



**Planning, Development  
and Transportation**  
Transportation Planning  
305 Chestnut Street  
PO Box 1810  
Wilmington, NC 28402-1810

**DATE:** 01.03.2018  
**TO:** ProTrak  
**FROM:** Mitesh Baxi  
Traffic Engineering

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■ **WOODLANDS AT ECHO FARMS TRACT 2 [TRC Plan Review]**

∞ Initial Review Note ∞

All comments are based on adopted policy documents, specific City of Wilmington Land Development Code (CofW LDC) and City of Wilmington Technical Standards and Specifications Manual (CofWTSSM) requirements in effect at the time of this review. These have been noted after the comment as appropriate for your ease in further research.

The City Engineer may administratively approve dimensional variance requests per LDC Sec. 18-348. If the Applicant feels further interpretation is in order, please contact Transportation Planning directly to discuss in additional detail. Please apply for all administrative variances in writing, an email is acceptable or this may be included on the plan set. Please see Sec. 18-348 of the Land Development Code for the information required to process a variance request.



**BASE INFORMATION:**

- Revise all sheets to accurately illustrate the existing conditions on and surrounding this parcel. Show all adjacent traffic signs, lane configurations, traffic control devices and pavement markings on the site inventory plan. Please refer to the Technical Standards and Specifications Manual (link is below) Ch. VII C.1.a.2. for specific information and distance requirements. Contact Traffic Engineering at 341-7888 if you need assistance locating these elements.

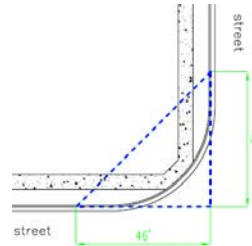
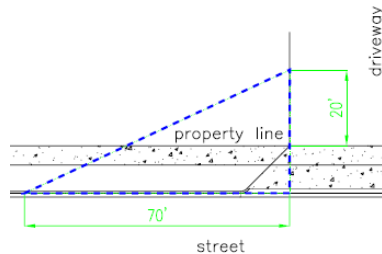
**NCDOT:**

It is the Applicant's responsibility to coordinate directly with NCDOT to determine if any driveway permits/ revisions/ review processes are required. Contact NCDOT at 910. 251.2655. Please note additional comments may be forthcoming once coordination occurs.

**TECHNICAL STANDARDS – NEW ROADS:**

1. Please specify appropriately whether a section of Road to access units 25 to 30 will be designated as public ROW or private ROW.
2. The T-shaped turnaround off Road R must be as per [SD 3-05](#). Dimension the radii accordingly.
3. The wheel chair ramps shown at the intersections with Independence Blv are not installed as per [SD 3-09](#). The ramps at marked crossings must be wholly contained within the markings.
4. Install wheelchair ramp at corner of 22' wide backing stub, at the entrance of proposed parking area, opposite of units 47 & 48', at the entrance of proposed parking area, and at the end of T-shaped turnaround as per NCDOT and/or City standards. Connect sidewalk with ramp.
5. The minimum street corner radii is 35'. [\[7-5 CofW Tech Stds\]](#) Please amend wherever applicable on site plan.

6. The sight distance triangle for the street corner intersection is not as per City standard. Show and apply the City's 46'x46' sight distance triangle at each street corner intersection on the site plan. [\[Sec.18-529\(c\)\(3\)CofW LDC\]](#) Add a note indicating that all proposed vegetation within sight triangles shall not interfere with clear visual sight lines from 30"-10'. [\[Sec.18-556 CofW LDC\]](#) Also show and apply the City's 20'x70' sight distance triangle at the driveway for the proposed parking area.



