BCATS
NON-MOTORIZED FACILITIES PLAN
(Bicycle Report)

Final Report
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by

BCATS
The Bay City Area Transportation Study

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Introduction

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) has given transportation officials a new mandate to consider alternatives to the single-occupant motor vehicle in their planning. Because of growing concerns with environmental quality and traffic congestion, local agencies are encouraged to support the non-motorized modes. Most ISTEA programs encourage development of projects that allow use of the bicycle to replace commuter, shopping or other trips otherwise taken by vehicle. Further, ISTEA makes available a wide range of funding opportunities for providing for bicycle and pedestrian transportation.

BCATS has an adopted 2015 Long Range Transportation Plan which includes a modal section regarding non-motorized travel. This report extensively expands on the data provided in the 2015 plan by identifying bicycle transportation deficiencies, outlining solutions, determining priorities and monitoring programs or projects which have been implemented.

Role of Non-motorized Travel in Bay County

Non-motorized travel can play an important role in the overall transportation system. Its purpose is to provide safe, convenient, and adequate facilities to encourage forms of transportation other than the single occupied vehicle (SOV). Non-motorized transportation such as bicycling can be used as an alternative mode for commuting as well as recreational use. Bicycling is permitted on all highways, roads, and streets in Michigan except limited access freeways. Some counties in Michigan have included non-motorized transportation considerations in their comprehensive plans. Although transportation by bicycle is the focus of this report, the principles addressed are applicable to other forms such as skating, jogging and walking.

In Bay County, new bicycle paths designed as either trails through parks or in the right-of-way of abandoned rail lines are being planned or are under construction to meet the communities needs for alternative methods of transportation, while reducing conflict with roads and automobiles. These systems serve communities by linking residential neighborhoods with schools, churches, parks, municipal offices, central business districts, and other commercial areas, and by providing recreational opportunities.

Profile of Bicycle Commuting

The amount of commuter travel by bicycle occurring nationally appears to be dictated by five key factors which are also relevant to Bay County: distance, traffic levels, carrying capacity, weather and origins and destinations.

Distance. A subscriber survey for Bicycling Magazine in the early 1980s revealed that the 37% of subscribers who commuted by bicycle traveled an average 4.7 miles each way to work. The trip lengths are distributed as shown below.

Table 1
Bicycle Commuting Trip Lengths in Miles

One-Way Commuting Miles	Percentage of Commuter Trips
0-2	16
2-5	43
6-9	26
10-14	10
15+	5

Source: John Forester, Bicycle Transportation, MIT Press, 1983. p.24

From this table, it can be seen that 85% of bicycle trips are under 10 miles in length. With average bicycle speeds at 12 mph, trips above 10 miles in length would approach 50 minutes. Forester cites that typical motorists consider relocating residences or other means of reducing travel time as commuting times approach this limit. The distance travelled is a most important determinant of the type of trips for which bicycle travel is a viable option.

Traffic Volumes/Intersection Controls. Compared to motorists, bicyclists are less affected by parallel traffic and significantly more affected by cross traffic. Even in congested areas, there is frequently enough roadway width for bicyclists to share lanes with stopped motorists, while not being stopped themselves. At cross-streets with heavy arterial traffic bicyclists must wait longer for a safe gap to cross than motorists; frequent restarting of a bicycle from a standstill is tiring. A network of stop signs on residential streets can have the impact of shifting bicycle traffic to main arterial streets. By pacing themselves beside car traffic and green light changes in a corridor, signalized arterial streets are a bicyclist's best choice for urban trips in dense traffic areas, provided the outside lane is wide enough.

Carrying Capacity. Touring bicyclists carry as much as 30 pounds of equipment. Cyclists on local utility trips, such as from the local grocery store may carry 20 pounds with a typical rack saddle bags, and backpack. According to Forester, commuter bicyclists tend to avoid loads exceeding 10 pounds to maximize travel speeds and facilitate easy loading and unloading.

Weather. Experienced cyclists have typically acquired appropriate clothing to handle both rain and cold weather, and use headlights for night travel. Forester concludes that bicycle riding does not typically occur to a large extent at temperatures below freezing.

