COMPLETE STREETS PONTIAC

Building COMMUNITY
by remaking the STREETS of Pontiac
for the PEOPLE of Pontiac

The Greenway Collaborative, Inc.

THE CITY OF PONTIAC MICHIGAN

OAKLAND UNIVERSITY

Healthy Pontiac, We Can!

OAKLAND COUNTY MICHIGAN

Made possible with funding from the Centers for Disease Control and Prevention.

Prepared By:

The **Greenway** Collaborative, Inc.

For additional information, visit the project website at:

www.walkbike.info/pontiac

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Planning Commission

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Plan Adopted:

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In the summer of 2016, the Friends of the Clinton River Trail held four Trail Clean-Up Work Days and were able to clear back overgrown vegetation along 0.75 mile of the Clinton River Trail-Pontiac Connector Route. Due to the success of those events, the Healthy Pontiac, We Can Coalition began a Take Back the Sidewalks campaign and held an event near the former Webster Elementary School to clear another 0.25 mile.

Murphy Ave Before

Murphy Ave After

South Blvd Before

South Blvd After

Project Overview

Oakland University was awarded a grant though the Centers for Disease Control to support public health efforts that reduce chronic diseases, promote healthier lifestyles, address health disparities and control health care spending. Non-motorized transportation, specifically walking and biking, can play a large roll in active lifestyles, which address many of the goals of the grant.

Working in the City of Pontiac, the objective of this project is to create a Complete Streets Master Plan for the City that consists of identifying existing and potential non-motorized pathways, roadways for on-road bike lanes and sidewalk improvements, pedestrian/bicycle friendly wayfinding signage, and ways to provide future connectivity to parks, schools, downtown, commercial centers and other key destinations determined by the community. Planning for the Complete Streets Master Plan began the fall of 2015 and extended to the summer of 2016. Technical Assistance was provided by The Greenway Collaborative, Inc.

Steering Committee Walking Tour Around Downtown Pontiac

COMPLETE STREETS PONTIAC

Building COMMUNITY by remaking the STREETS of Pontiac....for the PEOPLE of Pontiac

Set Policies

- **Health and Safety First**
- **Define Priorities**
- **Plan for Everyone**

Build

- **A Nice and Easy Network**
- **Safer Thoroughfares**
- **Better Places**

Promote

- **Through Events and Programming**
- **Online**
- **On the Ground**

Evaluate

- **Use**
- **Safety**
- **Satisfaction**

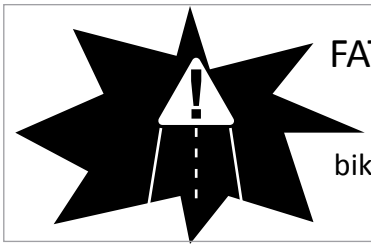
A successful and sustainable transportation system places people first and incorporates four key elements:

- **Policies** set the stage for a change in the built environment.
- **Built Environment** changes are needed to create safer thoroughfares.
- **Promotional Efforts** are necessary to realize the potential of improvements.
- **Evaluation** is key to determine if resources were well spent and are achieving the desired result.

This plan outlines the key recommendations for each of the four categories mentioned. It is by no means an exhaustive list; there are many best practices that have not been included. The focus of this plan is on achievable priority objectives that may be accomplished over the next five to ten years and address the key issues and opportunities identified through public engagement. Once these objectives have been accomplished, it is recommended that the City revisit the physical improvements, the policies, promotional efforts and evaluation tools it uses, as new best practices are constantly being developed.

Pontiac Transportation: By the Numbers

A dashboard was created for the project. Complete dashboard maps and data can be viewed at: www.walkbike.info/pontiac



FATAL TRAFFIC ACCIDENTS

52

bike/pedestrian fatalities reported between 2004 – 2013

PEDESTRIAN CRASHES

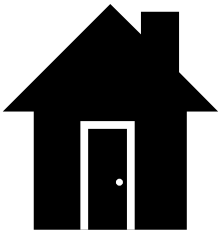
306

pedestrian crashes reported between 2004 – 2014

BICYCLE CRASHES

183

bicycle crashes reported between 2004 – 2014



HOUSEHOLDS WITHOUT VEHICLES

Over 14%

WALK SCORE

41

Pontiac is a Car-Dependent City, which means most errands require a car

POPULAR WALKING, RUNNING AND BIKING ROUTE

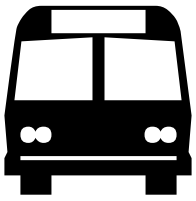
Clinton River Trail

COMMUTERS THAT WALK TO WORK

0 – 36%

COMMUTERS THAT BIKE TO WORK

0 – 8%



COMMUTERS THAT TAKE PUBLIC TRANSIT TO WORK

0 – 30%

Public Input

The project began with a Steering Committee Kickoff Meeting on November 11, 2015 at the Pontiac Public Library that included a walking tour around the downtown and bicycling tour of adjacent neighborhoods. Agencies and groups represented on the Steering Committee include:

- Michigan Department of Transportation
- City of Pontiac DPW
- Oakland County Planning
- Oakland University
- Oakland County Health Division
- Friends of the Clinton River Trail
- American Cycle & Fitness
- SMART
- Healthy Pontiac, We Can Coalition
- The Greenway Collaborative
- Main Street Pontiac

Public input at the Golden Opportunities Club regular meeting.

Over the next few months, nine Public Input Meetings were held throughout the City of Pontiac to collect input from residents. Many of the community engagement sessions were held during regular Citizen District Council Meetings with the goal of holding one session in each of the seven districts. A Public Input Meeting was also held at the Pontiac Public Library that was offered in both English and Spanish. The Golden Opportunities Club provided input and voiced concerns at a regular meeting held at the Bowens Senior Center.

The first round of community engagement sessions introduced the project to the public and input was collected on what would make it easier to walk and bike in the City of Pontiac. Based on the input from the first round, a preliminary plan was created and then presented during a second round of meetings in order to collect additional input.

Throughout both rounds of public input, online maps and information were provided to collect input from participants that were unable to attend the meetings.

Key Issues Identified

At the start of the project, the public meetings were held with representatives of the general population. These were typically standing meetings that the project was invited to be a part of rather than special meetings that targeted people who were interested in pedestrian and bicycle issues. At all of the meetings, the project was well received and the people in attendance were supportive of efforts being made to improve the conditions for walking and bicycling in the community. The following summarizes the key issues that were discussed at those meetings.

Mobility

- Sidewalk gaps and poor sidewalk pavement condition
- Snow and ice on sidewalks
- Physical barriers – busy roads without crosswalks, railroads and river
- Clinton River Trail surface condition

Personal Safety

- Threatening stray dogs
- Overgrown vegetation
- Lack of functioning street lights

Traffic Safety

- Unsafe road crossings
- No bike facilities on busy roads
- Motorists blocking crosswalks, speeding, not yielding to pedestrians
- People walking in the road
- Faded pavement markings
- Signal timing is not set for pedestrians
- Roads in bad condition for everyone

"Residents do not see the transportation network as theirs, but rather something that is imposed on them."

Family forced to walk in the grass adjacent to Cesar Chavez Ave because there are gaps in the sidewalk along the roadway.

One reoccurring theme was that the people of Pontiac are tired of their town being a drive through city. There was a sense that the needs of the residents were secondary to those of the people that only drive through Pontiac to get from one place to another. The City's transportation corridors were often seen as more of a barrier to transportation than a means of access to an array transportation options. Residents do not see the transportation network as theirs, but rather something that is imposed on them.

Key Opportunities Identified

Beyond identifying issues at the public meetings, the meeting attendees also offered a number of ideas on how best to address the issues that were being discussed. Some of the opportunities were specific such as "I would like to see bike lanes on _____ Street." These comments were noted and in many cases already identified as opportunities, and if not the preliminary Multi-Modal Network Map was adjusted. In addition to the in-person meetings, input was also gathered online via interactive crowdsourcing maps where specific opportunities were identified. The following summarize the key opportunities that were raised through public meetings.

Engage the Community

- Connect with and work with local businesses
- Tie senior housing into the network as many of them do not have access to cars
- Work with congregations on events and programs

Develop Programs

- Set up walking groups through workplaces and places of worship
- Provide bicycle education for children through school and places of worship
- Establish safe routes to school programs with an initial focus on crossing guards
- Have the Sheriff's Office put more focus on enforcing the speed limits on the busy streets
- Safety and education outreach to motorists, pedestrians and bicyclists

Build on Existing Resources

- Create routes and interpretive systems that pay homage to the city's history
- Place walking trails in the parks and connect them to citywide walking and bicycling routes
- Complete the Clinton River Trail

The overarching theme of the opportunities was that just about any improvements to pedestrian and bicycle conditions would be welcome. People commented positively on the new bike parking and fix-it stations being added around the City. People also noted how they were impressed with many of the new bicycle facilities being added in Detroit and how Ferndale, Michigan has gone through a rapid transformation over the past few years with many improvements to pedestrian and bicycle facilities.

Reality Check

While there was great support for the ideas presented at the meetings, one constant in the discussions was the issue on how the proposed improvements were going to be paid for and just as important, how were they going to be maintained? Given the City's recent financial challenges, there was a desire to set realistic expectations.

The recommendations for the physical improvements as well as the policies, programs and evaluation approaches reflect this reality. Yes, more can be done, but the focus is on how to leverage limited resources and utilize community partnerships, to yield the most positive change for the least amount of money.

Comprehensive cost of bicycle and pedestrian crashes from 2004-2014:

25

Million Dollars a Year

Cost of Doing Nothing: The Economic and Societal Impact of Crashes in Pontiac

From 2004 to 2014, automobiles struck 306 pedestrians and 183 bicycles in the City of Pontiac. That works out to be over 3 crashes each month. Additionally, pedestrian and bicycle fatal crashes made up 36% of all crashes for that time period; over twice the state's average. Each crash results in a tremendous physical and emotional toll on the person that was hit and his or her family. There is also an emotional toll on the drivers of vehicles that hit the pedestrians and bicyclists.

Beyond the emotional and physical costs of each crash, there is an economic cost. The National Highway Traffic Safety Administration (NHTSA) makes estimates of the average economic and societal costs of fatal and nonfatal injuries. The NHTSA considers the calculable costs of crashes are wage and productivity losses, medical expenses, administrative expenses, vehicle damage and employer's uninsured costs. When doing a cost benefit analysis for a transportation project, one must look beyond those costs and take into account a measure of the value of lost quality of life. The NHTSA uses figures based on empirical studies to determine the more inclusive average comprehensive cost. Using NHTSA's average costs figures from 2010, the comprehensive cost of those 489 pedestrian and bicycle crashes over that 11 year period is over 272 million dollars. This works out to be 24.75 million dollars a year or $4,575 per resident each year.

The Economic and Societal Impact of Crashes in Pontiac

Cost of Crashes

	Fatal (K)	Incapacitating Injury (A)	Nonincapacitating Injury (B)	Possible Injury (C)	No Injury
Economic Cost	$1,398,916	$82,048	$23,742	$19,492	$10,439
Comprehensive Total	$5,348,855	$1,001,206	$276,010	$127,768	$42,298

Pedestrian

	Fatal (K)	Incapacitating Injury (A)	Nonincapacitating Injury (B)	Possible Injury (C)	No Injury	Total
No Pedestrian Involved	42	331	926	2,978	14,922	19,199
Pedestrian Involved	19	67	97	105	18	306
Total	61	398	1,023	3,083	14,940	19,505
All Crashes Econ. Cost	$85,333,876	$32,655,104	$24,288,066	$60,093,836	$155,958,660	$358,329,542
All Crashes Comp. Cost	$326,280,155	$398,479,988	$282,358,230	$393,908,744	$631,932,120	$2,032,959,237
Ped Econ. Cost	$26,579,404	$5,497,216	$2,302,974	$2,046,660	$187,902	$36,614,156
Ped Comp. Cost	$101,628,245	$67,080,802	$26,772,970	$13,415,640	$761,364	$209,659,021

Ped % of All Crashes	1.6%	
Ped % of Fatal Crashes	31.1%	over twice the state's average
Ped % of A Crashes	16.8%	over twice the state's average
Ped % of K/A Crashes	18.7%	
% of All Crashes Fatal	0.3%	
% of Ped Crashes Fatal	6.2%	

Bicyclist

	Fatal (K)	Incapacitating Injury (A)	Nonincapacitating Injury (B)	Possible Injury (C)	No Injury	Total
No Bicyclist Involved	58	378	965	3,010	14,911	19,322
Bicyclist Involved	3	20	58	73	29	183
Total	61	398	1,023	3,083	14,940	19,505
All Crashes Econ. Cost	$85,333,876	$32,655,104	$24,288,066	$60,093,836	$155,958,660	$358,329,542
All Crashes Comp. Cost	$326,280,155	$398,479,988	$282,358,230	$393,908,744	$631,932,120	$2,032,959,237
Bike Econ. Cost	$4,196,748	$1,640,960	$1,377,036	$1,422,916	$302,731	$8,940,391
Bike Comp. Cost	$16,046,565	$20,024,120	$16,008,580	$9,327,064	$1,226,642	$62,632,971

Bike % of All Crashes	0.9%	
Bike % of Fatal Crashes	4.9%	almost twice the state's average
Bike % of A Crashes	5.0%	143% the state's average
Bike % of K/A Crashes	5.0%	
% of Bike Crashes Fatal	1.6%	

Pedestrian and Bicyclist

Ped & Bike % of All Crashes	2.5%		
Ped & Bike % of Fatal Crashes	36.1%		
Ped & Bike % of A Crashes	21.9%		
Ped & Bike % of K/A Crashes	23.7%		
Ped & Bike Economic Costs	$45,554,547	$45.55 Million	$4.14 Million per Year
Ped & Bike Comp. Costs	$272,291,992	$272.29 Million	$24.75 Million per Year

Source Data: NHTSA: The Economic & Societal Impact of Motor Vehicle Crashes, 2010 (revised May 27, 2016)
All values in 2010 dollars and the Michigan Traffic Crash Facts 2004 through 2014 Data

Set Policies

Health and Safety First

Establish public health-, safety- and welfare-driven decision making processes specifically in regards to transportation.

