We want your feedback on the draft study outcomes.
Strategic Context: the corridor

- The Pawtucket Street Corridor Study was initiated in 2015 by UMass Lowell in partnership with the City of Lowell.
- Sustainable Lowell 2025 was endorsed in 2013.
- The City adopted a Complete Streets policy in 2015.
- TIGER VII grant to replace bridges along the corridor.
- Lowell Downtown Evolution Plan in 2010.
- Coalition for a Better Acre (CBA) is an active stakeholder in the community.
- Northern Middlesex Council of Governments (NMCOG) prepared a Regional Strategic Plan for Greater Lowell (2011).
- The United States Surgeon General’s 2015 call to action “Step It Up!” further promotes walkability improvements in communities as an essential ingredient for health.

BIKE AND RUN MAP

Popular biking and running routes along the corridor. Source: Stava.com
Strategic Context: the big picture

- Demographics
- Economics
- Community/university synergies
I. Overview

How do we make a great urban neighborhood more livable?

How do we connect three campuses to build one university?

Can we have a positive impact on the Acre and University... and improve transportation connections?
I. Overview

Core principles respect all three perspectives

- Enrich the livability of the Acre.
- Reduce UMass Lowell’s traffic impact on the area, even as the university continues to grow.
- Foster walkability and bikeability.
- Strengthen sense of place along the corridor to activate economic development.
- Promote safety and a sense of security.
- Maintain or improve traffic flow.
- Add transit options.
II. Discover and Engage

- The corridor is a mixed commercial and residential street. Buildings facing onto the corridor have a mix of public, institutional, commercial, and residential uses.

- People are on the move whether by bus, shuttle, car, bike, or foot. Students commute between classes along the corridor, including through University Crossing, a newly-built destination.

- Regionally, the corridor is a connection between three important bridges across the Merrimack River that often suffer from traffic congestion.

- Pawtucket Street connects UMass Lowell’s three campuses and is an important arterial street for the City of Lowell and the Acre.
OUR ANALYSIS UNCOVERED OPPORTUNITIES IN THE PROJECT AREA

- Limited bike infrastructure, with discontinuous on-street lanes on Father Morissette Boulevard and Broadway Street.
- Sub-par pedestrian circulation infrastructure along the corridor, including at constrained locations.
- Inefficient transit and UMass shuttle service due to aged bridges incapable of supporting heavy vehicles.
- Recent investments at University Avenue bridge and University Crossing.
- Parking lots detract from walkability as they occupy several primary frontages.
- Property owners have expressed interest in selling or changing their property’s uses.
- Merrimack River views are obstructed by fencing and other barriers.
- Vehicular lanes are not well marked, especially approaching School Street where drivers form disorganized turning lanes.
- Portions of the corridor possess a quiet and green residential character that ought to be preserved and enhanced.
Discover

BUILDING USE
- UMass Lowell
- Public and Institutional
- Commercial
- Residential

1. Between South Campus and Sheehy Park
2. School Street and Pawtucket Street
3. Historic building assets
4. Corridor character of East Campus
Engage

WHAT WE HEARD

• “Lack of bicycle facilities”
• “Gaps between active and destination uses discourage walking”
• “There is not a strong sense of the place”
• “Students do not feel welcome walking”
• “Corridor feels unsafe at night”
• “Open access to the river walk”
• “Branding can show how great the Acre neighborhood is”
• “Historic character should be preserved”
• “Introduce art along the corridor”
• “Parks along the corridor could use improvement”
• “Need active and healthy transportation options”
Engage

WHAT WE HEARD

• “Walkability for all age groups, including the Acre’s seniors”

• “Would like to have college-town type retail on ground floors”

• “Periodic heavy vehicle traffic due to limited bridge crossings”

• “Events and temporary placemaking interventions have appeal”
CHALLENGES AND OPPORTUNITIES

We asked participants to share their ideas about the corridor’s challenges and opportunities on table maps.
## Principles

