VICINITY MAP

SR

 $\mathbf{R}\mathbf{d}$ 

END -UT I-

STA 19+99

NC DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF MITIGATION SERVICES

# AS-BUILT PLANS SHAWS RUN MITIGATION SITE

LOCATION: COLUMBUS COUNTY, NORTH CAROLINA

CSX Railroad

٠Π

UT 1

SR 1414

STA 0+00

BEGIN -UT I-

Braswell Rd

UT 2 -END -UT 2-

STA 4+29

LIMITS OF DISTURBANCE: 7.73 AC

BEGIN -UT 2-

STA 0+41

TYPE OF WORK: STREAM RESTORATION AND ENHANCEMENT (CLEARING, GRUBBING, GRADING, EROSION CONTROL AND PLANTING)

UT 1

Grists

Rd

<u>"{</u>]

 $\Box$ 

.443

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#### INDEX OF SHEETS

SHEET NUMBER SHEET Title Sheet Symbology Easement 04A THRU 4G As-Built Structures

#### SURVEYORS CERTIFICATION(S)

Surveyor's disclaimer. No attempt was made to locate any cemeteries, wetlands, hazardous material sites, underground utilities or any other features above, or below ground other than those shown. However, no visible evidence of cemeteries or utilities, aboveground or otherwise, was observed by the undersigned (other than those shown).

As-Built Planting Table

I certify that the survey is of an existing parcel or parcels of land or one or more existing easements and does not create a new street or change an existing street.

I JOHN A. RUDOLPH , certify that this plat was prepared under my supervision from an actual field survey made under my supervision, of as-built conditions.

That the boundaries not surveyed are clearly indicated as such and were plotted from information as referenced hereon; That the ratio of precision as calculated was 1:7,500+ and that the global navigational satellite system (GNSS) was used to perform this survey and the following

Class of Survey: CLASS B (HORIZONTAL) CLASS B (VERTICAL)
Positional Accuracy: 0.12 feet (HORIZONTAL) Type of GPS field procedure: RTK

Published/Fixed Control Use: OPUS Geoid Model: 2012B CONUS
Combined Grid Factor: 0.99990680 GROUND TO GRID
Units: US SURVEY FEET

That this plat meets the requirements of the standards of practice for land surveying in North Carolina. Witness my hand and seal this <u>04th</u> day of <u>November</u>, 2020

SEAL OR STAMP CARO OR SESSIONA Docusigned by SURVE O SURVE ON SURVEY RUDIN ASHLEY KIN 3/3/2021

L-4194

### RECORD DRAWING

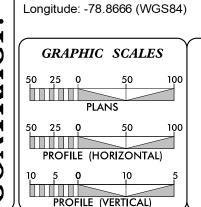
# Prepared in the Office of: SUNGATE DESIGN GROUP, P.A

905 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27606 TEL (919) 859-2243 ENG FIRM LICENSE NO. C-890

JOSHUA G. DALTON, P.E.

### DocuSigned by: Joshiva E&S Daliton -1089AD8C14994¢3... 7 2697 I SALVA G. DANINI MAYUA G. DAY 3/3/2021

NA



Shaws Run Mitigation Site

USACE Action #: SAW-2018-01196

DWR Project #: 2018-0866

Columbus County DMS ID #: 100055 DMS Contract #: 0007515

Lumber 03040203

Latitude: 34.313

PROPOSED LENGTH OF -UT 1- = 1999 LF PROPOSED LENGTH OF -UT 2 -= 388 L TOTAL STREAM LENGTH = 2428 LF RIPARIAN WETLAND (acreage) RESTORATION LEVEL STREAM (linear footage NONRIPARIAN WETLAND (acrea RESTORATION 2367 5.850 0.000 ENHANCEMENT 0.000 0.000 0.100 0.000 MITIGATION UNITS 2367 SMU: 5.860 RIPARIAN WMI NONRIPARIAN WML

