



Final Past/Existing Transportation and Land Use Trends Report

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Executive Summary

Introduction

The Grand Vision Land Use and Transportation Strategy began officially in early July, 2007 when the contract between Mead & Hunt, Inc. and TC-TALUS was signed. However, the discussion of transportation and land use in the Grand Traverse region started long before that. As the Grand Vision project moves forward with a new approach to regional planning, an understanding of the existing conditions is needed. Transportation planning is an exercise that considers transportation systems, land use, and environmental features. This document is a summary of specific documents that introduce the reader to a collection of past and current transportation, land use, and environmental studies and reports.

The project Study Area is defined by the project scope as the area comprised of Traverse City, Acme Township, Blair Township, Green Lake Township, Whitewater Township, Peninsula Township, Garfield Township, East Bay Township, Long Lake Township, and Elmwood Township. The Area of Influence is defined by the project scope as Grand Traverse County, Leelanau County, Benzie County, Wexford County, Kalkaska County, and Antrim County. A map of the Study Area and Area of Influence can be found at the end of this section labeled **Figure 1.0**.

Maps associated with the transportation policy documents are found in **Appendix A**. Zoning maps from the Study Area can be found in **Appendix B**. Future Land Use maps from both the Study Area and the Area of Influence can be found in **Appendix C**. Maps related to environmental studies can be found in **Appendix D**.

Transportation Policy

A need for improvements to the transportation system in the Grand Traverse region has been recorded in studies and plans consistently since the 1930s when the Michigan Department of Transportation (MDOT) designated US-31 and M-22 as state routes along existing roads. In 1942, the Traverse City Plan described the “Narrows” between the Grand Traverse Bay and Boardman Lake as a prime bottleneck to the east-west flow of traffic and proposed a new east-

west route through the city. The City Plan was updated in 1963 and 1977 and the east-west route from the 1940s was reaffirmed.

Regional transportation plans and preliminary engineering studies followed in a revolving pattern through the 1980s as the Traverse Bay Regional Planning Commission was replaced by the Grand Traverse County Planning Commission which in turn formed the Transportation Advisory Committee in 1985 which officially became the TC-TALUS organization in 1990. Through the planning and engineering loop, project funding was discussed. In the late 1980s, the public rejected a plan to fund a group of regional transportation improvements through a 15 year millage assessment.

During the 1990s, TC-TALUS initiated a series of regional transportation studies. Early studies were focused on specific issues including an origin and destination study and a preliminary environmental study of options for crossing the Boardman River Valley. Studies then moved into regional transportation planning activities. The tools and models were more sophisticated over time and a public involvement component was undertaken as part of the planning activities.

In spite of these efforts, public involvement in 2003 came in the form of organized opposition to the construction of a bridge connecting Hartman Road and Hammond Road over the Boardman River. Long included in the project list for the Grand Traverse County Road Commission (GTCRC), the project advanced through several stages of planning and permitting. Opposition to the project in the area grew through grass roots activities. One example is the Smart Roads Plan brochure created by the Coalition for Sensible Growth in cooperation with the Michigan Land Use Institute. It opposed the proposed connection on the basis that it would intensify sprawl, waste money, threaten existing businesses and harm the environment. It proposed an alternative solution which included improvements to existing infrastructure, expansion of non-motorized and public transportation and land use planning tools. At the end of 2003, the GTCRC withdrew an application from the MDEQ for an Environmental Impact Statement (EIS) related to the bridge construction and the region was back to the planning process. In August of 2004, the GTCRC passed a motion to pause the permit process for the Hartman-Hammond bridge project.

As part of the transportation planning activity in the region, corridor studies have been done to address the east and west segments of M-72 and an access management plan has been developed for the east roadway section between I-75 and US-31. Another transportation planning activity is in Leelanau County where M-22 has been designated as a State Scenic Heritage Route. This program raises awareness in the region of the road's value as a scenic resource and example of the region's heritage. It is not regulatory in nature but it establishes

development guidelines for the road and seeks local cooperation on land use decisions. A guidebook brochure has been created as a public information tool.

There are transportation options other than the automobile which have also been studied. Public transportation options were studied in 1997 through a strategic plan for the Bay Area Transportation Authority (BATA). The study recommended establishing a fixed route service and a transit center. Both have been accomplished in the last ten years. Residents of the Grand Traverse region also have the option of non-motorized transportation (and recreation) because of a fifty-five mile trail system developed and maintained by the Traverse Area Recreation and Transportation (TART) Trails, Inc. Both of these systems are noted in the transportation policy section as they provide strategy options for the Grand Vision project.

The future of railroad service in the Grand Traverse region received attention in a study done by the Northwest Michigan Council of Governments (NWMCOG) in 2002 for the Traverse City Area Chamber of Commerce. It was undertaken with the expectation that the State of Michigan would be offering the rail system and rail right of ways for sale. The study recognizes that present market forces may not be in place to justify a private commercial purchase. Without the commercial incentive to keep the rail line active, the study points out the possibility that the rail line could be divided into parcels and lost as a transportation corridor. The study stresses the importance of keeping the rail line intact and encourages the community to make sure it happens to preserve the option of rail service in the region in the future.

Communication, cooperation and coordination between different road agencies and budgeting authorities are part of the challenge to regional transportation planning, as is funding availability. The Transportation Policy section (Section 1.0) addresses overarching policy documents from the Michigan Department of Transportation (MDOT). Currently, MDOT is promoting a system of asset management strategies as a 'best-practice' tool for keeping roadway infrastructure performing well within the budget constraints of the overall system. In 2006, NWMCOG received grant funding from MDOT to create a document explaining asset management as a practice and to report on existing road conditions for each municipality.

TC-TALUS recognized a pattern of transportation planning activity which lacked the broad-based public support to endure through the steps of funding and building. The Grand Vision Transportation and Land Use Strategy is a regional transportation study specifically designed to break that cycle. The Grand Vision team, led by project manager Mead & Hunt, is designed to start with "Values, Vision and Strategy" before reaching what has been the traditional starting point of "Plan, Fund and Build." The project is supported by federal dollars which will fund the

study and the first implementation steps. The project team includes experienced professionals recognized nationally for their experience and success in regional visioning and scenario planning with state-of-the-art technology. A good starting point for the Grand Vision project is an understanding of where we are now and how we got here.

Land Use

Land use policies and ideas in the Grand Traverse region are generated at the regional, county and local levels while decisions are made exclusively at the local levels. The Northwest Michigan Council of Governments (NWMCOG) is a regional planning resource agency. As an agency, the NWMCOG does not have regulatory authority but it supports and guides planning activity at the local level through a collection of material and studies. Its service area includes all of the counties in the Area of Influence and Charlevoix, Emmet, Manistee and Missaukee Counties.

Each county in the Area of Influence has a county planning office which offers resources for and coordination between local units of governments. The Grand Traverse County Master Plan is an umbrella policy document designed to offer a future vision at the county level. Each local unit of government in the Study Area has a master land use (or comprehensive) plan and zoning authority.

Included in the Land Use Section is information on the location of each municipality, major transportation corridors, and goal statements from policy documents. Centers of population and patterns of commercial development patterns within the municipality are also identified. Access management tools are noted when they are found in local zoning ordinances. More detail is provided for the units of government in the Study Area while a "broad brush" approach is taken with the Area of Influence.

In many ways, there is a regional cohesiveness between the local units of government. There are many common themes expressed through the goals, policies and objectives of planning documents. Residents of the Grand Traverse region recognize the unique beauty of the area and the value of the area's natural resources to the region's quality of life, recreational opportunities and tourism industry. Repeatedly, local plans express an interest in planned development practices that protect the rural feel and agricultural practices in the region and protect the area's natural resources and scenic views from roadways. Planned development goals also include designs that make sense on the land, encourage pedestrian connections, offer a range of options in price and visibly blend in with the landscape. Most communities recognize Traverse City as

the regional center and oppose sprawl as a development pattern in the region. Implementation strategies vary from one community to the next.

A major difference between communities as expressed in the policy documents is the local policy position on a regional east-west connector road. Some communities support additional infrastructure as a way of improving safety and efficiency for traffic moving through a growing region. Other communities hold that a high-volume, high-speed road moving traffic through the region will erode the region's unique, high-quality life and generate sprawl type development. Another major difference between local units of government is the type and pattern of development allowed along major transportation corridors.

As part of the Land Use Section, economic policies and programs are examined from the state, regional and local levels. The State of Michigan sets a course of economic policy through initiatives and funding that affects every part of the state. As Michigan shifts from a manufacturing economy to a service and high-tech economy, the state is offering support to the emerging industries. The NWMCOG provides regional economic development programs and the Traverse City Area Chamber of Commerce provides services around Traverse City.

At each level of government, the natural resources and appearance of the region are recognized as a significant part of the economic engine of the Grand Traverse region. These amenities draw tourists to the region and can also be used to attract business owners who have a choice in where they locate. The tourism economy is seasonal and there is a recognized need to balance out the employment opportunities for residents. High speed internet is not available in many places in the region and is another recognized need.

The Land Use section includes summaries of many past studies and reports related to the Study Area. One example is the *New Designs for Growth Regional Guidebook* that provides guidance for all types of development. The Guidebook embraces the tenants of smart growth with graphic designs, explanations and examples of preferred development patterns. It has been embraced by planning commissions around the region and is an example of preferred development patterns desired in the region.

Another example of past studies is the 2004 report entitled *Vision in GTC* (Grand Traverse County). The report summarized the results of a charrette/visioning session which expressed residents' preferences for growth. It includes a statement that reads, "*Re-route regional through-traffic outside of downtown and remove Grandview Parkway to reconnect downtown to the bay.*"

The preferred development pattern along the Grand Traverse Bay was the subject of several studies including efforts by Michigan State University and University of Michigan students. The student efforts led to the creation by Wade Trim and JJR of the “Your Bay, Your Say” document in 2007. This study describes community preferences for the long-term appearance, land use and transportation choices along the Traverse Bay waterfront.

More generally, there have been studies done to compile regional opinions and statistical data (Benchmarks Northwest), seasonal population, housing and the region’s laborshed. The seasonal population study reports that the population in Leelanau and Benzie counties almost doubles during the summer months. Across the Study Area in the summer months there is an estimated one visitor for every two permanent residents. Housing and laborshed studies indicate that there is a lack of affordable housing in and around Traverse City causing workers to commute into Traverse City daily from areas including Kalkaska, Buckley and Lake Ann along major roads such as M-22, M-72 and US-31.

Environment

The solution to regional transportation questions is not just a question of roads. The relationship between roads and the communities they serve is interconnected. Completed studies and the policy documents that are already in place are valuable resources as we begin to work toward a solution through a new process. In addition to land use considerations, part of the equation is the environment. The environment is a benefit to the quality of life in the region and it is also a constraint to transportation choices.

In this document, there are text descriptions taken from planning documents and the Michigan Natural Features Inventory (MNFI) for each of the counties in the Area of Influence including Grand Traverse County. The text includes policy statements, land cover statistics and information about plants and animals that are classified as endangered, threatened or of special concern.

Each county plan includes policy statements that identify the impact of urban development on the environment as the largest threat to the environment. Each policy document also recognizes that those impacts can be steered, regulated or guided to some extent through the use of planning and zoning tools. Common themes run through the text of each county’s master land use plan emphasizing that natural resources are valued and something to be protected since they are limited and irreplaceable. The natural beauty of the area also contributes to the high quality of life in the region and to the economy both in resource based industries and in tourism. The

environmental section of the document also summarizes several other studies and reports that are relevant to the region.

The Grand Traverse Bay Watershed Protection Plan evaluates the performance of the watershed for five designated uses including an ability to support cold-water fishery, swimming, navigation and a quality public water supply. The study found that none of the uses are impaired on a watershed wide scale but that some uses may be threatened in specific areas. The mission of the plan is to provide guidance and direction for future actions that affect these functions in the watershed and several guiding principals are included as direction for the future.

The Boardman River Natural River Plan describes the river, the pressure for residential development along the river and the role of the state's protection through the Natural River Program. It also notes that that the dams along the river may be removed to restore the river to its original function.

A Natural Areas Inventory of Grand Traverse County is a report done through the MNFI to survey the land surface of the county and identify and evaluate features of the remaining natural areas. The inventory document states that unfavorable land use has eliminated 99% of the natural area quality landscape in Grand Traverse County and encourages conservation of the county's remaining native plant and animal populations.

The Brown Bridge Quiet Area document describes the natural area that exists eleven miles south of Traverse City. The Brown Bridge Quiet Area is roughly 1,300 acres in size and provides visitors the opportunity to experience nature through trails, boardwalks and observation areas.

Conclusion

Residents, public administrators, elected officials and the business community are working toward a regional transportation plan through the Grand Vision project. The solution will reflect the values of the area as choices are made about roads and the land use patterns around them. Scenarios will show the impact of different choices on the environment, the transportation network, the consumption of land and other issues.

People in different offices and in different communities have decision-making authority over part of the solution. Land use decisions are guided by studies done at the regional level and by Master Land Use plans done at the county level but the decisions are made independently by

each local unit of government. Each of the local units of government in the Study Area has local zoning authority and elected officials representing the preferences of their own constituents.

The region has a wealth of environmental resources including the Grand Traverse Bay, high quality lakes and rivers, expansive state and federal forest areas, breathtaking views and a unique combination of climate and soils that create some of the nation's most productive farmland. Transportation decisions are both constrained and inspired by the area's natural resources.

The transportation network itself is a collection of roads serving regional, local and neighborhood travel. It is also a public transportation system and a rail system and a pathway system that offer alternative modes of transportation to the region. The region has recognized for more than two decades that the effectiveness of the existing transportation infrastructure is not adequate to serve its growing population. Transportation infrastructure improvements have been planned but not implemented. The question to be answered by the Grand Vision project is what combination of choices for transportation and land use best fit the values of the region. An understanding of the work that has already been done will be an effective start to the Grand Vision project.

1.0 Transportation Policy in the Grand Traverse Region

1.1 Introduction

The transportation policy section of the document reviews documents related to transportation policy in the Grand Traverse region beginning in 1977 with the City Plan for the City of Traverse City. After the City Plan came the regional transportation plans in the 1980s and then the TC-TALUS transportation plans in the 1990s and 2004. Transportation planning met with public opposition once when a ballot proposal to fund the package of transportation improvements was defeated. Public opposition organized in 2003 as the Grand Traverse County Road Commission (GTCRC) moved forward in the environmental permitting process prior to constructing a bridge connecting Hartman Road and Hammond Road through the Boardman River Valley. Documents from these activities are summarized in Section 1.5. To aid the reader in understanding the transportation policy in the Grand Traverse region, a map of the Study Area and Area of Influence can be found in the Executive Summary section titled **Figure 1.0**.

Although infrastructure improvements were not implemented, there were successful efforts to improve the functionality of the existing transportation. Corridor studies were done for east and west M-72 and M-22 was designated as a Scenic Heritage Route. These studies are summarized in Section 1.6 and Section 1.7. Various multi-modal studies were completed for rail and bus systems and are included in Section 1.8. Transportation policy documents for the State of Michigan are also presented in Section 1.10.

1.2 City Plans

1977 City Plan, City of Traverse City Planning Commission

In 1973, the Traverse City Planning Commission realized that the 1963 City Plan was no longer able to address the growth and change that was occurring in the city. A new planning document was commissioned through Johnson, Johnson and Roy of Ann Arbor, Michigan. Four years of study and discussion resulted in the adoption of the 1977 City Plan. The document was comprehensive in scope and included goal statements which still echo through planning documents in the region. It included three Major Street Plans labeled “Immediate”, “Intermediate” and “Long Range.” A map of the three Major Street Plans can be found in **Appendix A, Figure A-1**. The immediate plan made improvements to the existing street system and proposed basic

changes such as intersection improvements. The intermediate plan included major changes to improve east/west traffic between the Bay and Boardman Lake through the construction of a close-in urban bypass. The long range plan included the construction of an outer beltline to replace the US-31 trunkline. This seems to be the first publication of the bypass concept in planning efforts.

Engineering Study for East-West Arterial Highway, Johnson & Stout P.C., 1980

An excellent historic summary is included in the introduction to the study entitled Engineering Study for East-West Arterial Highway prepared for the City of Traverse City by Johnson & Stout P.C. in March of 1980. The following information is taken from that summary: *"In the 1930s, the State Highway Department recognized the need for road improvements and designated routes for US-31 and M-22 along existing streets. Because of the limited right of way, there were no structural changes made to the roads. In the mid-1950s a major change was made when US-31 was rerouted so that it came into Traverse City from the south to the intersection with 14th Street at Silver Lake Road and then followed Division Street to the Bay and then followed Grandview Parkway to Munson."*

The 1977 City Plan included a reference to the "Narrows" between the Bay and Boardman Lake as a prime bottleneck to the east-west flow of traffic and proposed a route from Front and Railroad south to Woodmere and Boyd and then along Parsons to Three Mile Road. The 1977 City Plan included direction for the transportation system in Traverse City. After consideration of other east-west routes, the City Planning Commission reconfirmed the route that had been anticipated since the 1940s. The 1977 City Plan extended the connection route north around Boardman Lake following the railroad right of way and then west along 14th Street to Division (US-31). A connection to downtown was also included with an extension of Boardman to 8th Street. The 1942 City Plan stated, *"Since the most critical problem currently facing the City is the carrying of east-west traffic between the Bay and Boardman Lake, the solution selected from several alternatives is the 14th Street Extension. The construction of a close-in urban by-pass that can also service cross-town traffic will have the most beneficial and immediate effect on existing City traffic problems."* A map of that route is included in **Appendix A, Figure A-2**.

The 1980 engineering study was comprehensive in its approach and included consideration of social and environmental impacts, road alignment, right of way acquisition costs, projected traffic volumes, railroad issues and preliminary design drawings. The 1977 City Plan emphasized a desire to choose a route which "creates the most good with the least amount of social and economic disruption" which made this route the preferred option. The anticipated construction cost was \$5.62 million in 1981 dollars. A general obligation bond was recommended as the best

source of funding the project. Since the project was identified as regional in nature, a millage assessment to include all of Grand Traverse County was advised.

1.3 Regional Plans

1981 Highway Improvement Plan (preliminary draft), Traverse Bay Regional Planning Commission

A preliminary draft of a regional Highway Improvement Plan was created by the Traverse Bay Regional Planning Commission in 1981. The map document included roads to be improved, a proposed highway and proposed new roads. This is the first appearance of a proposed east-west bypass beginning at M-72 and M-31 on the east, looping around the south side of Traverse City along Hammond Road and connecting back up with M-72 at Gray Road north of Silver Lake. This is also the first appearance of the Hartman-Hammond Bridge Connection. A map of that route is included in **Appendix A, Figure A-3**.

