NON-MOTORIZED FACILITIES PLAN 2015







Petoskey Non-Motorized Facilities Plan

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OVERVIEW

In 2010, the City Planning Commission adopted a sidewalk plan that developed goals for sidewalk construction and maintenance. This non-motorized facilities plan is an expansion of that plan, to incorporate other facilities designed primarily for pedestrians and bicyclists such as shared-use trails and on-street bike facilities. Non-motorized transportation is a critical element of an integrated transportation system. A connected, regional system of non-motorized facilities will help to increase mobility choices, relieve traffic congestion, reduce air pollution and fuel consumption, promote physical activity and healthy lifestyles, provide an economic generator and improve quality of life.

As of October 2015, the City of Petoskey has 43.7 miles of sidewalk and 10.9 miles of paved multi-use, non-motorized trail, an increase of 5 miles of sidewalk and 1.8 miles of trail within the past five years. These numbers do not include natural trails, such as those found on the east side of the Bear River Valley north of Sheridan Street and the trail south of Sheridan Street, trails throughout the River Road Sports Complex, or in the North Central Michigan College natural area.

Major improvements were made over the past five years with sidewalk and non-motorized trail construction. Additions include sidewalks on both sides of Kalamazoo Avenue south of Jennings, the full length of Atkins Street, Howard Street south of Sheridan Street which then connects to the Grimes Street trail, as well as connectors on the Ottawa elementary and High School Campuses. The City continues winter maintenance of sidewalks, as this was ranked as a service residents wanted in the 2010 citizen survey. Community wide, Petoskey has a WalkScore® of 84, making it a very walkable city.

TABLE 1
City Non-Motorized Facilities Miles*

SIDEWALK AND TRAIL MILES	54.57
SIDEWALK/ TRAIL TO STREET MILES RATIO	1.49

**Updated through 2015 construction season projects; including Charlevoix Ave.*

SIDEWALKS

Current sidewalk construction standards are 5-6 feet of width in residential areas and 6-8 feet of width in commercial areas to accommodate side-by-side walkers, strollers, and wheelchairs and the standard for shared-use trails is 10 feet. While it is preferable to have a 5-6 foot parkway or green-lawn between a sidewalk and curb, there are occasions when a parkway is not possible. When these situations arise, the sidewalk is constructed directly at the back of curb, however this construction makes winter sidewalk use particularly difficult as snow plows put snow back on sidewalks that had been removed.

Resort Bluffs section of the Little Traverse Wheelway

A walkable community is important to City residents; survey results from the 2007 Petoskey Area-Wide Transportation Study indicated that 45% of respondents identified sidewalk construction, bike paths and bike lanes as a service of highest importance. The non-motorized facilities we currently have are well used according to the 2010 National Citizen Survey undertaken in the City. Ease of walking was ranked good to excellent by 76% of respondents, ease of bicycle travel was rated good to excellent by 65% of respondents, and availability of paths and walking trails was ranked by 80% of respondents as good to excellent. The survey results indicated that 16% of respondents walked to work and 2% biked to work. The 2010 Census figure for walking as a commute method was a close 15.4%.

The City currently has sidewalk regulations that address what may encroach into the public right-of-way in commercial areas. Petoskey has worked hard to achieve a vibrant downtown, but needs to balance the desires of business owners to enhance their storefronts with the need to accommodate sidewalk users of all abilities. In a downtown environment, the sidewalk can be divided into three areas: the frontage zone next to the building, the pedestrian zone and the planter zone between the pedestrian zone and the curb. The pedestrian zone is required to be a minimum of 48 inches per ADA regulations, but in a heavily travelled area such as downtown Petoskey, it is ideal for this area to be no less than 60 inches or five (5) feet to provide sufficient space for two pedestrians to travel side by side without passing other pedestrians, or for two people going in opposite directions to pass one another. There is also a vertical clearance that must be met (80") for awnings, flags, etc.

On July 24, 2015 staff undertook a sidewalk accessibility audit with Jim Moore of the Disability Network to identify areas that should be addressed for barrier-free compliance. In most places, the downtown pedestrian zone is a minimum of 60", with a few exceptions that should be addressed when possible. Of specific issue is the barricading of outdoor seating areas to allow for alcohol service. This encroachment is not included in the sidewalk regulations or design guidelines, but must not reduce pedestrian clearance to less than 48". It was also pointed out that while the streetscape is aesthetically pleasing, the brick pavers heave and sidewalk joint edges get chipped, creating trip and wheel-catching hazards. When the day comes for a redesign of the downtown streetscape, these issues as well as placement of light fixtures need to be considered to reduce pedestrian obstructions.

The purpose of updating the sidewalk plan to a non-motorized plan is to maintain and enhance Petoskey's standing as a pedestrian friendly, walkable and bike friendly community and to achieve the following master plan goals:

- Promote the development of a transportation network that provides facilities for residents of all ages and abilities.
- Provide safe and efficient pedestrian and bicycle transportation facilities for the purposes of promoting energy conservation and public health.
- Consider the needs of pedestrians and bicyclists in all roadway improvement projects, including roadway surfaces, safety, intersection design, roadway width, and sidewalks.

There is increased interest locally and nationally to improve the ability of children to get to school by either walking or riding bikes. One of the purposes of the national Safe Routes to School (SRS) program is to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age. Providing continuous sidewalks and bike routes that connect neighborhoods to schools and recreational facilities is a key component of improving safe access for children. The City is working with the Health Department of Northwest Michigan, Emmet County, Bear Creek Township, Petoskey Public Schools and the Michigan Department of Transportation to improve the sidewalk network around the school campuses.

Through an analysis of existing sidewalk gaps and establishment of sidewalk installation and replacement priorities, as well as opportunities to improve facilities for bicycle use, the plan will serve as a guide to staff, the planning commission and city council in development of the capital improvement program and annual budgets.

