

Town of Wakefield
Greenwood Square/Greenwood School Area
September 2013

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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Purpose

The Wakefield Town Administrator, Stephen Maio, is interested in improving the image and overall economic viability of the Greenwood Square/ Greenwood School area of Wakefield. In addition, members of the Greenwood Elementary School faculty and staff would like to revive the Walk-to-School program and make the walking routes safer for students to walk to school.

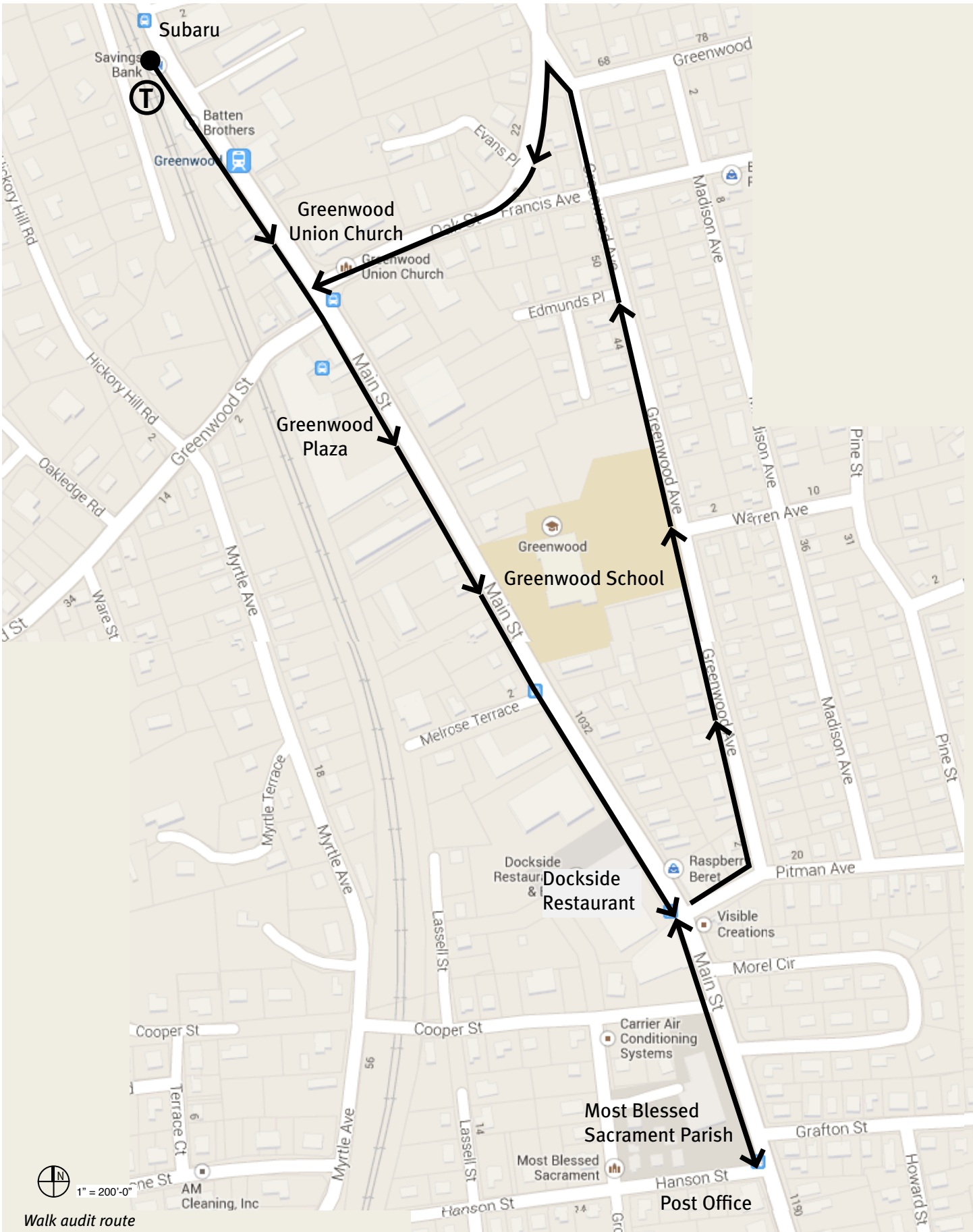
With these goals in mind, WalkBoston conducted a walkability assessment on August 20, 2013, of the area with Mass-in-Motion Coordinator, Kara Showers, Safe Routes to School Coordinator, Heather Ross, and Executive Director of the Wakefield Chamber of Commerce, Kendall Inglese. WalkBoston representatives included Dorothea Hass, Senior Program Manager and Stacey Beuttell, Program Director.