Define Priorities

Institute planning, zoning, engineering, design, enforcement and maintenance processes that prioritize pedestrians 1st, bicyclists 2nd, transit riders 3rd and motorists last.

Plan for Everyone

Create a multi-disciplinary public/private committee so that all viewpoints and user needs are addressed in transportation projects.

Policy Recommendations

The following are the top twelve recommended policies to be implemented by the City of Pontiac over the next few years. Most may be implemented at a very low cost in the immediate future and a number of them build on existing partnerships.

1. Community First Streets Policy
2. Sidewalk Audit
3. Sidewalk Gap Prioritization Methodology
4. Better Coordination with County on Animal Control
5. Priority Snow Clearance Policy
6. Site Plan Approval Checklist
7. Focused Enforcement
8. Expanded Bike Parking Program
9. Enhance and Promote Issue Reporting Tool
10. Local Direct Road Funding Mechanism
11. Transit Stop Facility Audit
12. Transit System Analysis

Newly installed bicycle parking and bicycle repair stand at the Pontiac Public Library.

1. Community First Streets Policy

A resounding overarching theme in the public input was that the people of Pontiac feel that the mobility and convenience of the people that drive through Pontiac have been given preference over the safety, mobility and economic interests of those that live in Pontiac. In short, they are tired of Pontiac being a drive-through city. This perception is backed up by data. Looking back over ten years of crash reports, the inescapable conclusion is Pontiac is one of the most dangerous cities in the country to walk and bike in. Being a mid-size city with a population of about 60,000 keeps Pontiac off the lists of the most dangerous places to walk or bicycle in the country however, the City's crash statistics tell a startling story.

- 31.1% of all traffic fatalities are pedestrians; this is twice the state's average.
- Pontiac's rate of pedestrians killed in crashes with motor vehicles per 100,000 residents is 2.64 people each year; the most dangerous metropolitan area in the country, Orlando/ Kissimmee, Florida's rate is 2.75.
- 4.9% of traffic fatalities are bicyclists; this is twice the state's average.
- Pontiac's rate of bicyclists killed in crashes with motor vehicles per 100,000 residents is 0.42 people each year; this is 168% higher than the state rate of 0.25 per 100,000.[1]

Clearly, when over 36% of all traffic fatalities are pedestrians and bicyclists, there is a glaring issue that demands action. The impetus for Complete Streets Pontiac was to improve community health by removing the barriers that prevent people from integrating physical activity in their daily routine. Physical activity is a key part of a healthy lifestyle that reduces the risk of many chronic diseases such as diabetes, obesity and heart disease. The analysis of traffic crashes brought up a second public health issue. By making Pontiac's streets safer for pedestrians and bicyclists, two community health crises can be addressed at once.

"Pontiac is one of the most dangerous cities in the country to walk and bike in."

Many roads in Pontiac are difficult to cross especially for people with mobility challenges.

A point that is often overlooked in transportation planning is that the mobility of people that drive comes at the expense of the lives of people that walk and ride their bike. Many of the people that walk and bike do so out of necessity in part due to their age, financial circumstance, physical or cognitive abilities. No one should die simply because they don't drive a car. In some neighborhoods over 14% of the homes do not have a vehicle, 30% of the population start their trip to work by walking to the bus stop and 8% of the population bike to work.[2]

To address the identified public health concerns, the City of Pontiac should draft and adopt a "Community First Streets Policy" that combines the key elements of a Vision Zero[3] policy and a Complete Streets[4] policy.

[1] Source: Michigan Traffic Crash Facts. Michigan Office of Highway Safety Planning, Web; and Dangerous By Design. Publication. Smart Growth America and National Complete Streets Coalition, May 2014. Web.

[2] Online GIS Maps | PolicyMap. PolicyMap, n.d. Web. 14 July 2016.

[3] Vision Zero is a multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic.

[4] Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and ability.

"No one should die simply because they don't drive a car."

Community First Streets Policy Outline

The public rights-of-ways and streets of Pontiac should be planned, designed, engineered, maintained, regulated and policed based on the following ten principles:

1. That most traffic deaths and injuries are preventable and the City of Pontiac does not consider any traffic fatalities acceptable.
2. That all users of the roadway including pedestrians, bicyclists and transit users be accommodated, not only in new construction, but also in reconstruction, resurfacing, restoration, rehabilitation and preventive maintenance projects to the fullest degree possible based on the scope of the work.
3. That the City of Pontiac encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes of travel.
4. That flexibility in the design of the roadway be employed and integrates current best practices, such as those included in the National Association of City Transportation Officials (NACTO) design guidelines, and also allows for innovative design approaches to be implemented and evaluated.
5. That the City of Pontiac places human life and health paramount in the decision making process and concerns regarding motorized vehicle level of service, congestion, mobility, etc. are secondary concerns.

6. That traffic safety solutions must be addressed holistically.
7. That the people using roadways in the City of Pontiac may make mistakes. The City's transportation system should be designed robust enough such that when mistakes do happen they do not result in fatalities or serious injuries.
8. That the City of Pontiac's Department of Public Works, Road Commission for Oakland County, Michigan Department of Transportation, Oakland County Sheriff's Office and the Michigan State Police share responsibility with users of the roadway system in creating a transportation system that is safe for all users of the roadway and these providers and regulators must do their utmost to guarantee the safety of all citizens; cooperate with road users; and be ready to change as necessary to achieve safety.
9. That the City should set performance standards for the transportation system with measurable outcomes and evaluate progress on an annual basis.
10. That any exceptions to this policy be documented in writing and approved by City Council.

2. Sidewalk Audit

Large gaps and deteriorating conditions of the existing sidewalk network were issues frequently raised in public meetings. The first step in addressing these concerns is to understand the scope of the problem.

In 2016, students and faculty at Oakland University worked to develop a process to evaluate the sidewalk system throughout the City. Overall infrastructure conditions like cracking, tripping hazards, obstacles, vegetated buffers, street lighting and overgrown vegetation were determined to be key information to collect.

The following criteria were considered when prioritizing streets to be inventoried:

1. Arterials and Collectors with transit
2. Corridors identified as near-term opportunities in the Complete Streets Plan
3. Arterials without transit
4. Collectors without transit
5. Corridors identified as neighborhood connector routes in the Complete Streets Plan
6. Local streets in neighborhoods with high percentage of residents who do not own a car
7. All remaining local streets

A sidewalk assessment team, made up of Oakland University students, began the audit in the summer of 2016. The team collected GPS points, recorded infrastructure conditions and other related information in order to create a geographic information system (GIS) database. The information collected will then be used to identify gaps in the sidewalk network and sections that need to be replaced.

Once the initial sidewalk audit is completed, the long-term goal is for the City to continue to evaluate the sidewalk system on an annual basis. Each year a sector of the community, perhaps corresponding with City Council Districts, will be evaluated.

Students from Oakland University evaluated sidewalk conditions in the summer of 2016.

3. Sidewalk Gap Prioritization Methodology

After the sidewalk audit is complete, the City will need to prioritize improvements. The first set of priorities has been identified in the Phase 1 - Near Term Network in the *Complete Streets Pontiac* plan. These priority areas are typically along major roadways with transit routes, connect senior housing with nearby amenities, link transit hubs, or are in response to public input. Once these obvious gaps have been filled, the City should analyze the information from the sidewalk audit and create sidewalk gap prioritization methodology to identify which gaps should be completed next.

The following information is from the sidewalk gap prioritization project developed by the City of Ann Arbor in collaboration with the Pedestrian Safety and Access Task Force. The City looked at a number of examples from around the country and based their approach on a system developed by Austin, Texas. The objective was to have a decision support tool that used readily available GIS data and was not too onerous. The following pages outline the approach.

Sidewalk Gap Criteria Weighting

A GIS-based model was created and used to evaluate sidewalk gaps in the City of Ann Arbor. Each gap was individually scored based on the following table. The scores were then weighted based on proximity to related values. Proximity to schools and transit are the most heavily weighted. Since Oakland University developed the sidewalk audit, it is recommended that the City partner with them on the next step and create the prioritization model.

Sidewalk Gap Prioritization Criteria				
	Relative Value	Threshold	Score	Weight
1	Proximity to Schools	Greater than ½ mile from a school	1	100%
		Greater than ¼ mile to ½ mile from a school	3	100%
		1/8 mile to ¼ mile from a school	6	100%
		Less than 1/8 mile from a school	10	100%
		Subtotal Possible	10	
2	Proximity to Transit	Greater than ¼ mile from an AAATA or school bus stop or train station	1	90%
		Greater than 1/8 mile to ¼ mile from an AAATA or school bus stop or train station	3	90%
		300 feet to 1/8 mile from an AAATA or school bus stop or train station	6	90%
		Less than 300 feet from an AAATA or school bus stop or train station	10	90%
		Subtotal Possible	10	
3	Proximity to affordable Housing	Greater than ½ mile from an affordable housing facility	1	60%
		Greater than ¼ mile to ½ mile from an affordable housing facility	3	60%
		1/8 to ¼ mile from an affordable housing facility	6	60%
		Less than 1/8 mile from an affordable housing facility	10	60%
		Subtotal Possible	10	

	Relative Value	Threshold	Score	Weight
4	Proximity to a Library, Government, Office, Major Commercial Attractor, or Park	Greater than ½ mile from a library, government office, major commercial attractor or Park	1	80%
		Greater than ¼ mile to ½ mile from a library, government office, commercial attractor or park	3	80%
		1/8 mile to ¼ mile from a library, government office, major commercial attractor or park	6	80%
		Less than 1/8 mile from a library, government office, commercial attractor or park	10	80%
		Subtotal Possible	10	
5	Classification of Adjacent Road	Adjacent to a Local Street	1	55%
		Adjacent to an Urban Collector	6	55%
		Adjacent to an Arterial Collector	10	55%
		Subtotal Possible	10	
6	Requested by Citizen or Other Group	No Petition	0	40%
		Requested by Citizen or General Citizen	7	40%
		Requested by an individual or group that represents the barrier-free community	10	40%
		Subtotal Possible	10	
7	Near-Term Opportunity in City's Non-motorized Transportation Plan	Not identified in Figure 5.1E in Plan as a Near-Term Opportunity	1	30%
		Identified in Figure 5.1E in Plan as a Near-Term Opportunity	10	30%
		Subtotal Possible	10	
8	Gap Length	Total length created by adjacent gaps is greater that 330 feet	1	35%
		Total length created by adjacent gaps greater than 150 feet and less than 330 feet	5	35%
		Total length created by adjacent gaps is less than 150'	10	35%
		Subtotal Possible	10	
9	City-Owned Parcels	Not adjacent to a City-Owned Parcel	0	35%
		Adjacent to a City-Owned Parcel	10	35%
		Subtotal Possible	10	
10	Pedestrian/ Auto Incidents	No pedestrian/automobile incidents within the past 5 years within 300 feet of gap	0	30%
		Within 300 feet of one (1) pedestrian/automobile incident within the past 5 years	5	30%
		Within 300 feet of more than one (1) pedestrian/ automobile Incident within the past 5 years	10	30%
		Subtotal Possible	10	

4. Better Coordination with County on Animal Control

The fear of being attacked by a stray dog was brought up at practically every public meeting with many personal stories shared. With Oakland County taking over animal control responsibilities, the primary issue seems to be communication—residents simply do not know what number to call. Over the course of the project, the City has made the Oakland County Animal Control number more prominent on its website and integrated into its community "Request For Action" button on the website.

Recent reports have noted that once the number has been called, the Oakland County Sheriff and Animal Control officers have been very responsive. To continue to address this issue, the City and County should work together on the following two point strategy:

1. **Promote Using the County Animal Control Number.** Through meetings with community groups, fliers, business cards, refrigerator magnets, etc. the Oakland County Animal Control phone number should be promoted. The information should be clear letting people know that residents of Pontiac should call the County Animal Control to report stray dogs, indicate what dog owner responsibilities are and fines for not properly controlling pets.
2. **Proactive Neighborhood Sweeps.** Given the importance of this issue, the County should routinely patrol neighborhoods looking for stray dogs. The officers should be encouraged to strike up casual conversations with residents to better understand if there are some chronic issues with particular dogs or areas.

The City has made the Oakland County Animal Control number more prominent on the "Request For Action" section of the website.

5. Priority Snow Clearance Policy

The City of Pontiac's current codes in regards to snow clearance are fairly typical. While it may be desirable to reduce the time period between the end of the snow and the time that the snow is removed from 24 to 12 hours, the real concern is enforcement of the current ordinance.

Proactive Enforcement

The City should take a proactive role in the enforcement of snow removal based on the following priorities:

1. Arterials with transit
2. Collectors with transit
3. Within a ¼ mile of a school

Community Education. Paired with enforcement, community education needs to be an outreach effort that identifies winter maintenance as the home owner's and business owner's responsibility and stresses why sidewalk snow removal is so important for the community as a whole. The outreach could be in the form of community newsletters, City website and public service announcements.

The goal is to reduce the occurrence of people walking in the City's busiest roadways because the sidewalks are impassible.

6. Site Plan Approval Checklist

A site design checklist or similar tool should be provided to developers and used by the City in the review of site plans to ensure that bicycle and pedestrian issues are being adequately addressed and planned for. The following checklist was adapted with minor modifications from the *Canadian Guide to Promoting Sustainable Transportation through Site Design* by the Canadian Institute of Traffic Engineers. It is a part of a larger publication that examines a variety of policies and actions related to site plan design standards that promote a sustainable transportation network.

According to the Pontiac City Code, Residents and/or property owners are responsible for removing snow/ice from adjacent sidewalks, crosswalk ramps and bus stops within 24 hours of the end of a snow event.

