



PUBLIC INFORMATION

ITEM NO. 2

DATE OF MEETING: April 7, 2014

REQUESTED BY: Mike Nadeau & Citizens for Hampstead By-pass

SHORT TITLE: Citizens for Hampstead Bypass.

BACKGROUND: "Citizens for Hampstead Bypass" members have requested to make a presentation to the Board of Commissioners to provide additional information. Attached is an Editorial by the *Wilmington Star News* with respect to this issue. Also attached are two letters from Transportation Planner Walter Kulash addressed to the Citizens for the Hampstead Bypass.

Editorial - State transportation officials should listen more closely to Hampstead residents

Published: Monday, March 10, 2014 at 9:12 a.m.

Does Hampstead really need three interchanges on the proposed U.S. 17 bypass? A group that badly wants the bypass to be built says no. State transportation officials say yes, based on traffic projections. In the absence of a compelling reason to spend \$30 million on something the pro-bypass group says is unnecessary and would disrupt the community, we'll side with the residents.

N.C. Department of Transportation officials did their homework, studying traffic traveling through and within the expansive unincorporated community, which hugs U.S. 17 through most of eastern Pender County. They believe there is sufficient reason to build three interchanges, one at the southern point, one at the northern entrance to the community and one that dumps traffic off in the middle of the business district.

But members of Citizens for the Hampstead Bypass, cleverly abbreviated C4HB, think two interchanges should be enough because much of the traffic that was counted by the DOT is traffic that will use the bypass once it's built. They note that it would fill in a popular baptismal pond with historic significance, raze one of the community's favorite restaurants and kill a number of cypress trees that have been standing for two or three centuries.

A little history: Hampstead residents have been pushing for a bypass ever since the DOT first proposed widening U.S. 17 to four lanes through the community. Residents fought the widening, which they felt would hurt their community and cause accidents. They were right about the latter. A combination of speed, volume and improper turns in front of oncoming traffic have created problems.

But the widening was justified and necessary -- U.S. 17 is a major north-south thoroughfare, and Gov. Jim Hunt declared (during his first administration) that the road would be four lanes from South Carolina to Virginia by 2000. It should not come as a shock that limited resources and ever-increasing road needs have moved that timeline far, far back.

It is less clear that a third interchange must be built along with the bypass. While that would be the most cost-effective option and may be necessary as Hampstead continues to grow, the DOT and the project itself might benefit from shaving \$30 million off the \$152 million price tag, which does not include the related Military Cutoff extension (add \$51.6 million).

State Rep. Chris Millis, R-Pender, wants DOT officials and residents to get together to work it out. That's a constructive suggestion.

The citizens group wants this bypass built. The DOT finally has the green light to get started. Together, they can ensure that the project does what it is supposed to do -- take through traffic off Hampstead's main street -- without the unintended consequence of bulldozing what residents best love about their community.

Walter Kulash, P.E.
Transportation Planner

P.O. Box 252 (mail) 32 Blands Knob Road (express)
Little Switzerland, NC 28749
407 491 9888
walterkulash@bellsouth.net

Citizens for the Hampstead Bypass
Hampstead, NC

January 17, 2014

I have completed a "community specific" traffic analysis to estimate the future traffic volumes between the Hampstead Bypass and Central Hampstead. This study shows clearly that a Bypass with only two Central Hampstead interchanges (Southern and Northern) is more than adequate for these future traffic volumes, and that a third interchange (Midtown) is not needed.

I projected this "community specific" traffic by applying the hourly trip generation rates from the definitive *ITE* (Institute of Traffic Engineers) *Trip Generation Manual* to projected year 2035 data (population, households, businesses) for Central Hampstead. Future population and households were computed by expanding existing census counts by growth rates provided by Pender County Planning. Future business activity was projected by expanding a detailed roster of existing employment and commercial floor areas within Central Hampstead. School trips were obtained from recent counts of vehicle turning movements into schools, and were corroborated against *ITE Trip Generation Manual* rates.

My Central Hampstead study area, centered along a four-mile stretch of US 17, is bounded on the south by the Bypass Southern interchange (on NC 210 just west of Food Lion), on the north by the Bypass Northern Interchange (just north of the schools complex on US 17), on the east by the Intracoastal Waterway and on the west by the Bypass itself. The Intracoastal Waterway, conservation land to the west of US 17 and the Bypass itself constrain the amount of developable land in Central Hampstead, eliminating the possibility that suburban sprawl might add significant amounts of travel to the Central Hampstead area.

For comparability with NCDOT traffic model projections, I have adopted the year 2035 (ten years after opening of the Bypass) as my forecast year.

My completed study shows:

1. NCDOT's traffic model projections of year 2035 travel between the Bypass and Central Hampstead greatly exceed (over double) the year 2035 travel as computed from *ITE Trip Generation Manual* applied to community data. This discrepancy is large, and beyond the limits typically acceptable in transportation planning.
2. The difference, in traffic volume to/from Central Hampstead, between the NCDOT model and the *ITE* community-based projections is greater than the entire volume projected by NCDOT for the Mid-Town interchange. Therefore,
3. The year 2035 travel between the Bypass, US 17 and Central Hampstead can easily be accommodated on two interchanges: the Northern and the Southern.

