SUP 21-01 – (Thales) Wait Avenue Subdivision – 1st Submittal review cycle

START DATE: 12-9-21	DUE DATE: __12-17-21__	TRC/STAFF Comments issued on: _____12/20/2021_____

Review Group	Staff	RCVD on:	Comments	APPROVAL
Planning & Zoning	Karen Mallo, WR	12/16/21	See attached PDF [of a WORD doc] of Written Comments	
Parks & Recreation	JG Ferguson	12/17/21	Run greenway through open space and take (greenways) off of the sidewalks.	
Engineering	Brian Laux / Jacqueline Thompson	12/17/21	See attached Mark-Up PDF of the PUD Masterplan (1 sheet).	
Watershed Management	Jeevan Neupane	12/14/21	See attached PDF (from an email) of comments, and two (blank) attachments.	
COR Utilities (W/WW)	Tim Beasley		No comments received.	
Fire / EMS	Brittany Hocutt		No comments received.	
NCDOT	Matt Nolfo	12/16/21	The Wake County District Office does not have objections to the land shown being converted to be used for Residential or Commercial purposes, or the approval of the proposed Special Use Permit. Any work done on NCDOT ROW will require an approved encroachment application, and the connections shown to Wait Avenue and Averette Road will need approved driveway permits. A TIA may be required based on how development occurs, and the TIA could require additional roadway improvements. These changes or modifications to the site should not prevent the land from being used in accordance with the proposed Special Use Permit.	✓

✓

Revised: 12-20-21

WithersRavenel
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MEMORANDUM

To:	Meredith Gruber, Town of Rolesville, Planning Director Michael Elabarger, Town of Rolesville, Senior Planner
CC:	Kelly Arnold, Town of Rolesville, Manager
From:	Liza Monroe Karen Morgan Mallo, AICP
Date:	December 16, 2021
Project:	SUP 21-01, Thales – Wait Avenue
Subject:	Special Use Permit Review Comments

We have completed a review of the special use permit completed by Pulte Homes. The project proposes the construction of 288 residential units, both single-family and townhomes, as well as commercial uses on 92.32 total acres. The site is located on 2028 and 2206 Wait Avenue. The current zoning of the site is R&PUD. The proposed zoning is R&PUD with additional conditions building upon the previous approved special use permit, SUP18-01.

We offer the following comments:

A. Application Statement

1. The applicant notes that this proposal encourages an "active lifestyle" but is requesting a condition that could result in a 15% reduction of recreational open space. Staff would suggest editing this statement as it appears to contradict the conditions proposed.

2. Staff would advise the applicant that in order to make this statement during the hearing, a report from an expert may be needed. Effects on property values shall be confirmed by a licensed professional in that field, namely a NC licensed real estate appraiser. Expert testimony is required within the quasi-judicial process.

3. The applicant notes that this proposal will orient commercial uses to minimize impact on surrounding residential uses however, the proposed condition would allow non-residential buildings and uses closer to the front of the site. Staff would suggest editing this statement as it appears to contradict the conditions proposed.

4. No comments on statement number 4.

5. No comments on statement number 5.

6. No comments on statement number 6.

7. No comments on statement number 7.

B. Amended Master Plan

1. The Plan shows Area DA-5 with 24 residential units, but the Calculations Chart shows DA-5 with 40 units.

2. The Master Plan indicates specific number of units in each development area. However, the most recent Preliminary Plant submittal shows a different number of units in the development areas (eg. DA4 indicates 9 units on the Master Plan but the Preliminary Plat shows 10; DA-5 indicates 24 units on the Master Plan but 42 on the Preliminary Plat.)

3. The R3 Lot Area Calculations are incorrect for item listed under Rolesville Code. The Code does not require a 10' Side OR 10' Corner Yard Setback for the R3 Use.

C. Proposed Conditions

1. No comments on condition number 1.

2. Staff would recommend the applicant expound upon what is meant by *temporary uses*. Does this limit the community from hosting events in the future like a food truck rodeo or yard sale?