Origins and Destinations. Forester presents no data as to where bicycle commuters travel, but speculates that they nationally, tend to be employed in high-technology industries, technical or governmental offices. Other bicycle commuters will use bicycles for travel from residences to local shopping and servicing areas. Shopping centers can be major bicycle travel destinations depending on the availability of secure bicycle storage areas, or the willingness of merchants to permit patrons to bring in their bicycles. Downtown office areas typically have the most acute shortage of secure storage facilities; building managers and their service personnel tend to resist installation of such facilities.

National Trends. Bicycling has continued to grow as a mode of transportation nationally. Table 2 indicates the number of Americans who commute to work by bicycle has increased from 2.0 million in 1986 to 3.5 million in 1990. Local, state and federal agencies are responding to the increased use of bicycles by implementing a wide variety of bicycle-related projects and programs.

Many factors have likely contributed to the increase in bicyclists in the United States include congested roadways, national health advocacy, and increased provision of bicycle facilities in some cities. The bicycle has emerged as a significant mode of transportation for basic personal travel throughout the nation. As a result, bicycle facilities, such as bikeways and safety paths, are now being planned and implemented in coordination with other modes of transportation.

Table 2

U.S. Bicycle Usage Statistics

Type of Riders (Millions)	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**
Total U.S. Bicyclists	82.0	85.0	88.0	90.0	93.0	96.0	99.0
Adults Riding Regularly	14.0	17.0	20.0	23.0	25.0	27.5	31.0
Bicycle Commuters	2.00	2.20	2.70	3.20	3.5	4.0	4.3
Racing (in thousands)	120k	150k	180k	200k	220k	240k	250k
Mountain Bicycle Users	2.60	5.00	7.50	11.0	15.0	20.0	25.0
Event Participants	1.5	1.8	1.0	1.1	1.3	1.5	1.7
Touring and Vacation	0.75	1.80	2.40	2.70	3.00	1.5	1.7

Source: Bicycle Federation of America
Mich. Dept. of Transportation, Hwy. System Planning Sect., Non-Motorized Unit

Types of Bicyclists

Bicyclists travel for a wide variety of reasons. Nearly 100 million people in the United States own bicycles. The Bicycle Federation of America estimates that fewer than 5 percent would qualify as experienced or highly skilled bicyclists. Since the policy goal is to accommodate existing bicyclists and encourage increased bicycle use to replace auto trips, there will be more novice riders than advanced riders using the highway system. Therefore, any roadway treatments intended to accommodate bicycle use must address the needs of both experienced and less experienced riders. One solution to this challenge is to develop the concept of a "design cyclist" and adopt a classification system for bicycle users such as the following:

Group A--*Advanced Bicyclists*. Experienced riders who can operate under most traffic conditions, comprise the majority of the current users of collector and arterial streets and are best served by the following:

* Direct access to destinations usually via the existing street and highway system.

* The opportunity to operate at maximum speed with minor delays.

* Sufficient operating space on the roadway or shoulder to reduce the need for either the bicyclist or the motor vehicle operator to change position when passing.

Group B--*Basic Bicyclists*. These are casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Some will develop greater skills and progress to the advanced level. Basic bicyclists prefer:

* Comfortable access to destinations, preferably by a direct route; either low-speed, low traffic-volume streets of designated bicycle facilities.

* Well-defined separation of bicycles and motor vehicles on arterial and collector streets (bike lanes or shoulders), or on separate bike paths.

Group C--*Children*. Pre-teen riders whose roadway use is initially monitored by adults, eventually they are accorded independent access to the system. They and their parents prefer the following:

* Access to key destinations surrounding residential areas, including schools, recreation facilities, shopping, or other

residential areas.

* Residential streets with low motor vehicle speed limits and volumes.

* Well-defined separation of bicycles and motor vehicles on arterial and collector streets, or on separate bike paths.

While other distinctions can be added, these lists support combining groups B and C bicyclists in most situations. Therefore, a "design cyclist" concept is proposed that recognizes two broad classes of bicyclists: group A riders and group B/C riders.

Generally, group A bicyclists will be best served by designing all roadways to accommodate shared use by bicycles and motor vehicles. This can be accomplished by:

* Establishing and enforcing speed limits to minimize speed differentials between bicycles and motor vehicles on neighborhood streets.

