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Improving Access to Trails and Green Space: Brightwood Neighborhood, Springfield, Massachusetts

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Improving Access to Trails and Green Space

Brightwood Neighborhood, Springfield, MA



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Improving Access to Trails and Green Space

Brightwood Neighborhood, Springfield, MA

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Fall 2021

I. Executive Summary

1.1 Purpose and Need

Accessibility has been an issue with the Connecticut River Walk and Bikeway (River Walk) since its completion in 2003. Our project focuses on designing better connections between this Springfield, MA rail trail and the local environmental justice communities it is meant to serve. As a team of four undergraduate design students, we have spent three months conducting a comprehensive research study on the trail. Ultimately, we will be turning over our research to the Appalachian Mountain Club which intends to use it for reference in their efforts to secure funding for improving River Walk access in the city of Springfield.

1.2 Study Background

As part of an undergraduate design studio class under the instruction of Professor Michael DiPasquale, our team conducted extensive research on the Connecticut River Walk and Bikeway. Looking through the lens of equity, we identified a cogent lack of access to this rail trail from the Brightwood neighborhood, to which it runs parallel.

Similar environmental justice issues in Springfield have been studied by UMass students in the past, such as “Making Connections — Envisioning Springfield’s North End,” and *Healthy Place-Making: Revitalizing Springfield’s Medical District*, completed in graduate urban design studios in 2009 and 2019, respectively. Our work this semester builds upon these previous studies, while also delineating itself through our focus on the River Walk specifically.

1.3 Goals and Objectives

Our study consists of four parts: research, community engagement, design solutions, and deliverables. Much like a traditional planning project, these objectives were completed in a partially chronological fashion. Our approach consisted of overlaps between each component — as much as our research informed our engagement, what we learned from our engagement also informed our research, and so on.

With the ultimate goal of providing the Appalachian Mountain Club with a wealth of information supporting the need for funding for improvements to the Connecticut River Walk and Bikeway, our team combined the results of our research, engagement, and design into this document: our deliverable for the project.

II. Research Findings

2.1 Study Area

2.1.1 Regional Study Area

The region we investigated was located in Southwestern Massachusetts in the Pioneer Valley which spans Hampden, Hampshire, and Franklin counties. At a finer scale, our focus fell specifically within the city of Springfield's Brightwood neighborhood. Although we focused on this neighborhood, the larger picture our research will contribute to is the regional connectivity of active modes of transportation from Longmeadow through Springfield and then up to the Northampton/Amherst area.

Springfield, MA is a post-industrial city located along the Connecticut River and is home to roughly 150,000 residents. In the late 19th and early 20th centuries, Springfield was a hub of manufacturing and industry, however, many companies have since closed their doors or moved to areas better suited to their needs. The exodus of industry in Springfield, as is the case in many post-industrial cities, left a gaping hole in the local economy, causing many people to experience poverty and food insecurity. Today, the city continues to experience many of the challenges that arose from the flight of the manufacturing sector in the 20th century.

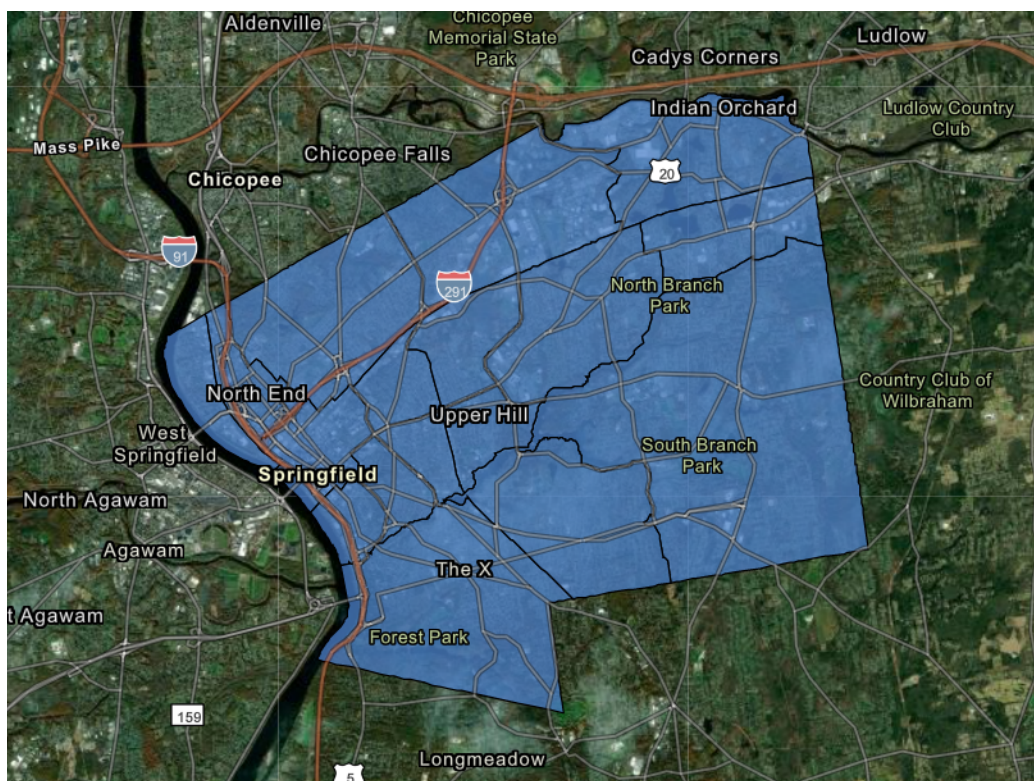


Figure 1. City of Springfield, Massachusetts

Springfield is home to a relatively diverse population of residents with roughly 40% identifying as Latino/Hispanic, about 20% identifying as Black, and about 30% identifying as White. As of 2019, the median household income for the city was nearly \$40,000 which is about \$20,000 less than the national median. Additionally, the poverty rate in the city is about 27% compared to the national average of roughly 11%.

2.1.2 Primary Study Area

The Brightwood neighborhood is located near the North End area of Springfield, adjacent to the Eastern side of the Connecticut River. It is a residential area, measuring a total of 234 acres, and in 2019 had a population of 2,469 people and a total of 897 households. It is also an environmental justice community (see section 2.6).