Axiom Environmental 218 Snow Ave Raleigh, NC 27603

GRANT LEWIS PROIECT DESIGNER

Restoration Systems 1101 Haynes St. Suite 211 Raleigh, NC 27604

WORTH CREECH

-D 

**BOUNDARIES AND PROPERTY:** 

#### RECORD DRAWING

# CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

SHEET NAME

SYMBOLOGY

DMS ID #: /00055

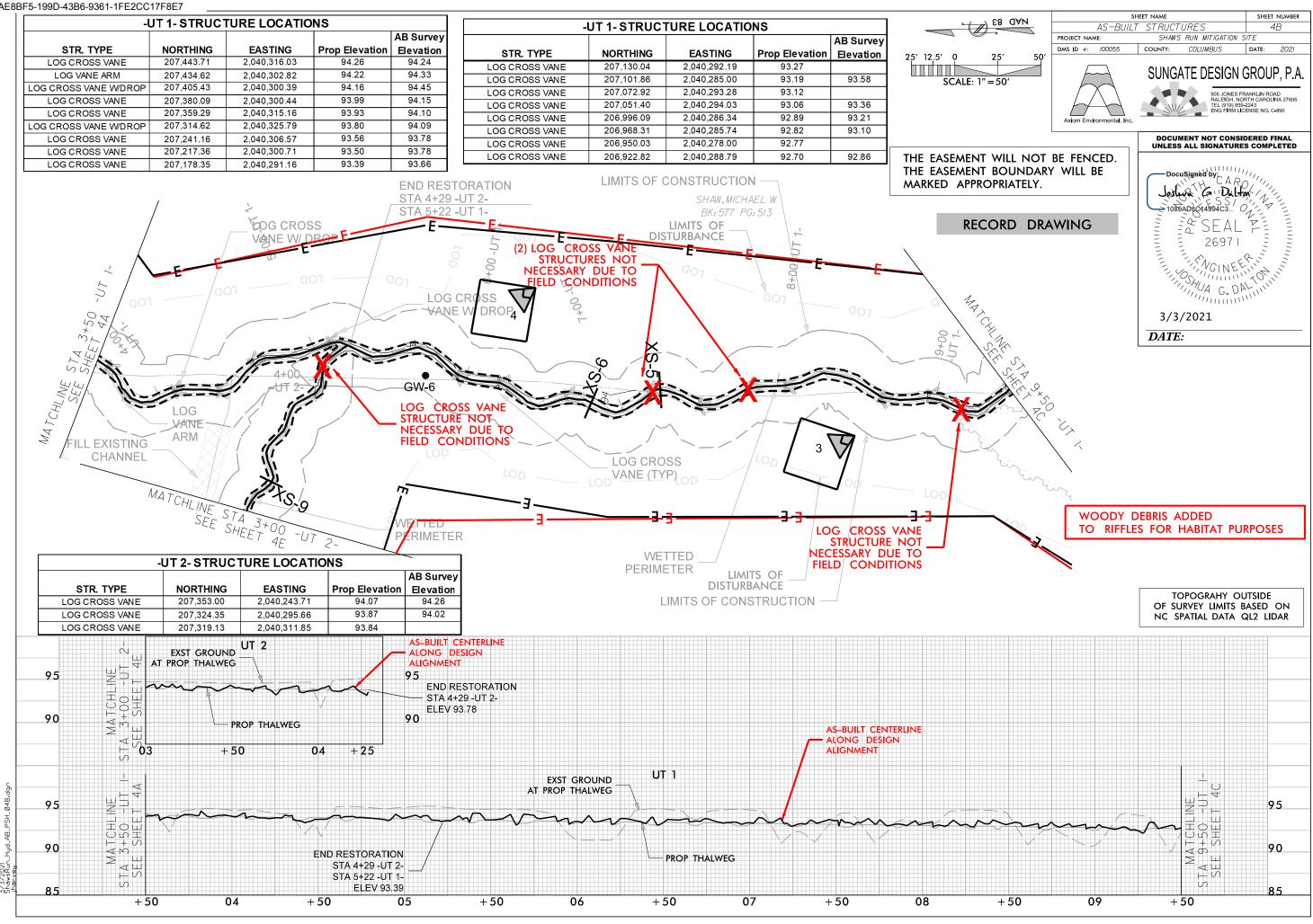
SHAWS RUN MITIGATION SITE

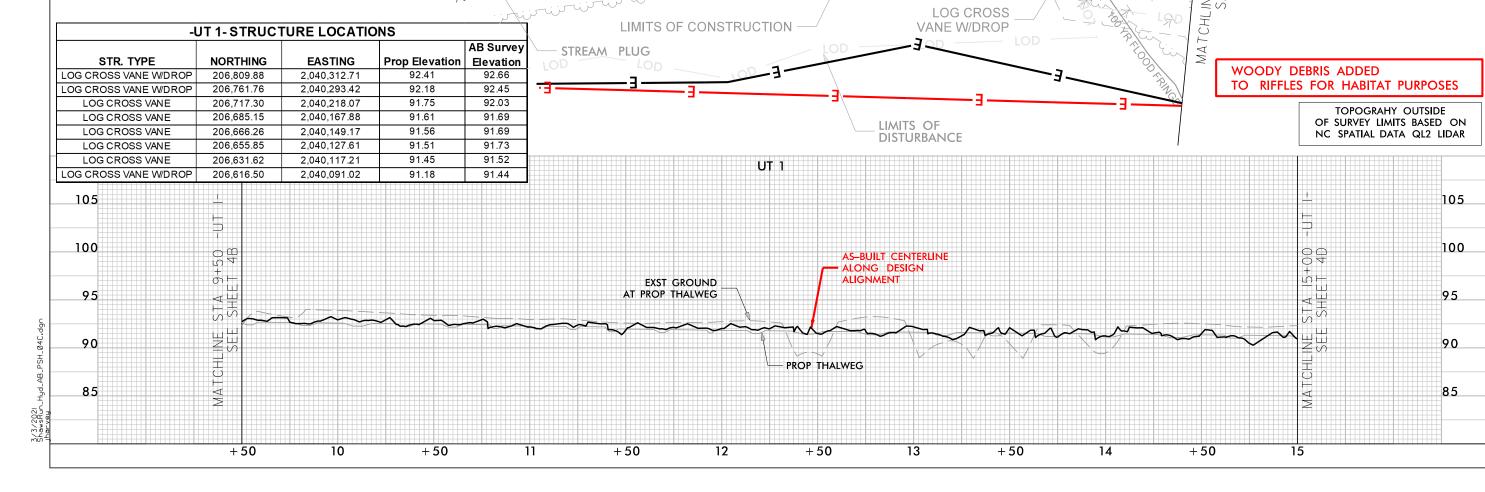
COUNTY: COLUMBUS DATE: 2021

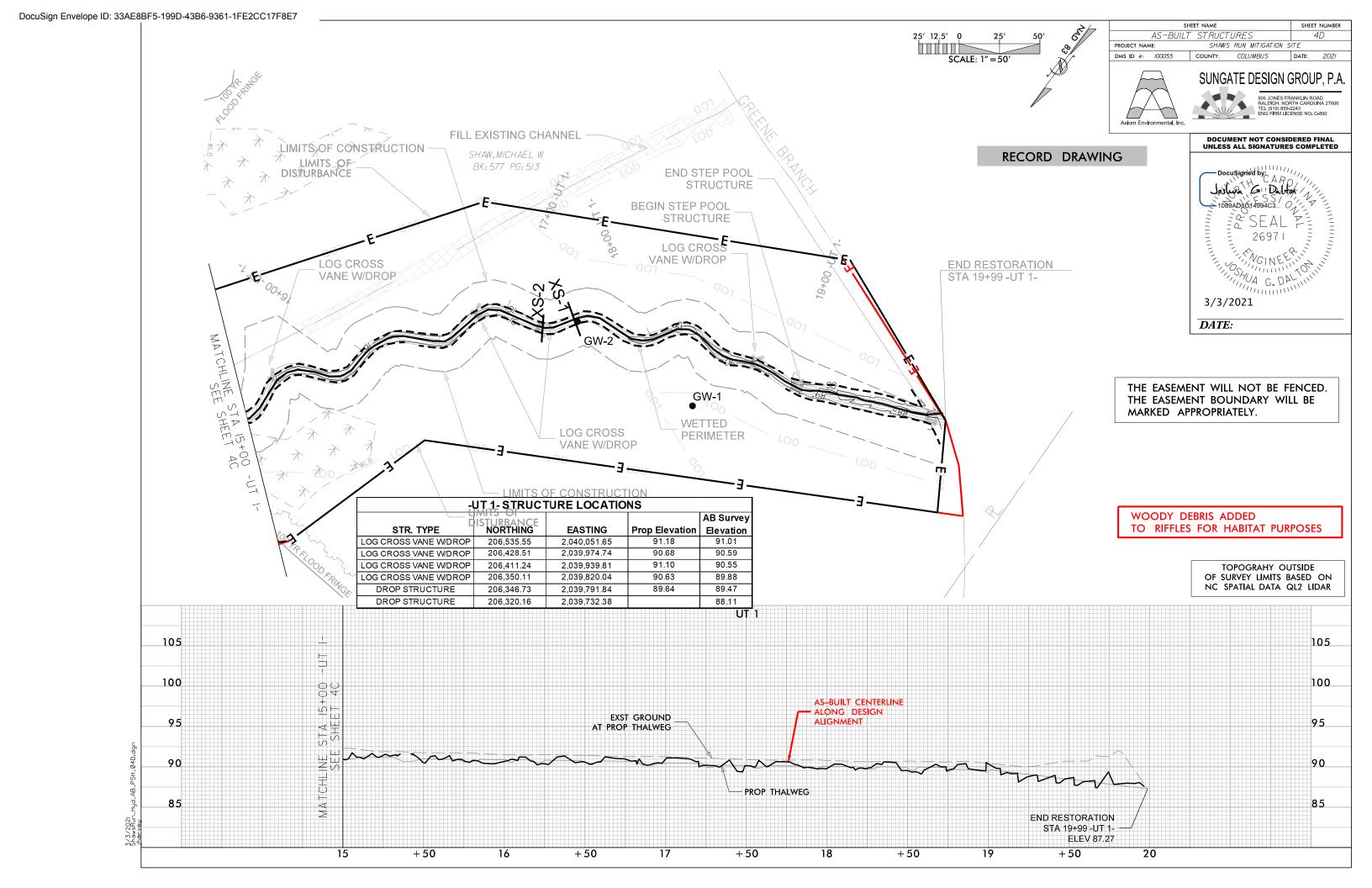
SHEET NUMBER

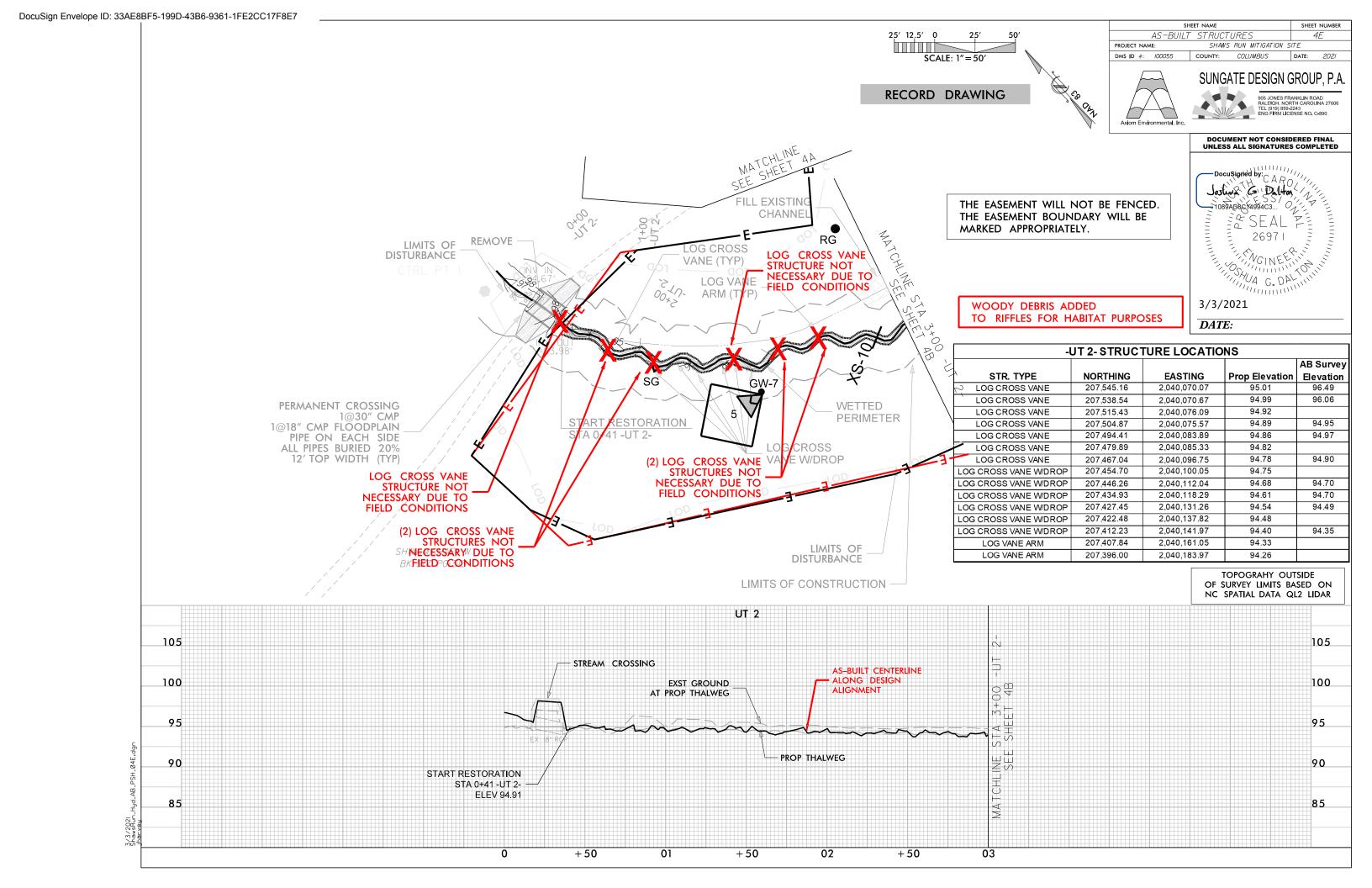
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<b>BOUNDARIES AND PROPERTY:</b>						SUNGATE	EDESIGN GROUP, P.A
State Line —		Exist Permanent Easment Pin and Cap	$\Diamond$	Pipe Culvert	- = = = =		905 JONES FRANKLIN ROAD
County Line		New Permanent Easement Pin and Cap —	<b></b>	Footbridge	- <b>&gt;</b>		RALEIGH, NORTH CAROLINA 27606 TEL (919) 859-2243 ENG FIRM LICENSE NO. C-890
Township Line		Vertical Benchmark	×	Drainage Box: Catch Basin, DI or JB	_ СВ	Axiom Environmental, Inc.	ENGTHING ENGLISHED
City Line		Existing Right of Way Marker —————	$\overline{\triangle}$	Paved Ditch Gutter		SS Forced Main Line LOS D (S.U.E.*)	FSS
