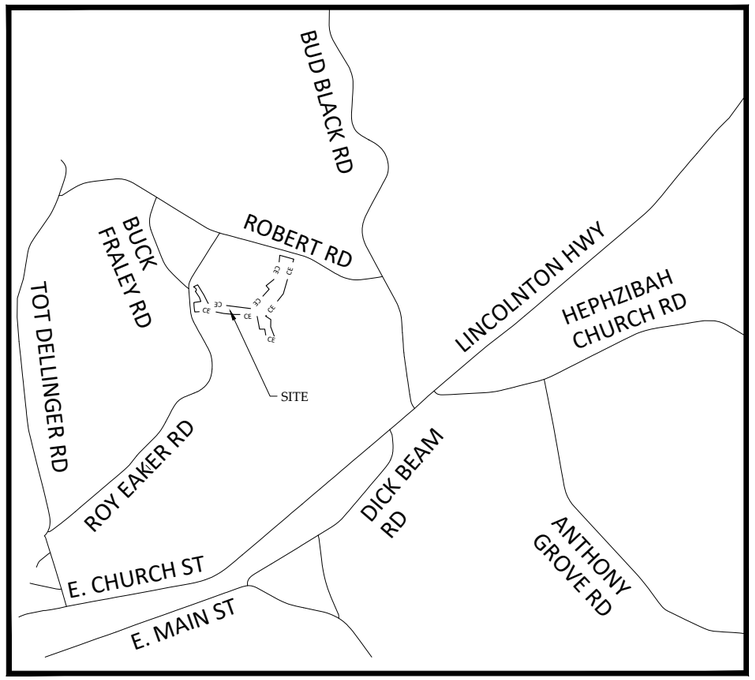
Oak Hill Dairy Mitigation Site Record Drawing

Gaston County, North Carolina

for

NCDEQ

Division of Mitigation Services



Vicinity Map
Not to Scale

STREAM ORIGINS		
NAME	NORTHING	EASTING
OAK HILL CREEK	609299	1299430
UT1	610055	1297694
UT1A	610499	1297711
UT1B	609941	1297705
UT2	610266	1299747
UT3	610616	1299891

PRELIMINARY PLANS
ISSUED May 12, 2022

Sheet Index

Project Directory

Engineering:
Wildlands Engineering, Inc
License No. F-0831
167-B Haywood Rd
Asheville, NC 28806
Jake Mclean, PE, CFM
828-774-5547

Surveying:
Kee Mapping and Surveying, PA
88 Central Avenue
Asheville, NC 28801
Phillip B. Kee, PLS
828-645-8275

Owner:
NCDEQ - NC DMS
1652 Mail Service Center
Raleigh, NC 27699
Mathew Reid
828-231-7912

NCDEQ Contract No. 7867
DMS ID No. 100120

NC DWR#20190863
Catawba River Basin 03050102

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NORTH CAROLINA PROFESSIONAL SEAL 049178 ENGINEER JAKE MCLEAN
5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Title Sheet

Revisions:

Date: May 12, 2022
Job Number: 005-02182
Project Engineer: JM
Drawn By: AMR
Checked By: JCK

Sheet 0.1

May 13, 2022

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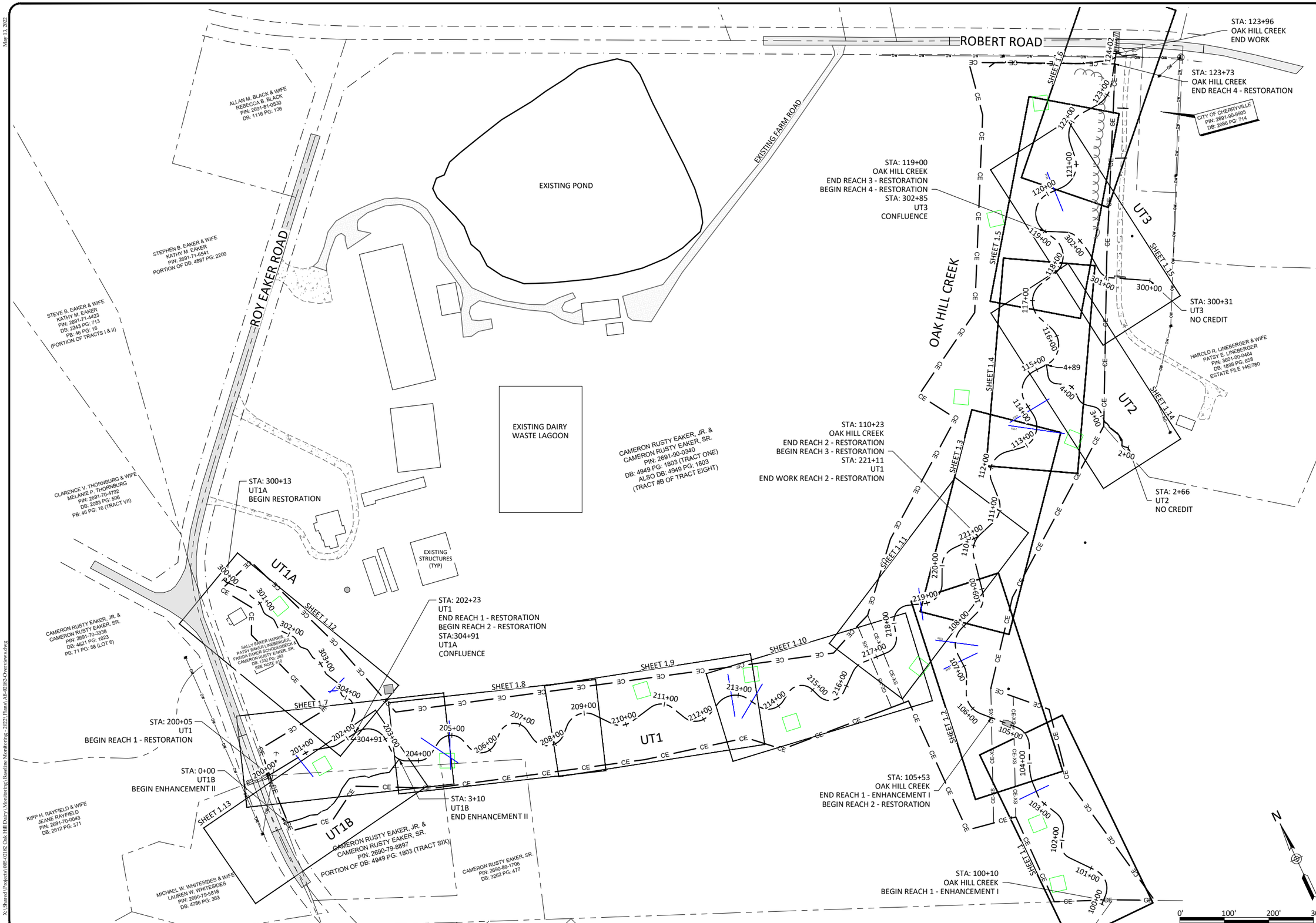

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NORTH CAROLINA PROFESSIONAL SEAL 045178 ENGINEER
5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Project Overview

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 0.2

Oak Hill Creek

Pre-Construction Features

- Pre-Construction Property Line
- Pre-Construction NCDOT Right-of-Way (R/W)
- Pre-Construction Top of Bank
- Pre-Construction Overhead Utility Line (OHE)
- Pre-Construction Overhead Utility Easement (OUE)
- Pre-Construction Fence (X)
- Pre-Construction Overhead Utility (OW)
- Pre-Construction Sanitary Sewer (SS)
- Pre-Construction Sanitary Sewer Right of Way (SSE)
- Pre-Construction Tree Line
- Pre-Construction Storm Pipe
- Pre-Construction Wetland
- Pre-Construction Road
- Pre-Construction Rip Rap
- Pre-Construction Building
- Pre-Construction Utility Pole

Design Features

- Design Alignment (10+00)
- Design Bankfull
- Design Major Contour (5' Interval)
- Design Minor Contour
- Design Permanent Culvert
- Design Woven Wire Fence
- Design Barbed Wire Fence
- Design 8' Double Gate
- Design 12' Single Gate

Design Structures

- Design Various Constructed Riffles
- Design Cascading Riffle/Rock Cascade
- Design Brush Toe
- Design Vegetated Soil Lift
- Design Bank Roughening
- Design Floodplain Roughening
- Design BMP
- Design Log Sill
- Design Cover Log
- Design Log J-hook
- Design Log Vane
- Design Rock Sill
- Design Boulder J-hook with Sill

Asbuilt Features

- Asbuilt Alignment
- Asbuilt Bankfull
- Recorded CE (CE)
- Recorded Internal Crossing (CE-IX)
- Asbuilt LOD
- Asbuilt Major Contour (5' Interval) (100)
- Asbuilt Minor Contour
- Asbuilt Permanent Culvert
- Asbuilt Fence
- Asbuilt 8' Double Gate
- Asbuilt 12' Single Gate
- Asbuilt Permanent Ford Crossing
- Asbuilt Stream Crossing - Culvert

Asbuilt Structures

- Asbuilt Various Constructed Riffles
- Asbuilt Cascading Riffle/Rock Cascade
- Asbuilt Brush Toe
- Asbuilt Vegetated Soil Lift
- Asbuilt BMP
- Asbuilt Gravel Farm Road
- Asbuilt Soil Farm Road
- Asbuilt Bank Roughening
- Asbuilt Boulder Toe
- Asbuilt Riprap
- Asbuilt Bridge Crossing
- Asbuilt Log Sill
- Asbuilt Cover Log
- Asbuilt Log J-hook
- Asbuilt Rock Sill
- Asbuilt Rock J-hook with Sill
- Asbuilt Log J-Hook with Sill
- Photo Point (PP #)
- Permanent Vegetation Plot (VP #)
- Barotroll
- Ground Water Gage (GWG #)
- Crest Gage (CG #)
- Monitoring Cross Section (XS #)

PROJECT NOTES:
Topographic survey was completed by Kee Mapping and Surveying, PA in July 2019.
Parcel boundary survey completed by Kee Mapping and Surveying, PA in October 2019.
Conservation easement survey completed by Kee Mapping and Surveying, PA in October 2020.

Topographic data supplemented with Lidar data from Feb - April 2017.

Riffle selection varied based on available materials at the Engineers' discretion. Field coordination will be required.

Project Notes:
1. DEVIATIONS FROM THE DESIGN WILL BE SHOWN IN RED.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

General Notes and Symbols

Revisions:

Date:	May 12, 2022
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Drawn By:	AMR
Checked By:	JCK

Sheet 0.3

May 13, 2022

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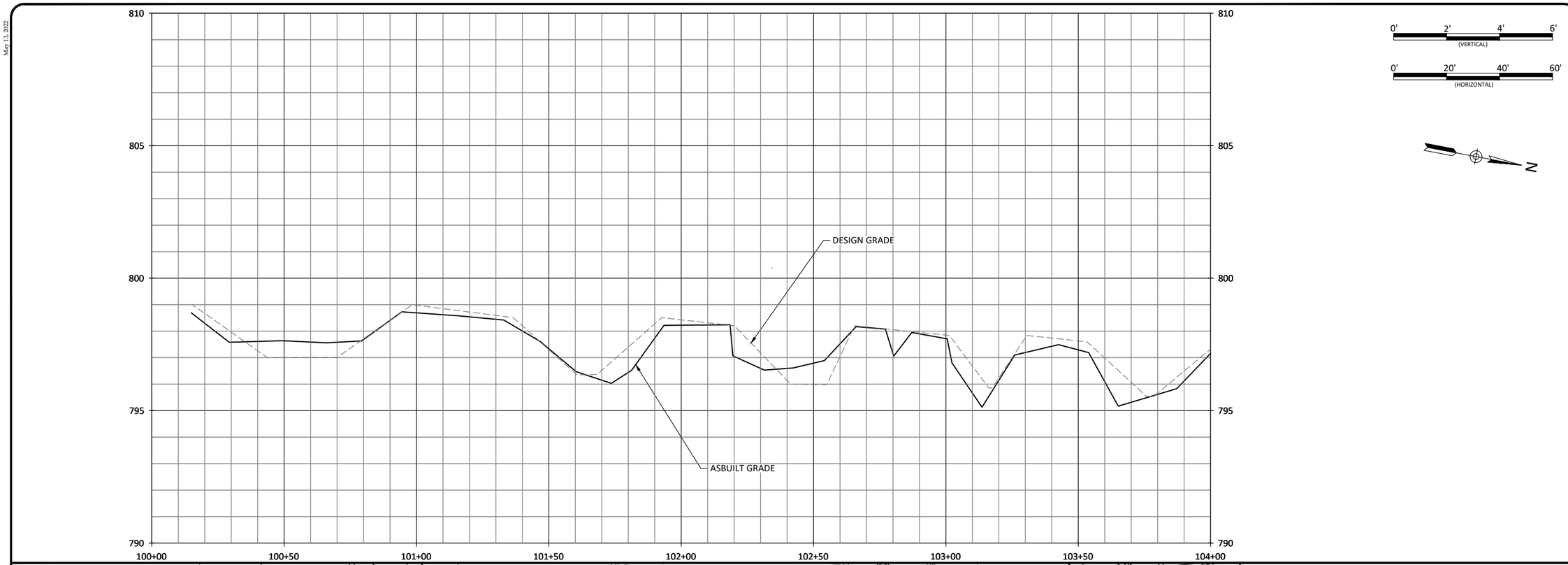

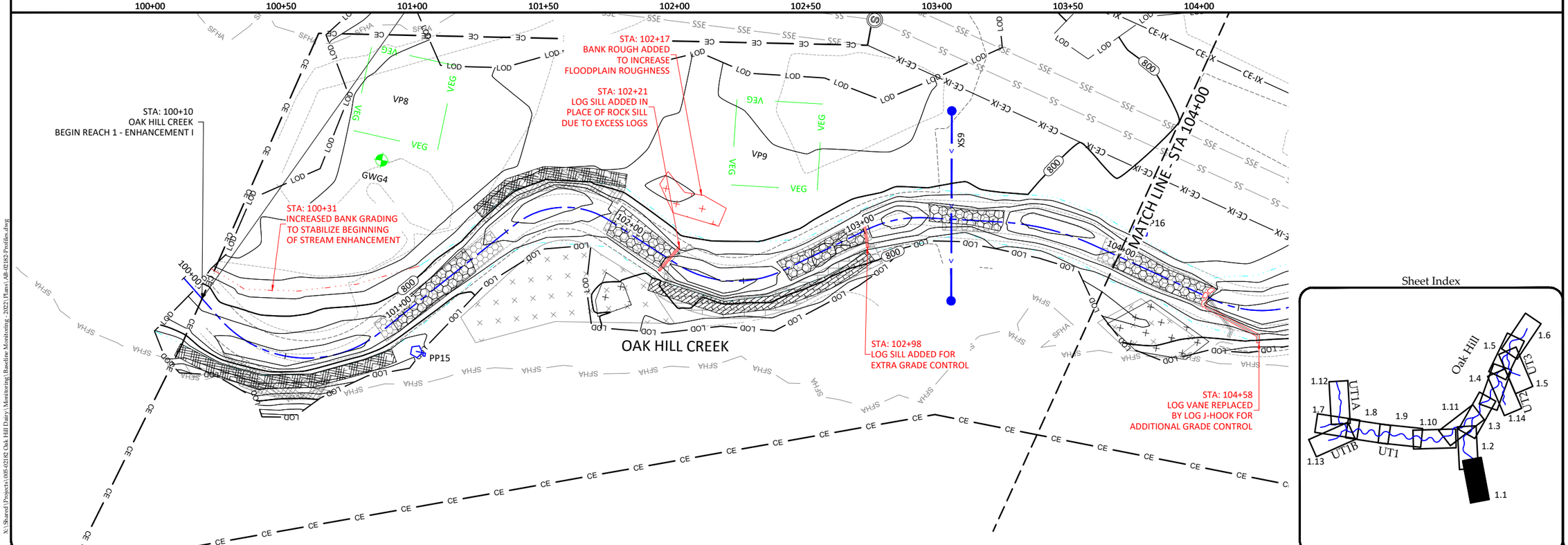

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JASON CARTER KNOBLAUCH 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Oak Hill Creek
Stream Plan and Profiles

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Sheet 1.1

May 13, 2022

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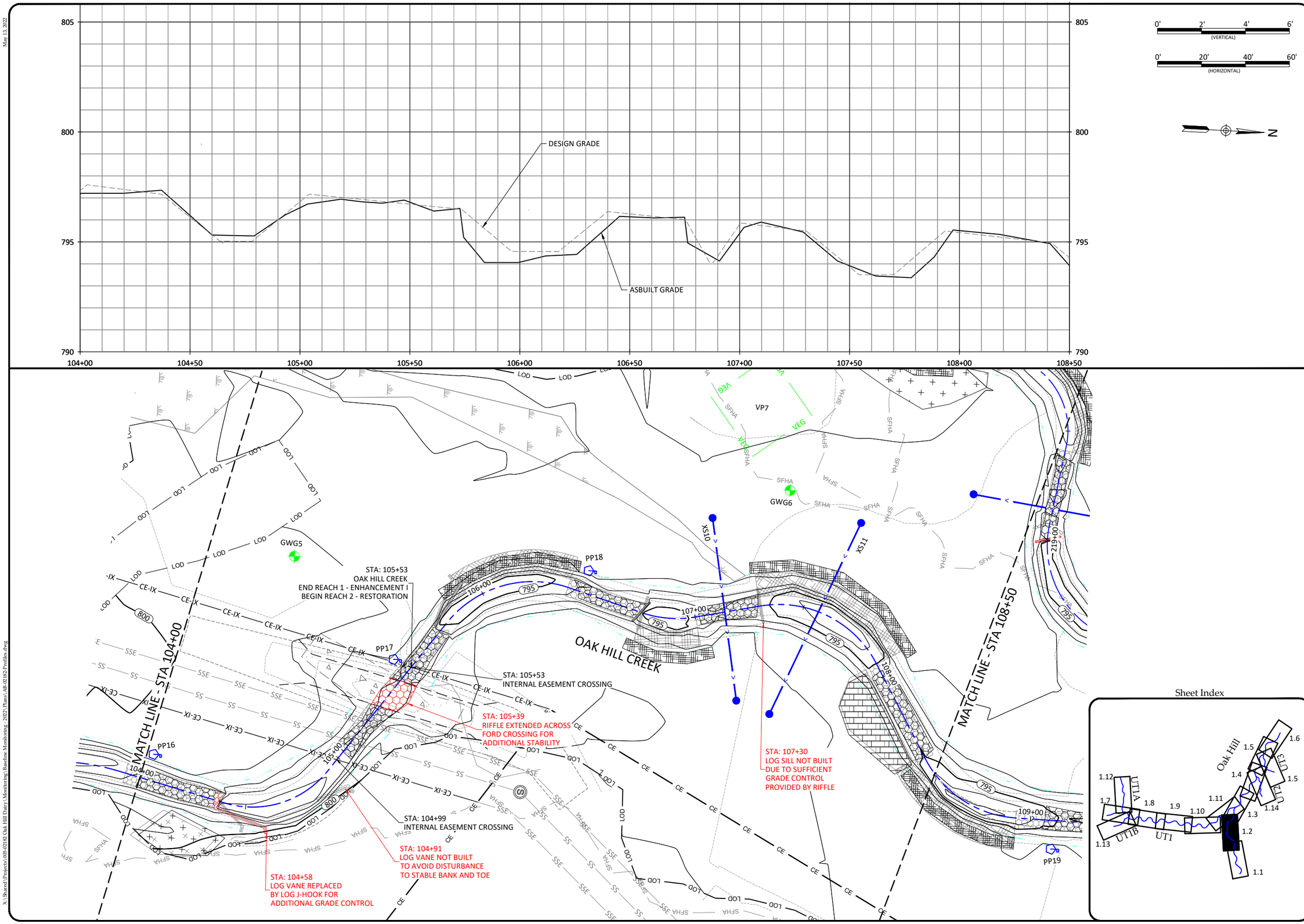

