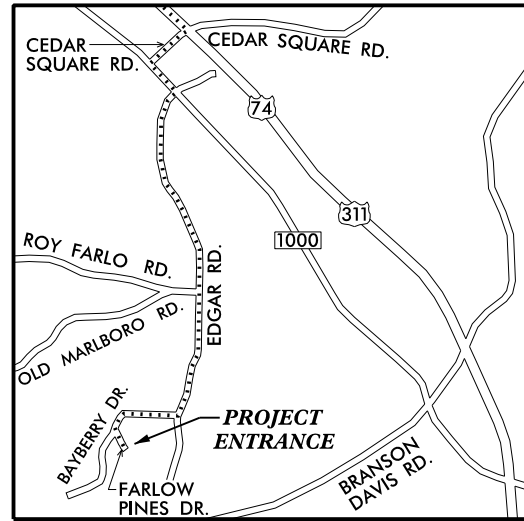


KCI JOB# : 20158591



VICINITY MAP
NOT TO SCALE

NCDEQ DIVISION OF MITIGATION SERVICES

CEDAR BRANCH STREAM RESTORATION SITE

RANDOLPH COUNTY, NORTH CAROLINA

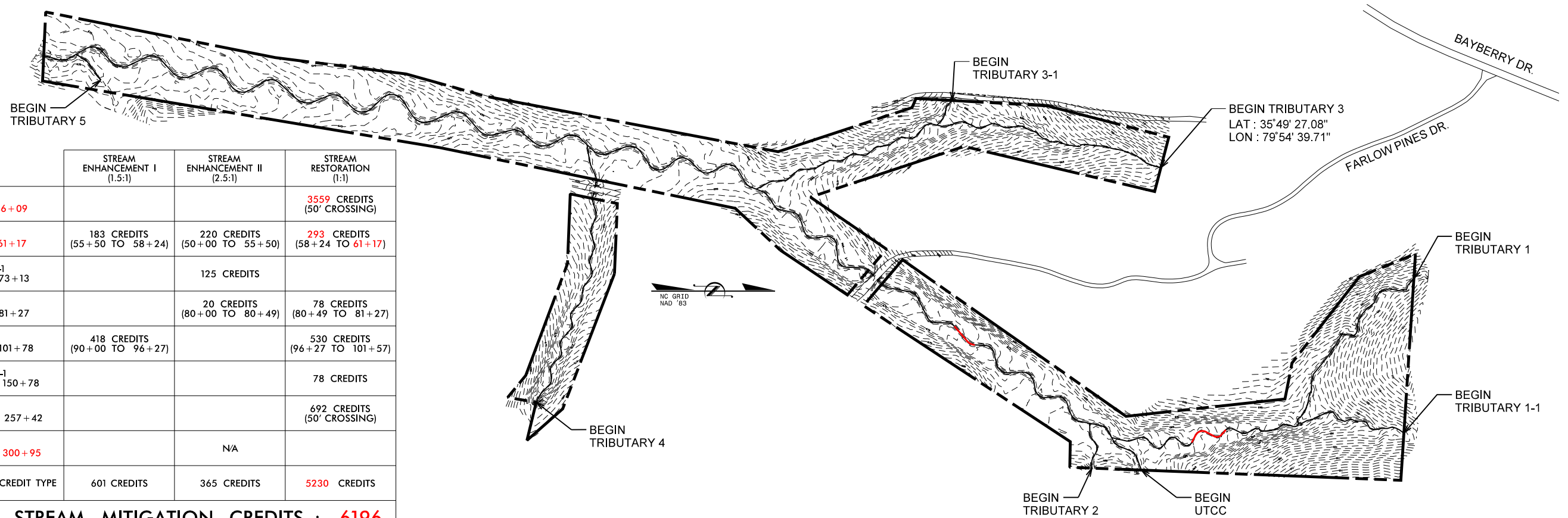
STATE	DMS PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
N.C.	97009	1	9

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 GENERAL NOTES & PROJECT LEGEND
- 3-8 SITE PLAN
- 9 PLANTING PLAN

AS-BUILT PLANS

NOTE:
NO MAJOR CHANGES WERE MADE TO
THE ORIGINAL CONSTRUCTION PLANS.



	STREAM ENHANCEMENT I (1.5:1)	STREAM ENHANCEMENT II (2.5:1)	STREAM RESTORATION (1:1)
UTCC 10+00 TO 46+09			3559 CREDITS (50' CROSSING)
TRIBUTARY 1 50+00 TO 61+17	183 CREDITS (55+50 TO 58+24)	220 CREDITS (50+00 TO 55+50)	293 CREDITS (58+24 TO 61+17)
TRIBUTARY 1-1 70+00 TO 73+13		125 CREDITS	
TRIBUTARY 2 80+00 TO 81+27		20 CREDITS (80+00 TO 80+49)	78 CREDITS (80+49 TO 81+27)
TRIBUTARY 3 90+00 TO 101+78	418 CREDITS (90+00 TO 96+27)		530 CREDITS (96+27 TO 101+57)
TRIBUTARY 3-1 150+00 TO 150+78			78 CREDITS
TRIBUTARY 4 250+00 TO 257+42			692 CREDITS (50' CROSSING)
TRIBUTARY 5 300+00 TO 300+95		N/A	
TOTALS PER CREDIT TYPE	601 CREDITS	365 CREDITS	5230 CREDITS

TOTAL STREAM MITIGATION CREDITS : 6196

DIRECTIONS TO SITE

From Raleigh, follow I-40 West. Merge left to take the I-85 South. Take exit 113B and follow signs for 74 East /US 311 South. Take exit 79 for Cedar Square Road. Take a right onto Cedar Square Rd and then a quick left onto State Road 1009 and then a quick right onto Edgar Rd. Follow Edgar Rd for 3 miles then take a right onto Mt. Olive Church Rd. Follow for about a half mile then take a left onto Farlow Pines Drive. The site will be at the end of the gravel road.

