

BACON'S REBELLION

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Fire Trucks and Bike Lanes

Wilton on the James has solved the intractable "design by fire truck" issue without sacrificing its commitment to a pedestrian-oriented community. The result: an impressive network of bike paths.

By James A. Bacon

Earlier this year Doug Cole, a principal in the Design Forum land planning firm, found himself stumped by a dilemma described in *Bacon's Rebellion* some time back: Design by Fire Truck.

Cole's firm was the lead designer for Wilton on the James, a New Urbanism project planned in eastern Henrico County. Like the planners for the Tree Hill project I wrote about in "Design by Fire Truck," Cole's ambition to create narrow, pedestrian-oriented streets was trumped by the safety concerns of the Henrico County fire department. The main boulevard through Wilton on the James, Cole was told, would be too narrow to accommodate the outriggers used to stabilize the big fire-fighting rigs.

That posed a major problem: The boulevard was a critical element around which the entire Wilton plan revolved. Widening the lanes to make them fire-truck friendly would invite motorists to drive faster. Speeding cars would transform the street from a people zone into a car zone. And that would ruin everything that the devel-

oper HHHunt was trying to accomplish.

In my previous article, I left the Tree Hill planners in a state of limbo, unsure of whether or not they would work out their problems. But Cole persisted in finding a solution -- adding a bike lane -- and, in doing so, created an entire new dimension for the development that had not been part of its original conception.

I tender this tale to celebrate the spirit of creativity. Designing livable communities at an affordable price is incredibly difficult. There are so many elements to consider, so many trade-offs to make, so many regulations to abide by, so many constituencies to please, that the job may seem impossible. But Design Forum cut

through this particular problem with a solution that seems simple and eloquent in retrospect but was hardly obvious at the time. *Bacon's Rebellion* plans to tell more stories like these in the future, and we invite readers to let us know of others.

Wilton on the James marks the outer edge in a string of major New Urbanism projects along the James River that would bring upscale development for the first time to eastern Henrico County. Rocketts Landing, which overlaps Henrico and the City of Richmond, would redevelop an old industrial district hugging the river. Just beyond, Tree Hill would create a mixed use project with a high-density town center. Skipping a few properties out to the Interstate-895 bypass, Wilton would create a lower-density, mixed-use "village" of 3,200 dwelling units arrayed around a retail-oriented town center. The project has received zoning

Wilton on the James will build its main boulevard around this hedgerow, which bisects the Wilton property.



approval but still has a number of issues to resolve before construction begins.

A dominant feature of Wilton property is a hedgerow of mature trees and underbrush. In the early stages of the project, the designers fixed on the idea of organizing the community around the hedgerow: They envisioned the line of trees running down the median of the main boulevard.

Inspired by Richmond's Monument Ave., Cole proposed making the boulevard the project's "power street," lined with large, handsome houses.

The boulevard will function as one of the project's main interior arteries, linking the town center with the community center. In the original plans, Cole conceived of four lanes divided by the median: two lanes running one way, two the other. Eight-foot-wide outer lanes would be set aside for parking, while 14-foot-wide inner lanes would be reserved for moving cars. In between, he planned for 65 feet of green space, with the hedgerow running down the center.

A core goal of New Urbanism is to create pedestrian-friendly streetscapes. There are many tricks to the trade,



This rendering shows the layout of the main section of Wilton on the James. The main boulevard can be seen in the middle as a green strip running northeast to southwest.

but one of the most basic is to keep the streets narrow. There is a direct correlation between the width of traffic lanes and the speed at which people drive, regardless of what the posted speed limits might be. Narrowing the lanes forces people to slow down and drive more carefully, and that makes pedestrians feel safer.

Henrico County planners liked the plan, recalls Cole, but the fire chief took one look and called a halt to it. Fire fighters needed 20 feet of unobstructed pavement for their outriggers, .

New Urbanists argue that more people are likely to die in automo-

bile accidents caused by poor street design than will die in house fires that fire trucks can't reach. County planners around the country often accept that logic, but fire marshals are more cautious. In Henrico County, as in many other counties, the fire chief calls the shots. "Design by fire truck" is a national phenomenon.

For Cole, keeping the travel lanes narrow was critical. Why couldn't the fire truck pull to the

edge of the lane and extend its outrigger into the grass of the median, he asked.

