

STATE	CONTRACT NUMBER	SHEET NO.	TOTAL SHEETS
N.C.	003984	1	9

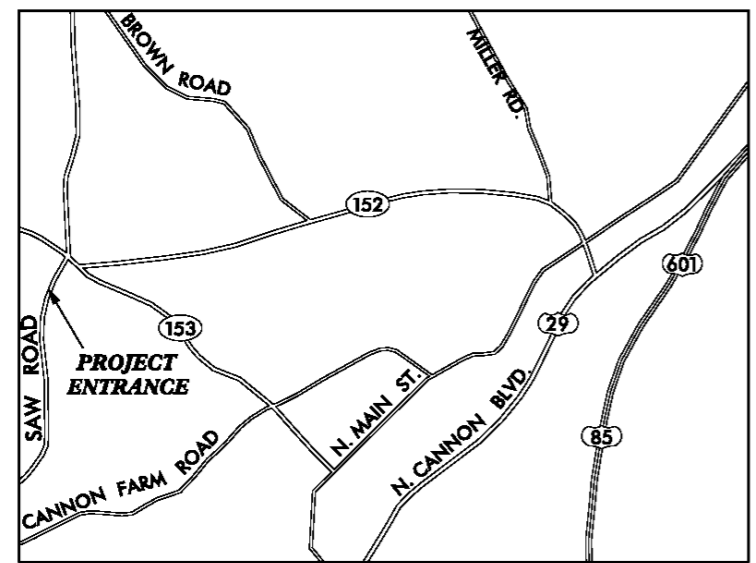
SYN.	DESCRIPTION	DATE
REVISIONS		

STATE OF NORTH CAROLINA
ECOSYSTEM ENHANCEMENT PROGRAM

ROWAN COUNTY

LOCATION: JACOB'S LANDING
CHINA GROVE, NORTH CAROLINA

TYPE OF WORK: STREAM MITIGATION



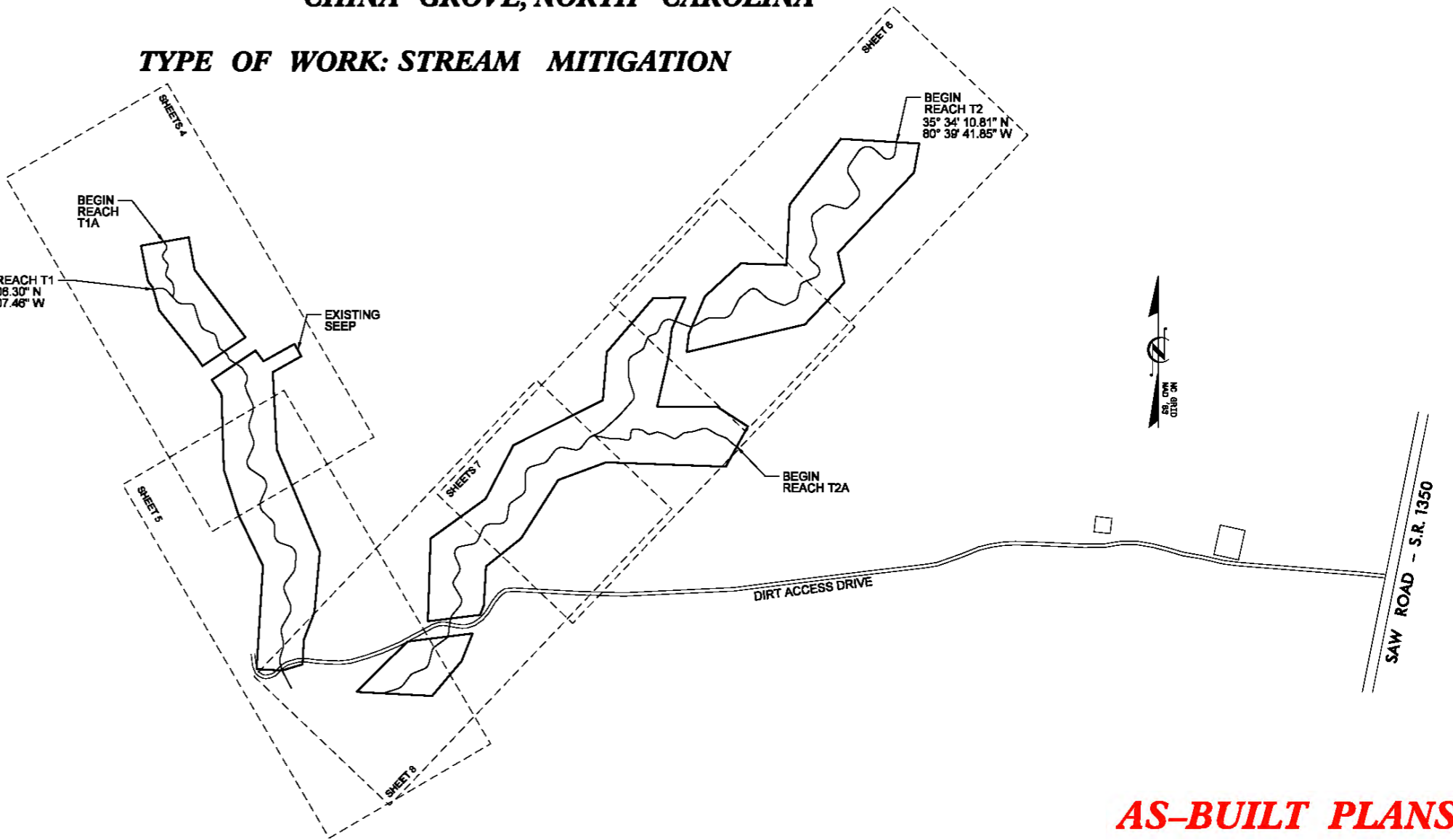
VICINITY MAP
NOT TO SCALE

DIRECTIONS TO SITE

FROM RALEIGH, TAKE I-40 WEST.
SLIGHT LEFT ONTO I-85 BUS SUS-29
SUS-70 W (signs for High Point/Charlotte).
FOLLOW I-85 SOUTH TO EXIT 68.
MERGE ONTO US-29 CONNECTOR
SOUTH. TURN RIGHT ONTO NORTH
CAROLINA 152 W/CHURCH STREET.
TURN LEFT ONTO SAW ROAD TAKE
A RIGHT AT THE TWO STORY HOUSE
