

US-31/M-37
(Division Street)
Planning And Environmental
Linkages (PEL) Process
FINAL REPORT



March 2016



Prepared for:
Michigan Department of Transportation



Prepared by:
CDM Smith Michigan Inc.



The Planning and Environmental Linkages (PEL) Report for the 1.2 miles of US 31 M-37 Division Street in Traverse City is complete in accordance with the Federal Highway's Administration's (FHWA) Planning and Environmental Linkages (PEL) process. This process was completed as a result of a collaborative effort between the City of Traverse City, the Michigan Department of Transportation, other agencies, organizations, stakeholders, and the public. As stakeholders of the system, it is beneficial that we came together, providing potential solutions to deliver a safer and more efficient transportation facility within the PEL area. As members of the Administrative Team, we were integral in this process with input from the Local Advisory Committee and the public.

As an acknowledgement of partnership for this process, we are in concurrence with the Final US 31 M-37 Division Street Planning and Environmental Linkages Report.



Mark Lewis, Program Development Team Leader
Federal Highways Administration, Michigan



Date



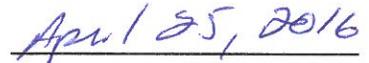
Rick Liptak, Traverse City Transportation Service Center Manager
Michigan Department of Transportation



Date



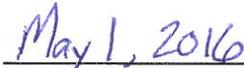
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Date



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Date

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Planning and Environmental Linkages (PEL) Process

This report includes a summary of the process followed for the Planning and Environmental Linkages (PEL) study along US-31/M-37 (Division Street). The goal of improving the study is to improve safety, operations, and pedestrian mobility while minimizing impacts to adjacent properties. The Federal Highway Administration’s (FHWA) PEL process is being followed to ensure planning and environmental factors are considered throughout the study to carry forward into a National Environmental Policy Act (NEPA) analysis, if deemed necessary. The PEL process also promotes a partnership with the key stakeholders within the study area leading to an improved and balanced planning and decision-making process. The limits of the PEL study included US-31/M-37 (Division Street) in Traverse City, Michigan between 14th Street/Silver Lake Road and Grandview Parkway; which is illustrated in **Figure PEL-1**.

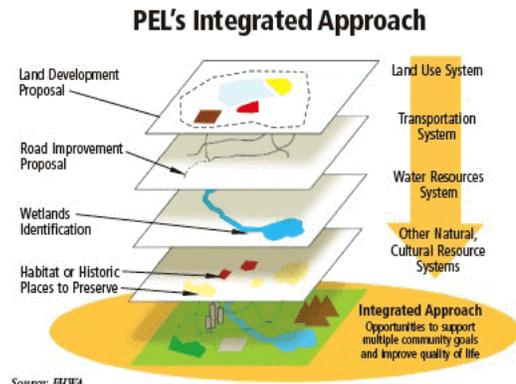
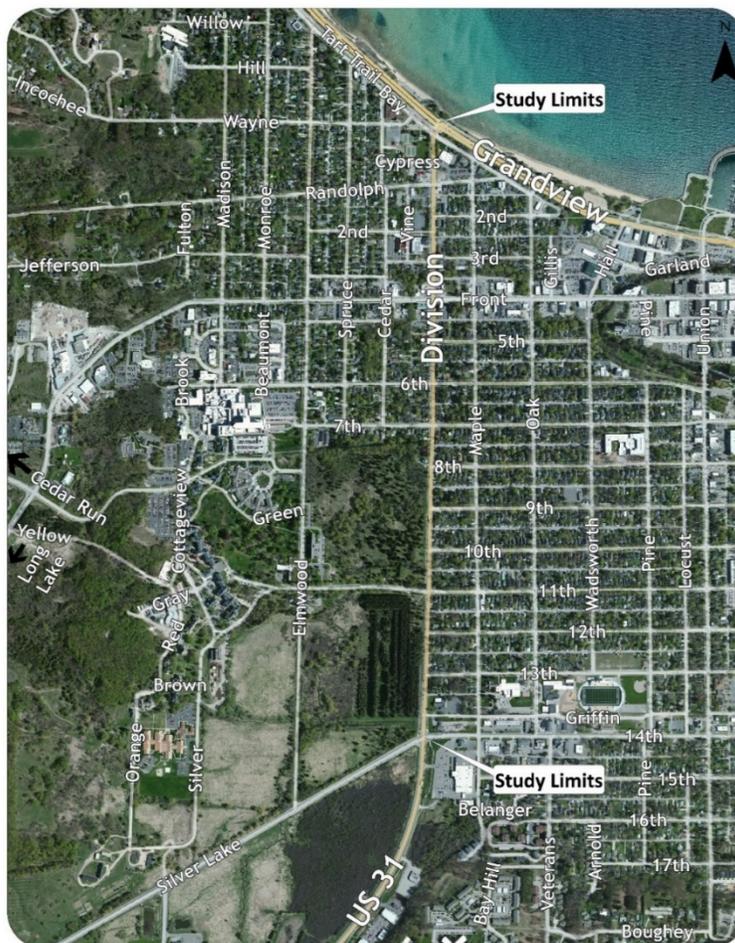


Figure PEL-1 Project Study Area



Section 1

Background

The US-31/M-37 (Division Street) PEL was funded by the Michigan Legislature’s Roads and Risk Reserve Fund. This PEL process was on the Michigan Department of Transportation’s (MDOT) suggested project list that the Legislature reviewed in choosing projects. MDOT is the sponsor of the Division Street PEL project which began September 2014. An Administrative Team was formed to help steer the project which included: MDOT, City of Traverse City, and consultant CDM Smith. A Local Advisory Committee (LAC) was also formed to provide meaningful interaction and guidance throughout the study with stakeholder groups along the corridor. The LAC members included representatives from the City of Traverse City, Garfield Township, Grand Traverse County, local school system, neighborhood associations, law enforcement agencies, Munson Healthcare, the Village at Grand Traverse Commons, parks and recreation committees, and the local environmental organization. A list of all individuals on the Administrative Team and LAC can be found in **Appendix A**.

1.1 Existing Conditions

Traverse City is one of Michigan’s most popular cities and located on Lake Michigan. It is the largest city in the 21-county northern Michigan MDOT region with a population of 14,674 at the 2010 census, and located in the Grand Traverse micropolitan region (Benzie, Grand Traverse, Kalkaska and Leelanau Counties, population 143,372). The Traverse City area is one of the largest producers of tart cherries in the United States and hosts the annual National Cherry Festival in early July, attracting approximately 500,000 visitors annually. Grapes grown in the surrounding countryside contribute to one of the largest wine production centers in the Midwest. Tourism, mostly in the summer and early fall, is another industry. The Traverse City area features varied natural attractions, including Great Lakes/Lake Michigan beaches, wineries, micro-breweries, Sleeping Bear Dunes National Lakeshore, campgrounds, and State forest areas.



Downtown Traverse City

Transportation Facility and Project Limits

US-31/M-37 (Division Street) is a north-south highway located on the west side of Traverse City and is the main entrance into the city from the south. It is a Statewide Corridor of Highest Significance which means it serves a large segment of travel needs; connects urban areas and key activity centers; provides value to economic health and competitiveness; and moves goods, food, and products. It is classified as an urban principal arterial and is listed on both the National Highway System (NHS) and National Truck Network (NTN) due to its regional and statewide importance. The existing speed limit along the corridor ranges from 40 mph between Fourteenth Street/Silver Lake Road and Eighth Street, and 30 mph between Eighth Street and Grandview Parkway.



Intermittent Sidewalk near Fourteenth Street

In 2014 the existing pavement along US-31/M-37 (Division Street) was rated between excellent and good condition per information received from the MDOT Traverse City TSC, despite no record of pavement reconstruction in over 30 years. Based upon increased traffic volumes, the ability of the subgrade soils to drain properly, and maintenance costs to upkeep the current condition of the pavement, a total pavement reconstruction may eventually be required but not for the foreseeable future.

The right-of-way (ROW) width along Division Street varies greatly throughout the entire corridor. It is at its widest (245 feet) just north of Fourteenth Street. Between Fourteenth Street and Thirteenth Street the ROW decreases from 245 feet to 205 feet and then to 101 feet. At Thirteenth Street it reduces again to a width of 76 feet and stays that width until Eleventh Street where it reduces again to 73 feet. This 73 feet width continues north to Seventh Street where the final ROW decrease occurs to 66 feet and stays this wide up to Grandview Parkway.

Land Uses, Characteristics, and Surrounding Environment

The project corridor has two distinct segments, each with different characteristics. From Fourteenth Street/Silver Lake Road to Seventh Street the roadway is lined by historic homes (Central Neighborhood) to the east, and historic parklands (Grand Traverse Commons) to the west. It is a significant change from the land uses south of Fourteenth Street/Silver Lake Road which are primarily large commercial retail stores, car dealerships, restaurants, and department stores. Between Seventh Street and Front Street, Division Street transitions into a residential area on both sides of the street, and then a business district from Front Street north to Grandview Parkway. Downtown Traverse City is located approximately five blocks to the east of Division Street on Front Street. See **Figure 1-1** for the Project Constraints Map of the project area.

Significant corridor features include the Village at Grand Traverse Commons and Munson Healthcare campus. Both are located west of Division Street between Fourteenth and Sixth streets and generate significant traffic from visitors, customers, employees, residents, and patients. The Village at Grand Traverse Commons is one of the largest, historic preservation and adaptive reuse redevelopments in the country. The 63-acre Village is the unique renovation of dozens of historic buildings formerly known as the Traverse City State Hospital, and previously, the Northern Michigan Asylum. The Village includes a vast array of eclectic shops,



The Village at Grand Traverse Commons

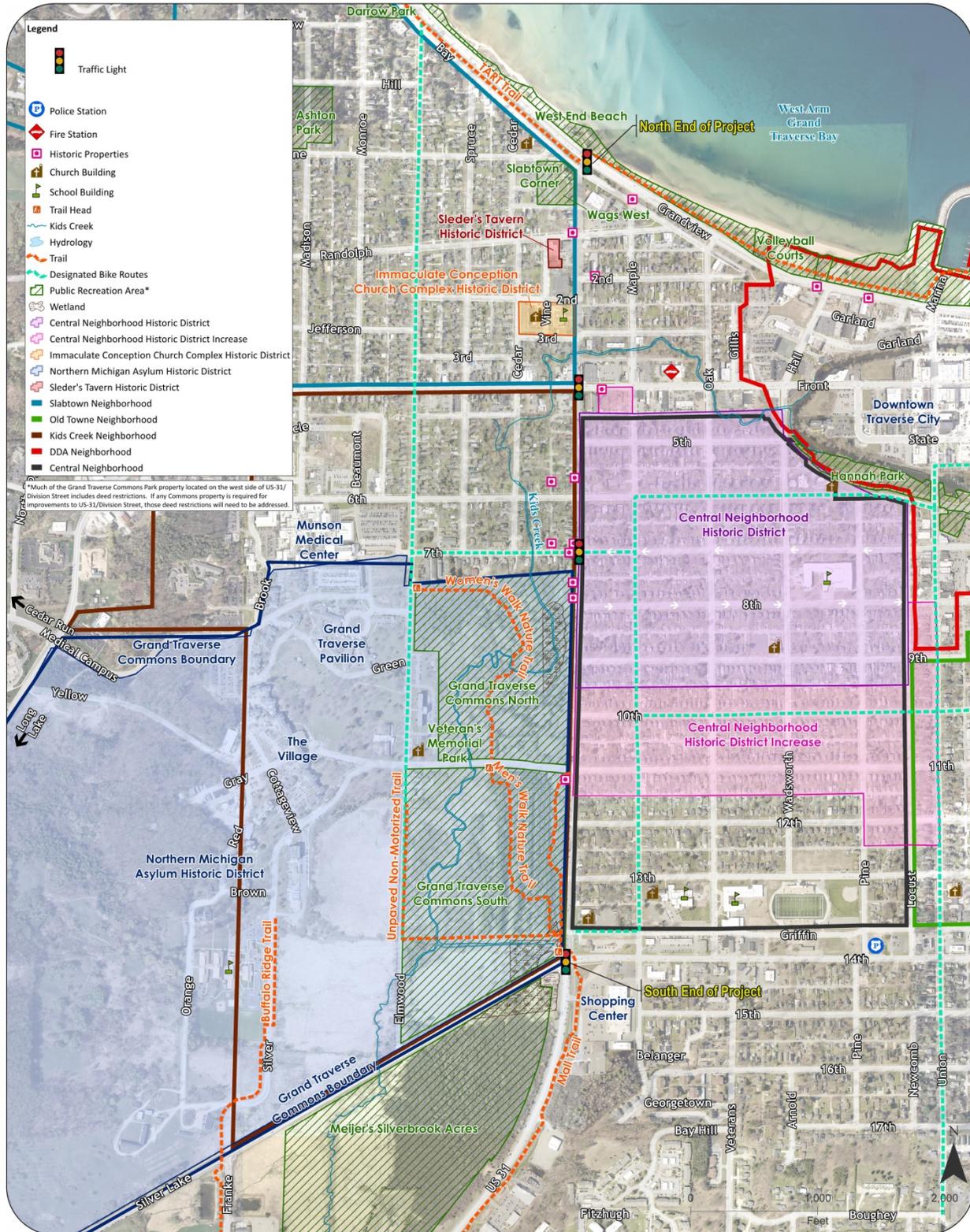
unique eateries, and professional services surrounded by pedestrian friendly walkways and expansive lawns, and historic arboretum. Special events, social gatherings, festivals, farmers market, artist exhibitions, and concerts are all activities that take place at the Village.



Munson Medical Center

Munson Medical Center is a 391-bed hospital serving the Northern Michigan region. It is the largest of the eight Munson Healthcare system hospitals located throughout Northern Michigan and currently has over 3000 employees. The main entrance to the hospital is located off Sixth Street with the emergency room off of Seventh Street, three blocks west of Division Street. Also located around the hospital are private doctor's offices, treatment services facilities, hospice facility, a patient family residence, and the Grand Traverse Pavilions (an area of independent senior living, assisted living, and nursing home).

Figure 1-1 Project Constraints Map - Existing Conditions



Grand Traverse Commons is a park owned by the City of Traverse City between Fourteenth Street/Silver Lake Road and Eighth Street on the west side of Division Street. The Grand Traverse Commons/Village at Grand Traverse was formerly owned by the State of Michigan and was part of the Traverse City State Hospital complex (historically called the Northern Michigan Asylum). After the complex completely closed in the 1980s, the State of Michigan legislature enabled the transfer of the property to mainly the City of Traverse City from the State of Michigan. The City of Traverse City established a park on the deeded property along Division Street and it has functioned as a park ever since. The park is made up primarily of two large parcels, one over 85 acres, another about 30 acres. The park is a portion of the grounds surrounding the former Traverse City State Hospital, which included both a men’s and women’s walkway for hospital residents. This park is significant historically because the use of nature for a pastoral setting to treat mental illness was considered a major medical advancement in the late 19th and early 20th Centuries.

There are three established neighborhoods located along the corridor; Central Neighborhood, Kids Creek Neighborhood, and Slabtown neighborhood.

There are four historic districts along the corridor:

- Central Neighborhood Historic District
- Northern Michigan Asylum Historic District
- Immaculate Conception Church Complex Historic District
- Sleder’s Tavern Historic District



Historic Property

Each historic district is made up of a unique combination of historic buildings, structures, objects, and sites. Additionally, there are individual historic properties located outside of the historic districts that are adjacent to the corridor. These districts and properties are shown in **Figure 1-1** Project Constraints Map.

Parks are located along the corridor in various locations and include Meijer’s Silverbrook Acres located in the southwest corner of Fourteenth Street/Silver Lake Road and Division Street, the Grand Traverse Commons North and Grand Traverse Commons South on the west side of the roadway between Fourteenth and Seventh streets, Slabtown Corner Park located on the north end of the project just south of Grandview Parkway, and West End Beach Park which is located on the north side of Grandview Parkway on Grand Traverse Bay. The TART Trail (Traverse Area Recreational Trail) runs along Grandview Parkway and crosses the Parkway at the Division Street traffic signal.

Located on the west side of the roadway is the Mall Trail pathway which is a two-mile long trail that parallels US-31 from Fourteenth Street/Silver Lake Road to South Airport Road near the Grand Traverse Mall. The Mall Trail connects downtown Traverse City residents with many commercial businesses and restaurants located south of Fourteenth Street/Silver Lake Road. The trail runs along the project corridor from Fourteenth Street/Silver Lake Road north to Eleventh Street.



Mall Trail Pathway

Kids Creek generally runs parallel to Division Street on the west side of the roadway through the Grand Traverse Commons Park and into the Kids Creek neighborhood. It then crosses under Division Street via an eight-foot by eight-foot box culvert just north of Front Street as it travels east and connects to the Boardman River near downtown. Historical plans indicate that the most recent replacement of this structure occurred in 1952. A tributary to Kids Creek is located under the Fourteenth Street/Division Street intersection and flows from the southeast quadrant to the northwest quadrant. According to historical plans the outlet is a 48-inch pipe.

Corridor Issues/Problem Statement

Division Street is a U.S. route (US-31), a Michigan State route (M-37), a residential street, and it serves as a travel route for all types of traffic: to and from work, shopping, and schools; commercial vehicles; tourist trips to Traverse City, the Leelanau and Old Mission peninsulas; trips to the Villages at Grand Traverse Commons and to Munson Medical campus; and trips to the retail and services areas south of Fourteenth Street. As a result the traffic along US-31/M-37 (Division Street) is quite heavy and congested for a good portion of the day with peaks of commuter and school traffic. Festivals and special events increase traffic congestion even further. Due to the amount of traffic on Division Street and the fact that there are no turn lanes or signals at some of the busiest intersections within the study area, Division Street has become a difficult road to navigate for both motorized and non-motorized users. One of the biggest issues is northbound left-turning traffic at Eleventh, Sixth, and Randolph Streets and southbound turns to Twelfth and Eighth Streets. Left-turning vehicles stop in the left travel lane, which reduces the highway to a one-lane road and can lead to frequent crashes. Eleventh Street is one of three major entrances to the Grand Traverse Commons area.

Another issue along the corridor is the intersection at Seventh Street. Northbound left-turns are not permitted at this signalized intersection but instead occur at unsignalized Sixth Street, which is one of the entrance streets to Munson Medical facilities. The Seventh Street intersection also has an eastbound travel issue due to Seventh Street being one-way westbound to Division Street. Traffic heading east must turn right onto south Division Street and then left onto eastbound Eighth Street which is one-way east. This results in a traffic weave since traffic cannot go straight through on Seventh Street. A similar weave occurs for eastbound Eleventh Street down to Twelfth Street via southbound Division Street since it is an unsignalized intersection and hard to go straight through.



Truck on Division Street at Grandview Parkway

As stated earlier Division Street is an important truck corridor for both the region and state. Many of the trucks are food service related trucks transporting cherries, apples and other locally grown products from growers to processing plants located in Grand Traverse, Leelanau, and Antrim Counties. Other large trucks also routinely travel the corridor including large trucks and semi-trucks hauling asphalt, concrete, crane and rigging, excavation, construction equipment and materials, petroleum, goods, and products.

As mentioned, pedestrians are also affected by the excessive traffic on Division Street. Residents from the adjoining neighborhoods find it quite difficult to cross Division Street even at signalized intersections due to turning traffic. Safety is a big concern for residents as traffic congestion creates a barrier to pedestrians wanting to cross the street. A significant amount of pedestrian activity in the summer season occurs near Grand Traverse Bay and Grandview Parkway. As a result the intersection at Division Street is very

challenging for pedestrians crossing the Parkway accessing the West End Beach area. The TART Trail also crosses the road at this location, which adds to the motorized concerns over safety.

