



# Master Planning Council (MPC)

**MEETING NOTES - March 4th, 2015**

Office of the Architect for the University

## Health System Traffic Study and UBike Bicycle Share System

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Graduate Representative

Lia Cattaneo  
Undergraduate Representative

### Meeting Agenda

- Health System Traffic Study Review by Julia Monteith, Senior Land Use Planner, Office of the Architect for the University
- UBike update by Rebecca White, Director of Parking & Transportation

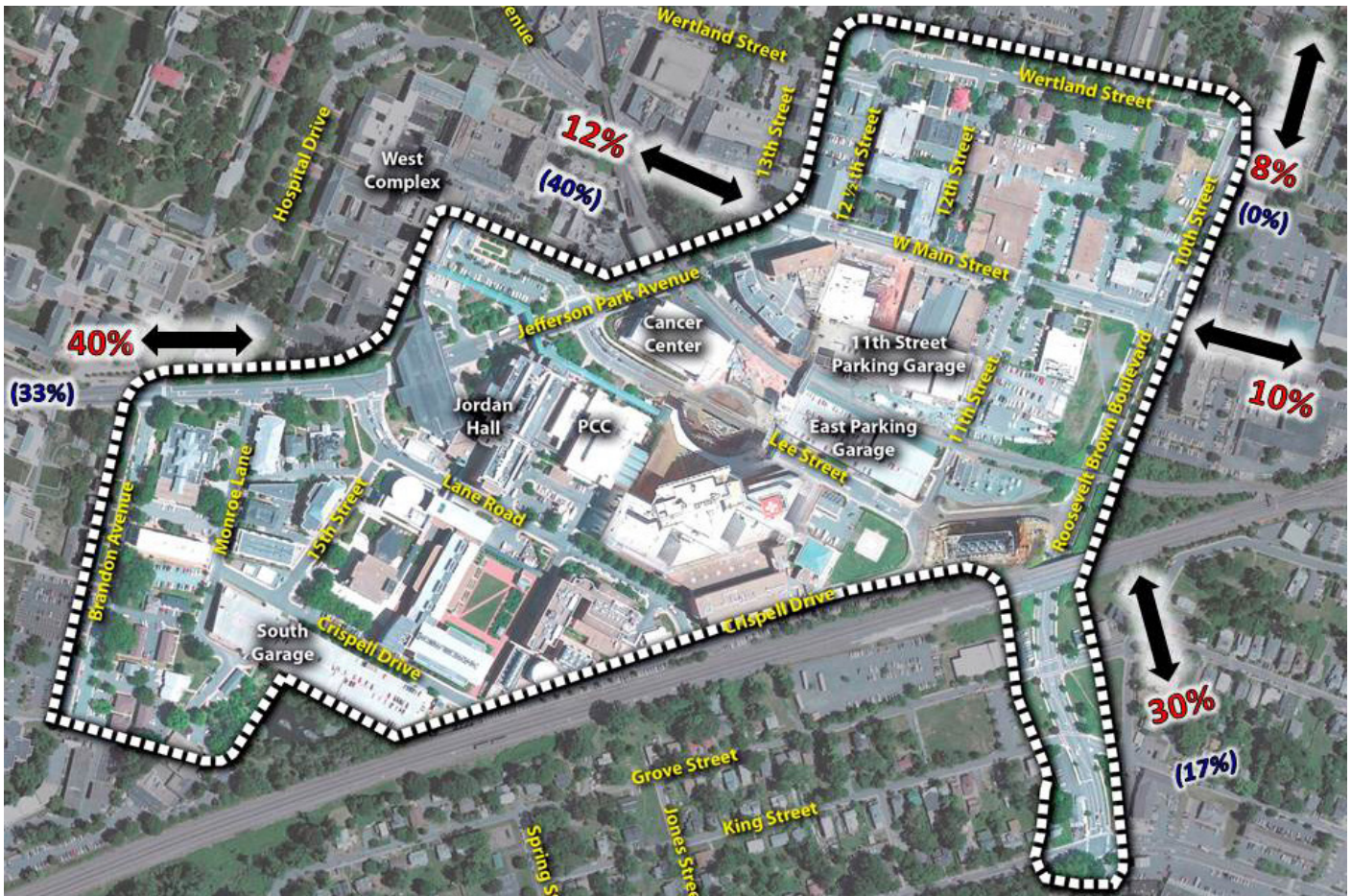
### Presentation Summaries

Julia Monteith began the meeting at 3:30 PM with brief remarks.

