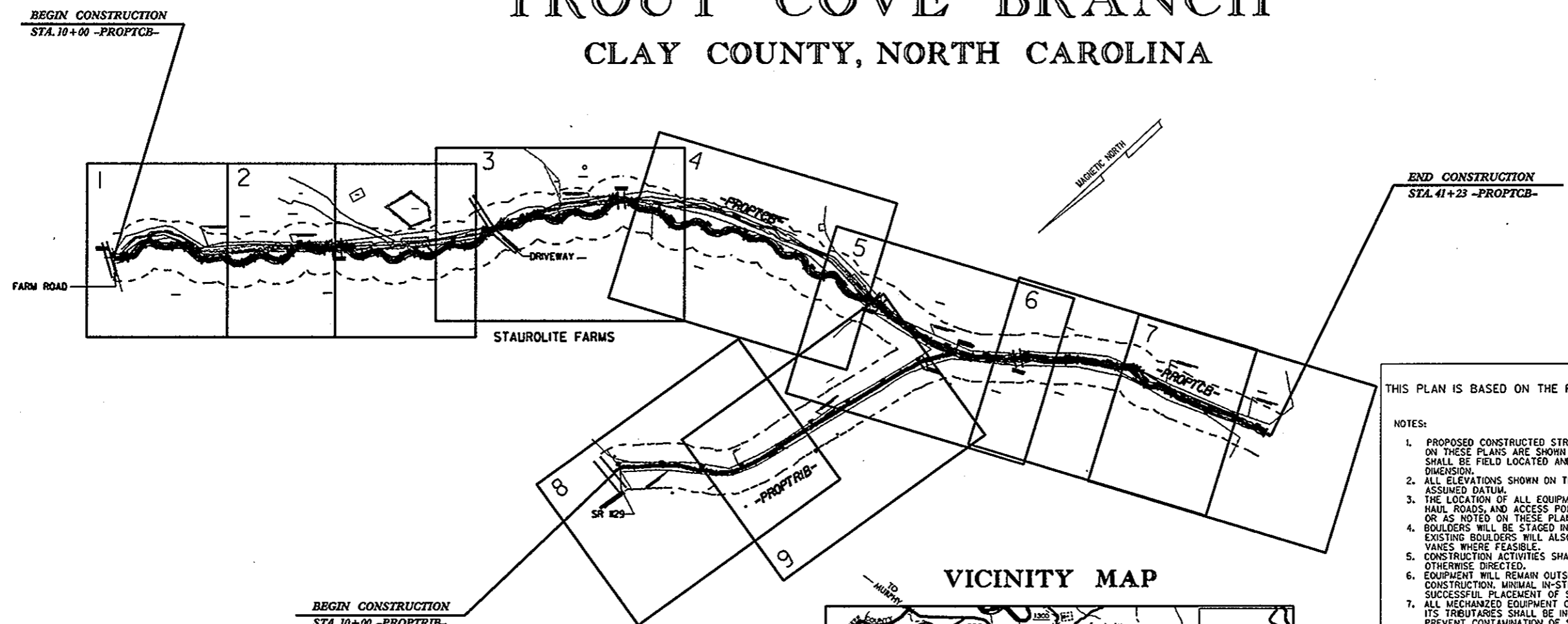


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IN CONJUNCTION WITH
THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

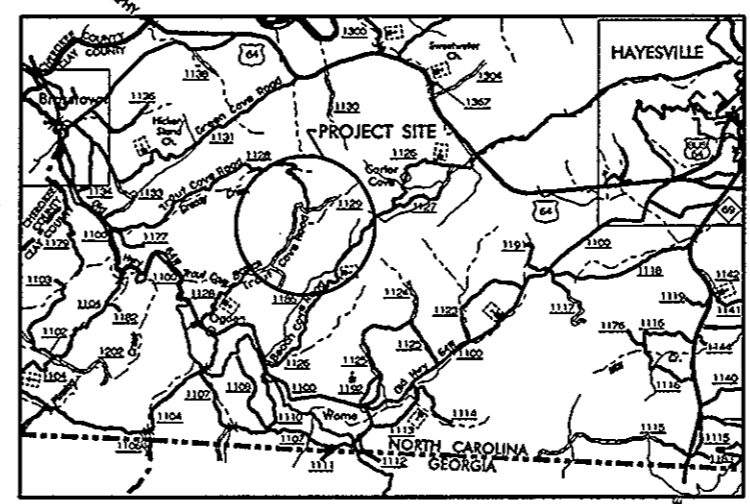
NATURAL CHANNEL DESIGN STREAM RESTORATION PROJECT
TROUT COVE BRANCH
CLAY COUNTY, NORTH CAROLINA



THIS PLAN IS BASED ON THE PRINCIPLES OF NATURAL CHANNEL DESIGN

- NOTES:
1. PROPOSED CONSTRUCTED STREAM FEATURES AND STRUCTURES SHOWN ON THESE PLANS ARE SHOWN IN THEIR APPROXIMATE LOCATION AND SHALL BE FIELD LOCATED AND DIMENSIONED TO INSURE PROPER CHANNEL DIMENSION.
 2. ALL ELEVATIONS SHOWN ON THESE PLANS ARE REFERENCED TO AN ASSUMED DATUM.
 3. THE LOCATION OF ALL EQUIPMENT AND MATERIAL STAGING AREAS, HAUL ROADS, AND ACCESS POINTS TO BE COORDINATED BY ENGINEER, OR AS NOTED ON THESE PLANS.
 4. BOULDERS WILL BE STAGED IN CONSTRUCTION AREAS UPON DELIVERY. EXISTING BOULDERS WILL ALSO BE UTILIZED IN FORMATION OF ROCK VANES WHERE FEASIBLE.
 5. CONSTRUCTION ACTIVITIES SHALL PROGRESS DOWNSTREAM, UNLESS OTHERWISE DIRECTED.
 6. EQUIPMENT WILL REMAIN OUTSIDE OF CHANNEL FOR THE MAJORITY OF CONSTRUCTION. MINIMAL IN-STREAM WORK IS ANTICIPATED FOR SUCCESSFUL PLACEMENT OF STRUCTURES.
 7. ALL MECHANIZED EQUIPMENT OPERATED IN OR NEAR THE STREAM OR ITS TRIBUTARIES SHALL BE INSPECTED REGULARLY AND MAINTAINED TO PREVENT CONTAMINATION OF STREAM WATERS FROM FUELS, LUBRICANTS, HYDRAULIC FLUIDS, OR OTHER TOXIC MATERIALS. ANY EQUIPMENT REPAIRS, MAINTENANCE, OR REFUELING ACTIVITIES SHALL NOT BE DONE WHILE THE EQUIPMENT IS IN THE STREAM OR ITS TRIBUTARIES.
 8. CONTRACTOR TO DISPOSE OF ALL WASTE MATERIAL OFF-SITE AND IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. EXCESS SOIL TO BE DISPOSED OF PER ENGINEER'S INSTRUCTIONS.
 9. TEMPORARY LIVESTOCK FENCING TO BE INSTALLED PRIOR TO CONSTRUCTION AS DIRECTED BY ENGINEER AND PER NRCS STANDARD DETAILS. ALL ACCESS GATES ARE TO BE LOCKED AND SECURED IMMEDIATELY AFTER INGRESS/EGRESS TO AVOID LIVESTOCK ESCAPE.
 10. ALL EXISTING FENCING TO BE REMOVED PRIOR TO THE INSTALLATION OF THE APPROPRIATE TEMPORARY FENCING.
 11. ALL ON-SITE TREES REMOVED DURING THE STREAM RESTORATION CONSTRUCTION TO BE USED ON-SITE AS ROOTWADS, WHERE FEASIBLE.
 12. ALL ROOTWADS SHALL BE INSTALLED BY DRIVING THEM INTO THE STREAMBANK, AS OPPOSED TO INSTALLATION THROUGH EXCAVATION OF THE STREAMBANK, WHERE FEASIBLE.
 13. ALL DISTURBED AREAS TO BE RESEEDDED IMMEDIATELY AS SPECIFIED ON THE SEEDING SCHEDULE.
 14. APPLY SEED AND EROSION CONTROL FIBER MATTING TO BANKFULL BENCH AND CUT BANKS DAILY AS EXCAVATION PROGRESSES. EROSION CONTROL FIBER MATTING WILL BE KEYED INTO THE TOP OF SLOPE TO PREVENT UNDERCUTTING FROM SHEET FLOW. ADDITIONAL SILT FENCING WILL BE INSTALLED AS APPLICABLE.
 15. UNLESS OTHERWISE DIRECTED BY NRCS, A 50-FOOT MINIMUM WIDTH PERMANENTLY VEGETATED BUFFER SHALL BE PLANTED.
 16. VEGETATION REPLACEMENT WILL PROCEED FROM DECEMBER THROUGH MARCH. LIVE STAKING WILL BE IMPLEMENTED USING ONLY NATIVE SPECIES (BLACK WILLOW [SALIX NIGRAL], SILKY DOGWOOD [CORNUS AMOMUM], TAG ALDER [ALNUS SERRULATA]), AND OTHERS, AS APPROPRIATE). RECOMMEND THAT ALL CUTTINGS BE SOAKED IN WATER FOR TEN DAYS IMMEDIATELY PRIOR TO PLANTING.
 17. PERMANENT LIVESTOCK-PROOF FENCING SHALL BE INSTALLED TO PROTECT PERMANENT VEGETATED BUFFER PER NRCS DIRECTION AFTER STREAM CONSTRUCTION IS COMPLETED.

VICINITY MAP



BEGIN CONSTRUCTION
STA. 10+00 -PROPTTRIB-

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LEGEND

ROADS & RELATED ITEMS

Prop. Woven Wire Fence	
Prop. Chain Link Fence	
Prop. Barbed Wire Fence	
Existing Fence	
Exist. Guardrail	
Prop. Guardrail	
Equality Symbol	

RIGHT OF WAY

Right of Way Marker	
Exist. Right of Way Line w/Marker	
Prop. Right of Way Line (by others)	
Prop. Right of Way Line (by contract)	
Exist. Control of Access Line	
Prop. Control of Access Line	
Exist. Easement Line	
Prop. Temp. Construction Easement Line	
Prop. Temp. Drainage Easement Line	
Prop. Perm. Drainage Easement Line	

HYDROLOGY

Stream or Body of Water	
Flow Arrow	
Disappearing Stream	
Spring	
Shoreline	
Falls, Rapids	

UTILITIES

Exist. Pole	
Exist. Power Pole	
Exist. Telephone Pole	
Exist. Joint Use Pole	
Telephone Pedestal	
Cable TV Pedestal	
Hydrant	
Exist. Water Valve	
Sewer Clean Out	
Power Manhole	
Water Manhole	
Light Pole	
H-Frame Pole	
Power Line Tower	
Pole with Base	
Gas Valve	
Gas Meter	
Telephone Manhole	
Power Transformer	
Sanitary Sewer Manhole	
Storm Sewer Manhole	
Tank; Water, Gas, Oil	
Recorded Water Line	
Sanitary Sewer	
Recorded Sanitary Sewer Force Main	
Recorded Gas Line	
Storm Sewer	
Recorded Power Line	
Recorded Telephone Cable	
Recorded UG Telephone Conduit	
Unknown Utility	
Recorded Television Cable	
Recorded Fiber Optics Cable	
Exist. Water Meter	
Exist. Overhead Power Line	
Exist. Underground Utilities	

STRUCTURES

MAJOR	
Bridge, Tunnel, or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR	
Head & End Wall	
Pipe Culvert	
Footbridge	
Drainage Boxes	

TOPOGRAPHY

Loose Surface	
Hard Surface	
Change in Road Surface	
Curb	
Right of Way Symbol	
Guard Post	
Paved Walk	
Bridge	
Box Culvert or Tunnel	
Ferry	
Culvert	
Footbridge	
Trail, Footpath	

STREAM IMPROVEMENTS

Approximate Fill In Existing Channel	
Approx. Location of Proposed Rock Cross Vane (See Detail)	
Existing Thalweg	
Existing Top of Bank	
Proposed Thalweg	
Proposed Bankfull	
Approx. Location of Proposed Rootwad (See Detail)	
Proposed 50' Buffer Boundary	
Proposed Oxbow Pond/Wetland (See Detail)	

BOUNDARIES & PROPERTIES

Property Line	
Property Line Symbol	
Exist. Iron Pin	
Property Corner	
Property Monument	
Property Number	
Parcel Number	
Fence Line	
Existing Wetland Boundaries	
Proposed Wetland Boundaries	
Buildings	
Foundations	
Gate	
Sign	
Well	

VEGETATION

Existing Woods Line	
Existing Tree	
Existing Maple	
Existing Black Walnut	
Existing Dead Tree	
Existing Sycamore	
Existing Poplar	

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NO.	BY	DATE	DESCRIPTION OF REVISION
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4			
3			
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1	AJW	1/16/02	SUBMITTED TO NRCS FOR REVIEW

HIWASSEE RIVER WATERSHED COALITION
 IN CONJUNCTION WITH
 THE NATURAL RESOURCES CONSERVATION SERVICE

TROUT COVE BRANCH
 CLAY COUNTY, NORTH CAROLINA

LEGEND

HORIZONTAL CURVE INFORMATION

-PROPTCB-

Curve A	=	
Radius	=	40.0000
P.C. Station	=	10+30.14
P.T. Station	=	10+52.49
Curve B	=	
Radius	=	27.0000
P.C. Station	=	10+75.16
P.T. Station	=	11+07.64
Curve C	=	
Radius	=	47.0000
P.C. Station	=	11+28.95
P.T. Station	=	11+50.26
Curve D	=	
Radius	=	42.0000
P.C. Station	=	11+65.46
P.T. Station	=	12+03.98
Curve E	=	
Radius	=	24.0000
P.C. Station	=	12+28.22
P.T. Station	=	12+49.93
Curve F	=	
Radius	=	31.0000
P.C. Station	=	12+80.79
P.T. Station	=	13+02.28
Curve G	=	
Radius	=	38.0000
P.C. Station	=	13+11.36
P.T. Station	=	13+52.47
Curve H	=	
Radius	=	24.0000
P.C. Station	=	13+77.64
P.T. Station	=	14+02.00
Curve I	=	
Radius	=	35.0000
P.C. Station	=	14+16.80
P.T. Station	=	14+65.22
Curve J	=	
Radius	=	31.0000
P.C. Station	=	14+77.02
P.T. Station	=	15+14.73
Curve K	=	
Radius	=	23.0000
P.C. Station	=	15+42.14
P.T. Station	=	15+61.64
Curve L	=	
Radius	=	40.0000
P.C. Station	=	15+63.47
P.T. Station	=	15+86.21
Curve M	=	
Radius	=	39.0000
P.C. Station	=	16+06.16
P.T. Station	=	16+32.99
Curve N	=	
Radius	=	23.4000
P.C. Station	=	16+33.85
P.T. Station	=	16+62.21
Curve O	=	
Radius	=	41.0000
P.C. Station	=	16+79.79
P.T. Station	=	17+17.28
Curve P	=	
Radius	=	23.8000
P.C. Station	=	17+28.87
P.T. Station	=	17+59.50
Curve Q	=	
Radius	=	42.0000
P.C. Station	=	17+68.26
P.T. Station	=	18+10.47

