

Chapter 7 TRANSPORTATION

INTRODUCTION

The Transportation element of the Master Plan is not simply a list of future projects, but is an infrastructure plan that establishes the overall goals and guiding policies for addressing transportation issues within Chocolay Township. As in all communities today, the economy is heavily dependent on the transportation system. US-41 and M-28 serve not only local residents, but long distance travelers. Chapter 2 noted that the large majority of Township residents work outside the Township and drive to work. Therefore, the growth of the area becomes largely dependent upon a safe, convenient, and economical transportation system to facilitate the easy movement of people, goods, and services both within and outside the Township. This makes the local transportation system, including highways, railroads, airports, and harbors, even when outside the Township, key elements in the future of Chocolay Township. This chapter has direct relationships with the land use, population and housing, natural resources, and community services and facilities sections of the master plan.

Inasmuch as the transportation system affects the shape and setting of a community, expansion in population and land use are usually the driving force and transportation improvements are in reaction to the changes being seen. The pattern in which this growth occurs will have a tremendous impact on the transportation system, and an important aspect of Chocolay Township's future development will be patterns of future commercial and residential growth. As the community has grown in size, population and commercial activity, the roadway network has expanded to serve newly developed areas and land uses. At the same time, investment in transportation infrastructure has not kept pace with that growth. Roadway maintenance and improvements, circulation improvements, investment in alternative modes such as transit and bicycle travel, innovative demand management techniques and wise planning of the location and extent of further development will all play an important role in the future of the Township's transportation system.

This chapter examines existing transportation modes, presents several road classification systems, reviews key access management issues and identifies major needed road improvements.

In 2010 as part of the Master Plan update, the Township mailed out surveys to our residents and one of the questions was, "What are the three most NEGATIVE things about living in Chocolay Township?" Two of the top three had to do with transportation, the number one response was road maintenance and the number three response was transportation accessibility.

Goals & Principles

The Township's goals for Transportation are:

- *A transportation network that allows for the safe and efficient movement of goods and people alternative transportation modes will be supported and enhanced.*
- *Add more multimodal pathways that provide connections between uses along both existing vehicular routes and possibly more direct routes*

The supporting principles for Transportation are the following:

1. The Township will continue to work with the Marquette County Road Commission to plan and implement construction projects.
2. The Township will work with the state and county to increase funding through locally generated revenues, developer fees and Federal and state grants.
3. Future developments will be encouraged to incorporate pedestrian-oriented designs.

Transportation Objectives:

1. Increase the safety and security for all modes of travel in the transportation system through design, enforcement and education.
2. All modes of transportation should be integrated into the overall transportation network to reduce or eliminate crash conflicts between all modes (rail, auto, transit and non-motorized modes).
3. Work with local community organizations, MarqTran, MDOT and local businesses to improve the accessibility, usability, and attractiveness of the bus stop.
4. Increase access to multiple modes of transportation in all areas of the Township, as appropriate based on planned land uses and densities.
5. Ensure long term viability of transportation modes by recognizing the needs of providers and users when redeveloping and designing new sites.
6. Provide for complete pedestrian facilities for all development and redevelopment projects including continuous sidewalks that connect buildings to street sidewalks, ramps, crosswalks or the continuation of a sidewalk through roadways or parking areas, and appropriate lighting on pedestrian ways.
7. Provide motorized and non-motorized connections between land uses wherever physically feasible.
8. Review land uses to identify potential overlay districts, mixed-use areas, and infill opportunities to focus density in strategic locations that support and compliment multiple transportation modes for improved mobility.
9. Develop a plan with specific, measurable benchmarks for evaluating sustained progress toward the two goals.

TRANSPORTATION MODES

Within the Township there is only one principal transportation mode, and four minor alternate modes. The principal mode is vehicular movement on public roads. The alternate modes include Marq-Tran service, and seasonally, snowmobile, bicycle and walking which are largely recreational modes.

However, other modes nearby provide important transportation services to Township residents. These include air and water transportation.

Photo 7-1
**The Primary Transportation Mode in Chocolay Township
 is private automobiles**



The transportation mode that everyone is familiar with is the road system. It is the primary transporter of goods, services, and people. Each of the roads within the Township has a specific traffic capacity, design standard, and design use. The road classification system will first be discussed and then the Township roads will be inventoried as to how they fit into the system.

Financing

For road funding purposes, three systems of road classification are used. The National Functional Classification system was listed above. Only classified roads are eligible for federal highway aid. It is used to determine whether federal aid can be obtained for these roads. Funds originate with the federal portion of the gasoline tax paid by motorists on each gallon of gas. Townships are not eligible for federal or state highway funds.

Act 51 of the Public Acts of 1951, as amended, creates the Michigan Transportation Fund (MTF) into which specific transportation taxes are deposited, sets priorities for the use of transportation revenues, and charges county road commissions with the responsibility of classifying county primary and local roads. The classifications developed by the county road commissions are subject to Michigan Department of Transportation (MDOT) approval. Roads designated as primary roads must be of “the greatest importance”. This determination is based on traffic volumes, primary generators of traffic served and other factors. The State classification system is tied to Act 51. It includes five categories: state trunklines, county primary roads, county local roads, city and village major streets, and city and village local streets. Funds originate from the state portion of the gasoline tax. A statutory formula determines how much goes to MDOT, how much to County Road Commissions, and how much to cities and villages.

The county road system includes only two categories: primary and local roads. County road commissions also receive Act 51 funds and sometimes federal aid highway funds for special projects on certain roads. Within the Township, County roads 480, 545, and 551 are the only county primary roads and they are also on the federal National Functional Classification system. All other public roads in the Township are county local roads.

Michigan Transportation Fund (MTF)

The Marquette County Road Commission each year allocates a certain amount of funds towards improvements to the local road system in each of the communities, primarily using monies from the Michigan Transportation Fund (MTF). The MTF was established under Public Act 51 of 1951, and it's a formula that uses factors such as road classification, road millage, and population to distribute funds according to the various county road commissions, cities, and villages. A percentage of the funding received by each road commission is also set aside for engineering, snow removal and urban roads. The percentage of local road improvement funding allocated to each community varies year to year depending on the financial conditions of the Road Commission. The Road Commission has experienced sharp budget cuts in recent years and has had limited funds to fix our local roads.

Michigan Transportation Economic Development Fund (TEDF)

This program was established in 1987 by the Michigan Legislature. The purpose of the program is to assist with road improvements that attract industry and create and retain jobs in Michigan. The program provides funding to allow the state, local agencies and businesses to work together to meet the demands placed upon our transportation system due to quick economic growth. There are five separate funding categories, Economic development road projects, state trunkline service, urban county congestion relief, secondary all-season road system, forest roads, and cities in rural counties. The fund was reauthorized with minor revisions in 1993.

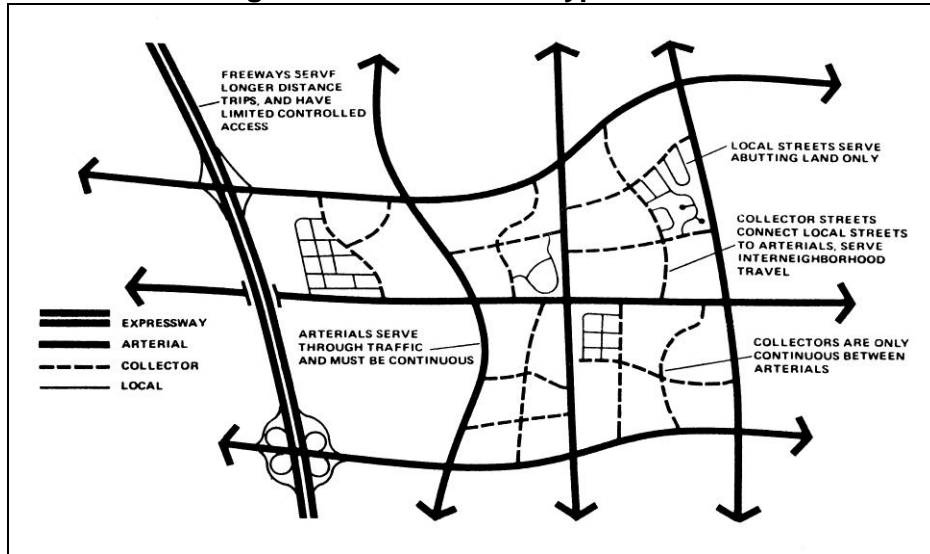
CLASSIFICATION OF ROADS

Roads have a two-fold purpose: The movement of traffic and the provision of access to adjoining property. All roads in the Township serve these two purposes to some degree. Through the process of defining road functions and correlating these with land use policies, several benefits should be realized by the local or even state government responsible for their operation. By defining the function of roads and their service to the community, the appropriate land uses can be encouraged adjacent to these roads and with proper access management, the public investment in these roads can be preserved.

The design of a road depends principally on its functional classification and the traffic volume it is expected to carry at some future time. Such design factors, as the number of lanes, width and surfacing of shoulders, width of structures, type of surface, and design speed all depend on traffic volume and functional classification. See Figure 7-1 which depicts the typical range of road types within a metropolitan area.

Since land use patterns are largely determined by transportation facilities, functional classification is important because it permits coordination of land use policies with the transportation system. Once a functional classification is adopted, zoning regulations can be structured to ensure that specific land uses are guided to locations on the road networks which are consistent with the existing or planned capacity of the network to accommodate the traffic generated. Access controls can be employed along arterial and collector routes whose principal function is to carry traffic. This will ensure that traffic carrying capacities are not usurped by turning movements to and from uses located along these routes. Similarly, subdivision regulations can provide for the dedication of sufficient right-of-ways, and in some cases, the installation of improvements based on the design standards outlined above.