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5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
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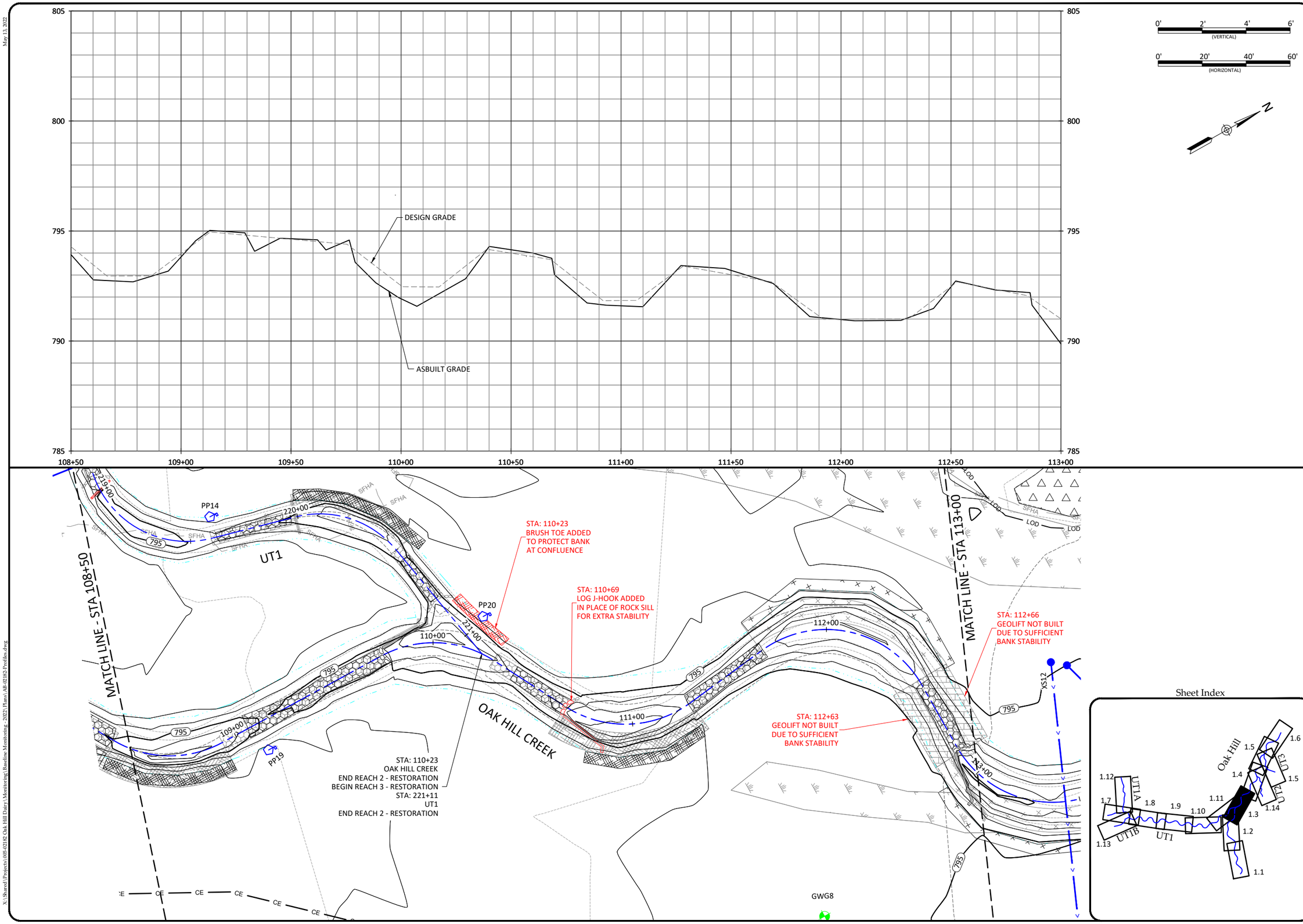

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JOHN CRAWFORD KOBB 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

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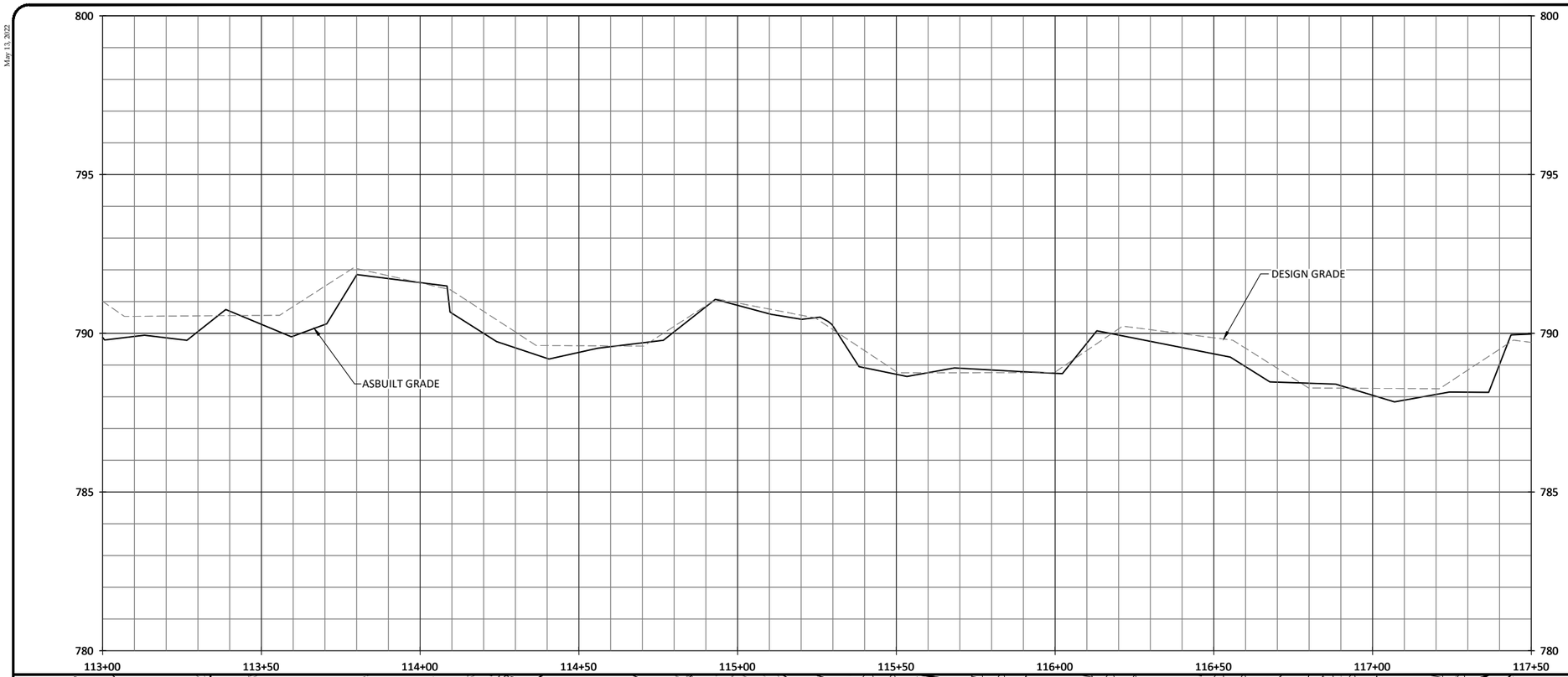

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0' 20' 40' 60' (HORIZONTAL)

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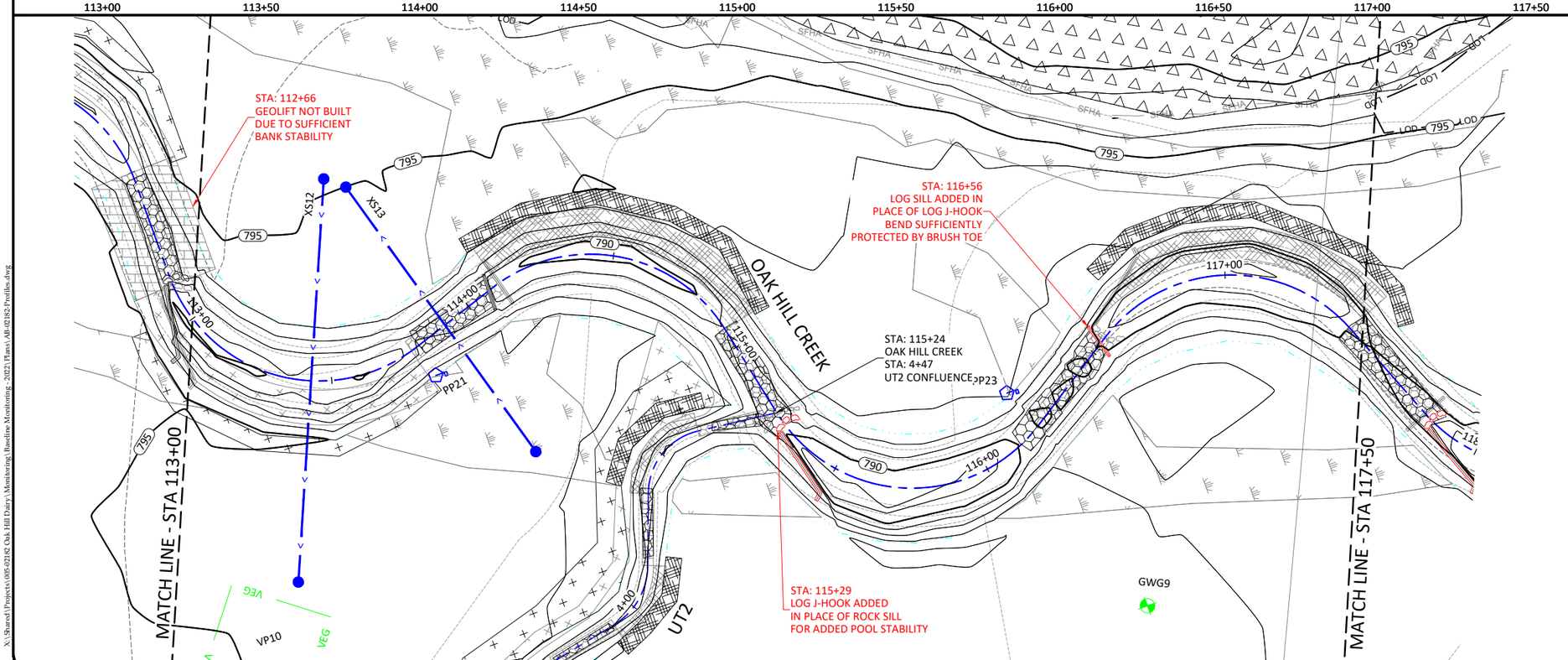

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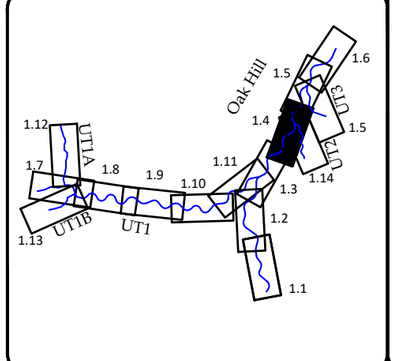

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 029178 JAMES C. KNOBY 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Oak Hill Creek
Stream Plan and Profiles

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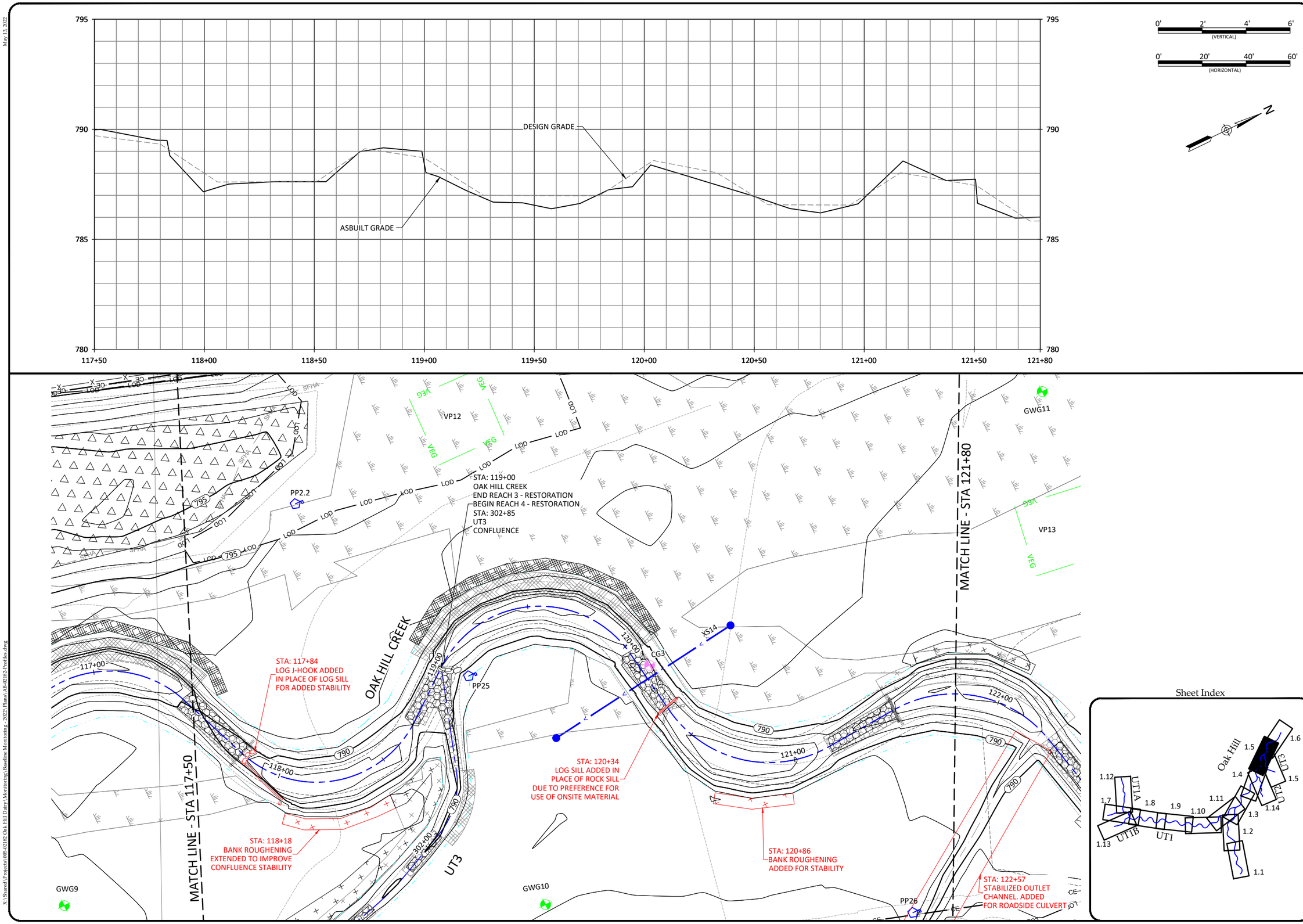

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JOHN CARTER KNOBLAUGH 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Oak Hill Creek
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Sheet 1.5

May 13, 2022

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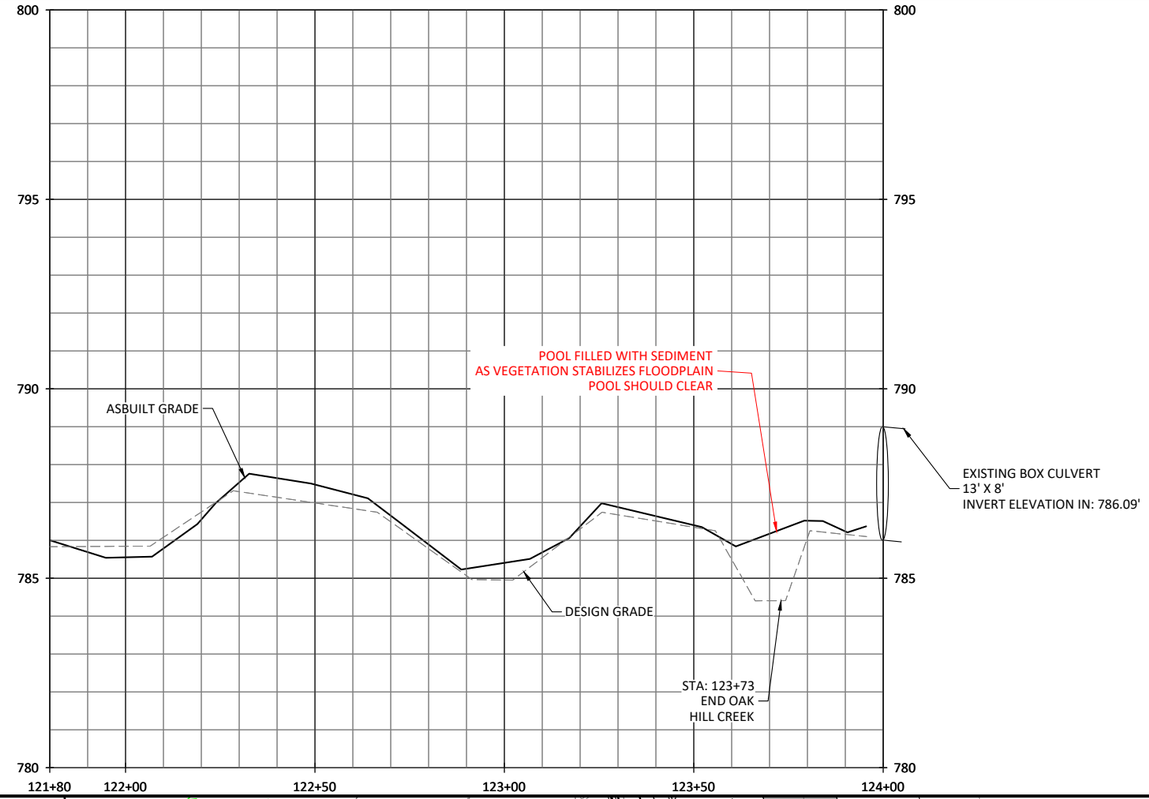