Prepared in the Office of:



4505 FALLS OF NEUSE ROAD, SUITE 400
RALEIGH, NORTH CAROLINA 27609

GARY M. MRYNCA, PE
PROJECT ENGINEER

ALEX FRENCH
PROJECT DESIGNER

Prepared for:



MATTHEW REID
DMS PROJECT MANAGER

LIN XU
DMS REVIEW COORDINATOR

PROJECT SURVEYOR

SIGNATURE:

P.E.

PROJECT ENGINEER



SIGNATURE:

P.E.

GENERAL NOTES:

THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT TRACTS. THE PARENT TRACT BOUNDARIES ADJACENT TO THIS EASEMENT ARE NOT CHANGED BY THIS PLAT.

DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.

THE BASIS OF THE MERIDIANS AND COORDINATES FOR THIS PLAT IS THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD 83), BASED ON DIFFERENTIAL GPS OBSERVATIONS. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.

NO UNDERGROUND UTILITY LOCATING PERFORMED DURING THE COURSE OF THIS SURVEY.

CONTROL POINTS

POINT	NORTHING	EASTING	ELEV
KCI#5	755366.41	1730226.86	667.68
KCI#10	756707.20	1730478.67	711.23
KCI#11	756146.00	1730544.57	694.53
KCI#12	756494.18	1730600.11	692.08
KCI#13	756406.21	1730654.21	694.70
KCI#14	756110.12	1730661.90	680.21
KCI#15	755981.55	1730569.27	680.73
KCI#16	755829.59	1730478.27	675.43
KCI#60	753336.65	1729563.95	635.82
KCI#61	753761.53	1729675.94	641.03
KCI#62	755625.54	1729907.38	687.14
KCI#63	755470.80	1729952.13	680.24
KCI#64	755119.17	1730063.07	663.17
KCI#65	753280.38	1729730.88	638.89
KCI#66	754260.03	1729739.70	650.45



PROJECT ENGINEER

NO.	DATE	REVISIONS



PROJECT SURVEYOR



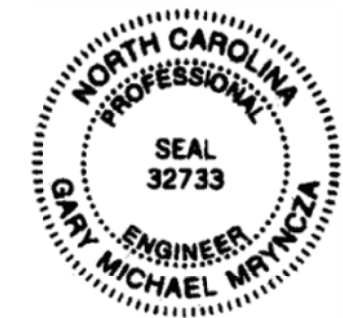
PROJECT LEGEND:

- New Thalweg w/Approximate Bankfull Limits
- Step Pool
- Riffle Enhancement
- Riffle Grade Control
- Riffle Cascade
- Live Lift
- Filled Channel
- Tree Line
- Minor Contour Line
- Major Contour Line

CEDAR BRANCH
STREAM RESTORATION SITE
AS-BUILT PLANS
RANDOLPH COUNTY, NORTH CAROLINA

DATE: JUNE 2018
SCALE: N.T.S.

