

## CHAPTER 4 ONE TOWNSHIP... MANY “COMMUNITIES”

There are several fairly distinct development settings in Marquette Township, all of which have their own type of transportation needs. There is an “urban” style of development in the Trowbridge Park area supported by a “city-like” street system of local roads. There is highway corridor commercial development of motels, restaurants, gas stations, malls, and big box stores associated with US 41/M-28. There are rural residential settings of cul-de-sac subdivisions which are served by county primary roads and there is “dispersed” settlement of single family residents that are not concentrated to a particular location.

Though unique in their setting, all of these development types are integrally tied to the transportation system.

### US-41 / M-28 Highway Corridor

The US-41/M-28 highway corridor is the most significant road feature in the Township. Though it pales in comparison with County Roads and Local Roads in length (5 miles versus 20 and 46 miles respectively), it greatly surpasses other Township roads in daily traffic volumes. The corridor also serves as the commercial center of the Township, which is both good and bad from a transportation standpoint. The MDOT is charged with the responsibility of developing, operating, and maintaining this right-of-way.



The two primary purposes of this corridor are to provide a route on which vehicles can move safely at the speeds for which the facility was designed. Secondly, State Highways are constructed to connect communities. So, from a traffic standpoint MDOT’s responsibility is moving vehicles through the corridor.

MDOT also plays a role in Michigan’s Economic growth. There is recognition that quality road facilities are important to creating, expanding, and keeping jobs in Michigan.

This dual role requires MDOT attain a balance between moving traffic while providing safe and efficient access to business and industry.

According to the *State’s Long Range Plan (SLRP)* corridors are the primary focus “to make the most effective use of limited transportation revenues, improvements will be

## Road Facilities Plan

focused on corridors of highest significance”. Taken on a statewide basis, 92% of Michigan’s population lies within a 20 mile area along these corridors.

US-41/M-28 as it passes through Marquette Township is a Statewide Corridor of Highest Significance, See Figure 4-1. This corridor begins in Houghton and extends to the Canadian border in Sault Ste. Marie. This is one of only two such corridors in the Upper Peninsula, the other running along the “south shore” from Menominee, Escanaba, to St. Ignace.

Figure 4-1 Statewide Highest Corridor of Significance



Source: Marquette County RMD

### Access Management

The *Michigan Access Management Guidebook* defines access management as “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 preserve investment in roads by managing the location, design, and type of access to property”.

These are certainly worthy goals. Goals which Marquette Township “embraced” through adoption of access management techniques and regulations as a component of the Township’s Zoning Ordinance. By directive of the Ordinance, the adopted standards will be applied by the Zoning Administrator and by the Planning Commission during their respective site plan reviews.

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According to the *Michigan Access Management Guidebook*, there are five major reasons why access management is beneficial.

1. Access management improves traffic safety and can prevent vehicular crashes.
  - By limiting or reducing driveways, conflict points, where crashes can occur are also reduced.
2. Access management results in shorter travel times and reduced motorist costs.
  - Fewer access points results in less “mixing” of traffic traveling at varied speeds.
3. Access management extends the function and capacity of roadways.
  - Vehicles slowing to turn or accelerating from driveways reduces the ability of the roadway to move cars diminishing its carrying capacity.
4. Access management improves access to private property while enhancing the value of private land development.
  - Businesses with easy and safe access are more inviting to customers.
5. Access management results in nicer communities.
  - In communities with access management there is more green space between driveways, fewer signs and more attractive appearance overall.

Access management is a “balancing act” between maintaining the functions of a road to carry traffic with the need to provide safe, reasonable access to adjoining properties. It can only succeed as a cooperative effort between the local unit, Marquette Township, and the appropriate road agency. The MDOT is the agency for state trunklines and the Marquette County Road Commission for county system roads. Integral in determining the need or quantity of access is the Township through its land use control mechanism, zoning.

Marquette Township is a member and active participant in the US-41/M-28 Corridor Advisory Group. The single most significant accomplishment of this group (beyond forming a cohesive group to address a mutual problem) was participation in the development of a *Comprehensive Corridor Access and Management Plan*. Central to this plan was assisting municipalities through which US-41/M-28 passed to adopt language in their zoning ordinances facilitating control of access to the corridor. Most municipalities (like Marquette Township) have amended their ordinances while the process is ongoing in others.

Culvers and Red Lobster restaurants are prime examples of applying access management techniques to improve access safety. The two businesses agreed to provide parking lot connectivity, seen in the center of the photo, as well as one shared rear access off of Brookton Road. Patrons now have the option of visiting the establishments without traveling the corridor.



## Road Facilities Plan

The Advisory Group continues to meet on a monthly basis. At these meetings proposed site plans impacting the corridor (1000' each side of US-41/M-28) are reviewed and access management techniques applied. Comments are provided to developers and municipalities as appropriate.

### Directional Crossovers

Congestion at intersections throughout the State was worsening and crashes at intersections continued to rise. Michigan's solution came in the 1960's through implementation of a concept called Median U-Turn Intersection Treatment (MUITT), more commonly known as directional crossovers or "Michigan Left". This concept has been implemented successfully in several other states since.

