Jerry Markatos 919 542-2139
180 Hew Tree Lane Re: Riverbend Estates
of Laurel Ridge

1972 purchase of 260-odd acres land by me and my wife Cathy,
on behalf of the multiple buyers who agreed on environmental and community principles
has led to our honoring those principles ever since. Most of the gravel road through
our land is on our deed, except for some portions owned by immediate neighbors,
and I maintained the road with the help of grading by Tommy Glossen until another landowner
in the neighborhood took on the responsibility.

Development, that is, purchase of tracts by the river
was only accomplished by carefully negotiated R O W agreement
that specified an end to the use of Rock Rest neighborhood road (their use)
if a second or other access route were created.

This agreement has established a precedent based on the absence of
right of way to other nearby land.

We experience the exploitation of the land around us to be hostile to the environmental
principles guiding the Rock Rest neighborhood's plans, and living arrangements.
and constitute a burden to us and others in our neighborhood.

Ton after ton of timber and vegetation is lofted into the overburdened atmosphere that now
delivers disastrous amounts of rain and wildfires and a destabilized climate. For my part,
we pile branches in several places on our land rather than burn it, adding carbon dioxide
to the lethal burden on the atmosphere. avoiding

Grinding of tree trunks is better than burning them but it still creates an industrial
level of noise in what has been, and is marketed as a quiet forested area.

Tom Marriott and Alice Yeaman have dedicated ~85 acres of land adjoining their land
using a conservation easement, defending a creek and offering space for wildlife.
In other words, ameliorating the impact on the environment we cherish. 26,27,28

The right of way issues are complicated by the existence of a landlocked tract on the south side
of the neighborhood road. It's acreage that for decades was planted as wildlife food. It would be
helpful for the developers to dedicate that acreage with a conservation easement rather than
arrange road access that would end or complicate the R O W our riverside residents have
negotiated.

Considering the millions of dollars of development activity under way, impacting the area in
ways that include grave damage to Dry Creek stability, such concession by developers would be
in the spirit of the action by Alice and Tom to respect the environmental values with acreage
dedicated via conservation easement.

* Plans submitted here a major error.
As Wade Barber Jr. and Paul Messick both
ascertained, there is NO R.O.W. through the
Rock Rest neighborhood, across our land, except
for the limited, conditional R.O.W. mentioned here. JM

Verbal Presentation of Riverbend Concerns and Issues

Hello, my name is John Wagner and I live at 210 Jessamine Lane on land that is surrounded on 2 sides by this development.

I am very concerned about the loss of the extensive mixed hardwood forests that used to provide an extensive contiguous forest between Rock Rest Road and the Haw River.

Riverbend plans to provide 100-foot riparian buffers for perennial and intermittent streams, a 50-foot buffer around wetlands, and a 30-foot buffer on ephemeral streams. In addition, it plans to preserve dedicated opens spaces of approximately 30 acres in addition to the riparian buffers.

This is commendable. However, given the developer's history of multiple sedimentation violations in Chatham County, the bulldozing of a known wetland without a permit, and the recent paved driveway from a Swain home that connected to NC State Road 1547, Rock Rest Road without a permit from DOT. This proposed development not only needs to be revised, but it needs to have careful oversight by the county and the Chatham Planning Board.

There are important distortions, gaps, and errors in the proposal. There are also many areas that while minimally meeting requirement, fall well short of what could be done, and fail to follow the recommendations from the Chatham Environmental Review Advisory Committee and the Natural Heritage Program.

In my three minutes, I'll just touch on a few, but I have provided copies of a few additional topics and details in my handout.

The developer packed the lots to maximize number of houses and profit. However, this means that although there is some open space, they are small and scattered. There are no intact contiguous blocks of forest as a shared resource for the residents – or for wildlife.

Vegetation and forests

> "Due to the site being primarily dominated by successional stands from past timber harvesting the development of the site would have a minimal adverse effect on the natural vegetation of the area."

