

**Prospectus**

**Little Ivy Creek Bridge Rehabilitation**

(Technical Report)

(STS Research Paper)

**Gentrification, displacement and social justice in university-community interaction: a case study of Brandon Ave Redevelopment**

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Fall, 2019

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## **Introduction**

As cities expand, they implement new technologies to advance the progression of the city. There is a lack of undeveloped land in cities so in order to expand cities redevelop areas. Redeveloping an area creates conflict between the developer and the existing residents of the planned redevelopment. The developer has more power and resources at their disposal than the residents which results in a power dynamic that adversely affects the residents. UVA has embarked on a redevelopment project at Brandon Avenue to create an Eco district that they hope will be a model green community and set the precedent for future development at the university. In the process of planning and constructing this development the university used its power and resources to rezone Brandon Avenue from residential to University High Density (UHD) to allow for the redevelopment. To accomplish this the university forced all the existing UVA buildings on Brandon Avenue to vacate and petitioned to have the city vacate all of its public interests on Brandon Avenue. Currently there are two non-UVA owned properties on Brandon Avenue. My research question is focused on the level of influence these properties had on the decision to redevelop the avenue and how the rezoning has affected the properties. I will be looking into the ways in which the university used their influence on the City of Charlottesville to have power over the existing properties. I will take a systematic look at the redevelopment and identify points within the system the existing residents can intervene to decrease the power imbalance with the developer.

## Technical Report

Construction activities have significant social impacts on mobility and safety of the public. Closing or restricting access to roadways impedes the flow of traffic which directly affects safety and indirectly affects economic activity. Reducing the project delivery time minimizes the construction period and in return reduces the social impacts of construction. Project delivery time is always a priority when planning a project as it directly affects the project cost. ABC elevates this priority to minimize the social cost of the project. The social cost is the impact the project has on the stakeholders affected by the construction activities associated with the project. The social cost of road closures, restricted lanes, and detours is impeded economic activity because of the restriction of flow of people and goods. This indirectly negatively affects the commercial and industrial activity in the area. In large urban centers the cost of this economic impact can be significant depending on the extent of the closure, in some cases it can exceed the actual cost of the project. ABC is aimed at reducing this impact by using “innovative planning, design, materials, and construction methods in a safe and cost-effective manner to reduce the onsite construction time” (FHWA). While the social costs associated with construction activities are a major issue to consider when deciding to implement ABC, there are other benefits that deal with site constructability and safety of workers. Many times, projects are faced with constructability issues that prolong the construction period. Remote locations, weather delays, worker safety, and cost of temporary structures are all inherent risks faced in construction. . ABC uses prefabricated elements and systems to streamline the construction process which limits safety risks for workers and reduces the onsite construction time. There for mitigating the risk of weather delays and making is easier to build in remote locations

My Capstone project is focused on the rehabilitation or replacement of a bridge north of Charlottesville on US Route 250. The bridge was constructed in 1932 to allow US Route 250 to pass over Little Ivy Creek. After inspection by the Virginia Department of Transportation it was determined that the bridge was in poor condition and would need to be repaired or replaced. The capstone project is focused on the feasibility of using Accelerated Bridge Construction (ABC) to rehabilitate or replace the bridge. ABC is a project planning and procurement approach that improves project delivery time, work- zone safety, and site constructability while also reducing traffic impacts, onsite construction time, and weather-related delays. Currently, 11,500 vehicles pass over the bridge per day. Any construction will temporarily restrict vehicular flow over the bridge. Using conventional bridge construction one lane would remain open at all times using a signalized system but construction would take approximately 3 months. Using ABC would restrict all traffic over the bridge but a maximum closure time of two weeks is feasible. An assessment of the existing conditions of the bridge and the site along with a cost evaluation and considerations of public opinion will allow us to understand the feasibility of incorporation ABC into the project.

### **STS Thesis**

Zoning ordinances lay out how a city is developed. In most cases they are designed so the vision the city leaders have for the layout of the city can become a reality. “A zoning ordinance is a written regulation and law that defines how property in specific geographic zones can be used” (Kenton, 2018). Cities or regions are divided into zones and in these zones the city defines the land uses allowed or prohibited. Zones are typically classified under three categories: residential, commercial, and mixed use. In a more basic sense, it is an attempt by the city to structure neighborhoods and separate residential properties from commercial. Zoning ordinances are not perfect and as a result are constantly changed. This creates tension between landlords and tenants

because the landlord has the power to petition for a zoning change on their property, potentially forcing the tenants to relocate.

In 2003 the City of Charlottesville passed a new zoning ordinance that featured new university specific zones near grounds. University High Density (UHD) is one of the university specific zones included in the ordinance. UHD is defined as " areas in the vicinity of the University of Virginia in which high-density residential developments, including multifamily uses, are encouraged" (Residential Zoning Matrix Update, 2010). This can be seen in the Figure 1 below. These zones enable the expansion of the university by permitting construction of high-density apartment buildings. The UHD zoning has allowed for the development and construction of the Brandon Avenue redevelopment. The redevelopment is an attempt to make a model green community by creating a green urban space where students and faculty will live, work, and learn. The vision of this green urban design is to create a culturally vibrant, happy, and inclusive community within the university. However, in the process of procuring this redevelopment the university demolished all of the existing property it owned on Brandon Avenue, forcing the residents to leave, and also petition the city to vacate all its public interest in the avenue. Since the 1970's UVA has been purchasing the lots on Brandon Avenue. They have been successful in acquiring all of the properties with the exception of two privately owned properties. The two non-UVA properties on Brandon Avenue are currently still standing through the ongoing construction.

