

**U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT**

Action Id. SAW-1990-30036 County: New Hanover U.S.G.S. Quad: NC-Wilmington

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee:	<u>Matrix Development Group</u> <u>Joseph Taylor</u> <u>CN 4000 Forsgate Drive</u> <u>Cranbury, NJ, 00512</u>	Agent:	<u>Land Management Group</u> <u>Kim Williams</u> <u>3805 Wrightsville Ave</u> <u>Suite 15</u> <u>Wilmington, NC 28403</u>
Size (acres)	<u>139</u>	Nearest Town	<u>Wilmington</u>
Nearest Waterway	<u>Barnards Creek</u>	River Basin	<u>Cape Fear</u>
USGS HUC	<u>03030005</u>	Coordinates	Latitude: <u>34.165863</u> Longitude: <u>-77.923158</u>

Location description: **Project area is located on the existing golf course of the Echo Farms subdivision in Wilmington, New Hanover County, North Carolina. Project is located to the west of Carolina Beach Road, areas to be developed include course areas near Chastain Drive, Appleton Way, and Echo Farms Road.**

Description of projects area and activity: **This verification authorizes the discharge of fill material into 0.032 of wetlands for the construction of two road crossings in tract 2 of the Woodlands at Echo Farms and 0.034 acre of permanent open water impacts for a road crossing for access to Tract 3A. Permanent wetlands impacts of 0.008 acre are authorized for the construction of two stormwater outlets in Tract 3B and 0.014 acre of open water impacts for an additional stormwater outlet. 37 linear feet of fill is authorized for the replacement of an existing culvert in Tract 3B and an additional 20 linear feet of temporary impacts for utility line installation. The fill is authorized under this permit is for the construction of residential homes and apartments and stormwater features on the existing Echo Farms Golf Course and access to these housing areas.**

Applicable Law(s): Section 404 (Clean Water Act, 33 USC 1344)
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Nationwide/General Permit Number: **Permit Number: 18 & 29**

SEE ATTACHED NWP GENERAL, REGIONAL, AND/OR SPECIAL CONDITIONS

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the enclosed Conditions, your application signed and dated 2/21/2019, and the enclosed plans Wetland Impact Exhibit Maps dated 11/16/2018. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management **in Wilmington, NC, at (910) 796-7215**.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Rachel Capito at (910)-251-4487 or Rachel.A.Capito@usace.army.mil**

Corps Regulatory Official: 90 CAPITO.RACHEL.ANN.15362767 Digitally signed by CAPITO.RACHEL.ANN.1536276790
DN: c=US, o=U.S. Government, ou=DoD, ou=PKO, ou=USA,
cn=CAPITO.RACHEL.ANN.1536276790
Date: 2019.04.01 10:10:04 -04'00' _____ Date: **4/1/2019**

Expiration Date of Verification: **3/18/2022**

SPECIAL CONDITIONS
SAW-1990-30036

1. In order for this permit to be valid, you must obtain 401 Water Quality Certification from the North Carolina Division of Water Resources. The permittee shall provide the Corps with a copy of the required certification or waiver of certification from the state prior to proceeding with the work in waters of the U.S. The permittee shall comply with all conditions of the state certification.
2. Temporary discharge of excavated or fill material into wetlands and waters of the United States will be for the absolute minimum period of time necessary to accomplish the work. All authorized temporary wetland impacts will be returned to pre-disturbance grade and contour, and re-vegetated with appropriate native wetland species.
3. The permittee shall avoid the remaining onsite wetlands as shown on the approved drawings. These natural wetland areas were avoided as part of the permit application review process, and therefore, will not be disturbed by any dredging, filling, mechanized land clearing, agricultural activities, or other construction work whatsoever.
4. The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the authorized permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

Action ID Number: SAW-1990-30036 County: New Hanover

Permittee: Matrix Development Group, Joseph Taylor

Project Name: Woodlands at Echo Farms

Date Verification Issued: 4/1/2019

Project Manager: Rachel Capito

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Rachel Capito
Wilmington Regulatory Office
U.S Army Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

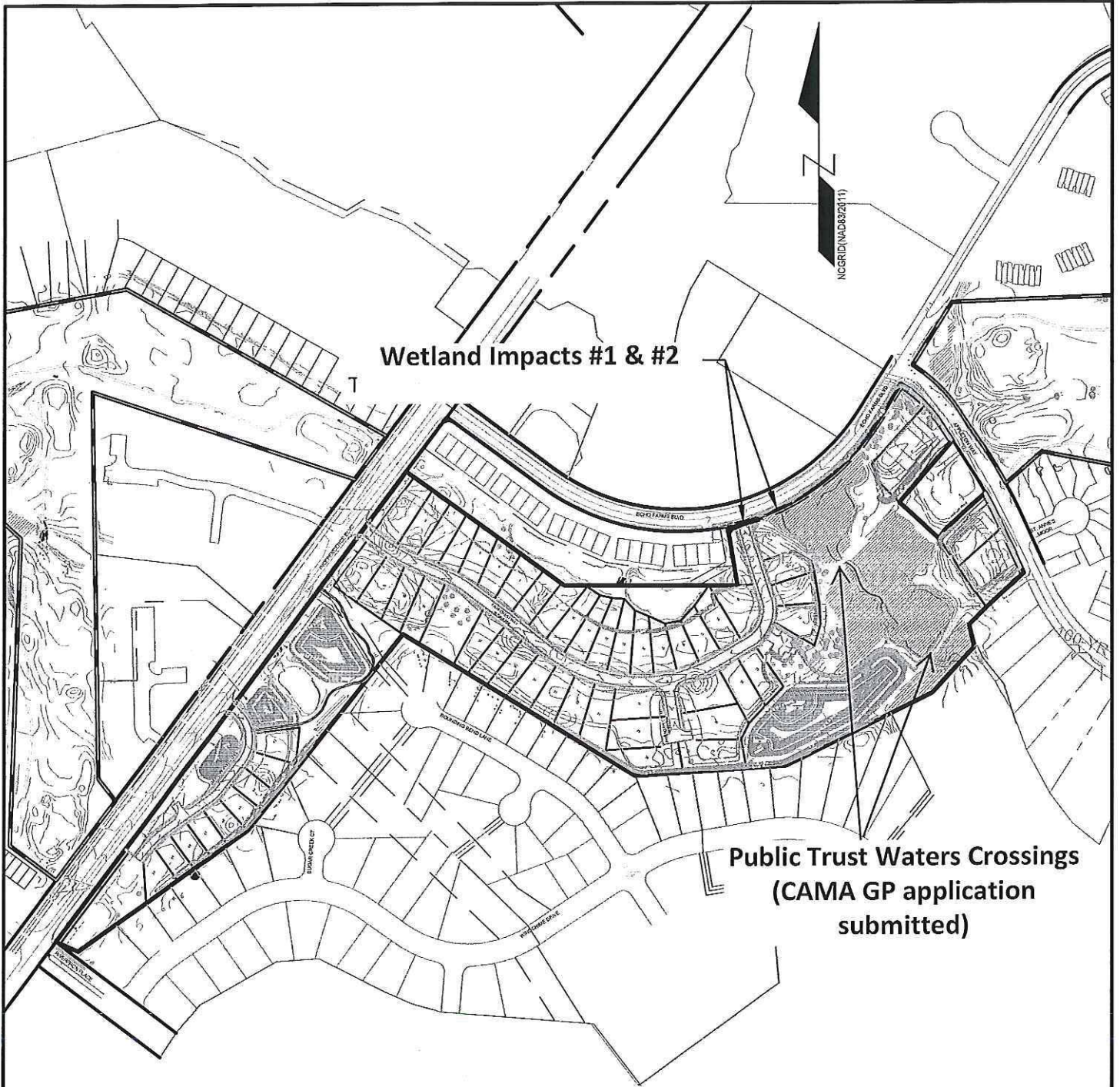
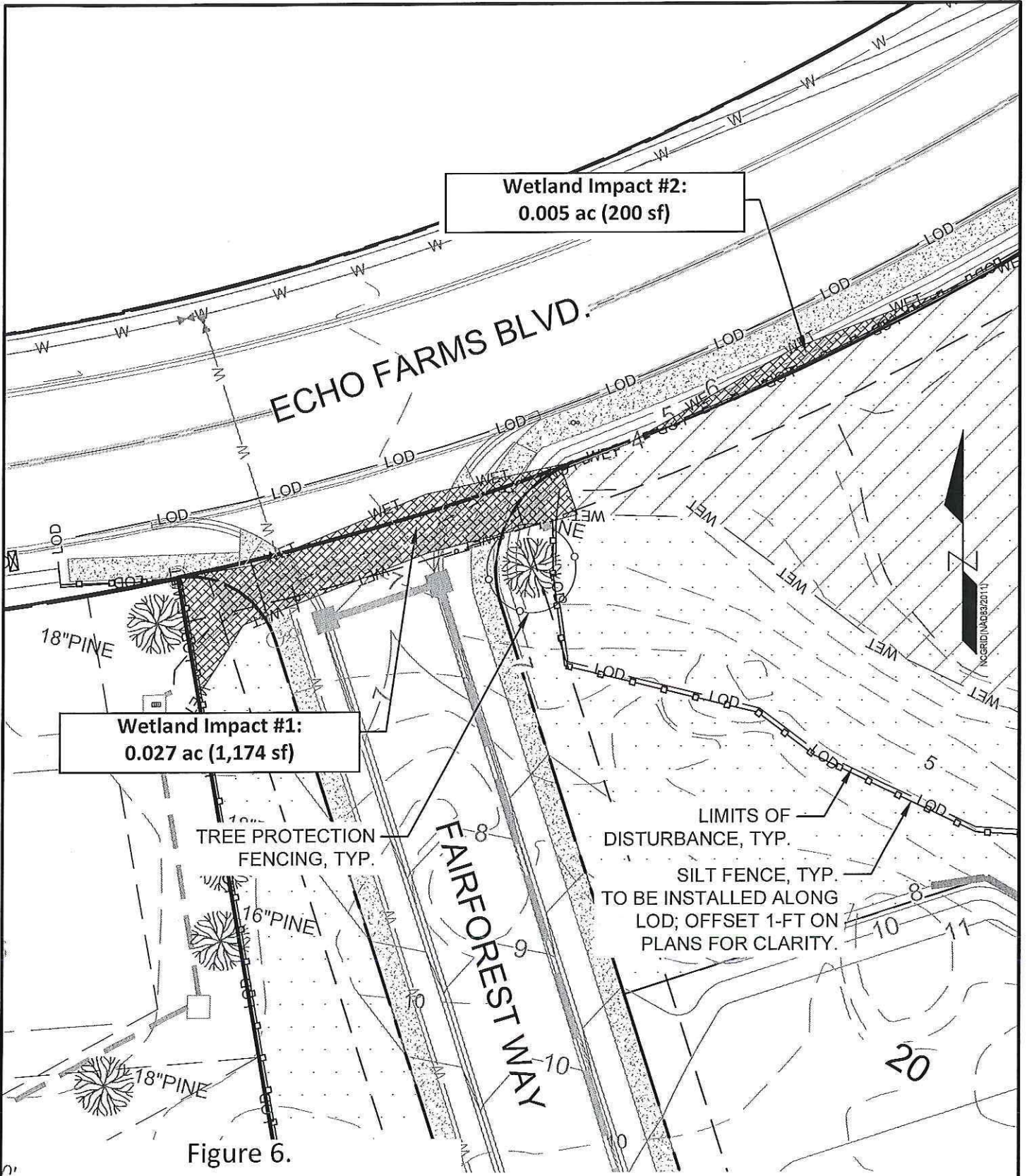


