

Appendix E – Health Data

I-91 Viaduct Study: Key informant Interview Summary

Specific Aims

We sought to assess the evaluation criteria that are being used in the I-91 viaduct study to explore if those criteria are relevant to community members who would be affected by the proposed viaduct alternatives. Our objectives are twofold.

- a. **Improve community engagement methods employed for the I-91 Viaduct Study and for future transportation studies:** By including stakeholders' suggestions of how to improve the community engagement process for the I-91 Viaduct Study we hope to provide MassDOT with opportunities for enriching stakeholder engagement in future projects.
- b. **Examine the I-91 Viaduct evaluation criteria for community relevance:** We sought stakeholder perceptions around 5 groupings of evaluation criteria in order to ensure that the alternatives analysis includes the community voice. Interview questions focused on how the interviewees understood the relevance of the 5 evaluation criteria buckets to the community:
 1. Mobility and Accessibility
 2. Safety
 3. Environmental Effects
 4. Land Use and Economic Development
 5. Community Effects

Methods

This is a qualitative examination of key informant stakeholder interviews primarily intended to provide feedback about transportation studies in Massachusetts. University of Massachusetts students participating in a Health Impact Assessment class interviewed 11 people during March and April 2016. The interviews were on the phone and the students' were provided with a uniform script by the class instructors. The students asked the interviewees if they were comfortable being directly quoted and identified. All interviewees responded affirmatively. Staff at the Massachusetts Department of Public Health reviewed the interview notes, summarized emergent themes and wrote this report.

Study subjects/population

The population of interest includes anyone who is familiar with Springfield's ecosystem and health-related issues. Each of the key informant interviewees represents an organization whose goal in some way relates to improving the health and wellbeing of Springfield's residents. This purposive sampling could lead to an over emphasis of the interviewees' specific area of expertise and may not be representative of the lived experience of all Springfield's residents. The subjects included community residents, city employees of both Springfield and West Springfield, and representatives from volunteer organizations, coalitions as well as community health centers and hospitals. Organizations that were represented in the interviews included:

- Arise for Social Justice and Springfield Climate Justice

- West Springfield Health Department
- Pioneer Valley Asthma Coalition Manager
- Springfield Bicycle / Pedestrian Group
- City of Springfield South End Public Safety
- Caring Health Center
- HAP Housing (CDC)
- City of Springfield
- Live Well Springfield
- Baystate Health

Recruitment Strategies

Due to time constraints, the University of Massachusetts class instructors (which include staff from the Massachusetts Department of Public Health and Partners for a Healthier Community; the public health institute for western Massachusetts) identified interviewees based on knowledge of Springfield-area organizations that routinely work on related issues and/or represent community issues that align with MassDOT's investigation of the I-91 viaduct.

Interview Guide and Codebook

We developed a semi-structured interview guide found in this document's appendix. Based on the evaluation criteria matrix that MassDOT has been developing for their consultants Milone and MacBroom the below topics are included in the interview guide:

- Description of the 5 topical issues identified in the evaluation criteria,
 1. Mobility and Accessibility
 2. Safety
 3. Environmental Effects
 4. Land Use and Economic Development
 5. Community Effects
- Appropriateness of the issues to Springfield,
- Vulnerable populations, and
- Public engagement process in the I-91 viaduct study

Interviews were not recorded. Prior to asking the interview questions, the students were provided a script describing the 4 different alternatives being considered at the time the interviews took place. This provided a context through which the interviewee could then begin to answer the interview questions. The students then asked questions in the interview guide to all interviewees and took notes to record as much of the interview as possible.

Findings

Describing the interviewees

Many of the interviewees have been active in the community around transportation-related projects and have varying areas of expertise and interest ranging from active transportation, environmental

pollution, health care delivery and public safety. This is evident both from the work that they do in the area as well as their responses to the interview questions.

Common Themes

Below is a word cloud of the interviews' text to provide a summary snapshot of emergent themes.



Additionally, a synthesis of the University of Massachusetts students' interview notes from the key informant interviews provided the following key themes:

- Access
 - Goods and services
 - Open spaces
 - Space for community Programming
 - Public Transit
- Connectivity
 - Strategic Placement of Resources
 - Bicycle and Pedestrian Infrastructure
- Safety
 - Perceptions of crime
 - Traffic-related injuries
- Environmental Quality
 - Air Pollution
 - Noise Pollution
 - Focus on Housing and Schools
- Vulnerable Populations

- Children
- People of Color
- People with pre-existing conditions
- Low-Income communities
- Economic-Implications
 - Housing Units created/destroyed
 - Jobs
 - Cost of the Project
- Community Engagement
 - Media is not enough
 - Meet people where they are at

The following describes how the stakeholders specifically called out each theme and gives a brief explanation of what was meant.

Access:

Interviewees highlighted the overarching connection between access to community resources and residents meeting physical activity guidelines. They also discussed how access to various community assets could have other co-benefits.

Access to goods and services

Specifically, stakeholders identified the economic benefit of bikeable environments on local business. One respondent said, that biking and walking infrastructure...

... can cause business [es] to see an increase in customers. Those who now have an easier route to reach these businesses are likely to use them more frequently... for times when the weather permits, this can save money on transportation.

