

Carpenter Bottom Mitigation Site Record Drawings

Gaston County, North Carolina

for

NCDEQ

Division of Mitigation Services



Vicinity Map
Not to Scale



RECORD DRAWINGS
APRIL 1, 2022

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Project Directory

Engineering:
 Wildlands Engineering, Inc
 License No. F-0831
 167-B Haywood Rd
 Asheville, NC 28806
 Eric Neuhaus, Project Engineer
 865-207-8835

Owner:
 NCDEQ
 Division of Mitigation Services
 1652 Mail Service Center
 Raleigh, NC 27699
 Matthew Reid
 828-231-7912

DMS Project No. 100090
 Catawba River Basin 03050102

Surveying:
 Turner Land Surveying
 P.O. Box 148
 Swannanoa, NC 28778
 Elisabeth G. Turner, PLS
 919-827-0745

USACE Action ID
 No. SAW-2018-02062
 NCDWR #20190049



Carpenter Bottom Mitigation Site Record Drawings
 Gaston County, North Carolina

Title Sheet

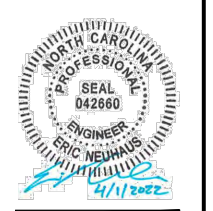
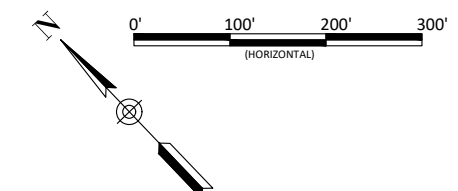
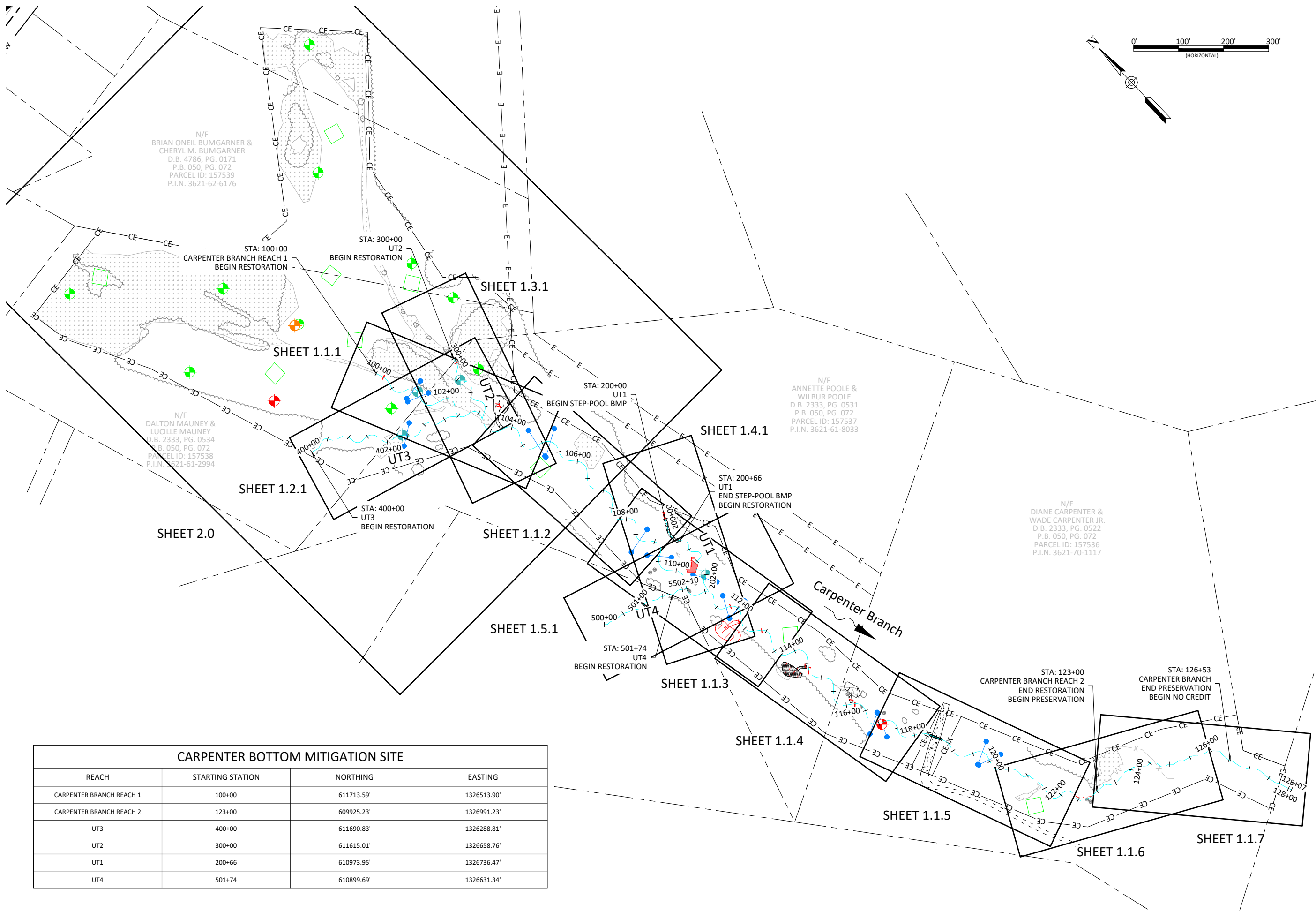
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Date: 4.01.2022
 Job Number: 005-02179
 Project Engineer: EFN
 Drawn By: ABT
 Checked By:

0.1

Sheet

May 19, 2022
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Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

Project Overview

CARPENTER BOTTOM MITIGATION SITE			
REACH	STARTING STATION	NORTHING	EASTING
CARPENTER BRANCH REACH 1	100+00	611713.59'	1326513.90'
CARPENTER BRANCH REACH 2	123+00	609925.23'	1326991.23'
UT3	400+00	611690.83'	1326288.81'
UT2	300+00	611615.01'	1326658.76'
UT1	200+66	610973.95'	1326736.47'
UT4	501+74	610899.69'	1326631.34'

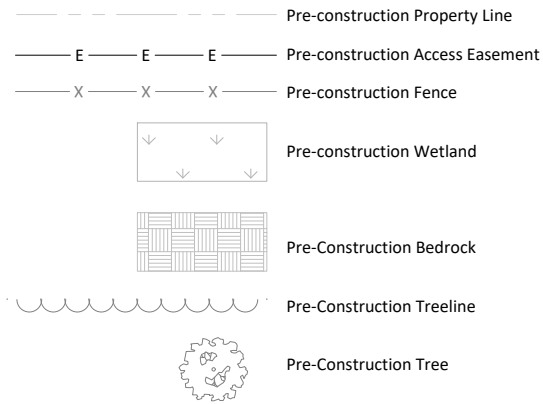
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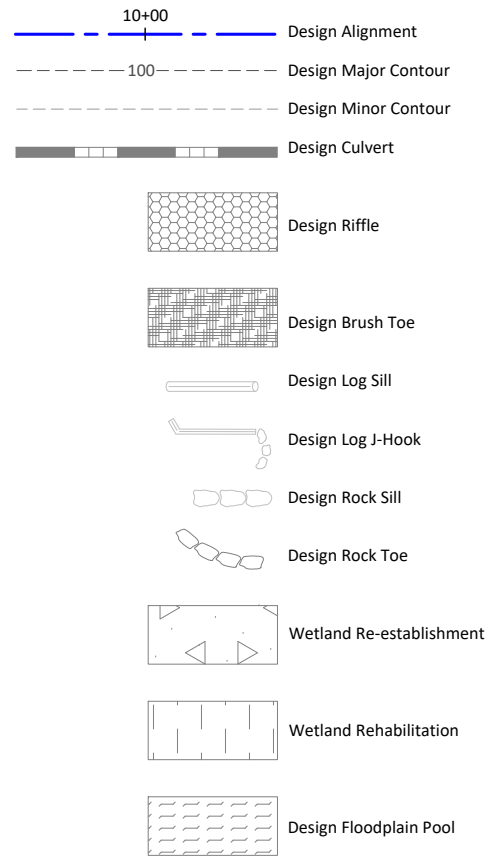
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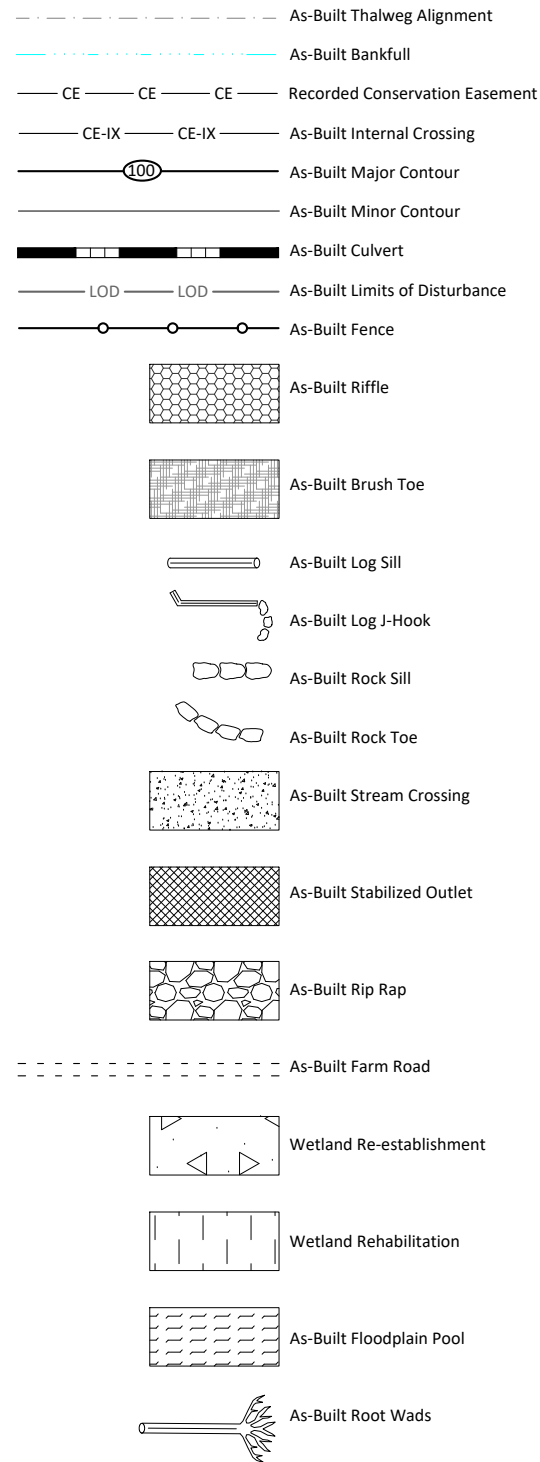
Pre-Construction Features



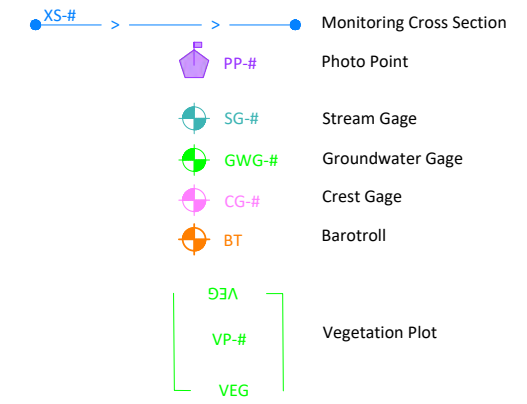
Design Features



As-Built Features



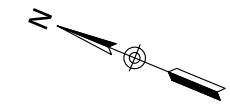
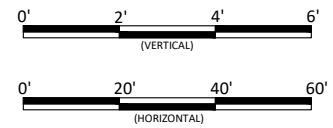
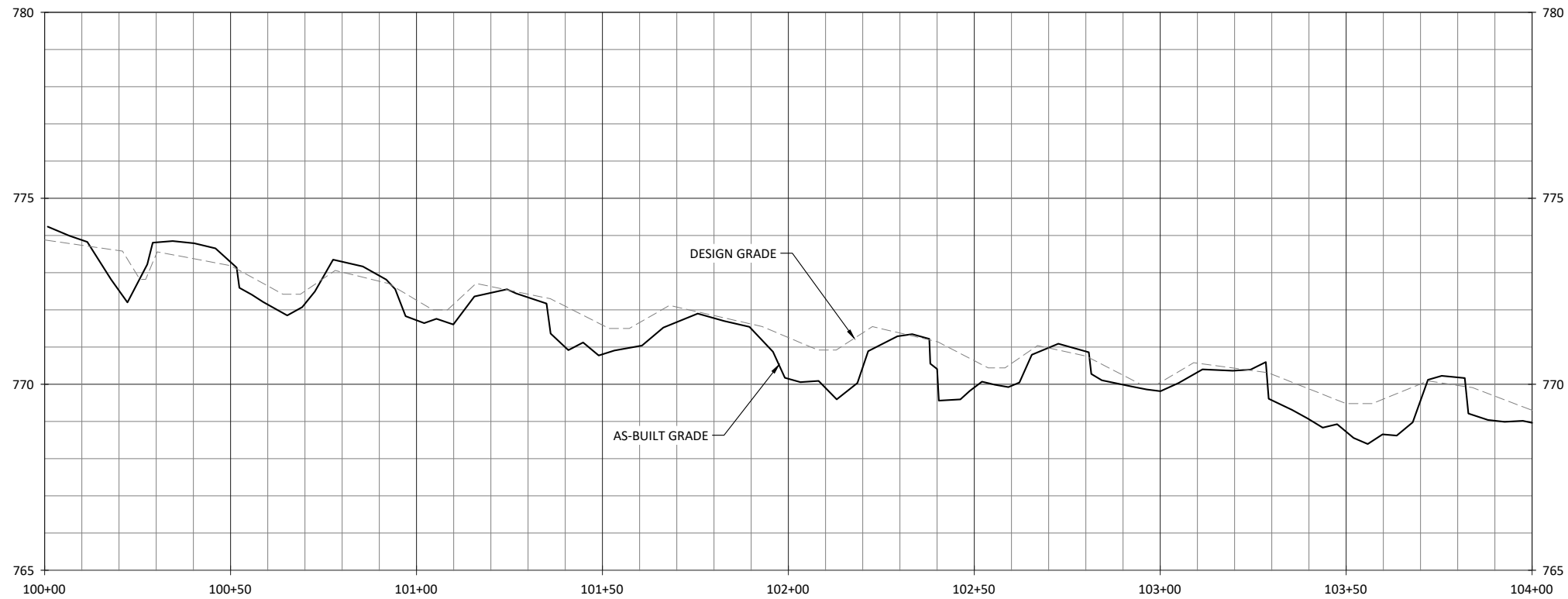
Monitoring Features



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

Revisions:

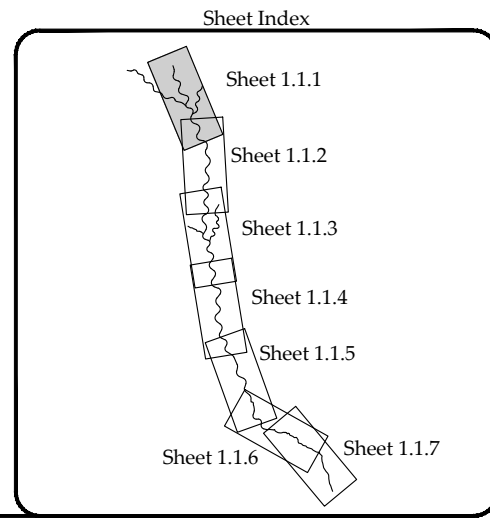
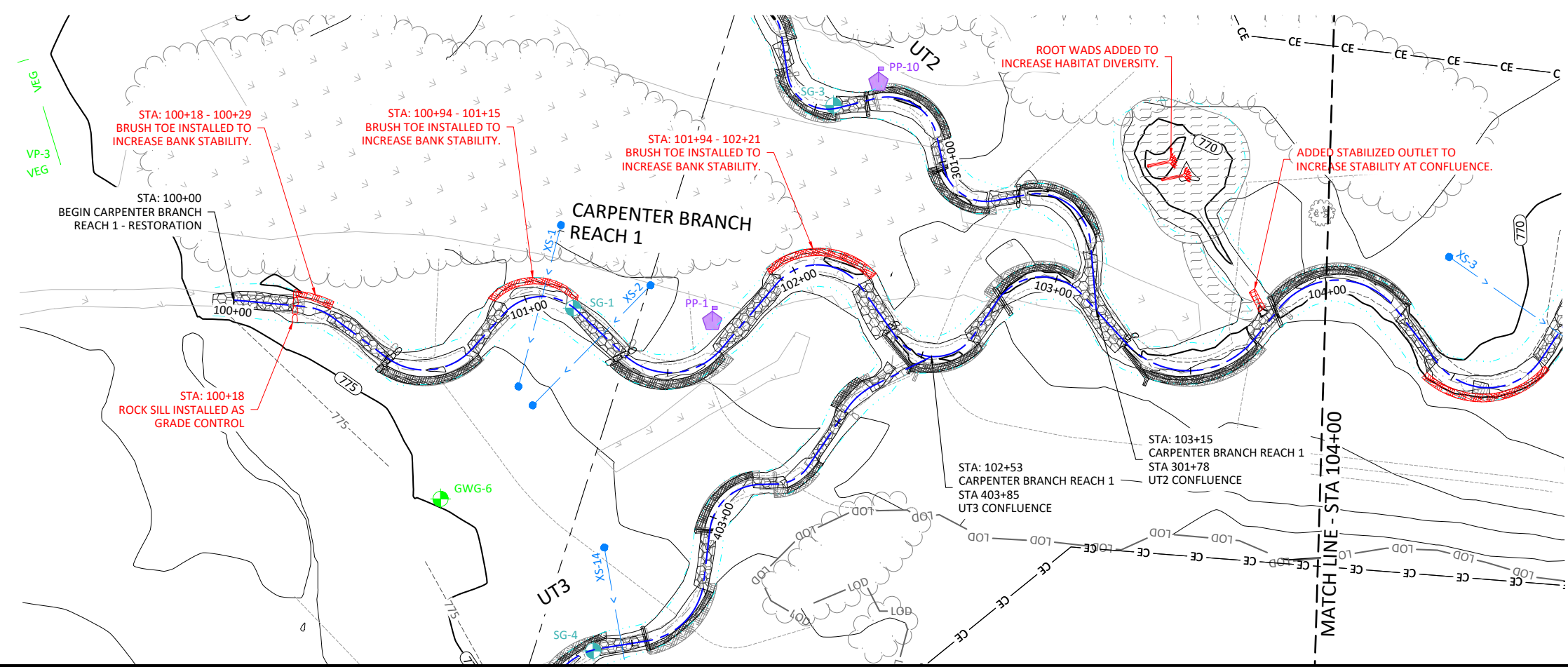
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Job Number:	005-02179
Project Engineer:	EJN
Drawn By:	ABT
Checked By:	



Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

Carpenter Branch
Stream Plan and Profile

- NOTES:**
1. DEVIATIONS FROM THE DESIGN WILL BE SHOWN IN RED.
 2. AS-BUILT INFORMATION FOR UT2 IS ADDRESSED ON SHEET 1.3.1.
 3. AS-BUILT INFORMATION FOR UT3 IS ADDRESSED ON SHEET 1.2.1.

