

AS-BUILT SURVEY OF HAUSER CREEK STREAM RESTORATION

SCO# 070698301
DAVIE COUNTY

REFERENCES:
OWNER:
 NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM
 1652 MAIL SERVICE CENTER
 RALEIGH, NC 27099-1652
 (919)715-0476
 EEP PROJ. MGR.: HARRY TSOMIDES
 EEP REVIEW COORDINATOR: TIM BAUMGARTNER

CONTRACTOR:
 CAROLINA ENVIRONMENTAL CONTRACTING, INC.
 MT. AIRY, NC
 (336)320-3849

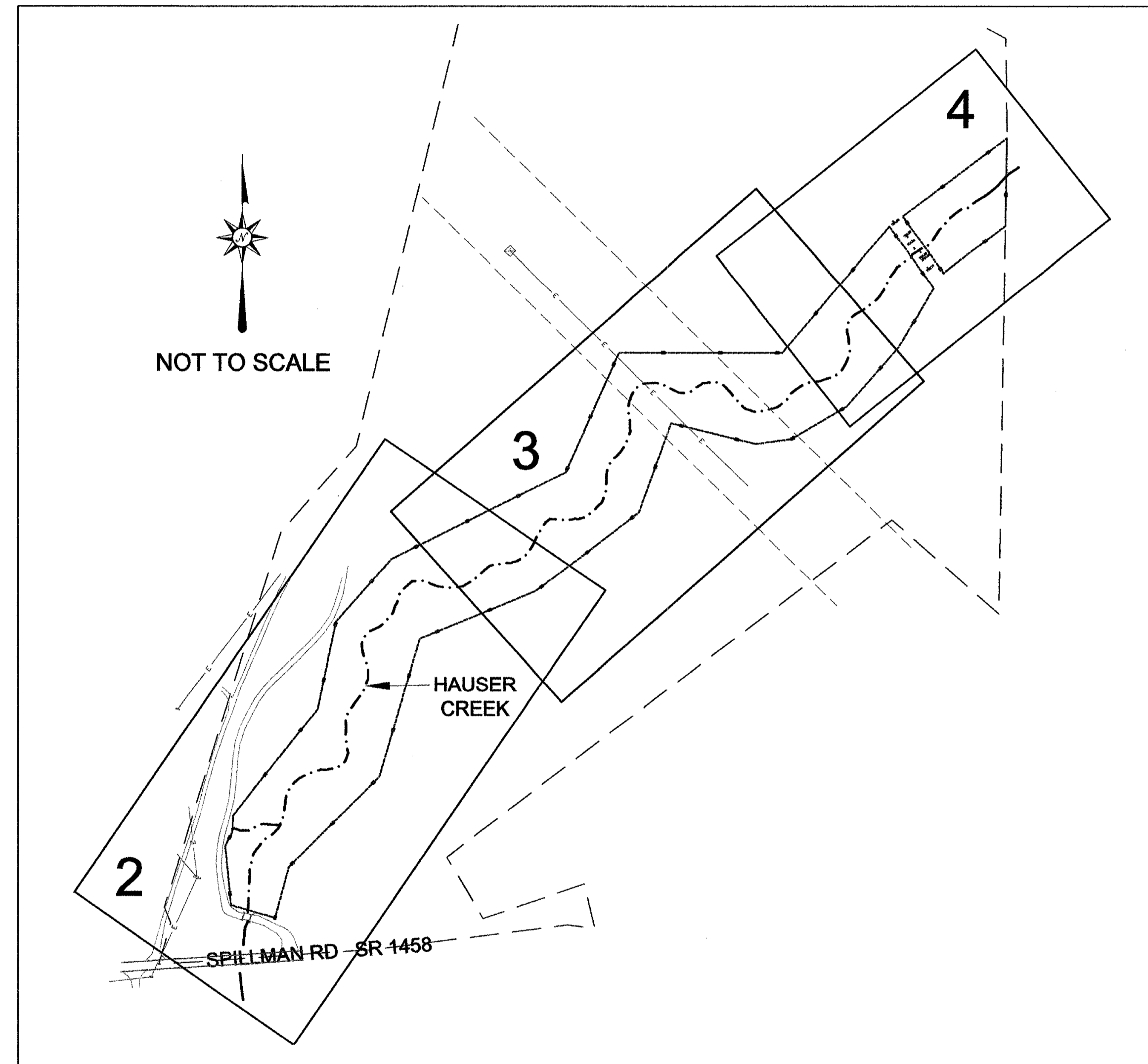
DESIGNER:
 WARD CONSULTING ENGINEERS, P.C.
 RALEIGH, NC
 (919)870-0526

I, ELISABETH G. 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 28th DAY OF SEPTEMBER, 2011.

Elisabeth G. Turner
 ELISABETH G. TURNER, P.L.S. #L-4440

I, ELISABETH G. TURNER, CERTIFY THAT THESE PLANS WERE DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION AND THAT THE RATIO OF PRECISION AS CALCULATED IS 1: 5,700 +. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS 28th DAY OF SEPTEMBER, 2011.

Elisabeth G. Turner
 ELISABETH G. TURNER, P.L.S. #L-4440



SHEET INDEX

- SHEET 1 - TITLE, VICINITY MAP, SHEET INDEX, AND GENERAL NOTES
- SHEET 2 - PLAN AND PROFILE STATION 0+69 TO 11+00
- SHEET 3 - PLAN AND PROFILE STATION 11+00 TO 22+00
- SHEET 4 - PLAN AND PROFILE STATION 22+00 TO 26+80
- SHEET 5 - FLOOD STUDY CROSS SECTIONS AND STRUCTURE CHART