AT 350 SAW ROAD. FOLLOW THE DIRT
DRIVE THROUGH THE CATTLE FIELDS
TO THE SITE.

INDEX OF SHEETS

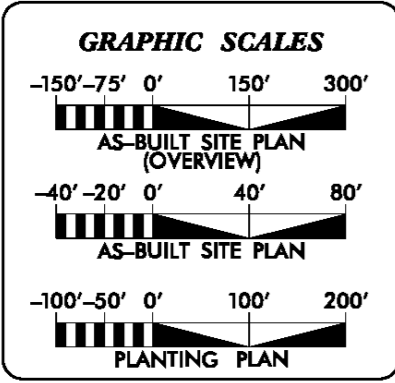
- 1 TITLE SHEET
- 2 GENERAL NOTES & PROJECT LEGEND
- 3-8 AS-BUILT SITE PLAN
- 9 PLANTING PLAN



AS-BUILT PLANS

KCI JOB# : 20110675

CONTRACT #: 003984



PROJECT DATA

STREAM RESTORATION LENGTH = 4,484 FEET

STREAM ENHANCEMENT II LENGTH = 109 FEET

Prepared In the Office of:

KCI Associates of North Carolina, P.A.
SUITE 220 LANDMARK CENTER II, 4601 SIX FORKS RD., RALEIGH, NC
ENGINEERS • PLANNERS • ECOLOGISTS

ALEX FRENCH
NATURAL CHANNEL DESIGN

PROJECT ENGINEER
GARY M. MRYNCZA, P.E.

SIGNATURE: _____ P.E.

