Historic and densely populated cities must strive to employ multi-modal transportation strategies in order to achieve mobility, vitality, and environmental health, as their pre-automotive designs are unable to accommodate significant traffic flow increases. As a result, Lowell will embrace a multi-modal strategy, which prioritizes amenities for pedestrians, bicyclists, public transit-users, and carpooling commuters. This model will also help ensure long-term economic sustainability, as transportation choice is desirable to the diverse population already living within the city, as well as the next generation seeking to relocate to a vibrant urban place.
Ciudades históricas y densamente pobladas deben buscar usar estrategias de transporte de múltiples modos para lograr la movilidad, la vitalidad, y la salud ambiental, ya que sus diseños pre-automovilísticos no pueden acomodar grandes aumentos en el flujo del tráfico. Por ende, Lowell adoptará una estrategia multi-modal, la cual priorizará comodidades para peatones, biciclistas, usuarios(as) del transporte público, y personas que viajan a diario al trabajo compartiendo carros con otras. Este modelo también ayudará a asegurar la sostenibilidad de largo plazo ya que el poder elegir el modo de transporte es deseable para la población diversa que ya radica en la ciudad, así como para la siguiente generación que quiera mudarse a un lugar urbano y vivo.

MOBILIDADE E ACESSO

Cidades históricas e densamente povoadas deverão empregar estratégias de transporte multimodal, a fim de alcançar mobilidade, vitalidade e saúde ambiental, já que as suas vias construídas antes do automóvel ser introduzido, são incapazes de acomodar o aumento do fluxo significativo de tráfego veicular. Como resultado, Lowell vai adoptar uma estratégia multimodal, que prioriza as faixas para pedestres, ciclistas, usuários de transporte público e usuários de “carpooling”. Este modelo também irá ajudar a garantir a sustentabilidade econômica a longo prazo, proporcionando várias opções de transporte desejáveis à população diversa que reside na cidade, bem como à próxima geração procurando habitar num centro urbano vibrante.
OBJECTIVES

1. Promote bike and pedestrian mobility.

2. Increase use and efficiency of public transportation.

3. Improve access to and support a variety of options for sustainable commuting practices.

4. Support land-use transportation policies that encourage multi-modal mobility.

5. Where practical, improve traffic flow and the capacity of the City’s existing streets.

6. Minimize the transportation demand generated by new development and institutional growth.

7. Maximize public safety in all modes of transportation.

8. Ensure efficient freight transportation.

9. Maximize the utility of available parking resources in retail and residential areas.

10. Promote quality urban design in all transportation infrastructure projects.

11. Beautify and enhance gateways and entry points.
1. **PROMOTE BIKE AND PEDESTRIAN MOBILITY.**

- Develop, implement and identify funding to maintain a citywide Bicycle Plan that continues to build upon the existing network of bike lanes, sharrows (shared use lanes), storage racks, and signage, in addition to self-service stations, guides and maps to display bike-friendly routes, and other relevant amenities for cyclists.

- Explore the establishment of a Bicycle and Pedestrian committee.

- Support the establishment of a citywide or regional Bike Share Program.

- Develop a bike safety education campaign for both bicyclists and drivers, continuing to organize outreach events and make resources available so as to create a culture of biking citywide.

- Support UMass Lowell’s campus bike share program, installation of bike racks on their shuttle buses, and other related initiatives.

- Support businesses that cater to cyclists.

- Continue to improve and expand Lowell’s system of canal and river walkways, as well as regional trail networks, for both leisure and transportation purposes, constructing pathways that adequately serve as shared-use paths for pedestrians and bicyclists.

- Expand the Safe Routes to School program and ensure that school zones are brought into compliance with the Manual on Uniform Traffic Control Devices (MUTCD).

- Ensure timely removal of ice and snow, and pruning of encroaching vegetation on sidewalks.
- Develop and implement an operational and maintenance plan for pedestrian and bicycle facilities and infrastructure, including but not limited to sidewalks, potholes, rails and lighting.