Reservation Line	- — · — · —	Existing Right of Way Line		Storm Sewer Manhole	- §		
Property Line		New Right of Way Line	$\frac{\widehat{R}}{W}$	Storm Sewer	s	MISCELLANEOUS:	
Existing Iron Pin	— ⊖ EIP	,		Y VIII Y VIII O		Utility Pole ————————————————————————————————————	<b>—</b> ●
Computed Property Corner			W	UTILITIES:		Utility Pole with Base ————————————————————————————————————	
Property Monument		New Right of Way Line with Concrete or Granite RW Marker	$ \stackrel{\bigcirc}{\bigcirc}$ $\stackrel{\bigcirc}{\bigcirc}$ $\stackrel{\bigcirc}{\bigcirc}$ $\stackrel{\bigcirc}{\bigcirc}$	POWER:	ſ	Utility Located Object ———————	
Parcel/Sequence Number —	- (23)	New Control of Access Line with		Existing Power Pole	- •	Utility Traffic Signal Box ———————	<u> </u>
Existing Fence Line	_	Concrete C/A Marker	$ \bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$	Proposed Power Pole	- 6	Utility Unknown U/G Line LOS B (S.U.E.*)	
Proposed Fence Gate		Existing Control of Access	———( <u>Ĉ</u> )——	Existing Joint Use Pole	<b>◆</b> -	U/G Tank; Water, Gas, Oil —————	
Proposed Barbed Wire Fence		New Control of Access	( <u>C</u> )	Proposed Joint Use Pole	<b>- - ←</b>	Underground Storage Tank, Approx. Loc. —	— ÚST