Not only does this imply that local businesses will see an increase in business, but the average consumer would have a cost savings associated with the improved infrastructure. This was also highlighted when one stakeholder said, “Shopping – it would create more shopping opportunities and retail.”

A very important service that should not be overlooked is health care. One stakeholder suggested that through the alternatives assessment, there should be a discussion about how residents would be able to access the hospital and health care clinics.

Access to open spaces

Access to quality open spaces has been shown to have health benefits. Historically, the river has been difficult to access and therefore not enjoyed as a resource by many of Springfield’s residents. In fact one resident noted that the river wasn’t much to see. That being said, access to open spaces was included in almost all of the interviews as an important consideration. In particular, interviewees emphasized needing to access the waterfront easily and noted that the river’s identity is totally limited by the highway. Many stakeholders expressed excitement

about the possibility of opening up connections to the river and described how the connections to open space will have positive health benefits. However at least one interviewee noted concern that any type of raised viaduct being considered for future designs would limit access to the river.

Space for Community Programming

One stakeholder suggested that the I-91 plans ought to provide open space venues for community programming. This could lead to positive impacts for the social connectedness of residents.

Public Transit

Improving public transportation was a repeated theme in the stakeholder interviews and rose as a fundamental issue that the I-91 project should take into account. One specific stakeholder called out the access to healthcare facilities via public transportation as a needed component of the alternatives assessment.

Connectivity:

Bike trails, hiking trails,[the] I-91 project could be the centerpiece for other expanded [connectivity] initiatives.

Generally speaking stakeholders noted that connectivity should be a major element to the I-91 project. Specifically, stakeholders called out how the I-91 project could have very specific impacts on the biking and walking infrastructure and how that infrastructure tied to larger transit systems. Historically, highway projects have changed the fabric of some Springfield neighborhoods and there was a sense that residents would like to mend those neighborhoods' connections where possible.

I-91 does bisect the North End in particular and those neighborhoods... As I look up and down Springfield where I-91 is, I think I like the underground notion. As it allows those communities to be knitted back together.

When the city has greater connectivity, it could have implications for quality of life, access to open spaces, social relationships of residents, and economic development. However, it was noted that for there to be real change, there would have to be “transformative” change and the I-91 project provides an opportunity for that.

Strategic placement of resources

Placement of parking that strategically supports visitors and residents of Springfield getting physical activity. For instance this would include parking placement to emphasize the opportunity to make one stop in the car and visit multiple locations by foot once the car is parked. Additionally, one stakeholder emphasized the role that the train and bus systems could play in connecting Springfield's residents to a larger transit system.

Bicycle and Pedestrian Infrastructure

Right now, Springfield around the I-91 viaduct is “not pedestrian friendly at all” as many stakeholders highlighted a need for Springfield's transportation system to include walkable and

bikeable networks. In other words, barriers to bicycling and walking need to be considered regarding the connectivity of I-91 plans. One stakeholder explicitly called out creating a pedestrian zone as a great way to make needed connections.

Safety

Perceptions of Crime

Stakeholders identified the perception of crime as a potential impact and discussed “getting rid of obstruction and dark corners that I-91 creates allow[s] you to control crime better.” While stakeholders did not focus as much on this issue as on others, possibly reflecting a bias in the sample, there was a general theme that crime needs to be considered as a component of transportation design and development.

Bicycle and Pedestrian Infrastructure

When increasing the number of bicycle and pedestrian infrastructure features safety (from injury) needs to remain in the forefront of the evaluation criteria. This was an understanding throughout the interviews.

Environmental Quality

Air Pollution

Air pollution was heavily emphasized by the interviewees. Several themes emerged with one respondent skeptical that the proposed changes would make much of a difference to air quality in the city – specifically in targeted neighborhoods where exposure is significant (such as the North End). One respondent also noted that they would only be able to support proposed changes if actual concentrations of pollutants were measured and models developed to show what the predicted change would be.

Noise Pollution

Many of the stakeholders suggested that noise was a major health concern when considering the various alternative designs for I-91. One stakeholder called out the noise pollution of the train that runs near the I-91 primary study site and suggested that the designs of I-91 should incorporate some noise mitigation.

Focus on Housing and Schools

The impact of housing and schools were specifically articulated as being areas to include in the analysis regarding the exposure to air pollution.

Construction Mitigation

While not a repeated theme at least one respondent noted the concern with impacts, especially to vulnerable populations, related to air quality and noise during the construction period of any major change to the viaduct. It was noted that multiple years of disruption and added stressors to vulnerable populations may outweigh positive changes when construction is completed.

Vulnerable Populations

The interviewed stakeholders all expressed concern for the people who are most geographically proximal to the roadway. There was specific recognition of people in areas of lower income, people who are the oldest and youngest of Springfield's community, and people of color. Additionally, there was explicit mention of people with pre-existing conditions, refugee / immigrant communities, and communities with lower education levels. As a take-home message, equity was a common theme. The interviewees want to see explicitly who will benefit the most and who will be harmed the most by any proposed change.

Children

Generally speaking, children were identified as a vulnerable population that are harmed most by existing conditions and that could benefit from changes.

Minorities

Many stakeholders mentioned that communities of color should explicitly be included in the evaluation of the various alternatives.

