

SITE MAPS

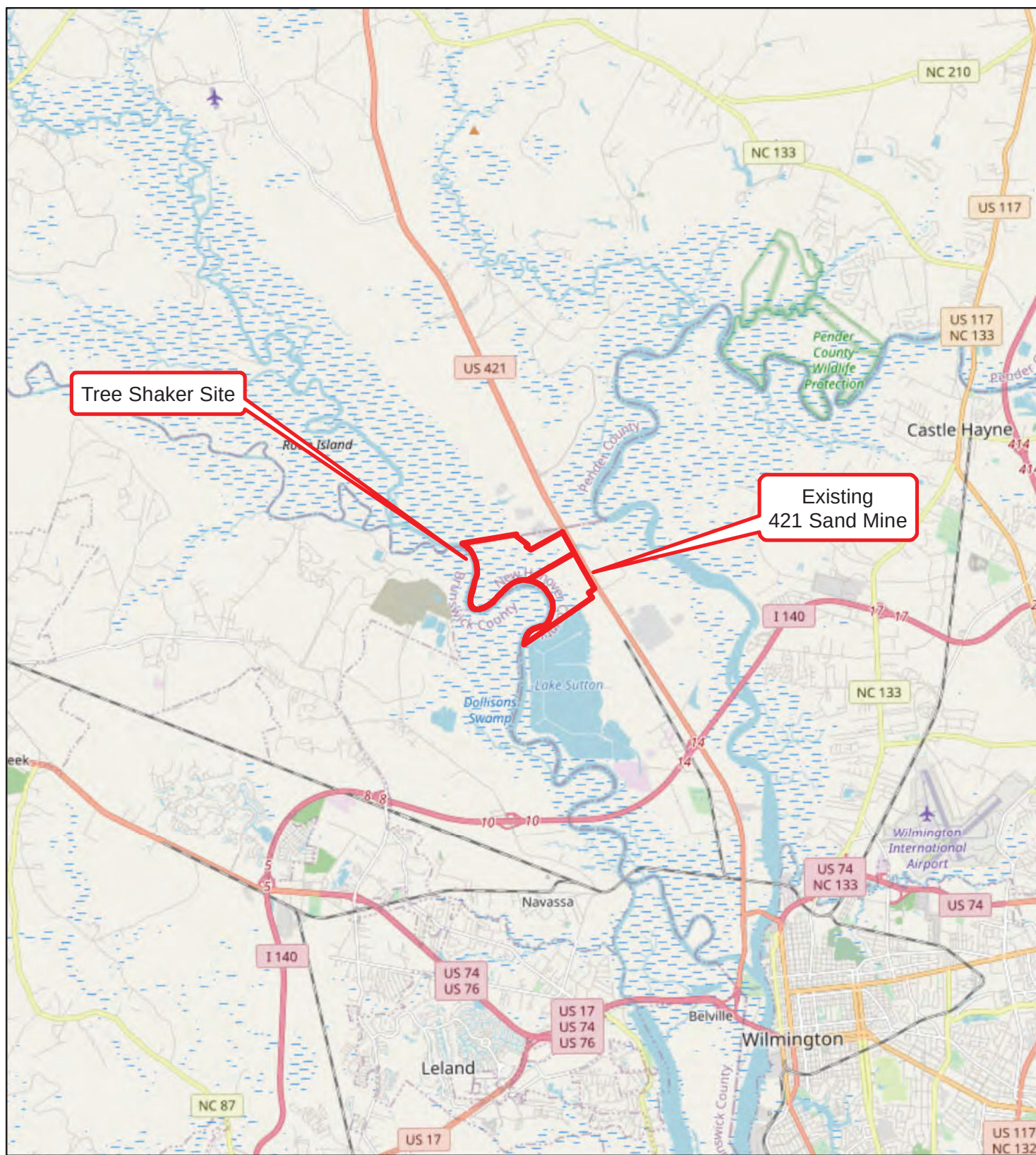
Figure 1. Vicinity Map

Figure 2. Topographic Map

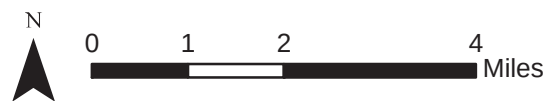
Figure 3. Soils Map

Figure 4. Aerial Photograph

Figure 5. Off-Site Alternatives



Boundaries are approximate and not meant to be absolute.
 Map Source: World Street Map

