

KCI JOB# : 20100798

CONTRACT #: 003273

STATE OF NORTH CAROLINA
ECOSYSTEM ENHANCEMENT PROGRAM

**BUFFALO FLATS
RESTORATION SITE**

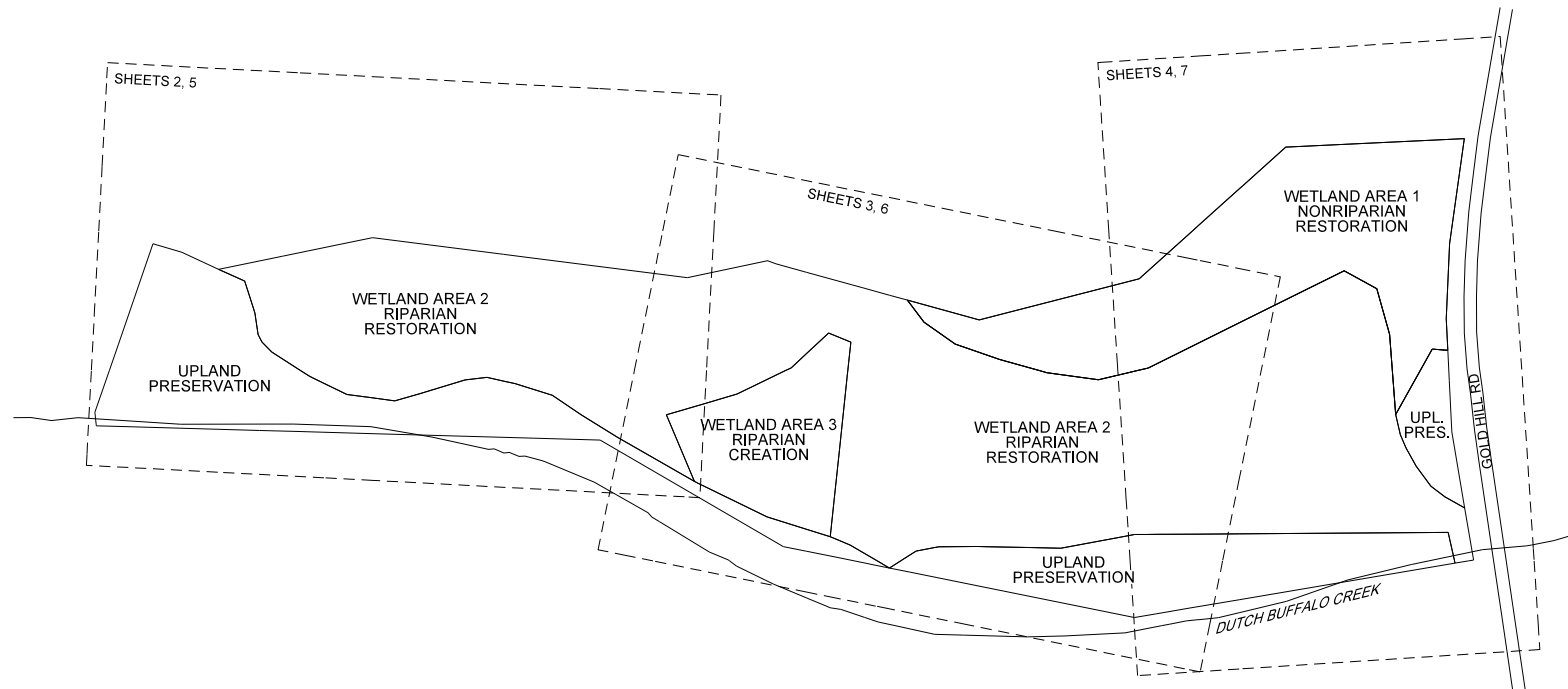
**CABARRUS COUNTY, NORTH CAROLINA
YADKIN RIVER BASIN**

**ROCKY RIVER WATERSHED
UPPER DUTCH BUFFALO CREEK DRAINAGE
03040105020050**



**VICINITY MAP
NOT TO SCALE**

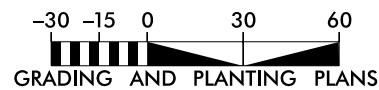
DIRECTIONS FROM RALEIGH:
PROCEED WEST ON I-40 FOR APPROXIMATELY 80 MILES. THEN TRAVEL ON I-85 SOUTH TOWARD HIGH POINT. TAKE EXIT 63 TOWARD KANNAPOLIS. TURN LEFT AT LANE STREET AND ANOTHER LEFT ONTO OLD SALISBURY-CONCORD RD. THEN TAKE A SLIGHT RIGHT ONTO IRISH POTATO RD. TRAVEL FOR 5 MILES AND THEN TURN LEFT AT GOLD HILL RD. THE SITE WILL BE APPROXIMATELY 1.3 MILES AHEAD ON THE LEFT (SHORTLY AFTER CROSSING THE BRIDGE OVER DUTCH BUFFALO CREEK).



