



## ***Downtown Walk Assessment Pittsfield, MA***

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Centers for Disease Control and Prevention Division of Community Health/Community Transformation Grant

Mass in Motion, an initiative of the MA Department of Public Health

**MAKING MASSACHUSETTS MORE WALKABLE**

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## **Walk Audit Participants**

### **Organizers:**

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### **Walking Champions:**

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### **City of Pittsfield:**

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## Purpose of Walk Assessment

Walkability, which is a measure of the level of connection and quality of the walking environment, contributes to an area's economic vitality, residents' physical health, and community's level of engagement. Neighborhoods with well-maintained sidewalks, safe crossings, streetscapes that contain benches and trees, and destinations accessible on foot have higher walkability and, consequently, better economic, physical and community health.

The purpose of this walk assessment was to identify ways of improving the walking connections between downtown businesses along North Street, the Big Y shopping area along West Street, and the newly constructed children's carousel along Center Street and South Church Street. While the downtown sections of North Street and Columbus Avenue proved to be highly walkable, Center Street and West Street were less walkable with uninviting and potentially unsafe pedestrian conditions. The construction of the children's carousel along Center Street will draw more families to this area. Developing greater pedestrian connectivity between the shopping areas and the residential areas to the north could reduce traffic congestion and promote a safer and more walkable area.



*Walk audit participants near the West St/Center St intersection*

## Overall Observations

The following observations describe the general quality and characteristics of the walking environment seen during the assessment.

- Sidewalks vary in condition which can be a major barrier to accessibility along streets with elevation gains along Center and West Streets
- Crosswalks vary in condition and style, some of which are faded and nearly undetectable
- Automobile speeds along Center and West Streets are relatively fast
- Traffic signal phasing and timing allow for short pedestrian waits and adequate crossing times, but allow for heightened conflicts with turning vehicles
- Pedestrians take the path of least resistance, crossing roads where there are no crosswalks, and walking along roads where there are no sidewalks

## Overall Recommendations

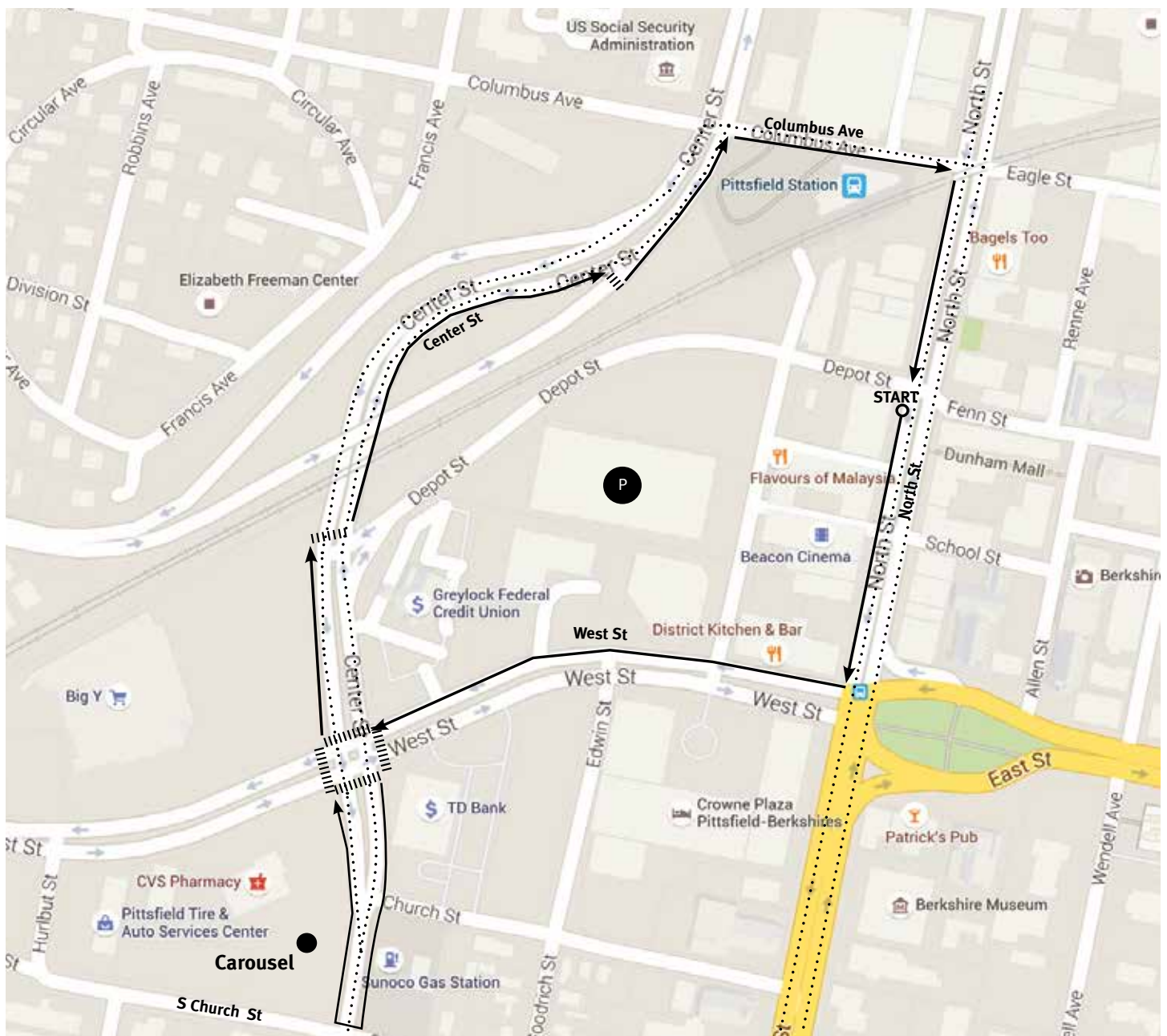
The following general recommendations suggest an approach to infrastructure improvements in the area of Pittsfield seen during the walk assessment.