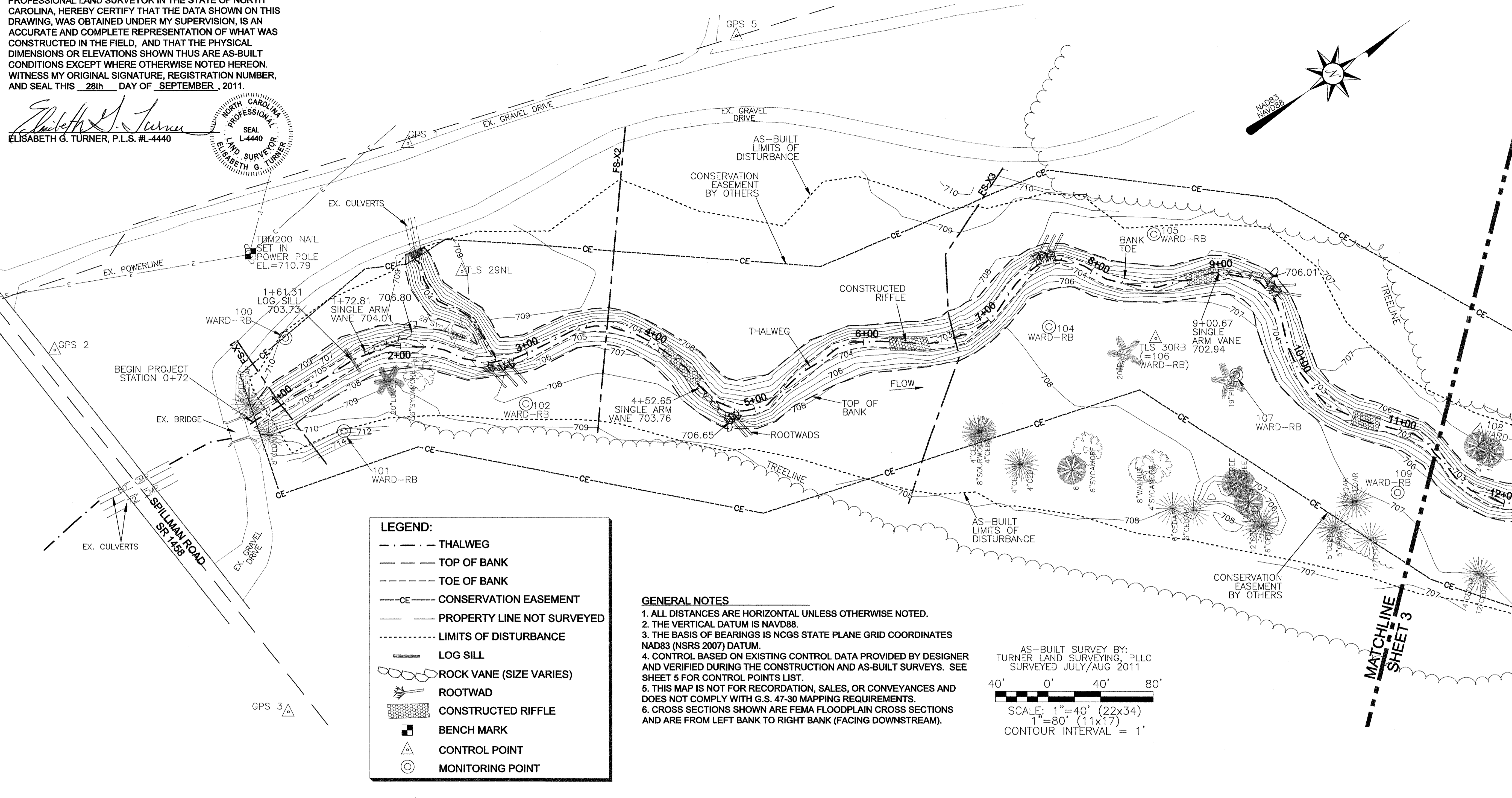
GENERAL NOTES

1. ALL DISTANCES ARE HORIZONTAL UNLESS OTHERWISE NOTED.
2. THE VERTICAL DATUM IS NAVD88.
3. THE BASIS OF BEARINGS IS NCGS STATE PLANE GRID COORDINATES NAD83 (NSRS 2007) DATUM.
4. CONTROL BASED ON EXISTING CONTROL DATA PROVIDED BY DESIGNER AND VERIFIED DURING THE CONSTRUCTION AND AS-BUILT SURVEYS. SEE SHEET 5 FOR CONTROL POINTS LIST.
5. THIS MAP IS NOT FOR RECORDATION, SALES, OR CONVEYANCES AND DOES NOT COMPLY WITH G.S. 47-30 MAPPING REQUIREMENTS.
6. CROSS SECTIONS SHOWN ARE FEMA FLOODPLAIN CROSS SECTIONS AND ARE FROM LEFT BANK TO RIGHT BANK (FACING DOWNSTREAM).

REVISIONS, DATE AND INITIAL:		NORTH CAROLINA
<p>TITLE</p> <p>AS-BUILT SURVEY OF HAUSER CREEK STREAM RESTORATION</p> <p>SCO# 070698301</p> <p>DAVIE COUNTY</p>		
<p>TURNER LAND SURVEYING, PLLC</p> <p>3201 Glenridge Drive, Raleigh, NC 27604 -- (919)875-1378 P-0702 -- Lturner@att.net -- Dturner119@att.net www.TURNERLANDSURVEYING.COM</p>		
<p>DATE: 8/15/2011</p> <p>SURVEYED BY: DST/EGT</p> <p>DRAWN BY: DST/EGT</p> <p>REVIEWED BY: DST/EGT</p> <p>PROJECT: TLS-11-008</p> <p>FILE: HAUSER CREEK RESTORATION 92471_AB_TLS_F</p> <p>SCALE: AS SHOWN</p> <p>SHEET 1</p>		

I, ELISABETH G. 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 28th DAY OF SEPTEMBER, 2011.

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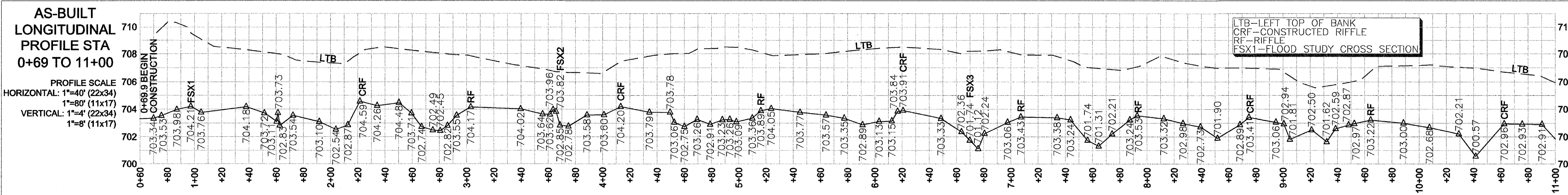
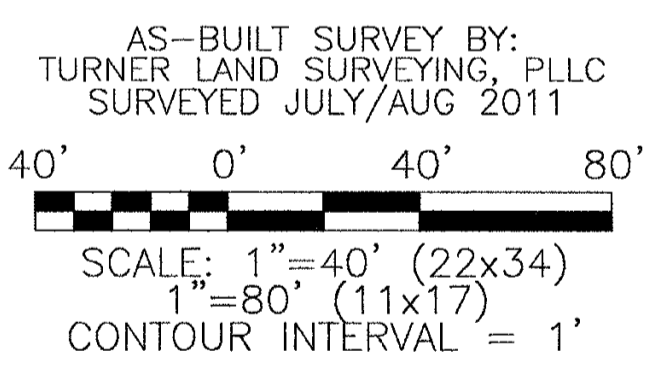


LEGEND:

--- (dashed line)	THALWEG
--- (solid line)	TOP OF BANK
--- (dashed line)	TOE OF BANK
--- (dashed line)	CONSERVATION EASEMENT
--- (dashed line)	PROPERTY LINE NOT SURVEYED
--- (dotted line)	LIMITS OF DISTURBANCE
--- (thick solid line)	LOG SILL
--- (line with circles)	ROCK VANE (SIZE VARIES)
--- (line with triangles)	ROOTWAD
--- (line with squares)	CONSTRUCTED RIFFLE
--- (square symbol)	BENCH MARK
--- (triangle symbol)	CONTROL POINT
--- (circle symbol)	MONITORING POINT

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6. CROSS SECTIONS SHOWN ARE FEMA FLOODPLAIN CROSS SECTIONS AND ARE FROM LEFT BANK TO RIGHT BANK (FACING DOWNSTREAM).