1.2 Previous Projects and Studies

Over the past 20 plus years MDOT has completed a number of capital preventive maintenance projects along this stretch of US-31/M-37 (Division Street). These projects include mill and fill, joint repair, resurfacing, and crack sealing, with the most recent project completed in 2011. The current remaining surface life is six to seven years and it is still categorized as a preventative maintenance fix.



Pedestrian Crossing Grandview Parkway at Division Street

Fourteen previous studies have been completed that either looked at this stretch of Division Street or included a portion of this project area. The most relevant study was the Division Design Initiative/Division Street Steering Committee Recommendations completed in 2011 which can be found in **Appendix M**. The 2011 initiative involved many of the same stakeholders that participated in the current PEL study.

Four of the studies recommended roundabouts as a potential solution in some form or another. They included:

- Division Design Initiative/Division Street Steering Committee Recommendations - 2011
- City of Traverse City Corridors Master Plan – 2013
- Division Street Traffic Modeling – 2010
- Traverse City Bayfront Study – 2010

Although Traverse City does not currently have a roundabout within the city, clearly people who participated in the various studies viewed them as potentially having value for the problems that exist along the corridor.

Many of the studies had the goal of developing strategies and initiatives to enhance local values related to transportation. Common themes from these plans include:

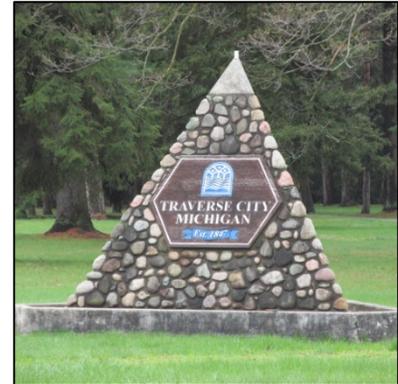
- Coordinate solutions with local stakeholders to ensure goals are met
- Improve the interconnections of the local trail system
- Improve streetscapes and landscaping along main corridors
- Traffic calming
- Provide mobility choices
- Preserve and protect neighborhoods
- Preserve and protect natural resources
- Improve pedestrian and bicycle connections to recreation areas

For the Grand Traverse Commons and Munson Medical Center, additional access is desirable. Constructing an 8 ½ Street has been studied with conceptual designs, but is not being implemented at this time (additional access has been illustrated in 1996, 1999, 2000 Medical Campus plans). Silver Drive was an additional access to Grand Traverse Commons and the medical campus that has relieved some traffic off of Division Street turning left at Eleventh Street. Clearly ingress and egress from the Commons and Munson Medical Center have a direct impact on the traffic along Division Street. However, the intersection improvements that result from the PEL project will improve the access connections on the west side of Division Street. A Prior Studies Summary Memo was prepared which evaluated each of the previous studies and its potential effect on the PEL study. It is included in **Appendix B**.

Section 2

Methodology Used

The City of Traverse City has been studying improvements to US-31/M-37 (Division Street) for many years as stated previously in **Section 1.2**. In 2011 a series of recommendations were developed as a result of the “Division Design Initiative” that attempted to address the issues along the corridor related to traffic congestion, safety, and pedestrian mobility. A key challenge for many projects is reaching local consensus in order for projects to move forward into environmental clearance, design and ultimately funding and construction. MDOT determined that the best way to develop consensus for a Division Street preferred alternative was to utilize FHWA’s PEL process which emphasizes stakeholder and public engagement during the alternatives development and decision making process and also considering potential environmental impacts.



**Monument Located Along
Division Street**

The scope of work for this PEL included documentation of the PEL process which was updated throughout the study and includes:

- Summarize the environmental analysis and potential impacts completed thus far for use when funding is secured and NEPA classification is pursued
- Engage and solicit input from stakeholders and members of the public, including the City of Traverse City
- Develop and refine a Purpose and Need Statement
- Develop a Preferred Alternative for use in securing funding and considering future phasing
- Document how the preferred alternative solves existing traffic congestion and crash issues

NEPA-like terminology was used in the project documentation to accommodate future NEPA classification if necessary. For instance, the PEL includes a Purpose and Need Statement which went through multiple reviews and edits, including a public review period.

The decision makers throughout the study process consisted of the Administrative Team (MDOT and City of Traverse City) and the LAC as described in **Section 1 Background**. Key coordination points between decision makers included the collection of relevant data, environmental field work, crash analysis, the Road Safety Audit (RSA), traffic operation analysis, and alternatives development. More detail regarding the Safety Analysis and RSA can be found in **Section 7.5**. Important alternative decisions were made by the Administrative Team utilizing this information. These decisions were communicated to the Local Advisory Committee (LAC) and FHWA at subsequent meetings to obtain comments and concurrence prior to Public Input Sessions.

Section 3

Agency Coordination

3.1 Resource Agencies

The following agencies were sent e-mail notifications for the public input sessions as well as e-mails stating the website location for viewing the conceptual design alternatives. Due to the large number of historic resources along the corridor, coordination with the SHPO included additional meetings, and SHPO staff attended some of the PEL meetings in Traverse City. The SHPO was the only resource agency to provide a response, and their letter is included in **Appendix C** along with the e-mails sent the agencies below.

Federal Highway Administration (FHWA)

Michigan State Housing and Development Authority (MSHDA) – SHPO (State Historic Preservation Office staff)

Michigan Economic Development Corporation

Michigan Department of Natural Resources (MDNR)

MDNR Grants Administration - The MDNR Grants Administration was contacted to verify properties purchased or developed with DNR funds along the corridor. DNR confirmed Slabtown Corner has received Land and Water Conservation Fund grant monies.

Michigan Department of Environmental Quality

Michigan Department of Transportation – Transit

Other than FHWA, DNR, and SHPO, no responses were received from any of the other above agencies.

SHPO Meeting - July 15, 2015

The primary purpose of this meeting was to obtain some preliminary feedback from SHPO regarding their thoughts or concerns on potential impacts to historic resources since both sides of Division Street have historic resources (districts and/or properties). Specifically discussed was the potential width of the median under consideration south of Eighth Street. Other discussion points included potential traffic impacts to historic Central Neighborhood and specific properties adjacent to the roadway. SHPO asked that MDOT prepare a letter outlining the issues they would like SHPO to respond to. This letter was sent to SHPO July 22, 2015. A copy of the letter is included in **Appendix C** along with the SHPO response letter dated October 15, 2015.



**Grand Traverse Commons
Entrance at Eleventh Street**

3.2 Administrative Team Meetings

The US-31/M-37 (Division Street) PEL Administrative Team had representatives from the Michigan Department of Transportation, Traverse City, and CDM Smith. A full list of administrative team members can be found in **Appendix A** while a full list of all project meetings is provided in **Table 3-1**. LAC meetings and Public Input Sessions are discussed in **Section 4 Public Coordination**. Administrative Team meeting minutes and summaries can be found in **Appendix C**.

Table 3-1 Project Meetings

Meeting Name	Meeting Date
Admin Team Meeting	September 25, 2014
LAC Meeting 1 - Study Team Kick-Off Meeting	October 16, 2014
Public Input Session #1	October 28, 2014
Admin Team Meeting	November 12, 2014
LAC Meeting 2	November 19, 2014
Munson Healthcare Meeting	December 9, 2014
Public Input Session #2	December 9, 2014
FHWA Update Meeting	January 13, 2015
Admin Team Meeting	February 12, 2015
LAC Meeting 3	February 26, 2015
FHWA Update Meeting	March 12, 2015
Admin Team Meeting	April 8, 2015
LAC Meeting 4	April 21, 2015
Public Input Session #3	May 14, 2015
Admin Team Meeting	May 20, 2015
Road Safety Audit	June 1-2, 2015
Admin Team Meeting	June 17, 2015
LAC Meeting 5	June 23, 2015
City Commission Working Session	July 13, 2015
FHWA Update Meeting	July 20, 2015
Public Input Session #4	August 19, 2015
MDOT Team Meeting	September 2, 2015
Admin Team Meeting	September 15, 2015
LAC Meeting 6	September 24, 2015

Administrative Team Meeting - September 25, 2014

The Administrative Team was assembled at the kick-off of the project on September 25, 2014. The team consists of the MDOT, the City of Traverse City staff, and the consultant. A list of individual Administrative Team members is located in **Appendix A**. During this meeting the PEL process was described, critical project data was shared, funding issues for the project were discussed, the scope of the PEL study was discussed, and the members of the Local Advisory Committee were determined.

Administrative Team Meeting - November 12, 2014

Data collection to-date was the main focus of the second administrative team meeting. Data collection discussion included: safety and traffic analysis, the Road Safety Audit (RSA), prior studies of the Division Street corridor, and the ongoing environment and historical analysis. The October 16, 2014 Local Advisory Committee meeting was recapped and the administrative team then made edits to the draft Purpose and Need statement that had been developed after the first Public Input Session. The next step for the Purpose and Need statement was to present it at the next LAC meeting. The administrative team thought it would be a good idea to meet with FHWA to review the Purpose and Need.

FHWA Update Meeting - January 13, 2015

This was the Team's first meeting with FHWA regarding the US-31/M-37 (Division Street) project. The Team provided FHWA with background and update on with the status of the project. The draft Purpose and Need Statement was provided to FHWA and some discussion occurred regarding Purpose and Need wording. Other topics of discussion were data and plans gathered, the RSA schedule, constraints along the corridor, LAC communications, and the alternatives brainstorming development results.

Administrative Team Meeting - February 12, 2015

A primary purpose of this administrative team meeting was to discuss the historic properties located within the project study area since they are significant constraints to the development of the alternatives. The other key issue discussed was a detailed review of the draft alternative concepts developed to-date.

FHWA Update Meeting - March 12, 2015

This was an update meeting to FHWA with the main topic being the development of the draft alternative concepts and the feedback the team had received so far from the Administrative Team and LAC meeting 3. FHWA indicated the importance of this route being a truck route as it relates to the traffic modeling and the local expectations for traffic improvements. In general, FHWA was supportive of the alternatives developed up to this point.

Administrative Team Meeting - April 8, 2015

The fourth administrative team meeting was held in order to review comments made by the Local Advisory Committee on the conceptual alternatives and to discuss the matrix evaluation tables that had been developed for each of the alternatives.

Administrative Team Meeting - May 20, 2015

The fifth administrative team meeting focused on what was heard at Public Input Session #3 and how it affects the current alternatives. The team discussed each intersection in detail to determine what refinements to each would be needed to move the alternatives forward towards the preferred alternative.

Administrative Team Meeting - June 17, 2015

The results of the RSA were shared and further discussion of Public Input Session #3 occurred. Continued alternative refinements were discussed, along with topics for Local Advisory Committee Meeting 5 and the upcoming Study Team presentation to the City Commission.

FHWA Update Meeting - July 20, 2015

The purpose of this meeting was to provide an update to FHWA on the past four months of project activity, and get some input and direction on some specific project issues. Those issues were related to the potential median width as it could result in a 4(f) impact, and the proposal to keep the present lane widths at 11 feet which would require a design exception. Potential traffic impacts to the side streets was also discussed as this is a concern of FHWA.

Section 4

Public Coordination

The Division Street PEL Administrative Team coordinated with the public and stakeholders throughout the entire process. Six Local Advisory Committee (LAC) meetings and four public input sessions were held in addition to specific meetings with Munson Healthcare and the City Commission.

4.1 Local Advisory Committee (LAC) Meetings

The Division Street PEL Administrative Team worked with representatives of the LAC in order to obtain advisory input regarding direction and decisions made throughout the project. The LAC was an integral element of this study as progression of the project was dependent upon engaging members and gathering important feedback. A list of LAC member organizations is shown below in **Table 4-2**. A list is also included in **Appendix A** and includes the names of the representatives from each organization who were invited and attended the meetings. LAC members were also kept up to date through emails and postings to the project webpage. Meeting presentations, attendance list, and other information is included in **Appendix D**.

Table 4-1 Local Advisory Committee Organizations

Traverse City	Garfield Township
Traverse City Commission	Garfield Township Recreation Authority
Traverse City Parks and Recreation	Schools
Traverse City Historical Commission	Traverse City Area Public Schools
Traverse City Planning Commission	Trinity Lutheran School
Traverse City Police Department	Immaculate Conception School
Traverse City Fire Department	Neighborhood Associations
Traverse City Assistant Manager	Central Neighborhood
Joint Planning Commission - City/Township	Slabtown Neighborhood
Grand Traverse County	Kids Creek Commons
Grand Traverse County Road Commission	Economic Development
Grand Traverse Pavilions	Munson Healthcare
Grand Traverse County Sheriff's Office	Traverse City Area Chamber of Commerce
Grand Traverse County Planner	The Village at Grand Traverse Commons
Grand Traverse County Commissioner	TC Tourism
Environmental	Transportation Agencies
Watershed Center Grand Traverse Bay	BATA
Grand Traverse Band of Ottawa and Chippewa Indians	TART Trails
	TC TALUS
Land and Roads Management Director	Disability Network

LAC Meeting 1 - October 16, 2014

The goal of the first LAC meeting was to explain the roles and responsibilities of being a member of the committee. Members were asked to attend all of the meetings, commit to actively participate in the process and provide accurate input and feedback throughout the entire process. The Division Street PEL scope was reviewed and FHWA's PEL process was explained. Members were given a schedule as well as next steps. The committee members were also asked to give input to their initial thoughts about the Purpose and Need for the Division Street project.

LAC Meeting 2 - November 19, 2014

The second LAC meeting began with a review of the roles and responsibilities of LAC members and moved into an update of data collection completed. This LAC meeting was held after the first Public Input Session which was reviewed during the LAC meeting. The 2011 Division Street Steering Committee prior recommendations were discussed and the draft Purpose and Need Statement was presented for comment.

LAC Meeting 3 - February 26, 2015

The third LAC meeting was held after the second Public Input Session. The revised Purpose and Need Statement had been presented at the public meeting and was shown again at this LAC meeting. The main focus for the third LAC meeting was to present the traffic forecasting and analysis process as well as the historic resources that exist in the study area. Draft alternative concepts for five of the intersections and associated roadway segments along the corridor were also presented. The purpose was to illustrate the range of alternatives to be considered and to obtain feedback from the committee to help steer the alternatives development. As not all LAC members were present, the team prepared an alternatives summary memo containing all the information presented at the LAC meeting #3 which was then e-mailed (March 9th) to the entire LAC for their review and comment.

LAC Meeting 4 - April 21, 2015

The fourth LAC meeting was held in advance of the third Public Input Session to allow discussion of the alternatives developed based on the Purpose and Need Statement. The discussion was on an intersection-by-intersection basis, starting at the southern end of the study area at Fourteenth Street/Silver Lake Road. After the five main intersections were discussed a median cross section was presented and discussed.

LAC Meeting 5 - June 23, 2015

After the third Public Input Session the LAC gathered for their fifth meeting. A roundabout video was shown in order to educate the LAC members on how roundabouts function and their level of safety. This led into the summary of Public Input Session #3 and a discussion about the comments received. The RSA results were discussed and alternative refinement discussions took place based on feedback from LAC members. The preliminary Preferred Alternative was also presented and discussed.

LAC Meeting 6 - September 24, 2015

The purpose for this meeting was to summarize what was heard at Public Information Session #4 and present the final Preferred Alternative as it will appear in the PEL document. Most of the discussion centered on pedestrian crossing concerns at the proposed roundabouts, specifically the roundabout at Grandview Parkway. The committee was informed that the PEL report would be provided to them once it goes through MDOT and FHWA reviews.

4.2 Public Input Sessions

As shown in **Table 3-1**, four (4) public meetings were held during the US-31/M-37 (Division Street) PEL process. Each session was held to share information such as a project description, data collected to date, alternatives development, and, most importantly, to solicit feedback from the public as to what they see as problems in the study area and to get suggestions as to how those problems would be addressed. For each meeting postcards were sent to every address within three blocks of Division Street between Fourteenth Street/Silver Lake Road and Grandview Parkway (approximately 1,000). Meeting notices were posted to MDOT's website and distributed to local media outlets. All of the public input sessions

were “open house” style events with the exception of Public Input Session 4. At this session three 15-minute presentations were made at the top of each hour to present the material shown in the room.

Further information for all four sessions can be found in their summaries located in **Appendix E**.

Public Input Session #1 - October 28, 2014

The first public input session was held at the Traverse City Governmental Center. This session was an open-house format. The session presented the PEL process, introduced a timeline, and provided an opportunity for public and project stakeholder input on perceived problems. Fifty eight people signed in and 40 comment forms were received either at the meeting or e-mail. The most frequent comments included:

- Not pedestrian friendly
- Heavy traffic flow
- Division Street is a barrier
- Intersections are congested
- Not bicycle friendly
- Left-turns are impossible
- Lack of sidewalks
- There is nowhere to cross
- Vehicles are traveling too fast



Public Information Session #1

This information was used to draft the Purpose and Need Statement to develop the conceptual alternatives. The summary document for Public Input Session #1 can be found in **Appendix E**.

Public Input Session #2 - December 9, 2014

The second public input session was held at Munson Medical Center. This open-house session presented the draft Purpose and Need Statement and illustrated the known constraints and data gathered to date. Meeting attendees were provided an opportunity to provide comments on all information presented. Fifty five people signed in and 30 comments were received. The majority of comments received supported the Purpose and Need Statement. The summary document for Public Input Session #2 can be found in **Appendix E**.

Public Input Session #3 - May 14, 2015

The third public input session was held at the Traverse City Governmental Center. During the open-house-style meeting the public was given the opportunity to learn about the conceptual alternatives developed for each intersection as well as a median option throughout the entire project corridor. Meeting attendees were given an information sheet after they signed in that helped them with a project overview, information on design considerations for alternative development, and discussed how the alternatives were developed. The public was asked to review the alternatives and potential corridor improvements and to provide feedback as to which alternatives they preferred at each major intersection along the project corridor as well as their thoughts on the median option in the segments of roadway between intersections. Some people wanted roundabouts at every major intersection along

the corridor; while others wanted zero roundabouts along the corridor. The full summary document for Public Input Session #3 can be found in **Appendix E**.

Conceptual alternatives posters were placed at the Traverse City government office and at the Traverse Area District Library for public review.

Public Input Session #4 - August 19, 2015

The fourth Public Input Session was held at Kirkbride Hall in The Village at Grand Traverse Commons. This particular meeting was both open-house and presentation format. A brief, 15-minute presentation was given at 4 p.m., 5 p.m., and 6 p.m. to share the project process and to detail the preferred alternative at the five main intersections of the project study area. Meeting attendees were asked to provide feedback on the preferred alternatives for the Division Street corridor and associated intersections. 116 people signed in, an estimated 160 attended, and 62 comments were received. Generally, the feedback included concerns towards the use of roundabouts and the public's ability to utilize them safely, as well as the pedestrians crossing at the roundabout during peak times. The full summary document for Public Input Session #4 can be found in **Appendix E**.



Public Information Session #4

4.3 Other Stakeholder Outreach

Many of the stakeholder groups, organizations, and businesses were part of the Local Advisory Committee. As a result there was minimal need for additional one-on-one meetings with stakeholders. One exception to this was Munson Medical Center.

Munson Medical Center - December 9, 2014

As one of the largest employers in Northern Michigan, and one of the biggest generators of traffic along the Division Street corridor, a meeting was held specifically with Munson Healthcare staff to find out about potential expansion plans that could result in additional traffic to and from the hospital campus.

The hospital mentioned three expansion projects specifically. One is a new cancer center located on Sixth Street across the street from the main hospital and is presently being constructed. Munson indicated they completed a traffic study for the new cancer center which revealed the new cancer center would reduce traffic as they are consolidating services which will provide less fragmented trips for patients. The main hospital is currently under expansion and increasing the number of individual rooms to bring the hospital up to current standards. However, they are not adding more beds, only rooms. They also indicated they are planning a future two-level parking structure where the current parking lot is front of hospital.