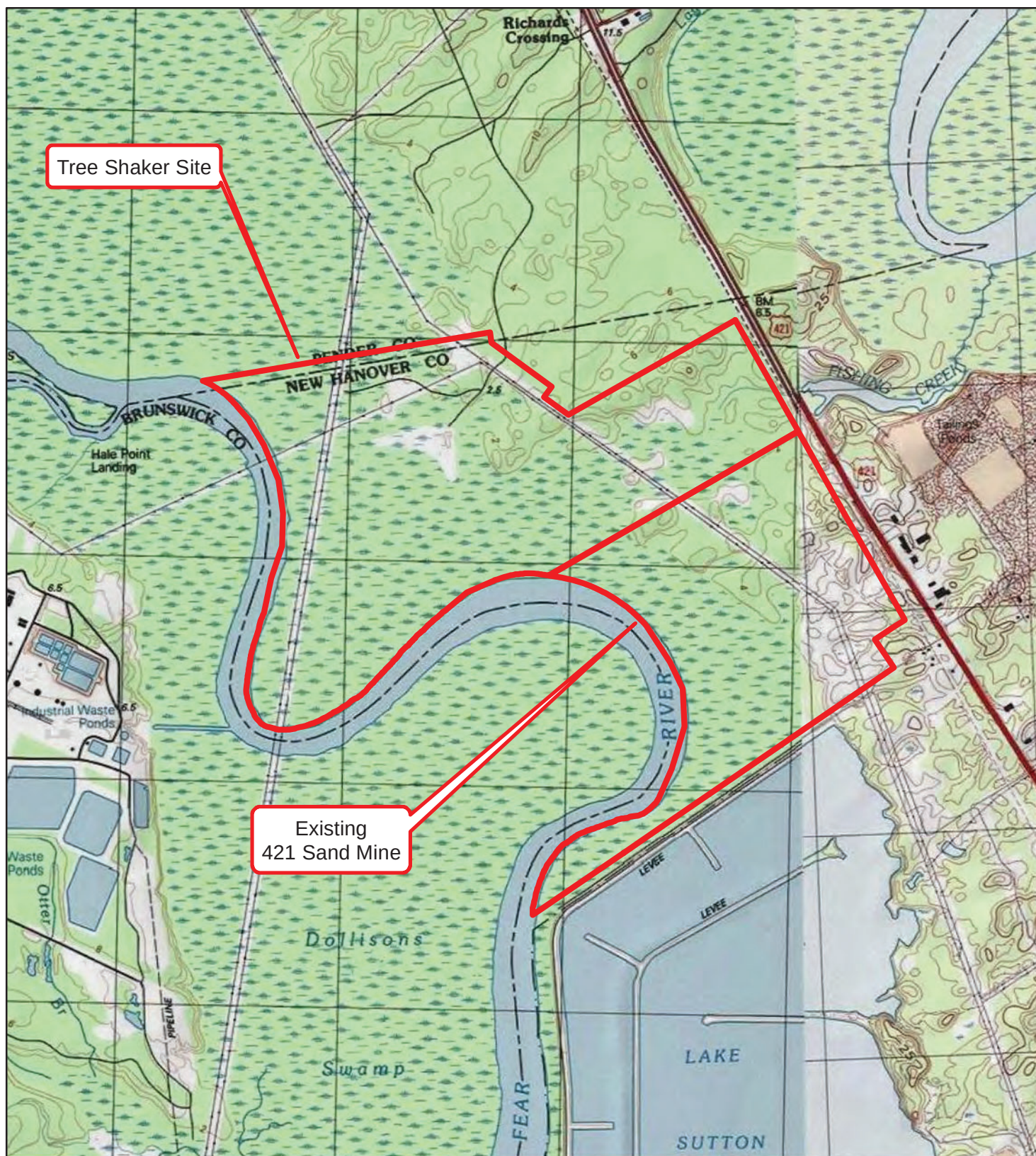


Tree Shaker Tract
 New Hanover County, NC

March 2023
 DRGNCW20.273

DAVEY 
Resource Group
 3805 Wrightsville Avenue
 Wilmington, NC 28403
 (910) 452-0001

Figure 1.
Vicinity Map



Boundaries are approximate and not meant to be absolute.

Map Source: USGS Topographic Map; Leland Castle Hayne uads



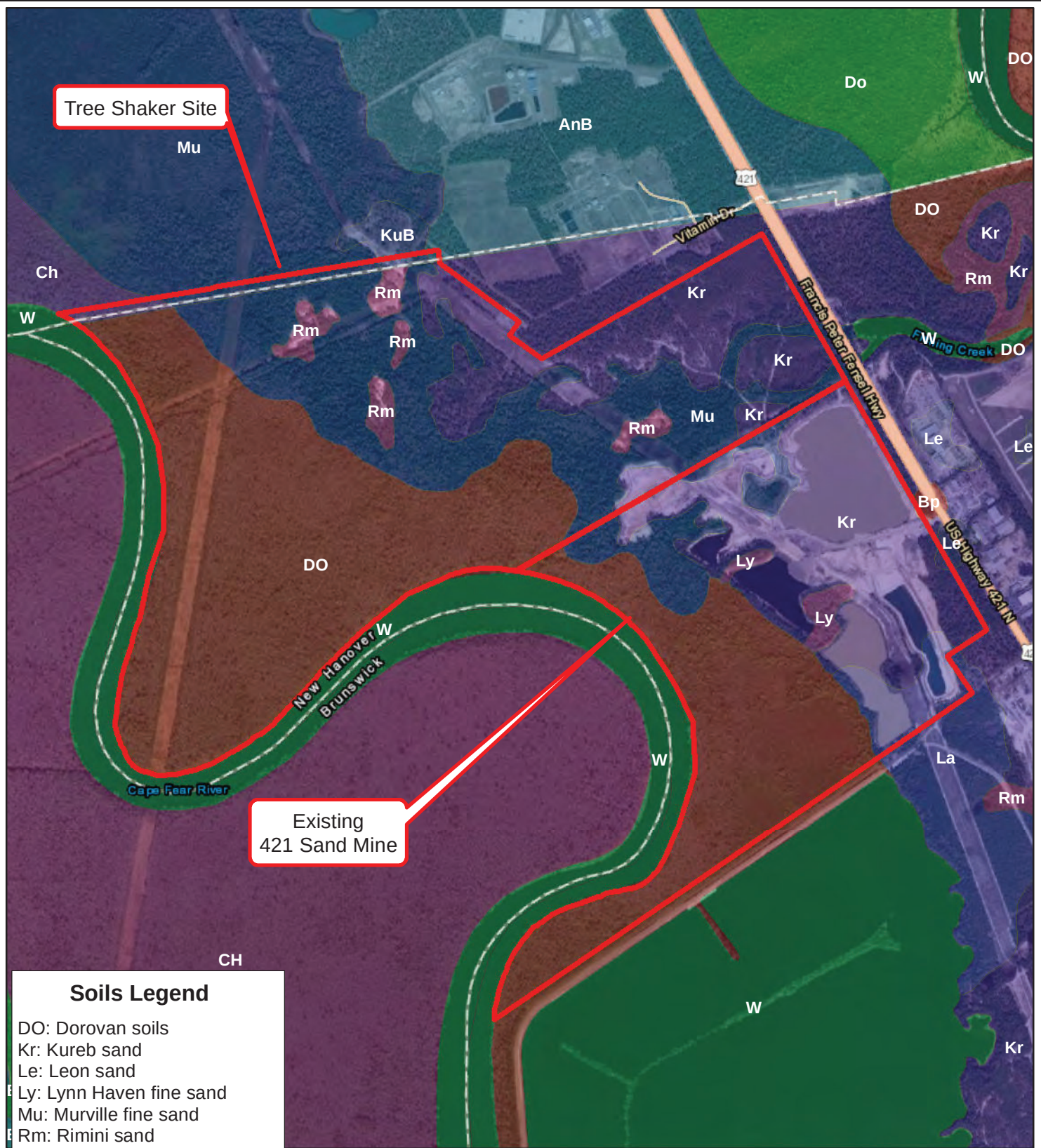
0 1,000 2,000 4,000 Feet

Tree Shaker Tract
New Hanover County, NC

March 2023
DRGNCW20.273

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Figure 2.
Topographic Map



Boundaries are approximate and not meant to be absolute.

Map Source: GIS Soils Data for New Hanover Co, Pender Co, and Brunswick Co.