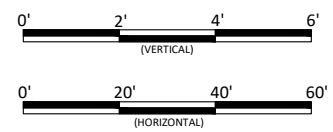
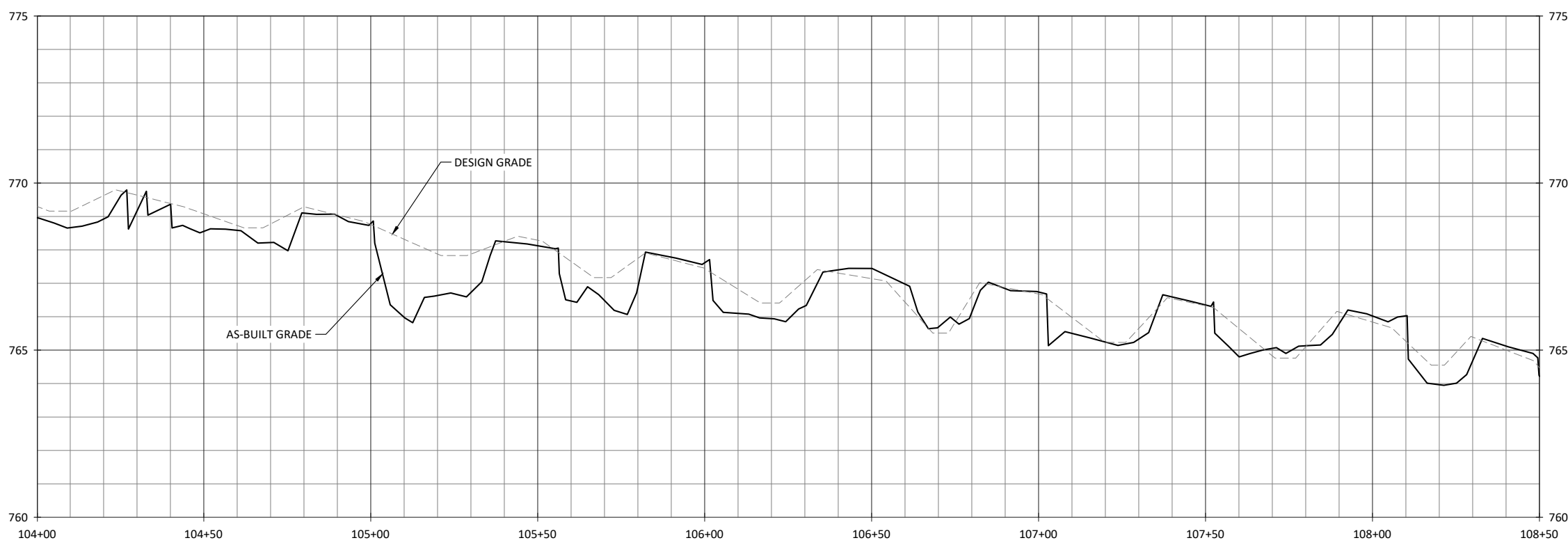


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Drawn By: ABT
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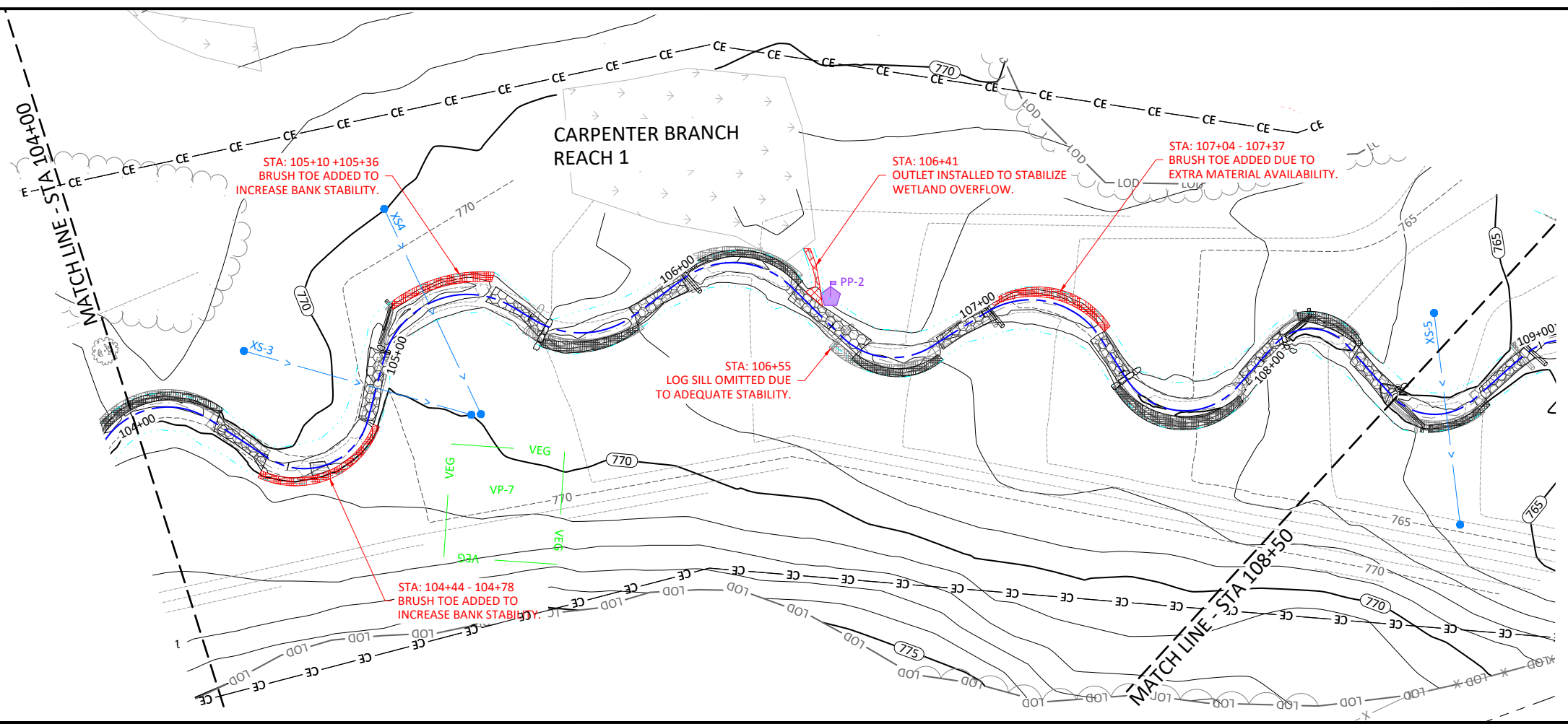
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May 19, 2022

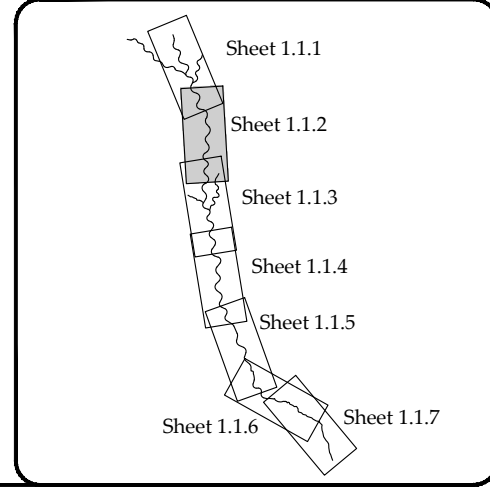


Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina
Carpenter Branch
Stream Plan and Profile

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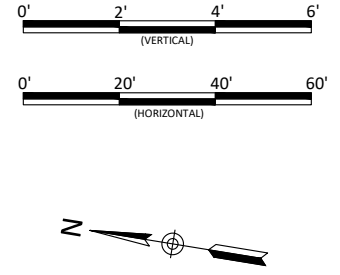
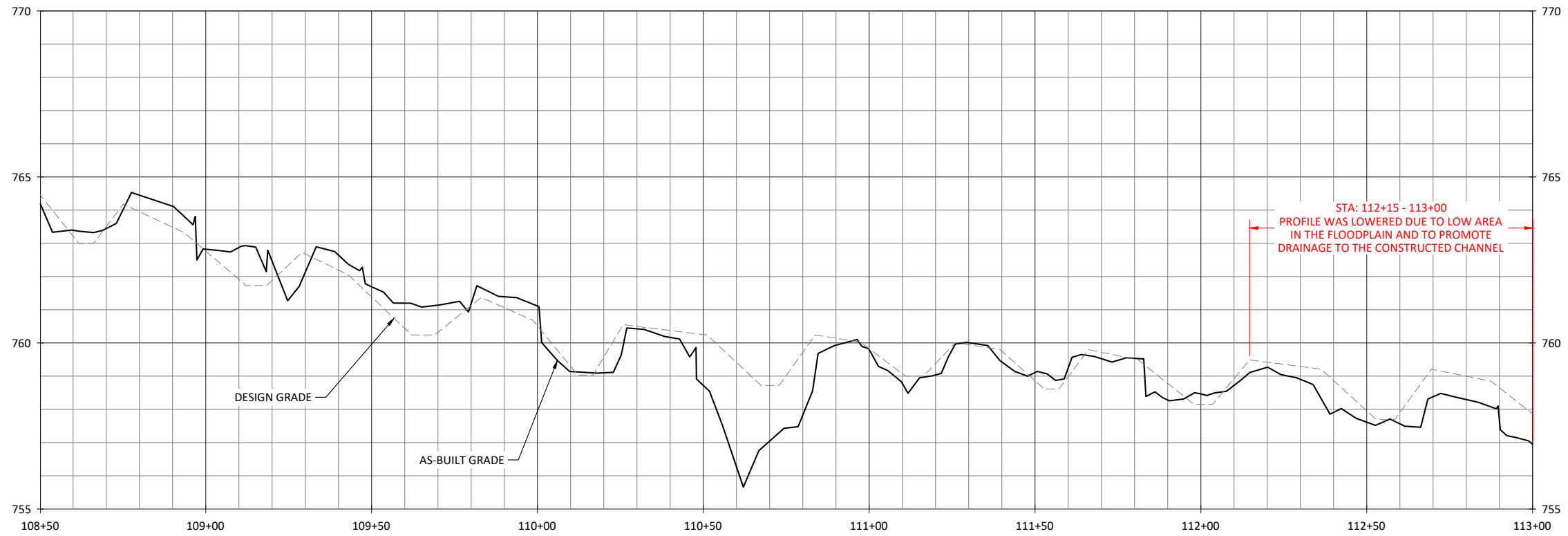
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Project Engineer: EFN
Drawn By: ABT
Checked By: ABT

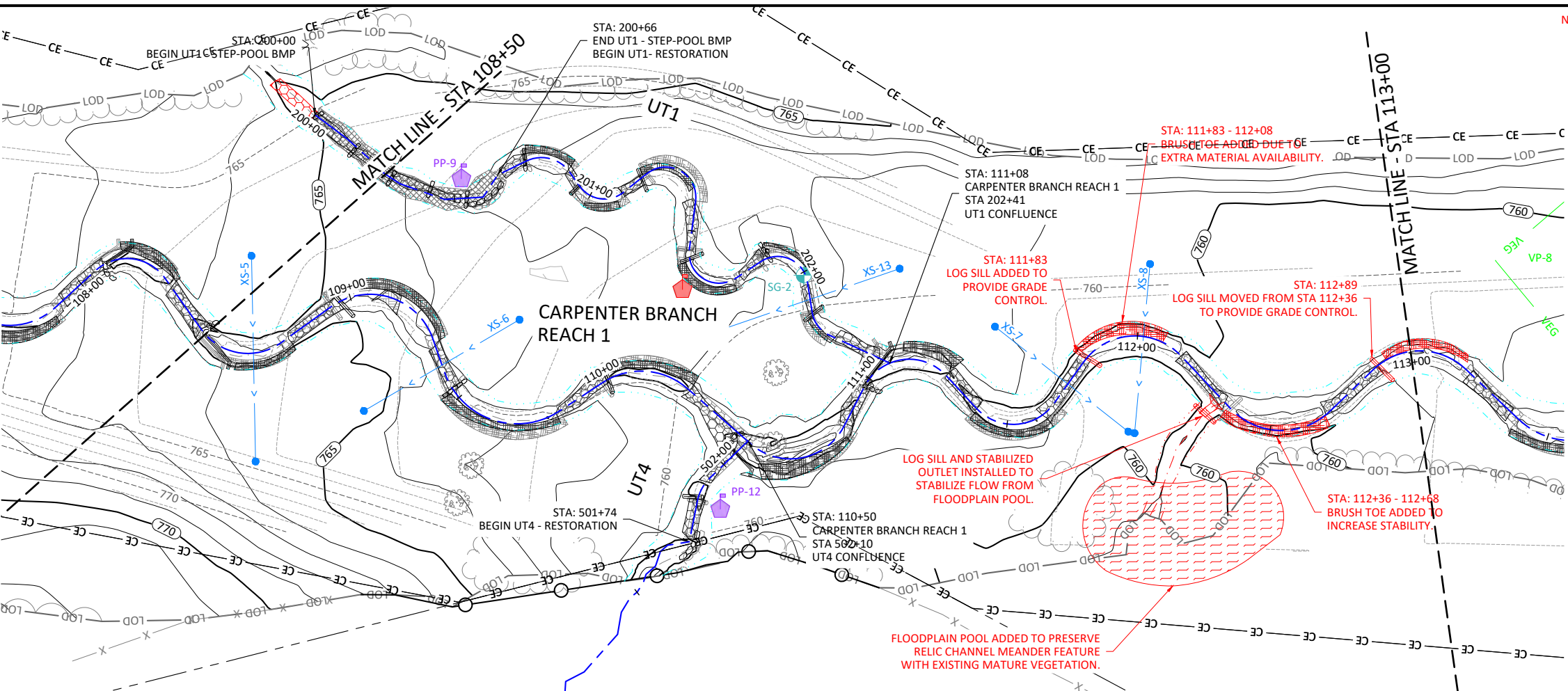
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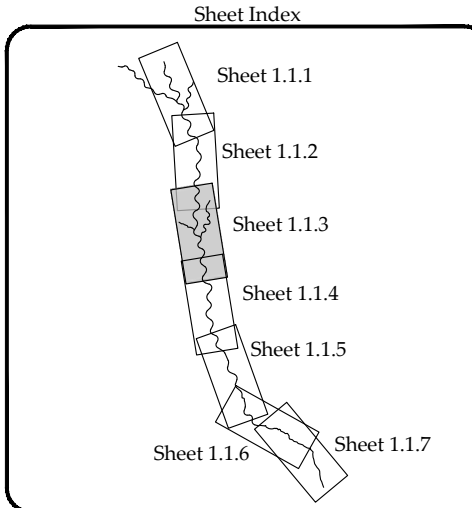
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Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina
Carpenter Branch
Stream Plan and Profile

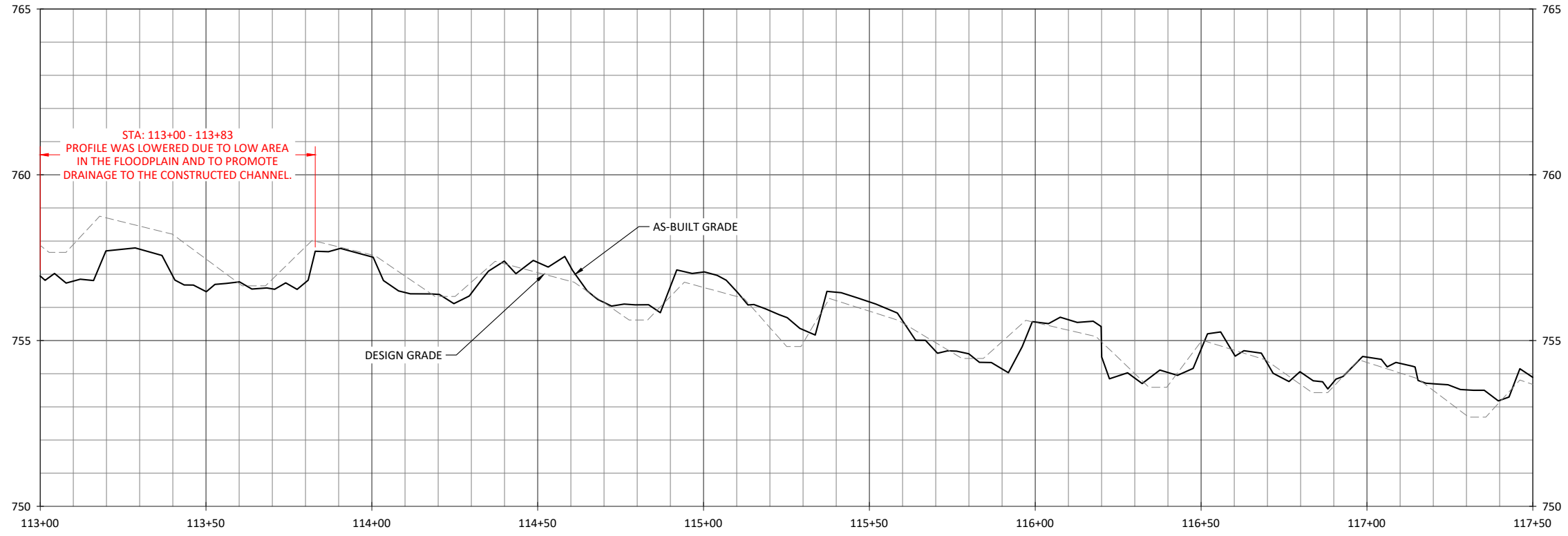


- NOTES:**
1. DEVIATIONS FROM THE DESIGN WILL BE SHOWN IN RED.
 2. AS-BUILT INFORMATION FOR UT1 IS ADDRESSED ON SHEET 1.4.1.
 3. AS-BUILT INFORMATION FOR UT4 IS ADDRESSED ON SHEET 1.5.1.



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Job Number:	005-02179
Project Engineer:	EJN
Drawn By:	ABT
Checked By:	

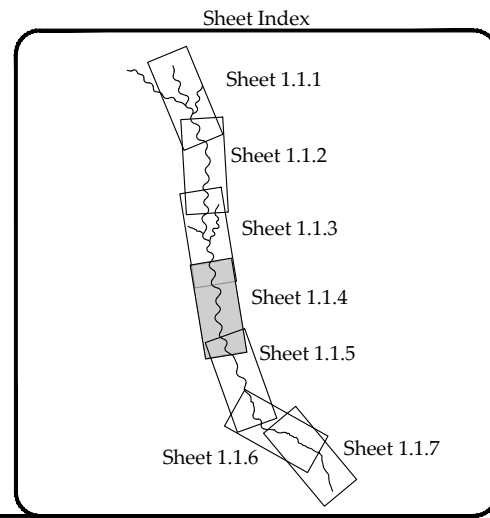
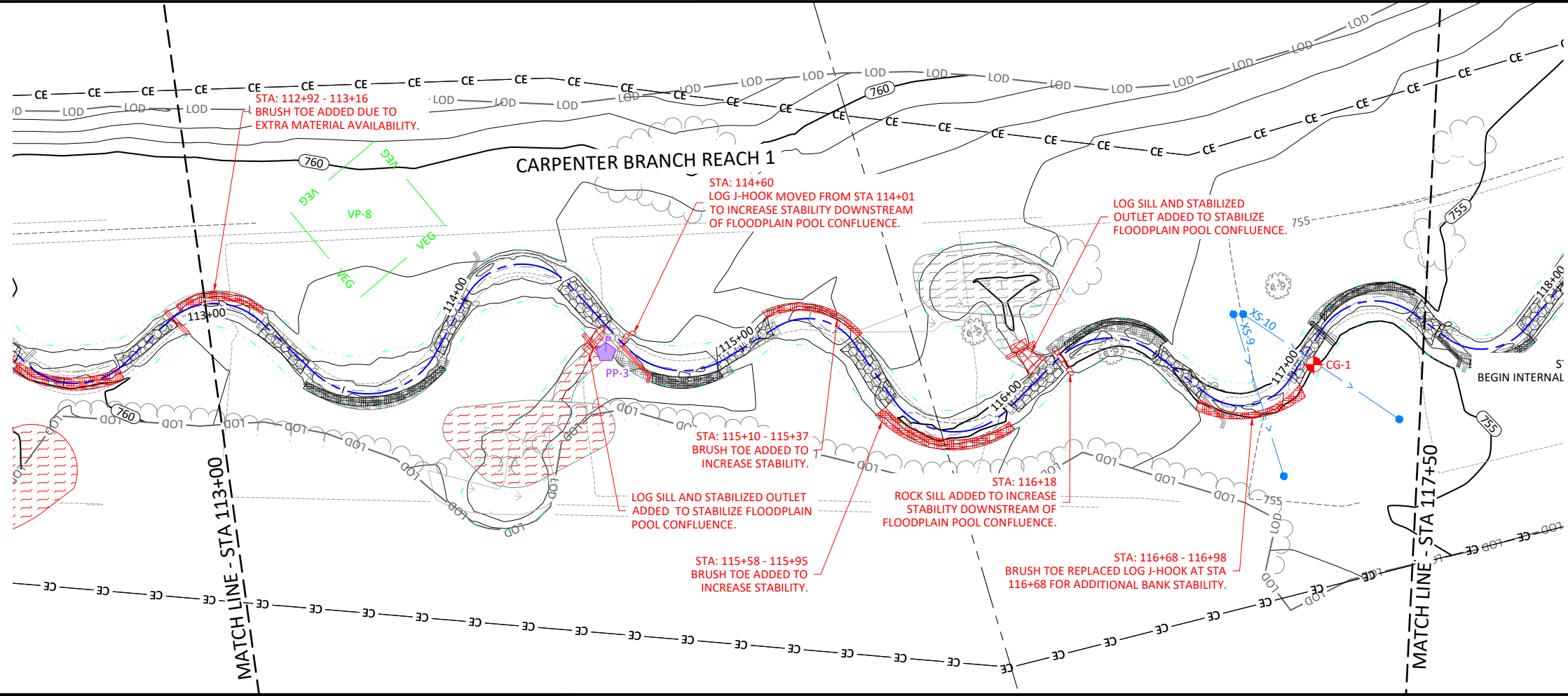
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Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

Carpenter Branch
Stream Plan and Profile

- NOTE:**
1. DEVIATIONS FROM THE DESIGN WILL BE SHOWN IN RED.
 2. CREST GAGE ADDED AFTER SURVEY WAS COLLECTED TO MONITOR BANKFULL EVENTS.