<table>
<thead>
<tr>
<th>1</th>
<th>Foster Walkability and Bikeability</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Complete street with bike lanes, improved pedestrian infrastructure, and transit connections.</td>
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<tr>
<td></td>
<td>Make the corridor a preferred route for pedestrians.</td>
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<tr>
<td></td>
<td>Upgrading existing “sharrow” lanes and adding new protected lanes for use by residents, visitors, and students on bikes.</td>
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</tbody>
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<thead>
<tr>
<th>2</th>
<th>Strengthen Sense of Place</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Make an exceptional street for passing through and lingering.</td>
</tr>
<tr>
<td></td>
<td>Redevelopment of vacant buildings and empty lots</td>
</tr>
<tr>
<td></td>
<td>Retrofits of existing buildings to strengthen sense of place along the corridor</td>
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<tr>
<td></td>
<td>Improving access to and enjoyment of the great parks and open spaces.</td>
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</tbody>
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<table>
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<th>3</th>
<th>Promote Safety and a Sense of Security</th>
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<tbody>
<tr>
<td></td>
<td>Well-lit, active corridor with safety features visible from all locations.</td>
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<tr>
<td></td>
<td>Reactivate the corridor with eyes on the street.</td>
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<tr>
<td></td>
<td>Address pedestrian and cyclist safety along the corridor.</td>
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<th>4</th>
<th>Maintain or Improve Traffic Flow</th>
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<tbody>
<tr>
<td></td>
<td>Maintain or increase the number of vehicle lanes for each segment of the street.</td>
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<td></td>
<td>Reduce the number of vehicle trips between campuses by promoting and facilitating alternative transportation modes.</td>
</tr>
<tr>
<td></td>
<td>Improve bus routing.</td>
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</tbody>
</table>
IV. Concepts

1. Northern Canal bridge
2. Pawtucket Canal bridge
3. Protected bike lanes
4. Connections and parks at the new Howe Bridge
5. Pedestrian safety improvements
6. Safety lighting
7. Wayfinding for pedestrians and bicyclists
8. Bus routing and headways
9. Public access to buses
10. Protected bus stops

11. Regulatory changes
12. Infill and retrofit
13. Private student housing
14. Reuse of street-facing historic buildings
15. Partnerships with local businesses
16. Connections to parks and park improvement
17. Corridor map
18. Signature bike racks
19. Artwork
20. Art, music, and video events and festivals
21. Tactical interventions
Complete Streets

1. Northern Canal bridge

- Bridge over the Northern Canal is being replaced as part of the City of Lowell’s TIGER grant award. The replacement bridge will fit within the current bridge’s footprint.

- Two-way conversion of the street to continue Pawtucket Street as a two-way street through to Aiken Street.

- Two-way conversion of Pawtucket Street will improve pedestrian safety by calming traffic and improve overall vehicle network performance by improving access to Ouellette Bridge on Aiken Street.

- Bend the intersection with Father Morissette Boulevard to accept east-bound left-hand turns and continue to allow west-bound right-hand turns while also creating a pedestrian and bike refuge on the north side of the intersection.

- It is not possible to also widen the bridge to include protected bike lanes. Therefore, calm traffic over the bridge and introduce sharrows.
Complete Streets

2. Pawtucket Canal bridge

- Pawtucket Street’s bridge of the Pawtucket Canal is being replaced as part of the City of Lowell’s TIGER grant award. The replacement bridge will fit within the current bridge’s footprint.

- Improve sidewalk connections.

- Add protected bike lanes in each direction. This should be possible within the existing curb-to-curb and overall footprint of the bridge.

- Enable heavy vehicle traffic over the bridge, thus allowing buses and shuttles to operate efficiently through the corridor.
3. Protected bike lanes

- The vision calls for protected lanes where possible and on-street shared lanes everywhere else.

- Where necessary, reduce vehicle lanes to 10-feet wide to create space for protected bike lanes. There are examples of 10’-0” travel lanes in Lowell on Dutton Street and Chelmsford Street.

- Protect on-street bike lanes where possible.