Walter Kulash
Transportation Planner

P.O. Box 252 (mail) 32 Blands Knob Road (express)
Little Switzerland, NC 28749
407 491 9888
walterkulash@bellsouth.net

February 17, 2014

Mr. Mike Nadeau
Citizens for the Hampstead Bypass
Hampstead, NC

RE: Summary of NCDOT response to requests for information

Dear Mike:

Our two inquiries to NCDOT seeking clarification of the year 2035 forecasts for the Hampstead Bypass have focused on two questions:

- (1) Was community-specific trip generation data used by NCDOT in projecting the year 2035 traffic between Hampstead and the Bypass?
- (2) How were the Hampstead Bypass and US 17 year 2035 traffic volumes derived from the Wilmington Urban Area travel demand ("traffic") model?

Responses to these two questions are summarized as follows:

1. Was Community-specific Trip Generation Data Used by NCDOT in Projecting the Year 2035 Traffic To/From Hampstead?

We made our first request for information on this question in an email to Karen Russell, December 13, 2013. She forwarded the request to Jay McInnis, who responded to us (email of December 19, 2013) that "trip generation was used to estimate the amount of traffic that would use the [northern] interchange". However, the material attached to this response (NCDOT spreadsheet process for deriving hourly volumes from daily volumes) included no indication of a trip generation study.

Our next request (email to Jay McInnis, January 6, 2014) asked for details about the "trip generation" analysis referred to in the December 19, 2013 response (above). In response (email of January 21, 2014) Jay McInnis stated that in fact no trip generation analysis had been performed. The NCDOT's traffic consultant, rather than performing a trip generation analysis as scoped (i.e., contracted for) by NCDOT, decided that "they did not need to use trip generation" and that instead "traffic counts [at the Topsail School Road/Vista Lane intersection] provided a more accurate depiction of traffic utilizing the school intersection", which somehow became decisive in their process for allocating traffic to the north and south interchanges.

In further response to our requests of January 6, 2013, Jay McInnis provided (email of February 10, 2014 and attachments) all of our requested zone-by-zone data ("socio-economic" data) which drives the trip generation stage of the Wilmington Urban Area traffic model. Our review of this data for the zones (or portions thereof) within Hampstead strongly confirm our position, based on our trip generation analysis using our own projection of community data, that the year 2035 traffic to/from Hampstead as predicted for the NCDOT Alternatives 6R and 6TR cannot possibly be reconciled with projected community data, either our own or the Wilmington Urban Area traffic model's.

Based on information received from NCDOT about trip generation analysis, we conclude that:

1. No trip generation study was done by NCDOT in arriving at the year 2035 traffic projections to/from Hampstead,
2. The trip generation data in the Wilmington Urban Area traffic model does not support the NCDOT year 2035 traffic projections for the Hampstead area, and
3. Rather than conducting, as requested, a trip generation analysis to more accurately project traffic to/from Hampstead, NCDOT's consultant instead reallocated, among Hampstead streets, fixed and pre-determined quantities of traffic from both the north and southern Hampstead interchanges

2. How Were Bypass and US 17 Traffic Volumes Derived from the Traffic Model?

In our email to Jay McInnis, January 6, 2014, we requested: (1) for the Hampstead Bypass Corridor, the trip assignments from the Wilmington Urban Area traffic model, and (2) post-model computation steps, if any, used to convert the model results to the year 2035 projections for Alternative 6R.

The response, attachment titled *Computational Steps from Model Output to Traffic Forecast* (email from Jay McInnis, February 10, 2014), does not provide trip assignments in the conventional and expected format of a network diagram with the link-by-link volume noted on each link. The link volumes that are provided, identified in the table *Wilmington Travel Demand Worksheet*, are not identified as unadjusted model results but rather as "worksheet" products. Further, the link information provided does not include any of the intersecting streets in Hampstead, which are the links whose projected volumes are most in question.

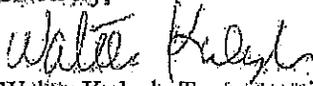
On the basis of what we have received from two requests for information on the derivation of traffic projections from model data, we tentatively conclude:

1. Allocation of traffic between the Hampstead Bypass and US 17 has been made through a process (possibly applying a "diversion" guideline) that has not yet been shared with us,
2. The large volumes of traffic assigned, in the year 2035 traffic forecasts to streets intersecting US 17 in Hampstead area, were not derived from the traffic model, but were

rather the result of apportioning a predetermined and fixed volume of traffic to/from the Bypass to these streets.

Please feel free to contact me with any questions or comments you may have regarding our interpretation of the NCDOT responses to our questions.

Sincerely,



Walter Kulash, Transportation Planner