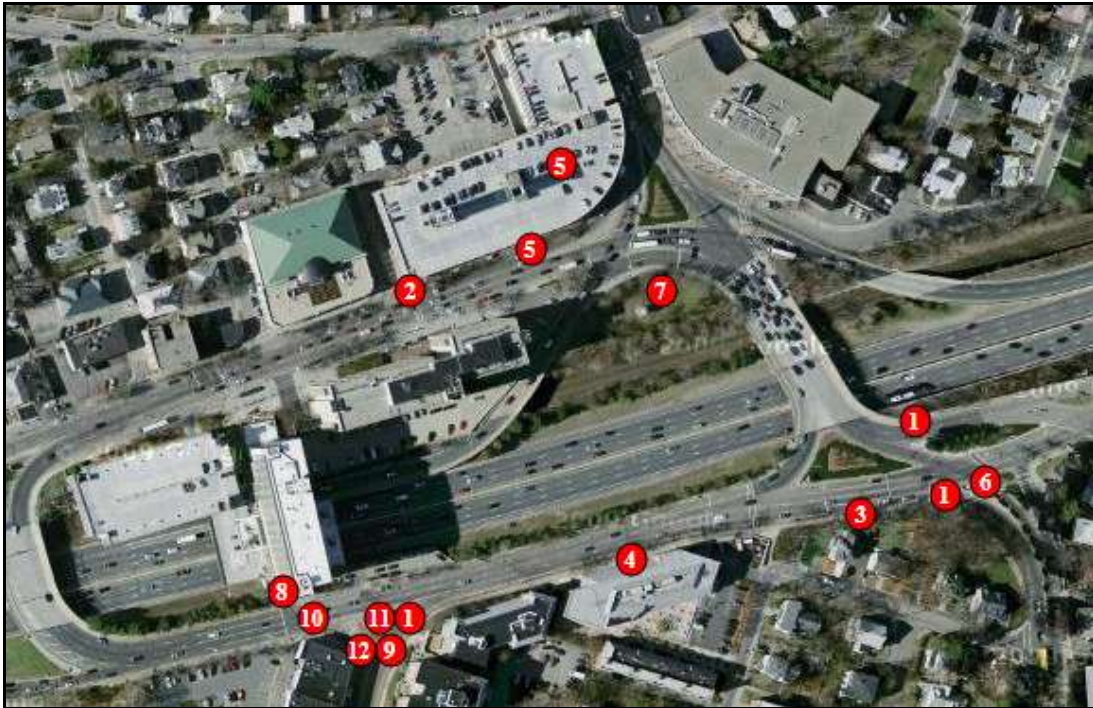


## Newton Corner

In this study area, we noticed many problematic patterns that involved inaccessibility and unsafe facilities. This included poor surface conditions, and an inaccessible path through the Crowne Plaza Hotel. Also, curb cuts and signals were not always designed to the accessibility standards provided by the ADA. In this section, we discuss the areas for improvement found in Newton Corner as well as potential solutions for these problems, as shown in Figure 15.



**Figure 1: Newton Corner Problems and Opportunities Map**

- 1. Dangerous Conditions caused by Right Turns on Red:** One challenge we found during our observations were dangerous conditions caused by right turns during red lights. This problem was observed at the intersection of Centre Street and the intersection of Centre Avenue and Park Street and Centre Avenue. Both intersections have large volumes of vehicles and this causes frequent right turns on red. These frequent turns, in addition to aggressive driving, can cause hazardous situations.

*Recommendation: Prohibit rights-on-red.* We recommend this for the Park Street and Centre Avenue intersection, specifically the right turn on to the bridge over the Mass Pike. High traffic volumes and aggressive driving cause dangerous and inaccessible travel for pedestrians crossing this street.

*Recommendation: Install a “No Turn on Red” signal.* We recommend implementing a signal that prohibits rights on red during the walking light at the right turns at Centre Avenue and Centre Street as well as the right turn from Centre Avenue onto Park Street. This will decrease potential conflicts between pedestrians crossing during the walk phase and vehicles turning right.

- 2. Hazardous Brick Surfaces:** Washington Street, for example, has a partial brick surface, as shown in Figure 16. Brick surfaces are extremely difficult to maintain and can be hazardous. The ADA suggests uneven surfaces such as bricks should be avoided.



**Figure 2: Brick Surface along Washington Street**

*Recommendation: Replace with pressed concrete.* We recommend replacing the brick surfaces with pressed concrete. Pressed concrete maintains some of the aesthetic appeal of brick while providing a safer traveling surface. This can be implemented systematically over time. As the brick degrades, pressed concrete could be used as a replacement. An example of pressed concrete is shown below in Figure 17.



