



Lenox Town Center Walk Audit

Lenox, MA

July 28, 2016

Participants

Moderators

Stacey Beuttell, WalkBoston
Brendan Kearney, WalkBoston

Town of Lenox

Kim Graham, Director, Council on Aging/Parks and Recreation
Gwen Miller, Land Use Director, Town Planner

Residents/Walking Club Members

Ginny Akabene
Barbara Frost
Susan May
Elliott Morss
Jen Piccard
Cris Roberts
Dianne Romeo
Mark Shapp
Jennifer Shapp
Barbara Shickmanter
Ruth Wheeler

Purpose of Assessment

WalkBoston conducted a walkability workshop on July 28, 2016, funded by the Massachusetts Department of Public Health Mass in Motion program. The workshop discussed the principles of walkable communities and summarized pedestrian infrastructure improvements that increase safety and improve the quality of the walking environment. After discussing walkability, WalkBoston staff led the group on a walk assessment of the Lenox town center. This report is a summary of the group's observations and preliminary recommendations for improvements to the town center's pedestrian infrastructure.

The assessment had several goals:

1. Evaluate walking conditions in the Lenox town center
2. Identify a walking route that connects senior housing to the town center
3. Consider opportunities for wayfinding signs that highlight walking times to local destinations

The technical terms and traffic control devices discussed in this report are defined in Appendix A.



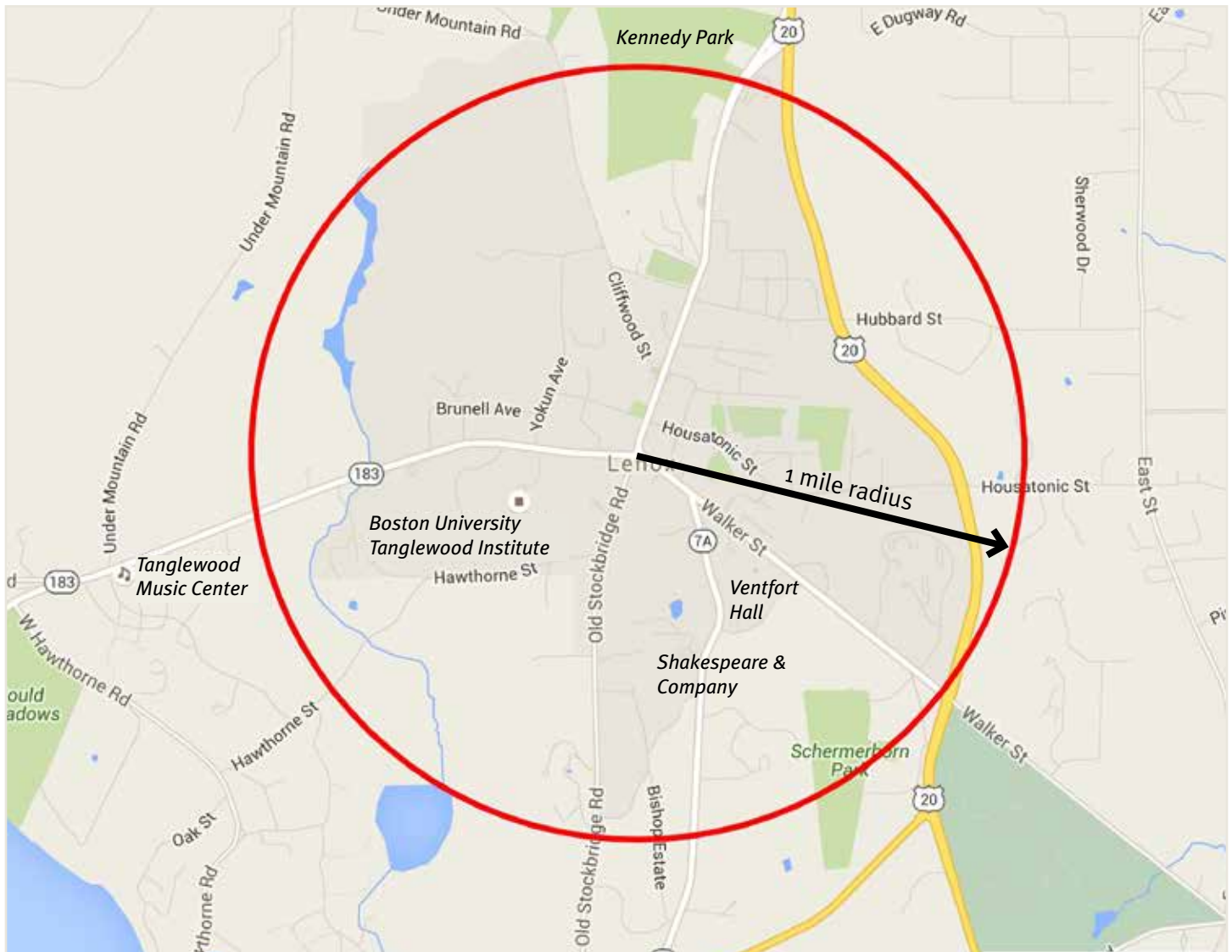
Walkability workshop participants listened to a brief presentation on walking infrastructure before going out to evaluate the walking environment in the Lenox town center. After the walk, we reconvened to discuss our observations and preliminary recommendations

