



**AGENDA**  
CHARTER TOWNSHIP OF MERIDIAN  
TOWNSHIP BOARD – REGULAR MEETING  
March 17, 2020 6:00 pm

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1. CALL MEETING TO ORDER
  2. PLEDGE OF ALLEGIANCE/INTRODUCTIONS
  3. ROLL CALL
  4. PRESENTATION
    - A. Introduction of Economic Development Director
    - B. Coronavirus Task Force Update
  5. CITIZENS ADDRESS AGENDA ITEMS AND NON-AGENDA ITEMS\*
  6. TOWNSHIP MANAGER REPORT
  7. BOARD MEMBER REPORTS OF ACTIVITIES AND ANNOUNCEMENTS
    - A. Election Report-Clerk Dreyfus
    - B. Treasurer’s Report-Treasurer Deschaine
  8. APPROVAL OF AGENDA
  9. CONSENT AGENDA
    - A. Communications
    - B. Minutes-March 3, 2020 Regular Meeting
    - C. Bills
    - D. Authority to Open Accounts
  10. QUESTIONS FOR THE ATTORNEY
  11. HEARINGS (CANARY)
  12. ACTION ITEMS (PINK)
    - A. Rezoning #19100 (Durow) 1259 Grand River Avenue RR and RRA to C-2-**Final Adoption**
    - B. Municipal Building HVAC Replacement Bids
    - C. Resolution Celebrating Women’s History Month
    - D. Newton Road Sanitary Sewer SAD #54- Resolution #4
  13. BOARD DISCUSSION ITEMS (ORCHID)
    - A. Special Use Permit #19131 (The W. Investment Holdings)
    - B. Special Use Permit #19141 (The Cured Leaf TC, Inc)
    - C. Zoning Amendment #20020 (Township Board) Multiple Family Zoning Districts
    - D. Medical Marihuana Ordinance Amendment
    - E. Membership in Michigan Water/Wastewater Agency Response Network (MiWARN)
  14. COMMENTS FROM THE PUBLIC
  15. OTHER MATTERS AND BOARD MEMBER COMMENTS
  16. CLOSED SESSION- Motion to go into a closed session to discuss a confidential written legal opinion from the Township attorney regarding the alleged medical marihuana violation by Daniel White and to discuss trial or settlement strategy in connection with the court prosecution of that violation by the Township attorney, as an open meeting would have a detrimental financial effect on the litigating or settlement position of the Township and enter into closed session for strategy session connected with the negotiation of the collective bargaining agreements with the police and fire unions under section 8(c) of the Open Meetings Act.
  17. ADJOURNMENT
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All comments limited to 3 minutes, unless prior approval for additional time for good cause is obtained from the Supervisor.  
Appointment of Supervisor Pro Tem and/ or Temporary Clerk if necessary.

Individuals with disabilities requiring auxiliary aids or services should contact the Meridian Township Board by contacting:  
Township Manager Frank L. Walsh, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4258 - Ten Day Notice is Required.  
Meeting Location: 5151 Marsh Road, Okemos, MI 48864 Township Hall



**7.B**

# **TOWNSHIP BOARD MEETING**

**March 12, 2020**

## **TREASURER'S REPORT**

**Collections**

**Distributions**

**Investments**

**DELINQUENT PERSONAL PROPERTY TAX COLLECTION TOTALS FOR 2015,  
2016, 2017, 2018 & 2019 TAX YEARS**

COLLECTED IN 2019	\$	33,431.86
COLLECTED IN 2020	\$	5,070.02
TOTAL REMAINING COLLECTIBLE (TO 03-11-2020)	\$	86,560.62

**TOTAL 2019 TAX YEAR COLLECTIONS (TO 03-02-2020)** \$ 103,919,204.03

**2019 TAX YEAR DISTRIBUTION TOTALS (AS OF 02-16-2020)**

STATE EDUCATION TAX	\$	10,773,896.64
HASLETT SCHOOLS	\$	5,691,953.16
OKEMOS SCHOOLS	\$	16,455,956.69
WILLIAMSTON SCHOOLS	\$	365,445.94
EAST LANSING SCHOOLS	\$	2,120,928.82
INGHAM INTERMEDIATE SCHOOL DISTRICT	\$	10,761,348.81
INGHAM COUNTY	\$	20,174,642.58
MERIDIAN TOWNSHIP ADMIN	\$	1,007,267.92
MERIDIAN OPERATING	\$	7,331,381.94
MERIDIAN SPECIAL MILLAGES	\$	11,124,613.12
INGHAM CO LANDBANK-BROWNFIELD ELEVATION DDA	\$	95,265.11
CATA	\$	5,290,226.68
CADL	\$	2,744,559.52
AIRPORT	\$	1,229,735.67
LCC	\$	6,698,225.28
<b>TOTAL DISTRIBUTION:</b>	<b>\$</b>	<b>101,865,447.88</b>

2/29/2020

## CURRENT FIXED MATURITY INVESTMENTS

Maturity	Fund	Investment	Principal	Purc Date	Int. Rate
09/30/20	general fund	Horizon	1,000,000.00	09/30/19	1.94%
04/30/21	general fund	First Nat'l Bank of Amer	1,046,240.28	03/30/18	2.82%
09/23/21	general fund	Independent	1,022,413.86	09/23/19	1.95%
09/12/22	general fund	Wells Fargo (MBS)	90,000.00	09/12/19	2.00%
10/01/23	general fund	FNMA (MBS)	409,969.17	07/30/19	2.03%
04/01/25	general fund	FNMA (MBS)	2,100,000.00	08/12/19	2.85%
10/01/27	general fund	DDA Loan	124,500.00	08/05/10	3.00%
			<u>5,793,123.31</u>		
04/01/25	land preserve	FNMA (MBS)	150,000.00	08/12/19	2.85%
			<u>150,000.00</u>		
11/23/21	land pres res	Federal Natl Mtg (MBS)	330,000.00	05/19/16	1.50%
10/01/24	land pres res	FNMA (MBS)	892,000.00	07/30/19	2.47%
07/01/25	land pres res	FNMA (MBS)	490,843.40	09/09/19	2.60%
09/01/31	land pres res	Federal Natl Mtg (MBS)	1,000,000.00	10/28/19	2.305%
			<u>2,712,843.40</u>		
07/02/21	twp imp rev	Commercial Bank	404,144.32	7/2/2019	2.05%
			<u>404,144.32</u>		
07/27/21	water	Horizon	2,000,000.00	07/27/19	2.15%
			<u>2,000,000.00</u>		
<b>Total Fixed Investments \$</b>			<b>11,060,111.03</b>		

## CURRENT NON-FIXED INVESTMENTS

2/29/2020

PURCH. DATE	FUND	INVESTMENT	PRINCIPAL	CURRENT RATE	INVESTMENT TYPE
08/01/02	GF	MBS	\$ 6,686.81	0.00%	money market
05/12/08	GF	MI Class	\$ 2,815,862.67	1.72%	pooled funds
05/20/09	GF	MSU Fed. CU	\$ 5.00	0.00%	savings
05/28/09	GF	MSU Fed. CU	\$ 754,761.15	1.20%	money market
<b>Total</b>			<b>\$ 3,577,315.63</b>		
08/01/02	LP	MBS	\$ -	0.00%	money market
04/16/03	LP	Flagstar	\$ 261,307.09	1.49%	savings
05/12/08	LP	MI Class	\$ 1,699,895.58	1.72%	pooled funds
<b>Total</b>			<b>\$ 1,961,202.67</b>		
08/01/02	LP-R	MBS	\$ -	0.00%	money market
01/16/09	LP-R	Horizon	\$ 208,606.55	1.55%	money market
05/12/08	LP-R	MI Class	\$ -	0.00%	pooled funds
<b>Total</b>			<b>\$ 208,606.55</b>		
08/01/02	PM	MBS	\$ -	0.00%	money market
09/30/08	PM	MI Class	\$ 603,191.88	1.72%	pooled funds
03/27/14	PM	Flagstar	\$ 420,628.33	1.49%	savings
<b>Total</b>			<b>\$ 1,023,820.21</b>		
08/01/02	SF	MBS	\$ -	0.00%	money market
01/08/09	SF	Flagstar	\$ 5.56	1.49%	savings
<b>Total</b>			<b>\$ 5.56</b>		
12/01/09	PA	MBS	\$ -	0.00%	money market
<b>Total</b>			<b>\$ -</b>		
02/08/13	TA	MI Class	\$ -	0.00%	pooled funds
<b>Total</b>			<b>\$ -</b>		
08/01/02	WF	MBS	\$ -	0.00%	money market
05/22/09	WF	MI Class	\$ 1,010,253.35	1.72%	pooled funds
<b>Total</b>			<b>\$ 1,010,253.35</b>		
03/09/17	BP	MI Class	\$ 422,750.98	1.72%	pooled funds
<b>Total</b>			<b>\$ 422,750.98</b>		
03/09/17	RDS	MI Class	\$ 214,708.13	1.72%	pooled funds
<b>Total</b>			<b>\$ 214,708.13</b>		
12/6/2019	RDIMP	MBS	\$ -	0.00%	money market
<b>Total</b>			<b>\$ -</b>		
<b>Total Non-Fixed Investment:</b>			<b>\$ 8,418,663.08</b>		
<b>Total Fixed and Non-Fixed Investments</b>			<b>\$ 19,478,774.11</b>		

**FIXED MATURITY INVESTMENT TRANSACTIONS FOR FEBRUARY 2020**

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<b>2/21/2020</b>	<b>ROAD DEBT IMPROVEMENT</b>		
	Sold Treasury Bills @ MBS	\$	3,992,220.38
<b>2/25/2020</b>	<b>LAND PRESERVATION RESERVE</b>		
	Principal payment recvd on agency fund	\$	756.81

**NON-FIXED INVESTMENT TRANSACTIONS FOR FEBRUARY 2020**

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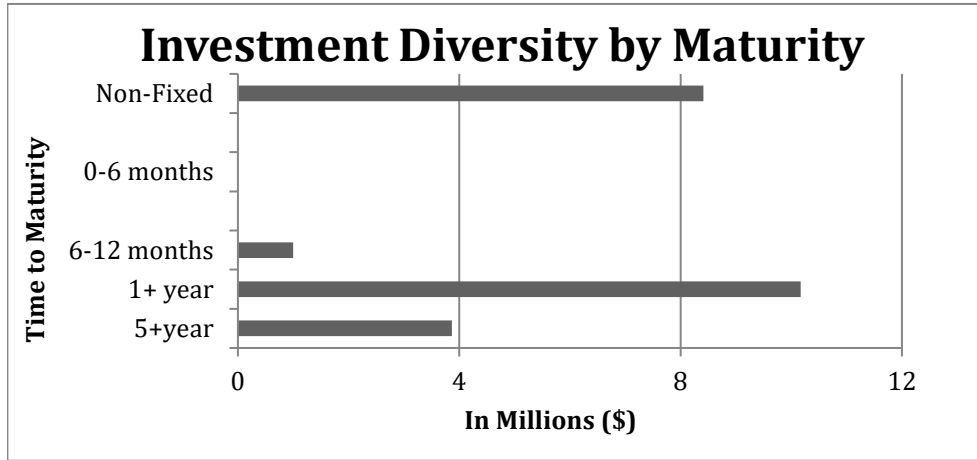
<b>2/4/2020</b>	<b>LAND PRESERVATION RESERVE</b>		
	ACH'd funds from MBS money market to Horizon Checking	\$	5,707.44
<b>2/4/2020</b>	<b>LAND PRESERVATION</b>		
	ACH'd funds from MBS money market to Horizon Checking	\$	368.13
<b>2/4/2020</b>	<b>GENERAL FUND</b>		
	ACH'd funds from MBS money market to Horizon Checking	\$	6,686.03
<b>2/28/2020</b>	<b>LAND PRESERVATION RESERVE</b>		
	ACH'd funds from MBS money market to Horizon Checking	\$	5,708.27
<b>2/28/2020</b>	<b>LAND PRESERVATION</b>		
	ACH'd funds from MBS money market to Horizon Checking	\$	368.13

<b>Bank</b>	<b>Amount Fixed</b>	<b>Amount Non-Fixed</b>	<b>Total Investment</b>
Horizon	\$ 3,000,000.00	\$ 208,606.55	\$ 3,208,606.55
Flagstar	\$ -	\$ 681,940.98	\$ 681,940.98
MBS	\$ 5,462,812.57	\$ 6,686.81	\$ 5,469,499.38
MI Class	\$ -	\$ 6,766,662.59	\$ 6,766,662.59
Commercial Bank	\$ 404,144.32	\$ -	\$ 404,144.32
MSU Federal CU	\$ -	\$ 754,766.15	\$ 754,766.15
DDA Loan	\$ 124,500.00	\$ -	\$ 124,500.00
First Nat'l Bank of Amer	\$ 1,046,240.28		\$ 1,046,240.28
Independent	\$ 1,022,413.86		\$ 1,022,413.86
Totals	\$ 11,060,111.03	\$ 8,418,663.08	\$ 19,478,774.11
% of total investment	56.78032389	43.21967611	100

Each investment institution has received and signed the Meridian Charter Township Investment Policy and Agreement to Comply.

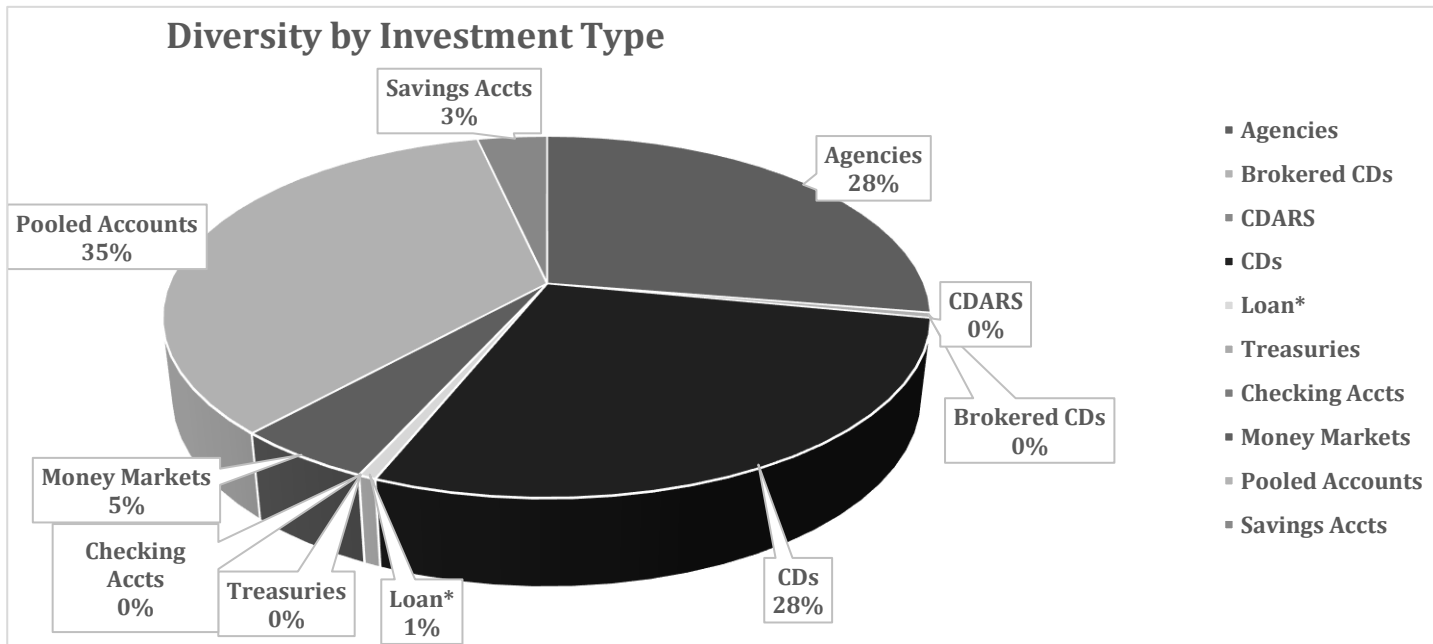
The signed agreement specifies that they are adhering to Public Act 20.

# Investment Report Charter Township of Meridian



### Current Investment Portfolio Size

Certificate of Deposits	\$ 5,472,798.46
CDARS	\$ -
Brokered CD's	\$ 90,000.00
Agencies	\$ 5,372,812.57
Loan*	\$ 124,500.00
Treasuries	\$ -
Money Markets	\$ 970,054.51
Checking Accts	\$ -
Savings Accts	\$ 681,945.98
Pooled Funds	\$ 6,766,662.59
	<b>\$ 19,478,774.11</b>



\* Not an official investment but reflected for tracking purposes.





**CLERK'S OFFICE  
BOARD COMMUNICATIONS  
March 17, 2020**

**BOARD INFORMATION  
(BI)**

**From:** [Yingxin Zhou](#)  
**To:** [Board](#)  
**Subject:** Covid 19 - large gatherings in the township  
**Date:** Friday, March 6, 2020 2:15:32 PM

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Hello, Board,

I'm very worried about how Coronavirus is spreading in US. I've been watching closely the development of this virus since January and fully understand that it transfers human to human, it spreads very quickly and the fatality rate is high. Wuhan, the epicenter of the outbreak in China, has given a very painful lesson to the world.

Could you please consider cancelling all large gatherings in the township that a large crowd will be attending? It will help contain the spread of the virus. Though there has been no confirmed case in MI yet, there will be, sooner or latter.

Thank you very much for your consideration.

Regards,  
Yingxin Zhou

**From:** [phyllis.vaughn](#)  
**To:** [Board](#)  
**Subject:** Absentee Ballots.  
**Date:** Thursday, March 5, 2020 2:38:16 PM

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March 5th 2020

To :Meridian Township Board

My name is Phyllis Vaughn, I am a resident of Meridian Township. I live at Grange acres. For the past 5 years, I have worked with residents here to help them get registered and added to the permanent absentee voter list.

I won't go into problems some have had in past. In the past three months, I have tried to answer questions regarding filling out request for ballot and getting ballots

A woman named Sharon Rocha who lives at 1746 Lenore was put on permanent AV list 4 years ago. She didn't receive application for ballot. She did call in Feb. She as of yesterday did not receive application or ballot.

Elizabeth and Robert Fierke 1742 Lenore Lane. Did not receive applications. I told them to call two weeks ago and they did. As of yesterday they did not receive applications. I was at their home yesterday and Liz called Clerks office. She was told it was too late because (it could get lost or stolen) No one suggested they could still come to office.

Sharon Johnson 6068 Taylor Court called in Feb because she had not received ballot. She had sent in application. She received second application not a ballot.

I am acquaintances' of these people and about the only time I see them is to make sure they VOTE.

I only spoke with 10 people and did follow up. The above is the results. All of these people deserve to have a reason why the are not on permanent AV list. Or if they need to re apply. I have worked to get different millages passed. Mostly CATA and the roads.

I have come to Township offices with people to make sure they get on the list and the sad part is some had not voted in years.

Thank you for trying to bring integrity to our Clerks office. Phyllis Vaughn

### **Bette Bigsby**

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**From:** Bette Bigsby  
**Sent:** Thursday, March 05, 2020  
**To:** 5:01 PM Phil Deschaine  
**Cc:**  
**Subject:** Brett Dreyfus  
Ms. Vaughn's email

Mr. Deschaine,

I looked up the people that Ms. Vaughn spoke about in her email.

Elizabeth and Robert Fierke are not on the Absentee voter list. Therefore they would not have received an

application. Sharon Rocha did not return her application  
Sharon Johnson did not return her application.

Thank  
you,  
Bette

Mrs. Bette Bigsby  
Deputy Clerk  
Meridian Township  
5151 Marsh Road  
Okemos, MI 48864  
517-853-4328  
517-853-4251 – Fax



**From:** [DEBRA KULPANOWSKI](#)  
**To:** [Board](#)  
**Subject:** Paving Ethel St.  
**Date:** Wednesday, March 4, 2020 11:41:17 AM

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Dear Board,

I am a Meridian Township resident that lives on Ethel St., the unpaved portion east of Cornell. Despite the occasional grading that's done, our road is deeply rutted and a muddy mess. One neighbor told me that the bad road is a deterrent to through traffic avoiding the Grand River traffic light.

I would love to see our road be paved and block the access to Grand River (just put one of those freeway concrete barriers there). These are the advantages:

- a dead end road would prevent all of the non-resident traffic using it as a short cut. There are only 9 houses on our road yet we get a lot of traffic.
- less wear and tear on our vehicles
- would be able to use the road for walking/jogging/bike riding. I currently drive someplace else to walk because our road is a mud bog.

I would be happy to discuss this with anyone to make it happen.

Sincerely,

Debby Rankin

248-872-3088

**From:** [Bowlby, Neil](#)  
**To:** [Board](#)  
**Subject:** Letter to the Meridian Township Board  
**Date:** Wednesday, March 4, 2020 6:32:59 AM  
**Importance:** High

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Dear Meridian Township Board,

I am writing this letter to express my support for the explanation offered by Clerk Dreyfus concerning the delay in mailing absentee ballots for the upcoming primary election. I too have noticed a history of the Ingham County Clerk unfairly targeting Meridian Township Clerk, Brett Dreyfus, with allegations of inappropriate or inadequate job performance on his part. I was also disheartened by the decision last night to remove Clerk Dreyfus' letter to the Ingham County Board of Commissioners because it wasn't specifically addressed to the Meridian Township Board. I was not, however, surprised at who among you made the motion to strike the letter from the record (Trustee Opsommer) and who seconded the motion (Treasurer Deschaine). It's really sad when the accused are denied the opportunity to defend themselves before township voters because of a "technicality". So, in the interest of the public being allowed to be fully aware of Clerk Dreyfus' response to the letter from Clerk Beyrum, and for your, the Township Board's, information, I am including the contents of his letter in this letter, which IS addressed to the Meridian Township Board:

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February 28, 2020

Ingham County Board of Commissioners  
341 S. Jefferson St.  
Mason, MI 48854

Dear Ingham County Commissioners:

When public officials work together in a cooperative and supportive manner, citizens have more trust in their government and in the people they elected to represent them.

I am writing to you to express concerns about Ingham County Clerk Barb Byrum, and how she interacts with other public officials.

Clerk Byrum had some concerns and questions regarding mailing of absentee ballots for the upcoming Presidential Primary on March 10 in Meridian Township.

County Clerks across Michigan, who have election-related questions involving a local municipality in their county, will typically call or email the local Clerk, and get their questions answered or concerns addressed through direct communication between the County Clerk and the local Clerk. The actions (and inactions) of Ingham County Clerk Byrum stands in stark contrast to how the vast majority of County Clerks interact with their local municipal clerks.

Ingham County Clerk Byrum made a decision to not reach out to me to answer her questions or

concerns. Instead, she sent an inaccurate, misleading and inflammatory letter to the Meridian Township Board of Trustees, and simultaneously contacted the press and media, in order to broadcast her concerns to the community at large. In fact, she made the same decision and took the same approach two years ago.

There are several significant problems to this sensationalist approach taken by Ms. Byrum. It is counter productive to contact the media and send letters to individuals not involved with election administration, rather than work directly with the community's Election Administrator (the local Clerk) to speedily resolve any potential issue. Her actions reveal that the goal of generating negative publicity for the public official is more important to her than actually resolving election-related concerns.

The second problem caused by Clerk Byrum's tactics is that her not-so-secret goal to generate suspicion and doubt among elected officials and in the community at large undermines citizen confidence in their local government, and this leads to decreased voter trust, resulting in reduced voter turnout. This directly contradicts the goal of most Clerks and Bureau of Election officials to increase voter trust in the local election process and to promote ways to increase voter turnout.

But there is another concern involving the County Clerk, and that is her role in providing the programming to local Clerks that is needed to test ballots. The underlying cause of the delay in mailing absentee ballots to citizens is County Clerk Byrum NOT providing the programming needed to test absentee ballots BEFORE they are mailed to voters who requested them via Absentee Voter Ballot Applications.

In a letter sent out in February to all Clerks across Michigan, the new Director of the Bureau of Elections, Jonathan Brater, stated:

"Ballots should be tested early. As we have instructed in the past, ballots should be tested as soon as possible upon receipt and before the bulk of your ballots are issued."

Our office contacted the Ingham County Clerk numerous times in January inquiring about the status of the programming. By the week of February 10th we knew that we were past the 40-day window and could no longer wait for the programming, so we planned our mass mailing that week and the ballots were sent out without being tested. If the County Clerk had provided programming in advance of the 40 day window, we would have mailed out the ballots at the beginning of the 40 day window, as expected by state law.

County Clerk Byrum provided programming for our Township on February 11, 2020 - 11 days past the 40 day window that she referred to in her letter. It is impossible to comply with the state mandate of having tested ballots delivered to absentee voters within the 40 day window if the County Clerk doesn't provide programming to allow testing of ballots at some point prior to the beginning of that 40 day window.

The Bureau of Elections also announced that it was going to take "additional steps to help ensure counties ... deliver ballots to cities and townships by the 45th day before the election, and that cities

and townships have as much time as possible to test ballots, process applications, and have ballots available to voters for the entirety of the 40-day period."

Citizens in Ingham County would benefit from a County Clerk that focused on improving her own performance in her duties and responsibilities, and acting less like a publicity-seeking "investigator" who appears to discredit public officials to advance her own political agenda.

Clerk Byrum has used her personal Facebook page to broadcast concerns, using charged language in her post. Clerks, and others who read that posting, thought it was unprofessional and highly inappropriate to interact with citizens using a personal social media page, especially targeting a local municipality and local Clerk by name. This is part of a well-established "blaming and shaming" pattern of behaviors exhibited by Clerk Byrum in her overzealous and occasionally misinformed quest to correct perceived problems or issues.

County Clerk Byrum has had a number of problems and issues within her own office, and she should be focusing on resolving and preventing these kinds of problems in the future. These areas of concern include local government election reimbursement procedures, understanding the role and limitations of the Ingham County Board of Canvassers, better understanding Campaign Finance Law regulations and exemptions, and proper use of email and social media in professional settings.

Perhaps Ingham County Commissioners could speak with Clerk Byrum privately, and encourage her to improve her own performance and communication skills, as well as improving her compliance with meeting the 40 day window to provide programming to local Clerks to allow them to test ballots.

Sincerely,

Brett Dreyfus  
Meridian Township Clerk

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I hope that in the future, the Meridian Township Board will not be so nit-picky about formalities, especially when it concerns the public's right to know both sides of a story.

Sincerely,  
Neil R. Bowlby  
Resident of Haslett





**PROPOSED DRAFT MINUTES**

**PROPOSED MOTION:**

**Move to approve and ratify the minutes of the Regular Meeting of March 17, 2020 as submitted.**

**ALTERNATE MOTION:**

**Move to approve and ratify the minutes of the March 17, 2020 Special Meeting with the following amendment(s): [insert amendments]**

CHARTER TOWNSHIP OF MERIDIAN  
TOWNSHIP BOARD REGULAR MEETING **-DRAFT-**  
5151 Marsh Road, Okemos MI 48864-1198  
853-4000, Township Hall Room  
TUESDAY, March 03, 2020 **6:00 pm.**

PRESENT: Supervisor Styka, Clerk Dreyfus, Treasurer Deschaine, Trustees Jackson, Opsommer, Wisinski, Sundland

ABSENT: Trustee Sundland left the meeting at 7:12 pm.

STAFF: Township Manager Walsh, Director of Public Works Perry, Police Chief Plaga, Fire Chief Hamel, Community Planning Director Kieselbach, Principal Planner Peter Menser, Human Resource Director Marx, Information Technology Director Gebes

1. CALL MEETING TO ORDER

Supervisor Styka called the meeting to order at 6:03 pm.

2. PLEDGE OF ALLEGIANCE/INTRODUCTIONS

Supervisor Styka led the Pledge of Allegiance.

3. ROLL CALL

The Recording Secretary called the roll of the Board.

4. PRESENTATIONS

Chief Plaga presented a certificate of appreciation from the Meridian Township Police Department to Manager Walsh for rendering aid to a citizen who fell on ice and struck her head.

5. CITIZENS ADDRESS AGENDA ITEMS AND NON-AGENDA ITEMS

Supervisor Styka opened public remarks at 6:09 pm.

Supervisor Styka closed public remarks at 6:09 pm.

6. TOWNSHIP MANAGER REPORT

Township Manager Walsh discussed HVAC bid due Thursday, March 05, 2020. Road bids due March 27, 2020, Pine Village Project postponed to the March 17, 2020 Board Meeting, 5 Economic Development Director finalists, proposed ordinance amendments on medical marihuana on March 17, 2020.

7. BOARD MEMBER REPORTS AND ANNOUNCEMENTS

Treasurer Deschaine:

- Attended the Michigan Township Association’s (MTA) annual meeting covering updates on legislative matters and practical training including implementation of the recreational marihuana laws and flooding issues.
- Attended the Lansing Chamber of Congress annual dinner on Thursday, February 25, 2020 at the Kellogg Center, Meridian Township is not mentioned in Annual Report “Creating A Stronger Region,” Trustee Opsommer is on the back page. Discussed redevelopment of Haslett and Okemos downtown areas.
- General Manager of the University club Karen Grannemann will receive the national 2019 ATHENA Leadership Award on March 24, 2020.

Trustee Jackson

- Attended the MTA conference in which Lieutenant Governor Gilchrist spoke on State Preemption of Local Control and Roads, discussed water erosion around coastal areas of Michigan and inland problems, discussed reforming how roads are funded.
- Attended the Tri-County Regional Planning Commission orientation for new members.

Trustee Opsommer

- Land Preservation Advisory Board meeting will be on Wednesday, March 10, 2020 at 6:00 pm regarding the land preservation millage.

Supervisor Styka

- Tourism, hotel occupancy is up in Mid-Michigan according to the Greater Lansing Visitor and Convention Bureau. Julie Pingston will replace President/CEO Jack Schripsema who is retiring.

Clerk Dreyfus:

- Presidential Primary held on Tuesday, March 10, 2020.
- Clerk’s Office holding extended hours on Thursday, March 05, 2020 until 7 pm, and Saturday from 9 am to 5 pm. Will be issuing ballots, processing voter registrations, issuing absentee ballots that citizens can take with them and engage in early voting through Saturday.
- On Monday, March 09, 2020 citizens can come into the Township building and vote but not take the ballot with them.
- All absentee ballots must be turned into the Clerk’s Office by 8 pm Tuesday.
- Can register to vote by 8 pm on Tuesday.
- Any voters who voted for a Presidential candidate nominee no longer running can spoil their ballot up through 4 pm on Monday, 09, 2020. A written statement needs to be provided to the Clerk’s Office that says if they wish to have a new Absentee Voter Ballot or not, and if they wish to vote at the polls. “Spoil” is the legal term meaning to cancel the old ballot and issue a new ballot.

8. APPROVAL OF AGENDA

**Trustee Jackson moved to approve the Agenda. Seconded by Clerk Dreyfus.**

VOICE VOTE: Motion carried: 7 – 0

**Treasurer Deschaine moved to add a Discussion Item (13A) on Election Commission Procedures. Supported by Trustee Opsommer.**

VOICE VOTE: Motion carried: 7 – 0

9. CONSENT AGENDA

Supervisor Styka reviewed the consent agenda.

**Treasurer Deschaine requested to remove the February 18, 2020 minutes from the Consent Agenda and place them under Action Items as Action Item (12F).**

**Trustee Opsommer moved to remove a Communications Item (February 28, 2020 letter). Seconded by Treasurer Deschaine.**

Trustee Opsommer comments that communications are to be transparent, that the communications to the board are incoming communications to the board, recommended removal of the February 29, 2020 letter from the Township Clerk to the Ingham County Board of Commissioners, because the letter was not addressed to the Board.

Clerk Dreyfus responded that other communications in the packet – which had not been addressed to the board – have been placed in the packet numerous times in the past, including a previous CATA audit, which the Board voted 6-1 to place in in the packet despite objections by the Township Clerk. The February 28, 2020 letter from the Township Clerk communicated his concerns regarding inaccurate and inflammatory comments by Ingham County Clerk Barb Byrum in her letter to the Township Board, as well as her failure to provide programming to allow testing of ballots 40 days before the election.

VOICE VOTE: Motion carried: 6 – 1 (Clerk Dreyfus)

**Treasurer Deschaine moved to adopt the Consent Agenda. Seconded by Trustee Wisinski.**

ROLL CALL VOTE: YEAS: Treasurer Deschaine, Supervisor Styka, Clerk Dreyfus, Trustees Sundland, Jackson, Opsommer, Wisinski

NAYS:

Motion carried: 7 – 0

A. Communications

**Treasurer Deschaine moved that the communications be received and placed on file and any communications not already assigned for disposition be referred to the Township Manager or Supervisor for follow-up. Seconded by Trustee Wisinski.**

ROLL CALL VOTE: YEAS: Treasurer Deschaine, Supervisor Styka, Clerk Dreyfus, Trustees Sundland, Jackson, Opsommer, Wisinski

NAYS:

Motion carried: 7 – 0

B. Minutes

- 1) February 18, 2020 Regular Meeting (moved to Action Item 12F)
- 2) February 22, 2020 Board Retreat

**Treasurer Deschaine moved to approve and ratify the minutes of the Special Meeting of February 22, 2020 as submitted. Seconded by Trustee Wisinski.**

ROLL CALL VOTE: YEAS: Treasurer Deschaine, Supervisor Styka, Clerk Dreyfus, Trustees Sundland, Jackson, Opsommer, Wisinski

NAYS:

Motion carried: 7 – 0

C. Bills

**Treasurer Deschaine moved to approve that the Township Board approve the Manager’s Bills as follows. Seconded by Trustee Wisinski.**

<b>Common Cash</b>		<b>\$ 184,316.07</b>
<b>Public Works</b>		<b>\$ 425,512.45</b>
<b>Trust &amp; Agency</b>		<b>\$ 4,088,896.36</b>
	<b>Total Checks</b>	<b>\$ 4,698,724.88</b>
<b>Credit Card Transactions</b>		<b>\$ 10,294.95</b>
Feb 13th – Feb 26th		
	<b>Total Purchases</b>	<b>\$ <u>4,709,019.83</u></b>
<b>ACH Payments</b>		<b>\$ <u>762,322.17</u></b>

ROLL CALL VOTE: YEAS: Treasurer Deschaine, Supervisor Styka, Clerk Dreyfus, Trustees Sundland, Jackson, Opsommer, Wisinski

NAYS:

Motion carried: 7 – 0

10. QUESTIONS FOR THE ATTORNEY – NONE

11. HEARINGS (CANARY) – NONE

12. ACTION ITEMS (PINK)

A. Jolly Road Proposed Conversion from 4 to 3 Lanes from Hagadorn to Dobie Road

**Trustee Opsommer moved to approve the resolution for the Ingham County Road Department conversion of Jolly Road from 4 lanes to 3 lanes for the east segment, Alaeidon Parkway to Dobie**

**Road, and for the west segment, Kansas Street to Hagadorn Road, as described in the resolution. Seconded by Trustee Jackson.**

Board discussion: pros and cons of reducing two lanes of traffic in each direction to one lane in each direction with a center turn lane. Citizen viewpoints on road diets, research studies, Transportation Commission approval, concerns about gaps in traffic, past experiences locally.

ROLL CALL VOTE: YEAS: Trustees Opsommer, Wisinski, Sundland, Jackson, Supervisor Styka, Treasurer Deschaine

NAYS: Clerk Dreyfus

Motion carried: 6 – 1 (Clerk Dreyfus)

B. Special use Permit #19151 (Haslett Gallery)

**Trustee Opsommer moved to adopt the resolution approving Special Use Permit #19151 (Haslett Gallery, Inc.) to establish a commercial medical marihuana provisioning center at 2119 Haslett Road. Seconded by Clerk Dreyfus.**

Board discussion: board member support, application thorough and complete, staff flagged no issues.

ROLL CALL VOTE: YEAS: Trustees Wisinski, Jackson, Opsommer, Sundland, Treasurer Deschaine, Clerk Dreyfus, Supervisor Styka

NAYS:

Motion carried: 7 – 0

C. Zoning Board of Appeals Alternate Appointment

**Trustee Jackson moved to approve the appointment made by Supervisor Styka of Erin Schroeder, as an Alternate to the Zoning Board of Appeals, with a term ending 12/31/2021. Seconded by Trustee Wisinski.**

Board discussion: legal background, involved in various land issues.

VOICE VOTE: Motion carried: 7 – 0

D. Environmental Commission Appointment

**Trustee Wisinski moved to approve the appointment made by Supervisor Styka of Courtney Boersema to the Environmental Commission for a term ending 12/31/2020. Seconded by Trustee Jackson.**

Board discussion: Environmental Studies and Sustainability major at MSU, Environmental Commission to provide a green infrastructure map.

VOICE VOTE: Motion carried: 7 – 0

E. Possible Action to Remove from the Table Rezoning #19100 (Durow) 1259 Grand River Avenue RR and RRA to C-2

**Trustee Opsommer moved to take from the table Rezoning #19100 for the purpose of discussion and possible action. Seconded by Trustee Jackson.**

Mr. Menser presented an overview of the request to rezone 1.487 acres at 1259 Grand River Avenue from RR (Rural Residential) and RRA (Single Family-Suburban Estates) to C-2 (Commercial) with conditions voluntarily offered by the applicant for publication and subsequent adoption.

VOICE VOTE: Motion carried: 7 – 0

**Trustee Opsommer moved to approve Rezoning #19100 (Durow) at 1259 Grand River Avenue RR and RRA to C-2 with the conditions offered. Seconded by Treasurer Deschaine.**

Board member requested the rationale of the exclusion of Item 1C “bars, taverns, lounges and brew pubs as those terms are used in Ordinance Section 86-404(d)(1),” noted that citizens have requested these kinds of establishments in our Township.

Staff response noted conditions were offered by applicant, and there is a provision in the zoning ordinance that requires a significant setback between residential zoning for the specific category of the ordinance, and that a bar or lounge would need a larger setback. Staff noted the setback was about 100 feet.

ROLL CALL VOTE: YEAS: Trustees Sundland, Jackson, Opsommer, Wisinski, Supervisor Styka, Clerk Dreyfus, Treasurer Deschaine

NAYS:

Motion carried: 7 – 0

F. February 18, 2020 Regular Meeting Minutes

**Treasurer Deschaine moved to substitute the changed minutes proposed by the Treasurer for Pages 3 and 8 of the original February 18, 2020 Regular Meeting minutes. Seconded by Trustee Opsommer.**

Treasurer Deschaine belief that the February 18, 2020 minutes were not concise, accurate and balanced as they could have been. Noted changes made on Page 3 regarding the inclusion of the letter by Ingham County Clerk Byrum, and the second change on Page 8 regarding Form-Base Code (FBC).

Clerk Dreyfus response that the changes made by Treasurer Deschaine were made from his perspective and his proposed minutes do not appear balanced, accurate nor concise. Noted that the Treasurer’s changes to the minutes are always approved by the Board, without any vetting or changes made. Township Clerk is statutorily responsible for the minutes. Balance is needed when there is a minority viewpoint, public needs to see both sides of the issue. Board member belief that the revision contains 60% Clerk, 40% Board comments. Treasurer Deschaine stated that the minutes give majority of the comments to the Clerk to explain why the letter by Ingham County Clerk Byrum should be left out. Board packet is for the benefit of the Board and should reflect all Board member views, not over-represent the minority view.

VOICE VOTE: Motion carried: 6 – 1 (Clerk Dreyfus)

**Supervisor Styka moved to approve and ratify the minutes of the Regular Meeting Minutes of January 18, 2020 as amended.**

VOICE VOTE: Motion carried: 6 – 1 (Clerk Dreyfus)

13. BOARD DISCUSSION ITEMS (ORCHID)

A. Election Commission Procedures

Board discussion: Treasurer Deschaine mentioned location of meeting, requested more public venue, Clerk agreement for meetings in Administrative Conference room, current meeting held there. Notification in lobby, public notification process including newspaper publication, historical lack of interest in Election Commission by public and by Board members appointed to Commission, mainly administrative tasks such as approving list of precinct workers and receiving board –public not interested. Concern that certain laws have not been properly followed, new Deputy Clerk on board for 2 months and deadline for Commission meeting was missed, new master calendar implemented will ensure future meeting dates and notifications planned well in advance of deadlines.

Opinion that past trends and actions by Election Commission before 2016 can be “thrown out” due to new heightened concerns about elections, timeframe of appointing election workers, AV Counting Board members, and Receiving Board members as it relates to state deadlines, notification to local political parties of precinct workers and AVCB for input, historically no input from local political parties including this election, importance to provide list of precinct workers to Election Commission in advance of meeting.

**Trustee Sundland left the Board Meeting at 7:12pm.**

Analysis of people & process involved in serving as Election workers, Election Commission role involves routine approval of list of workers, no previous Board member had ever expressed concerns about selection of precinct workers, last-minute Precinct worker or AVCB member changes are always allowed and these happen without Election Commission knowledge or approval. Discussion on Public Accuracy test, test was always delegated from Election Commission to Clerk staff, delegation not given in 2016, Public Accuracy test will be repeated so Election Commission can participate.

14. COMMENTS FROM THE PUBLIC

Supervisor Styka Opened Public Remarks at 7:21 pm.



Supervisor Styka Closed Public Remarks at 7:21 pm.

15. OTHER MATTERS AND BOARD MEMBER COMMENTS – NONE.

16. CLOSED SESSION

**Clerk Dreyfus moved to enter into closed session for strategy session connected with the negotiation of the collective bargaining agreements with the police and fire unions under Section 8(c) of the Open Meetings Act. Seconded by Treasurer Deschaine.**

ROLL CALL VOTE: YEAS: Trustees Wisinski, Jackson, Opsommer, Supervisor Styka, Treasurer Deschaine, Clerk Dreyfus

NAYS:

Motion carried: 6 – 0

**Treasurer Deschaine moved to return to Open Session. Seconded by Trustee Jackson.**

ROLL CALL VOTE: YEAS: Trustees Wisinski, Jackson, Opsommer, Supervisor Styka, Treasurer Deschaine, Clerk Dreyfus

NAYS:

Motion carried: 6 – 0

**Board returned to Open Session at 8:07pm.**

17. ADJOURNMENT

**Treasurer Deschaine moved to adjourn the meeting. Seconded by Trustee Wisinski.**

VOICE VOTE: Motion carried: 6 – 0

**Supervisor Styka adjourned the meeting at 8:08 pm.**

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RONALD J. STYKA,  
TOWNSHIP SUPERVISOR

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BRETT DREYFUS,  
TOWNSHIP CLERK



To: Board Members  
From: Miriam Mattison, Finance Director  
Date: March 17, 2020  
Re: Board Bills

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Charter Township of Meridian  
Board Meeting  
3/17/2020

MOVED THAT THE TOWNSHIP BOARD APPROVE THE MANAGER'S  
BILLS AS FOLLOWS:

COMMON CASH	\$	2,548,489.57
PUBLIC WORKS	\$	277,201.73
TRUST & AGENCY	\$	5,472,699.31
TOTAL CHECKS:	\$	8,298,390.61
CREDIT CARD TRANSACTIONS 2/27/2020-3/11/2020	\$	9,375.48
TOTAL PURCHASES:	\$	<u>8,307,766.09</u>
ACH PAYMENTS	\$	<u>11,758,243.94</u>

03/12/2020 02:27 PM  
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 DB: Meridian

INVOICE APPROVAL BY INVOICE REPORT FOR CHARTER TOWNSHIP OF MERIDIAN  
 EXP CHECK RUN DATES 03/17/2020 - 03/17/2020  
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID  
 BANK CODE: GF

Vendor Name	Description	Amount	Check #
1. BETTY ANNE RUPLEY	FARM MARKET VENDOR	15.00	
2. 55TH DISTRICT COURT	SMALL CLAIMS COURT FILING	25.00	102448
	SMALL CLAIMS COURT FILING	45.00	102449
	TOTAL	70.00	
3. AIRGAS GREAT LAKES	MEDICAL OXYGEN	529.21	
	MEDICAL OXYGEN	76.96	
	TOTAL	606.17	
4. ANTHONY RANDAZZO	MECHANICAL PERMIT APPLICATION CANCELLED - 50% REF	85.00	
5. AUTO VALUE OF EAST LANSING	UNIT 28 -FLEET REPAIR PARTS 2020	139.69	
	FLEET REPAIR PARTS 2020	8.38	
	UNIT 28 - FLEET REPAIR PARTS 2020	139.69	
	SHOP SUPPLY - FLEET REPAIR PARTS 2020	25.78	
	UNIT 140 - FLEET REPAIR PARTS 2020	128.99	
	FLEET REPAIR PARTS 2020	18.29	
	UNIT 73 - FLEET REPAIR PARTS 2020	39.88	
	TOTAL	500.70	
6. AXON ENTERPRISE, INC	TASER X2 DEVICE + 4 YR WARRANTY	1,671.00	
7. THE BANK OF NEW YORK MELLON	MERIDIANTW13 - AGENT FEE	250.00	
8. BANNASCH WELDING INC	PARTS FOR TORNADO SALTER	706.90	
	UNIT 87 -PARTS FOR TORNADO SALTER	429.80	
	TOTAL	1,136.70	
9. BARYAMES CLEANERS	FEB - UNIFORM CLEANING	18.60	
10. BECKS PROPANE	PROPANE FOR GLENDALE CEMETERY OFFICE	287.81	
11. BERNTSEN	LOCATION MARKERS FOR FIBER OPTICS TOWNHALL-SERVICE	548.75	
12. BOARD OF WATER & LIGHT	FEB 1 - MAR 1 - 2020 STREETLIGHT SERVICE	578.88	102445
13. BRD PRINTING, INC	PANCAKE BREAKFAST CORRUGATED SIGNS	255.00	
14. CINTAS CORPORATION #725	MECHANICS UNIFORMS 2020	48.35	
	MECHANICS UNIFORMS 2020	48.35	
	MECHANICS UNIFORMS 2020	48.35	
	MECHANICS UNIFORMS 2020	48.35	
	TOTAL	193.40	
15. CITY OF EAST LANSING	SHARED ASSESSOR SERVICES - FEB	4,919.76	
	2020 RECREATION BASKETBALL LEAGUE	1,040.00	
	TOTAL	5,959.76	
16. COMCAST	THB INT + TV SERVICES FROM 3.1 -3.31	344.82	
17. CULLIGAN WATER CONDITIONING	SOFTNER SALT FOR HARRIS NATURE CENTER	18.40	

Vendor Name	Description	Amount	Check #
18. DBI	POCKET EMBOSSER	24.71	
	EMBOSSER, POCKET RND	24.71	
	CUSTOM STAMP	19.46	
	NESTLE WATER X 2	11.98	
	PENS	7.90	
	FOLDERS, MLA AND HANGING	27.96	
	MAGNUM MARKERS	8.10	
	TOTAL	124.82	
19. OFILIA DIAZ	FARM MARKET VENDOR	21.00	
20. ESRI INC	ESRI GIS SOFTWARE RENEWAL 2020/2021	16,309.00	
21. FAHEY SCHULTZ BURZYCH RHODES PLC	LEGAL FEES	720.00	
	LEGAL FEES	2,793.00	
	LEGAL FEES	2,838.00	
	LEGAL FEES	189.00	
	LEGAL FEES	396.00	
	LEGAL FEES	1,419.00	
	LEGAL FEES	1,506.00	
	LEGAL FEES	363.00	
	LEGAL FEES	66.00	
	LEGAL FEES	4,480.33	
	LEGAL FEES	87.61	
	LEGAL FEES	682.06	
	LEGAL FEES	33.00	
	LEGAL FEES	8,856.00	
	LEGAL FEES	147.00	
	LEGAL FEES	121.50	
	TOTAL	24,697.50	
22. FIRST AMERICAN ADMINISTRATORS	EYEMED VISION INSURANCE - FEB	2,018.39	
23. FIRSTDUE FIRE SUPPLY	SCBA TANK HYDR-STAT	525.00	
24. FORESIGHT GROUP	UNIT 124- GRAPHICS FOR CODE COMPLIANCE VEHICLE	344.41	
	UPDATES GRAPHICS FOR POLICE K9 VEHICLE	981.68	
	WATER BILL MAILING 2/14 , FOREIGN POSTAGE, AND POS	270.71	
	WATER BILLS W BACKS - 2/28 AND 2 FOREIGN POSTAGE	504.49	
	CYCLE 6 STATEMENTS	304.52	
	TOTAL	2,405.81	
25. FRIEDLAND INDUSTRIES INC	DOCUMENT DESTRUCTION - 167 BOXES	417.50	
26. GALLAGHER BENEFIT SERVICES, INC	MARCH MONTHLY CONSULTING FEE	2,779.26	
27. GORDON CONSTRUCTION SERVICES	CONSTRUCTION OF MARKETPLACE ON THE GREEN PROJECT	71,991.00	
	CONSTRUCTION OF MARKETPLACE ON THE GREEN PROJECT	78,237.00	
	TOTAL	150,228.00	
28. GRANGER	RUBBISH AND RECYCLING DISPOSAL SERVICES	164.52	
29. GREAT LAKES INTERIOR & DESIGN	29 CHAIRS FOR NELSON ROOM	5,630.06	
	STORAGE MEDIA CABINET FOR NELSON ROOM	560.00	
	ROLLER SHADES FOR NELSON ROOM	1,522.00	
	4' X 6' GLASS MAGNETIC MARKER BOARD	391.00	
	15 NESTING TABLES FOR NELSON ROOM	5,192.00	
	TOTAL	13,295.06	