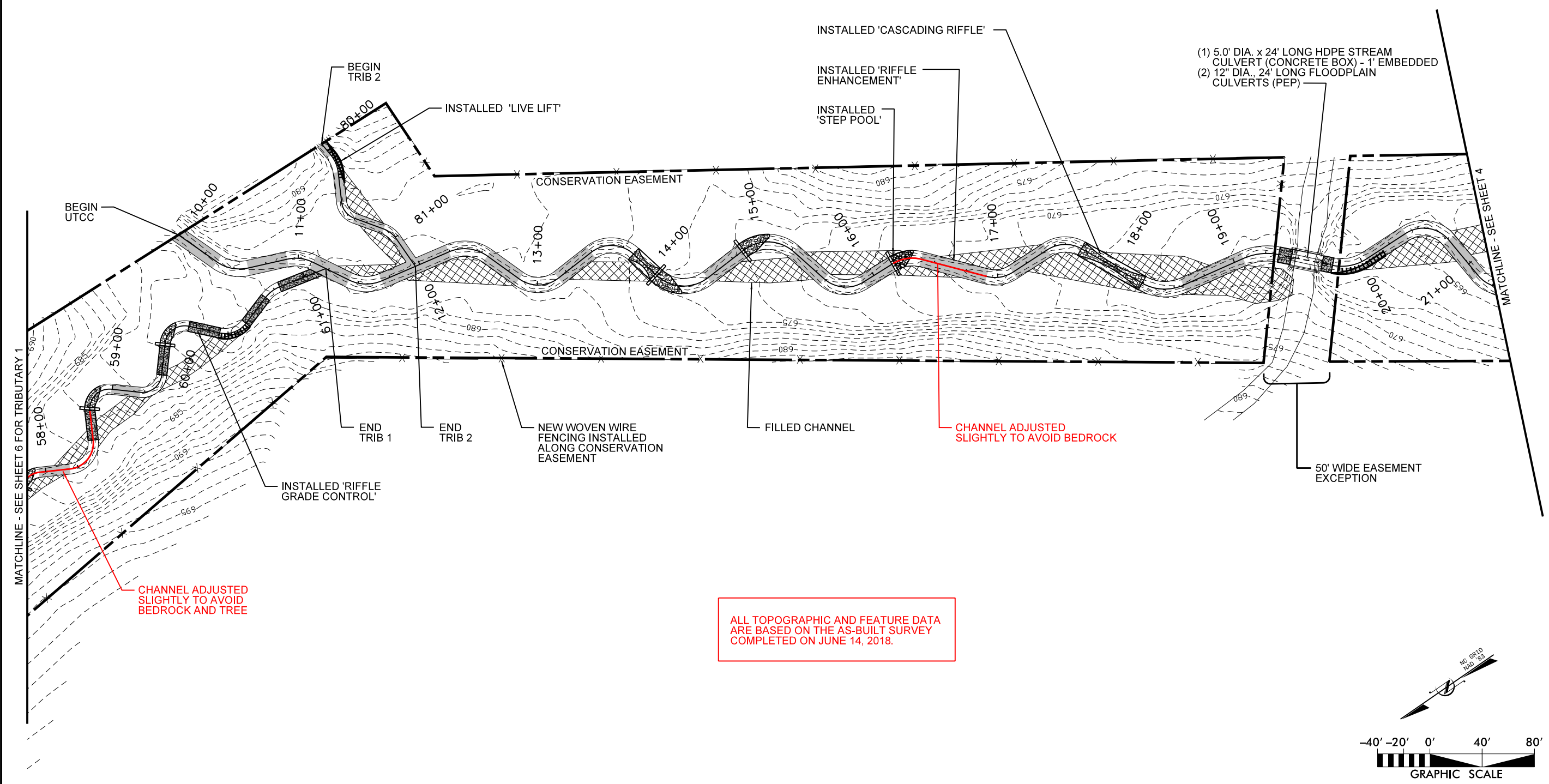
GENERAL NOTES & PROJECT LEGEND



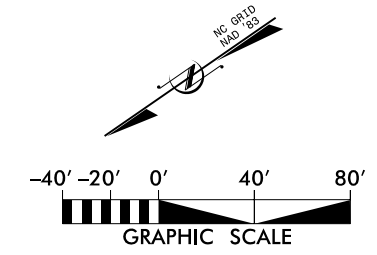
PROJECT SURVEYOR

PROJECT ENGINEER

NO.	DATE	REVISIONS



ALL TOPOGRAPHIC AND FEATURE DATA ARE BASED ON THE AS-BUILT SURVEY COMPLETED ON JUNE 14, 2018.



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 ASSOCIATES OF NC
 ENGINEERS • PLANNERS • SCIENTISTS
 4505 FALLS OF NEUSE ROAD, SUITE 400
 RALEIGH, NORTH CAROLINA 27609