- Prioritize sidewalk maintenance of areas with high levels of current or anticipated pedestrian activity (e.g., route to the carousel)
- Consider the installation of new crosswalks where necessary and focus on maintenance of crosswalks to ensure visibility
- Review traffic signal phasing and timing to ensure pedestrian safety concerning turning vehicles and wait times by considering leading pedestrian intervals
- Create heightened enforcement zones for both speed and improper use of sidewalks and crosswalks especially along Center and West Streets
- Consider long-term redevelopment plans for intersections with special attention to shortening curb radii to slow traffic and create safer intersections

## Walk Assessment Route

The walk assessment began on North Street near the intersection with Depot Street. Participants walked south along North Street to the intersection with West Street. Turning west, the participants proceeded along West Street towards the intersection with Center Street. At the intersection, participants turned south to examine the intersection where the children's carousel is finishing construction. After examining the area around the carousel at Center Street and South Church Street, the walkers turned north back to the intersection of Center Street and West Street. Crossing

West Street and continuing north on Center Street, the participants followed the only possible path that crosses Center Street just south of the overpass. The walkers then continued north along the eastern side of Center Street before again having to cross to the east over the section where the overpass meets with Center Street. The walk continued north along Center Street before turning east on Columbus Avenue and then turning south on North Street to the original starting point.



Map of walking route

## CDC Walkability Audit Tool

The CDC walkability audit tool uses a ranking method to assess factors related to safety and aesthetics. Safety considerations are considered the most important, followed by aesthetics. Shade is considered the least important and is weighted the least in the audit tool formula.

