Planning Commission
Regular Meeting
September 19, 2017
7:00p.m.

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF MINUTES
   - 8-28-2017 Special Planning Commission Meeting

5. CORRESPONDENCE / BOARD REPORTS

   -Boards and Commissions Expiration Dates

   -2006 M-20 Access Management Plan Study

6. APPROVAL OF AGENDA
7. PUBLIC COMMENT: Restricted to (3) minutes regarding issues not on this agenda
8. PUBLIC HEARINGS
   - HOP 2017-01 Photography Studio 4305 E. Wing Rd. Owner Jeremy and Jennifer Ruble

9. NEW BUSINESS

   A. SPR 2017-07 Dermatology medical facility Bellows Messenger LLC(authorized by current owner First Baptist Church of Mt Pleasant 1802 E. High St. PID 14-023-20-016-01 *Action: Review and Approve Site Plan*

   B. HOP 2017-01 Photography Studio 4305 E. Wing Rd. Owner Jeremy and Jennifer Ruble *Action: Review and Approve permit with conditions if needed*

10. OTHER BUSINESS
    A. Discussion of LSL Planning and Bids for Zoning Review Update

11. EXTENDED PUBLIC COMMENT: Restricted to 5 minutes regarding any issue
12. FINAL BOARD COMMENT
13. ADJOURNMENT

Charter Township Of Union

Board Expiration Dates

Planning Commission Board Members (9 Members) 3 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	Norm	Woerle	11/20/2020
2-Chair	Phil	Squattrito	2/15/2020
3- Vice Chair	Bryan	Mielke	2/15/2018
4-Secretary	Alex	Fuller	2/15/2020
5-Vice Secretary	John	Zerbe	2/15/2018
6	Ryan	Buckley	2/15/2019
7	Denise	Webster	2/15/2020
8	Erik	Robinette	2/15/2018
9	Dwayne	Strachan	2/15/2018
Zoning Board of Appeals Members (5 Members, 2 Alternates) 3 year term			
#	F Name	L Name	Expiration Date
1-Chair	Tim	Warner	12/31/2019
2-PC Rep / Vice Chair	Bryan	Mielke	2/18/2018
3-Vice Secretary	Jake	Hunter	12/31/2019
4-Secretary	Mike	Darin	12/31/2019
5	Paul	Gross	12/31/2018
Alt. #1	Andy	Theisen	12/31/2019
Alt. #2	Taylor	Sheahan-Stahl	2/15/2018
Board of Review (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Doug	LaBelle II	12/31/2018
2	James	Thering	12/31/2018
3	Brian	Neyer	12/31/2018
Alt #1	Mary Beth	Orr	1/25/2019
Citizens Task Force on Sustainability (4 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Laura	Coffee	12/31/2018
2	Mike	Lyon	12/31/2018
3	Jay	Kahn	12/31/2018
4	Phil	Mikus	11/20/2020
Construction Board of Appeals (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Colin	Herron	12/31/2017
2	Richard	Klumpp	12/31/2017
3	Andy	Theisen	12/31/2017
Hannah's Bark Park Advisory Board (2 Members from Township) 2 year term			
1	Mark	Stuhldreher	12/31/2018
2	John	Dinse	12/31/2017
Chippewa River District Library Board 4 year term			
1	Ruth	Helwig	12/31/2019

Charter Township Of Union

Board Expiration Dates

EDA Board Members (11 Members) 4 year term			
#	F Name	L Name	Expiration Date
1	Thomas	Kequom	4/14/2019
2	James	Zalud	4/14/2019
3	Richard	Barz	2/13/2021
4	Robert	Bacon	1/13/2019
5	Ben	Gunning	11/20/2020
6	Marty	Figg	6/22/2018
7	Sarvijit	Chowdhary	1/20/2018
8	Cheryl	Hunter	6/22/2019
9	Vance	Johnson	2/13/2021
10	Michael	Smith	2/13/2021
11	Mark	Perry	3/26/2018
Mid Michigan Area Cable Consortium (2 Members)			
#	F Name	L Name	Expiration Date
1	Kim	Smith	
2	Vacant		
Cultural and Recreational Commission (1 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1	Brian	Smith	12/31/2019
Sidewalks and Pathways Prioritization Committee (2 year term)			
#	F Name	L Name	Expiration Date
1 BOT Representative	Phil	Mikus	7/26/2019
2 PC Representative	Denise	Webster	8/15/2018
3 Township Resident	Sherrie	Teall	8/15/2019
4 Township Resident			
5 Member at large	Barbara	Anderson	8/15/2019

CHARTER TOWNSHIP OF UNION
Planning Commission
Special Meeting

A special meeting of the Charter Township of Union Planning Commission held on August 28, 2017 at the Township Hall.

Meeting was called to order at 7:05 p.m.

Roll call by Robinette

Roll Call
Present: Buckley, Mielke, Robinette, Squattrito, Webster, and Zerbe (late)
Excused: Fuller, Strachan, and Woerle

Approval of Minutes
Webster moved **Buckley** supported to approve the August 15, 2017 minutes as presented. **Vote: Ayes: 5 Nays: 0. Motion carried.**

7:08 p.m. – Zerbe present.

Correspondence / Reports
No correspondence or reports.

Approval of Agenda
Webster moved **Mielke** supported approval of the agenda as presented. **Vote: Ayes: 6 Nays 0. Motion carried.**

Public Comment – Open 7:10 p.m.
No comments.

Public Hearing

New Business

A. SPR 2017-06 Burch Welding and Tank, Inc Location: 2253 Enterprise Dr.
Township Planner, Gallinat gave a brief history of the property, stating that the applicant is requesting an expansion for office and storage.
Alan Craighead, Lapham Associates, represented the applicant requesting to the Planning Commissioners that sidewalks be waived in this industrial zone and requested storm water management discharge hole be larger.

Mielke moved **Buckley** supported to approve SPR 2017-06 Site Plan Review: Burch Welding and Tank, LLC located at 2253 Enterprise Dr. with the following conditions: Dumpsters to be enclosed per Township ordinance, updated drain sign off by the Drain Commissioner with approval and recommendation up to .2 cfs. **Vote: Ayes: 5 Nays 1. Motion carried.**

Zerbe moved **Robinette** supported to amend the motion to include a temporary waiver of sidewalks until the Township deems necessary, where installation of sidewalks to be installed as shown on plan. **Vote: Ayes: 4 Nays 2. Motion carried.**

Other Business
Discussion was held by the Planning Commission regarding the Annual Joint Meeting of all Township Boards and Commissions.

Extended Public Comment –open 8:19 p.m.
Jeff Harrision, 1700 E. River Rd. – Commented that all sidewalks should be waived in Industrial zones.
Jim McBryde, MMDC – Commented that Burch Welding and Tank, Inc. is a good fit and project for the Community, as it will bring more jobs to the area.

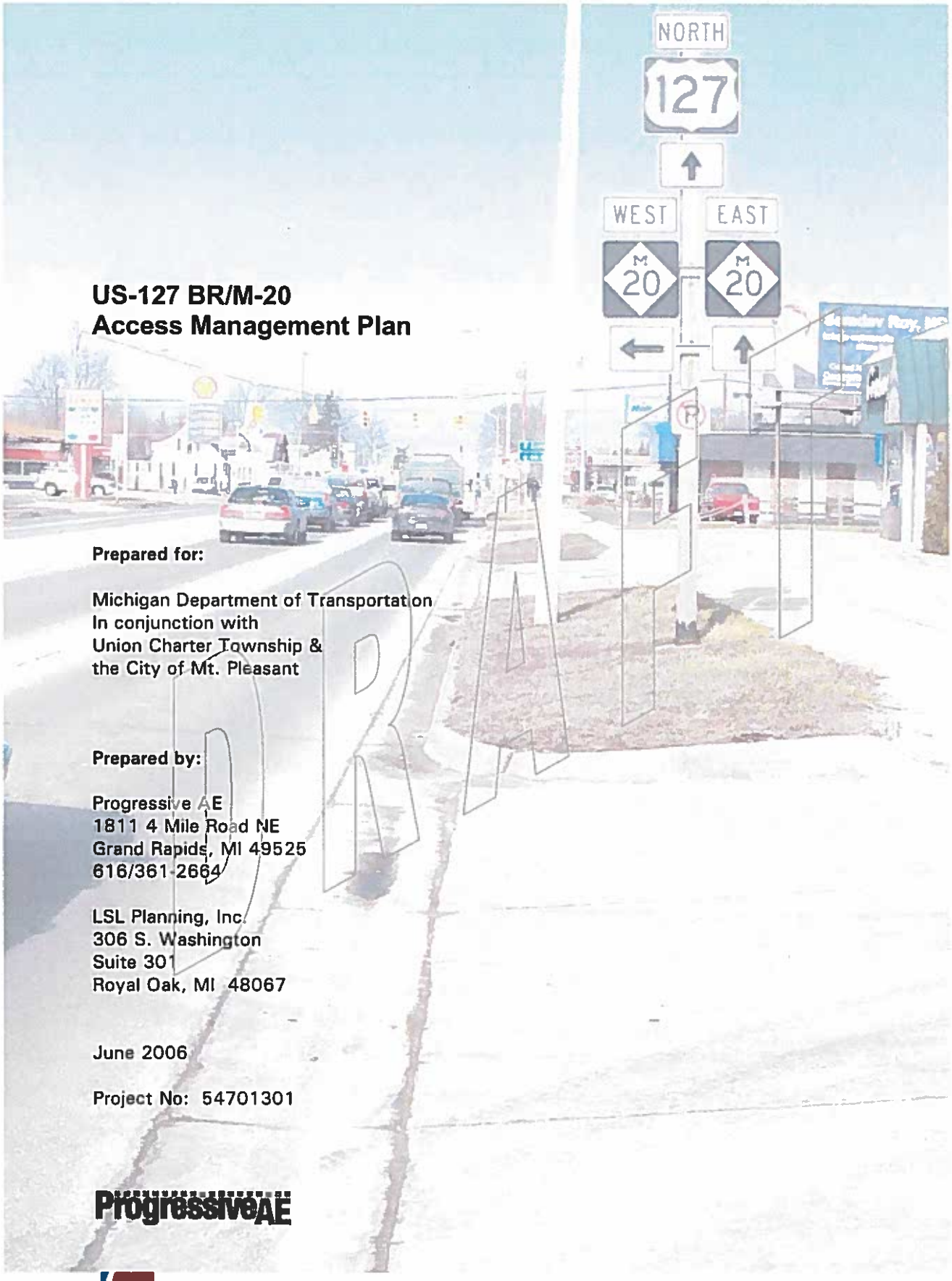
Final Board Comment
Mielke – Mentioned interest in Annual Planners Conference September 27-29 at Mackinac Island.
Buckley – Commented that sidewalks are not a penalty for businesses.

Adjournment – Chairman Squattrito adjourned the meeting at 8:25 p.m.

APPROVED BY: _____

Alex Fuller – Secretary
John Zerbe – Vice Secretary

(Recorded by Jennifer Loveberry)



US-127 BR/M-20
Access Management Plan

Prepared for:

Michigan Department of Transportation
In conjunction with
Union Charter Township &
the City of Mt. Pleasant

Prepared by:

Progressive AE
1811 4 Mile Road NE
Grand Rapids, MI 49525
616/361-2664

LSL Planning, Inc.
306 S. Washington
Suite 301
Royal Oak, MI 48067

June 2006

Project No: 54701301

ProgressiveAE

LSL Planning, Inc.

US-127 BR/M-20 Access Management Plan

US-127 BR/M-20 Access Management Plan

Acknowledgements

US-127 BR/M-20 Access Management Steering Committee:

- City of Mt Pleasant
- Union Charter Township
- MDOT – Bay Region
- MDOT – Mt. Pleasant TSC
- Isabella County Road Commission
- Isabella County
- Mt. Pleasant Mission/Pickard DDA

Project Consultant Team:

- Progressive AE
- LSL Planning

The Steering Committee would like to thank the many interested citizens, landowners, public officials, and agency staff that provided input at the public open houses and steering committee meetings.

June 2006

Table of Contents

List of Figures

Executive Summary

The US-127 BR (Mission Street)/M-20 (Pickard Street) Access Management Plan area encompasses three distinct roadway segments. It includes Mission Street from Bluegrass Road north to Corporate Drive, Pickard Street (M-20) from Mission east to Summerton Road, and M-20 from Lincoln Road west to Meridian Road. The first two of these corridors are experiencing significant congestion and crash issues, due largely to past heavy commercial development with little control to access. The third corridor is emerging and will likely come under increasing commercial development pressure in the coming years.

Both the City of Mt. Pleasant and Union Charter Township recognize that the preparation and implementation of an access management plan will help alleviate a portion of the existing traffic congestion on Mission and Pickard Streets, while allowing for the more effective accommodation of traffic generated by future development on M-20 west of Lincoln Road.

Access Management Tools and Benefits

Access management is an effort to maintain efficient traffic flow, preserve the roadway's capacity, and reduce the frequency and severity of crashes while maintaining reasonable access to land uses. This can be accomplished through careful placement (or relocation) of access points to reduce conflicts with traffic using other access points and traffic flowing through intersections. Access management usually involves tools to space access points or restrict certain turning movements. Some of these tools are:

- proper spacing of access points along the same side of the street,
- alignment or spacing from access points on the opposite side of the street,
- placing driveways a sufficient distance from intersections to minimize impact to intersection operations,
- geometric design to restrict certain turning movements (usually left turns),
- location of traffic signals, and
- shared access systems (connections between land uses, shared driveways, frontage roads or rear service drives).

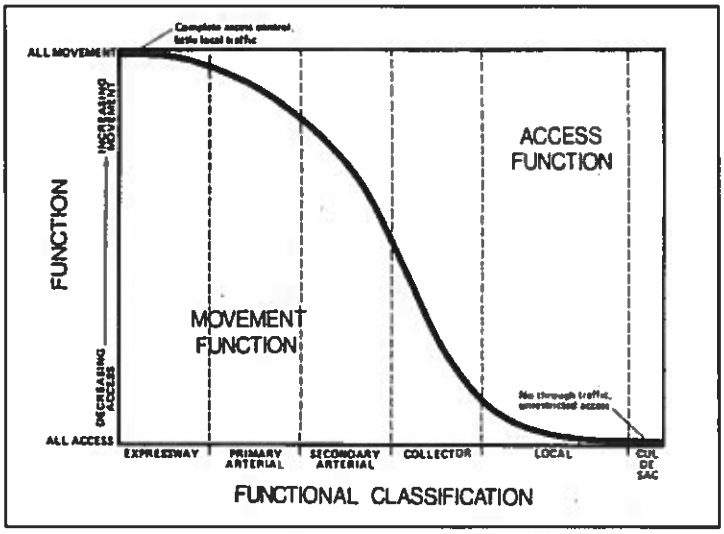
Access management can provide several benefits to motorists, communities and land uses along the US-127 BR/M-20 corridors. Among the benefits, based on experience and studies for similar corridors, are the following:

- reduce crashes and crash potential;
- preserve or increase roadway capacity and the useful life of roads;
- decrease travel time and congestion;
- improve access to and from properties;
- ensure reasonable access to properties (though not necessarily direct access nor the number of driveways preferred by the landowner/developer);
- coordinate land use and transportation decisions;
- improve environment for pedestrians and bicyclists (less driveways to cross);
- improve air quality; and
- maintain travel efficiency and related economic prosperity.

Why Access Management?

Successful implementation of the recommendations in the US-127 BR/M-20 Access Management Plan will help the City, Township, and MDOT accommodate planned development along the corridor while reducing the amount of negative impact on traffic flow and crash potential. Numerous studies nationwide have shown that a proliferation of driveways or an uncontrolled driveway environment increases the number of crashes, can severely reduce capacity of the roadway and may create a need for costly improvements in the future. Areas where access management plans have been adopted and followed by the communities and road agencies have resulted in 25-50 percent reductions in access-related crashes.

The Plan includes specific recommendations for individual properties as well as general recommendations that apply to a number of areas along the corridors. While some of the recommendations can be directly implemented, many are long-term initiatives that will require an on-going partnership and commitment between the City, Township, and MDOT. This requires the two communities' planning commissions, elected bodies, and zoning board of appeals members to be aware of the benefits of access management and their role in the Plan's implementation.



The model US-127 BR/M-20 overlay zoning district is expected to be placed over the existing zoning regulations for all parcels with frontage along the Plan corridors or those within 120 feet of the centerline of those corridor roadways. Many of the existing sites along Mission and Pickard Streets will not be able to meet all of the access management standards, particularly older sites. In order to address these situations the ordinance provides the authority to modify the standards on a case-by-case basis. The model ordinance provides planning commissions with the authority to modify the standards during site plan review, provided the intent of the standards is being met to the maximum extent practical on the site. The ordinance also requires traffic impact studies to be performed for larger developments that have the potential to generate significant volumes of traffic. These studies would evaluate the impact that a proposed development will have on the road system and identify mitigation to offset the impact.

Plan Development

The US-127 BR/M-20 Access Management Plan and ordinances were prepared under the direction of a Steering Committee comprised of representatives from the City of Mt. Pleasant, Union Charter Township, MDOT, Isabella County (Road Commission and Planning/Development) and the DDA. Public involvement included two public workshops/open houses. Comments and recommendations by the public, local officials and the MDOT staff at the workshops were considered and incorporated into the final plan.

While individual land owners may see the regulations as restricting access to their property, a well-managed access system will improve access to properties and maintain or even improve travel efficiency, thereby enhancing economic prosperity for local businesses. A strong access management program also has the benefit of closely coordinating land use and transportation decisions to improve the overall quality of life in the community.

1. INTRODUCTION

Historically Mission Street, and more recently Pickard Street and M-20 to the west, have served as the key transportation corridors for moving significant traffic and goods through the central part of the Mt. Pleasant area. Mission Street has long served as the main commercial spine within the area, partly due to its current designation as the US-127 Business Route through town. Pickard Street is becoming increasingly developed as the communities grow and development continues to the east outside of the study area. And M-20 to the west is expected to come under increasing commercial development/rezoning pressure and will need to plan for the traffic impacts that always come with that type of development.

Union Charter Township, the City of Mt. Pleasant, and the Michigan Department of Transportation (MDOT) have recognized that there are significant congestion and safety issues on the highly developed Mission Street, and to a slightly lesser extent on Pickard Street, that can be addressed in part by retrofitting the existing poor commercial access system. It's also recognized that those same poor conditions need to be avoided in the emerging section of M-20 west of Lincoln Road. To that end, access management is recognized as a key tool to improve operating conditions and preserve the public dollars spent in the past on these roadways. The study area is illustrated on Figure 1.

The primary goal behind this access management plan is to improve traffic operations and reduce crash potential along all three roadway corridors while retaining reasonable access to existing and future developments. Access management will preserve the road's capacity through limiting the number of access points along with careful placement and spacing of new or retrofit access points. The resulting improvements can be significant and at a relatively low cost in comparison to roadway reconstruction.

The questions this access management plan will help address include:

- ***What access-related improvements should be made to existing uses to reduce crash potential and enhance efficiency of the US-127 BR/M-20 corridors?***
- ***How can land use/site plan decisions support the recommendations and enhance the effectiveness of this access management plan?***
- ***What access guidelines should be adopted to help maintain safety and efficiency while still providing reasonable access to adjacent land uses?***

figure 1

Preparation of this Plan

To assist in the development of this plan a Steering Committee was formed with representatives from the City of Mt. Pleasant, Union Charter Township, MDOT, Isabella County Road Commission, Isabella County Planning/Development, and the DDA. The Steering Committee met regularly to review the issues, provide suggestions on draft recommendations and assist in obtaining comments from the public and local officials.

This plan was developed over seven months through a series of meetings with the Steering Committee. The process also included two public workshops/open houses held at Mt Pleasant city hall and Union Township hall – the first held on April 6, 2006 and the latter on June 29, 2006. Both of these open houses provided a presentation on the need for, and benefits of, access management in this study area. Large graphics were on display illustrating the preliminary access management recommendations. Comments and recommendations by the public, local officials and the MDOT staff were considered and incorporated into the final recommendations. A listing of the public comments and responses can be found in the appendix.

Role of Access Management

As noted, the goal behind this access management plan is to improve traffic operations and safety along the existing US-127 BR and M-20 corridors while retaining reasonable access to existing and future development along the roadways. Access management, in this situation, involves improving upon and preservation of the road's capacity through reducing or limiting the number of access points, careful placement and spacing of access points, and small scale road improvements to separate turning movements from through traffic.

The terms "access" and "access point" are used frequently throughout this document. Those terms refer to commercial driveways (ie. retail, office, industrial, etc.) and platted roadways or private roads but do not refer to driveways to individual single family homes, unless otherwise noted.

There are many short and long term benefits to this program, some of which are listed below:

- Gives MDOT, City, and Township the latitude to make future improvements with the least disruption on homeowners, businesses and the anticipated development pattern along the roadway.
- Preserves or improves the capacity of the roadway by locating/relocating access points where they will have the least disruption on through traffic flow.
- Reduces crash potential through careful placement and spacing of access points and median crossovers.
- Provides landowners with reasonable access to their property from Mission, Pickard, or M-20, though to meet the benefits above, in some cases the number of access points will be fewer or more indirect than previously allowed.
- Improves traffic operations and safety that will benefit everyone. Access management and other improvements along the plan corridors require a partnership

between the City, Township, MDOT, and the Isabella County Road Commission. One way to promote this collaborative approach is through improved coordination and communication between the MDOT and the two communities when reviewing development proposals.

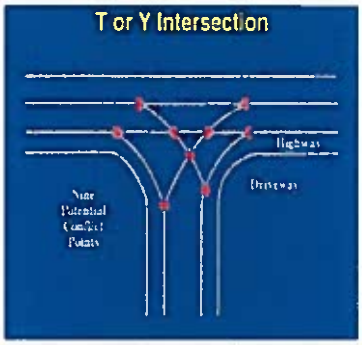
- Provides general background and information on the benefits of access management to assist Mt Pleasant and Union Township officials.

Realization of the benefits listed above can be accomplished through a variety of changes, both physical and regulatory. Key recommendations of this access management plan are listed below, and are explained in more detail in the subsequent chapters.

- Identify changes to existing access points to improve safety and efficiency of the roadway corridors. Such improvements, especially along Mission Street, include closure or consolidation of numerous existing access points to improve spacing. Specific recommendations are illustrated on a series of drawings for sections of the corridors.

- Gradual replacement of individual direct access points with access through rear service drives or shared driveways.

- Access for new development through service drives. The plan illustrates options, since the preferred location and alignment will depend upon the intensity of future development proposals. Generally, the deepest separation from the roadway is desired, but in some cases, a frontage road may be the most practical design.



Each new driveway adds to the number of conflict points along a roadway at which a traffic crash could occur.

- Establish access standards to help maintain safety and efficiency while still providing reasonable access to adjacent land uses. These standards should be applied to both retrofit existing sites and to new developments. This can be done through consideration of access issues as the City and Township review development proposals, through improved coordination with MDOT, and through adoption of access management standards into the two zoning ordinances.

Access Management – What is it?

Access management is a process that regulates access to land uses in order to help preserve the flow of traffic on the road system. Numerous studies nationwide have shown that a proliferation of driveways or an uncontrolled driveway environment increases the number of crashes, severely reduces capacity of the roadway and may create a need for costly improvements in the future. Areas where access management plans have been adopted and implemented by the communities and road agencies have resulted in 25-50 percent reductions in access-related crashes. Further statistical data is available in an MDOT access management publication called "Improving Driveway & Access Management in Michigan."

Access management can provide several benefits to motorists, communities and land uses along the US-127BR/M-20 corridors. Among the benefits, based on experience along other corridors and numerous studies are the following:

- Preserve roadway capacity and the useful life of roads;
- Reduce crashes and crash potential;
- Coordinate land use and transportation decisions;
- Improve access to properties;
- Decrease travel time and congestion;
- Improve air quality; and
- Maintain travel efficiency and related economic prosperity.

In addition to those measurable benefits, the public also benefits due to the reduction in roadway improvement costs and reduced environmental impacts. Land owners and developers benefit from the long term enhancement of property values and knowing up front that there are established access criteria thereby reducing the need for redesign and the likelihood of a lengthy site approval process.

"Numerous studies nationwide have shown that a proliferation of driveways or an uncontrolled driveway environment increases the number of crashes, can severely reduce capacity of the roadway and may create a need for costly improvements in the future."

Successful implementation of the plan's recommendations will require continued coordination between the two communities and MDOT. This document includes a draft corridor overlay zoning district that the City and Township have refined further for adoption.

Perhaps the most important result that comes out of this process will not be the access management plan itself. It may be the further recognition that good, timely communication between the Mt. Pleasant, Union Township, and MDOT is the key to a successful plan that will be implemented.

The following chapters discuss in detail the benefits and background of access management and the specific recommendations for this seven mile study corridor.

2. EXISTING ACCESS and LAND USE CONDITIONS

One of the primary initial tasks when developing an access management plan is to define the current access conditions and land use plans along the study area corridors. This section of the report outlines those current traffic and access conditions and land use issues. A brief description of the US-127BR and M-20 design and traffic characteristics within the study area follows.

Current Roadway and Access Characteristics

There is a wide variety of geometric, traffic, and access conditions along the study are sections of Mission Street, Pickard Street, and M-20 to the west. Cross sections range from two to seven lanes and there is a fairly wide disparity in daily traffic volumes.

There are typically two or three general development characteristics that need to be taken into account for most access management corridors. In general, there are areas that are currently undeveloped (and may stay that way for some time), areas that are relatively undeveloped but experiencing growth pressures, and areas that are already mostly or fully developed.

Subsequent chapters will outline proposed improvements and standards that the two communities and road agencies can use to improve upon or retain an efficient access system. In order to define those proposed improvements, field surveys were completed to identify existing locations or areas that have poor or substandard access conditions. These are outlined below, along with current roadway characteristics, in three general corridor sections; US-127 BR/Mission Street, M-20/Pickard Street from Mission to Summerton Road, and M-20/Remus Road from Lincoln Road west to Meridian Road. Clearly the first tow sections are very developed while the section of M-20 to the west is relatively undeveloped.

Mission Street (US-127 Business Route)

Roadway Characteristics

The Mission Street portion of the study area begins at Bluegrass Road and ends at Corporate Drive at the north end. The typical cross section throughout the corridor is five lanes, not including short right turn lanes provided at a few key intersections.