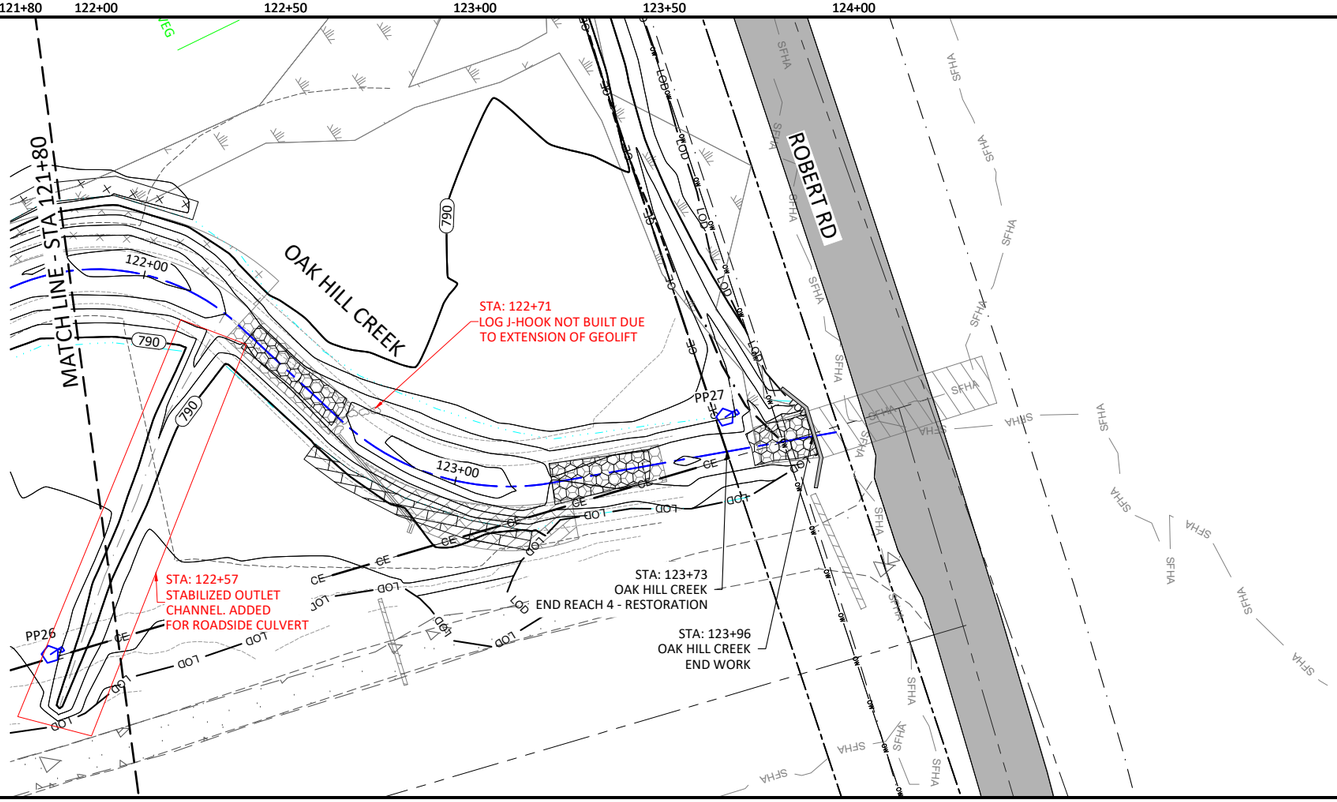

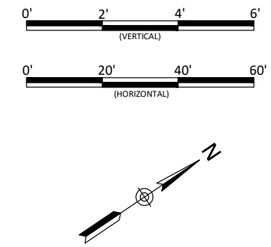

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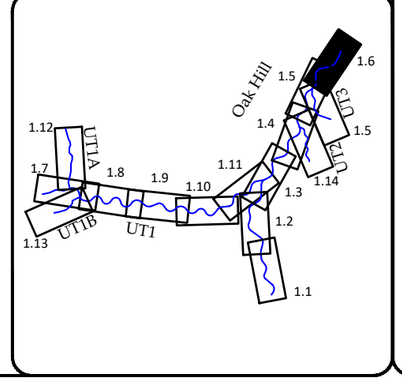

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049178 JOHN C. KNOPF 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Oak Hill Creek
Stream Plan and Profiles

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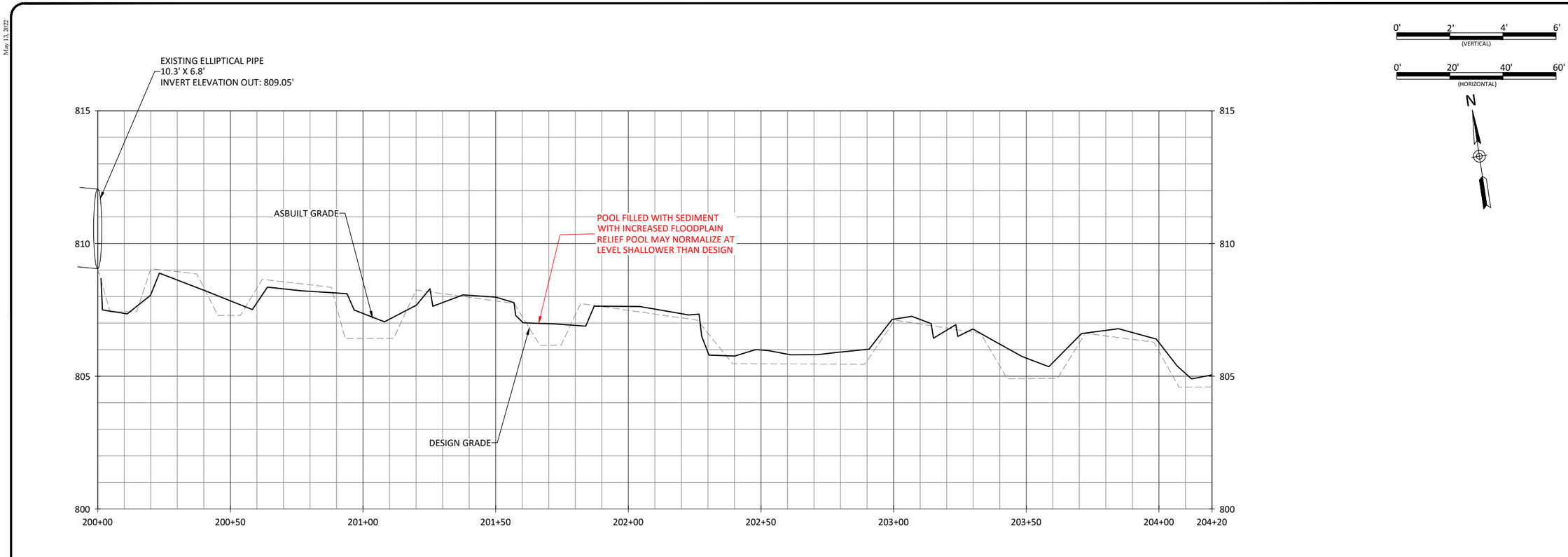

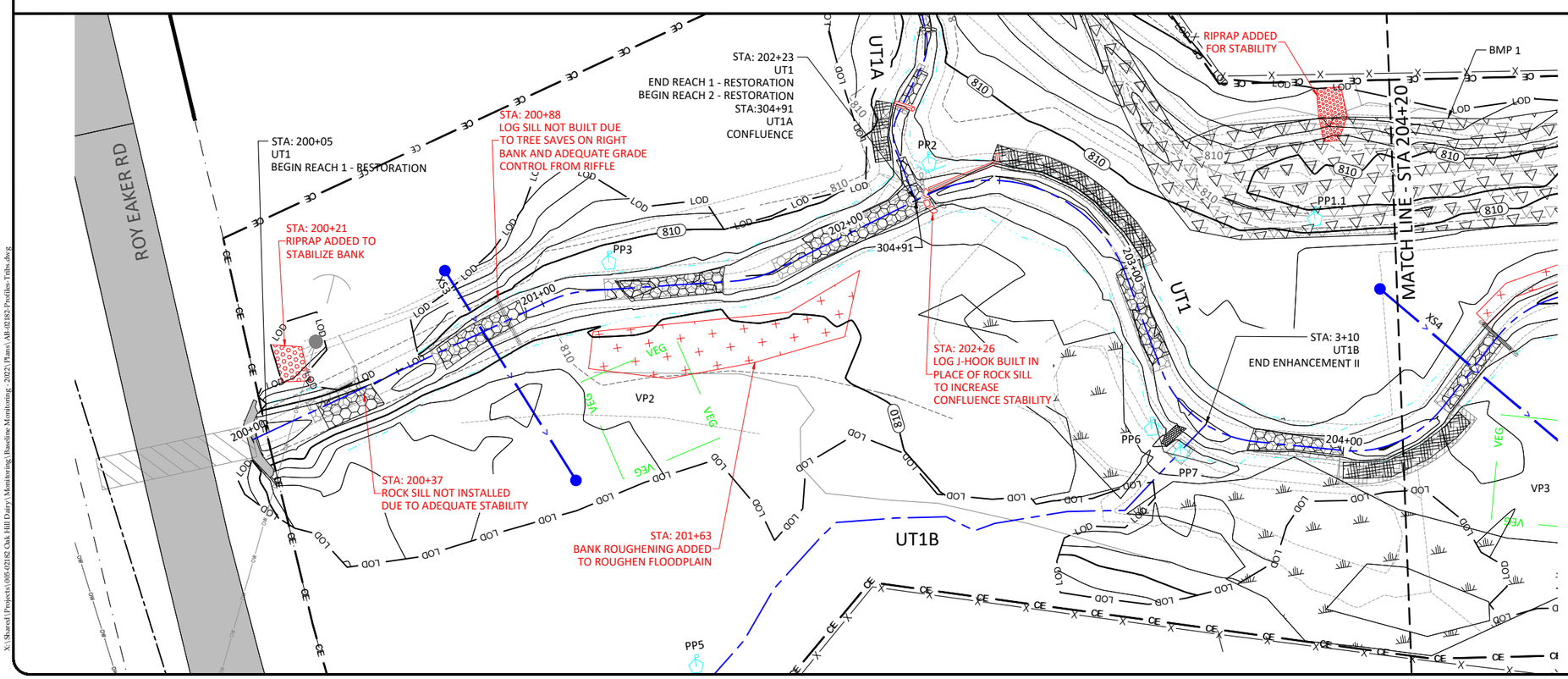

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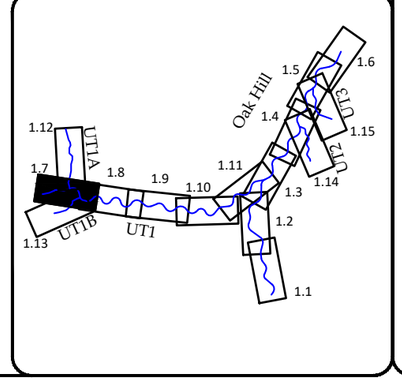

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JOHN C. KNOPF 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

UT1
Stream Plan and Profiles

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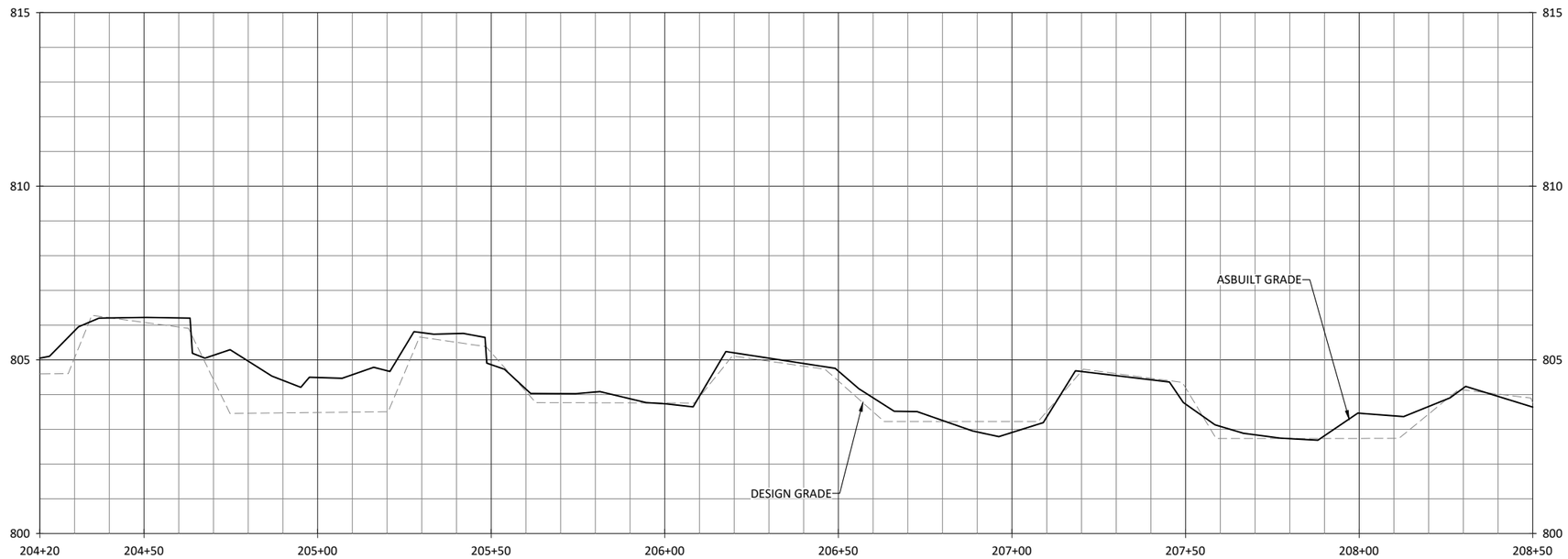

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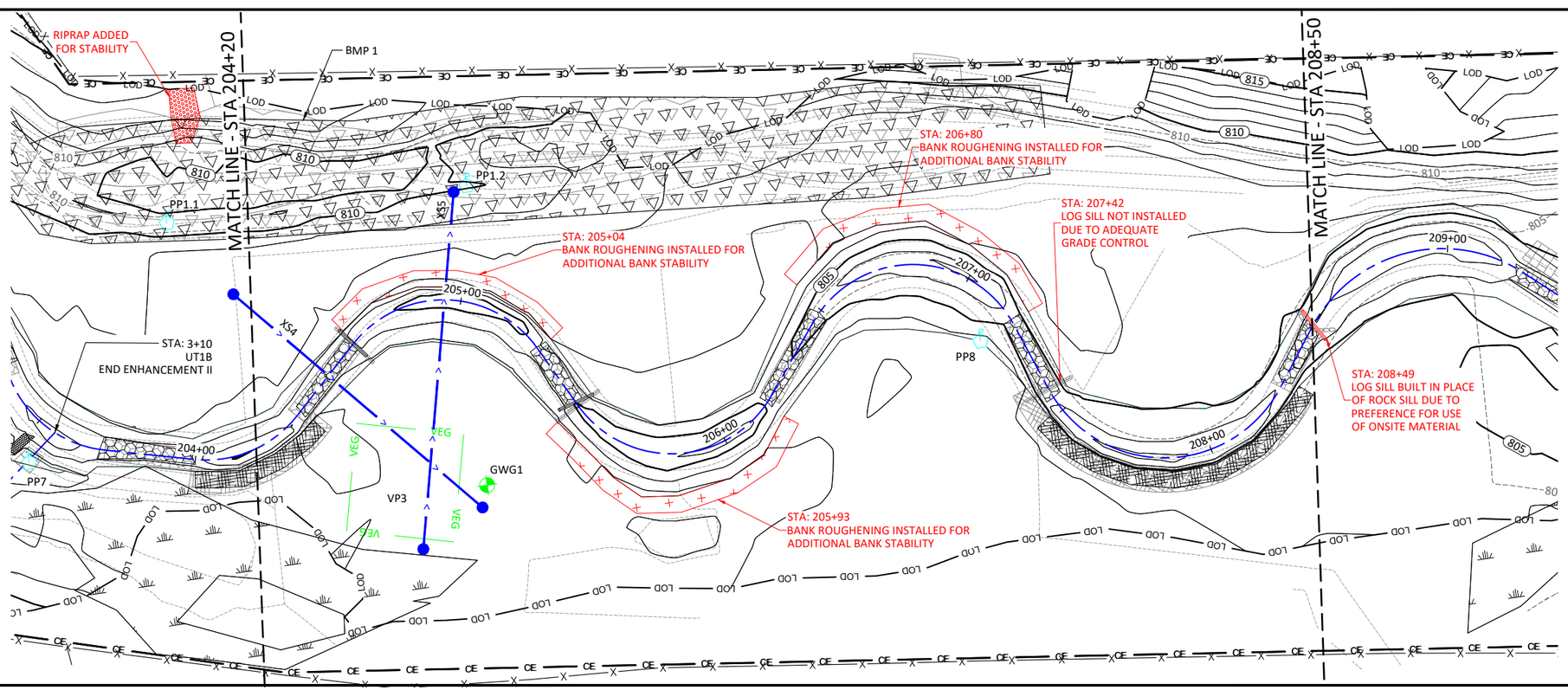

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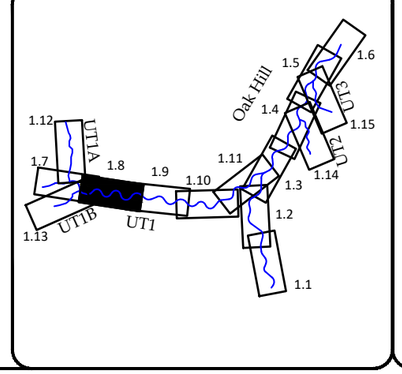

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JACOB KOONTZ 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

UT1
Stream Plan and Profiles

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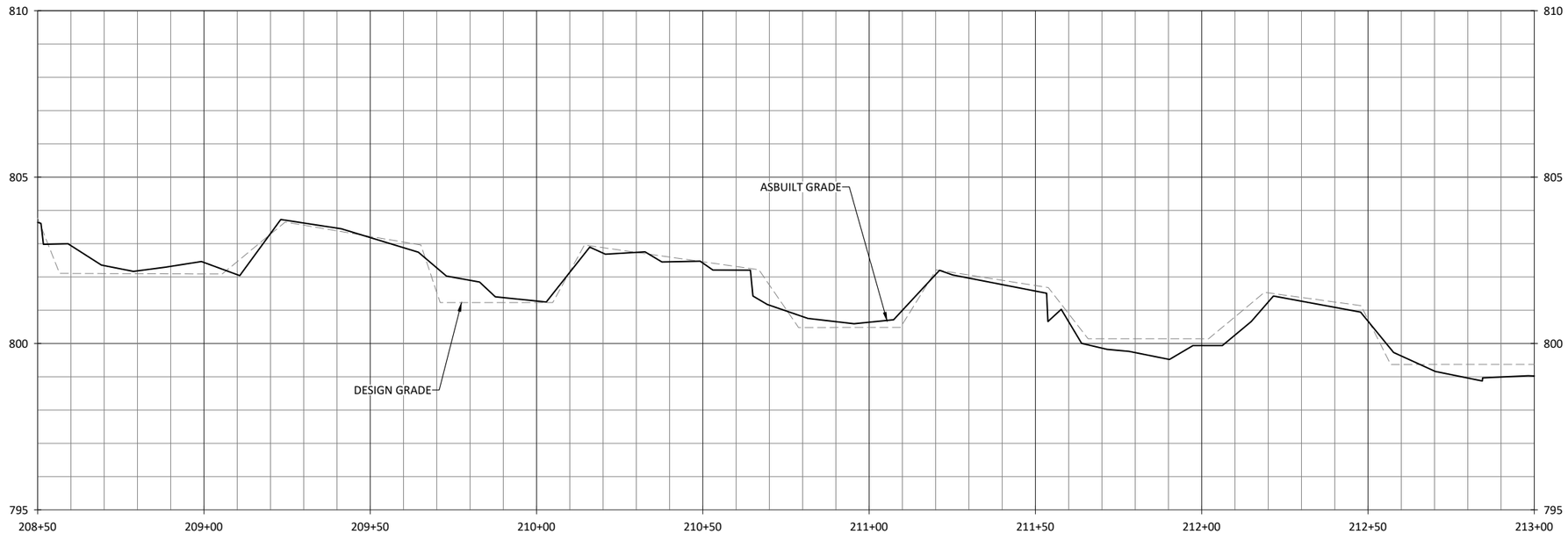

