

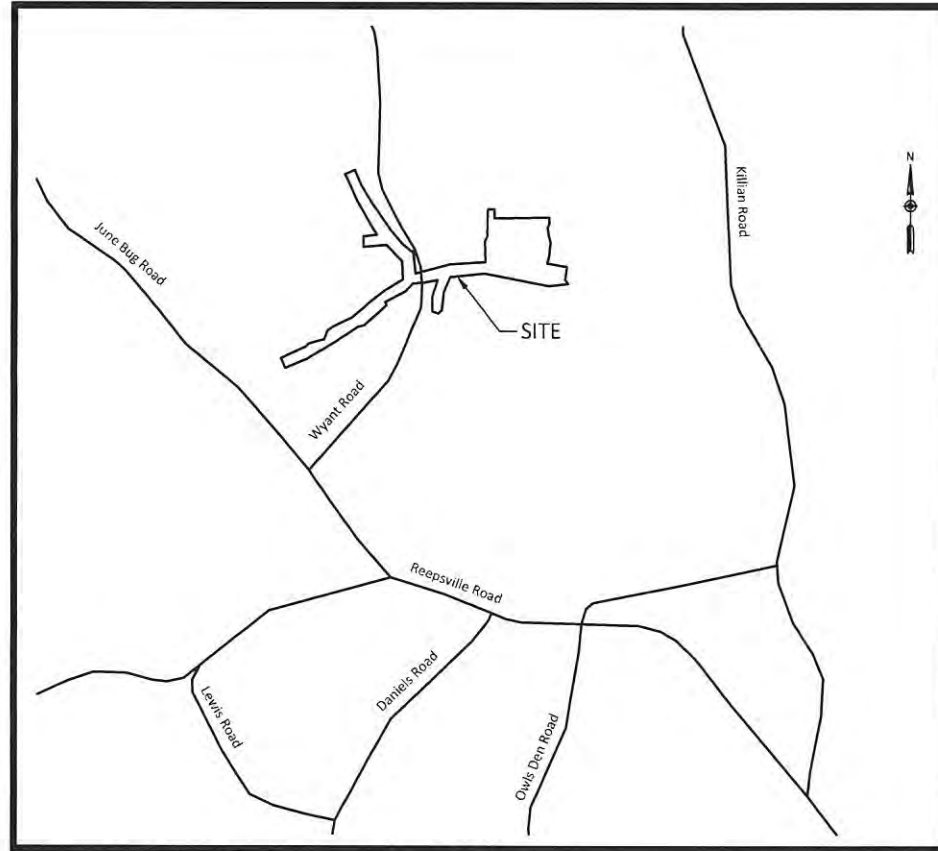
Wyant Lands Mitigation Site Record Drawings

Lincoln County, North Carolina

Catawba River Basin 03050102 (03050103 Expanded Service Area)

for

NCDEQ Division of Mitigation Services



Vicinity Map
Not to Scale



**RECORD DRAWINGS
ISSUED OCTOBER 5, 2021**

Sheet Index

Title Sheet	0.1
Project Overview	0.2
General Notes and Symbols	0.3
Stream Plan and Profile	
Wyant Creek	1.1 - 1.11
UT1	1.12 - 1.13
UT2	1.14 - 1.19
UT3	1.20 - 1.21
Wetland Grading Overview	2.0
Wetland Grading Exhibit	2.1
Planting	3.0 - 3.8
Fencing Overview	4.0

Project Directory

Engineering: Wildlands Engineering, Inc License No. F-0831 167-B Haywood Road Asheville, NC 28806 Eric Neuhaus, PE 865-207-8835	Owner: NCDEQ Division of Mitigation Services 1652 Mail Service Center Raleigh, NC 27699 Paul Wiesner 828-273-1673
Surveying: Kee Mapping and Surveying, PA 88 Central Avenue Asheville, NC 28801 Phillip B. Kee, PLS 828-575-9021	USACE Action ID No. SAW-2017-02609 NCDWR No. 20180177

CERTIFICATE OF SURVEY AND ACCURACY

I, PHILLIP B. KEE, CERTIFY THAT THE GROUND TOPOGRAPHIC SURVEY PORTION OF THIS PROJECT WAS COMPLETED UNDER MY DIRECT SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY DIRECT SUPERVISION; THAT THE RECORD DRAWINGS WERE PREPARED BY WILDLANDS ENGINEERING, INC. FROM DIGITAL FILES PROVIDED BY KEE MAPPING AND SURVEYING, PA AS SHOWN AND CERTIFIED ON AN AS-BUILT SURVEY FOR "WYANT LANDS MITIGATION SITE", JOB # 2103026-AB, DATED 07/09/21; THAT THIS SURVEY WAS PERFORMED AT THE 95% CONFIDENCE LEVEL TO MEET THE FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS AND TO MEET THE REQUIREMENTS OF A TOPOGRAPHIC SURVEY TO THE ACCURACY OF CLASS A HORIZONTAL AND CLASS C VERTICAL WHERE APPLICABLE; THAT THE ORIGINAL DATA WAS OBTAINED BETWEEN THE DATES OF 04/20/21 - 06/02/21; THAT THE CONTOURS SHOWN AS BROKEN LINES MAY NOT MEET THE STATED STANDARD AND ALL COORDINATES ARE BASED ON NAD 83 (NSRS 2011) AND ALL ELEVATIONS ARE BASED ON NAVD 88; THAT THIS MAP MEETS THE SPECIFICATIONS FOR TOPOGRAPHIC SURVEYS AS STATED IN TITLE 21, CHAPTER 56, SECTION .1606; THAT THIS MAP WAS NOT PREPARED IN ACCORDANCE WITH G.S. 47-30, AS AMENDED AND DOES NOT REPRESENT AN OFFICIAL BOUNDARY SURVEY.

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS 12TH DAY OF OCTOBER, 2021, A.D.

DocuSigned by:
Phillip B. Kee
D965004A7692407...

PHILLIP B. KEE, PLS L-4647



WILDLANDS
ENGINEERING
167-B Haywood Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

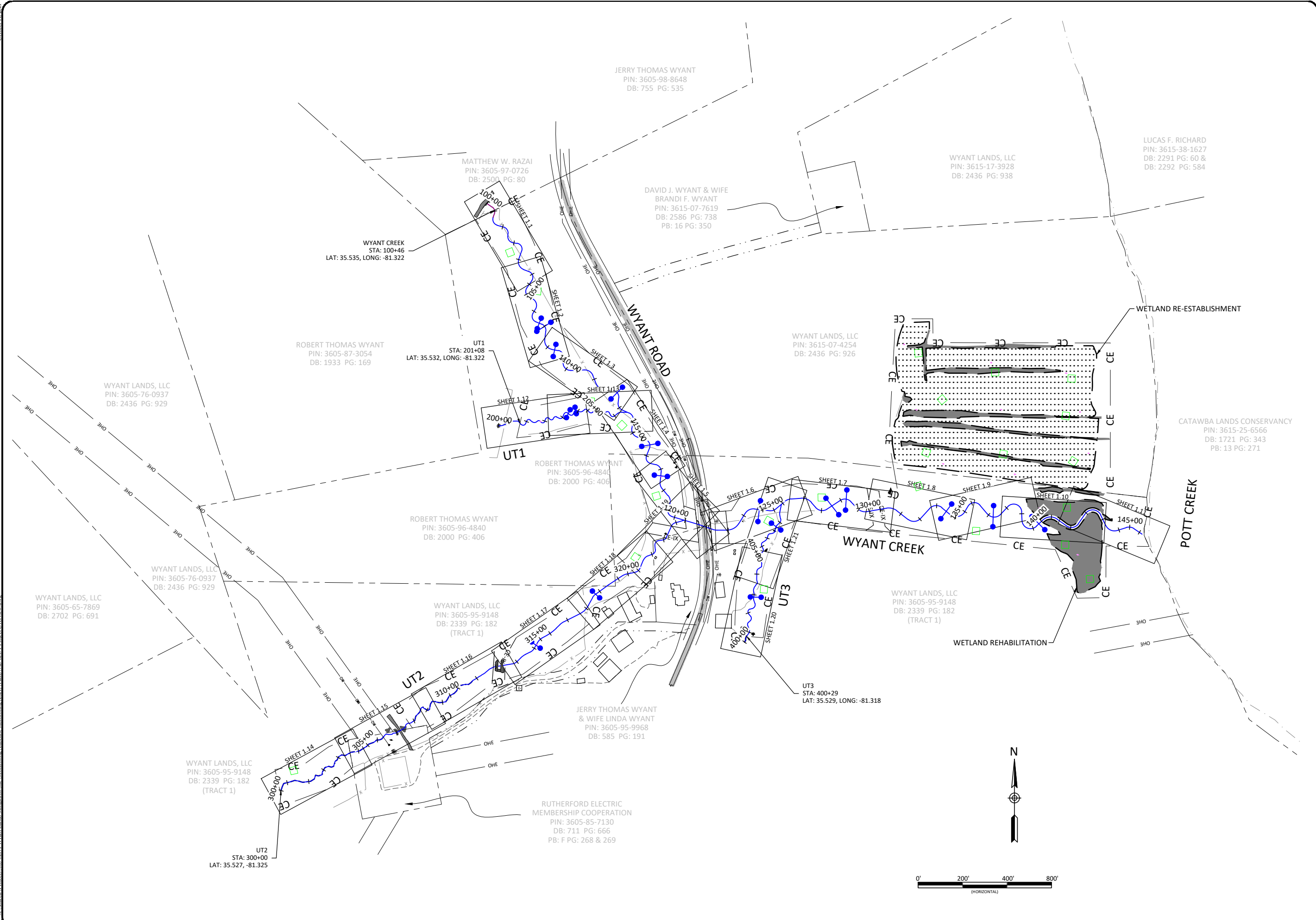
Title Sheet

Revisions:	

Date:	October 5, 2021
Job Number:	05-02171
Project Engineer:	EPN
Drawn By:	JFK
Checked By:	JCK
Sheet:	0.1

X:\Shared\Projects\005-02171\Wyant Lands Mitigation Site\Monitors\Map\03050102-03050103-Expanded-Service-Area-02171-Cover.dwg, October 12, 2021

October 5, 2021
X:\shared\Projects\005-02171_Wyant_Lands_Mitigation_Site_Monitoring_Baseline_Monitoring\02171_Plan_A\02171_Plan_Overview.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 Hester Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Project Overview

Revisions:	

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

0.2
Sheet

Pre-construction Features

- Pre-construction Thalweg
- Pre-construction Adjoiner Line
- Pre-construction Property Line
- Pre-construction top of bank
- Pre-construction Overhead Utility Easement
- Pre-construction Overhead Electric
- Pre-construction Power Pole
- Pre-construction Fence
- Pre-construction Storm Pipe
- Pre-construction Farm Road
- Pre-construction Wetland
- Pre-construction Spring Head
- Pre-construction Bedrock
- Pre-construction Asphalt Road
- Pre-construction Farm Road

Design Features

- Proposed Thalweg Alignment
- Recorded Conservation Easement
- Proposed Internal Crossing
- Proposed Major Contour
- Proposed Minor Contour
- Proposed Limits of Disturbance
- Proposed Permanent Culvert Crossing
- Proposed Permanent Ford Crossing Without Cattle Slat
- Proposed Permanent Ford Crossing With Cattle Slat
- Proposed Constructed Riffles Per Plans
- Proposed Brush Toe
- Proposed SPSC
- Proposed Bioretention BMP
- Proposed Channel Stabilization
- Proposed Wetland Ditch Plug
- Proposed Log Sill
- Proposed Cover Log
- Proposed Log J-Hook
- Proposed Boulder J-Hook
- Proposed Rock Sill
- Wetland Rehabilitation
- Wetland Reestablishment

As-Built Features

- As-Built Thalweg Alignment
- As-Built Bankfull
- Recorded Conservation Easement
- As-Built Internal Crossing
- As-Built Fence
- As-Built Major Contour
- As-Built Minor Contour
- As-Built Limits of Disturbance
- As-Built Permanent Culvert Crossing
- As-Built Permanent Ford Crossing Without Cattle Slat
- As-Built Permanent Ford Crossing With Cattle Slat
- As-Built Constructed Riffles
- As-Built Brush Toe
- As-Built SPSC
- As-Built Bioretention BMP
- As-Built Channel Stabilization
- As-Built Wetland Ditch Plug
- As-Built Log Sill
- As-Built Cover Log
- As-Built Log J-Hook
- As-Built Boulder J-Hook
- As-Built Rock Sill
- Wetland Rehabilitation
- Wetland Reestablishment
- As-Built Outlet Protection

Monitoring Features

- Photo Point
- Permanent Vegetation Plot
- Barotroll
- Stream Gage
- Ground Water Gage
- Crest Gage
- Monitoring Cross Section

Notes:

- Deviations from the design will be shown in red.



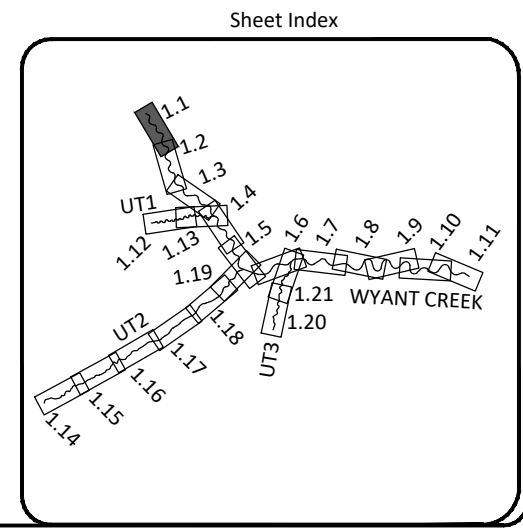
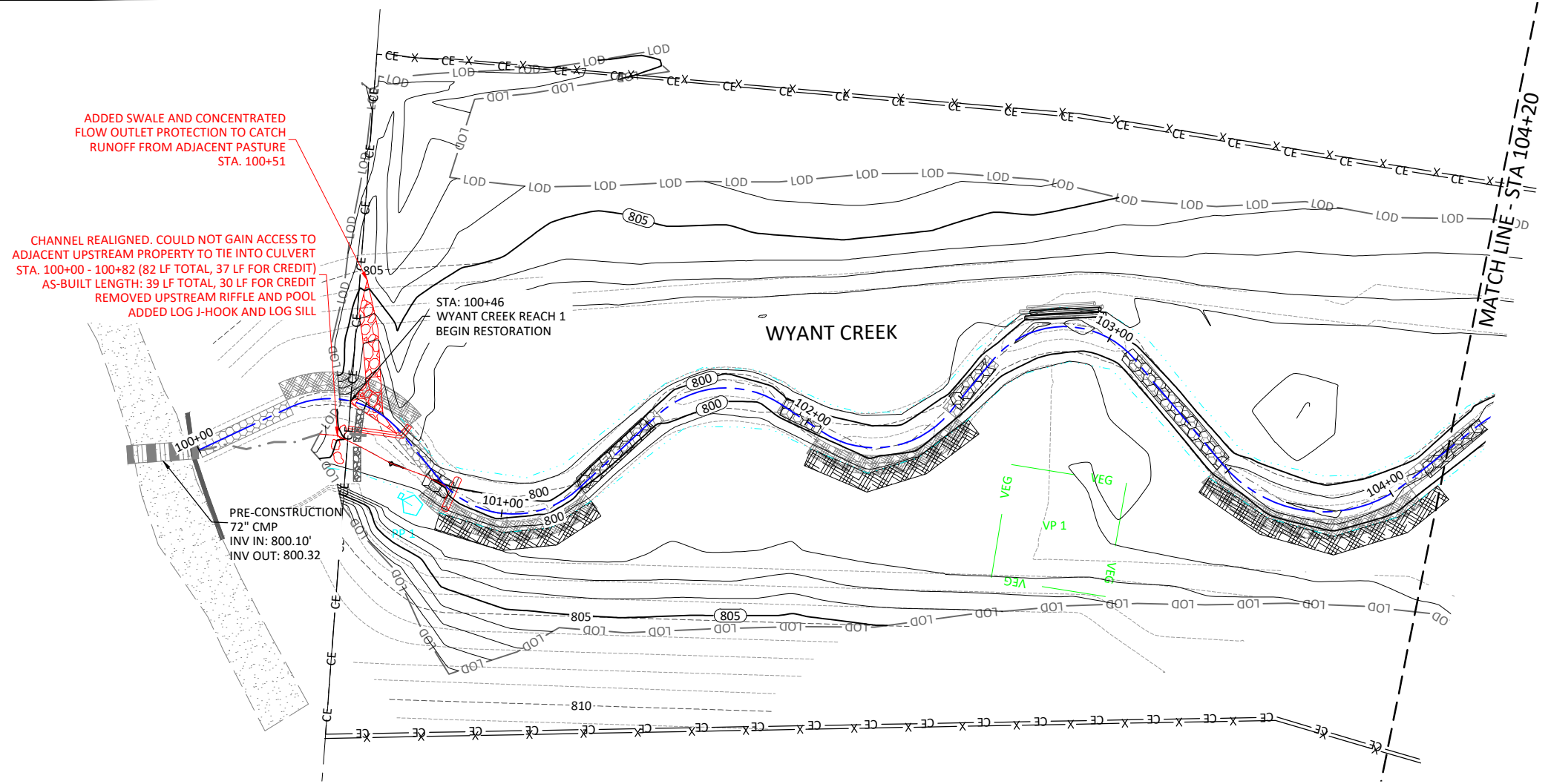
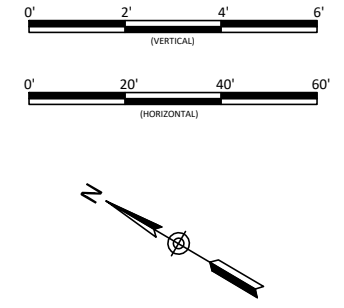
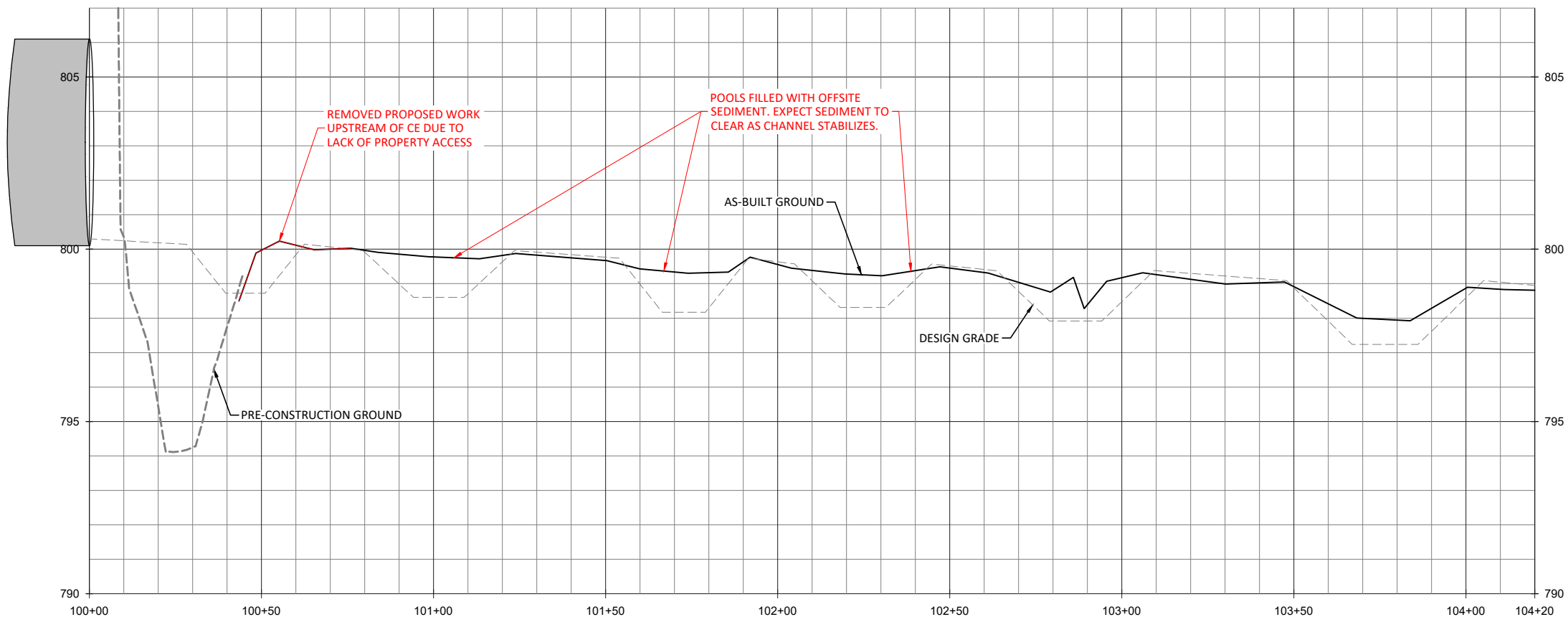
Wyant Lands Mitigation Site Record Drawings Lincoln County, North Carolina

General Notes and Symbols

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JFK
Checked By:	JCK

0.3

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline - Monitor\2021\Plan\AR-02171 - Profiles.dwg



WILDLANDS
 LANDSCAPE ARCHITECTURE
 1678 HERSHFIELD ROAD
 ASHEVILLE, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831

10/15/21

Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina

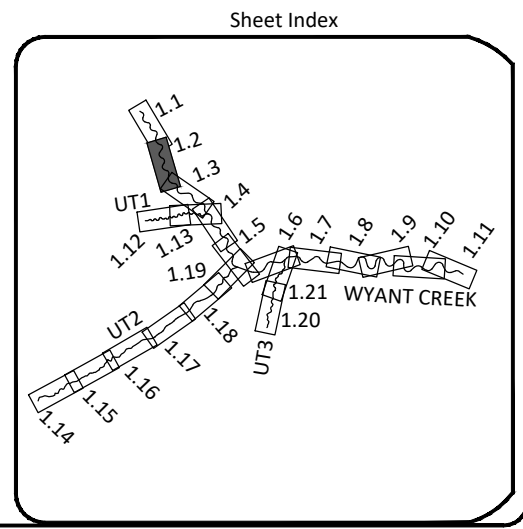
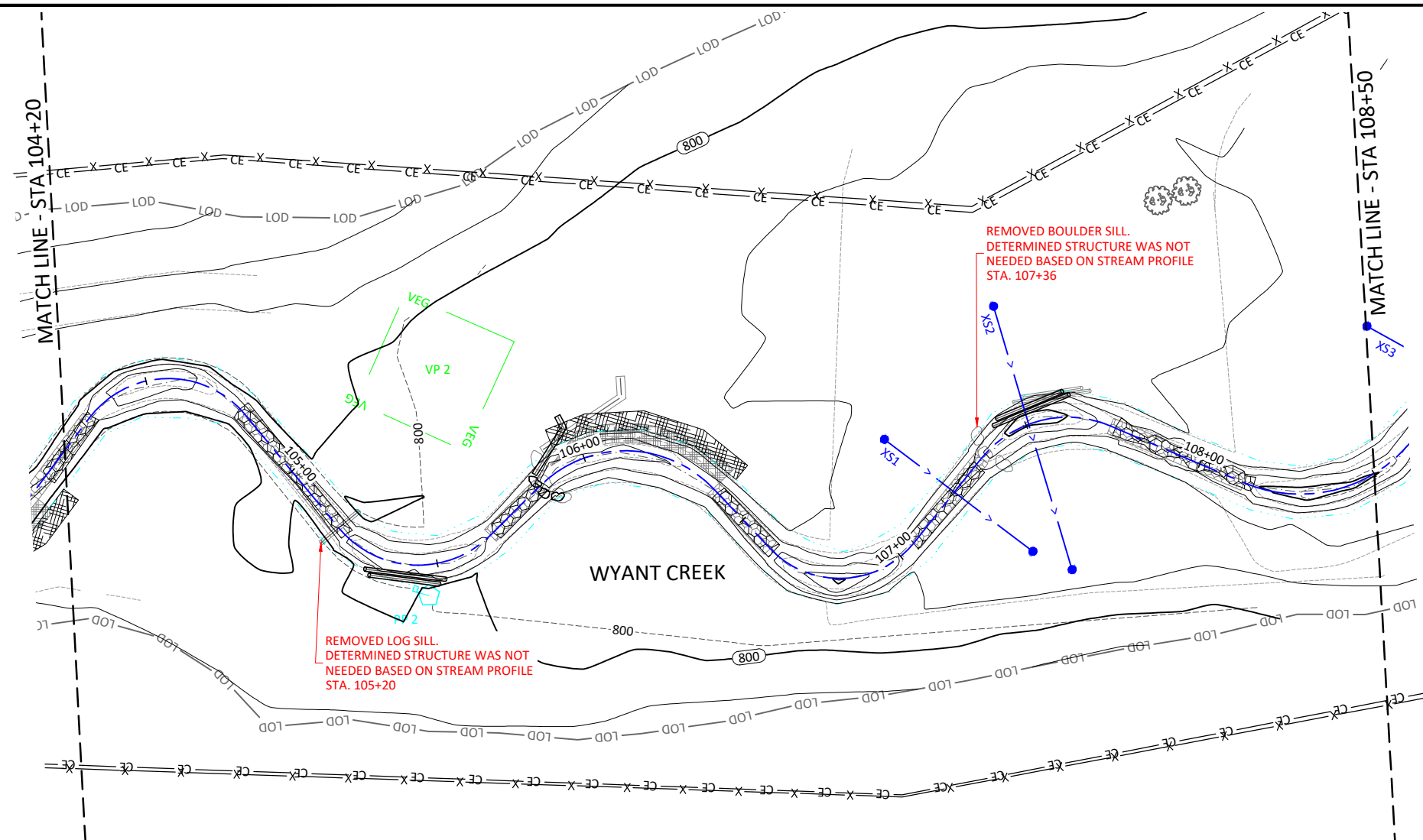
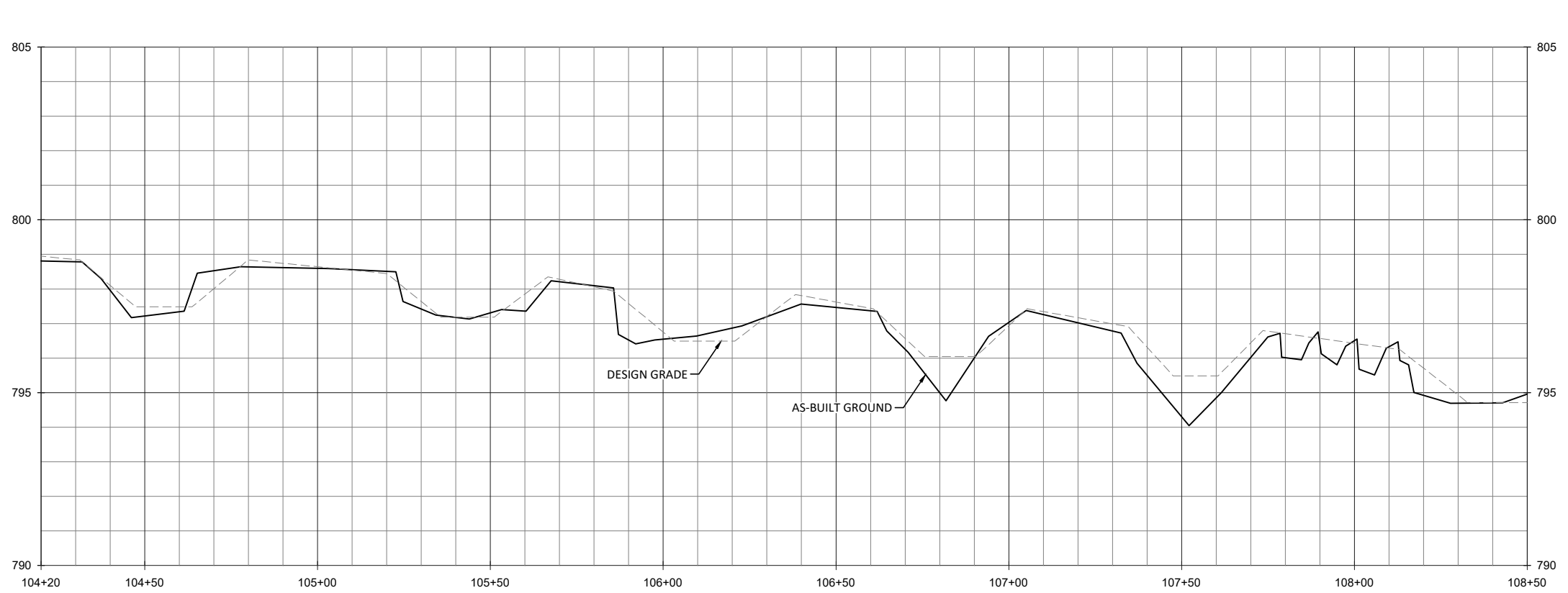
Wyant Creek
 Stream Plan and Profile