3. UDO 14.8.9 states all outdoor lighting shall be designed and located such that the maximum illumination measured in foot-candles at the property line does not exceed *three-tenths* onto adjacent residential property and one onto adjacent commercial sites and public rights-of-way. These conditions would increase the lighting permitted onto adjacent properties. Staff would recommend removing this condition or adding landscaping conditions to ensure there is appropriate screening.

4. Edit to state that a minimum 10% of the *gross area* shall be provided as open space as this is what is stated in UDO Section 15.4.8.2. Also change to emphasis that 35% shall be devoted to *active recreation* open space as there are specific requirements.

5. No comments on condition number 5.

6. No comments on condition number 6.

7. The intent of this Ordinance requirement is to have a more aesthetic view where trees and shrubs are placed at the forefront of the site. Staff would suggest the applicant note their intention for landscaping and beautification with no nresidential buildings located where there is typically greenery.

C. Comprehensive Plan Consistency/FLUM

1. The 2017 Comprehensive Plan and Future Land Use Map (FLUM) distinction shows this area of Rolesville as *medium density* residential.

    a. *Medium density* is defined as predominately single-family residential uses with portions of duplex, townhouse or multifamily residential. These are lots or tracts at a density range of three to five dwelling units per gross acre including preserved open space areas along with limited non-residential uses under planned unit development or form base code provisions.

    b. The SUP aims to limit specific nonresidential use types that could be deemed incompatible with residential zoning. It does not remove any residential uses and thus the proposed conditions are consistent with the FLUM.

EXISTING CONDITIONS:

- 50' RIPARIAN/POND BUFFER
- POND/WETLAND
- LITTLE RIVER WATERSHED

PROPOSED FEATURES:

- RESIDENTIAL SINGLE FAMILY DETACHED/ TOWNHOME ATTACHED
- COMMERCIAL
- ROAD
- POTENTIAL ACCESS POINT
- 10' PEDESTRIAN GREENWAY *
- LANDSCAPE / STREETSCAPE BUFFER
- STOP SIGN

* THIS SECTION OF TRAIL MAY BE ALTERED WITH EVENTUAL SUBMITTAL OF PRELIMINARY PLAT

DEVELOPMENT CENTER CALCULATIONS

DEVELOPMENT AREA	USE	TOTAL ACRES	ENVIRONMENTAL FEATURES (ACRES)	STEEP SLOPES (APPX. ACRES)	STREET & SIDE BUFFERS	NET ACRES	UNITS
DA-1	RESIDENTIAL	25.43	3.21	9.4	0.74	12.08	78
DA-2	RESIDENTIAL	8.49	4.19	1.3	0.00	3.00	18
DA-3	RESIDENTIAL	5.18	1.51	0.67	0.30	2.70	12
DA-4	RESIDENTIAL	9.30	1.88	2.3	0.00	5.12	9
DA-5	RESIDENTIAL	19.74	2.70	2.59	2.02	12.43	40
DA-6	RESIDENTIAL	9.76	0.10	0.71	2.15	6.80	131
DA-7	COMMERCIAL	10.00	1.28 WSHD	0.00	1.27	7.45	N/A
DA-8	COMMERCIAL	5.86	1.16 WSHD	0.05	0.85	3.80	N/A

NET COMMERCIAL = 11.25 ACRES
NET RESIDENTIAL = 288 UNITS

R3 LOT AREA CALCULATIONS

	MINIMUM LOT AREA (SF)	MINIMUM LOT WIDTH (FT.)	FRONT YARD SETBACK (FT.)	SIDE YARD SETBACK (FT.)	CORNER YARD SETBACK (FT.)	REAR YARD SETBACK (FT.)	OPEN SPACE
ROLESVILLE CODE	6,000	20	15	10	10	15	15%, 35% REC
PUD REQUEST							
TOWNHOME	2,000	20	20' / 5' ALLEY	5'	10'	10'	10%, 35% REC
SINGLE FAMILY	5,000	50	20' / 5' ALLEY	20'	3'	15'	10%, 35% REC

10' MEANDERING SIDEWALK ALONG WAIT AVENUE OUTSIDE EX. R.O.W.