Figure 7-1
Design Characteristics of Types of Roads

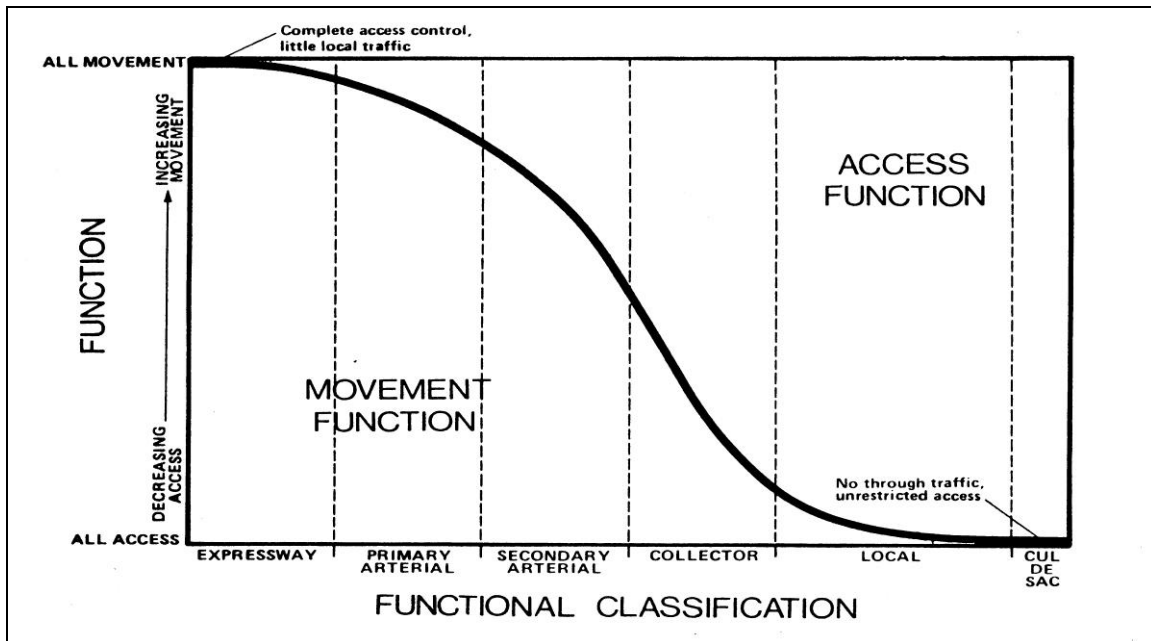


Source: Arterial Street Access Control Study, Tri County Regional Planning Commission, 1981, p.3.

A typical road classification system includes the following road types:

1. Limited Access Highway -- Major highways providing no direct property access that are designed primarily for through traffic. These are also called freeways.
2. Major Arterial -- Arterials are roadways of regional importance intended to serve moderate to high volumes of traffic traveling relatively long distances. A major arterial is intended primarily to serve through traffic where access is carefully controlled. Some major arterials are referred to as "regional arterials".
3. Minor Arterial -- A roadway that is similar in function to major arterials, but operates under lower traffic volumes, over shorter distances, and provides a higher degree of property access than major arterials.
4. Major Collector -- A roadway that provides for traffic movement between arterials and local streets and carries moderate traffic volumes over moderate distances. Collectors may also provide direct access to abutting properties.
5. Minor Collector -- A roadway similar in function to a major collector but which carries lower traffic volumes over shorter distances and provides a higher degree of property access than a major collector.
6. Local Street -- A street or road intended to provide access to abutting properties, which tends to accommodate lower traffic volumes and serves to provide mobility within that neighborhood.

Figure 7-2
Functional Classification of Roads



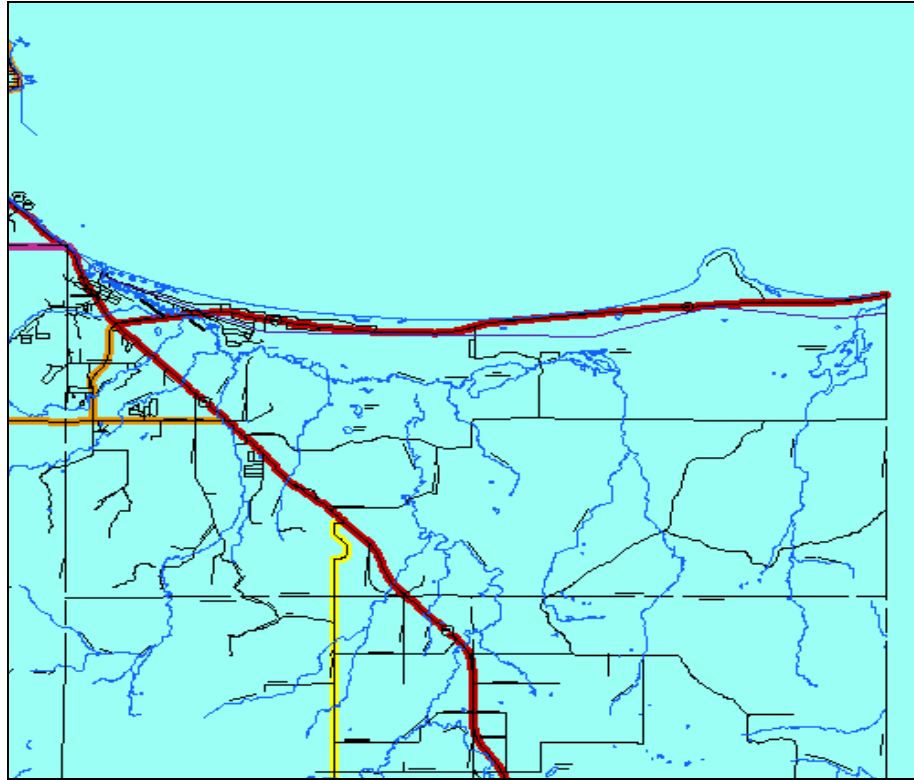
Source: Arterial Street Access Control Study, Tri County Regional Planning Commission, 1981, p.3.

The major roads in Michigan are included in the National Functional Classification System in order to be eligible for federal road funds. Under this system, roads are classified into the following categories:

- Rural or Urban Interstate (analogous to “limited access highway” above)
- Rural or Urban Other Freeway (analogous to “limited access highway” above)
- Rural or Urban Other Principal Arterial (analogous to “major arterial” above)
- Rural or Urban Minor Arterial (analogous to “minor arterial” above)
- Rural Major Collector or Urban Collector (analogous to “major collector” above)
- Rural Minor Collector (analogous to “minor collector” above).

The figure above shows the relationship of the movement function of roads relative to the access function. Freeways absolutely preserve the movement function while local streets primarily serve as access to abutting property. Arterials and collectors provide some of both, with arterials primarily there for the movement function. It is very important to preserve the movement function of arterials and collectors or congestion will greatly reduce the utility of such roads for safe travel over a distance. When communities poorly plan and regulate land uses next to arterials and collectors, then considerable tax dollars must be spent that would not have had to be spent to try and remedy the resulting congestion and unsafe conditions.

Map 7-1
Roads in Chocolay Township
According to the National Functional Classification System



Red = Rural Principal Arterial **Orange** = Rural Major Collector **Yellow** = Rural Minor Collector
 Source: Michigan Department of Transportation [Note: the pink in the upper left corner is the urban boundary line for urban aid highways, it is not a road.]

Within Chocolay Township, only three of these classifications apply (as follows and as illustrated on Map 7-1)

1. **Rural Principal Arterial** - these arterials provide the next to the highest level of traffic mobility available on the total highway system. US-41 and M-28 are statewide arterials as well as major arterials.
2. **Rural Major Collector** - these interconnect and augment the statewide and regional arterial system. County Road 480 and 551 from US-41 to 480 are major collectors. The primary function is to interconnect people in the economic activity centers not served by statewide arterial highways.
3. **Rural Minor Collectors** - these function primarily as collector- distributor roads. County Road 545 (West Branch Road) from U.S. 41 South is a minor collector. These roads provide service between minor population and economic centers within the County. Traffic mobility and trip continuity are not as essential as on arterials.

Photo 7-2
M-28 is a Statewide Arterial



The remaining roads in the Township are grouped as Local Access Streets/Roads. These provide access to adjacent properties and these streets and roads carry practically no through traffic since traffic desires are mostly local in nature. The best route continuity is not important. The major functions of these streets and roads are to:

- Provide access and service to the residential developments adjacent to them.
- Provide access to homes, farms, and other uses, or to provide access to commercial and/or industrial establishments (these streets should be constructed to carry heavy vehicles if the conditions warrant).

Private Roads

Another significant part of the road system in Chocoday Township is private roads. Unfortunately, some of the older private roads were laid out and constructed without any consideration of road design standards. They are also often overgrown with vegetation. This makes it difficult or impossible to safely bring a fire truck, trash truck or delivery truck down them. Because of safety concerns, many communities do not permit the construction of new private roads.

Several residential developments in the Township, many of them under condominium ownership of home sites, are served by private roads. Ownership and maintenance responsibility for these rests with the property owners whose lands are accessed by the private roads. The Township Zoning Ordinance contains regulations which govern the location and design of these private local access streets. The Township now requires that any home owner who lives on a private or seasonal road sign a hold harmless agreement. This is to ensure that the Township is not liable for a home burning down as a result of the fire department not getting to the fire in time.