INDEX OF SHEETS

- 1 TITLE SHEET
- 2 - 4 AS-BUILT SITE PLAN
- 5 - 8 PLANTING PLAN
- 9 MONITORING LOCATIONS

GRAPHIC SCALES



PROJECT DATA

- WETLAND AREA 1
NONRIPARIAN WETLAND RESTORATION = 3.4 ACRES
- WETLAND AREA 2
RIPARIAN WETLAND RESTORATION = 11.2 ACRES
- WETLAND AREA 3
RIPARIAN WETLAND CREATION = 1.2 ACRES

Prepared in the Office of:

**KCI Associates
of North Carolina, P.A.**
SUITE 220 LANDMARK CENTER 11,460 SIX FORKS RD., RALEIGH, NC
ENGINEERS • PLANNERS • ECOLOGISTS

GARY M. MRYNCA, P.E.
PROJECT ENGINEER

TIM MORRIS & KRISTIN KNIGHT-MENG
WETLAND DESIGN

PROJECT ENGINEER



SIGNATURE:

P.E.

Prepared for:







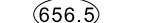
**Ecosystem
Enhancement**
PROGRAM
GUY PEARCE
CONTRACT ADMINISTRATOR

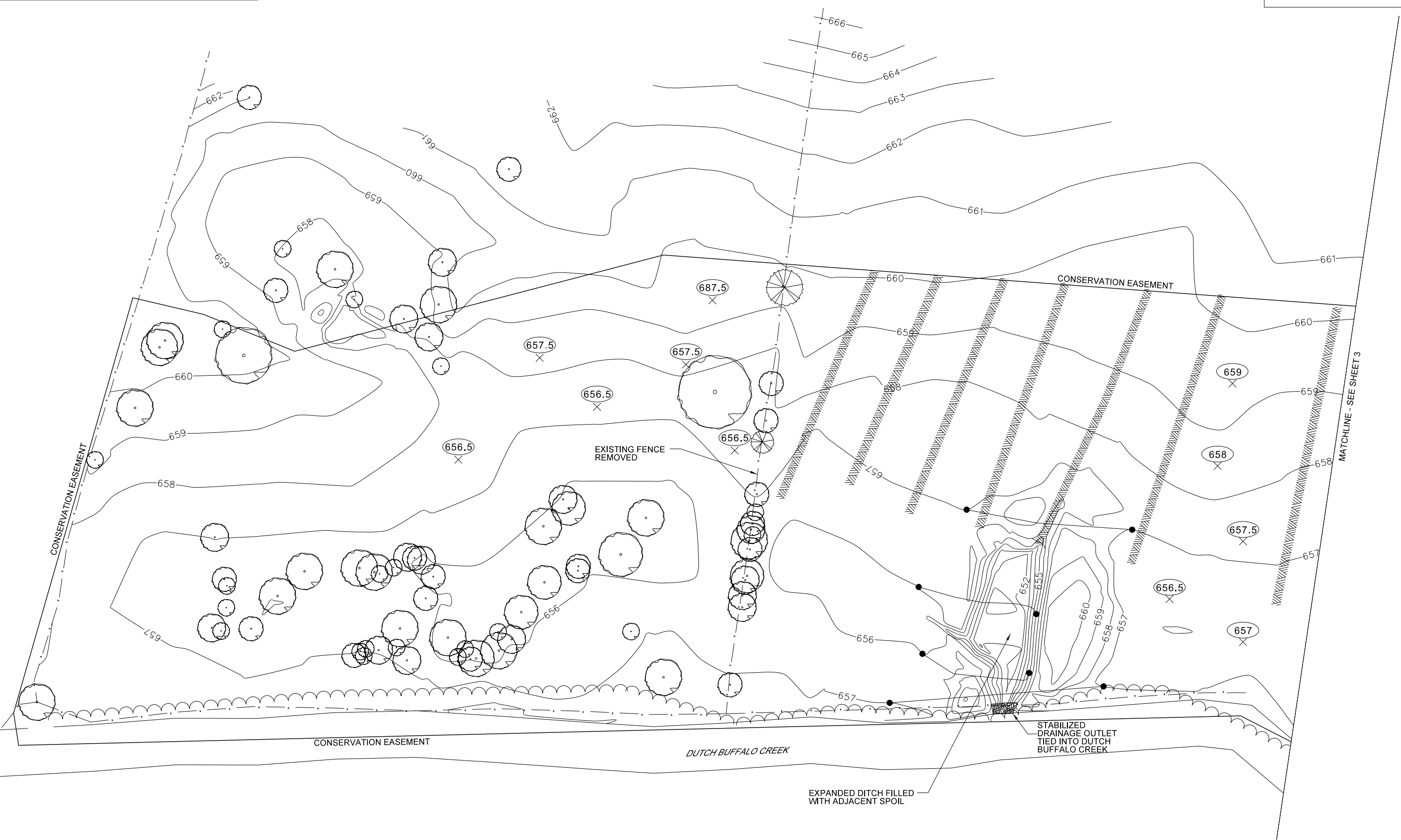
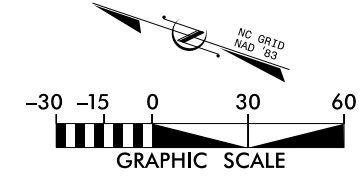
STATE	CONTRACT NUMBER	SHEET NO.	TOTAL SHEETS
N.C.	003273	1	9