Walkability Assessment Route

The walking route focused on Main Street between Forest Street and the southern boundary of the Town of Wakefield near Hawley Road. The group carried out an on-the-street assessment of the pedestrian facilities and amenities in the area with an emphasis on identifying low cost infrastructure projects that could improve both the safety of the walking environment and enjoyment of the walking experience.



Walk audit participants: Kendall Inglese-Wakefield Chamber of Commerce, Dorothea Hass-WalkBoston, Heather Ross-SRTS, and Kara Showers-MiM Coordinator for Melrose/Wakefield



1" = 200'-0"
Walk audit route

Character of Main Street between Forest Street and Hawley Road

Main Street is an arterial road running approximately north/south from the northern edge of Wakefield south into the neighboring town of Melrose. It is a two-way street with one lane of vehicular traffic moving in both directions with parking lanes on both sides of the street. There are no marked bike lanes. The MBTA commuter rail runs roughly parallel to Main Street and the Greenwood train platform is located behind The Savings Bank near the intersection of Forest Street and Main Street. Parking for the commuter rail extends along Main Street from Forest Street north to Linden Avenue.

Pedestrian street crossings occur primarily at signalized intersections with mid-block crossings at Greenwood Elementary School and the Most Blessed Sacrament Parish near the Hanson Street/Grafton Street intersection with Main Street. All signalized intersections have pedestrian crossing signals that vary in condition and effectiveness. Signal phasing includes an all-stop for vehicles, which comes up relatively quickly (within a minute wait time) and provides an adequate crossing time for pedestrians to reach the other side.

Traffic volumes were steady during the audit (2:00 pm to 4:00 pm on a Tuesday in August) and speeds ranged in excess of 30 mph along much of the route. School was not in session, so we did not observe the impact of school dismissal on the traffic patterns.

Sidewalks run along Main Street on both sides of the street and are generally wide, smooth and in good condition. A verge of reasonable width is provided along much of the route and shade trees enhance the quality of the walking experience. Curb ramps are provided at most street crossings, but no detectable warning strips have been installed. The strips must be installed when street improvements occur.

Overall assessment

The pedestrian facilities within the study area provide a good foundation for a safe, pleasant walking environment for a neighborhood school and local business district. With the addition of some low-cost infrastructure improvements and attention paid to creating an identity for Greenwood as a place, the area has the potential to thrive as a vital neighborhood center.

Below is a list of specific observations and recommendations for improving the walking environment in Greenwood Square and around the Greenwood Elementary School.

1. Observation: Vehicle speed on Main Street is too fast

Cars pick up speed when there are few points of “friction” (such as stop signs or traffic signals). Drivers can see for long distances, and therefore feel more comfortable driving at greater than desirable speeds for a thickly settled neighborhood and retail district. While not a huge deterrent, there are no posted speed limit signs except in the designated 20 mph school zone near Greenwood Elementary School. Slowing traffic down will promote a safer, more enjoyable walking experience, which can in turn promote a more vibrant retail/commercial district. Drivers have more time to see the variety of businesses along the street if they are traveling at a slower speed, and will be more likely to stop.



Drivers tend to drive faster on streets with wide travel lanes and few points of “friction”, such as crosswalks, stop signs, or traffic signals.

RECOMMENDATIONS:

- Install more mid-block street crossings with curb bump-outs to increase the points of friction on the roadway (see Observation 2 for proposed locations)
- Paint fog lines or parking stalls along the road edge and use in-street pedestrian signs to narrow the drivers' perception of the roadway width
- Post and enforce speed limits



Fog lines on Main Street in Melrose just south of the Wakefield town line.

2. Observation: Marked street crossings on Main Street are generally limited to signalized intersections, which leaves long stretches of road with no protected crossings.

People resort to crossing the street between moving cars to reach destinations across the street. In times of heavy traffic, this practice can be dangerous and discourage patrons from crossing the street to frequent a business.

