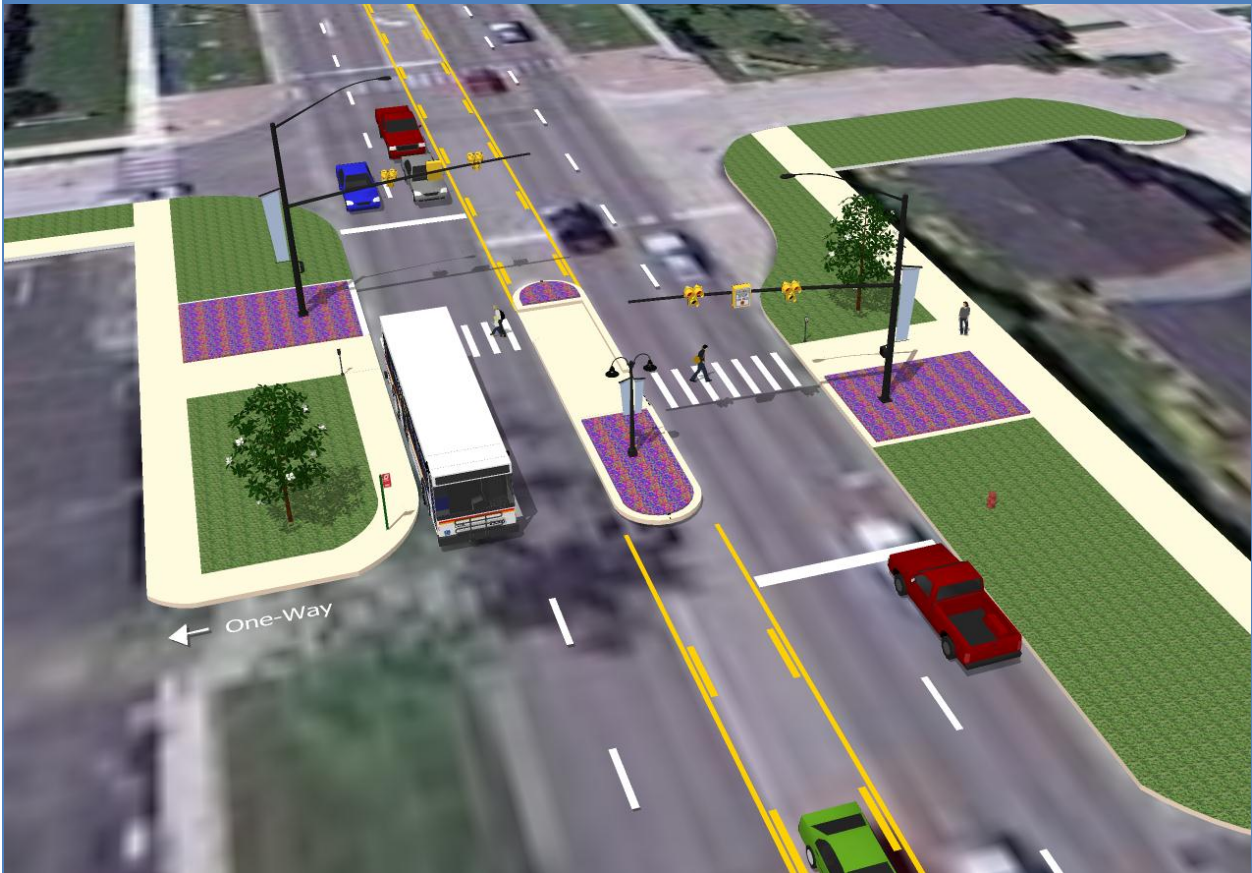


CITY OF CLAWSON

DOWNTOWN BICYCLE AND PEDESTRIAN PLAN

December 14, 2012



prepared for



submitted by:



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN
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SUPPLEMENTAL DOCUMENTS

Appendix (included as a separate document)

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN

INTRODUCTION

The purpose of the City of Clawson Downtown Bicycle & Pedestrian Plan is to specifically focus on improving pedestrian access across 14 Mile Road and Main Street, to integrate bicycle facilities into the downtown area and to provide improvements to the streetscape that will further enhance the pedestrian environment and create a strong sense of place.

The development of this plan was led by a public engagement process. An online survey (185 participants) and two public open houses (33 participants) were held to gather input from the community and help guide the design process.

The following pages provide recommendations for:

1. Road Crossing Improvements
 - General Approach
 - W 14 Mile Road at Washington Avenue
 - W 14 Mile Road between Washington Avenue and Main Street
 - E 14 Mile Road between Church Avenue and Renshaw Avenue
 - E 14 Mile Road at Florence Street / Pare Street
 - E 14 Mile Road at Bellevue Avenue
 - N Main Street at Bowers
 - S Main Street at Jefferson
2. Bicycle Improvements
3. Pedestrian Streetscape Enhancements
 - West Side of S Main Street
 - East Side of S Main Street
 - South Side of E 14 Mile Road
 - Information Kiosk

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN

ROAD CROSSING IMPROVEMENTS

GENERAL APPROACH

The road crossings are designed to address multiple objectives:

1. Improve the safety of pedestrians and bicyclists crossing 14 Mile Road and Main Street
2. Improve the pedestrian connectivity between the four quadrants of Clawson's downtown
3. Provide a means for bicyclists on the proposed bike route system to safely cross 14 Mile Road safely
4. Define the downtown for motorists driving along 14 Mile Road
5. Reinforce the visual cues to motorists that they are in a downtown environment and to reduce speeds accordingly
6. Coordinate road crossing improvements with transit stops

For 14 Mile road the approach was to establish "gateways" at the edge of downtown. At these points motor vehicle speeds are higher and the surrounding context is transitioning from suburban to urban. Landscaped and lighted medians help alert the motorists to the change in context. Given the higher speeds of travel of motorists approaching the edge of the downtown area, Pedestrian Hybrid Beacons (See the Appendix for more information) are used to stop vehicular traffic on 14 Mile Road. Many of the pedestrians at these locations will be children or senior citizens that may have difficulty judging a safe gap in traffic traveling at such speeds. The overhead structure of the beacons also helps reinforce the gateway into town.

Closer to Main Street, the traffic on 14 Mile Road is traveling at a slower pace and it was felt that Pedestrian Hybrid Beacons would not be warranted and that crossing islands used with rectangular rapid flash beacons would be the more appropriate solution (See the Appendix for more information).