Maintenance of the private roads (snow plowing, grading, dust control, drainage ditch maintenance, etc.) is the responsibility of the home owner along these roads, who usually accomplish these tasks either on their own or through a contract agreement with a private entity. The Planning Commission now requires that the contractor write up a maintenance agreement that has to be signed by the home owners and kept on file at the Township Hall.

However, unless the road contains a 66 foot right-of-way and is built or brought up to County Road Commission specifications, the County will not take over the road and provide maintenance. The result is generally after-the-fact hard feelings on the part of residents who may not have realized the responsibility of living on a private road and who feel they are being denied public services that others take for granted.

The 2005 Comprehensive Plan suggested that the Township should no longer permit private roads. As a result of the new plan, the Township, in 2008, updated the Zoning Ordinance to match the Plan. However, during the zoning ordinance update, there was public opposition to this idea. As a result, the Planning Commission and Township Board felt that the Township should continue to permit private roads. Also during the Zoning Ordinance update and review process, both the Planning Commission and Township Board authorized up to four parcels to share a common driveway.

The Planning Commission should work with other area Planning Commissions and the County Road Commission to create a new set of public road standards for open space developments serving a small number of lots. If this does not happen, the Township will either have to accept public roads with current standards, or substantially beef up its private road standards to ensure the design, construction and maintenance is much higher (i.e. up to public road standards). This will require new standards on road design and construction and number of lots served. It will require imposing road maintenance agreements that are signed by the developer and Township and recorded with the Register of Deeds for all property affected. It will also require a special assessment clause permitting the Township to special assess all properties served by the private road if it is not adequately maintained.

The Township does not currently have a program to monitor the maintenance of private roads and the responsibility lies with the residents located on the private road. However, because not all private roads have been properly maintained, the Township needs to be more assertive to ensure that emergency vehicles and fire trucks can always access dwellings and businesses along private roads. The Township Planning Commission should continue to work with the Township Fire Department to ensure that all homes are properly addressed and roads are wide enough to allow the trucks to get to their homes.

Following is a list of the private roads in Chocolay Township as of early 2010:

Acorn Trail, Acre Trail, Anna's Trail, Apple Trail, Autumn Trail, Bayou Street, Cedar Lane, Cheryl Court, Chocolay River Trail, Cindy Lane, Deerview Trail, Dock Street, Edgewood Trail, East Chocolay River Trail, Hidden Creek, Hillcrest Trail, Hotel Place, Industrial Drive, JH Lane, Keweenaw Trail, Lara Lei Trail, Morning Meadow Drive, Norway Trail, Ojibwa Trail, Pine Cone Trail, part of Poplar Trail, Red Fox Trail, Royal Oak Lane, part of Sandy Lane, part of Shimon Court, Springwood Lane, South Willow Road, Tia Trail, Vista View Trail, Wanda Street, Welsh Trail, Willow Road, Wintergreen Trail.

Seasonal Roads

A Seasonal Road System was established in Marquette County by resolution of the Marquette Board of Commissioners on November 12, 1990. The County Road Commission has defined a seasonal road as being a county road, or a portion thereof, which, during the months of November through April, has minimal use by motor vehicles does not provide sole access to a building which is used as a principal residence during the months of November through April, and is not normally maintained or snowplowed by the Road Commission during those months. The Township has seen an increase in the number of newly constructed homes that are occupied on a year round basis that front on a seasonal road. The home owners are required to sign a hold harmless agreement with the Township in order for them to understand some of the risks associated with a home on a seasonal road. The Township should work with the Fire Department to ensure that the roads are wide enough for the fire trucks and to keep track of the person responsible for plowing the road during the winter months. The home owners have requested that the Township assist them in having them become year-round roads and part of the County Road System. The Township has taken the position that the roads are seasonal and don't meet the 66 foot easement requirement and the County Road Commission does not want any additional roads to maintain.

Gravel Roads

Gravel roads serve large parts of the Township. Such local roads do a good job of meeting access needs when traffic volumes are low. However, once traffic exceeds 500-600 vehicles/day on an average quality gravel road, then maintenance demands go up sharply. Paving is often not an option because of the high construction cost (often \$300,000 plus per mile), even though the maintenance cost is much less. In addition, a paved road often has a capacity of 12-15,000 vehicles/day, which is far more than needed in many rural areas and may induce more development into the area (sprawl).

Thus, it is very important that Township zoning regulations keep density lower than 1 dwelling unit per 10 acres in areas served by gravel roads. This density reflects the highest traffic volume a gravel road can accommodate without constantly needing grading, and even then it assumes the gravel road is of the highest quality possible with a proper sub-base and a good gravel surface.

Photo 7-3

Kawbawgam Road, Gravel Road in Chocolay Township



TRANSPORTATION DECISION MAKING

All of the decisions on roads in the Township are made either by the Michigan Department of Transportation (on US-41 and M-28) or the Marquette County Road Commission (which is responsible for all other public roads in the Township). Roads under the jurisdiction of MDOT are evaluated on the basis of pavement condition, ride quality, friction and rutting. Surface conditions are determined by the amount of deterioration such as cracking, faulting, wheel tracking, patching, etc. Determining ride quality is subjective, but is based on the degree of comfort experienced by drivers and passengers. MDOT has a five year plan that lists priority road and bridge improvements throughout the state. Local governments provide input on priority road and bridge needs directly to MDOT through the local TSC office in Ishpeming.

The federal government through the Federal Highway Administration and the state government through the Michigan Department of Transportation have input on county level road decisions primarily through the funds they provide and the strings they attach in the form of regulations and guidelines. The Township has input on the Road Commission's decisions in any of the following three ways.

First, each year the Township Board decides its priorities for the roads in the Township: what roads need work, where, and when. The roads in Chocolay Township are evaluated using the PASER (Pavement Surface and Evaluation and Rating) system. Survey teams drive the Township roads to inventory surface type, such as concrete, asphalt or gravel and to evaluate road condition. The survey utilizes such characteristics as surface distress, pavement strength and deflection. Roadways are rated on a scale from one to ten. A rating of "10" indicates the pavement is in new condition, and has no visible signs of distress. A roadway given the rating of "1" represents the poorest roadway condition with visible signs of distress and extensive loss of surface integrity. The Township Board then sends the results to the County Road Commission in an advisory role, to present their priorities and to exchange other pertinent information. The Road Commission, to a large extent, follows the Township's desires fairly closely. Thus, the degree to which the Township's priorities are acted on will depend in part on how much money the Township has to help provide funding for those priorities, and the funds available to the County Road Commission.

The second way the Township can affect Road Commission decisions is through the County Board of Commissioners who appoint the County Road Commissioners.

The third way is for Township officials or citizens to call the Road Commission directly to provide information or make a complaint. When used, this approach provides valuable information directly and immediately. Further, the number of calls can give a rough indication of the magnitude of a problem. In addition, the Township often receives road complaints from citizens, and it can provide valuable information to the Road Commission in managing these complaints.

ACCESS MANAGEMENT

According to the Access Management Guidebook produced by MDOT, access management is a set of proven techniques that can help reduce traffic congestion, preserve the flow, of traffic, improve traffic safety, prevent crashes, preserve existing road capacity and persevere investment in roads by managing the location, design and type of access to property. The idea of access management is to focus on the number, location, and design of driveways as they are related to travel lanes, dedicated turn lanes and signal operations.

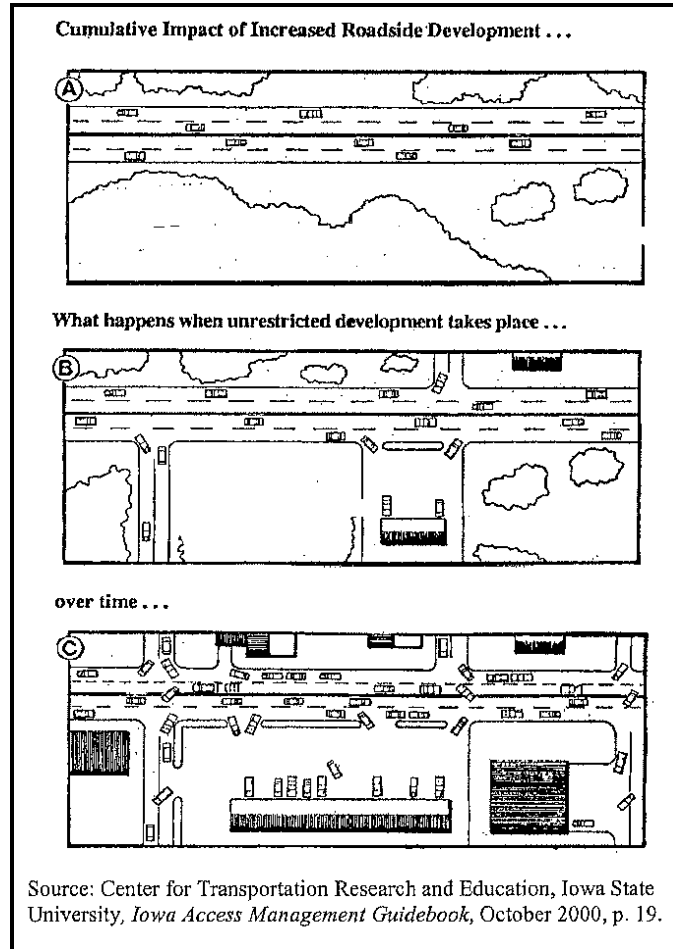
15 ACCESS MANAGEMENT PRINCIPLES

1. "Reasonable access" to property abutting a state highway or county road is protected by state law. (Act 200 of 1969). Direct access is not mandated if other access options are available.
2. Proper application of access management techniques assures businesses and drivers of safe and convenient access and taxpayers of more cost-effective use of their money spent on roads.
3. The more important the roadway (the higher its functional classification) the higher the degree of access management that should be applied so that the road continues to perform according to the function it was designed to serve.
4. Interconnections between adjacent sites and between new subdivisions and the existing street system is important in maintaining safe and efficient traffic flow.
5. Limit the number of driveways and other conflict points.
6. Separate driveways and other conflict points.
7. Improve driveway operation by fitting the best design to the need.
8. Remove turning vehicles from through traffic lanes.
9. Reduce conflicting traffic volumes.
10. Improve roadway operations on arterials by achieving the proper balance between traffic flow and access to abutting property.
11. Lay the foundation for correcting existing access management problems and preventing future ones in the local comprehensive plan and/or an access or corridor management plan.
12. To optimize the benefits of access management, coordination with all appropriate transportation agencies is essential when preparing access management plans, design techniques and the elements of local access management regulations.
13. To optimize the benefits of access management, multi-jurisdictional coordination with all appropriate transportation agencies is essential when applying access management standards on lot split, subdivision, site plan and other zoning reviews.
14. Educate the public about the benefits of access management and involve them in development of access management plans and implementation activities.
15. Many access management techniques are best implemented through zoning and others through local lot split, subdivision, condominium and private road regulations.

Source: MDOT Access Management Guidebook, 2001, pg.2-2.

As the number of vehicles on a roadway increases, turning onto or off of roadway becomes more difficult. At the same time, as the traffic level increases, frontage along the road becomes more desirable for development. Driving the Township's main commercial area it appears that as the development occurred, there was little attention paid to how entrances and exits would affect traffic movement and safety. The traffic problems did not appear overnight and access management can only help where rededication is an option and the owners are willing to close or combine driveways. Congestion created by strips of roadside commercial land uses is one of the most objectionable impacts on development.

Access management strategies are intended to provide and manage access to properties along roadways, while simultaneously maintaining traffic flow and optimizing safety, capacity, and speed. Thus promote health, safety and so forth of the citizens and system users. The illustration below shows how land is used adjacent to roads has an impact on roadway function and operation. The more driveways that are permitted the more congestion will occur.



What are the Consequences of Poor Site Access and Circulation Design?

- Inadequate access capacity
- On-site congestion
- Congestion on the public street system
- High crash experience on the public street
- High crash experience on-site
- Pedestrian-auto crashes
- Limited flexibility to adjust the design or operation to changed conditions
- Loss of customers
- Frustrated motorists
- Unstable land use – declining commercial corridor stability
- Decrease in property value
- Decreased tax revenues
- Diverts motorists onto neighborhood streets.

In 2004, the Michigan Department of Transportation, with input from representatives of each of eight jurisdictions along the US-41/M-28 corridor (from Chocolay Township west through Ely Township), prepared an access management plan for the corridor. Entitled **US-41/M-28 Comprehensive Corridor & Access Management Plan**, the Plan sets forth a series of proposed road and intersection improvements, as well as driveway redesigns and closures proposed to be implemented as the opportunity presents itself. Those elements of the **US-41/M-28 Comprehensive Corridor and Access Management Plan** that apply within Chocolay Township are hereby adopted by reference as the guide for future corridor and access management improvements.

The Comprehensive Corridor and Access Management Plan was updated in 2010 by CUPPAD Regional Commission Marquette County Resource Management and Development Department. The plan listed the accomplishments that were done under the suggestion from the 2004 plan. Chocolay Township was very fortunate to receive a MDOT Enhancement Grant in 2010 to allow for positive improvement along our section of the US-41/M-28 Corridor. They included the construction of a bicycle pathway constructed on the west side of US-41/M-28E, construction of a pedestrian tunnel under US 41 which linked the pedestrian/bicycle pathway on the east side of highway to the newly constructed pathway on the west side, removal of the outdated pedestrian overpass. Additional improvements includes, intersection upgrades to Silver Creek Road, Dry Dock Bar driveways, construction of a service road between Holiday Gas and the Gateway Plaza, Cherry Creek Road, M-28E intersection was reconstructed with new signals, and construction of a multi-use bridge over the Chocolay River.



Pedestrian Tunnel Construction
Summer of 2010

In order to implement the **US-41/M-28 Corridor and Access Management Plan** and the Memorandum of Understanding, all the participating jurisdictions signed to be a part of the project leading to the creation of the **US-41/M-28 Corridor and Access Management Plan**. During the 2008 Zoning Ordinance update, the Township added an overlay section referred to as the US-41/M-28 Access Management Overlay District, which was to promote safe and efficient travel on the US-41/M-28 Highways within our Township. Those zoning amendments are based on the model access management ordinance sanctioned and promoted by the Michigan Department of Transportation in the **Access Management Guidebook** published by MDOT in 2001.

The original plan recommended that a Corridor Advisory Group be created, where local government officials and staff along the route would be able to meet once a month to review proposed site plans along the corridor. This was done and the local jurisdictions meet once a month at the TSC Ishpeming location to review access management issues and corridor improvement issues related to a particular site plan. The meetings have been beneficial to Chocolay Township and have encouraged the Planning Commission to ask for the developers to provide better ingress and egress and additional landscaping at the entrances.

The Planning Commission and Township Board should ensure that all new development and redevelopment of existing sites should address pedestrian and bicycle access to and within the site. A goal of Chocolay Township should be to establish and maintain a safe transportation system. This should be a high priority and the Township should work diligently to meet applicable safety standards. This can be best accomplished by:

- Require all major developments to provide adequate access for emergency vehicles.
- Provide safe pedestrian street crossings, particularly near schools and recreation areas.
- Encourage development of school minimize vehicle/pedestrian conflicts.
- Establish speed limits based on traffic engineering analysis.
- Enforce speed limits, especially near schools, in residential areas and downtown commercial areas.
- Provide guidance for vehicles on streets through striping, raised medians and islands, reduction of roadside obstructions, and other traffic engineering solutions.

The Township should establish a maintenance plan for all of the bicycle and pedestrian pathways to ensure that all walkways are in optimal conditions by:

- Repairing cracks and bumps,
- Minimizing slopes,
- Maintaining visibility at corners,
- Avoiding abruptly ending walkways,
- Reducing speed and traffic,
- Keeping walkways clear of poles and other objects,
- Avoiding poor drainage and standing water on sidewalks, and
- Providing curb cuts and ramps that comply with ADA standards

Traffic Volumes

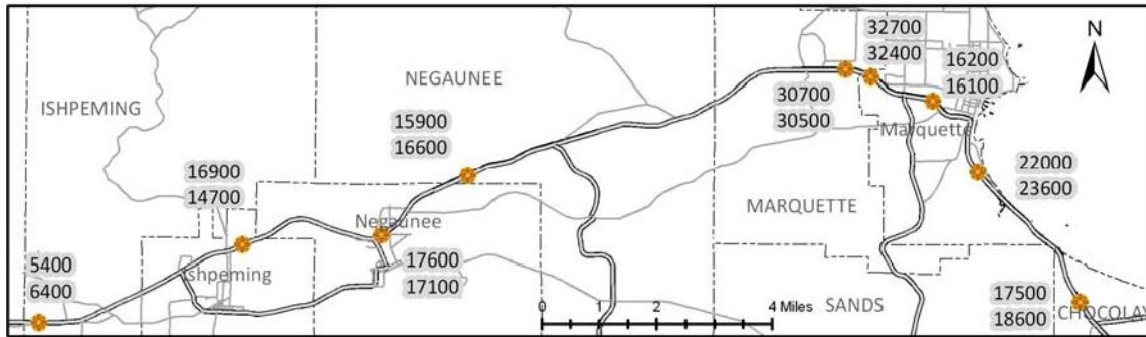
Average daily traffic (ADT) volumes on M-28 range from 8,000 vehicles on the east end of the Township to 6,500 vehicles at US-41. This is up sharply from 2005 when it was 4,000 vehicles/day. About 450 vehicles/day are commercial trucks.

Average daily traffic volumes on US-41 are about 6,500 vehicles/day from the south end of the Township to M-28. Then from US-41S to County Road 480, the average daily traffic volumes are about 4,900 vehicles. About 330 commercial trucks travel this stretch daily.

From the intersection of US-41/M-28/Cherry Creek Road north to the Township line by the Visitor’s Center, traffic builds to about 18,600 vehicles/day. This is slightly less than in 1994 when it was 19,000 vehicles/day.

Map 7-2

Average Annual Traffic Volume US-41/M-28 Corridor Study Area



**the top number shown is the 2008 ADT volume and the bottom number is the 2003 ADT volume
Source: MDOT, 2008 and 2003*

Traffic Crashes

The **US-41/M-28 Corridor and Access Management Plan** includes an analysis of high crash intersections of which there are two in the Township. The first is at Silver Creek Road and US-41/M-28, and the second is at the junction of US-41, M-28 and Cherry Creek Road. Neither intersection has marked pedestrian markings or crosswalks, although the Silver Creek intersection has an overhead pedestrian bridge on the north leg of the intersection. On Silver Creek Road there were 45 crashes in the five years from 2006-2010. Six were southbound rear ends, 5 were sideswipe and there were no head-on left-turn crashes. There was one head-on at the intersection of US 41 and Corning Street and the driver was traveling west. Prior to 2010, the westbound crashes were the most common and the belief was that the pedestrian overpass affected the drivers' visibility. The Township is hoping to see a drop in the number of crashes in the future since the removal of the pedestrian overpass. The Township should see about having Corning Street realigned so it squares with the intersection.