Prepared For:

GUY PEARCE
CONTRACT ADMINISTRATOR

GENERAL NOTES:

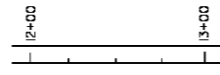
1. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT TRACTS. THE PARENT TRACT BOUNDARIES ADJACENT TO THIS EASEMENT ARE NOT CHANGED BY THIS PLAT. BOUNDARY INFORMATION SHOWN HEREON WAS DERIVED FROM DEEDS AND MAPS OF THE ROWAN COUNTY AND MONUMENTATION FOUND IN THE FIELD.
2. DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
3. 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 PERFORMED IN SEPTEMBER 2013.
4. VERTICAL DATA SHOWN HEREON BASED ON NAVD '88.
5. DEED REFERENCES:
 DB 915 PG 687
 DB 875 PG 742
 DB 1122 PG 670
 DB 756 PG 923
6. SUBJECT PROPERTIES KNOWN AS TAX NUMBER:
 #234 023
 #234 024
 #234 025
7. SUBJECT PROPERTIES PARTIALLY LIE WITHIN THE AREA DESIGNATED AS ZONE "X", BASED ON FEDERAL FLOOD INSURANCE RATE MAP 3710560600J EFFECTIVE JUNE 16, 2009.
8. NO UNDERGROUND UTILITIES LOCATED DURING THE COURSE OF THIS SURVEY.

CONTROL POINTS

POINT	NORTHING	EASTING	ELEV
KCI#300	664903.87	1504085.22	793.15
KCI#301	665233.49	1504239.55	793.59
KCI#302	665473.30	1504002.98	795.81
KCI#303	665697.94	1504191.77	814.90
KCI#304	665937.34	1503951.47	802.99
KCI#305	664916.39	1504449.19	794.00
KCI#306	665228.78	1504766.13	799.81
KCI#307	665600.75	1504938.38	806.02
KCI#308	665792.33	1505240.51	812.50
KCI#309	666042.52	1505553.70	816.94
KCI#310	666304.60	1505937.21	830.19
KCI#311	665620.22	1505198.16	816.10
KCI#312	665466.78	1505394.29	831.29

PROJECT LEGEND:

Thalweg with
Approximate Bankfull Limits



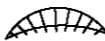
Step Pool



Riffle Grade Control



Soil Lift



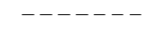
Riffle Enhancement



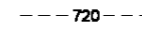
Existing Woods Line



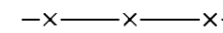
Minor Contour Line



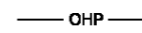
Major Contour Line



New Woven Wire Fence



Overhead Power Line



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4601 SIX FORKS ROAD
RALEIGH, NORTH CAROLINA 27609

JACOB'S LANDING
STREAM MITIGATION PROJECT
CHINA GROVE, ROWAN COUNTY, NORTH CAROLINA

DATE: MARCH 2013
SCALE: N.T.S.