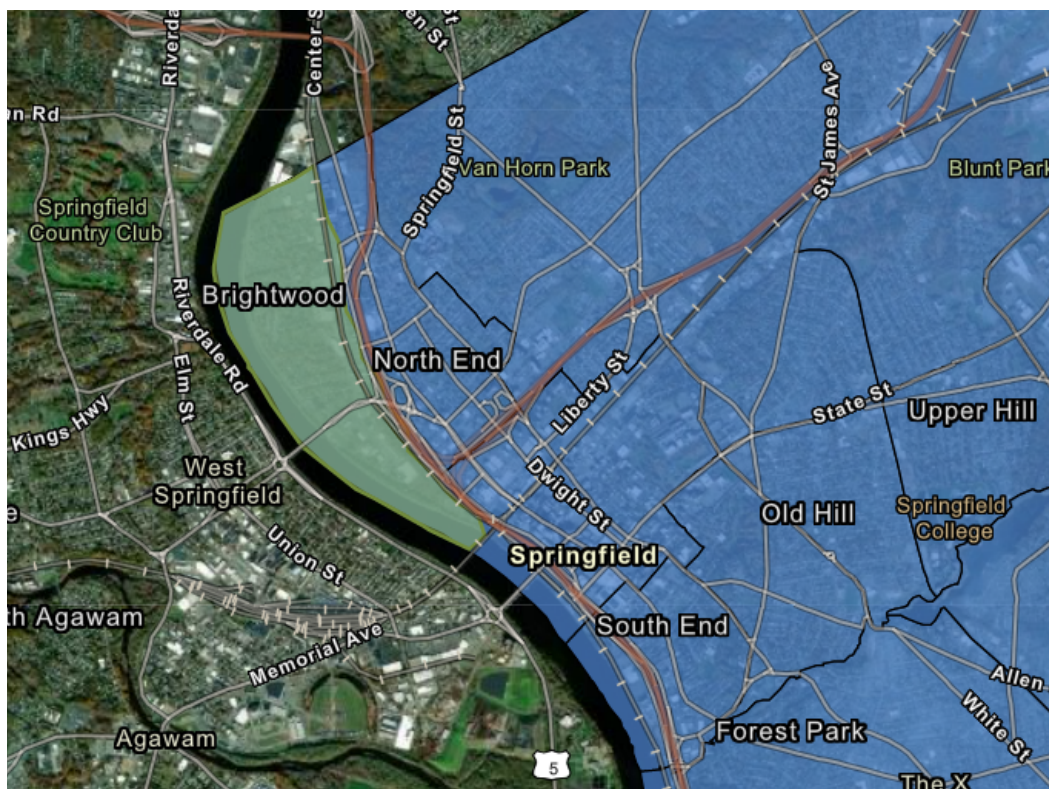


Figure 2. Brightwood neighborhood (Springfield, MA)

The topography of the neighborhood is important for understanding the access issues regarding the River Walk. Brightwood is at constant risk of flooding, as evidenced by the floodwall running along the Western side of River Road. This flood risk was visualized in the 2009 study “Making Connections - Envisioning Springfield’s North End,” as seen in the below map:

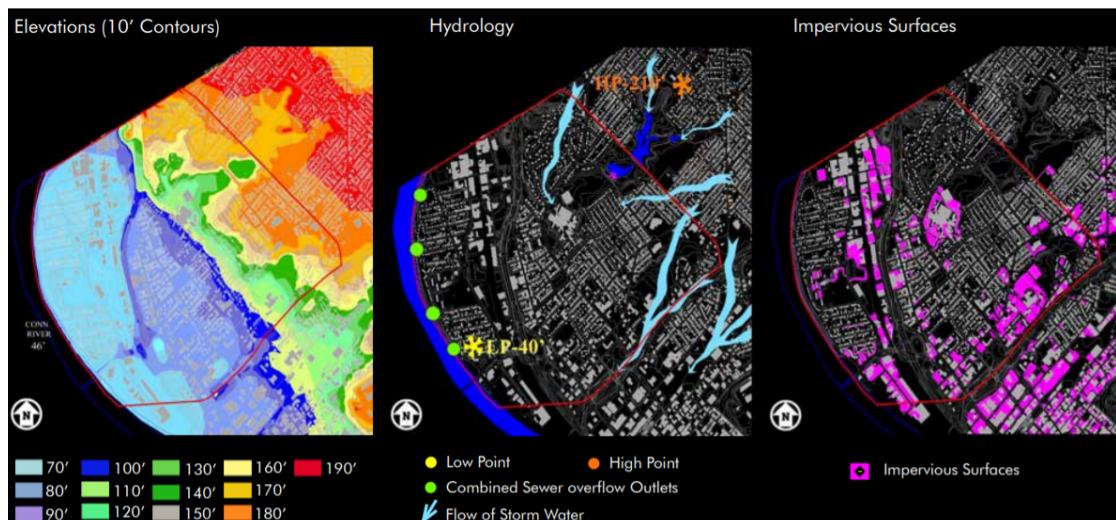


Figure 3. Topography, hydrology, and impervious surfaces in Brightwood

2.1.3 History

Brightwood developed as worker housing for Wason Manufacturing Company. The company was founded in 1845 by Charles Wason and made passenger coaches and streetcars during the 19th and early 20th centuries. Because of the location of the railroad, the company was able to manufacture the coaches and put them right onto the tracks, shipping them anywhere in the country. The company was forced to close down in 1932 due to the great depression.

In 1936 and again 1938 the area was devastated by floods. Even after the flooding was gone, debris and trash littered the area. Due to the loss of the Wason manufacturing company and the devastation left by the floods, the area was in major economic decline and was considered a slum. This led city planners to take action. An urban renewal plan was introduced in 1968 that would rezone much of the area for industrial uses and in this process, entire neighborhoods were demolished. Highrise apartment buildings were added to enforce urban development, a huge contrast to the workforce housing that existed there previously. Also in the 1960s, the construction of I-91 divided North End in half, cutting off Brightwood from the rest of Springfield. In the 1980s, zoning once again focused on industrial and commercial uses. Unlike the industrial uses of the 19th and early 20th century, huge industrial buildings with large parking lots spread across the area leading to what is now the medical district. The rest of the neighborhood was developed as single-family homes.

2.2 Existing Conditions

2.2.1 Existing Land Use and Planning

Efforts to create the Connecticut River Walk and Bikeway began in 1992, when the Pioneer Valley Planning Commission (PVPC) began working with several cities adjacent to the Connecticut River to create what was originally intended to be a 21-mile contiguous bikeway, with the goal of revitalizing the Connecticut riverfront and improving the quality of life for the residents of the adjacent neighborhoods. This proposal included a plan for a rail-trail connecting through the cities of Chicopee, Holyoke, Springfield, Agawam, and West Springfield. The Springfield portion of the trail was completed in 2003, for a cost of \$3.4 million. However, it did not connect to the other proposed sections of the trail as many of them have yet to be built.

The length of the Springfield River Walk measures 3.7 miles, extending from its Northern terminus on Plainfield Street to its current southern terminus at the South End Bridge. Accessing the trail has been a prominent issue as there is no real entrance at the Northern terminus, and the Southern portion does not connect to the Agawam portion of the trail, which currently remains separate from what should be a contiguous trail. Other issues we were able to identify include the danger of a railway crossing, and heavy traffic surrounding the Southern terminus.

A group of surveys conducted in 2005 demonstrates what trail-goers perceive as the strengths and weaknesses of the Connecticut River Walk and Bikeway. *Figure 4.* & *Figure 5.* show the various frequencies of how trail users accessed the River Walk in addition to what they found to be most appealing about the trail.

Table II-2 – Travel Mode to Access the River Walk

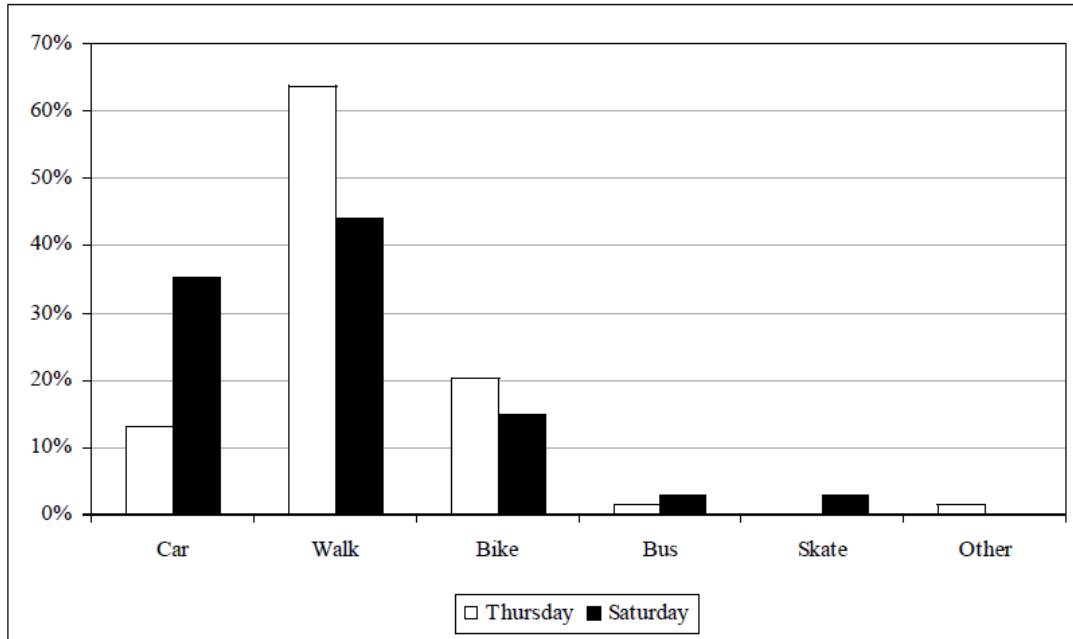


Figure 4. Travel mode to access the River Walk

Table II-8 – Best Aspect of the River Walk

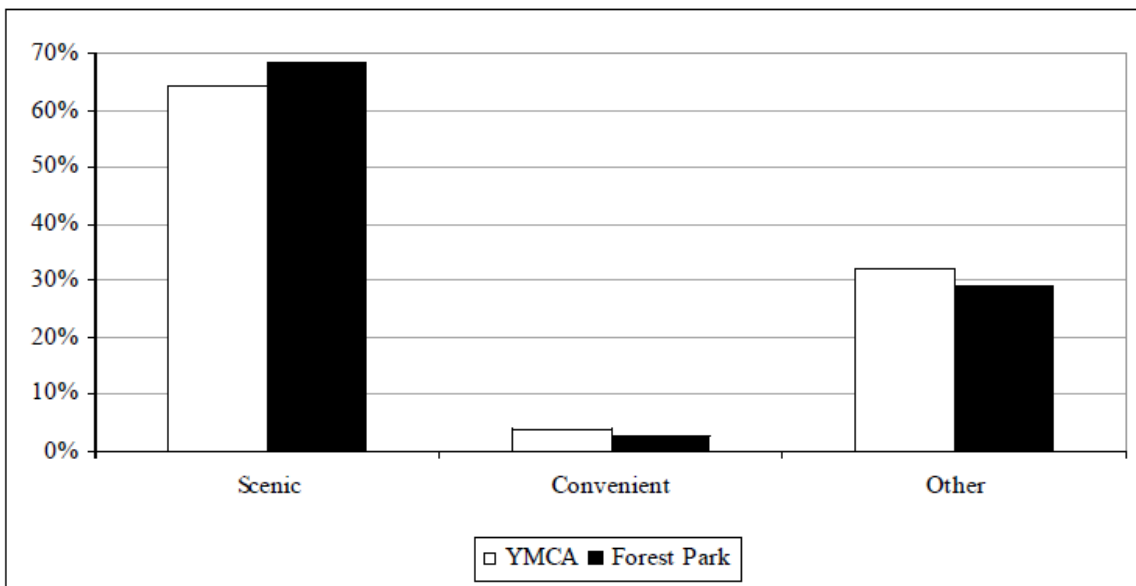


Figure 5. Best aspect of the River Walk

More recent survey data provided by the PVPC shows the current state of the trail's use. The Planning Commission conducts yearly surveys on attendance at either end of the trail. A 2014 study completed by the Commission in conjunction with the UMass Chan Medical School recorded the median daily usage of the Brightwood section at 70 people, while the median use of the Boathouse section (located to the South of the Brightwood section) counted 96 people. This 2014 data is bolstered by a survey from 2021, which identified peak monthly trail use in the month of August, with slightly less use in adjacent months.

2.2.2 Open Space

Springfield's Brightwood neighborhood contains an adequate amount of open space in addition to the River Walk, further distinguishing this as an issue of access as opposed to an actual lack of greenery. Principal Planner Scott Hanson commented that Brightwood is one of Springfield's most underrated neighborhoods. As shown below, Brightwood is not lacking in open space.

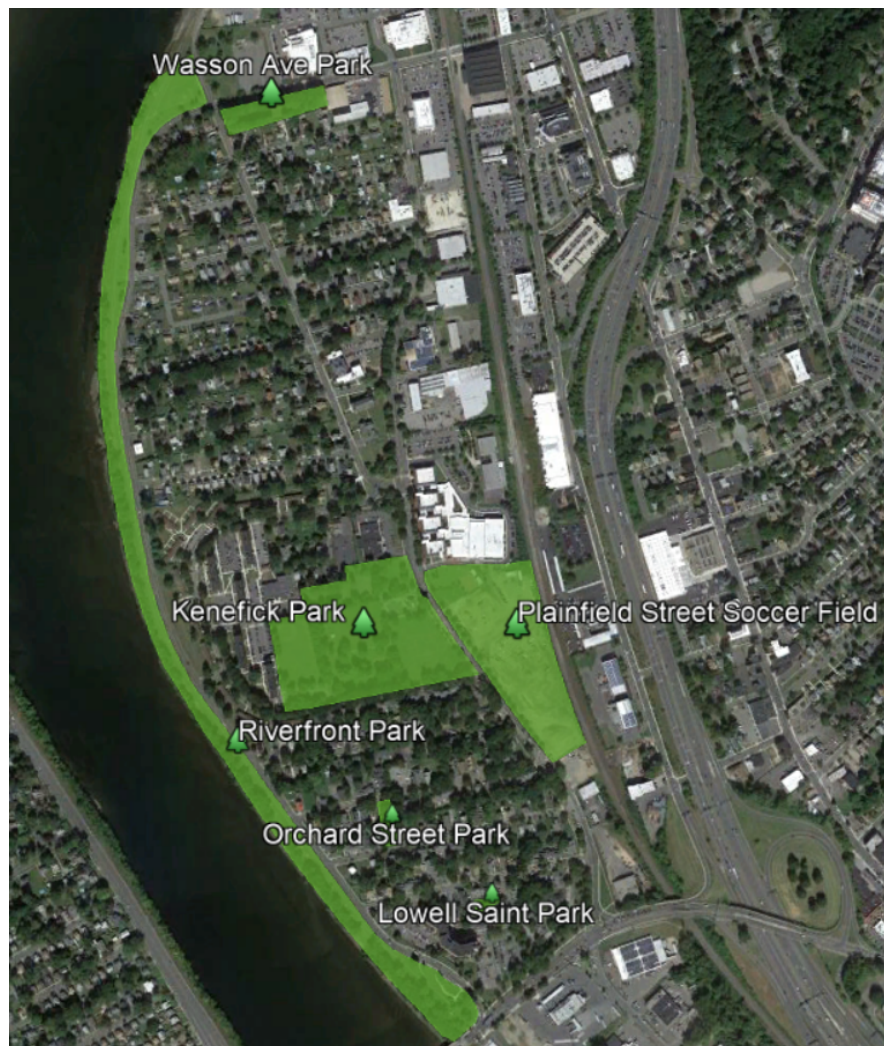


Figure 6. Green space in Brightwood

2.2.3 CT River Walk and Bikeway

In the early 1990s as part of an Urban Renewal Plan, the Pioneer Valley Planning Commission (PVPC) proposed a regional plan for a bike trail to connect communities from the Agawam/Longmeadow area through Springfield and to its northernmost point near Northampton. Construction started in 1993 and took roughly ten years to complete the Agawam and Springfield sections of the trail. In 2003, the Connecticut River Walk and Bikeway opened to the public. Since then, none of the other sections of trail throughout the Pioneer Valley have been completed to connect the proposed 21-mile long regional trail.

2.2.4 Physical Barriers

2.2.4.1 I-91

Interstate-91 (I-91) is a highway spanning the states of Vermont, Massachusetts, and Connecticut with its Southern terminus in New Haven CT, and the Northern terminus at the Canadian border in Vermont. The section which passes through Springfield was completed in the early 1960s being strategically placed to increase connectivity to central and downtown neighborhoods in the city. City planners also advocated for the construction of I-91 through Springfield with the belief that the interstate would bring economic development to the area and with intentions of cutting off the city from what was at the time a heavily polluted river. Since its completion, I-91 has dissected the city and much of the forecasted development did not happen due to the raised structural nature of the highway (compared to buried in tunnels). Additionally, neighborhoods in the North End, Downtown, and South End districts are largely disconnected from the rest of the city to the East. Conversely, much of the Eastern parts of the city are disconnected from the river. Numerous studies have been conducted to investigate the effects of I-91 on the economic and social development of the neighborhoods that it segregates from the rest of Springfield.

2.2.4.2 Rail Line

The Amtrak rail line runs parallel to the Connecticut River Walk and Bikeway. This railroad prevents access to the River Walk and Amtrak is resistant to creating new crossings across the tracks due to safety concerns. According to Springfield residents we spoke with, there is a current issue with children in the area crossing the tracks illegally. Creating designated paths to cross the railroad will direct pedestrians to safer, controlled modes to access the River Walk.

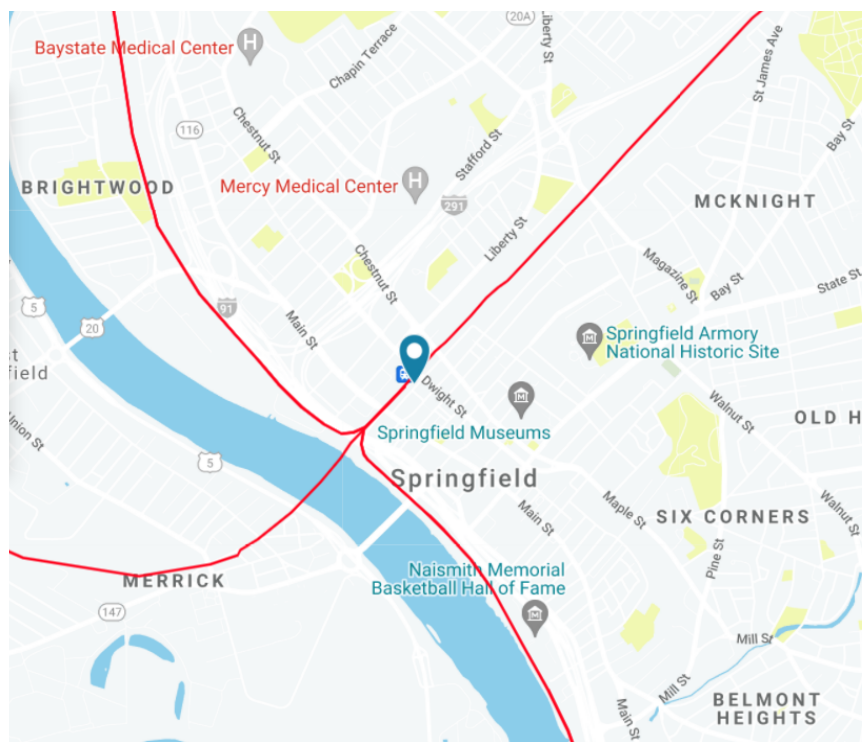


Figure 7. Amtrak railroad tracks

2.2.4.3 Flood Wall

The roughly 1-mile long flood wall that separates much of Brightwood from the River Walk is a point of interest for our group's research. The flood wall provides a crucial service to the North End communities, especially Brightwood which is the closest neighborhood to the river. Taking into account the two floods that occurred in the 1930s, this wall being where it makes sense and proves to be an efficient way of ensuring residents' safety and maintenance of their properties. However, as previously mentioned, the flood wall separates much of the Brightwood neighborhood from the River Walk, making it difficult for certain residents to access the trail.

As a research and design team, we investigated the flood wall and asked ourselves if it would be possible to modify it to increase accessibility to the trail from the adjacent neighborhoods. As we explored potential options, we spoke with former city planner Scott Hansen who informed us that the flood wall is a project overseen by the Army Corps of Engineers (ACE). The ACE provides maintenance and reviews and modifies the wall as they see fit. If any changes were to occur to the wall that would compromise its status as an effective flood control system, then the adjacent communities would have to purchase flood insurance which would likely be in the range of 3-5,000 dollars per year.

Considering the socioeconomic status of many Brightwood residents, having to pay an additional few thousand dollars per year simply isn't feasible for a neighborhood with a median household income of roughly \$24,000. The flood wall provides both environmental

and economic benefits to this community. This leads us to the conclusion that increasing access to the trail via alteration of the flood wall is not a realistic option for this community. However, we have researched alternative options to increase access to the trail which are outlined later in this document.

2.3 Environmental Justice Communities

2.3.1 Definitions

The Environmental Protection Agency of the United States has defined Environmental Justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies,”. An Environmental Justice (EJ) Community is one that meets specific criteria for lacking environmental equity. The exact definition and criteria for being an EJ Community vary by state, however, Massachusetts designates EJ Communities based on the presence of one or more of the following criteria:

1. The annual median household income is not more than 65% of the statewide annual median household income;
2. Minorities comprise 40% or more of the population;
3. 25% or more of households lack English language proficiency; or
4. Minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the statewide annual median household income.

2.3.2 Brightwood Neighborhood

The Brightwood neighborhood qualifies as an environmental justice community on three of the four criteria: income, English isolation, and minority status. The median household income of Brightwood is \$23,750, compared to the median household income for the entire city which is \$39,432.

2.4 Past Studies

The Brightwood Neighborhood, the adjacent North End, and Springfield as a whole have been studied regularly, both by the University of Massachusetts — Amherst, and various other planning groups. Pertinent past studies include:

1. Healthy Place Making: Revitalizing Springfield’s Medical District, 2019, UMass Amherst
2. Interstate 91 Viaduct Study, 2018, Milone & MacBroom, Inc.
3. Making Connections - Envisioning Springfield's North End, 2009, UMass Amherst

4. Springfield River Walk and Bikeway Survey, For the City of Springfield, Final Report, 2005, Pioneer Valley Planning Commission
5. Connecticut River Walk and Bikeway: Brightwood Neighborhood Assessment, n.d., Rails-To-Trails Conservancy

2.5 Community Engagement

2.5.1 Professionals

Scott Hanson: Principal Planner, City of Springfield

We met with Scott Hanson for a site visit with our research team and he walked us through some of the more nuanced information about the River Walk. We had previously communicated with him towards the beginning of our project, primarily through email, in order to get a feel for what has been discussed or worked on and what he may believe should be done. He explained the many issues with the location of the floodwall that borders the path as well as the consequences of altering the floodwall.

Frank Slegers: Landscape Architect

We met with Frank towards the middle of the semester to discuss possible design ideas for the River Walk as well as to inquire about Brightwood residents' relationship with the trail. One of our team members met with Frank to conduct an interview. During this interview, Frank mentioned a plethora of design possibilities as well as other ideas regarding the trail. Some of his ideas included:

- Connect the trail to West St. Bridge
- Connect the trail to Agawam
- Connect the trail to Forest Park
- Better inter-city connectivity
- Stairs over floodwall
- Guerilla design tactics

Frank also spoke on how many of these ideas have been previously mentioned/proposed, however, there are too many agencies involved with the trail, therefore, minimal work gets done. He mentioned how Springfield has pressure to upgrade this path yet many officials want to take it away and rethink the whole idea. Taking it down would only further upset the residents (as they are generally in favor of the River Walk) and cause "bad press" for the city.

2.5.2 Stakeholders

Brightwood Residents:

Our research team has been in email correspondence with some residents of Brightwood and the surrounding areas. The residents were very polarized in their responses to our team. We reached out to survey them on their general thoughts about the trail as well as any

suggestions for how to improve upon the trail. The majority of the residents met our outreach with distrust and aggravation. We later found out (from resident Frank Slegers) that the animosity stems from years of promises and statements from both UMass student teams and the City of Springfield that the accessibility and connectivity of this River Walk will be improved. That may be true, but it has been almost 20 years since the last time the River Walk was worked on, therefore the residents are fed up.

Paraphrased resident responses to a simple introductory email about our team and project:

- “Do more research before raising our hopes”
- “The more you know about the problem (River Walk) the less upset you'll make us”
- “Nothing has changed so nothing will”

Medical staff and patients:

The medical district located near the River Walk houses most of the presumed regular users of the trail. The trail (as stated above) is located just south of the medical district and is in an ideal location for patients and employees to access and use the trail.

2.5.3 Public Meetings

WalkBike Springfield Meeting:

WalkBike Springfield is a bicycle advocacy group that organizes for safer cycling in the city of Springfield, as well as for the creation of better bike infrastructure, including rail trails. Attending the meeting, we got a clearer idea of what cyclists in Springfield desire from the River Walk, and what they perceive to be its biggest flaws.

Attendees echoed what we had heard from other sources regarding who uses the River Walk. We learned that the perception of the River Walk from cyclists is that the Brightwood section is “95% used by walkers,” usually doing “the lunch walk,” as well as “families that live in that neighborhood.”

When asked about what issues they may see with the River Walk, we learned that, in their opinion, one of the largest issues is “the number of agencies involved” in its management. It’s “not even owned by a single agency,” one bicycle advocate told us. They further explained that the Department of Public Works does most of the maintenance on the trail, except at park sites which is done by the Department of Parks and Recreation. However, all of this maintenance is overseen by the Army Corps of Engineers. Additionally, officials working in water and sewage are also involved due to the proximity to the Connecticut River, which has a CSS (combined sewage system). This means that when there is too much rain, the storm drains release combined sewage overflow containing both sewage and stormwater into the Connecticut River.

We also learned about recent attempts to secure funding for River Walk projects. After a 2011 tornado, Springfield received significant funds from the Tornado Relief Road Repair Fund to fix essential infrastructure. There was a push to include a redesign of River Road which would have made it into a one-way street with space for a ramp up the floodwall but this component of the plan failed to receive funding.

III. Recommendations

3.1 Infrastructure and Amenities

Northern Terminus Redesign:

The Northern terminus is one of the primary areas in need of improvement. While it currently lacks visibility and accessibility, it can be transformed relatively easily into a welcoming entrance to the trail. By connecting the beginning of the path to nearby Wason Ave Park, the trail will be given a logical destination, building a better sense of place.

There is also a distinct lack of access via car to the trail at its Northern endpoint, which could be remedied by creating a small parking lot within the triangular field of grass seen below.



Figure 8. Northern entrance of the Riverwalk

Benches and Picnic Tables:

Sense of place can further be improved by the installation of picnic tables and benches along the River Walk. This will encourage visitors to spend time on the trail, seeing it as a place to spend time and not just a place to travel through.

Ramp at River Road:

Creating a ramp along River Road would be the ultimate improvement to River Walk access, bringing the Brightwood neighborhood the convenience of entering the River Walk without needing to walk to either end of the mile-long floodwall. This project would be difficult not only because of the high funding cost, but also because of the various regulatory issues surrounding such a venture.

The ACE manages the flood wall and determines whether it is in functional condition. The creation of a ramp up the wall would potentially degrade its integrity which could decertify each Brightwood household from flood protection and they would have to pay for flood insurance.

Floodwall



Street Level (Below)



Riverwalk (Above)

Figure 9. River Walk floodwall

Additionally, ADA regulations would likely require a ramp too large for the current sidewalk to accommodate. This would then necessitate a redesign of River Road itself, changing it into a one-way street. This has been proposed before, after the 2011 tornado, but the proposed plan failed to receive Tornado Relief Road Repair funds.

If a ramp construction project was seriously considered, it may be most sensible to place the ramp along the floodwall at Kenefick Park. Kenefick Park lies roughly at the midpoint of the floodwall and access between the park and the River Walk would help create a network of green space in Brightwood.

Kenefick Park Passage



Figure 10. Connectivity with Kenefick Park

Flood Wall Mural:

A mural along the flood wall could be a second, less expensive option. A mural can incorporate designs that reflect the area's rich history and the current stakeholders, such as Wason Manufacturing Co., Baystate medical, or images that represent the pride of the Hispanic population in Springfield, and other suggestions made by the community. The mural can also be used for wayfinding. Words or imagery can be used as part of the mural to indicate the location of the bike path above the flood wall.

Fresh Paint Springfield would be the ideal partner for such a project. Fresh Paint is a non-profit organization already working in Springfield creating murals for downtown. They help connect communities with artists to create the community's vision. They also host painting parties that allow community members of all ages to participate in painting the mural, no ladders or experience necessary. These murals are paint-by-number on special mural fabric that is set up on tables. The fabric is then permanently adhered to the walls.

Floodwall Mural (connecting the community)

**FRESH PAINT
SPRINGFIELD 2021**

- Beautify the floodwall
- Represent history & community
- Wayfinding opportunity
- Painting parties available to all ages



Figure 11. Flood Wall Mural Examples and Fresh Paint Springfield

West Street Entrance Improvements:

Although there is parking at the West Street entrance, which provides access to the River Walk to the South, there are still design issues to be addressed. The signage for the River Walk could be improved since the sign currently in use may confuse visitors into thinking that the River Walk only runs South of the entrance. Additionally, due to the high amount of traffic in the area, safety is also a concern.

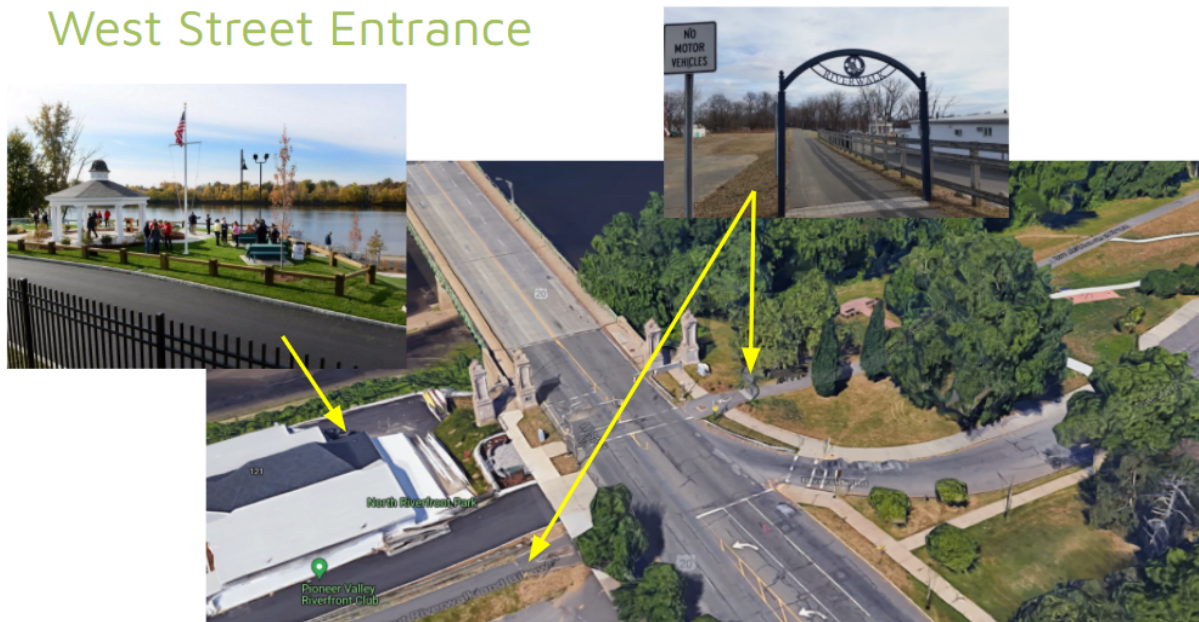


Figure 12. River Walk West St. entrance

Connecting to Chicopee:

North of Springfield sits the town of Chicopee. Chicopee is currently undertaking two River Walk projects along the CT River and the Chicopee Canal as part of the larger regional 21-mile project. However, the current plans for the River Walk to the North only covers approximately 2.4 miles and does not include a direct connection to the River Walk in Springfield. Part of the challenge in creating this connection is the lack of available space to continue the bike path directly North along the river. Work on the project was scheduled to begin in the summer of 2021 and finish at the end of April 2022 with an estimated cost of \$3 million.

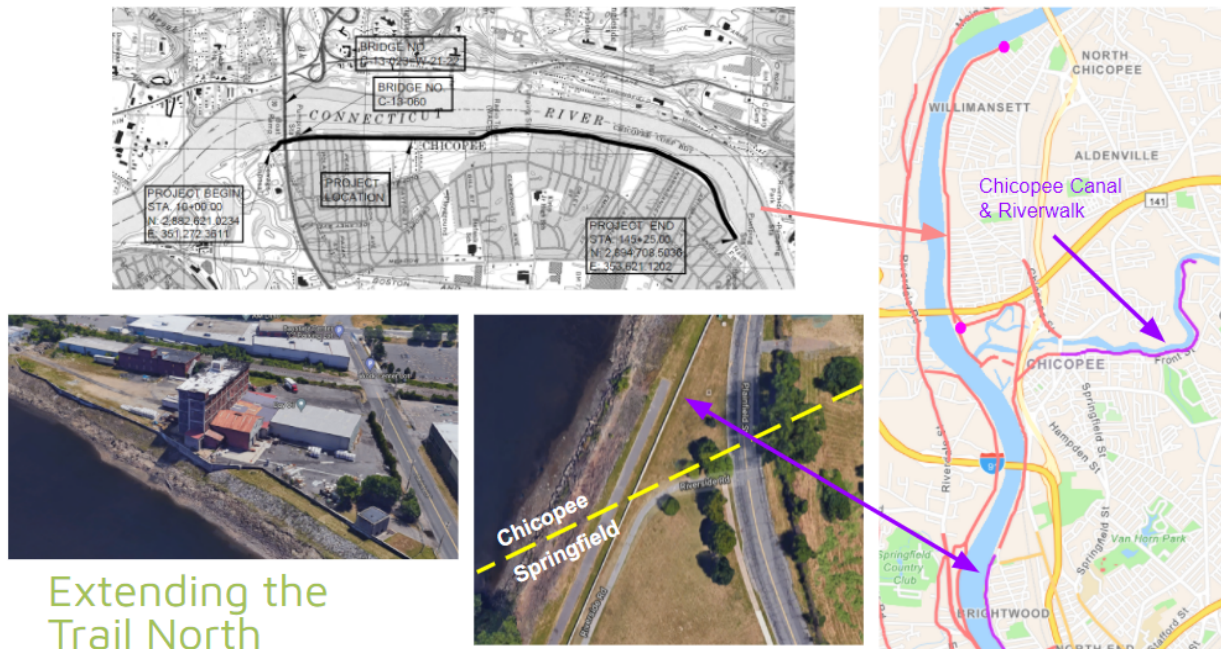


Figure 13. North terminus extension

Connecting to Forest Park:

Extending the trail South could offer a crucial connection to one of the largest urban municipal parks in the United States; Forest Park. Forest Park covers 735 acres of land overlooking the CT River. Forest Park was designed by renowned landscape architect Frederick Law Olmsted and features a zoo, aquatic gardens, an outdoor amphitheater, wooded trails, and scenic views.

Many plans have been suggested to connect the River Walk to Forest Park. Currently, there is a dead end at the Southern end of the trail, with no real connection to any location. Connecting the path to Forest Park would give users a destination and additional trails within the park.

Extending the Trail South (Forest Park)

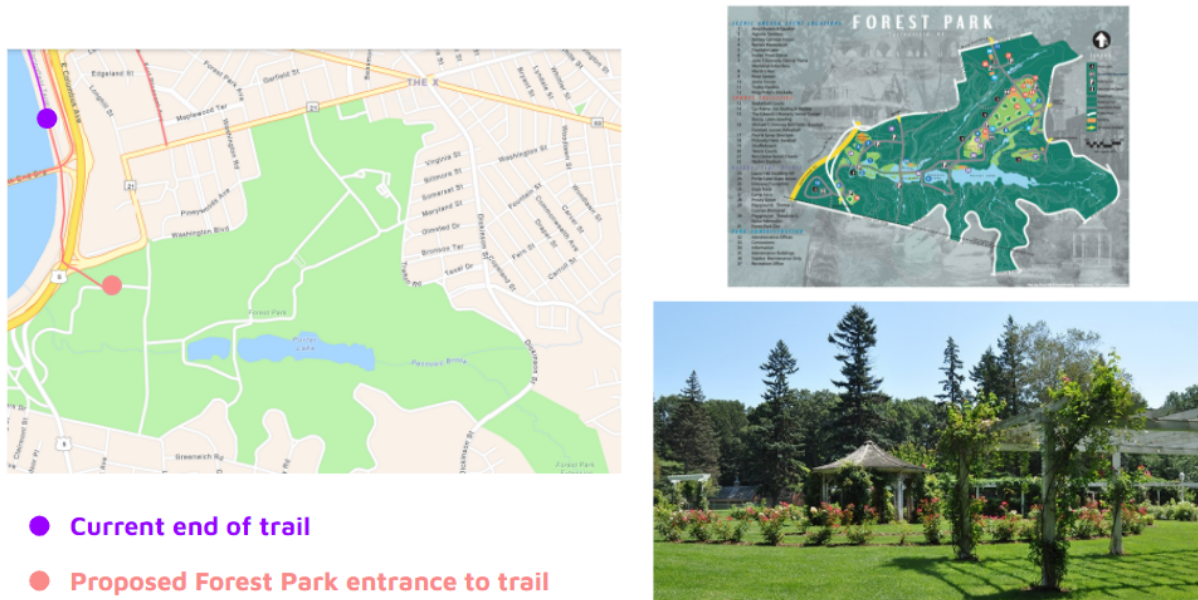


Figure 14. South terminus connectivity with Forest Park

Extending the trail south does present some issues which have limited the success of proposed projects. Not only is Forest Park situated at a higher elevation than the River Walk, but the trail would also have to go over both an active rail line and I-91 in the process.

Connecting to Agawam:

There is also the opportunity to improve connections between the River Walk and the Agawam Riverfront trail on the Western side of the river. Both the Agawam trail and the Springfield trail are completed but no clear connection is made between them. Currently, users must travel alongside highway traffic over the South End Bridge to cross the river. There are no protected bike lanes along this path.

Extending the Trail South (Agawam)



Figure 15. South terminus extension

There are plans that already attempt to address the Agawam section of trail. The challenge is making a safe and convenient connection that users of all skill levels would be comfortable using.

3.2 Funding

There are many sources for funding future improvements to the Connecticut River Walk and Bikeway. Moving beyond the budget constraints of the City of Springfield is essential to mobilizing sufficient funds for any of these recommendations. The following funding sources may be considered:

1. Mass Trails Funds
2. MassDOT Shared Streets Program
3. MassDOT Bottleneck Reduction Program
4. Transportation Climate Initiative Program
5. Land & Water Conservation Fund
6. Community Preservation Act Grants
7. Connecting Communities Grant Program
8. The Solomon Foundation

IV. Conclusions

The Connecticut River Walk and Bikeway is full of unrealized potential. What exists now as a path of pavement squeezed between a floodwall and a steep embankment can be transformed into a nexus for connecting the many parks surrounding the trail to each other. The wealth of green space in and around the Brightwood neighborhood may currently be fragmented, but this can be changed with improvements to the River Walk. The more this green space can be connected, the more it can transform residents' perceptions of the city itself. Instead of a city with parks, Springfield can be a network of parks: a city within a park. Improving access to the River Walk can be an important part of a larger vision for Brightwood and Springfield as a whole.

However, when speaking from a design perspective it is essential not to forget the many assets of the River Walk today and the hard work it took to get to this point. The River Walk has been a project nearly three decades in the making and only exists today because of the blood, sweat, and tears of many bicycle advocates, planners, city officials, and Springfield residents who believed it could happen. In the complex world of community development, every new piece of infrastructure has an iceberg-sized amount of unseen work lying beneath it. To everyone who has spent their time and energy making the River Walk what it is today — thank you.

In order to continue improving the conditions within Springfield's environmental justice communities, funding must be mobilized. As we were told at the WalkBike Springfield meeting, rail-trails aren't built in their entirety, they are built in sections. In securing this next round of funding, it is important to remember the desires of the residents themselves. The people of the Brightwood neighborhood deserve the first and last word when it comes to this trail. One of the most important findings from our engagement efforts was the general sense of annoyance from Brightwood residents, and it's no wonder! Over the past decade, this section of trail has been studied many times without any actual change in infrastructure. From our communications with Brightwood residents, we could surmise they are fed up with being surveyed, especially when such surveys do not result in any improvement of the River Walk. It is high time for research to turn into design and design into construction. The River Walk has come a long way and is primed for further transformation in the future.

V. Appendices

5.1 Appendix A: Contacts List

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Left to Right: Greg, Alena, Josh, & Eli

5.3 Appendix C: References

- Ahronian, David M.; Ashton, Kelly R.; Bassett, Erin G.; Cohen, Maxwell A.; Czulak, Victor J.; Dunbar, Gregory S.; Farragher, Brendan T.; Gorman, Jonathan L.; Guy II, Peter L.; Iles, Timothy J.; Inthasorn, Piyawut; Johnson, Travis A.; Koch, Jonathan; Kronewitter, Justin J.; Livingston, Zachary B.; Morano, Matthew; Mulvehill, Brian; Murphy, Kevin C.; O'Connell, Sean P.; Stephens Jr., Peter W.; Tourigny, Christopher; White, Bryce P.; and Young, Timothy E. (2009). *Making Connections - Envisioning Springfield's North End. Landscape Architecture & Regional Planning Studio and Student Research and Creative Activity*. 4.
- Amtrak. *Springfield, Massachusetts*. <https://www.amtrak.com/stations/spg>
- Appalachian Mountain Club. (2021, July). About Us. Appalachian Mountain Club. <https://www.outdoors.org/about/>.
- The Armory at Springfield. (1861). *Scientific American*, 4(20), 311–311. <http://www.jstor.org/stable/26140059>
- Brown, R. D. (1983). Shays's Rebellion and Its Aftermath: A View from Springfield, Massachusetts, 1787. *The William and Mary Quarterly*, 40(4), 598–615. <https://doi.org/10.2307/1921810>
- City of Springfield Department of Parks and Recreation. (2014, September) *Connecticut River Walk and Bikeway: Springfield Section*. Pioneer Valley Planning Commission.
- City of Springfield. History and Culture. History and Culture. <https://www.springfield-ma.gov/cos/history>.
- Circuit Trails JEDI Task Force. Market Research: Equity of Access to Trails.
- Commonwealth of Massachusetts. *Environmental Justice Populations in Massachusetts*. Mass.gov. <https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts>.
- Doss, E. (2012). Augustus Saint-Gaudens's The Puritan: Founders' Statues, Indian Wars, Contested Public Spaces, and Anger's Memory in Springfield, Massachusetts. *Winterthur Portfolio*, 46(4), 237–270. <https://doi.org/10.1086/669736>
- Executive Office of Energy and Environmental Affairs. (2015). *Languages spoken by at least 5% of the census tract population by persons who do not speak english well*. American Community Survey: U.S. Census Bureau. <https://mass-eoea.maps.arcgis.com/apps/webappviewer/index.html?id=dfdfbf9c109647fc9601f7524c1fd9f4>

- Executive Office of Energy and Environmental Affairs. (2020). *Massachusetts 2020 Environmental Justice Populations*.
<https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=1d6f63e7762a48e5930de84ed4849212>
- Fairweather, A., Gagnon, T., Guan, T., Mealey, J., Gwendolyn, S., Wackernagel, P. (2019). *Healthy Place Making: Revitalizing Springfield's Medical District*. University of Massachusetts — Amherst Department of Landscape Architecture and Regional Planning.
- Forrant, Robert. (2012). *Grinding Decline in Springfield*. University of Massachusetts - Boston Scholarworks. New England Journal of Public Policy.
<https://scholarworks.umb.edu/cgi/viewcontent.cgi?article=1635&context=nejpp>.
- Fresh Paint Springfield. (2021). *FRESH PAINT SPRINGFIELD JUNE 5-13*. Fresh Paint Springfield. <https://www.freshpaintspringfield.com/>
- Google Earth. *Google Earth*. Google. <https://earth.google.com/web>
- Google Maps. *Google Maps*. Google. <https://www.google.com/maps>
- Holt, Steve. (2021, April). The Troubled History of Inclusion in American Outdoor Spaces. Appalachian Mountain Club.
<https://www.outdoors.org/resources/amc-outdoors/history/the-troubled-history-of-inclusion-in-american-outdoor-spaces/>.
- Innes, S. (1978). Land Tenancy and Social Order in Springfield, Massachusetts, 1652 to 1702. *The William and Mary Quarterly*, 35(1), 33-56. <https://doi.org/10.2307/1922570>
- Jessen, Klark. (2012). *Lieutenant Governor Tim Murray today joined MassDOT Secretary and CEO Richard A. Davey in Springfield to award \$1.35 million in reimbursements to the City to fund essential storm damage repairs following the June 1, 2011 tornado*. Springfield: Tornado Relief Road Repair Funds.
<http://blog.mass.gov/transportation/massdot-highway/springfield-tornado-relief-road-repair-funds/>
- Knoch, C., & Pack K. Connecticut River Walk and Bikeway: Brightwood Neighborhood Assessment. Rails-To-Trails Conservancy.
- Live Well Springfield. *Hiking Trails*. Hiking Trails - Live Well Springfield.
<https://livewellspringfield.org/fun-fitness/hiking-trails/>
- McCollough, Jeff. (2021). Springfield River Walk and Bikeway Use Surveys. Pioneer Valley Planning Commission.
- Milone & MacBroom, Inc. (2018, August). *Interstate 91 Viaduct Study*.

- Pioneer Valley Planning Commission. (2005, December). *Springfield River Walk and Bikeway Survey, For the City of Springfield, Final Report*.
- Pioneer Valley Planning Commission. (1995, June). CONNECTICUT RIVER 2020 STRATEGY: Part Two: Action Strategy for Riverfront Revitalization.
- Richard D. Brown. (1974). The Emergence of Urban Society in Rural Massachusetts, 1760-1820. *The Journal of American History*, 61(1), 29-51.
<https://doi.org/10.2307/1918252>
- Siebert, W. H. (1936). The Underground Railroad in Massachusetts. *The New England Quarterly*, 9(3), 447-467. <https://doi.org/10.2307/360280>
- Sjodin, Anthony. (2021, August). An Unfair Burden: Why Environmental Justice Means Cleaner Air for Cities like Chelsea, Mass. Appalachian Mountain Club.
<https://www.outdoors.org/resources/amc-outdoors/conservation-and-climate/an-unfair-burden-why-environmental-justice-means-cleaner-air-for-cities-like-chelsea-mass/>.
- Stutt, Jordan. (2021, September). *Supporting Public Health, Transportation Investment and Climate Commitments through TCI-P*. Acadia Center.
<https://acadiacenter.org/supporting-public-health-transportation-investment-and-climate-commitments-through-tci-p/>
- U.S. Census Bureau. (2019). *Quickfacts: Springfield City, Massachusetts; United States*.
<https://www.census.gov/quickfacts/fact/table/springfieldcitymassachusetts,US/PST045219>