- On road segments where space is constrained, use sharrows to remind drivers that bikers have a right to be there as well (General Laws of the Commonwealth of Massachusetts, Chapter 85, Section 11B.).

- Install bike boxes at lighted intersections to allow bikers to the front of the queue at red lights.

- Where needed, use off-street sidewalk right-of-way as protected bike lanes.
4. Connections and parks at the new Howe Bridge

- UMass Lowell’s corner parcels on either side of the new Howe Bridge are a major pedestrian connections. Widen the sidewalk and facilitate pedestrian movement towards South Campus and the Howe Bridge.

- In conjunction with replacement of the Northern Canal Bridge, expand the sidewalk, extending the bike lane to the intersection, and creating a public park with views over the Northern Canal and Merrimack River.

- Expand the public park in a manner reflective of the cultural and historic fabric of the district.
Complete Streets

5. Pedestrian safety improvements

- ADA accessibility should be ensured at all intersections. Sidewalk surfacing improvements and sufficient clear zones free of obstacles may be required.

- Reduce the number of curb cuts to improve pedestrian safety.

- Crosswalks should be improved and upgraded with new locations added where needed.

- Install curb extensions at intersections with over-dimensioned turning radii. Curb extensions may be painted, use textured pavement, or constructed with a curb reveal.

- Except for on Primary Arterials, install speed tables to calm traffic. Speed tables have precedence in Lowell’s Back Central neighborhood.
Complete Streets

6. Safety lighting

- Residents and students spoke strongly in favor of lighting the corridor for visual continuity and safety.
- Continue installing emergency call boxes with lights along the corridor.
- Visually connect the corridor with distinctive pedestrian-scale lighting to reassure residents and students walking and biking that they are on route and in a safe place.
- Lamps could be augmented with wayfinding signage, Wi-Fi hotspots, pedestrian and/or bike counters, integrated bike parking, and street furniture.
7. Wayfinding for pedestrians and bicyclists

- Encourage walking, biking, and transit by providing useful signage.

- Invite students and residents along the corridor by creating a safe, comfortable, and inviting environment.

- Create user-friendly signs and maps for residents, visitors, and students. Encourage multi-modal mobility through information.

- Identify popular destinations, businesses, and routes between transit services, landmarks, and public spaces.

- A corridor wayfinding system should include time and distance indications for walkers and bikers.
8. Bus routing and headways

- New routing, shown below, will transform the functionality of UMass’ Red Line shuttle between South and East Campuses.
- The new routing will be made possible by the transformative TIGER grant with a partnership between the City of Lowell and UMass Lowell.

The current Red Line UMass shuttle bus route (indicated in solid red) is affected by structural deficiencies on the circled bridge. After the bridge is replaced, the bus should be re-routed as shown by the dotted line.
Complete Streets

9. Public access to buses

- Work with LRTA to explore sharing responsibility for public busing along the corridor to improve efficiency and performance.

- The community would benefit from additional transit options through the corridor, with an added benefit of reducing the number of car trips through Pawtucket Street.

- Increase the existing service’s efficiency by adding ridership.

- Provide additional transit options for residents of the Acre and visitors.
10. Protected bus stops

- Improve users’ experience of transit.
- Create distinctive bus shelters for routes along the corridor.
- Bus shelters are an opportunity to involve a local artist and create a comfortable and welcoming environment.
- Bus shelters should have built-in wayfinding that highlights destinations along the corridor.
- Contribute to creating a safe, comfortable, and welcoming environment.
- Explore real-time bus arrival electronic displays at bus stops.
11. Regulatory changes

- Sites along the Pawtucket Street corridor fall under a variety of zones – INST, TMF, TMU, USF.
- Present zoning restricts development potential both by use and by dimensional regulations.
- In order to encourage and facilitate ease of development along this corridor, zoning should be reclassified along Pawtucket Street.
- A zoning district should incorporate the positive elements from existing zoning definitions:
  - Maximum height of 65’, 6 story maximum
  - No FAR limitations, instead use an open space requirement
  - Residential uses of seven (7) or more units on one lot should be permitted by right, and not require any Special Permit or Planning Board approval
  - Retail Uses should continue to be allowed where appropriate.
12. Infill and retrofit

- Redevelopment along the corridor can create activity and interest that may reduce the perceived distance between campuses while also creating economic development for the larger community.