- Conduct street-sweeping at least twice per year on all public streets and more frequently in heavily travelled pedestrian and bicycle areas including Downtown, neighborhood business districts, at major fixed transportation stops, and near the university campuses.

- Ensure that mid-block crossings and primary intersections are in compliance with the American Disabilities Act (ADA) and include functioning pedestrian signal buttons.

- Implement a firm policy in favor of concurrent pedestrian phasing and pedestrian right-of-way at signalized intersections, eliminating exclusive pedestrian phasing wherever feasible.

- Identify areas in need of traffic calming interventions and, wherever possible, prioritize improvements in these locations.

- Implement traffic-calming strategies and streetscape enhancements identified in the 2009 City Building Workshops by residents living in neighborhoods adjacent to Downtown.

- Implement the public infrastructure recommendations of the Downtown Evolution Plan.
In partnership with the Lowell National Historical Park, UMass Lowell, and other partners, support the expansion of the Lowell Streetcar system from a National Park visitor amenity to a viable public transit service with connections to the Gallagher Terminal, Hamilton Canal District, and UMass campuses to the extent that it proves financially viable, does not compromise funding and support for other transportation priorities, and enjoys the active support of its primary beneficiaries.

Prioritize multi-modal and vehicular improvements to the Gallagher Terminal from nearby neighborhoods and the Downtown.

Utilize interactive technologies, publicize scheduling information, and provide free Wi-Fi on public transit.

Ensure the accommodation of strollers, luggage, shopping carts, and bikes on public buses and trains.

Improve LRTA service by extending the hours of operation, making maps and schedules readily available, increasing the number of bus shelters, and exploring greater frequency of service through expanding the usage of smaller buses.
Flex routes and schedules offer enormous potential to make public transit more accessible and convenient. Photo: Rhode Island Public Transit Authority

- Develop a flex bus/van system, and explore a partnership with MassRIDES to meet the changing demands of passengers.
- Partner with the LRTA and other entities to identify and develop public art and educational initiatives that enhance the quality of the rider experience.
- Identify and reserve a potential fixed route transit corridor between the Gallagher Terminal and Cross Point Towers.
- Encourage UMass Lowell and Middlesex Community College to enter into rideshare agreements with the LRTA so as to increase institutional ridership and reduce unnecessary duplication of service.
- Advocate for the maintenance of existing MBTA services, rates, and schedules that benefit Lowell residents and employers.
- Support the expansion of the MBTA commuter rail north to New Hampshire and improve transit connections from North Station to South Station and other locations in Boston so as to enhance the utility of commuter rail service for Lowell-based riders with destinations outside the City.
- Promote mass transit options along the Route 3 and I-495 corridors to better reflect and support the economic integration of the region.
3 IMPROVE ACCESS TO AND SUPPORT A VARIETY OF OPTIONS FOR SUSTAINABLE COMMUTING PRACTICES.

- Encourage employers to create policies and regulations that provide incentives for car-pooling, car-sharing, and ride-sharing.
- Encourage employers, institutions, and commercial property owners to provide facilities that support bicycle commuting, including showers and secure storage areas.
- Support the extension and connectivity of regional trail networks and on-street bicycle infrastructure to encourage bike commuting.
- Encourage local employers to offer flexible work schedules and the ability to work from home/telecommute.
- Encourage vehicle sharing providers to expand their Lowell service presence beyond the UMass campuses.
- Explore the potential for the establishment of local and regional Park & Rides, and explore partnerships with UMass Lowell to expand on existing Park & Ride lots geared towards students.
- Ensure that sufficient infrastructure exists to support a network of electric vehicles, including the establishment of electric vehicle charging stations, and home-based charging stations.
- Support the establishment of a Guaranteed Ride Home program, which provides a free ride during emergency situations to all residents that regularly carpool, bike, walk, or take public transit.