REVISIONS, DATE AND INITIAL:

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PLAN & PROFILE STA 0+69 TO 11+00

AS-BUILT SURVEY OF HAUSER CREEK STREAM RESTORATION

SCO# 070698301

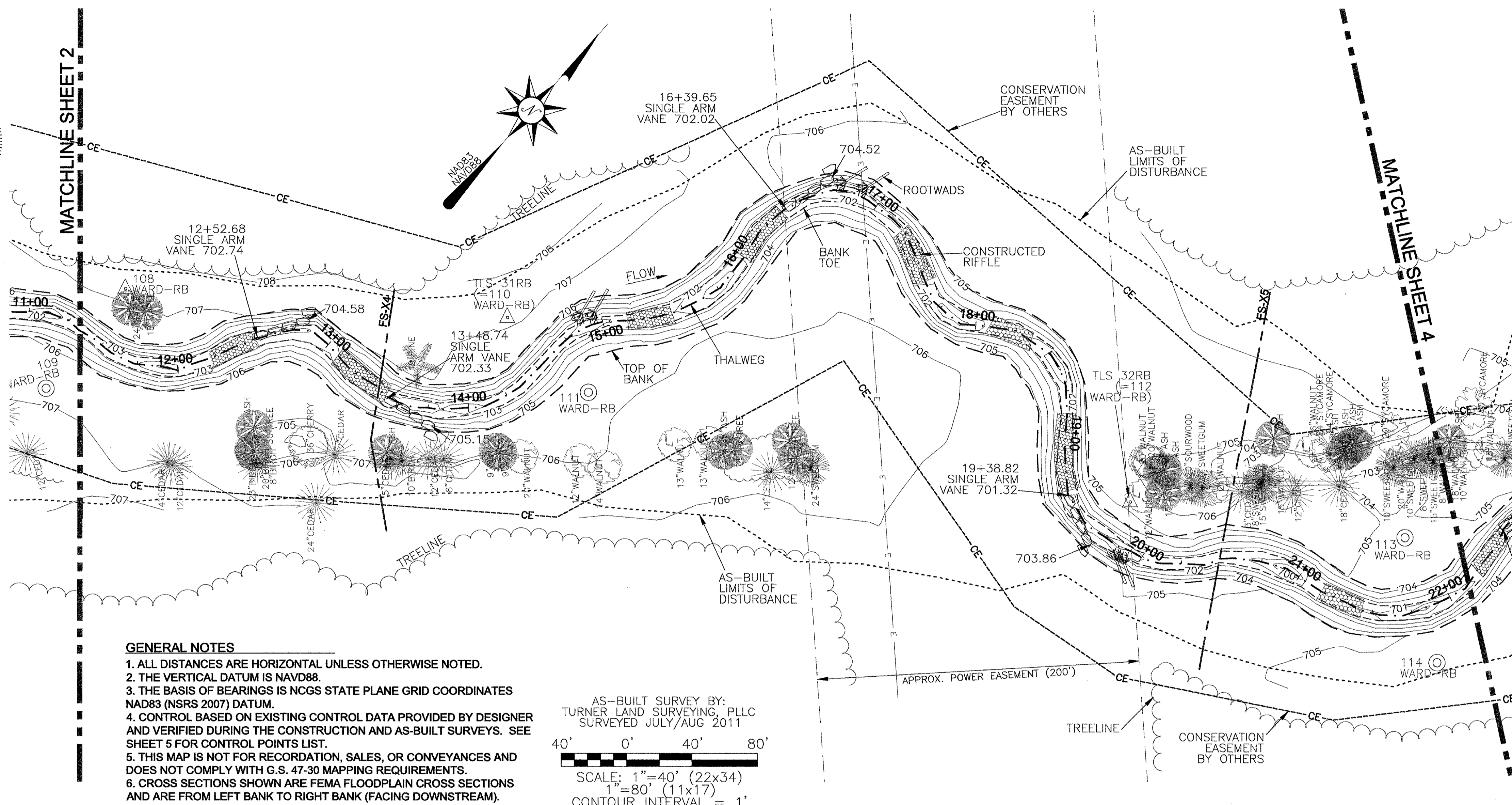
NORTH CAROLINA
 DAVIE COUNTY

DATE: 8/15/2011
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 DRAWN BY: DST/EGT
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 FILE: HAUSER CREEK RESTORATION 92471 AB TLS_F
 SCALE: AS SHOWN

SHEET **2**

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 NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-4440 ELISABETH G. TURNER



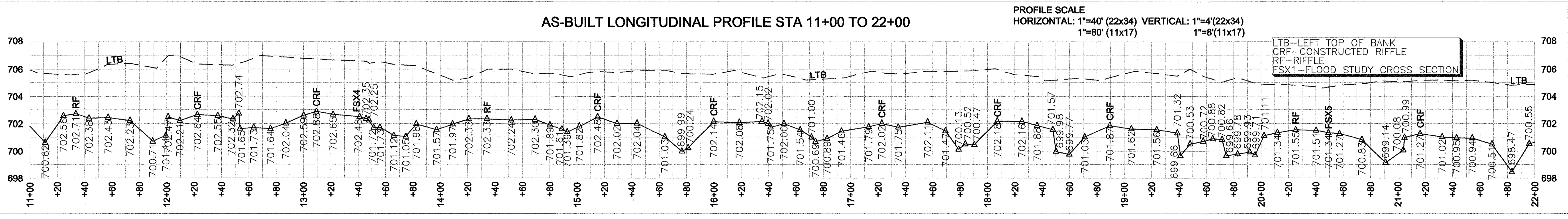
- LEGEND:**
- THALWEG
 - TOP OF BANK
 - TOE OF BANK
 - CE--- CONSERVATION EASEMENT
 - PROPERTY LINE NOT SURVEYED
 - LIMITS OF DISTURBANCE
 - LOG SILL
 - ROCK VANE (SIZE VARIES)
 - ROOTWAD
 - CONSTRUCTED RIFFLE
 - BENCH MARK
 - △ CONTROL POINT
 - MONITORING POINT