Site Plan Approval Checklist

Adapted with minor modifications from the
Canadian Guide to Promoting Sustainable Transportation through Site Design
by the Canadian Institute of Traffic Engineers

Land Use & Urban Form Checklist:

- ☐ Densities are sufficient to support transit (3 to 7 households an acre / 4 to 7 jobs an acre)
- ☐ Highest density land uses are located close to activity nodes such as transit corridors and intersections.
- ☐ Proposed use provides or adds to a diversity of land uses in the surrounding area and does not result in large tracts of similar uses.
- ☐ Proposed use is compatible with adjacent land uses and with long term land use plans for the area.
- ☐ Adjacent street network provides for connectivity of transit, cycling and pedestrian routes.
- ☐ Mixed uses help support non-motorized transportation.

Safety & Security Checklist:

- ☐ Overall site design attempts to minimize conflict points between vehicles, pedestrians and cyclists.
- ☐ Sight distances have been considered in overall site design and in the placement of entry signs and landscaping.
- ☐ Consideration has been given to personal security for pedestrians, cyclists and transit users.
- ☐ Buildings are located close to the street, but provide adequate clearance for pedestrian activities along street frontage.
- ☐ Where appropriate, retail, restaurants and other pedestrian oriented uses animate the street frontage.

Building Entrances Checklist:

- ☐ Building entrances are located close to the street, with direct pedestrian access.
- ☐ Potential conflict points between users arriving by different modes are minimized.

Internal Transportation Network Checklist:

- ☐ Roads and paths match up with surrounding networks and ensure direct connections through the site for cyclists and pedestrians.
- ☐ Block lengths are limited and mid-block crosswalks are provided where appropriate.
- ☐ Traffic-calming principles are applied, where appropriate (proper site design should avoid the need to apply extensive traffic calming).
- ☐ Appropriate measures have been taken to ensure easy progress of transit through the site.

Desired Pedestrian & Cyclist Routes Checklist:

- ☐ Safe, continuous and clearly defined routes for pedestrians and cyclists are provided along desire lines including links to surrounding residential areas.
- ☐ Weather protection and amenities such as trees are provided.
- ☐ Intersections are designated to facilitate pedestrian and cyclist crossings.

Transit Stops Checklist:

- ☐ Walking distances to stops do not exceed 1,300 feet, and pathways to stops are safe and direct.
- ☐ Waiting areas are well lit and attractive.

Site Grading Checklist:

- ☐ Terrain along pathways is kept reasonably level, and ramps are also provided wherever stairs are necessary.
- ☐ Slopes along pathways are designed to avoid the ponding of slush and water.

Motor Vehicle Parking Configuration & Treatment Checklist:

- ☐ Off-street parking is located away from the street, preferably behind buildings or underground.
- ☐ Vehicle access is separate from pedestrian access, and access and egress controls are designed so vehicles do not block pedestrian ways.
- ☐ Parking lots are kept small and designed to prevent speeding.
- ☐ Pedestrians have protected walkways through the lots.

Motor Vehicle Parking Supply & Management Checklist:

- ☐ Off-street parking should be provided, where necessary, at the sides and rear of buildings.

Bicycle Parking Checklist:

- ☐ Bicycle parking is located near entrance for short term users in a high visibility location.
- ☐ Weather protected bicycle parking for longer term users is provided in a secure area. Storage possibilities for gear are considered.
- ☐ Showers, changing rooms and lockers are provided within employment centers.

Passenger Pick-up & Drop-off Areas Checklist:

- ☐ Passenger pick-up and drop-off areas are located to the side or rear of buildings, downstream from the entrance, but no more than 100 feet away from it.

Loading Areas Checklist:

- ☐ Loading areas are located off the street, and are screened from public view.
- ☐ Loading area access is designed so that pedestrian, cyclist, and transit routes are never severed.

Internal Road Design Checklist:

- ☐ Appropriate traffic signals and compact geometry of intersections control speeds and allow for safe passage of cyclists. Roads are designed to cross at right angles. Sight lines are respected.
- ☐ Lanes are designed to accommodate motor vehicles and cyclists, and remind users of the other networks on the site.
- ☐ Facilities for cyclists and sustainable modes are provided and continued across the site.

Pedestrian Facilities Checklist:

- ☐ Sidewalks are provided along all roads, and follow pedestrian desire lines where possible.
- ☐ Properly signed crossings are provided wherever a path or sidewalk crosses a road.
- ☐ Pathways are clearly defined, delineated, and are of a sufficient unobstructed width. Appropriate amenities such as lighting and weather protection are provided and safety along path is addressed.

Transit Facilities Checklist:

- ☐ Stops are located close to the main entrances of activity generators. Crosswalks are provided at all stops.
- ☐ Stops and waiting areas are properly illuminated, visible from a distance, and have warranted amenities such as shelters and benches.
- ☐ Spacing between stops is minimized.
- ☐ Shelters and rest areas are provided at transit stops and locations where there is a high number of users, the elderly or the disabled.
- ☐ Shelters and rest areas are identifiable, accessible, placed appropriately, and are comfortable.

Wayfinding Checklist:

- ☐ Appropriate signage and physical features are provided for users of all networks to determine their location, identify their destination, and progress towards it.

Street Furniture & Amenities Checklist:

- ☐ Amenities are provided to create a comfortable and appealing environment, empty trash receptacles on a regular basis and respond to user needs.

Landscaping Checklist:

- ☐ Landscaping does not compromise user security and safety.
- ☐ Amenities
- ☐ Landscaping

7. Focused Enforcement

Strict enforcement of unfamiliar laws or unknown dangers accompanied by steep fines is a losing proposition for everyone involved. The reality is that many people do not know what the rules are when it comes to yielding to pedestrians in crosswalks and who yields to whom when a car turns across a bike lane. Thus enforcement is best done hand in hand with educational campaigns.

When new facilities are completed, they should be promoted through grand opening events and community outreach (see items 1 and 2 under Promotion). These efforts should be accompanied by a targeted educational enforcement program. Immediately after the completion of a new facility, the Sheriff's Office should perform a number of high profile enforcement actions at that location at various times of the day and days of the week. When a vehicle, pedestrian or bicyclist is in violation of the traffic code, he or she will be pulled aside and informed of the violation and the underlying safety concern, be issued a simple document that further explains the issue and let off with a warning.

Law enforcement officers often prefer this type of non-confrontational approach to address what are often minor traffic violations. Typically, very few tickets are issued for offenses such as failure of a motor vehicle to yield to a bicycle in a bike lane or failure to yield to a pedestrian in a crosswalk. The odds of a patrolling officer spotting an infraction are pretty low and the enforcement action is likely to be considered a low priority by the officer. But the consequences of users of the roadway having an uneven understanding the laws can be deadly. These targeted enforcements also provide the opportunity to educate law enforcement officers on some pedestrian and bicycle related safety issues and laws that they may not themselves be familiar with.

It is important to work with the Oakland County Sheriff's Office on enforcement and educational bicycle and pedestrian campaigns.

8. Expanded Bike Parking Program

The City of Pontiac, in conjunction with Oakland County and Oakland University, should continue their efforts to install bike parking at key destinations. The bike parking rack design, placement, number of spaces, signage, etc. should be in accordance with the latest edition of the Association of Pedestrian and Bicycle Professionals' Bicycle Parking Guidelines available at: www.apbp.org.

For new construction, the City should update its zoning ordinances, to not only address short-term bike parking requirements, but also long-term bike parking that provides secure and sheltered facilities.

9. Promote Issue Reporting Tool

Currently the City uses "Request For Action" through www.AccessMyGov.com as a tool for citizens to report issues. The City should promote the use of the tool to highlight pedestrian and bicycle issues. Stickers with the website link and some basic information about the tool could be provided at bus stop crosswalks, bike racks, and other locations across town.

Long-term bike locker storage locker example from Hobart, Indiana.

Volunteers from General Motors helped to install bike racks around Pontiac in the fall of 2016.

10. Local Direct Road Funding Mechanism

The reality today is a city in Michigan cannot maintain, let alone improve, a transportation system based solely on funds distributed from the State through Act 51, even with the increase in gas taxes. In many Michigan cities, local funding accounts for about half of the budget used to improve local roadways. Given the poor condition of many of Pontiac's roads, without any significant increases of funds beyond Act 51 money, the roads will continue to degrade and crumbling roads are unsafe for all users. Also, while there are state and federal funding sources available for some projects, most all of them require a local match.

Given the recent financial challenges of the City, this recommendation does not come lightly. But the history does not change the equation. The City needs to identify a direct funding mechanism for its roads. This could come in many forms and may likely require a charter amendment. But each year that the roads deteriorate further, the costs of bringing the system to an acceptable level increases.

As various direct local funding scenarios are evaluated, they should look well beyond simply the cost of resurfacing the roadways. A holistic view of the transportation system and its role in community health and economic vitality is necessary. Grand Rapids Vital Streets program is one Michigan example that should be referenced.

The specifics of a local funding mechanism are well beyond the scope of this project. It is recommended that a task force be developed to look at this issue in more detail. As part of that discussion, pedestrian and bicycle issues should be at the forefront given safety concerns discussed earlier. The discussion should include:

- Standalone pedestrian and bicycle safety projects
- Seasonal maintenance such as snow removal from sidewalks along major roadways and sweeping debris from bike lanes
- Long-term maintenance programs for sidewalks, crossing islands and bike lanes
- Community outreach and education
- Transit routes, stops and support structures
- Green Street approaches

11. Transit Stop Facility Audit

An inventory and analysis of Pontiac's transit stops should be conducted to determine the condition and amenities at each stop. This could be done in partnership with Oakland University and the Suburban Mobility Authority for Regional Transportation (SMART). The audit should look at the following elements:

- Current Bus Route Map
- Current Schedule Posting
- Concrete Access Pad
- Benches
- Trash and Recycling Receptacles
- Existing Shelter Structure Condition
- Bike Racks

Conduct an inventory of needed amenities at SMART bus stop locations.

12. Transit System Analysis

The City of Pontiac should petition the Regional Transit Authority to conduct an analysis of the current transit routes. The purpose of the analysis would be to see if there are neighborhoods that are currently underserved by transit. Also, bus stop use could be compared to the transit stop facility audit to help prioritize improvements.

Conduct an analysis of current transit routes.

Built Environment Recommendations

A Nice and Easy Network

Establish a "low stress" and universally accessible network of pedestrian and bicycle routes that link community resources using local roads and trails.

Safer Thoroughfares

Reconfigure thoroughfares to increase the safety, comfort and access for all users, to minimize the potential for accidents that result in injury.

Better Places

Transform public rights-of-way into attractive people-centric spaces that address critical environmental concerns and foster public engagement and commerce.

Phase 1: Near Term Improvements

- Southern Loop: $77,000
- Northern Loop: $133,000
- To Telegraph: $17,000
- To Bloomfield Square Shopping Center: $6,000
- To Oakland University: $38,000
- To Great Lakes Crossing Via Joslyn: $20,000
- To Great Lakes Crossing Via Baldwin: $5,000
- New Temporary Route for the Clinton River Trail: $778,000
- Critical Sidewalk Gaps: $733,000
- Critical Road Crossing Improvements: $2,745,000

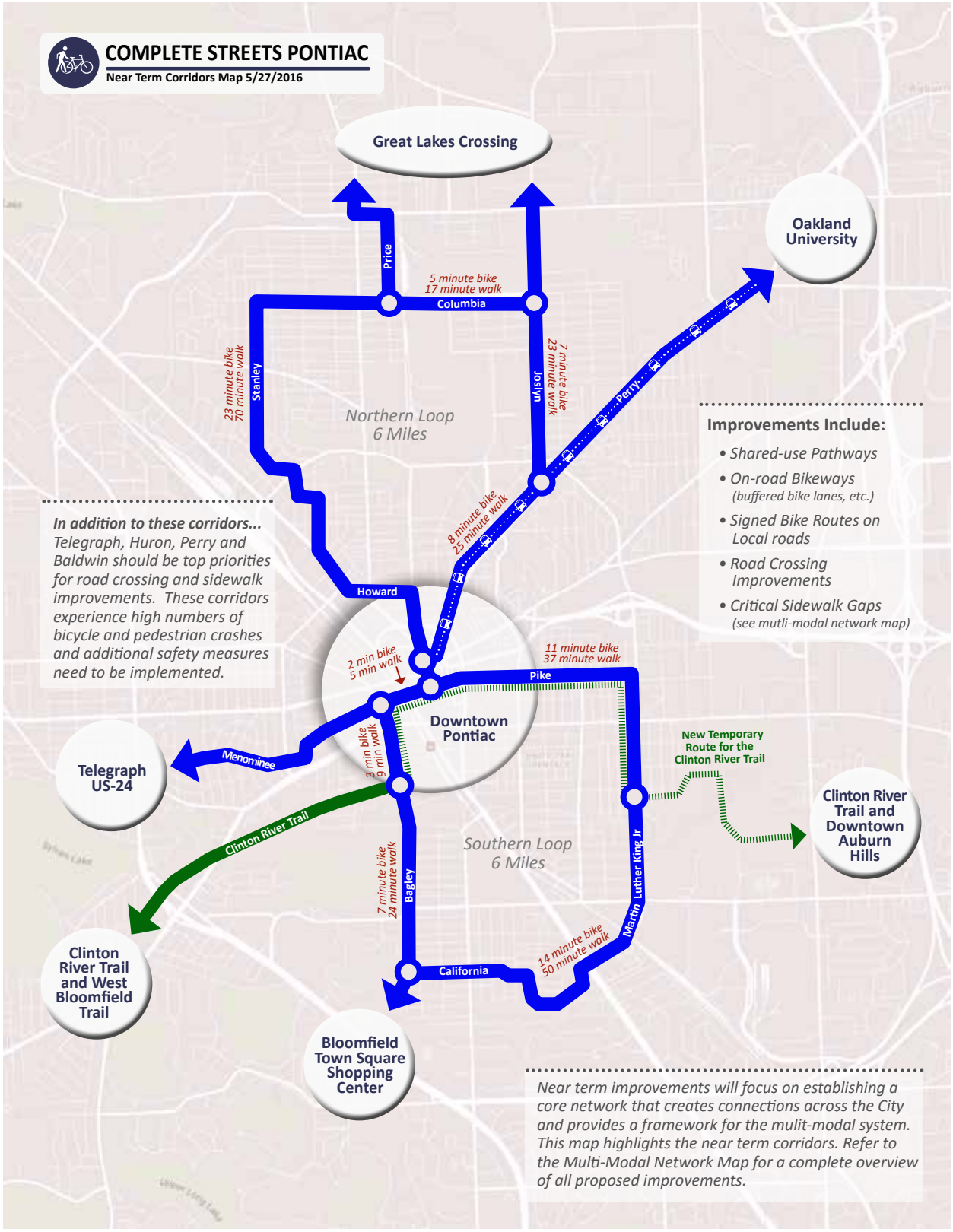
Summary of Proposed Improvements

- 80 Locations for Crosswalk Improvements
- 5 Miles of Critical Sidewalk Gaps Identified
- 20 Miles of Shared Use Pathways and Trails
- 26 Miles of Neighborhood Connector Routes
- 12 Miles of Bike Lanes
- 41 Miles of Buffered Bike Lanes
- 4 Miles of Shared Lane Markings
- 0.6 Miles of Cycle Track