This directly implies that the developer believes that mixed oak-hickory and other hardwood forests – if they have previously been harvested are not natural vegetation. Does he think only old growth virgin forests are "natural vegetation"? Does he think roads, lawns, l60 lots, can have minimal effects on vegetation?

Lighting

> "The developer will utilize fully shielded light fixtures to concentrate light on the street and prevent any undesirable spillage." This is good. But – "Project will not produce excessive amounts of artificial light and will likely not pose a major threat to wildlife."

Turning a contiguous area of forest into a subdivision, with streetlights every 1,000 feet along roads, in addition to porch lights, houselights, yard floodlights, and with no restrictions on pole "security" lights on lots, may all be permitted, but it **does** pose a threat to birds, wildlife, and insects.

One example, fireflies require darkness for their flashes to allow communication and mating. Firefly populations are rapidly decreasing in the North Carolina piedmont. There are sightings reported of the very rare "blue ghost firefly" on property directly adjacent to Riverbend.

Displaced Wildlife

> After being displaced during periods of construction, the report states "most species will have adequate resources after development and may return once the project is complete."

That is true, but very misleading. Certainly, deer and many species will return to parts of the development. However, there is a significant group of species that require deep forests. These will probably never return to this heavily fragmented habitat. These include whip-poor-will, wood thrush, barred owl, pileated woodpecker, and many others. They won't return.

Additional Gaps and Omissions

- Developer has made no statement or commitment to halt all tree cutting and clearing during migratory bird nesting season throughout the entire construction period.

- Developer fails to address the reality of probable floods that exceed the old 100-year floods.

- The Natural Heritage program recommended "that developer maintain a forested riparian zone of 200 feet along all tributaries to the Haw." Discussion or consideration of this buffer size is missing. Why was this not implemented?

- A known and well documented archeological site where a Sissipahaw village existed for centuries along the Haw, and adjacent to Riverside. It included a vertical log palisade encircling a village, thousands of pottery shards, arrowheads, and stone tools from different centuries. Despite the proximity of indigenous homes and a village, the developer, and the State Historic Preservation Office state that "the proposed project will have no effect on historical or archaeological resources." Why isn't **any** archeological survey recommended or required?

- Wildlife corridors are critically important for providing connected, protected pathways – especially to connect to rivers. Riverbend could easily dedicate lot 19, or, reconfigure several lots along the creek that crosses lots 20 and 21. Those could connect a large forested area with the river just by widening the stream buffer to a few acres, or at least 300 feet, and dedicating that as an undisturbed conservation easement. The developer could get a tax write-off, and wildlife would have a safe way to reach the river

Thank you.

Additional Planning Board Notes
John Wagner - August 5, 2025

Rock Rest Mafic Islands and Shores

Many rare aquatic species, including the Federally Endangered Cape Fear shiner, occur within the Haw River adjacent to this natural area. **Intact forests along the riverbanks** help maintain water quality and habitat integrity for the aquatic species within the Haw River Aquatic Habitat.

This is primarily Basic Mesic Forest and Dry-Mesic Basic Oak—Hickory Forest, but also includes Mesic Mixed Hardwood Forest and Dry- Mesic Oak—Hickory Forest. Interspersed with them are substantial areas of younger hardwood forest and areas whose condition is not well known. **These areas contribute to making this site a large contiguous patch of forest as well as buffering the higher quality communities.**

The Natural Heritage Inventory of the Significant Natural Areas of Chatham County (June 2024) states: "Many rare aquatic species, including the Federally Endangered Cape Fear shiner, occur within the Haw River adjacent to this natural area. **Intact forests along the riverbanks** help maintain water quality and habitat integrity for the aquatic species within the Haw River Aquatic Habitat.

This is primarily Basic Mesic Forest and Dry-Mesic Basic Oak—Hickory Forest, but also includes Mesic Mixed Hardwood Forest and Dry- Mesic Oak—Hickory Forest. Interspersed with them are substantial areas of younger hardwood forest and areas whose condition is not well known. **These areas contribute to making this site a large contiguous patch of forest as well as buffering the higher quality communities.**"

The Rock Rest Mafic Islands and Shores is a significant Chatham County ecosystem and habitat. In a time of population growth and rapid new housing developments, it is important that Chatham County protect the few diverse existing ecosystems that are described in the NH Inventory.