#### TECHNICAL STANDARDS – PARKING:

7. Parking lot must meet requirements of standard details [SD 15-11 CofW Tech Stds](#) for parking lots under 25 stalls. Please amend the driveway width to 24' and design as per [Chapter VII, Detail 3-03.1 & 3-03.2 CofWTSSM](#).
8. Twenty-four feet (24') is the minimum drive aisle width behind perpendicular parking. [\[Table 6, page 7-19 CofWTSSM\]](#)
9. The backing stub is to be 10' deep by 15' wide. Please revise and dimension. [\[Chapter VII, Detail SD 15-12 CofWTSSM\]](#)

#### STREET LIGHTING [\[City of Wilmington Street Lighting Policy\]](#):

10. The street lighting plan is prepared assuming turnaround access for units 25 to 30 as a public ROW. Street lighting plan will be amended if the scenario changes.
11. The standard streetlight shall be a DEP enclosed cutoff (Cobra type), high pressure sodium vapor (HPSV) or DEP designated LED equivalent fixture installed within the recommended range of mounting heights for the specific fixture. The standard streetlight shall be installed on a wooden pole in areas served from overhead facilities and on a fiberglass pole in areas served from underground facilities.
12. A layout for the Standard street lighting has been provided with the review considering all Roads for this site as public ROW. Minimum of 10 (Ten) street lights are required for this sub-division. Although, developers may choose to provide any extra lights or ornamental. Any installations above the criteria of Standard street lighting, will be considered as non-standard and has to conform to the City's non-standard street lighting procedure as per the policy.
13. Developers shall bear any installation costs associated with streetlights, if applicable. In areas served from underground facilities, the developers shall pay the one-time underground contribution charge, if applicable.
14. The Planning, Development and Transportation Director or designee and the City Landscape Designer will coordinate plaza plantings and streetlight locations to minimize the obstruction of light by vegetation.

#### GENERAL NOTES TO ADD TO THE PLAN:

- A. All signs and pavement markings in areas open to public traffic are to meet MUTCD (Manual on Uniform Traffic Control Devices) standards. [\[Detail SD 15-13 CofW Tech Stds\]](#)
- B. It shall be the responsibility of the subdivider to erect official street name signs at all intersections associated with the subdivision in accordance with the Technical Standards and Specifications Manual. The subdivider may acquire and erect official street name signs or may choose to contract with the city to install the street signs and the subdivider shall pay the cost

of such installation. Contact Traffic Engineering at 341-7888 to discuss installation of traffic and street name signs. Proposed street names must be approved prior to installation of street name signs.

- C. Contact Traffic Engineering at 341-7888 forty-eight hours prior to any excavation in the right of way.
- D. If these units are sold at any point, the buyer must receive a subdivision street disclosure statement. Please note this on the site plan and advise the property owner of this requirement. [\[Sec.18-378 \(e\) CofW LDC\]](#)

**MISCELLANEOUS:**

- ❖ Permitting of business identification signage is a separate process. NCDOT/ City of Wilmington will not allow obstructions within the right of way.
- ❖ Contact Traffic Engineering at (910) 341-7888 to discuss street lighting options.

Please let me know if you have any questions or if I can be of further assistance as this development moves through the review process.





PROJECT ADDRESS:

TAX PARCEL IDENTIFICATION #:

RECORDED DEED BOOK:

TOTAL SITE AREA:

CURRENT ZONING:

CAMA LAND USE CLASSIFICATION:

MAXIMUM ALLOWABLE BUILDING HEIGHT:

EXISTING LAND USE:

PROPOSED LAND USE:

REQUIRED/PROPOSED LOT COVERAGE

<u>SETBACK STANDARDS</u>	<u>PROVIDED</u>	<u>REQUIRED</u>
MINIMUM FRONT SETBACK	15 FT	15 FT
MINIMUM SIDE SETBACK	5 FT	5 FT
MINIMUM CORNER SETBACK	10 FT	10 FT
MINIMUM REAR SETBACK	15 FT	15 FT

**SINGLE FAMILY LOT SIZE**  
APPROXIMATELY 60' WIDE x 120' LONG  
MINIMUM WIDTH = 50'  
MINIMUM SQUARE FOOTAGE = 5,000 SF