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

1.1

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitoring\Baseline_Monitoring (2021)\Plan\AS-02171 - Profiles.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 Hargett Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

Professional Engineer Seal: 042660, State of North Carolina, License No. 101512

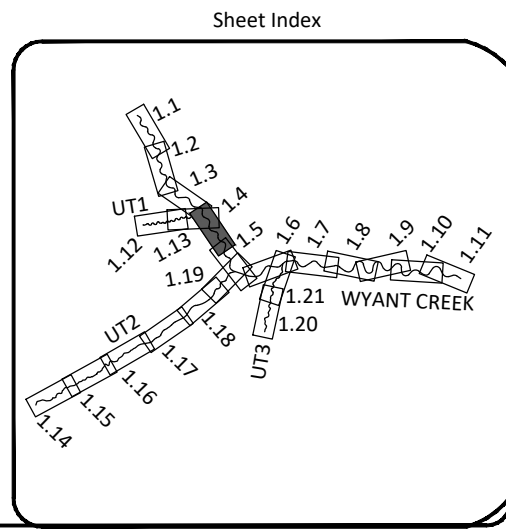
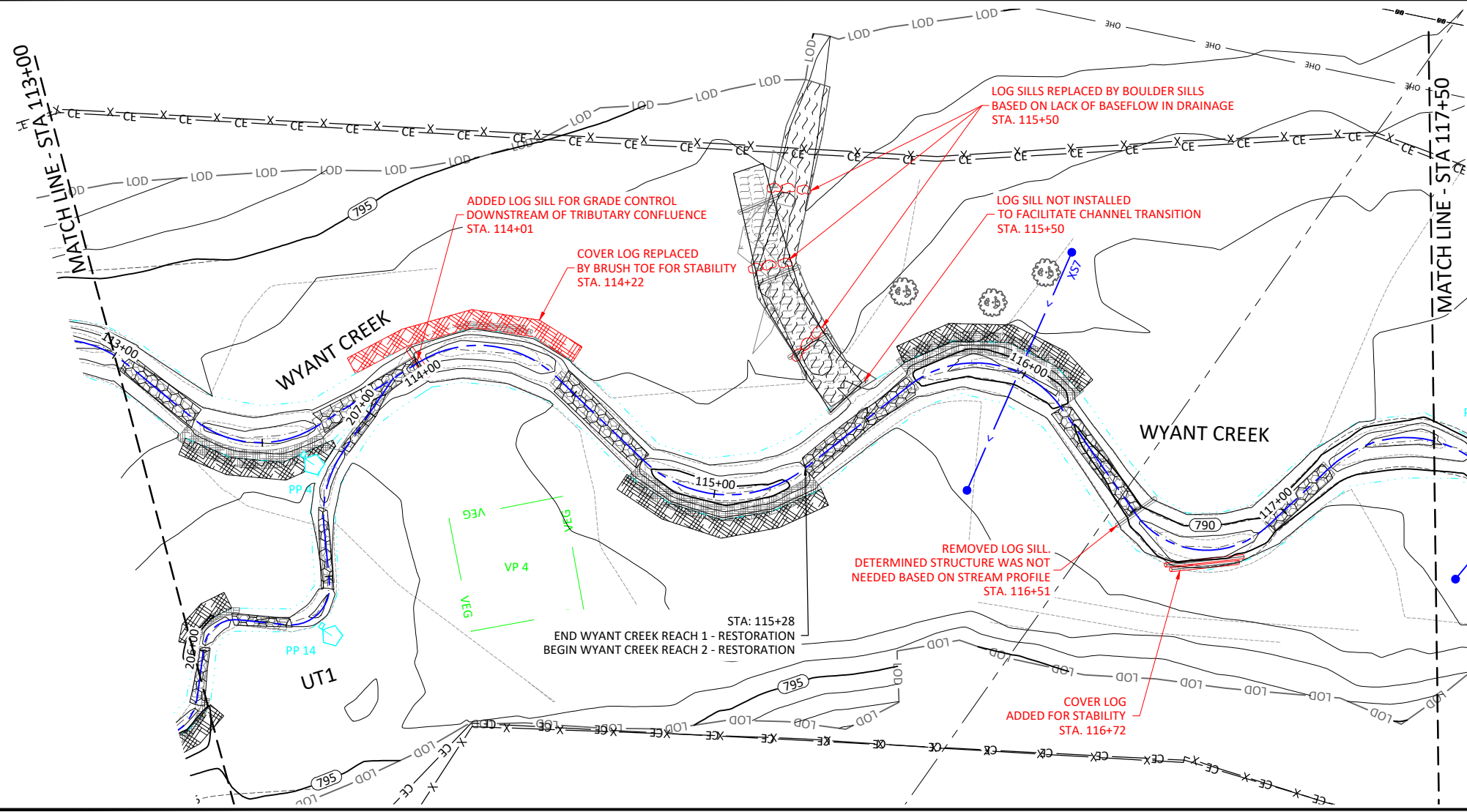
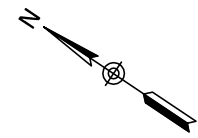
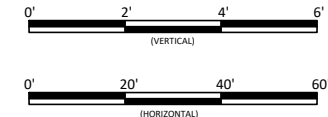
Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Wyant Creek
Stream Plan and Profile

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

Revisions:

October 11, 2021

X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline - Monitor\2021\Plan\AR-02171 - Profiles.dwg



WILDLANDS
 CONSULTING ENGINEERS
 1678 HERRING ROAD
 ASHEVILLE, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina

Wyant Creek
 Stream Plan and Profile

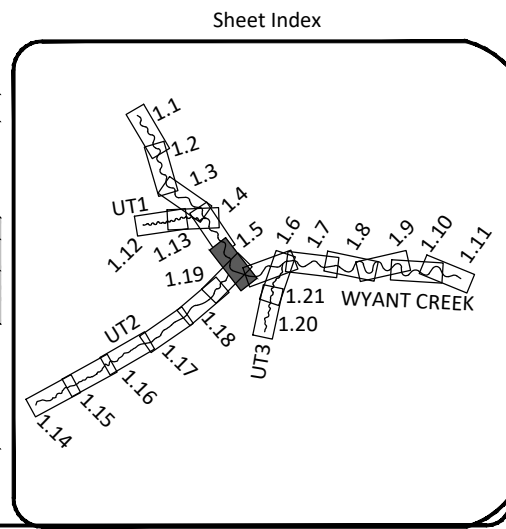
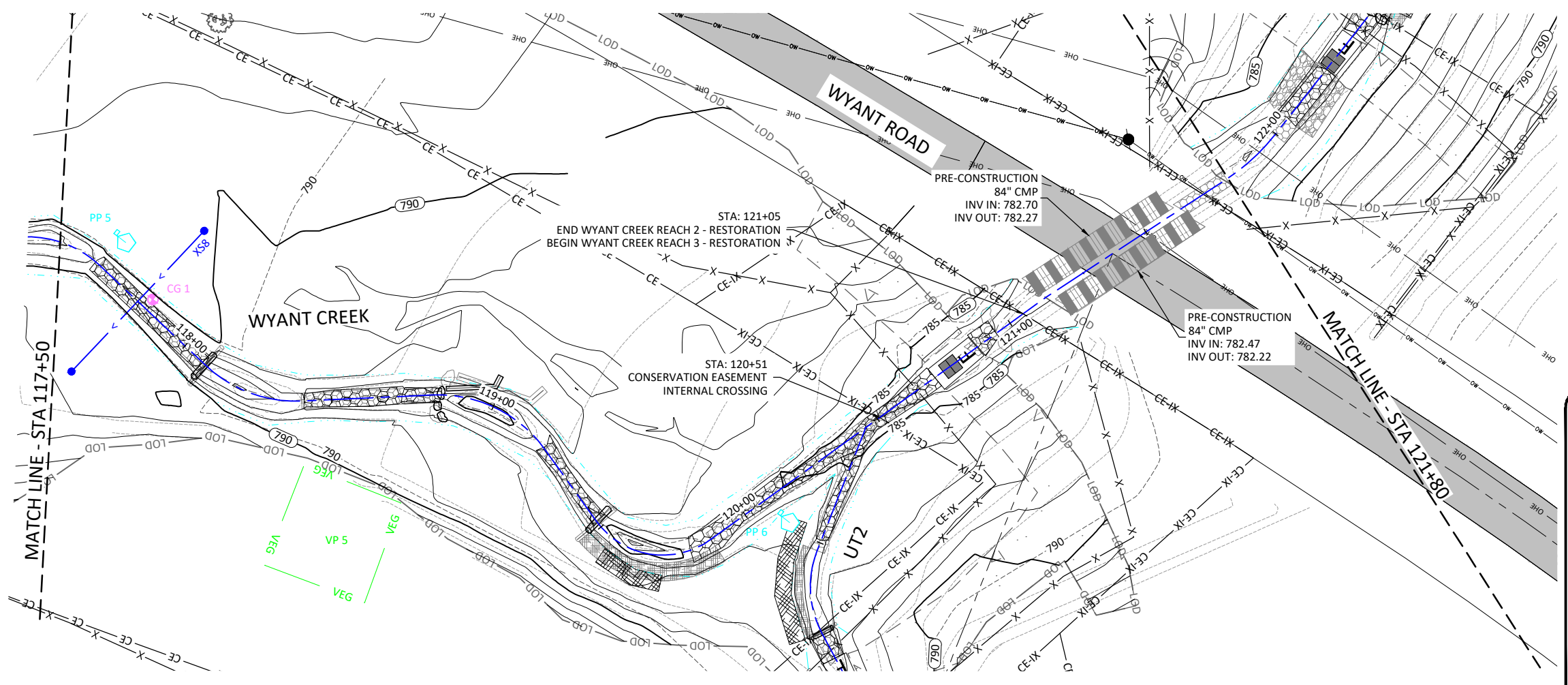
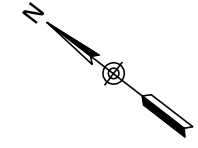
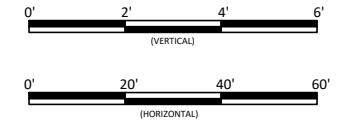
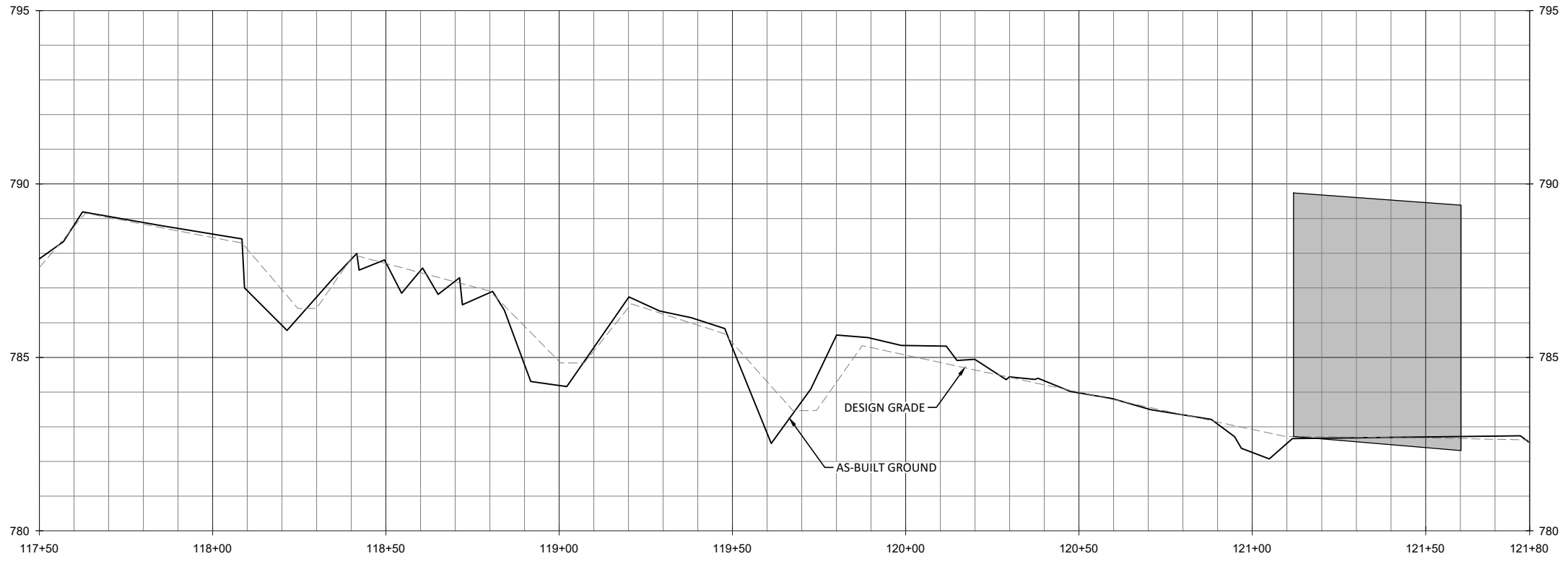
Revisions:

Date: October 5, 2021
 Job Number: 005-02171
 Project Engineer: EPN
 Drawn By: JPK
 Checked By: JCK

1.4

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HILLS ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wyant Creek
Stream Plan and Profile

Revisions:

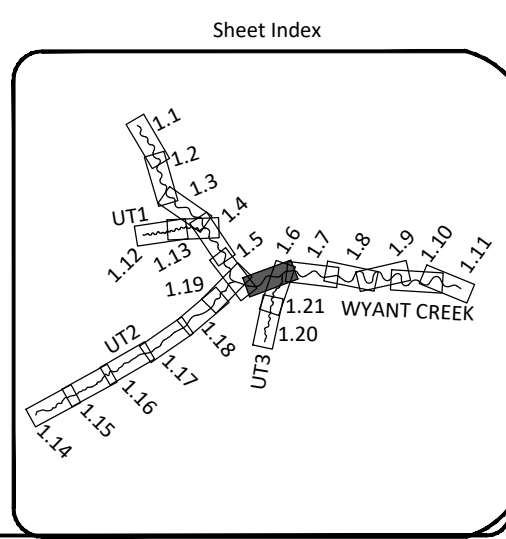
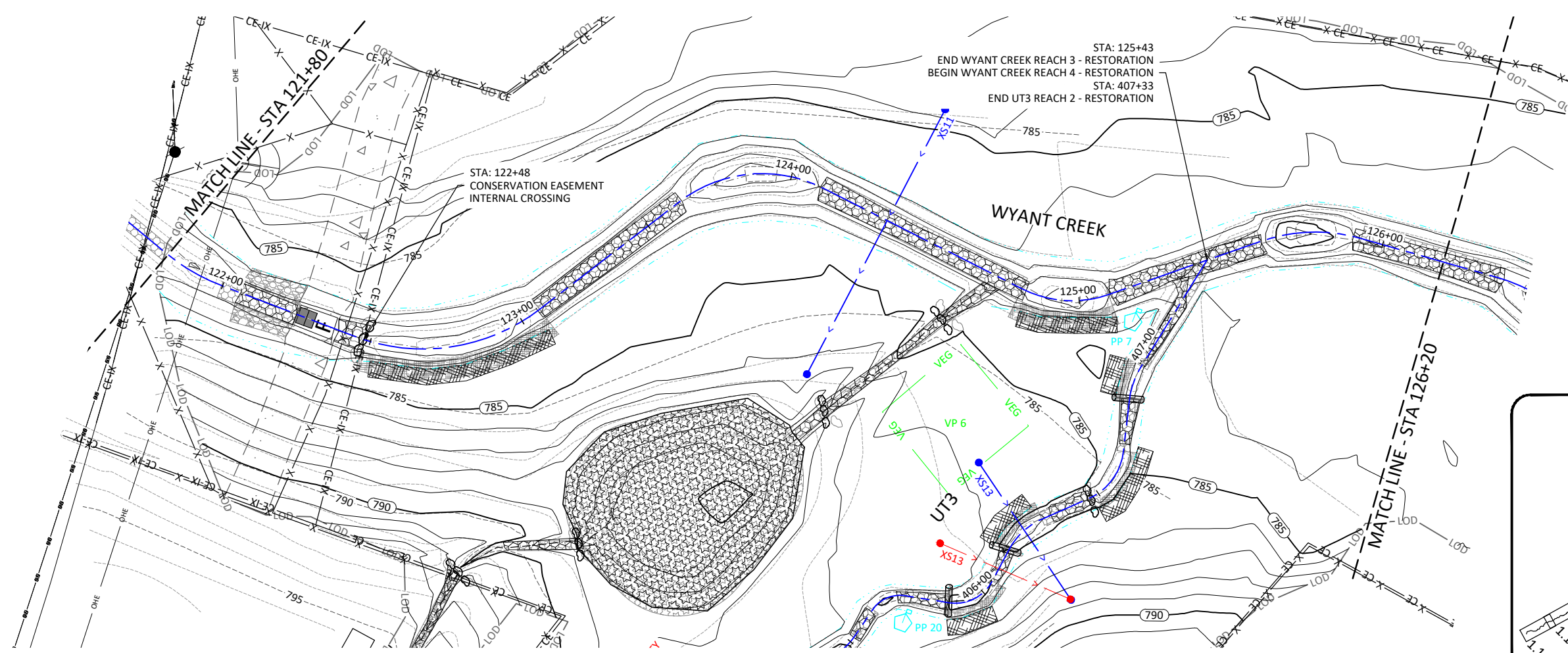
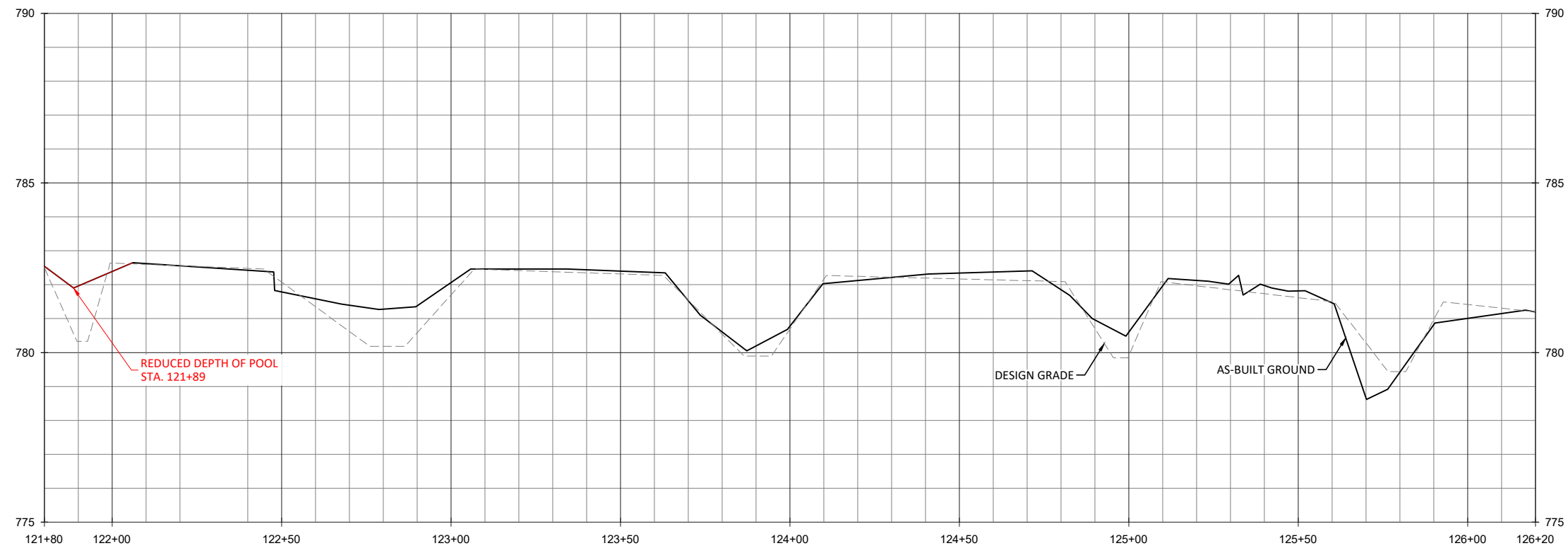
No.	Description

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JPC
Checked By: JCK

1.5

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring (2021)\Plan\AB-02171 - Profiles.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wyant Creek
Stream Plan and Profile

Revisions:	

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JF
Checked By: JCK

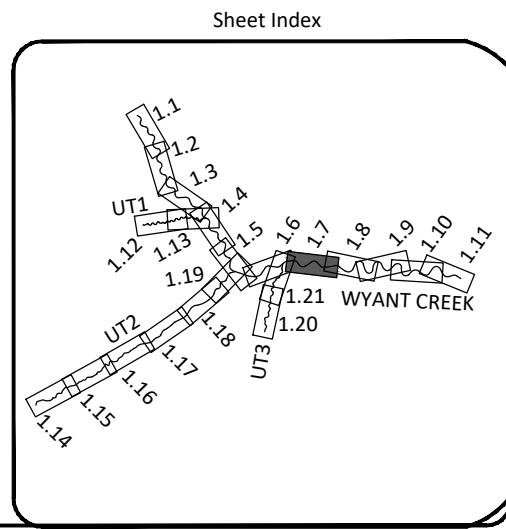
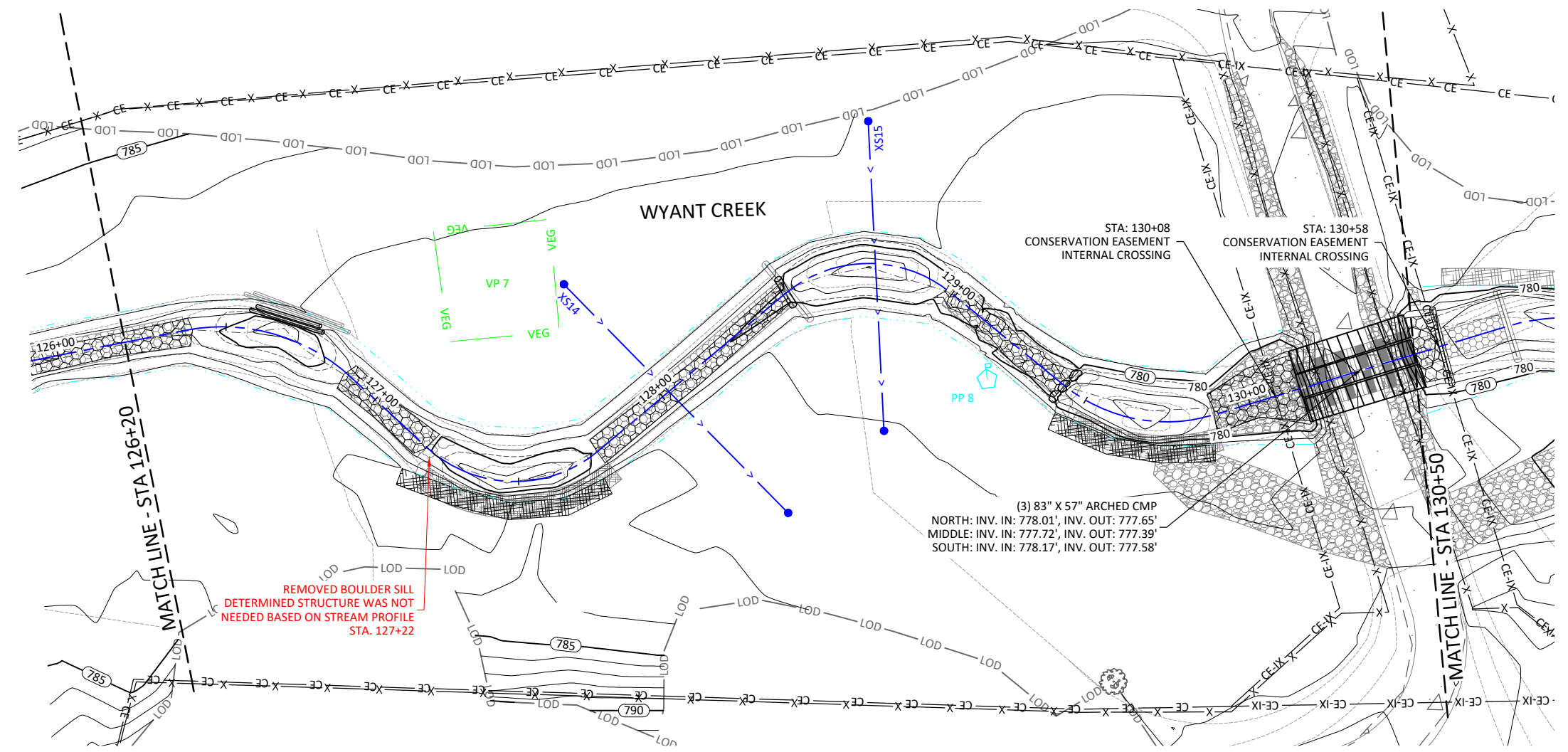
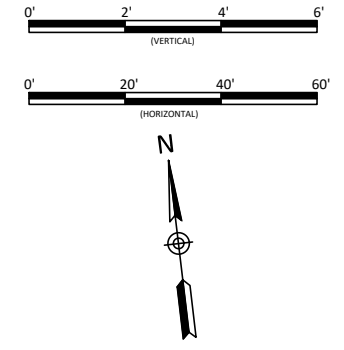
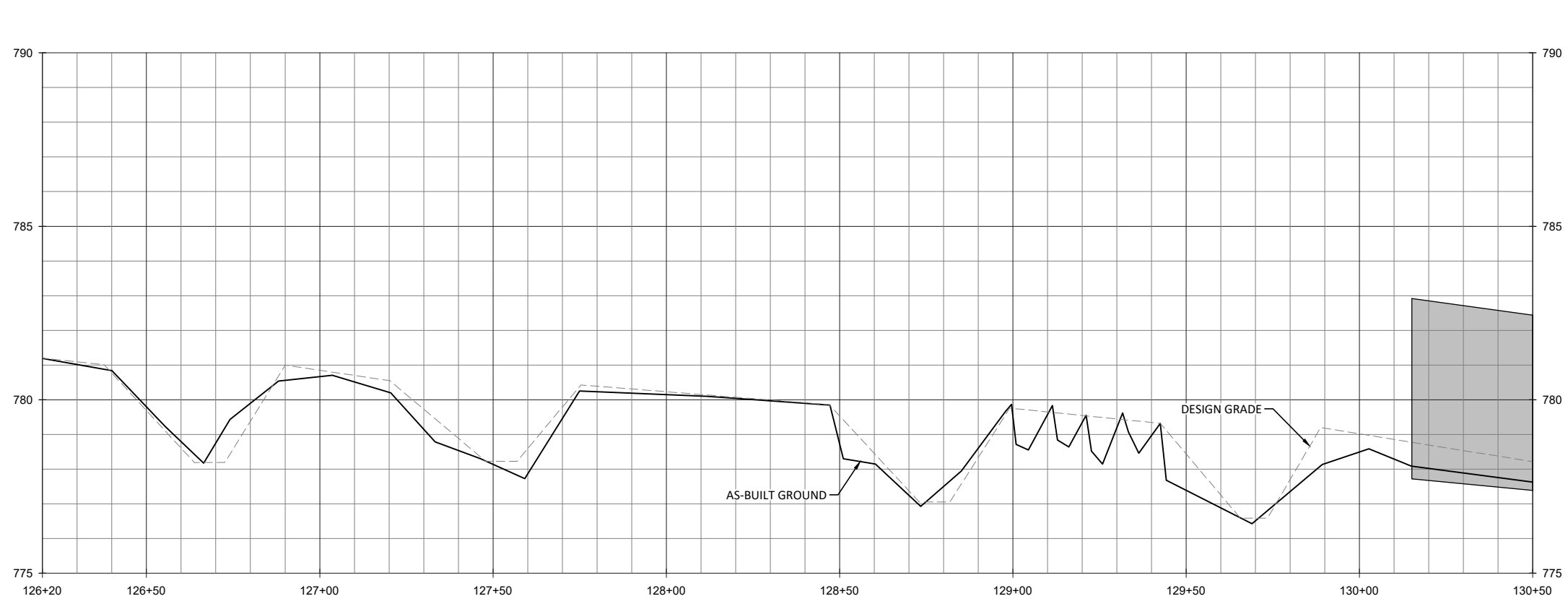
1.6