Vendor Name	Description	Amount	Check #
30. HALT FIRE INC	HEATER CONTROL VALVE #137	77.85	
	UNIT 137 ; HEATER CORE , HANDLING AND FREIGHT	388.12	
	TOTAL	<u>465.97</u>	
31. HAMILTON RD LTD	REFUND-OVER PMT FOR RENTAL PROPERTY REGISTRATION R	200.00	
32. HASLETT PUBLIC SCHOOLS	BUS TRANSPORTATION FOR FIELD TRIPS	449.05	
33. HUNTINGTON NATIONAL BANK	INTEREST DUE ON DEBT SERVICE	203,500.00	
34. M78 INSITE VENTURES LLC	WETLAND VERIDICATION REFUND	106.90	
35. JOHN DEERE FINANCIAL	FLEET FUEL 2020- FEB	7,677.00	
36. JOHN E. REID AND ASSOCIATES INC	CORNELL & ANDERSON TRAINING	1,060.00	
37. KEBS INC	FARMER'S MARKET CPUD	2,650.00	
38. KENT COUNTY DEPT OF PUBLIC WORKS	WASTE TO ENERGY	95.40	
39. LANSING SANITARY SUPPLY INC	STATE CONTRACT CUSTODIAL SUPPLIES 2020	175.65	
	ICEAWAY TURBO ICEMELTER 105PLT	739.51	
	STATE CONTRACT CUSTODIAL SUPPLIES 2020	394.70	
	DEPARTMENT CLEANING SUPPLIES	44.02	
	STATE CONTRACT CUSTODIAL SUPPLIES 2020	87.33	
	TOTAL	<u>1,441.21</u>	
40. LANSING UNIFORM COMPANY	STANDING PO FOR UNIFORMS	100.00	
	STANDING PO FOR UNIFORMS	159.90	
	TOTAL	<u>259.90</u>	
41. MAHO	MAHO SPRING SEMINAR FOR JOE WADE	40.00	
42. MARSH POINTE APARTMENTS	PMT OF APPLICATION FEE FOR YEARBY	25.00	102450
43. JOYCE A MARX	REIMBURSEMENT FOR CLOROX WIPES PURCHASE	32.76	
44. STEPHEN VAN DEUSEN	FARM MARKET VENDOR	37.00	
45. MEDICAL MANAGEMENT SYSTEMS OF	AMBULANCE BILLING SERVICE	5,005.92	
46. THE MERIDIAN COMPANY	OVER PMT OF ELECTRICAL PERMIT PE20-0120	2.00	
47. MERIDIAN TOWNSHIP	TRANSFER FOR FLEX CHECKING FOR 3.13 PAYROLL	550.69	
48. MERIDIAN TOWNSHIP	TO PURCHASE CD @ INDEPENDENT BANK - ROAD CD - 5 MO	1,000,000.00	102447
	TO PURCHASE CD @ INDEPENDENT BANK - ROAD CD - 15MT	1,000,000.00	102446
	TOTAL	<u>2,000,000.00</u>	
49. MERIDIAN TOWNSHIP RETAINAGE	GORDON CONSTRUCTION SERVICES	7,999.00	
	GORDON CONSTRUCTION SERVICES	8,693.00	
	TOTAL	<u>16,692.00</u>	

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Vendor Name	Description	Amount	Check #
50. MERRILL FORD	UNIT #122 REPAIR WORK- CONTROL ARMS; TRANSMISSION	6,924.21	
	UNIT 129 - FORD FLEET REPAIRS AND PARTS 2020	412.18	
	UNIT 145 - FORD FLEET REPAIRS AND PARTS 2020	63.32	
	CREDIT UNIT 129 - FORD FLEET REPAIRS AND PARTS 202	(75.00)	102420
	TOTAL	7,324.71	
51. MICHIGAN TOWNSHIP ASSOCIATION	CLASSIFIED ADVERTISING	35.00	
52. MID MICHIGAN EMERGENCY EQUIPMENT	UNIT 668 - UPLIFT POLICE INTERCEPTORS	8,977.00	
	UNIT 666 - TOPPER FOR POLICE FORD RANGER	2,050.00	
	TOTAL	11,027.00	
53. MID-MICHIGAN HEATING & COOLING	OVERPMT ON MECHANICAL PERMIT PM20-0144	15.00	
54. MCKESSON MEDICAL-SURGICAL GOC SOL	POLICE EXAM GLOVES	176.65	
55. MYERS PLUMBING	DRAIN CLEANING SERVICES - MENS LOCKER ROOM	159.00	
56. NAPA	SHOP SUPPLY, UNIT 6 ,150,134,133 FLEET REPAIR PART	185.76	
57. NORTH WINDS HEATING & COOLING	OVER PMT ON PM20-0137	10.00	
58. PC MALL GOV	BTO POWEREDGE SERVER AMD 7542 2.35/32/240 DELL/PCM	17,466.38	
	BTO POWEREDGE SERVER AMD 7542 2.35/32/240 DELL/PCM	8,733.19	
	TOTAL	26,199.57	
59. PEOPLEFACTS LLC	EMPLOYEE PRE-EMPLOYMENT CREDIT CHECKS	43.21	
60. PRINT MAKERS SERVICE INC	20 LB BOND PAPER AND YELLOW TONER	344.80	
	SERIERS BLACK, CYAN, MAGENTA, YELLOW GRAM CATRIDGE	627.50	
	KIP 860 AND METER CHARGE - COLOR AND BLACK	138.96	
	TOTAL	1,111.26	
61. PRO-TECH MECHANICAL SERVICES	2020 HVAC REPAIRS- PREVENTATIVE MAINTENANCE	4,206.25	
62. RECLAIMED BY DESIGN	MARCH - 2020 MONTHLY OPERATION OF RECYCLING CENTE	2,000.00	
63. ROMANOW BUILDING SERVICES	MARCH - JANITORIAL SERVICES FOR TOWNSHIP BUILDINGS	7,607.77	
64. SCARLETT EXCAVATING	PAY EST 2 - NEWTON ROAD SANITARY SEWER EXTENSION S	5,875.00	
65. SME	SERVICES 1.27-2.23 NEWTON ROAD EXTENSION	495.10	
66. SPARROW OCCUPATIONAL	3 PHYSICALS	431.00	
67. ST MARTHA CONFERENCE OF	REIMBURSEMENT FOR PMT TO AVOID EVICTION FOR P.ALSI	200.00	102451
68. STATE OF MICHIGAN	QUALITY ASSURANCE ASSESSMENT 1.1-3.31	2,654.04	
69. SWAGIT PRODUCTIONS, LLC	FEBRUARY - VIDEO STREAMING SERVICES HOMTV	3,462.00	
70. T MOBILE	BACK UP CELL & INTERNET SERVICES FROM 1.21-2.20	29.63	
71. TDS	PRI TELEPHONE SREVICE - SERVICE 2.28-3.27	1,638.34	
72. TEAM FINANCIAL GROUP	COPIER LEASE - FEB	1,273.78	
73. TPM COMMUNICATIONS LLC	PUBLIC SAFETY - INSTALLED 4 CAT 6 CABLES	486.15	
74. VERIZON WIRELESS	VERIZON USAGE 1.24-2.23	3,788.74	

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Vendor Name	Description	Amount	Check #
75. VIRIDIS DESIGN GROUP	ENGINEERING SERVICES FOR HNC PAVILION AND RESTROOM	1,000.00	
76. WASTE MANAGEMENT	ANIMAL CARCASS REMOVAL DUMPSTER (DEAD DEER REMOVAL	115.46	
77. WEST SHORE FIRE INC	SCBA FILL MAINTENANCE	87.50	
78. ZOLL MEDICAL CORP	STANDING PO FOR HEART MONITOR SUPPLIES/EQUIP.	1,035.00	
TOTAL - ALL VENDORS		2,548,489.57	

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Vendor Name	Description	Amount	Check #
1. BLACKBURN MFG CO	FLAGS- WATER	429.10	
2. CATHEY INDUSTRIAL SUPPLIES, CO	MISC ITEM 16FJX-16MP	9.64	
3. CITY OF LANSING	MARCH - SEMI ANNUAL SEWER OPERATIONS	215,185.84	
4. CNFC TITLE	5128 CHAGGAL LN REIMB OF PERFORMANCE GUARANTEES	2,000.00	
5. EJ USA, INC.	FIRE HYDRANTS	4,426.20	
	WATER SYSTEM REPAIR PARTS 2020	89.26	
	TOTAL	<u>4,515.46</u>	
6. ELHORN ENGINEERING	PERMANGANATE ODOR CONTROL	18,085.60	
7. ETNA SUPPLY COMPANY	INSTALLATION PARTS 2020	21,815.05	
8. FERGUSON WATERWORKS #3386	WATER SYSTEM REPAIR PARTS 2020	589.57	
	WATER SYSTEM REPAIR PARTS 2020	48.00	
	WATER SYSTEM REPAIR PARTS 2020	414.00	
	TOTAL	<u>1,051.57</u>	
9. FIRST AMERICAN ADMINISTRATORS	EYEMED VISION INSURANCE - FEB	275.86	
10. GALLAGHER BENEFIT SERVICES, INC	MARCH MONTHLY CONSULTING FEE	470.74	
11. HYDROCORP	FEB MUNICIPAL - CROSS CONNECTION CONTROL PROGRAM	2,430.00	
12. MICHIGAN RURAL WATER ASSOC	MRWA WATER DISTRIBUTION TRAINING CLASSES	1,240.00	
	MRWA WATER DISTRIBUTION TRAINING CLASSES	825.00	
	TOTAL	<u>2,065.00</u>	
13. NOURSE TRUCKING	RETURN OF SEWER LICENSE DEPOSIT	1,000.00	
14. CARL SCHLEGEL INC	SAND , GRAVEL & TOPSOIL 2020	2,657.98	
15. TRI-COUNTY REGIONAL PLANNING	AERIAL IMAGERY FOR ENGINEERING DESIGN	2,256.00	
16. VERIZON WIRELESS	VERIZON USAGE 1.24-2.23	448.89	
17. WATERWORTH	SOFTWARE SUBSCRIPTION, PRO SERVICE PACKAGE	2,495.00	
18. YUAN ZHONG	REYW-006379-0000-02 - OVER ESTIMATED BILL	10.00	
TOTAL - ALL VENDORS		277,201.73	



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BANK CODE: TA

Vendor Name	Description	Amount	Check #
1. AMROCK INC-CHASE SIX	33-02-02-27-154-002 OVER PMT ON WINTER PROPERTY TA	333.47	12873
2. BERONDA MONTGOMERY	33-02-02-33-426-013 OVER PMT ON WINTER PROPERTY TA	17.00	12874
3. CAPITAL AREA DISTRICT LIBRARY	WINTER TAX COLLECTION	519,139.09	12875
4. CAPITAL REGION AIRPORT AUTHORITY	WINTER TAX COLLECTION	232,608.18	12877
5. CAPITAL AREA TRANSPORTATION	WINTER TAX COLLECTION	1,000,682.97	12876
6. CORELOGIC	33-02-02-21-401-003 OVER PMT ON WINTER PROPERTY TA	1,879.01	12878
7. EAST LANSING PUBLIC SCHOOLS	SUMMER TAX COLLECTION	680.62	12879
8. HASLETT PUBLIC SCHOOLS	WINTER AND SUMMER TAX COLLECTION	585,418.81	12880
9. INGHAM COUNTY TREASURER	33-02-02-24-480-005 REVERSED PMT	949.00	12889
10. INGHAM INTERMEDIATE SCHOOL	SUMMER TAX COLLECTION	12,396.26	12881
11. KEVIN ELY	33-02-02-36-100-025 OVER PMT ON WINTER PROPERTY TA	90.00	12882
12. LANSING COMMUNITY COLLEGE	WINTER TAX COLLECTION	1,266,980.27	12883
13. OKEMOS PUBLIC SCHOOLS	WINTER AND SUMMER TAX COLLECTION	1,809,562.24	12884
14. R NADAKUDUTI	33-02-02-15-280-033 OVER PMT ON WINTER PROPERTY TA	33.18	12885
15. STEVEN & AMY CLARK	33-02-02-04-476-004 OVER PMT ON WINTER PROPERTY TA	89.84	12886
16. WILLIAMSTON SCHOOLS	WINTER AND SUMMER TAX COLLECTION	41,839.37	12887
TOTAL - ALL VENDORS		5,472,699.31	

**Credit Card Report 2/27/2020-3/11/2020**

<b>Posting Date</b>	<b>Merchant Name</b>	<b>Amount</b>	<b>Name</b>
2/27/2020	BIG LOTS #4679	\$250.00	MATTHEW WALTERS
2/27/2020	MEIJER # 025	\$104.97	DEREK BURCHAM
2/27/2020	BERNTSEN INTERNATIONAL	\$133.66	CHAD HOUCK
2/27/2020	OFFICEMAX/OFFICEDEPT#3379	\$29.99	KYLE FOGG
2/27/2020	MEIJER # 025	\$24.41	KRISTI SCHAEING
2/27/2020	THE HOME DEPOT #2723	\$137.43	JANE GREENWAY
2/27/2020	THE HOME DEPOT #2723	\$68.01	KEITH HEWITT
2/27/2020	PAYPAL *AMYROMBACK	\$130.00	CATHERINE ADAMS
2/28/2020	MEIJER # 025	(\$104.97)	DEREK BURCHAM
2/28/2020	PANERA BREAD #600715 P	\$14.49	KRISTEN COLE
2/28/2020	GFS STORE #1901	\$108.73	ANDREA SMILEY
2/28/2020	SIGNATURE FORD	\$220.00	TODD FRANK
2/28/2020	BOBCAT OF LANSING	\$219.02	TODD FRANK
2/28/2020	MSU PAYMENTS	\$60.00	BRANDIE YATES
2/28/2020	THE HOME DEPOT #2723	\$5.88	JANE GREENWAY
2/28/2020	SEARS ROEBUCK 8220	\$89.00	ROBERT MACKENZIE
2/28/2020	MEIJER # 025	\$22.96	ANDREW MCCREADY
2/28/2020	LANSING PARKING RAMP TIBA	\$10.00	DEREK PERRY
2/28/2020	JETS PIZZA - MI-053 - MOT	\$324.58	MICHAEL DEVLIN
2/28/2020	OFFICEMAX/OFFICEDEPT#3379	\$40.99	MATT FOREMAN
2/28/2020	AMAZON.COM*7Q5H91TD3	\$20.98	MICHELLE PRINZ
3/2/2020	THE HOME DEPOT #2723	\$166.92	LAWRENCE BOBB
3/2/2020	THE HOME DEPOT #2723	\$193.59	LAWRENCE BOBB
3/2/2020	THE HOME DEPOT #2723	\$27.22	LAWRENCE BOBB
3/2/2020	BIGGBY COFFEE #0121	\$37.98	BRAD BACH
3/2/2020	MEIJER # 025	\$53.63	KRISTI SCHAEING
3/2/2020	HASLETT TRUE VALUE HARDW	\$17.97	TODD FRANK
3/2/2020	THE HOME DEPOT #2723	\$53.38	TODD FRANK
3/2/2020	TST* BUDDIES PUB & GRILL	\$125.22	JANE GREENWAY
3/2/2020	MEIJER # 025	\$60.52	JANE GREENWAY
3/2/2020	FERGUSON WTRWRKS #3386	\$108.06	DAVID LESTER
3/2/2020	THE HOME DEPOT #2723	\$6.88	KEITH HEWITT
3/2/2020	SIGNARAMA OF LANSING	\$131.16	MICHELLE PRINZ
3/3/2020	FILMFREEWAY.COM	\$225.00	BRANDIE YATES
3/3/2020	FILMFREEWAY.COM	\$225.00	BRANDIE YATES
3/3/2020	FILMFREEWAY.COM	\$75.00	BRANDIE YATES
3/3/2020	AMZN MKTP US*7M4VI3D23	\$176.45	ROBERT MACKENZIE
3/3/2020	WAL-MART #2866	\$25.10	PETER MENSER
3/3/2020	AMAZON.COM*9H4XL9FD3	\$12.35	MICHELLE PRINZ
3/3/2020	STATE EGLE WATER TEST	\$16.00	CATHERINE ADAMS
3/4/2020	THE HOME DEPOT #2723	\$12.24	LAWRENCE BOBB
3/4/2020	THE HOME DEPOT #2723	\$24.48	LAWRENCE BOBB
3/4/2020	HOOVER FENCE CO.	\$101.94	LAWRENCE BOBB
3/4/2020	AMAZON.COM*7L4M115K3 AMZN	\$30.31	KRISTI SCHAEING
3/4/2020	COMCAST	\$314.54	ANDREA SMILEY
3/4/2020	PAYPAL *FORENSICCON	\$200.00	ANDREW MCCREADY
3/4/2020	AMERICAN PLANNING A	\$383.00	PETER MENSER
3/4/2020	THE HOME DEPOT #2723	\$7.37	KEITH HEWITT
3/4/2020	AMZN MKTP US*3B5TV3Z93	\$14.99	MICHELLE PRINZ
3/4/2020	ART VAN FURNITURE 127	\$249.95	WILLIAM PRIESE
3/5/2020	DEWITT FENCE	\$125.00	LAWRENCE BOBB
3/5/2020	THE HOME DEPOT #2723	\$74.51	JIM HANSEN

3/5/2020	MICHIGAN SUPPLY	(\$173.32)	TYLER KENNEL
3/5/2020	HOMEDEPOT.COM	\$173.70	TODD FRANK
3/5/2020	THE HOME DEPOT #2723	\$16.88	TODD FRANK
3/5/2020	THE HOME DEPOT #2723	\$39.88	DAN PALACIOS
3/5/2020	THE HOME DEPOT #2723	\$71.09	KEITH HEWITT
3/6/2020	THE HOME DEPOT #2723	(\$26.70)	LAWRENCE BOBB
3/6/2020	SOLDANS FEEDS & PET S	\$16.28	LAWRENCE BOBB
3/6/2020	FORESIGHT GROUP INC	\$18.00	KRISTI SCHAEING
3/6/2020	OFFICEMAX/OFFICEDEPT#3379	\$29.97	BRETT DREYFUS
3/6/2020	LANSING PARKING RAMP TIBA	\$10.00	BRANDIE YATES
3/6/2020	LANSING PARKING RAMP TIBA	\$10.00	BRANDIE YATES
3/6/2020	THE HOME DEPOT #2723	\$55.74	DAVID LESTER
3/6/2020	AMERICAN PUBLIC WORKS	\$43.99	DEREK PERRY
3/6/2020	AMAZON.COM*GD70Z7MV3 AMZN	\$34.93	MICHELLE PRINZ
3/6/2020	AMAZON.COM*IJ9BN9O83 AMZN	\$48.46	MICHELLE PRINZ
3/6/2020	AMZN MKTP US*MP8YM11J0	\$224.93	MICHELLE PRINZ
3/6/2020	AMZN MKTP US*BB02J6F23	\$17.88	MICHELLE PRINZ
3/6/2020	TOP HAT CRICKET FARM INC	\$47.66	CATHERINE ADAMS
3/9/2020	MENARDS LANSING WEST MI	\$219.99	LAWRENCE BOBB
3/9/2020	THE HOME DEPOT #2723	\$25.65	LAWRENCE BOBB
3/9/2020	THE HOME DEPOT #2723	\$57.43	LAWRENCE BOBB
3/9/2020	THE HOME DEPOT #2723	\$55.00	LAWRENCE BOBB
3/9/2020	HASLETT TRUE VALUE HARDW	\$14.99	BRAD BACH
3/9/2020	USA BLUE BOOK	\$206.34	CHAD HOUCK
3/9/2020	WALGREENS #11286	\$21.14	KYLE ROYSTON
3/9/2020	LEXISNEXIS RISK SOL EPIC	\$150.00	KRISTI SCHAEING
3/9/2020	OFFICEMAX/OFFICEDEPT#3379	\$17.29	KRISTI SCHAEING
3/9/2020	LANGUAGE LINE	\$17.94	KRISTI SCHAEING
3/9/2020	ON THE SPOT ENGRAVING	\$139.25	KRISTEN COLE
3/9/2020	MICHIGAN ASSOC OF CHIEFS	\$175.00	ANDREW MCCREADY
3/9/2020	WESCO - # 3255	\$218.40	KEITH HEWITT
3/9/2020	WESCO - # 3255	\$98.40	KEITH HEWITT
3/9/2020	OFFICEMAX/OFFICEDEPT#3379	\$91.42	MATT FOREMAN
3/9/2020	WAL-MART #2866	\$199.00	MATT FOREMAN
3/9/2020	THE HOME DEPOT #2723	\$16.20	MATT FOREMAN
3/9/2020	THE HOME DEPOT #2723	\$4.46	MATT FOREMAN
3/9/2020	AMAZON.COM*Q638S60G3 AMZN	\$59.88	MICHELLE PRINZ
3/9/2020	OFFICEMAX/OFFICEDEPT#3379	\$145.85	CATHERINE ADAMS
3/9/2020	MENARDS LANSING WEST MI	\$219.99	CATHERINE ADAMS
3/9/2020	STATE EGLE WATER TEST	\$33.00	CATHERINE ADAMS
3/10/2020	HASLETT TRUE VALUE HARDW	\$44.97	MATTHEW WALTERS
3/10/2020	SHAHEEN CHEVROLET	\$160.09	JIM HANSEN
3/10/2020	TRB WEBINAR	\$95.00	NYAL NUNN
3/10/2020	HARBOR FREIGHT TOOLS 157	\$34.36	KYLE FOGG
3/10/2020	ALRO STEEL CORP	\$11.14	KYLE FOGG
3/10/2020	MEIJER # 025	\$61.88	MARK VROMAN
3/10/2020	PANERA BREAD #608017	\$141.48	MICHELLE PRINZ
3/10/2020	AMAZON.COM*UZ5EO9QH3 AMZN	\$24.83	MICHELLE PRINZ
3/10/2020	FD HAYES ELECTRICAL COMPA	\$200.00	CATHERINE ADAMS
3/11/2020	THE HOME DEPOT #2723	\$23.44	LAWRENCE BOBB
3/11/2020	JERSEY GIANT SUBS ST 7	\$25.40	WILLIAM RICHARDSON
3/11/2020	COSTCO WHSE#1277	\$183.62	BRETT DREYFUS
3/11/2020	COSTCO WHSE#1277	\$104.91	BRETT DREYFUS
3/11/2020	QUALITY DAIRY 31120025	\$17.27	MARK VROMAN
3/11/2020	HASLETT TRUE VALUE HARDW	\$0.84	TODD FRANK

3/11/2020	HASLETT TRUE VALUE HARDW	\$1.15	TODD FRANK
3/11/2020	EAST COAST GLOVE AND SUPP	\$211.97	ROBERT MACKENZIE
3/11/2020	PARKING EP/PS	\$1.25	CATHERINE ADAMS

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<b>Total</b>	<b>\$9,375.48</b>
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ACH Transactions

Date	Payee	Amount	Purpose
2/27/2020	Blue Care Network	\$ 61,240.61	Employee Health Insurance
2/28/2020	State of MI	\$ 28,858.42	MI Bus Tax
2/28/2020	ICMA	\$ 36,802.17	Payroll Deductions 2/28/2020
2/28/2020	Various Financial Institutions	\$ 274,340.09	Direct Deposit 2/28/2020
2/28/2020	IRS	\$ 98,808.98	Payroll Taxes 2/28/2020
2/28/2020	Nationwide	\$ 3,883.85	Payroll Deductions 2/28/2020
3/6/2020	Invoice Cloud	\$ 1,784.40	Utility Transaction Fees
3/6/2020	HRA	\$ 1,042.34	HRA Draw
3/9/2020	Delta Dental	\$ 14,029.81	Employee Dental Insurance
3/9/2020	Wire Transfers	\$ 8,000,000.00	Road Improvement Bonds
3/10/2020	Mers	\$ 237,453.27	Employee Retirement
3/11/2020	Wire Transfers	\$ 3,000,000.00	Road Improvement Bonds
<b>Total ACH Payments</b>		<b><u>\$ 11,758,243.94</u></b>	



9.D

**To: Board Members**  
**From: Phil Deschaine, Township Treasurer**  
**Date: March 12, 2020**  
**Re: Authority to open account**

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This is a resolution to approve the following institution(s) and/or security broker/dealer(s) for the purpose of depositing and investing Township funds according to our Investment Policy and within PA 20 Guidelines.

**Move to adopt a resolution entitled “Authority to Open an Account” at:**

**Citizens Bank**  
**Bank of America**

RESOLUTION OF CHARTER TOWNSHIP OF MERIDIAN  
AUTHORITY TO OPEN ACCOUNT

I hereby certify that I Brett Dreyfus am the duly elected and qualified Clerk and the keeper of the records of Charter Township of Meridian and that the following is a true and complete copy of a resolution duly adopted at a meeting of the Township Board held on \_\_\_\_\_, and that such resolution shall be in full force and effect, as of \_\_\_\_\_.

RESOLVED, That \_\_\_\_\_, ("Bank"), is hereby designated a depository of Charter Township of Meridian and that funds deposited therein may be withdrawn upon checks or other instruments of Charter Township of Meridian ("Township").

RESOLVED FURTHER, That all checks, drafts, notes, withdrawals or orders drawn against said funds shall be signed by Phil Deschaine, Township Treasurer, or any two of the following: Ronald J. Styka, Supervisor; Frank L. Walsh, Manager; and Brett Dreyfus, Clerk.

RESOLVED FURTHER, That Phil Deschaine, Township Treasurer, is authorized to make verbal telephone requests upon the Bank for the purchase of investments (by use of the Personal Identification Number assigned to him if required by the Bank) and in the case of his inability to exercise this function, any two of the following may issue written instructions to the Bank for the purchase of investments: Ronald J. Styka, Supervisor; Frank L Walsh, Manager; and Brett Dreyfus, Clerk.

RESOLVED FURTHER, That the Bank is hereby authorized and directed to honor any withdrawals and to pay any checks and other instruments drawn against said funds, to the order of the Treasurer or any two of the above named officials signing and/or countersigning such instruments.

RESOLVED FURTHER, That the above designated officers are hereby authorized to execute, on behalf of the Township, signature cards, or other documents, containing the rules and regulations of the Bank and the conditions under which deposits are accepted, and to agree on behalf of the Township to those rules, regulations, and conditions as amended.

RESOLVED FURTHER, That the Clerk shall certify to the Bank the names, of those holding the offices or positions listed above and shall thereafter as changes in those offices may occur, immediately certify to the Bank a revised list of officers who are authorized to act in accordance with this resolution. Bank may rely on such certifications and shall be indemnified by the Township from and against any claims, expenses, or losses resulting from honoring the signature of any officer so certified, or from refusing to honor any signature not so certified. These resolutions shall remain in force until written notice to the contrary shall have been received by the Bank, but receipt of such notice shall not affect any prior action taken by the Bank in reliance on this resolution or any certification made in connection herewith.

I further certify that the following are the titles, names and genuine signatures of the OFFICERS AUTHORIZED BY THE ABOVE RESOLUTIONS.

<u>NAME and TITLE, SIGNATURE</u>	<u>FACSIMILE SIGNATURE (if used)</u>
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_____ Phil Deschaine, Treasurer	_____
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_____ Ronald J. Styka, Supervisor	_____
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_____ Frank L. Walsh, Manager	_____
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_____ Brett Dreyfus, Clerk	_____
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I hereby certify the above and I have hereunto subscribed my name as Clerk of Meridian Charter Township on \_\_\_\_\_.

\_\_\_\_\_  
Brett Dreyfus, Township Clerk

386007712  
Township's Tax Payer ID#





12.A

**To:** Township Board

**From:** Mark Kieselbach, Director of Community Planning and Development

**Date:** March 12, 2020

**Re:** Rezoning #19100 (Durow), 1259 Grand River Avenue RR and RRA to C-2 Final Adoption

---

The Township Board at its meeting on March 3, 2020 voted to approve Rezoning #19100 for introduction. As directed by the Board the proposed ordinance was published in the form in which it was introduced.

#### **Township Board Options**

The Township Board may approve or deny the proposed rezoning from RR (Rural Residential) and RRA (Single Family-Suburban Estates) to C-2 (Commercial) with conditions. A resolution to approve the rezoning for final adoption subject to the conditions voluntarily offered by the applicant is provided for the Board's consideration.

- **Move to adopt the resolution for final adoption of Ordinance No. 2020-04 pursuant to Rezoning Petition #19100 to rezone 1.487 acres at 1259 Grand River Avenue from RR (Rural Residential) and RRA (Single Family-Suburban Estates) to C-2 (Commercial) with conditions voluntarily offered by the applicant.**

#### **Attachment**

1. Resolution to approve.

G:\Community Planning & Development\Planning\REZONINGS (REZ)\2019\REZ 19100 (Durow)\Staff memos\REZ 19100.tb4.doc

**RESOLUTION TO APPROVE**

**Rezoning #19100  
1259 Grand River Avenue**

**RESOLUTION**

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 17th day of March, 2020, at 6:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, Gary Durow requested the rezoning of approximately 1.487 acres located at 1259 Grand River Avenue from RR (Rural Residential) and RRA (Single Family-Suburban Estates) to C-2 (Commercial); and

WHEREAS, the Planning Commission held a public hearing on the request at its regular meeting on December 16, 2019 and at its meeting on January 13, 2020 recommended denial of the rezoning request; and

WHEREAS, in a letter dated January 22, 2020 the applicant offered the following voluntary conditions on the rezoning:

1. The following uses of the Subject Property will be prohibited:
  - a. Drive-thru windows;
  - b. fast food restaurants (e.g.: McDonald’s/Burger King);
  - c. bars, taverns, lounges and brew pubs as those terms are used in Ordinance Section 86-404(d)(1);
  - d. gas stations; and
  - e. open business hours after 12:00 am
  
2. The Subject Property may only be redeveloped pursuant to an approved Mixed Use Planned Unit Development (MUPUD) or Commercial Planned Unit Development (CPUD). As used in this offer, the term “redeveloped” means the demolition of the existing buildings and construction of new buildings on the Subject Property.

WHEREAS, the Township Board discussed the proposed rezoning and related conditions at its meetings on February 4, February 18, and March 3, 2020 and reviewed the staff and Planning Commission materials provided under cover memorandums dated January 30, February 12, and February 27, 2020; and

WHEREAS, the proposed rezoning to C-2 (Commercial) is consistent with the commercial use of the property to the north of the site; and

**Resolution to Approve - Final Adoption**

**Rezoning #19100 (Durow)**

**Page 2**

WHEREAS, a portion of the subject property has been used for commercial purposes since the 1960's; and

WHEREAS, the proposed rezoning of the property to C-2 (Commercial) will make the commercial use of the property a conforming use; and

WHEREAS, the conditions offered by the applicant ensures future redevelopment of the property will be harmonious with surrounding land uses; and

WHEREAS, the Township Board introduced Rezoning #19100 for publication and subsequent adoption at its meeting on March 3, 2020.

NOW THEREFORE, BE IT RESOLVED THE TOWNSHIP BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN hereby **FINALLY ADOPTS** Ordinance No. 2020-04, entitled "Ordinance Amending the Zoning District Map of Meridian Township pursuant to Rezoning Petition #19100" from RR (Rural Residential) and RRA (Single Family-Suburban Estates) to C-2 (Commercial) subject to the following conditions voluntarily offered by the applicant:

1. The following uses of the Subject Property will be prohibited:
  - a. Drive-thru windows;
  - b. fast food restaurants (e.g.: McDonald's/Burger King);
  - c. bars, taverns, lounges and brew pubs as those terms are used in Ordinance Section 86-404(d)(1);
  - d. gas stations; and
  - e. open business hours after 12:00 am
  
2. The Subject Property may only be redeveloped pursuant to an approved Mixed Use Planned Unit Development (MUPUD) or Commercial Planned Unit Development (CPUD). As used in this offer, the term "redeveloped" means the demolition of the existing buildings and construction of new buildings on the Subject Property.

BE IT FURTHER RESOLVED that the Clerk of the Charter Township of Meridian is directed to publish the Ordinance in the form in which it is adopted.

ADOPTED: YEAS: \_\_\_\_\_  
\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )

**Resolution to Approve - Final Adoption**

**Rezoning #19100 (Durow)**

**Page 3**

I, the undersigned, the duly qualified and acting Clerk of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and a complete copy of a resolution adopted at a regular meeting of the Township Board on the 17th day of March, 2020.

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Brett Dreyfus  
Township Clerk

**ORDINANCE NO. 2020-04**  
**ORDINANCE AMENDING THE ZONING DISTRICT MAP**  
**OF MERIDIAN TOWNSHIP**  
**PURSUANT TO REZONING #19100**

The Charter Township of Meridian ordains:

Section 1. Amending the Zoning District Map.

A. The Zoning District Map of Meridian Township, as adopted in Section 86-312 of the Code of the Charter Township of Meridian, Michigan, as previously amended, is hereby amended by changing the RR (Rural Residential) and RRA (Single Family-Suburban Estates) District symbols and indication as shown on the Zoning District Map, for 1259 Grand River Avenue, the property legally described as:

BEGINNING AT A POINT ON THE NORTH-SOUTH ¼ LINE 787.70 FEET NORTH OF THE SOUTH ¼ OF SECTION 23, N89 DEGREES, 333 FEET, N08 DEGREES 35' 27"E, TO THE SOUTH LINE OF GRAND RIVER AVENUE - S76 DEGREES 48", ON R/W 306.30 FEET TO THE NORTH-SOUTH ¼ LINE - SOUTH ON THE ¼ LINE 168.40 FEET TO THE POINT OF BEGINNING. SECTION 23 T4NR1W; 1.61 acre, more or less.

to that of C-2 (Commercial) with conditions.

Section 2. Validity and Severability. The provisions of this Ordinance are severable and the invalidity of any phrase, clause or part of this Ordinance shall not affect the validity or effectiveness of the remainder of the Ordinance.

Section 3. Repealer Clause. All ordinances or parts of ordinances in conflict therewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings Clause. This Ordinance does not affect rights and duties matured, penalties that were incurred, and proceedings that were begun, before its effective date.

Section 5. Effective Date. This Ordinance shall be effective seven (7) days after its publication or upon such later date as may be required under Section 402 of the Michigan Zoning Enabling Act (MCL 125.3402) after filing of a notice of intent to file a petition for a referendum.

\_\_\_\_\_  
Ronald J. Styka, Township Supervisor

\_\_\_\_\_  
Brett Dreyfus, Township Clerk



**To: Township Board Members**

**From: Derek N. Perry, Deputy Township Manager  
Director of Public Works & Engineering**

**Date: March 12, 2020**

**Re: Municipal Building HVAC Replacement Project**

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In the 2020 Township operating budget, \$2.2 million was allocated for the replacement of the Municipal Building HVAC system. The project budget provides funding for Direct Construction Work (\$1,600,000), Construction Management (\$450,000), Bonding, Insurance, Permits and Asbestos abatement (\$50,000) and Contingency (\$100,000).

On March 5, 2020, we received and opened bids for the mechanical, electrical and general trade construction work. We received three bids for general trades, 2 bids for the mechanical (HVAC) and 1 bid for the electrical.

General Trades	Denny B Construction	\$148,770
General Trades	Moore Trosper	\$107,731
<b>General Trades</b>	<b>Mallory Building</b>	<b>\$98,900</b>
Mechanical	John E Green Company	\$1,560,000
<b>Mechanical</b>	<b>Gunthorpe Plumbing &amp; Heating</b>	<b>\$1,330,300</b>
<b>Electrical</b>	<b>Centennial Electric</b>	<b>\$83,700</b>

After careful review, and interviews of the firms by our Construction Management Team, we are recommending that all low bids totaling \$1,512,900.00, be approved. In combination with our additional project costs of \$606,572, the recommended construction firms and associated bids will provide for a **total cost of \$2,119,472.00**, which is \$80,528.00 below the total project budget.

If approved as recommended, the project construction schedule anticipates a May start and an October completion date. Intense coordination of the project between our Construction Management Team, Contractors and Township Team members will be critical to maintain normal operations for the public and to minimize disruptions for everyone in the building.

**Proposed Motion:**

**“Move to authorize Deputy Township Manager Perry to proceed with the Municipal Building HVAC replacement project, and accept the bids of Mallory Building for general trades, Gunthorpe Plumbing and Heating for mechanical services and Centennial Electric for electrical services in the amount of \$1,512,900 for direct construction services.”**



12. C

**To: Board Members**  
**From: Ronald J. Styka, Township Supervisor**  
**Date: March 13, 2020**  
**Re: Resolution Celebrating Women's History Month**

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Women's history month is an annual observance in the United States during the month of March. The attached document has been drafted for Township Board approval. Our diversity is something we welcome, embrace and celebrate in Meridian Township.

A motion is prepared for Board consideration:

**MOVE TO APPROVE THE RESOLUTION CELEBRATING WOMEN'S HISTORY MONTH.**

**Attachment:**

1. Resolution Celebrating Women's History Month

**RESOLUTION CELEBRATING WOMEN'S HISTORY MONTH**

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held on the 17<sup>th</sup> day of March 2020, at 6:00 pm local time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_

**WHEREAS**, American women of every race, class, and ethnic background have made historic contributions to the growth and strength of our Nation in countless recorded and unrecorded ways;

**WHEREAS**, American women have played and continue to play critical economic, cultural, and social roles in every sphere of the life of the Nation, by constituting a significant portion of the labor force working inside and outside of the home;

**WHEREAS**, American women have played a unique role throughout the history of the Nation, by providing the majority of the volunteer labor force of the Nation;

**WHEREAS**, American women were particularly important in the establishment of early charitable, philanthropic, and cultural institutions in our Nation;

**WHEREAS**, American women of every race, class, and ethnic background served as early leaders in the forefront of every major progressive social change movement;

**WHEREAS**, American women have served our country courageously in the military;

**WHEREAS**, American women have been leaders, not only in securing their own rights of suffrage and equal opportunity, but also in the abolitionist movement, the emancipation movement, the industrial labor movement, the civil rights movement, and other movements, especially the peace movement, which have created a more fair and just society for all;

**WHEREAS**, despite these contributions, the role of American women in history has been consistently overlooked and undervalued, in the literature, teaching and study of American history;

**WHEREAS**, women have played and continue to play a major role in the governing of the Charter Township of Meridian, serving on numerous Boards and Commissions and as the Supervisor, Treasurer, Clerk, and Trustee throughout the Township's history; and

**WHEREAS**, the Congress of the United States passed a resolution in 1987 and in every successive year since then designating that March is "Women's History Month," calling upon the



people of the United States to observe and honor the role of women in the Nation with appropriate programs, ceremonies, and activities:

**NOW, THEREFORE, BE IT RESOLVED BY THE TOWNSHIP BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN, INGHAM COUNTY, MICHIGAN**, that Meridian Township shall observe the month of March, 2020, as “Women’s History Month.”

ADOPTED:    YEAS:  
                  NAYS:

STATE OF MICHIGAN        )  
  ) ss  
COUNTY OF INGHAM        )

I, the undersigned, the duly qualified and acting Clerk of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted at a regular meeting of the Township Board on the 17<sup>th</sup> day of March 2020.

---

Brett Dreyfus, Clerk  
Meridian Charter Township



12.D.

**To:** Township Board Members

**From:** Derek N. Perry, Deputy Township Manager  
Director of Public Works & Engineering

Younes Ishraidi, P.E., Chief Engineer

**Date:** March 17, 2020

**Re:** Newton Road Public Sanitary Sewer Improvement - Resolution #4  
Special Assessment District #54

---

The Township Board held a public hearing on June 18, 2019 to hear comments on the establishment of a special assessment district to construct approximately 200' of gravity sanitary sewer, along Newton Road from approximately 80' south of Sacramento Way to the south to service 3 parcels in the subject special assessment district.

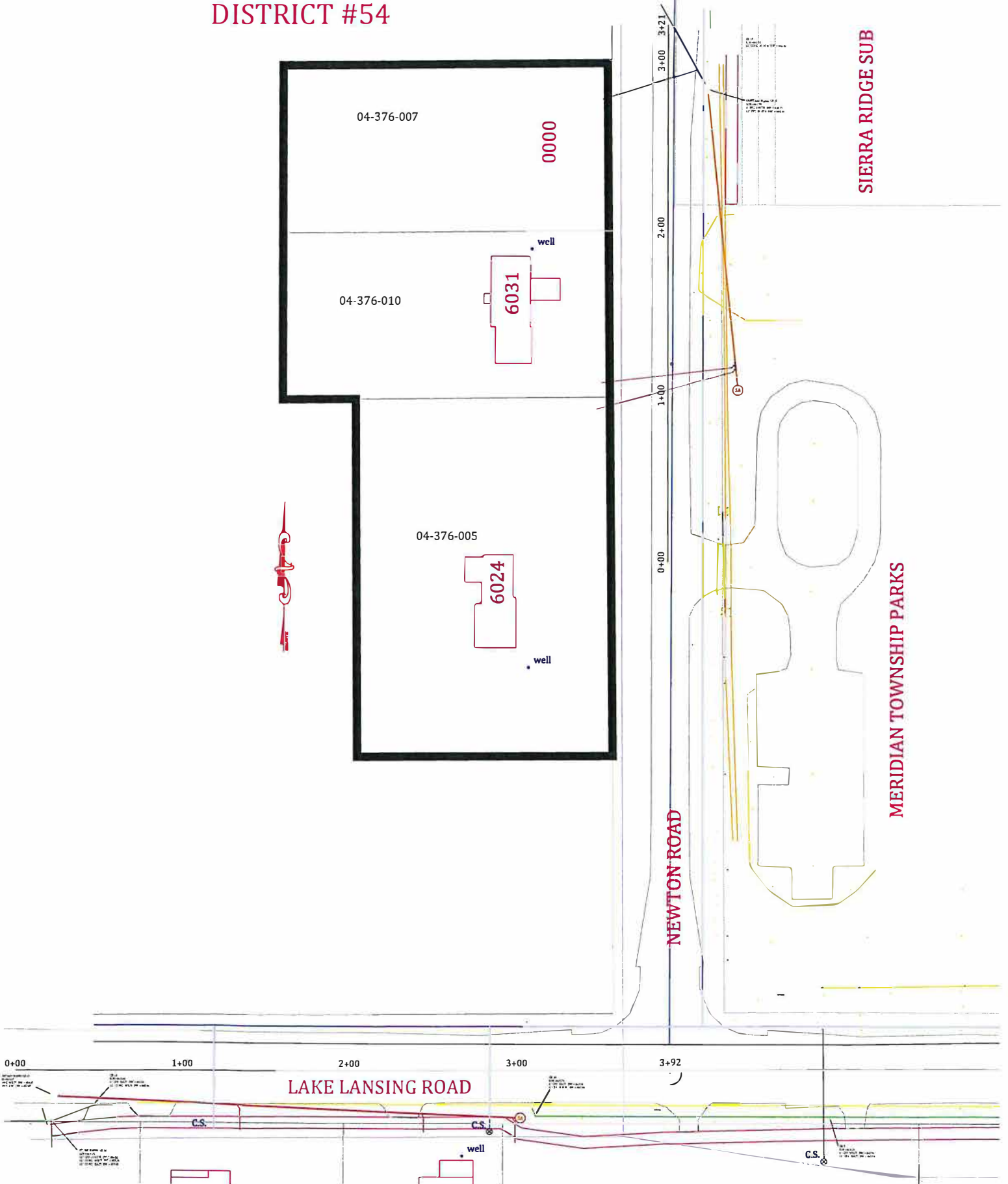
Also on June 18, 2019, the Township Board adopted Resolution #3, which approved the construction of the sanitary sewer improvement, approved the plans and cost estimate, determined the district, and directed an assessment roll be made. This project has been substantially completed, at an anticipated final cost of \$87,895.12. As such, the proposed final assessment per parcel is \$21,973.78. In order to ease the burden of the relatively high assessment, owners of the existing two homes have requested a 15-year payback period.

The attached Resolution #4 for Newton Road Public Sanitary Sewer Improvement Special Assessment District #54 files the proposed final special assessment roll with the Township Clerk and sets the date for a public hearing on April 14, 2020.

**Proposed Motion:**

**“Move to approve Newton Road Public Sanitary Sewer Improvement Special Assessment District #54, Resolution #4, which files the proposed final special assessment roll with the Township Clerk and sets the date for a public hearing on April 14, 2020.”**

# NEWTON ROAD SANITARY SEWER EXTENSION SPECIAL ASSESSMENT DISTRICT #54



**NEWTON ROAD PUBLIC SANITARY SEWER IMPROVEMENT  
SPECIAL ASSESSMENT DISTRICT NO. 54**

**RESOLUTION NO. 4**

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Township Municipal Building, 5151 Marsh Road, Okemos, Michigan 48864-1198, (517) 853-4000 on Tuesday, March 17, 2020 at 6:00 p.m.

**PRESENT:** \_\_\_\_\_  
\_\_\_\_\_

**ABSENT :** \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_

and supported by \_\_\_\_\_.

**WHEREAS**, by resolution adopted June 18, 2019, the Township Board of the Charter Township of Meridian, determined to acquire and construct the more particularly hereinafter described Newton Road Public Sanitary Sewer Improvement Special Assessment District No. 54 and assess the cost thereof, to the property deemed benefitted by said improvements, all in accordance with Act 188, Public Acts of Michigan, 1954, as amended; and

**WHEREAS**, the Supervisor has prepared and reported to the Township Board a special assessment roll assessing the cost of said improvements to the property benefitted thereby with the proper certificate attached thereto.

**NOW, THEREFORE, BE IT RESOLVED THAT:**

1. Said special assessment roll shall be filed with the Office of the Township Clerk and shall be available for public examination during regular working hours on regular working days.
2. The Township Board shall meet at 6:00 p.m. on Tuesday, April 14, 2020, at the Meridian Township Municipal Building, 5151 Marsh Road, Okemos, Michigan, in the Charter Township of Meridian, for the purpose of reviewing and hearing objections to the special assessment roll.
3. The Township Clerk shall cause notice of such hearing and the filing of the assessment roll to be published twice in a newspaper of general circulation in the Township, prior to the date of the hearing. The first publication shall be at least ten (10) days before the hearing pursuant to Act 188, Public Acts of 1954. The Clerk shall also cause notice of such hearing to be mailed by first class mail to all property owners in the special assessment district shown on the current assessment rolls of the Township, at least ten (10) full days before the date of said hearing. Said notice as published and mailed shall be in substantially the following form: (SEE ATTACHED)

**MERIDIAN TOWNSHIP RESIDENTS**

**NOTICE OF REVIEW OF SPECIAL ASSESSMENT ROLL FOR  
NEWTON ROAD PUBLIC SANITARY SEWER IMPROVEMENT  
SPECIAL ASSESSMENT DISTRICT NO. 54**

By Charter Township of Meridian  
Ingham County, Michigan

**TO THE RECORD OWNERS OF, OR PARTIES IN INTEREST IN, THE FOLLOWING PROPERTY  
CONSTITUTING THE PROPOSED SPECIAL ASSESSMENT DISTRICT:**

**3302-02-04-376-005, 6024 Newton Rd:** M4-42-1 Com in N & S ¼ line at pt 187 ft N of S ¼ post;  
W 177 ft; N 210 ft; E 177 ft; S 210 ft to beg on SW 1/4 of Sec 4, T4N,R1W. (.69 ac)

**3302-02-04-376-010 6031 Newton Rd:** M4-42-2-2 Beg on the N-S ¼ line of sd Sec 4 at a pt  
397 ft, N 01 deg 40'10"E of S ¼ cor of Sec 4, th N 88 deg 20' W, 233 ft; th N 01 deg 40' 10" E, 200  
ft th S 88 deg 20' E, 233 ft; th S 01 deg 40' 10" W, 200 ft on the N-S ¼ line of Sec 4 to pt of beg  
exc the N ½, sec 4 T4N, R1W. (.46 ac)

**3302-02-04-376-009 Newton Rd:** M4-42-2-2-1 Beg on the N-S ¼ line of Sec 4 at a pt 397 ft, N  
01 deg 40' 10" E of S ¼ cor of Sec 4, th N 88 deg 20' W 233 ft, th N 01 deg 40' 10" E, 200 ft; th S  
88 deg 20' E, 233 ft; th S 01 deg 40' 10" W, 200 ft on the N-S ¼ line of Sec 4 to pt of beg exc the S  
½ Sec 4, T4N, R1W. (.46 ac)

and excluding road right of way and other lands deemed not benefitted and excluding all streets and other land deemed not benefitted.

**PLEASE TAKE NOTICE** that a special assessment roll has been prepared and is on file in the Office of the Township Clerk for public examination. Said special assessment roll has been prepared for the purpose of assessing the cost of the following described sanitary sewer improvements to the property benefitted therefrom:

Construction of approximately 178 ft of 8" gravity sanitary sewer, beginning at the manhole approx. 80 ft south of Sacramento Way to the south along Newton Road; including installation of lateral lines from the main to the road right of way to service all parcels in the proposed special assessment district, Section 4, Meridian Township, Ingham county, Michigan, T4N, R1W.

**TAKE FURTHER NOTICE** that the Township Board will meet on Tuesday, April 14, 2020, at 6:00 p.m., at the Meridian Township Municipal Building, 5151 Marsh Road, Okemos, MI 48864-1198, (517) 853-4000, for the purpose of reviewing said special assessment roll and hearing any objections thereto.

Appearance and protest at the hearing in the special assessment proceedings is required in order to appeal the amount of the special assessment to the state tax tribunal. You or your agent may appear in person at the hearing and protest the special assessment; or you may file your appearance and protest by letter with the Township Clerk before the close of this hearing, and your personal appearance is not required. The owner or any person having an interest in the real property may file a written appeal of the special assessment with the state tax tribunal within 30 days after the confirmation of the special assessment roll if that person protested the special assessment at this hearing.

Your special assessment is proposed to be **\$21,973.78**.

**DATED:** \_\_\_\_\_

Brett Dreyfus, Township Clerk  
CHARTER TOWNSHIP OF MERIDIAN

**Newton Road Public Sanitary Sewer Improvement  
Special Assessment District No. 54  
Resolution No. 4  
Page 2**

4. All resolutions and parts of resolutions insofar as they conflict with the provisions of this resolution be and the same are hereby rescinded.

**ADOPTED:**

**YEAS:** \_\_\_\_\_  
\_\_\_\_\_

**NAYS:** \_\_\_\_\_

Resolution declared adopted.

**STATE OF MICHIGAN)  
 ) ss.  
COUNTY OF INGHAM )**

I, the undersigned, the duly qualified and acting Clerk of the Charter Township of Meridian, Ingham County, Michigan, **DO HEREBY CERTIFY** that the foregoing is a true and complete copy of proceedings taken by the Township Board at a regular meeting held on Tuesday, March 17, 2020.