-PROPTCB-

Curve R	=	
Radius	=	30.0000
P.C. Station	=	18+22.06
P.T. Station	=	18+55.10
Curve S	=	
Radius	=	55.0000
P.C. Station	=	18+65.20
P.T. Station	=	19+22.11
Curve U	=	
Radius	=	46.0000
P.C. Station	=	19+23.85
P.T. Station	=	19+88.17
Curve V	=	
Radius	=	23.8000
P.C. Station	=	19+89.56
P.T. Station	=	20+08.13
Curve W	=	
Radius	=	32.0000
P.C. Station	=	20+31.83
P.T. Station	=	20+58.65
Curve X	=	
Radius	=	26.5000
P.C. Station	=	20+60.13
P.T. Station	=	20+90.34
Curve Y	=	
Radius	=	64.0000
P.C. Station	=	20+90.66
P.T. Station	=	21+74.67
Curve Z	=	
Radius	=	20.0000
P.C. Station	=	21+75.18
P.T. Station	=	22+02.21
Curve AA	=	
Radius	=	29.0000
P.C. Station	=	22+12.86
P.T. Station	=	22+52.78
Curve BB	=	
Radius	=	46.0000
P.C. Station	=	22+54.84
P.T. Station	=	23+27.41
Curve CC	=	
Radius	=	30.5000
P.C. Station	=	23+31.21
P.T. Station	=	23+61.79
Curve DD	=	
Radius	=	31.0000
P.C. Station	=	23+74.34
P.T. Station	=	23+99.60
Curve EE	=	
Radius	=	48.0000
P.C. Station	=	24+00.35
P.T. Station	=	24+33.80
Curve FF	=	
Radius	=	25.0000
P.C. Station	=	24+44.70
P.T. Station	=	24+61.96
Curve GG	=	
Radius	=	44.0000
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P.T. Station	=	25+38.30

-PROPTCB-

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P.T. Station	=	25+97.08
Curve II	=	
Radius	=	37.5400
P.C. Station	=	25+97.18
P.T. Station	=	26+50.56
Curve JJ	=	
Radius	=	36.0000
P.C. Station	=	26+58.17
P.T. Station	=	27+05.36
Curve KK	=	
Radius	=	22.5000
P.C. Station	=	27+07.72
P.T. Station	=	27+32.47
Curve LL	=	
Radius	=	52.0000
P.C. Station	=	27+32.78
P.T. Station	=	27+98.89
Curve MM	=	
Radius	=	28.0000
P.C. Station	=	28+01.47
P.T. Station	=	28+39.17
Curve NN	=	
Radius	=	27.0000
P.C. Station	=	28+39.60
P.T. Station	=	28+82.51
Curve OO	=	
Radius	=	42.3000
P.C. Station	=	28+82.52
P.T. Station	=	29+52.75
Curve PP	=	
Radius	=	19.2000
P.C. Station	=	29+52.86
P.T. Station	=	29+82.82
Curve QQ	=	
Radius	=	58.0000
P.C. Station	=	29+89.37
P.T. Station	=	30+47.68
Curve RR	=	
Radius	=	65.0000
P.C. Station	=	30+60.90
P.T. Station	=	30+80.86
Curve VV	=	
Radius	=	10.0000
P.C. Station	=	31+68.86
P.T. Station	=	31+75.38
Curve WW	=	
Radius	=	20.0000
P.C. Station	=	32+27.89
P.T. Station	=	32+39.68
Curve XX	=	
Radius	=	30.0000
P.C. Station	=	32+52.60
P.T. Station	=	32+61.50
Curve SS	=	
Radius	=	45.0000
P.C. Station	=	37+26.99
P.T. Station	=	37+85.11

-PROPTCB-

Curve UU	=	
Radius	=	34.7406
P.C. Station	=	37+85.18
P.T. Station	=	38+33.68

-PROPTRIB-

Curve UT0	=	
Radius	=	40.0000
P.C. Station	=	9+93.42
P.T. Station	=	10+22.63
Curve UT1	=	
Radius	=	15.0000
P.C. Station	=	13+98.34
P.T. Station	=	14+12.76
Curve UT2	=	
Radius	=	30.0000
P.C. Station	=	18+46.92
P.T. Station	=	18+64.87
Curve UT3	=	
Radius	=	34.0000
P.C. Station	=	18+64.87
P.T. Station	=	18+79.27
Curve UT4	=	
Radius	=	27.0000
P.C. Station	=	18+79.27
P.T. Station	=	18+88.76



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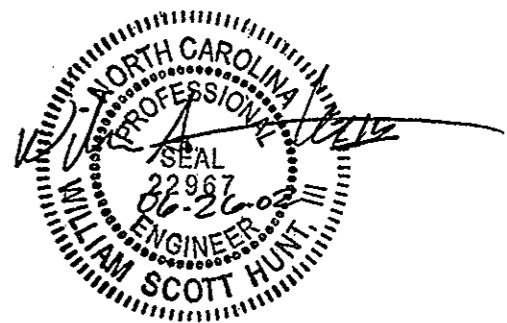
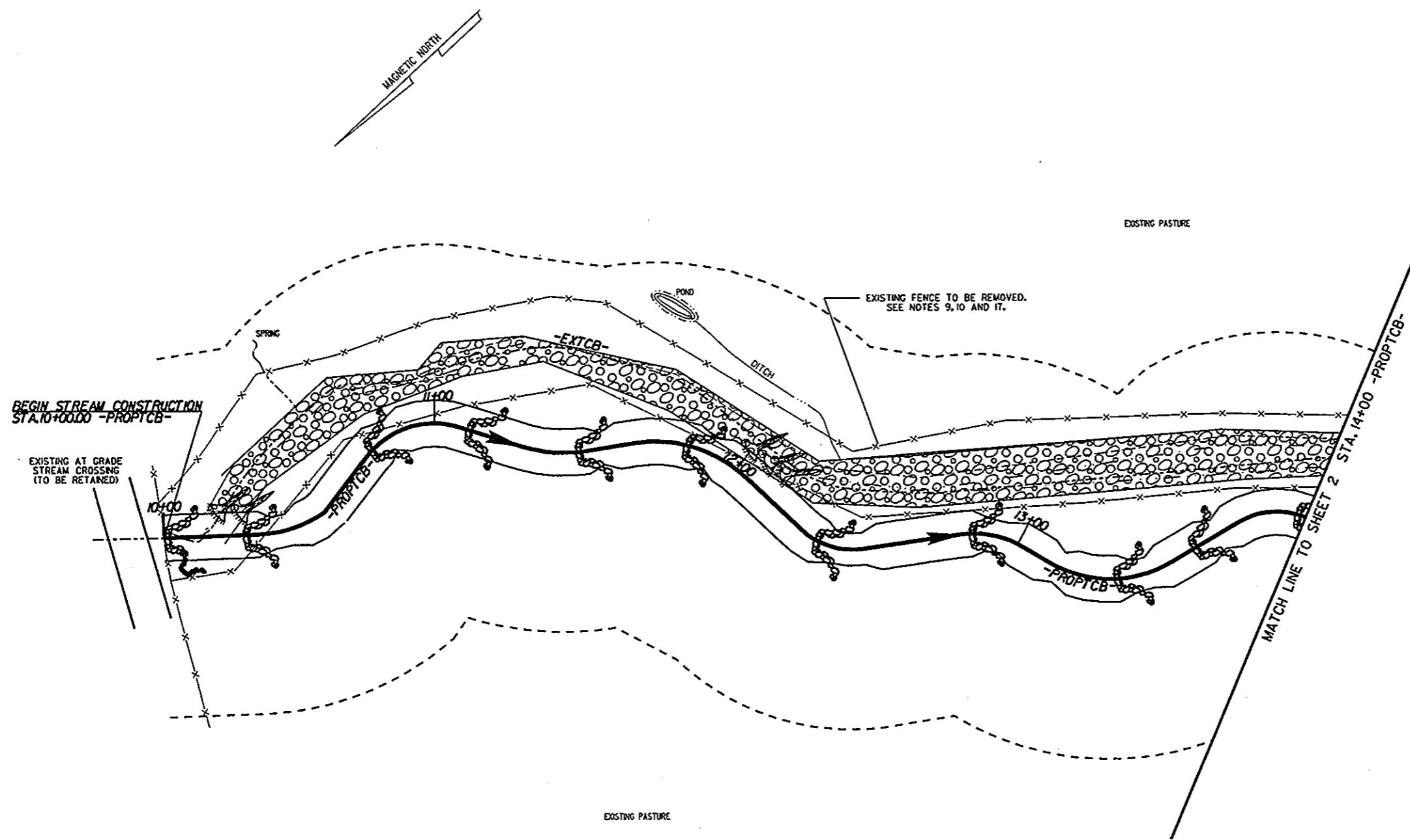
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2	AJW	1/29/02	PERMIT SUBMITTAL
1	AJW	1/16/02	SUBMITTED TO NRCS FOR REVIEW

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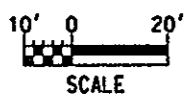
TROUT COVE BRANCH

CLAY COUNTY, NORTH CAROLINA

CURVE INFO.



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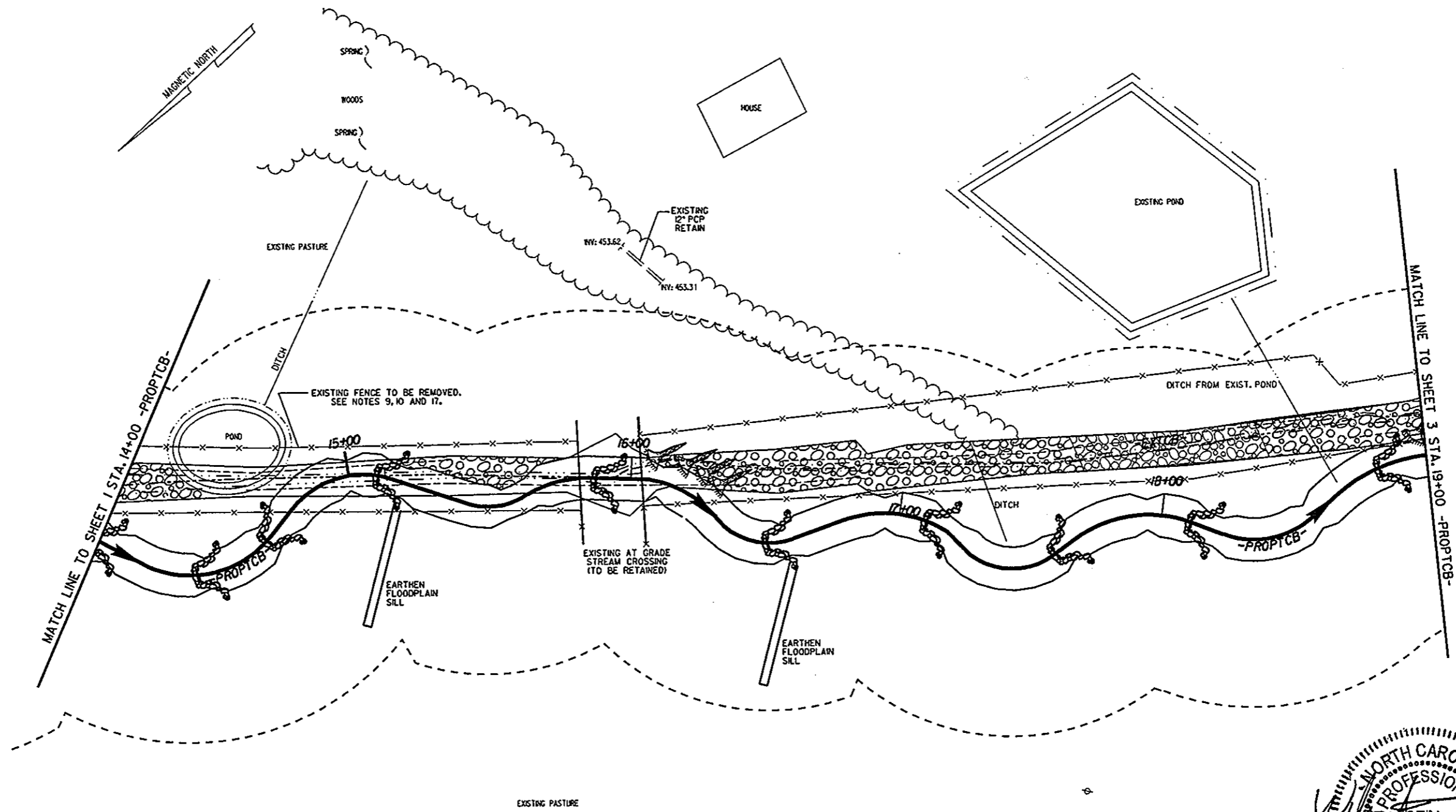
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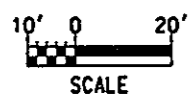
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 CLAY COUNTY, NORTH CAROLINA