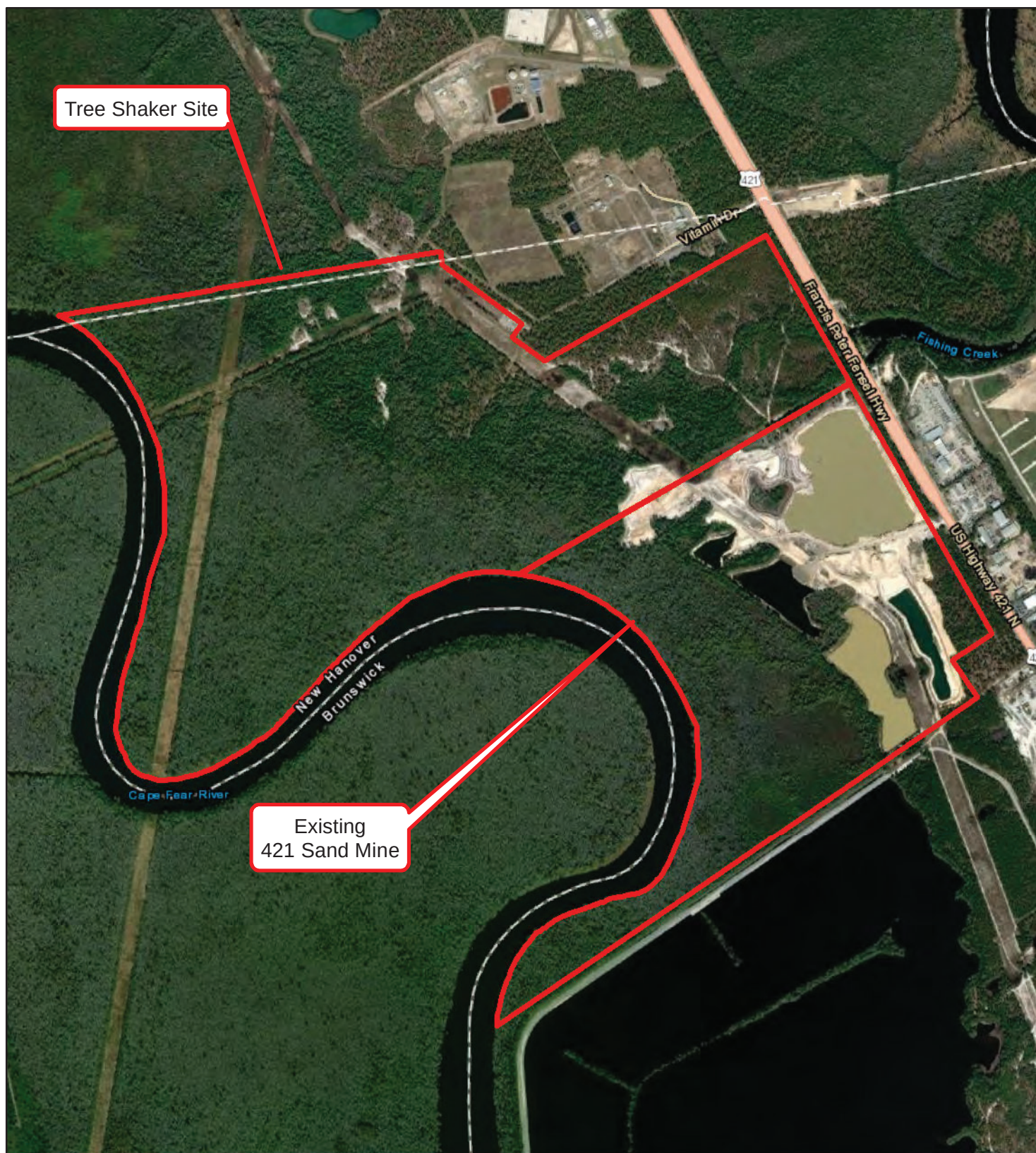
0 750 1,500 3,000 Feet

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Figure 3.
Soils Map



Boundaries are approximate and not meant to be absolute.

Map Source: 2020 NC OneMap Aerial



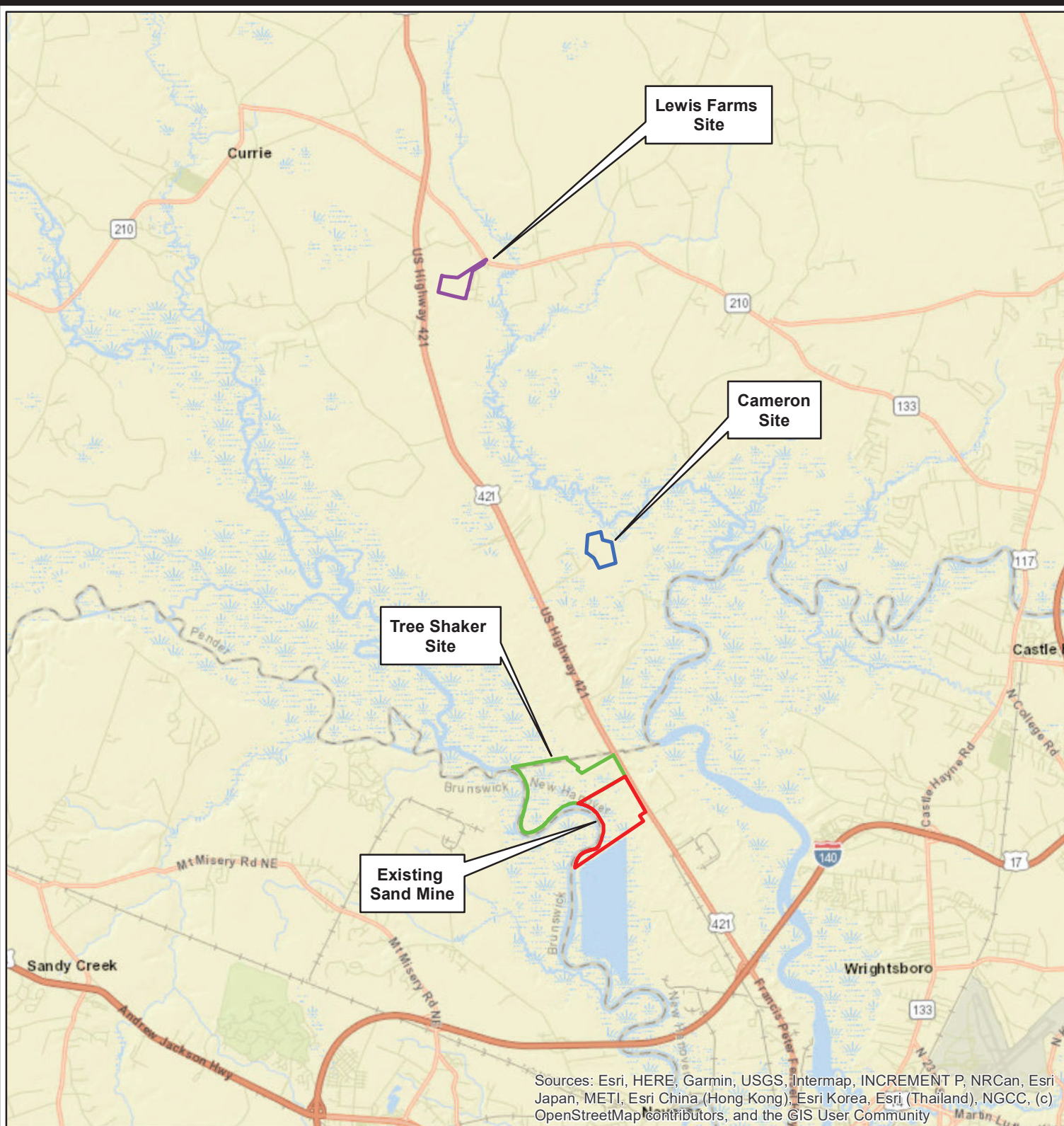
0 750 1,500 3,000 Feet

Tree Shaker Tract
New Hanover County, NC

March 2023
DRGNCW20.273

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Figure 4.
Aerial Photo



Boundaries are approximate and not meant to be absolute.