Context

The town center of Lenox, Massachusetts is a compact, walkable destination for residents and visitors drawn to Lenox by Tanglewood, the summer home of the Boston Symphony Orchestra, and the town's Berkshire mountain setting. Lenox has a population of just over 5,000 residents living in a primarily rural and small town development pattern.

While the town centers provide infrastructure that supports walking, many of the rural roads connecting homes to the town centers of Lenox, Lenoxdale and New Lenox are narrow and do not have sidewalks. Route 7 and Route 20 (Veteran's Memorial Highway) – a median-separated arterial with two travel lanes in each direction - run north/south through the middle of Lenox with only one signalized crossing that provides crosswalks and signals for walkers at Housatonic Street. Veteran's Memorial Highway is seen as a significant barrier between the east and west sides of Lenox.

Given the development pattern, walking facilities in Lenox may be reserved for areas of higher density, such as the three town centers, and may focus on supporting walking once within the town centers rather than between them. Maps and wayfinding signs can help to connect walkers to everyday destinations, such as the post office, town hall, retail shops, and cultural points of interest.

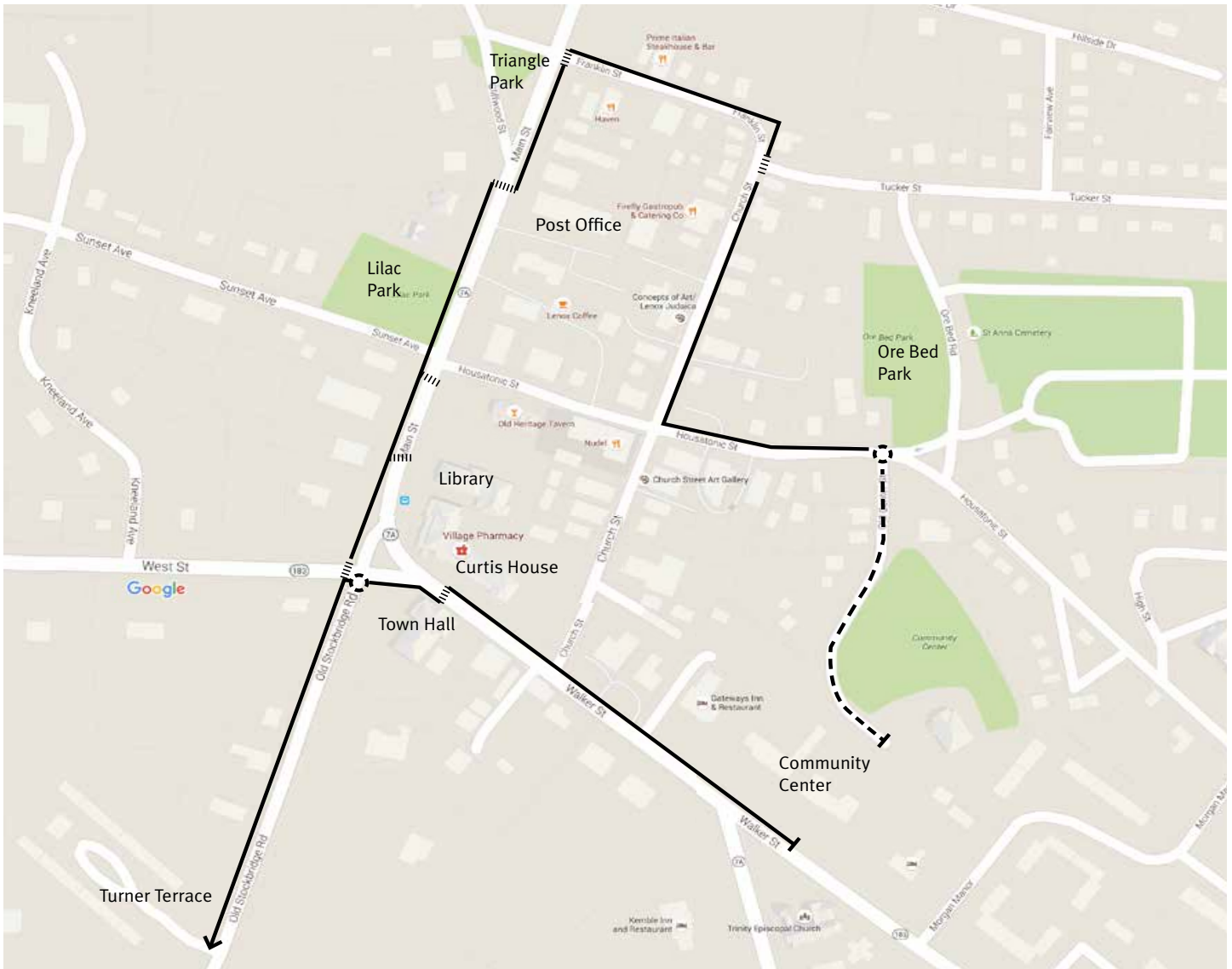


Walkability is often measured in mile increments. This map shows the destinations one could reach within a mile of the Lenox Town Center. A one mile walk takes 15 to 20 minutes on average.

Study Area

The walking route looked at connections from two senior housing complexes (Turner Terrace and Curtis House) to the Lenox town center. It included town center destinations such as the community center, town hall, library, post office, “Triangle” Park, Ore Bed Park and Lilac Park. The group began at the Community