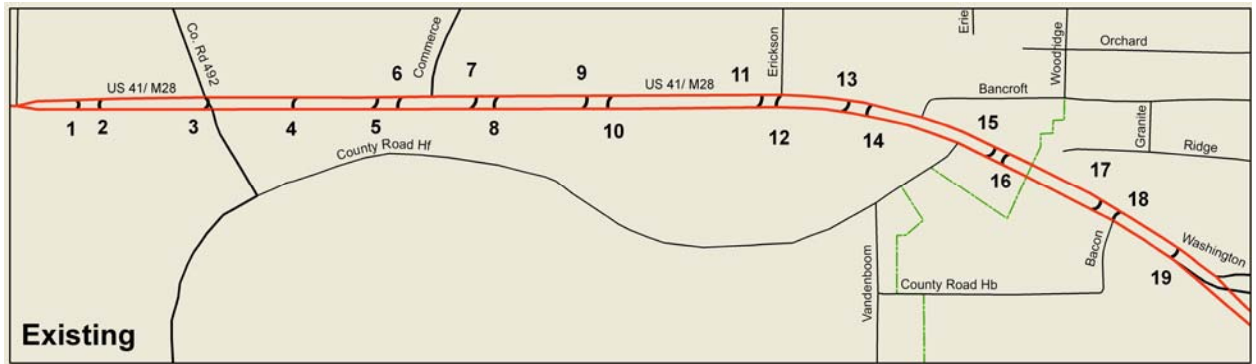
This "treatment" entails elimination of left turns at signal lights and allows the maneuver to be made utilizing median crossovers beyond the intersection. This turning configuration has proven to be a very safe method. The Federal Highway Administration cites past research that shows reported numbers of crashes at MUITT's are anywhere from 20 to 50 percent lower than conventional intersections. Further, crashes that do occur result in less severe injury do to "glancing" type impacts from vehicles traveling the same direction versus right angle side impacts. Though still a fairly new concept some 40 years ago when the US-41/M-28 corridor was designed through Marquette Township, directional crossovers were the method of choice for accomplishing easterly or westerly directional change. The design incorporated 19 crossovers at locations determined by proper spacing relating to intersections, topography, and other factors which resulted in the system present today. Today's system, however, does not match today's conditions. Much of the corridor during original design was undeveloped where today a vacant parcel is rare and cases of redevelopment of existing properties are even taking place. This advanced state of development, along with growing vehicle numbers and both intentional and unintentional misuse by drivers has resulted in a functional decline of many of these directional crossovers. Drivers and residents are well aware of this decline and in public forums associated with this plan cited numerous problems and suggested "solutions" ranging from closure to traffic lights.



The US 41/M-28 Corridor Advisory Group recognized a need to revisit the directional crossover configuration along the corridor. Figure 4-2 shows the location of existing crossovers in Marquette Township. In the summer of 2007, MDOT staff undertook the project and prepared the *US 41/M-28 Highway Corridor Directional Crossover Analysis, Marquette Township*, currently in draft form. Following Figure 4-2 is a summary of the MDOT's draft report recommendations. Figure 4-3 reflects the highway corridor after the proposed improvements are implemented.

## Road Facilities Plan

Figure 4-2 Corridor Crossover Analysis, Existing Crossovers



Source: Marquette County RMD

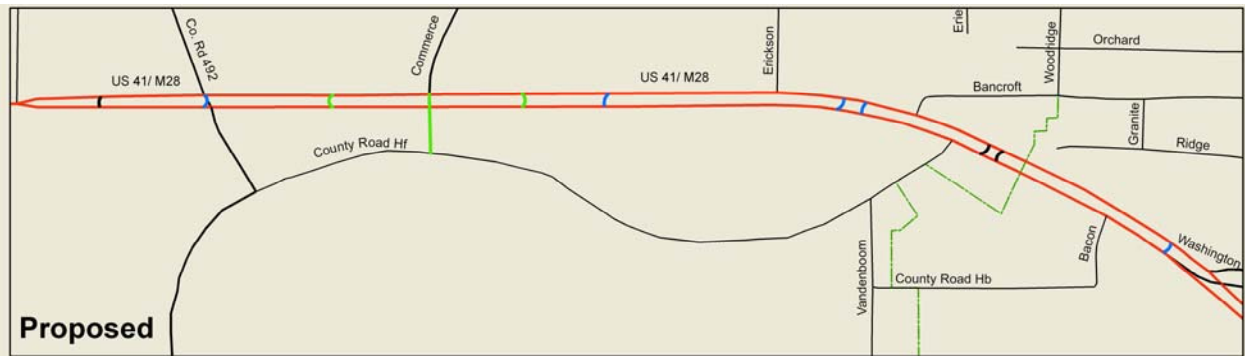
### The MDOT US 41/M-28 Highway Corridor Directional Crossover Analysis, Marquette Township Draft Recommendations:

1. Remove
2. a) Relocate crossover further east, past the eastern Walmart entrance.  
b) Crossover #2 and #3 will likely need further analysis to develop a functional solution. *When planning for these crossovers, special consideration should be given to the location of the Michael's entrance and the Wright St. deceleration taper.*
3. a) Relocate crossover further east to prevent vehicles from cutting across westbound US 41/M-28 to access Wright St.
4. Remove
5. a) Maintain as is and close if Westwood Mall signal is relocated to Commerce Dr.  
b) This signal may be relocated in the future, further east to Commerce Dr. If and when this occurs, Kohl's/Mall entrance should also be moved to the Commerce Dr. location (or modified to right-in/right-out only). *\*It is recommended that the proposed new signal at Commerce Dr. should not allow left hand turning movements onto Commerce Dr. This will eliminate the potential for "T-bone" type crashes between westbound US 41/M-28 traffic and eastbound US 41/M-28 traffic wishing to travel northbound on Commerce Dr. Instead, two new crossovers one on the east and one on the west sides of Commerce Dr, will function as "Michigan-lefts" for the proposed Commerce Dr. signal.*
6. a) Repaint with hatching to discourage double stacking.  
b) Maintain as is and close if Westwood Mall signal is relocated to Commerce Dr.
7. a) Repaint with hatching to discourage double stacking.  
b) Maintain as is and close if Westwood Mall signal is relocated to Commerce Dr.
8. a) Repaint with hatching to discourage double stacking.  
b) Maintain as is and close if Westwood Mall signal is relocated to Commerce Dr.
9. a) Repaint with hatching to discourage double stacking.  
b) Maintain as is and close if Westwood Mall signal is relocated to Commerce Dr.
10. a) Repaint with hatching to discourage double stacking.  
b) Maintain as is and monitor once crossover #12 is closed.
11. Remove
12. Remove
13. Repaint with hatching to discourage double stacking.