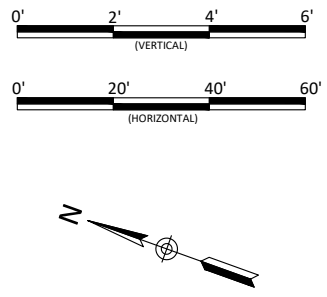
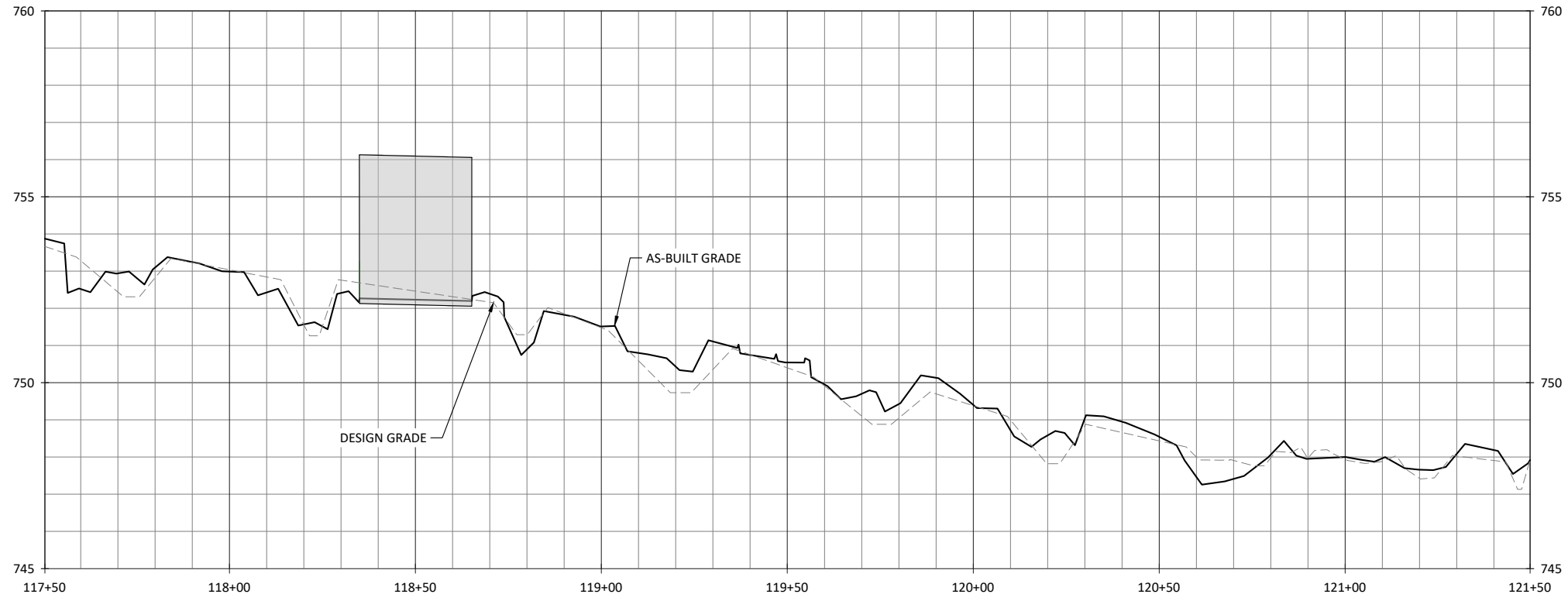


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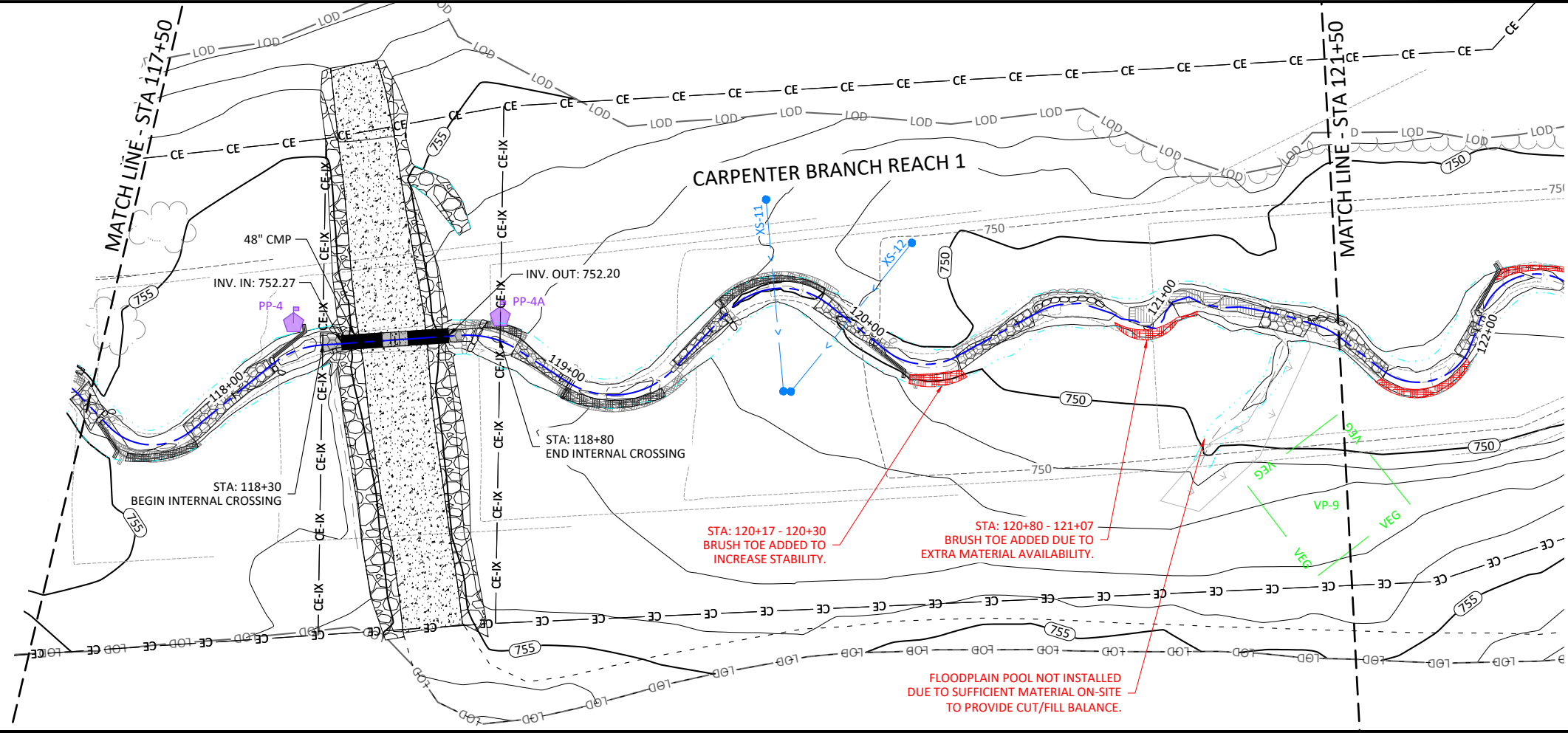
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Drawn By:	ABT
Checked By:	

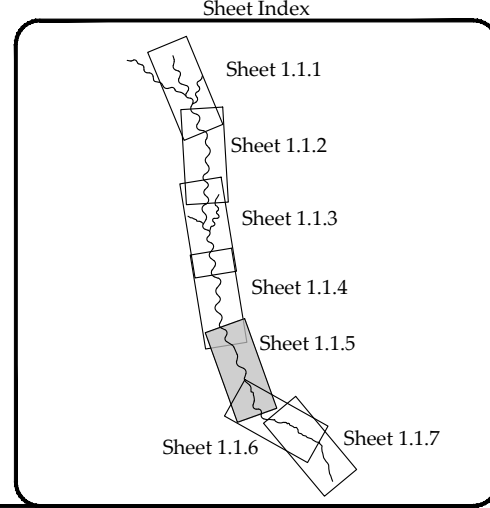
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Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina
Carpenter Branch
Stream Plan and Profile

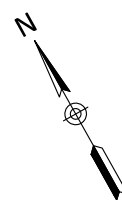
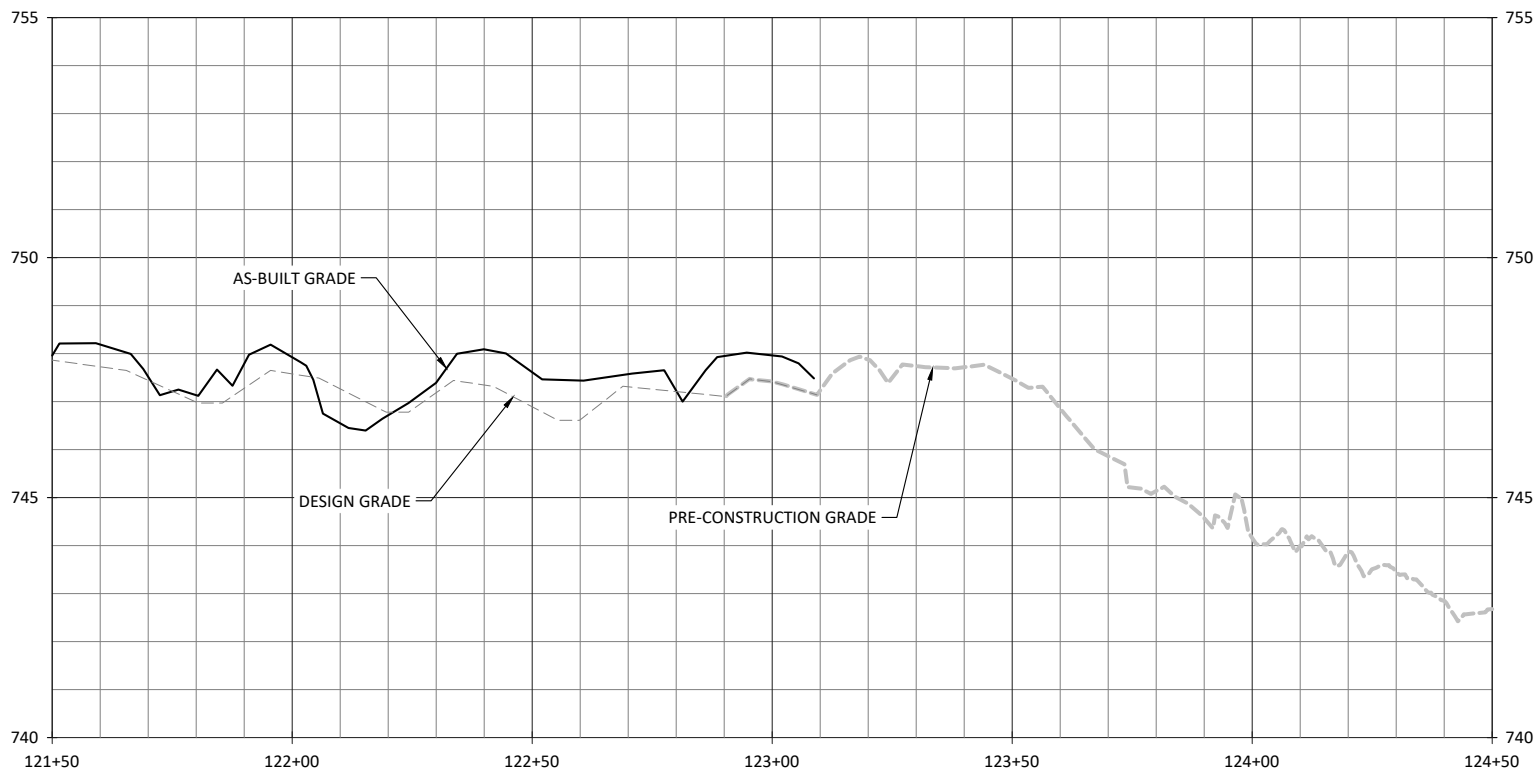


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4.01.2022
Job Number: 005-02179
Project Engineer: EFN
Drawn By: ABT
Checked By:
1.1.5
Sheet

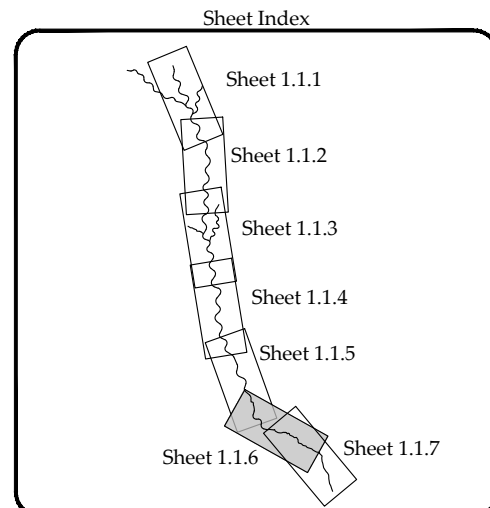
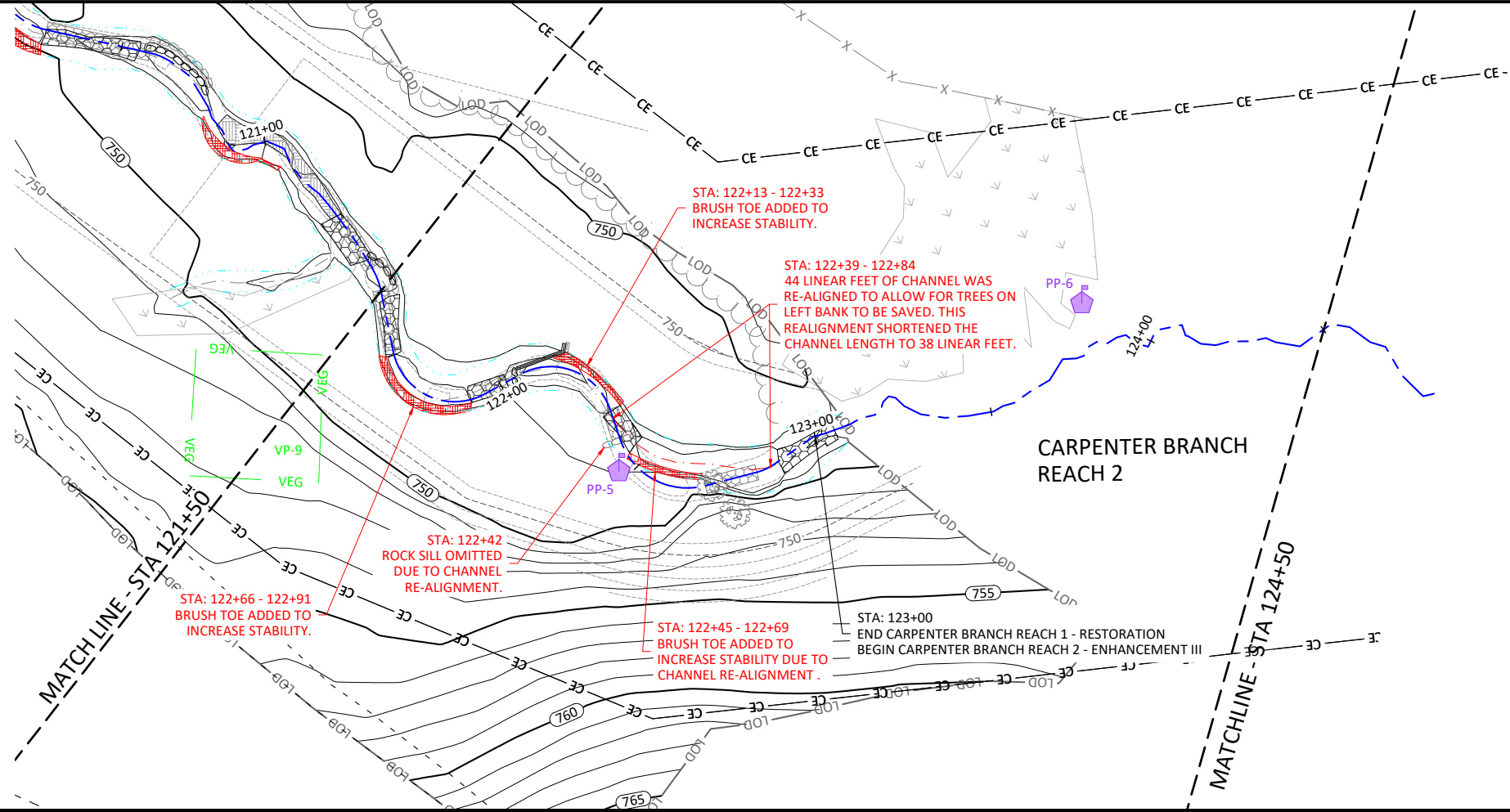


Carpenter Bottom Mitigation Site Record Drawings

Gaston County, North Carolina

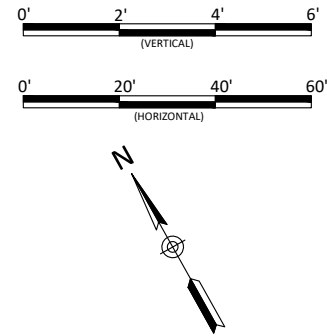
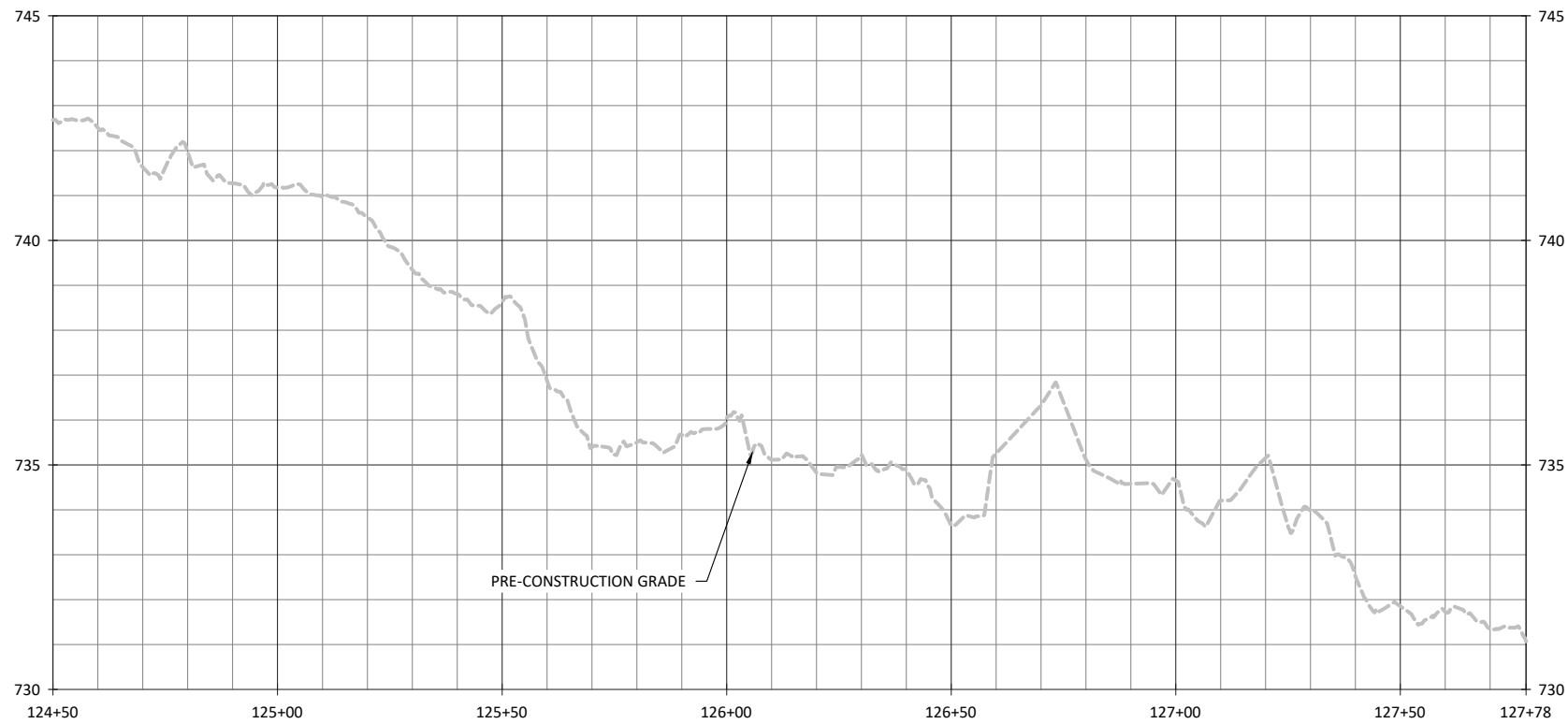
Carpenter Branch
Stream Plan and Profile