CEDAR BRANCH
 STREAM RESTORATION SITE
AS-BUILT PLANS
 RANDOLPH COUNTY, NORTH CAROLINA

DATE: JUNE 2018
 SCALE: GRAPHIC
 SITE PLAN
 REACH: UTCC
 SHEET 3 OF 9



PROJECT ENGINEER

PROJECT SURVEYOR

NO.	DATE	REVISIONS

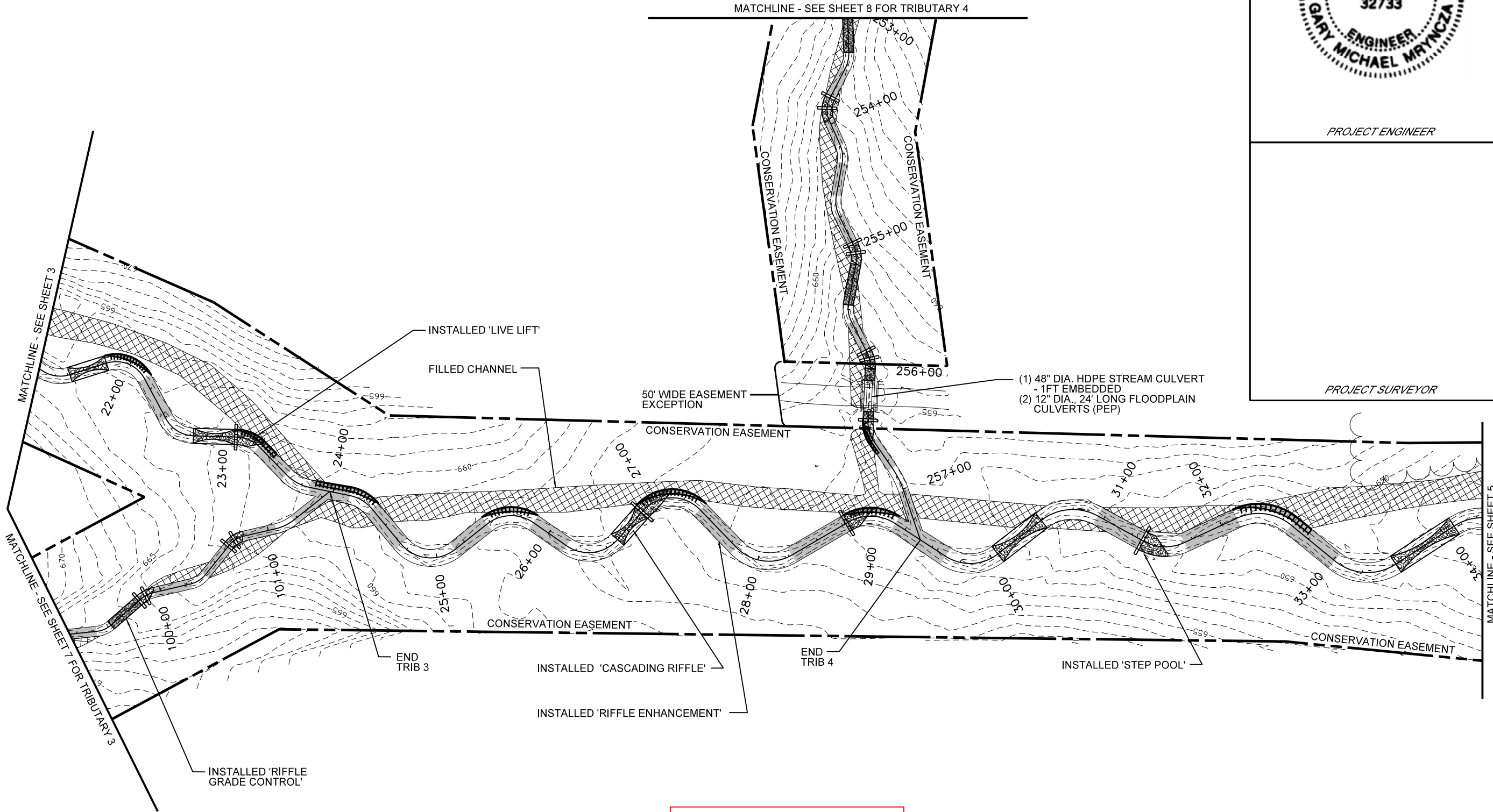


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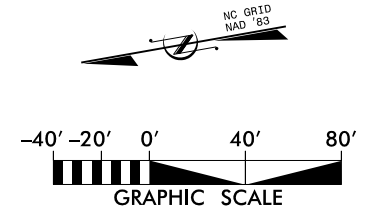
CEDAR BRANCH
STREAM RESTORATION SITE
AS-BUILT PLANS
RANDOLPH COUNTY, NORTH CAROLINA

DATE: JUNE 2018
SCALE: GRAPHIC
SITE PLAN
REACH:
UTCC
SHEET 4 OF 9

MATCHLINE - SEE SHEET 8 FOR TRIBUTARY 4



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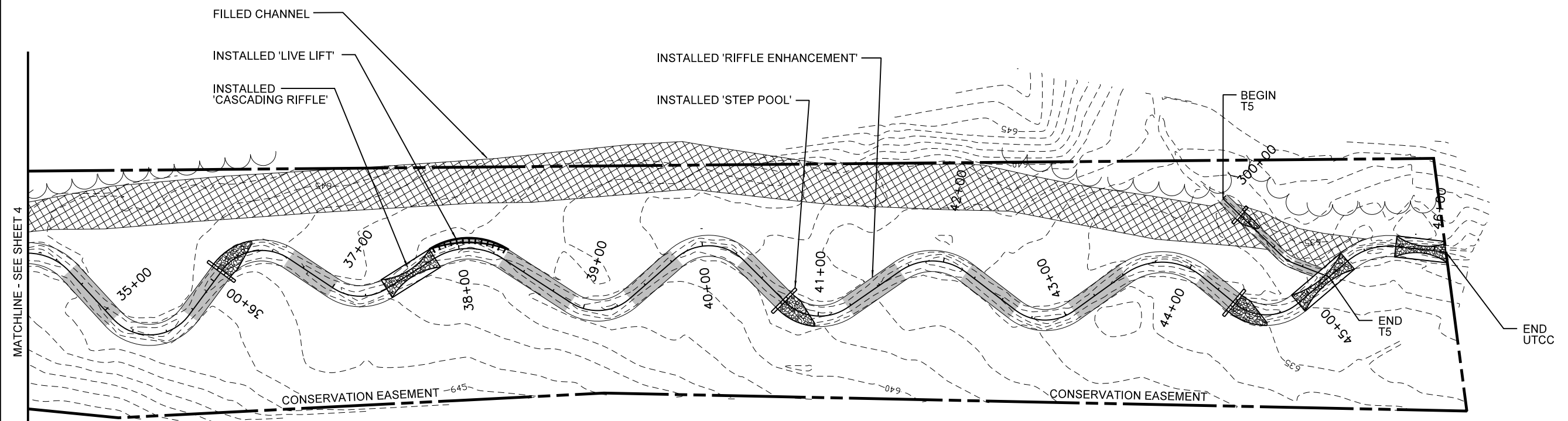




PROJECT SURVEYOR

PROJECT ENGINEER

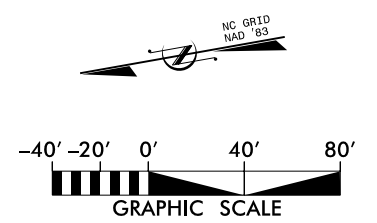
NO.	DATE	REVISIONS



ALL TOPOGRAPHIC AND FEATURE DATA ARE BASED ON THE AS-BUILT SURVEY COMPLETED ON JUNE 14, 2018.