Sheet

WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERSHMAN ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

10/5/21

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wyant Creek
Stream Plan and Profile

Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JPK
Checked By: JCK

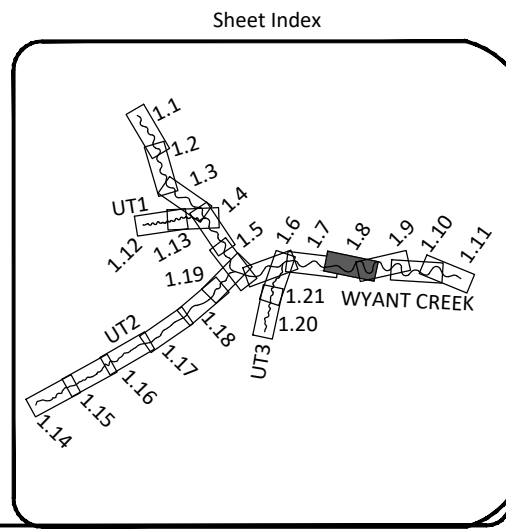
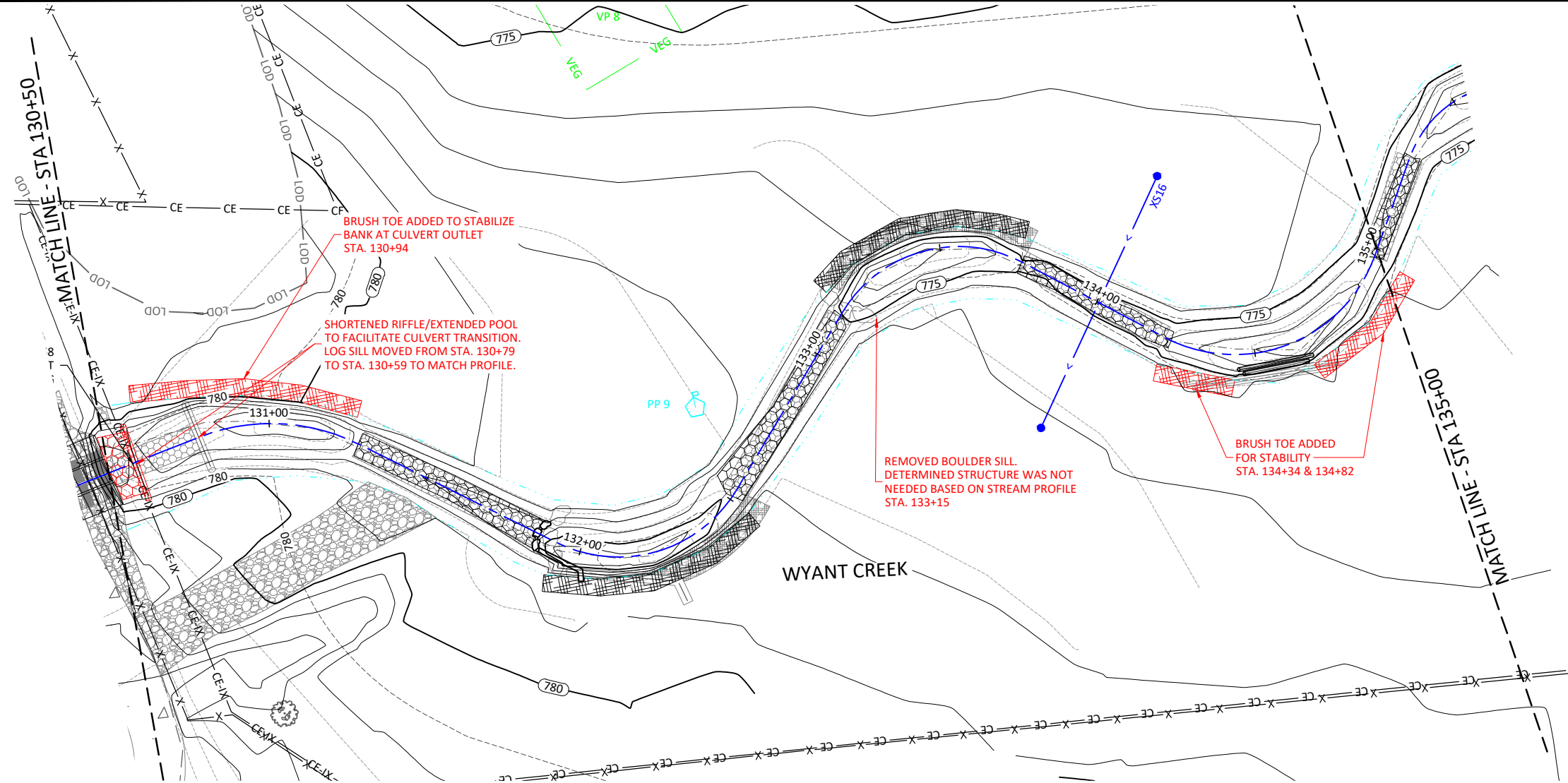
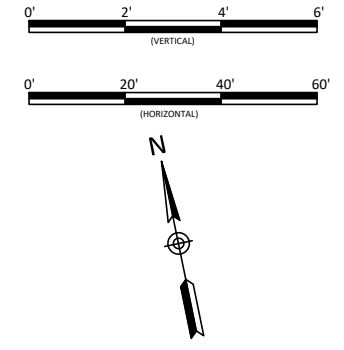
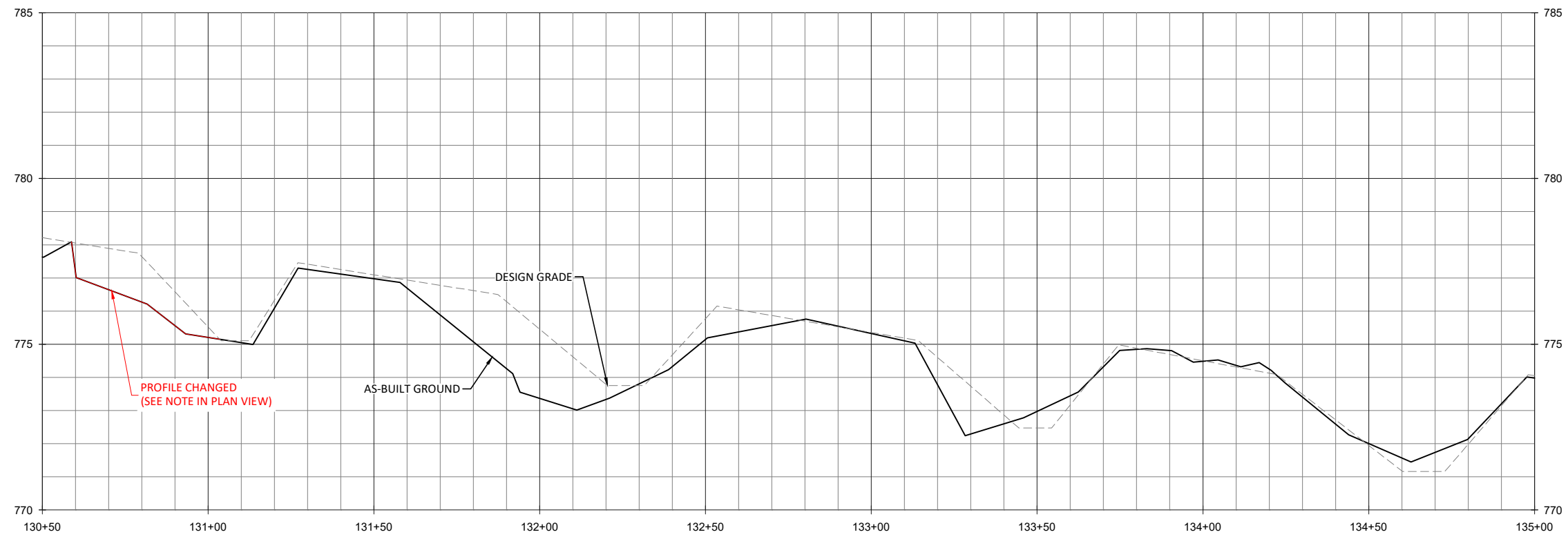
1.7

Sheet

WILDLANDS
LANDSCAPE ARCHITECTURE
1678 Hills Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wyant Creek
Stream Plan and Profile

Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JCK

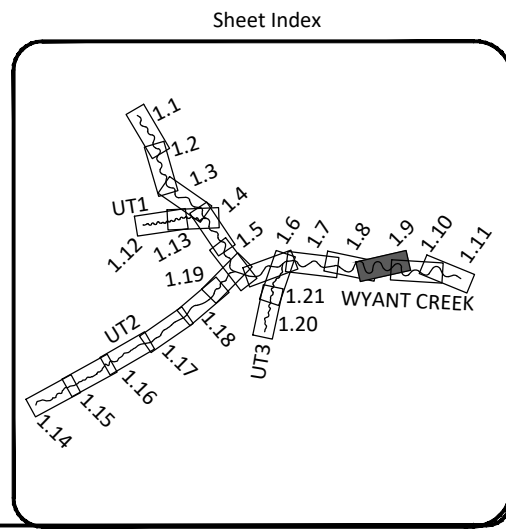
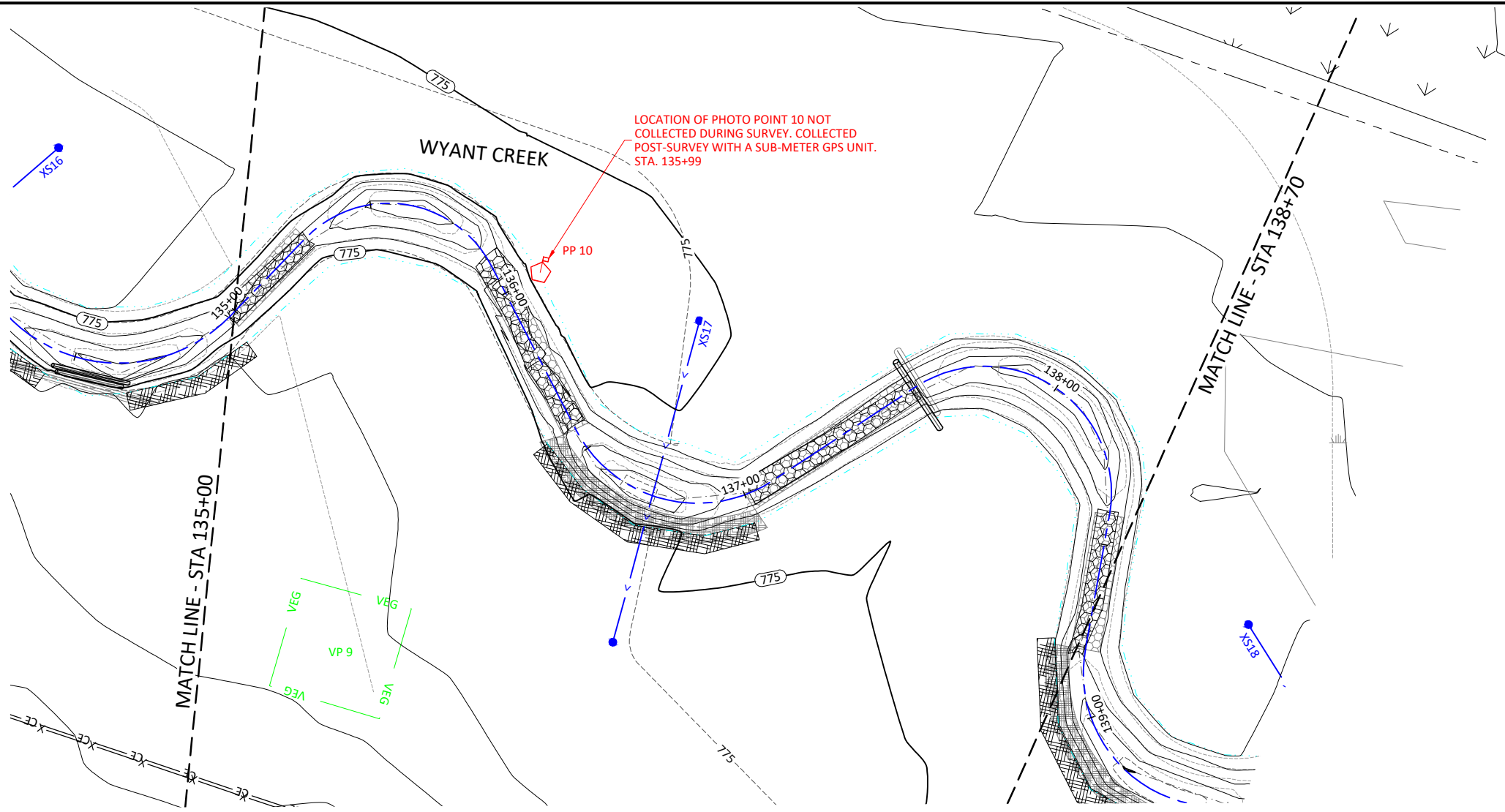
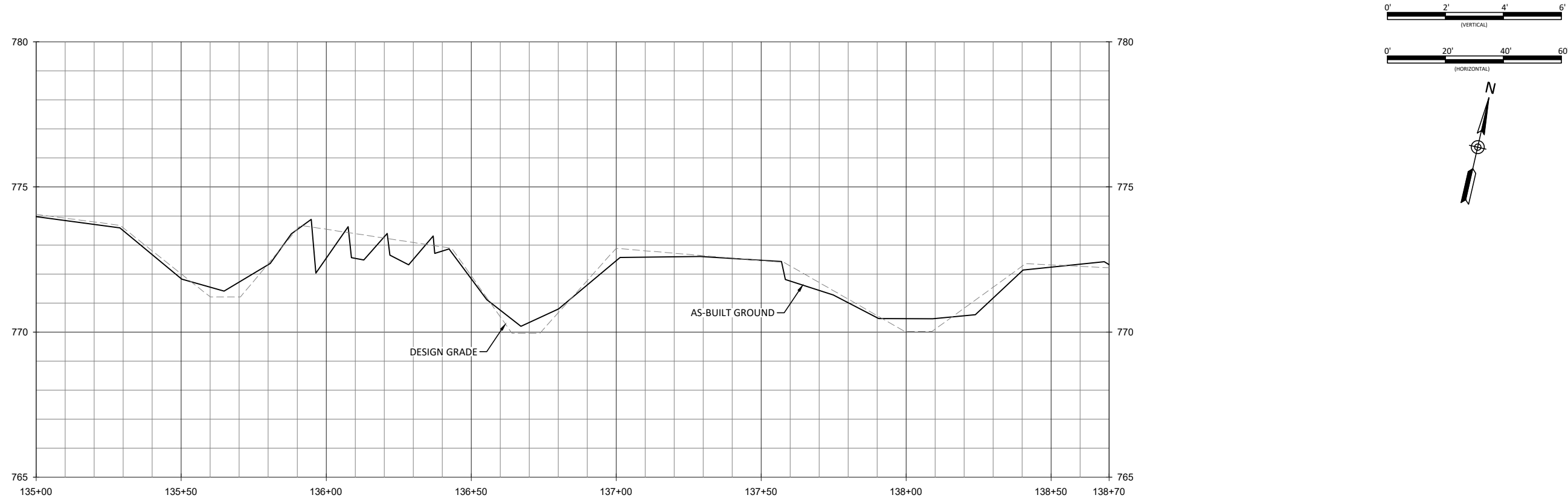
1.8

Sheet

WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERRING ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring (2021)\Plan\AB-02171 - Profiles.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERRING ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

PROFESSIONAL SEAL
042660
ERIC J. WILSON
10/15/21

Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wyant Creek
Stream Plan and Profile

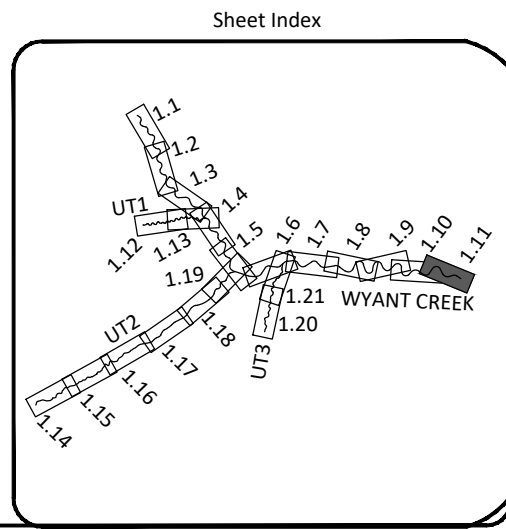
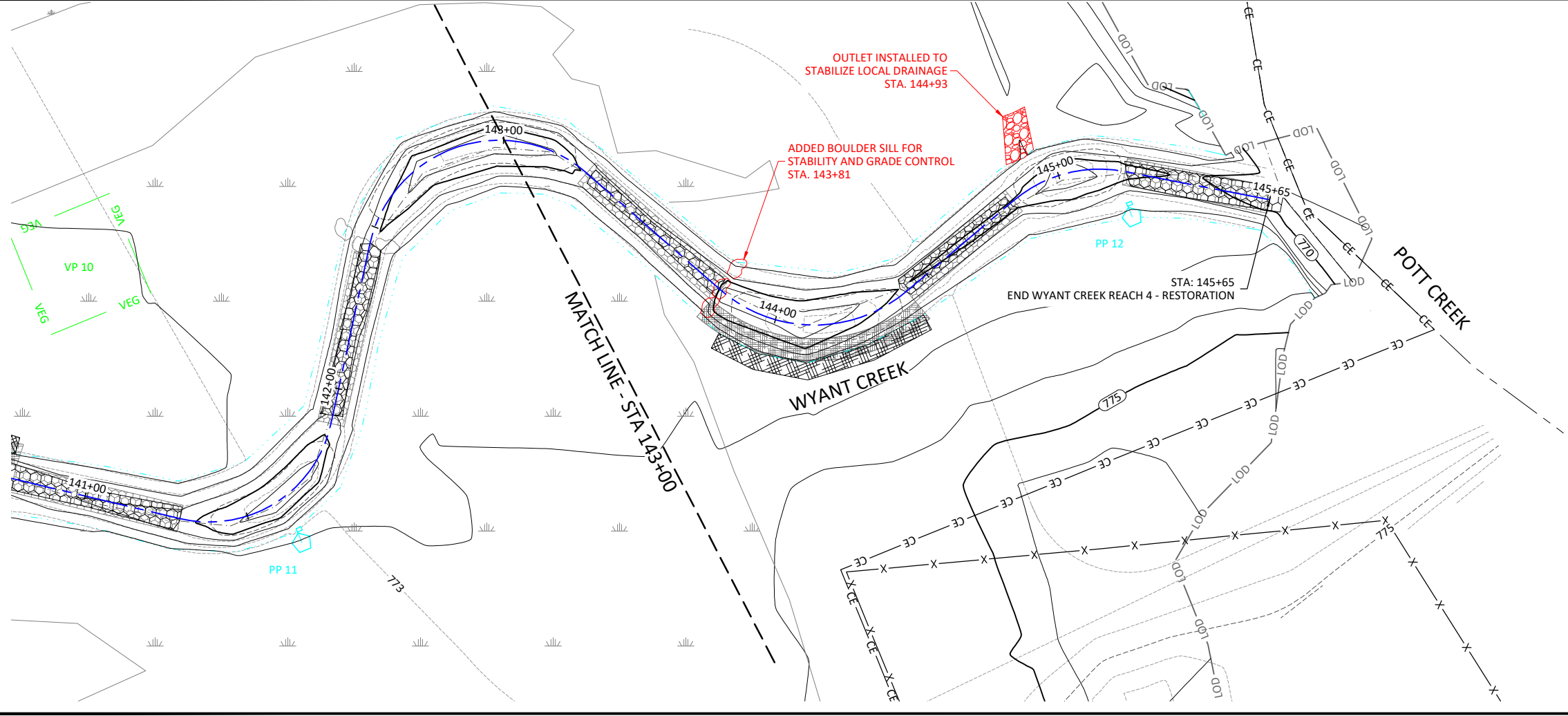
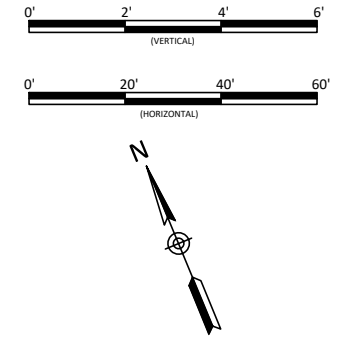
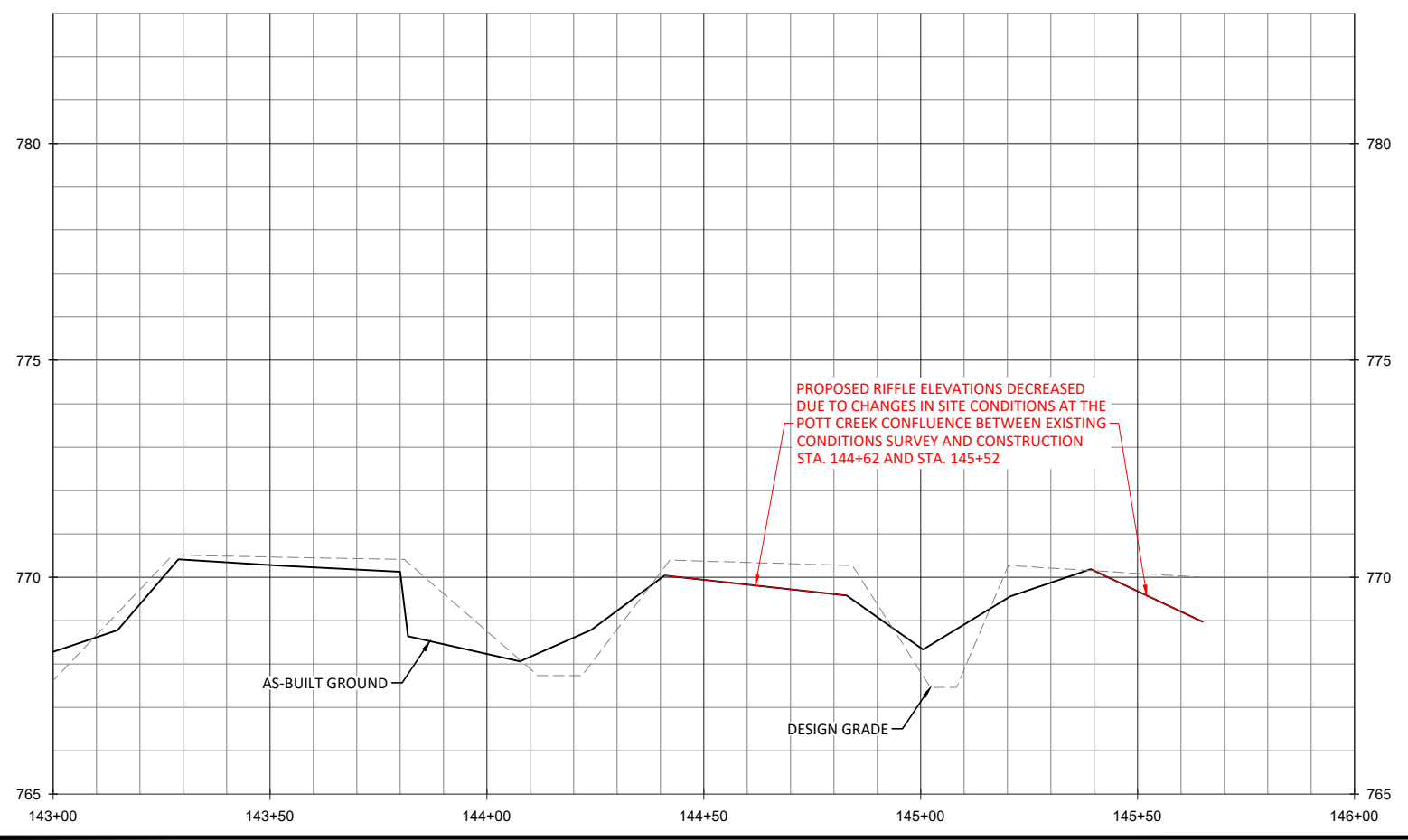
Revisions:	

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

1.9

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

Revisions:

1	GRADING CORRECTED
2	BASED ON SURFACE ERROR

Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wyant Creek
Stream Plan and Profile

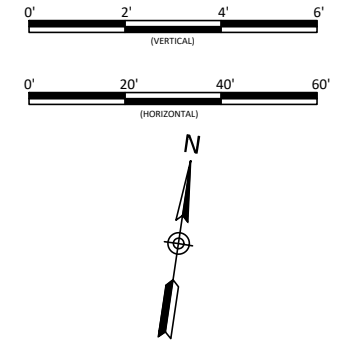
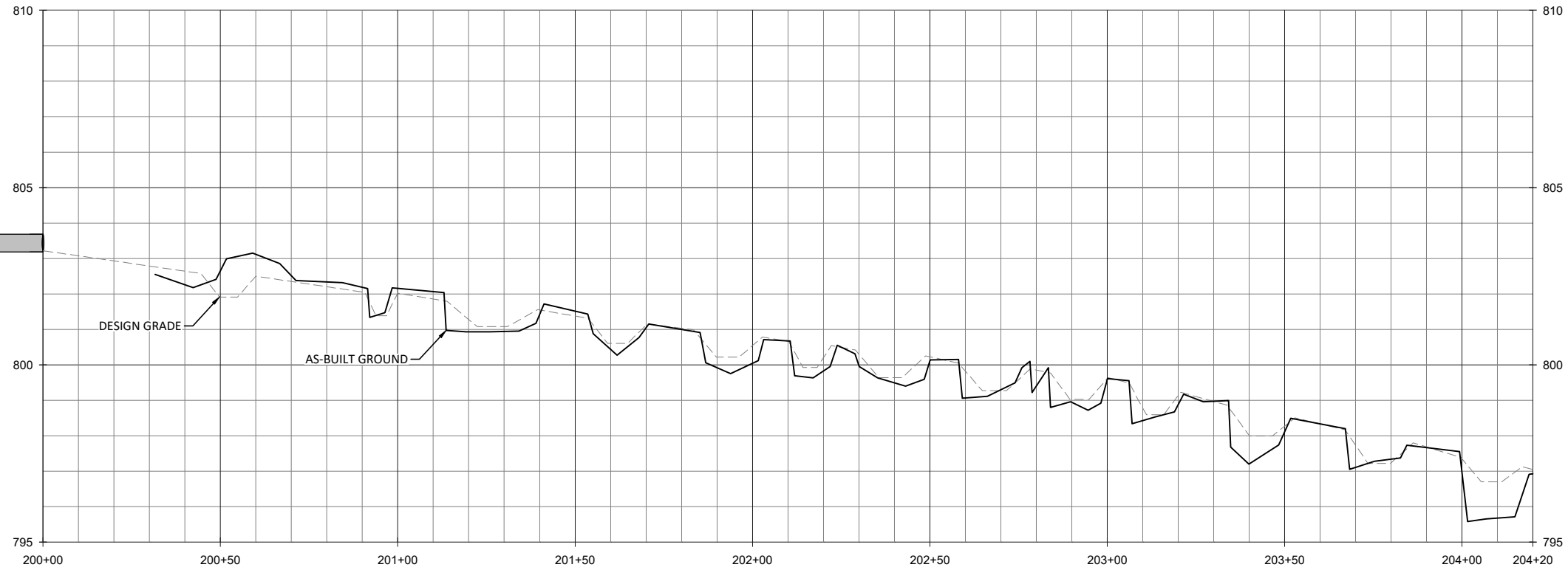