Existing Wetland Boundary		Existing Easement Line ————————	——E——	Power Manhole ————————————————————————————————————	— (P)	A/G Tank; Water, Gas, Oil —————	
Proposed Wetland Boundary —		New Conservation Easement	——Е——	Power Line Tower	-	Geoenvironmental Boring	— ◆
Existing Endangered Animal Boundary		New Temporary Drainage Easement ——	TDE	Power Transformer	<b>—</b>	U/G Test Hole LOS A (S.U.E.*)	<b>_</b>
Existing Endangered Plant Boundary		New Permanent Drainage Easement —	PDE	U/G Power Cable Hand Hole	_	Abandoned According to Utility Records —	— AATUR
Existing Historic Property Boundary		New Permanent Drainage / Utility Easement	——DUE——	H-Frame Pole	<b>-</b> • <b>-</b> ••	End of Information ————————————————————————————————————	— E.O.I.
Existing Thistoric Property Booliudity		New Permanent Utility Easement ———	PUF	U/G Power Line LOS B (S.U.E.*)	— — — P— — — —		
BUILDINGS AND OTHER CULT	URE:		TUE	U/G Power Line LOS C (S.U.E.*)	— — — P — — —	Riffle Rip Rap ——————	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Gas Pump Vent or U/G Tank Cap		New Aerial Utility Easement		U/G Power Line LOS D (S.U.E.*)	Р	Log Vane	
Sign —	_	New Acrial Chiny Edschieff	AUL	TELEPHONE:		-	
Well —	_ 0	ROADS AND RELATED FEATURE	ES:			Log Cross Vane	
