

Finding a Cure for the Longwood Area's Transportation Challenges



LivableStreets

Rethinking urban transportation

LONGWOOD
AREA CYCLISTS

January 2018

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Executive Summary



“[Longwood] doesn’t work for cars, pedestrians, buses, or bikes and doesn’t have a good connection to public transit... Who exactly does it work for?”

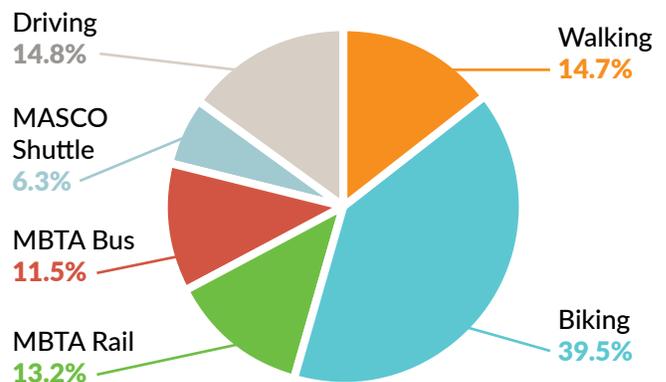
*People on foot cross Longwood Ave. at Brookline Ave., January 2017
Photo by Jacob Meunier*

This question, posed by a Roxbury resident, was at the forefront of our engagement campaign at the beginning of 2017. Through thousands of interactions, survey responses, and real-time discussions with commuters over the course of six months, we learned that the current transportation systems in the Longwood Area serve very few people effectively.

If we fail to think strategically about how to reshape our streets to meet the demands of today, ongoing growth and development will detrimentally impact much-needed access for patient-care, employment, and education in a critical corner of the Commonwealth’s economy.

Once on the urban edge, the Longwood Area is now a global center for healthcare, research, and education; attracting patients, students, and caregivers to 22 institutions on a densely packed 213-acre campus. Every day, 110,800 people travel to the Longwood Area by nearly every mode available to commuters in Metro Boston. They drive from communities as far away as North Berwick, Maine, and Sandwich on Cape Cod. They take the commuter rail from Providence, Rhode Island, and the #65 bus from Brighton. They

Survey Respondents by Mode



walk from Mission Hill and bike from Somerville. Through our survey, we captured a significant cross-section of these commuters and provided an overview of the mobility challenges they face.

Improving transportation on Longwood's streets requires a holistic approach, which is why LivableStreets and the Longwood Area Cyclists solicited feedback from commuters traveling by all modes. Although the modal split of survey respondents does not directly reflect the overall mode usage in the Longwood Area, the feedback collected features key challenges facing the district's – and the region's – transportation system. For instance, a special emphasis was placed on reaching out to EMTs operating ambulances – a relatively small but crucial population.

To learn more about the Longwood Area's ongoing mode-shift trends and current mode split, reach out to MASCO.

From the feedback provided by more than 1,500 commuters, the following challenges came into focus:

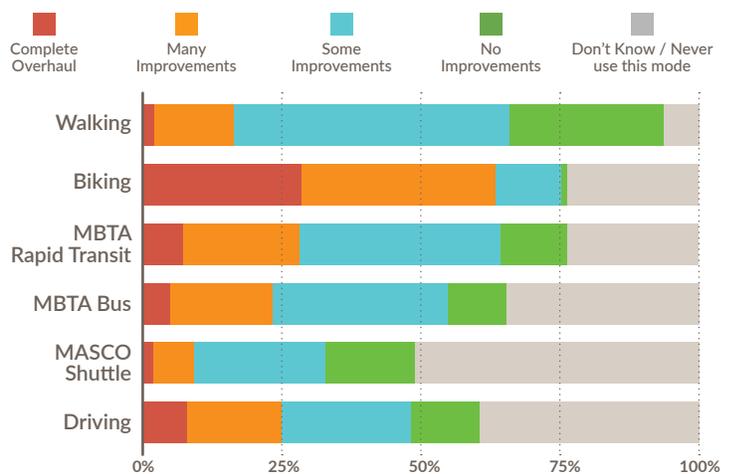
- ◆ **A lack of safe, connected biking and walking infrastructure**
- ◆ **Congestion elevates patient stress**
- ◆ **Lack of convenient transit options drives people to rely on their cars**

Although there has been considerable growth in people walking, biking, and taking transit, our survey found that serious hurdles remain to encourage more people to rely on sustainable modes. For instance, of a subgroup of motorists driving from neighborhoods and inner suburbs serviced by the MBTA, 36% of respondents said that they would like to switch to another mode – mass transit being the leading option. They cited the unreliability and long travel times associated with current transit service as being their main reasons for why they drive instead.

Better serving commuters like these is not an easy feat in the Longwood Area, where multiple agencies and institutions from the governmental and non-profit sector claim jurisdiction. This dynamic complicates decision-making and project planning timelines, making it difficult for stakeholders to understand who's in charge. Tackling these issues in this densely packed and growing district could serve as a blueprint for how to improve transportation and channel the fast-pace of development in many of the thriving economic centers in Metro Boston.

Over the last twenty years, planning agencies on multiple levels have sought new transportation options for the Longwood Area, many centered around politically and fiscally intensive capital projects. Under the administration of Mayor Martin J. Walsh,

Overall Infrastructure Ratings: All Respondents



“Of a subgroup of motorists driving from neighborhoods and inner suburbs serviced by the MBTA, 36% of respondents said that they would like to switch to another mode – mass transit being the leading option.”

there have been multiple planning efforts on a city-wide level to address the need for greater transportation access in Boston. Through the Go Boston 2030 process, several proposed projects would specifically impact the Longwood Area.

Based on past and ongoing planning initiatives and the challenges brought to light by our survey respondents, we support the following recommendations to quickly and effectively enact change:

- ◆ **Redesign Longwood's streets, fast**
- ◆ **Prioritize transit and emergency vehicles**
- ◆ **Improve safety and access for people walking and biking**

It's clear that without an appropriate response from planning institutions responsible for managing the Longwood Area, the district's ability to care for patients, lead cutting edge research, and educate will be greatly undermined. This is already a reality for too many traveling to the Longwood Area today.

VOICES FROM THE SURVEY:

"I've found that getting off the bus when it's stuck in traffic and walking gets me to my destination faster. Coming from work, I sometimes use UberPool because the bus does not come often enough and I would need to miss more work in order to get to appointments on time."

~ Patient / visitor traveling by MBTA bus from Jamaica Plain

"If the patient didn't have a spinal cord injury before entering the Longwood area... they will once they get there. The roads are worse than terrible."