1983 Gourdie Fraser Study

In 1983, Gourdie/Fraser & Associates, Inc. produced a study titled Preliminary Engineering & Cost Study for Various Transportation Routes in the Grand Traverse Region of Grand Traverse County, Michigan. The report was prepared for the Traverse Bay Regional Planning Commission. The purpose of the study was to provide preliminary engineering and cost information for projects related to the 1980 East-West Cross Town Arterial and the 1981 Highway Improvement Plan (which is still referred to as a preliminary draft in this 1983 study) along with a recommended construction sequence. The goal was to enable the Traverse Bay Regional Planning Commission to adopt and implement a regional transportation plan.

The preliminary engineering for the proposed bypass was eliminated from the study with the exception of the Hartman-Hammond Bridge connection after the Michigan Department of Transportation (MDOT) indicated that it viewed the bypass as a local project and would not support it with state funding. According to the document, the bridge was kept because it would add to the flexibility in meeting the County's east-west traffic needs. The Traverse Bay Regional Planning Commission was encouraged by MDOT to continue to plan for a bypass through regional development patterns and protection of future rights-of-way.

After the modification in scope, the plan included a collection of twelve projects. The report considered adjacent land use, environmental and social impacts, alignment, soils, profiles, drainage, right-of-way and traffic. The first project on the list in order of the proposed sequence was the East-West Cross Town Arterial proposed in 1980. The second project was an extension

of that arterial east to Three Mile Road. Also included were improvements to South Airport Road between Garfield Road and Three Mile Road; an extension of Airport Road between Three Mile Road and Four Mile Road; an extension of Airport Road from Four Mile Road northeast to the intersection of US-31 and Holiday Hills Road or east to Five Mile Road; an improvement of Three Mile Road from South Airport to US-31; an improvement of Four Mile Road from the South Airport Road extension to US-31; the Hartman-Hammond Bridge connection and improvements to four north-south road connections. A map of the proposed projects is included in **Appendix A, Figure A-4** at the end of this document.

The study recommended the use of general obligation bonds to fund the projects. It also recommended that the bond issue be obligated at the county level with support of all municipalities since the improvements were a benefit to the regional transportation network.

Preliminary Engineering and Cost Study Update for Road Network Improvements

In September, 1986, Gourdie/Fraser & Associates prepared another preliminary engineering and cost study document. This time it was prepared for the Grand Traverse County Planning Commission based on a Road Improvement Plan developed by the County Planning Commission. The report was in essentially the same report format as the 1983 study and a total of twelve road projects are analyzed from a standpoint of preliminary engineering feasibility and cost. The Road Improvement Plan was different than the previous Highway Improvement Plan so the project list in this study changed somewhat.

Of the twelve projects addressed in this document, the cross-town arterial study and improvements to Airport Road remained on the list. Projects added to the list included the Urban By-Pass Arterial, the Cass Road Bridge closure, Six Mile Road connection and improvements, Garfield Road improvements, Center Road relocation and improvements (Peninsula Township), Keystone Road relocation and improvements. The plan notes that there is "currently" an Origin and Destination study being undertaken by the MDOT which may change their position on the bypass as a local project. The Road Improvement Plan and list of projects associated with this study are included in **Appendix A, Figures A-5 and A-6**.

As before, funding mechanisms for the projects are discussed and a recommendation is made that the projects be undertaken as a single bond issue for regional transportation.

An Evaluation of the Proposed Traverse City Beltline

This report was prepared by the Michigan Department of Transportation in November, 1987 and is an evaluation of the proposed Traverse City Beltline. It assesses the impact of the proposed

beltline in terms of traffic data and general local considerations. It evaluates the proposal at the regional and statewide levels and contains recommendations. It begins with recognition that *although the state trunklines have been improved over the years, they have reached a point where little else in the way of major improvements can be done to increase their overall capacity due to right-of-way restrictions.*

Although the response from MDOT acknowledges that a new state highway route could have a positive impact on the traffic patterns in the current system, it also indicates several areas of concern or conflict with the study submitted for consideration. The proposal suggests that the beltway connect to M-72 and MDOT advocates for a connection at US-31. The proposal was based on a 100' right-of-way and MDOT responds that a 200' right-of-way will be necessary. Several concerns were raised to the proposed route. Specifically, the route impacts farmlands enrolled in P.A. 116; wetlands which are regulated by MDEQ; State Forest Land which is publicly owned for the purposes of conservation; and the Boardman River which is a designated Natural River as well as many of its tributary streams. Additionally it identifies the need for future investigation into archaeology, historical resources, and rare and endangered species. The MDOT response also questions the Hartman-Hammond crossing location.

1980s Bond Issue

In the late 1980s, the Grand Traverse County Road Commission placed a \$25 million bond issue on the county ballot. That was the equivalent of 2.2 mills over 15 years for all Grand Traverse County residents. The project, titled The Roads Improvement Project, sought funding for the collection of projects together that had been in the planning stages for years. It included construction of the east-west route connecting Fourteenth Street and Parsons Road, improvement and extension of South Airport Road and Keystone Roads, widening of Garfield Avenue, the Urban By-Pass project and closure of the Cass Road Bridge. The bond issue was defeated by voters.

1.4 TC-TALUS

TC-TALUS: A Brief History

The TC-TALUS organization that exists today is the result of more than twenty years of transportation planning discussions in the Grand Traverse Region. It began in 1985 when the Grand Traverse County Planning Commission created the Transportation Advisory Committee. In 1990, the TC-TALUS organization adopted by-laws and became an official organization with a full-time staff member. Since its formation, TC-TALUS has performed or commissioned a series of transportation and land use studies beginning in 1991.

TC-TALUS Origin and Destination Study, 1991

The official title of the document reads *Single Station Cordon Origin and Destination Survey for the Traverse City Area Transportation and Land Use Study, Factual Data Report, August, 1991*. The purpose of the study was to collect current data on traffic movement interchanging with and passing through the TC-TALUS area. The study was requested because the O&D data being used by MDOT in the travel demand model was not current and did not match the TC-TALUS boundary. The study was conducted during five days in August 1991 with four stations set up from 6 a.m. to 8 p.m. Traffic counts on the road were taken and some motorists were surveyed as they went through the stations. Information was gathered on vehicle types, reason for travel and number of passengers. The data was collected and expanded to create O&D projections for the TC-TALUS boundary area. In all, 38,356 trips were recorded.

Environmental Framework Study for a Boardman River Bridge Crossing, May 1992

The Cass Road Bridge was classified as being critically deficient by the Michigan Critical Bridge Committee in 1988 and slated for replacement based on funding availability. The Cass Road Bridge was one of just two east-west crossings of the Boardman River Valley and east-west traffic routes had topped the list of needed transportation improvements for decades. The bridge was owned by the Grand Traverse County Road Commission who was considering the construction of a new bridge. Part of the consideration of the bridge replacement was to determine feasible relocation sites for the existing Cass Road Bridge in the Boardman River Valley. The TC-TALUS and Michigan Department of Transportation (MDOT) hired JJR, Inc. to prepare an environmental framework study in the Boardman River Valley as an initial step in the relocation process. The Study Area included the river valley and upland plateaus between Cass Road and Keystone Road and from 500 feet south of the Boardman Dam and 500 feet north of a line connecting Hartman Road and Hammond Road. The purpose of the environmental framework study was to define the most relevant issues influencing a bridge crossing location and to identify where more detailed investigations would be required for inclusion in an Environmental Assessment (EA) or and Environmental Impact Statement (EIS). The report includes an evaluation of four design and route alternatives as well as preliminary analyses of environmental factors such as historic sites, air quality impacts and wetland impacts. The report is designed to allow the reader to understand the environmental impacts of each alternative design and select a preferred route. In the end, the study does not provide a definite preferred route. Rather, it notes strengths and weaknesses of each proposal and points to the two options that score best numerically with regard to potential environmental impacts. See **Appendix A, Figure A-7** for a map of the Boardman River crossings that were evaluated in the study.

Traverse City Transportation and Land Use Study (Transit Oriented Design Study), September 1993

This document was prepared for TC-TALUS by HOH Associates, a land planning and urban design consulting firm. The purpose of the document was to provide an initial framework within the Study Area that would address regional growth management issues. The primary considerations of the document included strengthening existing communities, establishing environmentally sensitive open space networks, and considering transit oriented development issues. The report recommended concentrating development where communities are established to reduce consumption of undeveloped areas and avoid strip development.

HOH Associates made several recommendations that included projecting possible build-out scenarios for a proposed urban service district, developing an approach for establishing zoning districts, and identifying an urban service district. Moreover, the report recommended considering the fragmentation of open space, the infringement of sprawl on the rural landscape, and the pressure on environmentally sensitive areas by urbanized areas. HOH Associates wanted to consider all forms of transportation in order to provide local and regional solutions and evaluate mass transit ideas in more detail. The proposed plan included three features – the village center, the transportation hub, and the outer parkway. HOH Associates recommended a system of village centers around which higher density development would be concentrated, a transportation hub that would bring the Boardman River Valley into prominence, and a limited access, scenic parkway as a bypass around Traverse City that would potentially reduce traffic in town by 20%.

TC-TALUS Long Range Transportation Land Use Plan, July 1995

In July of 1995, TC-TALUS published a long range plan prepared by Matt Skeels of TC-TALUS in cooperation with MDOT staff. The purpose of this document was to analyze existing and future transportation and land use systems through forecasting and traffic models. The goals of the plan were to build community consensus about regional transportation and land use issues, advocate inter-modal transportation networks, promote future land use and transportation development to reduce demand on the road system, encourage the best use of existing transportation networks and preserve environmental, agricultural, and open space assets. Land use patterns were modeled, including sprawl, village center development, and an urban growth boundary around Traverse City.

It was recommended that growth be concentrated around Traverse City but that villages and townships also encourage village center development patterns to reduce sprawl. Various road alternatives were also considered, including do-nothing, low cost improvements, and new road construction. Recommendations included increasing capacity and safety of state trunklines,

studying the location for a beltway/bypass, and increasing the capacity of specific local roads. Moreover, the plan recommended providing a fixed route bus service in the region, implementing bicycle path plans, and developing non-motorized paths to connect village centers to the urban core.

US Route 31/ Michigan Route 72/ Michigan Route 37 Regional Corridor Study, Traverse City, Michigan, September, 1996.

The Corridor Analysis Report was prepared by Vanasse Hangen Brustlin, Inc. in association with Gourdie/Fraser & Associates and Planning Resources, Inc. for the Michigan Department of Transportation. The report is dated September 1996 and was conducted specifically to determine if the construction of a new US-31 arterial roadway would help to meet the long-term transportation needs in the Traverse City area.

The report begins by noting that according to MDOT's projections, the existing highway system will be unable to meet the needs of the region in the future. This report follows a study done in 1995 by TC-TALUS to identify possible solutions to the region's transportation needs.

The report documents and explains the process that was undertaken and the results of each exercise. Seven possible corridor areas were identified and then five were studied in more detail. Consideration was given to traffic patterns and engineering requirements; environmental constraints and regulatory issues associated with their protection; and land use patterns and impacts of a new road on the area. There was an extensive public participation component to the study as well which included newsletters, comment forms, media releases and open houses.

At the end of the study, there is a recommendation to MDOT that three corridor alternatives be advanced into the next stage of the planning, right of way preservation and design process. One option of the three was identified as best meeting the project purpose of diverting traffic from existing trunklines, improved system continuity and regional accessibility. A map of all of the corridor alternatives and the three recommended corridors from the study are included in **Appendix A, Figure A-8 and Figure A-9.**

TC-TALUS Area Resident Survey, December 1997

In December of 1997, an area resident survey was conducted and summarized by the Research Services Center for Business and Industry located at Northwestern Michigan College. The objective of the survey was to determine the views and preferences of area residents on transportation and land use issues. The survey was conducted by phone and included questions about satisfaction with land development, transportation, and traffic in the TC-TALUS region.

Respondents preferred to see more land preserved for outdoor recreation and agriculture. Additionally, respondents preferred to live in a rural or suburban area rather than a city. Vehicular transportation was identified as the most important mode of transportation. Respondents also responded to questions regarding traffic on specific roads and intersections. In general, respondents disagreed that the property tax should be increased to reduce traffic in residential areas, while they agreed that state and federal taxes should be the primary method of funding road maintenance and improvement.

TC-TALUS Public Involvement Plan, 2001

In 2001, Terry J. Paquet, PE and Cathy Sommerfield, PhD from the Michigan Technical Education Center at Northwest Michigan College prepared a report for TC-TALUS. The plan recommended a system and procedures for public involvement as a standard part of TC-TALUS transportation planning activities. The goal of the public involvement plan (PIP) was to provide a method of obtaining meaningful public input to generate better discussions on land use and transportation issues.

The PIP divided the process into three phases--assessment, awareness building, and plan implementation. During Phase I, Assessment, the scope of the PIP was to determine current public awareness, knowledge, and interest levels, to develop an assessment plan that sought input, implemented a survey, and analyzed public input.

Phase II, Awareness Building, focused upon publicizing Phase I survey results and information on transportation and land use issues. Proposed awareness building methods included open forums, a citizen's guide, local press coverage, school programs, a video, a hot line, website, and/or chat room about transportation issues.

Phase III, Plan Implementation, sought to obtain public input for long range transportation planning and provide a process for obtaining input on a continuous basis. Recommended implementation methods included targeted focus groups or open meetings, workshops and conferences, briefings to for profit and not for profit groups, websites, a transportation fair, and a transportation library in the TC-TALUS office or local library.

TC-TALUS Public Involvement Plan Survey, 2002

Prepared by Research Services at Northwestern Michigan College, a public involvement plan survey was conducted to assess the level of interest within the region in providing input on transportation and land use issues. The survey, which was conducted by phone, found that the majority of respondents (85.9%) had not provided input on transportation issues in the past, while

29.4% of respondents had. Although past input on issues was minimal, 76.8% of respondents were interested in providing input on area transportation or land use issues. The primary reasons for interest were concerns with quality of life, unhappiness with current growth and development, and concerns about traffic. Respondents preferred to provide input through questionnaires, online or newspaper surveys, or through evening public meetings. Additionally, respondents wanted to improve the amount of information they received about issues and be provided information in greater detail and with more than one perspective.

LEAM Study, 2004

The LEAM Model is a computer-based tool that simulates land-use changes across space and time. It was developed and is now managed by a team of faculty, staff, and students at the University of Illinois at Urbana-Champaign. The mission of the LEAM group is to help foster an understanding of the relationships between urban, environmental, social and economic systems. The LEAM group believes that when we understand the extent to which one system affects another, we will make better land use management decisions in the future.

In 2004, a TALUS-LEAM Project was undertaken and the LEAM computer model was applied to the Grand Traverse region using local and MDOT data. The goals of the projects were centered around helping the citizens understand the inter-relation between transportation and land use and the effect that one has on the other. Simulations of different futures were created as a base for discussion about the region's future. Models were created based on a baseline or "do nothing" scenario, an "ultra growth" scenario, and a zoning scenario. In February 2005, two planning charrettes were held to solicit public input on the scenarios. A charrette manual was provided in advance to TC-TALUS members and a presentation describing the LEAM process and outcomes was given to participants. Based on the maps, participants were asked to consider what they would like to have happen in the region. Later, the model added socio-economic information in addition to land use and transportation. These simulations showed the possibility of significant socio-economic changes to the region over time.

The report notes many successes of the study and the need to build on them. It further states that the information gathered during the study can be further refined for future modeling.

SPR Fund Request to Study Munson Commons Area, 2004

Federal legislation requires that 2% of the transportation dollars received by the state must be set aside for planning and research activities (SPR). A proposal was made jointly by MDOT staff and TC-TALUS to use SPR funds for a traffic review study of the Munson Medical Center and the adjacent Commons Development in 2004. The problem statement reads, "*this growth...is not*

adequately supported by the local road systems or US-31/M-37 that serves the area.” The project proposal was supported by Traverse City, Grand Traverse County Road Commission and Garfield Township. To date, the project has not been funded.

1.5 Hartman/Hammond Connector

After the Roads Improvement Project bond issue failed, the Grand Traverse County Road Commission (GTCRC) continued to schedule annual road improvements as funding permitted on an annual basis. The project list continued to include the Hartman-Hammond Road connector. The bridge project moved forward until a point at the end of 2003. The documents summarized below were included in the scope of this project and provide some insight into the culmination of the public debate over regional transportation.

Hartman/Hammond Connector – Michigan Department of Environmental Quality Letter

This is a letter dated March 1, 2004 and was addressed to Mr. Michael Dillenbeck of the Grand Traverse County Road Commission (GTCRC) in a response to his letter dated December 17, 2003. In the 2003 letter, Mr. Dillenbeck indicated that the GTCRC wished to withdraw its permit application and asked for specific guidance for the approval of the project permit. In response, the Michigan Department of Environmental Quality (MDEQ) does not say that the permit could not be approved, but offers counsel on the shortcomings of the application.

The letter offers comments on the review process required of the MDEQ including the need to show that there are no “feasible and prudent” alternatives to the construction proposal. It suggests that these had not been adequately addressed since the “Smart Road” alternative was not fully evaluated. The letter is direct in saying that the MDEQ finds the Environmental Impact Statement submitted with the application to be “seriously flawed.” Additional suggestions are offered about review requirements and the contents of a successful application. The letter is signed by Mr. Stanley F. Pruss, Deputy Director of the MDEQ.

Smart Roads Plan

Grand Traverse Region--Alternatives to the Traverse City Bypass was created by the Coalition for Sensible Growth, a Traverse City-based grassroots organization and the Michigan Land Use Institute. The brochure takes a “smart growth” approach to roads and promotes a solution that does not include a bypass and four-lane bridge. The Smart Roads proposal criticizes the Hartman/Hammond Bridge project and bypass proposal by the Grand Traverse County Road Commission as a \$300 million plan that would “intensify sprawl, waste money, undermine existing businesses and neighborhoods and harm the environment.” It calls the proposed bypass an

example of “subsidizing sprawl.” It also proposes an alternative solution. It proposes a combination of efforts including a new design to South Airport Road, a renovation to the Cass Road Bridge, the creation of a Keystone-Beitner Parkway in conjunction with and expansion of non-motorized and public transportation options and land use planning tools.

