

MEMORANDUM

To: The Honorable Pam Hemminger, Mayor; The Honorable Jessica Anderson, Mayor pro tem, The Honorable Nancy Oates, The Honorable Hongbin Gu, The Honorable Allen Buansi, The Honorable Michael Parker, Chapel Hill Town Council

CC: Wesley McMahon, Chair, Parks, Greenways and Recreation Commission; Paul Neebe, Chair, Transportation and Connectivity Advisory Board; Bill Webster, Planning and Development Manager, Parks & Recreation; Bergen Watterson, Transportation Planning Manager, Planning & Development

From: Doris & Dan Powers (301 Hickory Dr); Mari Lindsay (404 Hickory Dr); Brian & Nicole Sartor (407 Hickory Dr); Richard & Alyson Scoltock (410 Hickory Dr); Mauricio & Janet Castro (412 Hickory Dr); Phil Page (416 Hickory Dr); Tabitha Combs & Tom Craven (418 Hickory Dr); Kelly McMillen (419 Hickory Dr); Elizabeth O’Nan (420 Hickory Dr); Shadi Cinpinski (421/423 Hickory Dr); Stacie Parham & Michael Belcher (422 Hickory Dr); Jessica & Ken Cannon (413 Ridgefield); David Schwartz (415 Ridgefield Rd); David & Betsy Taylor (422 Ridgefield); Ish Sharma (428 Ridgefield); Kim Stahl, Neil Stahl, Dean Huff, & Alan Huff (431 Ridgefield Rd)

Date: September 21, 2018

Re: Proposed alignment of a multi-use path between Fordham Blvd and Hickory Drive from Ridgefield Road to Willow Drive

Overview

The town has proposed extending the multi-use path that currently terminates at Ridgefield Rd north to Willow Drive, alongside and adjacent to the east side of Fordham Blvd. We do not support this proposal in its current form, as the applicant has not demonstrated that it improves safety or accessibility for pedestrians and bicyclists over the existing on-street facility; rather, the proposed pathway alignment likely increases exposure of pedestrians and bicyclists to serious or fatal conflicts with motorists. The proposal as written does not provide adequate distances to allow motorists to avoid collisions with non-motorized travelers at conflict points, and the proposal also overstates the width of right-of-way available to accommodate their written plans.

In spite of these concerns, the Town of Chapel Hill Parks & Recreation Department has indicated that they intend to proceed with the multi-use path as proposed. We believe this decision to be hasty, based on flawed information from the consultant, and based on a plan that does not accord with best practices for pedestrian and bicycle safety. We are disappointed the Town has not arranged for further opportunities for public dialog regarding this plan, and **we request that Council not move forward with plans to extend the multi-use path until additional public comments have been received and satisfactorily addressed, and alternatives carefully considered.**

Proposed project in the context of the Chapel Hill Mobility & Connectivity Plan

We understand that the town’s Mobility & Connectivity Plan calls for multi-use paths along both sides of Fordham Blvd, and that NCDOT funds have been earmarked for this particular project. However, we also

recognize that plans are living documents. Good plans are written to articulate a vision and guide investment in support of that vision, rather than to be an immutable list of projects to be checked off. The vision articulated in the Mobility & Connectivity Plan is for a comprehensive network of pedestrian and bicycle connections within Chapel Hill and the surrounding area (Town of Chapel Hill, 2017). This vision is supported by a “toolbox” of recommendations, rather than concrete projects. This approach accommodates uncertainty—if in the course of plan implementation one learns that a recommended treatment does not accord well with conditions on the ground, the recommendations can be modified without undermining the plan’s vision.

We argue that the safety challenges associated with the proposed multi-use path render the path in conflict with the town’s vision of creating “safe and comfortable corridors that link neighborhood parks, employment centers, business districts, transit stops, and other destinations” (Town of Chapel Hill, 2017, p. E-1). Maintaining the existing multimodal facility along Hickory Drive, which requires virtually no investment from the town, more closely aligns with the plan’s intent. We respectfully request the town consider this alternative in the context of the plan and in light of the safety challenges presented by this particular corridor.

In support of this request, we present a short description of the existing facility along Hickory Drive and its appropriateness as part of a comprehensive pedestrian and bicycle network, as well as a brief list of the safety challenges associated with the proposed multi-use path project. We would welcome the opportunity to discuss these arguments in more detail in a public forum and/or in writing.