Center; continued northwest on Walker Street to Town Hall; negotiated the complicated Rt 183/Rt 7A intersection and walked south on Old Stockbridge partway to Turner Terrace; turned back north across West Street and Sunset Avenue, past Lilac Park to Triangle Park; walked east and south on the redesigned Franklin Street and Church Street streetscapes; turned east onto Housatonic Street to Ore Bed Park; and, finally walked south on Ore Bed Road past the tennis courts to the back of the community center.

Overall, the walking conditions within the town center are excellent when compared to many other rural Massachusetts communities. However, walk audit participants witnessed dangerous intersections, missing crosswalks, confusing paving treatments, and uneven sidewalks. The following sections detail the key issues that affect walkability and pedestrian safety in Lenox town center and make recommendations for improvement.



Walk audit route to and from the Community Center

- sidewalk
- - - no sidewalk
- ||||| crosswalk
- ⊕ no crosswalk

Key Issues

There is no crosswalk across Old Stockbridge Road at the intersection of Rt 183/7A.

The Walker Street/West Street/Main Street/Old Stockbridge Road intersection (183/7A) in front of town hall and the Curtis House sees high volumes of vehicular and pedestrian traffic. People walking do not have a complete marked route across the intersection from any direction and must walk a significant distance out of their way to use crosswalks. There are only two crosswalks at the intersection – one across West Street and one located just east of the intersection between the Curtis House and Town Hall. There is a third crosswalk across Main Street connecting the Library and the Summer White House Inn. It is unreasonable to expect people to walk to the Library and back to West Street to cross this intersection.