Questions: Given what is known about the Mafic Islands and Shores, why is the developer allowed not only to build next to it, but also to have lots that are within this site? Why are there not open spaces designated for this overlap? Why is the developer permitted to pack lots in this section of the Haw without any consideration of this unique area?

Species that need special protections

From the NHP Inventory, I am listing some of the rare and endangered species that will be seriously impacted if sedimentation in the Riverside streams and into the Haw is not carefully prevented, and if extreme rainstorms during construction are not incorporated into the development's proposal.

Below I show some of these species, and I am including text from the Natural Heritage report and some photographs. I am doing this because in reading lists of threatened animals it is possible to just skim the over the list. Instead, with the photographs I hope the planning board and the developer will remember that these animals are real, fascinating, and important.

The Significantly Rare Septima's Clubtail (*Gomphurus septima*) occurs at the site. Also, four rare aquatic species have been documented in the adjacent Haw River: the State and Federally Endangered Cape Fear Shiner (*Notropis mekistocholas*),

and the State Special Concern Carolina darter (*Etheostoma collis*)

, and two Significantly Rare species, Carolina ladle crayfish (*Cambarus davidii*)

Greg Meyers (iNaturalist)

Probable Carolina Ladle Crayfish from 2025 Rock Rest photo from property adjoining Riverbend

and Eastern Creekshell (*Villosa delumbis*).

These species are likely to be seriously affected or killed from erosion sedimentation from Riverbend unless the developer takes serious steps to avoid problems that caused his previous sedimentation violations in Chatham County.

"Intact vegetated riverside forests are essential for protecting these aquatic species from pollution and siltation from erosion."

"With increasing population growth and land development in all parts of North Carolina, it is urgent that areas of outstanding natural significance be identified and that efforts be made to protect these sites for posterity through willing cooperation of landowners. "

Question: Can Riverside and Swain take any steps to add more protections to this natural heritage site?

Is the developer going to do anything to 'willingly cooperate" to protect this significant Natural Site for the residents and for future generations?

Vernal Pools

The Wagner property has one small vernal pool close to Bitternut Creek. Vernal pools isolated from creeks or streams, are very important ecologically. They are not wetland or streams, and are usually dry except for short periods during the spring or summer. However, they provide a place for frog and salamander eggs to develop where they are not susceptible to predation from fish.

There are almost certainly important vernal pools on the riverbend property. However, none appear on their maps, and there is no discussion of avoiding destroying these pools in the proposed development.

4.2 Alternate Sites

"Due to the site being primarily dominated by successional stands from past timber harvesting, as well as the conservation of natural areas, the development of the site would have a minimal adverse effect on the natural vegetation of the area."

Question: This statement implies that any area previously timbered is not "natural vegetation". The development will cut, at the very least, about 160 acres of mostly mixed hardwood forests, and fragment a previously contiguous area of forest along the Haw River with lots, roads, driveways, and housing. Does the Riverbend developer really believe that only site development on old growth, or virgin forests would have adverse effects on the natural vegetation?

5.6 Areas of Archaeological or Historical Value

Question: there is a well-documented archeological study of a Sissipahaw village site adjacent to Riverbend. While that actual site will not be directly impacted, doesn't the information about that site (which I provide extracts of below) merit a site survey to see if there are significant artifacts in select sites from the hundreds of years of indigenous occupation by this specific section of the Haw River and the adjoining forests and hills?

The following items are extracts taken from "**Indian Communities on the North Carolina Piedmont A.D 1000 to 1700** by H. Trawick Ward and R. P. Stephen Davis, Jr. published by UNC Chapel Hill in 1993.

In it, the Mitchum site has an entire chapter detailing the findings from a small excavated area on the Haw floodplain adjoining the proposed Riverbend development.

