



A non-motorized transportation plan for the City of Hastings



# **Bike Master Plan**

**2016**



*“ Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody. ”*

*-Jane Jacobs, The Death and Life of Great American Cities*



# Acknowledgements

## **CITY OF HASTINGS**

Jeff Mansfield, City Manager

Lee Hays, Public Works Director

Alan Klein, Community Development Director

Jim James, Superintendent of Streets & Construction

Jeff Pratt, Chief of Police Department

## **STEERING COMMITTEE**

Tracy Baker

Randall Bertrand

Levi Bolthouse

Troy Dalman

Tom Wilt

## **CONSULTANT**

Williams & Works

**williams&works**  
engineers | surveyors | planners



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# 01 // Introduction



# Introduction

## BIKE PLAN PURPOSE

The **purpose** of the Hastings Bike Plan is to help guide the City to become a more bike-friendly community, where convenience and safety encourage residents and visitors to utilize bicycling as a healthy alternative to driving a personal vehicle.

The Hastings Bike Plan identifies and provides implementation strategies for recommendations that are intended to assist the City in evolving into a place where people of all ages and abilities are encouraged to bicycle for any purpose. Ultimately, the Hastings Bike Plan aspires to encourage more people to use a bicycle as a mode of transportation.

The **vision** of the Hastings Bike Plan is to:

- Create new and enhance existing bike route connections to destinations in Hastings and adjacent communities.
- Develop a plan for a Citywide bicycle network that includes arterial and neighborhood routes.
- Build on the existing and planned bicycle facilities and multi-use trails.
- Improve bicycling safety through enhanced signage and installation of bike lanes.
- Prioritize improvements to the bicycle network and planning actions for implementation.
- Develop goals and policy recommendations in the areas of education, encouragement, enforcement and evaluation.
- Increase bicycle ridership by removing barriers, improving facilities and providing more information.

# Introduction

## BIKE PLAN PROCESS

In order to provide carefully considered asset, planning, and design recommendations for the Bike Plan, the following approach was utilized:

### 1 DISCOVER

**Review.** Conducted a comprehensive review of all relevant local and regional transportation, recreation, and land use data to understand place-based assets and opportunities.

**Inventory.** Reviewed and analyzed the current assets of the community through bike and walking tours, GIS mapping, and data collection; building an understanding of how the assets align with existing community goals and objectives for connectivity.

### 2 ENGAGE

**Phase 1.** A steering committee meeting and a bike tour analyzed existing conditions.

**Phase 2.** A community meeting presented potential bike connections and potential future street cross sections depicting bike facilities (sharrows, on-street lanes, protected bike lanes, etc.).

**Phase 3.** A steering committee meeting reviewed community input, revised the plan, and set priorities and strategies for implementation.

### 3 CREATE

**Prepare.** A draft and final Bike Plan that is actionable and reflective of community assets, values and input was completed. The draft was available for public consideration and comment before the final Bike Plan was adopted.

**Implement.** The final Bike Plan was the product and strategies for implementation will help the City complete the recommendations and vision of the Plan.

# Introduction

## REVIEW

Collected and Reviewed  
Relevant Traffic/Streets/  
Planning/Community Data

**1**  
**DISCOVER**

**INVENTORY**  
Completed inventory  
of City Street Space  
and Community  
Assets/Attractions

**2**  
**ENGAGE**

**3**  
**CREATE**

## PREPARE/ TEST

Prepared draft and  
Final Bike Plan;  
Demonstrated  
Implementation  
Opportunities

## STEERING COMMITTEE/PUBLIC

Engaged and collaborated with City staff,  
stakeholders, and members of the public on  
potential routes, recommendations, facilities, and  
implementation strategies

## 02 // Community Background



# Community Background

## REGIONAL LOCATION AND CONNECTIONS

The City of Hastings is located in the southwestern lower peninsula of Michigan, centrally positioned between the metropolitan areas of Kalamazoo/Battle Creek, Grand Rapids, and Lansing. The City is the county seat of Barry County, and is the County's only city.

The City borders Hastings Charter Township to the north, east and south, and Rutland Charter Township to the west, and has a total area of approximately 5.28 square miles. M-37 and M-43 converge in the City and provide connections to larger regional cities, U.S. 131, Interstate 96, Interstate 94, and Interstate 69.

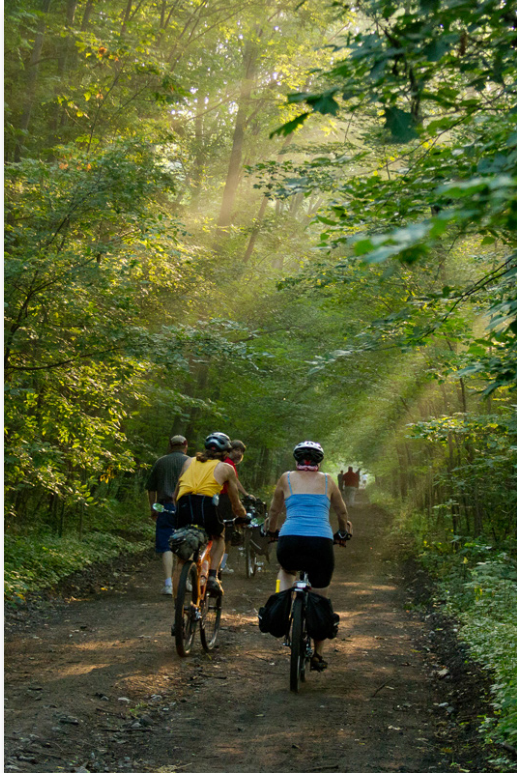
The regional Paul-Henry Thornapple Trail, a multi-use trail, bisects the City. The trail is in close proximity to the Thornapple River, and when completed, will be a 42-mile multi-use recreation trail extending from Grand Rapids to Vermontville, MI.



# Community Background

## PHYSICAL CHARACTERISTICS + NATURAL ENVIRONMENT

The City of Hastings' natural features and rural context are important in defining its small town charm and quality of life. The topography of the City ranges from undulating in the northwest and southwest to relatively flat in the central area. The surrounding land is characterized by rolling topography with numerous lakes, streams and wetlands. Barry County is one of the more wooded counties in southern Michigan and is home to over 250 lakes. Carter Lake touches on the City's northern boundary, with Algonquin Lake to the west. The Thornapple River is the City's most notable natural feature, running east to west through the center of the town. The river defines a number of the City's parks and provides fishing and canoeing/kayaking opportunities. The City is also a short distance from the Barry State Game Area, Middleville State Game Area, and the Yankee Springs Recreation Area which together include thousands of acres of public forested land.