* Wide outside lanes on collector and arterial streets built with an "urban section" (i.e., with curb and gutter).

* Providing usable shoulders on highways built with a "rural section" (i.e., no curb and gutter).

Generally, group B/C bicyclists will be best served by a network of neighborhood streets and designated bicycle facilities, which can be provided by:

* Ensuring neighborhood streets have low speed limits through through effective speed enforcement controls.

* Providing a network of designated bicycle facilities (e.g., bike lanes, separate bike paths, side-street bicycle routes) through the key travel corridors typically served by arterial and collector streets.

Trips made by this varied bicycle rider population can be classified as either utilitarian or recreational in nature. On a utilitarian trip, a direct route is most important. The bicycle rider is simply substituting a bicycle in place of an automobile for his of her personal transportation. Shopping and work trips fall in this category.

Recreational trips make another important use of the bicycle. Time and directness are less important than the scenery, the companionship or exercise value in using a bicycle.

Bicycle Facility Types

Several types of bicycle facilities have emerged to serve various travel needs, budgets, and level of separation from other traffic. All such facilities are classified as bikeways. A *bikeway* is any road, path, or way which in some manner is specifically designated for the exclusive use of bicycles or are to be shared with other transportation modes. The three basic categories of bikeways are described below.

Bicycle Path

Bicycle paths are facilities on exclusive rights of way and with minimal cross flow with motor vehicles. This designation is based on functional use as well as construction characteristics. Bicycle paths should be thought of as extensions of the highway system that are intended for the exclusive or preferential use of bicycles in much the same way as freeways are intended for the exclusive or preferential use of motor vehicles. There are a number of similarities between the design criteria for bicycle paths and those for highways such as horizontal alignment, sight distance requirements, signing, and markings.

Generally, bicycle paths should be used to serve corridors not served by streets and highways or where a wide right-of-way exists, permitting such facilities to be constructed away from the influence of parallel streets. Bicycle paths should offer opportunities not provided by the road system. They can either provide a recreational opportunity, or they can serve as direct high-speed commuter routes, if cross flow by motor vehicles can be minimized. For example, paths can provide a commuting bicyclist a shortcut through residential neighborhoods. The most common applications are along rivers, water-fronts, canals, utility rights-of-way, abandoned railroad rights-of-way, within college campuses, or within and between parks. These facilities can be provided as part of planned developments. Another common application of the bicycle path is to close the gaps in bicycle travel caused by natural barriers such as rivers and hills.

Bicycle paths have been used extensively within planned neighborhoods and communities where auto use is restricted by physical design. The positive incentives to bicycle use given by bicycle paths in auto-restricted zones appear to have significant effects on the modal choice between bicycles and autos for short trips. However, they can only work where the engineer has a clear understanding of bicyclists' travel desires, needs, and capabilities -- and where there is a continuing commitment to maintenance and policing.

This commitment may come from condominium covenants, park environment revenues, university or other institutional funds, or special assessment districts, and such commitments may be more reliable in the long term than local government general funds.

Bicycle Lanes

Bicycle lanes are facilities which are shared by other forms of traffic. Usually, bicycle lanes are marked on the roadway with striping, signing, and pavement markings or in some cases with parking barriers, to indicate preferential or exclusive use of bicycles.

The costs of bicycle paths are generally low, if road space exists, and they will generally be cheaper than bicycle paths even if the roadway must be widened to provide for bicycle lanes. Maintenance and security can be effectively shared with other roadway users.

Bicycle lanes are established along streets in corridors where there is significant bicycle demand, and where there are distinct needs that can be served by them. The purpose should be to improve conditions for bicyclists in the corridors. Bicycle lanes are intended to delineate the rights-of-way to bicyclists and motorists and to provide for more efficient movement by each. Bicycle lanes better accommodate bicyclists through corridors where insufficient room exists for safe bicycling on existing streets. This can be accomplished by reducing the number of motor vehicle traffic lanes, or prohibiting parking on given streets in order to delineate bicycle lanes.

Other strategies can be implemented with bicycle lanes to improve the situation for bicyclists, that might not be possible on all streets (e.g., improvements to the surface; augmented sweeping program. special signal facilities, etc.). Generally, stripes alone will not measurably enhance bicycle travel.