Map Source: World Street Map



0 1 2 4 Miles

Tree Shaker Tract
New Hanover County, NC

April 2023
DRGNCW20.273

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Resource Group

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(910) 452-0001

Figure 5.
Off-Site Alternatives

SITE PLAN DRAWINGS

Tree Shaker Site

Sheet 1. Overview of Parcel

Sheet 2. Existing Conditions Close Up

Sheet 3. Site Plan Showing Proposed Impacts

Sheet 4. Cross Section of Typical Pit

Sheet 5. Erosion Control Notes

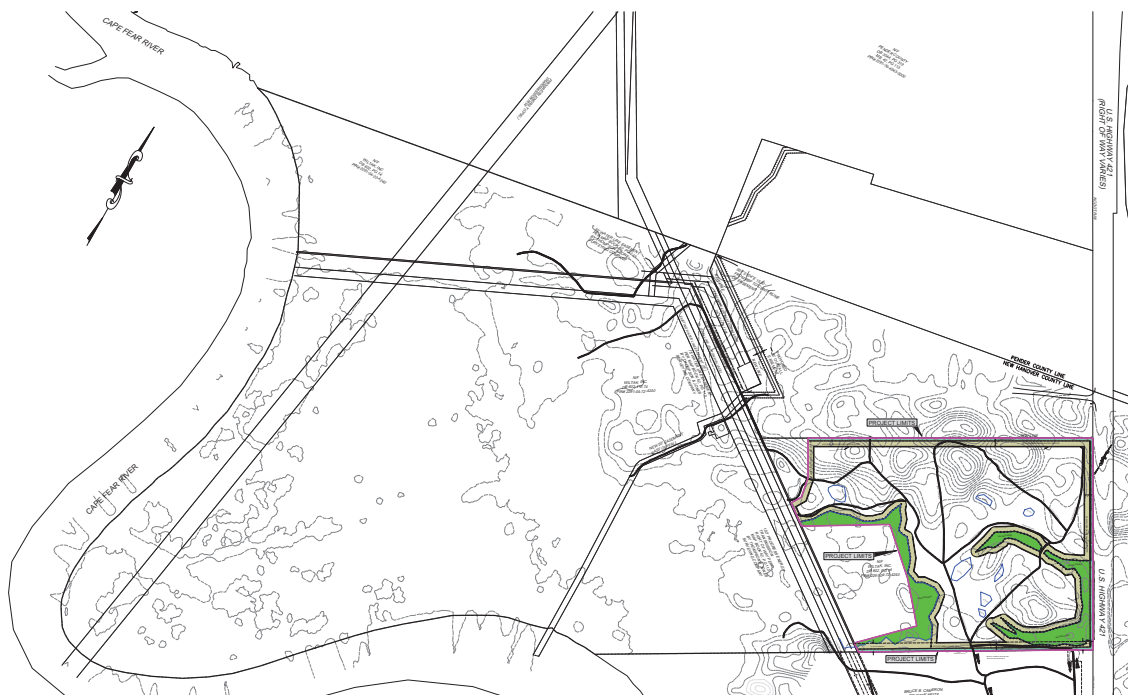
421 Sand Mine Site (After-the-Fact)

Sheet 6. Site Plan for 421 Sand Mine Showing Ditch Impacts

Sheet 6A. Close up of Ditch Impacts

On-Site Alternatives

Sheet 7. On-Site Alternative #2



- [illegible]

LEGEND

- = POWER POLE
- = DRAINAGE FLOW DIRECTION
- E.I.P. = EXISTING IRON PIPE
- E.I. = EXISTING IRON
- E.C.M. = EXISTING CONCRETE MONUMENT
- R.W. = RIGHT OF WAY
- C.P. = COMPUTED POINT
- EST = EXISTING SEDIMENT TRAP
- PROPERTY LINE
- PROPOSED SILT FENCE
- COMPUTED PROPERTY LINE

NOTES

1. AREA COMPUTED BY COORDINATE METHOD
2. ALL DISTANCES ARE HORIZONTAL
3. FOR REFERENCE SEE AS NOTED
4. SURVEYED JANUARY OF 2017

<i>Practical Standards and Specifications</i>	
Maintenance	Check and clean the water supply. Reassemble and repair original valves when uniform operation is shown on the design valves. Insulate, insulate placed above the tank and properly installed. Check the structure for erosion, piping, and any condition weekly and take such action(s) as may be required. Examine the structure and any equipment immediately after the construction site has been permanently abandoned. Remove the built site is listed with the surrounding area and utilities. All repair and performance should be retained from the time given to date received. Insurers should be placed in designated disposal areas and not allowed to drive into areas or through ways during stream removal.
References	<i>Revised Publications</i> 4.11. Temperature Sampling 4.12. Pumping Station 4.13. Sampling 4.14. Trench, Bore, Slurry, and Shallow Cuts <i>Revised Topics and Services</i> 4.15. Software Status 4.16. Process Analysis <i>Revised Conditions Department of Transportation</i> <i>Revised Specifications for Roads and Structures</i>

CATEGORY	AFFECTED ACREAGE
PROPOSED MINE	
HAUL ROADS	1.0
MINE EXCAVATION	60.6
DISTURBED UNEXCAVATED BUFFERS	14.5
25 FT. VEGETATIVE BUFFERS	3.6
WETLANDS VEGETATIVE BUFFERS	9.7
TOTAL	89.4

total: product assessed	
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NOTE:
THIS PLAN TO BE UTILIZED AND
REVIEWED ONLY IN CONJUNCTION
WITH THE WRITTEN NARRATIVE,
WHICH IS AN INTEGRAL PART OF
THIS MINING PLAN