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14. Repaint with hatching to discourage double stacking. *The Corridor Advisory Group agrees that traveling against traffic to access Fazoli's is an illegal movement and should be considered an enforcement issue. Painting the western portion of the crossover with hatching would encourage vehicles to enter the crossover more easterly, making it more difficult to access Fazoli's from this crossover.*
15. Repaint with hatching to discourage double stacking until future re-alignment of Brookton Rd. can be accomplished.
16. Relocate this crossover to the east, past the mall entrance; make the mall entrance right-in/right-out only.
17. Remove, *traffic will utilize crossover #19 to change direction.*
18. Remove
19. a) Repaint with hatching to discourage double stacking.  
b) May be closed if future round-a-bout is installed in this area.

Figure 4-3 The MDOT Corridor Crossover Analysis, after Implementation of Proposed Recommendations



Source: Marquette County RMD, MDOT data

Proposed Modifications	
	Move or Reconstruct
	Repaint to discourage doublestacking
	With Signal Relocation

The Township's Future Road Plan includes relocation of the "Kohl's" light to Commerce. The recommendation is consistent with the plan. The study recommendations are incorporated into this Plan.

The proposed crossover improvement recommendations provide both short-term and long-term strategies. Some of these actions can be taken now such as painting the hatching while others such as closures or relocations may be made as funding becomes available and yet other recommendations, those associated with the move of the "Kohl's" light to Commerce, will require public support, coordination with the County Road Commission and the Township at some point in the future.

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### Turn Lanes

Turn lanes are used primarily to separate turning traffic from through traffic. With turn lanes, vehicles waiting to turn are removed from the through lanes thereby reducing delay to through traffic. Turn lanes can also be used by vehicles as a deceleration area when leaving a major road or street. According to the Institute of Transportation Engineers, by removing turning vehicles from the through lane safety is improved. Studies have shown a 52% decrease in rear-end crashes at locations of major driveways when turn lanes are added.

In public forums as part of the process preceding this plan, several comments regarding both acceleration and deceleration lanes were mentioned. Specific locations suggested were acceleration lanes on the hill before Frei Chevrolet heading west and where Wright Street comes out heading west. Deceleration lanes were suggested at Frei Chevrolet and Hudson's, both heading east.

MDOT, the Township, and the US41/M28 Corridor Advisory Committee all concur that turn lanes at both Frei Chevrolet and Hudson's Classic Grill would enhance safety and facilitate improved traffic flow at both locations. These entities are attempting to "partner" with the private landowners in developing these turn lanes. MDOT has proposed providing services at no cost such as drawing plans, preparing for bids, layout staking and inspection of the jobs, and also a waiver of permit fees. The Township is also willing to participate financially in developing these turn lanes. It should be known by December of 2007 if the private owners are interested in participating.

### Roundabouts

Controlling intersections through the use of roundabouts as an alternative to signalization is commonplace throughout the world. Figure 4-4 demonstrates a roundabout.

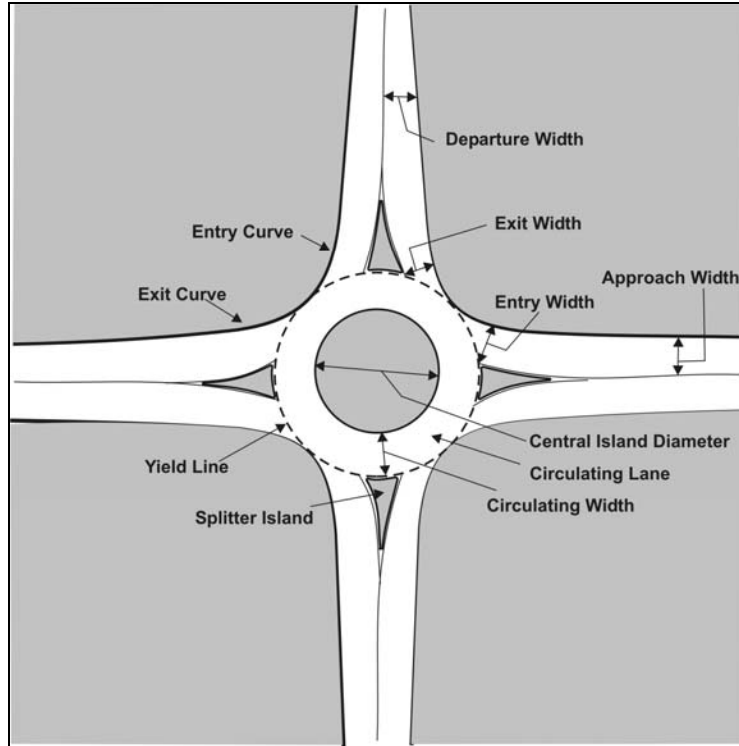
Evolving from early attempts called traffic circles the modern roundabout was developed in the United Kingdom in the mid 1960's. The difference between the traffic circle and the roundabout is that vehicles entering a roundabout yield to traffic that is already circulating. This single change dramatically improved the safety characteristics of these intersections and decreased severity of collisions.