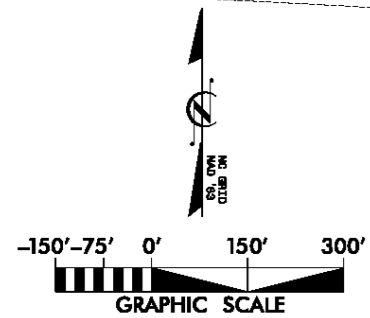
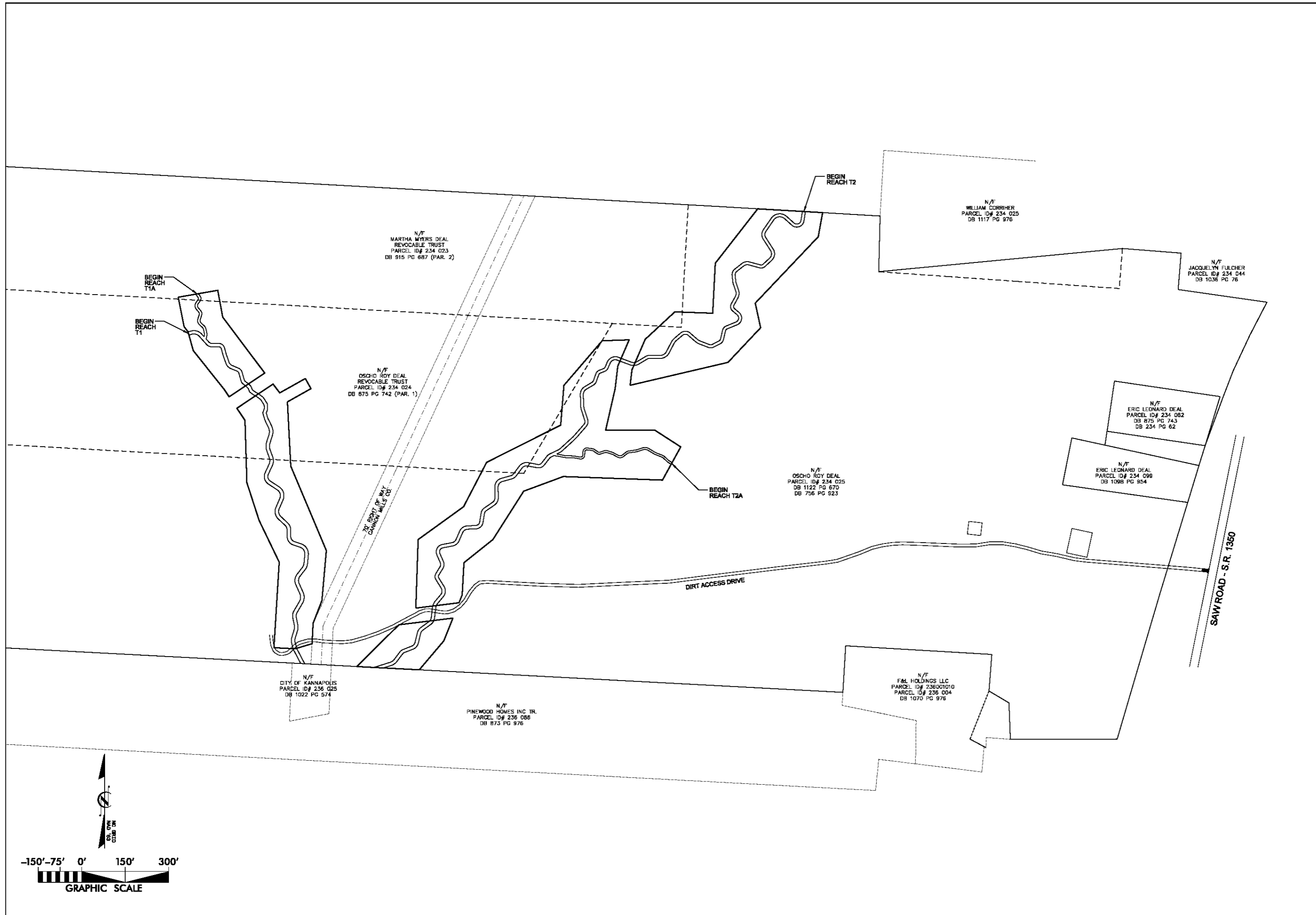
PROJECT
LEGEND &
NOTES