WILDLANDS
LANDSCAPE ARCHITECTS
1678 Hix Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

1.11
Sheet

October 11, 2021

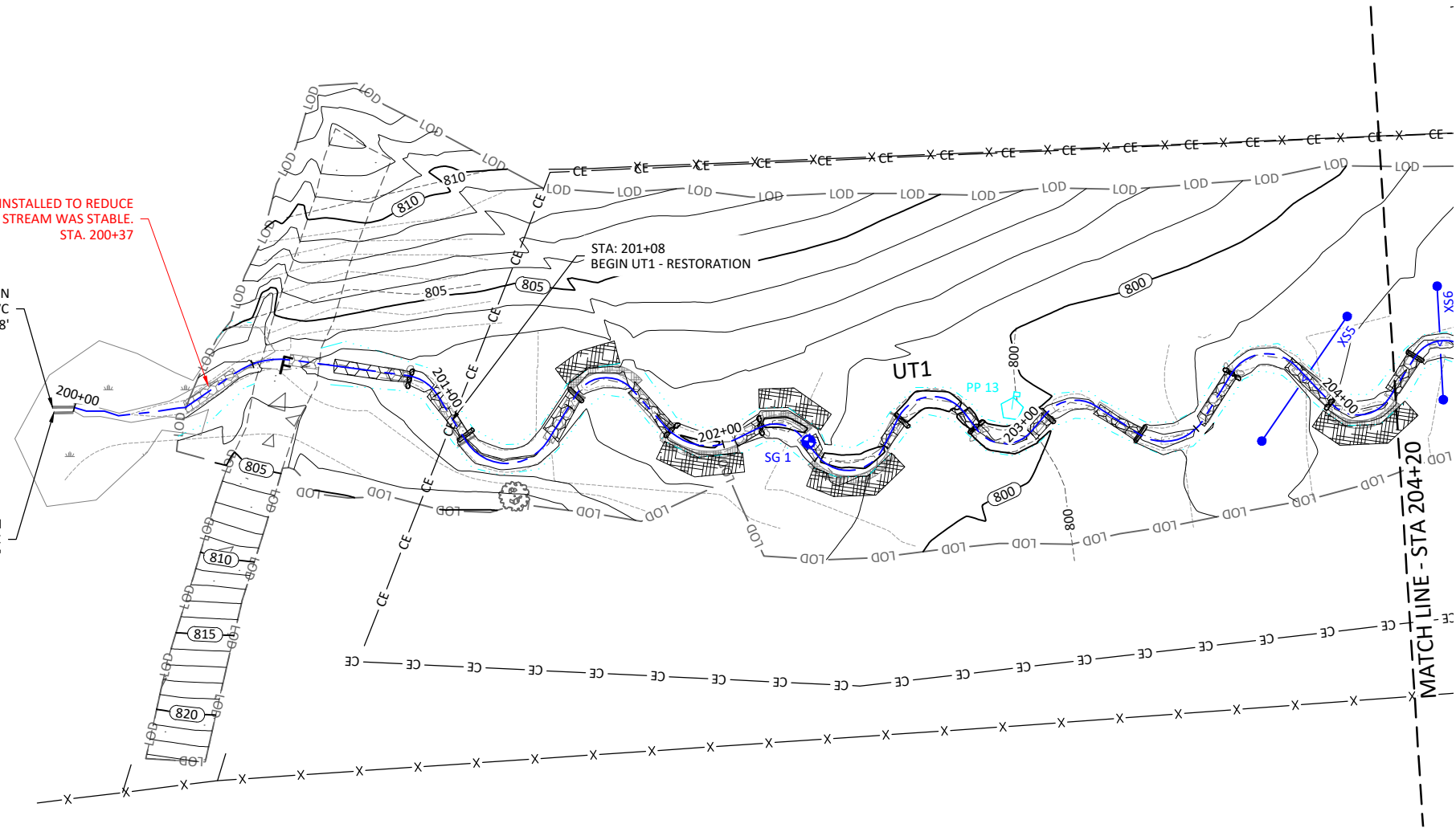
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



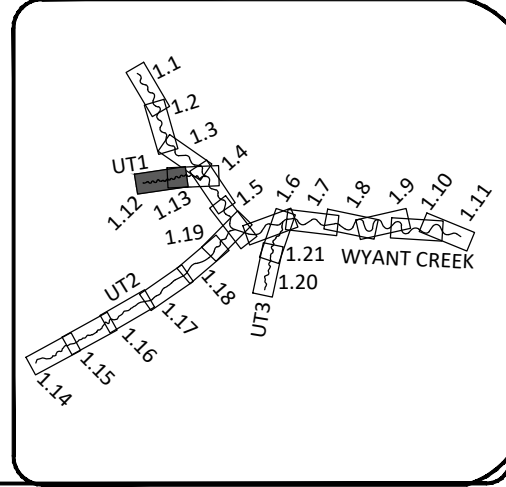
RIFFLE NOT INSTALLED TO REDUCE WETLAND IMPACT. STREAM WAS STABLE.
STA. 200+37

PRE-CONSTRUCTION
6" PVC
INV OUT: 803.18'

PRE-CONSTRUCTION
6" PVC
INV OUT: 803.54'



Sheet Index



Date: October 5, 2021

Job Number: 005-02171
Project Engineer: EPN
Drawn By: JF
Checked By: JCK

1.12

Sheet

Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

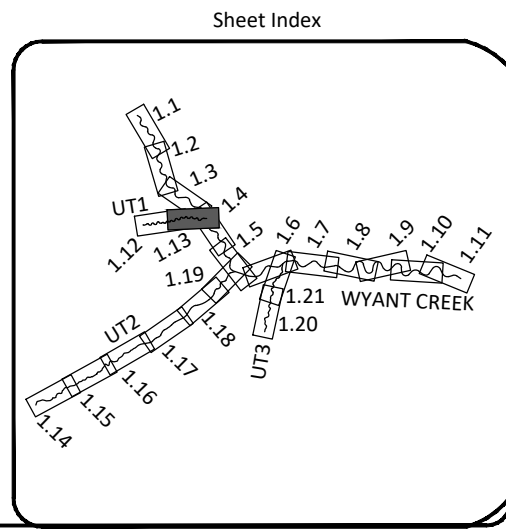
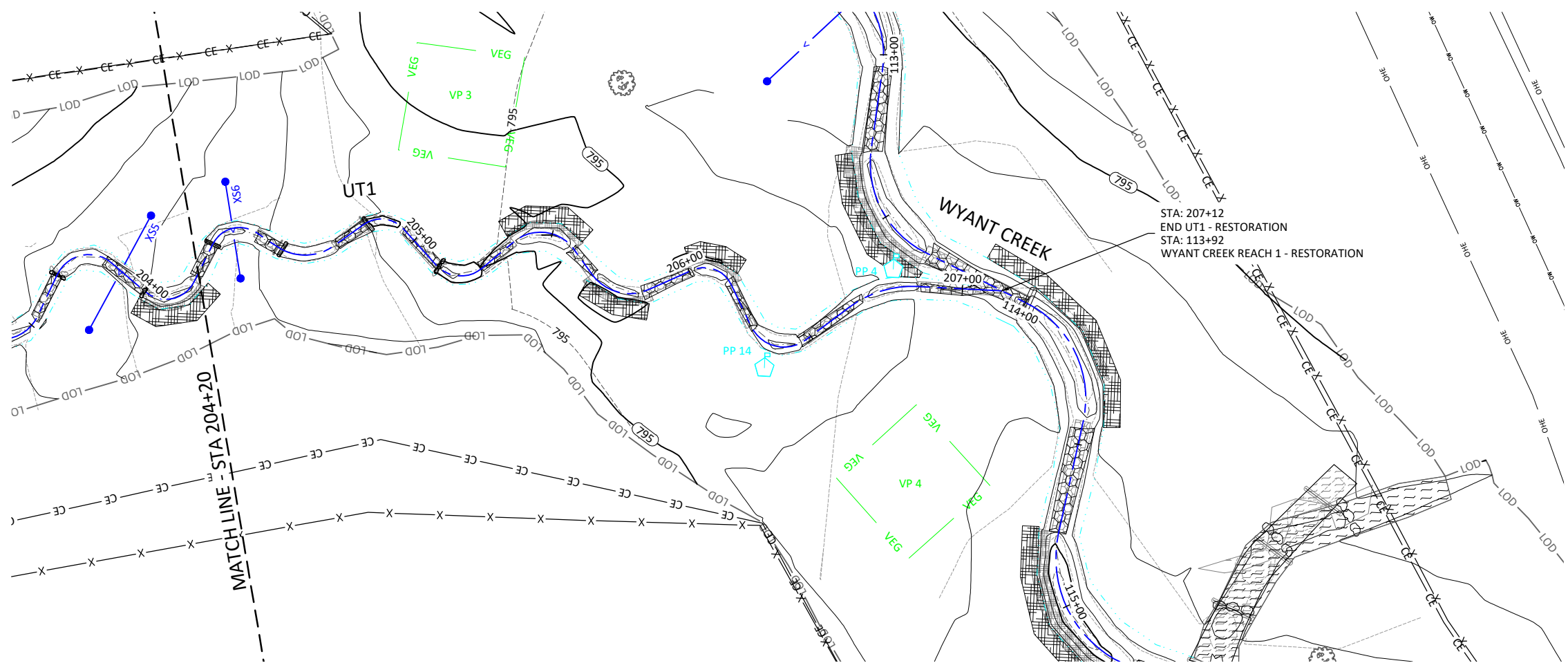
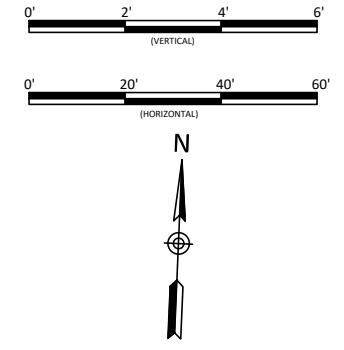
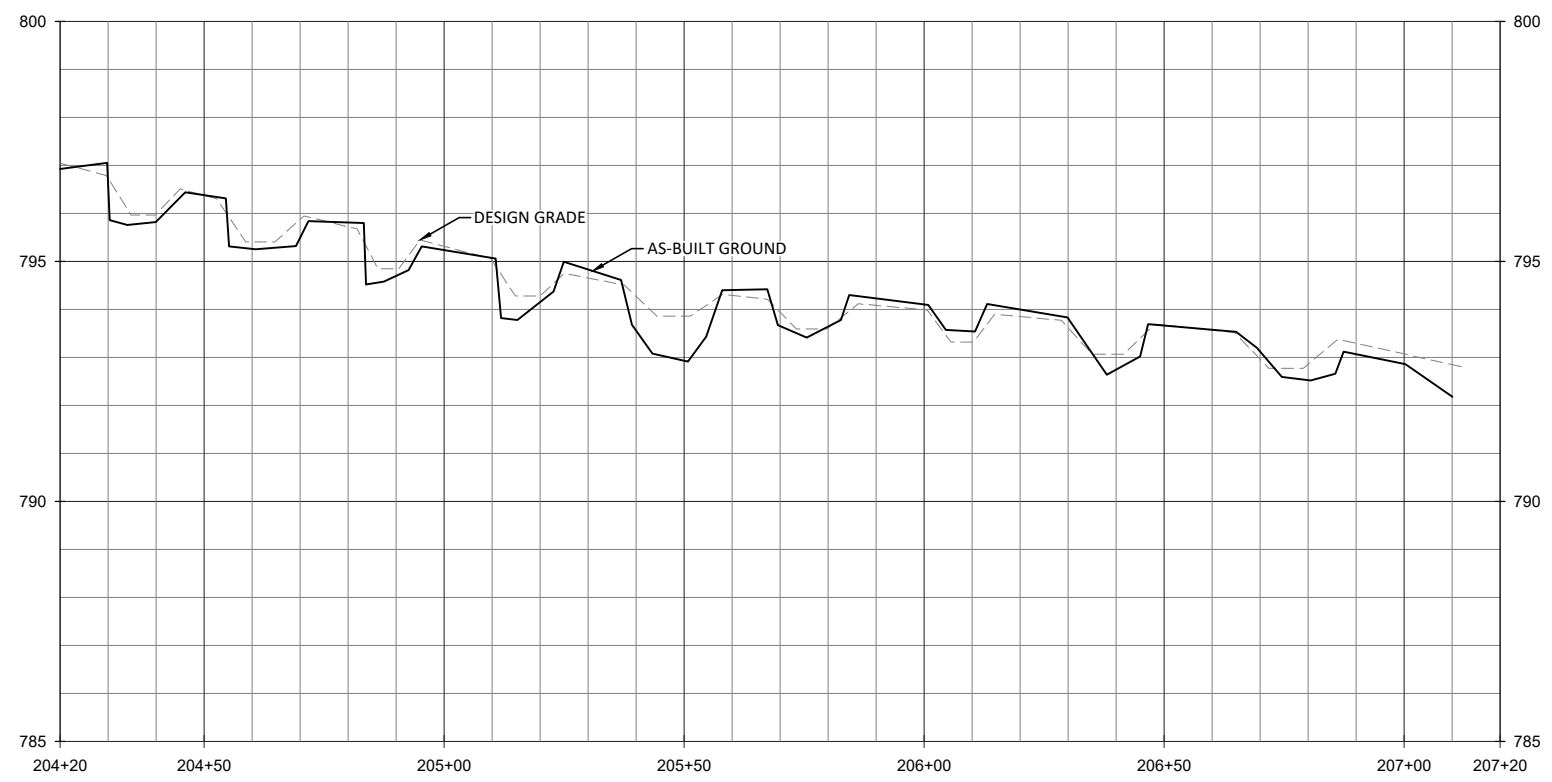
UT1
Stream Plan and Profile



WILDLANDS
LAND REFORM
1678 HERSH ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

October 11, 2021

X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring (2021)\Plan\AB-02171 - Profiles.dwg



WILDLANDS
 LANDSCAPE ARCHITECTURE
 1678 Hills Road
 Asheville, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina

UT1
 Stream Plan and Profile

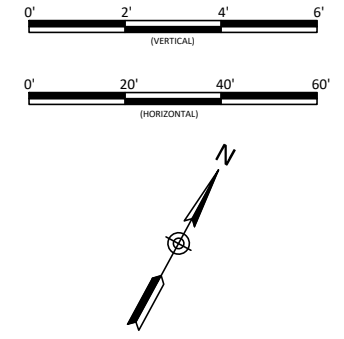
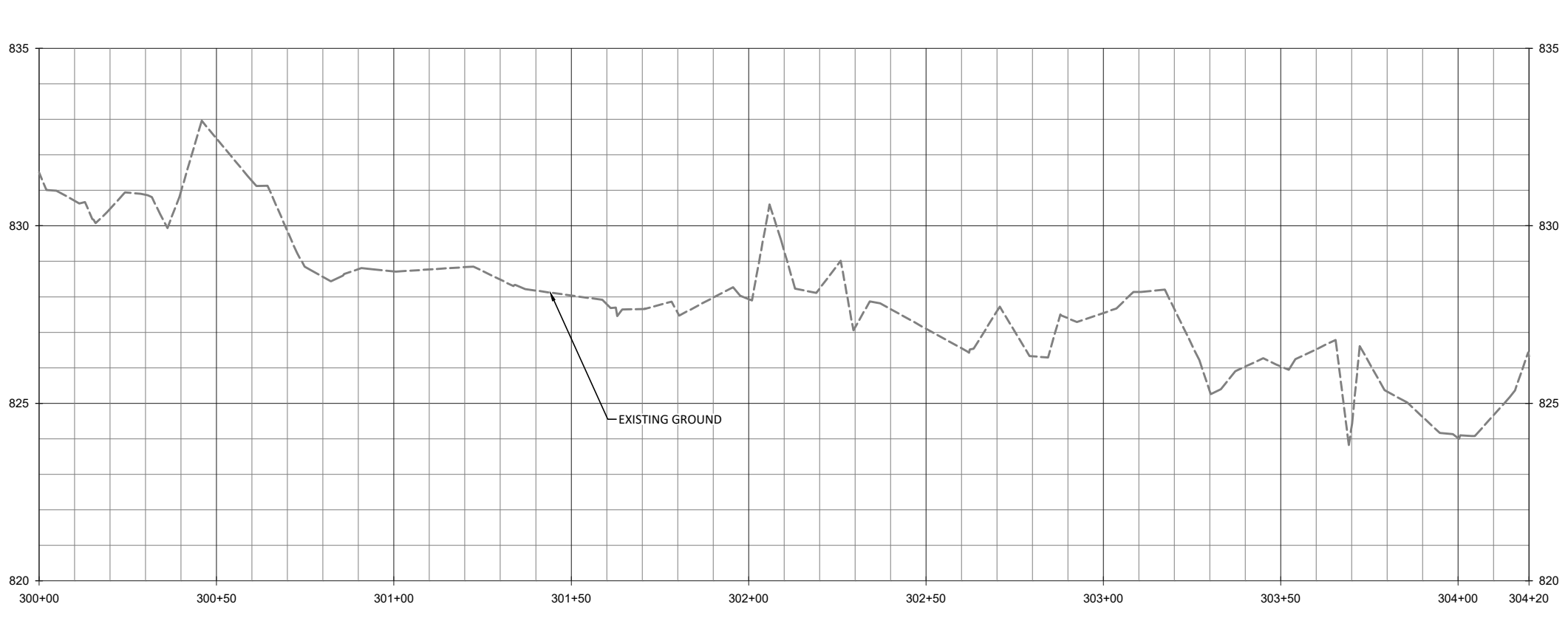
Revisions:

Date: October 5, 2021
 Job Number: 005-02171
 Project Engineer: EPN
 Drawn By: JP
 Checked By: JCK

1.13

Sheet

October 11, 2021



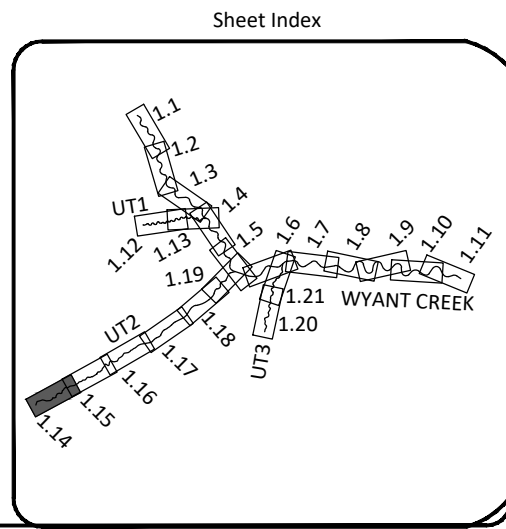
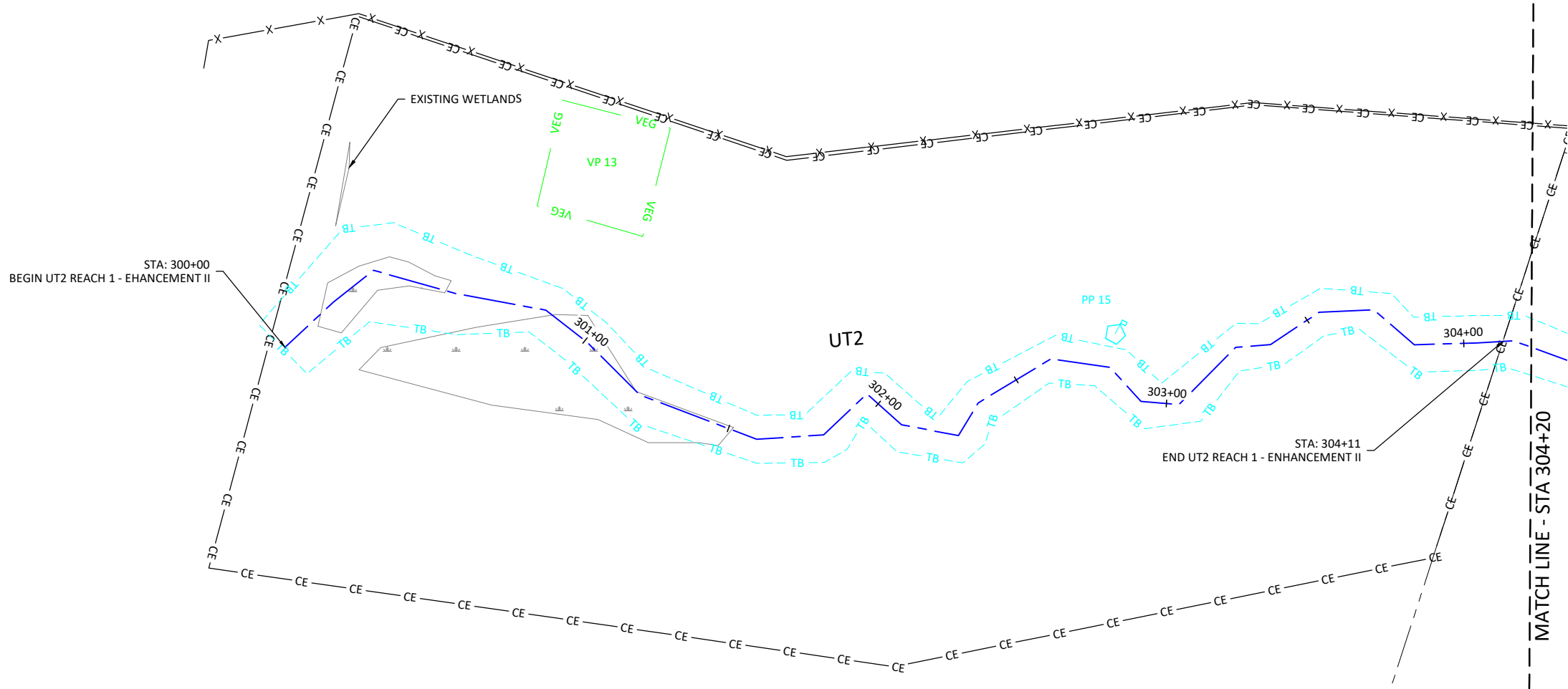
WILDLANDS
 CONSULTING ENGINEERS
 1678 HERRING ROAD
 ASHEVILLE, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina

UT2
 Stream Plan and Profile

- ENHANCEMENT II REACH TREATMENTS:
1. EXCLUDE CATTLE
 2. TREAT INVASIVE VEGETATION
 3. UNDERSTORY PLANTING - SEE PLANTING PLANS



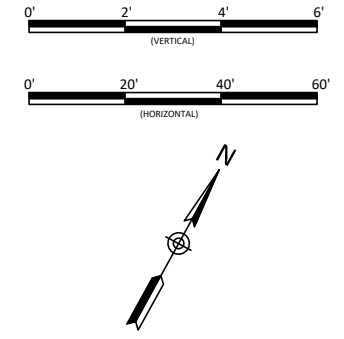
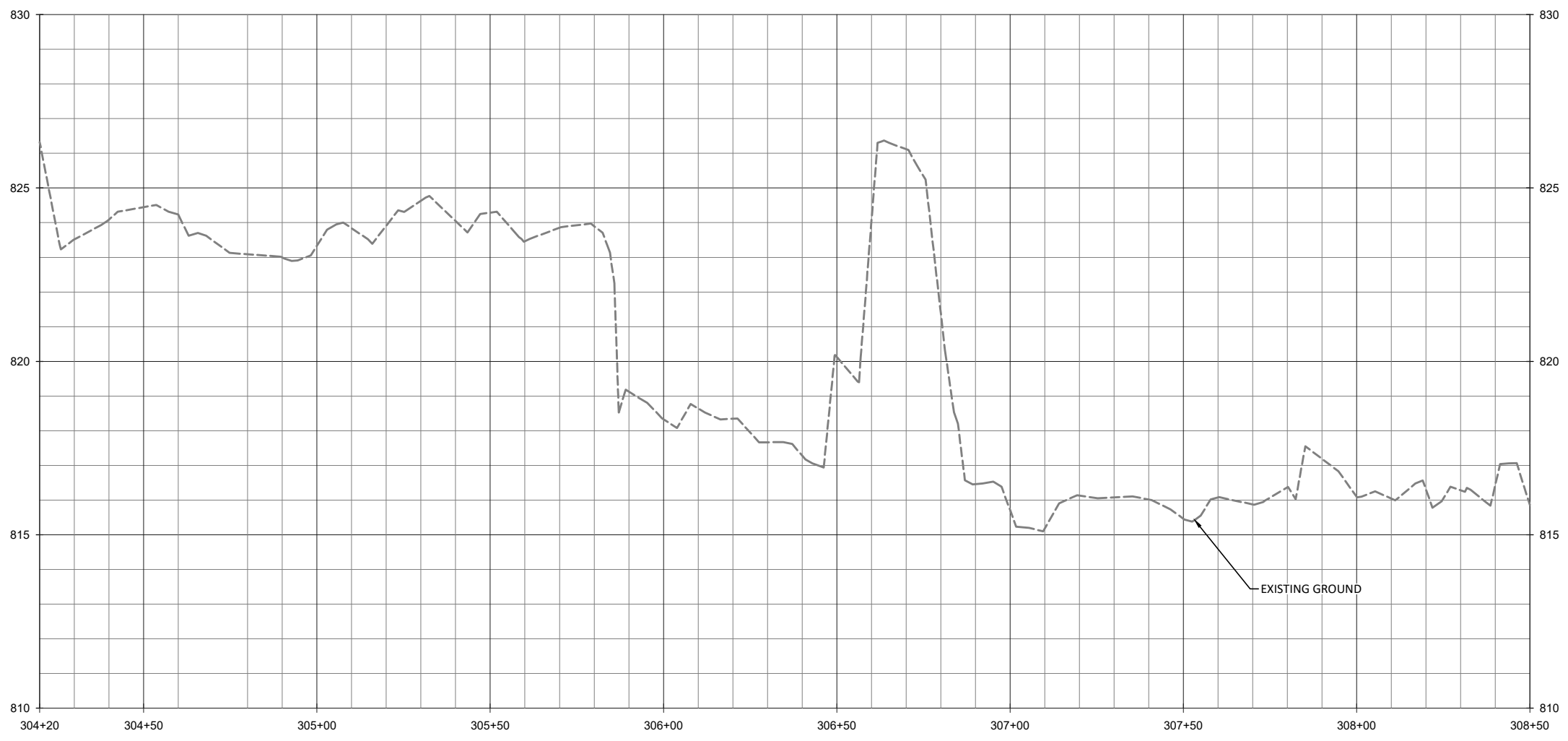
Revisions:

Date: October 5, 2021
 Job Number: 005-02171
 Project Engineer: EPN
 Drawn By: JP
 Checked By: JCK

1.14
 Sheet

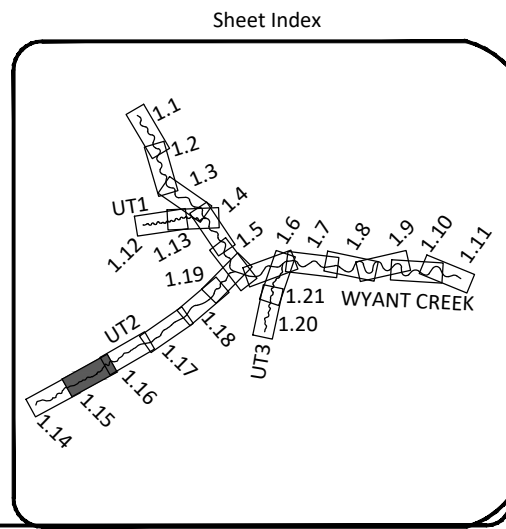
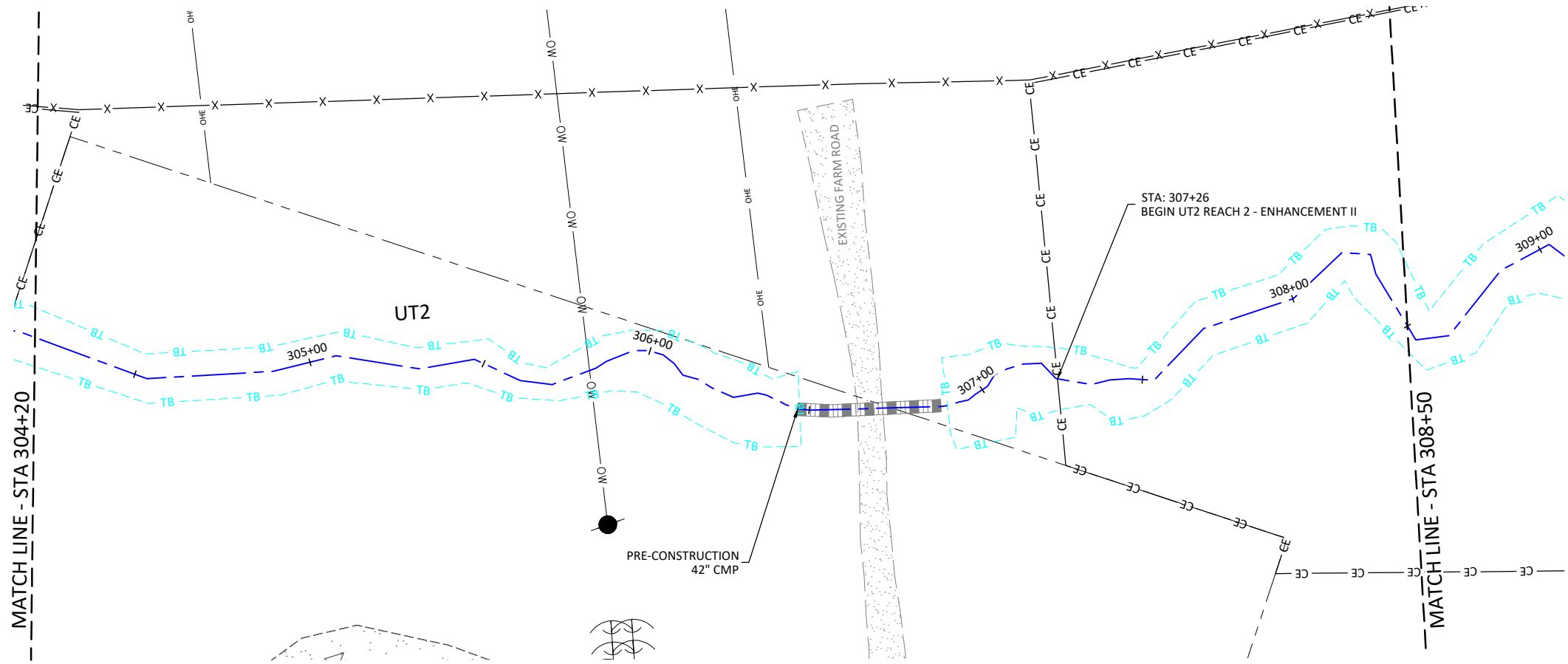
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AR-02171 - Profiles.dwg

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



NOTE:
1. NO DESIGN WORK STA: 304+09 - 307+26

- ENHANCEMENT II REACH TREATMENTS:
1. EXCLUDE CATTLE
 2. TREAT INVASIVE VEGETATION
 3. UNDERSTORY PLANTING - SEE PLANTING PLANS



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

UT2
Stream Plan and Profile

WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERRING ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

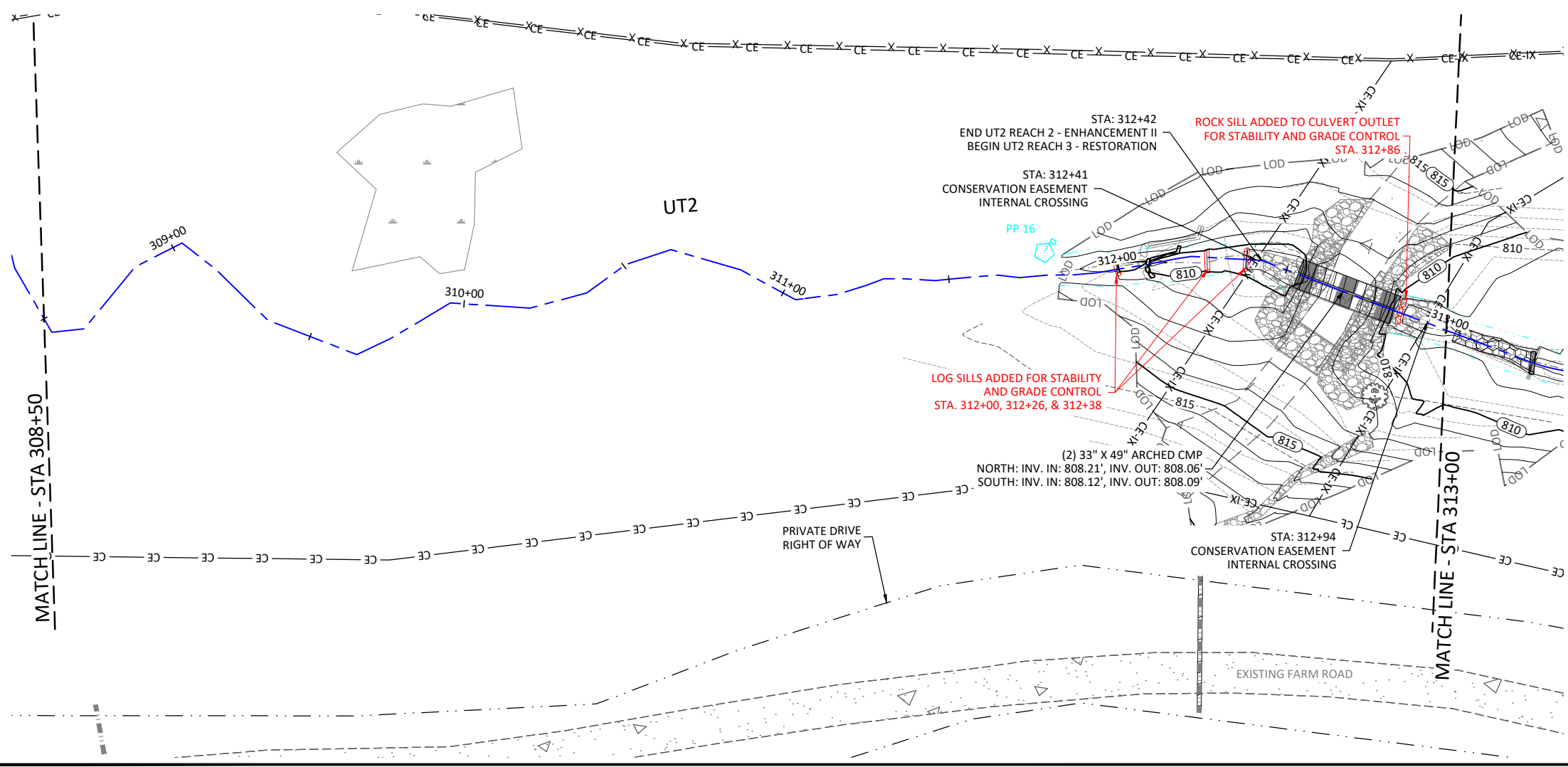
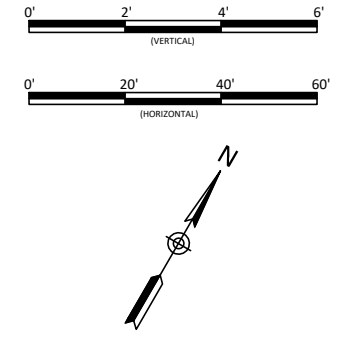
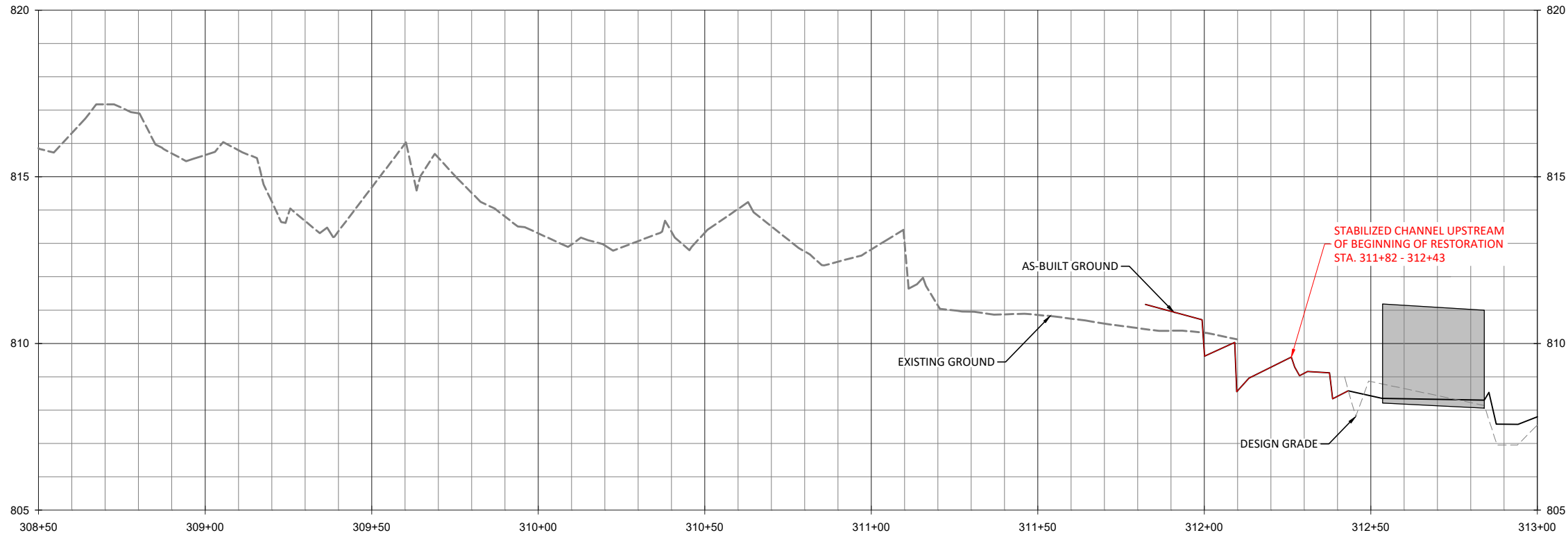


Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

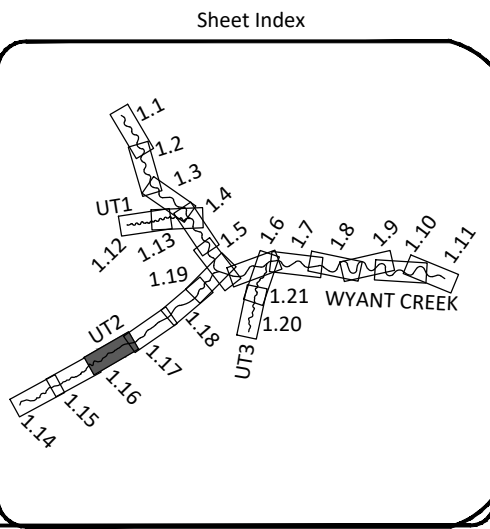
1.15

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg




- ENHANCEMENT II REACH TREATMENTS:**
1. EXCLUDE CATTLE
 2. TREAT INVASIVE VEGETATION
 3. SUPPLEMENTAL PLANTING - SEE PLANTING PLANS



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

UT2
 Stream Plan and Profile

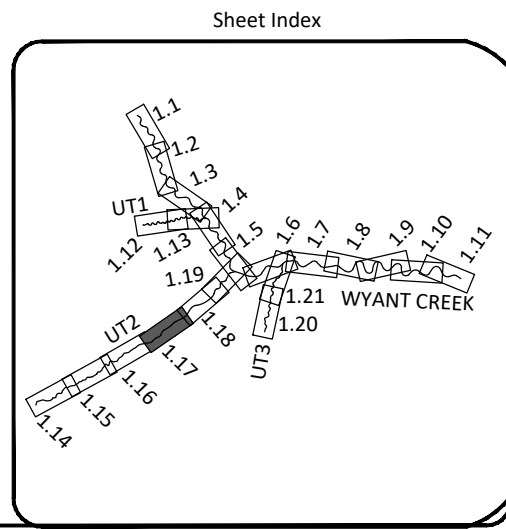
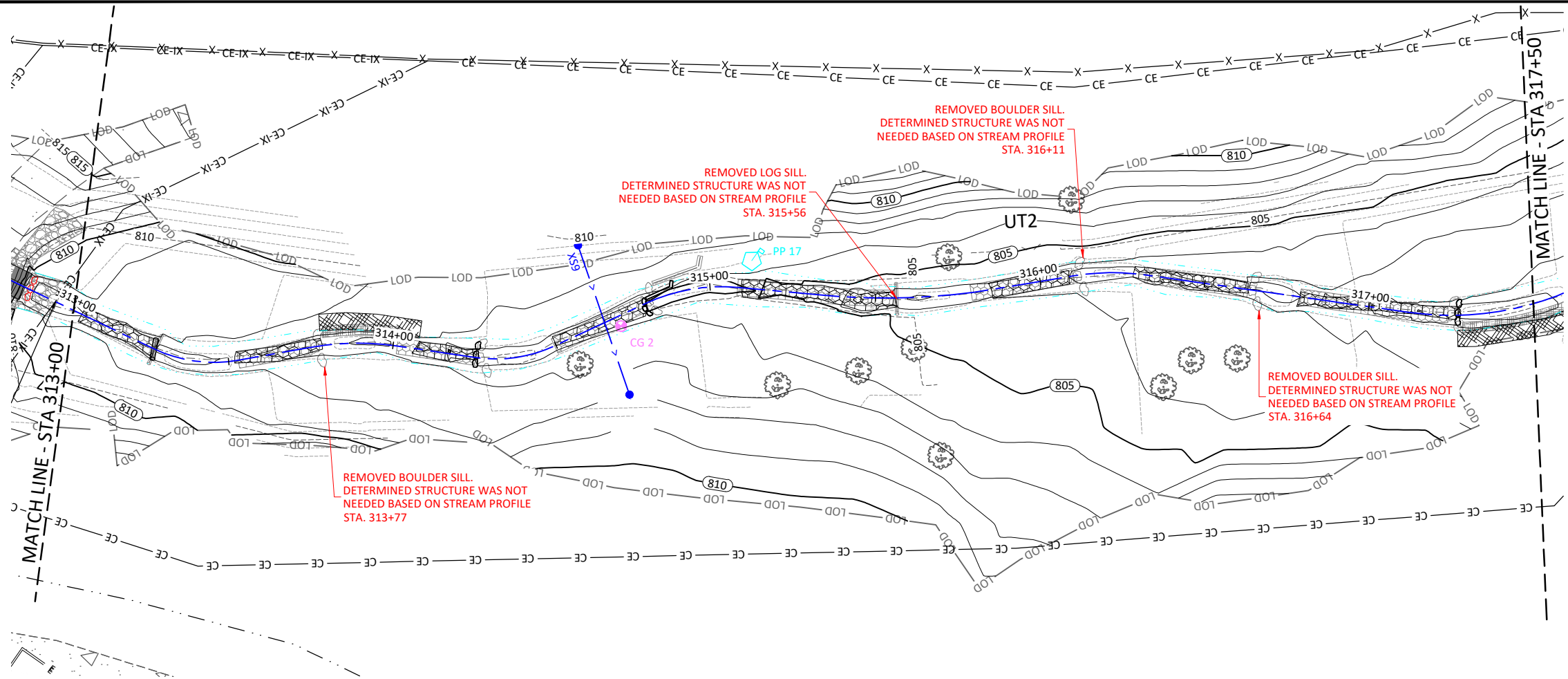
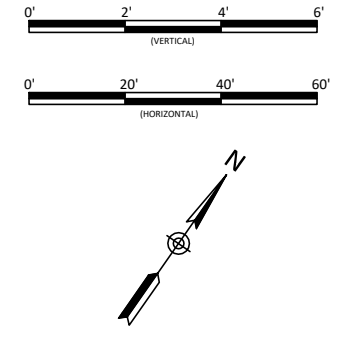
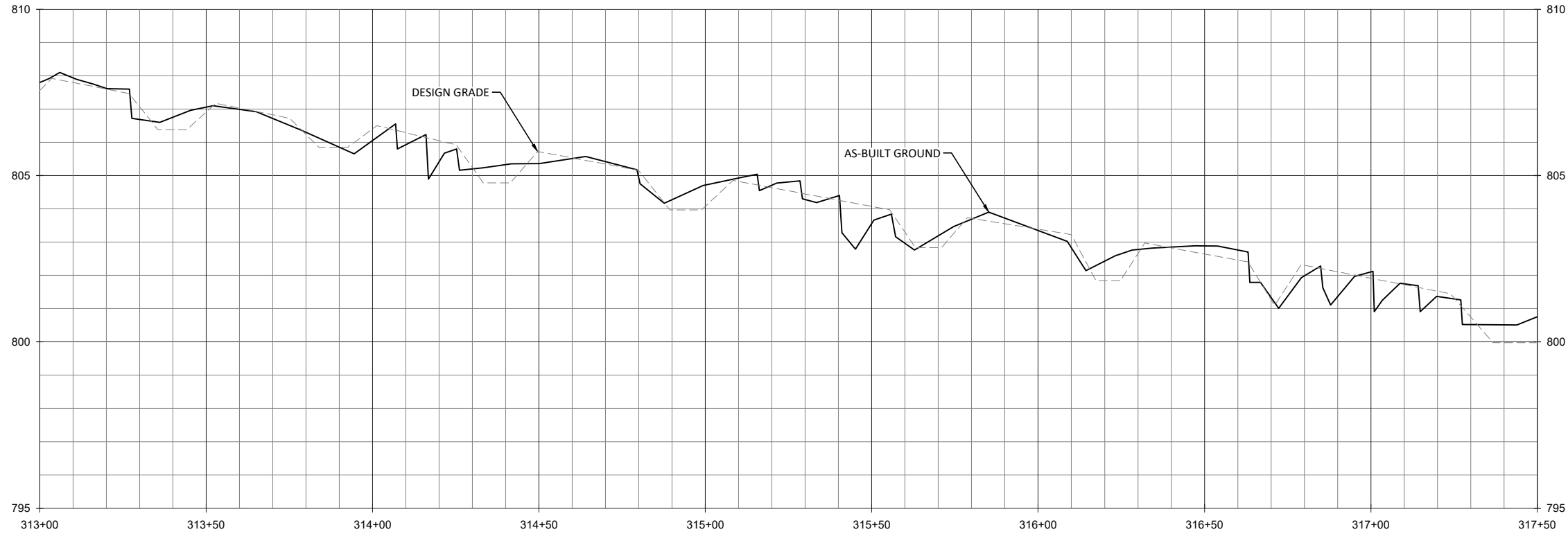
WILDLANDS
 LANDSCAPE ARCHITECTURE
 1678 Highway 280
 Asheville, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831



Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

1.16
 Sheet

October 5, 2021
X:\shared\Projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline - Monitor\2021\Plan\AB-02171 - Profiles.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERRING ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

UT2
Stream Plan and Profile

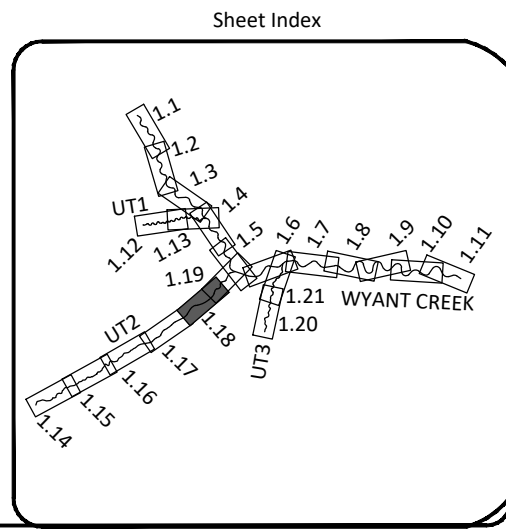
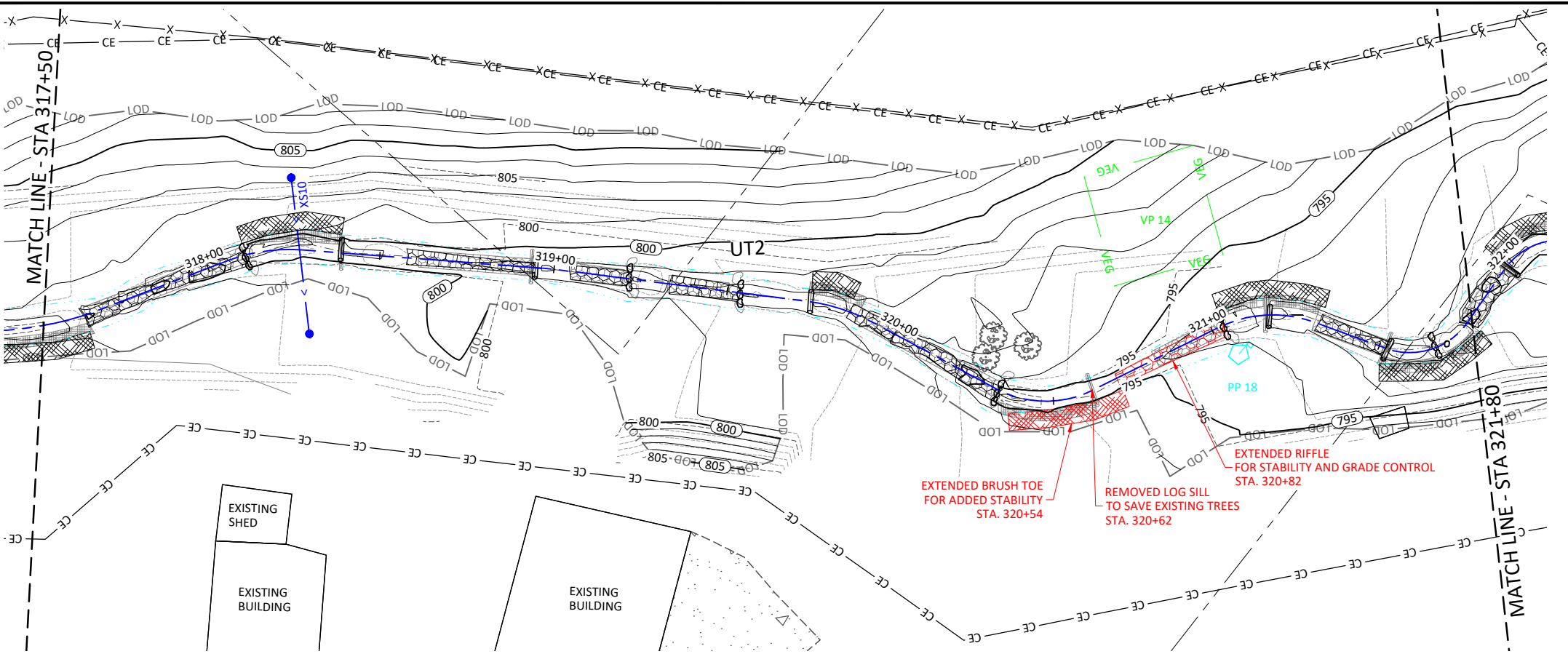
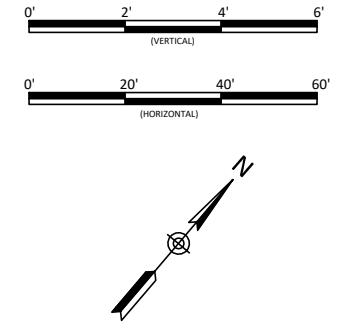
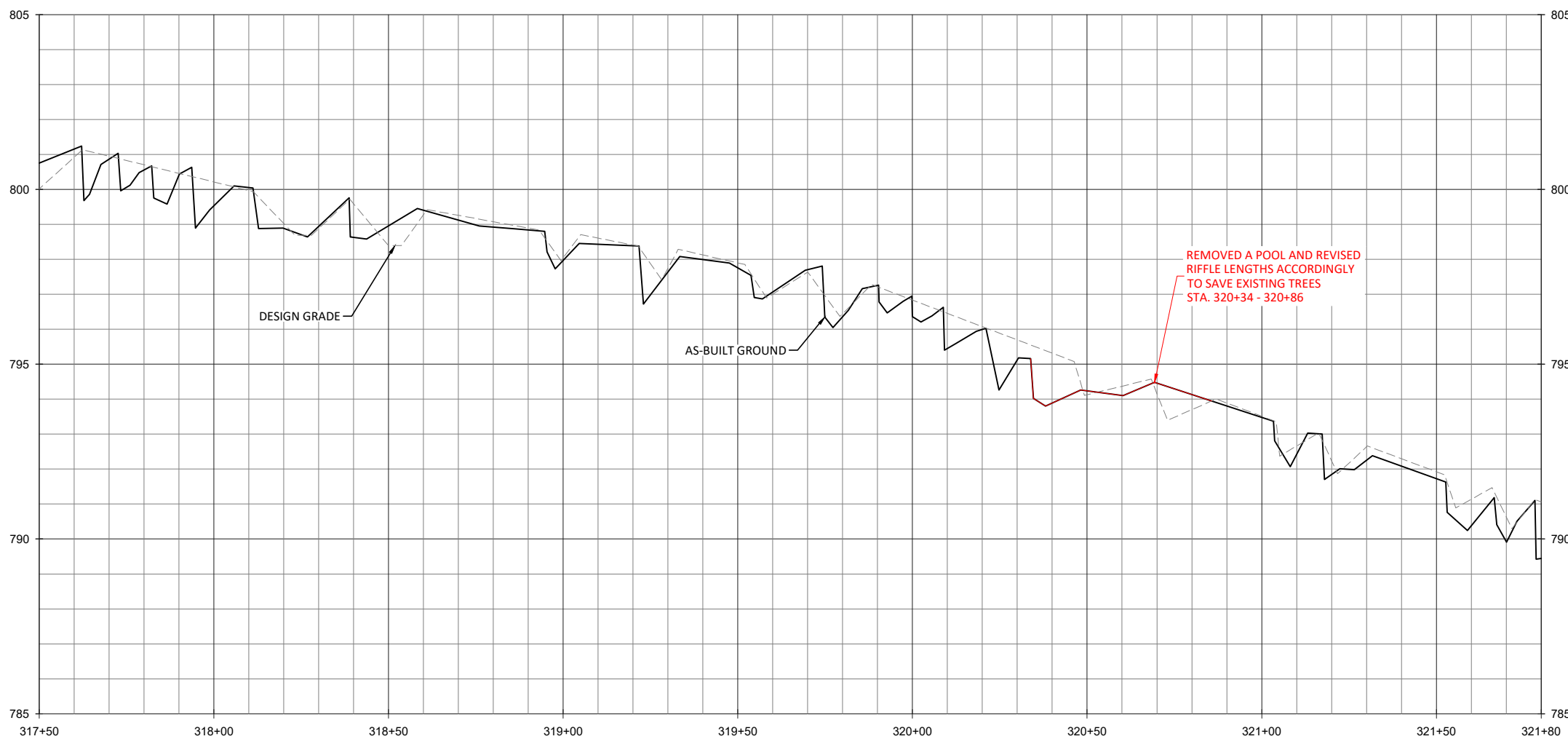
Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JCK