Recent traffic counts indicate that weekday daily traffic volumes on Mission range from approximately 17,000 vehicles on the north end up to about 32,000 vehicles in the Broomfield Road area. Speed limits range from 30 miles per hour in the central part of the

corridor up to 40 miles per hour towards each end. Mission Street/US-127BR currently has signalized intersections at the following cross streets:

- Bluegrass Road
- Broomfield Road
- Preston Street
- Bellows Street
- High Street
- Michigan Street
- Broadway Street
- Pickard Street

It should be noted that Mission Street has a relatively high number of crashes, with the block between Preston Street and Broomfield Street experiencing over 150 crashes in the last five years. Over 30 percent of those were directly related to driveway traffic movements, with that percentage likely higher if crashes at main intersections that were indirectly access-related were also taken into account.

Existing Access Conditions

Mission Street is considered a retrofit corridor in terms of access management. It is highly developed, with little or no undeveloped parcels within the study area. The existing access system is similar to many other older high volume/high development corridors around the state where sites were approved and constructed in the past without the current knowledge of the detrimental effects of poor access management. Although there are examples of good recent site plan/access decisions (eg. Walgreen's at Preston), there are many examples of substandard (by today's standards) access/driveway spacing, design, and numbers.

Existing access management deficiencies on Mission Street include the following:

- *Substandard driveway storage;* many of the commercial driveways along Mission have little or no internal storage (distance from Mission to first internal cross aisle or parking) that provides more efficient ingress/egress operations.

- *Poor intersection-to-driveway spacing*; there are examples of poor spacing between an intersection and an adjacent commercial driveway at almost every intersection along the corridor, several of these are gas stations but other sites/uses also have this issue that affects the operational safety of the intersection.

- *Poor driveway spacing and/or unnecessary second drive;* too numerous to mention again – many instances of driveways spaced too close together or sites that have more than one driveway that do not warrant a second (or more) access.

- *No internal cross access/service drive connections*; lack of internal connections between adjacent uses (either large or small businesses) can significantly affect Mission Street – appears in many cases to have been a conscious decision to block cross access in many cases.
- *Substandard driveway offset*; this currently exists at several locations, although it would be difficult in the past to align or offset driveways properly given that there are so many.
- *Parking/Access deficiencies*. At several spots, most notably on the eastern leg of the Mission/Preston intersection, where on-street, 90-degree parking is allowed well within the functional area of a signalized intersection.
- *Substandard driveway width*. Several locations have older very wide driveway openings that can lead to driver confusion, multiple access movements.

Pickard Street (M-20 – Mission Street to Summerton Road)

Roadway Characteristics

Pickard Street generally has a five-lane cross section between Mission and Summerton Road, with separate right turn deceleration lanes or tapers at a few locations. Traffic counts indicate that daily weekday volumes range from approximately 21,000 to 26,000 vehicles on Pickard in this section.

Speed limits in this subarea currently range from 35 miles per hour in the City section near Mission, 45 miles per hour from roughly Russell Street to the interchange, and up to 55 miles per hour out near Summerton. Along with the aforementioned Mission Street signal, Pickard's intersections with Brown Street, Isabella Road, and the two US-27 interchange ramps are controlled by traffic signals.

Existing Access Conditions

Pickard Street/M-20 is also very developed for much of its frontage although several of the more recent developed commercial sites have better access controls in place. By in large though, it is still considered predominantly as a retrofit corridor as there are many corrections to the existing access system that will need to be made over the coming years when opportunities arise.

There are several newer developments that the City or Township has approved, along with MDOT, that have better access design or location based upon the guidelines MDOT has now adopted and used on a regular basis. However, there are many examples of older access points with deficient design/location attributes.

- *Substandard driveway to intersection spacing;* numerous examples of poorly located driveways along Pickard at signalized cross roads and/or on those cross roads.

- *Poor driveway spacing;* many examples along the corridor, particularly on the south side across from the Meijer store, on the north side just west of Belmont, and on the southeast quadrant of the US-127/M-20 interchange.

- *Unnecessary second drives;* same locations as those noted above and several other locations.

- *Substandard driveway design/storage;* wide open commercial driveways, like the one on Florence Street on the south side of Pickard, too little driveway storage (distance from roadway to first internal parking/circulation) at numerous locations, typically older small commercial sites.

- *No internal cross access/service drive connections*; lack of internal connections between adjacent commercial uses –for example the two newer restaurants on the northeast quadrant of the Pickard/Brown intersection.

- *Substandard driveway offsets*; this currently exists at several locations, including the driveway to the medical office building that is offset from Betty Lane.

M-20 (Remus Road – Lincoln Road to Meridian Road)

Roadway Characteristics

This section of M-20 has a two-lane cross section with a center left turn lane added at its intersections with Lincoln and Meridian. Recent 24-hour traffic counts indicate that M-20 in this area carries approximately 13,000 vehicles on a weekday.

Currently, the M-20/Lincoln intersection is the only one in this part of the study area that is traffic signal controlled. At this time all other side roads are stop sign controlled. The speed limit is 55 miles per hour throughout this corridor section.

Existing Access Conditions

For the most part the M-20 frontage within the Lincoln-to-Meridian segment is relatively undeveloped, at least in a commercial sense. Small commercial development is focused at the two endpoints, with single family homes and/or residential plats sprinkled along the remainder of the corridor.

The Township has started the development of a service drive system along the north side of M-20 at Lincoln Road that is planned to be extended as sites develop. Existing access management deficiencies are limited to the following:

- *Poor driveway spacing;* A couple of locations, including the proximity of the McDonald's and adjacent bank driveways.
- *Unnecessary second drive/poor driveway offsets;* the small commercial site opposite the above uses does not warrant the need for two driveways, especially as one or both help create poor offset issues.

Existing Land Use Characteristics

Introduction

The US-127 BR/M-20 corridors, located on portions of Pickard, Mission, and Remus Roads, provide access to numerous businesses and residences in the City of Mount Pleasant and Union Charter Township. With access points come access management issues, especially in corridors such as US-127 BR and M-20, which are have already been developed into various uses with many independent land and business owners. When evaluating the impacts that individual land uses have on a corridor, the intensity of the land use generally dictates the amount of traffic, and consequently the amount of traffic impact on a main road, that a use generates. Other impacts to the environment around the roadway include noise and air quality, light, and other physical nuisances that go beyond the limits of the property. Intensive uses, such as commercial and industrial uses, generally produce greater levels of traffic and other off-site impacts. These impacts should be considered by communities when determining not only the future land use along these corridors, but also the degree of access management needed to promote safety and traffic flow.

The US-127 BR/M-20 study area is located in an area that has experienced sustained residential and commercial growth over the past several decades. This growth has contributed to traffic congestion throughout the study area in both the City and the Township. In addition, the areas to the west on Remus Road are experiencing increased development pressure and could experience congestion in the future.

Existing Land Use

Existing land uses along the corridors can be grouped into two main categories. These are built-out commercial corridor, which includes all of Pickard and Mission, and an undeveloped agricultural corridor on Remus Road in the western area of the Township. The following are detailed discussions of these two groups and the areas that lie within.

Fully developed commercial corridor in the southern area of Mission.

- **Existing Commercial Corridors: Pickard and Mission**

  The first of these two categories includes all of Pickard and Mission in the study area. These connected roads have been developed over the last several decades and include short blocks and narrow, single-business parcels scattered throughout.

  The areas close to the interchanges on the east and south ends have seen some larger commercial developments, including strip centers, hotels, and large shopping centers.

Multiple driveways on Pickard just east of US-127 lead to a variety of commercial uses.

Pickard (M-20). Uses along Pickard include manufactured home sales, hotels, gas stations, sit-down restaurants, movie theater, large-scale retail and grocery, fast food, and a wide range of other auto-oriented businesses. There are also several single family homes and vacant lots on the south side of Pickard. The eastern end of Pickard (east of the freeway) has a large home improvement store, but also has vacant acreage near the business school and hotels near the Township line.

Commercial development along Mission brings pavement right up to a lot line.

Mission (US-127BR/M-20). Uses along Mission vary greatly but are generally retail and office commercial. The north half of Mission has the shortest blocks as well as the narrowest parcels. Many individual businesses have been built along this stretch of roadway, often very close to the right-of-way and with little room for parking. Progressing to the southern end of US-127 BR, there are increasingly larger commercial developments, with multi-tenant commercial centers and chain restaurants. On the east side of Mission from north of Bluegrass to US-127, large retailers including JC Penny, Target, and WalMart are incorporated into disjointed shopping centers. In

this same southern area, the west side of Mission consists of commercial parcels sandwiched between the roadway and the Central Michigan University Main Campus.

Development adjacent to Mission includes on-street parking for several commercial uses.

- **Undeveloped/Agricultural Corridor: Remus Road**

  The second category refers to Remus Road, located west of the City limits and in a primarily agricultural area of the Township.

  With the exception of small commercial uses at Lincoln and Meridian, the balance of this area is large tracts of agricultural land and larger-lot residential subdivisions. There is pressure near Lincoln for expanded commercial on the north and south sides of M-20.

Agriculture dominates the landscape on Remus west of Lincoln.

Future Land Use and Influence on Transportation

Planned future land uses vary from one community to another and are driven by development patterns, infrastructure and the desired community character. A composite map of the study area's future land use is illustrated in Figure 2 in the *Study Area Future Land Use Map*. The future land use adjacent to these corridors will have a significant impact on future traffic patterns, flow, and congestion. Examining the configuration of future land use categories can help drive both site-specific and corridor-wide policies for Access Management. The following are detailed discussions of the existing future land use along the various corridors as well as any adjustments recommended to improve traffic safety and flow.

- **Existing Commercial Corridors: Pickard and Mission**

The Pickard and Mission corridors are both planned for commercial land use. This pattern lends itself to a high number of vehicle trips, many access points, and abundant signage. The south end of Mission also abuts the University and its corporate park. Implementation of Access Management recommendations and policies will be critical to making these roadways safe to vehicle and pedestrian traffic while promoting flow and increasing capacity.

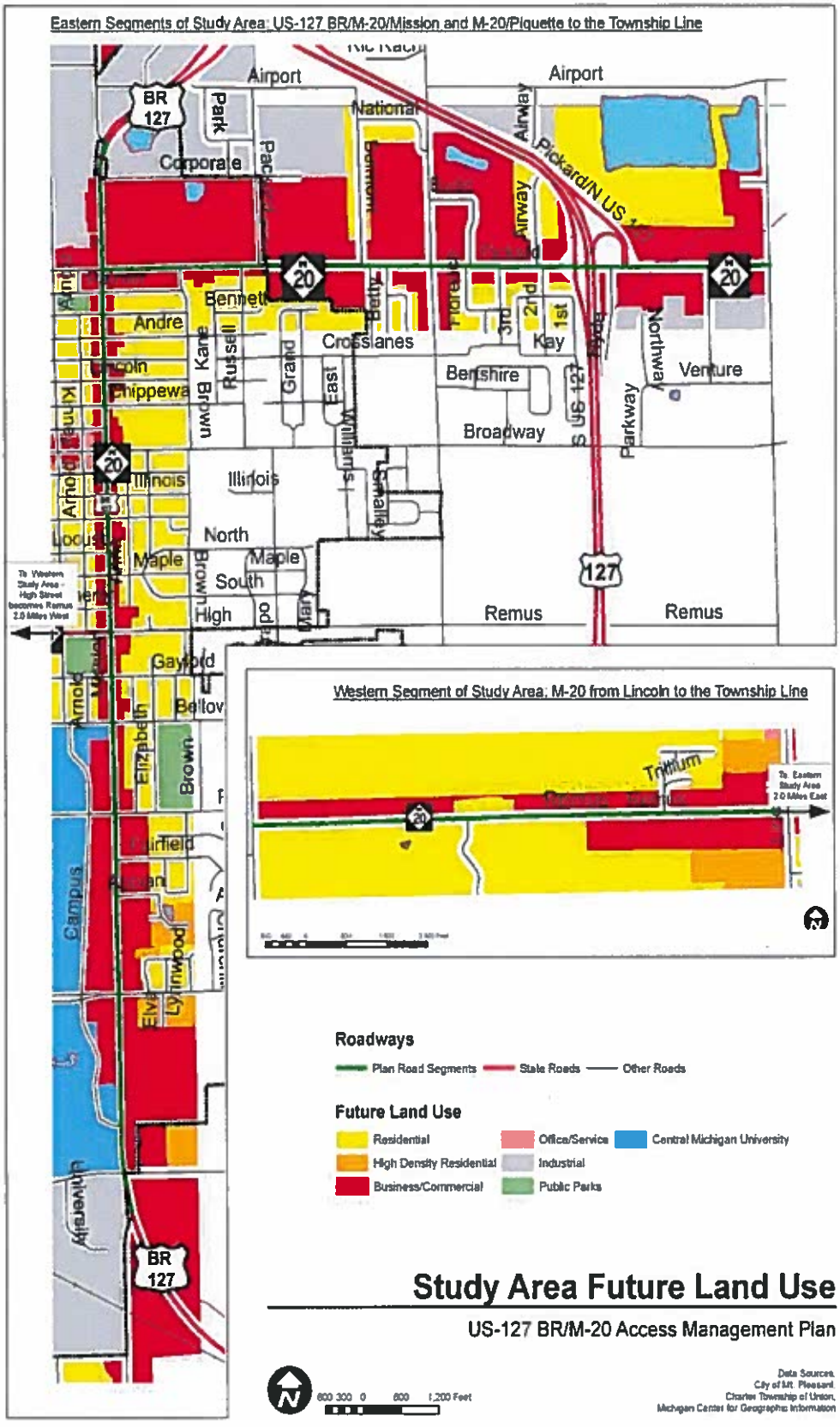

Eastern Segments of Study Area: US-127 BR/M-20/Mission and M-20/Piquette to the Township Line
Airport
BR 127
Park
Corporate
National
Airway
Pickard/N US-127
Bennett
Andre
Lincoln
Chippewa
Kane
Russell
Brown
Grand
East
Crosslanes
Berkshire
Broadway
Kay
1st
2nd
3rd
Northway
Venture
Parkway
Illinois
North
Maple
South
High
Remus
Gaylord
Bellow
Campus
University
Western Segment of Study Area: M-20 from Lincoln to the Township Line
Trimum
Roadways
Plan Road Segments
State Roads
Other Roads
Future Land Use
Residential
High Density Residential
Business/Commercial
Office/Service
Industrial
Public Parks
Central Michigan University
Study Area Future Land Use
US-127 BR/M-20 Access Management Plan
600 300 0 600 1,200 Feet
Data Sources
City of Mt. Pleasant
Charter Township of Union,
Michigan Center for Geographic Information

FIGURE 2

The area on the south end of Mission is also experiencing significant commercial and high-density residential development. Managing access and providing easy routes to signalized intersections for left turns will help maintain safety.

- **Undeveloped/Agricultural Corridor: Remus Road**

  The Remus Road corridor currently has commercial future land use on the north side of the road for it's entire length, and a area of planned commercial on the south that goes about 1/3 of the way to the Township's western boundary.

  The depth of these planned commercial zones will be a key component to managing access for future development. Currently the planned area on the north side of the road is only about 300 feet deep. With an expansion of the road, front shared access drives, and landscaping, the depth of these areas is too shallow and should be extended to the north by at least 150 feet. If area of planned commercial is a concern, reducing the length of commercial on Remus' north side in favor of a narrower, deeper area would allow for a planned, coordinated development with plenty of room for road expansion, internal access and landscaping.

  The planned commercial on the south side of Remus is closer to 600 feet, and should be able to accommodate an access pattern that limits any development to only one or two access for the entire length of M-20.

Each type of land use creates traffic that adds to the existing through traffic along the highway. For example, a typical single-family home generates about ten vehicle trips per day (5 in, 5 out), where a commercial use located on a similarly sized lot may generate as many as fifty or more trips in an hour.

A unique aspect of land use and zoning decisions is the impact a decision in one community can have on the other communities along the corridor. Traffic and other effects of commercial development are not constrained by community boundaries. Therefore, information on major planning and zoning changes being requested along the corridors should be shared with the other community and appropriate agencies.

"A unique aspect of land use and zoning decisions is the impact a decision in one community can have on the other communities along the corridor. Traffic and other effects of commercial development are not constrained by community boundaries."

3. ACCESS MANAGEMENT STANDARDS

Based upon the analysis of existing conditions and constraints, and review of MDOT, national, local, and other states access guidelines, the access management plan for the US-127BR/M-20 study area was developed. This chapter summarizes the basic design standards that should be used by the City of Mt. Pleasant and Union Charter Township in future access deliberations along the study area corridors and other corridors where appropriate.

Access Management Standards

Since there is a wide disparity in the current and planned future development along the US-127BR/M-20 corridors, it is impractical to impose driveway standards uniformly throughout the study area. Design or spacing criteria applicable to the developed portions of study area on Mission Street and Pickard Street would be less than ideal for the relatively undeveloped M-20/Remus Road subarea. Standards should provide sufficient flexibility to be effective and equitable as well as meet requirements set by MDOT and administered by the City, Township and/or Isabella County Road Commission.

The introduction of this report mentioned several benefits that typically result from consistent use of an access management plan. To achieve those benefits, access standards must recognize the following principles:

- ***Design for efficient access.*** Identify driveway design criteria that promote safe and efficient ingress and egress at driveways.
- ***Separate the conflict areas.*** Reduce the number of driveways, increase the spacing between driveways and between driveways and intersections, and reduce the number of poorly aligned driveways.
- ***Remove turning vehicles or queues from the through lanes.*** Reduce both the frequency and severity of conflicts by providing separate paths and storage areas for turning vehicles and queues.
- ***Limit the types of conflicts.*** Reduce the frequency of conflicts or reduce the area of conflict at some or all driveways by limiting or preventing certain kinds of maneuvers.
- ***Preserve public investment and the integrity of the roadway.*** Acknowledge that substantial public funds have

"Improved driveway spacing simplifies driving by reducing the amount of information to which a driver must process and react."

been invested to develop the corridor to move traffic safely and efficiently.

- ***Provide reasonable access.*** Recognize that property owners have an inherent right to access public roadways, although reasonable access may be indirect in some instances.

Correct driveway spacing simplifies driving by reducing the amount of information to which a driver must process and react. Locating a driveway away from the operational area of a signalized intersection decreases the potential for congestion and accidents for both through traffic and vehicles using that driveway. Adequate spacing between driveways and unsignalized roadways (or other driveways) can reduce confusion that otherwise requires drivers to watch for ingress and egress traffic at several points simultaneously while controlling their vehicle and monitoring other traffic ahead and behind them.

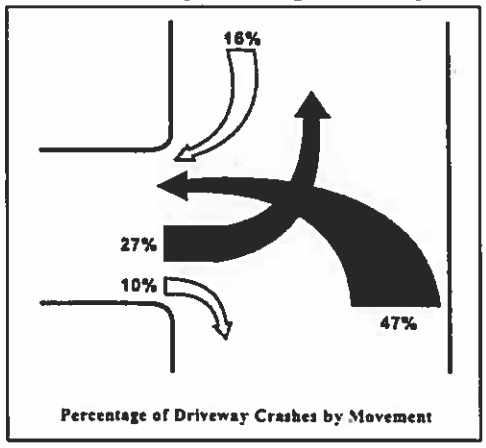
The following sections discuss a few of the basic access design criteria that were used during the analysis of the US-127BR/M-20 study area. The specific way in which these criteria or standards applied to the corridor is then outlined in the following chapter.

Access Design Parameters

Access management involves a series of tools to limit and separate traffic conflict points, separate turning volumes from through movements, locate traffic signals to facilitate traffic movement and limit direct access on higher speed roads and thus preserve capacity and improve safety. The following is a summary of what access management standards would involve.

- **Number of Access Points:** The number of access points to a development should be limited to one where possible. The number of driveways allowed along Mission Street and the two M-20 subareas will affect traffic flow, ease of driving, and crash potential. Every effort should be made to limit the number of driveways; and encourage access off side streets, service drives, frontage roads, and shared driveways. Along the study corridors, driveways should be properly spaced from one another and from intersections with other major streets.

  Access to a parcel should generally consist of a single driveway, which should be shared with adjacent parcels wherever possible. Certain developments generate enough traffic to consider allowing more than one driveway and larger parcels with frontages of at least 660 feet may also warrant an additional driveway. An additional driveway should only be considered following a traffic impact study that demonstrates the need for additional access and, where possible, the second access point should be located on a side street or be shared with adjacent uses.



Data from the National Highway Institute indicates that most driveway crashes involve left-turn movementss

- **Driveway Spacing from Intersections:** Driveways need to be placed such that there is adequate spacing from an intersecting street to ensure that traffic entering or exiting a driveway does not conflict with intersection traffic. Spacing between a proposed

driveway and an existing public street intersection is an important design element that must be identified. Typical standards take into account the type of roadways involved (trunkline, arterial, etc.), type of intersection control, and type of access requested. In most cases, there should be no driveways developed within the functional boundary of a given intersection unless the size of that parcel and other constraints do not provide a good alternative.

For a state trunkline roadways such as Mission Street that have speed limits of 30 to 40 mile an hour, full movement driveways onto Mission should typically be a minimum of at least 230 away from a signalized intersection (460 feet in 40 mph zones) and 115 to 230 feet away from unsignalized intersections. Such distances are typically not attainable in highly developed/small parcel roadways such as Mission Street, and to a lesser extent on Pickard Street.

In locations where existing parcel constraints limit that spacing (retrofit areas – most of Mission and Pickard), driveways onto Mission or Pickard should be placed as far as possible away from the intersection. In most areas of the corridor, spacing of driveways on the side roads should be at least 250 feet from the nearest edge of the trunkline pavement.

- **Driveway Spacing from Other Driveways:** Driveways also need to provide adequate spacing from other driveways to ensure that turning movement conflicts are minimized. Generally, the greater the speed along the roadway the greater the driveway spacing should be.

  Spacing standards recommended for this study area corridor are based upon MDOT guidelines adopted several years ago (that are based upon numerous national references) and require the following minimum distances between driveways (centerline to centerline) given a measured average speed:

Posted Speed (MPH)	Minimum Driveway Spacing
25	130 feet
30	185 feet
35	245 feet
40	300 feet
45	350 feet
50+	455 feet

  Again, it will be difficult for sites along the two retrofit corridor sections to meet these standards, so the primary goal is to close/combine driveways that at least maximize driveway spacing as opportunities arise.

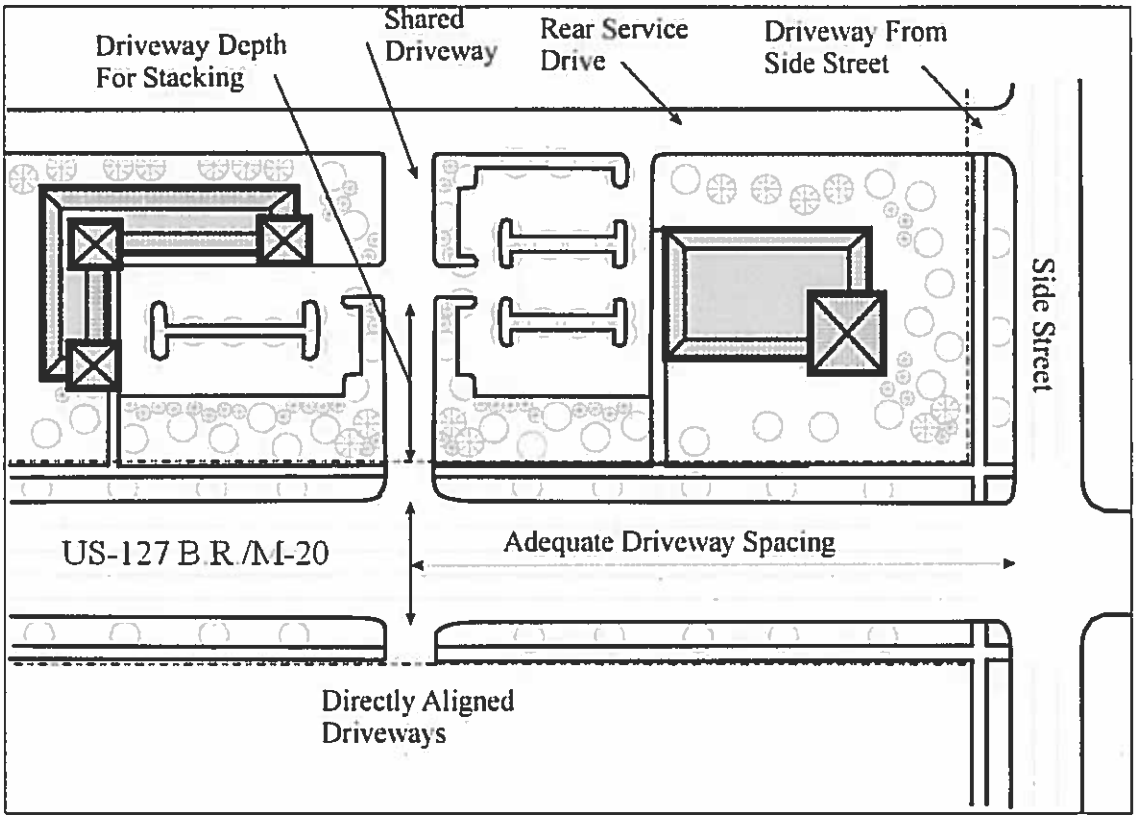
- **Driveway Alignment:** In order to prevent left turn conflicts, driveways should be aligned with those across the street or offset a sufficient distance to prevent turning movement conflicts. Minimum offsets on US-127BR and M-20 should be determined by posted speeds and range from 325 feet for a 30-mile per hour zone to 750 feet in a 55-mile per hour zone.

- **Shared Driveways:** Sharing or joint use of a driveway by two or more property owners should be encouraged. This will require a written easement from all affected property

owners during the site plan approval process. Where a future shared access is desired, the developer should indicate an easement that will be provided to future adjacent uses.

- **Alternative Access:** Alternative access should be encouraged, such as shared driveways, rear service drives or frontage roads. Where parcels have frontage on Mission Street/Pickard Street/M-20 (west) and a side street, access should be provided off of the side street. Certain turning movements should be limited, especially left turns, where safety hazards may be created or traffic flow may be impeded.