On Cherry Creek Road there were 60 crashes from 2006-2010. Thirteen were eastbound and seventeen were westbound crashes. An intersection operations study was completed in September of 2007 and recommended that improvements be done to the intersection of Cherry Creek Road/US 41/M-28E to provide safer left-turn opportunities. The US-41/M-28/Cherry Creek Road is where US-41 converges with M-28 at this intersection, and the two routes jointly continue to the northwest. Based on the study, a traffic signalized upgrade was the best option for this location. Then in 2008, the intersection was upgraded to include replacement of the concrete and markings, new traffic lights and pedestrian markings.

Driveway Closures/Consolidations

The **US-41/M-28 Corridor and Access Management Plan** also identifies several driveway closures or consolidations that should occur as the opportunity presents itself. This is one of the most fundamental access management principles (see sidebar in gray). Driveway closures or consolidations reduce the number of conflict points at which crashes could occur. Crashes go up with the number of driveways if the separation distance between driveways is substandard. As a result, where there are two or more driveways on the same parcel, and they are not properly separated for the speed of the roadway, driveways should be closed or combined to meet the MDOT safety requirements.

Exceptions may apply for driveways serving semi-trucks but even then, not more than two driveways on US-41 or M-28 should be permitted. Driveway closures or consolidations are most easily accomplished when a landowner comes in for development approval on a new development, expansion of an existing development or a redevelopment of property. Opportunities to combine driveways and gain access via a frontage or rear service road should also be capitalized upon.

Photo 7-4

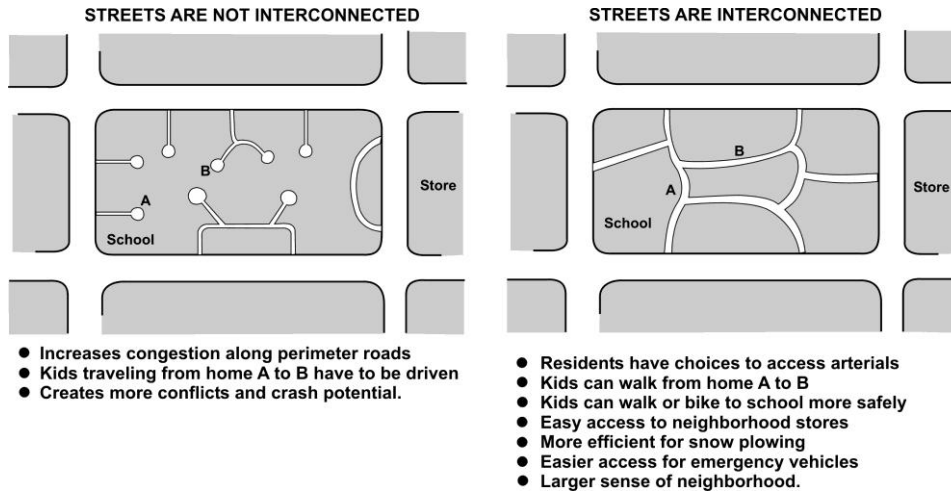
**Very Few Businesses Need Two Driveways
Restricting Access on US-41 and M-28 Will Improve Safety and Traffic Flow**



INTERCONNECTED STREETS

The emerging system of streets and roads in the Township is characteristic of one that will present major problems in the future. That is because many of the new, especially residential, developments are built in subdivisions or site condo projects with an independent street design that is not connected to abutting property, nor leaves stub street openings for future connections. This is not only more difficult for residents or users of those developments; it is also not nearly as safe. If a bad storm blocks the entrance, then fire trucks, ambulances, electric or telephone utility trucks or police cannot get down the street, and that is when residents are more likely to overdo themselves and have a heart attack or get injured. The Township should require in its subdivision and zoning regulations that all developments have an interconnected street system, or include stub roads for a future connection as abutting property is developed.

Figure 7-3
Interconnected Streets



Source: MDOT Access Management Guidebook, 2001, pg. 2-7.

PUBLIC ROAD CONDITIONS AND IMPROVEMENTS

The county road network consists of 283.85 miles of county primary roads and about 988.39 miles of county local roads. The County plows about 67.7% or about 861.6 miles of roads. There are 5.58 miles of county primary road and 73.59 miles of county local roads in Chocolay Township. The Road Commission plows 83.2% of it, or all but 13.31 miles. Improvements to the county primary roads, both maintenance and construction, are scheduled by the Road Commission as their funds allow. As mentioned above, the County Road Commission bears the responsibility of construction and maintenance on both the primary and local road systems. Due to the current financial situation of the County Road Commission the routine maintenance of the local roads is not getting accomplished. In 2007, the Township went to the voters to ask for 1.7 mills for over a period of five years. The millage amount was to allow for the Township to have the more densely populated residential areas roads resurfaced. Since that time, the following roads have been resurfaced.

2008	2009	2010	2011	2012	2013	2014	2015	2016
Fairbanks	Van Epps	Ridgewood	Riverside	Edgewood	Lakewood Ln	Lakewood Ln	Wildwood	Alderbrook
Terrace	Ripley Crt	Candace	Forrest	Dandelion	Superior	Hiawatha	Townline	Oakbrook
Wright	Quarry	Candee	Riverdale	Sandy Lane			Wooddale	Brookwood
Green Bay	Reservoir	Fernwood	Glenwood	Briarwood			Aspen	Sunnybrook
Corning	Hoppock	Jennifer	Riverland	Penny			Ford	Meadowbrook
Kellogg	Carmen Dr.	Timber Ln.	Dana	Katers				Brookfield
Baker	Jean			Meadow				Birch Brook
	Juliet			Ridge				Pinebrook
	Judy							Brookside
	Veda							

Improvements to the Township road system fall into two categories: 1) upgrading existing roads, and 2) future roads. As far as the existing roads are concerned, their general routes and locations are established. But as the roads carry increased traffic volume, their level of construction should correspondingly increase. Some of the first streets in the area were much narrower than current design standards would allow and their base is not as sturdy as present design would provide. A gradual improvement of the existing roads should take place so that they also meet contemporary design specifications

Existing Road Improvements

The state highways and the county primary roads in the Township are in fair to good shape.

According to the Five Year Highway and Bridge Program, published by MDOT, there is scheduled repair work to be done on state road US 41S from the Carp River Bridge (City of Marquette) to Bayou Street in our Township. The work will include restoration and rehabilitation of 2.290 miles. It was also stated that the project will now include resurfacing of US 41S to the intersection of M-28E and Cherry Creek. Part of this project will also include raising the highway approximately two feet, removal of the curb and gutter, building shoulders along both sides of the highway, and relocation of the bike path closer to Lake Superior. This project is scheduled for the summer of 2012.

Relative to county primary roads, County Road 545 contains an extreme ninety degree corner and is a curvy road. County Road 480 contains residential strip development. This strip development and the large number of driveways accessing onto this road decreases the safety of this road system.

Relative to local roads, there are some problem areas (not ranked). These include:

1. Lakewood Ln. has minor linear cracking from Green Bay Street to Superior Street.
2. Shot Point Drive has been breaking up in the low swampy areas and continues to do so.
3. Riverland Drive is starting to lose the inside shoulders on the corners.
(Will be resurfaced the summer of 2011)
4. Riverside Road is deteriorating on all of the inside corner radii and there are pot holes at the intersection with US-41 and where the street meets the old railroad grade. **(Will be resurfaced the summer of 2011)**
5. Ortman Road from Cherry Creek to US-41 has linear cracking and is starting to break up (alligator pattern).
6. Ortman Road from Cherry Creek north has minor linear cracking and heaving.
7. Woodvale Drive is starting to heave at the corner of the “s” curve.
8. Ford Road is starting to develop cracks on its entire surface.
9. Cherry Creek Road south of Co. Rd. 480 and past Old Kiln Road is starting to break apart at the corner radii.
10. Foster Creek Road is starting to break up in places.
11. Orchard Lane has minor linear cracking.
12. South Big Creek Road’s shoulders are breaking down.
13. Brookfield subdivision roads are breaking up and have linear cracking.
14. Green Garden and Greenfield Roads are in very poor condition from the Green Garden hill to Mangum Road and Mangum Road’s first ¼ mile from US-41.
15. Briarwood Subdivision roads have transverse cracking

Proposed 2012 MDOT Road Construction
in the City of Marquette and Chocolay Township.



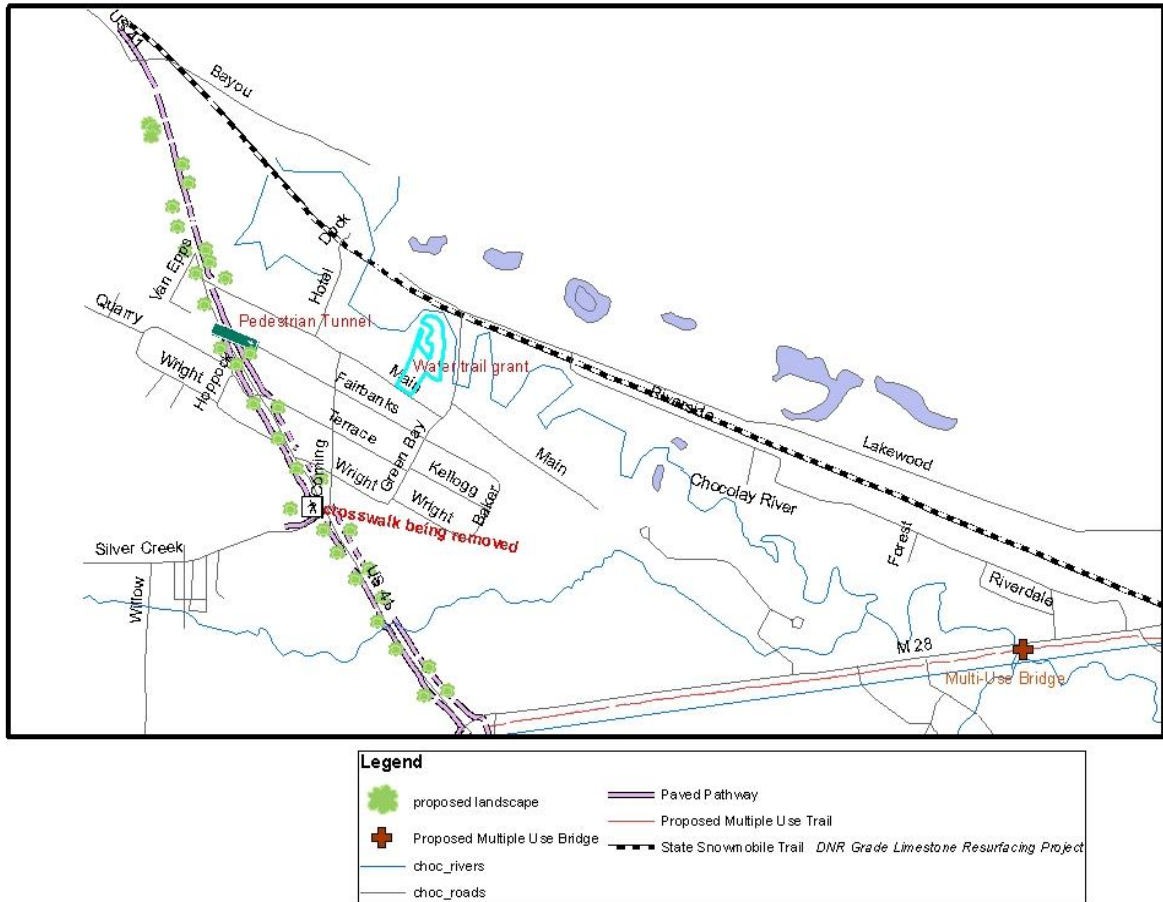
Source: MDOT Ishpeming Transportation Service Center 2011

MDOT ENHANCEMENT GRANT

Chocolay Township received a Michigan Department of Transportation Enhancement Grant in 2008 along with a Recreation Trail Funding Grant. That involved adding 2.3 miles of pathway, landscaping along US-41, a pedestrian tunnel under US 41, removal of the pedestrian overpass over U.S. 41S, and a multi-use trail that connected the current snowmobile trail from its intersection with M-28E west to the U.S. 41 intersection and a bridge over the Chocolay River on the south side of M-28E. With the new trail in place on the south side of M-28, the snowmobilers and bikers can now reach the businesses situated along U.S. 41S. The non-motorized pathway, tunnel construction, tree plantings and landscaping was a \$1,611,400 grant, with *the* Township's portion being \$75,000. The Chocolay River Bridge and the pathway along M-28 were funded through a Multi-purpose Recreation Improvement Fund and Recreational Trails Program Grant for \$329,000.



Chocolay Township Enhancement Project



ROAD CONDITIONS AND IMPROVEMENTS

New Roads

Future roads should also meet the previously mentioned design specifications. Consideration should particularly be given to where these roads should be located. An improved road can be a great attraction for development. But the development should be where it can be conveniently served by local services, such as the sewer and water, ease of maintenance, access to public facilities, schools, recreation facilities, and other goods and services. Therefore, determination of where development should occur should be a major determinant to deciding where the new roads should be built. The other major determinants for new roads are:

- Providing missing links on an interconnected road pattern
- Relieving and preventing congestion
- Providing alternative means of access for certain types of traffic.

There are four locations that should be considered for new roads (plus some small connectors) in the Township over the next twenty years. Each meets the three criteria above. They are very generally depicted on Map 7-3. Specific route alignments would be determined following detailed study in each area. Future land use along these new roads is depicted and described on the Future Land Use Map in Chapter 10.

- The first involves extending E. Main Street in Harvey to the old Lake Superior and Ishpeming railroad line west of M-28. This would put a connection to M-28 about a half mile from the US-41/M-28/Cherry Creek Road intersection, and another connection to Harvey. An additional option of moving the road further down would be to extend Basil Road and connect it with Chocolate Downs Drive.
- The second is a connecting road from Harvey behind existing businesses to M-28. Routing the road adjacent to the old railroad right-of-way (which is in private ownership for this segment) may be a possible location, but that would take the road farther east than necessary (but would align it with the second option described above). If that was not feasible, a new road from the east end of Wright Place (or perhaps another street) in Harvey that paralleled US-41/M-28 all the way to US-28 would give another connection option to M-28 from Harvey and hopefully permit a connection from the trucking company property so east bound trucks would not have to do a left-turn onto US-41/M-28 and could instead do a left-turn onto M-28 which has a lower volume. In any event, this road should connect to M-28 at least 1/3 mile east of the existing US-41/M-28 intersection and 1/2 or more miles east is better. With any option, the Township is strongly encouraged to balance the needs of the transportation network with the potential intrusion of commercial vehicle traffic within a close proximity of a residential area.
- The third is continuation of the radial street design already in place on the south quadrant of the US-41/M-28/Cherry Creek intersection, on the other three corners. A large part of this continuation on the north side of the intersection would be accomplished by the third suggestion above. The other two corners are of a lower priority and should occur as the opportunity presents itself. It is essential that all the new streets line up with one another, but it is likely that as traffic grows at the intersection that only right-turn in and out of these new streets would be permitted on all legs.
- The fourth connection would be to extend Quant Trail to the old Lake Superior and Ishpeming railroad line east of M-28. This would put a connection to M-28 about a quarter of a mile from US-41/M-28/Cherry Creek Road intersection, though an effort should be made to keep that alternate route as far as possible. One of the problems with this proposal is that Quant Trail is a private road and obtaining one of lots at the end of the road would be costly.

Map 7-3
Proposed General Location of New Public Roads

MASS TRANSIT**Issues and Findings**

Public transit service within the Township is provided by the Marquette County Wide Transportation System (MarqTran), which was established in 1982. From 1982 to 1985, MarqTran served all areas in Marquette County that were outside the cities of Marquette and Ishpeming, which were served by Marquette Transit Authority and Ishpeming Transit Authority. In 1985, these three transit operations consolidated into the current MarqTran system. MarqTran is a non-profit mass transportation service, which receives revenue for its operation from state and federal operation system funds, fare box, county-wide millage, contract fares, transit pool reimbursement and interest, and other income.

MarqTran uses a combination of fixed routes, a feeder, small bus curb-to-curb service, special contract runs and specialized service runs. Fixed routes and small bus curb-to-curb service serves the urban area of Marquette County and includes the cities of Marquette, Ishpeming, Negaunee and the townships of Marquette, Ishpeming, Negaunee, Chocolay, Skandia, West Branch and Forsyth.

Small Bus Curb-to-Curb Services

Small bus curb-to-curb transport allows pre-qualified passengers to call up to seven days in advance for service. Currently, MarqTran allows up to seven days in advance for ADA registered disabled persons, up to three days in advance for all persons for medical/dental appointments, up to two days in advance for seniors and non-ADA-registered disabled persons and one day in advance for all other passengers. All curb-to-curb buses are lift-equipped and are fully accessible. The cost of MarqTran curb-to-curb service varies depending on distance traveled, i.e., the farther the distance, the higher the bus fare. Currently, the maximum curb-to-curb fare for a one way ride is \$5.60. This would be the cost for a member of the general public to ride from one end of the county to the other. A senior citizen would pay half that cost. Additionally, persons with disabilities who require an aide to assist them may do so at no charge as long as the aide boards and disembarks at the same points as the fare paying passengers. MarqTran also has a medical call-back program that allows a medical facility or passenger to call a MarqTran dispatcher for pick-up when the passenger has finished their appointment.

Vehicle Inventory

Currently, MarqTran has 35 vehicles. Twenty-six of the 35 are Demand Response vehicles. The remaining nine are Line Haul, all of which are lift equipped. Only twenty of the demand response vehicles are lift equipped. A large percentage of the vehicle fleet has exceeded the guidelines of the bus replacement schedule. It is expected that with an aging fleet, maintenance costs will continue to increase.

Shelter/Signage

MarqTran has a limited number of shelters and signage. There are five shelters, most of which are located within the city of Marquette. Bus route and stop signs are limited to old signs that are weathered and in need of replacement. Budget constraints have not allowed for new shelters or signage. MarqTran received a grant to add bike racks to the front of their buses.

As of 2011, they have added ___ bike racks, which will eventually be installed on the entire line haul fleet. The bike racks offer passengers a unique way to travel to local bike routes, shopping destinations, school, or work. Each bike rack holds two bikes. They are free, safe, and easy to use, requiring three simple steps for loading.

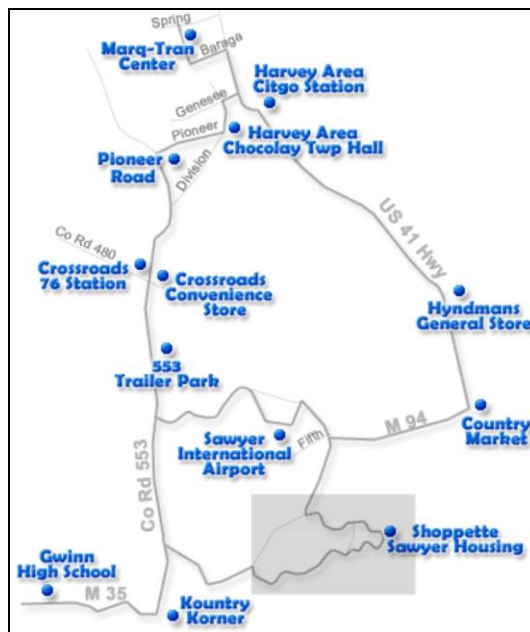
MarqTran is used by Mental Health clients and individuals participating in the Special Service Program that assists senior citizens and disabled persons with unmet transportation needs. It is also frequently used by college students, elderly, and commuters as an alternative mode of travel.

Support MarqTran Services.

The Township should continue to support MarqTran services as an integral part of the Township’s transportation system. The Township has provided financial support in the past and should consider setting aside funds to enhance the bus shelter and lot that it’s placed upon. The Township should also seize the opportunity to place informational brochures or kiosk at various locations in our Township including the Michigan Welcome Center. The existing routs should also be evaluated to ensure that our residents, especially the elderly, are aware of the current schedule. With the Township now offering senior meals once a month at the Township, a partnership between AMCAB, Chocolay and MarqTran should be encouraged as a way to increase the number of individuals that take advantage of the free meals.

Chocolay Township should encourage and, if possible, assist MarqTran to add a bus shelter in the Beaver Grove area, and, more specifically, at the Beaver Grove Restaurant. Their parking lot is adequate for a shelter and offer room for the buses to turn around. The Township should also look at getting permission for the owner of the old LaRUE Town and County Market at the intersection of US 41S and Wright Place to allow for some expansion of the bus shelter, construction of bicycle racks and parking spaces.

Figure 7-5
Marquette/Sawyer/Gwinn Route of Marq-Tran



Source: Marq-Tran website, 2004.

Complete Streets

Michigan Public Act 135 defines complete streets as, "...roadway planner, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive devices, foot or bicycle." Complete streets are planned, designed, operated and maintained such that all users may safely, comfortably and conveniently move along and across streets throughout a community. Communities across the United States are instituting policies to "Complete Streets" and provide "roads for all modes." All modes of transportation may not be appropriate for all of the roads in a community. Establishing a complete streets policy would help ensure that all professional parties involved in designing a roadway with all users in mind, such as bicyclists, pedestrian of all ages and abilities.

Complete streets encourage walking and bicycling for health and to address climate change and our dependence on oil. These policies may also include providing transportation for those residents that don't drive. There is no one design recommendation for a community to adopt to be part of the Complete Streets initiative. The components can be made up of, sidewalks, bike lanes, wide shoulders, special bus lanes, comfortable and accessible public transportation stops, accessible pedestrian signals and curb extensions. Complete streets policies offer the opportunity to improve travel options of people of all ages. Planning, designing, and building roads with all users in mind will provide older adults a variety of options for getting around, whether walking, taking public transportation, or sharing rides with family and friends. Proven methods to create complete streets for aging pedestrians include retiming signals to account for slower walking speed, constructing median refuges or sidewalk bulb-outs to shorten crossing distances, and installing curb ramps, sidewalk seating, and bus shelters with seating. Improved lighting, signage, and pavement markings are among the measures that benefit drivers of any age, particularly older drivers.

Numerous local communities have already adopted complete streets resolutions or ordinances. The Township should at the minimum adopt a resolution of support for complete streets. In the near future the Township should develop more comprehensive guidelines on complete streets that specifically address how the Township will integrate complete streets into its plans, policies and programs. The Township Planning Commission should create a list of potential projects such as installing new bike paths along Cherry Creek Road and Co 480 and add those to the Township's Capital Improvement Plan. The Township has the opportunity to work with MDOT and the Road Commission to plan for and implement improvements related to non-motorized facilities, transit, carpooling and commercial vehicle infrastructure.

SAFE ROUTES TO SCHOOL (SR2S)

In 2010 Chocolay Township installed 1.9 miles of new bike paths along with a multi-use bridge over the Chocolay River and it runs parallel to M-28E. It is felt that the children in the community will be major users of non-motorized transportation, as well as encouraging their parents to use pathways. In the absence of sidewalks, people will either drive to where they need to go or use the street as they would a sidewalk. Sidewalks are pedestrian transportation corridors. The Township should explore funding opportunities with the Marquette Area Public Schools and the Marquette County Health Department on securing funds to create additional pathways to get students to Cherry Creek Elementary.

FUTURE TRAILS

Chocolay Township is the home of several all-season trails that provide important recreational opportunities for residents and nonresidents. However, existing trails were not planned with the kind of citizen and property owner input that is typical of Township initiatives and any future trails must be—irrespective of the entity proposing the trail. The nuisance effects of snowmobiles very near single family dwellings is considerable, and while future 4-cycle engines are expected to cut noise considerably, there are other issues that need to be addressed as well, including speed, clear vision at intersections and driveways, and travel off of designated trails. In particular, the Riverside Road – Lakewood Lane intersection and the Green Bay Street – Lakewood Lane Intersection with the existing trail have bad sight distances and poor stopping distances and these safety issues need to be addressed in the near future, and similar problems need to be prevented by better trail planning in the future. Increased monitoring and enforcement of public safety laws should also be a key component of future trail planning and development.

With the Township having an aggressive resurfacing plan, it might be a good idea to look at utilizing the existing right-of-way to add additional paved shoulders that would allow the residents additional room to walk or bike. Lakewood Lane might be a good road to try, as there are a number of residents that currently utilize the road for walking and bicycling and it's near existing paved or gravel trails. The Township should explore opportunities to create additional multi-use paths along Cherry Creek Road and CO 480 up to the Briarwood Subdivision. There are numerous families in those areas that would benefit from the trails and could even use them to walk or bicycle to Cherry Creek Elementary School.

Promote Non-motorized Connection and Walkability

Walkability is the measure of how convenient it is for people to walk in a certain area to access amenities, and goods and services. In other words, a walkable community provides pedestrians with facilities such as sidewalk, sidewalk ramps, crosswalks, tunnels, good lighting and an array of destinations that are easily accessible on foot or via another form of non-motorized transportation.

**According to the 2010 Chocolay Township resident survey,
over 35% of the respondents would like to see new or repaired
bicycle/ pedestrian pathways in our Township.**

Many areas of our Township are currently underserved by non-motorized transportation options. In recent years, the Township has attempted to increase the sidewalks, and connect the existing paths to our commercial center and neighboring communities. The Township should continue to focus on the development of a comprehensive non-motorized transportation, as illustrated in _____ (develop a non-motorized plan/map). Chocolay Township was the recipient of a MDOT Enhancement Grant which allowed the Township to add 1.9 miles of new pathway and to construct a pedestrian tunnel that allows our high density residential neighborhood to access Silver Creek Park and the bicycle path that connects to the City of Marquette's bike path. The Path is 10-foot wide and following the route of US 41 and M-28E; it provides pedestrians and bicyclist with a safe route to use along the corridor. This model should be translated into many other areas of the Township along other similar roads.

The Michigan Department of Natural Resources (MDNR) also graded and resurfaced 6.2 miles of its trail along the former Soo Line Railroad grade using compacted crushed limestone. The resurfacing began at the Michigan Welcome Center on US 41 and extended east to Kawbawgam Road. The new surface provides a pleasant riding experience for bicyclists and even those in strollers or wheel chairs. Linked to the US 41/M28 pathway at the Welcome Center and Timber Lane, the trails provide a 4.26 mile exercise loop with minimal street crossings for the health and enjoyment of Township residents.

Our Township characteristic is rural and our residents have stated that they want to maintain the rural atmosphere, so adding sidewalks, pathways, and bicycle lanes may not be appropriate in every situation in our Township. The location of paths may work better in the outlining areas of our Township and the resurfacing of the existing railroad grade that runs to Autrain County.

The following guidelines provide the basis for which option should be installed in which areas of our Township.



Pathways – Pathways similar to M-28E Pathway, these should be used along similar roadways including Cherry Creek Road, US 41S and Lakewood Lane, and County Rd. 480.

Sidewalks – Sidewalks are primarily used by pedestrians to get from one place to another. Sidewalks must be installed along all new commercial development on M-28E. Additionally in our Harvey area, any new commercial development may be asked to install a sidewalk.

Bicycle Lanes – As our commercial and residential areas evolve and some areas become denser and have limited right-of-way available for pathways or sidewalks, the incorporation of dedicated bike lanes may be necessary to continue to provide bicyclist with access to significant destinations. These lanes provide bicyclist with a safe travel route, and one that is separate from motorized transportation.

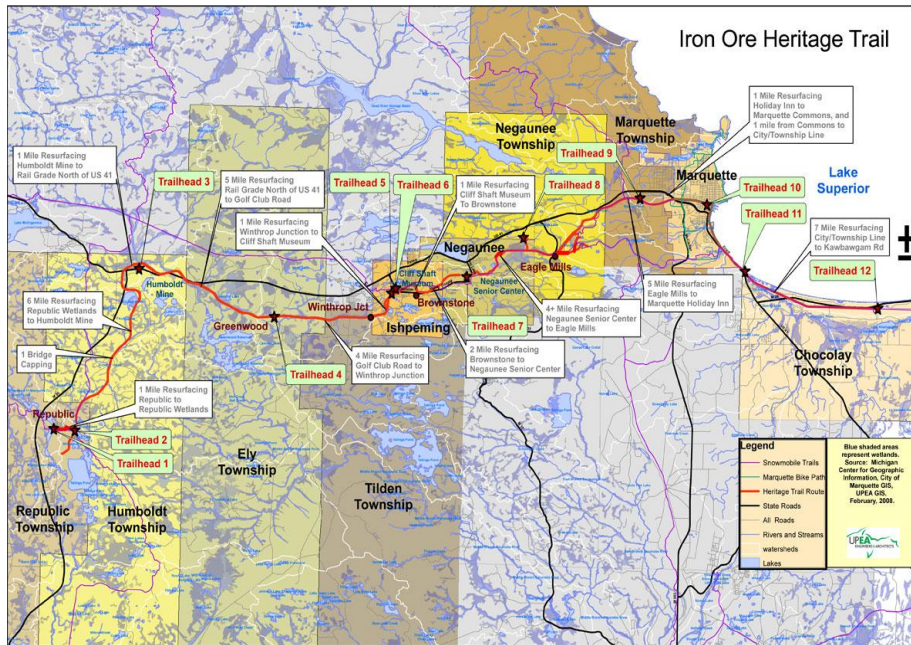
Trails - Trails are non-motorized connections that typically do not run along a road right-of-way like pathways, sidewalks, and bicycle lanes. In Chocolay Township, trails are planned to be located within parks, utilizing existing railroad right-of-way, and within new rural developments. Since this type of connection has the potential to be on private property, it will be important for the Township to establish regulations that require trails to connect to existing non-motorized network.

Photo 7-6
**All-Season Trails need Improvements
 to Address Safety and Noise Issues**



Iron Ore Heritage Trail

The Iron Ore Heritage Trail will be a 48-mile, multi-use, year round trail that connects communities and people to the region’s historic sites and human stories. Reaching from Republic Township to Kawbawgam Road in Chocolay Township, this surfaced and signed transportation/recreational corridor will be preserved for generations to come. The trail is to be used by bicyclists, runners, hikers, walkers, cross-country skiers, snowshoes, snowmobilers, and equestrians will be able to utilize this route. There are portions of the trail that have parallel but separate trails that are designed to be used for motorized and non-motorized users. While our Township does not have any old mining sites, there were many sawmills that were built along the Chocolay River that provided lumber for the harbor, towns and roads.



North Country Trail Association

According to the North Country Trail website, the North Country National Scenic Trail (NCT), stretches more than 4,600 miles from Crown Point in eastern New York to Lake

Sakakawea in western North Dakota in the United States. It was designed to provide peaceful recreational opportunities in some of the America's outstanding landscapes.

The NCT is administered by the National Park Service, managed by federal, state, and local agencies, and built and maintained primarily by the volunteers of the North Country Trail Association (NCTA) and its partners. The trail passes through seven states, including the lower and Upper Peninsula from St. Ignace to Ironwood. NCT connects more than 160 public land units, including parks, forests, scenic attractions, wildlife refuges, game areas, and historic sites.



The Township should explore options to help advertise the trail and look at sharing costs of maintaining the NTA portions in our Township. The Township was contacted about posting signs up along the Trail and to create a trailhead at the Township owned Kawbawgam Pocket Park. This would provide a great opportunity to partner with another trail association.

Display of Goods in the Right-of-Way

Many businesses along our US 41 and M-28E corridor display goods, signs, products and our vehicles for sale inside the right-of-way. This is an infringement on the public right-of-way and often impedes clear vision at driveways and intersections. The state relies on local zoning enforcement to ensure that the right-of-way is clear of any commercial goods, vehicles and/or illegal signs.

CAPITAL IMPROVEMENTS PROGRAM

The Township should use a capital improvements program (CIP) to schedule all future public improvements. A CIP is a timetable or schedule of all future capital improvements to be carried out during a specific period and listed in order of priority, together with cost estimates and the anticipated means and sources of financing each project. Usually the time period is six years with the first year being a capital budget.

The Township enters into contracts with the County Road Commission for reconstruction and repaving on local roads on a 50-50 match basis. As discussed earlier, this type of arrangement has been beneficial to the Township as well as to the Road Commission in prioritizing which roads in the Township need reconstruction or repaving. This type of an effort should be continued. The County Road Commission ranks all paved roads every four years. 1996, 2000, 2004 and 2010 data are available. The Township Planning Commission should review this data when available as well as other road needs.

Appendix C includes a road ranking system that was included in the original Township Plan. It may need updating, but is a relevant starting point for a contemporary ranking system. Road improvement recommendations should be considered annually as part of the CIP process in order to allow the Planning Commission to identify transportation needs and to recommend projects consistent with this Plan.

In addition, the Township should pay additional attention in the future to construction projects such as bridges, culverts, drainage, etc. that have previously not been considered a priority for funding. Similarly, more attention should go to constructing new pedestrian and bicycle paths now that a path runs from the US-41/M-28/Cherry Creek Road intersection all the way to Marquette.

POTENTIAL PLANTS FOR USE ALONG STREETS AND HIGHWAYS

The following plants are suitable for planting along public streets and highways in Chocolay Township. Some are more salt tolerant than others and care should be given to selection of plants that are best suited to the conditions they will face when planted.

Deciduous Trees:

Common Name	Scientific Name
Shademaster Locust	Gleditsia triacanthose ‘Shademaster’
Larch*	Larix species (a deciduous conifer)
Ornamental Pears	Pyrus species
Red Oak*	Quercus rubra
White Oak*	Quercus alba
Black Locust*	Robinia pseudoacacia
Paper Birch*	Betula papyrifera
Basswood	Tilia Americana
Ginkgo	Ginkgo biloba
Serviceberry*	Amelanchier species

Evergreen Trees:

Common Name	Scientific Name
White Spruce*	Picea glauca
Colorado Spruce	Picea pungens
Austrian Pine	Pinus nigra
Junipers (*Eastern Red Cedar is native)	Juniperus species (*Juniperous virginiana)
Norway Spruce	Picea abies

Shrubs:

Common Name	Scientific Name
Alpine Current	Ribes alpinum
Siberian Pea	Caragana arborescens
Honeysuckle	Lonicera species
Bridalwreath Spirea	Spireaea Vanhouttei
Snowberry	Symphoricarpus species
Lilacs	Syringa species
Forsythia	Forsythia species
American Cranberrybush Viburnum*	Vibrunum trilobum
Arrowwood Viburnum*	Viburnum dentatum

**Native species. These plants may be more likely to survive than ornamental species and can more favorably contribute to a natural, rural visual character.*

Transit-Oriented Development (TOD)

This is a planning and regulatory approach intended to maximize the benefits of transit through the location, placement, design, and density of development. TOD often

includes a mixture of uses clustered around a transit stop or transit corridor, at sufficient density to support transit and stimulate a walkable environment. TOD is an important part of vibrant communities with transit facilities where walkable, bikeable development nodes can add to community sustainability. TOD can be applied in a particular district or along key transit corridors through overlay zoning. Utilizing TOD in Chocoday Township can influence land-use patterns, and in turn, as land use affects demands on the Transportation system. TOD is seen not only as a way to promote transit ridership, but as a mechanism to further economic development and enhance community quality of life goals as well.

Current Land Use Context

Existing commercial and residential development in the area is predominantly low density in nature, typically single-story commercial buildings with surface parking, and single-family neighborhoods sprinkled with condominiums. Recent development trends, however, are moving toward an intensification and diversification of development patterns in the area. The current bus shelter is located on a vacant parcel that the Township could obtain and then utilize to create a more aesthetically pleasing bus shelter along with bike racks, parking spaces, benches and additional lighting. There are also vacant commercial parcels that are adjacent to existing businesses that could be developed with TOD in mind. Addressing street design as well as the physical arrangement and proximity of land uses is perhaps the keystone of transit orientation.

Ways to Achieve Successful TODs:

- Restrict auto-related design and uses
- Compact development
- Orient buildings to sidewalk
- A complete pedestrian network around transit stops or stations
- Provide incentives for developments located within core areas (1/4 - 1/2 mile) from stations or stop
- Create “transit friendly design” as those street features within the public right-of-way that can apply just about anywhere and with far less cost than transit oriented development strategies. These could include interconnected street systems, additional transit stops in our township, bus stops with amenities for pedestrians and convenient pedestrian access to the streets, along with bicycle lanes, paths and parking.

Future Vision for our Township

Chocolay Township should look at finding ways to enhance our current streetscape and trail system by adding additional trees, lighting, benches, and weather protection. People are more likely to walk or bicycle in an attractive environment they feel comfortable and safe in. The Township should also encourage the development of additional walking and bicycling routes that create a safe environment for pedestrians and bicyclists.

Improving the compatibility and connectivity of our land uses and transportation network will be the primary consideration for all future transportation and land use decisions in the Township. The automobile will continue to be a significant component of our transportation network, and therefore, cannot be ignored. However, as the Township continues to evolve, there are steps we can take to balance the options available by providing stronger non-motorized connections, lay the groundwork to foster the public transportation system.

Chocolay recognizes that the daily transportation experience contributes to our quality of life, and that we should offer multiple modes of transportation to allow our residents to get to the destination. As we look into our future, it's important to remember the type of, location, density, and design of our land use helps facilitate the activities and business we can attract and support within our community. A functioning, multi-modal transportation network is imperative to the success of our businesses, the quality of life of our residents, and the Township's image.



Source: <http://www.pedbikeimages.org/E.lowry>