ADD RIGHT TURN LANE

30' STREETSCAPE BUFFER

CARRIE MAY LANE

ADD LEFT TURN LANE

LONGMONT DRIVE

DA-1
25.43 ac. GROSS
12.08 ac. NET
RESIDENTIAL
78 UNITS

DA-3
5.18 ac. GROSS
2.70 ac. NET
RESIDENTIAL
12 UNITS

WAIT AVENUE

30' TYPE 'D' & STREETSCAPE BUFFER

RIGHT-IN/RIGHT-OUT

35 M.P.H.

65' R.O.W. COLLECTOR

STOP

AUSTIN RIDGE PARKWAY

DA-6
9.76 ac. GROSS
6.80 ac. NET
RESIDENTIAL
131 UNITS

THALES
(1860151206)

ADD RIGHT TURN LANE

30' TYPE 'A' BUFFER

30' TYPE 'D' & STREETSCAPE BUFFER

DA-7
10.00 ac. GROSS
1.28 ac. WSHD
7.45 ac. NET
COMMERCIAL
75,000 SF

WATERSHED DELINEATED BASED ON TOPOGRAPHY

DA-2
8.49 ac. GROSS
3.00 ac. NET
RESIDENTIAL
18 UNITS

10' ASPHALT GREENWAY WITHIN R.O.W.

20' TYPE 'D' BUFFER

10' TYPE 'D' BUFFER

30' TYPE 'D' & STREETSCAPE BUFFER

ADD MIDDLE TURN LANE

DA-5
19.74 ac. GROSS
12.43 ac. NET
RESIDENTIAL
24 UNITS

25 M.P.H.

65' R.O.W.

DA-8
5.86 ac. GROSS
1.16 ac. WSHD
3.80 ac. NET
COMMERCIAL
75,000 SF

OLD PEARCE ROAD

DA-4
9.30 ac. GROSS
5.12 ac. NET
RESIDENTIAL
9 UNITS

30' TYPE 'A' BUFFER

SHOW LINE FOR 30' BUFFER ALONG PROPERTY LINE :

PIN: 1860038619

LITTLE RIVER WATERSHED (STRIPED HATCH)

AVERETTE ROAD

5' MEANDERING SIDEWALK ALONG AVERETTE RD.OUTSIDE EX. R.O.W.

POTENTIAL CONNECTION TO ADJACENT PARCEL

0 50 100 200 NORTH

SCALE: 1" = 100'

THALES ACADEMY

WAIT AVE. & AVERETTE RD.

P.U.D. MASTERPLAN

DECEMBER 17, 2020

STEWART

SUP 21-01 / Thales Wait Ave (Subdivision) PUD Amendment

These comments are copied/pasted from an email from JEEVAN NEUPANE, Wake County Environmental, dated 12-14-2021, to Town Staff.

Below are preliminary E&SC comments from the sketch plan submitted as there were no erosion and sediment control plan sheets, grading plan, nor E&SC measures included in the construction package. The comments below are guidance to sculpt the submittal made at a later date. This plan has not been submitted for Stormwater/E&SC review yet. The construction plans may be formally submitted to Wake County for review of the Stormwater management plan and the sediment and erosion control plan at any time. That review will result in more detailed or additional comments.

1. Provide perimeter silt fence with J-Hooks around the perimeter of the site. Add silt fence outlets along perimeter near riser/skimmer discharge, at low points/sharp angle changes in silt fence, and downstream of Emergency Spillway.

2. Provide limit of disturbances, construction sequences, phased E&SC plan to cover: clearing and grubbing, permanent storm drainage, and vertical construction. Provide details for construction sequence, silt fence, inlet protection, silt fence outlet, check dams, basin, skimmer and all other sediment control measures.