It should be recognized that the recommendations included in this document are not final designs ready for construction. Detailed engineering studies will likely be required to finalize some the road crossing improvement recommendations. These studies would refine the final geometry of the islands as well as determine such issues as the signal timing. But it is expected that the general configurations will not change in any substantial manner as they are based on MUTCD warrants, current best practices, considerations for context and field observations of motor vehicle, bicycle and pedestrian traffic patterns.

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

W 14 MILE ROAD AT WASHINGTON AVENUE

OVERVIEW:

Based on the online survey and the public workshops, this crossing was considered the most important location to provide a safe road crossing. It is adjacent to a large senior housing complex, a major bus stop and is one block south of the high school.

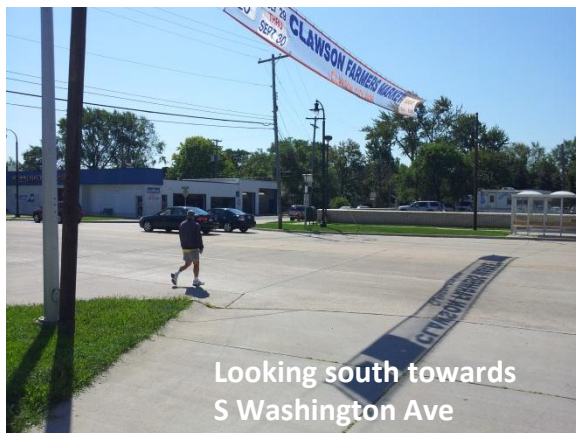


RECOMMENDATIONS:

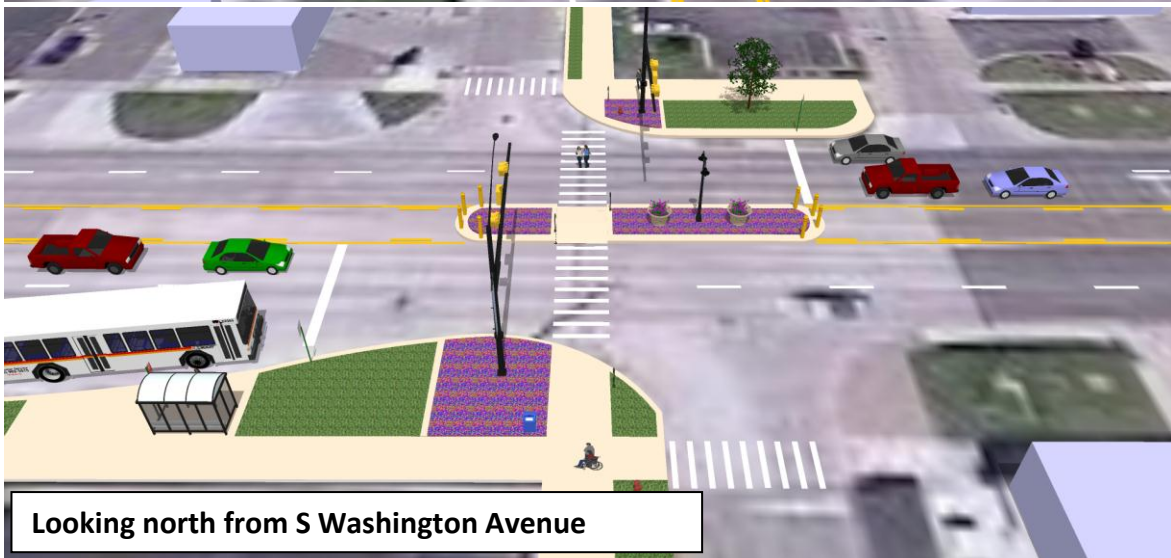
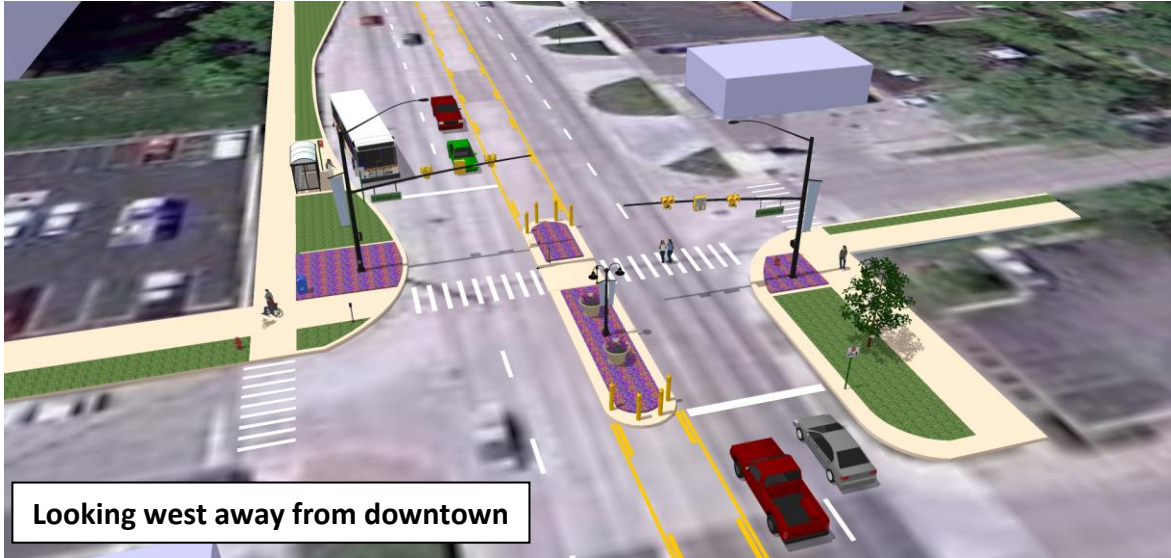
Considering the ages and abilities of many of the likely users in combination with the characteristics of the roadway, the proposed crossing includes the following proven safety countermeasures:

- Crossing Island
- Pedestrian Hybrid Beacon

As Pedestrian Hybrid Beacons are generally not used at intersections, the left turn from both North and South Washington is restricted to eliminate motorists turning left across the crosswalk when the beacon is activated. This also allows for a more substantial island. While a staggered zig-zag pedestrian style crossing (see page 7 for an example) is generally desirable in situations like this, the straight shot crossing is proposed to work with the current alignment of the sidewalks. It may be necessary to shorten the length of the island on the east side slightly to accommodate left turns from 14 Mile onto southbound S. Washington Street.