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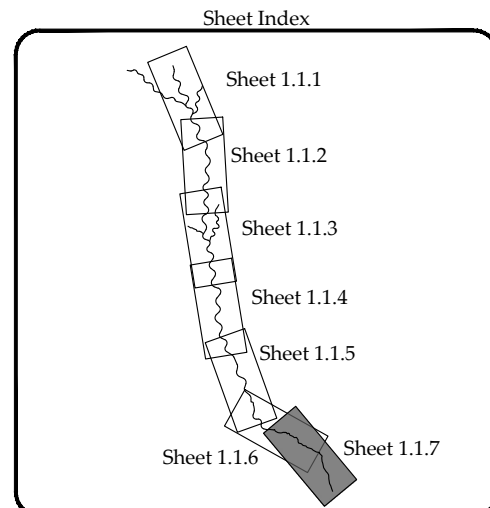
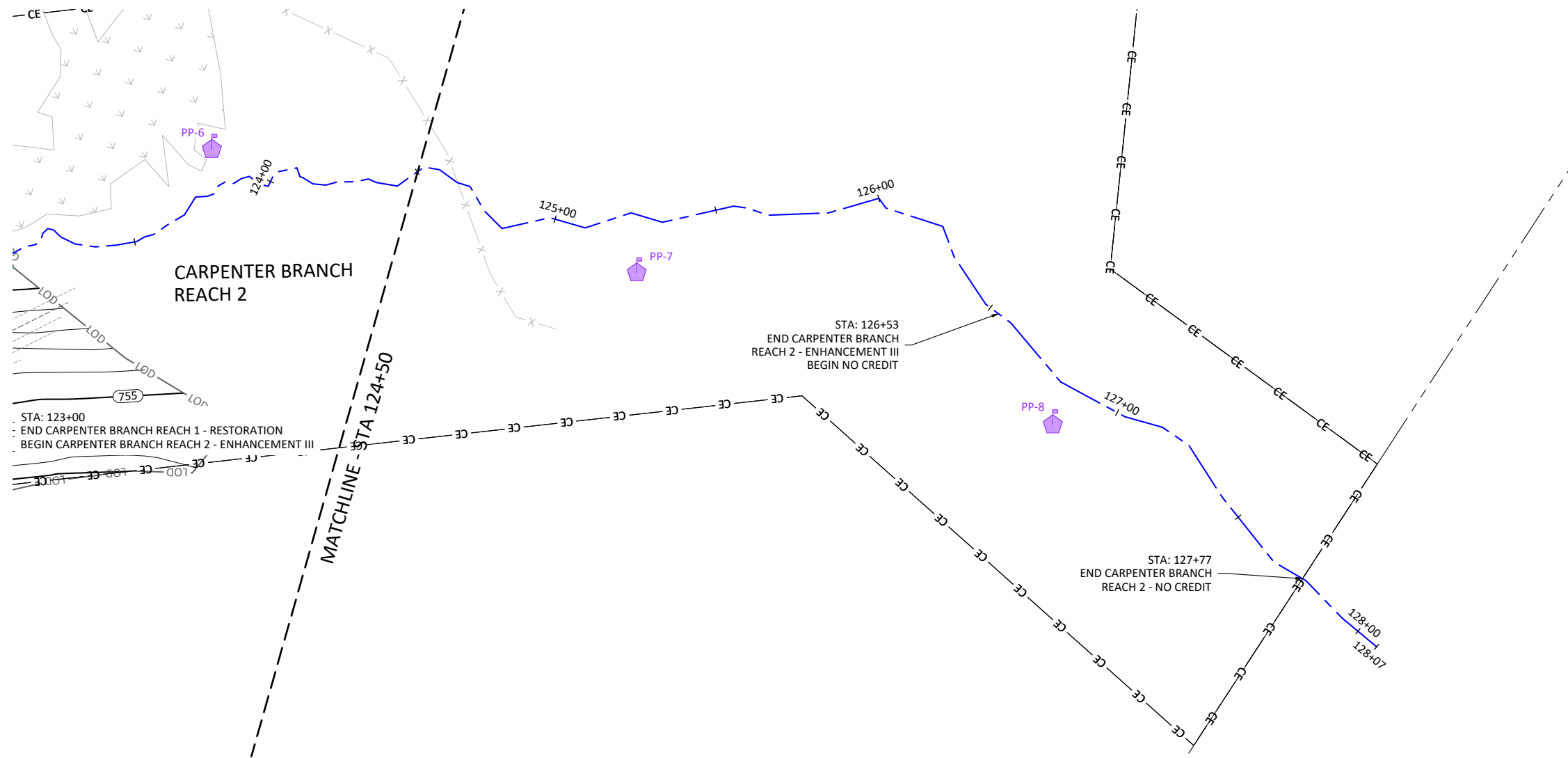


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Date: 4.01.2022
Job Number: 005-02179
Project Engineer: EFN
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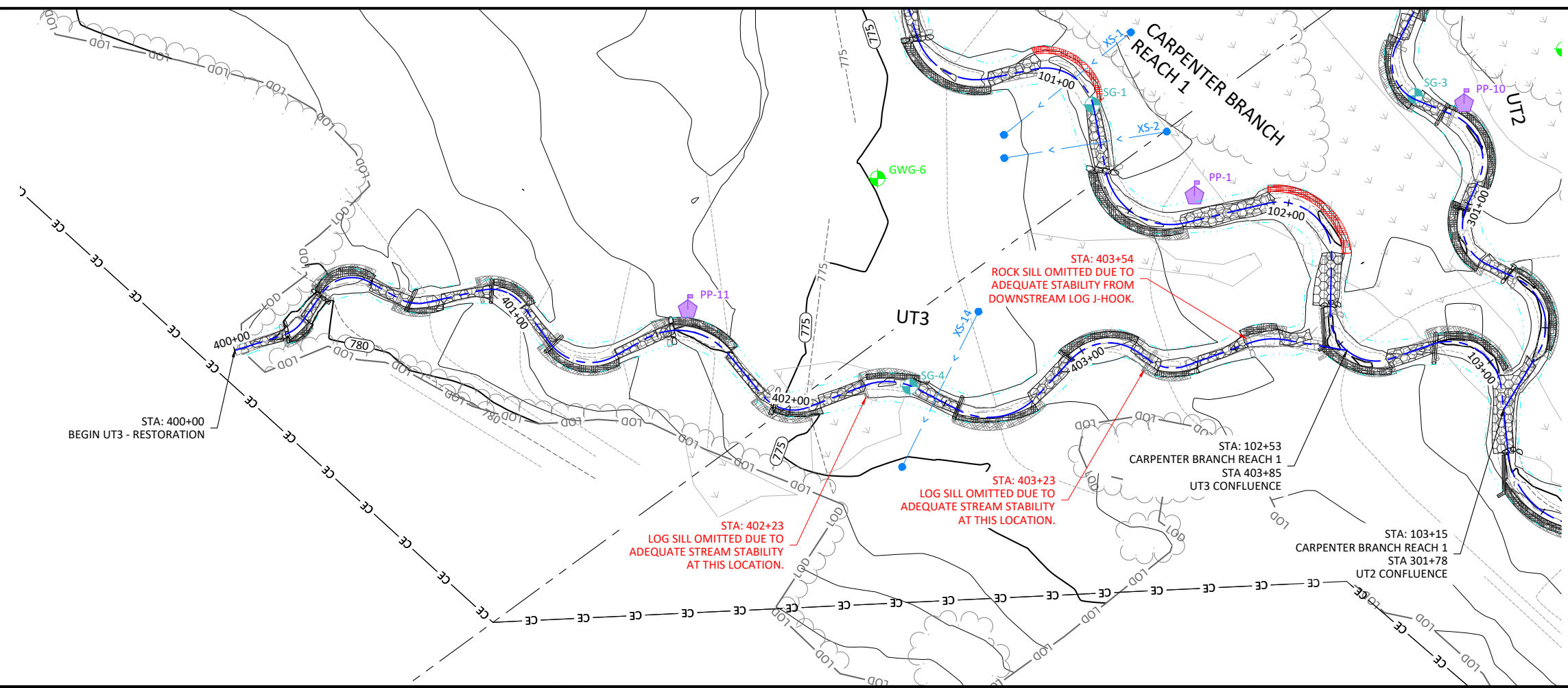
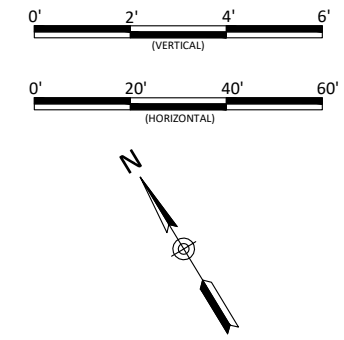
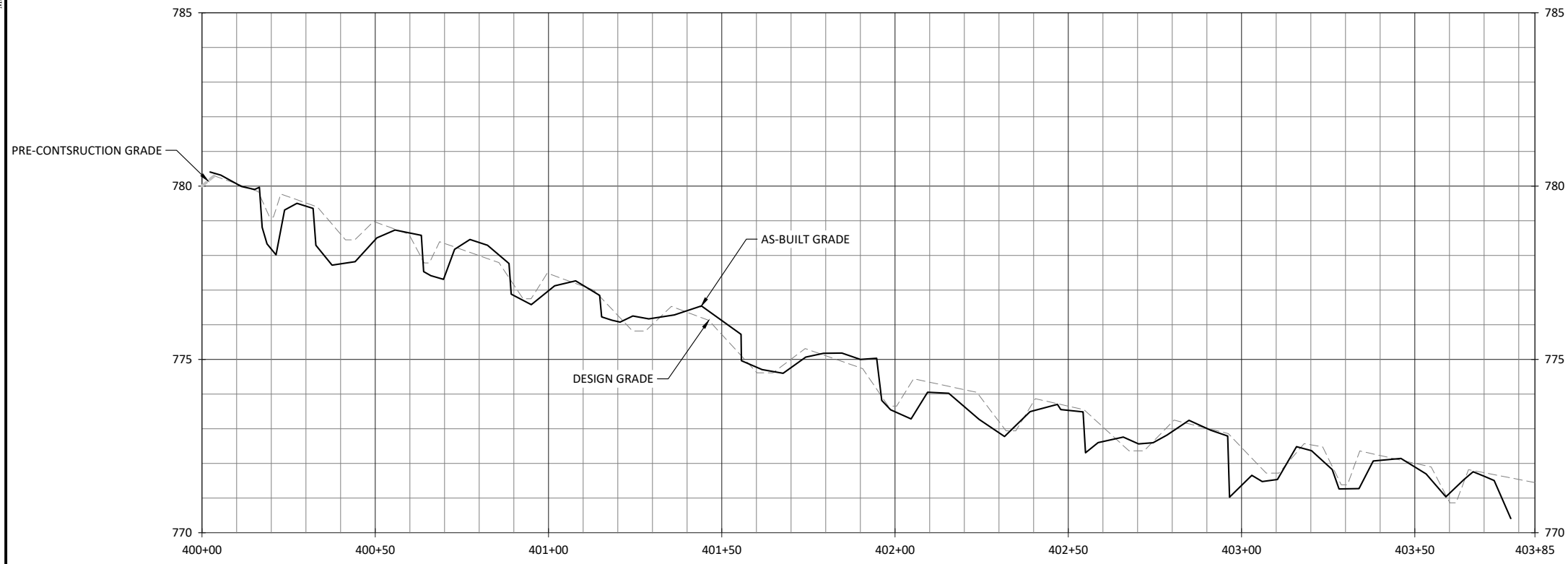
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Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina
Carpenter Branch
Stream Plan and Profile

Revisions:

Date: 4.01.2022
Job Number: 005-02179
Project Engineer: EFN
Drawn By: ABT
Checked By:
1.1.7
Sheet



- NOTES:**
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 2. AS-BUILT INFORMATION FOR CARPENTER BRANCH IS ADDRESSED ON SHEETS 1.1.1 THROUGH 1.1.7
 3. AS-BUILT INFORMATION FOR UT2 IS ADDRESSED ON SHEET 1.3.1.

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Sheet 1.2.1	Sheet 1.3.1
Sheet 1.5.1	Sheet 1.4.1

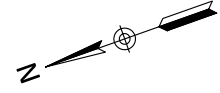
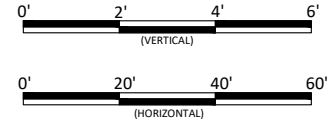
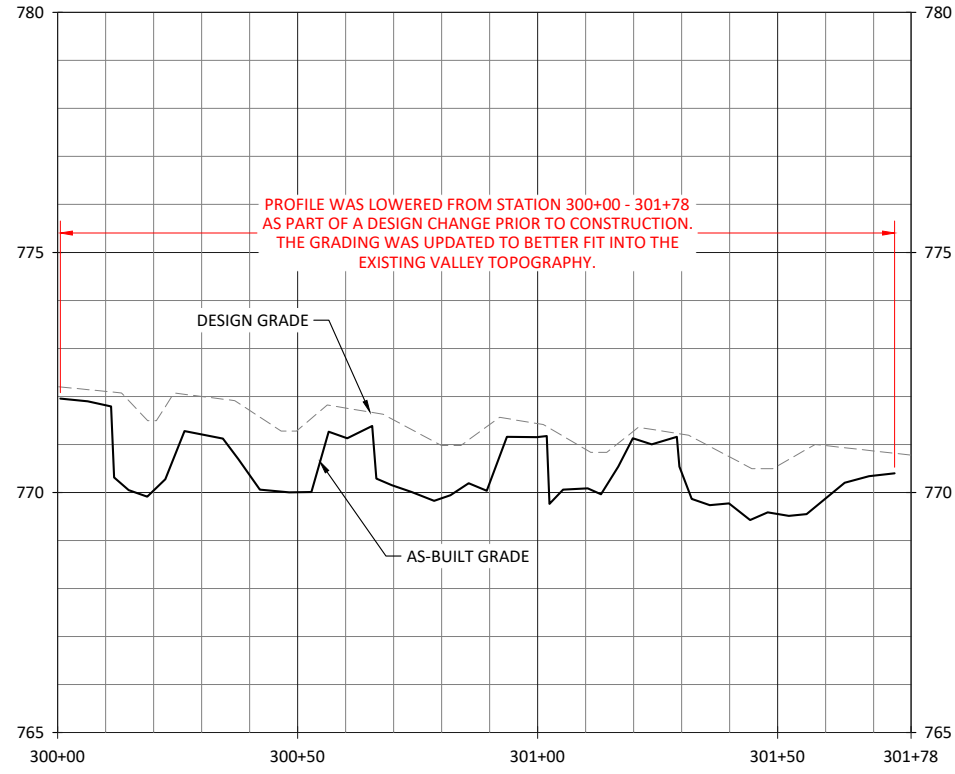
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Project Engineer: EFN
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Checked By:
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Carpenter Bottom Mitigation Site Record Drawings
 Gaston County, North Carolina

UT3
 Stream Plan and Profile

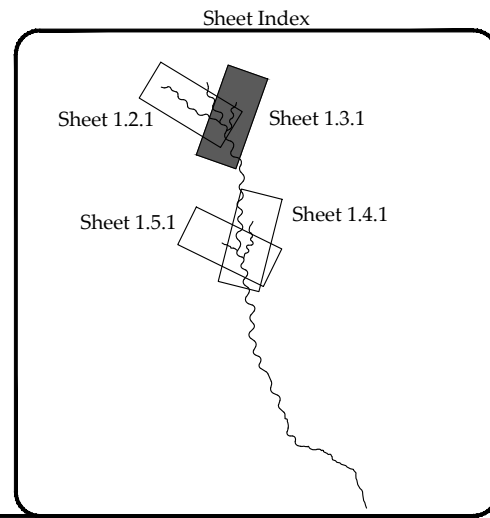
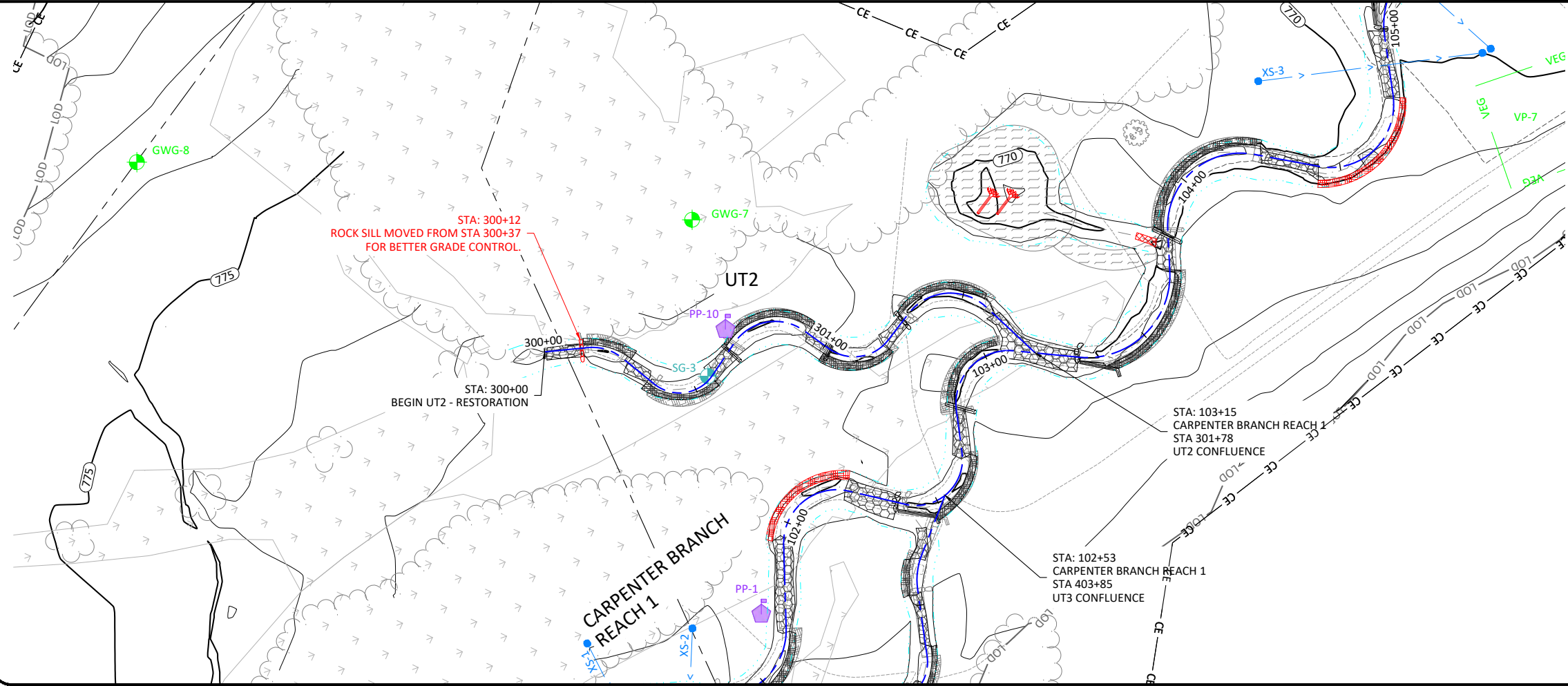




Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

UT2
Stream Plan and Profile

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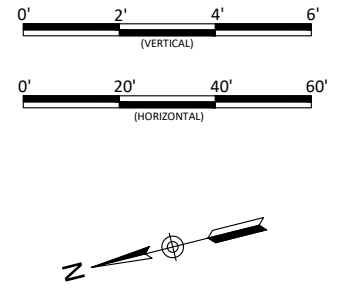
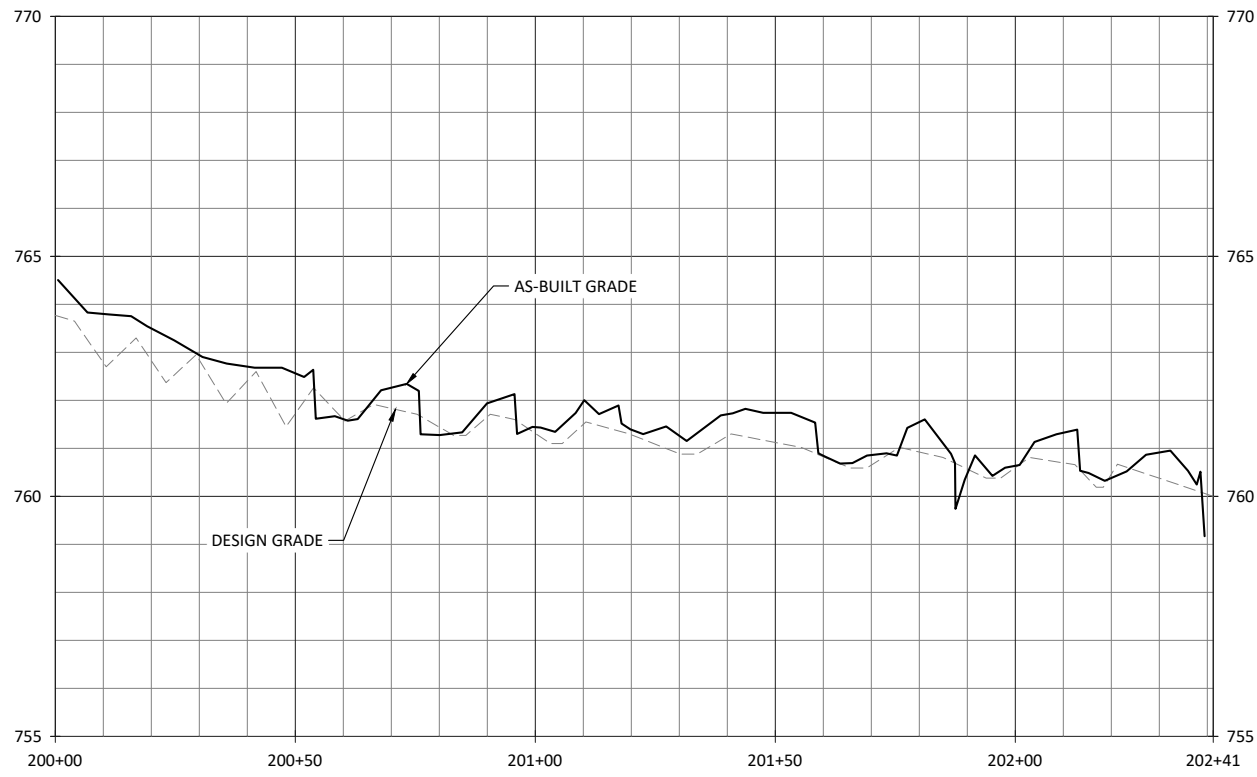
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Project Engineer: EFN

