten (10) days before the expiration of the Inspection Period. The Seller shall have the right, but not the obligation, (i) to cure any title defect or

eliminate any exception in the Commitment to which the Purchaser objects; (ii) to correct any state of facts shown on the Survey to which Purchaser has objected; or (iii) to address the conditions disclosed in the Environmental Report in a manner satisfactory to Purchaser. Seller shall notify Purchaser if Seller is unable or unwilling to take the remedial action within ten (10) days. If the Seller is unable or unwilling to cure or eliminate or correct as requested in an Objection Notice, within ten (10) days after the Objection Notice is given, the Purchaser shall elect to either (i) waive such defects, exceptions or state of facts and accept title to the Property subject to such defects, exceptions or state of facts without reduction of the Purchase Price (except that Purchaser shall be entitled to satisfy any monetary liens or encumbrances out of the Purchase Price at Closing) or (ii) terminate this Agreement whereupon, the parties shall have no further rights or obligations hereunder. Should Purchaser elect to accept title, survey and environmental conditions based upon the above-noted reports, the Purchaser shall notify the Seller in writing of such acceptance. Purchaser's failure to give such notice to Seller within thirty (30) days after the Objection Notice has been given shall be deemed to be an election by Purchaser to terminate this Agreement. All matters of title and survey to which Purchaser fails to object within the time period specified above, and all such matters to which the Purchaser has objected, but has waived such objections under clause (i) of the third preceding sentence, shall be deemed to be "Permitted Encumbrances."

ARTICLE SIX

CLOSING

Section 6.1. Closing Date. The consummation of the purchase and sale of the Property herein contemplated (such consummation being herein referred to as the "Closing" and the date thereof being referred to as the "Closing Date") shall take place on or before the earlier of twenty (20) days after the expiration of the Inspection Period as it may be extended, or November 15, 2023. Purchaser may, at its option, waive any conditions to Closing and close at any time with at least five (5) business days prior written notice of the Closing Date.

Section 6.2. Place of Closing. The Closing shall take place in Knox County, Tennessee in such manner (including exchange of documents via the mail), as may be designated by Purchaser in the notice given under Section 6.1 or as mutually agreed upon by Seller and Purchaser.

Section 6.3. Mutual Conditions to Closing. The Closing shall include a simultaneous purchase of the Purchase Tract, conveyance of the Donation Tract and execution of the ECR. The Purchaser's obligation to close the purchase of the Purchase Tract is subject to the condition that Seller shall simultaneously donate and convey the Donation Tract as provided herein. The Seller's obligation to donate and convey the Donation Tract is subject to the condition that Purchaser shall simultaneously purchase the Purchase Tract and execute the ECR.

ARTICLE SEVEN

CONSUMMATION OF SALE AND CONDITIONS TO CLOSING

The Closing shall be consummated as follows:

Section 7.1. Seller's Deliveries and Conditions to Purchaser's Obligations. Seller shall deliver to Purchaser at the Closing the following documents dated as of the Closing Date, the delivery, content and accuracy of which shall be a condition to Purchaser's obligation to consummate the purchase and sale herein contemplated:

(a) **Deed(s)**. Special warranty deed(s), in form and substance reasonably satisfactory to Purchaser, with full special or limited covenants of title, in recordable form duly executed by the Seller and conveying the Purchase Tract and the Donation Tract to Purchaser good, fee simple; and

(b) **Owner's Affidavit**. An Affidavit in form satisfactory to the Title Insurance Company, stating that all bills have been paid for any improvements to the Property and sufficient to allow the Title Insurance Company to remove any "standard" exceptions contained in the Commitment;

(c) **Authority of Seller**. Documentation (including resolutions, if applicable) in form and substance satisfactory to Purchaser evidencing the fact that Seller has the full and unrestricted lawful power to enter into and carry out the terms of this Agreement and execute and deliver the documents described herein; and

(d) **Non-Foreign Statement**. A sworn statement that Seller is not a "foreign person" or a non-resident alien as defined by the Internal Revenue Code and the regulations promulgated thereunder in the form required by Treas. Regs. Section 1445; and

(e) **Releases**. Releases of any deeds of trust or liens on the Property.

(f) **ECR**. The ECR.

Section 7.2. Further Conditions to Purchaser's Obligations.

The following conditions must occur and/or be satisfied as an additional condition precedent to Purchaser's obligation to consummate the purchase and sale herein contemplated (unless waived by Purchaser) and if such conditions are not met to the satisfaction of Purchaser, the Purchaser may terminate this Agreement:

(a) Purchaser shall be able to obtain, at Purchaser's cost, the Title Policy as described in Section 5.1;

(b) There shall be no condemnation or eminent domain proceedings pending or threatened against the Property or any part thereof and neither party shall have received any notice, written or oral, of the desire of any public authority or other entity to take or use the Property or any part thereof.

(c) Seller shall have complied, in all material respects, with all covenants and provisions required by this Agreement to be complied with by Seller before, on, or as of the Closing Date;

(d) The representations and warranties of Seller in this Agreement shall be true and correct in all material respects on and as of the Closing Date.

Section 7.3. Purchaser's Other Deliveries. At the Closing, Purchaser shall deliver to Seller the balance of the Purchase Price. In addition, Purchaser shall execute and deliver the ECR.

Section 7.4. Title Insurance Premiums; Documentary Transfer Fees and Taxes; Survey Cost. Purchaser shall pay all state transfer fees and taxes and recording costs imposed on or in connection with the conveyance of the Property. Purchaser shall pay all premiums and other costs associated with the Title Policy and the Commitment, and the costs of the Survey and the Plat. Seller and Purchaser shall each pay ½ of the cost of any closing escrow fee.

Section 7.5. Real Estate Commission. Seller and Purchaser each warrant to the other that no broker or agent has been engaged by it

in connection with the negotiation and/or consummation of this Agreement, and each hereby indemnifies and holds the other harmless from and against any and all claims of any broker or agent so claiming.

Section 7.6. Costs of the Parties. All costs or expenses of performance of obligations hereunder and the consummation of the transactions contemplated herein which have not been specifically assumed by either party under the terms hereof shall be borne by the party incurring such cost or expense.

ARTICLE EIGHT

CLOSING ADJUSTMENTS AND APPORTIONMENTS.

All of the items of income and expense related to the Property, including, without limitation, ad valorem taxes payable for the tax year in which the closing takes place, shall be apportioned or adjusted between the Seller and the Purchaser. All apportionments and adjustments shall be made as of 11:59 P.M. on the Closing Date, except those items which are not susceptible of determination on the Closing Date, which shall be apportioned or adjusted after the Closing, but computed as of the Closing Date. To the extent that the apportionments and adjustments at the Closing are not based upon final figures or there are any errors or omissions in the calculation or determination thereof, promptly after notice of such final figures or errors or omissions, the Parties shall readjust or reapportion and make the payment required as a result thereof. At Closing, Seller shall pay greenbelt or rollback taxes due in connection with the sale of the Property, if any. Seller and Purchaser shall cooperate as may be reasonably appropriate to mitigate the applicable rollback taxes to the extent consistent with Purchaser's intended use of the Property.

ARTICLE NINE

DEFAULT; REMEDIES ON DEFAULT

Section 9.1. Default; Liquidated Damages. Purchaser and Seller acknowledge that it would be extremely impracticable and difficult to ascertain the actual damage which would be suffered by Seller if Purchaser fails to consummate the purchase and sale contemplated herein (for any reason other than Seller's failure, refusal or inability to perform any of Seller's covenants and agreements hereunder or the failure of any other of the conditions to Purchaser's obligation to close hereunder). Based on all those

considerations, Purchaser and Seller have agreed that the damage to Seller would reasonably be expected to amount to the Earnest Money.

Accordingly, provided that Purchaser has not terminated this Agreement as allowed by Section 4.3 and if Seller has performed its covenants and agreements hereunder but Purchaser has breached its covenants and agreements hereunder and has failed, refused or is unable to consummate the purchase and sale contemplated herein by the Closing Date, then Escrow Agent shall pay the Earnest Money to Seller as full and complete liquidated damages. Upon Seller's receipt of such payment, as above provided, no party to this Agreement shall have any liability to any other party to this Agreement; and this Agreement shall in its entirety be deemed null, void and of no further force and effect, provided that the indemnities set forth in Article 2 and Section 4.1 shall survive. In that regard, Seller may recover from Purchaser any Earnest Money which Purchaser has failed to deliver to Escrow Agent in accordance with the terms of this Agreement.

If Seller has breached any of its covenants and/or agreements under this Agreement and/or has failed, refused or is unable to consummate the purchase and sale contemplated herein by the Closing Date, (a) Purchaser shall be entitled to seek and obtain specific performance, (b) the Escrow Agent, upon the request of Purchaser, shall return the Earnest Money to Purchaser and (c) the Purchaser shall be entitled to recover from Seller its actual out-of-pocket costs and expenses up to a maximum of Twenty Five Thousand Dollars (\$25,000.00).

Section 9.2. Termination. In the event this Agreement is terminated for any reason, Purchaser shall deliver to Seller within ten (10) days after such termination all copies and originals of documents delivered by Seller to Purchaser before, on or after the date hereof with respect to the Property, together with all copies and originals of all surveys, engineering reports, inspection reports, cost estimates, site plans and all documentation obtained by or on behalf of Purchaser with respect to the Property. The foregoing requirement to deliver such documents, surveys, engineering reports, inspection reports, cost estimates, site plans and documentation shall survive such termination.

ARTICLE TEN

MISCELLANEOUS PROVISIONS

Section 10.1. Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto with respect to the transactions contemplated herein, and it supersedes all prior understandings or agreements between the parties.

Section 10.2. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective heirs, devisees, personal representatives, successors and assigns.

Section 10.3. Waiver; Modification. Failure by Purchaser or Seller to insist upon or enforce any of their rights shall not constitute a waiver thereof, and nothing shall constitute a waiver of Purchaser's rights to insist upon strict compliance with the provisions hereof. Either party hereto may waive the benefit of any provision or condition for its benefit contained in this Agreement. No oral modification hereof shall be binding upon the parties, and any modification shall be in writing and signed by the parties.

Section 10.4. Governing Law. This Agreement shall be governed by and construed under the laws of Tennessee.

Section 10.5. Article Headings. The article headings as herein used are for convenience of reference only and shall not be deemed to vary the content of this Agreement or the covenants, agreements, representations and warranties herein set forth or limit the provisions or scope of any Article.

Section 10.6. Date Hereof. For purposes of this Agreement, the date hereof shall mean the latest date of execution of this Agreement by all parties hereto.

Section 10.7. Counterparts. To facilitate execution, this Agreement may be executed in as many counterparts as may be required. All such counterparts shall collectively constitute a single agreement.

Section 10.8. Time of Essence. TIME IS OF THE ESSENCE OF THIS AGREEMENT.

Section 10.9. Subsequent Documentation. Seller and Purchaser agree that they will, at any time, prior to, at or after Closing,

duly execute and deliver to the other any additional documents and instruments which are customary and which must necessarily be executed in order to consummate the purchase and sale contemplated herein, and the failure of Purchaser or Seller to demand such documents or instruments at or before the Closing shall not alleviate the obligation of the parties to execute and deliver same at any time, upon the demand.

Section 10.10. Assignment. The Purchaser may assign the rights and delegate the duties assumed by it as a result hereof to a governmental entity which will perform Purchaser's obligations under this Agreement and the ECR (the "Permitted Assignee") but to no other person or entity. No further assignment of this Agreement shall be permitted by the Purchaser or the Permitted Assignee without Seller's prior written approval. Any such assignment or delegation shall release Purchaser from its liability to Seller under this Agreement. Upon the written assignment by Purchaser delivered to Seller, Seller agrees to accept the performance of the Permitted Assignee and to perform this Agreement for the benefit of Purchaser's Assignee. Seller may assign the rights and delegate the duties assumed by it as a result hereof without the prior written consent of the Purchaser, but such assignment or delegation shall not release or excuse the Seller from its liability to the Purchaser under this Agreement.

Section 10.11. Tax-Deferred Exchange. Notwithstanding any other provision of this Agreement to the contrary, the parties recognize that Seller may effect a tax-deferred exchange in connection with the conveyance of the Subject Property. Purchaser agrees to cooperate to the extent reasonably requested by Seller, in connection with the timing and terms of the conveyance described herein and to execute such additional instruments as may be reasonably requested by the Seller in connection with any such exchange and compliance with the applicable provisions of the Internal Revenue Code and the regulations thereunder. In addition, Purchaser acknowledges that Seller may assign its rights, but not its obligations, under this Agreement in connection with such an exchange to a Qualified Intermediary as provided in IRC Reg. 1.1031(k)-1(g)(4) on or before the Closing Date. However, Purchaser will not have any obligation to accept title to property to be exchanged for the Property in a tax-deferred exchange. To the extent necessary to complete its exchange, Seller agrees to use a Qualified Intermediary for the exchange of property. In the event that Seller elects to use a tax-deferred exchange, it shall reimburse any expenses incurred by the Purchaser as a result of such exchange and shall indemnify, defend and hold Purchaser

harmless from and against any and all liabilities incurred by the Purchaser as a result of its participation in such exchange that would not otherwise shall have occurred or be payable as a result of the sale described in this Agreement.

Section 10.12. Acceptance; Date Hereof. If Purchaser causes a signed original of this Agreement to be delivered to Seller or its agent, such delivery shall be considered to be an offer by Purchaser. Such offer shall expire at 5:00 p.m. Eastern Time on August 31, 2023 (the "Expiration Time") unless an original or copy signed by Seller is delivered to the Purchaser at the address for the Purchaser set forth in Article 11 prior to the Expiration Time. For purposes of this Agreement, the date hereof shall mean the latest date of execution of this Agreement by all parties hereto.

ARTICLE ELEVEN

NOTICES

All notices, requests, consents and other communications hereunder shall be in writing and shall be personally delivered or mailed by first class registered or certified mail, return receipt requested, postage prepaid:

(a) If to Seller: Timothy C. Scott
9529 Turnbridge Lane
Knoxville, TN 37922

with copy to: Dennis B. Ragsdale
Long, Ragsdale & Waters, P.C.
1111 N. Northshore Dr., Suite S-700
Knoxville, TN 37919

or to such other address as may have been furnished to Seller in writing by Purchaser.

(b) If to Purchaser: David Smoak, Town Administrator
Town of Farragut
11408 Municipal Center Drive
Farragut, TN 37934

with copy to: Thomas M. Hale
Kramer Rayson LLP
800 S. Gay Street
Suite 2500
Knoxville, TN 37929-9702
Email: tomhale@kramer-rayson.com

or to such other address as may have been furnished to Purchaser in writing by Seller.

Any such notice, request, consent or other communication shall be deemed to be sufficiently given or served for all purposes when presented personally or when sent by national recognized overnight courier service or by registered or certified U.S. Mail, postage prepaid, to any party hereto at the address set forth above or at such other address as any party shall subsequently designate in writing. Notwithstanding the foregoing, no change of address from the addresses set forth above shall be effective until notice of such change of address is actually received by the parties to whom said notice has been sent.

ARTICLE TWELVE

ESCROW AGENT

Escrow Agent shall serve as Escrow Agent hereunder without remuneration other than reimbursement of out-of-pocket expenses to be paid by Seller. Escrow Agent shall have the right to disburse the Earnest Money to Purchaser or Seller upon written notice from the parties. The parties hereto hereby acknowledge that the Escrow Agent shall have no liability to any party on account of its failure to disburse the Earnest Money; and, in the event of any dispute as to who is entitled to receive the Earnest Money and interest earned thereon, if any, Escrow Agent shall have the right to retain the funds and disburse them in accordance with the final order of a court of competent jurisdiction or to deposit the Earnest Money with said court, pending a final decision of such controversy. The parties hereto further agree that Escrow Agent shall not be liable for failure of any depository of the Earnest Money and shall only be otherwise liable in the event of its gross negligence or willful misconduct. If the Purchaser furnishes its taxpayer identification number, Escrow Agent shall keep all Earnest Money in an escrow account and any interest shall be credited to Purchaser and applied against the Purchase Price.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals as of the day and year first above written.

WITNESSES:

Allison Myers

"PURCHASER":

TOWN OF FARRAGUT

By:

Ron Williams
Ron Williams, Mayor

WITNESSES:

Em D H

J. Scott

"SELLER"

TIMOTHY C. SCOTT

TODD M. SCOTT

The undersigned has executed this Agreement solely to confirm its acceptance of the duties of Escrow Agent as set forth herein this 1 day of September, 2023.

TENNESSEE VALLEY TITLE INSURANCE CO.

By:

Its:

Exhibit A

LEGAL DESCRIPTION PER COMMITMENT NUMBER 231420

PARCEL NO. 1:
SITUATED IN THE 6TH CIVIL DISTRICT OF KNOX COUNTY, TENNESSEE AND WITHIN THE CORPORATE LIMITS OF THE TOWN OF FARRAGUT, TENNESSEE, AND BEING KNOWN AS LOT 1 OF THE KNOX SW SECTOR TIS SUBDIVISION (INSTR. NO. _____) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT AN IRON ROD SET ON THE WESTERLY RIGHT-OF-WAY LINE OF MCFEE ROAD, SAID IRON ROD MARKING THE COMMON CORNER OF LOTS 1 AND 2 OF THE AFOREMENTIONED SUBDIVISION AND BEING SOUTH 42 DEG. 02 MIN. 15 SEC. EAST, 98.04 FEET FROM AN EXISTING IRON ROD MARKING THE COMMON CORNER OF LOT 1 AND HOMESTEAD LAND HOLDINGS, LLC (INSTR. NO. 202012310053337); THENCE WITH THE COMMON LINE OF LOT 2 THE FOLLOWING ELEVEN (11) CALLS: THENCE SOUTH 54 DEG. 18 MIN. 01 SEC. WEST, 188.50 FEET TO AN IRON ROD SET; THENCE 417.73 FEET ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 320.00 FEET AND A CHORD BEARING AND DISTANCE OF SOUTH 16 DEG. 54 MIN. 11 SEC. WEST, 388.93 FEET TO AN IRON ROD SET; THENCE SOUTH 20 DEG. 28 MIN. 38 SEC. EAST, 88.09 FEET TO AN IRON ROD SET; THENCE 283.82 FEET ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 250.00 FEET AND A CHORD BEARING AND DISTANCE OF SOUTH 12 DEG. 01 MIN. 44 SEC. WEST, 268.82 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 56 MIN. 19 SEC. WEST, 806.11 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 51 MIN. 52 SEC. WEST, 200.25 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 51 MIN. 14 SEC. WEST, 469.63 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 52 MIN. 36 SEC. WEST, 588.93 FEET TO AN IRON ROD SET; THENCE SOUTH 50 DEG. 40 MIN. 01 SEC. WEST, 174.87 FEET TO AN IRON ROD SET; THENCE SOUTH 55 DEG. 03 MIN. 09 SEC. WEST, 1,357.66 FEET TO AN IRON ROD SET; THENCE NORTH 21 DEG. 30 MIN. 14 SEC. WEST, 1,357.66 FEET TO AN IRON ROD SET MARKING THE COMMON CORNER WITH LOT 2 AND SCOTT (INSTR. NO. 202012020045114); THENCE ALONG THE COMMON LINE OF SCOTT (INSTR. NO. 202012020045114), SEAL (INSTR. NO. 202007140003801) AND HOMESTEAD LAND HOLDINGS, LLC (INSTR. NO. 202012310053337) THE FOLLOWING FOUR (4) CALLS: THENCE NORTH 57 DEG. 28 MIN. 43 SEC. EAST, 1,209.99 FEET TO AN IRON ROD SET; THENCE SOUTH 33 DEG. 36 MIN. 39 SEC. EAST, 406.06 FEET TO AN EXISTING IRON ROD; THENCE NORTH 57 DEG. 10 MIN. 12 SEC. EAST, 1,483.12 FEET TO THE POINT OF BEGINNING.
CONTAINING 54.889 ACRES AS SHOWN ON THE ALTA/NSPS LAND TITLE SURVEY BEARING PROJECT NUMBER 22440007 AND SIGNED BY ROBERT D. SANDERS, JR., TN RLS 1889.

PARCEL NO. 2:
SITUATED IN THE 6TH CIVIL DISTRICT OF KNOX COUNTY, TENNESSEE AND WITHIN THE CORPORATE LIMITS OF THE TOWN OF FARRAGUT, TENNESSEE, AND BEING KNOWN AS LOT 1 OF THE KNOX SW SECTOR TIS SUBDIVISION (INSTR. NO. _____) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT AN IRON ROD SET ON THE WESTERLY RIGHT-OF-WAY LINE OF MCFEE ROAD, SAID IRON ROD MARKING THE COMMON CORNER OF LOTS 1 AND 2 OF THE AFOREMENTIONED SUBDIVISION AND BEING SOUTH 42 DEG. 02 MIN. 15 SEC. EAST, 98.04 FEET FROM AN EXISTING IRON ROD MARKING THE COMMON CORNER OF LOT 1 AND HOMESTEAD LAND HOLDINGS, LLC (INSTR. NO. 202012310053337); THENCE WITH SAID RIGHT-OF-WAY LINE THE FOLLOWING TWO (2) CALLS: THENCE SOUTH 33 DEG. 55 MIN. 49 SEC. EAST, 100.96 FEET TO AN IRON ROD SET; THENCE SOUTH 36 DEG. 07 MIN. 49 SEC. EAST, 391.34 FEET TO AN IRON ROD SET AT THE RIGHT-OF-WAY INTERSECTION OF THE WESTERLY LINE OF MCFEE ROAD AND THE NORTHERLY LINE OF BOYD STATION ROAD; THENCE ALONG THE NORTHERLY AND WESTERLY RIGHT-OF-WAY LINE OF BOYD STATION ROAD THE FOLLOWING TWO (2) CALLS: THENCE SOUTH 49 DEG. 57 MIN. 07 SEC. WEST, 274.59 FEET TO AN IRON ROD SET; THENCE SOUTH 04 DEG. 56 MIN. 19 SEC. WEST, 35.36 FEET TO AN EXISTING IRON ROD SET AT THE INTERSECTION OF THE WESTERLY RIGHT-OF-WAY LINE OF BOYD STATION ROAD AND THE NORTHERLY RIGHT-OF-WAY LINE OF NORFOLK SOUTHERN; THENCE ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF NORFOLK SOUTHERN THE FOLLOWING EIGHT (8) CALLS: THENCE SOUTH 49 DEG. 56 MIN. 19 SEC. WEST, 1,224.27 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 51 MIN. 52 SEC. WEST, 200.21 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 51 MIN. 14 SEC. WEST, 469.63 FEET TO AN IRON ROD SET; THENCE SOUTH 49 DEG. 52 MIN. 36 SEC. WEST, 588.93 FEET TO AN IRON ROD SET; THENCE SOUTH 50 DEG. 40 MIN. 01 SEC. WEST, 178.03 FEET TO AN IRON ROD SET; THENCE SOUTH 55 DEG. 03 MIN. 09 SEC. WEST, 291.24 FEET TO AN IRON ROD SET; THENCE SOUTH 61 DEG. 41 MIN. 52 SEC. WEST, 309.27 FEET TO AN IRON ROD SET; THENCE SOUTH 68 DEG. 28 MIN. 22 SEC. WEST, 127.77 FEET TO AN IRON ROD SET MARKING THE COMMON CORNER WITH SCOTT (INSTR. NO. 202012020045114); THENCE WITH SAID COMMON LINE NORTH 21 DEG.30 MIN. 17 SEC. WEST, 1,321.42 FEET TO AN IRON ROD SET AT AN EXISTING LOUB POWER, SAID IRON ROD MARKING THE COMMON CORNER WITH SCOTT AND LOT 2; THENCE ALONG SAID COMMON LINE NORTH 57 DEG. 25 MIN. 18 SEC. EAST, 662.33 FEET TO AN IRON ROD SET MARKING THE COMMON CORNER OF LOT 1; THENCE WITH THE COMMON LINE OF LOT 1 THE FOLLOWING ELEVEN (11) CALLS: THENCE SOUTH 21 DEG. 30 MIN. 14 SEC. EAST, 1,357.66 FEET TO AN IRON ROD SET; THENCE NORTH 55 DEG. 03 MIN. 09 SEC. EAST, 51.83 FEET TO AN IRON ROD SET; THENCE NORTH 50 DEG. 40 MIN. 01 SEC. EAST, 174.87 FEET TO AN IRON ROD SET; THENCE NORTH 49 DEG. 52 MIN. 36 SEC. EAST, 588.93 FEET TO AN IRON ROD SET; THENCE NORTH 49 DEG. 51 MIN. 14 SEC. EAST, 469.64 FEET TO AN IRON ROD SET; THENCE NORTH 49 DEG. 51 MIN. 52 SEC. EAST, 200.25 FEET TO AN IRON ROD SET; THENCE NORTH 49 DEG. 56 MIN. 19 SEC. EAST, 806.11 FEET TO AN IRON ROD SET; THENCE 283.82 FEET ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 250.00 FEET AND A CHORD BEARING AND DISTANCE OF NORTH 12 DEG. 01 MIN. 44 SEC. EAST, 268.82 FEET TO AN IRON ROD SET; THENCE NORTH 20 DEG. 28 MIN. 38 SEC. WEST, 88.09 FEET TO AN IRON ROD SET; THENCE 417.73 FEET ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 320.00 FEET AND A CHORD BEARING AND DISTANCE OF NORTH 16 DEG. 54 MIN. 11 SEC. EAST, 388.93 FEET TO AN IRON ROD SET; THENCE NORTH 54 DEG. 18 MIN. 01 SEC. EAST, 188.50 FEET TO THE POINT OF BEGINNING
CONTAINING 31.139 ACRES AS SHOWN ON THE ALTA/NSPS LAND TITLE SURVEY BEARING PROJECT NUMBER 22440007 AND SIGNED BY ROBERT D. SANDERS, JR., TN RLS 1889.

AS SURVEYED LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN THE SIXTH (6TH) CIVIL DISTRICT OF KNOX COUNTY, TENNESSEE , WITHIN THE TOWN OF FARRAGUT, AND BEING ALL OF LOTS 1R AND 2R OF THE FIRST RESUBDIVISION OF KNOX SW SECTOR TIS AS RECORDED IN INSTRUMENT NUMBER 202212060033269 IN THE REGISTER'S OFFICE OF KNOX COUNTY, TENNESSEE, AND BEING A PORTION OF A PROPERTY OF TIMOTHY C. SCOTT AND TODD M. SCOTT AS RECORDED IN DEED BOOK 20201202, PAGE 45114 AND IN DEED BOOK 20220111, PAGE 54282 IN THE REGISTER'S OFFICE OF KNOX COUNTY, TENNESSEE AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND REBAR WITH A CAP, SAID POINT BEING THE INTERSECTION OF THE NORTHWEST RIGHT-OF-WAY LINE OF BOYD STATION ROAD WITH THE SOUTHWEST RIGHT-OF-WAY LINE OF MCFEE ROAD; THENCE ALONG SAID NORTHWEST RIGHT-OF-WAY LINE OF BOYD STATION ROAD THE FOLLOWING TWO (2) COURSES: SOUTH 49°57'07" WEST, A DISTANCE OF 274.59 FEET TO A FOUND 5/8" REBAR WITH CAP(STAMPED S&ME); SOUTH 04°56'19" WEST, A DISTANCE OF 35.36 FEET TO A FOUND 5/8" REBAR WITH CAP (STAMPED AG CCI RLS 1332), SAID POINT BEING IN THE NORTHWEST RIGHT-OF-WAY LINE OF THE NORFOLK SOUTHERN RAILROAD; THENCE ALONG SAID NORTHWEST RIGHT-OF-WAY LINE OF THE RAILROAD THE FOLLOWING EIGHT (8) COURSES: SOUTH 49°56'19" WEST, A DISTANCE OF 1,224.27 FEET TO A FOUND 5/8" REBAR WITH CAP; SOUTH 49°51'52" WEST, A DISTANCE OF 200.21 FEET TO A FOUND 5/8" REBAR WITH CAP (STAMPED S&ME); SOUTH 49°51'14" WEST, A DISTANCE OF 469.63 FEET TO A FOUND 5/8" REBAR WITH CAP (STAMPED S&ME); SOUTH 49°52'36" WEST, A DISTANCE OF 588.94 FEET TO A FOUND 5/8" REBAR; SOUTH 50°40'01" WEST, A DISTANCE OF 178.03 FEET TO A FOUND 5/8" REBAR; SOUTH 55°03'09" WEST, A DISTANCE OF 291.24 FEET TO A FOUND 1/2" REBAR WITH CAP WITH CAP; SOUTH 61°41'52" WEST, A DISTANCE OF 309.27 FEET TO A FOUND 1/2" REBAR WITH CAP (STAMPED S&ME); SOUTH 68°28'22" WEST, A DISTANCE OF 127.77 FEET TO A FOUND 1/2" REBAR WITH CAP (STAMPED S&ME); THENCE LEAVING SAID RAILROAD, SEVERING AFOREMENTIONED SCOTT PROPERTY THE FOLLOWING FOUR (4) COURSES: NORTH 22°27'41" WEST, A DISTANCE OF 68.80 FEET TO A FOUND 1/2" REBAR WITH CAP (STAMPED S&ME); NORTH 21°30'20" WEST, A DISTANCE OF 1,347.88 FEET TO A SET 5/8" REBAR WITH CAP STAMPED "SAM"; NORTH 57°41'49" EAST, A DISTANCE OF 661.72 FEET TO A SET 5/8" REBAR WITH CAP STAMPED "SAM"; NORTH 57°34'35" EAST, A DISTANCE OF 525.01 FEET TO A SET 5/8" REBAR AND CAP STAMPED "SAM", SAID 5/8" REBAR LYING ON THE SOUTHERLY LINE OF THE FINAL PLAT OF MEADOWS ON MCFEE, PHASE 2 (INSTRUMENT NUMBER 202208300013966); THENCE WITH SAID MEADOWS ON MCFEE, PHASE 2, THE FOLLOWING FOUR (4) COURSES: SOUTH 33°56'46" EAST, A DISTANCE OF 16.71 FEET TO A SET 5/8" REBAR AND CAP STAMPED "SAM"; NORTH 57°21'24" EAST, A DISTANCE OF 683.81 FEET TO A SET 5/8" REBAR AND CAP STAMPED "SAM"; SOUTH 33°04'41" EAST, A DISTANCE OF 412.64 FEET TO A FOUND 5/8-INCH IRON ROD; NORTH 57°13'20" EAST, A DISTANCE OF 1,483.15 FEET TO A SET 5/8" REBAR AND CAP STAMPED "SAM", SAID 5/8" REBAR BEING A CORNER IN THE AFOREMENTIONED SOUTHWEST RIGHT-OF-WAY LINE OF MCFEE ROAD, AND PASSING A FOUND 5/8" REBAR WITH CAP (STAMPED BENCHMARK 692-4090) AT 1489.27 FEET; THENCE WITH SAID SOUTHWEST RIGHT-OF-WAY LINE OF MCFEE ROAD THE FOLLOWING TWO (2) COURSES SOUTH 33°55'49" EAST, A DISTANCE OF 197.79 FEET TO A FOUND 5/8" REBAR WITH CAP (STAMPED S&ME); SOUTH 36°07'49" EAST, A DISTANCE OF 391.34 FEET TO POINT OF BEGINNING.

CONTAINING 86.76 ACRES (3,779,107 SQ. FT.) OF LAND, MORE OR LESS.



TITLE EXCEPTIONS PER SCHEDULE B, SECTION II OF TITLE COMMITMENT -- COMMITMENT NUMBER 231420

- 1-7. THESE ARE NOT SURVEY MATTERS
8. RIGHTS OF NORFOLK SOUTHERN RAILWAY COMPANY IN AND TO ANY PORTION OF SUBJECT PROPERTY LYING WITHIN THE BOUNDS OF ITS RIGHT OF WAY AND/OR ANY RIGHT OF WAY THAT IT MIGHT CLAIM UNDER CHARTER RIGHTS, TO INCLUDE BUT NOT LIMITED TO CERTAIN RIGHT OF WAY FILED FOR RECORD IN WARRANTY BOOK T, VOLUME 2, PAGE 69 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY; NO WIDTH GIVEN, REFER TO VAL MAPS V64-4 & V64-5 AS SHOWN HEREON.
9. EASEMENT GRANTED BY C.J. BURNETT AND WIFE, ANNIE BURNETT, TO EASTERN TENNESSEE POWER COMPANY, DATED OCTOBER 12,1911, FILED FOR RECORD IN TRUST BOOK 166, PAGE 223 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY; NO WIDTH GIVEN, BUT RUNS WITH LOCATION OF THE UTILITY POLES AND WIRES; AS SHOWN HEREON.
10. EASEMENT GRANTED BY J.R. CAMPBELL, A SINGLE MAN, AND O.A. CAMPBELL, A SINGLE MAN, TO EASTERN TENNESSEE POWER COMPANY, DATED OCTOBER 12, 1914, FILED FOR RECORD IN TRUST BOOK 166, PAGE 225 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY; NO WIDTH GIVEN, BUT RUNS WITH LOCATION OF THE UTILITY POLES AND WIRES; AS SHOWN HEREON.
11. CLEARANCE PERMIT GRANTED BY O.L. SEAL TO SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, DATED JULY 6, 1954, FILED FOR RECORD IN WARRANTY BOOK 951, PAGE 369 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY AND IS SHOWN HEREON.
12. CLEARANCE PERMIT GRANTED BY FLOYD BURNETTE, BESSIE BURNETTE AND DEE BURNETTE, TO SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, DATED JUNE 28, 1954, FILED FOR RECORD IN WARRANTY BOOK 951, PAGE 401 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY AND IS SHOWN HEREON.
13. AGREEMENT CONCERNING 28-FOOT RIGHT OF WAY SET FORTH IN THAT AGREEMENT AMONG J.M. STAFFORD, GLADYS STAFFORD, ROBERT L. SMITH AND FRED LANGLEY, DATED MARCH 17, 1970, FILED FOR RECORD IN WARRANTY BOOK 1703, PAGE 18 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: WARRANTY BOOK 1703, PAGE 18 REFERENCES WARRANTY BOOK 1426, PAGE 383 AND CANNOT BE PLOTTED BY DEED, BLANKET IN NATURE.
14. TENNESSEE VALLEY AUTHORITY POWER LINE EASEMENT SET FORTH IN QUIT CLAIM DEED FROM A.C. MULLINS, BEING THE OWNER OF AN UNDIVIDED 37.5% INTEREST, TO W.K. WARREN, DATED DECEMBER 31, 1979, FILED FOR RECORD IN WARRANTY BOOK 1703, PAGE 18 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: TVA POWERLINE EASEMENT NOT DESCRIBED IN DOCUMENT.
15. EASEMENT GRANTED BY EDWARD L. CLAY AND VIRGINIA B. CLAY, THE KNOXVILLE UTILITIES BOARD, DATED SEPTEMBER 25, 1996, FILED FOR RECORD IN WARRANTY BOOK 2227, PAGE 936 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY AND IS SHOWN HEREON.
16. UTILITY EASEMENT BY AND BETWEEN EDWARD L. CLAY AND WIFE, VIRGINIA B. CLAY, AND THE KNOXVILLE UTILITIES BOARD, AND THE FIRST UTILITY DISTRICT OF KNOX COUNTY, TENNESSEE, DATED AS OF APRIL 29, 2002, FILED FOR RECORD AS INSTRUMENT NO. 200205010090437 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY AND IS SHOWN HEREON.
17. UTILITY EASEMENT BY AND BETWEEN EDWARD L. CLAY AND WIFE, VIRGINIA B. CLAY, AND BE FIRST UTILITY DISTRICT OF KNOX COUNTY, TENNESSEE, DATED AS OF JANUARY 7, 2003, FILED FOR RECORD AS INSTRUMENT NO. 200301150061667 IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY AND IS SHOWN HEREON.
18. MATTERS DEPICTED AND DISCLOSED BY PLATS OF RECORD AS INSTRUMENT NO. 202208220011856 AND AS INSTRUMENT NO. 202212060033269 (NEW), IN THE KNOX COUNTY REGISTER OF DEEDS OFFICE.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY AND IS SHOWN HEREON.
19. RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE USE OF AND THE CONTINUED UNINTERRUPTED FLOW OF A WET WEATHER STREAM CROSSING THE WESTERN PART OF SUBJECT PROPERTY, AND DRAINAGE DITCH RUNNING ALONG RAILROAD RIGHT OF WAY.
SURVEYOR'S OPINION: DOES AFFECT PROPERTY, AND IS SHOWN HEREON.
20. RIGHTS OF TENANTS IN POSSESSION.
SURVEYOR'S OPINION: NOT A SURVEY MATTER.
21. THE POLICY, WHEN ISSUED, WILL NOT INSURE THE EXACT SQUARE FOOTAGE AND/OR ACREAGE SET OUT IN THE DESCRIPTION IN SCHEDULE A HEREOF.
SURVEYOR'S OPINION: ACREAGE AS SHOWN HEREON.

SURVEYOR'S NOTES

1. BEARINGS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83), CORS 96, EPOCH 2010.0, TENNESSEE STATE PLANE COORDINATE SYSTEM, TENNESSEE GEODETIC REFERENCE NETWORK (TGRN) AND ARE FURTHER REFERENCED TO THE TENNESSEE DEPARTMENT OF TRANSPORTATION VIRTUAL REFERENCE NETWORK.
2. ALL DISTANCES SHOWN HEREON ARE HORIZONTAL GRID DISTANCES AND ARE MEASURED IN U.S. SURVEY FEET. THE COMBINED SCALE FACTOR FOR THIS PROJECT IS 0.9999053549.
3. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND ARE FURTHER REFERENCED TO THE TENNESSEE DEPARTMENT OF TRANSPORTATION VIRTUAL REFERENCE NETWORK.
4. GLOBAL POSITIONAL DATA (REAL-TIME KINEMATIC (RTK) GPS) WAS OBSERVED ON JULY 13, 2023, UTILIZING A TRIMBLE R12 DUAL FREQUENCY RECEIVER. THE POSITIONAL ACCURACY OF THE GPS SURVEY CONTROL SET TO PERFORM THIS SURVEY DOES NOT EXCEED 0.07 FEET HORIZONTALLY.
5. FIXED CONTROL STATIONS ARE LISTED AS FOLLOWS:
TDOT DISTRICT 17 CORS ARP, PID: DL2078, LATITUDE N35°48'48.15928", LONGITUDE W84°00'17.53634".
6. ALL ABOVE GROUND IMPROVEMENTS AND UTILITIES WITHIN 5 FEET OF ALL PROPERTY LINES HAVE BEEN LOCATED AND ARE SHOWN HEREON. THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON DRAWINGS RECEIVED FROM THE CLIENT. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF ANY UTILITIES SHOWN, WHICH ARE NOT VISIBLE FROM THE SURFACE.
7. THE PROPERTY SHOWN HEREON IS CURRENTLY ZONED "A" (AGRICULTURAL) DISTRICT. FOR ACCURATE INFORMATION CONCERNING ZONING REQUIREMENTS AND RESTRICTIONS CONTACT TOWN OF FARRAGUT COMMUNITY DEVELOPMENT DEPARTMENT 865-675-2684
BUILDING SETBACKS: FRONT35' REARDETERMINED BY CODE DURING APPLICATION. SIDEDETERMINED BY CODE DURING APPLICATION.
THESE RESTICCTIONS ARE NOT EXHAUSTIVE, ALWAYS CONSULT WITH BUILDING AUTHORITIES PRIOR TO CONSTRUCTION. RESTRICTIONS ARE SUBJECT TO CHANGE.
8. NO PROPOSED CHANGES IN STREET(S) RIGHT-OF-WAY LINES WERE APPARENT AT THE TIME OF THIS SURVEY. THERE IS NO EVIDENCE OF RECENT STREET, SIDEWALK CONSTRUCTION, OR REPAIRS, AND EARTHWORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS AT THE TIME OF THIS SURVEY.
9. THE PROPERTY SHOWN HEREON IS LOCATED IN FLOOD ZONE "X" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR THE TOWN OF FARRAGUT. THIS MAP IS DESIGNATED AS MAP NUMBER 47093C0354F AND 47093C0360F AND HAS AN EFFECTIVE DATE OF MAY 2, 2007. THE FIELD WORK WAS COMPLETED ON AUGUST 21, 2023.
11. THE SURVEY SHOWN HEREON WAS COMPLETED WITH THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE PROVIDED BY TENNESSEE VALLEY TITLE INSURANCE COMPANY, BEARING COMMITMENT NUMBER 231420, AND HAVING AN EFFECTIVE DATE OF AUGUST 28, 2023 AT 8:00 AM. THE APPLICABLE SCHEDULE B, SECTION II ITEMS AFFECTING THE SURVEY ARE LISTED HEREON ON. THE CERTIFYING SURVEYOR'S COMMENTS ARE SHOWN IN RED INK.
12. SOURCES OF INFORMATION USED TO FACILITATE THIS SURVEY WERE PREVIOUS SURVEYS BY THIS FIRM, SURVEYS BY OTHER FIRMS AND INFORMATION FURNISHED BY CLIENT. NO TITLE SEARCH, TITLE OPINION OR ABSTRACT WAS PERFORMED BY THIS FIRM. THERE MAY BE DEEDS OF RECORD, UNRECORDED DEEDS, EASEMENTS, RIGHT-OF-WAYS, OR OTHER INSTRUMENTS OF RECORD WHICH COULD AFFECT THE BOUNDARIES OF THIS PROPERTY THAT WERE NOT FURNISHED AT TIME OF SURVEY.
13. THERE IS BOTH VEHICULAR AND PEDESTRIAN ACCESS TO THE PROPERTY VIA MCFEE ROAD.
14. THE PROPERTY SHOWN HEREON IS THE SAME AS IN THE PROVIDED TITLE COMMITMENT.
15. THE OWNERS AND PROPERTY ADDRESSES:
TIMOTHY C. & TODD M. SCOTT
7214 BALL CAMP PIKE
KNOXVILLE, TN 37931

AREA STATEMENT TABLE		
PARCEL NUMBER	SQUARE FOOTAGE (SQ. FEET)	ACREAGE (AC.)
162-024.02 MAIN	2,406,561	55.25
162-024.03	1,372,546	31.50
TOTAL	3,779,107	86.75

PROPOSED AREA TABLE		
PARCEL AREA	SQUARE FOOTAGE (SQ. FEET)	ACREAGE (AC.)
55 ACRE TRACT	2,395,938	55.00
15 ACRE TRACT	653,474	15.00
REMAINING TRACT	729,695	16.75

SURVEYOR'S CERTIFICATION

(NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEAL OF A TENNESSEE LICENSED LAND SURVEYOR)

TO: S&ME, TENNESSEE VALLEY TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6A, 8, 11A, 13, 14, 16, 17, 18, OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON AUGUST 21, 2023.

I HEREBY FURTHER CERTIFY THAT THE ALTA/NSPS LAND TITLE SURVEY OF THE PROPERTY SHOWN AND DESCRIBED HEREON WAS COMPLETED UNDER MY DIRECTION AND SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

I FURTHER CERTIFY THAT THIS SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS FOR SURVEYS SET FORTH BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS IN CHAPTER 0820-3, STANDARDS OF PRACTICE. NO SEARCH OF THE PUBLIC RECORDS HAS BEEN MADE BY THIS OFFICE. THE SURVEY IS BASED ON INFORMATION FURNISHED BY CLIENT OR CLIENT'S REPRESENTATIVE.

I FURTHER CERTIFY THAT THE SURVEY CONTROL SHOWN AND UTILIZED FOR THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEMS METHODOLOGY, MEETING RULE 0820-03--(07)(5) AND THE CURRENT MINIMUM STANDARD FOR A CATEGORY IV SURVEY.



OCTOBER 24, 2023

DATE OF SIGNATURE

ROBERT D. SANDERS, JR.
TENNESSEE REGISTERED LAND SURVEYOR
CERTIFICATE NO. 1889

PROJECT: S&ME Inc.
ALTA / NSPS MCFEE ROAD SURVEY

JOB NUMBER: 1023080418
DATE: 9/2023
SCALE: N/A
SURVEYOR: R. SANDERS
TECHNICIAN: J. SKILES
DRAWING: MCFEE ROAD -- ALTA
PARCEL ID: 162 024.02, 162 024.03
PARTYCHIEF: C. BIRDSONG/ D. BURRELL/ S. MCCAMMON
FIELDBOOKS: 42324

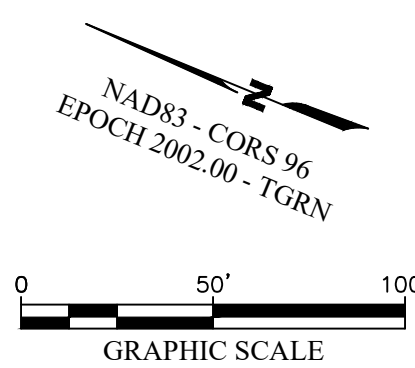
ALTA/NSPS Land Title Survey For: S&ME, Inc.
A Portion of As Described In Instrument No. 202012020045114
Lying within the Corporate Limits of the Town of Farragut and
in the 6th Civil District of Knox County, Tennessee



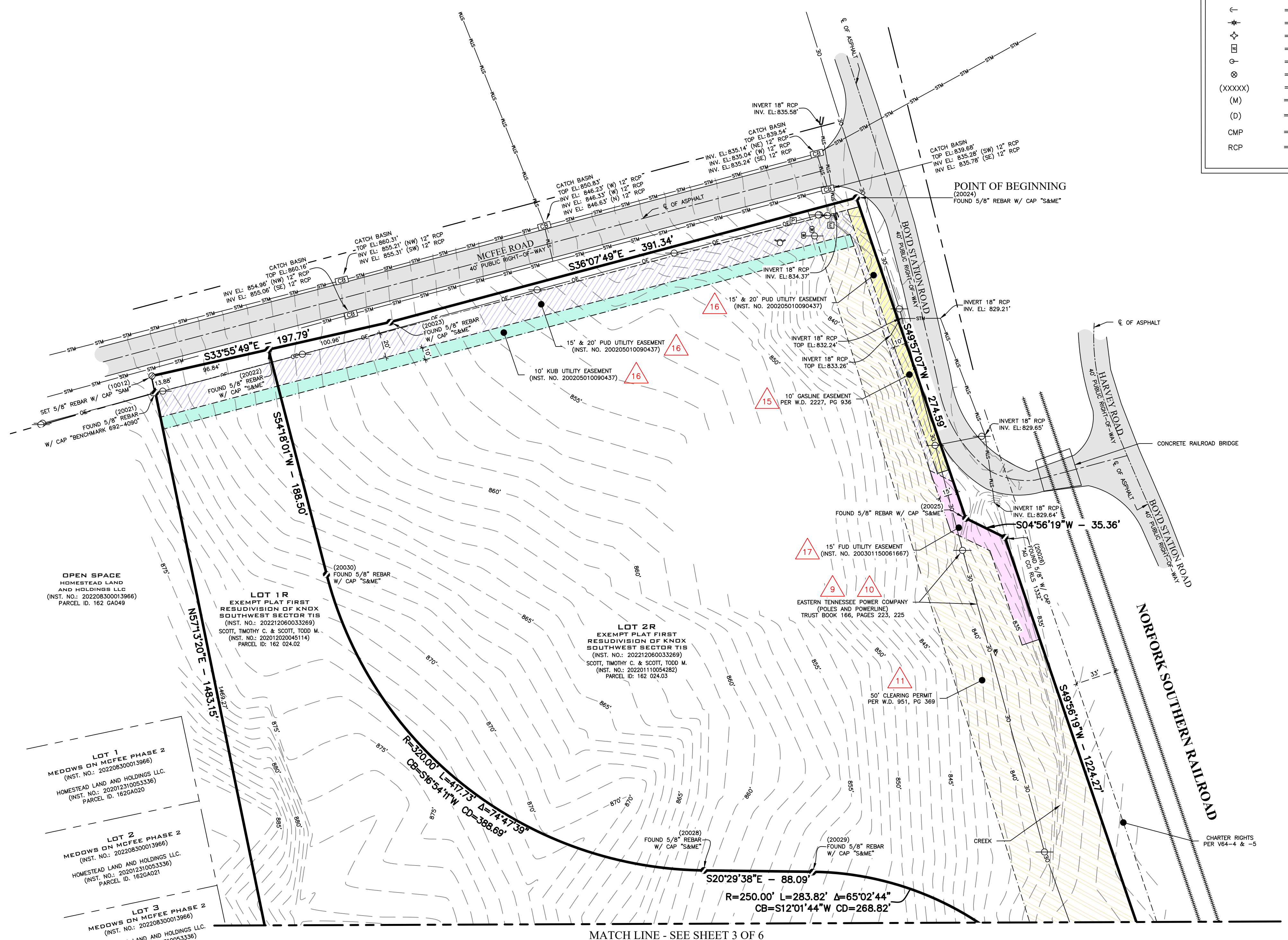
SHEET 1
OF 6



9047 Executive Park
Drive Suite 120
Knoxville, TN 37923
Ofc: 865.200.4366
email: info@sam.biz



LEGEND	
	= CATCH BASIN
	= GAS MARKER
	= SIGN
	= UTILITY POLE
	= WASTE WATER MANHOLE
	= WATER METER
	= WATER VALVE
	= WATER FAUCET
	= ELECTRIC METER VAULT
	= GUY WIRE
	= LIGHT POLE
	= TRAFFIC SIGNAL
	= TRAFFIC BOX
	= GUY POLE
	= POST / BOLLARD
	= SAM POINT NUMBER
	= MEASURED DISTANCE
	= DEEDED DISTANCE
	= CORRUGATED METAL PIPE
	= REINFORCED CONCRETE PIPE
	= TREE LINE
	= ADJOINER LINE, LINE NOT SURVEYED. LINE MAPPED FROM DEEDS OR PLATS (UNLESS NOTED)
	= RIGHT-OF-WAY LINE, LINE NOT SURVEYED. LINE MAPPED FROM DEEDS OR PLATS (UNLESS NOTED)
	= BOUNDARY/PROPERTY LINE
	= SANITARY SEWER
	= DITCHLINE
	= STORM WATER PIPE
	= OVERHEAD ELECTRIC
	= WOOD FENCE
	= UNDERGROUND WATER
	= UNDERGROUND GAS
	= RAILROAD
	= PAVED ASPHALT SURFACE
	= CONCRETE SURFACE
	= TITLE EXCEPTION NUMBER
	= CALCULATED POINT



- SCHEDULE BII EXCEPTION ITEM 9 TRUST BOOK 166, PAGE 223
- SCHEDULE BII EXCEPTION ITEM 10 TRUST BOOK 166, PAGE 225
- SCHEDULE BII EXCEPTION ITEM 11 WARRANTY BOOK 951, PAGE 369
- SCHEDULE BII EXCEPTION ITEM 12 WARRANTY BOOK 951, PAGE 401
- SCHEDULE BII EXCEPTION ITEM 15 WARRANTY BOOK 2227, PAGE 636
- SCHEDULE BII EXCEPTION ITEM 16 INSTRUMENT NO.: 200205010090437
- SCHEDULE BII EXCEPTION ITEM 17 INSTRUMENT NO.: 200301150061667