SHEET NO. 1



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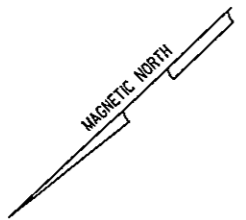
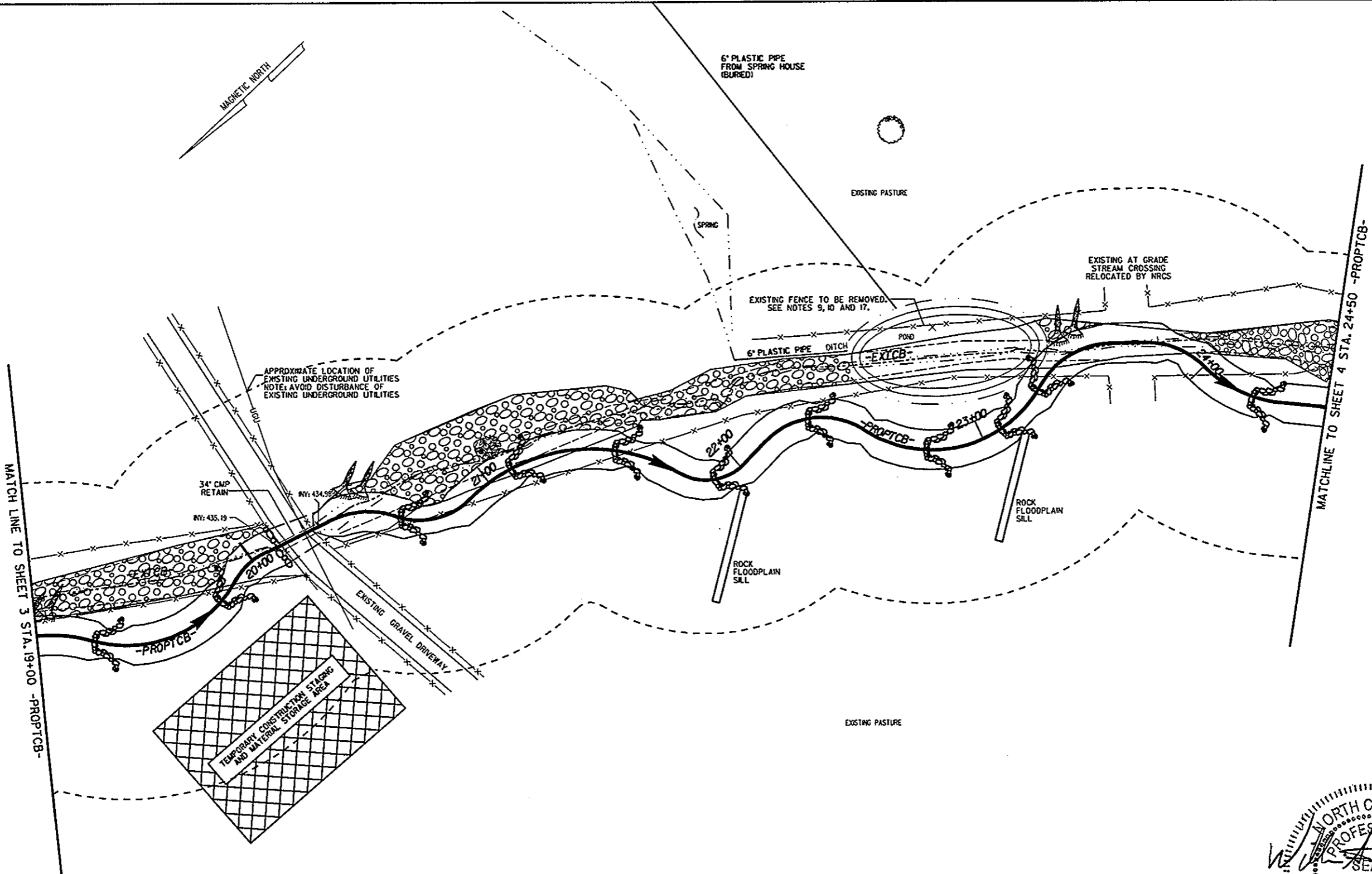
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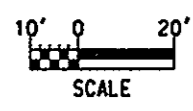
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TROUT COVE BRANCH
 CLAY COUNTY, NORTH CAROLINA
 SHEET NO. 2



MATCH LINE TO SHEET 3 STA. 19+00 -PROPTCB-

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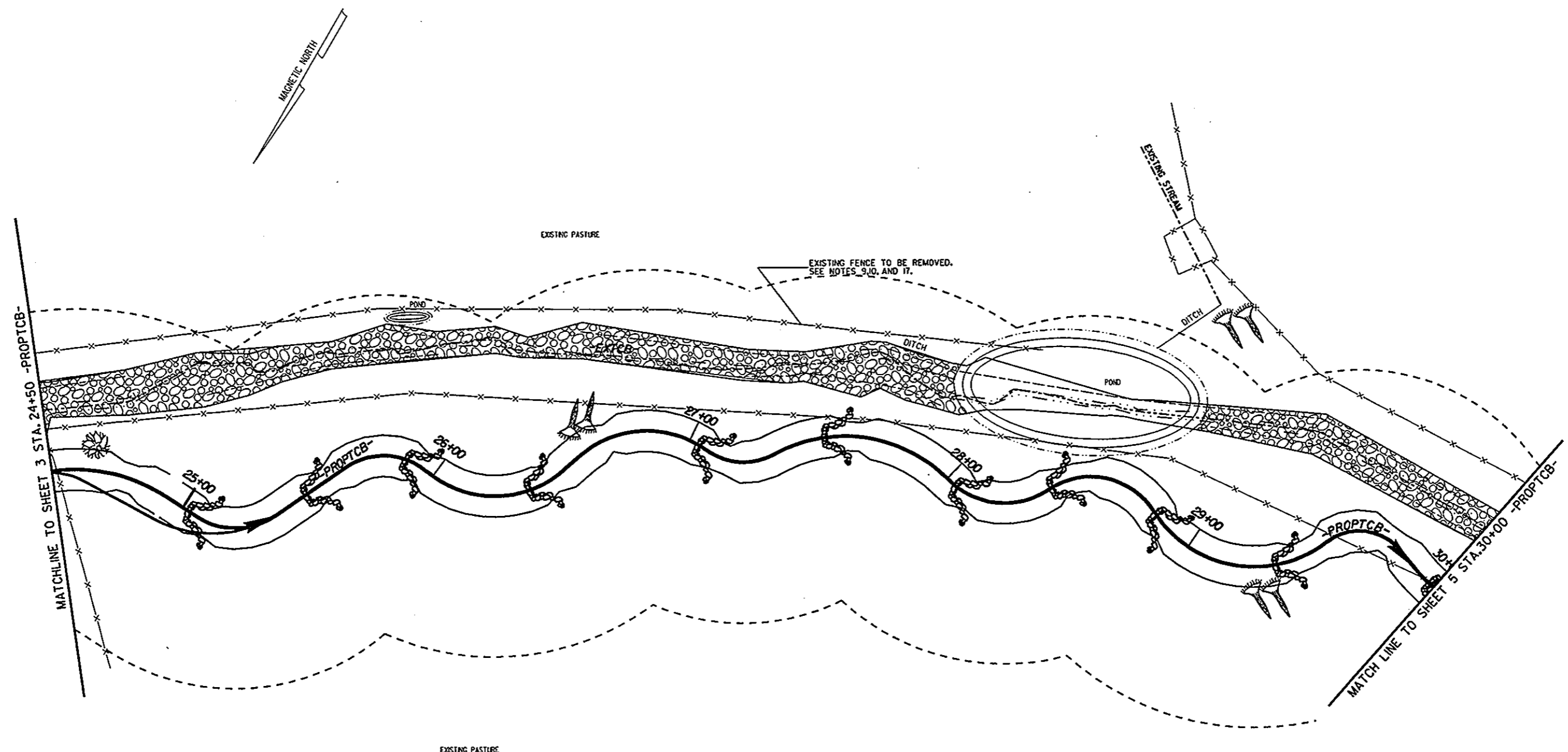
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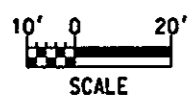
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TROUT COVE BRANCH
 CLAY COUNTY, NORTH CAROLINA
 SHEET NO. 3



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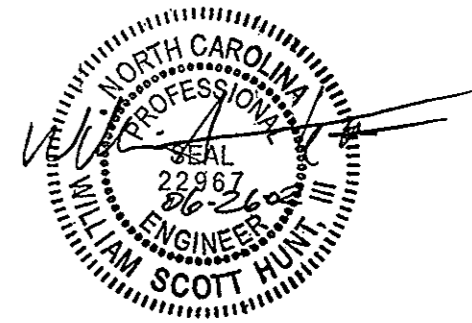
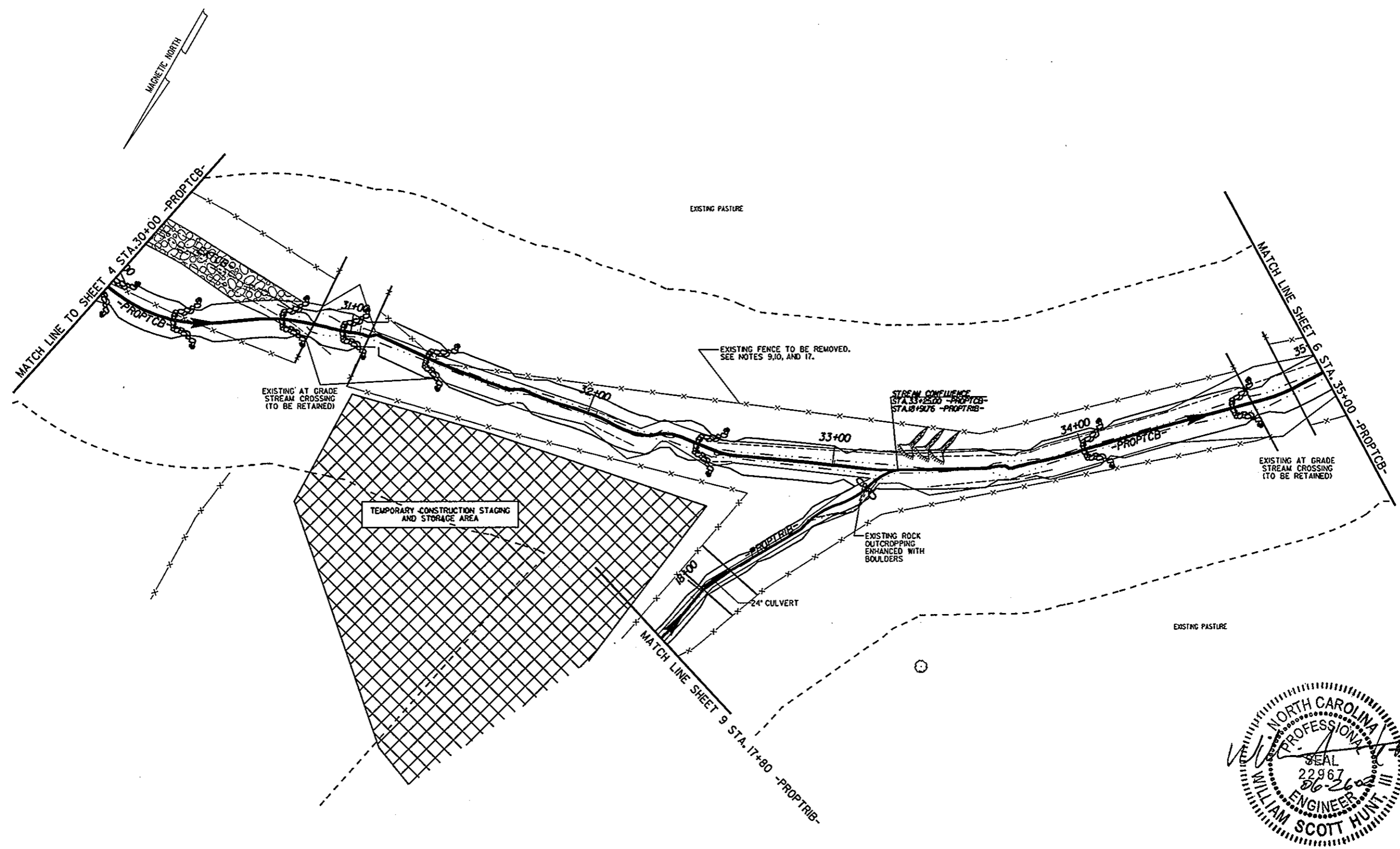



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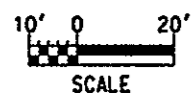
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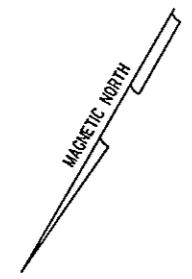
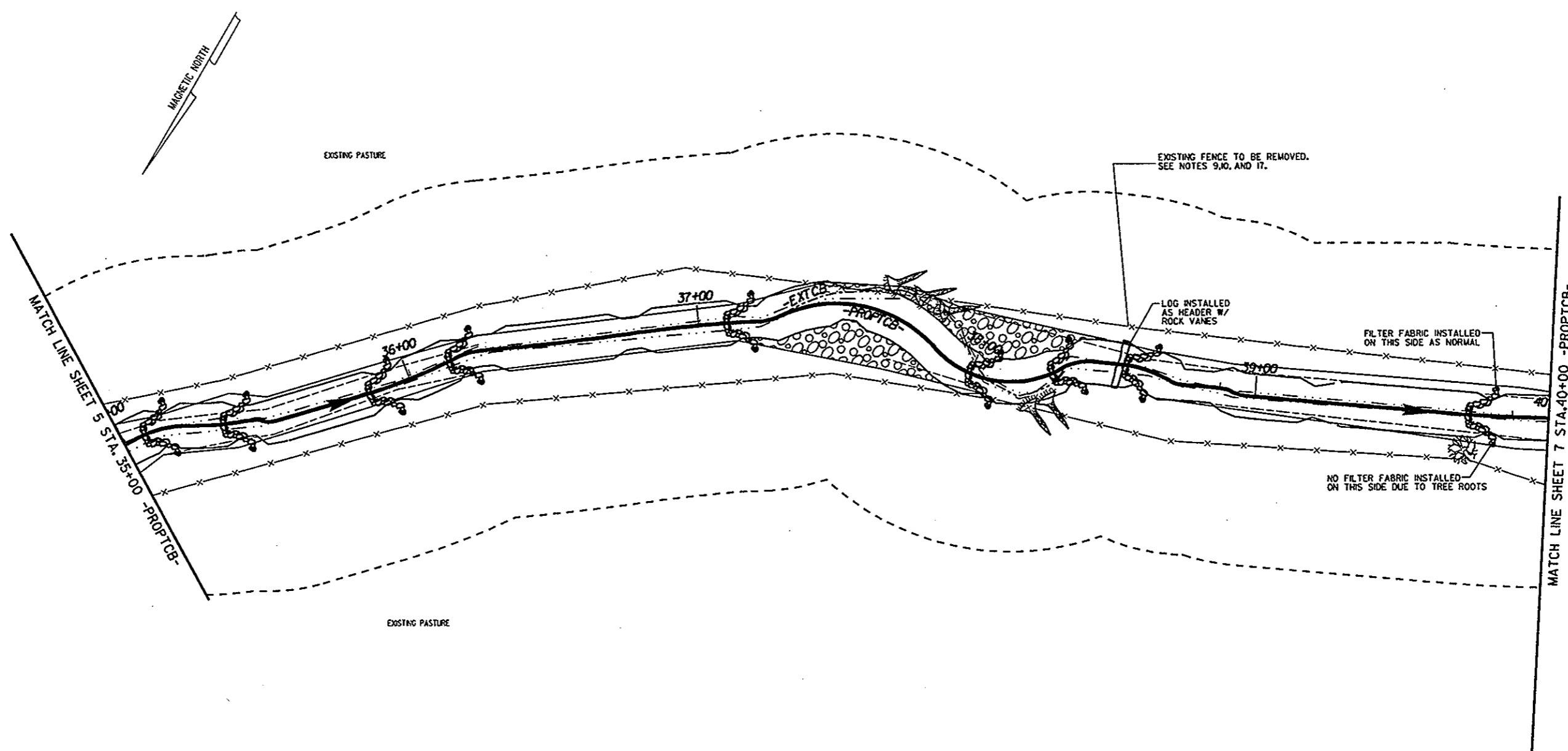