Existing facility

There is currently an effective on-street multimodal facility that parallels the proposed extension, along Hickory Drive from Ridgefield Road to Willow Drive. While not designated formally as a shared street,¹ Hickory Drive very much functions as one, with low motor vehicle traffic volumes,² a posted speed limit of 25 mph,³ signed bicycle route, on-street parking, and substantial use by pedestrians, cyclists, dog-walkers, and children. The academic literature and FHWA and NACTO guidance suggest this sort of facility is ideal for use as a multi-modal transportation corridor, and requires neither sidewalks nor bicycle lanes in order to provide a safe environment (e.g., AASHTO, 2012; FHWA, 1999; NACTO, 2014b).

Shared streets “create conditions where pedestrians and bicyclists can walk or ride on the street and cross at any location, as opposed to at designated locations. This encourages cautious behavior on the part of all users, which in turn reinforces slower speeds and comfortable walking and bicycling conditions.” (Porter et al., 2016). This is essentially how Hickory Drive functions today, even without special design treatments indicating it as a shared street.

Current pedestrian and bicycle planning practice is moving toward designing streets for all ages and abilities, which includes encouraging non-motorized traffic along low-stress, low-speed neighborhood

¹ Another descriptor for “shared streets” is “yield roadway” (see Dickman et al., 2016 for additional information).

² Shared streets should have no more than 100 vehicles during the peak hour for pedestrians to feel comfortable sharing the road with motorists (FHWA Pedestrian Safety Guide and Countermeasure Selection System 2013, cited in Porter et al., 2016).

³ NACTO’s recommends 25mph for bicycle boulevards (see (NACTO, 2014a, p. 167), although FHWA recommends maximum speeds of 20mph for shared neighborhood streets (Porter et al., 2016, p. 58).

streets *without dedicated right-of-way space* for those modes (NACTO, 2014c). The bicycle boulevard or shared street model can be an excellent way to provide low stress connections between busy corridors for pedestrians and bicyclists, provided they are properly designed and signed (NACTO, 2014b). Hickory Drive meets the design criteria; it only lacks proper signage to become a viable shared street and a substantially safer, lower-stress option than the proposed multi-use path along Fordham.

Proposed facility

The proposed replacement facility extends an existing (but poorly maintained) greenway from its current northern terminus at the intersection of Fordham Blvd and Ridgefield Rd, north to Walnut St, and then to Willow Dr. This alignment introduces two new points of conflict between motorists and non-motorized travelers (Willow and Walnut) and increases the complexity of an existing conflict point (Ridgefield).

The proposed new multi-use path does not adequately address these conflict points, and, even with modifications, it is unlikely to be able to meet FHWA's guidance for minimizing risk of harm of non-motorized travelers.

While all three conflict points are of concern, we are particularly worried about the proposed crossing at Ridgefield Rd. Extending the multi-use path across Ridgefield will place path users in a dangerous position, which will exacerbate existing conflicts with motorists turning right onto Ridgefield from Fordham, and introduce new conflicts for motorists turning right onto Fordham from Ridgefield.

Conflicts with motorists turning onto Ridgefield from Fordham

Multi-use path users attempting to cross Ridgefield Road where Ridgefield meets Fordham Blvd face the potential for serious injury or death due to conflicts with motorists attempting to turn right from Fordham onto Ridgefield. The FHWA has published guidance on minimizing the risk of conflict at such locations, where roadway-adjacent multi-use paths intersect with side streets. However, our observations at the intersection of Ridgefield Rd and Fordham Blvd indicate that the criteria established in FHWA's guidelines are not met in the applicant's proposal; furthermore, these criteria cannot physically be met within the existing right-of-way. Specifically, FHWA's guidance on separation between roadways and multi-use paths and on the speeds of motor vehicles exiting the roadway onto the side street are critically important here. For multi-use paths running parallel to roadways with posted speed limits in excess of 35 mph, the following requirements must be met (Dickman et al., 2016):

1. There should be at least 20' (24' preferred) of separation between the right-most lane of the roadway (including right-turn deceleration lanes) and the multi-use path where the path intersects with side streets, AND
2. The speed of motor vehicles as they enter the intersection should be no more than 20 mph.

This combination of minimum separation and maximum speed is required to ensure motorists turning from the roadway onto the side street have sufficient time to stop to avoid a crash with a pedestrian or bicyclist crossing the side street. If vehicle speeds are in excess of 20mph, then the separation between the adjacent roadway and the multi-use path must be increased and/or a right-turn deceleration lane must be provided.