Figure 5.
Woodlands at Echo Farms: Tract 2
Overall Site Plan

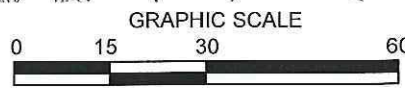
PARAMOUNT
ENGINEERING, INC.
122 Cinema Drive, Wilmington, NC, 28403 (910)-791-6707
NC License #: C-2846

Date :	01/28/19
Scale:	1"=400'
Drawn :	AEC
Chk:	RPB
Proj. No:	17358.PE

WETLAND IMPACT EXHIBIT MAP



Woodlands at Echo Farms: Tract 2
Wetland Impact Detail



SCALE: 1"=30'

1
3

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NC License #: C-2846

Date :	01/28/19
Scale:	1"=30'
Drawn :	AEC
Chk:	RPB
Proj. No:	17358.PE

**WETLAND IMPACT
EXHIBIT MAP**

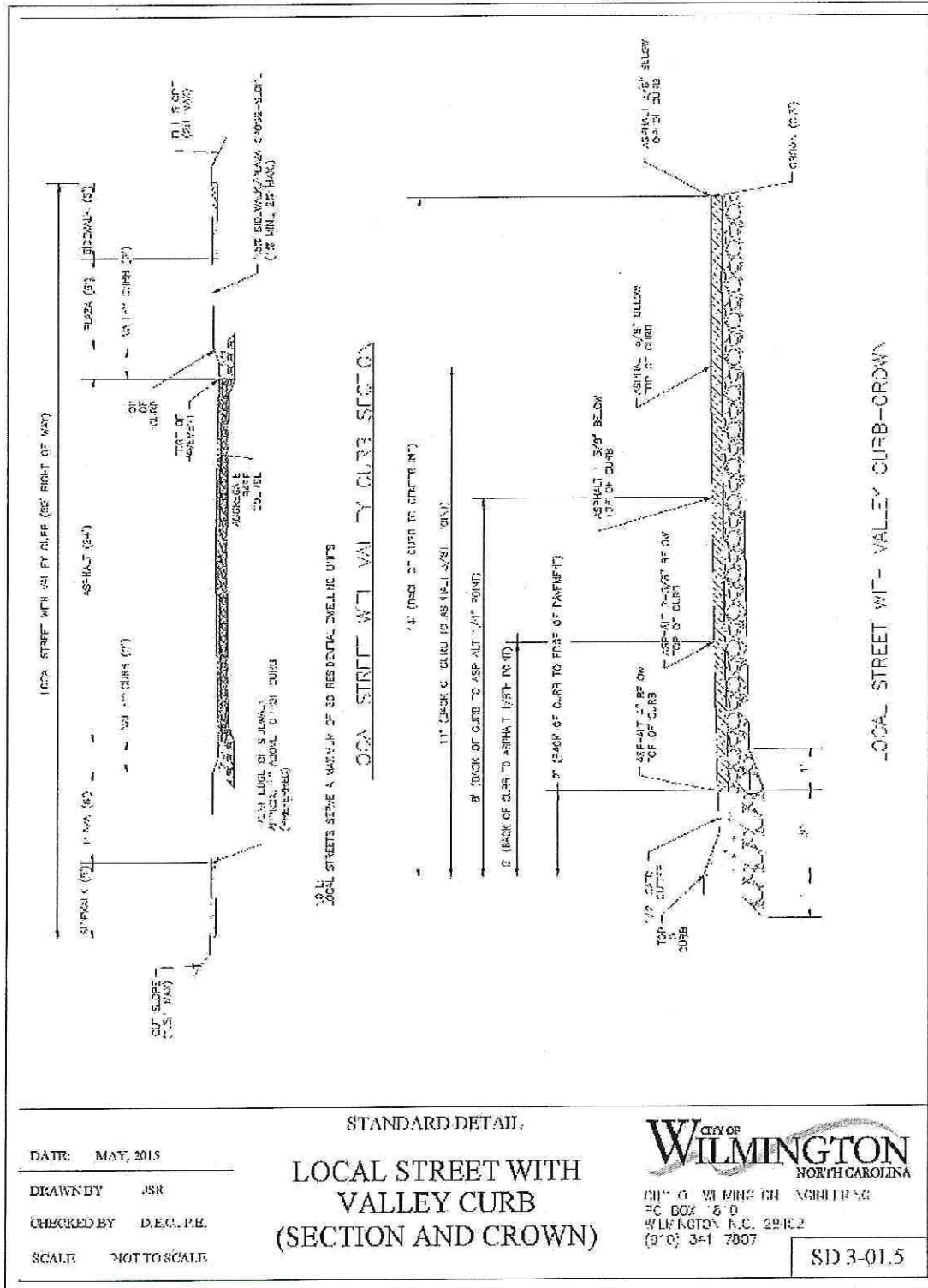
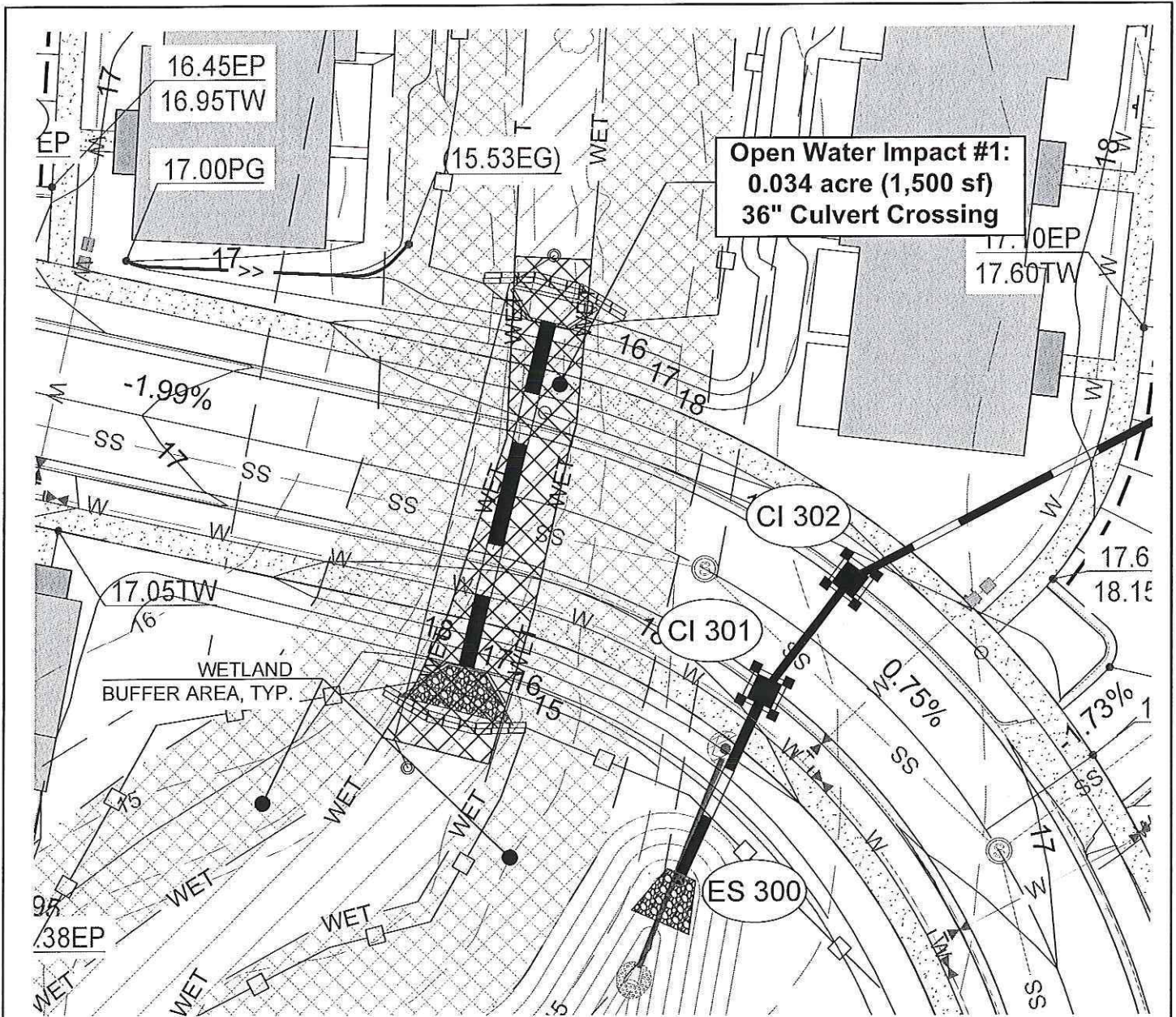