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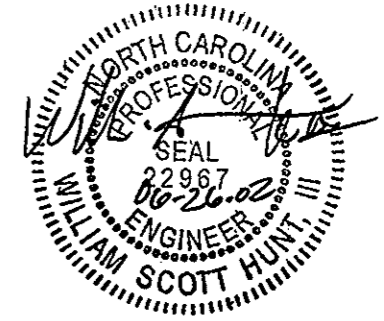
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 CLAY COUNTY, NORTH CAROLINA

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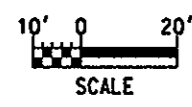


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MATCH LINE SHEET 7 STA. 40+00 -PROPTCB-



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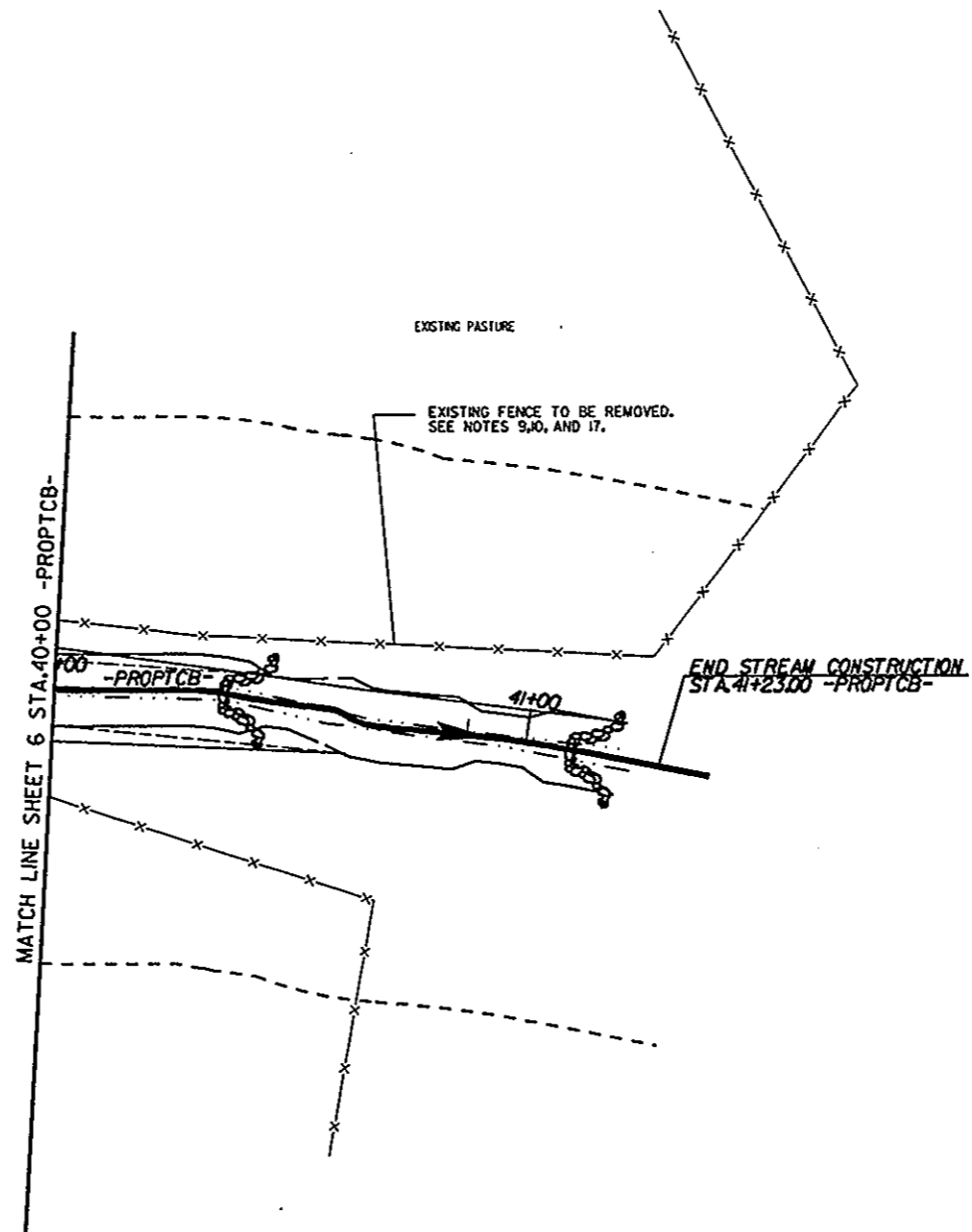
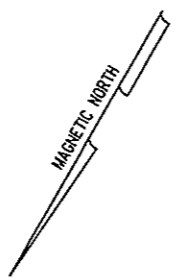
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 Tel: 919/782-5511 Fax: 919/782-5905

NO.	BY	DATE	DESCRIPTION OF REVISION
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2	AJW	1/29/02	PERMIT SUBMITTAL
1	AJW	1/16/02	SUBMITTED TO NRCS FOR REVIEW

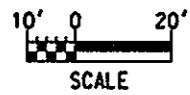
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TROUT COVE BRANCH
 CLAY COUNTY, NORTH CAROLINA

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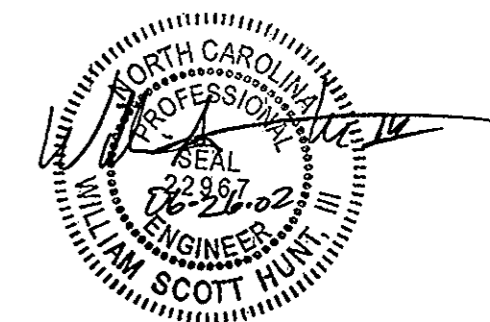
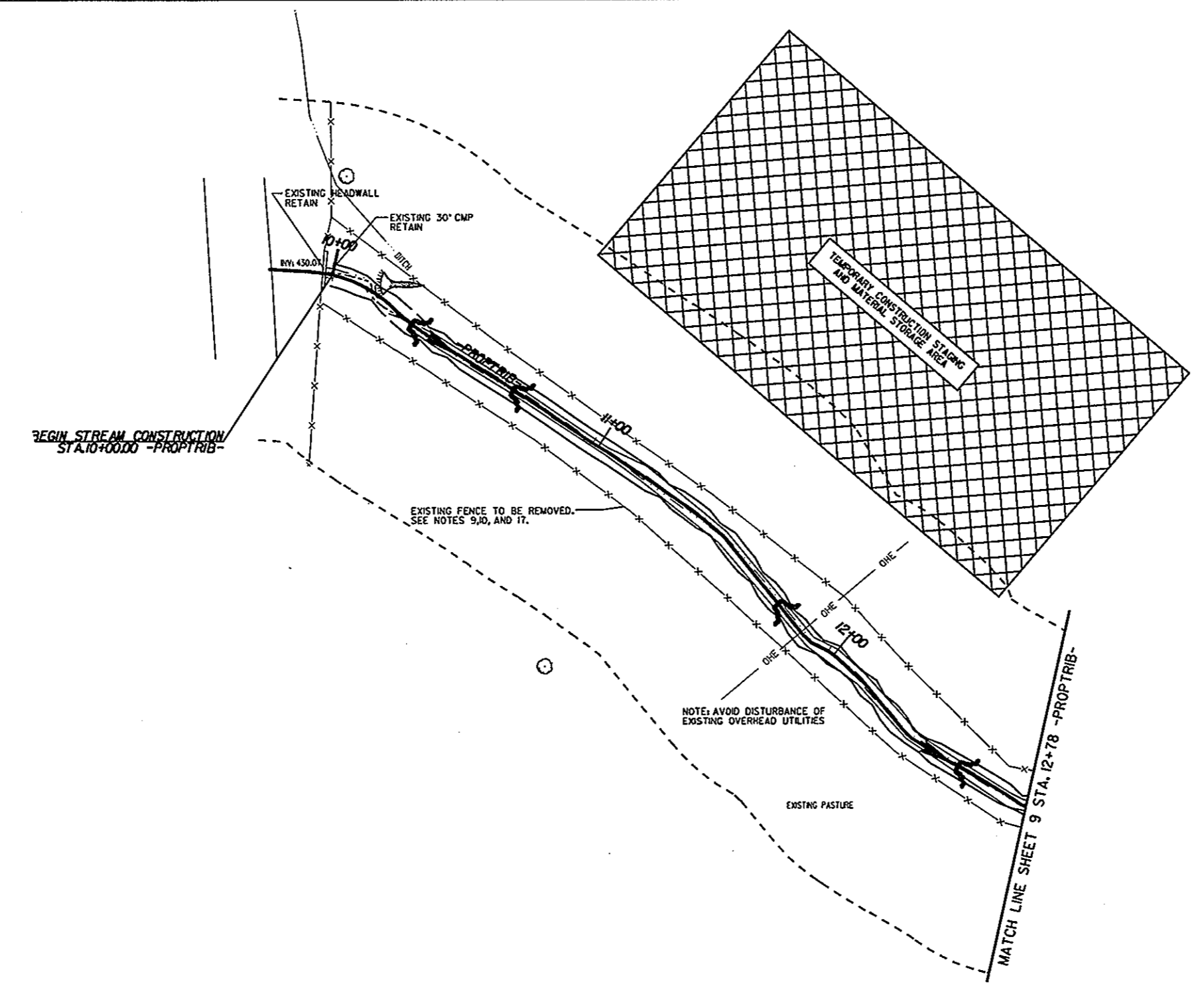

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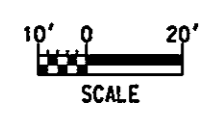
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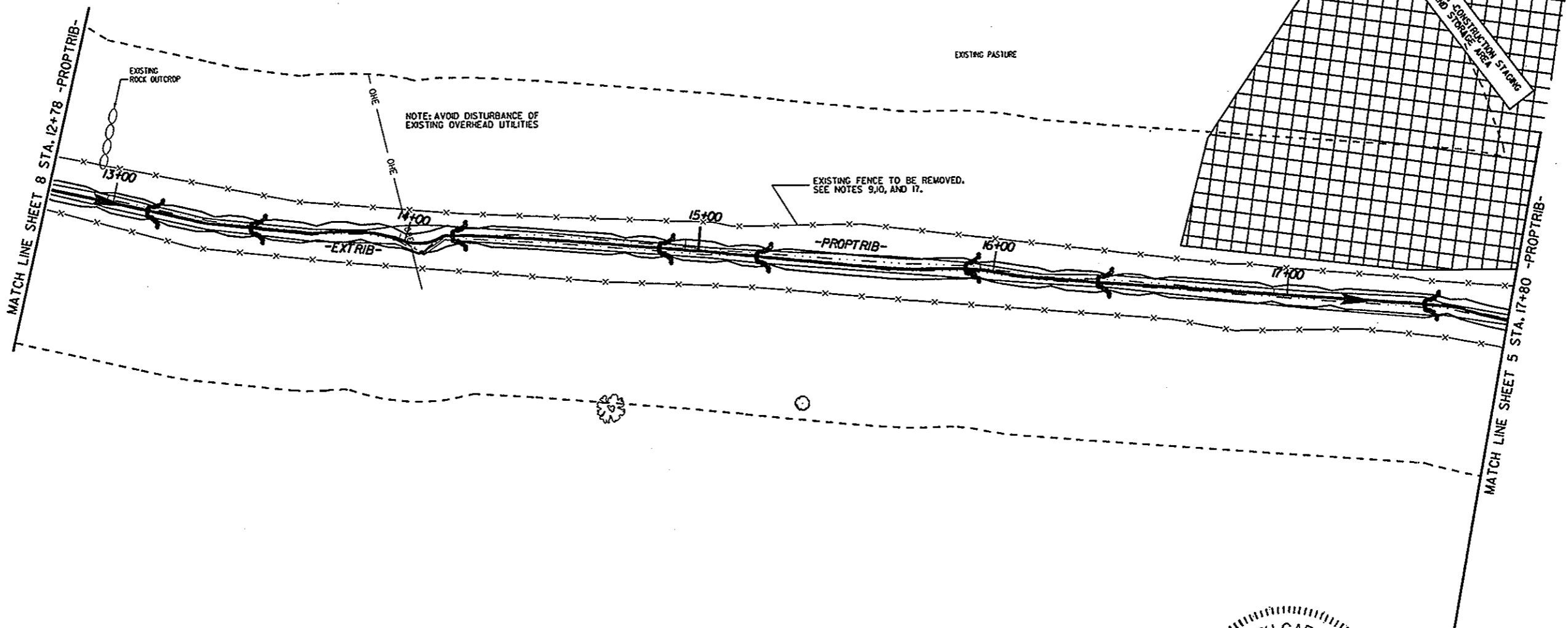
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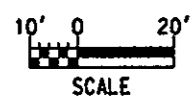
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 CLAY COUNTY, NORTH CAROLINA