People with pre-existing conditions

It is self evident that people with pre-existing conditions should be included in a definition of vulnerable people. Multiple stakeholders called them out as needing to be included in the alternatives analysis. Additionally, stakeholders identified the need to assess the universal accessibility of the various alternatives. One respondent noted that a criterion for alternatives could be to answer the question: *will the changes help someone with asthma?*

Low Income

Low-income populations are vulnerable to existing conditions related to I-91. Many of the stakeholders mentioned that the alternatives assessment ought to include consideration of those from low-income areas of the community. This is not just limited to geographic proximity to the road but it also includes how those people access community resources.

I think in general low-income populations in the city would be most significantly impacted primarily because the transportation system would be disrupted as well as some of those changes are right in the middle of low income neighborhoods. Since the public transportation is primarily used by low-income, there is a significant negative impact.

Geographical vulnerabilities

Respondents repeatedly focused on the isolation of the North End that I-91 has created. This isolation is felt economically and physically and is where the most health related benefit could occur if changes were made to I-91 that reduced or eliminated that isolation. Additionally, the South End was noted as an area of the city that is especially vulnerable to air pollution and noise due to its' proximity to I-91.

Economic Implications

Housing Units created/ destroyed

One stakeholder mentioned that the city has a poor historical record of replacing any removed/housing units effectively. Therefore, there was mention of the need to ensure that the alternatives analysis includes the effect on the number of housing units.

Jobs

One stakeholder mentioned that the number of jobs affected during construction could be looked at with a couple different lenses. 1) The number of highway workers employed during construction and 2) the time that businesses would need to be closed due to construction obstruction. There was some skepticism that any change to I-91 would have a causal positive effect on job creation.

Cost of the project

Stakeholders suggested considering the costs of the project for the life cycle of the project rather than just for the construction costs. One stakeholder suggested that if I-91 “wasn’t elevated, it would be a lot less expensive. Right now it has to be worked on every 25 years or so and that costs millions of dollars.” Additionally, a different stakeholder suggested weighing the costs to other initiatives that could improve health outcomes, i.e. is there another way to be spending this amount of money that would improve people’s lives?

Community Engagement

Overall, stakeholders mentioned that the community engagement for the I-91 Viaduct study was suboptimal. Below is a list of the comments around the outreach:

“[I] only heard about a few meetings because of a colleague and then in the end it was cancelled.”

Some stakeholders highlighted that the community engagement process should be modelled after initiatives like the GoBoston2030 campaign that includes a year-long community engagement listening process.

Media is not enough

Many stakeholders discussed the use of media as an outreach tool. Some stakeholders specifically called out the I-91 study website as not being sufficient for getting the word out about public meetings.