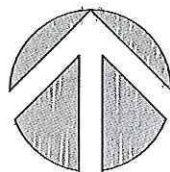
Figure 7.
Woodlands at Echo Farms: Tract 2
Road Cross Sections

3
3

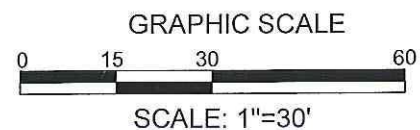


CHASTAIN DRIVE

Figure 10.
Woodlands at Echo Farms:
Tract 3A
Detail of Road Crossing



NORTH



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 ENGINEERING, INC.
 122 Cinema Drive, Wilmington, NC, 28403 (910)-791-6707
 NC License #: C-2846

Date: 11.16.18
 Scale: 1"=30'
 Drawn: JBS
 Chk: RPB
 Proj. No: 18252.PE

Woodlands Landing at Echo
 Farms Wetland Impact
 36" CULVERT CROSSING

1
 2

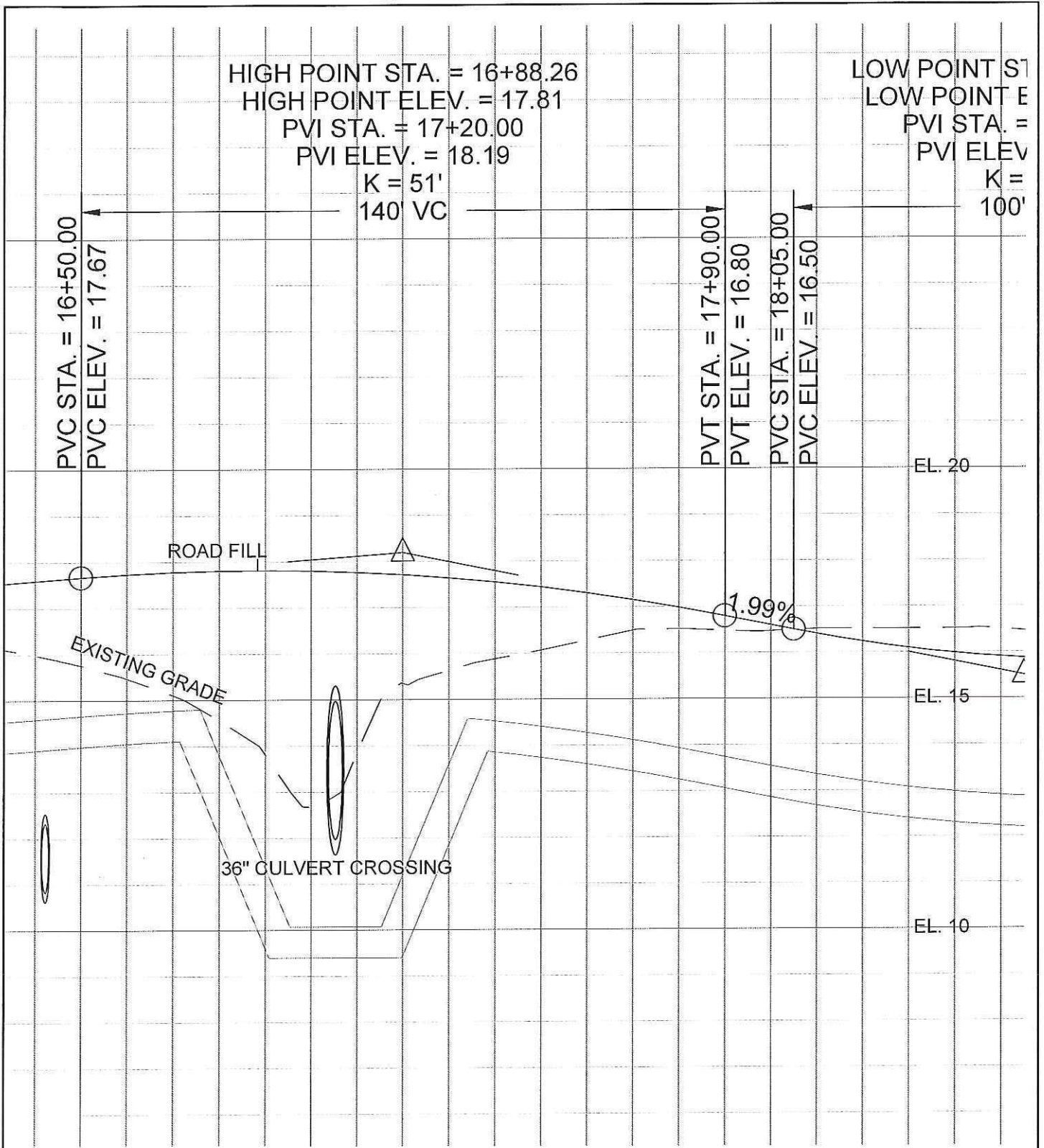
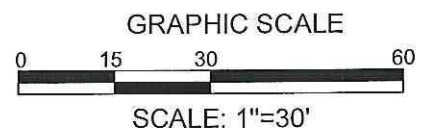