3. It appears there will be several stream/pond crossing. Provide specific construction sequence and details for temporary and permanent stream crossings this should address “construction in the dry” and bypass of any live stream flow around the work area. Sediment basins and runoff conveyance should be provided upstream of each crossing, preferably on all “4-corners” but at least for “2-corners” of the crossing, Silt fence should also be installed along stream banks at the end of the work day to minimize impacts. If timber mat crossing is selected for the temporary, provide notes that there will be stone approaches on both sides and the boards will have no gaps, geotextile shall be underlain or overlain, and side boards will be installed along the perimeter of the mat. Also remember to submit 401/404/buffer authorizations and impact maps for stream, wetland and buffer impacts.

4. Provide stage seeding and sediment control along project perimeter as part of the initial installation in the erosion control sequence.

5. Provide calculation for all basins and SCM conversion sequence on the plan. Provide note in the construction sequence to notify NCDEQ-DEMLR a minimum of 10 days prior to initiating this sequence, per NCG01 permit.

6. Check shear stress of temporary diversions and provide appropriate rolled erosion control product/lining for temporary diversions. Provide temporary diversions with check dams and geotextile underlayment that extends 5ft upstream and downstream of check dams.

7. Provide stable transition area from temporary diversions to toe of basin slopes. Provide note that area downstream of basins and diversions shall be stabilized upon construction.

8. Show location of stockpiles, staging, and material laydown areas.

9. Ensure no sediment control measures are installed within Neuse Riparian Buffer.

10. Provide inlet protection for curb/yard inlets and concrete washout area. Provide detail for concrete washout area.

11. Provide berm at top of fill slope and slope drains that outlet to the temporary diversion along project perimeter and discharging to a sediment basin. Provide calculations for slope drains corresponding energy dissipators. Provide detail for slope drain.

12. Provide stage seeding and sediment control along project perimeter as part of the initial installation in the erosion control sequence. Provide note that area downstream of basins will be stabilized immediately upon construction.

13. Provide note in the construction sequence to notify NCDEQ-DEMLR and Wake County E&SC Inspector, a minimum of 10 days prior to initiating basin dewatering/removal sequence, per NCG01 permit.

14. Show location of concrete washout areas.

15. Provide rolled erosion control product/lining of slopes with elevation greater than or equal to 10ft and steeper than 3:1. Provide rolled erosion control product detail. Keep in mind and remind builders that they will have to provide single family lot erosion and sediment control and will need to be permitted and submit for their own erosion and sediment control plan.

16. Please note that the New NCG01 permit requirements will need to be followed when submitting for erosion control plan approval and the NCG01 permit will need to be applied for through the new Portal. The Certificate of Coverage will need to be acquired prior to Wake County setting up the pre-construction meeting and issuing the Grading Permit

I have attached checklist for sediment and stormwater applications that might be useful for engineers and developers.

Thanks

Jeevan Neupane, P.E.

Environmental Consultant

Wake County Government

Environmental Services Department

jeevan.neupane@wakegov.com

919.819.8907 mobile

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PPR – Pre-submittal Plan Review Checklist - Municipalities

Project Name				**Planning Number**		**Jurisdiction**	
Applicant				**Watershed**		**New or Expansion (N/E)?**	
Project Acreage		**Existing Impervious SF**		**Proposed Impervious SF**		**Disturbed Acreage**	
Residential				**Nonresidential**			

Review Status: **12/20/2021**	☐	Pre-Submittal Plan Comments All checked items must be addressed upon submittal of construction plans.

Submittal Package Requirements
Items marked with an "X" were noted as either insufficient or not provided. Engineer comments are in **RED** and provide the necessary requirements for either pre-construction or construction plan approval.