The location also marks the western edge of the downtown area. A number of gateway treatments such as banners, decorative street lights, raised planters and flower beds are proposed to both delineate the district and bring traffic speeds closer to the desired speed in the commercial area.



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

W 14 MILE ROAD BETWEEN WASHINGTON AVENUE AND MAIN STREET

OVERVIEW:

Currently there is little demand for a crosswalk at this location, but there is a large undeveloped parcel on the south side of W 14 Mile Road, when this side develops in the future this situation will likely change.

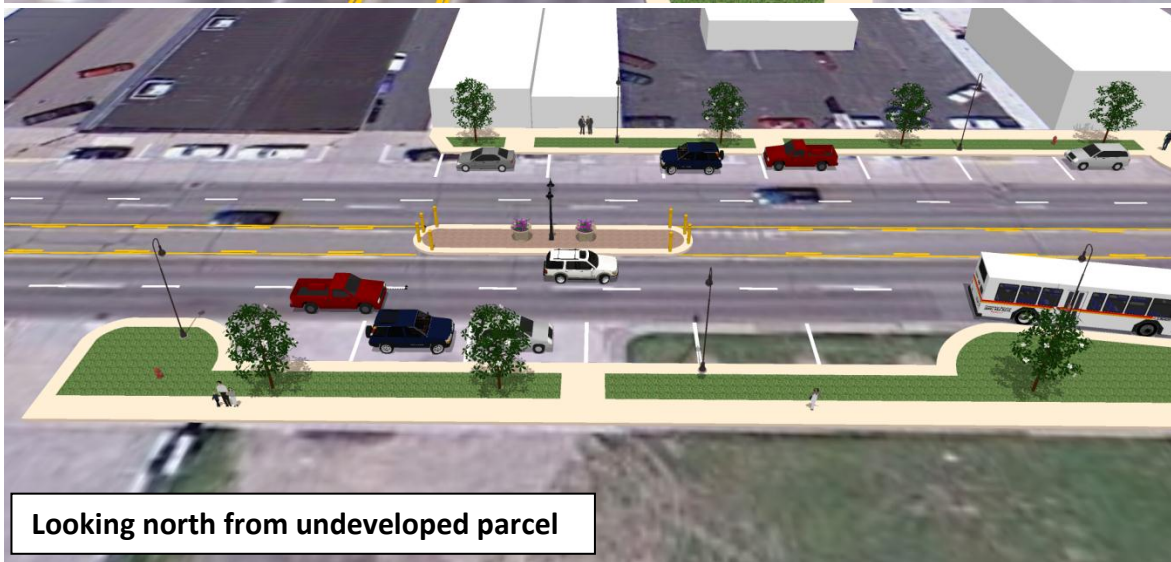
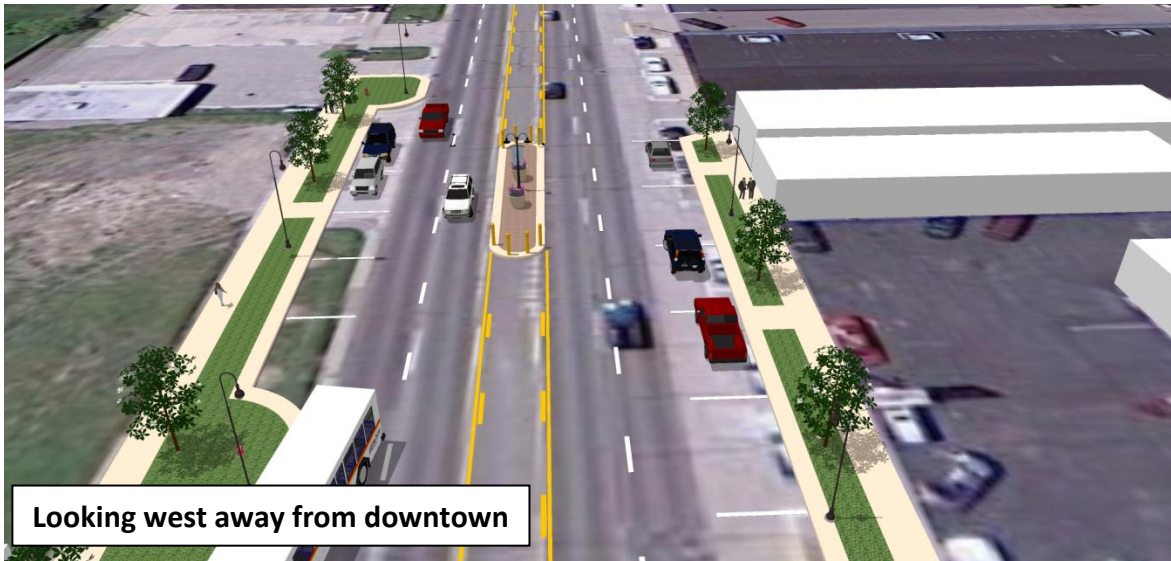


RECOMMENDATIONS:

A median is proposed in an unused portion of the center turn lane to help maintain the downtown character and appropriate traffic speeds. The island is proposed to be surfaced in a decorative paver initially as it will be difficult to access for maintenance. A decorative light feature is proposed to illuminate the island and potential support banners for special events. Low maintenance planters are also recommended to enhance the crosswalk and continue the gateway feeling into the downtown. The proposed island is very similar to those in downtown Ypsilanti on Michigan Avenue (US-12), which is also a five lane road with on-street parking in a small downtown setting.



Looking south towards undeveloped parcel



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

E 14 MILE ROAD BETWEEN CHURCH AVENUE AND RENSHAW AVENUE

OVERVIEW:

This crossing is adjacent to commercial areas and a bus stop.