The intersection is not signalized, but the northbound Old Stockbridge Road approach and the Main Street southbound approach are controlled with stop signs. Drivers familiar with the intersection move quickly through it, while visitors hesitate as they determine who has the right of way. The Paterson –Egleston

Monument sits in the center of the junction of 7A and Route 183. When approaching the intersection from the south on Old Stockbridge Road, people must go up a considerable hill which compromises sight lines and pedestrian visibility.

Walk audit participants observed people walking from town hall across Old Stockbridge Road to reach destinations on West Street and Main Street, including passengers arriving by regional bus. Boston University Technical Institute students (BUTI) walk between BUTI and the town center in the summer to take the bus into Boston.

This intersection has been studied in the past (*Downtown Transportation Management Study, 2003; Lenox Village Center Improvement Plan, 2008*) and some recommendations included moving the Monument. Participants in the walk audit felt strongly that immediate, short-term improvements to this intersection must be a priority and not depend on moving the monument to enhance safety. Given the grade change, the angles of each approaching road, and the location of some driveway access points, the improvements are more complicated than simply painting a crosswalk across Old Stockbridge Road.



Aerial view of Route 138/7A intersection



Views of Old Stockbridge Road approach where a crosswalk is needed. The sightlines, grade, and existing driveway make it more difficult to mark a safe crossing.



View of the West Street approach with the only marked crosswalk in the Rt 138/7A intersection

Recommendations

Short term

- Explore the following short-term options for installing a marked crosswalk across Old Stockbridge Road
 - » Mark a crosswalk and install accessible ramps and sidewalk connections between the municipal parking lots on the east side of Old Stockbridge connecting to the sidewalk on the west side just south of the residential driveway
 - » Relocate and/or close the municipal and private residence driveways on Old Stockbridge Road just south of the West Street intersection to make room for a marked crosswalk and accessible ramp
 - » Install roadside crosswalk signs to make the crossing more visible
- Review location of stop sign and stop line where Old Stockbridge meets West Street
- Move existing crosswalk sign closer to edge of the road; consider installing advance crosswalk signs

Long term

- Tighten curb radius where Walker Street meets Old Stockbridge Road on the west side of town hall
 - » Install curb ramps and a crosswalk at the Walker St/Old Stockbridge Rd intersection
 - » Install roadside crosswalk signs to make crossing more visible
- Rethink location of angled parking in front of the Curtis House
 - » Redesign to accommodate marked crosswalk between Adams Community Bank and the Curtis House – could include curb bump-out or complete curb realignment to mirror curve and convert to parallel parking
 - » Remove parking entirely to maximize pedestrian visibility

Parking spaces limit the visibility of walkers as they cross at several marked crosswalks in the town center.

Parallel parking spaces that obscure crosswalks can present a real danger to pedestrians who assume all crosswalks are guaranteed safe locations to cross the street. Many cities and towns have ordinances that prohibit parking spaces within 20 to 30 feet of a crosswalk and/or intersection. Lenox has two such provisions in the Town Bylaws:

Article V Section 5-1 General Prohibitions

No person shall allow, permit or suffer any vehicle . . . to stand or park in any street, way, highway, road or parkway under the control of the Town of Lenox . . . in any of the following places . . .

(i) – upon any street or highway within twenty feet of an intersecting way, except alleys

Article V Section 5-7 Prohibited at Safety Zones

No person shall park a vehicle within twenty feet (20) of either end of a safety zone, which is located within thirty feet (30) of the curb or edge of the roadway

Article 1 Section 1-15. Safety Zone

Any area or space set aside within a roadway for the exclusive use of pedestrians and which has been indicated by signs, lines or markings, having the written approval of the Department of Public Works, Commonwealth of Massachusetts.

Despite the bylaws, walk audit participants observed multiple locations where parking is striped within the restricted distance. Cars parked in these spaces limit the visibility of people wishing to cross the street and the visibility of drivers required to yield to people crossing. The biggest safety concern is the zone before the crosswalk when people crossing are looking back at oncoming traffic.