CEDAR BRANCH
STREAM RESTORATION SITE
AS-BUILT PLANS
RANDOLPH COUNTY, NORTH CAROLINA



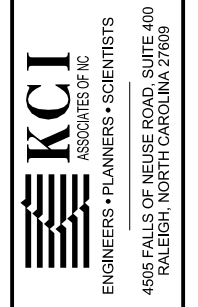
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SITE PLAN
REACH: UTCC
SHEET 5 OF 9



PROJECT SURVEYOR

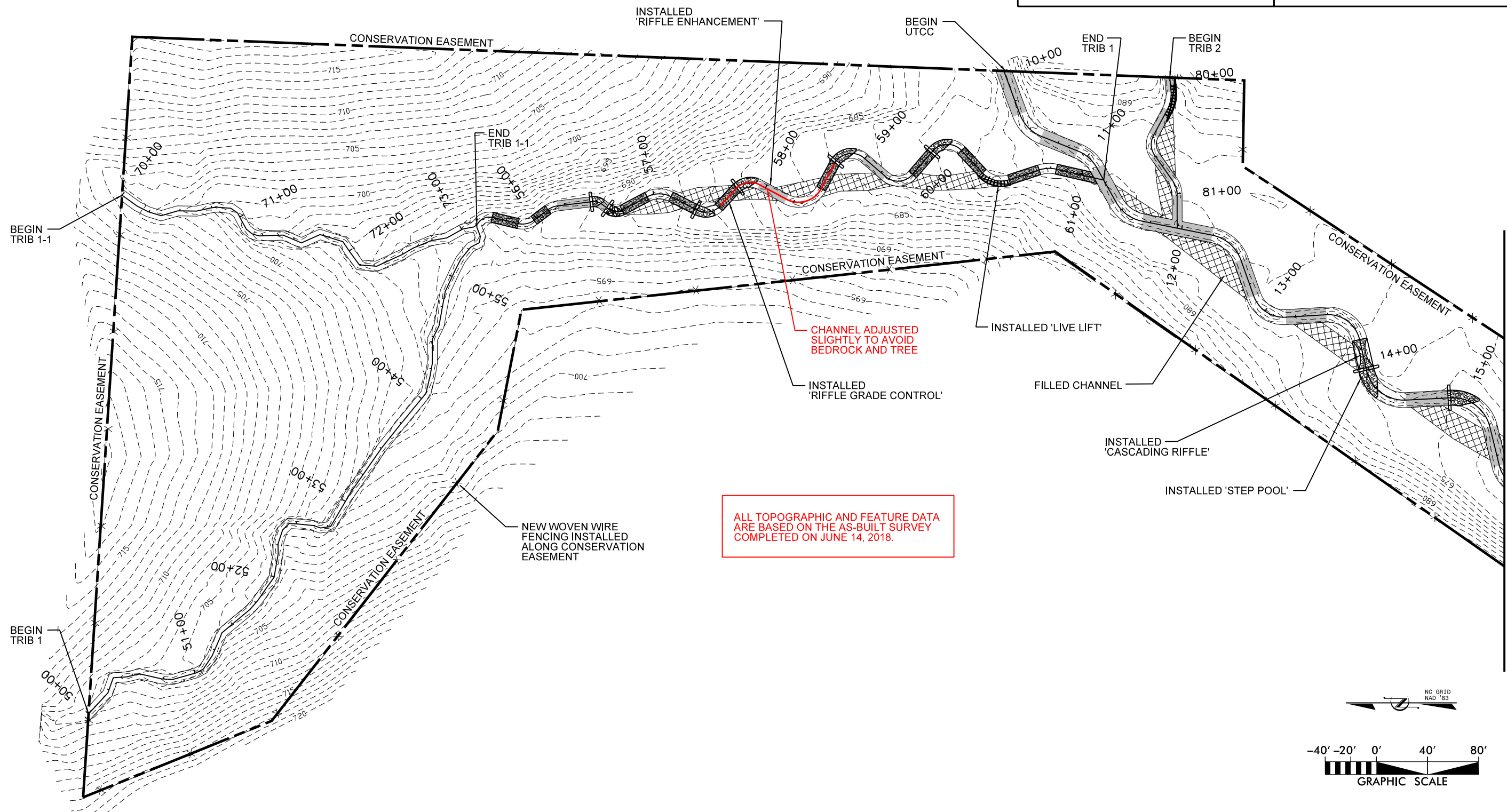
PROJECT ENGINEER

NO.	DATE	REVISIONS

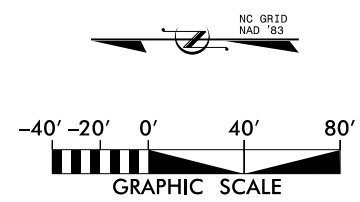


CEDAR BRANCH
STREAM RESTORATION SITE
AS-BUILT PLANS
RANDOLPH COUNTY, NORTH CAROLINA

DATE: JUNE 2018
SCALE: GRAPHIC
SITE PLAN
REACH:
TRIB 1 & 1-1
SHEET 6 OF 9



ALL TOPOGRAPHIC AND FEATURE DATA ARE BASED ON THE AS-BUILT SURVEY COMPLETED ON JUNE 14, 2018.



