

From: Paul Green
Sent: Wednesday, August 23, 2017 3:17 PM
To: Barrett, Jon <JBarrett@a2gov.org>
Cc: Laura Strowe <
Subject: ZBA17-025 1140 Broadway Street

Zoning Board of Appeals
August 23, 2017
Subject: ZBA17-025 1140 Broadway Street

Dear Board Members,

Who am I?

My name is Paul Green and I live at 1615 Harbal Drive, up the hill from the proposed development. I am the leader of the Off-Broadway Neighborhood Association, and although many members of the association hold views similar to mine, I am not representing them in any official capacity.

I am employed at the University of Michigan Transportation Research Institute where I lead the Driver Interface Group, whose research concerns how people drive. I have not conducted studies on parking needs, though I have done studies of how people park. My professional expertise concerns human factors engineering/ergonomics, how to design things for people so they are safe, easy to use, and useful. The views here do not represent the University, only mine.

I am on travel this week and unable to appear at the hearing, so I am submitting my comments on the Morningstar Appeal via email.

I am opposed to the variance to reduce the number of parking spaces required from 620 to 558.

The variance request does not pass the test in the ZBA rules. What the rules require that "A variance may be granted by the Zoning Board of Appeals only in cases involving practical difficulties or unnecessary hardships when ALL of the following is found TRUE." Providing adequate parking for a new apartment complex is *not a hardship case*.

It is true that one can walk to the hospital (if one is employed there), there provisions for bikes, and there are bus routes, but the number of people who will use them and their impact on parking needs are unknown. Commuter rail does not exist at the moment, and it is unknown how many will use it if it is built.

Even if some demands change, people will still have vehicles for many purposes, and they need parking for them. Why do people drive? The most recent data for the US is 2009 National Household Travel Survey. If one looks at the data, about 19% of all trips are to and from work, 6% are business related, 14% are shopping, 15% are family/personal errands, 6%

are school/church, 30% are social and recreational, and 9% are other. These are round numbers. Also noteworthy, are the mean trip distances for each category, which are substantial. They are work-11.8 miles, work related business-20.0 miles, shopping-6.5 miles, errands-7.0 miles, school/church-6.3 miles, social/recreational-10.7 miles, and other-51.5 miles. What is important to note that if one examines the location of shopping, schools and churches, where people will go for errands, etc., people will still need personal vehicles for these purposes and many are beyond typical walking and biking distances. Parking needs remain, so decreasing the amount of parking does not make sense.

Automated vehicles are unlikely to reduce parking needs in the short term. The argument has been made that driving will change in the future. It could, but all of the evidence is based on when, how, and where people will drive if they had an automated vehicle is based on speculation. Findings are typically obtained by asking people what they would do if they had an automated vehicle. The problem is that invariably those that are asked have never driven in an automated vehicle. People are notoriously poor at predicting what they will use, like, or want, if it is beyond their experience. Summarizing that research is a matter for another email message. So, making decisions, in this case estimating parking needs, based on speculation about automated driving, is risky at best.

Inadequate parking will have major negative consequences for the Broadway neighborhood. Suppose 558 spaces are allowed, but in fact 620 are needed as required. Where will the 62 cars park? They cannot park on Plymouth Road, Moore Street, or much on Maiden Lane because of parking restrictions and because of the intersection(s) to be crossed. Jones, in many places, is too narrow. Therefore, they are going to park on Broadway.

Our data (Cullinane, Smith, and Green, 2004) shows that for parallel parking in Ann Arbor, the mean space per vehicle is approximately 24 feet. Parking will largely be beyond the creek, with about 400 linear feet for parking (maybe less) before Jones, space for 16 cars at most. Beyond Jones, there is room for parking on only 1 side of Broadway. To park the remaining 46 cars, an estimated 1100 feet of street (on 1 side) is needed, which would be well up Broadway Hill (and this assumes no one on Broadway parks on the street). However, the point is this is not a good situation for those living on Broadway. Thus, basically Broadway becomes the parking lot for Morningside, and there is no street parking for the neighborhood.

Given the failure to meet the requirements for a variance, the parking needs of tenants of the Morningside complex, unknown consequences of automated vehicles, and the impact on the Broadway neighborhood, I am strong opposed to this variance.

Paul Green, Ph.D.

1615 Harbal Drive

Cullinane, B., Smith, D., and Green, P. (2004). *Where, When, and How Well People Park: A Phone Survey and Field Measurements* (technical report 2004-18). Ann Arbor, MI: University of Michigan Transportation Research Institute.