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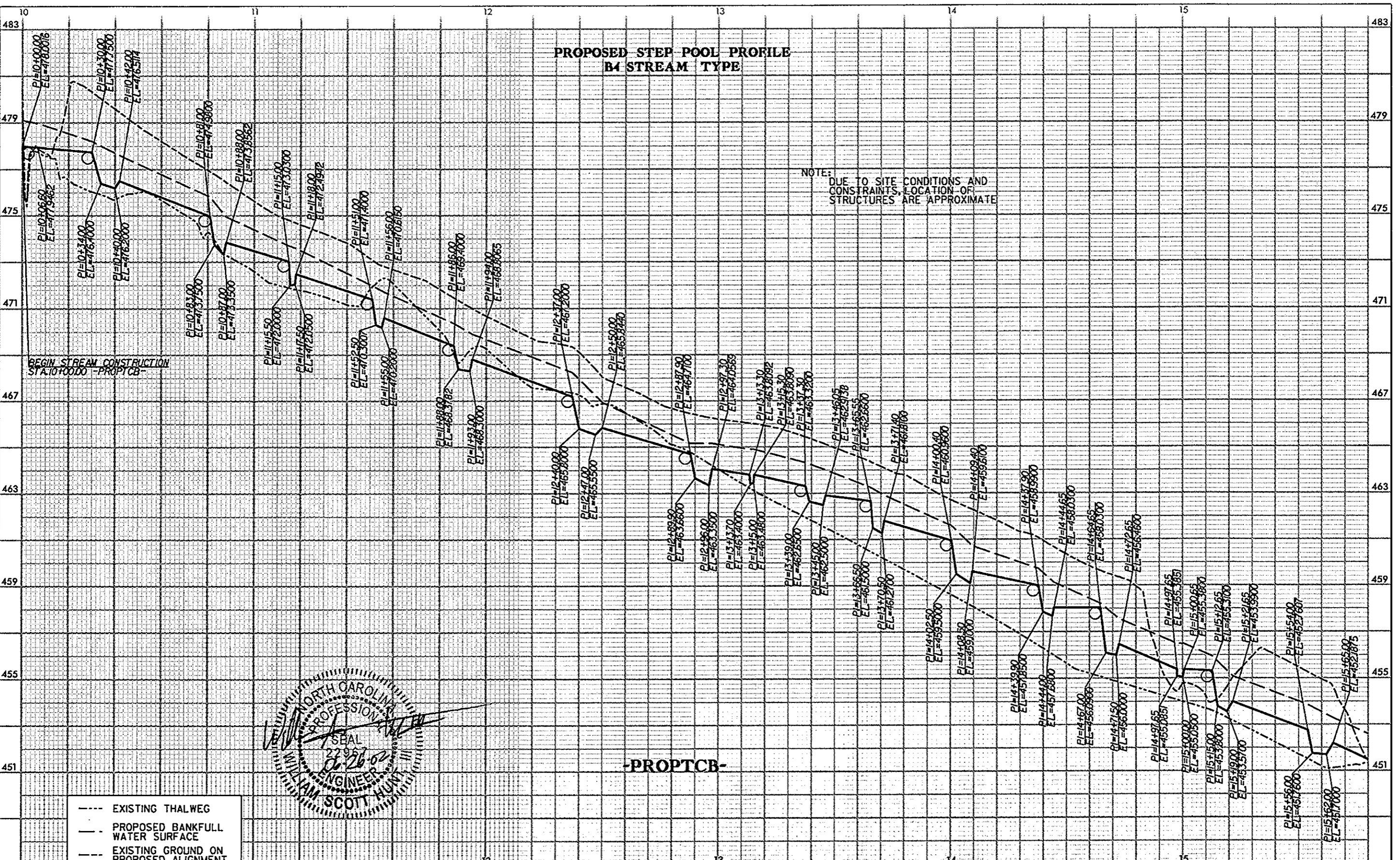
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 CLAY COUNTY, NORTH CAROLINA

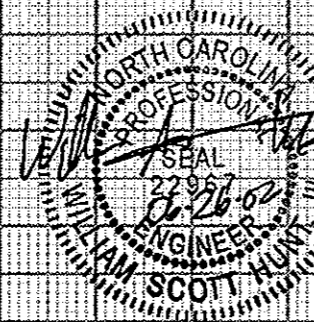
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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE

NOTE:
DUE TO SITE CONDITIONS AND
CONSTRAINTS, LOCATION OF
STRUCTURES ARE APPROXIMATE



- EXISTING THALWEG
- PROPOSED BANKFULL WATER SURFACE
- EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



-PROPTCB-



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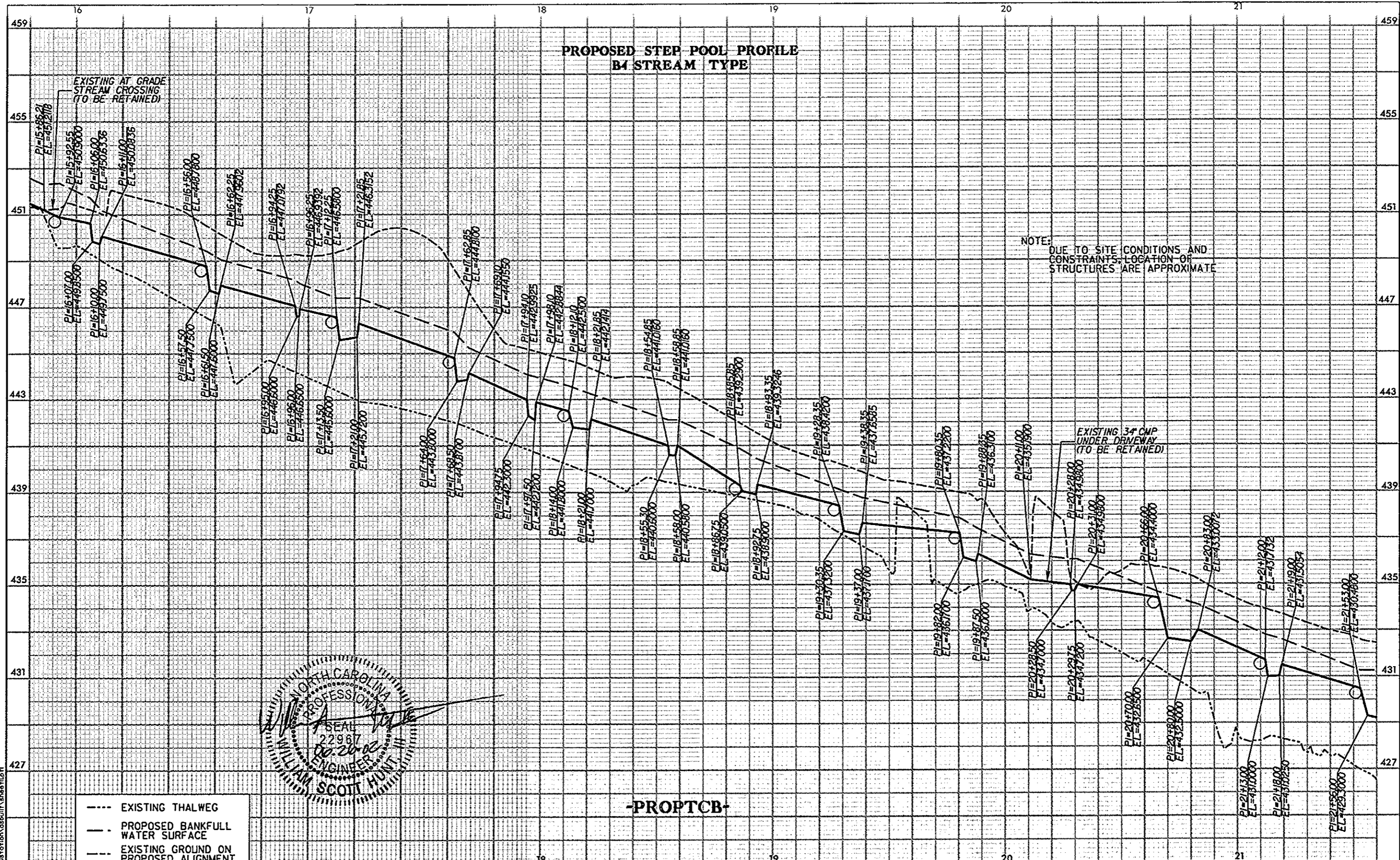
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CLAY COUNTY, NORTH CAROLINA

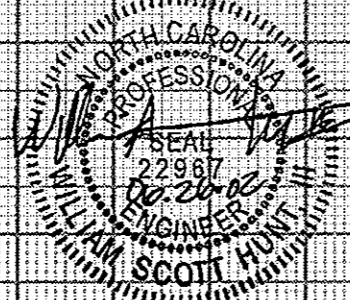
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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE



NOTE:
DUE TO SITE CONDITIONS AND
CONSTRAINTS, LOCATION OF
STRUCTURES ARE APPROXIMATE



-PROPTCB-

- EXISTING THALWEG
- - - PROPOSED BANKFULL WATER SURFACE
- ... EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE

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IN CONJUNCTION WITH
THE NATURAL RESOURCES CONSERVATION SERVICE

TROUT COVE BRANCH

CLAY COUNTY, NORTH CAROLINA

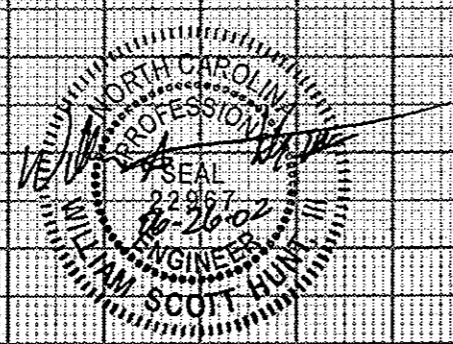
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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE

NOTE: DUE TO SITE CONDITIONS AND CONSTRAINTS, LOCATION OF STRUCTURES ARE APPROXIMATE

- EXISTING THALWEG
- - - PROPOSED BANKFULL WATER SURFACE
- - - EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



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BY	DATE	DESCRIPTION OF REVISION
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IN CONJUNCTION WITH
THE NATURAL RESOURCES CONSERVATION SERVICE

TROUT COVE BRANCH
CLAY COUNTY, NORTH CAROLINA

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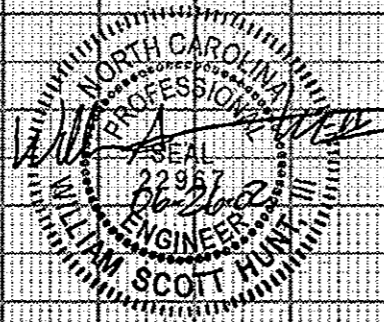
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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE

NOTE:
DUE TO SITE CONDITIONS AND
CONSTRAINTS, LOCATION OF
STRUCTURES ARE APPROXIMATE

EXISTING AT GRADE
STREAM CROSSING
(TO BE RETAINED)

- EXISTING THALWEG
- - - PROPOSED BANKFULL WATER SURFACE
- - - EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



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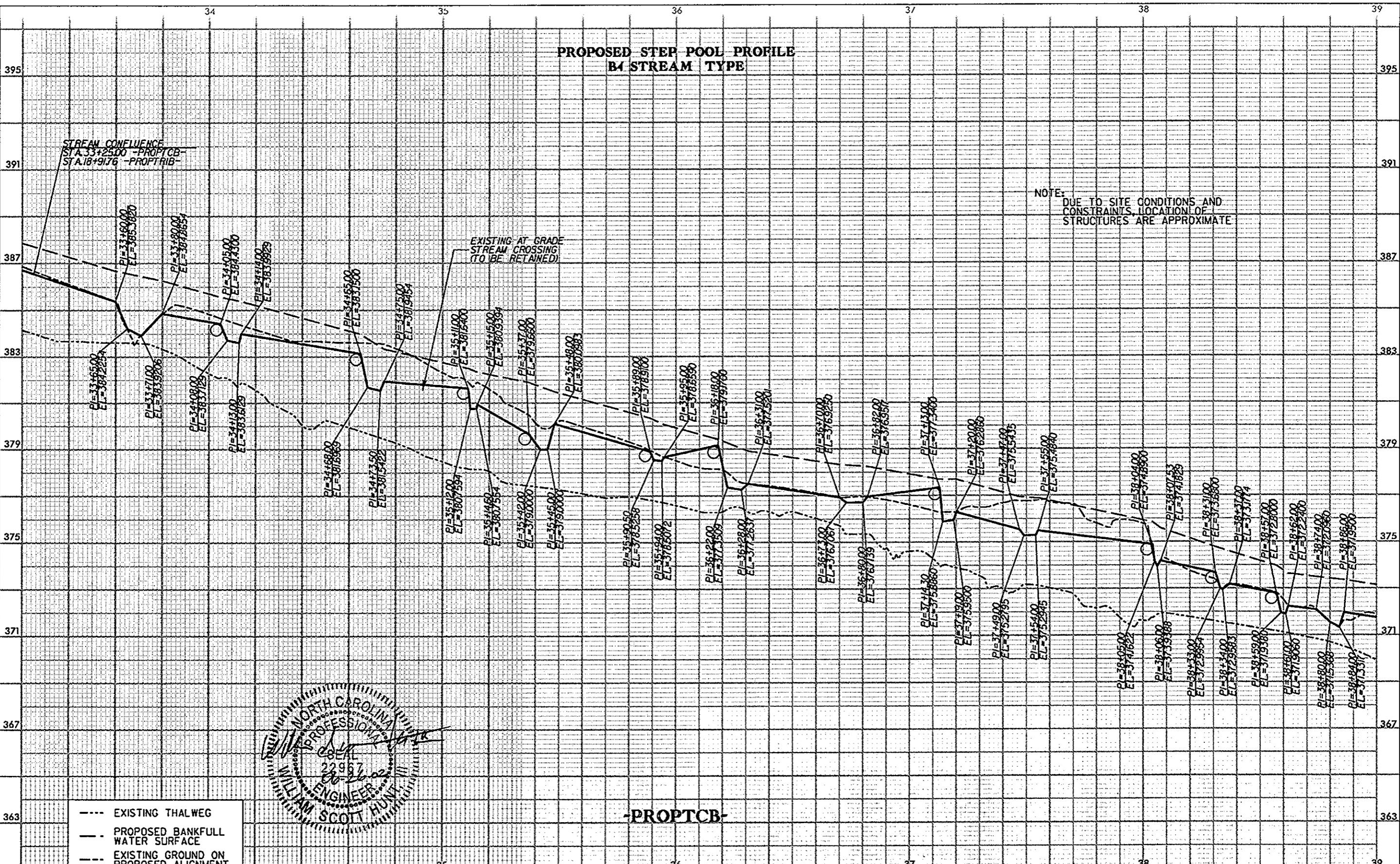
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IN CONJUNCTION WITH
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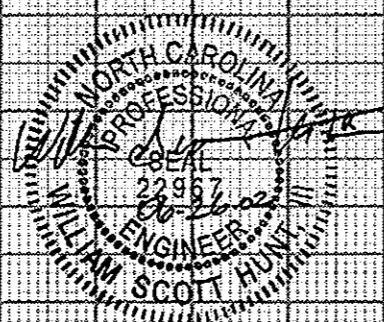
TROUT COVE BRANCH
CLAY COUNTY, NORTH CAROLINA