#### Health System Traffic Study Review by Julia Monteith, Senior Land Use Planner, Office of the Architect for the University

This study was completed by VHB for the University of Virginia Health System and it encompasses the Health System in general, but extends beyond the hospital in all directions. This plan was initiated because there are a number of projects, both in the City and being constructed by the University that potentially stress the existing transportation system in this area. New development could potentially add 1,850 beds, 1000 parking spaces, and a new hotel to the area. Not all of these projects being evaluated are built yet. Only The Flats at West Village has been constructed to date. Other projects that are in various stages of planning include The Standard housing project, 1000 West Main Street housing project and the Sycamore House Hotel at the southwest corner of West Main Street and 11th Street. The University has two major projects planned for the Health System that will impact traffic flows: The Education Resource Center (ERC), located between the Cancer Center and the Lee Street Parking Garage and the Emergency Department Expansion/Hospital Bed Tower which would add a significant addition to the east of the existing hospital. The ERC has multiple functions such as imaging, education, pharmacy and meeting. The sum of these projects point to the need for better understanding of traffic impacts. It is critical that emergency vehicles can continue to access the hospital safely and quickly.

Analysis shows that traffic is not distributed uniformly throughout the study area. 40% of traffic flows from JPA to West Main Street, 30% flows from Roosevelt Brown Blvd to West Main Street, 12% or less of the traffic flows between West Main and University Avenue, West Main Street and Downtown or 10th Street NW to West Main Street. Traffic engineers are factoring in the effect of all the potential developments in the study on the traffic system in terms of the average daily trips they generate. Traffic impact is based on Level of Service (LOS) A through F, where A is a well-functioning intersection and F is a failing intersection. Most intersections are currently operating at an A or B LOS except West Main Street and Roosevelt Brown Blvd, which is a LOS of D. This intersection is a concern. The problems at West Main Street and Roosevelt Brown intersection also have a negative effect



Current Traffic Distribution: Predicted (in black) vs Actual (in red)

up the nearby 17th Street and West Main Street intersection. With all the new developments, the LOS is affected in a negative way: By 2016 West Main Street and Roosevelt Brown Boulevard/10th Street intersection drops to LOS E during the PM peak hour. Remaining intersections in the study area operate an overall LOS of C or better during both AM and PM peak hours. Finally, long queues are expected along eastbound West Main Street at 11th Street and Roosevelt Brown Boulevard. By 2020 West Main Street and Roosevelt Brown Boulevard/10th Street intersection drops to LOS F during the PM peak hour. In addition, heavy queuing is expected along the following routes:

- Eastbound West Main Street approach at 11th Street
- Eastbound West Main Street at Roosevelt Brown Boulevard/10th Street
- Northbound Roosevelt Brown Boulevard at West Main Street
- Eastbound Jefferson Park Avenue at Lane Road

While it is known that additional back-ups will occur beyond the immediate study area, this area was chosen based on the resources available for the study and the diminishing accuracy of the results as a larger and more complex traffic system is modeled. It is more useful to focus on a smaller area that can be modeled easier and more accurately.