"The Mitchum site represented the best-known example of a Contact period Indian village within the Haw River drainage (see Dickens et al. 1987)"

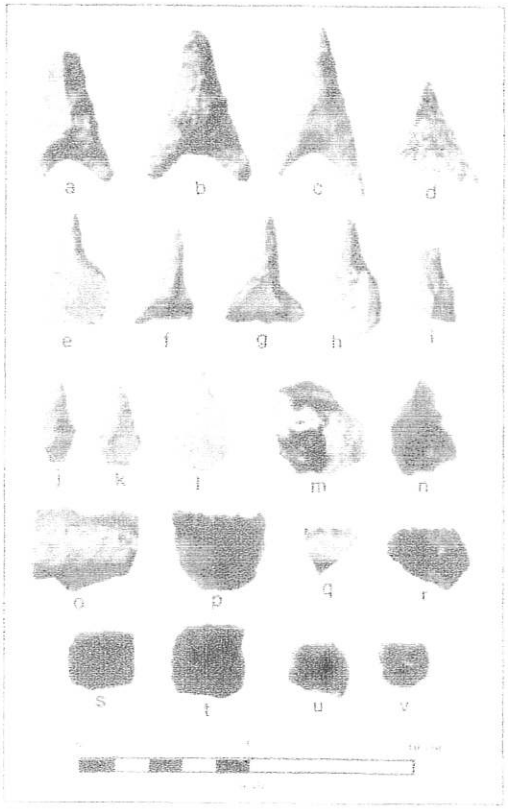
The Mitchum site was a palisade village that showed contact and trade with Europeans. However, the site also had stone tools typical of Early Archaic (ca. 8,000 B.C.) projectile point types, other arrowhead points associated with the Middle Archaic period (ca. 5,500-5,000 B.C.), and still other stone tools associated with Early to Middle Woodland period (ca. A.D. 100-500). This site was evidently occupied, at least intermittently for centuries

Artifacts recovered from the site included 572 stone tools and tool fragments.

.These included flaked or chipped stone drills, hoes, and scrapers. Ground smooth stone axes or celts. Also found were stone anvils, hammerstones, and milling stones.

Pottery fragments include thousands of pottery shards dating from 1300 to 1670 of many different decorative styles including pots pressed with corn cobs, pressed with cordage, or with carved wooden paddles.

69 fragments of clay pipestems and clay pipe bowls were found.



Other Mitchum site items recovered included turtle shells, mussel shells, 797 mammal bones including bear, beaver, deer.

The excavation also included a grave from the period.

So, it seems highly unlikely that the Sissipahaw tribe and other indigenous groups lived by the Haw River for hundreds of years and did not leave significant graves, artifacts, and campsites or even other village sites throughout the Riverbend site and the surrounding hills and forests.

However, the Riverbend report on page 9 states that in 2024, SHPO , and Riverbend, determined that "**the proposed project will have no effect on historical or archaeological resources.** "

No mention is made of even a cursory archeological survey.

Question: Shouldn't there be an archeological survey of the area? And shouldn't that include the steep sloped hill adjacent to Sissipahaw village site that rises approximately 200 feet above the village site in the floodplain below. In my opinion, at a minimum, that hilltop deserves to be checked for artifacts and ceremonial remains that seem very likely at such a perfect overlook of the village and the surrounding area.

Site visit photo #13

However, the developer or the county should have a qualified archeologist look at maps and carry out on-site reviews of the topography to identify specific areas that seem worthy of a site survey.

Additional Question: in Chapter 14, the UNC study discusses the possibility that main burial sites for some of the villages studied, may have been located further away from the habitation site, and therefore not found. This may be unlikely, but since only one grave was found at the Mitchum site, and some of the other piedmont villages had many more graves, it is possible. If during digging and clearing, artifacts or remains are unearthed, will the Riverbend development commit, in writing, to notify the proper authorities and halt further digging until the artifacts or remains are properly studied and placed with the proper tribe or agency?

