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May 23, 2017

Ms. Lynn Richardson
Chatham County Planning Department
P.O. Box 54
Pittsboro, NC 27312

Re: Water Supply and Wastewater Treatment Capacity for Section X
Farrington P.U.D

Dear Ms. Richardson:

Water supply for Section X is available from the Chatham County water system through existing water agreements between the County and Fitch Creations, Inc.

The situation regarding wastewater treatment capacity at the Farrington WWTP* can be summarized as follows:

<u>Project Tributary to WWTP</u>	<u>No. Units</u>
P.U.D. Approved Units (includes Galloway Ridge and Section X)	1,602
Units on Septic Tanks (Phase 1-3)	(209)
Farrington Woods 1 & 2	111
Whitaker Ridge	11
Henderson Place	45
 Total Units tributary to WWTP	 1,560

Total Flow Required by NC DEQ** permitting = 1560 units x 250 gpd/unit = 390,000 gpd
Additional Flow Estimate for Village Center = 20,000 gpd

Total Buildout Flow per DEQ =	410,000 gallons per day
Total Existing Constructed WWTP Capacity	270,000 gallons per day
Total Permit Capacity	500,000 gallons per day

* Wastewater treatment plant

** North Carolina Division of Environmental Quality

The Ferrington WWTP currently has existing constructed capacity to serve some future areas in Section X, in addition to the currently constructed Area A, Area B, and Area K. Section X Area C has been permitted and will be under construction in June, 2017. The existing collection system has capacity to serve the entire Section X project. It should be noted that Ferrington monitors wastewater flow constantly at the WWTP. The current WWTP daily flow is approximately 162,000 gallons per day. The flow allocated to the existing WWTP is now approximately 222,700 gallons per day; less than the 270,000 gallon per day constructed capacity. Further, as areas in Ferrington are completed, the flow tributary to the WWTP is reconciled in order to accurately determine the available capacity.

The NC DEQ rules require the plant to be expanded when the average daily flow exceeds 243,000 gallons per day (90% of the current plant's rated capacity). Ferrington has documented to NC DEQ that actual flow from constructed units is less than the 250 gpd per unit permitting requirement. Therefore, the above total buildout flow of 410,000 gpd may be conservative. Past flow reconciliations have demonstrated that flows are consistently less than 250 gpd per unit.

Fitch Creations, Inc. currently has Authorization to Construct an expansion to the wastewater treatment plant from the North Carolina Division of Environmental Quality. Fitch Creations will expand the Ferrington WWTP as needed to provide adequate treatment capacity for Ferrington until buildout, and as required to comply with NC DEQ rules.

Sincerely,

Diehl & Phillips, P.A.



Alan R. Keith, P.E.

5/23/17

Cc: R.B. Fitch
Dan Sears
John Phillips