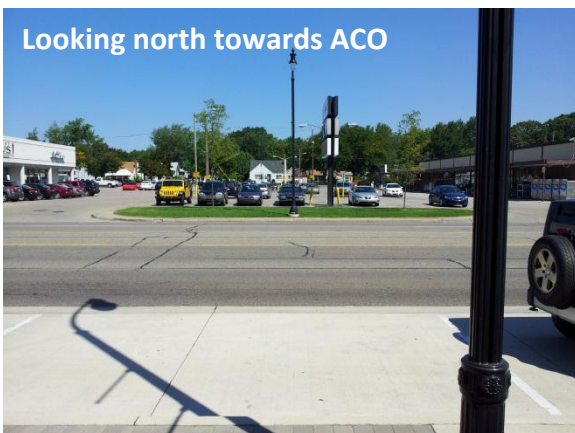
RECOMMENDATIONS:

The crossing includes the following proven safety countermeasures:

- Staggered “zig-zag” crossing island to orient pedestrians towards oncoming motor vehicles and provide additional space for multiple pedestrians crossing at the same time.
- Double posted, rectangular Rapid Flash Beacons with advanced warning on the outside lanes
- Yield bars 40’ in advanced of the crosswalk to minimize multiple-threat crashes by improving sight lines
- In order to provide appropriate sight lines, two on-street parking spots need to be removed on the south side to create a curb extension



Flower beds on the crossing island and curb extensions are proposed to enhance the community character. Left turns into the center driveway of the ACO parking are lot eliminated, but left turns into the ACO parking lot entrances 100’ to either side of the center driveway are maintained. The center driveway is proposed to be removed in the Municipal Parking Lot Study prepared by McKenna Associates in March of 2011.

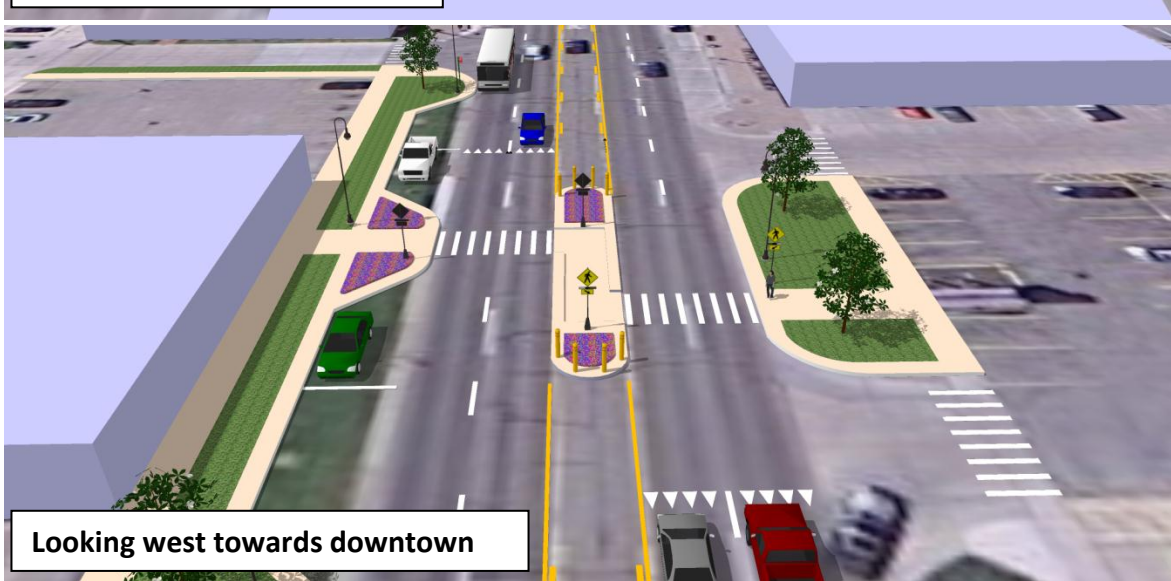




Looking east away from downtown



Looking north towards ACO



Looking west towards downtown

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

E 14 MILE ROAD AT FLORENCE STREET / PARE STREET

OVERVIEW:

Currently there is little demand for a crosswalk at this location, however the city is in the process of developing their bike route system and this is a key crossing location. This area also marks the beginning of the commercial properties in the Downtown.

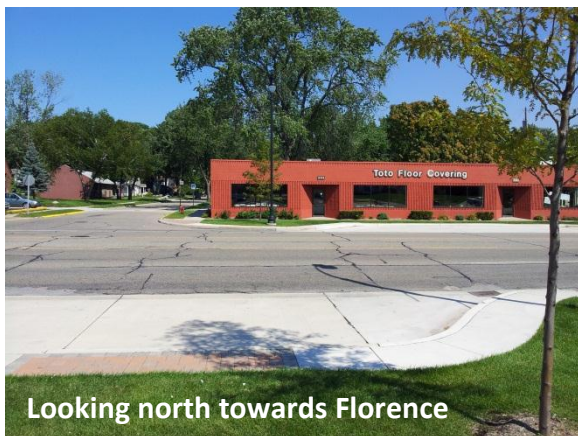


RECOMMENDATIONS:

Considering that this is a designated bike route in combination with the characteristics of the roadway, the proposed crossing includes the following proven safety countermeasures:

- Crossing Island.
- Pedestrian Hybrid Beacon

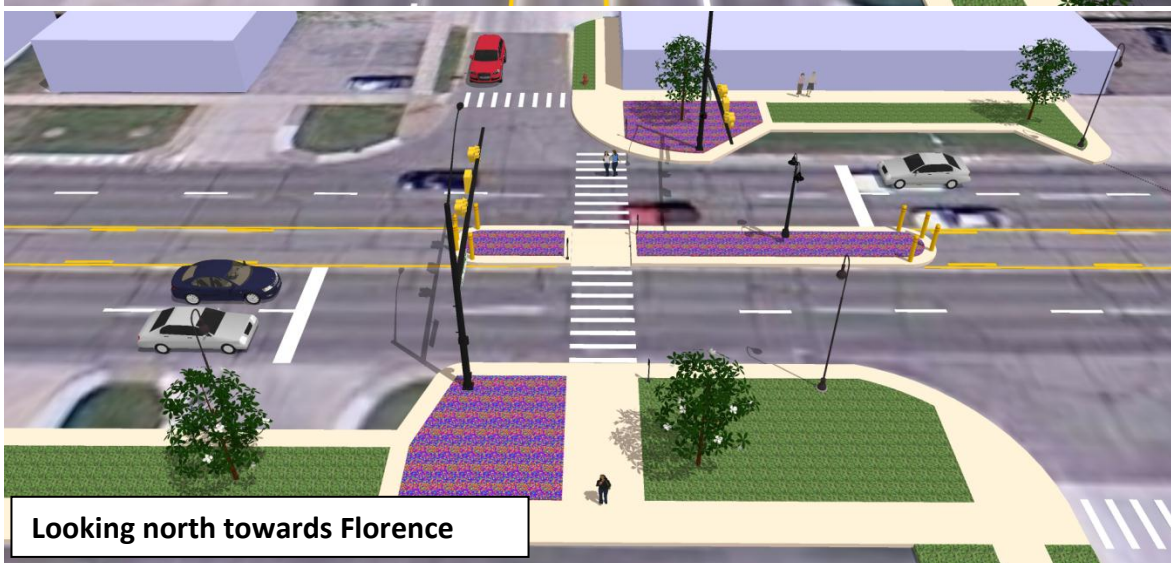
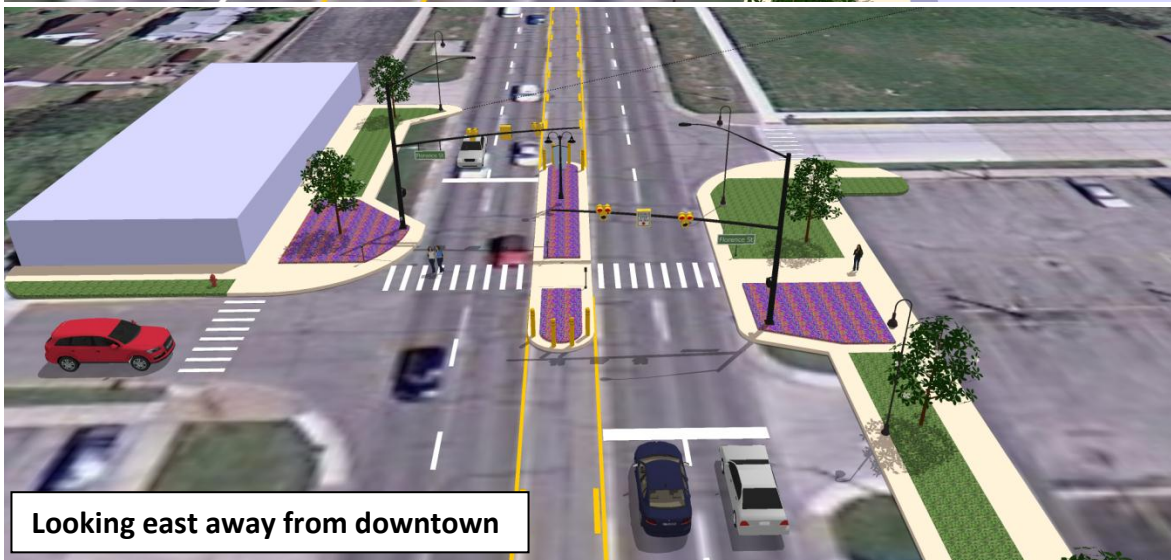
Since this area marks the beginning of the commercial properties on the eastern edge of the downtown area, a number of gateway treatments such as banners, sculpture and flower beds are proposed to both delineate the district and bring traffic speeds closer to the desired speed in the commercial area.



Looking north towards Florence

In order to accommodate the crossing, one on-street parking space is proposed to be removed on the south side of 14 Mile.

The island as proposed could be modified to integrate a staggered zig-zag style crossing (see page 7 for an example). This would though require either taking the northern half of the crosswalk out of alignment with the sidewalk along Florence Street or removing an additional on-street parking space on the south side if 14 Mile. The western nose of the island may need to be shortened slightly to better accommodate left turns from 14 Mile to Florence Street.



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

E 14 MILE ROAD AT BELLEVUE AVENUE

OVERVIEW:

This crossing marks the eastern edge of the downtown area. It is adjacent to a school, daycare center and bus stops. Although there was some demand for a crossing in this area, a recent engineering study that looked at upgrading the traffic light at Bellevue found exceptionally low pedestrian levels even when a light was present.



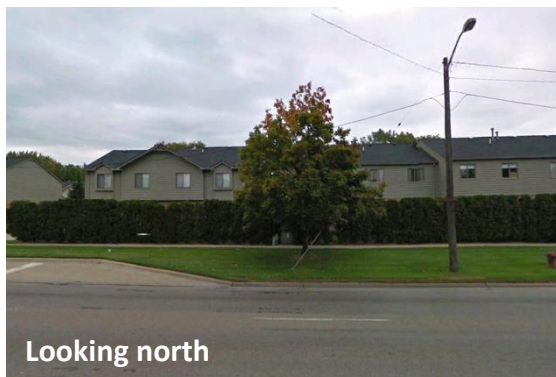
RECOMMENDATIONS:

Considering the school age users in combination with the characteristics of the roadway, the proposed crossing includes the following proven safety countermeasures:

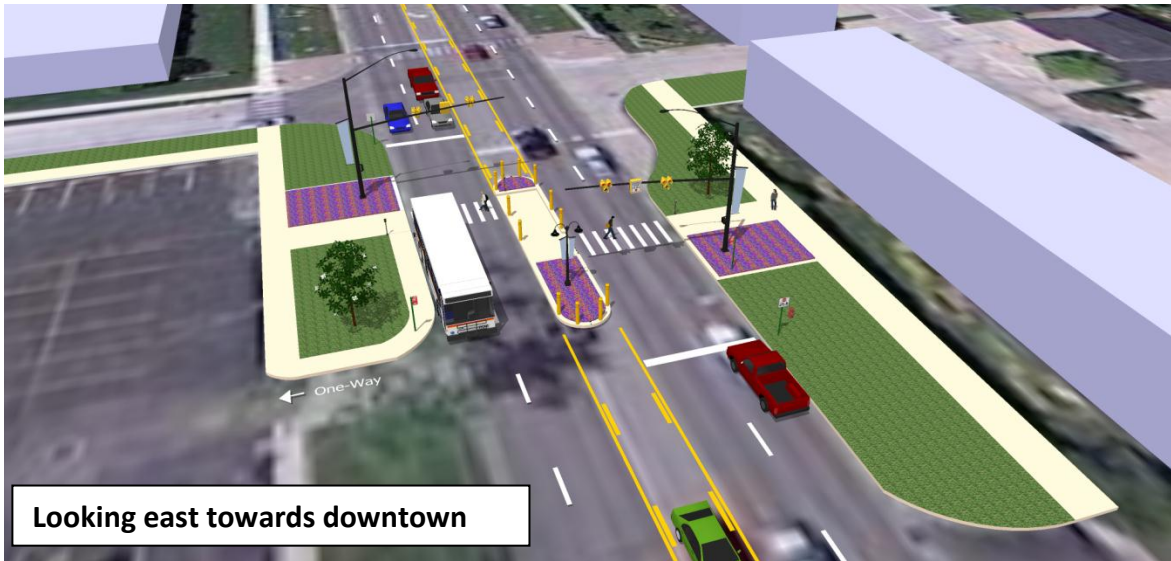
- Crossing Island.
- Pedestrian Hybrid Beacon

This crosswalk is staggered to orient pedestrians towards oncoming motor vehicles and provide additional space for multiple pedestrians crossing at the same time. Existing turning movements maintained into and out of adjacent driveways and streets, with the understanding that the daycare center has a one-way into the parking lot off of E 14 Mile Road.