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AS-BUILT SURVEY BY:
 TURNER LAND SURVEYING, PLLC
 SURVEYED JULY/AUG 2011

40' 0' 40' 80'

SCALE: 1"=40' (22x34)
 1"=80' (11x17)
 CONTOUR INTERVAL = 1'



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 www.TURNERLANDSURVEYING.com

PLAN AND PROFILE STATION 11+00 TO 22+00

AS-BUILT SURVEY OF
HAUSER CREEK STREAM RESTORATION
 SCO# 070698301

NORTH CAROLINA
 DAVIE COUNTY

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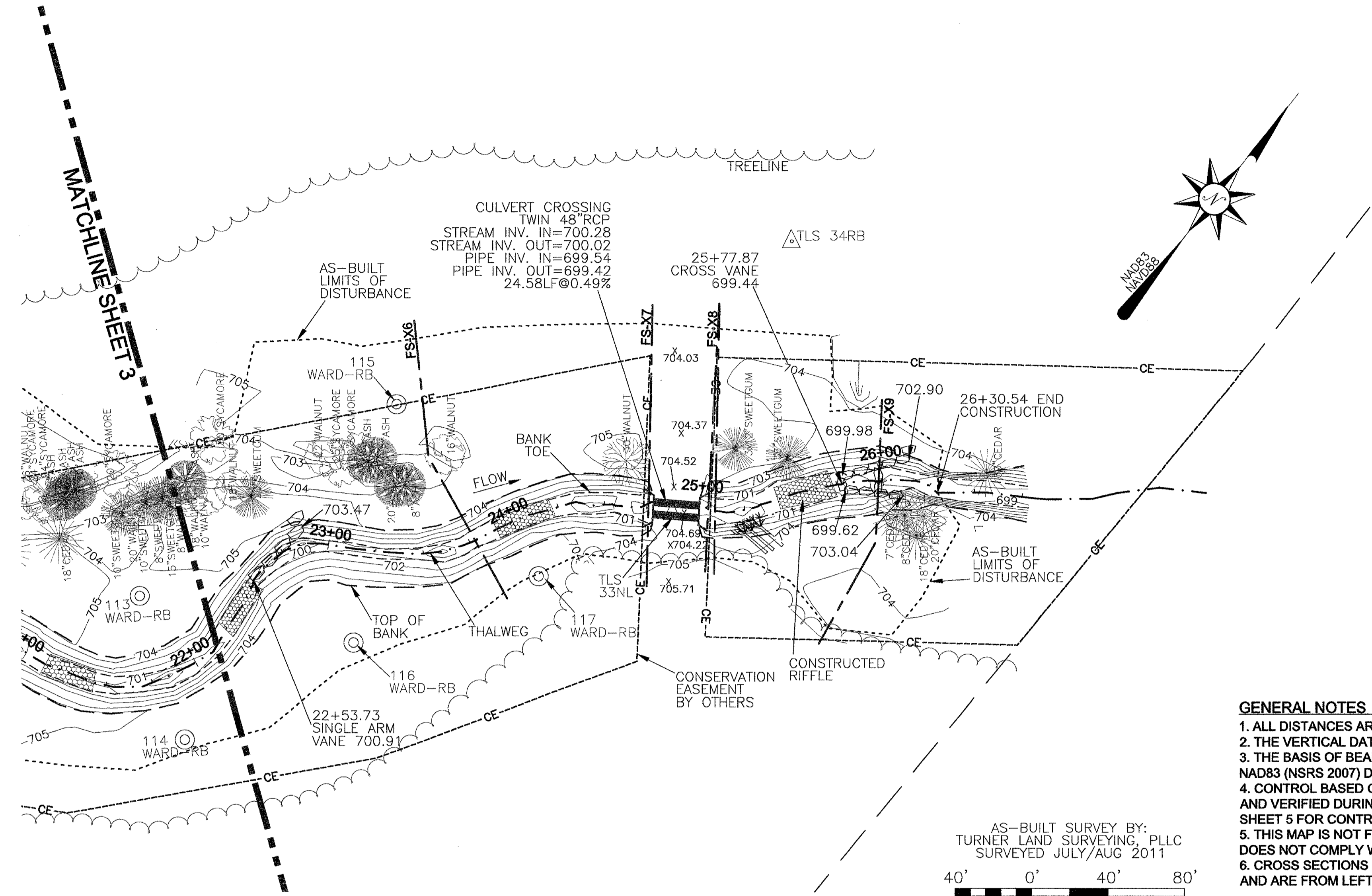
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 NORTH CAROLINA PROFESSIONAL LAND SURVEYOR
 SEAL L-4440
 ELISABETH G. TURNER

LEGEND:

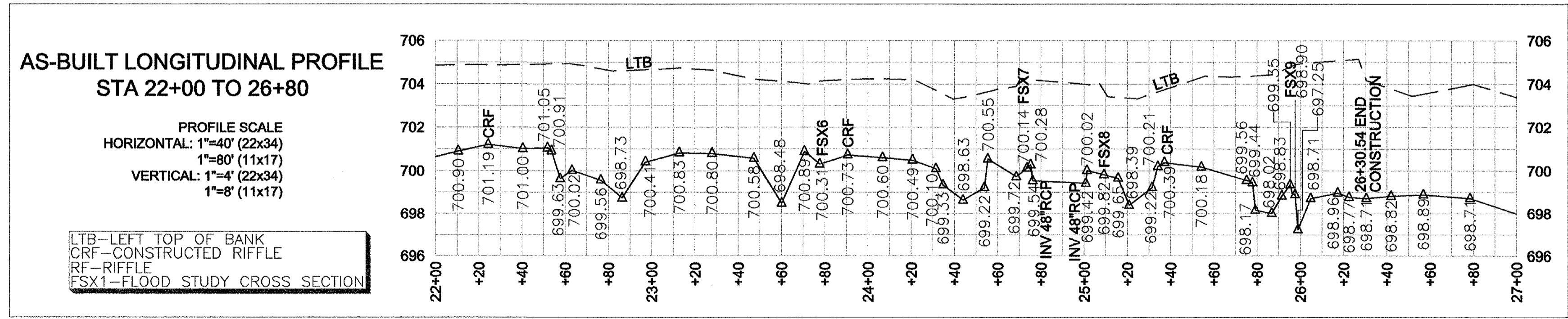
- THALWEG
- TOP OF BANK
- TOE OF BANK
- CE --- CONSERVATION EASEMENT
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- LOG SILL
- ROCK VANE (SIZE VARIES)
- ROOTWAD
- CONSTRUCTED RIFFLE
- BENCH MARK
- △ CONTROL POINT
- MONITORING POINT



AS-BUILT SURVEY BY:
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 SURVEYED JULY/AUG 2011