COMPLETE STREETS PONTIAC: NEAR TERM CORRIDORS MAP

Phase I Grand Total: $7,650,300**

***Includes construction costs and design and engineering costs. See page 31 for more details.*



COMPLETE STREETS PONTIAC: MULTI-MODAL NETWORK FACILITY TYPES

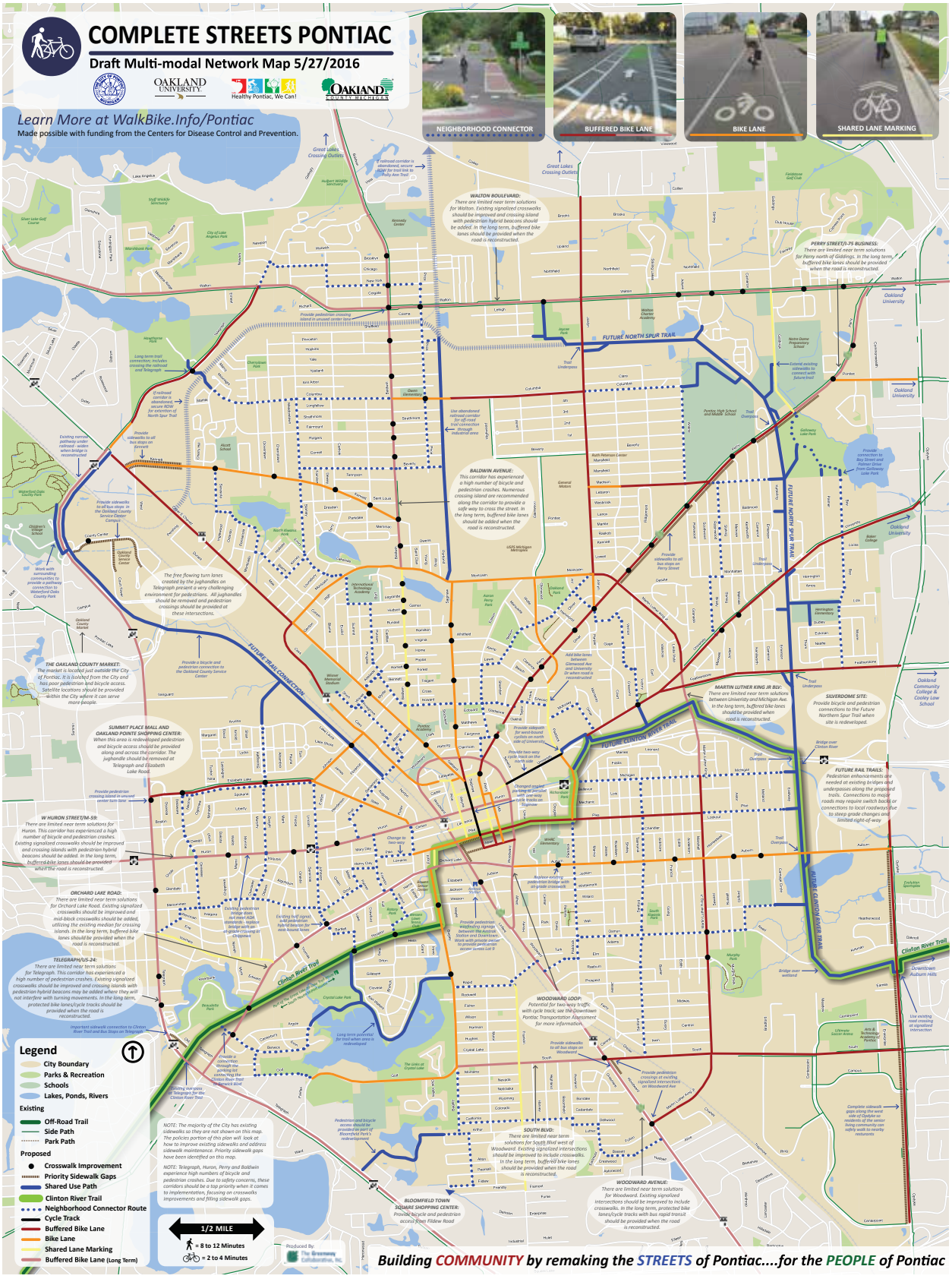
Neighborhood connector routes are typically found on residential streets that have low traffic volumes and low speed limits. These "nice and easy" bicycle and pedestrian connectors can also have route and wayfinding signs that display nearby destinations like parks, schools and business districts.

Shared lane markings or sharrows can be found in locations where there is insufficient width to provide a designated bike lane. The marking also alerts road users to the lateral position bicyclists are likely to occupy within the traveled way, therefore encouraging safer passing practices. Cyclist should ride down the center of the arrows when possible.

A bike lane is the portion of a roadway that has been designated by pavement markings and signage for the preferential or exclusive use of bicyclists.

Buffered bike lanes are conventional bike lanes paired with a designated buffer space separating the bike lane from the adjacent motor vehicle travel lane and/or on-street parking.

COMPLETE STREETS PONTIAC: MULTI-MODAL NETWORK MAP



COMPLETE STREETS PONTIAC

Building COMMUNITY by remaking the STREETS of Pontiac....for the PEOPLE of Pontiac

Complete Streets Pontiac is a plan to make Pontiac more walkable and bikeable for transportation, fitness and fun! Check out some of the preliminary recommendations and let us know what you think! Visit **www.WalkBike.Info/Pontiac** for more information and to share your ideas.


Bike Lanes


Local roads designed to give bicycles and Pedestrians priority


Cycle Tracks


Signed Bike Routes


Sidewalks


Shared Use Paths


Rectangular Rapid Flash Beacon


Marked Crosswalk

Recomendations:

SET POLICIES

- *Community First Streets Resolution*
- *Sidewalk condition inventory and privatization plan*
- *Road millage with funding for ped. & bike facilities and maintenance*
- *Priority snow clearance on main streets and bus routes*
- *Street light monitoring program*
- *Better coordination with county on animal control*
- *Site plan approval checklist for pedestrian and bike facilities*
- *Focused enforcement ties to crashes and new facilities*
- *Expand bike parking program and new parking ordinance*

BUILD

- *80 Crosswalk Improvements*
- *5 Miles of Critical Sidewalk Gaps*
- *20 Miles of Shared Use Pathways and Trails*
- *26 Miles of Neighborhood Connector Routes*
- *12 Miles of Bike Lanes*
- *41 Miles of Buffered Bike Lanes*
- *4 Miles of Shared Lane Markings*
- *0.6 Miles of Cycle Tracks*

PROMOTE

- *Grand opening events, banners and outreach when new facilities are built*
- *Wayfinding and interpretive kiosks at key locations linked by routes*
- *Website with resources*
- *Community fun runs, walks and rides*
- *Support for business and congregation based walking and bicycling groups*
- *Safe routes to school programs*
- *Wellness focused commuter challenge program*

EVALUATE

- *Yearly ped. & bicycle crash analysis*
- *Established yearly ped. & bike counts*
- *Before and after counts*

Pontiac Complete Streets: Phase 1 - Near Term Network	
Order of Magnitude Cost Estimate DRAFT 6/27/16	
CONSTRUCTION COSTS	
Typically covered in Transportation Alternative Project Funding	
All Item Subtotal	$4,553,750.00
Mobilization (10%)	$455,375.01
Temporary Traffic Control (5%)	$227,687.50
Contingency (25%)	$1,138,437.52
Total Construction Costs	**$6,375,250.00**
Design and Engineering Costs	
Not Typically covered in Transportation Alternative Project Funding	
Engineering Design (10%)	$637,525.01
Contract Administration (4%)	$255,010.00
Construction Observation (6%)	$382,515.01
Total Design and Engineering Costs	**$1,275,050.02**
GRAND TOTAL	**$7,650,300.10**

SOUTH LOOP

Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Neighborhood Connectors (Unknown Pavement Condition) Signed Bike Route							
Front	W Pike	Orchard Lake	0.1	mi	$10,000	$1,000	
Woodward	MLK Jr	Bassett	0.1	mi	$10,000	$1,000	Use sidewalk; crossing needed at Woodward
Bassett	Earlmoor	MLK Jr	0.3	mi	$10,000	$3,000	
Earlmoor	Dellwood	Bassett	0.1	mi	$10,000	$1,000	
Dellwood	Howland	Earlmoor	0.1	mi	$10,000	$1,000	
Howland	California	Dellwood	0.1	mi	$10,000	$1,000	
California	Bagley	Howland	0.6	mi	$10,000	$6,000	
Bagley	Golf/South Blvd	California	0.3	mi	$10,000	$3,000	
Good Pavement Conditions: Grind & Re-stripe Buffered Bike Lane							
MLK Jr	Michigan Ave	South Blvd	1.27	mi	$38,160	$48,463	Grind and re-stripe, 5 to 3 lane conversion
MLK Jr	South Blvd	Charles	0.32	mi	$33,390	$10,685	Grind and re-stripe, 4 to 2 lane conversion
Unknown Pavement Conditions: No Grinding Required							
Front	W Pike	Orchard Lake	0.1	mi	$10,600	$1,060	Paint and signs, no grinding required
Poor Pavement Conditions: Implement with Upcoming Resurface/Reconstruction Project Bike Lane							
W Pike	Front	Saginaw	0.2	mi	With Resurface/ Reconstruction		Change one-way to two-way west of Williams on Pike
E Pike	Woodward	MLK Jr	1	mi	With Resurface/ Reconstruction		
Bagley	Orchard Lake	Golf/South Blvd	0.3	mi	With Resurface/ Reconstruction		
Buffered Bike Lane							
E Pike	Saginaw	Woodward	0.19	mi	With Resurface/ Reconstruction		
MLK Jr	Woodward	Charles	0.1	mi	With Resurface/ Reconstruction		
				South Loop Total:		**$77,208**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

NORTH LOOP

	Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Neighborhood Connectors (Unknown Pavement Condition)								
Signed Bike Route								
	W Howard	Baldwin	Adelaide	0.5	mi	$10,000	$5,000	
	Adelaide	W Howard	Harriett	0.1	mi	$10,000	$1,000	
	Harriett	Adelaide	Putnam	0.1	mi	$10,000	$1,000	
	Putnam	Harriett	Legrande	0.3	mi	$10,000	$3,000	
	Legrande	Putnam	Summit	0.1	mi	$10,000	$1,000	
	Summit	Legrande	Stanley	0.1	mi	$10,000	$1,000	
	Stanley	W Columbia	Montcalm	1.08	mi	$10,000	$10,800	
	W Columbia	Stanley	Baldwin	0.5	mi	$10,000	$5,000	
CIP								
Bike Lanes								
	Saginaw	Montcalm	Woodward	0.93	mi	With Resurface/ Reconstruction		2017 reconstruction
	Joslyn	N Perry	Montcalm	0.18	mi	With Resurface/ Reconstruction		2017 resurfacing
Buffered Bike Lane								
	Joslyn	Montcalm	E Beverly	0.64	mi	With Resurface/ Reconstruction		2017 resurfacing
Good Pavement Conditions: Grind & Re-stripe								
Buffered Bike Lane								
	E Columbia	Railroad	Joslyn	0.7	mi	$33,390	$23,373	Grind and re-stripe, 4 to 2 lane conversion
Good Pavement Conditions: Grind & Re-stripe								
Buffered Bike Lane								
	W Columbia	Baldwin	Railroad	0.3	mi	With Resurface/ Reconstruction		
	N Perry	University	Lafayette	0.1	mi	With Resurface/ Reconstruction		MDOT jurisdiction
Buffered Bike Lane								
	N Perry	Lafayette	Woodward	0.1	mi	With Resurface/ Reconstruction		MDOT jurisdiction
	Joslyn	Beverly	Columbia	0.32	mi	With Resurface/ Reconstruction		
Fair Pavement Conditions: Grind & Re-stripe								
One-way Cycle Track								
	Saginaw	Huron	Pike	0.15	mi	$118,690	$17,804	Grind and re-stripe, change to parallel parking, use parking as buffer for cycle track
	Saginaw	Huron	Oakland	0.13	mi	$114,450	$14,879	Grind and re-stripe, use parallel parking as buffer for cycle track
Buffered Bike Lane								
	Saginaw	Oakland	Woodward	0.1	mi	$114,450	$11,445	Grind and re-stripe, One-way Cycle Tracks without bollards
	N Perry	Woodward	Joslyn	1	mi	$38,160	$38,160	Grind and re-stripe, 5 to 3 lane conversion, MDOT jurisdiction
					North Loop Total:		**$133,460**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