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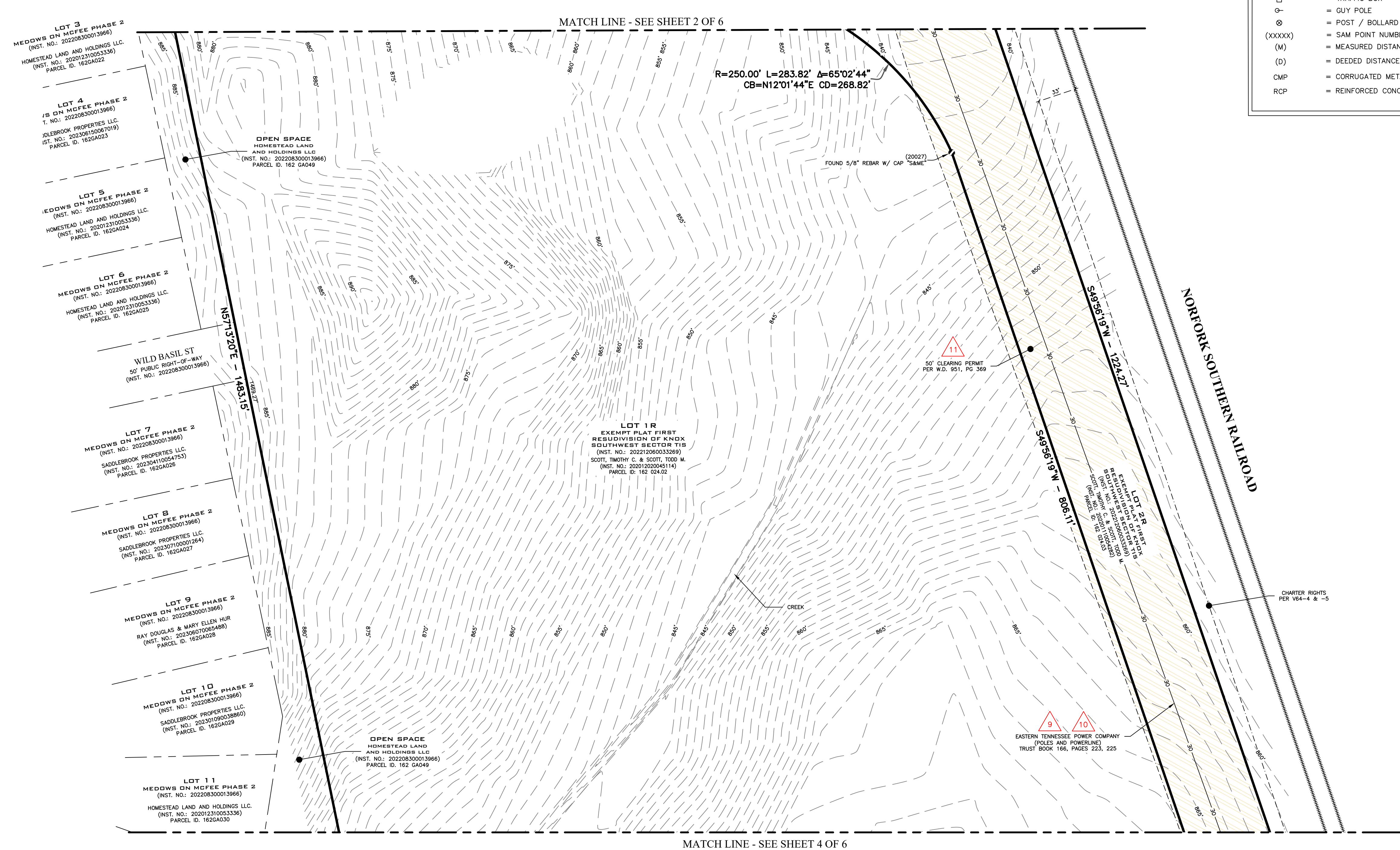
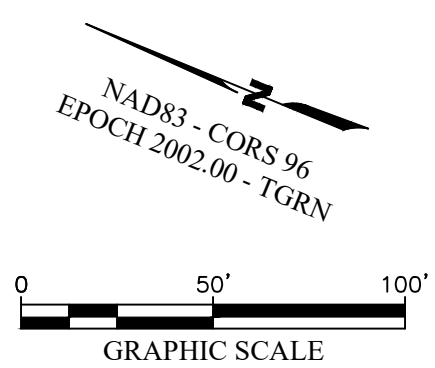
9047 Executive Park
Drive Suite 120
Knoxville, TN 37923
Ofc: 865.200.4366
email: info@sam.biz

PROJECT: S&ME Inc. ALTA / NSPS MCFEE ROAD SURVEY
JOB NUMBER: 1023080418
DATE: 9/2023
SCALE: 1" = 50'
SURVEYOR: R. SANDERS
TECHNICIAN: J. SKILES
DRAWING: MCFEE ROAD - ALTA
PARCEL ID: 162 024.02, 162 024.03
PARTYCHIEF: C. BIRDSONG/ D. BURRELL/ S. MCCAMMON
FIELDBOOKS: 42324

ALTA/NSPS Land Title Survey For: S&ME, Inc.
A Portion of As Described In Instrument No. 202012020045114
Lying within the Corporate Limits of the Town of Farragut and
in the 6th Civil District of Knox County, Tennessee



SHEET 2
OF 6



SCHEDULE B1 EXCEPTION ITEM 9
TRUST BOOK 166, PAGE 223

SCHEDULE B1 EXCEPTION ITEM 10
TRUST BOOK 166, PAGE 225

SCHEDULE B1 EXCEPTION ITEM 11
WARRANTY BOOK 951, PAGE 369

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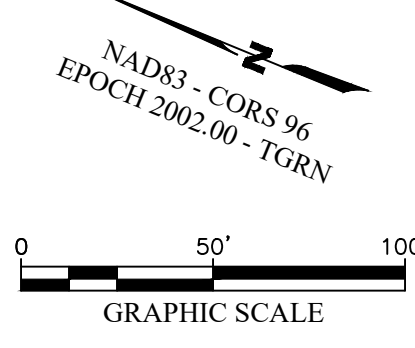
9047 Executive Park
Drive Suite 120
Knoxville, TN 37923
Ofc: 865.200.4366
email: info@sam.biz

PROJECT: S&ME Inc. ALTA / NSPS MCFEE ROAD SURVEY
JOB NUMBER: 1023080418
DATE: 9/2023
SCALE: 1" = 50'
SURVEYOR: R. SANDERS
TECHNICIAN: J. SKILES
DRAWING: MCFEE ROAD - ALTA
PARCEL ID: 162 024.02, 162 024.03
PARTYCHIEF: C. BIRDSONG/ D. BURRELL/ S. MCCAMMON
FIELDBOOKS: 42324

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SHEET 3
OF 6



MATCH LINE - SEE SHEET 3 OF 6

LEGEND

= CATCH BASIN

= GAS MARKER

= SIGN

= UTILITY POLE

= WASTE WATER MANHOLE

= WATER METER

= WATER VALVE

= WATER FAUCET

= ELECTRIC METER VAULT

= GUY WIRE

= LIGHT POLE

= TRAFFIC SIGNAL

= TRAFFIC BOX

= GUY POLE

= POST / BOLLARD

= SAM POINT NUMBER

= MEASURED DISTANCE

= DEEDED DISTANCE

= CORRUGATED METAL PIPE

= REINFORCED CONCRETE PIPE

= TREE LINE

= ADJOINER LINE, LINE NOT SURVEYED.
LINE MAPPED FROM DEEDS OR PLATS (UNLESS NOTED)

= RIGHT-OF-WAY LINE, LINE NOT
SURVEYED. LINE MAPPED FROM
DEEDS OR PLATS (UNLESS NOTED)

= BOUNDARY/PROPERTY LINE

= SANITARY SEWER

= DITCHLINE

= STORM WATER PIPE

= OVERHEAD ELECTRIC

= WOOD FENCE

= UNDERGROUND WATER

= UNDERGROUND GAS

= RAILROAD

= PAVED ASPHALT SURFACE

= CONCRETE SURFACE

= TITLE EXCEPTION NUMBER

= CALCULATED POINT

△ SCHEDULE BI EXCEPTION ITEM 9
TRUST BOOK 166, PAGE 223
△ SCHEDULE BI EXCEPTION ITEM 10
TRUST BOOK 166, PAGE 225
△ SCHEDULE BI EXCEPTION ITEM 11
WARRANTY BOOK 151, PAGE 399
△ SCHEDULE BI EXCEPTION ITEM 12
WARRANTY BOOK 151, PAGE 401
△ SCHEDULE BI EXCEPTION ITEM 18
INSTRUMENT NO.: 202212060033269

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email: info@sam.biz

PROJECT: S&ME Inc. ALTA / NSPS MCFEE ROAD SURVEY
JOB NUMBER: 1023080418
DATE: 9/2023
SCALE: 1" = 50'
SURVEYOR: R. SANDERS
TECHNICIAN: J. SKILES
DRAWING: MCFEE ROAD - ALTA
PARCEL ID: 162 024.02, 162 024.03
PARTYCHIEF: C. BIRDSONG/ D. BURRELL/ S. MCCAMMON
FIELDBOOKS: 42324

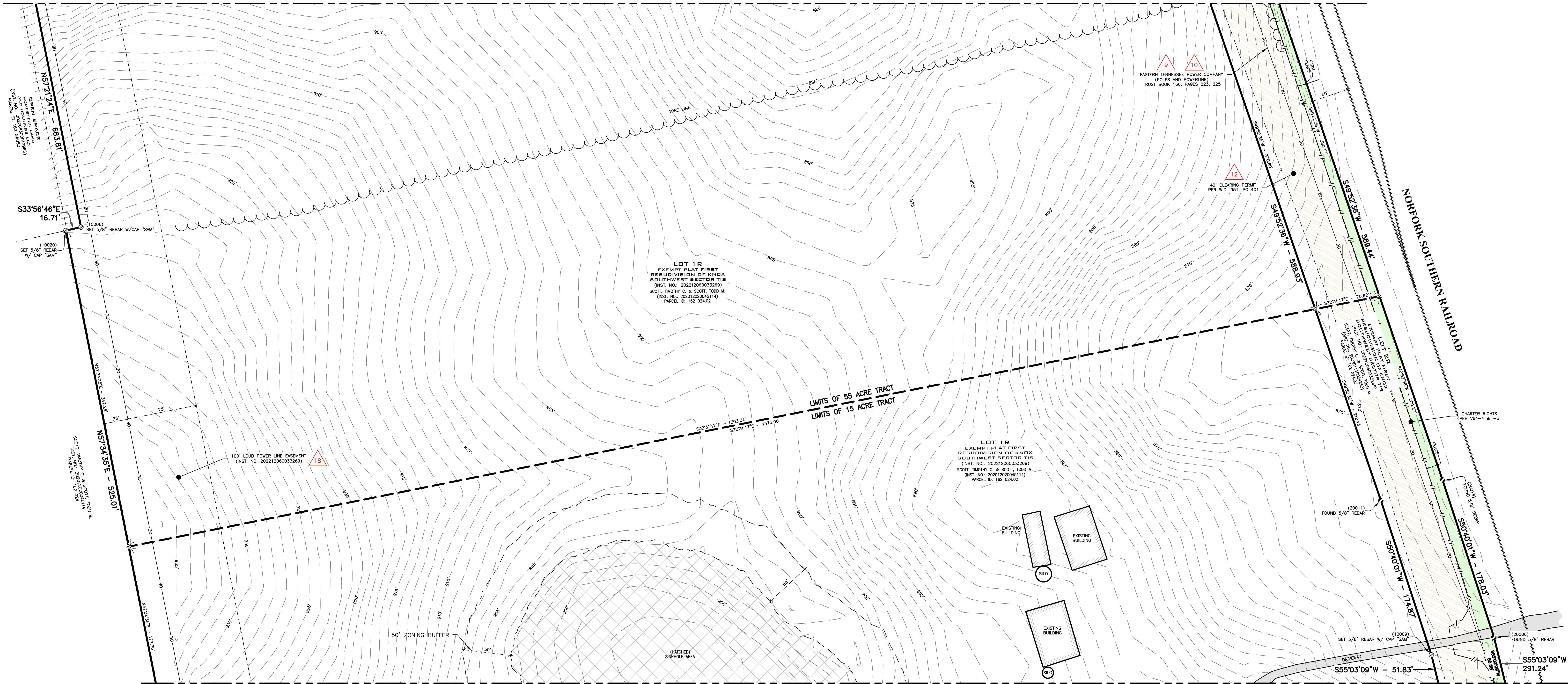
ALTA/NSPS Land Title Survey For: S&ME, Inc.
A Portion of As Described In Instrument No. 202012020045114
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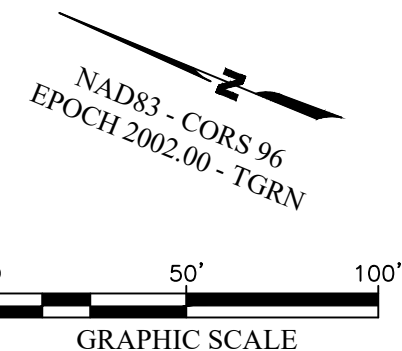
SHEET 4
OF 6

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MATCH LINE - SEE SHEET 4 OF 6



MATCH LINE - SEE SHEET 6 OF 6



- SCHEDULE BI EXCEPTION ITEM 9 TRUST BOOK 166, PAGE 223
- SCHEDULE BI EXCEPTION ITEM 10 TRUST BOOK 166, PAGE 225
- SCHEDULE BI EXCEPTION ITEM 12 WARRANTY BOOK 951, PAGE 401
- SCHEDULE BI EXCEPTION ITEM 18 INSTRUMENT NO.: 202212060033289

LEGEND			
	= CATCH BASIN		= LIGHT POLE
	= GAS MARKER		= TRAFFIC SIGNAL
	= SIGN		= TRAFFIC BOX
	= UTILITY POLE		= GUY POLE
	= WASTE WATER MANHOLE		= POST / BOLLARD
	= WATER VALVE		= SAM POINT NUMBER
	= WATER FAUCET		= MEASURED DISTANCE
	= ELECTRIC METER VAULT		= DEEDED DISTANCE
	= GUY WIRE		= CORRUGATED METAL PIPE
			= REINFORCED CONCRETE PIPE
	= PAVED ASPHALT SURFACE		= TREE LINE
	= CONCRETE SURFACE		= ADJOINER LINE, LINE NOT SURVEYED, LINE MAPPED FROM DEEDS OR PLATS (UNLESS NOTED)
	= TITLE EXCEPTION NUMBER		= RIGHT-OF-WAY LINE, LINE NOT SURVEYED, LINE MAPPED FROM DEEDS OR PLATS (UNLESS NOTED)
	= CALCULATED POINT		= BOUNDARY/PROPERTY LINE
	= OVERHEAD ELECTRIC		= SANITARY SEWER
	= WOOD FENCE		= DITCHLINE
	= UNDERGROUND WATER		= STORM WATER PIPE
	= UNDERGROUND GAS		
	= RAILROAD		



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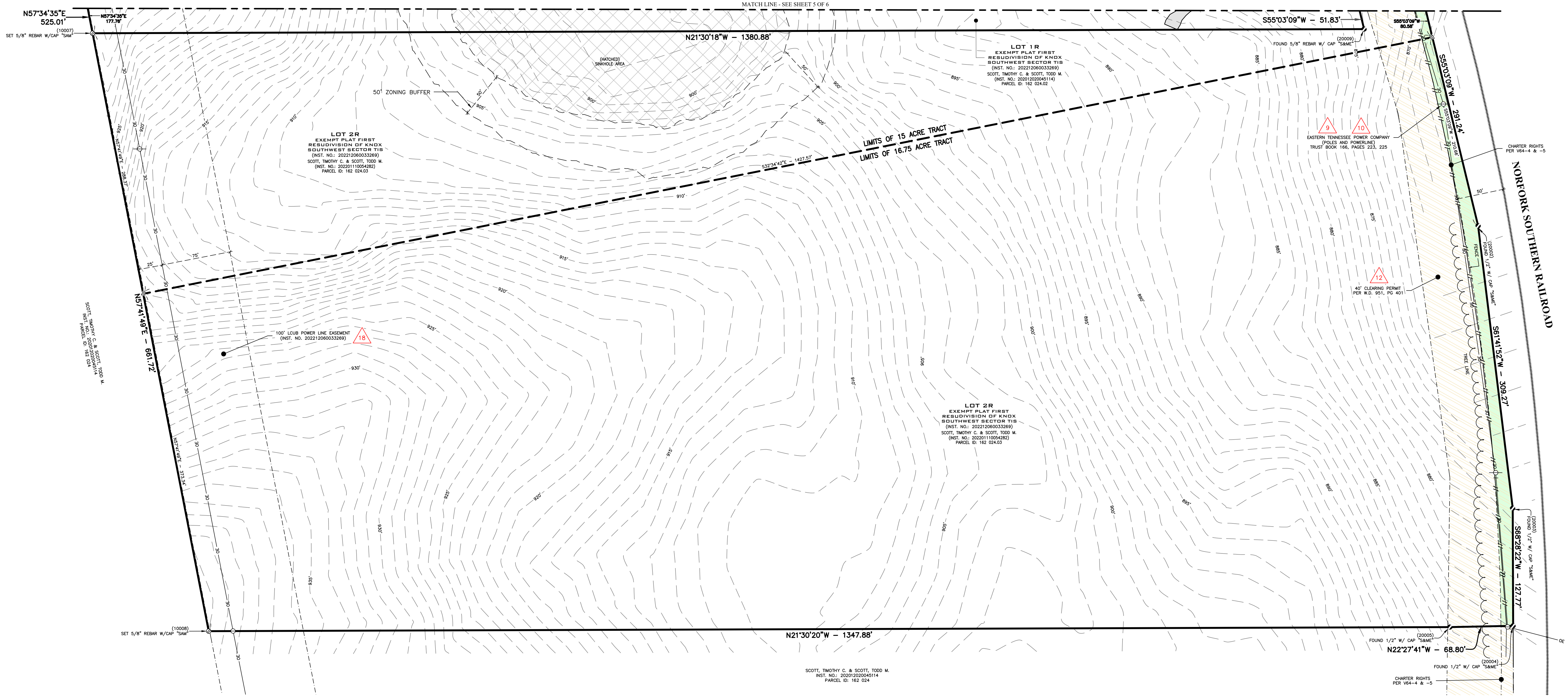
PROJECT: S&ME Inc.
ALTA / NSPS MCFEE ROAD SURVEY

JOB NUMBER: 1023080418
DATE: 9/2023
SCALE: 1" = 30'
SURVEYOR: R. SANDERS
TECHNICIAN: J. SKILES
DRAWING: MCFEE ROAD - ALTA
PARCEL ID: 162 024.02, 162 024.03
PARTYCHIEF: C. BIRDSONG/ D. BURRELL/ S. MCCAMMON
FIELDBOOKS: 42324

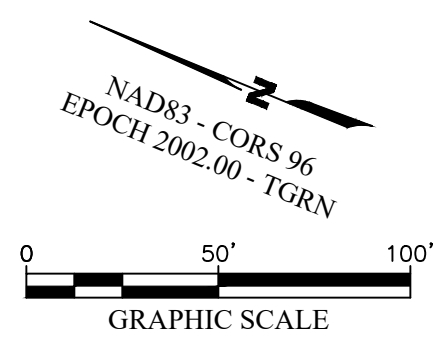
ALTA/NSPS Land Title Survey For: S&ME, Inc.
A Portion of As Described In Instrument No. 202012020045114
Lying within the Corporate Limits of the Town of Farragut and
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SHEET 5
OF 6



SCHEDULE BI EXCEPTION ITEM 9
TRUST BOOK 166, PAGE 223
SCHEDULE BI EXCEPTION ITEM 10
TRUST BOOK 166, PAGE 225
SCHEDULE BI EXCEPTION ITEM 12
WARRANTY BOOK 951, PAGE 401
SCHEDULE BI EXCEPTION ITEM 18
INSTRUMENT NO.: 202212060033269



LEGEND			
	= CATCH BASIN		= LIGHT POLE
	= GAS MARKER		= TRAFFIC SIGNAL
	= SIGN		= TRAFFIC BOX
	= UTILITY POLE		= GUY POLE
	= WASTE WATER MANHOLE		= POST / BOLLARD
	= WATER METER		= SAM POINT NUMBER
	= WATER VALVE		= MEASURED DISTANCE
	= WATER FAUCET		= DEEDED DISTANCE
	= ELECTRIC METER VAULT		= CORRUGATED METAL PIPE
	= GUY WIRE		= REINFORCED CONCRETE PIPE
	= PAVED ASPHALT SURFACE		= CONCRETE SURFACE
	= TITLE EXCEPTION NUMBER		= CALCULATED POINT
	= OVERHEAD ELECTRIC		= WOOD FENCE
	= UNDERGROUND WATER		= UNDERGROUND GAS
	= RAILROAD		= TREE LINE
	= ADJOINTER LINE, LINE NOT SURVEYED, LINE MAPPED FROM DEEDS OR PLATS (UNLESS NOTED)		= BOUNDARY/PROPERTY LINE
	= SANITARY SEWER		= DITCHLINE
	= STORM WATER PIPE		



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PROJECT: S&ME Inc.
ALTA / NSPS MCFEE ROAD SURVEY

JOB NUMBER: 1023080418
DATE: 9/2023
SCALE: 1" = 50'
SURVEYOR: R. SANDERS
TECHNICIAN: J. SKILES
DRAWING: MCFEE ROAD - ALTA
PARCEL ID: 162 024.02, 162 024.03
PARTYCHIEF: C. BIRDSONG/ D. BURRELL/ S. MCCAMMON
FIELDBOOKS: 42324

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A Portion of As Described In Instrument No. 202012020045114
Lying within the Corporate Limits of the Town of Farragut and
in the 6th Civil District of Knox County, Tennessee



SHEET 6
OF 6



Report of Preliminary Geotechnical
Exploration
Farragut Park-McFee East
Farragut, Tennessee
S&ME Project No. 23430267

PREPARED FOR:

Cannon & Cannon, Inc
855 Kingston Pike
Knoxville, Tennessee 37919

PREPARED BY:

S&ME, Inc.
1413 Topside Rd.
Louisville, Tennessee 37777

September 27, 2023



September 27, 2023

Cannon & Cannon, Inc.
855 Kingston Pike
Knoxville, Tennessee 37919

Attention: Mr. Jeff Beckett

Reference: **Report of Preliminary Geotechnical Exploration
Farragut Park-McFee East**
Farragut, Tennessee
S&ME Project No. 23430267

Dear Mr. Beckett,

This report presents the results of the preliminary geotechnical exploration for the Farragut Park-McFee East site in Farragut, Tennessee. Our services were provided in general accordance with S&ME Proposal No. 23430267, dated June 8, 2023, as authorized in Work Authorization No. 1 by Mr. Jeff Beckett of Cannon & Cannon, Inc. (CCI).

This report describes our understanding of the project, presents the results of the preliminary field exploration and laboratory testing, and discusses our conclusions and preliminary recommendations. S&ME appreciates this opportunity to be of service to you. Please call if you have questions concerning this report or any of our services.

Sincerely,

S&ME, Inc.

A handwritten signature in cursive script that reads "Zane M. Robinson".

Zane Robinson, E.I.
Staff Professional I
ZRobinson@smeinc.com

Daniel Boles, PE
Project Manager
dboles@smeinc.com

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- Appendix I – Figures
- Appendix II – Boring Logs
- Appendix III – Laboratory Test Results

Report of Preliminary Geotechnical Exploration

Farragut Park-McFee East

Farragut, TN

S&ME Project No. 23430267

1.0 Introduction

The primary purpose of our services was to explore the subsurface conditions at the site, evaluate those conditions, and provide preliminary recommendations for site preparation and foundation support. This report describes our understanding of the project, presents the results of the field exploration and laboratory testing, and discusses our conclusions and preliminary recommendations relative to the considerations discussed in this report. This report provides the following:

- A summary of the project information;
- A summary of current site conditions, topography, and area geology;
- A summary of the field exploration methods;
- A summary of the subsurface conditions encountered in the test borings;
- A summary of the laboratory test methods and results;
- Preliminary site assessment;
- Preliminary recommendations for site preparation, including subgrade preparation, excavation, suitability of onsite soils for re-use as structural fill, structural fill placement, and groundwater control;
- Preliminary recommendations for shallow foundation support; and,
- An Appendix with Site Location Plan, Test Location Plan, individual boring logs for each soil test boring, and a summary report of laboratory tests.

2.0 Project Description

Initial project information was based on telephone conversations with Mr. Darryl Smith, Town Engineer and at project scoping meeting on June 2, 2023, at the CCI office.

We understand The Town of Farragut is considering the acquisition of 70 acres of undeveloped agricultural land within the Town of Farragut limits and located south of McFee Road and west of Boyds Station Road. Planned uses have yet to be developed but may include a variety of public recreational uses. The Town has requested an ALTA survey, Phase I Environmental Site Assessment, preliminary natural resources, and geotechnical evaluations as due diligence efforts prior to and as part of the property transfer. Previously, a limited geotechnical investigation was completed in the area for a proposed development that was canceled.

Because the site development is preliminary in nature, no site grading plan has been developed. Preliminary estimates include cuts of 10 to 15 feet and fill of up to 10 feet. We expect the larger cuts to be performed on the higher elevations on the north side of the site. It is assumed modest sized buildings are planned for the site that are typical to recreational development such as bathrooms and fieldhouses. We expect single story buildings with wall and column loads not exceeding 5 kips per linear foot and 100 kips, respectively.

The project information and assumptions detailed in this report should be reviewed and confirmed by the appropriate team members. Modifications to our conclusions and recommendations may be required if the actual conditions vary from the project information and assumptions described herein.

3.0 Exploratory and Testing Procedures

3.1 Soil Test Borings

Members of S&ME's professional staff made a site reconnaissance to observe pertinent site features and to mark the test boring locations. The locations of the sixteen (16) soil test borings, identified as B-01 through B-16, were established by overlaying project plans into Google Earth™ and transferring the data into a hand-held GPS unit which was used in the field. Some limitations were encountered during clearing for site access that prevented the borings being established in the eastern and northeastern most areas of the site. Notably the density of the wooded area and abrupt elevation changes limited drill rig access to these areas.

The soil test borings for this exploration were completed with drill rig CME 750 by mechanically twisting hollow stem augers into the soil in general accordance with ASTM D6151, *Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling*. Soil samples were obtained at approximately 2 ½-foot intervals in the upper 10 feet and at 5-foot intervals thereafter in general accordance with ASTM D1586, *Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils* until the planned termination depth or auger refusal was reached for each boring. During standard penetration testing, the sampler was first seated 6 inches and then driven an additional foot with blows of 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated the *standard penetration resistance* (SPT) or *N-value* with units of blows per foot (bpf). The N-value provides a general indication of in-situ soil conditions and has been correlated with certain engineering properties of soils. A safety hammer was used for the standard penetration resistance testing.

Subsurface water level readings were taken in each of the borings during drilling and upon completion of the soil drilling process. Upon completion of drilling and sampling, each borehole was backfilled with soil cuttings and a borehole closure device. Due to safety concerns, the boreholes were not left open for delayed subsurface water level measurements.

3.2 Laboratory Testing

The samples obtained during the field exploration were transported to our laboratory and visually classified by members of our professional staff in general accordance with ASTM D2488 *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*. The purposes of this review were to check the field descriptions, visually estimate the relative percentages of the soils' constituents (sand, clay, etc.), determine the likely soil origin, and identify pertinent structural features. The stratification lines shown on the appended Boring Logs represent the approximate boundaries between soil types, but the transitions may be more gradual than shown. Selected soil samples were subjected to forty-three moisture content tests (ASTM D2216), two grain size tests (ASTM D6913), two Standard Proctor Compaction tests (D698), and two Atterberg Limits tests (ASTM D4318).

4.0 Site, Geologic, and Subsurface Conditions

4.1 Site Conditions

The 70-acre site is located in Farragut, Tennessee. The site is generally bound by McFee Road to the north, Boyd Road to the east and is primarily an undeveloped wooded area that was cleared before drilling activities began. Review of historic Google Earth™ imagery indicates that between April and June of 2021, development of a subdivision began on Red Poppy Drive and Scarlet Sage Drive adjacent to the northwest of the site. As of March 2023, historical Google Earth™ appears to show the same subdivision having on-going development with stormwater detention basins/ runoff areas located along the property line of the site.

4.2 Geologic Conditions

Farragut, Tennessee is located in the Valley and Ridge Physiographic Province. Elongated ridges that trend in a northeast-southwest direction characterize this province. The ridges are typically formed on highly resistant sandstones and shales, while the valleys and rolling hills are formed on less resistant limestone, dolomite, and shales.

Based on our review of the Geologic Map of the Concord Quadrangle, dated 2013, bedrock of the Chepultepec Dolomite (Oc), Kingsport Limestone (Ok), and Mascot Dolomite (Oma) formations underly the site. The Chepultepec Dolomite is composed of mostly fine-grained, light-gray to light olive-gray material with some brown petroliferous bedding. Within the bedrock, white oolitic chert nodules come in trace amounts and medium-grained sandstone can be found in bedding less than one foot thick along with dolomoldic chert in the lower part of the formation. The Kingsport is comprised of limestone and dolomite rock. The limestone is a fine-grained, light olive-gray while the dolomite can be medium to fine-grained or coarse grained depending on if the rock is light-gray or mottled brownish gray to white. Chert commonly exists in the bedding or in large masses within this formation. The Mascot Dolomite formation is made up of mostly fine-grained, locally sandy olive-gray to white with occasional maroon color in the dolomite rock. The limestone subordinate is fine-grained, light olive-gray and thick-bedded. Chert can be present in bedding and nodules, and unconformity is typically seen at the top of this formation.

Since the bedrock underlying this site contains carbonate rock (i.e. limestone), the site is susceptible to the typical carbonate hazards of irregular weathering, cave and cavern conditions, and overburden sinkholes. Carbonate rock, while appearing very hard and resistant, is soluble in slightly acidic water. This characteristic, plus differential weathering of the bedrock mass is responsible for the hazards. Of these hazards, the occurrence of sinkholes is potentially the most damaging to overlying soil-supported structures. Sinkholes occur primarily due to differential weathering of the bedrock and flushing or raveling of overburden soils into the cavities in the bedrock. The loss of solids creates a cavity or dome in the overburden. Growth of the dome over time or excavation over the dome can create a condition in which rapid, local subsidence or collapse of the roof of the dome occurs.

A certain degree of risk with respect to sinkhole formation and subsidence should be considered with any site located within geologic areas underlain by potentially soluble rock units. While a rigorous effort to assess the potential for sinkhole formation on this site was beyond the scope of this evaluation, the test borings drilled at this site did not encounter open voids or other signs of incipient sinkhole conditions. We have reviewed the USGS

quadrangle map for this area. There are several closed depressions in the immediate vicinity of the site and sinkholes will be a risk during site development. Based on the successful development in the surrounding area, it is our opinion this site does not have a greater risk of future karst activity than similar sites in the area.

4.3 Subsurface Conditions

The boring logs included in the Appendix should be reviewed for specific information at the individual boring locations. The depths and thicknesses of the subsurface strata indicated on the boring logs are generalized and the transition between materials may be more gradual than indicated. Information on actual subsurface conditions exists only at the specific boring locations and is relevant to the time the exploration was performed. Variations may occur and should be expected between and away from the boring locations. The stratification lines were used for our analytical purposes and, unless specifically stated otherwise, should not be used as the basis for design or construction cost estimates.

4.3.1 Topsoil

Topsoil was encountered from the ground surface to depths ranging from about 5 to 12 inches in each of our borings.

4.3.2 Residual Soils

Residual soils were encountered in all borings below the layer of topsoil to the depth of termination. Residual soil forms from the in-place weathering of the underlying parent bedrock. The residual soils encountered at the site were typically composed of red-brown and orange-brown fat clay with trace silt, chert, and sand with varying amounts of rock fragments. N-values in the residuum ranged from 4 to 74 blows per foot, indicating a soft to hard soil consistencies in fine grained soils.. However, the residual soils were typically in the stiff to very stiff consistency ranges. Each of the borings were terminated in residual soil at their predetermined depths.

4.3.3 Groundwater

The boreholes were observed for the presence of groundwater at the termination of boring. Groundwater was not encountered in any of the 16 test borings. We backfilled the boreholes shortly after completion due to safety concerns, and therefore delayed groundwater level measurements were not obtained. It should be noted that groundwater levels can fluctuate with seasonal, climatic, and environmental changes. Further, groundwater may be encountered at depths different from those identified in our borings in the future.

5.0 Laboratory Testing

The results of the laboratory testing for this project are summarized in the table below. A summary of laboratory tests is included in the Appendix.

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Specimen Identification			Natural Moisture Content (%)	Atterberg Limits			Grain Size Analysis (%)			Standard Proctor (PCF)	Optimal Moisture Content (%)
ID	No.	Top Depth		LL	PL	PI	Fines	Sand	Gravel		
B-01	BULK-01	0	23.6	48.0	31.0	17.0	87.0	11.9	1.1	99.5	23.7
B-01	SS-02	3.5	23.6								
B-01	SS-03	6	25.3								
B-01	SS-04	8.5	34.2								
B-01	SS-05	13.5	34.6								
B-01	SS-06	18.5	36.1								
B-02	SS-02	3.5	17.3								
B-02	SS-03	6	18.0								
B-02	SS-04	8.5	24.1								
B-02	SS-05	13.5	24.6								
B-02	SS-06	18.5	26.2								
B-03	BULK-01	0	28.2	68.0	47.0	21.0	94.8	5.2	0.0	89.3	30.5
B-03	SS-02	3.5	34.1								
B-03	SS-03	6	33.9								
B-03	SS-04	8.5	33.9								
B-03	SS-05	13.5	42.6								
B-03	SS-06	18.5	39.9								
B-04	SS-02	3.5	31.5								
B-04	SS-03	6	37.3								
B-04	SS-04	8.5	34.5								

6.0 Preliminary Conclusions and Recommendations

6.1 Site Assessment

Based on the subsurface conditions encountered during this geotechnical exploration and our experience with similar projects, it is our professional opinion this site is adaptable for the construction of a public recreational area development. We note the following items may impact construction schedules and budgets:

- Clearing and grubbing should be performed prior to earthwork activities. Topsoil should also be stripped and either removed from the site or stockpiled for later use in landscaping areas. Topsoil encountered in our test borings ranged from about 5 to 12 inches. However, it is not uncommon in wooded areas to have to strip below the topsoil layer to remove concentrations of tree and brush roots.
- Groundwater was not encountered in the borings at the time of drilling. We do not expect groundwater, if encountered, to have a significant impact on site grading.
- Stiff to very stiff residual soils were encountered in each of the borings. The soils generally consisted of low and high plasticity silts and clays. Fat clays (higher plasticity clays) and elastic silts were generally encountered in the borings based on our visual and manual evaluation and laboratory testing of the soils. Higher plasticity clays have a greater potential for volume change (shrinking and swelling) with changing moisture contents. This can make these soils more difficult to work with during site grading.
-

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- Based on our laboratory testing and visual classification, we expect the on-site soils may be suitable for reuse as compacted structural fill, provided the soils meet the requirements in Section 6.2.3 of this report. Fill soil containing deleterious material would not be suitable for reuse as fill.
- Based on our exploration, the field and laboratory testing, and our experience with similar soils, the subsurface soil conditions at this site are suitable to support shallow foundations designed using allowable bearing pressures of 2,000 to 3,000 pounds per square foot (psf), provided the foundations bear on newly placed compacted soil fill or stiff or higher consistency residual soils as described in Section 6.3.

The preceding has been an overview of the key geotechnical issues we expect may affect the proposed development of the site based on the current development plans discussed in this report. Our preliminary recommendations regarding these issues as well as other geotechnical aspects of the planned site construction are discussed in the subsequent report sections. Our preliminary conclusions and recommendations will need to be reviewed once project plans are more fully developed.

6.2 Earthwork

6.2.1 *Stripping*

To prepare the site for construction, organics, debris, stumps, topsoil, large root systems, any remaining utilities or infrastructure should be stripped and removed from the construction area. The depth of the topsoil encountered in the borings ranged from about 5 to 12 inches. However, we expect the topsoil intervals may be greater in unexplored areas, particularly in drainage features. It's not uncommon in wooded areas to have to strip below the topsoil layer to remove concentrations of tree and brush roots. Topsoil may either be disposed of offsite or stockpiled for re-use in landscaping areas.

6.2.2 *Subgrade Evaluation*

After completion of stripping in areas to receive fill, and once grade is achieved in cut areas, we recommend proofrolling the exposed surface of the subgrade soils. The purpose of proofrolling is to locate pockets of soft or unstable soils. Proofrolling should be performed using a loaded dump truck or other heavy equipment approved by our geotechnical engineer. The proofrolling operation should traffic the site with parallel passes of the vehicle starting at one side of each building pad and continuing to the other. Each pass should overlap the preceding pass to ensure complete coverage.

A representative from S&ME should be present to observe the proofrolling operations and to provide recommendations should unstable soils be encountered. In general, unstable materials in the building areas should be undercut until stable materials are exposed. Backfill should consist of compacted soil as described in Section 6.2.3 of this report. After proofrolling and prior to placing fill on the site, the upper surface soils should be scarified and properly compacted.

Subgrade repair can be expected to be more extensive if grading operations are performed during wet periods of the year. The onsite soils are moisture sensitive and will be softened by rubber-tired construction traffic when wet. Once areas requiring remediation have been repaired, the site may be brought to grade with structural fill.

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Depending on prevailing weather conditions and the speed of contractor activities during the grading phase of this project, proofrolling may be required on multiple occasions.

6.2.3 Earth Material Utilization and Fill Placement

Soil used as structural fill should be clean soil, free of organics, trash, and other deleterious material, and containing no rock fragments greater than 4 inches in any one dimension. Preferably, structural soil fill should have a standard Proctor maximum dry density of 90 pounds per cubic foot (pcf), or greater, a PI of 35 percent or less, and an organic content of less than 5 percent. Soils to be used as structural soil fill should be tested and observed by S&ME geotechnical personnel before being placed.

The soil tested in this exploration had a maximum dry density ranging from 89.3 pounds per cubic foot (pcf) in boring B-03 to 99.5 pcf in boring B-01 with an optimum moisture content of 30.5 and 23.7 respectively. The soils in boring B-03 fall slightly below our recommended unit weight for fill placement. Based on the amount of grading anticipated at the site these soils will become mixed during mass grading and improve the unit weight, but care should be taken to avoid using low unit weight soils in structural areas such as building and pavement areas. Given the amount of grading anticipated and the moisture content testing results of the soils, we anticipate moisture conditioning will be required.

6.2.4 Fill Density Testing

In-place density testing must be performed to check the previously recommended compaction criteria are achieved. We recommend these tests be performed on a full-time basis during mass grading in building areas and for utility trench backfill when a large volume of soil is being placed daily. Part-time density testing should suffice for utility trench backfill when there is a low volume of daily soil placement. The frequency of tests performed while the fill is being observed on a full-time basis can be determined by our field personnel based on the rate of fill placement, the observed behavior of the compacted material, and the equipment used. Tests should be performed at vertical intervals of 2 feet or less as the fill is being placed. We recommend density testing by a technician working under the direction of our project engineer.

6.2.5 Plastic Soil Considerations

Based on our experience in East Tennessee, soils with plasticity indices (PI) less than 30 percent have a slight potential for volume changes with changes in moisture content, and soils with a PI greater than 50 percent are highly susceptible to volume changes. Between these values, we consider the soils to be moderately susceptible to volume changes. Based on our experience in the area, we expect soils to be moderately susceptible to volume changes. The soils testing at the site had PIs ranging from 17 to 21 percent which indicates silt and elastic silts were encountered. We also expect some higher plasticity clays to be encountered during site grading.

Unlike other areas of the country where higher plasticity soils cause considerable foundation problems, East Tennessee does not typically endure long periods of severe drought or wet weather. However, in some year's drought conditions can be severe enough to cause significant soil shrinkage and after a period of drought the soils can swell with increasing moisture. If moderately plastic foundation and subgrade soils dry significantly or moisture contents increase significantly after completion of construction, there is the potential for volume change

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that can result in distress in buildings, floor slabs and pavements. Therefore, the volume change potential of the soils at the site should be considered, and the following construction precautions are recommended.

To reduce the potential for moisture content changes and associated volume changes to affect foundations, we recommend foundations bear at least 30 inches below exterior grades. Additionally, we recommend the owner may want to consider undercutting and replacing higher plasticity soils in building areas with lower plasticity soils to provide a lower plasticity buffer between the bottoms of grade slabs and the underlying higher plasticity soils. We recommend a buffer of at least 24 inches in grade slab areas.

- The foundation excavations should be excavated, observed, and backfilled in the same day to prevent excessive wetting or drying of the foundation subgrade soils.
- Floor slab subgrades should not be allowed to become excessively wet or dry prior to floor slab construction.
- The site should be graded to drain surface water away from the structure both during and after construction. In addition, any drains should discharge water well away from foundation and slab areas.
- Heat sources should be isolated from foundation soils to minimize drying of the foundation soils.
- Plantings with high water demands should not be planted near foundations and grade slabs.

6.2.6 *Sinkhole Risk Reduction and Corrective Action*

Based on our experience, we have found several measures useful in the design and site development to reduce the potential for sinkhole development at sites. These measures would decrease but not eliminate the potential for sinkhole development. Much can be accomplished to decrease the potential of future sinkhole activity by proper grade selection and positive site drainage.

The portions of the site excavated to achieve the desired grades will have a higher risk of sinkhole development than the areas to be filled, because of the exposure of the numerous relict fractures in the soil to rainfall and runoff. On the other hand, those portions of the site receiving a modest amount of fill will have a decreased risk of sinkhole development caused by rainfall or runoff because the placement of a cohesive soil fill over these areas effectively caps the area with a less permeable layer of remolded soil.

Although it is our opinion the risk of ground subsidence associated with sinkhole formation cannot be eliminated, we have found the following measures are useful in design and site development to reduce this potential risk:

- The scarification and recompaction of the upper nine inches of soil exposed in cut sections, thereby creating a layer of less permeable material.
- Maintaining positive site drainage to route surface waters well away from structural areas both during construction and over the life of the structures. Control of surface water during construction and over the project life will be very important to reduce the potential for sinkhole development.
- Verifying subsurface piping structures are carefully constructed and pressure tested prior to their placement in service.
- Using watertight seals in the storm drainage system.
- Using compacted soil, compacted dense-graded aggregate, or flowable fill to backfill site utilities. The use of No. 57 stone as utility backfill should be avoided.

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If a sinkhole develops, the appropriate corrective action is dependent on the size and location of the sinkhole. As described herein, S&ME should be retained to observe site and subgrade preparation activities. If sinkhole conditions are observed, the type of corrective action is most appropriately determined by S&ME on a case-by-case basis.

6.2.7 Final Subgrade Preparation

Floor slab area subgrades are often disturbed between completion of site grading and floor slab construction due to weather, foundation or utility installation, and other construction activities. For this reason, it is important the subgrades be evaluated just before slab construction. At that time, as much of the subgrade as practical should be proofrolled with a loaded dump truck in the presence of our representative. Any areas that pump, rut, or deflect significantly under the proofrolling load, or which are otherwise assessed to be soft or unstable, should be undercut to materials capable of supporting the proofrolling equipment without significant deflection. The undercut areas should be backfilled with compacted soil or crushed stone that does not exhibit rutting or pumping under the movement of construction equipment. Our representative can provide recommendations for repairing unstable areas that are observed.

6.3 Preliminary Foundation Recommendations

Shallow foundations for buildings should bear on either newly placed compacted soil fill prepared in accordance with the recommendations of this report, or stiff or higher consistency residual soils. Based on our analysis, shallow foundations bearing on newly placed compacted soil fill or stiff or higher residual soils may be designed using allowable bearing pressures ranging from 2,000 to 3,000 pounds per square foot (psf). Depending on the final grades and building locations, some remediation of foundation bearing soil and slab subgrades can be expected. Once building locations and final grades are determined, additional exploration should be performed to evaluate soil conditions at proposed building locations and foundation depths. Building foundations should avoid bearing on both residual soil and fill because the transition from a residual to fill soils has the potential to cause differential settlement.

7.0 Follow-Up Services

Our services should not end with the submission of this preliminary geotechnical report. S&ME should be retained to perform a design level geotechnical exploration once site grading information, proposed building locations, and structural loading information is available. Information collected during this final exploration, in conjunction with the data already collected, will allow us to provide project specific recommendations.

8.0 Limitations of Report

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions and preliminary recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other representation or warranty is expressed or implied.

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We relied on project information given to us or assumed by us based on similar projects in the Farragut, Tennessee area to develop our conclusions and preliminary recommendations. If project information described in this report is not accurate, or if it changes during project development, we should be notified of the changes so that we can modify our recommendations based on this additional information, if appropriate.

Our conclusions and preliminary recommendations are based on limited data from a field exploration program. Subsurface conditions can vary widely between explored areas. Some variations may not become evident until construction. If conditions are encountered which appear different than those described in our report, we should be notified. This report should not be construed to represent subsurface conditions for the entire site.

Unless specifically noted otherwise, our field exploration program did not include an assessment of regulatory compliance, environmental conditions or pollutants or presence of any biological materials (mold, fungi, bacteria). If there is a concern about these items, other studies should be performed. S&ME can provide a proposal and perform these services, if requested.

S&ME should be retained to review the final plans and specifications to check that earthwork, foundation, and other recommendations are properly interpreted and implemented. For additional information regarding the use and limitations of this report, please read the *Important Information about your Geotechnical Engineering Report* document located at the end of this report.

Appendices

Appendix I – Figures

Drawing Path: T:\Knoxville-1430\Projects\23430267_Cannon & Cannon, Inc._Farragut Park-McFee East_Farragut TN\Civil-Geo-Env\CAD\Sketch\Figure 1_SVM.dwg

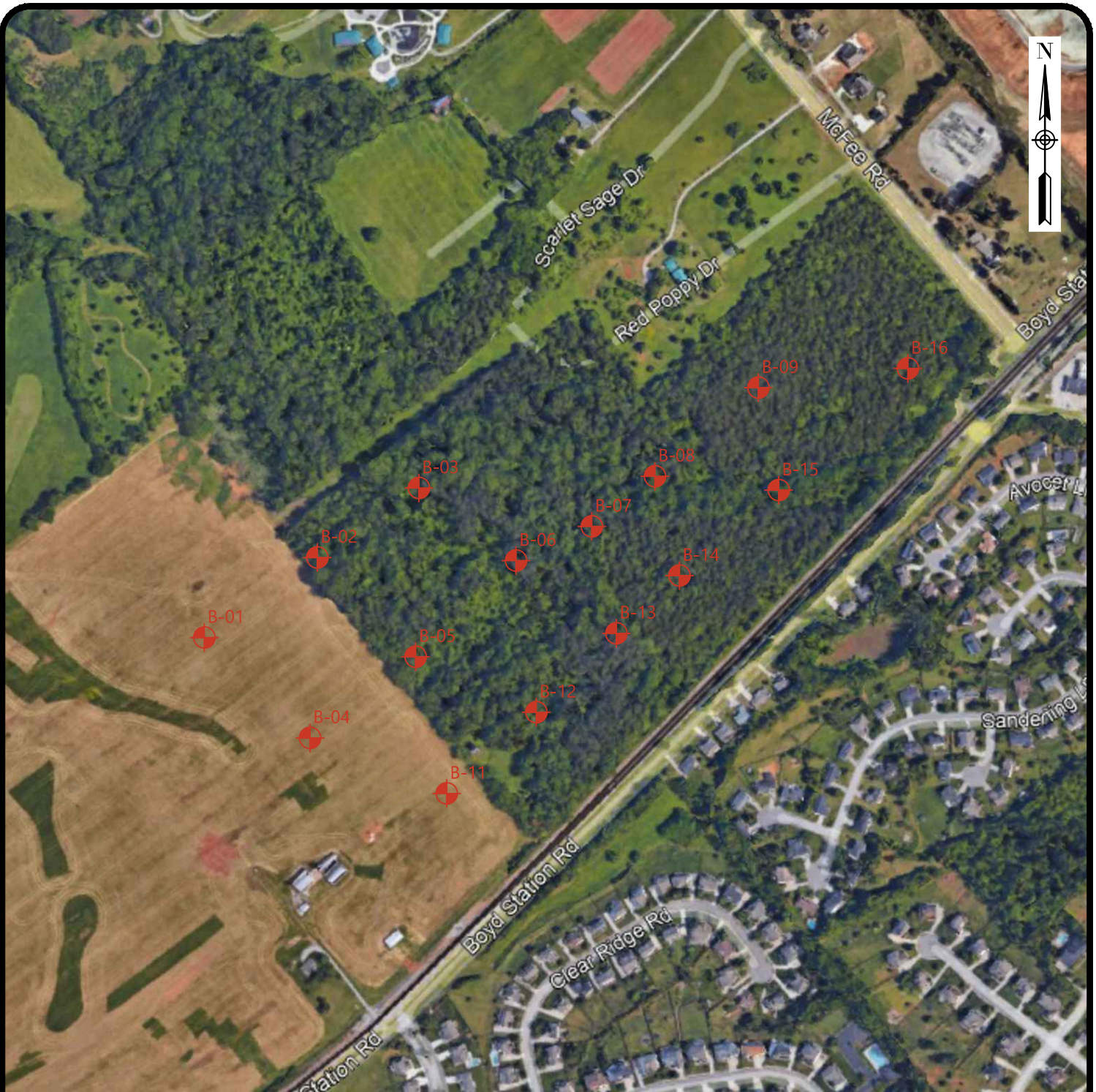


Notes:

- 1) Base map from Google Earth Pro accessed on September 19, 2023.

	Site Vicinity Map		SCALE:	FIGURE NO.
			Not to Scale	1
			DATE:	
			09/19/2023	
		Town of Farragut Farragut Park - McFee East Farragut, Tennessee	PROJECT NUMBER	
			23430267	

Drawing Path: T:\Knoxville-1430\Projects\2023\23430267_Cannon & Cannon, Inc._Farragut Park-McFee East_Farragut TN\Civil-Geo-Env\CAD\Sketch\Figure 2_BLP.dwg



Legend:

 Approximate Location of Soil Test Borings

Notes:

- 1) Boring locations are shown in general arrangement only.
- 2) Do not use boring locations for determination of distances or quantities.
- 3) Base map from Google Earth Pro accessed on September 19, 2023.



Boring Location Plan

Town of Farragut
Farragut Park - McFee East
Farragut, Tennessee

SCALE:

Not to Scale

DATE:

09/19/2023

PROJECT NUMBER

23430267

FIGURE NO.

2

Appendix II – Boring Logs

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-01 <i>Sheet 1 of 2</i>			
DATE DRILLED: 07/31/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 25.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS, AU				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA						ELEVATION
							20	40	60	80	100		
0					TOPSOIL, 7 inches								0
0.6				SS-01	SILT (ML), trace chert, little clay, stiff, dark red brown, moist, black staining	6-5-6 N = 11 PPV= 2.0	●						
				SS-02		5-6-8 N = 14 PPV= 2.0	●	○					
5				SS-03		6-8-11 N = 19 PPV= 2.5	●	○					
8.0				SS-04	FAT CLAY (CH), trace chert, some silt, stiff to very stiff, red brown with orange brown, moist, black staining	7-9-4 N = 13 PPV= 3.5	●	○					
10													
				SS-05		6-8-10 N = 18 PPV= 3.0	●	○					
15													
17.0				SS-06	SILT (ML), trace chert, little clay, stiff to very stiff, red brown with orange brown, moist, black staining	5-6-8 N = 14 PPV= 2.5	●	○					
20													

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/31/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-02 <i>Sheet 1 of 2</i>			
DATE DRILLED: 07/25/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 25.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 5 inches							0
0.4				SS-01	SILT (ML), trace chert, trace rock fragments, trace organics, stiff, red brown, moist, black staining	5-6-7 N = 13 PPV= 4.0	●					
3.0				SS-02	SILT (ML), trace chert, some clay, stiff to very stiff, red brown with orange brown, moist, black staining	6-11-13 N = 24 PPV= 4.0	○ ●					-5
5				SS-03		6-10-10 N = 20 PPV= 4.5	●					
				SS-04		6-7-9 N = 16 PPV= 2.2	● ○					-10
10		Residuum										
				SS-05		4-6-7 N = 13 PPV= 1.5	● ○					-15
15												
				SS-06		4-7-7 N = 14 PPV= 1.0	● ○					-20
20												

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/25/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			



GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-03 <i>Sheet 1 of 2</i>			
DATE DRILLED: 07/26/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 25.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 12 inches							0
1.0				SS-01	SILT (ML), trace chert, trace organics, stiff, red brown, moist, black staining	4-5-9 N = 14 PPV= 2.0						
3.0				SS-02	SILT (ML), trace chert, some clay, stiff to very stiff, red brown with orange brown, moist, black staining	5-11-13 N = 24 PPV= 4.0						
5				SS-03		7-12-14 N = 26 PPV= 4.0						-5
				SS-04		6-11-10 N = 21 PPV= 3.8						-10
10		Residuum		SS-05		4-6-7 N = 13 PPV= 3.0						-15
15				SS-06		4-5-7 N = 12 PPV= 2.0						-20
20												

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD		07/26/2023		Not encountered
END OF DRILLING				
AFTER DRILLING				
AFTER DRILLING				

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-04 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/31/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA						ELEVATION	
							△ % Fines	○ NMC	H PL-LL	20	40	60		80
0					TOPSOIL, 7 inches									0
0.6				SS-01	SILT (ML), trace chert, stiff, dark red brown, moist, black staining	5-5-7 N = 12 PPV= 3.0	●							
3.0				SS-02	FAT CLAY (CH), trace chert, some silt, very stiff, red brown and orange brown, moist, black staining	10-10-14 N = 24 PPV= 3.5	● ○							-5
5				SS-03		10-11-13 N = 24 PPV= 4.5	● ○							
8.0		Residuum		SS-04	SILT (ML), trace chert, trace sand, some clay, stiff to very stiff, red brown and orange brown, moist, black staining	13-13-13 N = 26 PPV= 3.2	● ○							-10
10														
15				SS-05		5-5-6 N = 11 PPV= 2.0	● ○							-15
15.0					Borehole terminated at 15.0 feet									-20

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/31/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-05 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/31/2023		ELEVATION:		NOTES:			
DRILL RIG: CME 750		DATUM: NAVD88					
DRILLER: George Akins		BORING DEPTH: 15.0 ft					
HAMMER TYPE: Safety Hammer		CLOSURE: Cuttings with Hole Closure Device					
DRILLING METHOD: 3-1/4" HSA		LOGGED BY: Sydney Maddux		NORTHING:		EASTING:	
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0	0.4				TOPSOIL, 5 inches							0
				SS-01	SILT (ML), trace chert, some clay, firm to very stiff, red brown, moist, black staining	2-4-4 N = 8	●					
				SS-02		5-6-8 N = 14 PPV= 2.2	●	○				-5
				SS-03		5-7-11 N = 18 PPV= 2.5	●	○				
				SS-04		5-7-10 N = 17 PPV= 2.5	●	○				-10
				SS-05		5-7-8 N = 15 PPV= 2.0	●	○				-15
15	15.0				Borehole terminated at 15.0 feet							
20												-20

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/31/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			



GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-06 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/26/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 5 inches							0
0.4												
				SS-01	SILT (ML), trace chert, some clay, stiff to very stiff, red brown with orange brown, moist, black staining	3-5-7 N = 12 PPV= 2.5	●					
				SS-02		6-10-13 N = 23 PPV= 3.2	●					
5				SS-03		6-9-12 N = 21 PPV= 3.5	●					-5
				SS-04		6-11-12 N = 23 PPV= 2.2	●					
10												-10
12.0				SS-05	FAT CLAY (CH), trace chert, some silt, stiff to very stiff, red brown with orange brown, moist, black staining	4-6-6 N = 12 PPV= 2.0	●					
15					Borehole terminated at 15.0 feet							-15
15.0												
20												-20

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/26/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-07 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/27/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 12 inches							0
1.0				SS-01	SILT (ML), trace chert, little clay, stiff, dark red brown, moist, black staining	3-4-6 N = 10 PPV= 4.0	●					
				SS-02		4-5-5 N = 10 PPV= 1.0	●	○				
5.5				SS-03	SILT (ML), trace chert, some clay, stiff, red brown, moist, black staining	5-6-6 N = 12 PPV= 3.5	●	○				
				SS-04		5-5-8 N = 13 PPV= 2.0	●	○				
15.0				SS-05		5-5-8 N = 13 PPV= 1.8	●	○				
					Borehole terminated at 15.0 feet							

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/27/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-08 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/27/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 7 inches							0
0.6				SS-01	SILT (ML), trace chert, trace wood, some clay, stiff to very stiff, red brown, moist, black staining	6-6-7 N = 13 PPV= 2.0	●					
				SS-02		5-7-10 N = 17 PPV= 3.0	●					
5				SS-03	SILT (ML), trace chert, some clay, very stiff, red brown, moist, black staining	6-8-11 N = 19 PPV= 2.5	●					-5
5.5				SS-04		5-8-11 N = 19 PPV= 2.2	●					
10												-10
15				SS-05		5-8-9 N = 17 PPV= 2.0	●					-15
15.0					Borehole terminated at 15.0 feet							
20												-20

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/27/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-09 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/26/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 6 inches							0
0.5				SS-01	SILT (ML), trace chert, little clay, firm to very stiff, dark red brown, moist, black staining	3-3-4 N = 7 PPV= 0.8	●					
				SS-02		3-4-5 N = 9 PPV= 2.0	●					
5				SS-03		4-5-9 N = 14 PPV= 2.5	●					
				SS-04		5-7-14 N = 21 PPV= 1.8	●					
10												
12.0				SS-05	FAT CLAY (CH), trace chert, some silt, very stiff, red brown and orange brown, moist, black staining	5-7-8 N = 15 PPV= 3.5	●					
15					Borehole terminated at 15.0 feet							
15.0												
20												

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/26/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-11 Sheet 1 of 1			
DATE DRILLED: 07/31/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0					TOPSOIL, 7 inches							0
	0.6			SS-01	SILT (ML), trace chert, some clay, very stiff to stiff, red brown with orange brown, moist, black staining	5-7-9 N = 16 PPV= 3.0	●					
				SS-02		6-8-12 N = 20 PPV= 4.0	●					-5
5				SS-03		7-11-14 N = 25 PPV= 4.5	●					
				SS-04		6-8-11 N = 19 PPV= 4.0	●					-10
10				SS-05		4-5-6 N = 11 PPV= 2.0	●					-15
15	15.0				Borehole terminated at 15.0 feet							
20												-20

GROUNDWATER	DATE	DEPTH (FT)	REMARKS
ATD	07/31/2023		Not encountered
END OF DRILLING			
AFTER DRILLING			
AFTER DRILLING			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-12 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/31/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA						ELEVATION
							20	40	60	80	100		
0					TOPSOIL, 6 inches								0
0.5				SS-01	SILT (ML), trace chert, some clay, very stiff, red brown, moist, black staining	8-9-10 N = 19 PPV= 4.0	●						
				SS-02		8-12-15 N = 27 PPV= 3.8	●	○					-5
5				SS-03		9-11-14 N = 25 PPV= 3.2	●	○					
				SS-04		9-8-10 N = 18 PPV= 1.5	●	○					-10
10													
				SS-05		3-4-11 N = 15 PPV= 1.0	●	○					-15
15	15.0				Borehole terminated at 15.0 feet								
20													-20

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/31/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-14 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/27/2023			ELEVATION:		NOTES:		
DRILL RIG: CME 750			DATUM: NAVD88				
DRILLER: George Akins			BORING DEPTH: 15.0 ft				
HAMMER TYPE: Safety Hammer			CLOSURE: Cuttings with Hole Closure Device				
DRILLING METHOD: 3-1/4" HSA			LOGGED BY: Sydney Maddux		NORTHING: EASTING:		
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION	
							△ % Fines	○ NMC	H PL-LL	20	40		60
0					TOPSOIL, 5 inches								0
0.4				SS-01	SILT (ML), trace chert, trace wood, little clay, stiff, red brown, moist, black staining	3-4-5 N = 9 PPV= 3.0	●						
3.0				SS-02	SILT (ML), trace chert, little clay, stiff, red brown, moist, black staining	4-5-9 N = 14 PPV= 2.5	●						
5				SS-03		7-8-7 N = 15 PPV= 3.0	●						
				SS-04		5-5-6 N = 11 PPV= 1.0	●						
10													
12.0				SS-05	SILT (ML), trace chert, some clay, stiff, red brown and orange brown, moist, black staining	4-4-5 N = 9 PPV= 0.2	●						
15					Borehole terminated at 15.0 feet								
15.0													
20													

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/27/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

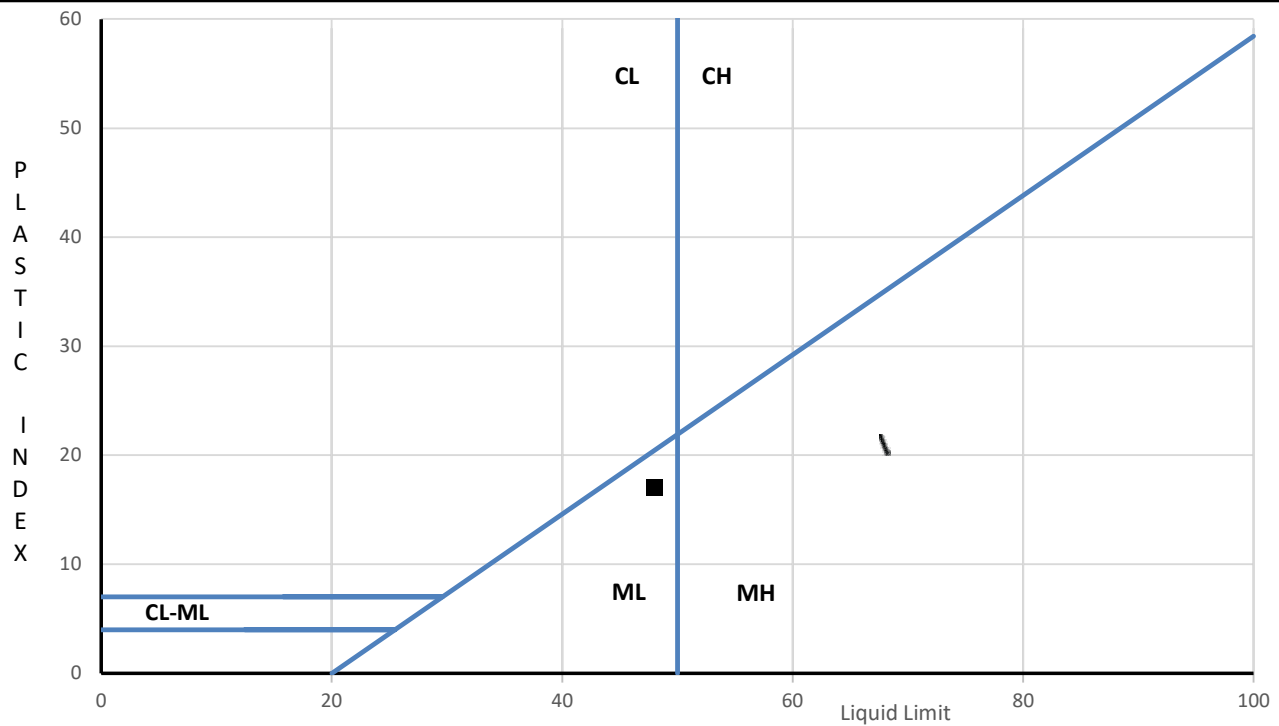
PROJECT: Farragut Park-McFee East Farragut, TN S&ME Project No. 23430267				BORING LOG: B-16 <i>Sheet 1 of 1</i>			
DATE DRILLED: 07/26/2023		ELEVATION:		NOTES:			
DRILL RIG: CME 750		DATUM: NAVD88					
DRILLER: George Akins		BORING DEPTH: 15.0 ft					
HAMMER TYPE: Safety Hammer		CLOSURE: Cuttings with Hole Closure Device					
DRILLING METHOD: 3-1/4" HSA		LOGGED BY: Sydney Maddux		NORTHING:		EASTING:	
SAMPLING METHOD: SS				PROJECT COORDINATE SYSTEM - NAD 1983 StatePlane Tennessee FIPS 4100 Feet			

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA					ELEVATION
							20	40	60	80	100	
0	0.4				TOPSOIL, 5 inches							0
				SS-01	SILT (ML), trace chert, little clay, soft to hard, red brown, moist, black staining	3-5-5 N = 10 PPV= 1.5	●					
				SS-02		3-5-7 N = 12 PPV= 1.5	●					
5				SS-03		33-66-8 N = 74 PPV= 3.0			●			-5
				SS-04		3-5-3 N = 8 PPV= 2.5	●					
10	15.0			SS-05		2-1-3 N = 4 PPV= 0.2	●					-10
15						Borehole terminated at 15.0 feet						-15
20											-20	

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	☒	07/26/2023		Not encountered
END OF DRILLING	☒			
AFTER DRILLING	☒			
AFTER DRILLING	☒			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
 LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf),
 AR = Auger Refusal

Appendix III – Laboratory Test Results



Specimen Identification				MC	LL	PL	PI	Fines	Classification (symbol is based on minus 40 material only when no grain size information is present.)	
	ID	No.	Top Depth						Symbol	Name
■	B-01	BULK-01	0	23.6	48	31	17	87.0	ML	SILT
	B-01	SS-02	3.5	23.6						
	B-01	SS-03	6	25.3						
	B-01	SS-04	8.5	34.2						
	B-01	SS-05	13.5	34.6						
	B-01	SS-06	18.5	36.1						
	B-02	SS-02	3.5	17.3						
	B-02	SS-03	6	18.0						
	B-02	SS-04	8.5	24.1						
	B-02	SS-05	13.5	24.6						
	B-02	SS-06	18.5	26.2						
\	B-03	BULK-01	0	28.2	68	47	21	94.8	MH	ELASTIC SILT
	B-03	SS-02	3.5	34.1						
	B-03	SS-03	6	33.9						
	B-03	SS-04	8.5	33.9						
	B-03	SS-05	13.5	42.6						
	B-03	SS-06	18.5	39.9						
	B-04	SS-02	3.5	31.5						
	B-04	SS-03	6	37.3						
	B-04	SS-04	8.5	34.5						

INDEX TEST RESULTS



Project Name	Farragut Park-McFee East	
Project Number	23430267	
Approved by		Date
		8/16/2023 21:35

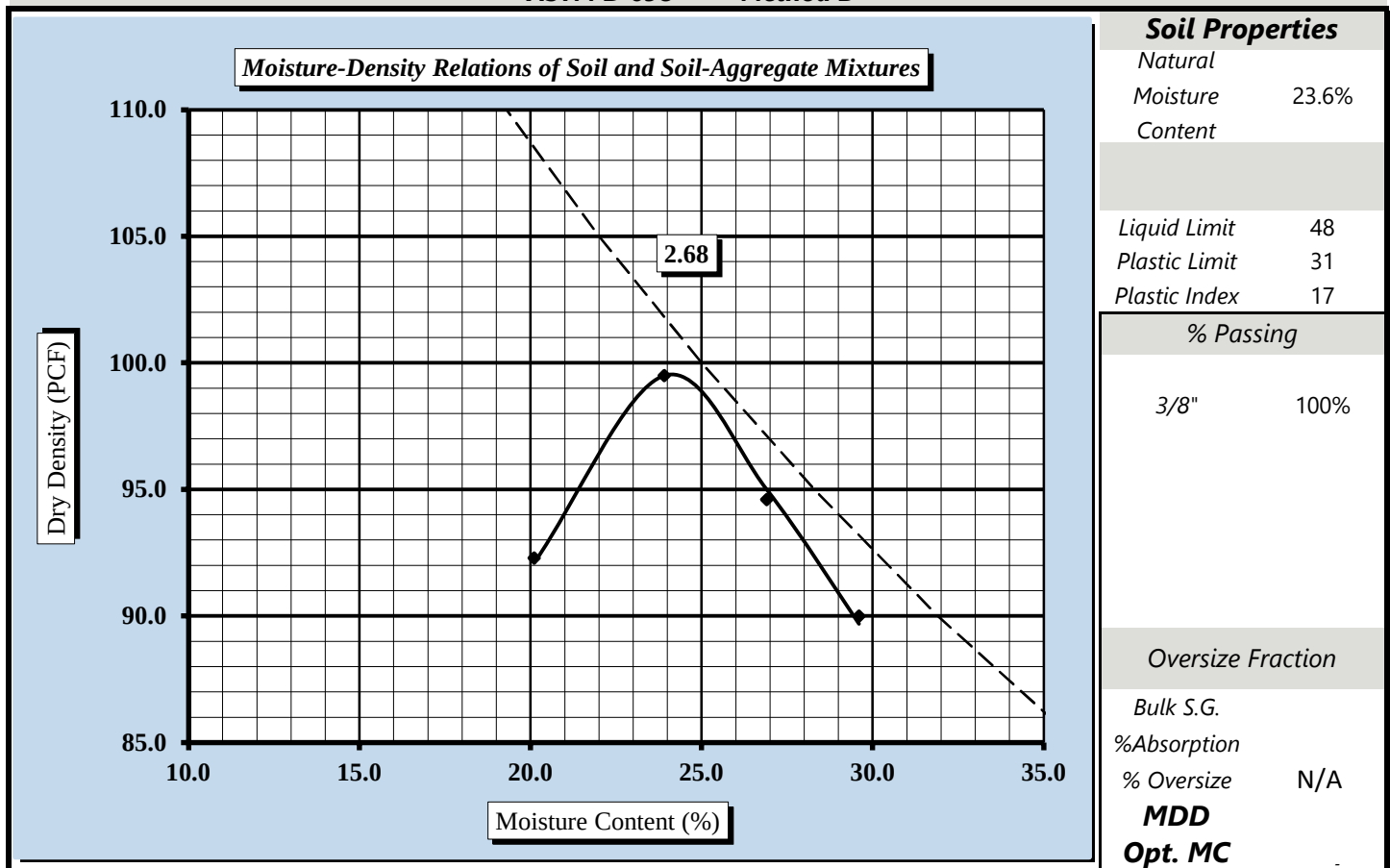
MOISTURE - DENSITY REPORT*Quality Assurance*

S&ME, Inc. - Knoxville: 1413 Topside Road, Louisville, TN 37777

S&ME Project #:	23430267	Log #:	43-3930	Report Date:	8/16/2023
Project Name:	Farragut Park-McFee East	Test Date(s):	8/5/2023 - 8/8/2023		
Client Name:	Town of Farragut				
Client Address:	11408 Municipal Center Dr, Farragut, TN				
Boring #:	B-01	Sample #:	BULK	Sample Date:	7/26-7/31
				Depth:	0-10 ft

Sample Description: SILT (ML), red

Maximum Dry Density	99.5	PCF.	Optimum Moisture Content	23.7%
----------------------------	-------------	-------------	---------------------------------	--------------

ASTM D 698 - - Method B

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐
 Sieve Size used to separate the Oversize Fraction: #4 Sieve ☐ 3/8 inch Sieve ☒ 3/4 inch Sieve ☐
 Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: The specific gravity value of the zero air-voids line is assumed.

ASTM D698, D2216, D4318

Victoria Igoe
Technical Responsibility

Victoria Igoe
Signature

Senior Engineering Technician
Position

8/16/2023
Date

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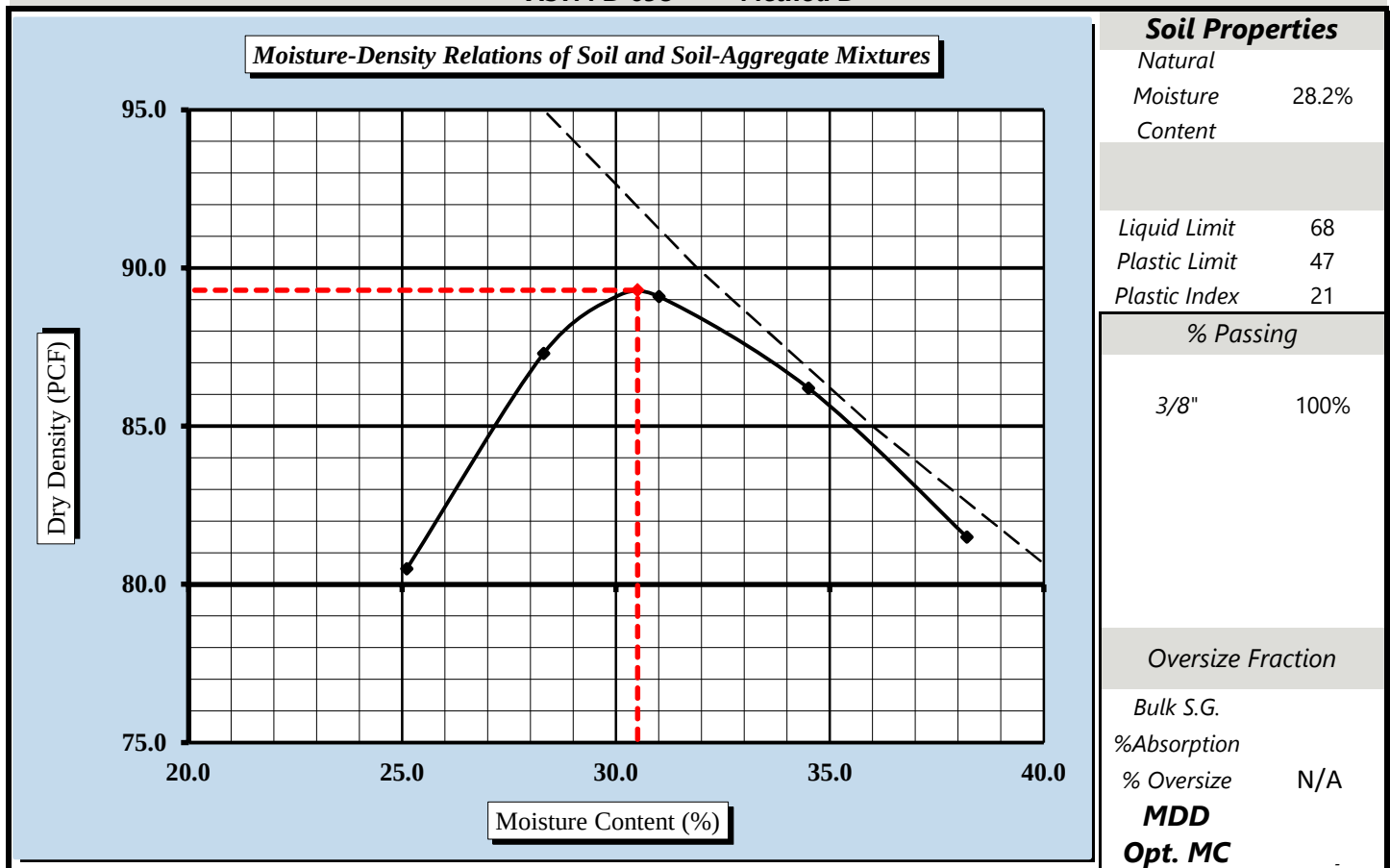
MOISTURE - DENSITY REPORT*Quality Assurance*

S&ME, Inc. - Knoxville: 1413 Topside Road, Louisville, TN 37777

S&ME Project #:	23430267	Log #:	43-3930	Report Date:	8/16/2023
Project Name:	Farragut Park-McFee East	Test Date(s):	8/5/2009		
Client Name:	Town of Farragut				
Client Address:	11408 Muncipal Center Dr, Farragut, TN				
Boring #:	B-03	Sample #:	BULK	Sample Date:	7/26-7/31
				Depth:	0-10 ft

Sample Description: ELASTIC SILT (MH), red

Maximum Dry Density	89.3	PCF.	Optimum Moisture Content	30.5%
----------------------------	-------------	-------------	---------------------------------	--------------

ASTM D 698 - - Method B

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐
 Sieve Size used to separate the Oversize Fraction: #4 Sieve ☐ 3/8 inch Sieve ☒ 3/4 inch Sieve ☐
 Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: The specific gravity value of the zero air-voids line is assumed.

ASTM D698, D2216, D4318

Victoria Igoe
Technical Responsibility

Victoria Igoe
Signature

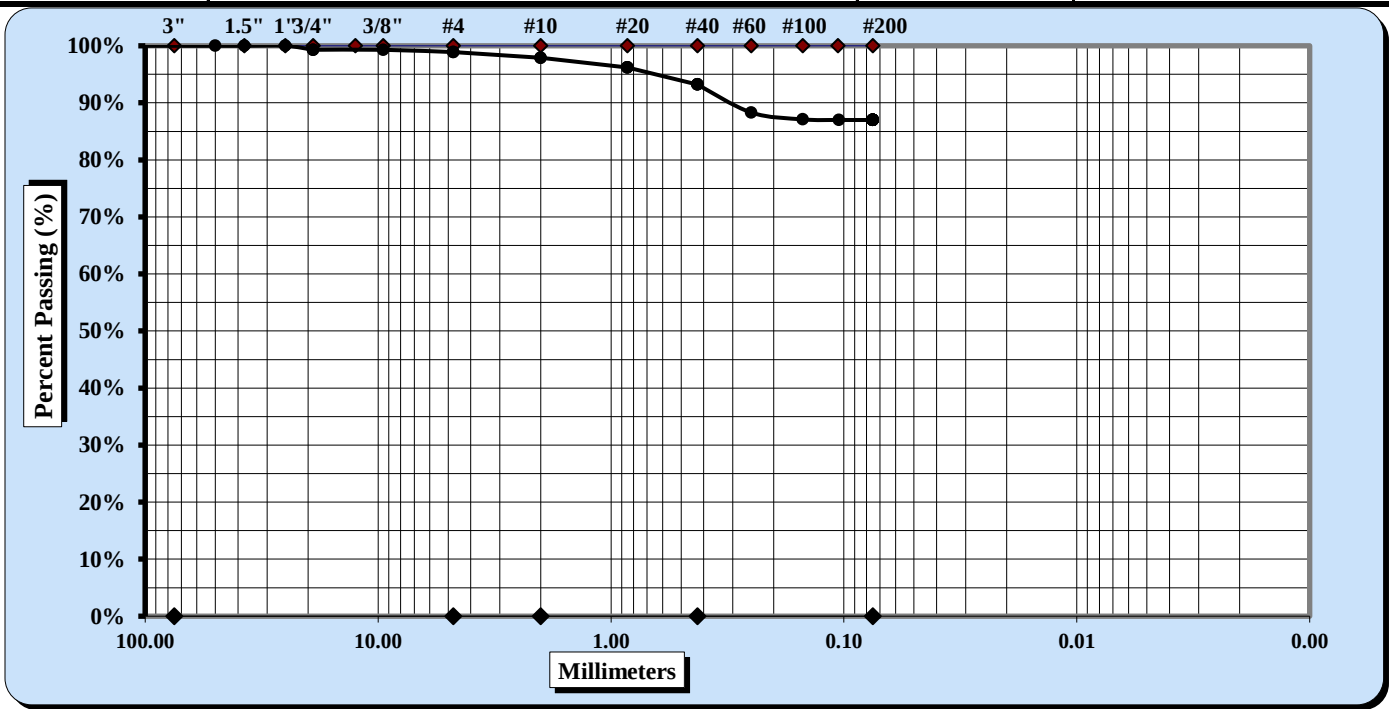
Senior Engineering Technician
Position

8/16/2023
Date

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	ASTM D6913: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	Report Number	KNOX_23000844
		Report Date	8/16/2023
		Test Date	8/7/2023
		Sample Date	7/31/2023

Project Number	23430267		
Project Name	Farragut Park-McFee East		
Client Name	Town of Farragut		
Client Address			
KeyLAB ID	KNOX202308010	Sample Type	AU
Location ID	B-01	Sample Top Depth	0
Sample Reference	BULK-01	Sample Base Depth	10
Description		Method	ASTM D6913 Method B
Classification	SILT		



ASTM PARTICLE SIZE DEFINITIONS			
Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and > 2.00 mm (#10)	Silt & Clay	< 0.075
Maximum Particle Size	19 mm	Coarse Sand	1.0
Gravel	1.1	Medium Sand	4.7
Liquid Limit	48	Plastic Limit	31
		Fine Sand	6.2
		Silt & Clay	87.0
		Plastic Index	17

Description of Sand & Gravel Particles:		Rounded	☐	Angular	☒
Hard & Durable	☒	Soft	☐	Weathered & Friable	☐

References / Comments / Deviations:

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KGonzalez	vigoe	
Tested by	Approved by	Signature
Knoxville	1413 Topside Road, Louisville, TN 37777	



Phase I Environmental Site Assessment
McFee Road Property
Farragut, Tennessee
S&ME Project No. 23430267

PREPARED FOR:

Cannon & Cannon, Inc.
855 Kingston Pike
Knoxville, Tennessee 37919

PREPARED BY:

S&ME, Inc.
6515 Nightingale Lane
Knoxville, Tennessee 37909

August 2, 2023



August 2, 2023

Cannon & Cannon, Inc.
855 Kingston Pike
Knoxville, Tennessee 37919

Attention: Mr. Jeff Beckett

Reference: **Phase I Environmental Site Assessment**
McFee Road Property
Farragut, Knox County, Tennessee
S&ME Project No. 23430267

Dear Mr. Beckett,

S&ME, Inc. (S&ME) has completed a Phase I Environmental Site Assessment (Phase I ESA) at McFee Road in Farragut, Knox County, Tennessee (i.e., "subject property"). The attached report presents the findings of S&ME's Phase I ESA which was performed in accordance with ASTM E1527-21 and S&ME Proposal No. 23430267 dated July 6, 2023. The purpose of this Phase I ESA was to identify, to the extent feasible, *recognized environmental conditions* in connection with the subject property.

ASTM E1527-21 states that a Phase I ESA "meeting or exceeding" this practice and completed less than 180 days prior to the date of acquisition or intended transaction is presumed to be valid if the report is being relied on by the User for whom the assessment was originally prepared and the following components were completed: interviews, the regulatory review, site visit, and the declaration by the environmental professional responsible for the assessment.

S&ME appreciates the opportunity to provide our services on this project. Please contact us at your convenience if there are questions regarding the information contained in this report.

Sincerely,
S&ME, Inc.

A handwritten signature in black ink that reads "Alexis Wiltfong".

Alexis Wiltfong, MBA
Staff Scientist II
awiltfong@smeinc.com

A handwritten signature in blue ink that reads "Eric M. Solt".

Eric M. Solt, PG
Principal Geologist
esolt@smeinc.com



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Appendix V – Site Photographs and Site Reconnaissance Checklist

Appendix VI – User Questionnaire and Interview Documentation

Appendix VII – User/Owner Provided Information and File Review Documents

Appendix VIII – Qualifications of Environmental Professional and Staff



Executive Summary

S&ME, Inc. (S&ME) has completed a Phase I Environmental Site Assessment for the McFee Road property in Farragut, Knox County, Tennessee (the "subject property"). The following executive summary is intended as an overview of the Phase I ESA, for the convenience of the reader. The complete report should be reviewed in its entirety prior to making decisions regarding this site.

The subject property is comprised of Knox County tax parcels 162 02403 and 162 02402 and occupies approximately 70 acres. According to historical information reviewed by S&ME, the subject property was agricultural, residential and forested land from the late 1930's up until present day. Property usage in the vicinity of the subject property is predominantly residential and agricultural.

S&ME contracted ERIS (Environmental Risk Information Services) to conduct an environmental database search of the subject property and the surrounding area, and ERIS provided the Database Report with Xplorer® (ERIS Report) as the environmental database report. The subject property was not identified in the Database Report. The Database Report identified two off-site listings of potential environmental concern within the applicable search radii of the subject property. Based on the nature of each listing, local topography, and/or the distance to the subject property, the off-site listings are not expected to affect the subject property.

Alexis Wiltfong of S&ME conducted a site reconnaissance of the subject property on July 7, 2023. The site reconnaissance was performed by walking accessible areas of the subject property.

Onsite and off-site opinions include:

- One empty, aboveground storage tank was observed on the subject property is not considered a REC as no visible staining or other evidence of a release was observed.
- Three rusted 55-gallon drums observed on the west central portion of the subject property near a dilapidated hay barn are not considered RECs as no visible staining or other evidence of a release was observed.
- Oil staining of the ground surface observed inside a small garage on the subject property is considered to be *de minimis* and is therefore not considered a REC.
- A refuse/disposal area observed in the tree line of the subject property near the dilapidated hay barn appeared to be of limited areal extent and of domestic waste/refuse origin. This area is considered to be a *de minimis* condition and therefore not a REC.
- lans Market 67 located at 1116 Harvey Road, 249 feet downgradient from the subject property, was identified in the underground storage tank database as a regulated facility. This facility is not considered a REC in connection with the subject property due to its distance from the subject property and/or the topographic relationship with the subject property.
- A railroad track observed to border the subject property to the south is not considered a REC as it is topographically downgradient from the subject property.

This assessment did not identify RECs, controlled recognized environmental conditions (CRECs) or significant data gaps in connection with the subject property.



1.0 Introduction

S&ME conducted a Phase I Environmental Site Assessment (ESA) for a 70 -acre property along McFee Road in Farragut, Knox County, Tennessee (the "subject property"). The subject property is comprised of Knox County tax parcels 162 02403 and 162 02402, occupies approximately 70 acres, and it is situated predominantly along Boyd Station Road and west of McFee Road. The Phase I ESA was conducted using the ASTM International (ASTM) E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and in accordance with S&ME Proposal No. 23430267 dated July 6, 2023.

1.1 Purpose

The goal of the Phase I ESA process is to identify, pursuant to ASTM E1527-21, *recognized environmental conditions* in connection with the subject property. It is S&ME's understanding that the Phase I ESA is being conducted as part of due diligence activities for site development.

The following pertinent definitions to this Phase I ESA are provided in ASTM E1527-21:

- *Recognized Environmental Condition (REC)* - (1) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment*; (2) the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* or likely *release* to the *environment*; or (3) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* under conditions that pose a *material threat* of a future *release* to the *environment*.
- *Controlled Recognized Environmental Condition (CREC)* - a *recognized environmental condition* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, *activity and use limitations* or *other property use limitations*).
- *Historical Recognized Environmental Condition (HREC)* - a previous *release of hazardous substances* or *petroleum products* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted user criteria established by the applicable regulatory authority or authorities without subjecting the *subject property* to any controls (for example, *activity and use limitations* or *other property use limitations*). An *historical recognized environmental condition* is not a *recognized environmental condition*.
- *Business Environmental Risk (BER)* - a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of *commercial real estate*, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of BER issues may involve addressing one or more non-scope-of-services considerations, some of which are identified in Section 13 of ASTM E1527-21.
- *De minimis condition* - a condition related to a *release* that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a *de*



minimis condition is not a *recognized environmental condition* nor a *controlled recognized environmental condition*.

1.2 Detailed Scope of Services

1.2.1 ASTM E1527-21

S&ME's approach to performing this Phase I ESA consisted of four major tasks in accordance with ASTM Standard Practice E1527-21.

Task 1 - A review of reasonably ascertainable public records for the subject property and the immediate vicinity was conducted. This review was performed to characterize environmental features of the subject property and to identify past and present land use activities, on or in the vicinity of the subject property, which may indicate a potential for RECs. The review of the reasonably ascertainable public records included:

1. Review of federal, state, tribal, and reasonably ascertainable local public records for the subject property and immediate vicinity.
2. Review of the standard historical sources: aerial photographs, fire insurance maps, local street directories, topographic maps, building and tax department records, interviews, and other relevant standard historical sources for the subject property and adjoining properties for evidence indicating the presence of RECs in connection with the subject property.
3. Review of land title records, including a copy of the current deed, back to 1940 or first developed use, whichever is earlier, if the documents are provided to S&ME by the Phase I ESA User.

Task 2 - A site reconnaissance was performed to identify visible signs of past or existing contamination on or adjacent to the subject property as visually observed from the subject property or public right-of-way. This reconnaissance was also performed to evaluate evidence found in our public record review that might indicate activities resulting in hazardous substances or petroleum products being used or deposited on the subject property. The site reconnaissance included the following activities:

1. A reconnaissance of the subject property and adjacent properties was performed to look for evidence of current and past property uses, signs of spills, stressed vegetation, buried waste, underground or above ground storage tanks (USTs or ASTs), subsidence, transformers, or unusual soil discoloration which may indicate the possible presence of contaminants on the properties.
2. The site reconnaissance involved a viewing of the periphery of the subject property and a walk-through of accessible areas of the site interior.
3. Areas of the subject property were photographed to document the current use(s) of the subject property, as well as conditions such as unusually discolored soil, stressed vegetation, or other significant features associated with the subject property.

Task 3 - Interviews with past and present property owners (if available), operators, occupants and appropriate local officials were conducted to consider any local knowledge of hazardous substances or petroleum products on the subject property or on adjacent properties.

Task 4 - Report preparation.



1.2.2 Exclusions from and Additions to Scope of Services

Unless specifically authorized as an addition to the Phase I ESA work scope, the assessment does not include sampling of environmental media (i.e., soil, surface water, soil gas, groundwater or air). In addition, unless specifically authorized, the Phase I ESA scope of services does not include ASTM E1527-21 non-scope considerations, including but not limited to:

- assessment of business risk issues such as asbestos-containing materials (ACMs);
- biological agents, cultural/historic resources;
- ecological resources;
- endangered species;
- health/safety;
- regulatory compliance;
- indoor air quality including any assessment of vapor intrusion, with the exception of the Vapor Encroachment Screening as discussed in Section 4.6;
- industrial hygiene; lead-based paint (LBP);
- lead in drinking water;
- mold, fungi or bacteria in buildings;
- polychlorinated biphenyls (PCBs) in building components;
- naturally occurring radon;
- substances not defined as hazardous substances per 40 CFR 312, including emerging contaminants such as Per- and polyfluoroalkyl substances (PFAS).
- or wetlands.

1.3 Significant Assumptions

Information obtained from the Client, the Client's representatives, individuals interviewed, and prior environmental reports was considered to be accurate unless S&ME's reasonable inquiries clearly revealed otherwise.

The groundwater within the local geologic province is typically contained in an unconfined (water table) aquifer. The slope of the water table under static conditions (no pumping interference) often approximates the land surface topography. Thus, the interpreted groundwater flow direction is assumed to be approximately the same as the topography of the ground surface. Perennial surface waters (creeks, streams, rivers, ponds, etc.) are assumed to act as discharge features for groundwater flow.

1.4 Limitations and Exceptions of Assessment

The Phase I ESA was conducted using ASTM E1527-21. The findings of this report are applicable, and representative of conditions encountered at the property on the date of this assessment and may not represent conditions at a later date. The review of public records was limited to that information which was available to S&ME at the time this report was prepared. Interviews with local and state government authorities were limited to those people whom S&ME was able to contact during the preparation of this report. Information was derived from "reasonably ascertainable" and "practically reviewable" sources in compliance with our understanding of the standards set forth by ASTM E1527-21.

The historical review failed to document property use in approximately five-year intervals back to its first developed use, or back to 1940, whichever is earlier, as historical resources for these periods were not reasonably attainable (i.e., data failure).



Unless provided by the User, land title and judicial records were not reviewed for environmental liens or activity and use limitations (AULs) by S&ME.

1.5 User Reliance

The User of this report is Cannon and Cannon. Use of this report by third parties will be at such party's sole risk except when granted under written permission by S&ME. Any such authorized use or reliance by third parties will be at the sole discretion of S&ME and subject to the same Agreement under which the work was conducted for the User.

The additional party's use and reliance on the report will be subject to the same rights, obligations, and limitations imposed on the User by our Agreement, unless otherwise agreed; however, the total liability of S&ME to all parties of the Phase I ESA shall be limited to the remedies and amounts as provided in the Agreement as a single contract. The additional party's use and reliance on the report shall signify the additional party's agreement to be bound by the proposal and contract that make up the Agreement between S&ME and the User.

According to standards set forth by ASTM E1527-21, certain components of the Phase I ESA will expire 180 days from the date of initiation of that component and will therefore require updating if the date of use exceeds these time periods. The following table lists the dates of initiation for pertinent components on this assessment:

Table1-1 – Dates of Initiation for Phase I ESA Components

Component	Date of Initiation
Environmental Database Search	June 26, 2023
Site Reconnaissance	July 7, 2023
Interviews	July 17, 2023
Environmental Lien Search	N/A
Environmental Professional Declaration	August 2, 2023

2.0 General Site Description

2.1 Site Location

The subject property is situated predominantly along Boyd Station Road and west of McFee Road in Farragut, Tennessee. According to the Knox County Geographic Information System (GIS) website, the subject property is comprised of Knox County tax parcels 162 02403 and 162 02402 and occupies approximately 70 acres.

2.2 Site and Vicinity Characteristics

The subject property is relatively flat. It is currently in crop as soy bean on the western portion of the property and is forested land on the central and eastern portions of the property. Property usage in the area of the subject property is predominantly residential and agricultural. The subject property is bordered to the south by railroad tracks and Boyd Station Road, to the east by McFee Road, to the north by Red Poppy Drive and Wild Basil Street and to the west by grassy fields.



3.0 User Provided Information

Certain information identified in ASTM E1527-21 is to be provided by the User of this report. S&ME provided a User Questionnaire with our proposal, and the questionnaire was completed on July 13, 2023, by Mr. Tim Scott of Scott Laboratory Solutions. A copy of the completed User Questionnaire is included in Appendix VI.

3.1 Title Records

The client did not provide S&ME with title records for review.

3.2 Environmental Liens or Activity and Use Limitations

Review of AULs and environmental liens by the environmental professional can help in determining if a REC is associated with the property. AULs can include both institutional and engineering controls and are often recorded in land title records in the restrictions of record rather than a typical chain-of-title or title abstract. According to ASTM E1527-21, the User is responsible for providing land title (federal, state, tribal, and local) records that describe environmental liens or AULs back to 1980.

Mr. Scott indicated on the User Questionnaire that he was not aware of any AULs or liens against the subject property.

3.3 Specialized Knowledge

Mr. Scott indicated that he did not have specialized knowledge that is material to RECs identified in connection with the subject property.

3.4 Commonly Known or Reasonably Ascertainable Information

No commonly known or reasonably ascertainable information about the subject property within the local community that was material to RECs in connection with the subject property was reported to S&ME on the User Questionnaire by Mr. Scott.

3.5 Valuation Reduction for Environmental Issues

Mr. Scott indicated on the User Questionnaire that the purchase price for the property reasonably reflects fair market value.

3.6 Owner, Property Manager and Occupant Information

According to Knox County property records, the owner of the subject property is Todd and Timothy Scott. The subject property is currently unoccupied.

3.7 Reason for Performing the Phase I ESA

This Phase I ESA is being conducted as part of due diligence services for development associated with the subject property. The purpose of the Phase I ESA is to identify, pursuant to ASTM E1527-21, RECs, CRECs, and HRECs in connection with the property.



3.8 Other

Mr. Scott indicated the building located on the subject property is approximately 20 years old.

4.0 Records Review

This section summarizes records obtained and reviewed to help identify RECs, and CRECs in connection with the subject property.

4.1 Standard Environmental Record Sources

S&ME reviewed selected federal and state regulatory lists within an *approximate minimum search distance* of the subject property, as defined by ASTM E1527-21. The reviewed lists were compiled by ERIS into the Database Report with Xplorer®, which is included in Appendix II. The Database Report includes a listing of the databases, search distances, an explanation of each database, and figures depicting the approximate locations of regulated facilities identified in the vicinity of the subject property. Regulatory listings are limited and include only those facilities or incidents that are known to the federal and state agencies at the time of publication of various agency databases, as indicated in the Database Report.

The subject property was not identified in the database search. The identified facilities of potential concern, based on distance and topography, are listed in the following table:

Table 4-1 – Database Search Summary Table (Standard Record Sources)

Site Name and Address	Direction & Distance	Record	Comment
Ians Market 67 1116 Harvey Road ERIS ID: 1	249 feet east, downgradient	UST (Underground Storage Tank)	TDEC DUST Facility ID # 2-471474; consists of one 4,000-gallon diesel UST, one 4,000-gallon gasoline UST, one 8,000-gallon gasoline UST and one 12,000-gallon gasoline UST, all currently in use. Based upon distance from and downgradient topographic relationship to the subject property, this facility is not considered a suspect REC in relation to the subject property.

Based on the information in the Database Report, the distance from the subject property, and/or the topographic relationship with respect to the subject property, there are no additional ERIS listings in the Database Report expected to adversely impact the subject property.



4.1.1 *Regulatory File Review*

Based on the information in the ERIS Report, it is the opinion of the Environmental Professional that a review of available regulatory files would not provide additional information that would affect S&ME's ability to render an opinion about RECs or CRECs associated with the subject property.

4.2 Additional Environmental Record Sources

4.2.1 *Tribal Record Sources*

The ERIS Database Report did not reveal listings of tribal environmental records.

4.2.2 *Other Record Sources*

No additional records were reviewed during this Phase I ESA.

4.3 Physical Setting Sources

Physical setting sources were reviewed to provide information about the geology and hydrogeology of the area of the subject property.

Surface Drainage and Soil

Based upon a review of the topographic map, it appears that the subject property slopes downward towards the southwest (see Figure 1, United States Geological Survey (USGS) Topographic Map, Appendix I). The subject property has a surface elevation of approximately 882 feet above mean sea level. During the site reconnaissance it was observed that subject property is generally level on the northern end with a surface drainage to the southwest due to grading activities and drainage to an unnamed tributary to Turkey Creek that bounds the property to the southeast. The United States Department of Agriculture (USDA) Soil Survey website was reviewed to identify the soil type underlying the subject property. A review of the information presented on the website indicated that the majority of the subject property as being underlain by the following soils:

Table 4-3 – Site Soils

Soil Series	Drainage	Runoff Class
Dewey silt loam, 6 to 15 percent slopes (DcC2)	Well drained	Moderately low
Dewey silt loam, 15 to 25 percent slopes (DeD2)	Well drained	Moderately low
Dewey loam, 25 to 40 percent slopes (DeE2)	Well drained	Moderately low
Emory silt loam, 2 to 5 percent slopes (EmB)	Well drained	Moderately low
Etowah-Minvale complex, 2 to 5 percent slopes (EvB)	Well drained	Moderately low

Depth to a restrictive feature is typically greater than 60 inches. Typical depth to water ranges at least to greater than 60 inches.

Bedrock



According to the Geologic Map of Knoxville dated 2023, the subject property is located over the upper part of the Knox Group which consists of dolostone and limestone.

Groundwater

The source of groundwater in Knox County is precipitation in the form of snow and rain. A portion of the precipitation infiltrates into the ground and moves under the influence of gravity to the water table. The soils in East Tennessee, including the site, are generally of insufficient thickness or permeability to provide a drinking water source. Perched ground water is often trapped at the soil/rock interface but is generally of insufficient quantity or quality for domestic use purposes. It is important to note that groundwater in the Valley and Ridge Physiographic Province is most often confined to cracks and fissures in the carbonate bedrock. Therefore, absolute flow direction cannot be determined without extensive investigation of depths to ground water at a particular site.

Shallow groundwater generally flows in directions subparallel to the ground surface slopes and under the influence of gravity toward points of discharge such as creeks, swamps, drainage swales, or pumped groundwater wells. Based upon review of the topographic maps, the anticipated groundwater flow direction in the uppermost water-bearing unit across the subject property is to the south, toward an unnamed tributary of Little Turkey Creek. Groundwater in this general area is not typically used as drinking water source as municipal potable water is provided by local utilities to newer homes. Though, older homes would have used water wells as a potable drinking source.

4.4 Historical Use Information on the Subject Property

S&ME reviewed historical use information from ERIS Xplorer® as part of this Phase I assessment. The following documents were reviewed:

- Aerial photographs for the years 1937, 1939, 1953, 1959, 1967, 1975, 1981, 1987, 1992, 1997, 2006, 2007, 2008, 2010, 2012, 2014, 2016, 2018, 2021, and 2022.
- Historical Sanborn Fire Insurance Maps were not available for the subject property.
- Local Street Directories for the years 1989, 1990, 1995, 2000, 2003, 2008, 2012, 2016, 2020, and 2022.
- Topographic maps for the years 1936, 1940, 1953, 1968, 1984, 2016, and 2019.

Historical information is included in Appendix III. S&ME's historical document review findings for the subject property are presented in the following table.

Table 4-4 – Historical Use Summary Table (Onsite)

Listing/Observed Feature	Years Found for this Listing	Source(s)
Two structures were depicted along an unimproved road in the western-central portion of the subject property. An unnamed stream flowing east/northeast was shown on all maps along the eastern-central portion of the subject property boundary. A powerline was depicted along the northern property boundary. A pond was depicted on the northwestern portion of the subject property. A railway bounded the southern property boundary on all maps, along with an unimproved road bounding a portion	1936	Topographic Map



Listing/Observed Feature	Years Found for this Listing	Source(s)
of the southern property boundary. A light duty road bounded the subject property to the east.		
Structures were depicted on the southwestern portion of the subject property. A pond was observed on all maps in the northwestern corner of the subject property. General usage of the subject property appeared to be agricultural, open farmland. A tree line following the unnamed stream area was observed.	1937, 1939, 1953, 1959, 1967	Aerial Photographs
Only one structure was depicted on the southern portion of the subject property.	1940	Topographic Map
Additional structures and a silo were depicted on the subject property. Boyd Station Road first appeared on the maps in 1968.	1968, 1984	Topographic Maps
The central and eastern portions of the subject property have begun to form dense vegetation.	1975, 1981, 1987, 1992, 1997	Aerial Photographs
The subject property at 13023 Boyd Station Road did not appear in the city directories.	1989, 1990, 1995, 2000, 2003, 2008, 2012, 2016, 2020, and 2022	City Directories
The subject property remains relatively unchanged to the present day.	2006, 2007, 2008, 2010, 2012, 2014, 2014, 2016, 2018, 2021, and 2022	Aerial Photographs
Structures are no longer depicted on the subject property.	2016, 2019	Topographic Maps

4.5 Historical Use Information on Adjoining Properties

Historical information including the above-referenced resources were reviewed to assess off-site historical land uses. S&ME's historical document review findings for adjoining properties are presented in the following table.

Table 4-5 – Historical Use Summary Table (Adjoining and Area)

Listing/Observed Feature	Years Found for this Listing	Source(s)
An unnamed stream was observed south of the subject property. An unimproved road and structure were depicted west of the subject property. The unnamed stream on the subject property continued to the north and southeast on all maps.	1936, 1940, 1953	Topographic Maps
The surrounding adjoining properties appear to be primarily rural agricultural with some residential development, wooded areas, and unimproved roadways. Additional water features are observed south and southwest of the subject property. Fort Loudon Lake was depicted in all maps east of the subject property.	1937, 1939, 1953	Aerial Photographs

Listing/Observed Feature	Years Found for this Listing	Source(s)
Additional development was observed north of the subject property.	1959, 1967, 1975, 1981, 1987, 1992, 1997	Topographic Maps
Additional structures were observed east and west of the subject property, as well as a depression south of the subject property. An additional unimproved roadway and structure were observed north of the subject property.	1968, 1984	Topographic Maps
Prolific residential development was first observed south of the subject property. A substation was first observed to the east of the subject property.	2006	Aerial Photograph
No structures are depicted surrounding the subject property.	2016, 2019	Topographic Maps
The surrounding properties remain relatively unchanged to the present day.	2007, 2008, 2010, 2012, 2014, 2014, 2016, 2018, 2021, and 2022	Aerial Photographs

4.6 Vapor Encroachment Screening

A Vapor Encroachment Screening (VES) of identified potential contaminant sources was performed as part of this Phase I ESA. The conclusions of the VES indicate that a Vapor Encroachment Condition (VEC) does not exist. The VES completed by S&ME is provided in Appendix IV.

5.0 Site Reconnaissance

The site reconnaissance was performed by Alexis Wiltfong of S&ME on July 7, 2023. Representative photographs of the subject property and the Site Reconnaissance Checklist are included in Appendix V. On-site observations are depicted on Figure 3, Appendix I.

5.1 Methodology and Limiting Conditions

The purpose of the site reconnaissance is to obtain information indicating the likelihood of identifying RECs in connection with the subject property. The site reconnaissance was performed by walking accessible areas of the subject property.

5.2 General Site Setting

5.2.1 Current Use(s) of the Subject Property

The subject property is currently in use as a soybean field on the western portion of the property.



5.2.2 Past Use(s) of the Subject Property

Evidence of past agricultural use of the subject property was observed. Grain silos and old barbed-wire fencing was observed on the property, possibly indicating the past usage of the property as a livestock farm.

5.2.3 Current Use(s) of Adjoining and Surrounding Properties

The current uses of the adjoining properties were identified to the extent that they were visually observed from the subject property during our field reconnaissance or during interviews or in the records review. Descriptions of adjoining properties are provided below:

- North: Residential homes, Red Poppy Drive, and wooded land.
- South: Boyd Station Road with residential homes beyond.
- East: McFee Road, a power substation, a residence, with residential construction beyond.
- West: Agricultural land with residence, barn, and silos.

5.2.4 Past Use(s) of Adjoining and Surrounding Properties

No indications of the previous use of adjoining and surrounding properties were noted during the site reconnaissance.

5.2.5 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The subject property is generally level, with slight slopes downward on the northern portion of the western and eastern sides of the property. Surface water generated at the subject property is expected to be routed to an unnamed tributary towards Fort Loudon Lake.

5.2.6 Description of Structures and Roads

Structures on the subject property consist of:

- Two silos,
- one garage,
- two open-sided pole barns,
- one grain trough with a roof,
- one well house,
- one dilapidated hay barn,
- and one single-story abandoned residential structure.

The residential and farm buildings appear to be at least 50-years-old.

The subject property is accessed by a paved and gravel road to the south via Boyd Station Road. Boyd Station Road is a two-lane paved road.

5.2.7 Potable Water Supply and Sewage Disposal System

Potable water and sanitary service is currently not provided to the subject property. A water supply well was observed on the subject property. Visual evidence of a septic system was not observed on the subject property.



5.3 Exterior Observations

Exterior observations from the site reconnaissance are summarized in the following table.

Table 5-1 – General Exterior Observations

Description	Reported or Observed On-site (Y/N)	Comments (Noteworthy observations are further discussed below the table.)
Hazardous Substances and Petroleum Products	Y	One empty aboveground storage tank (AST) was observed near the silos (photo 24).
Underground Storage Tanks (USTs)	N	Not Applicable
Aboveground Storage Tanks (ASTs)	Y	One empty, single-walled AST was observed on the subject property near the silos (photo 24). The AST appeared to be in poor condition. No visible staining or other evidence of a release was observed.
Oil/Water Separators	N	Not Applicable
Strong, Pungent, or Noxious Odors	N	Not Applicable
Drums, Barrels and/or Containers > 5 Gallons	Y	Three rusted 55-gallon drums were observed on the western central portion of the subject property near the dilapidated hay barn (photo 43).
Unidentified Substance Containers	N	Not Applicable
Potential Polychlorinated Biphenyls (PCB)-Containing Equipment	N	Not Applicable
Hydraulic Equipment	N	Not Applicable
Utilities and Stormwater Management	N	Not Applicable
Pits, Ponds, Lagoons, and Surface Waters	Y	One stream was observed on the central to eastern portion of the subject property.
Surface Water Discoloration, Sheen or Free Product	N	Not Applicable
Stained Soil or Pavement	N	Not Applicable
Stressed Vegetation	N	Not Applicable
Solid Waste	Y	trash and debris were observed on the southern portion of the subject property near Boyd Station Road (photo 41).
Process/Industrial Wastewater Discharges	N	Not Applicable
Wells	Y	One well shed was located on the western portion of the subject property near the silo (photos 15-18)
Septic Systems	Y	A suspect septic system was reported by the property owner as being located near the homeplace on the subject property.

Description	Reported or Observed On-site (Y/N)	Comments (Noteworthy observations are further discussed below the table.)
		During the time of the site reconnaissance, S&ME did not observe a septic tank system.
Heating/Cooling	N	Not Applicable
Drains and Sumps	N	Not Applicable
Other	N	Not Applicable

5.4 Interior Observations

Interior observations from the site reconnaissance are summarized in the following table.

Table 5-2 – General Interior Observations

Description	Reported or Observed On-site (Y/N)	Comments (Noteworthy observations are further discussed below the table.)
Hazardous Substances and Petroleum Products	N	Not Applicable
USTs	N	Not Applicable
ASTs	N	Not Applicable
Oil/Water Separators	N	Not Applicable
Strong, Pungent, or Noxious Odors	N	Not Applicable
Pools of Liquid	N	Not Applicable
Drums, Barrels and/or Containers > 5 Gallons	N	Not Applicable
Unidentified Substance Containers	N	Not Applicable
Potential PCB-Containing Equipment	N	Not Applicable
Hydraulic Equipment	N	Not Applicable
Contracted Maintenance Services	N	Not Applicable
Stained Surfaces	Y	Oil staining of a portion of the floor surface was observed inside the small garage on the subject property (photos 6-11).
Solid Waste	N	Not Applicable
Drains and Sumps	Y	A floor drain/hook up was observed on the western interior portion of the small garage (photo 8).
Other	N	Not Applicable



6.0 Interviews

S&ME contacted individuals and local authorities that may have information concerning existing conditions, activities, and history of the property and off-site facilities. Brief summaries of the information from those interviews are discussed below. Copies of interview documentation are included in Appendix VI.

6.1 Interview with Past and Present Owners

Mr. Tim Scott, current owner of the subject property, was interviewed by S&ME via phone call on July 17, 2023. The following summarizes the interview details:

- Mr. Scott has owned the property for 2.5 years.
- He is unaware of any USTs on the subject property.
- The AST located on the property was on the property when he purchased it.
- Mr. Scott is unaware of any hazardous materials concerns in connection with the subject property.
- Mr. Scott assumes the garage used to be a cattle milking shed as the farm was for cattle before being turned into a row crop farm.

6.2 Interview with Key Site Manager

Mr. Scott is considered to be the Key Site Manager.

6.3 Interview with Occupants

The property is currently not occupied.

6.4 Interview with Local Government Officials

S&ME contacted the Knox County Fire Department via email to obtain information regarding possible releases of hazardous substances or petroleum products, or fire-related incidents in connection with the subject property. The Knox County Fire Department responded that they did not have any records for the subject property since it is not connected to an address.

6.5 Interviews with Others

No interviews with others were conducted during the time of this report. The previous owner, before ownership by the Scotts, is deceased.

7.0 Findings and Opinions

The results of the Phase I ESA are summarized in the following sections.

7.1 On-Site Findings

The following on-site findings were identified during this assessment:

- One empty, single-walled AST was observed on the subject property near the large two open-sided pole barns and silos. The AST appeared to be in poor condition.



- Three rusted 55-gallon drums were observed on the western central portion of the subject property near the dilapidated hay barn.
- Floor surface oil staining was observed inside the small garage on the subject property.
- A refuse/disposal area was observed in the tree line of the subject property near the dilapidated hay barn.

7.2 Off-Site Findings

The following off-site findings were identified during this assessment:

- Ians Market 67 located at 1116 Harvey Road, 249 feet downgradient from the subject property, was identified in the UST database.
- A railroad track was observed to border the subject property to the south.

7.3 On-Site Opinions

The following opinions are provided concerning the on-site findings of this assessment:

- The empty, single-walled AST observed on the subject property near the large two open-sided pole barns and silos is not considered a REC as no visible staining or other evidence of a release was observed.
- Three rusted 55-gallon drums observed on the western central portion of the subject property near the dilapidated hay barn are not considered RECs as no visible staining or other evidence of a release was observed.
- Floor surface oil staining observed inside the small garage on the subject property is considered to be a *de minimis* condition and therefore not considered a REC.
- The refuse/disposal area observed in the tree line of the subject property near the dilapidated hay barn appeared to be of limited areal extent and of domestic waste/refuse origin. This area is considered to be a *de minimis* condition and therefore not a REC.

7.4 Off-Site Opinions

The following opinion is provided concerning the off-site finding of this assessment:

- Ians Market 67 located at 1116 Harvey Road, 249 feet downgradient from the subject property, was identified in the UST database. This facility is not considered a REC in connection with the subject property due to its distance from the subject property and/or the topographic relationship with the subject property.
- The railroad track observed to border the subject property to the south is not considered a REC as no regulatory records pertaining to a release were observed, and it is topographically downgradient from the subject property.

7.5 Data Gaps

The following data gaps were identified during this assessment:



- The historical review failed to document property use in approximately five-year intervals back to its first developed use, or back to 1940, whichever is earlier (i.e., data failure). See Section 4.4 of this report for more details on historical information.
- Land title and judicial records were not reviewed for environmental liens or AULs; however, the Client reported no knowledge of environmental liens or AULs.
- The eastern portion of the subject property was not completely observed due dense vegetation and lack of historical findings on aerials and topographical maps.

These data gaps are not considered significant to our ability to identify RECs in connection with the subject property.

8.0 Conclusions

S&ME has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E1527-21 of McFee Road in Farragut, Knox County, Tennessee. Exceptions to or deletions from this practice are described in Section 1.4 and Section 9 of this report.

This Phase I ESA did not identify RECs, CRECs, or significant data gaps in connection with the subject property.

Based on the information obtained and the findings of this assessment, it is the opinion of the Environmental Professional that further assessment is not warranted.

9.0 Deviations

No deviations from the standard were made.

10.0 Additional Services

No additional services were performed by S&ME.

11.0 References

Material references are cited within the report text, unless listed below.

12.0 Signature(s) of Environmental Professional(s)

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

A handwritten signature in blue ink, appearing to read 'Eric M. Solt'.

Eric M. Solt, PG
Environmental Professional



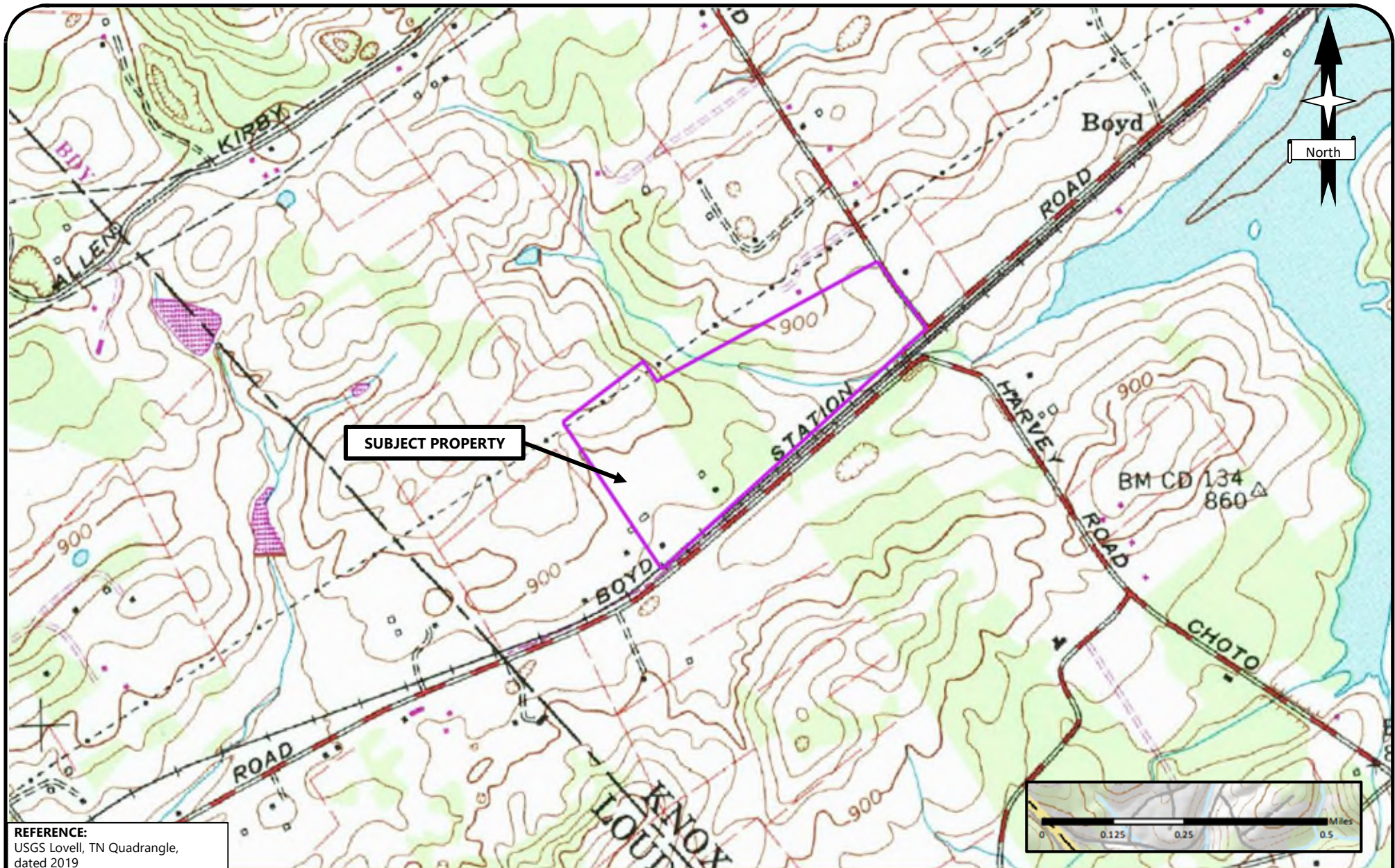
13.0 Qualification(s) of Environmental Professional(s)

S&ME delivers engineering, design, planning, environmental, and construction services for the built environment. Founded in 1973, we have grown to an 1,100-person corporation operating from 34 offices across the United States.

Qualifications of the environmental professional and staff who contributed to this Phase I ESA are included in Appendix VIII.

Appendices

Appendix I –Figures



TOPOGRAPHIC EXHIBIT

Phase I Environmental Site Assessment
McFee Road
Knox County, Farragut, TN

APROX SCALE:
See Map

DATE:
7/6/2023
PROJECT NUMBER
23430267

FIGURE NO.

1



REFERENCE:
Google Earth 2023



TAX MAP

Phase I Environmental Site Assessment
McFee Road
Knox County, Farragut, TN

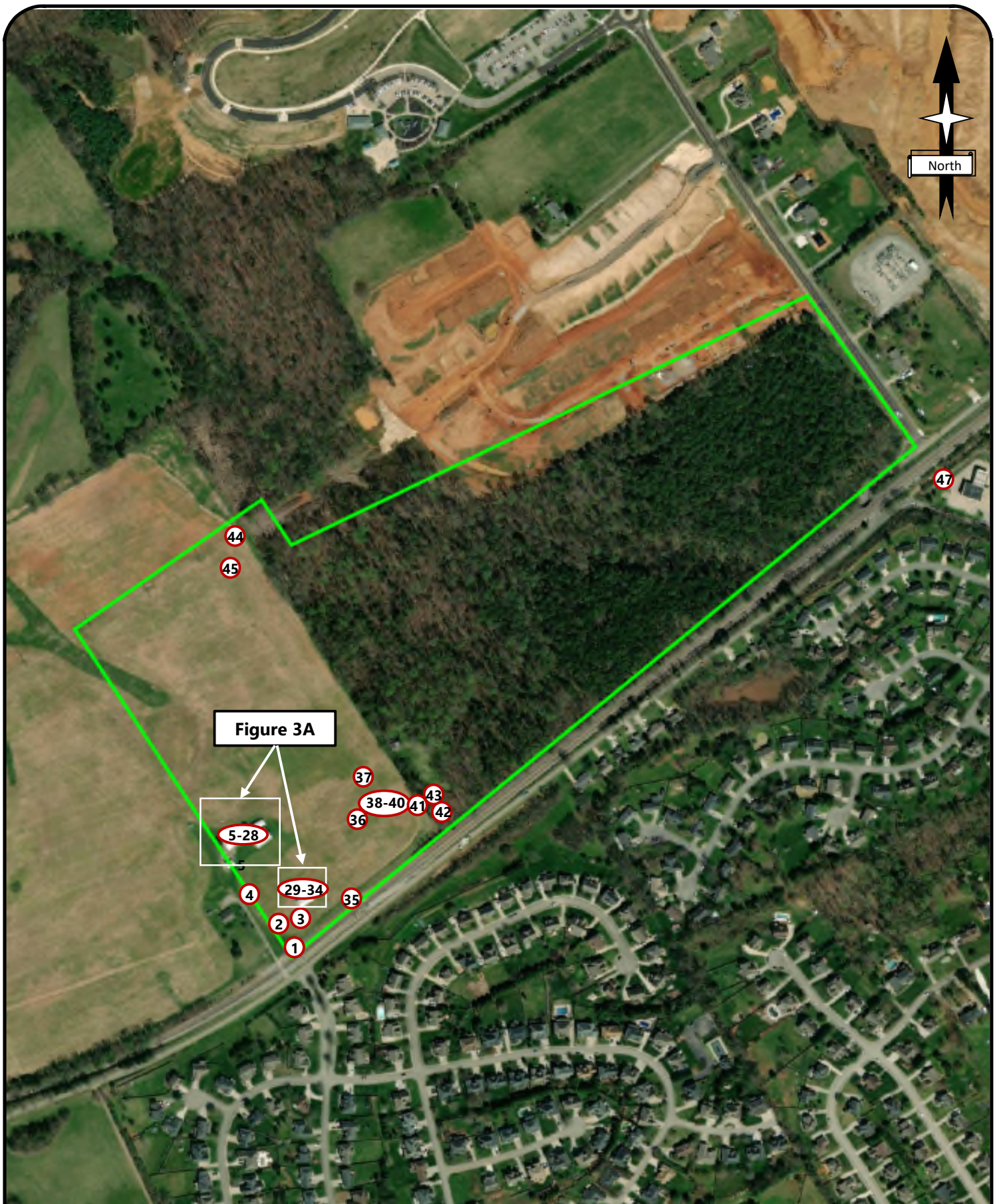
SCALE:
NTS

DATE:
7/6/2023

PROJECT NUMBER
23430267

FIGURE NO.

2



○ Photograph Locations
 — Assessment Boundary

REFERENCE:
 Google Imagery, dated 2022

PHOTOGRAPH LOCATIONS

Phase I Environmental Site Assessment
 McFee Road
 Knoxville, Tennessee

SCALE:
 NTS

DATE:
 7/6/2023

PROJECT NUMBER
 23430267

FIGURE NO.

3



○ Photograph Locations
 — Assessment Boundary

REFERENCE:
 Google Imagery, dated 2023

PHOTOGRAPH LOCATIONS

Phase I Environmental Site Assessment
 McFee Road
 Knox County, Farragut, Tennessee

SCALE:
 NTS

DATE:
 7/6/2023

PROJECT NUMBER
 23430267

FIGURE NO.

3A

Appendix II – ERIS Report



DATABASE REPORT

Project Property:	<i>McFee Road Property McFee Road Knoxville TN</i>
Project No:	<i>23430267</i>
Report Type:	<i>Database Report</i>
Order No:	<i>23062800078</i>
Requested by:	<i>S&ME, Inc.</i>
Date Completed:	<i>June 30, 2023</i>

Environmental Risk Information Services

A division of Glacier Media Inc.

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Executive Summary

Property Information:

Project Property: *McFee Road Property
McFee Road Knoxville TN*

Project No: *23430267*

Coordinates:

Latitude:	<i>35.83983773</i>
Longitude:	<i>-84.18874413</i>
UTM Northing:	<i>3,969,833.43</i>
UTM Easting:	<i>753,915.43</i>
UTM Zone:	<i>UTM Zone 16S</i>

Elevation: *882 FT*

Order Information:

Order No: *23062800078*

Date Requested: *June 28, 2023*

Requested by: *S&ME, Inc.*

Report Type: *Database Report*

Historicals/Products:

Aerial Photographs	<i>Historical Aerials (with Project Boundaries)</i>
City Directory Search	<i>CD - 2 Street Search</i>
ERIS Xplorer	<i>ERIS Xplorer</i>
Excel Add-On	<i>Excel Add-On</i>
Fire Insurance Maps	<i>US Fire Insurance Maps</i>
Physical Setting Report (PSR)	<i>Physical Setting Report (PSR)</i>
Topographic Map	<i>Topographic Maps</i>

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
<u>Standard Environmental Records</u>								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0

State

SHWS	Y	1	0	0	0	0	0	0
DEL SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
LUST	Y	0.5	0	0	0	0	-	0
LUST TRUST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
HWRA	Y	0.5	0	0	0	0	-	0
DHWR	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	1	0	-	-	1
DEL STORAGE TNK	Y	0.25	0	0	0	-	-	0
INST	Y	0.5	0	0	0	0	-	0
ENG	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
SRP	Y	0.5	0	0	0	0	-	0
REMEDIATION	Y	0.25	0	0	0	-	-	0

Tribal

INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0

County

No County standard environmental record sources available for this State.

Additional Environmental Records

Federal

FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	1	1
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0

State

PRIORITY CLEAN	Y	0.25	0	0	0	-	-	0
DELISTED DCER	Y	0.25	0	0	0	-	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
CDL	Y	PO	0	-	-	-	-	0
SPILLS	Y	0.125	0	0	-	-	-	0
SPILS	Y	0.125	0	0	-	-	-	0
SWM COMPLAINT	Y	0.25	0	0	0	-	-	0
HWM	Y	0.25	0	0	0	-	-	0

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Total:	0	1	0	0	1	2
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* PO – Property Only

* 'Property and adjoining properties' database search radii are set at 0.25 miles.

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
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No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	UST	TN0022	1116 Harvey Road Knoxville TN 37922 Facility ID Facility Status: 2471474 Active Tank ID: 58342, 58343	ENE	0.05 / 249.03	-43	16
2	MRDS	QUARRY	KNOX COUNTY KNOXVILLE TN 37922 Dep ID: 10276092	E	0.51 / 2,703.19	-36	18

Executive Summary: Summary by Data Source

Standard

State

UST - Underground Storage Tanks

A search of the UST database, dated Apr 27, 2023 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
TN0022	1116 Harvey Road Knoxville TN 37922	ENE	0.05 / 249.03	1
<i>Facility ID Facility Status: 2471474 Active</i> <i>Tank ID: 58342, 58343</i>				

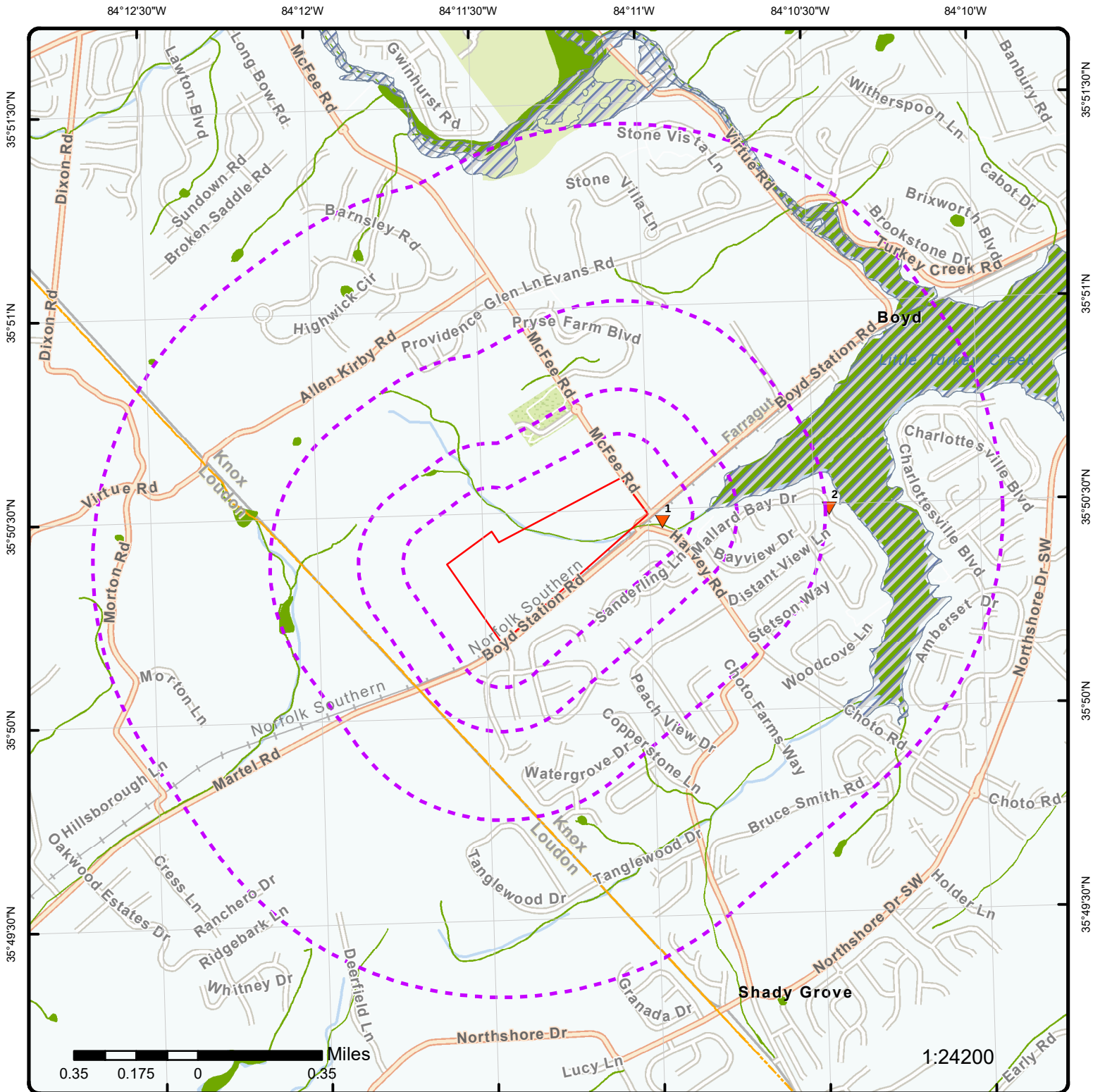
Non Standard

Federal

MRDS - Mineral Resource Data System

A search of the MRDS database, dated Mar 15, 2016 has found that there are 1 MRDS site(s) within approximately 1.00 miles of the project property.

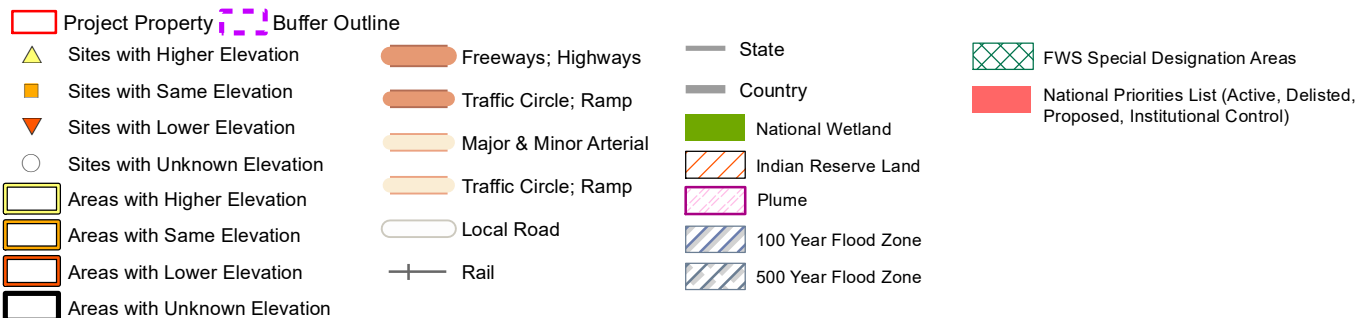
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
QUARRY	KNOX COUNTY KNOXVILLE TN 37922	E	0.51 / 2,703.19	2
<i>Dep ID: 10276092</i>				

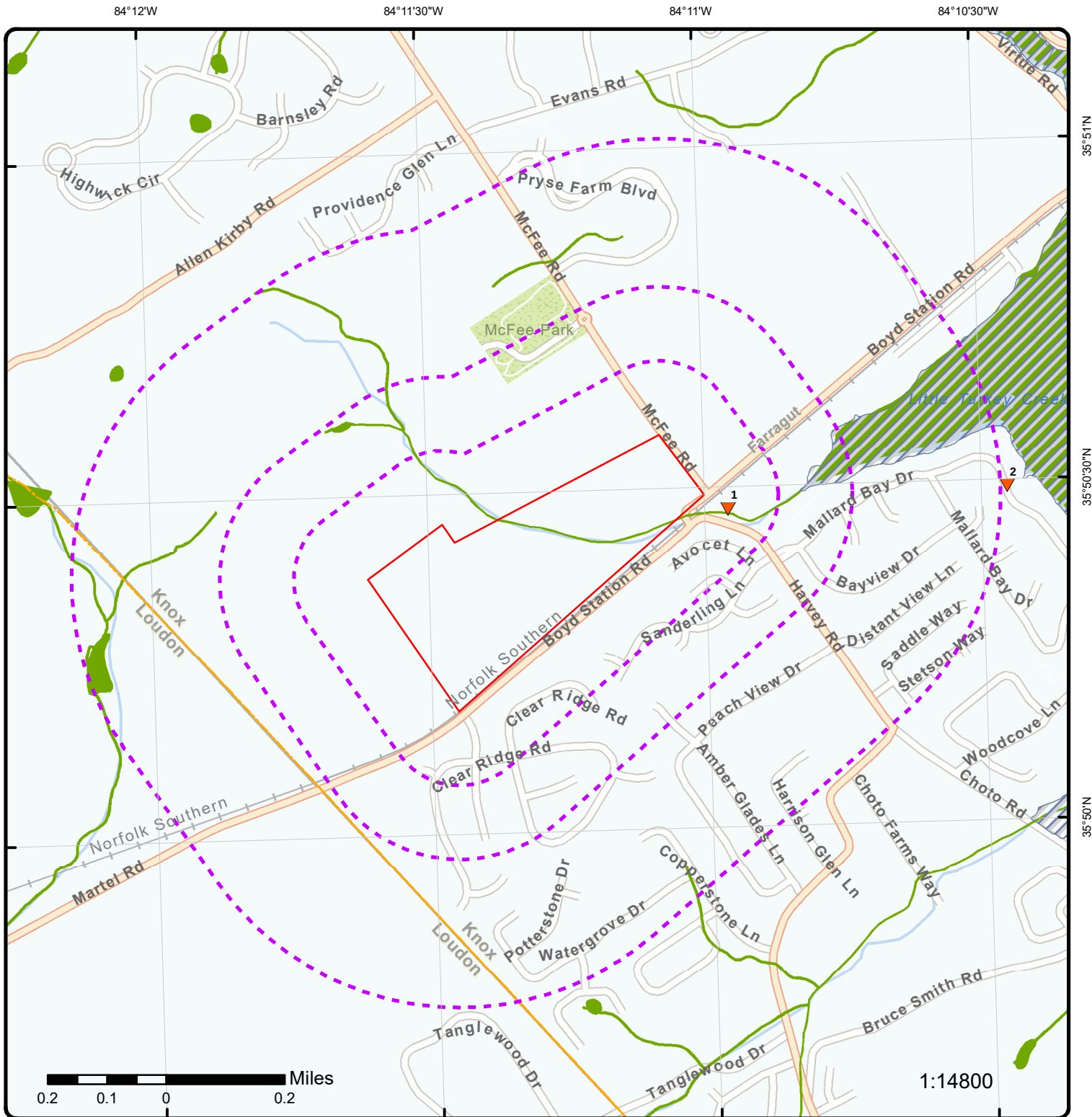


Map: 1.0 Mile Radius

Order Number: 23062800078

Address: McFee Road, Knoxville, TN

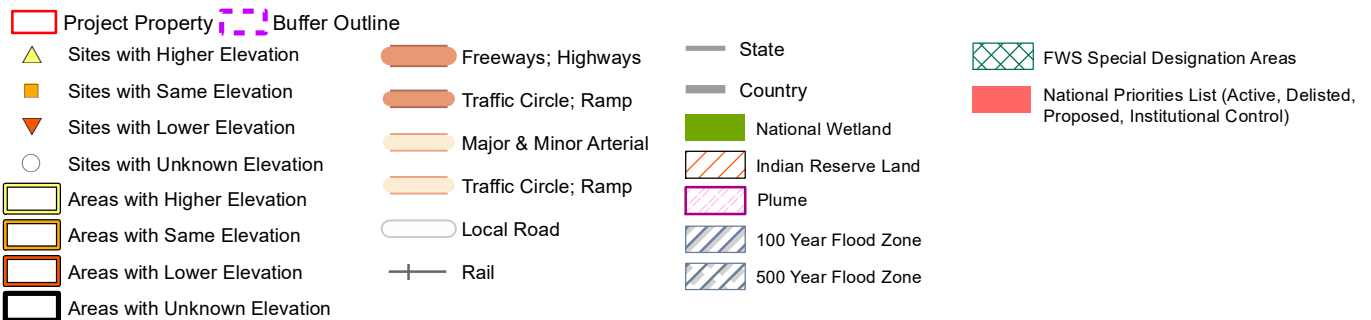




Map: 0.5 Mile Radius

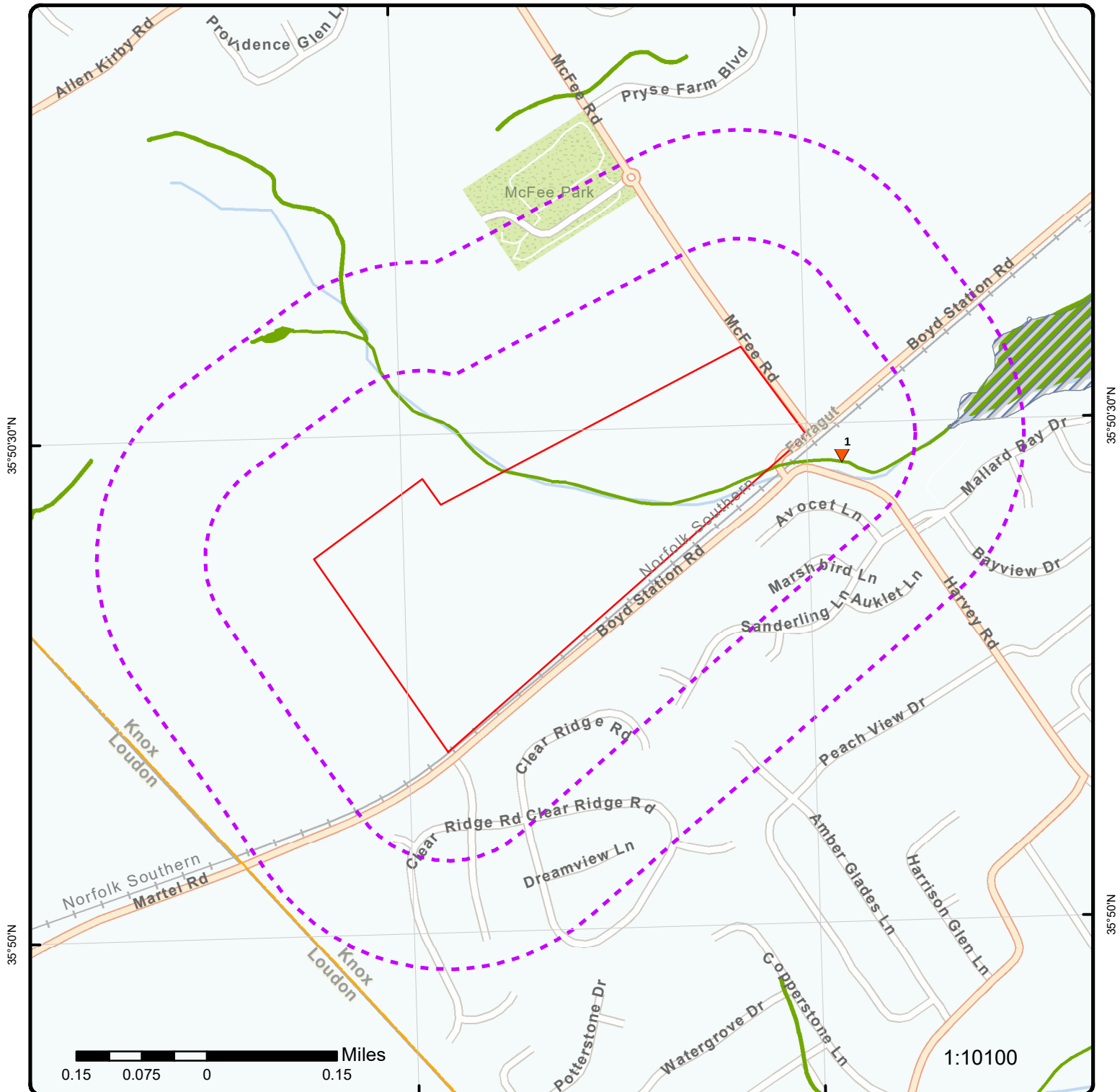
Order Number: 23062800078

Address: McFee Road, Knoxville, TN



84°11'30"W

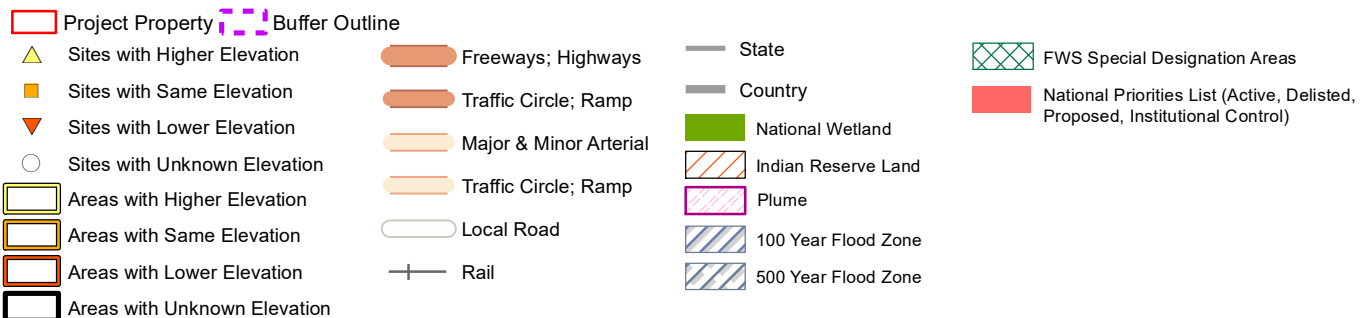
84°11'W



Map: 0.25 Mile Radius

Order Number: 23062800078

Address: McFee Road, Knoxville, TN





Aerial Year: 2022

Address: McFee Road, Knoxville, TN

Source: ESRI World Imagery

Order Number: 23062800078



© ERIS Information Inc.

84°12'30"W 84°12'W 84°11'30"W 84°11'W 84°10'30"W 84°10'W

35°51'30"N

35°51'N

35°50'30"N

35°50'N

35°49'30"N

35°49'N

35°51'30"N

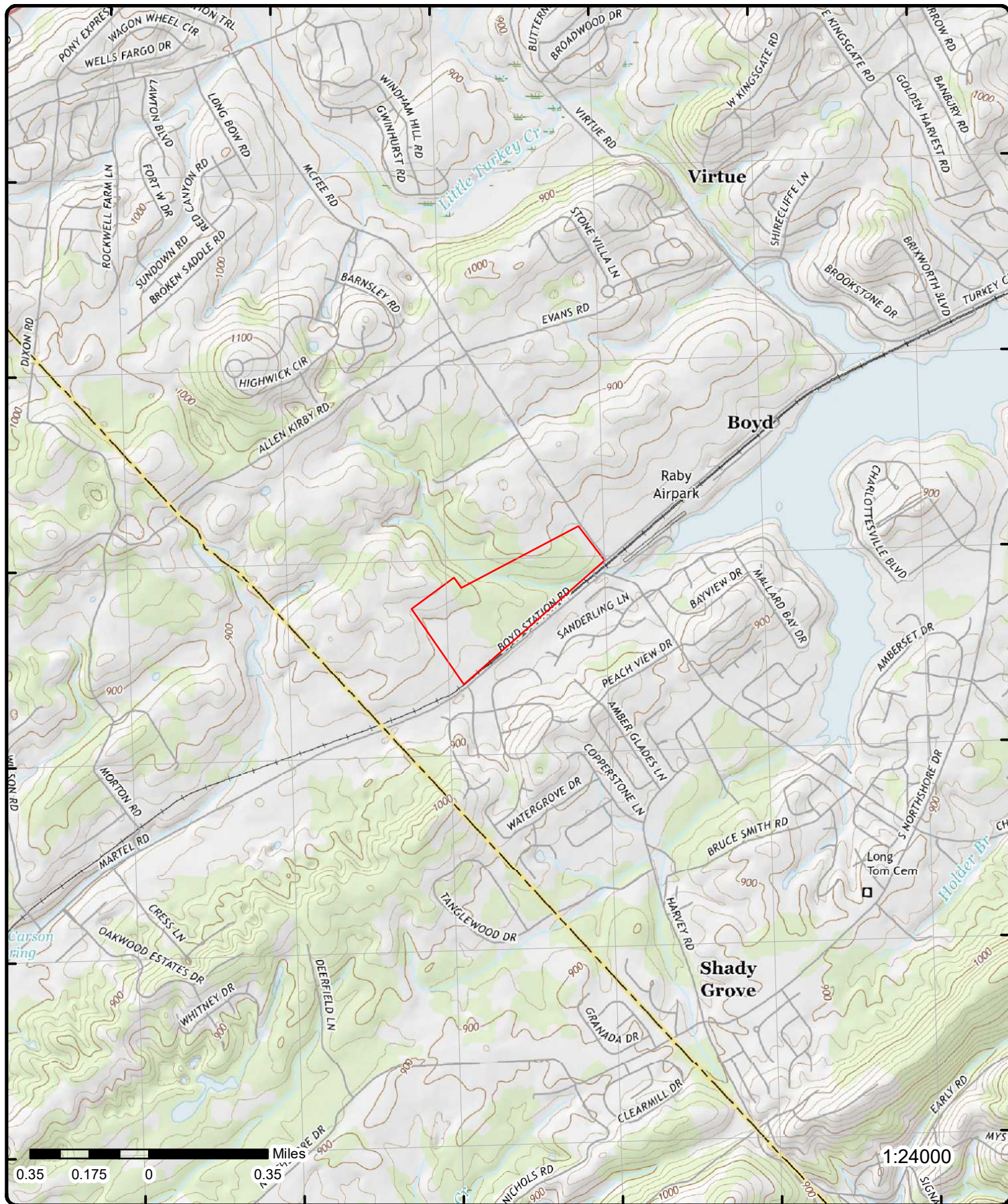
35°51'N

35°50'30"N

35°50'N

35°49'30"N

35°49'N



Topographic Map

Year: 2016

Order Number: 23062800078

Address: McFee Road, TN

Quadrangle(s): Concord, TN

Source: USGS Topographic Map



© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	ENE	0.05 / 249.03	839.26 / -43	TN0022 1116 Harvey Road Knoxville TN 37922	UST

Facility ID:	2471474	Tank Count:	4
Facility Status:	Active	Compart Cnt (Tdec):	4
Facility County:		Fac Status (Tdec):	Active
Region:		CIU (Tdec):	4
Currently in Use:	4	TOU (Tdec):	0
Perm Out of Use:		POU (Tdec):	0
Temp Out of Servic:		Region (Tdec):	2
Reason Red Tagged:		Latitude (Tdec):	35.841288
Facilit Red Tagged:	Not Red-Tagged	Longitude (Tdec):	-84.182571
Owner ID:	345916	X:	-84.18256673713825
Owner Type:	Commercial	Y:	35.841281118929864
Owner Name:	Lehigh Gas Wholesale Services, Inc.		
Facility Type:	Gas Station or Truck Stop		
Facility Name:	TN0022		
Facility Address1:	1116 Harvey Road		
Facility Address2:			
Facility City:	Knoxville		
Facility Zip:	37922		
Fac Name (Comparments):	TN0022		
Fac Address (Comparments):	1116 Harvey Road		
Fac Address2 (Comparments):			
Facility City (Comparments):	Knoxville		
Facility Zip (Comparments):	37922		
Fac State (Comparments):	PA		

Tank Details

Tank ID:	58342	Owner Type:	Commercial
Tank No:	1	Owner Status:	Active
Date Tank Installd:	NOV-01-2007	Owner CIU Count:	196
Emergency Gen:		Owner POU Count:	57
Date Tank Closed:		Owner TOU Count:	15
How Tank Closed:		Owner Tank Count:	268
Facility Count:	57		
Owner Name:	Lehigh Gas Wholesale Services, Inc.		
Tank Construction:	Composite - Steel w/FRP		
Category of Construction:			

Compartment Details

Compart ID:	59467	Date Last Used:	
Compart Letter:	B	Regulated Status:	Regulated
Compt Capacity:	8000	Small Delivery:	More than 25
Status:	Currently in Use	Overfill Preventn:	Ball Float Valves
Product:	Gasoline	Date Comprt Closed:	
Overfill Device Installed:			
Spill Device Installed:			
Piping Material:	Rigid Plastic - (NUPI - Western Fiberglass -UPP - Brugg)		
Piping Type:	Pressurized		
Pipe Construction Type:	Double Wall		
Pipe Construction:	Double Wall		
Pipe Install or Rep Date:			
Leak Detection Cat:	Mechanical (Automatic)		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Leak Detection Periodic:		Annual LTT				
Comprt Release Detectn:		Automatic Tank Gauging				
Compart Overall Stat:						
Overfill Installation Date:						
Spill Bucket Installation Date:						
Spill Prevention:		Single walled				
Address Line 1:		645 Hamilton St.				
Address Line 2:		Suite 400				
City:		Allentown				
State:		PA				
Zip:		18101-2105				
Compart ID:		59466		Date Last Used:		
Compart Letter:		A		Regulated Status:		Regulated
Compt Capacity:		12000		Small Delivery:		More than 25
Status:		Currently in Use		Overfill Preventn:		Ball Float Valves
Product:		Gasoline		Date Comprt Closed:		
Overfill Device Installed:						
Spill Device Installed:						
Piping Material:		Rigid Plastic - (NUPI - Western Fiberglass -UPP - Brugg)				
Piping Type:		Pressurized				
Pipe Construction Type:		Double Wall				
Pipe Construction:		Double Wall				
Pipe Install or Rep Date:						
Leak Detection Cat:		Mechanical (Automatic)				
Leak Detection Periodic:		Annual LTT				
Comprt Release Detectn:		Automatic Tank Gauging				
Compart Overall Stat:						
Overfill Installation Date:						
Spill Bucket Installation Date:						
Spill Prevention:		Single walled				
Address Line 1:		645 Hamilton St.				
Address Line 2:		Suite 400				
City:		Allentown				
State:		PA				
Zip:		18101-2105				
Tank Details						
Tank ID:		58343		Owner Type:		Commercial
Tank No:		2		Owner Status:		Active
Date Tank Installd:		NOV-01-2007		Owner CIU Count:		196
Emergency Gen:				Owner POU Count:		57
Date Tank Closed:				Owner TOU Count:		15
How Tank Closed:				Owner Tank Count:		268
Facility Count:		57				
Owner Name:		Lehigh Gas Wholesale Services, Inc.				
Tank Construction:		Composite - Steel w/FRP				
Category of Construction:						
Compartment Details						
Compart ID:		59468		Date Last Used:		SEP-15-2008
Compart Letter:		A		Regulated Status:		Regulated
Compt Capacity:		4000		Small Delivery:		
Status:		Currently in Use		Overfill Preventn:		Ball Float Valves
Product:		Gasoline		Date Comprt Closed:		
Overfill Device Installed:						
Spill Device Installed:						
Piping Material:		Rigid Plastic - (NUPI - Western Fiberglass -UPP - Brugg)				
Piping Type:		Pressurized				
Pipe Construction Type:						
Pipe Construction:						
Pipe Install or Rep Date:						
Leak Detection Cat:		Annual Line Leak Detector Test				
Leak Detection Periodic:		Interstitial Monitoring for Piping				
Comprt Release Detectn:		Automatic Tank Gauging				

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Compart Overall Stat: Overfill Installation Date: Spill Bucket Installation Date: Spill Prevention: Address Line 1: 645 Hamilton St. Address Line 2: Suite 400 City: Allentown State: PA Zip: 18101-2105						
Compart ID: 59469 Compart Letter: B Compt Capacity: 4000 Status: Currently in Use Product: ULS Diesel Overfill Device Installed: Spill Device Installed: Piping Material: Rigid Plastic - (NUPI - Western Fiberglass -UPP - Brugg) Piping Type: Pressurized Pipe Construction Type: Double Wall Pipe Construction: Double Wall Pipe Install or Rep Date: Leak Detection Cat: Mechanical (Automatic) Leak Detection Periodic: Annual LTT Comprt Release Detectn: Automatic Tank Gauging Compart Overall Stat: Overfill Installation Date: Spill Bucket Installation Date: Spill Prevention: Single walled Address Line 1: 645 Hamilton St. Address Line 2: Suite 400 City: Allentown State: PA Zip: 18101-2105						
Date Last Used: Regulated Status: Regulated Small Delivery: More than 25 Overfill Preventn: Ball Float Valves Date Comprt Closed:						
2	1 of 1	E	0.51 / 2,703.19	846.23 / -36	QUARRY KNOX COUNTY KNOXVILLE TN 37922	MRDS
Dep ID: 10276092 Dev Status: PAST PRODUCER Code List: MBL Url: http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10276092 I1: 27 Latitude: 35.841492 Longitude: -84.174316						
Commodity						
I1: 46 Code: MBL Commodity: Marble, Dimension Commodity Type: Non-metallic Commodity Group: Stone, Dimension Importance: Primary Line: 1 Inserted By: MAS migration Insert Date: 29-OCT-02 Updated By: USGS Update Date: 29-OCT-02						
Names						
I1: 37 Status: Current Site Name: Quarry Line: 1 Inserted By: MAS migration Insert Date: 29-OCT-02 Updated By: USGS Update Date: 29-OCT-02						

Unplottable Summary

Total: 1 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
SWM COMPLAINT	Pro Pools Dump Site	Harvey Road	TN		866029900

Unplottable Report

Site: Pro Pools Dump Site
Harvey Road TN

SWM COMPLAINT

Complaint ID:	16455	RCV Mon Year:	OCT-2010
Facility ID:		Calendar Days:	3
Site ID:		DIV:	SWM
Permit No:		EFO:	Knoxville
Investigated:	OCT-04-2010	County:	Knox
Status:	No Problem Found	Other Counties:	
Completed:	OCT-04-2010	Latitude:	
Received:	OCT-01-2010	Longitude:	
Site Owner:			
Site Description:	woods.		

Complaint

Complaint No:	16455
Assigned Date:	OCT-04-2010
Date Received:	OCT-01-2010
How Received:	Phone
Concerning:	Illegal Dumping
Concerning (Other):	

Investigation

Status:	No Problem Found
Status Detail:	
Responsible Party:	
Resp Party Phone:	
Photos:	
Date Investigated:	OCT-04-2010
Date Completed:	OCT-04-2010
Date Referred:	
Referred to:	
Last Updated:	OCT-04-2010
Updated by:	

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List:

NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Mar 23, 2023

National Priority List - Proposed:

PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Mar 23, 2023

Deleted NPL:

DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Mar 23, 2023

SEMS List 8R Active Site Inventory:

SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the SEMS GIS/REST file layer obtained from EPA's Facility Registry Service.

Government Publication Date: Jan 25, 2023

Inventory of Open Dumps, June 1985:

[ODI](#)

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites:

[SEMS ARCHIVE](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Jan 25, 2023

Comprehensive Environmental Response, Compensation and Liability Information System -

[CERCLIS](#)

CERCLIS:

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands:

[IODI](#)

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned:

[CERCLIS NFRAP](#)

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

[CERCLIS LIENS](#)

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

[RCRA CORRACTS](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 24, 2023

RCRA non-CORRACTS TSD Facilities:

[RCRA TSD](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by RCRA.

Government Publication Date: Apr 24, 2023

RCRA Generator List:[RCRA LQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 24, 2023

RCRA Small Quantity Generators List:[RCRA SQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 24, 2023

RCRA Very Small Quantity Generators List:[RCRA VSQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 24, 2023

RCRA Non-Generators:[RCRA NON GEN](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 24, 2023

RCRA Sites with Controls:[RCRA CONTROLS](#)

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Apr 24, 2023

Federal Engineering Controls-ECs:[FED ENG](#)

This list of Engineering controls (ECs) is provided by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents issued in fiscal years 1982-2021 for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Apr 26, 2023

Federal Institutional Controls- ICs:[FED INST](#)

This list of Institutional controls (ICs) is provided by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents issued in fiscal years 1982-2021 for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Apr 26, 2023

Land Use Control Information System:

LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites:

NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: Mar 23, 2023

Emergency Response Notification System:

ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:

ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:

ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Jan 16, 2023

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:

FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 13, 2022

FEMA Underground Storage Tank Listing:

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan:

FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Aug 8, 2022

Delisted Facility Response Plans:

DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Aug 8, 2022

Historical Gas Stations:[HIST GAS STATIONS](#)

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries:[REFN](#)

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Aug 30, 2022

Petroleum Product and Crude Oil Rail Terminals:[BULK TERMINAL](#)

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jun 29, 2022

LIEN on Property:[SEMS LIEN](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Jan 25, 2023

Superfund Decision Documents:[SUPERFUND ROD](#)

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Mar 23, 2023

Formerly Utilized Sites Remedial Action Program:[DOE FUSRAP](#)

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State**Promulgated Sites:**[SHWS](#)

The Promulgated List made available by Tennessee's Department of Environment and Conservation (TDEC) is a List of Inactive Hazardous Substance Sites. 'Inactive hazardous substance sites that constitute an imminent, substantial danger' is an inactive hazardous substance site where there is a threat of danger to the public health, safety, or environment which is both real and presently existing. This database is state equivalent NPL.

Government Publication Date: Mar 27, 2023

Delisted State Hazardous Waste Sites:[DEL SHWS](#)

This database contains a list of sites which have removed from The Promulgated Sites Listing maintained by Tennessee's Department of Environment and Conservation (TDEC).

Government Publication Date: Mar 27, 2023

Solid Waste Disposal Facilities and Landfills:[SWF/LF](#)

A list of permitted solid waste and landfill facilities made available by Tennessee's Department of Environment Conservation (TDEC).

Government Publication Date: May 4, 2023

Environmental Activities on USTs:

LUST

The Tennessee Department of Environment and Conservation (TDEC) has made available a list of facilities where any type of environment-related activity has occurred due to a tank closure, or a suspected or confirmed release. The information in this list includes the facility's name and address when the environmental activities began, and the as well as the current status of the activities taking place.

Government Publication Date: Apr 27, 2023

Tennessee Petroleum Underground Storage Tank Fund:

LUST TRUST

A list of facilities which have applied for reimbursement from the Tennessee Petroleum Underground Storage Tank Fund, made available by Tennessee Department of Environment and Conservation (TDEC).

Government Publication Date: Apr 27, 2023

Delisted Leaking Storage Tanks:

DELISTED LST

This database contains a list of leaking storage tank sites and their Funds for reimbursement of costs related to assessment and cleanup that were removed from the Department of Environment and Conservation (TDEC) database.

Government Publication Date: Apr 27, 2023

Hazardous Waste Remedial Action Fund:

HWRA

List of sites under the Hazardous Waste Remedial Action Fund (HWARF) program, maintained by Tennessee Department of Environment and Conservation (TDEC). The Division of Remediation uses the Fund to investigate and cleanup environmental problems caused by the release of hazardous substances into the environment.

Government Publication Date: Mar 27, 2023

Delisted Hazardous Waste Remedial Action Fund:

DHWR

List of sites which once appeared on - and have since been removed from - the list of sites participating in the Hazardous Waste Remedial Action Fund, made available by Tennessee's Department of Environment and Conservation (TDEC).

Government Publication Date: Dec 20, 2022

Underground Storage Tanks:

UST

A list of tank compartments that have been reported to the Division of Underground Storage Tanks in the Department of Environment and Conservation (DEC). Some of the compartments listed, are not regulated by state or federal regulations, because of the substance stored, the size of the compartment, its use, etc. This list is maintained by Tennessee Division of Underground Storage Tanks in DEC.

Government Publication Date: Apr 27, 2023

Delisted Storage Tanks:

DEL STORAGE TNK

List of tank compartments is maintained by the Division of Underground Storage Tanks in the Department of Environment and Conservation (DEC). The department would remove a record if the compartment is not regulated. This list contains the non-regulated tank compartments that been removed from the department's tank database.

Government Publication Date: Apr 27, 2023

Sites Remediated with Institutional Controls:

INST

List of remediated sites that have institutional controls in place. This list has been made available by Tennessee's Department of Environment and Conservation (TDEC).

Government Publication Date: Mar 27, 2023

Sites Remediated with Engineering Controls:

ENG

This list made available by Tennessee's Department of Environment and Conservation (TDEC) is comprised of remediated sites that have engineering controls.

Government Publication Date: Mar 27, 2023

Voluntary Cleanup, Oversight and Assistance Program:

VCP

The Voluntary Cleanup Oversight and Assistance Program (VOAP) overlooked by Tennessee's Department of Environment and Conservation (TDEC) offers people the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a No Further Action letter and a release of liability for areas where investigation and cleanup is conducted. This list is maintained by the Division of Remediation in Department of Environment and Conservation.

Government Publication Date: Mar 27, 2023

State Remediation Program List:

SRP

The State Remediation Program (SRP) was established in 1994 within the Division of Solid Waste Management of the Department of Environmental Conservation (DEC) for the purpose of providing owners, prospective purchasers and other interested parties the means to voluntarily investigate, clean up or monitor contaminated sites not regulated under RCRA, CERCLA or the Tennessee Division of Underground Tanks (UST). This list maintained by Department of Environment and Conservation, Division of Solid waste Management - Site Remediation Program.

Government Publication Date: Mar 27, 2023

Division of Remediation Sites:

REMEDATION

List of remediation sites that are or have been under any of the program in Division of Remediation, Tennessee's Department of Environment and Conservation, including VOAP, DCERP, SRP, etc.

Government Publication Date: Mar 27, 2023

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands:

INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 4, which includes Tennessee, is made available by the United States Environmental Protection Agency (EPA). There are no federally recognized Tribes in Tennessee, according to the U.S. Department of Interior, Bureau of Indian Affairs.

Government Publication Date: Apr 12, 2019

Underground Storage Tanks (USTs) on Indian Lands:

INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 4, which includes Tennessee, is made available by the United States Environmental Protection Agency (EPA). There are no federally recognized Tribes in Tennessee, according to the U.S. Department of Interior, Bureau of Indian Affairs.

Government Publication Date: Oct 14, 2017

Delisted Tribal Leaking Storage Tanks:

DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2023

Delisted Tribal Underground Storage Tanks:

DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2023

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

Facility Registry Service/Facility Index:

FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Aug 18, 2022

Toxics Release Inventory (TRI) Program:

TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Oct 19, 2022

PFOA/PFOS Contaminated Sites:

[PFAS NPL](#)

List of National Priorities List (NPL) and related Superfund Alternative Agreement (SAA) sites where PFOA or PFOS contaminants have been found in water and/or soil. The site listing is provided by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Mar 28, 2023

Federal Agency Locations with Known or Suspected PFAS Detections:

[PFAS FED SITES](#)

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from March 2022 to April 2023. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Apr 24, 2023

SSEHRI PFAS Contamination Sites:

[PFAS SSEHRI](#)

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map, credited to the Northeastern University's PFAS Project Lab, Silent Spring Institute, and the PFAS-REACH team. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: <https://pfasproject.com/pfas-sites-and-community-resources/>

Government Publication Date: Oct 9, 2022

National Response Center PFAS Spills:

[ERNS PFAS](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the "Material Involved" or "Incident Description" fields. Limitations: The data from the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Apr 15, 2023

PFAS NPDES Discharge Monitoring:

[PFAS NPDES](#)

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Feb 19, 2023

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory:

[PFAS TRI](#)

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Oct 19, 2022

Perfluorinated Alkyl Substances (PFAS) Water Quality:

PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

PFAS TSCA Manufacture and Import Facilities:

PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest :

PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Apr 9, 2023

PFAS Industry Sectors:

PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Apr 16, 2023

Hazardous Materials Information Reporting System:

HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs:

NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Feb 8, 2023

Toxic Substances Control Act:[TSCA](#)

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA:[HIST TSCA](#)

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:[FTTS ADMIN](#)

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:[FTTS INSP](#)

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:[PRP](#)

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Jan 25, 2023

State Coalition for Remediation of Drycleaners Listing:[SCRD DRYCLEANER](#)

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):[ICIS](#)

The U.S. Environmental Protection Agency's Enforcement and Compliance History Online system incorporates data from the Integrated Compliance Information System - National Pollutant Discharge Elimination System (ICIS-NPDES). ICIS-NPDES is an information management system maintained by the Office of Compliance to track permit compliance and enforcement status of facilities regulated by the NPDES under the Clean Water Act. This data includes permit, inspection, violation and enforcement action information for applicable ICIS records.

Government Publication Date: Oct 15, 2022

Drycleaner Facilities:[FED DRYCLEANERS](#)

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Dec 11, 2022

Delisted Drycleaner Facilities:[DELISTED FED DRY](#)

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Dec 11, 2022

Formerly Used Defense Sites:

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset.

Government Publication Date: Jul 12, 2022

FUDS Munitions Response Sites:

FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: Jul 12, 2022

Former Military Nike Missile Sites:

FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents:

PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Mar 31, 2021

Material Licensing Tracking System (MLTS):

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites:

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

MINES

The Master Index File (MIF) is provided by the United State Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Nov 7, 2022

Surface Mining Control and Reclamation Act Sites:

SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Government Publication Date: Aug 18, 2022

Mineral Resource Data System:

MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites:

LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Title II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 1, 2022

Alternative Fueling Stations:

ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Mar 23, 2023

Superfunds Consent Decrees:

CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS) since 2010. CMS may not reflect the latest developments in a case nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Apr 19, 2023

Air Facility System:

AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments:

SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Mar 30, 2022

Polychlorinated Biphenyl (PCB) Transformers:

PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers:

PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Nov 3, 2022

State

Drycleaner Environmental Response Program Remediation Sites:

PRIORITY CLEAN

Tennessee's Department of Environment and Conservation (TDEC) Division of Remediation operates a program called the Drycleaner Environmental Response Program (DCERP). This program keeps a list of DCERP remediation sites.

Government Publication Date: Mar 27, 2023

Delisted Drycleaner Environmental Response Program Remediation Sites:

DELISTED DCER

The list of Drycleaner Environmental Response Program, maintained by the Tennessee's Department of Environment and Conservation Division of Remediation, would remove a record if the program finished the remediation. This list contains all such records that has finished remediation.

Government Publication Date: Dec 20, 2022

Registered Drycleaner Facilities List:

DRYCLEANERS

The Drycleaner Environmental Response Program (DCERP) of the Department of Environment and Conservation maintains a list of registered drycleaner facilities.

Government Publication Date: Mar 24, 2023

Delisted Drycleaners List:

DELISTED DRYCLEANERS

List of sites removed from the drycleaners database made available by the Department of Environmental and Conservation.

Government Publication Date: Mar 24, 2023

Registry of Contaminated Properties:

CDL

The Department of Environment and Conservation (DEC) maintains a registry of all properties reported by a law enforcement agency that have been under order of quarantine for at least sixty (60) days. These properties have been quarantined due to the criminal activities associated with Clandestine Methamphetamine Laboratories (CML). This list is maintained by The Department of Environment and Conservation (TDEC).

Government Publication Date: Mar 1, 2023

Spills, Emergency Response Data:

SPILLS

An inventory of spill locations reported to Tennessee Emergency Management Agency. This list made available by Tennessee Emergency Management Agency (TEMA).

Government Publication Date: Jul 22, 2015

Statewide Petroleum Incident Logging Section (SPILS) List:

SPILS

Tennessee's Statewide Petroleum Incident Logging Section (SPILS) is a new program within the Tennessee Department of Environment and Conservation (TDEC)'s Division of Solid Waste Management (DSWM). The SPILS program log incidents along Tennessee's roadways where a reportable quantity of petroleum products is released to the environment, ensuring that appropriate cleanup standards are applied, remediation activities are completed, and final reports detailing the response are received and reviewed.

Government Publication Date: May 16, 2023

Solid Waste Management (SWM) Complaints:

SWM COMPLAINT

List of Solid Waste Management (SWM) complaints in the Tennessee Department of Environment & Conservation (TDEC) Dataviewer.

Government Publication Date: Jan 25, 2021

Hazardous Waste Management Facilities:

HWM

List of Hazardous Waste Management Facilities made available by Tennessee's Department of Environment and Conservation. Includes Active, Inactive, Closed, Open, Operating, and Not Operating facilities. This is not a complete list of hazardous waste management facilities permits in the state of Tennessee.

Government Publication Date: May 16, 2023

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

Appendix III – Historical Research Documentation



TOPOGRAPHIC MAPS

Project Property:	McFee Road Property McFee Road Knoxville TN None
Project No:	23430267
Requested By:	S&ME, Inc.
Order No:	23062800078
Date Completed:	June 28, 2023

Environmental Risk Information Services

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We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2019	7.5
2016	7.5
1984	7.5
1968	7.5
1953	7.5
1940	7.5
1936	7.5
1936	15

Topographic Map Symbolology for the maps may be available in the following documents:

Pre-1947

[Page 223 of 1918 Topographic Instructions](#)

[Page 130 of 1928 Topographic Instructions](#)

1947-2009

[Topographic Map Symbols](#)

2009-present

[US Topo Map Symbols](#)

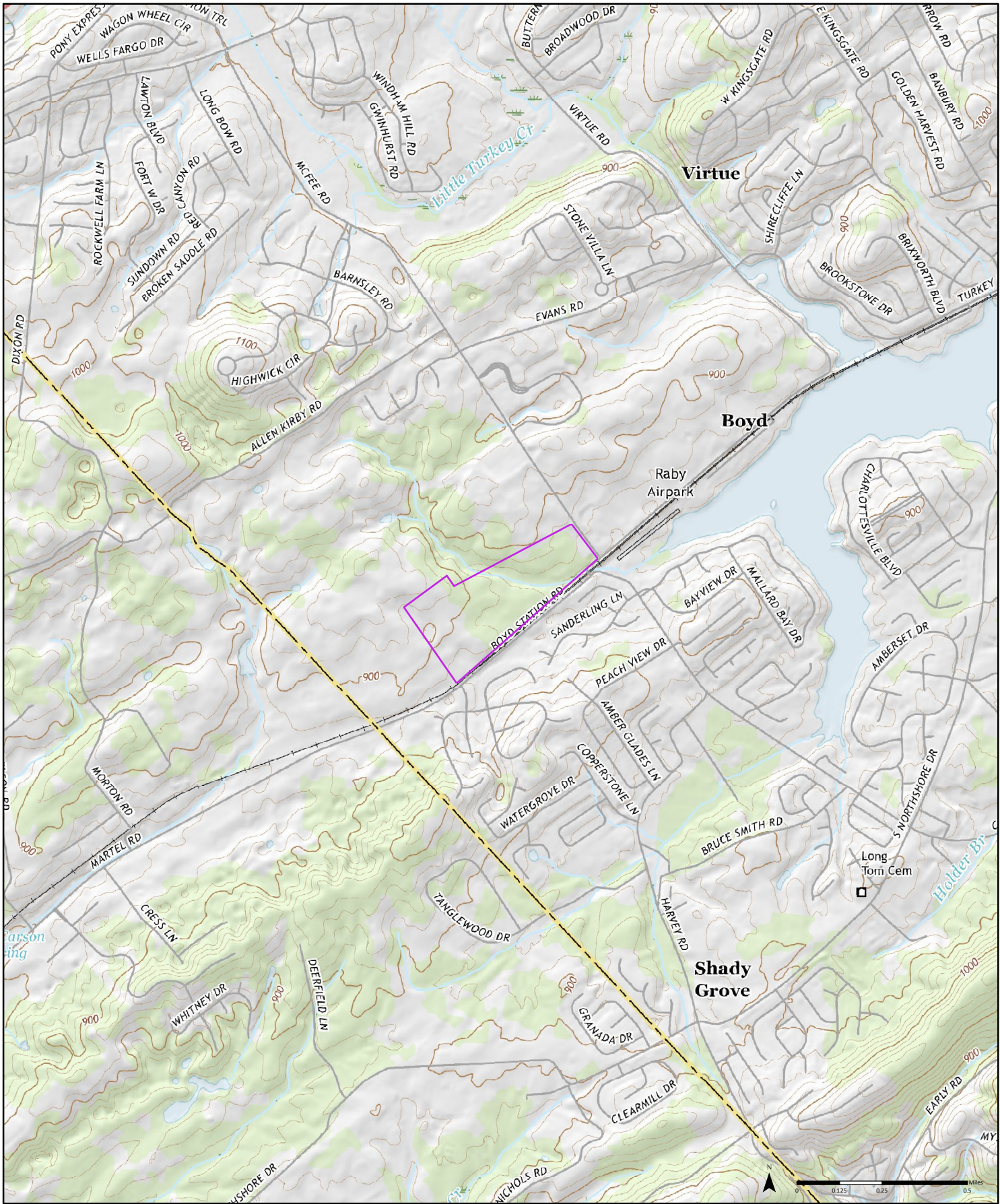
Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.

No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

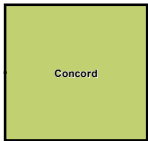
Environmental Risk Information Services

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1.866.517.5204 | info@erisinfo.com | erisinfo.com

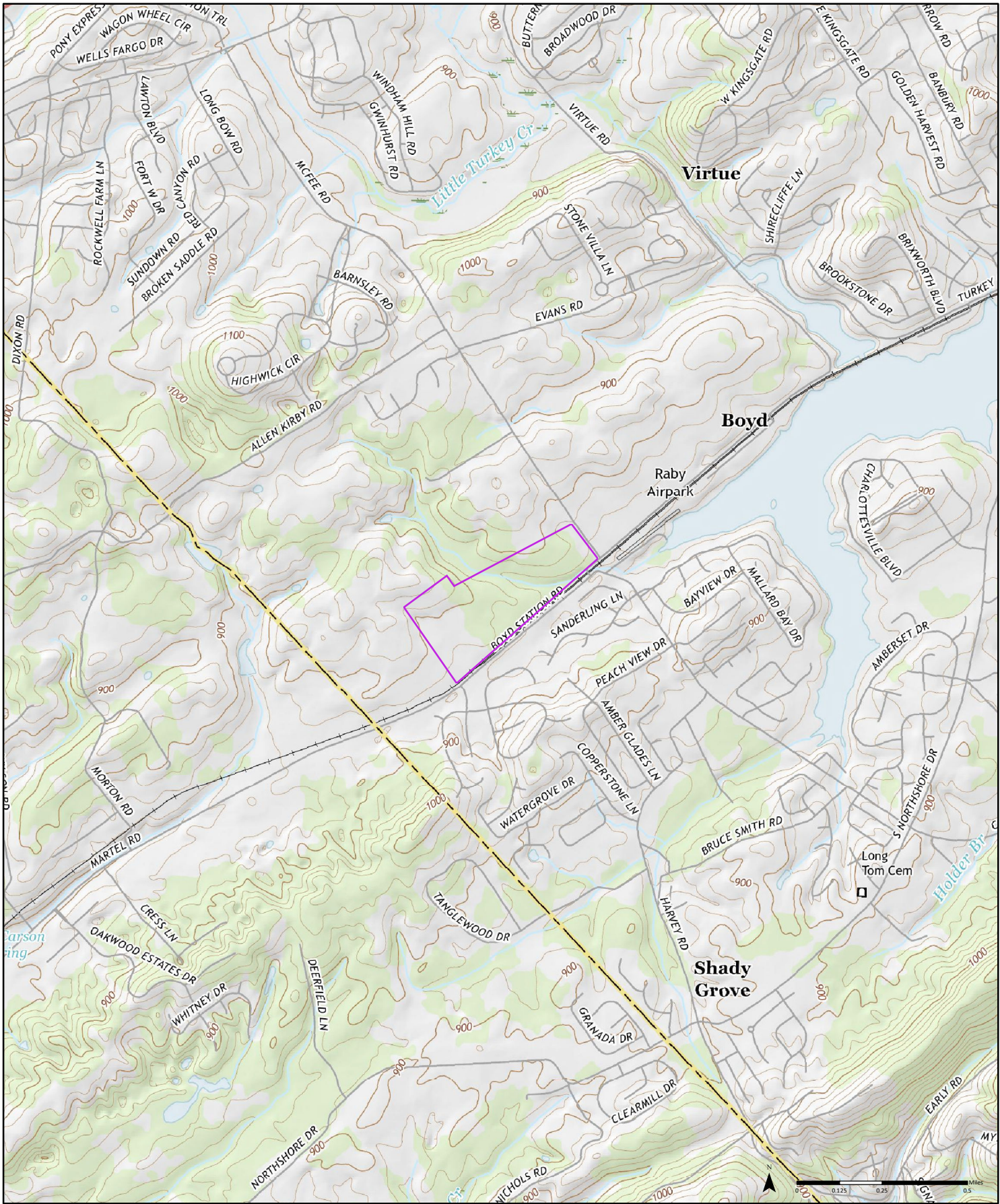


2019 Order No. 23062800078



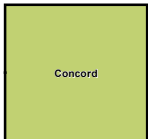
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Source: USGS 7.5 Minute Topographic Map



2016

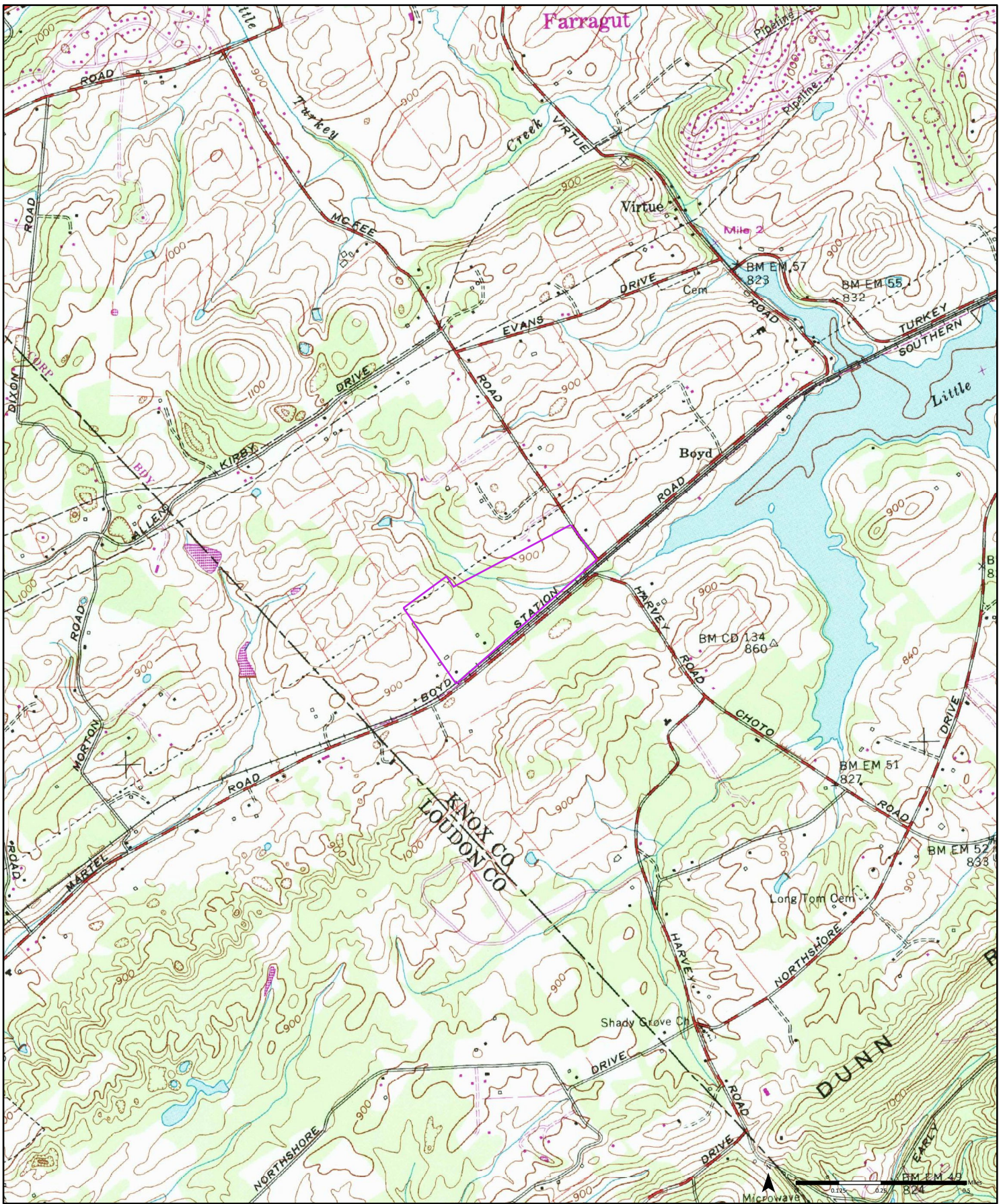
Order No. 23062800078



Available Quadrangle(s): Concord, TN

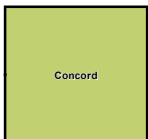
Source: USGS 7.5 Minute Topographic Map



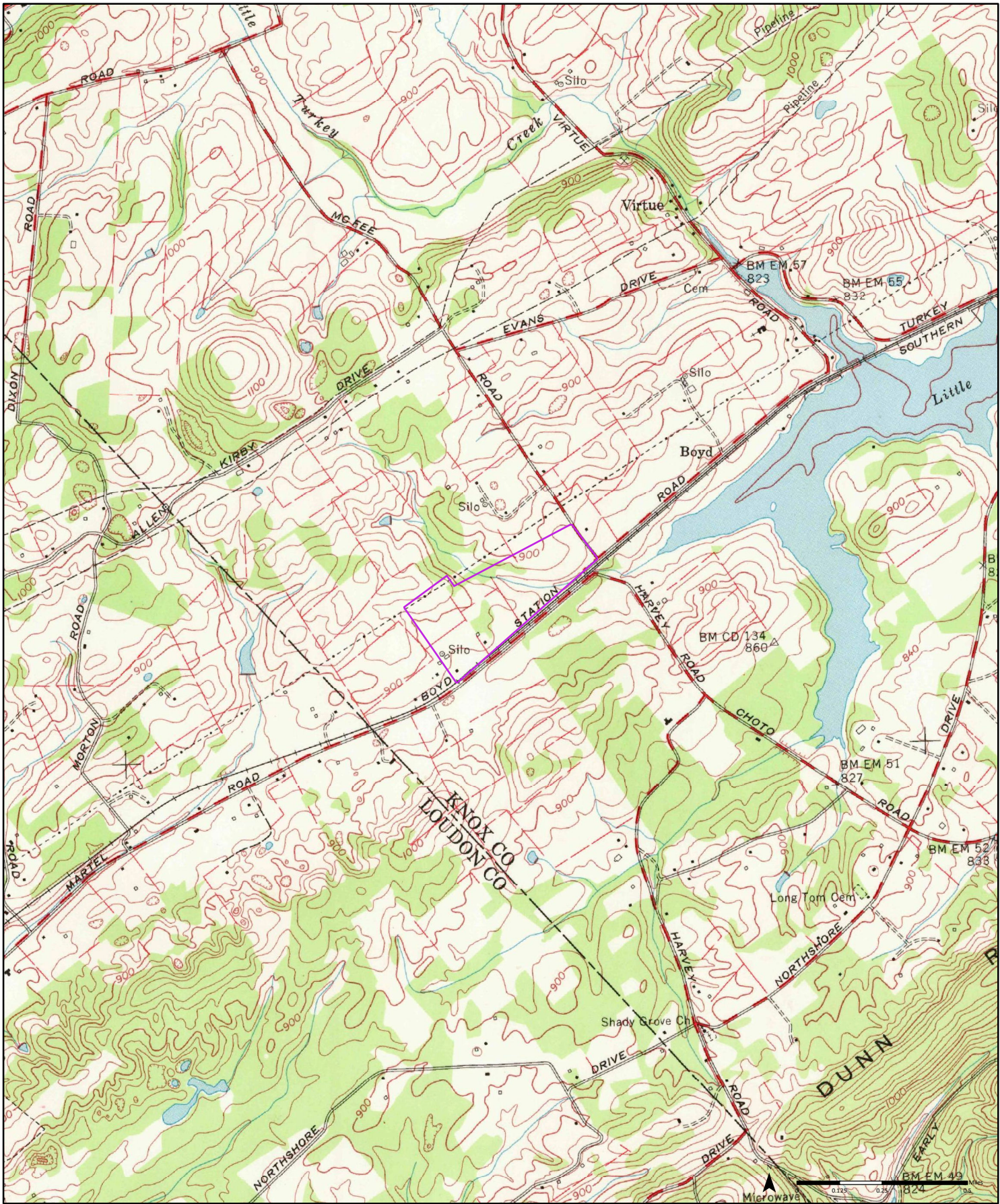


1984 (1-1984) Aerial Photo Year: 1981
 Photo Revision Year: 1984

Order No. 23062800078



Available Quadrangle(s): Concord, TN (1-1984)



1968 (1-1968) Aerial Photo Year: 1967 Order No. 23062800078

Available Quadrangle(s): Concord, TN (1-1968)

Concord

Source: USGS 7.5 Minute Topographic Map





1953 (1-1953) Aerial Photo Year: 1952 Order No. 23062800078

Concord

Available Quadrangle(s): Concord, TN (1-1953)



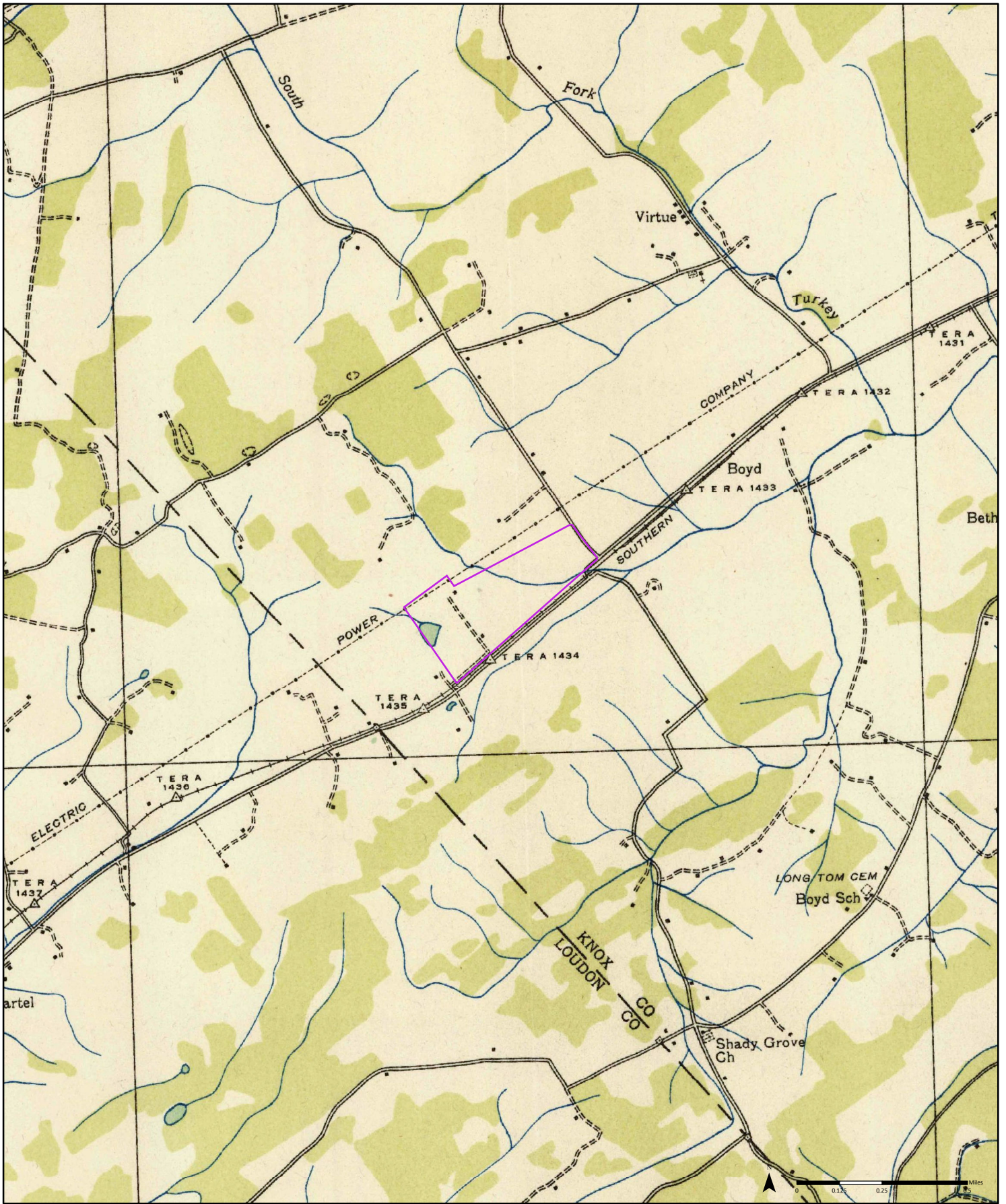
1940 Order No. 23062800078

Available Quadrangle(s): Concord, TN

Concord

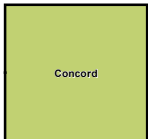
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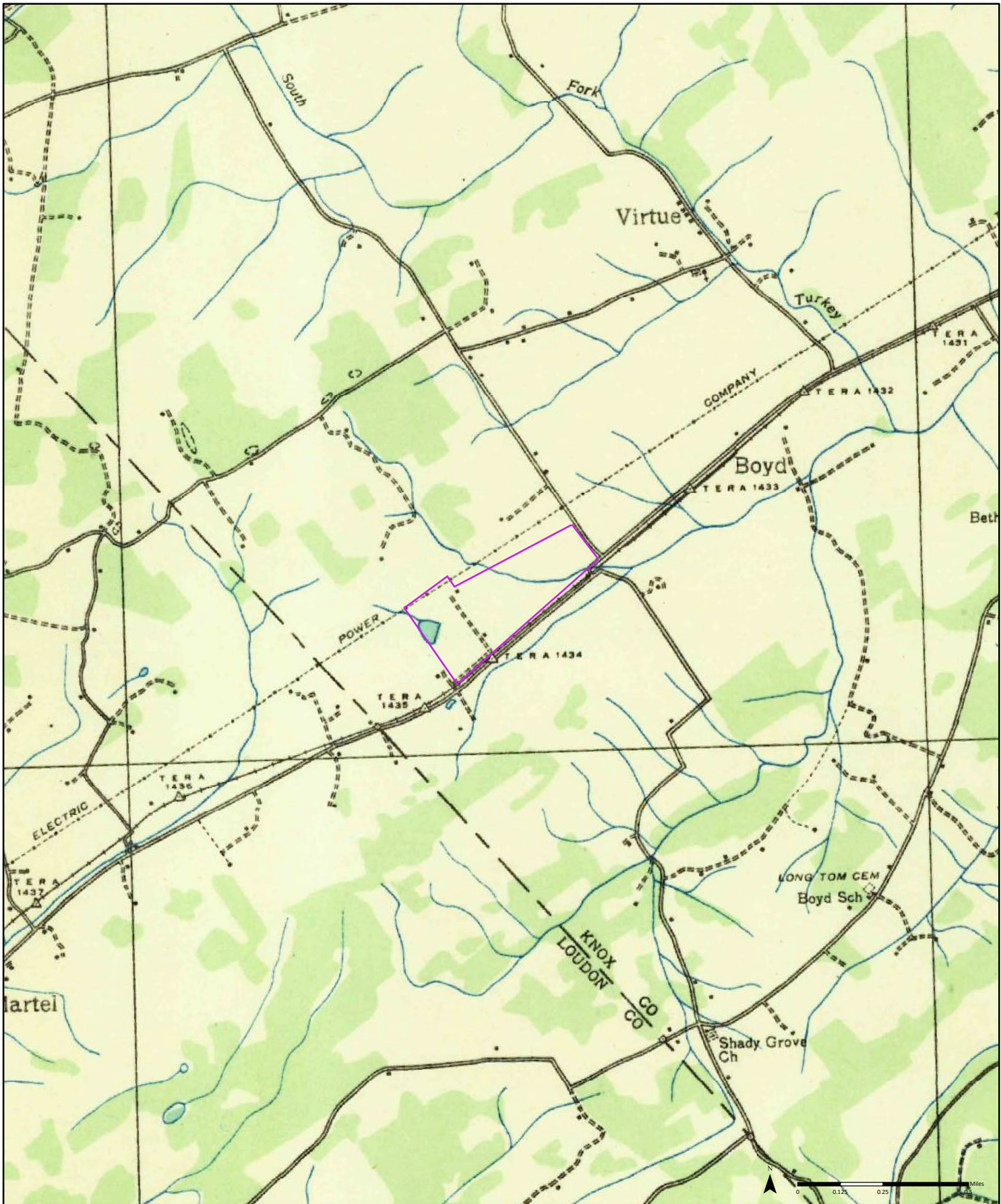
1936

Order No. 23062800078



Available Quadrangle(s): Concord, TN

Source: USGS 7.5 Minute Topographic Map



1936

Order No. 23062800078



Available Quadrangle(s): Friendship, TN

Source: USGS 15 Minute Topographic Map





HISTORICAL AERIALS

Project Property: McFee Road Property

McFee Road

Knoxville TN

Project No: 23430267

Requested By: S&ME, Inc.

Order No: 23062800078

Date Completed: June 30, 2023

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

Environmental Risk Information Services

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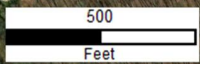
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Date	Source	Scale	Comments
2022	MAXAR TECHNOLOGIES	1" = 500'	
2021	United States Department of Agriculture	1" = 500'	
2018	United States Department of Agriculture	1" = 500'	
2016	United States Department of Agriculture	1" = 500'	
2014	United States Department of Agriculture	1" = 500'	
2012	United States Department of Agriculture	1" = 500'	
2010	United States Department of Agriculture	1" = 500'	
2008	United States Department of Agriculture	1" = 500'	
2007	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
1997	United States Geological Survey	1" = 500'	Best Copy Available
1992	United States Geological Survey	1" = 500'	
1987	United States Geological Survey	1" = 500'	Best Copy Available
1981	United States Geological Survey	1" = 500'	
1975	United States Geological Survey	1" = 500'	Best Copy Available
1967	Agricultural Stabilization & Conserv. Service	1" = 500'	Photo Index - Best Available
1959	Agricultural Stabilization & Conserv. Service	1" = 500'	
1953	Agricultural Stabilization & Conserv. Service	1" = 500'	
1939	Tennessee Valley Authority	1" = 500'	
1937	Tennessee Valley Authority	1" = 500'	

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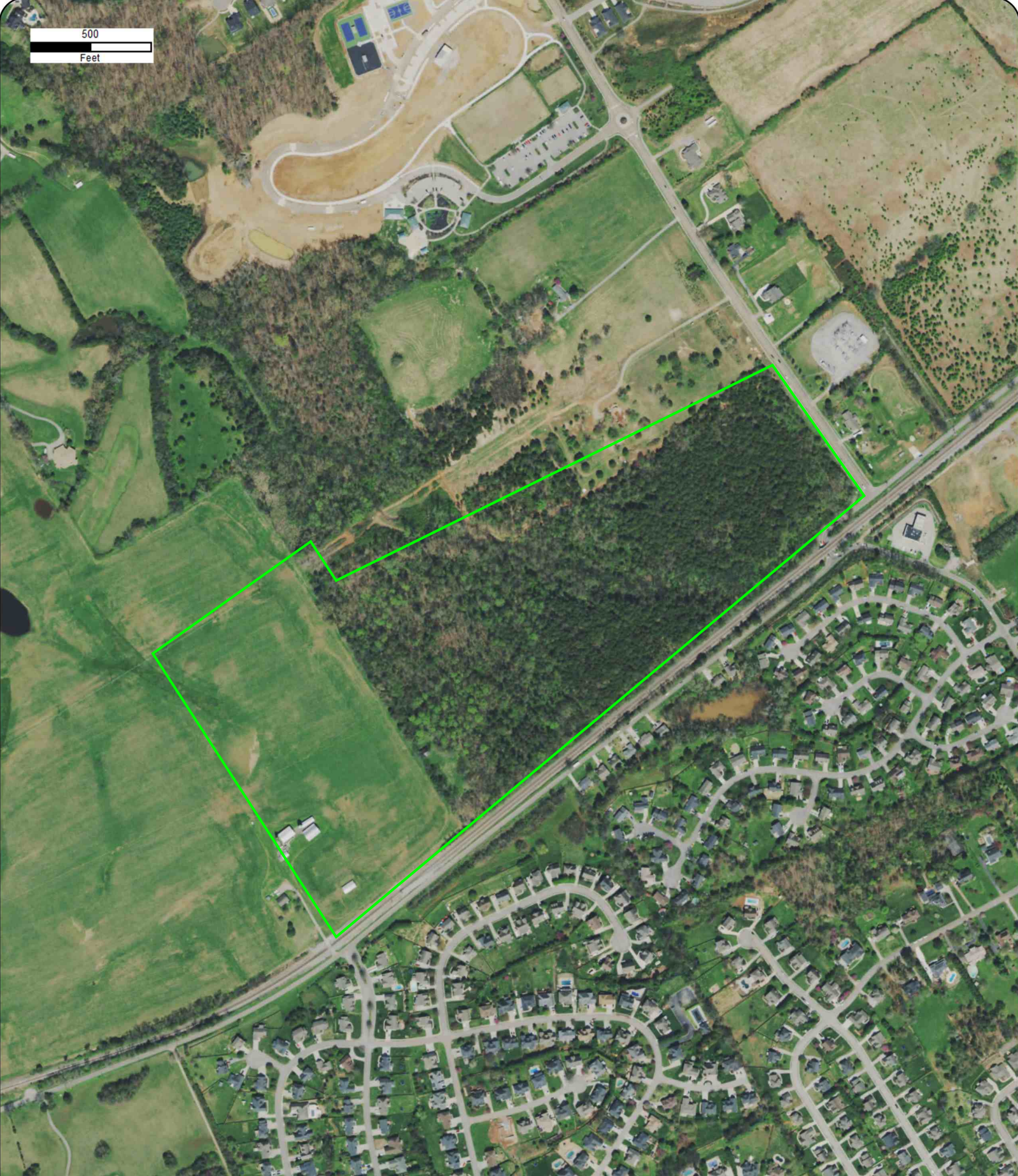
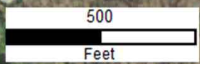


Year: 2022
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: McFee Road, Knoxville, TN
Approx Center: -84.18874413,35.83983773

Order No: 23062800078





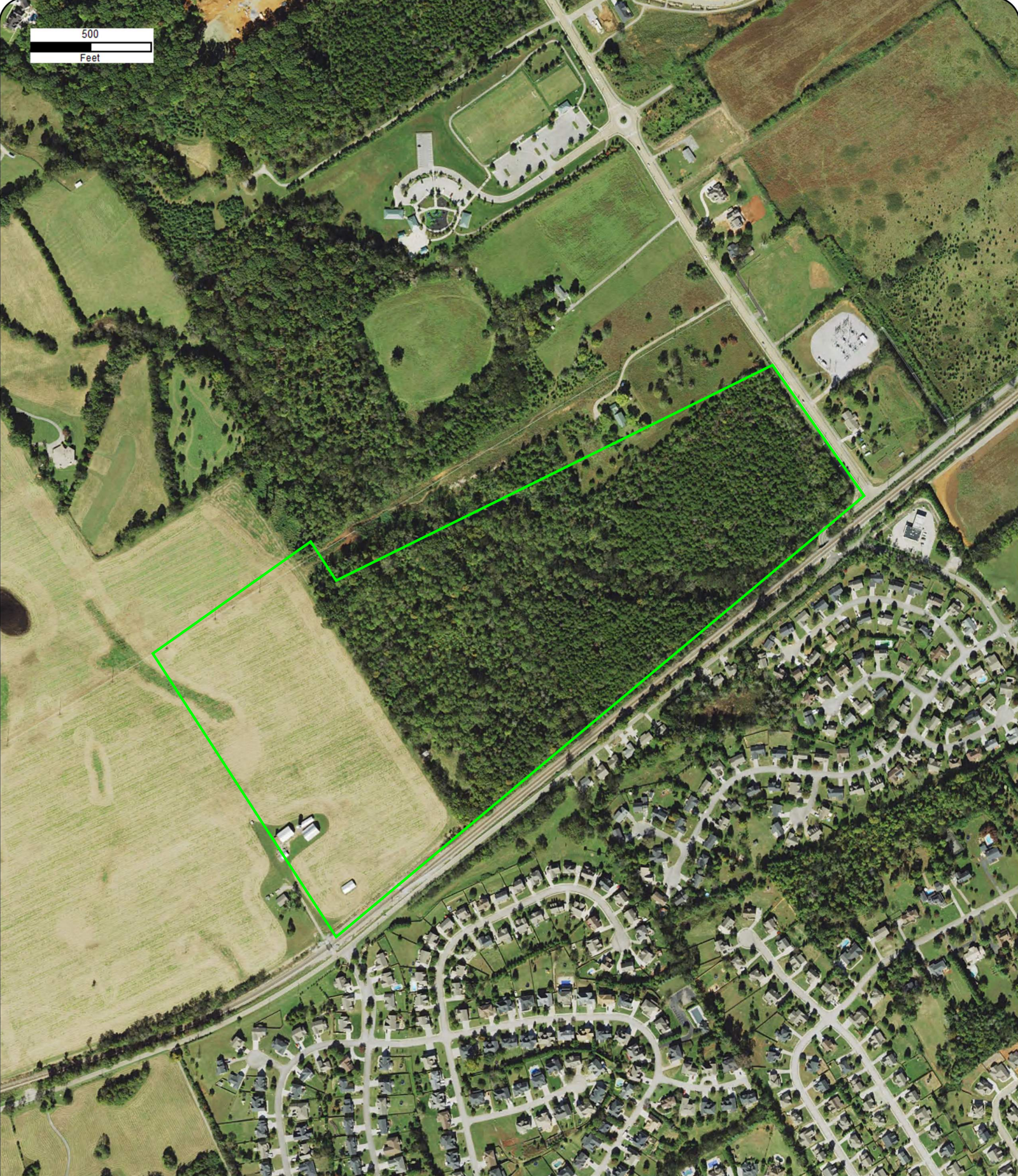
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Approx Center: -84.18874413,35.83983773

Order No: 23062800078



500
Feet



Year: 2018
Source: USDA
Scale: 1" = 500'
Comment:

Address: McFee Road, Knoxville, TN
Approx Center: -84.18874413,35.83983773

Order No: 23062800078



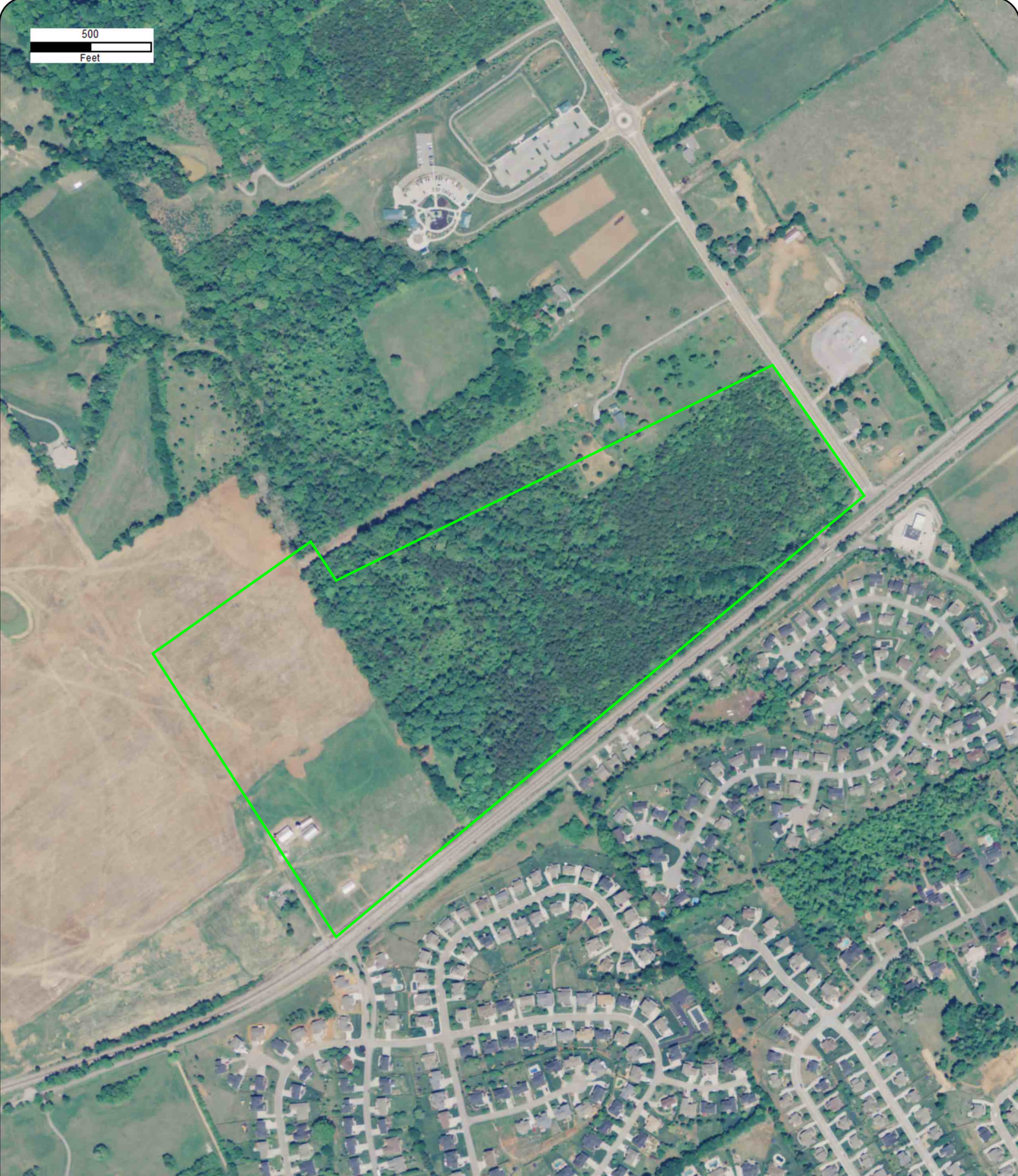
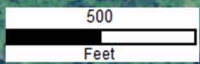


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Order No: 23062800078





Year: 2014
Source: USDA
Scale: 1" = 500'
Comment:

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078



500
Feet



Year: 2012
Source: USDA
Scale: 1" = 500'
Comment:

Address: McFee Road, Knoxville, TN
Approx Center: -84.18874413,35.83983773

Order No: 23062800078



500
Feet

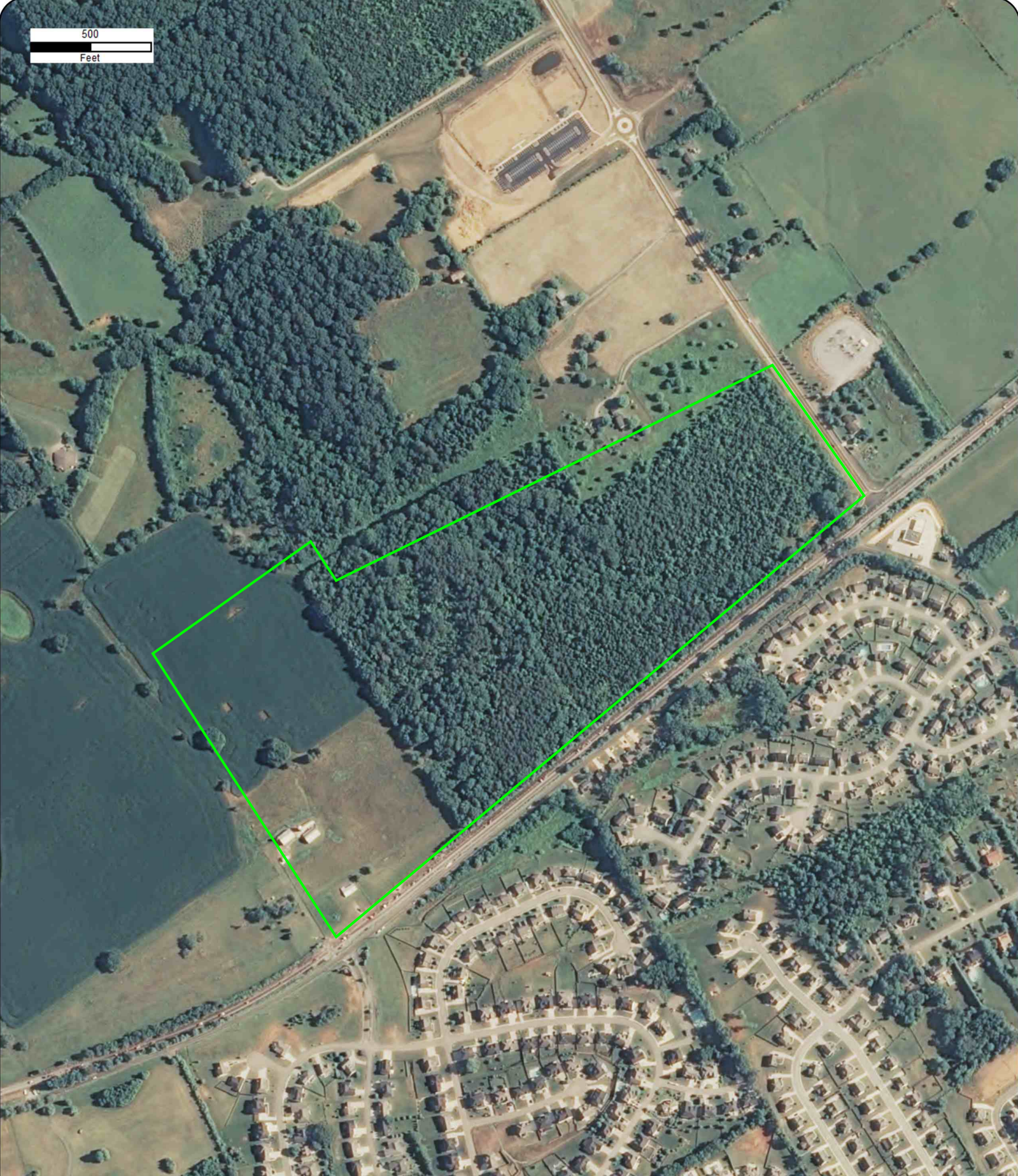
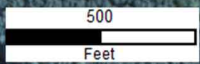


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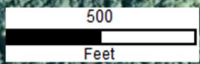


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Order No: 23062800078





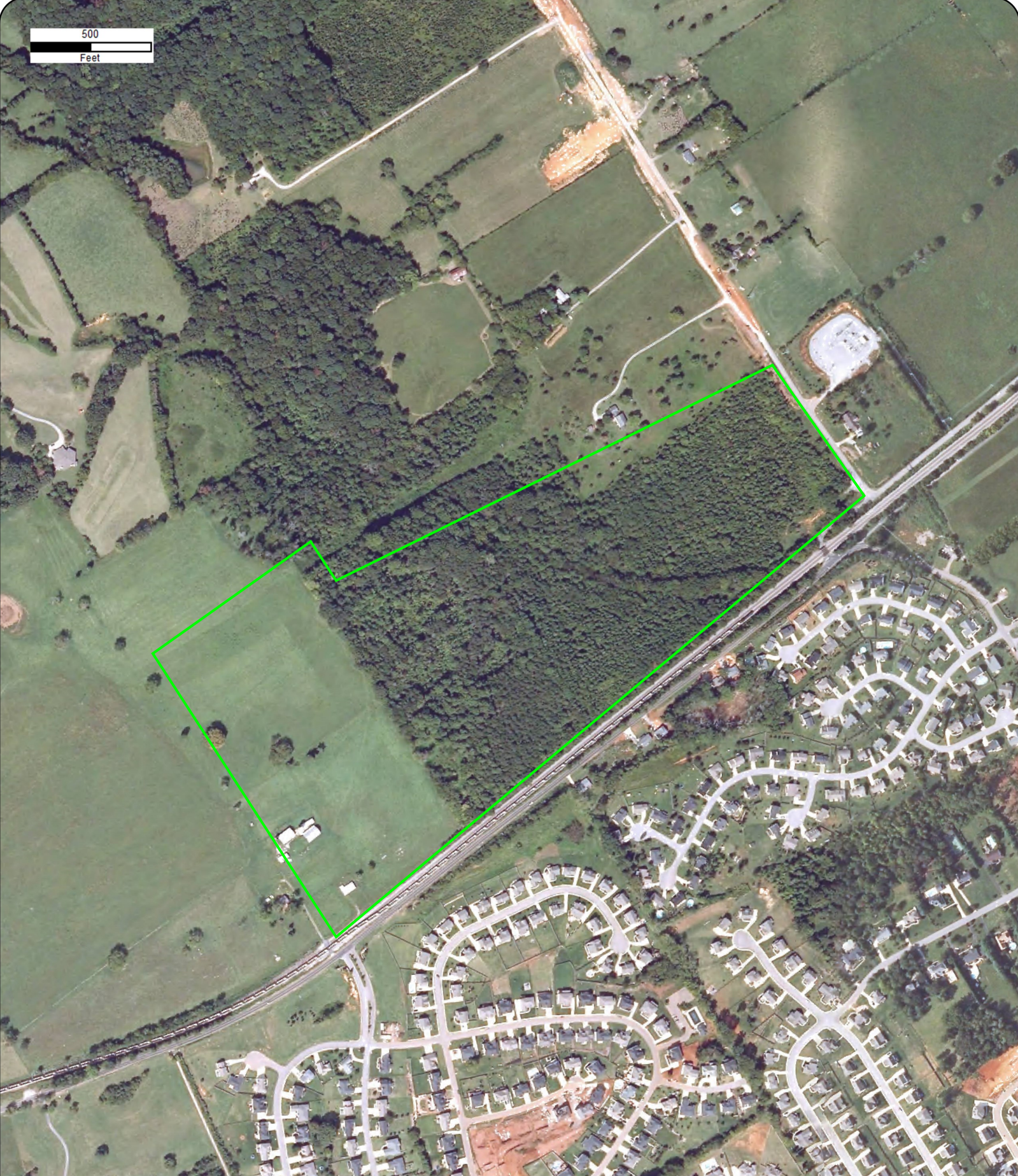
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Comment:

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078



500
Feet



Year: 2006
Source: USDA
Scale: 1" = 500'
Comment:

Address: McFee Road, Knoxville, TN
Approx Center: -84.18874413,35.83983773

Order No: 23062800078



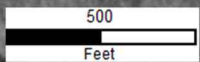


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Scale: 1" = 500'
Comment: Best Copy Available

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078





Year: 1992
Source: USGS
Scale: 1" = 500'
Comment:

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078



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Feet

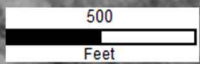


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Order No: 23062800078



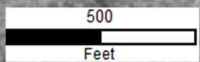


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Approx Center: -84.18874413,35.83983773

Order No: 23062800078





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Source: USGS
Scale: 1" = 500'
Comment: Best Copy Available

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078





Order No: 23062800078



500
Feet



Year: 1959
Source: ASCS
Scale: 1" = 500'
Comment:

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078



500
Feet

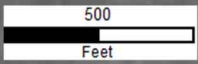


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Source: ASCS
Scale: 1" = 500'
Comment:

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Approx Center: -84.18874413,35.83983773

Order No: 23062800078





Year: 1939
Source: TVA
Scale: 1" = 500'
Comment:

Address: McFee Road, Knoxville, TN
Approx Center: -84.18874413,35.83983773

Order No: 23062800078





ERIS 



CITY DIRECTORY

Project Property: *McFee Road Property
McFee Road
Knoxville, TN*

Project No: *23430267*

Requested By: *S&ME, Inc.*

Order No: *23062800078*

Date Completed: *July 03, 2023*

Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

July 03, 2023
RE: CITY DIRECTORY RESEARCH
McFee Road
Knoxville,TN

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:

12800-13000 of Boyd Station Rd
900-1100 of McFee Rd

Search Notes:

Search Results Summary

Date	Source	Comment
2022	DIGITAL BUSINESS DIRECTORY	
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2008	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
2000	DIGITAL BUSINESS DIRECTORY	
1995	CITY PUBLISHING CO	
1990	CITY PUBLISHING CO	
1989	CITY DIRECTORY CO	
1984	CITY DIRECTORY CO	
1979	CITY DIRECTORY CO	
1974	CITY DIRECTORY CO	
1969	CITY DIRECTORY CO	
1965	CITY DIRECTORY CO	
1960	CITY DIRECTORY CO	
1951	CITY DIRECTORY CO	
1943	CITY DIRECTORY CO	
1938	CITY DIRECTORY CO	
1933	CITY DIRECTORY CO	
1928	CITY DIRECTORY CO	
1923	CITY DIRECTORY CO	

Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

12908JOHN SCHOOLCRAFT...RESIDENTIAL

12912JOHN SAULS...RESIDENTIAL

12916CORY WHITE...RESIDENTIAL

12920JEREMY SEAL...RESIDENTIAL

931KENNETH KINCAID...RESIDENTIAL

1013DAVID FOUCHE...RESIDENTIAL

1024ROBERT GIBSON...RESIDENTIAL

12908JOHN SCHOOLCRAFT...RESIDENTIAL

12912JOEY SAULS...RESIDENTIAL

12916CORY WHITE...RESIDENTIAL

12920JEREMY SEAL...RESIDENTIAL

931GENE KINCAID...RESIDENTIAL

1013DAVID FOUCHE...RESIDENTIAL

1024LISA GIBSON...RESIDENTIAL

12860

JILL ABSTON...RESIDENTIAL

12908

JOHN SCHOOLCRAFT...RESIDENTIAL

12912

JOEY SAULS...RESIDENTIAL

12916

CORY WHITE...RESIDENTIAL

931

GENE KINCAID...RESIDENTIAL

931

KENNETH KINCAID...RESIDENTIAL

931

VELMA KINCAID...RESIDENTIAL

1024

LISA GIBSON...RESIDENTIAL

1024

ROBERT GIBSON...RESIDENTIAL

2012 **BOYD STATION RD**

SOURCE: DIGITAL BUSINESS DIRECTORY

12864	RICHARD BAUGHMAN ...RESIDENTIAL
12904	PAMELA ANDERSON ...RESIDENTIAL
12916	CORY WHITE ...RESIDENTIAL
12920	CORY CROWELL ...RESIDENTIAL
12920	SHERRY CROWELL ...RESIDENTIAL

2012 **MC FEE RD**

SOURCE: DIGITAL BUSINESS DIRECTORY

901	SUSAN DIMMICK ...RESIDENTIAL
931	GENE KINCAID ...RESIDENTIAL
931	VELMA KINCAID ...RESIDENTIAL
1013	ELEANOR GIBSON ...RESIDENTIAL
1013	OSCAR GIBSON ...RESIDENTIAL
1013	TED GIBSON ...RESIDENTIAL
1024	LISA GIBSON ...RESIDENTIAL
1024	ROBERT GIBSON ...RESIDENTIAL
1024	ROBERT GIBSON TRUCKING ...GENERAL FREIGHT TRUCKING, LOCAL

NO LISTING FOUND

901	RALPH & SUSAN DIMMICK... RESIDENTIAL
931	GENE KINCAID... RESIDENTIAL
1013	O T GIBSON... RESIDENTIAL
1024	ROBERT D GIBSON... RESIDENTIAL
1024	ROBERT GIBSON TRUCKING... LOCAL TRUCKING OPERATOR

NO LISTING FOUND

901

RALPH W DIMMICK...RESIDENTIAL

931

GENE KINCAID...RESIDENTIAL

1006

VERNON LINGINFELTER...RESIDENTIAL

1013

O T GIBSON...RESIDENTIAL

1024

ROBERT GIBSON TRUCKING...ANIMAL AND FARM PRODUCT TRANSPORTATION SERVICES

NO LISTING FOUND

901

RALPH W DIMMICK...RESIDENTIAL

931

GENE KINCAID...RESIDENTIAL

1006

VERNON LINGINFELTER...RESIDENTIAL

1013

O T GIBSON...RESIDENTIAL

1024

ROBERT GIBSON TRUCKING...ANIMAL AND FARM PRODUCT TRANSPORTATION SERVICES

BOYD STATION RD

(R R 83) 37922

CONCORD-FARRAGUT

From Virtue Rd sw to Loudon County Line

12405	Butler Charles	966-8244	80
12409	Atchley D O	966-8678	87
12417	Rice Johnny	966-0993	88
12421	Huskey Charles	966-8827	79
12425	Asher J L	966-1834	87
12428	Bryant E H	966-1738	85
12429	Anderson Michael L	966-2850	92
12429	Walker Johnny A	875-1344	92
12432	Smith Rufus	966-0076	94
12433	Scott Robbie	671-2656	93
12500	Boyd Larry W	966-6559	90
12512	Burkart George W	966-0367	90
12520	Arrowsmith H W	966-1617	92
12520	Arrowsmith Jane	675-0627	92
12528	Purdy Robert L	675-1128	90
12540	Vincent Jacques	966-7784	89
12544	Beeler Thomas C	966-7016	88
12548	Eisenbach Richard J	966-2717	93
12611	Millsaps Ralph	675-6207	91
13110	Peters John M	966-8565	81
13112	Taylor M	966-2205	88
13116	Rhodes Bobby	671-0684	94
13121	Tallent Susan	675-4312	91

0-BUS

23-RES

0-NEW

MC FEE RD (R R 83) 37922

Contd

CONCORD-FARRAGUT

513	Johnson Michael		
513	McFee Alfred F	+ 875-2788	81
600	McFee Tom R	966-5948	81
612	Scarborough D	966-5942	81
612	Scarborough D	675-2198	94
616	Bandy C Ward	966-4329	94
624	Vaughn Wayne M	966-3782	92
704	Ivey Bob L	966-8594	79
705	Jones Fred Wm	966-2455	82
706	Ivey B Mitch	966-9338	79
719	Tucker Bob Rev	675-1367	90
810	Waller L M	966-9987	94
901	Dimmick Ralph W	966-2316	80
931	Kincaid Gene	966-9517	84
1006	Linginfelter Vernon	966-9370	93
1013	Gibson O T	966-9300	..
		966-6277	78
	0-BUS	41-RES	3-NEW

BOYD STATION RD NW (R R 36)

37922 Contd

CONCORD-FARRAGUT

12425	Asher J L	966-1834	87
12428	Bryant E H	966-1738	85
12433	Hickey Hoyle E	966-4238	80
12500	Boyd Larry W	966-6559	90
12512	Burkart George W	966-0367	90
12516	Nuyt Gary M	675-6898	89
12520	Beeler Thomas C	966-7016	88
12520	Connelly Rick	966-5813	90
12524	Turnell Terry	+ 675-7790	90
12528	Purdy Robert L	+ 675-1128	90
12532	Rosenbloom I L Jr	966-2887	88
12536	Fore Richard D	+ 675-5186	90
12540	Vincent Jacques	966-7784	89
12548	Cox Gary	+ 966-7978	90
12611	Climer Rex	966-8540	85

(R R 52) ZIP CODE 37922

13100	Emge Michael	966-3215	86
13112	Taylor M	966-2205	88
13116	Hall L S	966-4038	86
--	Peters John M	966-8565	81

1-BUS 23-RES 4-NEW

MC FEE RD NW (R R 36)

37922 Contd

CONCORD-FARRAGUT

513	Reese Johnny	966-9974	85
600	McFee Tom R	966-5942	83
612	Hine Lucy	966-4577	89
624	Vaughn Wayne M	966-8594	79

(R R 52) ZIP CODE 37922

704	Ivey Bob L	966-2455	82
705	Jones Fred Wm	966-9338	79
706	Ivey B Mitch	+ 675-1367	90
717	Blankenship D V	966-9849	84
719	Justice Mike Rev	966-9987	88
802	Haynes Ron	+ 675-5369	90
810	Waller L M	966-2316	80
901	Dimmick Ralph W	966-9517	84
931	Seal Betty	966-2023	89
--	Gibson O T	966-6277	76
--	Kelley Hayle P	966-9892	77
--	Seal Bill	966-9370	--
--	Sharp L E	966-9374	87

2-BUS 43-RES 5-NEW

STREET NOT LISTED

659

MC FEE RD (STOOKSBURY
ESTATES)-FROM OLD STAGE RD
SOUTH TO BOYD STA RD 1 SOUTH
OF KINGSTON PIKE

ZIP CODE 37922

106★Linginfelter Vernon © 966-9300
200 Pro-Tex Pest Control Serv 966-5080
Guaschino Brian © 966-5080
204 Mc Cord Jon E © 966-1546
208 Vaughan Dottie A Ms © 966-1518
212 Jones Wm C © 966-6806
217 Guettner Patk © 966-6493
221 Oravitz Jas W © 966-9868
224 Circuit Technology 966-7222
225 Lincoln Jas F © 966-6682
228 Geren Lawrence E © 966-2428
229 Akers Art E © 966-3749
231 Fielder David E 966-8671
233★Kennedy John
300 Phillips H S III © 966-9891
301 No Return
304 Walden E E 966-7750
305 Rosen Geo E © 966-6637
308 Hulse C Keith 966-6408
313 Mc Bay Eddie H © 966-7725
320 Pierce Kelsie L ©
321 Johnson Walter B © 966-4830
329★Markll Robt ©
330 Smith Wm Dalton © 966-6253
340 Floyd J Lewis © 966-6264

STREET NOT LISTED

RANGE NOT LISTED

STREET NOT LISTED

RANGE NOT LISTED

1974

BOYD STATION RD

SOURCE: CITY DIRECTORY CO

STREET NOT LISTED

1974

MC FEE RD

SOURCE: CITY DIRECTORY CO

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

1960

BOYD STATION RD

SOURCE: CITY DIRECTORY CO

STREET NOT LISTED

1960

MC FEE RD

SOURCE: CITY DIRECTORY CO

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

STREET NOT LISTED

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STREET NOT LISTED



FIRE INSURANCE MAPS

Project Property:	McFee Road Property McFee Road Knoxville TN
Project No:	23430267
Requested By:	S&ME, Inc.
Order No:	23062800078
Date Completed:	June 28, 2023

Please note that no information was found for your site or adjacent properties.

Appendix IV – Vapor Encroachment Screening

Appendix II - Tier 1 Vapor Encroachment Screening Report

Introduction

S&ME has conducted a Phase I Environmental Site Assessment (ESA) for the subject property located at McFee Road, Farragut, Tennessee. The Phase I ESA was performed in accordance with ASTM International (ASTM) E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM 2021), which requires the consideration of confirmed or potential releases of hazardous substances and/or petroleum products that may pose a threat of contamination to the subject properties, including an evaluation of the potential migration of vapors. The evaluation of potential migration of contaminant vapors for this Phase I ESA, herein referred to as a Tier 1 Vapor Encroachment Screening (VES), was accomplished utilizing procedures described as Tier 1 Screening in ASTM E2600-15, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions* (ASTM 2015) and, if applicable, using the refined search distances presented by Buonicore (2009), as described below.

Purpose

The purpose of this VES is to assist in evaluating the existence of Vapor Encroachment Conditions (VECs) at the subject properties. The VES was performed to identify releases or potential releases of chemicals of concern on or near the subject properties and to evaluate the likelihood of vapors migrating from the releases via the subsurface to the subject properties. The presence or likely presence of vapors containing chemicals of concern in the subsurface of the subject properties constitutes a VEC and may also constitute a *recognized environmental condition* (REC), as defined by ASTM E1527-13.

Evaluation Process

The following information was reviewed during the Tier 1 VES to identify releases or potential releases of chemicals of concern on or near the subject properties and to evaluate the likelihood of vapors migrating from the releases via the subsurface to the subject properties:

- The type of contaminant (petroleum product vs. non-petroleum product known or suspected to have been stored on-site or at identified off-site sources;
- The distance between identified off-site sources and the nearest subject properties' boundary;
- Information of known or assumed groundwater flow directions(s) with respect to the subject properties;
- The potential for preferential pathways or barriers to exist between the identified off-site sources and the subject properties' boundary; and,
- Physical setting and other information sources.

The ASTM E 2600-15 Tier 1 Screening process recommends initial screening distances to estimate contaminant plume length and width with no empirical plume data. In cases where the direction of groundwater flow is known or can be reasonably assumed, those distances were refined under a conservative scenario using calculations presented by Buonicore (2009). The resulting vapor screening distances (*i.e.*, distances from a potential off-site contaminant source to the nearest boundary of the subject properties) are presented in Table 1 with respect to the type of contaminant and the known or presumed direction of groundwater flow.

Table 1 - VES Area of Concern Screening Distances

Contaminant Type	Source Location with respect to the nearest Subject Property boundary and considering known or assumed groundwater flow direction ⁽³⁾		
	Up-gradient	Cross-gradient	Down-gradient
Non-petroleum COC ⁽¹⁾ (see ASTM E 2600-15, Appendix X6)	1,760 feet (1/3 rd mile)	365 feet	100 feet
Petroleum COC NAPL ⁽²⁾	528 feet (1/10 th mile)	165 feet	100 feet
Petroleum COC Dissolved	528 feet (1/10 th mile)	95 feet	30 feet

Notes: (1) COC – Chemicals of Concern

(2) NAPL – Non Aqueous Phase Liquid (*i.e.*, free product)

(3) Groundwater Flow Direction – if not known or assumed, use search distance of 1,760 feet for up-gradient, cross-gradient, and down-gradient

Table 2 - Identified Potential Contaminant Sources

Contaminant Source	Distance, direction, and groundwater flow direction (with respect to nearest subject property's boundary)	Contaminant Type and Screening Distance	Vapor Encroachment Condition Determination
Ians Market 67 1116 Harvey Road	TDEC DUST Facility ID # 2-471474; consists of one 4,000-gallon diesel UST, one 4,000-gallon gasoline UST, one 8,000-gallon gasoline UST and one 12,000-gallon gasoline UST, all currently in use.	Petroleum COC (30 Feet)	<u>VEC does not exist</u>

Results

Based on our review of information collected as part of the Phase I ESA process, the subject property was not identified as a potential vapor contaminant source. Potential off-site contaminant sources were evaluated with respect to the process, screening distances, type of contaminant, and known or assumed groundwater flow direction. No off-site properties were identified as a potential vapor contaminant source.

Conclusion

Based on the processes described herein, the following conclusions were drawn from this VES:

- A VEC does not exist off-site and adjacent to the subject property.
- No on-site facilities were identified as potential vapor contaminant sources.

References

- American Society for Testing and Materials. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-13, Philadelphia, PA.
- American Society for Testing and Materials. 2015. Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions E 2600-15, Philadelphia, PA.
- Buonicore, A.J. 2009. A Smaller Intrusion. pp. 26-31, May 2009.

Signature(s) of Environmental Professional(s)



Eric M. Solt, PG
Senior Reviewer

Appendix V – Site Photographs and Site Reconnaissance Checklist



Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

1

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of southwest corner of subject property, facing northwest.



Photograph ID:

2

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of subject property from southwest corner, facing northeast





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

3

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of structures on subject property. from southwest corner facing north.



Photograph ID:

4

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of old structures on subject property, west side, facing northeast.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
5

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of structures on subject property. from southwest corner facing northeast.



Photograph ID:
6

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

Interior view of white-brick building, from south corner facing north.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

7

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Interior view of white-brick building, from south corner facing northeast wall.



Photograph ID:

8

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Floor drain on northeast side of building, next to front door.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

9

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Cut out in floor next to
southeast wall of building.



Photograph ID:

10

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of staining
throughout building, on
northwest side of building,
facing northwest





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
11

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

Interior view of white-brick building, from northeast corner facing west corner.



Photograph ID:
12

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of brick silo located on the west side of the subject property, facing north.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
13

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

Lumber piles to the north of mason-brick building, facing south.



Photograph ID:
14

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

Representative view of subject property, from west side facing east.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

15

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of well shed on western side of subject property, facing north.



Photograph ID:

16

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Interior view of well shed with pressurized well tank in northwest corner, facing northwest.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

17

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Interior view of east side of well shed, facing northeast.



Photograph ID:

18

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Electric fence ground rod in front of well shed, facing north.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
19

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of silo on west portion of
subject property, facing west.



Photograph ID:
20

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of brick silo with pipe
extending into the ground, on
west side of property facing
east.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

21

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of farm storage area on western side of subject property, facing east.



Photograph ID:

22

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of materials in farm storage area, on western side of subject property facing west.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
23

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of storage area beside of silo, on western side of subject property, facing southwest.



Photograph ID:
24

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

AST on western side of subject property near metal silo, facing north.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

25

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of subject property behind metal silo, facing southeast towards railroad.



Photograph ID:

26

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of barn area, western side of subject property, facing west.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

27

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of farm storage area, western side of subject property, facing southeast.



Photograph ID:

28

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of subject property, from western side, facing southeast.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

29

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of old building on subject property, western side, facing north.



Photograph ID:

30

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of side of structure on western portion of subject property, facing south.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

31

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of structure on western side of subject property, north side of structure, facing east.



Photograph ID:

32

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Telephone wire box and cut out on side of structure, facing south.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

33

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Interior view of structure on subject property, entrance area on south side of structure.



Photograph ID:

34

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Interior view of west side of structure on subject property.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

35

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of subject property, on south border of subject property, facing northeast.



Photograph ID:

36

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of subject property from middle of subject property, facing west.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

37

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of middle of subject property, facing north.



Photograph ID:

38

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of fallen structure in the middle of the subject property, facing east.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
39

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of fallen structure in the middle of the subject property, facing south.



Photograph ID:
40

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

View of fallen structure in the middle of the subject property, facing north.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

41

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of trash along tree line in the middle of the subject property, near south border.



Photograph ID:

42

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of tires in tree line in the middle of subject property, near southern border.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:
43

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

Representative view of steel drum in tree line near southern border of subject property.



Photograph ID:
44

Photograph Tag:

Survey Date:
07-JUL-23

Comments:

Representative view subject property, near north border of subject property facing west.





Project Name: McFee Road Property
Site Location: McFee Road, Knoxville, TN

Project No: 23430267

Photograph ID:

45

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

Representative view of subject property, middle of property near northern border, facing south.



Photograph ID:

46

Photograph Tag:

Survey Date:

07-JUL-23

Comments:

View of adjoining property to the northeast, facing northwest.



SITE RECONNAISSANCE CHECKLIST

Phase I Environmental Site Assessment



Site and Project Information

Site Name: [McFee Road](#)

Job Number: [23430267](#)

Site Address: [McFee Road](#)

Date: [2023-07-07](#)

Site Reconnaissance performed by: [Alexis Wiltfong](#)

Accompanied by:

Representing whom:

General Property Description:

Structures (# and use of buildings, type of construction, # of stories, approx. age, current source of heating fuel, apparent age of current heating system, evidence of former heating system, presence of floor drains, sumps, elevators, chemical storage, current/past septic systems):

[Structures on the subject property consist of: • Two silos, • one garage, • two open-sided pole barns, • one grain trough with a roof, • one well house, • one dilapidated hay barn, • and one single-story abandoned residential structure. The residential and farm buildings appear to be at least 50-years-old.](#)

Site Manager (name, title, affiliation, period on-site): [None.](#)

Occupants (name, title, affiliation, period of occupancy): [Unoccupied.](#)

Pavements (type, general condition): [Gravel and pavement in fair condition.](#)

Limitations (locked doors, unsafe conditions, ground cover, low light, excluded areas): [The single-story residential structure was overgrown and locked. The eastern portion of the subject property was densely vegetated for observation.](#)

Inaccessible areas (location, size, why inaccessible): [Portions of the eastern portion of the subject property were in accessible due to access and dense vegetation.](#)

Topography: [The subject property is generally level, with slight slopes downward on the northern portion of the western and eastern sides of the property.](#)

Soil Type: [Dewey silt loam, 6 to 15 percent slopes \(DcC2\) Dewey silt loam, 15 to 25 percent slopes \(DeD2\) Dewey loam, 25 to 40 percent slopes \(DeE2\) Emory silt loam, 2 to 5 percent slopes \(EmB\) Etowah-Minvale complex, 2 to 5 percent slopes \(EvB\)](#)

SITE RECONNAISSANCE CHECKLIST
Phase I Environmental Site Assessment



Rock Outcrops: [None observed.](#)

Apparent direction of G/W flow: [Southeast towards lake.](#)

On-Site Observations:

SITE FEATURES	OBSERVED (Y/N)	DESCRIPTION
USTs	No	
ASTs	Yes	One empty, single-walled AST was observed on the subject property near the silos (photo 24). The AST appeared to be in poor condition. No visible staining or other evidence of a release was observed.
Drums	Yes	Three rusted 55-gallon drums were observed on the western central portion of the subject property near the dilapidated hay barn (photo 43).
Staining/Spills	No	
Solid Waste Storage / Disposal	Yes	trash and debris were observed on the southern portion of the subject property near Boyd Station Road (photo 41).
Unusual or Noxious Odors	No	Three rusted 55-gallon drums were observed on the western central portion of the subject property near the dilapidated hay barn (photo 43).
Transformers/Other PCB Equipment	No	
Drums, Barrels and/or Containers > 5 Gallons	Yes	Three rusted 55-gallon drums were observed on the western central portion of the subject property near the dilapidated hay barn (photo 43).
Stressed vegetation	No	
Discolored or Disturbed Soil	No	
Mounding or Piles of Soil	No	
Evidence of Land Filling	No	
Depressions	No	
Pits, Ponds, or Lagoons	No	

SITE RECONNAISSANCE CHECKLIST

Phase I Environmental Site Assessment



Railroad Spurs	No	
Monitor Wells	No	
Municipal Water/Sewer	No	
Water Supply Wells/Septic Tanks	Yes	One well shed was located on the western portion of the subject property near the silo (photos 15-18). A suspect septic system was reported by the property owner as being located near the homeplace on the subject property. During the time of the site reconnaissance, S&ME did not observe a septic tank system.
Other	No	

Are MSDS's available for stored chemicals: N/A

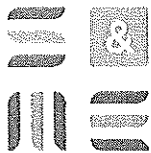
Non-hazardous waste disposal by: Vacant property.

Hazardous waste disposal by: Vacant property, N/A.

Off-Site Observations:

Property to the north is at a higher elevation than subject property	Describe observations: Residential homes, Red Poppy Drive, and wooded land.
Property to the east is at a equal elevation than subject property	Describe observations: McFee Road, a power substation, a residence, with residential construction beyond.
Property to the south is at a lower elevation than subject property	Describe observations: Boyd Station Road with residential homes beyond.
Property to the west is at a equal elevation than subject property	Describe observations: Agricultural land with residence, barn, and silos.

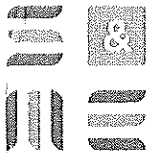
Appendix VI – User Questionnaire and Interview Documentation



PHASE I ENVIRONMENTAL SITE ASSESSMENT USER QUESTIONNAIRE

In order to qualify for Landowner Liability Protections (LLPs), ASTM E1527-21 specifies that the ESA User must provide the following information, if available, to the Environmental Professional. Failure to provide this information could make the ESA incomplete and the User unable to qualify for LLPs.

1. As the User of this Phase I ESA, do you have knowledge of any environmental clean-up liens against the property that are filed or recorded under federal, tribal, state, or local laws?
No
1. As the User of this Phase I ESA, do you have knowledge of any Activity and Use Limitations (AUL's) such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, state, or local laws?
No
2. As the User of this Phase I ESA, do you have any specialized knowledge or experience related to the subject property or nearby properties?
NO
3. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If not, is the lower purchase price attributable to known or suspected contamination?
Yes
4. As the User of this Phase I ESA, do you have knowledge of information about the property that would be helpful in identifying conditions indicative of contaminant releases, such as: a) past use of the property; b) presence of specific chemicals (past or present); c) spills or chemical releases at the property; or d) environmental cleanups that have taken place at the property?
No
5. As the User of this Phase I ESA and based on your knowledge and experience of the property, are there any obvious indicators that point to the presence or likely presence of contamination on the property?
No



User Questionnaire (continued)

In addition, certain other information should be provided, although not necessarily to qualify for *LLPs*, including contact information for past and current property owners, operators, and key occupants; the reason for performing this ESA; and documentation showing the property address, location, and boundaries.

6. What is the purpose of the Phase I ESA (i.e., why is it needed)?

Contractual due diligence for a sale

7. Is the subject property on city utilities? If so, how long has the subject property been on the city system?

☒ No ☐ Yes (please explain below)

8. Is there or was there previously a septic system present at the subject property?

☐ No ☒ Yes (please explain below) Possible septic for a homeplace

9. If there are buildings on the subject property, how are the buildings heated?

☒ No ☐ Yes (please explain below)

10. Have the buildings always been heated this way? If not, what was the prior heat source(s)?

☐ Yes ☐ No (please explain below)

11. If available, **provide contact information for past and current property owners, operators, and key occupants.**

12. If not previously presented to S&ME, please provide documentation showing the property address, location and boundaries.

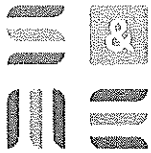
Printed Name

Tim Scott

Signature

Date

7/13/23



USER FURNISHED INFORMATION

The following is a list of documents and information that could be useful to S&ME, Inc. in preparing your Phase I Environmental Site Assessment (ESA). Please check the appropriate boxes below, sign, and fax or mail this form along with the signed Agreement for Services and completed User Questionnaire. We will contact you regarding review of any available materials.

Yes No

- | | | |
|-------------------------------------|-------------------------------------|--|
| ☐ | ☒ | 1. Environmental site assessment reports |
| ☐ | ☒ | 2. Environmental audit reports |
| ☐ | ☒ | 3. Environmental permits (i.e. solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits) |
| ☐ | ☒ | 4. Registrations for underground and above-ground storage tanks |
| ☐ | ☒ | 5. Material safety data sheets (MSDS) |
| ☐ | ☒ | 6. Community right-to-know plan |
| ☐ | ☒ | 7. Safety plans; preparedness and prevention plans; spill prevention, countermeasure and control plans, etc. |
| ☐ | ☒ | 8. Reports regarding hydrologic conditions on the property or surrounding area |
| ☐ | ☒ | 9. Reports of any past or current environmental remediation on-site or on adjoining properties |
| ☐ | ☒ | 10. Notices or other correspondence from any government agency relating to past or existing environmental liens encumbering the property |
| ☐ | ☒ | 11. Hazardous waste generator notices or reports |
| ☒ | ☐ | 12. Geotechnical studies |
| ☐ | ☒ | 13. Report of earthwork or land filling activities on-site |
| ☐ | ☒ | 14. Information concerning any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum Products |
| ☐ | ☒ | 15. Notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products |
| ☐ | ☒ | 16. Disclosure of sumps, pits, drainage systems (i.e. the existence of and location) |
| ☐ | ☒ | 17. Building plans (architectural, utility, structural) |
| ☐ | ☒ | 18. Description of current site operations, including layout drawings or sketches |
| ☐ | ☒ | 19. Title report/chain-of-title |
| ☐ | ☒ | 20. Tax assessor records (previous owner and occupants) |
| ☐ | ☒ | 21. Purchase price analysis (if lower than comparables) |
| ☐ | ☒ | 22. Current and historical photographs of the site |
| ☐ | ☒ | 23. Current and historical topographic maps of the site |

Printed Name

Tim Scott

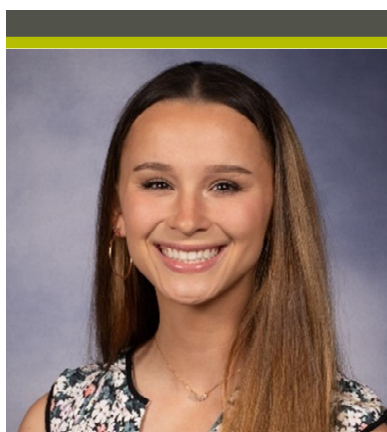
Signature

Date

7/13/23

**Appendix VII – User/Owner Provided Information and File Review
Documents: None**

Appendix VIII – Qualifications of Environmental Professional and Staff



PROJECT ROLE

Staff Scientist II

LOCATION

Knoxville, TN

EDUCATION

- B.S. Wildlife Ecology and Management, Auburn University, 2020
- M.B.A. Professional Master of Business Administration, University of Tennessee, 2022

YEARS OF EXPERIENCE

Joined S&ME in 2022 with 2 years' experience.

REGISTRATIONS AND CERTIFICATIONS

- 8-HR OSHA HAZWOPER Refresher
- Environmental Due Diligence Phase I Site Assessor
- TN Erosion Prevention and Sediment Control Level 1, TDEC, No. 145007
- Certified Prescribed Burn Manager, Alabama Forestry Commission, No. 2460

Alexis Wiltfong, MBA

Staff Scientist II

Ms. Wiltfong has 2 years' experience with Phase I & II Environmental Site Assessments (ESAs), wetland delineations, hazardous materials assessments, ArcGIS, various media sampling, and quality control of technical documents.

Key Projects and Assignments

Core Spaces

Knoxville, TN | September 2022 – Present

Conducts Phase I ESAs and hazardous materials evaluations.

Verizon

Tennessee | October 2022 – Present

Conducts SOW No. 14 site assessments and hazardous materials evaluations.

Sysco

Knoxville, Tennessee | October 2022 – Present

Conducts NPDES stormwater sampling and visual assessments.

Norfolk Southern

Asheville, NC | November 2020 – November 2021

Conducted quarterly soil sampling efforts and oversight of drilling subcontractors.*

SiREM Lab U.S.

Knoxville, Tennessee | December 2020 – March 2021

Aided in the testing of human saliva for early detection of the novel COVID-19 virus through means of RT-qPCR.*

Paducah Gaseous Diffusion Plant Superfund Site

Paducah, Kentucky | January 2021 – October 2021

Supported multiple technical working groups including the Risk Assessment Working Group (RAWG) and the Groundwater Modeling Working Group (GMWG); and updated project deliverables for final reports.*

Dominion Energy

Virginia | March 2021 – October 2021

Conducted numerous wetland delineations and T&E assessments.*

Amazon

Alcoa, Tennessee | June 2021

Assisted with Phase II scope field actions.*

**Experience with previous employer.*



PROJECT ROLE

Senior Geologist/Senior Reviewer

LOCATION

Knoxville, TN

EDUCATION

- BS, Geology, Tennessee Technological University, 1987

YEARS OF EXPERIENCE

Joined S&ME in 2001 with 13 years of experience

REGISTRATIONS

- PG, TN #1802, 1991
- PG, KY #881, 1993
- PG, NC #1717
- PG, GA #1572, 2000

PROFESSIONAL MEMBERSHIPS

- National Groundwater Association
- Geological Society of America

Eric M. Solt, PG

Senior Geologist/Senior Reviewer

Mr. Solt is a Senior Geologist who manages the Environmental Services Department at S&ME's Knoxville Branch. With 27 years of environmental experience, his areas of proficiency include: geologic investigations; regulatory compliance; Phase I and Phase II Environmental Site Assessments (ESA); UST/AST closure; petroleum and organic solvent-related site assessment design and oversight; solid and hazardous waste evaluation, permitting and management; soil and groundwater remediation system design, remediation construction management, and operation and maintenance; asbestos and lead-based paint surveys; abatement project design and abatement management; indoor air quality and mold assessment and remediation; and preparing health and safety plans. Mr. Solt is also a certified S&ME Senior Reviewer.

KEY PROJECTS AND ASSIGNMENTS

Verizon Wireless

Various Locations | Tennessee, Virginia, Arkansas, Mississippi, Georgia

Project Senior Reviewer for Phase I ESAs for both raw and co-location sites. Has provided senior review for Phase I ESAs and ESA updates for more than 100 Verizon Wireless sites through multiple S&ME branches. Also works closely with Verizon's environmental legal counsel to incorporate current Verizon-specific requirements regarding report content and format.

Former Paint and Varnish Manufacturer

Hamilton County, Tennessee | 2012-present

Project Manager for the assessment and monitoring of groundwater and soil vapor at a former paint and varnish manufacturing facility located on approximately 30 acres adjacent to the Tennessee River in downtown Chattanooga. After production concluded in the mid-1990s, the property was subdivided and portions of the manufacturing facility were demolished in preparation for site redevelopment. Commercial redevelopment has occurred on several parcels, with redevelopment pending on others. S&ME is currently conducting groundwater monitoring and additional soil vapor assessment and remediation design to assist in facilitating multiple parcel owners with full site redevelopment.

Vapor Intrusion Assessment for Commercial Property

Knoxville, Tennessee | 2012

Project Manager for the assessment of vapor intrusion potential at a former dry-cleaning facility and current commercial property. The assessment techniques included soil gas using passive detectors, sub-slab vapor sampling using post-run tubing and summa canisters, and indoor ambient air sampling. The assessment results were used by the Tennessee Department of Health in determining potential health risks for users and occupants of the building to return the property to active commercial use.

**Experience with previous employer.*



Former Brookside Mills Site

Knoxville Tennessee | 2003, 2012

Project Manager for the subsurface evaluation of a 20-acre historic knitting mill site. All buildings had been demolished by the time of the assessment, therefore the assessment design included integration of Sanborn maps and historic aerial photographs using GIS to aid in determining relevant sample locations. Historic GIS data was integrated with current high resolution aerial photography and sub-meter GPS to identify sample locations in the field. The assessment included surface and soil, plus groundwater and surface water evaluation. Served as Environmental Project Manager for brownfield compliance during redevelopment of the property in 2012.

EPA-funded Brownfields Community-Wide Assessment - Knoxville Downtown North I-275 Corridor

Knoxville, Tennessee | 2011-present

Senior Reviewer for community-wide assessment grant project under EPA Brownfields Program. Project activities completed to date include Project Area Environmental Database Inventory and amendment of Generic Quality Assurance Project Plan.

Municipal Garage and Administrative Offices (Multiple Properties)

Blount County, Tennessee | 2006, 2010 & 2011

Project Manager for Phase I ESAs, Phase II ESAs and facility hazardous materials surveys. The Phase II ESAs included the assessment of soil and groundwater. Hazardous materials surveys included asbestos, lead paint, PCB equipment, mercury-containing devices, and universal wastes.

United States Postal Services Facilities

East Tennessee | 2009 & 2011

Project Manager for facility roof surveys. Services included the collection and description of roofing materials from surface to metal deck, documentation of deck conditions, and analysis of materials for asbestos and foam materials for phenols. Surveys also included infrared imaging to determine potential areas of leaks/water infiltration.

On-Call Industrial Hygiene Services, University of Tennessee

Knoxville, Tennessee | 2010-present

Project Manager/Coordinator and Senior Reviewer for on-call asbestos/industrial hygiene services for the UT Campus Facilities Services Department. Typical services provided include: expedited pre-renovation asbestos surveys, bulk material sampling, analysis and reporting, abatement design specifications, and abatement air monitoring clearance sampling. Also conducting asbestos management inspections and plans for facilities regulated under AHERA.

University of Tennessee Cherokee Farm

Knoxville, Tennessee | 2010

Project Manager for the delineation, material characterization, and disposal permitting of a pre-RCRA municipal/medical waste accumulation area. The waste material was discovered during mass grading for a large redevelopment project,

**Experience with previous employer.*



and the removal was therefore time-critical. The project required the accelerated negotiation of a state-issued disposal permit and the documentation of material removal and disposal for cost confirmation on behalf of the owner. Post-removal soil sampling and regulatory reporting was also conducted to obtain "case closure" from TDEC.

Blount Avenue Improvements

Knoxville, Tennessee | 2010

Senior Project Manager for Phase I ESA, Phase II ESA, disposal permitting and remediation confirmation sampling in support of the reconfiguration of utilities and widening of Blount Avenue in downtown Knoxville. Conducted pre-construction soil probing and sampling along the corridor to provide an estimate of contaminated material for disposal permitting. Coordinated soil segregation and disposal during construction phase.

Hazardous Materials Survey, Naval Reserve Facility

Knoxville, Tennessee | 2010

Project Manager for a pre-renovation hazardous materials survey. Assisted in the collection of material samples for analysis for asbestos and lead-based paint, and collected soil samples for analysis for RCRA metals. Completed an inventory of universal waste materials, PCBs, mercury-containing equipment and moisture intrusion conditions and mold. Provided recommendations for the management and/or disposal of identified hazardous materials.

EPA-funded Brownfields Community-Wide Assessment - Knoxville South Waterfront

Knoxville, Tennessee | 2009-present

Senior Reviewer for community-wide assessment grant project under EPA Brownfields Program. Project activities include preparation of Project Area Environmental Database Inventory, Phase I ESAs, Generic and Site-Specific Quality Assurance Project Plan Preparation, and Phase II ESAs. Phase I assessment projects completed include a 3-acre metal fabricating facility, a 23-acre medical facility compound comprised of 6 individual parcels and a former drycleaner and petroleum bulk plant.

Asbestos Survey, Abatement Design and Abatement Project Monitoring, Carrick Hall University of Tennessee

Knoxville, Tennessee | 2009-2010

Project Manager for pre-renovation asbestos survey for a seven-story residence hall. Asbestos survey information was used to create an asbestos abatement design specification for use by prospective abatement contractors in process and during the abatement project. During abatement, S&ME served as the owner's representative in conducting daily project monitoring, air sampling and on-site analysis, and post-abatement inspections and final clearance sampling.

Former Municipal Waste Disposal Area

Knox County, Tennessee | 2009

Project Manager for a site assessment to determine the approximate areal extent, cover thickness, and residual landfill gas potential for a pre-RCRA municipal

**Experience with previous employer.*



waste disposal area in an urban setting. Data obtained from historic aerial photographs, topographic maps, and personnel interviews were integrated using GIS for the assessment planning and design. Assessment techniques included the use of a Geoprobe® to determine cover thickness and nature of waste material, and to install a post-run tubing system for gas collection and analysis.

EPA-funded Brownfields Community-Wide Assessment
East Tennessee | 2008-2010

Senior Reviewer for 16-county community wide assessment under EPA Brownfields Assessment Grant Program. Project included the implementation of Phase I ESAs for properties including a knitting mill, petroleum bulk plant, furniture manufacturer, historical landfill, and riverfront corridor.

Aluminum Manufacturing Facility
Blount County, Tennessee | 2006-2007

Project Manager for comprehensive building materials inventory at multiple facilities that included the identification, sampling, analysis and labeling of all identified asbestos-containing materials. The project included approximately 90 buildings or structures at the facility.

NETWM Landfill
Rogersville, Tennessee | 2005-present

Hydrogeologist and Senior Reviewer for the compliance monitoring and assessment of corrective measures at a municipal solid waste landfill. Current project tasks include semi-annual groundwater compliance monitoring, statistical analysis of data and annual groundwater use surveys.

Blount County Highway Department
Alcoa, Tennessee | 2005

Project Manager for facility investigation that included the environmental assessment of a 19-acre county vehicle maintenance garage and the delineation of pre-RCRA municipal landfill cells located on the site. Historic aerial photographs were geo-referenced and imported to handheld GPS for use in the field to establish test pit locations for the confirmation of landfill extent, which greatly expedited the landfill delineation. Environmental assessment and landfill delineation information was used to negotiate a Brownfield agreement. The site has been successfully redeveloped as a major retail center.

Former Metal Fabrication Facility
Knoxville, Tennessee | 2005

Project Manager for pre-purchase due diligence and Phase II Environmental Site Assessment of a former large-scale industrial metal fabrication facility. The assessment also included test pit and drilling evaluation of a portion of the facility that included a coal tar disposal area associated with a historic gas light production facility.

Former Plasti-Line Facility
Knoxville, Tennessee | 2005

Project Manager for pre-purchase due diligence Phase I and Phase II Environmental Site Assessment of a former thermoplastic molding facility.

**Experience with previous employer.*



Marathon Ashland Light Products Terminal

Knoxville, Tennessee | 2004

Project Manager for soil sampling and delineation of shallow petroleum contamination prior to facility upgrades. Also assessed and documented soil cleanup efforts relative to a gasoline release at a pipeline manifold.

Burgin Dodge

Knoxville, Tennessee | 2003

Project Manager for a facility assessment driven by property transaction. Duties included review of existing environmental documents and reports; a Geoprobe® assessment of the maintenance area; the installation and sampling of groundwater monitoring wells; and the coordination of facility upgrades to meet buyer requirements. Project was expedited for completion in time for closing of sale, and facility was granted no further action by state regulatory agency.

Former Injection Molding Facility

Blount County, Tennessee | 2003

Project Manager responsible for facility assessment to determine the extent of migration of hydraulic oils beneath the process area floor slabs. Assessment also included air rotary drilling to evaluate site groundwater.

Pilot Oil Corporation and Pilot Travel Centers, LLC

Various Southeast Locations | 2002-2009

Project Manager for Phase I and Phase II pre-purchase due diligence environmental services. Responsibilities included contract management and development and implementation of site assessment plans. Property assessments included both developed and undeveloped parcels.

Former Lay Packing Facility

Knoxville, Tennessee | 2002-2005

Project Manager for pre-purchase environmental due diligence and regulatory-driven assessment for a former meat processing facility. The assessment of the six-acre facility included a Phase I ESA, asbestos survey, hazardous materials inventory, and soil and groundwater assessment. Post-purchase services included the sampling and in-place closure of two 20,000-gallon fuel oil heating tanks.

Proposed Municipal Service Center

Alcoa, Tennessee | 2002-2003

Project Manager for the Phase II Environmental Assessment of a former manufacturing facility with pre-RCRA municipal landfill cells located on the property. The assessment utilized test pits, soil borings and Geoprobe® investigation techniques to document soil conditions in the vicinity of the manufacturing areas, and to define boundaries of historic landfill cells relative to proposed structures. Environmental services also included a landfill cover thickness and residual methane evaluation, and a hazardous materials survey in the powerhouse, production, and drying kiln buildings.

**Experience with previous employer.*



Former Industrial Complex

Elizabethton, Tennessee | 2002

Project Geologist for Phase II Environmental Site Assessment prior to site redevelopment. Project included review of historic facility operations and environmental compliance issues, assessment design, plus subsurface investigation and reporting. Assessment results were used to successfully negotiate a Brownfield agreement for the site which aided in site redevelopment as a large retail center.

Auto Dealership

Clinton, Tennessee | 2002

Project Manager responsible for the evaluation of possible sources of free product emanating from wet-weather springs down-gradient from the facility. Product source was determined and rock coring was used to evaluate routes of migration in karst bedrock.

Motiva Bulk Fuel Terminal

Nashville, Tennessee | 2000

Project Manager for the soil and groundwater assessment relative to an aboveground release from a one million-gallon fuel storage tank.

Retail Fuel Outlets

Nine sites in Western and Central North Carolina | 1999-2001

Project Manager responsible for procurement, scheduling, and field services management for soil and groundwater remediation system construction projects.

Anniston Army Depot

Anniston, Alabama | 1999

Project Manager for LNAPL free product recovery system evaluation using mobile enhanced multi-phase extraction to determine aquifer parameters and free product production at various vacuum and flow rates.

Equiva, LLC (Chevron/Texaco)

Various sites in Tennessee | 1997-2001

Project Manager and point of contact for underground storage tank and environmental services in middle and east Tennessee. Responsibilities included contract management, development of site assessment and corrective action plans, remediation system procurement, construction, and operation and maintenance, plus negotiation of site closures, as well as UST trust fund reimbursement management. Also conducted Phase I ESAs for facility transfers.

Retail Fuel Outlet

Sevierville, Tennessee | 1993-1996

Project Manager for the assessment and remediation of a hydrocarbon release. Project included full delineation of phased product and dissolved phase hydrocarbon plume encroaching on the Little Pigeon River; installation of a cutoff product recovery trench, recovery wells and a multi-phase extraction and remediation system; NPDES permitting and monthly monitoring and remediation progress monitoring.

**Experience with previous employer.*



Bulk Fuel and Pipeline Terminal

Knoxville, Tennessee | 1992-1993

Project Geologist responsible for a groundwater assessment to determine the source of large quantities of free product existing at the facility. Used geophysical assessment to determine bedrock profile to aid groundwater assessment planning.

Baptist Hospital

Knoxville, Tennessee | 1992

Project Geologist responsible for the location, design, and installation of groundwater recovery wells in karst bedrock. Wells were installed using air rotary drilling. Well installation involved the casing of non-impacted water bearing zones.

Hoechst Celanese

Salisbury, North Carolina | 1990

Environmental Scientist responsible for asbestos air monitoring program for plant maintenance and upgrades.

BASF Fibers

Enka, North Carolina | 1988-1991

Environmental Scientist responsible for asbestos air monitoring and project monitoring program during industrial powerhouse demolition. Duties included bulk sampling of suspect materials, pre-abatement inspection of work area containments; personnel, work area and containment monitoring during abatement; plus clearance sampling and analysis of air samples by phase contrast microscopy (PCM). Duties also included the scheduling and supervision of IH sampling technicians conducting air monitoring for other abatement projects conducted at the facility.

CONTINUING EDUCATION

- S&ME Phase I ESA Training, 2003-2012
- ASTM Vapor Encroachment Screening, 2011
- Stream Restoration and Natural Channel Design, 2004
- Natural Attenuation for Site Remediation, 1998
- Groundwater Pollution and Hydrology, 1994
- Bio-Venting, Principles and Applications, 1994
- Air Sparging for Site Remediation, 1994
- 40-Hour Hazardous Waste Operations Training, 1993 and annual 8-Hour refresher courses

**Experience with previous employer.*



Jurisdictional Waters Report
McFee Road Property
Farragut, Knox County, Tennessee
S&ME Project No. 23430267

PREPARED FOR:

Cannon & Cannon, Inc.
8550 Kingston Pike
Knoxville, Tennessee 37919

PREPARED BY:

S&ME, Inc.
6515 Nightingale Lane
Knoxville, Tennessee 37909

July 19, 2023



July 19, 2023

Tennessee Department of Environment
Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, Tennessee 37921
Attention: Ms. Shari Winburn

U.S. Army Corps of Engineers
Nashville District Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214
Attention: Mr. Casey Ehorn

Reference: **Jurisdictional Waters Report**
McFee Road Property
Farragut, Knox County, Tennessee
S&ME Project No. 23430267

Dear Shari and Casey,

S&ME, Inc. (S&ME) is submitting this report to present the results of the jurisdictional waters assessment completed by S&ME in July 2023 at the referenced site. The Town of Farragut (Town) is considering the acquisition of 70 acres of undeveloped land with the Town limits located southwest of McFee Road and northwest of Boyds Station Road in Knox County, Tennessee. Planned uses are not yet determined; however, a variety of public recreational uses are anticipated.

Cannon and Cannon, Inc. contracted S&ME to obtain a hydrologic determination (HD) from the Tennessee Department of Environment and Conservation (TDEC) and a Jurisdictional Determination (JD) from the U.S. Army Corps of Engineers (USACE). The following report details the wetland and stream delineations performed by S&ME and includes background information, methodology, a description of areas observed for waters of the U.S. (WOTUS) / waters of the state (WOTS), and relevant figures and photographs.

We appreciate your review of the enclosed information. Please contact Sarah Rowe (srowe@smeinc.com) with any questions or if you need further information related to the project.

Sincerely,

S&ME, Inc.

A handwritten signature in grey ink that reads "Sarah Rowe".

Sarah A. Rowe, PWS, QHP
Project Biologist

A handwritten signature in grey ink that reads "Elizabeth M. Porter".