- Opportunities along the corridor include street-facing parking lots and underutilized historic buildings, including sites identified on the map.

- Market rate housing potential tenants include graduate students, university staff, and faculty as well as residents of the Acre.

- Well-designed and well-managed affordable housing similar to what has helped revive sections of Moody, Upper Merrimack, and Salem Streets, including adaptive reuse of historic structures, could contribute to enhancing the corridor and addressing housing cost pressures that have been identified as a priority challenge by Acre residents.
13. Private student housing

- Larger scale development of student-focused housing could reduce the pressure on the Acre’s existing housing stock from the demand for student accommodation in the neighborhood.

- UMass Lowell’s projected growth will generate additional demand for student housing in the coming years and encourages the development of private student housing along the Pawtucket corridor to help address this need.

- Student housing aims at a different target group than market rate housing and has a potentially lower parking space minimum per rental unit.

- Student housing can contribute to activity along the corridor by developing empty and underutilized parcels.

- Well-designed, purpose-built student housing will provide a more attractive and safer alternative to existing poor quality rental housing stock that is currently marketed to students who wish to live off campus.
14. Reuse of street-facing historic buildings

- The corridor is fortunate to have a stock of historic buildings. Preserve the corridor’s historic attributes through appropriate reinvestment.

- The City of Lowell, private owners, the Historic Commission and UMass should work together to encourage lively street-facing uses and urban living along the corridor by rehabilitating certain historic buildings.

- Historic rehab for commercial uses does not necessitate retail use; offices with active facades as shown to the right can enliven a street as well.

- Examples of street-facing historic buildings that are potential candidates for rehabilitation along the corridor are highlighted in the following Corridor Segments section.

- Improve the pedestrian experience along the corridor by fostering a sense of place.
15. Partnerships with local businesses

- Offer technical assistance, financial services and other support to existing small businesses along the corridor.

- Assist businesses seeking to upgrade window displays; improve store layout; use new social media strategies; enhance visual merchandising; employ best practices in creating a positive customer experience; and/or address other management concerns.

- Provide small businesses access to a variety of lending programs.

- Use a business-to-City or business-to-UMass liaison to guide business owners through the programs available, connect those owners with planning processes, and assist with any short-term or long-term issues.

- Attract new businesses to the corridor, including destination retailers and restaurants and local chains that may be interested in expanding.
16. Connections to parks and park improvement

- Foster a sense of place by improving the quality and visibility of open spaces.
- Improve the pedestrian experience by upgrading connections across and permeability through open spaces.
- **Sheehy Park:** Improve access from South Campus, improve wayfinding, remove visual barriers to the river, introduce public art
- **Spaulding House Park:** Improve access and wayfinding from Mammoth Road and Pawtucket Street.
- **Francis Gate Park:** Improve entrance visibility, wayfinding for pedestrians and cyclists to the canalway
- **Koumantzelis Field:** Improve park entrances by the canal and at the Bartlett School driveway
- **Northern Canal Island Walkway:** Allow access onto the walkway

Open space improvements may include new furniture.

Open spaces can comfortable for lingering, even if paved.
17. Corridor map

- Foster economic development along the corridor and improve connections between University campuses and the surrounding neighborhoods.
- Use a steering committee composed of leaders from across the community.
18. Signature bike racks

• Make visitors and residents aware of the corridor through visual continuity.

• Bike racks are an important component of the expanded bike network that is being proposed along the corridor.

• Signature bike racks should reflect and contribute to the corridor atmosphere.
19. Artwork

- Public art can foster a sense of place and improve walkability by maintaining or increasing visual interest along the corridor.

- A public art program can tap into academic programs and a wide range of national and regional public artists and art curators.

- Ideas for sculptures and installations can be solicited through a competitive request. Individual awards for large, permanent pieces may range from $50,000 to $75,000.