**MAXIMUM ALLOWED DENSITY**  
9 UNITS/ACRE  
FOR AREAS LOCATED WITHIN A CAM CONSERVATION AREA THE MAXIMUM ALLOWED DENSITY IS 2.5 UNITS/ACRE

**DENSITY TRACT 2**  
54 UNITS TOTAL  
9.51 ACRES @ 9 UNITS/ACRE = 85 MAXIMUM ALLOWED UNITS  
26 PROPOSED UNITS = 2.73 UNITS/ACRE

17.24 ACRES @ 2.5 UNITS/ACRE = (CAMA CONSERVATION AREA) = 43 MAXIMUM UNITS  
28 PROPOSED UNITS - 1.62 UNITS/ACRE

<u>OPEN SPACE REQUIREMENTS</u>		
(54) UNITS X 0.03 ACRES	<u>PROVIDED</u>	<u>REQUIRED</u>
TOTAL	11.27 AC	1.62 AC
ACTIVE (50% OF REQUIRED)	0.80 AC	0.81 AC
PASSIVE (50% OF REQUIRED)	10.48 AC	0.81 AC

**FLOOD NOTE**  
PORTIONS OF THE SUBJECT PARCEL LIE WITHIN A 100-YEAR FLOOD ZONE (AE-9) AS INDICATED BY FEMA FLOOD ZONE PANEL 3720312500J BEARING AN EFFECTIVE DATE OF APRIL 3, 2006.

<b><u>SITE INFORMATION</u></b>	
PROPOSED IMPERVIOUS AREA	
LOT IMPERVIOUS (5,000 SF/LOT)	270,000 SF
ON-SITE SIDEWALKS	21,013 SF
ASPHALT/ CONCRETE/ CURB & GUTTER	64,262 SF
FUTURE	<u>3,025 SF</u>
TOTAL PROPOSED IMP. AREA	358,300 SF (8.23 AC)

PROPOSED PERCENT IMPERVIOUS                      358,300 SF / 1,165,205 SF = 30.8%

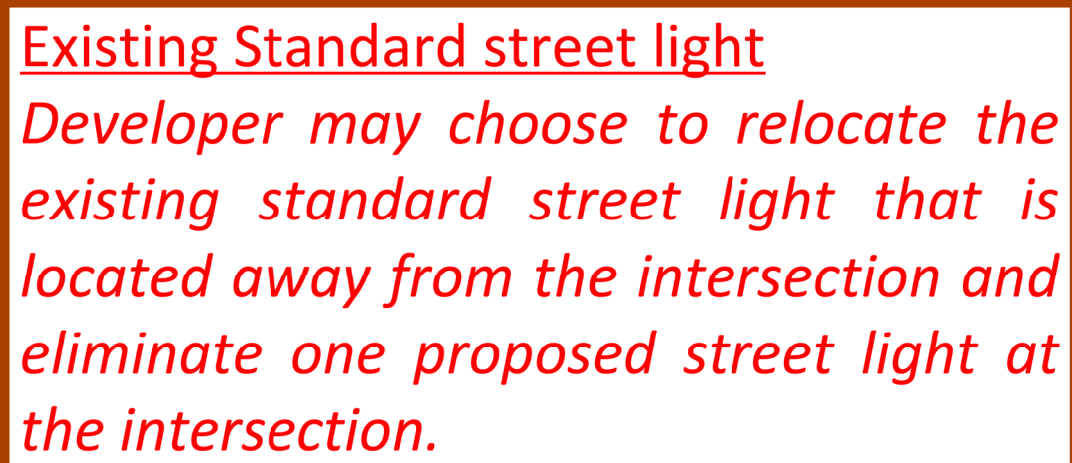
OFF-SITE IMPERVIOUS	
IMPERVIOUS PAVEMENT	3,016 SF
IMPERVIOUS SIDEWALK	<u>4,732 SF</u>
TOTAL	<u>7,748 SF</u>