~ EMT personnel traveling by ambulance

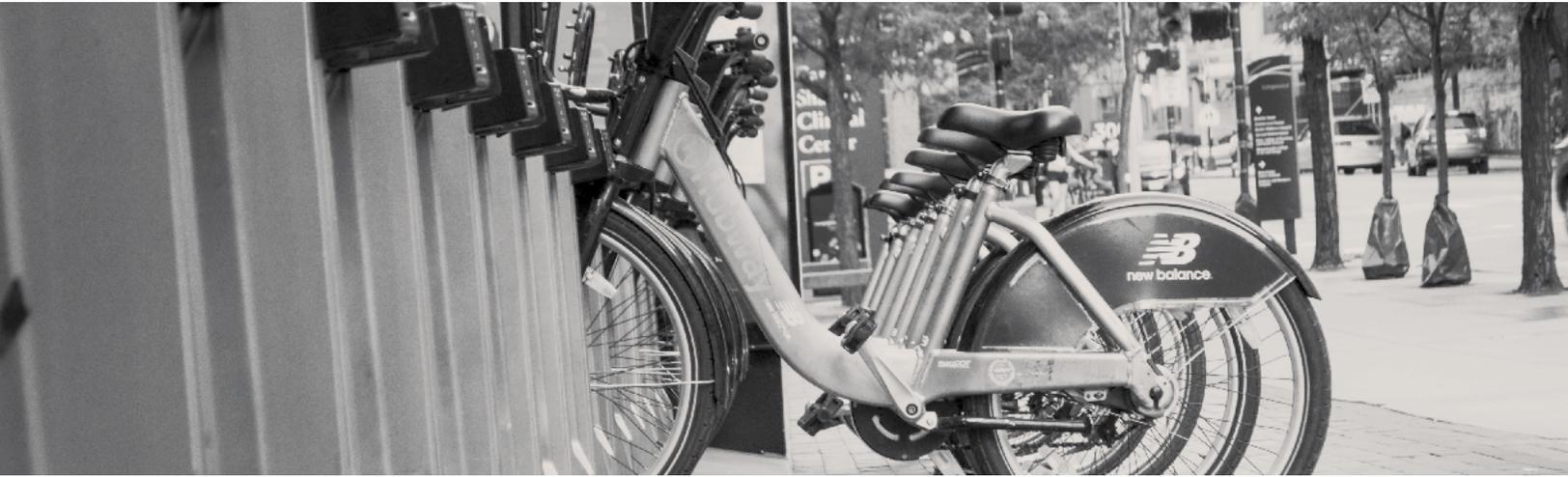
"The hospitals should not have to risk their patients or doctors getting hit, or losing a day of work if they hit people. The place is a mess, please fix."

~ Patient / visitor traveling by bike from downtown Boston

"I have several job offers available in the Longwood Medical Area that I won't take due to the commute."

~ Educational affiliate traveling by MASCO / institutional shuttle from Westford, MA

Introduction



Hubway bike share station on Longwood Ave.
Photo by Liana Genito

Longwood Cyclists

“I’ll never forget that morning.”

On August 7, 2015, David Read was biking from North Station to work at the Longwood Area. David was also pleased to have company that morning: a Dana-Farber colleague had asked him to ride with her as she rode to work by bike for the very first time. She’d rented a Hubway and the two enjoyed chatting as they made their way towards Beacon Street.

They arrived to find a crash scene at the corner of Massachusetts Avenue and Beacon Street. David stopped to ask the police officer directing traffic if it was a bicyclist. The man answered: “Oh yeah, fatal,” before continuing to wave cars on through. The details came later: the crash had taken the life of a young post-doctoral fellow, rising endocrinologist and thyroid surgeon from Switzerland. Anita Kurmann, like David and many others, had been riding her bike to work at the Longwood Area that morning, except her life was ended suddenly when a tractor trailer driver ran her over while taking a right-hand turn.

Coming across the crash scene was chilling. David reports that his coworker hasn’t gotten on a bike since. He knows there are too many others like this – who would like to bike to work or school, but simply don’t because it is uncomfortable and dangerous.

What would the Longwood Area look like if it were safe, convenient, and accessible for people biking?

What would the Longwood Area look like if it were safe, convenient, and accessible for people biking?

This question was at the forefront of David's mind when he set plans in motion to organize all of the people he saw on bikes in the Longwood Area. As VP of Medical Oncology at Dana-Farber Cancer Institute, he is quick to point out the unique demands of Longwood Area streets: patients often need to be transported in ambulances or private vehicles, there are elevated levels of stress and anxiety, and at any given time many people are new to navigating the area – coming to visit or drop off a patient. Delivery vehicles are also constant, and parking and double-parking are a concern for all.

Despite the area's density, David knew that many of its institutions remained siloed when it came to responding to transportation needs. Transient populations such as visitors, patients, and students, and little to no residential footprint made public input scarce or scattered at best. Many individuals simply didn't know who to ask or where to go with their traffic safety concerns.

He started asking colleagues at nearby institutions to share their bike-to-work stories – doctors, nurses, students, and caretakers appeared out of the woodwork with stories of getting hit and injured while biking to work. He realized that many shared common concerns over the conditions of the road, overall bike safety, and access, and captured these stories in [two videos](#) that have now been viewed and shared over 4,000 times.

The videos have been followed by quarterly bike “summits”, lunch hour gatherings that bring together Longwood Area Cyclists, MASCO, Boston Transportation Department, and partnering advocacy organizations like LivableStreets Alliance and Boston Cyclists Union. David expressed that simply getting everyone in the same place at the same time made an immediate impact on the conversation: “Longwood cyclists were so eager to have a community and a forum. To feel like their voices were being heard.”

If something like Anita's crash were to happen today, David thinks that the reaction from the Longwood community would be immediate and much more unified. He notes that many members of the Beth Israel Deaconess community (where Anita worked) are now involved in the Longwood Area Cyclists group and have the ability to communicate and connect regularly with one another.

He credits the support of advocacy partners like the Massachusetts Vision Zero Coalition, Boston Cyclists Union, and LivableStreets Alliance for helping to lay the organizational groundwork for the Longwood Area Cyclists. He says that Longwood has always had the numbers [of people biking and walking] and these groups are helping to activate the numbers through active data collection, reporting, and more.

He says he's looking forward to popping the bottle of champagne he has sitting in his office when the Longwood Ave bike lanes go in. But he and many others in the Longwood



Cars, delivery trucks, and bicyclists compete for space on busy streets in the Longwood Area.

Photo: Jacob Meunier

“Longwood cyclists were so hungry to have a community and a forum. To feel like their voices were being heard.”

Area Cyclists group see a long road ahead. Their vision has grown and needs to include a network of connected routes into, around, and through the medical area. Their lives, and the lives of many others, depend on it.

LivableStreets Alliance

LivableStreets Alliance advocates for innovative and equitable transportation solutions that create safe, affordable and convenient options for everyone in Metro Boston. As an advocacy organization we are skilled at building broad public support, and educating decision-makers and thought leaders to advance projects.

Many of our longtime supporters work, study, and access medical care in the Longwood Area, and our organization has been advocating for improving transportation in and around the area since 2005. We recognize that the dramatic increase in biking exemplifies the ongoing mode-shift underway, a change that can also be noted in the growth of people walking and taking transit to access the Longwood Area.

Making much-needed improvements to Longwood Avenue or Brookline Avenue requires a multimodal approach, with transit (especially bus service), pedestrian safety, and emergency vehicle access for patient care as equally important focuses. This emphasis was at the foundation of our planning for a year-long public engagement campaign with the Longwood Area Cyclists. Building upon David's excellent grassroot efforts to organize the biking community we planned to take everything a step further, engaging people using all modes and identifying key locations for safety concerns.

Multimodal Survey

In February 2017, we launched a survey soliciting feedback from people walking, biking, driving, taking transit, and operating emergency vehicles in the area. Our questions ranged from origin and destination to transportation barriers and challenges specific to the user's primary mode for traveling to, around, and out of the Longwood Area.