Bicycle lanes work best between intersections, and may have to terminate 100 feet or so from an intersection in order to avoid conflicts with motor vehicles that are making right turns. Where successfully enforced and maintained, bicycle lanes can reinforce safe riding habits. Bicycle lane movements should ideally be protected by stop signs and bicycle-actuated signals at intersections.

Bicycle Routes

Bicycle routes share road space with motor vehicle traffic. Costs are usually limited to erecting bicycle route signs, and roadway widening for bicycles is rare. Maintenance and security costs are minimal involving mainly sign maintenance.

Bicycle routes should serve either to:

1. Provide continuity to other bicycle facilities (usually bicycle lanes);

2. to designate preferred routes through high-demand corridors.

Rails-to-Trails

An emerging development in promoting non-motorized travel is the *Rails-to-Trails Conservancy* Program (See Map). This program supports the conversion of abandoned rail corridors into trails, which can be used for such non-motorized transportation as walking, jogging, bicycling and in-line skating.

Table 3

Rails-to Trails in Bay County

Bay-Hampton Railtrail

Endpoints:	Portsmouth Township (Youngs Ditch Rd.) to Bay City (Liberty Bridge)
Location:	West Hampton Township/East Bay City
Length:	3.15 Miles
Surface:	Asphalt & Concrete

Bay-Portsmouth Railtrail (Planning stage, grant secured for R.O.W.)

Endpoints:	Portsmouth Township (Youngs Ditch Rd.) to Bay City (Lafayette Bridge)
Location:	Portsmouth Township/Bay City
Length:	3.41 Miles
Surface:	Asphalt & Concrete

Defoe Park Link

Endpoints:	Veteran's Memorial Park to Defoe Park
Location:	City of Bay City
Length:	.57 Miles
Surface:	Asphalt

Anderson Trail

Endpoints:	Bay City State Recreation Area
Location:	Bangor Township
Length:	1 Mile
Surface:	Asphalt

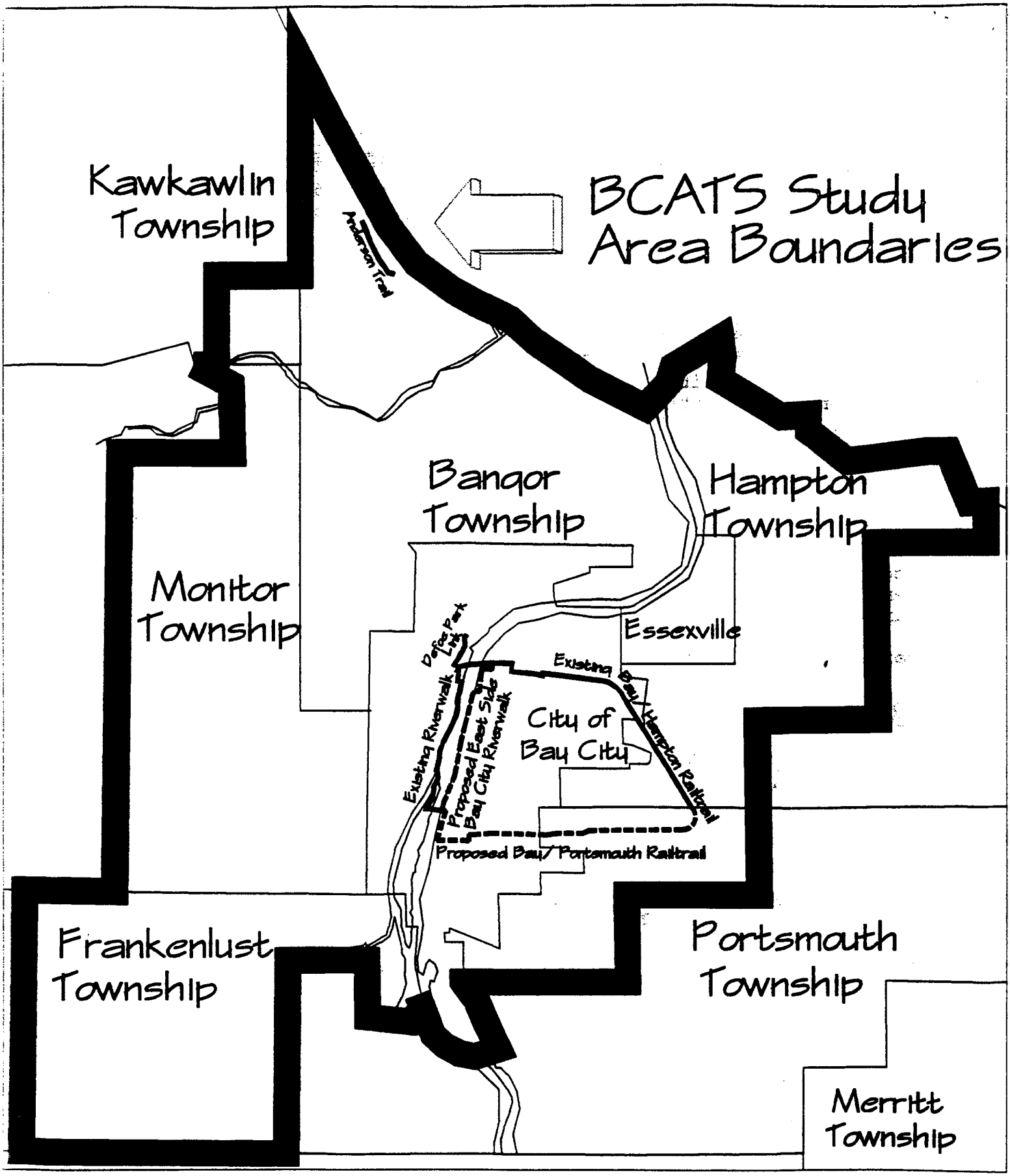
Other Trails in Bay County

East Side Bay City Riverwalk (Proposed)

Endpoints:	Lafayette Bridge to Liberty Bridge
Location:	Bay City
Length:	1.9 Miles
Surface:	Asphalt & Concrete

West Side Bay City Riverwalk

Endpoints:	Liberty Bridge to Bigelow Park
Location:	Bay City
Length:	2.37 Miles
Surface:	Asphalt & Concrete



RAILTRAIL MAP

Bicycle Facility Development

Outline of Possible Bicycle Planning Process

Two basic policy alternatives in bicycle travel could be to: (a) accommodate current bicycle use and/or (b) increase the level of use. A review of policy statements by Congress, USDOT, and the Federal Highway Administration makes it clear that the Federal policy goal for bicycling is to accommodate current use and to encourage increased use, while enhancing safety.

1. Inventory of Existing Conditions;
2. Develop Goals and Objectives;
3. Analysis of improvements; and
4. Selection of Improvements.

Each phase is discussed below summarized from the above resource documents.

Inventory of Existing Conditions

Planning for non-motorized facilities begins with observing and gathering data on the existing conditions for non-motorized travel. Problems, deficiencies, safety concerns, and the user's needs must be identified. The existing environment should be observed. Bikeways and roadways where bicyclists ride and roadways where bicyclists do not ride should be examined for their suitability for non-motorized forms of transportation. Obstructions and impediments on existing highways, such as unsafe grates, debris, shoulders, narrow lanes, driveways, rough pavements,high-speed or high-volume traffic, high truck volume, curbside auto parking, bridge expansion joints, metal grate bridge decks, and traffic signals that are not responsive to non-motorized travel should be considered for their affects. The existing bicycle parking situation should be examined for its adequacy.

Areas near non-motorized traffic generators, such as major employment centers, schools parks and shopping centers, should be reviewed to identify existing or potential non-motorized travel. Convenient access and storage for bicyclists at mass transit stops, terminals and other intermodal transfer points should be checked. Barriers, such as rivers and freeways, should be identified and examined for their effects on non-motorized travel.

Accident locations should be investigated to identify any physical obstructions which may contribute to accidents. Data on the amount of recreational versus utilitarian travel and on the ages and experience of the victims, should be collected.

Public participation is essential during the inventory of existing conditions. Observation and surveys of active and potential users will be useful. A wide variety of views should be sought. the views of various groups should be weighed against each other and tempered with sound professional judgement.

Besides the inventory of physical factors affecting non-motorized transportation, education, existing laws affecting users, and enforcement programs should be examined for their effectiveness.

Goals and Objectives

A set of goals and objectives should be developed and adopted to act as guiding principles in the selection of bicycle facilities. The goals and objectives should serve as the guide for development of non-motorized transportation systems over time as funds become available for implementation.

Below are examples of possible goals and objectives. Obviously locally appropriate goals and objectives would be developed in a Bay County effort. The following list is illustrative, to identify the types of issues requiring deliberation.

A. Provide Bicycling Opportunities to Citizens of Bay County.

1. by connecting as many population concentrations within the area as possible;
2. by designing pathways which can be used by users of various abilities;
3. by providing adequate bicycle and parking access to major trails;
4. by designing area trails which connect to trails in neighboring areas.

B. Provide Access to Major Activity Centers.

1. by identifying major recreational, shopping, employment and education centers and designating feasible bike routes to connect these centers;
2. by providing adequate bicycle parking/storage facilities.

C. Provide Bicyclists with Safe Cycling Opportunities.

1. by locating bikeways on streets which have been identified as low volume, low-speed streets with low accident rates wherever possible;
2. by utilizing wide streets without on-street parking wherever possible;
3. by carefully designing bikeway intersections;
4. by eliminating dangerous gratings, minimizing steep grades and other potential hazards to cyclists.

D. Provide Aesthetically Pleasing Recreational and Transportation routes for Bicyclists

1. by separating cyclists from heavy traffic as much as possible;
2. by considering the bicyclists' "view from the road; in designated routes.

E. Promote Wise Expenditures for Design, Construction and Maintenance

1. by making the maximum use of federal and state funds for bikeways;
2. by making use of existing bicycle routes in area communities and neighboring counties wherever possible;
3. by using utility rights-of-way and publicly-owned corridors for bikeway corridors whenever possible;
4. by designing bikeways which conform to accepted bikeway engineering standards;
5. by locating and designing bikeways for ease of maintenance;
6. by insuring that a responsible agency will provide for maintenance.

Analysis of Improvements

Bicycle-use goals and objectives should be in harmony with the overall transportation policy of the community or state. The inventory of existing conditions provides an opportunity to modify and/or refine bicycle-use goals and objectives. With established goals and objectives in hand, the existing conditions are analyzed and a plan is developed. Programs and projects for bicycle user encouragement, enforcement, education, and improvements complement each other and are all options that should be considered. The end result is a plan of proposed improvements of non-motorized travel.

A wide range of improvements should be considered in the facility improvement portion of a plan, Roadway improvements and maintenance, bikeways, and bicycle parking facilities should be considered.

Roadway and roadway maintenance improvements should reduce conflicts between pedestrians, bicyclists, and motorists and should correct conditions unsafe for bicycle riding. Improvements to drainage grates, railroad grade crossings, pavement surfaces, traffic signals, signing and marking should be beneficial.

Bicycle routes should provide continuity to other bicycle facilities or designate preferred routes. Whenever possible, bicycle paths should provide enjoyable

recreational opportunities as well as desirable commuter routes.

Effective bicycle parking must offer protection from theft and vandalism. It should also provide protection from weather damage. Provisions for bicycle parking should be considered at all major traffic generators, especially where motor vehicle parking is provided, and at mass transit stations to encourage intermodal travel.

Selection of a Facility

According to AASHTO, when a facility improvement is desired, its primary purpose (e.g., utilitarian or recreational) and the following factors should be considered to determine its type, location and priority:

1. Barriers--In some areas, there are physical barriers to non-motorized travel, caused by topographical features, freeways or other impediments. In such cases, providing a facility to overcome a barrier can create new opportunities.
2. Accidents--The reduction or prevention of non-motorized accidents (i.e. bicycle/motor vehicle, bicycle/bicycle, bicycle/pedestrian and single bicycle accidents) along routes is important. The potential for alleviating accident problems through the improvement of a facility should be assessed. Plans should be reviewed to eliminate the introduction of new accident problems.

3. Directness--For utilitarian bicycle trips, facilities should connect traffic generators and should be located along a direct line convenient for users.