Traverse City Commission - July 13, 2015

An update was provided to the City Commission at a monthly Study Session meeting. The information presented included a summary of all the outreach that had been completed to date and the draft Preferred Alternative for the corridor.

Section 5

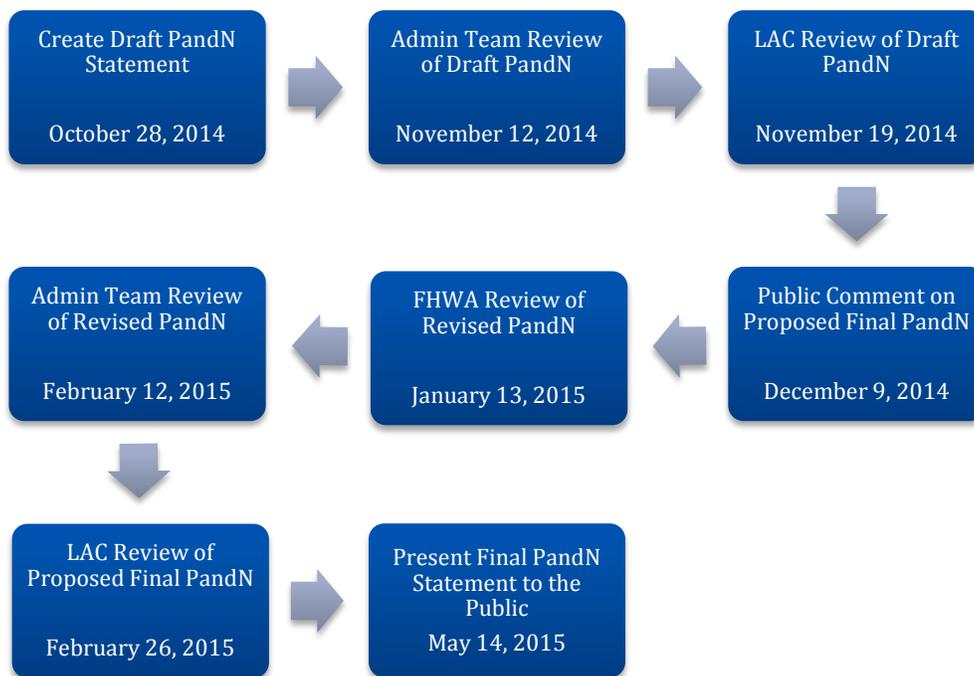
Purpose and Need Statement for the PEL Study

The draft Purpose and Need was developed with input provided by the Administrative Team, the Local Advisory Committee, and the public. FHWA then provided review and comments prior to the commencement of the alternatives development process. The draft Purpose and Need provided the criteria such as safety and traffic operations as well as non-motorized mobility within the corridor to screen alternatives. The Purpose and Need was refined a number of times based on comments received from the LAC and public outreach.



Congestion on Northbound Division Street

Figure 5-1 Purpose and Need Development and Refinement Process



5.1 Draft Purpose and Need

During and after the first public information meeting, feedback was received expressing an overwhelming desire to make Division Street safer and less congested. The Draft Purpose and Need:

Purpose:

The purpose of the US-31/M-37 (Division Street) Planning and Environmental Linkages (PEL) is to improve safety and operations for all users of this designated National Highway System route while

minimizing negative impacts to the natural environment and adjoining properties and enhancing positive benefits to the neighborhoods, parks, businesses, and all users of the corridor.

This Planning and Environmental Linkages process addresses Division Street between Fourteenth Street/Silver Lake Road and Grandview Parkway and will:

- Create a plan that accommodates the many interests of its users (drivers, pedestrians, bicyclists, commuters, commercial traffic, trucks, businesses, residents)
- Create a plan that reflects the context of Traverse City and the urban setting of the corridor
- Provide improved operations along Division Street
- Provide for traffic calming and complete streets design elements where possible
- Improve non-motorized mobility within the corridor
- Minimize impacts on the natural environment



Traffic Intersection at Division Street, Grandview Parkway, and Bay Street

Need:

- Improve opportunities for pedestrians, assisted device users, and bicyclists to cross Division Street
- Improve traffic mobility and operations
- Decrease crashes along the corridor

5.2 Final Purpose and Need

The Draft Purpose and Need was unveiled at the second public input session and comments were collected from the public and stakeholders. The proposed final Purpose and Need was developed and presented once again to the Administrative Team and LAC. The final Purpose and Need for the Division Street PEL is as follows:

Purpose:

The purpose of the US-31/M-37 (Division Street) Planning and Environmental Linkages (PEL) is to improve safety and operations for all users of this designated National Highway System route while minimizing negative impacts to the natural environment and adjoining properties and enhancing positive benefits to the neighborhoods, parks, businesses, and all users of the corridor.

This Planning and Environmental Linkages process addresses Division Street between Fourteenth Street/Silver Lake Road and Grandview Parkway and will:

- Create a plan that accommodates the many interests of its users (drivers, pedestrians, bicyclists, commuters, commercial traffic, trucks, businesses, residents)
- Provide improved operations along Division Street
- Provide for traffic calming, context sensitive solutions, and complete streets design elements where possible
- Improve non-motorized mobility within the corridor
- Minimize impacts on the natural environment



Pedestrian Crossing at Division and Grandview Parkway

Need:

- Improve opportunities for pedestrians, assisted device users, and bicyclists to cross Division Street
- Improve traffic mobility and operations
- Decrease crashes along the corridor

5.3 Project Level Purpose and Need Statement

Due to the level of outreach completed during the development of the PEL Purpose and Need Statement it should be able to move directly into the NEPA process as the project-level purpose and need. However, depending on the amount of time that passes between the completion of the PEL study and the start of any NEPA process for a specific project, there may be a need to revisit the purpose and need statement to verify that the elements are still valid and determine whether any revisions are needed. In addition, the PEL Purpose and Need Statement is for the entire corridor from Fourteenth Street/Silver Lake Road to Grandview Parkway. Depending upon funding and priorities, elements of the Preferred Alternative could be designed and constructed separate from the entire corridor project. That could result in the need for a project specific Purpose and Need that could be somewhat different than the one presented in this PEL report.

Section 6

Range of Alternatives

6.1 Range of Alternatives Approach

When developing alternatives as part of a PEL study, it is important to consider solutions or alternatives from prior studies. In addition, there needs to be an evaluation of the potential alternatives from a “blank slate” point of view to be certain other potential solutions are uncovered that may have been overlooked or not evaluated. Thus, the range of alternatives covers a wide scope and includes what has already been considered and new alternatives for consideration.

The initial development of potential alternatives improvements occurred at the Study Team brainstorming session held on January 9, 2015. To provide direction, the following items were discussed as screening criteria: Draft Purpose and Need statement, project constraints/potential fatal flaws (a defect in a scenario or alternative that makes implementation of such scenario or alternative impossible or highly undesirable), and summary of Public Input Sessions #1 and #2. The purpose of this session was to brainstorm ideas that could be viable alternatives and improvements worthy of moving into the conceptual alternative development process. Recommendations from the brainstorming session are listed in **Table 6-1** along with the determination whether or not to carry them forward for additional analysis.

Table 6-1 Brainstorming Session Recommendations

Alternative	Reason for Consideration	Determination and Reasons
Road Diet (three-lane roadway with bike lanes)	<ul style="list-style-type: none"> • Can be more efficient than four-lane roadways. • Increase pedestrian safety due to decreased roadway width. • Increase safety by separating left-turn lanes. 	Eliminated: Traffic volumes are too high and Syncro analysis indicated road diet would result in traffic gridlock.
Boulevard with crossovers (Michigan lefts)	<ul style="list-style-type: none"> • Remove left turns while providing full access. • Provides refuge for pedestrians. • Aesthetically pleasing transition between east neighborhood and west parks. • Boulevard width allows for numerous aesthetic treatments (city entrance sign, trees, etc.) • Moves southbound traffic further from east side residences. 	Eliminated: Even without truck loons at crossovers, a 64-foot boulevard width is necessary to accommodate delivery trucks. This would lead to excessive impacts to the Commons parks and historic properties.
Continuous median without crossovers (no Michigan lefts)	<ul style="list-style-type: none"> • Remove left turns. • Provides median refuge for pedestrians. • Aesthetically pleasing transition between east neighborhood and west parks. 	Carried Forward: Depending on median width, right-of-way impacts may not be a fatal flaw and it still addresses the Draft Purpose and Need.

Alternative	Reason for Consideration	Determination and Reasons
Continuous Left-Turn Lane (5 lane alternative)	<ul style="list-style-type: none"> • Increase safety and operations by separating left turns from thru lanes. 	Eliminated: Does not provide pedestrian refuge islands and has extensive impact to parks and historic properties.
Roundabouts at intersections	<ul style="list-style-type: none"> • Increase traffic safety and operations compared to signalized intersections for both motorized and non-motorized users. • Provides median refuge for pedestrians. 	Carried Forward: Despite potential fatal flaws at Eleventh, Seventh, and Front Streets, appeared feasible at Fourteenth Street and Grandview Parkway.
Connect intermittent sidewalk along northbound Division Street	<ul style="list-style-type: none"> • Increase pedestrian mobility and safety. 	Carried Forward: Appeared to be feasible despite some utility pole and tree barriers.

Another step while developing the range of alternatives was to evaluate prior studies. An important consideration during this process is to understand the scope and context of the prior studies in this corridor. For example, a past alternative or improvement may solve a traffic and safety issue but may or may not have considered environmental impacts and NEPA constraints in their evaluation. Overall, the range of alternatives must consider all constraints, impacts, and geometric standards as part of the evaluation. A memorandum summarizing the prior studies can be found in **Appendix B**. This memorandum was submitted on February 2, 2015, allowing an approach without bias or preconceived alternatives. Recommendations from the prior studies not already identified during the brainstorming session are listed in **Table 6-2** along with the determination whether or not to carry forward for additional analysis.

Table 6-2 Additional Recommendations from Prior Studies

Alternative	Reason for Consideration	Determination and Reasons
Change character of Division Street to city street instead of thoroughfare.	<ul style="list-style-type: none"> • Division Street is a barrier between the east and west neighborhoods. • Slow traffic speed. • Increased safety for motorized and non-motorized users. 	Carried Forward with Caveat: Character change and maintaining the operations on a NHS route must be balanced.
Create a transitional/gateway intersection at Fourteenth Street/Silver Lake Road.	<ul style="list-style-type: none"> • Alerts tourists that they have reached their destination. • Modify motorist roadway expectations from a suburban arterial to a city street. 	Carried Forward with Caveat: Fourteenth Street/Silver Lake Road intersection modifications must be balanced with operations due to Division Street being a NHS route.
New 8 ½ Street Connection from Division Street to Elmwood Avenue.	<ul style="list-style-type: none"> • Create a more direct entrance into the hospital campus. • Remove hospital traffic from Sixth, Seventh, and Eleventh streets. 	Eliminated: Due to potential high impacts to park, wetlands, and Kids Creek.

All the alternatives considered roadway improvements such as various cross sections, alignments, and intersection options. Non-motorized facility improvements were considered outside of the roadway but bike lanes were eliminated as an improvement due to the limited right-of-way and current parallel route along Maple Street. Transit considerations were not included since no problems or issues were brought up at the LAC or public levels. Other multimodal considerations were not included due to the nature and limited scope of the project, and based upon the review of the prior studies and master plans.

6.2 Conceptual Alternatives

The brainstorming and prior study alternatives and improvements that addressed the Draft Purpose and Need without fatal flaws were analyzed further as part of the Conceptual Alternative development process. To further focus the analysis the criteria matrix in **Table 6-3** was developed. The comparison criteria was developed to allow for easy review and evaluation of the alternatives by the LAC and public. The information presented allows the alternatives to progress from Conceptual Alternatives to a Preferred Alternative. Specific quantitative data such as construction cost and anticipated crash reductions were not used in the matrix as they were not viewed as being significant differentiators based on the comments received from the Administrative Team, LAC and public. The overall goal of this step was to develop alternatives and uniform criteria to present at Public Input Session #3 to help facilitate discussion and gather input to develop the Preferred Alternative. Through the involvement and input of the Administrative Team, FHWA, and the LAC, the draft Conceptual Alternative scenarios were refined and this goal reached.

Table 6-3 Comparison of Alternatives Example Matrix

Comparison of Alternatives					
 Poor Minimal Acceptable Good		? Intersection			
		1 - No Build	2 - Safety & Operational Improvements	3 - 11' Median w/Signals	4 - Roundabouts
Transportation Factors	Improves Vehicle Congestion				
	Improves Safety (Crashes)				
	Improves Bicyclist Mobility				
	Improves Pedestrian Mobility				
	Provides Traffic Calming				
Environmental Factors	Minimizes Historic Properties/Resources Affected				
	Minimizes ROW Impacts/Relocations				
	Minimizes Parkland Impacts				
	Minimizes Natural Environment Impacts				
	Potential Fatal Flaw/Red Flag				
Satisfies Purpose & Need					

The following Conceptual Alternative scenarios were considered worthy of additional analysis. These are broken down by key intersection (Fourteenth Street, Eleventh Street, Seventh Street, Front Street, and Grandview Parkway) and the segments connecting them. Three build alternative scenarios were developed and for consistency, each scenario was applied to each key intersection with minor site-specific variances. It was intended that the intersection alternative could come from any of the conceptual alternative scenarios as the improvement at one intersection was independent of the decision at another intersection (No-Build vs Safety and Operational vs Signal vs Roundabout).

For the segments between key intersections, varying median types and widths were proposed and were considered independent of the key intersections. As listed in the criteria matrix, the No-Build and the

three build alternative scenarios were compared. The following list provides high-level discussion on each alternative scenario.

- **No-Build Alternative:** The performance of existing serves as a baseline for the build alternatives.
- **Safety and Operational Improvements Alternative:** Provides upgrades that improve existing conditions while minimizing right-of-way and environmental impacts. These may or may not meet the project Purpose and Need.
- **Median with Signals Alternative:** Provides a continuous median and signal at every key intersection. These all meet the project Purpose and Need.
- **Roundabout Alternative:** Provides a geometrically sound roundabout at each key intersection for public review and comments despite potential fatal flaws at Eleventh Street, Seventh Street, and Front Street. Roundabouts were considered at all key intersections as part of the 2011 Division Design Initiative which is why the PEL study also analyzed roundabouts at these locations.
- **Segment Options:** Provides a continuous median within the segments along the entire project limit. Construct intermittent sidewalk where currently gapped along NB Division Street. This option satisfies the project Purpose and Need due to the following:
 - Improves Division Street safety and operations by eliminating left turns from thru lane between key intersections
 - Provides improved pedestrian movements due to median refuge areas at crossings and constructing sidewalk at existing gaps on east side of Division Street
 - Potential corridor aesthetic improvements such as low-growth landscaping and stamped concrete

For each key intersection and segment a detailed description and pros/cons can be found in the following discussion. Exhibits of each build Conceptual Alternative scenario along with the populated criteria matrix can be found in **Appendix F, Table 6-4** in this section summarizes the Conceptual Alternative scenarios along with all intersection build alternatives Level of Service (LOS).

No-Build Alternative

Description:

- Maintains the existing geometry and operations along Division Street with optimized signal timings

Advantages:

- No additional right-of-way or environmental impacts

Disadvantages:

- Does not address corridor operational and safety deficiencies
- Does not improve non-motorized mobility

- Does not enhance look and feel of Division Street

Traffic Summary:

Between the existing conditions and 2035 No-Build condition overall intersection Level of Service (LOS) degrades with Fourteenth Street off-peak and Grandview Parkway PM becoming LOS E, while Front Street PM and off-peak enter gridlock at a LOS F.

Safety and Operational Improvements

This alternative scenario provides some short-term benefit relative to the 2035 No-Build condition by adding turn lanes as described below. In addition to turn lanes a continuous six-foot median (three feet of which would be raised) was proposed for the full corridor to limit left turns to key intersections only. The six-foot median includes a two-foot curb (1.5 feet of gutter and 6 inches of curb) on each side separated by two-feet of hard surface for a total raised width of three feet.

Description:

- Fourteenth Street: Addition of NB Division Street right-turn lane, restriping WB for dual left-turn lanes, and restrict Griffin Street to right-in/right-out
- Eleventh Street: Addition of NB and SB Division Street left-turn lanes and restrict Eleventh Street to right turns only
- Seventh Street: Addition of NB Division Street left-turn lane which would extend south to accommodate SB Division Street left turns to Eighth Street
- Front Street: Extend NB and SB Division Street left-turn lanes from 180 feet to 225 feet
- Grandview Parkway: NB Division Street widened to accommodate dual left-turn lane, addition of EB and WB Grandview Parkway lanes to facilitate WB dual left-turn lanes, and restrict Bay Street to right-in/right-out
- Potentially reconstruct sidewalk between Ninth and Eleventh streets on the west side as off alignment non-motorized path west of Division Street and fill in the sidewalk gaps on the east side

Advantages:

- Least right-of-way and environmental impacts relative to other build alternatives
- Partially addresses Purpose and Need
- Provides access management at difficult adjacent intersections

Disadvantages:

- Restricts left turns from Division Street to minor intersections and vice versa, which increases traffic on side streets to key intersections and decreases operations at key intersections
- Narrow three-foot raised median does not provide adequate pedestrian refuge area and aesthetic opportunities

- Extends the length of the existing crosswalk at Grandview Parkway

Traffic Summary:

Significant LOS improvement is only recognized at Eleventh Street since the existing delay is due to thru and left turns, which are eliminated in this alternative.

Median with Signals Alternative

This alternative scenario provides more robust improvements over the Safety and Operational Improvement alternative through additional capacity at some key intersections. In addition to these improvements, a continuous median was proposed for the full corridor to limit left turns to key intersections only. From Fourteenth Street north to Eighth Street an 11-foot median (eight-foot raised) was proposed and six-foot (three-foot raised) from Eighth Street north to Grandview Parkway.

Description:

- Fourteenth Street: Addition of NB Division Street right-turn lane, WB Fourteenth Street and SB Division Street expansion for dual left-turn lanes, Fourteenth Street expansion for dual EB thru lanes, and restrict Griffin Street to right-in/right-out
- Eleventh Street: Addition of NB and SB Division Street left-turn lanes and traffic signal
- Seventh Street: Addition of NB and SB Division Street left-turn lane and conversion of Seventh Street to two-way traffic for at least one block (Maple Street)
- Front Street: Extend NB and SB Division Street left-turn lanes from 180 feet to 225 feet (same improvements as Safety and Operational Improvements)
- Grandview Parkway: NB Division Street widened to accommodate dual left-turn lane, addition of EB and WB Grandview Parkway lanes to facilitate WB dual left-turn lanes, and restrict Bay Street to right-in/right-out (same improvements as Safety and Operational Improvements)
- Potentially reconstruct sidewalk between Ninth and Eleventh streets on the west side as off alignment non-motorized path west of Division Street and fill in the sidewalk gaps on the east side

Advantages:

- Addresses Purpose and Need
- Provides additional improvements compared to Safety and Operational Improvement Alternative with similar right-of-way and environmental impacts
- Eleven-foot median (eight-foot raised) width provides adequate pedestrian refuge area and aesthetic opportunities
- Provides full access at all key intersections, allowing neighborhood street grid to operate as originally designed historically
- Provides access management at difficult adjacent intersections

- Provides improved bicycle mobility and safety by allowing biking commuters to go straight (east) on Seventh Street from the hospital campus area as they are currently prohibited from this movement (must turn left or right at signal if using travel lanes)

Disadvantages:

- Restricts left turns from Division Street to minor intersections and vice versa, which increases traffic on side streets to key intersections and decreases operations at key intersections
- Narrow three-foot raised median north of Eighth Street does not provide adequate pedestrian refuge area and aesthetic opportunities
- Facilitating full access at Seventh and Eleventh Streets may increase traffic volumes on these streets and change existing feel of roadways

Traffic Summary:

Overall consistent LOS improvements are recognized for this alternative where it differs from the Safety and Operational Improvement alternative. The decrease in Seventh Street PM LOS is due to the intersection conversion to two-way traffic, allowing the EB thru, SB left and WB left movements which were previously not allowed. These additional movements reduced the LOS at Seventh Street but enhance overall corridor operations.