**Figure 3: Pressed concrete on Washington Street in Newton Corner**

- 3. Debris on Sidewalks:** Also, sidewalks in this area, especially along Centre Ave, are covered with debris such as sand and dirt. The debris can make the sidewalk slippery and therefore hazardous.

*Recommendation: Clean sidewalks seasonally.* Even though this is a seasonal issue for the spring and most likely will be addressed, we recommend cleaning sidewalks more frequently and sooner after the winter season. This will minimize the time that sidewalks are hazardous. This will require the cooperation of the Department of Public Works which is responsible for maintaining these facilities.

- 4. Lack of Proper Bus Stop:** At the south side stop, we found that the bus shelter was open and unattractive. This current shelter does not protect the bus users from the elements, as displayed in Figure 18. Another challenge at this bus stop was a lack of bicycle racks. There currently are no outside bike racks in the vicinity of the bus stop.



**Figure 4: Newton Corner south bus stop**

*Recommendation: Implement full bus shelter and bike racks.* We recommend implementing a full bus shelter at this stop. We were informed by our sponsors that this is the second-most used stop in Newton. Therefore, it is beneficial to shelter the bus patrons from the weather here. We also recommend implementing bike racks at this stop.

- 5. Inaccessible Walking Button:** A walking light at Park St and Centre Ave also presents a challenge. Here, we found that the walking button is in the center of a raised median thus making it inaccessible to the disabled and elderly, seen in Figure 20. Also, this walking button was not functional. This walking button presents a safety concern as well as violating the ADA regulations on its accessibility. Below are two options for improving the accessibility of the walking light.



**Figure 5: Inaccessible Walking button at Centre Avenue and Park Street**

*Recommendation: Create curb cuts on and off the median.* After fixing the walking signal itself, we recommend implementing curb cuts to allow access to the walking button. This will also elevate pedestrians from the level of traffic thus increasing the perception of safety.

*Recommendation: Relocate the walking button:* After fixing the walking signal itself, we recommend relocating the walking button to the edge of the median. This will make the button accessible from the median cut through.

- 6. Closed Green Space:** In Newton Corner, there are not many green open spaces. Therefore, an area for improvement could be the Memorial Bell Park that is currently completely enclosed by a fence, as evident in Figure 21. This area has the potential to be a public area that would attract pedestrians and also offer them a safer path to travel.



**Figure 6: Bell Park on the north side of Newton Circle Rotary**

*Recommendation: Open the park:* We recommend opening this park to the public. This could be opened from dawn until dusk in order to prevent problems with misuse, such as vandalism. This will allow residents and employees to enjoy a green space.

- 8. Inaccessible Walking Path:** An inaccessible path through the Crowne Plaza hotel was identified as a challenge. This cut through passes over the Massachusetts Turnpike connecting the north and south sides of the village center, shown in Figure 22. However, on the south side, there is a stairway preventing all disabled persons and many elderly from utilizing this path. Without the ability to use this path, pedestrians must walk around the west side of the rotary, which is a long, indirect path for many. During a walkthrough of the area, we noticed an elderly man using a cane traveling around this corner.



**Figure 7: Crowne Plaza path - south side**

*Recommendation: Implement a ramp.* We recommend the implementation of a pedestrian ramp on the south side of the path to allow access to all persons in accordance with ADA regulations.

- 9. Improper Placement of Traffic Signals:** The traffic signals for the right turn on Centre Street at the intersection of Centre Avenue are located after the crosswalk, as shown in Figure 23. This causes cars stopped at the light to block the crosswalk and cause a hazard for pedestrians.



**Figure 8: Traffic signals at Centre Street and Centre Avenue**

*Recommendation: Change traffic signals.* We recommend moving the light on the median past the crosswalk to the same location as the other traffic light on the

median. Also, we recommend removing the traffic signal on the right hand side of the road altogether.

- 10. Walking Signal Sequencing:** The two walking signals for crossing Centre Street at the intersection with Centre Avenue are not properly timed or sequenced. This may cause pedestrians to be trapped on the median for an entire signal cycle.

*Recommendation: Sequence the walking signals.* We recommend sequencing the walking signals. This will allow pedestrians to cross the entire street at one time rather than in two separate cycles.

- 11. Uneven Median:** The median on Centre Street at the intersection with Centre Avenue is not a level surface and may cause some difficulties for disabled pedestrians, as shown in Figure 24.