PRELIMINARY PLAN



SITE PLAN OF TREE SHAKER SAND MINE

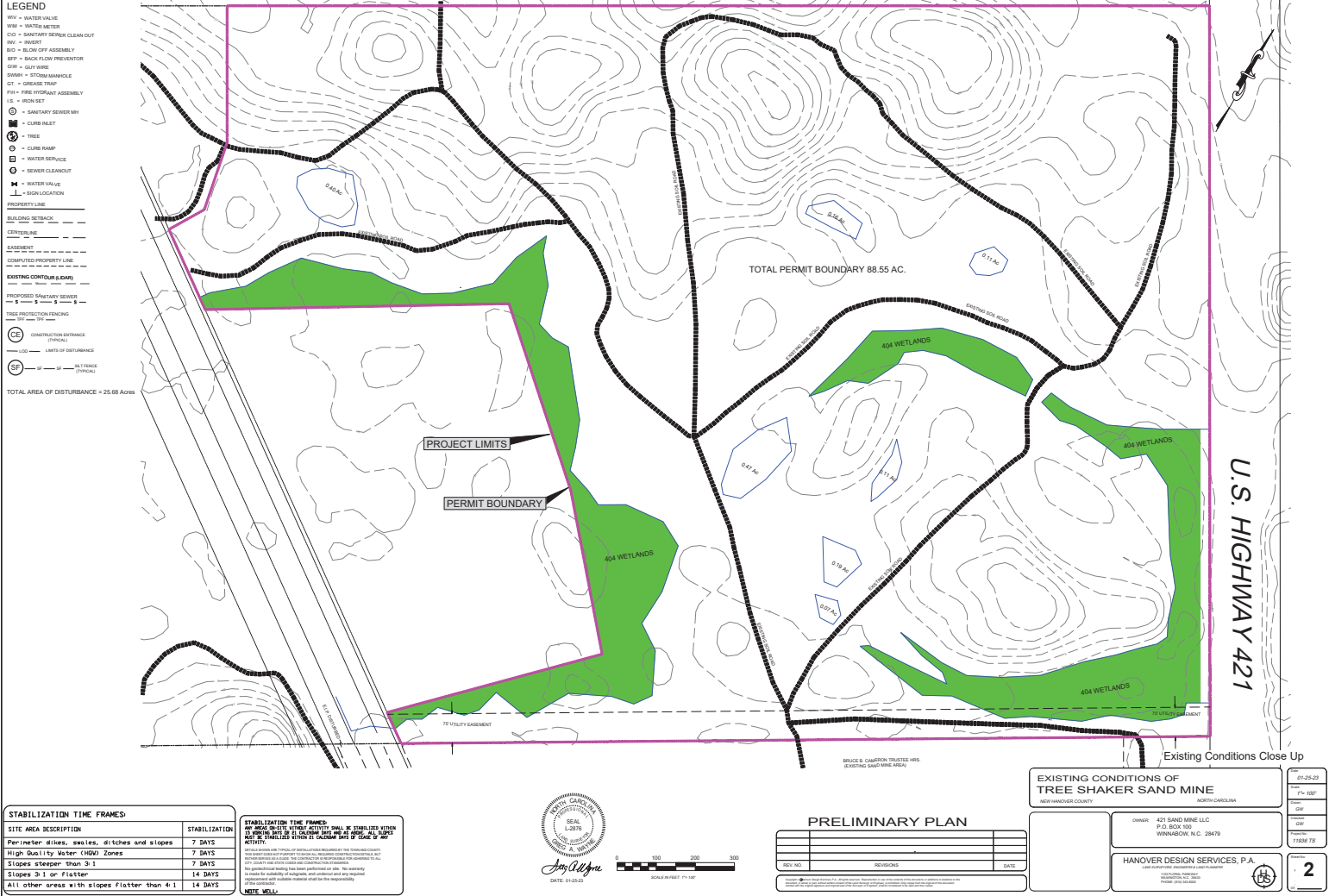
OWNER: 421 SAND MINE LLC
P.O. BOX 100
WINNABOW, N.C. 28479

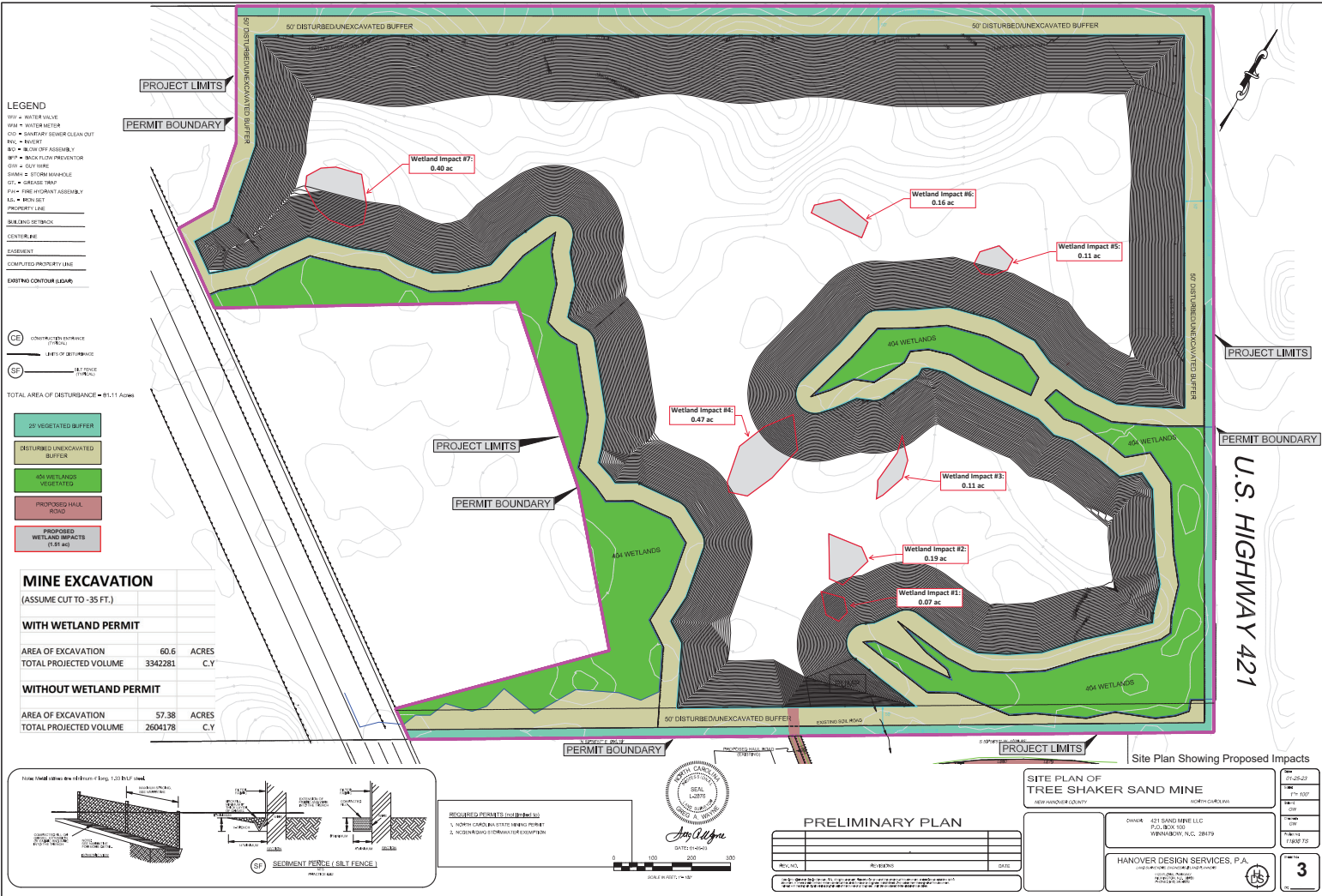
HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WASHINGTON, N.C. 28433