Figure 10a.
Woodlands at Echo Farms: Tract 3A
Road Cross Section

CHASTAIN DRIVE



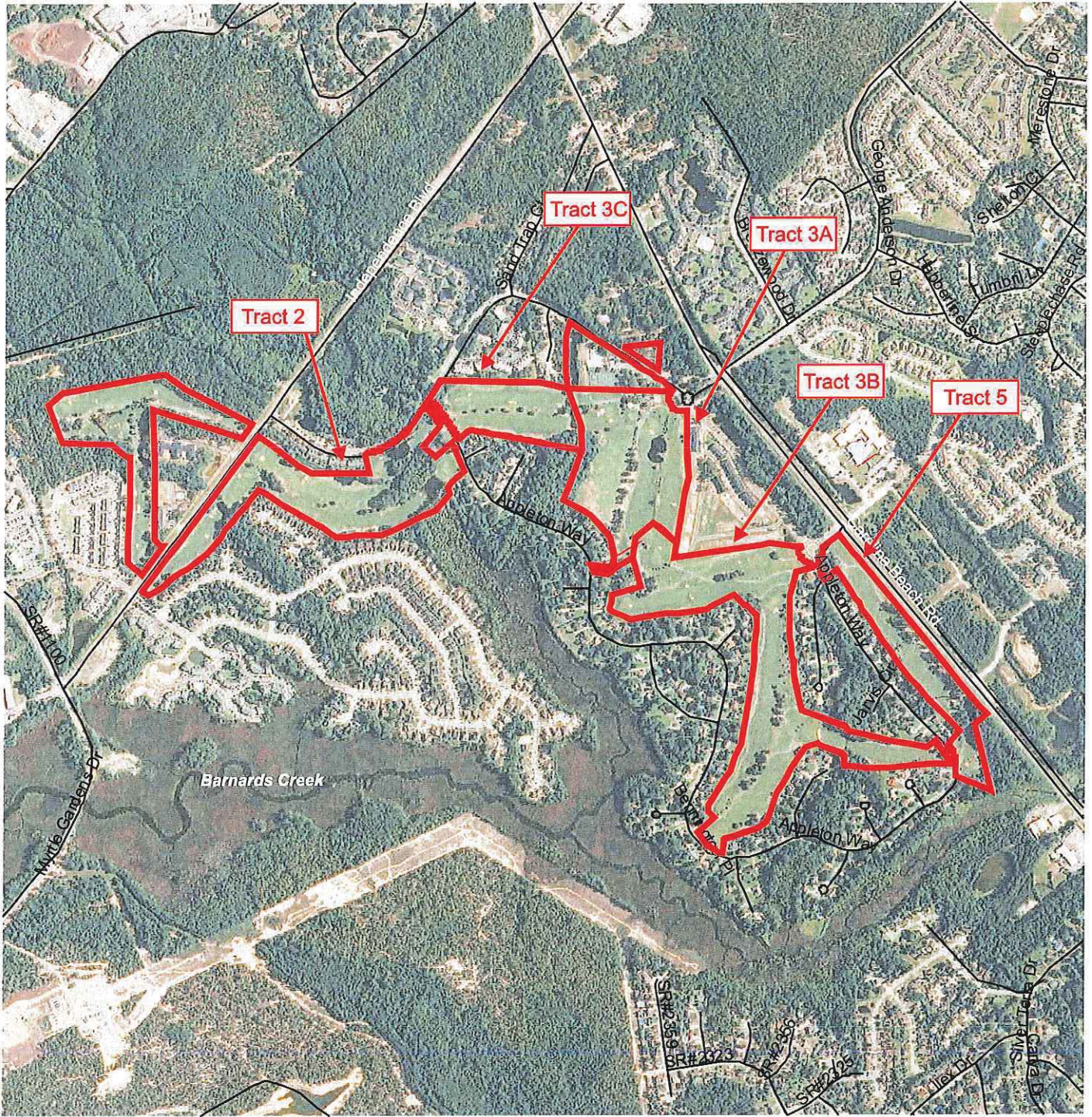
PARAMOUNTE
 ENGINEERING, INC.
 122 Cinema Drive, Wilmington, NC, 28403 (910)-791-6707
 NC License #: C-2846

Date : 11.16.18
 Scale: 1"=30'
 Drawn : JBS
 Chk: RPB
 Proj. No: 18252.PE

Woodlands Landing at Echo
 Farms Wetland Impact
 36" CULVERT CROSSING

2

2



*Boundaries are approximate and are not meant to be absolute.

Map Source: 2012 NC One Map



SCALE 1" = 1,200'

Woodlands at Echo Farms
Phases 2, 3A, 3B, 3C, & 5
New Hanover County, NC

LMG19.041
January 2019



www.lmggroup.net

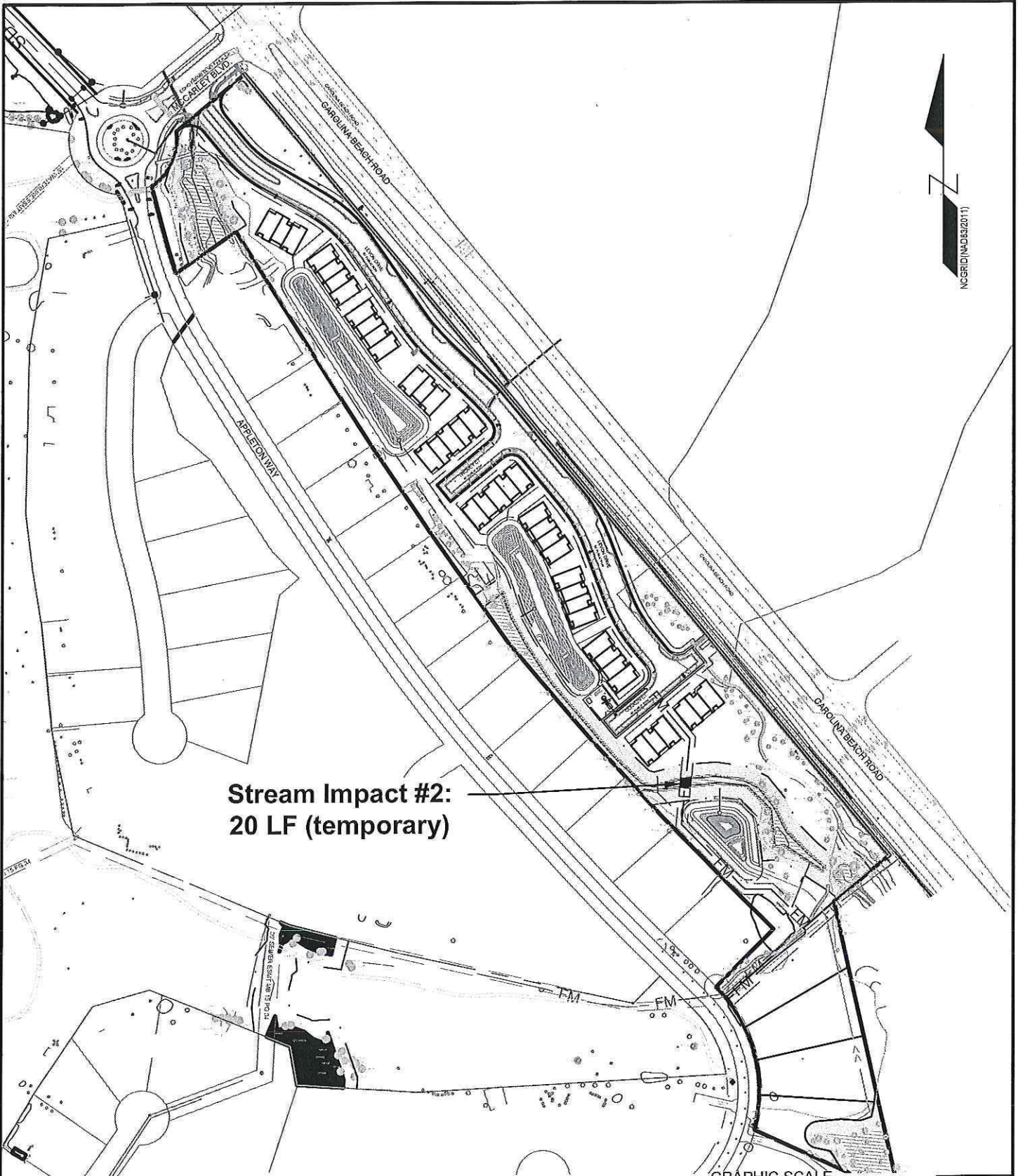
3805 Wrightsville Avenue
Wilmington, NC 28403

Phone: 910.452.0001 Fax: 910.452.0060

Figure 4
Aerial Photograph

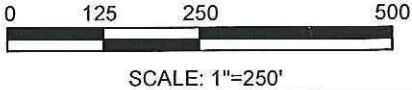
CAPITO.RACHEL
ANN.1536276790

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CAPITO.RACHEL.ANN.1536276790
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=ISA, cn=CAPITO.RACHEL.ANN.1536276790
Date: 2019.04.01 10:27:27 -0500