The walk audit participants completed a walk audit tool worksheet for each road segment and/or intersection along the walk route. The worksheet evaluates the following 9 factors:

- A. Pedestrian facilities
- B. Pedestrian conflicts
- C. Crosswalks
- D. Maintenance
- E. Path size
- F. Buffer
- G. Universal accessibility
- H. Aesthetics
- I. Shade

Each factor was given a numerical score between 1 and 5 (5 being the highest score). The formula below calculates a score for each road segment or intersection:

sum of high importance features (A-C): \_\_\_ x 3  
sum of medium importance features (D-H): \_\_\_ x 2  
sum of low importance features (I): \_\_\_ x 1

The scores are mapped on a walkability map using three categories:

**Red** - Higher risk; unattractive (70 or less)

**Yellow** - Moderate risk; reasonably attractive (71-85)

**Green** - Low risk; attractive (scores higher than 85)

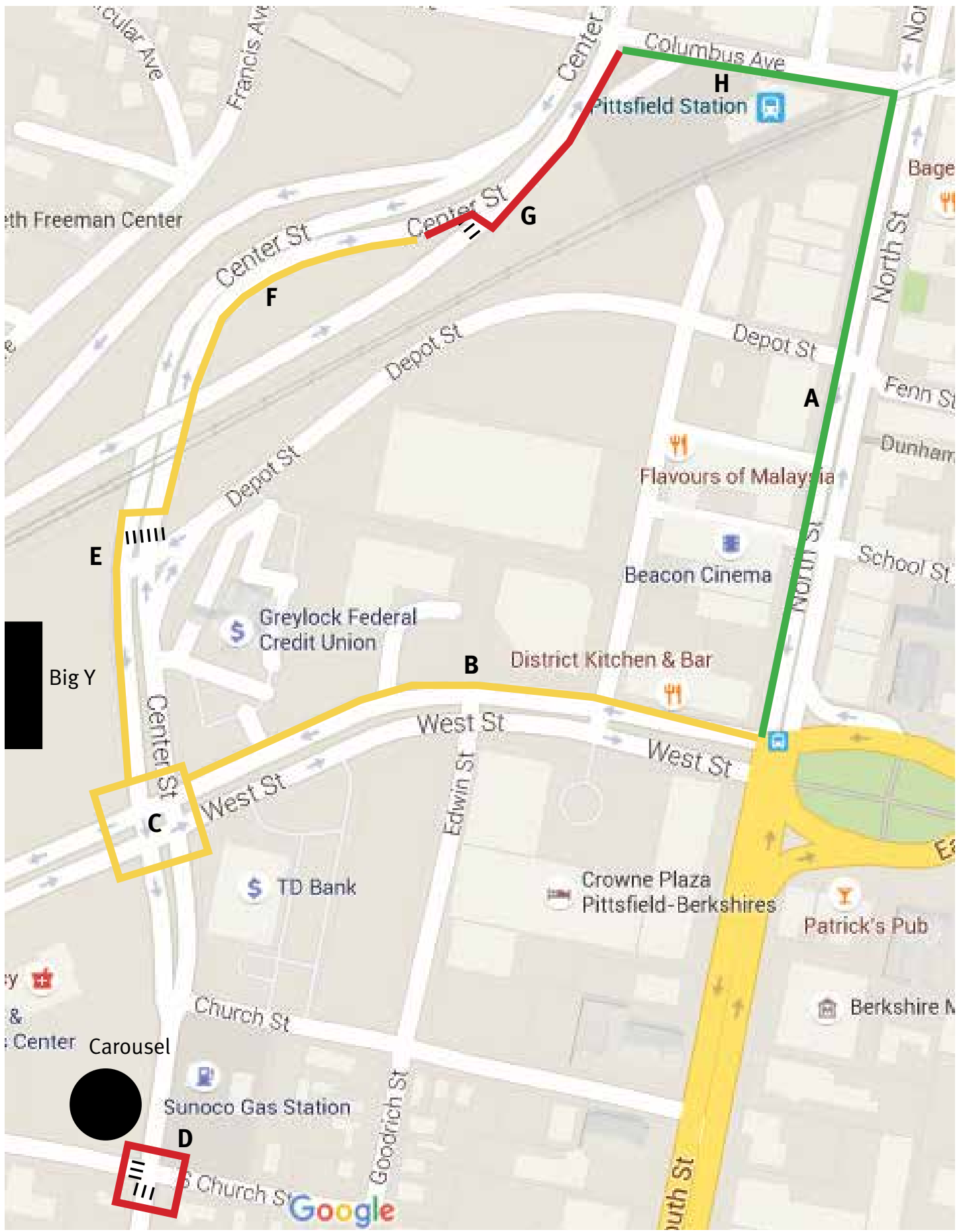


*Example of a high-risk, unattractive road segment*



*Example of a low-risk, attractive road segment*

# Pittsfield Walkability Map



	WALKING ROUTE SEGMENT							
	A	B	C	D	E	F	G	H
<b>TOTAL</b>	<b>95</b>	<b>74</b>	<b>77</b>	<b>51</b>	<b>71</b>	<b>78</b>	<b>64</b>	<b>87</b>
<b>A. FACILITIES</b>	4	4	5	3	4	3	3	5
<b>B. CONFLICTS</b>	5	4	3	2	3	4	3	3
<b>C. CROSSWALKS</b>	5	3	5	3	4	5	3	4
<b>D. MAINTENANCE</b>	5	3	5	2	5	5	4	4
<b>E. SIZE</b>	5	5	5	5	5	5	5	5
<b>F. BUFFER</b>	5	3	1	1	1	3	1	5
<b>G. ACCESS</b>	5	4	5	3	4	4	4	5
<b>H. AESTHETICS</b>	5	4	2	2	3	3	4	5
<b>I. SHADE</b>	3	3	2	1	2	1	1	3

**SUM OF HIGH IMPORTANCE FEATURES (A-C): \_\_\_ x 3**

**SUM OF MEDIUM IMPORTANCE FEATURES (D-H): \_\_\_ x 2**

**SUM OF LOW IMPORTANCE FEATURES (I): \_\_\_ x 1**

## Site-Specific Observations and Recommendations

The descriptions below characterize the corridors and intersections along the walking route. Recommendations for specific infrastructure improvements follow the descriptions.

Appendix B defines many of the traffic calming techniques and pedestrian infrastructure elements suggested in this report.

### North Street corridor (Segment A)

North Street is a highly walkable corridor with lots of shops, restaurants, and other businesses. This area has undergone a transformation within the past five years. Crosswalks are frequent and painted with a red/white design at all intersections along the corridor. Bump-outs at crosswalks shorten crossing distances and make pedestrians more visible. Brick and concrete sidewalks are wide and lined with trees, rain gardens, and street furniture, including restaurant seating. A parking lane along North Street provides an adequate buffer between pedestrians and the roadway.