Drawn By: ABT

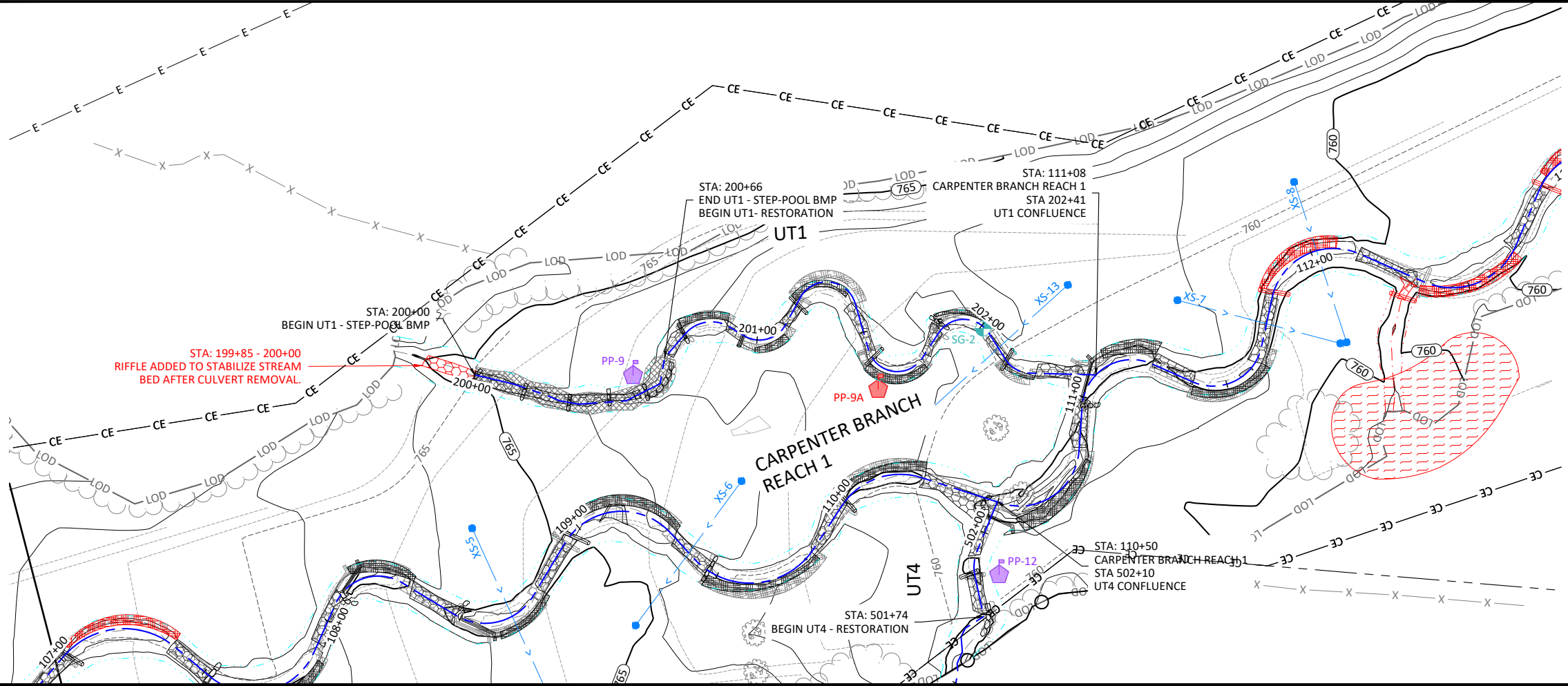
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Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

UT1
Stream Plan and Profile



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 3. AS-BUILT INFORMATION FOR UT4 IS ADDRESSED ON SHEET 1.5.1.
 4. PHOTO POINT WAS ADDED AFTER SURVEY WAS COMPLETED TO PROVIDE AN ADDITIONAL VISUAL MONITORING LOCATION ON UT1.

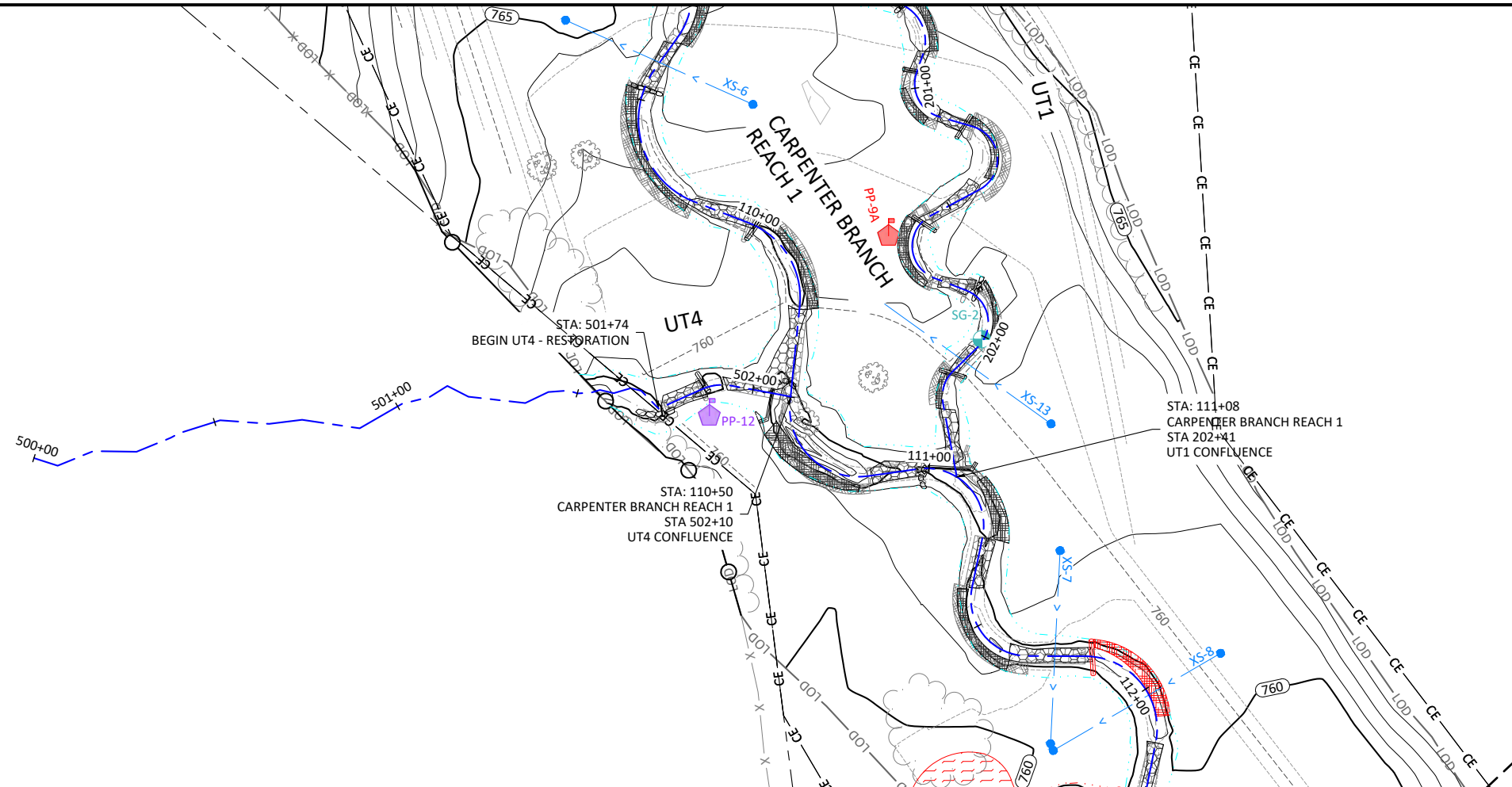
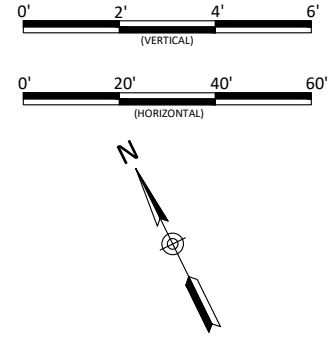
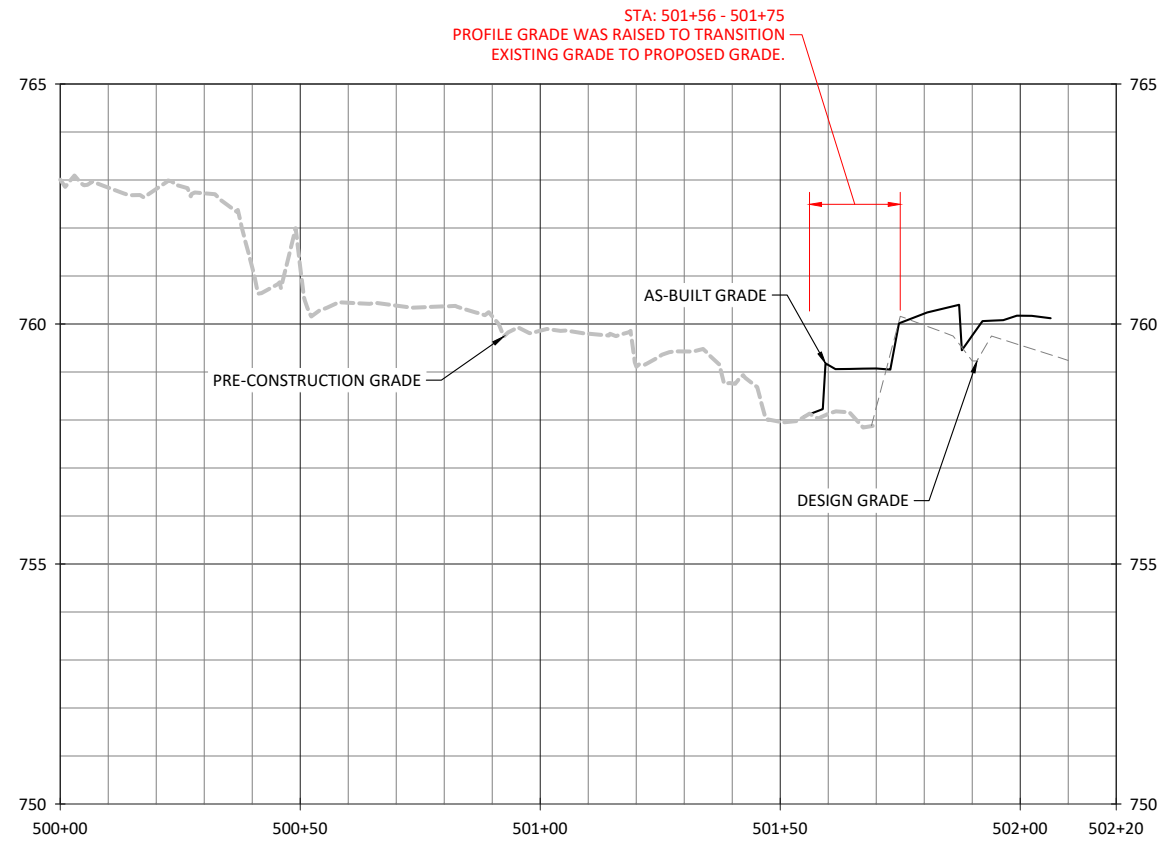
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Sheet 1.2.1 Sheet 1.3.1

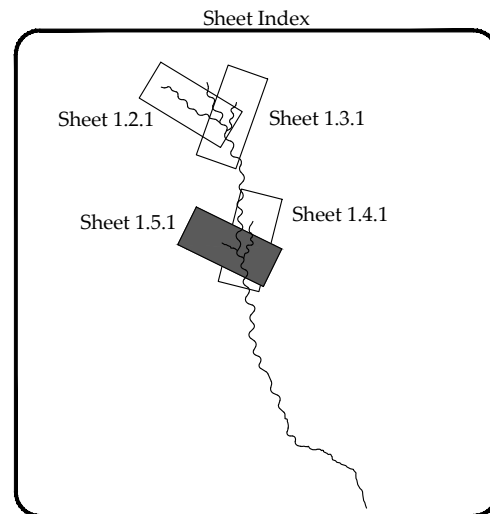
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Revisions:

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Drawn By: ABT
Checked By:
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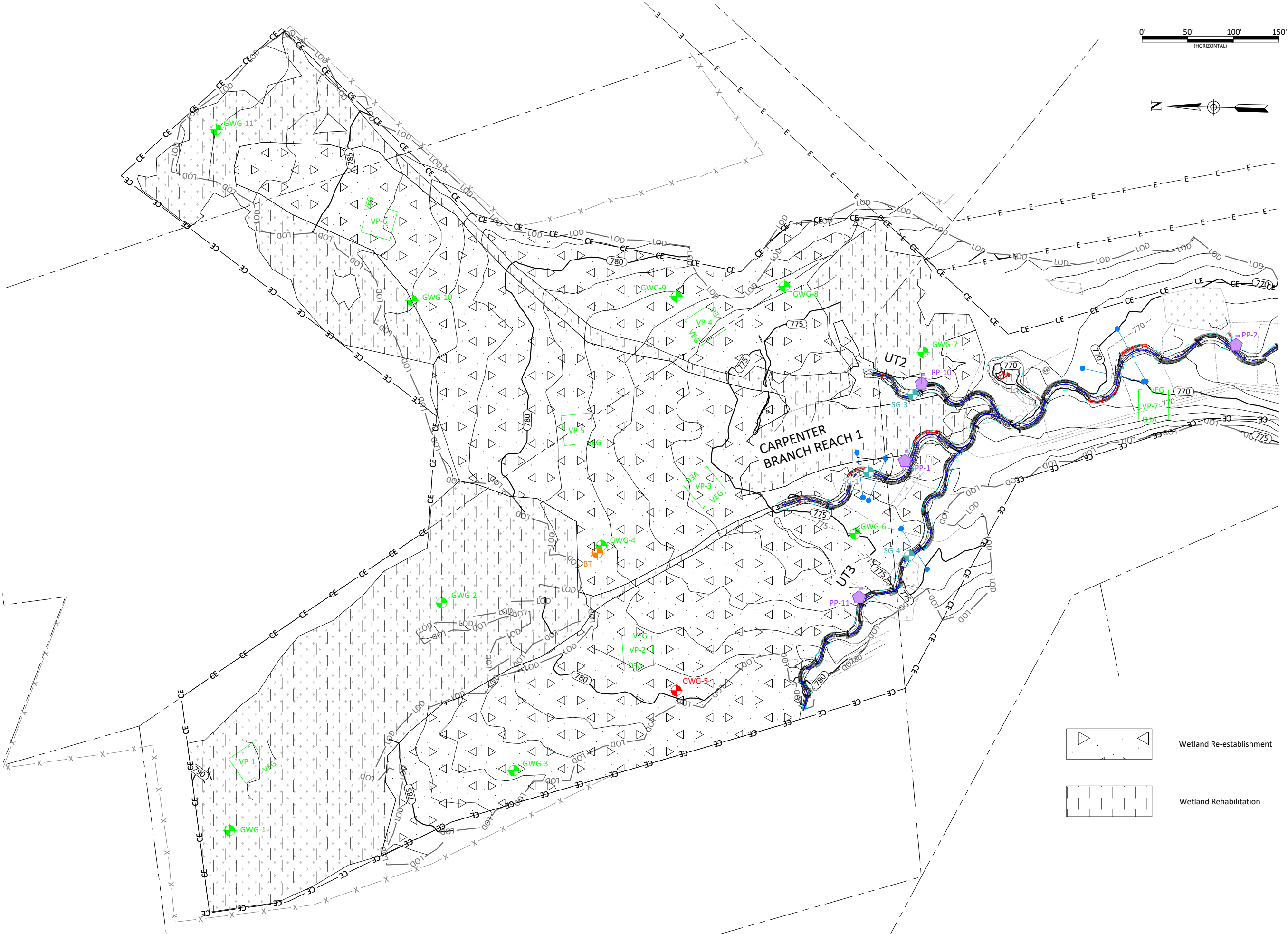
Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

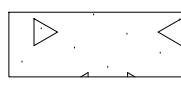
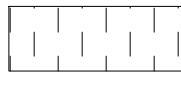
UT4
Stream Plan and Profile

Revisions:

Date: 4.01.2022
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Project Engineer: EFN
Drawn By: ABT
Checked By:

1.5.1
Sheet



-  Wetland Re-establishment
-  Wetland Rehabilitation

Carpenter Bottom Mitigation Site Record Drawings
Gaston County, North Carolina

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Date: 4.01.2022
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 Project Engineer: EFN
 Drawn By: ABT
 Checked By:

2.0

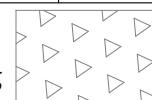


Open Area Buffer Planting



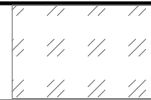
Open Buffer Planting Zone Trees							
Bare Root							
Species	Common Name	Max Spacing	Indiv. Spacing	Min. Caliper Size	Stratum	Wetland Indicator	# of Stems
<i>Acer negundo</i>	Boxelder	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10% 11%
<i>Platanus occidentalis</i>	Sycamore	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
<i>Betula nigra</i>	River Birch	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
<i>Liriodendron tulipifera</i>	Tulip Poplar	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	10% 11%
<i>Quercus Phellos</i>	Willow Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10% 11%
<i>Fagus grandifolia</i>	American Beech	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	10% 11%
<i>Diospyros virginiana</i>	Persimmon	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	5%
<i>Populus deltoides</i>	Cottonwood	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10% 11%
Total							90%
Alternates							
<i>Nyssa sylvatica</i>	Black Gum	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	0%
<i>Acer saccharinum</i>	Silver Maple	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	0%
<i>Ulmus rubra</i>	Slippery Elm	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	0%
Open Buffer Planting Zone Small Trees / Shrubs							
Bare Root							
Species	Common Name	Max Spacing	Indiv. Spacing	Min. Caliper Size	Stratum	Wetland Indicator	# of Stems
<i>Alnus serrulata</i>	Tag Alder	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	OBL	2%
<i>Hamamelis virginiana</i>	Witch Hazel	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FACU	2%
<i>Cornus florida</i> <i>Cornus amomum</i>	Flowering Dogwood-Silky Dogwood	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy Shrub	FACU FACW	2%
<i>Lindera benzoin</i>	Spicebush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	2%
<i>Amelanchier arborea</i>	Serviceberry	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	2%
Total							10%
Alternates							
<i>Asima triloba</i>	Pawpaw	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	0%
<i>Carpinus caroliniana</i>	American Hornbeam	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	0%

Partially Vegetated Buffer Area Planting



Partially Buffer Planting Zone Trees							
Bare Root							
Species	Common Name	Max Spacing	Indiv. Spacing	Min. Caliper Size	Stratum	Wetland Indicator	# of Stems
<i>Carpinus caroliniana</i>	American Hornbeam	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	10%
<i>Euonymus americana</i>	Strawberry Bush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	10%
<i>Lindera benzoin</i>	Spicebush	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	10%
<i>Fagus grandifolia</i>	American Beech	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	10%
<i>Ulmus rubra</i>	Slippery Elm	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10%
<i>Hamamelis virginiana</i>	Witchhazel	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FACU	10%
<i>Calycanthus floridus</i>	Sweetshrub	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FACU	10%
<i>Cornus florida</i>	Flowering Dogwood	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FACU	10%
<i>Asima triloba</i>	Pawpaw	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	FAC	10%
<i>Quercus rubra</i>	Northern Red Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACU	10%
Total							100%

Wetland Planting



Wetland Planting Zone Trees							
Bare Root							
Species	Common Name	Max Spacing	Indiv. Spacing	Min. Caliper Size	Stratum	Wetland Indicator	# of Stems
<i>Platanus occidentalis</i>	Sycamore	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
<i>Quercus pagoda</i>	Cherrybark Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
<i>Quercus phellos</i>	Willow Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	10%
<i>Ulmus americana</i>	American Elm	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	10%
<i>Nyssa sylvatica</i>	Black Gum	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	5%
<i>Quercus michauxii</i>	Swamp Chestnut Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	10%
<i>Acer negundo</i>	Boxelder	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	5%
<i>Celtis laevigata</i>	Sugarberry	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	5%
<i>Betula nigra</i>	River Birch	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	10%
Total							85%
Alternate							
<i>Acer saccharinum</i>	Silver Maple	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	0%
Wetland Planting Zone Small Trees/Shrubs							
Bare Root							
Species	Common Name	Max Spacing	Indiv. Spacing	Min. Caliper Size	Stratum	Wetland Indicator	# of Stems
<i>Alnus serrulata</i>	Tag Alder	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	OBL	5%
<i>Lindera benzoin</i>	Spicebush	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	3%
<i>Cephalanthus occidentalis</i>	Buttonbush	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	OBL	5%
<i>Sambucus canadensis</i>	Elderberry	12 ft.	6-12 ft.	0.25"-1.0"	Shrub	FAC	2%
Total							15%
Alternate							
<i>Alnus serrulata</i>	Tag Alder	12 ft.	6-12 ft.	Tubling	Sub-Canopy	OBL	5%-0%