RECOMMENDATIONS:

- Paint crosswalks on Main Street at regular intervals, particularly in commercial areas, to facilitate safer crossings.
 - » North side of the Forest Street/Main Street intersection
 - » Hanson Street/Main Street intersection near the Post Office
 - » Humphrey Street/Main Street intersection

- Purchase and place in-street pedestrian crossing signs at the road centerline within the crosswalks to increase driver awareness of the possibility of pedestrians in the area. Suggested locations include:
 - » Greenwood Elementary School crosswalk
 - » Most Blessed Sacrament Parish



Suggested location and example of an in-street pedestrian crossing sign

Wakefield has at least two pedestrian crossing signs in the downtown district north of our study area.

- Install curb bump-outs at mid-block crossings. Bump-outs allow pedestrians to see beyond parked cars and allow drivers to see pedestrians, which increases the probability that they will stop.



Example of mid-block curb bump-out
<http://mikeontraffic.typepad.com/a/6a00e54foe5eb98834015433be1d75970c-320wi>

3. Observation: Crosswalks in many locations on Main Street need to be repainted, and crosswalks are missing across some roads that intersect Main Street. Also, several crosswalks are too close to driveways and need to be relocated.

There are a variety of different styles of crosswalk pavement markings on Main Street and in the Greenwood Square area. Variety is fine as long as the crosswalks are in good condition and highly visible. WalkBoston prefers that crosswalks have a ladder pattern at the very least, rather than simply two horizontal lines. Two simple lines do not draw enough attention to pedestrians and drivers can confuse them with stop lines when crossings are associated with stop signs.



Crosswalks at the Main Street/Greenwood Street/Oak Street intersection need to be resurfaced.

Most street crossings in the study area have curb ramps that meet ADA requirements, however the majority are missing the detectable warning strips now required. As crossings are improved, curb ramps and detectable warning strips must be installed.



Crosswalk patterns - courtesy of USFHA

4. Observation: The planned expansion on the north side of Greenwood Plaza would benefit from plantings and/or an outdoor seating area to draw customers into the retail establishments.

As development expands in Greenwood Plaza, business owners should consider reserving space for outdoor plantings to define parking and pedestrian areas. An outdoor seating area would add life to the area and possible bring the focus to people rather than parking cars to this area.

RECOMMENDATIONS:

- Repaint, paint or resurface crosswalks in the following locations:
 - » Main Street/Greenwood Street/Oak Street (4 crossings)
 - » Pitman Avenue (3 crossings)
 - » Morell Circle (2 crossings) - new
 - » Grafton Street (1 crossing) - new
 - » Hanson Street (1 crossing) - new
 - » Humphrey Street (1 crossing)- new
 - » Greenwood Avenue – a second crosswalk leading to Greenwood Elementary School just north of the bus/car drop-off zone
- Relocate crosswalks in the following locations:
 - » Greenwood Elementary School Crosswalk away from half-circle entrance road
 - » Greenwood Plaza



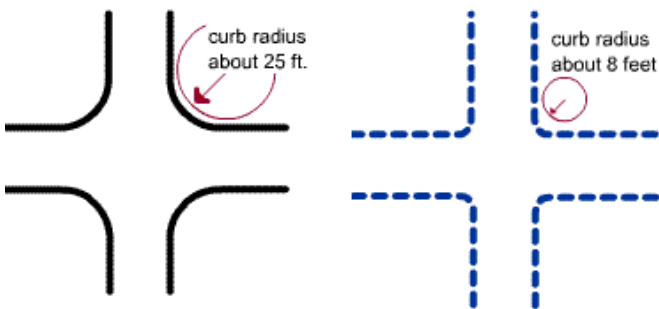
Planters along the Greenwood Plaza parking lot define and enhance the pedestrian zone along Main Street.

RECOMMENDATIONS:

- Consider reducing the parking count and adding a defined outdoor seating area or parklet along this stretch of Main Street
- Install planters to separate the parking lot from the street edge that add color and softness to this area

5. Observation: The curb radii on some driveways (curb cuts) and several streets that intersect Main Street are too generous and promote fast driving.