5.12.2 Endangered Species

S&EC determined that the proposed project would have **"no effect" or "not likely to adversely affect" threatened or endangered species.**

As someone who had a full-time job for three years with the Georgia Department of Natural Resources and Georgia State University collecting and analyzing stream macroinvertebrates, this seems highly unlikely to be true. The project was an EPA funded non-point source pollution study that involved sampling streams that were primarily in agricultural, forested, urban areas, and relatively natural areas. I was on the macroinvertebrate team. At the end of the project, I did most of the work compiling the data and comparing the various taxa across streams. During that study I became very familiar with on-site visible effects of stream sedimentation effects, as well as how that affected the data about stream macroinvertebrate diversity.

Sedimentation harms or kills off sensitive macroinvertebrates and fish by burying the streambed, making feeding difficult, and clogging animal gills. Affected insect and fish communities are affected for years or decades. Because stream macroinvertebrates communities are the foundation of all larger stream and stream bank life including fish, amphibians, reptiles, birds and mammals if they are damaged or destroyed the ripple effects are serious.

I am very concerned that all Riverbend sedimentation issues not be dismissed or given minimal attention. This development will clear forests and put over 107 lots across many streams, intermittent streams, and ephemeral streams, many on steep slopes, all draining into the Haw River. I feel that much more attention needs to be given to the stormwater controls, swales, and buffer areas, and the placement of the sewage line. This much development, so close to the Haw needs to be done right.

Question - Riverbend has at least 1 Stormwater Control Device that abuts the 100-year floodplain. Those are supposed to slow or stop stormwater from flowing into streams and rivers. If Chatham's increasingly severe storms flood those SCM's and release sediment and runoff chemicals into the Haw, isn't that likely to adversely affect the Cape Fear Shiner habitats that are known to be in the downslopes and downstream areas from Riverbend? Isn't there a substantial risk that clearing 107 lots will have enough drainage into the Riverbend streams and the river to frequently dump sediments and later dump lawn chemicals and thus "adversely affect" the Cape Fear shiner, the Carolina Ladle Crayfish, and the Carolina Darter? Why did the developer not map and delineate the placement of the development's sewer lines?

5.3 Land Use

"The engineer estimates around 160 acres of disturbance over the life of the project."

Question - There are currently 107 proposed lots in the Riverbend proposal. Their report states that each lot will likely involve 1 or 2 acres of clearing. The report states that the amount of clearing is up to the homeowner, and there is nothing in the Riverbend plat proposal that prevents a lot from clearing more than 2 acres. However, just assuming each lot has 2 acres cleared for the driveways, parking areas, home site, and yard, that would be 214 acres of disturbance. How did the engineer determine the average clearing would be 1.495 acres instead of giving a range of 107 to 214 (or even 321)?

Disturbance of Migratory Birds during clearing and construction

The following birds were identified in a single, partial-day survey of the Marriott/Yeaman property. The survey was carried out by the Natural Heritage Program's Stephany Horton.

American Crow
Carolina Wren
Hooded Warbler
Northern Cardinal
Ovenbird
Red-eyed vireo
Yellow Billed Cuckoo

These species represent a very small sampling of the many, many, migratory and resident birds in the area. In the Riverbend proposal, there are almost no mentions of birds. They deserve to be protected during nesting season.

Question: Will the developer ensure that tree felling and forest clearing will be halted during bird nesting season? If so, can these tree felling limits apply to the whole construction phase over the 5 to 10 years?

5.0 Existing Environment and Project Impacts

Impervious surfaces

"The engineer approximates 12% impervious surface between roads and estimated lots."

Question – impervious surfaces on a lot typically include a driveway, the roof of the house, and possibly a storage building or shed. However, based on some of the Laurel Estates on the opposite side of Rock Rest Road, there are likely to be tennis courts, multiple driveways to a single house, paved patios, swimming pools, and multiple outbuildings. Is 12% actually a reasonable estimate for this development?

Note: A second paved driveway was added to the top left house since this Google image was made. This driveway connected to the State Road 1547 (Rock Rest Road) without the required permit from the NC DOT.

Summary

I strongly recommend that the current Riverbend proposal be rejected as it currently stands. There are too many questions to be answered, problems to be worked through, and revisions that deserve consideration by the developer.

Thank you.
John Wagner