TO TELEGRAPH

	Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Neighborhood Connectors (Unknown Pavement Condition) Signed Bike Route								
	W Pike	Franklin	William	0.2	mi	$10,000	$2,000	Change from one-way to two-way
	Franklin	W Pike	Henry Clay	0.1	mi	$10,000	$1,000	
	Henry Clay	Palmer	Franklin	0.1	mi	$10,000	$1,000	
	Palmer	Stout	Henry Clay	0.05	mi	$10,000	$500	
	Stout	S Johnson	Palmer	0.2	mi	$10,000	$2,000	
	S Johnson	Stout	Menominee	0.1	mi	$10,000	$1,000	
	Menominee	Ontario	S Johnson	0.75	mi	$10,000	$7,500	
	Ontario	Wenonah	Menominee	0.1	mi	$10,000	$1,000	
	Wenonah	Ontario	S Telegraph	0.1	mi	$10,000	$1,000	
Poor Pavement Conditions: Implement with Upcoming Resurface/Reconstruction Project Bike Lanes								
	W Pike	William	Front	0.17	mi	With Resurface/ Reconstruction		Change from one-way to two-way west of Williams on Pike
					To Telegraph Total:		**$17,000**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

TO BLOOMFIELD SQUARE SHOPPING CENTER

	Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Neighborhood Connectors (Unknown Pavement Condition) Signed Bike Route								
	Bagley	California	Arthur	0.1	mi	$10,000	$1,000	
	Arthur	Bagley	Bagley	0.1	mi	$10,000	$1,000	
	Bagley	Arthur	Fildew	0.28	mi	$10,000	$2,800	
	Fildey	Bagley	Wrenn	0.1	mi	$10,000	$1,000	
* Work with shopping center to provide back entrance								
					To Bloomfield Square Shopping Center Total:		**$5,800**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

NEW TEMPORARY ROUTE FOR THE CLINTON RIVER TRAIL

Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Neighborhood Connectors (Unknown Pavement Condition)							
Signed Bike Route							
Osmun	MLK Jr	Clifford	0.1	mi	$10,000	$1,000	
Clifford	Osmun	Cottage	0.1	mi	$10,000	$1,000	
Cottage	Clifford	Carriage	0.1	mi	$10,000	$1,000	
New Trail Segments							
Asphalt Shared Use Path			4752	lf	$47	$224,151	
Boardwalk/bridge			300	lf	$600	$180,000	
Paving the Existing Trail							
Asphalt Shared Use Path			7,860	lf	$47	$370,755	
				New Temporary Route for the Clinton River Trail Total:		**$777,906**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

TO OAKLAND UNIVERSITY

	Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Fair Pavement Conditions: Grind & Re-stripe Buffered Bike Lane								
	N Perry	Joslyn	Madison	1	mi	$38,160	$38,160	Grind and re-stripe, 5 to 3 lane conversion, MDOT jurisdiction
*Following existing sidepaths north on Perry and east on Walton to Oakland University								
					To Oakland University Total:		**$38,160**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

TO GREAT LAKES CROSSING VIA BALDWIN

	Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Neighborhood Connectors (Unknown Pavement Condition) Signed Bike Route								
	Price	Columbia	Walton	0.5	mi	$10,000	$5,000	
*Follow existing sidepaths west on Walton and North on Baldwin to Great Lakes Crossing								
					To Great Lakes Crossing Via Baldwin Total:		**$5,000**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

TO GREAT LAKES CROSSING VIA JOSLYN

	Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Good Pavement Conditions: Grind & Re-stripe Buffered Bike Lane								
	Joslyn	Walton	Collier	0.54	mi	$38,160	$20,606	Grind and re-stripe, 5 to 3 lane conversion
Poor Pavement Conditions: Implement with Upcoming Resurface/Reconstruction Project Buffered Bike Lane								
	Joslyn	Columbia	Walton	0.5	mi	With Resurface/ Reconstruction		
* Following existing sidepaths north along Joslyn to Great Lakes Crossing								
					To Great Lakes Crossing Via Joslyn Total:		**$20,606**	*Refer to critical road crossings and sidewalk gaps for other improvements on these corridors

CRITICAL SIDEWALK GAPS

Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Concrete Sidewalk							
Woodward	Southeast corner at South Blvd		450	lf	$30	$13,500	East side of Woodward, MDOT jurisdiction
Opdyke	Centerpoint	Clinton River Trail	7,128	lf	$30	$213,840	West side of Opdyke
Opdyke	Kirkman	Auburn	2,640	lf	$30	$79,200	West side of Opdyke
Perry	North of Pontiac Road		1,584	lf	$30	$47,520	West side of Perry, MDOT jurisdiction
Perry	Emerson Ave	North end of Galloway Lake Park	2,112	lf	$30	$63,360	West side of Perry, MDOT jurisdiction
Perry	Melwood	Scottwood	1,263	lf	$30	$37,890	West side of Perry, MDOT jurisdiction
Perry	Scottwood	MLK Jr	3,168	lf	$30	$95,040	West side of Perry, MDOT jurisdiction
W Pike	Woodward	S Saginaw	600	lf	$30	$18,000	South side of W Pike
Woodward (southbound loop)	W Pike St	Orchard Lake Rd	700	lf	$30	$21,000	West side of Woodward, MDOT jurisdiction
Lot 9	Woodward	Water St	600	lf	$30	$18,000	Route through parking lot, private ownership
Old Telegraph	Telegraph	Clinton River Trail	850	lf	$30	$25,500	Southwest side of Old Telegraph, MDOT jurisdiction
County Center Dr E	Telegraph	Court Tower Blvd	2,640	lf	$30	$79,200	South side of County Center Dr E
Hospital Dr	South of County Center Dr		700	lf	$30	$21,000	East side of Hospital Dr
				Critical Sidewalk Gaps		**$733,050**	* Perry, has high numbers of pedestrian and bicycle crashes

CRITICAL ROAD CROSSING IMPROVEMENTS

Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Marked Crosswalk							
County Center Dr E	At Bus Stop		1	each	$2,520	$2,520	Includes: signs, ramps, pavement markings
Baldwin	At E Kennett		1	each	$7,760	$7,760	Includes: curb cuts, ramps, sidewalk extensions, pavement markings, pedestrian signals
Perry	At Joslyn		1	each	$7,760	$7,760	MDOT jurisdiction - includes: Curb cuts, ramps, sidewalk extensions, pavement markings, pedestrian signals
Woodward	At South Blvd		1	each	$7,760	$7,760	MDOT jurisdiction - includes: Curb cuts, ramps, sidewalk extensions, pavement markings, pedestrian signals
Woodward	at Martin Luther King Jr Blvd		1	each	$7,760	$7,760	MDOT jurisdiction - includes: Curb cuts, ramps, sidewalk extensions, pavement markings, pedestrian signals

CRITICAL ROAD CROSSING IMPROVEMENTS (CONT.)

Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Rectangular Rapid Flash Beacon							
Orchard Lake Road	At the Clinton River Trail		1	each	$18,000	$18,000	
Hybrid Pedestrian Beacon							
Woodward	At Amtrak/W Judson		1	each	$130,000	$130,000	MDOT jurisdiction
Hybrid Pedestrian Beacon With Crossing Island							
Baldwin	At Owens		1	each	$148,000	$148,000	
Baldwin	At Beverly		1	each	$148,000	$148,000	
Baldwin	Between Fairmount and Stathmore		1	each	$148,000	$148,000	
Baldwin	Between Rutgers and Fairmount		1	each	$148,000	$148,000	
Baldwin	Between Yale and Ypsilanti		1	each	$148,000	$148,000	
Baldwin	Between Sheffield and Princeton		1	each	$148,000	$148,000	
Baldwin	At E New York Ave		1	each	$148,000	$148,000	
Baldwin	At Newport Ave		1	each	$148,000	$148,000	
Huron	At Chippewa/ Waldo		1	each	$148,000	$148,000	MDOT jurisdiction
Huron	At Oneida/ Thorpe		1	each	$148,000	$148,000	MDOT jurisdiction
Huron	At Henderson		1	each	$148,000	$148,000	MDOT jurisdiction
Perry	At Turtle Creek Apartments		1	each	$148,000	$148,000	MDOT jurisdiction
Telegraph	At River Bank		1	each	$148,000	$148,000	MDOT jurisdiction
Telegraph	Between Hazel and Edna		1	each	$148,000	$148,000	MDOT jurisdiction
Telegraph	At Premont		1	each	$148,000	$148,000	MDOT jurisdiction

CRITICAL ROAD CROSSING IMPROVEMENTS (CONT.)

Corridor	From	To	Quantity	Unit	Unit Price	Cost Estimate	Notes
Crossing Island							
Baldwin	At Tregent		1	each	$18,000	$18,000	
Baldwin	At Poplar		1	each	$18,000	$18,000	
Baldwin	At Virginia		1	each	$18,000	$18,000	
Baldwin	At Garner/ Hudson		1	each	$18,000	$18,000	
Baldwin	At Legrande		1	each	$18,000	$18,000	
Baldwin	North of City Line Rd		1	each	$18,000	$18,000	
Perry	At Lafayette		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Fairgrove/ Stephens		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Beach		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At N Paddock		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Hammond		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Lowell		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Ridgemont		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Arlene		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Kenilworth		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Emerson		1	each	$18,000	$18,000	MDOT jurisdiction; with 5 to 3 lane
Perry	At Pontiac		1	each	$20,000	$20,000	MDOT jurisdiction; include - crossing island in unused center turn lane, pedestrian signals, pavement markings, ramps, sidewalk extensions
Telegraph	At Elizabeth		1	each	$18,000	$18,000	MDOT jurisdiction
E Walton	At Baldwin		1	each	$18,000	$18,000	Provide crossing island in unused center lane
				Critical Road Crossing Improvements		**$2,745,560**	* Baldwin, Perry, Huron and Telegraph have high numbers of pedestrian and bicycle crashes

COST WORKSHEET

Item	Unit Price	Unit
Rectangular Rapid Flash Beacon	$18,000	Each
Refuge Island	$18,000	Allow
Crosswalk	$1,200	Allow
Curb Extensions (2)	$17,000	Allow
Hybrid Ped Beacon	$130,000	Each
--Hybrid Ped Beacon --with Crossing Island	(Beacon) $130,000 (Island) $18,000 Total: $148,000	Each Each
Wayfinding	$12,000	Per Mile
Fill Sidewalk Gaps (6' Concrete)	$30	Per Linear Foot
Shared Use Path (12' Asphalt)	$250,000 $47.17	Per Mile Per Linear Foot
14' Boardwalk	$3,168,000 $600	Per Mile Per Linear Foot
Signed Bike Route Signs	$10,000	50 signs/mile at $200 each
Shared Lane Marking --Pavement Marking --Signs	(Markings) $6,600 (Signs) $4,000 Total: $10,600	40 symbols/mile at $165 each 20 signs/mile at $200 each
Grind	$0.40 /foot	Road Type
	$2,120	2 lane per mile
	$4,240	3 lane per mile
	$6,360	4 lane per mile
	$8,480	5 lane per mile
	$10,560	6 lane per mile
	$12,720	7 lane per mile
	$8,480	Both sides per mile
	$4,240	Both sides per mile
Bike Lane Line	$0.50/foot	Bike Lane Line
	$2,650	1 line per mile
	$5,300	2 lines per mile
	$7,950	3 lines per mile
	$10,600	4 lines per mile
	$13,200	5 lines per mile
	$15,900	6 lines per mile
	$5,300	Parallel both sides
Delineator Post	$80,000	530 posts/mile at $150 each
Bike Lane --Symbols --Signs	(Symbols)$6,600 (Signs) $4,000 Total: $10,600	40 symbols/mile at $165 each 20 signs/mile at $200 each
Change from Angled Parking to Parallel Parking	$11,660	per mile
Move Parallel Parking	$7,420	per mile

COST WORKSHEET (CONT.)

Item	Quantity	Unit	Unit Price	Cost Estimate
Signalized Intersection Improvements				
--Curb Ramps	8	sy	$70	$560
--Detectable Warning	40	sf	$35	$1,400
--Countdown Pedestrian Signal	4	each	$550	$2,200
--Pavement Markings	100	lf	$6	$600
--Sidewalk Extensions	100	lf	$30	$3,000
			Total	$7,760
Basic Crosswalk				
--Curb ramps	2	sy	$70	$140
--Detectable Warning	20	sf	$35	$700
--Pavement Markings	30	lf	$6	$180
--Sidewalk Extensions	50	lf	$30	$1,500
			Total	$2,520

Road Type	Grinding	Restriping	Symbol/ Signs	Bike Lanes	Buffered Bike Lane	Cycle Track (With Delineator Posts) **Does not include signal changes
Lane Narrowing (Grinding and Adding Bike Lanes) Per Mile						
1 lane road	$0	$3,180	$10,600	$13,780	$23,320	$103,320
2 lane road	$2,120	$4,770	$10,600	$17,490	$27,030	$107,030
3 lane road	$4,240	$8,480	$10,600	$23,320	$32,860	$112,860
4 lane road	$6,360	$7,920	$10,600	$24,880	$34,420	$114,420
5 lane road	$8,480	$9,540	$10,600	$28,620	$38,160	$118,160
Lane Conversions (Grinding and Adding Bike Lanes) Per Mile						
2 to 1 lane	$2,120	$1,590	$10,600	$14,310	$23,850	$103,850
2 to 1 Contraflow	$2,120	$3,180	$10,600	$15,900	$25,440	$105,440
3 to 2 lane	$4,240	$4,770	$10,600	$19,610	$29,150	$109,150
4 to 2 lane	$8,480	$4,770	$10,600	$23,850	$33,390	$113,390
4 to 3 lane	$6,360	$6,360	$10,600	$23,320	$32,860	$112,860
5 to 3 lane	$8,480	$9,540	$10,600	$28,620	$38,160	$118,160

Phase 1 Funding Strategy

An order of magnitude estimate of the cost to implement Phase 1 is approximately $7,700,000, of which approximately $1,300,000 are design, engineering and grant administration costs. These are also known as "soft costs" and are not typically eligible for many state and federal funding opportunities. In addition, most state and federal funding sources require some sort of cash match, typically a minimum of 20%, but often the local match is substantially more in order to be competitive. In some cases, state funds can be used to match federal funds, which decrease the amount of local funding required.

The following information outlines an approach for Phase 1, that could be implemented within a six year time frame using primarily federal and state funding sources. It is an aggressive schedule, but one for which ample justification can be made. This approach requires going beyond the usual application for available grants, calling for a coordinated strategy to be developed between the City, Federal Highway Administration, Michigan Department of Transportation, Road Commission for Oakland County and the Southeast Michigan Council of Governments.