*CDC Walkability Tool Score (out of 100): 95*

### Recommendations:

- Repair sidewalks including loose pavers and broken slabs of concrete, where needed
- Enforce city ordinance to maintain a clear sidewalk walking zone where outdoor dining/seating is offered



*Redesigned sections of North Street with wide sidewalks, enhanced greenery, and curb bump-outs*

## West Street (Segment B)

West Street is a wide, four-lane road with a center island. This segment of West Street has driveway access to parking and drive-through service for multiple banks, as well as access to a large downtown parking structure. Given the wide road and steep downhill grade moving west along this section, cars can pick up significant speed. There are no crosswalks across West Street between North Street and Center Street. Sidewalks run along both sides of West Street at a good width and with a small grass buffer between pedestrians and traffic. The sidewalk surfaces, however, are often uneven or cracked.

*CDC Walkability Tool Score (out of 100): 74*

### *Recommendations:*

- Repair and/or replace sidewalks and curb ramps along West Street
- Narrow driveway entrances and consider eliminating those no longer in use
- Consider adding a crosswalk across West Street on the west side of the unsignalized intersection of Edwin Street and West Street. Construction would require that the median be redesigned as a pedestrian refuge island and the installation of curb ramps

## Intersection of West Street and Center Street (Segment C)

The West Street/Center Street intersection is a large, four-way intersection with two approaches that widen to six lanes to include turning lanes. The presence of curb ramps, detectable warning strips, and well-marked crosswalks improves the safety of pedestrians using this intersection. The pedestrian signal timing for people crossing the road provides a reasonable amount of time to cross. Traffic approaching this intersection from both West Street and Center Street build up considerable speed before reaching the intersections. Wide curb radii allow drivers to maintain those high speeds while turning. Because the signal phasing allows for cars to turn while pedestrians have a walk sign (e.g., concurrent phase), the wide curb radii and speed associated with them can create an added danger to pedestrians.