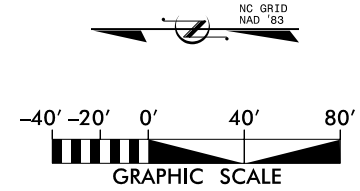
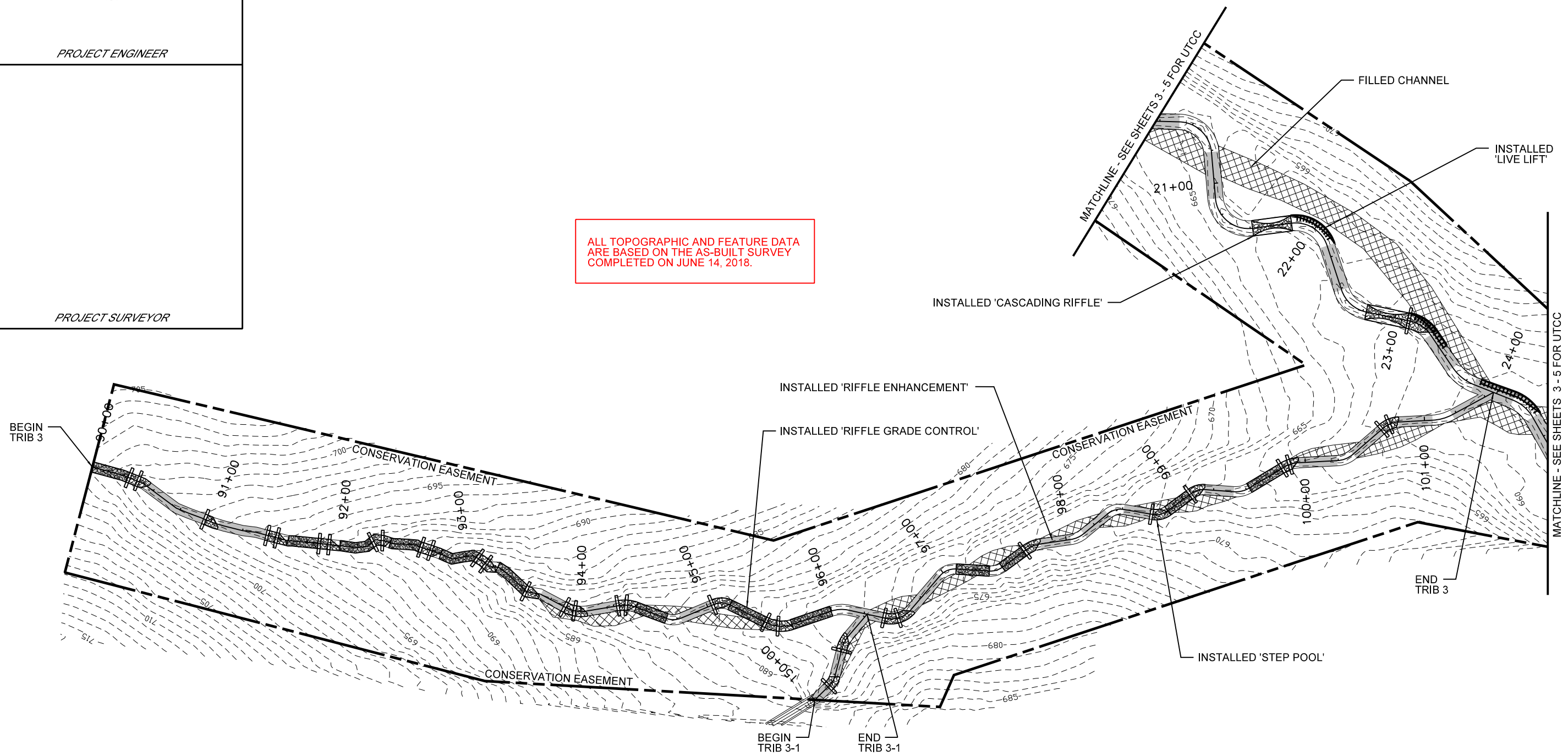
MATCHLINE - SEE SHEETS 3 - 5 FOR UTCC



PROJECT ENGINEER

PROJECT SURVEYOR

ALL TOPOGRAPHIC AND FEATURE DATA ARE BASED ON THE AS-BUILT SURVEY COMPLETED ON JUNE 14, 2018.