Parking too close to the crosswalk on Main Street just south of the intersection with Housatonic Street

Recommendations

Short term

- Remove parking space striping from the following Lenox town center locations:
 - » Two mid-block crosswalks on Walker Street between Church Street and Main Street intersection
 - » Three mid-block crosswalks on Main Street between West Street and Cliffwood Street
- Evaluate crosswalks on 7A north of the town center for parking encroachment issues that block visibility
- Install no parking signs near crosswalks and at intersections
- Paint diagonal white lines in no parking zones adjacent to crosswalks and intersections
- Work with the Lenox Police Department to enforce no parking ordinances

Long term

- Install curb bump-outs at locations where painted lines do not deter parking



Cars parked within 20' of a crosswalk block pedestrian visibility and increase potential for conflicts.

New streetscape paving patterns on Franklin Street and Church Street are confusing to walkers and drivers.

As a result of the Lenox Town Center Improvement Plan, the Town installed a variety of paving materials as part of efforts to meet the following stated goals:

- Enhance pedestrian safety
- Provide efficient, safe car movement
- Improve green connections, and
- Encourage private collaboration

The wider sidewalks, improved lighting, shorter crosswalks, street trees, and organized parking spaces built as a result of the Improvement Plan have enhanced the appearance of the town center. However, the inconsistent use of paving materials and the lack of curbs in some locations has jeopardized pedestrian safety.

In some cases, pavers indicate a pedestrian zone while in others they are used in vehicular travel lanes. For example, as Franklin Street curves to meet Church Street, the travel way is paved with the same concrete pavers as those used on the adjacent sidewalks (except for a slight change in color). This area should not be a pedestrian priority zone, however the similar paving pattern could indicate pedestrian use. Furthermore, the lack of a painted yellow centerline in this area facilitates drivers' tendencies to flatten out the curve and consequently drive into the lane of oncoming traffic.

The same confusing use of pavers in the travel way occurs at the following locations:

- On Franklin Street at the parking lot driveway in front of Prime Italian Steakhouse
- On Church Street in front of the Gifted Child and parking lot entrance. This location is particularly dangerous due to the flush curb. The town plans to install temporary curbing to indicate where the sidewalk begins and ends



At the intersection of Housatonic and Church Streets, white lines have been painted to highlight crosswalks, but many walkers don't use them.

If the paving treatments on the travel ways had been limited to the raised intersections, such as at Housatonic Street/Church Street, and the raised crosswalks, such as at Housatonic and Main Street, the paving patterns may have been effective, rather than confusing.

In addition, the materials used on the travel way to indicate crosswalks – such as gray concrete pavers – are hard to see and may not give drivers enough of an advanced warning to yield to pedestrians. In some cases, the Town has painted white lines on top of the gray pavers to increase visibility and further define the crosswalk.



The meaning of the use of pavers on the curve connecting Franklin Street and Church Street is unclear.

Recommendations

Short term

- Continue to use paint to clarify pedestrian zones and vehicular travel ways
- Continue ongoing maintenance of concrete pavers on travel ways, sidewalks and crosswalks to limit tripping hazards
- Establish Town crosswalk design standards that include guidelines for raised crossings, raised intersections, mid-block crossings, and crossings at intersections

Long term

- Consider establishing a safety zone throughout the designated historic district in the town center, including Main Street between Sunset Avenue and Walker Street. Safety zones limit traffic speeds to 20 mph much like a school zone (see Appendix A for safety zone definition).

Flush curbs create potential conflict areas between people walking and people driving.

Flush curbs can be used enhance the pedestrian experience and assist in traffic calming at a raised crossing or intersection. Typically, flush curbs allow people to continue walking on the same level as the sidewalk while drivers must rise over the sidewalk, road crossing or intersection. In the Lenox town center, flush curbs are used effectively at the Housatonic/Church Street intersection because traffic is stop controlled from all approaches and therefore moving slowly. The flush curbs at the Franklin Street and Main Street intersection and in the middle of Church Street are less successful.