\_\_\_\_\_  
Brett Dreyfus, CMMC, Township Clerk

**NEWTON ROAD PUBLIC SANITARY SEWER IMPROVEMENT  
SPECIAL ASSESSMENT DISTRICT #54**

**ASSESSMENT ROLL**

<u>Parcel Number &amp; Property Description</u>	<u>Property Address</u>	<u>Property Owner &amp; Address</u>	<u>Estimated Assessment</u>
3302-02-04-376-005	6024 Newton Rd	Chou Lytongpao 6024 Newton Road East Lansing, MI 48823	\$21,973.78
<u>Property Description:</u> M4-42-1 Com in N & S ¼ line at pt 187 ft N of S ¼ post; W 177 ft; N 210 ft; # 177 ft; S 210' to beg on SW ¼ of Sec 4, T4N,R1W. (.69 ac)			
-----			
3302-02-04-376-010	6031 Newton Rd	Mike & Arvilla Bateman 6031 Newton Road East Lansing, MI 48823	\$21,973.78
<u>Property Description:</u> M4-42-2-2 Beg on the N-S ¼ line of sd Sec 4 at a pt 397 ft, N 01 deg 40'10"E of S ¼ cor of Sec 4, th N 88 deg 20' W, 233 ft; th N 01 deg 40' 10" E, 200 ft' th S 88 deg 20' E, 233 ft; th S 01 deg 40' 10" W, 200 ft on the N-S ¼ line of Sec 4 to pt of beg exc the N ½, sec 4 T4N, R1W. (.46 ac)			
-----			
3302-02-04-376-009	Newton Rd	George F Eyde Family, LLC 300 S. Washington Square, Ste 400 Lansing, MI 48933	\$21,973.78
<u>Property Description:</u> M4-42-2-2-1 Beg on the N-S ¼ line of sec 4 at a pt 397 ft, N 01 deg 40' 10" E of S ¼ cor of Sec 4, th N 88 deg 20' W 233 ft, th N 01 deg 40' 10" E, 200 ft; th S 88 deg 20' E, 233 ft; th s 01 deg 40' 10" W, 200 ft on the N-S ¼ line of Sec 4 to pt of beg exc the S ½ Sec 4, T4N, R1W. (.46 ac)			
-----			

**NEWTON ROAD PUBLIC SANITARY SEWER IMPROVEMENT**

**SPECIAL ASSESSMENT DISTRICT NO. 54**

- - CERTIFICATE OF SUPERVISOR - -

STATE OF MICHIGAN)

) ss.

COUNTY OF INGHAM )

I, Ronald J. Styka, Supervisor of the Charter Township of Meridian, Ingham County, Michigan, hereby certify that the attached Newton Road Public Sanitary Sewer Improvement Special Assessment District No. 54 Special Assessment Roll was made by me pursuant to the resolution of the Township Board of said Charter Township of Meridian heretofore adopted on March 17, 2020, and that in making such assessment roll, to the best of my judgment, I conformed in all respects to the directions contained in such resolution and in the Statutes of the State of Michigan.

\_\_\_\_\_  
Ronald J. Styka  
Supervisor

DATED:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public, Ingham County, MI  
My Commission expires:\_\_\_\_\_

I, Brett Dreyfus, the duly qualified and acting Township Clerk of the Charter Township of Meridian, Ingham County, Michigan, **DO HEREBY CERTIFY** that the notice of hearings on the Newton Road Public Sanitary Sewer Improvement Special Assessment Roll were personally mailed by me to all of the landowners listed hereon on the dates indicated in my affidavit of mailing.

\_\_\_\_\_  
Brett Dreyfus, CMMC, Township Clerk





**To: Township Board**

**From: Mark Kieselbach, Director of Community Planning and Development**

**Date: March 12, 2020**

**Re: Special Use Permit #19131 (The W. Investment Holdings)**

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The W. Investment Holdings has requested special use permit approval to construct a 4,000 square foot commercial medical marihuana provision center at 1614 Grand River Avenue. The approximate 2.4 acre subject site is located on the north side of Grand River Avenue, east of Central Park Drive and zoned C-2 (Commercial).

The Planning Commission held a public hearing on the proposal at its meeting on February 10, 2020 and on February 24, 2020 voted to recommend approval, citing the following reasons for their decision:

- The subject site is located entirely within Overlay Area 5 and is appropriately zoned C-2 (Commercial), which allows commercial medical marihuana provisioning centers by special use permit.
- The proposed commercial medical marihuana provisioning center meets the required setbacks from any public or private K-12 school, church, place of worship or other religious facility, library, preschool, or child care center established in Section 40-31 of the Code of Ordinances.
- The proposed commercial medical marihuana provisioning center will not adversely affect adjacent land uses or the health, safety, and general welfare of the community.
- The proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.

Staff memorandums outlining the SUP request and minutes from the Planning Commission meetings at which the request was discussed are attached for the Board's review.

### **Township Board Options**

The Township Board may approve or deny the proposed special use permit proposal. If the Board amends the proposal, the request may be referred back to the Planning Commission for a recommendation. A resolution will be provided at a future meeting.

### **Attachments**

1. Staff memorandums dated February 6, 2020 and February 20, 2020 with attachments.
2. Resolution recommending approval.
3. Planning Commission minutes dated February 10, 2020 (public hearing) and February 24, 2020 (decision).



**To:** Planning Commission

**From:** Peter Menser, Principal Planner  
Mackenzie Dean, Assistant Planner

**Date:** February 6, 2020

**Re:** Special Use Permit #19131 (The W. Investment Holdings), construct new freestanding 4,000 square foot commercial medical marihuana provisioning center at 1614 Grand River Avenue.

---

The W. Investment Holdings has applied for a special use permit (SUP) to construct a new freestanding 4,000 square foot commercial medical marihuana provisioning center at 1614 Grand River Avenue. The approximate 2.4 acre project site is zoned C-2 (Commercial).

A provisioning center, also referred to a dispensary, is a facility where marihuana, or products derived from marihuana, is sold to registered medical marihuana patients or primary caregivers in accordance with the Michigan Medical Marihuana Act that was approved in 2008. A provisioning center license obtained from the State of Michigan, Department of Licensing and Regulatory Affairs (LARA), authorizes the holder to purchase or transfer marihuana only from growers and processors and to sell or transfer marihuana only to registered qualifying patients or registered primary caregivers. Under current State law consumption or use of marihuana or marihuana products at a provisioning center is prohibited. Provisioning centers are also prohibited from selling or allowing the consumption or use of alcohol or tobacco products on their premises, and from allowing a physician to conduct examinations and issue medical certifications for the purpose of obtaining a registry identification card.

### **Background**

At its meeting on May 21, 2019 the Township Board adopted both zoning and non-zoning ordinances allowing commercial medical marihuana facilities in designated areas in the Township. The non-zoning ordinance established the application process, the facility types allowed, the number of permits, and the general operational standards for the different types of commercial facilities, which include growers, processors, secure transporters, provisioning centers, and safety compliance facilities. The zoning ordinance established seven designated areas in the Township where commercial medical marihuana facilities are permitted and identified the zoning districts in which each of the five types of commercial medical marihuana facilities can locate, as identified in the table on the following page.

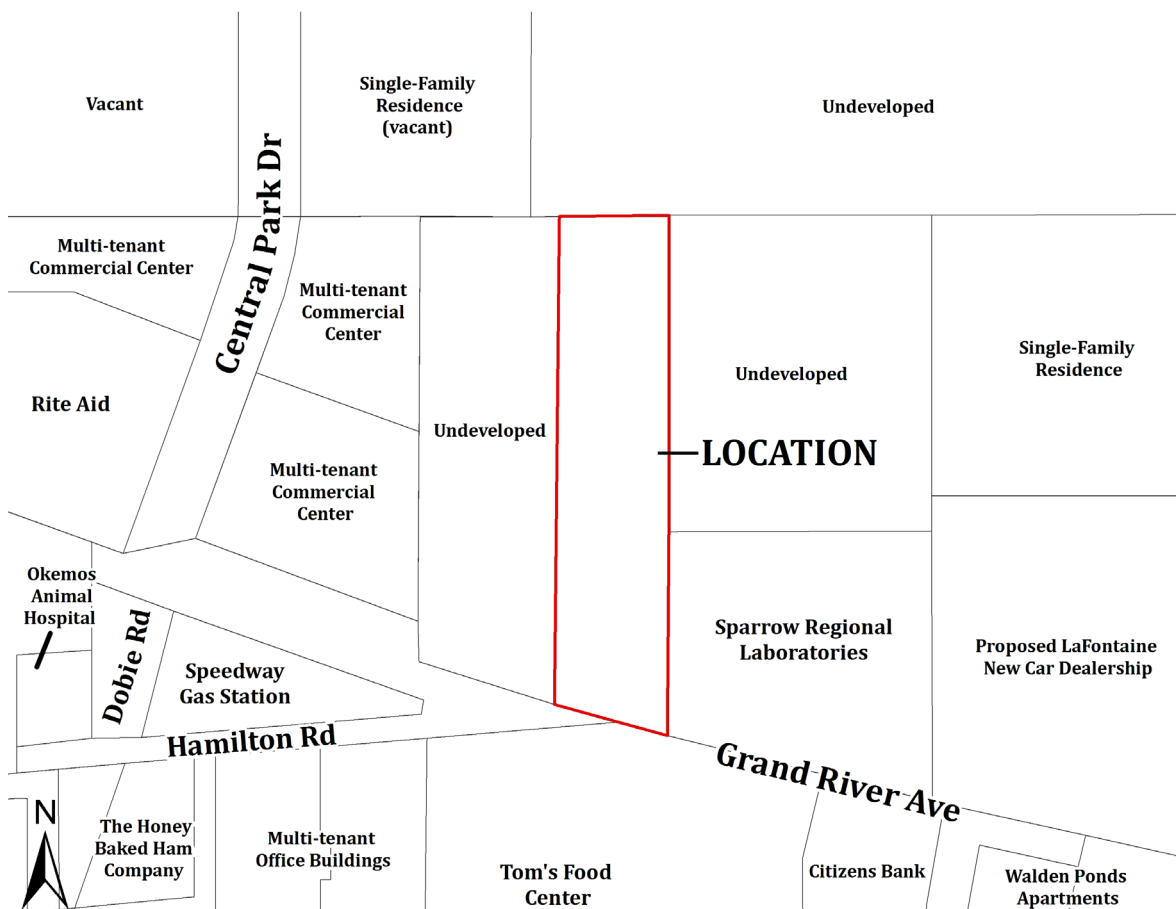
**Special Use Permit #19131 (The W. Investment Holdings)**

**Planning Commission (February 10, 2020)**

**Page 2**

<i>Facility type</i>	<i>Zoning District(s) allowed</i>	<i>Overlay Area(s) allowed</i>
Grower	I (Industrial)	1, 4, 6
Processor	I (Industrial)	1, 4, 6
Provisioning Center	I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park)	1, 2, 3, 4, 5, 6, 7
Safety Compliance Facility	I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park)	1, 2, 3, 5, 6, 7
Secure Transporter	I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park)	1, 2, 3, 5, 6, 7

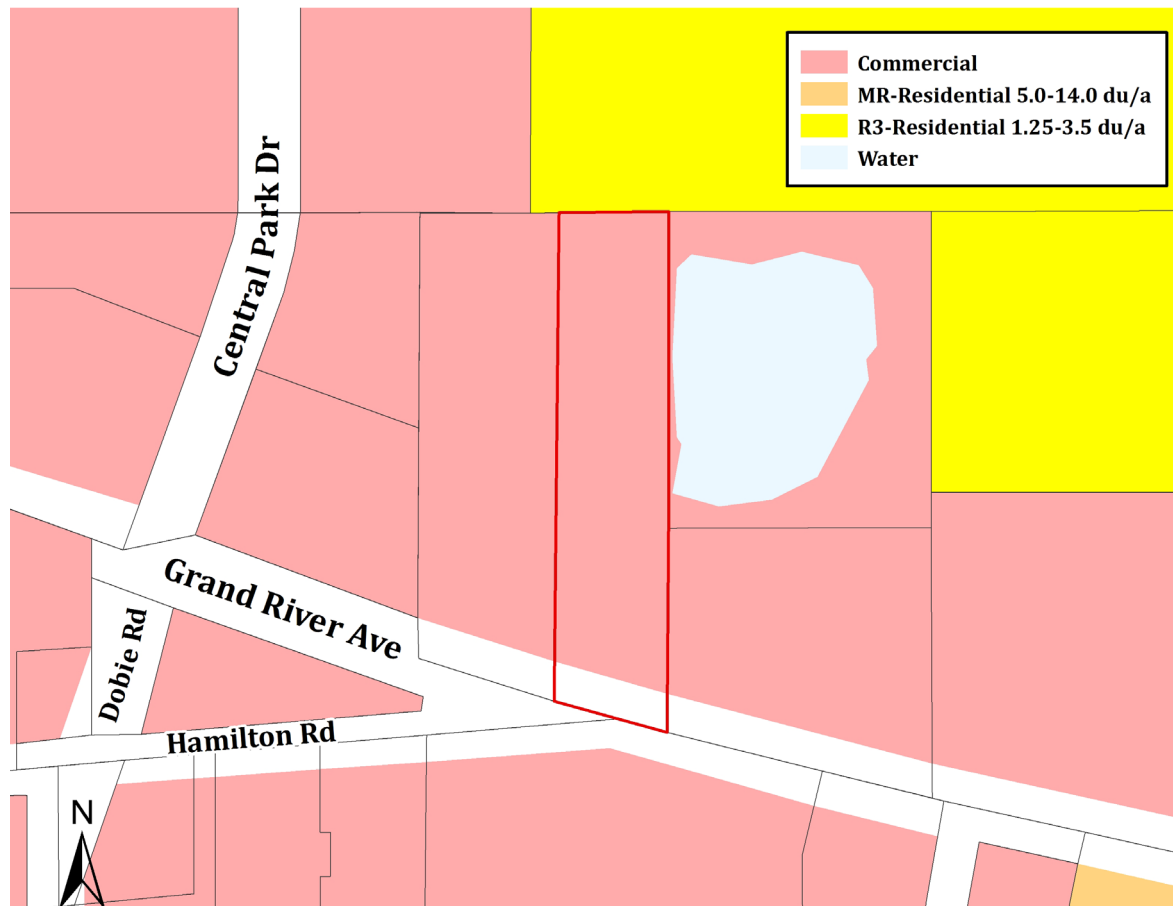
**LOCATION MAP**



## Master Plan

The Future Land Use Map from the 2017 Master Plan designates the subject site in the Commercial category.

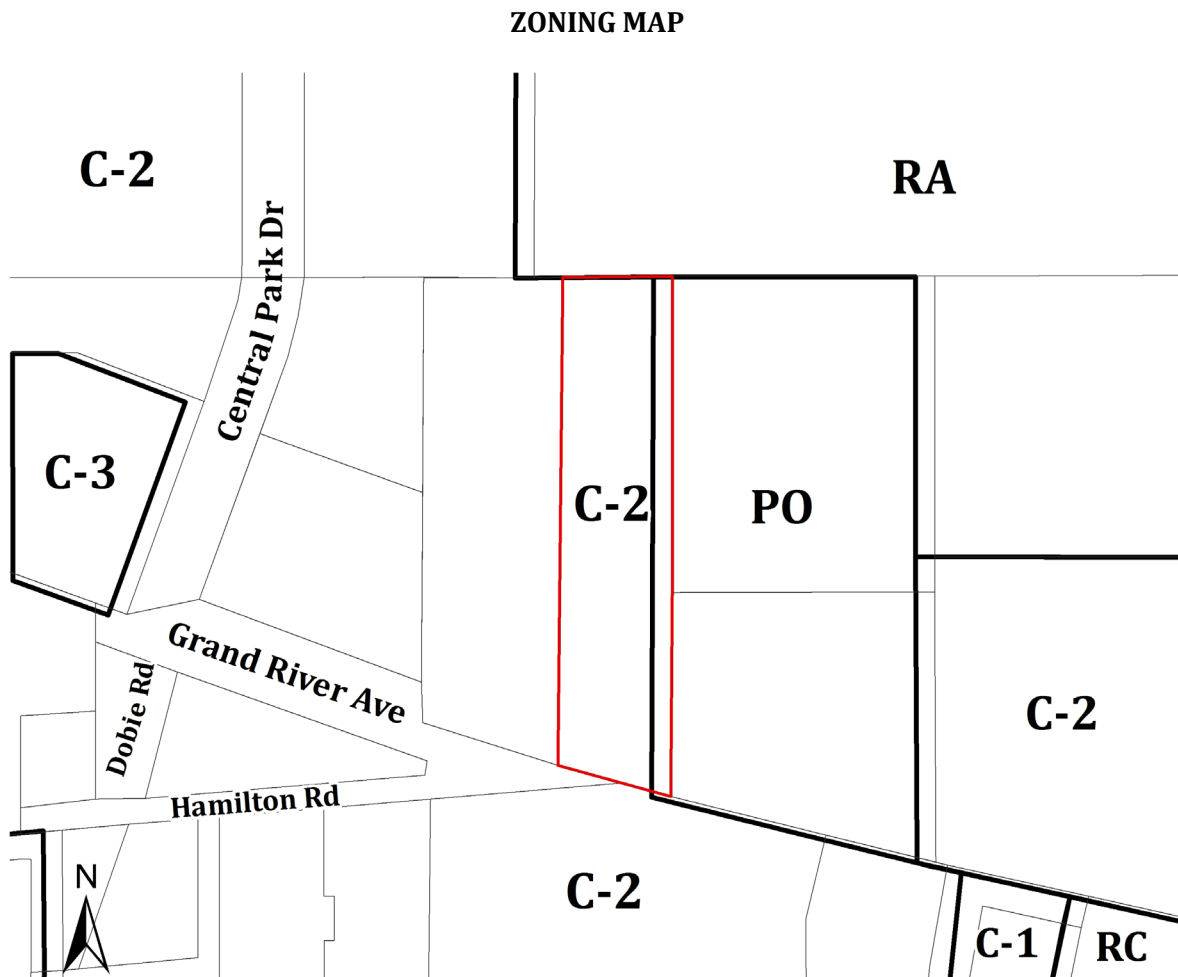
### FUTURE LAND USE MAP



## Zoning

The proposed project is located in the C-2 (Commercial) zoning district. A provisioning center is permitted in the C-1, C-2, C-3 (Commercial), I (Industrial), and RP (Research and Office Park) zoning districts subject to approval of a special use permit reviewed by the Planning Commission and approved by the Township Board.

The C-2 district requires a minimum of 100 feet of lot frontage and 4,000 square feet of lot area. The shopping center parcel property is 2.4 acres in size (104,544 square feet) and has 150 feet of frontage along Grand River Avenue.



### Physical Features

The site is currently undeveloped. The site was previously occupied by a 1,163 square foot single family house built in 1925, a 785 square foot detached garage, and a shed all of which were demolished in early 2019.

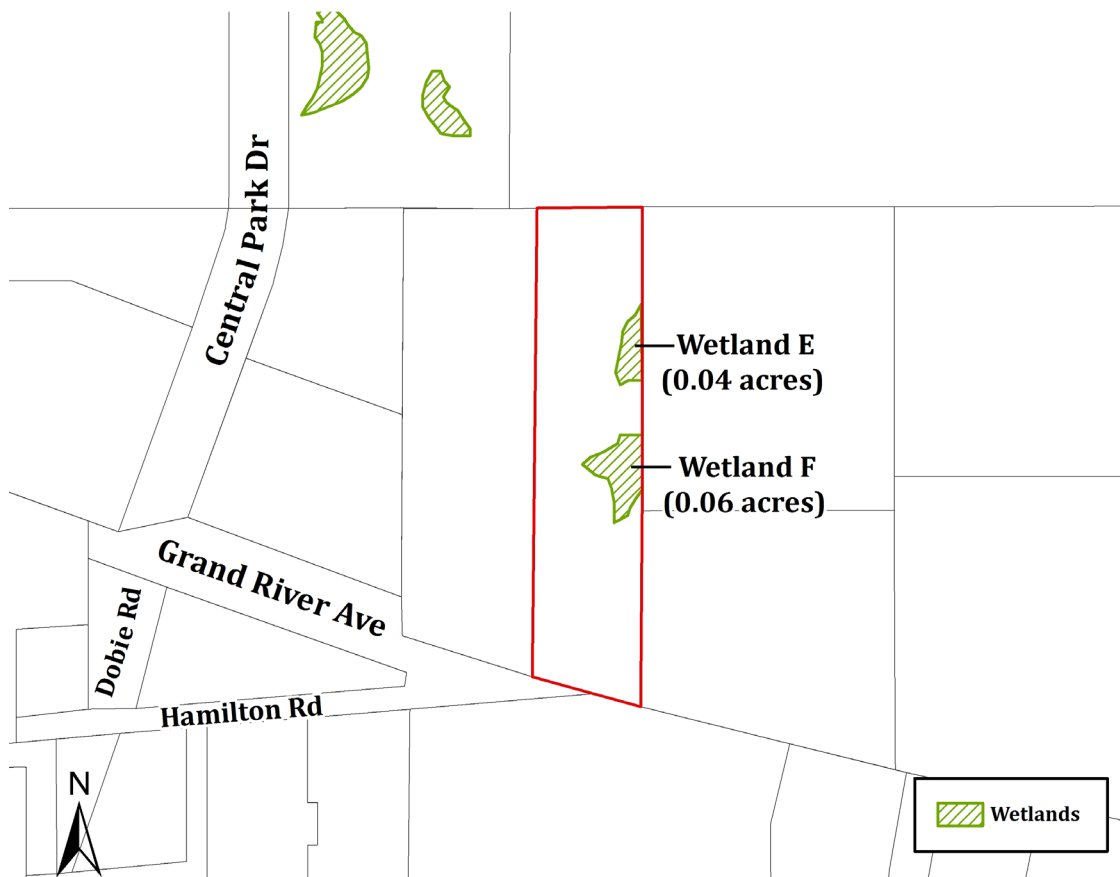
The Flood Insurance Rate Map (FIRM) for Meridian Township indicates the property is not located in a floodplain. The Township Greenspace Plan shows no special designation on the site.

*Wetlands*

Two wetlands are located on the subject property. A wetland delineation was conducted to determine the boundary, regulatory status, and size of the wetlands. The delineation was verified by the Township’s wetland consultant in October 2018. The delineation was conducted to facilitate the development of a Fox Nissan car dealership, which was proposed to be located at 1614 & 1622 Grand River Avenue and Parcel #22-252-003 adjacent to Central Park Drive. The three parcels combined contain six wetlands. Due to the current request to construct a provisioning center at 1614 Grand River Avenue, only the two wetlands located on 1614 Grand River Avenue will be detailed in this report. Wetlands E and F are both located within 30 feet of an approximately 2-acre pond and are therefore regulated by the State of Michigan and Meridian Township. Based on the submitted plans the applicant is not proposing any impacts to wetlands, and where applicable the 20 foot wetland setback is observed.

Section 86-471 of the Code of Ordinances requires all structures and grading activities be set back 20 feet or 40 feet from a delineated wetland boundary depending on the size of the wetland, and that a natural vegetation strip be maintained within 20 feet of the wetland boundary. The site plan shows the 20 foot setback from Wetland E and F.

**WETLANDS MAP**



### **Streets and Traffic**

The site fronts on Grand River Avenue. Grand River Avenue is a four lane road with curb and gutter and a center turn lane classified as a Principal Arterial street on the Street Setbacks and Service Drives Map in the ordinance. The most recent (2018) traffic count information from the Michigan Department of Transportation (MDOT) for Grand River Avenue, between Dobie Road and Cornell Road, showed a total of 15,980 vehicles in a 24 hour period.

A traffic impact study is required for new special uses which would generate over 100 directional trips during a peak hour of traffic or over 750 trips on an average day. The applicant submitted a traffic impact study prepared by Fleis & Vandenbrink Engineering, Inc. dated January 21, 2020 that provides information on traffic generated by the proposed project. The study looks at existing, background (future traffic volumes without the traffic generated by the proposed development), and future level of service (LOS) during the AM (7:45-8:45 a.m.) and PM (5:00-6:00 p.m.) peak hours at the following three intersections around the project site:

- Grand River Avenue and Central Park Drive/Dobie Road
- Grand River Avenue and Hamilton Road
- Grand River Avenue and proposed site driveway

The traffic study notes that existing traffic at the studied intersections all operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours, with the exception of the southbound left-turn maneuver on Central Park Drive. For future traffic, the study indicates that all studied intersections will continue to operate at an acceptable LOS during the AM and PM peak hours, with the exception of the southbound left-turn movement at Grand River Avenue and Central Park Drive which is expected to operate at a LOS E with 55.9 seconds of vehicle delay, an increase of 17.3 seconds from the background conditions.

The traffic impact study estimated traffic generation for the proposed project based on a 5,430 square foot marijuana dispensary, which is Land Use Code 882 in the Institute of Transportation Engineers (ITE) Trip Generation Manual. The applicant is proposing a 4,000 square foot provisioning center building, therefore the traffic generated by the site may be slightly less than the traffic impact study indicates. The following table summarizes findings from the trip generation analysis.

Description	Size	AM Peak Hour			PM Peak Hour			Weekday
		In	Out	Total	In	Out	Total	
Marijuana Dispensary, Land Use Code 882	5,430 sq. ft.	32	25	57	60	59	119	1,372

The study shows that the proposed new development is expected to generate 57 vehicle trips in the AM peak hour, 119 vehicle trips in the PM peak hour and 1,372 vehicle trips over a 24 hour period.

The applicant's traffic consultant suggested an optimization of traffic signal timing at the intersection of Grand River Avenue and Central Park Drive. The study notes optimizing signal timings improved operations to an acceptable LOS and significantly reduce queue length.

### **Grand River Avenue Corridor Access Management Overlay District**

The applicant is proposing to close an existing driveway and create a new driveway along Grand River Avenue to access the site. In accordance with the Michigan Department of Transportation (MDOT), the Township has developed access management criteria for use in evaluating proposed access driveways along Grand River Avenue. The access management criteria for the proposed driveway is summarized in the study provided by the applicant's traffic consultant. Based on the study, the traffic consultant noted that waivers for the spacing between adjacent driveways will be required to facilitate the development of the proposed provisioning center. This criteria will be reviewed during the site plan review process.

### **Utilities**

Municipal water and sanitary sewer is available in the vicinity to serve the subject site. The location and capacity of utilities will be reviewed in detail during site plan review if the special use permit is approved.

### **Staff Analysis**

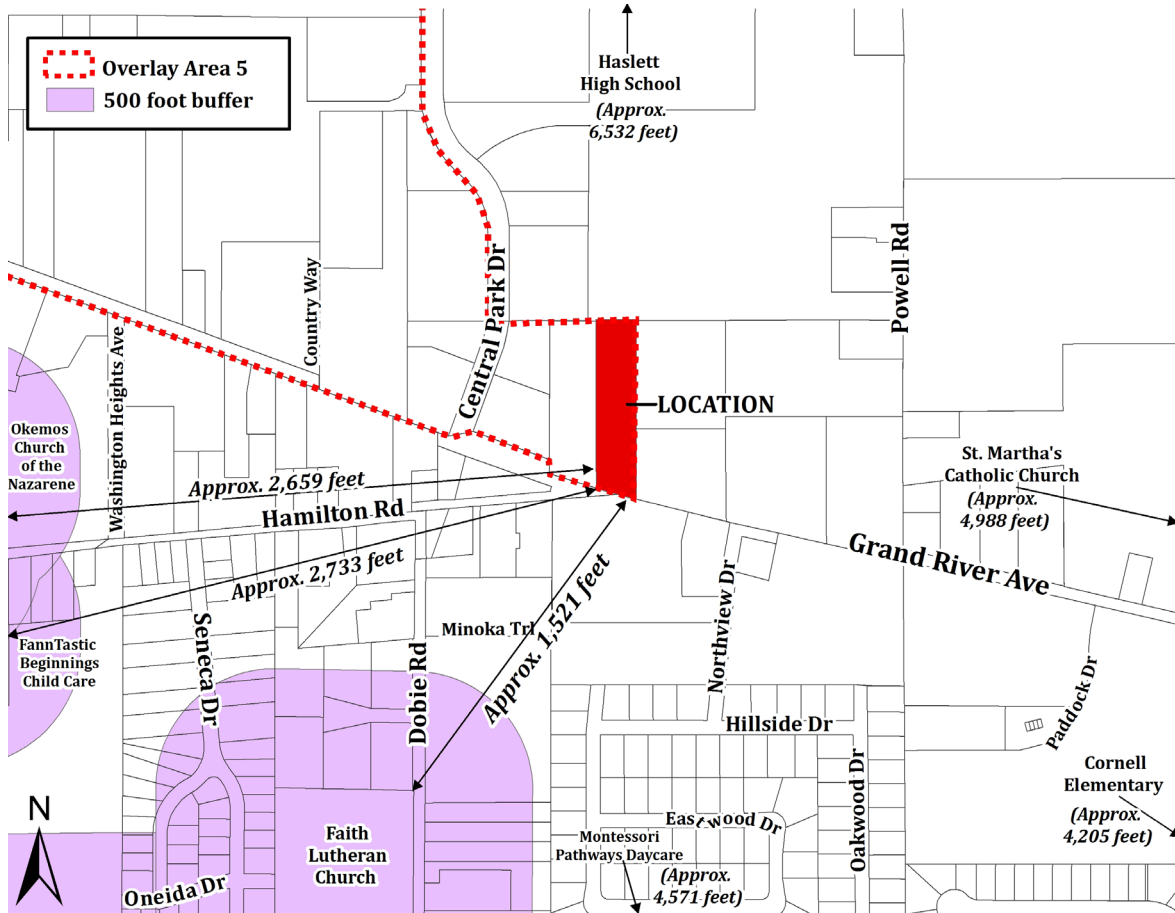
The W. Investment Holdings has requested special use permit approval to construct a new 4,000 square foot commercial medical marijuana provisioning center building located at 1614 Grand River Avenue. For commercial medical marijuana facilities the Planning Commission makes a recommendation on the request and the Township Board makes the final decision. The special use permit review criteria found in Section 86-126 of the Code of Ordinances should be used when evaluating special use permit requests.

### *Required Spacing*

The non-zoning ordinance adopted by the Township Board requires commercial medical marijuana facilities to be located one-thousand (1,000) feet from any public or private K-12 school, five hundred (500) feet from any church, place of worship or other religious facility, and five hundred (500) feet from any library, preschool, or child care center. The minimum distance between uses is measured horizontally between the nearest property lines. The map on the following page shows the 500 and 1,000 foot buffers near the proposed provisioning center. The closest facility to the proposed provisioning center is Faith Lutheran Church. Faith Lutheran Church is located at 4515 Dobie Road, which is located approximately 1,521 feet away from the proposed provisioning center.



### SETBACKS MAP



#### Commercial Medical Marihuana Facility Permit Application

Applicants for a commercial medical marihuana facility must go through various steps in order to establish a facility within Meridian Township, including securing local and state approval. The local process begins with the initial application for a Commercial Medical Marihuana Facility Permit. To be eligible for a permit the applicant was required to submit a non-refundable \$5,000 dollar application fee and address at least two of the following three requirements: (1) an official statement issued by the Department of Licensing and Regulatory Affairs (LARA) indicating that the applicant has completed state prequalification for a license, (2) proof that the applicant or owners of at least 75% of the applicant are current Township residents and were residents for at least twelve months prior to filing the application, (3) signing of a certification restricting the transfer of the permit for a period of not less than 30 months after issuance. The applications were reviewed internally by Township staff and the Township Attorney. Other important aspects of the permit application process included submittal of documents addressing the organizational structure of the applicant, passing background checks, submitting a security plan for the facility, addressing waste disposal, providing details on staffing, and submitting information on product vendors and transporters.

## Special Use Permit #19131 (The W. Investment Holdings)

Planning Commission (February 10, 2020)

Page 9

Once the facility application is deemed complete, the applicant receives conditional approval from the Director of Community Planning and Development. In this initial application period the Township did receive only applications for provisioning centers.

### *Lottery*

If multiple applications are received for an overlay area a lottery is held to establish the order applicants can apply for a special use permit. If a conditionally approved applicant fails to submit a SUP application within the required 60 day period after the lottery then the applicant's conditional approval is revoked and the next applicant drawn in the lottery receives an opportunity to submit a SUP application. In the case of the current request, the applicant was one of ten conditionally approved applicants in Overlay Area 5, so a lottery was required.

### *State Review and Next Steps*

SUP approval must be granted by the Township Board before an application can move forward to the final steps of approval for a Commercial Medical Marihuana Facility Permit. Before operations may begin at the facility the applicant must be granted a permit by the Director of Community Planning and Development and receive final approval from the State of Michigan by completing the License Qualification and Final Approval steps of the state application process. Only when the facility has been inspected and the Township has confirmed all applicable State approvals will a Commercial Medical Marihuana Facility Permit be issued and the facility allowed to open. The commercial medical marihuana facility permit is issued for a period of one year.

### *Renewal*

After one year, the applicant must submit an application to renew the Commercial Medical Marihuana Facility Permit. A \$5,000 renewal fee is required at the time of application. Each year, any pending applications for renewal or amendment of valid, unexpired permits are reviewed and granted or denied before applications for new permits are considered. If a renewal is denied or licensure is not granted the permit shall be forfeited and the Director may accept new applicants in the next application period. If the applicant maintains a valid State license and remains in good standing with both the State and Township a renewal will be granted for another one year period.

*Development Standards*

Additionally, development of the site is subject to all standards for lot coverage, setback areas and landscaping. The following chart summarizes the plan requirements:

<b>Design Objective</b>	<b>Standard</b>	<b>Proposed</b>
<b>Minimum lot width (Grand River Avenue)</b>	100 feet	150 feet
<b>Front yard setback (Grand River Avenue)</b>	100 feet	255.9 feet
<b>Side yard setback (east)</b>	15 feet	65.9 feet
<b>Side yard setback (west)</b>	15 feet	17 feet
<b>Rear yard setback</b>	15 feet	384.6 feet
<b>Setback from a residential district</b>	100 feet	384.6 feet
<b>Maximum building height</b>	35 feet	24 feet
<b>Parking</b>	22 spaces	34 spaces
<b>Bike parking</b>	2 spaces	6 spaces
<b>Vehicle loading space</b>	1 per building	1 loading space
<b>Impervious surfaces</b>	70%	39.8%

*Land use:* A provisioning center is permitted in the C-2 zoning district subject to approval of a special use permit reviewed by the Planning Commission and approved by the Township Board.

*Bicycle parking:* One bicycle parking space is required for every ten motor vehicle parking spaces required. There are 22 parking spaces required; therefore the project must have a minimum of two bicycle parking spaces (one rack). Three bicycle parking racks (six bicycle parking spaces) are shown on the submitted site plan near the entrance of the proposed provisioning center. The Township requires the use of an inverted "U" shaped bicycle rack. The site plan indicates the proposed bicycle racks will be the inverted "U" shaped style.

*Building materials:* Building materials for this project include a mixture of burnished (polished) block, prefinished metal coping, and concrete and metal siding. A sample board of the building materials submitted by the applicant will be displayed at the public hearing.

*Landscaping:* A landscape plan was submitted and will be reviewed during the site plan review process.

## **Special Use Permit #19131 (The W. Investment Holdings)**

**Planning Commission (February 10, 2020)**

**Page 11**

SUP approval must be granted by the Township Board before an application can move forward to the final steps of approval for a Commercial Medical Marihuana Facility Permit. The applicant must also submit for Site Plan Review before work can begin. Site Plan Review is a detailed staff-level analysis of the project which includes reviews of storm water, utilities, lighting, landscaping, grading, and other issues to ensure compliance with all applicable ordinances as well as confirmation of approvals from local agencies such as the Ingham County Drain Commissioner's Office and Road Department. Before operations may begin at the facility the applicant must be granted a permit by the Director of Community Planning and Development and receive final approval from the State of Michigan by completing the License Qualification and Final Approval steps of the state application process. Only when the facility has been inspected and the Township has confirmed all applicable State approvals will a Commercial Medical Marihuana Facility Permit be issued and the facility allowed to open.

### **Planning Commission Options**

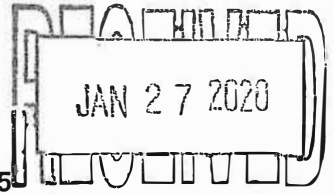
The Planning Commission may recommend approval, approval with conditions, or denial of the proposed special use permit. A resolution will be provided at a future meeting.

### **Attachments**

1. Special use permit application and attachments.
2. Site plan prepared by NF Engineers & Surveyors dated November 11, 2019 (revision date January 24, 2020) and received by the Township on January 27, 2020.
3. Floor plan and elevations prepared by ROGVOY Architects dated August 2, 2019 and received by the Township on January 27, 2020.
4. Traffic Impact Study prepared by Fleis & Vandenbrink Engineering, Inc. dated January 21, 2020 and received by the Township on January 21, 2020.
5. Wetland Delineation Report prepared by Marx Wetlands, LLC dated September 24, 2018 and received by the Township on October 19, 2018.
6. Wetland Verification Report prepared by The Township Wetland Consultant dated October 19, 2018 and received by the Township on October 19, 2018.
7. Medical Marihuana Overlay Area Map dated May 16, 2019.

G:\Community Planning & Development\Planning\SPECIAL USE PERMITS (SUP)\2019\SUP 19131 (The W. Investment Holdings)\SUP 19131.pc1.docx

**CHARTER TOWNSHIP OF MERIDIAN  
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT  
5151 MARSH ROAD, OKEMOS, MI 48864  
PLANNING DIVISION PHONE: (517) 853-4560, FAX: (517) 853-4095**



**SPECIAL USE PERMIT APPLICATION**

Before submitting this application for review, an applicant may meet with the Director of Community Planning and Development to discuss the requirements for a special use permit and/or submit a conceptual plan for review to have preliminary technical deficiencies addressed prior to submittal of the application. If the property or land use is located in the following zoning districts RD, RC, RCC, RN then the applicant must meet with the Planning Director to discuss technical difficulties before filing a formal application.

**Part I**

- A. Applicant The W. Investment Holdings - Ammar W. Alkhafji  
 Address of Applicant 29580 Northwestern Highway  
 Telephone - Work 248.497.4000 Home \_\_\_\_\_ Fax \_\_\_\_\_ Email ammar@winvestorsgroup.com  
 Interest in property (circle one): Owner Tenant Option Other  
 (Please attach a list of all persons with an ownership interest in the property.)
- B. Site address / location / parcel number 1614 W. Grand River / 33-02-22-426-001 / Parcel 3  
 Legal description (please attach if necessary) Attached  
 Current zoning C2 - Commercial District  
 Use for which permit is requested / project name Commercial  
 Corresponding ordinance number \_\_\_\_\_
- C. Developer (if different than applicant) Same as above  
 Address \_\_\_\_\_  
 Telephone – Work \_\_\_\_\_ Home \_\_\_\_\_ Fax \_\_\_\_\_
- D. Architect, Engineer Planner or Surveyor responsible for design of project if different from applicant:  
 Name Nowak and Fraus Engineers Rogvov Architects  
 Address 46777 Woodward, Pontiac, MI 48342 32500 Telegraph, Bingham Farms, MI 48025  
 Telephone – Work 248.332.7931 Home \_\_\_\_\_ ~~Fax~~ \_\_\_\_\_ Tel. 248.540.7700
- E. Acreage of all parcels in the project: Gross 2.40 Net \_\_\_\_\_
- F. Explain the project and development phases:
- G. Total number of:  
 Existing: structures 1 bedrooms unknown offices N/A parking spaces N/A carports N/A garages 1  
 Proposed: structures 1 bedrooms N/A offices N/A parking spaces 34 carports N/A garages N/A
- H. Square footage: existing buildings 2,161 proposed buildings 4,000  
 Usable Floor area: existing buildings 2,161 proposed buildings 4,000
- I. If employees will work on the site, state the number of full time and part time employees working per shift and hours of operation: It is expected that there will be 3 employees on site. Hours of operation is anticipated to be from 8 am to 7 pm
- J. Existing Recreation: Type N/A Acreage \_\_\_\_\_  
 Proposed Recreation: Type N/ Acreage \_\_\_\_\_  
 Existing Open Space: Type Residential Lawn Acreage 2.28  
 Proposed Open Space: Type Commercial Lawn Acreage 1.60

- K. If Multiple Housing:
- Total acres of property N/A
- Acres in floodplain \_\_\_\_\_ Percent of total \_\_\_\_\_
- Acres in wetland (not in floodplain) \_\_\_\_\_ Percent of total \_\_\_\_\_
- Total dwelling units \_\_\_\_\_
- Dwelling unit mix:
- |                                    |                |             |
|------------------------------------|----------------|-------------|
| Number of single family detached:  | for Rent _____ | Condo _____ |
| Number of duplexes:                | for Rent _____ | Condo _____ |
| Number of townhouses:              | for Rent _____ | Condo _____ |
| Number of garden style apartments: | for Rent _____ | Condo _____ |
| Number of other dwellings:         | for Rent _____ | Condo _____ |

L. The following support materials must be submitted with the application:

1. Nonrefundable Fee.
2. Legal Description of the property.
3. Evidence of fee or other ownership of the property.
4. Site Plan containing the information listed in the attachment to this application.
5. Architectural sketches showing all sides and elevations of the proposed buildings or structures, including the project entrance, as they will appear upon completion. The sketches should be accompanied by material samples or a display board of the proposed exterior materials and colors.
6. A Traffic Study, prepared by a qualified traffic engineer, based on the most current edition of *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation.
  - a. A traffic assessment will be required for the following:
    - 1) New special uses which could, or expansion or change of an existing special use where increase in intensity would, generate between 50 to 99 directional trips during a peak hour of traffic.
    - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
  - b. A traffic impact study will be required for the following:
    - 1) New special uses which would, or expansion or change of an existing special use where increase in intensity would, generate over 100 directional trips or more during a peak hour of traffic, or over 750 trips on an average day.
    - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
7. Natural features assessment which includes a written description of the anticipated impacts on the natural features at each phase and at project completion that contains the following:
  - a. An inventory of natural features proposed to be retained, removed, or modified. Natural features shall include, but are not limited to, wetlands, significant stands of trees or individual trees greater than 12 inches dbh, floodways, floodplains, waterbodies, identified groundwater vulnerable areas, slopes greater than 20 percent, ravines, and vegetative cover types with potential to sustain significant or endangered wildlife.
  - b. Description of the impacts on natural features.
  - c. Description of any proposed efforts to mitigate any negative impacts.

The natural features assessment may be waived by the Director of Community Planning and Development in certain circumstances.

- M. Any other information specified by the Director of Community Planning and Development which is deemed necessary to evaluate the application.
- N. In addition to the above requirements, for zoning districts, **RD, RC, RCC, RN, and CV** and **Group Housing Residential Developments** the following is required:
1. Existing and proposed contours of the property at two foot intervals based on United States Geological Survey (USGS) data.
  2. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer.
  3. Ten copies of a report on the intent and scope of the project including, but not limited to: Number, size, volume, and dimensions of buildings; number and size of living units; basis of calculations of floor area and density and required parking; number, size, and type of parking spaces; architectural sketches of proposed buildings.
  4. Seven copies of the project plans which the Township shall submit to local agencies for review and comments.
- O. In addition to the above requirements, a special use application in zoning district **RP** requires the following material as part of the site plan:
1. A description of the operations proposed in sufficient detail to indicate the effects of those operations in producing traffic congestion, noise, glare, air pollution, water pollution, fire hazards or safety hazards or the emission of any potentially harmful or obnoxious matter or radiation.
  2. Engineering and architectural plans for the treatment and disposal of sewerage and industrial waste tailings, or unusable by-products.
  3. Engineering and architectural plans for the handling of any excessive traffic congestion, noise, glare, air pollution, or the emission of any potentially harmful or obnoxious matter or radiation.
- P. In addition to the above requirements, a special use application for a use in the Floodway Fringe of zoning district **CV** requires the following:
1. A letter of approval from the State Department of Environmental Quality.
  2. A location map including existing topographic data at two-foot interval contours at a scale of one inch representing 100 feet.
  3. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits, extent, and elevations of the proposed fill, excavation, and occupation.
  4. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- Q. In addition to the above requirements, a special use application for a use in the Groundwater Recharge area or zoning district **CV** requires the following:
1. A location map including existing topographic data at two-foot interval contours.
  2. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits and extent of the proposed fill, excavation, and occupation.
  3. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- R. In addition to the above requirements, the Township Code of Ordinances, Article VI, should be reviewed for the following special uses: group housing residential developments, mobile home parks, nonresidential structures and uses in residential districts, planned community and regional shopping center developments, sand or gravel pits and quarries, sod farms, junk yards, sewage treatment and disposal installations, camps and clubs for outdoor sports and buildings greater than 25,000 square feet in gross floor area.

Part II

SUP REQUEST STANDARDS  
Township Code of Ordinances, Section 86-126

Applications for Special Land Uses will be reviewed with the standards stated below. An application that complies with the standards stated in the Township Ordinance, conditions imposed pursuant to the Ordinance, other applicable Ordinances, and State and Federal statutes will be approved. Your responses to the questions below will assist the Planning Commission in its review of your application.

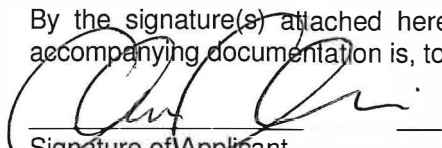
- (1) The project is consistent with the intent and purposes of this chapter.
- (2) The project is consistent with applicable land use policies contained in the Township's Master Plan of current adoption.
- (3) The project is designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such a use will not change the essential character of the same area.
- (4) The project will not adversely affect or be hazardous to existing neighboring uses.
- (5) The project will not be detrimental to the economic welfare of surrounding properties or the community.
- (6) The project is adequately served by public facilities, such as existing roads, schools, stormwater drainage, public safety, public transportation, and public recreation, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide any such service.
- (7) The project is adequately served by public sanitation facilities if so designed. If on-site sanitation facilities for sewage disposal, potable water supply, and storm water are proposed, they shall be properly designed and capable of handling the longterm needs of the proposed project.
- (8) The project will not involve uses, activities, processes, materials, and equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare, or odors.
- (9) The project will not directly or indirectly have a substantial adverse impact on the natural resources of the Township, including, but not limited to, prime agricultural soils, water recharge areas, lakes, rivers, streams, major forests, wetlands, and wildlife areas.

Part III

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes     No    (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate

  
\_\_\_\_\_  
Signature of Applicant

1/27/2020  
Date

Ammar Alkhatfaji  
Type/Print Name

Fee: \_\_\_\_\_

Received by/Date: \_\_\_\_\_





CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

January 24, 2020

**Meridian Township**  
5151 Marsh Road  
Okemos, Michigan 48864

Attention: **Department of Community Planning and Development**

Regarding: **Parcel 3 – 1614 W. Grand River 33-02-22-426-001**  
**Special Land Use**

To All:

The W. Investment Holdings – Ammar W. Alkhafaji desires to construct a retail business on the referenced parcel/property. Parcel 3 is 2.20 acres of a larger property that will be developed in the future by the Owner listed above. The proposed retail is planned to be a 4,000 square foot building with a total 34 parking spaces.

1. The site noted above is zoned C-2 Commercial District. The minimum lot area is 4,000 square feet. The lot/ parcel 3 is 2.40 acres. The lot width is 144 feet. The proposal meets the setback requirements.

The proposed use is a provisioning center. At the suggestion of the Township and in accordance with Section 86-404 the applicant is submitting this project for a special use.

2. The Township Master Plan identifies the subject parcel zoned as commercial use. The proposed use as a provisioning center will be harmonious with the surrounding properties. The property to the east of this project is a medical office. The property to the west of the site is commercial. Long term plans are to develop Parcel 2 as a commercial retail site. The provisioning center is consistent with applicable land use policies contained in the Township's Master Plan of current adoption as our property has been chosen via the township's "lottery" for District 5.
3. As provided on the attached plans, the propose development fits seamlessly on the site and has been designed to meet the standards of the Meridian Township Zoning Ordinance. As indicated above the proposed development will be harmonious with the surrounding properties and will serve as a transition between the medical office to the east and the commercial operation to the west. The hours of operation will conform with the township's requirement and will not exceed what is allowed by the township. All precautionary measures will be taken in regard to the security of the operation along with the wellbeing of the community and surrounding vicinity. Building will be constructed following all Township and Michigan building code standards. The design will be appropriate with the existing general vicinity and its intended character and will not change the essential character of that area.
4. The proposed development will be a transition between the surrounding properties and will be harmonious with those properties. It will not adversely affect or be hazardous to existing neighboring uses. Our facility will include an odor plan including a carbon filtration system to make sure there is no

NOWAK & FRAUS ENGINEERS

46777 WOODWARD AVENUE  
PONTIAC, MI 48342-5032

WWW.NOWAKFRAUS.COM

VOICE: 248.332.7931  
FAX: 248.332.8257

smell giving a negative effect to our neighbors and surrounding community. We will also be having full security on the property during business hours to ensure safety to our clientele and the community at large.

5. It is anticipated that the proposed provisioning center will slightly increase the amount of commercial activity in this area. The provisioning center will be replacing existing an existing residential property. It is likely that the patrons for this project will also utilize the other nearby properties. This project will **not** be detrimental to the economic welfare of surrounding properties and community, and in fact will have a positive effect to the economic welfare of surrounding properties and community.
6. The subject parcel has frontage onto West Grand River Avenue. Pedestrian access currently exists along Grand River Avenue. Public utilities such as sewer, water and storm water are available to the site.
7. The site is served by public water and sanitary sewer services. All of which will be properly designed to fit this project and will be adequately capable of handling all long term needs for the proposed project.
8. The proposed project will not involve any uses or activities, processes, materials, equipment or conditions that will be detrimental to any persons, property or general welfare through the excessive generation of traffic, noise, smoke, fumes, glare or odor. A traffic generation report along with traffic study is provided to show support of that. We have also provided an odor plan in the provisioning center application to show all preventative measures of eliminating odor to surrounding area. There will be no conduct in the place of business to create excessive noise, smoke or fumes. All lighting of the property will be conforming to townships ordinance.
9. The proposed provisioning center project will not directly or indirectly have an adverse impact on the natural resources of the Township, the agricultural soils, water recharge areas, lakes, rivers, streams, major forests, wetlands and wildlife areas.