- Murals are a less expensive way to engage a local artist to tell the neighborhood’s story on a prominent wall.

- A “Corridor of Light” concept creates a sense of place in the evenings and engages local artists and architecture.

- Public artwork locations along the corridor may include prominent gateways and prominent facades.
20. **Art, music, and video events and festivals**

- Temporary events and festivals bring the street to life.

- Art and music performances may involve University faculty and students from a wide variety of departments, including design, art, and music.

- Potential locations along the corridor are Sheehy Park, Northern Canal Island, and around University Crossing.
Placemaking

21. Tactical interventions

- Creative, inexpensive, and engaging solutions can be found for many issues such as safety and vacant lots.

- “Lighter, quicker, cheaper” placemaking such as the painting of plazas, pedestrian malls, and curb extensions popularized in New York City.

- Tactical interventions may include street furniture, painting bike lanes, pop-up shops, signage, and programming.

- Tactical interventions create a platform to test and structure partnerships and they build momentum toward bigger and more permanent solutions, and may involve teams of residents, non-profits, businesses, students, and artists.

- Tactical interventions are often linked to an event, which can facilitate permitting under Lowell’s special events and festivals guidelines.
VI. Corridor Segments

CORRIDOR SEGMENTS

1. East Campus
2. University Crossing
3. School Street Intersection
4. Parks Segment
5. South Campus
CURRENT ROAD CLASSIFICATION

- From MassDOT’s 2014 Road Inventory
- Arterial: Arterials provide the highest level of mobility. Minor arterials provide a lower level of regional mobility than principal arterials.
- Collector: Collectors provide some level of both mobility and access.
- Local road: Local roads provide access to abutting land with little or no emphasis on mobility.

SUGGESTED RECLASSIFICATION

- Reclassify highlighted segments of Pawtucket Street as a Minor Arterial and Father Morissette Boulevard to Aiken Street as a Principal Arterial.
- The reclassification of Pawtucket Street would enable important traffic calming measures through the campus to protect pedestrians, including students, visitors, and event-goers at LeLacheur Park.
1. East Campus details

**Cross section A.** Pawtucket Street looking west.

On the northern sidewalk between Bourgeois Hall and Fox Hall looking west
2. University Crossing

- University Crossing
- Jimmy John's with student housing above, new mixed use, widened sidewalk.
- 0.7 acre private site: student or market rate housing, celebrate and invest in historic properties.
- 1.5 acre UMass site: future campus building(s); maintain existing parking count with a parking structure.
- 2.1 acre private site: student housing potential.
- Enhance public park and expand sidewalk.
2. University Crossing details

Cross section B. Pawtucket Street looking west.

On the sidewalk at 193-199 Pawtucket Street looking east
3. School Street details

Cross section C. Pawtucket Street looking west.

Detail of the proposed bike mixing zone at the School Street intersection
4. Parks Segment details

Cross section D. Pawtucket Street looking west.

On the northern sidewalk of the new Pawtucket Canal Bridge looking west.
5. South Campus details

Cross section E. Wilder Street looking south.
VII. Next Steps

- This study identified an ambitious list of concepts to pursue. Some focus on specific locations, while others are policy-oriented or corridor-wide. Each of the concepts addresses a challenge or builds on an opportunity that was identified through the team’s discovery and engagement process.

- The next step forward is for community members, local stakeholders, elected officials, and UMass to choose which concepts should proceed, and when.

- In many cases, it is possible to test a particular concept by implementing it using temporary materials. This allows the benefits of a project to be enjoyed while aspects of the project are tested and verified. After a trial period is complete, modifications can be incorporated into the permanent design.
Acknowledgements

We are grateful for the many collaborators who shaped this vision for the Pawtucket Street corridor. Community members, students, business owners, elected officials, and UMass staff took the time to discuss the challenges, opportunities, and priorities that we presented in this study.

Special thanks to the Theodore Edison Parker Foundation for their generous financial support for this project.
QUESTIONS?