Over the course of five months, we collected more than 1,500 responses from all of the mode groups, providing us with a broad cross-section of this complex corner of the metropolitan region. We kicked off our survey at the Longwood Area Cyclists Summit on February 15, 2017, promoting it online, by email, and Longwood Area Cyclists' and LivableStreets' social media. Additional promotion was provided by many of the area's hospitals and institutions such as Emmanuel College, Massachusetts College of Pharmacy and Health Sciences University, Wheelock College, MassART, Dana-Farber Cancer Institute, Northeastern University, Boston Children's Hospital, and Medical Academic and Scientific Community Organization (MASCO).



LivableStreets' Street Ambassadors engaged commuters and promoted the survey throughout the spring and summer of 2017.

Photo: Liana Genito

Number of Street Ambassadors involved:

17

Number of outreach hours:

95

Number of different on-the-street outreach locations:

6

Interactions with public during outreach:

~3,000



LivableStreets' Street Ambassador volunteers led outreach efforts by talking with commuters on the street, near transportation amenities like parking garages, bus stops, T stations, and bike cages.
Photo: Andrew McFarland

To broaden our outreach beyond these institutions and organizations, LivableStreets trained and coordinated a team of 17 volunteer Street Ambassadors. These volunteers collectively logged 95 hours talking with people on the street during 13 outreach sessions in April, June, and July. The approach was to have conversations with people about their commutes, chiefly during rush hours (morning, lunchtime, and evening). These volunteers greatly amplified our reach of outreach efforts.

TIMELINE OF ENGAGEMENT:



Longwood Today: Where We Find Ourselves



Longwood T Station is a critical access point for transit and the area's greenway network. Photo by J. Liana Genito

The Longwood Area is an international destination for medical care, research, and education. Situated between the town of Brookline and Boston's Mission Hill and Fenway neighborhoods, the area is home to several major hospitals and schools including Brigham and Women's Hospital, Beth Israel Deaconess Medical Center, Dana-Farber Cancer Institute, Massachusetts College of Pharmacy and Health Sciences University, Massachusetts College of Art, Harvard Medical School, and Harvard Dental School, among others. The Longwood Area's rich mix of 'Eds and Meds' attracts over 110,800 people per day, including commuters, visitors, and patients.

Management of this bustling area is handled by the Medical Academic and Scientific Community Organization (MASCO). Established in 1972 as the Medical Area Service Corporation, the organization underwent a name change in 1992 – reconfiguring it as a non-profit, rather than a corporation. Today, MASCO coordinates 22 member institutions.

Recent Modeshift Trends

Since the year 2000, transportation patterns in the area have also undergone significant change:

- ◆ Transit use has increased by 12%
- ◆ Walking and biking have increased by 7%
- ◆ Commuters traveling by car have decreased by 19%

LONGWOOD AREA TODAY

Employees:

45,200

New job openings annually:

7,500

New jobs generated annually:

1,100

By 2030, the Longwood Area is projected to grow by

1,100

employees and

6.86 million square feet

Despite this steady shift, the Longwood Area remains a highly congested and complicated area to navigate. Between commuter rail, train, bus, institutional shuttles, paratransit, and emergency vehicles, getting around is a challenging ordeal. The area's projected growth will likely only exacerbate these current challenges as density and daily trips to the area increase. With consistent levels of pedestrian and cyclist crashes over the past several years, it has become clear that a new approach to transportation in the Longwood Area needs to take shape.

Of all the transportation changes in the Longwood Area, the rise of bike commuting is notable. Automated bike counts conducted by the City of Boston in September 2016 recorded 1,348 people biking along Longwood Avenue east of Pilgrim Road per day; placing it in the top five busiest bike corridors of the 60 tracked citywide. Compared to total vehicles along the corridor, people biking were 12% of overall traffic. Independent manual counts conducted by the Boston Cyclists Union in May 2016 during morning peak travel times (8 to 9am) found that the bicycle mode share was 39.1% of all traffic traveling eastbound on Longwood Avenue.

Planning Challenges

Despite these behavioral shifts, changes in street design and infrastructure have been slow to take hold in the Longwood Area.

With the exception of Brookline Avenue and forthcoming plans for Longwood Avenue, relatively little dedicated bike infrastructure has been added in the last few years.

In 1990, MASCO completed its last master plan for the Longwood Area and established CommuteWorks, one of the first urban transportation management associations in the country. Over the last few years, MASCO's shuttle service has expanded considerably, but this has not been paired with coordinated improvements for street redesign or rider amenities that result in improved commute times, reliability, and access.

Throughout the 2000's, MBTA and MassDOT worked with municipalities and major stakeholders on planning a proposed "Urban Ring", a circumferential transit corridor traveling partially through the Longwood Area. With the exception of the ongoing Silver Line Extension to Chelsea, most of this project has not been realized. In 2013, Central Transportation Planning (CTPS) conducted an analysis studying the need for bus priority throughout the Longwood Area, but few improvements like route re-alignment, bus priority lanes, and transit signal priority have been implemented to bolster key transit connectors. Transit lifelines like the MBTA's 47 (5,036 average weekday boardings) and 65 bus (2,516) routes, and MASCO's M-2 shuttle are prime candidates for these measures.

The City of Boston's recently released Go Boston 2030 Action Plan calls for a "Longwood Transit Hub" as envisioned by MASCO. This concept consists of off-street loading bays



The number of bike commuters in the Longwood Area has been steadily growing.
Photo: Liana Genito

Bicycles were 39.1% of eastbound, morning peak travel on Longwood Ave, according to Boston Cyclists Union counts conducted in May 2016.

for buses and shuttles and the possibility of an underground transit tunnel. However, the time frame for this project is currently listed for planning and completion sometime between the years 2027 and 2037. The Action Plan also identifies the need for two "Rapid Bus" service routes from the Longwood Area to JFK/UMass Station in Dorchester and Mattapan. Despite the need for these services now, these projects are also a ways off and would not be planned or implemented for another 5 to 15 more years.

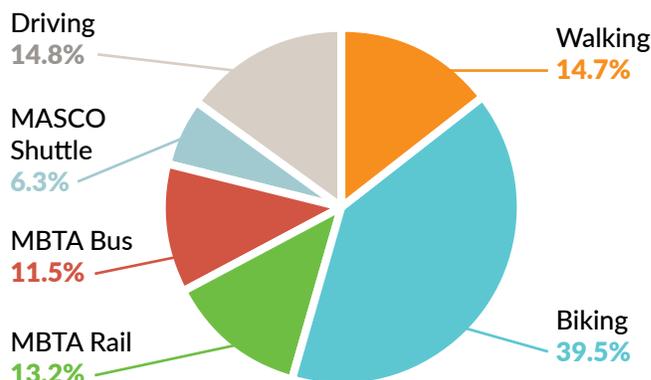
Overall, the complex web of overlapping and interlocking jurisdictions among private institutions, municipal boundaries, and public agencies further complicates planning and decision-making in a rapidly growing corner of Metro Boston. Understanding which agency leads which planning initiatives and the overall decision-making process remains an obstacle for employees, students, patients, and visitors in the area.