- **Service Drives:** Frontage drives, rear service drives, shared driveways, and connected parking lots should be used to minimize the number of driveways, while preserving the property owner's right to reasonable access. In areas within one-quarter mile of existing or future signal locations, access to individual properties should be provided via these alternative access methods rather than by direct connection to a major arterial.



In areas where service drives are proposed or recommended, but adjacent properties have not yet developed, the site should be designed to accommodate a future service drive, with access easements provided. The City/Township/MDOT/ICRC may temporarily grant individual properties a direct connection to an arterial road until the frontage road or service drive is constructed. This access point should be closed when the frontage road or service drive is constructed.

The safety and efficiency of these types of facilities (and shared driveways) is only as good as their design allows. An important but often overlooked design aspect of that design is the "storage" provided at the access driveways. This is the distance between

the main road and the service drive or the first internal cross access. This storage needs to be deep enough to accommodate expected vehicle queues thereby reducing the chance of blocking internal circulation on the service drive. The correct length is also needed to reduce the possibility of entering vehicles backing up into the main road due to internal congestion. Correct location and maintenance of traffic control signs and pavement markings are essential to a smooth operation of these driveways.

There are several factors that affect the determination of the best alignment and depth of a service drive. Those factors include the existing right-of-way at that location on US-127 BR or M-20, the depth of the adjacent parcels, and the location of existing buildings in developed or partially developed corridor sections. For drives providing access to two small commercial uses, the storage should be at least 40 feet. For drives providing access to more than two small commercial uses, the storage should be at least 60-100 feet and potentially much more than that (100 - 300 feet) depending upon the trip generation characteristics of the existing/proposed long term land uses to be served.

"Shared access drives, service drives or frontage roads all serve to minimize the number of conflict points along a corridor while still providing reasonable access to the adjacent land uses."

Rear service drives are often preferred because they do not create issues with driveway depth. They also facilitate placing parking to the rear of buildings and moving the buildings closer to the road. Rear service drives also have the added benefit of facilitating integrated access and circulation with development further to the rear. On larger sites, these rear service drives can be designed to function similar to roads interconnecting uses and sites.

Service drives are usually constructed and maintained by the property owner or an association of adjacent owners. The service drive itself should be constructed to public roadway standards in regard to cross section (ie. 22-30 feet wide) materials, design, and alignment. The design is often predicated upon the type and size of vehicles it will need to accommodate including delivery trucks. However, an easement that defines a service drive does not need to be nearly as wide as a public street right-of-way. Since, by definition, these internal roadways will be serving several uses with numerous driveways, additional uses such as on-street parking (temporary or otherwise) should be allowed only under special circumstances.

- **Sight Distance:** There are only a few sight distance limitations in the study area and those are located in the M-20/Remus Road subarea. The minimum sight distance required for a vehicle to enter or exit the traffic stream on an arterial from a side street or driveway is determined by MDOT and/or the iCRC at the time of an application for a driveway permit. The Township should coordinate with the MDOT at the time of site plan review to ensure that this sight distance requirement can be met. If this distance cannot be met on the site, indirect access through another property should be sought.

Implementation of the above access recommendations will help to preserve the capacity, safety, and useful life of the US-127 BR and M-20 corridors. Travel time and congestion will be decreased and the potential for crashes will be reduced. While individual land owners may see the regulations as restricting access to their property, over the long term a well managed access system will improve access to properties and maintain travel efficiency, thereby enhancing economic prosperity of local businesses. A strong access

management program also has the benefit of closely coordinating land use and transportation decisions to improve the overall quality of life in the two communities. The design of the access points can be as important to the overall operation of a corridor as their location. MDOT's driveway design standards can be supplemented by requirements adopted by the City or Township along the study corridors. Design standards usually define geometric requirements regarding driveway widths, corner radii, and taper lengths to name a few.

4. ACCESS MANAGEMENT PLAN

The access management plan developed for the US-127BR/M-20 study area was directly and indirectly based upon both state and nationally recognized standards. Developing standards to be used for future access considerations are only part of the picture. The other key element for any access management plan is to identify improvements to existing access systems that will reduce crash potential and provide better efficiency within each of the corridor sections. These corrections are typically referred to as retrofit access improvements.

As discussed during several of the Steering Committee and public open house meetings, in several areas of the corridor it may be all but impossible to retrofit a corridor section to meet current spacing guidelines for new driveways. On roadways such as Mission and Pickard Streets, however, the goal still is to minimize the number of driveways as much as possible. It should be recognized that many of the retrofit improvements recommended in the plan will only become implementable when an owner or developer approaches Union Township, Mt. Pleasant, or MDOT during another approval process. Others, at least in the City, may be implemented through the newly proposed DDA-funded driveway closure process.

It should be recognized that many of the retrofit improvements recommended in the plan will only become implementable when an owner or developer approaches Union Township, Mt. Pleasant, or MDOT during another approval process.

This plan is a flexible document that is subject to adjustments and improvements as the study area corridors develop or redevelop. Although the basic design parameters should remain in place, exact locations and configurations of driveways and service/frontage roads may shift as development plans come into focus. This is especially true for undeveloped areas within the study corridors.

The recommendations of the access plan are largely based on parcel configurations and future land use plan in existence at the time this plan was prepared. Property combinations and unified development of small parcels is strongly encouraged. In addition, existing parcels should only be divided if a coordinated access system is retained through signed agreements and illustrated on a plan.

The following sections and accompanying figures outline how the recommended access management standards are applied within the overall US-127BR/M-20 study area. As discussed in the previous section, the average speed of traffic along a given corridor is one of several design parameters used to develop driveway spacing standards. Other factors

that came into play include the roadway design types, intersection traffic control type, sight distance concerns, physical constraints and the type and size of potential traffic generators.

Service drives and/or internal site connections may play an integral part of the future access management system along the study area frontage. These will likely be typically located in two general areas; where there are significant sections of commercial or developmental areas that have not yet been developed (M-20/Remus Road), or as shorter internal connections in developed areas. The plan illustrates a few locations for these facilities and the variability in alignment that service drives can take.

The Access Management Plan is illustrated in a series of 14 "maps." These show the final recommendations that resulted from numerous discussions with the Steering Committee members and input from other interested/affected obtained at the two public open houses (where presentation-size versions of the maps were used). The following discussions regarding the access management plan recommendations are summarized on a map-by-map basis. The discussion and graphics start with Mission Street (at southern end), then Pickard Street/M-20, and conclude with M-20/Remus Road from Lincoln west to Meridian Road.

Mission Street (US-127 BR) – Bluegrass Road to just north of Bellows Street

The access management improvements recommended for this section of Mission Street are illustrated on Figures 3, 4, and 5. Given its intensely developed nature, the plan is focused on numerous recommendations for addressing existing driveway/access issues.

Recommended retrofit improvements include many proposed driveway closures of older commercial driveways and related development of shared drives, especially on the block between Broomfield and Preston where excessive poorly spaced driveways dictates the need to reduce the number of access points from 35 to 26 . It's not a coincidence that this block had the highest number of crashes (150) along Mission Street over the last five years. It should be noted that using a strict application of MDOT's access management guidelines would result in reducing the number of access points to only 12.

There are several recommendations to develop better internal connections. The existing Target site is a good candidate for such connections, as are several of the restaurants and other businesses that line the west side of Mission Street north of Broomfield. The plan essentially calls for the removal of many/all of the various types of physical constraints (curbs, rails, fencing, etc) that currently block needed connectivity that will help reduce ingress/egress movements on Mission.

The need for better internal connectivity is also shown by the plan's recommendations for short service drive connections. One example within this subarea is on the west side of the short Appian Way-to-Fairfield Street block. If/when the hotel site redevelops, a rear service

drive should be constructed to provide access to that site as well as to adjacent sites and the two streets.

Recommended closures include several driveways that are very close to a key intersection and well within its functional area. The gas station located on the northeast quadrant of the Mission/Broomfield intersection is a classic case of an older 4-access point design that is/was common. The plan calls for closing combining two driveways that are immediately adjacent to the signalized intersection, revising one to a right-in only, and sharing a driveway with the small commercial use on the north side. Access to the site will still be very good (including tanker circulation) and the changes will benefit the oft-congested adjacent intersection.

Typical Driveway Closure Costs

Closure Type	Estimated Cost*
Close/Remove Existing Commercial Driveway	$5,000 - $10,000
Close/Remove Two Driveways and Construct Shared Driveway	$15,000 - $25,000

**Costs typically borne by site owner if/when site redevelops/improves, unless planned MDOT roadway improvement project provides funds.*

As noted in the Existing Conditions chapter, on-street parking is also an access/safety issue, especially when it occurs within the functional area of a signalized intersection on Mission Street. The plan recommends that all on-street parking currently located on Preston Street just east of Mission be removed.

Mission Street (US-127 BR) –Just north of Bellows Street to Corporate Drive

The recommended improvements to the access system for this stretch of Mission Street are illustrated on Figures 6, 7, and 8. Much like the southern half of this corridor, the recommendations run the whole gamut of potential access solutions for a densely developed corridor.

The plan's recommendations include closing and/or combining a total of 35 existing access points along this subarea. Some of these are just unused curb cuts, but most are unnecessary second driveways or combined driveways that are too close together. Nine of the recommended closures are in the short Gaylord-to-High section. Several closure or driveway revision recommendations also address locations where existing drives are too close to a major intersection.

For instance, almost anything that can be done to reduce/eliminate access within the functional area of the Mission/Pickard intersection should be pursued, given the high traffic volumes at that location. That includes pursuing internal access between the commercial sites on the northeast corner of the intersection and the existing Meijer site. Its our understanding that one of the two recommended internal connections is already being planned/approved.

There are also several locations where the plan addresses side street access that is too close to the intersection (including on-street parking) and in one instance (at Wisconsin Street) where the recommendations include narrowing an existing very wide commercial driveway.

The commercial parcels along this section tend to have less depth than other areas so service drive recommendations don't come in to play much. There are recommendations, however, for internal connections between adjacent commercial parking areas that will help reduce conflicts on Mission Street. Also, continued or expanded use of the alley that runs parallel to Mission along the west side should be promoted – likely tied to potential widening of that alley if the opportunity arises.

Pickard Street (M-20) – Mission Street to Summerton Road

Figures 9 through 12 illustrate the plan's access management recommendations for this section of the study area. Although there are recommendations for the few undeveloped parcels, they are largely retrofit-type recommendations given the predominantly developed nature of the Pickard Street corridor.

Since this corridor's development is relatively newer than that of Mission Street, the number of recommended driveway closures per mile due to driveway spacing is somewhat less, although there still are subsections where this is an issue and is addressed. The section just west of Belmont on the north side is recommended for closure/combining of at least 4 of the eight existing driveways located within 650 feet. Of particular importance is the area next to the US-127/M-20 interchange. In order to provide a safer and more efficient roadway section at this key hub, recommendations include closing several existing commercial driveways and making better use of existing main access points, specifically the signalized northbound off-ramps/Home Depot intersection.

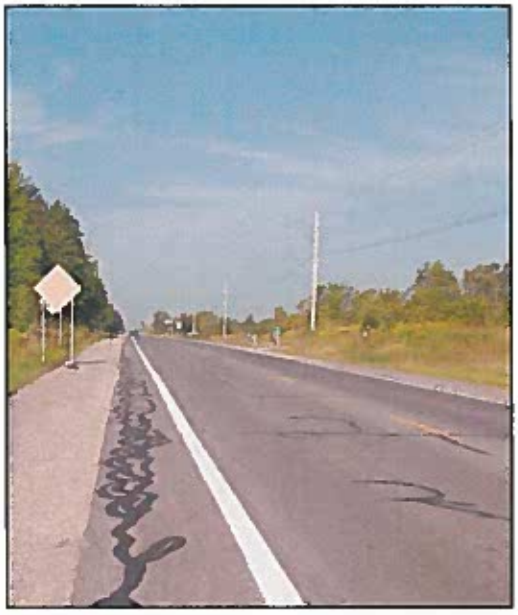
Recommendations include development of short rear service drive segments at a couple of locations; one behind the sites on the northeast corner of the Pickard/Brown intersection, and one located behind the northwest corner parcels at the Pickard/Isabella intersection. Both of these are designed to provide indirect access to a signalized intersection, thereby providing for safer left-turn movements.

Existing poor driveway offsets are also addressed. Current inbound left-turn conflicts observed in the opposing but offset college and Enterprise Drive "intersections" can be eliminated if the main driveway to the college is relocated to align with Enterprise. Combining restaurant drives in the section immediately east of Mission will also address current driveway offset issues. The plan notes that, in that same area, Palmer Street is functioning fairly well as a rear service drive type of facility.

M-20 (Remus Road) – Lincoln Road west to Meridian Road

As noted in other chapters, this section of the overall study area is quite different, mostly in terms of the level of development. Therefore, although there are a few retrofit type of proposed access changes, the recommendations are more oriented towards defining how and where future commercial or residential plat access should occur.

As depicted in the following pages (Figures 13 through 16), retrofit recommendations are limited to a couple of commercial driveway closures or relocations at both ends of this subarea.



In terms of future access to commercially planned areas, recommendations include pursuing a combination of shared access points, good spacing of those access onto M-20, and the continued development of rear or front service drives. Current land use plans provide for fairly good depth of commercial development, or enough so to provide room enough for construction of service drives that can serve multiple sites with fewer drives to the higher speed (55 mph) highway.

Those access spacing recommendations of 660-800 feet also apply to any potential future residential plats that may be pursued towards the western portion of this subarea. As with any such development, individual home access should be from internal plat streets, not directly onto M-20.

General Land Use Recommendations

Although access management is primarily intended to improve motor vehicle traffic flow, it can support transportation demand management by integrating transportation and land use planning, and by improving transportation options. Improved transportation options result in a more diverse and flexible transportation system that can accommodate variable and unpredictable conditions. A goal is to develop plans for US-127 BR and M-20 that will allow rational development while maintaining or improving safety and mobility along an existing roadway. This can be a powerful tool to direct development or redevelopment along the study area corridors. Access management can increase the capacity of a corridor to accommodate development, and can minimize development pressure in areas where development is not planned.

Land use planning efforts that can be used to support access management standards on Mission Street, Pickard Street, and M-20 to the west include encouraging clustered development (M-20 west), creating more pedestrian-oriented street designs, improved connectivity between development parcels, and road space reallocation to encourage efficiency. Road space reallocation involves shifting more road space to specific transportation activities, and managing roadways to encourage more efficient and equitable transportation. It is a method of prioritizing transportation to favor higher value trips and lower cost modes. Road space reallocation can involve strategies ranging from parking and sidewalk management and pedestrian improvements, to speed reductions and traffic calming. Road space reallocation can be particularly appropriate on a congested roadway such as Mission Street, since a vehicle's road space requirements increase with its size and speed. Motorists impose far more congestion on other road users than people who travel by other modes.

Recommendations

General land use strategies that can be used to accomplish access management strategies on one or more of the study corridor subareas include:

- **Establish future right-of-way needs for the corridor:** Although the right-of-way width appears to be sufficient at this time on M-20 to the west to accommodate recommendations of this plan, it should be determined whether additional right-of-way may be needed in the future to provide for future roadway and access improvements. Future cross sections for the roadway should gain agreement between MDOT and the Township. Specific issues that should be considered in establishing future right-of-way needs (widths) include:

  - Allow for variations in road location, based on existing development and natural elements which the Township may wish to preserve;
  - Accommodate drainage needs and topographical changes;
  - Accommodate operational features such as turn lanes at intersections and potential transit facilities; and
  - Flexibility in road design to allow for bike lanes, sidewalks, buffer strips between the curb and sidewalk, etc.

- **Increase minimum lot frontage along the corridors:** There exist multiple areas along the corridor that are undeveloped, mostly within Union Township on M-20/Remus Road. Minimum lot width requirements should be examined to insure future lot splits are not too narrow to meet frontage requirements based on access spacing standards. In particular, minimum lot widths within the overlay district should be between 400-600 feet in order to meet the desired spacing requirement between access points. This minimum lot frontage can be varied if one or more of the following is provided:

  - Provisions are made to share access between parcels; and/or
  - A determination has been made that topographic conditions preclude the ability to meet the driveway spacing standards.

- **Adjust front yard setback requirements:** Front yard building setbacks within the overlay district should account for future right-of-way needs and access options. One option is to establish setbacks measured from the centerline of the road. In cases where a service drive and/or frontage road is being provided, a minimum of eighty (80) feet is needed between the M-20 centerline and the pavement of the service drive/frontage road. In order to minimize disruption and preserve areas for future right-of-way, setback requirements could be increased with no detention/improvements between the existing right-of-way and parking and building.

While there is no set time for implementing access management standards, the pace of development or redevelopment within the study area often determines the schedule for implementation. Access management standards within the US-127BR/M-20 Overlay District should be implemented by evaluating proposed access for each new or redeveloping property independently to determine its relationship to corridor plans and policies.

5. ADOPTION and USE of the PLAN

Successful implementation of the recommendations in the US-127BR/M-20 Access Management Plan requires a partnership between the City of Mt. Pleasant, Charter Township of Union, and MDOT. This requires that the City and Township Planning Commissions, elected bodies and zoning boards of appeals members be aware of the benefits of access management and their role in its implementation.

A coordinated and comprehensive access management approach is essential if future development and redevelopment in the study area is to be accommodated and traffic safety and flow in the area is to be improved. Development decisions along US-127BR/M-20 are under the purview of several agencies. The City and Township have jurisdiction over land use planning, zoning, site plan and subdivision review outside the US-127BR/M-20 rights-of-way and full jurisdiction on side streets. The City of Mt. Pleasant, the Isabella County Road Commission and MDOT, have control over improvements within the US-127BR/M-20 rights-of-way.

One technique to help implement the Plan is to amend the local zoning ordinance to acknowledge the special standards and review procedures for the US-127BR/M-20 corridors. Part of the Access Management Plan project is to craft a zoning ordinance amendment for the City and Township and assist with having them adopted. This process will continue after the completion of this Plan.

The US-127BR/M-20 overlay zoning districts would be placed over the existing zoning regulations for all parcels with frontage along US-127BR/M-20 and along intersecting roads within three hundred fifty (350) feet of the US-127BR/M-20 rights-of-way. For example, if the current zoning is residential, the uses permitted in that zoning district, the dimensional standards (setbacks, height, etc.) and other regulations would still apply, but the access spacing and circulation design standards of the overlay district would also apply.

The focus of the overlay zone is a set of access management standards. Access management is a set of proven techniques that can help reduce traffic congestion, preserve the flow of traffic, improve traffic safety, minimize crash frequencies, preserve existing roadway capacity and preserve investment in roads by managing the location, design and type of access to property. More than one technique is usually required to effectively address existing or anticipated traffic problems.

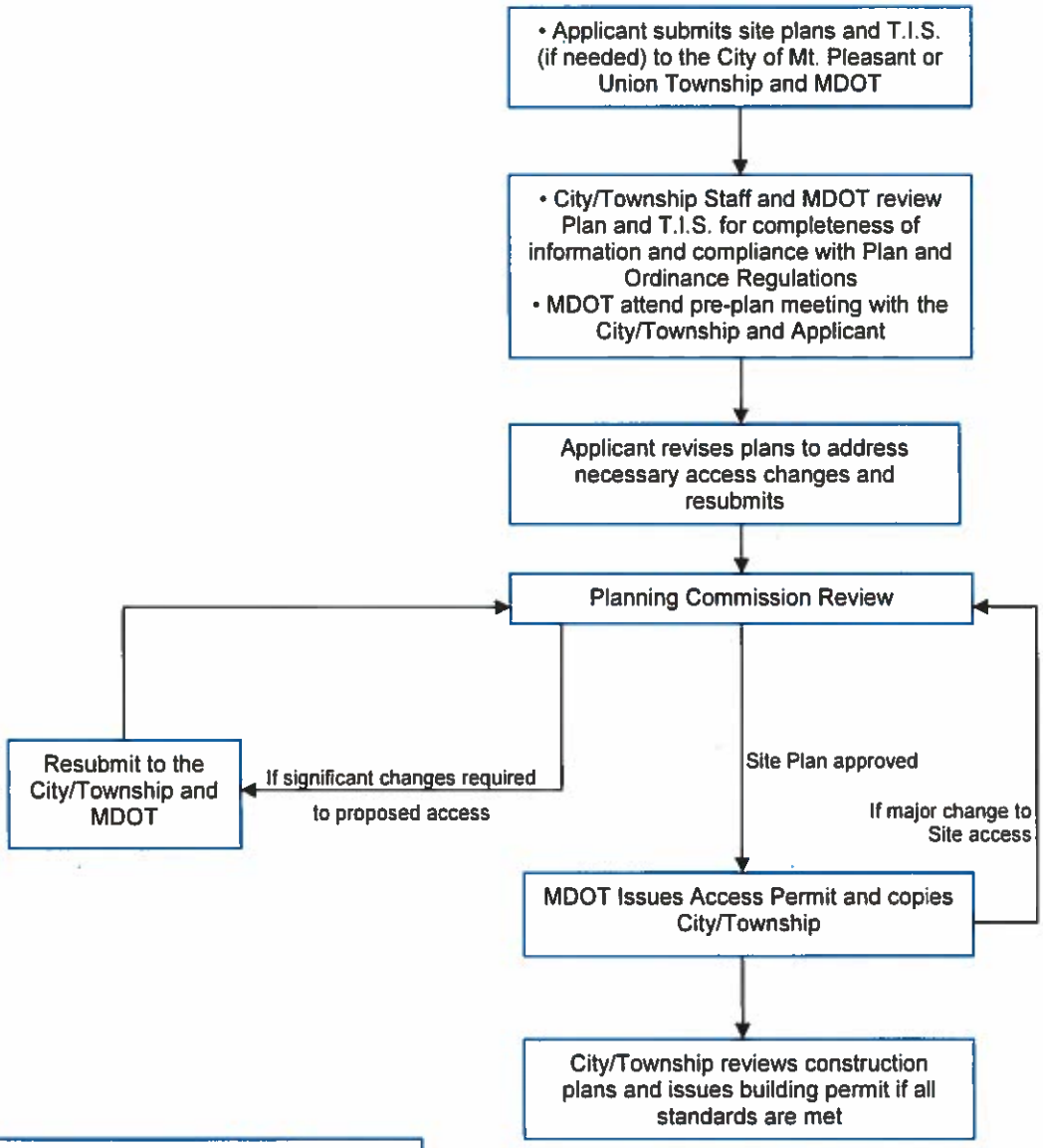
Not all sites will be able to meet all of the access management standards, particularly older sites with existing development. In order to address these situations the ordinance provides the authority to modify the standards on a case-by-case basis, with guidance on a site-specific scale coming from the recommendations outlined in this Plan.

The ordinance also requires traffic impact studies be performed for larger developments that have the potential to generate significant volumes of traffic. These studies would evaluate the impact that a proposed development will have on the road system and identify mitigation to offset the impact. The ordinance makes reference to the handbook "Evaluating Traffic Impact Studies, a Recommended Practice for Michigan," developed by the MDOT and Tri-County Regional Planning Commission as the required methodology for completing the study.

The flow chart illustrated on Figure 17 on the next page outlines the recommended process to be followed in review of any development proposal along the US-127BR/M-20 corridors. It provides for a coordinated review by the City of Mt. Pleasant, Union Charter Township, and MDOT (could be revised to include the Isabella County Road Commission for instances where side road access is an issue). The intent of the process is to ensure that the local unit's of government review of the site plan design and MDOT's access permit process is coordinated to implement the recommendations of this plan. The process provides for a feedback loops between the planning commission and MDOT as modifications are made to access and circulation.

To continue the implementation of the US-127BR/M-20 Access Management Plan, the Steering Committee should continue to meet on a regular basis. This will provide a forum to discuss and coordinate major development proposals, traffic impact studies, access issues, right-of-way preservation and roadway cross-section designs, rezoning proposals, ordinance text amendments, local master plan updates, roadway improvements, non-motorized transportation, streetscape enhancement, and other common issues along the corridor.

US-127 BR/M-20
Recommended Access Approval Procedure
for Site Plans, Special Land Uses,
Subdivisions and Site Condominiums



LEGEND

T.I.S. = **Traffic Impact Study**

MDOT = **Michigan Department of Transportation**
Mt. Pleasant TSC
1212 Corporate Drive
Mt. Pleasant, MI 48858
989-773-7756

Note: This chart illustrates the preferred process to insure coordinated agency reviews on access-related issues. The site plan review process also involves other standards and agencies that will influence the approval process.

Draft ordinance
(submitted earlier for review)

APPENDIX

Charter Township of Union

Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: A) SPR 2017-07 Dermatology Medical Facility Bellows Messenger LLC E. 1802 E. High St.

Applicant: Rowe Professional Services
Owner: Bellows Messenger LLC (Authorized by current owner First Baptist Church of Mt. Pleasant.)
Location: 1802 E. High St. Southeastern corner 502' x 298.5'. PID 14-023-20-016-01
Current Zoning: OS Office Service District.
Adjacent Zoning: R-2A to the north, R-2A to the east across Isabella Rd., R-2A to the west, and OS-1 to the south (City of Mt. Pleasant.)
Future Land Use/Intent: Residential: Primarily single family uses with limited mixed neighborhood commercial use.
Current Use: Baptist Church.
Reason for Request: Applicant proposes to construct a dermatology medical office.
History: The portion of the property that will be used has been recently rezoned from R-2A to OS. The property is currently owned by First Baptist Church. The sale of the property to be split from the current parcel is contingent on the rezoning application and site plan approval.

Outside approvals have been attained from the Isabella County Road Commission, Isabella County Transportation Commission, Mt. Pleasant Fire Department and Isabella County Drain Office for Storm Water Management. We have additional comments from the City of Mt. Pleasant.

Objective of board: Final site plan was received 14 days (06-027-2017) before our regular scheduled meeting on September 05, 2017. The Planning Commission shall study the site plan and shall, within sixty days of its submittal to the Zoning Official, either approve or disapprove the proposed site plan. If the site plan is disapproved, the reasons for disapproval shall be stated.

Recommend at this time a recommendation to approve of SPR 2017-07 Bellows Messenger LLC on the condition that

- All outside agency approvals are adhered to.
- All requirements of sections 12, 28 of Zoning Ordinance followed.

Peter Gallinat
Twp Planner

ROWE PROFESSIONAL SERVICES COMPANY

Large Firm Resources. Personal Attention.℠

LETTER OF TRANSMITTAL

TO:	Union Township Zoning and Planning	DATE:	9/5/17
	2010 S. Lincoln Road	JOB NO.:	17M0053
	Mt. Pleasant, MI 48858	RE:	Bellows Messenger LLC-SPR
Attn:	**Peter Gallinat**	Shipped via:	☐ By 10am next business day
			☐ By end of next business day
			☐ Standard delivery

cc: File
Dr. Greg Messenger
Patrick Hanes

If shipping via UPS please provide Recipient's Phone No.

WE ARE SENDING YOU:

☒ Attached ☐ Under separate cover via _____

COPIES	DATE	NO	DESCRIPTION
10	8/29/17	6	Proposed Mid-Michigan Health Site Plan for Review and Approval
1	8/29/17	1	Copy of Check ($225) for site plan review
1	8/29/17	5	Completed Requirements for Site Plan Review Checklist

THESE ARE TRANSMITTED:

☒ For your use ☐ As requested ☐ Other _____

REMARKS:

Peter,

Please see the attached site plan for a proposed medical office building located on E. Bellows St. for review and approval. We would like this site plan to be included on the agenda at the September 19th planning commission meeting. We have also submitted the plan to the required agencies per the township zoning ordinance. We are working with Kim Smith regarding a utility agreement between the township and the city of Mt. Pleasant for connecting to the city's water main and sanitary sewer. Please contact us with any questions or concerns you may have regarding the site plan.

Signed: Troy Grander

Troy Grander, PE - Project Engineer

Union Township Site Plan Review Application 2015 Revision

INSTRUCTIONS

- All items in this list must be included in the drawing unless exempted by ordinance or specifically noted as not included. Incomplete submissions may not be forwarded to the Planning Commission for review. All features of the plan must conform to the Union Township Zoning Ordinance 1991-5 and other state and local ordinances and laws as applicable. Union Township Well Head Protection documents are a part of Site Plan Review and required with your Site Plan submission.
- To expedite this process you should make Storm Water Management and Road Permit Applications as soon as possible, and submit a copy of the site plan to the Mt. Pleasant Fire Department. Site plans received prior to these outside approvals may be reviewed as Preliminary Site Plan Reviews and may require a Final Site Plan Review submission after receiving outside agency approvals. You may elect to receive a Preliminary Review by the Planning Commission prior to other submittals. Contact the appropriate agency for their submission requirements and any required forms.
- **Special Use Permits:** Uses requiring a Special Use Permit have both a special use permit approval process and a site plan review. The fee* for a Special Use Permit is in addition to the site plan review fee*. This form and a Special Use Permit Application must accompany application for a Special Use Permit. The Planning Commission will make a recommendation to the Charter Township of Union Board who has approval authority, thus requiring two meetings, one of the commission and one of the board. If desired, the applicant may elect to have the Public hearing with a preliminary plan showing sufficient detail to determine the impact on the surrounding properties, and address other issues of concern, and then proceed to final Site Plan Review. In this approach the commission will make its finding subject to final site plan approval at the first meeting, and the applicant will return with a detailed drawing meeting all the elements of site plan review, including submission to outside agencies.
- **SUBMISSION DEADLINE:** Ten copies of the site plan and this completed check list must be submitted no less than 14 days prior to the Planning Commission meeting. The Planning Commission meets at 7:00 PM on the third Tuesday of each month. A Site Plan Review fee* must accompany each submission. You will not receive any notification prior to your scheduled meeting; it is your responsibility to show up at the meeting. If your are uncertain, call the Zoning administrator at (989) 772 4600 ext 41
- Applicants may submit a single copy of the plan and check list prior to the submission deadline to the zoning administrator for review and comment.
- Land Owner (or his / her agent) is responsible to apply for all permits, including Building, Grading and Zoning permit, Sign Permit, Water and Sewer, and Land Divisions (if applicable) AFTER Planning Commission review and approval. The proposed use shall be constructed per the submitted plan including any conditions of approval. Minor revisions maybe approved by the zoning administrator. Consult with the township before implementing any changes to the approved site plan.

Union Township Site Plan Review Application 2015 Revision

FILL OUT THE FOLLOWING

I. This application is for (circle one) Preliminary Site Plan Review Final Site Plan Review

II. Applicant Name ROWE Professiional Services Company - Troy Grunder, PE

III. Applicant Address 127 S. Mission St. Mt. Pleasant MI 48858

IV. Applicant Phone (989) 772-2138 Owner Phone (989) 773-0096

V. Applicant is (circle) Contractor Architect Engineer Developer Land Owner (skip V& VI) Other

VI. Land Owner Name Messenger Dermatology

VII. Land Owner Address 1515 Lake Lansing Rd, Lansing, MI 48912

VIII. Project/Business Name Messenger Dermatology

IX. Fill out check list that follows. You must check off that each item has been included in the drawing. If an item is not going to be included in the construction, note that in the comment area. For the first three items, check off if you have made the required submittals to other reviewing agencies.

SUBMITTALS TO OTHER AGENCIES	Off	
Storm water management plan approval prior to application. Reviewed by the County Engineer	X	Copy of Union Township Storm Water Management Plan available upon request. Submit (2) copies of plan and calculations directly to the Isabella County Engineer, contact Bruce Rohrer at (989) 772 0911, ext. 231. Any review fees are additional.
All curb cuts, acceleration/deceleration lanes, additional drives, and other matters pertaining to roads to be approved by MDOT or Isabella County Road Commission prior to application.	X	MDOT (M 20, BR 127 sites) at (989) 773 7756. Contact Isabella County Road Commission (all other county roads) at (989) 773 7131. Submit (3) copies.
Mt. Pleasant Fire Dept.	X	Sgt Randy Keeler (989) 779-5122, (2) copies
Isabella Co Transportation Commission (ICTC)	X	Rick (989) 773 2913, (2) copies
WELLHEAD PROTECTION REPORTING FORMS (Required for all Site Plans)		
Hazardous Substances Reporting Form Part I and II	X	Kim Smith (989) 772-4600 ext 224
(Forms included in this packet)		ksmith@uniontownshipmi.com
PERMIT INFORMATION - DEQ Check List	X	
SITE PLAN REQUIREMENTS	**I Of**	**Comments - (also indicate any features which will not be included in the development or are not applicable)**
Name and addresses of Property Owner Name and Address of Applicant	X	
Provide Construction Type (per Mi Building Code) and if sprinkled, (assume Type IVb, un-sprinkled if not provided)	x	

Union Township Site Plan Review Application 2015 Revision

The date, north arrow and scale. The scale shall be not less than 1"= 20' for property under three (3) acres and not more than 1"=40' for property greater than three acres.	x	
All lot and/or property lines are to be shown and dimensioned, including building setback lines	x	
The **location and dimensions** of all existing and proposed:		
fire hydrants (within 400 feet of building) - - - -	x	
drives, ----------	x	
sidewalks, (required) ----------	x	
curb openings, ----------	x	
acceleration/deceleration lanes, ----------		N/A
signs, ----------		
exterior lighting on buildings and parking lots, - -	x	
parking areas (Including handicapped parking spaces, barrier-free building access, unloading areas), ----------	x	
recreation areas, ----------	x	N/A
common use areas, ----------		N/A
areas to be conveyed for public use and purpose. -		N/A
Elevation of building front, side, and back. Include Sign size, height, and design. Canopy heights extending over driveways accommodate Public Transportation	x	
Source of utilities. Public water and sewer approval by Union Township Utility Coordinator prior to application.	x	Note: Union Township policy is to issue sewer and water permits after application for a building permit. Applicant is advised to contact the utility department for availability prior to site plan review. The township does not coordinate other utility matters. Applicant to assure himself that site is suitable for septic systems, contact Central Michigan District Health Department
All dumpsters shall be screened from public view with an opaque fence or wall no less than six feet in height. Show location. (Note most refuse contractors require concrete pad to place dumpsters upon)		N/A
The location and right-of-way width of all abutting roads, streets, alleys and easements.	x	
A locational sketch drawn to scale giving the section number and the nearest crossroads.	x	

Union Township Site Plan Review Application 2015 Revision

The zoning of the subject property and the abutting properties.	×	
The location, height and type of fences and walls.		N/A
The location and detailed description of landscaping.	x	
For multiple family and mobile home parks, contour intervals shall be shown (two foot intervals for average slopes ten percent and under and five foot intervals for slopes over ten percent). Topography, however, is encouraged to be shown on all site plans.		N/A
The location of all existing and proposed structures on and within one hundred feet of the subject property's boundary.	×	
For apartments, provide a count of bedrooms per building and total count of bedrooms for the project.		N/A

APPLICANT COMMENTS

Union Township Site Plan Review Application 2015 Revision

I submit the site plan and this application as a true representation of existing and proposed conditions. I agree to install all features as shown and to abide by conditions placed upon approval of this plan by the Union Township Planning Commission . False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and / or removal of work installed. Any changes to the Site Plan now or in the future must be approved by the Union Township Planning Commission or Zoning Administrator. Approval of this plan shall not constitute the right to violate any provisions of the Union Township Zoning Ordinance 1991-5, or other applicable building or state codes and or laws.

Signature of Applicant — Date: 8/31/17

Signature of Owner (if other than applicant) — Date: 8/31/17

PLEASE PLACE OUR REVIEW ON THE 9/19/17 (INSERT DATE) PLANNING COMMISSION MEETING. An owners representative WILL / WILL NOT attend. You will not receive a reminder of the scheduled meeting.

Union Township Site Plan Review Application 2015 Revision

Township use

File # _____

Fee Paid initial _____

Receipt # _____

Date received _____

Review Comments

_____

_____

_____

_____

Date review completed by Zoning Administrator _____

Place on the _____ Planning Commission Agenda

Planning Commission Decision _____

_____

PERMIT INFORMATION

www.michigan.gov/deqpermits

The Department of Environmental Quality (DEQ) has prepared a list of key questions to help identify what DEQ permits, licenses, or approvals of a permit-like nature may be needed. By contacting the appropriate offices indicated, you will help reduce the possibility that your project or activity will be delayed due to the untimely discovery of additional permitting requirements later in the construction process. While this list covers the existence of permits and approvals required from the DEQ, it is not a comprehensive list of all legal responsibilities. A useful way to learn whether other requirements will apply is to go through the Self-Environmental Assessment in the Michigan Guide to Environmental, Health, and Safety Regulations, online at: http://www.michigan.gov/ehsguide. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the DEQ programs noted below.

KEY QUESTIONS:	Yes ☐	No ☐	PROGRAM WEBPAGE AND CONTACTS
MISCELLANEOUS CONSTRUCTION			
Air Quality Permit to Install: Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)?	Y ☐	N ☒	Air Quality Division (AQD), Permit Section
Asbestos Notification: Does the project involve renovating or demolishing all or portions of a building? Notification is required for asbestos removal and required for all demolitions even if the structure never contained asbestos.	Y ☐	N ☒	AQD, Asbestos Program
Land and Water Featured Programs (Water Resources Division) - USACE Consolidated Permits: Please consult the Land and Water Management Decision Tree document to evaluate whether your project needs a land and water management permit (i.e., Does the project involve filling, dredging, placement of structures, draining, or use of a wetland?).	Y ☐	N ☒	Water Resources Division (WRD), Joint Permit Application
Soil Erosion and Sedimentation Control: Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction)?	Y ☒	N ☐	Soil Erosion and Construction Storm Water, or Contact your Local Agency
NPDES Storm Water Discharge from Construction Sites Notice of Coverage: Does the project involve construction which will disturb one or more acres that come into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water?	Y ☐	N ☒	NPDES Storm Water Permits Program, or appropriate DEQ District Office
Public Swimming Pool Construction (Spas/Hot Tubs) Permits: Will your business involve the construction or modification of a public swimming pool, spa or hot tub?	Y ☐	N ☒	Public Swimming Pool Program, or appropriate DEQ District Office
Threatened and Endangered Species: Does the project involve activities that would destroy a protected species of plant or animal or disturb a protected animal species?	Y ☐	N ☒	Endangered Species Assessment, Threatened and Endangered Species Program, 517-373-1552
Does the project involve *construction* or alteration of any *sewage collection or treatment* facility?	Y ☐	N ☒	Appropriate District Office, WRD, Part 41 Construction Permit Program
Does the project involve construction of a facility that landfills, transfers, or processes of any type of *solid non-hazardous waste* on-site, or places *industrial residuals/sludge* into or onto the ground?	Y ☐	N ☒	Office of Waste Management and Radiological Protection (OWMRP), Solid Waste, Appropriate DEQ District Office
Does the project involve the construction of an on-site treatment, storage, or disposal facility for *hazardous waste*?	Y ☐	N ☒	OWMRP, Hazardous Waste Section, Treatment, Storage and Disposal
WATER SUPPLY *(More information, see: http://www.michigan.gov/deqwater, select "drinking water")*			
I am buying water from my community water supply (i.e. city of Detroit or Grand Rapids)	Y ☐	N ☒	Contact your Local Water Utility
I have a private or other water supply well (Type III)	Y ☐	N ☒	Contact your (District or County) Local Health Department
I have a Non-Community Water Supply (Type II)	Y ☐	N ☒	Guide, Contact your (District or County) Local Health Department
I am a community water supply (Type I)	Y ☐	N ☒	Community Water Supply, DEQ District Office Community Water Supply Program

WASTEWATER MANAGEMENT		
Storm Water Discharge to Wetlands: Will storm water be collected, stored, or treated in a wetland area from a public road, industrial, commercial, or multi-unit residential development?	Y ☐ N ☒	WRD, Joint Permit Application
Great Lakes: Does the project involve construction, filling, or dredging below the Ordinary High Water Mark of one of the Great Lakes?	Y ☐ N ☒	WRD, Joint Permit Application
Inland Lakes and Streams: Does the project involve any dredging, filling, placement of structures, or the operation of a marina within an inland waterbody (e.g. lake, river, stream, drain, creek, ditch, or canal), enlargement of a waterbody, or excavation of a pond within 500 feet of a waterbody?	Y ☐ N ☒	WRD, Joint Permit Application
Storm Water Ponds and Discharges to Inland Lakes/Streams, or Great Lakes: Will storm water from any road or any other part of the development be discharged either directly or ultimately to an inland waterbody, or one of the Great Lakes; or will a storm water pond be constructed within 500 feet of an inland waterbody?	Y ☐ N ☒	WRD, Joint Permit Application
Does the project involve placement of fill, earth moving, or placement of structures within the 100-year *floodplain* of a watercourse?	Y ☐ N ☒	WRD, Joint Permit Application
Does the project involve construction of a building or septic system in a designated Great Lakes *high risk erosion area*?	Y ☐ N ☒	WRD, Shoreland Management
Does the project involve dredging, filling, grading, or other alteration of the soil, vegetation, or natural drainage, or placement of permanent structures in a designated *environmental area*?	Y ☐ N ☒	WRD, Shoreland Management
Does the project propose any development, construction, silvicultural activities or contour alterations within a designated *critical dune area*?	Y ☐ N ☒	WRD, Sand Dune Management
Does the project involve construction of a *dam*, weir or other structure to impound flow?	Y ☐ N ☒	WRD, Dam Safety Program
CONSTRUCTION PERMITS (SECTOR SPECIFIC)		
Does the project involve the construction or alteration of a water supply system or sewage disposal system for a **manufactured housing** project?	Y ☐ N ☒	Office of Drinking Water & Municipal Assistance (ODWMA)
Does the project involve a **subdivision or site condominium** project utilizing individual on-site subsurface disposal systems or individual wells?	Y ☐ N ☒	ODWMA
Does the project involve the construction or modification of a **campground**?	Y ☐ N ☒	ODWMA, Campgrounds program
Does the project involve the construction or modification of a **public swimming pool**?	Y ☐ N ☒	ODWMA, Swimming pools program
OPERATIONAL PERMITS		
Renewable Operating Permit: Does your facility have the potential to **emit** any of the following: 100 tons per year or more of any criteria pollutant; 10 tons per year or more of any hazardous **air pollutant**; or 25 tons per year or more of any combination of hazardous **air pollutants**?	Y ☐ N ☒	AQD, Permit Section
NPDES: Does the project involve the **discharge of any type of wastewater** to a storm sewer, drain, lake, stream, or other **surface water**?	Y ☐ N ☒	WRD, Appropriate DEQ District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program
Does the facility have **industrial** activity that comes into contact with **storm water** that enters a storm sewer, drain, lake, stream, or other surface water?	Y ☐ N ☒	WRD, Permits Section, or appropriate DEQ District Office
Does the project involve the **discharge of wastewaters** into or onto the **ground** (e.g. subsurface disposal or irrigation)?	Y ☐ N ☒	WRD, Groundwater Permits Program
Does the project involve the drilling or deepening of **wells for waste disposal**?	Y ☐ N ☒	Office of Oil, Gas and Minerals (OOGM)
Does the project involve landfilling, transferring, or processing of any type of **solid non-hazardous waste** on-site, or placing **industrial residuals/sludge** into or onto the ground?	Y ☐ N ☒	OWMRP or Appropriate DEQ District Office

Does the project involve the on-site treatment, storage, or disposal of **hazardous waste**?	Y ☐ N ☒	OWMRP, Hazardous and Liquid Waste
Does the project require a **site identification number** (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (Web Site)	Y ☐ N ☒	OWMRP, Appropriate DEQ District Office
Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of **radioactive material** in any form?	Y ☐ N ☒	OWMRP, Radioactive Material and Standards Unit
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have **radioactive levels** above background?	Y ☐ N ☒	OWMRP Radioactive Material and Standards Unit
Do you desire to develop a **withdrawal** of over 2,000,000 gallons of **water** per day from any source other than the Great Lakes and their connecting waterways? Or, do you desire to develop a withdrawal of over 5,000,000 gallons of water per day from the Great Lakes or their connecting waterways?	Y ☐ N ☒	WRD, DWEHS, Source Water Protection Unit
CHEMICAL ADDITION PROJECTS		
Are you using **chemicals** or materials in, or in contact with, **drinking water** at any point in the **water works system**?	Y ☐ N ☒	WRD, Appropriate DEQ District Office, Public Water Supply Program
Are you applying a chemical treatment for the purpose of **aquatic nuisance control** (pesticide/herbicide etc) in a water body (i.e. lake, pond or river)? (5.	Y ☐ N ☒	WRD, Aquatic Nuisance Control and Remedial Action Unit
Are you applying materials to a water body for a **water resource management project** (i.e. mosquito control treatments, dye testing, or fish reclamation projects)?	Y ☐ N ☒	WRD, Surface Water Assessment Section
OPERATIONAL PERMITS (SECTOR SPECIFIC)		
Does the project involve the **transport** of some other facility's non-hazardous **liquid waste**?	Y ☐ N ☒	OWMRP, Transporter Program
Does the project involve the **transport hazardous waste**?	Y ☐ N ☒	OWMRP, Transporter Program
Does your facility have an **electric generating unit** that sells electricity to the grid and burns a fossil fuel?	Y ☐ N ☒	AQD, Acid Rain Permit Program
Is the project a **dry cleaning establishment** utilizing perchloroethylene or a flammable solvent in the cleaning process?	Y ☐ N ☒	DEQ, AQD, Dry Cleaning Program
Does your **laboratory test potable water** as required for compliance and monitoring purposes of the Safe Drinking Water Act?	Y ☐ N ☒	DEQ, Laboratory Services Certifications
Does the project involve the generation of **medical waste** or a facility that treats medical waste prior to its disposal?	Y ☐ N ☒	OWMRP, Medical Waste Regulatory Program
Does the project involve transport of septic tank, cesspool, or dry well contents or the discharge of **septage** or sewage sludge into or onto the ground?	Y ☐ N ☒	ODWMA, Septage Program
Do you store, haul, shred or process **scrap tires**?	Y ☐ N ☒	OWMRP, Scrap Tire Program
Does the project involve the operation of a **public swimming pool**?	Y ☐ N ☒	ODWMA, Public Swimming Pools Program
Does the project involve the operation of a **campground**?	Y ☐ N ☒	ODWMA, Campgrounds
Do you engage in the business of **hauling bulk water** for drinking or household purposes (except for your own household use)?	Y ☐ N ☒	ODWMA, Water Hauler Information
PERSONAL LICENSES/CERTIFICATIONS		
Are you designated by your facility to be the **Certified Operator** to fulfill the requirements of a wastewater discharge permit (**NPDES including Storm**	Y ☐ N ☒	WRD, Operator Training, Storm Water Program

Water or Groundwater)?		
Are you a **drinking water operator** in charge of a water treatment or water distribution system, back-up operator, or shift operator?	Y ☐ N ☒	WRD, Operator Training
Are you a **water-well** drilling contractor, pump installer, **dewatering well** contractor or dewatering well pump installer?	Y ☐ N ☒	WRD, Well Construction Unit
OIL, GAS AND MINERALS		
Do you want to operate a **central production facility** (applies to oil and gas production facilities where products of diverse ownership are commingled)?	Y ☐ N ☒	OOGM, Petroleum Geology and Production Unit
Does the project involve the removal of sand from a **sand dune area** within two (2) miles of a Great Lakes shoreline?	Y ☐ N ☒	OOGM, Minerals and Mapping Unit, Sand Dune Mining Program
Does the project involve the diversion and control of water for the mining and processing of **low-grade iron ore**?	Y ☐ N ☒	OOGM, Minerals and Mapping
Does the project involve the surface or open-pit mining of **metallic mineral deposits**?	Y ☐ N ☒	OOGM, Minerals and Mapping
Does the project involve the mining of **nonferrous mineral deposits** at the surface or in underground mines?	Y ☐ N ☒	OOGM, Minerals and Mapping
Does the project involve mining **coal**?	Y ☐ N ☒	OOGM, Minerals and Mapping
Do you want to change the status of an **oil or gas** well (i.e. plug the well)?	Y ☐ N ☒	OOGM, Permits and Bonding Unit
Does the project involve drilling of **oil, gas, brine disposal, secondary recovery, or hydrocarbon** storage wells?	Y ☐ N ☒	OOGM, Permits and Bonding Unit
Does the project involve plugging or deepening of an **oil or gas** well, or conveying rights in the well as an owner to another person?	Y ☐ N ☒	OOGM, Permits and Bonding Unit
Does the project involve changing the status or plugging of a **mineral well**?	Y ☐ N ☒	OOGM, Minerals and Mapping
Does the project involve the drilling or deepening of **wells for brine production, solution mining, storage, or as test wells**?	Y ☐ N ☒	OOGM, Minerals and Mapping
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have **radioactive levels** above background?	Y ☐ N ☒	OWMRP, Radioactive Protection Programs
STORAGE TANKS (CONSTRUCTION AND OPERATION)		
Does the project involve the installation of an **aboveground storage tank** for a flammable or combustible liquid (under 200 degrees Fahrenheit)?	Y ☐ N ☒	Michigan Department of Licensing and Regulatory Affairs (DLARA) - Storage Tank Unit, 517-335-7211
Does the project involve the installation of a **compressed natural gas dispensing station** with storage?	Y ☐ N ☒	DLARA - Storage Tank Unit, 517-335-7211
Does the project involve the installation of a **liquefied petroleum gas** container filling location or storage location that has a tank with a capacity of more than 2,000 gallons or has two (2) or more tanks with an aggregate capacity of more than 4,000 gallons?	Y ☐ N ☒	DLARA - Storage Tank Unit, 517-335-7211
Does the project involve the installation, removal, or upgrade of an **underground storage tank** containing a petroleum product or a hazardous substance?	Y ☐ N ☒	DLARA - Storage Tank Unit, 517-335-7211
Does the project involve the **installation** of a **hydrogen system**?	Y ☐ N ☒	DLARA - Storage Tank Unit,517-335-7211

CHARTER TOWNSHIP OF UNION

SITE PLAN REVIEW
HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: Messenger Dermatology

Name of business owner(s): Dr. Gregory Messenger

Street and mailing address: 1515 Lake Lansing Rd, Lansing, MI 48912

Telephone: (517) 487-0128

Fax: (517) 487-2639

Email: Info@MessengerDermatology.com

I affirm that the information submitted is accurate.

Owner(s) signature and date: [signature] 9/14/17

Information compiled by:

Troy Grunder, PE

ROWE PSC

Part 1: Management of Hazardous Substances and Polluting Materials

1. Y [N] Will the proposed facility store, use or generate hazardous substances or polluting materials (including petroleum-based products) now or in the future? If yes, please complete this form and submit with your site plan. A catalogue and map of natural resources on and near the site, including an assessment of groundwater vulnerability is required to be submitted with your plan.

2. Y [N] [illegible] on-site?

3. Y [N] _ Will any hazardous substances or polluting materials be stored on-site? If yes, identify the storage location on the site plan. Describe the size and type of secondary containment structure here or on an attached page. Submit a map and/or diagram of facilities on the site related to groundwater protection, including secondary containment structures, loading/unloading areas, drinking water wells, septic systems, underground storage tanks and storm drain inlets.

4. Y [N] Will the new underground storage tanks be located less than 2000 feet from a drinking water well serving more than a single household?

5. Y [N] Are existing underground storage tanks on-site less than 200 feet from a drinking water well serving more than a single household?

If the answer to questions 4 or 5 are yes, you may be in violation of the State of Michigan underground storage tank regulations . For specific requirements, please contact the MDEQ Underground Storage Tank Division. District Office Telephone: 989-894-6200 (Saginaw Bay District Office)

6. Y [N] Will the interior of the facility have general purpose floor drains? (general purpose floor drains should not be connected to a sanitary sewer system, stormwater drainage system, dry well or septic system). If yes, will the floor drain connect to: (circle one)

_ _

a. on-site holding tank
b. on-site system

The on-site system must be approved by the MDEQ.
Contact: MDEQ Waste Management Division.
District Office telephone: 989-894-6200 (Saginaw Bay District Office)

7. Y [N] Will hazardous substances or polluting materials be stored, used, or handled out-of doors near storm drains which discharge to lakes, streams, or wetlands? If yes, describe the type of catch basin or spill containment facilities which will be used (use an attached sheet with diagram if appropriate).

cc: Charter Township of Union Department of Public Works

Part II: Types and Quantities of Hazardous Substances and Polluting Materials Used, Stored or Generated On-Site

Please list the hazardous substances and polluting materials (including chemicals, hazardous materials, petroleum products, h azardous wastes and other polluting materials) which are expected to be used, stored or generated on -site. Quantities should reflect the maximum volumes on hand at any time. Attach additional pages if necessary to list all hazardous substances and polluting materials.

Common Name	CHEMICAL NAME (components)	Form	MAX QUANTITY ON HAND AT ONE TIME	TYPE OF STORAGE CONTAINERS
	KEY: LIQ. = liquid P.LIQ = pressurized liquid S = solids G = gas PG = pressurized gas			**KEY:** AGT = above ground tank DM = drums UGT = underground tank Cy = cylinders CM = metal cylinders CW = wooden or composition container TP = portable tank

Mount Pleasant Fire Department
804 E. High Street
Mount Pleasant, Mi 48858

Union Township Site Plan Review

Thursday August 31, 2017

Bellows Messenger LLC

E Bellows ST
Mt. Pleasant, MI 48858

A Site Plan Review was conducted on Tuesday August 29, 2017 and revealed the following requirements listed below.

ORDER TO COMPLY: Since these conditions are contrary to code, you must correct them upon receipt of this notice. Please provide our department the documentation that verifies compliance with the code.

This list shall not be considered all-inclusive, as other requirements may be neccessary, additional requirements are located in Chapter 5 and appendixes B, C, and D of the 2012 Edition of the International Fire Code.

If you have any questions regarding this matter, please feel free to contact me at (989) 779-5122.

Violation Code

1 PROPERTY Identification

Proposed Doctors Office
Bellows & Isabella

Site Plan Review August 2017
Type VB construction approximate square footage: 10,030.
Future addition also shown on site plan.

ACCESS AND WATER Road and Water Supply

When fire apparatus access roads or water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles in accordance with Section 505.2 of the 2012 Edition of the International Fire Code.

ACCESS ROAD 150 FT Buildings within 150ft of Access Road

All portions of a building are required to be within 150 feet of an approved Fire Department access road, in accordance with Chapter 5, Section 503.1.1 of the 2012 Edition of the International Fire Code.

Site Plan does not meet the above requirements, IFC 2012 section 503.1.1 exception 2 allows for an increase to the 150'.
Under exception 2 "alternative means of fire protection" has been proposed, building has fire suppression.

ACCESS ROAD OBSTRUCTED Dimensions and Clearances

All fire apparatus access roads, including parking lots, shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches in accordance with Chapter 5, Sections 503.2.1, 503.2.2, 503.3 and 503.4 of the 2012 Edition of the International Fire Code. Fire Prevention Ordinance 93.02(D)

Canopy height to meet above requirements. Increase the height of the canopy for emergency access.

ACCESS ROAD LOAD Designed and Maintained to Support the

All fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities in accordance with Chapter 5, Sections 503.2.3 and 503.4 of the 2012 Edition of the International Fire Code.

BUILDING IDENTIFICATION Buildings Shall Have Address

Provide address identification numbers in accordance with Chapter 5, Sections 505.1 of the 2012 Edition of the International Fire Code or applicable to the City of Mt. Pleasant code of ordinances 150.01 Land Usage.

DUMPSTERS Dumpster Locations

Dumpster's and containers with an individual capacity of 1.5 cubic yards or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or combustible roof eave lines in accordance with Chapter 3, Section 304, and 304.3.3 of the 2012 Edition of the International Fire Code.

Location of dumpster/trash receptacle not shown on print.

HYDRANT CLEARANCE 3 ft Space Around Hydrants

A 3 foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved, in accordance with Chapter 5, Section 507.5.5 of the 2012 Edition of the International Fire Code.

KNOX BOX Knox Box Requirements and Location

Provide a Knox Key entry device and install it in approved location by the Fire Code Official, as in accordance with Chapter 5, Section 506.1, 506.1.1 and 506.2 of the 2012 Edition of the International Fire Code. (Go to Knoxbox.com and

search by fire department or zip code - select "Mt. Pleasant Fire Department" and place order for the type of Knox box desired.)

FDC LOCATION FDC Location and Distance

Fire Department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as other wise approved by the fire chief. The fire department connection shall be located within 150 feet of a fire hydrant , in accordance with Chapter 9, Section 912.2.1 of the 2012 Edition of the International Fire Code and the Fire Prevention Ordinance 93.12 Provide a 5" Storz Fire Department Connection with a 30 degree downturn.

Additional hydrant required, the hydrant placement to be located in the east entrance drive in the parking lot peninsula nearest to the building. The FDC location to be within 150' of the new hydrant location and be facing the south street side of the building.

FDC HORN STROBE Horn Strobe Above FDC

Provide a horn strobe above the Fire Department Connection. Fire Prevention Ordinance 93.12(A)

ACCESS ROAD SIGNAGE Signage Requirements

All fire apparatus access roads shall be conspicuously posted with uniform "NO PARKING" or "FIRE LANE" signs in keeping with the standard established in applicable law, or as prescribed by the fire code Official and erected on both sides of the fire apparatus access roads. Signs shall be erected no further than 100 feet apart in all areas designated as fire apparatus access roads. Signs shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility, in accordance with Chapter 5, Section 503.3 of the 2012 Edition of the International Fire Code. Fire Prevention Ordinance 93.02(E)

WATER SUPPLY (GPM) Capable of Supplying the Required Fire

Provide fire hydrants capable of supplying the required fire flow in accordance with Chapter 5, Section 507 of the 2012 Edition of the International Fire Code. The number and spacing of fire hydrants is based on the construction type and square footage of the building in accordance with Appendix B and C and tables B105.1 and C105.1 of the 2012 Edition of the International Fire Code. (Contact Fire Department to verify locations.)

The new hydrant plus the existing hydrant on Bellows meets the fire flow requirements.

Keeler, Randy

Lieutenant
Mount Pleasant Fire Department

Peter Gallinat

From: Rick Collins [rcollins@ictcbus.com]
Sent: Monday, August 21, 2017 3:13 PM
To: 'mfaeth@rowepsc.com'; Peter Gallinat
Subject: Bellows Messenger site plan review

I have no issues with the Bellows Messenger plans.

Rick Collins | Executive Director
2100 E. Transportation Dr | Mt. Pleasant, MI 48858
Phone 989.773.6766 | Fax 989.773.1873
rcollins@ictcbus.com
Visit our website at ictcbus.com

Sam Ber Engineering

Bruce E. Rohrer, P.E.
957 Morey Drive
Mt. Pleasant, Michigan 48883
(989) 330-2150

August 31, 2017

Peter Galliant
Charter Township of Union Planner
2010 S. Lincoln Road
Mt. Pleasant, MI 48858

RE: Storm Water Management Plan for Messenger Dermatology Site

Dear Mr. Galliant:

I have reviewed the Storm Water Management Plan prepared by Troy Grunder, P.E., of Rowe Professional Services for the above captioned project located in part of the SE ¼ of Section 14, Union Township, located at the NW corner of Bellows Street and Isabella Road. The proposed plan is consistent with the Union Township Storm Water Ordinance assuming roof water runoff is diverted to the detention pond. Also, the future building addition is not included in the plan.

If you have any questions or need any further information, please feel free to contact me in my office.

Sincerely,

Bruce E. Rohrer, P.E.
Consulting Engineer
Isabella County

BER/taw

cc: Troy Grunder
Rowe Professional Services

Peter Gallinat

From: Pat Gaffney [PGaffney@isabellaroads.com]
Sent: Thursday, August 31, 2017 8:19 AM
To: Tewari, Stacie; Troy Grunder
Cc: Peter Gallinat
Subject: RE: Bellows Messenger Site Plan
Attachments: Stormwater Management Plan Sheet 1.pdf; SH - 17M0053 - SITEPLAN FOR REZONING APPLICATION.pdf

Staci,

See attached plans that Troy sent me yesterday.

Patrick J. Gaffney, PE
Engineer Superintendent
Isabella CRC
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

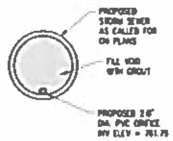
From: Tewari, Stacie [mailto:stewari@mt-pleasant.org]
Sent: Thursday, August 31, 2017 8:15 AM
To: Pat Gaffney; Troy Grunder
Cc: Tewari, Stacie; Peter Gallinat (pgallinat@uniontownshipmi.com)
Subject: RE: Bellows Messenger Site Plan

Pat,

In talking to Troy, they plan to tie into that storm sewer outlet that drains into the county storm sewer on Isabella Rd. and not the city storm sewer in Bellows. Just making sure you were aware of that.

Thanks.

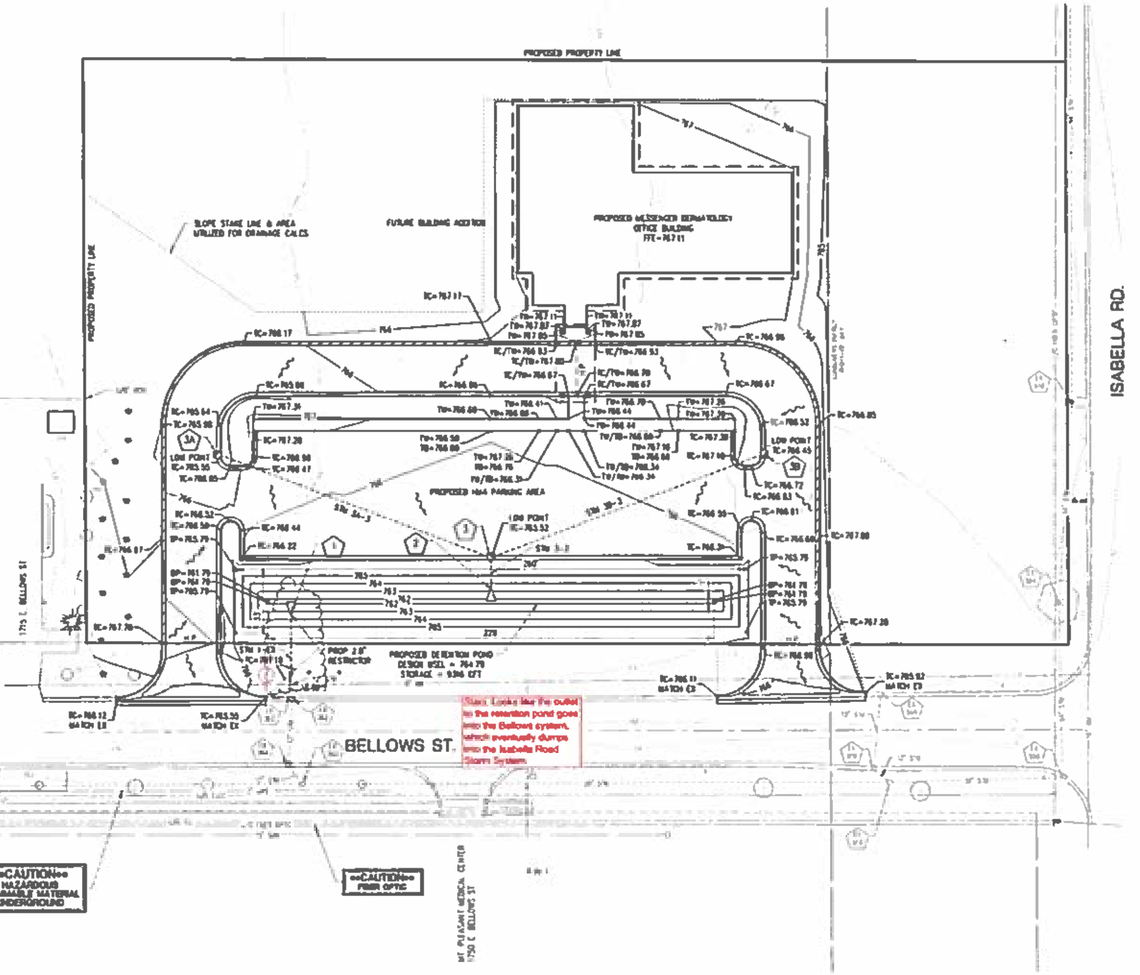
Stacie Tewari, P.E., LEED® AP
City Engineer
City of Mt. Pleasant - Division of Public Works
1303 N. Franklin Avenue
Mt. Pleasant, MI 48858
Phone: 989.779.5404
Fax: 989.772.6250
stewari@mt-pleasant.org



ORIFICE DETAIL

NOT TO SCALE

NOTE: PIPE VOID BETWEEN OUTSIDE WALL OF ORIFICE AND INSIDE WALL OF STORM SEWER PIPE SHALL BE GROUTED SOLID AT LEAST 12" FROM THE LOCATION IN WHICH THE PIPE PENETRATES THE MANHOLE.



EXISTING STRUCTURE INVENTORY

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	NORTHING	EASTING
3	48"	B	T/C=765.72	12" 761.80 E (PR) 12" 761.83 W (PR) 18" 761.83 S (PR)	763372.85	[illegible]
3A	48"	B	T/C=765.75	12" 762.34 E (PR)	763425.85	13021982.90
[illegible]	48"	B	T/C=766.63	12" 763.26 W (PR)	763425.85	13022246.90
EX 303	N/A	N/A	RIM=764.79	12" 761.72 S (EX) 12" 761.72 N (PR)	763313.53	13021980.65

PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE NORTHING	END OF PIPE EASTING
1	12"	Con End Sect, Conc	12" 761.79	763344.84	13021999.82
2	18"	Con End Sect, Conc	18" 761.79	763326.84	13022102.08

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 1-ES1	12"	Storm Sewer, Cl E, 12 inch	37'	0.19%	0'	37'
STM 3-2	18"	Storm Sewer, Cl E, 18 inch	16'	0.25%	0'	16'
STM 3A-3	12"	Storm Sewer, Cl E, 12 inch	140'	0.34%	0'	140'
STM 3B-3	12"	Storm Sewer, Cl E, 12 inch	140'	0.82%	0'	140'

DRAINAGE NOTES

1. PROPOSED BUILDING AREA, SIDEWALKS, PAVEMENT, AND CURB AND GUTTER ALL UTILIZED AS IMPERVIOUS AREA IN STORM SEWER DESIGN. LANDSCAPE AND OUTLAWN AREAS INCLUDED IN STORM SEWER DESIGN AS PERVIOUS AREA.

CONSTRUCTION NOTES

1. TC/TW GRADES FOR FULL HEIGHT CURB AND GUTTER NEED 0.50' ADDED TO THE ELEVATION TO DETERMINE TOP OF CURB HEIGHT.
2. TOP OF SLAB DOWNS FOR SIDEWALK TO BE PLACED 6" FROM TC/TW LOCATION FOR AREAS THAT HAVE FULL HEIGHT CURB AND GUTTER.

SITE GRADING LEGEND

H.P. = PROPOSED HIGH POINT/RIDGE
TC = TOP OF CURB
TP = TOP OF HMA PAVEMENT
TW = TOP OF CONCRETE SIDEWALK
TP = TOP OF POND
BP = BOTTOM OF POND
→ = DIRECTION OF SURFACE FLOW

CONSTRUCTION SEQUENCE

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]

CURB HATCHING LEGEND

PROPOSED F4 SPILL CURB

BENCHMARK DATA TABLE

[illegible]

TRAVERSE POINT DATA TABLE

[illegible]

Know what's below. Call before you dig.

PLAN SUBMITTALS AND CHANGES

PRELIMINARY PLANS - NOT FOR CONSTRUCTION

PLAN DATE: AUGUST, 2017
PROJECT MGR: TRG
REVIEWER: MFP
SCALE: 1"=30'

ROWE PROFESSIONAL SERVICES COMPANY

O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

127 S. Main Street
Mt. Pleasant, MI 48858

PREPARED FOR
BELLOWS MESSENGER, LLC
MESSENGER DERMATOLOGY

GRADING PLAN

REV:

SHT# 1 OF 1

JOB No: 17M0053

Peter Gallinat

From: Tewari, Stacie [stewari@mt-pleasant.org]
Sent: Thursday, August 31, 2017 3:55 PM
To: 'Pat Gaffney'; 'Troy Grunder'
Cc: Peter Gallinat
Subject: RE: Bellows Messenger Site Plan

As a follow up to my phone conversations with Troy and Pat today, please outlet the detention pond directly to the 54" county storm drain on the west side of Isabella Rd. rather than the city storm sewer on Bellows St. Please submit revised construction plans. If the detention pond outlets directly to the county storm drain, the detention shall be sized based on Union Township requirements for storm water management.

Thank you.

Stacie Tewari, P.E., LEED® AP
City Engineer
City of Mt. Pleasant - Division of Public Works
1303 N. Franklin Avenue
Mt. Pleasant, MI 48858
Phone: 989.779.5404
Fax: 989.772.6250
stewari@mt-pleasant.org

From: Tewari, Stacie
Sent: Thursday, August 31, 2017 8:15 AM
To: 'Pat Gaffney' <PGaffney@isabellaroads.com>; Troy Grunder <TGrunder@rowepsc.com>
Cc: Tewari, Stacie <stewari@mt-pleasant.org>; Peter Gallinat (pgallinat@uniontownshipmi.com) <pgallinat@uniontownshipmi.com>
Subject: RE: Bellows Messenger Site Plan

Pat,

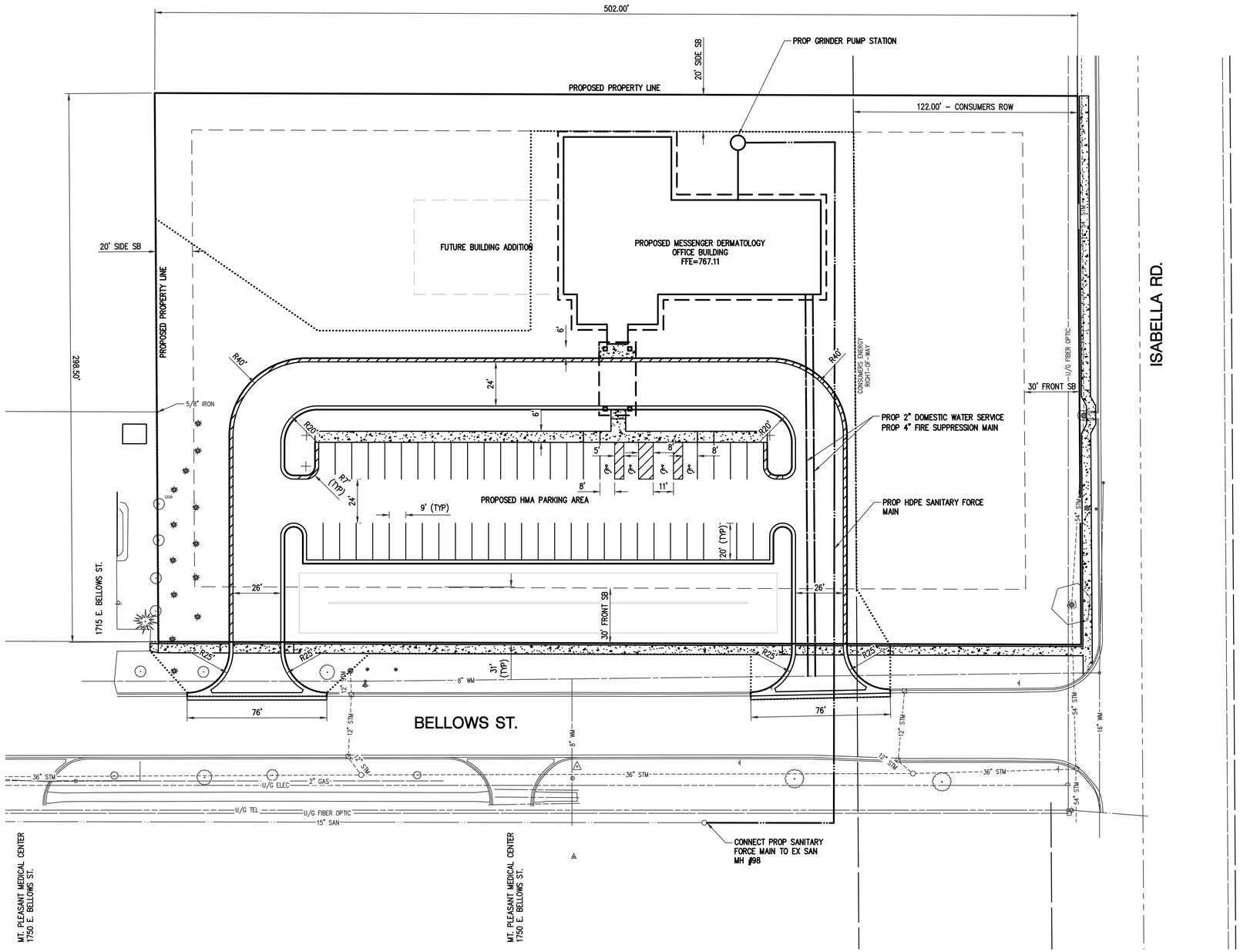
In talking to Troy, they plan to tie into that storm sewer outlet that drains into the county storm sewer on Isabella Rd. and not the city storm sewer in Bellows. Just making sure you were aware of that.

Thanks.

Stacie Tewari, P.E., LEED® AP
City Engineer
City of Mt. Pleasant - Division of Public Works
1303 N. Franklin Avenue

ROWE PROFESSIONAL
SERVICES COMPANY

127 S. Main Street | Mt. Pleasant, MI 48858
O: (989) 772-2138 | F: (989) 773-7757 | C: (989) 492-4779
www.rowepsc.com | Follow us on: Facebook | LinkedIn

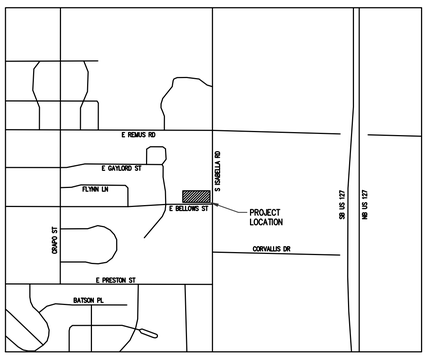


PROPERTY OWNER:
BELLOWS MESSENGER, L.L.C.
BELLOWS STREET
MT. PLEASANT, MI 48858

APPLICANT:
ROWE PROFESSIONAL SERVICES COMPANY
TROY GRUNDER, PE
127 S. MAIN ST.
MOUNT PLEASANT, MI 48858

ZONING INFORMATION:
EXISTING ZONING – R2A ONE AND TWO FAMILY DISTRICT
PROPOSED ZONING – OS OFFICE/SERVICE
ADJACENT ZONING – NORTH: R2A
SOUTH: CITY OF MT. PLEASANT
EAST: AGRICULTURAL
WEST: CITY OF MT. PLEASANT

PARKING REQUIREMENTS:
REQUIRED PARKING SPACES (OS) – EIGHT (8) SPACES FOR EACH DOCTOR
PROVIDED PARKING SPACES (OS) – 53 SPACES
REQUIRED ADA SPACES – 3 SPACES
PROVIDED ADA SPACES – 4 SPACES (1 VAN ACCESSIBLE)



PROJECT LOCATION MAP

Know what's **below.**
Call before you dig.

PLAN SUBMITTALS AND CHANGES	
SITE PLAN APPROVAL – **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION
6/14/17	REZONING APPLICATION SUBMITTAL
9/5/17	SITE PLAN REVIEW SUBMITTAL

REV:

SHT# 1 OF 4

JOB No: 17M0053

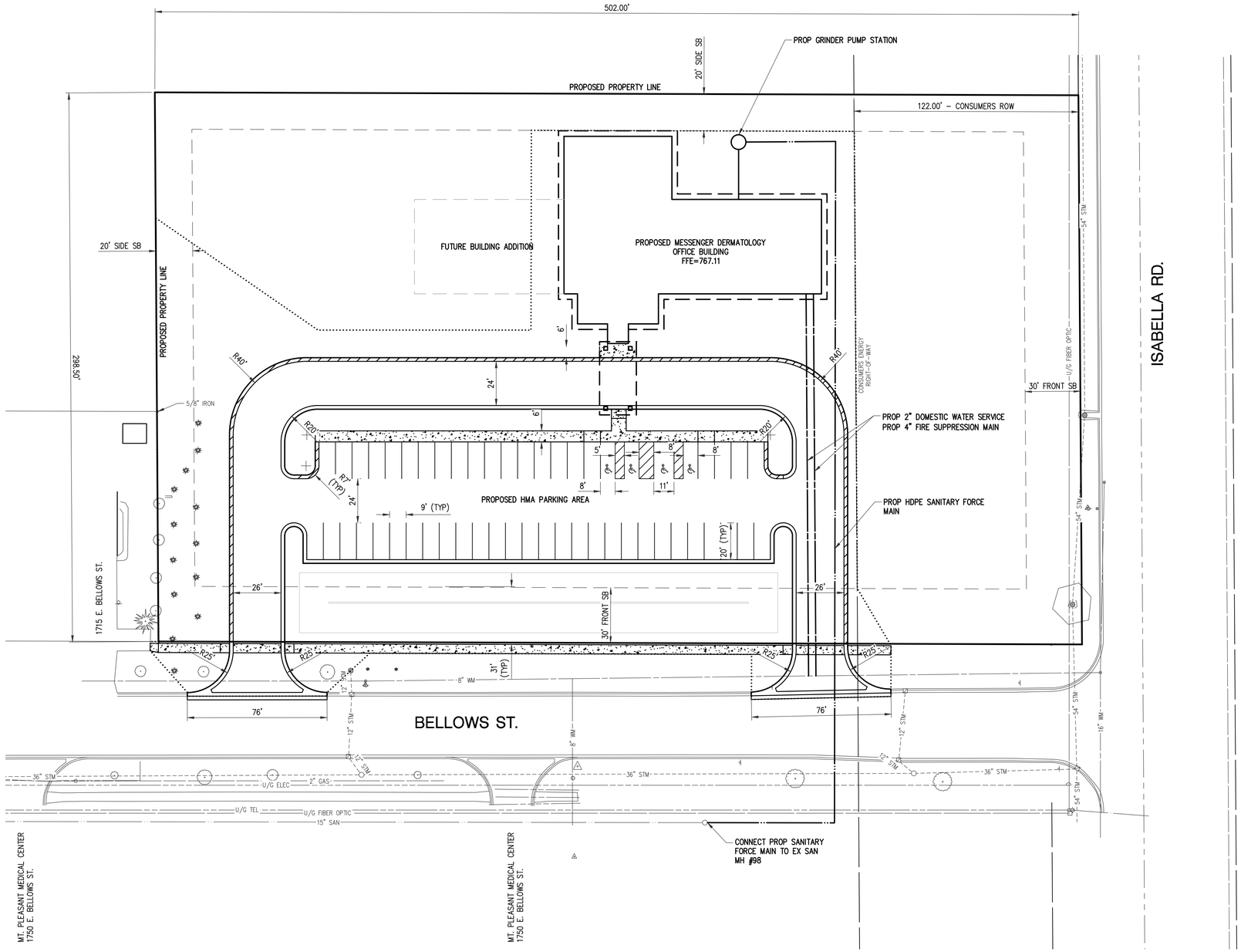
PLAN DATE: SEPTEMBER 5, 2017
PROJECT MGR: TRG
REVIEWER: MPF
SCALE: 1"=30'

ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PREPARED FOR
BELLOWS MESSENGER, LLC
MESSENGER DERMATOLOGY

PROPOSED SITE PLAN

PLOTTED: 9/15/2017 9:40 AM
R:\Projects\17M0053\Dwg\Construction Drawings\SH – 17M0053 – SITEPLAN FOR APPROVAL.dwg



N

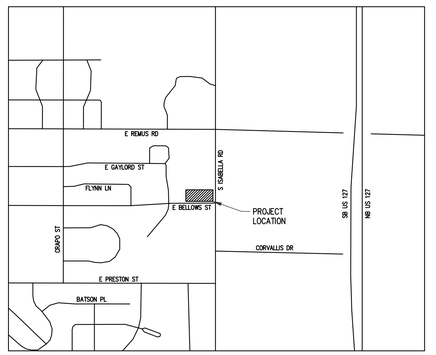
0 30 ft 60 ft

PROPERTY OWNER:
BELLOWS MESSENGER, L.L.C.
BELLOWS STREET
MT. PLEASANT, MI 48858

APPLICANT:
ROWE PROFESSIONAL SERVICES COMPANY
TROY GRUNDER, PE
127 S. MAIN ST.
MOUNT PLEASANT, MI 48858

ZONING INFORMATION:
EXISTING ZONING – R2A ONE AND TWO FAMILY DISTRICT
PROPOSED ZONING – OS OFFICE/SERVICE
ADJACENT ZONING – NORTH: R2A
SOUTH: CITY OF MT. PLEASANT
EAST: AGRICULTURAL
WEST: CITY OF MT. PLEASANT

PARKING REQUIREMENTS:
REQUIRED PARKING SPACES (OS) – EIGHT (8) SPACES FOR EACH DOCTOR
PROVIDED PARKING SPACES (OS) – 53 SPACES
REQUIRED ADA SPACES – 3 SPACES
PROVIDED ADA SPACES – 4 SPACES (1 VAN ACCESSIBLE)



PROJECT LOCATION MAP

Know what's **below.**
Call before you dig.

PLAN SUBMITTALS AND CHANGES

SITE PLAN APPROVAL – **NOT FOR CONSTRUCTION**

DATE	DESCRIPTION
6/14/17	REZONING APPLICATION SUBMITTAL
9/5/17	SITE PLAN REVIEW SUBMITTAL

REV:

SHT# 1 OF 4

JOB No: 17M0053

PLAN DATE: SEPTEMBER 5, 2017
PROJECT MGR: TRG
REVIEWER: MPF
SCALE: 1"=30'

ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PREPARED FOR
BELLOWS MESSENGER, LLC
MESSENGER DERMATOLOGY

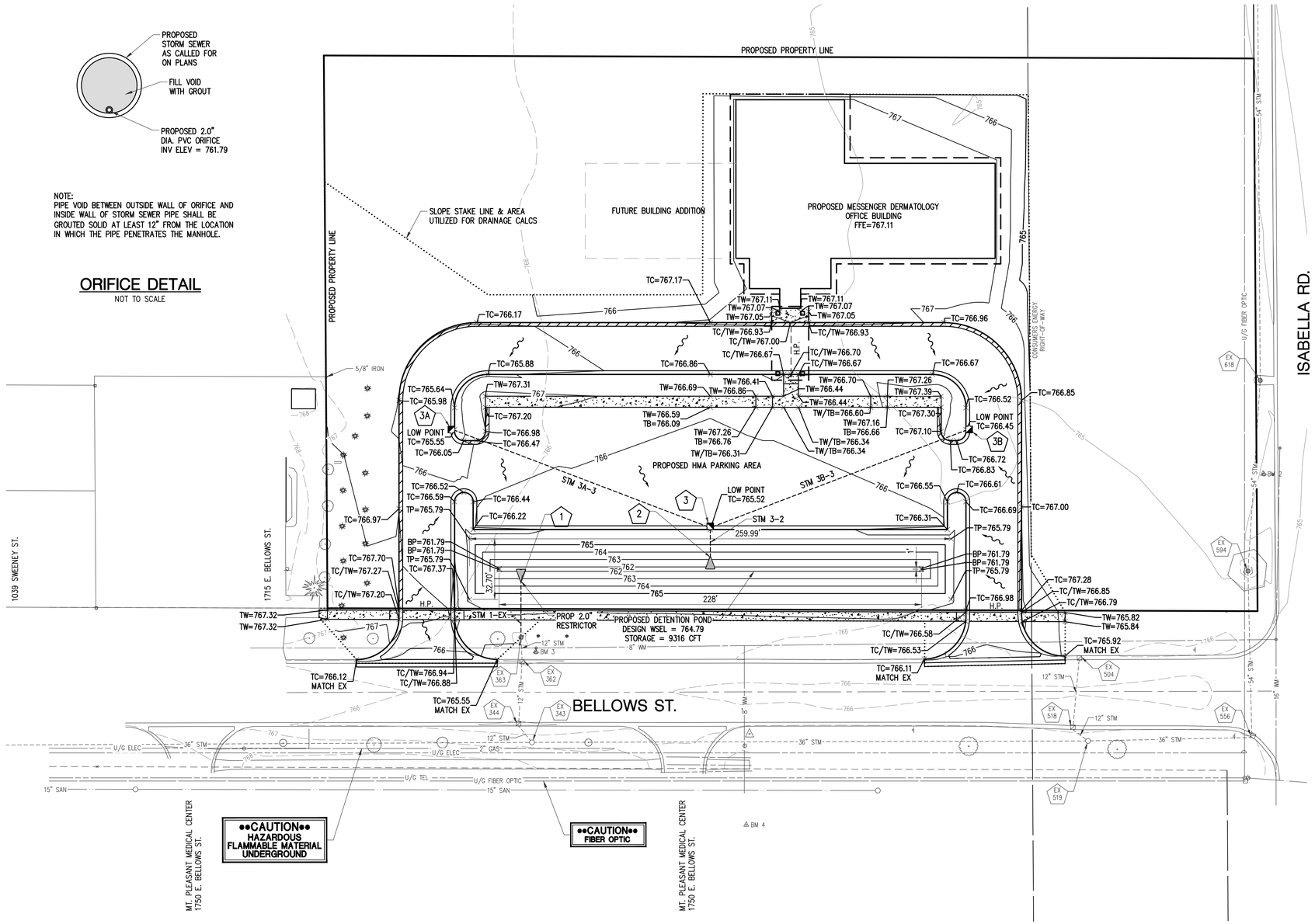
PROPOSED SITE PLAN

R:\Projects\17M0053\Dwg\Construction Drawings\SP – 17M0053 – SITEPLAN FOR APPROVAL.dwg
PLOTTED: 9/5/2017 11:57 AM

NOTE:
PIPE VOID BETWEEN OUTSIDE WALL OF ORIFICE AND INSIDE WALL OF STORM SEWER PIPE SHALL BE GROUTED SOLID AT LEAST 12" FROM THE LOCATION IN WHICH THE PIPE PENETRATES THE MANHOLE.

ORIFICE DETAIL

NOT TO SCALE



EXISTING STRUCTURE INVENTORY

MH# 343
TYPE: STORM
COVER: SOLID
RIM= 766.32
12" RCP NW INV.=760.62
36" RCP E INV.=759.42
36" RCP W INV.=759.42

MH# 344
TYPE: STORM
COVER: CURB INLET
RIM= 764.84
12" RCP SE INV.=761.09
12" RCP N INV.=761.09

MH# 362
TYPE: STORM
COVER: CURB INLET
RIM= 764.89
12" RCP S INV.=761.19
12" RCP N INV.=761.19
6" CPP E INV.=761.69

MH# 363
TYPE: STORM
COVER: BEEHIVE
RIM= 764.72
12" RCP S INV.=761.72

MH# 504
TYPE: STORM
COVER: CURB INLET
RIM= 765.32
12" RCP S INV.=761.62
6" CPP E INV.=761.82

MH# 518
TYPE: STORM
COVER: CURB INLET
RIM= 765.27
12" RCP N INV.=761.52
12" RCP SE INV.=761.42

MH# 519
TYPE: STORM
COVER: SOLID
RIM= 766.28
12" SLC S INV.=759.98
36" RCP W INV.=759.08
12" RCP NW INV.=761.08
36" RCP E INV.=759.08

MH# 556
TYPE: STORM
COVER: CURB INLET
RIM= 765.45
54" RCP S INV.=758.05
36" RCP W INV.=758.05
54" RCP N INV.=758.05

MH# 594
TYPE: STORM
COVER: BEEHIVE
RIM= 763.60
54" RCP S INV.=758.00
54" RCP N INV.=758.00

MH# 618
TYPE: STORM
COVER: BEEHIVE
RIM= 764.51
54" RCP S INV.=758.01
54" RCP N INV.=758.01
6" CPP E INV.=761.11

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	NORTHING	EASTING
3	48"	K	T/C=765.72	12" 761.89 E (PR) 12" 761.83 W (PR) 18" 761.83 S (PR)	763372.85	13022101.99
3A	48"	K	T/C=765.75	12" 762.34 E (PR)	763425.85	13021962.99
3B	48"	K	T/C=766.65	12" 763.26 W (PR)	763425.85	13022240.99
EX 363	N/A	N/A	RIM=766.17	12" 761.72 S (EX) 12" 761.72 N (PR)	763313.53	13021999.83

PROPOSED STORM SEWER END SECTION TABLE

STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE NORTHING	END OF PIPE EASTING
1	12"	Culv End Sect, Conc	12" 761.79	763344.04	13021999.82
2	18"	Culv End Sect, Conc	18" 761.79	763356.91	13022102.00

PROPOSED STORM SEWER PIPE TABLE

PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 1-EX	12"	Storm Sewer, Cl E, 12 inch	37'	0.19%	0'	37'
STM 3-2	18"	Storm Sewer, Cl E, 18 inch	16'	0.25%	0'	16'
STM 3A-3	12"	Storm Sewer, Cl E, 12 inch	149'	0.34%	0'	149'
STM 3B-3	12"	Storm Sewer, Cl E, 12 inch	149'	0.92%	0'	149'

DRAINAGE NOTES

1. PROPOSED BUILDING AREA, SIDEWALKS, PAVEMENT, AND CURB AND GUTTER ALL UTILIZED AS IMPERVIOUS AREA IN STORM SEWER DESIGN. LANDSCAPE AND OUTLAWN AREAS INCLUDED IN STORM SEWER DESIGN AS PERVIOUS AREA.

CONSTRUCTION NOTES

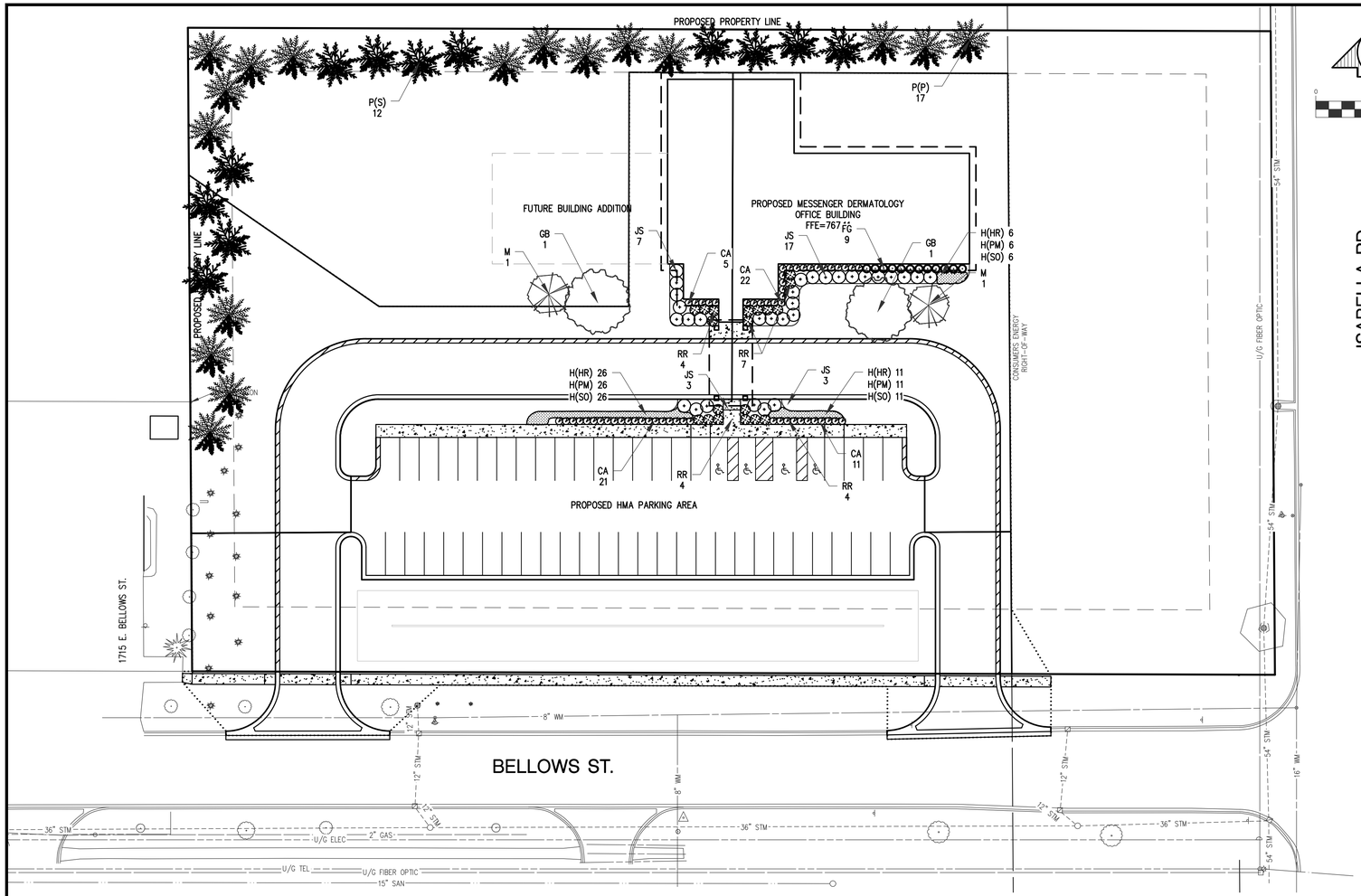
1. TC/TW GRADES FOR FULL HEIGHT CURB AND GUTTER NEED 0.39' ADDED TO THE ELEVATION TO DETERMINE TOP OF CURB HEIGHT.
2. TOP OF DUB DOWNS FOR SIDEWALK TO BE PLACED 6" FROM TC/TW LOCATION FOR AREAS THAT HAVE FULL HEIGHT CURB AND GUTTER.

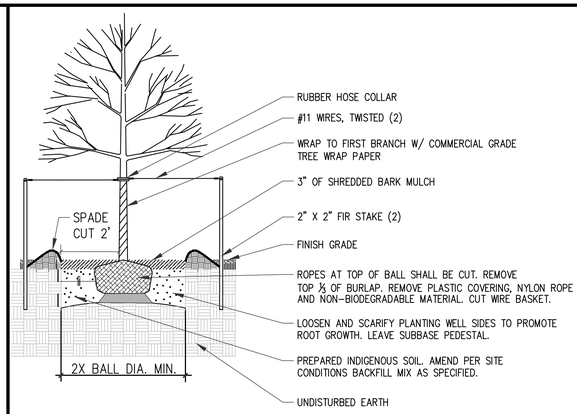
CONSTRUCTION SEQUENCE

1. EXCAVATION AND STOCKPILING OF SOIL.
2. IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES
3. STORM SEWER INSTALLATION
4. ROUGH GRADING
5. BUILDING CONSTRUCTION
6. FINE GRADING
7. HMA AND CONCRETE CONSTRUCTION
8. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
9. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

SITE GRADING LEGEND

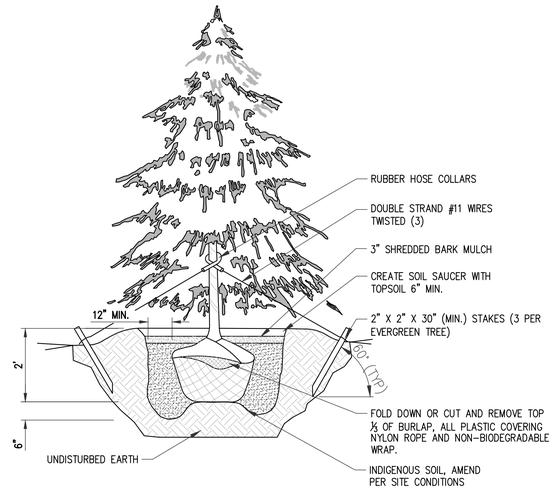
H.P. = PROPOSED HIGH POINT/RIDGE
TC = TOP OF CURB
TB = TOP OF HMA PAVEMENT
TW = TOP OF CONCRETE SIDEWALK
TP = TOP OF POND
BP = BOTTOM OF POND
~~~ = DIRECTION OF SURFACE FLOW

CURB HATCHING LEGEND

PROPOSED F4 SPILL CURB

BENCHMARK DATA TABLE

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 2	763402	13022400	766.98	TOP NW FLANGE BOLT OF HYDRANT IN NW QUAD OF ISABELLA ROAD AND BELLOWS STREET
BM 3	763306	13022008	766.98	TOP NW FLANGE BOLT OF HYDRANT , NORTH SIDE OF BELLOWS STREET, 400'± WEST OF ISABELLA ROAD
BM 4	763212	13022121	768.50	TOP NORTH SIDE OF CONCRETE LIGHT POLE BASE, NE CORNER OF PARKING LOT FOR MT. PLEASANT MEDICAL CENTER, 50'± SOUTH OF CENTERLINE OF BELLOWS STREET

TRAVERSE POINT DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 1	763327.5920	13022380.6610	FOUND IRON WITH "JSF" CAP IN NW QUAD OF ISABELLA ROAD AND BELLOWS STREET
TP 5	763261.4940	13022123.1550	SET IRON WITH "ROWE TRAV" CAP, 4' SOUTH OF BACK OF CURB SPRING POINT, EAST SIDE OF EAST ENTRANCE TO MT. PLEASANT MEDICAL CENTER

Know what's **below.**
Call before you dig.

PLAN SUBMITTALS AND CHANGES

SITE PLAN APPROVAL – **NOT FOR CONSTRUCTION**

DATE	DESCRIPTION
6/14/17	REZONING APPLICATION SUBMITTAL
9/5/17	SITE PLAN REVIEW SUBMITTAL

REV:

SHT# 2 OF 4

JOB No: 17M0053

PLAN DATE: SEPTEMBER 5, 2017
PROJECT MGR: TRG
REVIEWER: MPF
SCALE: 1"=30'

ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PREPARED FOR
BELLOWS MESSENGER, LLC
MESSENGER DERMATOLOGY

GRADING & UTILITY PLAN

PLOTTED: 9/5/2017 11:57 AM R:\Projects\17M0053\Dwg\Construction Drawings\SH - 17M0053 - GRADING.dwg
~~~





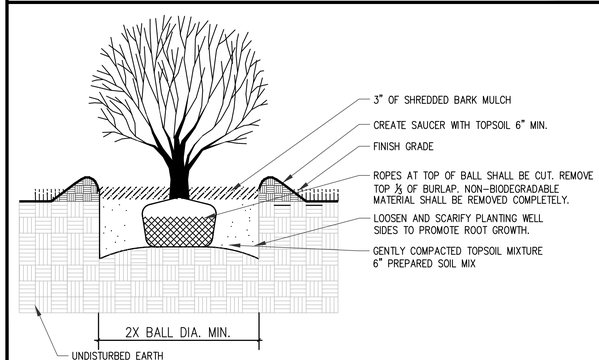
DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



TYPICAL EVERGREEN PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

PLANT SCHEDULE					
SYM	KEY	BOTANICAL NAME	COMMON NAME	NOTES	QUANTITY
	CA	CALAMAGROSTIS ACUTIFOLIA 'KARL FOERSTER'	KARL FOERSTER REED GRASS	NO. 3 CONT. 2' HT.	59 @ 2' SPACING
	FG	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	NO. 3 CONT. 15" HT.	9 @ 14" SPACING
	H(HR)	HEMEROCALLIS SP. 'HAPPY RETURNS'	PARDON ME DAYLILY	CLUMP NO. 2 CONT. 2' HT.	43 @ 14" SPACING
	H(PM)	HEMEROCALLIS SP. 'PARDON ME'	PARDON ME DAYLILY	CLUMP NO. 2 CONT. 2' HT.	43 @ 14" SPACING
	H(SO)	HEMEROCALLIS SP. 'STELLA DE ORO'	STELLA DE'ORO DAYLILY	CLUMP NO. 2 CONT. 2' HT.	43 @ 14" SPACING
	JS	JUNIPERUS SABINA 'BUFFALO'	BUFFALO JUNIPER	NO. 3 CONT. 15" HT.	26 @ 4' SPACING
	RR	ROSA 'RADRAZZ'	KNOCKOUT ROSE	NO. 3 CONT. 18" HT.	19 @ 4' SPACING

TREE SCHEDULE						
SYM	KEY	SIZE	BOTANICAL NAME	COMMON NAME	NOTES	QUANTITY
	GB	2" CAL.	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO	B&B	4
	M	5" CAL.	MALUS 'SNOWDRIFT'	SNOWDRIFT CRABAPPLE	B&B	2
	P(P)	60' HT.	PICEA PUNGENS 'GLAUCA'	COLORADO BLUE SPRUCE	B&B	17
	P(S)	90' HT.	PINUS STROBUS	EASTERN WHITE PINE	B&B	12

LANDSCAPE NOTES:

1. ALL LANDSCAPE MATERIALS SHALL BE HEALTHY AT THE TIME OF INSTALLATION.
2. CONTRACTOR SHALL SUPPLY FINISH GRADE AND EXCAVATE AS NECESSARY TO SUPPLY A MINIMUM 6" TOPSOIL DEPTH IN ALL PLANTING BEDS AND 3" TOPSOIL IN ALL LAWN AREAS UNLESS NOTED OTHERWISE.
3. ALL TOPSOIL SHALL BE IMPORTED AND SCREENED. EXISTING TOPSOIL MAY ONLY BE REUSED IF APPROVED BY THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS TO BE IN A HEALTHY CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE. CONTRACTOR SHALL REPLACE WITHOUT COST TO THE OWNER ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE OWNER'S REPRESENTATIVE DURING AND AT THE END OF THE GUARANTEE PERIOD.
5. ALL PLANTINGS SHALL CONFORM TO ANSI 260.1 OR CURRENT EDITION.
6. AREAS SPECIFIED WITH PLANT MATERIAL SHALL BE FINE GRADED AND SEEDED FOR TURF ESTABLISHMENT.
7. ALL EXCESS EXCAVATED MATERIALS AND DEBRIS WHICH ARE NOT ACCEPTED FOR DISPOSAL ON SITE BY THE OWNER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF LEGALLY OFF SITE.
8. ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESS WATER FROM STANDING ON LAWN AREAS OR AROUND TREES & SHRUBS.
9. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY MATERIAL NOT MEETING SPECIFICATIONS.
10. THE CONTRACTOR SHALL PLACE 3" OF SHREDDED BARK MULCH IN LANDSCAPE BEDS FOR SPECIFICATIONS.
11. LANDSCAPE EDGING SHALL BE ANGLE-STAKED BELOW GRADE PER MANUFACTURERS RECOMMENDATIONS TO SECURE FROM MOVEMENT.
12. ALUMINUM LANDSCAPE EDGING IS TO BE INSTALLED ALONG PLANTING BED EDGES WHERE MULCH AND LAWN MEET.

N

0 30 ft 60 ft

ISABELLA RD.

PLAN DATE: SEPTEMBER 5, 2017
PROJECT MGR: TRG
REVIEWER: MPF
SCALE: 1"=30'

ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PREPARED FOR
BELLOWS MESSENGER, LLC
MESSENGER DERMATOLOGY

LANDSCAPE PLAN

REV:

SHT# 3 OF 4

JOB No: 17M0053

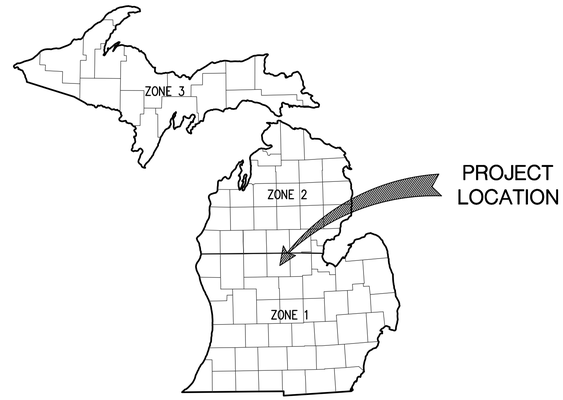
R:\Projects\17M0053\Dwg\Construction Drawings\SH - 17M0053 - LANDSCAPE SITE PLAN.dwg
PLOTTED: 9/5/2017 11:57 AM

MICHIGAN UNIFIED KEYING SYSTEM
SOIL EROSION SEDIMENTATION CONTROL MEASURES

✱ INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	A SLOPES	B STREAMS AND WATERWAYS	C SURFACE DRAINAGEWAYS	D ENCLOSED DRAINAGE (Inlet & Outfall Control)	E LARGE FLAT SURFACE AREAS	F BORROW AND STOCKPILE AREAS	G ADJACENT PROPERTIES
1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.	✱				✱	✱	
2	SELECTIVE GRADING & SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES EASE EROSION PROBLEMS.	✱				✱	✱	✱
3	GRUBBING OMITTED	SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE DISCOURAGES EQUIPMENT ENTRANCE	✱				✱		✱
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL STABILIZES SOIL SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF	✱	✱	✱		✱	✱	✱
5	SEEDING	INEXPENSIVE AND VERY EFFECTIVE STABILIZES SOIL, THUS MINIMIZING EROSION PERMITS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME SHOULD INCLUDE PREPARED TOPSOIL BED	✱		✱		✱	✱	✱
6	SEEDING WITH MULCH AND/OR MATTING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED	✱		✱			✱	✱
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS MULCH TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRASS IS ROOTED SHOULD INCLUDE PREPARED TOPSOIL BED	✱				✱	✱	✱
8	SODDING	PROVIDES IMMEDIATE PROTECTION CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH EASY TO PLACE; MAY BE REPAIRED IF DAMAGED SHOULD INCLUDE PREPARED TOPSOIL BED	✱		✱		✱	✱	✱
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF REDUCES VOLUME OF RUNOFF ON SLOPES	✱	✱					✱
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS PROTECTS SOIL FROM IMPACT OF FALLING RAIN PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES	✱				✱	✱	
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES COLLECTS SEDIMENT HOLDS WATER, SEED, AND MULCH BETTER THAN SMOOTH SURFACES	✱				✱		✱
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION	✱				✱		✱
13	RIPRAP, RUBBLE, GABIONS	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS PERMITS RUNOFF TO INFILTRATE SOIL DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS	✱	✱	✱				
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THUS MINIMIZING EROSION PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS					✱		
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VOLUME AND VELOCITY IRREGULAR SURFACE WILL HELP SLOW VELOCITY	✱				✱		
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY					✱		✱
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH COLLECTS SEDIMENT PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE	✱					✱	
18	DIVERSION BERM	DIVERTS WATER FROM VULNERABLE AREAS COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGEWAYS MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION	✱					✱	✱
19	DIVERSION DITCH	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS	✱					✱	✱
20	BERM & DITCH	DIVERTS WATER TO A PREPARED DRAINAGEWAY MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH	✱					✱	✱
21	FILTER BERM	CONSTRUCTED OF GRAVEL OR STONE INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS SLOWS RUNOFF AND COLLECTS SEDIMENT	✱	✱					✱
22	BRUSH FILTER	USES SLASH AND LOGS FROM CLEARING OPERATIONS CAN BE COVERED AND SEEDED RATHER THAN REMOVED ELIMINATES NEED FOR BURNING OR REMOVAL OF MATERIAL FROM SITE							✱
23	BARE CHANNEL	LEAST EXPENSIVE FORM OF DRAINAGEWAY MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF MINIMUM EROSION POTENTIAL			✱				
24	GRASSED WATERWAY	MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BARE CHANNEL GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT USED WHERE BARE CHANNEL WOULD BE ERODED			✱				✱
25	SLOPE DRAIN (SURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✱						✱
26	SLOPE DRAIN (PIPE CHUTE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✱						✱
27	SLOPE DRAIN (SUBSURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED AS GRADING PROGRESSES	✱						✱

KEY	DETAIL	CHARACTERISTICS	A SLOPES	B STREAMS AND WATERWAYS	C SURFACE DRAINAGEWAYS	D ENCLOSED DRAINAGE (Inlet & Outfall Control)	E LARGE FLAT SURFACE AREAS	F BORROW AND STOCKPILE AREAS	G ADJACENT PROPERTIES
28	DROP SPILLWAY	SLOWS VELOCITY OF FLOW, REDUCING EROSIVE CAPACITY		✱	✱				
29	PIPE DROP	REDUCES RUNOFF VELOCITY REMOVES SEDIMENT AND TURBIDITY CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW			✱				
30	PIPE SPILLWAY	REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF MAY BE PART OF PERMANENT EROSION CONTROL PLAN			✱				
31	ENERGY DISSIPATER	SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL PERMITS SEDIMENT COLLECTION FROM RUNOFF	✱		✱	✱			
32	LEVEL SPREADER	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW AVOIDS CHANNEL EASEMENTS AND CONSTRUCTION OFF PROJECT SITE SIMPLE TO CONSTRUCT			✱				
33	SEDIMENTATION TRAP	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW CAN BE CLEANED AND EXPANDED AS NEEDED		✱	✱				
34	SEDIMENT BASIN	TRAPS SEDIMENT RELEASES RUNOFF AT NON-EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE VISUAL AMENITIES		✱	✱	✱			
35	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION USE CATCH BASINS TO COLLECT SEDIMENT					✱		✱
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET					✱		✱
37	SOD FILTER	INEXPENSIVE AND EASY TO CONSTRUCT PROVIDES IMMEDIATE PROTECTION PROTECTS AREAS AROUND INLETS FROM EROSION				✱			
38	STRAW BALE FILTER	INEXPENSIVE AND EASY TO CONSTRUCT MAY BE LOCATED AS NECESSARY TO COLLECT SEDIMENT MAY BE USED IN CONJUNCTION WITH SNOW FENCE FOR ADDED STABILITY				✱			✱
39	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE EASY TO CONSTRUCT FILTERS SEDIMENT FROM RUNOFF				✱			✱
40	INLET SEDIMENT TRAP	EASY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED				✱			
41	STONE AND ROCK CROSSING	MAY BE ROCK OR CLEAN RUBBLE MINIMIZES STREAM TURBIDITY INEXPENSIVE MAY ALSO SERVE AS DITCH CHECK OR SEDIMENT TRAP		✱					
42	TEMPORARY CULVERT	ELIMINATES STREAM TURBULENCE AND TURBIDITY PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY		✱					
43	CULVERT SEDIMENT TRAP	EASY TO INSTALL AT INLET KEEPS CULVERT CLEAN AND FREE FLOWING MAY BE CONSTRUCTED OF LUMBER OR LOGS		✱					✱
44	CULVERT SEDIMENT TRAP	DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS		✱					
45	TEMP. STREAM CHANNEL CHANGE	NEW CHANNEL KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION REQUIRES STATE PERMIT		✱					
46	SHEET PILINGS	PROTECTS ERODIBLE BANK AREAS FROM STREAM CURRENTS DURING CONSTRUCTION MINIMAL DISRUPTION WHEN REMOVED		✱					
47	COFFERDAM	WORK CAN BE CONTINUED DURING MOST ANTICIPATED STREAM CONDITIONS CLEAR WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM		✱					
48	CONSTRUCTION DAM	PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES CONTROLLED FLOODING CAN BE ACCOMPLISHED DURING PERIODS OF INACTIVITY		✱					
49	CHECK DAMS	REDUCES FLOW VELOCITY CATCHES SEDIMENT CAN BE CONSTRUCTED OF LOGS, STRAW, HAY ROCK, LUMBER, MASONRY, OR SAND BAGS		✱	✱				
50	WEIR	CONTROLS SEDIMENTATION IN LARGE STREAMS CAUSES MINIMAL TURBIDITY		✱	✱				
51	RETAINING WALL	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS MINIMIZES MAINTENANCE	✱						✱
52	SEEPAGE CONTROL	PREVENTS PIPING AND SOIL SLIPPAGE ON CUT SLOPES	✱						✱
53	WINDBREAK	MINIMIZES WIND EROSION MAY BE SNOW FENCE					✱		
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.			✱				✱



SEEDING ZONES

SOIL EROSION & SEDIMENTATION CONTROL

1. CONTRACTOR SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND, IF REQUIRED, OBTAIN A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT PRIOR TO ANY EARTH CHANGES.
2. CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
3. BORROW AND FILL DISPOSAL AREAS WILL BE SELECTED AND APPROVED AT TIME OF PLAN REVIEW.
4. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
5. CLEANUP WILL BE DONE IN A MANNER TO INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
6. THE PROJECT WILL BE CONTINUALLY INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS.
7. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.
8. ALL TEMPORARY SOIL EROSION CONTROL MEASURES MUST BE REMOVED FROM ROAD RIGHT-OF-WAY AREAS PRIOR TO ACCEPTANCE OF STREETS FOR ROUTINE MAINTENANCE.
9. VEGETATION MUST BE ACCEPTABLY ESTABLISHED PRIOR TO FINAL RELEASE OF THE CONSTRUCTION GUARANTEE BY THE DESIGNATED SOIL EROSION SEDIMENTATION CONTROL AGENT.

CONSTRUCTION SEQUENCE

1. EXCAVATION AND STOCKPILING OF SOIL.
2. IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES; SELECTIVE GRADING, DIVERSIONS AS REQUIRED IN FIELD, PROTECTION OF STORM SEWER FACILITIES.
3. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
4. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

PERMANENT SEEDING GUIDE

	APR	MAY	JUN	JUL	AUG	SEP	OCT	
IRRIGATED AND/OR MULCH								ZONE 1
WITHOUT IRRIGATION OR MULCH								
IRRIGATED AND/OR MULCHED								ZONE 2
WITHOUT IRRIGATION OR MULCH								
IRRIGATED AND/OR MULCHED								ZONE 3
WITHOUT IRRIGATION OR MULCH								

TEMPORARY SEEDING GUIDE
ZONE 1

TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT	
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS					15TH			
SUDANGRASS								
RYE OR PERENNIAL RYE							15TH	15TH
WHEAT								

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE SEDIMENT CONTROL												
TEMP. CONTROL MEASURES												
STORM FACILITIES												
TEMP. CONSTRUCTION ROADS												
SITE CONSTRUCTION												
PERM. CONTROL MEASURES												
FINISH GRADING												

Know what's **below.** **Call** before you dig.

PLAN SUBMITTALS AND CHANGES

SITE PLAN APPROVAL – **NOT FOR CONSTRUCTION**

DATE	DESCRIPTION
6/14/17	REZONING APPLICATION SUBMITTAL
9/5/17	SITE PLAN REVIEW SUBMITTAL

REV:

SHT# 4 OF 4

JOB No: 17M0053

PLAN DATE: SEPTEMBER 5, 2017
PROJECT MGR: TRG
REVIEWER: MPF
SCALE: NONE

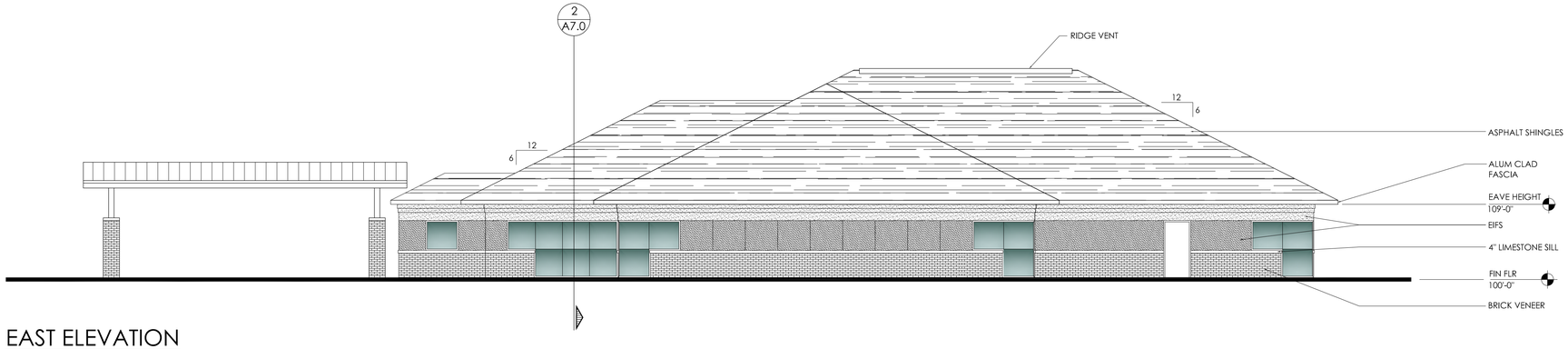
ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PREPARED FOR
BELLOWS MESSENGER, LLC
MESSENGER DERMATOLOGY

SOIL EROSION & SEDIMENTATION CONTROL LEGEND

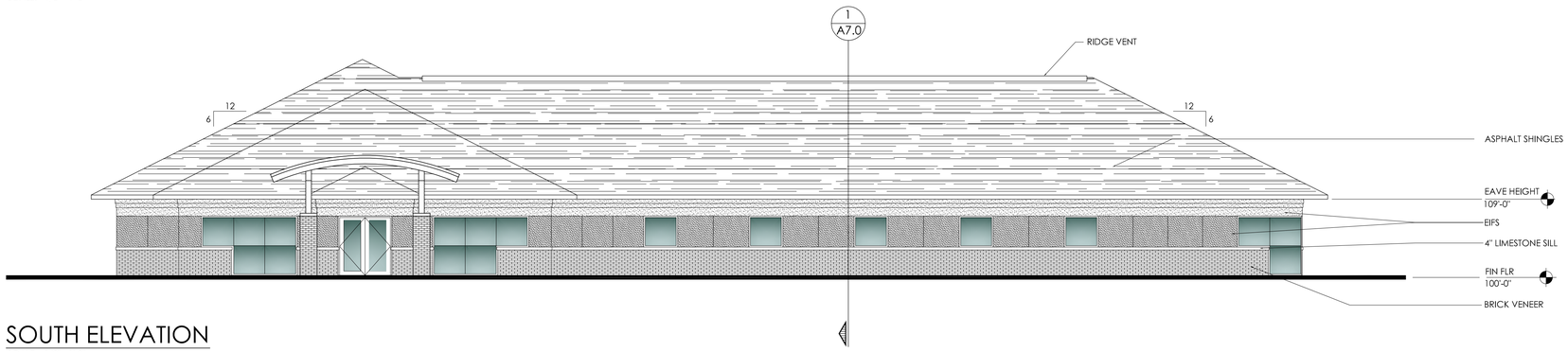
R:\Projects\17M0053\Dwg\Construction Drawings\SH - 17M0053 - GRADING.dwg

PLOTTED: 9/5/2017 11:57 AM



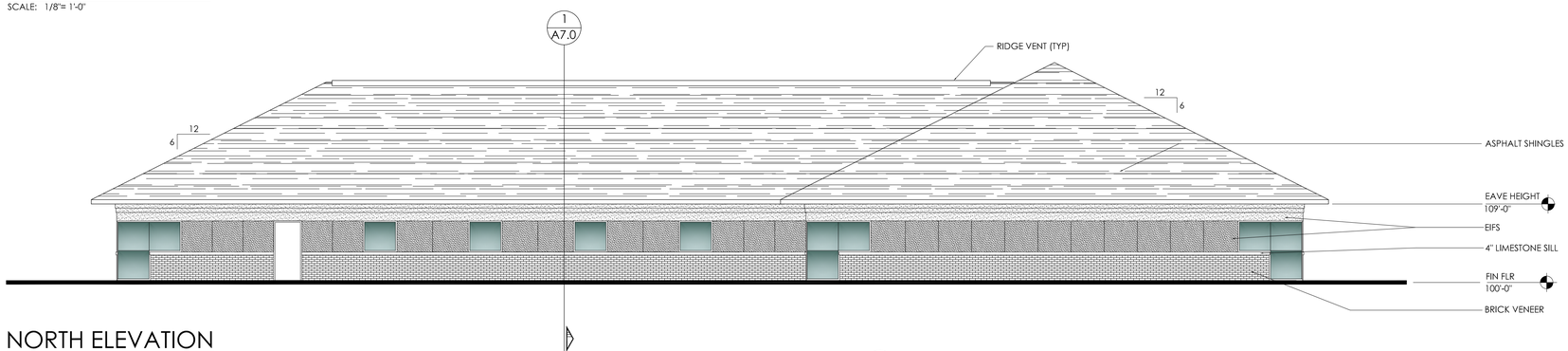
EAST ELEVATION

SCALE: 1/8"= 1'-0"



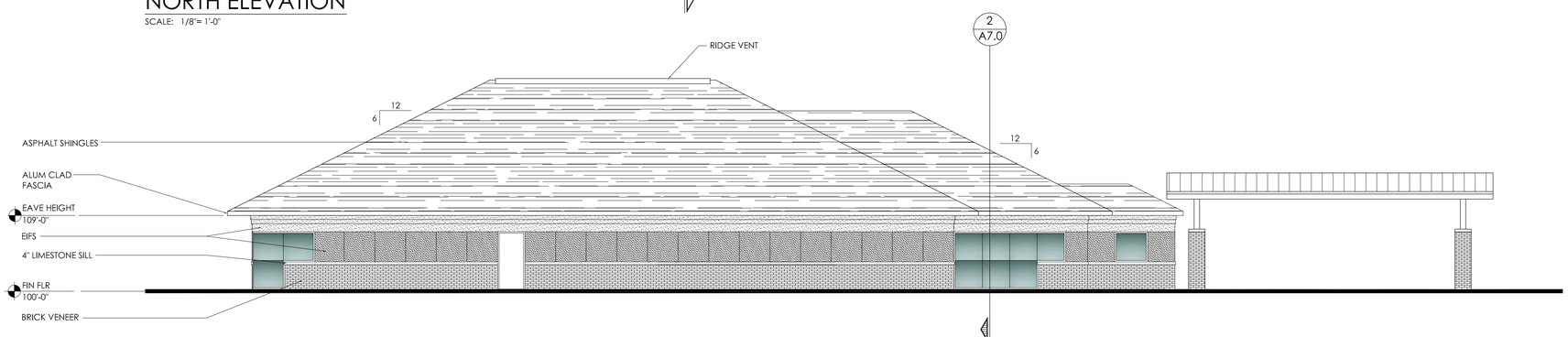
SOUTH ELEVATION

SCALE: 1/8"= 1'-0"



NORTH ELEVATION

SCALE: 1/8"= 1'-0"



WEST ELEVATION

SCALE: 1/8"= 1'-0"

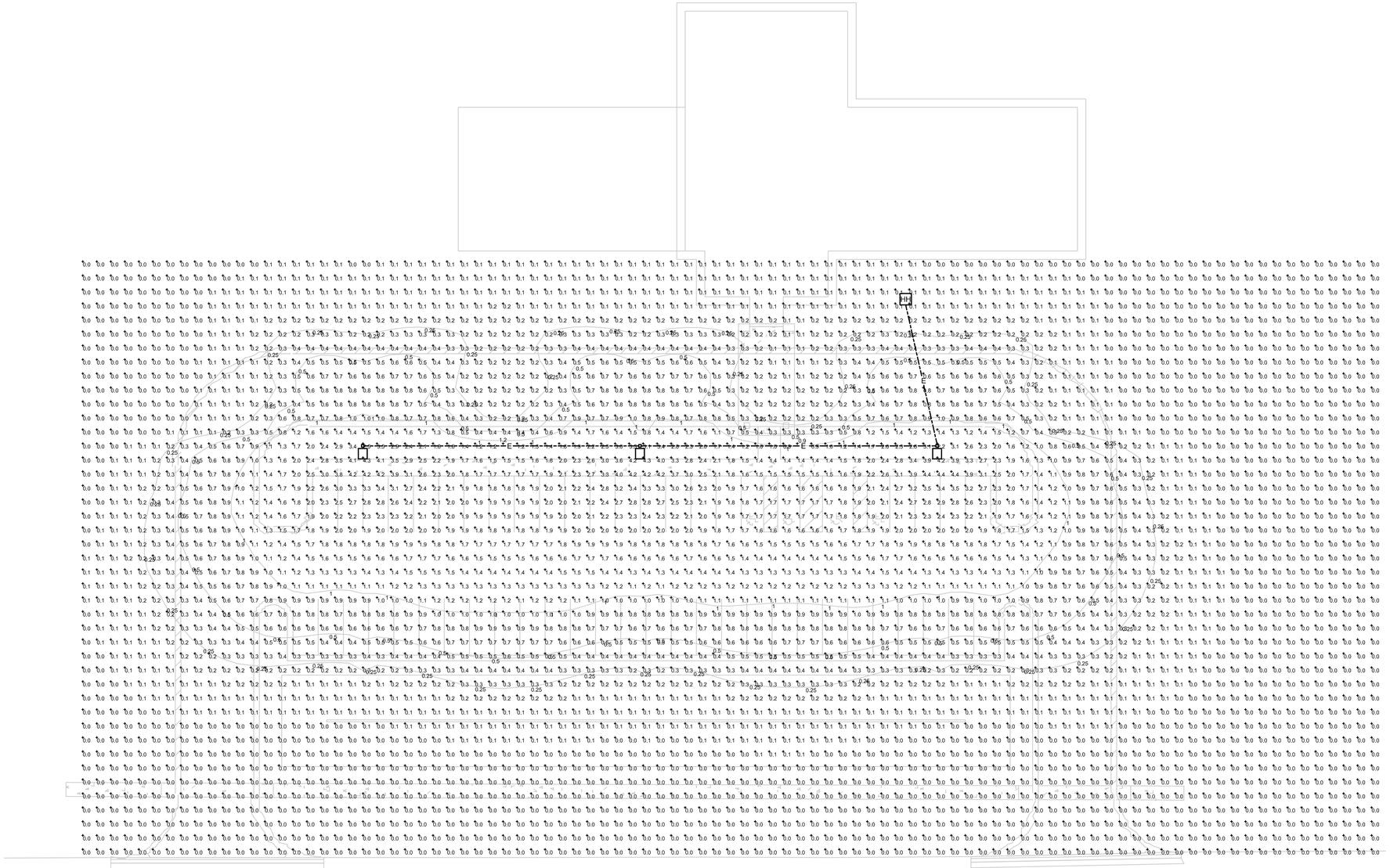
9-14-2016	BUILDING PERMIT
DATE	ISSUED FOR:

CASE
ARCHITECTURE, INC.
ARCHITECTURE • PASSION • INTEGRITY
282 S. MAIN • FREELAND, MI •989.695.9707

PROJECT:
NEW FACILITY FOR:
MESSENGER DERMATOLOGY
UNION TOWNSHIP, MICHIGAN

SHEET TITLE:
EXTERIOR ELEVATIONS

APPROVED BY: RHC
PROJECT NUMBER: 16-250-13
DRAWING NUMBER: A4.0



NORTH

SITE LIGHTING POINT BY POINT CALULATIONS

Statistics						
Description	Symbol	Avg	Min	Max/Min	Avg/Min	Max
Calc Zone #1	+	0,5 fc	0,0 fc	N/A	N/A	4,4 fc

Schedule										
Symbol	Label	Quantity	Manufacturer	Catalog Number	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage	Description
▫	B	3	Lithonia Lighting	DSX1 LED 60C 1000 40K T4M MVOLT MA	LED	1	Lithonia DSX1_LED_60C_1000_40K_T4M_MVOLT_MA.ies	19770,03	0,81	209,28	DSX1 LED WITH (2) 30 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 1000mA , FOR MAST ARM MOUNTING

REV.	DESCRIPTION	BY	DATE

Dr. MESSENGER DERMATOLOGY

SITE ELECTRICAL PLAN

MacMILLAN ASSOCIATES
CONSULTING ENGINEERS
714 EAST MIDLAND STREET • BAY CITY, MICHIGAN 48706
(989) 894-4300 • FACSIMILE (989) 894-9930
www.macmillanassociates.com

APPROVED BY	EAB	DATE	8/2017
CHECKED BY	BV	JOB No.	2017-0181
DRAWN BY	DCT	DWG. No.	

SHEET No. SE2 OF

Charter Township of Union

Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: **B) HOP 2017-01 Photography Studio 4305 E. Wing Rd.**
(Requires Public Hearing)

Applicant: Jeremy and Jennifer Ruble
Owner: Jeremy and Jennifer Ruble
Location: 4305 E. Wing Rd. Mt. Pleasant, MI 48858
Current Zoning: AG Agricultural District.
Adjacent Zoning: AG to the north, AG to the east, AG to the west, and AG to the south across the road.
Future Land Use/Intent: A-3: Buffer existing agricultural or underdeveloped land from new development. Desired uses in this area follow the existing Zoning
Current Use: One-Family Dwelling Residential.
Reason for Request: Applicant proposes to operate a photography studio in home.
History: Township Records show that the property has been used a One-Family Dwelling for Residential since 2004. Home Occupation Permits are allowed for an AG District per section 8.19 of the Zoning Code.
Objective of board: Conduct a public hearing. Review the application and either approve the permit with conditions if needed or deny permit with reasons stated. This is not a recommendation. Final approval is with the Planning Commission.

Recommend at this time recommend approval of HOP 2017-01

Peter Gallinat
Twp Planner

RECEIVED
AUG 22 2017
BY: AP

HOME OCCUPATION PERMIT APPLICAION
Charter Township of Union

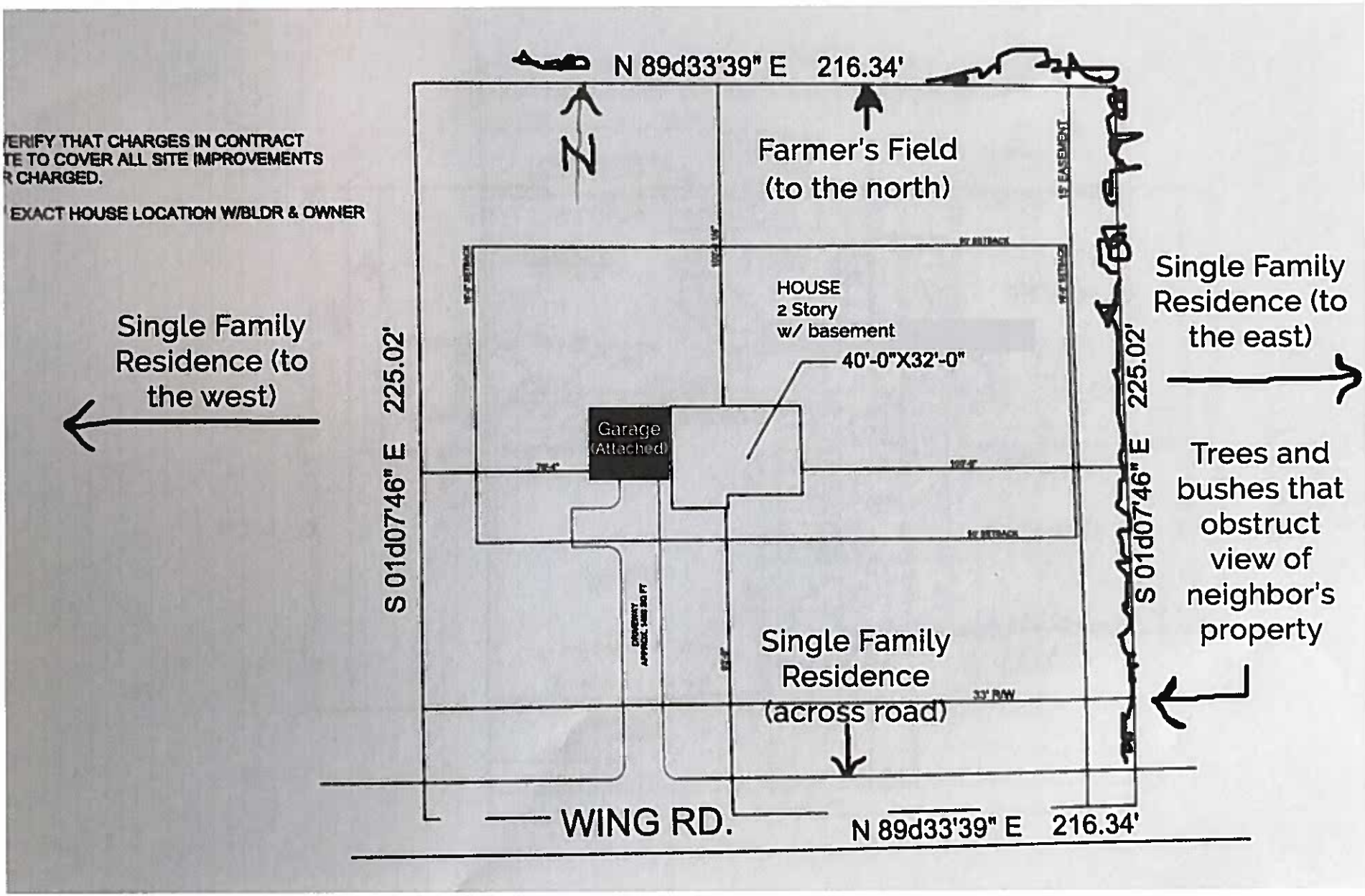
1. Give your Name and address of where Home Occupation is to be conducted. Also give a mailing address if you are not receiving mail there yet.
   Jeremy Ruble
   4305 E. Wing Rd.
   Mt. Pleasant, MI 48858
2. What is the zoning of the property? _____
3. List the Residents of your home who will be associated with the conduct of the home occupation Jennifer Ruble + Jeremy Ruble
4. Do all the above live at the residence? yes (If the answer is "No" the permit may not be granted.)
5. Do you intend to hire employees to work **at** the location? no. (This would not apply to services provided to your occupation that are conducted off the premises)
6. Briefly describe the nature of the operation (Such as Beauty Shop, Accounting office, legal office, etc.) Photography for newborns + graphic design.
7. What hours do you plan to conduct the operation? M-F 9am-4pm
8. Are any products to be sold at the home? no (Answer "no" for sales by demonstration, catalogs, multi-level, etc if products are sold off premises)
9. List any mechanical operations (such as sawing, welding, etc.) NONE
10. Provide a sketch (you may do this yourself) showing the floor plan of the home or accessory building, indicating areas that are for the public and areas that are not. You need to show the square footage of the entire building, and the square footage of the areas being used for the occupation.
11. Provide a sketch of your land, the home, and indicate what is on the lots around you. Provide dimensions of your lot, setbacks from the lot lines and roads. Also indicate any storage areas, parking, and natural features, such as shrubs, that would screen your home from the neighbors.

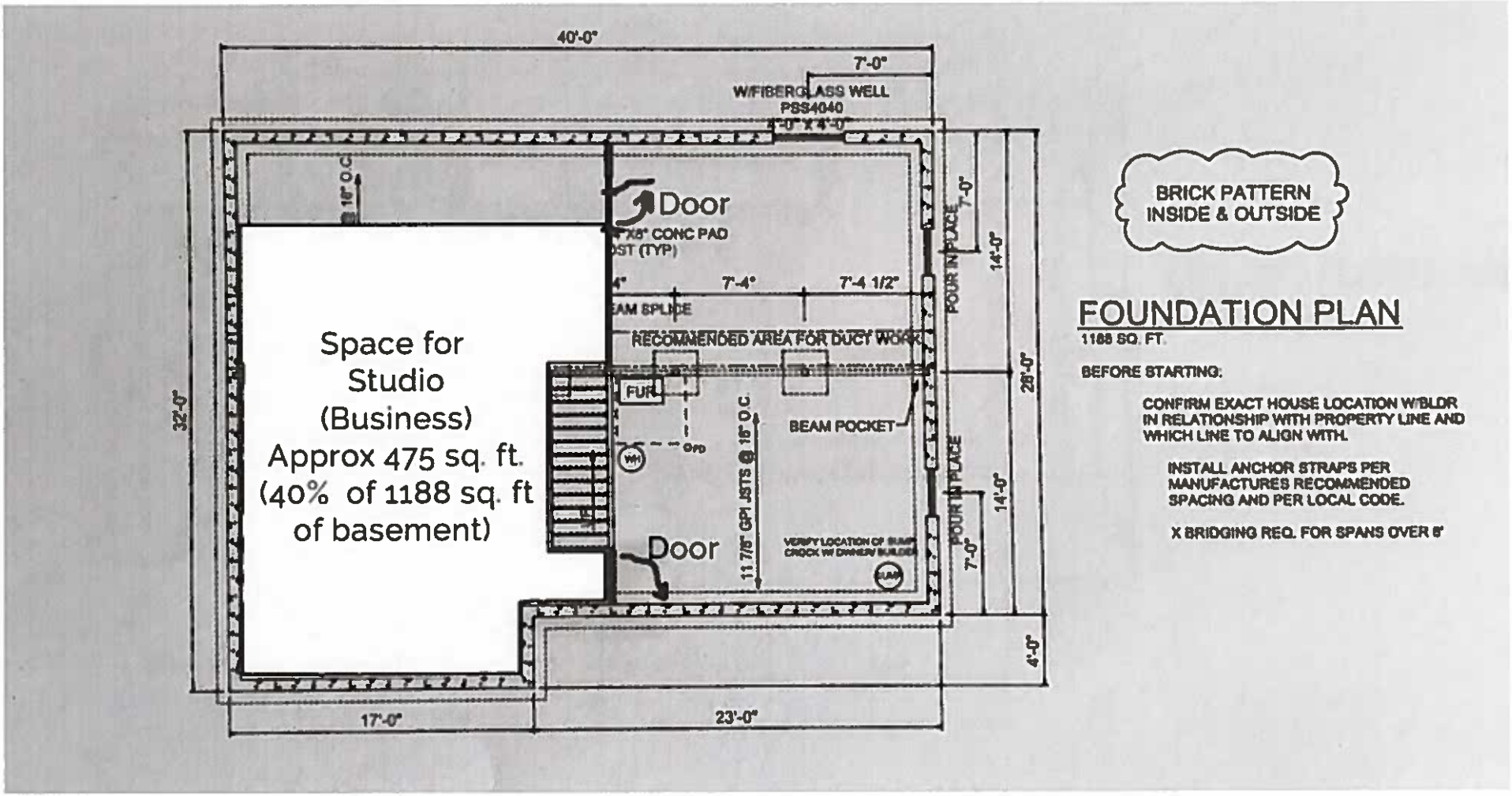
Office use:

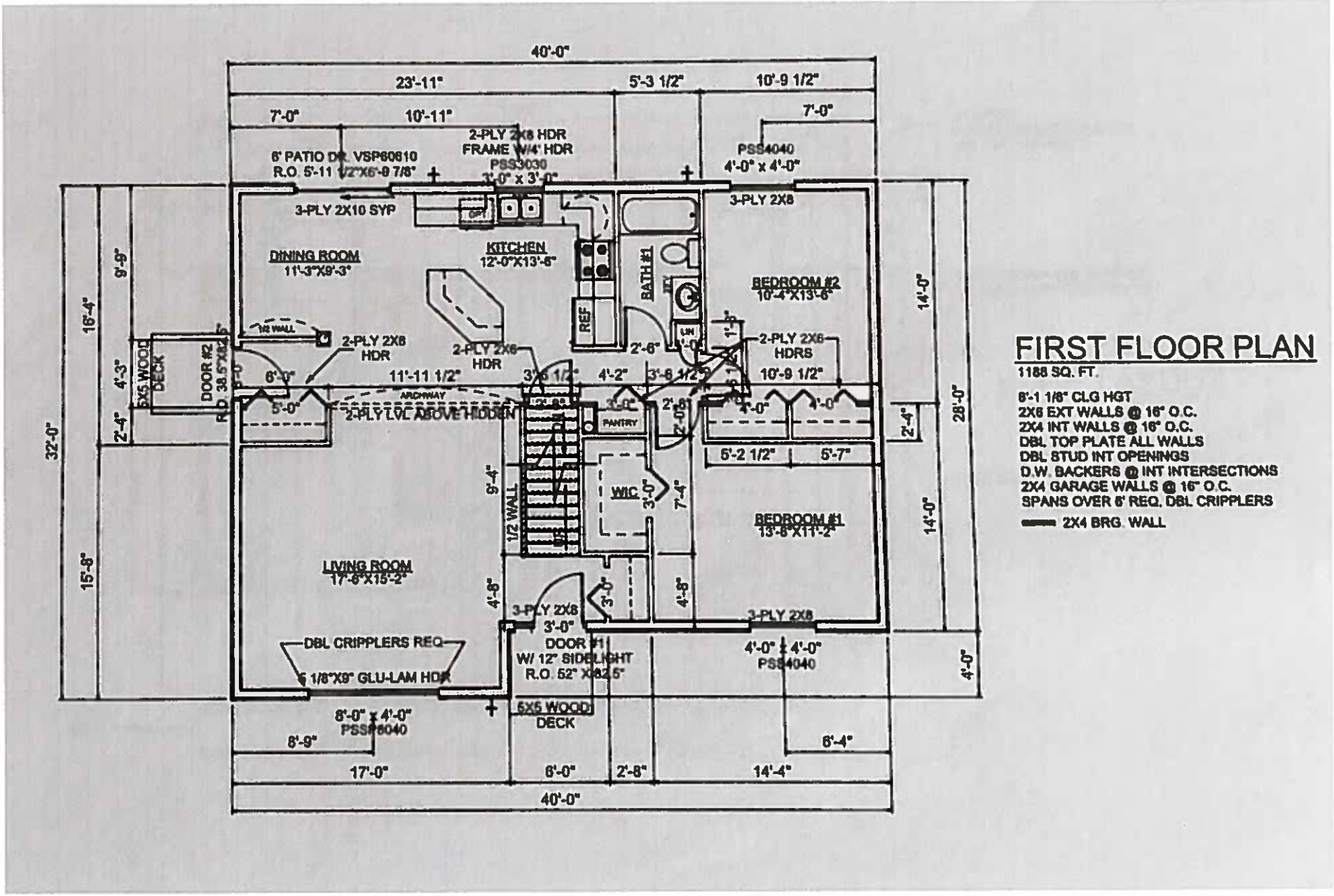
Fee paid ? _____

Date to be reviewed _____

Date of mailing to residents _____


ERIFY THAT CHARGES IN CONTRACT
TE TO COVER ALL SITE IMPROVEMENTS
R CHARGED.
EXACT HOUSE LOCATION W/BLDR & OWNER
N 89d33'39" E 216.34'
N
Farmer's Field
(to the north)
Single Family
Residence (to
the west)
HOUSE
2 Story
w/ basement
40'-0"X32'-0"
Garage
(Attached)
S 01d07'46" E 225.02'
Single Family
Residence (to
the east)
S 01d07'46" E 225.02'
Trees and
bushes that
obstruct
view of
neighbor's
property
Single Family
Residence
(across road)
33' R/W
WING RD.
N 89d33'39" E 216.34'


40'-0"
7'-0"
W/FIBERGLASS WELL
PSS4040
4'-0" X 4'-0"
16" O.C.
Door
7'-4"
7'-4 1/2"
RECOMMENDED AREA FOR DUCT WORK
FUR
BEAM POCKET
11 7/8" GPI JSTS @ 16" O.C.
Door
POUR IN PLACE
7'-0"
14'-0"
28'-0"
32'-0"
4'-0"
17'-0"
23'-0"
Space for
Studio
(Business)
Approx 475 sq. ft.
(40% of 1188 sq. ft
of basement)
BRICK PATTERN
INSIDE & OUTSIDE
FOUNDATION PLAN
1188 SQ. FT.
BEFORE STARTING:
CONFIRM EXACT HOUSE LOCATION W/BLDR
IN RELATIONSHIP WITH PROPERTY LINE AND
WHICH LINE TO ALIGN WITH.
INSTALL ANCHOR STRAPS PER
MANUFACTURES RECOMMENDED
SPACING AND PER LOCAL CODE.
X BRIDGING REQ. FOR SPANS OVER 8'



FIRST FLOOR PLAN

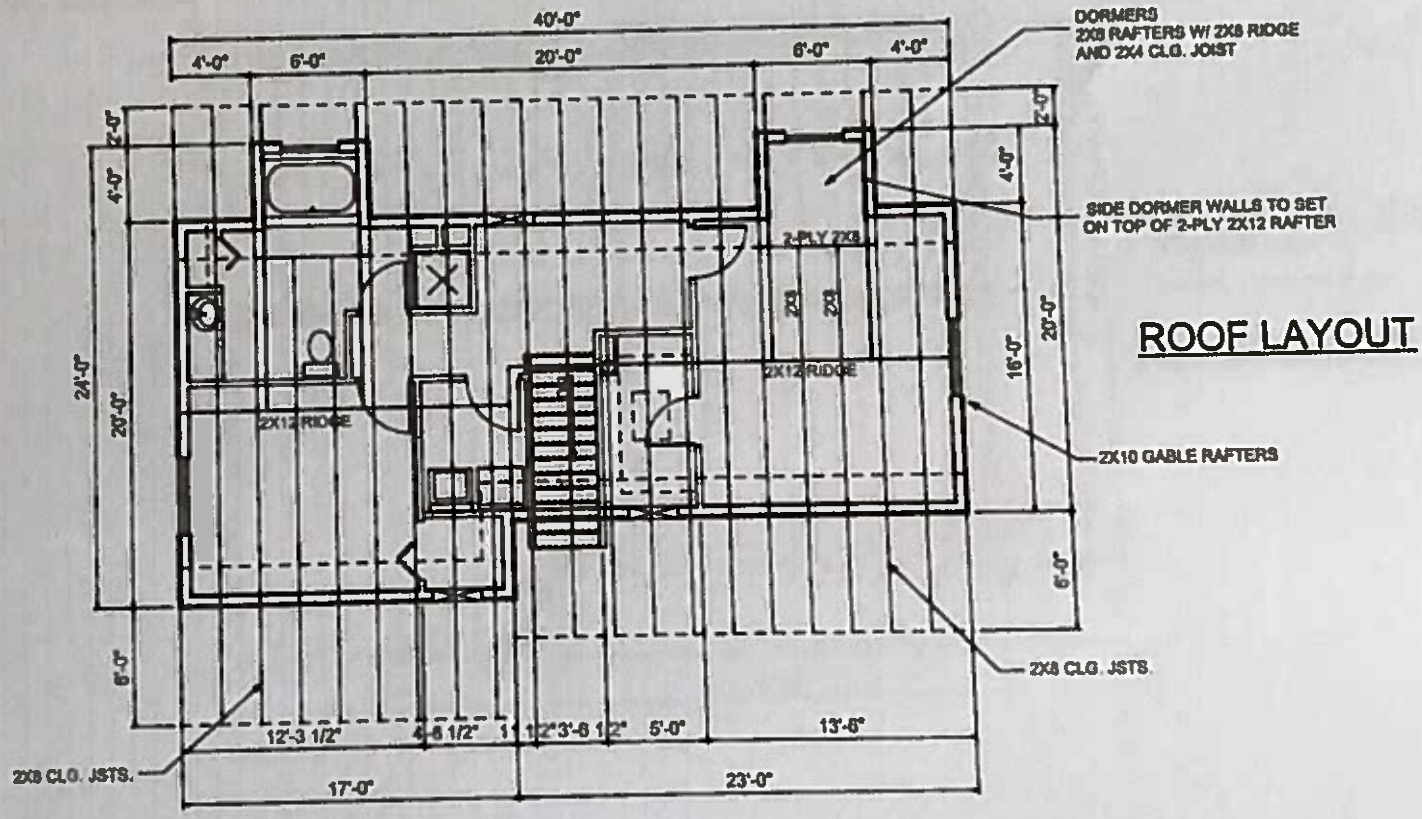
1188 SQ. FT.

8'-1 1/8" CLG HGT
2X6 EXT WALLS @ 16" O.C.
2X4 INT WALLS @ 16" O.C.
DBL TOP PLATE ALL WALLS
DBL STUD INT OPENINGS
D.W. BACKERS @ INT INTERSECTIONS
2X4 GARAGE WALLS @ 16" O.C.
SPANS OVER 6' REQ. DBL CRIPPLERS

2X4 BRG. WALL

1st Story = 1188 ft sq. ft.

Top Floor


40'-0"
4'-0"
6'-0"
20'-0"
6'-0"
4'-0"
DORMERS
2X8 RAFTERS W/ 2X8 RIDGE
AND 2X4 CLG. JOIST
SIDE DORMER WALLS TO SET
ON TOP OF 2-PLY 2X12 RAFTER
2-PLY 2X8
2X12 RIDGE
2X12 RIDGE
ROOF LAYOUT
2X10 GABLE RAFTERS
2X8 CLG. JSTS.
2X8 CLG. JSTS.
12'-3 1/2"
5'-0"
13'-6"
17'-0"
23'-0"

2^{nd} Story = 756 ft sq. ft.

UNION TOWNSHIP – NOTICE OF HOME OCCUPATION APPLICATION

NOTICE is hereby given that an application for a Home Occupation Permit shall be considered on Tuesday, September 19, 2017, at 7:00 p.m. at the Union Township Hall located at 2010 South Lincoln Road, Mt. Pleasant, Michigan, before the Union Township Planning Commission for the purpose of hearing any interested persons in the following request for a Home Occupation Permit, as allowed by the Union Township Zoning Ordinance 1991-5 as amended.

Requested by Ruble Jeremy & Jennifer, a Home Occupation Permit in an AG zone for a Photography Studio located inside home.

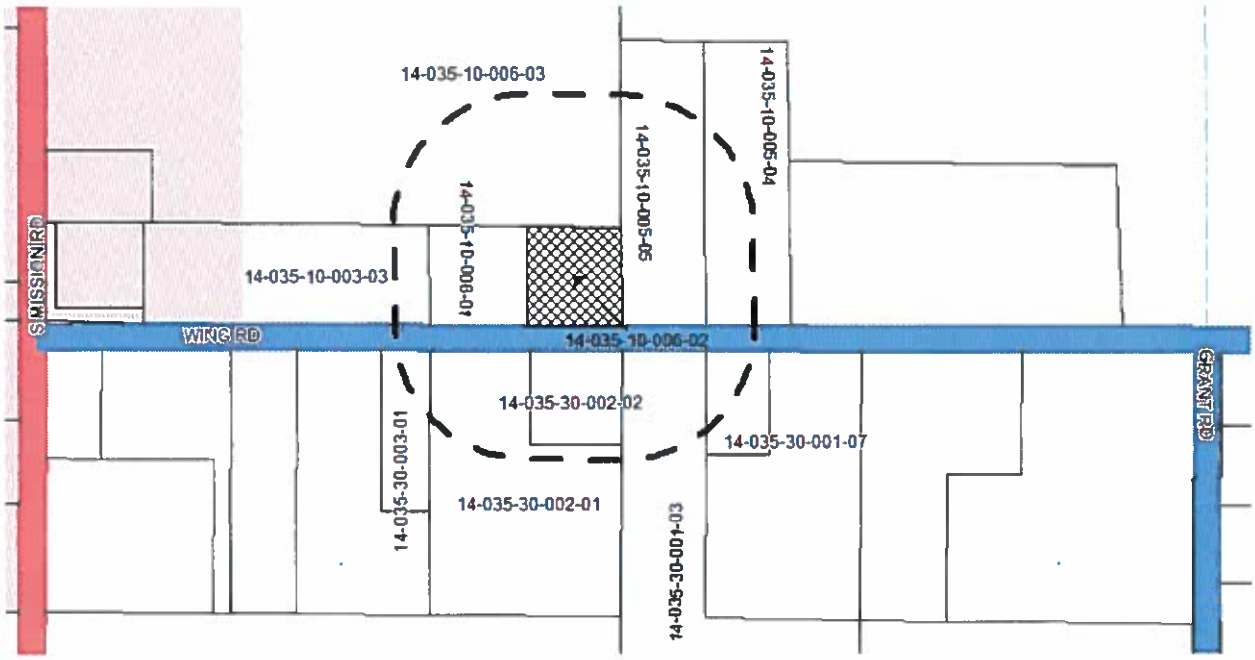
Legal Description of property: T14N R4W, SEC 35, COM N 89D 33M 39S E, ALG E-W 1/4 LN, 1116.02 FT FROM W 1/4 COR SEC 35; TH N 89D 33M 39S E, 216.75 FT; TH N 1D 20M 23S W, 225.03 FT; TH S 89D 33M 39S W, 216.34 FT; TH S 1D 14M 4S E, 225.02 FT TO POB 1.12 A M/L 9/10/03 SPLIT 35-10-003-00 NOW 006-01 (WEST), 006-02 (EAST) AND 006-03 (MINI STORAGE)

This property is located at. 4305 E. Wing Rd. Mount Pleasant, MI 48858

All interested person may submit their views in person, in writing, or by signed proxy prior to the public hearing or at the public hearing.

All materials concerning this request may be seen at the Union Township Hall, located at 2010 S. Lincoln Road, Mt. Pleasant, Michigan, between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday. Phone (989) 772 4600 extension 241.

Peter Gallinat,
Township Planner



The checkered parcel represents **4305 E. Wing Rd.** The owner of 4305 E. Wing Rd has requested a Home Occupation Permit for a photography studio located inside the home. The parcel is zoned AG (Agricultural). All of the white colored parcels are zoned AG (Agricultural). The pink color represents B-4 (General Business District) The dashed circular border around the applicant's parcel represents a 300ft border. The Parcel ID numbers of those properties within 300ft of the applicant's property have been noted.

Jeremy & Jennifer Ruble
4305 E. Wing Rd.
MT PLEASANT, MI 48858

Deshano Development Co.
325 Commerce Ct.
Gladwin, MI 48624

Adam S. Betz
4321 E. Wing Rd.
MT PLEASANT, MI 48858

Colin W. Herren
4349 E. Wing Rd.
MT PLEASANT, MI 48858

Robinson John D Jr. & Sharlene M
4346 E. Wing Rd.
Mt. Pleasant, MI 48858

Allen Larry J. & Marilyn S
4330 E. Wing Rd
MT PLEASANT, MI 48858

Irving Clarence F & Mary A
4266 E. Wing Rd.
Mt. Pleasant, MI 48858

Tait Alice A.
4256 E. Wing Rd.
Mt. Pleasant, MI 48858

Burger Dean Michael Rev Liv Trust
P.O. Box 75
Cedar, MI 49621

Bouman Brent & Kara
4295 E. Wing Rd.
Mt. Pleasant, MI 48858

Withey Trina
P.O. Box 758
Mt. Pleasant, MI 48804-0758

digitalfirst MEDIA

MICHIGAN GROUP

AFFIDAVIT OF PUBLICATION

48 West Huron Street • Pontiac, MI 48342

CHARTER TOWNSHIP OF UNION
2010 S Lincoln

Mount Pleasant, MI 48858
Attention: Peter Gallinat

STATE OF MICHIGAN,
COUNTY OF ISABELLA

The undersigned Jake Allport, being duly sworn the he/she is the principal clerk of Morning Sun, morningstarpublishing.com, published in the English language for the dissemination of local or transmitted news and intelligence of a general character, which are duly qualified newspapers, and the annexed hereto is a copy of certain order, notice, publication or advertisement of:

CHARTER TOWNSHIP OF UNION

Published in the following edition(s):

Morning Sun	09/03/17
morningstarpublishing.com	09/03/17

UNION TOWNSHIP – NOTICE OF HOME OCCUPATION APPLICATION

NOTICE is hereby given that an application for a Home Occupation Permit shall be considered on Tuesday, September 19, 2017, at 7:00 p.m. at the Union Township Hall located at 2010 South Lincoln Road, Mt. Pleasant, Michigan, before the Union Township Planning Commission for the purpose of hearing any interested persons in the following request for a Home Occupation Permit, as allowed by the Union Township Zoning Ordinance 1991-5 as amended.

Requested by Ruble Jeremy & Jennifer, a Home Occupation Permit in an AG zone for a Photography Studio located inside home.

Legal Description of property: T14N R4W, SEC 35, COM N 89D 33M 39S E, ALG E-W 1/4 LN, 1116.02 FT FROM W 1/4 COR SEC 35; TH N 89D 33M 39S E, 216.75 FT; TH N 1D 20M 23S W, 225.03 FT; TH S 89D 33M 39S W, 216.34 FT; TH S 1D 14M 4S E, 225.02 FT TO POB 1.12 A M/L 9/10/03 SPLIT 35-10-003-00 NOW 006-01 (WEST), 006-02 (EAST) AND 006-03 (MINI STORAGE)

This property is located at. 4305 E. Wing Rd. Mount Pleasant, MI 48858

All interested person may submit their views in person, in writing, or by signed proxy prior to the public hearing or at the public hearing.

All materials concerning this request may be seen at the Union Township Hall, located at 2010 S. Lincoln Road, Mt. Pleasant, Michigan, between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday. Phone (989) 772 4600 extension 241.

Peter Gallinat,
Township Planner

Published: September 3, 2017

TINA M CROWN
Notary Public - Michigan
Lapeer County
My Commission Expires Mar 20, 2021
Acting in the County of Oakland

Sworn to the subscribed before me this 6th September 2017

Tina M Crown

Notary Public, State of Michigan
Acting in Oakland County

Advertisement Information

Client Id: 531226 **Ad Id:** 1422773 **PO:** **Sales Person:** 200300