SYL.	DESCRIPTION	DATE	APPROVED
REVISIONS			



SITE PLAN LEGEND

-  EASEMENT LINE
-  PRE-RESTORATION CONTOUR LINES
-  DESIGNED CONTOUR LINES
-  TREE LINE
-  ROCK STABILIZED OUTLET
-  FILLED DITCH
-  APPROX. FINISHED GRADING ELEV.



SYMBOL	DESCRIPTION	DATE	APPROVED







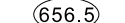


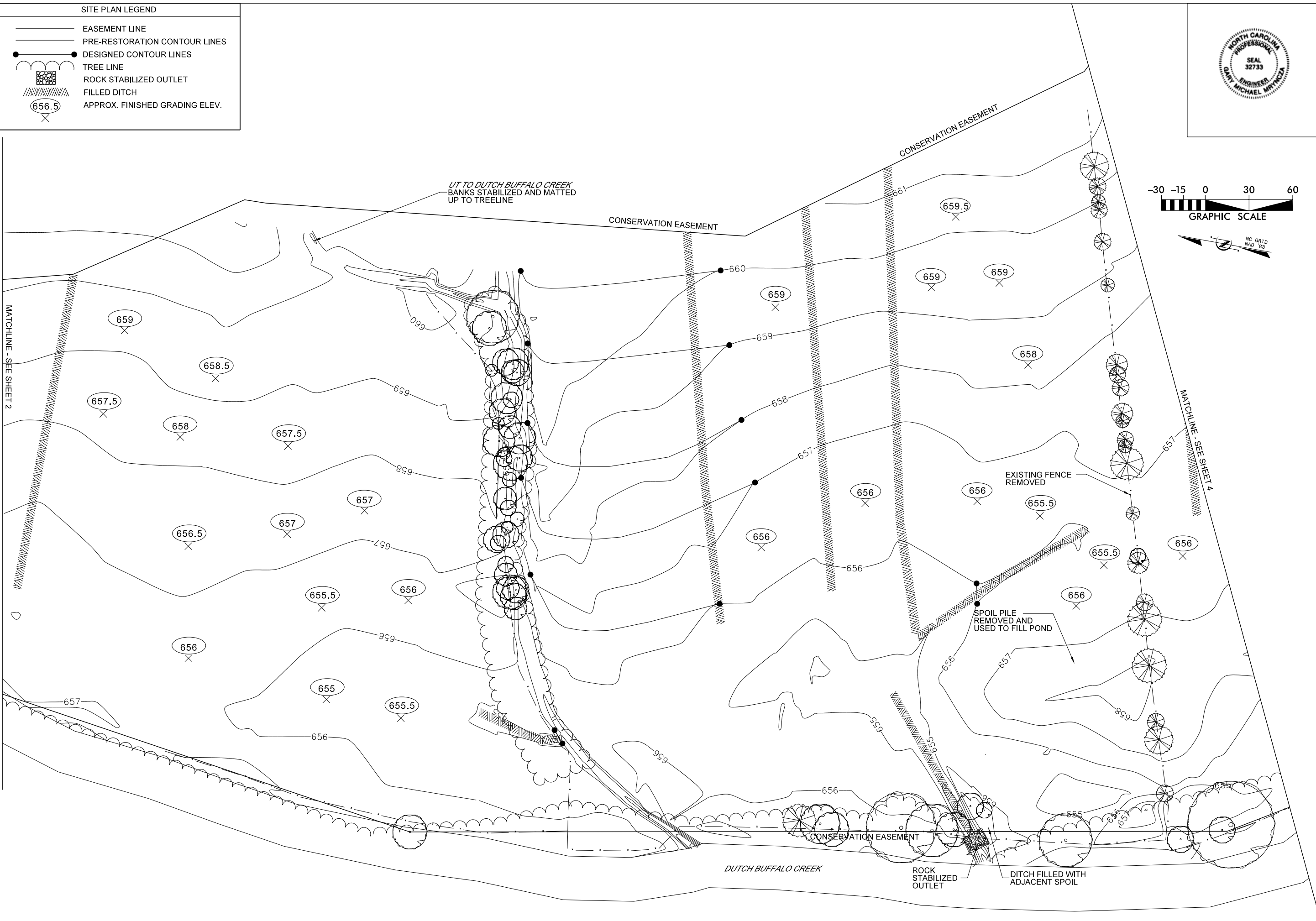
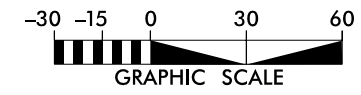
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RALEIGH, NORTH CAROLINA 27609