Our observations suggest that the speed of vehicles as they turn from Fordham onto Ridgefield are regularly in excess of 30 mph, though we have not yet been able to measure turning speeds and would welcome the opportunity to do so. As shown in Figure 1, the maximum separation available between Fordham and the proposed path (assuming a 10' wide path) is 20', which is insufficient given recorded vehicle turning speeds. Reducing vehicle turning speeds via a deceleration lane would further reduce the available separation between the right-most vehicle lane (where motorists begin their turning action) to 8' to 10' – far short of the required 20' to 24'.

Current users of the existing path, which terminates at Ridgefield, inherently understand the potential for conflict at this intersection. If one observes this location, one will note that pedestrians and bicyclists hug the south (right-hand) side of Ridgefield after exiting the path, in order to avoid being hit from behind by vehicles turning into Ridgefield from Fordham at speed. Likewise, users heading onto the path from Ridgefield cross over to the south (left-hand) side of Ridgefield well in advance of the entrance to the side path, to avoid being hit head-on by vehicles turning onto Ridgefield. Continuing the existing multi-use path across and to the north of Ridgefield would undermine this established safe behavior and instead encourage pedestrians and bicyclists to venture out into the middle of Ridgefield, greatly increasing their exposure to conflict with motor vehicles.

Conflicts with motorists turning onto Fordham from Ridgefield or Walnut

Southbound users of the proposed multi-use path—particularly cyclists and others traveling faster than walking speed—will be at risk of serious injury or death when crossing Ridgefield Rd and Walnut St, due to conflicts with motorists attempting to turn right from those side streets onto Fordham. For the same reason that it is not safe for cyclists to ride facing traffic on roadways or sidewalks, it is not safe for them to travel along roadway adjacent multi-use paths in a contra-flow direction: motorists preparing to execute a right turn are trained to look to the left, but not to the right, when approaching an intersection. When cyclists are traveling in a contra-flow direction—as they would be if traveling southbound on the multi-use path—they will be approaching motorists from the left, and thus would not be seen (AASHTO, 2012; FHWA, 1999). This was the case along Martin Luther King Jr Blvd near Hillsborough St in Chapel Hill in 2014, when a cyclist lawfully riding on the sidewalk against traffic was struck and killed by a motorist leaving Run-In Jim's Gas Station (Grubb, 2014).

Even when motorists are aware of pedestrians or bicyclists approaching from the left, most motorists assume they have the right of way, and expect the pedestrian/bicyclist to stop (FHWA, 2006). At an un-signalized intersection, such as the ones at Ridgefield/Walnut and Fordham, this situation puts the full responsibility for avoiding collision on the cyclist.⁴ This burden is inappropriate for a multi-use path that will attract children, and especially for a path that is part of a Safe Routes to School program, as many children do not have the cognitive ability to safely navigate such conflicts.

⁴ NACTO Urban Bikeway Design Guide provides guidance for the safe installation of contra-flow bicycle facilities, including a requirement that both the roadway/side-street intersection and the side-street/multi-use path intersection be signalized. NACTO also recommends that right-on-red turns onto the roadway from the side-street be prohibited (NACTO, 2014a). However, given the proximity of the Fordham at Ridgefield intersection to the existing signalized intersection at Fordham and Estes Drive, it is unrealistic to add another traffic control device at Ridgefield.



Figure 1. Existing conditions at Ridgefield Rd and Fordham Blvd

In sum, the proposal to extend the existing shared use path north across Ridgefield Rd and Walnut St places vulnerable path users in an unsafe position, where motorists do not expect to see them and/or cannot react in time to avoid a collision with them. There are inadequate protections for pedestrians, bicyclists, and other users of the path to allow them to safely cross Ridgefield Rd or Walnut St, and no realistic options for mitigating the conflict risks through increased separation or signalization.

The safety concerns at this type of intersection should not be underestimated. “In a 2015 study, the City of Seattle found that the most significant crash type at both signalized and un-signalized intersections was a turning motorist crossing the path of a through bicyclist or pedestrian....Right-turning motorists accounted for 15 percent of bicyclist crashes and 17 percent of pedestrian crashes at all intersection types” (Porter et al., 2016, p. 91)

Thus, the proposed multi-use path not only fails to enhance pedestrian and bicyclist safety over the existing on-street facility on Hickory Dr, it actually degrades it. We understand the town is concerned that the lack of sidewalks along Hickory Dr prevents town leaders from guaranteeing the safety of pedestrians on Hickory, but the safety risks associated with navigating the proposed multi-use path’s intersections with Fordham and Walnut far exceed those of walking or bicycling down a low volume, neighborhood shared street.