HOW LOWELLIANS GET TO WORK

- Drove Alone: 79.3%
- Carpoled: 11.4%
- Public Transportation: 2.5%
- Walked: 3.9%
- Worked from Home: 1.8%
- Other Means: 1.1%

Data Source: 2010 American Community Survey
4 SUPPORT LAND-USE TRANSPORTATION POLICIES THAT ENCOURAGE MULTI-MODAL MOBILITY.

- Utilize public transportation nodes as catalysts for higher density, transit-oriented development.
- Replace minimum parking requirements with more progressive parking regulations that reduce the need for new parking construction in mixed-use districts where alternative transportation options are readily available.
- Through project review and land-use regulations, encourage site designs that support walkable neighborhoods and districts and pedestrian/bicycle accessibility to the developments themselves.
- Using the Edward Early Parking Structure’s Middlesex Street façade as a model, ensure that new parking structures include ground floor uses and architectural details that stimulate an active streetscape and support attractive pedestrian experiences on adjacent sidewalks.
- Model employee transportation incentive programs through the City of Lowell.
5 WHERE PRACTICAL, IMPROVE TRAFFIC FLOW AND THE CAPACITY OF THE CITY’S EXISTING STREETS.

- Prioritize infrastructure improvements by areas of institutional growth, and along streets that currently exceed their carrying capacity.
- Work with the Hamilton Canal District developers to secure financing to implement the off-site roadway improvements identified in the project’s Master Plan and MEPA decision.
- Upgrade bottleneck intersections with improved geometry, updated signals, and pavement and landscape markings. Priority intersections include: Westford/Chelmsford, Broadway/Fletcher, Appleton/South, Lawrence/Church, Lawrence/Rogers, Thorndike/Dutton, Middlesex/Wood, Prescott/Market/Central, Central/Merrimack, Merrimack/Bridge, Father Morrisette/Cabot, Appleton/Gorham/Central, University Ave/Riverside, Gorham/Moore, Broadway/Wilder, Chelmsford/Lincoln, Westford/School, School/Pawtucket, Thorndike/YMCA Drive/Lowell Connector Outbound, and bridge crossings.
The Rourke Bridge was constructed nearly 30 years ago as a temporary bridge over the Merrimack River. With funding from the Massachusetts Department of Transportation (Mass DOT), the Northern Middlesex Council of Governments (NMCOG) is conducting a study to identify opportunities for future improvements to the bridge and surrounding area.  

Photo: Ashley Cantrell

- Improve the level of service on primary roadways without negatively impacting pedestrian and bicycle safety and mobility.
- Implement recommendations from the Downtown Evolution Plan to make many downtown streets two-way.
- Accelerate the process for accepting unaccepted streets to increase available funding through MA Chapter 90 for maintenance.
- Increase annual appropriations for pavement markings citywide.
- Replace the temporary Rourke Bridge and make repairs to other older bridges, as deemed necessary.
MINIMIZE THE TRANSPORTATION DEMAND GENERATED BY NEW DEVELOPMENT AND INSTITUTIONAL GROWTH.

- Require traffic impact study and transportation demand management plans be submitted as part of Site Plan Review for larger projects.
- The City should lead by example in transportation demand management planning, and support UMass Lowell, the School Department, and other public and private entities to adopt similar programs.
- Work with Lowell General Hospital to ensure that transportation demand management is considered in their planning for the consolidation of Lowell’s two hospitals under common ownership.
- Specifically target areas of anticipated student residential growth, such as the Upper Merrimack Corridor, East Campus, and Downtown for pedestrian improvements and transportation demand management strategies.
- Work with Middlesex Community College to develop and implement transportation demand management strategies which will result in fewer single-occupancy vehicle trips to their Lowell campus and reduced parking demand.
MAXIMIZE PUBLIC SAFETY IN ALL MODES OF TRANSPORTATION.