*Bicyclists on Thornapple Trail*

# Community Background

## LAND USE + HOUSING

The City of Hastings provides a variety of different housing opportunities based on both age and density. According to the 2010 U.S. Census data, there are a total of 3,231 housing units in the City, of which 2,910 are occupied.



Older single family, medium density residential neighborhoods surround the Downtown area. Rural and suburban residential areas are located on the west edge of the City, while multi-family units and apartments are concentrated north of Woodlawn Avenue. A mobile home park is located in the southeast of the City. The Central Business District includes land north and south of East State Street with adjacent mixed commercial, office and residential areas. A second Commercial District is located along West State Street to the City limits, and an industrial park is located on the southeast side of the City. A large portion of the land along the Thornapple River is designated floodplain.

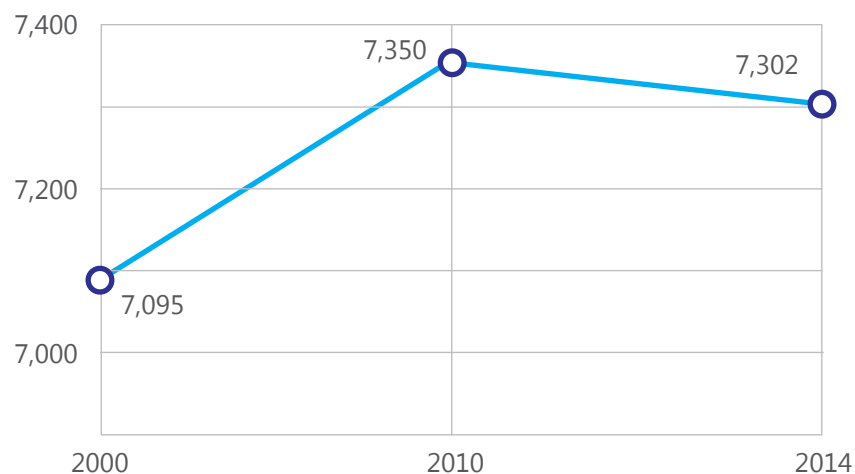


*Aerial Photo  
of downtown  
Hastings*

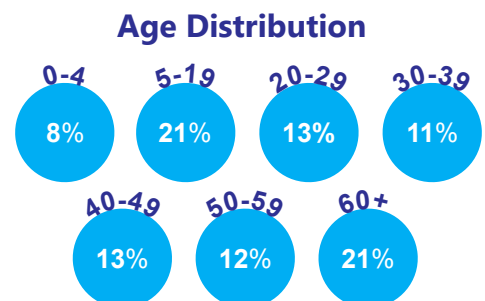
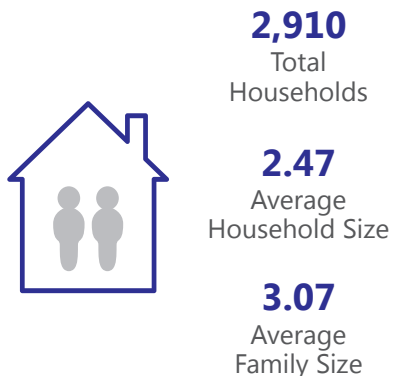
# Community Background

## DEMOGRAPHICS + ECONOMY

The 2010 U.S. Census indicates a population in the City of Hastings of 7,350, which represents a 3.5% increase from the 2000 Census, while 2014 Census data estimates a population of 7,302.



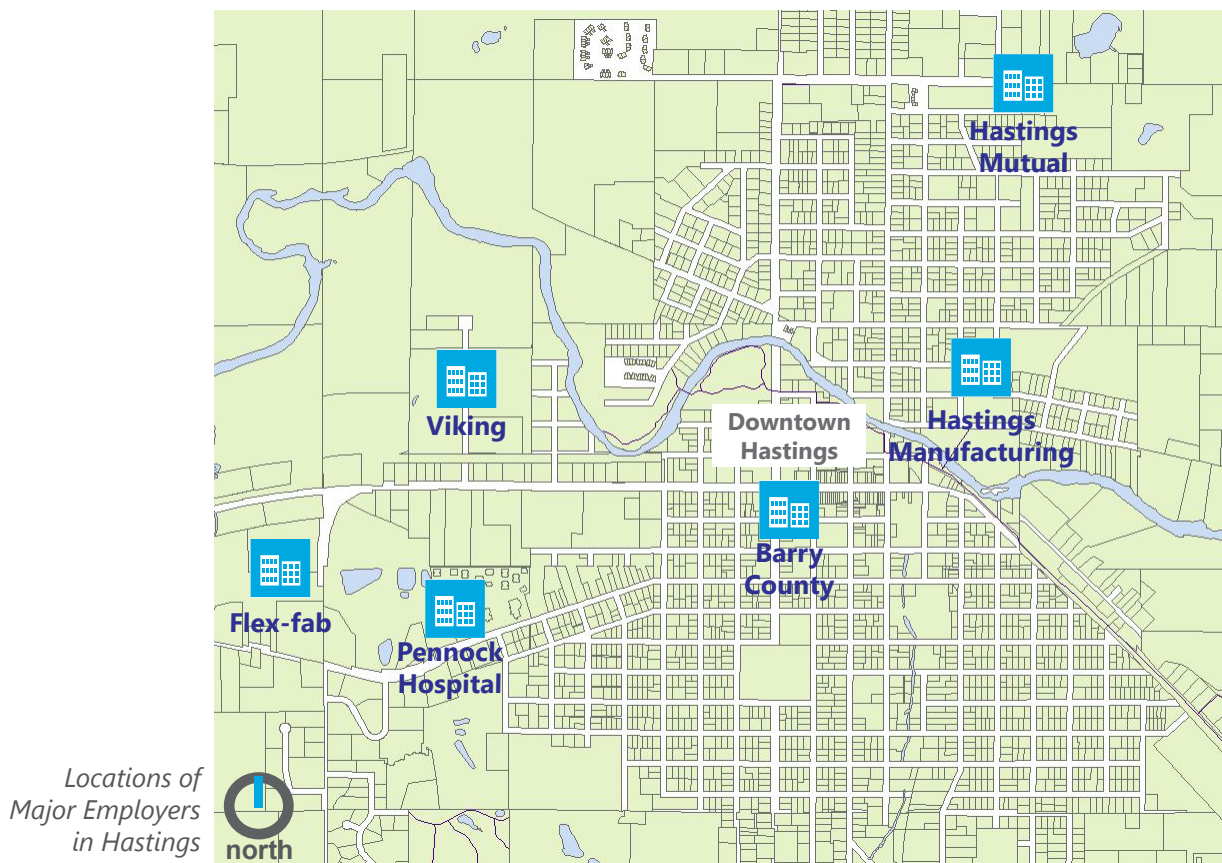
The median age of City of Hastings residents in 2010 is 36.2, slightly below the median age of Barry County as a whole (41.2) and the State of Michigan (45.5). The population based on gender is 3,445 male and 3,905 female. The City's age distribution reflects a need for bicycle infrastructure for young, active families, commuters, and accessible facilities for the aging population.



# Community Background

The 2010 U.S. Census Bureau data indicates a median household income level of \$40,542, compared to \$39,033 in 2000. The median income level in the City is about 13% lower than that of the County and the State of Michigan. Maintaining a bicycle is less expensive than maintaining a personal vehicle. Residents of the City from a variety of income levels may benefit from a safe, well-connected bicycle network as an alternative to driving, potentially improving quality of life.

The City of Hastings has a wide variety of employers and has experienced some growth in its employment base with new businesses locating in the downtown area. The more prevalent industries in the community include manufacturing, retail, services, and health care. Major employers in the City include Pennock Hospital, Hastings Manufacturing Company, Flex-Fab, Hastings Mutual Insurance, Viking and Barry County government. Given the relatively close proximity of major employers to existing housing stock, expanding the current network of trails, pedestrian walkways and potential bicycle lanes may encourage residents to use biking as an alternative mode of commuting.



## 03 // Existing Conditions



# Existing Conditions

## BICYCLE INFRASTRUCTURE IN HASTINGS

Currently, the City of Hastings does not specifically accommodate bicycles with dedicated bicycle facilities or bicycle lanes. Despite this lack of bicycle infrastructure, the Paul-Henry Thornapple Trail acts as a significant off-street multi-use path network traversing the community; however, connections to the trail are limited. Nonetheless, the City has made attempts to accommodate bicyclists by installing bike racks in the Downtown streetscape.

## PAUL-HENRY THORNAPPLE TRAIL

The Paul-Henry Thornapple Trail is a partially-completed “rail trail” extending 42 miles from Vermontville, Michigan, northwest to Grand Rapids. The trail was previously the Grand River Valley Railroad, constructed in 1868, but service on the line ended in 1983. Today the trail is a popular recreation destination in the region, accommodating residents of the communities of Hastings, Middleville, Caledonia and elsewhere in Barry County and Kent County.

The completed portions of the trail consist of paved or grass/gravel surfaces, and take users through the heart of the Thornapple River Valley, along farmland, wetlands, woodlands and quaint towns. The Thornapple Trail extends through the heart of downtown Hastings, along the Thornapple River. This area of the City is referred to as the Hastings Riverwalk.



*Thornapple Trail Location*

# Existing Conditions

## **BARRY-ROUBAIX RACE**

The City of Hastings and Barry County is known for the Barry-Roubaix, one of the country's most popular on-road / off-road cycling races, featuring a variety of terrain and surfaces. The race route traverses the roadways throughout the City of Hastings and Barry County and is open to cyclists of all performance levels. Started in 2009, the race is held annually on the fourth Saturday in March and attracts over 3,000 participants. As part of their training, racers frequently practice in the City, and have requested safer accommodations and facilities for bikes year round.



*Barry-Roubaix Race*



*Thornapple Trail*

# Existing Conditions

## EXISTING ROAD NETWORK

The City of Hastings generally consists of an traditional “grid” street layout. This street network allows efficient vehicular and non-motorized connectivity and access.

Most roadways are maintained by the City of Hastings and are considered “local streets”, with the exception of M-43 and M-37, which are two major thoroughfares extending through the city and owned and maintained by the Michigan Department of Transportation. Michigan Avenue is a north-south major street linking downtown Hastings and the north and south portions of the City. State Street (M-37) is the major east-west thoroughfare in the City directing access through the major commercial/retail areas and downtown Hastings.

The Department of Public Services maintains an infrastructure inventory and capital improvements plan to prioritize major and local street improvements. The Department also monitors and responds to the need to provide winter maintenance services in a timely manner.

## EDUCATIONAL FACILITIES

There are five public school sites located within the City of Hastings, including:

- **Hastings High School** is located on a 54 acre site in the southwest of the city, including a community education and recreation center with a community swimming pool.
- **Hastings Middle School** is centrally located, north of downtown.
- **Central Elementary School** is contiguous with the Middle School site.
- **Northeastern Elementary School** is located in the northeastern portion of the city.
- **Southeastern Elementary School** is located in the southeastern portion of the city.

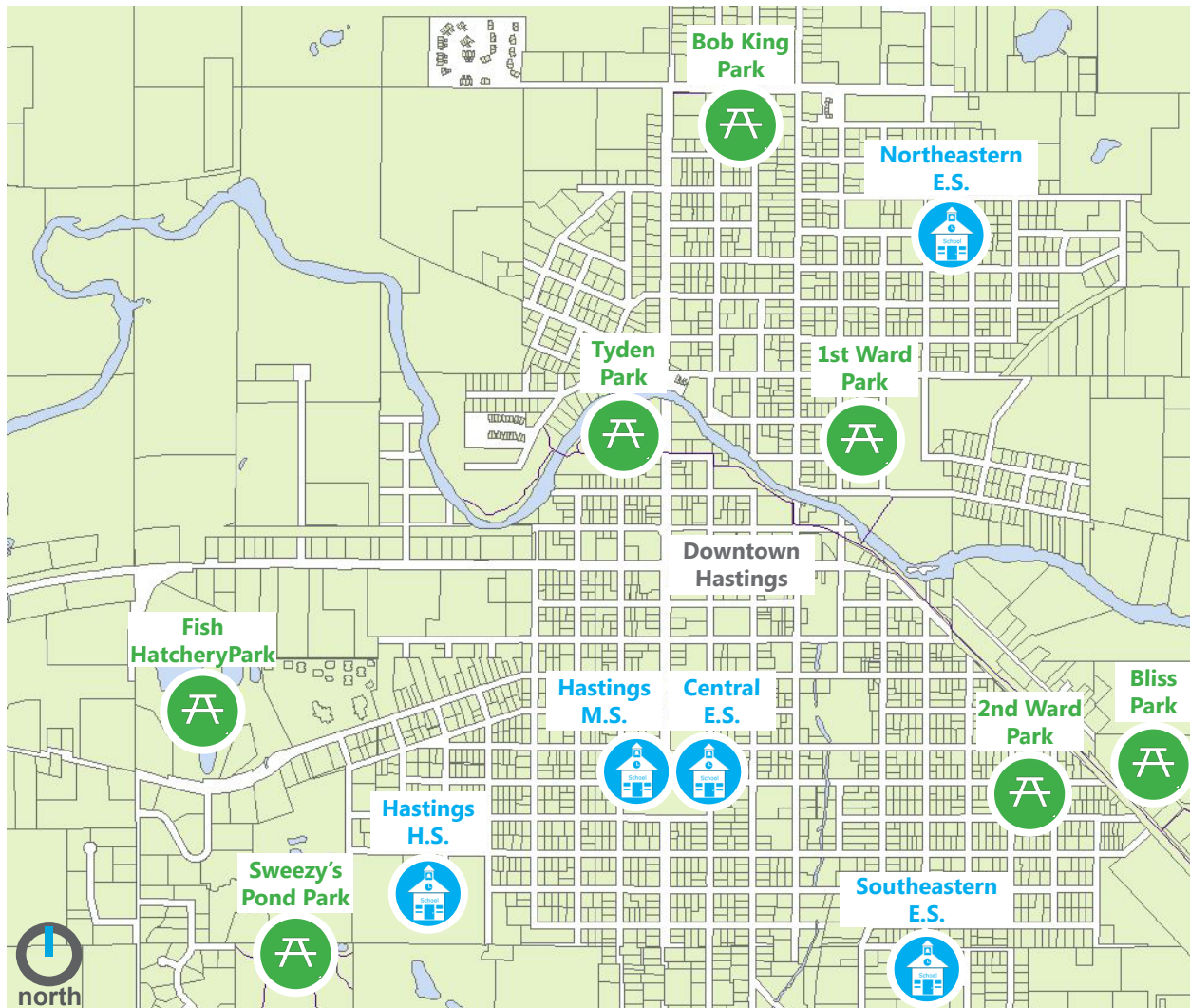
# Existing Conditions

## PARKS

There are several public park and open space locations throughout the City of Hastings. Each of these spaces offer area residents direct access to their amenities and are easily accessible by vehicle, bicycle or foot.

- **Tyden Park** is adjacent to downtown Hastings, offering direct access to the Thornapple Trail and River. The park includes volleyball courts, basketball courts and a canoe/kayak launch.
- **Bob King Park** is located at the north end of Hastings on the south side of Woodlawn Avenue
- **Fish Hatchery Park** is located next to Pennock Hospital on Green Street, and is the largest park in Hastings. The park is a site for concerts, softball games, tennis matches, soccer tournaments, basketball games and picnics.
- **1st Ward Park** is a small pocket park located on the southeast corner of Boltwood Street and High Street.
- **2nd Ward Park** is a small pocket park located on the southeast corner of Montgomery Street and Bond Street.
- **Bliss Park** is located along the Thornapple Trail near the intersection of State Street and Star School Road.
- **Sweezy's Pond Park** is located near the southwest portion of the city, adjacent to Hastings High School.

# Existing Conditions



*Location of Public Parks  
and Educational Facilities*

## 04 // Community Outreach



# Community Outreach

As with any community project, it is critical that the citizenry and other stakeholders be involved during the planning process. As part of the delivery of the Hastings Bike Plan, the consultant team and bike committee conducted a community and stakeholder engagement process to inform the planning and implementation of strategies to deliver the Plan's key goals and objectives and uphold the Bike Plan vision.

With a clear understanding of the current conditions in the community and with an inventory of current bike and recreation facilities, the planning team solicited citizen input and developed policy designed to guide the City in implementing the Bike Plan.

This summary outlines the City Hastings' community engagement framework, consultation activities, and outcomes.

## community outreach objectives

- 1** To provide opportunities for the community to participate in the City of Hastings' decision making process ensuring outcomes that benefit the community.
- 2** To provide a strong foundation for understanding and working with the community - promoting a shared responsibility for decisions and trust in the decision making process.
- 3** To develop sustained collaboration, partnerships and new ways to involve and empower the community to implement the Bike Plan.

# Community Outreach

## **STEERING COMMITTEE**

As a method of collaboration, a steering committee was formed with the intent of identifying opportunities and constraints in developing the bike plan. The steering committee included City staff, residents and community stakeholders. Strategic decisions were made with the assistance and input of the steering committee. The Project Team met with the Steering Committee four times during the planning process.

## **KICKOFF MEETING**

A well planned kickoff meeting sets the tone for a successful project. On January 20, 2016, a kickoff meeting was held at Hastings City Hall for the Project Team to collaborate with City officials. The first project meeting offered an opportunity to discuss the plan for leading the project to a successful completion. This meeting provided the framework to set proper expectations and establish guidelines that helped the project team stay on time and within budget.

## **BIKE TOUR**

On June 9, 2016, the project team and steering committee met for a bike tour of the City. The purpose of the tour was to analyze existing conditions and the potential for future bike lane locations and facilities. The team traveled the City via bicycle, making various observations such as street right-of-way width, on-street parking constraints, traffic volumes access to parks, schools and existing trails, as well as overall safety and comfort level of traveling the City via bicycle.

## **COMMUNITY OUTREACH EVENT & OPEN HOUSE**

An additional outreach method the project team undertook an open house meeting at the Walldorff Brewpub in downtown Hastings on August 10, 2016. This event allowed the project team to meet citizens and solicit feedback on the Plan. The project team presented the plan to the group and provided handouts, comment cards and posters to convey information regarding the process of developing the bike plan, proposed recommendations and implementation strategies.

# Community Outreach



## COMMUNITY OUTREACH EVENT



Let's talk about the proposed **BIKE PLAN** in Hastings

# Community Outreach

## COMMUNITY COMMENTS

"We prefer  
bike lanes over  
sharrows"

"Go all in on doing  
the complete  
proposed project  
(paint and stripe all  
streets)"

"Add signage when  
possible"

"Add bike  
parking"

"Pay the extra money to  
stripe in different colors  
to differentiate between  
white lines"

"Add signs at entrance to the  
City - This is a bike friendly  
community, use caution and  
share the road"

"Make sure  
everything is very  
well marked - add  
side street and  
overhead signs"

"Add connections to all  
schools in the city"

# Community Outreach

## COMMUNITY OUTREACH THEMES

Themes help to take the temperature of a community and reveal important issues that assist in guiding the planning process. Themes are the building blocks for setting the goals and strategies vital to the implementation of a plan and help to provide a citizen's perspective of how to address various issues. The following themes are representative of the comments received during the Open House in both written and spoken word and include generalized comments under each:

### Full Implementation

- Add bike lanes over sharrows
- Stripe in different colors
- Install bike parking for all bikes

### Signage & Symbolology

- Build bike wayfinding system directing bike traffic
- Use similar and familiar bike symbolology
- Install overhead bike signage

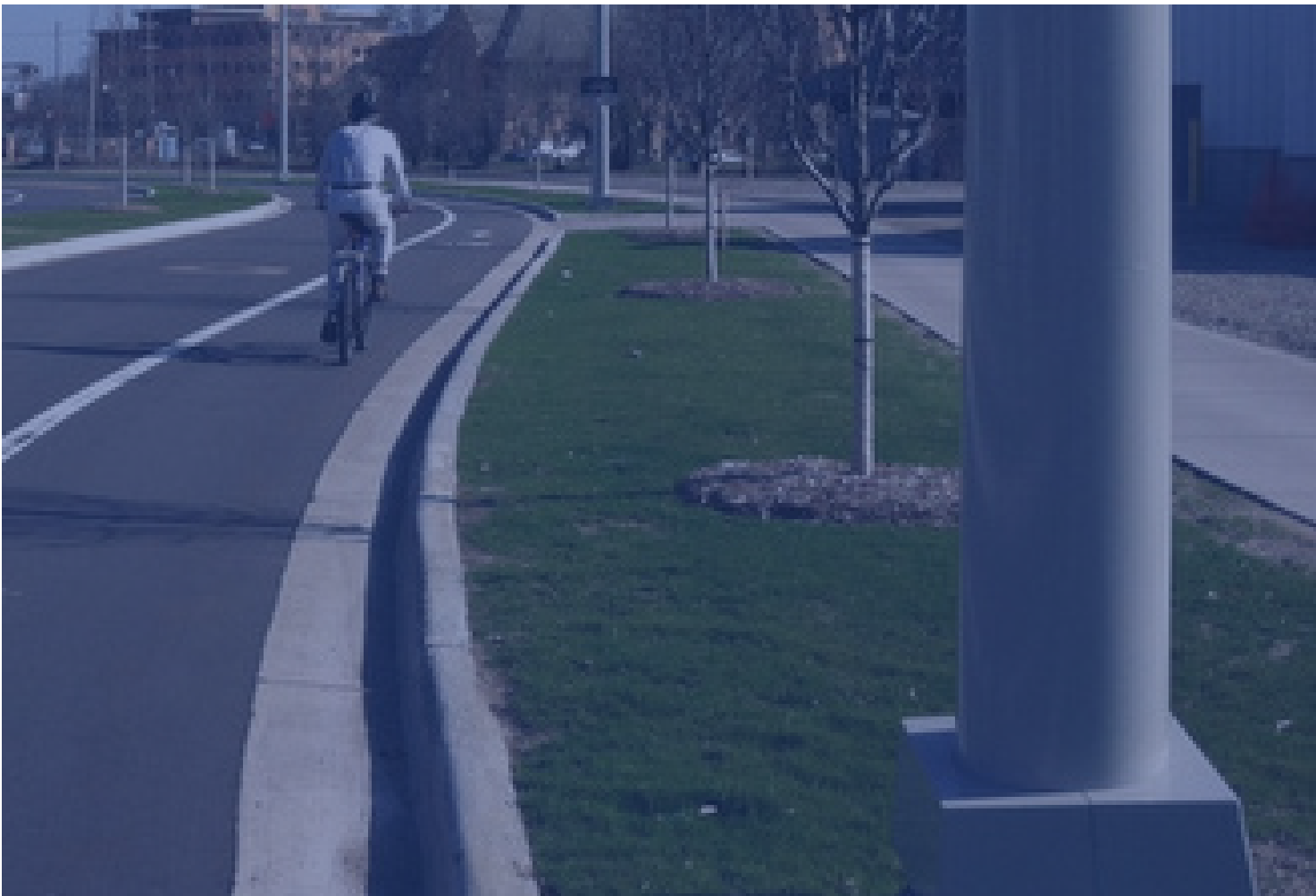
### Education

- Show that Hastings is bike friendly
- Teach how to share the street
- Distribute informational pamphlets around town

### Safety

- Enforce traffic speeds
- Reduce traffic speeds
- Educate riders and motorists on bike safety
- Connect all schools with bike facilities

# 05 // Plan Recommendations



# Plan Recommendations

## OVERVIEW OF RECOMMENDED BIKE NETWORK

The rationale for determining potential bike route locations and facilities was based on a number of factors. To create a feasible and robust bike plan, the Project Team established the following priorities:

### Accessibility and Connectivity

One of the primary objectives of this bike plan is to develop a system of routes which connect to key destinations throughout the City. These destinations include parks, schools, major employers, Downtown Hastings and the Thornapple River and Riverwalk Trail. Additionally, the Steering Committee wanted to place all facilities on city-owned streets. Finally, to manage cost, bike facilities were to be placed within the existing curb to curb space.

### Safety

The majority of the U.S. public is interested in biking but concerned about safety. Residents' willingness to ride is highly influenced by the quantity and quality of bike lanes available to them. According to the National Association of City Transportation Officials (NACTO), in cities that are building protected bike lane networks, bicycling is increasing and the risk of injury or death is decreasing. NACTO's latest analysis shows that investment in bike lanes spurs additional cycling, increasing visibility and further reducing risk for all cyclists.

Cycling is on the rise in the United States and there is a clear correlation between an increase in the number of cyclists on city streets, growth in a city's bike lane network and an improved safety rate for riders.

The recommendations outlined in this plan took into consideration the safest routes available to potential riders.

### Encouraging Bicycle Ridership

The plan considers a broad range of bicyclists. Bicyclists vary by age, experience and knowledge, fitness levels, destinations and trip purposes.

### Quality of Life

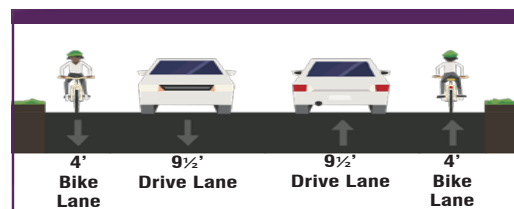
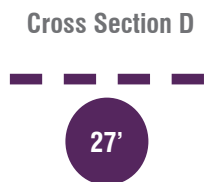
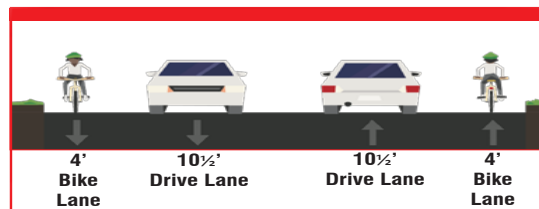
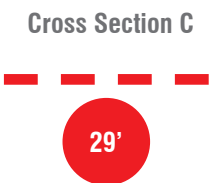
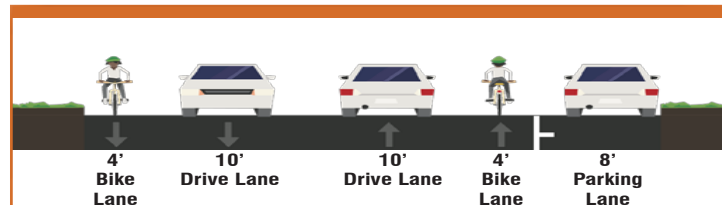
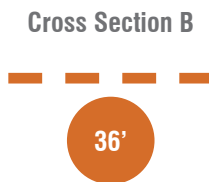
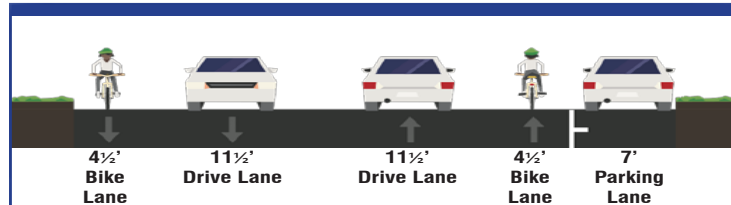
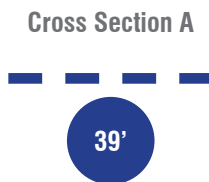
Bicycle and pedestrian facilities are a proven way to increase quality of life and support public health through increased physical activity. Walking and biking also provide low-cost transportation options and may reduce the overall cost of living.

## RECOMMENDED BIKE ROUTES



# Plan Recommendations

## RECOMMENDED BIKE FACILITIES



# Plan Recommendations

Cross Section A



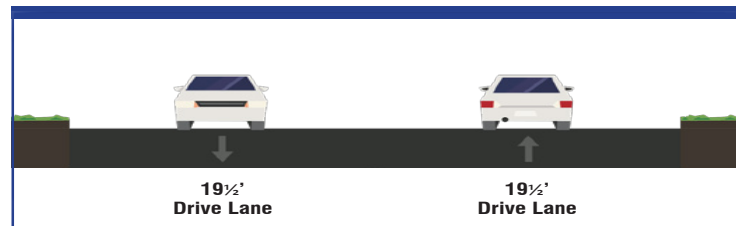
## Existing:

Two 19.5' drive lanes.

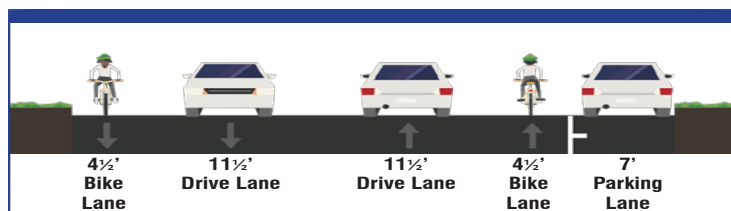
## Proposed:

Two 4.5' bike lanes, two 11.5' drive lanes, and a 7' parking lane.

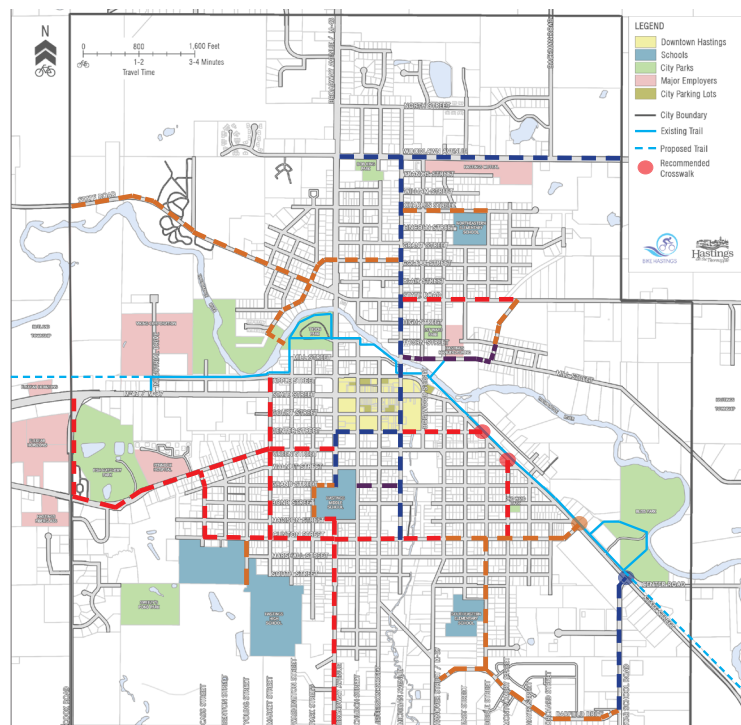
## EXISTING



## PROPOSED

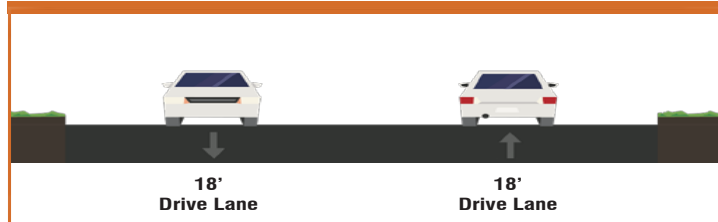


An example of the proposed Cross Section A bike facilities implemented on Kalamazoo Avenue in Grand Rapids.

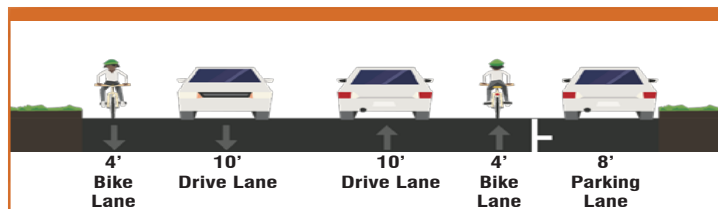


# Plan Recommendations

## EXISTING



## PROPOSED



### Cross Section B

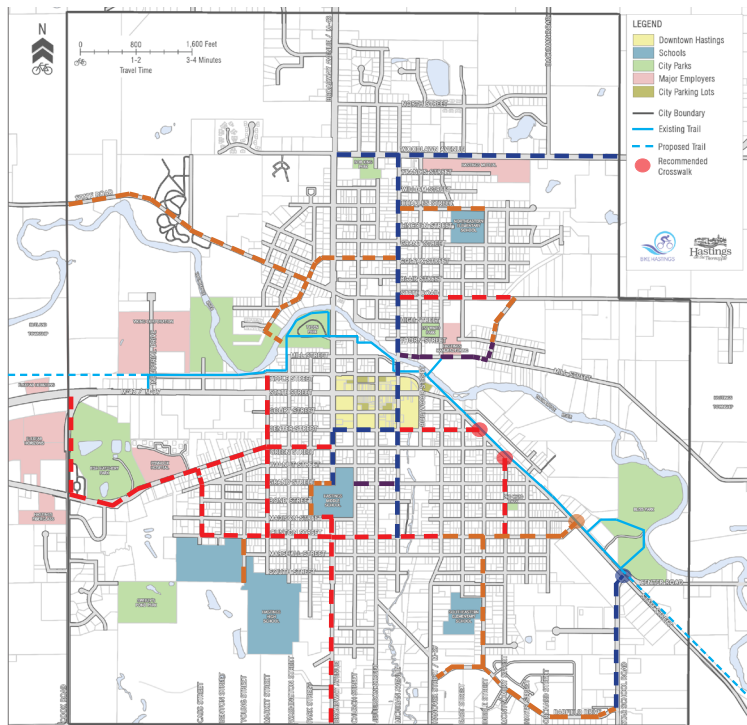


### Existing:

Two 18' drive lanes.

### Proposed:

Two 4' bike lanes, two 10' drive lanes, and an 8' parking lane.



An example of the proposed Cross Section B bike facilities implemented on State Street in Grand Rapids.

# Plan Recommendations

Cross Section C



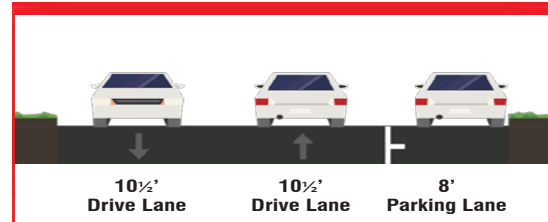
## Existing:

Two 10.5' drive lanes.

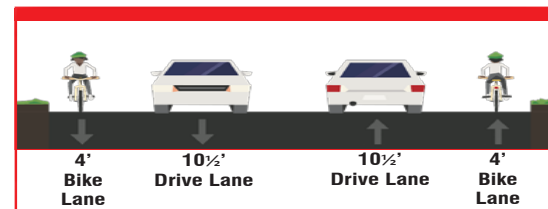
## Proposed:

Two 4' bike lanes, two 10.5' drive lanes, and the elimination of the 8' parking lane.

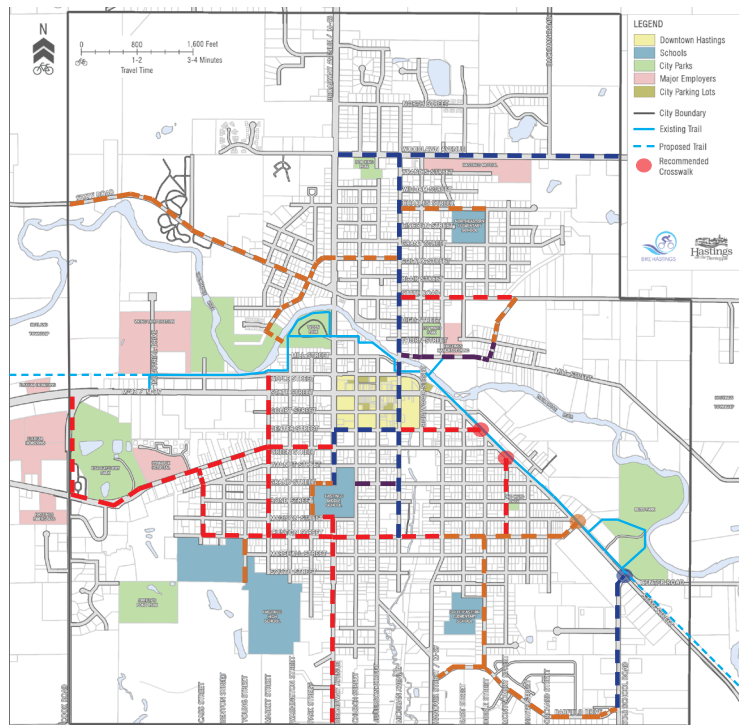
## EXISTING



## PROPOSED

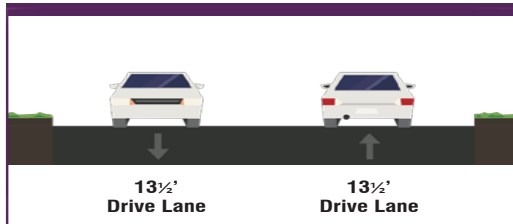


An example of proposed Cross Section C bicycle facilities implemented on a neighborhood street.

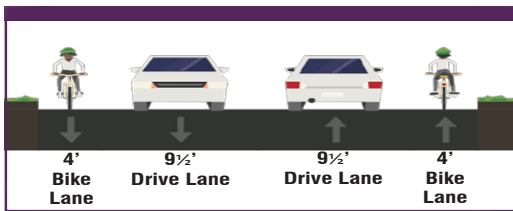


# Plan Recommendations

## EXISTING



## PROPOSED



## Cross Section D

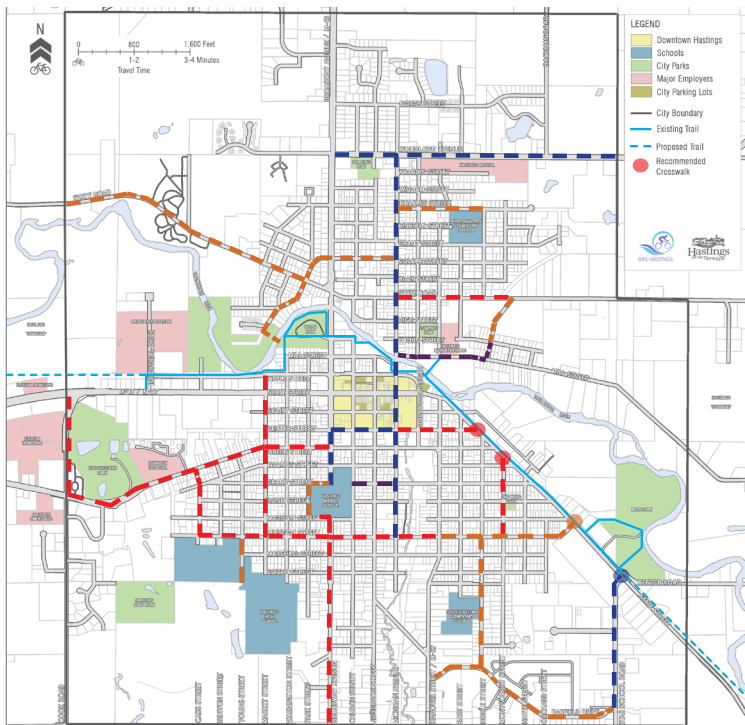


### Existing:

Two 13.5' drive lanes.

### Proposed:

Two 4' bike lanes and two 9.5' drive lanes.



An example of proposed Cross Section D bicycle facilities implemented with green lane paint.

## 06 // Plan Implementation



# Plan Implementation

For the Hastings Bike Master Plan to have its intended impact on the City of Hastings community, it must be implemented. Creating a bike friendly community is a comprehensive process which requires multiple steps and actions. The following pages include implementation steps and details related to why, when, and how the Bike Master Plan will move forward.



# Plan Implementation

## DEVELOP A BICYCLE SAFETY AND AWARENESS CAMPAIGN

**WHY:** For the safety of both bicyclists and motorists it is necessary to have a bicycle safety and awareness campaign which lays out the purpose of bike lanes, how to interact with bicyclists, the responsibilities of being a bicyclist in the roadway, and hand signals.

**WHEN:** Winter, Spring, Summer 2017: before, during, and after bicycle facilities installation

### HOW:

- *Host a bicycle safety and awareness kick-off event prior to re-striping City streets with bike lanes*
- *Participate in National Bike Safety Month*
- *Produce or utilize a an existing bicycle safety and awareness pamphlet*
- *Distribute pamphlet to local businesses*
- *Advertise around the City using bulletin boards, local newspaper, internet resources*



The City of Grand Rapids established "Driving Change GR" as a city-wide bicycle safety campaign.



Share the road, or similar bicycle awareness signage, should be placed at gateways to the City.

# Plan Implementation

## INSTALL BIKE FACILITIES PER RECOMMENDATIONS

**WHY:** The primary implementation step is to fully install the bicycle facilities that are outlined in the plan recommendation section as a two-year pilot project.

**WHEN:** Spring 2017

### HOW:

- *Re-stripe all City Streets per recommended bike route map*
- *Add bicycle signage to routes*
- *Utilize consistent bike symbology*
- *Install bike racks in parks and public gathering places*
- *Install bike repair stations along routes, in parks, and in public gathering spaces*



An example of a bicycle repair station installed on a public sidewalk.



Signs similar to the example above should accompany bike lanes throughout the City when possible.



# Plan Implementation

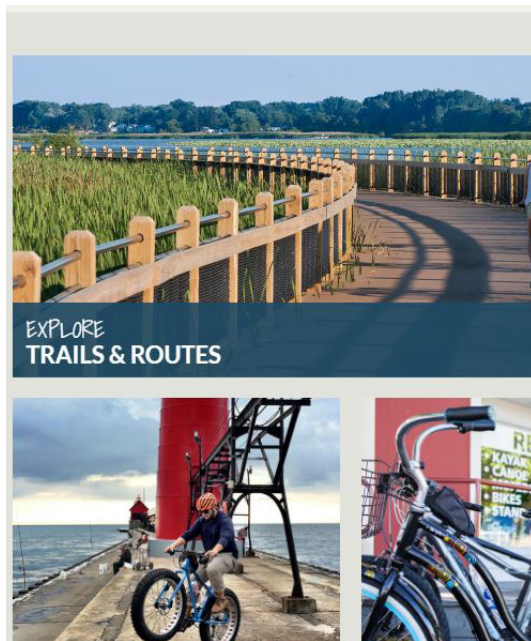
## ENGAGE THE PUBLIC + ORGANIZATIONS

**WHY:** Building long-term relationships in neighborhoods and local leaders is essential to spreading information, getting feedback and building local support for bike-related projects.

**WHEN:** Winter, Spring, Summer 2017, and beyond: before, during, and after bicycle facilities installation with continually updated website and active email account

### HOW:

- *Add page or tab about biking to the City's website*
- *Keep an open line of contact with bike groups and the public by providing a dedicated e-mail address for bike related issues*
- *Collaborate and communicate with the County Health Department, hospitals, Barry Roubaix, and league of American Bicyclists*



The City of Grand Haven provides a web page as a guide for biking in the community.



The City could partner with the Barry-Roubaix race on annual public engagement and bicycle education at the event.

# Plan Implementation

## ENFORCEMENT + MAINTENANCE

**WHY:** The City of Hastings must have a legal framework for enforcing the recommendations and help to implement the Hastings Bike Master Plan; including but not limited to parking in bike lanes, providing bike racks in new developments, and safe passing distances. Maintenance must also be incorporated into the policy framework of City departments for continued implementation and infrastructure success.

**WHEN:** Begin as soon as possible

### HOW:

- *Enact an ordinance to prohibit parking in bike lanes*
- *Enact an ordinance to require a car passing distance around a bike of 5 feet*
- *Amend the Zoning Ordinance to require or incentivize bike racks in new development*
- *Clear roads continually and sweep roads in the spring*



Without enforcement, motorists may use bike lanes for on-street parking.



Some communities have used warning stickers as an education strategy before writing tickets.

# Plan Implementation

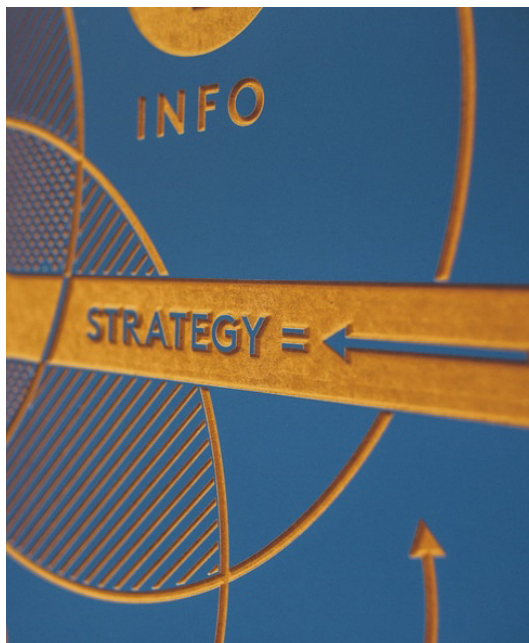
## INTEGRATE BICYCLES INTO ALL EXISTING AND FUTURE CITY OF HASTINGS DESIGN + PLANNING DOCUMENTS

**WHY:** It is important for all planning documents in the City to incorporate or reference bicycle infrastructure so that they align with one another. Comprehensive planning requires cohesive policies which complement the Bike Plan goals and objectives.

**WHEN:** Begin as soon as possible, with regular updates which continue to address bicycle facilities and planning for bicycle infrastructure

### HOW:

- *Review and update (if necessary) the Master Plan*
- *Review and update (if necessary) the Parks and Recreation Plan*
- *Review and update (if necessary) the DDA Plan*
- *Review and update (if necessary) the Capital Improvement Plan*
- *Create a bicycle facility maintenance strategy and plan*



The City should develop a review and update strategy as part of integrating bicycles into all plans.



The City may wish to host a lunch and learn with city engineering and public services employees as part of the development of a bicycle facility maintenance plan.

# Appendix

**RESOLUTIONS OF ADOPTION TO BE ATTACHED HERE.**



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