*CDC Walkability Tool Score (out of 100): 77*

### *Recommendations:*

- Study alternative signal phasing options to determine its impact on traffic congestion and pedestrian safety. Consider a leading pedestrian interval.
- Consider tightening curb radii to slow the speed of cars before they make turns. Short-term fixes could include paint and flex-posts. Long-term fixes would include moving curbs and narrowing travel lanes.



*West Street has wide sidewalks and a buffer between moving traffic and the sidewalk. However, the sidewalks are in need of repair.*



*Intersection of West Street and Center Street*



## Intersection of Center Street and South Church Street (Segment D)

The new children's carousel on the northwest corner of Center Street and South Church Street will draw additional automobile and pedestrian traffic to this area. This intersection has crosswalks that cross South Church Street and one crosswalk that crosses Center Street on the south side of the intersection. However, all the crosswalks are faded and have limited markings. People walking to visit the carousel would prefer to cross Center Street on the north side of the South Church Street intersection where there is no crosswalk. The gas station driveway and lack of functional curb ramp would make adding a crosswalk more complicated, although still possible.

The curb ramps and sidewalks along the eastern side of the intersection are in poor shape and do not allow for easy access. The northeast corner of the intersection is overgrown with plants, crowded with trash, and has sidewalks in need of repair. The northwest corner of the South Church Street/Center Street intersection has a wide curb radius, which lengthens the crossing distance for pedestrians.



*Broken curb ramps, sidewalks, and debris make this intersection an unwelcome crossing.*

South Church Street west of Center Street is unnecessarily wide. The width of the street and the lack of lane markings can increase traffic speed, which is not a good mix with families and young children crossing to reach the carousel. Steps should be taken to reduce the road's width.

*CDC Walkability Tool Score (out of 100): 51*

### *Recommendations:*

- Maintenance of sidewalks, curb ramps, and crosswalks including fixing broken concrete slabs, clearing overgrown plants, cleaning up trash, and repainting crosswalks
- Examine possibilities for adding a crosswalk across Center Street on the north side of the intersection. Potential areas of conflict include the gas station driveway, carousel driveway, and sight distances from the Center Street and Church Street intersections
- Add an in street pedestrian sign to raise awareness of pedestrians crossing Center Street
- Reduce the crossing distance on the intersection's northwest corner using curb bump-outs.
- Narrow travel lanes on South Church Street using pavement markings



*High speeds and the lack of a crosswalk at a natural pedestrian desire line make this a potentially dangerous crossing to the carousel.*



*This crossing at Center Street can be dangerous given the high driving speeds and the changes in light drivers experience moving south beneath the overpass.*

### Center Street between West Street and Depot Street (Segment E)

This section of Center Street has sidewalks that are discontinuous and intersections with no marked places to cross. On the east side of Center Street, the sidewalk curves along a right-turn slip lane to Depot Street, but there are no crosswalks across Depot Street to continue north on Center Street.

The sidewalk along the west side of Center Street ends just past Depot Street. There is a crosswalk with flashing pedestrian signs across Center Street to allow people to continue walking north on Center Street. However, people frequently don't cross as evidenced by a path worn in the grass along the west side. This walking behavior is dangerous and has resulted in one fatality in this area. Cars pick up considerable speed coming south on Center Street and go under an overpass almost immediately north of the crosswalk at Depot Street. The overpass partially shades the road causing visibility issues; drivers' eyes need to adjust to the change from dark to light and may not see a pedestrian walking along the roadway.