SIDEWALK CONSTRUCTION GOALS AND OBJECTIVES

In 2010, the Planning Commission was asked to prioritize a list of areas for new sidewalk construction based on a scale of 1 to 3, with 1 being a high priority sidewalk construction area, 2 a medium priority and 3 a low priority. An average of the rankings was then taken resulting in the following prioritization:

1	Streets leading to a school
1.4	Streets leading to a public park
1.4	Streets adjacent to a public park
1.4	Streets within residential neighborhoods
1.4	Collectors/major streets
1.7	Streets within commercial districts
1.7	Distribution between neighborhoods
2.7	Undeveloped or low density residential areas (i.e., Greenwood Cemetery)
2.9	Streets within industrial districts
2.9	Dead-end streets and cul de sacs

For plan purposes, areas with scores between 1 and 1.4 will be considered "top priority streets" for sidewalk construction. As indicated in the ranking, the top priority area

identified for new sidewalk construction was streets that lead to a school; the existing goal of sidewalks on at least one side of all streets was also identified as a priority.

From these priorities, the following goals and objectives have been derived:

Goals

- Sidewalks on at least one side of all priority streets.
- Sidewalks on both sides of priority streets within ¼ mile of a school.
- Sidewalks on both sides of streets within ¼ mile of a public park.
- Sidewalks are well maintained and constructed to ensure safety and accessibility for all.
- Sidewalks are connected with safe pedestrian crossings.

Objectives

- Construct sidewalks in conjunction with street projects whenever possible to increase efficiencies.
- Use the 2010 Sidewalk Inventory and Condition Rating Report to prioritize sidewalks for reconstruction.
- Make connections between sidewalks and trail systems whenever possible.
- Maximize sidewalk connectivity (avoid dead-end sidewalks).
- Construct new sidewalks to provide the greatest community benefit.
- Ensure sidewalks are useable all-year round.
- Create safe pedestrian street crossings.
- Promote the sidewalk network.

IMPLEMENTATION COSTS

Since the plan was adopted in 2010, there has been significant new sidewalk construction. However, to achieve the goal of sidewalks on both sides of all priority streets within ¼ mile of a school, approximately six (6) miles of sidewalk remain to be constructed.

The benchmark for annual sidewalk expenditures – split between new construction and replacement – continues to be approximately $200,000, which includes engineering costs and other contingencies. The amount of sidewalk that this allotment will provide will vary greatly by location. Based on the 2014 sidewalk project bid prices, a lineal foot of six-foot wide sidewalk was $20, which includes removal of existing pavement and preparation work for new sidewalks.

New sidewalk, 2009

However, this does not include other costs that are often incurred including retaining walls, Americans with Disabilities Act (ADA) compliance work or other issues that arise due to grade or soil conditions. It should be noted that sidewalk installations to date have been on those streets without major terrain or right-of-way issues, so many of the remaining sidewalk gaps will be more costly to install with retaining walls, railings, ADA compliance, etc.. An approximation of the cost for one city block of sidewalk with a two-foot retaining wall would be $60 a lineal foot; higher retaining walls would have substantially greater costs and costs per lineal foot are higher for spot replacements.

As a follow-up to the 2010 plan, an updated sidewalk condition rating report for existing sidewalks was completed. The report indicated that 90% of sidewalks received a rating of fair to good. The estimated cost of replacement of poor or very poor sidewalk and spot repairs such as trip hazards was $474,568. The City has been working on the problem areas identified, which is a continuing process.

IMPLEMENTATION PRIORITIES

Given that sidewalk budgets will likely fluctuate over time, further prioritization of construction is needed. In addition to priority locations, consideration needs to be made whether sufficient right-of-way exists, locations of existing street trees, terrain issues, and where the investments will be best utilized (i.e., cost-benefit).

Table 2 illustrates a scoring system for sidewalk construction priority street sections. The streets identified are either within a quarter-mile of a school or had no sidewalks as these were identified as the top priorities for sidewalk construction. Each of the five top priority areas is then assigned a value, resulting in a total score for each street. Any streets with terrain or right-of-way issues that would require higher construction costs or adjustments to standards (e.g., installation at back of curb, less than 6 feet of width) and segments that are already included in the 2010-2016 Capital Improvement Plan (excluding 2010) are also noted. Table 3 then identifies the highest scoring streets, which range from 3.5 to 5.

Given the many variables in sidewalk construction logistics and costs, this plan does not explicitly recommend a construction timeframe for the scored streets. However, the scoring system provided, as well as consideration of neighborhood distribution, should be used in preparation of the annual capital improvement program to ensure progress on sidewalk construction priority areas. In addition, the following strategies are recommended to ensure Petoskey's continued success and improvement as a walkable community.

1. Budget sufficient funds to construct approximately ¼ mile of new sidewalk each year.

2. Use the 2010 Sidewalk Inventory and Condition Rating Report to incorporate annual sidewalk repair and replacement into the CIP.

3. Continue to budget for sidewalk snow removal.

4. Continue to work with MDOT to improve pedestrian crossings on State Highways.

5. Increase sidewalk width to more than 6 feet if the right-of-way necessitates sidewalk construction without a parkway to separate the pedestrian from traffic.

6. Provide information to residents on importance of not blocking sidewalks with vehicles and increase enforcement of this violation.