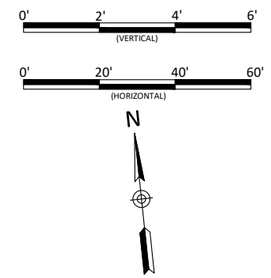

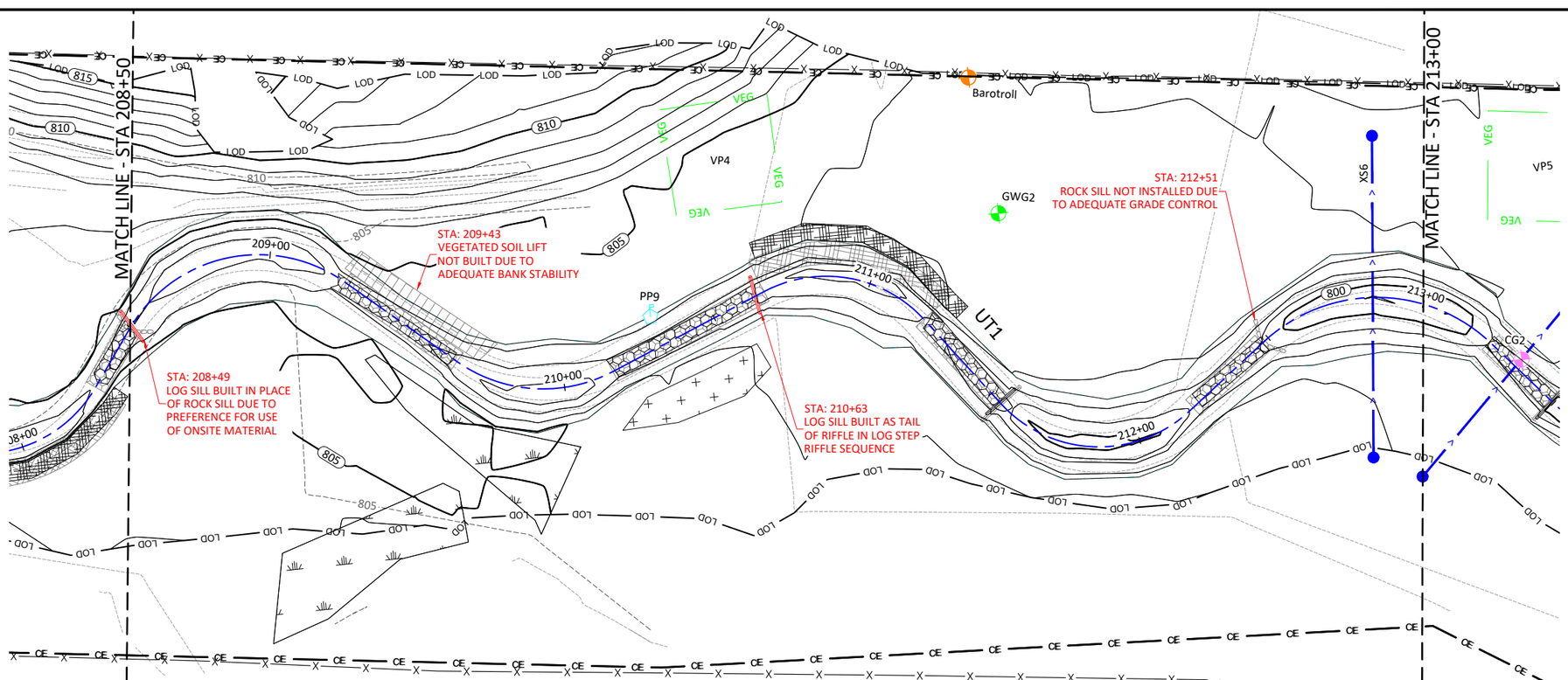

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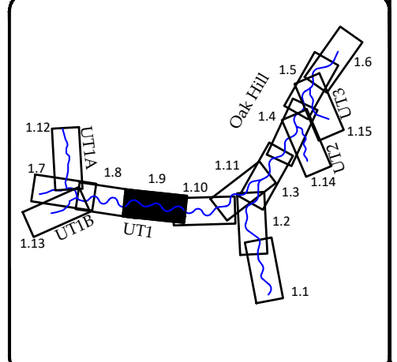

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JOHN C. KNOPF 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
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UT1
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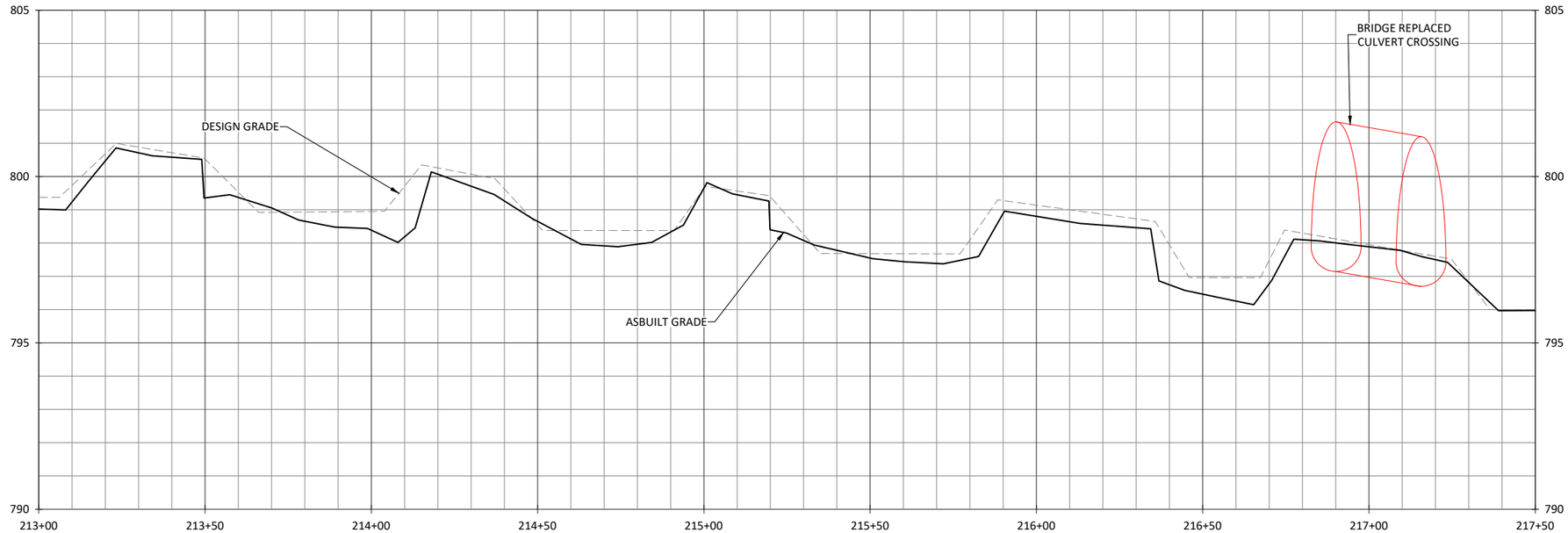

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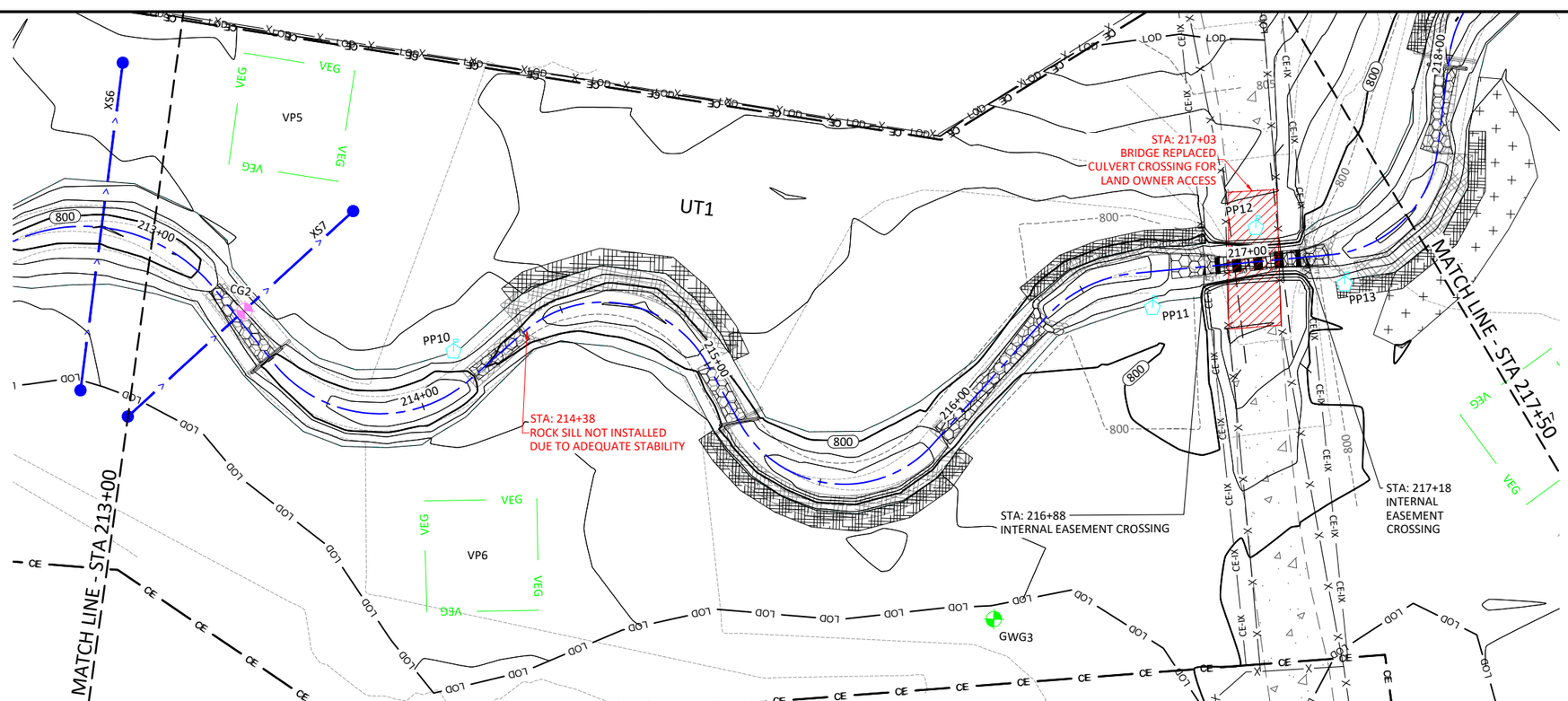

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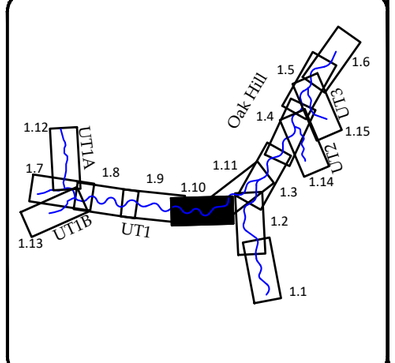

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

UT1
Stream Plan and Profiles

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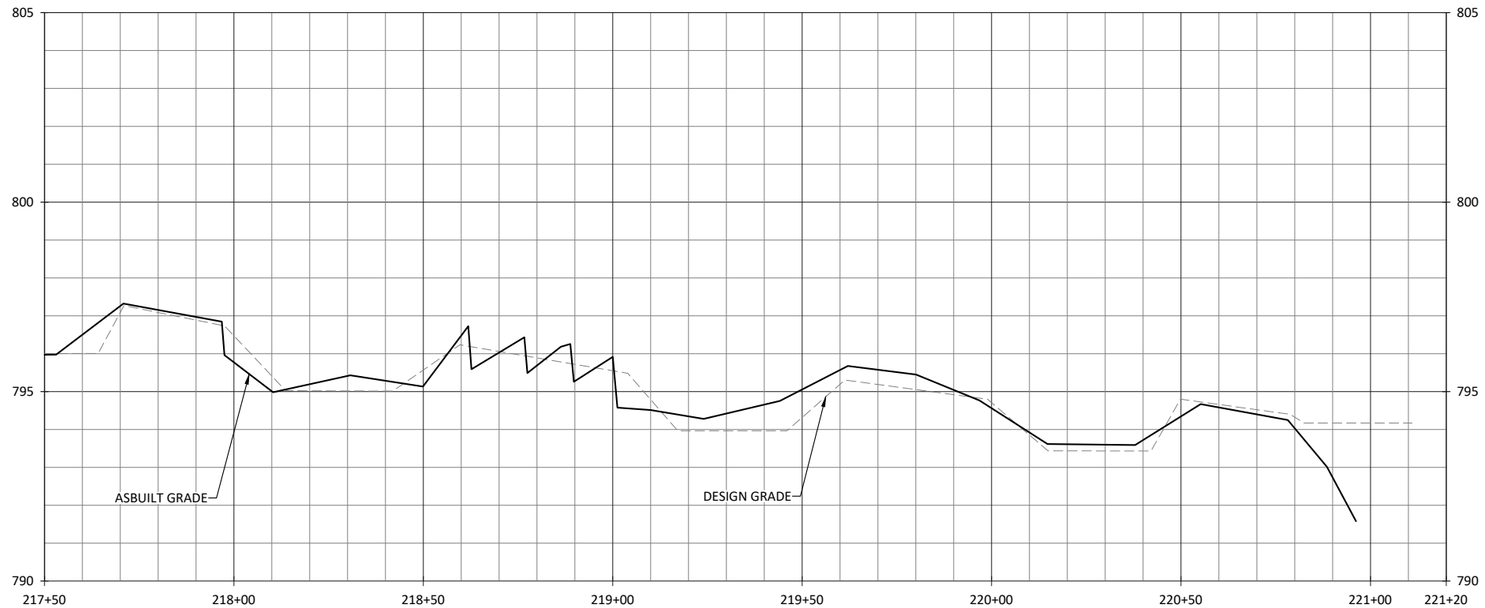

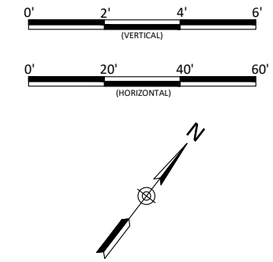

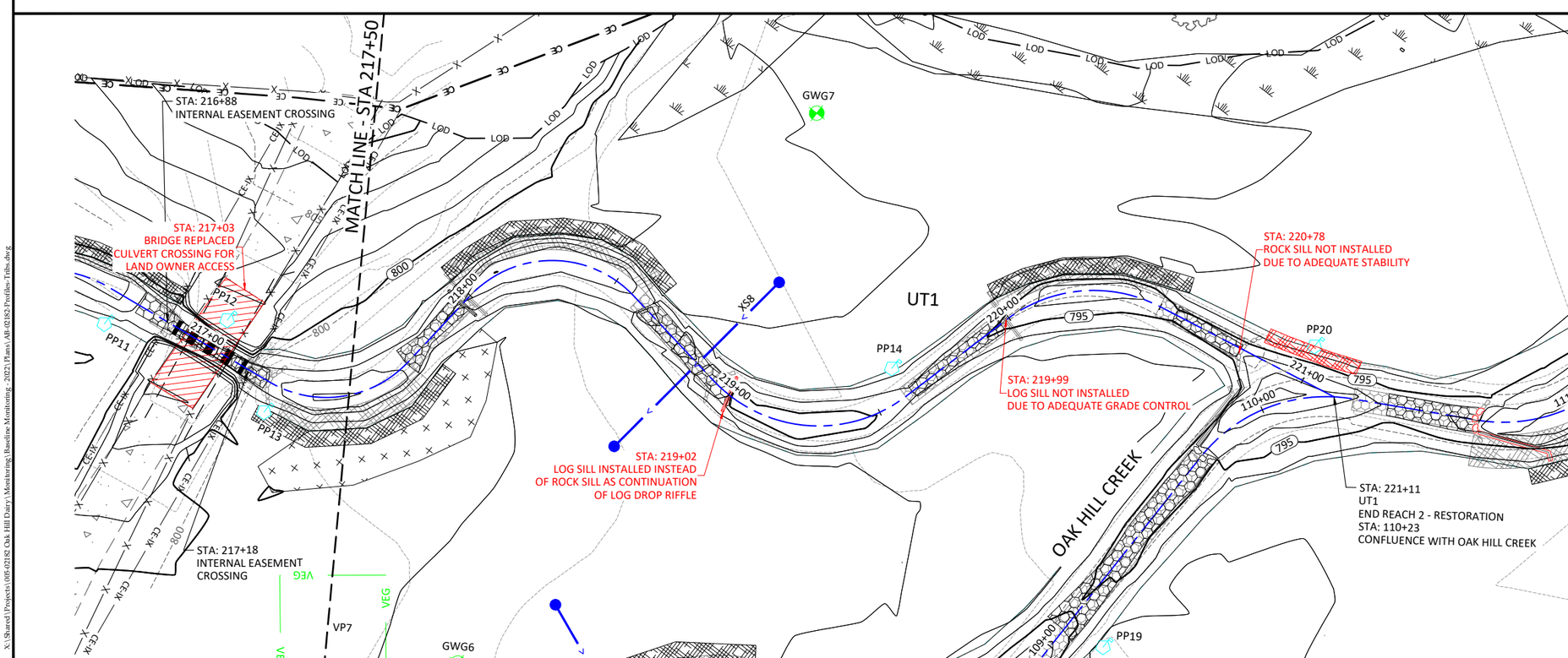

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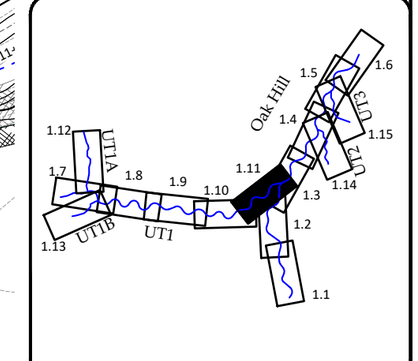

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050178 JASON KEPNER
5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

UT1
Stream Plan and Profiles

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 1.11

May 13, 2022

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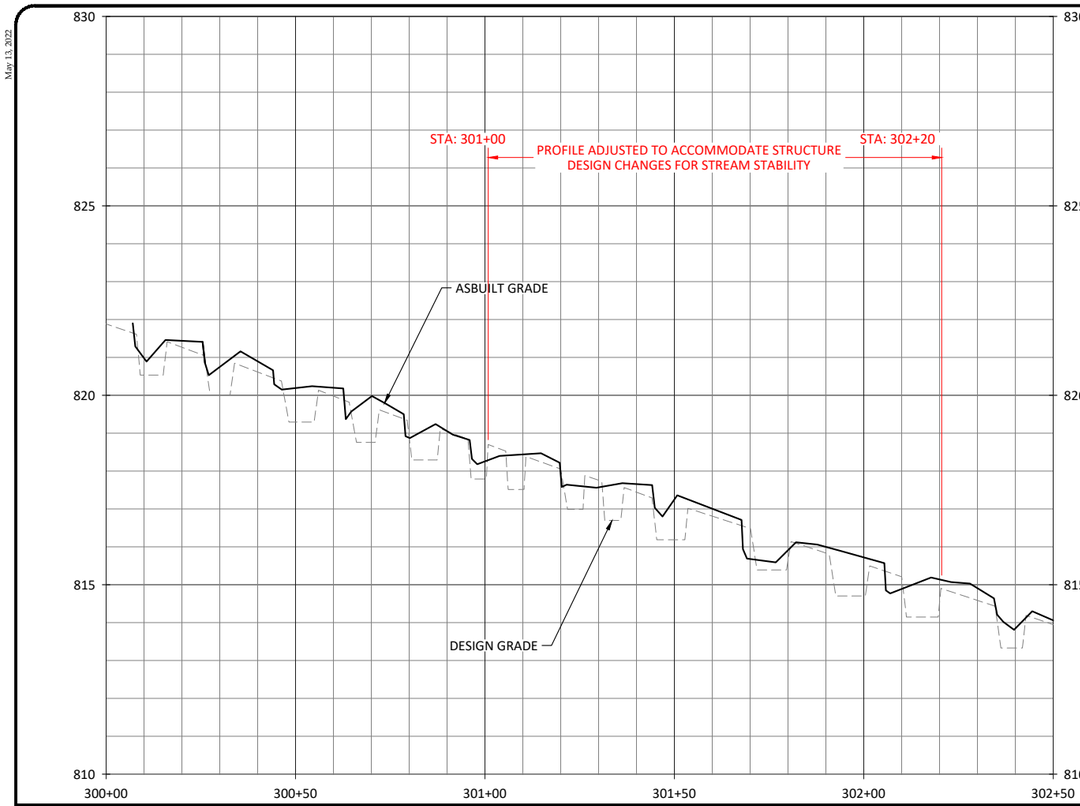