BUFFALO FLATS RESTORATION SITE
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

DATE: JUNE 2012
SCALE: GRAPHIC
AS-BUILT SITE PLAN
SHEET 2 OF 9

SITE PLAN LEGEND

-  EASEMENT LINE
-  PRE-RESTORATION CONTOUR LINES
-  DESIGNED CONTOUR LINES
-  TREE LINE
-  ROCK STABILIZED OUTLET
-  FILLED DITCH
-  APPROX. FINISHED GRADING ELEV.



MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 4

UT TO DUTCH BUFFALO CREEK
BANKS STABILIZED AND MATTED
UP TO TREELINE

EXISTING FENCE
REMOVED

SPOIL PILE
REMOVED AND
USED TO FILL POND

DUTCH BUFFALO CREEK

SYMBOL	DESCRIPTION	DATE	APPROVED







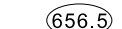


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**BUFFALO FLATS
RESTORATION SITE**
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

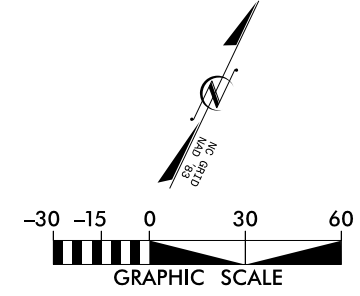
DATE: JUNE 2012
SCALE: GRAPHIC
**AS-BUILT
SITE PLAN**
SHEET 3 OF 9

SITE PLAN LEGEND

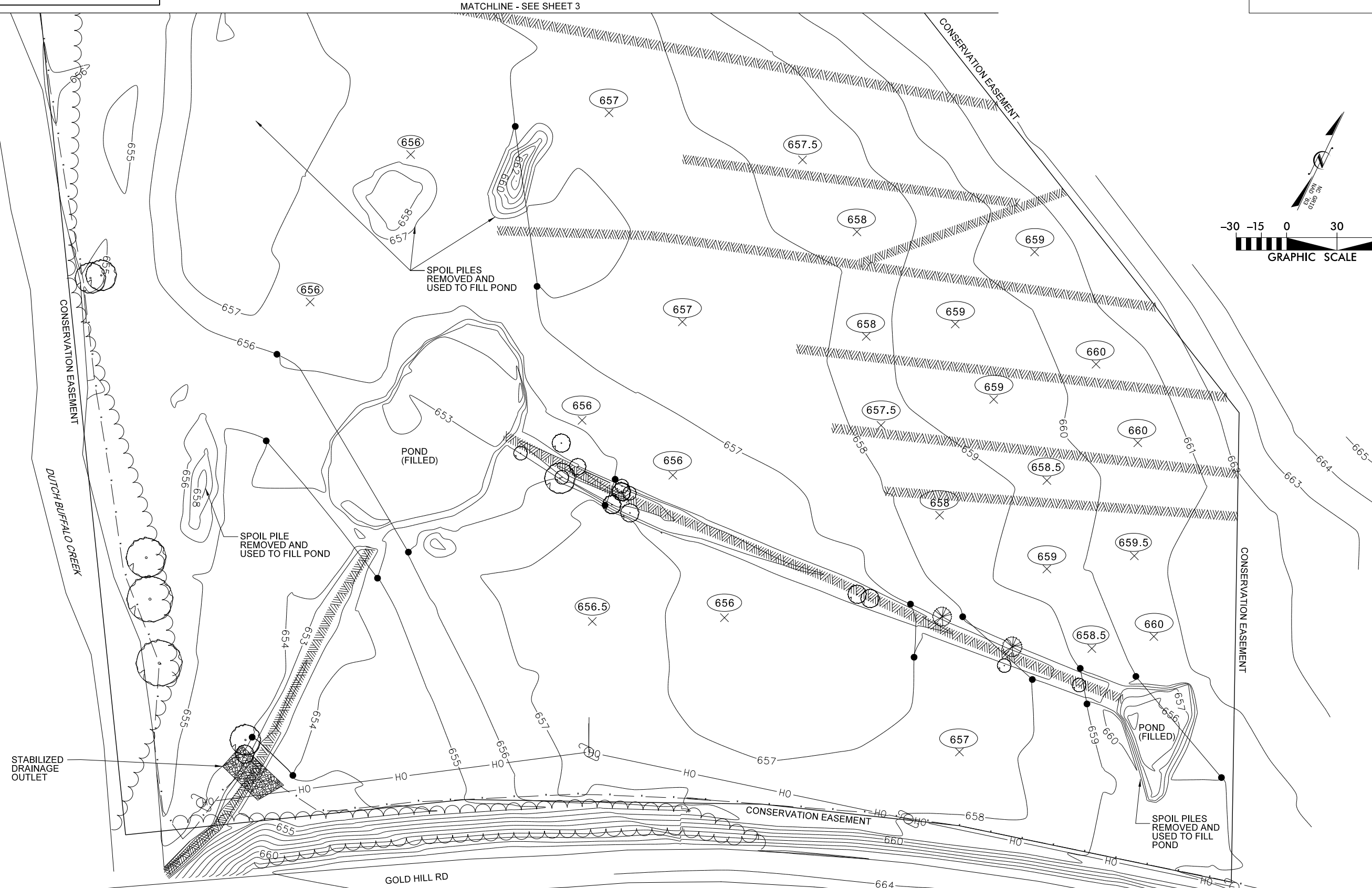
-  EASEMENT LINE
-  PRE-RESTORATION CONTOUR LINES
-  DESIGNED CONTOUR LINES
-  TREE LINE
-  ROCK STABILIZED OUTLET
-  FILLED DITCH
-  APPROX. FINISHED GRADING ELEV.