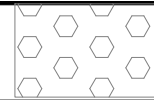
Partially Vegetated Wetland Planting



Partially Vegetated Wetland Planting Zone							
Bare Root							
Species	Common Name	Max Spacing	Indiv. Spacing	Min. Caliper Size	Stratum	Wetland Indicator	# of Stems
<i>Platanus occidentalis</i>	Sycamore	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
<i>Nyssa sylvatica</i>	Black Gum	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	15%
<i>Alnus serrulata</i>	Tag Alder	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	OBL	15%
<i>Acer negundo</i>	Boxelder	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FAC	15%
<i>Celtis laevigata</i>	Sugarberry	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	15%
<i>Cephalanthus occidentalis</i>	Buttonbush	12 ft.	6-12 ft.	0.25"-1.0"	Sub-Canopy	OBL	15%
<i>Quercus michauxii</i>	Swamp Chestnut Oak	12 ft.	6-12 ft.	0.25"-1.0"	Canopy	FACW	10%

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

Riparian Corridor Planting (Streambanks)



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

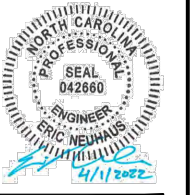
Permanent Seeding

Riparian Seeding - Open Canopy					
Pure Live Seed (20 lbs/ acre)					
Approved Date	Species Name	Common Name	Stratum	Wetland Indicator	Density (lbs/acre)
All Year	<i>Schizachyrium scoparium</i>	Little Bluestem	Herb	FACU	4.0
All Year	<i>Panicum virgatum</i>	Switchgrass	Herb	FAC	2.0
All Year	<i>Panicum rigidulum</i>	Redtop Panicgrass	Herb	FACW	1.0
All Year	<i>Rudbeckia hirta</i>	Blackeyed Susan	Herb	FACU	1.0
All Year	<i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	Herb	FACU	1.0
All Year	<i>Carex vulpinoidea</i>	Fox Sedge	Herb	OBL	1.0
All Year	<i>Panicum clandestinum</i>	Deertongue	Herb	FAC	2.0
All Year	<i>Elymus virginicus</i>	Virginia Wild Rye	Herb	FACW	2.0
All Year	<i>Sorghastrum nutans</i>	Indiangrass	Herb	FACU	3.0
All Year	<i>Bidens aristosa</i>	Showy Tickseed Sunflower	Herb	FACW	1.0
All Year	<i>Helianthus angustifolia</i>	Narrowleaf Sunflower	Herb	FACW	1.0
All Year	<i>Coreopsis tinctoria</i>	Plains coreopsis	Herb	FAC	1.0

Wetland Seeding - Open Canopy					
Pure Live Seed (20 lbs/ acre)					
Approved Date	Species Name	Common Name	Stratum	Wetland Indicator	Density (lbs/acre)
All Year	<i>Coleataenia anceps</i>	Beaked Panicgrass	Herb	FAC	3.0
All Year	<i>Carex vulpinoidea</i>	Fox Sedge	Herb	OBL	2.0
All Year	<i>Elymus virginicus</i>	Virginia Wild Rye	Herb	FACW	4.0
All Year	<i>Bidens aristosa</i>	Showy Tickseed Sunflower	Herb	FACW	3.0
All Year	<i>Panicum cirgatum</i>	Switchgrass	Herb	FAC	3.0
All Year	<i>Polygonum pensylvanicum</i>	Smartweed	Herb	FACW	1.0
All Year	<i>Juncus effusus</i>	Common Rush	Herb	OBL	2.0
All Year	<i>Panicum dichotomiflorum</i>	Smooth Panicgrass	Herb	FACW	2.0

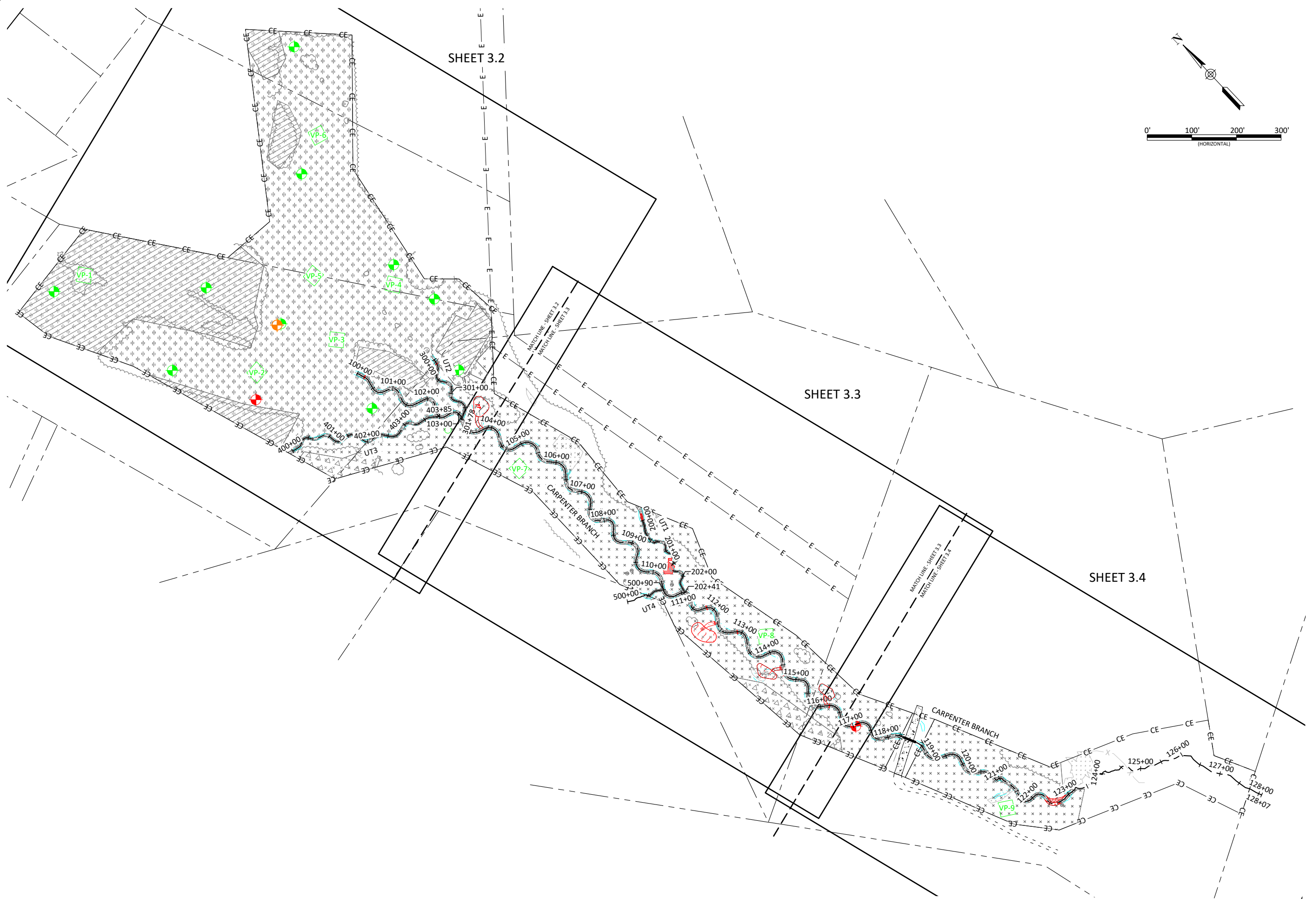
Stabilization Seeding

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



May 19, 2022

X:\shared\Projects\005-02179 Carpenter Bottom Mitigation Site\Monitoring\Baseline\Monitoring\Plans\ABT-02179 - Planting Plan.dwg



Carpenter Bottom Mitigation Site Record Drawings
 Gaston County, North Carolina
 Planting Overview
 Planting Plan

Revisions:

Date: 4.01.2022
 Job Number: 005-02179
 Project Engineer: EFN
 Drawn By: ABT
 Checked By:

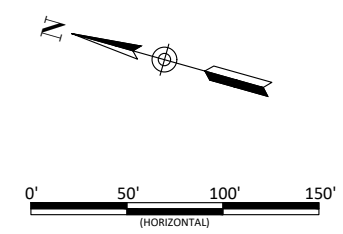
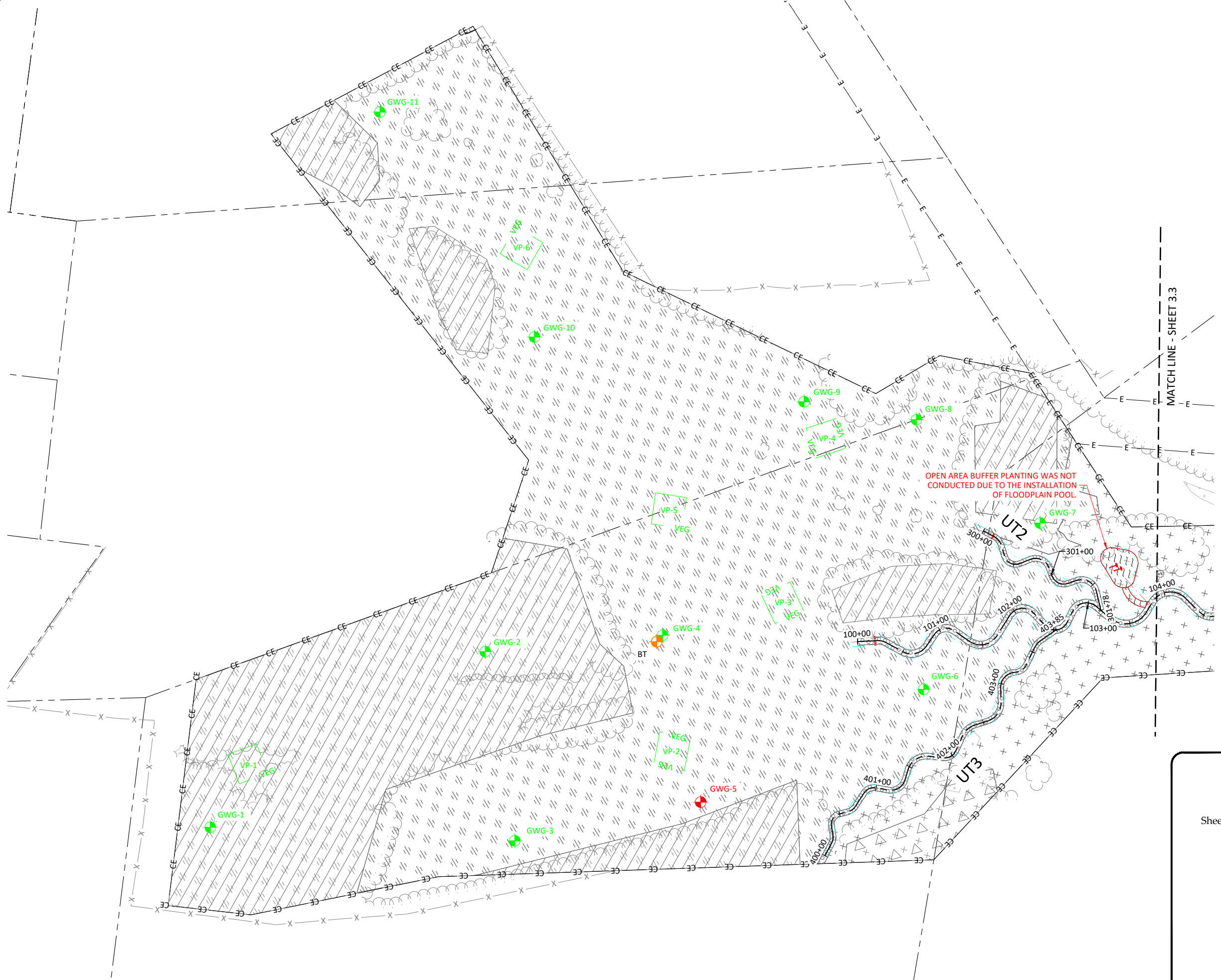
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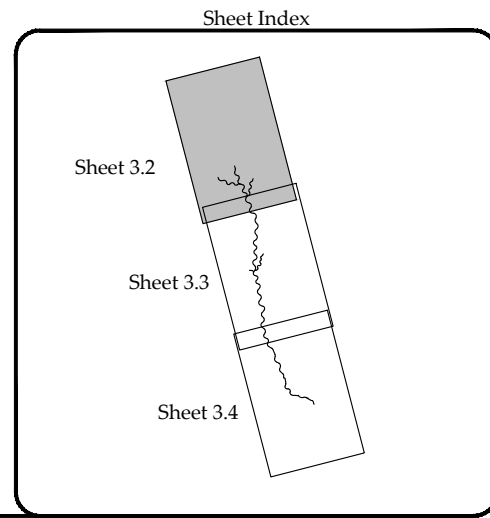
WILDLANDS
 ENGINEERING
 167-B Haywood Rd
 Asheville, NC 28806
 Tel: 828.774.5547
 License No. F-0831

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OPEN AREA BUFFER PLANTING WAS NOT CONDUCTED DUE TO THE INSTALLATION OF FLOODPLAIN POOL

MATCH LINE - SHEET 3.3



Carpenter Bottom Mitigation Site Record Drawings Gaston County, North Carolina

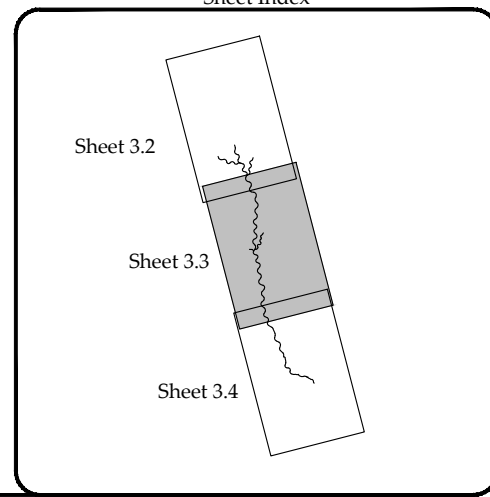
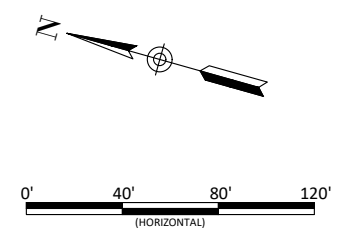
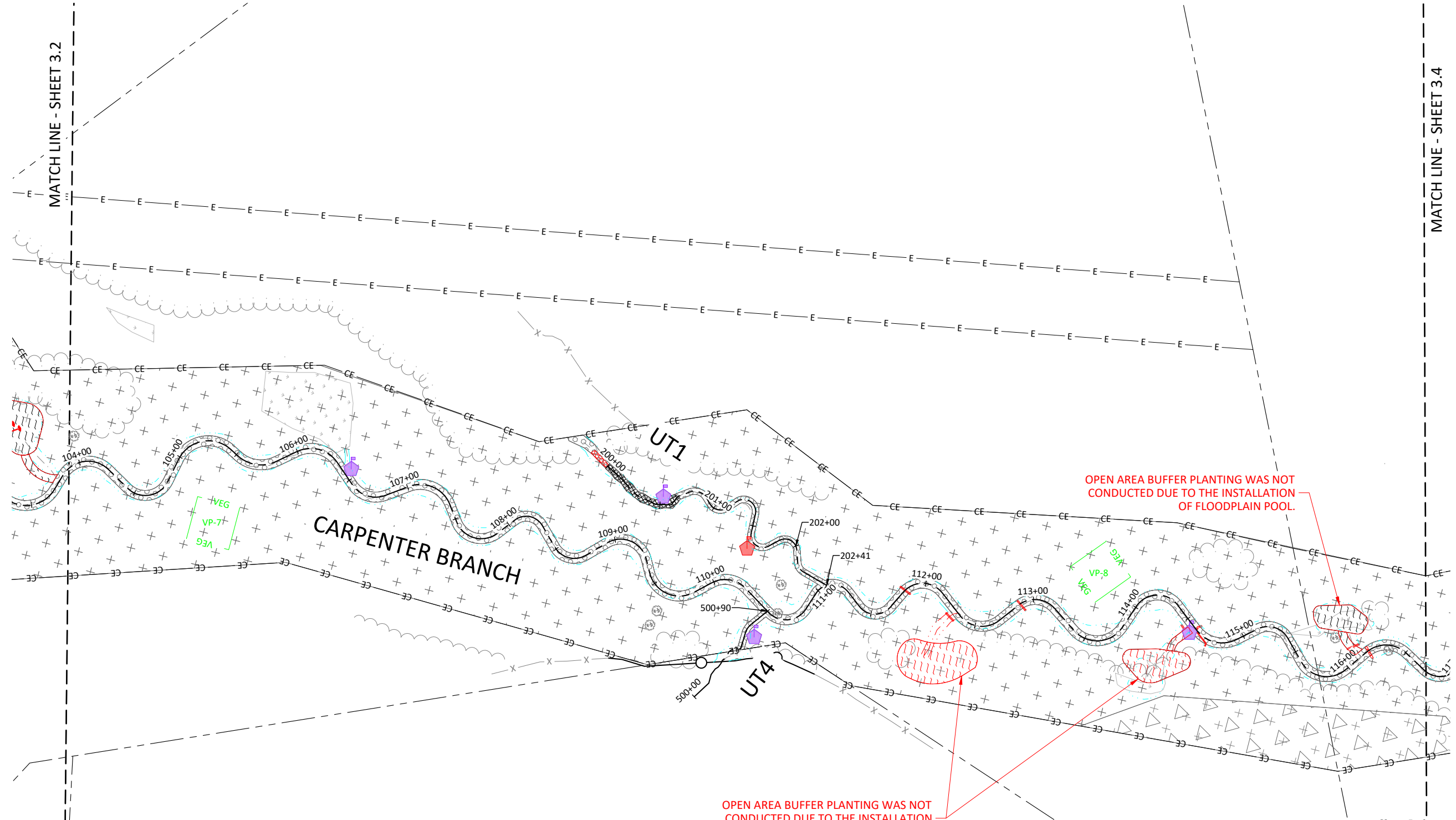
Planting Plan

Date:	4.01.2022
Job Number:	005-02179
Project Engineer:	EJN
Drawn By:	ABT
Checked By:	

3.2

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WILDLANDS
ENGINEERING
167-B Haywood Rd
Asheville, NC 28806
Tel: 828.774.5547
License No. F-0831



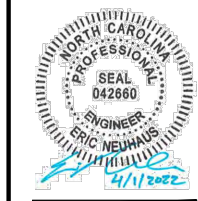
Carpenter Bottom Mitigation Site Record Drawings
 Gaston County, North Carolina