SHEET NO. 13

PROPOSED STEP POOL PROFILE
B4 STREAM TYPE



- EXISTING THALWEG
- PROPOSED BANKFULL WATER SURFACE
- EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



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IN CONJUNCTION WITH
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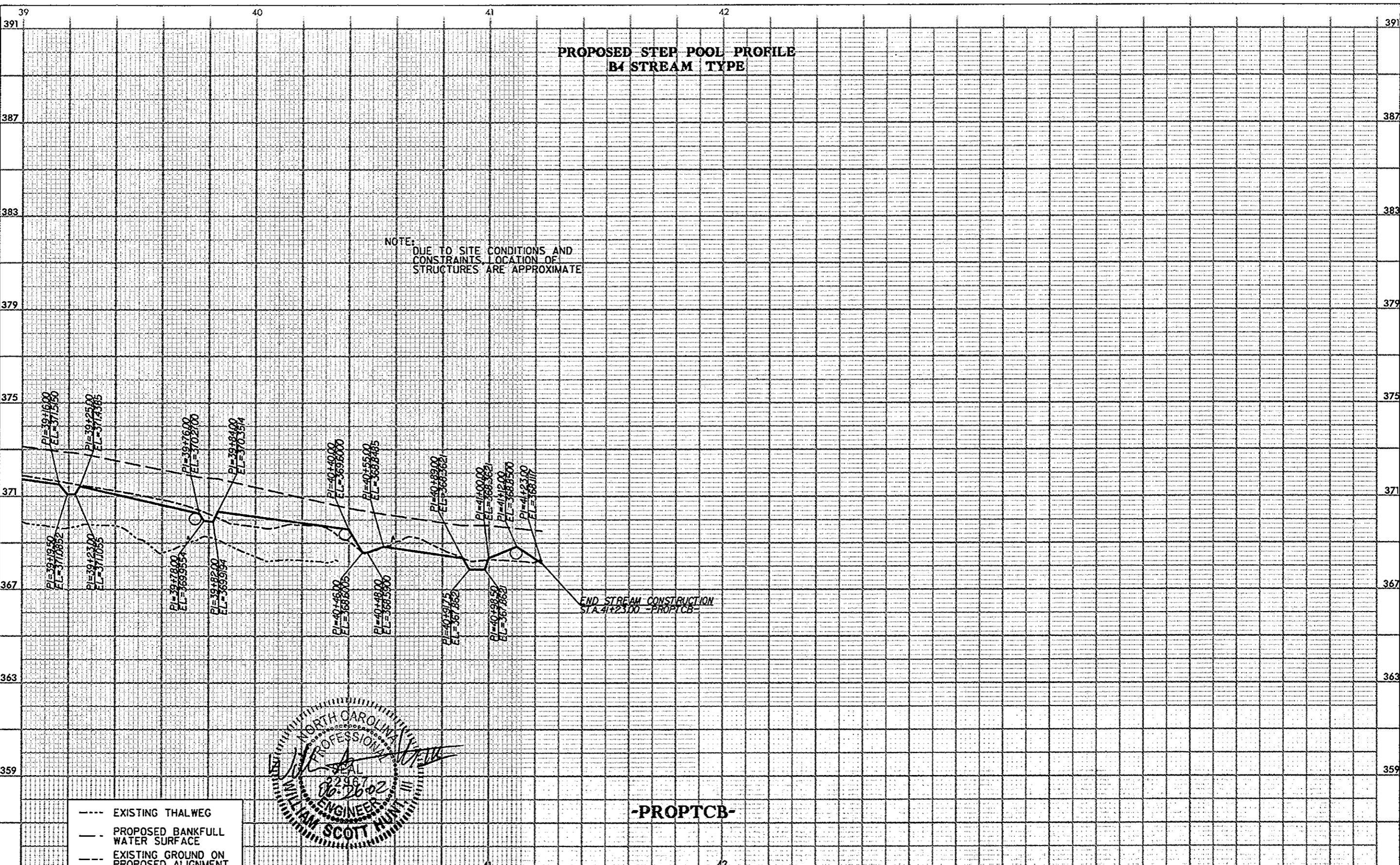
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CLAY COUNTY, NORTH CAROLINA

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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE

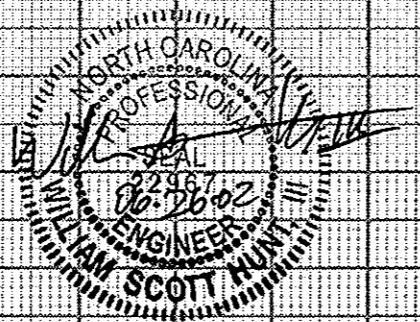
NOTE:
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CONSTRAINTS, LOCATION OF
STRUCTURES ARE APPROXIMATE



END STREAM CONSTRUCTION
STA 41+23.00 -PROPTCB-

-PROPTCB-

- EXISTING THALWEG
- - - PROPOSED BANKFULL WATER SURFACE
- - - EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



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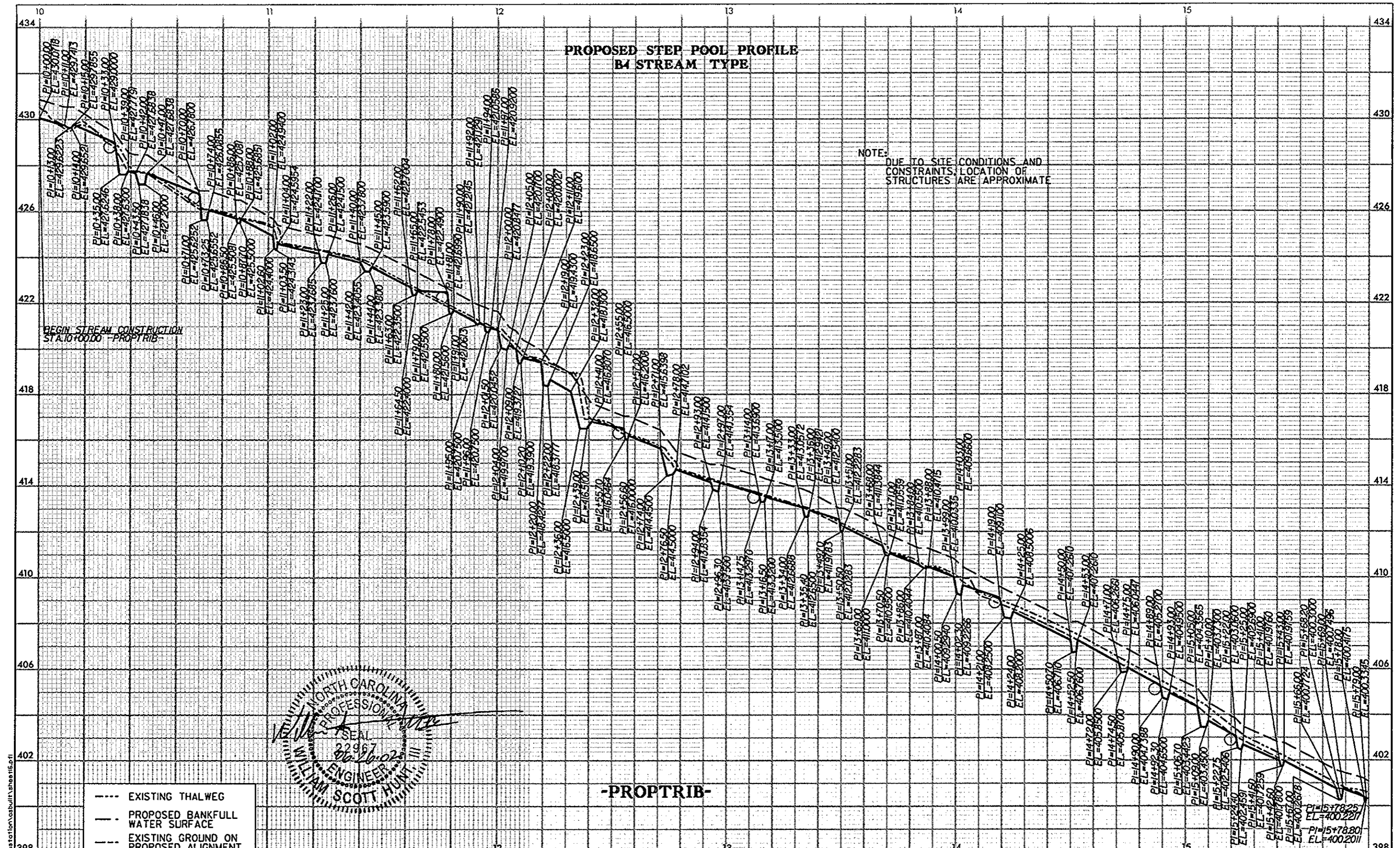
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IN CONJUNCTION WITH
THE NATURAL RESOURCES CONSERVATION SERVICE

TROUT COVE BRANCH
CLAY COUNTY, NORTH CAROLINA

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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE

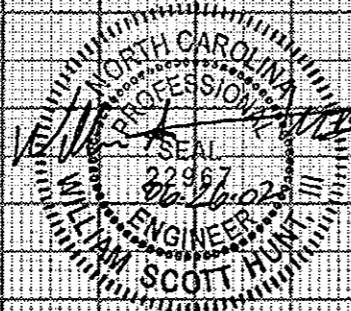
NOTE:
DUE TO SITE CONDITIONS AND
CONSTRAINTS, LOCATION OF
STRUCTURES ARE APPROXIMATE



BEGIN STREAM CONSTRUCTION
STA. 10+00.00 - PROPRIB

-PROPRIB-

- EXISTING THALWEG
- PROPOSED BANKFULL WATER SURFACE
- EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



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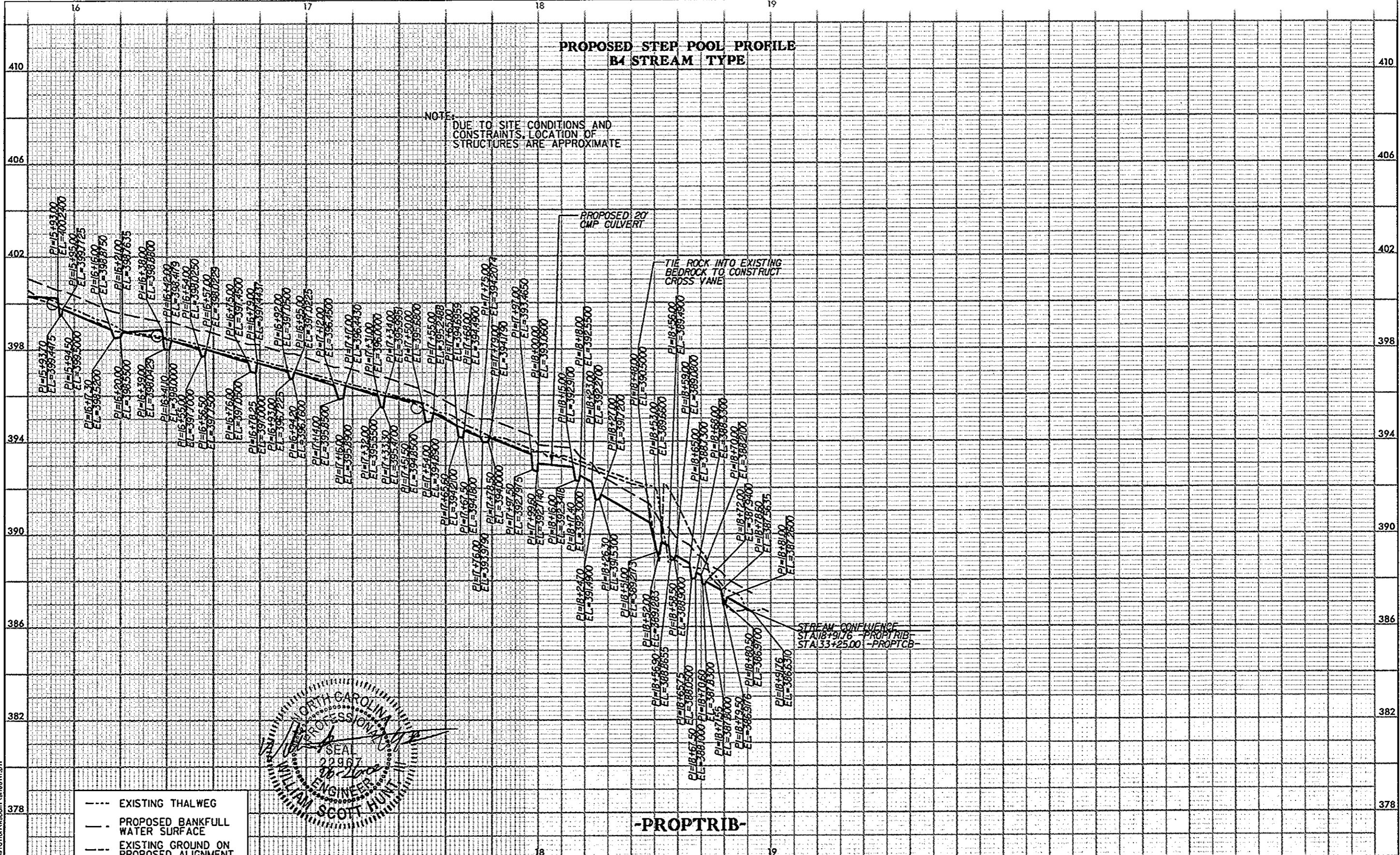
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CLAY COUNTY, NORTH CAROLINA

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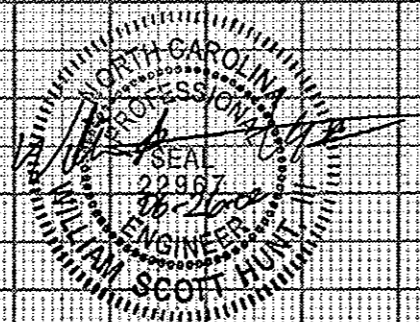
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PROPOSED STEP POOL PROFILE
B4 STREAM TYPE

NOTE:
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- EXISTING THALWEG
- - - PROPOSED BANKFULL WATER SURFACE
- - - EXISTING GROUND ON PROPOSED ALIGNMENT
- PROPOSED THALWEG
- PROPOSED CROSS VANE