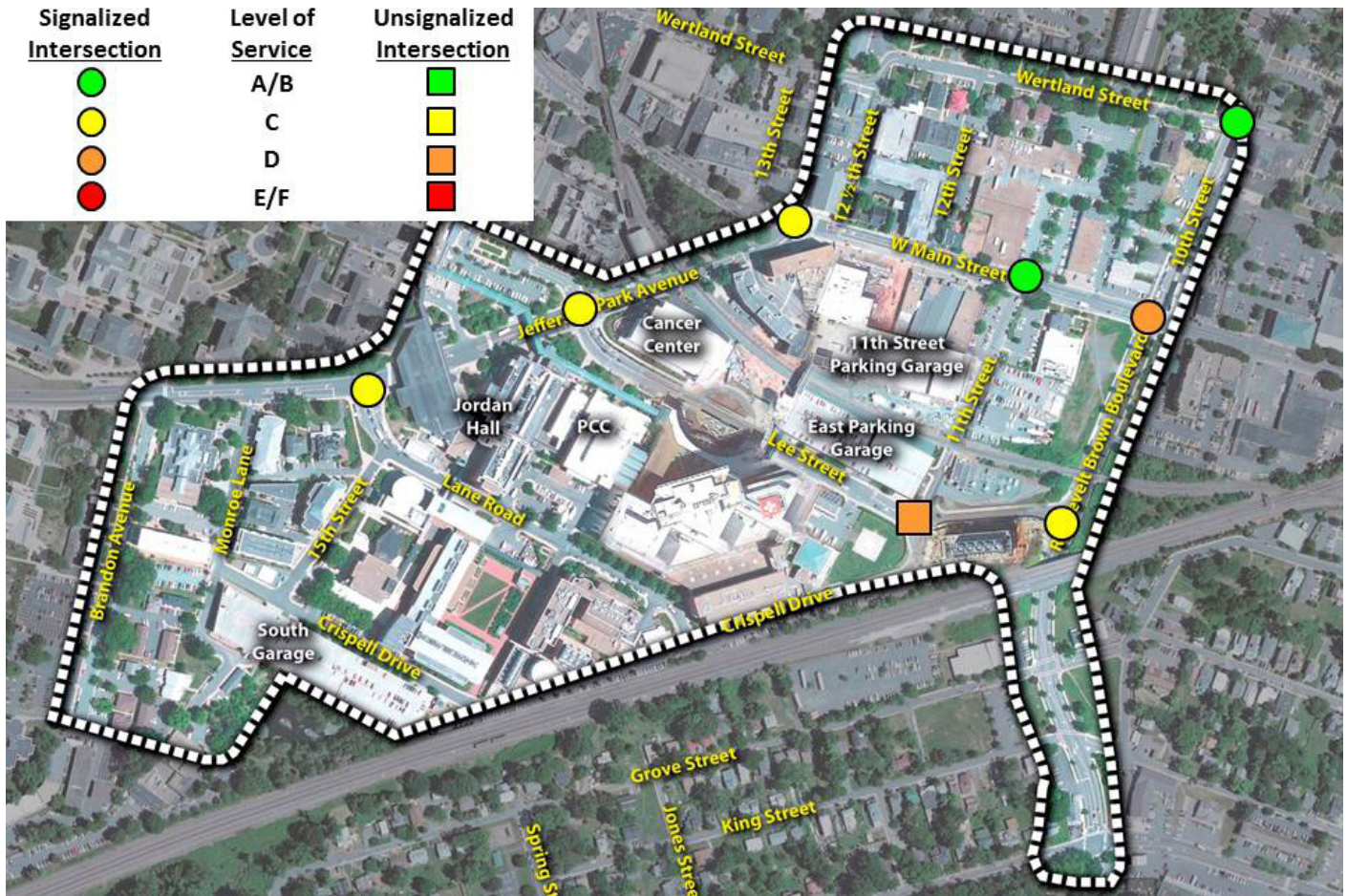
The biggest traffic concerns and mitigations concern the West Main Street corridor. The study recommends several changes to the intersection at West Main Street at 11th street:

1. Construct eastbound right-turn lane onto 11th street
2. Construct a northbound right turn lane from 11th to West Main Street.

Further analysis of the intersection has shown there is not enough space in current 11th Street ROW for the extra lane, so the University would have to consider expanding the road toward the Patton Mansion and Core Lab (need 36')

Recommendations at West Main Street and Roosevelt Brown Boulevard are:

1. to construct an east bound right turn lane from West Main Street onto Roosevelt Brown Boulevard
  2. to construct north bound right turn lane from Roosevelt Brown Boulevard onto West Main Street
- Improvements are difficult, though, because the University does not own any at this intersection.



2020 Level of Service with recommended improvements.

One final improvement recommendation is to construct an eastbound right-turn lane into Lane Road from JPA by removing on street parking spots in front of University language houses. If these improvements were implemented, it would improve LOS across the study area. There is no priority given to any of the improvements, so they should be completed opportunistically.

The study also looked at transit/pedestrian and bicycle facilities in the study area. For transit, the consultants did not have any additional suggestions other than to limit bus idling on Lee Street. Suggested pedestrian improvements include a new sidewalk along the west side of 11th Street and pedestrian scale railroad crossing gates on 11th street. New sidewalk and bike lanes are recommended along JPA on the Clarke Park side of the road. The study also recommends an improved path from the Corner to the Health System that passes behind the Corner building and past heat plant. Finally, the study recommends reducing the road width on Jeanette Lancaster Way, in order to improve the pedestrian experience on the street. This street is noted in the 2010 Health System Area Plan as a managed, pedestrian oriented street. Need to be careful of access to McCleod and access at certain times of day. About half of the traffic and pedestrian recommendations are currently being worked on by the University.