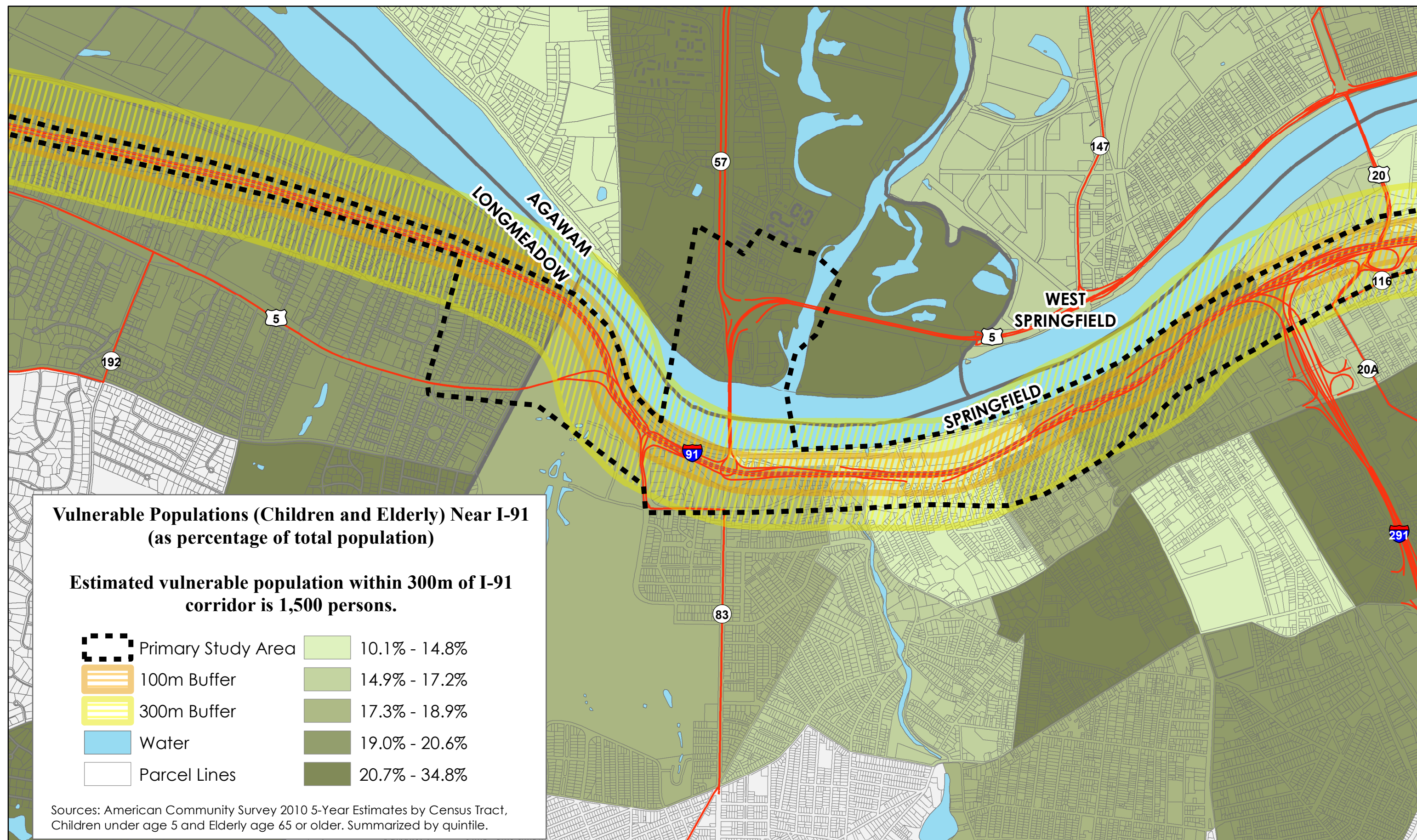
Meet people where they are

An overarching theme that emerged about how to perform better public outreach is the notion of “meeting people where they are.” Many interviewees identified the need to partner with community organizations to reach their networks. Other stakeholders suggested that there should be a door knocking campaign to talk to people who would have otherwise not heard about the meetings and have missed the opportunity to learn about the process.

Major Takeaways

The following are key take away points for MDPH and MassDOT to consider for the I-91 project and for future studies:

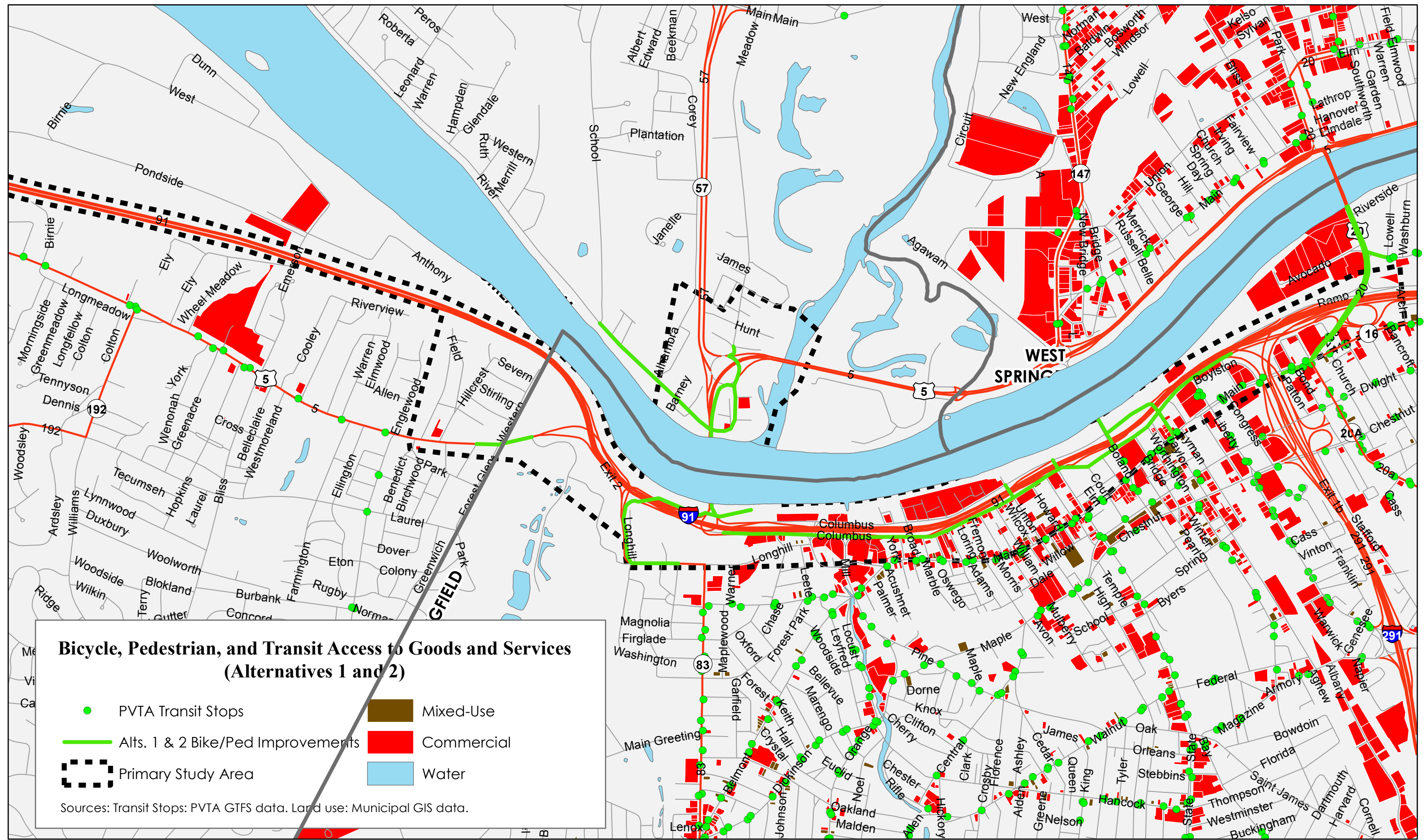
- Community engagement needs to focus on representation of the community and neighborhoods that are most likely to be impacted by the decisions being considered. Different methods of engagement should be considered.
- Equity issues should be a central concern. Explicitly this means the transportation study should have a goal of reducing inequities that are a result of current conditions. In the context of I-91 this means focusing on neighborhoods such as the North End and describing explicitly how changes will improve conditions in that area of the Springfield. This implies that equity be thoroughly examined through the alternatives analysis and the transportation study process as a whole.
- Proposed changes should be transformational: to increase opportunities for walking/biking, to make the river more central to life in the City and to reduce exposures to pollutants will require big changes, big ideas and good community engagement.