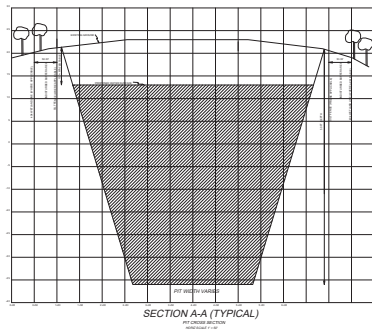
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Drawn:	GW
Checked:	GAW
Project No:	11936 TS
Sheet No:	1

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WASHINGTON, N.C. 28433

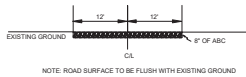
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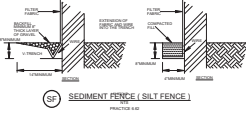
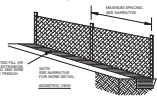




TYPICAL HAUL ROAD X-SECTION



Note: Metal stakes are minimum 4' long, 1.33 S&F steel.



(SF) SEDIMENT FENCE (SILT FENCE)
PRACTICE 4.02

REQUIRED PERMITS (and Notes to):
1. NORTH CAROLINA STATE MINING PERMIT
2. NONDISBURG STORMWATER EXEMPTION



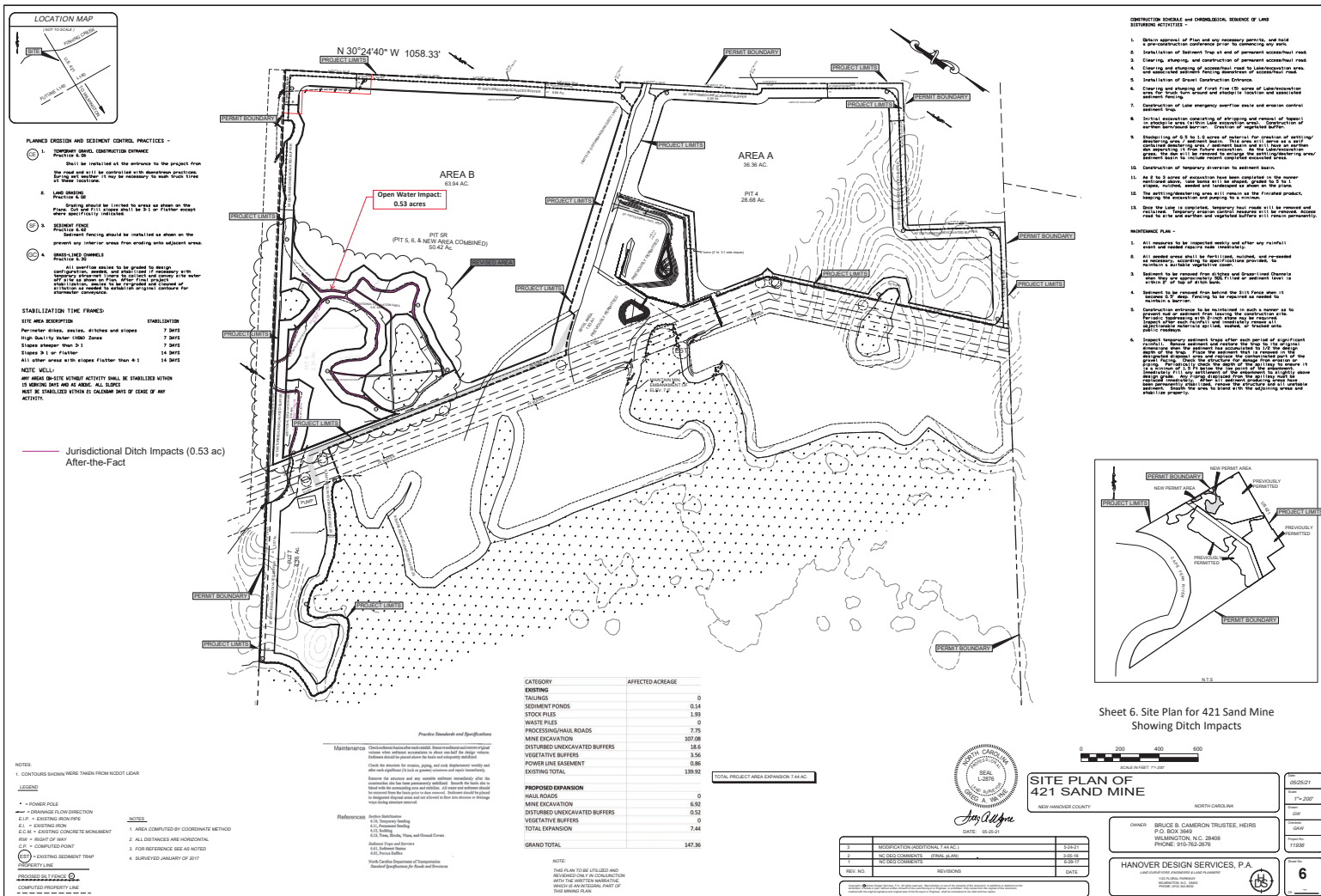
DATE: 01-25-23

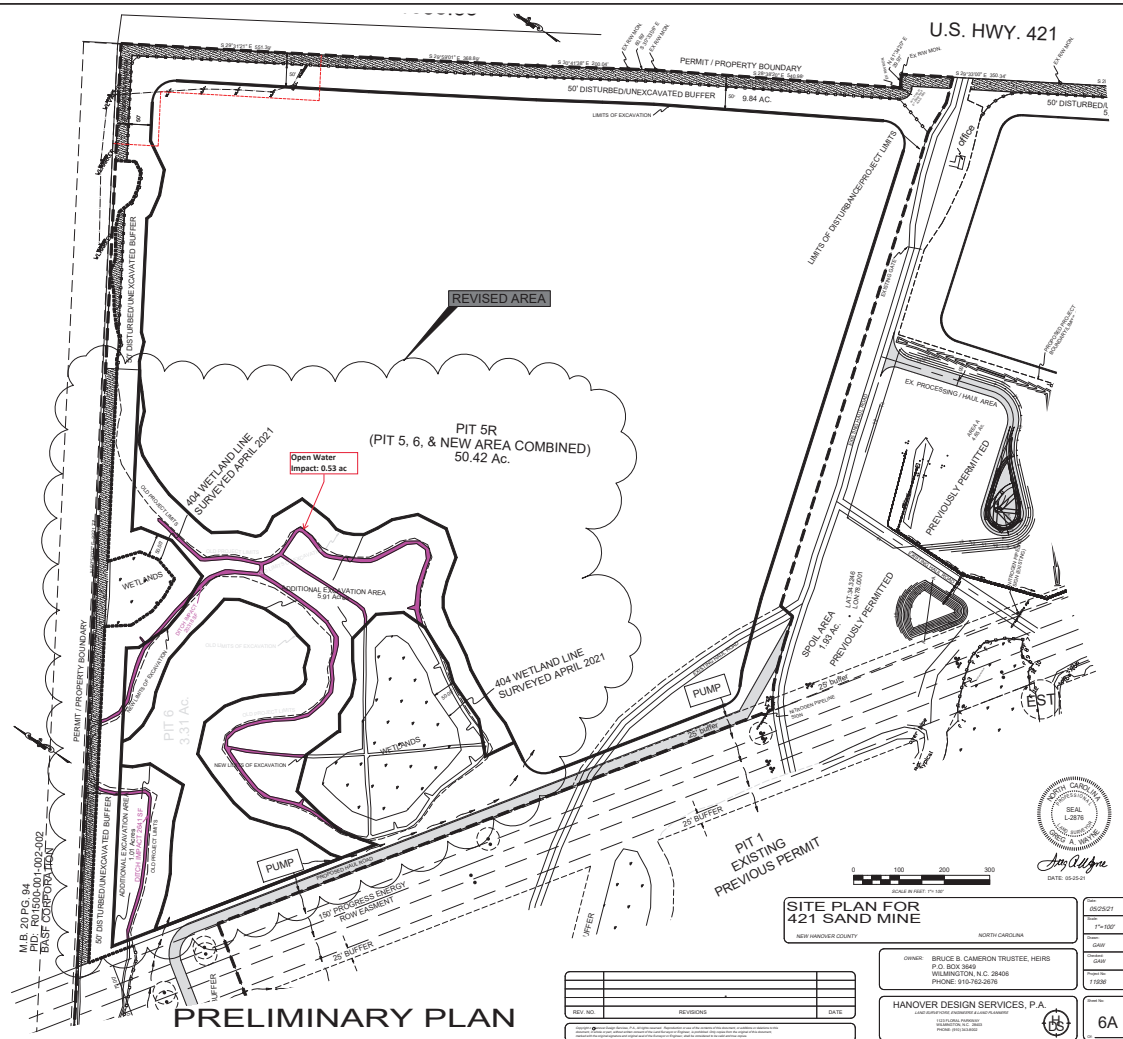
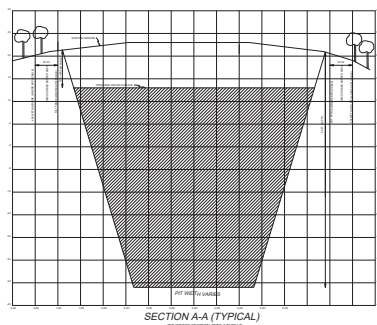
PRELIMINARY PLAN

REV. NO.	REVISIONS	DATE

Typical Cross Section of Mine Pit

SITE PLAN OF TREE SHAKER SAND MINE		01-25-23
NEW HANOVER COUNTY NORTH CAROLINA		P= 100'
OWNER: 421 SAND MINE LLC P.O. BOX 100 WINNABOW, N.C. 28479		001