NO.	DATE	REVISIONS



CEDAR BRANCH
STREAM RESTORATION SITE
AS-BUILT PLANS
RANDOLPH COUNTY, NORTH CAROLINA

DATE: JUNE 2018
SCALE: GRAPHIC
SITE PLAN
REACH:
TRIB 3 & 3-1
SHEET 7 OF 9



PROJECT ENGINEER

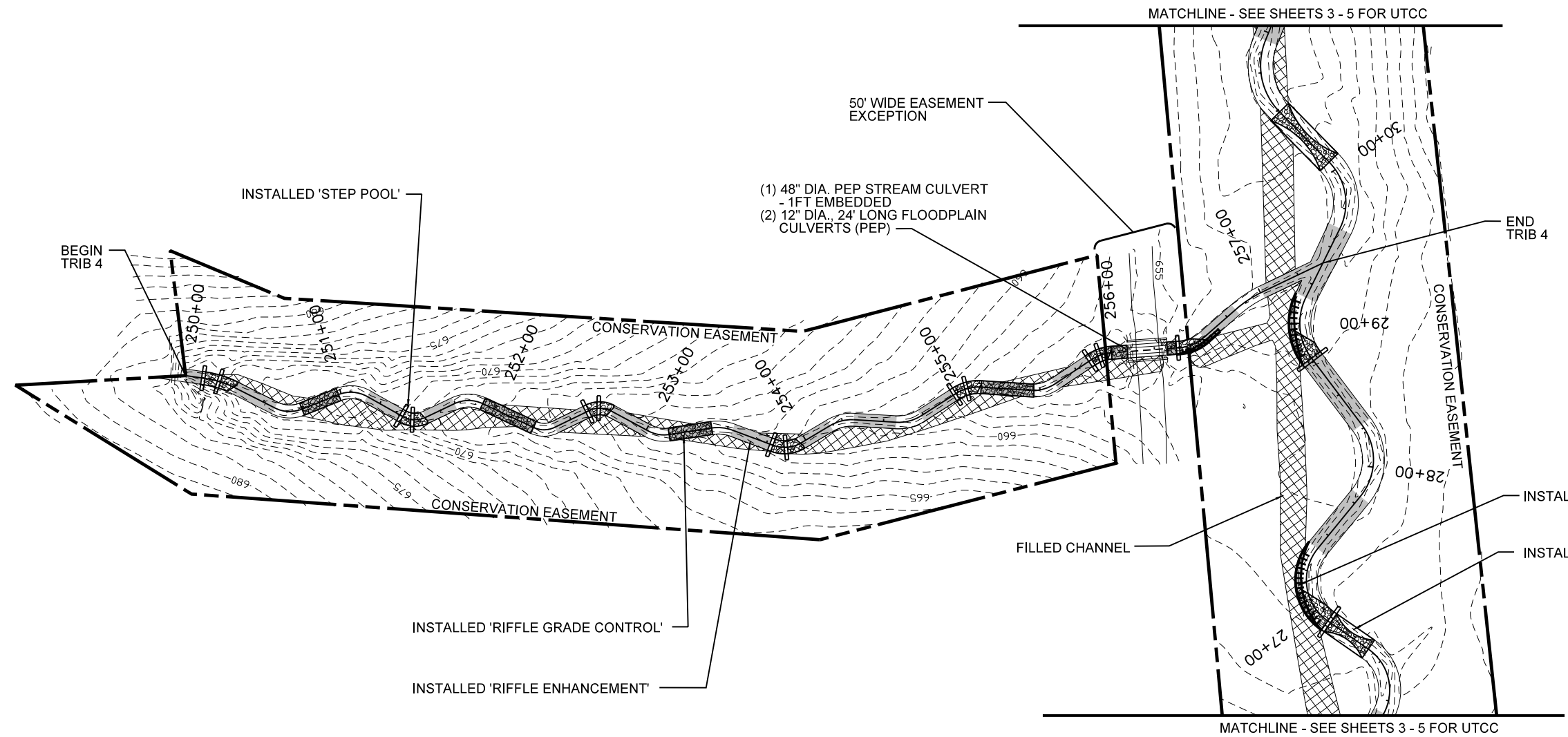
PROJECT SURVEYOR

NO.	DATE	DESCRIPTION	BY

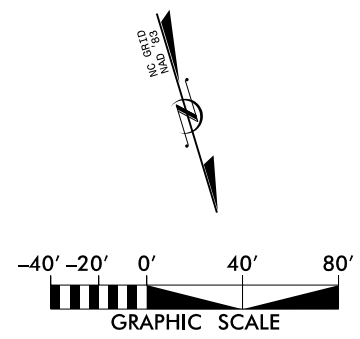


CEDAR BRANCH
STREAM RESTORATION SITE
AS-BUILT PLANS
RANDOLPH COUNTY, NORTH CAROLINA

DATE: JUNE 2018
SCALE: GRAPHIC
SITE PLAN
REACH:
TRIB 4
SHEET 8 OF 9



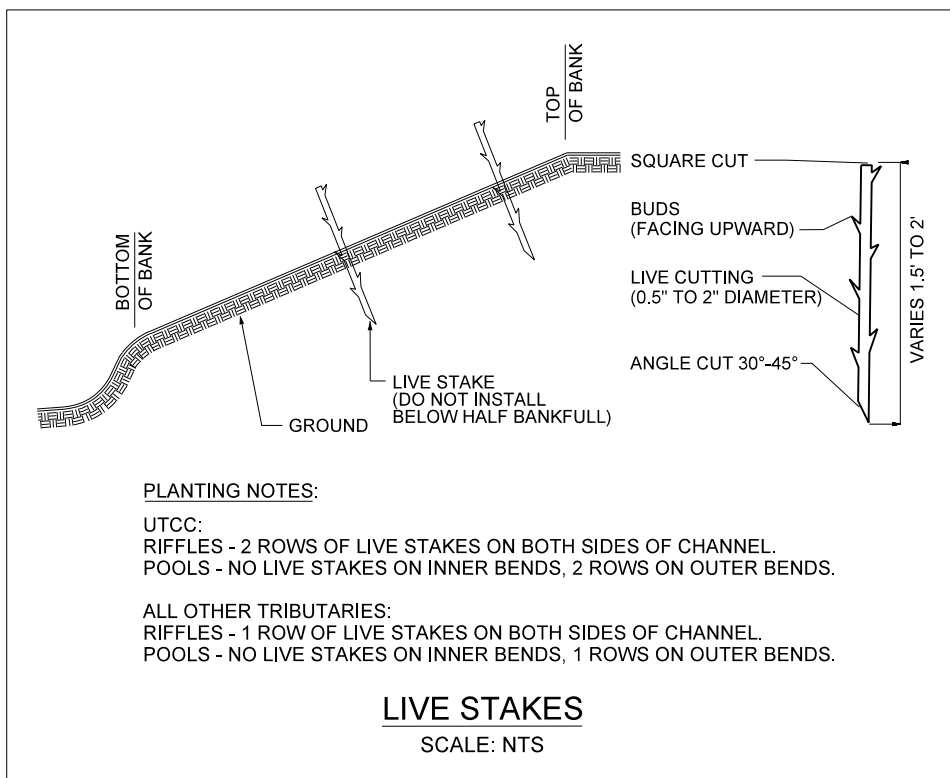
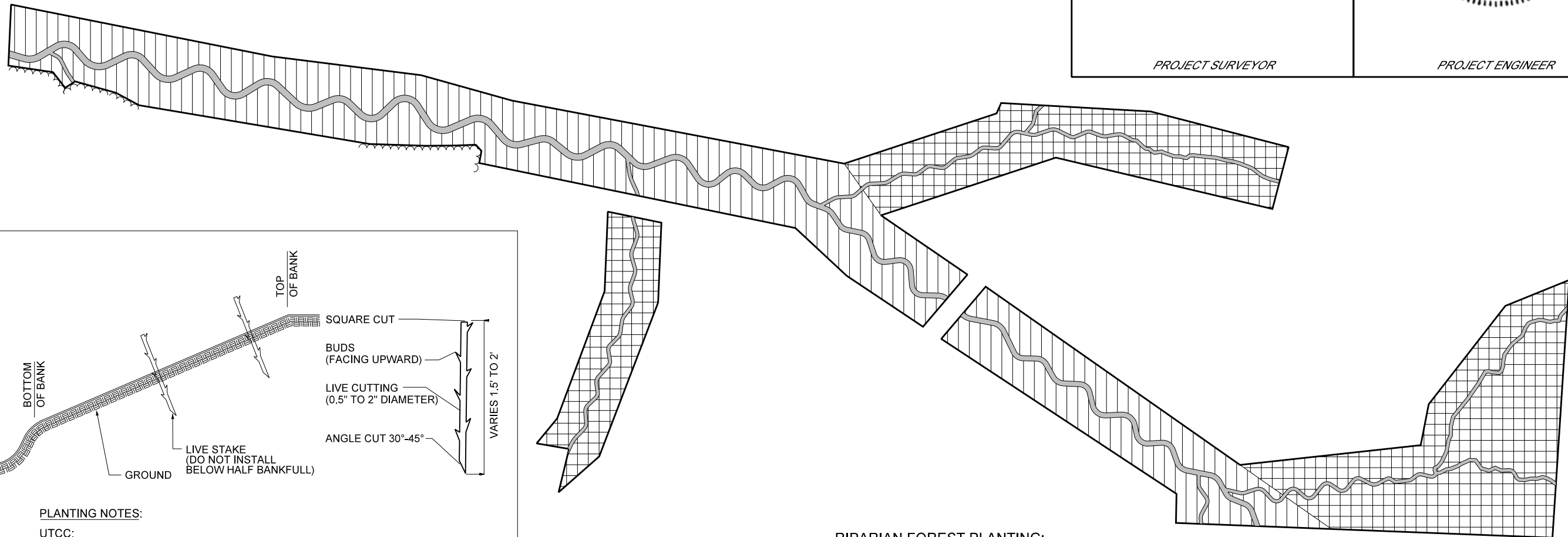
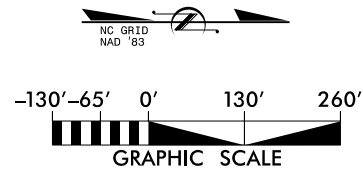
ALL TOPOGRAPHIC AND FEATURE DATA ARE BASED ON THE AS-BUILT SURVEY COMPLETED ON JUNE 14, 2018.





PROJECT SURVEYOR

PROJECT ENGINEER



PLANTING NOTES:

UTCC:
RIFFLES - 2 ROWS OF LIVE STAKES ON BOTH SIDES OF CHANNEL.
POOLS - NO LIVE STAKES ON INNER BENDS, 2 ROWS ON OUTER BENDS.

ALL OTHER TRIBUTARIES:
RIFFLES - 1 ROW OF LIVE STAKES ON BOTH SIDES OF CHANNEL.
POOLS - NO LIVE STAKES ON INNER BENDS, 1 ROWS ON OUTER BENDS.

RIPARIAN FOREST PLANTING:

PLANTING ZONE 1 = 10.5 ACRES
12" - 18" BARE ROOT MATERIAL
968 STEMS/ACRE (9' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	STATUS	% OF TOTAL	# OF PLANTS