TOTAL PROP. IMPERVIOUS (ON-SITE & OFF-SITE)	366,048 SF
ALLOCATED IMPERVIOUS PER LOT	5,000 SF

IMPERVIOUS AREA IN FLOODPLAIN/CAMA CONSERVATION AREA	
AREA = 750,974 SF (17.24 AC)	
MAX IMPERVIOUS COVERAGE 25% = 187,744 SF	
ROADS & SIDEWALKS	= 45,000 SF
FUTURE CAYAK LAUNCH	= 2,250 SF
28 LOTS @ 5,000 SF/LOT	= <u>140,000 SF</u>
TOTAL:	= 187,250 SF


**WATER AND SEWER CAPACITY**  
**SANITARY SEWER**  
 SINGLE FAMILY - ASSUMING 4-BEDROOM HOMES @ 120 GPD/BED = 480 GPD/HOME  
 54 SINGLE FAMILY HOMES @ 480 GPD/HOME = 25,920 GPD

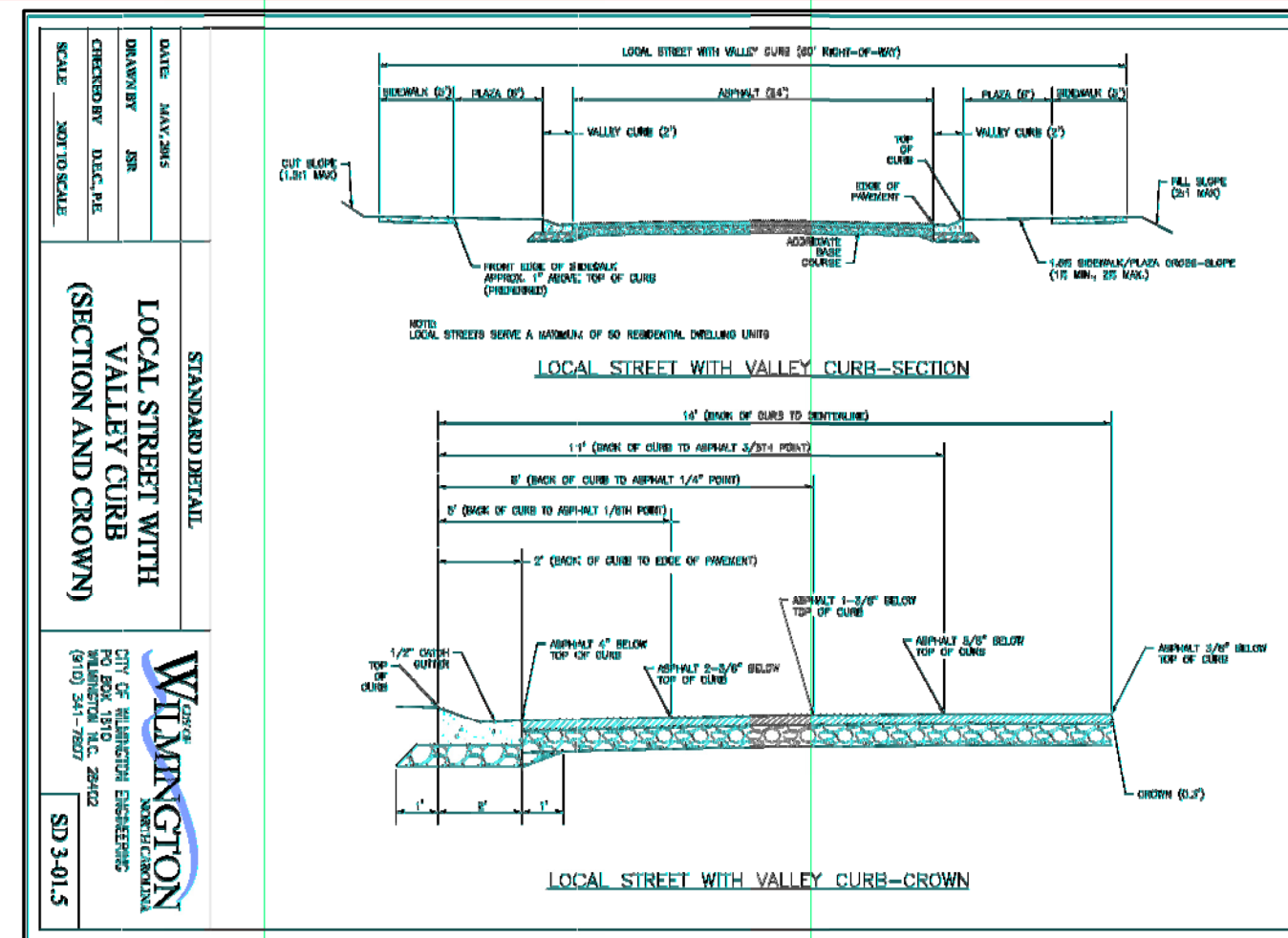
WATER  
SINGLE FAMILY - 54 HOMES AT 400 GPD/HOME = 21,600 GPD