DESIGNER: HANOVER DESIGN SERVICES, P.A. 10000 WYOMING AVE. WINNABOW, N.C. 28479		15888 722
4		4





Sheet 6A. Close Up of 421 Sand Mine Showing Ditch Impacts



- LEGEND**
- WV • WATER VALVE
 - WM • WATER METER
 - CO • SANITARY SEWER CLEAN OUT
 - RV • RIGID
 - BO • BLOCK OFF ASSEMBLY
 - SP • BACKFLOW PREVENTOR
 - GR • GUY WIRE
 - SWH • STORM WINDHOLE
 - CT • CIRCULAR TANK
 - FW • FIRE HYDRANT ASSEMBLY
 - LS • LEAK DET
 - PROPERTY LINE
 - BUILDING SETBACK
 - CENTERLINE
 - ASBESTOS
 - COMPUTED PROPERTY LINE
 - EXISTING CONTOUR (LEAD)

- CE • CONSTRUCTION ENTRANCE (PIT WALL)
- SP • SLOPE (PIT WALL)
- TOTAL AREA OF DISTURBANCE = 81.11 ACRES

- 20' VEGETATED BUFFER
- DISTURBED/UNEXCAVATED BUFFER
- 40A WETLANDS VEGETATED
- PROPOSED HAUL ROAD

MINE EXCAVATION

(ASSUME CUT TO -35 FT.)

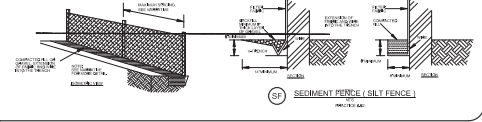
WITH WETLAND PERMIT

AREA OF EXCAVATION 60.6 ACRES
TOTAL PROJECTED VOLUME 3342281 C.Y.

WITHOUT WETLAND PERMIT

AREA OF EXCAVATION 57.38 ACRES
TOTAL PROJECTED VOLUME 2604178 C.Y.

Notes: Shaded areas are minimum of 100' 1:20 BULF limit.



