

# GREEN, EQUITABLE AND LIVABLE

TRANSFORMING THE CORE OF  
MASON SQUARE IN SPRINGFIELD, MA

UMass Amherst Design Center in Springfield  
Department of Landscape Architecture &  
Regional Planning  
In Collaboration with the City of Springfield  
Office of Planning and Economic Development

Professor: Frank Sleepers

GRADUATE URBAN DESIGN STUDIO SPRING 2023

Chaitrali Doke • Chandana Palika • Jacqueline Berlin • Jeffrey Taylor • Julia Slater • Michael Chancellor  
Michael Riccio • Michael Amato • Pavana Jairaj • Zachary De Lorenzo



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UMass Amherst Design Center in Springfield  
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Graduate Urban Design Studio Spring 2023  
Professor: Frank Slegers

Contact:  
Frank Slegers  
Associate Professor  
Department of Landscape Architecture and Regional Planning  
210 Design Building  
University of Massachusetts  
551 North Pleasant Street  
Amherst, MA 01003-9357

Email: [slegers@larp.umass.edu](mailto:slegers@larp.umass.edu)

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“ WE GOT TO KNOW OUR  
NEIGHBORS ”  
RANDOLPH T. HESTER, 2006

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- Alexander Sherman City Forester of the City of Springfield
- Scott Hanson Former Principal Planner, City of Springfield

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- Catherine Ratté Director
- Kyle Finnell Land Use Planner

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- Michael Di Pasquale Director UMass Amherst Design Center, Associate Professor LARP
- Wayne Feiden Director Center for Resilient Metro-Regions, Adjunct Professor LARP

## STUDENTS OF THE GRADUATE URBAN DESIGN STUDIO 2023

- Michael Amato, Jacqueline Berlin, Michael Chancellor, Zachary Delorenzo, Chaitrali Doke, Pavana Jairaj, Chandana Palika, Michael Riccio, Julia Slater, Jeffrey Taylor

## STUDIO INSTRUCTOR

- Frank Slegers, Associate Professor

Finally, we are most thankful to Chandana Palika for her tireless effort compiling the work and creating this report.

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- Alexandrae Lamonth and Brenton Morris Shiloh SDA Church
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- Betsy Johnson WalkBike Springfield
- Britt Ruhe Director of Commonwealth Murals, Founder of Fresh Paint Springfield
- Gregg Mitchell Branch Supervisor, Mason Square Branch Library
- James E Johnson McKnight VP
- Jasper McCoy Home City Development, Inc.
- Jay Griffin Stone Soul, Inc. Program Chairman
- Leo Williams Springfield Neighborhood Housing Services, Inc.
- Liz Wills-O’Gilvie Gardening the Community
- Nicolle Cestero American International College (AIC)
- Tracye Whitfield City Councilor



WHO ARE WE??

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PROFESSOR FRANK SLEEGERS



CHAITRALI DOKE



CHANDANA PALIKA



MICHAEL AMATO



PAVANA JAIRAJ



JEFFREY TAYLOR

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STUDENTS OF GRADUATE URBAN DESIGN STUDIO SPRING 2023



JACQUELINE BERLIN



ZACHARY DE LORENZO



MICHAEL CHANCELLOR



JULIA SLATER



MICHAEL RICCIO

## THANK YOU..

We would like to thank everyone who helped us throughout the design process. Thanks to our client, City of Springfield and PVPC for enthusiastically providing feedback on our designs and guidance during the design process. We also thank city of Springfield and Mason Square community members for their hospitality, inviting us to attend the community meetings and showing us the neighborhood. It was a rich and unique experience that we will not forget.

Additional thanks to our Professor Frank Slegers and PVPC, for the base materials and final report preparations.

We are grateful to have had the opportunity to experience the culture of Mason Square and experience all it has to offer.

Sincerely,

The students from Graduate Urban Design Studio 2023



**GREEN, EQUITABLE AND LIVABLE - TRANSFORMING THE CORE OF MASON SQUARE** takes a focused look at the Mason Square Planning District in Springfield, Ma and provides strategies for urban design and landscape architecture to support a community's vision for the future.

The Graduate Urban Design Studio 2023 partnered with the Springfield Office of Planning and Economic Development and collaborated with MassDevelopment and Pioneer Valley Planning Commission (PVPC) to create five unique design and planning proposals. The work is intended to inspire and inform the Mason Square TDI Partnership Work Plan and the PVPC's long-term work on the Neighborhood Plans. The ideas are open for discussion and review by the larger Mason Square community and may guide further planning and design decisions. Our students enthusiastically supported the ideas and thoughts that were expressed at the various Community Meetings for the larger Mason Square district in the spring of 2023. The design work focused on the TDI district area in the core of Mason Square that includes the former MCDI brownfield at Wilbraham Avenue. Our goal is to shape a district for everybody to create safe and beautiful streets, provide better connectivity to public urban green, enhance arts, culture and dining, and catalyze equitable housing and business opportunities.



# CORE RECOMMENDATIONS

• Making Ben Swan Way more usable for people as a small-scale neighborhood hub for curbside dining, cultural events, markets, performances. Measures range from complete closing down for regular traffic to modest alteration of parking layout and introduction of pedestrian-friendly surfaces to slow down traffic. Ben Swan Way is a space that should be used more for temporary community events.

• Reduction of traffic speed along State Street and Wilbraham Road through reduction of lane widths and/or number of lanes, elevated pedestrian crossings, planting of big street trees, establishment of bike lanes and on-street parking. These measures can be executed in phased stages that includes testing out. Measures have to be executed specifically for the diverse conditions and demands of the context. Envision safe ways to walk back and forth from residential areas to the Rebecca Johnson and the DeBerry Swan School. Primary street corridors need more pedestrian-scale lighting, benches, and covered bus stops.

• The former MCDI area should be developed with a diverse strategy that encompasses opportunities for small businesses and manufacturing including work/live/art, adult education, mix of affordable and market rate housing, hospitality industry and community services. This area has the chance to establish Mason Square as a hub for the community. The area could need more density through turning 1-story buildings into 3 or 4-story buildings. Mixed uses and active storefronts add safety.

• Food is an important topic in the district that needs to be addressed at multiple scales and levels. Offering spaces for community gardens on vacant or underutilized lots can be a great opportunity to educate about food and create community. Local markets should cater to diverse income levels to provide food security. Food should be part of the local economy and display the ethnic diversity. The neighborhood needs more and various restaurants and places to eat.

• Inclusion of art and activities that acknowledge black culture and the diversity of today. Embrace the racial history of the project area through expansion of community-building art events such as Fresh Paint, and commemoration of Nelson Stevens and AfriCOBRA (the African Commune of Bad Relevant Artists).

• Stronger pedestrian and bicycle connections from east to west are needed to make assets and amenities better accessible and encourage physical activities. This is specifically recommended for Old Hill and Upper Hill and foster connections to the DeBerry-Swan School. Underutilized land along the former railroad corridor should be used as a green spine for the community. The southern area of the land that is used by the Springfield Water and Sewer Commission should be repurposed for recreation and housing to glue the neighborhoods together.

• Illumination, color scheme, friendly appearance of storefronts is necessary that people feel safe 24/7. The City is running a CDGB Storefront Improvement Program to provide funding and support for local shop owners. The program needs to be promoted more aggressively and storefronts should showcase the cultural variety of the area.

• Envision a new walking/bicycling network for the larger Mason Square district including connections to the Mill River/ Watershops Pond and Union Station along the “Arc of Recreation”. This proposed trail should be implemented in phases to regain traction and credibility of the more than 30-year old planning proposals.

• The commercial strip on upper State Street across AIC needs more definition through architecture and building codes that discourage parking lots at the front.

• Plantings with big trees can minimize heat island effects in the core area of Mason Square. Green roofs for new buildings, green facades and stormwater swales are recommended.

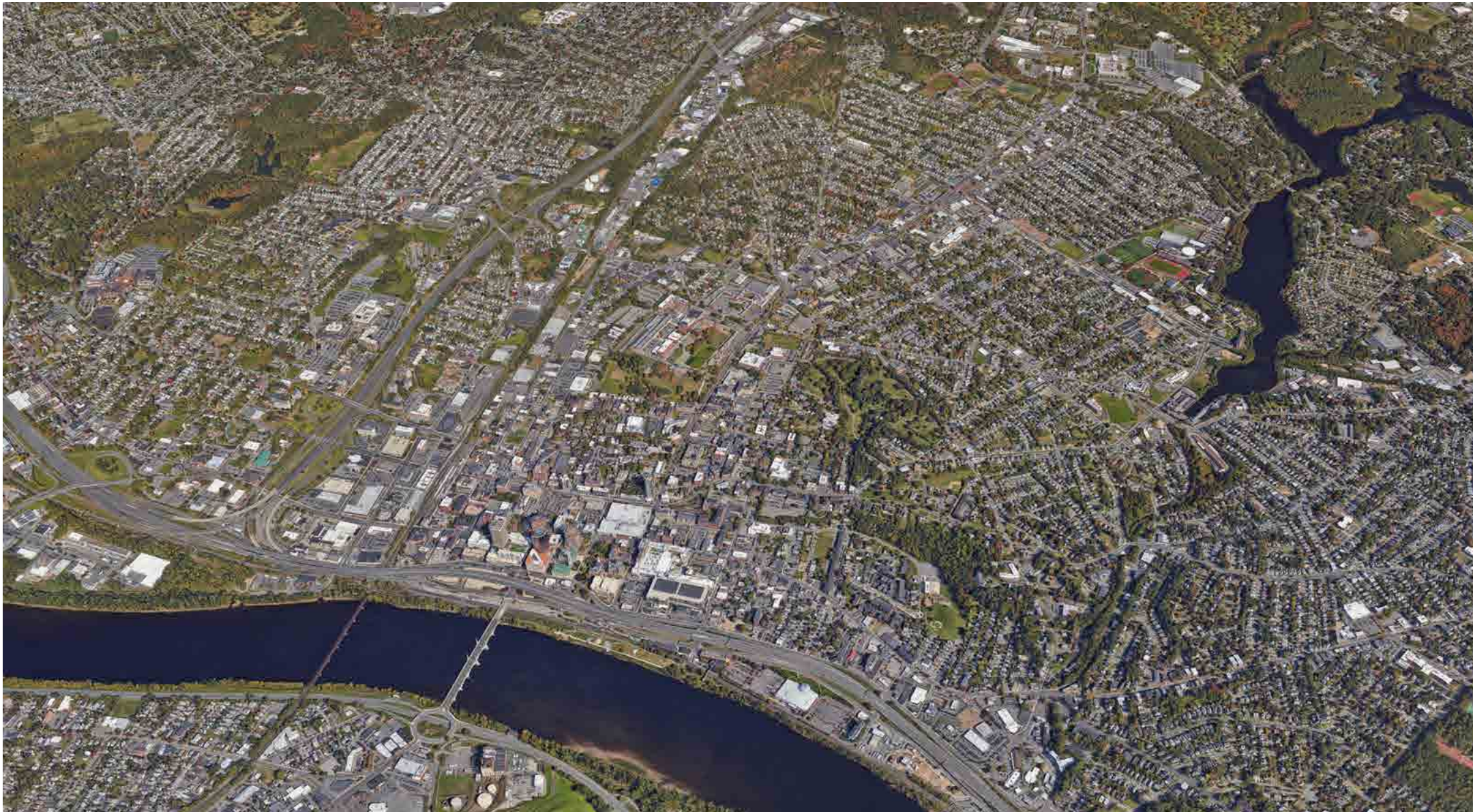
# STUDIO FRAMEWORK

The LARP Graduate Urban Design Studio worked in partnership with the City of Springfield and their Office of Planning and Economic Development to create visions and ideas for the Mason Square District. We have collaborated with two institutions, MassDevelopment and PVPC (Pioneer Valley Planning Commission) that have most recently been involved in searching for new opportunities in developing one of the most fascinating areas in Springfield, MA. Our plans catalyzed further planning and design proposals to continue the strong legacy of this studio and their partnership with the City of Springfield. Our graduate and undergraduate urban design studios have always been a crucial part of this partnership and created strong bonds with the local planning administration, planning agencies, stakeholders, residents, entrepreneurs, and community activists. The studio is coordinated and supported through an agreement between the City of Springfield and the UMass Amherst Design Center in Springfield. Active forms of community engagement played an important role in this studio. Understanding place and people is crucial for successful urban design.



GRADUATE URBAN DESIGN STUDIO SPRING 2023





## STUDIO PROJECT GOALS AND OBJECTIVES

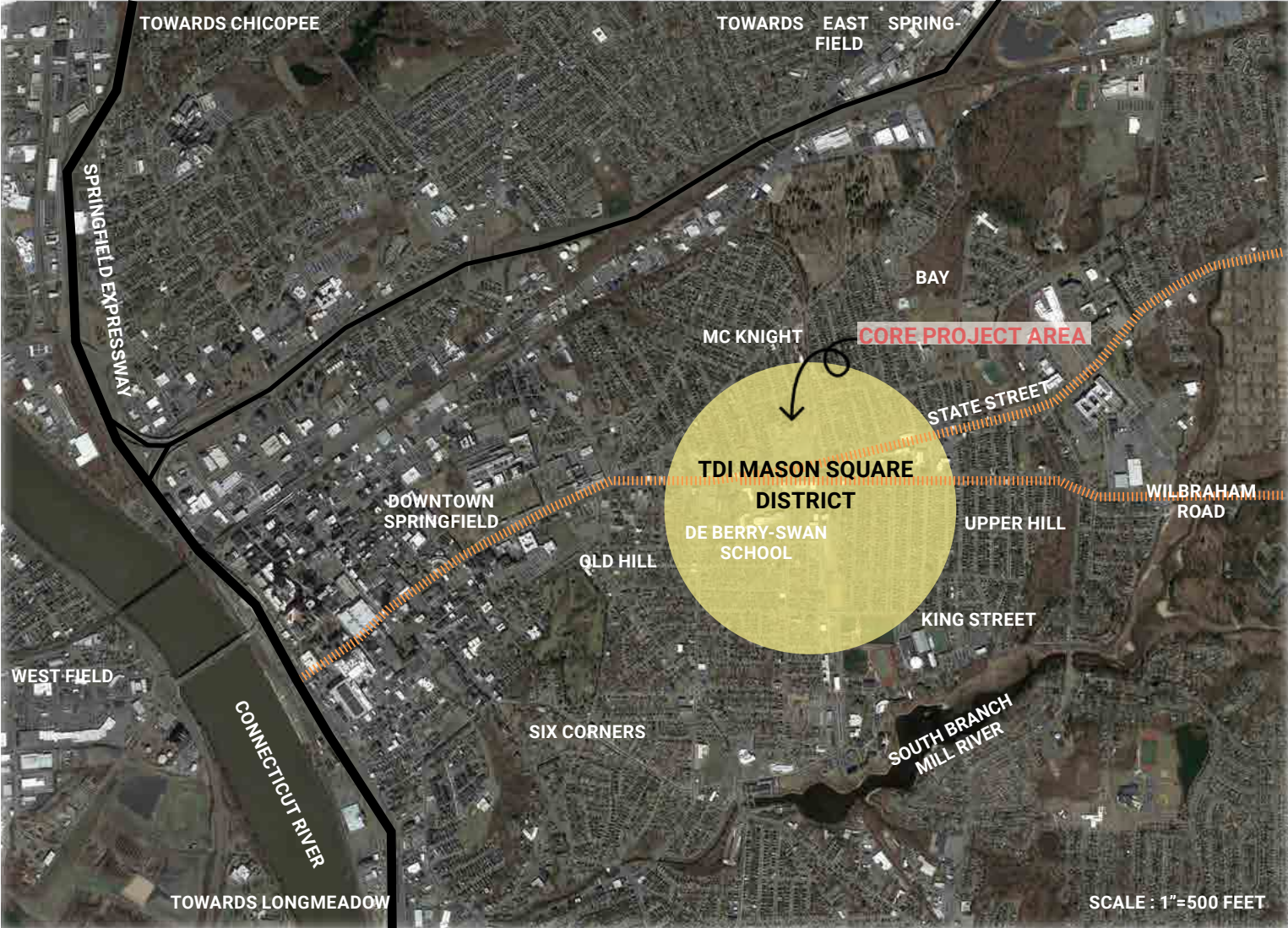
### STUDIO PROJECT GOALS

Placemaking, traffic calming, and public space activation that center youth and families in the core of the Mason Square in Springfield, MA. Our design and planning proposals foster safe and beautiful streets, provide better connectivity to public urban green, enhance arts, culture and dining, and catalyze equitable housing and business opportunities.

### LEARNING OBJECTIVES

- Learning about diversity of cultures, ethnics and demographics, and applications of expert/stakeholder engagement and participation.
- Learning to align community goals for developing a planning and engaging design theme that responds to the complexity of an urban setting including the needs of a diverse urban population.
- Learning to understand the neighborhood as a multifunctional and multiscalar urban system.
- Learning about methods of tactical urbanism and how they can become meaningful and community-building interventions in an urban neighborhood.
- Learning design and planning solutions through research of case studies and precedents.
- Learning to expand proficiency in digital representation software and expand portfolio of creative work.
- Learning to package a complex design into a legible and enticing format for public display.
- Learning about critical issues in urban design and sustainability.

CORE PROJECT AREA



Our core focus area matches with the TDI – Mason Square District within the four neighborhoods McKnight, Bay, Upper Hill, and Old Hill. While our area encompasses four neighborhoods, they are geographically one entity.

For our studio, the area from Wilbraham Road in the north to King Street in the south is most relevant because this area has been significantly transformed over the last 5 years.

New developments include the DeBerry-Swan School on Union Street, the 114 apartments in the long-derelict Knox Manufacturing Building, and the Samuel Golden Park on Wilbraham Avenue.

The area also encompasses community landmarks such as the Mason Square Library or a small commercial strip along Ben Swan Way that is located across the small Mason Square Park.



Image showing the aerial view of Mason Square looking S-W

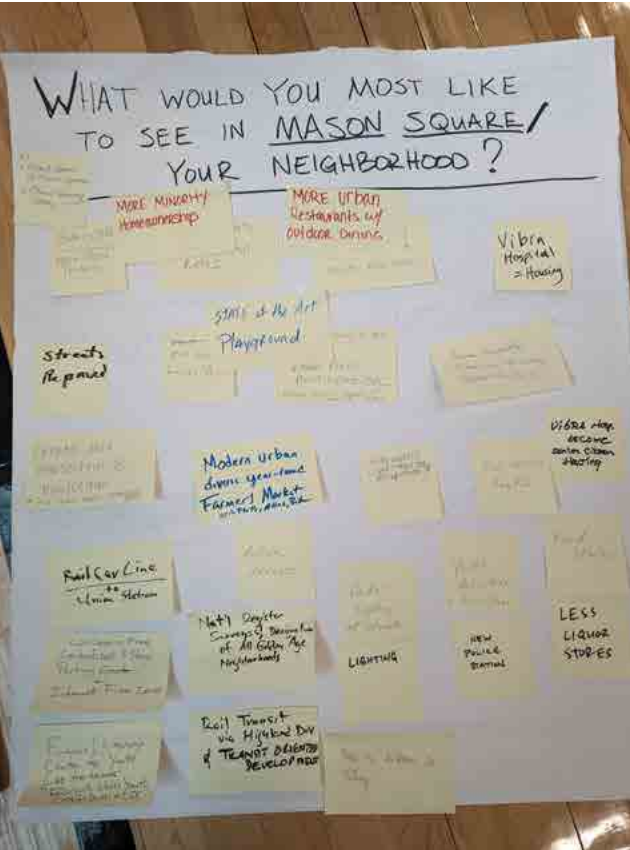
# DEVELOPMENT OF THE DESIGN PROGRAM

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Our 14 week studio work included in-depth study, analysis and assessment of the project area through on-site exploration and observation, interviews, dialogues with community members, experts and stakeholders, sketching, institutional document research, historic research, analysis of aerial photographs, and the manipulation of GIS data. Specific case studies in the design teams were formed to create a reference to support design proposals. Each design team came up with precedents studies supporting their design ideas. These design ideas were presented to the expert engagement panel where we learned more about the residents' ideas and visions for the neighborhood.

After this engagement panel we narrowed down our focus areas, analyzed the data and came up with tangible deliverables. Interaction with the community has informed us about assets and opportunities and has helped us understand the relationship between people and space. This lead us to discussions to generate new ideas and visions.

Second half of the studio we focused more on getting into these details and got valuable feedback from guest critiques during studio which allowed us to have focused conversations about our design teams. Final design concepts and a master plan was presented to the planning officials and an expert panel to conceptualize a new vision for the area. First presentation was held at UMass during the department's presentation week. The second and final presentation was held in Springfield library as a casual gallery show where neighbors could come and have a conversation about the final design ideas.



- Internal project area assessment (History, Land Use, Street Analysis, etc.)
- Site visits
- Case Studies/Precedents

- **Five Major Themes**
  - Food Security
  - Housing
  - Commerce
  - Recreation
  - Streetscape/Safety

- Community engagement
  - Initial meeting/site visit with City of Springfield and MassDevelopment.

- Students participated in four (4) PVPC-led community workshops
- UMass led one (1) community workshop.
- Design potential interventions for the project area. Presented designs internally at UMass and externally to the Mason Square community.

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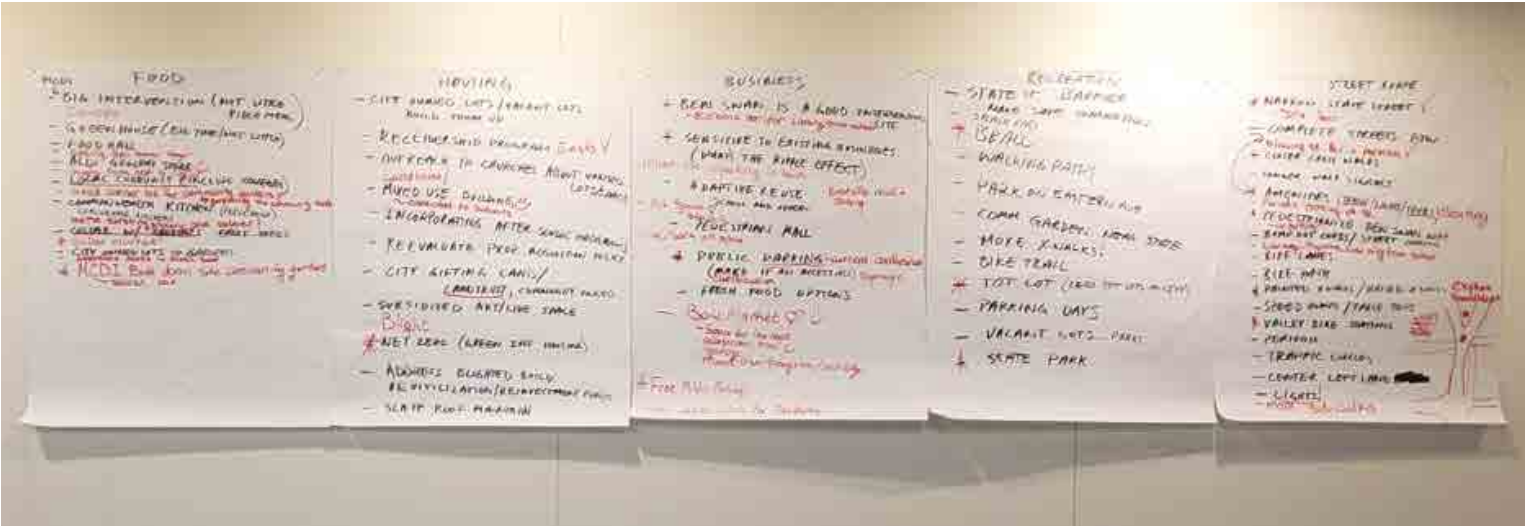
## DESIGN PROCESS

# COMMUNITY ENGAGEMENT

A greater knowledge of resources, challenges, and objectives from various viewpoints was achieved through meetings with numerous stakeholders and community members. The design program was developed in part as a result of listening to their thoughts.

## NEIGHBORHOOD MAPPING WORKSHOP

- Pedestrian safety, reduce speed of vehicles in neighborhoods.
- Improve blight/aesthetics of buildings, vacant lots.
- More park amenities, lighting, restrooms, benches, trashcans, etc.
- Housing ownership – more low-income & affordable options.
- Full-line grocery store; food security.
- More spaces for small businesses, restaurants, start-ups, meeting spaces.
- Community-focused financial services.
- Create a ‘sense of arrival’ for the Mason Square area.



# EXPERT ENGAGEMENT PANEL



## UNDERSTANDING THE HISTORICAL CONTEXT OF MASON SQUARE

HISTORY

To begin any discussion regarding the history of Springfield, MA, we must first acknowledge that the land upon which the city was established was inhabited by Native Americans at least 10,000 years prior according to the archaeological record. These were a group of Algonquian people known specifically as the “Agawam” or “Akawaham” who lived through farming, hunting, trading, and diplomacy with other indigenous tribes within the Connecticut River Valley and beyond.



Source: Simtropolitan



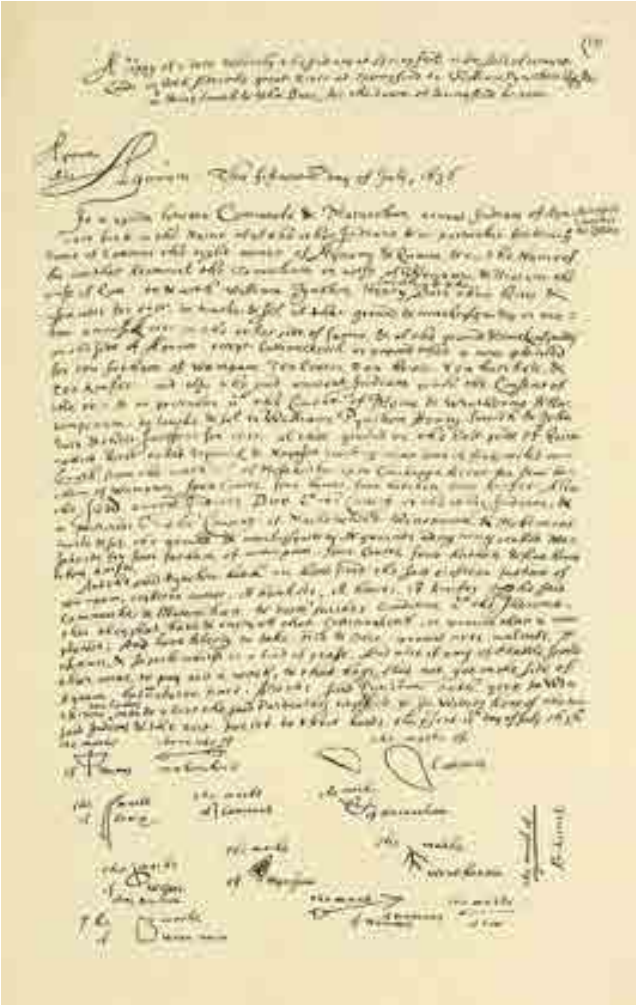
Source: ancientlights.org

SPRINGFIELD, MA ORIGINS: THE AGAWAM PEOPLE AND TOWN FOUNDING

When European settlers arrived in the area by the early 17th century, there were initial efforts made by some figures such as William Pynchon to establish peaceful relations with the Agawam. He purchased the land from them in 1636 through a deed that allowed them to continue their traditional activities, although it is questionable that they fully understood the terms of the sale. Eventually, however, the native peoples would be forcibly removed and forced out as more settlers moved to the Springfield area.



Source: Simtropolitan



# MASON SQUARE HISTORY

## EARLY YEARS

### SCHOOL FOR CHRISTIAN WORKERS

Constructed in 1886, this building went by different names over the years, but was noteworthy early on as the birthplace of basketball within the back gymnasium in 1891 by James Naismith. The original building was torn down in 1965 to create a parking lot and later a McDonald's restaurant by the 1990's



### WINCHESTER SQUARE

After the original namesake of Mayor Charles Winchester in the mid-19th century, the area became an active part of the city especially along State St. In the 1980's it would be renamed Mason Square to honor the prominent black landowner and businessman Primus Mason.



### PROMINENCE OF STATE STREET

As residential development continued in the surrounding neighborhoods, State Street became a major arterial crossing within the city. This would increase as time went on, serving businesses, industries and outlying wards as Springfield grew.



### HOME OF INDUSTRY

The activities in this part of Springfield continued to change and grow with innovative products and manufacturing skills. Companies such as the Knox Automobile Co. and Hendeed Manufacturing, later known as Indian Motorcycles rose to prominence here.



### TRANSPORATION OPTIONS INCREASE

In addition to the commerce and thoroughfare of State Street, other connections such as Wilbraham Road became increasingly important with light rail and trolly installations, as well as important circuits for more and more automobiles as time went on.



### CENTER OF COMMERCE AND INDUSTRY

As the neighborhoods of McKnight, Bay, Old Hill and Upper Hill developed, the Mason Square area became an important center for business activities as well as an industrial hub within the city of Springfield centered around the Highland Division of the New York, New Haven and Hartford Railroad line.



### DISASTERS AND CHALLENGES

As Springfield continued to be a center for innovation and industry, so did the challenges of growth and expansion as more land was developed. Natural disasters also occurred, such as The Flood of 1910.



### WEALTH AND COMFORT

As befitting a thriving city built on innovative ideas and manufacturing accumen, the Mason Square area and the McKnight neighborhood in particular became an area full of large victorian residences built upon this wealth.



### NEIGHBORHOODS FOR WORKERS

Although some areas rose in affluence, many of the surrounding wards grew to house the influx of workers needed by local industries and businesses. This resulted in many more modest and middle-class neighborhoods surrounding the Mason Square area.



Situated outside of downtown Springfield and east of the National Armory, the early years of the Mason Square area were characterized by a few residences in the early 19th century that were later supplanted by commercial businesses, industry, and civic institutions.

The surrounding neighborhoods of Bay, McKnight, Upper Hill and Old Hill were established and grew as the population of the city increased, and by the later 1800's became a busy center of activity and manufacturing with the Highland Division Rail Line bisecting the area.

Originally known as Winchester Square, the tradition of innovation within the City of Springfield thrived here as well, with the invention of basketball inside the gymnasium of the School for Christian Workers on State Street in 1891. Multiple industries and manufacturing businesses were established within the area of the square, with the Knox Automobile Works and the Indian Motorcycle factory (or "Motorcycle" as it was originally called) as arguably the most notable. As business and prosperity continued to increase there were more houses constructed along comfortable tree-lined streets for workers and business leaders alike.



#### PRIMUS MASON

The names sake of Mason Square, Primus became one of the richest citizens in the city, owning numerous properties in the area until his death in 1892.



#### ANNIE MCTIER

The first woman, black or white, who registered to vote in Springfield, and actively encouraged others in the neighborhood to vote and make their voices heard as well.



Betsy Casanas mural - Mason Square Library



Don and Paul Blanton mural - 727 State Street



Clyde Santana mural - 38 Catharine Street



MLK murals - 3 Rutland Street

#### MARTIN LUTHER KING, JR. FAMILY SERVICES CENTER

This location houses a highly-impactful organization that has assisted many in the community with housing, food, activities and other services since 1977.



#### AFRICAN AMERICAN HERITAGE

The symbol of this flag has been raised in Mason Square for over 25 years and honors black veterans at the War Memorial along State Street.



#### SAMUEL A. BOLDEN PARK

This new park was recently dedicated to Samuel Bolden who was a prominent advocate for youth sports and activities in the area.



#### NELSON STEVENS

This artist and UMass, Amherst professor was instrumental in the AfriCOBRA movement of Springfield in the 1960's, and whose legacy of community art is continued through the efforts of organizations such as Fresh Paint.

St. John's Congregational Church

Many other black citizens and people of color lived and worked in the Mason Square area and continue to do so up to the present, although we felt that this important heritage is not as legible or leveraged as it could be. An exception to this are various colorful murals around Mason Square that celebrate this legacy as well as current struggles for equality and the Black Lives Matter movement that were painted or inspired by the work of local artist and activist Nelson Stevens.

## BLACK HISTORY IN MASON SQUARE

One of the principal figures that lived locally in the area was a black man named Primus Mason who rose to become a leading entrepreneur and land-owner in Springfield. Born in the early 1800's, he was a savvy businessman that worked diligently at many occupations and investments to acquire his wealth and the ownership of properties in the area. When he died in 1892, Mason let both land and money for charitable purposes for residents living in the area, and therefore he became the new name-sake of Mason Square in the 1980's as a historical legacy of his generosity.

MASON SQUARE TODAY:  
AN INSPIRED COMMUNITY,  
A POSITIVE FUTURE.

MLK COMMUNITY & YOUTH CENTER

The Martin Luther King, Jr. Family Services Community & Youth Center holds an annual celebration of community members based on their commitment to social justice and equity within the Springfield community. The center offers a variety of programming including after school programs, family support, arts programs, and recreational activities.



FRESH PAINT SPRINGFIELD

Throughout the second week of September of 2022, the Fresh Paint Mural Festival returned to Springfield following a pandemic hiatus. Nine new murals were painted through a collaborative community effort across the Mason Square, North End, and South End neighborhoods of the city.



HONORING SPRINGFIELD'S BLACK HISTORY

Springfield's first black firefighter, Lenny Corbin, is honored by a memorial outside the East Avenue Fire Station at Mason Square. A memorial ceremony is held annually to pay tribute to the man who "lead the way for minority firefighters" not only in Springfield, but across the state of Massachusetts.

KNOX BUILDING REDEVELOPMENT

The historic Knox Building is undergoing a transformative rehabilitation into 54 new apartment units. The back half of the building is slated for further revelopment, which would make an additional 60 units available.



DEBERRY SWAN ELEMENTARY SCHOOL

This the state of the art facility is a new consolidated school, which combined the aging William DeBerry School and Homer Street Schools. This \$95 million building will serve roughly 800 elementary students and 120 Pre-K students in the neighborhoods surrounding Mason Square.

A NEED FOR RECREATIONAL GREEN SPACES

The new Samuel A. Bolden park on Wilbraham Avenue was named in memory of Sam Bolden, a beloved community member who felt strongly about the importance of youth sports and recreation activities in Mason Square and across Springfield.



GUNN BLOCK PURCHASED FOR REDEVELOPMENT

In December of 2022, Gunn Block, the oldest commercial building still standing in Springfield at a remarkable 187 years old, was sold to Thomas Napolitano, a developer from Connecticut. The renovation will feature studio and one-bedroom apartments, as well as a first floor restaurant space.

GARDENING THE COMMUNITY

The local youth-led food justice organization Gardening the Community recently acquired a plot of land at 200 Walnut St. The organization previously was operating on borrowed land. After fourteen years of hard work in the Mason Square District, the organization finally has a central hub to organize community events and grow healthy produce.



A NEW ERA FOR INDIAN MOTORCYCLE

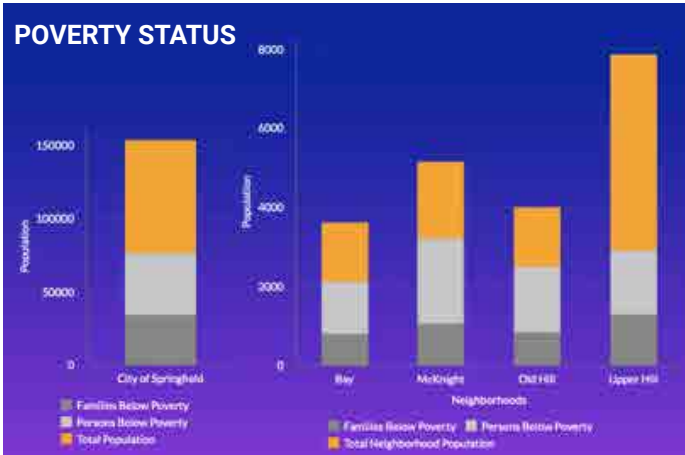
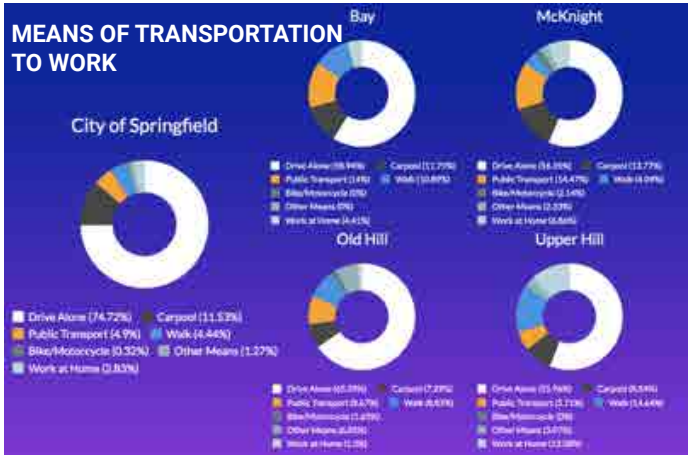
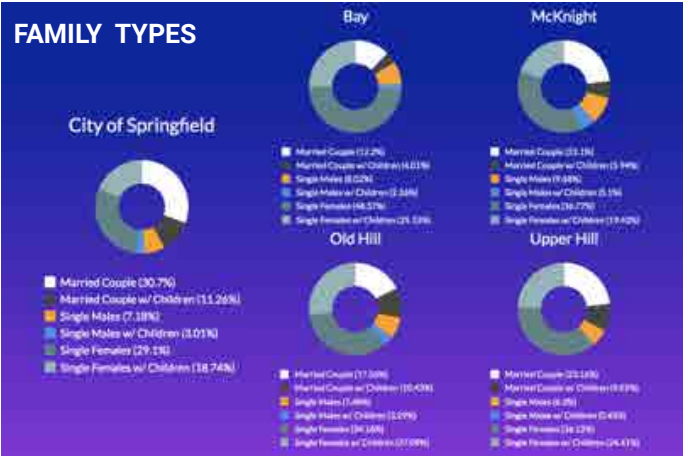
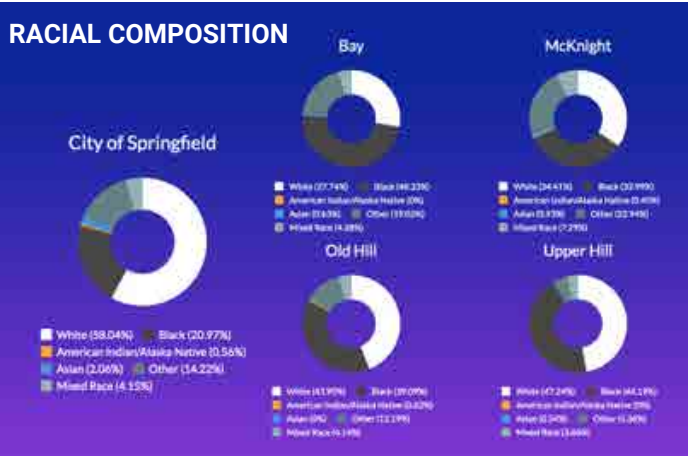
The historic Indian Motorcycle building has recently been renovated into Mason Square Apartments. The \$32 million renovation made 139 townhouse style units available to the community. Adjacent buildings on site provide an additional 60 units of multifamily housing as well as mixed-use office space.



## UNDERSTANDING THE AREA

DEMOGRAPHICS

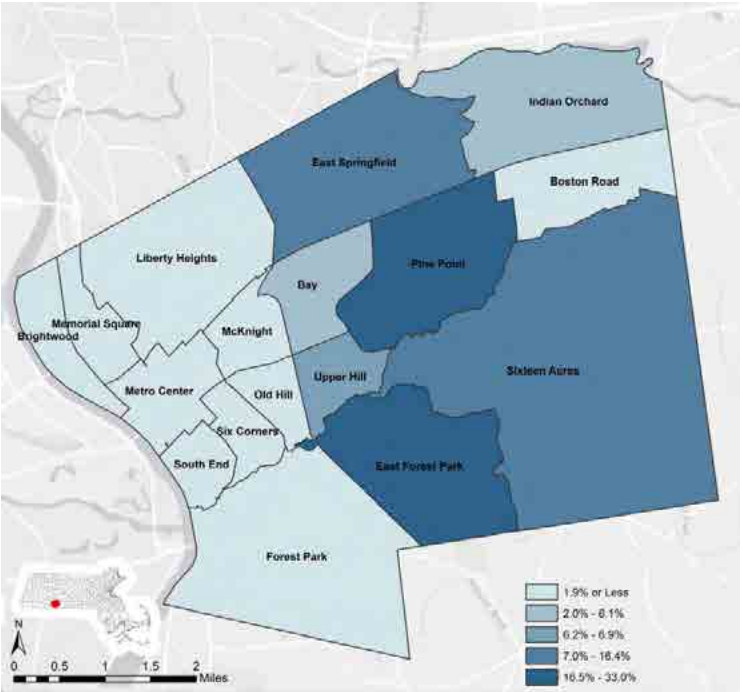
- Demographic data from PVPC & ten year census analyzed.
- Data misrepresents community through various inaccuracies (i.e. hispanic separated into white and black data sets).



- Transportation to work is car centric, walking and biking is not common.
- As we can see in the bar graph, High poverty rate is recored in Mason Square area.

FOOD DESERTS

The map below shows the locations of parking lots, gas stations, fast food restaurants, sit-down restaurants, local businesses, and grocery stores. A comparison of all these businesses reveals a very high percentage of surface parking. Grocery stores are at the bottom of the map. There are only a couple of small grocery stores nearby. Members of the community have voiced their worries on this matter because the TDI district urgently needs access to wholesome, reasonably priced food. We examined issues surrounding the accessibility of nutritious food at our design studio and developed design concepts that you can see on subsequent pages.



“ An area in which residents’ access to healthy, affordable food is highly restricted” (Oxford Reference)

- Bay (6.1%)
- McKnight (0%)
- Old Hill (0%)
- Upper Hill (6.9%)



# NATURAL SYSTEMS AND URBAN GREEN SPACE

The watershed map shows the Connecticut River floodplain with its smaller rivers and tributaries. Since the draining of the glacial Lake Hitchcock, the river has changed its course, which has been depicted by the gentle feathery structures on the map. The Connecticut river flows South of the Holyoke range to the Massachusetts-Connecticut border and then winds through the settlements of Springfield and Holyoke. Other features highlighted on the map include drumlin fields in the South Hadley region as well as sand dunes in Chicopee. From the map, we see that the city of Springfield belongs to the Connecticut River Watershed.

Map showing Springfield city with respect to surrounding Watersheds

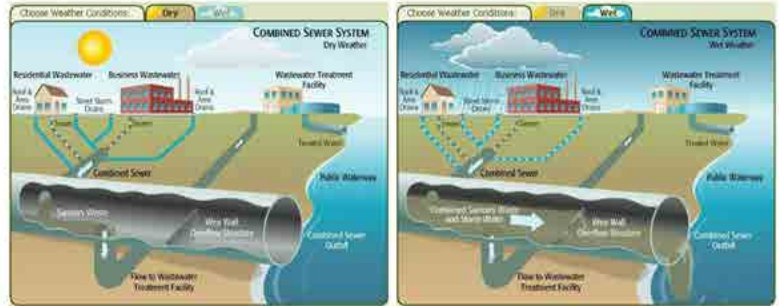


Map showing Impervious surfaces in TDI mason square district

In our project area, impervious surfaces make up about 85 percent. The district can benefit from more pervious surfaces, stormwater infiltration designs, and green spaces which in turn can mitigate the risks of the urban heat island.

In older cities such as Springfield, wastewater collection (or sewer) systems were originally constructed a century ago to collect and transport wastewater (sewage) and stormwater together in one pipe. During rain events, the combined rain runoff (or “stormwater”) from the streets along with wastewater from homes and buildings can overwhelm the capacity of the combined sewer mains. To prevent this excess capacity from backing up into streets or basements, the combined sewer overflow systems (CSOs) were designed with outfalls that empty this excess capacity into waterways. The final collection points where water with effluents is discharged into the Connecticut River are shown on the map.

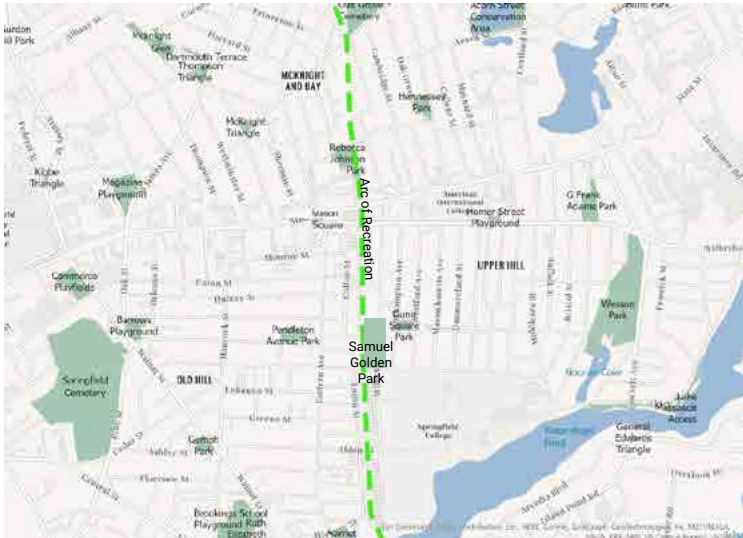
Map showing combined sewer overflow systems in Springfield city



Negative impacts of a combined sewer overflow system

The CSOs use gravity and natural topography to collect rainwater and city wastewater. However, the implementation of CSOs in city planning is not an ideal solution to manage a surge in stormwater runoff during heavy rains. As a result, designers are given an opportunity to design systems using more pervious surfaces, green infrastructure, trees as well as effective infiltration systems. Incorporating elements like rain barrels can also help minimize the flow of stormwater into public sewer systems.

# PUBLIC OPEN SPACE SYSTEM



Public open spaces at the neighborhood scale in the larger Mason Square area.

The project area has small and larger public parks. This includes the new Samuel Golden Park that provides a new asset in the neighborhood. The park includes a large playing field, basketball court, and a playground. Notable is that this park and the adjacent Gunn Square Park lack trees that could provide shade in the summer. The park system in the district lack connectivity. For example, Watershop Pond is hardly accessible from Mason Square. This could be improved through the realization of the planned rail trail along the Highland Division Rail Trail. A project that has been coined by our students as “Arc of Recreation” 15 years ago. Another challenge is that some of the property of the former railroad is used by Springfield Water and Sewer Commission as industrial storage space and impedes west to east connections. Most residents need to walk for fifteen to thirty minutes to get to the nearest park because of barriers, missing connections, or hostile streetscapes.



Public open spaces at the larger TDI District area.

# TREE CANOPY AND HEAT ISLAND EFFECT

Map showing tree canopy in TDI Mason Square district

The absence of shaded walkways and roads are evident from the map. Most trees can be seen on private properties while very few are present on streets. The Mason Square District has very limited canopy cover when compared to the rest of Springfield and this gives way for possible design interventions which may include shaded bike paths, shaded sidewalks, and shaded parks.

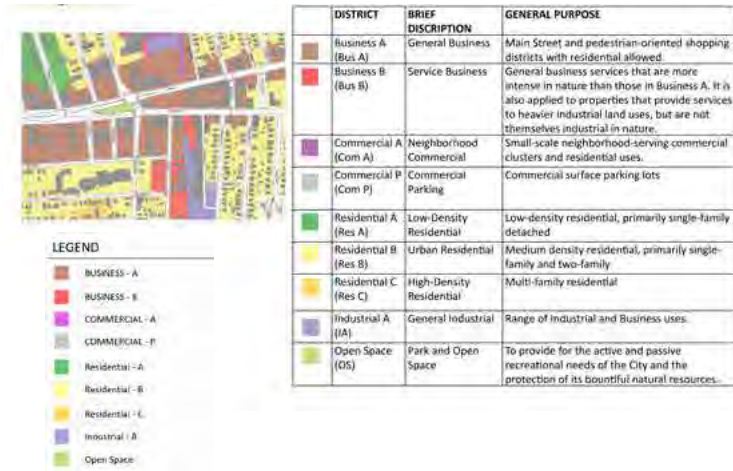


Map showing Heat Island Effect in TDI Mason Square District



The temperature in the core of Mason Square is dramatically affected by lack of tree canopy and high amount of pavement (both roads and parking lots). Map depicts relative heat severity derived from Landsat imagery from summers of 2019 and 2020 (Trust for Public Land; tpl.org)

ZONING AND FIGURE GROUND



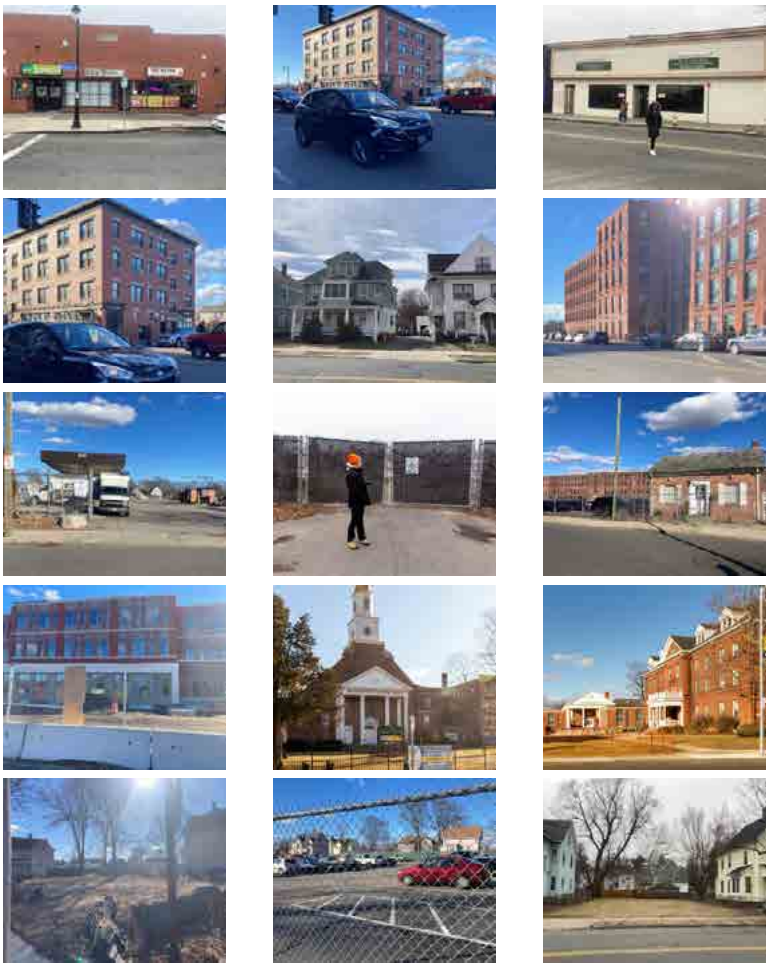
Map showing zoning with different color codes in TDI Mason Square district

The majority of the structures along State Street are mixed-use structures with commercial offices and shops within. There are some institutional and commercial spaces in this mixture. Most of the spaces are residential as you get further east and west. Compared to the amount of land that is occupied, the TDI district does not have enough area set aside for public open spaces. The majority of the project area is made up of densely populated residential and commercial areas. The MCDI property is identified as an industrial area and may serve as the location for the construction of a new public open space. The figure ground map below has a greater concentration of impervious surfaces close to the project area. Parking is very plentiful in the TDI district, which greatly contributes to this.



Map showing figure ground study in TDI Mason Square district

LAND-USE



# STORE FRONT IMPROVEMENT PROGRAM

- Funded by the US department of Housing and Urban Development.
- **Criteria for funding**
  - Need to be on ground floor.
  - For Profit Businesses only .
  - Need to be in Community development block grant eligible areas.
- **What the Funding can be used for**
  - Business signs and/or awnings
  - Exterior Painting
  - Doors/Windows
  - Façade Improvements
  - New Trees/Plantings
  - Lighting
  - Removal of existing steel roll down doors
- **Amount of funding**
  - \$25,0000 per storefront.
  - Property owners need to match 100% of funding.
  - Can apply for up to three storefronts.
  - Business owners need to match 10% of funding.
  - Can receive funding from program once every five years.



Map showing Bus routes in TDI Mason Square district



Map showing Bus stops in TDI Mason Square district



# TRANSPORTATION

In the TDI district, starting from Union station, public transport is in good working order on weekdays and weekends. This has a significant positive impact on the project area because it gives users a fantastic access point. According to this map, all buses depart from Union Station and then dissolve up to go in different directions in the North and East. As this neighborhood develops through revitalization, increasing multi-modal transportation facilities is critical to provide safe, functional, efficient and healthy alternatives to an automobile dominated system.

There are numerous bus stops and stop locations around Mason Square District for convenient access for users. PVRTA bus stops in the TDI district are circled on the map. The map reveals that there aren't many bus stops that are covered. For commuters, there are two Valley Bike stations on State Street. There are no designated bike lanes within the neighborhood.

# SURFACE PARKING LOTS



Map showing Surface parking lots in TDI Mason Square district

Mason Square Neighborhood has many existing parking opportunities. The majority of parking structures are in the TDI district. Double sided on-street parking is available on State Street and on Ben Swan Way. No public parking lots are seen. It is very unclear which parking lots belong to which buildings.

Surface parking lots have the potential for alternative uses than just parking.

 - SURFACE PARKING LOTS



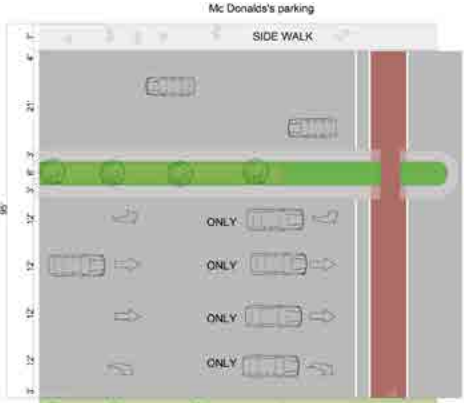
# STREET EXPERIENCE



Map showing hierarchy of roads in TDI Mason Square district

Understanding the hierarchy of neighborhoods road systems is critical while coming up with design proposals as it will help you understand how people travel currently, missing connections and what connections can be made in the future. Looking at the map above we can see that State Street is the major arterial road which acts as a great east-west corridor and also a major link between downtown Springfield and East Springfield. Mason square junction can be a major choking point during rush hours time. Other corridors that are marked in yellow are the collector roads which will bring the traffic from the neighborhoods (McKnight, Bay, Old hill, Upper hill, Six corners) to the State street and Wilbraham Avenue. The streets colored in pink are local streets that do not have a heavy traffic volume during much of the day, but provide essential cross neighborhood linkage.

STATE STREET



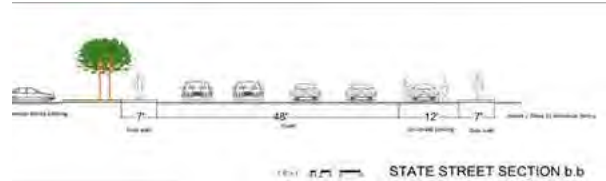
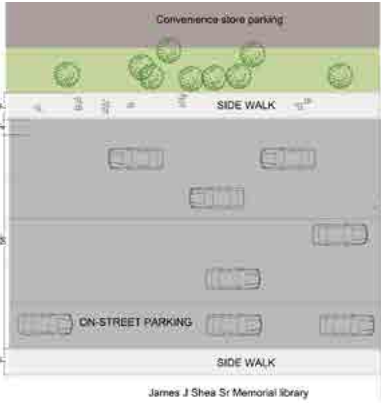
State Street is one of the major corridors in and out of the TDI district, and a major link to the surroundings communities. It is a 100’ road with 4 way lane going towards East Springfield and 2 way lane going towards Downtown Springfield. Our major goal here is to rework current street structure in order to accommodate complete streets program that would allow for mixed use lanes and more pedestrian friendly traffic flow levels along the street.

BEN SWAN WAY & WILBRAHAM AVENUE



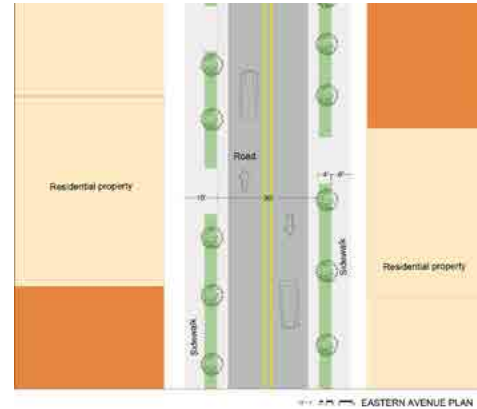
This cross section is representative of the typical street corridor of Ben swan way consisting 2 way lane further continues to be Wilbraham Avenue. It is a 30’ wide road. On street parking on the Ben Swan way leaves very little space for the traffic to pass through the intersection.

STATE STREET BETWEEN MONTROSE STREET & CONCORD STREET



Another cross portion of State Street, next to AIC, is 60’ wide, has 4 lanes of two-way traffic, and on-street parking. This is a crucial street in the area that serves as a key east-west artery with significant locations on either side. There are now no bike lanes, despite parking and mixed traffic cannot be accommodated by the width of the roads.

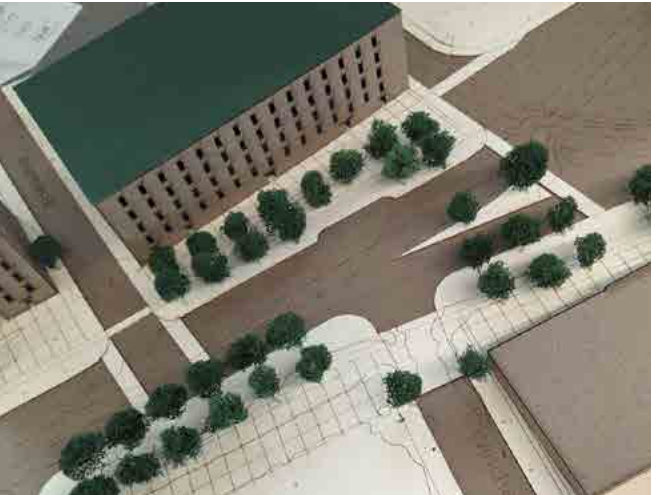
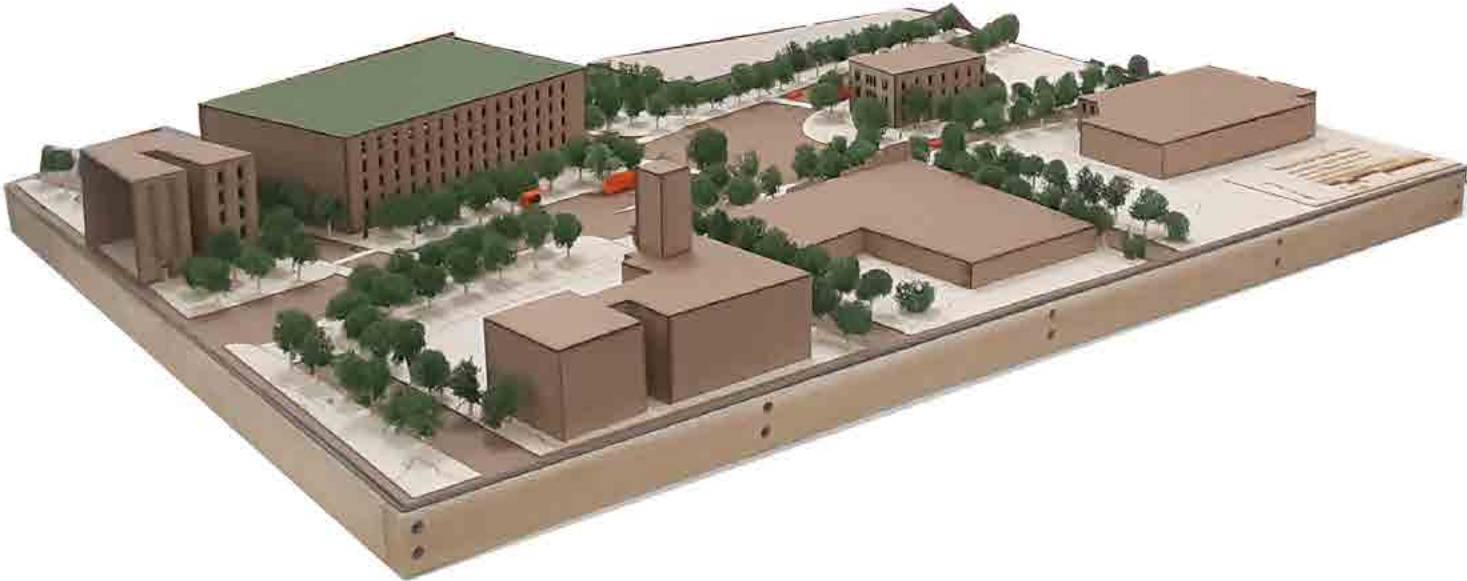
EASTERN AVENUE



Eastern Avenue is a 30-foot-wide two-way roadway with on-street parking and sidewalks on both sides. Mild vehicular and mobile traffic. Mostly residential construction. Minimal street trees. Common path for pedestrians. You will also see some design ideas for residential streets of this type that might calm traffic.

# STUDY MODEL

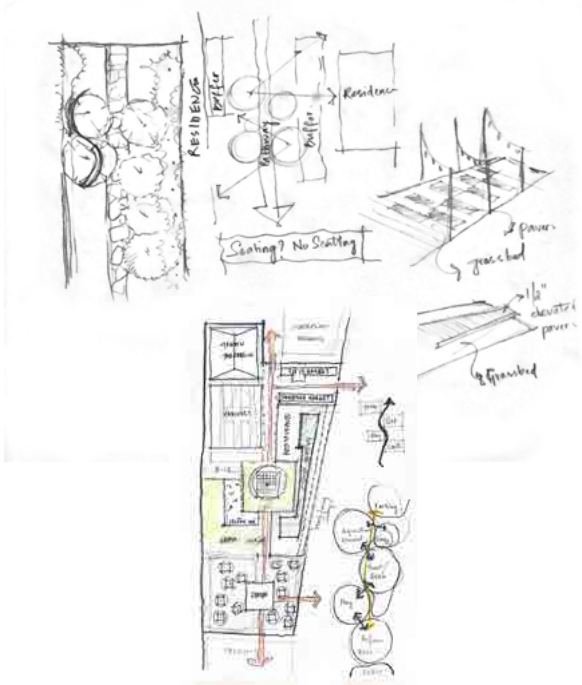
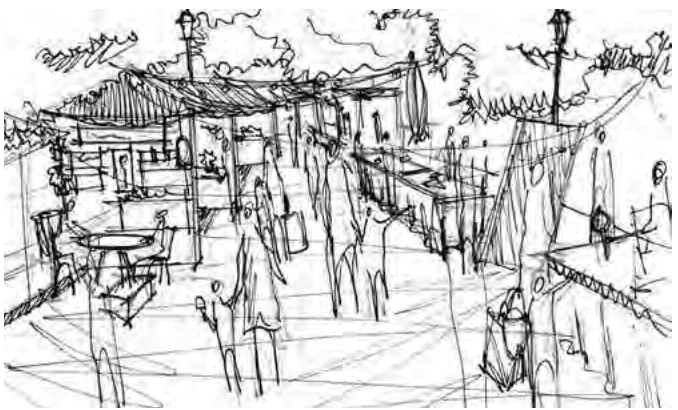
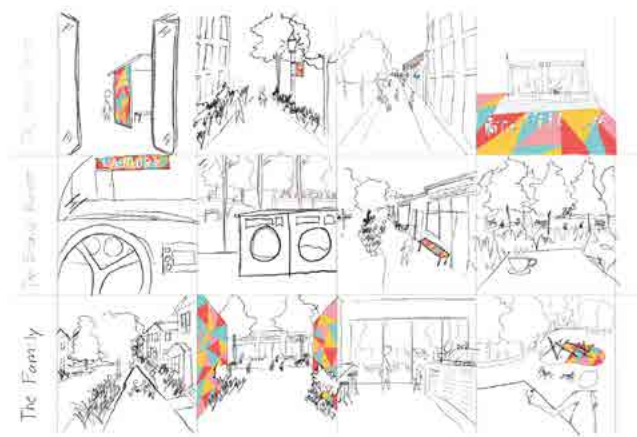
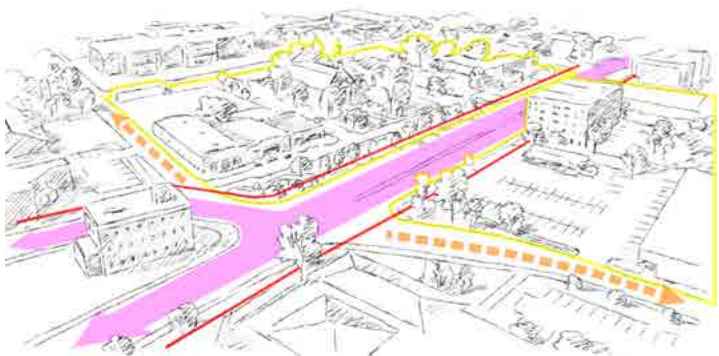
We thank Jacqueline Berlin and Michael Chancellor for creating this beautiful study model which includes their design proposal .



# CONCLUSIONS

## CHALLENGES

- Strong sense of community but physical barriers isolate neighborhoods and limit sense of place.
- Vehicle-centric road network makes for unsafe pedestrian conditions.
- Mason Square does not properly reflect the diversity and heritage of residents.
- Limited access to healthy, local food.
- Shortage of affordable housing.
- Many vacant and underused properties.
- Limited tree canopy within TDI District.



## OPPORTUNITIES

- Opportunities to forge stronger connections and strengthen sense of place and community.
- Pedestrian-centric will improve safety and walkability.
- Celebrate heritage and diversity more prominently (Art, Restaurants, Small Businesses).
- Increase access to healthy, local food.
- More mixed-use and infill of unused spaces can increase housing and create a more vibrant core area.
- Increase tree canopy and vegetation throughout area.