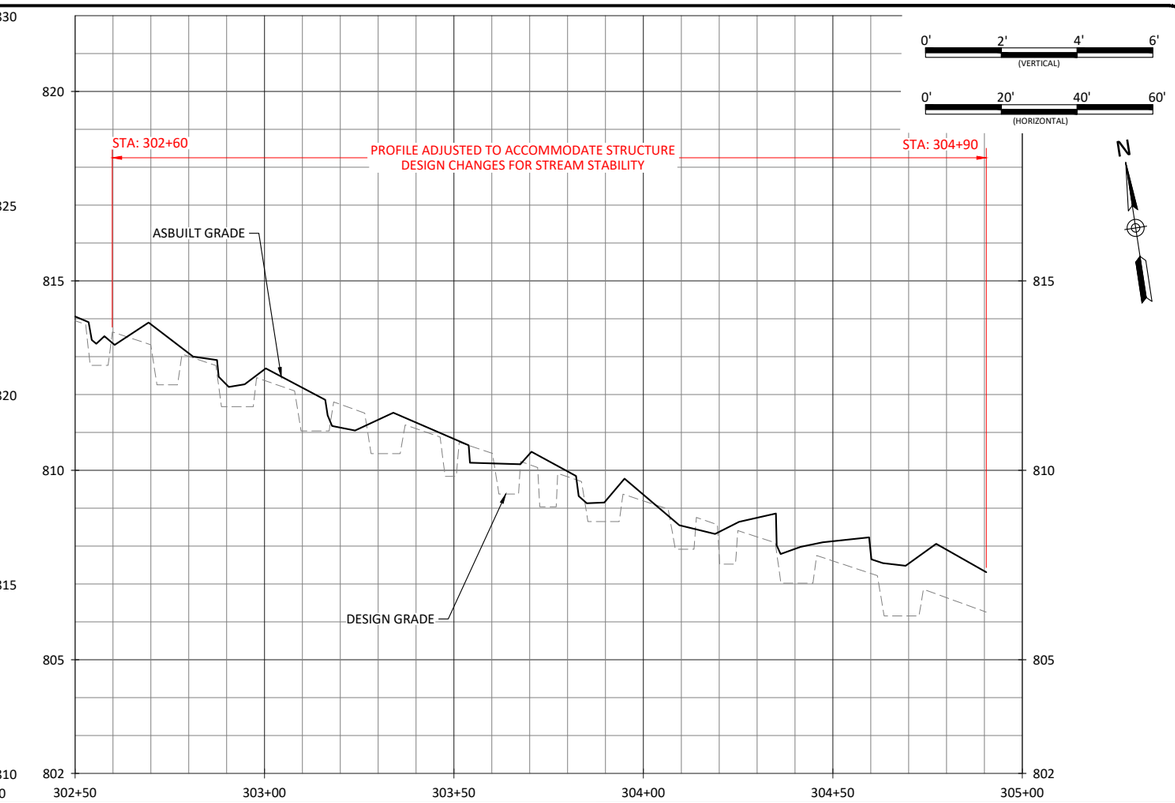

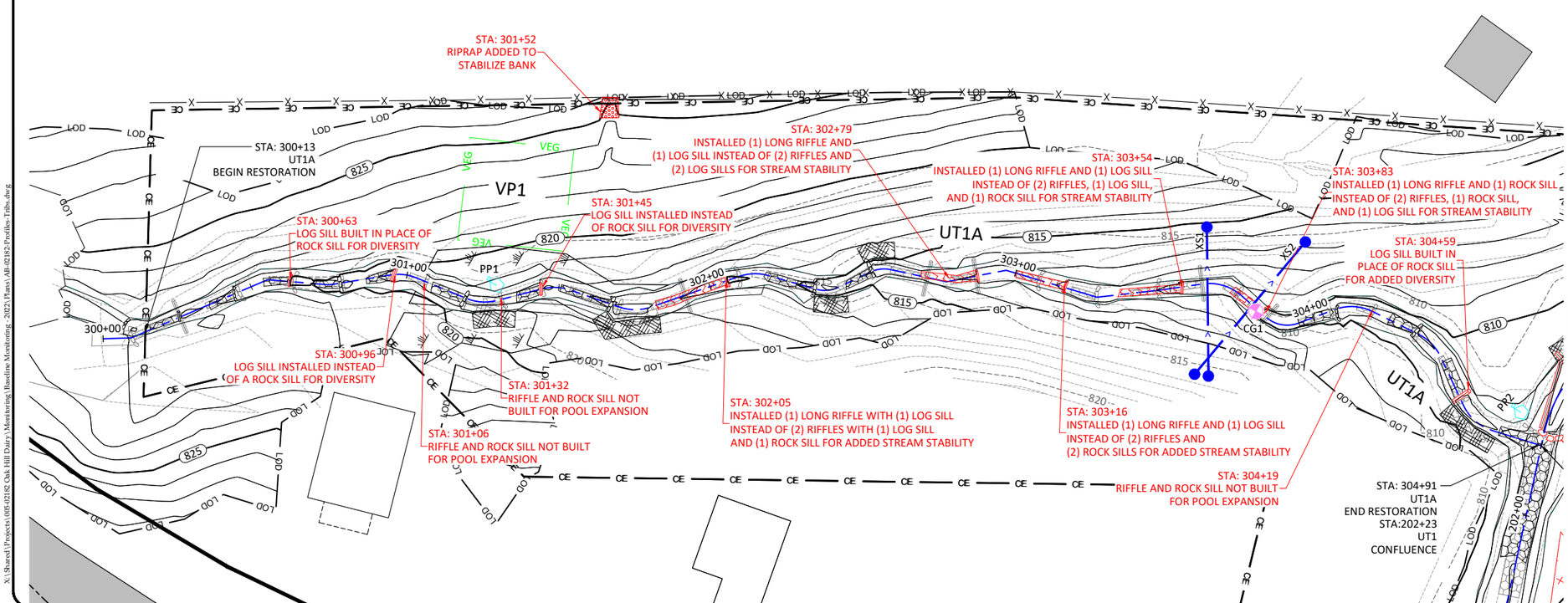

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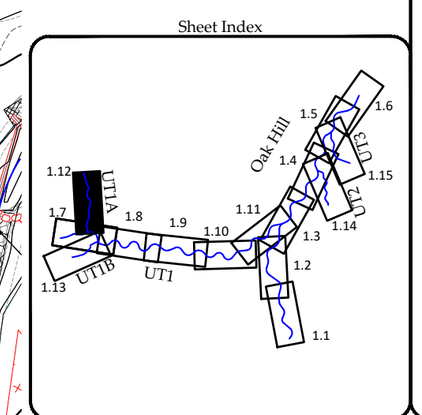

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

UT1A
Stream Plan and Profiles

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 1.12

May 13, 2022

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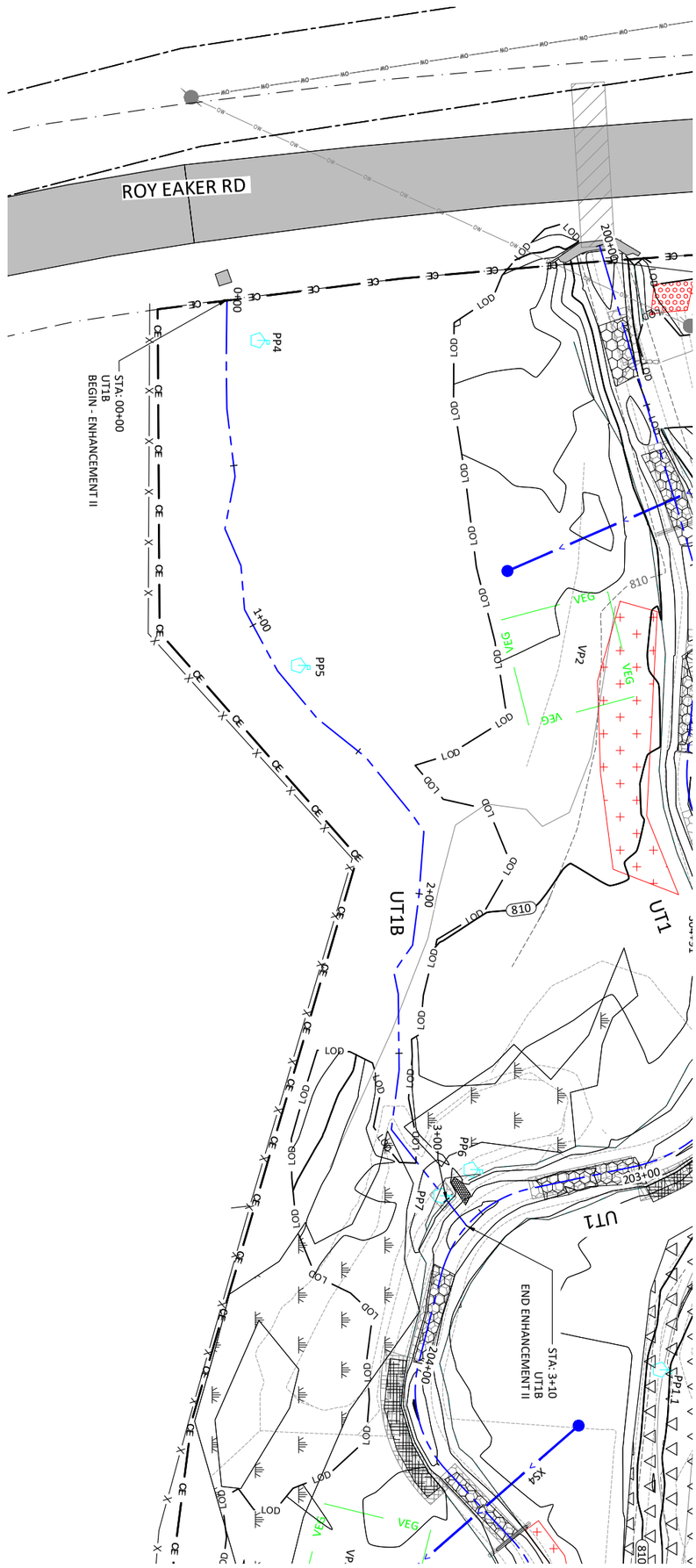

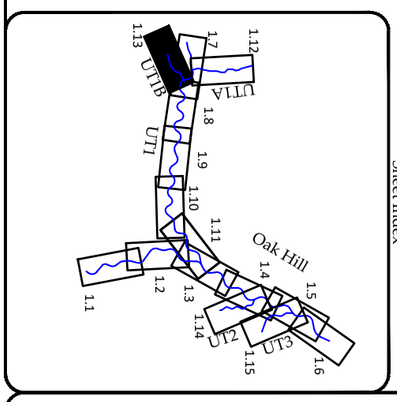

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Revisions:

1.13
Sheet

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

UT1B
Stream Plan and Profiles

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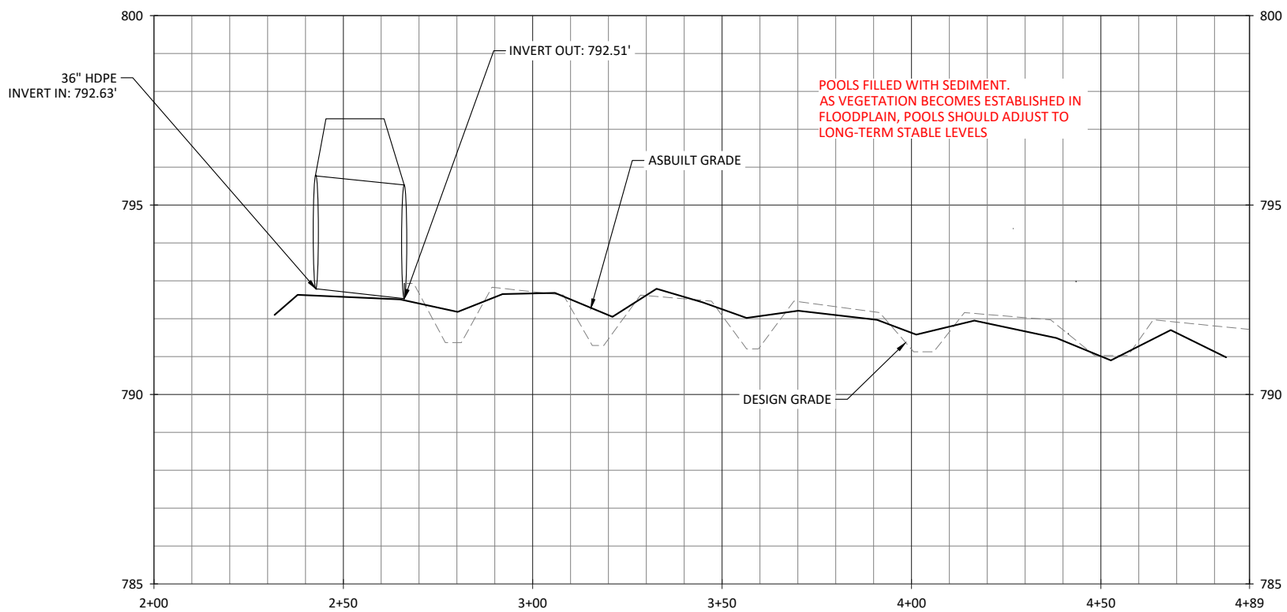

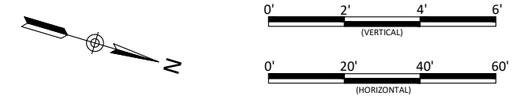

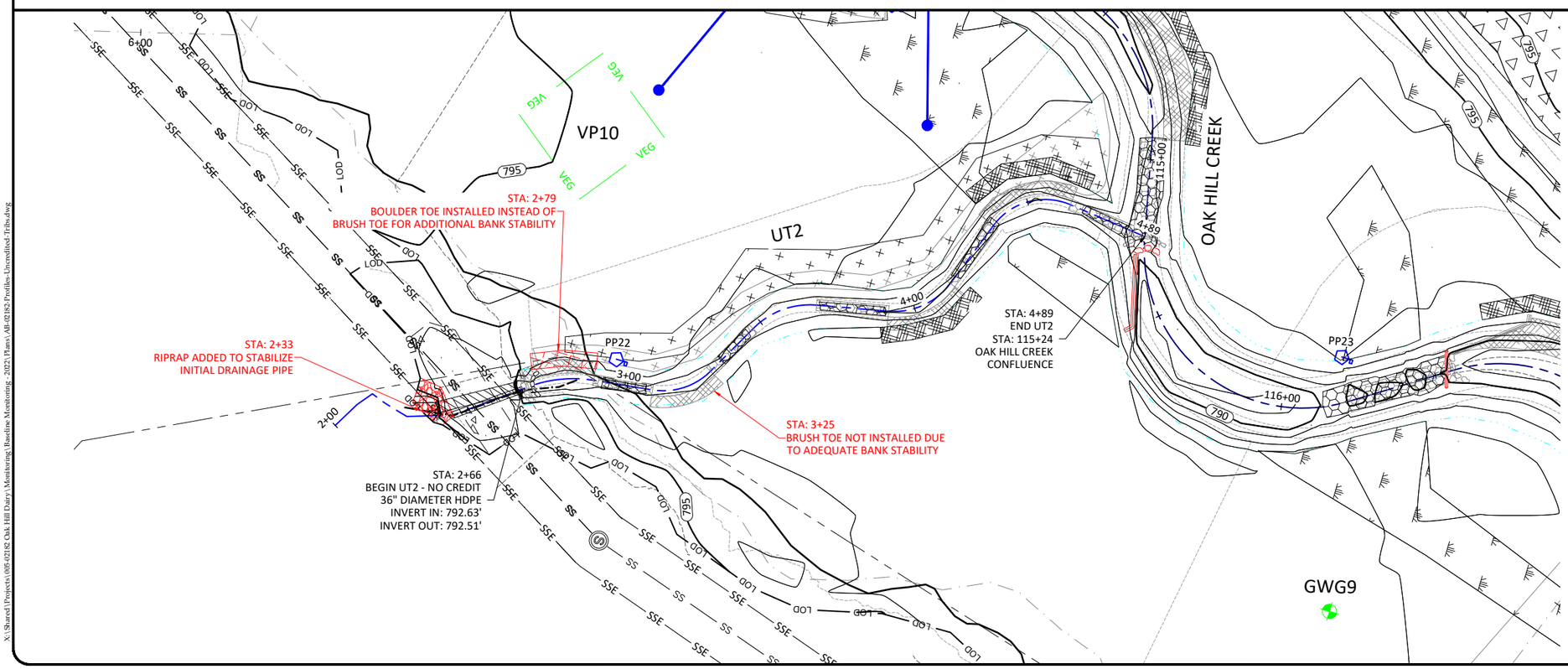

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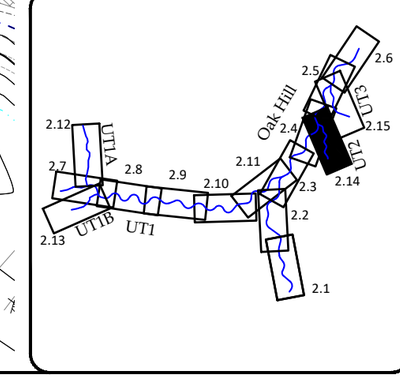

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Uncredited-Tribs - UT2
Stream Plan and Profiles

Revisions:

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Job Number:	005-02182
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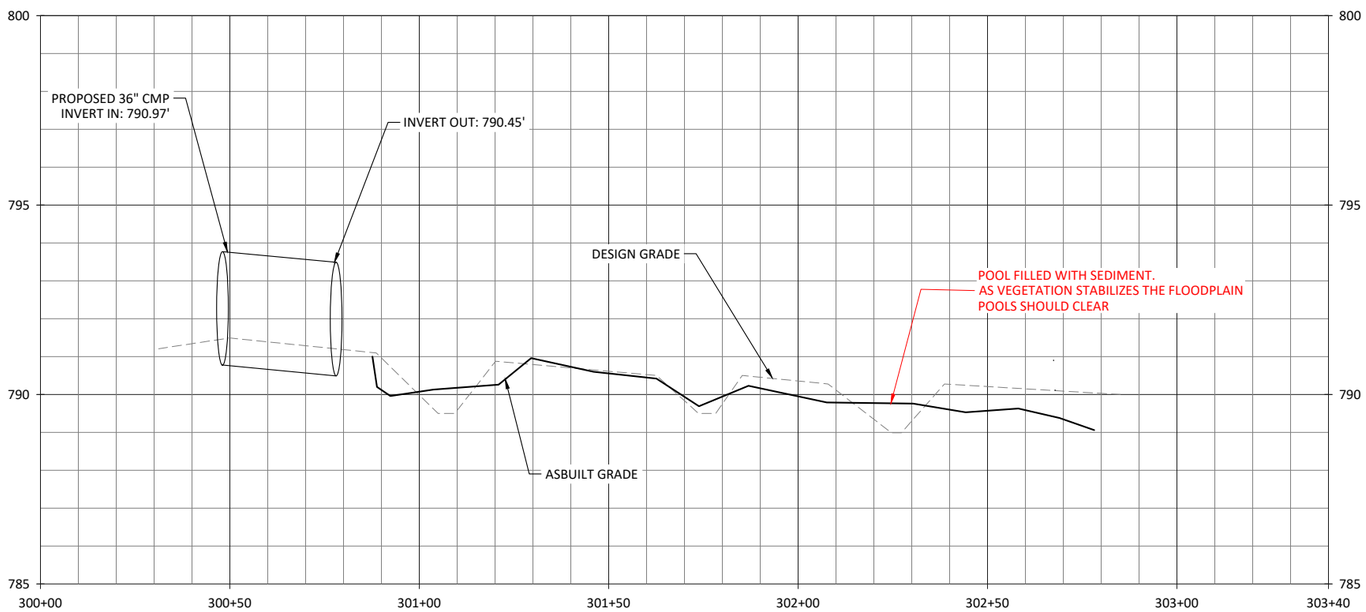