RIVER BIRCH	BETULA NIGRA	FACW	20	2100
GREEN ASH	FRAXINUS PENNSYLVANICA	FACW	20	2100
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW	20	2100
WILLOW OAK	QUERCUS PHELLOS	FAC	10	1050
AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	FACW	20	2100
YELLOW POPLAR	LIRIODENDRON TULIPIFERA	FACU	10	1050
				10,500

PLANTING ZONE 2 = 9.1 ACRES
12" - 18" BARE ROOT MATERIAL
968 STEMS/ACRE (9' X 5' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	STATUS	% OF TOTAL	# OF PLANTS
YELLOW POPLAR	LIRIODENDRON TULIPIFERA	FACU	20	1800
SOUTHERN RED OAK	QUERCUS FALCATA	FACU	25	2200
WILLOW OAK	QUERCUS PHELLOS	FAC	20	1800
WHITE OAK	QUERCUS ALBA	FACU	20	1800
AMERICAN PERSIMMON	DIOSPYROS VIRGINIANA	FAC	8	700
PIN OAK	QUERCUS PALUSTRIS	FACW	7	600
				8,900

STREAM ZONE :

STREAM ZONE
LIVE STAKES: 1.5' TO 2' LENGTHS, 1/2" TO 2" DIAMETER,
PLANT AT 3' SPACING, RANDOM SPECIES PLACEMENT.

COMMON NAME	SCIENTIFIC NAME
BLACK WILLOW	SALIX NIGRA
SILKY WILLOW	SALIX SERICEA
SILKY DOGWOOD	CORNUS AMOMUM

DATE	DESCRIPTION	BY	DATE



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CEDAR BRANCH
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PLANTING PLAN

SHEET 9 OF 9