At the Franklin and Main intersection, the flush curb along the southern edge of the sidewalk creates an elongated curb cut for the Sunoco Gas Station giving people walking along that edge little separation from the driveway or the street. The lack of differentiation at the southeast corner forces people into the street before the crosswalk begins and allows drivers to cut the corner.

The flush curbs in the middle of Church Street, combined with the paving patterns, create confusion around who has the right of way. The long length of the flush curb could be a pedestrian plaza or a shared street. With parking permitted adjacent to the flush curb, the space's purpose is murky at best.



Ambiguous use of paving materials and flush curbs on Church Street

Recommendations

Short term

- Install temporary curbing along eastern edge of Church Street flush curb to differentiate sidewalk from travel way in front of children's clothing and toy store
- Consider temporary curbing at the Franklin Street/Main Street intersection to delineate sidewalk

Long term

- Establish town-wide guidance on use of flush curbs to provide developers, designers and transportation engineers with information on where flush curbs are appropriate
- Redesign and replace flush curbs with straight curbs in conflict locations – may not occur until roads are reconstructed, or at a minimum resurfaced



View of Franklin/Main Street intersection looking south down Main Street



Long crosswalk across Main Street at the Main/Franklin/Cliffwood intersection

Crossing distances at some marked crosswalks are long.

Walk audit participants reported that the crosswalk across Main Street at the intersection of Main and Franklin Streets, in particular, was “long” and “dangerous.” Curb bump-outs would shorten the crossing distance and narrow the travel lane at this important intersection as you enter the retail district of the town center.

Traffic speeds leaving the town center seem to increase while driving north past Cliffwood Street. Traffic speeds driving south toward the town center on Main Street also seem relatively high. If the crossing at Main and Franklin is enhanced, speeds may drop making the crossing safer for people crossing to reach the bus stop, Kennedy Park, or the town center retail district.

Recommendations

Short term

- Paint a ladder crosswalk across Main Street at the Main St/Franklin St intersection

Long term

- Install curb bump-outs at the Main St/Franklin St intersection
- Explore other options for slowing fast-moving traffic on Route 7A including narrowing lanes



Asphalt sidewalks leading to the town center are in vary in quality and all are relatively narrow

Asphalt sidewalks leading into the town center are uneven and disconnected in some locations.

The asphalt sidewalks along the west side of Old Stockbridge Road are showing signs of age. Tree roots and freeze/thaw processes have begun to break up the sidewalks, and cross-slopes have increased with time. The sidewalks are relatively narrow given the high volumes of pedestrians (particularly in the summer and fall tourist seasons). Maintenance of these sidewalks is critical to promote walking to the town center for people living and visiting destinations within walking distance of the center.

In addition to paving repairs, benches should be repaired and replaced when needed. A bench along Old Stockbridge Road is extremely low and difficult for older adults to use as a resting place when walking up the hill to the town center.

Recommendations

Short term

- Identify priority sidewalks leading to the town center in need of repair/replacement. Priority sidewalks include those connecting schools, senior housing, transit stops, parks, and local landmarks to the town center. Old Stockbridge Road is a priority sidewalk.
- Coordinate with the Department of Public Works resurfacing/reconstruction programs

Long term

- Establish sidewalk prioritization plan and annual sidewalk replacement/repair budget to systematically replace aging sidewalks leading to town center

- Identify locations where sidewalks do not currently exist where there is demand (or desire) for sidewalks to be built. A town-wide pedestrian plan could identify corridors leading from the town center to trail heads, schools, parks, and other local destinations, such as Tanglewood, that need safe walking connections. These connections could be sidewalks, roadside paths or other walkable connection that respects the small-town, rural character of Lenox.

Walking connection between Ore Bed Park and the Community Center is challenging.

Ore Bed Park is a destination for many children and staff in the childcare, camp and pre-school programs at the Community Center. Housatonic Street separates the Community Center from the park. There is no sidewalk along Old Center Street and no crosswalk across Housatonic Street. The sight lines are challenging as Housatonic Street curves to meet Church Street at the town center. Participants reported that drivers speed along this stretch of road. Staff members at the Community Center described a crossing strategy involving multiple caregivers and children holding hands in a line.