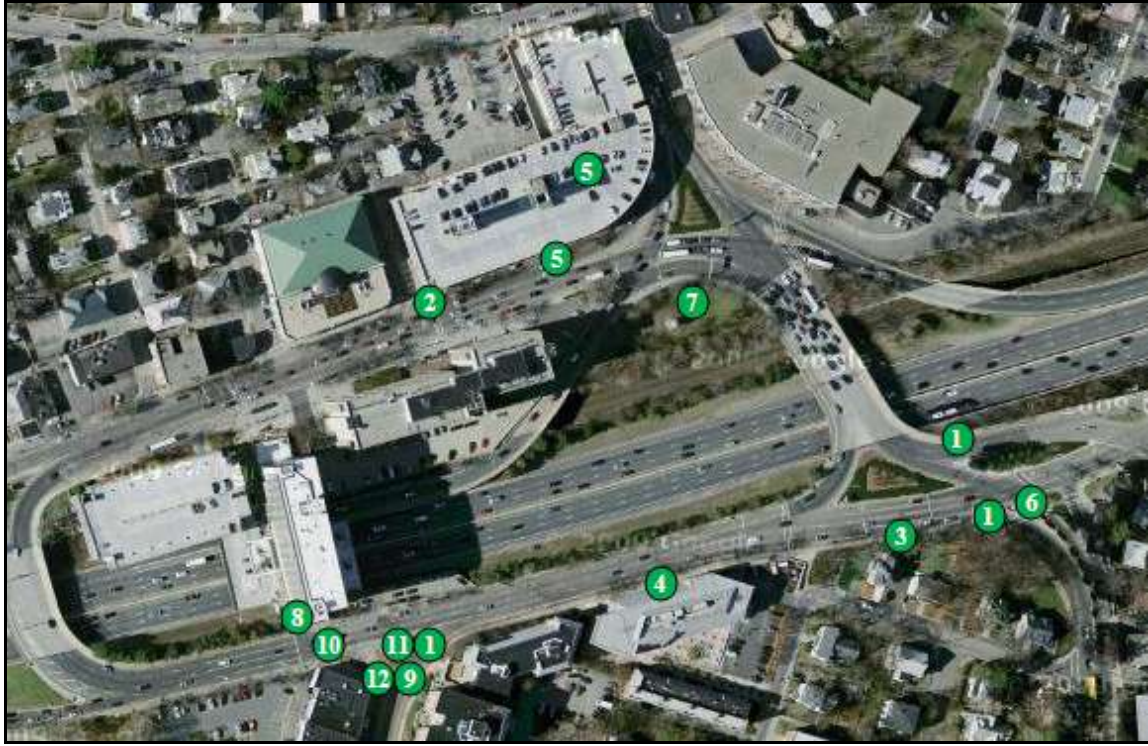
**Figure 9: Median at Centre Street and Centre Avenue**

*Recommendation: Level the surface.* We recommend leveling this surface in order to allow safer travel to all pedestrians.

- 12. Pedestrian Sight Line:** The crosswalk on the left side of Centre Street at the intersection of Centre Avenue causes pedestrians traveling from the median to face away from traffic. Again, this causes a safety concern because the pedestrian may not see on-coming vehicles in the road.

*Recommendation: Change the crosswalk angle.* We recommend making this crosswalk parallel with Centre Avenue in order to allow pedestrians the ability to see on-coming vehicles. Cathy Buckley, a MPO representative, informed us of this challenge.

**Summary of Newton Corner Recommendations**



**Figure 10: Newton Corner Recommendations Map**

<b>Location on Fig. X</b>	<b>Recommendation</b>	<b>Cost</b>	<b>Impact</b>
1	Prohibit right turns on red	Low	High
	Install a “No Turn on Red” signal	Low	High
2	Replace with pressed concrete	Low	Low
3	Clean sidewalks seasonally	Low	Low
4	Implement a full bus shelter and bike racks	High	High
5	Implement bike racks or install informative signage	Low	Low
6	Create curb cuts on and off median	Low	High
	Relocate the walking button	Low	High
7	Open Bell Park	Low	Low
8	Implement a ramp	High	High

<b>Location on Fig. X</b>	<b>Recommendation</b>	<b>Cost</b>	<b>Impact</b>
9	Change traffic signals	High	High
10	Sequence the walking signals	Low	Low
11	Level the surface	Low	Low
12	Change the crosswalk angle	Low	Low