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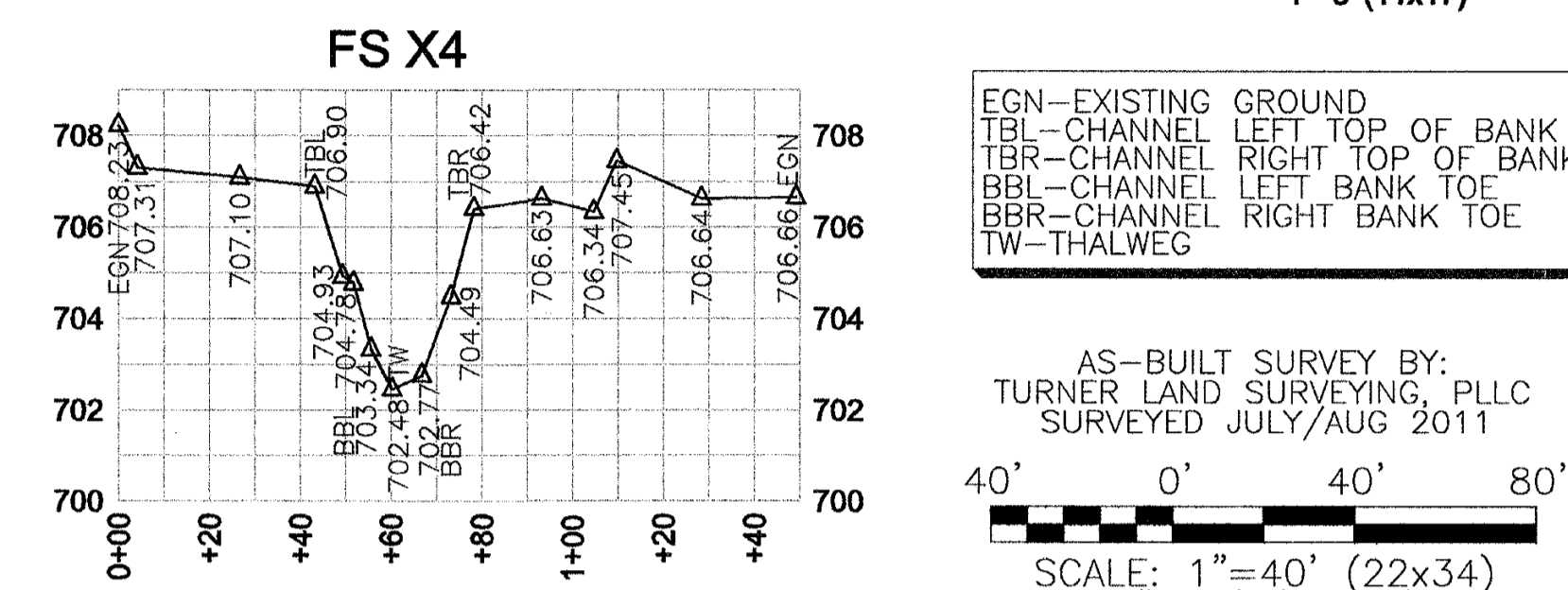
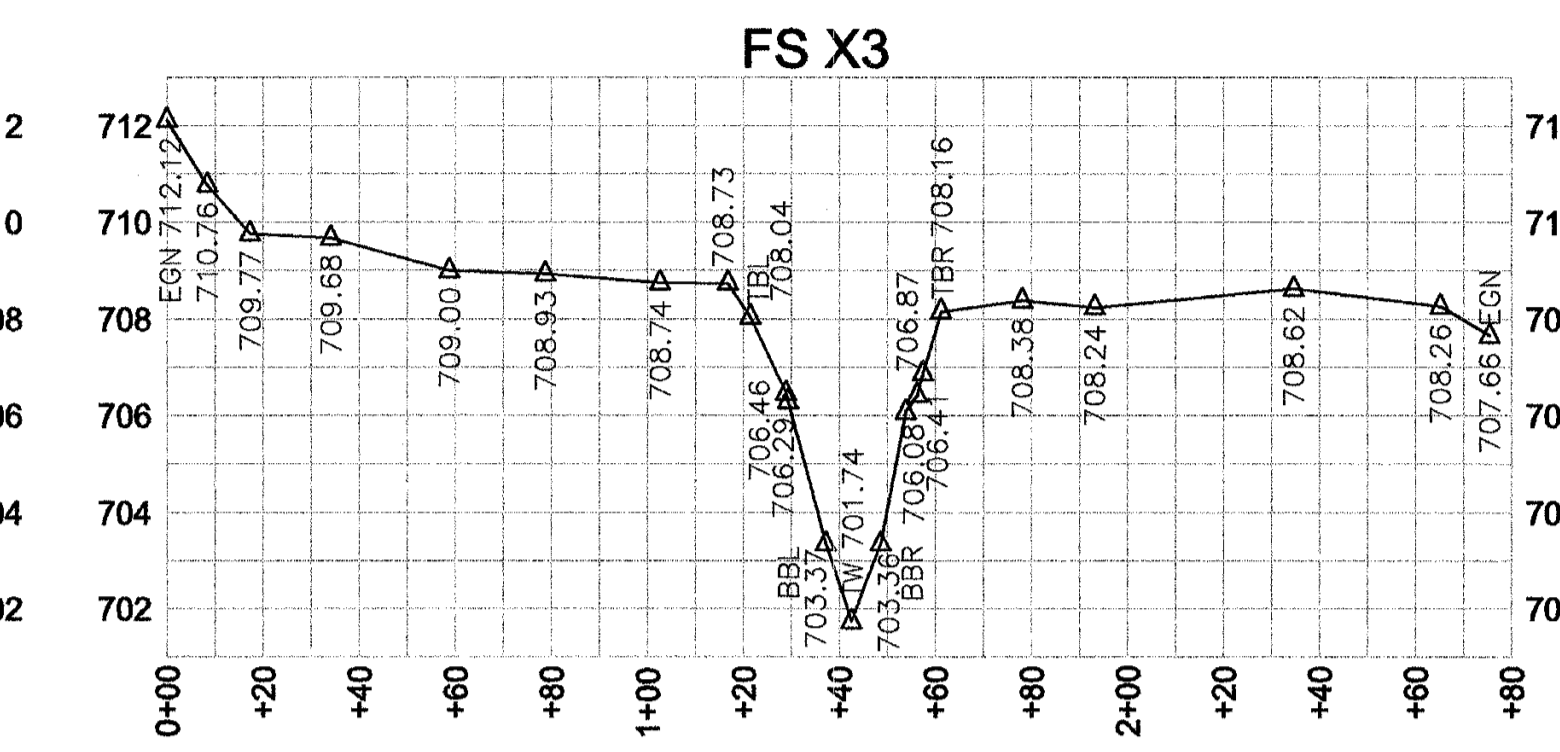