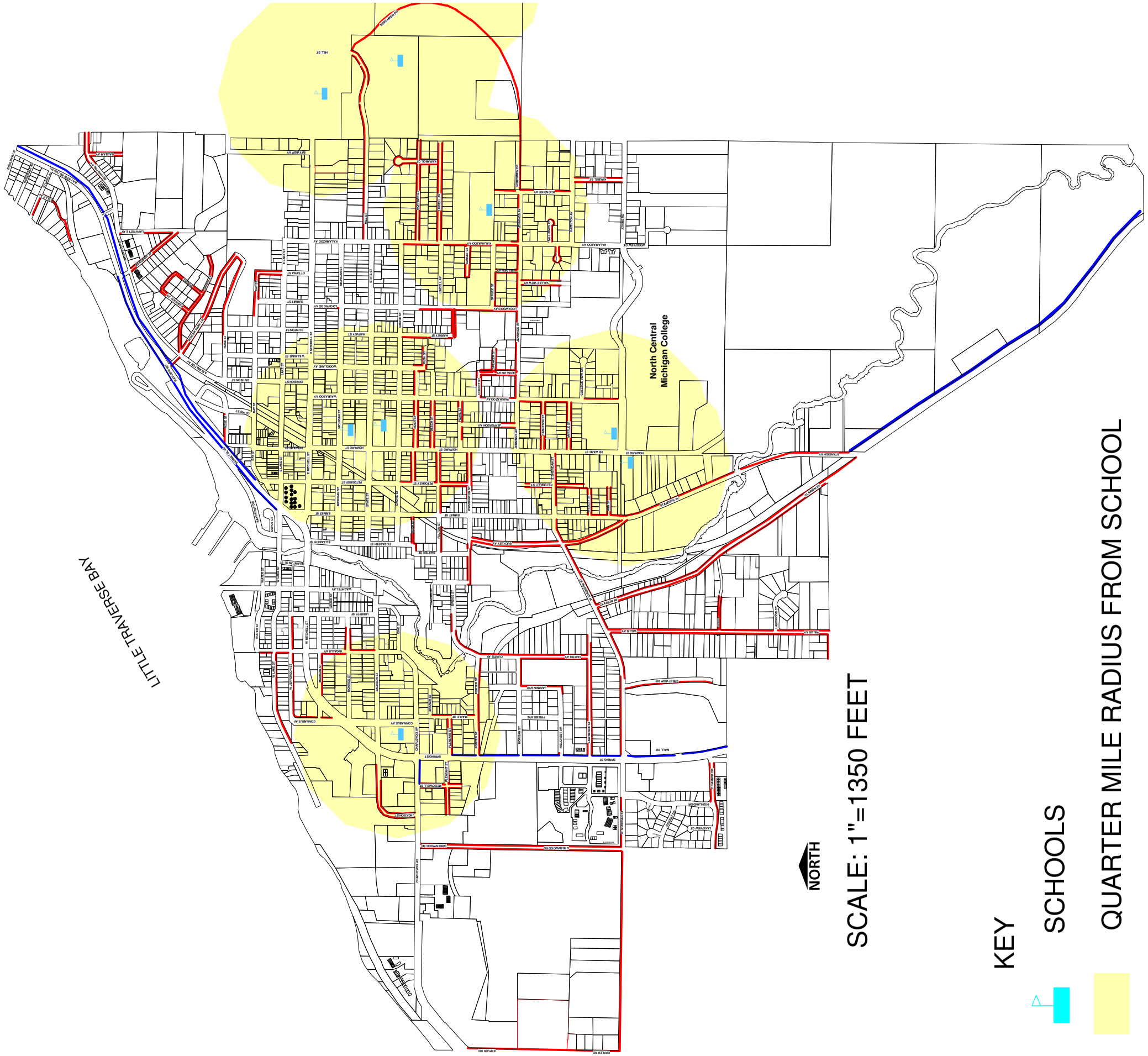
7. Address ADA compliance issues.

8. Explore extension of the Downtown Greenway Corridor to Fulton and Washington Streets to create a connection to the on-road bike route system.

NON-MOTORIZED FACILITIES PLAN

FIGURE 1

Identified Sidewalk Gaps



Map created with Emmet County and City data by the Office of City Planner for illustrative purposes only. (alt 11-2015)

Update 9-2015

TABLE 2
SIDEWALK CONSTRUCTION
STREET PRIORITY SCORES

STREET	SEGMENT LENGTH IN FEET (APPROX)	HIGH PRIORITY AREA						LOW PRIORITY AREA**	TOPO OR R.O.W ISSUES	STREET SCORE
		1/4 MILE SCHOOL (Value 1.5)	LEADING OR ADJACENT TO A PARK (Value 1)	RESIDENTIAL NEIGHBORHOOD* (Value 1-2)	COLLECTOR/ MAJOR STREET (Value 1)	NO SIDEWALKS (Value 1.5)	IMPORTANT CONNECTOR (Value .5)	(Value -1)		
ARLINGTON AVE (MacDonald to City Limit)	500			X	X				$	2
BEAUBIEN	870			X		X	X			4
BEECH	590	X		X		X			$	4
BRIDGE (North side)	214		X	X	X					4
BUCKLEY (Standish to Sheridan)	850	X		Half		X		X	$	2.5
BUCKLEY (Sheridan to Washington)	2000							X	$	-1
CARLETON	600	X		X		X	X	X		3
CLARION	3830				X	X			$$	2.5
CURTIS (S. of Morgan)	829		X	X		X				3.5
FULTON	700	X		X		X			$	4
GREENWOOD (Sheridan to Charlevoix)	2560				X	X			$$	2.5
HILL	2910	X		X					$	2.5
HOFFMAN (Kalamazoo to Karamol Ct.)	1250	X		X		X		X		3
JACKSON (Charlevoix to W. Mitchell)	780	X	X			X		X	$	3
JEFFERSON AVE	230	X		X		X			$	4
JENNINGS (Klondike to Lockwood)	1403	X		X	X		X		$	4
JENNINGS (Lockwood to Waukazoo)	1085			X	X		X			2.5
KALAMAZOO (Grove-Jennings)	1445	X	X	X	X				$$	4
KLONDIKE	630	X		X			X			3
KRUSEL	610	X		X		X	X			4.5
LAFAYETTE	780			X						1.5
LAWRENCE	1210		X	X		X				3.5
Ottawa Sidewalk LINDELL (Kalamazoo to Karamol Ct)	1230	X		X		X		X		3
LOCKWOOD (No sidewalks South of Spruce)	300	X	X	X		X			$	5
MAPLE	540	X		X	X				$	3.5
MORGAN	370		X	X						2
MYRTLE	600	X		X		X		X		3
NORTHMEN DRIVE (Klondike to School property)	620	X	X	X						3.5
NORTHMEN	4130	X	X							2.5
PEARL	244	X		X		X	X	X	$	4.5
PETOSKEY (Sheridan to Washington Park)	332	X	X	X		X		X	$$	4
PETOSKEY (Washington to Washington Park)	198		X	X		X		X		2.5
PLEASANT (Maple to Spring)	460	X				X				3
PORTER	1010	X			X					2.5
RUSH	960	X		X		X			$	4
SHERIDAN	1810	X		X	X				$$	3.5
SPRING (Porter to Charlevoix)	720	X			X					2.5
STANDISH (Emmet to river)	1420	X	X		X			X	$	2.5
WASHINGTON (Emmet to Howard)	1010	X	X	X		X			$$	5
WAUKAZOO (south of Myrtle)	160	X		X		X		X		3
WILLIS	2800			X		X			$$	2.5
WINTER PARK LANE	1670		X	X		X			$$	3.5