Median with Roundabouts Alternative

This alternative scenario provides geometrically sound roundabout alternatives at all key intersections. As stated previously, the roundabout alternatives at Eleventh, Seventh, and Front Streets were identified early as having fatal flaws but were carried forward to provide consistent alternative design and data to the Study Team, LAC, and public. In addition to these improvements, a continuous median was proposed for the full corridor. From Fourteenth Street north to Eighth Street an 11-foot median (eight-foot raised) was proposed and six-foot (three-foot raised) from Eighth Street north to Grandview Parkway. The median prevents direct left turns which are instead facilitated by 180 degree turns at adjacent roundabouts.

Description:

- Fourteenth Street: Two-lane roundabout with dedicated WB Fourteenth Street right-turn lane. This turn lane requires an offset pedestrian crossing of NB Division Street for safety.
- Eleventh Street: Two-lane roundabout for Division Street movements and one-lane for Eleventh Street. The alignment is shifted west of the existing intersection to reduce right-of-way impact on the east residential area.
- Seventh Street: Two-lane roundabout for Division Street movements and one-lane for Seventh Street. The alignment is shifted west of the existing intersection to reduce right-of-way impact on the east residential area.
- Front Street: Two-lane roundabout centered on the existing intersection

- Grandview Parkway: Two-lane roundabout with dedicated WB Grandview Parkway thru lane. The roundabout center is shifted east of the existing intersection to avoid impact to Slabtown Corner Park in the southwest quadrant.
- Potentially reconstruct sidewalk between Ninth and Eleventh streets on the west side as off alignment non-motorized path and fill in the sidewalk gaps on the east side

Advantages:

- Addresses Purpose and Need most comprehensively from a safety, operations, and aesthetic aspect
- Safer for pedestrians due to reduced crash potential based on removing all left-turn movements, and traffic travelling at slower speeds
- Wide splitter islands provides ample pedestrian refuge area to cross one direction of travel at a time
- Reduced vehicular crashes based on slower operating speeds
- Reduces intersection conflict points relative to a signalized intersection for both motorized (eight versus 32) and non-motorized users (eight versus 32)
- Aesthetic treatments optional
- Provides full access at all key intersections, allowing neighborhood street grid to operate as originally designed historically
- Restricted left turns are accommodated at adjacent roundabouts

Disadvantages:

- Right-of-way and environmental impacts at Eleventh, Seventh, and Front Streets are fatal flaws
- Narrow three-foot raised median in between key intersections does not provide adequate pedestrian refuge area for mid-block crossings
- Facilitating full access at Seventh and Eleventh Streets may increase traffic volumes and change existing feel of roadways
- Perceived fewer gaps (less platooning) in traffic for side street traffic compared to a signalized option, which makes it more challenging to turn from side streets. The gaps at roundabouts are shorter but more frequent allowing one car to turn per gap versus multiple cars waiting turning between signal platoons.

Traffic Summary:

LOS improvements are substantial relative to the other build alternatives.

Segment Options

This section provides a more comprehensive summary and analysis of continuous median options. As stated previously, regardless of width a continuous median restricts left turns from Division Street to minor intersections and vice versa. This median alternative in-turn pushes side street traffic to key signalized intersections and decreases operations at these intersections. The three-foot raised median was determined to be the minimal width possible to separate NB and SB Division Street traffic, which eliminates the left turns from thru lanes at minor intersections. These turning movements cause the majority of crashes along the corridor and need to be addressed to satisfy the Purpose and Need. The three-foot median does not provide adequate pedestrian refuge area or opportunity for aesthetic improvements, but does minimize right-of-way and environmental impacts.

The 11-foot median (eight-foot raised) proposed for the Median with Signals and Median with Roundabouts alternatives between Fourteenth and Eighth streets results in minimal right-of-way and environmental impacts. As previously discussed an 11-foot median width not only satisfies the Purpose and Need goal of providing non-motorized users a safe crossing of Division Street but also provides operational, safety, and aesthetic benefit. This width was selected since it minimizes encroachment to the historic district and parks to the west while still allowing for a smooth geometric transition to a left-turn lane at key intersections.

Another option to enhance the overall corridor is to construct continuous sidewalk along the east side of Division Street where sidewalk gaps now exist. This would require removal of trees and relocation of some utilities. Currently the city is addressing these sidewalk gaps within and adjacent to the corridor. In addition to pedestrian improvements, enhanced crosswalks are proposed at various non-signalized intersections along the corridor. These enhanced crosswalks will consist of high-visibility features such as pavement markings and signing. The crosswalk specifics and locations will be worked out in the future with input from the city of Traverse City.

Traffic Summary

Table 6-4 illustrates the overall intersection LOS for each of the Conceptual Alternatives. While traffic operations are not the only criteria analyzed, it is important considering Division Street is a National Highway System (NHS) route. Results are based on the concept of level of service (LOS) with values ranging from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays.

Table 6-4 Conceptual Alternative Overall Existing and 2035 Intersection LOS

Intersection	Peak Hour	Conceptual Alternative				
		2015 Existing	No-Build	Safety and Oper Improv	Median w/ Signals	Roundabouts
Fourteenth Street	AM	D	D	D	C	A
	PM	E	E	E	D	B
	Off Peak (OP)	D	E	D	C	B
Eleventh Street*	AM	F (11 th), A (Division)	F (11 th), A (Division)	F (11 th), A (Division)	B	A
	PM	F (11 th), A (Division)	F (11 th), A (Division)	F (11 th), A (Division)	C	A
	OP	F (11 th), A (Division)	F (11 th), A (Division)	F (11 th), A (Division)	C	A

Intersection	Peak Hour	Conceptual Alternative				
		2015 Existing	No-Build	Safety and Oper Improv	Median w/ Signals	Roundabouts
Seventh Street	AM	A	A	A	B	A
	PM	B	B	C	D	A
	OP	B	B	B	B	A
Front Street	AM	C	D	D	D	A
	PM	D	F	F	F	C
	OP	D	F	F	F	B
Grandview Parkway	AM	C	D	C	D	A
	PM	D	E	D	D	C
	OP	C	D	C	D	B

* Eleventh Street is analyzed differently for Existing, No-Build, and Safety and Operational Improvements since it is a two-way stop controlled intersection.

At Grandview Parkway the Safety and Operational Improvements alternative scenario performed slightly better than the Median with Signals scenario despite having one less NB turn lane due to the addition of an all pedestrian phase specific to the Median with Signals option.

6.3 Preferred Alternative

Following Public Input Session #3 additional meetings were held with the Administrative Team, FHWA, and LAC, as previously discussed in **Section 4**, to determine which Conceptual Alternative scenarios would be included in the Preferred Alternative. Comments received from these entities can be found in the Public Input Session #3 summary located in **Appendix E** and meeting minutes found in **Appendix C Agency Coordination**. The various conceptual alternative scenarios were blended into a composite alternative which became the Preferred Alternative which was further refined with input from the Administrative Team, FHWA, and LAC in preparation for Public Input Session #4. Through the input received from the remaining project meetings and Public Input Session #4, the Preferred Alternative was finalized.

The Preferred Alternative includes each key intersection and segment presented along with the rationale behind this selection. A summary of modifications that occurred as each aspect was advanced from a Conceptual Alternative to a finalized Preferred Alternative is included along with the exhibit. Traffic volume improvements relative to the 2035 No-Build condition for the Preferred Alternative are summarized in **Table 6-5**. Costs for the Preferred Alternative can be found in **Appendix G**.

Fourteenth Street

For the Fourteenth Street intersection a roundabout was selected as the Preferred Alternative, which is shown in **Figure 6-1**.

Rationale for Selection:

- Sufficient right-of-way to accommodate geometrically sound design without incurring fatal flaw impacts
- Best alternative to address Purpose and Need for both motorized and non-motorized users

- Creates a transitional entrance into Traverse City from the commercial land uses south of Fourteenth Street into the neighborhood/historic district/park land uses north of Fourteenth Street
- Splitter island and median widths allow for potential aesthetic treatments

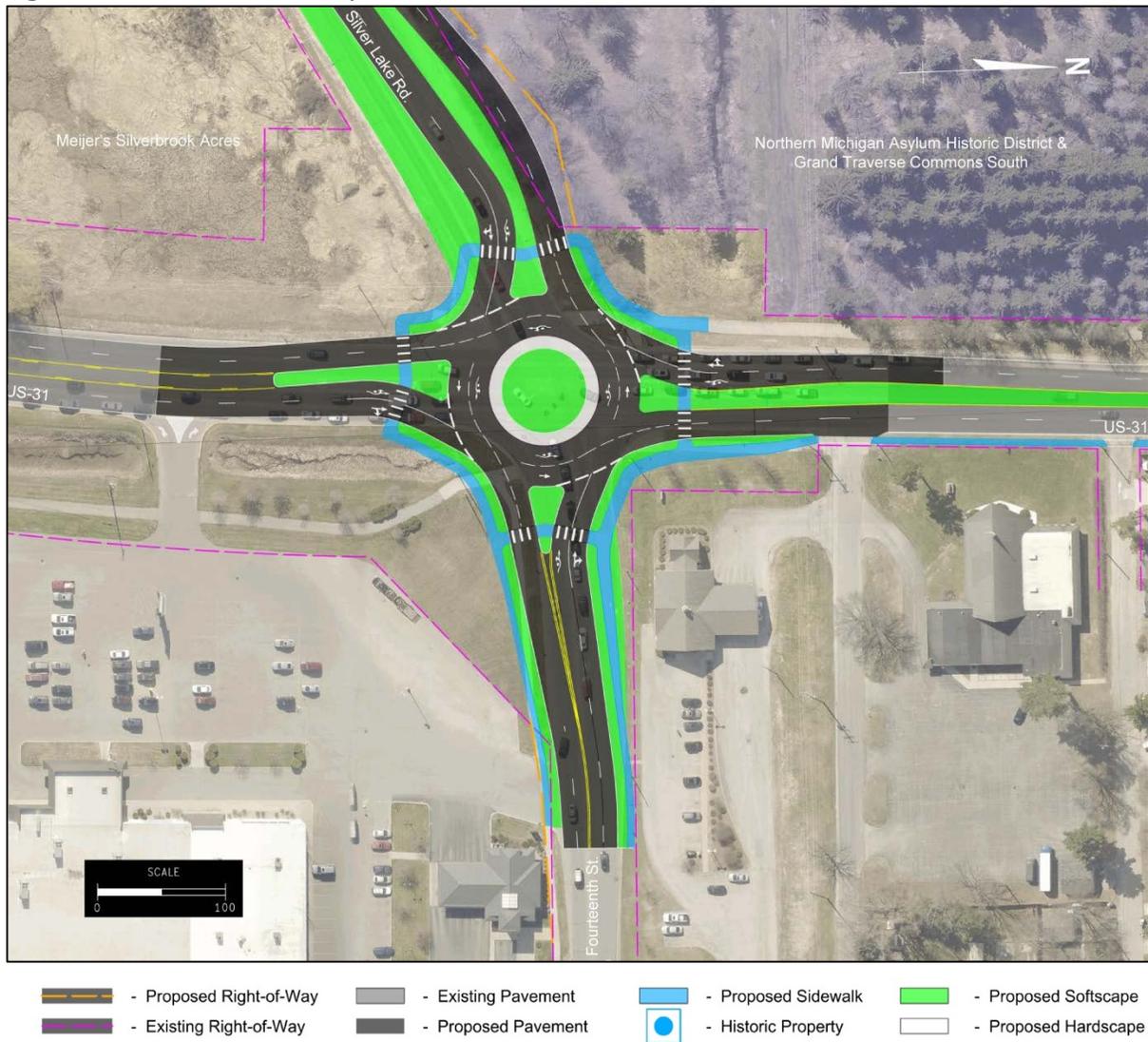
Modifications from Conceptual:

A roundabout sensitivity analysis was completed for an inflated 2035 set of traffic conditions which showed the potential need for a future third westbound lane if traffic volumes grow to a certain level at the Division-Fourteenth Street intersection. The proposed roundabout would be constructed as a double lane roundabout and geometrically designed to allow for expansion as needed in the future.

Additional Considerations:

- Dedicated WB Fourteenth Street right-turn lane may be required in the future depending on future traffic growth rates
- Future environmental clearance may reveal greater concerns in one quadrant over the others, such as the historic and park property in the northwest quadrant. In anticipation of this issue, an alternate roundabout design is shown in **Appendix L** overlaying the Preferred Alternative. This alternate design still meets current geometric standards.

Figure 6-1 Fourteenth Street/Silver Lake Road Preferred Alternative



Eleventh Street

For the Eleventh Street intersection an 11-foot median (eight-foot raised) with signal was selected as the Preferred Alternative, which is shown in **Figure 6-2**.

Rationale for Selection:

- Best alternative to address Purpose and Need for both motorized and non-motorized users without incurring a fatal flaw
- Provides signal, needed turn lanes, and all intersection movements which allows the neighborhood street grid to operate as designed

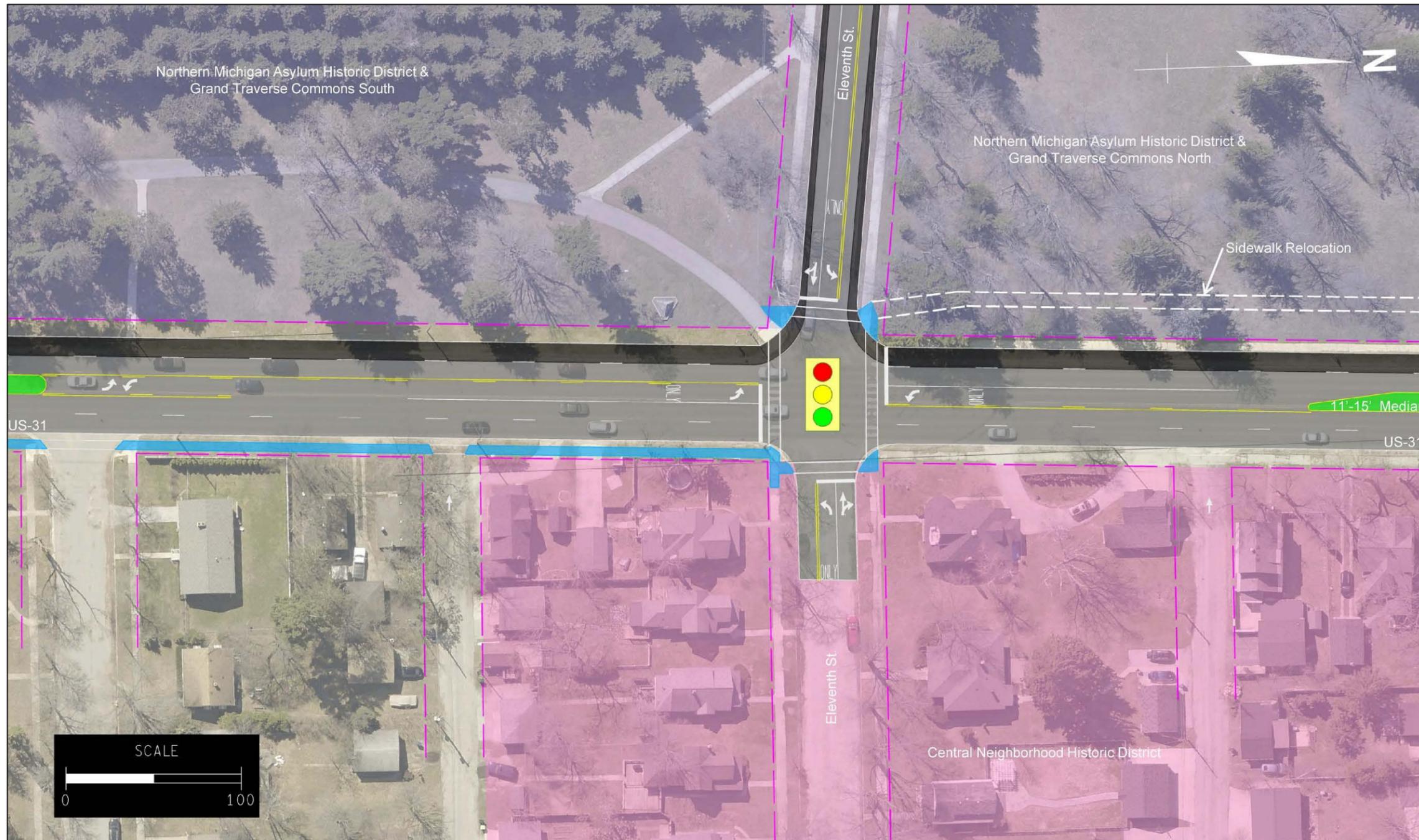
Modifications from Conceptual:

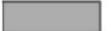
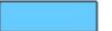
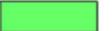
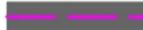
- Eleventh Street west of Division would require widening for approximately 250 feet to allow for a second lane approaching the signal, while Eleventh Street east of Division would require new lane striping to allow for the additional lane. This is required by MDOT Signals Unit to prevent all three movements from being clustered in one lane.
- Sidewalk relocation is still shown within the park but runs parallel with Division Street rather than meandering.

Additional Considerations:

- New signals must meet one of nine criteria to be warranted. Existing traffic volumes do not warrant a signal based on the 2035 volumes warrant 3 (Peak Hour warrant). Therefore a revised signal warrant analysis at the time of design is recommended.
- Central Neighborhood expressed concern with increased traffic and the desire for traffic calming and/or access management to maintain the current traffic patterns. These measures require city input, discussion, and approval prior to construction of the Preferred Alternative.
- Approximately 15 residential on-street parking spaces along Eleventh Street east of Division Street would be lost due to the addition of the second approach lane to the new traffic signal.

Figure 6-2 Eleventh Street Preferred Alternative



- | | | | |
|---|--|---|--|
|  - Proposed Right-of-Way |  - Existing Pavement |  - Proposed Sidewalk |  - Proposed Softscape |
|  - Existing Right-of-Way |  - Proposed Pavement |  - Historic Property |  - Proposed Hardscape |

Seventh Street

For the Seventh Street intersection the Conceptual Alternative 11-foot median (eight-foot raised) with signal was selected as the Preferred Alternative, which is shown in **Figure 6-3**. Refer to discussion located later in this section regarding the lack of a median north of Seventh Street.