1.6 Corridor Studies

M-72 Corridor Study, 2001

The M-72 Corridor Study was prepared by R. Clark Associates, Inc. for TC-TALUS in October 2001 with funding from four townships, Grand Traverse County, the Grand Traverse Band of Ottawa and Chippewa Indians and a matching grant from Rotary Charities. The plan area is the M-72 Corridor from Kalkaska Village to Acme Township at the intersection of US-31. The plan was prompted by an understanding that this portion of M-72 serves as the gateway to the Grand Traverse region for visitors and adds to the quality of life for residents. Choices made in infrastructure and the location and style of new building developments can threaten its scenic beauty. The study inventories existing conditions along the corridor in terms of natural features and land use patterns. The document identifies scenic viewsheds and performs a build-out analysis based on existing zoning regulation. It also uses a computer program to alter existing views from the road to create virtual “before and after” scenarios.

The study recommends that the following areas be considered with regard to their ability to impact the road: incorporation of alternate modes of transportation (pedestrian crossings, bike lanes), placement of utilities, signage, access management, landscape requirements, scenic view easements, PDR & TDR programs, ridge protection overlay zones, and telecommunication towers. Additional steps are recommended including an amendment to local zoning regulations, cooperative efforts between local units of government and, dialogue with the business community and MDOT.

West M-72 Corridor Study

The West M-72 Corridor Study obtained for this summary is a two-page set of maps that included graphic design and detailed notations. The maps are dated 6/24/02 and are titled “Concept Diagram.” The drawings were prepared by Victor Nelhiebel Land Architecture and New Designs for Growth and included Solon and Elmwood Townships in Leelanau County and Long Lake and Garfield Townships in Grand Traverse Counties. M-72 runs on the county line in much of the Study Area. The maps are coded to show existing land use, primary areas for conservation, best sites for development, and areas with the highest priority for the purchase of development rights. A comprehensive set of roadway and non-motorized transportation improvements are presented

which include preservation of sensitive natural features and viewsheds, mixed use planned developments, village centers and new road and trail connections.

M-72 Access Management Plan

An M-72 Access Management Plan was prepared for the Michigan Department of Transportation by Progressive AE in June, 2001. The document addressed the M-72 corridor between I-75 and M-31 which includes the Village of Kalkaska. Initial sections of the document include an inventory of existing conditions, including a text description of each municipality in the Study Area and a map which indicates zoning and future land use patterns. The Access Management Plan itself is a combination of best-practices in general and specific recommendations for improvements to be made when possible. Both are expressed through a combination of text description and mapping. The M-72 Access Management Plan recognizes that the effectiveness of the plan depends on cooperation between the local units of government and MDOT. To this end, the Plan contains two specific tools for implementation—a Model Overlay to be adopted into local zoning ordinances and a Letter of Understanding between the local units of government and MDOT agreeing to reference and use the M-72 Access Management Plan when making decisions which impact the corridor.

1.7 M-22 Scenic Corridor Heritage Route

M-22 Scenic Heritage Route Plan

In 1999, Leelanau County assembled a nominating committee with members from each township in the County to investigate the possibility of establishing M-22 as a Scenic Heritage Route. The committee then worked with the Northwest Michigan Council of Governments to create the Scenic Heritage Route Plan.

The purpose of the Plan and the mission statement of the committee reads: *To promote measures which protect and enhance the scenic, historical and recreational characteristics of Michigan Highway 22 as it traverses the rural countryside and unique villages of Leelanau County.* The introduction of the Plan describes the roadway and the benefit it provides to the community as a quality of life, a tourist attraction, a commercial tool and a transportation corridor. It identifies development trends that are a concern which are 1) Signs; 2) Power Lines; 3) Decline of Agricultural and Forest Land; 4) Commercial Strip Development; 5) Erosion and Land Change and 6) Residential Construction. The Plan also draws language from the County's General Plan in support of the protection of the corridor.

The long-term goals of the Plan are *to preserve and enhance the natural, historic and cultural resources along the route, preserve the scenic qualities of the corridor and encourage development that will not detract from these qualities, encourage community involvement in the on-going monitoring of the Heritage Corridor, encourage interpretive programs that describe the natural, historic and cultural features located along the corridor, and to promote the maintenance of the unique and rural feel of the villages and countryside along M-22.*

The Plan includes a strategy for implementing the goals including funding of infrastructure improvements for both appearance and safety, promoting land use decisions and cooperation with local zoning offices, the preservation of farmland and open space, community involvement, design tools to minimize visual intrusions. It also includes an inventory of the natural, cultural and recreational resources along the corridor. An implementation section puts all of the pieces together into short-term and long-term goals and an action plan.

Leelanau Scenic Heritage Route Management Plan Update, 2006

An update to the Scenic Heritage Route Management Plan was done in 2006 by the Northwest Council of Governments and approved by the MDOT in February of 2007. The Heritage Route Committee included representatives from nine townships, three villages, Leelanau County, the Grand Traverse Band of Ottawa and Chippewa Indians, Sleeping Bear Dunes National Lakeshore, MDOT, local organizations, agencies and citizens. The update presented information in change of land use, population and commercial development since the original plan. It included new information including traffic counts and crash data and a collection of photographs to document existing scenic views. The goal of the Plan remained the same but there were updated objectives and activities presented in a 5-Year Action Plan and a list of long-range goals.

General Guidebook

The brief General Guidebook for the M-22 Scenic Heritage Route says, *"the purpose of the Leelanau Scenic Heritage Route Committee is to promote measures that protect and enhance the scenic, historical, and recreational characteristics of Michigan Highway 22 as it traverses the rural countryside and unique villages of Leelanau County."*

The organization and the designation carry no regulatory authority but rather work to promote an awareness of good design principles along the corridor. Areas of concern include signs, utilities, the decline of agricultural and forest land, commercial strip development, erosion and land change and residential construction. The brochure explains the role of MDOT and its permit requirements provides contact information for local and county development offices and includes

examples of design principles taken from the New Designs for Growth Guidebook as an example of “Best Practices” to use.

1.8 Multi-Modal Studies and Non-Motorized Options

Public Transportation Coordination Study for Grand Traverse and Leelanau Counties (Corradino Group in association with Wade-Trim, March 1998)

BATA, the Bay Area Transportation Authority, was established in 1985 through the merger of Leelanau County Transit and Traverse City Dial-a-Ride. In September 1997, BATA initiated a strategic planning study to plan for future transportation service in the Traverse City region. The MDOT and the Traverse City Area Chamber of Commerce supported the study. The plan included rider and non-rider surveys, a description of the current service and identified priority areas for bus service including Munson Hospital and Northwest Michigan College. Ideas for coordination and efficiency were considered for both facilities and service. The plan recommended establishing a fixed route service and creating a transit center, both of which have been accomplished in the nine years since the study was published.

Preserving Options: Maintaining Rail Corridors in Northwest Michigan

This report was prepared by the Northwest Michigan Council of Governments for the Transportation Committee of the Traverse City Area Chamber of Commerce in October 2002. It was written with the expectation that the State of Michigan would offer the Grand Traverse area rail system and right of way for sale in the near future. The document reviews historical and current rail use in Northwest Michigan, explains the State’s practice of divestiture and considers the benefits of maintaining the railway intact as well as the negative impacts if it is lost. Benefits include transportation, economic development and tourism. It recognizes that the current economic value of the rail combined with its purchase price could deter a commercial purchase. As a result, there is some consideration of other tools through which the rail line can be maintained intact. The paper strongly recommends that the Northern Michigan Rail System and right-of-way be protected and maintained in its entirety and that the community be prepared to make sure it happens.

The TART Trail System

The Traverse Area Recreation and Transportation (TART) Trails, Inc. provides a network of trails in the Grand Traverse region and encourages the public to use them for both transportation and recreation. The existing network contains fifty-five miles of both paved and unpaved trails. The Leelanau Trail is over fifteen miles long connecting Traverse City and Sutton’s Bay along a former railroad corridor. The eleven mile TART trail is a paved route through the urban center of

Traverse City connecting downtown, neighborhoods, beaches, hotels and restaurants. The VASA Pathway is located in the Pere Marquette State forest and offers a series of looping trails ranging from three kilometers to twenty-five kilometers. The unpaved pathway trails are popular in all seasons. The Boardman Lake Trail currently runs along the east side of the Boardman Lake. The north half of the trail is paved and there are future plans to complete the loop around the lake and connect to the TART trail. The TART organization sponsors Smart Commute Week and the Tour de Tart each year to promote use of the trails.

1.9 Asset Management: A New Direction for Transportation Management

This report was prepared by the Northwest Michigan Council of Governments (NWMCOG) with financial assistance through a grant from MDOT. The purpose of the document was two-fold. First, the document explains to the reader the concept of Asset Management and its evolution as a recognized practice over time. In a nutshell, it is a pro-active approach to infrastructure maintenance which works to achieve an overall performance level in the road system. It includes an inventory and surface rating system (on a scale of 1-10) which is explained in the document. The system is applied through a visual pavement evaluation system called PASER. The information is then used in planning to develop short- and long-range plans that take available resources and budget constraints into account.

The second part of the report includes reports by municipality on road data collected including maps with roads coded by condition and charts to show condition compared to the region overall.

1.10 Michigan Department of Transportation Policies

The Michigan Transportation Plan

Moving Michigan Forward—2005-2030 is the overarching Michigan Department of Transportation (MDOT) policy document and also the state long range plan. It contains an overview of the trends and challenges facing Michigan today with references to many other more technical documents. It sets forth goals and strategies for managing the transportation network and related financial decisions. Overall, the current policy is to identify and focus on the corridors of highest significance at the state, regional and local levels. State and regional corridors are identified in the document. Also included in the priority group are the transportation crossings between the U.S. and Canada. The M-72 Corridor through Traverse City is identified as a corridor of significance at the statewide level with an indication that it is an “activity center” which is defined as a place, from the perspective of the State of Michigan, where population, employment, tourism, transportation, and other economically important activities are concentrated.

MDOT State Transportation Improvement Plan 2006-2008

The State Transportation Improvement Plan (STIP) is a compilation of all transportation projects that will be authorized for funding in fiscal years 2006-2008. The STIP document lists only projects outside of the Metropolitan Area Boundaries. Some portion of the document contains information about how the STIP is developed and much of it is in spreadsheet format listing counties and projects. In Grand Traverse County there are plans in place to “Rehab & Reconstruct” US-31 from Acme north to the Antrim County line in 2006 and to build a “Passing Relief Lane” on M-113 from Kingsley west 1.4 miles in 2008.

1.11 Conclusion

The Grand Traverse region has a long history of transportation planning efforts. Since the adoption of the Traverse City Plan in 1942, traffic congestion in an east-west direction has been part of the planning focus. The planners and planning organizations have changed over time. The region has grown and changed over time. The details of the regional transportation plans have changed over time. Although planning efforts have become more sophisticated, none have been able to overcome public resistance to implementation of major infrastructure improvements.

Transportation planning projects that improve the capacity of existing infrastructure have been successfully implemented in the region. Efforts include the creation and adoption of access management plans for the east and west sections of the M-72 corridor and the designation of M-22 as a Scenic Heritage Route. Public transportation offered by the Bay Area Transportation Authority (BATA) has grown and received public funding support through the past decade. TART Trails, Inc. is a non-profit organization that offers non-motorized transportation choices to individuals in and around Traverse City. The trail network continues to expand through public support for the organization.

The Grand Vision project is designed to create a regional land use and transportation plan that can be implemented because of a broad base of public support. The data contained in this document is new to the Grand Vision team but transportation planning is not new to the region. In order to look toward the future, we consider past events, plans, and studies as a way of understanding our starting point.

2.0 Land Use Profile

2.1 Introduction

The Land Use Profile includes an overview of land use policy positions for both the Study Area and the Area of Influence. The information is taken from the Master Land Use Plan and the Zoning Ordinance of each municipality and is intended only to give the reader a general understanding of each unit of government with respect to location, major transportation corridors, water features, development nodes, and policy positions related to future development and transportation. Also included in this section is an overview of regional economic policy documents and the organizations associated with each. A final section summarizes regional land use studies. **Figure 1.0** found at the end of the Executive Summary section provides a map of the Study Area and the Area of Influence.

The Study Area is defined by the project scope as the area comprised of Traverse City, Acme Township, Blair Township, Green Lake Township, Whitewater Township, Peninsula Township, Garfield Township, East Bay Township, Long Lake Township, and Elmwood Township. The Area of Influence is defined by the project scope as Grand Traverse County, Leelanau County, Benzie County, Wexford County, Kalkaska County, and Antrim County.

Zoning maps for the Study Area can be found in **Appendix B**. Future Land Use maps for both the Study Area and the Area of Influence can be found in **Appendix C**. Zoning maps for the Area of Influence are not included because county zoning authority exists only when there is no local zoning authority. Grand Traverse County, Leelanau County and Antrim County have no zoning authority while Benzie County, Wexford County and Kalkaska County have a zoning ordinance with authority in some areas.

2.2 Study Area

Grand Traverse County

Grand Traverse County planning activities serve as a policy guide for local land use decisions, but all local planning and zoning authority rests in the sixteen local units of government. The County's Comprehensive Plan (December, 2002) recognizes that the County will continue to

grow and that without guidance the growth will threaten the quality of life that is a hallmark of the community. The plan notes an anticipated population increase of over 60% in the County over the next 25 years and a lack of preparation for it. The executive summary reads in part: *“Certainly the region can sustain such an expansion of its population, but the area’s current mechanisms for managing growth are inadequate if the desire is to accept that growth while maintaining and preserving the natural environment and the local quality of life.”* Based on public participation during the development of the plan, a vision statement was developed to express the people’s desire to effectively manage the County’s growth and put the advantages of life in the region within reach of all citizens.

Overall, most plans at the local level support the goals and policies of the County’s Plan. As part of the County’s Comprehensive Plan, an analysis was performed to identify the areas of conflict between the local land use document and the County plan. There were two conflicts identified along major road corridors. The County Plan identified *“an extended pattern of commercial and industrial development planned along M-72 in both Acme and Whitewater Townships that may foster a strip pattern extending from the Grand Traverse Bay to Williamsburg”* and later notes that a *“significant area of higher intensity development is planned in Green Lake Township extending north and south of US-31. It includes a mix of uses and seems to promote the westward expansion of the developed portions of the County.”*

Goals expressed in the County planning document are echoed in local documents and in those of adjacent counties. They include protection of the natural environment in a sustainable manner, promotion of a safe and efficient system of roadways and public transportation, regional cooperation, sustainable agriculture, a variety of housing choices to meet the needs of all residents, expansion of recreational opportunities and a healthy economy which will all protect the quality of life that citizens and visitors enjoy.

Implementation strategies were added to the plan in an amendment adopted February 20, 2007. One of the strategies is an action statement encouraging local municipalities to include road plans in their local master plans. The County proposes to support local road plans through a planning commission policy and to provide model language to the local units of government.

City of Traverse City

Located in the heart of the Study Area, Traverse City is positioned on the north side of Grand Traverse County with waterfront along the Grand Traverse Bay and a developed urban core within the City limits. The 2000 U.S. Census reported a population in the City of 14,532. The

population in Traverse City is expected to remain constant or drop slightly while significant population growth is expected in the rest of the Study Area.

The transportation policy approach looks at a variety of tools for improving traffic circulation in the City. Public transit, pedestrian-friendly design, signal timing, access management and flexible work days are all considered part of the solution. A new north-south road is planned along the west side of the Boardman River using an existing railroad right-of-way. Congestion in east-west traffic patterns is acknowledged but new or widened roads are not supported. Planning Commission Chair Linda Smyka offers the following comments in the introduction to the 2002 Master Plan: *"...it has been the Planning Commission's belief that a key component to maintaining our small-town character is "calming" traffic and not allowing our constrained piece of land to be overrun by ever wider strips of asphalt."*

As part of the transportation policy, the Master Plan also supports the construction of parking structures in the regional center area as long as it is pedestrian scale at the street level and attractive within the surrounding development. The Plan supports the development guidelines of the New Designs for Growth Development Guidebook, the small-town atmosphere of the City, the bayfront as an open-space resource, the downtown as a regional destination and a sustainable economy.

The zoning ordinance supports concepts expressed in the Master Land Use Plan. Zoning regulations recognize established residential lot sizes, emphasize redevelopment of areas within the city limits and provide for neighborhood and community center retail areas in proximity to each residential area. The regional commercial zoning districts are located in the first three blocks south of Grandview Parkway, packed in a seven block stretch. With the exception of the "Morgan Farm" area in the northwest corner of the City, all new development will be infill development or redevelopment.

The Open Space District (OS) is an urban green area district applied along the waterfront and to existing parks and recreation facilities. Small amounts of open space may also be gained through planned site design on individual parcels. The City of Traverse City also owns the Brown Bridge Quiet Area, a natural area of just over 1,300 acres that is located 11 miles south of the city limits.

Grand Traverse Commons

Although not a local unit of government, the Grand Traverse Commons is an area which has a role of its own in the Study Area and in the planning hierarchy of the region. The Grand Traverse

Commons is a tremendous land and historic resource located in both Traverse City and Garfield Township. The 484 acres are located with frontage on Silver Lake Road, Division Street and Long Lake Road. It was originally the site of the Traverse City State Hospital which opened in 1885. The property will be redeveloped under the guidance and principles set forth in the *Grand Traverse Commons District Plan* approved by Traverse City and Garfield Township Planning Commissions. The plan will be carried out by the Grand Traverse Commons Redevelopment Corporation, established under the Urban/Redevelopment Corporation Law, Public Act 250 (1941). A Joint Planning Commission was formed in 2007 to address ongoing planning of the site. The District Plan proposes that 80% of the property remain green and the other 20% be used for buildings, streets and parking areas. The wetlands and wooded hillsides are to remain as open space for passive recreational purposes. Most development will be through renovation of existing structures. Uses allowed include residential, office, retail, light manufacturing, institutional and recreation. There are eight “sub-areas” in the Commons including a medical campus associated with Munson Medical Center. Traffic circulation and on-site parking needs are part of the review process. The Grand Traverse Commons Joint Planning Commission began a process in 2007 to revise the plan, but no major change to the primary goals and general layout are expected.

Acme Township

Just around the Bay to the east from Traverse City, Acme Township is north of East Bay Township and on the east coast of the East Arm of Grand Traverse Bay. Acme Township is rich in natural resources. Acme Township also contains the intersection of two regional transportation corridors. M-72 runs east and west across the township and US-31 runs north and south along the Grand Traverse Bay shoreline. Land use patterns can be described in relation to the transportation system. North of M-72, the township remains agricultural with an abundance of orchards and other farming operations. In the southwest corner and along Grand Traverse Bay, land use is single-family residential. The 1,400 acre Grand Traverse Resort is located at M-72 and US-31. Other commercial developments exist in that area, many in strip patterns along the main roads. The 2000 U.S. Census counted 4,332 residents and estimates the 2006 population at 4,500.