***Predominantely single family neighborhood +1; predominantly multiple family, or low income housing +2**
****Undeveloped or low density residential, dead-end street, one-block street, industrial area**

UPDATE 9-2015

TABLE 3
SIDEWALK CONSTRUCTION
TOP PRIORITY STREET SCORES

STREET	SEGMENT LENGTH IN FEET (APPROX)	HIGH PRIORITY AREAS						LOW PRIORITY AREA**	TOPO OR R.O.W ISSUES	STREET SCORE
		1/4 MILE SCHOOL (Value 1.5)	LEADING OR ADJACENT TO A PARK (Value 1)	RESIDENTIAL NEIGHBORHOOD* (Value 1-2)	COLLECTOR/ MAJOR STREET (Value 1)	NO SIDEWALKS (Value 1.5)	IMPORTANT CONNECTOR (Value .5)	(Value -1)		
WASHINGTON (Emmet to Howard)	520	X	X	X		X	X		$$	5.5
LOCKWOOD (South of Spruce)	290	X	X	X		X	X		$$	5.5
KRUSEL	610	X		X		X	X			4.5
PEARL	244	X		X		X	X	X	$	4.5
BEECH	590	X		X		X			$	4
BRIDGE (North side)	214		X	X	X					4
CARLETON	600	X		X		X				4
FULTON	700	X		X		X			$	4
JEFFERSON AVE	230	X		X		X	X		$	4
JENNINGS (Klondike to Lockwood)	1403	X		X	X		X		$	4
KALAMAZOO (Grove-Jennings)	1445	X		X	X		X		$$	4
MYRTLE	600	X		X		X			$	4
PETOSKEY (Sheridan to Washington Park)	332	X	X	X		X		X	$$	4
RUSH	960	X		X		X			$	4
WINTER PARK LANE	1670		X	X		X	X		$$	4
BEAUBIEN	870			X		X				3.5
CURTIS (S. of Morgan)	840		X	X		X				3.5
LAWRENCE	1210		X	X		X				3.5
MAPLE	540	X		X	X				$$	3.5
SHERIDAN	1810	X		X	X				$$	3.5
KLONDIKE	630	X		X			X			3
HOFFMAN (Kalamazoo to Karamol Ct.)	950	X		X		X		X		3
(Ottawa Sidewalk) **LINDELL (Kalamazoo to Karamol Ct)**	950	X		X		X		X		3
JACKSON (Charlevoix to W. Mitchell)	780	X	X			X		X	$	3