Small Mine	- <b>*</b>	Existing Edge of Pavement		Existing Telephone Pole —	<b>-</b> - <b>●</b> -		
Foundation —		Existing Curb		WATER:		Step Pool Structure	
Area Outline	_	Proposed Slope Stakes Cut —	<u>C</u>				Begin End
Cemetery		Proposed Slope Stakes Fill —————	<u>F</u>	Water Manhole			
Building —		Proposed Curb Ramp	(R)	Walci Melei	<del>-</del>	Stream Plug —————	
School —		Existing Metal Guardrail		Waler Valve	- ⊗	Floodplain Interceptor ————	
Church —	_	Proposed Guardrail ————————————————————————————————————		Water Hydrant	— •Ş	·	
Dam —		Existing Cable Guiderail		U/G Water Line LOS B (S.U.E*)		Proposed Fence ————	<del></del>
HYDROLOGY:				U/G Water Line LOS C (S.U.E*)		Limits of Disturbance —————	— LOD —
Stream or Body of Water —		Proposed Cable Guiderail  Equality Symbol		U/G Water Line LOS D (S.U.E*)	A/G Water	AS-BUILT:	
Hydro, Pool or Reservoir		Pavement Removal		Above Ground Water Line ——————	ANO HOTEL	Stream Centerline ————	
		VEGETATION:		GAS:		Stream Top of Bank ————	
Jurisdictional Stream Buffer Zone 1			Δ.	Gas Valve	- 💠	Stream Gauge ————————————————————————————————————	_
Buffer Zone 2		Single Tree  Single Shrub	w a	Gas Meter	<b>-</b> ♦	_	,,