**Stream Impact #2:
20 LF (temporary)**

**Figure 15. Woodlands at Echo Farms: Tract 5
Overall Site Plan**

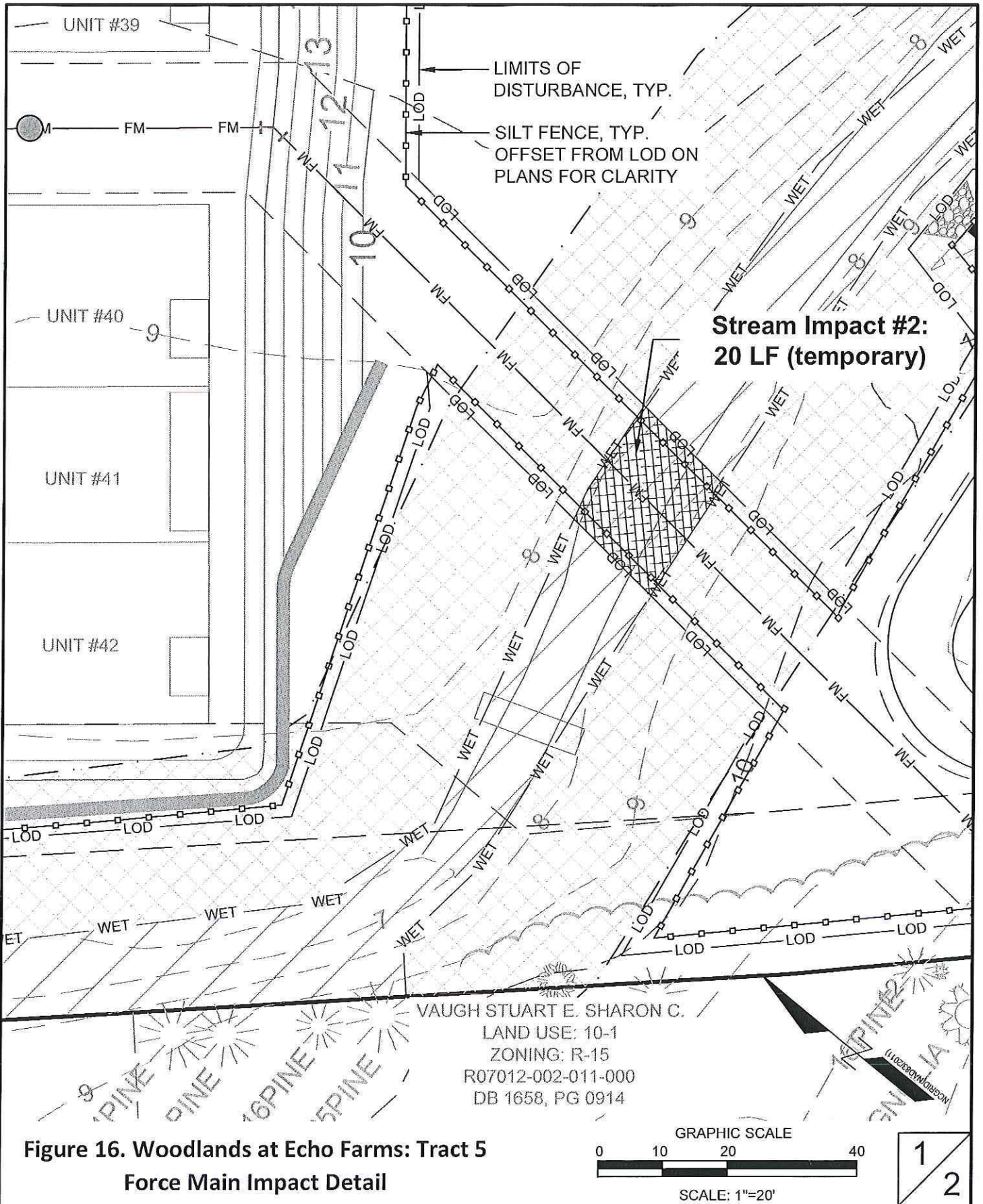


2
2

PARAMOUNT
ENGINEERING, INC
122 Cinema Drive, Wilmington, NC, 28403 (910)-791-6707
NC License #: C-2846

Date :	02/13/19
Scale:	1"=200'
Drawn :	AEC
Chk:	RPB
Proj. No:	18153.PE

**WETLAND IMPACT
EXHIBIT MAP**



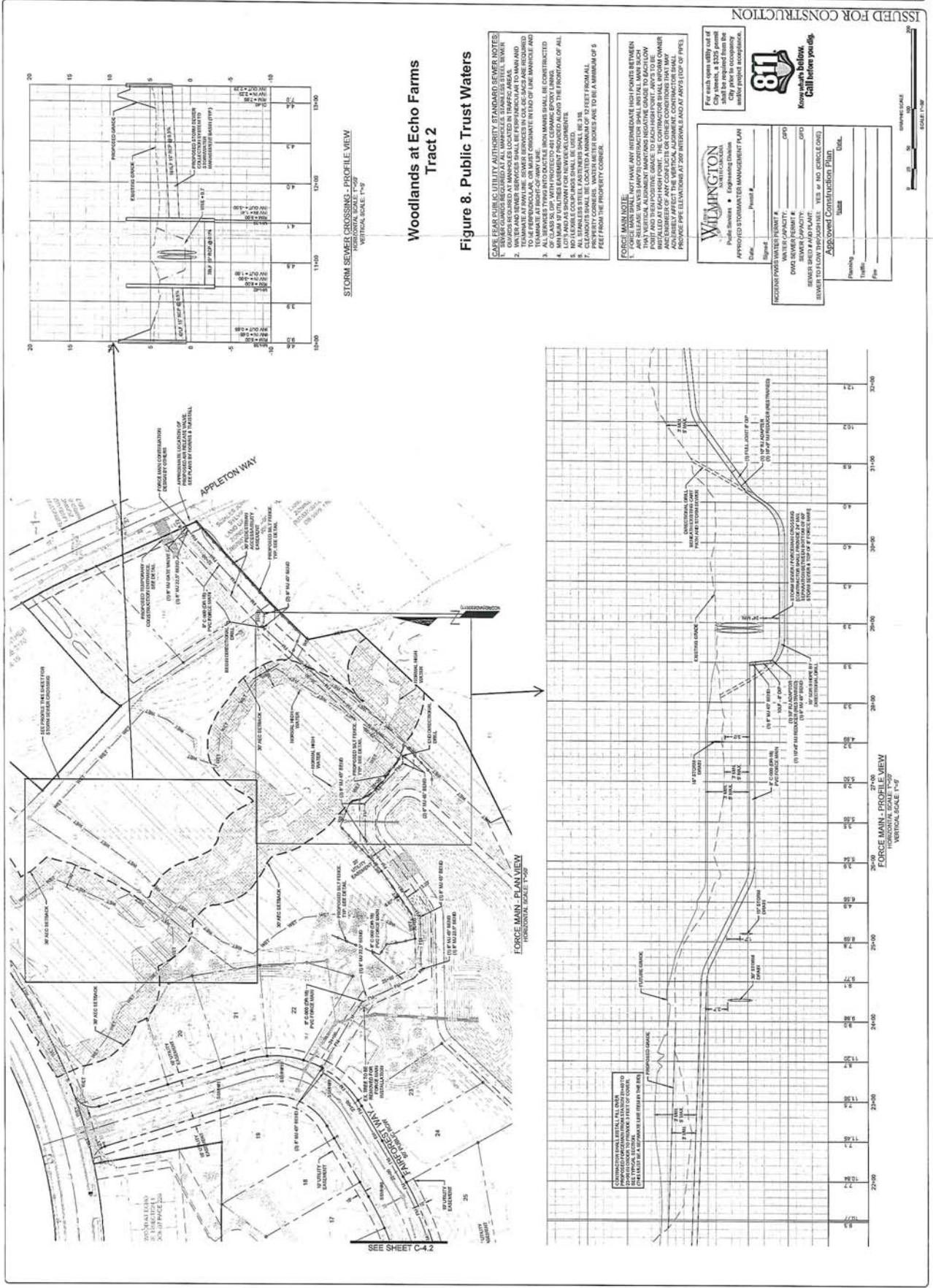
**Figure 16. Woodlands at Echo Farms: Tract 5
Force Main Impact Detail**

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NC License #: C-2846

Date :	02/13/19
Scale:	1"=20'
Drawn :	AEC
Chk:	RPB
Proj. No:	18153.PE

**WETLAND IMPACT
EXHIBIT MAP**

CAPIT
ORAC
HELA
NN.15
36276
790
Created by:
CAROLANNE AN
DREWS-LEWIS
DRAWING: WETLAND
IMPACT ANALYSIS
DATE: 02/13/19
SCALE: 1"=20'
DRAWN BY: RPB
CHECKED BY: AEC
DATE: 02/13/19



Woodlands at Echo Farms
Tract 2
Figure 8. Public Trust Waters

- CAME PEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:**
- SEWER COVERS REQUIRED AT ALL MANHOLES, STAKE OUTS, STEEL BOXES, AND ALL OTHER LOCATIONS WHERE THE SEWER IS EXPOSED TO THE STREET SURFACE.
 - WATER AND SEWER SERVICES SHALL BE PERMANENTLY TO MAIN AND SHALL BE INSTALLED AT THE POINT OF CONNECTION TO THE MAIN AND SHALL BE INSTALLED AT THE POINT OF CONNECTION TO THE MAIN AND SHALL BE INSTALLED AT THE POINT OF CONNECTION TO THE MAIN.
 - ALL SEWER LINES SHALL BE CONSTRUCTED TO A MINIMUM OF 18" DEPTH FROM ALL EXISTING GRADE.
 - ALL SEWER LINES SHALL BE CONSTRUCTED TO A MINIMUM OF 18" DEPTH FROM ALL EXISTING GRADE.
 - NO TRENCH COLLARS SHALL BE USED.
 - ALL SEWER LINES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ALL EXISTING UTILITIES.
 - ALL SEWER LINES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ALL EXISTING UTILITIES.
 - ALL SEWER LINES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ALL EXISTING UTILITIES.