Community planning efforts established a vision for the township in 1999 with revisions in 2001, 2005 and 2007. The vision includes protection of natural and scenic qualities of the community including water resources and agricultural influences. The vision also includes the development of a Town Center with a concentrated mix of uses, a neo-traditional design and adequate infrastructure. The Acme Town Center Report was added as an amendment to the Master Plan in 2001 that further defined this part of the vision. It includes this policy statement to promote a

balanced response to development pressure *“to enact a system for shaping and absorbing some of the growth that will occur regionally, in order to maximize benefits for the Township and preserve significant amounts of open space in the surrounding area.”* In other portions of the document, strip commercial development and sprawling residential development are both identified as contrary to the community’s vision. The New Designs for Growth Guidebook and the M-72 Corridor Study are both supported by reference.

Several large, mixed-use development proposals have been submitted by developers and approved by the township since 2001. Each has resulted in a legal challenge after the township’s action and, to date, none have been built. Nonetheless, new commercial and/or residential developments of significant size are possible around M-72 and US-31.

The current zoning ordinance has provisions for the transfer of development rights, open space development, mixed use planned development and another innovative option called planned agricultural units. New cluster options are being considered to replace existing provisions in the ordinance. Active steps have been taken to preserve farmland outside of these development areas. A large part of the township is zoned A-1 Agricultural. The township residents recently approved a millage for farmland preservation through a local purchase of development rights program. The township has also initiated an effort to acquire (over time) the East Bay shoreline from the intersection of US-31 and M-72 south to the MDOT Roadside Park area. The goal is to convert the land to public open space. An extension of the TART (Traverse Area Recreation and Transportation) trail system in this area is a possibility.

The environmental and aesthetic value of the water resources in the township are recognized and protected in special zoning language entitled Supplementary Shoreland, Stream Environment and Wetland Regulations.

East Bay Township

East Bay Township is located adjacent and southeast of Traverse City with a short stretch of shoreline on the East Bay. US-31 passes through along the East Bay Shoreline and the township is otherwise served with a network of county roads. Hammond Road runs east-west through the township and Three Mile Road runs north-south from US-31 to Garfield. Additionally, Supply Road is recognized as a road which could become the preferred route from US-131 to Traverse City if improvements being considered by MDOT are made. The northwest section of East Bay Township is urbanized with residential subdivisions, moderate and high density residential areas, a village center away from the waterfront, regional business on the waterfront and two industrial areas. The Township is home to 15,000 acres of the Pere Marquette State Forest. The

Township is impacted by two stream corridors: the Boardman River and Mitchell Creek. There is also a lake district in the eastern and southern portion of the township.

The Master Land Use Plan was adopted in 1999. The document's introduction states, *"This Plan was developed in response to the incessant pace of development in the Township."* It emphasizes the need to look long-term at the impacts of current development. It notes that a connection between Hartman and Hammond Roads is "highly probable" in the next twenty years and anticipates a significant increase in traffic as well. It looks to land use planning and zoning tools to mitigate the affect of the changes that come with growth. With regard to land use patterns, the Comprehensive Plan describes a Natural Area Preservation where 20 acres of land should be preserved for every acre developed. It also proposes the development of a Village Center at the intersection of Hammond Road and Three Mile Road with a mix of high density residential and neighborhood commercial services at a pedestrian scale.

The zoning ordinance was adopted in 2003 and has been revised as recently as 2006. In the zoning ordinance, single family residential development is permitted in seven different zoning districts in addition to the Mobile Home and Town Center Districts. The Lake Area District, the Boardman River District and the Agricultural District all list a 40,000 square foot minimum lot size (just under 1 acre). The Natural Area District requires a five (5) acre minimum lot size. Cluster development tools are available. Each district has special setback requirements from water features. An overlay district for Mitchell Creek and Baker Creek add requirements for a managed buffer strip.

Garfield Township

Garfield Township is located adjacent and southwest of Traverse City. The township limits do not have frontage on East Bay. Garfield Township is bisected by US 31 as it goes south out of Traverse City. It is also split by the Boardman Lake and River in a north-south direction. M-72 runs east-west on the north limit of the township and South Airport Road is a local east-west arterial that travels over the Boardman River. Residential development patterns in Garfield Township have extended outward around the Traverse City limits and around Silver Lake in the township's southwest corner. Commercial development follows the US-31 corridor, Keystone Avenue and the section of South Airport Road closest to Traverse City.

Within the developed areas of the township, there are pockets that remain undeveloped or have the potential to be redeveloped as larger planned developments. These areas are identified on the Future Land Use Map as "planned development." The plan further describes the types of uses that are expected to be included within each block. Amendments are being considered for

the zoning ordinance to make it consistent with this approach to future development. Some of this approach is already in place through the “Planned Shopping” areas in the current zoning ordinance.

Outside of commercial areas, a band of agricultural land still exists in a ring around the outside of the township except for the Silver Lake development. Conversion of much of the agricultural land to residential is anticipated on the Future Land Use Map at a density of 2 units per acre.

With regard to transportation, the Master Land Use Plan includes a Thoroughfare Plan which includes both existing and proposed arterial and collector streets. The Hartman Road-Hammond Road connection is shown on the Thoroughfare Plan as a proposed road. In the text, the following comments are included: *“Planners in Garfield Township have in the past pursued, and continue to pursue, the goal of better East-West mobility. The linkage of Hammond Road with Hartman Road across the Boardman River has been one possible solution to this goal. In another section, it reads: Garfield Township looks forward to implementing solutions to the East-West mobility goal that are products of the GT LUTS process. It is a specific objective and policy of this plan to limit local traffic access onto major thoroughfares within the Township as identified in the TC-TALUS Transportation Plan. The creation of new lots fronting directly on such roads is considered inappropriate and unacceptable.”* The Zoning Ordinance does not include overarching access management regulations but there are some provisions within other regulatory sections. Much of the existing development along major arterials is built in a strip pattern with multiple access points.

Garfield Township is host to several water resources including the Boardman River, the south end of Boardman Lake and Silver Lake. The zoning ordinance includes some environmental protection requirements of the shoreline with setbacks and elevation requirements. There are also references to regulations, permits and approvals which may be required from the MDNR through the Natural River Act.

Whitewater Township

On the eastern edge of the Study Area, Whitewater Township is adjacent to Acme Township and the north half of East Bay Township. M-72 runs through the middle in an east-west direction and Williamsburg Road and Elk Lake Road intersect in a north-south direction. The unincorporated village of Williamsburg is located at the intersection of the two. Whitewater Township does not have “frontage” on the Grand Traverse Bay but the northeast border of the township is formed by Lake Skegemog and Elk Lake.

Whitewater Township uses several tools to steer development along M-72. The west half of the M-72 corridor is regulated by a corridor overlay district and is primarily reserved for commercial development. Township Ordinance #23, Arterial Road Access Management Regulations, is another access management tool. The Master Plan recommends that the portions of M-72 not zoned commercial (east of Cook Road) have a special scenic overlay district created to protect the road's scenic character.

Whitewater Township also developed its own Road Plan in August of 2004 which notes the link between roads and adjacent land use. It advocates that a necessary part of preserving the Township's rural environment is to preserve the rural character of the roads. The purpose of the Road Plan is *"to promote guidelines and design standards that will provide a safe, efficient, and aesthetically pleasing road system that complements the Master Plan, preserves rural character, and serves the needs of residents of Whitewater Township."* The document includes policy statements on a variety of topics including road design, changes to road classification, coordination with the County Road Commission, M-72 access management and design and signage.

While the development pressure on M-72 was expected, the current plans states that the residential "sprawl" development pressure is arriving but was not anticipated in earlier plans. Recognizing this pattern, Whitewater Township states its opposition to random residential sprawl in the Master Plan. Instead, the Plan proposes that the historic Village of Williamsburg develop as a compact community center with a mixed land use pattern. The Township previously enacted a zoning amendment in 1998 that rezoned the historic village of Williamsburg from industrial to a new mixed-use Village District. Many tenants of "smart growth" are evident in the community's zoning language and vision for the area. At the same time, the 1999 Master Plan calls for measures to preserve the rural character and natural features elsewhere in the township. Implementation tools include open space and cluster design language for rural residential development and overlay zones for the protection of scenic and environmental resources. A revised zoning ordinance has been prepared to move these goals forward and is currently being considered by the Township Planning commission.

Another event that was identified as "not anticipated in 1990 Master Plan" was the opening of the Turtle Creek Casino near Williamsburg off of M-72. The Casino is operated by the Grand Traverse Band of Ottawa and Chippewa Indians and is exempt from local regulatory control. Whitewater Township clearly recognizes the need to work cooperatively with the appropriate Tribe in land use planning efforts around the Casino.

The Master Plan contains several clearly worded statements relating to transportation. One reads in part: *“Whitewater Township should oppose transportation investments by the State or County that generate sprawl development. The improvement of M-72 as a major arterial...has already had a major impact, especially in spawning commercial development. It has also made Traverse City more accessible...which will gradually encourage residential development in these areas...While Whitewater Township has no direct control over M-72, it should go on record in opposition to any more public investments that make M-72 an even greater high-speed thoroughfare. Whitewater should do the same with respect to other public roads in the Township which come under the jurisdiction of the Board of County Road Commissioners.”*

It states later in the document: *“The Township should go on record, whenever appropriate, in support of this Master Plan’s recommendations on infrastructure built by other entities. This means that the Township should oppose actions that would increase sprawl, such as traffic-generating improvements to M-72, improvements to County roads that change their rural character, the construction of new schools, and the extension of water and sewer trunk lines into rural areas.”*

The Plan has a positive vision for rail transportation. It reads in part: *“The Township should support restoration of passenger service on the railroad line to Williamsburg. The presence of an active rail line that terminates in Williamsburg represents an opportunity that could, in the long term, benefit the proposed village center...While this option may seem far-fetched at present, it may be more plausible as the region becomes more heavily developed and traffic in and out of Traverse City becomes more and more congested. A train station in Williamsburg would be highly conducive to its development as a pedestrian-oriented village.”*

Peninsula Township

Peninsula Township is, as its name suggests, a peninsula going north from Traverse City into the Grand Traverse Bay. Its physical features make it a valuable and unique agricultural resource as the top producer of tart cherries in the nation. Its shoreline, natural beauty and proximity to Traverse City make it desirable for residential development. Recognizing this conflict, Peninsula Township residents formally adopted the Purchase of Development Rights (PDR) program in 1994 by voting in a tax millage to support the program. The program pays landowners to keep their land in agricultural production or as open space. The PDR program was further supported by grants from the State of Michigan, the USDA (United States Department of Agriculture), the Michigan Department of Transportation, and the American Farmland Trust. By the end of 2001, the PDR program and other programs had preserved 4,000 acres of agricultural land. Township

residents approved another millage increase in 2002 that generated additional monies and will added 3,000 to 4,000 acres to the coverage area.

Approximately 70% of the peninsula is zoned A-1 Agricultural with a five-acre minimum lot size. Otherwise there are 35 acres zoned commercial on the map and no industrial zoning district. Limited areas zoned for three classes of residential development line the east and west shoreline and cluster in the south end of the township adjacent to Traverse City. Planned Unit Developments are encouraged in each residential zone and the agricultural zone and are the only tool for multi-family residential development.

The Master Land Use Plan aims to steer residential and commercial activities to concentrated nodes in and near the existing centers of Mapleton and Bowers Harbor with a village atmosphere. The Plan states clearly: *“Peninsula Township believes that concentrated commercial areas are more desirable than sprawl.”* Agriculture and suburban residential uses including home occupations are recognized as the primary economic base of Peninsula Township which is helpful in maintaining the township’s rural ambiance. Businesses serve the needs of the township rather than the region. The Plan is also clear in the community’s position to: *“Maintain existing commercially zoned districts without creating new ones”* and equally clear in stating: *“Rezoning of land for commercial uses should not be considered.”*

As development occurs along the shoreline, natural features are protected to some extent by special provisions in the zoning ordinance. These rules include filling and grading, removal of shore cover and flood plain controls. There is no site plan review requirement but the limit on development, separation buffers and open space requirements serve as a type of environmental protection. Other implementation tools including the Capital Improvements Plan (water, sewer, roads) and PDR activities combine with zoning regulations to accomplish the unique goals of Peninsula Township.

Green Lake Township

Green Lake Township is located in the southwest corner of the Study Area and is home to the Village of Interlochen, Interlochen State Park and the Interlochen Arts Academy. US-31 runs east-west through the township and M-137 runs south from US-31 to the southern limit of the State Park through the Village of Interlochen.

Interlochen Center for the Arts (Interlochen) is an international force in the arts world located on a 1,200 acre campus between Green Lake and Duck Lake. Founded in 1928, Interlochen now boasts an alumni base of 85,000 worldwide. Annually, Interlochen attracts 2,500 students to its

summer arts camp programs and 500 students to its fine arts boarding high school during the academic year. Programs are offered in creative writing, dance, motion picture arts, music, theatre and visual arts. There are 600 arts presentations offered each year by students, faculty and guest artists. Students come from all 50 states and 40 other countries. Interlochen also offers year-round arts programs for lifelong learners.

Next to the Center for the Arts to the south is Interlochen State Park. Visitors to Interlochen State Park enjoy fishing and swimming in Green Lake and Duck Lake. The park was established as Michigan's first state park by the Michigan Legislature in 1917. The 200-acre public park was created to preserve the virgin pine stand for the people of Michigan. The park has 430 modern campsites and 60 rustic sites.

Residential sprawl has been limited in Green Lake Township due to the attractive nature of the lakes where residential development is concentrated (Cedar Hedge Lake, Duck Lake, Green Lake, Long Lake and Bass Lake). Additionally, residential development exists in the village and on the west side of the Township between US-31, the Village and the two big lakes (Green and Duck). Because the lakefront parcels are essentially “built out”, it is expected that the rate of growth in the Township will decline through 2020. However, it is expected that total housing stock will grow by 1,641 units to accommodate growth in year-round residents. This is due to the expectation that the seasonal vacancy rate will decline by one-half and that the average household size will decrease. A stated strategy of the Master Land Use Plan is to maintain the primarily single-family character of the Township. Design and location strategies incorporate concepts of “smart growth.” Open space and Planned Unit Development options were included in the 2006 zoning ordinance.

Other than residential uses, frontage parcels along US-31 are predominantly zoned Commercial (C) with some Office (O) and Industrial (M) parcels as well. The Master Land Use Plan notes that development along the US-31 corridor can be described as sprawl development because it has been allowed to extend along the highway rather than being concentrated at key locations. It calls for limiting driveway access to US-31 and coordinating future developments to help minimize the negative impacts of the highway strip development. Currently, access is not limited to US-31 but a provision for “Shared Frontage Roads” applies to parcels fronting on US-31.

The balance of the township is large lot forested and natural areas with minimum lot sizes of five acres (R-5) or ten acres (C-10). The State of Michigan owns approximately 2,401 acres of land in the Township which is managed as part of the Pere Marquette State Forest, the Interlochen State Park, and public boat access sites. The Shore-to-Shore Trail traverses the township as well.

Nearly 70 % of the Township's total area is described as "vacant" and is consumed by public land lying fallow or by water bodies.

Green Lake Township zoning regulations require a special setback from the water as a buffer tool to protect its natural resources. Each lake is surrounded by residential uses. The conservation zone away from the lakefront discourages any use which would alter the natural conditions of the land and limits residential density with large lot requirements.

Blair Township

Blair Township is located south of Garfield Township, between Green Lake and East Bay Townships. M-37 runs through the township in a north-south direction and US-31 runs west from M-37 to the township line.

The northwest quarter of Blair Township contains a majority of the residential development, including the Village of Blackwood which is also known as Grawn near the west township line. The northeast quarter is zoned for residential neighborhood development but small lot residential development is patchy at this time. The Commercial/Manufacturing zone is located along both sides of M-37 and US-31 almost without exception and the intersection of these two roads is the unincorporated village of Chums Corners. Access management provisions apply to both routes. The southern mile of Blair Township is zoned Agricultural. The middle of the east side is zoned Recreation-Conservation over the Pere Marquette State Forest which covers 3,900 acres of the township.

The Boardman River is a designated Natural River by the Michigan Department of Environmental Quality (MDEQ). Land development regulations have been developed by the State of Michigan under Part 305 (Natural Rivers) of the Natural Resources and Environmental Protection Act (P.A. 451 of 1994). As a result, local zoning regulations apply to all land areas within 400 feet of the Boardman River, Beitner Creek, Jaxon Creek and tributaries. State and local regulations include permitted uses, lot width and size requirements, setback requirements and a mandatory vegetative strip along the river.

In planning for the future, Blair Township strives to proactively guide growth. The addition and/or extension of sewer and water infrastructure and more dense urban development patterns are anticipated. The Master Land Use Plan contains a projected need for 1,719 new homes in the township by 2020.

The current Residential Neighborhood Zoning District is established as a tool to allow “smart growth” development and embraces the concepts put forward in the *New Designs for Growth* guidebook. The anticipated development density is four to ten units per acres. The district has no minimum lot size or width to allow for creative design and allows a variety of housing types, office, restaurant and small retail to be incorporated into developments. Single and two-family uses can be approved administratively by the Zoning Administrator. Pedestrian connections are required. The purpose statement for the zone reads, “*The focus of this district is to promote healthy family living by creating developments that are walkable, affordable, and desirable.*” Much of the new residential development in Blair Township has occurred as single family homes in platted subdivisions. One land use goal in the community is to provide for diverse housing types.

The Master Land Use Plan calls for an emphasis on Grawn as a unique location (a hamlet) and the creation of a “sense of place” for Chums Corners as a commercial and industrial center. There is recognition that strip development has occurred along M-37 and US-31 yet there is a desire to preserve scenic view corridors and to make both major corridors appealing to drivers and businesses. Also, the Master Land Use Plan identifies the need to respect agricultural lands and features, to celebrate the Boardman Valley and existing natural resources, to preserve the rural characteristics of the township and to encourage new parks and trails.

Long Lake Township

Long Lake Township is located west of Garfield Township and north of Green Lake Township. M-72 runs along the north border of the township, actually forming the north line of the eastern two-thirds of the township before jogging further north. Cedar Run Road runs east-west through the township a mile south of M-72. North Long Lake Road runs east-west through the east half of the township. Both roads continue east into Traverse City. There are no other major transportation routes through Long Lake Township.