That wouldn't work, he was told, someone might plant a tree and block the way.

What if he planted a porous pavement system in the median that provided structural support for the outriggers? Grass could grow through but not trees.



Outriggers used to stabilize fire trucks can extend the effective width of the vehicle by several feet on each side.

(Photo credit: [Invisible Structures Inc.](#))

No, there still was a possibility that a tree could grow and prevent the outrigger from occupying the ideal location.

What if he added sidewalks to the median strip, one on either side of the hedgerow? No one would plant a tree in the middle of a sidewalk!

No again. If it snowed, a plow might shove the street snow into the median, covering the sidewalk and making it inaccessible to an outrigger.

What if Cole widened the alleys in the back of the houses? He could make *them* 20 feet wide.

No, fire fighters respond to specific street addresses, so they have to go to the front of a house.

What if he clearly marked street addresses in the back of the houses?

No.

"We were at wits end," confesses Cole.

The fire chief wanted six more feet, but widening the travel lane would materially damage the vision for the Wilton project.

In desperation, Cole and his fellow designers held a mini-charrette in their Fan office. There, amidst the brainstorming, the germ of an

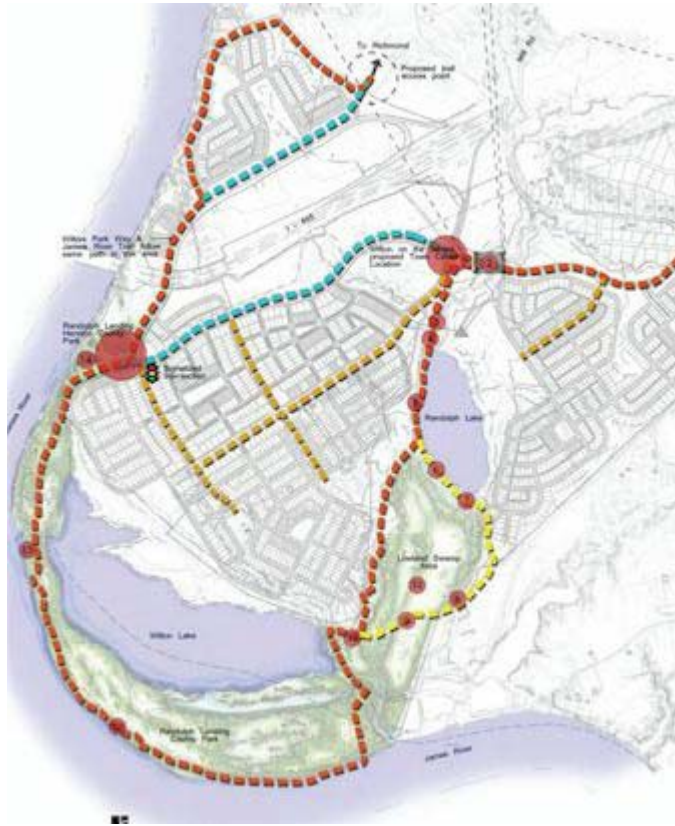
idea sprouted. What if they added a six-foot bicycle lane between the parked cars and the travel lane? The bicycle lane would provide the hard pavement space that the fire department wanted, and it would add a significant amenity to the project.

designers figured they could add an offshoot to the elementary school, run a bike lane along the creek, and extend a link to the planned [Capital Trail](#) bike path that one day will run all the way from Richmond to Williamsburg.

The developers liked the idea. So did the people in charge of the Capital Trail. In fact, they decided to loop the trail through Wilton, following two miles of riverfront. When built, the Wilton bike trail network will be an integral and picturesque part of the Capital Trail.

Now, says Cole, the Henrico fire department is happy, and so are the developers. Not only will the pedestrian orientation of the community be preserved, Wilton on the James will have an additional distinction as one of the more bicycle friendly venues in Virginia.

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Yellow-orange trails are the trails originally proposed by HHHunt. Red marks the James River trail, blue the Wilton Park Way trail, and bright yellow a James River alternate route added as a result of integration with the Capital Trail.

The idea had promise, but it needed noodling. What good was a bike lane that went from Point A to Point B? To encourage people to use their bicycles, the village would have to create a network of lanes that connected a variety of destinations. As the ideas kept flowing, the