Rationale for Selection:

- Best alternative to address Purpose and Need for both motorized and non-motorized users without incurring a fatal flaw
- Allows for EB Seventh Street traffic and bikes that desire to continue straight through the intersection rather than turning right onto SB Division Street and then left onto Eighth Street. This current traffic movement adds to the congestion and safety concerns prominent along Division Street.
- Provides needed turn lanes and full access at all key intersections, allowing neighborhood street grid to operate as designed

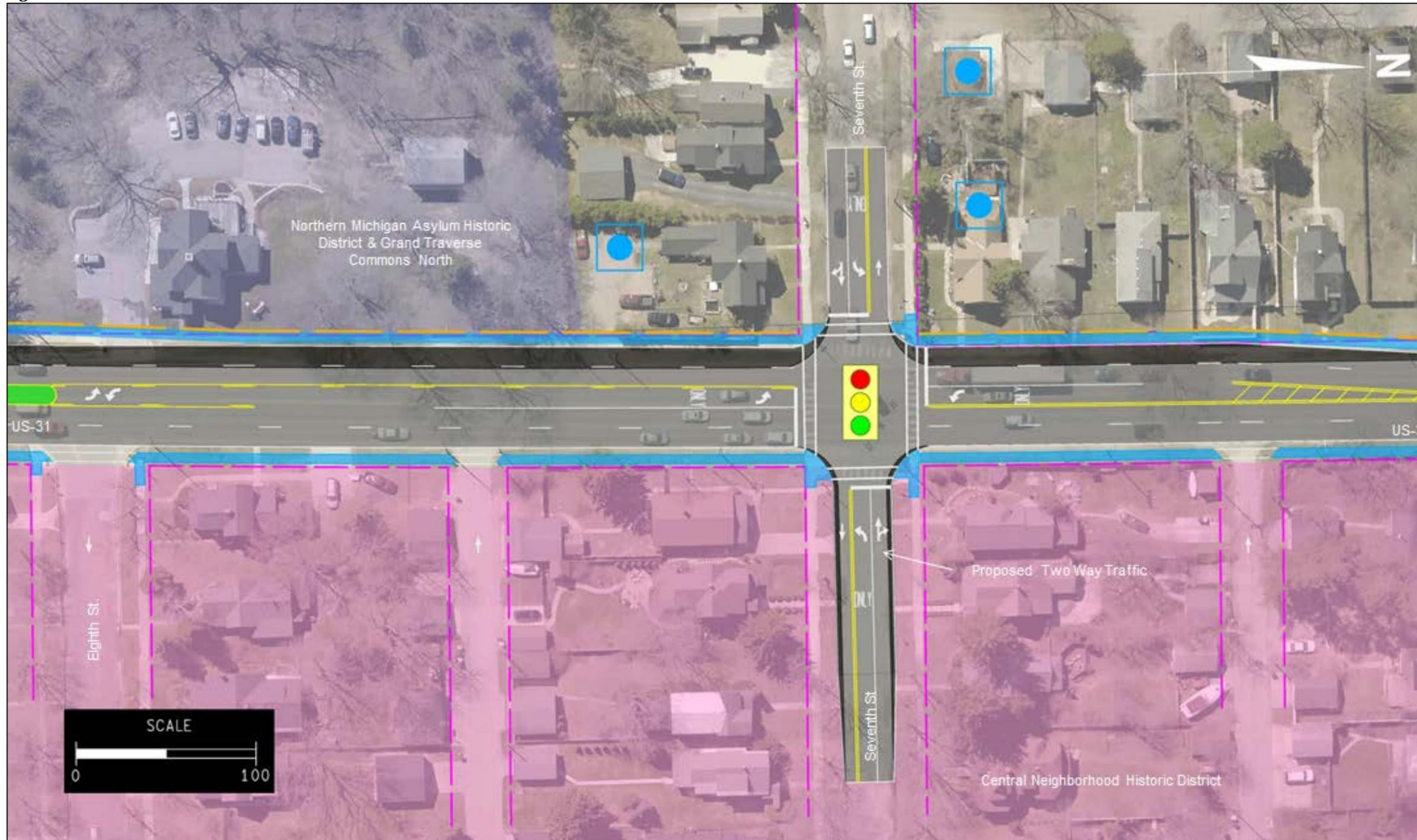
Modifications from Conceptual:

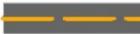
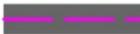
- Allow WB Seventh Street left turns since already providing green time for opposing EB left turns. Added dedicated NB/SB left-turn signal phase.
- Seventh Street east of Division would require minor widening for approximately 150 feet to allow for a second lane approaching the signal. This is required by MDOT Signals Unit to prevent all three movements from being clustered in one lane.

Additional Considerations:

- Central Neighborhood expressed concern with increased traffic and the desire for traffic calming and/or access management to maintain the current traffic patterns. These measures require city discussion and approval prior to construction of the Preferred Alternative.
- Approximately 10 residential on-street parking spaces along Seventh Street east of Division Street would be lost due to addition of the second approach lane to signal.

Figure 6-3 Seventh Street Preferred Alternative



- | | | | |
|---|--|---|--|
|  - Proposed Right-of-Way |  - Existing Pavement |  - Proposed Sidewalk |  - Proposed Softscape |
|  - Existing Right-of-Way |  - Proposed Pavement |  - Historic Property |  - Proposed Hardscape |

Front Street

For the Front Street intersection the Conceptual Alternative Median with Signal was selected as the Preferred Alternative, which is shown in **Figure 6-4**. Refer to discussion located later in this section regarding the lack of a median adjacent to this intersection.

Rationale for Selection:

- Best alternative to address Purpose and Need for both motorized and non-motorized users without incurring a fatal flaw.
- Roundabout alternative had a fatal flaw due to right-of-way since adjacent developments leave no space for intersection expansion without a full property relocation/purchase

Modifications from Conceptual:

NB and SB Division Street left turn lanes have been extended to 325 feet providing the maximum length within the ROW constraints (145 foot longer than existing 180 feet), while conceptual was a 45-foot extension to 225 feet. Based on the queue analysis of the 2035 SimTraffic queue outputs, the longest average left turn queue length for NB and SB is predicted to be 205 feet. The improvement at this intersection over the No-Build condition can be seen in more detail in the Appendix D of the Traffic Analysis Memorandum located in **Appendix H**.

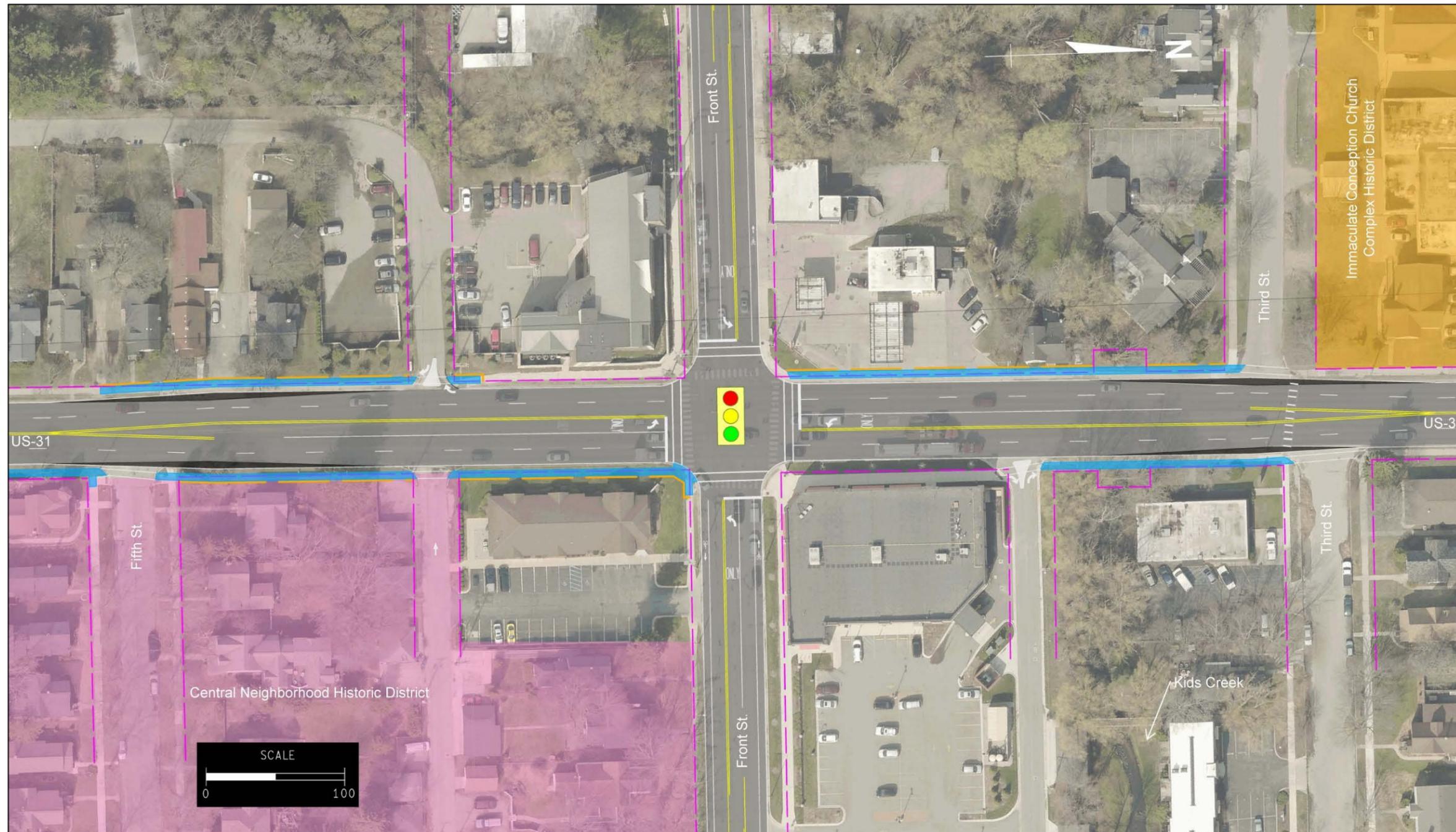
Additional Considerations:

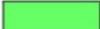
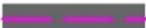
During field observations, the Road Safety Audit team witnessed a semi-trailer track over the sidewalk ramp in the northwest quadrant. This safety concern should be addressed in both the northwest and southeast quadrant with wider corner radii if possible. Adjacent properties, limited right-of-way, and longer crosswalk distances are issues that could prevent this consideration from being implemented.



Truck Tracks on Sidewalk

Figure 6-4 Front Street Preferred Alternative



- | | | | |
|---|---|---|--|
|  - Proposed Right-of-Way |  - Existing Pavement |  - Proposed Sidewalk |  - Proposed Softscape |
|  - Existing Right-of-Way |  - Proposed Pavement |  - Historic Property |  - Proposed Hardscape |

Grandview Parkway

For the Grandview Parkway intersection a roundabout was selected as the Preferred Alternative, which is shown in **Figure 6-5**.

Rationale for Selection:

- Sufficient right-of-way to accommodate geometrically sound design without incurring significant impacts to adjoining properties
- Best alternative to address Purpose and Need for both motorized and non-motorized users
- Splitter island and median widths allow for potential aesthetic treatments

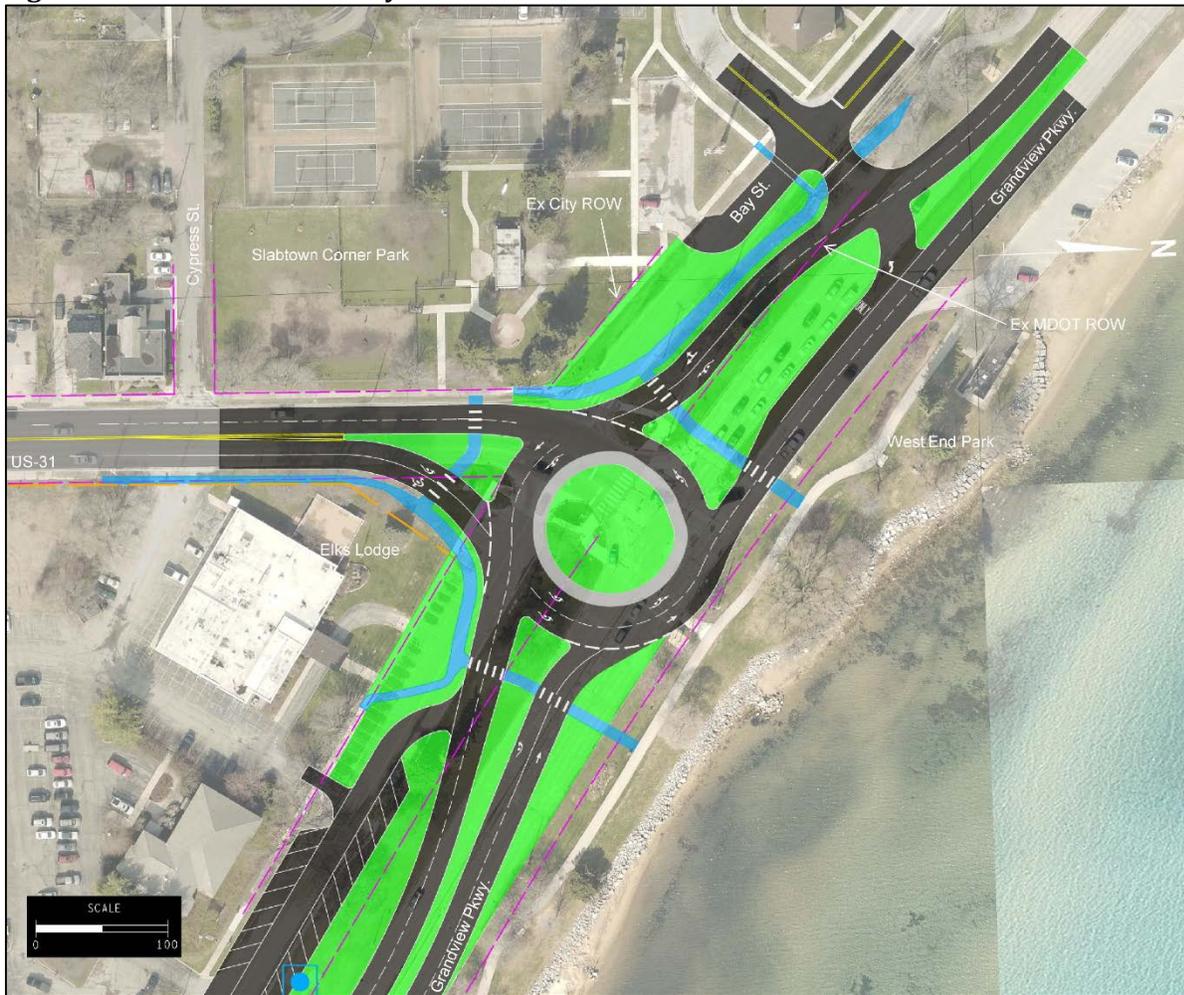
Modifications from Conceptual:

- A roundabout sensitivity analysis was completed for an inflated 2035 set of traffic conditions which showed the future need for a third westbound lane if traffic volumes grow to a certain level at the Division-Grandview Parkway intersection. The proposed roundabout would be constructed as a double lane roundabout. ROW is available to accommodate the additional lane if required in the future as demand increases.
- Geometric modification to reduce right-of-way impact at Elk's Lodge

Additional Considerations:

- Dedicated WB Grandview Parkway thru lane would be required in the future depending on future traffic growth rates
- In anticipation of difficult right-of-way acquisition, an alternate roundabout design is shown in **Appendix L** overlaying the Preferred Alternative. This alternate design still meets current geometric standards and avoids impact to Slabtown Corner Park and West End Beach Park.
- Approximately 10 parking spaces along Bay Street in front of the Elk's Lodge will be removed. This number may be lessened during final design.
- As shown in **Figure 6-5**, a portion of the proposed roundabout would be within city right-of-way. An agreement or re-deeding of right-of-way would be necessary between the city and MDOT.

Figure 6-5 Grandview Parkway Preferred Alternative



- | | | | |
|---|---|---|--|
|  - Proposed Right-of-Way |  - Existing Pavement |  - Proposed Sidewalk |  - Proposed Softscape |
|  - Existing Right-of-Way |  - Proposed Pavement |  - Historic Property |  - Proposed Hardscape |

Segment Options

The following segment options are included in the Preferred Alternative in addition to the previously discussed intersection options at Fourteenth Street, Eleventh Street, Seventh Street, Front Street, and Grandview Parkway.

Medians:

The following list contains the features of the median included in the Preferred Alternative and the rationale behind the decisions.

- An 11 to 15 foot intermittent median from Fourteenth Street/Silver Lake Road to Eighth Street will be incorporated into the previously discussed key intersection layouts, as shown in **Figure 6-6**. In the Conceptual Alternatives this median was continuous but access concerns to and from adjacent streets was expressed by the public, LAC, and FHWA. Up to 15-foot wide will allow for roadway features to be constructed within the existing right-of-way, while the sidewalk between Eleventh and Eighth Streets on the west side is relocated further into Grand Traverse Commons Park. This width range allows for a smooth geometric transition to left turn lanes.

Figure 6-6 Proposed 11' to 15' Median Section

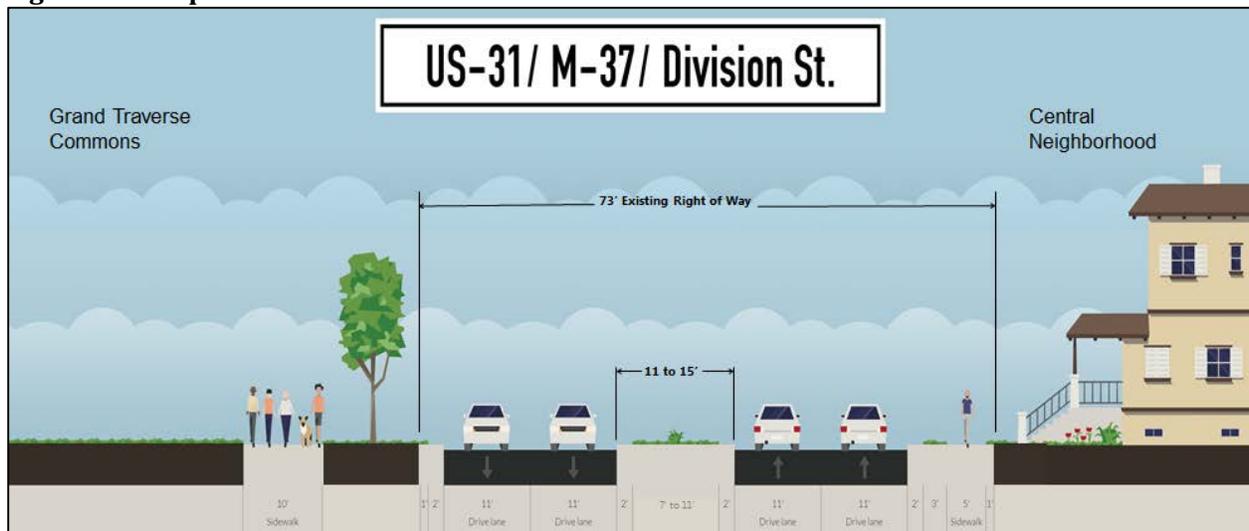


Image courtesy of Streetmix.net

- No median is proposed between Seventh Street and the Grandview Parkway as shown in **Figure 6-7**. In the Conceptual Alternatives a six-foot (three-foot raised) continuous, hard-surfaced median was shown. This width led to right-of-way and environmental impacts for the entire length. It only met the Purpose and Need from a traffic safety and operational perspective by physically separating traffic and prohibiting mid-block left turns. Similar concerns were raised regarding this continuous median and it did not provide an adequate pedestrian refuge area.