As the name suggests, Long Lake is the central feature of the township. Long Lake covers approximately four square miles and is surrounded by lake residential development on all sides. Three other smaller lakes also permit residential development around the perimeter. There is a one mile stretch of General Business (C-2) parcels with frontage on M-72. The other parcels along M-72 are zoned Agricultural. These account for approximately three miles of frontage. Several miles of North Long Lake Road on the east side of the township are zoned for high density residential housing. The southwest section of the township contains a block of Conservation Recreation parcels and the northwest contains a block of AG Agricultural parcels. There are very limited areas for commercial uses and none zoned for industrial use.

Waterfront development is a significant feature in Long Lake Township. Minimum lot widths are regulated on the water as well as on the road, there are setback requirements from the water and there are buffer requirements in place for development along the water. The Conservation Recreation areas are forested natural areas where very low impact development is permitted. The commercial development standards include groundwater protection measures.

Elmwood Township

Elmwood Township is located in the southeast corner of Leelanau County. It is part of the TALUS boundary and is included in the project Study Area. Elmwood Township is bordered on the east by the West Arm of Grand Traverse Bay and to the south by Grand Traverse County. The southeast corner of the township meets with the city limits of Traverse City. M-72 runs east-west along the township's southern border and M-22 runs north-south along Grand Traverse Bay. M-22 is designated as a Scenic Heritage Route and has excellent view of the bay.

There are four primary land use areas within Elmwood Township: Greilickville, the M-22 Corridor, the Timberlee Resort area, and the rural portion of the Township. Greilickville has developed as the primary commercial and industrial area of the Township and is surrounded by relatively dense single-family development. M-22 has developed as a single-family residential corridor with the exception the commercial area in Greilickville. Timberlee was originally developed as a ski resort and exists today as an independent population node with its own private water system. The rest of the Township remains rural with the exception of residential development around Lake Leelanau.

A central tenant to the development policy in Elmwood Township is to recognize Traverse City as a regional retail center which meets the majority of resident needs and support the continued economic viability of downtown Traverse City. Only local commercial development is encouraged in the established Greilickville area in the vicinity of M-22. Commercial development is discouraged from spreading along major thoroughfares outside of that area. A sub-area Waterfront Plan for the commercial district in Greilickville was complete as the need was identified for a more detailed plan of that area.

2.3 Area of Influence

Benzie County

Benzie County is located west of Grand Traverse County with its west boundary along the Lake Michigan shoreline. Leelanau County is its neighbor to the north and Manistee County its

neighbor to the south. Benzonia, Honor, Beulah, Elberta, Lake Ann and Thompsonville (Crystal Mountain Resort) and the City of Frankfort are located within Benzie County. According to the Benzie County Master Plan of 2000, the Office of the State Demographer estimated the population of Benzie County to be 15,500 in 2000 and projected 17,700 by 2020. The population estimates for 2006 produced by the Population Division of the U.S. Census Bureau now predict that the Benzie County population reached 17,652 as of July 1, 2006. Benzie County's population literally doubles in June, July and August and increases 13% in other months due to tourists.

Benzie County is served by US-31, M-22 and M-115 as well as several regional county roads. US-31 connects Benzonia, Beulah, Honor and the Village of Elberta and the City of Frankfort with Grand Traverse County. The regional roads connect south eastern and northern Benzie County with Traverse City. M-22 also provides a scenic route linking Frankfort to the Sleeping Bear Dunes National Lake Shore and Crystal and Platte Lakes to the north. A general aviation airport exists outside of the City of Frankfort and Village of Thompsonville. A state-funded bus system (BenzieBus) was recently created with route and dial-a-ride services.

Benzie County is rich in natural resources and more than 36% is publicly owned. Sleeping Bear Dunes National Lakeshore, the Pere Marquette State Forest and the Betsie River State Game Area are all part of Benzie County. The economy is highly resource-based in tourism and agriculture. The scenic natural character of the County is also highly valued by community residents as a quality of life feature.

Benzie County completed its Comprehensive Plan 2020 in 2000 and followed up with an Open Space & Natural Resources Protection Plan (OS&NRPP) in 2002. The Comprehensive Plan noted that zoning regulations were "over zoned" for the desired density pattern and did not protect viewsheds and scenic transportation corridors from development. It identified development pressure in the northeast quarter of the County from people working in Traverse City but wanting to live in a rural environment and strip development patterns along most major transportation corridors. It also acknowledged the variety of local zoning authorities and the need for intergovernmental cooperation.

The OS&NRPP focused more specifically on how and where to preserve open space, viewsheds, scenic corridors and natural resources. A top priority for preservation is "land along major transportation corridors." The rationale provided for this priority reads as follows, "*These lands define the character of the County as residents and visitors experience it. The help support the tourism industry in Benzie County and are the primary opportunity to experience nature for*

residents and visitors. Key viewsheds should be protected and new development should be buffered from view and access management to limit traffic crashes.”

Currently, the County Zoning Ordinance has authority in nine of the twelve townships in Benzie County. An amendment to the Zoning Ordinance reduced residential density levels by raising minimum lot size requirements in areas throughout the County. Corridor protection is in place along all county roads, US-131 and M-115 with an emphasis on landscaping and appearance requirements. Most new residential development has occurred as a Planned Unit Development (PUD) form of development to design around natural features protecting natural features, scenic viewsheds, sensitive lands and water bodies. Although there is support for cluster development around existing centers, the existing infrastructure limits the ability to increase density in these areas.

Leelanau County

Leelanau County is located northwest of Grand Traverse County. Elmwood Township (Greilickville) is in Leelanau County and in the TALUS boundary area. The overall population of Leelanau County was 21,119 according to the 2000 U.S. Census and of that total, 4,264 was in Elmwood Township. Overall the County has 15 local units of government and one sovereign nation, each with local land use authority. As a result, there is no county zoning ordinance. The County General Plan was adopted in 1995 and revised in 2000 and 2005 with significant public input and support. It serves as a policy guide for local units of government.

Overall, sustainability and balance is the policy theme. The Principal Goal of the General County Plan reads as follows: *“It is the principal goal of the Leelanau General Plan to establish a strategy for guiding growth that protects and, where possible, enhances the unique character of life on the peninsula. To that end, the General Plan focuses on balancing environmental protection, resource management, and economic development so as to provide a foundation for a suitable economy that permits long term prosperity for all present and future Leelanau County residents. The balance so achieved should not sacrifice environmental quality when reasonable and prudent development alternatives exist. This plan recognizes that a healthy economy depends on a healthy environment. Achievement of this goal means protecting the integrity of the land base for use by present generations without unnecessarily compromising the options of future generations.”*

Leelanau County is rich in natural resources. Water resources include the Lake Michigan shoreline, Grand Traverse Bay shoreline, and two large inland lakes. Recreation resources include Sleeping Bear Dunes National Lakeshore, Leelanau State Park, and many County and

local facilities. Productive soil for agriculture makes Leelanau County a top producer of cherries in the nation. Land cover statistics measured forest cover at 48% of the total county land area. Ridgelines provide scenic views of water, open space and forest lands throughout the County.

The natural beauty has attracted a steady stream of new residents which in turn threatens the natural beauty. From 1980 through 1992 there were 4,200 new homes built. Another 2,400 units are expected by 2010. Most have been built on agricultural land on large lots with direct access to a public road. The residential growth is expected to continue. The plan states clearly that the question is not *whether* the growth will occur but *when* and *how*. The County policy encourages new residential development on smaller lots near existing residential areas. It also encourages use of the design guidelines in the *New Designs for Growth* publication and open space development techniques in more rural areas. It calls for the use of a Capital Improvements Plan at the county and local levels and defined service boundaries as a tool for guiding development.

Forty-six percent (46%) of employed residents commute to work outside of the County. Residents are dependent on the automobile. Natural features such as steep slopes and forested areas affect road design and limit the road system from moving cars at high speeds. There is a recognized need to develop other transportation options. A need for a Class A road network is identified and the following action statement is included in the Plan: *“The LCRC should work with the Grand Traverse County Road Commission, the City of Traverse City, TC-TALUS, and the Michigan Department of Transportation to review and establish the need for a beltline route around Traverse City to minimize summer traffic congestion, allow farm vehicles to travel around (rather than through) the city, and to route through traffic to avoid time delay and safety hazards associated with unnecessary trips through the center of the city. The environmental impact of such a beltline must be considered.”*

In addition to the commuting population, others residents are seasonal or retired. This situation leaves several needs unmet or underserved including public transportation, health services and affordable housing. The General Plan also recognizes the need for a more diversified, economic base and year-round employment opportunities within the larger frame of sustainable growth.

Wexford County

Wexford County is located directly south of Grand Traverse County. US-131 runs through Wexford County in a north-south direction passing by Manton and Cadillac on the east side of the County. M-115 runs almost corner to corner through Mesick and Cadillac. Wexford County has a wealth of natural resources. Forty-two (42%) of all land in Wexford County is publicly-owned state and federal forests. Additionally, the Manistee River and Pine River provide natural

corridors through the County. The 2000 U.S. Census count for Wexford County was 30,484 and the estimated population for 2006 is 31,994.

The Wexford County Comprehensive Plan is dated May, 2004. The Plan lists nine fundamental principles that underlie the goals, objectives and policies of the document. They are: 1) Scenic character should be preserved or enhanced in the County; 2) Natural resources in the County should be protected from inappropriate use or conversion; 3) The natural environment of the County should be protected; 4) An economy built on renewable natural resources is sustainable and should continue to be an important economic base for the future; 5) Future development should primarily take place in a compact development pattern in the urban growth areas around Cadillac, Manton, Mesick, Buckley, and Harrietta; 6) Future land use, zoning, land division and public infrastructure decisions should be made consistent with this Plan; 7) A strong effort should be made to achieve improved intergovernmental cooperation within Wexford County; 8) The vision of this Plan must be achieved without violating protected property rights; and 9) Preservation of the scenic character in Wexford County is both dependent on and supports most of the economic base in the County. The Plan also identifies a need for an update to the Zoning Ordinance and a draft zoning ordinance dated May, 2007 is ready to be adopted.

The economic position of the Plan is a proactive economic growth approach that supports and creates economic opportunities throughout Wexford County. Consideration of economic development strategies are grouped into several categories. Industrial, commercial and office service areas should be located in areas where adequate infrastructure is available and designed to have minimal impact on the community's rural appearance. Steps should be taken to create a positive economic growth climate and existing businesses should be retained and expanded and new businesses recruited. The need for sufficient housing for the community and its workforce is identified as part of the economic strategy. Tourism is a part of the overall economic strategy and there is a specific interest in the development of non-motorized trails.

With regard to land use policies, The Wexford County Comprehensive Plan registers a preference for cluster development rather than strip development, and notes the need to develop recreational trails and to minimize the incompatibility of land uses that exist under the current zoning ordinance. Land division provisions to encourage open space and preservation of large parcels are encouraged. There are minimal transportation policies other than maintenance addressed in the Plan but the proposed county zoning ordinance does include access management provisions along major roadways including US-131, M-37 and M-115.

Kalkaska County

Kalkaska County is located east of Grand Traverse County. Major transportation routes through the County include US-131, traversing the northwest section of the County; M-66, running north-south; and M-72 running east-west. Many areas along major transportation routes are zoned for commercial and industrial development, especially in proximity to the Village of Kalkaska.

Kalkaska County contains thirteen jurisdictions which include the Village of Kalkaska and twelve townships. The Village of Kalkaska serves as the commerce center for the County and has the only public sewer and water system. Four townships (Garfield, Blue Lake, Clearwater, and Boardman) and the Village of Kalkaska have adopted zoning ordinances. County zoning applies to the rest of the Townships. The 2000 population for the County was 16,571 and the estimated population for 2006 is 17,330.

Local government, manufacturing, the oil and gas industry, retail trade, and tourism are the major employment sectors in the County. With more than 275 miles of streams and rivers and 85 inland lakes, seasonal tourism and recreational activities provide jobs and contribute to the overall economic well being of the County. Much of the forest-covered land is protected by the State as part of the state forest system. Overall, 49% of County land is in public ownership. Housing is affordable in Kalkaska County making it an attractive location for young families and seasonal homes. In 1990, seasonal homes represented 37.8% of all homes and in 2000 they represented 35%. Many of these are converted to permanent homes when the owners retire which adds to the senior population in the County.

The Master Land Use Plan contains a series of guiding principles which highlight the community goals. They are: 1) Preserve the rural character of the County [*Kalkaska County is not known as an urban area and wants to keep it that way*]; 2) Maintain the rural character and appearance of the highway and road corridors [*Every effort should be made to protect them from ill-suited development such as signage, billboards, multiple access points, obtrusive building placement, and ridgeline development*]; 3) Maintain the natural corridors and patterns and weave them into the plan; 4) Although agriculture is not a prominent land use, it plays an important role in the history and present life of the County; 5) Respect the individual Township and Village needs, but focus on the big picture; 6) Foster coordination between governing bodies; 7) Provide for diverse housing types; 8) Respect private property rights, while planning for the public interest; 9) Safeguard the historical and significant features of the County; 10) Establish a sense of unity in Kalkaska County; 11) Highlight the fact that Kalkaska County is a playground; 12) Emphasize compact development; and 13) Keep it simple, understandable, and straightforward.

From an economic standpoint, Kalkaska County has several advantages. It is located within 20 miles of Traverse City and has highway connectors, rail service and pipelines. It also has a lower tax rate and lower land costs than its neighboring communities. Growth is expected to be slow and steady. Existing strip development along major transportation corridors is noted as a feature that the community would like to see changed. New regulations that require different design and access practices will need to be placed in the zoning ordinances at the local level to be effective. As noted in the Plan's Guiding Principles, there is strong support for all of the growth ideas put forth in the New Designs for Growth guidelines.

County zoning regulations recognize the water resources of the Boardman Natural River, the Upper Manistee River and the many inland lakes which are both a magnet for residential development and an environmentally sensitive resource. A major zoning ordinance revision in 2001 changed site development standards to reduce the impact of new residential development on water resources. The Agriculture-Residential and Forest-Recreational zoning districts have purpose statements directed at protecting large parcels (agriculture) and natural features (forest). In some ways they act as a conservation tool. However, each district does allow for single family residential development on one acre of land and each has a PUD development option.

Antrim County

Antrim County is located north of Kalkaska County and borders the Grand Traverse Bay on the township's west border. The County has 27 miles of shoreline along Grand Traverse Bay and over 31,000 acres of water in the 76 inland lakes. Among these is Torch Lake which is 18,473 acres in size, has a maximum depth of 302 feet and is 18 miles long. This lake has been ranked by National Geographic as "the third most beautiful lake in the world."

There are five villages in Antrim County: Bellaire, Elk Rapids, Mancelona, Central Lake, and Ellsworth. The 2000 Census reported a total of 23,110 persons in Antrim County and estimates the 2006 population at 24,463. The southern part of the County is growing faster than others. Elk Rapids and Mancelona are the two centers of population. The following locations provide water and sewer to their residents: Village of Elk Rapids, Village of Central Lake, Village of Bellaire, Schuss Mountain, and Shanty Creek Resort.

Antrim County is considering a new Master Land Use Plan which has a draft date of December, 2006. The data provided here is from that draft document. In 2000, there were a total of 15,090 housing units in the County. Of these, 61% were occupied year round and 34% were occupied for seasonal, recreational, or occasional use. The remaining 5% of houses were classified as vacant. 82% of the housing stock is classified as single family and 11% as mobile home.

Unlike other counties in the region, manufacturing is a major employment group and revenue source for Antrim County. Agricultural also provides substantial economic revenue although the number of people in the labor force in this category is lower. Retail trade is an important economic component. A reflection of the manufacturing base is the fact that 5,671 employees work and live in Antrim County while 1,347 employees live in Antrim County and work in Charlevoix County and 1,285 employees live in Antrim County and work in Grand Traverse County.

There are two state trunk lines traversing Antrim County. US-31 is approximately 24 miles long and provides a north-south route through the County. It is located along the western edge and in some locations near Lake Michigan. There are three state highways: M-66 branches north from US-131 in Mancelona Township and provides a fairly direct route to Charlevoix, M-88 also branches from US-131 in Mancelona and travels to US-31 in Eastport. An asset management Study for the counties in the region done by the Northwest Michigan Council of Governments (NWMCOG) showed that 51% of Antrim County's roads were rated very good to excellent. In addition to personal vehicles, public transit is an option in Antrim County. A bus system called Antrim County Transportation (ACT) was established in 1977 and provides public transit services to all citizens in Antrim County.

The Planning Commission works cooperatively with the County Economic Development Corporation and the Northern Lakes Economic Alliance (NLEA). The following economic goals were recorded in the Master Land Use Plan: 1) Promote a balance of economic growth with preservation of rural climate, scenic beauty, and preservation of natural resources; 2) Promote controlled economic growth through appropriate land use policy and regulations, planning, and planning mechanisms at the county, township, and village level; 3) Promote retention and expansion of existing business and attract new businesses to create year-round jobs and to diversify the economy; 4) Optimize coordination of activities and resources to target economic development throughout the County; 5) Promote and support appropriate public and private infrastructure development necessary for economic development; 6) Promote growth/expansion of value added agriculture opportunities and promote general farm profitability; 7) Recognize the importance of and promote year-round recreation and tourism and a stable of the County economy; and 8) Encourage the re-use of existing facilities where appropriate.

Antrim County does not administer zoning regulations for any local unit of government. As a result, the County did not choose to implement plan goals through zoning but looked for other tools. Nonetheless, the plan offered the following guiding principles: 1) Keep Antrim County rural;

2) Protect the water; 3) Promote healthy living; 4) Direct development towards existing communities; 5) Provide housing for everyone; 6) Retain farming and farmlands; 7) Promote diverse working opportunities; 8) Maintain the rural appearance of the highway and road corridors; and 9) Balance property rights with the public interest.

2.4 Economic Strategy

Michigan's Economic Strategy

Michigan, today, is at a crossroads. The manufacturing industries that once guaranteed high-paying jobs are declining. To reshape the economy, the State of Michigan has implemented the 21st Century Jobs Fund to spark new investment and create high-tech companies and jobs that will diversify the economy. The Fund is specifically aimed at encouraging “competitive-edge” technologies. The four competitive-edge technologies are: life sciences, alternative energy, advanced automotive and homeland security and defense. Also supported are advanced computing or electronic device technology, design, engineering, testing, diagnostics, or product research and development related to any of the four competitive-edge technologies.

The Legislation creating the 21st Century Jobs Funds defined a series of implementation tools which include funding, a system of allocating the funds through grants and loans and the creation of a Board to handle the awards. The Board is authorized through the state legislation to expend not less than \$40 million in fiscal year (FY) 05/06, \$50 million in FY 06/07 and \$30 million in FY07 through 2012.