FORCE MAIN NOTE:

FORCE MAINS SHALL NOT HAVE ANY INTERMEDIATE HIGH POINTS BETWEEN MANHOLES. THE FORCE MAIN SHALL BE CONSTRUCTED TO A MINIMUM OF 18" DEPTH FROM ALL EXISTING GRADE. THE FORCE MAIN SHALL BE CONSTRUCTED TO A MINIMUM OF 18" DEPTH FROM ALL EXISTING GRADE.

WILMINGTON
 Public Services • Engineering Division

APPROVED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION

DATE: _____

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

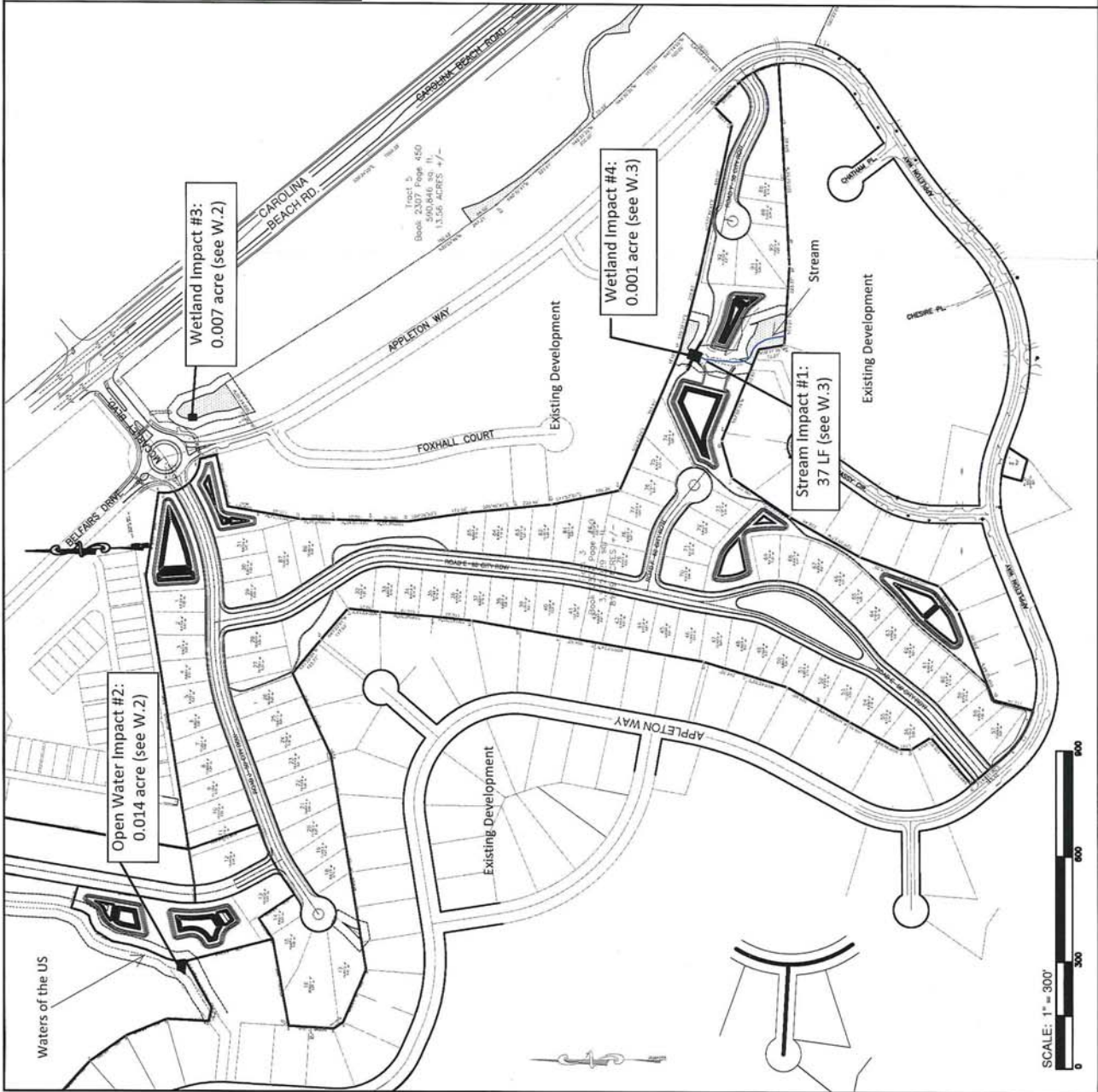
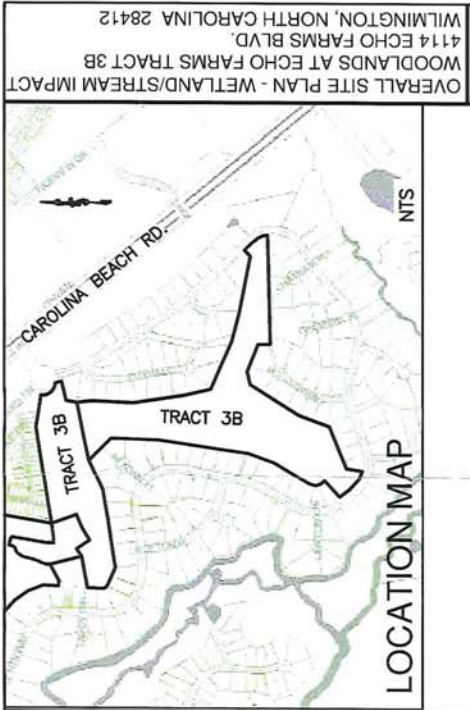
APPROVED BY: _____