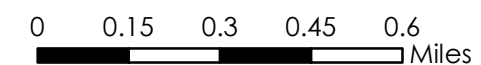
Primary Study Area Air Quality

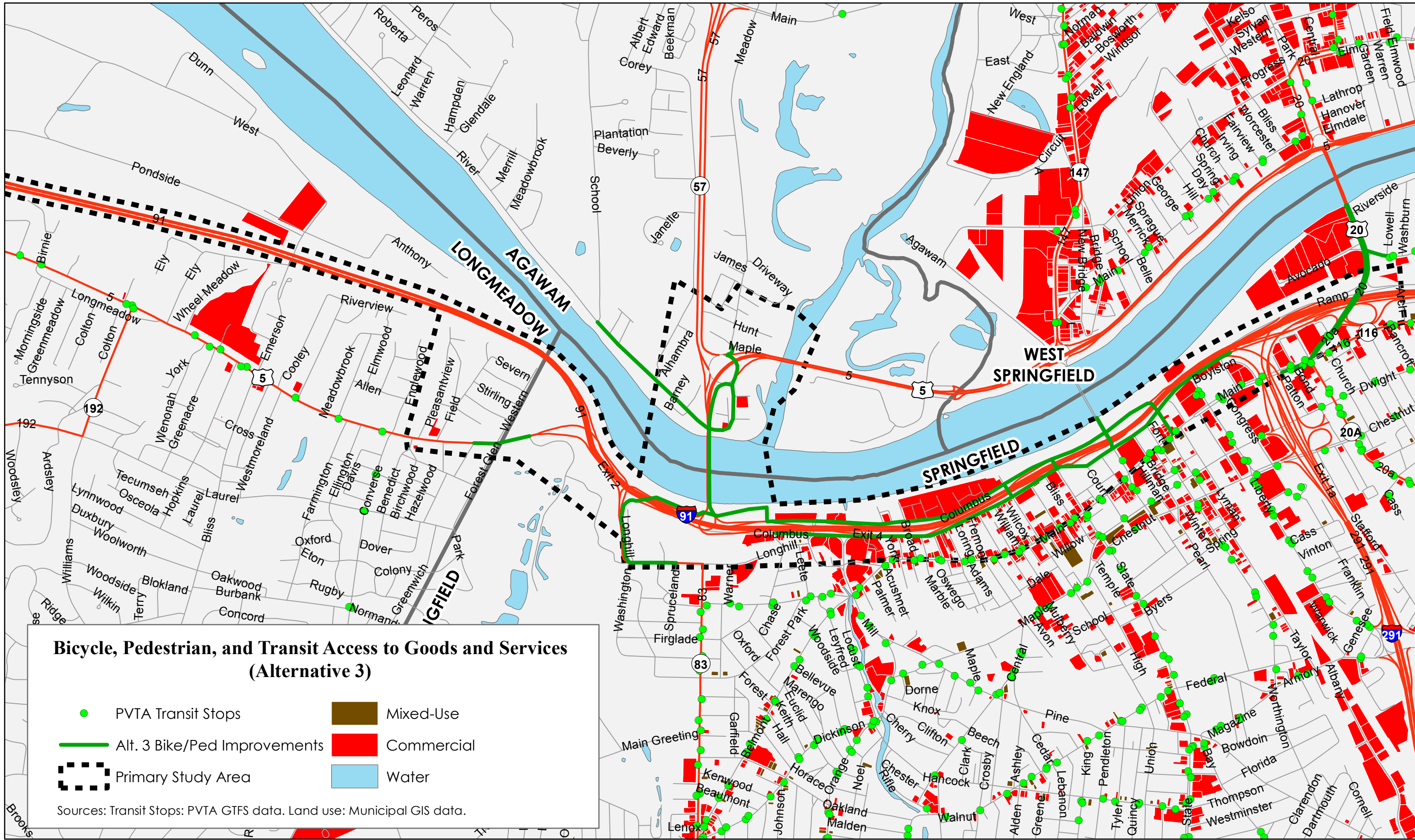
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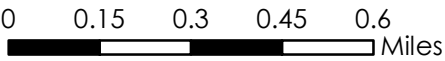


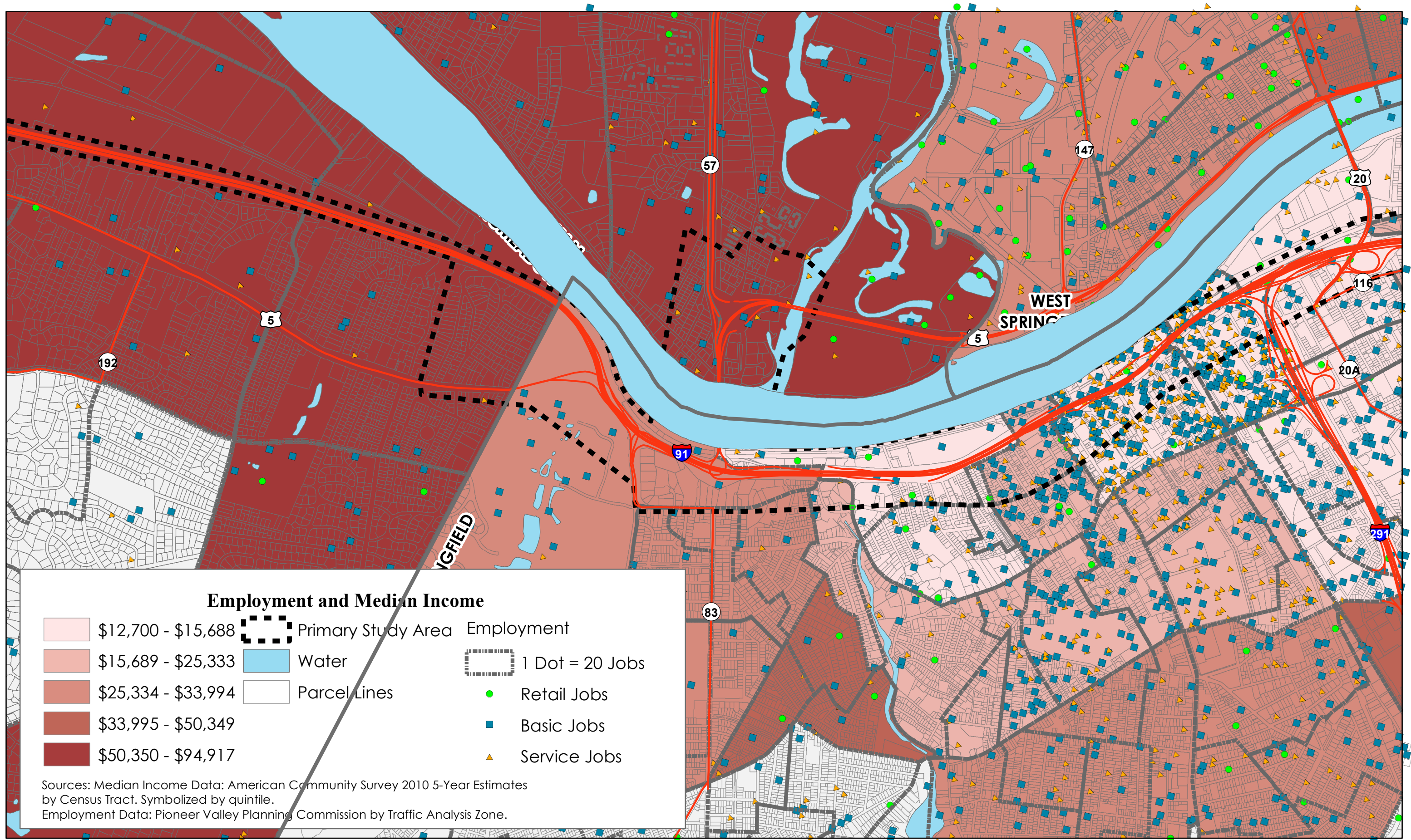
Primary Study Area Bike/Ped/Transit Improvements





