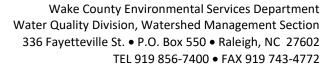




Project Nam	Wallbrook – Lot 8	Watershed	Lower Neuse		Rolesville	
Date Receive	4/1/2024	Date Processing Initiated	4/1/2024	Disturbed Acreage	2.3	
S&E Permi Numbe	t r <u>SEC-121766-2024</u>	S&E Plan Review Fee	\$700.00 PAID	S&E Permit Fee	\$700.00 PENDING	
SW Permi Numbe	t r _SWF- <mark>xxxxxx-xxxx</mark>	SW Plan Review Fee	\$ <mark>xx.xx</mark> PAID	SW Permit Fee	\$xx.xx PAID/PENDING	
Financial Respons	sible Party (FRP):	Engineer	:			
	prook Landco, LLC/J. Austin					
Name Willia			ne: ARK Consulti	ing/Bryan Fagundu	S	
Address: NC 2	el St. Suite 2, Wrightsville Beach	۸ddra	ss: 2755_B Char	les Blvd., Greenville	NC 27858	
			ne: 252-558-088		e, NC 27030	
	321-6430 ams@csere.com		ail: N/A			
	ams@csere.com		uii. <u>11/</u> A			
Plan Date/Revis	sion Date: 9/11/2024					
Review Status:	Construction Plan Not Approved and Incomplete (Items 1-4 required to be a complete submittal)					
10/2/2024	Construction Plan Not A	Approved and requ	ires additional info	ormation		
Construction Plan	n Review Comments					
necessary require	h an "X" were noted as either i ments for construction plan ap	proval.				
	References for Erosion and Sediment Control: Wake County Unified Development Ordinance (UDO) Article 10					
References for Stormwater Management are as follows:						
ROLESVILLE : Town of Rolesville Land Development Ordinance <u>Appendix B: Flood Damage Prevention and Stormwater</u> <u>Management</u> , Section 1.2 Stormwater <u>Management</u> effective June 1, 2021.						
WENDELL : Town of Wendell Unified Development Ordinance (UDO) <u>Chapter 6: Environmental Protection</u> , adopted 7/26/10.						
ZEBULON: Town	of Zebulon, NC Code of Ordinar	nces: <u>Chapter 151</u>				
☐ 1. <u>Erosio</u>	on Control and Stormwater Join	t Application (Req	uired to initiate pr	ocessing)		
2. RESU	Review Fees (Required to initiate processing) RESUBMITTALS: The first resubmittal is free, but all subsequent Stormwater resubmissions require a \$150 Resubmission Fee and Erosion Control resubmissions require a \$75 Resubmission Fee.					
3. Notai	rized Wake County Financial Re	sponsibility/Owner	ship Form (Require	ed to initiate proce	ssing)	

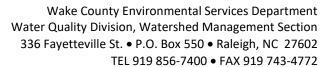




		a.	The application must include the owner's notarized written consent for the applicant to submit an erosion and sedimentation control plan and to conduct the anticipated land-disturbing activity if the applicant is not the owner of the land to be disturbed [10-30-2-(B)-(2)-(c)]		
	4.	Othe	Other documents:		
		a.	a. Engineering Approval: Copy of approval notification for projects in a municipality's zoning jurisdiction		
		b.	401/404 Documentation (Buffer determination letters, PCN application, comments, and approval) Documentation of wetland delineations.		
		c.	NCDOT Approval (Temporary Construction Entrances, Encroachment Agreements)		
		d.	Encroachment agreement(s) completed, signed and notarized for all off-site construction		
\boxtimes	5.	objec	r letter stating the purpose of the submission, describing site drainage, stormwater management tives, and how the proposed stormwater management plan will meet the objectives and be implemented BMITTALS: A letter detailing any changes, comments, proposed solutions to review comments, etc.		
	6.	Сору	of the USGS Quad Map with delineated project limits		
	7.	Сору	of the Wake County Soil Survey map with delineated project limits from 1970 manuscript		
	8.		1) electronic copy of a complete set of construction drawings for 1st resubmission, number (#) copies for approval.		
\boxtimes	9.	One (1) electronic copy of the Municipal Stormwater Design Tool (click here); submit Excel workbook (Site Data Sheet, Drainage Area Sheets, Site Summary Sheet, BMP Sheets, and BMP Summary sheet) -Provide justification for stormwater compliance. Stormwater permit required per Rolesville LDO 1.2.3.B.1. of Appendix B 1.2 Stormwater Management.			
	10.	Drain	age Area Maps with stormwater discharge points and Tc flow paths (existing/post construction/post BMP)		
	11.	Drain	age Area Map showing drainage areas to erosion control devices (can delineate on plan sheets)		
\boxtimes	12.	Stormwater and 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.	c. Dissipaters: Q10 velocities, stone size and dimensions		
		d.	d. Velocity calculations for stormwater runoff at points of discharge resulting from a 10-year storm after development were not provided or do not comply		
		e. Support data for all stormwater practice designs, such as inflow/outflow rates, stage/storage data, hydrographs, outlet designs, infiltration rates, water elevations, design output, summary, etc. -Apply for SWF permit and show how site complies with stormwater requirements. Groundcover changes curve numbers.			
		f.	f. Other hydraulic and hydrologic computations critical to the plan/designs		
		g. Signature, Date and Professional Seal: for all Stormwater design management proposals, i.e., calculations, BMP designs, operations/maintenance/budget/as built/inspections/manuals			