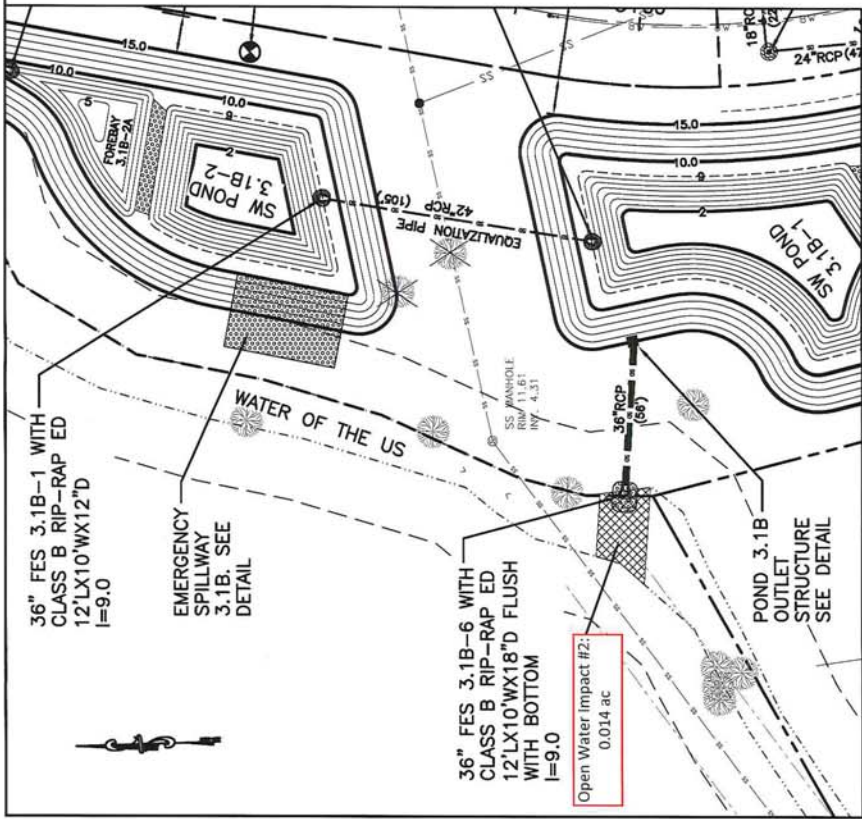
PROJECT STATUS: _____

DATE: _____

811
 Know what's below.
 Call before you dig.

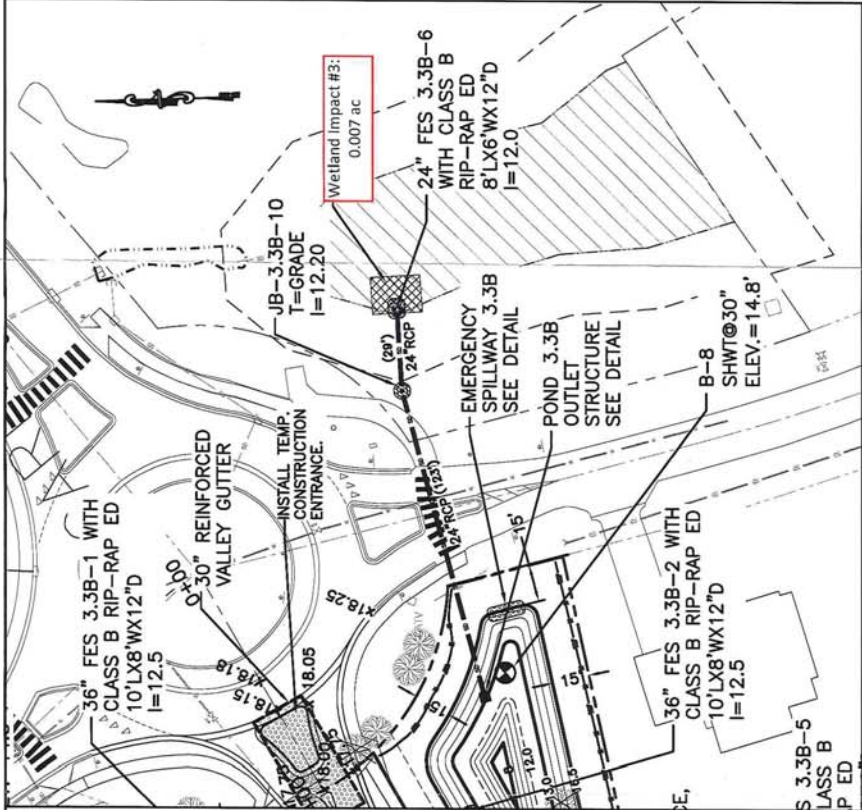
For each open utility call for a utility locate. A \$200 permit shall be required from the City of Wilmington. A \$100 fee shall be required from the City of Wilmington. A \$100 fee shall be required from the City of Wilmington.





SCALE: 1" = 50'

Open Water Impact #2:
0.014 acre (620 sf)



SCALE: 1" = 50'

Wetland Impact #3:
0.007 acre (300 sf)

Figure 12.
Woodlands at Echo Farms; Tract 3B
Detail Drawings

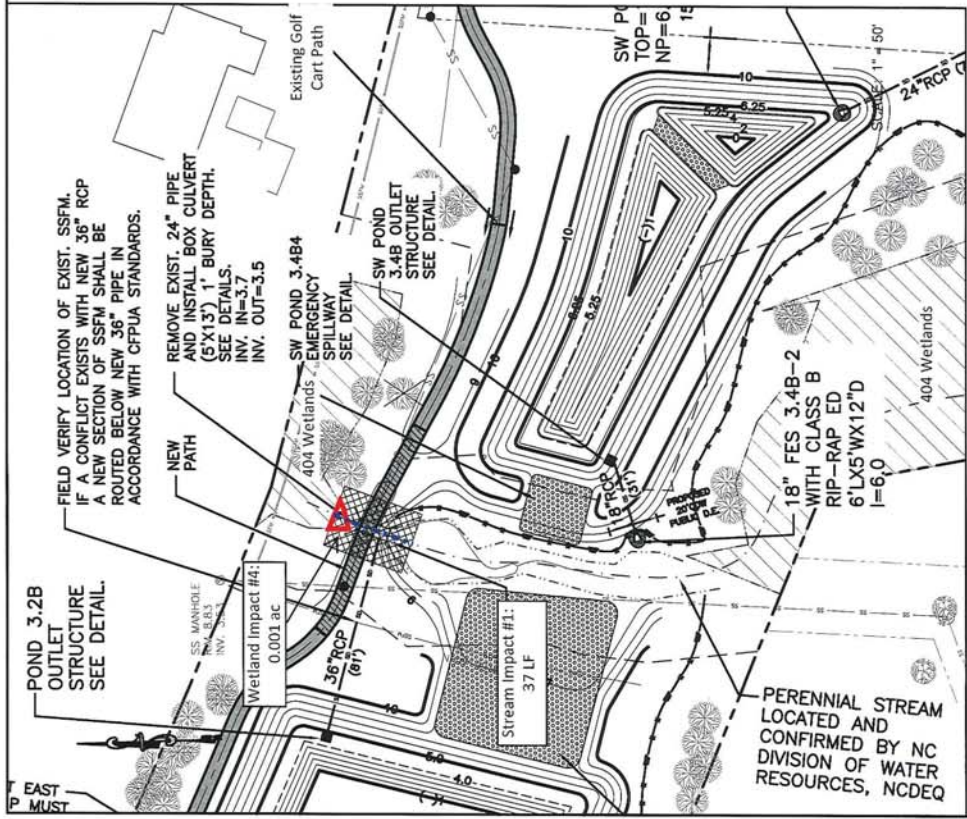


Figure 13.
Woodlands at Echo Farms; Tract 3B
Detail Drawings

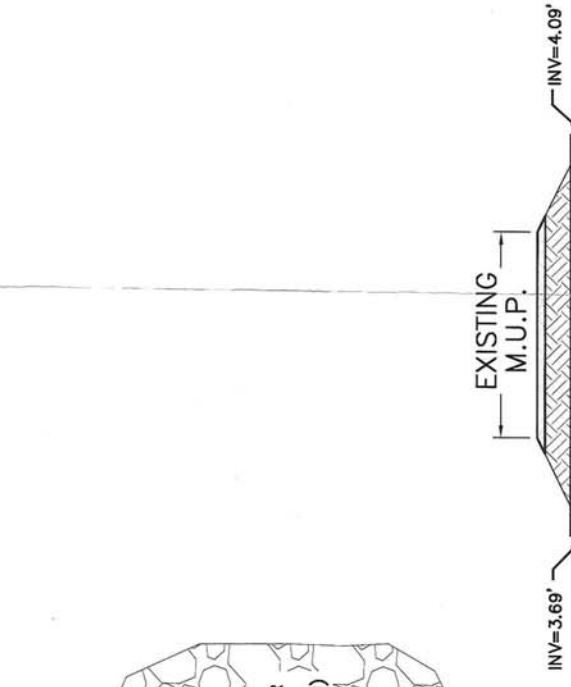
CARTODRACHELANN15362979 2018-01-10 10:00:00 AM
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IMPACT AREA 3 DETAILS
 WOODLANDS AT ECHO FARMS TRACT 3B
 4114 ECHO FARMS BLVD.
 WILMINGTON, NORTH CAROLINA 28412

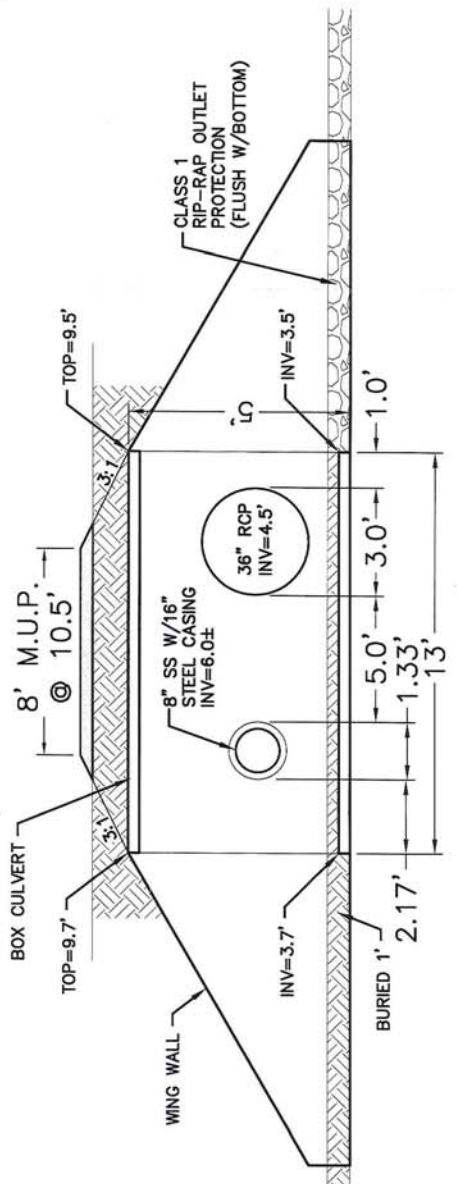
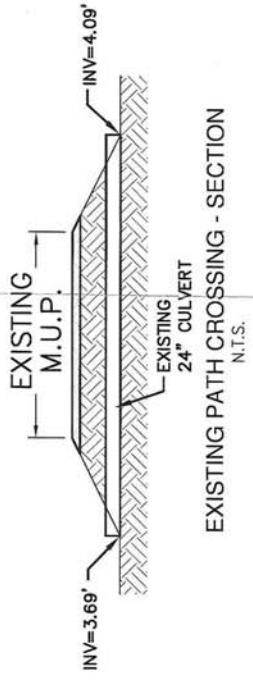
NORRIS & TUNSTALL
 CONSULTING ENGINEERS P.C.
 1425 MARKET STREET
 RAYLEIGH, NC 27601
 PHONE: (919) 841-9433
 FAX: (919) 841-9433
 LICENSE: REC-3441