Primary Study Area Bike/Ped/Transit Improvements

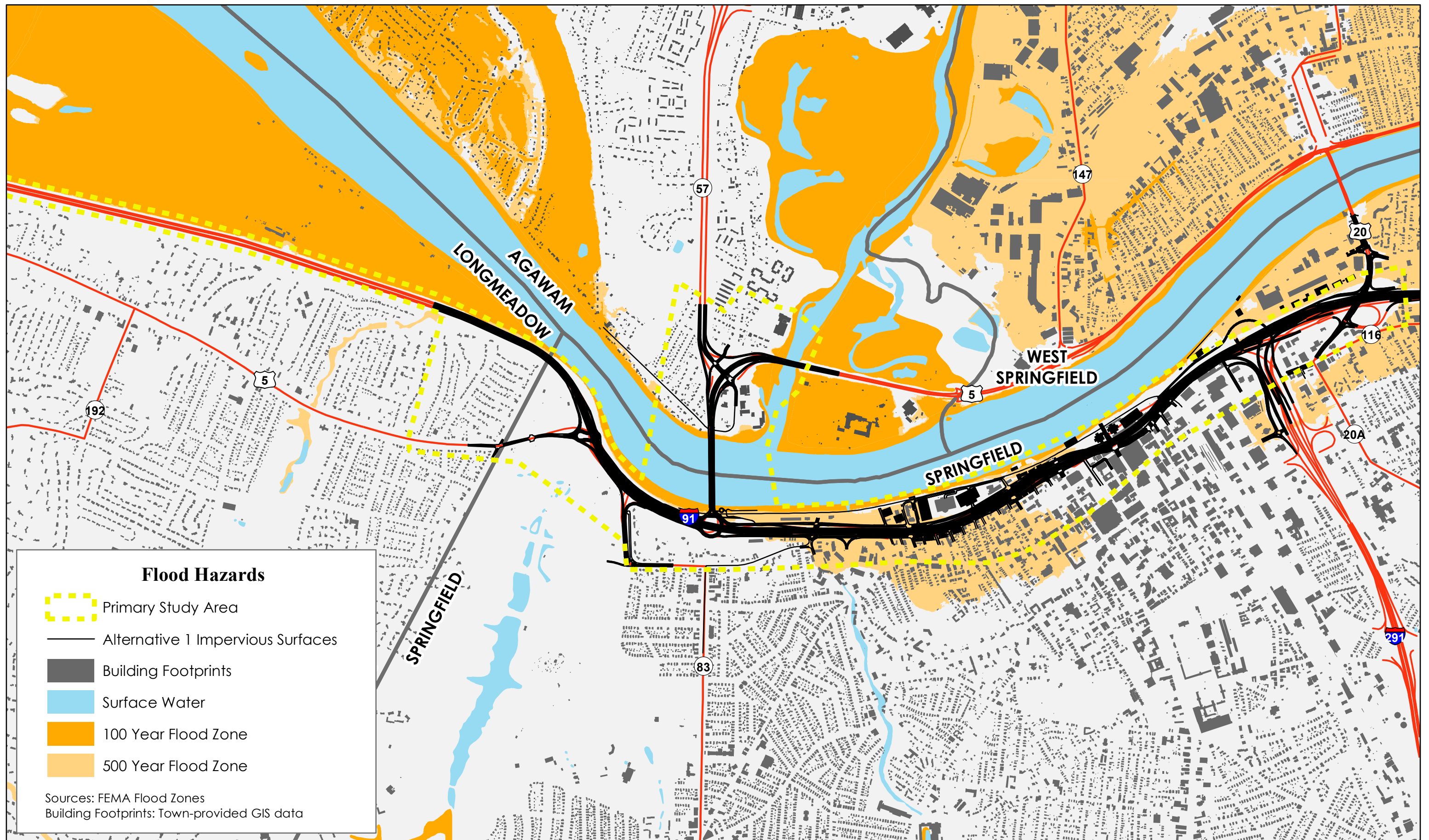




Primary Study Area Employment

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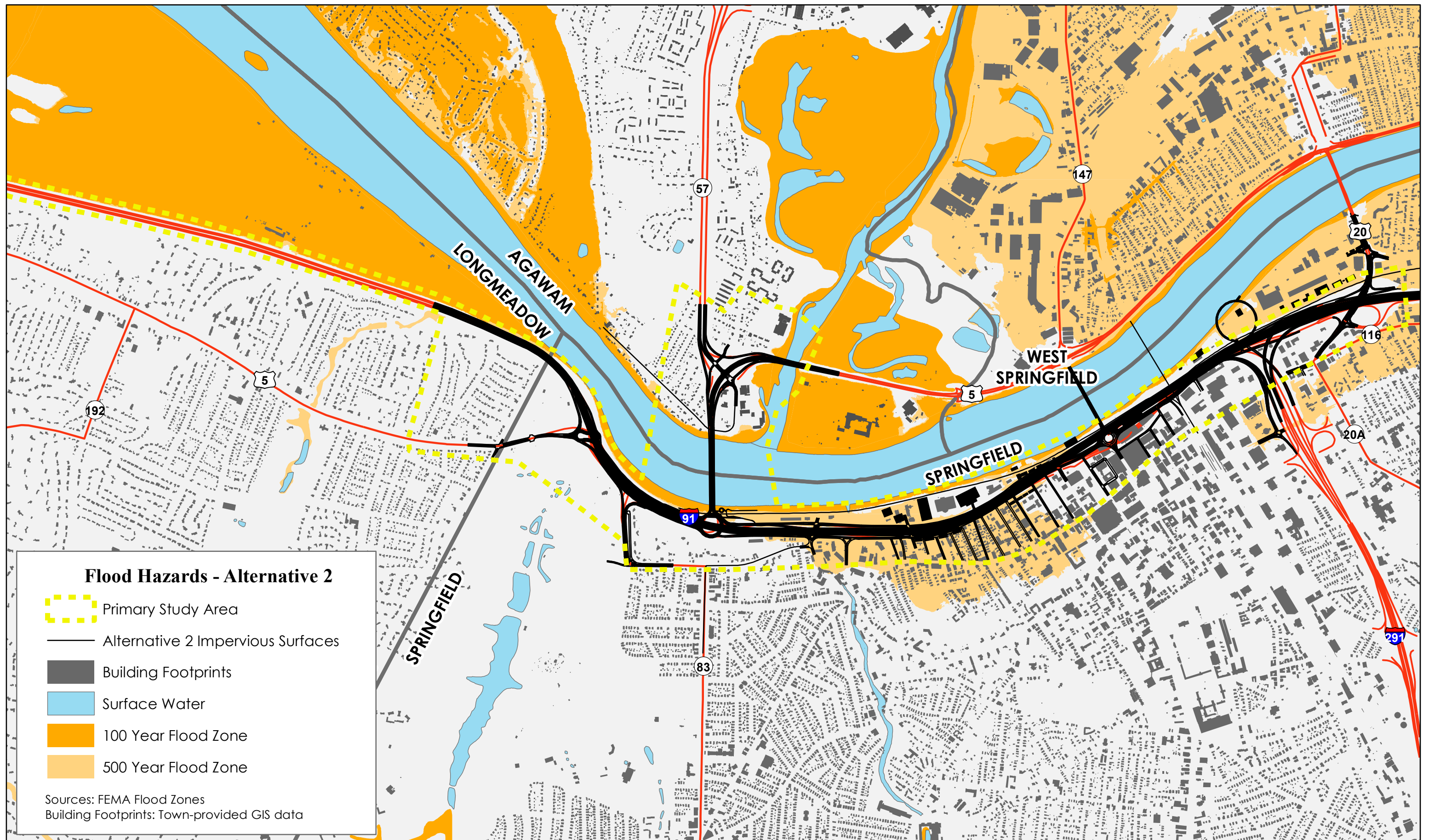