1.17

Sheet

October 5, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Profiles.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

UT2
Stream Plan and Profile

WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERSH ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



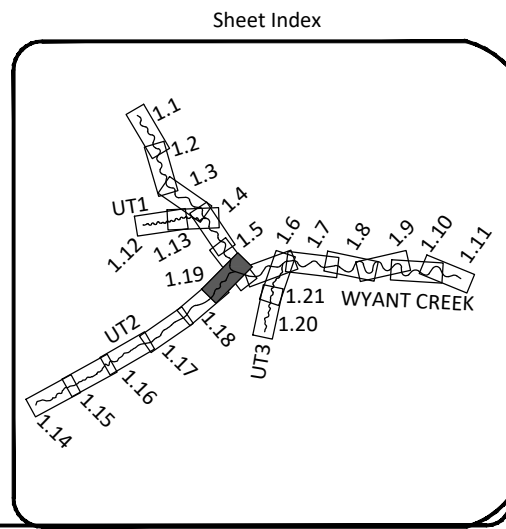
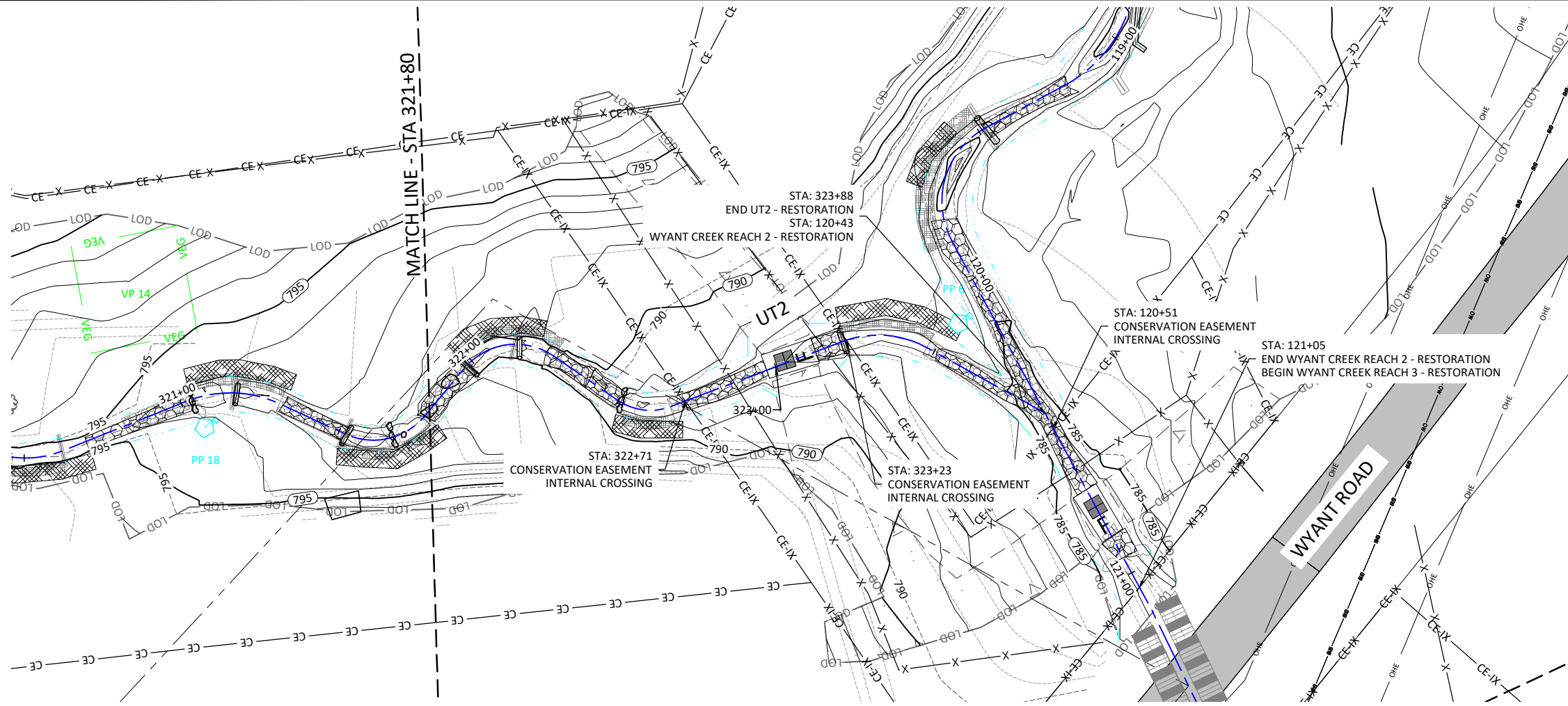
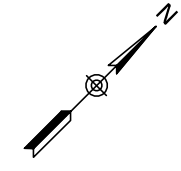
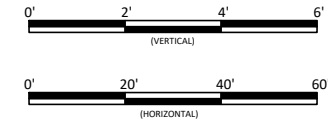
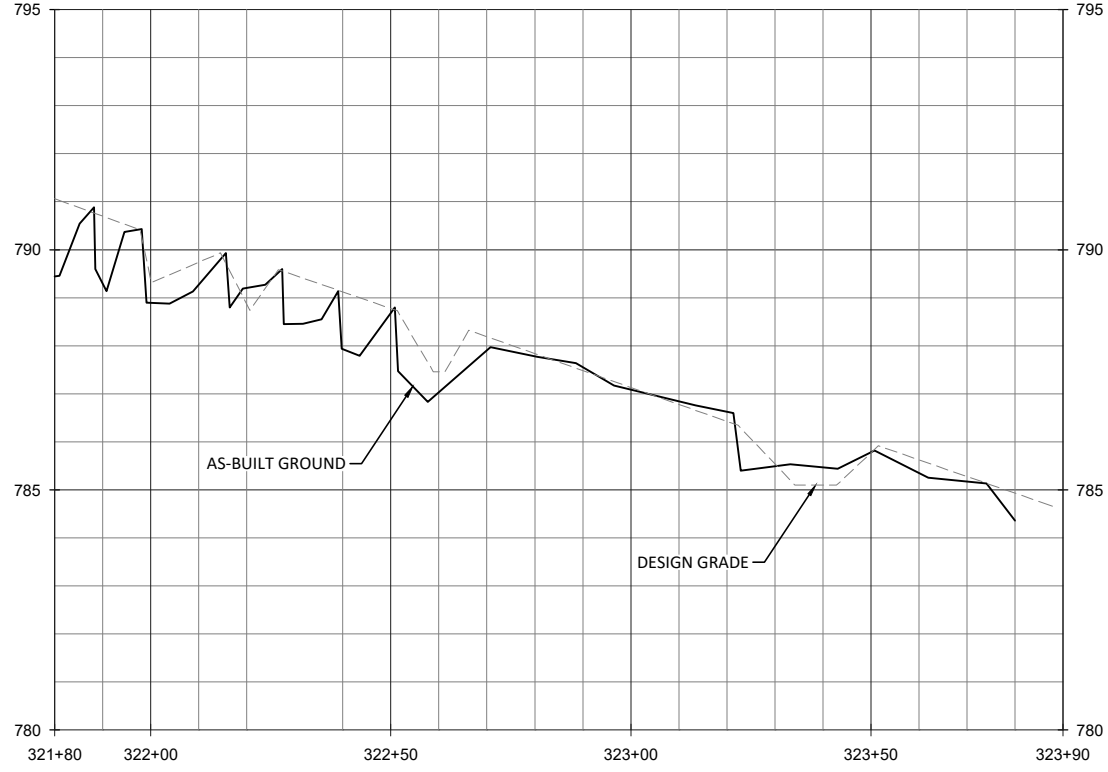
Revisions:	

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

1.18
Sheet

October 11, 2021

X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline - Monitor\2021\Plan\AB-02171 - Profiles.dwg



Date: October 5, 2021
 Job Number: 005-02171
 Project Engineer: EPN
 Drawn By: JF
 Checked By: JCK

Revisions:

1.19

Sheet

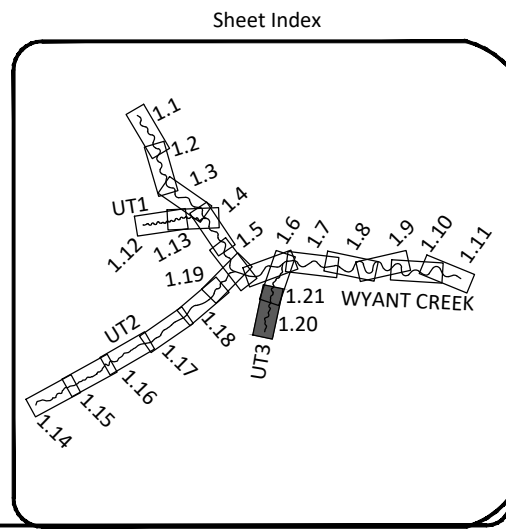
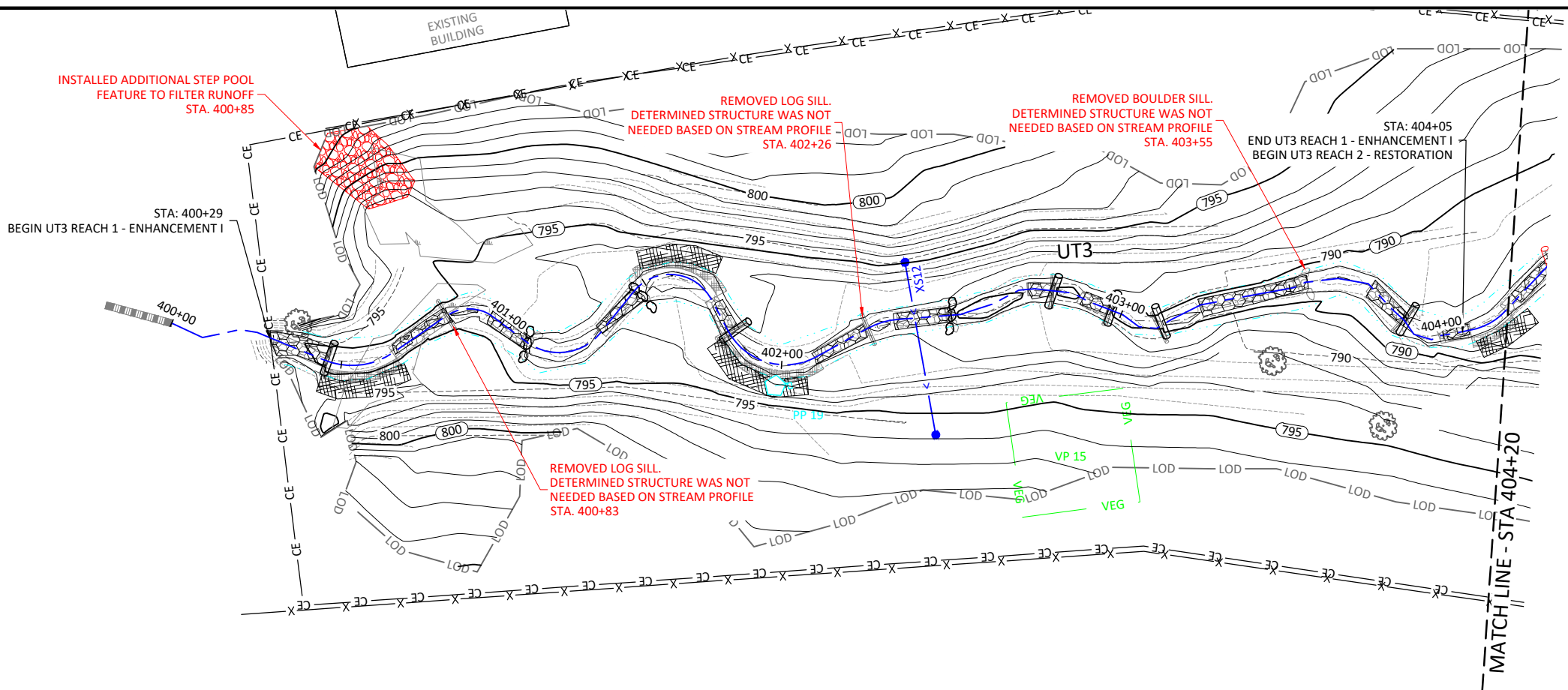
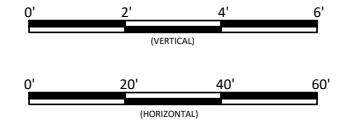
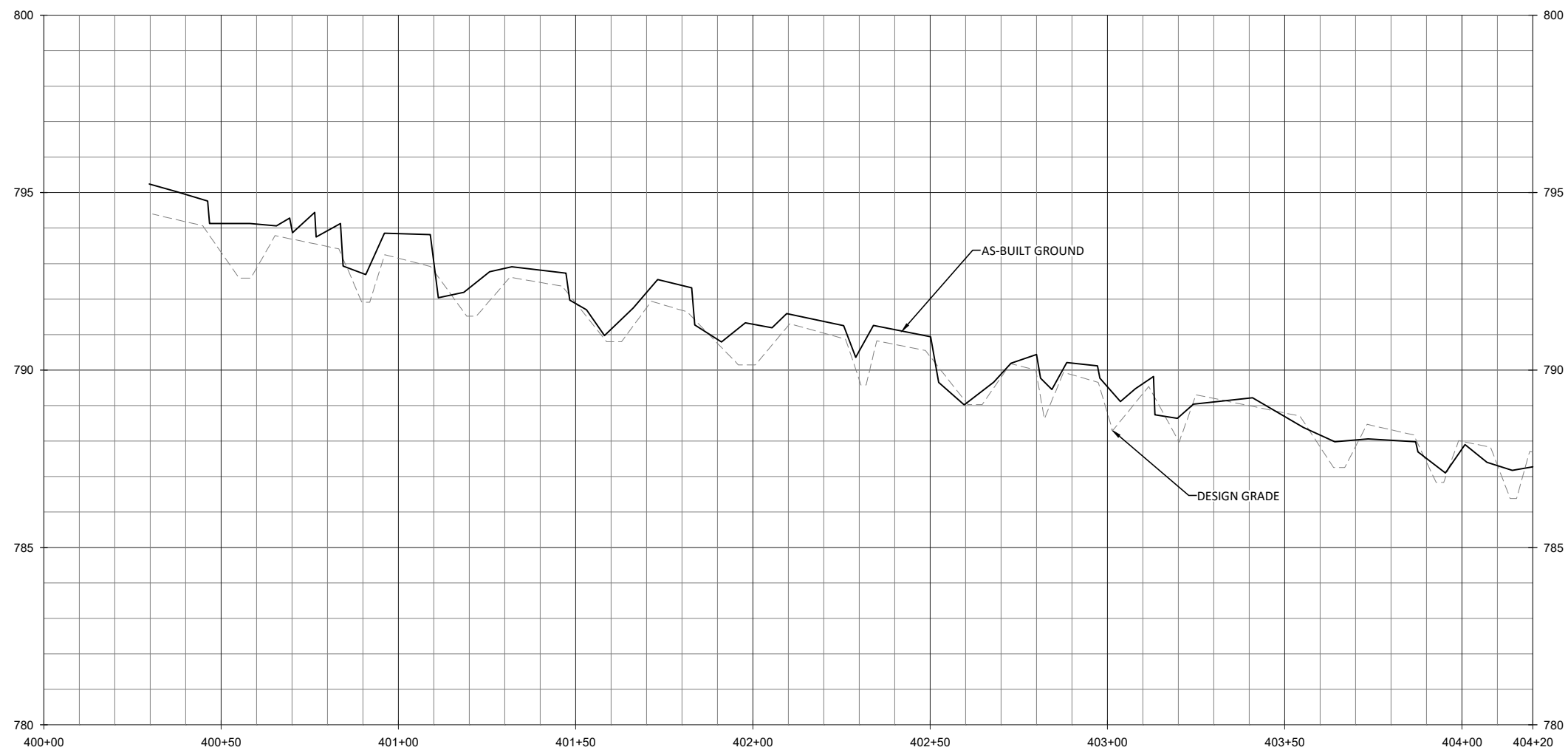
Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina

UT2
 Stream Plan and Profile



WILDLANDS
 CONSULTING ENGINEERS
 1678 Hester Road
 Asheville, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline - Monitor\2021\Plan\AS-02171 - Profiles.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERSH ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

UT3
Stream Plan and Profile

Revisions:

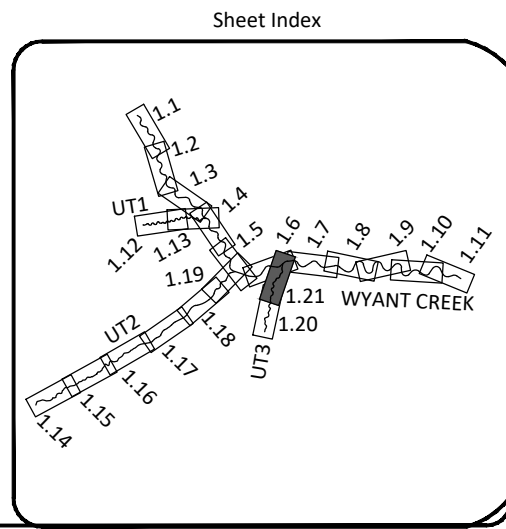
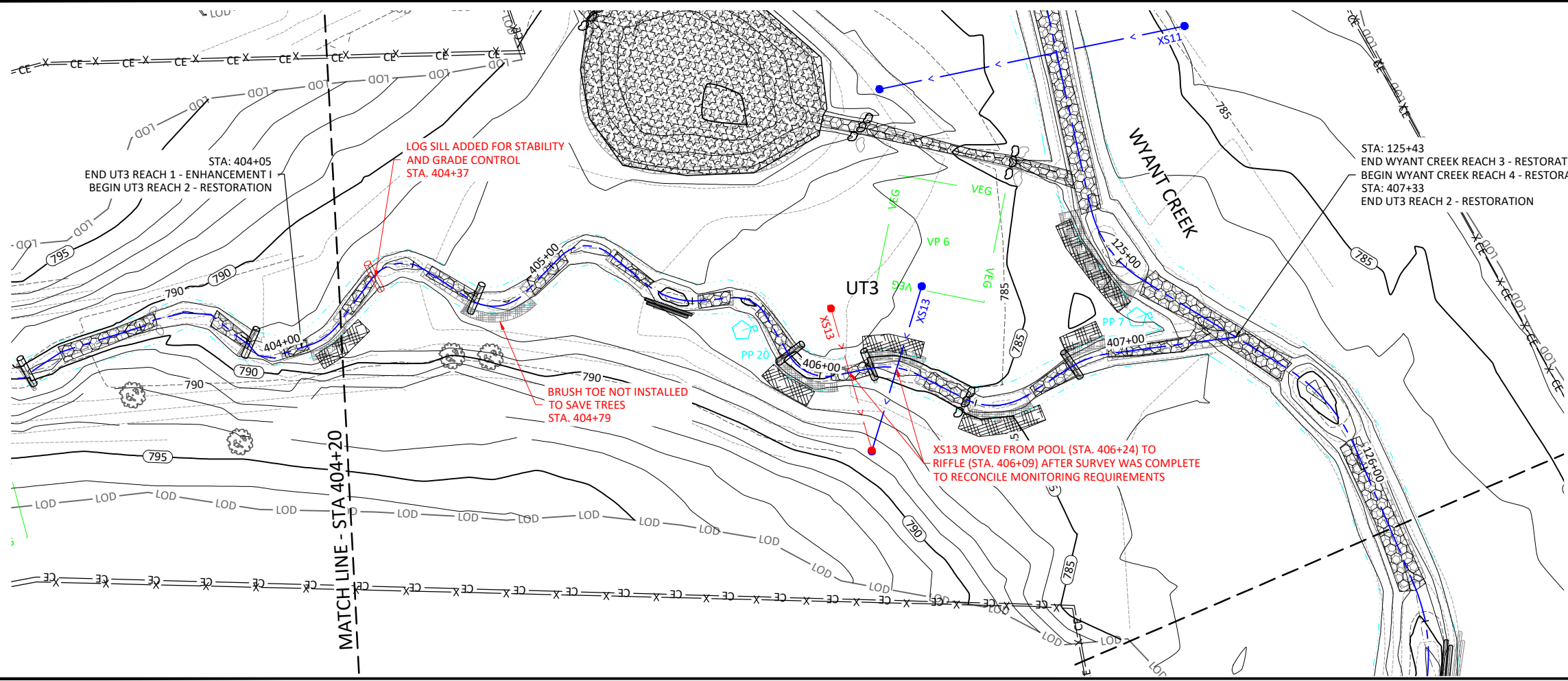
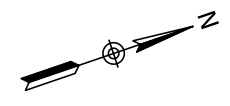
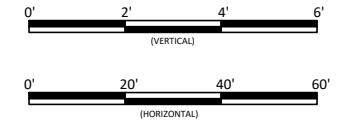
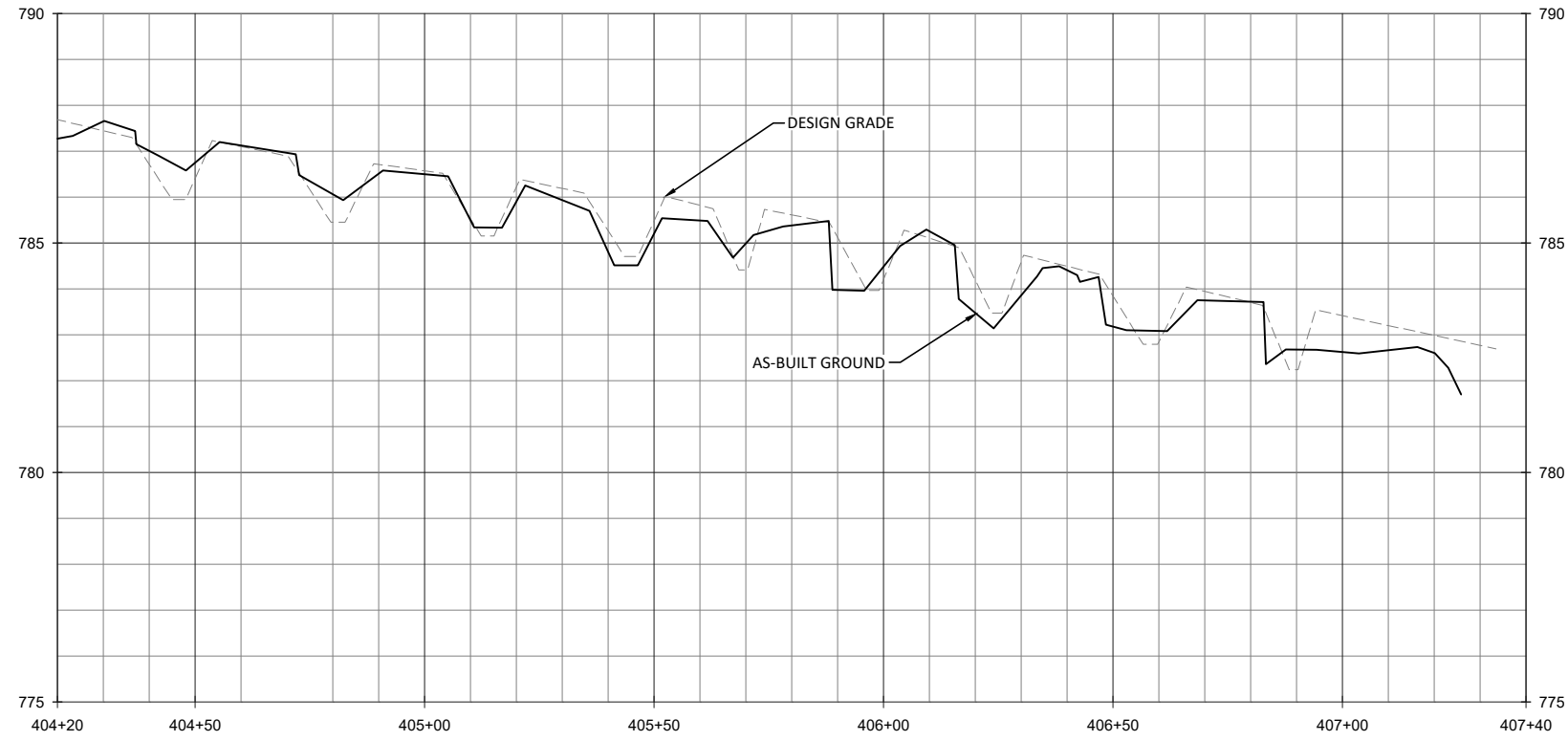
No.	Description	By	Date

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JF
Checked By: JCK

1.20

Sheet

October 5, 2021
X:\shared\projects\005-02171-Wyant_Lands_Mitigation_Site_Monitoring_Baseline_Monitoring_2021\Plan\AS-02171_Profiles.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