Flow Arrow		Hedge	₽	U/G Gas Line LOS B (S.U.E.*)	— — — — — — — — — — — — — — — — — — —	Groundwater Gauge	— # <b>—</b>
Disappearing Stream —		Woods Line		U/G Gas Line LOS C (S.U.E.*)		Benthic & Water Quality Station ———	_ △1
Spring —				U/G Gas Line LOS D (S.U.E.*)		Origin Point on CVS Plots	<b>\\</b>
Wetland		Orchard ————————————————————————————————————		Above Ground Gas Line		Crigin Folin on Cvo Flois	
Proposed Lateral, Tail, Head Ditch —		Vineyard ————————————————————————————————————	Vineyard	SANITARY SEWER:		CVS Plots	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Troposed Edieral, Full, Fledd Dilcii	FLOW	EXISTING STRUCTURES:		Sanitary Sewer Manhole	—		#
RIGHT OF WAY & PROJECT C	ONTROI ·	MAJOR:		Sanitary Sewer Mannole Sanitary Sewer Cleanout		Crass Sagdian	VC 100
-	•	Bridge, Tunnel or Box Culvert ————	CONC	U/G Sanitary Sewer Line	· ·	Cross Section ————	—— XS-10R
Secondary Horiz and Vert Control Point	₹.	Bridge Wing Wall, Head Wall and End Wall –	) CONC WW (	Above Ground Sanitary Sewer ————		Adjusted Stream Structure ————	
Primary Hariz and Vert Control Brief	. ·	MINOR:		SS Forced Main Line LOS B (S.U.E.*)			
Primary Horiz and Vert Control Point	•	Head and End Wall —————	CONC HW	SS Forced Main Line LOS C (S.U.E.*)		Not Constructed	$\times$