**Woodlands At Echo Farms Tract 2 Standard Street Lighting Plan**

1. Developers shall bear any installation costs associated with streetlights, if applicable. In areas served from underground facilities, the developers shall pay the one-time underground contribution charge, if applicable.
2. Streetlights will be reviewed through the subdivision process and must meet criteria established in City's Street Lighting Policy.
3. If any of the existing street lights coincide with the proposed, required number of street lights must be amended to comply with the street lighting policy.

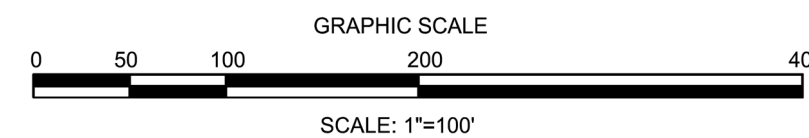
 Assuming turnaround access for units 25 to 30 will be a public ROW, suggested approximate locations of minimum required 10 street lights. Locations may vary as per the field survey by DEP.



<h2 style="margin: 0;">Approved Construction Plan</h2>	
Name _____	Date _____
Planning _____	
Traffic _____	
Fire _____	

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

NCDENR PWSS WATER PERMIT #: \_\_\_\_\_  
WATER CAPACITY: \_\_\_\_\_ GPD  
DWQ SEWER PERMIT #: \_\_\_\_\_  
SEWER CAPACITY: \_\_\_\_\_ GPD  
SEWER SHED # AND PLANT: \_\_\_\_\_  
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

<div>PEI JOB#: 17358.PE</div>	<div>C-2.0</div>	<div><div><div>12/18/17</div><div>031591</div><div>ROBERT A. BALL MD</div><div>ENGINEER</div><div>SEAL</div><div>NORTH CAROLINA</div><div>PROFESSIONAL</div></div><div>12/18/17</div></div>	<div><div>OVERALL SITE PLAN</div><div>TRACT 2</div><div>WOODLANDS @ ECHO FARMS</div><div>CITY OF WILMINGTON</div><div>NORTH CAROLINA</div></div>	<div><div>PARAMOUNT ENGINEERING</div><div>122 Cinema Drive</div><div>Wilmington, North Carolina 28403</div><div>(910) 791-6707 (O) (910) 791-6760 (F)</div><div>NC License # - C-2846</div></div>	<div><div>CLIENT INFORMATION:</div><div>ECHO FARMS, LLC</div><div>c/o MATRIX DEVELOPMENT GROUP</div><div>CN 4000 FORSCATE DRIVE</div><div>GRANBURY, NJ 08512</div></div>	REVISIONS: