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The work of the Senior Urban Design Studio 2009 describes a comprehensive and process-oriented strategy with various facets, which is documented in this report.

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We hope our Urban Design Studio can contribute to make the North End in Springfield a even greater place.

Frank Sleegers and John Taylor

Amherst, January 2010
Studio Context and Project Area

The North End of Springfield, Massachusetts is located north of downtown along Main Street, with I-291 to the South and the Springfield-Chicopee border to the North. To the West the Connecticut River is a natural boundary, and to the East the boundary is defined by Armory Street. The North End comprises three neighborhoods: Brightwood to the West along the Connecticut River, Memorial Square in the center, and Liberty Heights to the East.

Memorial Square and Brightwood have a rich Hispanic culture but a very low average household income. Other physical challenges in the North End as a whole include 1) the fragmentation of the area by two Interstates—I-291 and I-91—and the Springfield - Holyoke Railroad Line and 2) the lack of commercial activity in the relatively isolated Brightwood neighborhood and in the areas immediately adjacent to the Baystate and Mercy medical campuses.

Assets include the North End’s proximity to downtown Springfield as well as the North End’s thriving medical industry, which includes Baystate Medical Center and Mercy Medical Center. The medical industry is, one of the largest employers in the region as a whole. The Connecticut River and Van Horn Park are significant natural and potential recreational resources for the North End but are characterized by a lack of connection to and integration into the adjacent neighborhoods.

Project Goals

The project has multiple design objectives vis-a-vis the cultural, physical and economic environment of the North End:

1. Integrate the underutilized southwest portion of Van Horn Park and the isolated east bank of the Connecticut River into the open space network and existing neighborhoods. Design systematic connectivity to form a pedestrian- and bicycle-friendly network including safe routes to neighborhood schools, including Brightwood Elementary School, Lincoln Elementary School, Chestnut Street Middle School, and German Gerena Community School.

2. Create business services on Main Street that could serve both neighborhood residents and the employees of Baystate and Mercy Medical Centers. Foster synergies between the successful medical industry and activities on Main Street.

3. Foster community-shaping commercial efforts like farmers’ markets, and link them to the open space network.

4. Propose urban infill that reinforces the architectural edges along Main Street, fosters a diverse and robust housing market, and explores commercial development, and is sensitive to the natural and cultural context.

5. Investigate green infrastructure, e.g. alternative stormwater management and green streets, as a green strategy for growth in the more disadvantaged neighborhoods of the North End.

6. Integrate health programs of the medical industry with a network of recreational corridors and trails.

7. Engage communities in the programming and maintenance of open space and vacant lots with art and gardening.

8. Propose zoning regulations and creative incentives that encourage mixed land use and architecturally-defined street edges.

9. Develop a phased Master Plan for the built environment that generates public discussion and sets the groundwork for further planning efforts.
Learning Objectives and Deliverables

Team and Individual Deliverables
1. Big idea, Vision statement, goals and objectives, and design program.
2. 1” = 250’ - scale site assessment, including a spatial assessment before and after reading Lynch’s Spatial Taxonomy of Urban Systems.
3. 1” = 250’ - scale master plan.
4. Design concept plans of:
   1. 1” = 50’ - scale plan of team focus area
   2. 1” = 20’ - scale plan of individual design area
   Mixed media analogies/typologies as perspective views
   3. 1” = 1/8’ - scale sections or 1” = 1/4’ Study models and other 3D models
5. Summary report of assessment, big idea and design description.

Learning Objectives
1. Create a conceptual proposal for a renewed open space system. Identify potential green streets that could reinforce the open space system, e.g. as planted boulevards and/or green infrastructure.
2. Analyze and assess the urban grain of our project area in figure-ground drawings. Understand how urban grain reflects land use. Propose new land uses that reinforce a city that is legible.
3. Create a series of design typologies that could be applied to implement the design idea and convey it to a broad audience.
4. Reinforce a fluid the design process using a simultaneous mix of 3D design tools like sections and digital 3D models, physical study models and plans.
5. Develop focus area to engage the whole range of scales from city, to neighborhood, to site level.

Studio as Public Service, Methodology, and Learning Objectives

Urban Design Studio as Public Service
The project began with a visioning workshop, conducted in order to engage community members in the shaping of project goals and objectives. Groups of students and representatives of the project area worked together to identify attributes and challenges in the neighborhood and to conceive design ideas, culminating in the development of alternative vision statements that guided and informed specific design proposals in our studio.

Studio work includes in-depth study, analysis and assessment of the project area through on-site exploration and observation, interviews, sketching, institutional document research, historic analysis, aerial photographs, and the manipulation of GIS data. Specific case studies create a reference to support design proposals. Final design concepts and a master plan were presented to the UMass community and to the North End community, including official representatives of Baystate Medical Center. The design drawings will also be exhibited in the North End Citizens’ Council’s office to further stimulate discussion within the community and to demonstrate a UMass presence in Springfield.

It is the aim of this project to deliver public service to some of the most disadvantaged neighborhoods in Springfield. It will foster a planning process bringing together neighborhood residents and University faculty and students. It will start a productive dialogue between city representatives and residents. Both the finished product—students’ design proposals—and the relationships developed with and between stakeholders will create a useful design and planning framework that will be a guide and a paradigm for the next phases in the revitalization of the North End.

Methodology
The North End is part of the urban fabric of greater Springfield. Urban design is founded in a systematic understanding of this urban fabric. It investigates urban form and usage; it analyzes open space and transportation networks as systems; it proposes visions for the physical and social environment as process-oriented strategies for urban communities. Therefore, it has been necessary in this studio to analyze and assess these systems and to develop a framework and context for design. Physical design solutions are explored and expressed through the simultaneous use of plans, sections, and three-dimensional work models. Specific case studies create a reference to support design proposals.

Learning Objectives
1. Conduct face-to-face interviews and collect data through the visioning workshop, to develop and understand of the social and political structure of the project area and the project’s social context, challenges and opportunities. Develop a design program that reflects the findings.
2. Describe, analyze and assess the open space system of the project area and how it relates to the city context. Distinguish between nodal and corridor elements of the system. Identify missing links and connections. Create a hierarchy of open space nodes and create a hierarchy of open space corridors.
3. Create a conceptual proposal for a renewed open space system. Identify potential green streets that could reinforce the open space system, e.g. as planted boulevards and/or green infrastructure.
4. Analyze and assess the urban grain of our project area in figure-ground drawings. Understand how urban grain reflects land use. Propose new land uses that reinforce a city that is legible.
5. Create a series of design typologies that could be applied to implement the design idea and convey it to a broad audience.
6. Reinforce a fluid the design process using a simultaneous mix of 3D design tools like sections and digital 3D models, physical study models and plans.
7. Develop focus area to engage the whole range of scales from city, to neighborhood, to site level.
Making Connections in Springfield's North End

Senior Urban Design Studio • LA 497A • Fall 2009

Introduction

Springfield serves as the Southern Gateway into Massachusetts. Aligned along two major highways, I-91 and I-291, it is a major transportation hub. The city of Springfield is alive with culture, history, and diversity. It is known as "a city of homes" and in many ways, has a small town feeling within a large city. Springfield boasts one of the highest Percentages of open space per capita in New England and is home to many schools, museums, and historic buildings.

The Springfield Basin was formed by glacial Lake Hitchcock 8,000 years ago. Today, the Connecticut River is one of the city's most striking visual amenities.

History of Springfield

Springfield MA in Western Massachusetts was founded by William Pynchon in 1636 and became an important city for industry. Springfield was selected in 1770 as the United States manufacturing. A young and diverse ethnic population of 150,000 people live in Springfield.

Springfield is located near the Connecticut River but has turned its back to the river since the 1960's when I-91 was constructed, connecting Vermont to Connecticut.

New Trends in Springfield are quite positive:

• The old Basketball Hall of Fame has been turned into an "LA Fitness" health spa with mixed retail and restaurants. It provides work for 100 people.
• New firms in Springfield engage in Biotechnology redesign for $13,000,000.
• The entire 3.2 mile long State Street corridor is under development of the surrounding neighborhood.
• The new Federal Courthouse is a model for creative architecture and has already had a positive impact on the development of the surrounding neighborhood.

Springfield, with its 350-year history, must showcase its assets to become a capital in the region. It has much to offer, and is home to New England's largest companies, such as MassMutual Financial Group, Bay State Health, Smith and Wesson, and Big Y Food Inc.

Today, health care/educational/social services provide the base of the economy, followed by wholesale/retail trade and manufacturing. A young and diverse ethnic population of 150,000 people live in Springfield.

Springfield's North End – Assets, Opportunities, and Constraints

The North End is comprised of three neighborhoods, Brightwood, Memorial Square, and Liberty Heights. It is bordered to the North by Chicopee, to the West by the Connecticut River, and to the South by Springfield's thriving Metro Center. Interstate-91 runs north and south, directly through the North End.

In the early 1960's, Connecticut River Valley farm employed a large Puerto Rican Population. Many of these workers and their families have since settled in the area. Today, 10,000 residents live in Brightwood and Memorial Square (only a portion of Liberty Heights is included in our focus area) and 80% of the population is Puerto Rican, contributing greatly to the North End's strong cultural identity. It is also home to a number of community outreach groups, that actively promote community well-being within Springfield.

The North End has many other valuable assets as well. Several medical institutions are also located in the North End, including Baystate Medical Center, which is one of the largest employers in the region. Baystate represents some of the greatest buying power in the area and has a strong incentive to work towards improving its surroundings. Following the health, education, and social services industry, the second largest employer in the North End is the whole sale/retail industry. Main Street, the North End's commercial center, contains a strikingly diverse and lively array of businesses, activity, and people. The majority of locally owned businesses are embraced by the community, acting as meeting spots and places for conversation. Street vendors can be found along Main Street, creating small hubs of activity. This diversity and character is what makes the North End such a vibrant community.

Despite its many assets and opportunities, the North End faces several social and geo-physical challenges. Main Street, although already established as a commercial center, is lacking in its ability to draw outsiders, or to culturally unify the local community. The Connecticut River, one of Western Mass' most beautiful natural resources establishes the western boundary to the North End, but is virtually inaccessible to the local residents because of a full floodwall. A lack of accessibility and a general feeling of insecurity due to poor visibility and lighting leave the abundant open space underutilized relative to its potential. A large number of vacant lots result in what is, in many places, a disjointed urban fabric. I-91 and I-291, as well as the Amtrak railroad create severe physical barriers that isolate the community. Similarly the medical industry is poorly integrated into the community, as a socio-cultural gap that must be bridged in order for the North End to progress.

Based on the 2000 census, the North End has:
40% poverty rate:
• Lowest household income in the state
• Lowest educational attainment in the city
• Highest unemployment rate in the city

Significant health problems such as asthma and diabetes

Site Analysis and Assessment - Understanding the Area and Site

Urban design studio seniors meet with Springfield officials and representatives in Springfield’s North End.
Following a steep embankment along the Connecticut River, Brightwood and Memorial Square are relatively flat. To the East, the grade change becomes quite steep again, ascending roughly 80 feet across Liberty Heights, up to Van Horn Park. These steep slopes present some physical barriers and deterrents to those moving on foot or bicycle across the North End.

Urban Watershed and Impervious Surfaces

A number of combined sewer overflow outlets are detrimental to the water quality of the Connecticut River. A very large portion of our project area is spanned by impervious surfaces. Many of our design proposals present storm water management solutions, which will help to alleviate these problems.

The Connecticut River is bordered by a steep embankment, ascending as much as 30 feet to the bike path. A flood wall elevates the bike path above Riverside road and restricts access to the Connecticut River.
Site Analysis and Assessment - Understanding the Area and Site

1. Site Analysis and Assessment - Understanding the Area and Site

Land Use and Vacant Lots
The North End consists primarily of residential neighborhoods and, for an urban setting, contains a large number of green spaces and parks. The majority of the North End’s mixed use and commercial buildings are situated along Main Street in Memorial Square. Hospitals and the medical industry are present both in Liberty Heights and Brightwood. Several locations along the Amtrak railroad are still used for industrial purposes.

Urban Grain
Figure ground studies and a physical model provided insight into the fabric of the city. Larger buildings represent industrial or business areas, while a finer grain represents residential neighborhoods. By analyzing how the different forms mesh together, we were able to identify key places where smoothing the transition from one land use to another would be important.

Street Network and Parking
I-91 creates a physical barrier between Brightwood and Memorial Square. However, the highway makes Springfield quite accessible to both Connecticut and to the rest of Western Massachusetts. There are four passes under I-91. The southern edge of the project area is established by I-291. West Street connects the North End to West Springfield. A large number of parking lots contribute to the high rate of impervious surfaces. However, some institutions and business still have trouble finding enough parking.

Green Spaces and Streets
Springfield’s North End boasts a very high percentage of open space for an urban area, one of its greatest assets. Van Horn and Kenefick Park offer large areas for recreation. Linda’s, Calhoun, and Jaime Ulloa Park benefit Main Street. The Connecticut River Walk has the potential to connect the North End to the rest of Springfield and its residents to the scenic Connecticut River. However, these spaces are poorly lit and poorly visible and many people feel unsafe within them.
Design Team Focus Areas

1. Urban Spine
   Victor Czulak, Travis Johnson, Peter Stephens
   Improving Main Street to transform it into a cultural center for North End Residents and a destination for visitors.

2. Strategic Connections
   Kelly Ashton, Tim Iles, Chris Tourigny, Tim Young
   Reinvisioning several key locations, to improve the connection between Main Street and the Connecticut River.

3. North End Rail Trail Corridor
   David Ahronian, Matt Morano, Brian Mulvehill
   Taking advantage of underutilized space along the Amtrak railroad and creating safer pedestrian connections between Brightwood and Memorial Square.

4. Engaging the Riverwalk
   Bryce White, Greg Dunbar, Peter Guy, Piyawut Inthasorn
   Improving the Connecticut River Walk to make it safer, more engaging, and more accessible.

5. Confluence: The Act and Process of Merging
   Jon Gorman, Jon Koch Justin Kronewitter
   A proposed residential development as a means of connecting people to the Connecticut River.

6. Healthy Living
   Max Cohen, Erin Bassett, Zach Livingstone
   Community gardens as a means of improving health and community interaction in the Brightwood neighborhood.

7. The Automotive Landscape
   Brendan Faragher, Kevin Murphy, Sean O’Connell
   Discovering and utilizing the space that was cast aside as a result of the construction of Interstate-91.
Making Connections in Springfield's North End

The design is based on a strong urban core, which has been aptly named the Spine. The core will be transformed into a commercial, retail, and office center aligned along Main street. Current land uses will be altered to support and foster new retail development along the corridor. Both vehicular and pedestrian systems will be redesigned to promote safety and encourage lateral movement to the center and around the periphery. A greenway running east to west will link the core to the existing parks as well as the Connecticut river. Existing parks and open spaces will be redesigned to support a variety of activities and support biodiversity. Medical Center and other institutions will be linked to the core through new office zoning and the greenway. This is an attempt to foster interaction between hospital employees and the residents of the North End.
Our vision is for the North End to become a social and cultural center for its citizens and visitors. This center will be established through creative revitalization of the Main Street corridor, and its connections to existing facilities and neighborhoods. Lyndas park has been re-envisioned to create a stronger connection with Main St. and as well as the surrounding public schools. The proposed Community Dance Center establishes a link between Baystate Medical Center and the North End. Jefferson Ave. has been realigned to create a smarter connection with Main St. The realignment of Jefferson Ave. creates space for a pocket park that is sensitive to the many local businesses. Empty lots are to be infilled with buildings that create a stronger architectural edge, giving Main Street a more iconic feel and turning it into a more continuous experience. These elements come together to create a spine for the North End. This Backbone ties in social, economic, and environmental elements to revitalize the North End and give Main St. a sense of destination and place.
The following typologies help to illustrate some of the major concepts within the Urban Spine redevelopment plan.

-The first three typologies help to set a standardized layout for the Main Street Scape.

-Three large wind turbines establish a landmark visible from the highway as well as within the community.

-Redeveloped green streets utilize drainage swales, bike lanes reach out to existing parks and important institutions.

-Additional highway underpasses help perforate the barrier that I-91 creates and bring more people into Main St. The existing PVTA bus garage is to convert two bus garage bays into a farmers market directly in the middle of the North End. This brings fresh produce to the heart of the city encouraging community interaction as well as the support of local farmers.
Linda’s Park serves as the main Northern gateway to Springfield’s North End. The Park is located at the Northern end of Main Street at the intersection of the I-91 offramp and Dover Street. Linda’s Park serves as an opportunity to make a strong gateway to the Main Street corridor of the North End and a crucial connector between Baystate Hospital and Main Street. One goal of this design is to create a safer connection for students and strengthen the connection between the Gerena school, on the Western side of I-91, and the Lincoln school to the East with a vibrant, interactive gateway park. Linda’s Park slopes away from main street draining toward the exiting tunnel. Safety is an issue due to the lack of lines of sight into the park from Main Street. The tunnel has been prone to flooding through the years and the existing storm-water conveyance system is insufficient to handle the surface runoff from Linda’s Park. This plan responds to this situation by creating a series of bioswales to capture storm-water and transport it to two rain gardens at the base of the site. The constructed meadow that surrounds the site serves several ecological functions, cleansing the stormwater and recharging the groundwater, while enhancing the sensory experience of park users enriching the textures, colors, smells and movement of the landscape.
Baystate Hospital has isolated itself from the Northend community even though it is a block away from Main St. The purpose of the dance center, which is to be built on a currently abandoned lot, is to become a community center with an emphasis on healthy living, particularly through exercise manifested in dance, and specifically Salsa. This facility is to be run by Baystate employees to create an interaction between the hospital staff and the heart of the North End’s community on Main St. Adjacent to the Community center a café which would focus on healthy Latino food, as well as sell local goods, such as pastries and breads from the bakery across the street.

The plaza that is situated between the café and dance center is comprised of four main spaces. A hardscaped elongated plaza acts as a grand entry to the dance studio. The following room is an outdoor dance floor. The space is pushed down to help define its edge and the floor is made out of a parquet pattern ipe wood deck. This will mimic the feel of the dance halls within the building. Facing the stage, divided by circulation, is a sitting lawn. The lawn slopes up four feet into a concrete retaining wall. This slope up in conjunction with the stage being pushed down creates a theater style arrangement which allows comfortable seating for a performance.
In the space opened up by the strategic realignment of Jefferson Avenue, the new Jefferson Plaza sets the stage for an interactive and open ended place for people watching. The pocket park engages those passing through its adjacent intersection as well as the many surrounding store fronts. Just as Lynda’s Park and the new Community Dance Center connect Main St. to the public schools and Baystate Medical Center, Jefferson Plaza strengthens its connections to the local shops. Respectfully borrowing the activity from the surrounding shops and intersection, Jefferson Plaza is a place for people watching. It is somewhere to observe the dance of the of the passing vehicles and pedestrians, as if in an audience. Somewhere to sit and eat your barbecued pork from the local street vendor, to read a book while you wait for your cloths to dry in the near by laundromat, or to chat over a coffee during a lunch break. Rhythmic rows of wooden benches slide along tracks to engage people more in their surroundings, offering different opportunities for conversation and the ability to move seating in or out of the shade of the trees. In order to capture the entire intersection and the activity of the surrounding stores, the plaza extends to all four sides of the intersection and even through the street itself, stitching the area together.

Walking past the intersection, we are carried through the plaza, noticing a change in material and provoking the awareness that we are entering a new place. Similarly, those driving by in cars pass over rumble strips, alerting them to their surroundings, as well as the increased pedestrian traffic. The parallel, linear composition of the plaza creates a continuous motion across the intersection. Grooves in the pavement flow into grooves in a granite bench. The bars of a corten steel grate continue through to the wooden slats of the sliding benches. This angle is upheld by the alignment of the pavers on the ground.
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Making Connections in Springfield’s North End

Strategic Connections
Kelly Ashton, Timothy Iles, Chris Tourigny, Timothy Young

Our design goal is to envision the North End with a strong sense of community and a thriving economic core by enhancing existing assets and the connections to them towards enriching the way of life in the neighborhoods. Also, to establish a cohesive, cost-effective design through ways of strategic intervention by taking advantage of existing conditions and reusing materials throughout.

Our three objectives were:
• To connect Brightwood to Memorial Square
• To promote economic growth by bringing people to Main Street
• To encourage more community interaction

4 Corners Concept Diagram
We accomplished the design goals by revitalizing four main focus areas and the connections to them creating what we called the ‘Four Corners Walk’. This walk delineates a box in the center of downtown Main Street. This became the central hub to our design for the North End. Metaphorically speaking we envisioned this central hub as the ‘heart’ of the community which ‘pumped blood’ to other assets of the neighborhoods. These ‘arteries’ delineated our phases of design to which we hoped to bring people into the heart of the downtown area to promote community interaction, recreation, and economic growth.

The four areas are Linda’s Park; a proposed urban plaza; a proposed pedestrian bridge; and an area for riverfront access along the existing riverwalk.
The Pedestrian Bridge allows for a strong connection between Brightwood and Memorial Square, which was severed the first time in 1870, and strengthened by the construction of Interstate 91 in the 1950’s. Now permeating between these communities is extremely difficult. There are perimeter connections at grade that take about 23 minutes to walk fully. They are also interior connections; one being the Thomas Street tunnel which is only open from 7am-8pm, and an illegal unsafe connection through a break in a fence over the railroad tracks. This pedestrian crossing is heavily vegetated and has been used to entertain illegal behavior. In order for South Brightwood residents to reach Main Street they either walk through this illegal connection or walk an extra 25 minutes around to the tunnel.

The main goals of the pedestrian bridge is to create a safe, universally accessible connection that will link the two neighborhoods of Brightwood and Memorial Square; "what once disconnected now connects." The bridge uses materials from the abandoned train tracks below, as well as black locust decking, granite, corten steel sheetpile, granite pavers, and ornamental grasses that create a harmony textures, movement, and strong contrasts. The concept of the tracks is repeated throughout the entire design in the organization in the use of hardscapes and plantings. The tracks that once divided the neighborhoods of Brightwood and Memorial Square are now celebrated as one passes over the pedestrian bridge.

The sculptural bridge uses it’s overhead structure to emphasize the point of where one actually crosses the bridge. The sculptural bridge winds through the site and contrasts with the linear planting pattern below. The elements of the bridge are two entry plazas, a curvillinear path with two informal spaces viewing the bridge, and an amphitheater that connects with the Roberto Clemente fields nearby.
The proposed Urban Plaza will become the central core within the North End which will improve economic growth by providing mixed use. The plaza will become the heart of community programmed activities such as a farmers’ market, ‘Taste of the North End’ and winter festivals. Currently this site holds the PVTAs buses with two large parking garages. As this offers no benefit to the commercial corridor of Main Street and that of it’s residents we decided to create an urban plaza that would provide a space for community involvement while stimulating economic development. The removal of the garage adjacent to the Main Street scene, as well as the remodeling of the second, larger parking garage, and the addition of infill further define the plaza as a space.

Scultural water fountains bring life to the plaza and encourage user interaction. Hanover products from the aqua loc series are used. These are durable paving blocks that allow for maximum infiltration of storm water. In order to address water that does not infiltrate the grade of the entire plaza pitches towards the center away from the buildings where it is captured into a trench drain, allowed to filter into a holding tank, and then reused for the sculptural fountains.
Linda’s Park is currently an under utilized gateway space to the Thomas Street Tunnel, which is one of two links between Brightwood and Memorial Square. In recent years the park has been redesigned, thus we chose to save most of the existing structure. Since the park serves as the main entrance to the Gerena Magnet Elementary School and the Chestnut Accelerated Middle School we found it important to provide spaces for children, yet design them in a fashion so that they could be enjoyed by all. Upon our first visit to the site we noticed that most of the recently installed concrete walls and granite curbs had been destroyed by skate boards. To alleviate this problem, not only the park itself but across the city, we have decided to propose a 1700 sqft. skate park featuring both beginner and advanced areas. Other key design elements include a community garden with an outdoor classroom for school use, and a Landscape Structures playground. To help provide a safe feeling in the park, lights have been installed, and shrub plantings have been kept low and trees kept high to allow sight lines from one end of the park to the other. Since the installation of the skate park drastically changed the topography of the site, retention areas have been formed and planted with native wetland plants to keep storm water on site without flooding the tunnel.

The Northern section of Linda’s Park is transformed into a skate park. Starting from left moving right, the section cuts through Main Street and then through an entry plaza at the top of the site. The Entry plaza directly overlooks the Skate Park. To the North of the Skate Park is the I91 off-ramp. The west side of the park is the low point of the site. All water on the site drains to this point. The tunnel leading to the school can be seen in the background. The tunnel is both a positive and a negative feature within the landscape. Though the tunnel offers the park users and students the ability to traverse the busy I91 corridor, it also poses issues of safety and has been prone to flooding and mold. The strategic design of Linda’s Park will solve many of the issues with safety and drainage and will use the tunnel to benefit the community.
The Riverwalk has been revitalized in one area in order to resolve some issues we found. The Brightwood neighborhood occupies a 1 mile long bike way along the edge of the Connecticut River. It is a valuable asset to the community, however highly under utilized. We felt that this was due to a lack of clear entry into it from a barrier of a 9’ floodwall. Also, a steep slope prevents access to the river. When revitalizing the Riverwalk the objectives were to create a strong gateway into the bikeway and also to employ a boardwalk to encourage access to the river for contemplation and recreating. By modifying the floodwall and proposing a modified structural door of some sort, to be closed in case of the occurrence of a flood, a clear gateway is established. The existing bikeway 6’ above grade. By cutting into the floodwall and ramping the bike path to grade the path becomes bridged in order to create a separation of circulation, also the effects of a sloped wall in front of a curved bridge creates a sculptural arc look further encouraging invitation and entry. This also creates a strong entry node for gathering.

The boardwalk is universally accessible and leads to two seating nodes and ends at a floating deck. The implementation of a boardwalk allows for the preservation of existing vegetation thus celebrates the riparian corridor along the riverfront.

Community garden spaces and open central nodes are established in the backyard of the public housing units across the street from the entry in order to give something back to the residents and strengthen their connections to each other and the Riverwalk.
Engaging the Riverwalk
Gregory Dunbar, Peter Guy, Piyawut Inthasorn, Bryce White

Using terminology by Landscape Architect Kevin Lynch, we analyzed our site accordingly. There are three neighborhoods located in Springfield’s North End: Brightwood, Memorial Square, and Liberty Heights. Major edges that define and block pedestrian traffic are the Amtrak railway to the east of Brightwood, Interstate 91 (bisesects the North End), Interstate 291 to the south of Memorial Square and Liberty Heights, and Route 20 (West Street) to the south of Brightwood. Major nodes are Van Horn Park, Calhoun Park, Kenefick Park, and the Schools (Gerena Magnet School, Chestnut Accelerated Middle School and Lincoln School). Major paths that connect the nodes and neighborhoods to the Connecticut River Walk and Bikeway are denoted in green. One of the major paths is a pedestrian tunnel that connects Memorial Square to Brightwood. The tunnel starts at Linda’s Park in the Memorial Square, going under Interstate 91 and the Amtrak railroad, it opens back up at Gerena Magnet School and Chestnut Accelerated Middle School in Brightwood. Baystate Hospital and the Medical Campus are two major outsider destinations in the North End. We see these as places that can help bring economic growth to the community.

The materials palette is the collection of material examples, design features, and concepts that from which we drew inspiration. This includes local plants, water feature, distinct color, local arts, music, culture, local materials, and historical features of the area.
Our vision is to create the connections from major landmarks and public open spaces throughout Springfield’s North End to the Connecticut Riverwalk and bikeway. We designed a series of spaces that link the mile long stretch of the bikeway that runs along the western edge of the North End. The spaces establish strong gateways while engaging the river to allow for active and passive recreation. This revitalization will act as a catalyst to create strong connections to the existing walk and bikeway connecting to South Springfield and for future aspirations of connecting North to Chicopee.

The purposed master plan of the Connecticut Riverwalk and Bikeway has four focus areas along the Connecticut River; North Gateway, Laurel Street, Boulevard Entrance, and South Gateway. Each focus area has their own unique overhead structure. It made from red steel for easily visible and attractive to people. The red color and the interwoven represents the synergy of the Latin community and the movement up-down is to metaphor of the fluctuate of the Connecticut River seasonally. Moreover, The overhead structures give a variety of spatial experiences from space to space while also becoming a iconic image of interwoven relationships amongst the North End communities, bikeway and the Connecticut River.
Goals

1. Connect the communities of the North End to the Connecticut River walk and bikeway.
2. Provide a fun and safe walk and bikeway that people from surrounding communities feel safe using.
3. Invite the employees from Bay State Medical to use the walk and bikeway as a means of transportation or recreation.
4. Encourage the residents to value the walk and bikeway and feel appreciation for what it brings to their community.

The following typologies help to illustrate some of the major features along the street and existing flood wall near the Connecticut Walkway and Bikeway.

At the end of the street, it can be more meaningful, and beautifully visible by using the art work. The big letter is clear from far sight and easy to recognize. This idea is to utilize the wall for the creativity and development the community and traffic.

The living wall typologies are the idea to help turning the existing flood wall into more pleasant view and lively. Using the vine to cover the entire wall, it will change the color seasonally.
The North Gateway is located on the North side of Connecticut Walkway and Bikeway between River Road and Plainfield Street. North End of Connecticut Riverwalk and Bikeway is a future possibility bikeway connection to Chicopee. The area is relatively flat roughly around 2-3% slope and drops significantly beyond the riverbank. It stands at 23-25 feet above the Connecticut River. The floodwall runs and meet the ground at the beginning when enter spaces.

The design goal is to bring the people from Bay State medical center to use the park, make a stronger connection of people, walkway, bikeway, and Connecticut River, and create the alternative bike path and biking experiences to bikers. The main Entrance is slightly on Riverside Road to avoid the junction traffic. The red overhead structure leads the direction to the river and create some nice shadow and light during the day time and also provide the inside post lighting at night time. The big lawn is for active recreation, the upper terrace and the lower terrace are for sitting and viewing out into the River.

Plan of the North Gateway

The upper terrace has three step platforms and stone seating wall.
The lower terrace has a stone seating wall look out to the river.
The section show the relationship from the Riverside Road to the Connecticut River looking South.
The Laurel Street Entrance is the only entry space that is totally devoted to the suburban residence of the Brightwood neighborhood located in Springfield’s North End. The slope is set between 2-4%. There is a 2 foot wide flood wall that meets back up with grade in the middle of the Laurel Street entry space. The main idea for the entry is to attract the single family residence of Brightwood to the space and into the Bikeway. The spaces are designed to allow people of the community to gather and use the space as their own play areas. The seat walls incline as you get closer to the entry of the walk and bikeway allowing for viewing of the River, Bikeway, and Recreation occurring in the green spaces. There is a large river overlook space which allows people to stop, rest, and enjoy the scenic views of the Connecticut River.

A variety of community Gardens is one of the interesting ideas of the area that can draw people to the park.

Showing the main path and connection between plaza and big lawn

Direct connection of the community to the viewing area

This section shows the relationship between the boulevard and the Connecticut River.
Riverside park is the southern of the Connecticut Riverwalk and Bikeway within the North End. The site is bordered by the Connecticut River to the west, route 20 to the south and riverside street to the east. The site is primarily flat above the river and then slopes 22 feet down to the waters edge.

The concept for the design is based around the rigid structure of the gridded urban fabric in conjunction with the movement and flow of the river and bikeway. Community gardens surround the main green space, weaving the surrounding residents into the flowing gridded fabric of the site. Upon entering the site the user is lead through a series of espaliers which act as a defining gateway for the bikeway and entry spaces. The riverside overlook engages the user with the river, allowing for views to the west while creating various modes of enclosure through the use of overhead structures and a flowing grid of trees. The overlook crests the top of the riverside amphitheater, consisting of a series of concrete seating walls with grass terraces for passive recreation. The amphitheater is fragmented by groves of river birch, allowing for selective shaded areas while also defining the flow of the handicapped accessible ramp. This space is followed by a riverside dock which allows for close engagement between the user and...
North End Rail Trail Corridor
David Ahronian, Matt Morano, Brian Mulvehill

Our principal objectives for our design stem from collaboration with the residents and businesses to steer us in the right direction in order to develop a design that fits the needs of the community. This then lead us into the focusing on the infiltration of the physical edges that have segmented the three neighborhoods to create a better sense of community in the North End as a whole.

Our big idea for the North End of Springfield is to create and enhance the connectivity to the existing physical edges between the three neighborhoods as well as the rest of the city and the surrounding context with the use of a railroad corridor.

With the Amtrak rail corridor being one of the significant barriers within the community, we chose to take this constraint and transform it into an opportunity for greater connections. We also view the implementation of a rail trail as a destination not only for the local residents but to the regional context as they would be potential for further development both North and South to connect to downtown Springfield and Chicopee.
Currently, this portion of the railtrail design lies within an educational context and receives no use. It sits directly behind the Gerena Magnet School on Bernie Ave, and across the train tracks from the Chestnut Accelerated School. The Gerena school and the train tracks or this site’s two boundaries that make it very linear in proportion. Through a series of sketches and diagrams, a plan was developed with two major spaces. The first of the two spaces is “The Mural Labyrinth”, planned to be used more by the community as a whole. It is meant to feel like an outdoor art museum as the raised planters, mural walls, and tree cover define smaller pocket spaces within and include inlaid wood capped benching for pausing.

At the northern part of the plan lies the outdoor classroom/ play structure inspired by many of Lawrence Halprin’s designs. It is an outdoor amphitheater made up of a series of raised and lower platforms for the students to sit on, climb, and play on. During the warmer months, this space will give a feeling of urgency for the students to come to school and have their classes held outside.

Upper Left: Perspective of Outdoor Classroom
Upper Right: Perspective of Mural Labyrinth
Bottom: Section cut through rail corridor looking towards La Gerena School
The main design proposal for this section of land was to enhance the connections between Main St. and Bernie Ave. under I-91. This space was left over when the highway was built.

The existing conditions consist of an embankment with various native and invasive species. There is a lack of sidewalks and pedestrian flow along Bernie Ave.

Design objectives include wider sidewalks, street trees and elevated cross-walks. Within the underpasses there will be community art murals, more lighting, and wider sidewalks.

The main feature will be the art expression along Bernie Ave. This will bring people up and down the road and act as gateway to the underpasses.

Top: The section shows the relationship of the terraced wall system acting as a gateway to the underpass.

Below: The section shows the relationship between Bernie Ave. and the elements of the hillside and I-91.
At the southern end of the proposed rail trail lays the main entrance from Bernie Ave. Currently there is an illegal cut through located on site. This area is visually disconnected from Bernie Ave. allowing for illegal and unsafe activities such as crossing the tracks itself.

The Big idea for the southern focus area is to address the current need for a connection across the tracks. This is accomplished by locating a bridge on site that would connect over to Roberto Clemente field. This area is also designed to be the main gateway to the rail trail using the bridge and other design elements to strengthen the sense of gateway and movement.

Top: This is a perspective view of the southern entrance to the railtrail from Bernie Ave.

Middle: This is a section view cut through the center of the connection to Roberto Clemente Field.

Below: This is a section cut through the center of the southern connection to the railtrail from Bernie Ave.

Entrance to Rail Trail from Bernie Ave.

Section through the Roberto Clemente Field

Section through Bernie Avenue Connection

Southern Gateway
Like a river, needs many tributaries to make up its flow, a neighborhood needs a diverse makeup to provide its flow. With this in mind, our vision for the North End is to provide a structure that connects the neighborhoods through the inspiration of a moving river and its components.
A pedestrian bridge connects the broken neighborhoods to a proposed housing development and riverfront green space.

- The neighborhood becomes the “source” of the system with corridors moving people up and down the greater “watershed.”
- Calhoun Park and Main Street become the “eddy” of the system, churning live and vitality.
- Engaging the Connecticut River by making Kenefick Park and the surrounding riverfront area the “confluence of the system.”
The riverfront green space connects to the bike path, housing community and the North End at large.

- Provide an engaging source to the Brightwood neighborhood through a pedestrian bridge that acts as a landmark for the North End.
- Engage the edge of Kenefick Park to provide a gateway to the residential community and move people towards the water.
- Emphasize the presence of the Connecticut River by providing a viewing promenade and usable gathering space atop the flood wall, terminating the system of movement through the Brightwood neighborhood.
Healthy Living
Maxwell Cohen, Erin Bassett, Zachary Livingstone

Our vision for the Brightwood neighborhood is a self-supporting community that grows with the landscape. The commitment and creativity of the community help develop a vibrant and productive landscape. Community gardens, farmers markets, environmental art, and fitness trails mesh together to create an atmosphere that promotes social, physical, and economic well-being.

Our design creates a greenway that connects the medical industry, Brightwood neighborhood, and the school systems in a mutually beneficial community. The medical industry benefits from the cultural exposure, healthy outdoor lifestyle, and convenient shopping. The Brightwood neighborhood benefits from a strengthened sense of empowerment supported by economic stimulation, social interaction, and cultural pride. The school community benefits from after school programs, safe walking routes, and opportunities to display their work. The synergy developed by these three groups will help the Brightwood neighborhood serve as a model for other areas in Springfield to capture the power of the people. These changes will occur over years, but the plant of the greenway linking these three elements serves as a framework for change. If the vacant lots along the greenways are developed the positive benefit will be realized by the stakeholders. All parties must be committed for the plan to work, so it is critical that people participate in the planning and design of the individual sites along the greenway. Overall, the plan meshes together three critical parks of the neighborhood and unifies through the implementation of a greenway based on community education, urban agriculture, public art, and healthy eating.

The master plan shows the network of trails and community spaces.
The courtyard is enclosed by a trellis, and a system of raised box planters provide a wonderful atmosphere to spend an afternoon and enjoy local products.

Raised planters provide shaded seating.

An outdoor seating area provides a cafe setting in which to eat.

Plan of organic food plaza
The Automotive Landscape

Brendan Farragher, Kevin Murphy, Sean O’Connell

Our focus area within Springfield’s North End was that of the north-south Interstate 91 corridor. We utilized the left over space as a result of the automobile but with a design focus of pedestrian movement.

Our designs involved adapting the steep highway embankments to become usable space, changing traffic patterns on surrounding streets, and redeveloping our underutilized areas. The strongest and most unifying feature of the corridor is the ‘The Ribbon’ of wind turbines which starts in the very north and laces its way south. They move back and forth across the highway playing off the elevation changes in the unused embankments. This not only provides visual stimulation and intrigue for both drivers and pedestrians but also supplies power to buildings in the immediate vicinity. This renewable energy implementation will become a landmark of Springfield’s North End and will highlight our I-91 pedestrian corridor.

The most northern area in our corridor is a large hill which we chose as the site for the wind farm from which The Ribbon starts. At the base of this hill, also to the west of I-91, are the medical campus and the commuter parking lots for Baystate Medical Center. A major focus of this project was to improve the current commuter parking lot by implementing...
infiltration basins to deal with the massive amounts of storm water runoff from the highway embankments and the parking lot itself. A new pedestrian system provides a safe and pleasing way of traversing the parking lots and leads pedestrians to key locations such as bus stops. The multi-use path that runs along the embankments will provide an efficient way to walk and bike from the parking lots to the main Baystate Medical campus. Along the bike path tucked between two medical facilities we proposed a terraced garden area which provides an outdoor escape for those who work in the immediate area. The bike path and The Ribbon continue south along our Interstate 91 corridor.

The design in the middle of our focus area involved the development of a pedestrian corridor, a link between the northern and southern sections. The path was carved into the I-91 embankment on the edge of Bernie Ave. It undulates and meanders amongst ‘The Ribbon’ which, combined with its defining living retaining walls, gives its users a unique experience. With such close proximity to the Gerena Magnet School, interesting planting schemes allowed the embankment to become an educational opportunity. Above the path remains the steep slope but the space below it, while still a slope in some spots, contains a series of detention basins for the drainage of everything above it. The plant species covering the slope above and below the path are strikingly different in an attempt to show a difference in ecosystems. Above the path, thick, dense, mostly evergreen plants cover the slope and also act as a visual and audible buffer from the Highway. Below the path, are a variety of grasses and other wetland plants which fill both the sloped areas and the drainage spots. Before the path could be efficiently and safely accessed by both the public and children of the adjacent school, traffic calming strategies had to be implemented along Bernie Ave. These included narrowing the road, reducing the speed limit, installing curb bump-outs at cross walks and instituting stop and yield signs. With ecosystems and potential wild life on display, our entire Interstate 91 corridor has a safe, soothing and unique connection.

The southern portion of the focus area was broken into two main segments, one pedestrian friendly and usable open space, and the other a more visual space seen when entering and exiting the on and off ramps. There is a large, undeveloped section of land that lies between the off-ramp and interstate 91 which is currently serves no purpose. We have proposed to make this a unique storm water retention area that will play with landform as one is driving past it. The idea is to have the rain off from the on/off ramps collect here, while making it a visually stimulating drive as one enters the North End. In addition to the landform, ‘The Ribbon’ will also catch ones eye as they follow the on-ramp into the North End. By utilizing this left over space, the on-ramp no longer becomes just an on-ramp; it creates an iconic entrance into a colorful district of Springfield. Across 91 to the west, the other large open space will serve as a place for active recreation and public gathering. The unused space stretches the length of a football field and is currently an unmaintained lawn. It would be a perfect place for a small park with its close proximity to the Gerena Magnet School as well as downtown. Walking paths would line the perimeter of the site while the large open lawn will be the center of the design. Its gentle slope will provide a great place for sledding in the winter, creating a space that can truly be used year round.
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