☐	**1.**		Cover letter stating the purpose of the submission
☐	**2.**		One copy of the Municipal Stormwater Tool (Site Data Sheet, Drainage Area Sheets, Site Summary Sheet, BMP Sheets, and BMP Summary sheet). The design tool is located at: http://www.wakegov.com/water/stormwater/management/program/Pages/default.aspx
☐	**3.**		Drainage Area Maps with stormwater discharge points (existing/post construction/post BMP)
☐	**4.**		Copy of the USGS Quad Map with delineated project limits
☐	**5.**		Copy of the Wake County Soil Survey map with delineated project limits
☐	**6.**		Proposed Site Plan:
	☐	**a.**	North arrow, graphic scale, drafting version date, and legend
	☐	**b.**	Show all Neuse Riparian Buffers : [15A NCAC 02B.0233 & 0242]
	☐	**c.**	Delineation of all existing and proposed impervious surfaces: roads, well lots, recreation sites, single family residences, etc. (consistent with Municipal SW Tool inputs)
	☐	**d.**	Delineation of current FEMA boundaries (floodway, flood fringe & future/0.2%)
	☐	**e.**	Proposed drainage easements and widths *(in Feet)*

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PPR – Pre-submittal Plan Review Checklist - Municipalities

	☐	**f.**	Location and type of all proposed stormwater management structures *(grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.)*
	☐	**g.**	Proposed easement access lanes and sediment disposal areas for future maintenance of stormwater management facilities.
	☐	**h.**	A note should be added to the recorded plat distinguishing areas of disconnected impervious (refer to town websites and ordinances for final plat requirements)

Standards and Requirements Items marked with an "X" note relevant standards to be applied to the proposed development. Notes in RED provide review comments and/or any required elements to comply with standard. References are shown in brackets for the municipalities.

ROLESVILLE: *Town of Rolesville Unified Development Ordinance (UDO) Section 7.5: Stormwater Management Standards*
WENDELL: *Town of Wendell Unified Development Ordinance (UDO) Chapter 6: Environmental Protection*, adopted 7/26/10.
ZEBULON: *Town of Zebulon, NC Code of Ordinances: Chapter 151 and Chapter 152.249.*

Stormwater Management Requirements

☒	**7.**	**Stormwater Review Required -** All residential subdivision development must submit a plan to comply with the applicable municipalities' stormwater ordinance. Office, institutional, commercial or industrial development that disturbs greater than 20,000 square feet is required to comply with the stormwater management regulations. Development and redevelopment that disturb less than 20,000 square feet are not exempt if such activities are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules. **Rolesville** [7.5.1(E)], **Wendell** [Chapter 6.5(F)], **Zebulon** [Chapter 151.05]
☒	**8.**	**Stormwater Permit** – is required for all development and redevelopment unless exempt pursuant to the Code of Ordinances. A permit may only be issued subsequent to a properly submitted, reviewed and approved stormwater management plan and permit application. **Rolesville** 7.5.1(E)(3)], **Wendell** [Chapter 6.5(F)(3)], **Zebulon** [Chapter 151.21(A)] Note: A permit may not be required if there are no post-construction requirements (i.e. SCMs).
☒	**9.**	**SCMs** - For projects requiring stormwater treatment for quality and/or quantity control, the applicant must: 1) comply with the NC BMP Manual **Rolesville** [7.5.1(G)], **Wendell** [6.5(H)], **Zebulon** [151.07] 2) as well as *Completion of Improvements and Maintenance,* prior to issuance of a certificate of compliance or occupancy. **Rolesville** [7.5.5], **Wendell** [Chapter 6.5(O)], **Zebulon** [Chapter 151.50 – 151.56]
☒	**10.**	**Standards Based on Project Density**- In accordance with the definitions, projects are identified as Ultra Low-Density (15%or less Built-Upon Area, referred to as BUA, and less than one dwelling unit per acre), Low-Density (more than 15% BUA and no more than 24% BUA), and High-Density (24% or more BUA). **Rolesville** [7.5.4], **Wendell** [Chapter 6.5(M)], **Zebulon** [Chapter 151.35]

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PPR – Pre-submittal Plan Review Checklist - Municipalities