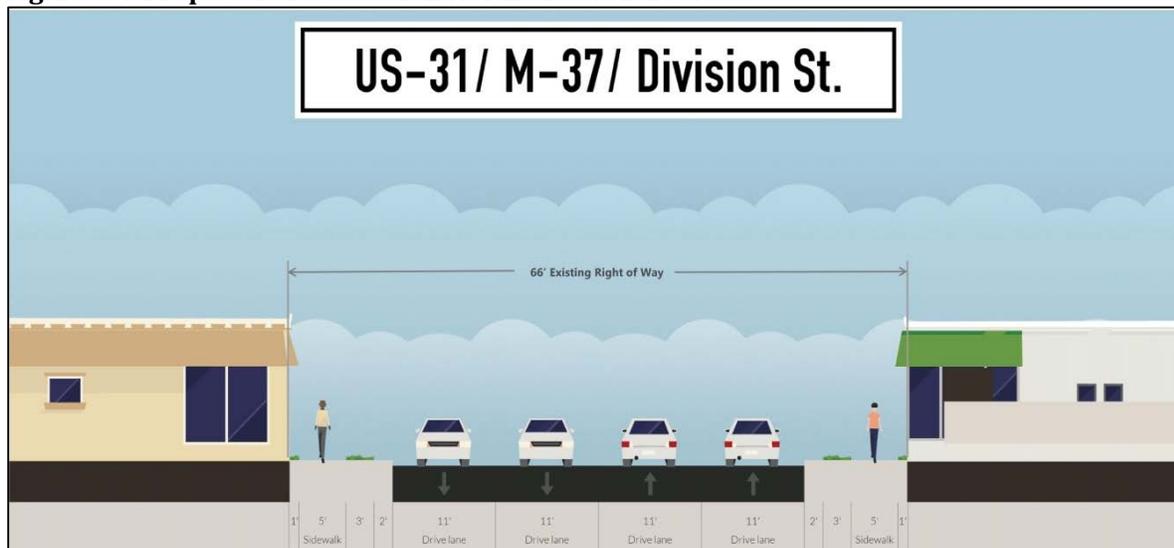
Figure 6-7 Proposed Cross Section North of Seventh Street

Image courtesy of Streetmix.net

Lane Width:

The existing Division Street lane width is 11 foot which will require a design exception. Per the MDOT Road Design Manual 3.09.02.A, design exceptions to maintain existing narrower lanes generally receive favorable consideration. FHWA confirmed a design exception would need to be submitted and would most likely be approved given the constraints.

Sidewalk:

Sidewalk and enhanced crosswalks proposed in the Conceptual Alternative phase were carried forward unchanged as a Preferred Alternative. Removal of trees and relocation of utilities will be necessary to accommodate construction along NB Division Street where currently there are gaps. These could be incorporated into operational improvements as well.

Kids Creek:

The Preferred Alternative will not affect the existing Kids Creek structure. Considerations regarding this structure and the waterway are discussed in **Section 8**.

Access Management:

As part of the Preferred Alternatives, five driveway/street entrances are recommended to be converted to right-in/right-out entrances and exits to improve operations and safety along the Division Street corridor adjacent to key intersections. These locations are Griffin Street adjacent to Fourteenth Street, alleys/driveways in northeast and southwest quadrants of Front Street, and both bounds of Bay Street at Grandview Parkway. In addition the Study Team evaluated and subsequently eliminated a potential continuous median meant to remove many of the left-turn options along the corridor. The Study Team recommends further coordination between MDOT and the city to enact additional access management opportunities along the corridor that could help improve operations and safety along Division Street from Fourteenth Street/Silver Lake Road to Grandview Parkway.

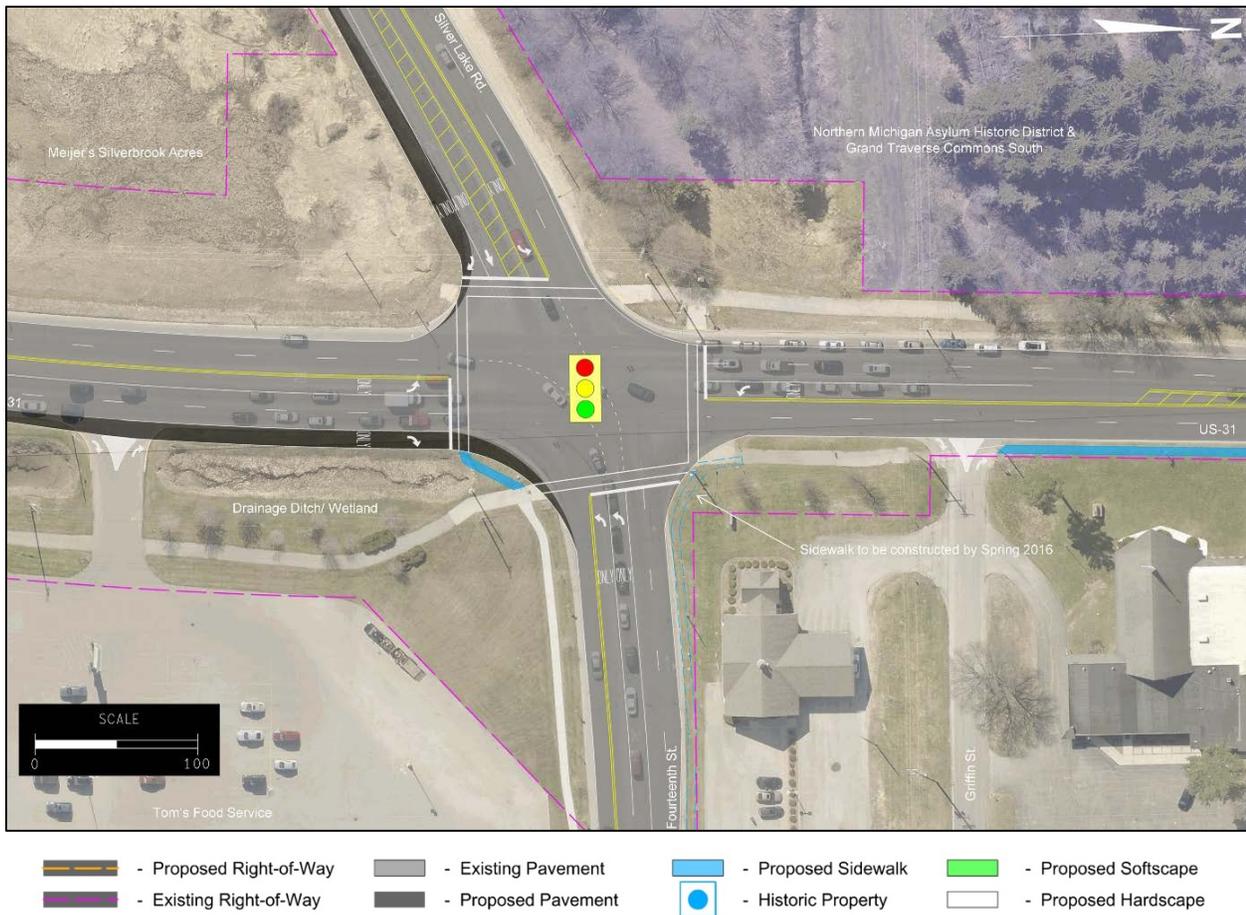
6.4 Operational Improvements

Some key intersections and segments have viable operational improvements that could provide short-term relief since a schedule of funding and design for the Preferred Alternative has not been identified. The operational improvements summarized in this section have minimal or no impacts, which allow them to be implemented sooner than the Preferred Alternative. Traffic volume improvements relative to the 2035 No-Build condition and the operational improvements are summarized in **Table 6-5**. Costs for the operational improvements can be found in **Appendix G**.

Fourteenth Street Operational Improvements:

The operational improvements shown in **Figure 6-8** consist of the addition of a NB Division Street right turn lane, restriping WB Fourteenth Street for dual left-turn lanes, pavement marking delineating WB Fourteenth Street thru movement from left turns, and restricting the northern most Tom's Food Service driveway and Griffin Street to right-in/right-out. These improvements can be constructed within existing right-of-way and with minimal environmental impact. The one potential impact is due to the addition of the NB Division Street right-turn lane which would encroach on the adjacent drainage ditch/possible wetland complex located immediately east of the roadway. Possible mitigation for this potential impact is ditch realignment or installing a guardrail with a retaining wall at the edge of pavement. A slight capacity improvement is recognized as shown in **Table 6-5**.

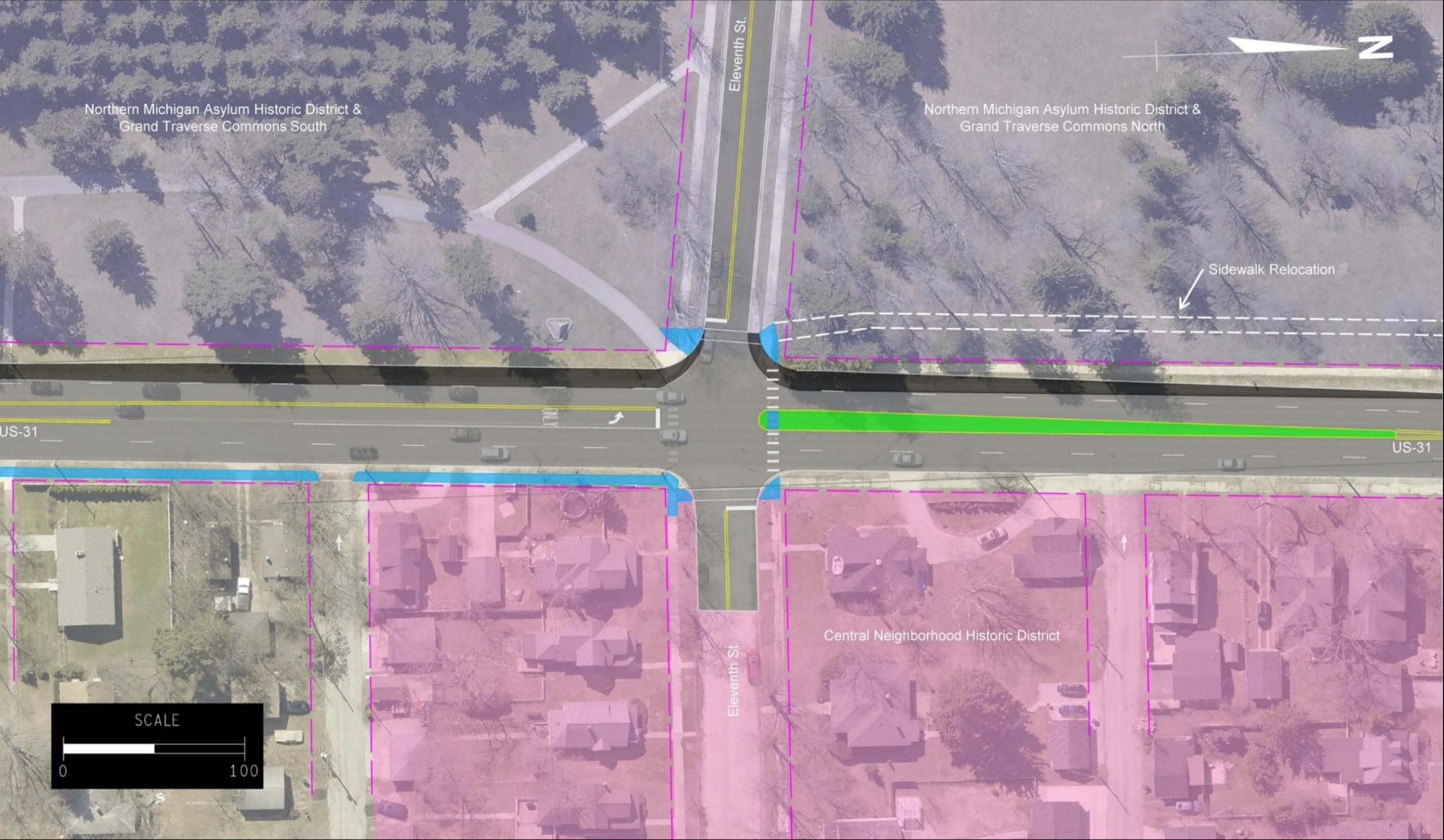
Figure 6-8 Fourteenth Street/Silver Lake Road Operational Improvement



Eleventh Street Operational Improvements:

The operational improvements shown in **Figure 6-9** consist of the addition of a NB Division Street left turn and a SB Division Street raised 11-foot tapered median. Southbound left turns onto Eleventh Street would not be allowed. The median provides a pedestrian refuge area and aligns the new Division Street lane configuration. A significant operational improvement is recognized with the introduction of a signal at Eleventh Street as shown in **Table 6-4**.

Figure 6-9 Eleventh Street Operational Improvement



- | | | | |
|---|---|---|--|
|  - Proposed Right-of-Way |  - Existing Pavement |  - Proposed Sidewalk |  - Proposed Softscape |
|  - Existing Right-of-Way |  - Proposed Pavement |  - Historic Property |  - Proposed Hardscape |

Seventh Street Operational Improvements:

Due to right-of-way limitations, no significant operational improvement exists. During the conceptual phase, a more robust, operational improvement was proposed but deemed unfeasible due to right-of-way impacts. A recommendation for the city to consider is converting Seventh Street to two-way traffic for at least one block (Maple Street) to remove the current EB weave onto Division Street which would benefit both motorist and bicycle users.

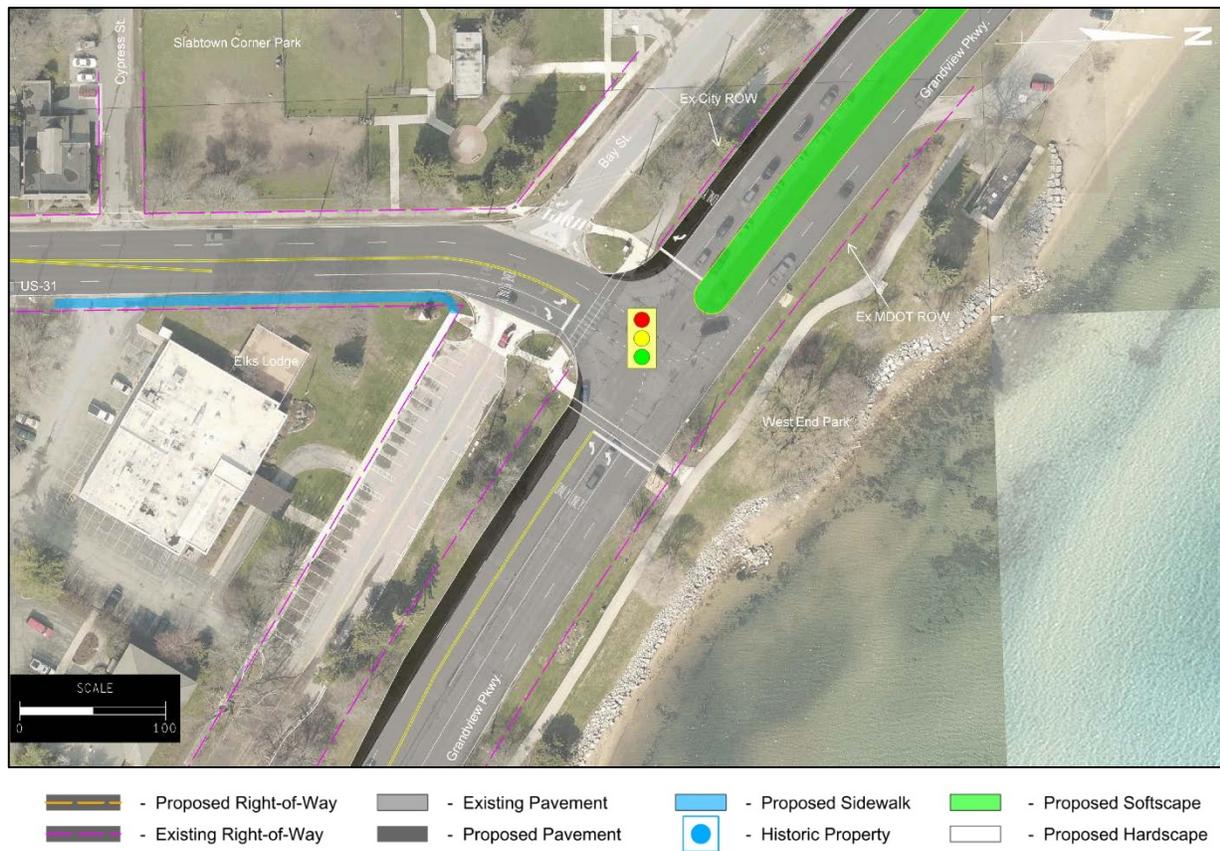
Front Street Operational Improvements:

Due to right-of-way limitations, no significant operational improvement exists. During the Conceptual Alternative phase, an operational improvement was proposed but deemed unfeasible due to right-of-way impacts. The only capacity benefit would be a corridor wide synchronization of traffic signals to improve Division Street conveyance. This improvement would not include the Grandview Parkway signal since it is already synced as part of the east-west corridor. A safety improvement would be restricting the two-way alleys in the southwest and northeast quadrants to right-in/right-out as shown in **Figure 6-4**.

Grandview Parkway Operational Improvements:

The operational improvement shown in **Figure 6-10** consists of the addition of a WB Grandview Parkway left-turn lane, which extends the crosswalk length, and restricts Bay Street to right-in/right-out movements. These improvements can be constructed within existing right-of-way and with no anticipated environmental impact. A slight capacity improvement is recognized as shown in **Table 6-5**.

Figure 6-10 Grandview Parkway Operational Improvement



6.5 Alternatives Traffic Summary and Costs Estimates

Traffic Summary

Table 6-5 illustrates the overall intersection LOS for each of the Preferred Alternative intersections and associated operational improvements.

Table 6-5 Preferred Alternative and Operational Improvements 2035 Intersection LOS

Intersection	Peak Hour	No-Build	Operational Improvements	Preferred Alternative
Fourteenth Street	AM	D	D	A
	PM	E	E	B
	Off Peak (OP)	E	D	B
Eleventh Street*	AM	F (11 th), A (Division)	F (11 th), A (Division)	B
	PM	F (11 th), A (Division)	F (11 th), A (Division)	C
	OP	F (11 th), A (Division)	F (11 th), A (Division)	C
Seventh Street	AM	A	A	B
	PM	B	C	C
	OP	B	B	B
Front Street	AM	D	N/A	D
	PM	F		F
	OP	F		F
Grandview Parkway	AM	D	D	A
	PM	E	D	C
	OP	D	D	B

* Eleventh Street is analyzed differently for Operational Improvements since it is a two-way stop controlled intersection.

The LOS improved from the No-Build conditions for the Operational Improvements and Preferred Alternative with the exception of Seventh Street where allowing additional movements lowers the LOS but improves overall system operations.

Cost Estimate

The Study Team prepared high-level cost estimates for each operational improvement and Preferred Alternative, which is summarized below in **Table 6-6**, with additional breakdown including costs by intersection provided in **Appendix G**.

Table 6-6 Cost Estimate Summary

Item Description	Operational Improvements	Preferred Alternative
Roadway (segments & intersections)	\$943,000	\$2,800,000
Other Percentage	\$390,000	\$1,170,000
Contingencies (20%)	\$268,000	\$810,000
Contractor Staking and Errors (3%)	\$60,000	\$150,000
Mobilization (10%)	\$180,000	\$510,000
Utilities	\$0	\$310,000

Item Description	Operational Improvements	Preferred Alternative
Right-of-Way	\$0	\$5,425,000
Professional Engineering (16%)	\$296,000	\$900,000
Construction Engineering (12%)	\$230,000	\$660,000
Total	\$2,367,000	\$12,735,000

Some considerations that went into the above estimate include:

- Roadway costs are based on an assumed HMA pavement structure. No pavement design was provided for the study.
- Existing span wire signals are assumed to be modified for operational improvements.
- Other percentages cover miscellaneous items such as pavement markings, signing, maintenance of traffic, drainage, soil erosion, etc.
- A 20 percent contingency is industry standard for a high-level estimates.
- Staking and mobilization percentage is based on MDOT standard.
- Utility cost will only be incurred when conflicts requiring relocation occur outside of existing MDOT right-of-way. These costs are estimated at \$10,000 per parcel requiring proposed right-of-way.
- The median residence value in the City of Traverse City is \$270,000. A cost of \$300,000 was used for full parcel takes. Partial takes are estimated at \$50,000 per parcel. Total impacted parcels are conservatively assumed to be half full and half partial takes.
- Professional and construction engineering percentages are based on industry average.