Primary Study Area Flood Hazards

0 0.15 0.3 0.45 0.6 Miles

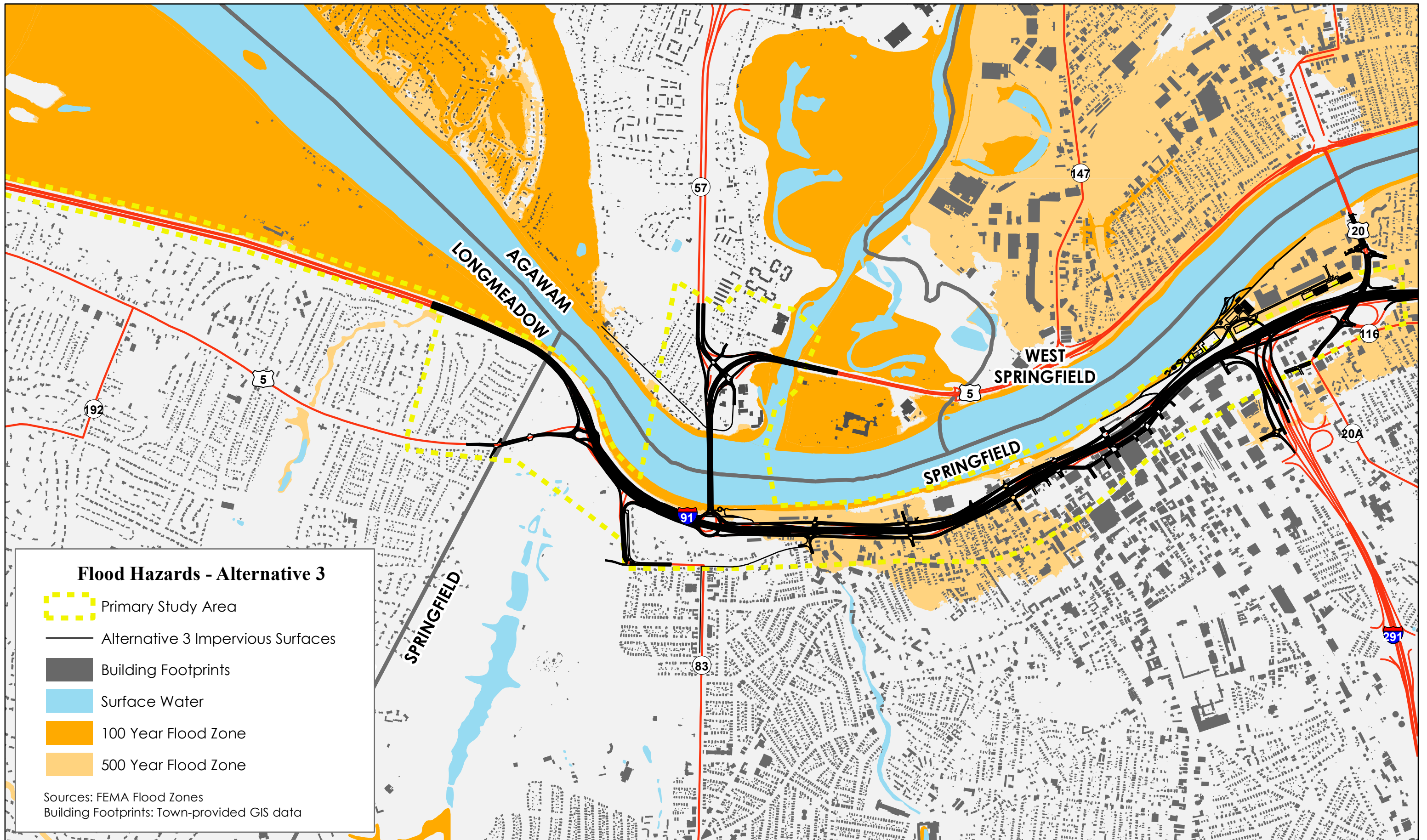




Primary Study Area Flood Hazards

0 0.15 0.3 0.45 0.6
Miles





Primary Study Area Flood Hazards

0 0.15 0.3 0.45 0.6
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