Several questions were posed to the group:

**What level of coordination with City’s West Main Street Planning effort should the University have?**

The city’s plan attempts to reduce the number of trips per day on West Main Street significantly so that the street becomes more bike and pedestrian oriented. Kurt Keesecker recommended coordinating with NDS to refine assumptions of trip generation due to new residential developments (Pavilions/Flats at West Main) to determine if those developments are producing significantly fewer vehicular trips per day.

**Don Sundgren asked what drives parking for city developments?** The answer is that there is a code requirement for parking, but it is not always the same because of special use permit process. Developers generally plan for the least amount of parking allowed, but the perceived market plays an important role too. This area is in parking modified zone, so there are reduced parking requirements in place for new development. Students probably would

be more likely to park during the day and not use their cars because it is easy for them to walk to Grounds. Currently, according to P&T Director Rebecca White, only about 40 - 45% of on-Grounds housing students want parking. For Faculty, about 70 to 80% purchase parking passes from P&T.

### **What other areas should be assessed for traffic issues?**

The University Ave/Emmet Street/Ivy Road area is already being assessed. Beyond this, no additional suggestions were made.



### **UBike update by Rebecca White, Director of Parking & Transportation, Parking & Transportation**

In October, the UBike system was presented to the MPC, but since then there have been a lot of new things to report and discuss with the Council, since the system officially launched in January of 2015. The University truly is on the leading edge of bike share, being one of only a few universities to have a true bike share system.

To review, the UBike system is a Parking & Transportation and Office of the Architect project. The impetus for the program began about 5 years ago as a case study for a School of Commerce course. This initial study found that to be economically feasible would require significant institutional financial support to offset projected gaps between revenue and operating costs. With this

in mind, the University applied for a planning grant from VDOT and won the TEP grant to study the bikeshare system further and to create a pro-forma for the system. With this information, the University applied for and won additional grant money for implementation of a system. These initial studies were essential so that the University implemented a system that is right-sized. During the grant process, the University received support for the program from both the City and Metropolitan Planning Organization.

The UBike system has all the technology on the bike, rather than on the bike racks. Bikes can be reserved using a smart phone, web browser or at the bike itself. After reserving a bike, a user unlocks the bike using a PIN, takes their ride and then locks it up at any UBike station on Grounds. The system is produced by Social Bicycles (SoBi). The University owns and operates the system, though there is an ongoing support contract with SoBi for software and support. The SoBi system allows for more bikes than a traditional bikeshare system, because the system costs are cheaper and more flexible. SoBi is launching bike share systems in cities around the country, Canada and Australia. At UVa, UBike consists of 18 stations and 120 bikes focused along McCormick Road and the Health System along JPA and toward downtown with a station at Stacey Hall.

Financially, it is not expected that UBike will be self-sufficient over its first few years. The VDOT TEP grant will allow for subsidized operation for 3 years. Eventually there are likely to be financial shortfalls, and one challenge is to figure out how to fill those. Operationally, stations are located close to UTS transit stops and their daily travel patterns are mirroring those stops. It is possible, with enough utilization of the system that UBike will allow for a bus stop to be removed from McCormick Road in the future. One way to help fill revenue shortfalls is through selling sponsorship/advertising. P&T is currently exploring how that might work and is focusing primarily on internal (bookstore, Hoos well, etc.) entities.

Maintenance and daily rebalancing of the system is being handled by Blue Ridge Cyclery. System alerts are addressed by both Blue Ridge Cyclery and Parking & Transportation depending on the nature of the alert. UBike Members can sign up for daily, monthly or annual passes. Students and staff get a discount on an annual plan, and can also get a six-month membership. There are also incentives and penalties for locking and leaving a bike outside the system. This encourages riders to keep their bikes in the system and available to others.

UBike was beta tested in the fall and winter of 2014 and went live on January the 20th. Winter is a slow time, but a slow start will help with ramping up for expected spring increases in use.

### Use Data:

So far UBIke has sold a mix of long term and short term memberships. There have been more day and one-month memberships sold than expected. Each bike is equipped with a GPS, so system usage can be accurately compiled and mapped. This kind of visualization helps to plan for new bike amenities and system expansion, but showing where highest levels of use are occurring. The system can also show the most popular stations. Alderman Library and OHill most used stations so far.