SHEET 2 OF 8

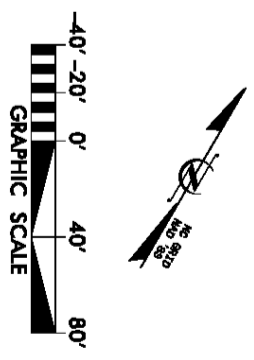
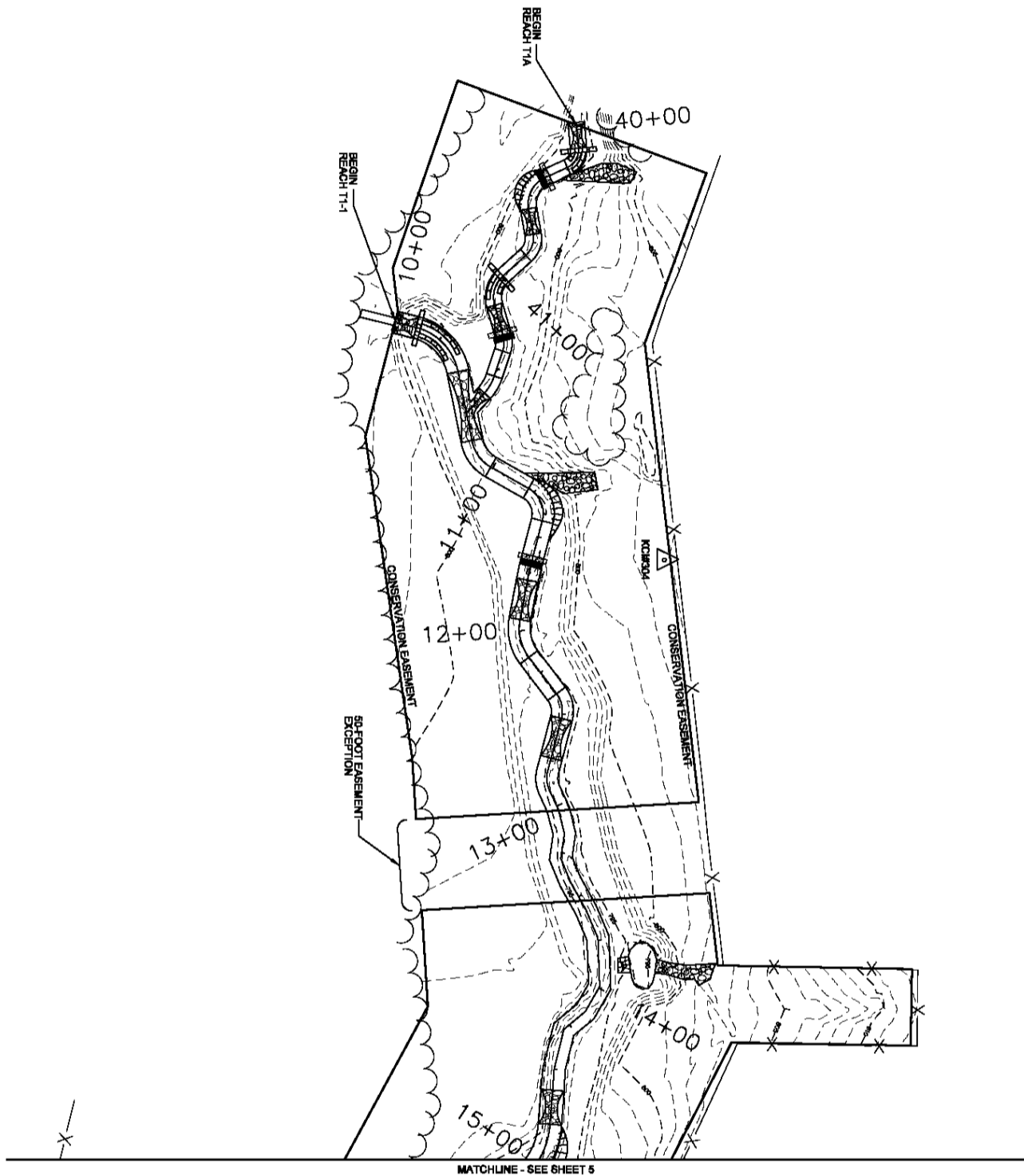
REVISIONS