Survey Findings: What We've Learned

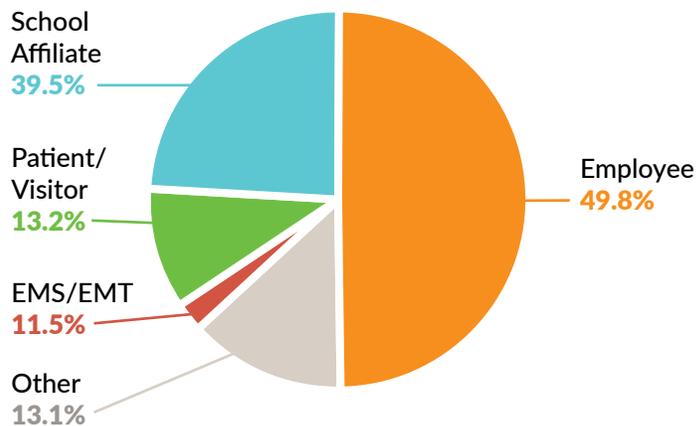
Through the multimodal survey and our engagement campaign, we interacted with more than 3,000 people in the Longwood Area and captured survey responses from more than 1,500 commuters, detailing their transportation experiences and challenges. Respondents traveled by car, bike, walking, transit (bus, shuttle, and rail), and emergency vehicle (EMS), and identified the following barriers, opportunities, and themes for traveling in the Longwood Area today.

Overall, survey respondents expressed misgivings and frustrations for current transportation connections and indicated that there was substantial room for infrastructure improvements in the Longwood Area. Walking, biking, MBTA rapid transit / rail, and MBTA bus infrastructure received a "some improvements needed" rating or more, according to the majority of overall respondents.

Survey Respondents by Mode



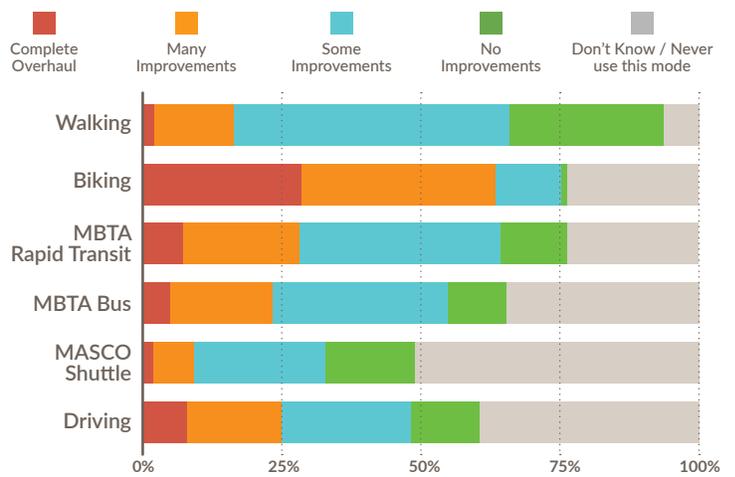
Survey Respondents by Reason for Visiting LMA



Biking infrastructure received some of the lowest ratings, even among non-cyclists. For example, of the people who primarily drive to the Longwood Area, 54% said that biking infrastructure needs many improvements or a complete overhaul. Of that same group, only 35% said that driving infrastructure needs a comparable level of change.

Furthermore, there's demonstrable latent demand for a continued mode-shift from car to active transportation. Commuters favored infrastructure-based solutions such as protected bike lanes and bus priority lanes to improve connections into, through, and out of the area. The following are key takeaways from the survey results.

Overall Infrastructure Ratings: All Respondents



Takeaways From the Survey

TAKEAWAY 1: A LACK OF SAFE, CONNECTED BIKING AND WALKING INFRASTRUCTURE

People who primarily walk to the Longwood Area were highly concentrated in five nearby communities, including Brookline, Fenway / Kenmore Square, Mission Hill, Back Bay, and Allston.

Overall, people walking wanted to see shorter crossing distances and or longer time to cross (39% listed it as #1 priority) along Longwood Ave and Riverway, and especially at Longwood Ave and Brookline Ave (#1 intersection) and Longwood Ave and Riverway (#2 intersection). Speeding was often a general concern, especially along Riverway where large volumes of pedestrians are crossing from Brookline and the Longwood T Station.

Overall, walking in the Longwood Area is the mode used by the highest portion of total survey respondents, and it received the largest rating of “some improvements needed” relative to other modes. Accordingly, relatively modest improvements to pedestrian infrastructure would have some of the broadest impact for people traveling in the area. Making targeted pedestrian improvements at “gateways” to the Longwood Area, such as Riverway and Longwood Ave and Brigham Circle would greatly benefit the high number of people walking from surrounding neighborhoods.

Walking in the Longwood Area is the mode used by the highest portion of total survey respondents, and it received the largest rating of “some improvements needed” relative to other modes.

WHAT PEOPLE WALKING TO LONGWOOD ARE SAYING:

"Pedestrian lights are too fast to cross Riverway."

~ Employee walking from Brookline

"The crosswalk lights are too short for me and I am a young, able bodied-person! Since this is a hospital area, I assume it is much worse for many."

~ Student / faculty member walking from Brookline

"The Riverway/Longwood intersection needs a longer window to cross. Many people cross during prohibited times because there is not enough time to get across the street."

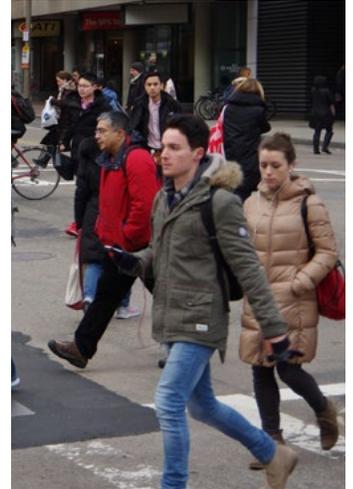
~ Employee walking from Brookline

"Recurring experience of running out of time to cross the street before I reach the other side. I've got a long stride, I tend to walk fast, and I still experience these issues. I can only imagine what someone disabled would experience, and am surprised I don't see many more accidents."

~ Employee walking from Allston

"I have nearly been hit at the Longwood/Riverway intersection several times - it's insanity. Pedestrians break rules, too, but the intersection gets blocked with cars/cars shoot through trying to squeeze in/cars travel at high rates of speed there."

~ Employee walking from Brookline



Pedestrians cross an intersection in the Longwood Area. Walking was the mode used by the highest portion of total survey respondents.
Photo: Jacob Meunier

Biking in Longwood

Frequent origin points for people biking were in communities like Brookline, Jamaica Plain, and Cambridge, which are close to off-street paths in linear parks such as the Emerald Necklace, Charles River, and Southwest Corridor. Current bikers could be categorized as “the lucky or the brave,” seeing that many commented that access to safe biking facilities encouraged them to bike while others stated that they were willing to take the risk with existing poor conditions.

Of all the mode users, people biking were the most in favor of improvements to biking infrastructure in the Longwood Area relative to their counterparts. 40.2% of biking respondents thought that a complete overhaul was needed for biking infrastructure within the Longwood Area.

Many bikers reported going miles out of their way to take safer, off-road paths such as those along the Charles River, Emerald Necklace, and Southwest Corridor. However, those travel choices are not reliable for commuters traveling from many other destinations.

Overwhelmingly, people who bike expressed a need for protected bike lanes relative to other improvements such as traffic signals for bikes and more bike parking. In terms of where they wanted to see these improvements, Longwood Ave and Brookline Ave were respectively the most desired corridors, with the intersection of these two streets deemed the highest priority for improvements.