System allows for personal tracking of rides and converts usage to dollars saved and calories burned and carbon reduced. It also allows for sharing rides on Facebook, and other social media sites.

One of the main reactions to the system has been to ask to expand it. The system was sized based on the available funding and a desire to keep the system balanced. If expansion were to occur the cost and staffing implications would have to be carefully assessed. Like areas of system expansion would be in the direction of North Grounds, further into the housing areas of West Grounds and/or partnering with the City to link the system with the downtown area. One benefit of the UBIke system is that the stations are easy to move around based on usage trends.

Questions posed to the MPC:

**What additional data could be collected?** Over time it would see aggregated carbon savings. It would be useful to map where bikes are put 'On Hold'. Demographics of users to better target marketing efforts. It would be interesting to analyze the effect of the system on bike rack availability near UBIke stations.

### Additional Areas of expansion for the UBIke system?

Providing bikes in areas of free parking or cheaper parking areas (off-grounds, UHall) would be nice but this kind of distribution of bikes can affect rebalancing.

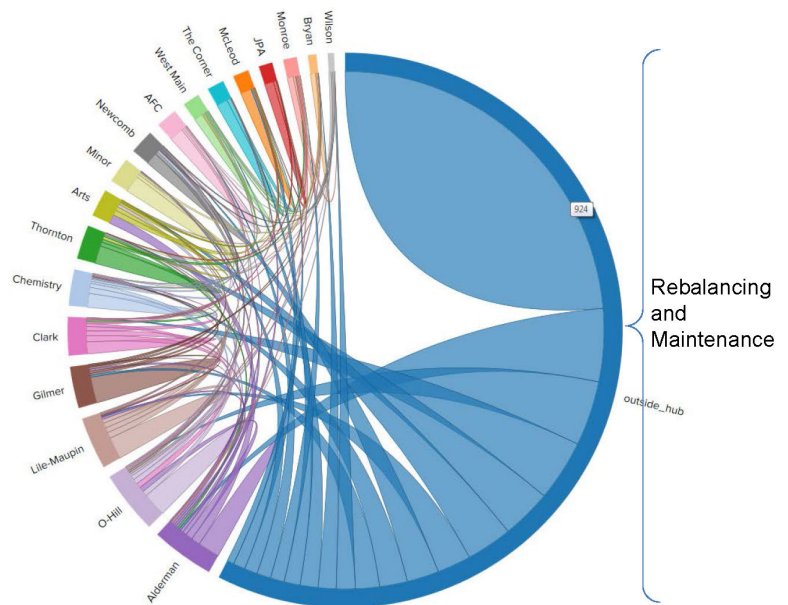
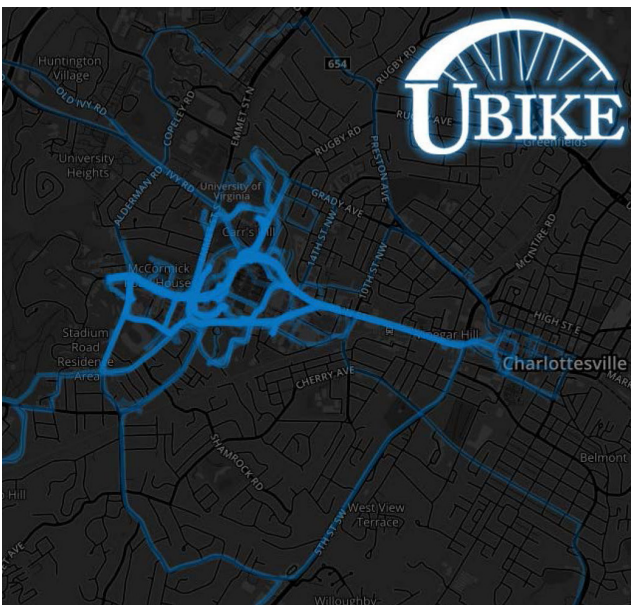
### What are your thoughts on helmet use?

The system has a lot of info encouraging helmet use, but is not required and helmet are not provided. When signing up members get a coupon for a discounted helmet.

### What are some possible future funding options for UBIke?

Transit and parking is heavily subsidized through student fees. Could student fees also support the system? Data is being tracked to make a case for this.

Grocery Stores/other corporate sponsorship might be an option but outside sponsors would have to be carefully considered.



UBike first month trip map (left) and station activity (right)