***Predominantely single family neighborhood +1; predominantly multiple family, or low income housing +2**

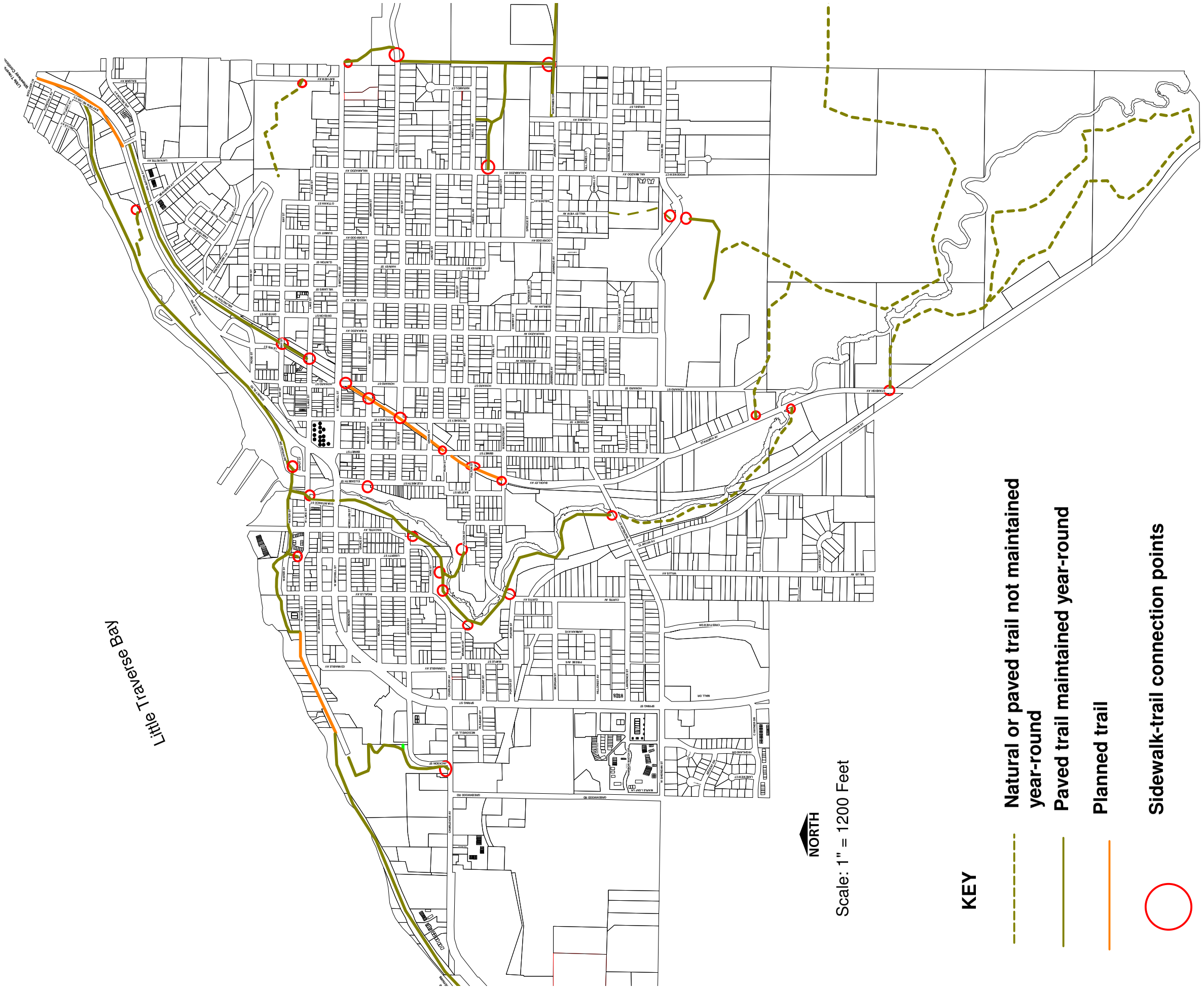
****Undeveloped or low density residential, dead-end street, one block street, industrial area**

CITY OF PETOSKEY

NON-MOTORIZED FACILITIES PLAN

FIGURE 2

Sidewalk-Trail Connections



Map created with Emmet County data by the Office of City Planner for illustrative purposes only (alt 11-2015)

NON-MOTORIZED FACILITIES

In addition to sidewalks, the City began constructing non-motorized trails thirty years ago as sections of larger, regional trail systems, including the Little Traverse Wheelway, Bear River Valley Recreation Area and the first phase of the Downtown Greenway Trail. Regionally, the construction of trails has accelerated dramatically in recent years as economic development and transportation alternative infrastructure. A recent study completed by the Top of Michigan Trails Council indicates that the trails in northwest-lower Michigan have usage of 100,000 individuals a year.[1] The extensive system of trails in northern Michigan can be found at www.upnorthtrails.org.

TABLE 4
Non-motorized trails within and maintained by the City of Petoskey

	Year completed	Length	Width	Surface
Little Traverse Wheelway	2008	8 miles (total trail 28 miles)	8 -10 feet	Asphalt and concrete
Bear River Valley (part of the North Country National Trail)	2010	1.06 (total trail 4600 miles)	10 feet	Concrete
Quarry Trail (spur of the Little Traverse Wheelway)	2013	0.37	10 feet	Asphalt
Downtown Greenway Corridor	2014	0.61	10 feet	Concrete

The City maintains these facilities for year-round use, which is funded through general tax dollars. The older sections, such as the Little Traverse Wheelway that runs through Bayfront Park, are in need of significant reconstruction and upgrading as standards for non-motorized facilities have changed from a width of 8 feet to 10 feet. The section along Bay Harbor also has several spots that have been

[1] http://www.trailscouncil.org/msu-trail-survey-64/

replaced but tree roots continue to push through, creating ridges in the pavement. Periodic replacement of the facility surfaces is budgeted through the Capital Improvements Plan (CIP), but as a regional facility, another funding source should be explored.

While trails are an extremely important part of the non-motorized facilities system, it cannot reach all areas for a complete non-motorized system. Therefore, enhancing streets for bicycle use is a necessary component, with bike route signing as the quickest, most cost effective method for prioritizing streets for bike use. The first phase of such a system was implemented in the city in 2011. Topography and traffic counts are two important considerations when deciding which streets to prioritize for biking, and keeping the routes on collectors or minor arterials creates connections to major facilities such as downtown, recreation areas and schools. Figure 3 illustrates how the on-street system connects to the trail network to create an overall system of non-motorized facilities, keeping in mind the context of Petoskey as a small city in a rural area without dedicated in-road biking facilities.

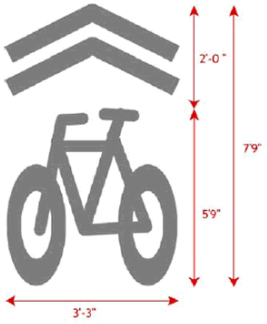
Designating streets for biking through signs is a good first step, but to truly encourage biking as a transportation mode, there are a variety of biking facilities that can be used. The most common is the designated bike lane. According to the National Association of City Transportation Officials (NACTO), bike lanes are most helpful on streets with a minimum average daily traffic of 3,000 motor vehicles, a posted speed of at least 25 MPH, and a high transit vehicle volume. City streets that meet the first two criteria include East Mitchell, Emmet, Standish, East Sheridan, Jennings, Kalamazoo, Howard south of Sheridan, and West Lake Street.

The benefits of bike lanes are to:

- Increase bicyclist comfort and confidence on busy streets.
- Create separation between bicyclists and automobiles.
- Increase predictability of bicyclist and motorist positioning and interaction.
- Increase total capacities of streets carrying mixed bicycle/motor vehicle traffic.
- Visually reminds motorists of bicyclists' right to the street.