The following are the cornerstone funding sources that should be utilized to construct Phase 1.

Federal Transportation Sources

These funds are most appropriate for improvements to pedestrian and bicycle infrastructure that serves primarily a transportation function. Most of these will be within the road right-of-way and may also be applied to off-road multi-use trails that are key transportation links for people that walk or bike.

These sources all fall under the Fixing America's Surface Transportation Act (FAST Act). These are Federal Highway Administration (FHWA) funds administered by the Michigan Department of Transportation (MDOT). Many of the improvements proposed in the plan fall under the three "Proven Safety Countermeasures" promoted by FHWA: Pedestrian Crossing Islands, Pedestrian Hybrid Beacons and Road Diets. Eligible agencies, with the exception of the Safe Routes to School program, are road agencies, also known as Act 51 agencies, based on the Michigan law that governs the distribution of federal transportation funds. The following provides more information on the key federal programs:

Transportation Alternatives (TA)

In Michigan, most pedestrian and bicycle improvements have been traditionally funded through the Transportation Alternatives Program, or TAP as they were known under the previous federal transportation bill (MAP-21). Southeast Michigan Council of Governments (SEMCOG) and Michigan Department of Transportation (MDOT) have set allocations of funding as part of the FAST Act, however they use the same application process, coordinate on funding and sometimes jointly fund projects. SEMCOG's application deadline is typically the beginning of May and MDOT has a rolling application and selects projects quarterly. The first step should be setting up a meeting with representatives of both SEMCOG and MDOT to outline the project and discuss a general funding strategy.

- MDOT TAP Program: www.michigan.gov/mdot/0,1607,7-151-9621_17216_18231---,00.html
- SEMCOG TAP Program: www.semcog.org/plans-for-the-region/transportation/transportation-alternatives-program-tap

Highway Safety Improvement Program (HSIP)

Michigan is required under the FAST Act to pursue data-driven, strategic and performance-focused approach to improving safety on all public roads. Eligible pedestrian improvements that are specifically identified include Pedestrian Hybrid Beacons and Pedestrian Crossing Islands. This funding source, administered by MDOT, is for locally controlled roadways regardless of the National Functional Classification. The total statewide budget in 2018 is approximately $6,000,000. The maximum award cannot exceed $600,000 and one agency cannot receive more than $2,000,000. This is potentially a key program that is currently underutilized for pedestrian and bicycle safety projects.

- FHWA HSIP Program: www.safety.fhwa.dot.gov/hsip/
- MDOT's 2016 HISP Program: www.michigan.gov/mdot/0,4616,7-151-48661_40552-387642--F,00.html

Surface Transportation Block Grant Program (STBGP)

The STBG actually includes the TA program as a specific set-aside, but pedestrian and bicycle projects are eligible for funding under the larger program. This is a very flexible program to address state and local transportation needs. There are specific sub-allocations within Michigan apportionment for areas with a population between 5,000 and 200,000 that would apply to Pontiac. Michigan has approximately $22,803,173 allocated for communities of that size. MDOT would need to identify projects in Pontiac for funding in cooperation with SEMCOG.

- FHWA STBG Program: www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm

Congestion Mitigation and Air Quality (CMAQ)

In Michigan, most CMAQ funds have traditionally gone to traffic signal optimization projects due to the way projects are currently evaluated in the state. But pedestrian and bicycle projects that are not exclusively recreational are specifically mentioned as typically eligible along with bike lanes on existing streets. If there is a safety component of the proposed project (as in the case of most of the proposed Phase 1 work) this allows a 100 percent federal share of the project. Also, construction engineering costs of up to 15% of the construction costs may be considered. Oakland County's 2015-2020 allocation for CMAQ funds is $4,679,161. The call for local CMAQ projects corresponds to MDOT and SEMCOG's Transportation Improvement Program (TIP) development schedule and the state call for projects is currently closed. This is an attractive funding source and will require substantial work with the Road Commission for Oakland County (RCOC), SEMCOG and MDOT as this may be breaking some new ground in the state.

- MDOT CMAQ Program: www.michigan.gov/mdot/0,4616,7-151-9621_11041_60661---,00.html

Safe Routes to School (SRTS)

In Michigan, the Safe Routes to School program is administered by MDOT in collaboration with the Michigan Fitness Foundation. Total infrastructure grant amounts vary greatly each year, but tend to average a little over $4 million a year since 2008. The SRTS program uses the same application process as the Transportation Alternatives Program and they are accepted on a rolling basis. There are multiple award rounds made each year. Schools or school districts seeking funding are required to develop a safe routes to school plan, which is a fairly involved process.

- Michigan's Safe Routes to School Program: www.saferoutesmichigan.org

Federal Non-Transportation Sources

The Centers for Disease Control (CDC) and the Department of Housing and Urban Development (HUD) fund pedestrian and bicycle improvement activities.

Community Development Block Grants (CDBG)

CDBG grants originate with the Federal Department of Housing and Urban Development (HUD) and are administered in Oakland County through Oakland County's Economic Development & Community Affairs Department. The program targets activities that benefit low and moderate income individuals and each year many of the transportation projects proposed are eligible. Last Year Pontiac received approximately $760,000 in CDBG funds all of which went towards demolition of blighted structures.

- CDBG Program in Oakland County: www.oakgov.com/advantageoakland/residents/Pages/CPHACommunities.aspx

Partnerships to Improve Community Health (PICH)

PICH is a three-year program administered by the Centers for Disease Control that supports the implementation of evidence-based strategies to improve the health of communities and reduce the prevalence of chronic disease. There is a specific program for small cities with a population between 50,000 and 500,000. In 2014, there were 20 communities that were awarded $14.2 million. Addressing physical inactivity is one of the four cornerstones of the grants approach to improving health. Most of the grant recipients focus on programing, however some recipients have an infrastructure component.

- PICH Program: www.cdc.gov/nccdphp/dch/programs/partnershipstoimprovecommunityhealth/index.html

Racial and Ethnic Approaches to Community Health (REACH)

REACH is a national program administered through the Centers for Disease Control focused on carrying out local, culturally appropriate programs to address health issues. Funds may be awarded to the City of Pontiac or a non-profit organization. Oakland University received a REACH grant that supports the Healthy Pontiac, We Can partnership. Most of the funding for this grant goes towards programing efforts, but there are limited funds available for infrastructure improvements.

- REACH Grant: www.cdc.gov/nccdphp/dch/programs/reach/

State Recreation Funding Sources

The Michigan Department of Natural Resources (MDNR) administers three recreational grant programs that have been key in many trail projects throughout the state. All of the grant applications are due on April 1st and require a current parks and recreation master plan.

The Michigan Natural Resources Trust Fund (MNRTF or Trust Fund)

Funding for the MNRTF is provided by revenue derived from royalties on the sale and lease of state-owned oil, gas, and mineral rights and is used for a variety of outdoor recreational improvements including land acquisition. Recently, the Iron Belle Trail has received a substantial amount of the funding and the MDNR is looking to address this issue by establishing a new fund specifically for the Iron Belle Trail. Funding varies from year to year and has been around $25 million statewide each year over the past three years. Development projects range from $15,000 to $300,000 and there are no set limits on acquisition grants. Trust fund grants require a minimum of a 25% match. This will be a key funding source for trail corridor acquisition and some development.

- MDNR Trust Fund Program: www.michigan.gov/dnr/0,4570,7-153-58225_58301---,00.html

MDNR Recreation Passport Grant Program (RP)

The recreation passport program is funded by elective vehicle registration fees and permits. The fund is used for the development of local public recreation facilities, including improvements to non-motorized trails. Grant amounts range from $7,500 to $45,000 and require a minimum of a 25% match. Statewide funding has been averaging about $1.3 million each year.

- MDNR Recreation Passport Program: www.michigan.gov/dnr/0,4570,7-153-58225_58701---,00.html

Land and Water Conservation Fund (LWCF)

The LWCF is actually a federal program administered by the MDNR, but is typically viewed as a part of the three key state recreation funds. LWCF grants range between $30,000 and $150,000 for development projects. LWCF grants typically award $1.2 million each year and require a 50% match.

- LWCF Program: www.michigan.gov/dnr/0,4570,7-153-58225_58672---,00.html

Determine a Reasonable Ask

Statewide in 2015 about $833,700,000 of federal aid funding was allocated toward pedestrian and bicycle projects according to the FHWA. For additional information, see the funding summary table at http://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/bipedfund.cfm. Pontiac's population of about 60,000 accounts for about 0.6% of the state-wide population of just under 10 million. 0.6% of $844 million (statewide federal funds for pedestrian and bicycle projects) in round numbers comes to $500,000. So a half million dollars from various federal funding sources should be a reasonable starting point. However, Pontiac is unique in a couple ways. First, it has been under represented in past funding due to its inability to match federal funds. Second, it offers almost an unprecedented opportunity to improve four corridors, three of which are state trunklines, all of which have a history of pedestrian crashes including fatal and incapacitating injury crashes. Thus an ask of $1 million in federal funds each year for the foreseeable future is not unreasonable.

Statewide, about $26.5 million in state recreation funding was allocated. Using the same population calculation as with the federal funds, Pontiac's share would be about $165,000. As with federal funds, Pontiac has historically been under represented due to its inability to provide local match. A reasonable budget would be $300,000 per year for the next few years. In a broad brush, this would also provide about a 30% match to federal funds.

Other federal non-transportation sources are challenging to determine an appropriate amount. The most reliable funding source is the CDBG. A reasonable portion of that for pedestrian and bicycle improvements is hard to evaluate given the competing needs. For the purpose of this exercise, $200,000 each year will be used.

Combined a budget of $1.5 million state and federal funds will be used as a baseline budget when approaching state and federal funding sources.

Implementation Time Frame

As noted earlier, the total order of magnitude estimate of the cost to implement Phase 1 is $7,700,000, of which approximately $1,300,000 are design and engineering costs. With a budget of $1.5 million each year, the project should take just over five years.

General Funding Approach

While a five-year, nearly $8 million dollar budget may seem significant ask, the cost of doing nothing is $25 million dollars each year. That is the comprehensive economic and social impact of a pedestrian and bicycle fatal crash rate that accounts for 36% of all fatal crashes and is twice the state's average. The current situation is untenable and any arguments against reallocating funds to address this critical safety deficiency are indefensible.

The mobility of motorized vehicle travel is coming at the expense of the lives of people who walk and bike in Pontiac. Even from a back of napkin cost benefit analysis, the proposed yearly budget is only 6% of the comprehensive costs of crashes each year. The proposed recommendations are based on proven safety countermeasures. The way forward is to convene a summit of FHWA, MDOT, RCOC, CDC, MDHHS, MDNR and City representatives and collaboratively develop a strategy. The tables and recommendations on the following pages outline a starting point for those discussions.

Funding Source Budget Recommendations

The following table outlines a recommended share of the yearly and total project budget for each of the funding sources identified. This amount is based on what should be a reasonable amount from the various funding sources based on their total budget, the population of Pontiac and the severity of the crash history. This should be used as a starting point for discussions with the various funding agencies.

Funding Source	Share	Yearly	Phase 1 Total
Transportation Alternatives	20%	$300,000	$1,560,000
Highway Safety Improvement Program	15%	$225,000	$1,170,000
Surface Transportation Block Gran Program	15%	$225,000	$1,170,000
Congestion Mitigation and Air Quality	10%	$150,000	$780,000
Safe Routes to School	3%	$45,000	$234,000
Community Development Block Grant	10%	$150,000	$780,000
Partnerships to Improve Community Health	1%	$15,000	$78,000
Racial & Ethnic Approaches to Community Health	1%	$15,000	$78,000
Michigan Natural Resources Trust Fund	20%	$300,000	$1,560,000
Recreation Passport Grant Program	1%	$15,000	$78,000
Land and Water Conservation Fund	1%	$15,000	$78,000
Local Match	3%	$45,000	$234,000
	100%	**$1,500,000**	**$7,800,000**

Funding Allocation By Project Type

The project consists of four general construction project types:

- Critical Road Crossings: $4,600,000 comprising 60% of the budget
- Critical Sidewalk Gaps: $1,300,000 comprising 17% of the budget
- Bicycle Corridors: $500,000 comprising 6% of the budget
- Shared Use Pathways: $1,300,000 comprising 17% of the budget

$5.9 million dollars, comprising 77% of the budget for Phase 1, directly addresses pedestrian safety along primary roadways. In many cases, the bicycle corridor improvements also contribute to pedestrian safety by reducing the number of motor vehicle lanes. The shared use pathway improvements complete a critical gap in the cross state Great Lake-to-Lake Trail Route 1.

The table on the following page should be used as starting point for discussions with the various funding agencies. The table attempts to match the recommended funding budget of each funding source to the various project types. It also attempts to match federal funds against state funds to meet the required matching proposed.

FUNDING ALLOCATION BY PROJECT TYPE

		Critical Road Crossings		Critical Sidewalk Gaps		Bicycle Corridors		Shared Use Pathways	Budget
Funding Source	**60%**	**$4,600,000**	**17%**	**$1,300,000**	**6%**	**$500,000**	**17%**	**$1,300,000**	**$7,700,000**
Transportation Alternatives	65%	$1,014,000	18%	$280,800	8%	$124,800	9%	$140,400	$1,560,000
Highway Safety Improvement Program	65%	$760,500	18%	$210,600	8%	$93,600	9%	$105,300	$1,170,000
Surface Transportation Block Grant Program	65%	$760,500	18%	$210,600	8%	$93,600	9%	$105,300	$1,170,000
Congestion Mitigation and Air Quality	65%	$507,000	18%	$140,400	8%	$62,400	9%	$70,200	$780,000
Safe Routes to School	70%	$163,800	30%	$70,200	0%	-	0%	-	$234,000
Community Development Block Grant	65%	$507,000	11%	$85,800	15%	$117,000	9%	$70,200	$780,000
Partnerships to Improve Community Health	65%	$50,700	17%	$13,260	9%	$7,020	9%	$7,020	$78,000
Racial & Ethnic Approaches to Community Health	65%	$50,700	17%	$13,260	9%	$7,020	9%	$7,020	$78,000
Michigan Natural Resources Trust Fund	43%	$670,800	17%	$265,200	0%	-	40%	$624,000	$1,560,000
Recreation Passport Grant Program	0%	-	0%	-	0%	-	100%	$78,000	$78,000
Land and Water Conservation Fund	0%	-	0%	-	0%	-	100%	$78,000	$78,000
Local Match	60%	$140,400	17%	$39,780	6%	$14,040	17%	$39,780	$234,000
Total		**$4,625,400**		**$1,329,900**		**$519,480**		**$1,325,220**	**$7,800,000**

Please Note:

The budge of the individual elements totals $7,700,000 and total budget of the funding sources total $7,800,000.