Painted “sharrows” on Longwood Ave indicate a shared environment for cars and bicyclists.

Photo: Jacob Meunier

VOICES FROM THE SURVEY:

“I am a mother of three and always feel I am taking my life into my hands. I ride assuming everyone is on their cell phones and oblivious at best to road sharing with bikers. I am a die hard bike commuter so I ride anyway, but I really only feel safe on a bike path in the greenway.”

~ Person commuting through the Longwood Area by bike from Brookline

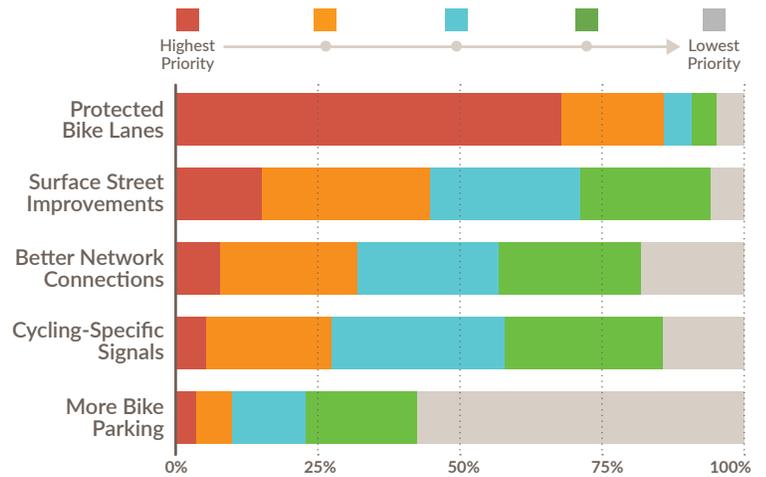
“I love biking and bike to work when the days are light long enough. I bike 10 miles (round trip) out of my way to come along the river bike path because all my friends and family are so afraid that I am going to get killed on the streets of Boston.”

~ Student / faculty member traveling primarily by MBTA rapid transit from Newton

Commuters Expressing Interest in Biking

Although biking has been on the rise, there are still many more who would like to bike, but currently do not due to the lack of protections. **Of 38% of car drivers who indicated that they are interested in traveling to the Longwood Area by other modes, lack of dedicated infrastructure (i.e. protected bike lanes and bus lanes) was the leading reason why they did not bike or take transit.** Among people who primarily walk, two thirds reported that protected bike lanes would encourage them to bike to and from the Longwood Area.

Cycling Infrastructure Improvement Priorities for Bikers



VOICES FROM THE SURVEY:

“I do not bike. As a driver of a car I am always worried about bikers and their safety. For their sake I wish the bike lane was more of an off-road bike path.”

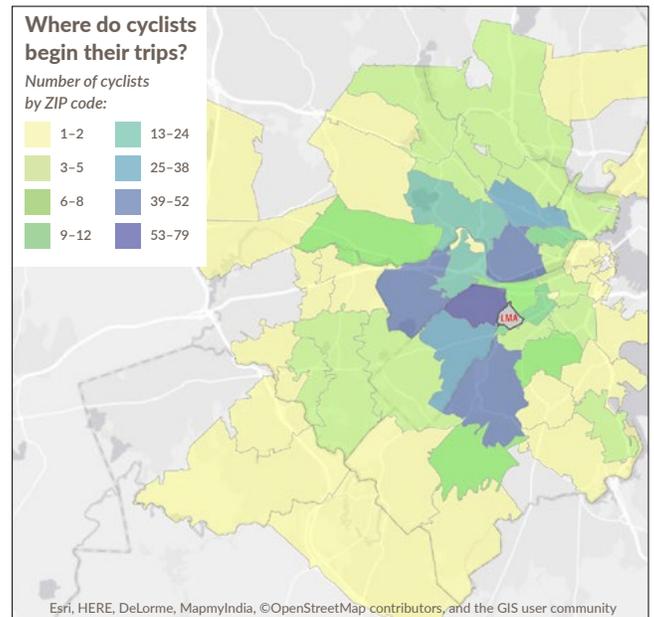
~ Employee traveling by MASCO / institutional shuttle from Charlestown

“The lack of good bicycle infrastructure scares me. I would happily bike if there were safe facilities.”

~ Patient / visitor traveling by car from Melrose

“I would consider biking; from my home to LMA, I could do. Within LMA is scary! I’ve had colleagues who have been hit by cars too many times to feel safe.”

~ Employee traveling by car from Newton



For people who currently drive, the leading factor that would encourage them to consider switching to an alternative mode would be if traffic congestion or their commute time increased. As development and jobs increase in the area, this is highly likely in the foreseeable future.

In addition to fears about speeding cars and congestion, there were considerable concerns about pedestrian and cyclist behavior (these critiques were even found from within mode-users of those respective groups) with regards to running red lights, walking against the light, biking against traffic and on sidewalks, etc. Ultimately, there were indications that poor infrastructure encourages poor behavior. Take for example, this comment provided by a patient / visitor traveling by bike from Jamaica Plain:

“I bike my kids to medical appointments, so my threshold of perceived safety is lower than if it were just me. Just me, I ride anywhere (though Riverway is terrifying. I go on the sidewalk there.) With my kids, I go on the sidewalk quite a lot around Longwood, or take the whole entire lane.”

Furthermore, the lack of safe walking and biking infrastructure encourages people to resort to less practical modes due to fear or convenience, as indicated by the following survey respondent describing a family member's daily commute from Roxbury:

“My wife drives from Fort Hill to Boston Latin School daily and it often takes her 25 minutes to go 1.4 miles. She shouldn't even want to drive such a short distance, but getting [there] on foot or by bike are both so awful that she goes by car.”

Without improvements to the area's active transportation infrastructure, potential pedestrians and cyclists will continue to turn to less sustainable modes, generating more traffic for Longwood's congested streets.

TAKEAWAY 2: CONGESTION ELEVATES PATIENT STRESS

For EMT's operating emergency vehicles, congestion was overwhelmingly considered the major obstacle for them when transporting patients to and from hospitals in the Longwood Area. Many added that basic street maintenance and obstructions to the flow of traffic were dramatically impacting their travel times.

Patients and their caregivers often described the experience of traveling in and out of the Longwood Area for healthcare as stressful or arduous. Many reported that the lack of reliable transit service required them to take taxis and rideshare, shouldering more costs and generating more vehicular congestion.



Poor infrastructure can encourage poor behavior such as running red lights, walking against the light etc. Photo: Liana Genito

In addition to fears about speeding cars and congestion, there were considerable concerns about pedestrian and cyclist behavior.

WHAT EMTs IN THE LONGWOOD AREA ARE SAYING:

"Double parking is very problematic."

"If the patient didn't have a spinal cord injury before entering the Longwood area...they will once they get there. The roads are worse than terrible."

"The hospitals should not have to risk their patients or doctors getting hit, or losing a day of work if they hit people. The place is a mess, please fix."

"The condition of the road in the Longwood area is abhorrent! As a medical hub, there are thousands of patients traveling on these roads everyday – by ambulance, chair car, taxi, personal vehicle, bike, etc. The number of potholes, quick fix cover-ups that turn old potholes into new bumps and other miscellaneous dips and divots make driving through the Longwood one of the most physically painful trips in Boston"

"The construction/delivery vehicles on Binney Street often make the street impassable for emergency vehicles. Shuttle buses on Binney Street and Shattuck Street make the street impassable."