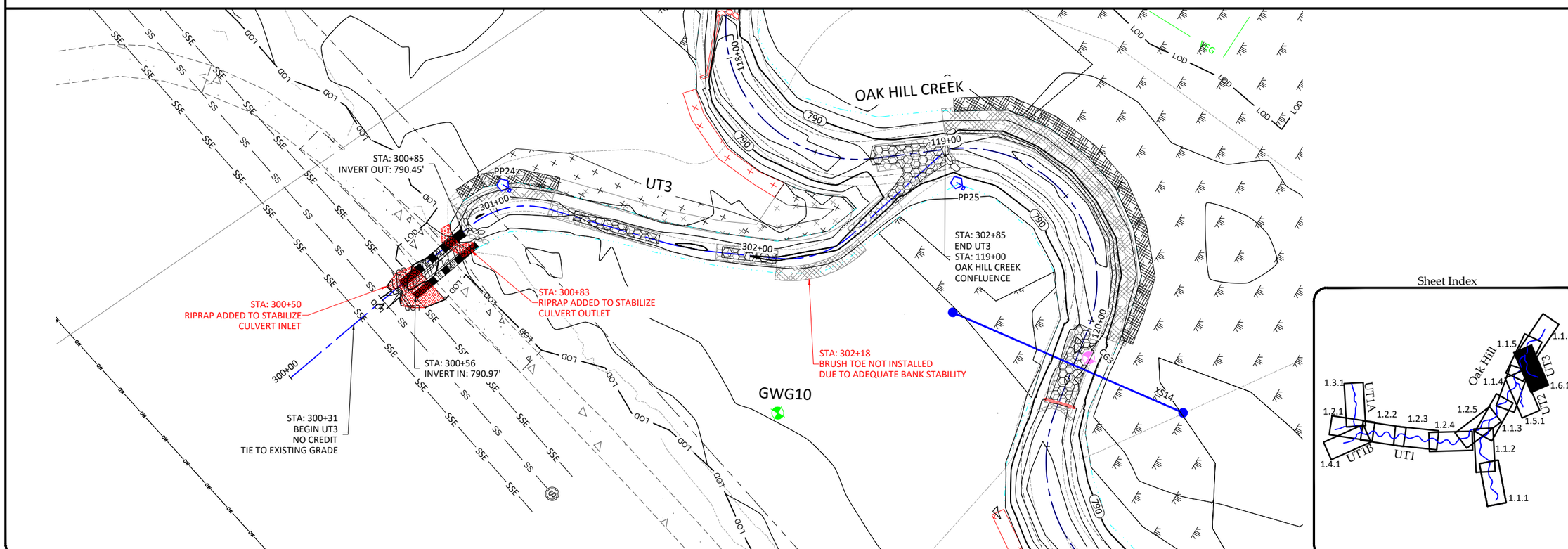

0' 2' 4' 6' (VERTICAL)

0' 20' 40' 60' (HORIZONTAL)

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Uncredited-Tribs - UT3
Stream Plan and Profiles

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
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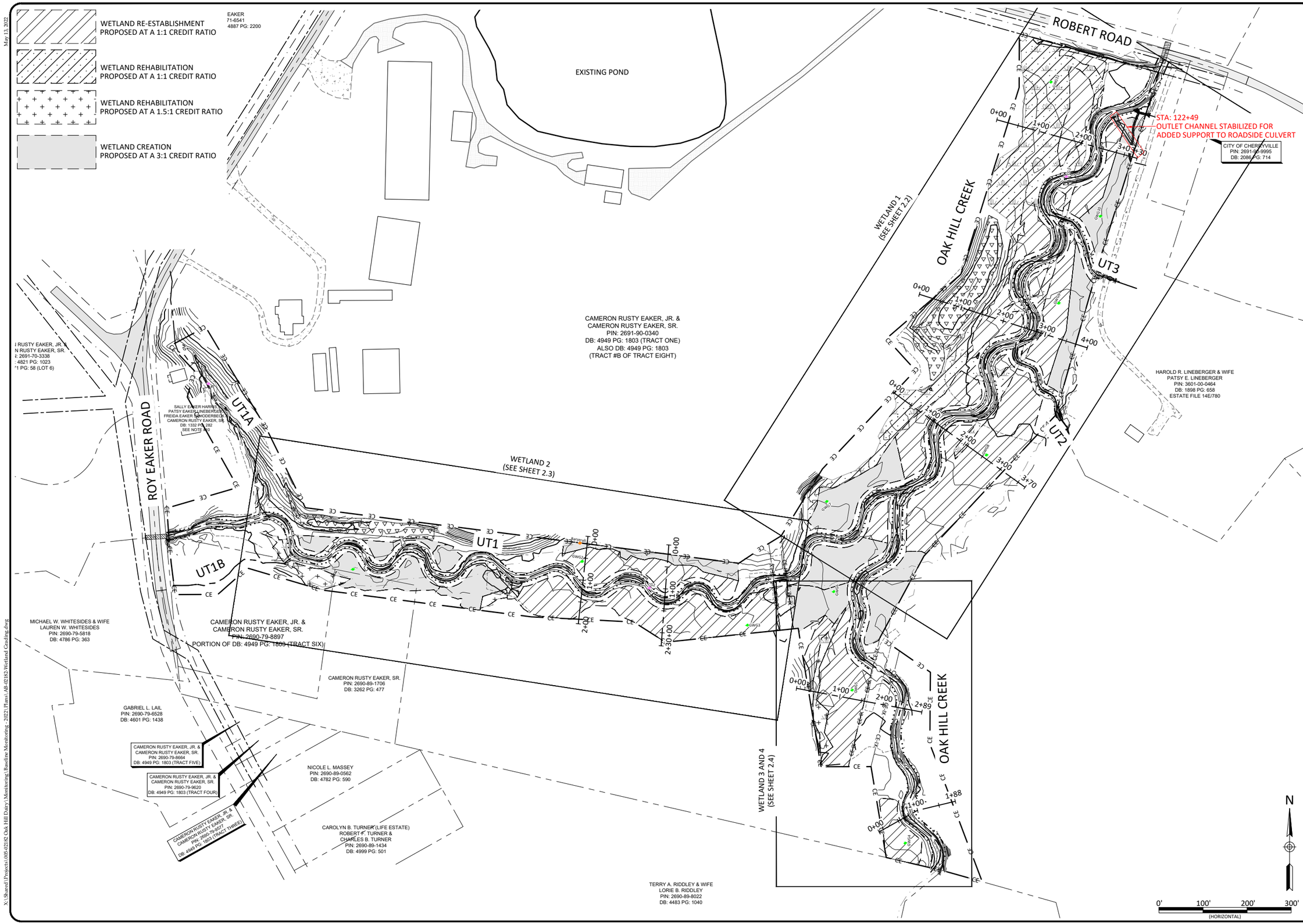
Sheet 1.15



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NORTH CAROLINA PROFESSIONAL SEAL 042073 ENGINEER JOHN MARK RAY
5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Wetland Grading - Overview
Wetland Grading

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
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Sheet 2.1

May 13, 2022

WETLAND RE-ESTABLISHMENT
PROPOSED AT A 1:1 CREDIT RATIO

WETLAND REHABILITATION
PROPOSED AT A 1:1 CREDIT RATIO

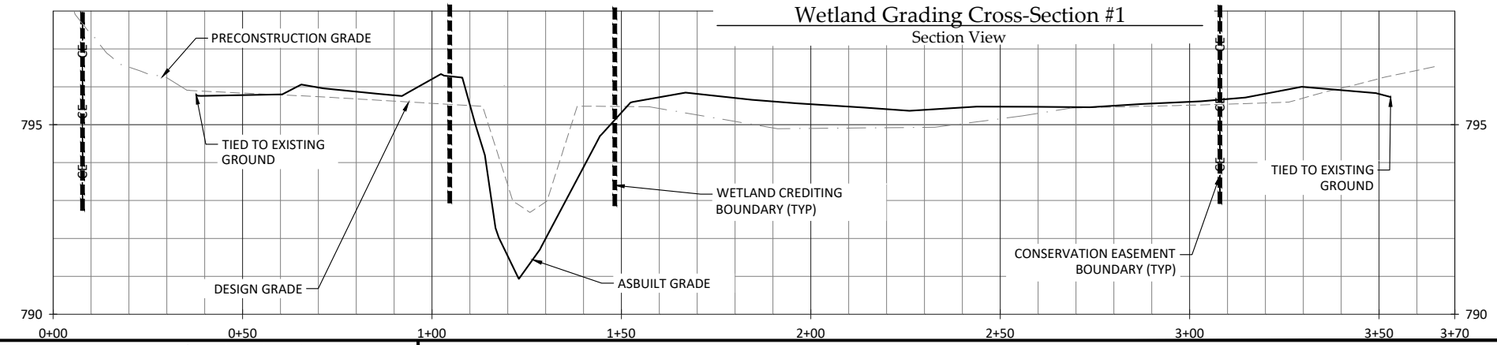
WETLAND REHABILITATION
PROPOSED AT A 1.5:1 CREDIT RATIO

WETLAND CREATION
PROPOSED AT A 3:1 CREDIT RATIO

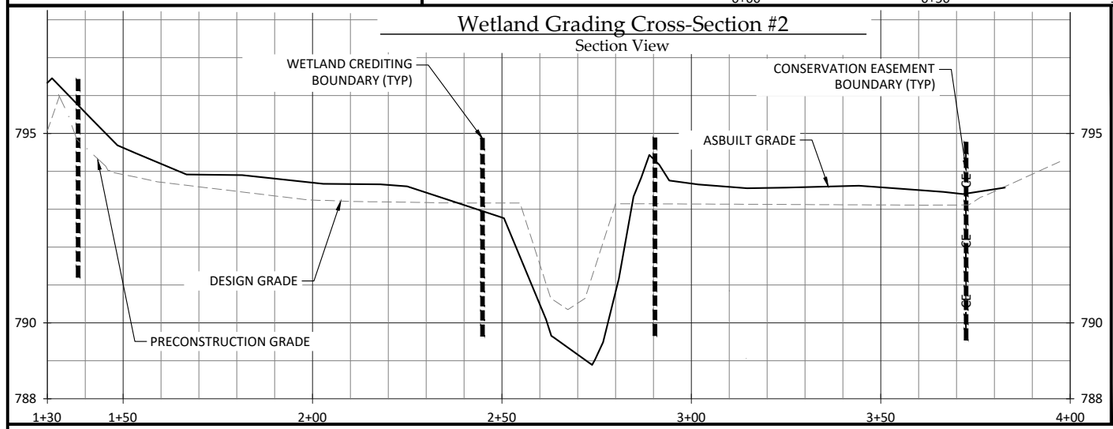
0' 20' 40' 60' (HORIZONTAL)

0' 2' 4' 6' (VERTICAL)

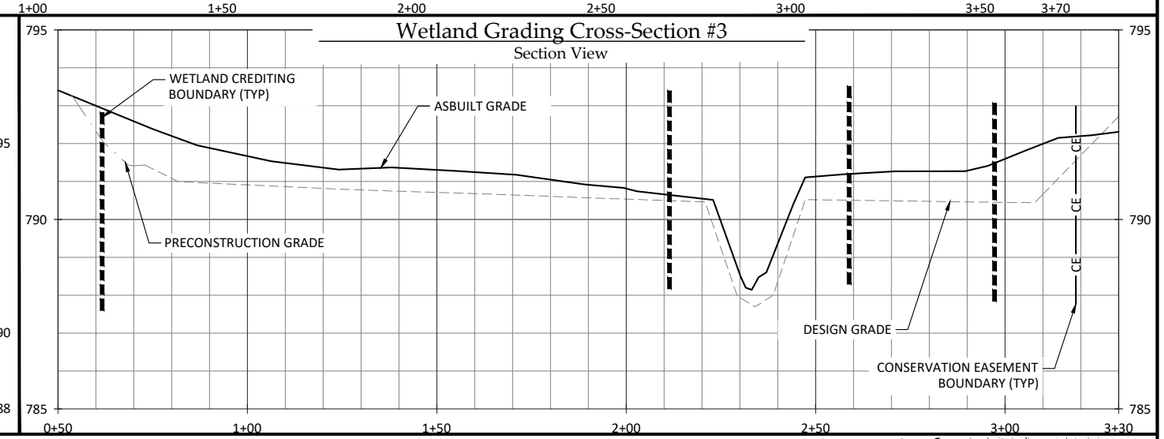
Wetland Grading Cross-Section #1
Section View



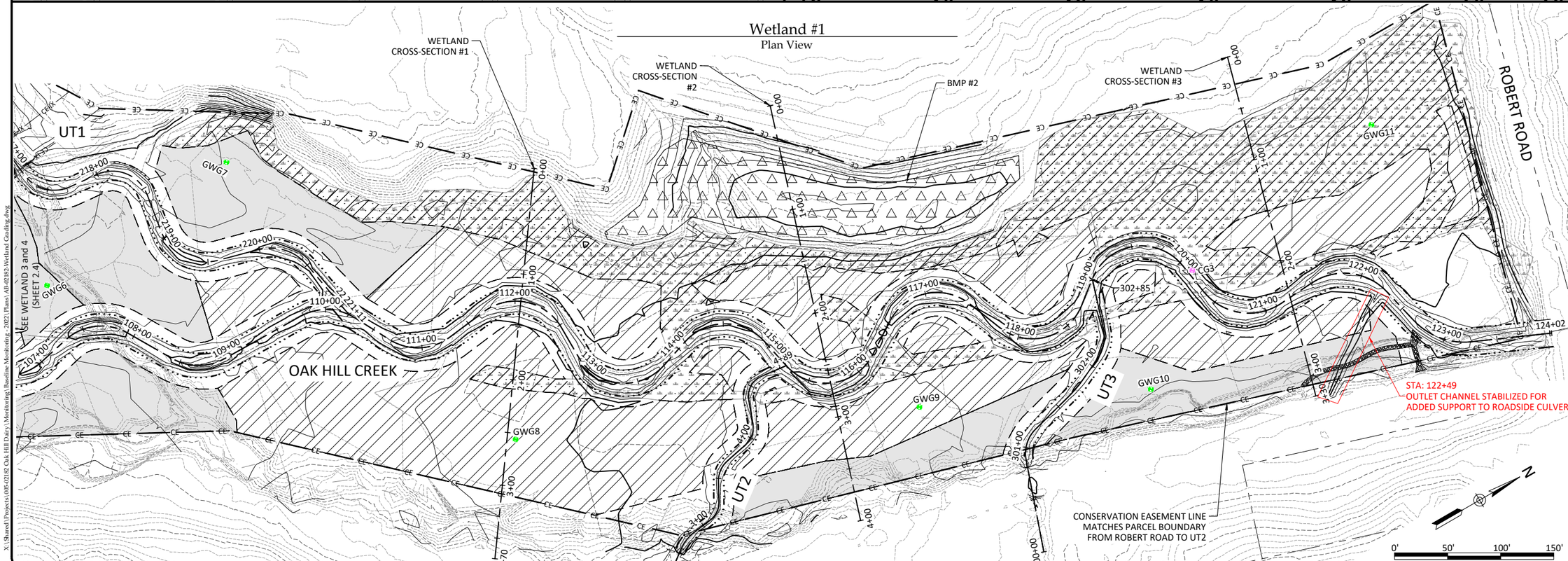
Wetland Grading Cross-Section #2
Section View



Wetland Grading Cross-Section #3
Section View



Wetland #1
Plan View



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5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Wetland Grading - Wetland 1
Wetland Grading

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 2.2

0' 20' 40' 60'
(HORIZONTAL)

0' 2' 4' 6'
(VERTICAL)

WETLAND RE-ESTABLISHMENT PROPOSED AT A 1:1 CREDIT RATIO

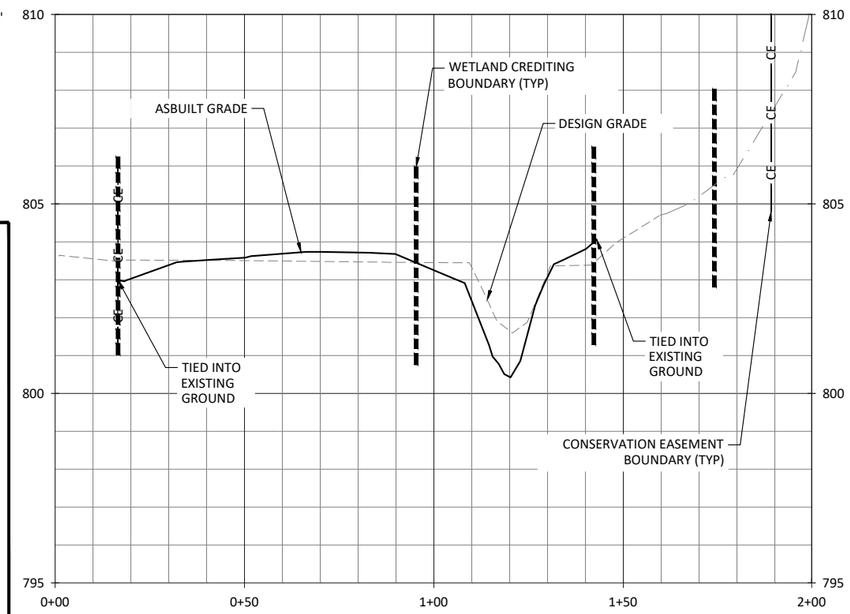
WETLAND REHABILITATION PROPOSED AT A 1:1 CREDIT RATIO

WETLAND REHABILITATION PROPOSED AT A 1.5:1 CREDIT RATIO

WETLAND CREATION PROPOSED AT A 3:1 CREDIT RATIO

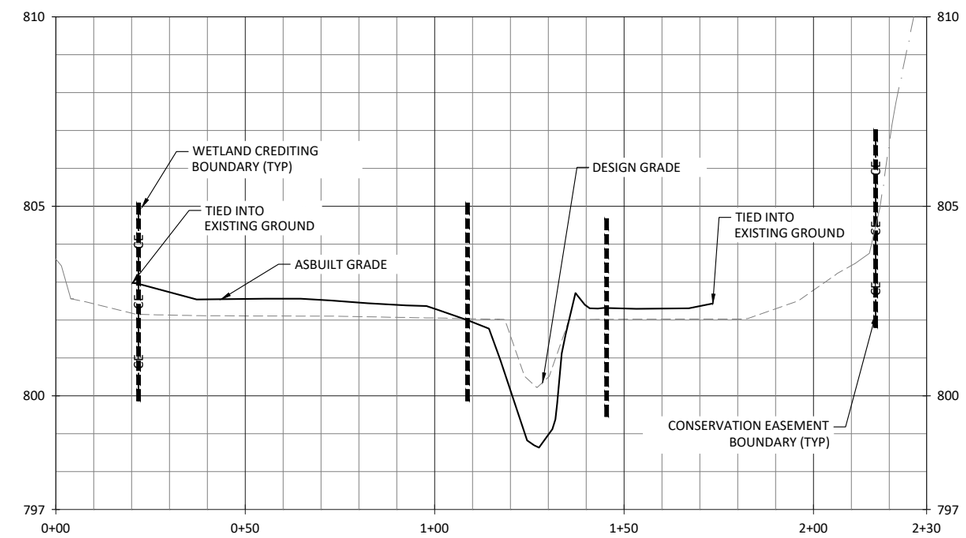
Wetland Grading Cross-Section #4

Section View



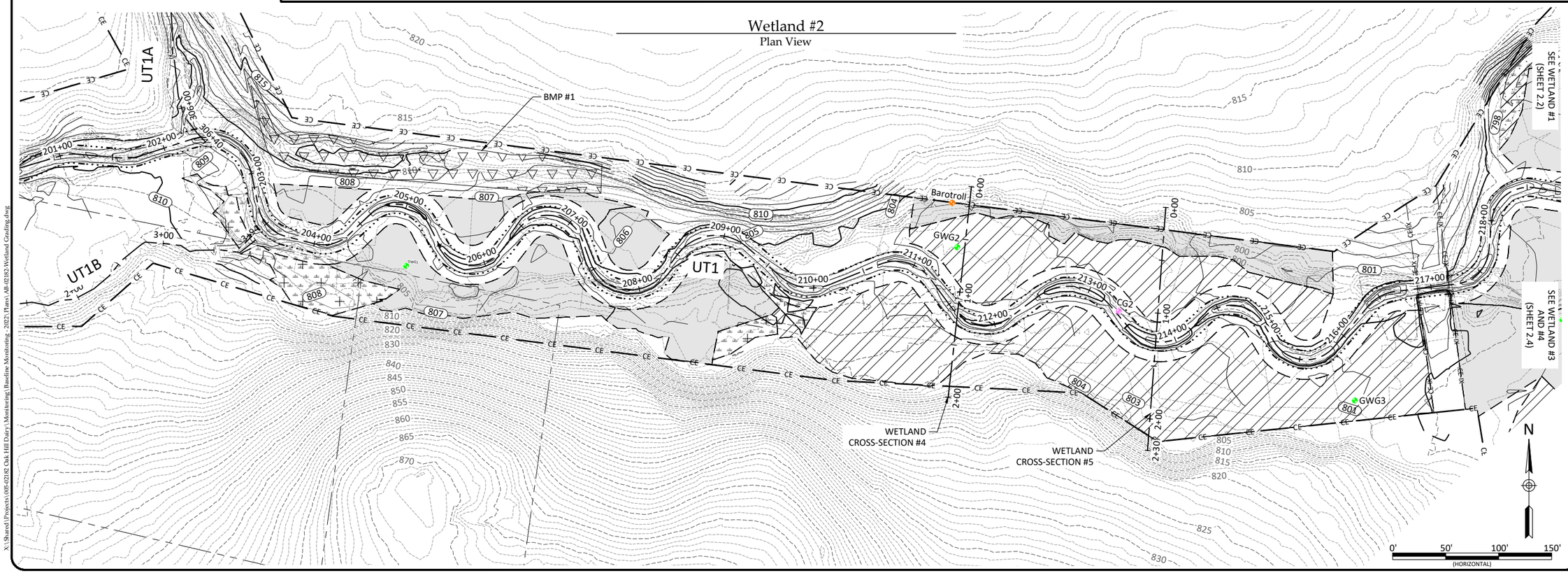
Wetland Grading Cross-Section #5

Section View



Wetland #2

Plan View



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NORTH CAROLINA PROFESSIONAL SEAL 078 ENGINEER JACOB C. KNOX
5/12/22

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Wetland Grading - Wetland 2
Wetland Grading