	☐	**a.**	**Standards for Ultra-Low and Low-Density Projects:** • Use of vegetated conveyances to maximum extent practicable • Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones • Recorded deed restrictions or protective covenants to ensure future development maintains consistency with approved project plans • Permanent SCMs (Stormwater Control Measures) are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality's Design Manual. • For Low-Density only, no net increase in peak flow leaving the site from the pre- development conditions for the 1 yr-24hr storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours. • Residential runoff after development must not exceed the Target Curve Numbers listed in the chart "Maximum Composite Curve Number, by Soil Group". • Ultra-Low and Low-Density projects may be eligible for target curve number credits. **Wendell Only**: Nitrogen export limited to 3.6 pounds per acre per year unless project achieves classification as an LID Project. **Rolesville** [7.5.4(A)(1-3)], **Wendell** [6.5(M)(1-3)], **Zebulon** [151.35(A-C)]
	☒	**b.**	**Standards for High-Density Projects:** • Measures shall control and treat runoff from the first inch of rain. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours. • Structural measures shall be designed to have a minimum of 85 % average annual removal for Total Suspended Solids (TSS) • Permanent SCMs (Stormwater Control Measures) are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality's Design Manual. • No net increase in peak flow leaving the site from the pre -development conditions for the 1 yr-24hr storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours. • Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones **Wendell Only:** Nitrogen export limited to 3.6 pounds per acre per year unless project achieves classification as an LID Project. **Rolesville** [7.5.4(A)(4)], **Wendell** [6.5(M)(4)], **Zebulon** [151.35(D)]
	☒	**c.**	**General Standards:** • Downstream Impact Analysis – DIA must be performed in accordance with the "10% rule", and a copy provided with the application. **Rolesville** [7.5.4(B)(1)], **Wendell** [6.5(N)(1)], **Zebulon** [151.36(A)]

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PPR – Pre-submittal Plan Review Checklist - Municipalities

	☐	**d.**	**Low Impact Development (LID) Classification:** • All development or redevelopment may be submitted for LID classification • Development must mimic the pre-developed hydrologic conditions of the site, as defined as "woods in good condition" for the 2-yr, 24 hr storm, within 10%. • Techniques required to achieve LID classification ➢ Natural site design ➢ Bio-retention systems or on-site infiltration (at least one must be used) ➢ At least **two** other techniques from the list provided in **Rolesville** [7.5.4(B)(5)(e) and **Zebulon** [151.36(E)(5) ➢ At least **one** other techniques from the list provided in **Wendell** [6.5(N)(5)(e)
Town of Wendell UDO Chapter 6.3 - Erosion and Sedimentation Control Requirements			
☒	**11.**		**Erosion Control:** This project will require a Land Disturbance Permit if it involves greater than one acre of disturbance. Adopting by reference the Wake County Soil Erosion and Sedimentation Control Ordinance. See website for details.
Riparian Buffer Rules			
☒	**12.**		Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The **Neuse River Riparian Area Protection and Maintenance Rule (15A NCAC 2B.0233)** applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Neuse River Basin with forest vegetation on the adjacent land or "riparian area".
Suggested Changes/Comments			
☐	**13.**		
Environmental Consultant:			**Contact Info:**
Wake County PE:			

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SECPS – Sediment and Erosion Control Construction Plan Submittal Checklist

Project Name _____ **Watershed** _____ **Jurisdiction** _____

Project Acreage _____ **Proposed Impervious** _____ **Disturbed Acreage** _____

Applicant:
Name _____
Address: _____
Phone: _____
Email: _____

Engineer:
Name: _____
Address: _____
Phone: _____
Email: _____

Construction Plan Review Submittal Package Requirements

[10-30-2(B)]-The S&EC plan submittal package must include all applicable items below to demonstrate compliance with applicable regulations. Unless otherwise noted, all references shown in brackets are for the *Wake County Unified Development Ordinance* (UDO), adopted 04/17/06. Select all applicable items below and provide with the submittal.