Striping bike lanes requires sufficient street width to meet the American Association of State Highway Transportation Officials (AASHTO) standards (see Table 5), and enforcement of appropriate use of these facilities solely for bikes can be an issue (i.e., not allowing on-street parking). Re-striping would be required each year, but at a cost of 20 cents per lineal foot of 4" striping[2], it can also be a cost effective traffic calming method where other structural methods such as bump-outs or islands are not acceptable.

[2] City of Petoskey 2014 prices.



Shared lane pavement markings (sharrows) are bicycle symbols carefully placed to guide bicyclists to the best place to ride on the road, avoid car doors and remind drivers to share the road with cyclists. Unlike bicycle lanes, sharrows do not designate a particular part of the street for the exclusive use of bicyclists. They are simply a marking to guide bicyclists to the best place to ride and help motorists expect to see and share the lane with bicyclists.

Other on–street facilities - cyclo tracks and bike boulevards- and are detailed in Exhibit A and would require major changes to right-of-way configurations. Making changes to street geometrics is possible, but would likely occur with street reconstructions. Also, there is a limit to the benefit if there are on-street facilities only within the City limits. As a small city that serves as a regional service center, it is necessary to coordinate on-street facilities with other jurisdictions to create a regional system. Given the need for coordinantion, recommendations for on-street bike facility improvements have been divided into short and long-term recommendations (see below).

TABLE 5
Bike Facility Standards

Facility	Recommended minimum width*	Needed street width including 18" curb and gutter and 6" lane striping (Does not include 1' for center lane striping)
Travel Lane	11'	25'
With Bike lane one side/ two sides	5'	28'/33'
With marked 7' parking lane and 5' bike lane one side/ two sides	13'	35'/48'
With marked Shared parking/bike lane (one side)	12'	36'
Shared bike/ travel lane (Sharrow, one side/two sides)	16'	27.5'/35'

Source: *AASHTO 2012 Guide for Bicycle Facilities*
*AASHTO does allow 10' travel lanes, but the city has not used less than 11' to date.

The majority of Petoskey collector and minor arterial streets have a curb-face to curb-face width less than 36 feet, with the exceptions of Emmet (varies from 27-37 feet), Jennings and Standish (36 feet). Given the need for on-street parking in many neighborhoods, the options for separated bike facilities that meet AASHTO standards

are limited without major changes to curb lines. Alternatively, changes could be made that do not meet AASHTO standards, but move the City in the direction of enhancing use of street rights-of-way for bicycle use.

To implement the following recommended strategies, it will be necessary for the City to change the balance of street use from principally a vehicle focus to one that emphasizes shared use, as well as to work with neighboring jurisdictions to create a regional system.

Non-motorized facilities goals and objectives

- Increase use of shared use trails and streets for transportation and recreation.
- Improve the safety of biking and walking.
- Consider the needs of bicyclists and pedestrians in roadway design and public space amenities (i.e., bike racks, bike lockers).

Strategies

1. Complete installation of the on-street bike route system signs.

2. Promote the existing network of non-motorized facilities as a transportation method in addition to a recreational activity through wayfinding, maps, and websites.

3. Create a bike riding-centered event such as a "Bike the Drive"[3] to promote identified bike routes.

4. Continue funding for construction, replacement and maintenance of the trail system while working towards a regional trail authority.

5. Educate the public on the rights and responsibilities of pedestrians, bikers and drivers.

6. Increase the width of older sections of the Little Traverse Wheelway to the current 10 foot standard.

7. Work with MDOT to replace the existing sidewalk from the east City limit to the traffic signal at McDonald Drive with a 10 foot trail and possible relocation of the curb line to the south for additional separation.

New downtown bike corral in use

8. In the short term, identify streets where bike lanes, sharrows, or other separated facilities could be installed and develop a phasing schedule. Of priority importance should be areas with safety issues, including the section of West Lake Street between the Solanus Mission and Magnus Park where there is a

[3] Bike the Drive events are held in many cities including Chicago (www.bikethedrive.org), and Madison, WI ("ride the drive").

blind corner due to the hedge and people use the sidewalk thinking it is the Little Traverse Wheelway. Other improvements given existing street configurations are listed below and shown on Figure 4.

West Lake Street
- Post no-parking on West Lake from Ingalls to Magnus Park and put in bike lanes to address safety issues at W. Lake and Little Traverse Wheelway connection.
- From Bayfront Drive to US 31, remove bump outs and on-street parking and replace with dedicated bike lane.

Standish Avenue
- Post "No Parking" on the east side and install a bike lane
- Install sharrows on west side

Buckley Avenue
- Use of sharrows from Standish Avenue to Washington Street

Kalamazoo Avenue
- Post No Parking on west side from Grove to Jennings (up the hill) and stripe a 5 foot bike lane.

Hill Street
- Replace on-street parking on north side with a bike lane and post "No Parking"
- Install Sharrows on south side

East Sheridan – Emmet to Howard
- Install bike lane and post "no parking" on south side (uphill)

Jennings
- Post "no parking" on south side and install 5' bike lane and install a striped parking lane on the north side.

Downtown Greenway Corridor
- Acquire easements along rail corridor to extend corridor to Washington Street.