*CDC Walkability Tool Score (out of 100): 71*

#### *Recommendations:*

- Install two crosswalks across Depot Street where it intersects with Center Street; (1) across the right-turn slip lane to the island, and (2) across Depot Street to the corner of Center Street
- Install appropriate "yield to pedestrian" signs to raise driver awareness of potential pedestrians crossing Center Street at Depot Street



*The sidewalk and buffer along Center Street are nice. However people attempt to walk along the road to the left in the picture, which has no sidewalk.*

### Center Street (Segment F)

This section of Center Street is a wide, four-lane road with a large, sweeping curve. People drive at high speeds along this section because it feels like a highway with no roadside buildings and an open landscape. The only sidewalk is along the east side of the street. It is a wide sidewalk with a green buffer between the road and walking path.

The lack of sidewalk on the west side of Center Street has not deterred people from walking on that side of the road where drivers pick up significant speed as they travel downhill under the overpass. A worn walking path through the grass shows the frequency of walkers using this side of the road. During the assessment, a man in an electric wheelchair scooter drove up the hill in the street rather than using the sidewalk because he claimed the sidewalk on the east side of Center Street was not smooth enough for his chair.



*People continually walk on the side of Center Street where there is no sidewalk despite multiple lanes of fast-moving traffic.*

Many residents of the apartments and housing developments on Columbus Avenue prefer not to cross Center Street because they would have to cross Center Street again at the top of the hill to reach their homes.

*CDC Walkability Tool Score (out of 100): 78*

**Recommendations:**

- Repairing cracked concrete sidewalks and clear away debris
- Encourage a police presence to reduce vehicle speeds and encourage walking on the side of the road with a sidewalk
- Consider conducting pedestrian safety seminars or distributing pedestrian safety information to the apartment and housing development residents on Columbus Avenue



*Cars coming from the access road onto Center Street do not yield at this crosswalk, which is poorly painted and not well signed.*

**Center Street and the overpass access road (Segment G)**

At the top of the hill, drivers coming from the neighborhood west of downtown connect with Center Street to continue north via an access road over Center Street. Drivers must yield at this intersection and walkers must cross the access road to reach the sidewalk. There is a crosswalk, but it is faded and there are no advance warning or yield to pedestrian signs. Drivers are most likely looking left to see if there is oncoming vehicle traffic since they are merging onto Center Street. As a result, they may not see someone attempting to cross. In fact, drivers did not yield to the group of walk assessment participants (which included a uniformed police officer).

There are no sidewalks along the access road, but people walk along it anyway to reach their neighborhoods. The road is relatively narrow and drivers tend to speed. Pedestrians have few alternatives to reach their neighborhood on roads with sidewalks without walking a significant distance out of their way.

*CDC Walkability Tool Score (out of 100): 64*

**Recommendations:**

- Replace the yield sign with a stop sign for cars entering Center Street
- Repaint the crosswalk using either a ladder or continental style
- Install advance crosswalk and yield to pedestrian signs before the access road/ Center Street intersection
- Encourage a police presence to reduce vehicle speeds

**Columbus Avenue (Segment H)**

Pittsfield Station, the new multi-modal station in Pittsfield, occupies the majority of this section of Columbus Avenue. The sidewalk is well maintained and wide enough for access, but multiple driveways for bus and parking access detract from the pedestrian experience. Crosswalks and signs, however, do encourage safer crossings along this section. At the Center Street and Columbus Street intersection, people must wait a long time for the walk sign, which encourages people to cross the street without waiting. This behavior was observed during the walk assessment.

*CDC Walkability Tool Score (out of 100): 87*

**Recommendations:**

- Re-examine the signal phasing and timing at the Center and Columbus Street intersection to reduce pedestrian wait time and allow enough time for people to cross
- Continue maintenance of sidewalks and crosswalks around bus and parking entrance driveways at Pittsfield Station

## Appendix A. Healthier Worksite Initiative Walkability Audit Tool

Location: \_\_\_\_\_ Date: \_\_\_\_\_

**A. Pedestrian Facilities (High):** presence of a suitable walking surface, such as a sidewalk or path.

1 No permanent facilities; pedestrians walk in roadway or on dirt path

2

3 Continuous sidewalk on both sides of road, or completely away from roads

4

5 Sidewalk on one side of road; minor discontinuities that present no real obstacle to passage

**B. Pedestrian Conflicts (High):** potential for conflict with motor vehicle traffic due to driveway and loading dock crossings, speed and volume of traffic, large intersections, low pedestrian visibility.