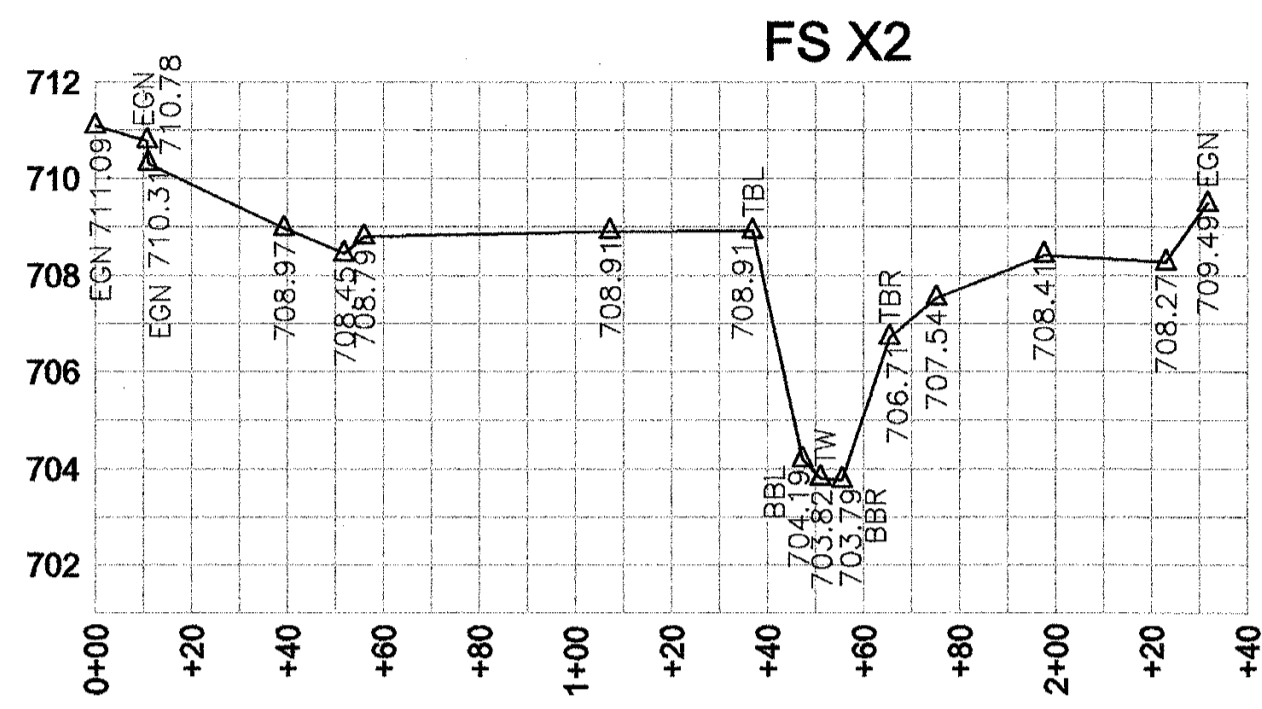
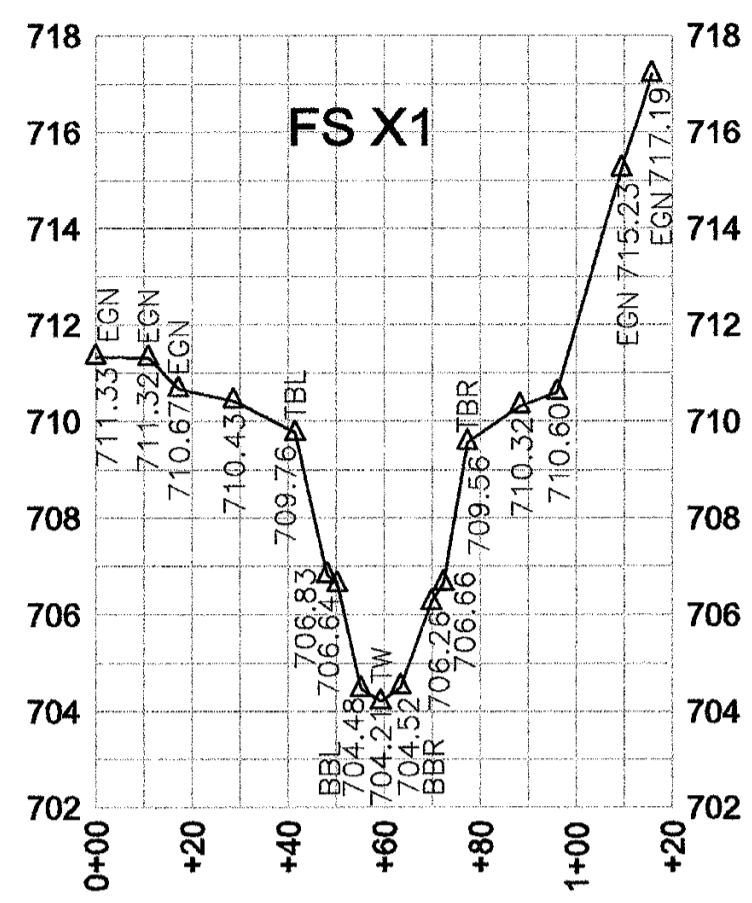
PLAN AND PROFILE STATION 22+00 TO 26+80