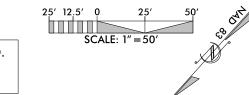






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THE EASEMENT BOUNDARY WILL BE
MARKED APPROPRIATELY.

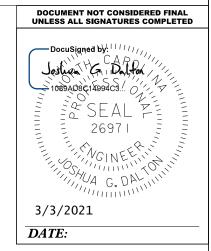


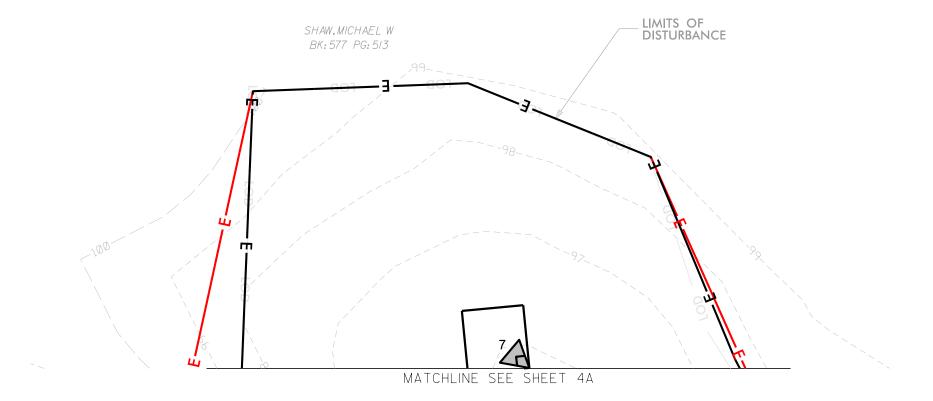
	SF	SHEET NUMBER		
/-	AS-BUILT	STRUCTURES	4F	
	PROJECT NAME:	SHAWS RUN MITIGATION S	ITE	
	DMS ID #: 100055	COUNTY: COLUMBUS	DATE: 2021	