DATE

DESCRIPTION



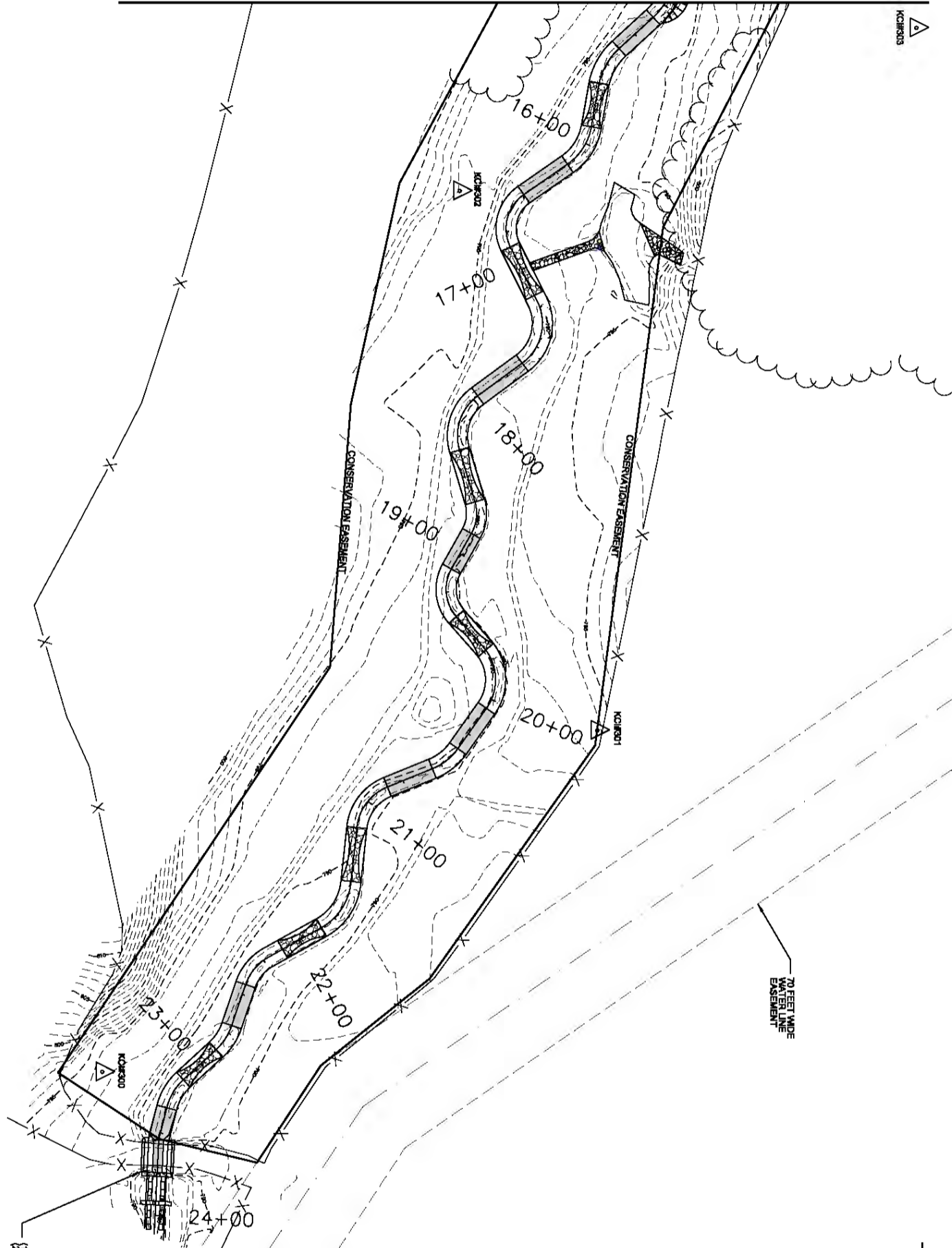
							DATE
							REVISIONS
							
KCI ASSOCIATES OF NC ENGINEERS • PLANNERS • SCIENTISTS 4601 SIX FORKS ROAD RALEIGH, NORTH CAROLINA 27609							
JACOB'S LANDING STREAM MITIGATION PROJECT CHINA GROVE, ROWAN COUNTY, NORTH CAROLINA REACHES T1, T1A, T2 AND T2A							
DATE: MARCH 2013							
SCALE: 1"=150'							
AS-BUILT SITE PLAN (OVERVIEW)							
SHEET 3 OF 8							



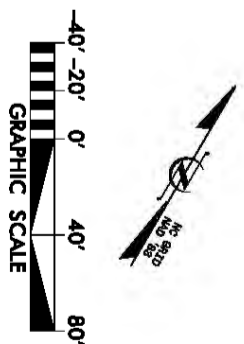
MATCHLINE - SEE SHEET 5

SHEET 4 OF 8 AS-BUILT SITE PLAN	DATE: MARCH 2013 SCALE: 1"=40'	JACOB'S LANDING STREAM MITIGATION PROJECT CHINA GROVE, ROWAN COUNTY, NORTH CAROLINA REACHES T1 AND T1A	KCI ASSOCIATES OF NC ENGINEERS • PLANNERS • SCIENTISTS 4601 SIX FORKS ROAD RALEIGH, NORTH CAROLINA 27609		<table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DESCRIPTION	DATE															
	NO.	DESCRIPTION	DATE																				
REVISIONS																							