4. Access--When locating a bicycle path, consideration should be given to the provision for frequent and convenient bicycle access, especially in residential areas. Adequate access for emergency, maintenance and service vehicles should also be considered.

5. Attractiveness--The scenic value is particularly important along a facility intended to serve a primarily recreational purpose.

6. Security--The potential for criminal acts against bicyclists, especially along remote paths, and the possibility of theft or vandalism at parking locations should be considered.

7. Delays--Bicyclists gave a strong inherent desire to maintain momentum. If bicycles are required to make frequent stops, they may tend to avoid the route or disregard the traffic controls.

8. Use Conflicts--Different types of facilities introduce different types of conflicts. Facilities on the roadway can result in conflicts between bicyclists and motorists. Bicycle paths can involve conflicts between bicyclists, moped operators roller skaters and pedestrians on the facility and between bicyclist and motorists at highway and driveway intersections.

9. Maintenance--Maintenance-sensitive design is an important feature. An improperly maintained bikeway will often be shunned by users in favor of a parallel roadway.

10. Pavement surface quality--bikeways must be free from bumps, holes and other surface irregularities if they are to attract and satisfy the needs of bicyclists. Utility covers and drainage grates should be at grade and, whenever possible, outside the expected area of travel. Approaches to railroad crossings should be improved as necessary to provide for safe bicycle crossings.

11. Truck and bus traffic--Because of their aerodynamic effect and width, high-speed trucks, buses, motor homes, and trailers can cause special problems for bicyclists. Where bus stops are located along a route, conflicts with bus loading and discharge and pavement deterioration may also be problems.

12. On-street motor vehicle parking--The turnover and density of on-street parking can affect bicyclist safety.

13. Traffic volumes and speeds--For facilities on roadways, traffic volumes and speeds must be considered along with the roadway width. Commuting bicyclists frequently use arterial streets because they minimize delay and offer continuity of trips of several miles. It can be more desirable to improve heavily traveled high-speed streets than adjacent streets, if adequate width for all vehicles is available on the more heavily traveled street. When this is not possible, a nearby parallel street may be improved for bicyclists, if stops are minimal and other tour conditions are adequate. When such a parallel facility is improved, care must be taken that the motor vehicle traffic is not diverted.

14. Cost/funding--Location selection will normally involve a cost analysis of alternatives. Funding availability can limit the alternatives; however, it is important that a lack of funds not result in a poorly designed or constructed facility. The decision to implement a bikeway plan should be made with a conscious, long-term commitment to a proper level on maintenance. If only a small amount of funds is available, emphasis should usually be given to low-cost improvements (e.g. bicycle parking, removal of barriers and

obstructions, roadway improvements, and non-construction projects (such as mapping).

15. Local laws--Non-motorized programs must reflect local laws and ordinances. Bicycle facilities must not encourage or require bicyclists to operate in a manner inconsistent with the adopted Rules of the Road.

16. Bridges can serve an important function by providing bicycle access across barriers, However, some features found in bridges can be unsuitable where bicyclists are to be accommodated. The most common of these are curb-to-curb widths that are narrower than the approach roadways (especially where combined with relatively steep grades), open grated metal decks found on many moveable spans, low railings or parapets, and certain types of expansion joints that can cause bicyclists steering difficulties.

17. Intersection conditions--A high proportion of bicycle accidents occur at intersections. Facilities should be selected so as to minimize the number of crossings.

Issues to Consider for Future Bicycle Facilities

The differences among bicyclists' abilities and purposes for riding must be understood before planning for bicycle transportation improvements.

Key deficiencies have been identified regarding Bay County's non-motorized transportation facilities.

1. There are relatively few continuous facilities of one type (e.g. continuous bicycle path). The "Rails-to-Trails-program is an important step toward creating continuous facilities.

2. Significant barriers to increased bicycle usage still exist. For example, secure bicycle lockers or storage is unavailable at most major office or shopping centers.

Funding Programs

The federal Intermodal Surface Transportation Efficiency Act (ISTEA) offers funds for implementing the needs of bicyclists' and pedestrians' within the National Intermodal Transportation System. Funding is provided by several federal transportation programs under which bicyclists and pedestrians may be accomplished.

The Federal share of the costs of projects under these programs is 80 percent with a 20 percent local match.