BOUNDARY POINTS (100' BULF)
1. NORTH CAROLINA STATE BOUNDARY
2. NORTHERN WETLANDS DISTRICT BOUNDARY



0 100 200 300
SCALE IN FEET (1" = 100')

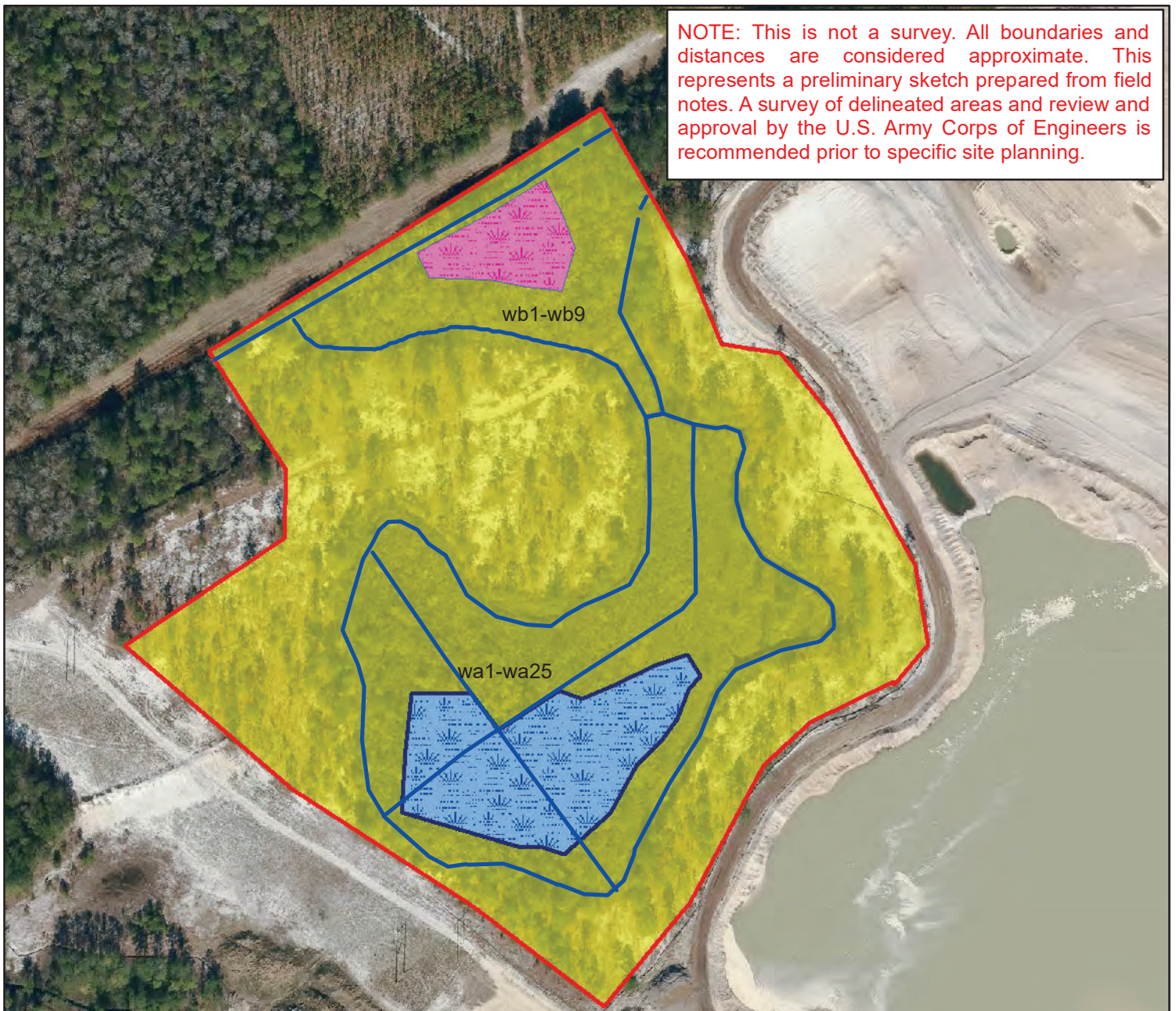
PRELIMINARY PLAN

REV. NO.	REVISION	DATE

**SITE PLAN OF
TREE SHAKER SAND MINE**

OWNER	421 SAND MINE LLC 770 LINDSEY RD. WINSTON-SALEM, NC 28179
DESIGNER	HANOVER DESIGN SERVICES, P.A. 10000 W. HANOVER RD. WINSTON-SALEM, NC 28179
DATE	01-25-20
SCALE	1" = 100'
PROJECT NO.	10000
SHEET NO.	6

NOTE: This is not a survey. All boundaries and distances are considered approximate. This represents a preliminary sketch prepared from field notes. A survey of delineated areas and review and approval by the U.S. Army Corps of Engineers is recommended prior to specific site planning.



Legend

-  Area of Interest - 15.8 acres
-  Uplands - 13.3 acres (84%)
-  Wetlands ~ 1.39 ac (9%)
-  Non-Jurisdictional Wetlands ~ 0.41 ac (3%)
-  Non-Stream Waters of the US (ditches) - Approx 5,025 linear feet of 6 ft ditches, approx 0.7 acres (4%)

L:\WETLANDS\2020 WETLANDS FILES\LMG20.218 ---

Hwy 421 Mine Site, Jeff Earp\Maps

Boundaries are approximate and not meant to be absolute.

Map Source: 2020 NC OneMap Aerial Photography



0 100 200 400
Feet

Hwy 421 Mine Site
New Hanover County, NC

Map Date: 04/04/2021
LMG20.218

 **LMG**
LAND MANAGEMENT GROUP
a DAVEY company
3805 Wrightsville Avenue
Wilmington, NC 28403
(910) 452-0001

**Section 404/401 Delineation
Preliminary Sketch**

NOTE: This is not a survey. All boundaries and distances are considered approximate. This represents a preliminary sketch prepared from field notes. A survey of delineated areas and review and approval by the U.S. Army Corps of Engineers is recommended prior to specific site planning.



Legend

- 2022 Project Area ~ 88.7 ac
- Uplands ~ 76.7 ac (86%)
- 404 Wetlands ~ 12.0 ac (13%)
- ⊙ Data Points

L:\Wetlands\2020\DRGNCW20.273\2022 delineation task\maps\tree shaker tract_preliminary sketch.mxd N
 Boundaries are approximate and not meant to be absolute.
 Map Source: 2020 NC OneMap

0 200 400 800
 ft
 Scale applies to 11X17" print.

Tree Shaker Tract
 New Hanover County, NC

Map Date: 11/07/22
 DRGNCW20.273

DAVEY
 Resource Group
 3805 Wrightsville Avenue
 Wilmington, NC 28403
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**Section 401/404
 Delineation Preliminary
 Reference Sketch**

Young longleaf pines in uplands in eastern part of site



Young longleaf pines in central uplands



Mix of older and young longleaf pines in northwestern part of site



Older longleaf pines in western part of site



Wetlands in southwestern part of site



Cleared uplands in eastern part of tract