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SHEET
4



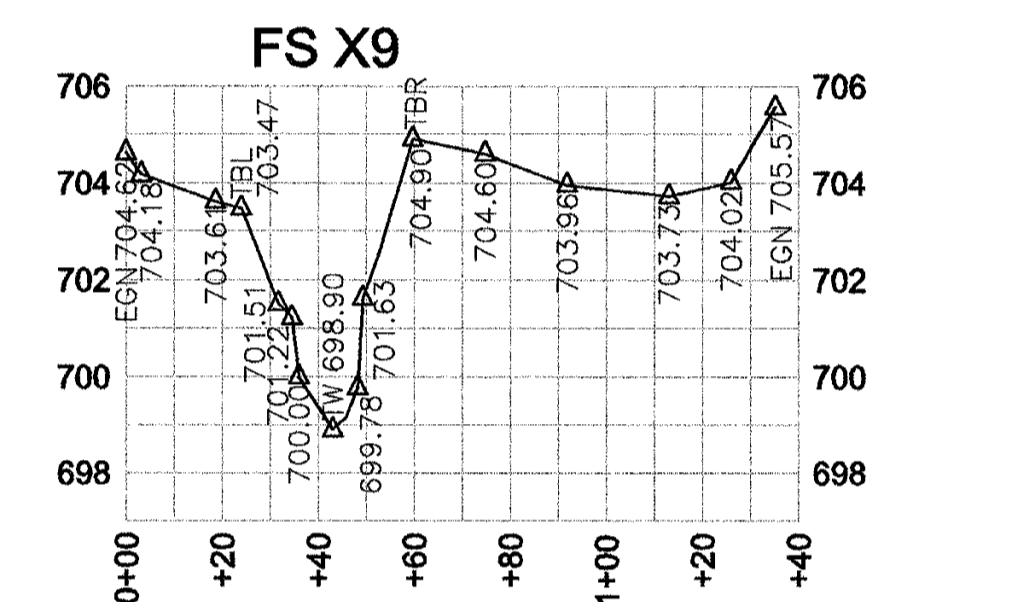
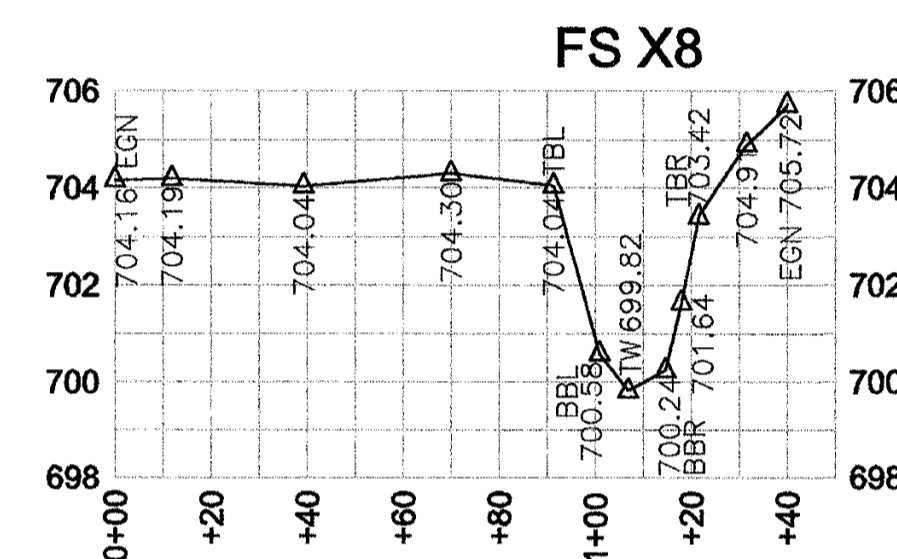
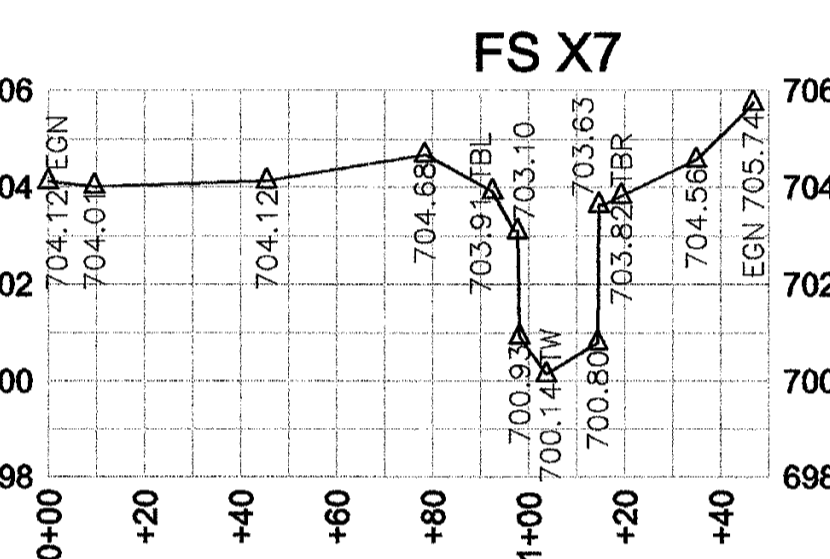
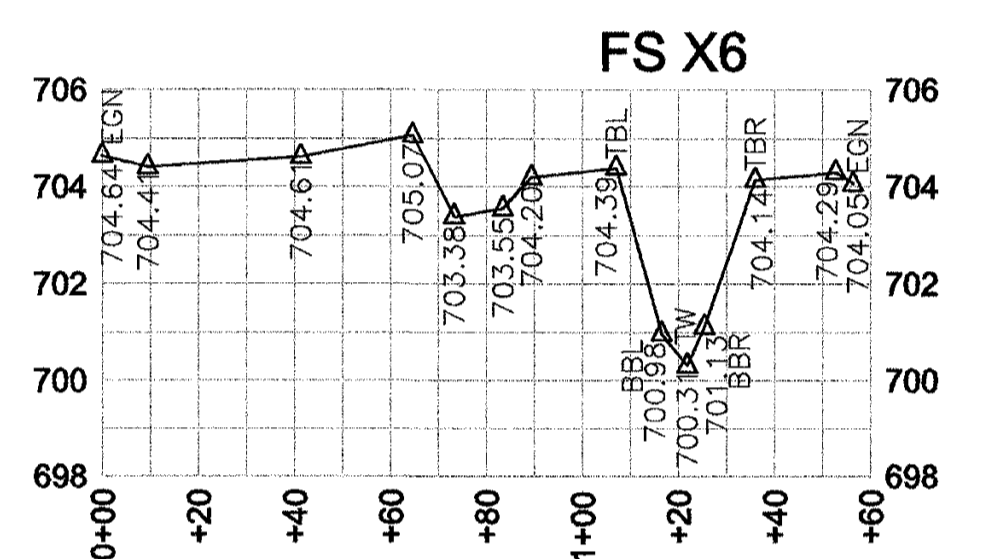
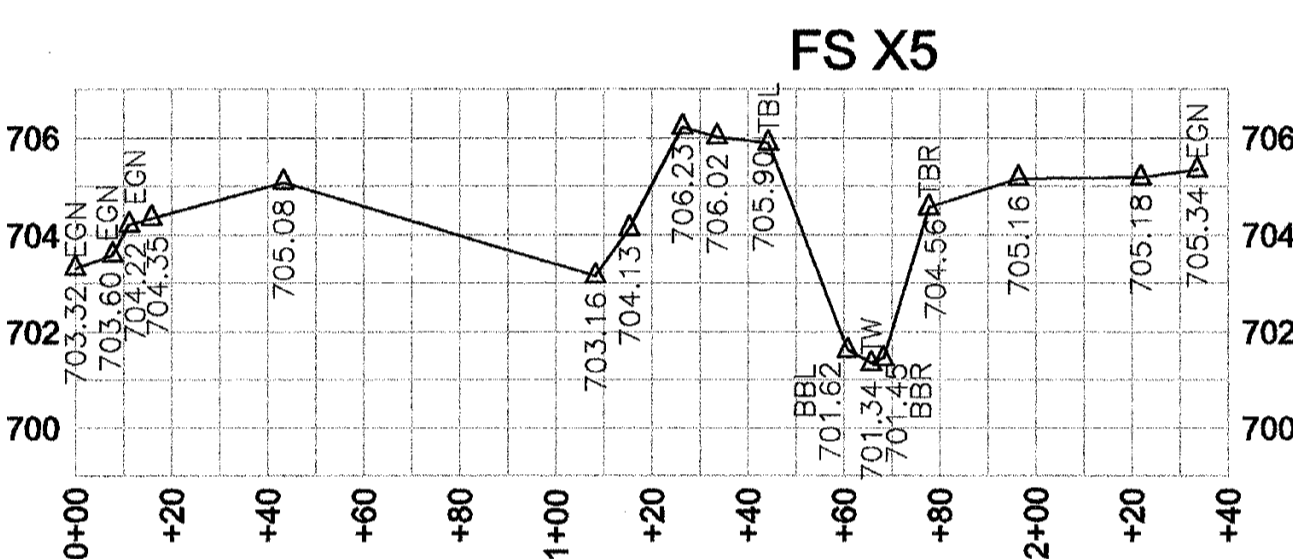
FLOOD STUDY CROSS SECTIONS