This discrepancy of $100,000 or approximately 1% is to account for rounding when distributing funding sources.

Promotional Recommendations

Online

Provide a hyper-local, web-based, one-stop shop for people who walk, bike and ride transit that provides information on active living, safety, routes, events and projects.

On The Ground

Utilize on-the-ground wayfinding and messaging, paired with information and support hubs to help people who walk, bike and ride transit find appropriate routes and resources.

Through Events and Programs

Special events provide an engaging way to discover something new and celebrate community accomplishments, as well as establish a high-profile means to raise awareness of critical issues. Ongoing programs provide a necessary support network to sustain positive change.

The promotional efforts are about changing culture and raising awareness. At its most basic level, the promotional efforts are about repeating the words “walk” and “bicycle” to the point where motorists are thinking about pedestrians and bicyclists as they drive down the roadways and people see walking and bicycling as viable and enjoyable way to get places. The following eleven elements work together to redefine Pontiac as a health oriented walkable and bikeable community:

1. Grand Opening Events
2. Community Outreach Coordination with New Facilities
3. Community Fun Runs, Walks and Rides
4. Wellness Focused Commuter Challenge Program
5. Safe Routes to School Program
6. Walking Group Initiation and Support
7. Walk Bike Information Hubs
8. Walk Bike Information Website
9. Establish a Transformation Brand
10. Mayor’s Challenge for Safer People, Safer Streets
11. Active Transportation Events Calendar

1. Grand Opening Events

Every new bike lane, elimination of sidewalk gap or new pedestrian crossing is an opportunity to promote walking and bicycling as well as highlight the City's transformation to a more walkable, bikeable place. Elected officials and City staff should make a point to celebrate the small victories and call attention to the progress being made through ribbon cutting events and press releases. The objective is to create a consistent drumbeat of pedestrian and bicycle successes in the news that will help people see their community in a new light, encourage more walking and bicycling trips and draw motorists attention to pedestrian and bicycle issues.

Friends of the Clinton River Trail Celebrate the Ground Breaking of the Pedestrian Bridge over Telegraph Road in 2010.

2. Community Outreach Coordinated With New Facilities

Every new bike lane, elimination of sidewalk gap or new pedestrian crossing is also an opportunity to educate. Education will be critical because many people may not understand what the rules of the road are, especially when there are new facilities. Complete Streets Pontiac proposes many new facility types such as buffered bike lanes, rectangular rapid flash beacons and hybrid pedestrian beacons that currently do not exist anywhere in the City.

Education will be most effective at the point of contact. Temporary signs and banners may be used with simple messages such as "Don't drive or park in the bike lane." Messages may be reinforced with things such as temporary bollards in the buffer of buffered bike lanes to reinforce messages. One of the most misunderstood issues across the country is who yields to whom at crosswalks. A major element of the outreach efforts should focus on motorists yielding to pedestrians in crosswalks.

3. Community Fun Runs, Walks and Rides

Non-competitive, low or no-cost events, are a good way to encourage people to try new activities and explore new areas. It is recommended that the Healthy Pontiac, We Can Coalition work with groups like the Friends of Pontiac Parks Association and Main Street Pontiac to organize and promote the following events:

New Facility Explorer Events
Coordinated with the grand opening of a significant new facility, such as a mile of buffered bike lane, the community should be invited to walk and/or bike the new facility before it is opened to the public. This provides a great opportunity to share safety information, give people a chance to look at something up-close in a controlled environment and promote the use of a new facility.

Future Trail Walks
Complete Streets Pontiac includes a number of long-term trail projects. At least once a year, a community walk should be held to keep these long-term, big-ticket ideas in the community consciousness. These events may be used to highlight particular issues, unique opportunities or fundraising goals to help move challenging projects forward.

Clinton River Spring Event
The Clinton River Trail, part of the Great Lake-to-Lake Trail Route 1, is an unfinished centerpiece of Pontiac's walking and bicycling infrastructure. Each year there should be a non-competitive walk and bike ride to promote the use of the trail and continued work towards completing the trail.

4. Wellness Focused Commuter Challenge Program

Commuter challenge programs are based on the idea that good natured competition can be used to spark long-term behavioral change. Typically, people go online to sign up and log the number of miles they walk or bike to work each day over the period of a month. There are many variations on this theme that cover longer or shorter periods of time or consider many other alternative forms of transportation depending on programs goals. Pontiac should focus on encouraging active transportation as part of work-based trips over the course of one month to start out. Places of business should be encouraged to form teams and donated prizes may be offered as rewards.

5. Safe Routes To School Program

A concerted effort should be made through the Healthy Pontiac, We Can Coalition to encourage all public and private schools to initiate a Safe Routes to School Program. By encouraging participation of all schools, they will be able to share some common resources and perhaps engage in a school to school challenge similar to the commuter challenge program.

6. Walking Group Initiation and Support

Sometimes the reasons for not walking and bicycling are more about fears of personal safety or lack of motivation. Walking and bicycling groups address those matters directly, provide the security of being in a group and they also encourage the motivation of a scheduled event where you know others expect your participation. Walking and bicycling groups also help to combat social isolation by building or strengthening social support networks.

Walking groups are admittedly difficult to engineer. It can be a challenge for an individual to find the right group that fits his or her circumstances and many people are reluctant to join a group of strangers out of fear that attracting unwanted attention. Given these concerns, it is suggested that walking groups initially focus on establishing programs that are an extension of existing social groups. The premise of this approach is that people will likely be at least acquainted with the other participants and there is a preexisting social network that may be called upon should a participant's behavior get out of line. The reality is, most of the concerns are unlikely to materialize, but nevertheless any concerns or problems that may arise need to be addressed promptly.

Walking Group Initiation

It is suggested that walking programs initially focus a turn-key program that could be offered at no cost. The Healthy Pontiac, We Can Coalition should work to initiate walking groups with focus on the following three groups:

Work Place

Mid to larger size businesses in Pontiac should be approached about starting up work place lunch-time walking groups. These programs could fall under the umbrella of an employee wellness program.

A kick-off lunch and learn event could be offered that introduces the walking program and encourages people to sign up for lunch time walking groups.

Place of Worship

Interfaith groups and larger congregations should be approached with the request to have a one-on-one meeting with church leadership and follow-up with a table at a post worship gatherings such as coffee hours. The idea is that the program could be mentioned during congregation announcements at the service.

Mayor Waterman leading Walk With Leaders in Downtown Pontiac.

Park and Neighborhood Based
Focusing on the Bowens Senior Center, work with various groups such as the Golden Opportunities Club and introduce the walking club idea at a regular meeting. After the meeting, make sure to provide a table where people can sign up and get additional information.

Walking Group Support
For people who have expressed interest in participating in a walking group, the following services should be offered:

For Individuals:

- Assistance in matching individuals with appropriate walking group
- Option to track individual progress
- Reminder and notification services that protect individual's private information
- Incentives for participation such as coupons for healthy food and fitness items

For Walking Group Leaders:

- Help identifying and mapping walking routes
- Option for groups to engage in friendly competitions
- Arranging for community health worker participation on walks
- Arranging for elected officials participation on walks

7. Walk Bike Information Hubs

Walk Bike Information Hubs serve as orientation and resource centers for people that walk and bike. They help those who are already walking, bicycling or paddling find community resources and also introduce people to new recreational and non-motorized transportation opportunities and events. It is recommended that Walk Bike Information Hubs be located strategically around Pontiac in locations where key pedestrian and bicycle routes intersect, city parks and at Clinton River Trail trailheads.

Information Hubs Include the Following Amenities:

- Four Sided Information Kiosks should display regional trail maps, City walking and bicycling route maps, events and general healthy living information
- Drinking fountain
- Bicycle fix-it station with air pump
- Bike parking
- Bench
- Trash and recycling receptacles

Example of a Walk Bike Information Hub.

8. Walk Bike Information Website

It is essential to the preceding initiatives to have a central information source focused on the needs of people that walk and bike in Pontiac. A website should be created and provide the following resources:

- Event Information and Press Releases
- Community Outreach Materials
- Registration for Events
- Commuter Challenge
- Safe Routes to School Resources
- Walking and Bicycling Group Support
- Digital Maps

9. Establish a Transformation Brand

One simple way to tie all of the previous eight initiatives together is through a common brand. This does not need to be overbearing – rather something that subtly reinforces the message that all of these efforts are working towards a common goal of a creating a health focused, walkable and bikeable, vibrant community. This could be as simple as integrating the Healthy Pontiac, We Can Coalition message or it could build on the Pontiac Moving Forward economic theme. It should however be something that transcends City government to be inclusive of the many public and private entities that will be involved.

10. Mayor's Challenge for Safer People, Safer Streets

In 2015 Secretary of Transportation, Anthony Foxx challenged city leaders to "raise the bar for bicyclist and pedestrian safety" by joining the Mayor's Challenge for Safer People, Safer Streets. Mayors and other elected officials participate in the following actives and have the ability to tap into a number of available resources:

- Take a Complete Streets approach
- Identify and address barriers to make streets safe and convenient for all road users, including people of all ages and abilities and those using assistive devices and mobility aids
- Gather and track biking and walking data
- Use designs that are appropriate to the context of the street and its uses
- Work in conjunction with existing road construction and development projects to create and complete pedestrian and bike networks
- Improve walking and biking safety laws and regulations
- Educate and enforce proper road use behavior by all

Participation in this program would reinforce the City of Pontiac's commitment to improving pedestrian and bicycle safety.

11. Active Transportation Events Calendar

Getting people to break out of a well-entrenched habit does not happen overnight. One event, a singular news story or a flier will have no lasting impact. Cultural change is a gradual transformation where new ideas permeate into a wide cross-section of society throughout an extended time period. In essence, this is a campaign with a simple message. The message is that active living is a rewarding life style. Easily understood, yes, but like quitting smoking or eating healthier, understanding what you should do does not equate to actually doing what you know you should.

To help build community consciousness of the issue, a drumbeat of activities tailored to specific interest groups are proposed throughout the year. It is not expected that everyone will participate in every activity. The hope is to get residents engaged in at least one event that fits their interests and current situation. If promoted effectively, they will hear about all of the other events and together they will begin to feel like they are a part of some larger, community-wide initiative.

A total of 24 events are proposed and arranged around four themes: Safe Routes to School; Something Special, Everyday Fitness and Building the Bike Culture. While 24 events proposed may seem daunting, many of them are actually small events that will require minimal planning. Some may start out small and grow from year to year. Some may start out as a single event and then become something that participants carry on with minimal or no outside assistance through much of the year.

A key aspect of all of these events is to cover them in a variety of news outlets. This will not only help attract new participants at the next event, but plant seeds of information in the population.

Active Transportation Calendar

	Safe Routes to School	Something Special	Everyday Fitness	Building the Bike Culture
JAN	Shovel for Scholars		Cool Commute Challenge	
FEB		Winter Warrior Warm-ups		Studded Tire Spectacular
MAR	Walk Around the World		Satellite Slim Down	
APR		Future Trail Hike		Tall Bike Tuesday
MAY	Bike Train Blast		Bike to Work Week	
JUNE		Clinton River Trail Celebration		R.A.T. Rides
JULY	Bike Rodeo		Mid-Day Meander Mondays	
AUG		Light Riders Night Parade		Midnight Bike Polo
SEPT	Walking School Bus Week		Walk to Work Week	
OCT	International Walk to School Day	Healthy Pontiac Weekends		Fixie Fridays
NOV	Still Walking Wednesday		Fat Tire Fridays	
DEC				Electric Bike Parade

Safe Routes to School Related Programs

A typical misunderstanding of Safe Routes to School programs is that they are oriented solely to the schools themselves. Encouraging more children to walk and bike to school and assuring that they have safe passage is the responsibility of the entire community. A single resident with no school-age children living with them at home can have a profound impact on who walks or bikes to school. Likewise, the number of kids that walk to school can have a significant impact on the amount of morning rush-hour traffic.

1) Shovel For Scholars

In the winter, the conditions of a community's sidewalks influence how many kids walk. A single unshoveled section of sidewalk can be a deterrent for many children and an unsurmountable obstacle for someone in a wheelchair or pushing a stroller. In January, a public service campaign should communicate to residents and businesses that they should strive to clear the sidewalks before school. The message should note that the fight against childhood obesity can be fought with a snow shovel by the people that may not have school aged children of their own. It should also remind motorists to be on the alert for kids walking to school in the in the dark morning hours.

2) Walk Around the World

If a classroom of 25 kids walked to school rather than being driven by a parent (an average ½ mile each day) that has the potential to eliminate up to 125 miles of travel each week. Elementary classes should be encouraged to track the total walking and bicycling mileage for the month of March. They can plot their progress on a map of the country and then combine their progress with classes around the school district to see how far they have traveled together. They can also calculate how many calories they have burned as well as how much gas, money and greenhouse emissions they have saved. The progress at the end of the month should be shared with the local media outlets.

3) Bike Train Blast

In May, when the weather begins to warm up, groups of kids should be encouraged to form bike trains. Bike trains are comprised of a group of children riding their bikes to school with one or more supervising adults. Bike trains address three key issues. First, is the fear parents may have for the personal safety of their child when they travel to or from school by him or herself. Second, an adult can help guide children that may not be as skilled or have the judgment to ride a bike to school by themselves. Third, the larger group of cyclists along with the presence of an adult makes the group more visible to motorists and improves safety. The bike train leaders can be volunteer parents that rotate the task on a regular basis. The schools should facilitate the process by helping plan routes and schedules and posting sign-up sheets and information. Local media should be contacted to both promote the idea as well as inform motorists what to expect. The schools should also participate in National Bike to School Day, which is usually held during the first week of May.