MATCHLINE - SEE SHEET 4



12 DIA. 20' LONG FLOODPLAIN CULVERTS (PEP)
4.5' H x 7.5' W x 20' LONG STREAM CULVERT (CONCRETE BOX)



70 FEET WIDE
WATER LINE
EASEMENT

CONSERVATION EASEMENT

CONSERVATION EASEMENT

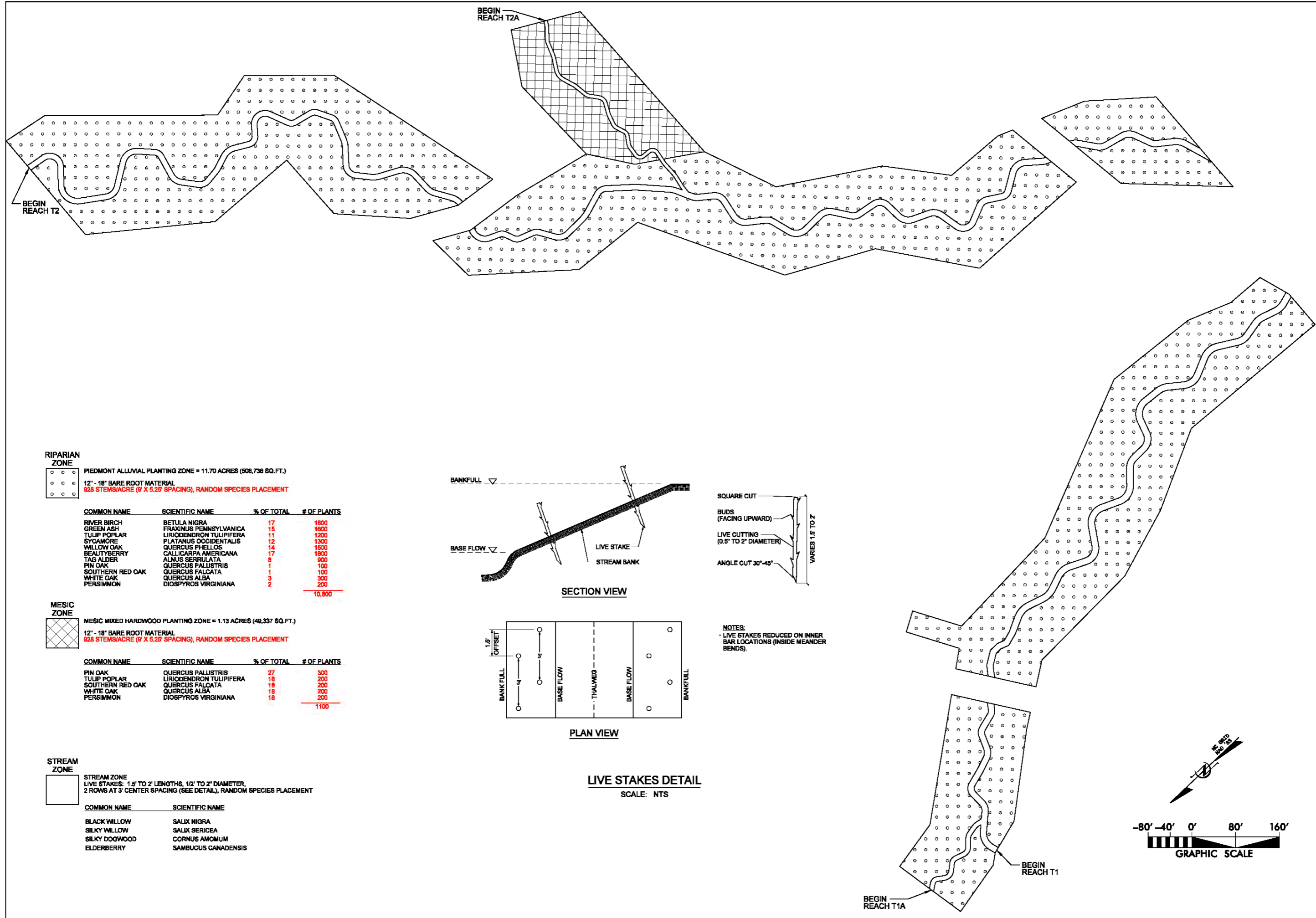
**JACOB'S LANDING
STREAM MITIGATION PROJECT**
CHINA GROVE, ROWAN COUNTY, NORTH CAROLINA
REACH T1

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RALEIGH, NORTH CAROLINA 27609