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
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Sheet 2.3

May 13, 2022

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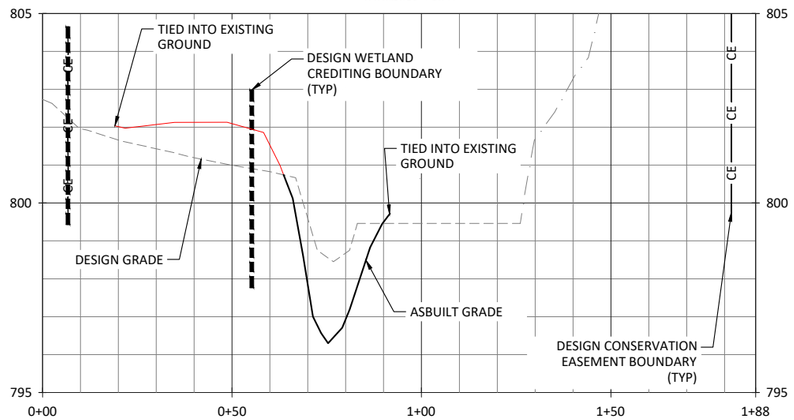
May 13, 2022

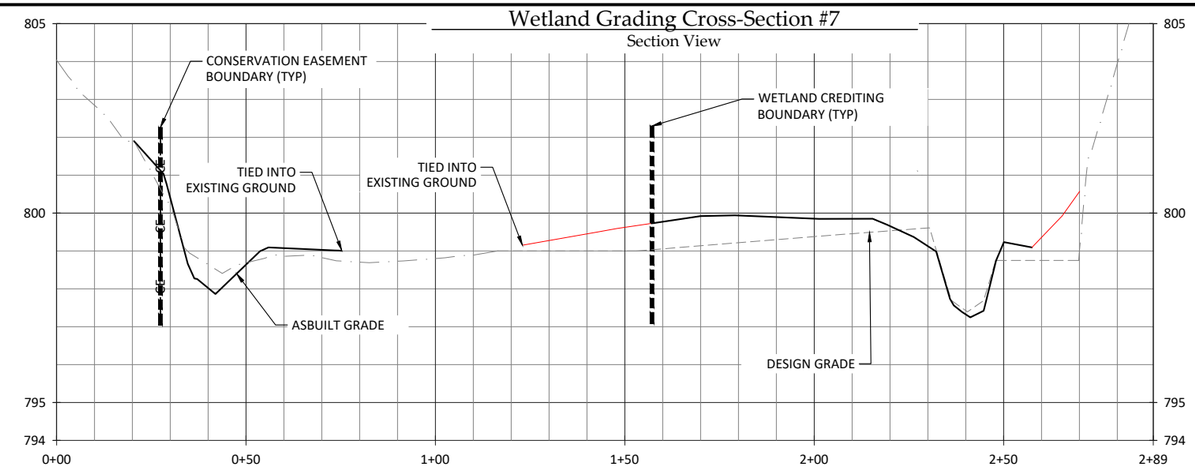
Wetland Grading Cross-Section #6

Section View



Wetland Grading Cross-Section #7

Section View



0' 20' 40' 60' (HORIZONTAL)

0' 2' 4' 6' (VERTICAL)

WETLAND RE-ESTABLISHMENT PROPOSED AT A 1:1 CREDIT RATIO

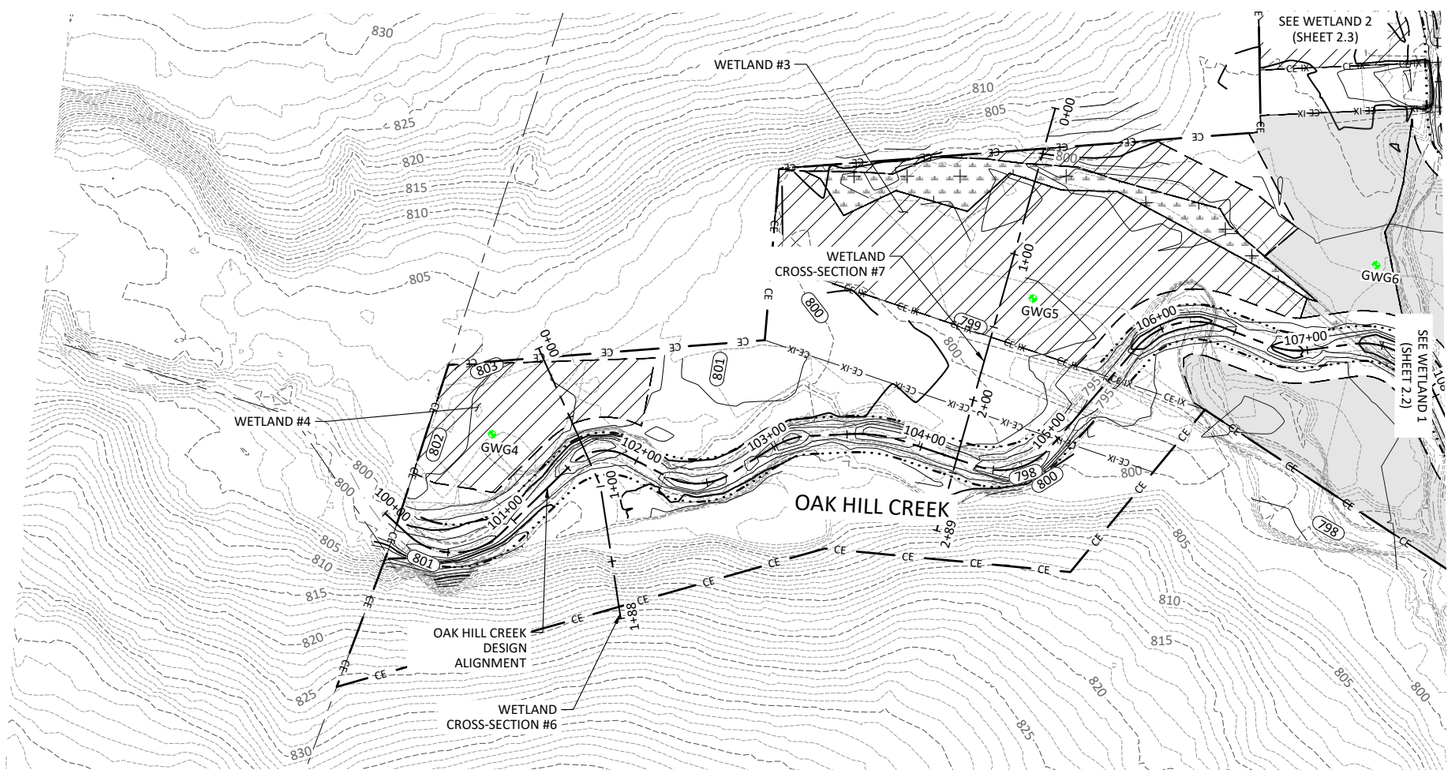
WETLAND REHABILITATION PROPOSED AT A 1:1 CREDIT RATIO

WETLAND REHABILITATION PROPOSED AT A 1.5:1 CREDIT RATIO

WETLAND CREATION PROPOSED AT A 3:1 CREDIT RATIO

Wetland #3 and #4

Plan View



0' 50' 100' 150' (HORIZONTAL)

N

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Wetland Grading - Wetland 3-4 Wetland Grading

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
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Sheet 2.4

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Open Area Buffer Planting

Open Buffer Planting Zone Trees							
Bare Root							
Species	**Common Name**	**Max Spacing**	**Indiv. Spacing**	**Min. Caliper Size**	**Stratum**	**Wetland Indicator**	**# of Stems**
Acer negundo	Boxelder	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10%
Platanus occidentalis	Sycamore	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
Betula nigra	River Birch	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
Liriodendron tulipifera	Tulip Poplar	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	2%
Quercus phellos	Willow Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10%
Oxydendrum arboreum	Sourwood	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	UPL	5%
Diospyros virginiana	Persimmon	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	6%
Populus deltoides	Eastern Cottonwood	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10%
Carya cordiformis	Bitternut Hickory	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	5%
Quercus alba	White Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	5%
Quercus rubra	Northern Red Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	5%
Ulmus rubra	Slippery Elm	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	1%
					Total		**89%**

Open Buffer Planting Zone Small Trees / Shrubs							
Bare Root							
Species	**Common Name**	**Max Spacing**	**Indiv. Spacing**	**Min. Caliper Size**	**Stratum**	**Wetland Indicator**	**# of Stems**
~~*Alnus serrulata*~~	~~Tag Alder~~	~~12 ft.~~	~~6-12 ft.~~	~~0.25"-1.0"~~	~~Sub-Canopy~~	~~OBL~~	~~2%~~
Hamamelis virginiana	Witch Hazel	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FACU	2%
Cornus florida	Flowering Dogwood	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FACU	2%
Lindera benzoin	Spicebush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	2%
Amelanchier arborea	Serviceberry	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	2%
Calycanthus floridus	Sweet Shrub	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FACW	1%
Sambucus canadensis	Elderberry	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	2%
					Total		**11%**

Notes:
(1) Substitute species: Sweetshrub, northern red oak, slippery elm.
(2) Transplants from on-site to be used at Designer's discretion for streambank and floodplain planting.
(3) Percentages of each species may be varied at Designer's discretion but shall not exceed 20% per each species.
(4) Designer may substitute container plantings or other plantings for bare roots.

TEMPORARY SEEDING		
APPROVED DATE	**TYPE**	**PLANTING RATE (lbs/acre)**
Jan 1 – May 1	Rye Grain (Secale Cereale)	120
	Ladino clover (Trifolium Repens)	5
	Crimson Clover (Trifolium incarnatum)	5
	Straw Mulch	4,000
May 1 – Aug 15	German Millet (*Setaria italica*)	40
	Ladino clover (Trifolium Repens)	5
	Crimson Clover (Trifolium incarnatum)	5
	Straw Mulch	4,000
Aug 15 – Dec 31	Rye Grain (*Secale Cereale*)	120
	Ladino clover (Trifolium Repens)	5
	Crimson Clover (Trifolium incarnatum)	5
	Straw Mulch	4,000

Note:
Rates of fertilizer and lime if necessary can be found in the site preparation plan included in the specification documents.

Wetland Planting

Wetland Planting Zone Trees							
Bare Root							
Species	**Common Name**	**Max Spacing**	**Indiv. Spacing**	**Min. Caliper Size**	**Stratum**	**Wetland Indicator**	**# of Stems**
Platanus occidentalis	Sycamore	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
Betula nigra	River Birch	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
Quercus phellos	Willow Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10%
Ulmus americana	American Elm	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	10%
Nyssa sylvatica	Black Gum	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	5%
Quercus michauxii	Swamp Chestnut Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	8%
Acer negundo	Boxelder	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	5%
Quercus nigra	Water Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	7%
Celtis laevigata	Sugarberry	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	5%
					Total		**80%**

Wetland Planting Zone Small Trees/Shrubs							
Bare Root							
Species	**Common Name**	**Max Spacing**	**Indiv. Spacing**	**Min. Caliper Size**	**Stratum**	**Wetland Indicator**	**# of Stems**
Alnus serrulata	Tag Alder	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	OBL	1%
Lindera benzoin	Spicebush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	5%
Cephalanthus occidentalis	Buttonbush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	OBL	5%
Sambucus canadensis	Elderberry	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	5%
Cornus amomum	Silky Dogwood	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FACW	1%
Salix sericea	Silky Willow	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	OBL	2%
Livestakes							
Salix nigra	Black Willow	8 ft	6-8 ft.	0.5"-1.5"	Shrub	OBL	1%
					Total		**20%**

Notes:
(1) Substitute species: Silky willow, silky dogwood.
(2) Tag Alder shall be limited to Wetland 1 or other wetter areas of the site as designated by Designer.
(3) Transplants from on-site to be used at Designer's discretion for streambank and floodplain planting.
(4) Percentages of each species may be varied at Designer's discretion but shall not exceed 20% per each species.
(5) Designer may substitute container plantings or other plantings for bare roots.

Partially Vegetated Buffer Area Planting

Open Buffer Planting Zone Trees							
Bare Root							
Species	**Common Name**	**Max Spacing**	**Indiv. Spacing**	**Min. Caliper Size**	**Stratum**	**Wetland Indicator**	**# of Stems**
Carpinus caroliniana	American Hornbeam	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	14%
Euonymus americana	Strawberry Bush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	14%
Lindera benzoin	Spicebush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	8%
Fagus grandifolia	American Beech	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	14%
Ulmus rubra	Slippery Elm	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	7%
Hamamelis virginiana	Witchhazel	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FACU	7%
Calycanthus floridus	Sweetshrub	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FACU	7%
Cornus florida	Flowering Dogwood	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FACU	7%
Asimina triloba	Pawpaw	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	14%
Quercus rubra	Northern Red Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	8%
					Total		**100%**

Riparian Corridor and Inundated Wetland Planting

Streambank Planting Zone							
Live Stakes							
Species	**Common Name**	**Max Spacing**	**Indiv. Spacing**	**Min. Size**	**Stratum**	**Wetland Indicator**	**% of Stems**
Salix nigra	Black Willow	8 ft.	6-8 ft.	0.5"-1.5" cal.	Shrub	OBL	25%
Cornus amomum	Silky Dogwood	8 ft.	6-8 ft.	0.5"-1.5" cal.	Shrub	FACW	20%
Salix sericea	Silky Willow	8 ft.	6-8 ft.	0.5"-1.5" cal.	Shrub	OBL	25%
Cephalanthus occidentalis	Buttonbush	8 ft.	6-8 ft.	0.5"-1.5" cal.	Shrub	OBL	15%
Sambucus canadensis	Elderberry	8 ft.	6-8 ft.	0.5"-1.5" cal.	Shrub	FAC	15%
					Total		**100%**
Herbaceous Plugs							
Juncus effusus	Common Rush	5 ft.	3-5 ft.	1.0"- 2.0" plug	Herb	FACW	40%
Carex crinita	Fringed Sedge	5 ft.	3-5 ft.	1.0"- 2.0" plug	Herb	OBL	10%
Carex lurida	Lurid Sedge	5 ft.	3-5 ft.	1.0"- 2.0" plug	Herb	OBL	20%
Carex lupulina	Hop Sedge	5 ft.	3-5 ft.	1.0"-2.0" plug	Herb	OBL	15%
Scirpus cyperinus	Woolgrass	5 ft	3-5 ft.	1.0"-2.0" plug	Herb	FACW	15%
					Total		**100%**

Note: See live staking and herbaceous plugs detail.

Permanent Seeding

Riparian Seeding - Open Canopy					
Pure Live Seed (21 lbs/ acre)					
Approved Date	**Species Name**	**Common Name**	**Stratum**	**Wetland Indicator**	**Density (lbs/acre)**
All Year	*Schizachyrium scoparium*	Little Bluestem	Herb	FACU	4.0
All Year	*Panicum virgatum*	Switchgrass	Herb	FAC	2.0
All Year	*Panicum rigidulum*	Redtop Panicgrass	Herb	FACW	1.0
All Year	*Rudbeckia hirta*	Blackeyed Susan	Herb	FACU	1.0
All Year	*Coreopsis lanceolata*	Lanceleaf Coreopsis	Herb	FACU	1.0
All Year	*Echinacea purpurea*	Purple coneflower	Herb	UPL	1.0
All Year	*Panicum clandestinum*	Deertongue	Herb	FAC	2.0
All Year	*Elymus virginicus*	Virginia Wild Rye	Herb	FACW	2.0
All Year	*Sorghastrum nutans*	Indiangrass	Herb	FACU	3.0
All Year	*Bidens aristosa*	Bur-Marigold	Herb	FACW	1.0
All Year	*Helianthus angustifolia*	Narrowleaf Sunflower	Herb	FACW	1.0
All Year	*Coreopsis tinctoria*	Plains corepsis	Herb	FAC	1.0
All Year	Achillea millefolium	Common yarrow	Herb	FACU	1.0

Wetland Seeding - Open Canopy					
Pure Live Seed (19 lbs/ acre)					
Approved Date	**Species Name**	**Common Name**	**Stratum**	**Wetland Indicator**	**Density (lbs/acre)**
All Year	*Coleataenia anceps*	Beaked Panicgrass	Herb	FAC	3.0
All Year	*Carex vulpinoidea*	Fox Sedge	Herb	OBL	2.0
All Year	*Elymus virginicus*	Virginia Wild Rye	Herb	FACW	4.0
All Year	*Bidens aristosa*	Bur-Marigold	Herb	FACW	3.0
All Year	*Panicum cirgatum*	Switchgrass	Herb	FAC	2.0
All Year	*Polygonum pensylvanicum*	Smartweed	Herb	FACW	0.5
All Year	*Juncus effusus*	Common Rush	Herb	OBL	1.5
All Year	*Panicum dichotomiflorum*	Panicgrass	Herb	FACW	2.0
All Year	Helianthus augustifolia	Narrowleaf sunflower	Herb	FACW	1.0

Notes:
(1) Apply Permanent Riparian seeding in all disturbed areas within Conservation Easement.
(2) Apply Permanent seeding in all other disturbed areas outside of Easement per specification.

Best Management Practice (BMP) Planting

Notes:
(1) Apply "Wetland Seeding - Open Canopy" seed mix to all disturbed areas of BMP including bottom of basin.
(2) Apply "Riparian Corridor Planting - Herbaceous Plugs and Livestakes" species in areas shown in detail.

Stabilization Seeding

Stabilization Seeding		
Pure Live Seed (32 lbs/ac)		
Species Name	**Common Name**	**lbs/acre**
Festuca arundinacea	Fescue (KY 31)	20
Dactylis glomerata	Orchard Grass	12

Notes:
(1) Apply Pasture Seeding for grading outside Conservation Easement, utility easements, and stream crossings.
(2) Install temporary seed and mulch with all permanent seed.