☐	**1.**		Erosion Control and Stormwater Joint Application (Required to initiate processing)
☐	**2.**		Review Fees (Required to initiate processing) RESUBMITTALS: The first resubmittal is free, but all subsequent resubmissions require a $75 Resubmission Fee
☐	**3.**		*[10-30-2(B)(2)]* Notarized Wake County Financial Responsibility/Ownership Form (Required to initiate processing)
☐	**4.**		Other documents:
	☐	**a.**	WC ONLY PRELIMINARY ZONING AND SUBDIVISION APPROVAL: Copy of approval notification (property description, subdivision or COSD approval, or Board of Adjustment approval, etc.).
	☐	**b.**	WC ONLY FLOOD STUDY: Copy of approval notification from Wake County Flood & Stormwater Environmental Engineer, (if applicable)
	☐	**c.**	ENGINEERING APPROVAL: Copy of approval notification for projects in a municipality's zoning jurisdiction
	☐	**d.**	401/404 Documentation (Buffer determination letters, PCN application, comments, and approval)
	☐	**e.**	NCDOT Approval
	☐	**f.**	Encroachment agreement(s) completed, signed and notarized for all off-site construction
☐	**5.**		Cover letter stating the purpose of the submission, i.e. project narrative RESUBMITTALS: A letter detailing any changes, comments, proposed solutions to review comments, etc.
☐	**6.**		Copy of the USGS Quad Map with delineated project limits
☐	**7.**		Copy of the Wake County Soil Survey map with delineated project limits

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SECPS – Sediment and Erosion Control Construction Plan Submittal Checklist

☐	**8.**	Drainage Area Map showing drainage areas to erosion control devices	
☐	**9.**	1 set of Erosion Control Calculations:	
	☐	**a.**	Sediment basin design (See website for Wake County design criteria)
	☐	**b.**	Ditches, swales, and channels: Q10/V10. Tractive force (shear stress), capacity and geometry.
	☐	**c.**	Dissipaters: Q10 velocities, stone size and dimensions. *[10-21-4]*
	☐	**d.**	Velocity calculations for stormwater runoff at points of discharge resulting from a 10-year storm after development *[10-21-3]*
☐	**10.**	One(1) copy of a complete set of construction drawings for 1st submission, five (5) copies for approval	
☐	**11.**	Proposed Site Plan:	
	☐	**a.**	Location/Vicinity Map
	☐	**b.**	North arrow, graphic scale, drafting version date, legend and professional seal
	☐	**c.**	Existing and proposed contours: plan and profiles for roadways
	☐	**d.**	Boundaries of tract: including project limits
	☐	**e.**	Limits of disturbance specified on plan
	☐	**f.**	Proposed improvements: roads, buildings, parking areas, grassed landscaped, and natural areas.
	☐	**g.**	Lot lines, lot numbers and road names
	☐	**h.**	Utilities: community water and sewer, plan/profiles, easements and sediment controls, and offsite septic.
	☐	**i.**	Stormwater Network: inlets, culverts, swales, ditches, channels and drainage easements.
	☐	**j.**	TEMPORARY SEDIMENT CONTROLS: locations and dimensions of gravel entrances, diversion ditches, silt fence, sediment basins, inlet protection, etc.
	☐	**k.**	PERMANENT EROSION CONTROLS: locations and dimensions of dissipaters, ditch linings, armoring, level spreaders, retaining walls, etc.
	☐	**l.**	Location and requirements for stockpiles (see website for Stockpile Requirements)
	☐	**m.**	Wake County Construction Details
	☐	**n.**	Wake County Construction Sequence
	☐	**o.**	Wake County Stabilization Guidelines

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SECPS – Sediment and Erosion Control Construction Plan Submittal Checklist

	☐	**p.**	Wake County Basin Removal Sequence Wake County or jurisdictional municipality must grant permission to convert the sediment basin over to stormwater use prior to completing any related work (a note in the construction sequence or elsewhere on the plan should indicate this).
	☐	**q.**	Show all Riparian Buffers [*Article 9-21*]; (Neuse: [15A NCAC 02B.0233 & 0242]
	☐	**r.**	Delineation of current FEMA boundaries (floodway, flood fringe & future/0.2%)
	☐	**s.**	Delineation of flood prone soil areas
	☐	**t.**	Location and type of all proposed stormwater management structures *(grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.)*

Standards and Requirements

By marking items with an "X", applicant acknowledges potential standards to be applied to the proposed development.