Elizabeth M. Porter, PMP, PG
Technical Principal



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- Figure 2 - Database Review
- Figure 3 - NRCS Soil Survey
- Figure 4 - FEMA Flood Hazards
- Figure 5 - Potential Jurisdictional Waters
- Figure 6 - Photograph Locations
- Figure 7 - Representative Photographs

Appendices

- Appendix I - Stream and Wetland Data Forms
 - TDEC HD Sheet (S1E)
 - USACE Wetland Determination Data Forms (UpA and UpB)
- Appendix II - Weather Data
 - Weather Underground Station Summary (June and July 2023)
 - Antecedent Precipitation Tool



1.0 Project Description

The subject property (the site) consists of approximately 70 acres comprised of portions of two parcels (162 02402 and 162 02403) located northwest of the McFee Road and Boyd Station Road intersection in Farragut, Knox County, Tennessee. The parcels currently belong to one owner, but the Town of Farragut (the Town) is considering purchasing the property for recreational uses. The site is comprised of mostly undeveloped forest and soybean fields, with a few single-standing barns and shelters near the southwestern corner of the property. The Town is currently performing due diligence activities on the site.

S&ME, Inc. (S&ME) has been contracted by Cannon and Cannon, Inc. on behalf of the Town to obtain a Jurisdictional Determination (JD) from the U.S. Army Corps of Engineers (USACE) regarding waters of the U.S. (WOTUS) and the Tennessee Department of Environment and Conservation (TDEC) regarding waters of the state (WOTS) to determine permitting requirements in regard to Sections 401 and 404 of the Clean Water Act (CWA) of 1972. The following report details the potentially jurisdictional waters observed on the site by S&ME in July 2023.

2.0 Methodology

Jurisdictional WOTUS, including wetlands and streams, are defined by 33 CFR Part 328.3 and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the USACE; the TDEC Division of Water Resources (DWR) regulates WOTS. S&ME performed the wetland assessment using the Routine On-Site Determination Method as defined in the USACE *1987 Wetlands Delineation Manual* and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*. This technique uses a multi-parameter approach, which requires positive evidence of three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. Areas exhibiting all three wetland characteristics, as well as surface waters, are considered jurisdictional. S&ME evaluated drainage features in accordance with the TDEC *Guidance for Making Hydrologic Determinations* (HDs), Version 1.5 using a Tennessee Qualified Hydrologic Professional (QHP). The procedures outlined in this guidance are intended to be applied to drainage features that could be considered either a wet-weather conveyance (WWC) or a stream.

Our assessment for the possible occurrence of jurisdictional waters within the site consisted of using a combination of in-house research and field reconnaissance. Subsequent to the in-house review, jurisdictional WOTUS and WOTS were assessed in the field employing the methodologies referenced above.

3.0 Literature and Database Review

Prior to our site visit, S&ME performed a literature review of the site to determine potential areas of concern to be evaluated while in the field. This included a review of U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps, the TDEC 303(d) draft list and DWR Public Data Viewer, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, historic aerial photographs, the Natural Resources Conservation Service (NRCS) soil survey database, and Federal Emergency Management Agency (FEMA) flood maps.

The property is located on a portion of the USGS quadrangle map for Concord, Tennessee, and the general latitude and longitude of the site are 35.840054° and -84.187937°. According to the USGS Topographic Map



(Figure 1) and the TDEC Public Data Viewer (Figure 2), one blue-line stream (a tributary to Little Turkey Creek and Fort Loudoun Lake/Reservoir) flows across the center of the site, flowing from northwest to southeast, exiting near the McFee Road/Boyd Station Road intersection. The TDEC Data Viewer indicates that the attainment for Little Turkey Creek is “not supporting” from sedimentation and alteration in streamside or littoral vegetative covers due to municipal/urbanized high-density areas and uses. The NWI map shows this drainage as a linear forested/scrub-shrub wetland. These features are shown in Figure 2 (Database Review).

The site is in rolling topography with elevations ranging from approximately 840 feet to 940 feet above mean sea level. According to the USGS, the site is underlain by Ordovician Holston Formation and Lenoir Limestone. The entire site drains to the eight-digit Hydrologic Unit Code (HUC) Ft. Loudoun/Watts Bar (06010201) and the 12-digit HUC Turkey Creek (060102010208) watersheds. The site is also located within the Southern Limestone/Dolomite Valleys and Low Rolling Hills ecoregion (67f).

The NRCS soil survey data for Knox County (Figure 3) was also reviewed for the presence of mapped hydric soils on the site, which may indicate wetland conditions due to poorly drained soil substrates. According to the NRCS soils map (Figure 3), the site is comprised of the following map unit types: Collegedale-Talbott complex (CkC); Dewey silt loam (DeC2 and DeD2); Dewey loam (DeE2); Emory silt loam (EmB); and Etowah-Minvale complex (EvB). According to the NRCS, the mapped soils are well-drained, are not hydric, they do not pond or flood, and the depth to water table is greater than six feet.

The flood hazard zone mapping, maintained by FEMA, was reviewed to determine potential flood zones at the site. No FEMA flood zones or hazards are located within the property boundary according to FEMA Flood Insurance Rate Map (FIRM) panels 47009C0100C and 47105C0125D, respective effective dates of September 19, 2007 and May 16, 2007. The FEMA Flood Hazards exhibit is included as Figure 4.

4.0 Field Review

Two S&ME biologists visited the site on July 7 and 18, 2023, to locate and delineate WOTUS and WOTS, including streams (perennial, intermittent, or ephemeral), wetlands, ponds, or other surface water features within the project area. The site is bordered by McFee Road to the northeast, Boyd Station Road and the CSX Railroad to the southeast, agricultural fields to the west and northwest, and a residential subdivision to the north. The site is located within a primarily residential area of Farragut; remaining agricultural lands are rapidly developing into residential subdivisions.

The project site is comprised of two distinctly different areas. The western half consists of soybean crops; multiple barns/sheds are also located on this portion of the site. The eastern half of the site is forested and consists of a mixture of mature, deciduous hardwoods and dense areas of eastern red cedar (*Juniperus virginiana*).

During S&ME’s site visit, one ephemeral stream (S1E) was observed at the site. The approximate extent of the potentially jurisdictional water is summarized in Table 4-1; the feature location is shown in the attached Potential Waters map (Figure 5); representative photographs of the site and their locations on an aerial photograph (Figures 6 and 7) are also attached.



Drainage Feature Assessment

Two S&ME QHPs trained in the TDEC *Guidance for Making HDs* (the Guidance) performed an evaluation of the site to identify and characterize on-site drainage features. The Guidance recommends that site visits occur at least 48 hours following a significant rain event so that the presence of stormwater doesn't influence the stream classification scoring. However, S&ME's initial site visit occurred less than 48 hours following a significant rain event (i.e., greater than 0.1 inch), documented by the nearby Weather Underground weather station KTNLENOI28 located northeast of the site. The USACE Antecedent Precipitation Tool (APT) that documents rainfall condition deviations from normal weather patterns determined that the evaluation period (i.e., the prior three months) is under normal conditions. The weather data and APT graph showing the local rainfall trends are in Appendix II.

S&ME observed one drainage feature onsite and assessed it using the TDEC Guidance, which provides a score for each stream's geomorphic, hydrologic, and biological characteristics. Drainages scoring 19 or above on the secondary indicator data form, or those with primary indicators, are considered streams by TDEC (i.e., WOTS). Drainage features scoring less than 19 are considered WWCs by TDEC and can be considered ephemeral streams by the USACE, if an ordinary high-water mark (OHWM) is present.

S&ME confirmed the presence of a tributary to Little Turkey Creek within the site, entering the northwestern property boundary and flowing generally southeast, exiting the site to the southeast under Boyd Station Road and the railroad. No other drainage features possessing a bed and bank, OHWM, or other stream characteristics were observed within the site. The drainage feature, its TDEC HD score, start/end points, and approximate length/acreage are shown in Table 4-1. The feature description is discussed below, and the corresponding TDEC HD Field Data Sheet is attached in Appendix I.

TABLE 4-1: STREAMS				
ID	HD Classification	Lat / Long Start Lat / Long End	Approximate Length	Approximate Acreage
S1E	<u>WWC / Ephemeral stream</u> Secondary Score: 16.75	Start: 35.841196° / -84.189197°	1,410 feet	0.20 acre
		End: 35.840948° / -84.184198°		

S1E is an ephemeral stream/WWC that enters the site southwest of a newly-constructed residential subdivision and flows across the site to the southeast. The channel averages a width of approximately four to five feet, with the widest section of channel located near the northwestern site boundary downslope from a detention basin outfall. During the site visits, ponding within the channel was observed below the outfall that was actively discharging due to inundation within the detention pond; no other water was observed within the channel. The upstream reach of channel has a well-defined bed and bank; however, the channel loses definition and evidence of frequent flows as it approaches the eastern site boundary. After appearing to sheet-flow through the woods, the feature redevelops a channel and continues offsite to the northeast. The substrate consists of primarily silt with gravel, and the wooded riparian zone is shaded with a tree canopy consisting of mostly eastern red cedar, shortleaf pine (*Pinus echinata*), green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), elms (*Ulmus* spp.), and privet (*Ligustrum sinense*) shrubs.



Wetland Assessment and Delineation

An S&ME professional wetland scientist (PWS) performed a field review of the site, investigating low-lying areas that may have the potential for extended periods of saturation/inundation and areas mapped by the NRCS soil survey as possessing hydric or partially hydric soils or shallow depth to water tables. S&ME also used laser imaging, detection, and ranging (LIDAR) mapping to identify areas with geomorphic positions conducive to wetland development (e.g., swales, depressions, drainages). **No potentially jurisdictional wetlands were observed within the project boundary.** USACE Wetland Determination Data Sheets completed for two representative upland locations (UpA, UpB) are attached in Appendix I.

5.0 Limitations

S&ME is aware that the U.S. Supreme Court narrowed the definition of WOTUS under the CWA in its opinion on May 25, 2023. In its majority opinion in *Sackett v. EPA*, the Supreme Court moved away from the previously-used broad-based significant nexus test for determining which water bodies and wetlands qualify as WOTUS and are afforded protection under the CWA. Instead, the Supreme Court determined that the CWA is limited to relatively permanent bodies of water connected to traditional interstate navigable waters (e.g., streams, oceans, rivers, lakes). The Supreme Court also determined that for adjacent wetlands to be considered WOTUS, a continuous surface connection with geographical water bodies must be present. Therefore, wetlands not connected to downstream waters by a relatively permanent waterbody (i.e., an intermittent or perennial stream), may not be considered WOTUS based on the Supreme Court decision. S&ME understands that USACE districts are currently reviewing the *Sackett* decision to determine next steps, and in the interim, may pause their issuance of JDs.

6.0 Conclusion

S&ME has completed this jurisdictional water determination in general accordance with TDEC and USACE delineation manuals and technical guidance. Based on our assessment, one WWC/ephemeral stream (non-WOTS, potential WOTUS, depending on the *Sackett* decision) is located on the site. The feature is a headwater tributary to Little Turkey Creek.

According to Section 404 of the CWA, a USACE permit must be acquired to authorize discharge of dredge or fill material into WOTUS (e.g., wetlands, streams (including ephemerals), ponds, and lakes). The USACE has established Nationwide Permits (NWP) to expedite the permitting process for common discharges which have been determined to have minimal individual or cumulative impacts on the environment. In general, the NWP authorizes impacts up to 0.5 acre of WOTUS. If S1E is determined to be a WOTUS and proposed impacts will exceed the NWP limitations, an individual Section 404/401 permit must be obtained.

TDEC also regulates impacts to WOTS under Section 401 of the CWA. TDEC has developed General Aquatic Resource Alteration Permits (ARAPs) to provide a streamlined, expedited means of authorizing projects that singularly or cumulatively propose minor impacts to water resources. An Individual 401 Water Quality Certification (WQC) is required if the project involves stream or wetland impacts that do not qualify under the Special or General Conditions outlined in the appropriate General ARAP. If TDEC concurs with S&ME's HD, the onsite WWC will not be regulated by the state as a WOTS, and a TDEC permit will not be required to impact the feature.



A National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permit is also required for clearing, grading, or excavation activities at the site that result in greater than one acre of disturbance. A buffer zone is not required along WWCs; however, best management practices (BMPs) should be used during construction to prevent sediment from entering the watercourse and leaving the site.

S&ME requests a Preliminary JD (PJD) from the USACE and an HD from TDEC to assist with site planning activities and to determine permitting requirements. S&ME appreciates your assistance with this request. If you have any questions regarding this report, please call or email Sarah Rowe ((865)970-0003, srowe@smeinc.com).

7.0 References

Environmental Systems Research Institute, Inc. 2023. ArcGIS Online [web application].
<https://smeinc.maps.arcgis.com/home/index.html>. (Accessed July 2023.)

Tennessee Department of Environment and Conservation, Division of Water Resources. 2023. Public Data Viewer [web application]. <https://tdeconline.tn.gov/dwr/>. (Accessed July 2023.)

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United States Department of Agriculture, Natural Resources Conservation Service. 2023. Plants Database [web application]. <https://plants.sc.egov.usda.gov/home>. (Accessed July 2023.)

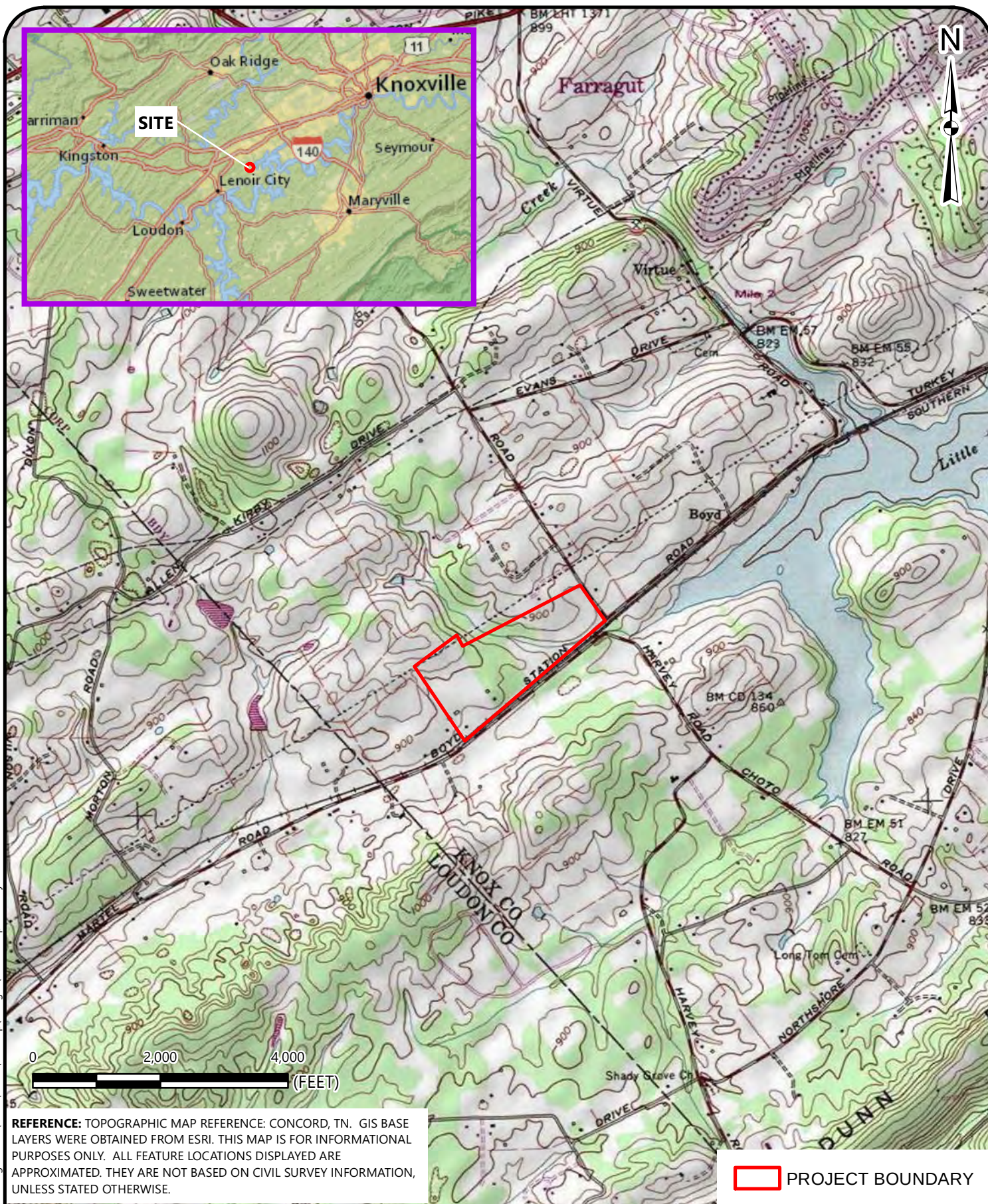
United States Department of Agriculture, Natural Resources Conservation Service. 2023. Web Soil Survey [web application]. <http://websoilsurvey.nrcs.usda.gov/>. (Accessed July 2023.)

United States Fish and Wildlife Service. 2023. National Wetlands Inventory [web application].
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United States Geological Survey. 2023. Tennessee Geologic Map Data. [web application].
<https://mrdata.usgs.gov/geology/state/state.php?state=TN>. (Accessed July 2023.)

Figures

Drawing Path: C:\Users\srowe\Desktop\faragut\FIG1.mxd plotted by Srowe 06-27-2023



USGS TOPOGRAPHIC QUADRANGLE

MCREE ROAD PROPERTY
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 2,000'
DATE:
6-27-23
PROJECT NUMBER
23430267

FIGURE NO.

1

Drawing Path: R:\GISRef\knoxville north\gis projects\2023 Projects\23420267_McFee Rd Due Diligence_Farragut\FIG2_DATABASE.mxd plotted by Srowe 07-17-2023



0 1,000 2,000
(FEET)

REFERENCE: GIS BASE LAYERS WERE OBTAINED FROM ESRI. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

PROJECT BOUNDARY **NWI-LISTED WETLANDS**

TDEC STREAM DATABASE

WETLAND TYPE

ATTAINMENT

EMERGENT (PEM)

FULLY SUPPORTING

FORESTED (PFO)/SCRUB-SHRUB (PSS)

NOT ASSESSED

OPEN-WATER POND

NOT SUPPORTING

LAKE

RIVERINE



DATABASE REVIEW

MCREE ROAD PROPERTY DUE DILIGENCE
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 1,000'

DATE:
7-12-23

PROJECT NUMBER
??????

FIGURE NO.

2

Drawing Path: R:\GIS\Ren\Knoxville North\GIS PROJECTS\2023 Projects\23430267 McFee Rd Due Diligence Farragut\FIG3_NRCS.mxd plotted by JRowe 07-19-2023



NRCS SOIL SURVEY

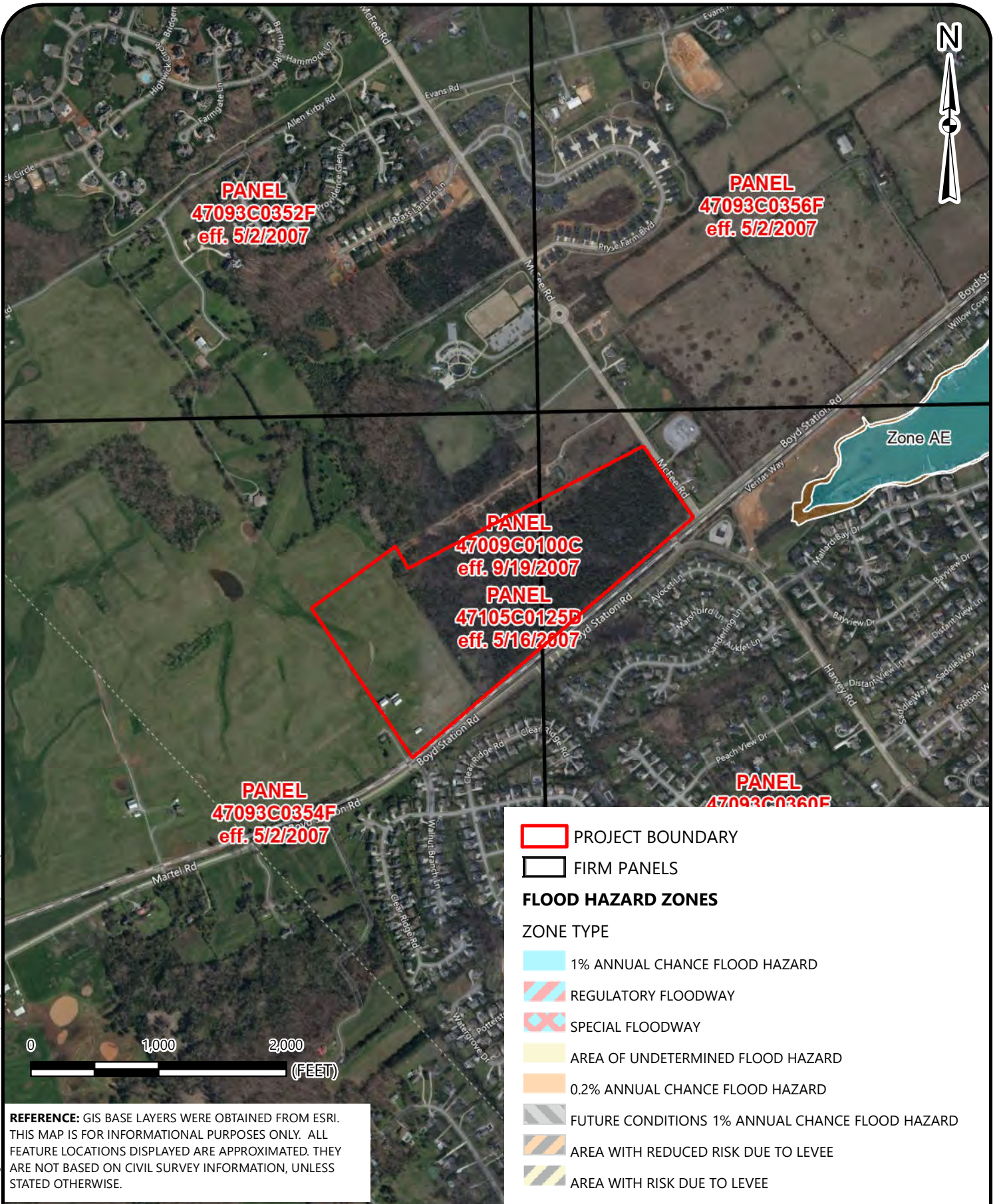
MCREE ROAD PROPERTY
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 500'
DATE:
7-19-23
PROJECT NUMBER
23430267

FIGURE NO.

3

Drawing Path: C:\Users\srowe\Desktop\Farragut\FIG4_FEMA.mxd plotted by Srowe 06-27-2023



FEMA FLOOD HAZARDS

MC FEE ROAD PROPERTY
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 1,000'
DATE:
6-27-23
PROJECT NUMBER
23430267

FIGURE NO.

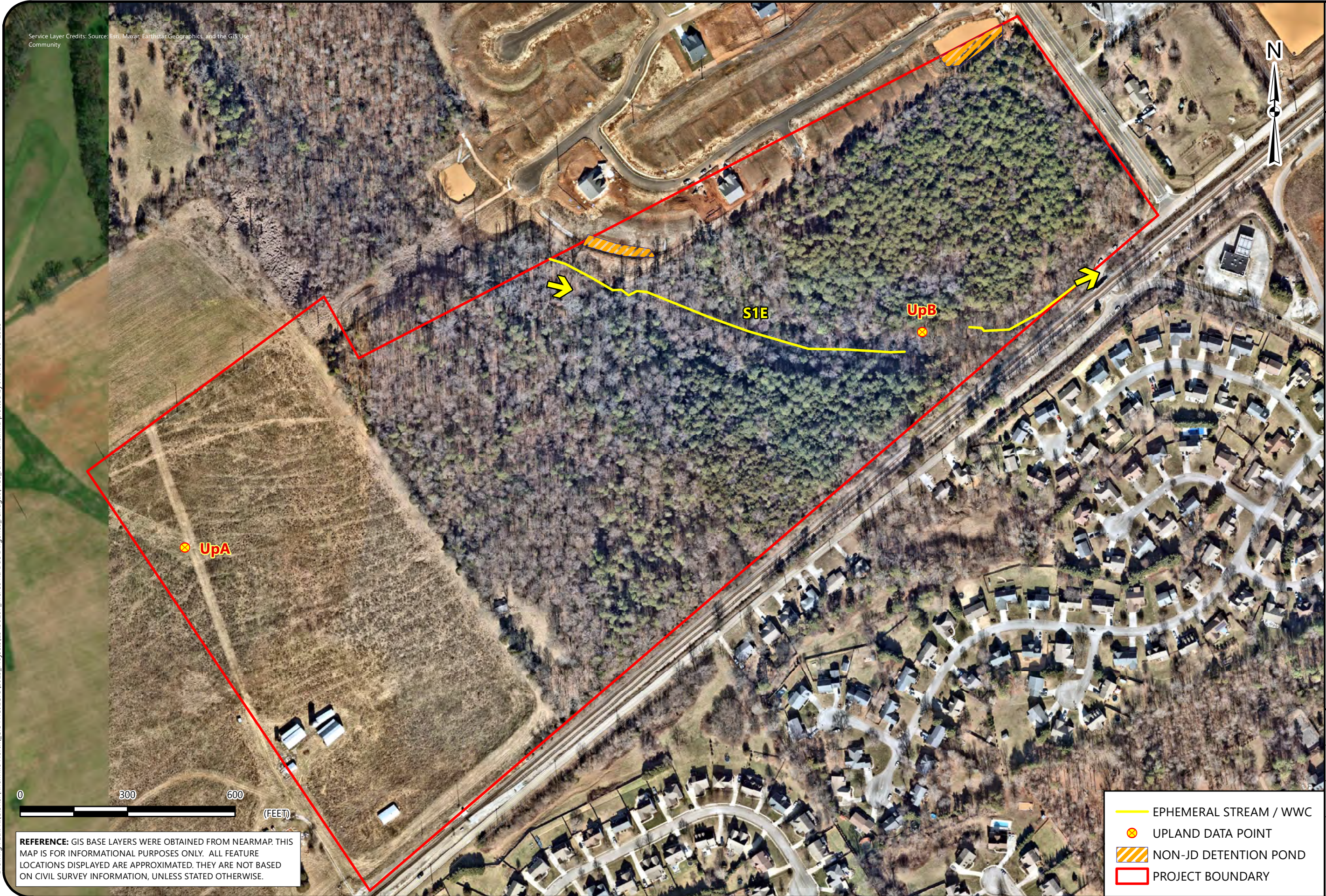
4

Drawing Path: R:\GISRef\Knoxville North\GIS PROJECTS\2023 Projects\23430267 McFee Rd Due Diligence Farragut\FIG5_JDWATERS.mxd plotted by JRowe 07-19-2023

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



REFERENCE: GIS BASE LAYERS WERE OBTAINED FROM NEARMAP. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.



POTENTIAL JURISDICTIONAL WATERS

MC FEE ROAD PROPERTY
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 250'

DATE:
7-19-23

PROJECT NUMBER
23430267

FIGURE NO.

5

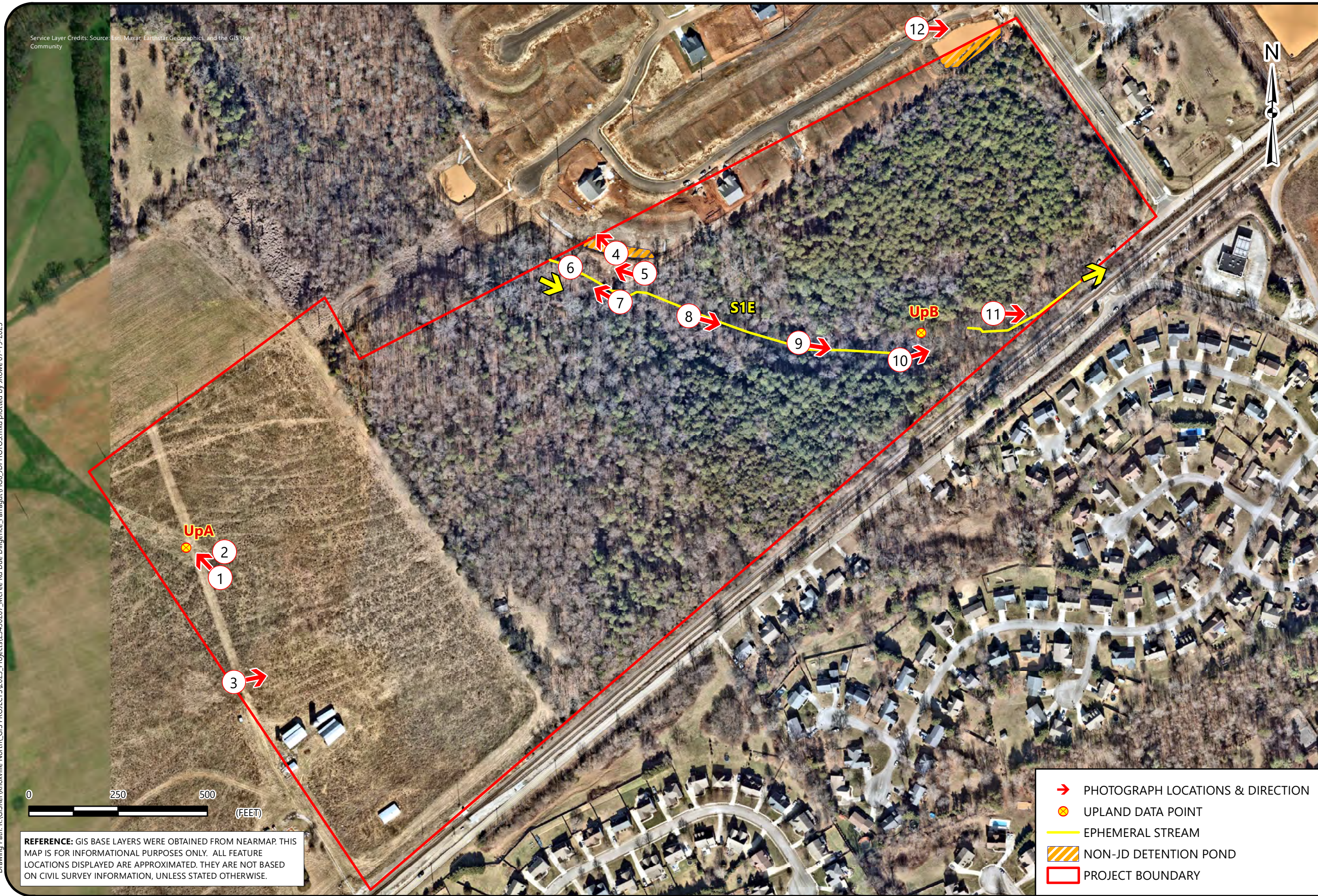
- EPHEMERAL STREAM / WWF
- UPLAND DATA POINT
- NON-JD DETENTION POND
- PROJECT BOUNDARY

Drawing Path: R:\GISRef\Knoxville North\GIS PROJECTS\2023 Projects\23430267 McFee Rd Due Diligence Farragut\FIG6_JDPHOTOS.mxd plotted by JRowe 07-19-2023

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

0 250 500
(FEET)

REFERENCE: GIS BASE LAYERS WERE OBTAINED FROM NEARMAP. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.



- ➔ PHOTOGRAPH LOCATIONS & DIRECTION
- ⊗ UPLAND DATA POINT
- EPHEMERAL STREAM
- ▨ NON-JD DETENTION POND
- ▭ PROJECT BOUNDARY

PHOTOGRAPH LOCATIONS

MC FEE ROAD PROPERTY
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 250'

DATE:
7-19-23

PROJECT NUMBER
23430267

FIGURE NO.

6

Figure 7 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 1



		Date: 7/7/2023
		Photographer: S. Rowe
1	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Upland data point UpA.

		Date: 7/7/2023
		Photographer: S. Rowe
2	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	High-chroma soils observed at upland data point UpA.

Figure 7 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 2



		Date: 7/7/2023
		Photographer: S. Rowe
3	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Soybean fields and barns on the western half of the property.

		Date: 7/7/2023
		Photographer: S. Rowe
4	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Constructed detention pond near the northwestern evaluation boundary.

Figure 7 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 3



		Date: 7/7/2023
		Photographer: S. Rowe
5	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Detention pond outfall that contributes hydrology to S1E.

		Date: 7/7/2023
		Photographer: S. Rowe
6	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Upstream reach of S1E; facing the channel.

Figure 7 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 4



		Date: 7/7/2023
		Photographer: S. Rowe
7	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Upstream reach of S1E; facing upstream.

		Date: 7/7/2023
		Photographer: S. Rowe
8	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Central reach of S1E; facing downstream.

Figure 7 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 5



		Date: 7/7/2023
		Photographer: S. Rowe
9	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	S1E; facing downstream.

		Date: 7/7/2023
		Photographer: S. Rowe
10	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Upland point UpB, where S1E loses definition.

Figure 7 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 6



		Date: 7/7/2023
		Photographer: S. Rowe
11	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Lower reach of S1E as it flows offsite to the northeast.

		Date: 7/18/2023
		Photographer: S. Rowe
12	Location / Orientation	Refer to Figure 6 – Photograph Locations.
	Remarks	Constructed detention pond near the northern corner of the evaluation boundary.

Appendices

Appendix I - Stream and Wetland Data Forms

**Hydrologic Determination Field Data Sheet**

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: UNT to Little Turkey Creek (S1E)		Date/Time: 7/7/23 @ 1130
Assessors/Affiliation: S&ME, Inc. (Sarah Rowe 1012-TN11, Josh Rowe (1103-TN13))		Project ID : 23430267
Site Name/Description: McFee Road Property		
Site Location: Northwest of Boyd Station Road and McFee Road		
HUC (12 digit): 060102010208 Turkey Creek	Latitude: 35.840780	
Previous Rainfall (7-days) : 1.71 inches	Longitude: -84.187889	
Precipitation this Season vs. Normal : average Source of recent & seasonal precip. data : Weather Underground & Antecedent Precipitation Tool		
Watershed Size : 0.38 square miles	County: Knox	
Soil Type(s) / Geology : EvB (Etowah-Minvale complex) / Ordovician Holston Formation, Lenoir Limestone	Source: USDA / USGS	
Surrounding Land Use : Agricultural, forest, residential		
Degree of historical alteration to natural channel morphology & hydrology (select one & describe fully in Notes) : Moderate		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	☒	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	☒	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	☐ N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	☒	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	☒	Stream
6. Presence of fish (except <i>Gambusia</i>)	☒	Stream
7. Presence of naturally occurring ground water table connection	☒	Stream
8. Flowing water in channel and 7 days since last precip >0.1 " in local watershed	☐	Stream
9. Evidence watercourse has been used as a supply of drinking water	☐	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in
TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WET WEATHER CONVEYANCE**Secondary Indicator Score (if applicable) = 16.75****Justification / Notes :**

Drainage feature originates as a slight swale near the northwestern site boundary and continues across the site to the southeast. At one point, a defined channel ends, and it is difficult to determine the water flow path. Overall hydrology of the area appears to have been affected by surrounding residential developments and the construction of detention ponds and outfalls. According to TDEC DataViewer, drainage features offsite and upslope from S1E that are likely the headwaters of S1E were determined to be WWCs.

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 11.25)	Absent	Weak	Moderate	Strong	
1. Continuous bed and bank	0	1	2	3	1.5
2. Sinuous channel	0	1	2	3	1
3. In-channel structure: riffle-pool sequences	0	1	2	3	1
4. Sorting of soil textures or other substrate	0	1	2	3	1
5. Active/relic floodplain	0	0.5	1	1.5	0
6. Depositional bars or benches	0	1	2	3	1
7. Braided channel	0	1	2	3	0
8. Recent alluvial deposits	0	0.5	1	1.5	0.75
9. Natural levees	0	1	2	3	0
10. Headcuts	0	1	2	3	0
11. Grade controls	0	0.5	1	1.5	0.5
12. Natural valley or drainageway	0	0.5	1	1.5	1.5
13. At least second order channel on existing USGS or NRCS map	0	1	2	3	3

B. Hydrology (Subtotal = 2.50)	Absent	Weak	Moderate	Strong	
14. Subsurface flow/discharge into channel	0	1	2	3	0
15. Water in channel and >48 hours since sig. rain	0	1	2	3	0
16. Leaf litter in channel	1.5	1	0.5	0	1
17. Sediment on plants or on debris	0	0.5	1	1.5	1
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5	0.5
19. Hydric soils in channel bed or sides of channel	No = 0		Yes = 1.5		0

C. Biology (Subtotal = 3.00)	Absent	Weak	Moderate	Strong	
20. Fibrous roots in channel bed ¹	3	2	1	0	1
21. Rooted plants in the thalweg ¹	3	2	1	0	1
22. Crayfish in stream (exclude in floodplain)	0	1	2	3	0
23. Bivalves/mussels	0	1	2	3	0
24. Amphibians	0	0.5	1	1.5	0
25. Macroinvertebrates (record type & abundance)	0	1	2	3	0
26. Filamentous algae; periphyton	0	1	2	3	1
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5	0
28. Wetland plants in channel bed ²	0	0.5	1	1.5	0

¹ Focus is on the presence of terrestrial plants.

² Focus is on the presence of aquatic or wetland plants.

Total Points = 16.75

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

1. Bed and bank is strong near the northern site boundary, however, it loses definition as it approaches the southeastern boundary.
11. Grade controls consist of primarily small tree roots and are infrequent.
14. No flow observed within channel less than 48 hours following a rain event of 0.6 inches.
15. Only one pool of water observed resulting from detention basin discharge near the WWC origin. No other water observed within the channel.
21. Violets, Japanese stiltgrass, and privet common within the channel.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: McFee Road Property **City/County:** Farragut / Knox **Sampling Date:** 07-Jul-23
Applicant/Owner: Cannon & Cannon, Inc. **State:** TN **Sampling Point:** UpA
Investigator(s): Sarah Rowe, PWS; Josh Rowe **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 2.0% / 1.1 °
Subregion (LRR or MLRA): LRR N **Lat.:** 35.839031 **Long.:** -84.192720 **Datum:** NAD83
Soil Map Unit Name: DeC2 - Dewey silt loam, 6-15% slopes, eroded **NWI classification:** _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: Upland data point collected within a swale that drains to a concave, closed depression.	

Hydrology

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) ☐ Surface Water (A1) ☐ True Aquatic Plants (B14) ☐ High Water Table (A2) ☐ Hydrogen Sulfide Odor (C1) ☐ Saturation (A3) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Water Marks (B1) ☐ Presence of Reduced Iron (C4) ☐ Sediment Deposits (B2) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Drift deposits (B3) ☐ Thin Muck Surface (C7) ☐ Algal Mat or Crust (B4) ☐ Other (Explain in Remarks) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____		Wetland Hydrology Present? Yes ☐ No ☒
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: No primary hydrology indicators present.		

VEGETATION (Five/Four Strata)- Use scientific names of plants.

				Dominant Species?		Indicator Status		Sampling Point: UpA	
				Absolute % Cover	Rel.Strat. Cover				
Tree Stratum (Plot size: _____)								Dominance Test worksheet:	
1.		0	☐	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)			
2.		0	☐	0.0%		Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
3.		0	☐	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)			
4.		0	☐	0.0%					
5.		0	☐	0.0%					
6.		0	☐	0.0%					
7.		0	☐	0.0%					
8.		0	☐	0.0%					
				0	= Total Cover				
Sapling-Sapling/Shrub Stratum (Plot size: _____)								Prevalence Index worksheet:	
1.		0	☐	0.0%		Total % Cover of: _____ Multiply by: _____			
2.		0	☐	0.0%		OBL species <u>0</u> x 1 = <u>0</u>			
3.		0	☐	0.0%		FACW species <u>0</u> x 2 = <u>0</u>			
4.		0	☐	0.0%		FAC species <u>0</u> x 3 = <u>0</u>			
5.		0	☐	0.0%		FACU species <u>70</u> x 4 = <u>280</u>			
6.		0	☐	0.0%		UPL species <u>25</u> x 5 = <u>125</u>			
7.		0	☐	0.0%		Column Totals: <u>95</u> (A) <u>405</u> (B)			
8.		0	☐	0.0%		Prevalence Index = B/A = <u>4.263</u>			
9.		0	☐	0.0%					
10.		0	☐	0.0%					
				0	= Total Cover				
Shrub Stratum (Plot size: _____)								Hydrophytic Vegetation Indicators:	
1.		0	☐	0.0%		☐ Rapid Test for Hydrophytic Vegetation			
2.		0	☐	0.0%		☐ Dominance Test is > 50 %			
3.		0	☐	0.0%		☐ Prevalence Index is ≤3.0 ¹			
4.		0	☐	0.0%		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
5.		0	☐	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)			
6.		0	☐	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7.		0	☐	0.0%					
				0	= Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)								Definition of Vegetation Strata:	
1.	<i>Trifolium pratense</i>	40	☒	42.1%	FACU	Four Vegetation Strata:			
2.	<i>Daucus carota</i>	10	☐	10.5%	UPL	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
3.	<i>Plantago lanceolata</i>	15	☒	15.8%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
4.	<i>Physalis alkekengi</i>	10	☐	10.5%	UPL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.			
5.	<i>Ambrosia artemisiifolia</i>	10	☐	10.5%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.			
6.	<i>Sorghum halepense</i>	5	☐	5.3%	FACU				
7.	<i>Torilis arvensis</i>	5	☐	5.3%	UPL				
8.		0	☐	0.0%					
9.		0	☐	0.0%					
10.		0	☐	0.0%					
11.		0	☐	0.0%					
12.		0	☐	0.0%					
				95	= Total Cover				
Woody Vine Stratum (Plot size: _____)								Five Vegetation Strata:	
1.		0	☐	0.0%		Tree - Woody plants , excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).			
2.		0	☐	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.			
3.		0	☐	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.			
4.		0	☐	0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m) in height.			
5.		0	☐	0.0%		Woody vines – Consists of all woody vines, regardless of height.			
6.		0	☐	0.0%					
				0	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)									
Upland is dominated by herbaceous species.									
				Hydrophytic Vegetation Present? Yes ☐ No ☒					

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: UpA

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR	4/4	100%				Silty Clay	

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) (LRR N)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147,148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (MLRA 147)
- ☐ Coast Prairie Redox (A16) (MLRA 147,148)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Soils are not hydric within the upland point location.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: McFee Road Property **City/County:** Farragut / Knox **Sampling Date:** 07-Jul-23
Applicant/Owner: Cannon & Cannon, Inc. **State:** TN **Sampling Point:** UpB
Investigator(s): Sarah Rowe, PWS; Josh Rowe **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Valley bottom **Local relief (concave, convex, none):** concave **Slope:** 2.0% / 1.1 °
Subregion (LRR or MLRA): LRR N **Lat.:** 35.840579 **Long.:** -84.185721 **Datum:** NAD83
Soil Map Unit Name: EmB - Emory silt loam, 2-5% slopes **NWI classification:** _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: Upland data point collected adjacent to an ephemeral stream at the valley bottom.	

Hydrology

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13)	☐ True Aquatic Plants (B14) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No primary hydrology indicators present.			

VEGETATION (Five/Four Strata)- Use scientific names of plants.

					Dominant Species?		Indicator Status		Sampling Point: UpB		
					Absolute % Cover	Rel.Strat. Cover					
Tree Stratum (Plot size: 30 ft)									Dominance Test worksheet:		
1.	<i>Celtis laevigata</i>	25	☒	71.4%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)					
2.	<i>Ulmus alata</i>	5	☐	14.3%	FACU	Total Number of Dominant Species Across All Strata: 6 (B)					
3.	<i>Juniperus virginiana</i>	5	☐	14.3%	FACU	Percent of dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)					
4.		0	☐	0.0%							
5.		0	☐	0.0%							
6.		0	☐	0.0%							
7.		0	☐	0.0%							
8.		0	☐	0.0%							
					35	= Total Cover					
Sapling-Sapling/Shrub Stratum (Plot size: 15 ft)									Prevalence Index worksheet:		
1.	<i>Ligustrum sinense</i>	15	☒	50.0%	FACU	Total % Cover of: Multiply by:					
2.	<i>Rosa multiflora</i>	5	☒	16.7%	FACU	OBL species 0 x 1 = 0					
3.	<i>Cornus florida</i>	5	☒	16.7%	FACU	FACW species 25 x 2 = 50					
4.	<i>Lonicera maackii</i>	5	☒	16.7%	UPL	FAC species 77 x 3 = 231					
5.		0	☐	0.0%		FACU species 35 x 4 = 140					
6.		0	☐	0.0%		UPL species 10 x 5 = 50					
7.		0	☐	0.0%		Column Totals: 147 (A) 471 (B)					
8.		0	☐	0.0%		Prevalence Index = B/A = 3.204					
9.		0	☐	0.0%							
10.		0	☐	0.0%							
					30	= Total Cover					
Shrub Stratum (Plot size:)									Hydrophytic Vegetation Indicators:		
1.		0	☐	0.0%		☐ Rapid Test for Hydrophytic Vegetation					
2.		0	☐	0.0%		☐ Dominance Test is > 50 %					
3.		0	☐	0.0%		☐ Prevalence Index is ≤3.0 ¹					
4.		0	☐	0.0%		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)					
5.		0	☐	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)					
6.		0	☐	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
7.		0	☐	0.0%							
					0	= Total Cover					
Herb Stratum (Plot size: 5 ft)									Definition of Vegetation Strata:		
1.	<i>Microstegium vimineum</i>	65	☒	79.3%	FAC	Four Vegetation Strata:					
2.	<i>Toxicodendron radicans</i>	5	☐	6.1%	FAC	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.					
3.	<i>Campsis radicans</i>	5	☐	6.1%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.					
4.	<i>Torilis arvensis</i>	5	☐	6.1%	UPL	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.					
5.	<i>Verbesina alternifolia</i>	2	☐	2.4%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft in height.					
6.			☐	0.0%							
7.			☐	0.0%							
8.			☐	0.0%							
9.			☐	0.0%							
10.		0	☐	0.0%							
11.		0	☐	0.0%							
12.		0	☐	0.0%							
					82	= Total Cover					
Woody Vine Stratum (Plot size:)									Five Vegetation Strata:		
1.		0	☐	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).					
2.		0	☐	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.					
3.		0	☐	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.					
4.		0	☐	0.0%		Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m) in height.					
5.		0	☐	0.0%		Woody vines – Consists of all woody vines, regardless of height.					
6.		0	☐	0.0%							
					0	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)											
Upland consists of mature trees and herbaceous species.											

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: UpB

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) (LRR N)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147, 148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (MLRA 147)
- ☐ Coast Prairie Redox (A16)
(MLRA 147,148)
- ☐ Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Soils are not hydric within the upland point location.