The proposed project is located within the existing commercial area of the Township.

Please call us if there are any questions pertaining to the above.

Respectfully,  
Nowak and Fraus Engineers

Michael D. Peterson, P.E.



CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

## LEGAL DESCRIPTION

### PARCEL 3

The East 145 feet of the following description: Beginning at a point 1123.75 feet West of the East quarter post of Section 22, Town 4 North, Range 1 West, thence West 351 feet, thence South 748 feet to the center of Grand River Road, thence Easterly along center of said road 351 feet; thence North 746 feet to beginning, Meridian Township, Ingham County, Michigan.

Address: 1614 W. Grand River Avenue

Tax ID No.: 33-02-02-22-426-001

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NOWAK & FRAUS ENGINEERS

46777 WOODWARD AVENUE  
PONTIAC, MI 48342-5032

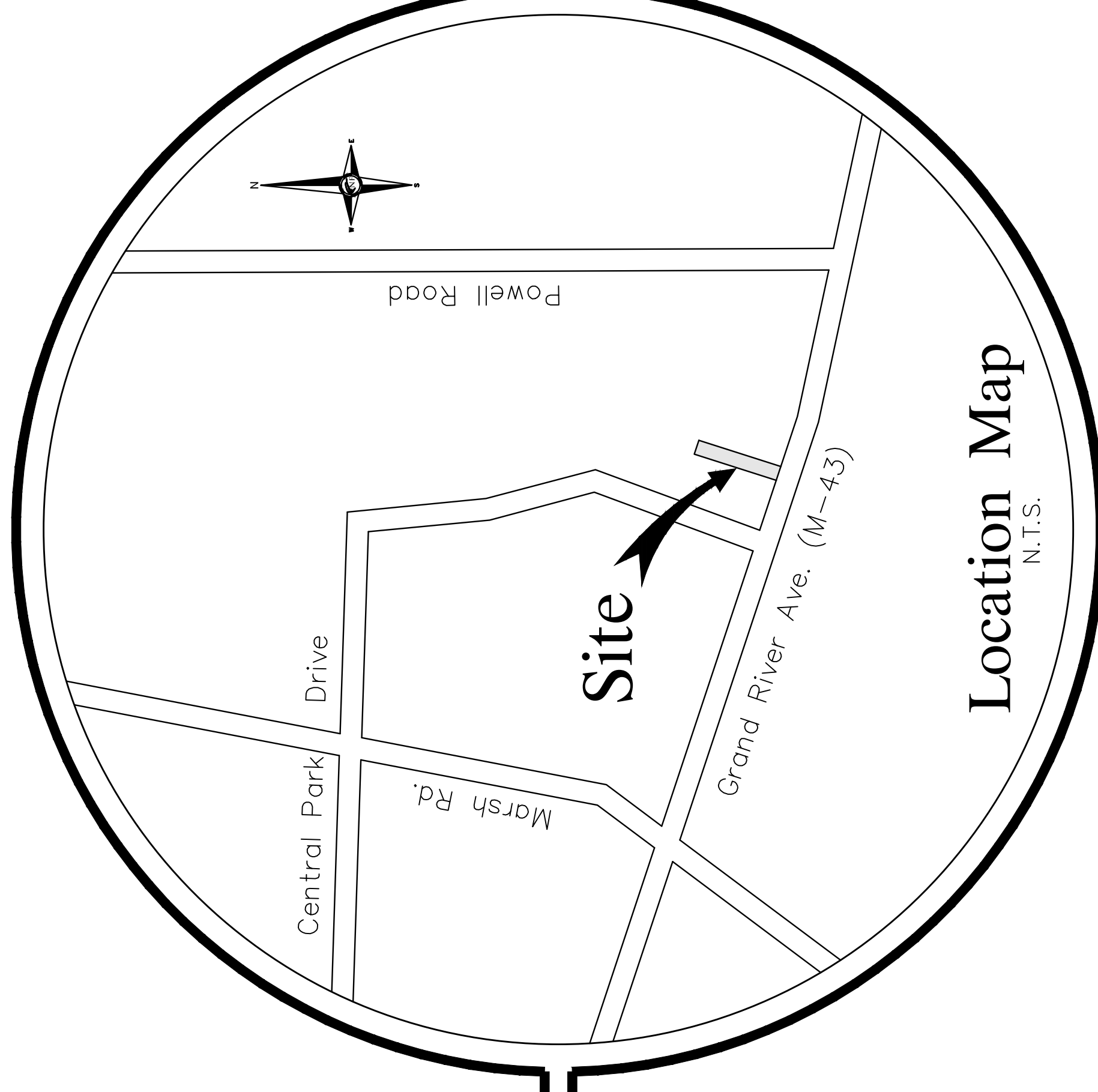
[WWW.NOWAKFRAUS.COM](http://WWW.NOWAKFRAUS.COM)

VOICE: 248.332.7931  
FAX: 248.332.8257

# Meridian Township, Ingham County, Michigan

## SITE PLAN PACKAGE

Prepared For:  
W Investment Holdings



REVISIONS:  
2020-01-24 Revise per Meridian Township

**Owner**  
W INVESTMENT HOLDINGS  
29580 NORTHWESTERN HWY.  
SUITE 100  
SOUTHFIELD, MI 48034  
CONTACT: AMMAR W. ALKHAFAJI  
PHONE: (248) 559-5555

**Engineer**  
ROGVOY ARCHITECTS  
32500 TELEGRAPH ROAD  
SUITE 250  
BINGHAM FARMS, MICHIGAN 48025  
CONTACT: MARK DRANE  
PHONE: (248) 540-7700

**Site Engineer**  
NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVENUE  
PONTIAC, MICHIGAN 48342  
CONTACT:  
MR. JEFFREY J. HUHTA, P.E., P.S.  
PHONE: (248) 332-7931  
EMAIL: JHUHTA@NFE-ENGR.COM

**Engineer**  
NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVENUE  
PONTIAC, MICHIGAN 48342  
CONTACT:  
MR. GEORGE A. OSTROWSKI, R.L.A.  
PHONE: (248) 332-7931  
EMAIL: GOSTROWSKI@NFE-ENGR.COM

- Site Description**
- C0 COVER SHEET
  - C1 BOUNDARY/TOPOGRAPHIC/TREE SURVEY - SOUTH
  - C2 BOUNDARY/TOPOGRAPHIC/TREE SURVEY - NORTH
  - C3 TREE SURVEY
  - C4 SITE PLAN
  - C5 DEMOLITION PLAN
  - L1 TREE PRESERVATION PLAN
  - L2 LANDSCAPE PLAN

Proposed Revisions

EG DESCRIPTION RECORDS

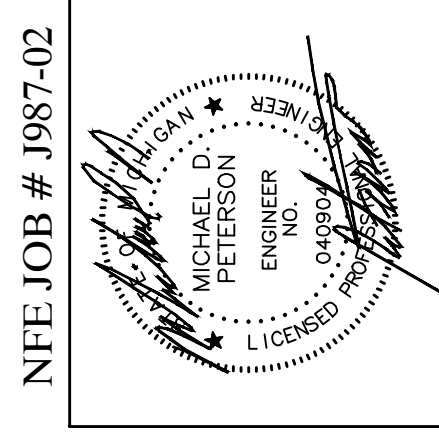
Address: 1622 W. Grand River Avenue  
Tax ID No.: 33-02-02-22-401-003

PARCEL 3  
The East 145 feet of the following description: Beginning at a point 1123.75 feet West of the East quarter post of Section 22, Town 4 North, Range 1 West, thence West 351 feet, thence South 748 feet to the center of Grand River Road, thence Easterly along center of said road 351 feet; thence North 746 feet to beginning, Meridian Township, Ingham County, Michigan.

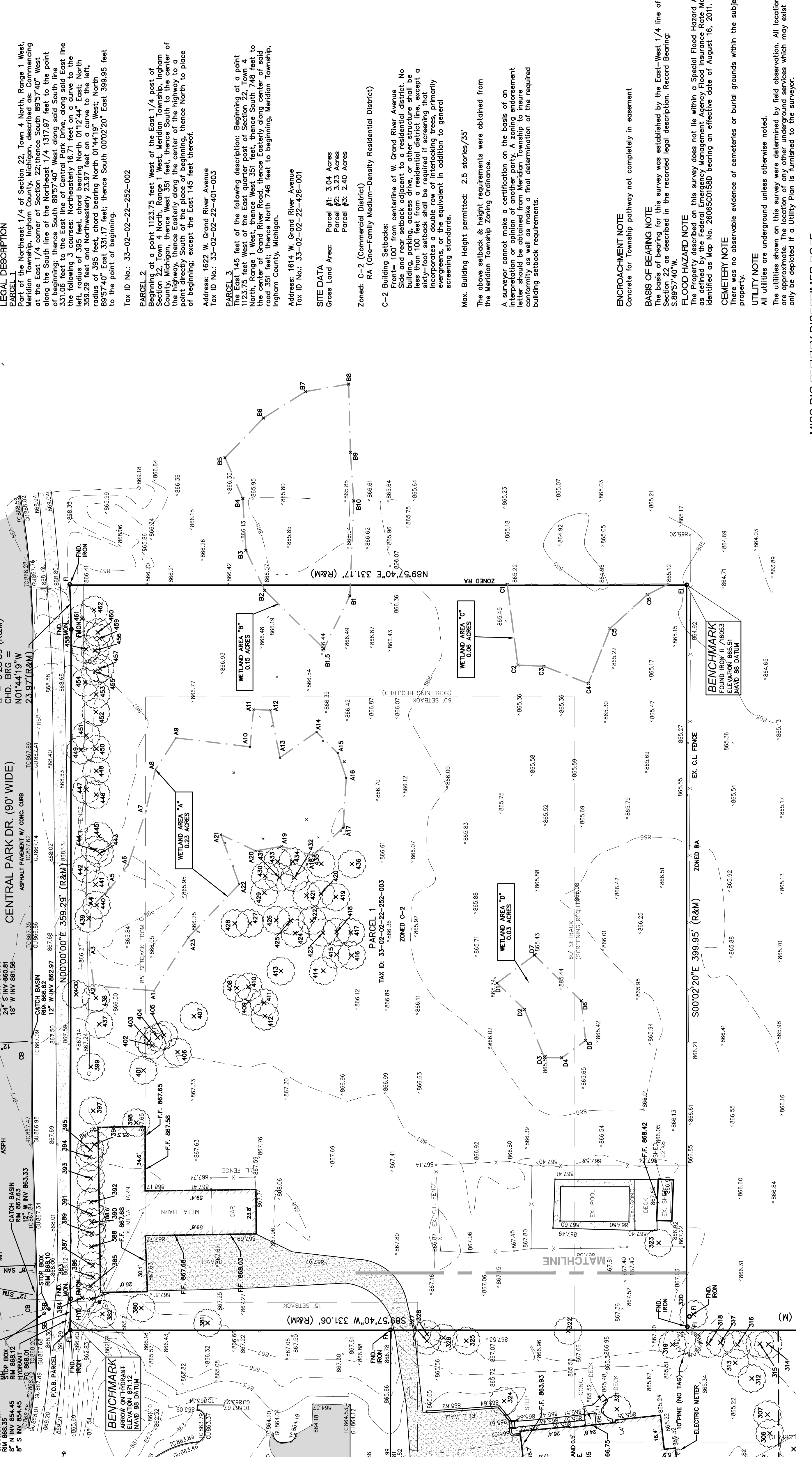
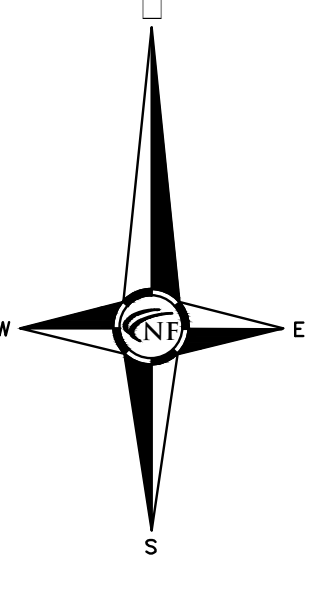
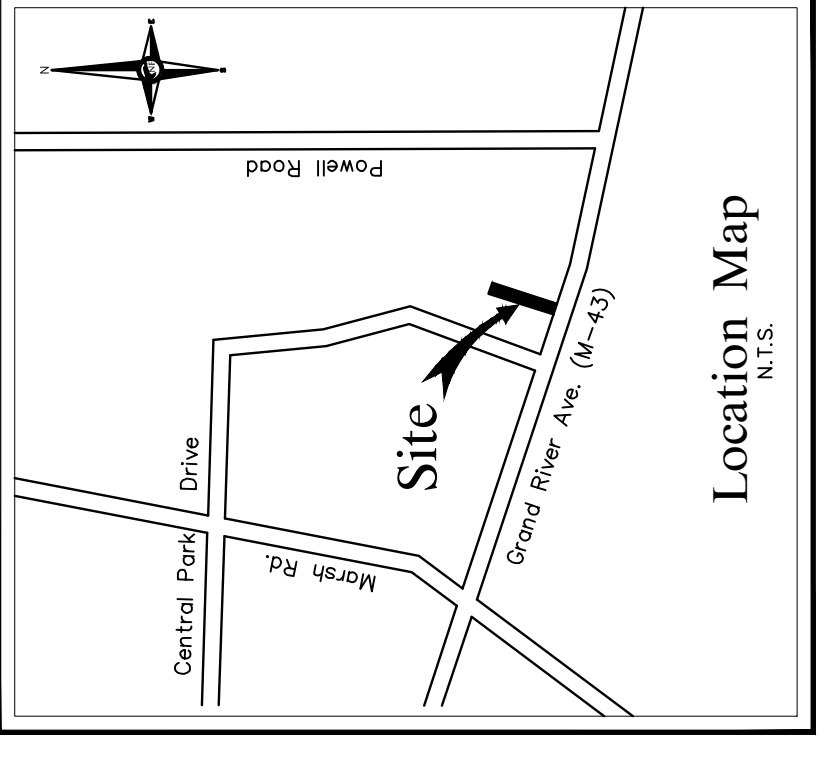
Address: 1614 W. Grand River Avenue  
Tax ID No.: 33-02-02-22-426-001

**NFE ENGINEERS**  
CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL: (248) 332-7931  
FAX: (248) 332-8237







MISS DIG DISORDER  
 A MISS DIG TICKET NUMBER A7230077-00A, PURSUANT TO MICHIGAN PUBLIC ACT 177 AS ENDED AND THE PREVIOUS EDITIONS OF THE MISS DIG ACT, THE PUBLIC UTILITIES UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY WAS ISSUED ON SEPTEMBER 20, 2017. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR. THE SURVEYOR HAS MADE A REASONABLE ATTEMPT TO LOCATE ALL UTILITIES AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE OPERATING COMPANY OF THE UTILITIES FOR THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

**LEGAL DESCRIPTION**  
 Part of the Northeast 1/4 of Section 22, Town 4 North, Range 1 West, Meridian Township, Ingham County, Michigan, described as: Commencing at the East 1/4 corner of Section 22; thence South 89°57'40" West along the South line of said Section 22, a distance of 127.5 feet to the point of beginning; thence East along the East line of said Section 22, a distance of 331.06 feet to the East line of Central Park Drive, along said East line the following 3 courses: Northeastly 16.71 feet on a curve to the left, radius of 395 feet, chord bearing North 01°12'44" East; North 89°57'40" East, 331.17 feet, chord bearing North 01°44'19" West; North 89°57'40" East, 331.17 feet, thence South 00°02'20" East, 398.95 feet to the point of beginning.

**PARCEL 1**  
 Tax ID No.: 33-02-02-22-252-002  
 Beginning at a point 1133.75 feet West of the East 1/4 point of the East 1/4 corner of Section 22, Township of Meridian, Ingham County, Michigan, thence North 74°00'00" East, a distance of 359.29 feet to the center of the highway, thence East along the center of the highway to a point directly South of the place of beginning, thence North to place of beginning, except the East 145 feet thereat.

**PARCEL 2**  
 Tax ID No.: 33-02-02-22-426-003  
 Address: 1614 W. Grand River Avenue  
 Tax ID No.: 33-02-02-22-426-001

**PARCEL 3**  
 The East 145 feet of the following description: Beginning at a point on the East 1/4 point of the East 1/4 corner of Section 22, Township of Meridian, Ingham County, Michigan, thence North 74°00'00" East, a distance of 359.29 feet to the center of the highway, thence East along the center of the highway to a point directly South of the place of beginning, thence North to place of beginning, except the East 145 feet thereat.

**SITE DATA**  
 Gross Land Area: Parcel #1: 3.04 Acres  
 Parcel #2: 3.23 Acres  
 Parcel #3: 2.40 Acres  
 Zoned: C-2 (Commercial District)  
 RA (One-Family Medium-Density Residential District)  
 C-2 Building Subblocks:  
 Front = 100' from centerline of W. Grand River Avenue  
 Side = 5' from centerline of Marsh Rd. or other structure shall be less than 100 feet from a residential district line, except a sixty-foot setback shall be required if screening that is deemed appropriate or the equivalent in addition to general screening standards.  
 Max. Building Height permitted: 2.5 stories/5'

The above setback & height requirements were obtained from the Meridian Township Zoning Ordinance.  
 A surveyor cannot make a certification on the basis of an interpretation or opinion of another party. A zoning endorsement letter should be obtained from Meridian Township to insure that the zoning requirements have been made a final determination of the required building setback requirements.

**ENCROACHMENT NOTE**  
 Concrete for Township pathway not completely in easement

**BASIS OF BEARING NOTE**  
 The basis of bearing for this survey was established by the East-West 1/4 line of Section 22 as described in the recorded legal description. Record Bearing: S 89°57'40" W.

**FLOOD HAZARD NOTE**  
 This survey does not lie within a Special Flood Hazard Area as defined by the Federal Emergency Management Agency Flood Insurance Rate Map identified as Map No. 26065C0158D bearing an effective date of August 16, 2011.

**UTILITY NOTE**  
 All utilities are underground unless otherwise noted. The utilities shown on this survey were determined by field observation. All locations are approximate. The location of any other underground services which may exist can only be depicted if a Utility Plan is furnished to the surveyor.

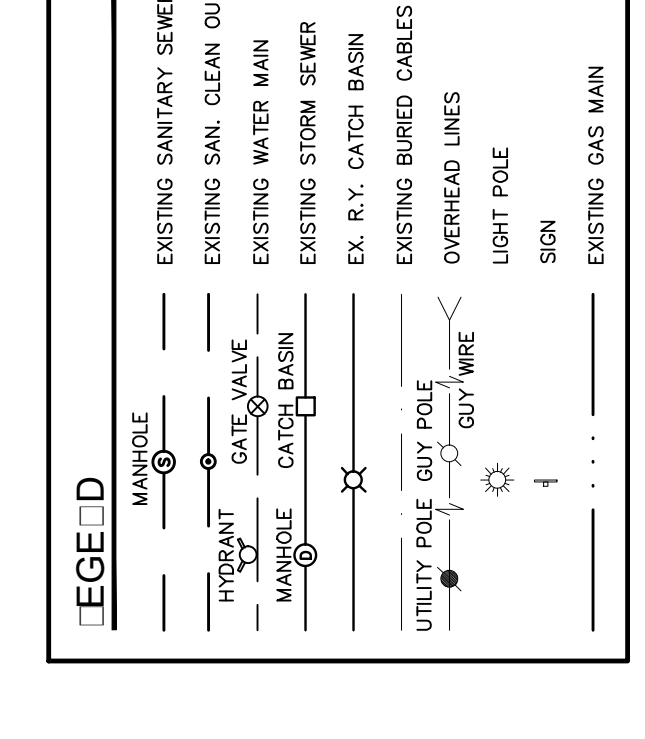
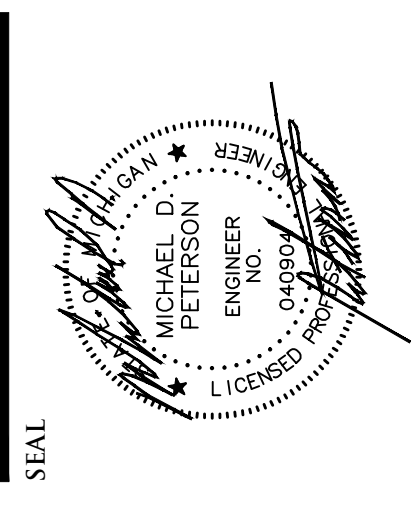


Table with 10 columns: Job Number, Job Location, Condition, Tree #, Botanical Name, Common Name, DBH, Trunk, Other DBH, Comments, Tree Inventory List (311-459), Quality, and Notes. Contains detailed tree survey data including species names like Picea pungens, Picea glauca, and various maples, along with their diameters and health conditions.

Condition Description Notes: "Good" - no observed structural defects... "Fair" - minor structural defects... "Poor" - major structural defects...



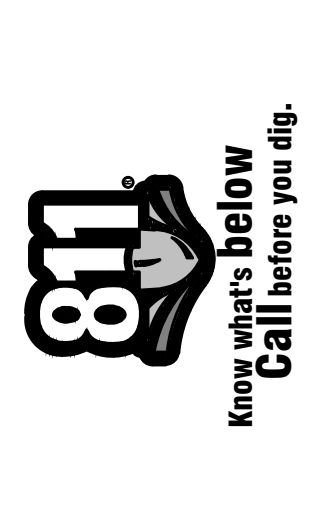
**PROJECT**  
Proposed Provisioning  
Center

**CLIENT**  
W Investment Holdings  
29580 Northwestern Hwy.  
Suite 100.  
Southfield, MI 48034

Contact: Ammar W. Alkhatjaji  
Phone: (248) 559-5555

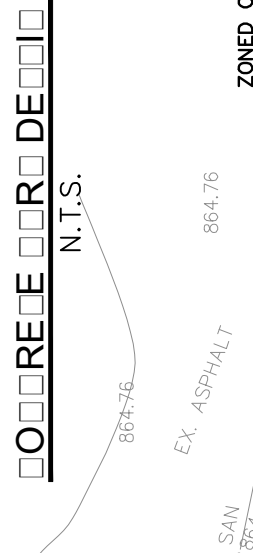
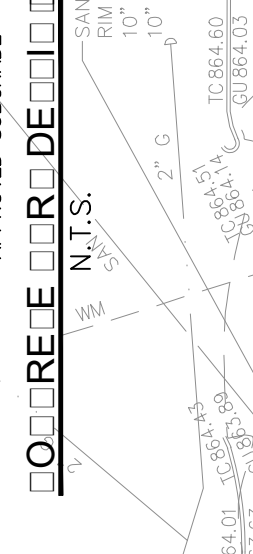
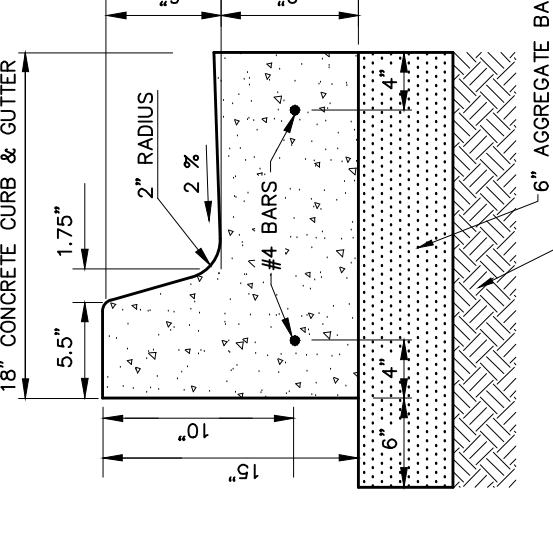
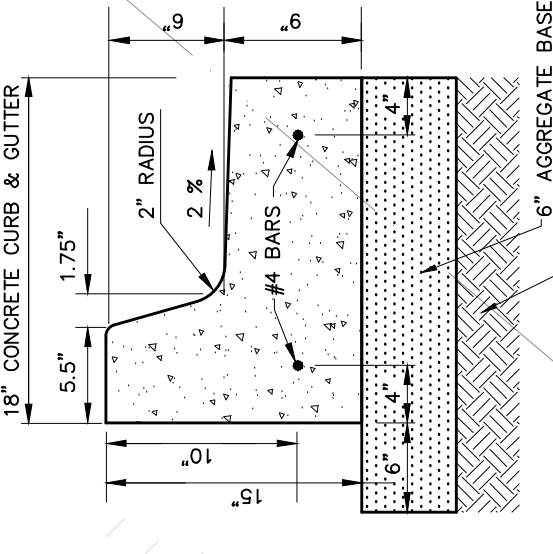
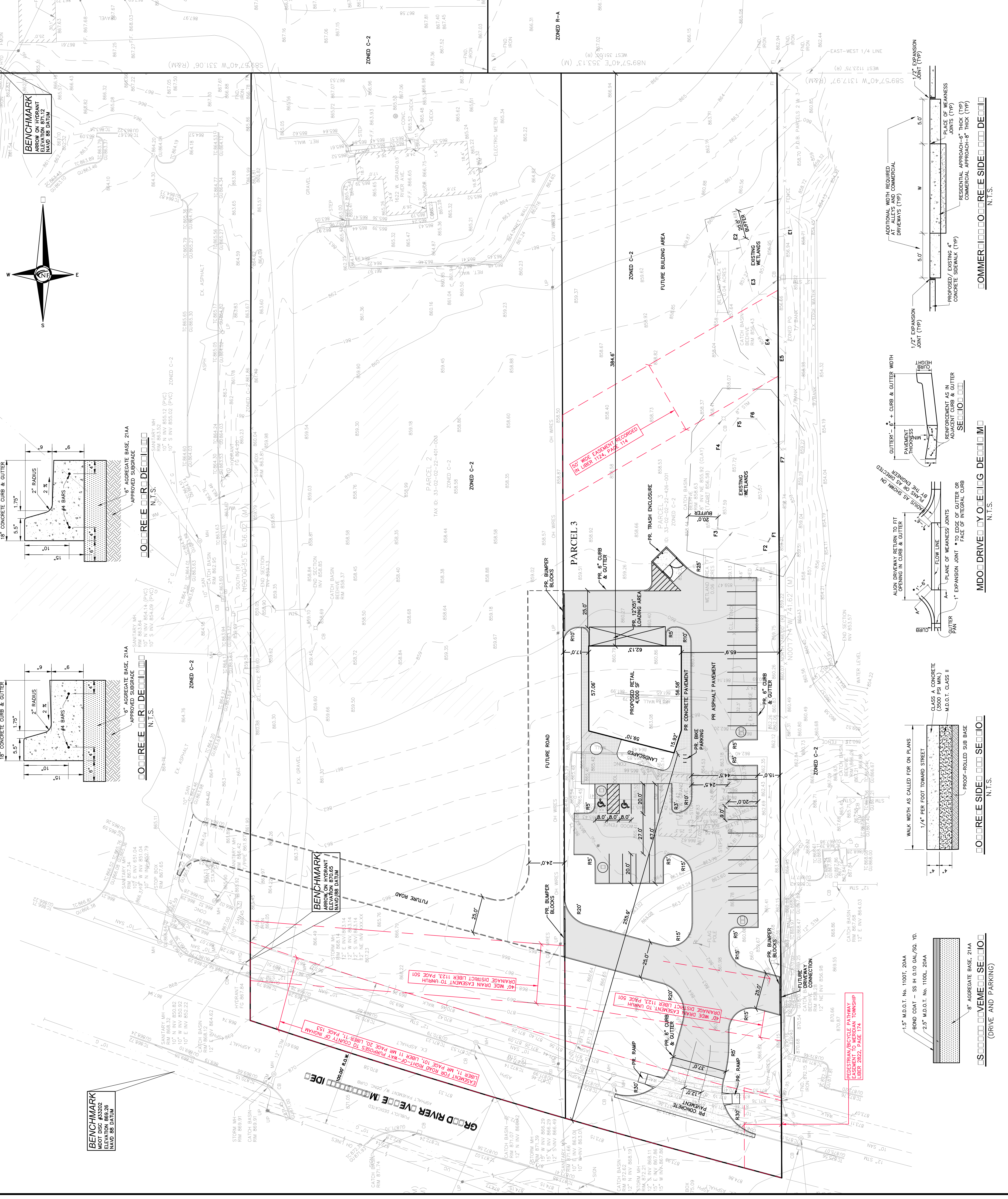
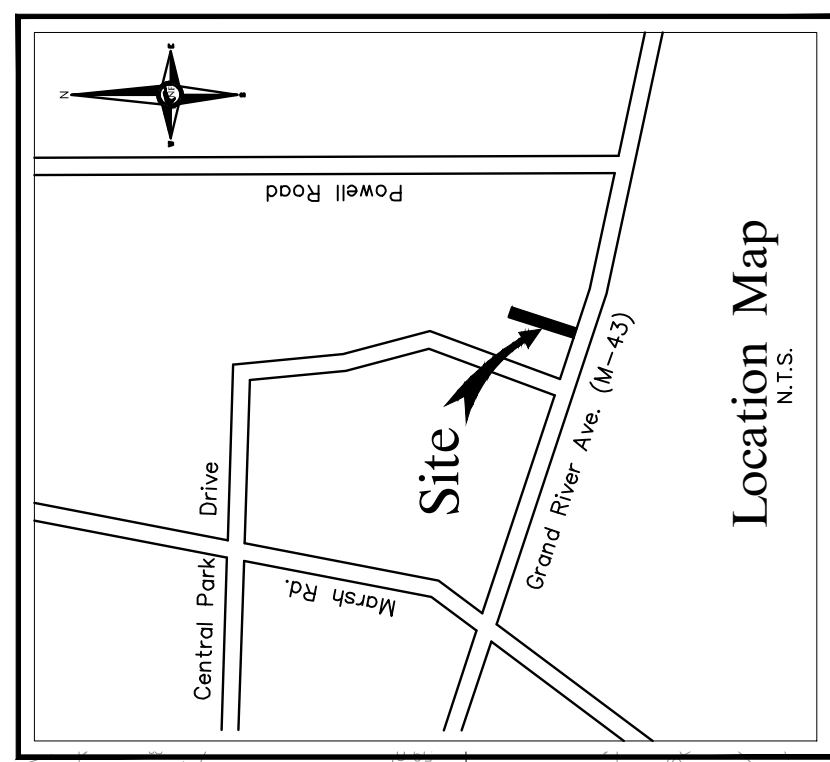
**PROJECT LOCATION**  
No. 1614  
W. Grand River Ave.  
Part of the NE 1/4 of  
Section 22, T4N., R. 1W.,  
Township of Meridian,  
Ingham County, MI

**SHEET**  
Site Plan



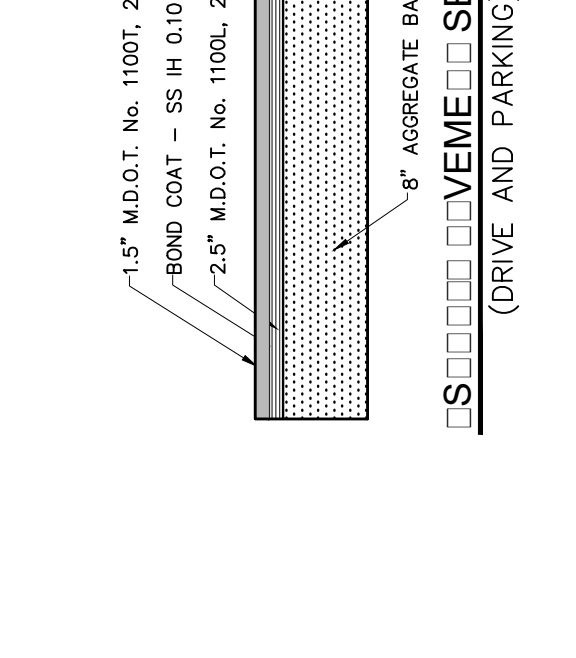
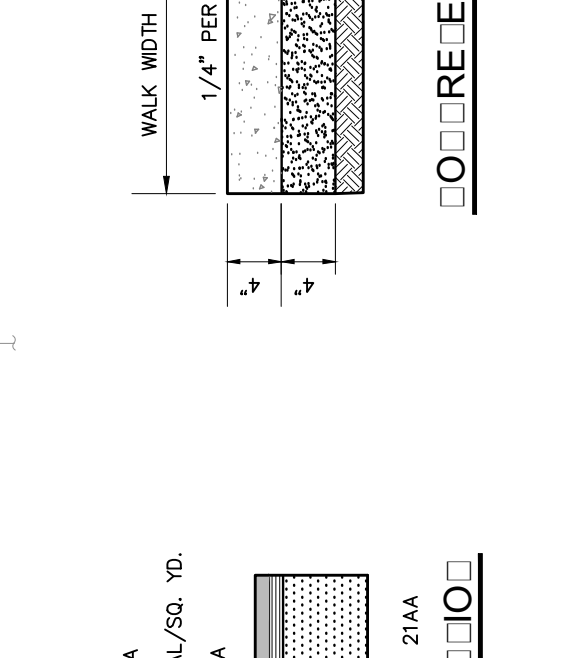
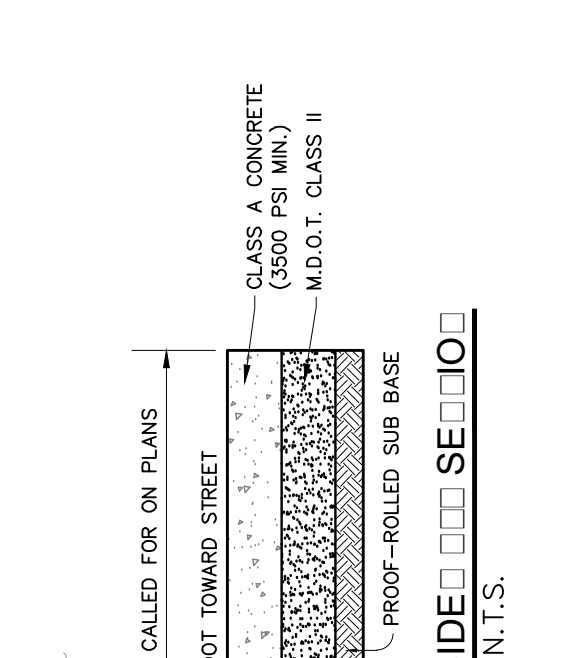
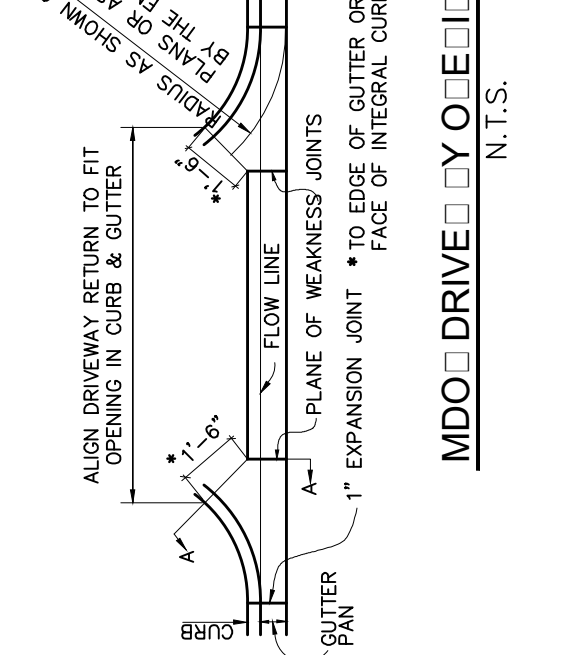
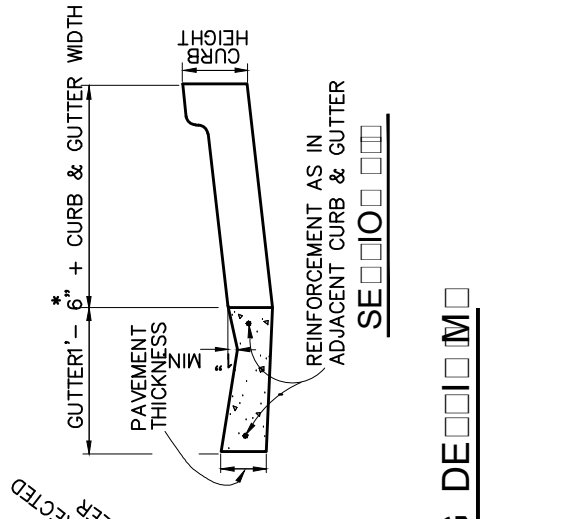
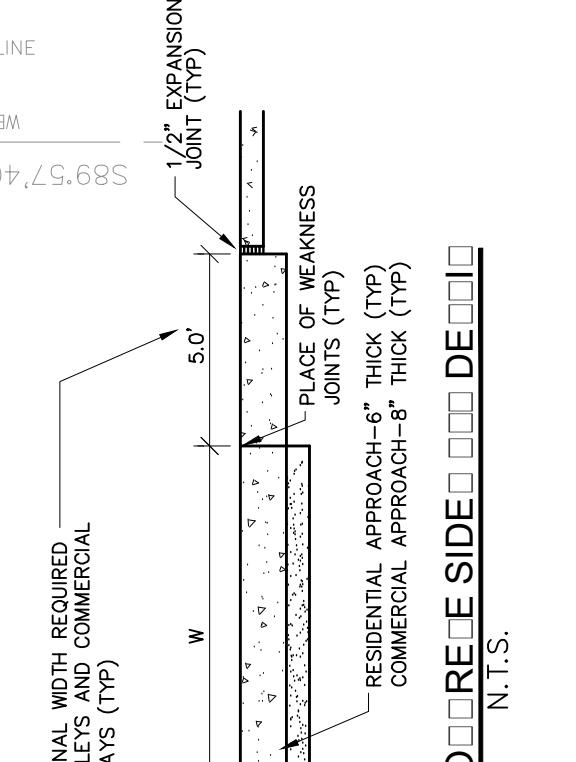
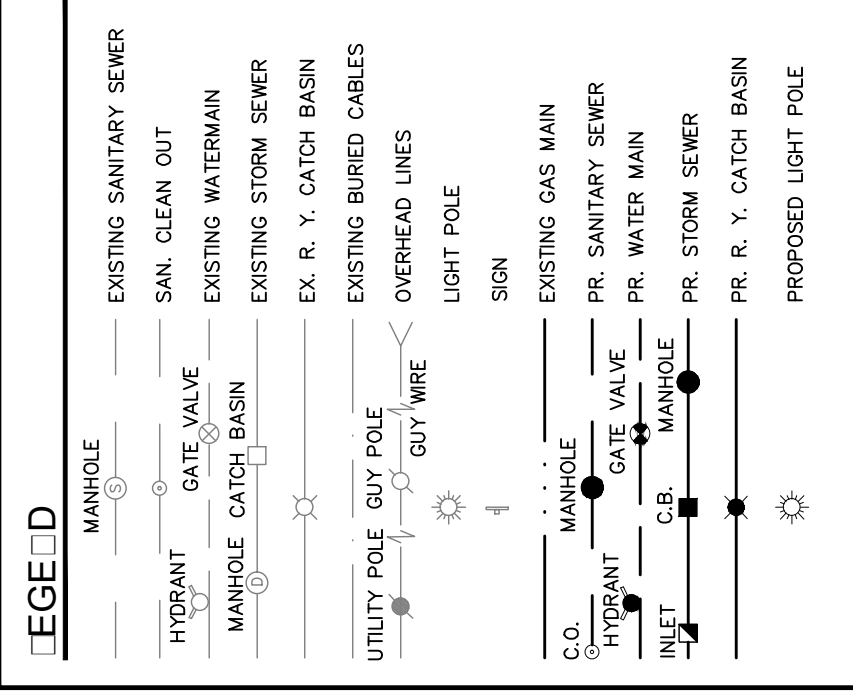
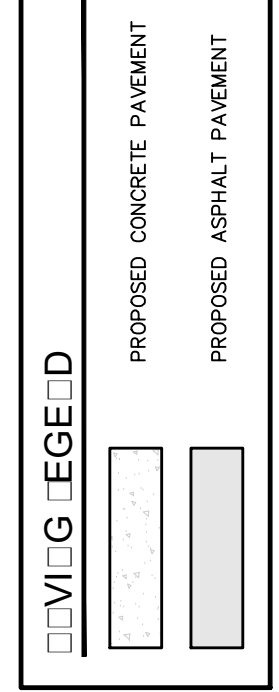
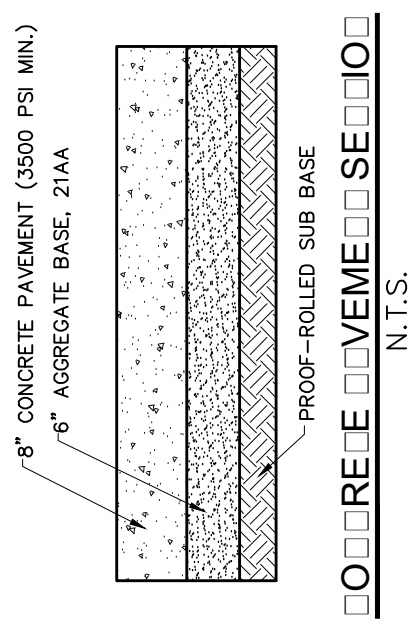
**REVISIONS**  
01-24-2020 Revise Per Twp.

<b>DRAWN BY:</b>	N. Naoum
<b>DESIGNED BY:</b>	N. Naoum
<b>APPROVED BY:</b>	M. Peterson
<b>DATE:</b>	11-11-2019
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<b>NFE JOB NO.</b>	1987-02
<b>SHEET NO.</b>	C4

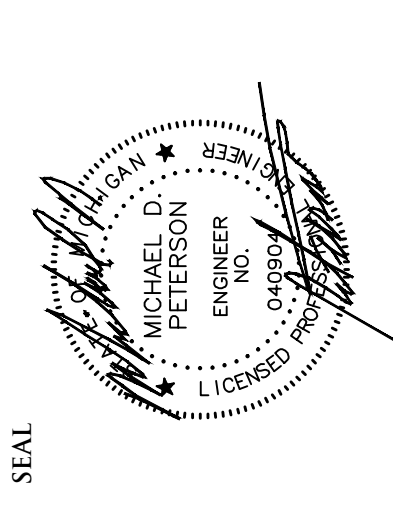


**SIZED**

<b>SITE AREA</b>	2.40 ACRES
<b>ZONING</b>	C-2 (COMMERCIAL DISTRICT)
<b>SETBACKS</b>	REQUIRED: 25.9' FROM E, 15' FROM S, 15' FROM R, 60' REAR.
<b>BUILDING HEIGHT</b>	REQUIRED: 35' (MINIMUM), EXISTING: 24.00'
<b>BUILDING AREAS</b>	REQUIRED: 4,000 SF, EXISTING: 4,000 SF
<b>RETAIL AREAS</b>	REQUIRED: 5 SPACES/1000 GFA, EXISTING: 5 SPACES/1000 GFA
<b>PARKING PROVIDED</b>	34 SPACES INCLUDING 2 BARRIER FREE SPACES
<b>VEHICLE LANDING</b>	REQUIRED: 1 SPACE PER BUILDING, PROVIDED: 1 - 12' X 51' LANDING SPACE
<b>LOT COVERAGE</b>	2.00% (MAX)
<b>PAVEMENT</b>	2.62% (MAX)
<b>OPEN SPACE</b>	71.54% (MAX)
<b>TOTAL</b>	104,544 SF @ 100.00%







**PROJECT**  
 Proposed Provisioning  
 Center

**CLIENT**  
 W Investment Holdings  
 29580 Northwestern Hwy.  
 Suite 100,  
 Southfield, MI 48034

Contact: Ammar W. Alkhatfaji  
 Phone: (248) 359-5555

**PROJECT LOCATION**  
 No. 1614  
 W. Grand River Ave.  
 Part of the NE 1/4 of  
 Section 22, T4N., R1W.,  
 Township of Meridian,  
 Ingham County, MI

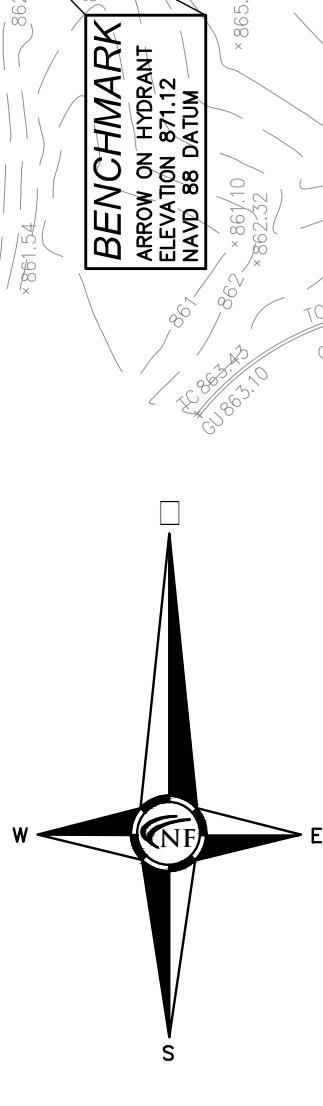
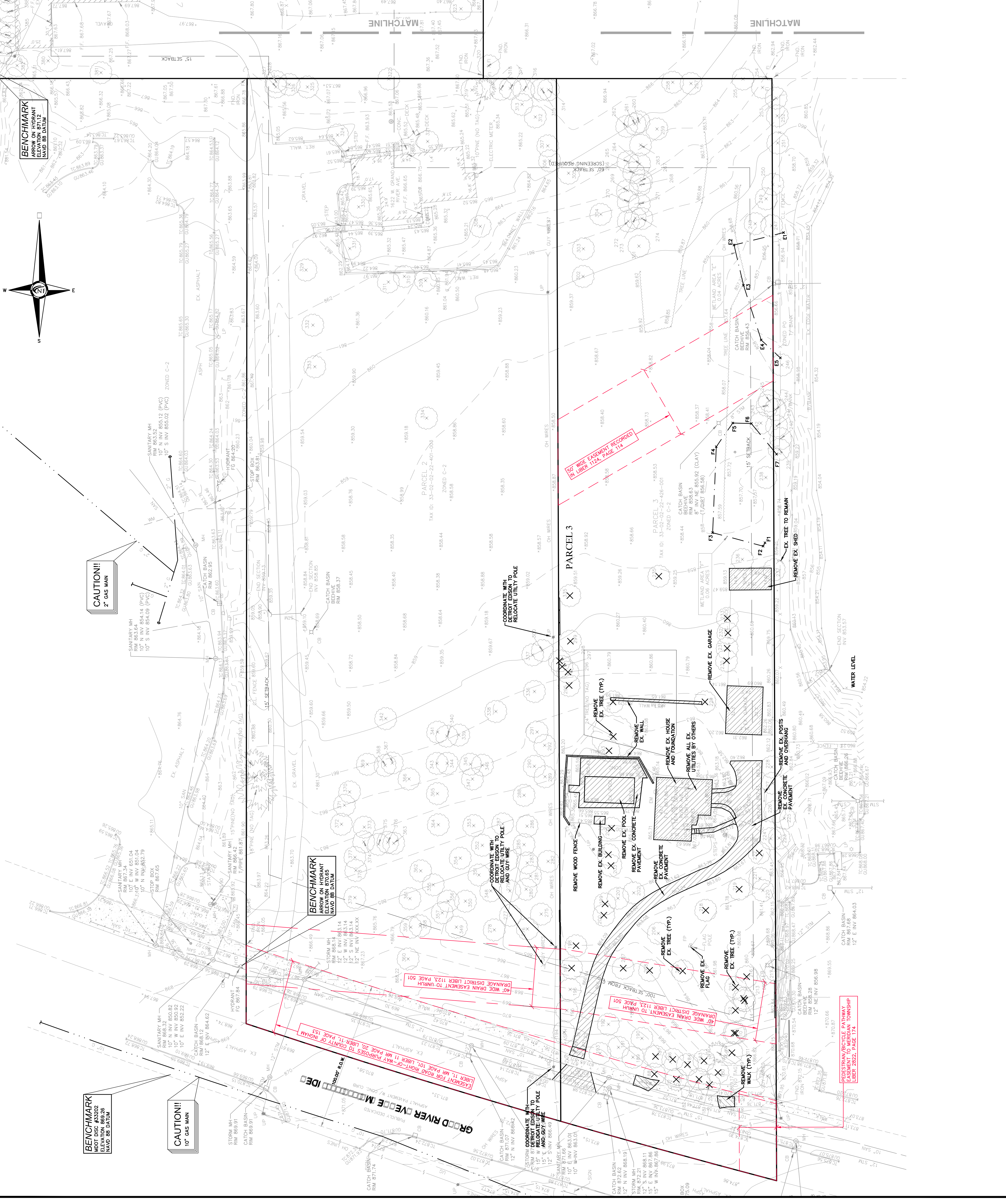
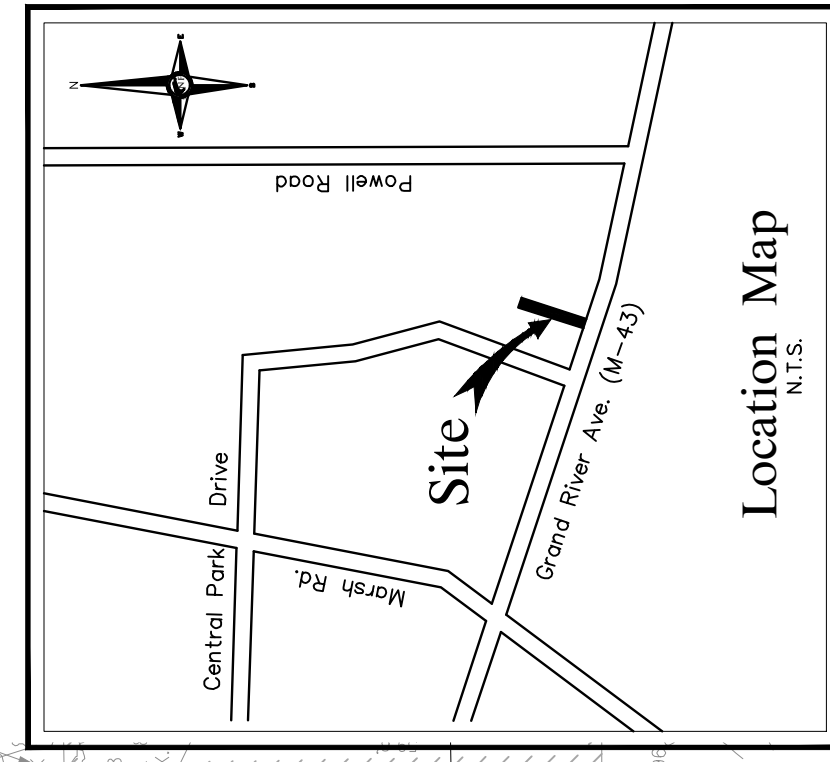
**SHEET**  
 Demolition Plan