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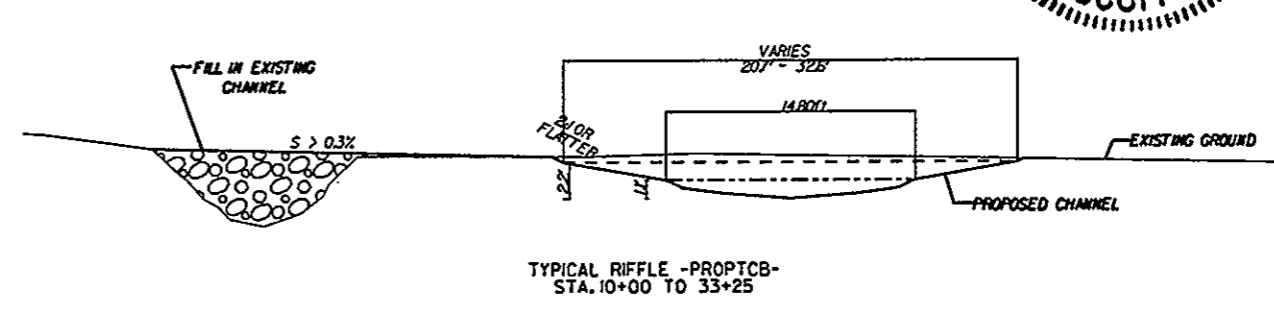
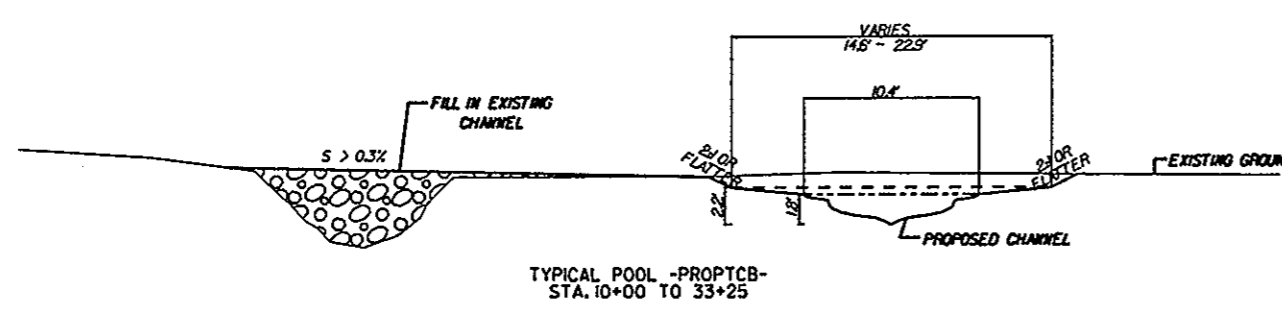
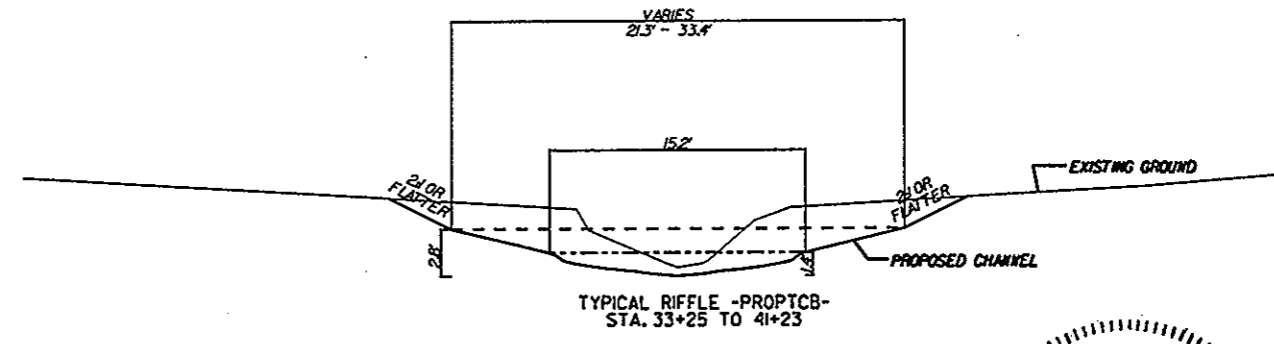
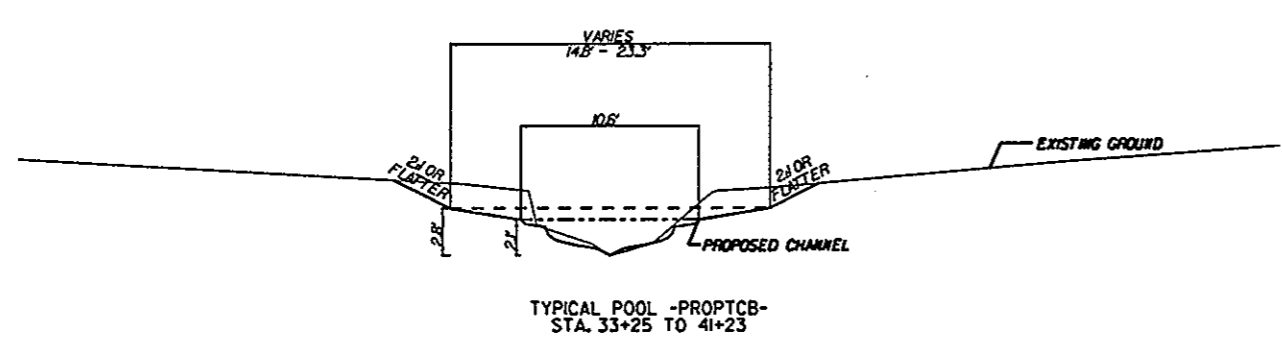
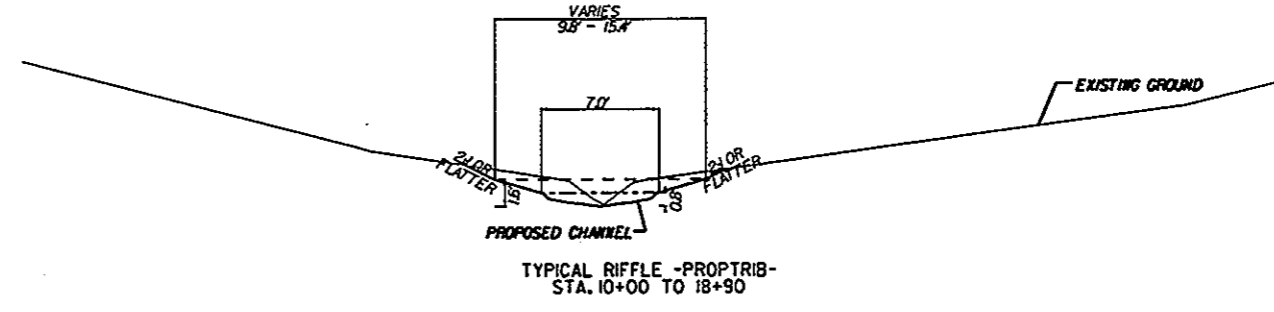
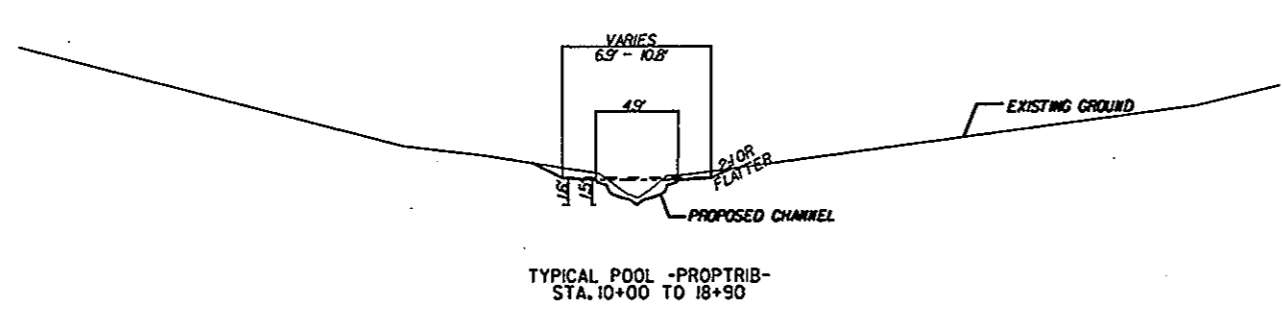
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TROUT COVE BRANCH
CLAY COUNTY, NORTH CAROLINA

SHEET NO. 17



TYPICAL SECTIONS
NTS



----- PROPOSED BANKFULL
 - - - - - PROPOSED FLOOD PRONE AREA

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 IN CONJUNCTION WITH
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TROUT COVE BRANCH
 CLAY COUNTY, NORTH CAROLINA

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STREAM RESTORATION SEEDING SPECIFICATIONS

THIS WORK SHALL CONSIST OF PREPARING THE AREA AND SOIL, FURNISHING AND PLACING SEED, EROSION CONTROL MATTING, AND SOIL AMENDMENTS IN ALL DISTURBED AREAS ALONG THE STREAMBANK, BANKFULL BENCHES, DEPOSITIONAL BARS, AND TOP OF BANKS.

SEEDBED PREPARATION

THE PREPARATION OF THE SEEDBED SHALL CONSIST OF HAND SCARIFYING TO PROVIDE A ROUGHENED SURFACE TO HOLD SEED IN PLACE. LARGE CLODS SHALL BE BROKEN UP AND RAKED INTO A SMOOTH, UNIFORM SURFACE.

SOIL AMENDMENTS

EVENLY DISTRIBUTE LIME AND FERTILIZER PER SOIL TEST RESULTS OVER ALL AREAS TO BE SEED. UNIFORMLY MIX LIME AND FERTILIZER INTO THE TOP 3 INCHES OF THE SOIL. WHERE SURFACE MATERIALS ARE PREDOMINANTLY GRAVEL, NO INCORPORATION IS REQUIRED. IN THE ABSENCE OF A SOIL TEST, APPLY LIME AND FERTILIZER AT THE FOLLOWING RATES:

LIME	4000 LBS/ACRE
FERTILIZER (10-10-10)	1000 LBS/ACRE

TEMPORARY SEEDING

USE IN CONJUNCTION WITH PERMANENT PLANTINGS ON SLOPES, DISTURBED AREAS ABOVE SLOPES, HAUL ROADS, CONSTRUCTION STAGING AREAS, DEPOSITIONAL BARS, AND BANKFULL BENCHES.

FOR FALL, WINTER, AND SPRING TEMPORARY SEEDING, USE THE FOLLOWING MIX:

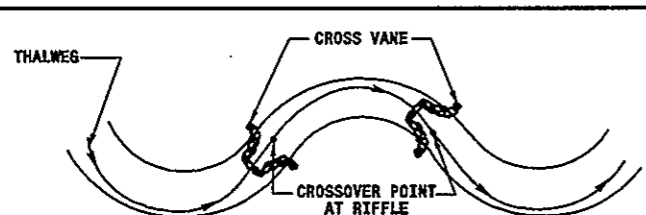
CEREAL RYE	120 LBS/ACRE
ORCHARD GRASS	20 LBS/ACRE

FOR SUMMER TEMPORARY SEEDING, USE THE FOLLOWING MIX:

SUDANGRASS	35-45 LBS/ACRE
BROWNTOP MILLET	30-40 LBS/ACRE
WEEPING LOVEGRASS	5-10 LBS/ACRE

MULCHING

MULCHING SHALL OCCUR IMMEDIATELY AFTER SEEDING WITHIN THE SAME WORKING DAY. ON SLOPES AND BANKFULL BENCHES MULCH SHALL CONSIST OF EROSION CONTROL NETTING MANUFACTURED BY NORTH AMERICAN GREEN, TYPE SC150BN (OR APPROVED EQUAL PRIOR TO PURCHASE). NETTING SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS WITH WIRE STAPLES AND OVERLAP TRENCHES. ON REMAINING DISTURBED AREAS, MULCH SHALL CONSIST OF GRAIN STRAW.



CROSS VANES TO BE PLACED UPSTREAM OF CROSSOVER POINT BETWEEN GLIDE AND RIFFLE SUCH THAT THE STREAMBED "GLIDES OUT" OF THE SCOUR POOL CREATED BY THE CROSS VANE SUCH THAT IT WILL TIE IN CORRECTLY WITH THE HEAD OF RIFFLE AT THE CROSSOVER POINT.

TYPICAL CROSS VANE LOCATION-PLAN VIEW

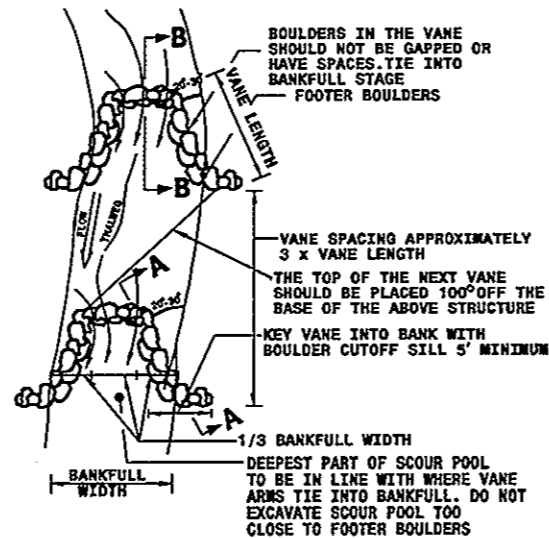


BOULDER CROSS VANE CONSTRUCTED ON MEANDER-PLAN VIEW

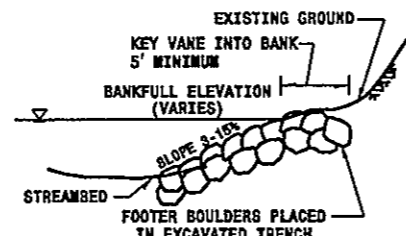
ALL BOULDERS TO BE MINIMUM VOLUME OF 1 CUBIC YARD AND SHALL BE ANGULAR, FLAT WITH AN AXIS 3 x AS LONG AS THE OTHERS TO RESIST ROLLING. BOULDER SHALL BE CLEAN AND FREE OF SEDIMENT