Decreasing the length of the curb radii at intersections and curb cuts forces cars to slow down before taking a turn. Tightening the corners not only slows right turning movements, but it also shortens the crossing distance for pedestrians. Curb radii can be shortened using a variety of means. Curbs can be extended into the intersection forming more of a right angle. Paint can be used to simulate a curb extension and encourage traffic into a narrower lane. Planters and flexible delineators (white posts) can reinforce the paint and is more cost effective than physically extending the curbs.



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

RECOMMENDATIONS:

- Reduce the length of the curb radii using one of the following strategies
 - » Move and extend curbs into the intersection
 - » Use paint to mark the pavement to simulate a curb extension
 - » Use planters, bollards, flexible delineators, and paint to narrow the roadway

- Use curb extension strategies in the following locations:
 - » Forest Street/Main Street intersection
 - » Oak Street/Main Street intersection
 - » Dockside restaurant parking lot



The curb cut leading to the Dockside Restaurant is excessively wide facilitating fast turns into the parking lot and extending the time pedestrians are in a potentially dangerous position.

6. Observation: Signalized pedestrian crossings need repair and/or upgrade at the Pitman/Main Street intersection

WalkBoston recommends the installation of countdown pedestrian signals with ADA-compliant buttons. Where possible, the WALK signal should be concurrent, reducing wait times for both pedestrians and vehicles. At intersections where concurrent signals are not possible, wait time for the pedestrian crossing phase should not exceed 1 minute 30 seconds. Adequate time crossing time (at least 15 seconds) should also be provided.



Pedestrian signalization is inconsistent at the Pitman and Main Streets intersection

RECOMMENDATIONS:

- Repair and/or replace the lamps in the pedestrian walk signals on Pitman Street
- Provide additional pedestrian walk signals and push buttons across Main Street at the Pitman Street intersection

7. Observation: The MBTA commuter rail stop at Greenwood Square is hidden from the street and there are no signs advertising its presence in the neighborhood.

The Greenwood stop is behind The Savings Bank on Main Street and cannot be seen from the street. To encourage ridership, the stop should be more prominent.

RECOMMENDATIONS:

- Install signs that identify the Greenwood MBTA Commuter Rail stop
- Install more bicycle parking to encourage T riders to bike to the train.
- Use paint to indicate a pedestrian zone in the bank parking lot adjacent to the train platform to facilitate pedestrian and vehicular movements to the T stop.



Pedestrian and vehicular zones should be clearly marked to avoid conflicts when accessing the T stop.

8. Observation: More advance pedestrian crossing signs are needed near the Greenwood Elementary School crosswalk to increase driver awareness

RECOMMENDATIONS:

- Install advance pedestrian crossing signs on both sides of the street crossing
- Verify that all school zone signs are in place at the prescribed distances on both Main Street and Greenwood Avenue
- Ensure that all flashing school zone signs are operational



Pedestrian crossing signs in advance of the Greenwood School would increase driver awareness of pedestrians in the area.



Radar speed school zone signs should be prominently displayed and regularly checked for accuracy. Malfunctioning signals do little to deter speeding traffic.

9. Observation: The Greenwood Avenue/Oak Street/Green Street intersection has an excessive amount of pavement, compromised sight lines, and unpredictable vehicular turning movements

The geometry and size of this intersection makes it difficult for pedestrians to predict vehicular traffic patterns and places them in vulnerable positions as they navigate the long street crossings. Drivers were observed coasting through stop signs in attempts to see oncoming traffic. If drivers are focused on avoiding other cars, then they will be less likely to remember to look for pedestrians as they approach the intersection.

RECOMMENDATIONS:

- Install a traffic island that would assist in defining traffic flows and could function as a pedestrian refuge for people crossing the vast intersection.
- Use pavement markings and rumble strips to help regularize traffic flows through the intersection
- Eliminate right turns from Oak Street onto Greenwood Avenue running east and extend the curb between Oak Street and Greenwood Avenue to minimize pavement. Extending the curb may also improve sight lines and discourage coasting through stop signs to see oncoming traffic.



Aerial view of the Greenwood Avenue/Oak Street/Green Street intersection

10. Observation: There are no benches or seating areas along the length of Main Street.

The addition of benches and seating areas along Main Street would provide places to rest and gather along Main Street. Seating should be placed in nodes, or areas of activity along the street.

RECOMMENDATIONS

- Locate benches in specific areas along Main Street (TBD)
- Identify areas large enough to establish gathering areas where people can congregate to add street life along Main.