1 High conflict potential

2

3

4

5 Low conflict potential

**C. Crosswalks (High):** presence and visibility of crosswalks on roads intersecting the segment. Traffic signals meet pedestrian needs with separate 'walk' lights that provide sufficient crossing time.

1 Crosswalks not present despite major intersections

2

3

4

5 No intersections, or crosswalks clearly marked

**D. Maintenance (Medium):** cracking, buckling, overgrown vegetation, standing water, etc. on or near walking path. Does not include temporary deficiencies likely to soon be resolved (e.g. tall grass).

1 Major or frequent problems

2

3

4

5 No problems

**E. Path Size (Medium):** measure of useful path width, accounting for barriers to passage along pathway.

1 No permanent facilities

2 < 3 feet wide, significant barriers

3

4

5 > 5 feet wide, barrier free

**F. Buffer (Medium):** space separating path from adjacent roadway.

1 No buffer from roadway

2

3

4 > 4 feet from roadway

5 Not adjacent to roadway

**G. Universal Accessibility (Medium):** ease of access for the mobility impaired. Look for ramps and handrails accompanying steps, curb cuts, etc.

1 Completely impassible for wheelchairs, or no permanent facilities

2 Difficult or dangerous for wheelchairs (e.g. no curb cuts)

3

4 Wheelchair accessible route available but inconvenient

5 Designed to facilitate wheelchair access

**H. Aesthetics (Medium):** includes proximity of construction zones, fences, buildings, noise pollution, quality of landscaping, and pedestrian-oriented features, such as benches and water fountains.

- 1 Uninviting
- 2
- 3
- 4
- 5 Pleasant

**I. Shade (Low):** amount of shade, accounting for different times of day.

- 1 No shade
- 2
- 3
- 4
- 5 Full shade

Sum of High importance (A-C): \_\_\_\_\_ x **3** = \_\_\_\_\_

Sum of Medium importance (D-H): \_\_\_\_\_ x **2** = \_\_\_\_\_

Sum of Low importance (I): \_\_\_\_\_ x **1** = \_\_\_\_\_

**Total Score:** \_\_\_\_\_ / 100

### Observations

1. What is the most dangerous location along this segment?
  
2. What is the most unpleasant element of this segment?
  
3. What improvements would make this segment more appropriate for pedestrian use?
  
4. Would it be possible to design a more direct route to connect the ends of this segment?
  
5. Are the conditions of this segment appropriate and attractive for exercise or recreational use?

## Appendix B. 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](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 in Woburn, MA

### Curb Extension/Curb Bulb-out

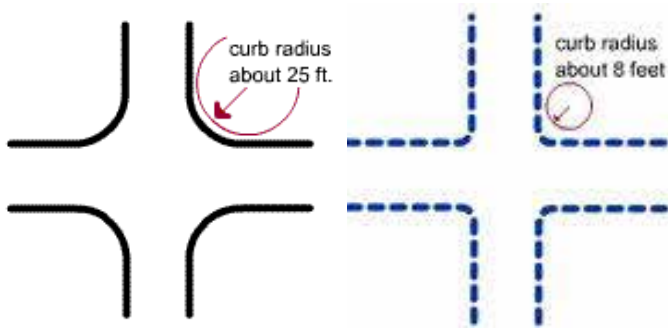
A sidewalk extension into the street (into the parking lane) shortens crossing distance, increases visibility for walkers and encourages eye contact between drivers and walkers.



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.



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.

## Fog Line

A fog line is a solid white line painted along the roadside curb that defines the driving lane and narrows the driver's perspective. Fog lines are most often used in suburban and rural locations, but may be appropriate in some urban conditions.



*Fog lines delineate the vehicular driving zone on wide roadways.*



*(A) Gravel-filled curb extension*



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

## 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](http://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/sys_impact_rpt/images/fig34.jpg)