UT3
Stream Plan and Profile

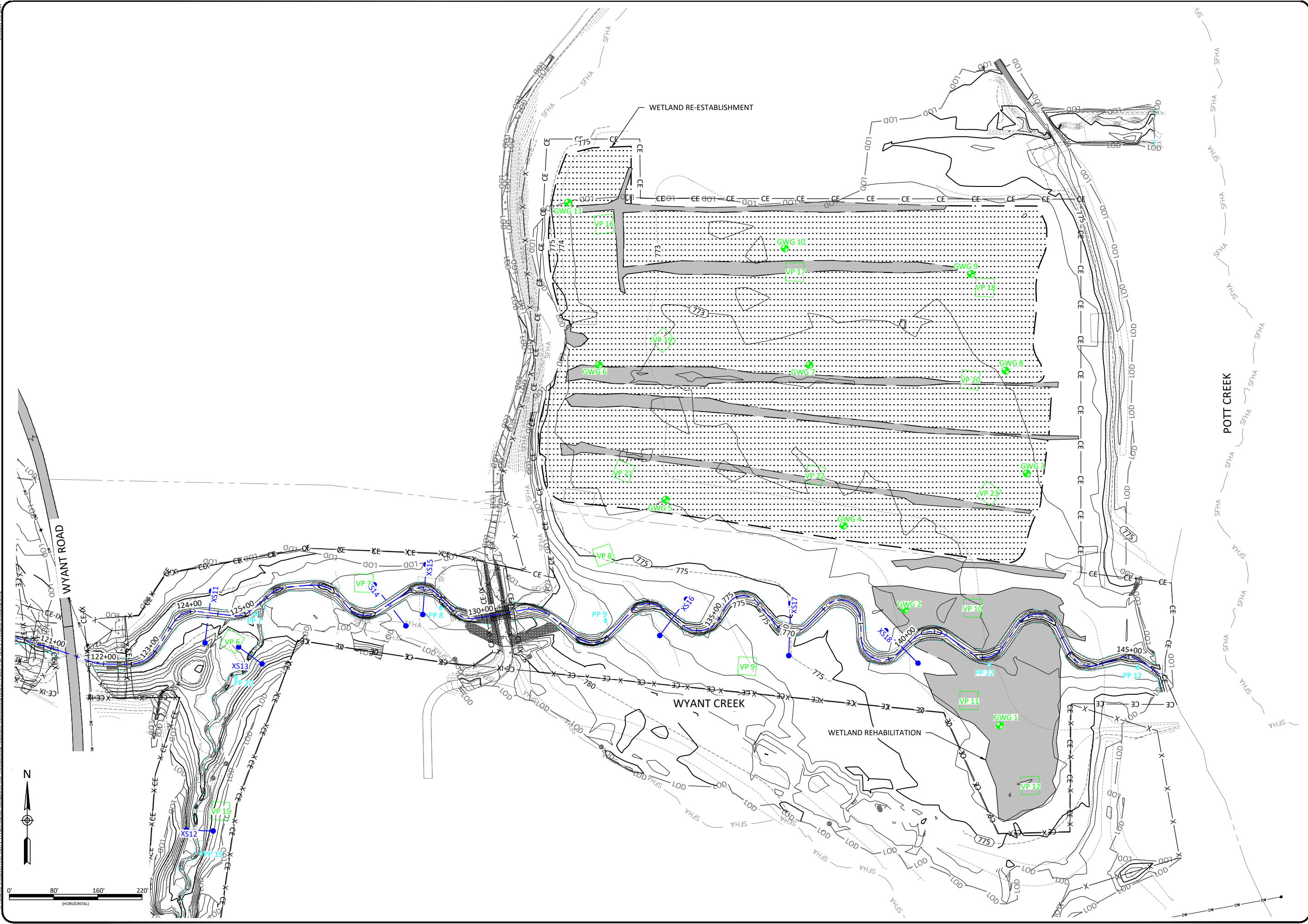
WILDLANDS
LANDSCAPE ARCHITECTURE
1678 Hills Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	JCK

1.21
Sheet

October 5, 2021
X:\shared\Projects\1005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\021011 Plans\AB-02171 Wetland Grading.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Wetland Grading Overview

Revisions:	

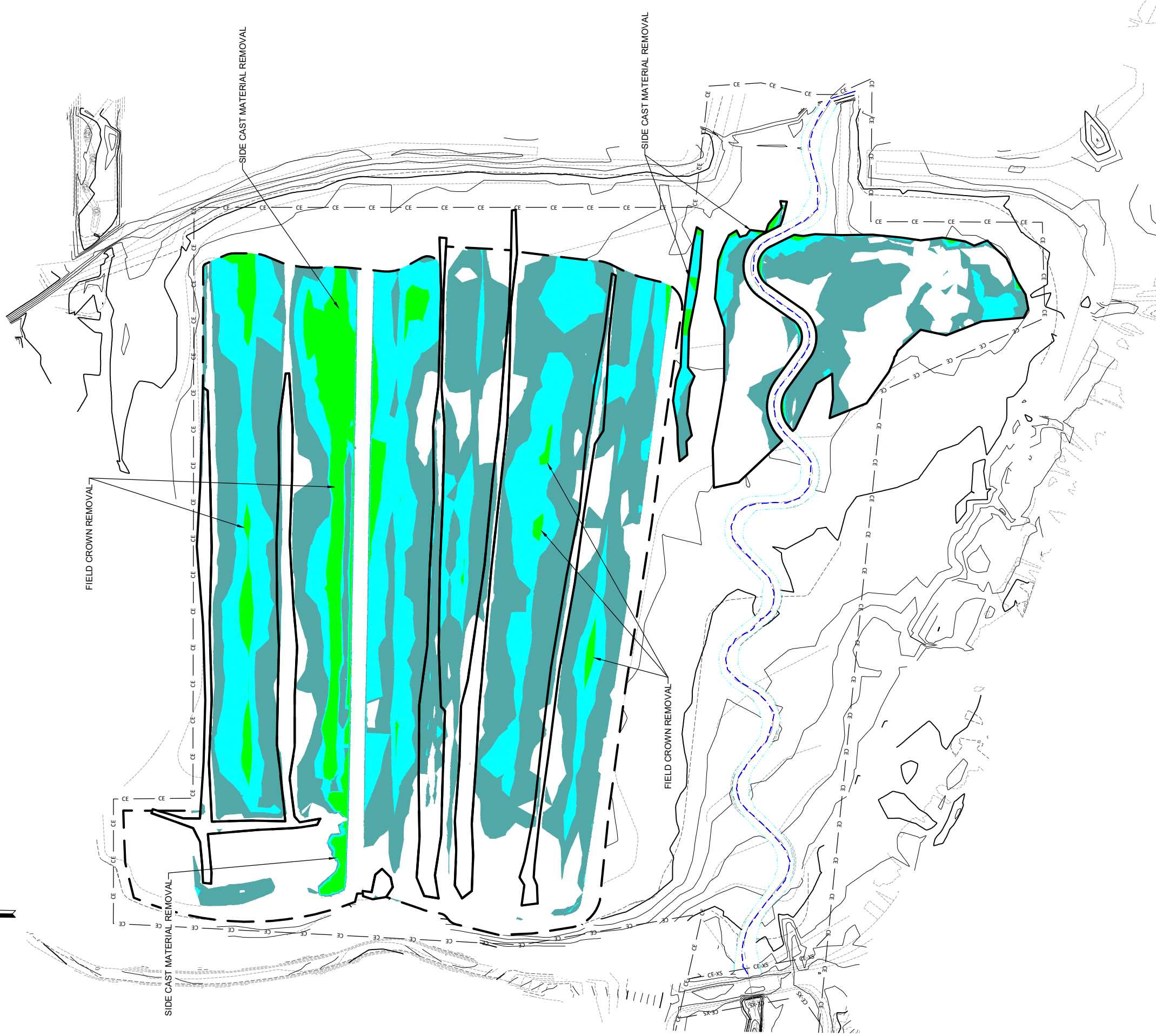
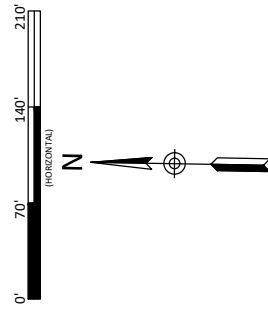
Date:	October 5, 2021
Job Number:	1005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	IDW

2.0

Sheet



WILDLANDS
LANDSCAPE ARCHITECTS
1678 Hays Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



LEGEND

- PROPOSED STREAM CENTERLINE
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- AS-BUILT MAJOR CONTOURS
- AS-BUILT MINOR CONTOURS
- AS-BUILT ALIGNMENT
- AS-BUILT CONSERVATION EASEMENT
- AS-BUILT BANKFULL
- WETLAND REHABILITATION
- WETLAND RE-ESTABLISHMENT

As-Built Cut Depths			
Number	Minimum Elevation (ft)	Maximum Elevation (ft)	Color
1	Greater than 1.0'	-1.97' - 0.84'	Green
2	-1.0	-0.5	Cyan
3	-0.5	0.0	Dark Green

Percent of Proposed Wetland Restoration (Includes Rehabilitation and Re-establishment')

1	-14%	6%
2	-29%	22%
3	-29%	38%

1) Total proposed wetland restoration acreage including rehabilitation and re-establishment is 14.2 Acres per the mitigation plan. Areas that were not graded and/or were filled are not included within the table above.

As-Built Cut Exceeding 12"		
Cut Type	Acres of Wetland Restoration (Includes Rehabilitation and Re-establishment)	Percent of Wetland Restoration (Includes Rehabilitation and Re-establishment)
Field Crown Removal	0.38	2.7%
Side Cast Removal	0.41	2.9%
Other	0.04	0.3%

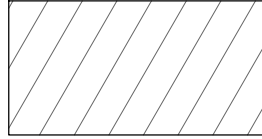
Date: October 5, 2021
 Job Number: 005-02171
 Project Engineer: EPN
 Drawn By: JF
 Checked By: JCK

Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina
 Wetland Grading Exhibit
 Wetland Grading

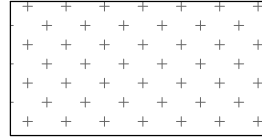


WILLDLANDS
 ENGINEERING
 167-B Haywood Road
 Asheville, NC 28806
 Tel: 704.332.3300
 Fax: 704.332.3306
 Firm License No. F-0831

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitoring\Baseline Monitoring (2021)\Plan\AB-02171 - Planting.dwg



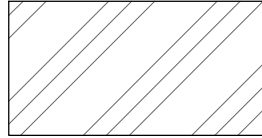
RIPARIAN ZONE				
Species	Common Name	Spacing	Min. Caliper	Percentage
Alnus serrulata	Tag Alder	12ft x 6ft	0.25"	5%
Carpinus caroliniana	American Hornbeam	12ft x 6ft	0.25"	5% 10%
Liriodendron tulipifera	Tulip Poplar	12ft x 6ft	0.25"	5% 9%
Platanus occidentalis	Sycamore	12ft x 6ft	0.25"	20%
Betula nigra	River Birch	12ft x 6ft	0.25"	15%
Fraxinus pennsylvanica	Green Ash	12ft x 6ft	0.25"	5%
Populus deltoides	Eastern Cottonwood	12ft x 6ft	0.25"	10% 9%
Diospyros virginiana	Persimmon	12ft x 6ft	0.25"	10% 9%
Quercus nigra	Water Oak	12ft x 6ft	0.25"	5%
Quercus phellos	Willow Oak	12ft x 6ft	0.25"	10% 9%
Quercus michauxii	Swamp Chestnut Oak	12ft x 6ft	0.25"	10% 9%



WETLAND PLANTING ZONE				
Species	Common Name	Spacing	Min. Caliper	Percentage
Platanus occidentalis	Sycamore	12ft x 12ft	0.25"	15% 17%
Quercus phellos	Willow Oak	12ft x 12ft	0.25"	15% 17%
Betula nigra	River Birch	12ft x 12ft	0.25"	15% 17%
Quercus michauxii	Swamp Chestnut Oak	12ft x 12ft	0.25"	15% 17%
Sambucus nigra	Elderberry	12ft x 12ft	0.25"	10% 17%
Alnus serrulata	Tag Alder	12ft x 12ft	0.25"	10%
Cephalanthus occidentalis L.	Common Buttonbush	12ft x 12ft	0.25"	10% 15%
Rosa palustris	Swamp Rose	12ft x 12ft	0.25"	10%

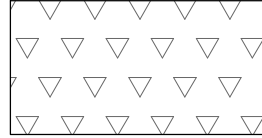
- NOTES:
1. WETLAND ZONE SPACING CHANGED TO 12' X 6' TO ENCOURAGE HABITAT ESTABLISHMENT.
 2. SPECIES COMPOSITION AND PERCENTAGES REVISED ACCORDING TO AVAILABILITY.

- NOTE:
1. SPECIES COMPOSITION AND PERCENTAGES REVISED ACCORDING TO AVAILABILITY.



Stabilization Seeding		
Scientific Name	Common Name	lb/acre
Festuca arundinacea	Tall Fescue	80

- NOTE:
1. "STABILIZATION SEEDING" IS FOR AREAS OF DISTURBANCE OUTSIDE CONSERVATION EASEMENT.



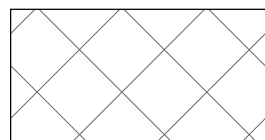
UNDERSTORY ZONE				
Species	Common Name	Spacing	Min. Caliper	Percentage
Carpinus caroliniana	American Hornbeam	12ft x 12ft	0.25"	15% 18%
Aronia arbutifolia	Red Chokeberry	12ft x 12ft	0.25"	15% 18%
Ilex verticillata	Winter Berry	12ft x 12ft	0.25"	15%
Lindera benzoin	Spicebush	12ft x 12ft	0.25"	15% 18%
Fagus grandifolia	American Beech	12ft x 12ft	0.25"	10% 13%
Magnolia acuminata	Cucumber tree	12ft x 12ft	0.25"	10%
Hammamelis virginiana	Witch Hazel	12ft x 12ft	0.25"	10% 13%
Corylus americana	American Hazelnut	12ft x 12ft	0.25"	5%
Asima triloba	Pawpaw	12ft x 12ft	0.25"	5% 8%
Morus rubra	Red Mulberry	12ft x 12ft	0.25"	12%

- NOTES:
1. SPECIES COMPOSITION AND PERCENTAGES REVISED ACCORDING TO AVAILABILITY.

WYANT CREEK STREAM BANK PLANTING ZONE - Livestakes				
Species	Common Name	Indiv. Spacing	Min. Caliper	Percentage
Salix nigra	Black Willow	3-5 ft	0.5"	10%
Cornus amomum	Silky Dogwood	3-5 ft	0.5"	20%
Cephalanthus occidentalis L.	Common Buttonbush	3-5 ft	0.5"	15%
Salix sericea	Silky Willow	3-5 ft	0.5"	25%
Physocarpus opulifolius	Ninebark	3-5 ft	0.5"	15%
Sambucus canadensis	Elderberry	3-5 ft	0.5"	15%

TRIBUTARY STREAM BANK PLANTING ZONE - Live Stakes				
Species	Common Name	Indiv. Spacing	Min. Caliper	Percentage
Cephalanthus occidentalis L.	Common Buttonbush	3-5 ft	0.5"	20%
Salix sericea	Silky Willow	3-5 ft	0.5"	40%
Physocarpus opulifolius	Ninebark	3-5 ft	0.5"	20%
Sambucus canadensis	Elderberry	3-5 ft	0.5"	20%

STREAM BANK ZONE - Herbaceous Plugs			
Species	Common Name	Indiv. Spacing	Percentage
Juncus effusus	Common Rush	4 ft	40%
Carex alata	Broadwing Sedge	4 ft	20%
Carex lurida	Lurid Sedge	4 ft	15%
Scirpus cyperinus	Woolgrass	4 ft	15%
Carex crinita	Fringed Sedge	4 ft	10%

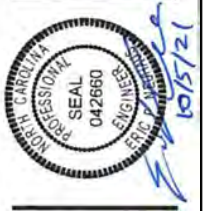


NOT PLANTED

Permanent Riparian Seeding				
Pure Live Seed (22 lbs/acre mix)				
Approved Date	Species Name	Common Name	Stratum	Density (lbs/acre)
All Year	Schizachyrium scoparium	Little Bluestem	Herb	4.0
All Year	Rudbeckia hirta	Blackeyed Susan	Herb	1.0
All Year	Carex vulpinoidea	Fox Sedge	Herb	1.0
All Year	Panicum clandestinum	Deertongue	Herb	3.0
All Year	Elymus virginicus	Virginia Wild Rye	Herb	3.0
All Year	Sorghastrum nutans	Indiangrass	Herb	3.0
All Year	Coreopsis lanceolata	Lanceleaf Coreopsis	Herb	1.0
All Year	Bidens aristosa	Bur-Marigold	Herb	1.0
All Year	Panicum rigidulum	Redtop Panicgrass	Herb	1.0
All Year	Helianthus angustifolia	Narrowleaf Sunflower	Herb	1.0
All Year	Coreopsis tinctoria	Plains Coreopsis	Herb	1.0
All Year	Panicum virgatum	Switchgrass	Herb	2.0

- NOTE:
1. PERMANENT RIPARIAN SEEDING IN ALL DISTURBED AREAS WITHIN CONSERVATION EASEMENT

TEMPORARY SEEDING		
APPROVED DATE	TYPE	PLANTING RATE (lbs/acre)
Jan 1 – May 1	Rye Grain (<i>Secale cereale</i>)	120
	Ground Agricultural Limestone	2,000
	10-10-10 Fertilizer	750
	Straw Mulch	4,000
May 1 – Aug 15	German Millet (<i>Setaria italica</i>)	40
	Ground Agricultural Limestone	2,000
	10-10-10 Fertilizer	750
	Straw Mulch	4,000
Aug 15 – Dec 31	Rye Grain (<i>Secale cereale</i>)	120
	Ground Agricultural Limestone	2,000
	10-10-10 Fertilizer	1,000
	Straw Mulch	4,000



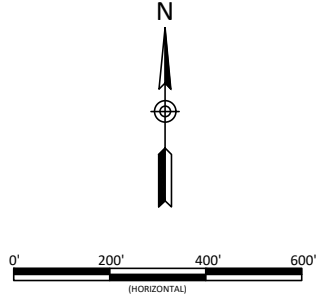
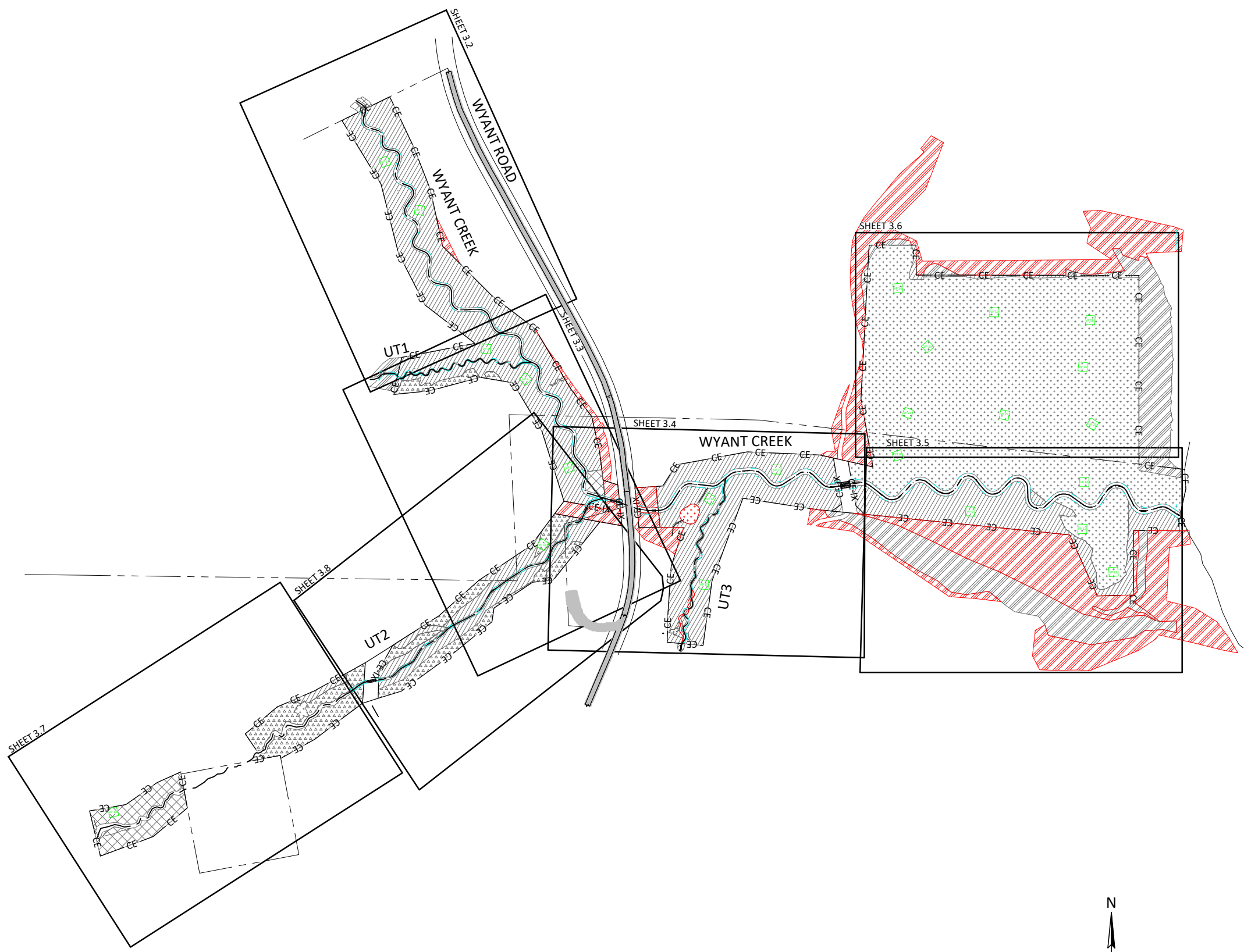
Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Plant List
Planting

Revisions:
7/21/20 per Erosion and Sediment Control Comments

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: IDW

3.0
Sheet

October 5, 2021
X:\shared\Projects\1005-02171 - Wyant Lands Mitigation Site Monitoring Baseline Monitoring\2021\Plans\AB-02171 - Planting Overview.dwg



Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JDW

Revisions:

3.1

Sheet

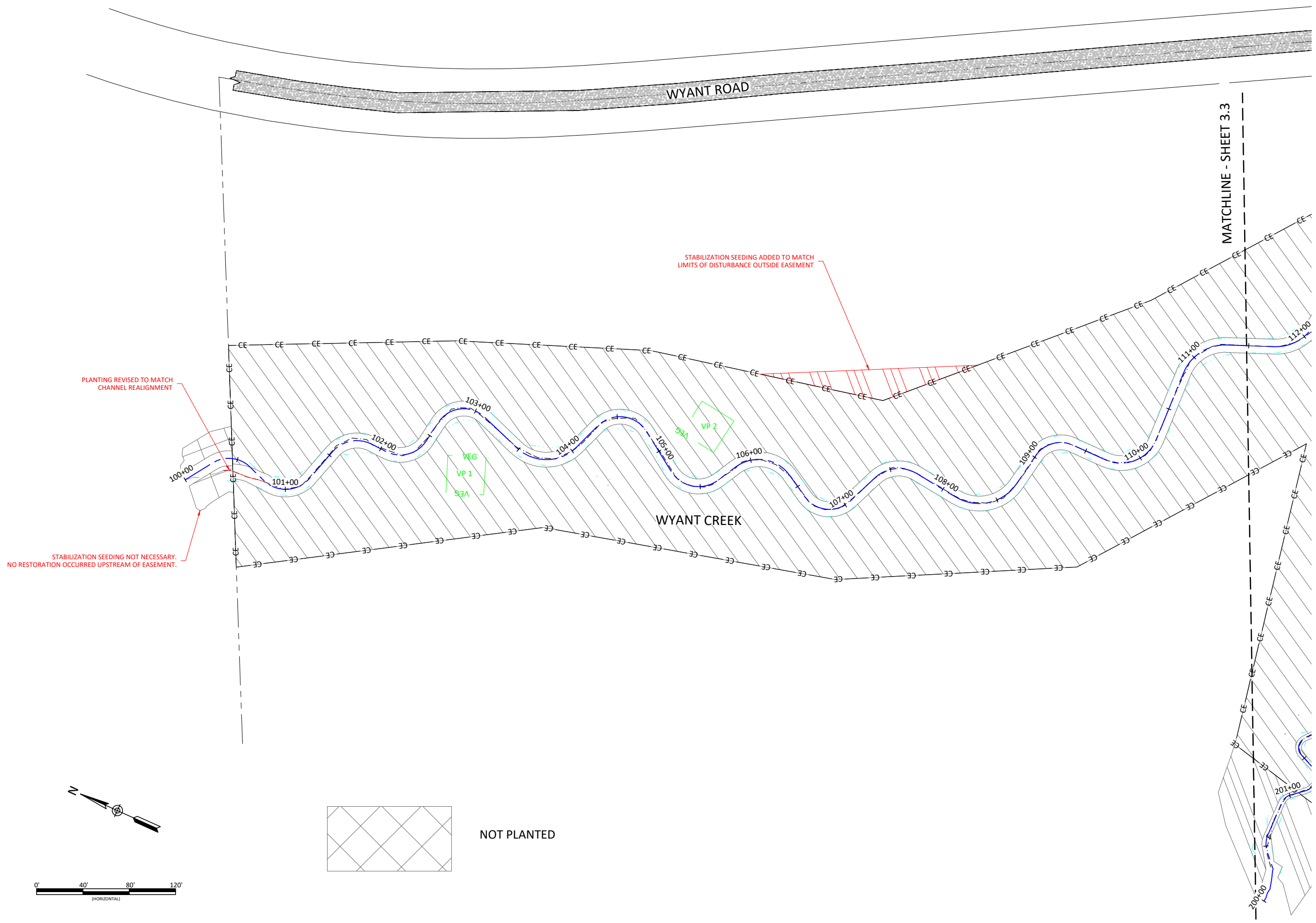
Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Planting Overview
Planting



WILDLANDS
LANDSCAPE ARCHITECTS
1678 Hays Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Planting.dwg



WILDLANDS
CONSULTANTS
1678 Hurd Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Planting Plan
Planting

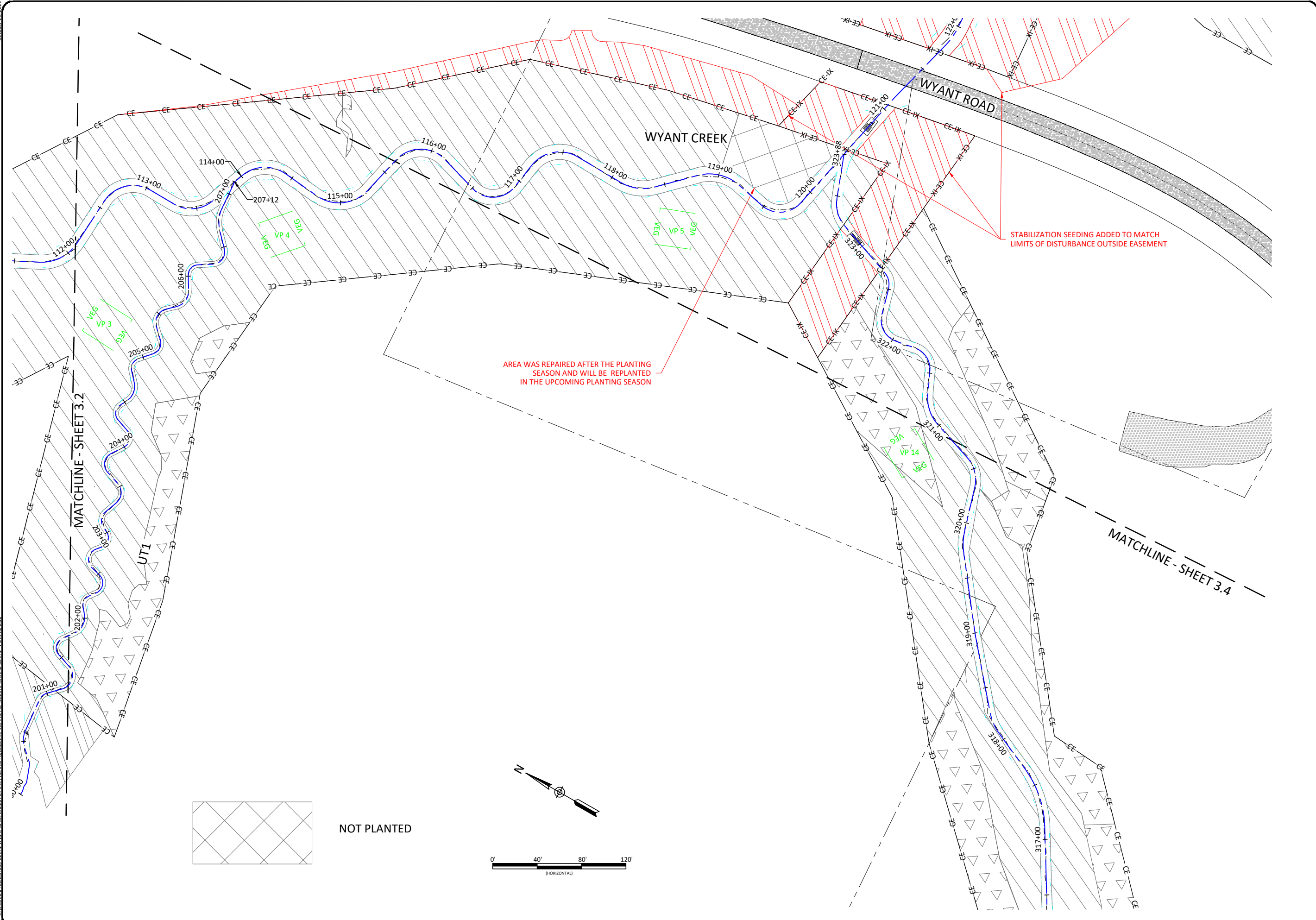
Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JDW