**REVISIONS**  
 01-24-2020 Revise Per Twp.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND MADE TO THE COMPLETENESS OR EXACTNESS OF LOCATION. THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

LEGEND	
	EXISTING SANITARY SEWER
	EXISTING SAN. CLEAN OUT
	EXISTING WATER MAIN
	EXISTING STORM SEWER
	EX. R. Y. CATCH BASIN
	EXISTING BURIED CABLES
	OVERHEAD LINES
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN
	EXISTING UTILITY TO BE ABANDONED
	EXISTING UTILITY TO BE ABANDONED
	INDICATES EXISTING TREE TO BE REMOVED AS PAVEMENT, BUILDINGS, ETC. TO BE REMOVED



**CAUTION!!**  
 2" GAS MAIN

**CAUTION!!**  
 10" GAS MAIN

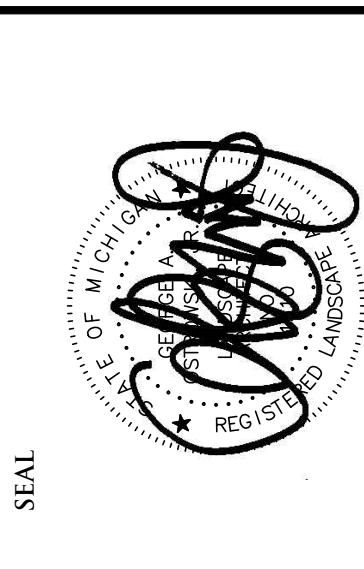
**CAUTION!!**  
 10" GAS MAIN

**BENCHMARK**  
 ARROW ON HYDRANT  
 ELEVATION 870.65  
 NAVD 88 DATUM

**BENCHMARK**  
 ARROW ON HYDRANT  
 ELEVATION 869.29  
 NAVD 88 DATUM

**BENCHMARK**  
 ARROW ON HYDRANT  
 ELEVATION 869.29  
 NAVD 88 DATUM

**BENCHMARK**  
 ARROW ON HYDRANT  
 ELEVATION 869.29  
 NAVD 88 DATUM



**PROJECT**  
Proposed Provisioning  
Center

**CLIENT**  
W Investment Holdings  
29580 Northwestern Hwy.  
Suite 100  
Southfield, MI 48034  
Contact: Anmar W. Alkhatiji  
Phone: (248) 559-5555

**PROJECT LOCATION**  
No. 1614  
W. Grand River Ave.  
Part of the NE 1/4 of  
Section 22, T4N., R.1W.,  
Township of Meridian,  
Ingham County, MI



**REVISIONS**  
01/24/20 REVISED PER TWP.

**DRAWN BY:**  
G. Ostrowski

**DESIGNED BY:**  
G. Ostrowski

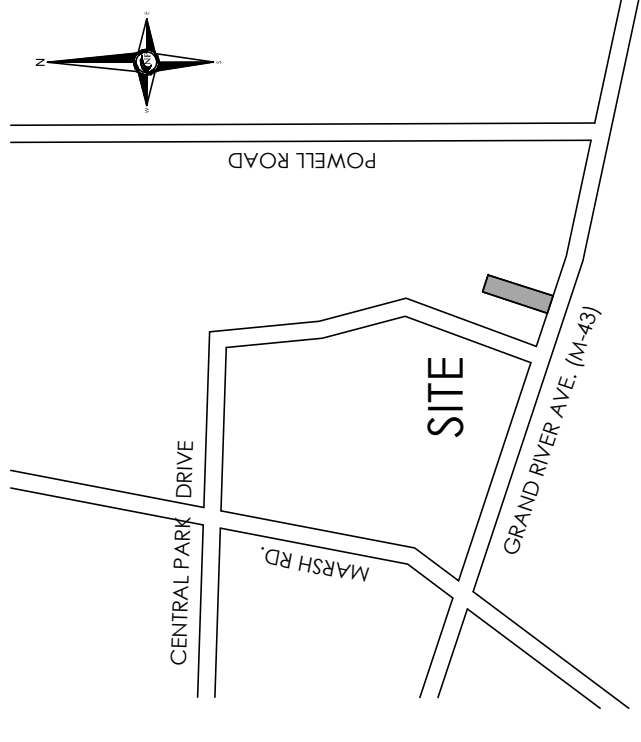
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G. Ostrowski

**DATE:**  
11-08-2019

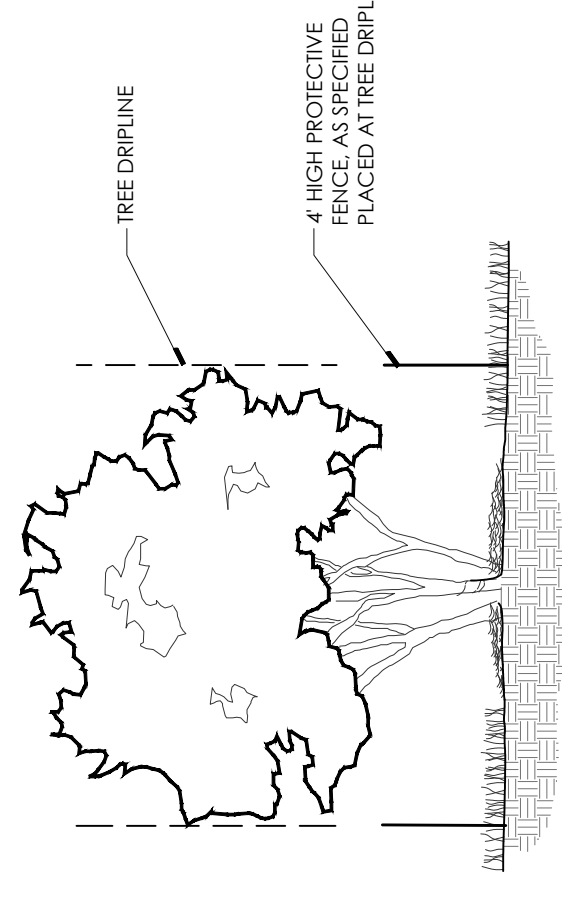
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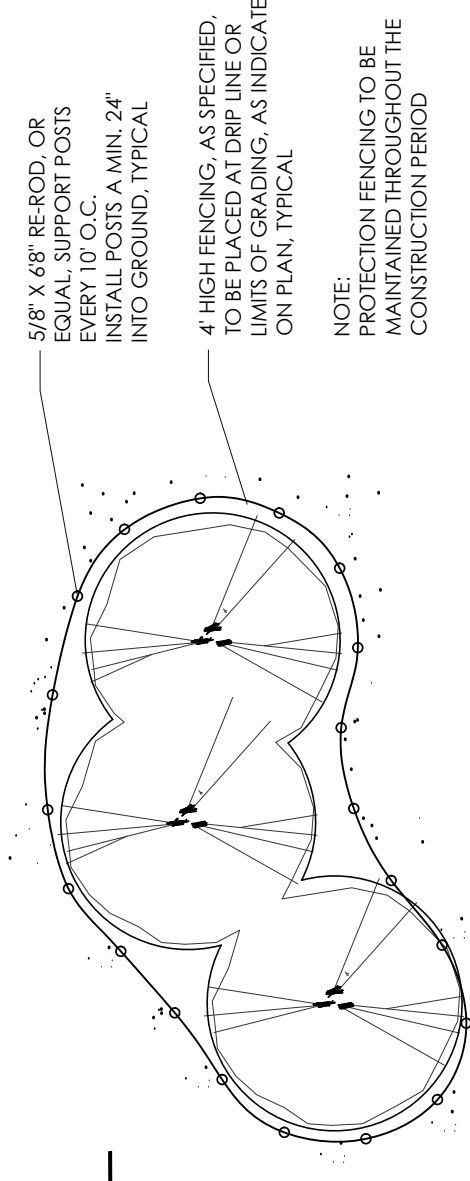
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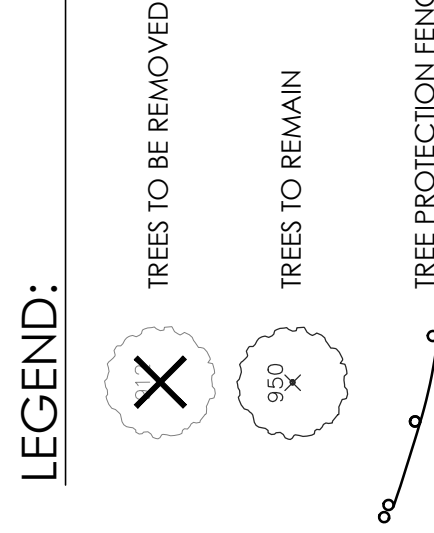
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**TREE PROTECTION DETAIL-SECTION**  
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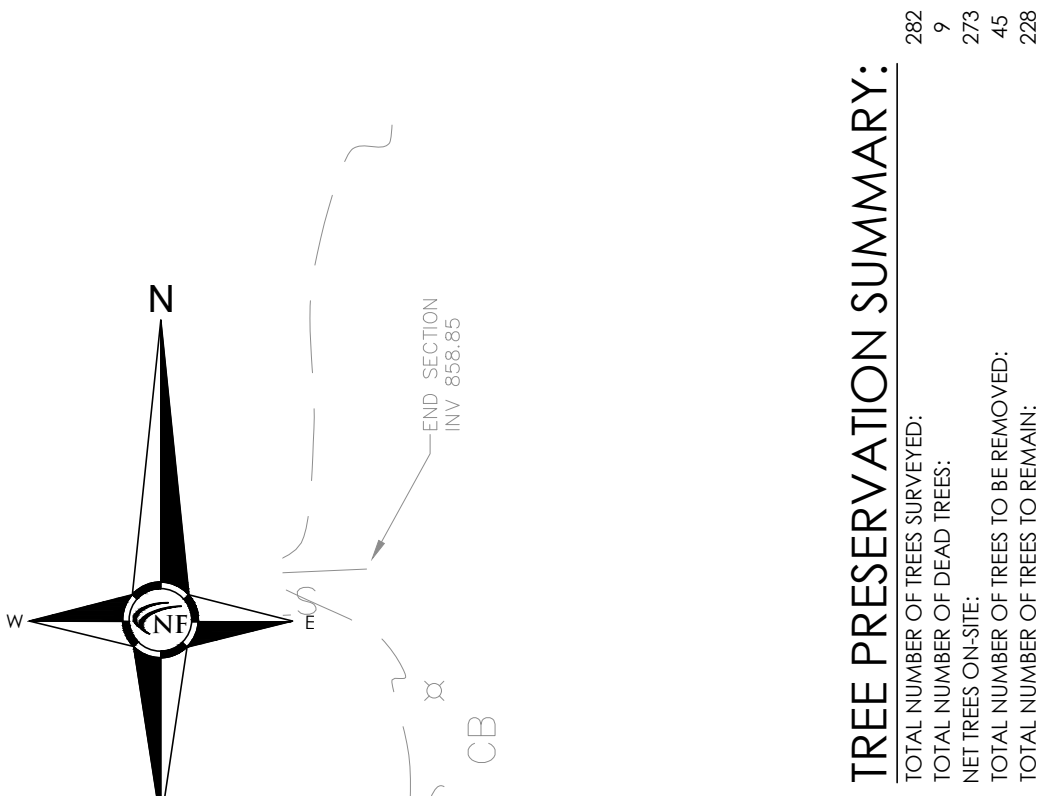


**TREE PROTECTION DETAIL-PLAN**  
N.I.S.



**GENERAL TREE PROTECTION NOTES**

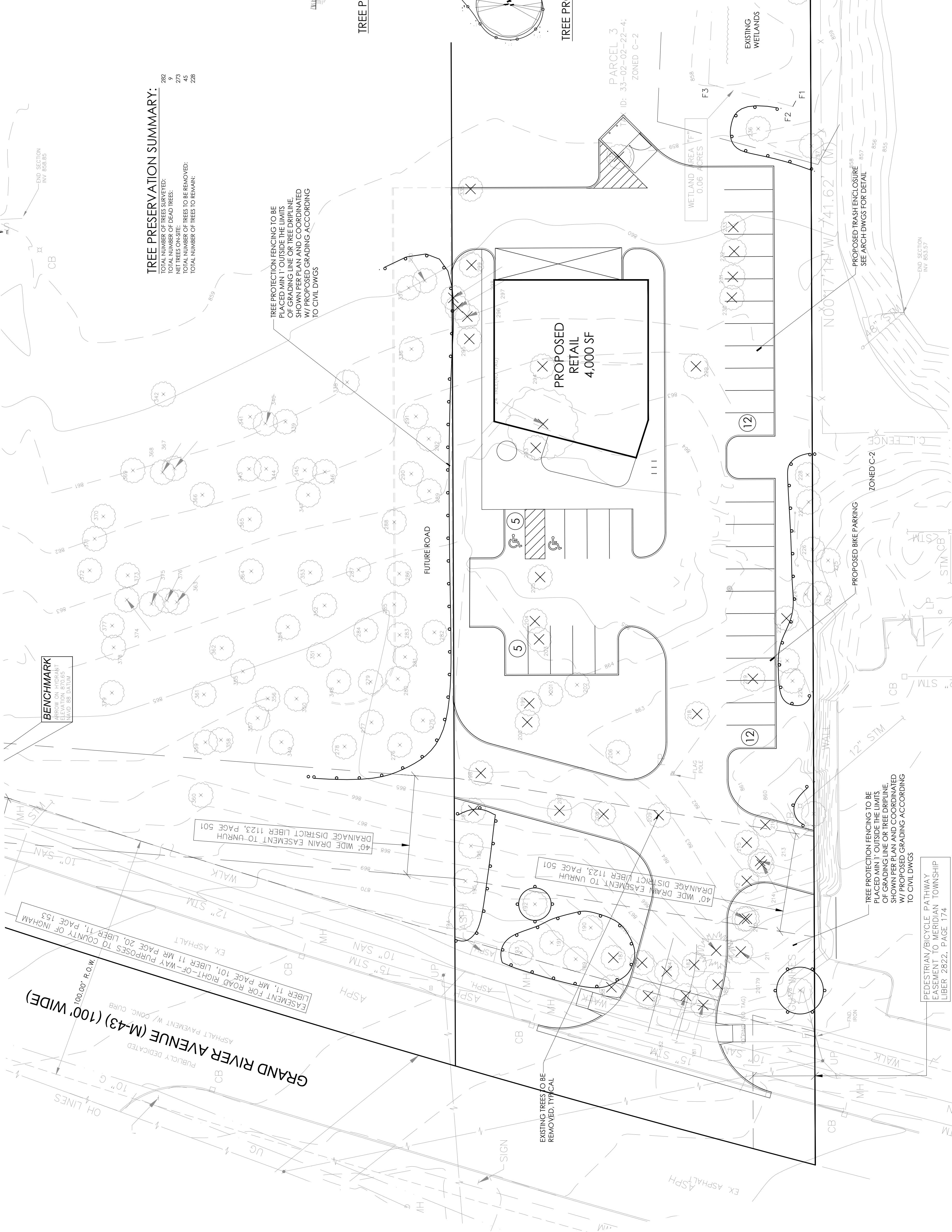
1. APPROVED TREE PROTECTION SHALL BE PLACED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION. VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PROTECTED AND SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION.
2. ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PROTECTED AND SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION.
3. NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO PLACING PROTECTIVE FENCING, PLACING PROTECTIVE FENCING MATERIALS, OR SOIL DEPOSITS WITHIN THE DRIP LINE MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS.
4. WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
5. TO ANY TREE SCHEDULED TO REMAIN, SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE SCHEDULED TO REMAIN.
6. ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE PROPERTY OWNER AND THE TREE SERVICE. TREE SERVICE SHALL LOCATE AND MARK ALL UTILITIES PRIOR TO ANY CONSTRUCTION ACTIVITIES. ALL TRENCHING SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
7. SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
8. ALL ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
9. ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH RIGIDLY STAKED FENCING.
10. PROTECTIVE FENCING SHALL BE SURROUNDED BY RIGIDLY STAKED FENCING. ALL FENCING SHALL BE PROTECTED UNDER THE DRIP LINE OF PROTECTED TREES.
11. THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
12. ALL PROTECTED TREES SHALL BE PROTECTED WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR EQUIPMENT WITH A HYDRO-AZE.
13. ALL PROTECTED TREES SHALL BE PROTECTED WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR EQUIPMENT WITH A HYDRO-AZE.
14. MINIMUM TREE SPACING FOR THE REPLACEMENT TREE OR RESTORE THE ORIGINAL TREE SHALL BE VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
15. TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.



**TREE PRESERVATION SUMMARY:**

TOTAL NUMBER OF TREES SURVIVED: 282  
TOTAL NUMBER OF TREES TO BE REMOVED: 273  
TOTAL NUMBER OF TREES TO REMAIN: 45  
TOTAL NUMBER OF TREES TO BE REMOVED: 228

TREE PROTECTION FENCING TO BE PLACED WITHIN THE DRIP LINE OF ALL TREES TO REMAIN. FENCING SHALL BE COORDINATED W/ PROPOSED GRADING ACCORDING TO CIVIL DWGS.



**BENCHMARK**  
MEASUREMENT POINT  
ELEVATION: 870.00  
DAUM: NAD 83 DATUM

PROPOSED TRASH ENCLOSURE  
SEE ARCH DWGS FOR DETAIL

PROPOSED BIKE PARKING

TREE PROTECTION FENCING TO BE PLACED WITHIN THE DRIP LINE OF ALL TREES TO REMAIN. FENCING SHALL BE COORDINATED W/ PROPOSED GRADING ACCORDING TO CIVIL DWGS.

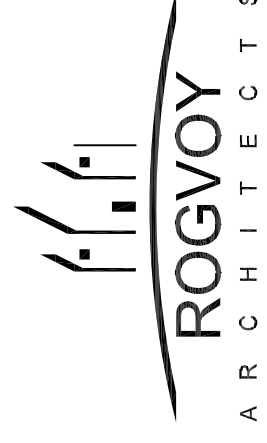
PEDESTRIAN/BICYCLE PATHWAY  
EASEMENT TO MERIDIAN TOWNSHIP  
LIBER 2822, PAGE 174



issued for:  
 OWNER REVIEW: 06 AUG. 2019  
 COMMUNITY REVIEW: 07 AUG. 2019  
 OWNER REVIEW: 04 NOV. 2019  
 OWNER REVIEW: 11 NOV. 2019  
 SPECIAL LAND USE: 11 NOV. 2019  
 OWNER REVIEW: 23 JAN. 2020

project:

Proposed for  
**Commercial Development**  
 Grand River Ave.  
 Meridian, MI



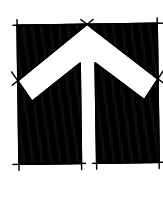
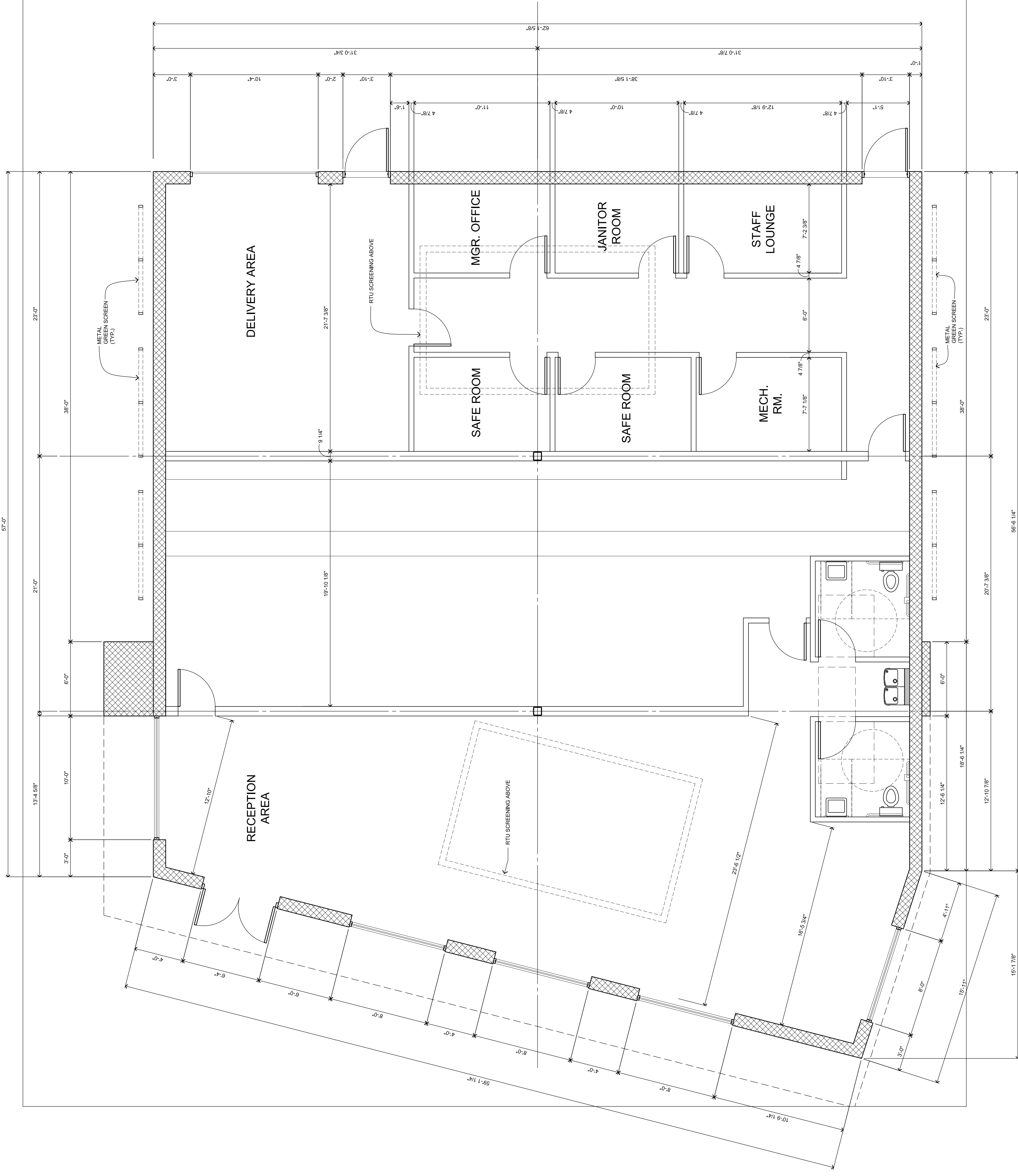
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 SUITE 250  
 BINGHAM FARMS, MICHIGAN  
 48025-2404  
 PH 248.540.7700 FX 248.540.2770  
 www.rogvoy.com

drawing:  
**Conceptual  
 Floor Plan**

DO NOT SCALE DRAWING  
 issue date: 02 AUG. 2019  
 drawn: BDB  
 checked: MD  
 approved: MD

file number: 19030  
 sheet:

FP-1



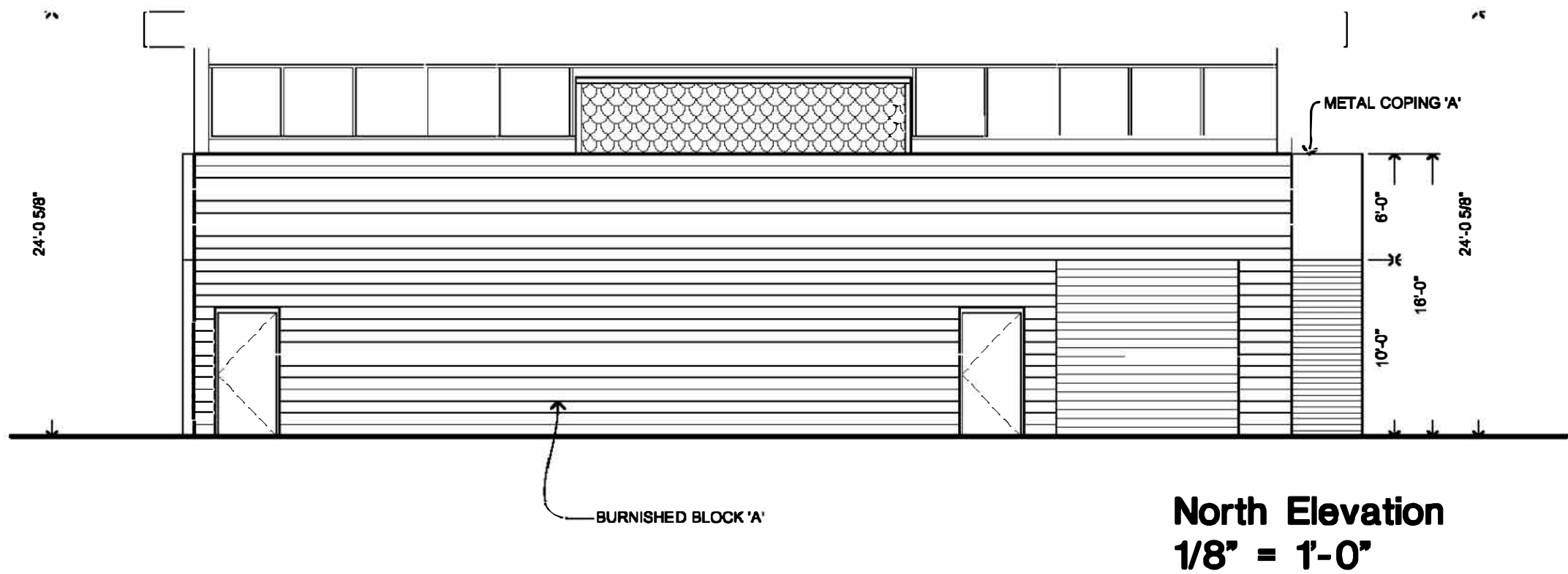
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PARCEL ID: 33-02-02-22-428-003 SCALE: 1/4" = 1'-0"  
 © COPYRIGHT 2019 ROGVOY ARCHITECTS, P.C.

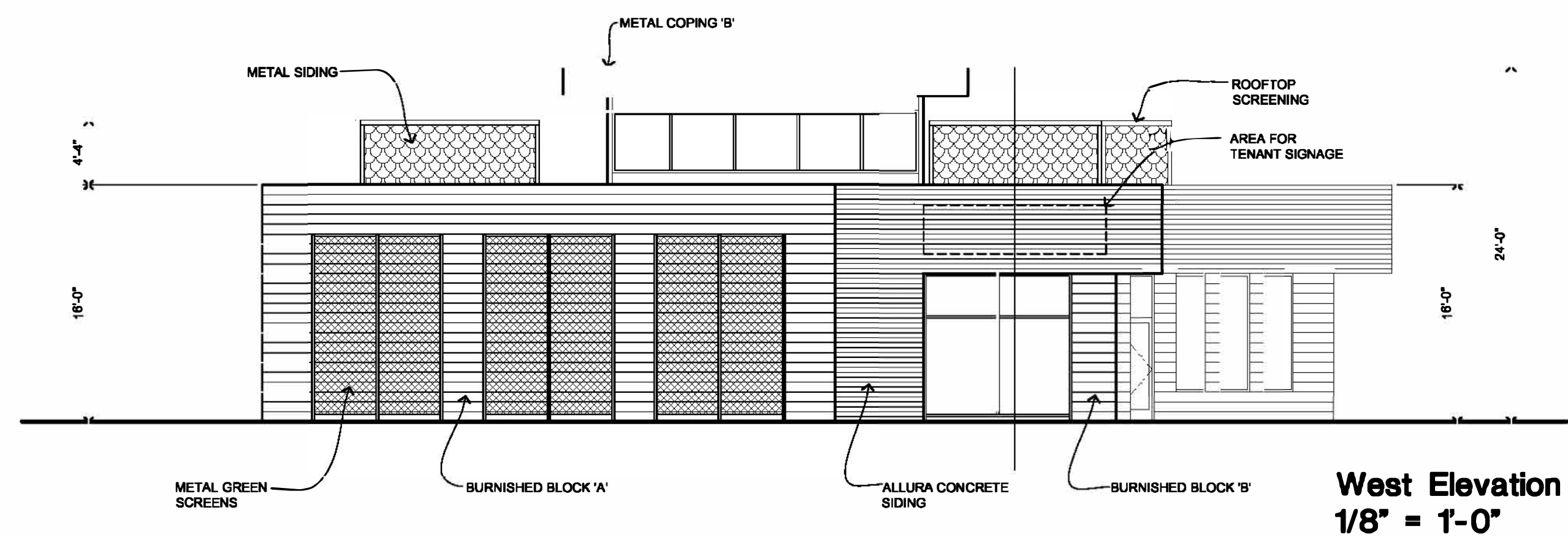


project:

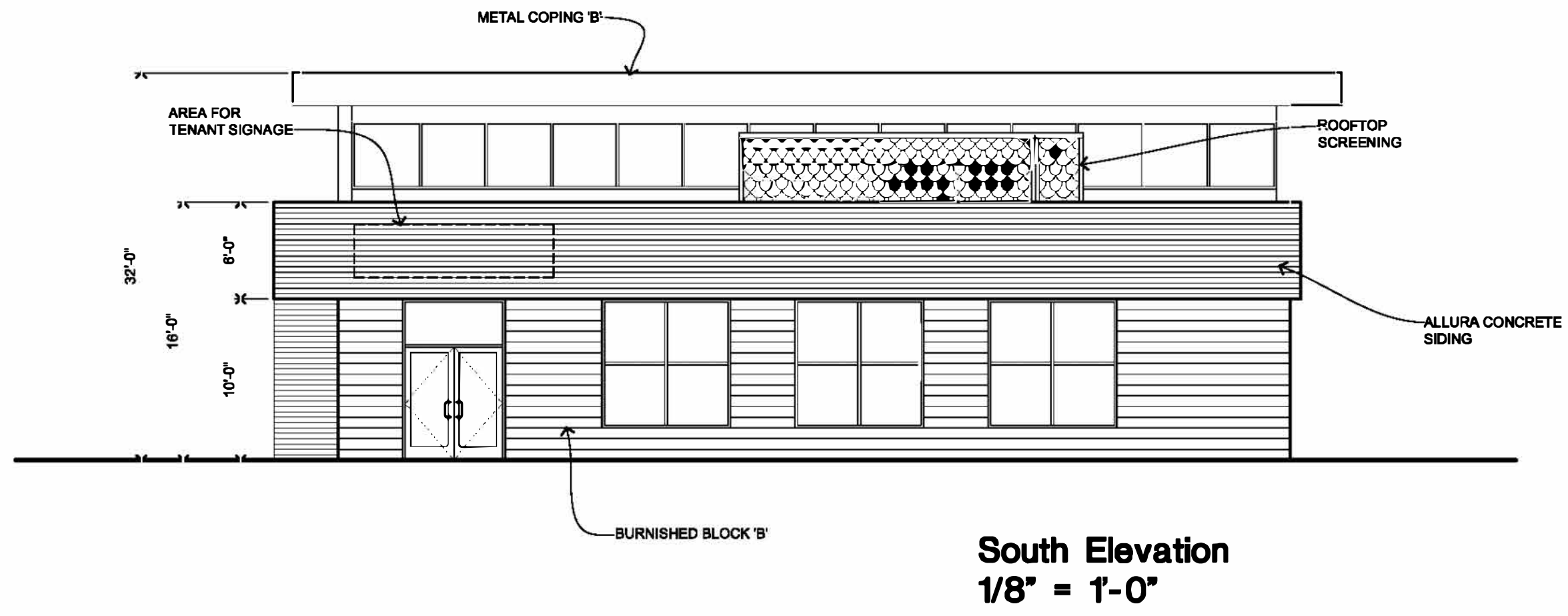
Proposed for  
**Commercial Development**  
 Grand River Ave.  
 Meridian, MI



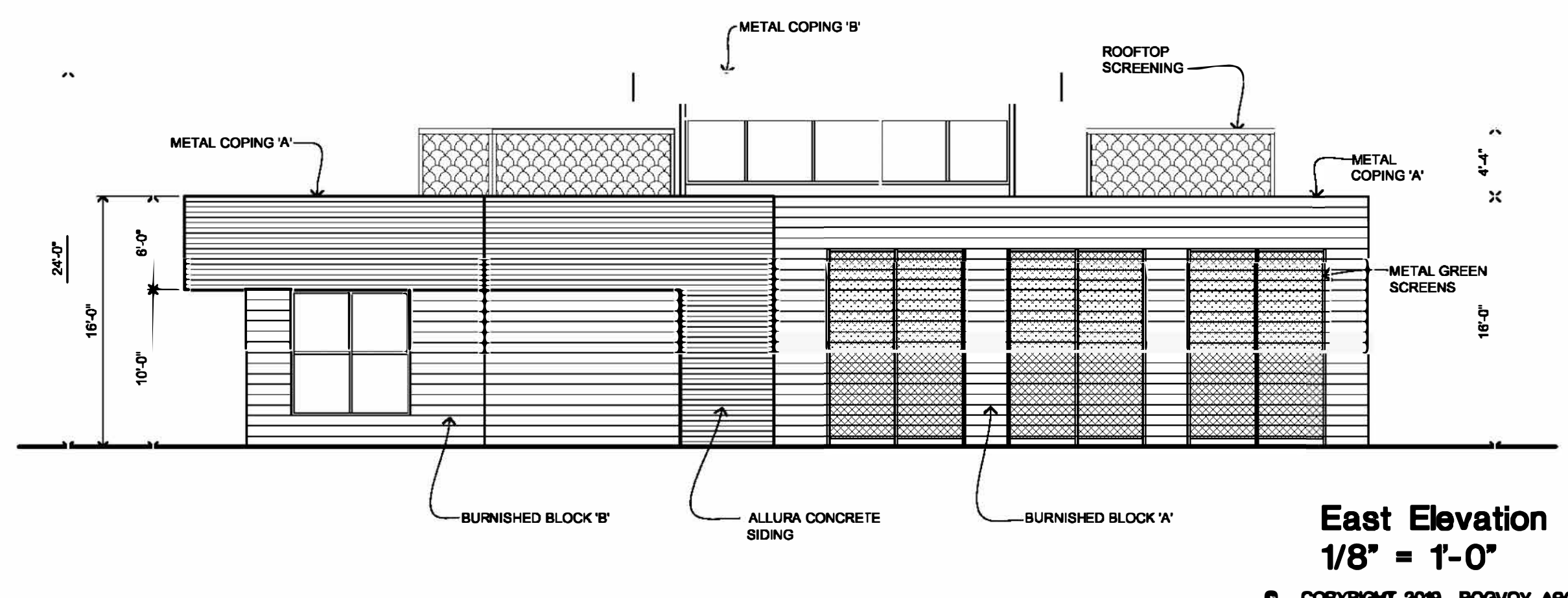
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 1/8" = 1'-0"



**West Elevation**  
 1/8" = 1'-0"



**South Elevation**  
 1/8" = 1'-0"



**East Elevation**  
 1/8" = 1'-0"

**ROGVVOY**  
 ARCHITECTS  
 32500 TELEGRAPH ROAD  
 SUITE 250  
 BINGHAM FARMS, MICHIGAN  
 48025-2404  
 PH 248.540.7700 FX 248.540.2710  
 www.rogvvoy.com

drawing:  
**Conceptual Floor Plan**  
 DO NOT SCALE DRAWING  
 issue date: 02 AUG. 2019  
 drawn: BDB  
 checked: MD  
 approved: MD

file number: **19030**

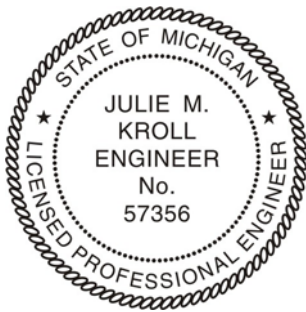
sheet:

**ELEV**

# PROPOSED PROVISION CENTER TRAFFIC IMPACT STUDY

MERIDIAN TOWNSHIP, MICHIGAN

JANUARY 21, 2020



**PREPARED FOR:**

W INVESTMENT HOLDINGS, LLC  
29580 NORTHWESTERN HWY, SUITE 1000  
SOUTHFIELD, MI 48034

**PREPARED BY:**



27725 STANSBURY BLVD., SUITE 195  
FARMINGTON HILLS, MI 48834

### Notice and Disclaimer

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Agency Review	Date	Comments



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## REFERENCES

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). (2018). *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*. WASHINGTON DC.

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INSTITUTE OF TRANSPORTATION ENGINEERS. (2017). *TRIP GENERATION MANUAL, 10TH EDITION*. WASHINGTON DC.

NATIONAL RESEARCH COUNCIL (U.S.) TRANSPORTATION RESEARCH BOARD. (2016). *HIGHWAY CAPACITY MANUAL, 6TH EDITION (HCM6)*. WASHINGTON, D.C.: TRANSPORTATION RESEARCH BOARD.

PAPACOSTAS, & PREVEDOUROS. (2001). *TRANSPORTATION ENGINEERING AND PLANNING*.

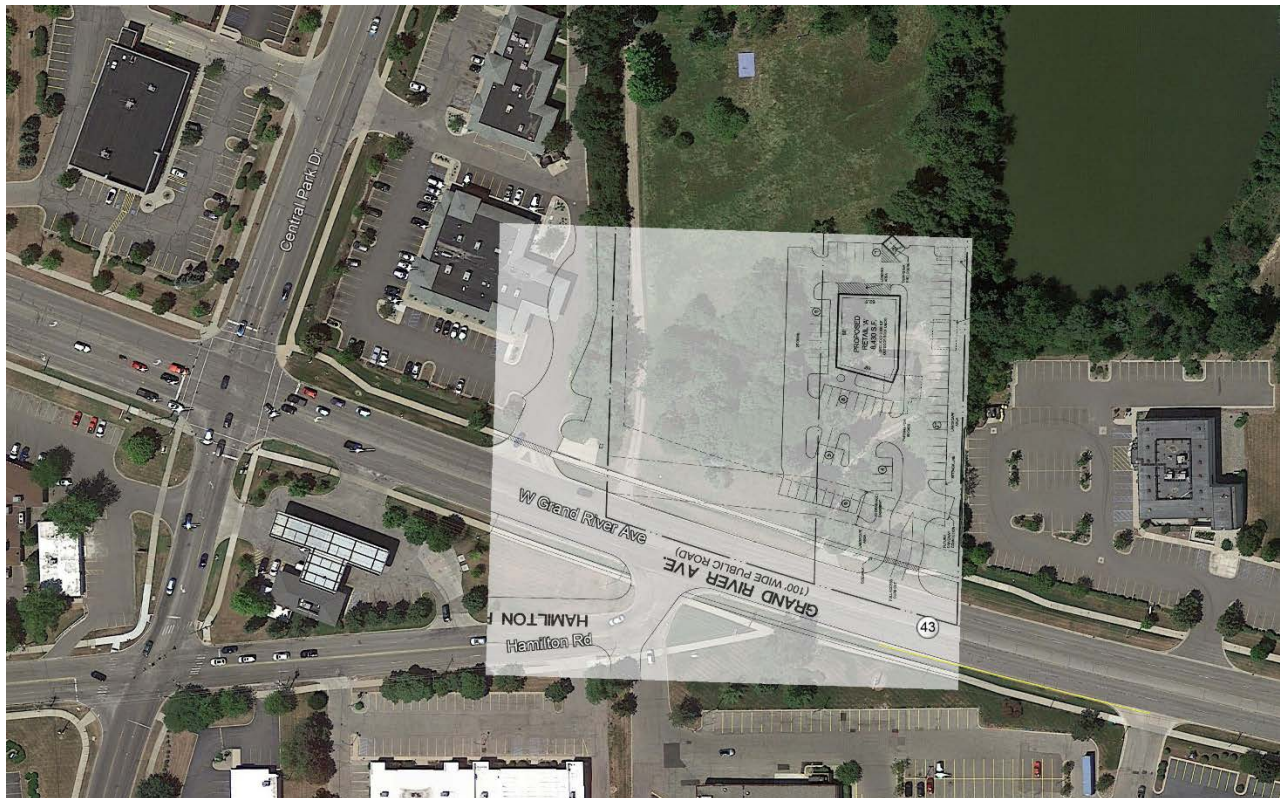
STOVER, V. G., & KOEPKE, F. J. (2006). *TRANSPORTATION AND LAND DEVELOPMENT (VOL. 2ND EDITION)*. WASHINGTON DC: INSTITUTE OF TRANSPORTATION ENGINEERS (ITE).



## EXECUTIVE SUMMARY

This report presents the results of a Traffic Impact Study (TIS) for the proposed provision center development in Meridian Township, Michigan. The project site is located generally in the northeast quadrant of W. Grand River Avenue and Central Park Avenue, adjacent to the north side of W. Grand River Avenue, opposite the intersection with Hamilton Road, as shown on **Figure E1**. The proposed development includes a 5,430 SF marijuana dispensary with site access to be provided via one site driveway to W. Grand River Ave. The Michigan Department of Transportation (MDOT) has jurisdiction over W. Grand River Ave. (M-43).

**FIGURE E1: SITE LOCATION**



This TIA has been completed at the request of Meridian Township to identify the impacts (if any) of the proposed development on the proposed site access point and the permitting of the site access. The scope of the study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice, methodologies published by the Institute of Transportation Engineers (ITE) and the requirements of Meridian Township. Additionally, F&V obtained input regarding the scope of work from Meridian Township Planning Department. In accordance with Township Ordinance, a Traffic Impact Study (TIS) is required for site plan approval.

## EXISTING OPERATIONS

The existing conditions analysis included the evaluation of the existing 2020 operations at the study intersections. The results of the existing conditions analysis are summarized below.

### Grand River Ave. & Central Park Drive

- During the AM peak hour, the intersection operates well, with an acceptable LOS and queue lengths for all approaches and movements.
- During the PM peak hour, the southbound left-turns on Central Park Drive operate at a LOS E, with excessive queue lengths that extend beyond the existing left-turn lane and impact the southbound through traffic on Central Park Drive.

- In order to improve the existing operations at this intersection mitigation measures were investigated, including signal timing changes and operations.
  - Signal timing optimization **is** recommended.
  - Left-turn phasing *is not* recommended.
- With the signal timing optimization at this intersection the operations improve to acceptable LOS and significantly reduce queue length.

#### **Grand River Ave. & Hamilton Road**

- During the both the AM and PM peak hours the intersection operates well, with an acceptable LOS and queue lengths for all approaches and movements.

### **FUTURE CONDITIONS**

The future conditions analysis included the evaluation of the future 2020 operations with the addition of the proposed development traffic at the study intersections. The results of the future conditions analysis are summarized below.

#### **Grand River Ave. & Central Park Drive**

- During the AM peak hour the intersection operates well, with acceptable LOS and queue lengths for all approaches and movements.
- During the PM peak hour the southbound left-turns on Central Park Drive operate at a LOS E, with excessive queue lengths that extend beyond the existing left-turn lane and impact the southbound through traffic on Central Park Drive.
  - With the signal timing optimization at this intersection the operations improve to an acceptable LOS and significantly reduce queue length.

#### **Grand River Ave. & Hamilton Road**

- During the both the AM and PM peak hours the intersection operates well, with an acceptable LOS and queue lengths for all approaches and movements.

#### **Grand River Ave. & Site Drive**

- During both the AM and PM peak hours the intersection operates well, at a LOS B/C during the peak periods with queue lengths of 1-2 vehicles.

### **ACCESS MANAGEMENT**

1. The proposed site driveway meets Grand River Ave. (M-43) Corridor Access Management criterion, provided the exceptions are granted by the Township and MDOT for the following driveways:
  - Tom's Driveway
  - Speedway Driveway
  - Sparrow Driveway
2. There is an existing center left-turn lane adjacent to the site; therefore, only the MDOT right-turn lane criteria was evaluated for the proposed site drive intersection. The results of the analysis show that a right-turn lane or taper is not required.
3. The results of the intersection sight distance analysis show that there will be adequate intersection sight distance at the proposed site driveway on Grand River Ave.

### **RECOMMENDATIONS**

*The recommendations of this TIS are as follows:*

- MDOT should investigate signal timing optimization at the Grand River & Central Park Drive intersection to improve existing and future PM peak hour operations.

## 1 INTRODUCTION

This report presents the results of a Traffic Impact Study (TIS) for the proposed provision center development in Meridian Township, Michigan. The project site is located generally in the northeast quadrant of W. Grand River Avenue and Central Park Avenue, adjacent to the north side of W. Grand River Avenue, opposite the intersection with Hamilton Road, as shown on **Figure 1**. The proposed development includes a 5,430 SF marijuana dispensary with site access to be provided via one site driveway to W. Grand River Ave. The Michigan Department of Transportation (MDOT) has jurisdiction over W. Grand River Ave. (M-43).

This TIA has been completed at the request of Meridian Township to identify the impacts (if any) of the proposed development on the proposed site access point and the permitting of the site access. The scope of the study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice, methodologies published by the Institute of Transportation Engineers (ITE) and the requirements of Meridian Township. Additionally, F&V obtained input regarding the scope of work from Meridian Township Planning Department. In accordance with Township Ordinance, a Traffic Impact Study (TIS) is required for site plan approval.

The purpose of this study is to identify the traffic related impacts, if any, of the proposed development project on the adjacent road network. Specific tasks undertaken for this study include the following:

### 1. Study Area

- a. Provide a description of the study area including surrounding land uses, intersection and roadway geometries, speed limits, functional classifications and traffic volume data (where available). In addition, a study area site map showing the site location and the study intersections will also be provided.

### 2. Proposed Land Use

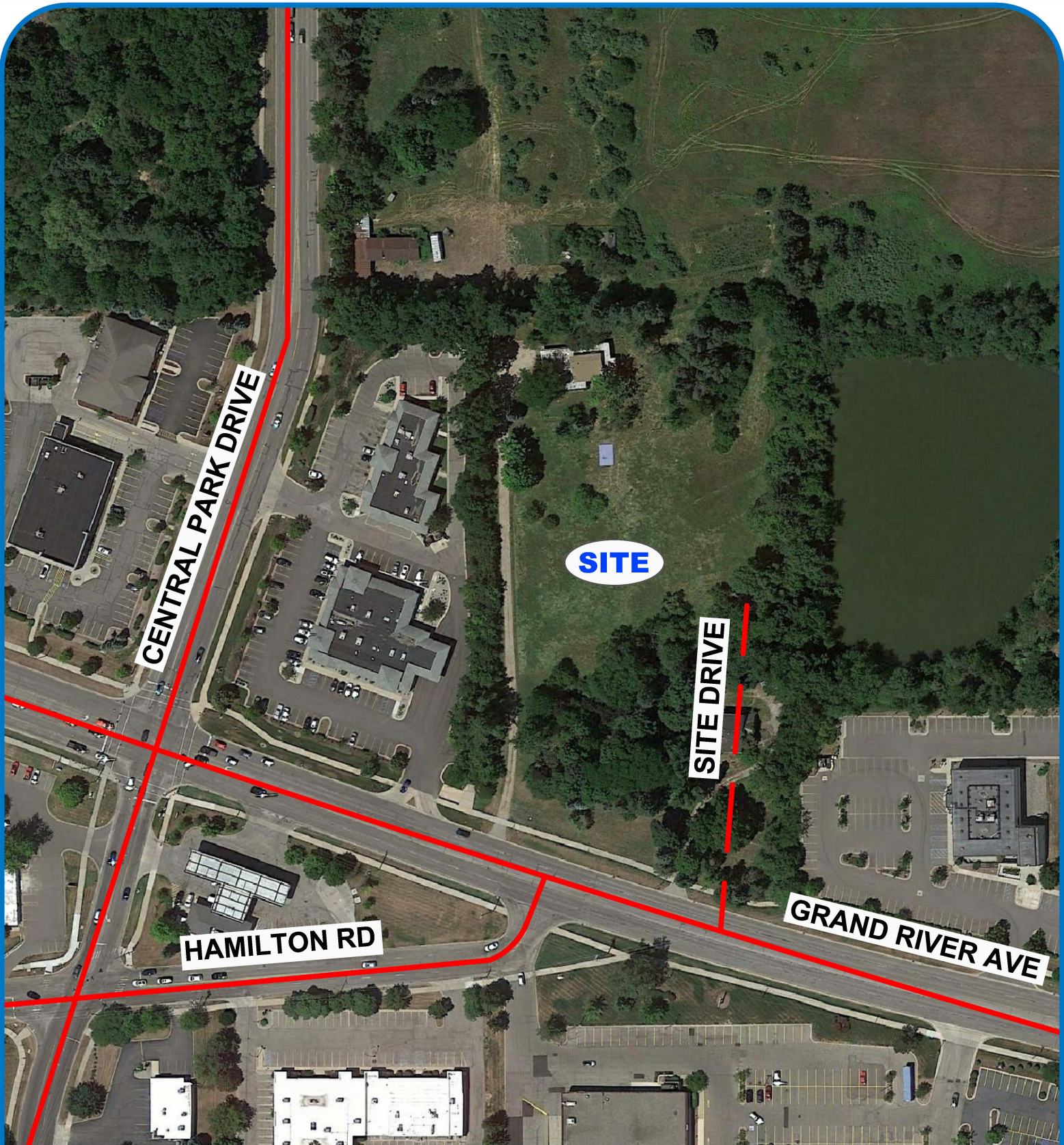
- a. Obtain and review the proposed site plan which includes the proposed land uses, densities, and desired site access locations. A description of the current and proposed land use will be accompanied with a complete project site plan (with buildings identified as to proposed use). A schedule for construction of the development will also be provided.

### 3. Existing Conditions

- a. Provide an analysis of the traffic-related impacts of the proposed development at the following study intersections:
  - Grand River Ave. & Central Park Drive/Dobie Road
  - Grand River Ave. & Hamilton Road
  - Grand River Ave. & Proposed Site Drive
- b. Obtain existing AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak period turning movement counts at the study intersections from Meridian Township for use in this study.
- c. Identify the Existing AM and PM peak hour traffic volumes at the study intersections based on turning movement count data provided.
- d. Calculate the **Existing** vehicle delays, LOS, and vehicle queues at the study intersections during the AM and PM. The analysis will be performed at each of the study intersections. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- e. Identify improvements (if any) for the study road network that would be required to accommodate the existing traffic volumes.

### 4. Future Background Growth

- a. If the planned completion date for the project or the last phase of the project is beyond one year of the study, an estimate of background traffic growth for the adjacent street network will be made and included in the analysis.
- b. Calculate the future background traffic volumes based on an appropriate traffic growth determined from local or statewide data to the project build-out year and/or any applicable background developments in the vicinity of this project as identified by Meridian Township.



# FIGURE 1 SITE LOCATION MAP

PROPOSED PROVISIONING CENTER  
MERIDIAN TOWNSHIP, MI

## LEGEND

 SITE LOCATION



NORTH  
SCALE: NOT TO SCALE

## 5. Background Conditions (No Build)

- a. Calculate the **Background (without the proposed development)** vehicle delays, LOS, and vehicle queues at the study intersections during the AM and PM peak periods. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6<sup>th</sup> Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- b. Any state, local, or private transportation improvement projects in the project study area that will be underway in the build-out year and traffic that is generated by other proposed developments in the study area will be included as background conditions.
- c. Identify improvements (if any) for the study road network that would be required to accommodate the background traffic volumes.

## 6. Trip Generation

- a. Forecast the number of AM and PM peak hour trips that would be generated by the proposed development based on data published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 10<sup>th</sup> Edition*.
- b. A table will be provided in the report outlining the categories and quantities of land uses, with the corresponding trip generation rates or equations, and the resulting number of trips.

## 7. Trip Distribution and Traffic Assignment

- a. Assign the trips that would be generated by the proposed development to the adjacent road network based on existing traffic patterns. The distribution of the estimated trip generation to the adjacent street network and nearby intersections shall be included in the report and the basis will be explained. The distribution percentages with the corresponding volumes will be provided in a graphical format.
- b. Combine the site-generated traffic assignments with the background traffic forecasts to establish the Future AM and PM peak hour traffic volumes.

## 8. Future Conditions

- a. Calculate the **Future (with the proposed development)** vehicle delays, LOS, and vehicle queues at the study intersections. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6<sup>th</sup> Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- b. Identify improvements (if any) for the study road network that would be required to accommodate the future traffic volumes.

## 9. Access Management

- a. Evaluate the Meridian Township Access Management criteria for the proposed site driveway on Grand River Ave., including adjacent driveway locations, opposite driveway locations, the location and spacing of the proposed site access in relation to the existing adjacent driveway and intersections.
- b. Evaluate the proposed intersection sight distance at the proposed site driveway intersection on Grand River Ave.

The scope of this study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice and information published by the Institute of Transportation Engineers (ITE). In addition, Meridian Township provided input regarding the scope of work for this study. The study analyses were completed using Synchro/SimTraffic (Version 10). Sources of data for this study included Traffic Engineering Associates (TEA) and information provided by Meridian Township, MDOT and ITE. All background information is provided in **Appendix A**.

## 2 BACKGROUND DATA

### 2.1 EXISTING ROAD NETWORK

Vehicle transportation for the proposed development is provided via Grand River Avenue located adjacent to the south side of the project site location. The lane use and traffic control at the study intersections are shown on **Figure 2** and the study roadways are further described below. For the purpose of this study, all minor streets and driveways are assumed to have an operating speed of 25 miles per hour (mph).

**Grand River Avenue (M-43)** runs generally in the east and west directions with a posted speed limit of 45 mph. Grand River Ave. is under the jurisdiction of MDOT and is classified a *Minor Arterial* adjacent to the proposed project site. The study segment has an AADT of approximately 13,250 vehicles per day (MDOT 2019). Grand River has a typical five-lane cross section in the vicinity of the site location, with two lanes in each direction and a center left-turn lane. The intersection with Central Park Drive is signalized, the intersection with Hamilton Road is unsignalized.

### 2.2 EXISTING TRAFFIC VOLUMES

The existing weekday turning movement count data used in this study were obtained from Meridian Township. TEA performed a traffic impact study in the vicinity of this project in 2018 and turning movement count data was collected at the study intersections for that project. The turning movement count data collected in 2018 was compared to the weekday traffic volume data obtained from the MDOT Traffic Data Management System (TDMS). This data included 24-hour traffic volume data collected on March 11-12, 2019 and recorded in 15-minute intervals. This data was used as a baseline to determine if a background growth rate was necessary to calculate the existing 2020 traffic volume for use in this study. The results of this comparison showed that the 2018 traffic volumes were essentially equal to the 2019 traffic volumes; therefore, no background growth was applied to the 2018 traffic volumes to establish the existing 2020 traffic conditions without the proposed development. The 2018 data were used as a baseline to establish the current 2020 peak hour traffic volumes for the analysis of existing traffic conditions. During collection of the turning movement counts, pedestrian data and commercial truck percentages were recorded and used in the traffic analysis. Peak Hour Factors (PHFs) were also calculated for each study intersection approach.

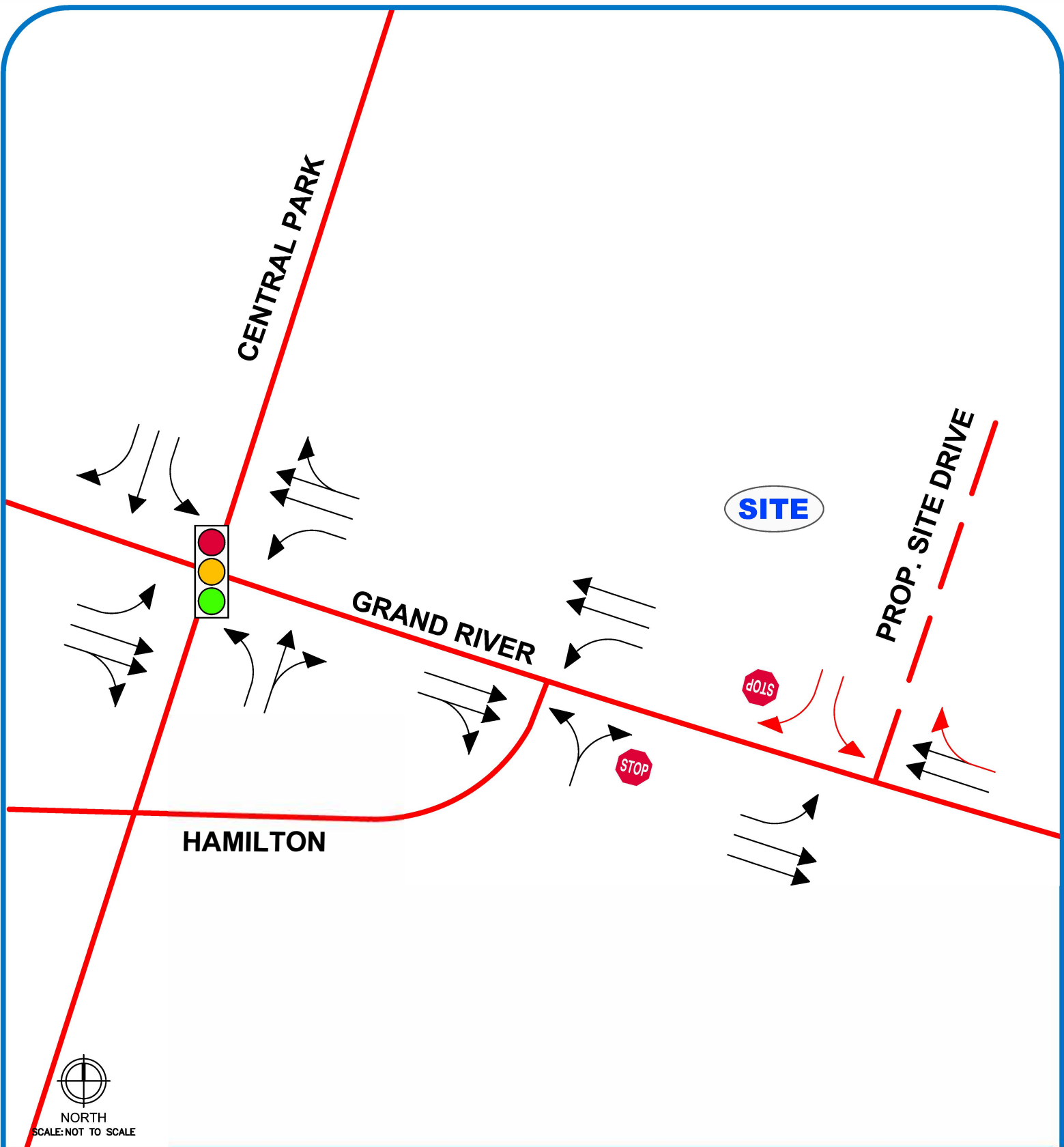
The peak hour volumes for each intersection were utilized for this study and the volumes were balanced upward through the study network, and through volumes were carried along the main study roadways. The peak hour traffic volumes were identified to occur between 7:45 AM to 8:45 AM and 5:00 PM to 6:00 PM. The traffic volume data are included in **Appendix A** and the existing peak hour traffic volumes used in the analysis are summarized on **Figure 3**.

## 3 ANALYSIS

### 3.1 EXISTING CONDITIONS






The existing AM and PM peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersection using Synchro traffic analysis software. The results of the analysis of existing conditions were based on the existing lane use and traffic control shown on **Figure 2**, the existing traffic volumes shown on **Figure 3**, and the methodologies presented in the Highway Capacity Manual 6<sup>th</sup> Edition (HCM6).

Descriptions of LOS "A" through "F" as defined in the HCM, are provided in **Appendix B** for signalized and unsignalized intersections. Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. The results of the analysis of existing conditions are presented in **Appendix B** and are summarized in **Table 1**. Microsimulations were also conducted at the study intersections using SimTraffic to further evaluate the network performance.

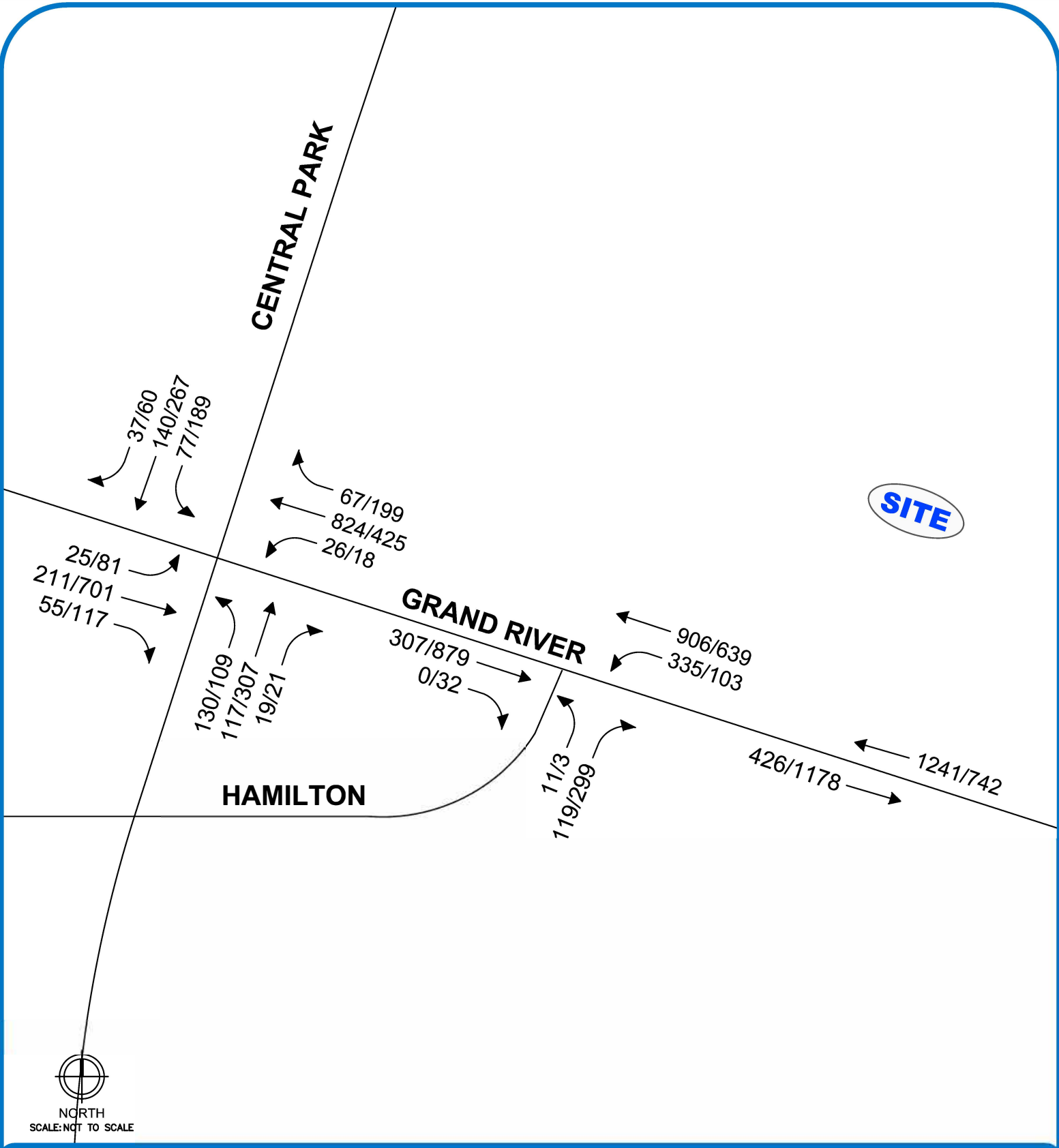


**FIGURE 2**  
**LANE USE AND TRAFFIC CONTROL**  
 PROPOSED PROVISIONING CENTER  
 MERIDIAN TOWNSHIP, MI

**LEGEND**

-  ROADS
-  LANE USE
-  PROPOSED LANE USE
-  UNSIGNALIZED INTERSECTION
-  SIGNALIZED INTERSECTION





**FIGURE 3**  
**EXISTING TRAFFIC VOLUMES**  
**VOLUMES**  
PROPOSED PROVISIONING CENTER  
MERIDIAN TOWNSHIP, MI



**LEGEND**  
ROADS  
TRAFFIC VOLUMES (AM/PM)

**Table 1: Existing Intersection Operations**

Intersection	Control	Approach	Existing Conditions								
			AM Peak				PM Peak				
			Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	
1	Grand River Ave. & Central Park/Dobie	Signalized	NBL	43.6	D	94	170	36.1	D	70	137
			NBTR	32.6	C	65	126	28.8	C	140	240
			SBL	38.6	D	49	95	55.9	E	326	503
			SBT	32.9	C	67	123	27.0	C	441	991
			SBR	30.1	C	17	43	23.3	C	131	647
			EBL	15.8	B	17	48	20.4	C	45	92
			EBT	8.0	A	37	82	14.7	B	95	149
			EBR	7.8	A	8	28	12.6	B	21	53
			WBL	8.9	A	11	42	18.5	B	11	34
			WBTR	11.7	B	125	214	14.8	B	97	162
			<b>Overall</b>	<b>18.4</b>	<b>B</b>			<b>22.4</b>	<b>C</b>		
2	Grand River Ave. & Hamilton Road	STOP (Minor Street)	NB	9.0	A	43	72	26.2	D	67	98
			WBL	9.4	A	40	73	11.1	B	34	76

The results of the existing conditions analysis show that all approaches and movements at the study intersections are currently operating acceptably at a LOS D or better, with the exception of the following:

**Grand River Ave. & Central Park Drive**

- During the PM peak hour, the southbound left-turns on Central Park Drive operate at a LOS E, with excessive queue lengths that extend beyond the existing left-turn lane and impact the southbound through traffic on Central Park Drive.

**3.2 EXISTING IMPROVEMENTS**

In order to improve the existing operations at this intersection mitigation measures were investigated, including signal timing changes and operations. The signal timing changes evaluated include optimizing the existing splits, and the amount of green time allocated for N/S and E/W movements. The operations evaluation included a review of the MDOT left-turn phasing calculations to determine if permissive/protected left-turn phasing should be added to the signal operations.

**Signal Timing Changes**

The signal currently operates during the PM peak hour with the 100 sec cycle length and 60(E/W)/40(N/S) splits. The 40 seconds does not provide adequate time to accommodate the existing southbound left-turn volume on the Central Park Drive approach. Therefore, the splits were optimized to provide 46(E/W)/54(N/S). The results of this change in signal timing are summarized below in **Table 2** and show significant improvement in the existing operations and reductions in queue lengths on the southbound approach. Furthermore, these changes in signal timing did not impact the operations on Grand River Ave.

**Left-Turn Phasing**

The MDOT left-turn phasing analysis spreadsheet was used to evaluate the existing left-turn volumes at this intersection to determine if separate left-turn phasing should be provided. The results of the analysis are attached and show that permissive/protected left-turns are warranted only on the SB Central Park Drive approach during the PM peak hour. Therefore, left-turn phasing is not recommended at this intersection to mitigate existing left-turn delays.

**Table 2: Existing Intersection Operations-With Improvements**

Intersection	Control	Approach	PM Peak Period												
			Existing Conditions				Existing with Improvements				Difference				
			Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	
1	Grand River Ave. & Central Park/Dobie	Signalized	NBL	36.1	D	70	137	30.5	C	62	118	-5.6	D to C	-8	-19
			NBTR	28.8	C	140	240	24.2	C	127	223	-4.6	n/c	-13	-17
			SBL	55.9	E	326	503	39.3	D	119	200	-16.6	E to D	-207	-303
			SBT	27.0	C	441	991	23.0	C	106	186	-4.0	n/c	-335	-805
			SBR	23.3	C	131	647	20.0	B	20	42	-3.3	C to B	-111	-605
			EBL	20.4	C	45	92	25.0	C	47	101	4.6	n/c	2	9
			EBT	14.7	B	95	149	18.0	B	125	199	3.3	n/c	30	50
			EBR	12.6	B	21	53	15.4	B	19	46	2.8	n/c	-2	-7
			WBL	18.5	B	11	34	22.6	C	15	40	4.1	B to C	4	6
			WBTR	14.8	B	97	162	18.3	B	112	183	3.5	n/c	15	21
			Overall	22.4	C			21.8	C			-0.6	n/c		

**3.3 BACKGROUND CONDITIONS**

Since the proposed development is anticipated to be constructed and completed within the next year, existing conditions were assumed equal to background (no build) conditions with a project buildout year of 2020.

**3.4 SITE TRIP GENERATION**

The number of Weekday AM and PM peak hour and daily vehicle trips that would be generated by the proposed development was forecast based on data published by ITE in the *Trip Generation Manual, 10<sup>th</sup> Edition*. The site trip generation forecast is summarized in **Table 3**.

**Table 3: Site Trip Generation**

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Marijuana Dispensary	882	5,430	SF	1,372	32	25	57	60	59	119

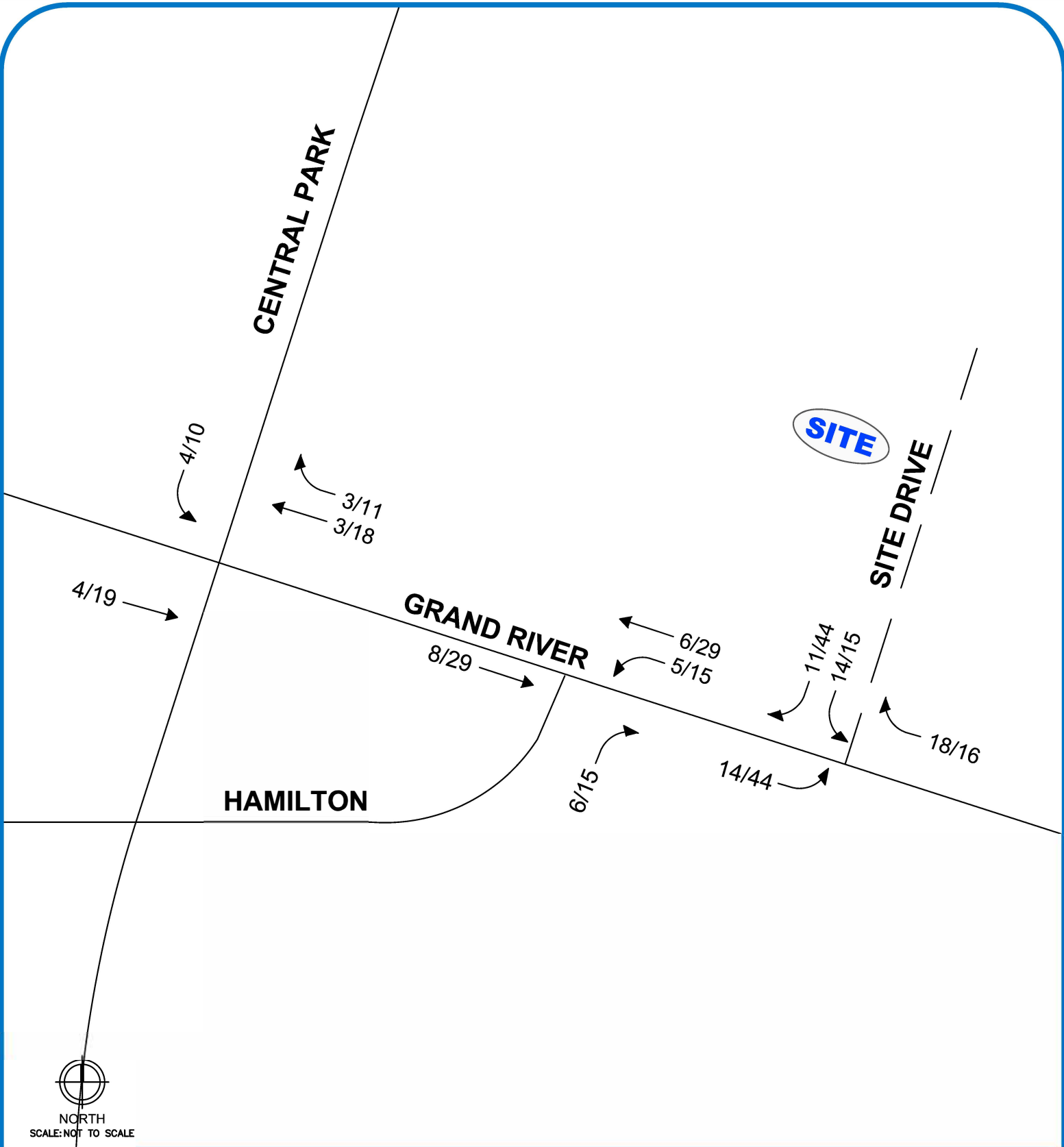
**3.5 SITE TRAFFIC ASSIGNMENT**

The vehicular trips that would be generated by the proposed development were assigned to the study roads based on existing peak hour traffic patterns in the adjacent roadway network, the proposed site access points, and the methodologies published by ITE. To determine trip distribution using the adjacent street traffic, it was assumed that the development land uses are trip generators; therefore, the global trip generation is based on trips entering the study network and traveling to the development. The ITE trip distribution methodology also assumes that new trips will return to their direction of origin. The resulting site trip distributions used in the analysis are summarized in **Table 4**.

**Table 4: Site Trip Distribution**



To / From	Via	AM	PM
West	Grand River Ave.	13%	31%
East	Grand River Ave.	57%	25%
South/West	Hamilton Rd./Dobie Rd.	18%	26%
North	Central Park Drive	12%	18%
Total		100%	100%

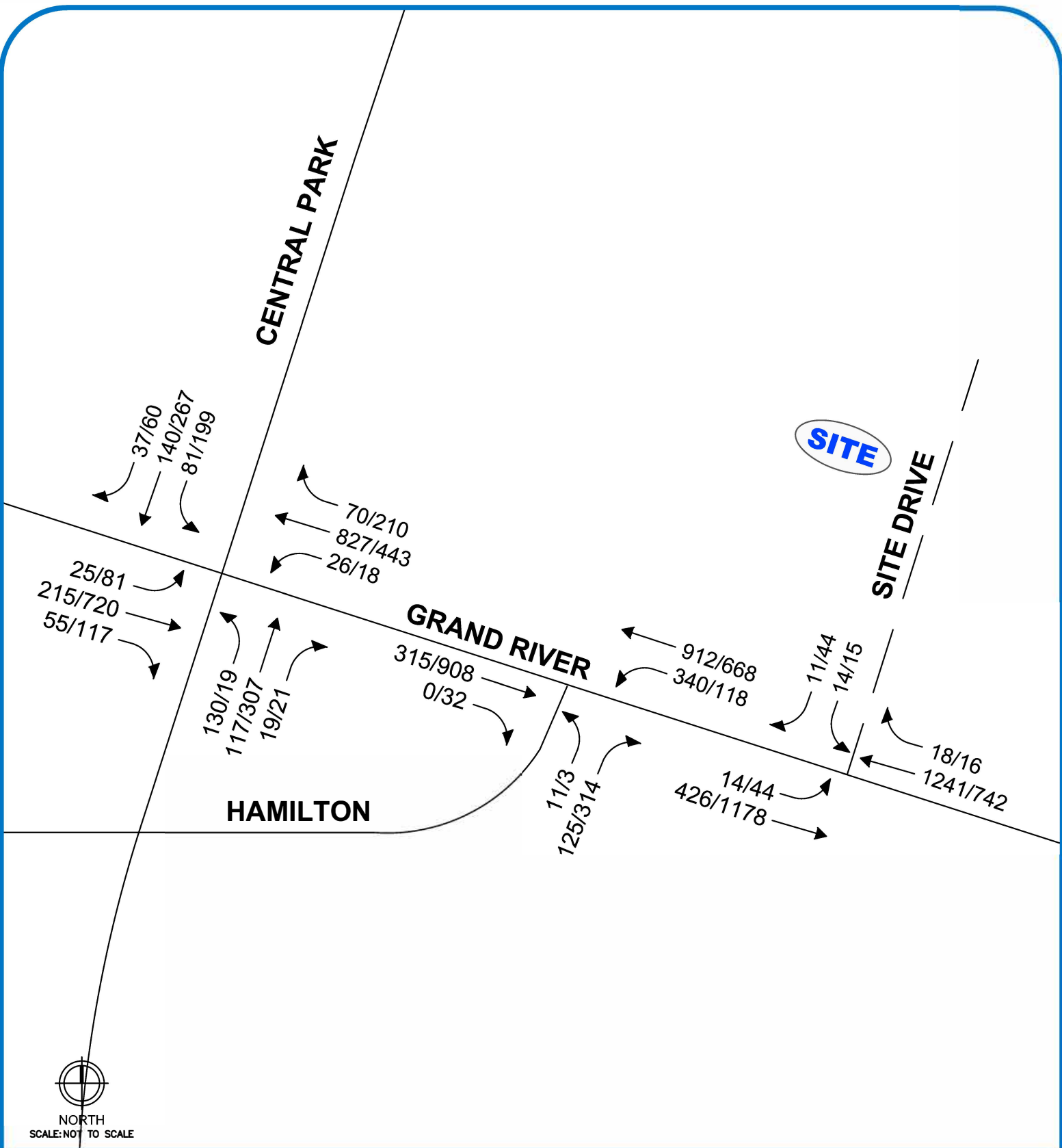
The vehicular traffic volumes shown in **Table 3** were distributed to the roadway network according to the distribution shown in **Table 4**. The site generated trips are shown on **Figure 4** and were added to the future existing traffic volumes shown on **Figure 2** to calculate the future peak hour traffic volumes with the proposed development, as shown on **Figure 5**.



**FIGURE 4**  
**SITE-GENERATED**  
**TRAFFIC VOLUMES**  
 PROPOSED PROVISIONING CENTER  
 MERIDIAN TOWNSHIP, MI



**LEGEND**

-  ROADS
-  TRAFFIC VOLUMES (AM/PM)



**FIGURE 5**  
**FUTURE TRAFFIC**  
**VOLUMES**  
 PROPOSED PROVISIONING CENTER  
 MERIDIAN TOWNSHIP, MI

**LEGEND**

-  ROADS
-  TRAFFIC VOLUMES (AM/PM)

### 3.6 FUTURE CONDITIONS

The future peak hour vehicle delays and LOS **with the proposed development** were calculated based on the existing lane use and traffic control shown on **Figure 2**, the proposed site access plan, the future traffic volumes shown on **Figure 5**, and the methodologies presented in the HCM6. The results of the future conditions analysis are presented in **Appendix C** and are summarized in **Table 5**.

**Table 5: Future Intersection Operations**

Intersection	Control	Approach	AM Peak Period												
			Existing Conditions				Future Conditions				Difference				
			Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	
1	Grand River Ave. & Central Park Drive/Dobie Road	Signalized	NBL	43.6	D	94	170	43.6	D	82	139	0.0	n/c	-12	-31
			NBTR	32.6	C	65	126	32.6	C	67	129	0.0	n/c	2	3
			SBL	38.6	D	49	95	38.9	D	52	101	0.3	n/c	3	6
			SBT	32.9	C	67	123	32.9	C	67	120	0.0	n/c	0	-3
			SBR	30.1	C	17	43	30.1	C	17	44	0.0	n/c	0	1
			EBL	15.8	B	17	48	15.9	B	16	50	0.1	n/c	-1	2
			EBT	8.0	A	37	82	8.0	A	36	74	0.0	n/c	-1	-8
			EBR	7.8	A	8	28	7.8	A	15	24	0.0	n/c	7	-4
			WBL	8.9	A	11	42	8.9	A	12	36	0.0	n/c	1	-6
			WBTR	11.7	B	125	214	11.7	B	126	210	0.0	n/c	1	-4
		Overall	18.4	B			18.4	B			0.0	n/c			
2	Grand River Ave. & Hamilton Road	STOP (Minor Street)	NB	9.0	A	43	72	9.3	A	42	71	0.3	n/c	-1	-1
			WBL	9.4	A	40	73	9.5	A	41	71	0.1	n/c	1	-2
3	Grand River Ave. & Site Drive	STOP (Minor Street)	SBL					28.7	D	15	42	28.7	D	15	42
			SBR					14.5	B	10	33	14.5	B	10	33
			EBL					12.5	B	9	32	12.5	B	9	32
Intersection	Control	Approach	PM Peak Period												
			Existing Conditions				Future Conditions				Difference				
			Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	
1	Grand River Ave. & Central Park/Dobie	Signalized	NBL	36.1	D	70	137	36.1	D	62	124	0.0	n/c	-8	-13
			NBTR	28.8	C	140	240	28.8	C	153	258	0.0	n/c	13	18
			SBL	55.9	E	326	503	60.3	E	380	528	4.4	n/c	54	25
			SBT	27.0	C	441	991	27.0	C	695	1276	0.0	n/c	254	285
			SBR	23.3	C	131	647	23.3	C	360	1138	0.0	n/c	229	491
			EBL	20.4	C	45	92	21.0	C	39	84	0.6	n/c	-6	-8
			EBT	14.7	B	95	149	14.9	B	102	159	0.2	n/c	7	10
			EBR	12.6	B	21	53	12.6	B	17	47	0.0	n/c	-4	-6
			WBL	18.5	B	11	34	18.8	B	13	37	0.3	n/c	2	3
			WBTR	14.8	B	97	162	15.2	B	98	164	0.4	n/c	1	2
		Overall	22.4	C			22.8	C			0.4	n/c			
2	Grand River Ave. & Hamilton Road	STOP (Minor Street)	NB	26.2	D	67	98	30.1	D	70	100	3.9	n/c	3	2
			WBL	11.1	B	34	76	11.5	B	42	81	0.4	n/c	8	5
3	Grand River Ave. & Site Drive	STOP (Minor Street)	SBL					22.4	C	13	38	22.4	C	13	38
			SBR					11.6	B	25	53	11.6	B	25	53
			EBL					9.7	A	19	47	9.7	A	19	47

*Note: Slight variations (+/-) in the vehicle queuing from existing and future conditions are due to the multiple iterations included in the SimTraffic modeling of the network. Approaches/movements with significant increases in queue lengths were further evaluated for mitigation measures as summarized in Section 3.7.*

The results of the future conditions analysis show that all approaches and movements at the study intersections are expected to operate in a manner similar to existing conditions, operating acceptably at a LOS D or better, with the exception of the following:

**Grand River Ave. & Central Park Drive**

- During the PM peak hour, the southbound left-turns on Central Park Drive will continue to operate at a LOS E, with excessive queue lengths that extend beyond the existing left-turn lane and impact the southbound through traffic on Central Park Drive.

**3.7 FUTURE IMPROVEMENTS**

In order to improve traffic operations to a LOS D or better for all approaches and movements at the study intersections under future conditions **with the proposed development**, mitigation measures were investigated. The results of the analyses are summarized in **Table 6** and summarized below.

- Signal timing optimization was evaluated for Grand River Ave. & Central Park Drive and found to adequately mitigate the impact of the proposed development and improve the existing operations.

**Table 6: Future Intersection Operations with Improvements**

Intersection	Control	Approach	PM Peak Period											
			Future Conditions				Future with Improvements				Difference			
			Delay (s/veh)	LOS	Avg. Queue	95th% Queue	Delay (s/veh)	LOS	Avg. Queue	95th% Queue	Delay (s/veh)	LOS	Avg. Queue	95th% Queue
1 Grand River Ave. & Central Park/Dobie	Signalized	NBL	36.1	D	62	124	29.7	C	60	122	-6.4	D to C	-2	-2
		NBTR	28.8	C	153	258	23.6	C	119	206	-5.2	n/c	-34	-52
		SBL	60.3	E	380	528	39.1	D	125	207	-21.2	E to D	-255	-321
		SBT	27.0	C	695	1276	22.4	C	105	189	-4.6	n/c	-590	-1087
		SBR	23.3	C	360	1138	19.5	B	17	41	-3.8	C to B	-343	-1097
		EBL	21.0	C	39	84	26.5	C	48	100	5.5	n/c	9	16
		EBT	14.9	B	102	159	18.7	B	126	192	3.8	n/c	24	33
		EBR	12.6	B	17	47	15.8	B	20	45	3.2	n/c	3	-2
		WBL	18.8	B	13	37	23.6	C	14	43	4.8	B to C	1	6
		WBTR	15.2	B	98	164	19.0	B	119	191	3.8	n/c	21	27
		Overall	22.8	C			22.1	C			-0.7	n/c		

**3.8 ACCESS MANAGEMENT**

**3.8.1 Grand River Ave. (M-43) Corridor Access Management**

Meridian Township, in coordination with MDOT, has developed access management criteria for use in evaluating proposed site access driveways along this corridor. The access management criteria for the proposed site driveway location are summarized in **Table 7** and shown on **Figure 6**.

**Table 7: Intersection/ Driveway Spacing Summary**

Adjacent Driveways/ Intersections	Same Side/Opposite	Distance	Meridian Twp. Rec.	Meets Req.
Speedway	Opposite	550	630	NO
Bank of America	Same Side	400	350	YES
Hamilton Road	Opposite-Intersection	225	200	YES
Sparrow (1600 Grand River)	Same Side	317	350	NO
Tom's	Opposite	286	630	YES*

\* With exception granted by Meridian Township Planning (minimum 150 ft for non-conflicting left-turns)

In accordance with MDOT guidelines, in the event that a particular parcel lacks sufficient frontage to maintain adequate spacing, the Region/TSC Traffic and Safety and Utility and Permit Engineers have the following options:

1. Choose the next lowest spacing. For example, on 30 mph roadway requiring 185 ft spacing, the distance may be reduced to no less than 130 ft which is the spacing from 25 mph speed.

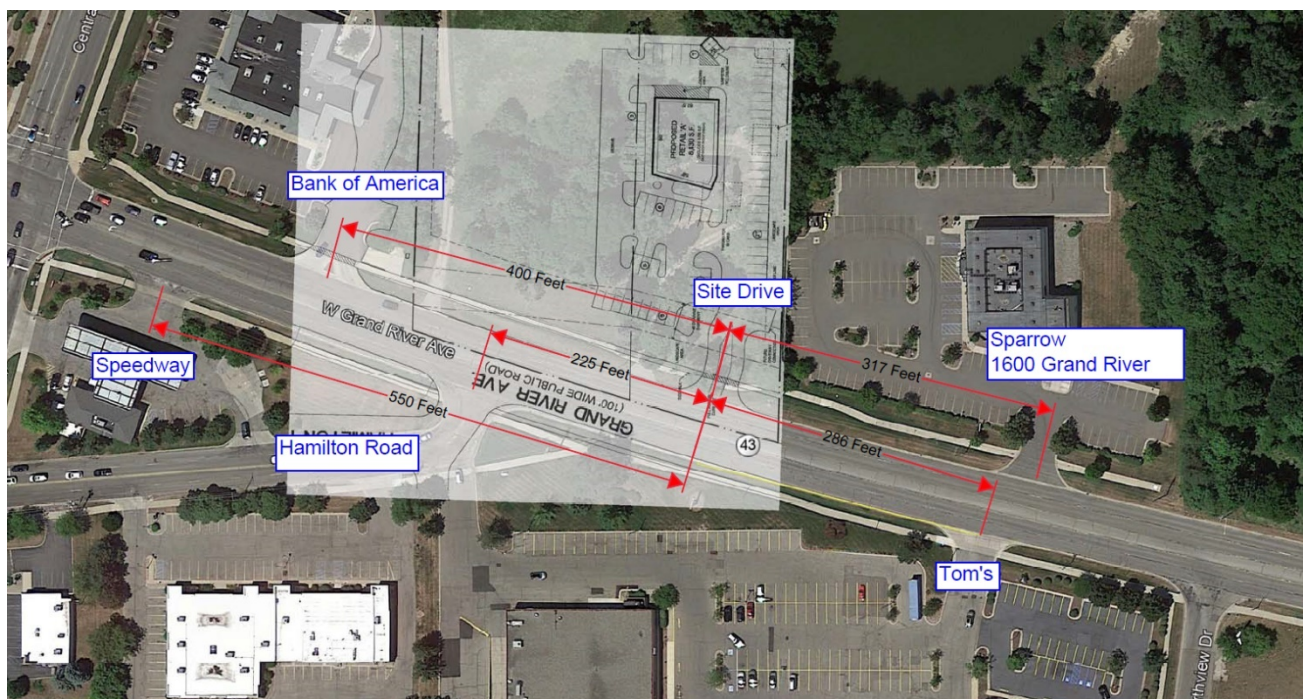
The next lowest speed was reviewed at the locations that do not meet the minimum spacing requirements. The results of this analysis are summarized in **Table 8** and show that the spacing requirements are still not met at these locations.

**Table 8: Intersection/ Driveway Spacing Summary-Alternative Minimums**

Adjacent Driveways/ Intersections	Adjacent/Opposite	Distance	Meridian Twp. Rec.	Meets Req.
Speedway	Opposite	550	525	YES
Sparrow (1600 Grand River)	Same Side	317	300	YES

By using the next lowest speed category, all of the driveways and intersections will meet access management spacing criteria. Therefore, none of the further criterion was necessary for consideration for this site driveway.

**FIGURE 6: ACCESS MANAGEMENT INTERSECTION SPACING**



### 3.8.2 MDOT Right-Turn Lane Analysis

The MDOT Geometric Design Guidance Sections 1.1.4 (formerly MDOT Traffic & Safety Notes 604A) was utilized in order to determine if a right-turn lane or taper is required at the proposed site driveway. The results of the analysis are provided in **Appendix D** and indicate the following:

- A right-turn radius only is recommended for the proposed Site Drive. No additional right-turn treatment is required.

### 3.8.3 Intersection Sight Distance Analysis

The intersection sight distance was reviewed at the proposed Grand River Ave. & Site Drive intersection. According to *Section 9.5 – Intersection Sight Distance* of the AASHTO design manual *A Policy on Geometric Design of Highways and Streets, 7<sup>th</sup> Edition (2018)*, an intersection sight distance of 625 feet is required for a left turn from a complete stop and a sight distance of 480 feet is required for a right turn from a stopped position at the study intersection based on the existing 45 mph speed limit (50 mph design speed).

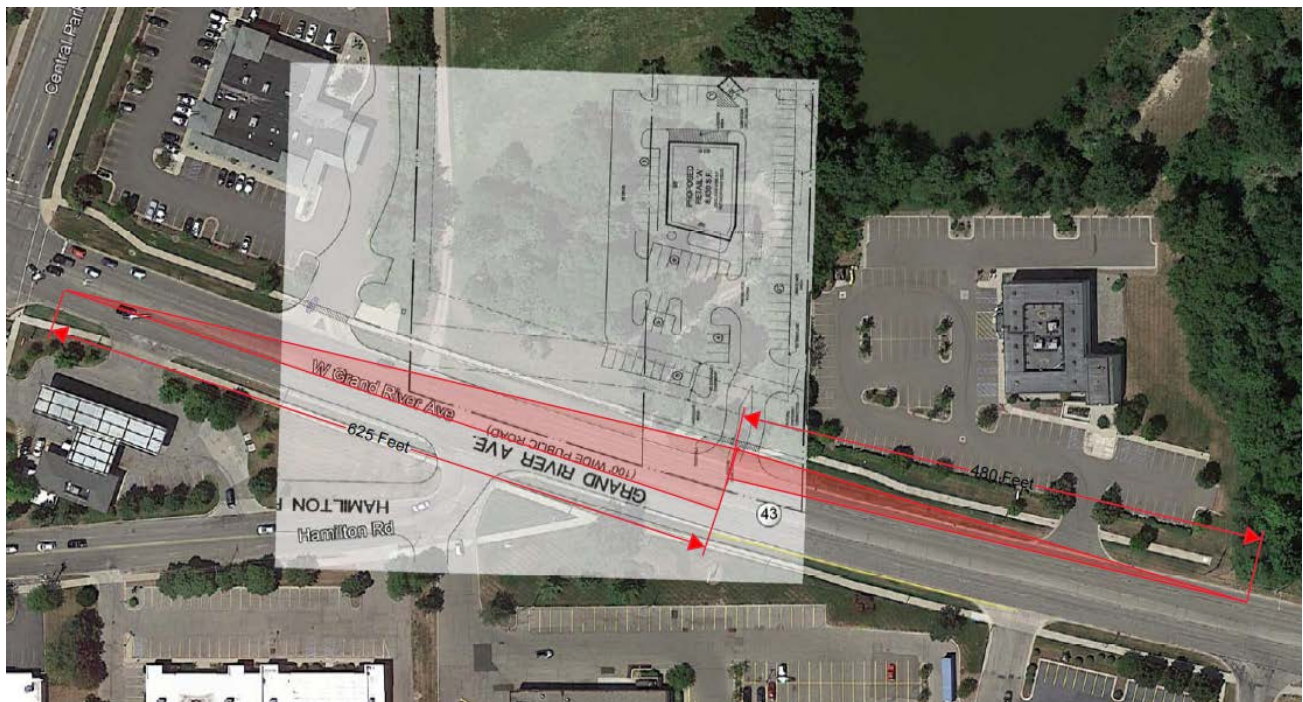
The AASHTO manual states that the “vertex (decision point) of the departure sight triangle on the minor road should be 14.5 ft from the edge of the major-road traveled way”. This gives an accurate depiction of driver



behavior when making a turn from a minor roadway. The results of the sight distance analysis show that there is adequate sight distance at the proposed intersection location. In addition, this section of Grand River Ave. has very little grade change and vertical distance is not a concern at this location. The intersection sight distance measurements are shown on **Figure 7**.

The results of the intersection sight distance analysis show that there will be adequate intersection sight distance at the proposed site driveway on Grand River Ave. There is the potential for vehicles queued on EB Grand River Ave. at the signalized intersection at Central Park Drive to block the view for egress left-turns; however, based on the vehicle queuing analysis (both with and without recommended signal timing improvements) the peak vehicle queues on this approach will not extend into the sight distance area as shown on **Figure 7**.

**FIGURE 7: INTERSECTION SIGHT DISTANCE**



## 4 CONCLUSIONS

*The conclusions of this Traffic Impact Study are as follows:*

1. The results of the existing conditions analysis show that all approaches and movements at the study intersections are currently operating acceptably at a LOS D or better, with the exception of the Grand River Ave. & Central Park Drive. During the PM peak hour, the southbound left-turns on Central Park Drive operate at a LOS E, with excessive queue lengths that extend beyond the existing left-turn lane and impact the southbound through traffic on Central Park Drive.
2. In order to improve the existing operations at this intersection, mitigation measures were investigated, including signal timing changes and operations.
  - a. Signal timing optimization **is** recommended.
  - b. Left-turn phasing *is not* recommended.
3. With the addition of site generated traffic volumes, the Grand River Ave. & Central Park Drive intersection is expected to operate similar to existing conditions, with both increased delays and vehicle queue lengths on the southbound approach.
4. In order to improve the future operations at the Grand River Ave. & Central Park Drive intersection, signal timing optimization is recommended.

5. The proposed site driveway is expected to operate well, at LOS B/C during the peak periods with queue lengths of 1-2 vehicles.
6. The proposed site driveway meets Grand River Ave. (M-43) Corridor Access Management criterion, provided the following exceptions are granted by the Township and MDOT.
  - a. The Tom's driveway is located opposite the proposed site driveway, approximately 286 feet to the east. The requirement is 630 feet; however, "The Director of Community Planning and Development may reduce this to no less than 150 feet where the offsets are aligned to not create left-turn conflict<sup>1</sup>", as they are in this location.
  - b. The Speedway driveway is located opposite the proposed site driveway, approximately 550 feet to the west. The requirement is 630 feet; however, in accordance with MDOT guidelines, in the event that a particular parcel lacks sufficient frontage to maintain adequate spacing, the Region/TSC Traffic and Safety and Utility and Permit Engineers may reduce this and choose the next lowest spacing. The next lowest spacing would be for a design speed of 45 mph, with a spacing criteria of 525 feet. Therefore, the driveway spacing would meet the spacing requirement.
  - c. The Sparrow driveway is located on the same side as the proposed site driveway, approximately 317 feet to the east. The requirement is 350 feet; again due to limited frontage, the next lowest spacing is 300 feet. Therefore, the driveway spacing would meet the spacing requirement.
7. There is an existing center left-turn lane adjacent to the site; therefore, only the MDOT right-turn lane criteria was evaluated for the proposed site drive intersection. The results of the analysis show that a right-turn lane or taper is not required.
8. The results of the intersection sight distance analysis show that there will be adequate intersection sight distance at the proposed site driveway on Grand River Ave.

## 5 RECOMMENDATIONS

*The recommendations of this TIS are as follows:*

- MDOT should investigate signal timing optimization at the Grand River & Central Park Drive intersection to improve PM peak hour operations.