Michigan has also recognized a need for venture capital to support the creation of technology companies. Public Act (P.A.) 214 of 2005, the Angel Investment Incentive, is a trial program designed to stimulate the creation and growth of early stage technology companies through tax deductions. To compliment the legislative initiative, the Michigan Venture Capital Association (MVCA) works to promote private equity investment in initial seed stage financing. The Michigan Economic Development Corporation (MEDC) was a founding member of the MVCA and has aggressively supported the growth of angel networks. Three angel networks are active in Grand Rapids, Ann Arbor and Bloomfield Hills. In addition, the MEDC has developed a comprehensive directory of Michigan resources involved with venture funding, including more detailed profiles of venture funds and their interests.

Another economic development tool initiated at the state level is SmartZone technology clusters that are established in distinct geographical locations. They promote resource collaborations between universities, industry, research organizations, government and other community institutions, growing technology-based businesses and jobs. Michigan's twelve SmartZones

include technology business accelerators that provide support services and help facilitate the commercialization of technology emerging from research in Michigan universities and private companies. There are currently no SmartZones in northwest lower Michigan.

Regional Economic Initiatives

As with land use and transportation planning, there are a collection of agencies in northwest Michigan taking a proactive approach to strengthening the local economy. The Northwest Michigan Council of Governments (NWMCOG) acts in a regional capacity as the Economic Development District (EDD) and is responsible for creating the annual Comprehensive Economic Development Strategy (CEDS) for the ten-county region it serves. The CEDS document is mandated by the Economic Development Administration (EDA) to define Economic Development Districts (EDD) throughout the nation. The EDD includes the project Study Area and the Area of Influence. The 2007 CEDS document includes a snapshot description of current population, infrastructure and economic conditions, economic development strategies and a list of economic development projects for the region. The plan identifies transportation as a “critical issue” for the ten-county region and provides comments on roadways, public transit, air travel and shipping options. Goals listed in the 2007 CEDS are: 1) Maintain and improve the regional quality of life; 2) Create and maintain a skilled workforce; 3) Diversify the regional economic base; 4) Strengthen partnerships with local governments and agencies; 5) Enhance and sustain infrastructure; and 6) Promote existing commercial areas as economic centers for the region. Included in the infrastructure list is the desire to develop broadband internet service in the region. No goals are listed to specifically address transportation. Within the economic goals are echoes of land use goals including a strengthening of existing urban areas and limitation of sprawl development, encouragement of brownfield redevelopment and cluster development patterns, protection of natural resources, and provision of affordable housing,

NWMCOG also developed a plan called Creating the 21st Century Workforce: Coordinating Regional Partnerships in the Northwest Michigan Region in November, 2006. The plan strives to put together a single strategic vision and work plan (conceptual and concrete) for the economic and workforce development organizations in the region. The organizations include MI Works!, local EDCs, the Small Business and Technology Development Center, MEDC, Michigan Rehabilitation Services, Chambers of Commerce, Downtown Development organizations, Tribes, local units of government, colleges and MSU Extension. The groups were organized into the Economic Development Advisory Committee, a separate Executive Committee and four Business Enhancement Teams by region. The group analyzed “gaps” in the system and identified needs including a four-year research university, regional data, broadband internet, support for struggling businesses and support for adult education. Actions developed in response to the identified needs including a layoff prevention initiative and workforce preparedness programs.

The regional Economic Development District has several local partners. The Traverse City Area Chamber of Commerce (TCACC) plays a role in the region. The TCACC presented the 2007 Economic Forecast for the five-county region of Antrim, Benzie, Grand Traverse, Kalkaska and Leelanau Counties that was prepared by the Northwest Michigan Council of Governments. Some of the economic strategies included in the document include minimizing the effects of seasonal variations in the economy, business retention, lay-off prevention, and responding to the impact of the older consumers and workers in the region. In fact, it is a goal of the TCACC to become a nationally recognized “Livable Community” across the life span. The TCACC supports many programs that allow residents to “age in place” including home remodeling programs, expanded mobility and transportation initiatives and accessible commercial services.

The Traverse Bay Economic Development Corporation (TBEDC) is housed in the TCACC and played its own unique role in regional economic development. TBEDC currently offers traditional business development assistance and community development initiatives such as downtown development, brownfield redevelopment and infrastructure assistance. The State of Michigan is steering business development assistance. This includes attracting new employers who are not part of the seasonal economy such as knowledge based industries and “high-margin” manufacturing.

Economic development is a primary focus of the Northwest Michigan Council of Governments (NWMCOG) in its ten-county region. NWMCOG provides programs to assist employers, employees and small businesses. These include the Small Business and Technology Development Center (SBTDC), the Procurement Technical Assistance Center (PTAC) and the Workforce Development Resource Center website.

The NLEA serves Antrim, Charlevoix, Cheboygan and Emmet Counties. Its strategic plan for 2006-07 lists action statements to support business retention, business start-ups, business attraction and broadband internet service. In addition, Antrim County has its own Economic Development Corporation. Two of its current projects are the development of a business park and a small business incubator.

2.5 Land Use Planning Studies

Land Use Policy at the state level has evolved through a process of studies and task groups since a surprise finding in an economic study in the early 1990s. In July of 1992 the Michigan Department of Natural Resources (MDNR) released a report entitled *Michigan's Environment and*

Relative Risk which ranked environmental risks. According to the report, two of the greatest risks to the state's environment were the lack of land use planning with regard to ecosystem integrity and the degradation of urban environments. These findings helped to put the land use discussion back on the political table in Michigan. In 1995, the Michigan Society of Planning Officials (MSPO) released a study entitled *Patterns on the Land: Our Choices, Our Future*. This document looked at land use trends over the past fifty years and looked forward to the next thirty. In 2001, the *Michigan Land Resource Project* was published using GIS technology to graphically represent Michigan's land use in 2040 and the impact on land-based industries including agriculture and tourism which are two of Michigan's top three industries. The report presented a graphic representation which sent a clear message to Michigan's policymakers.

Michigan's Land, Michigan's Future

In February, 2003 Governor Jennifer Granholm announced the formation of the bipartisan Michigan Land Use Leadership Council. The Council was made up of 26 voting members and charged with studying and identifying trends, causes, and consequences of urban sprawl and providing recommendations to the governor and the legislature. The vision statement developed later by the Council stated that their principal purpose was to make recommendations to reform land use decisions in Michigan in order to create sustainable and more livable communities. Three "shared-goals" of Michigan residents were identified as a result of the public input activities and include: economy prosperity, environmental and cultural integrity, and social equity. Sustainability was then described as a balance between these three goals. The ten tenants of smart growth were embraced.

The report recognized that the State of Michigan plays an active role in land use decisions through its investment and regulatory policies and that many of the state's programs have worked against smart growth principles. For example, financial support for infrastructure extension outside of an urban center leads to more development outside of the urban center. The report calls for redirection of the state's policies and actions to support the new vision of a vibrant, sustainable and equitable Michigan. Economic policy changes are discussed in the economic section. One legislative change that has come out of this process is Michigan's Public Act 266 of 2003, referred to as the Joint Municipal Planning Act. This act allows Michigan communities to join together to create joint planning commissions that have the authority to act in an official capacity.

Grand Traverse Bay Pilot Project

Out of the Joint Municipal Planning Act came funding support for joint planning initiatives from a variety of sources. The Northwest Michigan Council of Governments received a grant from the

Michigan Coastal Management Program in the Department of Environmental Quality to implement a joint planning project around Grand Traverse Bay. Three workshop sessions were conducted in the spring of 2005.

Visioning TC/Vision in GTC (Grand Traverse County)

The visioning process is not new to Grand Traverse County. In 2004, the Traverse City Convention and Visitor's Bureau arranged for a presentation, workshop and summary document to be done by William McDonough & Partners of Charlottesville, VA. A presentation regarding sustainable development was made at the Grand Traverse Resort with 800 people in attendance. The message emphasized that growth is coming to the region. The question is "how does the region want to grow?" A charrette workshop was held the next day with 150 people invited to participate. The maps were on the tables, the packets of growth indicators (transit, open space, mixed-use, residential, commercial) were provided to participants and people were put to work designing their preferred future development patterns. A written report was provided by the consultant identifying the results of the activity and the group results are described in detail.

Many points of consensus were identified through the activity and were organized into four categories: mobility, environment, quality of life and regionalism. Within the mobility section, an action statement reads "Re-route regional through-traffic outside of downtown and remove Grandview Parkway to reconnect downtown to the bay." An overall description of the results found in the document reads:

The following principles begin to capture the overarching themes and aspirations that were expressed during the charrette. They are offered as a draft to be used as a basis for subsequent discussions and should be confirmed, expanded and refined.

- 1. Protect our natural resources and our agricultural heritage and enhance our small town character by growing compact, walkable, mixed-use neighborhoods within the developed urban areas.*
- 2. Implement transit options for mobility that lessen the demands on roads while providing community-wide connectivity.*
- 3. Provide a high quality of life within our communities by offering accessible wellness, housing, education, culture, diverse employment and other opportunities that embody our values.*
- 4. Ensure the ecological health and beauty of our land and water resources through environmentally intelligent, innovative and regenerative planning and development strategies.*
- 5. Pursue planning and decision-making mechanisms that create regional-based systems and solutions.*

In the report, the Traverse City Convention and Visitor's Bureau was left to form a "Leadership Committee" to take the next steps which included holding more forums, developing a mission statement and creating a land use and transportation plan for implementation.

New Designs for Growth

New Designs for Growth is a guidebook and program initiative that takes a proactive approach to guiding physical development in the region. The guidebook is titled New Designs for Growth Development Guidebook and is a revision to the original Grand Traverse Bay Region Development Guide. It was produced by the Traverse Area Chamber of Commerce with the input of over 100 community volunteers through an 18-month process. It is a public-private partnership and the introduction explains that it "*demonstrates how thoughtful, quality design can improve our rural, suburban and urban environments by creating sustainable developments of economic value that protect our natural resources.*" It later notes that the document is neither anti- or pro-growth but is based on the premise that growth is inevitable and that it can be compatible with the environment.

The Guidebook is divided into a series of five sections: Critical Design Practices, Residential, Mixed-Use Developments, Commercial and Agriculture & Forestry. Each section provides a series of specific guidelines which are alternatives to traditional development practices and explains the benefits. The document encourages design that is environmentally, economically and culturally sustainable based on the ten tenants of Smart Growth. Each page includes an explanation of the guideline, a graphic representation through photos or sketches and additional information and key points. An indicator is placed next to each guideline as a link to the supporting smart growth principle.

The New Designs for Growth project is now managed by the Northwest Michigan Council of Governments in a cooperative arrangement with the Traverse City Area Chamber of Commerce (TCACC). With the revised guidebook completed, the New Designs for Growth committee actively reaches out to local governments and developers with the information. As a result, the policy planning documents in the region almost always reference this document by name and support its design principles.

Your Bay, Your Say

Traverse City contracted with Wade-Trim and JJR to create a local plan for the development of the City's bayfront. The meetings took place during the spring and summer of 2007 and there are "next steps" to be taken in the process.

After initial information gathering and public input exercises, there were five key concepts identified with respect to the desires of the community for the bayfront. They are: 1) Connect the downtown and neighborhoods to the waterfront; 2) Create a new Central Park, a “town square” on the water; 3) Promote mixed use infill to reinforce the edges of the park; 4) Provide a variety of activities and public spaces along the waterfront; and 5) Respect the natural beauty and ecological integrity of the Bay and Boardman River. Large buildings on the waterfront were not on the list.

The concepts were expressed through three different design alternatives and presented to the public. They included The Big Move concept that put Grandview Parkway below grade in an underground tunnel that included a major “land bridge” across it to unite the downtown with the waterfront. The String of Pearls concept kept Grandview Parkway in its current alignment but slowed traffic using a series of roundabouts as traffic calming devices. The Green Scheme concept proposed shifting Grandview Parkway away from the bayfront to the Bay Street corridor to provide more land area next to the waterfront on the west side as well as other pedestrian features and connections. Public feedback to the designs suggested that the preferred alternative was a combination of The Big Move and The Green Scheme alternatives. The next steps in the process include practical steps of conducting technical studies, developing design plans and organizing funding efforts.

2.6 Other Regional Studies

Benchmarks Northwest

Benchmarks Northwest, produced by the Northwest Michigan Council of Governments, is a tool to assess quality of life conditions in the ten-county region made up of Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee and Wexford Counties. The Benchmarks Northwest is a series of reports that evaluate community well-being and livability by offering secondary data and public perception (survey) information. The purpose is to provide a snapshot of community strengths and challenges. Highlights from the Benchmarks 2004 document are provided here. In a few instances, the information has been supplemented with data from the 2006 U.S. Census estimates which is noted through use of the date reference.

Population

As of 2006, there were approximately 298,796 people in the ten-county region comprising northwest Michigan. Between 2000 and 2006 the region's population increased by 5.6%. Northwest Michigan's population is projected to continue growing at a rate of 14.8% from 2000 to 2010 and 9.7% from 2010 to 2020. The primary source of growth in the region is

from in-migration of new residents. During the late 1990s half of the region's in-migration was the result of residents from Michigan, but outside of the ten-county region. 24% of in-migration resulted from residents outside of the state, and 25% from residents moving within the ten-county region.

In 2006 Grand Traverse County was the most populated of the ten northwest Michigan counties, with approximately 84,952 people. Population growth has focused in areas adjacent to the region's large cities, including Traverse City, Petoskey-Charlevoix, Cadillac, and Manistee. Although the region's population has grown significantly in the last three decades, its major cities have witnessed a decline in population. Traverse City, Cadillac, and Manistee have lost population, while only Petoskey-Charlevoix experienced population growth.

Housing

Between 1990 and 2000 the number of housing units in the region increased from 131,000 to 156,000, representing an 18.3% increase in regional housing stock. With the exception of Emmet and Missaukee counties, single-family units have outpaced the growth of multi-family units. In 2000 single-family homes comprised 76.2% of the region's housing units. Multi-family units made up 23.8% of housing units, while manufactured homes comprised about 12% of the region's housing stock.

Economy

In 2001 there were 140,750 jobs in northwest Michigan. The majority of these jobs were located in Grand Traverse County (32%), Emmet County (12%), and Wexford County (10%). Between 1997 and 2001 the region experienced growth in the number of jobs at just over 3%. Between 2000 and 2020, the region is projected to add an additional 40,000 jobs, for a growth of approximately 25%. Emmet County is expected to demonstrate the largest relative job growth. By 2006, approximately 179,786 people were employed in northwest Michigan. The region experienced 6.4% overall employment growth between 2002 and 2006.

Industry

The service and retail trade job sectors dominate the region's employment landscape, with the service sector comprising 35% of jobs and the retail sector comprising 23%. Manufacturing comprises another 17% of northwest Michigan's jobs. Significant job growth is projected for the finance, insurance, and real estate industries

Tourism-related retail sales greatly impact northwest Michigan's economy and employment landscape. In 1997 Grand Traverse County had the highest per capita retail sales volume out of all 83 Michigan counties; Emmet County ranked 3rd and Wexford County had the 5th highest per capita retail sales volume. In 2000 estimated tourism spending in the region totaled approximately \$780 million. About 30%, or \$234 million, of tourism spending was located in Grand Traverse County. In the state, Grand Traverse County ranked 7th highest in tourism spending, while Emmet County ranked 15th, and Charlevoix County ranked 21st.

Tourist spending in the region is dominated by those who visit motels and hotels. In 2000 motel and hotel tourists spent \$371 million, or 48% of the total annual regional tourist spending. Seasonal home residents contributed \$187 million (24%); day trip tourists added 15%, and camping visitors spent \$34 million or 4% of the total annual tourist spending.

Unemployment

During the first half of 2003, unemployment in the region was higher than the state average of 7%, except in Grand Traverse and Leelanau Counties. Grand Traverse County unemployment averaged 6.4% in 2003. However, higher seasonal variation is present in the region's unemployment rates when compared to state and national rates. In northwest Michigan unemployment rates may be as much as 50% to 100% higher in January than in July.

Wages

Regionally, northwest Michigan lags behind the state in average and median wages. In 2002, the average weekly wages totaled approximately \$535. This represents 70% of the state's average of \$734 per week.

Roads

As of 2002, northwest Michigan contained over 4,400 miles of public roads. In 2001, over 340,000 vehicles were registered in the region. The majority of roads are local, and approximately one-third of roads are not certified as public roads. Regionally, state and federal roads that service northwest Michigan's major cities, including Traverse City, Petoskey, Cadillac, and Manistee, have the highest volumes of traffic.

The private automobile is the dominant mode of transportation with 70% to 80% of the region's commuters driving alone, while only 10% to 16% choose to carpool. Only 1% of

the northwest Michigan's commuters use public transit, while 6% to 10% choose other means of transportation, such as walking or biking. When asked, residents expressed a desire for expanded transportation options, connected trail systems, walkable communities, energy efficiency, improved mobility and accessibility. Also, there is a significant concern with regional through-traffic in Traverse City.

Septic/Water Supply

In 1990, the septic system was the predominant method of removing waste in the region. Additionally, individual wells provided water to more regional households than public or private water systems. Only 30% of homes in the region utilized public water or sewerage systems. However, Grand Traverse, Wexford, and Emmet Counties had at least 40% of households on public systems in 1990. This is significant when compared to state trends in which 70% of homes are supplied by public or private water and sewerage systems. In Grand Traverse County, water and sewer facilities are available in limited areas, notably in Traverse City and surrounding villages and resorts.

Personal Technology

Although the data on telecommunications in the region is limited, surveys illustrate that the region ranks lower than other areas in the state in home personal computer ownership, cell phone ownership, and rate of internet usage. Additionally, the phone modem dominates internet connections in the region, such that only 9% of internet connections are high speed.

Cultural Resources

Cultural resources in northwest Michigan include both arts and entertainment facilities and physical or natural resources that may be used for passive or active recreation. In 1997, over 1,000 arts, entertainment, and recreation establishments were operating in northwest Michigan. However, there was a 39% decline in the number of people employed in the industry between 2000 and 2002.

Northwest Michigan is endowed with an abundance of unique natural resources and physical features. In the ten-county region, there are over 139,000 acres of water and 461 linear miles of Great Lake Shoreline. In 2000 over 9,500 public and private campsites dotted the region, and Grand Traverse County maintained the largest number of campsites. During the summer of 2002, over 190,000 visits were made to regional pedestrian trails, including the TART trail, Leelanau Trail, and VASA trail.