Recommendations

Short term

- Evaluate feasibility and safety implications of installing a crosswalk between Ore Bed Park and Old Center Street
- Monitor and/or enforce traffic speed limits on Housatonic Street to encourage slower driving



There is no safe place to cross between Ore Bed Park and the Community Center for many children who use both facilities.

- Consider installing a sidewalk, pedestrian warning signs, and/or pavement markings to bring awareness that people may be walking

Long term

- Study the possibility of reconstructing the intersection of Housatonic Street, Ore Bed Road, and Old Center Street with the goal of improving safety

Accessibility for those with physical challenges or in wheelchairs is not uniform throughout the town center. Some crossings and parking spaces are not compliant with Americans with Disabilities Act (ADA) standards.

As in many communities, some of the sidewalks, curb ramps and parking spaces do not meet ADA standards that ensure accessibility for people with all levels of ability. Participants noted multiple locations along the walking route that illustrated this issue:

- Crosswalk in front of community center is missing curb ramps and tactile warning panels
- All crosswalks on Main Street between Walker Street and Cliffwood Street are missing tactile warning panels.
- Crosswalk across Main Street nearest to Cliffwood Street needs new curb ramp
- ADA parking space in front of fire hydrant has no ramps at Franklin and Main Street intersection

There are other locations along the walking route and in the center that need improvement.



Crosswalks on Main Street need tactile warning strips and ADA-compliant curb ramps



Sign should be moved so it no longer blocks the sidewalk along Church Street

ADA improvements are required with all road reconstruction projects and with some road repaving projects. The improvements can be relatively expensive, and therefore can take a while to be fixed.

While affecting all sidewalk users, but disabled ones most significantly given its proximity to handicapped parking, the wooden sign for Dr. Snyder's dental office overhangs into the sidewalk. Several walk audit participants admitted to bumping into the sign repeatedly because it is an unexpected obstruction in the sidewalk.

Recommendations

Short term

- Advise the dental office to move their sign so that it does not encroach upon the sidewalk
- Determine if high priority locations are already on the Department of Public Works schedule for road reconstruction/repaving and ensure that ADA improvements are included in the projects

Long term

- Develop an ADA compliance plan for the Town of Lenox that prioritizes areas with the highest volumes of pedestrians (if one does not already exist)
- Secure funding for ADA compliance projects in the Town of Lenox. Two potential sources are the MassDOT Complete Streets funding program and the Safe Routes to School Infrastructure Program (if the location is near a school or on a primary student walking route)

Pedestrian wayfinding signs that provide the short time it takes to walk to local destinations may encourage people to walk rather than to drive.

As illustrated on the Lenox town center map on page 4, there are many local destinations within a relatively short walk from the town center. If informed of the time it takes to walk, many visitors may choose to walk to Tanglewood, Kennedy Park, or Shakespeare & Company rather than drive. The signs would also make a statement that Lenox values walking as a form of transportation, and that the town cares about providing safe, accessible passage to the town's points of interest.

Pedestrian wayfinding programs can be done on a small scale to test their effectiveness before installing a permanent, community wide wayfinding program. In Turners Falls, a village in Montague, MA, the town installed 17 signs to encourage people to walk between its museum, theater, bike path, parks, and downtown district. Surveys have shown that residents view the signs as another step in the town's dedication to improving the village center and promoting local institutions.

Recommendations

Short term

- Consider looking for resources to conduct a pilot wayfinding program, including walkyourcity.org or WalkBoston
- Identify destinations to include in the program
 - » For example, at 183/Old Stockbridge intersections, _ minutes to Tanglewood
 - » Or, at 7A and Housatonic Street, _ minutes to Kennedy Park



*Pilot pedestrian wayfinding program in Turners Falls, MA
Designed by WalkBoston*

Appendix A. Terminology

Below are images and definitions of the terms used to describe the walking environment in this report.

Crosswalk and Stop Line

Crosswalks can be painted in a variety of ways, some of which are more effective in warning drivers of pedestrians. Crosswalks are usually accompanied with stop lines. These lines act as the legally mandated stopping point for vehicles, and discourage drivers from stopping in the middle of the crosswalk.



Crosswalk patterns
Source: USFHA



Crosswalk and stop line
Source: http://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/sys_impact_rpt/images/fig16.jpg

Curb Ramp and Detectable Warning Strip

Curb ramps provide access from the sidewalk to the street for people using wheel chairs and strollers. They are most commonly found at intersections. While curb ramps have improved access for wheelchair-bound people, they are problematic for visually impaired people who use the curb as an indication of the side of the street. Detectable warning strips, a distinctive surface pattern of domes detectable by cane or underfoot, are now used to alert people with vision impairments of their approach to streets and hazardous drop-offs.



Curb ramp and detectable warning strip

Curb Extension/Curb Bulb-out

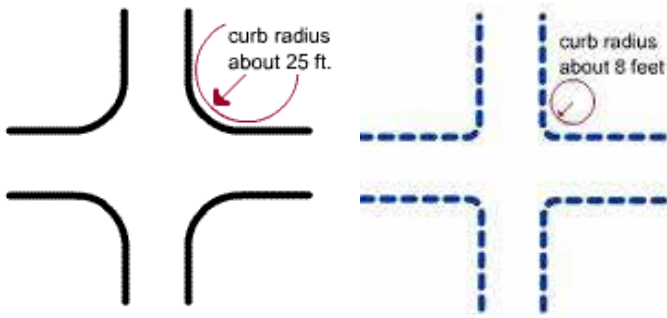
A sidewalk extension into the street (into the parking lane) shortens crossing distance, increases visibility for walkers and encourages eye contact between drivers and walkers.



Curb extensions are often associated with mid-block crossings

Curb Radius

A longer curb radius (on the left in figure below) allows vehicles to turn more quickly and creates longer crossing distance for pedestrians. A shorter curb radius (on the right in the figure below) slows turning speeds and provides pedestrians shorter crossing distances.



(A) Gravel-filled curb extension

There are two excellent examples of the shortening of curb radii in Woburn, MA. The first (A) is a low-cost solution using a gravel-filled zone between the original curb line and the newly established road edge. The second is a higher-cost solution using grass and trees and extending the sidewalks to the new curb. Both work to slow traffic.



(B) Grass, trees and extended sidewalk in curb extension

Fog Line

A fog line is a solid white line painted along the roadside curb that defines the travel lane. It narrows a driver's perspective and helps to slow traffic speeds. Fog lines are used in urban, suburban and rural locations.



Fog lines delineate the vehicular driving zone on wide roadways.

In-street Pedestrian Crossing Sign

In-street pedestrian crossing signs are used at the road centerline within crosswalks to increase driver awareness of pedestrians in the area. These signs are a relatively low-cost, highly effective tool in slowing traffic by the narrowing travel lanes. They are popular with road maintenance departments since they can be easily moved for snow removal.



Leading Pedestrian Interval (LPI)

A leading pedestrian interval gives pedestrians an advance walk signal before motorists get a green signal, giving the pedestrian several seconds to start walking in the crosswalk before a concurrent signal is provided to vehicles. This makes pedestrians more visible to motorists and motorists more likely to yield to them. Typical LPI settings provide 3 to 6 seconds of advance walk time.



Source: http://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/sys_impact_rpt/images/fig34.jpg

Rectangular Rapid Flash Beacon (RRFB)

RRFBs are user-actuated flashing lights (amber LEDs) that supplement pedestrian warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system. RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs may be installed on either two-lane or multi-lane roadways.

Source: http://safety.fhwa.dot.gov/intersection/conventional/unsignalized/tech_sum/fhwasa09009/



Rectangular Rapid Flash Beacon (RRFB) in West Springfield

Safety Zone (Slow Zone)

A safety zone is an area in which the posted speed limit is 20 miles per hour. Safety zones can be established anywhere in a Massachusetts city or town with approval from the applicable departments. Safety zones were recently passed as part of the 2016 Municipal Modernization Bill - Sections 193 and 194.