Planting Plan

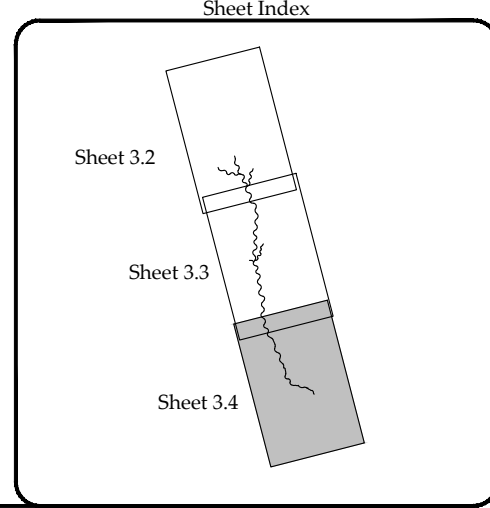
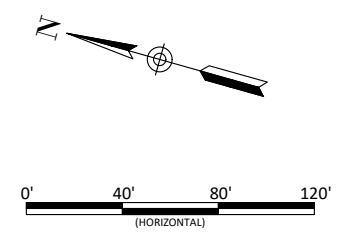
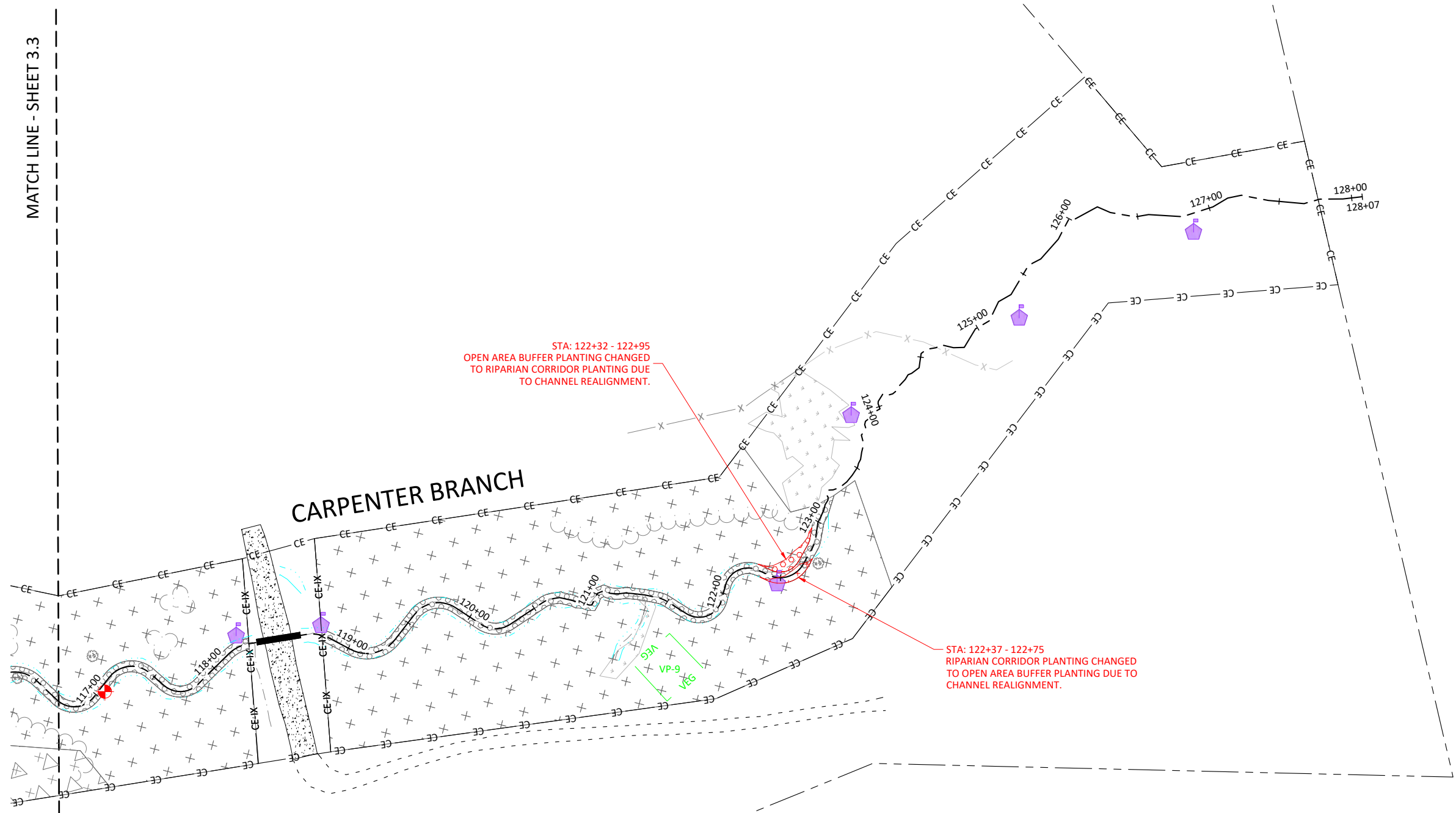
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Job Number:	005-02179
Project Engineer:	EJN
Drawn By:	ABT
Checked By:	

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Sheet



MATCH LINE - SHEET 3.3



Carpenter Bottom Mitigation Site Record Drawings
 Gaston County, North Carolina

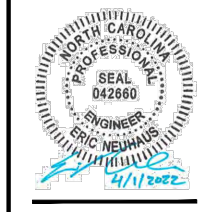
Planting Plan

Revisions:

Date:	4.01.2022
Job Number:	005-02179
Project Engineer:	EJN
Drawn By:	ABT
Checked By:	

3.4

Sheet



CARPENTER BOTTOM MITIGATION SITE AS-BUILT

SURVEY FOR:
WILDLANDS ENGINEERING, INC
LICENSE NO. F-0831
167-B HAYWOOD RD
ASHEVILLE, NC 28806
ERIC NEUHAUS, PE PROJECT ENGINEER
865-207-8835

AS-BUILT SURVEY PERFORMED BY
TURNER LAND SURVEYING, PLLC
AUGUST-SEPTEMBER 2021

P.O. BOX 148
SWANNANOVA, NC 28778
P-0702 (919) 827-0745
www.turnerlandsurveying.com
Certified DBE/WBE



NORTH CAROLINA
NORTH CAROLINA

GASTON COUNTY
LINCOLN COUNTY

CHERRYVILLE TOWNSHIP
LINCOLN TOWNSHIP

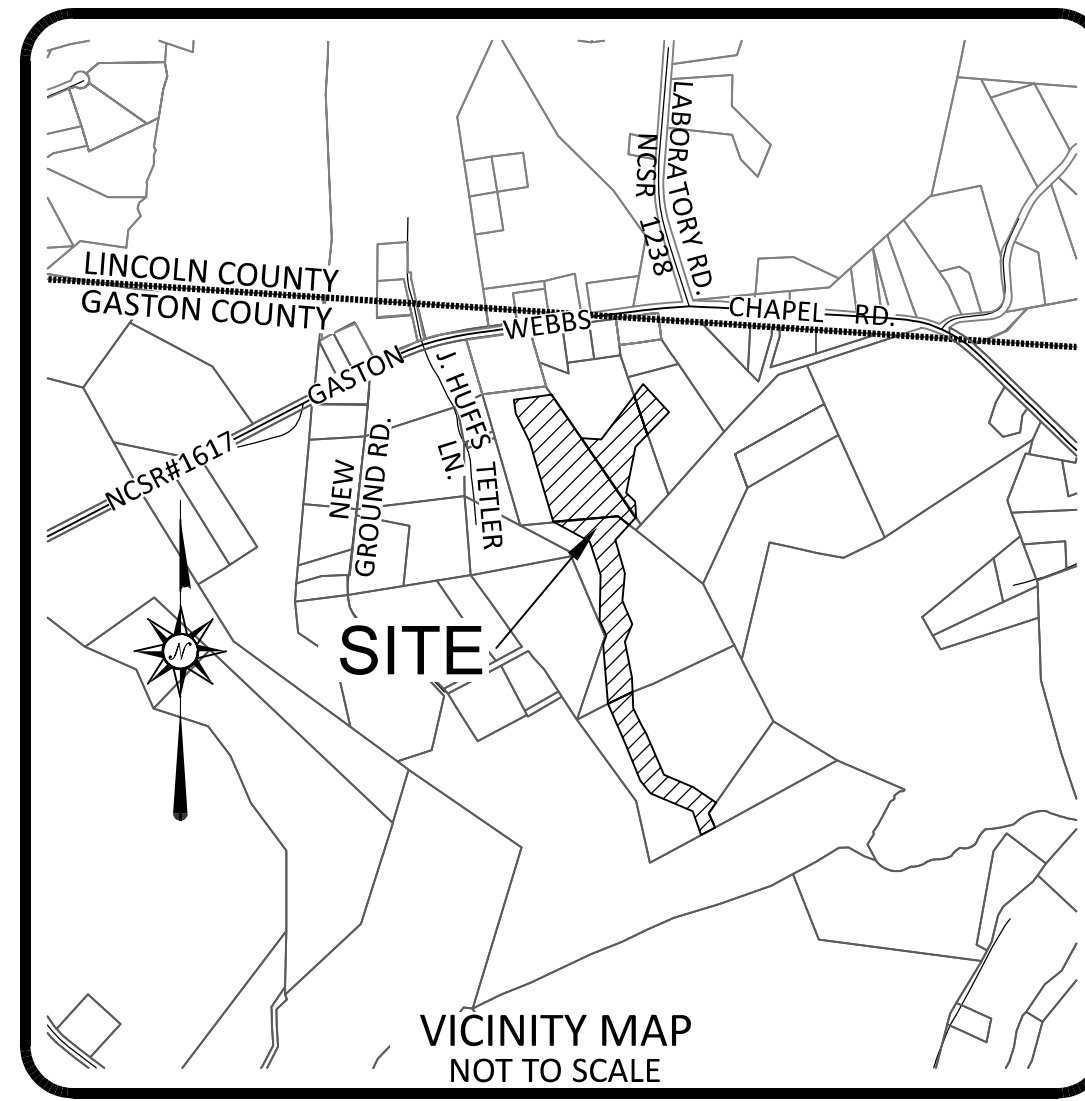
REVISIONS, DATE AND INITIAL:

AS-BUILT SURVEY FOR:

CARPENTER BOTTOM MITIGATION SITE

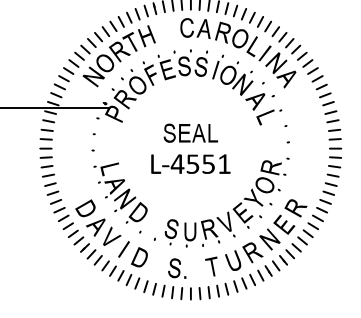
DATE:	8/24/2021
SURVEYED BY:	DST/CPG/EHK
DRAWN BY:	EGT/DST
REVIEWED BY:	DST/EGT
PROJECT:	19-020
FILE:	CARPENTER BOTTOM_AB.DWG
SCALE:	AS SHOWN

SHEET
1 of 4



I, DAVID S. TURNER, AS A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF NORTH CAROLINA, HEREBY CERTIFY THAT THE DATA SHOWN ON THIS DRAWING, WAS OBTAINED UNDER MY SUPERVISION, IS AN ACCURATE AND COMPLETE REPRESENTATION OF WHAT WAS CONSTRUCTED IN THE FIELD, AND THAT THE PHYSICAL DIMENSIONS OR ELEVATIONS SHOWN THUS ARE AS-BUILT CONDITIONS EXCEPT WHERE OTHERWISE NOTED HEREON. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS 31st DAY OF MARCH, 2022.

David S. Turner
DAVID S. TURNER, P.L.S. #L-4551



I, DAVID S. TURNER, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS TOPOGRAPHIC SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS FOR A TOPOGRAPHIC SURVEY TO THE HORIZONTAL ACCURACY OF CLASS A AND THE VERTICAL ACCURACY WHEN APPLICABLE TO CLASS C STANDARD, AND THAT THE ORIGINAL DATA WAS OBTAINED IN AUGUST 2021; THAT THE SURVEY WAS COMPLETED ON 1 SEPT 2021; AND ALL COORDINATES ARE BASED ON NAD83 (2011) AND ALL ELEVATIONS ARE BASED ON NAVD88. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS 31st DAY OF MARCH, 2022.

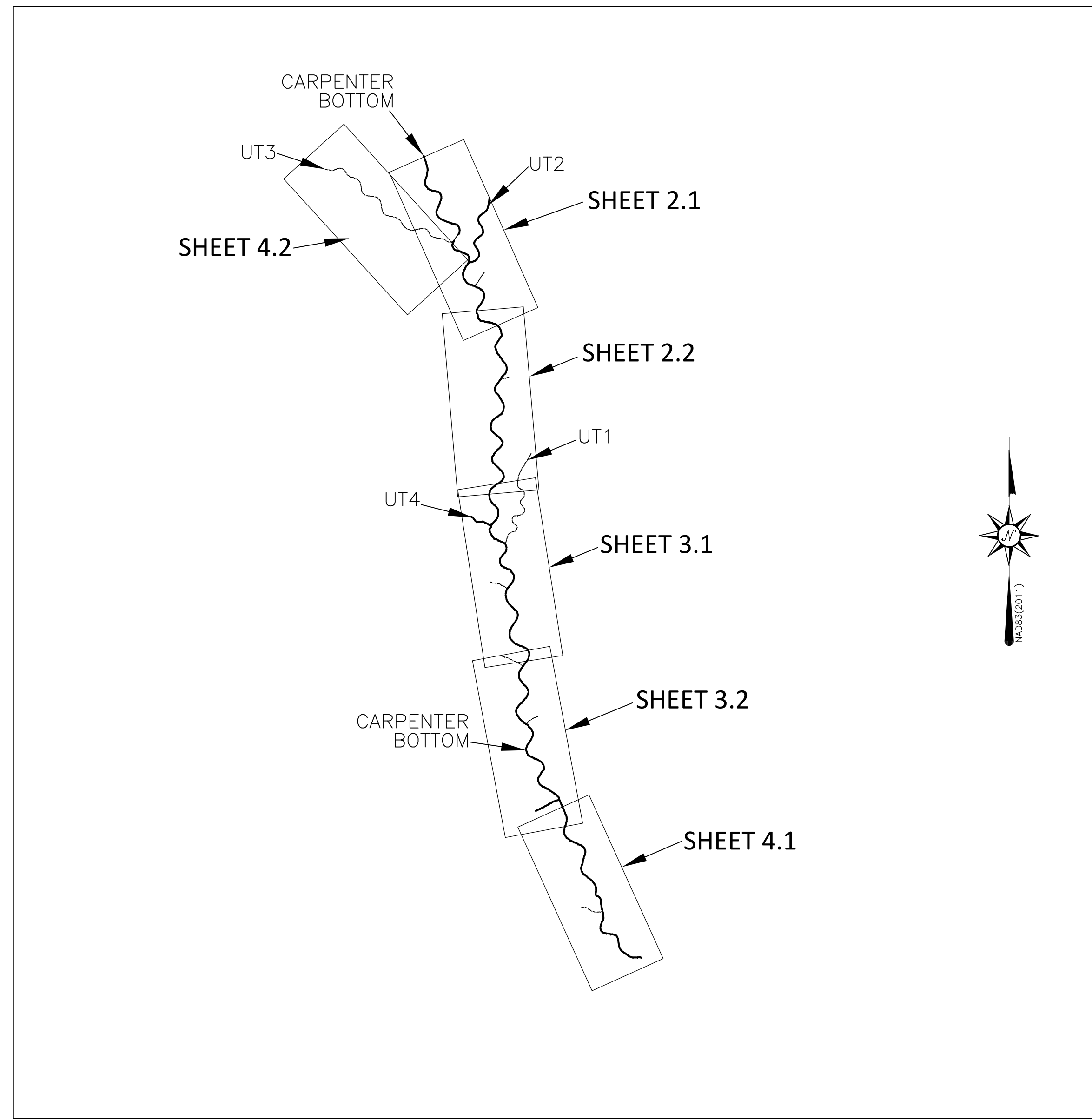
David S. Turner
DAVID S. TURNER, P.L.S. #L-4551



- GENERAL NOTES:**
- ALL DISTANCES ARE HORIZONTAL UNLESS OTHERWISE NOTED.
 - HORIZONTAL DATUM IS NAD83(2011) & VERTICAL DATUM IS NAVD88.
 - THIS MAP IS NOT FOR RECORDATION, SALES, OR CONVEYANCES AND DOES NOT COMPLY WITH G.S. 47-30 MAPPING REQUIREMENTS.
 - THE PURPOSE OF THIS MAP IS TO SHOW THE AS-BUILT CONDITIONS OF THE CARPENTER BOTTOM STREAM MITIGATION.
 - THE CONTROL NETWORK WAS ESTABLISHED BY TURNER LAND SURVEYING DURING THE EXISTING CONDITIONS SURVEY AND RECOVERED AND SUPPLEMENTED DURING THE AS-BUILT SURVEY. THE COORDINATES ARE LISTED IN THE CHART BELOW.
 - NO PROPERTY RESEARCH, INVESTIGATION, OR INDEPENDENT SEARCH FOR ENCUMBRANCES, RESTRICTIVE COVENANTS, EASEMENTS OF RECORD, OWNERSHIP, TITLE EVIDENCE, OR OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE EXAMINATION MAY DISCLOSE WERE PERFORMED FOR THIS SURVEY. A LICENSED ATTORNEY-AT-LAW SHOULD BE CONSULTED REGARDING CORRECT OWNERSHIP, WIDTH, AND LOCATION OF EASEMENTS AND OTHER TITLE QUESTIONS REVEALED BY A TITLE EXAMINATION.
 - SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AND/OR ENCUMBRANCES THAT MAY AFFECT THE PROPERTY(S).
 - THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES THAT MAY OR MAY NOT EXIST WITHIN THE BOUNDARIES AS SHOWN HEREON.

AS-BUILT CONTROL

PointNo.	Northing(Y)	Easting(X)	Elev(Z)	Description
3	612086.54	1326180.10	784.36	TLS#3RBC
4	611528.40	1326556.50	772.84	TLS#4NL
5	611439.90	1326648.70	771.39	TLS#5NL
6	611253.14	1326645.54	770.75	TLS#6NL
7	611063.04	1326623.90	769.58	TLS#7NL
9	610902.16	1326642.59	760.04	TLS#9NL
10	610684.24	1326646.43	758.07	TLS#10NL
11	610489.77	1326713.15	757.26	TLS#11NL
12	610273.85	1326772.05	753.54	TLS#12NL
16	609936.41	1327070.38	748.52	TLS#16NL
24	611518.28	1326546.56	772.97	TLS#24NL
26	611243.76	1326626.21	770.45	TLS#26NL
27	611045.95	1326598.27	770.81	TLS#27NL
28	610772.82	1326767.48	763.23	TLS#28NL
29	610497.07	1326753.15	757.53	TLS#29NL
31	610023.52	1326931.85	749.32	TLS#31NL
32	609683.75	1327066.96	748.05	TLS#32NL
50	610438.65	1326803.22	756.77	TLS#50NL
102	611714.31	1326322.55	779.54	TLS#102NL
104	611825.58	1326846.11	785.34	TLS#104NL
105	611672.25	1326804.09	777.77	TLS#105NL
106	611649.29	1326624.34	772.99	TLS#106NL
107	611066.93	1326750.80	767.28	TLS#107NL



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I, DAVID S. TURNER, AS A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF NORTH CAROLINA, HEREBY CERTIFY THAT THE DATA SHOWN ON THIS DRAWING, WAS OBTAINED UNDER MY SUPERVISION, IS AN ACCURATE AND COMPLETE REPRESENTATION OF WHAT WAS CONSTRUCTED IN THE FIELD, AND THAT THE PHYSICAL DIMENSIONS OR ELEVATIONS SHOWN THUS ARE AS-BUILT CONDITIONS EXCEPT WHERE OTHERWISE NOTED HEREON. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS 31st DAY OF MARCH, 2022.

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David S. Turner
DAVID S. TURNER, P.L.S. #L-4551



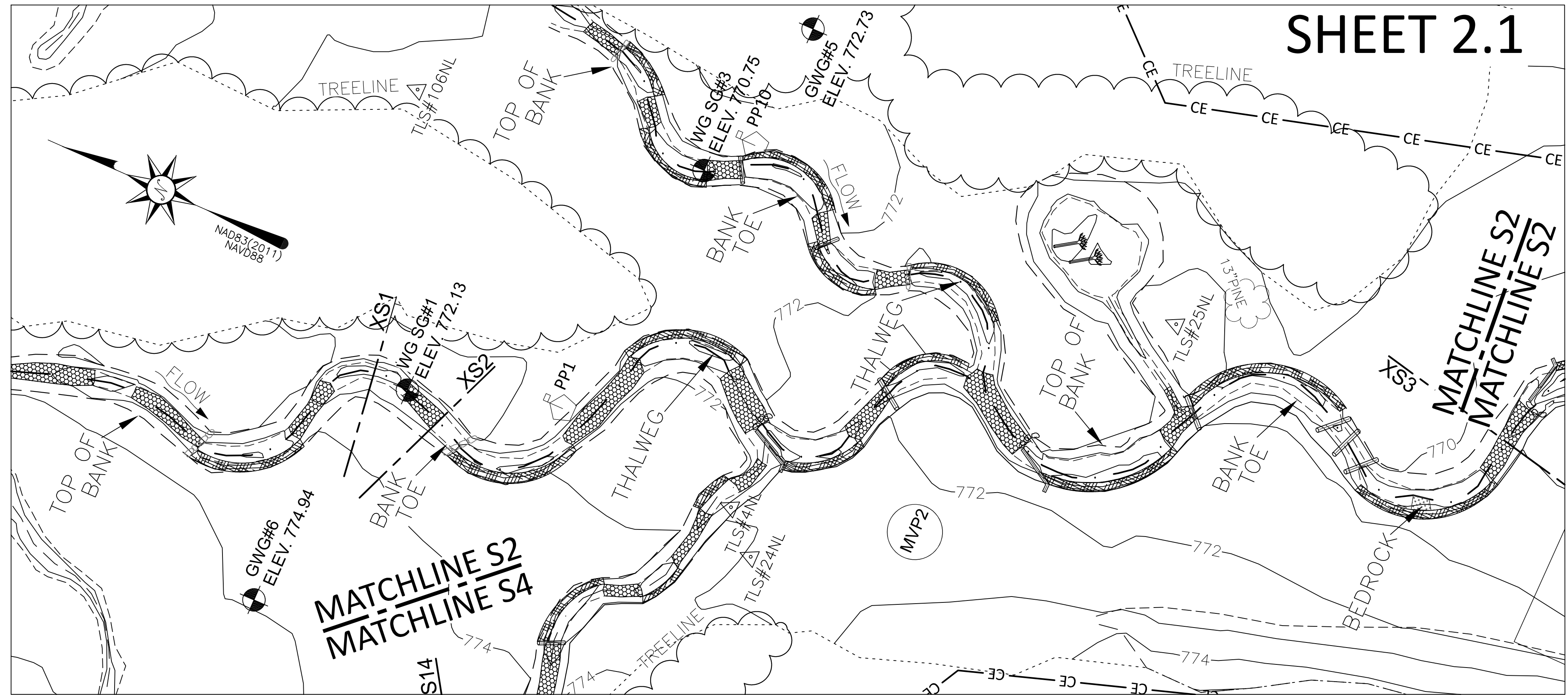
GENERAL NOTES:
1. SEE SHEET 1 FOR GENERAL NOTES