Gateway treatments including banners, decorative street lights and flower beds are proposed to help demark the edge of downtown and enhance community character.



Looking north



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

N MAIN STREET AT BOWERS

OVERVIEW:

A number of options were evaluated at both Bowers Ave and Broadacre Ave. Based on the dynamics of the road narrowing and the beginning of the commercial district, it was determined that Bowers would be the best option.

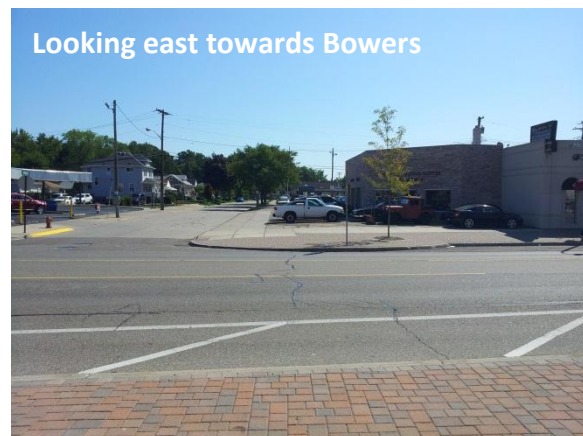


RECOMMENDATIONS:

The crossing includes the following proven safety countermeasures:

- Double posted Rectangular Rapid Flash Beacons
- Advanced Warning for southbound traffic
- Painted median approaching the crosswalk from both directions
- A curb extension into the marked off area located along the west side of N Main Street

Due to the concerns with stacking during rush hour, a crossing island was seen to be problematic. While a crossing island may be ideal, it was felt that a safe crossing could be accommodated using the Rectangular Rapid Flash Beacons, pavement markings and signage stating motor vehicles shall not block the crosswalk.





CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN ROAD CROSSING IMPROVEMENTS

S MAIN STREET AT JEFFERSON

OVERVIEW:

This crossing location is located adjacent to commercial areas, public parking lot and a bus stop.

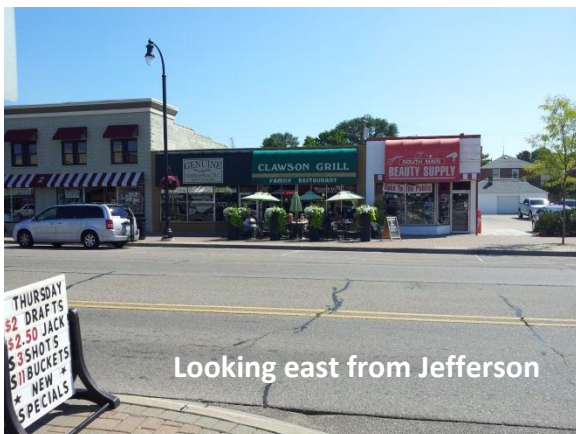


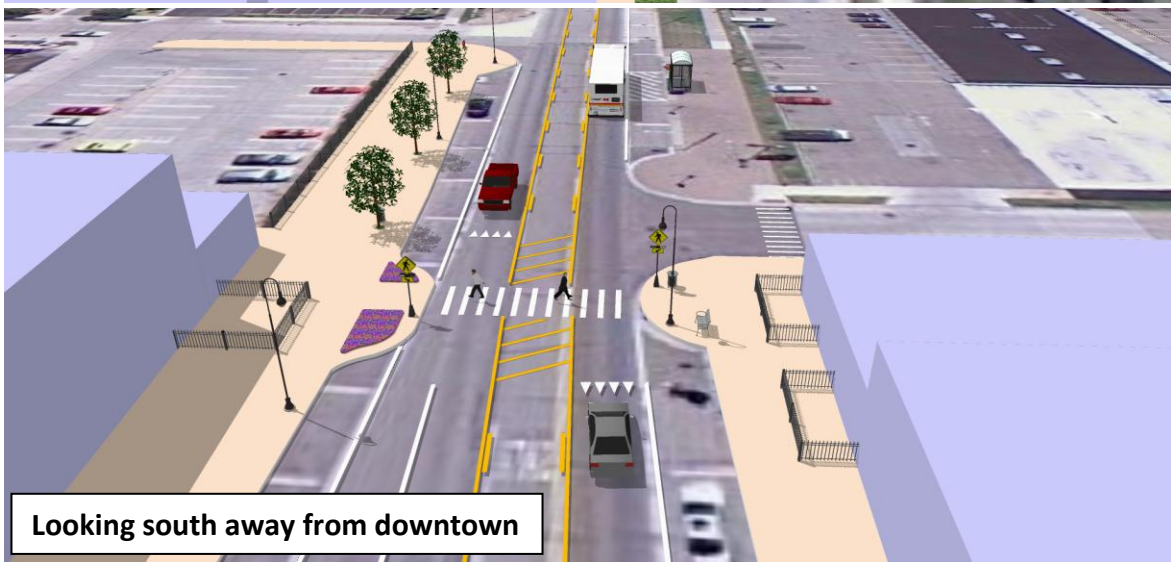
RECOMMENDATIONS:

The crossing includes the following proven safety countermeasures:

- Double posted Rectangular Rapid Flash Beacons
- Painted median approaching the crosswalk from both directions. While a crossing island would be desirable from a pedestrian safety standpoint, emergency vehicles frequently use the center lane to by-pass stopped traffic.
- Two on-street parking spots have been removed in order to provide a curb extension to provide appropriate sight lines

Existing turning movements maintained into and out of near-by driveways and streets. A flower bed is proposed in the curb extension.





CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN

BICYCLE IMPROVEMENTS

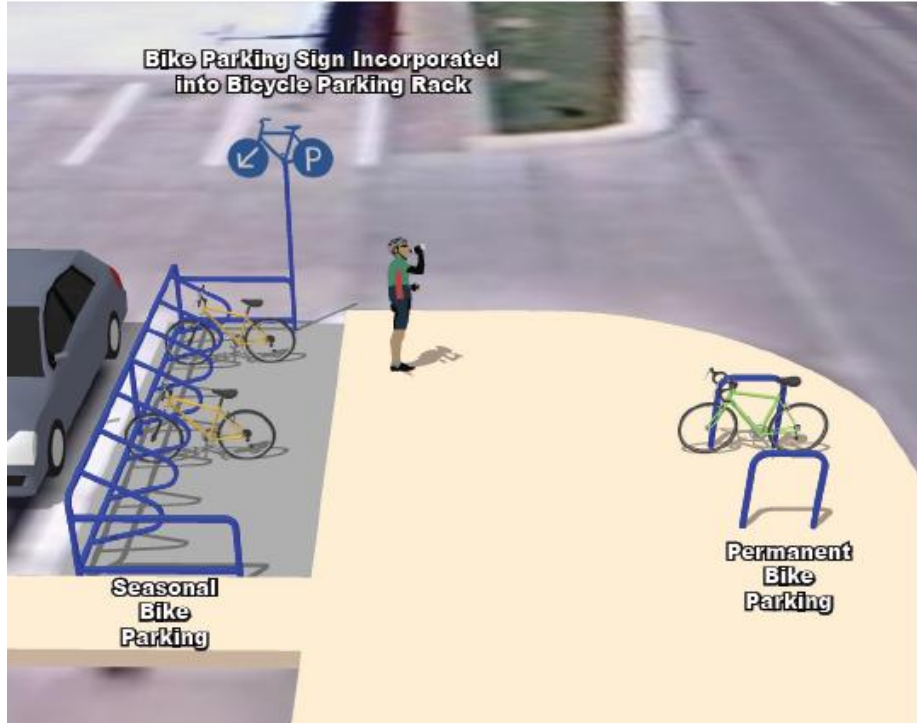
OVERVIEW:

In the near-term, on 14 Mile Road and Main Street, there are no cost effective ways to incorporate bike lanes on these roadways in the City of Clawson. Access to Downtown Clawson will be primarily via bicycle routes on local roadways. Facilities such as cycle tracks and wider sidewalks were considered. However, due to safety issues, an existing ordinance that bans bicycles on sidewalks in commercial areas and the cost of constructing these types of facilities they were deemed inappropriate solution to pursue further at this time.

RECOMMENDATIONS:

The following improvements are recommended:

- Provide wayfinding signage along local roadways to direct cyclists from the local bike route to bicycle parking locations in the downtown.
- At each bike parking location, provide a few permanent parking spaces and supplement these spaces with adjacent temporary bike parking from springtime through fall.
- The seasonal bike parking racks should be designed to take up one car parking location and could incorporate some sculptural elements.



BICYCLE IMPROVEMENTS MAP



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN PEDESTRIAN STREETScape ENHANCEMENTS

WEST SIDE OF S MAIN STREET



RECOMMENDATIONS:

The following improvements are recommended to provide shade and soften the streetscape with vegetation:

- Due to limited sidewalk space a parking space has been replaced with a raised planter made of cast-in-place concrete that can hold trees and provide informal seating along the edges



Looking south away from downtown



Looking north towards downtown



Looking west

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN PEDESTRIAN STREETScape ENHANCEMENTS

EAST SIDE OF S MAIN STREET



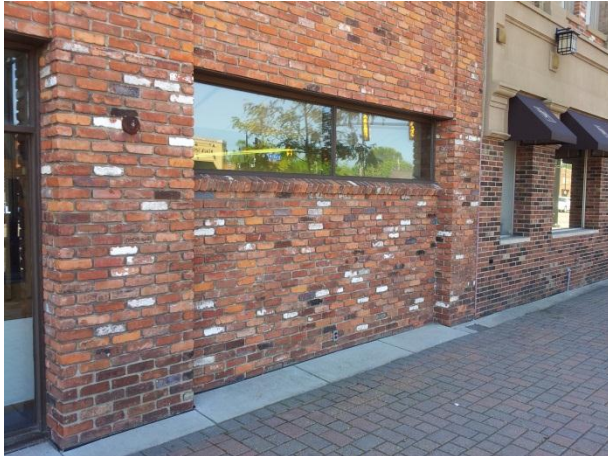
RECOMMENDATIONS:

The following improvements are recommended to provide shade in an area exposed to strong afternoon and evening sun as well as provide seating and create more intimate spaces in this area of the downtown:

- Raised planters made of cast-in-place concrete that can hold trees and provide informal seating along the edges
- Existing benches placed at the ends of the planters to provide more formal seating
- Seating areas around tables with umbrellas placed between the planters

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN PEDESTRIAN STREETScape ENHANCEMENTS

SOUTH SIDE OF E 14 MILE ROAD



RECOMMENDATIONS:

The following improvements are recommended in areas without retail to help liven up the streetscape:

- Place mid-sized planters with flowers to soften the building façade and add interest along the walkway



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN PEDESTRIAN STREETScape ENHANCEMENTS

INFORMATION KIOSK

Independent of this project, the city is pursuing the installation of an information kiosk in the downtown, including contact with a particular manufacturer.