DATE	1/10/18
BY	INS
CHECKED	INS
APP'D	
SCALE	
PROJECT	16083

W.4



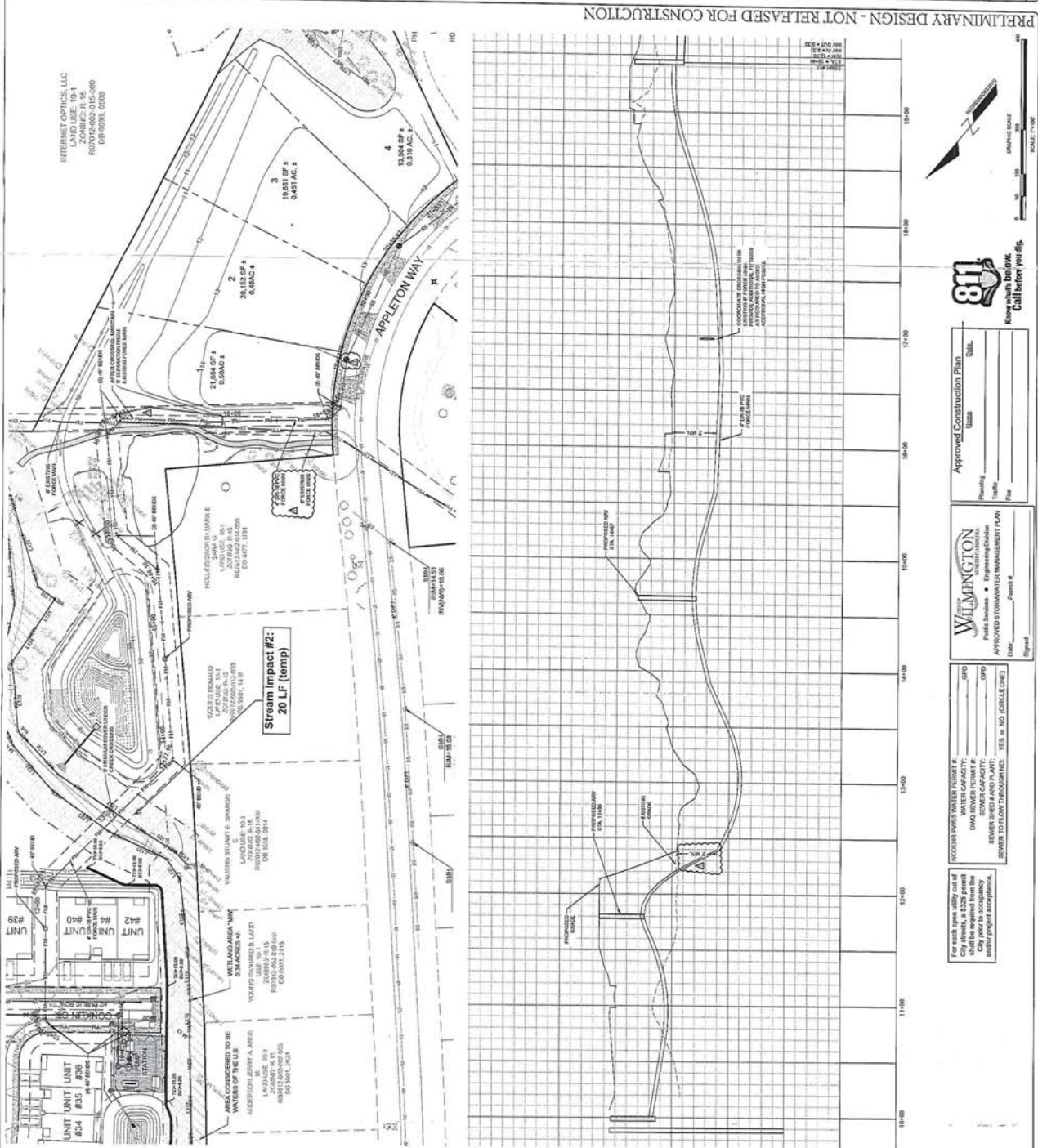
BOX CULVERT DETAIL - PLAN VIEW
 N.T.S.



BOX CULVERT DETAIL - SECTION A-A
 N.T.S.



Figure 14.
Woodlands at Echo Farms: Tract 3C
NO WETLAND IMPACTS



UTILITY NOTES: IN ACCORDANCE WITH THE CITY OF WILMINGTON, NORTH CAROLINA, THE FOLLOWING NOTES SHALL BE OBSERVED:

1. WATER MAINS SHALL BE Laid 30" DEEP TO PROVIDE A MINIMUM HORIZONTAL SEPARATION FROM THE SEWER MAINS. THE WATER MAINS SHALL BE INSTALLED AT THE BOTTOM OF THE TRENCH. THE TRENCH SHALL BE BACKFILLED WITH GRANULAR MATERIAL OR IN THE SAME TRENCH ON A SLOPE OF 1:1. THE TRENCH SHALL BE 18" WIDE AT THE BOTTOM AND 24" WIDE AT THE TOP.
2. WHEN CROSSING A WATER MAIN UNDER A SEWER, THE WATER MAIN SHALL BE Laid AT LEAST 18" ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE SEWER SHALL BE INSTALLED IN A TRENCH CONSTRUCTED OF CASTLE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE CASTLE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER, WHEREVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE INSTALLED IN A TRENCH CONSTRUCTED OF CASTLE IRON PIPE TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING.
4. WHERE VERTICAL CLEARANCE IS LESS THAN 36" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE CASTLE IRON PIPE FOR A MINIMUM OF 10 FEET ON EACH SIDE OF CROSSING AND STORM DRAIN SHALL BE 18" RC PIPE.
5. WHERE VERTICAL CLEARANCE IS LESS THAN 36" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE CASTLE IRON PIPE FOR A MINIMUM OF 10 FEET ON EACH SIDE OF CROSSING AND STORM DRAIN SHALL BE 18" RC PIPE.

FIRE ALIVE SAFETY NOTES:

1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN ANY DEVELOPMENT.
2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
3. CONTRACTOR SHALL MAINTAIN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
4. CONSTRUCTION TYPE - V, MULTI-FAMILY BUILDINGS WILL NOT BE SPRINKLED.
5. LANDSCAPING OR PARKING CAN NOT BLOCK OR OBSCURE THE LOC OR FIRE HYDRANTS. A 3.0' (91") CLEAR SPACE SHALL BE MAINTAINED AROUND THE CLEARANCE SIGN OF HYDRANTS AND VEHICLES.

WATER & SEWER SERVICE NOTE:

1. CONTRACTOR SHALL INSTALL WATER AND SEWER SERVICES IN ACCORDANCE WITH THE CITY OF WILMINGTON, NORTH CAROLINA. (1) WATER SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH CPTUA STANDARD DETAILS PER UNIT.
2. SEWER SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH CPTUA STANDARD DETAILS PER UNIT.

PERMITS INFORMATION:

1. SEWER CHANGES REQUIRED AT ALL MANHOLES, SPANNERS, STABLE STEEL SEWER, AND STORM DRAIN MANHOLES SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF WILMINGTON, NORTH CAROLINA. THE SEWER MAINS SHALL BE PERFORMED TO MAIN AND WATER MAINS SHALL BE PERFORMED TO 18" DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. ALL SEWER MAINS SHALL BE 18" DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. ALL SEWER MAINS SHALL BE 18" DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
4. ALL SEWER MAINS SHALL BE 18" DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
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6. ALL SEWER MAINS SHALL BE 18" DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
7. ALL SEWER MAINS SHALL BE 18" DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE DRAWINGS.

Figure 17. Woodlands at Echo Farms: Tract 5 Force Main Plan and Profile

811
 Know what's below. Call before you dig.

WILMINGTON
 PUBLIC SERVICES • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN

Approved Construction Plan
 Project No: _____
 Date: _____
 Engineer: _____

For each open utility call of 811, a fee of \$320 per call shall be required from the contractor. This fee shall be used for the purpose of making project acceptance.

FUTURE TRENCH WATER PERMIT # _____
 WATER PERMIT # _____
 DWD SEWER PERMIT # _____
 SEWER SHEET AND PLAN: _____
 SEWER TO FLOW THROUGH FEES: YES / NO (CIRCLE ONE)