"If Brookline Ave and other roads were repaved and repainted with clear lane markings and a wide/accessible bike lane, it would cut down on a lot of issues."

TAKEAWAY 3: LACK OF CONVENIENT TRANSIT DRIVES PEOPLE TO CARS

For commuters traveling by car, origin points were the most dispersed relative to other modes, covering 93 unique zip codes across several different states.

VOICES FROM THE SURVEY:

"I try to avoid it at all costs because of it feeling like a transportation black hole. I have never had an experience there that didn't stress me out."

~ Patient / visitor traveling by car from Roxbury

"I'm most afraid of how there are so many vehicles going in and out of unexpected areas--parking spots and drop off spots, bus stops, etc."

~ Patient / visitor traveling by bike from Somerville

"The 47 bus should be incredibly convenient, but is very often late, full, drives by, overcrowded, etc. Multiple times I have needed to take a taxi or rideshare instead to avoid being late even after allowing extra time for the trip. Biking in the Longwood area is stressful due to poor separation from traffic - I love how short a trip it is, but often feel stressed while riding there."

~ Patient / visitor traveling by MBTA bus from Cambridge

"I've sometimes found that getting off the bus when it's stuck in traffic and walking gets me to my destination faster. Also, I have cancer, and some days walking to and from the bus is tough. (I don't have to walk all that far, but I imagine others with health problems who are further from the bus must have a hard time with the walk.) Coming from work, I sometimes use UberPool because the bus does not come often enough and I would need to miss more work in order to get to appointments on time."

~ Patient / visitor traveling by MBTA bus from Jamaica Plain

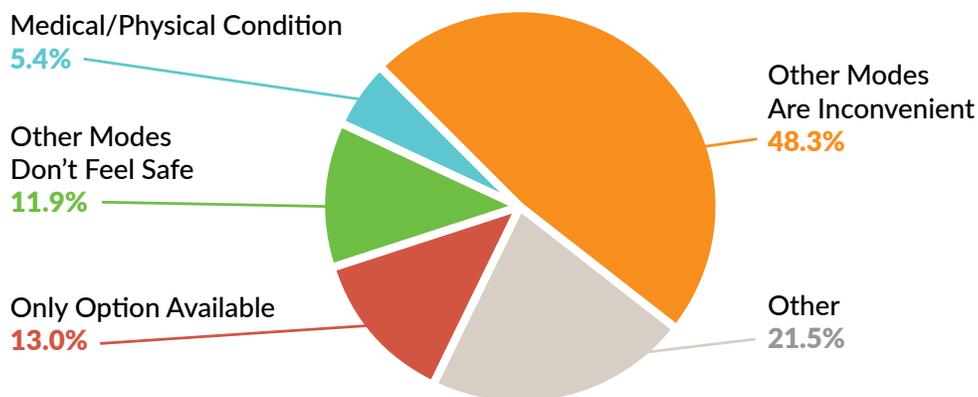
However, the top five most popular origin points for car drivers (see sidebar at right) were located in communities within 15 miles of the Longwood Area and are currently serviced by the MBTA (rapid transit, commuter rail, and / or bus).

Of drivers traveling from these top five zip codes, 72.22% are traveling frequently (3 times or more a week) to the Longwood Area, and their top reason (ranked number 1 by 66.67% of respondents) for driving was because "Alternative modes (i.e. MBTA rapid transit, biking, etc.) are inconvenient and / or take too much time." Convenience appeared to be their main motivator relative to price as other factors such as "less convenient parking location" and "increased congestion / commute time" outranked cost-based motivations such as "increases in parking prices" and "increases in fuel or toll prices".

Factors that would encourage them to use some form of transit included (these top three factors were tied):

1. **Better connections with other modes (subway to bus connections, bikeshare to bus connections, etc.)**
2. **Less overcrowding / more frequent service**
3. **More reliable service (fewer delays, etc.)**

Reasons for Driving to Longwood Area, According to Drivers



Of these top five communities, 36% of respondents said that they would like to switch to another mode – mass transit being the leading option. Of these respondents interested in switching to transit, leading reasons preventing them from making that change today include:

- ◆ **Available transit takes too much time**
- ◆ **Available transit is unreliable**



Many car drivers responded that they chose to drive because other modes are inconvenient.
Photo: Liana Genito

FREQUENT ORIGIN POINTS TO LONGWOOD FOR CAR DRIVERS (RESPONDENTS)

- Medford:**
10
- Natick:**
7
- West Roxbury:**
7
- Brookline:**
6
- Newton:**
6

Calls for improvements to transit times, reliability, and overcrowding were also common among existing transit users, especially MBTA bus and MASCO / institutional shuttles. "Congestion / traffic" was the leading factor for both mode groups when it came to which issues negatively impacted their commutes. When asked what they would like to see to improve surface transit, bus-only lanes, less overcrowding, and more reliable service ranked high for MBTA bus and MASCO / institutional shuttle riders.

WHAT PEOPLE WHO EXPRESSED INTEREST IN TRANSIT ARE SAYING:

"In order to take public transportation from my home, I need to take a bus to a train, and either walk about 15 minutes or take a Longwood shuttle, the total commute takes about an hour. Driving takes a little over half an hour, and my partner has a parking spot a 10-minute walk away. Right now, driving is my most convenient option; however, if I did not have access to this parking spot I would most likely take public transportation in the winter and possibly bike in the summer – although there are some significant safety hazards on my commute (rotaries, busy parkway) that make biking challenging also."

~ Employee at one of the Longwood Area hospitals driving from West Roxbury

"The roads are narrow and congested; bicyclists, cars, and ambulances are fighting for space. I feel stressed when I am driving down Brookline Ave, Longwood (especially during rush hours). Would like to take the T, but that's a hike from Dana-Farber (where I need to go)."

~ Volunteer driving from Newton

"Many times taking the D line outbound from Longwood I have stood and watched as 1, 2 or even 3 full train sets have come and either skipped the station or have been so full that I am unable to board and must wait for another train."

~ Student / faculty member driving from Newton

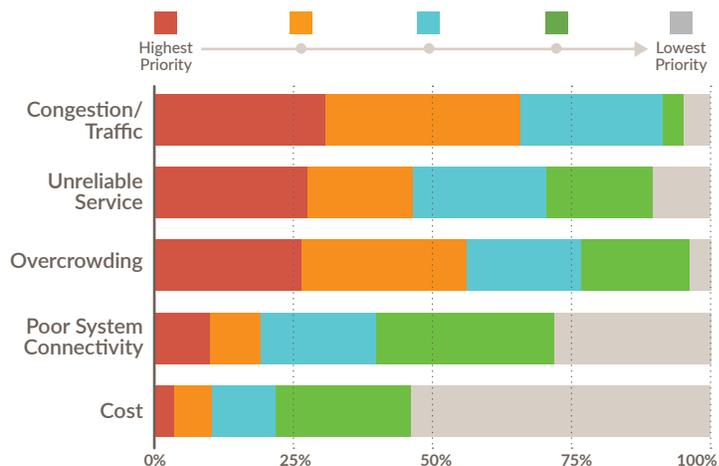
"In order for me to get the 5 miles on one road to my institution from my home, I need to take an unreliable bus an extra 5 miles in the opposite direction to the green line."

~ Employee at one of the Longwood Area hospitals traveling by car from West Roxbury

It was clear that current conditions on these transit modes not only discouraged riders, but in some cases threaten riders' personal health and safety, especially for more vulnerable riders.

Furthermore, there was a need to improve first- and last-mile connections within the Longwood Area. Improving the reliability of transit and safe bike infrastructure within the Longwood Area – to and from transit centers like Ruggles, Yawkey, Roxbury Crossing, and Longwood (D) stations would likely incentivize would-be transit riders, ultimately diminishing car traffic in this congested area.

Issues That Negatively Impact MBTA Bus Trips, According to Riders



WHAT BUS RIDERS IN LONGWOOD ARE SAYING:

“The 47 bus should be incredibly convenient, but is very often late, full, drives by, overcrowded, etc. Multiple times I have needed to take a taxi or rideshare instead to avoid being late even after allowing extra time for the trip.”

“The bus access to Longwood is completely unreliable and frustrating. I take the 47 bus, which is almost always delayed, overcrowded, or simply does not show up at all. I have 2 different bus tracking apps, and am signed up for the MBTA texting service, but even with these, the bus seems to show up at entirely different times every day. Often when it shows up, it is too crowded to board. I find the level of service frustrating, considering that so many people use the bus to commute to Longwood and their job. On days when the bus is particularly delayed, it can cause my already long commute to extend into an hour-and-a-half commute, which is absurd, considering that it would take 20 minutes driving.”

“Sometimes buses during rush hour are massively crowded. I wasn’t able to sit down one day when I had an ankle injury, causing me a lot of discomfort and fears my injury would become worse. Elderly commuters are frequently caused a lot of discomfort due to crowding or are unable to sit down (even if someone is willing to provide a seat-- which they often are!--it would be difficult for the rider to muscle their way to the seat.) Mothers with strollers either don’t have room or severely impact the ability of the bus to accommodate riders (which is not their fault.)”



*Bus and shuttle riders identified congestion and the lack of priority for transit as a main barrier to current service in the Longwood Area.
Photo by Andrew McFarland*

In some cases, major investments in transit or improvements to existing rapid transit / commuter rail service (in many cases well beyond the boundaries of the Longwood Area and the City of Boston) would be needed to encourage more car drivers to take public transportation. However, there is still considerable room for improvement based on current commuting experiences.

Improving the reliability of transit and safe bike infrastructure within the Longwood Area... would likely incentivize would-be transit riders, ultimately diminishing car traffic in this congested area.

Longwood Tomorrow: Where We Want to Go



*Bike and car commuters travel on Longwood Ave.
Photo: Liana Genito*

As the Longwood Area and nearby neighborhoods continue to develop, increasing numbers of employees and services will encourage more trips to an already congested area. Our survey responses indicate that there's considerable will to not only improve transportation options, but a strong desire to be able to choose a better, more practical option.

Current plans for Longwood Ave include dedicated, but not protected, bike lanes. These improvements are a good start, but they need to be one part of a series of improvements that prioritize transit and emergency vehicles, while also improving safety for bikers and pedestrians. Without fast planning and implementation, the Longwood Area will likely be strangled and undermined by its own success.

There's considerable will to not only improve transportation options, but a strong desire to be able to choose a better, more practical option.

VOICE FROM THE SURVEY:

"I have several job offers available at Longwood Medical Area that I don't take due to the commute."

~ Student / faculty member traveling by MASCO shuttle and rapid transit from Westford

RECOMMENDATION 1: **REDESIGN LONGWOOD'S STREETS... FAST**

Responsible agencies: City of Boston, MASCO, institutional partners, DCR, MBTA, community stakeholders, advocates, etc.

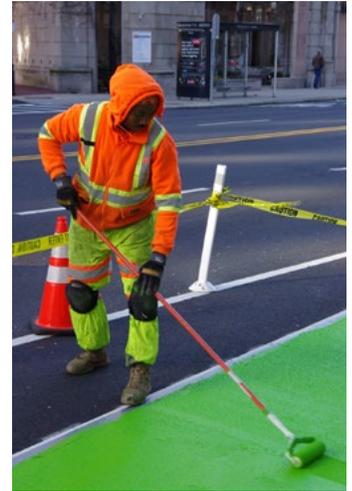
A world class research and healthcare center deserves world class streets that reflect how we move today. Due to the fast pace of change in the Longwood Area, coupled with the lengthy and financially burdensome process involved in capital construction and projects, we need to see fast redesigns of city streets with markings, traffic lights, concrete, and other cost-effective materials. In other cities like New York, Seattle, and San Francisco, we have seen incredible shifts in transportation behavior in response to street redesign. Over the last several years, Seattle's Department of Transportation has supported the city's skyrocketing bus ridership by improving street conditions and addressing service bottlenecks.

Boston's own Vision Zero program works to plan and redesign high-crash corridors and intersections through a similar manner. We need to see these tool kits and treatments expanded to transit and other sustainable modes. Short-term improvements provide opportunities for planners to collect data and make adjustments to the designs in advance of potential capital projects.

Faster planning and implementation builds better public faith in institutions and more opportunities for engaging the Longwood Area's employees, students, patients, and students. To achieve this, multiple agencies will have to coordinate frequently and effectively. MASCO, the City of Boston, MBTA, DCR, MassDOT, the Town of Brookline, and other key stakeholders should coordinate to advance a series of publicly stated priority projects focused on improving sustainable transportation connections to and within the Longwood Area.

RECOMMENDATION 2: **PRIORITIZE TRANSIT AND EMERGENCY VEHICLES**

To tap into the potential for mode-shift for commuters traveling from suburban communities, prioritize transit connections in the Longwood Area to improve first- and last-mile connections. Longwood is surrounded by several light rail, subway, and commuter rail stations, but, only buses and shuttles serve the core destinations and institutions. These transit lines are hampered by existing congestion, and cannot serve more riders more reliably without prioritization.



The City of Boston's Vision Zero initiative has worked to quickly improve streets with cost-effective materials.
Photo by Jacob Meunier

VOICES FROM THE SURVEY:

"...the reason I walk is because it is faster and just more convenient than taking the bus. When trying to take the 65 bus, I often wait 10+ minutes and the bus is totally full when it gets to me in Washington Square. Additionally, trying to get home using the bus, I can wait 20+ minutes for one, and there is often physically not enough space to fit everyone and people are left waiting for another bus. I know many people take this route (bus 65) and it would be wonderful to have it improved!"

~ Employee walking from Brookline

A transit tunnel or the proposed Longwood Transit Hub are needed today – not ten or twenty years from now. Patients, employees, and students can't wait for major capital projects. We need to find inexpensive surface options to prioritize vehicles that are high-capacity and need to service patients as soon as possible.

◆ Roll-out the red carpet treatment for transit by implementing a network of bus only lanes within and connecting to the Longwood Area.

- **Responsible agencies:** *City of Boston, Town of Brookline, City of Cambridge, MassDOT, DCR, MBTA, MASCO*
- There needs to be better coordination between transit providers and municipalities responsible for street maintenance to ensure better transit access and connectivity. This will improve service for existing customers and entice new ones to see bus transit as a convenient, reliable mode.
- To cut-down on delays and overcrowding on buses and shuttles, dedicated bus-only lanes should be implemented throughout the Longwood Area, especially along high-capacity routes like the CT2, 47, and 65.
- Bus lines are life lines for patients and employees, and dedicated lanes can also improve access for emergency vehicles. Having a clear system of connected, dedicated bus-only lanes can also benefit emergency vehicles traveling to and from Longwood Area hospitals.
- Other US cities, including Los Angeles and New York, have policies in place that provide emergency vehicles with access to bus-only lanes when transporting patients.



MBTA buses, MASCO shuttles, and institutional shuttles are critical life lines for directly accessing the Longwood Area.

Photo by Jacob Meunier.

◆ Improve traffic signals for transit

- **Responsible agencies:** *City of Boston, MBTA*
- Proposals for the second phase of the Urban Ring identified the need for queue jumps at many locations throughout the Longwood Area, including along Ruggle Street near Northeastern, Brookline Ave north of Longwood Ave, and along Longwood Ave.

◆ Streamline, consolidate shuttle operations

- **Responsible agencies:** *MASCO, institutional shuttle providers*
- Consolidate shuttle and MBTA bus stops where possible, and add amenities such as shelters, with heaters for winter-time travel.
- Make more shuttle services more accessible to more passengers.
- Services like the M-2 offer much desired transit connections between the Longwood Area and Cambridge. However, these services are limited to Harvard ID holders.

◆ Increase Hubway bikeshare stations at transit centers, including Longwood, Yawkey, and Ruggles to improve first- and last-mile connections within the Longwood Area

- **Responsible agencies:** *City of Boston, Hubway, MBTA, Town of Brookline*

◆ Better coordinate with existing transit providers to make it easier for more people to travel to the Longwood Area

- **Responsible agencies:** *MBTA, City of Boston, MASCO, shuttle providers*
- Work with the MBTA to adjust commuter rail schedules to get employees to work at earlier hours.
- Work with the City of Boston to improve connections for transit traveling to and from North Station.



Projects like Boston's Vision Zero redesign of Massachusetts Avenue shows how quick, affordable changes to the street can greatly improve biking safety and comfort. Photo by Jacob Meunier

RECOMMENDATION 3: IMPROVE SAFETY AND ACCESS FOR PEOPLE WALKING AND BIKING

Due to the high levels of bike and pedestrian activity, concerted improvements throughout the Longwood Area are needed as soon as possible to provide people with inexpensive infrastructure and encourage more people to see these modes as safe, enjoyable, and practical. Fortunately, the Longwood Area is densely developed with several nearby linear parks and paths. Investing in improving safe, appealing connections to these networks would very likely encourage more people to travel by bike or on foot.

Many of the Longwood Area's institutions are dedicated to healthcare and healing. This mission should be extended to its streets to improve safety and access for all.

VOICES FROM THE SURVEY:

"I'm from Seattle. Biking especially in Longwood Area feels very unsafe to me – would be nice to have protected bike lanes, even if 1-2 streets away."

~ Employee walking from Cambridge

"Without bike lanes, cars often do not see bikes in their blind spot and I have avoided being hit multiple times."

~ Patient / visitor & employee traveling by bike from Brighton

"I would prefer to bike than to take the T, but the lack of safe bike lanes and the lack of places to lock up my bike lead me to take the T."

~ Patient / visitor taking rapid transit from Jamaica Plain

"Besides feeling as if I will be hit by a car at any moment and not protected nor felt like a priority as a biker."

~ Patient / visitor traveling by bike from Bay Village, Boston

"I mainly walk down Longwood and find the sidewalks are too small to accommodate the number of pedestrians comfortably, especially at intersections."

~ Patient / visitor walking from Brookline

◆ Increase protections for people biking

- **Responsible agencies:** *City of Boston, MASCO, DCR*
- Without greater protections, people currently biking will continue to be injured or killed in crashes. Furthermore, more people will not be attracted to biking without protected bike lanes.
- Create at least one safe, protected bike route traveling in, through, and out of the Longwood Area.
- Roll-out more dedicated bike lanes on surrounding streets to create better network connectivity to and from various institutions.
- Increase bike parking for visitors.
- Install traffic calming along the parkways (i.e. Riverway, Fenway, Park Drive) to ensure better compliance with existing speed limits.
- Implement Go Boston 2030's Better Bike Corridor vision for a safe biking route from Boylston Street in the Fenway through to Brookline Avenue and improve protections at the intersection of the former Sears Rotary.

Without greater protections, people currently biking will continue to be injured or killed in crashes. Furthermore, more people will not be attracted to biking without protected bike lanes.

◆ Improving basic maintenance for streets and sidewalks

- **Responsible agencies:** *City of Boston, MASCO, DCR*
- Bring all crossings up to ADA compliance with cut-ramps and necessary improvements in the next 1–2 years.
- Complete four-way crossings at all intersections with high visibility crosswalks and enhanced crosswalks along parkways.
- Increase sidewalk widths, especially in areas near bus shelters.
- Make all pedestrian crossings auto-recall and install accessible pedestrian signals.

◆ Look beyond to improve connections to and from the Longwood Area

- **Responsible agencies:** *City of Boston, Town of Brookline, City of Cambridge, MassDOT, DCR*
- Improvements such as the Route 9 bike and pedestrian crossing have demonstrated the importance of crucial system connections and nodes.
- Improve connections to the following greenways and routes:
 - » Southwest Corridor via Mission Hill
 - » Fenway / Emerald Necklace
 - » Muddy River Path to Yawkey Station
 - » Connections to proposed Boylston Street protected bike lanes
- Charles River / Cambridge via BU Bridge

Conclusion



In the coming year, LivableStreets and the Longwood Area Cyclists will continue to engage commuters and decision-makers in the potential for transportation improvements in accordance with these recommendations. In 2018, a charette process will provide design options for pursuing these recommendations.

Passengers wait in line to get on an MBTA bus in the Longwood Area.
Photo: Liana Genito

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Report Authors

Andrew McFarland
Lynn Holmgren
Stacy Thompson
Ashley Pryce

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Special Thanks

Charlotte Fleetwood,
*Transportation Planner,
Boston Transportation Department*

Peter Furth, Ph.D.,
Northeastern University

Louisa Gag,
LivableStreets Alliance

Joshua Greenberg,
Boston Children's Hospital

Nidhi Gulati,
LivableStreets Alliance

Vineet Gupta,
*Director of Policy and Planning,
Boston Transportation Department*

Sarah Hamilton,
*Vice President, Area Planning
and Development, MASCO*

Doug Johnson,
Boston Cyclists Union

Caitlin McMurty,
*Harvard T.H. Chan School
of Public Health*

Paul Nelson,
Senior Transportation Planner, MASCO

Chris Osgood,
*Chief of the Streets, Transportation,
and Sanitation, City of Boston*

David Read,
Dana-Farber Cancer Institute

Jeffrey Rosenblum,
MIT

Stefanie Seskin,
*Active Transportation Director,
Boston Transportation Department*

Becca Wolfson,
Boston Cyclists Union

Street Ambassadors:

Carl Seglem

Nathaniel Trevor Gotfredson

Felix Arroyo

Alex Freidan

Liana Genito

Jim Tozza

Michael Immel

Seth Rubin

Jason Yu

Kyle Schroeckenthaler

Judy Fung

Ethan Rankin

Rebecca Slocum

Hiromi Hashimoto

Divya Gandhi

Susan Sommer