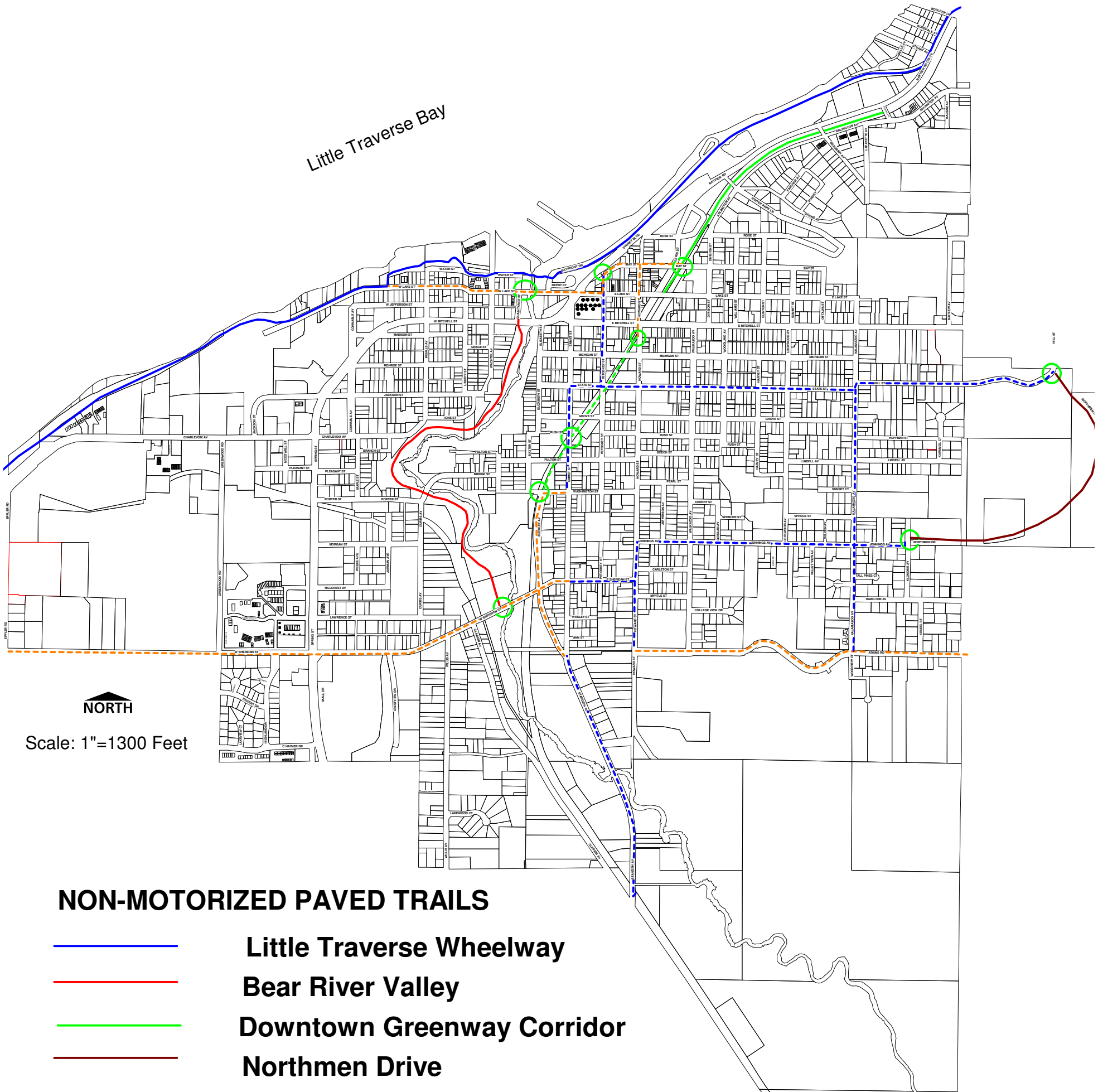
Clarion Avenue
- When this road is reconstructed, if curb and gutter is not added, add bike lane striping and post "No Parking".

9. In the long term, work with Emmet and Charlevoix Counties on a regional on-road biking system.

10. Consider bike facilities in all road reconstruction projects.

In summary, the City of Petoskey has done an excellent job of enhancing pedestrian and off-road cycling amenities over the past several decades. To maximize the use-ability of non-motorized facilities, there needs to be an interconnected off-road and on-road network. A connected, regional system of non-motorized facilities will help to increase mobility choices, relieve traffic congestion, reduce air pollution and fuel consumption, promote physical activity and healthy lifestyles, provide an economic generator and improve quality of life. The purpose of this plan is to ensure the focus on multi-modal transportation is continued by identifying additional opportunities for improvement.

City of Petoskey
Non-Motorized Facilities



NON-MOTORIZED PAVED TRAILS

- Little Traverse Wheelway
- Bear River Valley
- Downtown Greenway Corridor
- Northmen Drive