	13.	Draft Stormwater Agreement and draft Maintenance Agreement				
\boxtimes	14.	Prop	Proposed Site Plan:			
		a.	Combined Erosion Control, Stormwater and Floodplain Approval Block (Cover Sheet)			
		b.	Location/Vicinity Map			
		c.	North arrow, graphic scale, drafting version date, legend and professional seal			
		d.	Existing and proposed contours: plan and profiles for roadways			
		e.	Boundaries of tract: including project limits			
		f.	Table with impervious calculations - existing and proposed impervious surfaces: roads, well lots, recreation sites, single family residences, etc. (consistent with the Municipal Stormwater Design Tool inputs)			
		g.	Proposed improvements: roads, buildings, parking areas, grassed, landscaped and natural areas			
		h.	Lot lines, lot numbers, road names, and impervious limit on each lot rounded to nearest whole number			
		i.	Utilities: community water and sewer, plan/profiles, easements and sediment controls			
	\boxtimes	j.	Stormwater Network: inlets, culverts, swales, ditches, channels and drainage easements -Show stormwater network for permanent stabilization. Skimmer and sediment basin cannot be left indefinitely. Please show permit close out conditions.			
	\boxtimes	k.	TEMPORARY SEDIMENT CONTROLS: locations and dimensions of gravel entrances, diversion ditches, silt fence, sediment basins, inlet protection, etc. -Additional measures required around perimeterTemporary diversions in Phase 1 do not match contours. They go uphill in places.			
		l.	basins for maintenance and closeout. Label the bag and pad with dimensions.			
		m.	impervious dikes, etc.).			
		n.	Stream Protection: Design temporary sediment storage during the construction phase of stream culvert			
		0.	PERMANENT EROSION CONTROLS: locations and dimensions of dissipaters, ditch linings, armoring,			
		p.				
		q.	q. Location and requirements for stockpiles (see website for Stockpile Requirements)			
		r.	Wake County Construction Sequence (Provide project specific details as needed)			