State funds are available under Section 10k of Act 51, Public Acts of 1951. This requires that state and local units of government spend an average of at least 1% annually of their highway tax funds on non-motorized modes of transportation.

National Highway System (NHS) funds may be used for construction of bicycle transportation facilities and pedestrian walkways on land adjacent to any highway on the National Highway System (other than the Interstate System).

Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds may be used for construction of pedestrian walkways and bicycle transportation facilities and for carrying out non-construction projects.

Transportation Enhancement Activities. Ten percent of the STP funds must be used in 10 defined program areas, two of which are "provision of facilities for bicyclists and pedestrians," and "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)".

Local Issues

BCATS 2015 Long Range Plan Non-Motorized Transportation Recommendations

The following recommendations are to be implemented over the twenty year period:

1. Incorporate non-motorized interests into the design of projects to ensure that as many streets and highways as possible can be safely shared by motorists and bicyclists.

2. Improve bicycle facilities including: storage, shelters, comfort stations and automobile parking at trip ends for minor/major generators and transit hubs. Develop the width of paths, grading, drainage, barriers, fixed lighting, landscaping and structures where appropriate to accommodate users of the facilities.

3. Support the development of recreational non-motorized routes.

4. Improve safety issues such as drainage grate replacement, improving rail crossings, restriping and alternate routing.

5. Encourage police agencies to provide stricter enforcement of bicyclists who disregard the Uniform Vehicle Code.

6. Acquire rights-of-way for independent bikeway and walkway construction.

7. Install curb ramps on new or existing facilities.

8. Provide traffic control devices, including signs, pavement markings, signals, and signal actuation devices.

9. Promote access between non-motorized and other modes of transportation.

Bay County Programs

New bicycle paths designed as either trails through parks or in the right-of-way of an abandoned rail line are being planned or are under construction. In either case, these new trails serve recreational riding as will as provide connections between major shopping and commercial centers.

In the BCATS study area, the Railtrail/Riverwalk system will eventually complete a nine mile pedestrian oriented, circular course through Bay City, Hampton Township and Portsmouth Township. It is hoped that someday this trail system will be connected to trails existing and proposed in Frankenlust Township

and at the Tobico Marsh in Bangor Township. Other trails are being investigated for the City of Pinconning and for townships in northern Bay County.

The Bay City/Hampton Railtrail from Youngs Ditch Road in Hampton Township to the north end of Downtown Bay City is 5.5 miles long. The majority of the trail is built on a former rail bed. This increasingly popular pathway crosses farmland, apartment complexes, commercial and industrial districts, residential districts of all incomes, cemeteries, and two parks. It terminates at the Liberty Bridge. It is becoming a vital non-motorized transportation link for the eastern part of the city.

As the trail crosses the Liberty Bridge to the West side of Bay City it can be taken north to Defoe Park or south to Veterans Memorial Park.

The Defoe Park link is nearing completion. It will be a major pedestrian trail between Defoe Park and Veteran's Memorial Park.

The path leading south from the Liberty Bridge is called the Riverwalk. Riverwalk is the sole pedestrian path through Veteran's Memorial park on the west shore of the Saginaw River. Although it could may be used by commuters, it's primary function is for recreation. Biking, skating, fishing and strolling are popular activities. The south end of the trail terminates at the boardwalk/bridge that links the trail to Bigelow Park on the Middlegrounds Island.

Next, the trail crosses the Lafayette Bridge where it terminates. This end will soon be linked to the railtrail in Hampton Township to create a 9 mile loop.

A pathway for the south end of Bay City and Portsmouth Township is being planned and should be under construction in a short time. It will connect with the Bay City/Hampton Railtrail at Youngs Ditch Road in Portsmouth Township. This is the last section of the Railtrail/Riverwalk loop.

A 1.9 mile trail is proposed for the east side of the Saginaw river from the Lafayette Bridge to the Liberty Bridge. Part of the trail will pass through the Environmental Protection Agency's proposed research center, linking it to the proposed hotel/conference center and downtown.

The Anderson Link is a recreational trail at the Tobico Marsh /Bay City State Recreation Area in Bangor Township. It starts at the Jennison Nature Center at the Bay City State Park and terminates 1 mile later.