ON-STREET BIKE ROUTES

- Existing
- Planned
- On-road/ Off-road connection

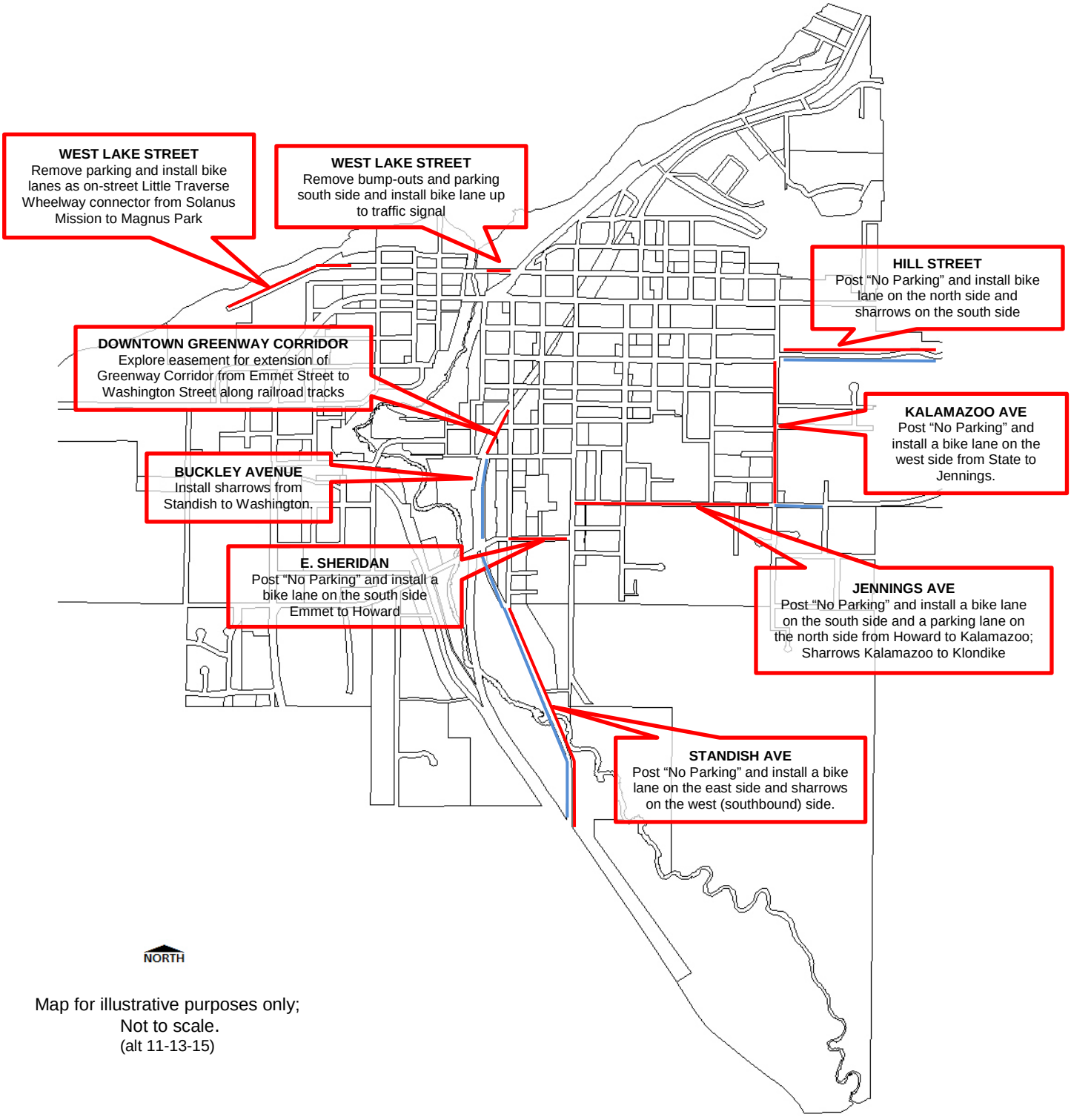
NON-MOTORIZE FACILITIES PLAN

FIGURE 3

Non-Motorized Facilities System

Map created with Emmet County and City data by the Office of City Planner for illustrative purposes only (alt 11-15)

Figure 4
Recommended Short-Term
On-street Bike Facility Improvements

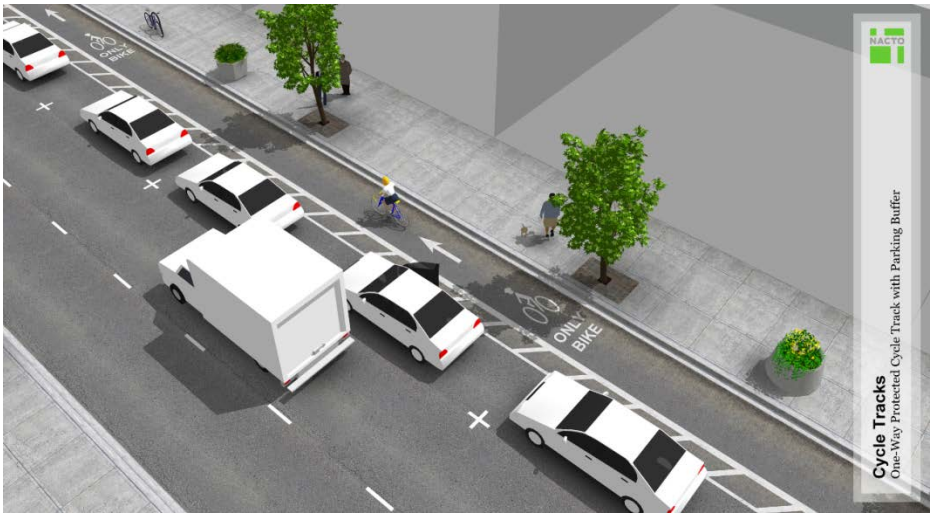


Map for illustrative purposes only;
Not to scale.
(alt 11-13-15)

APPENDIX A
Urban Bikeway Design Guide[i]

Cycle Track

A Cycle Track can be a one or two-way protected bike-way that uses a variety of methods for physical separation from traffic (see illustrations below).



Cycle Track Benefits

- Dedicates and protects space for bicyclists in order to improve perceived comfort and safety
- Eliminates risk and fear of collisions with over-taking vehicles
- Reduces risk of “dooring” compared to a bike lane and eliminates the risk of a doored bicyclist being run over by a motor vehicle
- Prevents double-parking

Typical Applications

- Streets with parking lanes
- Streets with high bicycle volume
- Streets with high motor vehicle volumes and/or speeds

Two-way cycle tracks (also known as protected bike lanes, separated bikeways, and on-street bike paths) are physically separated cycle tracks that allow bicycle movement in both directions on one side of the road. Two-way cycle tracks share some of the same design characteristics as one-way tracks, but may require additional considerations at driveway and side-street crossings.

Bicycle Boulevards

Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.

A bicycle boulevard should be considered where local streets offer a continuous and direct route (i.e., few stop signs) for bicyclists along low-traffic streets. Designated bicycle boulevards should be on streets that have fewer than 3,000 ADT and an 85th percentile speed of no more than 25 mph.

[i] Information provided is from the National Association of City Transportation Officials (NATCO) "Urban Bikeway Design Guide"


SPEED
LIMIT
20
Bicycle Boulevard
Bicycle Boulevards
Bicycle Boulevard Signs and Pavement Markings - Identification Sign