Northwest Michigan Seasonal Population Model

The Northwest Michigan Council of Governments sponsored this project to gather seasonal population trends for the region. Using data from 1995, APB Associates, Inc. and the Planning & Zoning Center, Inc. created a seasonal population model to estimate population by month and season and identified the unique challenges to the process. The report concluded that in 1995 on average, one in six persons staying in the region was not part of the permanent population. During the summer months, this trend peaked with almost one visitor to two permanent residents. Leelanau and Benzie Counties have the highest proportion of seasonal to permanent residents. Inland counties, including Kalkaska, Missaukee, and Wexford have less seasonal population variation than coastal counties. In 1995 Grand Traverse County experienced an annual average of 11% seasonal population. Between June and August, the Grand Traverse County seasonal population ranged from 17% to 22% of the total population.

Housing Needs Assessment for Grand Traverse County, Michigan

In 2003, the Community Research Group, LLC prepared A Housing Needs Assessment for Grand Traverse County and a similar report for four other counties. The report was commissioned by HomeStretch Housing Development Corporation. The housing market in Grand Traverse County is affected by its location near Traverse City as a commercial and cultural center and by the natural setting of the County and the impacts of tourism and vacation homes. As an industry, tourism creates relatively low-wage service jobs which impacts area income. As a result, the characteristics described below are seen in the county's housing market.

In the 1990s, the housing stock has gained value at a rate that exceeds income growth during the same time. During the 1990s, Grand Traverse County homes appreciated by 95.5 %, while median gross rents increased 37.7%, both greater than the state average. The 2000 U.S. Census estimates that 39% of renters and 26% of homeowners were “overburdened” which by definition means they are paying more than 30% of their income for housing. The County has generally lower household incomes when compared to the state. There are a low number of rental houses and multi-family complexes are uncommon. The number of households in the area is growing as well which increases demand and prices for housing.

Grand Traverse Labor Shed Study

The Grand Traverse Labor Shed Study was written in March of 1999 by the Traverse Bay Economic Development Corporation. It looked at where people lived and worked in the Grand Traverse labor market area. The area was defined as all or part of nine counties within a 50 mile radius of Traverse City. It noted in summary that just over 50% of employees working in Grand

Traverse County reside in Traverse City and the five townships immediately adjacent. It also provided commuting statistics between counties through the labor market area.

3.0 The Environmental Factor

3.1 Introduction

This section highlights the natural resources found within the Study Area and the Area of Influence and summarizes other environmental studies that have been done in order to gain an understanding of the region's unique natural resources. Numerous documents were consulted in order to generate an accurate summary of the region's natural resources. These resources included County Master Plans, GIS databases, and various environmental reports.

Figure 1.0 found at the end of the Executive Summary section provides a vicinity map of the Study Area and the Area of Influence. A comprehensive discussion of the region's transportation system can be found in Section 1.0, land use issues are discussed in Section 2.0.

3.2 Study Area and Area of Influence

The Area of Influence can best be described as the counties that surround and have a direct effect on the Study Area through policies, economics, development, or enforcement of regulations. Although the Study Area is a smaller subset of the Area of Influence, the region as a whole is interconnected and acts as a large ecosystem where positive or negative change in one area can impact the entire region. This section takes a "big picture" view of the region.

The Area of Influence is defined as the counties of Grand Traverse, Leelanau, Benzie, Wexford, Kalkaska, and Antrim. The Study Area is comprised of portions of Grand Traverse County including Traverse City, Acme Township, Blair Township, Green Lake Township, Whitewater Township, Peninsula Township, Garfield Township, East Bay Township, Long Lake Township and Elmwood Township located in Leelanau County.

3.3 Grand Traverse County

Grand Traverse County is home to Traverse City and the East and West Arm of the Grand Traverse Bay of Lake Michigan. The natural beauty of Grand Traverse County can be described

as some of the most beautiful countryside in the Midwest. It is characterized by numerous high quality lakes and rivers meandering through rolling terrain of pristine forests, open spaces and wetlands. The County is home to the Pere Marquette State Forest that provides valuable habitat for many sensitive plants and animals. The state forest and other public lands in the County provide local recreation for outdoor enthusiasts and wood products contribute to the local economy.

Of the total land area of the County (310,453 acres), approximately 61% of the land cover is open and wooded lands. This is followed by agricultural lands at 21%, urban land at 10%, and water and wetlands totaling 8%.

The 2002 Comprehensive Plan describes the natural environment of Grand Traverse County as one of abundant water. Excellent lakes, rivers, streams, and shorelines are found throughout the County provide high quality habitat for wildlife. Eleven watersheds cover the County with the Boardman River Watershed being the largest. High quality wetlands that regulate flooding and water movement within these watersheds add to the outstanding water resources found throughout the County.

The County receives approximately 87 inches of snow and 30 inches of rain per year and enjoys a mild climate in both winter and summer. The varied climate and sufficient precipitation contribute to the recreational opportunities and quality of life enjoyed by residents and visitors alike.

Grand Traverse County is also home to many unique and rare plants and animals. The Michigan Natural Features Inventory (MNFI) database which provides a listing of plants, animals, and natural communities that are currently classified as endangered, threatened, or species of special concern, indicated that Grand Traverse County in 2001 was home to four plant species that were state or federally classified as threatened or of special concern. These species included the Pitcher's Thistle, Hill's Thistle, Pussy-toes, and Lake Huron Tansy.

Six tree species were also recommended for consideration to be added to the MNFI system including the Black Willow, American Chestnut, Eastern Red-Cedar, Ironwood, Hop-Hornbean, Basswood, Rock Elm, and Cork Elm. Primary reasons for most listings were a loss of habitat due to increased human activity and development.

The MNFI also indicated that in 2001 nine animals were listed as endangered, threatened, or a species of special concern. These included the endangered Migrant Loggerhead Shrike, King

Rail, Red Shouldered Hawk, Common Loon, Bald Eagle, and the Osprey. Special concern species included the Wood Turtle, Eastern Massasauga, and the Ebony Boghaunter. As with the listed plant species, human activity and development along water bodies and the increase in residential homes in woodlands and wetlands were the primary reasons for declining biodiversity in the area.

It should be noted that conversations with avid outdoor enthusiasts who are very knowledgeable in the local flora and fauna indicated that there were more plants and animals (especially avian species) found within the County that were not listed in the 2001 MNFI database search. The MNFI is a dynamic database and as such should be checked routinely for additions and changes that might occur.

The 2002 Comprehensive Plan describes several threats or issues to the County's natural environment that endanger its high quality of life and abundant recreational opportunities. Several of the notable issues include:

Existing Growth Management Policies: The County is one of the fastest growing communities in the State of Michigan. According to the Grand Traverse County Comprehensive Plan, the existing population will increase 60% from 2001 to 2025. Based on this projected growth, the current mechanisms and policies in place for managing growth are not sufficient to preserve the natural resources and quality of life within the County.

The 2002 Comprehensive Plan recognizes that there are some inconsistencies at the local level with existing growth management strategies. Possible reasons for the inconsistencies include local plans that predate the County's Comprehensive Plan, Comprehensive Plan guidance that may be too vague, and the possibility that implementation at the local level results in unintended growth. The 2002 Comprehensive Plan also recognizes that it is possible that local jurisdictions know and understand the growth management strategies expressed in the 2002 Plan but choose to reject them.

Current Land Use Patterns: Current land use patterns in Grand Traverse County can best be described as low-density residential development. Using current projection trends for population growth it is estimated that 13 square miles will be consumed by residential sprawl by 2020. This outward progression of growth to rural areas will continue to increase traffic congestion and impact the natural resources. Many of the lakes in the County attract new development and existing lakeside cottages are being

remodeled or torn down to construct year-round homes. This generates a need for more public utility services and as a result, natural, unspoiled lakefronts are becoming rare. Many of the County's sensitive and unique water, woodland, and agricultural areas will be lost if this type of development continues.

Environmental Threats: Several environmental threats were identified that posed a direct risk to the area's natural resources. These included water quality and watershed protection, groundwater protection, wetlands, and sensitive ecosystem preservation.

Most threats can be traced back to existing land use patterns and the pressure new development puts on the environment. These pressures include water quality impacts on surface water and groundwater supplies. Improper fertilizer applications and other human activity contribute to the degradation of the area's water resources. Leaking underground storage tanks are of particular concern for the County's groundwater and aquifers due to the region's porous soils. Wetlands, woodland, and agricultural lands are being lost incrementally to new development and sprawl.

Five growth management policy levels have been developed to address the identified threats and the projected growth. The policy levels aim to preserve or potentially improve the abundant natural resources of the area and are intended to provide county-wide land use guidance to local jurisdictions. The five levels include:

- Level 1 - restrict and control development in sensitive environmental areas.
- Level 2 - minimize fragmentation of open lands.
- Level 3 - retain viable tracts of agricultural lands.
- Level 4 - encourage compact and livable communities.
- Level 5 - encourage efficient use of existing and planned investment in infrastructure to accommodate future growth.

Grand Traverse County plans to protect its natural resources by preparing for the projected growth through a proactive "stewardship" management approach. This approach as expressed in the 2002 Comprehensive Plan, understands that *"Grand Traverse County will continue to grow in harmony with the natural environment, protecting the area's unique resources while assuring that the economic, cultural and recreational advantages of life in the County are within reach of all its citizens"*. Growth is coming and the County is preparing proactive management plans to address it.

3.4 Leelanau County

The natural character of Leelanau County can be described as an environment with unusually varied topography that includes high quality lakes and streams, striking views, world-class dunes, and Lake Michigan shorelines. The high dune and glacial ridges form the major land features of Leelanau County. These ridges generally run north to south, are highly visible, and attract tourist and recreation enthusiasts from around the world. Leelanau County is home to the federally designated Sleeping Bear Dunes National Lakeshore Park and the state designated Leelanau State Park.

The natural resources of Leelanau County are considered very high quality. Most streams are designated cold-water trout streams and many of the inland lakes are considered oligotrophic or mesotrophic, which is indicative of high water quality and clarity. The woodlands and wetlands are unique and sensitive and contain an abundance of biologically diverse flora and fauna. A large percentage of the total land area is federal or state owned land. This public access to land provides sportsman and outdoor enthusiasts alike the opportunity to enjoy Leelanau County's rich natural resources.

As described in the updated 2005 Leelanau General Plan, most of the Peninsula is a checkerboard of picturesque woodlots, pastures, meadows, active crop fields, orchards, and water. There is more wooded landscape than open field. Approximately 48% of the County is considered wooded land, 21% is agricultural land, 19% open land, 8% urban land, 2% wetlands, and 2% sand dune/barren land.

During the development of the County's General Plan, several threats were identified that the County felt posed a risk to the health and natural beauty of the environment, these threats included:

Current Zoning: A major threat facing the County is "large lot zoning". Leelanau County stated in their General Plan *"The current development pattern is characterized by the fragmentation of large parcels into lots of between 1 and 20 acres in size with frontage on a county road primarily for use as the site for a single dwelling. These changes are occurring largely because local plans and zoning regulations not only permit them, but encourage them through so-called "large lot zoning" practices."* Large lot zoning poses a serious risk to the very thing that attracts residents and tourists to the County - the rural character of the area. Large lot zoning is one of the main contributors to the low-density sprawl that is currently occurring in the County.

In addition, the County understands that existing zoning regulations and the importance placed on environmental protection vary from each community. Often times when local land use decisions are made they do not apply existing environmental protection ordinances available to them.

Current Land Use Patterns: The 2005 Leelanau General Plan identifies the current land use pattern as a major threat to the future quality of life. If current trends continue as projected, the rural character and natural beauty of the County will be lost within the next 20 years. The current land use pattern is a direct result of regional population and employment growth. This growth creates market pressure to fragment and convert woodland, orchards, and farmlands to residential use. As a result, prime farmlands, forests, open spaces, and view sheds are lost, public service demands increase, and ultimately the economy of the County suffers because the fundamental reasons many people live, work, and visit the County declines.

Environmental Threats: Environmental features that are at risk within the County include air and water quality, groundwater protection, woodland and hillside preservation, protection of sensitive natural features, farmland, and unique wildlife.

Air quality is still considered good, however industrial contaminants from outside the County are causing ozone levels to rise. Due to the prevalence of sandy soils, groundwater and recharge aquifers are extremely sensitive to leaking hazardous materials. Wetlands are being lost to small incremental fills even though many regulations exist that limit or prohibit wetland filling. Residential development is impacting farmlands, woodlands, and other unique natural environments that provide habitat for many sensitive plants and animals. New development is not only consuming open space, but has the potential to impact groundwater and surface water due to the lack of mandatory septic system maintenance and uniform storm water regulations.

To address the threats facing the natural environment, the County recognizes that *“The natural resources of the Leelanau Peninsula are vital to the economic health and the sense of well being of area citizens. These natural resources are interrelated biological systems. They require knowledgeable and careful stewardship for protection measures to be effective.”*

Citizens of the County have indicated that they do not want the character to change even in the face of population and economic growth and that the natural resources of the County must be protected. Leelanau County has taken several steps toward ensuring that future planning and

development decisions protect the natural resources and visual character of the community. These steps include an environmental protection strategy that guides new development into villages and subdivisions rather than onto large rural lots, encourages cluster development to reduce open space impacts, avoids sensitive environments, and links open spaces to create wildlife corridors.

Leelanau County believes in a “stewardship ethic” that views renewable resources as resources deserving of wise and proactive management. The General Plan believes that natural resources warrant protection and they should be managed for long-term productivity based on their potential value and contribution to local quality of life. At the heart of this goal is the principle of guiding new development in a way that works with nature rather than against it.

3.5 Benzie County

Benzie County is rich and diverse in its natural resources. The scenic views, orchards, clean air, and clear water contribute to its rural character and draws many visitors. Residents and tourists enjoy miles of beaches and dunes along the Lake Michigan shoreline. Over 36% of Benzie County is publicly owned land. Much of this land is forested woodland with easy access that provides plenty of opportunities for outdoor enjoyment.

The County is characterized by lake-border plains, hill plains, large forests, clean lakes and rivers, and high quality wetlands. From an environmental perspective, the quality of the natural features of the County are considered very high. This pristine natural environment supports a variety of diverse plants and animals.

Benzie County is home to the Sleeping Bear National Lakeshore, the Pere Marquette State Forest, and the Betsie River State Game Area and Fish Hatchery. Many of the County’s natural features are considered “untouched”. These natural resources provide an economic benefit and contribute to the area’s high quality of life.

The County’s 2020 Comprehensive Plan identified issues that directly impact their natural resources. The County felt that uncontrolled development threatened the natural character and environmental resources of Benzie County more than any other.

Uncontrolled Development: The County understands that development is unavoidable. The physical size of the County is only 316 square miles, which makes it the smallest county in Michigan. According to the U.S. Census Bureau, Benzie County has one of the

fastest growth rates in the state. This increase in population growth directly influences development and the need for a growth management strategy.

As the County experiences uncontrolled growth, the one quality that the citizens have expressed as being the most important aspect of living in the County is its rural character, and their greatest fear is losing it. This is expressed in the 2020 Comprehensive Plan that states, *“If there is one issue that permeates nearly all aspects of Benzie County life and concern for the future it is the loss of rural character, open space and scenic view preservation. The north woods character and scenic views that attract residents and vacationers to Benzie County are mentioned again and again as important resources that shouldn't be lost. Scenic character is one of the highest topics on resident's lists during visioning sessions. It is also one of the things that the people of Benzie County could lose, other than their jobs and health, and suffer the greatest change in their lives. Unfortunately, it is also the one thing Benzie County is losing the fastest due to new development authorized by existing local regulations.”* The Comprehensive Plan asks the question *“Is it OK if the private land of Benzie County becomes like Chum's Corners in Grand Traverse County?”*

The 2020 Comprehensive Plan explains that development is rapidly *“eroding the scenic and rural character of the county.”* This development is fueled by current zoning practices at the township level that allows residential development on 2.5 to 10 acre lots. The County fears that uncontrolled development will impact the water quality, forests, and agricultural lands that contribute to the overall economy and existing way of life. The 2020 Comprehensive Plan states *“If all rural land is developed as presently zoned, there will be no viable farming, diminished wildlife habitat and very little scenery in the future of Benzie County.”* This assumption is supported by a land use, land cover analysis that compared aerial maps from 1978 to maps from 1996. The comparison found considerable increases in fragmentation of private land along state highways and county roads in the form of five to ten acre lots for residential land use. Existing land use patterns fragment the natural resource base and significantly change both the land uses and patterns of land use in the County.

To proactively deal with what the County feels is the number one threat faced by Benzie County residents, “uncontrolled development”, a series of principles, strategies, and policies were outlined in their Comprehensive Plan that aims to guide development in such a way that the rural character of the County and its high quality natural resources would be secure. At the heart of the growth management policy is the desire not to prevent growth but to guide it.

As part of this growth management strategy for balanced growth and environmental protection, fundamental principles were developed. These principles state that the *“Scenic character should be preserved or enhanced wherever feasible in the County. The Natural resources of the County should be protected from inappropriate use or conversion. The pristine natural environment of the County should be protected from degradation. An economy built on renewable natural resources is sustainable and should continue to be the principal economic base for the future. Future development should primarily take place in a compact development pattern. Future land use, zoning, land division and public infrastructure decisions should be made consistent with this Plan. A strong effort should be made to achieve improved intergovernmental cooperation within Benzie County. The vision in this Plan must be achieved without violating protected property rights.”*

3.6 Wexford County

Wexford County is similar to the other counties in the region in terms of its abundant natural resources and its scenic quality that is valued by both residents and visitor alike. The natural environment of Wexford County is one of beautiful forested hillsides, farmlands, rivers, lakes, and streams. The high quality natural environment with plentiful forests and wetlands support a variety of unique and sensitive flora and fauna. Wexford County is home to the City of Cadillac, the County's largest city.

Agricultural activities are predominately row-crops, dairy, and cattle farms, which contribute to the scenic character and sense of place that the residents value. Available public land provides an abundance of recreational opportunities such as hunting, hiking, camping, and other outdoor activities. The scenic quality and its natural resources heavily influence the economic base of the County through farming, tourism, forestry, and recreation.

Wexford County faces the same threats or issues as most counties in the region. Uncontrolled development, residential sprawl, and the need to increase governmental cooperation are all issues familiar to the area. The Wexford County Comprehensive Plans explains that through several citizen and agency meetings, the County identified threats that required proactive steps and planning to ensure the high quality natural resources so vital to County's economy and scenic character are maintained or even improved.

Current Land Use Trends: The Wexford County Comprehensive Plan states, *“If the current trend of single family homes lining County roads is continued, the landscape will*

become suburbanized. Many of the large open spaces will be chopped up and sprinkled with homes. Most open space would then be in yards, rather than a part of the current scenic landscape. This will diminish the value of the landscape to tourists and create a public service burden over time."

This trend directly threatens the scenic character and the natural resources of the County in a way that fragments the landscape and impacts the environment. Fragmentation converts woodlands, wetlands, and farmlands to commercial and residential use, which directly diminishes the very qualities that make the County desirable.

Improved Cooperation: The Wexford County Comprehensive Plan also identifies the need for better cooperation between governments. The Plan recognizes that cooperation does exist between governmental units; however, disagreements do occur and occasionally attempts to resolve issues fail. The Plan recommends a "government cooperation ethic" that encourages a wide view approach and an understanding that decisions made or not made at the local level will affect the rest of the County and region. This is demonstrated by the statement from the Plan that says *"There should be a government cooperation ethic in Wexford County which recognizes that land use and infrastructure decisions of each governmental unit have, over time, an impact on the character of the entire County (and entire region)."*

The Wexford County Comprehensive Plan describes nine fundamental principles that attempt to address the issues that challenge the sustainability of the County's natural resources. The nine principles state:

1. Scenic character should be preserved or enhanced in the County.
2. Natural resources in the County should be protected from inappropriate use or conversion.
3. The natural environment of the County should be protected.
4. An economy built on renewable natural resources is sustainable and should continue to be an important economic base for the future.
5. Future development should primarily take place in a compact development pattern.
6. Future land use, zoning, land division, and public infrastructure decisions should be made consistent with this Plan.
7. A strong effort should be made to achieve improved intergovernmental cooperation within Wexford County.
8. The vision of this Plan must be achieved without violating protected property rights.

9. Preservation of the scenic character in Wexford County is both dependent on and supports most of the economic base in the County.

Ultimately, these principles are intended to achieve long-term sustainable development through wise growth management strategies that preserve the high quality environment and quality life for the next generation.

3.7 Kalkaska County

Kalkaska can be described as a place filled with beautiful rivers, large diverse forests, and open farmland that draws many seasonal visitors to the area. Its natural resources are rich and diverse and support a variety of plants and animals. Kalkaska County is home to the Village of Kalkaska and is approximately 20 miles west of Traverse City.

The landscape is generally classified as hill-land, plains, and upland plains with much of the County covered in forests. Scattered throughout Kalkaska County are approximately 7,000 acres of wetlands that contribute to the high quality water resources and its biological diversity. The County is known for its pristine rivers that include the Rapid River, Boardman River, and Manistee River. These rivers provide natural corridors for wildlife as well as a multitude of recreational opportunities such as fishing and canoeing. Over 275 miles of streams and rivers and 85 inland lakes are found within the County. Vast tracts of state owned forests exist throughout the eastern and northwestern parts of the County. This public land provides recreation activities such as snowmobiling, hunting, camping, and all-terrain vehicle riding.

There are approximately 4,621 acres of prime farmland soil in the County. Although agriculture can be found in the middle of the County, it is not the dominant land use. However, it does add to the visual quality and scenic character of the County.

Kalkaska County faces similar challenges and threats to its natural resources as other counties in the region. In an effort to preserve the natural resources the County enjoys, the issues of existing land use trends, sprawl, and population growth are addressed in the Kalkaska County Master Plan. Some of these threats as described in the Plan include:

Population Growth: The population in Kalkaska County has grown in an upward trend since around 1970 and is expected to continue. The County grew by 22.8%, or 3,074 people during the last decade and is expected to add 4,600 new people during the next decade. The Plan predicts that the projected growth will follow existing land use trends

especially in and around areas with significant natural resources, such as the County's lakes and rivers. These natural areas are under heavy pressure for development as people move into the area to enjoy the outdoor opportunities the County provides.

Existing Land Use Trends: The Kalkaska County Master Plan states, *"The subdivision of large parcels into 10 acre or smaller lots is widespread in Kalkaska. Over time it results in significant landscape change as new homes are built. Because lot lines are not visible on the ground, land fragmentation goes largely unnoticed by the public. Land division patterns largely dictate the opportunities and constraints for accommodating new land uses and preserving those that exist. Land division trends have been expressed in different ways across the County. There are many areas in the County where parcels as small as 10 acres dominate the development patterns."*

The existing land use pattern being experienced by the County results in land fragmentation and significantly impacts the environment. Woodlands, wetlands, and other unique and sensitive habitats function best when they exist in large unbroken ecosystems. Fragmentation of the landscape into small residential or commercial development often diminishes the benefits that natural systems are capable of providing, such as wildlife habitat, flood control, and water purification.

The County understands that *"population and economic growth has, to a large extent, occurred as a result of the abundance of and quality of natural resources within the County."* In recognition of the fact that the economic base of the County is directly linked to its natural resources, the County has developed 13 "Guiding Principles" to direct policies and decision that will in turn protect the County's natural resources. In summary, these Guiding Principles seek to:

1. Preserve the rural character of the County.
2. Maintain the rural character and appearance of the highway and road corridors.
3. Maintain the natural corridors and patterns and weave them into the plan.
4. Although agriculture is not a prominent land use, it plays an important role in the history and present life of the County.
5. Respect the individual township and village needs, but focus on the big picture.
6. Foster coordination between governing bodies.
7. Provide for diverse housing types.
8. Respect private property rights, while planning for the public interest.
9. Safeguard the historical and significant features of the County.
10. Establish a sense of unity in Kalkaska County.

11. Highlight the fact that Kalkaska County is a playground.
12. Emphasize compact development.
13. Keep it simple, understandable, and straightforward.

The Kalkaska County Master Plan states, *“Kalkaska County is not an urban place, nor does it want to be. Kalkaska County wants to retain its rustic and outdoor playground atmosphere.”* The County’s goal is to conserve and protect its valuable natural resources and ensure they will be available for future generations to enjoy.

3.8 Antrim County

Antrim County is characterized by upland areas, coastal areas, lakebeds, striking dunes along Lake Michigan, and outwash and glacial channels. Its landscape ranges from flat marshy areas to very steep and rolling hills. More than half the County is wooded with over 180,000 acres of forested land. Like much of northwestern Michigan, Antrim County is a popular tourist destination.

The surface area of Antrim County is approximately 335,961 acres or 525 square miles. Antrim County has more than 31,000 acres of lakes, rivers, and streams and more than 6,500 acres of wetlands. There are over 76 inland lakes in Antrim County, with more than 25 miles of Lake Michigan shoreline. Streams and creeks total 264 miles in length and most are high quality blue ribbon trout streams.

The water resources of Antrim County are exceptional in quality and directly influence the overall value of the area’s ecosystem. Wetlands contain many species of plants and animals whose survival depends on this unique environment. However, because they are often associated with lake, river, and stream shorelines, they receive considerable attention as the pressure to develop along these shorelines increase.

Antrim County is home to several world-class rivers and lakes including the Jordan River, Manistee River, and Cedar River. Torch Lake is also found in Antrim County and at 18 miles long has been ranked by National Geographic as “the third most beautiful lake in the world.” In addition, the Chain of Lakes system has over 200 miles of shoreline and almost 60 square miles of open water.

The climate of the County tends to be influenced by lake-effect weather patterns as described in the Antrim County Master Plan, *“In the winter months, the temperatures range in the high to mid-*

20's for an average high and the average low temperature is in the mid-teens. During the growing season, the average highs are about 70 degrees the lows are near 50 degrees at night. The temperatures are modified in the spring and fall from the lake effects. This "Great Lake effect" provides cooler temperatures in the spring and warmer temperatures in the fall. This temperature modification makes for more ideal conditions for the production of specialty crops such as cherries and grapes."

The Michigan Natural Features Inventory database (MNFI) identified 15 threatened species and nine species of concern that exist within Antrim County. This is evidence of the high quality natural environment found in the County that supports plants and animals that require unique and diverse habitats to survive.

Like other counties in the Area of Influence, Antrim County also faces risks to its natural resources. Existing land use trends, uncontrolled development, and population growth are all issues that require a proactive policy to balance the needs of the County with the protection of its environment. Certain risks that are highlighted in the Antrim County Master Plan include:

Existing Land Use Patterns: The Antrim County Master Plan states that 8,258 acres were converted to Urban and Built Up classifications from other land use categories from 1978 to 1998. This equals approximately 12 square miles of forests, open space, and farmlands lost to development in two decades. Once land is lost to development, it is rarely restored. During roughly the same period, the County gained 6,916 persons and the population growth rate has been steadily increasing ever since.

The rural character of the County is a quality the residents identified as worthy of protecting and felt existing land use patterns posed a direct threat. This rural character included such things as being able to see the stars at night to preserving scenic overlooks along the roads. Natural features, such as wetlands, woodlands, lakes, and streams help shape the community identity. Uncontrolled development can significantly impact natural features and consequently impact the rural character of the County.

Wetlands are particularly susceptible to development as they are usually found near desirable landscape features such as lakes and rivers where property is highly valued. Although regulated, wetland environments are still being impacted by draining and filling practices. Forest fractionalization, residential construction, golf course construction, and roads continue to detrimentally affect the wetlands in the area.

The County's farming community is also considered part of the area's rural character. Farming in Antrim County faces the same developmental pressures as wetlands and woodlands. The Master Plan states, *"A dilemma for many communities is how to promote the preservation of farmland while addressing the demand for development. If a community wishes to protect their agricultural lands, their focus should be twofold: limiting development in predominantly agricultural areas and providing for development away from prime agricultural lands."*

To address the issues facing the County's natural resources, the County through their Master Plan developed "Guiding Principles" that are intended to aid Antrim County in guiding future growth. These principles when followed will help channel development into areas that are the least environmentally sensitive. These Guiding Principles include:

1. Keep Antrim County rural.
2. Protect the water.
3. Promote healthy living.
4. Direct development towards existing communities.
5. Provide housing for everyone.
6. Retain farming and farmlands.
7. Promote diverse working opportunities.
8. Maintain the rural appearance of the highway and road corridors.
9. Balance property rights with the public interest.

The Master Plan explains that the County's goal is to *"Simply recognize what is special about Antrim County and provide recommendations that individual units of governments can choose to use to help sustain the quality of life."*

3.9 Other Studies and Reports

To help gain an understanding of the significance of the area's natural resources various studies and reports focusing on a variety of environmental topics have been conducted in the past. This section provides a brief overview of several studies and reports that are of particular interest to the region.

Grand Traverse Bay Watershed Protection Plan

The Grand Traverse Bay Watershed Protection Plan created by The Watershed Center - Grand Traverse Bay describes the watershed as place of natural beauty and unparalleled importance to

the region. The Plan states, *“The Grand Traverse Bay watershed is one of the premier tourist and outdoor recreation regions in the State of Michigan. Its natural resource base and beauty contributes significantly to the quality of life enjoyed by year round residents accounting for the area’s continued growth and prosperity. However, with the rewards of economic achievement come the telling signs of environmental degradation. The same resource base that contributed to this region’s desirability as a place to live and work is now under considerable pressure to support continued development.”*

The mission of the Watershed Plan was to provide guidance and direction for future actions that will reduce the negative impact that pollutants and other environmental stressors have on the designated watershed uses. The plan outlines and establishes benchmarks and action steps to ensure water quality protection.

The Grand Traverse Bay watershed is broken into nine major drainage basins and drains approximately 976 square miles of land that is mostly located in portions of Antrim, Grand Traverse, Kalkaska, and Leelanau counties.

Forests (50%) and agriculture (20%) are the dominate land use/land cover in the watershed and account for approximately 70% of the total land area. Other land uses include open shrub/grassland, water, wetlands, and urban.

To address current and future activities that may result in a degradation of the watershed, a series of goals were developed. These goals include:

- Protect the integrity of aquatic and terrestrial ecosystems within the watershed.
- Protect and improve the quality of water resources within Grand Traverse Bay and its watershed.
- Establish and promote land and water management practices that conserve and protect the natural resources of the watershed.
- Enhance the amount and quality of recreational opportunities and support a sustainable local economy.
- Establish and promote educational programs that support stewardship and watershed planning goals, activities, and programs.
- Preserve the distinctive character and aesthetic qualities of the watershed.

In evaluating the status and quality of the watershed, The Grand Traverse Bay Watershed Protection Plan focused on five designated uses that significantly contribute to the overall health

of the watershed. The designated uses included the watershed's ability to support cold-water fishery and other indigenous aquatic life, total body contact (swimming), navigation, and the quality of public water supply at point of intake.

After a thorough analysis using standard scientific methods, The Watershed Plan concluded, *"None of the designated uses for the Grand Traverse Bay watershed are impaired on a watershed wide scale. However, in some cases, activities and resulting pollutants in the watershed may prove to be a threat to water quality and designated uses. Threatened waterbodies are defined as those that currently meet water quality standards, but may not in the future."*

It should be noted that in order to be successful, plans to protect land and water resources must be grounded in science and shaped and informed by community values. Plans must also be strategic and integrated. As part of the integration process, the Watershed Protection Plan has collaborated with The Grand Traverse Regional Land Conservancy's (Land Conservancy) to form a strategic partnership to protect the region's water resources.

The service area of the Land Conservancy includes Antrim, Grand Traverse, Kalkaska, Benzie and Manistee counties. The Land Conservancy has identified priority lands for protection within its service area based on natural resource characteristics. The Land Conservancy's success in protecting significant natural, scenic, and farmlands depends on strong partnerships and community support. In recent years, the Grand Traverse Bay Watershed Protection Plan has been a vital component of that success. Together, these organizations' respective plans offer an inclusive framework to protect the region's valuable land and water resources.

From 2003-2007, the Land Conservancy leveraged just over \$950,000 in combined funding from the Michigan Department of Environmental Quality's competitive 319 and Clean Michigan Initiative (CMI) grants to permanently protect five miles of waterfront and nearly 1,200 acres of sensitive land in the Chain of Lakes and Boardman watersheds in Antrim and Grand Traverse counties. The Land Conservancy protected this land by purchasing conservation easements, through voluntary land protection agreements with landowners, on private lands. The fair market value of the protected land was approximately \$4.5 million. The outcome of these permanent land protection efforts means that there will be fewer pollutants in the region's lakes, rivers, and streams.

The Michigan Department of Environmental Quality requires, as a prerequisite to receiving 319 and CMI grants, that a community have an approved watershed protection plan. The Land

Conservancy was able to apply for state funding to protect vital lands because of the creation and approval of the watershed plan developed by The Watershed Center - Grand Traverse Bay.

Northern Michigan's economy and the quality of life of its residents are inextricably linked to water quality. The Land Conservancy and The Watershed Center - Grand Traverse Bay are working together to ensure that the region's high quality lakes, rivers, and streams are protected forever.

Boardman River Natural River Plan

The Boardman River is a state designated Natural River and is located in Grand Traverse and Kalkaska counties. The river begins in Mahan swamp in north central Kalkaska County and flows southwesterly for approximately 40 miles before turning north for nine miles and emptying into Grand Traverse Bay at Traverse City. The Boardman River system drains a surface area of approximately 186,000 acres and includes about 130 linear miles of stream.

The Boardman River has excellent populations of trout due to its high water quality and habitat found along its banks. The Boardman River Natural River Plan states that studies have been conducted that conclude the Boardman River meets or exceeds all water quality standards for its "designated uses". These uses include total body contact (swimming), cold-water fisheries, industrial water supply, and agricultural and commercial water supply.

The Boardman River flows through four hydroelectric dams (Boardman, Brown Bridge, Sabin, and Union Street) near Traverse City. Two of the dams are owned by the city of Traverse City (Union Street and Brown Bridge), and two are owned by Grand Traverse County (Sabin and Boardman). Traverse City Light and Power, which has historically leased the Brown Bridge, Boardman and Sabin dams for generating power, decided that continuing the operation of the dams to generate hydroelectricity has become too expensive and has relinquished its licenses. As a result, a project is currently being conducted to study the feasibility of removing and restoring the river back to its original function. The project has not yet been completed and no conclusions have been reached.

As with most natural resources, the pressure to develop exists. The Boardman River Natural River Plan highlights this by saying. *"Vacation and retirement home developments continue to occur at a rapid rate in the Boardman River watershed and the Traverse City environs. As the demand for quality recreation and home sites increases, the natural beauty and wild character of the area could be destroyed by unregulated land use."* As a result, the Michigan Department of Natural Resources included the Boardman River in the State's Natural River Program with portions of the river classified as a country-scenic river and portions as a wild-scenic river. This

designation affords the river special protection and restricts development along the river in order to preserve, protect, and enhance the river and keep the river in its natural condition for future generations.

A Natural Areas Inventory of Grand Traverse County

A Michigan Natural Features Inventory (MNFI) was done in the Grand Traverse County in the spring of 1990. The purpose of the inventory was to survey the entire land surface of the County (297,737 acres) in order to identify and evaluate the remaining natural areas. The MNFI program maintains a database that tracks exceptional habitat communities and the occurrence of endangered, threatened, and special concern species of plants and animals in Michigan.

Prior to the European settlement of Grand Traverse County, it was thought that 25 natural communities existed in the County. During the inventory, 13 of the 25 natural communities were located. A total of 2,229 acres or 0.75% (three fourths of one percent) of the total land area of Grand Traverse County qualified as a natural area under the MNFI standards.

The Natural Features report states, *“While development or unfavorable land use has eliminated 99% of the natural area quality landscape of Grand Traverse County, this study demonstrates that remnant tracts continue to exist and many lack adequate protection to insure their future existence. Conservation of the best examples identified of the remaining natural communities, and their native plant and animal populations, can help ensure maintenance of the county’s diverse natural heritage for future generations.”*

Brown Bridge Quiet Area

The Brown Bridge Quiet Area is located on the Boardman River approximately 11 miles southeast of Traverse City. The Quiet Area is the backwaters of the Brown Bridge Dam that was constructed by Traverse City Light and Power in 1921.

The Brown Bridge Quiet Area encompasses 1,310 acres of land. Trails, boardwalks, and wildlife observation lookouts are found throughout the area. A variety of natural community types can be found within the Quiet Area including five known species of endangered, threatened, or special concern status including bald eagles, osprey, red-shouldered hawks, common loons, and wood turtles.

3.10 Summary

The region's natural resources are unequalled in both quantity and quality. High quality wetlands, woodlands, inland lakes and streams, and farmlands exist within each county. Several counties in the region enjoy miles of beaches and dunes along Lake Michigan. These natural resources attract visitors from around the world.

Each county is unique, but all share certain characteristics in terms of the threats facing the environment. Uncontrolled development, residential sprawl, population growth, and the need to increase governmental cooperation are common denominators among the counties in the region.

The threats to the long-term viability and sustainability of each county, if left unchecked will fragment the landscape, reduce habitat, degrade the water resources and ultimately impact the economy and character of the region.

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