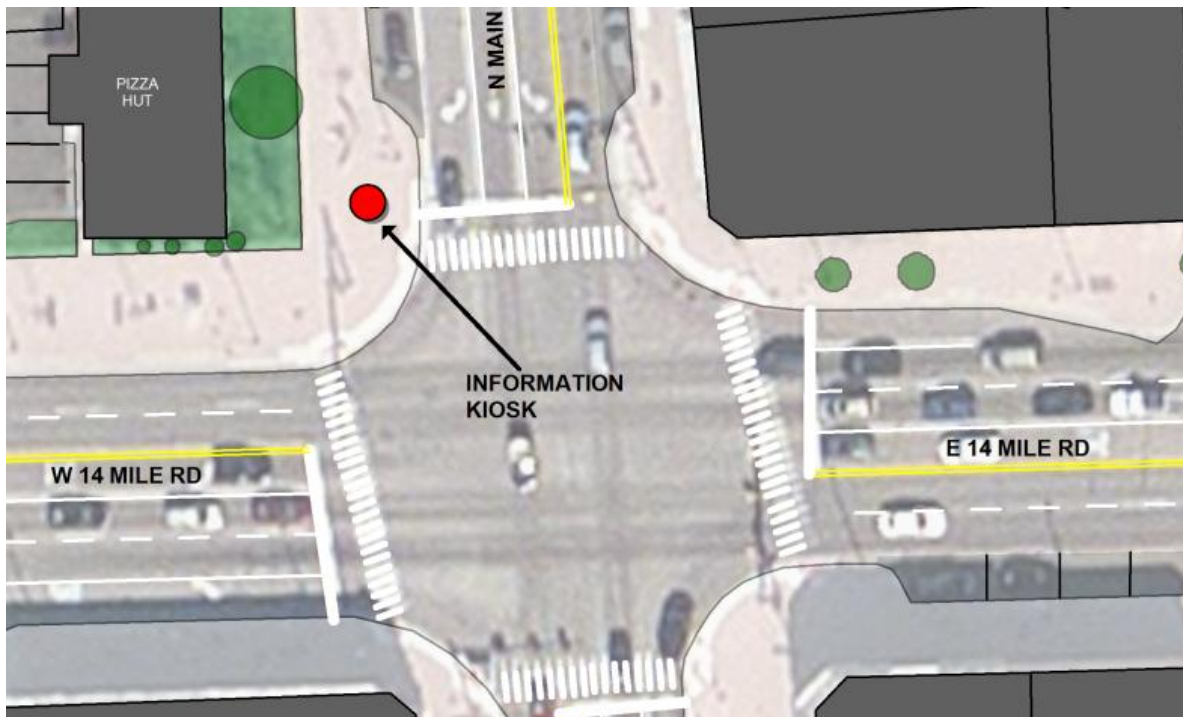
Information Kiosks can serve as orientation and resource centers for non-motorized trips. They can help those who are already walking and bicycling find community resources and introduce people to new walking and bicycling opportunities.

RECOMMENDATIONS:

- Place an Information Kiosk in the Downtown area at the Northwest corner of W 14 Mile Road and N Main Street near the “City of Clawson” brick sign
- The Information Kiosk should be a four-sided sign and includes information regarding downtown attractions, a walking map, bicycle routes and parking, downtown events and general tourist information



CORNERSTONE KIOSK By Great South Bay
587 Middle Road, Bayport, NY 11705 631-472-3000 Fax 472-3094



CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN BUDGETARY COST ESTIMATE

In order to illustrate the magnitude of costs and begin planning and budgeting for implementation, planning level budgetary cost estimates have been completed. It should be noted that these estimates are based on concepts only and while they include healthy contingencies, they are not based on detailed designs. If the community moves forward with implementation, detailed design will be completed and construction cost estimates recalculated at that time.

For reference, cost estimates for a handful of “typical” road crossing treatments are lists below:

- Curb Extension (around \$15,000)
- Crossing Island (around \$20,000)
- Double Posted Rectangular Rapid Flash Beacon with Advanced Warning Signs in both directions (around \$30,000)
- Hybrid Pedestrian Beacon (around \$125,000)

ROAD CROSSING IMPROVEMENTS	COST ESTIMATE
W 14 Mile Road at Washington Avenue	\$145,000
W 14 Mile Road between Washington Avenue and Main Street	\$20,000
E 14 Mile Road between Renshaw Avenue and Church Avenue	\$65,000
E 14 Mile Road at Florence Street / Pare Street	\$160,000
E 14 Mile Road at Bellevue Avenue	\$145,000
N Main Street at Bowers Avenue	\$40,000
S Main Street at Jefferson Avenue	\$35,000

BICYCLE IMPROVEMENTS	COST ESTIMATE
Wayfinding Signs (approximately \$150 each)	\$1350
Seasonal Bike Parking (approximately \$3,500 each)	\$14,000
Permanent Bike Parking (approximately \$150 each)	\$1,200

PEDESTRIAN STREETScape ENHANCEMENTS	COST ESTIMATE
Raised Planters (approximately \$10,000 each)	\$40,000
Mid-Sized Planters (approximately \$800 each)	\$6,400
Table with Chairs and Umbrella (approximately \$2,000 each)	\$4,000
Raised Planter in place of Parking (approximately \$25,000 each)	\$25,000

CITY OF CLAWSON DOWNTOWN BICYCLE AND PEDESTRIAN PLAN PHASING PLAN

The proposed improvements fall into four categories; Low Cost Safety Improvements, High Cost Safety Improvements, Bicycle Improvements and Pedestrian Streetscape Enhancements. The four categories should be implemented concurrently as opportunities and funding becomes available.

LOW COST SAFETY IMPROVEMENTS

This category includes safety improvements that could be done relatively quickly and easily at a low cost.

1. S. Main Street at Jefferson Avenue
2. N. Main Street at Bowers Avenue

HIGH COST SAFETY IMPROVEMENTS

This category list the higher cost crossing improvements in order of priority based on what needs to be done first from a safety standpoint.

1. W. 14 Mile Road at Washington Avenue
Identified as the most important crossing location due its proximity to the large senior housing complex, a major bus stop and high school
2. W. 14 Mile Road at Church/Renshaw Avenue
Identified as an important crossing due to its close proximity to the downtown and the demand that is created from having businesses on both sides of the street
3. W. 14 Mile Road at Florence/Pare Avenue
A key crossing for the city's bicycle route system and critical to the safety and success of that system
4. W. 14 Mile Road at Bellevue Avenue
Concerns for a safe road crossing due to the near-by day care center and grade school

BICYCLE FACILITY IMPROVEMENTS

The bicycle facility improvements are fairly low cost and it is recommended that both the signs and racks be implemented at the same time.

1. Bike Racks
2. Wayfinding Signs

PEDESTRIAN STREETScape ENHANCEMENTS

This category lists the streetscape enhancements in order of priority.

1. Raised Planters on the east side of S Main Street

Based on strong support from the public, the Raised Planters on the east side of S Main Street should be a priority

2. Seating – Tables with Chairs and Umbrellas

Since seating is provided by the raised planters, the tables and benches can be added in later

3. Information Kiosk

Independent of this project, the city is pursuing the installation of an information kiosk in the downtown, including contact with a particular manufacturer

4. Mid-sized planters with flowers on the west side of S. Main Street and the south side of E. 14 Mile Road

The mid-sized planters are a low-cost improvement that would enhance the streetscape

5. Raised Planter in place of parking spot on west side of S. Main Street

Wait to pursue the parking space planter based on how well the raised planters on the east side of S Main Street are received