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Planting List

Revisions:

Date: May 12, 2022
Job Number: 005-02182
Project Engineer: JM
Drawn By: AMR
Checked By: JCK

Sheet 3.1

May 13, 2022
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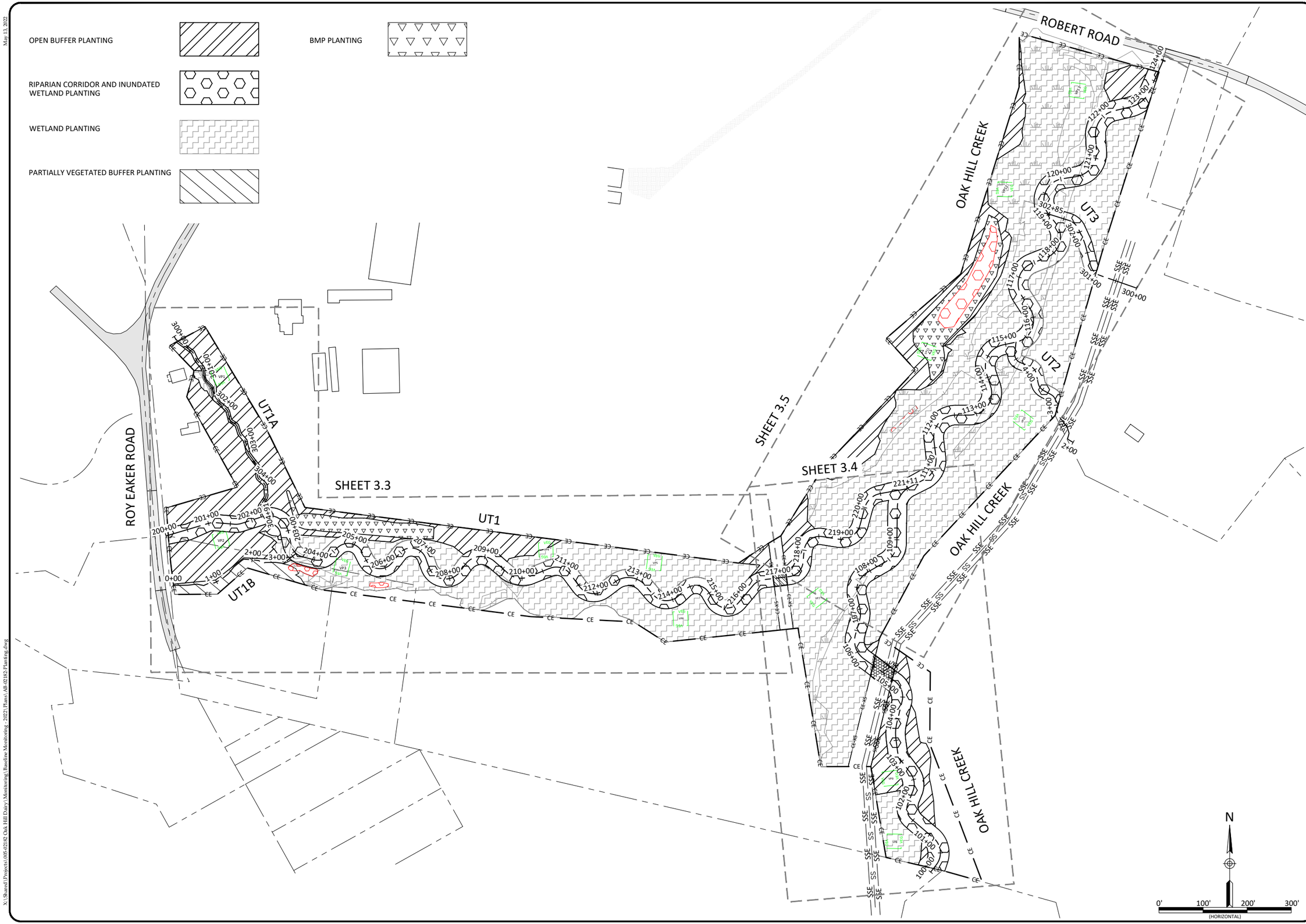

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Planting Overview

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 3.2

May 13, 2022

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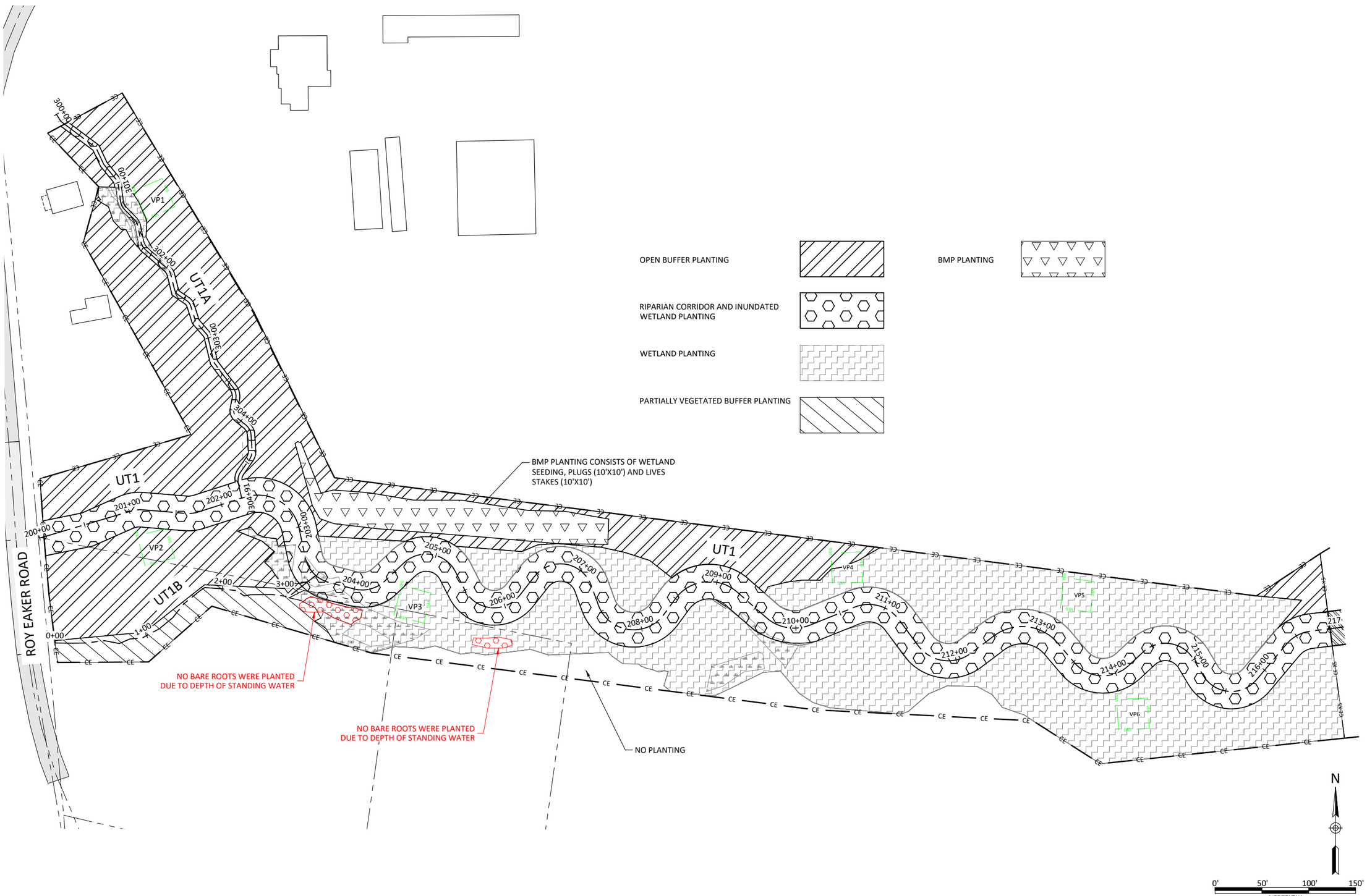

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Planting Plan

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 3.3

May 13, 2022

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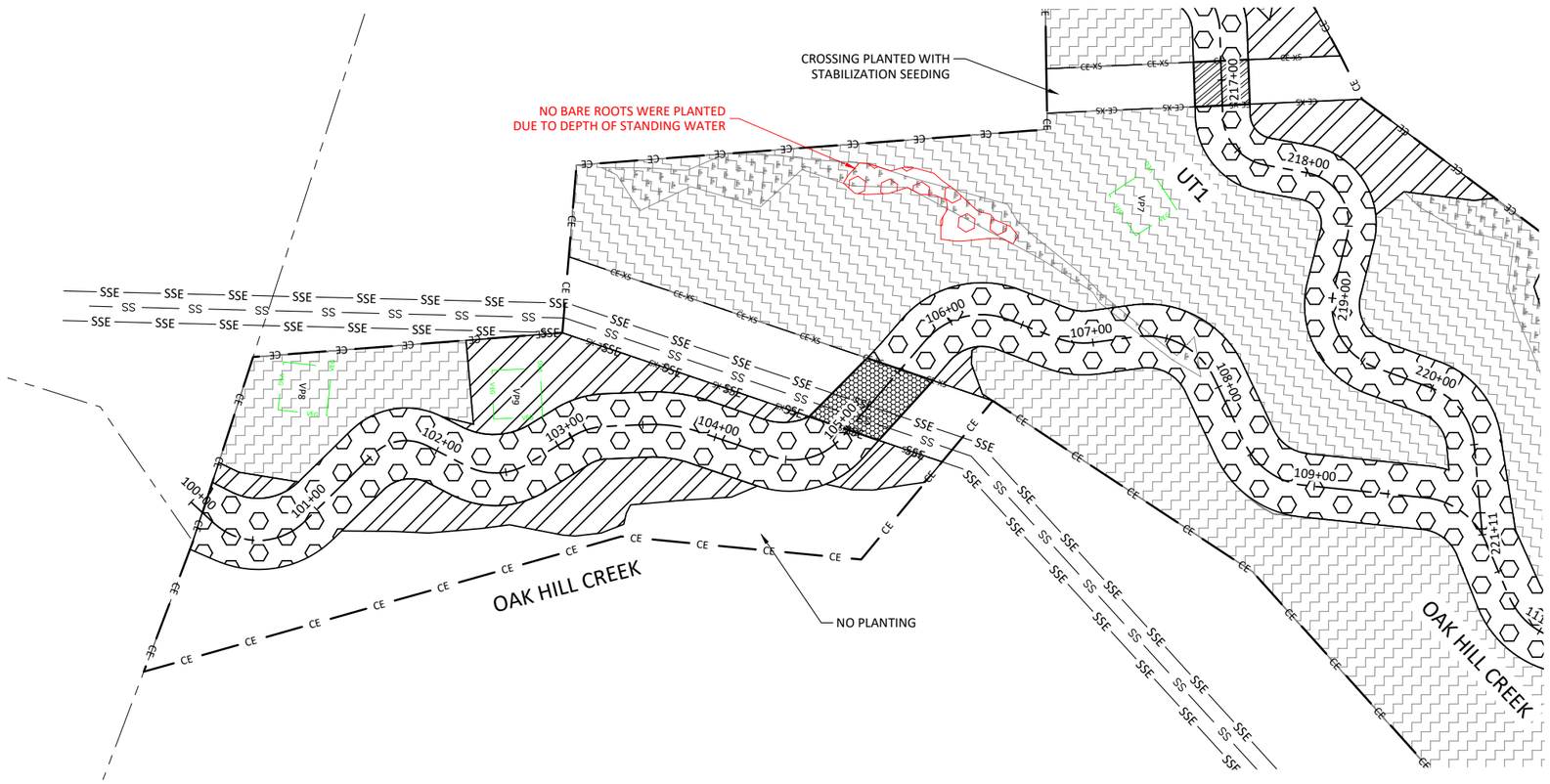
OPEN BUFFER PLANTING

BMP PLANTING

RIPARIAN CORRIDOR AND INUNDATED WETLAND PLANTING

WETLAND PLANTING

PARTIALLY VEGETATED BUFFER PLANTING



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0' 50' 100' 150'
(HORIZONTAL)

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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Planting Plan

Revisions:

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Sheet 3.4

May 13, 2022

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May 13, 2022

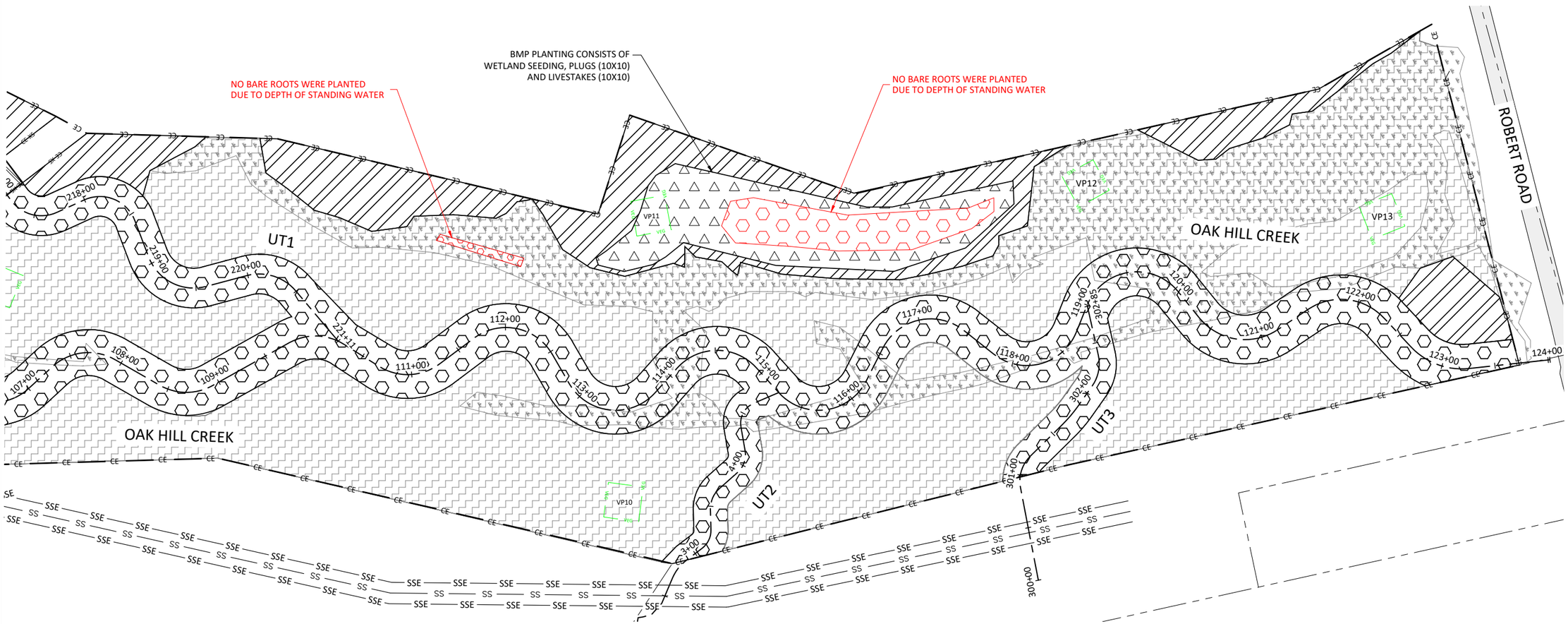
OPEN BUFFER PLANTING

BMP PLANTING

RIPARIAN CORRIDOR AND INUNDATED WETLAND PLANTING

WETLAND PLANTING

PARTIALLY VEGETATED BUFFER PLANTING



0' 50' 100' 150'
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Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Planting Plan

Revisions:

Date:	May 12, 2022
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Sheet 3.5

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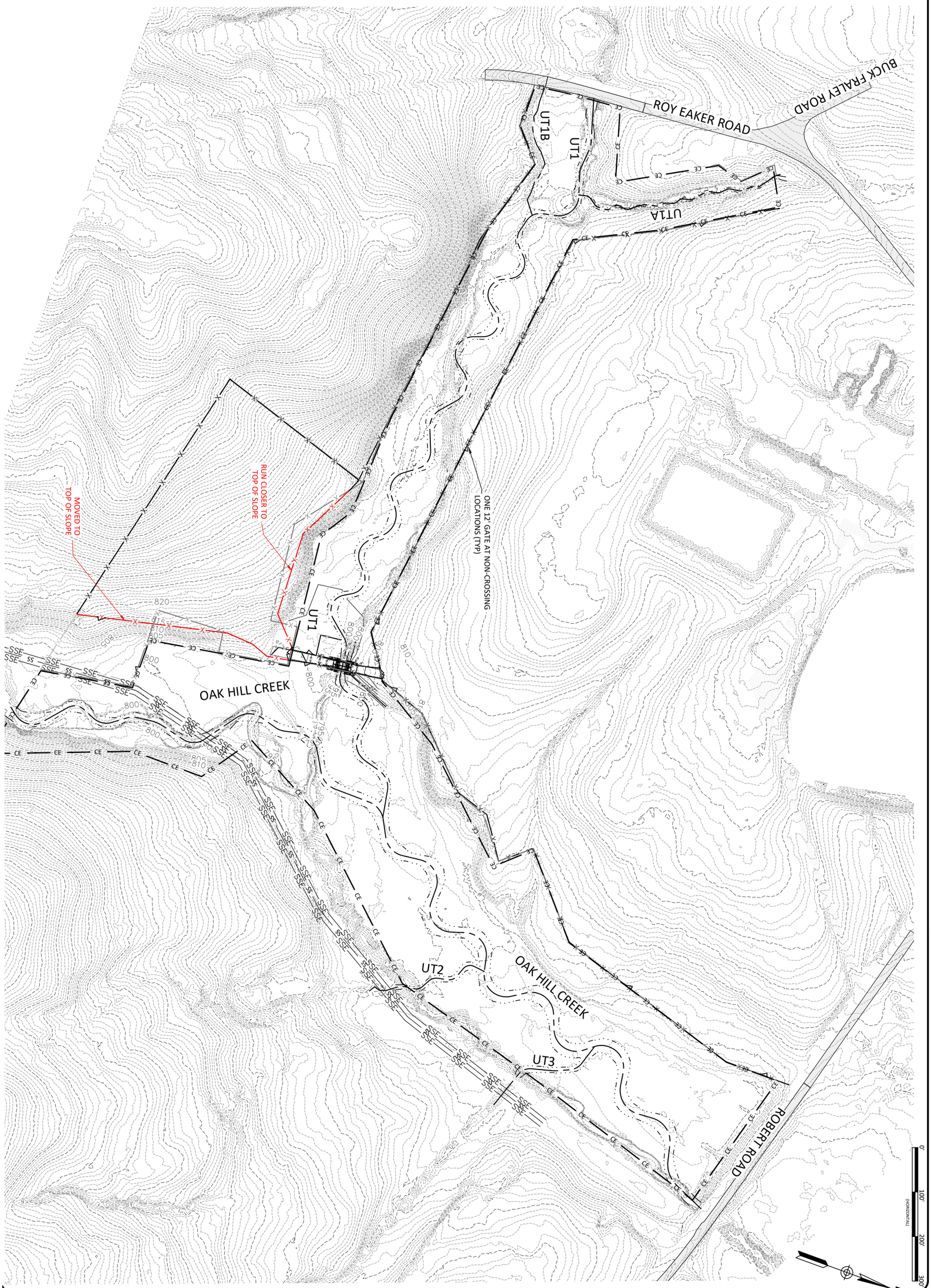

Date:	May 12, 2022
Job Number:	005-02182
Project Engineer:	JM
Drawn By:	AMR
Checked By:	JCK

Revisions:

Sheet 4.1

Oak Hill Dairy Mitigation Site Record Drawings
Gaston County, North Carolina

Fencing Plan

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