Section 7

Planning Assumptions and Analytical Methods

7.1 Range of Alternatives

As discussed in **Sections 1.2 Previous Studies** and **6.1 Range of Alternatives Approach**, the approach to the range of alternatives was to evaluate prior study recommendations and carry forward into the PEL alternatives analysis any recommendations that met the draft Purpose and Need Statement. Equally as important was the need to evaluate potential alternatives from a “blank slate” point of view to be certain other potential solutions were uncovered that may have been overlooked or not evaluated as part of the prior studies. Thus the range of alternatives covers a wide scope and includes what has already been considered and alternatives not yet developed.

7.2 Alternative Evaluation Criteria

The project Purpose and Need Statement, feedback received from the Administrative Team and the LAC, and comments received from the public meetings, were all used to develop a comparison of alternatives matrix/table. **Figure 7-1** is the Comparison of Alternatives matrix table developed for the Eleventh Street intersection. The purpose of the table was to provide a method/exhibit to easily compare the alternatives being considered for each intersection using key criteria developed to that point in the study.

The criteria centers around the key elements of the Purpose and Need Statement such as improving congestion, safety, and mobility, while minimizing impacts to historic and environmental resources. Each criteria was then evaluated against the potential alternatives (No-Build, Safety and Operational Improvements, Median with Signals, Roundabouts) at each of the five key intersections along the corridor. It was decided that the evaluation should be more qualitative than quantitative since many of the differences were

Figure 7-1 Eleventh Street Intersection Comparison of Alternatives

		11th Street Intersection			
		1 - No Build	2 - Safety & Operational Improvements	3 - 11' Median w/Signals	4 - Roundabouts
Transportation Factors	Improves Vehicle Congestion				
	Improves Safety (Crashes)				
	Improves Bicyclist Mobility				
	Improves Pedestrian Mobility				
	Provides Traffic Calming				
Environmental Factors	Minimizes Historic Properties/Resources Affected				
	Minimizes ROW Impacts/Relocations				
	Minimizes Parkland Impacts				
	Minimizes Natural Environment Impacts				
	Potential Fatal Flaw/Red Flag	--	--	--	
Satisfies Purpose & Need					

difficult to actually quantify with specific data at this state of the analysis. That being said, quantities were used where possible when developing the comparisons and then converted the quantities over into the four scoring categories which included: Poor, Minimal, Acceptable, and Good. A red flag was used to signify that a particular alternative was not feasible due to significant impacts to a particular

resource, which was either relocations (Front Street) and/or impacts to historic properties (Eleventh and Seventh streets).

Estimated costs were not included in the comparison matrix/table due to cost not being a significant differentiator in the alternative selection process at this time. The goal of the project was to come up with the right solution for US-31/M-37 (Division Street) based upon the developed Purpose and Need Statement. Although cost is ultimately always a consideration for transportation projects, in this case it was not the driving force or constraint for selecting a Preferred Alternative.

7.3 Environmental Analysis

MDOT's Environmental Section completed an environmental scoping review analysis (see **Appendix K**) for the project corridor that preliminarily assessed potential impacts to environmental resources. At this stage of project development (PEL) the intent is to identify constraints that could have an effect on the alternative evaluation and selection process. With this understanding MDOT completed a wetland delineation (October 2014) and a survey of above-ground cultural resources (April 2015). Other resources were checked using GIS and known databases/information. The primary environmental resources/constraints within the study area are park properties and historic properties. The study area includes four parks, two trails, and is bounded by four historic districts. There are a total of 112 historic properties within and neighboring those districts and 51 of those properties are immediately adjacent to Division Street.

7.4 Traffic Analysis

The below sections summarize the traffic analysis data collection, methodology, and alternative development process. Results from this analysis were presented throughout **Section 6** and can be found in detail within the Traffic Analysis Memorandum located in **Appendix H**.

Data Collection

MDOT provided traffic counts which were collected the week of June 16, 2013 (between Monday, June 17th and Wednesday, June 19th), and the week of September 15, 2013 (between Tuesday, September 17th and Wednesday, September 18th). Counts collected in June 2013 were available at all of the study intersections, while those collected in September 2013 were available only at Fourteenth Street/Silver Lake Road and Eleventh Street. A comparison of June and September counts at those two intersections suggested that traffic along Division Street was generally higher in June than in September.

Additionally, based on coordination with the City staff and MDOT, the weekday mid-to-late June was believed to be an average representation of traffic conditions during the tourist season, while still not the absolute worst-case traffic levels. This was based on the understanding that traffic levels reach higher volumes during certain periods of the summer such as early July when the National Cherry Festival is taking place. Only a small spike in traffic levels occur during weekends in the tourist season, so Monday to Wednesday are appropriate days. The selected June counts are in line with the 30th highest hour traffic analysis approach.

Methodology

Traffic analysis was performed using a combination of Synchro Delay Method and the Highway Capacity Manual (HCM) 2010 methodology. The Synchro Delay Method was used to estimate the average vehicle delay, while the HCM 2010 methodology was used to identify the corresponding LOS value. The intersections along the study corridor were evaluated during the weekday AM peak hour (the highest

traffic hour between 7 a.m. and 9 a.m.), PM peak hour (the highest traffic hour between 4 p.m. and 6 p.m.), and off-peak hour (the highest traffic hour between 11 a.m. and 3 p.m.). Using the June 2013 counts and an average annual traffic growth rate of 0.5 percent as coordinated with MDOT and the City of Traverse City.

The study intersections were evaluated using the Synchro/SimTraffic simulation tool, version 8. Before conducting the traffic analysis, all of the traffic simulation models were calibrated and validated to field conditions to ensure the accuracy of results obtained from those models. As recommended in the Michigan Signal Optimization Guidelines, October 2008, traffic models were calibrated and validated under existing conditions. All of the study intersections and their turning movements satisfy the validation criteria.

Alternative Development

Traffic forecasts were necessary to develop a 2035 No-Build alternative. MDOT's Statewide Travel Demand Model was selected as the most accurate available. According to MDOT's model, the average annual traffic growth rate would generally vary between 0.70 and 0.98 percent along the study corridor and between 0.33 and 1.95 percent on the cross streets. These rates are consistent with the historical average annual growth rates prevalent in the vicinity of the study area.

The preferred alternatives and operational improvements were compared to the existing 2014 and 2035 No-Build alternative. Some traffic analysis items of note that were incorporated and checked with the build alternatives are summarized below:

- Length of NB and SB Front Street left-turn lane extensions to ensure queues contained in lane during most traffic conditions
- Access management via right-in/right-out movements for adjacent side streets at key intersections
- Verification that NB Division Street traffic will not back up to Fourteenth Street due to new signal at Eleventh Street

7.5 Safety Analysis

The below sections summarize the safety analysis data collection, Road Safety Audit (RSA), and anticipated crash frequency. Results from this analysis were presented throughout **Section 6** and can be found in detail within the Crash Analysis Technical Memorandum located in **Appendix I** and the Road Safety Audit located in **Appendix J**.

Data Collection

MDOT provided nearly four years of detailed crash data from between January 2011 and September 2014. This data was filtered by location, crash type, time of day, weather, and roadway conditions to identify potential trends and reasons. The crash frequency and traffic volumes were then used to determine crash rates for fatal, Level A (injury crashes including incapacitating injuries), and total injuries for comparison to roadways of similar type and traffic volumes. Of the ten elements investigated (five intersections and five segments), nine were over the regional average. Crash mitigation counter measures are typically required when the crash rate exceeds double the regional crash average. Seven locations along the corridor exceeded this threshold and are shown in **Table 7-1**.

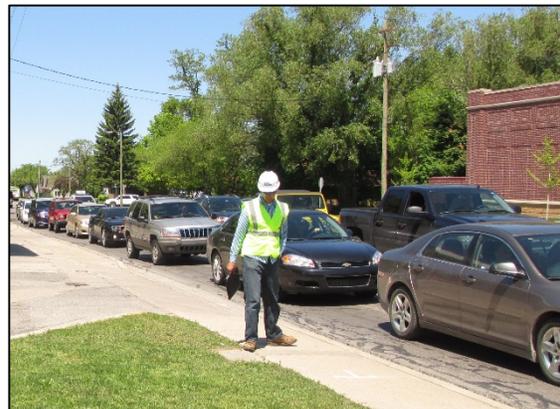
Table 7-1 Crash Rate Comparison

Study Corridor Element	Total Crash Rate (per MVM/MIN)	Regional Average Crash Rate
Roadway Segment		
South of Fourteenth Street/Silver Lake Road	5.37	1.84
Fourteenth Street/Silver Lake Road to Eleventh Street	3.56	1.84
Eleventh Street to Seventh Street	4.86	1.84
Seventh Street to Front Street	6.90	1.84
Front Street to Grandview Parkway	8.82	1.84
Intersection		
Division Street/Fourteenth Street/Silver Lake Road	1.74	0.48
Division Street/Eleventh Street	1.63	0.60
Division Street/Seventh Street	0.46	0.48
Division Street/Front Street	1.14	0.48
Division Street/Grandview Parkway	0.62	0.48

Road Safety Audit

The Road Safety Audit (RSA) was conducted June 1-2, 2015 per FHWA’s guidelines. The purpose of the RSA was to take the information from the above data and conduct a formal, safety performance examination of Division Street with an independent team comprised of experts from various disciplines. These experts included both MDOT and local officials. During both office and field work the goal was to answer the following questions:

- What elements of the road may present a safety concern: to what extent, to which road users, and under what circumstances?
- What opportunities exist to eliminate or mitigate identified safety concerns?



Ideally, an RSA would have occurred early in the process so that all parties involved could offer a fresh view. Unfortunately, the original fall 2014 date was rescheduled due to inclement weather leading to a date relatively late in the project study process. To allow for a truly independent team review the other RSA team members to identify issues and recommendations with minimal input.

The identified recommendations from the RSA were consistent with those previously developed by the Administrative Team as part of the alternatives development process, which validates the Preferred

Alternative and operational improvements discussed in **Section 6.3**. Crash reductions and estimated cost of fix were determined for each crash potential.

Anticipated Crash Summary

The Study Team performed a crash analysis within the project limits as discussed previously in **Section 6.3**, and as documented in the crash analysis memorandum, **Appendix I**. The Highway Safety Manual was utilized to estimate the predicted average crash frequency of the Preferred Alternative as shown in **Table 7-2**, which shows a decrease in crashes at the key intersections and along the corridor. The Time of Return (TOR) for the preferred alternative was calculated at 20.85 years, based on the predicted crash reductions and a preliminary cost estimate of \$12.7 million. TOR is a measure of how much time is needed to see a pay-off of the cost, calculated using the MDOT spreadsheet "Non-Trunkline TOR 2015".

Table 7-2 Predicted Average Crash Frequency

Existing Conditions	Observed Average Crash Frequency
14th to Grandview	47.09
14th	22.5
11th	13.5
7th	4.75
Front	13
Grandview	8.5
Subtotal	100.84
Preferred Alternative	Predicated Average Crash Frequency
14th to Grandview	9.66
14th	4.66
11th	5.33
7th	7.8
Front	7.94
Grandview	2.86
Subtotal	38.25
Reduction	65%

Section 8

Environmental Resources Reviewed

MDOT's Environmental Section was engaged in this study from the beginning of the project and assisted in the identification of potential environmental impacts. An Environmental Scoping Review was completed by MDOT's Environmental Section on May 20, 2015, and is included in **Appendix K**. In addition, MDOT also completed a Survey of Above Ground Cultural Resources Reconnaissance/Intensive-Level Evaluation for the project corridor which was completed in April 2015.

Summarized below are the results of the Environmental Scoping Report.

- Farmland Protection Policy Act (FPPA): *No anticipated concerns*
- National Pollutant Discharge Elimination System (NPDES): *No anticipated concerns*
 - Based on worst case scenario of greater than five acres earth disturbance.
- Coastal Zone: *Potential concerns*
 - The project is within the coastal zone management boundary (see map in **Appendix K**). If there is widening of the existing roadway beyond the existing footprint within the coastal zone, then a federal consistency review will be required.
 - Based on the Preferred Alternative of a roundabout at Grandview Parkway, and the Operational Improvement widening of Grandview Parkway for an additional NB turn lane, widening will occur within the coastal zone management boundary. As a result a federal consistency review would be required.
- Wetlands: *Potential concerns*
 - There is riparian wetland associated with Kids Creek about 90 feet west of the project limits. There is also wetland close to the project limits at the southern end of the project near Fourteenth Street/Silver Lake Road. If work is required in any wetland a Michigan Department of Environmental Quality (MDEQ) Part 303 permit will be required. Wetland mitigation would also be required for any impacts. A U.S. Army Corps of Engineers (USACE) Section 404 permit may also be required depending on the level of wetland impacts.
 - Based on the Preferred Alternative there is the potential for wetland impacts near Fourteenth Street/Silver Lake Road due to the proposed roundabout. Design modifications and/or alignment changes of this proposed roundabout could change, reduce, or eliminate wetland impacts depending on the final design of the intersection. Wetlands are located in the northwest and southwest quadrants.



Picture Tree next to Grandview Parkway

- Streams: *Potential concerns*
 - Kids Creek is a trout stream that passes under Division Street about 1,600 feet south of Grandview Parkway. If the project work impacts the stream a MDEQ Part 301 permit will be required. A USACE Section 404 permit may also be required.
 - Based on the Preferred Alternative impacts to Kids Creek should be minimal and related to construction activities at Front Street and the associated approaches. A total reconstruction of US-31/M-37 (Division Street) is not anticipated at this time, thus the Kids Creek structure under Division Street will not be impacted by the Preferred Alternative.
- Floodplains: *Potential concerns*
 - There is likely floodplain area associated with Kids Creek which crosses under Division Street. There may also be some floodplain area associated with Grand Traverse Bay at the north end of the project. If cut or fill is required at any floodplain area a MDEQ Part 31 permit will be required.
 - Based on the Preferred Alternative construction activities will occur at the Grandview Parkway intersection. If that intersection is within the floodplain of Grand Traverse Bay, a permit will likely be required. Impacts to the Kids Creek floodplain are not anticipated at this time unless the structure under Division Street is replaced or modified. This decision will not occur until final design.
- Migratory Birds: *Not included in the review due to lack of bridge work*
- Air Quality: *No anticipated concerns*
- Bridge Painting: *Not included in the review due to lack of bridge work*
- Endangered Species: *Flora – no anticipated concerns*
- Endangered Species: *Fauna – potential concerns*
 - If the project limits are extended south, potential King Rail (state endangered) nesting sites may be present near the right-of-way. A site review would be needed to determine any potential impacts to King Rail.
 - This project is located within the range of the Northern Long-eared Bat. If any tree removal or clearing of trees greater than three-inch diameter at breast height occur, then review and consultation will be required by MDOT's Environmental Section and the U.S. Fish and Wildlife Service.
 - Based on the Preferred Alternative trees adjacent to the roadway will be removed south of Front Street due to the proposed sidewalk on the east side of the road and also due to the proposed 11-foot median south of Eighth Street. Approximately 20 trees could be impacted, although a few of these trees are in very poor condition.
- Contamination: *No anticipated concerns*
 - Ten known contaminated sites were identified within or adjacent to the proposed project area. No anticipated concerns as long as all contaminated media is handled and disposed of appropriately in accordance with state and federal regulations. The city

indicated the Division/Front Street intersection is contaminated with free petroleum under the road.

- A Project Area Contamination Survey (PACS) is recommended to confirm known, and identify potential, sites of contamination. A PACS is necessary to purchase fee ROW and may be necessary for grading permit/easement right-of-way.
- **Water Quality: *Potential concerns***
 - Kids Creek passes under Division Street about 1,600 feet south of Grandview Parkway and is a trout stream impaired for other indigenous aquatic life and wildlife due to other anthropogenic substrate alterations, PCBs in water column and sedimentation/siltation and fish consumption due to PCBs.
 - For future projects, MDOT will develop a plan for controlling stormwater prior to plan review.
 - New NPDES permit requirements will be in effect in fiscal year 2015 and will require treating the first one inch of runoff by removing 80 percent of total suspended solids, and retaining any additional stormwater resulting from widening or increasing impervious surface to reduce stream bank erosion up to the two-year/24 hour storm event. All projects with construction starting in calendar year 2018 will be required to comply with the new permit post construction Best Management Practices (BMP) standards.
 - If this project is required to meet the 2015 NPDES permit conditions, additional right-of-way may be required, as well as BMPs that may require additional environmental reviews.
 - Based on the Preferred Alternative and the current lack of funding for statewide transportation projects, construction for many of these corridor improvements may not occur until 2018 or beyond. Thus the new NPDES permit requirements will be in effect.
- **Historic: *Potential concerns***
 - There are many National Register listed and eligible historic districts and individual properties located adjacent to the proposed project. Historic districts include: Central Neighborhood, Northern Michigan Asylum, Immaculate Conception Church and School Complex, and Sleder's Tavern. Any easement and/or fee right-of-way purchase, widening, radius improvements, or other proposed work outside of the existing curb adjacent to historic properties or districts will involve both formal State Historic Preservation Office (SHPO) consultation and likely Section 4(f) impacts.
 - Based on the Preferred Alternative, an adverse effect determination under Section 106 of the National Historic Preservation Act is likely.



Sleder's Tavern

- **Archaeology: *Potential concerns***
 - The archaeological sensitivity is low due to the high likelihood that urban development has disturbed any significant prehistoric or historic archaeological sites that may have once been present.
 - Based on the Preferred Alternative it is unlikely that any archaeological impacts will occur as a result of this project.
- **4(f)/6(f): *Potential concerns***
 - Several public recreational properties are located adjacent to the proposed project, including:
 - Meijer’s Silverbrook Acres – this property has many deed restrictions
 - Grand Traverse Commons – this property has many deed restrictions (see below)
 - Slabtown Corner – this property has Section 6(f) Land and Water Conversation Funds restrictions attached to the property.
 - West End Beach
 - TART Trail
 - Mall Trail
 - Grand Traverse Commons Deed Restrictions: In an effort to test support for changes along US-31/M-37 (Division Street) the City held a vote in 2012 asking the citizens to approve a process to sell up to 30 feet of the park property along the road to MDOT for Division Street improvements (conditional upon City Council approval, etc.). The vote passed and is valid through November 6, 2022. At the time, MDOT had no plans for the widening, however, the vote, along with Michigan legislative funding, led to a study of alternatives (PEL Study), some of which may involve widening the road and using part of the park. Transferring park property from city ownership to a transportation agency using federal aid usually presents challenges due to protections afforded to parks and historic properties under federal law. In this case, the state’s special legislation creating the park and resulting deed restriction adds complexity. Additional coordination is required between MDOT and the State Attorney General’s office to determine how to proceed on this issue.
 - Based on the Preferred Alternative proposed 11-foot median (eight-foot raised) south of Eighth Street impacts are likely to the Grand Traverse Commons and to historic properties. Additionally, impacts to the TART Trail are likely due to the proposed roundabout at Grandview Parkway. An individual Section 4(f) document may be needed to address right-of-way acquisition and potential constructive use impacts.
- **Social: *Potential concerns***
 - The sidewalk on the west side of Division Street between Eleventh and Eighth streets could be impacted by the proposed 11-foot median. A path similar to the Mall Trail pathway (south of Eleventh Street) may be constructed north of Eleventh Street to



Slabtown Corner Park

replace the existing sidewalk that is adjacent to Division Street. If impacts to the sidewalk occur, then a pedestrian detour will likely be required wherever possible.