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<sup>1</sup> Ord. No. 2004-06, 9-5-2004, (e) (8)

## **Appendix A**

# **BACKGROUND INFORMATION**

issued for:  
 OWNER REVIEW: 17 OCTOBER 2019  
 OWNER REVIEW: 21 OCTOBER 2019  
 OWNER REVIEW: 28 OCTOBER 2019  
 OWNER REVIEW: 28 OCTOBER 2019  
 OWNER REVIEW: 31 OCTOBER 2019  
 OWNER REVIEW: 15 JAN. 2020

<b>LAND/ BUILDING/ PARKING DATA :</b>	
<b>PHASE 1</b>	
<b>LAND DATA :</b>	
OVERALL LAND AREA :	8.67 ACRES
<b>BUILDING DATA :</b>	
PROPOSED RETAIL 'A' :	5,430 S.F.
OUTDOOR ROOF DECK :	3,000 S.F.
TOTAL BUILDING AREA :	8,430 S.F.
<b>PARKING REQUIRED :</b>	<b>42 SPACES</b>
RETAIL : 1,000 GFA 3,000 S.F. (3,000/1000 = 3) X 3 = 42 SPACES	42 SPACES
<b>PARKING PROVIDED :</b>	<b>68 SPACES</b>

project:

# Commercial Development

Proposed for  
 Grand River Ave.  
 Meridian Twp., MI



32500 TELEGRAPH ROAD  
 SUITE 250  
 BINGHAM FARMS, MICHIGAN  
 48025-2404  
 PH 248.540.7700 FX 248.540.2710  
 www.rogvoy.com

drawing:

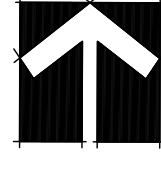
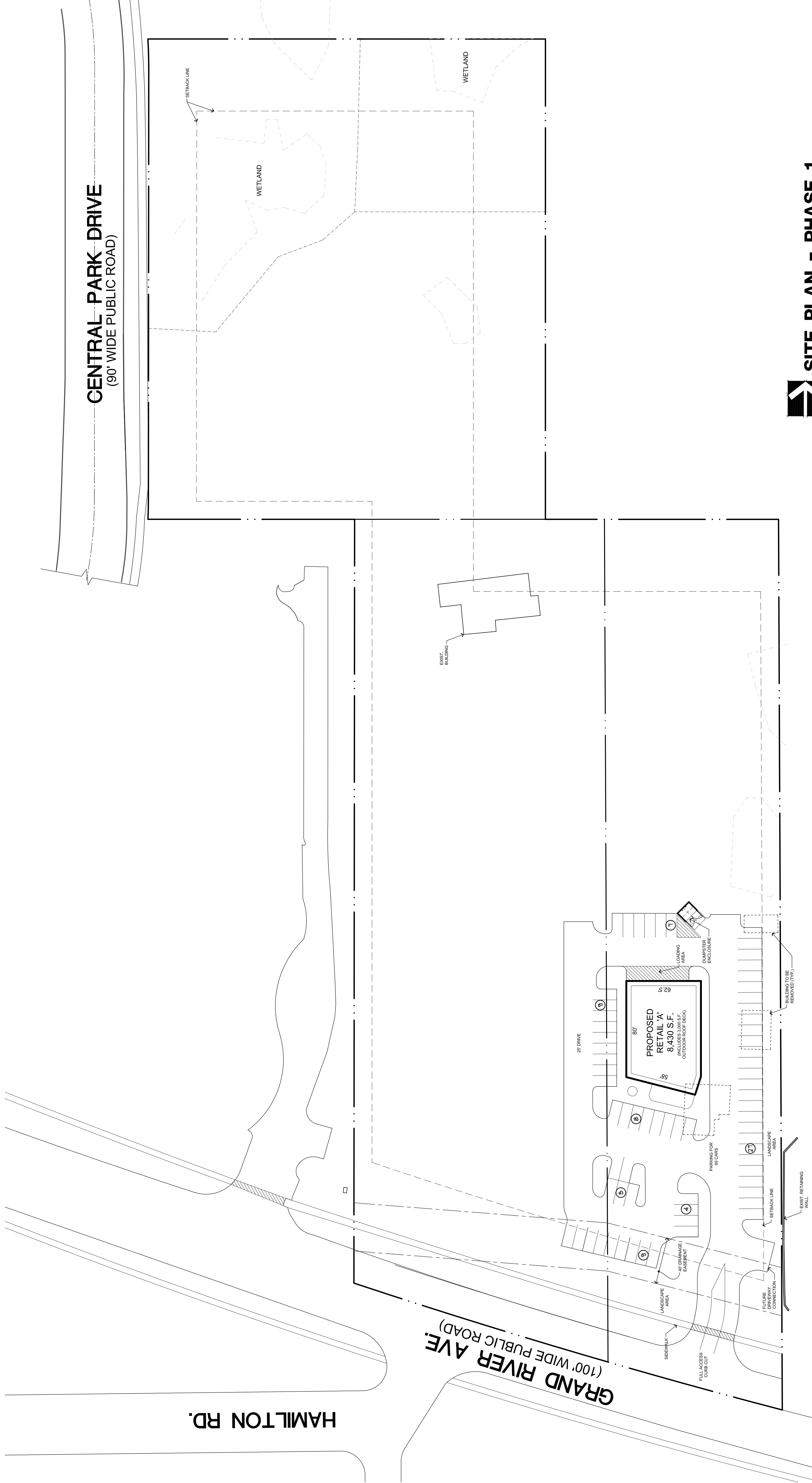
## Conceptual Site Plan Phase 1

DO NOT SCALE DRAWING

issue date: 02 AUG. 2019  
 drawn: KS/KL  
 checked: MD  
 approved: MD

file number: 19030  
 sheet:

# SP-1A



## SITE PLAN - PHASE 1

SCALE: 1"=40'-0"

# Traffic Engineering Associates, Inc.

PO Box 100  
Saranac, MI 48881  
517-627-6028

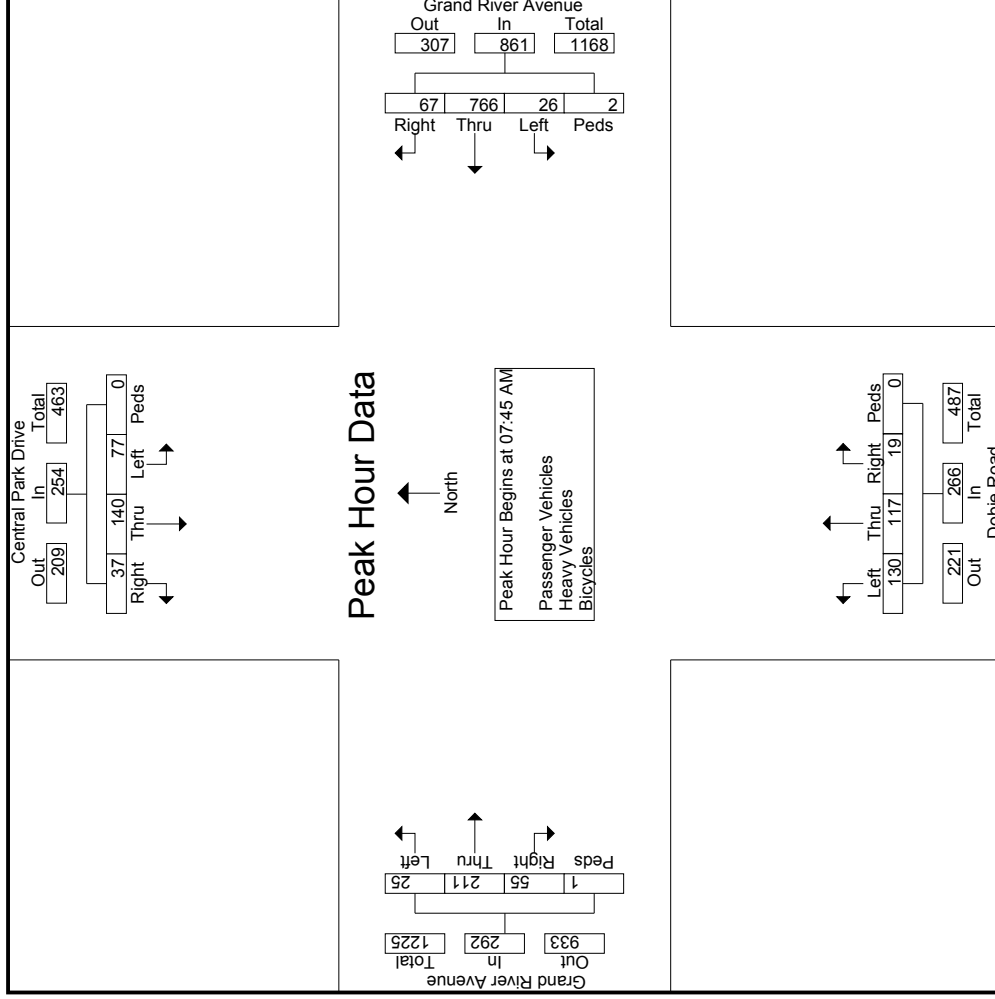
Location: Grand River & Central Park Dr  
County/City: Meridian Twp  
Weather: Sunny  
Counted By: DES & JJ

File Name : Grand River & Central Park - AM  
Site Code : 09201801  
Start Date : 9/20/2018  
Page No : 1

### Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

Start Time	Central Park Drive From North					Grand River Avenue From East					Dobie Road From South					Grand River Avenue From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	9	11	3	0	23	6	102	5	0	113	15	24	4	0	43	3	31	7	0	41	220
07:15 AM	10	20	4	0	34	8	166	13	0	187	20	11	0	0	31	4	35	7	0	46	298
07:30 AM	5	31	5	0	41	8	199	17	1	225	33	13	8	0	54	2	51	9	0	62	382
07:45 AM	17	31	7	0	55	3	233	13	0	249	32	33	8	0	73	11	57	9	0	77	454
<b>Total</b>	<b>41</b>	<b>93</b>	<b>19</b>	<b>0</b>	<b>153</b>	<b>25</b>	<b>700</b>	<b>48</b>	<b>1</b>	<b>774</b>	<b>100</b>	<b>81</b>	<b>20</b>	<b>0</b>	<b>201</b>	<b>20</b>	<b>174</b>	<b>32</b>	<b>0</b>	<b>226</b>	<b>1354</b>
08:00 AM	18	32	6	0	56	7	178	21	1	207	31	32	2	0	65	6	49	15	1	71	399
08:15 AM	19	37	10	0	66	12	166	13	1	192	33	31	5	0	69	5	58	22	0	85	412
08:30 AM	23	40	14	0	77	4	189	20	0	213	34	21	4	0	59	3	47	9	0	59	408
08:45 AM	14	28	8	0	50	7	143	30	0	180	37	52	3	0	92	13	56	13	0	82	404
<b>Total</b>	<b>74</b>	<b>137</b>	<b>38</b>	<b>0</b>	<b>249</b>	<b>30</b>	<b>676</b>	<b>84</b>	<b>2</b>	<b>792</b>	<b>135</b>	<b>136</b>	<b>14</b>	<b>0</b>	<b>285</b>	<b>27</b>	<b>210</b>	<b>59</b>	<b>1</b>	<b>297</b>	<b>1623</b>
<b>Grand Total</b>	<b>115</b>	<b>230</b>	<b>57</b>	<b>0</b>	<b>402</b>	<b>55</b>	<b>1376</b>	<b>132</b>	<b>3</b>	<b>1566</b>	<b>235</b>	<b>217</b>	<b>34</b>	<b>0</b>	<b>486</b>	<b>47</b>	<b>384</b>	<b>91</b>	<b>1</b>	<b>523</b>	<b>2977</b>
Apprch %	28.6	57.2	14.2	0		3.5	87.9	8.4	0.2		48.4	44.7	7	0		9	73.4	17.4	0.2		
Total %	3.9	7.7	1.9	0	13.5	1.8	46.2	4.4	0.1	52.6	7.9	7.3	1.1	0	16.3	1.6	12.9	3.1	0	17.6	
Passenger Vehicles	111	229	57	0	397	55	1367	130	3	1555	230	212	32	0	474	46	355	83	1	485	2911
% Passenger Vehicles	96.5	99.6	100	0	98.8	100	99.3	98.5	100	99.3	97.9	97.7	94.1	0	97.5	97.9	92.4	91.2	100	92.7	97.8
Heavy Vehicles	4	1	0	0	5	0	9	2	0	11	5	5	2	0	12	1	29	8	0	38	66
% Heavy Vehicles	3.5	0.4	0	0	1.2	0	0.7	1.5	0	0.7	2.1	2.3	5.9	0	2.5	2.1	7.6	8.8	0	7.3	2.2
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

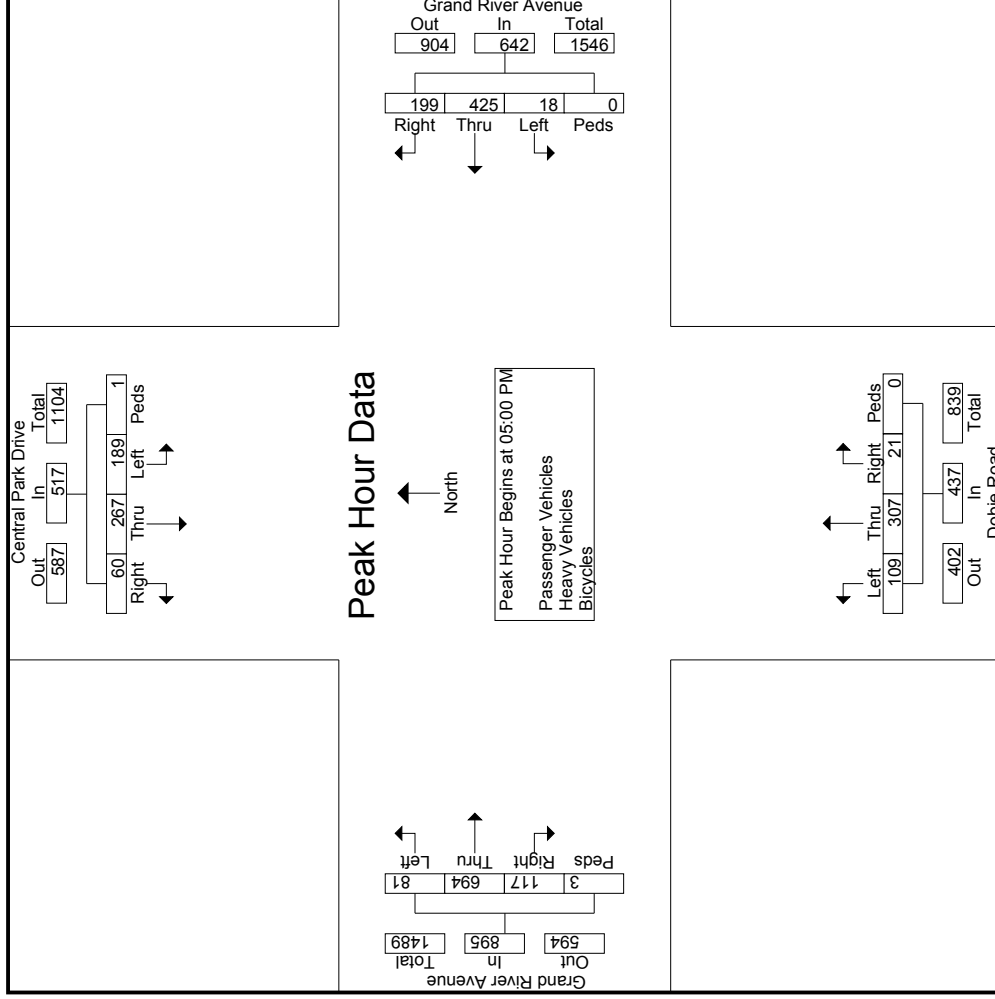
Start Time	Central Park Drive From North					Grand River Avenue From East					Dobie Road From South					Grand River Avenue From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	17	31	7	0	55	3	233	13	0	249	32	33	8	0	73	11	57	9	0	77	454
08:00 AM	18	32	6	0	56	7	178	21	1	207	31	32	2	0	65	6	49	15	1	71	399
08:15 AM	19	37	10	0	66	12	166	13	1	192	33	31	5	0	69	5	58	22	0	85	412
08:30 AM	23	40	14	0	77	4	189	20	0	213	34	21	4	0	59	3	47	9	0	59	408
Total Volume	77	140	37	0	254	26	766	67	2	861	130	117	19	0	266	25	211	55	1	292	1673
% App. Total	30.3	55.1	14.6	0		3	89	7.8	0.2		48.9	44	7.1	0		8.6	72.3	18.8	0.3		
PHF	.837	.875	.661	.000	.825	.542	.822	.798	.500	.864	.956	.886	.594	.000	.911	.568	.909	.625	.250	.859	.921



Location: Grand River & Central Park Dr  
County/City: Meridian Twp.  
Weather: Sunny  
Counted By: DES & JJ

File Name : Grand River & Central Park - PM  
Site Code : 09201801  
Start Date : 9/20/2018  
Page No : 1

Start Time	Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles																				
	Central Park Drive From North						Grand River Avenue From East						Grand River Avenue From West								
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total				
04:00 PM	53	32	18	0	103	4	96	38	0	138	16	56	7	0	79	19	123	16	0	158	478
04:15 PM	44	55	16	0	115	6	91	29	0	126	22	72	2	0	96	13	126	20	0	159	496
04:30 PM	42	61	17	0	120	3	97	29	0	129	21	78	5	0	104	12	143	20	1	176	529
04:45 PM	46	60	16	0	122	12	100	42	1	155	20	68	4	0	92	23	161	21	0	205	574
Total	185	208	67	0	460	25	384	138	1	548	79	274	18	0	371	67	553	77	1	698	2077
05:00 PM	53	73	10	0	136	6	90	63	0	159	29	68	5	0	102	15	163	23	1	202	599
05:15 PM	51	75	15	0	141	5	107	47	0	159	18	81	5	0	104	20	185	31	1	237	641
05:30 PM	38	66	15	0	119	1	117	35	0	153	30	74	9	0	113	20	176	35	0	231	616
05:45 PM	47	53	20	1	121	6	111	54	0	171	32	84	2	0	118	26	170	28	1	225	635
Total	189	267	60	1	517	18	425	199	0	642	109	307	21	0	437	81	694	117	3	895	2491
Grand Total	374	475	127	1	977	43	809	337	1	1190	188	581	39	0	808	148	1247	194	4	1593	4568
Approach %	38.3	48.6	13	0.1		3.6	68	28.3	0.1		23.3	71.9	4.8	0		9.3	78.3	12.2	0.3		
Total %	8.2	10.4	2.8	0	21.4	0.9	17.7	7.4	0	26.1	4.1	12.7	0.9	0	17.7	3.2	27.3	4.2	0.1	34.9	
Passenger Vehicles	372	474	127	1	974	43	805	335	1	1184	183	578	39	0	800	147	1231	191	4	1573	4531
% Passenger Vehicles	99.5	99.8	100	100	99.7	100	99.5	99.4	100	99.5	97.3	99.5	100	0	99	99.3	98.7	98.5	100	98.7	99.2
Heavy Vehicles	2	1	0	0	3	0	4	2	0	6	5	3	0	0	8	1	16	3	0	20	37
% Heavy Vehicles	0.5	0.2	0	0	0.3	0	0.5	0.6	0	0.5	2.7	0.5	0	0	1	0.7	1.3	1.5	0	1.3	0.8
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Start Time	Central Park Drive From North						Grand River Avenue From East						Grand River Avenue From West								
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour for Entire Intersection Begins at 05:00 PM	53	73	10	0	136	6	90	63	0	159	29	68	5	0	102	15	163	23	1	202	599
05:00 PM	51	75	15	0	141	5	107	47	0	159	18	81	5	0	104	20	185	31	1	237	641
05:30 PM	38	66	15	0	119	1	117	35	0	153	30	74	9	0	113	20	176	35	0	231	616
05:45 PM	47	53	20	1	121	6	111	54	0	171	32	84	2	0	118	26	170	28	1	225	635
Total Volume	189	267	60	1	517	18	425	199	0	642	109	307	21	0	437	81	694	117	3	895	2491
% App. Total	36.6	51.6	11.6	0.2		2.8	66.2	31	0		24.9	70.3	4.8	0		9.1	77.5	13.1	0.3		
PHF	.892	.890	.750	.250	.917	.750	.908	.790	.000	.939	.852	.914	.583	.000	.926	.779	.938	.836	.750	.944	.972





Location: Grand River & Hamilton Rd.  
County/City: Meridian Twp.  
Weather: Sunny  
Counted By: JJ

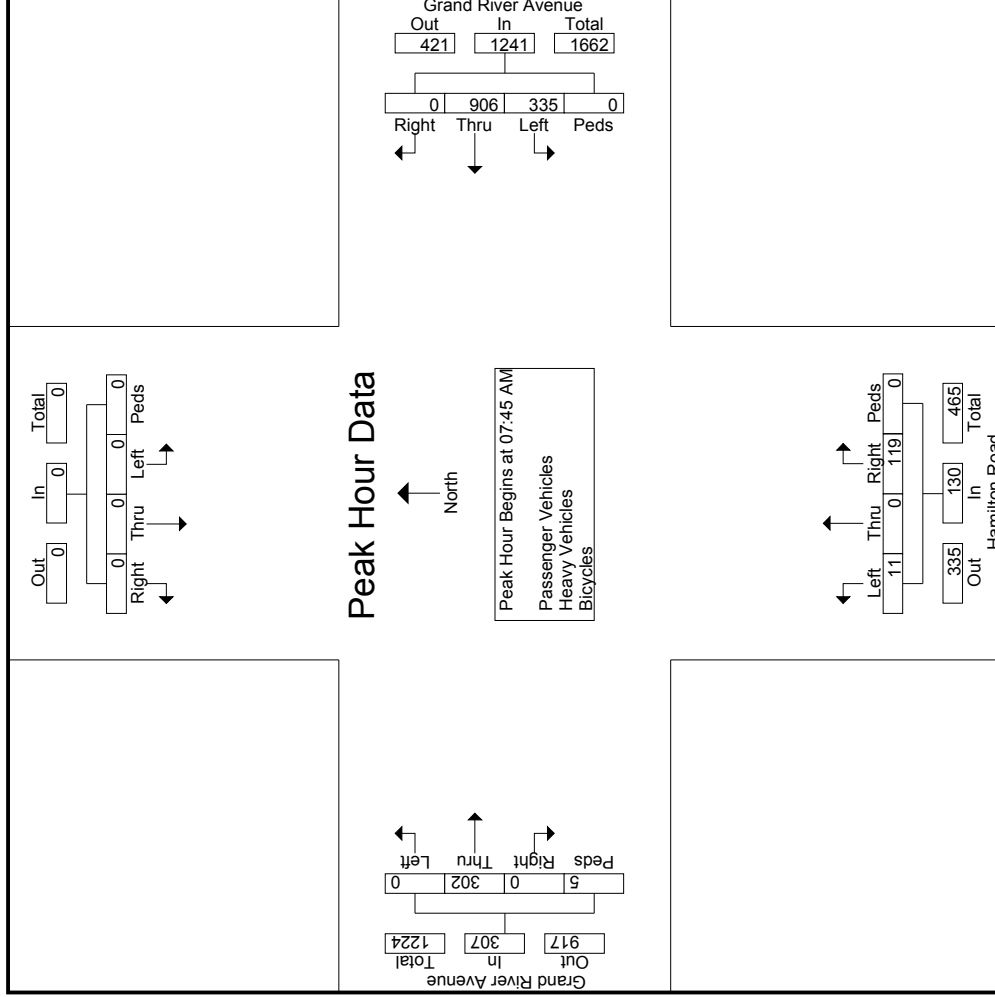
File Name : Grand River & Hamilton - AM  
Site Code : 09181802  
Start Date : 9/18/2018  
Page No : 1

Start Time	Grand River Avenue - Passenger Vehicles - Heavy Vehicles - Bicycles																				
	Grand River Avenue From East						Hamilton Road From South						Grand River Avenue From West								
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total				
07:00 AM	0	0	0	0	0	41	121	0	0	162	3	0	10	0	13	0	42	3	0	45	220
07:15 AM	0	0	0	0	0	78	197	0	0	275	4	0	14	0	18	0	40	0	0	40	333
07:30 AM	0	0	0	0	0	89	270	0	0	359	4	0	28	0	32	0	74	0	2	76	467
07:45 AM	0	0	0	0	0	103	255	0	0	358	5	0	50	0	55	0	84	0	0	84	497
Total	0	0	0	0	0	311	843	0	0	1154	16	0	102	0	118	0	240	3	2	245	1517
08:00 AM	0	0	0	0	0	78	223	0	0	301	2	0	18	0	20	0	57	0	0	57	378
08:15 AM	0	0	0	0	0	71	227	0	0	298	1	0	20	0	21	0	80	0	1	81	400
08:30 AM	0	0	0	0	0	83	201	0	0	284	3	0	31	0	34	0	81	0	4	85	403
08:45 AM	0	0	0	0	0	69	219	0	0	288	3	0	28	0	31	0	75	1	2	78	397
Total	0	0	0	0	0	301	870	0	0	1171	9	0	97	0	106	0	293	1	7	301	1578
Grand Total	0	0	0	0	0	612	1713	0	0	2325	25	0	199	0	224	0	533	4	9	546	3095
Approach %	0	0	0	0	0	26.3	73.7	0	0	11.2	0	0	88.8	0	0	0	97.6	0.7	1.6	0	0
Total %	0	0	0	0	0	19.8	55.3	0	0	75.1	0.8	0	6.4	0	7.2	0	17.2	0.1	0.3	17.6	0
Passenger Vehicles	0	0	0	0	0	601	1669	0	0	2270	23	0	191	0	214	0	506	4	9	519	3003
% Passenger Vehicles	0	0	0	0	0	98.2	97.4	0	0	97.6	92	0	96	0	95.5	0	94.9	100	100	95.1	97
Heavy Vehicles	0	0	0	0	0	11	44	0	0	55	2	0	8	0	10	0	27	0	0	27	92
% Heavy Vehicles	0	0	0	0	0	1.8	2.6	0	0	2.4	8	0	4	0	4.5	0	5.1	0	0	4.9	3
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Grand River Avenue - Passenger Vehicles - Heavy Vehicles - Bicycles																				
	Grand River Avenue From East						Hamilton Road From South						Grand River Avenue From West								
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total				
07:45 AM	0	0	0	0	0	103	255	0	0	358	5	0	50	0	55	0	84	0	0	84	497
08:00 AM	0	0	0	0	0	78	223	0	0	301	2	0	18	0	20	0	57	0	0	57	378
08:15 AM	0	0	0	0	0	71	227	0	0	298	1	0	20	0	21	0	80	0	1	81	400
08:30 AM	0	0	0	0	0	83	201	0	0	284	3	0	31	0	34	0	81	0	4	85	403
Total Volume	0	0	0	0	0	335	906	0	0	1241	11	0	119	0	130	0	302	0	5	307	1678
% App. Total	0	0	0	0	0	27	73	0	0	8.5	0	0	91.5	0	0	0	98.4	0	1.6	0	0
PHF	.000	.000	.000	.000	.000	.813	.888	.000	.000	.867	.550	.000	.595	.000	.591	.000	.899	.000	.313	.903	.844

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1  
Peak Hour for Entire Intersection Begins at 07:45 AM



Location: Grand River & Hamilton Rd.  
County/City: Meridian Twp.  
Weather: Sunny  
Counted By: JJ

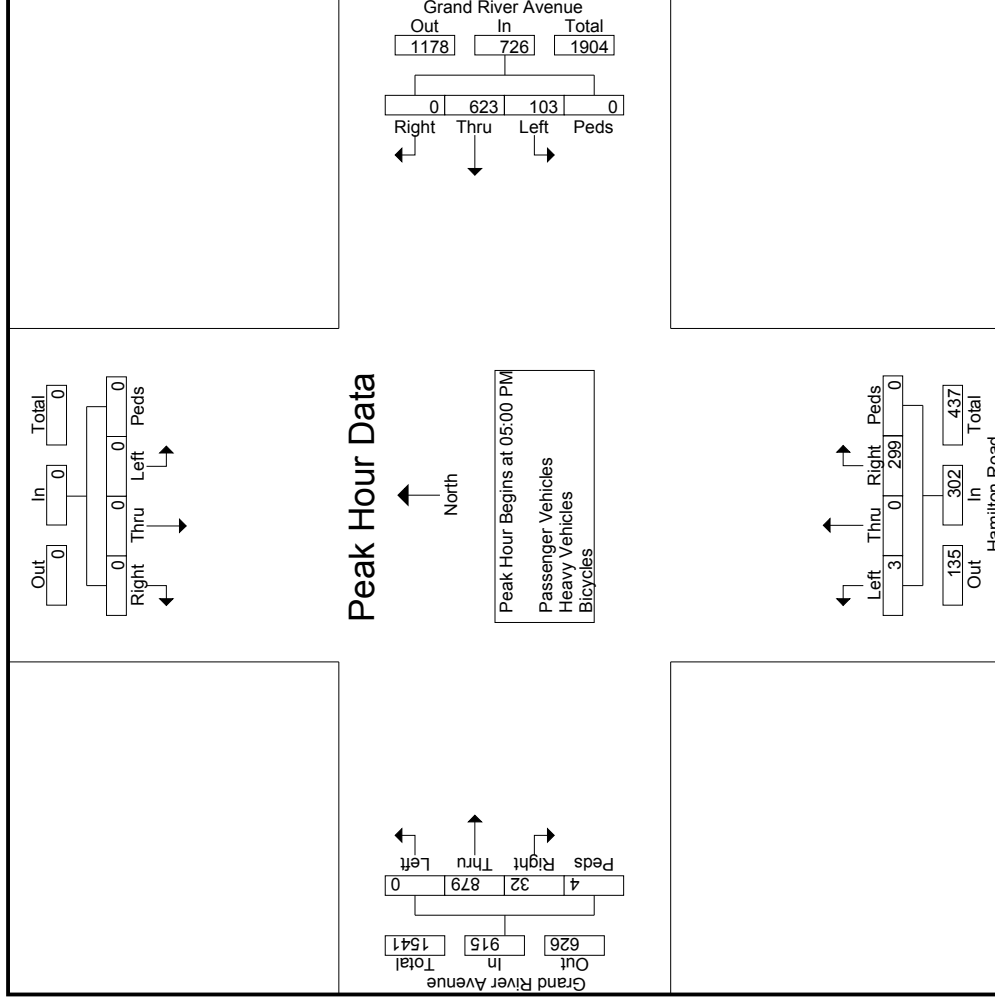
File Name : Grand River & Hamilton - PM  
Site Code : 09181802  
Start Date : 9/18/2018  
Page No : 1

Start Time	Grand River Avenue - Heavy Vehicles - Bicycles																			
	Grand River Avenue From East						Hamilton Road From South						Grand River Avenue From West							
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total			
04:00 PM	0	0	0	0	0	37	153	0	0	190	0	0	0	56	0	166	3	2	171	417
04:15 PM	0	0	0	0	0	32	129	0	0	161	0	0	0	67	0	178	6	0	184	412
04:30 PM	0	0	0	0	0	28	144	0	0	172	11	0	0	67	0	188	10	2	200	450
04:45 PM	0	0	0	0	0	46	173	0	0	219	0	0	0	48	0	196	6	0	202	469
Total	0	0	0	0	0	143	599	0	0	742	11	0	0	238	0	728	25	4	757	1748
05:00 PM	0	0	0	0	0	16	153	0	0	169	0	0	0	89	0	203	16	3	222	480
05:15 PM	0	0	0	0	0	29	142	0	0	171	0	0	0	61	0	233	9	1	243	475
05:30 PM	0	0	0	0	0	26	164	0	0	190	2	0	0	80	0	228	4	0	232	504
05:45 PM	0	0	0	0	0	32	164	0	0	196	1	0	0	69	0	215	3	0	218	484
Total	0	0	0	0	0	103	623	0	0	726	3	0	0	299	0	879	32	4	915	1943
Grand Total	0	0	0	0	0	246	1222	0	0	1468	14	0	0	537	0	1607	57	8	1672	3691
Approach %	0	0	0	0	0	16.8	83.2	0	0	39.8	0.4	0	0	14.5	0	43.5	3.4	0.5	45.3	
Total %	0	0	0	0	0	6.7	33.1	0	0	27.2	0.1	0	0	5.8	0	18.8	1.5	0.2	19.5	
Passenger Vehicles	0	0	0	0	0	238	1197	0	0	1435	14	0	0	528	0	1583	57	8	1648	3625
% Passenger Vehicles	0	0	0	0	0	96.7	98	0	0	97.8	100	0	0	98.3	0	98.5	100	100	98.6	98.2
Heavy Vehicles	0	0	0	0	0	8	25	0	0	33	0	0	0	9	0	24	0	0	24	66
% Heavy Vehicles	0	0	0	0	0	3.3	2	0	0	2.2	0	0	0	1.7	0	1.5	0	0	1.4	1.8
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Grand River Avenue																			
	Grand River Avenue From East						Hamilton Road From South						Grand River Avenue From West							
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total			
05:00 PM	0	0	0	0	0	16	153	0	0	169	0	0	0	89	0	203	16	3	222	480
05:15 PM	0	0	0	0	0	29	142	0	0	171	0	0	0	61	0	233	9	1	243	475
05:30 PM	0	0	0	0	0	26	164	0	0	190	2	0	0	80	0	228	4	0	232	504
05:45 PM	0	0	0	0	0	32	164	0	0	196	1	0	0	69	0	215	3	0	218	484
Total Volume	0	0	0	0	0	103	623	0	0	726	3	0	0	299	0	879	32	4	915	1943
% App. Total	0	0	0	0	0	14.2	85.8	0	0	14.2	1	0	0	99	0	96.1	3.5	0.4	94.1	96.4
PHF	.000	.000	.000	.000	.000	.805	.950	.000	.000	.926	.375	.000	.840	.000	.848	.943	.500	.333	.941	.964

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Entire Intersection Begins at 05:00 PM



**TRAFFIC SIGNAL TIMING PERMIT**

APPROACH	PHASE								TIMING INSTALLED		REMARKS		
	1	2	3	4	5	6	7	8					
MINIMUM GREEN PASSAGE													
MAXIMUM NO. 1													
MAXIMUM NO. 2													
YELLOW CHANGE													
RED CLEARANCE													
WALK													
PEDESTRIAN CLEARANCE													
EXTENDED PED. CLEARANCE													
REST IN WALK													
INITIALIZATION													
NON-ACT RESPONSE													
VEHICLE RECALL													
PEDESTRIAN RECALL													
NON-LOCK MEMORY													
DUAL ENTRY													
DIAL	CYCLE	SPLIT									O1	O2	O3
		SPLIT											
		SPLIT											
		SPLIT											
		SPLIT											
		SPLIT											
		SPLIT											
		SPLIT											
PHASE	MODE												

PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

FLASH HOURS: \_\_\_\_\_ to \_\_\_\_\_ DAILY  NONE

NIGHT FLASH: \_\_\_\_\_ FR = \_\_\_\_\_

CONFLICT FLASH: \_\_\_\_\_ FR = \_\_\_\_\_

CONTROLLER TYPE:  EPAC  PRE-EMPT

Other: \_\_\_\_\_  COUNTDOWN PEDS

LOCATION: \_\_\_\_\_

CITY/TWP: \_\_\_\_\_

COUNTY: \_\_\_\_\_

MILE POINT \_\_\_\_\_ CONTROL SECTION-SPOT # \_\_\_\_\_

Job # (if Applicable): \_\_\_\_\_

**OVERLAPS**

Overlap Phase	Load Bays	Phases Overlapped	T.G. (s)	Y (s)	R (s)	-GY	+GRN
=							
=							
=							
=							

# ADVANCED TIMING PARAMETERS FORM

SYSTEM INFORMATION		LEFT-TURN PHASING										RING AND BARRIER STRUCTURE											
Controller Type: <input type="checkbox"/> EPAC <input type="checkbox"/> Other:		System Type: <input type="checkbox"/> Closed Loop <input type="checkbox"/> Stand By <input type="checkbox"/> Group 1 <input type="checkbox"/> Group 2 Address: <input type="checkbox"/> TBC <input type="checkbox"/> TBC/GPS <input type="checkbox"/> None <input type="checkbox"/> Other:		If TBC, Synch by: <input type="checkbox"/> TOD <input type="checkbox"/> Event		Interconnect Type: <input type="checkbox"/> Hardwire <input type="checkbox"/> Fiber-Optic <input type="checkbox"/> Radio <input type="checkbox"/> Phone Drop <input type="checkbox"/> None <input type="checkbox"/> Other:		If Phone Drop, Phone #		Controller Status: <input type="checkbox"/> Master <input type="checkbox"/> Slave <input type="checkbox"/> Isolated <input type="checkbox"/> TBC		If Slave, Master Location:		Master Spot # :		Phase # / Description		Permissive-Protected Lag      Lead      Split      Lead      Lag		Protected-Only Lag      Lead      Lag		B1      B2      B3      B4	
VEHICULAR AND PEDESTRIAN DETECTION		DISAPPEARING LEGEND CASE SIGNS																					
Approach		Vehicular Detection Movements and Call Delay (s)										Pedestrian Detection Push-Button Crossing Locations											
		Left      Thru      Right	Loop      Video      Other																				
PHASE		1	2	3	4	5	6	7	8	O1	O2	O3											
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
DIAL	SPLIT	CYCLE																					
ADDITIONAL DIAL SPLIT DATA													COORDINATION DATA										
													Operation Mode										
													Coordination Mode										
													Maximum Mode										
													Correction Mode										
													Offset Mode										
													Force Mode										
													Max Dwell										
													Yield Period										
ADDITIONAL OVERLAP DATA																							
													Load	Phases									
													Bays	Overlapped		T.G. (s)	Y (s)	R (s)	-G/Y	+GRN			
													=										
													=										
													=										
													=										
													LOCATION:										
													PREPARED BY:		DATE:								
													<input type="checkbox"/> MDOT <input type="checkbox"/> County <input type="checkbox"/> City <input type="checkbox"/> Consultant										
													CONTROL SECTION-SPOT #										

# PREEMPTION INFORMATION FORM

Preemption Description:																Preempt System Data								
Preempt # =	Time (s)	Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Ring	1	2	3	4	
SEL Ped Ci		Vehicle	Track																MIN					
SEL Yellow			Dwell																GRN/WLK (s)					
SEL Red Ci			Cycle																					
TRACK Green			Exit																Priority	PE1/2	PE2/3	PE3/4	PE4/5	PE5/6
TRACK Ped Ci		Ped	Track																Status					
TRACK Yellow			Dwell																					
TRACK Red CL			Cycle																					
DWELL Green		Overlap	Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O						
RET Ped Ci		Vehicle	Track																					
RET Yellow			Dwell																					
RET Red Ci			Cycle																					
REMARKS :																								

Preemption Description:																Preempt System Data								
Preempt # =	Time (s)	Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Ring	1	2	3	4	
SEL Ped Ci		Vehicle	Track																MIN					
SEL Yellow			Dwell																GRN/WLK (s)					
SEL Red Ci			Cycle																					
TRACK Green			Exit																Priority	PE1/2	PE2/3	PE3/4	PE4/5	PE5/6
TRACK Ped Ci		Ped	Track																Status					
TRACK Yellow			Dwell																					
TRACK Red CL			Cycle																					
DWELL Green		Overlap	Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O						
RET Ped Ci		Vehicle	Track																					
RET Yellow			Dwell																					
RET Red Ci			Cycle																					
REMARKS :																								

Preemption Description:																Preempt System Data								
Preempt # =	Time (s)	Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Ring	1	2	3	4	
SEL Ped Ci		Vehicle	Track																MIN					
SEL Yellow			Dwell																GRN/WLK (s)					
SEL Red Ci			Cycle																					
TRACK Green			Exit																Priority	PE1/2	PE2/3	PE3/4	PE4/5	PE5/6
TRACK Ped Ci		Ped	Track																Status					
TRACK Yellow			Dwell																					
TRACK Red CL			Cycle																					
DWELL Green		Overlap	Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O						
RET Ped Ci		Vehicle	Track																					
RET Yellow			Dwell																					
RET Red Ci			Cycle																					
REMARKS :																								

Preemption Description:																Preempt System Data								
Preempt # =	Time (s)	Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Ring	1	2	3	4	
SEL Ped Ci		Vehicle	Track																MIN					
SEL Yellow			Dwell																GRN/WLK (s)					
SEL Red Ci			Cycle																					
TRACK Green			Exit																Priority	PE1/2	PE2/3	PE3/4	PE4/5	PE5/6
TRACK Ped Ci		Ped	Track																Status					
TRACK Yellow			Dwell																					
TRACK Red CL			Cycle																					
DWELL Green		Overlap	Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O						
RET Ped Ci		Vehicle	Track																					
RET Yellow			Dwell																					
RET Red Ci			Cycle																					
REMARKS :																								

PREPARED BY:		DATE:	
LOCATION:			
CONTROL SECTION-SPOT #			

## **Appendix B**

# **EXISTING TRAFFIC CONDITIONS**



HCM 6th Signalized Intersection Summary  
 1: Dobie Road/Central Park Drive & Grand River Ave

Existing Conditions  
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	211	55	26	824	67	130	117	19	77	140	37
Future Volume (veh/h)	25	211	55	26	824	67	130	117	19	77	140	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	29	245	64	30	958	78	143	129	21	93	169	45
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.91	0.91	0.91	0.83	0.83	0.83
Percent Heavy Veh, %	7	7	7	1	1	1	3	3	3	1	1	1
Cap, veh/h	314	2105	938	705	2069	168	262	372	61	284	451	382
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	523	3413	1520	1078	3354	273	1158	1557	253	1247	1885	1598
Grp Volume(v), veh/h	29	245	64	30	512	524	143	0	150	93	169	45
Grp Sat Flow(s),veh/h/ln	523	1706	1520	1078	1791	1836	1158	0	1810	1247	1885	1598
Q Serve(g_s), s	3.1	3.0	1.7	1.2	15.3	15.3	11.8	0.0	6.9	6.7	7.5	2.2
Cycle Q Clear(g_c), s	18.5	3.0	1.7	4.1	15.3	15.3	19.3	0.0	6.9	13.6	7.5	2.2
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	314	2105	938	705	1105	1132	262	0	433	284	451	382
V/C Ratio(X)	0.09	0.12	0.07	0.04	0.46	0.46	0.55	0.00	0.35	0.33	0.37	0.12
Avail Cap(c_a), veh/h	314	2105	938	705	1105	1132	487	0	784	526	816	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	7.9	7.7	8.8	10.3	10.3	39.9	0.0	31.6	37.2	31.8	29.8
Incr Delay (d2), s/veh	0.6	0.1	0.1	0.1	1.4	1.4	3.7	0.0	1.0	1.4	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.5	0.3	5.5	5.6	3.5	0.0	3.1	2.1	3.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	8.0	7.8	8.9	11.7	11.6	43.6	0.0	32.6	38.6	32.9	30.1
LnGrp LOS	B	A	A	A	B	B	D	A	C	D	C	C
Approach Vol, veh/h		338			1066			293			307	
Approach Delay, s/veh		8.6			11.6			38.0			34.2	
Approach LOS		A			B			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.4		30.6		69.4		30.6				
Change Period (Y+Rc), s		7.7		* 6.7		7.7		* 6.7				
Max Green Setting (Gmax), s		42.3		* 43		42.3		* 43				
Max Q Clear Time (g_c+I1), s		0.0		15.6		0.0		21.3				
Green Ext Time (p_c), s		0.0		2.9		0.0		2.6				

Intersection Summary

HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
2: Hamilton Road & Grand River Ave

Existing Conditions  
AM Peak Hour

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	307	0	335	906	11	119
Future Vol, veh/h	307	0	335	906	11	119
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	500	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	87	87	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	341	0	385	1041	18	198

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	346	0	1637
Stage 1	-	-	-	-	346
Stage 2	-	-	-	-	1291
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1210	-	91
Stage 1	-	-	-	-	688
Stage 2	-	-	-	-	222
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1204	-	62
Mov Cap-2 Maneuver	-	-	-	-	-407
Stage 1	-	-	-	-	466
Stage 2	-	-	-	-	222

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1122	-	-	1204	-
HCM Lane V/C Ratio	0.193	-	-	0.32	-
HCM Control Delay (s)	9	-	-	9.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	1.4	-

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

HCM 6th Signalized Intersection Summary  
 1: Dobie Road/Central Park Drive & Grand River Ave

Existing Conditions  
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	701	117	18	425	199	109	307	21	189	267	60
Future Volume (veh/h)	81	701	117	18	425	199	109	307	21	189	267	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1984	1984	1984	1984	1984	1984	1984	1984	1984	2000	2000	2000
Adj Flow Rate, veh/h	86	746	124	19	452	212	117	330	23	205	290	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	396	1972	877	332	1306	607	299	611	43	267	666	564
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	777	3770	1677	641	2497	1161	1034	1833	128	1044	2000	1693
Grp Volume(v), veh/h	86	746	124	19	340	324	117	0	353	205	290	65
Grp Sat Flow(s),veh/h/ln	777	1885	1677	641	1885	1773	1034	0	1961	1044	2000	1693
Q Serve(g_s), s	7.3	11.8	3.8	1.8	10.5	10.7	10.0	0.0	14.6	18.7	11.3	2.7
Cycle Q Clear(g_c), s	17.9	11.8	3.8	13.6	10.5	10.7	21.3	0.0	14.6	33.3	11.3	2.7
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	396	1972	877	332	986	927	299	0	653	267	666	564
V/C Ratio(X)	0.22	0.38	0.14	0.06	0.35	0.35	0.39	0.00	0.54	0.77	0.44	0.12
Avail Cap(c_a), veh/h	396	1972	877	332	986	927	299	0	653	267	666	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	14.2	12.3	18.2	13.9	13.9	34.3	0.0	27.1	41.1	26.0	23.1
Incr Delay (d2), s/veh	1.3	0.6	0.3	0.3	1.0	1.0	1.8	0.0	1.6	14.7	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.6	1.4	0.3	4.3	4.1	2.6	0.0	6.9	6.1	5.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	14.7	12.6	18.5	14.8	15.0	36.1	0.0	28.8	55.9	27.0	23.3
LnGrp LOS	C	B	B	B	B	B	D	A	C	E	C	C
Approach Vol, veh/h		956			683			470			560	
Approach Delay, s/veh		15.0			15.0			30.6			37.1	
Approach LOS		B			B			C			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		40.0		60.0		40.0				
Change Period (Y+Rc), s		7.7		* 6.7		7.7		* 6.7				
Max Green Setting (Gmax), s		52.3		* 33		52.3		* 33				
Max Q Clear Time (g_c+I1), s		0.0		35.3		0.0		23.3				
Green Ext Time (p_c), s		0.0		0.0		0.0		3.2				

Intersection Summary

HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
2: Hamilton Road & Grand River Ave

Existing Conditions  
PM Peak Hour

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	879	32	103	639	3	299
Future Vol, veh/h	879	32	103	639	3	299
Conflicting Peds, #/hr	0	4	4	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	500	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	93	93	85	85
Heavy Vehicles, %	1	1	2	2	2	2
Mvmt Flow	935	34	111	687	4	352

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	973	0	1522
Stage 1	-	-	-	-	956
Stage 2	-	-	-	-	566
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	704	-	109
Stage 1	-	-	-	-	334
Stage 2	-	-	-	-	532
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	701	-	91
Mov Cap-2 Maneuver	-	-	-	-	193
Stage 1	-	-	-	-	280
Stage 2	-	-	-	-	532

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	26.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	514	-	-	701	-
HCM Lane V/C Ratio	0.691	-	-	0.158	-
HCM Control Delay (s)	26.2	-	-	11.1	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	5.3	-	-	0.6	-

**Intersection: 1: Dobie Road/Central Park Drive & Grand River Ave**

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	62	102	90	50	61	240	237	204	152	130	153	54
Average Queue (ft)	17	37	18	8	11	114	125	94	65	49	67	17
95th Queue (ft)	48	82	54	28	42	206	214	170	126	95	123	43
Link Distance (ft)		2046	2046			398	398	522	522		1029	1029
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			250	500					400		
Storage Blk Time (%)												
Queuing Penalty (veh)												

**Intersection: 2: Hamilton Road & Grand River Ave**

Movement	WB	NB	B7
Directions Served	L	LR	T
Maximum Queue (ft)	96	82	50
Average Queue (ft)	40	43	3
95th Queue (ft)	73	72	25
Link Distance (ft)		15	400
Upstream Blk Time (%)		17	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)	500		
Storage Blk Time (%)			
Queuing Penalty (veh)			

**Network Summary**

Network wide Queuing Penalty: 0
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**Intersection: 1: Dobie Road/Central Park Drive & Grand River Ave**

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	113	169	167	74	39	153	201	154	272	424	866	644
Average Queue (ft)	45	95	86	21	11	79	97	70	140	326	441	131
95th Queue (ft)	92	149	147	53	34	130	162	137	240	503	991	647
Link Distance (ft)		2046	2046			398	398	522	522		1029	1029
Upstream Blk Time (%)											8	3
Queuing Penalty (veh)											0	0
Storage Bay Dist (ft)	500			250	500					400		
Storage Blk Time (%)										31	7	
Queuing Penalty (veh)										83	14	

**Intersection: 2: Hamilton Road & Grand River Ave**

Movement	EB	WB	NB	B7
Directions Served	TR	L	LR	T
Maximum Queue (ft)	9	99	97	144
Average Queue (ft)	0	34	67	17
95th Queue (ft)	4	76	98	71
Link Distance (ft)	398		15	400
Upstream Blk Time (%)			37	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)		500		
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 7: Bend**

Movement	SB
Directions Served	T
Maximum Queue (ft)	22
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	15
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

**Network Summary**

Network wide Queuing Penalty: 96

HCM 6th Signalized Intersection Summary  
 1: Dobie Road/Central Park Drive & Grand River Ave

Existing Conditions with Improvements  
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	701	117	18	425	199	109	307	21	189	267	60
Future Volume (veh/h)	81	701	117	18	425	199	109	307	21	189	267	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1984	1984	1984	1984	1984	1984	1984	1984	1984	2000	2000	2000
Adj Flow Rate, veh/h	86	746	124	19	452	212	117	330	23	205	290	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	349	1785	794	292	1182	550	359	701	49	330	765	648
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	777	3770	1676	641	2496	1161	1034	1833	128	1044	2000	1694
Grp Volume(v), veh/h	86	746	124	19	340	324	117	0	353	205	290	65
Grp Sat Flow(s),veh/h/ln	777	1885	1676	641	1885	1773	1034	0	1961	1044	2000	1694
Q Serve(g_s), s	8.0	13.0	4.2	2.0	11.6	11.8	9.2	0.0	13.6	18.4	10.5	2.5
Cycle Q Clear(g_c), s	19.8	13.0	4.2	15.0	11.6	11.8	19.7	0.0	13.6	32.0	10.5	2.5
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	349	1785	794	292	893	839	359	0	750	330	765	648
V/C Ratio(X)	0.25	0.42	0.16	0.06	0.38	0.39	0.33	0.00	0.47	0.62	0.38	0.10
Avail Cap(c_a), veh/h	349	1785	794	292	893	839	453	0	928	424	946	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	17.3	15.0	22.2	16.9	17.0	29.4	0.0	23.2	35.3	22.3	19.8
Incr Delay (d2), s/veh	1.7	0.7	0.4	0.4	1.2	1.3	1.1	0.0	1.0	4.0	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.3	1.6	0.3	4.9	4.7	2.3	0.0	6.3	4.9	4.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	18.0	15.4	22.6	18.2	18.3	30.5	0.0	24.2	39.3	23.0	20.0
LnGrp LOS	C	B	B	C	B	B	C	A	C	D	C	B
Approach Vol, veh/h		956			683			470			560	
Approach Delay, s/veh		18.3			18.3			25.8			28.6	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		55.0		45.0		55.0		45.0				
Change Period (Y+Rc), s		7.7		* 6.7		7.7		* 6.7				
Max Green Setting (Gmax), s		38.3		* 47		38.3		* 47				
Max Q Clear Time (g_c+I1), s		0.0		34.0		0.0		21.7				
Green Ext Time (p_c), s		0.0		4.3		0.0		5.3				

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection: 1: Dobie Road/Central Park Drive & Grand River Ave**

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	133	217	223	73	48	166	200	137	265	215	224	51
Average Queue (ft)	47	125	119	19	15	92	112	62	127	119	106	20
95th Queue (ft)	101	195	199	46	40	148	183	118	223	200	186	42
Link Distance (ft)		2046	2046			398	398	522	522		1029	1029
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			250	500					400		
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

**Intersection: 2: Hamilton Road & Grand River Ave**

Movement	EB	WB	NB	B7
Directions Served	TR	L	LR	T
Maximum Queue (ft)	9	77	101	121
Average Queue (ft)	0	30	67	16
95th Queue (ft)	5	62	98	72
Link Distance (ft)	398		15	400
Upstream Blk Time (%)			37	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)		500		
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 7: Bend**

Movement	SB
Directions Served	T
Maximum Queue (ft)	11
Average Queue (ft)	0
95th Queue (ft)	8
Link Distance (ft)	15
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

**Network Summary**

Network wide Queuing Penalty: 0



## **Appendix C**

# **FUTURE TRAFFIC CONDITIONS**

HCM 6th Signalized Intersection Summary  
 1: Dobie Road/Central Park Drive & Grand River Ave