4) Bike Rodeo

The summer would be a good time to organize at least one bike rodeo in the City. Bike Rodeos are typically half-day skill building events that feature a number of stations for kids to learn bike safety basics by participating in fun, hands-on activities. Bike Rodeos can be a little more complex to organize than other events, as they require a large number of skilled people. They are often done in conjunction with other community events. The payback is that it teaches not only the children new skills, but often the parents as well. Given the organizational demands of this type of activity, it would be ideal for the County to have a set program that they can take to different communities and enlist the help of the local police and volunteers.

5) Walking School Bus Week

At the start of the school year in September, the elementary schools should facilitate the organization of informal Walking School Buses. Walking school buses are arguably one of the most effective and easiest to implement Safe Routes to School strategies. Children that start walking in groups with adult supervision in the early elementary years typically continue to walk in groups unsupervised in the later part of elementary school and even when they go to middle school. The elementary schools should facilitate the process by helping plan routes and schedules and posting sign-up sheets and information. Local media should be contacted to both promote the idea as well as inform motorists to keep an eye out for children walking to school.

6) International Walk to School Day

International Walk to School Day is held annually, during the first week of October. It is a global event that involves schools from across the county and the globe - all walking to school on the same day.

7) Still Walking Wednesday

With the advent of daylight savings time and the weather turning cooler, students and parents could use a refresher about the benefits of walking or bicycling to school. The purpose is to help the walking school buses keep going and inform motorists to be on the alert in the dark morning hours for children walking to school.

Something Special

These are little celebrations of active living. They are used to initiate people into activities which they may not currently embrace and provide the support of a larger group.

1) Winter Warrior Warm-Ups

As New Year's resolutions are beginning to fall to the wayside, February is a good time to encourage people to keep active. Also, winter tends to be a time of social isolation due to people not spending as much time outside and losing touch with their neighbors. Winter Warrior Warm-ups are a series of Saturday morning outdoor walks. Each weekend will be at a different location. These gatherings could be accompanied by media articles that talk about simple strategies for staying warm while keeping active outside in the winter.

2) Future Trail Hike

When the weather begins to get a little warmer, April is a good time to push the distances a little further and explore some future trail routes. The groups do not need to be large. Local media should always be encouraged to come along as these hikes could be turned into articles about what a future trail connection may look like some day. If done each year, these could serve as a way to benchmark progress on the corridor development.

3) Opening Day

Similar to baseball's first pitch of the season, hold an Opening Day event in early April, after the snow melts, on the Clinton River Trail. This event will encourage volunteers to participate in a trail cleanup and ready the trail for the upcoming season.

4) Blessing of The Bikes

Hold an organized spring bike ride along City streets that begins with the Blessing of the Bikes. Interfaith groups could gather and encourage parishioners to participate. This is also an opportunity to provide cyclists with safe riding information and rules of the road.

5) Clinton River Tail Celebration

The Clinton River Trail is a centerpiece of Pontiac's walking and bicycling network, however it is also a work in progress. To encourage continued development and promotion of the trail, one weekend in June should be Clinton River Trail Fun Run/Walk/ Bike event that could coincide with National Trails Day (typically the first Saturday in June). It is an opportunity to celebrate new trail improvements and explore future trail connector routes, while reminding people of the wonderful resource in their neighborhood.

6) Righteous Ramble

In August, churches should encourage their congregations to meet on a Saturday morning or Sunday afternoon to bike around Pontiac, as well as, take part in some minor service project along the trail. The message would be taking care of body, mind and spirit and a way for the church to show its commitment to the community as a whole. Interfaith groups could meet to discuss strategies such as various churches or denominations take different weekends and promote the opportunity for some interfaith activities. Churches could also encourage parishioners to bike to church on Sundays by providing places to park their bikes and reiterate that casual attire like shorts and short sleeve shirts are welcome during the summer.

7) Healthy Pontiac Weekends

Each weekend in October, residents are encouraged to participate in an outdoor activity such as walking, running, bicycling, etc. and then record their time and/or miles on a website. The website could be used to track statistics and have the communities compete on a per capita basis and report out which community is the most active. Weekends could be even themed where one weekend is all about biking and the next running, etc.

Everyday Fitness

While the special events open up people to the opportunities, it is when people integrate activity into their everyday activities that a pattern gets ingrained. All of these events could be part of an active commuter challenge program that lasts the entire year. The main pitch of the program would be the benefits of a healthy and active workforce.

This program would have a website where individuals and employers could register and log their commutes or workplace sponsored activities. Individuals and employers could then track the number of active commute miles as well as calories burned, gallons of gas saved and greenhouse gases eliminated. Few people would use the system year-round, but special events throughout the year would keep the idea fresh.

Token awards could be provided for individuals meeting personal goals or accumulate the most mileage in a particular category for an event. Employers could also get awards based on their size and percentage of people participating. At the end of an event, a press release should be prepared that shows how many miles were done via an active commute and the resulting calories burned and greenhouse gases eliminated.

1) Cool Commute Challenge

In January, the Cool Commute Challenge will work to dispel the myth that people simply don't walk or bike to work in the winter. Accompanying the challenge would be a workshop on winter bicycle commuting. On particularly snowy days, there should be an effort through various media to show how walking or bicycling to work was actually easier and more pleasant than the frustrations of driving in bad weather.

2) Satellite Slim Down

In March, employees whose work commute is beyond a reasonable walking or bicycling distance will be encouraged to drive to a remote (a.k.a. satellite) parking lot and walk or bike the last mile or two to work. This program would utilize existing parking lots in City parks and be identified via website along with suggested routes to major employment centers. The parking lots would be signed for the month and additional police presence will be given to the parking lots and primary routes between employment centers and the parking lots.

3) Bike To Work Week

In May there is a National Bike to Work Week. During this time an effort should be made to promote safe bicycling as well as providing information on desirable bike routes. Employers and employees could participate in a week long and/or a month-long competition.

4) Mid-Day Meander Monday's

This would be held in July as a simple promotion to get people to walk during their lunch break. The idea is to promote exercise as something that can be done anytime and does not require special clothes or a gym membership.

5) Walk To Work Week

This would be held in September to encourage people to walk to work. The promotion would stress how much exercise someone would get by walking to work vs. driving. The promotion would also focus on how for trips 2 miles or less, a walking trip would likely not take much more time than driving. The event should highlight walking as a great low-impact exercise and an easy and enjoyable way for people to start getting more active.

6) Fat Tire Fridays

This is a follow-up to Bike to Work Week. It is an effort to promote biking to work at least one day a week. Fridays are chosen as many employers have a relaxed dress code on Friday and fat tires allude to the fact that you don't need a special commuter bike.

BUILDING A BIKE CULTURE

A simple way to check the health of the local bicycling community is to take a quick inventory of the diversity of the bicycle stock. If most of the bikes are mountain bikes or hybrid bikes, chances are it is not much of a bicycling community. There simply is no such thing as a typical bicyclist. Communities that have lots of people bicycling, actually have many sub-groups involved. Some of these sub-groups could not be more different from each other, yet they all love to bike. The following events are not targeted towards the current bike club crowd. Rather they are aimed at the younger crowd to highlight some of lesser known elements of bike culture. Needless to say, these need to be promoted in a manner that fits the audience.

1) Studded Tire Spectacular

A celebration of hard core winter bicycling - where the worse the weather, the better. Promotions could include how to build your own studded tires on the cheap with lag screws or zip ties. The ride is not particularly well organized but rather something as simple as letting people know where to meet, about what time people will head out and some idea of the length of the ride.

2) Tall Bike Tuesday

An informal ride through town by a bunch of folks on tall bikes or even an unsanctioned jousting match at some discreet location will get people's attention. Tall bikes are a celebration of the absurd by the imaginative armed with welding torches. The tall bike crowd is not a uniform group and some elements may not be seen in a particularly positive light by all members of society, but they are still the coolest things on two wheels.

3) Random R.A.T. Ride & Repeat

Ride Around Town (RAT) rides are a somewhat tamer version of a critical mass ride. It typically takes the form of a casual large group ride tooling around an urban area. They are often started by a group of friends and spread by word of mouth. The end destination is often a bar or restaurant for socializing. Generally they take place a little after the rush hour is done so there is not too much consternation by the motoring public and they add some life into the downtown after business hours.

4) Midnight Bike Polo

Bike Polo is a growing sport although typically the teams and matches are generally loosely organized. Played much like polo, but with a bike substituting for a horse, it can be played in a parking lot or on an actual field. Equipment is minimal, although many players protect the spokes on their front wheel. Having matches late at night when the temperature drops could be one of the best ways to cap off a hot August day. Getting a high school to open up a football field and turn on the lights at night could make it something special.

5) Fixie Fridays

Taking vintage 10 speeds from the '70s and '80s and converting them to fixed gear bikes has been going on for quite a few years and seems to still be going strong. Informal workshops where people could learn how to make a conversion, have access to the tools and purchase the necessary accessories would be ideal. At a minimum, start with some casual gatherings – might be very similar to the RAT rides.

6) Electric Bike Parade

Pontiac Light Riders is an active bicycle and service club. Members of the group light up their bike with every imaginable light scheme possible for fun, however, the group also has a service element that helps promote awareness of the homeless and elderly populations in the area. A yearly bike parade could be used to raise awareness and visibility of homeless bicyclists and raise money for a bicycle light give-a-way program.

Work with the Pontiac Light Riders to establish an annual parade.

Evaluation Recommendations

Use

Track the number of people walking and bicycling and estimate the total number of active transportation miles.

Safety

Analyze traffic crashes, fatalities and injuries. Focus on addressing the disproportionate percentage of vulnerable road users (pedestrians and bicyclists) killed and seriously injured by motor vehicles.

Satisfaction

Gauge residents satisfaction with the transportation options and the character of the streets.

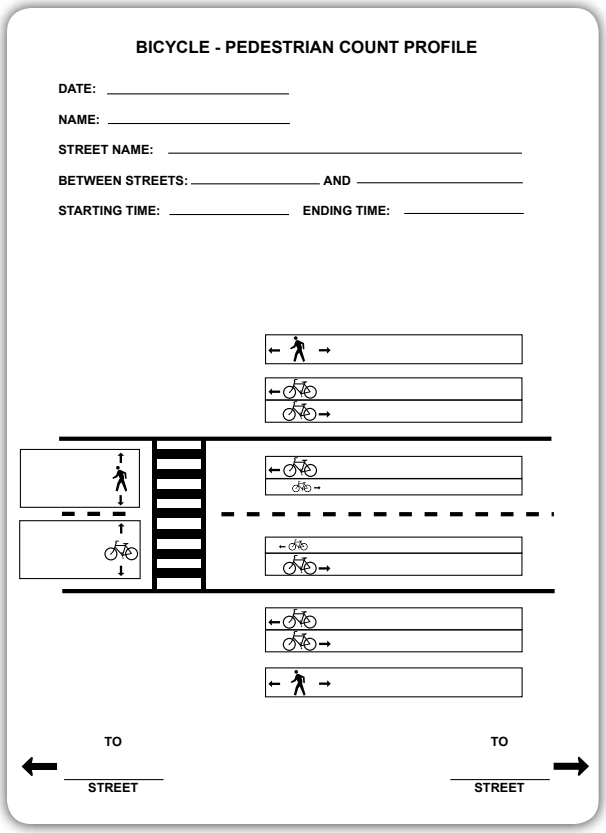
Evaluation Recommendations

Evaluation allows the City to determine if the investments to improve conditions for people that walk and bike are having the desired impact. The City should partner with Oakland University on the following four evaluation tasks:

1. Before and After Pedestrian and Bicycle Counts
2. Baseline Pedestrian and Bicycle Counts
3. Permanent Pedestrian and Bicycle Counts
4. Yearly Crash Analysis

1. Before and After Pedestrian and Bicycle Counts

At the most basic level, it is helpful to know if the addition of a pedestrian or bicycle facility influenced the number of people using a facility. Prior to any non-motorized transportation improvements being constructed, bicycle and pedestrian use should be counted. Approximately one year after completion, under similar circumstances, the counts should be repeated.



An example of a Bicycle and Pedestrian Count Profile form that can be used to determine the number of active transportation users.

2. Baseline Pedestrian and Bicycle Counts

At five or six fixed locations around town, baseline pedestrian counts should be conducted approximately three times a year - in the spring, summer and fall. At first, the counts could be conducted by hand using interns or volunteers. There should be an effort to do day long calibration counts at a few locations then shorter duration counts may be done and the information extrapolated.

Ideally, in the future portable automated counters would be employed at these same locations. If the City could partner with Oakland University or Oakland County, such that they could share the counters with other municipalities, that would be ideal from a cost standpoint.

3. Permanent Pedestrian and Bike Counters

As the system matures, it would ideal to install a few permanent pedestrian and bicycle counters along key corridors. These devices run 24 hours a day, 365 days a year and provide a continuous record of how bicycling and walking changes over time in a specific area. They are a great way to track how travel patterns and climate affect the local walking and bicycling culture and provide a source for computing Annual Average Daily Bicycling and Pedestrian Traffic numbers, which may be used to calculate crash rates.

4. Yearly Crash Analysis

Each year all pedestrian and bicycle crashes should be plotted and evaluated. The UD-10 Traffic Crash Reports of the fatal and severe injury crashes should be studied to understand the underlying circumstances. This crash analysis should include a comparison of historic crashes going back ten years so that trend lines can be evaluated.

The count data should be used to determine crash rates. Crash rates should be analyzed on a yearly basis by comparing the number of crashes with the pedestrian and bicycle counts that were conducted the same year. In general, studies have shown that an increase in the number of bicycles and pedestrians leads to a decrease in crash rates.

By conducting yearly crash analysis, the City will be able to track patterns and identify key areas where pedestrian and bicycle safety improvements are needed.