SYMBOL	DESCRIPTION	DATE	APPROVED



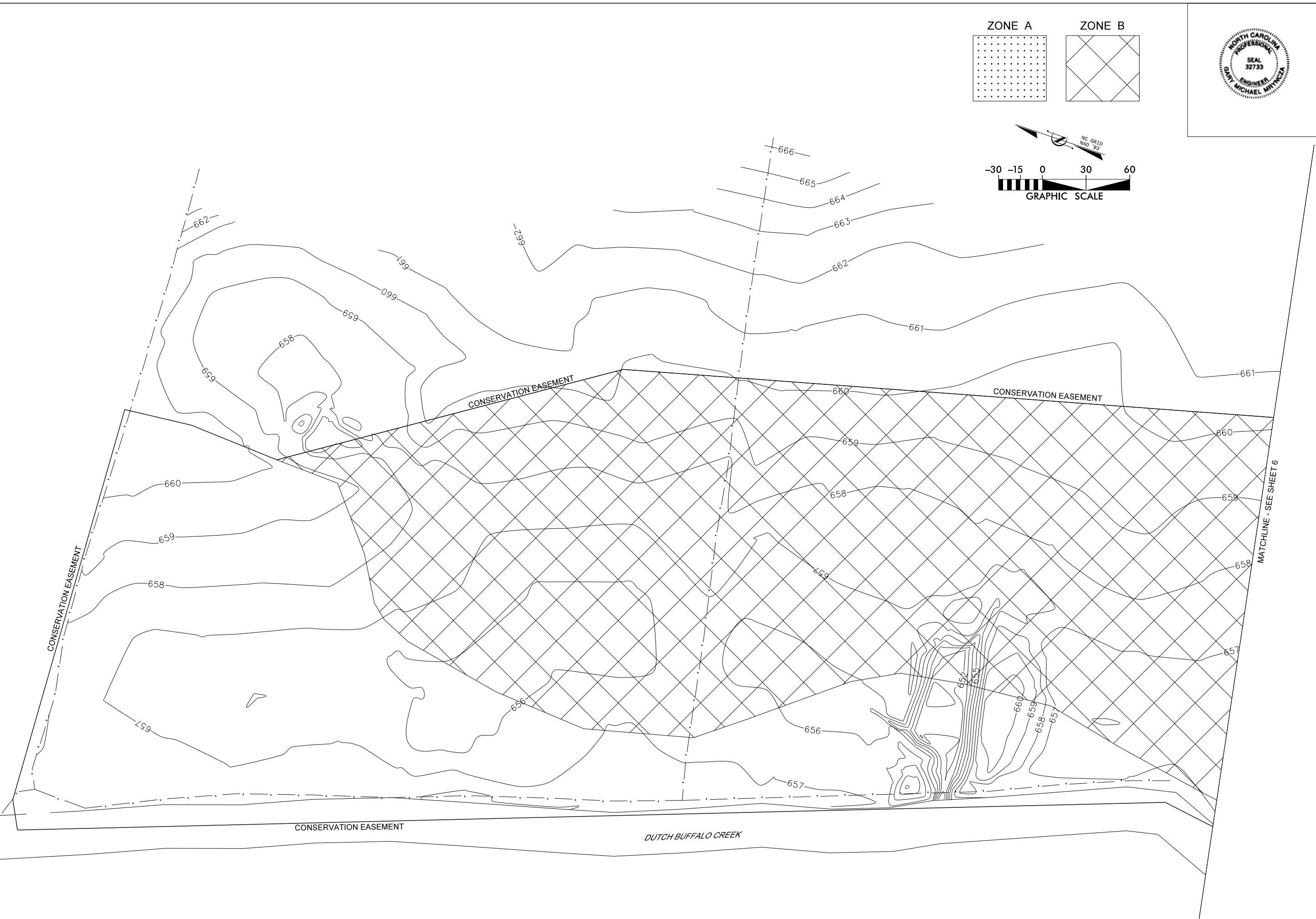
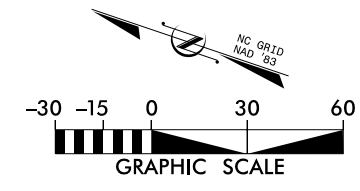
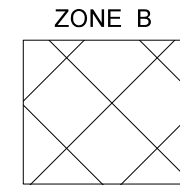
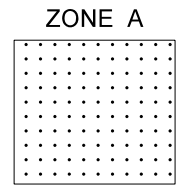
MATCHLINE - SEE SHEET 3



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**BUFFALO FLATS
RESTORATION SITE**
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

DATE: JUNE 2012
SCALE: GRAPHIC
AS-BUILT SITE PLAN
SHEET 4 OF 9



SYMBOL	DESCRIPTION	DATE	APPROVED



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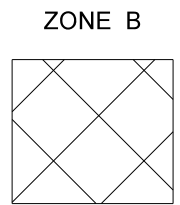
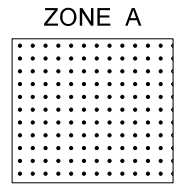
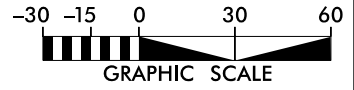
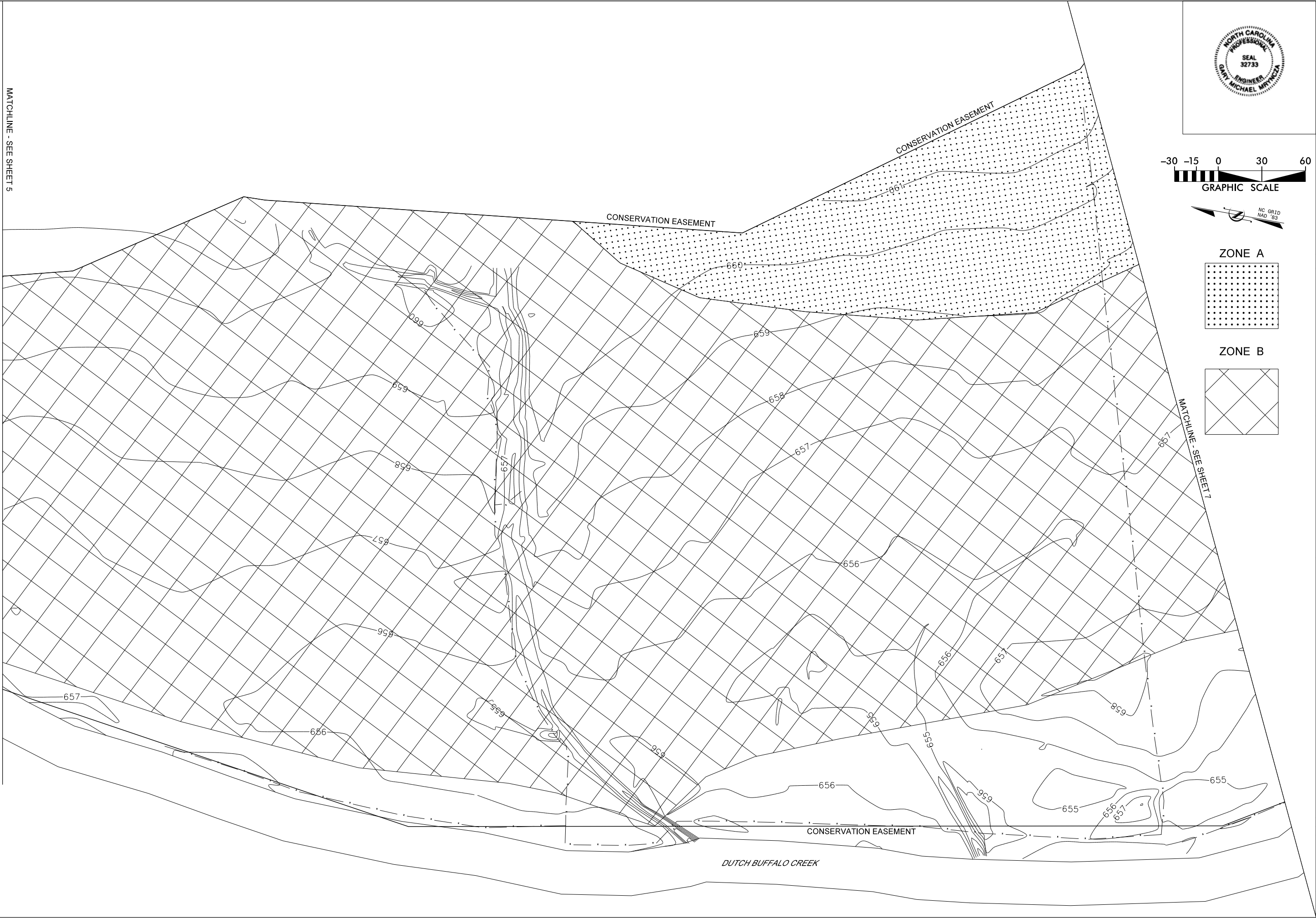
**BUFFALO FLATS
RESTORATION SITE**
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

DATE: JUNE 2012
SCALE: GRAPHIC

**PLANTING
PLAN**

SHEET 5 OF 9

MATCHLINE - SEE SHEET 5



SYMBOL	DESCRIPTION	DATE	APPROVED



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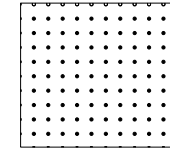
**BUFFALO FLATS
RESTORATION SITE**
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

DATE: JUNE 2012
SCALE: GRAPHIC

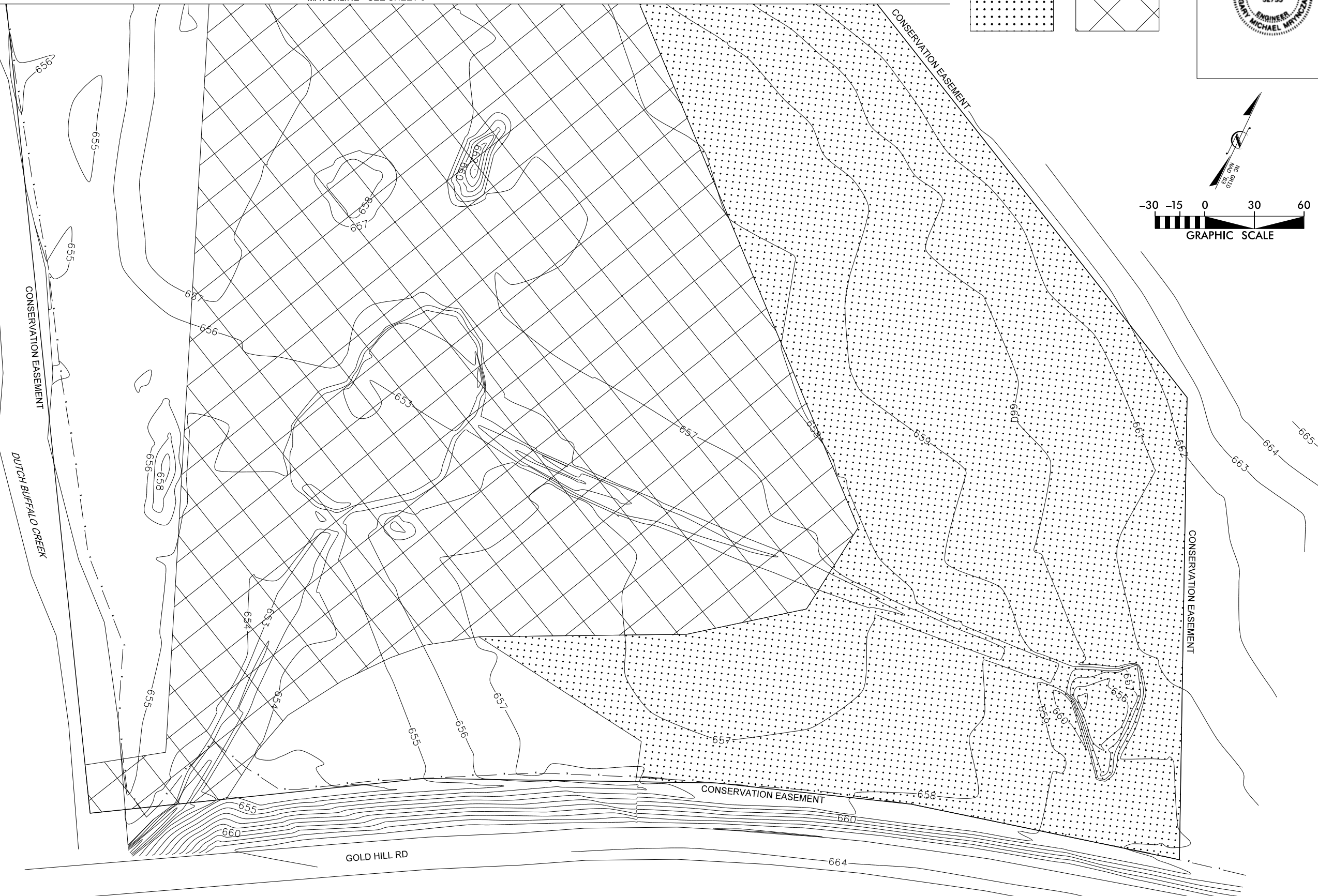
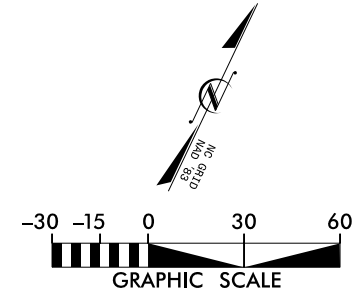
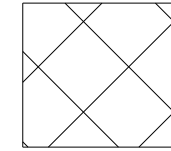
**PLANTING
PLAN**