NO.	DESCRIPTION	DATE

DATE: MARCH 2013
SCALE: 1"=40'
AS-BUILT
SITE PLAN
SHEET 5 OF 8



RIPARIAN ZONE

PIEDMONT ALLUVIAL PLANTING ZONE = 11.70 ACRES (508,738 SQ.FT.)
 12" - 18" BARE ROOT MATERIAL
 828 STEMS/ACRE (9' X 5.25' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	% OF TOTAL	# OF PLANTS
RIVER BIRCH	BETULA NIGRA	17	1800
GREEN ASH	FRAXINUS PENNSYLVANICA	15	1600
TULIP POPLAR	LIRIODENDRON TULIPIFERA	11	1200
SYCAMORE	PLATANUS OCCIDENTALIS	12	1300
WILLOW OAK	QUERCUS PHELLOS	14	1500
BEAUTYBERRY	CALLICARPA AMERICANA	17	1800
TAS ALDER	ALNUS SERRULATA	8	900
PIN OAK	QUERCUS PALUSTRIS	1	100
SOUTHERN RED OAK	QUERCUS FALCATA	1	100
WHITE OAK	QUERCUS ALBA	3	300
PERSIMMON	DIOSPYROS VIRGINIANA	2	200
			10,800

MESIC ZONE

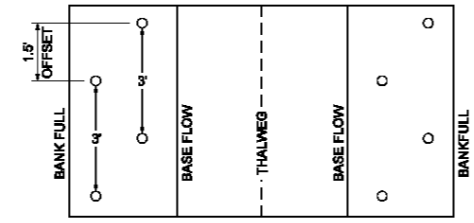
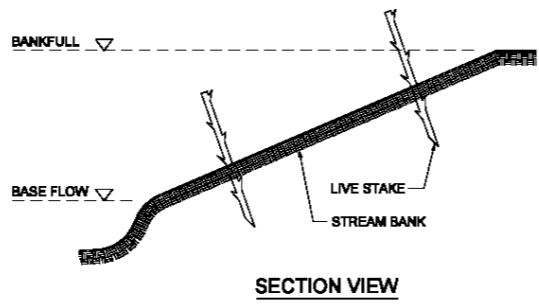
MESIC MIXED HARDWOOD PLANTING ZONE = 1.13 ACRES (48,337 SQ.FT.)
 12" - 18" BARE ROOT MATERIAL
 828 STEMS/ACRE (9' X 5.25' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	% OF TOTAL	# OF PLANTS
PIN OAK	QUERCUS PALUSTRIS	27	300
TULIP POPLAR	LIRIODENDRON TULIPIFERA	18	200
SOUTHERN RED OAK	QUERCUS FALCATA	18	200
WHITE OAK	QUERCUS ALBA	18	200
PERSIMMON	DIOSPYROS VIRGINIANA	18	200
			1100

STREAM ZONE

STREAM ZONE
 LIVE STAKES: 1.5' TO 2' LENGTHS, 1/2" TO 2" DIAMETER,
 2 ROWS AT 3' CENTER SPACING (SEE DETAIL), RANDOM SPECIES PLACEMENT

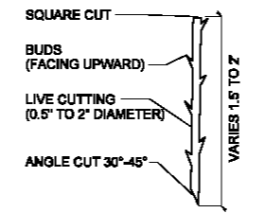
COMMON NAME	SCIENTIFIC NAME
BLACK WILLOW	SALIX NIGRA
SILKY WILLOW	SALIX SERICEA
SILKY DOGWOOD	CORNUS AMOMUM
ELDERBERRY	SAMBUCUS CANADENSIS



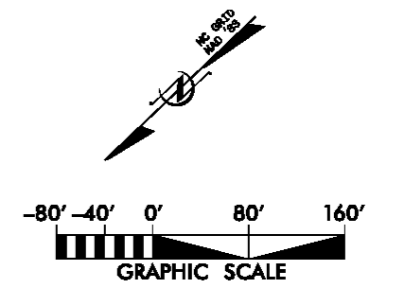
SECTION VIEW

PLAN VIEW

LIVE STAKES DETAIL
 SCALE: NTS



NOTES:
 - LIVE STAKES REDUCED ON INNER BANK LOCATIONS (INSIDE MEANDER BENDS).



NO.	DATE	DESCRIPTION	REVISIONS



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JACOB'S LANDING
STREAM MITIGATION PROJECT
 CHINA GROVE, ROWAN COUNTY, NORTH CAROLINA

DATE: MARCH 2013
 SCALE: 1"=80'
PLANTING PLAN
 SHEET 9 OF 9