3.2

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline - Monitor\2021\Plan\AB-02171 - Planting.dwg



WILDLANDS
1678 HERSH ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

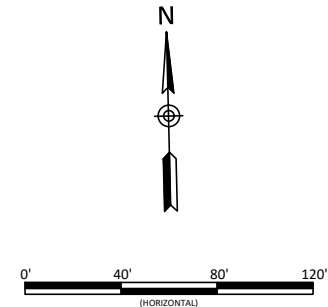
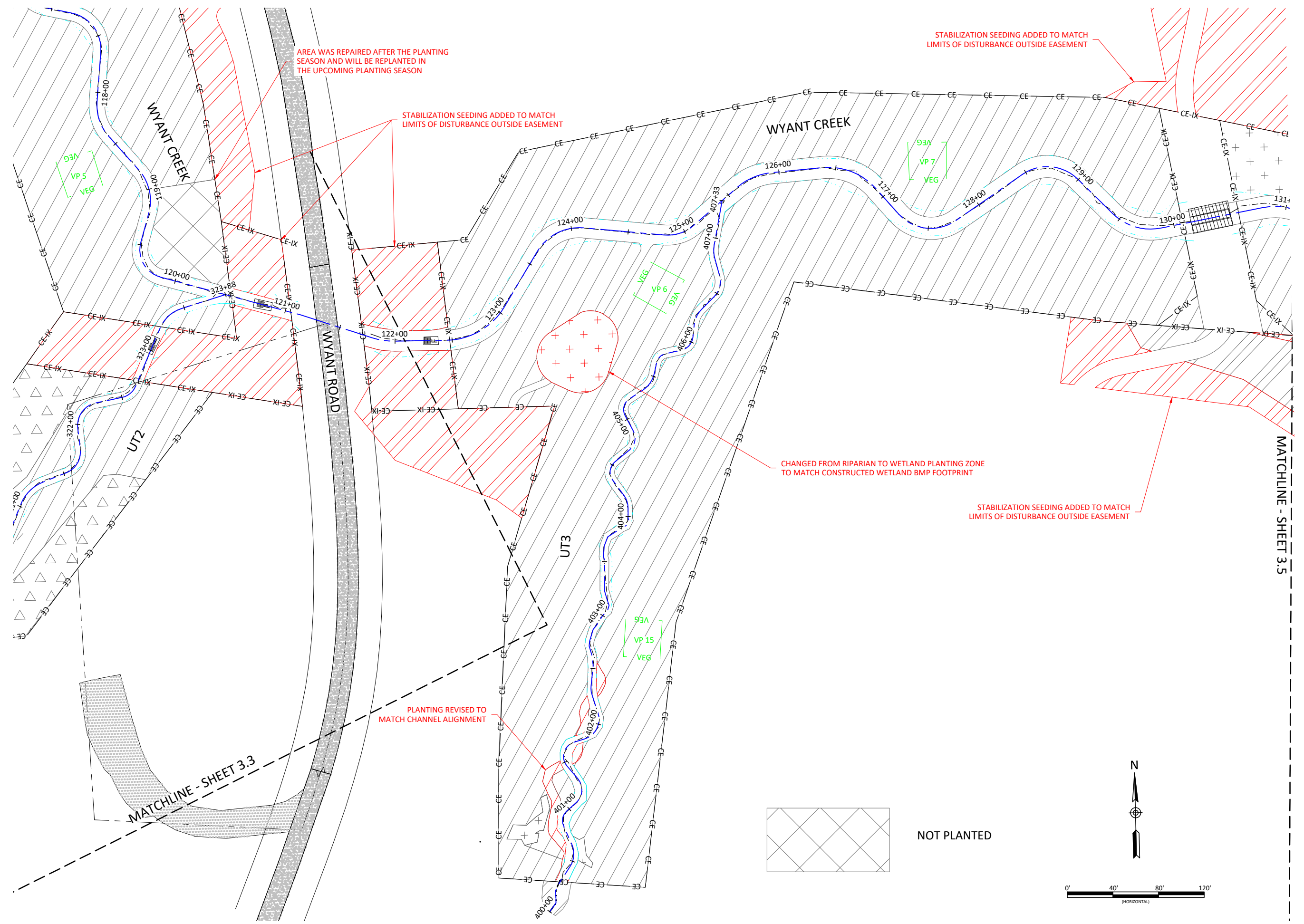
PROFESSIONAL SEAL
042660
10/15/21

Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Planting Plan
Planting

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	JP
Checked By:	IDW

3.3
Sheet

October 11, 2021
X:\shared\Projects\005-02171 - Wyant Lands Mitigation Site\Monitoring\Baseline Monitoring\2021\Plan\AB-02171 - Planting.dwg



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HARRIS Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Planting Plan
Planting

Revisions:

No.	Description	Date

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JDW

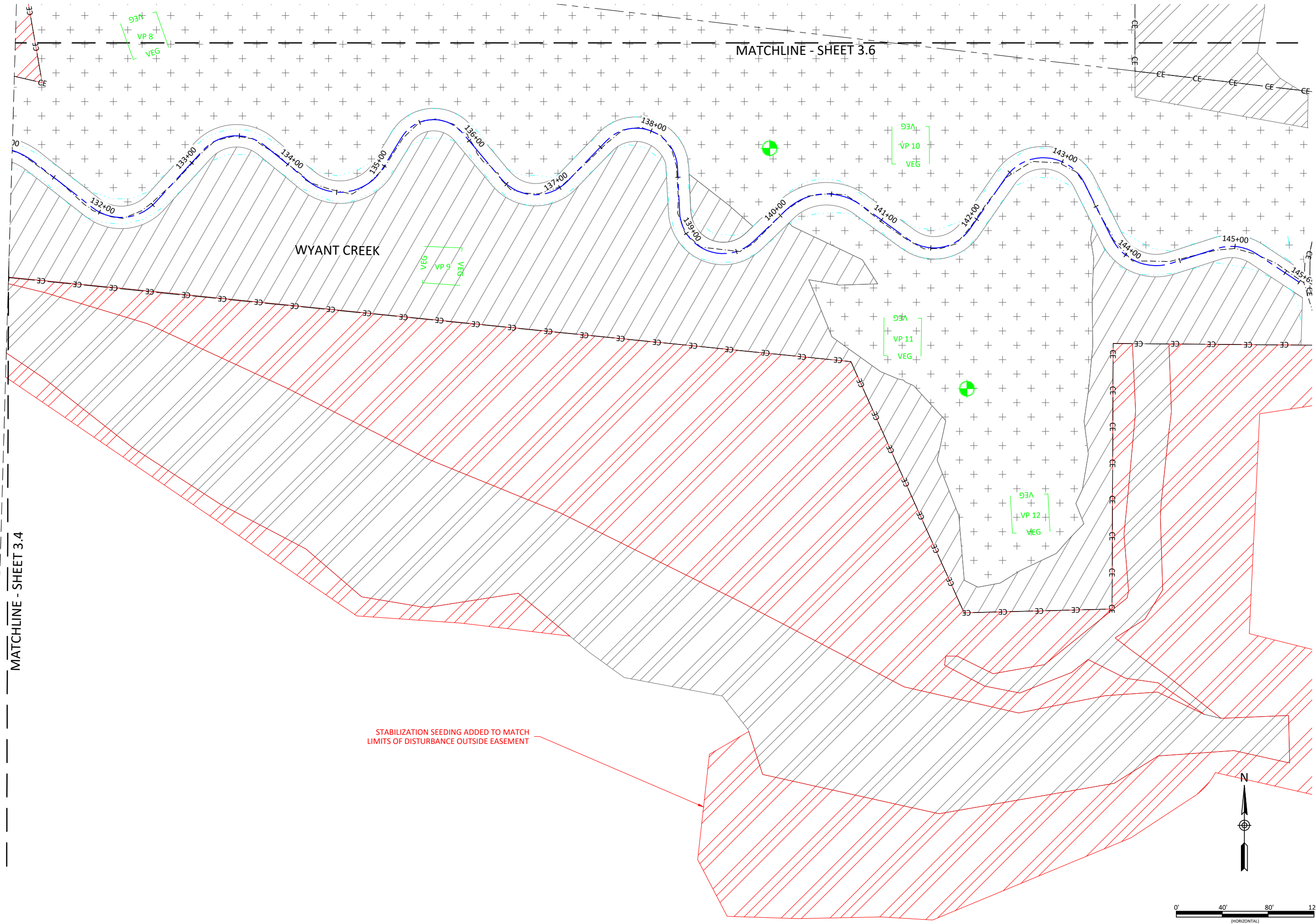
3.4

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Planting.dwg

MATCHLINE - SHEET 3.4

MATCHLINE - SHEET 3.6



WYANT CREEK

STABILIZATION SEEDING ADDED TO MATCH LIMITS OF DISTURBANCE OUTSIDE EASEMENT

Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Planting Plan
Planting

Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JDW

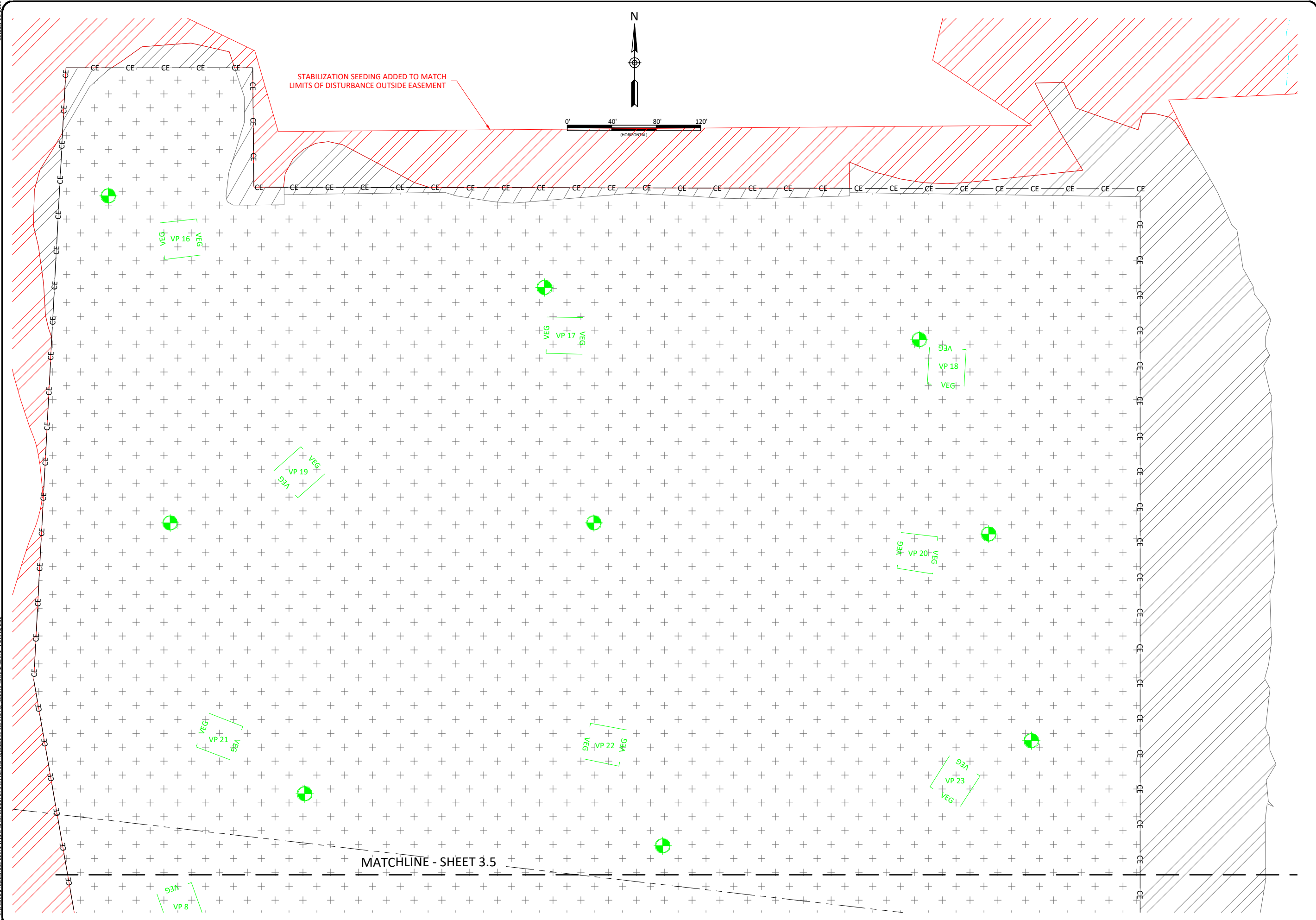
3.5

Sheet



WILDLANDS
LAND RECONSTRUCTION
1678 Highway 2806
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring (2021)\Plan\AB-02171 - Planting.dwg



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina
Planting Plan
Planting

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	EPN
Drawn By:	October 5, 2021
Checked By:	IDW

Revisions:

10/5/21

3.6
Sheet

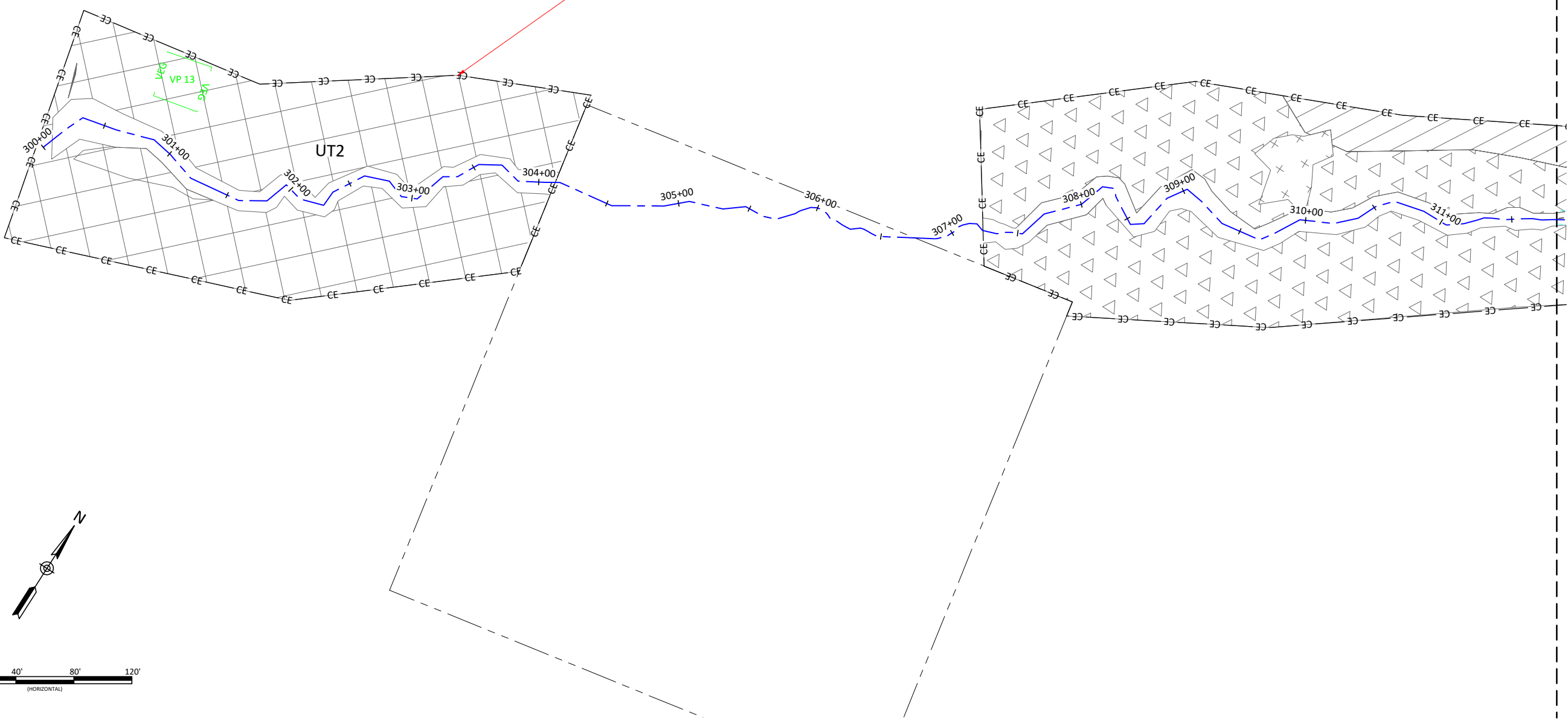
WILDLANDS
LAND REFORM
1678 Haverhill Road
Asheville, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831

PROFESSIONAL SEAL
042660
ENGINEER
10/5/21

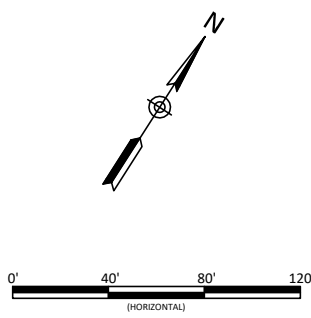
October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Planting.dwg



NOT PLANTED



MATCHLINE - SHEET 3.8



WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERRING ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

Planting Plan
Planting

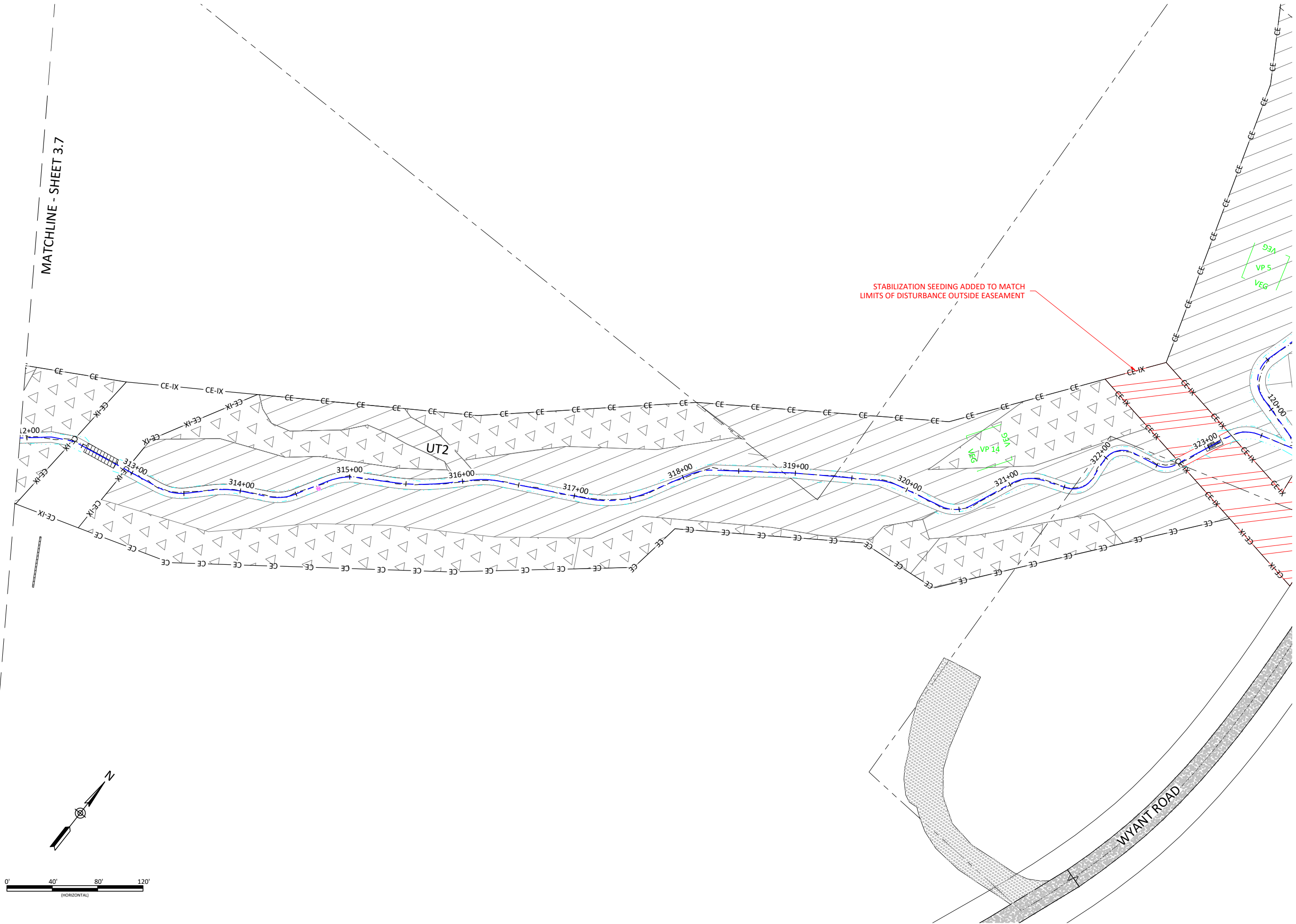
Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EFN
Drawn By: JP
Checked By: JDW

3.7

Sheet

October 11, 2021
X:\shared\projects\005-02171 - Wyant Lands Mitigation Site\Monitor\Baseline_Monitoring\2021\Plan\AB-02171 - Planting.dwg



MATCHLINE - SHEET 3.7

STABILIZATION SEEDING ADDED TO MATCH
LIMITS OF DISTURBANCE OUTSIDE EASEMENT

UT2

WYANT ROAD

WILDLANDS
LANDSCAPE ARCHITECTURE
1678 HERRING ROAD
ASHEVILLE, NC 28806
Tel: 865.207.8835
Fax: 704.332.3306
Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
Lincoln County, North Carolina

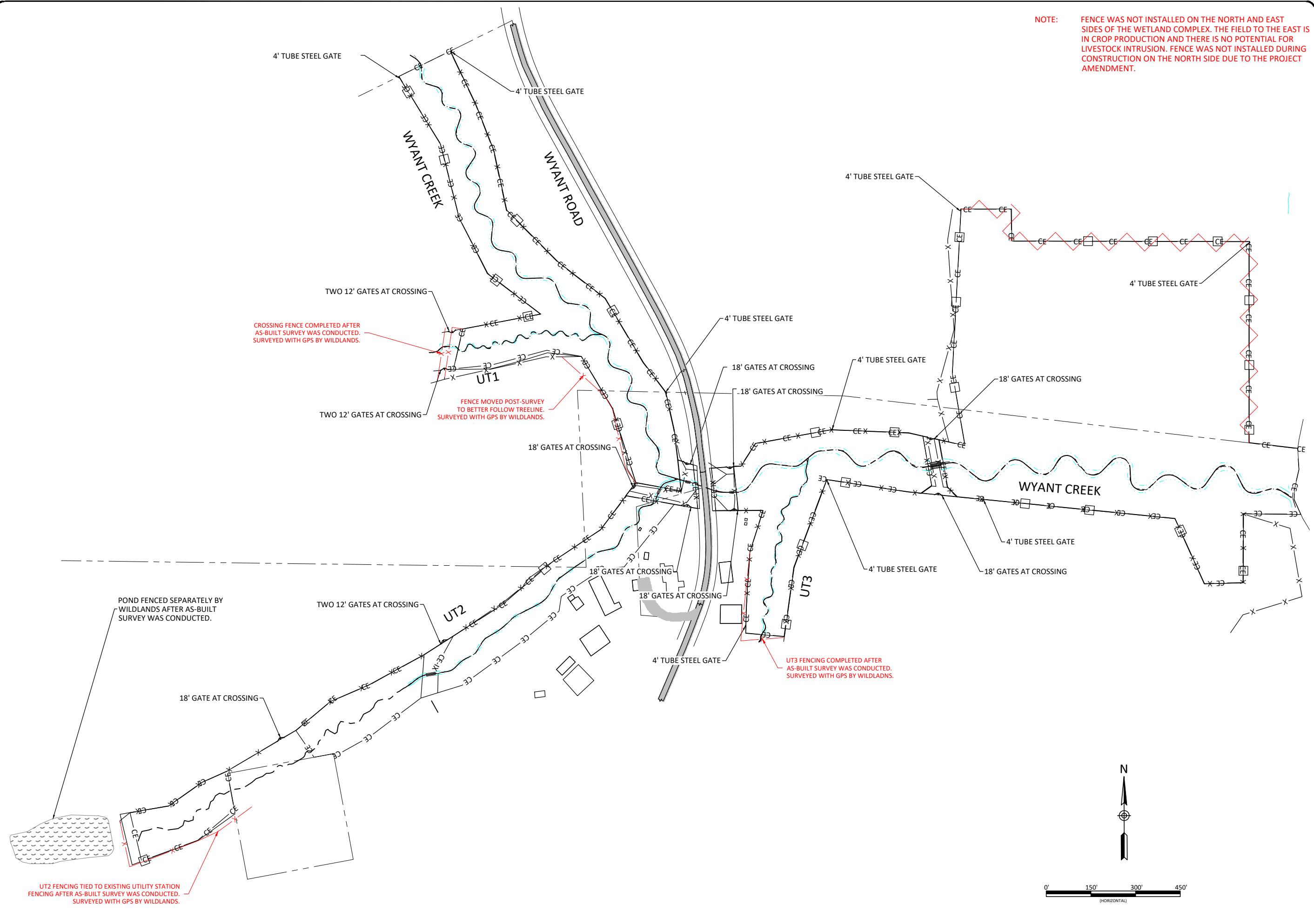
Planting Plan
Planting

Revisions:

Date: October 5, 2021
Job Number: 005-02171
Project Engineer: EPN
Drawn By: JP
Checked By: JDW

3.8

Sheet



NOTE: FENCE WAS NOT INSTALLED ON THE NORTH AND EAST SIDES OF THE WETLAND COMPLEX. THE FIELD TO THE EAST IS IN CROP PRODUCTION AND THERE IS NO POTENTIAL FOR LIVESTOCK INTRUSION. FENCE WAS NOT INSTALLED DURING CONSTRUCTION ON THE NORTH SIDE DUE TO THE PROJECT AMENDMENT.

CROSSING FENCE COMPLETED AFTER AS-BUILT SURVEY WAS CONDUCTED. SURVEYED WITH GPS BY WILDLANDS.

FENCE MOVED POST-SURVEY TO BETTER FOLLOW TREELINE. SURVEYED WITH GPS BY WILDLANDS.

UT3 FENCING COMPLETED AFTER AS-BUILT SURVEY WAS CONDUCTED. SURVEYED WITH GPS BY WILDLANDS.

UT2 FENCING TIED TO EXISTING UTILITY STATION FENCING AFTER AS-BUILT SURVEY WAS CONDUCTED. SURVEYED WITH GPS BY WILDLANDS.

POND FENCED SEPARATELY BY WILDLANDS AFTER AS-BUILT SURVEY WAS CONDUCTED.

WILDLANDS
 LAND REFORM
 1679 Highway Road
 Asheville, NC 28806
 Tel: 865.207.8835
 Fax: 704.332.3306
 Firm License No. F-0831



Wyant Lands Mitigation Site Record Drawings
 Lincoln County, North Carolina

Fencing Overview
 Fencing

Revisions:

8/14/2020 - FENCE REVISED PER FIELD CONDITIONS

Date:	October 5, 2021
Job Number:	005-02171
Project Engineer:	ETN
Drawn By:	JP
Checked By:	IDW

4.0