Wake County UDO Article 10 - Erosion and Sedimentation Control Requirements

☐	**12.**		**Erosion Control:** This project will require a Land Disturbance Permit if it involves greater than one acre of disturbance. See website for details.
☐	**13.**		***10-20-1 Minimum Standards*** - All soil erosion and sedimentation control plans and measures must conform to the minimum applicable standards specified in *North Carolina's Erosion and Sediment Control Planning and Design Manual* and the *Wake County Sedimentation and Erosion Control Plan Review Manual*. Erosion control devices must be installed to prevent any offsite sedimentation for any construction site regardless of the size of the land disturbance.
☐	**14.**		***10-20-3 Operation in Lakes or Natural Watercourses*** -Land disturbing activity in connection with construction in, on, over, or under a lake of natural watercourse must minimize the extent and duration of disruption of the stream channel. Where relocation of a stream forms an essential part of the proposed activity, the relocation must minimize unnecessary changes in the stream flow characteristics.
☐	**15.**		***10-20-10 Standards for High Quality Water (HQW) Zones*** Land-disturbing activities to be conducted in High Quality Water Zones must be designed as follows:
	☐	**a.**	Uncovered areas in High Quality Water (HQW) zones must be limited at any time to a maximum total area of 20 acres within the boundaries of the tract.
	☐	**b.**	**Maximum Peak Rate of Runoff -** Erosion and sedimentation control measures, structures, and devices within HQW zones must be planned, designed and constructed to provide protection from the runoff of the 25-year storm.
	☐	**c.**	**Settling Efficiency -** Sediment basins within HQW zones must be designed and constructed so that the basin will have a settling efficiency of at least 70% for the 40 micron (0.04mm) size soil particle transported into the basin by the runoff of that 2-year storm which produces the maximum peak rate of runoff.
	☐	**d.**	**Grade** - The angle for side slopes must be sufficient to restrain accelerated erosion (side slopes no steeper than 2 horizontal to 1 vertical if a vegetative cover is used for stabilization unless soil conditions permit a steeper slope or where the slopes are stabilized by using mechanical devices, structural devices or other acceptable ditch liners)

Wake County Environmental Services Department
Water Quality Division, Watershed Management Section
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☐	**16.**	Riparian Buffer Rules:	
	☐	**a.**	Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The **Neuse River Riparian Area Protection and Maintenance Rule (15A NCAC 2B.0233)** applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Neuse River Basin with forest vegetation on the adjacent land or "riparian area".
	☐	**b.**	Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Jordan Lake Watershed became effective on August 11, 2009. The **Jordan Lake Water Supply Watershed Buffer Rules (15A NCAC 02B .0267)** applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Jordan Lake Watershed with forest vegetation on the adjacent land or "riparian area".
☐	**17.**	***Senate Bill 1020;*** *"SECTION 3.(h) Additional standards for land-disturbing activities in the water supply watershed":*	
	☐	**a.**	Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to provide protection from the runoff of the 25-year storm
	☐	**b.**	Sediment basins shall be planned, designed, and constructed so that the basin will have a settling efficiency of at least seventy percent (70%) for the 40-micron size soil particle transported into the basin by the runoff of the two-year storm that produces the maximum peak rate of runoff
	☐	**c.**	Newly constructed open channels shall be planned, designed, and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization unless soil conditions permit steeper slopes or where the slopes are stabilized by using mechanical devices, structural devices, or other acceptable ditch liners.

Applicant Signature: _____

Date: _____