CROSS SECTION SCALE
 HORIZONTAL: 1"=40' (22x34)
 1"=80' (11x17)
 VERTICAL: 1"=4' (22x34)
 1"=8' (11x17)

EGN-EXISTING GROUND
 TBL-CHANNEL LEFT TOP OF BANK
 TBR-CHANNEL RIGHT TOP OF BANK
 BBL-CHANNEL LEFT BANK TOE
 BBR-CHANNEL RIGHT BANK TOE
 TW-THALWEG

AS-BUILT SURVEY BY:
 TURNER LAND SURVEYING, PLLC
 SURVEYED JULY/AUG 2011

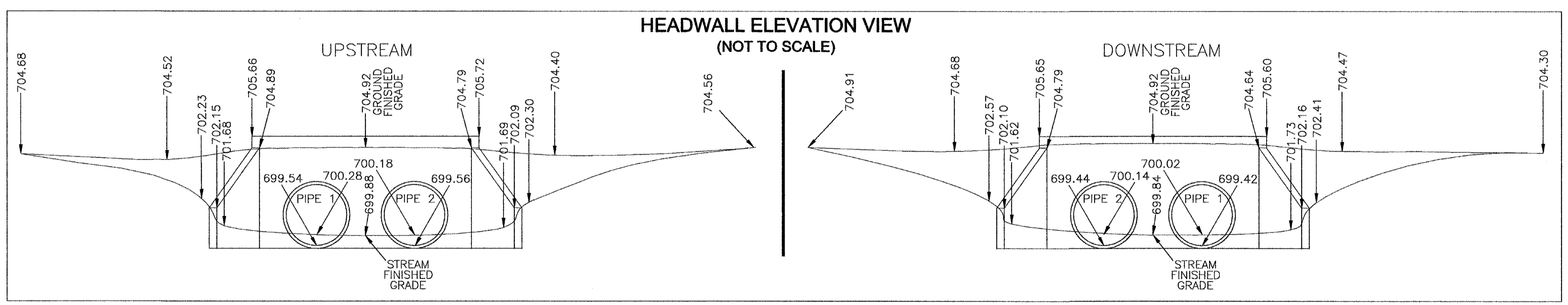
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NORTH CAROLINA
 PROFESSIONAL
 LAND SURVEYOR
 ELISABETH G. TURNER



CONTROL POINTS

PointNo.	Northing(Y)	Easting(X)	Elev(Z)	Description
1	836641.63	1551603.54	709.55	GPS 1
2	836331.32	1551580.33	717.28	GPS 2
3	836322.30	1551907.67	730.24	GPS 3
5	836894.21	1551678.36	713.39	GPS 5
29	836620.87	1551706.78	708.96	TLS 29NL
30	837028.06	1552047.76	707.55	TLS 30RB
31	837333.47	1552431.18	707.32	TLS 31RB
32	837501.94	1552790.97	705.48	TLS 32RB
33	837804.17	1553122.71	704.92	TLS 33NL
34	837954.29	1553083.10	704.95	TLS34=TLS22IP
108	837191.59	1552244.63	707.69	WARD-RB
200	836495.60	1551604.62	710.79	TBM 200NL

MONITORING PINS

PointNo.	Northing(Y)	Easting(X)	Elev(Z)	Description
100	836481.19	1551672.34	710.29	WARD-RB
101	836478.13	1551755.62	711.81	WARD-RB
102	836604.12	1551817.22	708.54	WARD-RB
104	836965.92	1551994.53	708.14	WARD-RB
105	837071.68	1551981.66	707.74	WARD-RB
106	837028.06	1552047.76	707.55	WARD-RB (=TLS 30RB)
107	837063.06	1552105.43	707.45	WARD-RB
108	837191.59	1552244.63	707.69	WARD-RB
109	837113.76	1552248.51	707.15	WARD-RB
110	837333.47	1552431.18	707.31	WARD-RB (=TLS 31RB)
111	837332.13	1552498.40	706.47	WARD-RB
112	837501.94	1552790.97	705.48	WARD-RB (=TLS 32RB)
113	837596.88	1552931.26	705.62	WARD-RB
114	837553.01	1552996.27	705.03	WARD-RB
115	837759.21	1552974.07	705.04	WARD-RB
116	837647.62	1553033.92	704.91	WARD-RB
117	837734.97	1553088.22	704.62	WARD-RB

AS-BUILT STRUCTURE CHART

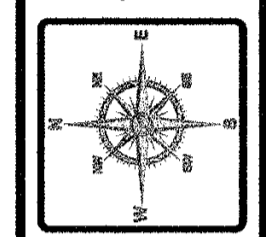
STRUCTURE STATION	STR. TYPE	ARM LENGTH	CHANNEL ELEVATION	BANK TIE-IN ELEVATION	SLOPE %
1+61.31	LOG SILL	N/A	703.73	N/A	N/A
1+72.81	ROCK VANE	38.5	704.01	706.80	7.2%
4+52.65	ROCK VANE	34.5	703.76	706.65	8.4%
9+00.67	ROCK VANE	38.9	702.94	706.01	7.9%
12+52.68	ROCK VANE	32.4	702.74	704.58	5.7%
13+48.74	ROCK VANE	32.1	702.33	705.15	8.8%
16+39.65	ROCK VANE	33.4	702.02	704.52	7.5%
19+38.82	ROCK VANE	33.3	701.32	703.86	7.6%
22+53.73	ROCK VANE	37.3	700.91	703.47	6.9%
25+77.87	ROCK CROSS VANE	N/A	699.44	N/A	N/A
	CV LEFT ARM	35.8	699.98	702.90	8.1%
	CV RIGHT ARM	30.6	699.62	703.04	11.1%

CROSS SECTIONS AND STRUCTURE CHART

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