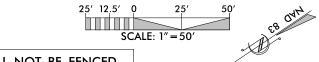


#### RECORD DRAWING





TOPOGRAHY OUTSIDE OF SURVEY LIMITS BASED ON NC SPATIAL DATA QL2 LIDAR DocuSign Envelope ID: 33AE8BF5-199D-43B6-9361-1FE2CC17F8E7



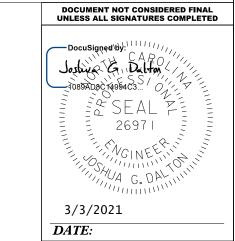
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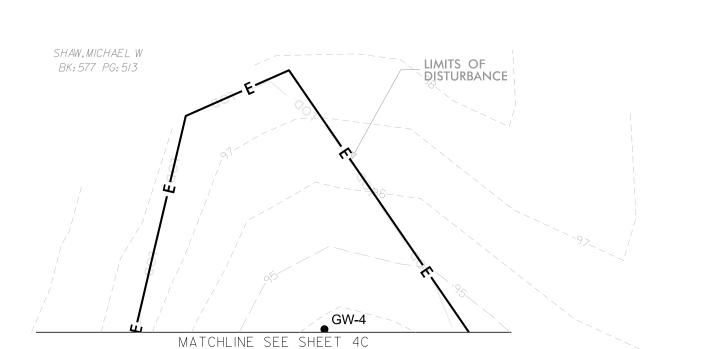
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### RECORD DRAWING





TOPOGRAHY OUTSIDE
OF SURVEY LIMITS BASED ON
NC SPATIAL DATA QL2 LIDAR

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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

RECORD DRAWING

#### DESIGN PLANTING LIST

Vegetation Association	Coastal Plain Small Stream Swamp Forest*		Mesic-Mixed Hardwood Forest*		Stream-side Assemblage**		TOTAL
Area (acres)	3.7		2.1		1.5		7.3
Species	# planted*	% of total	# planted*	% of total	# planted**	% of total	# planted
Bald cypress (Taxodium distichum)	503	20			408	10	911
Black gum (Nyssa sylvatica)	503	20			408	10	911
Swamp chestnut oak (Quercus michauxii)	252	10	143	10			394
Laurel oak (Quercus laurifolia )	252	10	143	10	-		394
River birch (Betula nigra)	252	10	143	10	408	10	802
Tulip poplar (Liriodendron tulipifera)	252	10	143	10	-		394
Water oak (Quercus nigra)			143	10			143
Willow oak (Quercus phellos)			143	10			143
Green ash (Fraxinus pennsylvanica)	252	10	286	20			537
Sycamore (Platanus occidentalis)	252	10	286	20	408	10	945
Silky dogwood (Cornus amomum)					612	15	612
Black willow (Salix nigra)					612	15	612
Buttonbush (Cephalanthus occidentalis)					612	15	612
Elderberry (Sambucus canadensis)					612	15	612
TOTAL	2516	100	1428	100	4080	100	8024
* Planted at a density of 680 stems/acre.							
** Planted at a density of 2720 stems/acre.							

#### AS-BUILT PLANTING LIST

Species	# Planted
Bald cypress (Taxodium distichum)	1000
Black gum (Nyssa sylvatica)	1000
Swamp chestnut oak (Quercus michauxii)	
Laurel oak (Quercus laurifolia)	400
River birch (Betula nigra)	800
Tulip poplar (Liriodendron tulipifera)	500
Water oak (Quercus nigra)	300
Willow oak (Quercus phellos)	300
Green ash (Fraxinus pennsylvanica)	300
Sycamore (Platanus occidentalis)	1000
Silky dogwood (Cornus amomum)	700
Black willow (Salix nigra)	
Buttonbush (Cephalanthus occidentalis)	800
Elderberry (Sambucus canadensis)	
Sugarberry (Celtis laevigata)	100
Persimmon (Diospyros virginiana)	300
Overcup Oak (Quercus lyrate)	400
Cherrybark Oak (Quercus pagoda)	400