- Parking could also be impacted at three different locations along the corridor. At Eleventh Street (east of Division Street) approximately 15 on-street parking spaces could be lost due to the lane requirements at a MDOT traffic signal. The same issue could result in about ten lost on-street parking spaces at Seventh Street (east of Division Street) if two-way traffic is allowed at this location. Another ten spaces could be lost on Bay Street next to the Elks Club property (east of Division Street) due to the proposed roundabout.
- Detour: *No anticipated concerns*
- Controversy: *Potential concerns*
 - Although the MDOT Environmental Scoping Review indicated *no anticipated concerns* related to Controversy, based on the interaction with the public and comments received to date there is potential for controversy as it relates to the proposed roundabouts. A few individuals have conveyed they are against roundabouts anywhere in Traverse City. But in the case of the Division Street/Grandview Parkway intersection the concern is even deeper due to unique characteristics which include: high concentration of pedestrians, the TART Trail crossing, and peak traffic volumes, which all interact and intersect at this location during summer and festival peak tourism seasons.
- Noise: *Potential concerns*
 - There are noise sensitive land uses along the corridor (residences, places of worship, parks) within the area of potential effect.
 - If the proposed project includes the addition of new through lanes, or changes in the horizontal alignment, a noise analysis would be required.
 - Based on the Preferred Alternative, no new through lanes or changes in the horizontal alignment will occur because of this project, other than a potential western shift in the SB lanes due to the proposed 11-foot median so noise analysis will not be required.
- Tree Removals: *Potential concerns*
 - If tree removal is required by the project then the following provisions are required:
 - U.S. Fish and Wildlife Service coordination is required and will be completed by MDOT prior to Environmental Certification.
 - MDOT Region Resource Specialist must be contacted to identify tree removal locations and recommend appropriate tree replacements.
 - For tree removals within residential area, the project manager must provide a 30-45 day advance notice to adjacent property owners.
 - Based on the Preferred Alternative trees adjacent to the roadway will be removed south of Front Street due to the proposed sidewalk on the east side of the road and also due to the proposed median south of Eighth Street. Approximately 20 trees could be impacted, although a few of these trees are in very poor condition. (see the Affected Trees Map in **Appendix K**).

- Review of tree/landscaping removal in context to its historic significance will be required in consultation with the SHPO.
- Indirect/Cumulative: *No anticipated concerns*

Section 9

Environmental Resources Not Involved in Study

MDOT's Environmental Section prepared an Environmental Scoping Memo that was discussed in **Section 8**. It can also be found in **Appendix K**. This memo is comprehensive and all environmental resources that the Study Team is aware of were reviewed in this PEL study.

Section 10

Cumulative Impacts

Indirect and Cumulative impacts were reviewed as part of MDOT's Environmental Scoping Review (May 20, 2015). No concerns are anticipated.

It is not anticipated that this project will have any long-term impacts. It is not anticipated that the proposed project will change land use patterns in the area and should have no impact on future development patterns. Although, past activity in the area, recent development trends, and local projects (non-MDOT projects) within the study area could create a cumulative impact on the local business industry; cumulative effects resulting from known and anticipated actions in the area are expected to be minimal. The project is not likely to start changes and development beyond what is already existing or planned. Meetings should be held with stakeholder groups to figure out ways to minimize construction and/or detour impacts.

Section 11

Mitigation Strategies

Through interaction and coordination with MDOT's Environmental Section, stakeholders, and the public, potential mitigation measures were developed for actions that could result in adverse effects. The mitigation measures are commitments that will be integrated into the project once it, or portions of the Preferred Alternative, move into design phase(s).

Wetlands: Based on the Preferred Alternative there is the potential for wetland impacts near Fourteenth Street/Silver Lake Road due to the proposed roundabout. Design modifications and/or alignment changes of this proposed roundabout could change, reduce, or eliminate wetland impacts depending on the final design of the intersection. If work is required in any wetland, mitigation would be required for any impacts.

Water Quality: Kids Creek passes under Division Street about 1,600 feet south of Grandview Parkway and is a trout stream impaired for other indigenous aquatic life and wildlife due to other anthropogenic substrate alterations, PCBs in water column and sedimentation/siltation and fish consumption due to PCBs. A tributary/ditch that flows into Kids Creek is located near the Fourteenth Street/Silver Lake Road intersection. New NPDES permit requirements will be in effect in fiscal year 2015 and will require treating the first one inch of runoff by removing 80 percent of total suspended solids, and retaining any additional stormwater resulting from widening or increasing impervious surface to reduce stream bank erosion up to the two-year/24-hour storm event. All projects with construction starting in calendar year 2018 will be required to comply with the new permit post construction BMP standards.

Historic: Any easement and/or fee right-of-way purchase, widening, radius improvements, or other proposed work outside of the existing curb adjacent to historic properties or districts will involve both formal SHPO consultation and likely Section 4(f) impacts. Based on the Preferred Alternative, an adverse effect determination under Section 106 of the National Historic Preservation Act is very likely. Further consultation with SHPO and Federal Highway Administration (FHWA) will be required to determine mitigation measures for the potential adverse effects to historic resources.

4(f): Transferring park property from city ownership to a transportation agency using federal aid usually presents challenges due to protections afforded to parks and historic properties under federal law. In this case, the state's special legislation creating the park and resulting deed restriction adds complexity. Additional coordination is required between MDOT and the State Attorney General's office and the City of Traverse City to determine how to proceed on this issue and to determine whether mitigation will be required for the potential impact. The Preferred Alternative would likely result in a need for an individual Section 4(f) document to address right-of-way acquisition and potential constructive use impacts. If impacts to the trails occur during construction, a trail detour plan will be developed.

Social: If impacts to the sidewalk occur, a pedestrian detour plan will need to be developed.

Tree Removals: If tree removal is required by the project then the MDOT Region Resource Specialist must be contacted to identify tree removal locations and recommend appropriate tree replacements. For tree removals within residential area, the project manager must provide a 30-45 day advance notice to adjacent property owners.

Section 12

Future NEPA Coordination

From a National Environmental Policy Act (NEPA) perspective the biggest issues moving forward from the PEL study are the potential impacts to historic resources and park property along the corridor. Specifically, the Northern Michigan Asylum Historic District/Grand Traverse Commons and the Central Neighborhood Historic District, located on opposite sides of US-31/M-37 (Division Street). Impacts to these properties will occur based upon the Preferred Alternative and will need further analysis during project NEPA clearance.

Future NEPA considerations and coordination is outlined in this section by project intersection along Division Street. The segment option is also discussed for the portion of roadway being considered for a center median (between Fourteenth and Eighth streets). The Preferred Alternative details related to each intersection option are presented in **Section 6**.

Fourteenth Street/Silver Lake Road Intersection

Operational Improvements: These improvements could impact the potential wetlands/ditch located in the southeast quadrant of the intersection. This area is drained by a 24-inch pipe that combines with additional storm sewer and outlets to the Kids Creek tributary in the northwest quadrant via a 48-inch pipe. Coordination should occur with the Watershed Center Grand Traverse Bay due to the water quality issues associated with Kids Creek. Although no right-of-way is anticipated with the operational improvements, a public meeting should be held as part of the NEPA process to allow for feedback due to the adjacent parks (Meijer's Silverback Acres and Grand Traverse Commons) and historic district (Northern Michigan Asylum).

Preferred Alternative: Depending on final alignment and design the proposed roundabout could impact the northwest quadrant and/or the southeast quadrant. If a Section 106 "No Adverse Effect" determination is made by SHPO for impacts associated with the Northern Michigan Asylum area, then project NEPA may be able to be completed as a Categorical Exclusion (CE). If the "No Adverse Effect" determination is made by SHPO, the impacts to the park (Grand Traverse Commons) would likely be treated as a Section 4(f) de minimis impact. A Section 106 "Adverse Effect" determination could also be made by the SHPO depending on final impacts which would then require an Environmental Assessment (EA) for NEPA clearance. Acquisition of any property from Grand Traverse Commons, due to the existing deed restrictions, will likely add time and complexity to the NEPA process.

Eleventh Street Intersection

Regardless of whether the operational improvements or the Preferred Alternative is constructed, the environmental considerations are the same. Per preliminary discussions with the SHPO any improvements and/or changes to this intersection would result in an "Adverse Effect" determination. This is due to the wider pavement required for the northbound turn-lane (and potential southbound turn-lane) and the fact that both sides of the street are historic districts. Thus an EA would be required for improvements to this intersection that include road widening. In addition, increased traffic on eastbound Eleventh Street under the Preferred Alternative new signal would require a traffic impact analysis to determine if the signal would result in an "Adverse Effect" to the historic neighborhood from a change in traffic patterns.

Seventh Street

This intersection is similar to Eleventh Street as far as NEPA considerations are concerned. Due to the adjoining historic properties in both the northwest and southwest quadrants, and the historic district on the east side of the street, and per preliminary discussions with the SHPO, any improvements and/or changes to this intersection would result in an “Adverse Effect” determination. Thus an EA would be required for improvements to this intersection that include road widening.

Front Street

During field observations, the RSA audit team observed a semi-trailer track over the sidewalk in the northwest quadrant. This safety concern should be addressed in both the northwest and southeast quadrants with wider corner radii if possible. Adjacent properties, limited right-of-way, and longer crosswalk distances are issues that need further analysis during NEPA. Other potential impacts at this location are to the southeast side of the intersection where new sidewalks are proposed adjacent to the Central Neighborhood Historic District. Although this impact is relatively minor, it would likely result in a de minimis Section 4(f) impact. Because historic districts are protected by Section 4(f), right-of-way acquisition is not required for sidewalks located within a district. Thus improvements to this intersection should result in a CE and “No Adverse Effect” determination.

Grandview Parkway

Operational Improvements: The TART trail is a 4(f) resource and crosses Grandview Parkway at this location. The trail connection will be maintained during construction activities. No other environmental impacts are anticipated as a result of these proposed operational improvements, and as a result project NEPA could be completed as a CE.

Preferred Alternative: Regardless of the final alignment and design of the proposed roundabout the TART trail impacts within the right-of-way will need to be addressed in future NEPA documentation.

Although right-of-way impacts are not anticipated at Slabtown Corner Park or West End Beach Park, the potential controversy of a roundabout at this location could require an EA as opposed to a CE.



TART Trail Located Between Grandview Parkway and Bay Street

Segment Options

The proposed median between Eighth and Fourteenth streets (regardless of width) would result in a project NEPA EA as any roadway widening would be considered an “Adverse Effect” on the adjoining historic resources by the SHPO. Adding a median into the roadway would change the context of the street which separates a historic neighborhood from a historic park property.

Section 13

Potential Issues for Future Consideration

Fourteenth Street

- A dedicated westbound Fourteenth Street right-turn lane on the proposed roundabout may be required sooner than anticipated depending on future traffic growth rates.
- Future environmental clearance may reveal greater concerns in one quadrant over the others, such as the historic and park property in the northwest quadrant. In anticipation of this issue, an alternate roundabout design is shown in **Figure 6-2** overlaying the Preferred Alternative. This alternate design still meets current geometric standards but would have a greater impact left on the southeast quadrant which includes a ditch/tributary to Kids Creek.
- Coordination needs to occur with the Watershed Center Grand Traverse Bay regarding the ditch/tributary located in the southeast quadrant. This watercourse crosses under the Fourteenth Street/Silver Lake Road intersection and into Kids Creek which is an impaired trout stream.

Eleventh Street

- New traffic signals must meet specific criterions to be installed. Existing traffic volumes at this intersection currently do not warrant a new traffic signal based on 2035 volumes. Therefore a revised signal warrant analysis at the time of design will be needed.
- Central Neighborhood expressed a great deal of concern over potential increased traffic on Eleventh Street because of a new traffic signal, which is the Preferred Alternative. They would like to see traffic calming measures and access management restrictions to prevent an increase in traffic along this street within the Central Neighborhood. Any turning or traffic restrictions at this location will require city input, discussion, and approval prior to construction of the Preferred Alternative.
- Eleventh Street east of Division Street is located within the Central Neighborhood historic district. As part of the environmental clearance phase a detailed traffic impact study to determine potential adverse effects (Section 106) to the historic neighborhood will need to be completed. A determination of effect will then be made by the SHPO on the potential effect increased traffic would have on the historic district.
- Approximately 15 residential parking spaces along Eleventh Street east of Division Street would be lost due to the addition of the second approach lane (three lanes total) for the new traffic signal. This proposed lane configuration is an MDOT Signals Unit minimum requirement. The City does not agree with the required three-lane approach on Eleventh Street and would like it to be two lanes instead of three.

Seventh Street

- No formal decision has been made yet by the City regarding changing Seventh Street east of Division Street to two-way traffic as described in the Preferred Alternative. They have indicated

they are studying a conversion of the entire length of Seventh Street to two-way and are open to the idea of changing it to improve traffic operations at this intersection.

- Central Neighborhood expressed concern with the change to two-way traffic on Seventh, even for only one block due to increased traffic. As part of the environmental clearance phase a detailed traffic impact study to determine potential adverse effects (Section 106) to the historic neighborhood will need to be completed. A determination of effect will then be made by the SHPO on the potential effect increased traffic would have on the historic district.
- Approximately 10 residential parking spaces along Seventh Street east of Division Street would be lost due to the addition of the second approach lane (three lanes total) to the traffic signal. This proposed lane configuration is an MDOT Signals Unit minimum requirement. The City does not agree with the required three-lane approach on Seventh Street and would like it to be two lanes instead of three.

Front Street

- During field observations, the Road Safety Audit team witnessed a semi-trailer track over the sidewalk ramp in the northwest quadrant. This safety concern also occurs in the southeast quadrant and should be addressed with wider corner radii if possible. Adjacent properties, limited right-of-way, and longer crosswalk distances are issues that need further analysis during the next phase of the project to determine the feasibility of this proposed change.
- The property owner of the bank located in the southeast quadrant has indicated they are opposed to any changes in access or use of their property.

Grandview Parkway

- A dedicated westbound Grandview Parkway right-thru lane on the proposed roundabout may be required sooner than anticipated pending future traffic growth rates.
- To reduce right-of-way impacts in the southeast quadrant (Elk's Lodge property) an alternate roundabout design is shown in **Appendix L** overlaying the Preferred Alternative. This alternate design still meets current geometric standards and avoids impact to Slabtown Corner Park and West End Beach Park.
- Approximately 10 parking spaces along Bay Street in front of the Elk's Lodge would be removed. This number may be lessened during final design.
- Future communication needs to occur with the Elk's Lodge representatives regarding the improvements at Grandview Parkway.
- As shown in **Figure 6-7**, a portion of the proposed roundabout would be within city right-of-way. An agreement or re-deeding of right-of-way would be necessary between the City and MDOT.
- Pedestrian crossings at Grandview Parkway are a very big concern due to the high volumes of traffic and pedestrians during peak times. Members of the LAC have expressed that this intersection is quite unique from a pedestrian and traffic point of view. This intersection has been looked at many times trying to come up with an answer to the conflicts with vehicular and pedestrian activity. Unfortunately, the intersection is so over capacity that trying to do

something in this location would cause havoc for both corridors (Grandview Parkway and Division Street), especially during the summer. MDOT is in the process of analyzing an adaptive signal system for Traverse City (to be constructed in 2019). Any changes to operations would need to be discussed to see if it would work with the adaptive system. The community and LAC understand that something needs to be done at this intersection to improve pedestrian crossings. Potential solutions discussed as part of the PEL study include:

- A roundabout (Preferred Alternative)
 - If no roundabout, consider a pedestrian only phase for the traffic signal to be used during peak times
 - A pedestrian bridge over Grandview Parkway
- The large tree located on the bay side of the Division Street/Grandview Parkway intersection is valued by the local community and was called the “photo tree” by some who provided comments to the Study Team. Potential impacts to this tree should be avoided. The currently proposed Preferred Alternative would not impact this tree.
 - The TART Trail crosses Grandview Parkway at Division Street. The trail is a 4(f) resource and potential impacts to the trail within the roadway right-of-way will need to be addressed in future NEPA documentation.

Median (between Fourteenth and Eighth streets)

- As noted in **Section 1.1**, Grand Traverse Commons is a park owned by the City of Traverse City between Fourteenth Street/Silver Lake Road and Eighth Street on the west side of Division Street. The park was formerly owned by the State of Michigan and was part of the Traverse City regional psychiatric hospital complex (historically called the Northern Michigan Asylum or Traverse City State Hospital). After the complex completely closed in the 1980s, the State of Michigan legislature enabled the transfer of the property to a variety of recipients through Public Act 38 of 1993. The overall property was broken up into a number of smaller parcels. After the legislation was passed, the individual parcels of land described in the legislation were deeded to the recipients by the State of Michigan. The City of Traverse City was deeded the property along Division Street for a park, and it has functioned as a park ever since. The park is made up primarily of two large parcels, one over 85 acres, another about 30 acres. The park is a portion of the grounds surrounding the former Traverse City State Hospital, which included both a men’s and women’s walks for hospital residents. This park is significant historically because the use of nature to treat mental illness was considered a major medical advancement in the late 19th and early 20th Centuries. In an effort to test support for changes along Division Street, the City held a vote in 2012 asking the citizens to approve a process to sell up to 30 feet of the park property along the road to MDOT for Division Street improvements (conditional upon City Council approval, etc.). The vote passed and is valid through November 6, 2022. At the time, MDOT had no plans for the widening, however, the vote, along with a legislative earmark, led to a study of alternatives (this PEL study), some of which may involve widening the road and using part of the park. Transferring park property from city ownership to a transportation agency using federal aid usually presents challenges due to protections afforded to parks and historic properties under federal law. In this case, the state’s special legislation creating the park and resulting deed restriction adds complexity. Key issues for consideration include:

- Section 4(f) of the DOT act applies to the park as a recreational facility and as an historic property. This law specifically relates to federal programs under the DOT and requires rigorous exploration of avoidance alternatives, which the environmental study shall identify and analyze. If it is determined that no alternatives to taking park land are prudent or feasible, then the project may proceed.
- Should the study conclude and the City agree that land from the park is needed to make improvements, the deed restrictions regarding the park will need to be addressed.
- Should the study successfully identify a build Preferred Alternative, the Traverse City Commission will need to approve the use of park land. Should the original vote be successfully challenged, the City may need to hold a new vote on the use of park land for transportation purposes.
- Trees are important to the City of Traverse City and they are a designated Tree City USA. The City has requested that trees be allowed in the proposed median between Fourteenth and Eighth streets. As a state highway and NHS route, Division Street is held to a higher standard than as a local road. Clear zone and sight distance constraints could prevent trees from being planted in the median. The final median treatment such as trees, rain gardens, etc. will need to be coordinated with the City of Traverse City, SHPO, FHWA, and MDOT.

City of Traverse City Considerations and Responsibilities

- A consistent concern heard from many residents along the corridor is the potential for increased traffic on neighborhood streets due to the changes along Division Street. The City has indicated they are working on and need to provide street calming initiatives as part of the overall solution of traffic traveling on the side streets along the Division Street corridor.
- Future development along the study corridor could negatively impact traffic operations along the corridor. When appropriate and feasible, traffic impact studies should be completed to determine potential impacts to the Division Street corridor and adjoining roadway network from the proposed development.

Other Future Considerations and Issues

- Some members of the public and LAC expressed concern over the speed limits along the Division Street corridor. Generally, the feeling is traffic is moving too fast along the corridor, especially at the south end where the posted speed is 40 mph. Speed limits are set through speed studies conducted by the Michigan State Police, independent from alternative studies. Roadway characteristics and potentially 85th percentile vehicle speed will change once the corridor improvements occur so a speed study should be requested afterwards.
- Non-signalized crosswalks have been requested along the corridor by the LAC and public to allow for safer crossings away from traffic signals. The specific locations and details of these crosswalks have yet to be determined. The crosswalks will be highly visible and placed along Division Street in locations that will be identified and studied. This will ensure crosswalks are placed in areas of pedestrian demand and agreed upon by the City and MDOT.
- Future design activities should incorporate public engagement to ensure that the project considers all community concerns while offering stakeholders an opportunity to shape the look

of the corridor. Continued close coordination with city officials and members of the LAC should benefit future project development.

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