LEGEND:

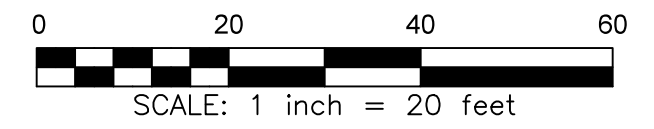
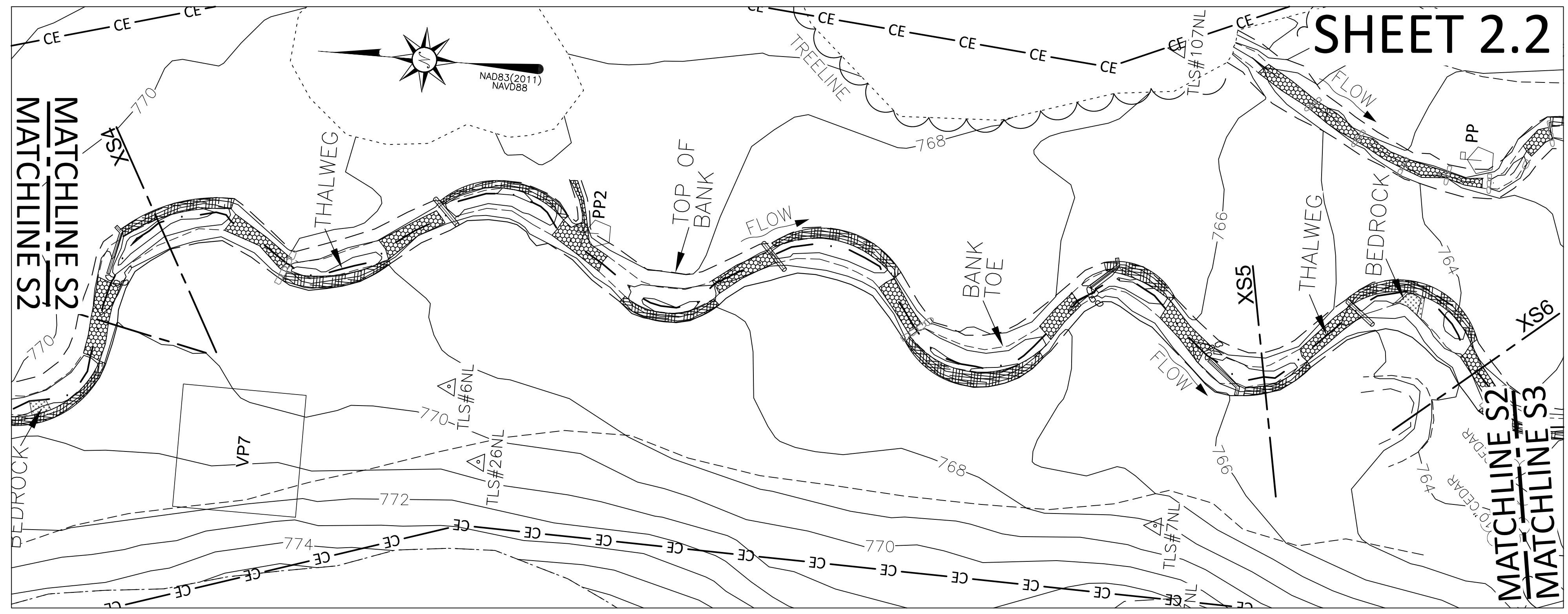
- THALWEG
- TOP OF BANK/TERRACE
- BANK TOE/TERRACE TOE
- AS-BUILT SURVEY LIMITS
- FARM PATH
- FENCELINE
- CONSERVATION EASEMENT
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- MONITORING WELL/GROUND WATER GAUGE
- PHOTO POINT
- VEGETATION PLOT/
MOVEABLE VEGETATION PLOT
- CONTROL POINT

CARPENTER BOTTOM MITIGATION SITE

SHEET 2.1



SHEET 2.2



THIS MAP IS NOT FOR RECORDATION, SALES, OR CONVEYANCES AND DOES NOT COMPLY WITH G.S. 47-30 MAPPING REQUIREMENTS.

REVISIONS, DATE AND INITIAL:

AS-BUILT SURVEY FOR:
CARPENTER BOTTOM MITIGATION SITE
CHERRYVILLE TOWNSHIP
LINCOLN TOWNSHIP
GASTON COUNTY
LINCOLN COUNTY
NORTH CAROLINA
NORTH CAROLINA

DATE: 8/24/2021
SURVEYED BY: DST/CPG/EHK
DRAWN BY: EGT/DST
REVIEWED BY: DST/EGT
PROJECT: 19-020
FILE: CARPENTER_BOTTOM_AB.DWG
SCALE: AS SHOWN

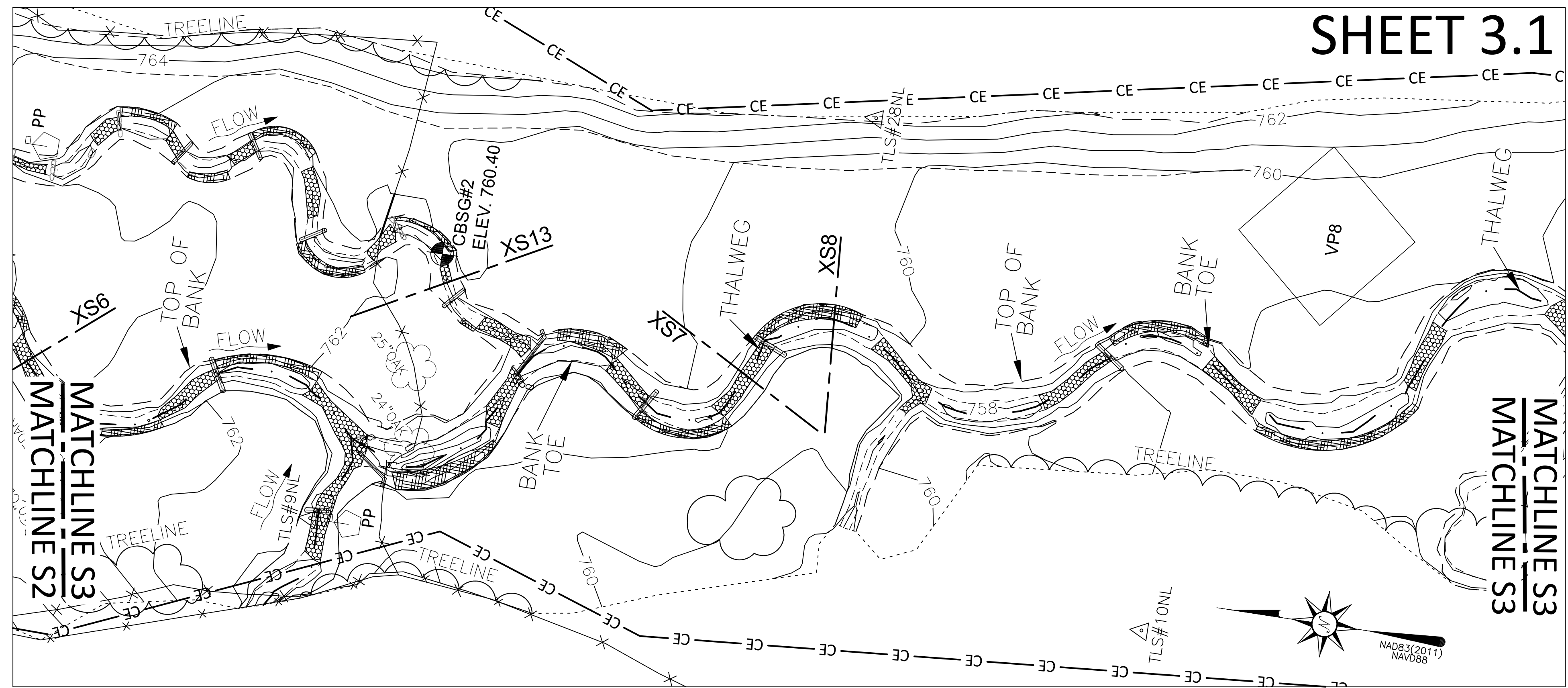
SHEET **2 of 4**

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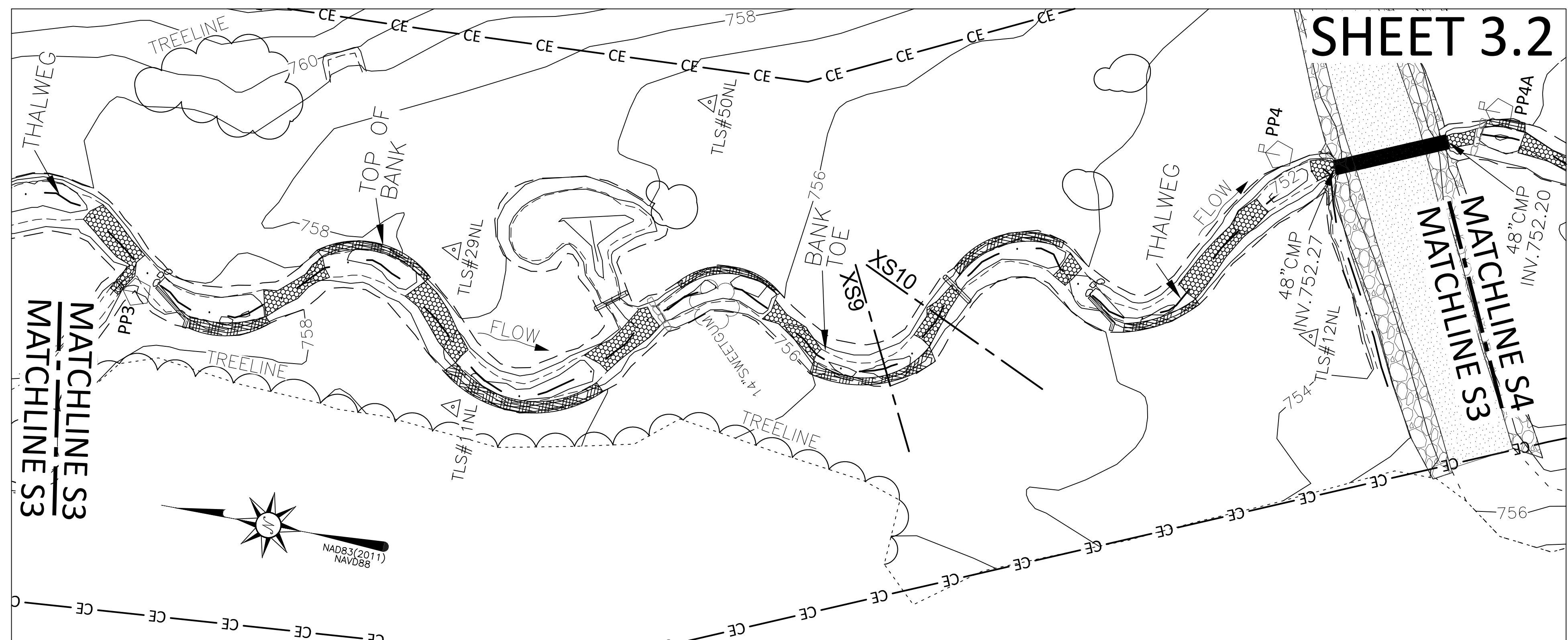


CARPENTER BOTTOM MITIGATION SITE

SHEET 3.1

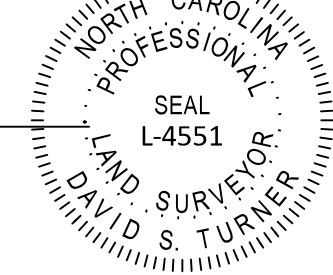


SHEET 3.2



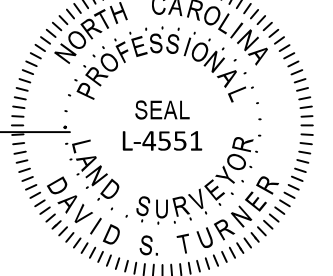
I, DAVID S. TURNER, AS A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF NORTH CAROLINA, HEREBY CERTIFY THAT THE DATA SHOWN ON THIS DRAWING, WAS OBTAINED UNDER MY SUPERVISION, IS AN ACCURATE AND COMPLETE REPRESENTATION OF WHAT WAS CONSTRUCTED IN THE FIELD, AND THAT THE PHYSICAL DIMENSIONS OR ELEVATIONS SHOWN THUS ARE AS-BUILT CONDITIONS EXCEPT WHERE OTHERWISE NOTED HEREON. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS 31st DAY OF MARCH, 2022.

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DAVID S. TURNER, P.L.S. #L-4551



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DAVID S. TURNER, P.L.S. #L-4551



GENERAL NOTES:
1. SEE SHEET 1 FOR GENERAL NOTES

LEGEND:

	THALWEG
	TOP OF BANK/TERRACE
	BANK TOE/TERRACE TOE
	AS-BUILT SURVEY LIMITS
	FARM PATH
	FENCELINE
	CONSERVATION EASEMENT
	CONTOURS
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	STREAM GAUGE
	MONITORING WELL/GROUND WATER GAUGE
	PHOTO POINT
	VEGETATION PLOT/
	MOVEABLE VEGETATION PLOT
	CONTROL POINT

REVISIONS, DATE AND INITIAL:

AS-BUILT SURVEY FOR:
CARPENTER BOTTOM MITIGATION SITE

CHERRYVILLE TOWNSHIP
LINCOLN COUNTY

GASTON COUNTY
LINCOLN COUNTY

NORTH CAROLINA
NORTH CAROLINA

DATE:	8/24/2021
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SHEET
3 of 4

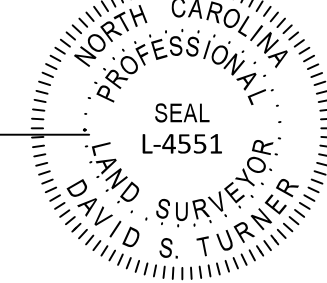
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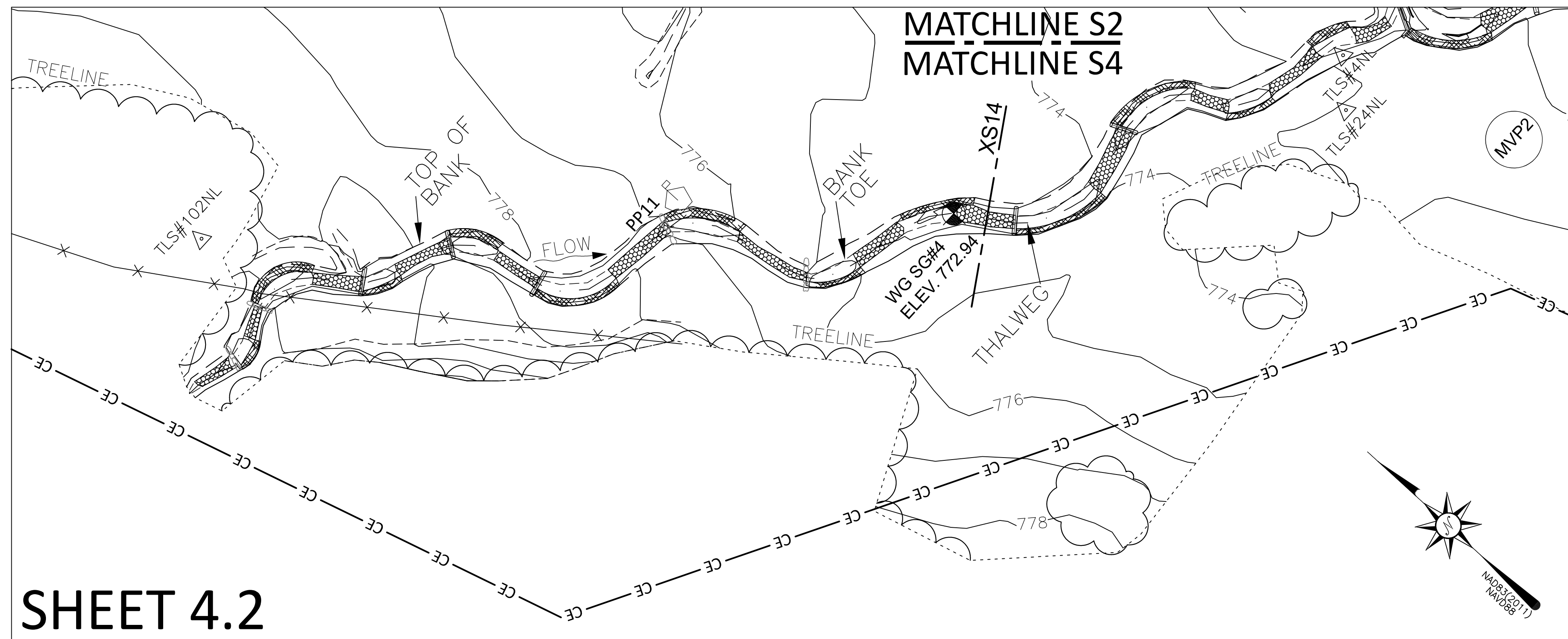
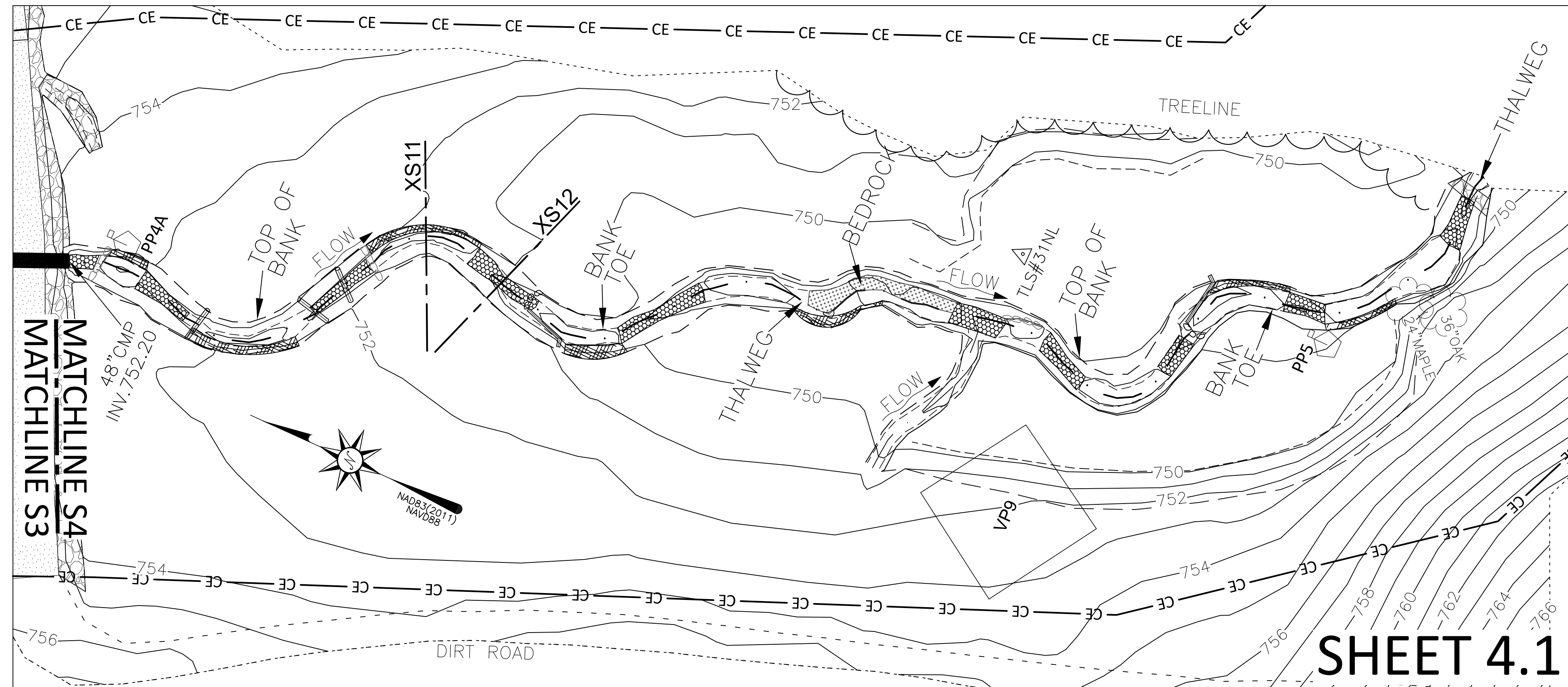
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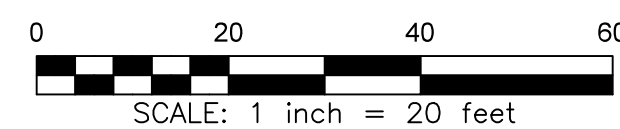
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CARPENTER BOTTOM MITIGATION SITE



LEGEND:

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