Recommendations

Based on the physical limitations of the right-of-way not reflected in the consultant’s plan, the clear safety concerns for pedestrians and bicyclists attempting to cross side streets adjacent to Fordham, and the presence of an existing appropriate alternative, the preferred course of action is the “do-nothing alternative.” This option involves maintaining and formalizing Hickory Drive as a shared street, and indicating it as such (to motorists and non-motorists alike) via proper signage. This option does not preclude an eventual extension of the multi-use path along Fordham, and indeed there are likely design solutions that may support such a path. But until such a solution is found, it makes little sense to charge ahead with a poor design, when an acceptable low- or no-cost alternative already exists.

A second-best alternative would be to eliminate motor vehicle right turns at Ridgefield and Walnut, as has been done for Rogerson Rd and Oakwood Drive at Raleigh Rd (Figure 2), and proceed with either the multi-use path as proposed. This approach would only address conflicts between motorists turning from Fordham onto the side streets, however, and would do nothing to address the conflict between south-bound path users and vehicles exiting the Little Ridgefield neighborhood. As this conflict pertains largely to cyclists and users other higher speed non-motorized modes, a modification to the second-best alternative would replace the multi-use path between Ridgefield and Willow with a pedestrian-only sidewalk, and direct cyclists and other higher speed users along the existing facility on Hickory.

We would be grateful for the opportunity to discuss these alternatives, the evidence supporting our safety concerns, or anything else regarding the proposed path at your convenience.

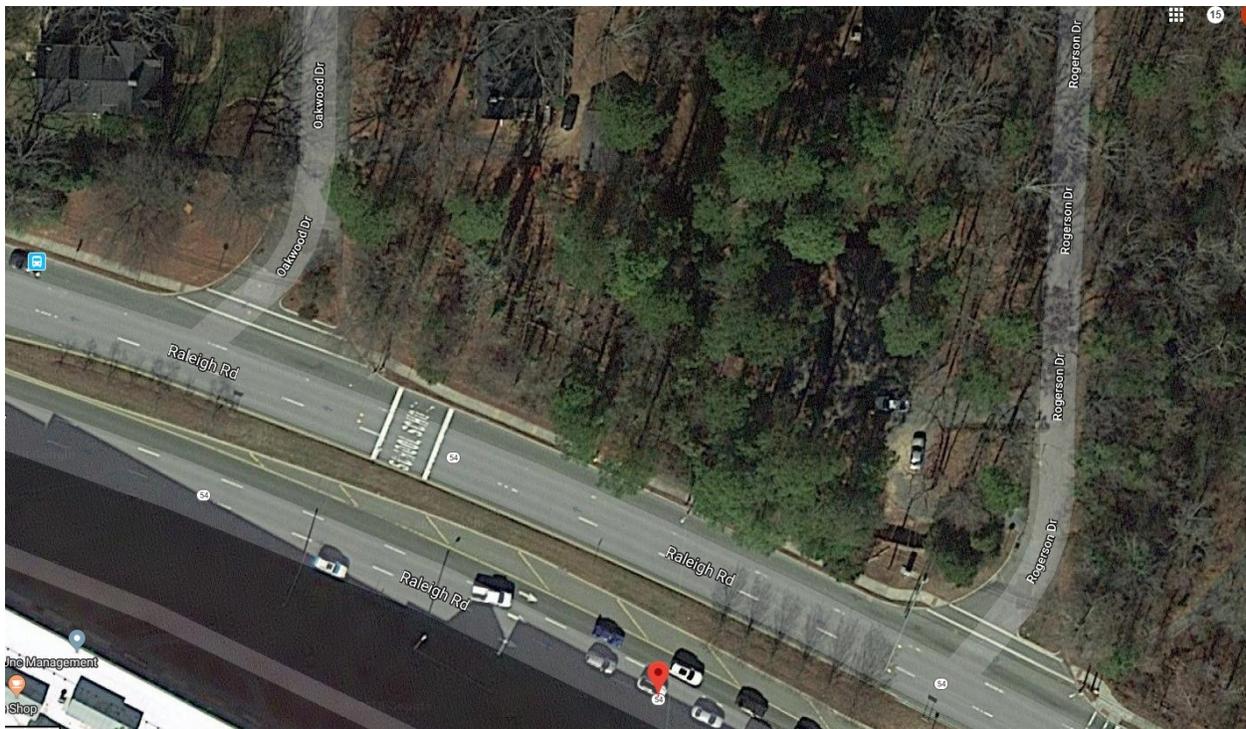


Figure 2. One way intersections along Raleigh Rd

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