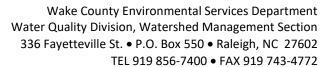




		wake County Construction Details -Pick one Sediment Basin detail. You are showing threeRevise to correct signature block on cover sheetWhy is Temporary Stockpile detail included, but no temporary stockpile shown? -Where are standard pipe outlets on the plans? Why are there two? -Where is inlet sediment control on the plans?				
		t.	Wake County Stabilization Guidelines			
		u.	Wake County Basin Removal Sequence Wake County must grant permission to convert the sediment basin over to stormwater use prior to completing any related work (construction sequence or note elsewhere on the plan should indicate this).			
		v.	Show all Riparian Buffers (Neuse: [15A NCAC 2B .0714])			
		w.	Delineation of current FEMA boundaries (floodway, non-encroachment areas, flood fringe and future/0.2%)			
		x.	PERMANENT STORMWATER MANAGEMENT STRUCTURES: locations and types of all proposed stormwater management structures (grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.)			
		y.				
		z.	Proposed stormwater easements, access lanes and backwater easements. Provide and label minimum 20 ft. Access easement and 10 ft. Maintenance easement from toe of stormwater pond embankment.			
Stan	dards	and Re	equirements			
<mark>com</mark>	ments	and/o	th an "X" note relevant standards to be applied to the proposed development. Notes in RED provide review rany required elements to comply with standard. nces are shown in brackets.			
	15.	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 [1.2.1.(E)], Wendell [6.5(F)], Zebulon [151.05]				
	16.	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 [1.2.3.(B)(2)], Wendell [6.5(F)(3)], Zebulon [151.21(A)] Note: A permit may not be required if there are no post-construction requirements (i.e. SCMs).				
	17.	17. SCMs – For projects requiring stormwater treatment for quality and/or quantity control, the applicant must 1) comply with the NC Stormwater Design Manual Rolesville [1.2.4.(B)(2)], Wendell [6.5(N)(2)], Zebulon [151.0 2) as well as Completion of Improvements and Maintenance, prior to issuance of a certificate of compliance or occupancy. Rolesville [1.2.5], Wendell [6.5(O)], Zebulon [151.50 – 151.56]				



<u> </u>							
	18.	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 [6.5(E)], Zebulon [151.10]					
		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					
	Ш	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 [1.2.4(A)(1-3)], Wendell [6.5(M)(1)], Zebulon [151.35(A-C)]					
	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)					
	Ш	 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 The Control of the Cont					
		Rolesville [1.2.4(A)(4)], Wendell [6.5(M)(4)], Zebulon [151.35(D)]					
		Low Impact Development (LID) Classification:					
		All development or redevelopment may be submitted for LID classification Provide a provide a provide and books and books are different as a defined as "considering and books are desired as "considering and books are desired as a defined as "considering and books are desired as a defined as "considering and books are desired as a defined as "considering and books are desired as a defined as "considering and books are desired as a desired as a defined as a desired					
		• 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 [1.2.4.(B)(5)(e)], and Zebulon					
		[151.36(E)(5)]					
		At least one other technique from the list provided in Wendell [6.5(N)(5)(e)]					
		The location of the state of th					





24-hour peak flow of the pre/post development to determine if the project will have any impacts on flooding or channel degradation downstream of the project site in accordance with Rolesville [1.2.4.(B)(1)] Wendell [6.5.(N)(1)], Zebulon [151.36(A)]. Wake Courty UDO Article 10 - Erosion and Sedimentation Control Requirements (Applies to Rolesville, Wendell and Zebulon) Zoo. Erosion Control: This project will require a Land Disturbance Permit if it involves greater than one acre of disturbance. Note: If the land disturbance is part of a common plan of development that is greater than one acre of disturbance. Note: If the land disturbance is part of a common plan of development, regardless of land disturbance acreage in each tract/parcel. Zoo. Minimum Standards [Article 10-20-1] - 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. Erosion control devices must be installed to prevent any offsite sedimentation for any construction site regardless of the size of the land disturbance. Operation in Lakes or Natural Watercourses [Article 10-20-3] — 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. Jandards for High Quality Water (HQW) Zones [Article 10-20-11] Land-disturbing activities to be conducted in High Quality Water Zones must be designed as follows: Jandards for 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. Maximum Peak Rate of Runoff — Erosion and sedimentation control measures, structures, and devices within HQW zones must be designed and constructed so that th			Dowr	nstream Impact Analysis – Required analysis using the "10% rule" drainage area evaluation of the 10-year,				
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Wake County Environmental Services Department Water Quality Division, Watershed Management Section 336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602 TEL 919 856-7400 • FAX 919 743-4772

		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.				
Neu	use Rip	arian I	Buffer Rules				
\boxtimes	25.	wate Prot lake	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 .0714) 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".				
Nor	th Caro	lina G	eneral Statute § 113A-61 (c) - Rig	ght to Appeal the I	Decision		
	26.	The applicant has the right to appeal this decision per North Carolina General Statute § 113A-61 (c).					
Add	Additional Suggested Changes/Comments						
	27.						
Environmental Consultant:			Jeevan Neupane, PE	Contact Info:	jeevan.neupane@wake.gov 919-819-8907		
	ironme ineer:	ntal	Janet S Boyer, PE, CFM	Contact Info:	janet.boyerwake.gov 919-856-7422		