- Incorporate Pedestrian Impact Analyses into the design process of transportation projects to protect the comfort and safety of pedestrian travel.
- Increase traffic enforcement, particularly in regards to speed limits, parking within 20’ of corners, stop signs, and traffic lights.
- Focus attention on high accident areas, particularly near bridge crossings, the VFW Highway, and along the Lowell Connector.
- Ensure safe and convenient routes to business districts, schools and other daily amenities.
ENSURE EFFICIENT FREIGHT TRANSPORTATION.

- Protect capacity of loading zones through identification of appropriate downtown locations and increased enforcement efforts.
- Guarantee that arterials and bridges have sufficient weight capacity and turning radii for freight transport.
- Provide incentives for freight transportation companies that employ strategies to reduce air pollution, and strengthen enforcement of anti-idling regulations for trains, delivery trucks, buses, and other heavy vehicles.
- Encourage the use of rail for industrial freight where feasible, and identify opportunities to enhance rail infrastructure to that end.

Research has shown that left turns and U-Turns can be both dangerous and time-consuming for delivery companies. UPS saved millions by rerouting their trucks so they could avoid left turns on their routes.

Photo: Rudolf Stricker

The Port of Charleston sponsored a Truck Replacement Program where trucking companies were assisted with down payments to purchase more environmentally-friendly and energy-efficient trucks.

Photo: Cascade Sierra Solutions

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MAXIMIZE THE UTILITY OF AVAILABLE PARKING RESOURCES IN
RETAIL AND RESIDENTIAL AREAS.

- Encourage downtown employees and residents to utilize public parking garages, leaving on-street parking available for customers and downtown visitors.
- Improve the appearance of downtown garages and the directional signage to access them.
- Manage parking garage fees to support their maximum utilization.
- Expand the parking kiosk system and increase public education around its use.
- Explore market-based pricing strategies for on-street parking downtown and within neighborhood business districts with an objective of maintaining approximately 10% of all on-street parking available at all times.
- Strengthen enforcement of the unregistered vehicle ordinance.
- Ensure that new developments provide off street parking to meet, but not exceed, their parking demand.
- Identify locations that are appropriate for car condos and collaborate with appropriate entities to ensure they are established and managed effectively.
- Expand regulatory support for shared and off-site parking to support the redevelopment and occupancy of existing buildings.
PROMOTE QUALITY URBAN DESIGN IN ALL TRANSPORTATION INFRASTRUCTURE PROJECTS.

- Incorporate thoughtful aesthetics and landscaping into transportation improvements.
- Work to restore connections and break-up larger city blocks into smaller, better networked, walkable street grids where the historic street patterns have been lost.
- Respect and support historic preservation and design in the construction and reconstruction of bridges, roadways, and other transportation projects.
- Encourage urban scale roadway and intersection designs and discourage the application of overly generous suburban standards in these projects.
11 BEAUTIFY AND ENHANCE GATEWAYS AND ENTRY POINTS.

- Work with MassDOT toward transforming the Lowell Connector into a Boulevard north of Plain Street and improve the traffic flow onto and from Thorndike Street to enhance safety and improve the transition from a highway to the urban street network.
- Conduct a citywide sign inventory and update signage as needed.
- Improve accessibility and coordination of way-finding signage for major points of interest, such as the local hospitals, institutions of higher education, places of historical significance, and cultural centers, exploring the incorporation of multi-lingual signage wherever feasible.
- Beautify major transportation corridors with street trees and other landscaping, as well as maintained signs, street lights, and other such amenities, where feasible.
- Forge partnerships with local entities and institutions to instill community pride and create a shared sense of ownership over beautification efforts.
- Explore the development of unique signage to define and celebrate Lowell’s distinct neighborhoods.
- Encourage community-driven efforts to establish murals and public art as a means by which to beautify gateways and entry points, while remaining in keeping with historic guidelines.
### MOBILITY AND ACCESS

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