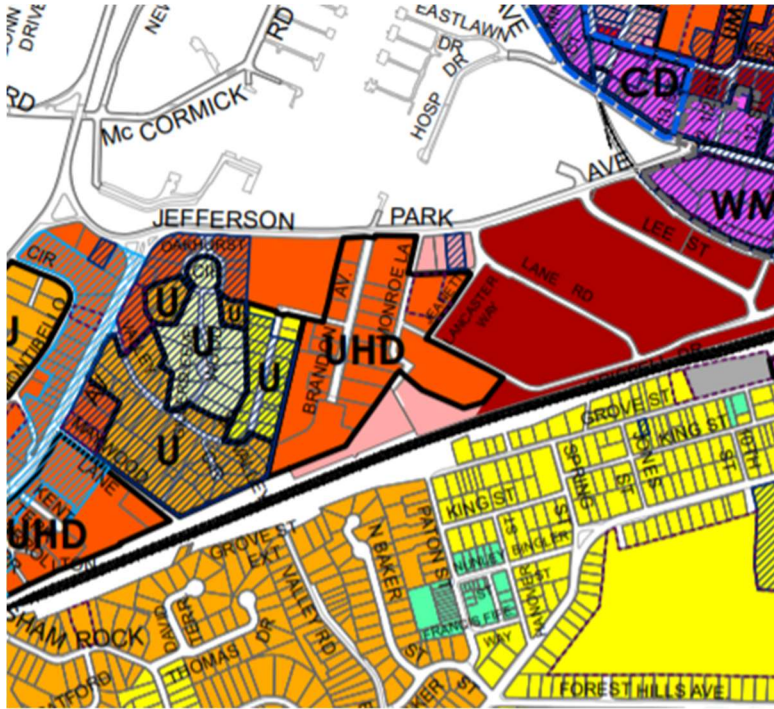


Figure 1: Brandon Avenue Zoning Map

My research question is focused on the power dynamics between UVA and the local community in the redevelopment plan of Brandon Avenue, and the level of influence such power dynamics has generated on the residents of Brandon Avenue. I am interested in the following questions:

1. Who represents and supports the university's interest in negotiating the redevelopment?
2. Who represents the community's interests? What prevents the neighborhoods voice to be heard?
3. What is the role of the city government in this matter?

With this research I hope to find places residents can intervene in redevelopments so that the nature of the procurement of the Brandon Avenue redevelopment does not set the precedent for future developments by the university. In a larger scope, I hope that this research will shed light on the

underlying problems of redevelopment and help me understand how to mitigate the gentrification that comes with redevelopment.

### **STS and Research Method**

This project will use Value Sensitive Design (VSD) and the Actor Network Theory (ANT) as frameworks to guide my research. Value Sensitive Design is a design approach which accounts for human values of all stakeholders in the design process. Actor Network Theory is the process of identifying all the stakeholders and the social forces between them. VSD and ANT are both paramount in understanding the relationships between the stakeholders but also forming a solution to the presented problem. Both of these frameworks help define the stakeholders and their roles. This will enable the identification of points to intervene to help create a balance of power among all parties involved.

To understand this power dynamic, this project will apply the following methods to collect the research data:

1. Document analysis: I will conduct the document analysis on the reports and policies of the development of the Brandon Avenue project and gather information about the existing properties on the avenue before construction. The Brandon Avenue Master Plan, City Council Agendas, and Charlottesville GIS proved to be useful resources for finding this information. I discovered that the university demolished three university owned apartment buildings to allow for the redevelopment, and excluded the three privately owned parcels on Brandon Avenue from the redevelopment. Looking through the City Council Agendas led me to evidence of

community outreach by the university regarding the redevelopment and letters explicitly stating the private properties support of the closure of Brandon Avenue to allow for the redevelopment.

2. Interview: To further investigate this I began interviewing David Broome, a resident of nearby Valley Rd. to gain further information about the university's community outreach efforts. I plan to interview representatives from the UVA Office of Planning, non-UVA residents on Brandon Avenue, and members from the city planning department. I had some suspicions regarding the letters from the property owners as they all stated "The vacation of Brandon Avenue will not create an inconvenience for our property" (City Council Agenda, 2017). The apparent reason for the properties cooperation appears to be the perceived benefit from the redevelopment. To investigate this, I have begun to research the social impacts of eco-innovations, specifically which parties stand to benefit from projects.

In order to progress further in my research I need investigate records of community meetings to gain more insight into the extent of the university's outreach, reach out to the property owners on Brandon Avenue to learn more about their input in the redevelopment, and further research the social inequity associated with eco-innovations to understand the risks presented to the non-UVA properties.

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