MATCHLINE - SEE SHEET 6

ZONE A



ZONE B



SYMBOL	DESCRIPTION	DATE	APPROVED



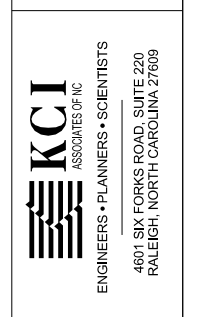
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**BUFFALO FLATS
RESTORATION SITE**
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

DATE: JUNE 2012
SCALE: GRAPHIC
**PLANTING
PLAN**
SHEET 7 OF 9

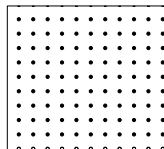


SYMBOL	DESCRIPTION	DATE	APPROVED



**BUFFALO FLATS
RESTORATION SITE**
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

ZONE A



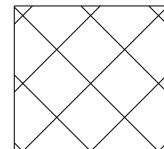
LOW ELEVATION SEEP ZONE

WETLAND AREA 1
NONRIPARIAN WETLAND RESTORATION
3.4 AC

18" - 24" BARE ROOT MATERIAL
436 STEMS/ACRE (10' X 10' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FAC	16	237
AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	FACW-	16	237
LAUREL OAK	QUERCUS LAURIFOLIA	FACW	13	193
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW-	13	193
CHERRYBARK OAK	QUERCUS PAGODA	FAC+	13	193
WILLOW OAK	QUERCUS PHELLOS	FACW-	13	193
AMERICAN ELM	ULMUS AMERICANA	FACW	16	237
			100	1,483

ZONE B



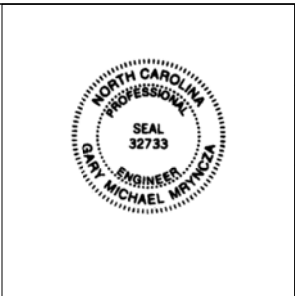
BOTTOMLAND HARDWOOD FOREST ZONE

WETLAND AREAS 2 AND 3
RIPARIAN WETLAND RESTORATION AND CREATION
12.4 AC

18" - 24" BARE ROOT MATERIAL
436 STEMS/ACRE (10' X 10' SPACING), RANDOM SPECIES PLACEMENT

COMMON NAME	SCIENTIFIC NAME	WETLAND INDICATOR	% OF TOTAL	# OF PLANTS
SUGARBERRY	CELTIS LAEVIGATA	FACW	10	541
BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	OBL	10	541
GREEN ASH	FRAXINUS PENNSYLVANICA	FACW	10	541
TULIP POPLAR	LIRIODENDRON TULIPIFERA	FAC	10	541
WATER TUPELO	NYSSA AQUATICA	OBL	10	541
OVERCUP OAK	QUERCUS LYRATA	OBL	10	541
SWAMP CHESTNUT OAK	QUERCUS MICHAUXII	FACW-	10	541
CHERRYBARK OAK	QUERCUS PAGODA	FAC+	10	541
WILLOW OAK	QUERCUS PHELLOS	FACW-	10	541
AMERICAN ELM	ULMUS AMERICANA	FACW	10	541
			100	5,410

MONITORING LEGEND	
	GROUNDWATER WELL
	RAIN GAUGE / BARROLOGGER
	PHOTO POINT
	VEGETATION PLOT
	EXISTING EASEMENT LINE
	TREE LINE



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CONCORD, CABARRUS COUNTY, NORTH CAROLINA

DATE: JUNE 2012
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MONITORING LOCATIONS
SHEET 9 OF 9