BOULDER CROSS VANE

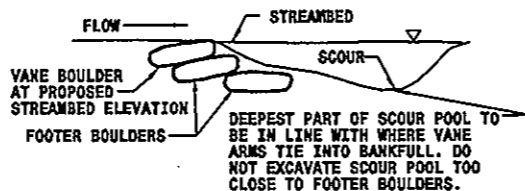
NTS



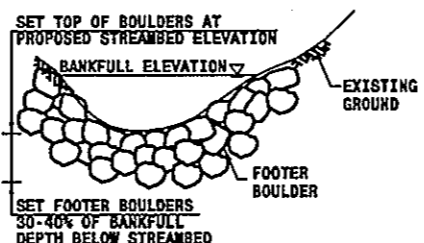
PLAN VIEW



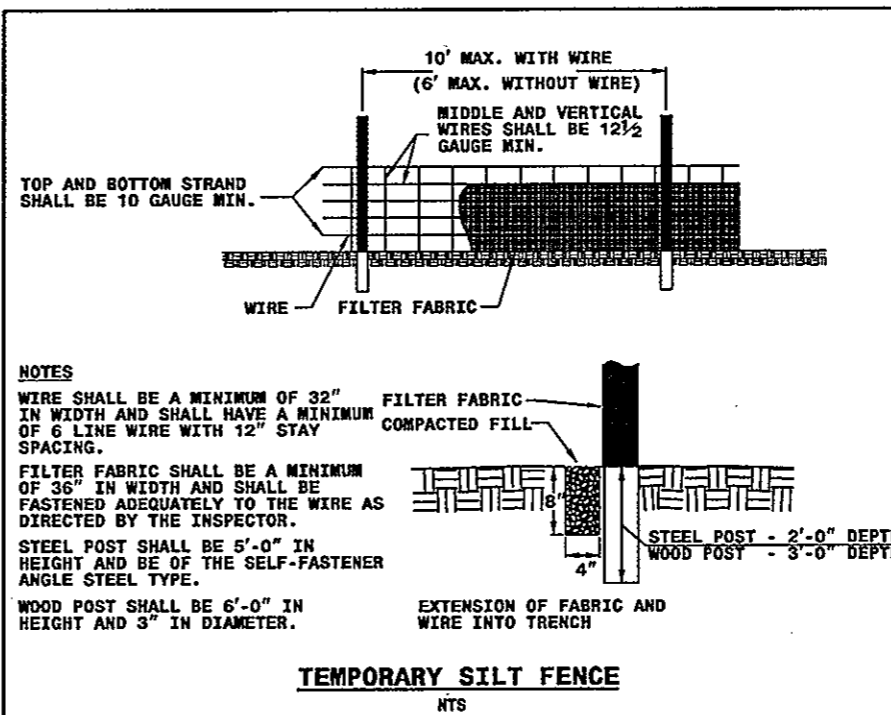
SECTION A-A



SECTION B-B



CROSS SECTION VIEW

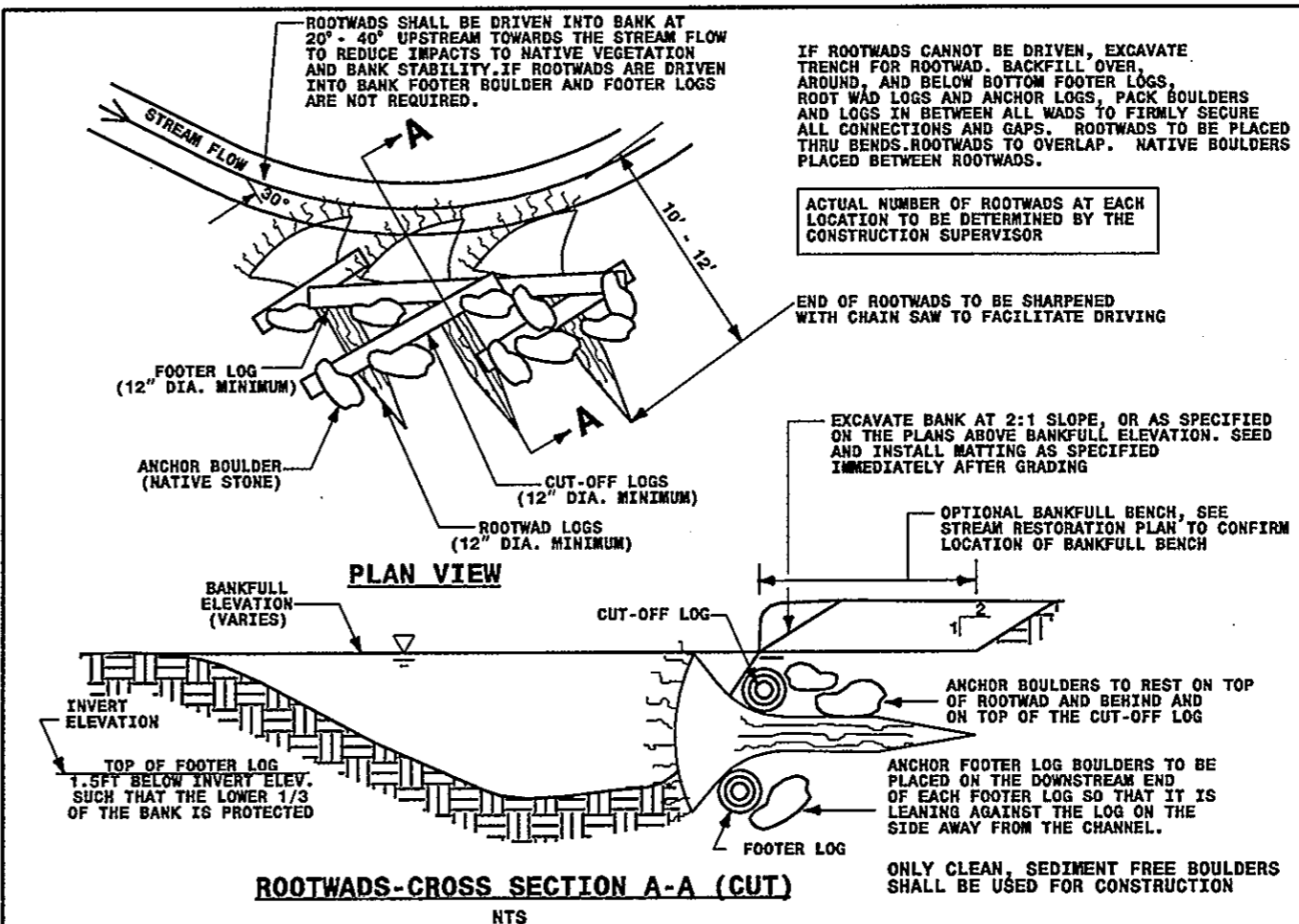
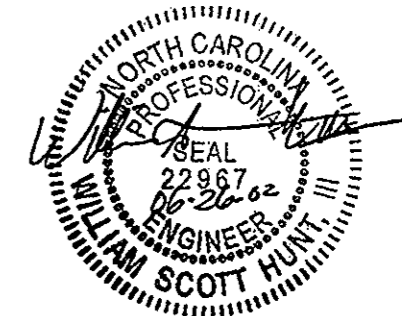


NOTES

WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRE WITH 12" STAY SPACING.
 FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE AS DIRECTED BY THE INSPECTOR.
 STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 WOOD POST SHALL BE 6'-0" IN HEIGHT AND 3" IN DIAMETER.

TEMPORARY SILT FENCE

NTS



ROOTWADS-CROSS SECTION A-A (CUT)

NTS



P.O. Box 31388 Raleigh, NC 27622-1388
 2301 Rexwoods Dr., Suite 102, Raleigh, NC 27607-3366
 Tel: 919/782-5511 Fax: 919/782-5905

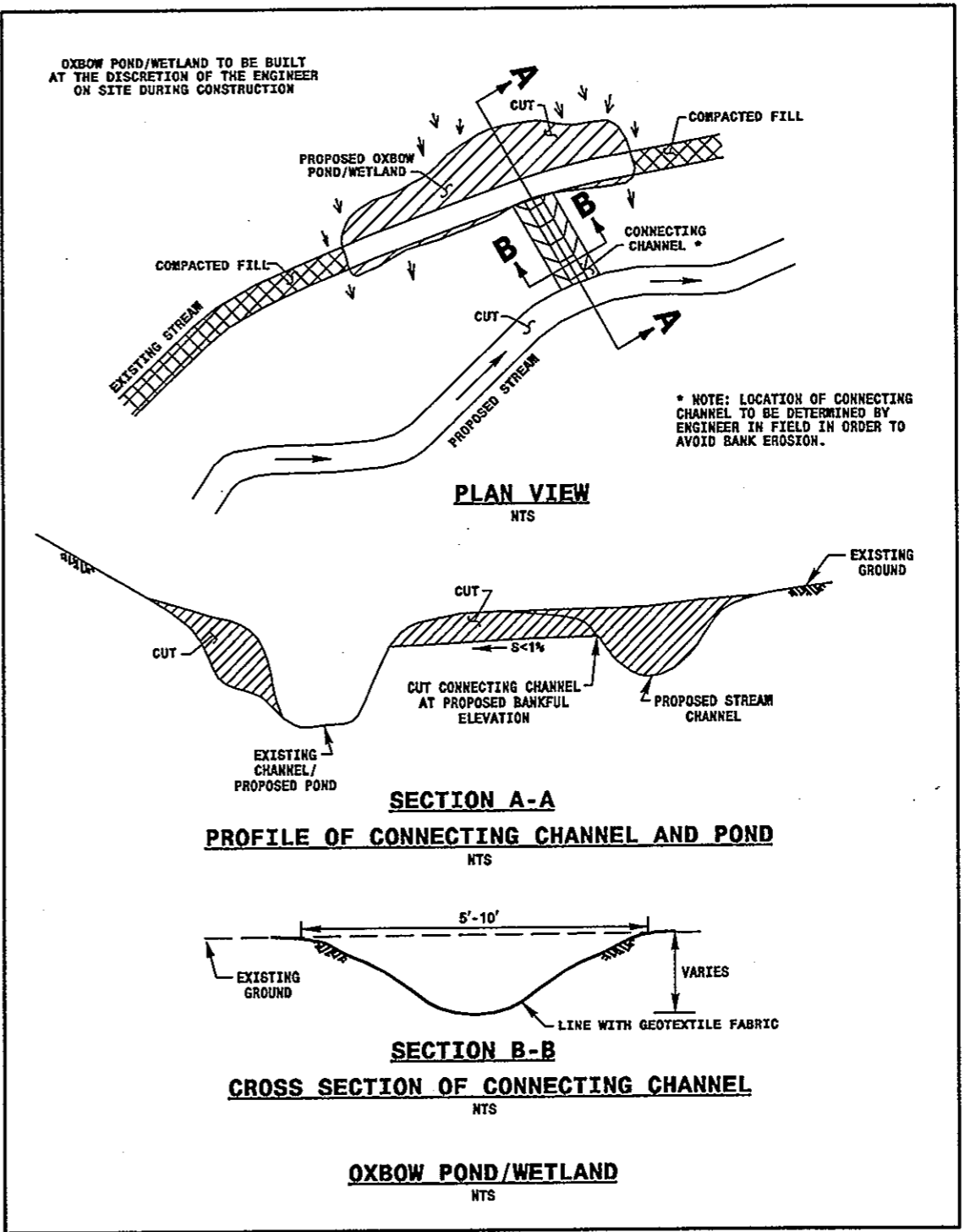
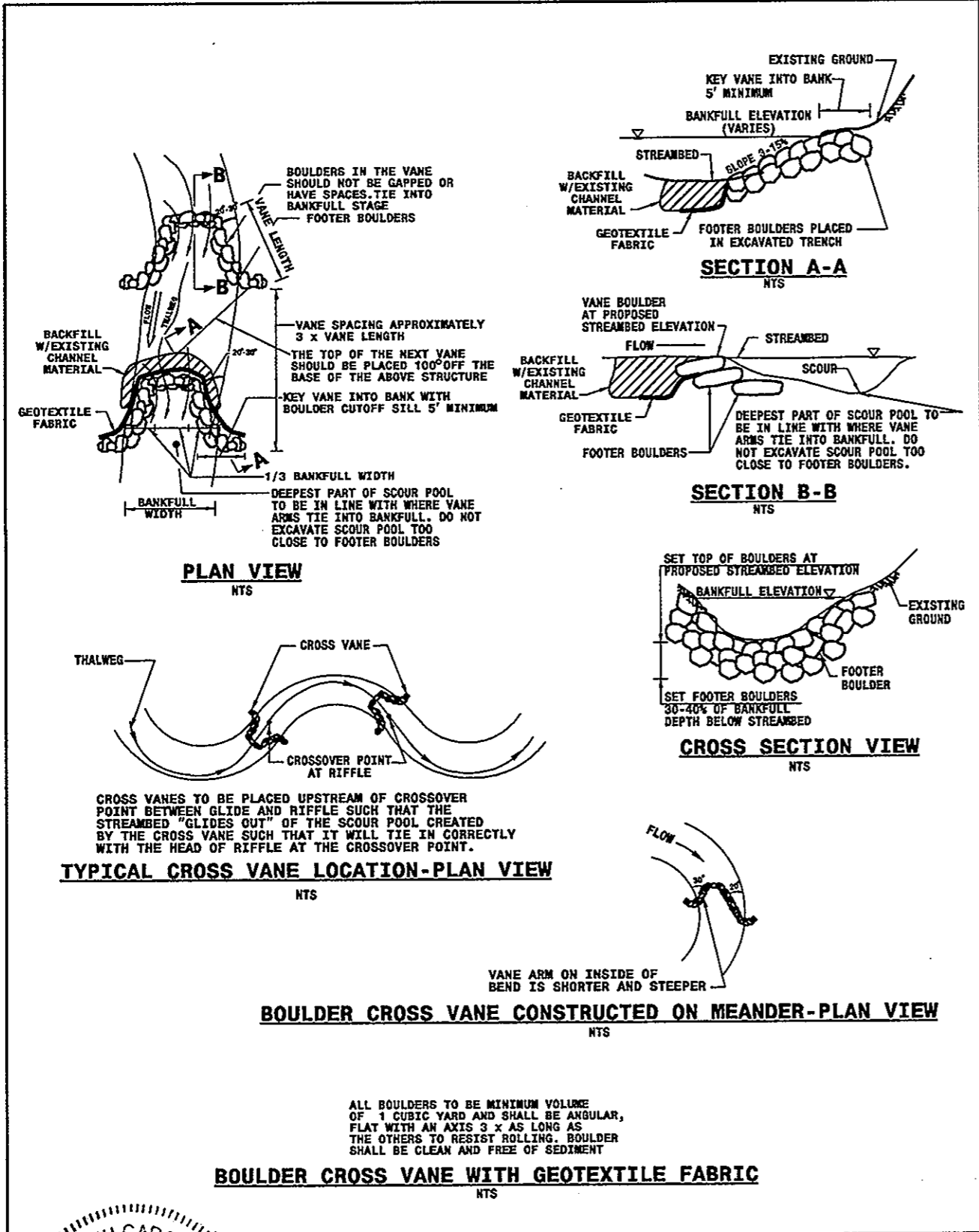
NO.	BY	DATE	DESCRIPTION OF REVISION
5			
4			
3	REB	5/13/02	AS BUILT
2	AJM	1/29/02	PERMIT SUBMITTAL
1	AJM	1/16/02	SUBMITTED TO NRCS FOR REVIEW

HIWASSEE RIVER WATERSHED COALITION
 IN CONJUNCTION WITH
 THE NATURAL RESOURCES CONSERVATION SERVICE

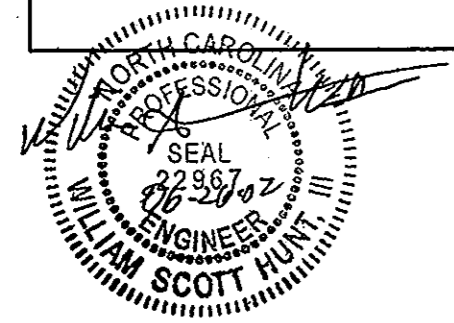
TROUT COVE BRANCH


CLAY COUNTY, NORTH CAROLINA

SHEET NO. 19



ARCADIS G&M
 2301 Rexwoods Dr., Suite 102, Raleigh, NC 27607-3366
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 William Scott Hunt, III
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 Tel: 919/782-5511 Fax: 919/782-5905

BY	DATE	DESCRIPTION OF REVISION
5		
4		
3	REB 5/13/02	AS BUILT
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BY	DATE	DESCRIPTION OF REVISION

HIAWASSEE RIVER WATERSHED COALITION
 IN CONJUNCTION WITH
 THE NATURAL RESOURCES CONSERVATION SERVICE

TROUT COVE BRANCH
 CLAY COUNTY, NORTH CAROLINA

SHEET NO. 20