There are several reasons for increased safety of roundabouts.

- There are fewer conflict points in a roundabout than a conventional intersection (no right angle or head on collisions.)
- Lower speeds in roundabouts allow drivers more time to react.
- Pedestrians only cross traffic coming from one direction at a time.

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Figure 4-4 Roundabout



Source: *US 41/M28 Comprehensive Corridor and Access Management Plan*, Planning and Zoning, Inc., 2004. p. 3-27.

In addition to the proven safety enhancement provided by this type of intersection, the yield approach allows drivers to flow through the circular pattern without having to stop at a traffic light. According to the *US 41/M-28 Comprehensive Corridor and Access Management Plan* “The injury crashes are documented to be 35 to 78 percent lower than a typical signaled intersection.” While at the same time “the average delay at a roundabout is estimated to be less than half of that at a typical signalized intersection.”

Roundabouts are discussed here as they could potentially be applied to intersections in Marquette Township. The *US 41/M-28 Comprehensive Corridor and Access Management Plan* indicates that reducing driver confusion is an important factor in traffic safety. Currently every intersection from the City of Marquette through Marquette Township is different. The Plan suggests that many of these intersections could utilize a roundabout.

The Michigan Department of Transportation recently funded a study for the possible conversion of two intersections, US 41/ M-28/Cherry Creek Road intersection in Harvey and the US 41/M-28/Front Street intersection in Marquette. For the Marquette intersection it was concluded that “the modern roundabout alternative is recommended as the best overall long-term solution at this intersection.”



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The potential for construction of the roundabout in Marquette is high. If it is constructed and once driver familiarity is achieved, broader application could take place along the corridor.

Studies, such as those performed in Marquette and Harvey at a cost of approximately \$13,000 an intersection are necessary to determine the potential on a site by site basis. In Marquette Township some possible locations would be the “Kohl’s” light (or Commerce Drive if it is relocated) the light at County Road HQ (future alignment of County Road 492 at Wal-Mart) or perhaps even Brickyard Road.

### Aesthetics

The growth of the highway and road network has had and will continue to have a visual impact on the environment.

In Marquette Township, much of the development occurred along a highway corridor (US 41/ M-28) just as it has elsewhere in the state and country. “Big box” franchise stores, large billboards, acres of paved parking all took their places.

Through its power to control land use (zoning and subdivision regulations) the Township has been very proactive in developing regulations for signs and parking lots as well as provision of “green space” for a softening effect on the built environment.

*Design Guidelines to Enhance Community Appearance and Protect Natural Resources*, a publication funded by the Dunn and Wage Foundations offers the following strategies to maintain visual quality along roads.

- Place restrictions on the size and number of signs.
- Bury utility wires to reduce visual clutter.
- Screen industrial buildings with landscaping.
- Use landscaped islands in parking lots to direct traffic, provide shaded parking, and create a pleasing view.
- Locate parking lots behind or beside buildings, rather than in front. When possible, share parking between businesses and institutions that are open at different hours of the day, or days of the week.
- Leave natural vegetation along roadways.
- Plant flowers or provide landscaping along main roadways entering town, on traffic islands, and along main streets to add color and beauty.
- Reduce light pollution at night by using non-glare, downward-directed, motion lights to limit constant lighting.

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Potential projects, when considering the built environment along the US 41/M-28 corridor primarily, range from large to small and economical to costly. Burying of utilities, for example, would be very expensive. Planting flowers and landscaping on the other hand could be done at reasonable cost.

The federal government provides Transportation Enhancement Funding (in excess of \$20 million in 2006) to the MDOT which it allocates for projects of this type. The Township, working in conjunction with the MDOT, should define a project and apply for this funding.

## **Trowbridge Park**

Trowbridge Park is the home of 2,012 (census 2000) Township residents representing 61% of the Township population as a whole. There are 785 housing units in Trowbridge accounting for 52% of the housing stock in the Township. The population density in Trowbridge is 1,462 people per square mile versus 60 on a Township wide basis.

The high population density of Trowbridge Park and the percentage of Township population residing there should be an important consideration in determining future connectivity of this “community” to the destinations (work, shopping, school, etc) they need to access. Similarly, allocation of Township resources for transportation enhancement and maintenance can affect a large number of residents by being applied in a small geographic area.

In 1887, Luther Trowbridge purchased all of Section 16, T48N-R25W which became Trowbridge Park. It was not until 33 years later when 8 plats of the area would be recorded. Still, these are the oldest plats in Marquette Township.

The plats make a grid of interconnected streets forming residential blocks. Some portions of the street system were never constructed, largely due to topography (steep slopes), geology (rock outcrops), water features (streams) and hydric soils (wetlands). The right-of-ways (ROWs) however, remain reserved from the original plats.

### Right of Way Rationalization

Township Administration desires to rationalize the disposition of these remaining ROWs. Should they be saved for future road development? Preserved as utility corridors? Trails or greenways? Or should the ROWs be abandoned and transferred into private ownership? As part of this planning process these questions are addressed.

This study uses a systematic approach to determine what to do with undeveloped right-of-ways. A geographic information system (GIS) was utilized to layer researched data over the “base layer” of the historical plats.

The first Figure 4-5 shows all the street layouts conceived when the original platting took place. “Streets” are indicated in yellow. In a progressive manner, subsequent “layers” of information (constructed streets, utilities, abandoned street segments) are placed over the original street “grid” gradually reducing the yellow portion of the map. The yellow

## Road Facilities Plan

portion that remains are the vacant right-of-ways to be studied. They will be considered individually for future public use versus potential abandonment.

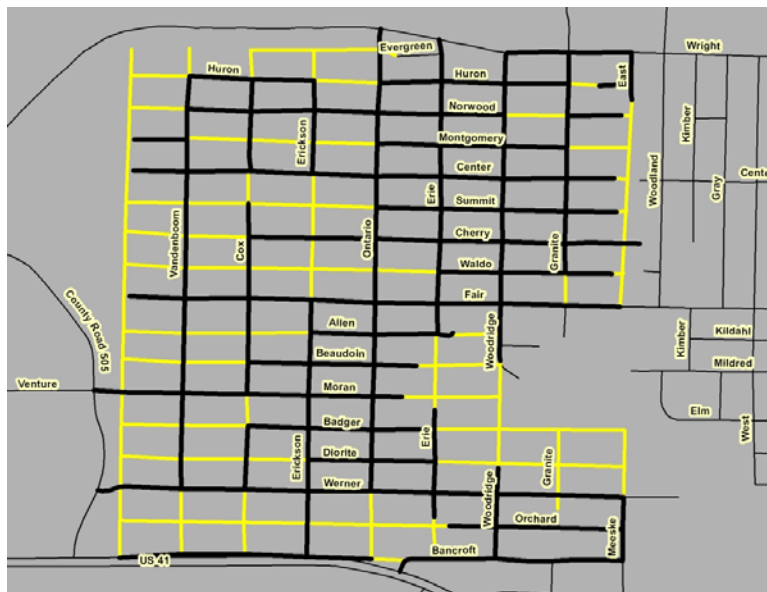
Figure 4-5 Trowbridge, ROWs from the Original Subdivision Plats



Source: Marquette County RMD

To the “layer” of the original plat the existing roads are added showing the balance of the ROWs that are currently undeveloped.

Figure 4-6 Trowbridge, Developed Roads



Source: Marquette County RMD

Next the ROW layout was researched in the Marquette County Register of Deeds to identify any abandonment which may have occurred. From this process, thirteen segments were deleted from the “grid” and are represented in white on Figure 4-7. The liber and page of these Register of Deeds records are listed and mapped in Appendix E.

## Road Facilities Plan

Figure 4-7 shows existing roads and legally abandoned roads deleted from the original plat.

Figure 4-7 Trowbridge, Developed Roads and Abandoned Right-of-Ways



Source: Marquette County RMD

Another potential existing or future use of these ROWs is utility corridors. The Township provided water and sewer system configurations. These utilities were associated with the residential development and existing street development. These utilities did not occupy any currently vacant ROWs.

The Marquette Board of Light and Power provided an overlay of their electrical transmission lines. Through primarily following streets there are five areas where “vacant” ROWs are utilized.

SEMCO Energy supplies gas to the Trowbridge Park area. SEMCO provided the location of their distribution system which was added to the base map. Their system utilized very little of the vacant ROWs (but some) which is reflected on the following map with the other utilities. SEMCO indicated they had no future plans for growth of their system. They indicated their modifications are responsive to development rather than in anticipation of it.

Telephone lines and Charter cable “round out” utilities present in Trowbridge. Both of these systems are associated with and do not exceed the electrical distribution system and therefore have no additional impact on right-of-ways.

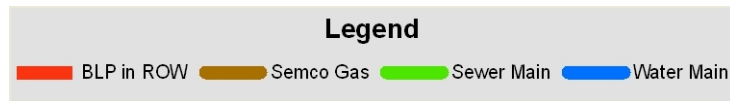
Figure 4-8 shows sanitary sewer main in green, water main in blue, Semco Energy infrastructure in brown, and Board of Light and Power in red. These layers are added over the existing roads and abandoned roads further reducing the quantity of vacant right-of-ways.

## Road Facilities Plan

Figure 4-8 Trowbridge, Developed Roads, Abandoned Right-of Ways, and Utilities



Source: Marquette County RMD



Preservation for future road use, the use for which these right-of-ways were originally reserved, is a priority in determining their future disposition.

The Township has developed a system of what they refer to as “future roads.” Of this system, one road segment known as Ryan’s Alley is located in Trowbridge and forms the westerly boundary of Trowbridge Park. The portion of Ryan’s Alley extending north from Moran Street to Center Street has been identified as a component of this “future road” concept and should be preserved.

Another concept from a Township-wide basis has been reducing local trips from the corridor by a variety of means. One of these concepts is to provide rear access to businesses. There are some ROWs, though already impacted by previous abandonment, south of Werner Street and primarily along Orchard Street which parallels US41/M-28 that may have potential to perform a rear access function. There are some topographic challenges associated with existing ROWs. There may be an opportunity, however, to negotiate with developers/businesses along the corridor for ROW abandonment in exchange for connection in appropriate locations. There is currently zoning language that impedes access to roads in residential districts by commercial traffic. This is a concept that needs to be revisited if rear access to businesses is a desirable alternative to driving the corridor.

## Road Facilities Plan

Figure 4-9 Trowbridge, Developed Roads, Abandoned Right-of-Ways, Utilities, and Future Roads



Source: Marquette County RMD

### Disposition of Vacant Right-of-Ways

The remaining right-of-ways were field checked regarding suitability for future uses. Potential public uses considered could be as roads/streets, utility corridors, or recreational trails.

### Utilities

Through the previous discussion of utilities, it was determined that these service providers were not interested in additional use of vacant ROWs. Should roads develop in these right-of-ways then utility extension (electric, gas, telephone, and/or cable) would likely take place. Therefore, no additional ROW is preserved specifically for utilities.

### Roads

From a road development standpoint, it is necessary to look at each road segment and determine first, is it even possible to construct from a site characteristics standpoint (topography, rock, streams, etc.) and secondly, whether the road is necessary. It should either serve as an important part of the circulation system (of benefit to the motoring public) or facilitate residential development, and preferably, both while providing emergency vehicle access.

Landownership also can be a factor in whether some of the right-of-ways are ever developed. To develop new parcels adjacent to the proposed street, existing ownerships would need to be separated into two lots. For example, two parallel streets that have an unutilized ROW between them currently have deep lots (1 block deep) that end at the unused ROW. Figure 4-10 is of the Summit Street ROW between Center Street to the north and Cherry Street to the South. White lines delineate parcels.

## Road Facilities Plan

Another consideration in determining if a right-of-way should be preserved is to avoid “land locking” of parcels. There are some parcels that exist, though undeveloped, that could only be accessed by means of the platted right-of-way. Figure 4-11 is of the Waldo Street ROW between the Cherry Street ROW to the north and Fair Avenue to the South. There are six street segments proposed to be preserved to prevent “land locking.” Those street segments are:

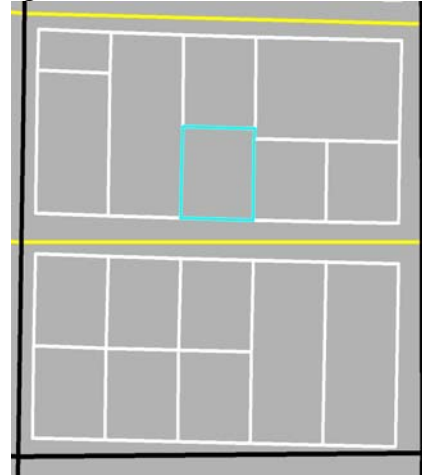
- Cherry- between Ryan’s Alley and Cox,
- Waldo- between Ryan’s Alley and Vandenboom,
- Allen- between Vandenboom and Cox, and between Erie and Woodridge,
- Badger- between Erie and Woodridge, and
- Diorite- between Granite and Meeske.

Figure 4-10 Deep Parcels



Source: Marquette County RMD

Figure 4-11 Land Locked Parcel



Source: Marquette County RMD

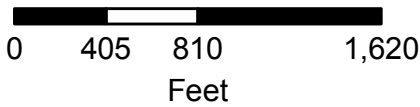
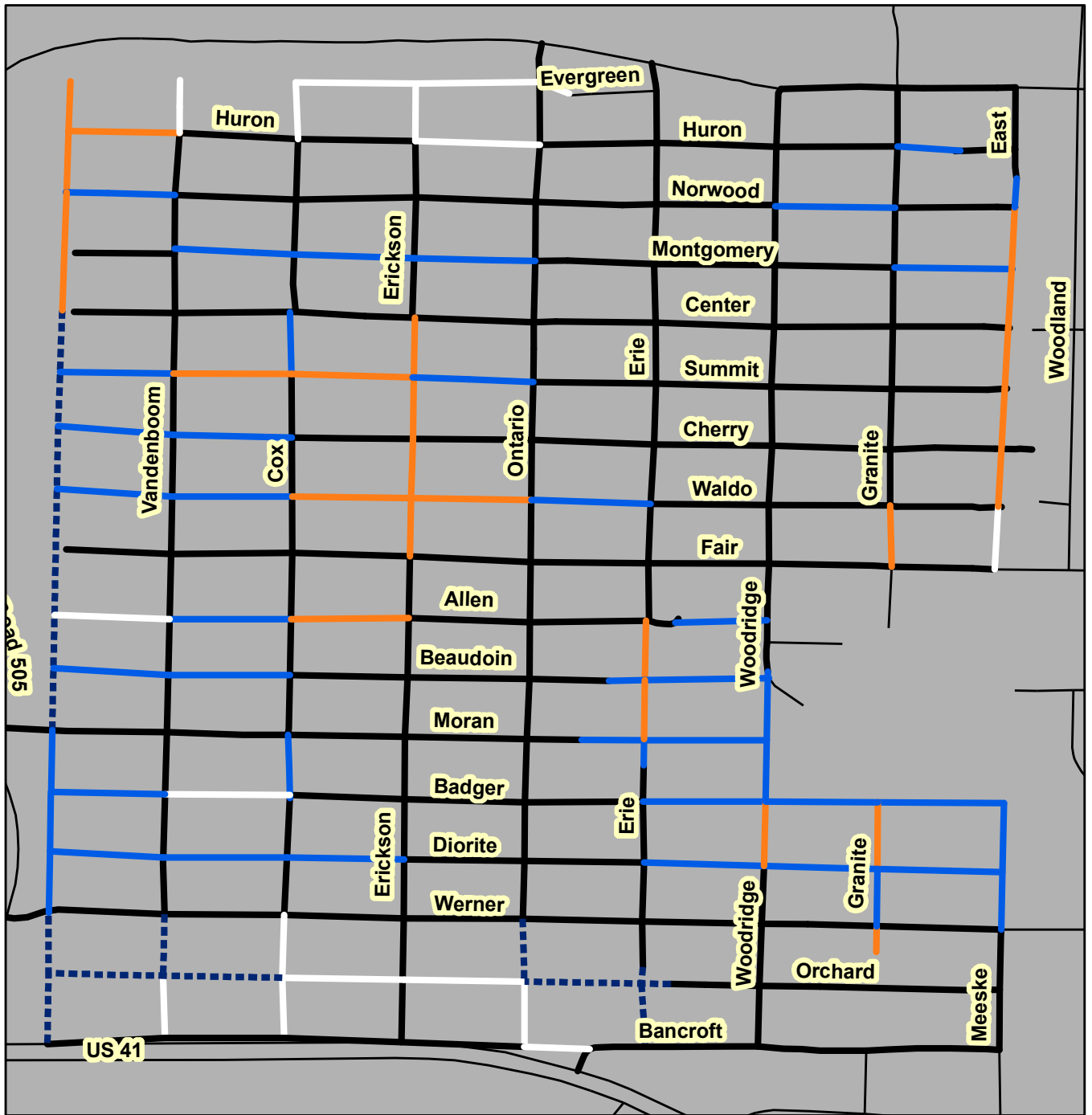
There are a “handful” of street segments that could support future residential development and other “scattered” sites where only a partial block is possible. Some of the more desirable right-of-ways are Norwood between Woodridge and Granite, Montgomery between Vandenboom and Ontario, Ryan’s Alley, the southwest portion of Trowbridge associated with Ryan’s Alley, Badger, and Diorite and the southeast area of Trowbridge, east of Erie and north of Badger. The last area mentioned, if developed, would be accessed from the north via Woodridge. Due to terrain features, many of the existing right-of-ways would likely need to be abandoned and a road system more compatible to the topography and land features laid out by the developer. In instances where a partial “block” could support development, the right-of-way for the entire block was preserved. The same standard was utilized on blocks that are retained to prevent “land locked” parcels.

It is important to note that this report does not provide an engineering level review regarding feasibility of construction. Also, to this point, consideration is only given to use for utilities and roads. Another public use, trails, could be considered as a possible subsequent step. Further, these abandonments would still need to follow an open and public process as delineated in Appendix G, Abandonment Process.

Figure 4-12, indicates proposed right-of-ways to be preserved (in blue) and proposed right-of-ways to be abandoned (in orange).



Marquette Township; Trowbridge Park Area



"The information and data provided herewith has been compiled from various sources, and is used by the County of Marquette for its own general purposes. The County does not warrant or guarantee that this information and data is accurate or current, nor does the County warrant or guarantee that this information and data is fit for any particular use or purpose. More specifically, the County warns that this information and data is not intended to be, and should not be, used to determine individual ownership, lot lines, or lines of occupation with respect to real estate. Any recipient of this information and data should independently verify its accuracy before relying on it for any purpose. The County of Marquette and its officers, agents, employees, boards, and commissions shall not be liable for any inaccuracy or omission in this information and data."

**Legend**

**Proposed ROW Plan**

- Developed Road
- Previously Abandoned
- Reserve
- Reserve- Potential Future Road/ Development
- Potentially To Be Abandoned
- Existing Roads

## Road Facilities Plan

### Trails and Greenways

Trails, like roads and utilities, are a public purpose for which Trowbridge right-of-ways may be preserved. Another similarity is that they are all linear features that need to be continuous to function. That is, connect point “A” to point “B” and back. In a developed, urban environment, opportunities for these connections are difficult, if not impossible, to come by often restricting bike riders and pedestrians to sidewalks and streets.

In Trowbridge, however, some of these vacant right-of-ways may provide logical trail connections and simultaneously divert trail users from the “sanitized” urban environment into natural areas without ever leaving the “neighborhood”.

The Trails and Greenways Committee has identified several systems of trails; greenway-trail, greenway-waterway, multiuse existing road, sidewalk, pedestrian/bicycle paved path, and shoulder bicycle path. Additionally, wildlife corridors (or green spaces) have been identified. Further information regarding Marquette Township’s trails and greenways plan can be found in the updated Township Recreation Plan. At this juncture, it becomes a policy decision by the Township Board as to whether right-of-way is to be preserved for trail purposes.

### Financial Implications

A consideration that may drive the final decision on whether to preserve or extinguish these right-of-ways is the revenue/expense related to this decision.

As it currently stands, the County Road Commission is the owner of the right-of-ways. The Commission does not receive Act 51 money (described in Chapter 3) for undeveloped right-of-ways. There is some revenue and expense associated with issuing permits to homeowners for utilization of right-of-ways for driveway purposes. There is potential expense due to liability as the property owner.

Should the right-of-way be retained and developed, the Road Commission would receive Act 51 money for maintenance (snowplowing, etc). On the cost side of the equation, in today’s dollars, on a site requiring no special preparation, a block in Trowbridge would cost \$200,000 to construct. With a local match of 60% Township to 40% Road Commission, careful consideration must be given weighing the cost/benefit of construction. Though residential development will provide more tax revenue, it has been proven that this type of residential development costs more in services required than it generates in tax revenue (see Cost of Community Service Study, Page 4-20).

If abandonment occurs, the Township becomes the landowner. No revenue is generated by this process. The Township would have “value” none-the-less in that the property is still available for public use such as trails or to meet other future public needs.

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The liability previously held by the Road Commission would now be the Township's responsibility. Any development of the right-of-ways would be at Township expense though grants might also be available as is the case with trails.

Should abandonment occur by both the Road Commission and the Township, ownership of the land could revert to adjacent landowners. If that were the case, properties along with their valuations, would increase resulting in more property tax revenue for the Township. Township tax assessing staff researched the properties that would be impacted by the list of potential right-of-way abandonments. Staff concluded that the state equalized value (SEV) would increase by \$115,000. This increase, when applied to existing millages, would result in a tax revenue gain of \$978.35 for the Township.

### Summary

A significant portion of the originally platted right-of-ways in Trowbridge are currently utilized or "ear-marked" for future public purpose. Still unanswered is the issue of right-of-way preservation for the purpose of trails and greenways.

Appendix J lists right-of-ways for possible reservation and those to consider for potential abandonment.

## Subdivisions

Subdivision may be defined as the act of dividing land into pieces that are easier to sell or otherwise develop, usually by means of a plat. The original piece of land then, if used for housing purposes, is typically known as a housing subdivision or housing development. Developers often times refer to these areas as “communities”.

As demand for rural home sites grows more and more subdivisions appear. For Marquette Township the first plats were in Trowbridge Park from 1910-1920. Then one in the 1950s, a couple in the 1970s, but since the 1980s the Township has been averaging a new subdivision every other year according to the Marquette County Register of Deeds department.

Subdivisions provide a challenge to local units of government. It is expensive to provide services to homes located outside of already developed areas. Initially, the new development appears attractive because of higher tax revenues. However, a number of studies have shown that providing services to homeowners costs more than residential landowners pay in property taxes. Conversely, these same properties in their original state as agricultural land or as forest land pay more in local taxes because of the minimal local government services required.

In a recent *Cost of Community Service Study (COCS)* performed by the Center for Land Use Education, University of Wisconsin-Stevens Point, it was determined that for every dollar raised in revenue, farm and forest land requires government to expend 31 cents, commercial and industrial property 29 cents, while residential results in a cost of \$1.11 for every dollar of revenue raised.

As applied to transportation facilities, the infrastructure itself is of initial concern. Developers likely will carry this burden, at least early on. Many times, it is the intent that the roads will become part of the public system in time. To safeguard against future local expense, a private road ordinance, clearly defining road standards is recommended. Even if it is not the intent to transfer the roads, it is essential that roads be built to strengths and dimensions capable of supporting and providing sufficient turning radius for fire trucks and other emergency equipment as-well-as school buses, garbage trucks, and snowplows. As our population ages, there will likely be demand to access these locations with mass transit for those that are unable to provide their own transportation.

Connectivity is another problem associated with cul-de-sac type subdivisions in that there is only one ingress/egress that congests traffic or could be potentially blocked trapping residents (see photo to right). Additionally, cul-de-sacs are a maintenance problem from a snow plowing

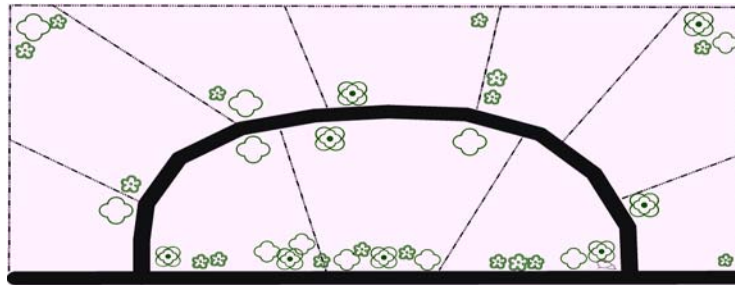


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perspective and take longer to clean. Regardless, it is imperative that a natural center be preserved at the end.

Another subdivision design, the “eyebrow”, see figure 4-13, offers a good solution to the connectivity issue associated with the standard cul-de-sac design by offering two entrance/exit points to the subdivision.

Figure 4-13 “Eyebrow” Subdivision Design



Source: Marquette County RMD

If cul-de-sac design is the preferred method of the developer, attention should be given to future build out of the area. To the extent possible, some connection should exist between subdivisions of this type. Some property of the subdivision should be preserved for future connecting right-of-way to other subdivisions and ideally, a return to a main road.

These factors should be considered in any subdivision sight plan review.

### **Dispersed Development**

Dispersed development makes up the balance of development in the Township and is characterized as “scattered” about the Township. These are typically homes located adjacent to County primary roads or are on private roads/drives.

Most residents do not locate in these areas anticipating a high level of service from local government such as solid waste disposal or water and sewer utilities. Some services may be required regardless such as fire, police, ambulance, or school buses.

In a *Hazard Mitigation Plan* completed by Marquette County in 2007, the most serious condition regarding this type of development was access. An example of the type of concerns, are locations such as those on County Road 550 west of the bridge on the Dead River. When the Silver Lake Dam breached in May of 2003, the bridge over the Dead River was closed due to the threat of failure and residents on the west side were cut off. A similar situation still exists along the Forestville basin.

Fire is another substantial concern in some locations, particularly those on private roads with inappropriate access. Compounding this is a lack of water supply for trucks. There

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are limited water sources. According to the Marquette Township Fire Department, through September of this year there were 167 calls responded to. There were 19 west of the Dead River Bridge. All but two of these were for fires.

Another potential problem for access by road is at grade railroad crossings that can potentially block traffic.

There have been cases where continued development on seasonal roads has required conversion to year round use, placing an increased burden on the County Road Commission for the benefit of a few people.

The impacts on transportation facilities should be considered carefully when developing the Township Future Land Use Plan and zoning districts.