Appendix II - Weather Data



Elev 1000 ft, 35.84 °N, 84.22 °W

Virtue/Wilson/Morton - KTNLENOI28

FORECAST FOR LENOIR CITY, TN (/WEATHER/US/TN/LENOIR-CITY/KTNLENOI28)

Station Summary

Online(updated 17 seconds ago)

CURRENT CONDITIONS

MAP



85.6 °F

Feels Like 89.7 °



WIND & GUST
2.0 / 3.4 mph

DEWPOINT

69.3 ° F

PRECIP RATE

0.00 in/hr

PRESSURE

29.85 in

HUMIDITY

58 %

PRECIP ACCUM

0.00 in

UV

7



lat=35.836498&lon=-84.218452&zoom=13&tl.play=0&tl.spd=2&groupSevere=1&groupHurrica

PWS CURRENT CONDITIONS

TEMPERATURE



WIND



PRESSURE



CURRENT
86°

DEWPOINT
69.3 °F

HUMIDITY
58 %



WIND FROM
W

GUST
3.4 mph

CURRENT
29.85 In



PRECIP RATE
0.00 in/hr

PRECIP TOTAL
0.00 in



CURRENT UV
7

UV RISK



CURRENT
664.50 watts/m²

Weather History for KTNLENOI28

Monthly Mode

June

2023

View

Next

Previous

Summary

June 1, 2023 - June 30, 2023

	High	Low	Average
Temperature	122.2 °F	-34.4 °F	70.8 °F
Dew Point	90.0 °F	-37.5 °F	63.6 °F
Humidity	99 %	24 %	80 %
Precipitation	5.54 in	--	--

	High	Low	Average
Wind Speed	12.1 mph	0.0 mph	0.6 mph
Wind Gust	21.7 mph	--	0.9 mph
Wind Direction	--	--	SSE
Pressure	30.89 in	26.90 in	--

Graph

Table

June 1, 2023 - June 30, 2023

Date	Temperature			Dew Point			Humidity			Speed			Pressure		Precip. Accum.
	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Low	Sum
6/1/2023	122.2 °F	73.0 °F	47.1 °F	89.6 °F	66.1 °F	46.9 °F	99 %	82 %	60 %	7.6 mph	0.3 mph	0.0 mph	29.94 in	29.78 in	0.00 in
6/2/2023	85.6 °F	74.4 °F	62.6 °F	71.1 °F	64.4 °F	58.1 °F	99 %	74 %	42 %	6.5 mph	0.7 mph	0.0 mph	29.84 in	29.67 in	0.00 in
6/3/2023	89.1 °F	75.0 °F	59.4 °F	66.2 °F	58.7 °F	46.8 °F	92 %	61 %	24 %	9.0 mph	0.9 mph	0.0 mph	29.74 in	29.63 in	0.00 in
6/4/2023	87.6 °F	75.1 °F	65.8 °F	70.3 °F	63.4 °F	59.2 °F	85 %	68 %	45 %	7.6 mph	0.7 mph	0.0 mph	29.77 in	29.67 in	0.00 in
6/5/2023	84.0 °F	71.5 °F	60.6 °F	73.4 °F	65.3 °F	59.5 °F	97 %	81 %	62 %	5.4 mph	0.5 mph	0.0 mph	29.82 in	29.70 in	0.00 in
6/6/2023	86.9 °F	73.3 °F	61.0 °F	69.1 °F	62.4 °F	56.7 °F	99 %	72 %	39 %	4.5 mph	0.4 mph	0.0 mph	29.78 in	29.65 in	0.00 in
6/7/2023	72.3 °F	66.3 °F	58.3 °F	65.5 °F	61.9 °F	57.4 °F	99 %	86 %	68 %	5.8 mph	0.4 mph	0.0 mph	30.13 in	29.56 in	0.00 in
6/8/2023	77.5 °F	67.6 °F	58.1 °F	63.3 °F	56.0 °F	46.4 °F	99 %	70 %	36 %	6.0 mph	0.7 mph	0.0 mph	30.12 in	29.60 in	0.00 in
6/9/2023	80.8 °F	66.8 °F	51.4 °F	57.4 °F	51.2 °F	43.7 °F	93 %	61 %	30 %	5.4 mph	0.5 mph	0.0 mph	29.75 in	29.67 in	0.00 in
6/10/2023	84.2 °F	69.0 °F	53.6 °F	62.4 °F	56.0 °F	51.3 °F	97 %	66 %	38 %	6.5 mph	0.6 mph	0.0 mph	29.77 in	29.66 in	0.00 in

Date	Temperature			Dew Point			Humidity			Speed			Pressure		Precip. Accum.
	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Low	Sum
6/11/2023	80.4 °F	69.1 °F	62.6 °F	75.2 °F	64.4 °F	57.2 °F	99 %	86 %	68 %	8.7 mph	0.8 mph	0.0 mph	29.73 in	29.47 in	0.74 in
6/12/2023	108.5 °F	68.8 °F	46.2 °F	90.0 °F	62.2 °F	46.0 °F	99 %	82 %	57 %	5.6 mph	0.8 mph	0.0 mph	29.70 in	29.65 in	0.02 in
6/13/2023	78.3 °F	65.6 °F	53.1 °F	59.4 °F	55.3 °F	51.8 °F	99 %	72 %	40 %	6.9 mph	0.7 mph	0.0 mph	29.74 in	29.62 in	0.00 in
6/14/2023	79.0 °F	67.4 °F	3.2 °F	73.0 °F	61.9 °F	1.6 °F	99 %	84 %	57 %	7.4 mph	0.6 mph	0.0 mph	29.62 in	28.15 in	0.09 in
6/15/2023	84.9 °F	71.4 °F	60.8 °F	72.5 °F	65.9 °F	60.6 °F	99 %	85 %	49 %	4.7 mph	0.5 mph	0.0 mph	29.65 in	29.56 in	0.01 in
6/16/2023	88.7 °F	74.7 °F	62.8 °F	71.6 °F	65.9 °F	62.1 °F	99 %	77 %	43 %	6.3 mph	0.6 mph	0.0 mph	30.12 in	29.61 in	0.00 in
6/17/2023	84.0 °F	72.2 °F	59.0 °F	66.7 °F	60.5 °F	55.8 °F	91 %	68 %	43 %	5.8 mph	0.8 mph	0.0 mph	29.77 in	29.68 in	0.00 in
6/18/2023	86.5 °F	72.8 °F	59.9 °F	72.3 °F	63.4 °F	56.8 °F	92 %	74 %	48 %	6.5 mph	0.6 mph	0.0 mph	29.75 in	29.62 in	0.00 in
6/19/2023	111.2 °F	70.0 °F	47.1 °F	90.0 °F	68.6 °F	46.9 °F	99 %	97 %	80 %	6.9 mph	0.4 mph	0.0 mph	29.67 in	29.56 in	2.05 in
6/20/2023	76.6 °F	69.7 °F	66.7 °F	73.2 °F	68.3 °F	66.6 °F	99 %	95 %	79 %	6.9 mph	0.3 mph	0.0 mph	29.67 in	29.62 in	0.15 in
6/21/2023	74.7 °F	68.5 °F	30.0 °F	68.9 °F	64.8 °F	29.8 °F	99 %	88 %	77 %	9.2 mph	1.9 mph	0.0 mph	30.89 in	29.53 in	0.06 in
6/22/2023	110.1 °F	66.1 °F	42.4 °F	90.0 °F	64.1 °F	42.3 °F	99 %	95 %	83 %	4.9 mph	0.4 mph	0.0 mph	29.74 in	29.70 in	0.49 in
6/23/2023	77.9 °F	68.3 °F	18.9 °F	70.0 °F	64.5 °F	18.7 °F	99 %	88 %	68 %	6.0 mph	0.4 mph	0.0 mph	29.80 in	29.75 in	0.03 in
6/24/2023	83.7 °F	72.2 °F	-34.4 °F	82.8 °F	66.7 °F	-37.5 °F	99 %	84 %	62 %	4.0 mph	0.3 mph	0.0 mph	29.84 in	29.75 in	0.00 in
6/25/2023	80.1 °F	69.3 °F	60.3 °F	74.7 °F	67.3 °F	60.1 °F	99 %	94 %	76 %	12.1 mph	0.4 mph	0.0 mph	29.72 in	29.67 in	0.30 in
6/26/2023	85.3 °F	73.1 °F	63.0 °F	75.6 °F	67.6 °F	62.1 °F	99 %	84 %	62 %	7.6 mph	1.0 mph	0.0 mph	29.64 in	29.58 in	0.66 in
6/27/2023	83.7 °F	73.8 °F	64.9 °F	72.0 °F	65.9 °F	62.1 °F	93 %	77 %	57 %	5.1 mph	0.5 mph	0.0 mph	29.77 in	29.69 in	0.00 in
6/28/2023	86.2 °F	74.2 °F	63.3 °F	75.2 °F	68.1 °F	63.1 °F	99 %	82 %	57 %	4.3 mph	0.3 mph	0.0 mph	29.84 in	29.75 in	0.00 in
6/29/2023	83.8 °F	74.2 °F	65.5 °F	76.6 °F	69.7 °F	65.1 °F	99 %	87 %	69 %	6.5 mph	0.3 mph	0.0 mph	29.96 in	26.90 in	0.00 in
6/30/2023	85.3 °F	70.9 °F	5.5 °F	78.4 °F	68.7 °F	5.4 °F	99 %	93 %	72 %	9.6 mph	0.6 mph	0.0 mph	29.86 in	29.80 in	0.94 in

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Elev 1000 ft, 35.84 °N, 84.22 °W

Virtue/Wilson/Morton - KTNLENOI28

FORECAST FOR LENOIR CITY, TN (/WEATHER/US/TN/LENOIR-CITY/KTNLENOI28)

Station Summary

Online(updated 4 seconds ago)

CURRENT CONDITIONS

MAP



85.6 °F

Feels Like 90.3 °



WIND & GUST
1.1 / 1.1 mph

DEWPOINT

70.2 ° F

PRECIP RATE

0.00 in/hr

PRESSURE

29.85 in

HUMIDITY

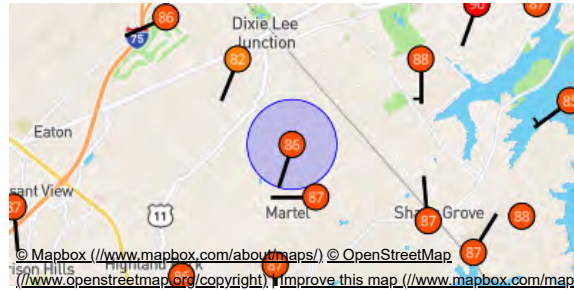
60 %

PRECIP ACCUM

0.00 in

UV

7



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lat=35.836498&lon=-84.218452&zoom=13&tl.play=0&tl.spd=2&groupSevere=1&groupHurrica

PWS CURRENT CONDITIONS

TEMPERATURE



WIND



PRESSURE



CURRENT
86°

DEWPOINT
70.2 °F

HUMIDITY
60 %



WIND FROM
S

GUST
1.1 mph

CURRENT
29.85 In



PRECIP RATE
0.00 in/hr
PRECIP TOTAL
0.00 in



CURRENT UV
7
UV RISK



CURRENT
668.90 watts/m²

Weather History for KTNLENOI28

Monthly Mode

July

2023

View

Next

Previous
Summary
July 1, 2023 - July 31, 2023

	High	Low	Average
Temperature	129.0 °F	-40.0 °F	75.1 °F
Dew Point	90.0 °F	-39.5 °F	70.5 °F
Humidity	99 %	44 %	87 %
Precipitation	1.16 in	--	--

	High	Low	Average
Wind Speed	7.6 mph	0.0 mph	0.5 mph
Wind Gust	13.7 mph	--	0.8 mph
Wind Direction	--	--	South
Pressure	30.51 in	28.81 in	--

Graph

Table

July 1, 2023 - July 31, 2023

Date	Temperature			Dew Point			Humidity			Speed			Pressure		Precip. Accum.
	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Low	Sum
7/1/2023	100.0 °F	77.6 °F	52.3 °F	90.0 °F	73.6 °F	52.2 °F	99 %	89 %	60 %	7.6 mph	0.6 mph	0.0 mph	29.88 in	29.76 in	0.04 in
7/2/2023	86.5 °F	74.8 °F	65.8 °F	79.5 °F	71.1 °F	65.7 °F	99 %	89 %	72 %	6.0 mph	0.6 mph	0.0 mph	29.83 in	29.70 in	0.00 in
7/3/2023	87.4 °F	77.0 °F	69.8 °F	80.6 °F	73.0 °F	66.9 °F	97 %	88 %	68 %	7.6 mph	0.8 mph	0.0 mph	29.85 in	29.76 in	0.05 in
7/4/2023	86.0 °F	75.1 °F	70.9 °F	79.2 °F	72.7 °F	69.4 °F	99 %	93 %	65 %	4.0 mph	0.3 mph	0.0 mph	29.91 in	29.85 in	0.11 in
7/5/2023	84.0 °F	73.7 °F	68.5 °F	76.1 °F	71.0 °F	68.4 °F	99 %	92 %	68 %	4.5 mph	0.3 mph	0.0 mph	29.92 in	28.81 in	0.54 in
7/6/2023	85.1 °F	74.6 °F	68.7 °F	81.9 °F	72.6 °F	68.5 °F	99 %	93 %	73 %	4.0 mph	0.4 mph	0.0 mph	29.85 in	29.38 in	0.03 in
7/7/2023	89.1 °F	77.6 °F	69.6 °F	77.9 °F	72.1 °F	69.4 °F	99 %	85 %	56 %	4.0 mph	0.4 mph	0.0 mph	29.79 in	29.70 in	0.00 in
7/8/2023	88.9 °F	76.4 °F	56.1 °F	78.1 °F	71.5 °F	55.9 °F	99 %	86 %	60 %	5.6 mph	0.5 mph	0.0 mph	30.51 in	29.64 in	0.17 in
7/9/2023	129.0 °F	73.6 °F	48.0 °F	89.6 °F	70.9 °F	47.8 °F	99 %	94 %	72 %	3.6 mph	0.2 mph	0.0 mph	29.76 in	29.69 in	0.22 in
7/10/2023	84.2 °F	73.3 °F	-40.0 °F	83.3 °F	65.6 °F	-39.5 °F	99 %	78 %	44 %	5.8 mph	0.6 mph	0.0 mph	29.81 in	29.73 in	0.00 in

Date	Temperature			Dew Point			Humidity			Speed			Pressure		Precip. Accum.
	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Low	Sum
7/11/2023	114.8 °F	74.5 °F	44.2 °F	90.0 °F	65.2 °F	44.1 °F	99 %	76 %	49 %	5.4 mph	0.4 mph	0.0 mph	29.87 in	29.81 in	0.00 in
7/12/2023	111.4 °F	73.1 °F	47.5 °F	90.0 °F	67.1 °F	47.3 °F	99 %	85 %	57 %	6.9 mph	0.6 mph	0.0 mph	29.89 in	29.84 in	0.00 in

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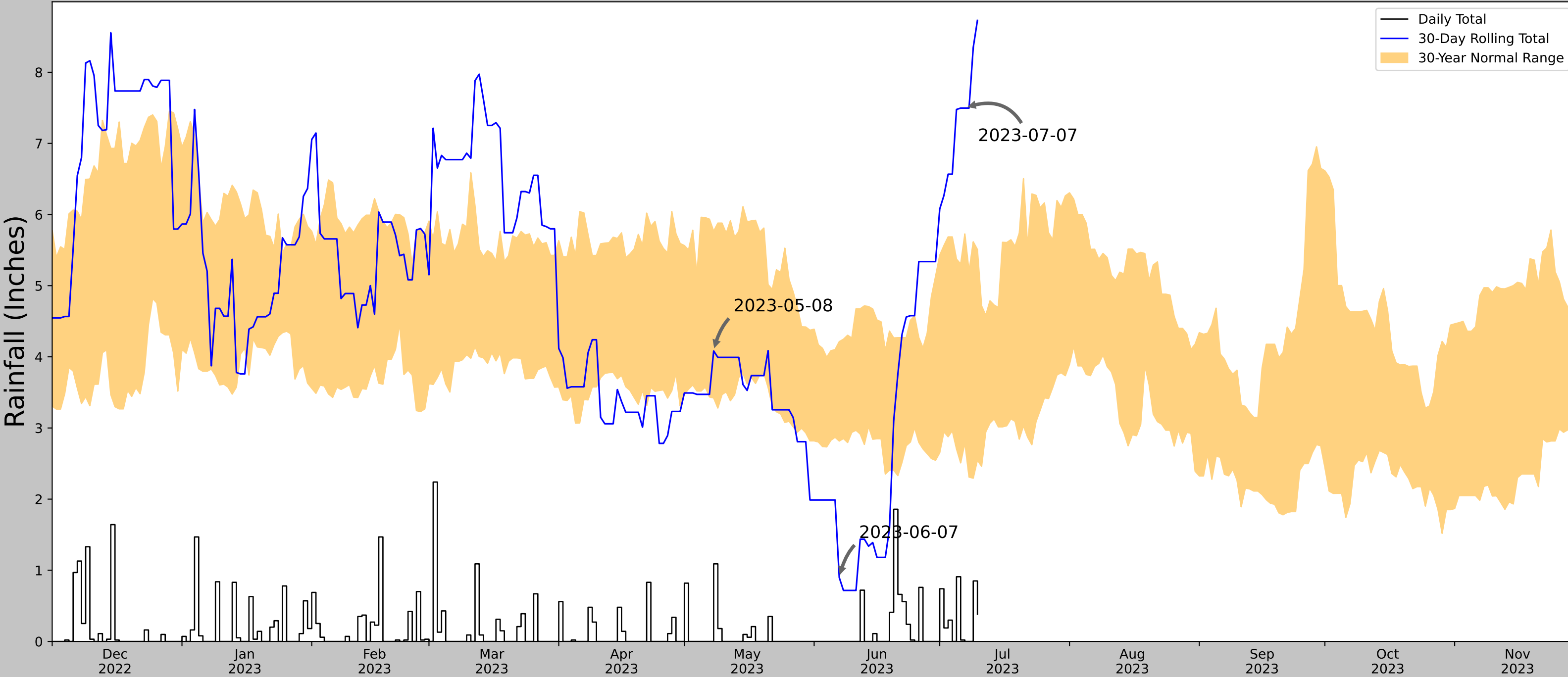
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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	35.840780, -84.187889
Observation Date	2023-07-07
Elevation (ft)	847.806
Drought Index (PDSI)	Normal (2023-06)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-07-07	2.790945	5.727559	7.496063	Wet	3	3	9
2023-06-07	2.816536	4.213386	0.897638	Dry	1	2	2
2023-05-08	3.422047	5.765748	4.082677	Normal	2	1	2
Result							Normal Conditions - 13



Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
LENOIR CITY	35.7875, -84.2622	785.105	5.558	62.701	2.849	10803	71
LOUDON 5.3 E	35.749, -84.265	855.971	2.665	70.866	1.388	2	19
LENOIR CITY 3.1 NE	35.8266, -84.2251	855.971	3.409	70.866	1.776	16	0
FRIENDSVILLE 3.6 NW	35.7998, -84.168	859.908	5.347	74.803	2.806	384	0
FRIENDSVILLE 4.6 NE	35.8113, -84.0839	928.15	10.126	143.045	6.005	35	0
OLIVER SPRINGS 5.6 SW	35.9695, -84.3855	839.895	14.345	54.79	7.241	1	0
KINGSTON	35.8572, -84.5281	813.976	15.656	28.871	7.497	108	0
OAK RIDGE ASOS	36.0231, -84.2336	899.934	16.357	114.829	9.239	4	0



Threatened and Endangered Species Report
McFee Road Property
Farragut, Knox County, Tennessee
S&ME Project No. 23430267

PREPARED FOR:

Cannon & Cannon, Inc.
8550 Kingston Pike
Knoxville, Tennessee 37919

PREPARED BY:

S&ME, Inc.
6515 Nightingale Lane
Knoxville, Tennessee 37909

July 19, 2023



July 19, 2023

U.S. Fish and Wildlife Service, Cookeville Field Office
446 Neal Street
Cookeville, TN 38501
Attention: Mr. Robbie Sykes

Tennessee Wildlife Resources Agency
P.O. Box 40747
Nashville, Tennessee 37204
Attention: Mr. Bobby Brown

Tennessee Department of Environment & Conservation
Division of Natural Areas
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, Tennessee 37243
Attention: Mr. Dillon Blankenship

Reference: **Threatened and Endangered Species Report**
McFee Road Property
Farragut, Knox County, Tennessee
S&ME Project No. 23430267

Dear Robbie, Bobby, and Dillon,

S&ME, Inc. (S&ME) is submitting this report to present the results of the threatened and endangered (T&E) species review completed by S&ME in July 2023 at the referenced site. The Town of Farragut (Town) is considering the acquisition of 70 acres of undeveloped land with the Town limits located southwest of McFee Road and northwest of Boyds Station Road in Knox County, Tennessee. Planned uses are not yet determined; however, a variety of public recreational uses are anticipated.

The Endangered Species Act of 1973 (ESA) mandates all federal departments and agencies to conserve listed species and to utilize their authorities in furtherance of the purposes of the ESA. If a U.S. Army Corps of Engineers (USACE) Section 404 permit is required for impacts to waters of the U.S., consultation with the U.S. Fish and Wildlife Service (USFWS) is required; consultation with Tennessee Wildlife Resources Agency (TWRA) and the TDEC Division of Natural Areas (DNA) may also be required if the project will occur in known or likely habitat of state- or federally-listed species.

S&ME is providing this T&E Species Report for your review and requests that the USFWS, TWRA, and DNA provide a letter of comments/concurrence at your earliest convenience. If you have any questions regarding this report, please feel free to contact us.

Sincerely,

S&ME, Inc.

A handwritten signature in cursive script, reading "Sarah A. Rowe".

Sarah A. Rowe, PWS, QHP
Project Scientist

A handwritten signature in cursive script, reading "Elizabeth M. Porter".

Elizabeth M. Porter, PG
Technical Principal/Vice President



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2.0 Literature and Database Review1

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- Figure 1 - USGS Topographic Quadrangle
- Figure 2 - Database Review
- Figure 3 - Photograph Locations and Habitat
- Figure 4 - Representative Photographs

Appendix - Species Lists

- USFWS IPaC Resource List
- TDEC DNA Concord Quadrangle Species Lists



1.0 Project Description

The subject property (the site) consists of approximately 70 acres comprised of portions of two parcels (162 02402 and 162 02403) located northwest of the McFee Road and Boyd Station Road intersection in Farragut, Knox County, Tennessee. The parcels currently belong to one owner, but the Town of Farragut (the Town) is considering purchasing the property for recreational uses. The site is comprised of mostly undeveloped forest and soybean fields, with a few single-standing barns near the southwestern corner of the property. The Town is currently performing due diligence activities on the site.

S&ME, Inc. (S&ME) is submitting this letter on behalf of Cannon & Cannon, Inc. (our client) and the Town requesting that the U.S. Fish and Wildlife Service (USFWS), Tennessee Wildlife Resources Agency (TWRA), and Tennessee Division of Natural Areas (TDNA) perform a review of the site with respect to the known presence of rare, threatened, or endangered (T&E) species. S&ME has performed a preliminary desktop review of potential T&E species that may exist at or near the site and performed a site visit to evaluate potential habitat conditions. The information collected by S&ME regarding potential protected species is described below.

2.0 Literature and Database Review

Prior to our site visit, S&ME performed a literature review of the site to determine potential areas of concern to be evaluated while in the field. This included a review of U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps, the TDEC 303(d) draft list and DWR Public Data Viewer, USFWS National Wetlands Inventory (NWI) maps, historic aerial photographs, the Natural Resources Conservation Service (NRCS) soil survey database, and Federal Emergency Management Agency (FEMA) flood maps.

The property is located on a portion of the USGS quadrangle map for Concord, Tennessee, and the general latitude and longitude of the site are 35.840054° and -84.187937°. According to the USGS Topographic Map (Figure 1) and the TDEC Public Data Viewer (Figure 2), one blue-line stream (a tributary to Little Turkey Creek and Fort Loudoun Lake/Reservoir) flows across the center of the site, flowing from northwest to southeast, exiting near the McFee Road/Boyd Station Road intersection. The TDEC Data Viewer indicates that the attainment for Little Turkey Creek is “not supporting” from sedimentation and alteration in streamside or littoral vegetative covers due to municipal/urbanized high-density areas and uses.

The NWI (Figure 2) shows the tributary as a palustrine emergent (PEM) wetland feature. The TDEC Data Viewer shows Little Turkey Creek as “not supporting” due to alteration in streamside vegetative covers and sedimentation/siltation resulting from municipal/urbanized high-density areas. No other surface waters are mapped on the USGS or NWI maps. Field verification by S&ME confirmed the presence of the Little Turkey Creek tributary as an ephemeral headwater as shown on the Aerial Photograph Map (Figure 3).

The site is in rolling topography with elevations ranging from approximately 840 feet to 940 feet above mean sea level. According to the USGS, the site is underlain by Ordovician Holston Formation and Lenoir Limestone. The entire site drains to the eight-digit Hydrologic Unit Code (HUC) Ft. Loudoun/Watts Bar (06010201) and the 12-

Threatened and Endangered Species Report

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267



digit HUC Turkey Creek (060102010208) watersheds. The site is also located within the Southern Limestone/Dolomite Valleys and Low Rolling Hills ecoregion (67f).

S&ME reviewed the USFWS online database (i.e., the Information, Planning, and Consultation (IPaC) decision support system) and the TDNA rare species by quadrangle (Concord) database to determine if T&E species, designated critical habitat, proposed critical habitat, Migratory Birds of Conservation Concern (MBCC), or other natural resources of concern may be affected by development activities at the site. As listed in Table 2-1 below, several federally- and state-protected species are listed within the vicinity of the project site; the USFWS IPaC indicates that no designated critical habitats are located within the project area. The species lists are included in the Appendix.

Table 2-1– Federal and State Protected Species List

Common Name	Scientific Name	Species Type	Protection Status
Gray Bat	<i>Myotis grisescens</i>	Mammal	Federal & State Endangered (E)
Indiana Bat	<i>Myotis sodalis</i>	Mammal	Federal Endangered (E)
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Mammal	Federal Endangered (E)
Tricolored Bat	<i>Perimyotis subflavus</i>	Mammal	Federal Proposed Endangered (PE)
Dromedary Pearlmussel	<i>Dromus dromas</i>	Mollusc	Federal Endangered (E)
Finerayed Pigtoe	<i>Fusconaia cuneolus</i>	Mollusc	Federal/State Endangered (E)
Orangefoot Pimpleback	<i>Plethobasus cooperianus</i>	Mollusc	Federal Endangered (E)
Tubercled Blossom	<i>Epioblasma torulosa torulosa</i>	Mollusc	Federal Endangered (E)
Anthony's Riversnail	<i>Atheurnia anthonyi</i>	Mollusc	Federal Experimental Population, Non-Essential (EXPN) and Federal/State Endangered (E)
Spiny Riversnail	<i>Io fluviatilis</i>	Mollusc	Rare, Not State-listed (R)
Monarch Butterfly	<i>Danaus plexippus</i>	Insect	Federal Candidate (C)
Hellbender	<i>Cryptobranchus alleganiensis</i>	Amphibian	State Endangered (E)
Blue Sucker	<i>Cycleptus elongatus</i>	Fish	State Threatened (T)
Flame Chub	<i>Hemitremia flammea</i>	Fish	State Deemed in Need of Management (D)
Whooping Crane	<i>Grus americana</i>	Bird	Experimental Population, Non-essential (EXPN)
Heron Rookery	<i>Not applicable</i>	Animal Assemblage	Rare, Not State-listed (R)

S&ME searched online sources (e.g., NatureServe (www.natureserve.org)) for information regarding the listed species in Table 2-1 to determine if they may be present at the site and if so, if site development may affect the



species. The findings of the species database review and the field review to identify potential habitat for listed species are detailed below.

3.0 Field Review

Two S&ME biologists visited the site on July 7, 2023, to evaluate the possible effects of development on potential T&E species and/or their habitat and to locate and delineate potentially jurisdictional surface waters. The site is bordered by McFee Road to the northeast, Boyd Station Road and the CSX Railroad to the southeast, agricultural fields to the west and northwest, and a residential subdivision to the north. The site is located within a primarily residential area of the Town; remaining agricultural lands are rapidly developing into residential subdivisions.

The project site is comprised of two distinctly different areas. The western half consists of soybean crops; multiple barns/sheds are also located on this portion of the site. During S&ME's site visit, one ephemeral stream was observed traversing the eastern half of the site. The eastern half of the site is forested and consists of a mixture of mature, deciduous hardwoods and dense areas of eastern red cedar (*Juniperus virginiana*). Tree species observed within the woods included southern red oak (*Quercus falcata*), chestnut oak (*Q. prinus*), black cherry (*Prunus serotina*), hackberry (*Celtis occidentalis*), dogwood (*Cornus florida*), elm (*Ulmus* spp.), shortleaf pine (*Pinus echinata*), green ash (*Fraxinus pennsylvanica*), tree of heaven (*Ailanthus altissima*), mimosa (*Albizia julibrissin*), and tulip poplar (*Liriodendron tulipifera*). Herbaceous species included poison ivy (*Toxicodendron radicans*), honeysuckle (*Lonicera sempervirens*), Virginia creeper (*Campsis radicans*), blackberry (*Rubus* sp.), greenbrier (*Smilax rotundifolia*), hedge parsley (*Torilis arvensis*), wingstem (*Verbesina alternifolia*), Japanese stiltgrass (*Microstegium vivineum*), and black snakeroot (*Sanicula odorata*).

The findings of the field habitat survey and the potential for listed T&E species are detailed below. An aerial photograph showing photograph locations is included (Figure 3); representative photographs are also attached (Figure 4).

Mammals

Gray Bat: The gray bat is the largest member of *Myotis* weighing between seven and 16 grams and is distinguished from other bats by the dark gray fur on the back. After the gray bat molts in July or August, the dark gray fur often bleaches to a chestnut brown or russet. Additionally, the bat's wing membrane connects to its ankle instead of at the toe as in other species of *Myotis*. The gray bat lives in caves year-round with rare exceptions; they do not inhabit abandoned barns, attics, or other structures as do other bat species. During the winter, the gray bat hibernates in deep vertical caves; in summer it roosts in caves that are typically scattered along rivers in limestone karst areas, feeding on flying aquatic and terrestrial insects. Females give birth to a single pup in late May or early June. **Based on our observations and data review, no caves exist within the project vicinity. It is unlikely that the gray bats occur within or in vicinity of the site, and S&ME expects no effect to this species by potential development.**

Indiana Bat: The Indiana bat has a wingspan of about nine to 11 inches and fur that is dark-brown to black. During winter, the bat species hibernate in humid caves or other similar structures (e.g., abandoned mines) that provide stable temperatures between 32° Fahrenheit (F) and 50° F. After hibernation, they migrate to their summer habitat in wooded areas where they usually roost under the loose tree bark of dead or dying trees. During

Threatened and Endangered Species Report

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267



summer, males roost alone or in small groups, while females roost in larger groups of up to 100 bats or more. They also forage in or along the edges of forested areas. Based on current USFWS guidance, potential roosting habitat for the Indiana bat includes live or dead trees with loose or exfoliating bark with a diameter at breast height (DBH) greater than five inches.

The wooded eastern portion of the property possesses trees larger than five-inch DBH, and some of the trees possess exfoliating bark, crevices, and/or open cavities. According to the USFWS August 22, 2022 Indiana Bat Sites in Tennessee map, the site is not located within the vicinity of known IBat habitat. **Since the extent of site development and subsequent tree removal is not known, a determination for effects to the Indiana bat cannot be provided at this time. A presence/absence survey for Indiana bat may be necessary to determine effects to this species once the extent of tree clearing of potential roosting trees is known. Winter clearing of potential roosting habitat may also be utilized to reduce inadvertent effects to Indiana bat.**

Northern Long-eared Bat: The northern long-eared (NLEB) has a wingspan of about nine to 10 inches and fur that is medium to dark brown on the back and tawny to pale-brown on the underside. Similar to the Indiana bat, during winter, NLEBs hibernate in humid caves or other similar structures that provide stable temperatures between 32° F and 50° F. After hibernation, they migrate to their summer habitat in wooded areas where they usually roost under the loose tree bark of dead or dying trees or in small crevices. During summer, males roost alone or in small groups, while females roost in larger groups of up to 100 bats or more. They also forage in or along the edges of forested areas. In general, NLEB use a variety of structures for roosting habitat, such as live and dead trees with cracked and exfoliating bark, broken limbs, cavities, and also man-made structures. However, they more often roost in crevices or cavities of trees than under exfoliating bark. Based on current USFWS guidance, suitable roosting habitat for NLEB includes trees with a DBH greater than or equal to three inches.

The wooded eastern portion of the property possesses trees larger than three-inch DBH, and some of the trees possess exfoliating bark, crevices, and/or open cavities. **Since the extent of site development and subsequent tree removal is not known, a determination for effects to the NLEB cannot be provided at this time. A presence/absence survey for NLEB may be necessary to determine effects to this species once the extent of tree clearing of potential roosting trees is known. Winter clearing of potential roosting habitat may also be utilized to reduce inadvertent effects to NLEB.**

Tricolored Bat: The tricolored bat, formerly known as the eastern pipistrelle, is a small bat weighing five to eight grams with a wingspan of eight to ten inches. The bat has a yellowish-brown coat that is dark at the base, yellowish-brown in the middle, and dark at the tips. The wing membranes are blackish, but the face and ears have a pinkish color. The bat also has relatively large feet compared to its body size and pink skin on the radius bone. This species spends winters hibernating in caves or mines and summers in buildings, tree cavities, and rock crevices; it forages along forest edges and over ponds and waterways for small insects. They are often the first to hibernate each fall and the last to emerge in the spring due to their intolerance to freezing temperatures.

The wooded eastern portion of the property possesses trees larger than three-inch DBH, and some of the trees possess exfoliating bark, crevices, and/or open cavities. **However, since this species is only proposed endangered at this time and is not yet listed, we understand there are presently no Section 7 requirements for this species. Winter clearing of potential roosting habitat may also be utilized to reduce inadvertent effects to tricolored bat.**



Clam/Molluscs

Dromedary Pearlymussel: The dromedary pearlymussel is a freshwater mussel in the Unionidae family native to the Cumberland and Tennessee River systems in Tennessee and Virginia. It is yellow-green in color with interrupted green rays on the shell. It has a white, pink, or reddish nacre and has a distinctive hump on the shell of larger individuals. Its preferred habitat is clean, fast-flowing water in substrates that contain relatively firm rubble, gravel, and stable, clean substrates. It is usually found in riffles occurring at shoals with sand and gravel and moderate current velocities, but can also be found in deeper, slower moving water in Tennessee. **Suitable habitat for dromedary pearlymussel is not present at the site, and S&ME expects no effect to this species by site development.**

Finerayed Pigtoe: The finerayed pigtoe is a freshwater mussel in the Unionidae family native to Tennessee, Alabama, and Virginia. It has a medium-sized shell that is yellow-green to light brown with numerous fine green rays. Its preferred habitat is in relatively silt-free substrates of sand, gravel, and cobble shoals of streams and rivers. **Suitable habitat for finerayed pigtoe is not present at the site, and S&ME expects no effect to this species by site development.**

Orangefoot Pimpleback: The orangefoot pimpleback is a freshwater mussel in the Unionidae family native to the Tennessee, Cumberland, and lower Ohio Rivers. It is rounded in shape, grows up to four inches long, and has bumps on the posterior part of the shell; the foot is orange in live specimens. Its preferred habitat is clean, fast-flowing water in silt-free rubble, gravel, or sand of medium to large rivers. It buries itself in sand or gravel in water as deep as 29 feet, so that only the edge of its shell and its feeding siphons are exposed. **Suitable habitat for orangefoot pimpleback is not present at the site, and S&ME expects no effect to this species by site development.**

Tubercled Blossom: The tubercled blossom is a freshwater mussel in the Unionidae family native to Tennessee, Alabama, and West Virginia. The last individual collected was a freshly dead one found in West Virginia in 1969; there have been no sightings since, and this species may be extinct. This mussel is found in large rivers, in shallow sand and gravel shoals with rapid current. **Suitable habitat for tubercled blossom is not present at the site, and S&ME expects no effect to this species by site development.**

Anthony's Riversnail: Anthony's riversnail is a freshwater snail in the Pleuroceridae family that is native to the Tennessee River system and presently known from the extreme lower sections of only four streams (i.e., the Sequatchie and Little Sequatchie Rivers, Limestone Creek, and the Tennessee River). It has a rhomboidly ovate shell covered with an olivaceous-yellowish epidermis with two purplish bands encircling the body whorl. The body whorl is shouldered by a series of large, obtuse, and irregular tubercles, with a stained purple columellar lip above and below. Its preferred habitat appears to be larger rivers, but lower stretches of large creeks are also inhabited. It is usually found on cobble/boulder substrates in the vicinity of riffles in strongly flowing sections. **Suitable habitat for Anthony's riversnail is not present at the site, and S&ME expects no effect to this species by site development.**

Spiny Riversnail: The spiny riversnail is a species of freshwater snail in the Pleuroceridae family, native to the Tennessee River system. It is highly variable in regard to shell morphology, but typically possesses a thick, spiny shell with a tapered, elevated spire. The whorls are somewhat convex to inflated, sutures are not impressed, and the body whorl is sculptured by wrinkled growth lines and marked by a series of spines the middle of the whorl.



The periostracum is olive green to brown. Preferred habitat includes large rocks and bedrock outcrops in well-oxygenated, shallow water with fast current. **Suitable habitat for spiny riversnail is not present at the site, and S&ME expects *no effect* to this species by site development.**

Insects

Monarch Butterfly: The monarch butterfly is a species of insect in the Nymphalidae family that ranges from North and South America and the Caribbean to Australia, New Zealand, oceanic islands of the Pacific, and Western Europe. The American population ranges from southern Canada through northern South America. Both male and female monarchs are bright orange with black borders and black veins; the veins on the female are thicker than those of the male, and male monarchs also have a swollen pouch on both of their hind wings. The wingspan ranges from 3.5 to 4.0 inches, and there are two series of small white spots in the margins. Monarchs are poisonous to vertebrates, and the poison comes from the milkweed they feed on. This species is frost intolerant, and their range of breeding habitat is greatly dependent upon the presence of asclepiad flora (milkweeds). Overwintering populations found in Mexico, California, Florida, and Arizona require dense tree cover, access to streams, and plenty of sunlight. Breeding habitat in the States includes agricultural fields, pastureland, prairie remnants, urban and suburban residential areas, gardens, trees, and roadsides. **Habitat for monarch butterfly exists within portions of the site. However, since this species is only considered a candidate species and is not yet listed or proposed to be listed, we understand there are presently no Section 7 requirements for this species.**

Amphibians

Hellbender: The hellbender salamander is a species of aquatic giant salamander native to eastern North America. It is much larger than all other salamanders in its geographic range and has a flat body and head with dorsal eyes and slimy skin. It has working lungs, but gill slits are often retained, even after maturity. Oxygen is absorbed from the water through capillaries of its side fills. It is blotchy brown or red-brown in color, with a pale underbelly. Habitat includes swift creeks and rivers, with intermittent rocks and boulders and swiftly moving water. **Suitable habitat for hellbender is not present at the site, and S&ME expects *no effect* to this species by site development.**

Fish

Blue Sucker: The blue sucker is a freshwater species of fish in the Catostomidae (i.e., sucker) family that is native to the Mississippi River basin north to Minnesota and Wisconsin, the Missouri River drainage to North Dakota and Montana, and the Gulf drainage from the Sabine River to the Rio Grande. It has an average length of 2.5 feet and is light steel-gray to jet black. It has an inferior mouth and a small/slender head that tapers to a fleshy snout. Habitat includes the largest rivers and lower parts of major tributaries. It occurs in channels and flowing pools with moderate current and moves upstream to spawn on riffles with cobble and bedrock substrate. **Suitable habitat for blue sucker is not present at the site, and S&ME expects *no effect* to this species by site development.**

Flame Chub: The flame chub is the only member of the genus *Hemitremia*. It is a small, heavy-bodied minnow that grows to a length of three inches. It has a deep caudal peduncle and a slightly compressed body shape. The head and snout are short and blunt. Coloration of juveniles and small adults is olive green above and white below, with a pale band above the lateral stripe. During the breeding season, males develop bright red coloration



in several locations of the body; males will usually have some red coloration during the remainder of the year as well. The flame chub occurs only in cold, clear waters of springs and spring-fed streams. **Suitable habitat for flame chub is not present at the site, and S&ME expects no effect to this species by site development.**

Birds

Whooping Crane: The whooping crane, a member of the Gruidae family, is the tallest bird in North America and is native to the eastern U.S. They have long necks and legs, a stout and straight bill, and an overall slender body that widens to a plump “bustle” at the tail. In flight, the wings are broad, and the neck is fully extended. Adults are bright white with accents of red on the head; the legs, bill, and wingtips are black. Whooping cranes breed in shallow, grassy wetlands interspersed with grasslands or scattered evergreens and winter mainly in coastal marshes and estuaries. During migration they stop over on wide, shallow river flats. **Suitable habitat for whooping crane is not present at the site, and S&ME expects no effect to this species by site development.**

Heron Rookery: A heron rookery is a communal nesting ground for blue herons, consisting of anywhere from just a few nests to hundreds of nesting pairs in a relatively small area. In the rookery, each nest is typically independent, with parent birds caring for only their nestlings. However, the proximity of the adult birds allows for more protections, including predators being spotted more quickly, and the ability of multiple adult birds to defend the nesting area if necessary. Most rookeries are found in wetland areas or near large water bodies, in large trees or groups of trees. **No heron rookeries or other nesting areas were observed within the project vicinity; therefore, S&ME expects no effect to herons or their nesting behaviors by site development.**

4.0 Conclusion

S&ME completed a literature, database, and pedestrian review of the site in July 2023 and identified appropriate habitat for three forest-dwelling bat species (Indiana bat, NLEB, and tricolored bat) and the Monarch butterfly. Therefore, S&ME is requesting comments from USFWS, TWRA, and TDNA regarding known species occurrences in the site vicinity and if the presence of potential habitat warrants the need for a presence/absence survey of specific species included in this report.

S&ME appreciates the opportunity to assist you with your project. If you have any questions regarding this report, please call or email Sarah Rowe ((865)970-0003, srowe@smeinc.com).

5.0 References

NatureServe Explorer. 2023. NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available <https://explorer.natureserve.org/>. (Accessed: July 2023.)

Tennessee Department of Environment and Conservation Division of Natural Areas. 2023. Rare Species by Quadrangle [web application]. <https://dataviewers.tdec.tn.gov/dataviewers/f?p=9014:2:::> (Accessed: July 2023.)

United States Fish and Wildlife Service. 2023. Environmental Conservation Online System (ECOS) [web application]. <https://ecos.fws.gov/ecp/>. (Accessed: July 2023.)



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United States Fish and Wildlife Service. 2023. Information for Planning and Consultation [web application]. <https://ecos.fws.gov/ipac/>. (Accessed: July 2023.)

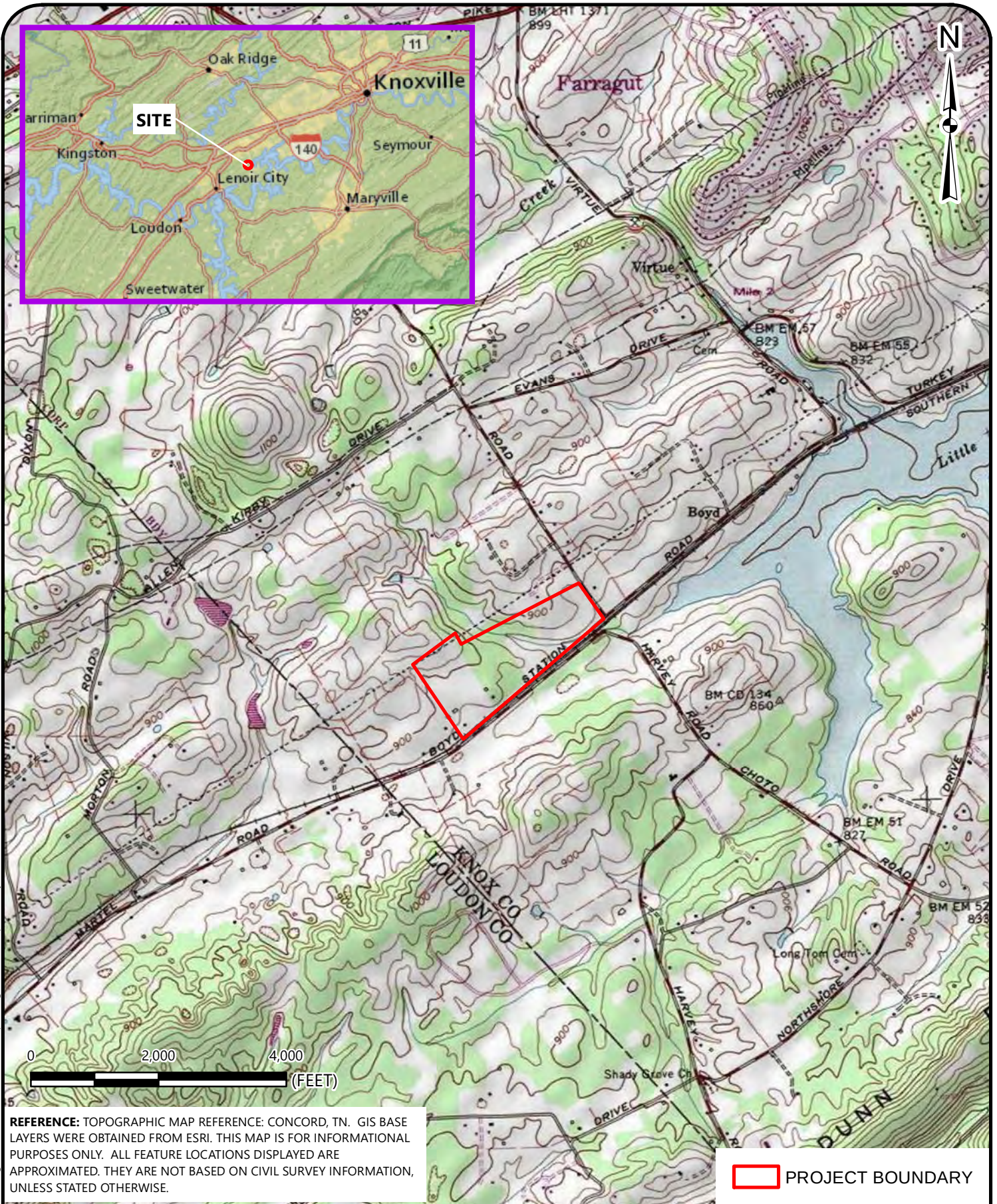
United States Fish and Wildlife Service. March 2023. Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines. U.S. Fish and Wildlife Service, Region 3, Bloomington, MN. 76 pp

United States Fish and Wildlife Service, Tennessee Ecological Services Field Office. 2023. Working with Bats in Tennessee. <https://www.fws.gov/cookeville/bats.html>.

United States Fish and Wildlife Service. Wildlife, Southeastern Mussels. August 22, 2018. <https://www.fws.gov/southeast/wildlife/mussels/>.

Figures

Drawing Path: C:\Users\srowe\Desktop\farragut\FIG1.mxd plotted by Srowe 06-27-2023



USGS TOPOGRAPHIC QUADRANGLE

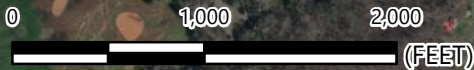
MCREE ROAD PROPERTY DUE DILIGENCE
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 2,000'
DATE:
6-27-23
PROJECT NUMBER
23430267

FIGURE NO.

1

Drawing Path: R:\GIS\Rer\knoxville north\gis projects\2023 Projects\23420267_McFee Rd Due Diligence_Farragut\FIG2_DATABASE.mxd plotted by Srowe 07-17-2023



REFERENCE: GIS BASE LAYERS WERE OBTAINED FROM ESRI. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

PROJECT BOUNDARY **NWI-LISTED WETLANDS**

TDEC STREAM DATABASE

ATTAINMENT

FULLY SUPPORTING

NOT ASSESSED

NOT SUPPORTING

WETLAND TYPE

EMERGENT (PEM)

FORESTED (PFO)/SCRUB-SHRUB (PSS)

OPEN-WATER POND

LAKE

RIVERINE



DATABASE REVIEW

MCREE ROAD PROPERTY DUE DILIGENCE
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1" = 1,000'

DATE:
7-12-23
PROJECT NUMBER
??????

FIGURE NO.

2

Drawing Path: R:\GISRef\Knoxville North\GIS PROJECTS\2023 Projects\23430267 McFee Rd Due Diligence Farragut\FIG3 T&E PHOTOS.mxd plotted by JRowe 07-19-2023

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

0 250 500
(FEET)

REFERENCE: GIS BASE LAYERS WERE OBTAINED FROM NEARMAP. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.



PHOTOGRAPH LOCATIONS & HABITAT

MC FEE ROAD PROPERTY
FARRAGUT, KNOX COUNTY, TENNESSEE

SCALE:
1 " = 250 '
DATE:
7-19-23
PROJECT NUMBER
23430267
FIGURE NO.

- ➔ PHOTOGRAPH LOCATIONS & DIRECTION
- EPHEMERAL STREAM
- POTENTIAL BAT ROOSTING HABITAT
- ▭ PROJECT BOUNDARY

Figure 4 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 1

		Date: 7/7/2023
Photographer: S. Rowe		
1	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Representative view of western half of property.

		Date: 7/7/2023
Photographer: S. Rowe		
2	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Soybean fields on the western half of the property.

Figure 4 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 2



		Date: 7/7/2023
		Photographer: S. Rowe
3	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Soybean fields and barns on the western half of the property.

		Date: 7/7/2023
		Photographer: S. Rowe
4	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Wooded edge of the property, facing northwest.

Figure 4 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 3



		Date: 7/7/2023
Photographer: S. Rowe		
5	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Wooded edge of the property, facing southeast.

		Date: 7/7/2023
Photographer: S. Rowe		
6	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Representative view of the mature woods onsite.

Figure 4 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 4



		Date: 7/7/2023
		Photographer: S. Rowe
7	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Representative view of the mature woods onsite.

		Date: 7/7/2023
		Photographer: S. Rowe
8	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Ephemeral stream that traverses the site.

Figure 4 – Representative Photographs

McFee Road Property

Farragut, Knox County, Tennessee

S&ME Project No. 23430267

Page 5



 A photograph showing a narrow, shallow stream flowing through a dense forest. The water is clear, and the surrounding vegetation is lush green, including many ferns and leafy plants. The stream bed is visible, covered with small rocks and fallen leaves.		Date: 7/7/2023
		Photographer: S. Rowe
9	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Ephemeral stream that traverses the site.

 A photograph of a dense forest thicket, identified as red cedar. The trees are tall and slender, with light-colored bark. The ground is covered in fallen leaves and branches, and the overall scene is a sun-dappled woodland.		Date: 7/7/2023
		Photographer: S. Rowe
10	Location / Orientation	Refer to Figure 3 – Photograph Locations and Habitat.
	Remarks	Representative view of the red cedar thicket on the eastern portion of the site.

Appendix - Species Lists

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Knox County, Tennessee



Local office

Tennessee Ecological Services Field Office

☎ (931) 528-6481

 (931) 528-7075

446 Neal Street
Cookeville, TN 38501-4027

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat <i>Myotis sodalis</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Birds

NAME	STATUS
Whooping Crane <i>Grus americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758	EXPN

Clams

NAME	STATUS
Dromedary Pearlymussel <i>Dromus dromas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6377	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3038	Endangered
Orangefoot Pimpleback (pearlymussel) <i>Plethobasus cooperianus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1132	Endangered
Tubercled Blossom (pearlymussel) <i>Epioblasma torulosa torulosa</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4126	Endangered

Snails

NAME	STATUS
Anthony's Riversnail <i>Athearnia anthonyi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4827	EXPN
Anthony's Riversnail <i>Athearnia anthonyi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4827	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the [Bald and Golden Eagle Protection Act](#) and the [Migratory Bird Treaty Act](#).

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

There are bald and/or golden eagles in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Aug 31

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

How is the probability of presence score calculated? The calculation is done in three steps:

- [illegible]

4/9

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 27 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20

Prairie Warbler *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

Prothonotary Warbler *Protonotaria citrea*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

Red-headed Woodpecker *Melanerpes erythrocephalus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Sep 10

Rusty Blackbird *Euphagus carolinus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Wood Thrush *Hylocichla mustelina*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

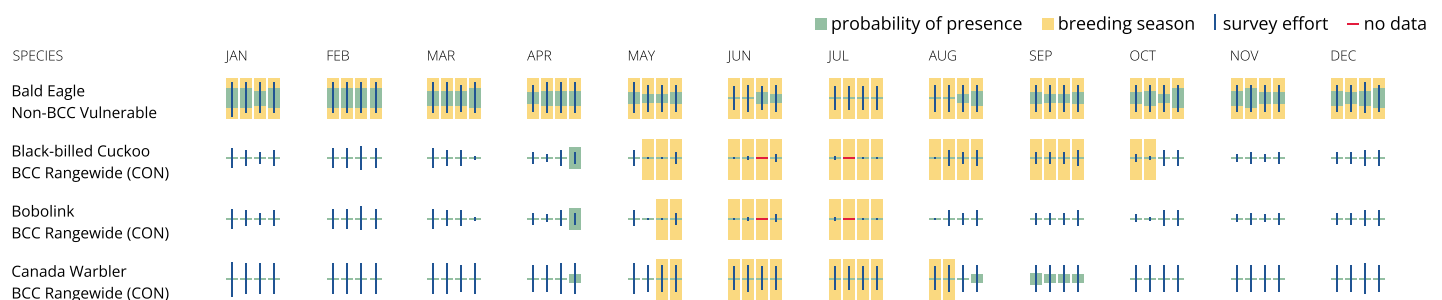
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

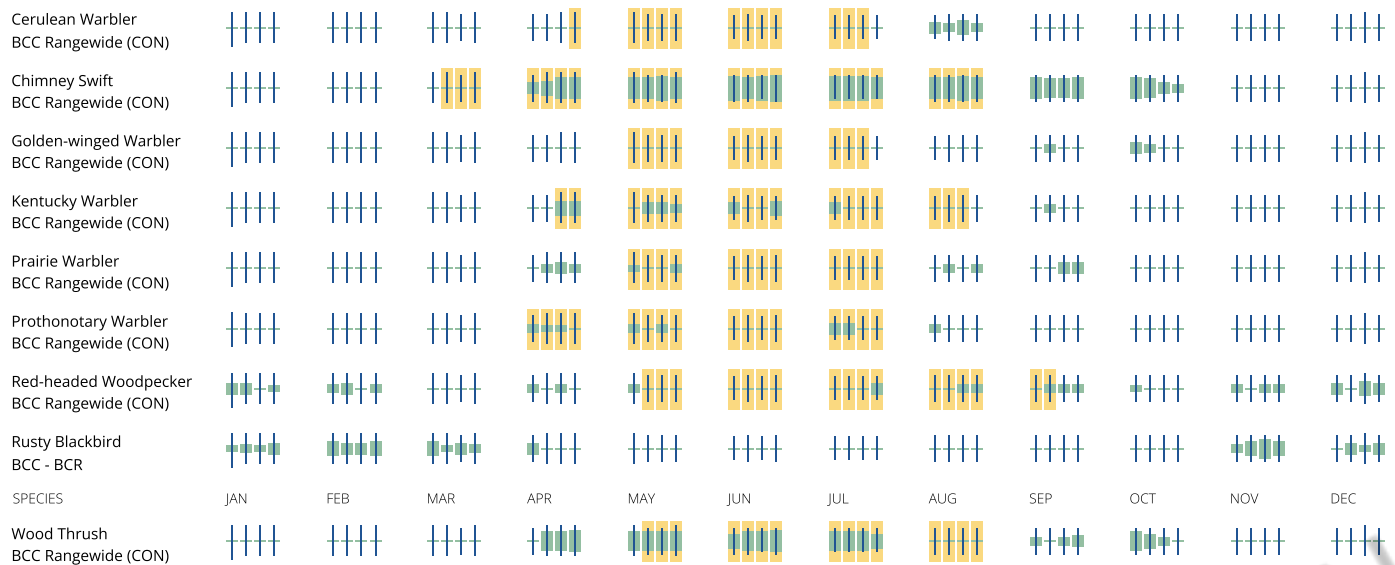
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1A](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION



Help • [Download Status and Ranks](#)

Key to Status and Ranks

Rare Species by USGS 1:24K Quadrangle

Data is refreshed on or around January and July each year.

Rows

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Quad Name	Quad ID	Type	Category	Scientific Name	Common Name	Global Rank	State Rank	Fed. Status	State Status	Habitat	Wet Habitat Flag
CONCORD	3508472	Vertebrate Animal	Amphibian	Cryptobranchus alleganiensis	Hellbender	G3	S3	--	E	Rocky, clear creeks and rivers with large shelter rocks.	Aquatic
CONCORD	3508472	Vertebrate Animal	Fish	Cycleptus elongatus	Blue Sucker	G3G4	S2	--	T	Swift waters over firm substrates in big rivers.	Aquatic
CONCORD	3508472	Invertebrate Animal	Mollusc	Athearnia anthonyi	Anthony's Riversnail	G1	S1	LE,XN	E	Larger rivers and downstream stretches of lg creeks, on cobble/boulder substrates adj. riffles; portions of upper TN River basin.	Aquatic
CONCORD	3508472	Invertebrate Animal	Mollusc	Fusconaia cuneolus	Finerayed Pigtoe	G1	S1	LE, XN	E	Riffles of fords and shoals of mod gradient streams in firm cobble and gravel substrates; middle & upper Tennessee River watershed.	Aquatic
CONCORD	3508472	Vertebrate Animal	Fish	Hemitremia flammea	Flame Chub	G3	S3	--	D	Springs and spring-fed streams with lush aquatic vegetation; Tennessee & middle Cumberland river watersheds.	Aquatic
CONCORD	3508472	Invertebrate Animal	Mollusc	Io fluviatilis	Spiny Riversnail	G1G2	S2	--	Rare, Not State Listed	Shallow waters of shoals that are rapid to moderate and well-oxygenated; Tennessee River & main tributaries; E Tennessee.	Aquatic
CONCORD	3508472	Animal Assemblage	No Data	Rookery	Heron Rookery	G5	SNR	--	Rare, Not State Listed	No Data	No Data

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If you have any questions or comments, Email ask.tdec@tn.gov or call at (888) 891-TDEC (8332).