Future Conditions  
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	215	55	26	827	70	130	117	19	81	140	37
Future Volume (veh/h)	25	215	55	26	827	70	130	117	19	81	140	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	29	250	64	30	962	81	143	129	21	98	169	45
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.91	0.91	0.91	0.83	0.83	0.83
Percent Heavy Veh, %	7	7	7	1	1	1	3	3	3	1	1	1
Cap, veh/h	312	2105	938	701	2063	174	262	372	61	284	451	382
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	519	3413	1520	1073	3344	282	1158	1557	253	1247	1885	1598
Grp Volume(v), veh/h	29	250	64	30	515	528	143	0	150	98	169	45
Grp Sat Flow(s),veh/h/ln	519	1706	1520	1073	1791	1834	1158	0	1810	1247	1885	1598
Q Serve(g_s), s	3.2	3.0	1.7	1.2	15.5	15.5	11.8	0.0	6.9	7.1	7.5	2.2
Cycle Q Clear(g_c), s	18.7	3.0	1.7	4.2	15.5	15.5	19.3	0.0	6.9	14.0	7.5	2.2
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	312	2105	938	701	1105	1132	262	0	433	284	451	382
V/C Ratio(X)	0.09	0.12	0.07	0.04	0.47	0.47	0.55	0.00	0.35	0.34	0.37	0.12
Avail Cap(c_a), veh/h	312	2105	938	701	1105	1132	487	0	784	526	816	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	7.9	7.7	8.8	10.3	10.3	39.9	0.0	31.6	37.4	31.8	29.8
Incr Delay (d2), s/veh	0.6	0.1	0.1	0.1	1.4	1.4	3.7	0.0	1.0	1.5	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.5	0.3	5.6	5.7	3.5	0.0	3.1	2.2	3.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.9	8.0	7.8	8.9	11.7	11.7	43.6	0.0	32.6	38.9	32.9	30.1
LnGrp LOS	B	A	A	A	B	B	D	A	C	D	C	C
Approach Vol, veh/h		343			1073			293			312	
Approach Delay, s/veh		8.7			11.6			38.0			34.4	
Approach LOS		A			B			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.4		30.6		69.4		30.6				
Change Period (Y+Rc), s		7.7		* 6.7		7.7		* 6.7				
Max Green Setting (Gmax), s		42.3		* 43		42.3		* 43				
Max Q Clear Time (g_c+I1), s		0.0		16.0		0.0		21.3				
Green Ext Time (p_c), s		0.0		2.9		0.0		2.6				

Intersection Summary

HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
2: Hamilton Road & Grand River Ave

Future Conditions  
AM Peak Hour

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	315	0	340	912	11	125
Future Vol, veh/h	315	0	340	912	11	125
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	87	87	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	350	0	391	1048	18	208

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	355	0	1661 180
Stage 1	-	-	-	-	355 -
Stage 2	-	-	-	-	1306 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	1200	-	88 832
Stage 1	-	-	-	-	681 -
Stage 2	-	-	-	-	218 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1194	-	59 828
Mov Cap-2 Maneuver	-	-	-	-	124 -
Stage 1	-	-	-	-	678 -
Stage 2	-	-	-	-	147 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	567	-	-	1194	-
HCM Lane V/C Ratio	0.4	-	-	0.327	-
HCM Control Delay (s)	15.5	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	1.4	-

HCM 6th TWSC  
3: Grand River Ave & Site Drive

Future Conditions  
AM Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	426	1241	18	14	11
Future Vol, veh/h	14	426	1241	18	14	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	463	1349	20	15	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1369	0	-	0	1621 685
Stage 1	-	-	-	-	1359 -
Stage 2	-	-	-	-	262 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	497	-	-	-	94 391
Stage 1	-	-	-	-	204 -
Stage 2	-	-	-	-	758 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	497	-	-	-	91 391
Mov Cap-2 Maneuver	-	-	-	-	167 -
Stage 1	-	-	-	-	198 -
Stage 2	-	-	-	-	758 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	22.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	497	-	-	-	167	391
HCM Lane V/C Ratio	0.031	-	-	-	0.091	0.031
HCM Control Delay (s)	12.5	-	-	-	28.7	14.5
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.1

HCM 6th Signalized Intersection Summary  
 1: Dobie Road/Central Park Drive & Grand River Ave

Future Conditions  
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	720	117	18	443	210	109	307	21	199	267	60
Future Volume (veh/h)	81	720	117	18	443	210	109	307	21	199	267	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1984	1984	1984	1984	1984	1984	1984	1984	1984	2000	2000	2000
Adj Flow Rate, veh/h	86	766	124	19	471	223	117	330	23	216	290	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	382	1972	877	325	1301	612	299	611	43	267	666	564
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	756	3770	1677	629	2487	1170	1034	1833	128	1044	2000	1693
Grp Volume(v), veh/h	86	766	124	19	356	338	117	0	353	216	290	65
Grp Sat Flow(s),veh/h/ln	756	1885	1677	629	1885	1771	1034	0	1961	1044	2000	1693
Q Serve(g_s), s	7.6	12.2	3.8	1.9	11.1	11.2	10.0	0.0	14.6	18.7	11.3	2.7
Cycle Q Clear(g_c), s	18.8	12.2	3.8	14.0	11.1	11.2	21.3	0.0	14.6	33.3	11.3	2.7
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	382	1972	877	325	986	926	299	0	653	267	666	564
V/C Ratio(X)	0.22	0.39	0.14	0.06	0.36	0.36	0.39	0.00	0.54	0.81	0.44	0.12
Avail Cap(c_a), veh/h	382	1972	877	325	986	926	299	0	653	267	666	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	14.3	12.3	18.5	14.0	14.1	34.3	0.0	27.1	41.6	26.0	23.1
Incr Delay (d2), s/veh	1.4	0.6	0.3	0.3	1.0	1.1	1.8	0.0	1.6	18.7	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.8	1.4	0.3	4.5	4.3	2.6	0.0	6.9	6.7	5.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	14.9	12.6	18.8	15.1	15.2	36.1	0.0	28.8	60.3	27.0	23.3
LnGrp LOS	C	B	B	B	B	B	D	A	C	E	C	C
Approach Vol, veh/h		976			713			470			571	
Approach Delay, s/veh		15.1			15.2			30.6			39.2	
Approach LOS		B			B			C			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		40.0		60.0		40.0				
Change Period (Y+Rc), s		7.7		* 6.7		7.7		* 6.7				
Max Green Setting (Gmax), s		52.3		* 33		52.3		* 33				
Max Q Clear Time (g_c+I1), s		0.0		35.3		0.0		23.3				
Green Ext Time (p_c), s		0.0		0.0		0.0		3.2				

Intersection Summary

HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
2: Hamilton Road & Grand River Ave

Future Conditions  
PM Peak Hour

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	908	32	118	668	3	314
Future Vol, veh/h	908	32	118	668	3	314
Conflicting Peds, #/hr	0	4	4	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	500	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	93	93	85	85
Heavy Vehicles, %	1	1	2	2	2	2
Mvmt Flow	966	34	127	718	4	369

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1004	0	1600
Stage 1	-	-	-	-	987
Stage 2	-	-	-	-	613
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	686	-	97
Stage 1	-	-	-	-	322
Stage 2	-	-	-	-	503
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	683	-	79
Mov Cap-2 Maneuver	-	-	-	-	175
Stage 1	-	-	-	-	261
Stage 2	-	-	-	-	503

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	30.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	502	-	-	683	-
HCM Lane V/C Ratio	0.743	-	-	0.186	-
HCM Control Delay (s)	30.1	-	-	11.5	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	6.2	-	-	0.7	-

HCM 6th TWSC  
3: Grand River Ave & Site Drive

Future Conditions  
PM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	1178	742	16	15	44
Future Vol, veh/h	44	1178	742	16	15	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	1253	798	17	16	48

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	815	0	-	0	1528
Stage 1	-	-	-	-	807
Stage 2	-	-	-	-	721
Critical Hdwy	4.14	-	-	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	2.22	-	-	-	3.52
Pot Cap-1 Maneuver	808	-	-	-	108
Stage 1	-	-	-	-	399
Stage 2	-	-	-	-	443
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	808	-	-	-	102
Mov Cap-2 Maneuver	-	-	-	-	223
Stage 1	-	-	-	-	376
Stage 2	-	-	-	-	443

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	808	-	-	-	223	593
HCM Lane V/C Ratio	0.058	-	-	-	0.073	0.081
HCM Control Delay (s)	9.7	-	-	-	22.4	11.6
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.3

**Intersection: 1: Dobie Road/Central Park Drive & Grand River Ave**

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	67	101	54	33	47	231	228	162	159	131	133	54
Average Queue (ft)	16	36	15	8	12	111	126	82	67	52	67	17
95th Queue (ft)	50	74	44	24	36	194	210	139	129	101	120	44
Link Distance (ft)		2046	2046			398	398	522	522		1029	1029
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			250	500					400		
Storage Blk Time (%)												
Queuing Penalty (veh)												

**Intersection: 2: Hamilton Road & Grand River Ave**

Movement	WB	WB	NB	B7
Directions Served	L	T	LR	T
Maximum Queue (ft)	72	48	82	51
Average Queue (ft)	41	2	42	3
95th Queue (ft)	71	24	71	28
Link Distance (ft)		182	15	400
Upstream Blk Time (%)	14			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	3	0		
Queuing Penalty (veh)	12	0		

**Intersection: 3: Grand River Ave & Site Drive**

Movement	EB	SB	SB
Directions Served	L	L	R
Maximum Queue (ft)	41	44	35
Average Queue (ft)	9	15	10
95th Queue (ft)	32	42	33
Link Distance (ft)			271
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	50	50	
Storage Blk Time (%)	1	3	0
Queuing Penalty (veh)	2	0	0

**Network Summary**

Network wide Queuing Penalty: 14



**Intersection: 1: Dobie Road/Central Park Drive & Grand River Ave**

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	110	183	164	67	44	144	191	163	287	425	969	845
Average Queue (ft)	39	102	92	17	13	82	98	62	153	380	695	360
95th Queue (ft)	84	159	156	47	37	133	164	124	258	528	1276	1138
Link Distance (ft)		2046	2046			398	398	522	522		1029	1029
Upstream Blk Time (%)											27	11
Queuing Penalty (veh)											0	0
Storage Bay Dist (ft)	500			250	500					400		
Storage Blk Time (%)										60	16	
Queuing Penalty (veh)										161	31	

**Intersection: 2: Hamilton Road & Grand River Ave**

Movement	EB	EB	WB	NB	B7
Directions Served	T	TR	L	LR	T
Maximum Queue (ft)	10	22	100	99	117
Average Queue (ft)	0	1	42	70	18
95th Queue (ft)	7	7	81	100	69
Link Distance (ft)	398	398		15	400
Upstream Blk Time (%)				41	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)			500		
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 3: Grand River Ave & Site Drive**

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	50	17	4	45	62
Average Queue (ft)	19	1	0	13	25
95th Queue (ft)	47	10	3	38	53
Link Distance (ft)		174	1722		270
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	50			50	
Storage Blk Time (%)	1			1	1
Queuing Penalty (veh)	3			0	0

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**Intersection: 7: Bend**

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Movement	SB
Directions Served	T
Maximum Queue (ft)	33
Average Queue (ft)	1
95th Queue (ft)	14
Link Distance (ft)	15
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

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























**Network Summary**

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Network wide Queuing Penalty: 196

HCM 6th Signalized Intersection Summary  
 1: Dobie Road/Central Park Drive & Grand River Ave

Future Conditions With Improvements  
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	81	720	117	18	443	210	109	307	21	199	267	60
Future Volume (veh/h)	81	720	117	18	443	210	109	307	21	199	267	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1984	1984	1984	1984	1984	1984	1984	1984	1984	2000	2000	2000
Adj Flow Rate, veh/h	86	766	124	19	471	223	117	330	23	216	290	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	329	1757	781	280	1159	545	368	715	50	339	780	661
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	756	3770	1676	629	2487	1170	1034	1833	128	1044	2000	1694
Grp Volume(v), veh/h	86	766	124	19	356	338	117	0	353	216	290	65
Grp Sat Flow(s),veh/h/ln	756	1885	1676	629	1885	1771	1034	0	1961	1044	2000	1694
Q Serve(g_s), s	8.5	13.6	4.3	2.1	12.4	12.6	9.1	0.0	13.4	19.4	10.3	2.4
Cycle Q Clear(g_c), s	21.1	13.6	4.3	15.7	12.4	12.6	19.4	0.0	13.4	32.8	10.3	2.4
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	329	1757	781	280	878	825	368	0	765	339	780	661
V/C Ratio(X)	0.26	0.44	0.16	0.07	0.41	0.41	0.32	0.00	0.46	0.64	0.37	0.10
Avail Cap(c_a), veh/h	329	1757	781	280	878	825	454	0	928	426	946	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	17.9	15.4	23.2	17.6	17.6	28.7	0.0	22.7	34.9	21.8	19.3
Incr Delay (d2), s/veh	1.9	0.8	0.4	0.5	1.4	1.5	1.0	0.0	0.9	4.2	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.6	1.6	0.3	5.3	5.1	2.3	0.0	6.1	5.2	4.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	18.7	15.8	23.6	19.0	19.1	29.7	0.0	23.6	39.1	22.4	19.5
LnGrp LOS	C	B	B	C	B	B	C	A	C	D	C	B
Approach Vol, veh/h		976			713			470			571	
Approach Delay, s/veh		19.0			19.2			25.1			28.4	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.3		45.7		54.3		45.7				
Change Period (Y+Rc), s		7.7		* 6.7		7.7		* 6.7				
Max Green Setting (Gmax), s		38.3		* 47		38.3		* 47				
Max Q Clear Time (g_c+I1), s		0.0		34.8		0.0		21.4				
Green Ext Time (p_c), s		0.0		4.2		0.0		5.3				

Intersection Summary

HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

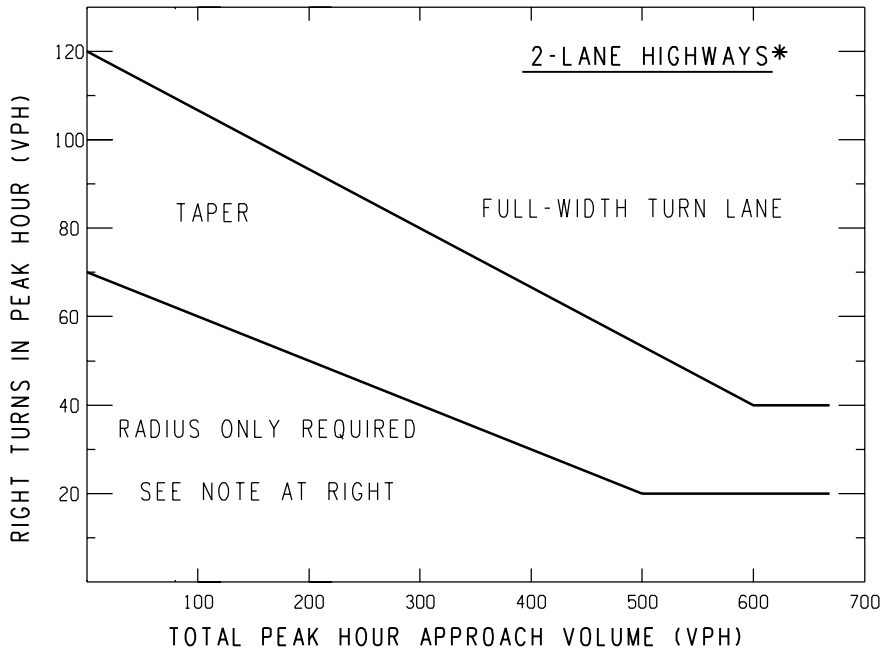
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Dobie Road/Central Park Drive & Grand River Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	131	209	202	59	65	195	229	150	250	242	238	50
Average Queue (ft)	48	126	117	20	14	98	119	60	119	125	105	17
95th Queue (ft)	100	192	188	45	43	163	191	122	206	207	189	41
Link Distance (ft)		2046	2046			398	398	522	522		1029	1029
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			250	500					400		
Storage Blk Time (%)												
Queuing Penalty (veh)												

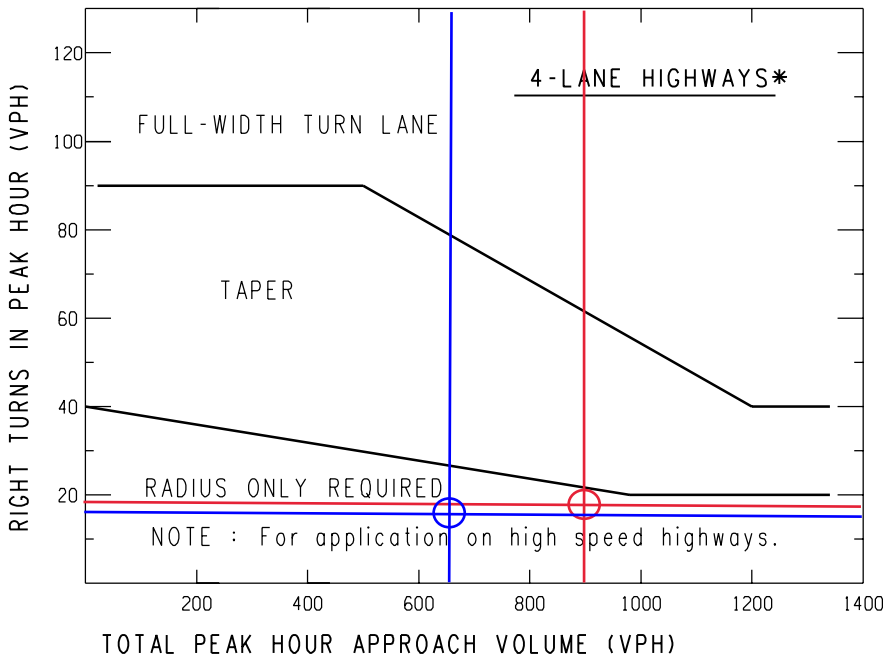
## **Appendix D**

# **WARRANT SUMMARIES**



NOTE:  
 For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = Peak hour right turns - 20



\*If a center left-turn lane exists (i.e. 3 or 5 lane highway), subtract the number of left turns in approach volume from the total approach volume to get an adjusted total approach volume.

AM  
 18 Right-turns  
 906 Approach

PM  
 16 Right-turns  
 639 Approach

**Sample Problem:**

The Design Speed is 55 mph. The Peak Hour Approach Volume is 300 vph. The Number of Right Turns in the Peak Hour is 100 vph. Determine if a right turn lane is recommended.

**Solution:**

Figure indicates that the intersection of 300 vph and 100 vph is located above the upper trend line; thus, a right-turn lane may be recommended.

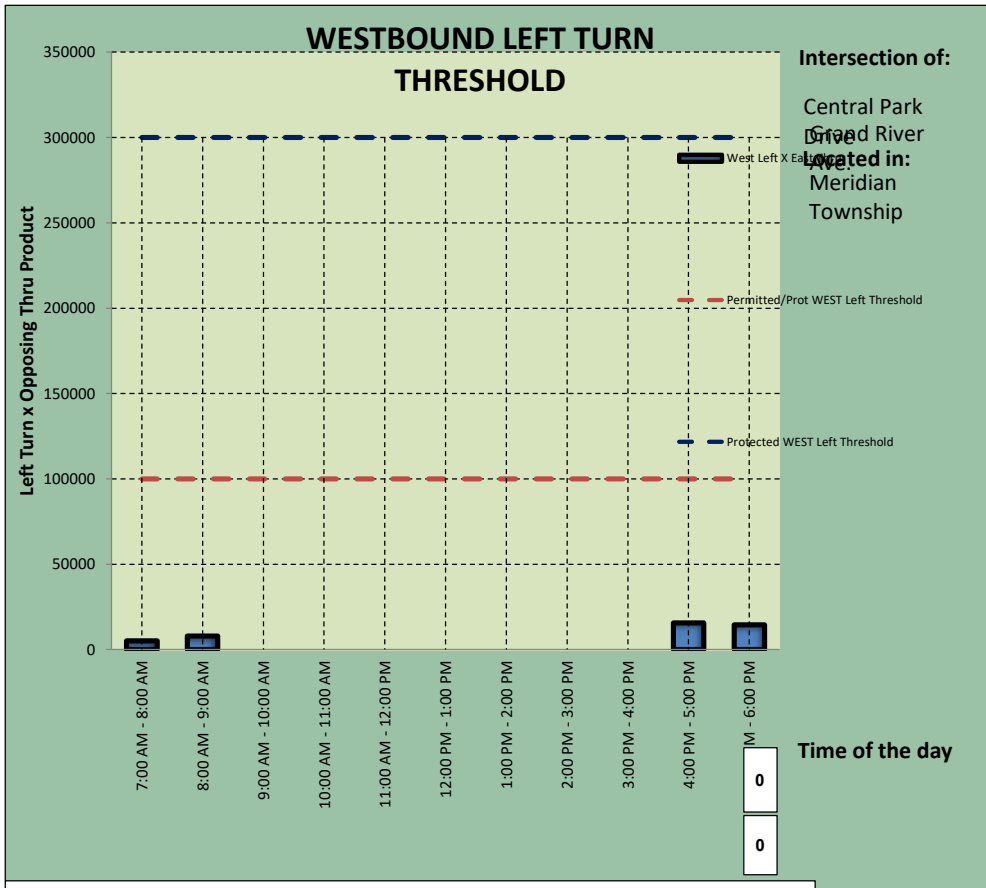
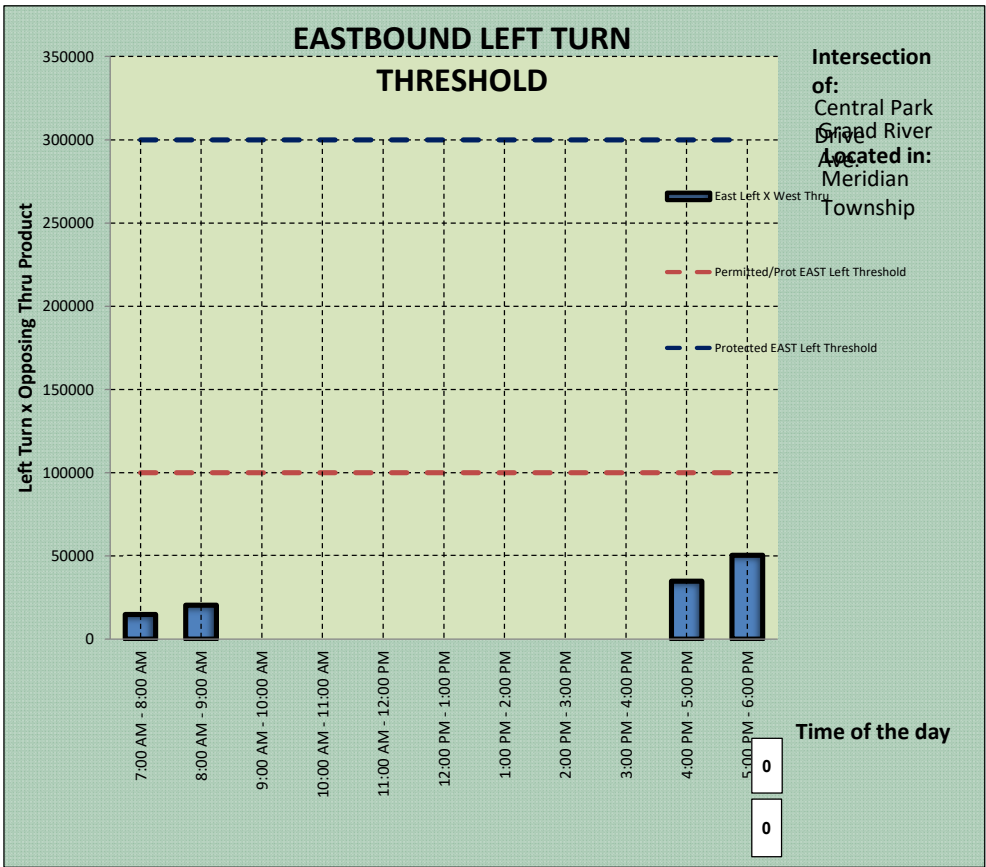
		<b>TRAFFIC VOLUME GUIDELINES          FOR RIGHT-TURN LANES AND TAPERS</b>	
<b>TRAFFIC AND SAFETY          NOTE</b>			
DRAWN BY: MTS CHECKED BY: JAT	08/05/2004 PLAN DATE:	<b>604A</b>	SHEET 2 OF 2
FILE: K:\DGN\ts notes\Note604A tsn.dgn		REV. 08/05/2004	

## EASTBOUND AND WESTBOUND LEFT TURN PHASE THRESHOLDS

Please enter Data in Yellow Boxes ONLY

CONDITIONS		Items to Consider for Protected Only	Items to Consider for Permissive/Protected	
<b>EASTBOUND LEFT TURN GEOMETRY</b>				
No. of Opposing WESTbound Thru Lanes (include combination thru lanes)	2	NO	YES	
No. of Opposing WESTbound Right Turn Only Lanes	0	N / A		
What is the Opposing WESTbound speed limit or 85%ile? (mph)	45	NO	N / A	
No. of EASTbound Left Turning Lanes	1	NO	N / A	
What is the EASTbound sight distance in the field? (ft)	500	NO	YES	
Minimum Required Sight Distance (ft)	397			
<b>WESTBOUND LEFT TURN GEOMETRY</b>				
No. of Opposing EASTbound Thru Lanes (include combination thru lanes)	2	NO	YES	
No. of Opposing EASTbound Right Turn Only Lanes	0	N / A		
What is the Opposing EASTbound speed limit or 85%ile? (mph)	45	NO	N / A	
No. of WESTbound Left Turning Lanes	1	NO	N / A	
What is the WESTbound sight distance in the field? (ft)	500	NO	YES	
Minimum Required Sight Distance (ft)	397			
<b>TRAFFIC CHARACTERISTICS</b>				
EASTbound Left Turn Vol (vph)	81	NO		
WESTbound Left Turn Vol (vph)	30	NO		
Cross Product of LEFT TURN EAST (See Chart Below)	50544	NO	NO	
Cross Product of LEFT TURN WEST (See Chart Below)	15750	NO	NO	
<b>CRASH HISTORY</b>				
Is there an existing permissive/protected or permissive/protected LT phase?	NO			
Which Approach does the "One Left Turn Movement" crashes correspond to?	EASTBOUND			
<b>ONE LEFT TURN MOVEMENT</b>	Crash History for 12 Month Period			
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO	NO
	Crash History for 24 Month Period			
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO	NO
<b>TWO LEFT TURN MOVEMENTS</b>	Crash History for 12 Month Period			
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO	NO
	Crash History for 24 Month Period			
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO	NO
EASTbound Left Turn DELAY per vehicle? Sec. / Veh.	20.4	NO		
EASTbound TOTAL Left Turn DELAY? Veh-Hr	0.46	NO		
WESTbound Left Turn DELAY per vehicle? Sec. / Veh.	55.9	NO		
WESTbound TOTAL Left Turn DELAY? Veh-Hr	0.47	NO		

*Left-turn phasing should only be approved and installed after a comprehensive engineering study indicates such an operation is necessary for the safe and efficient operation of an intersection. The type of left-turn phasing will be determined based on data from the engineering study which includes the amount of delay experienced by left-turning traffic, crash patterns that may be occurring and available capacity of the intersection.*



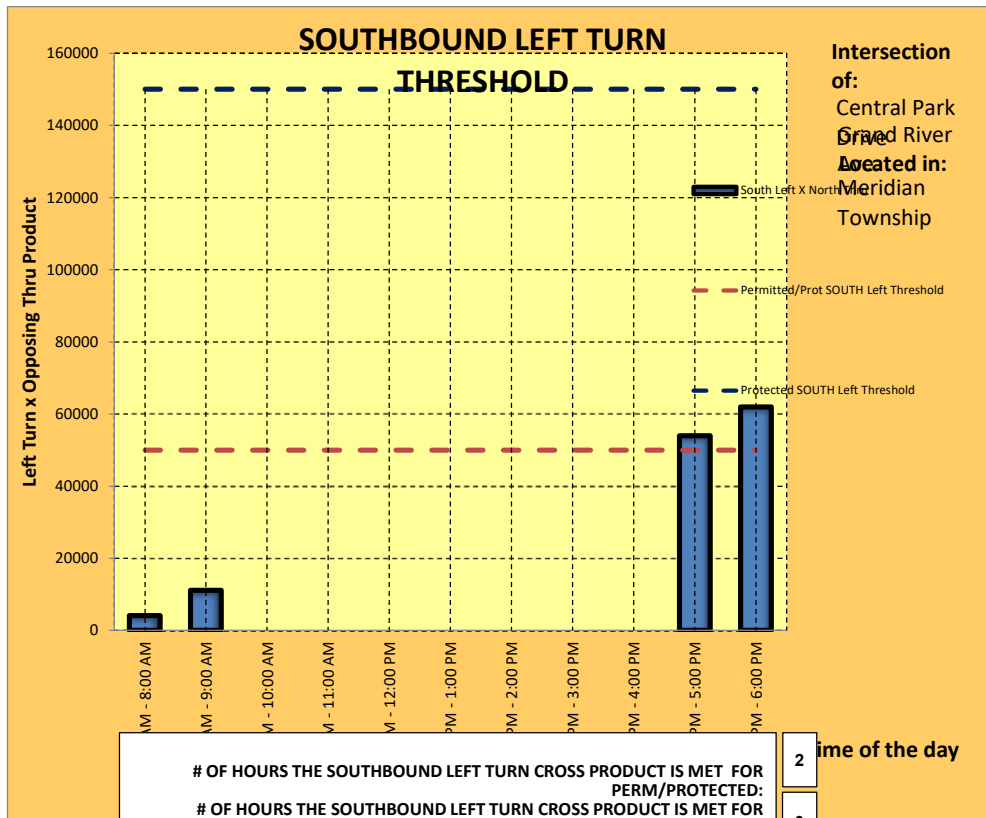
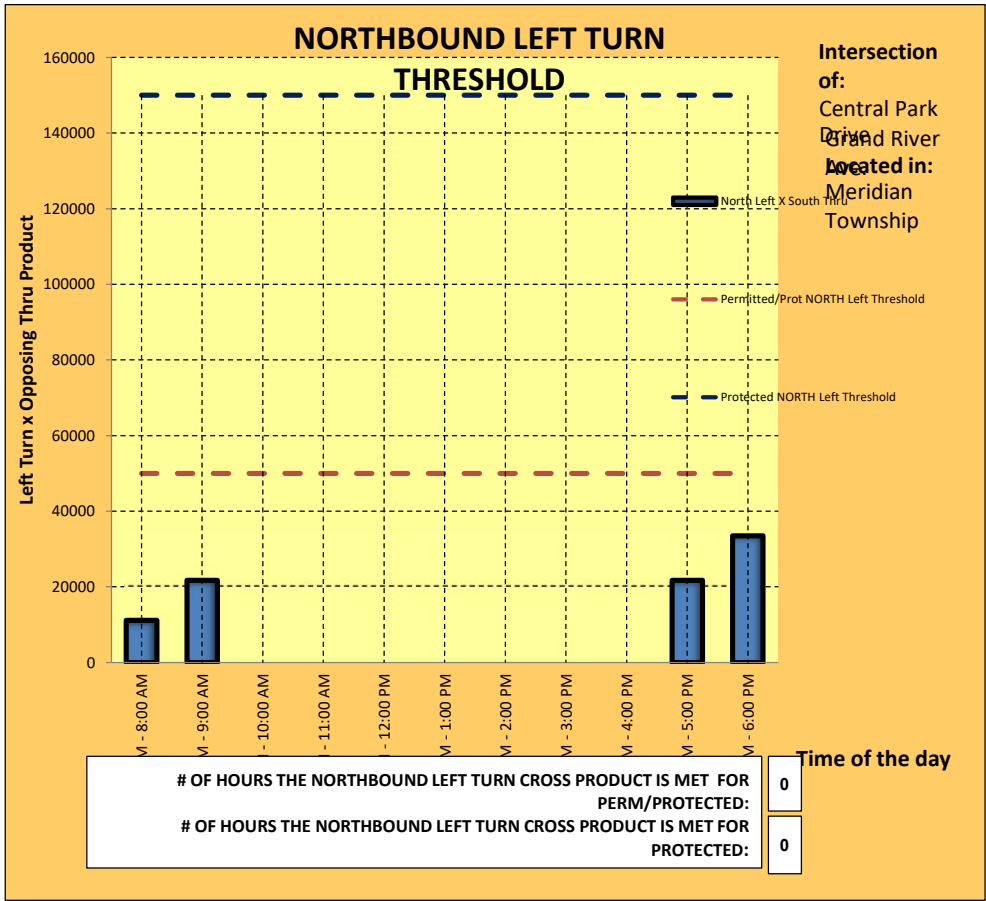


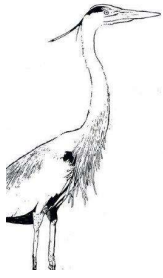
# NORTHBOUND AND SOUTHBOUND LEFT TURN PHASE THRESHOLDS

Please enter Data in Yellow Boxes ONLY

CONDITIONS		Items to Consider for Protected Only	Items to Consider for Permissive/Protected
<b>NORTHBOUND LEFT TURN GEOMETRY</b>			
No. of Opposing SOUTHbound Thru Lanes (include combination thru lanes)	1	NO	YES
No. of Opposing SOUTHbound Right Turn Only Lanes	1		N / A
What is the Opposing SOUTHbound speed limit or 85%ile? (mph)	35	NO	N / A
No. of NORTHbound Left Turning Lanes	1	NO	N / A
What is the NORTHbound sight distance in the field? (ft)	500	NO	YES
Minimum Required Sight Distance (ft)	309		
<b>SOUTHBOUND LEFT TURN GEOMETRY</b>			
No. of Opposing NORTHbound Thru Lanes (include combination thru lanes)	1	NO	YES
No. of Opposing NORTHbound Right Turn Only Lanes	0		N / A
What is the Opposing NORTHbound speed limit or 85%ile? (mph)	35	NO	N / A
No. of SOUTHbound Left Turning Lanes	1	NO	N / A
What is the SOUTHbound sight distance in the field? (ft)	500	NO	YES
Minimum Required Sight Distance (ft)	283		
<b>TRAFFIC CHARACTERISTICS</b>			
NORTHbound Left Turn Vol (vph)	135		YES
SOUTHbound Left Turn Vol (vph)	189		YES
Cross Product of LEFT TURN NORTH (See Chart Below)	33463	NO	NO
Cross Product of LEFT TURN SOUTH (See Chart Below)	61992	NO	YES
<b>CRASH HISTORY</b>			
Is there an existing permissive/protected or permissive/protected LT phase?	YES		
Which Approach does the "One Left Turn Movement" crashes correspond to?	SOUTHBOUND		
<b>ONE LEFT TURN MOVEMENT</b>	Crash History for 12 Month Period		
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO
	Crash History for 24 Month Period		
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO
<b>TWO LEFT TURN MOVEMENTS</b>	Crash History for 12 Month Period		
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO
	Crash History for 24 Month Period		
	Enter Number of Correctable crashes? (Left-Turn Head-On)	0	NO
NORTHbound Left Turn DELAY per vehicle? Sec. / Veh.	36.1	NO	
NORTHbound TOTAL Left Turn DELAY? Veh-Hr	1.35	NO	
SOUTHbound Left Turn DELAY per vehicle? Sec. / Veh.	55.9	YES	
SOUTHbound TOTAL Left Turn DELAY? Veh-Hr	2.93	YES	

*Left-turn phasing should only be approved and installed after a comprehensive engineering study indicates such an operation is necessary for the safe and efficient operation of an intersection. The type of left-turn phasing will be determined based on data from the engineering study which includes the amount of delay experienced by left-turning traffic, crash patterns that may be occurring and available capacity of the intersection.*





MARX  
WETLANDS  
LLC

September 24, 2018

Mr. Colin Schiefler  
**DP Fox dba Green Castle Properties, LLC**  
200 Ottawa Ave., NW #800  
Grand Rapids, MI 49506

**Re: Wetland Delineation Report: Grand River Avenue & Central Park Dr.  
(Approx. 9-acre Property)  
Meridian Township, Ingham County, MI**

Mr. Schiefler:

Pursuant to your request, Marx Wetlands LLC conducted a wetland determination and delineation for an approximately 9-acre Assessment Area consisting of three (3) parcels (#33-02-02-22-252-003, 33-02-02-22-401-003, and 33-02-02-22-426-001) for the above-referenced ("Project Site"). The Site is located on the east side of Central Park Drive on the north side of Grand River Avenue within Section 22 of Meridian Township (T4N, R1W) of Ingham County, Michigan. The intent of this determination is to provide a report of the character of any wetland areas within the subject parcel and an opinion as to the possible jurisdiction of the Michigan Department of Environmental Quality (MDEQ) and/or local governments over wetland areas identified on-site.

The wetland determination was performed in accordance with the Michigan Department of Environmental Quality Wetland Identification Manual (2001), the Northcentral-Northeast Manual to the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual. The delineation of any wetland depends on three basic parameters. These parameters are: 1) the presence of hydrophytic vegetation (plants adapted to living in saturated soils), 2) hydric soils (distinctive soil types that develop under saturated conditions), and 3) wetland hydrology (the presence of water at or near the surface for a specific period of time). The above parameters are virtually always inter-related and present in wetland systems. The wetland determination consisted of desktop review of available background documentation and mapping followed by two (2) site visits performed on September 17 & 18, 2018. A review of the findings is provided below.

#### **Site Characteristics**

Based on review of aerial photographs and the on-site visits, the Site is largely vacant, undeveloped land consisting of areas of upland field, scrub-shrub, forest, mixed deciduous tree lines, and wetland. The Site also contains existing vacated houses, a barn, in-ground pool, and associated lawn, particularly in the central and southern portions of the Site. In addition, existing driveways and mowed paths were also observed. The Site is within a largely commercial and residential region of Meridian Township, Michigan. The Site is bounded by undeveloped land to the north, commercial development/Central Park Drive to the west, W. Grand River Avenue to the south, and undeveloped land/commercial buildings to the east.

3309 Platt Road  
Ann Arbor, Michigan  
Mobile: 734-478-8277  
e-mail  
bg.marxwetlands@gmail.com

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*Cover Type Descriptions*

Upland herbaceous species found in the open fields and much of the lawn areas include orchard grass (*Dactylus glomerata*), common milkweed (*Asclepias syriaca*), smooth brome (*Bromus inermis*), Japanese hedge-parsley (*Torilis japonica*), bluegrasses (*Poa pratensis* & *P. compressa*), timothy (*Phleum pratense*), Queen Anne’s lace (*Daucus carota*), and thistles (*Cirsium arvense* and *C. vulgare*). In addition, scattered prairie remnant species were also observed such as little bluestem (*Schizachyrium scoparium*), broom-sedge (*Andropogon virginicus*), and goldenrods (*Solidago altissima* and *S. canadensis*). Scattered trees and shrub species observed include: cottonwood (*Populus deltoides*), multi-flora rose (*Rosa multiflora*), autumn-olive (*Elaeagnus umbellata*), blackberry (*Rubus allegheniensis*), and black raspberry (*Rubus occidentalis*).

The upland, scrub-shrub and mixed deciduous forested areas, including the tree lines generally contain the following species: penn sedge (*Carex pennsylvanica*), orchard grass, white vervain (*Verbena urticifolia*), Virginia creeper (*Parthenocissus quinquefolia*), white pine (*Pinus strobus*), black locust (*Robinia pseudoacacia*), Scotch pine (*Pinus sylvestris*), white spruce (*Picea glauca*), blue spruce (*Picea pungens*), crabapple/apple (*Malus spp.*), maples (*Acer platanoides*, *A. saccharum*, and *Acer saccharinum*), oaks (*Quercus alba* and *Q. rubra*), black walnut (*Juglans nigra*), box-elder (*Acer negundo*), black cherry (*Prunus serotina*), cottonwood, scattered with basswood (*Tilia americana*), white mulberry (*Morus alba*), sycamore (*Platanus occidentalis*), American elm (*Ulmus americana*), trembling aspen (*Populus tremuloides*), and ash (*Fraxinus spp.*) trees. Common native and non-native shrub species include autumn-olive, dogwoods (*Cornus amomum* and *C. racemosa*), common buckthorn (*Rhamnus cathartica*), blackberry and black raspberry. The weedy aspect of the Site is likely due to possible previous agricultural land use or another site disturbance. Refer to the enclosed *Photographic Log*.

**Wetland Determination & Delineation**

Six (6) wetlands (Wetlands A, B, C, D, E, and F) were identified within the Site and/or along the site’s perimeters. No ponds or watercourses appear within the Site. Refer to the enclosed Wetland Sketch.

Table 1. Wetland Inventory Table		
Feature Name	Wetland Type	Regulatory Status
Wetland A	Emergent (PEM)/Forested-PFO Edge	Likely MDEQ and Township Non-Regulated; isolated and < 0.25 ac in size
Wetland B	PEM/PFO edge	Likely MDEQ and Township Non-Regulated; isolated and < 0.25 ac in size
Wetland C	Emergent (PEM)	Likely MDEQ and Township Non-Regulated; isolated and < 0.25 ac in size
Wetland D	Emergent (PEM)	Likely MDEQ & Township regulated; within 500 feet of off-site pond.
Wetland E	Emergent/PFO edge	Likely MDEQ & Township regulated; within 500 feet of off-site pond.
Wetland F	Emergent/PFO edge	Likely MDEQ & Township regulated; within 500 feet of off-site pond

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Meridian Township, Ingham County, Michigan  
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Wetlands

**Wetlands A & B**

Wetlands A & B are largely emergent wetlands with a minor forested component observed in the northwest portion of the Site (on parcel 33-02-02-22-252-003). Wetland A is contained entirely within the Site; however, Wetland B extends north off-site. Herbaceous vegetation within these wetlands include: reed canary grass (*Phalaris arundinacea*; FACW), softstem bulrush (*Schoenoplectus tabernaemontani*; OBL), grass-leaved goldenrod (*Euthamia graminifolia*; FACW), Indian-hemp (*Apocynum cannabinum*; FAC), calico American-aster (*Symphotrichum lateriflorum*; FAC), soft-stemmed rush (*Juncus effusus*; OBL), and scattered sedges (*Carex lupulina*, *C. scoparia* and *C. vulpinoidea*; OBL-FACW). Woody vines include riverbank grape (*Vitis riparia*; FACW) and poison-ivy (*Toxicodendron radicans*; FAC); and shrub species include: black raspberry and dogwoods. Overhanging trees observed include silver maple (*Acer saccharinum*; FACW), white swamp oak (*Quercus bicolor*; FACW), elm (FACW) and cottonwood (FAC). Most of these species range in wetland indicator status from obligate (OBL) to facultative (FAC), indicating species that typically occur in wetlands. Wetland hydrology indicators observed include: microtopographic relief (i.e., hummocks), water-stained leaves, geomorphic position, and FAC Neutral Test. These wetlands appear to receive hydrology from precipitation, runoff from adjacent developed areas, and roadways, resulting in seasonally saturated to seasonally inundated water regimes. Refer to the enclosed *Wetland Sketch*.

**Wetlands C & D**

Wetlands C & D are primarily emergent wetlands observed in the northwest and north-central portion of the Site (on parcel 33-02-02-22-252-003). Wetland C extends north off-site and Wetland D is entirely within the site boundaries. Common herbaceous vegetation observed include: reed canary grass (FACW), grass-leaved goldenrod (FACW), redtop (*Agrostis gigantea*; FAC), softstem bulrush (OBL), Indian-hemp (FAC), paniced American-aster (*Symphotrichum lanceolatum*; FACW), soft-stemmed rush (OBL), and sedges (*Carex normalis*, *C. scoparia*, and *C. vulpinoidea*). Wetland C also contained: wool grass (*Scirpus cyperinus*; OBL), rush (*Juncus biflorus*), and self-heal (*Prunella vulgaris*; FAC). The species range in wetland indicator status from obligate (OBL) to facultative (FAC), indicating species that typically occur in wetlands. Wetland hydrology indicators observed include microtopographic relief (i.e., hummocks), geomorphic position, and FAC Neutral Test. These wetlands appear to receive hydrology from precipitation, runoff from adjacent developed areas, and roadways, resulting in seasonally saturated to seasonally inundated water regimes. Refer to the enclosed *Wetland Sketch*.

**Wetlands E & F**

Wetlands E and F are primarily emergent wetlands with overhanging trees observed along the eastern boundary of the Site (on parcel #33-02-02-22-426-001). These wetlands continue slightly off-site; however, do appear to close at an

Central Park Drive & W. Grand River Avenue  
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upland berm along the western edge of the pond (off-site). Dominant herbaceous vegetation observed include: reed canary grass (FACW) and redtop (FAC), scattered species include: calico American-aster (FAC) and ground-ivy (*Glechoma hederacea*; FACU). Overhanging trees and shrubs observed include box-elder (FAC), common buckthorn (FAC), black ash (*Fraxinus nigra*; FACW) saplings, and black willow (*Salix nigra*; FACW). Most of these species range in wetland indicator status from obligate (OBL) to facultative (FAC), indicating species that typically occur in wetlands. Wetland hydrology indicators observed include water-stained leaves, bare soil (sparsely vegetated concave surface in areas), geomorphic position, and FAC Neutral Test. These wetlands appear to receive hydrology from precipitation, runoff from adjacent developed areas, and roadways, resulting in seasonally saturated to seasonally inundated water regimes. Refer to the enclosed *Wetland Sketch*.

#### Regulations

Part 301, Inland Lakes and Streams, states that a feature is considered a regulated watercourse by the MDEQ if it possesses a defined bed, bank, and evidence of continued flow or a continued occurrence of water. Additionally, Part 301 states that if a pond with a surface area larger than five (5) acres should be considered regulated. Based on the site visit, no watercourses or ponds were observed on-site.

Part 303, Wetlands Protection, of the NREPA states that if a wetland is five acres in size or larger and/or connected to or located within 500 feet of a river, stream, lake, or pond, it is considered regulated by the MDEQ. Marx Wetlands, LLC has the professional opinion that both Wetlands A, B, and C are not likely regulated by the MDEQ because they appear less than 5 acres in size and isolated (i.e., not connected to or located within 500 feet of a regulating feature). However, Wetlands D, E, and F are likely within 500 feet of a regulating feature (i.e., off-site pond east of parcel #33-02-02-22-426-001). Therefore, Marx Wetlands LLC has the professional opinion that Wetlands D, E, and F appear to meet the requirements of Part 303, Wetlands Protection, of the NREPA.

In addition, Meridian Township (Township) has its own wetland protection ordinance. The township's Wetland Protection ordinance (Chapter 22, Article IV) states that wetlands are protected if they are:

- contiguous to any inland lake stream, river, or pond.
- Partially or entirely within 500 feet of the ordinary high-water mark of any inland lake, stream, river or pond.
- Two or more areas of wetland separated only by barriers, such as dikes, roads, berms or other similar features, if any of those wetlands are contiguous to an inland lake, stream, river or pond.

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- larger than two acres, even if not contiguous to an inland lake, stream, river or pond.
- not contiguous to any inland lake, stream, river or pond, if the state department of environmental quality determines the protection of the wetland is essential to the preservation of the natural resources of the state from pollution, impairment or destruction.
- wetlands, equal to or greater than one-quarter acre and equal to or less than two acres in size, which are not contiguous to any inland lake, stream, river or pond and are determined to be essential to the preservation of the natural resources of the Township as provided in township code § 22-156. Code § 22-156 provides that a wetland is essential to the preservation of the township's natural resources if it fulfills any of ten criteria.

Therefore, it is the professional opinion of Marx Wetlands LLC that Wetlands D, E, and F are also likely regulated by Meridian Township because they appear within 500 feet of a regulating feature (i.e., pond). Wetlands A, B, and C appear to be isolated and/or less than 0.25 acres in size and may be considered non-regulated by the Township; however, Wetlands A & B may be protected under the Meridian Township's *Chapter 22 Environment, Article IV Wetland Protection*, if it is determined that the protection of these wetland areas is important for the preservation of the local natural resources. (Meridian Township- Code 1974, § 105-3; Ord. No. 2002-02, 3-19-2002; Ord. No. 2003-11, 7-6-2003; Ord. No. 2011-04, 3-15-2011).

It is important to note that the Meridian Township Board has a policy of no net loss of wetlands and impacts to wetlands may require wetland mitigation. A mitigation plan, if required, shall be approved as part of the wetland use permit decision.

A permit or approval is likely required by the Meridian Township for any proposed work (e.g., filling, dredging, construction, and draining and/or other development) that takes place within the boundaries of a regulated wetland. Most construction activities that take place outside of these boundaries do not require a wetland permit from the MDEQ or Meridian Township. Please note that the MDEQ and Township have the final authority on the extent of regulated wetlands, lakes, and streams in the State of Michigan and Meridian Township, respectively.

Please be advised the information provided in this report is a professional opinion. The ultimate decision on wetland boundary locations and jurisdiction thereof rests with the MDEQ or Township and, in some cases, the Federal government. Therefore, there may be adjustments to boundaries based upon review of a regulatory agency. An agency determination can vary, depending on various factors including, but not limited to, experience of the agency representative making the determination and the season of the year. In addition, the physical

September 24, 2018

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Meridian Township, Ingham County, Michigan  
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characteristics of the site can change with time, depending on the weather, vegetation patterns, drainage, activities on adjacent parcels, or other events. Any of these factors can change the nature / extent of wetlands on the site.

Thank you for the opportunity to provide this wetland determination. If you have any questions, please contact me at your convenience.

Sincerely,



**Marx Wetlands LLC**

Bryana J. Guevara, PWS 2949  
ISA Certified Arborist MI-4204A  
Environmental Consultant

**Enclosures:**

- 1) Photographic Log
- 2) Wetland Sketch
- 3) USACE Wetland Determination Data Forms



## PHOTOGRAPHIC LOG



1) An east-facing view of existing dirt driveway.



2) A northeast-facing view of an upland old field with scattered shrubs and trees. In ground pool observed in background of this photograph.



3) View of existing mowed path observed in the western portion of the Site.



4) View of the undeveloped parcel consisting of primarily upland fields and mixed deciduous forest patches.

## PHOTOGRAPHIC LOG



5) Another view of upland mixed deciduous forested patches observed in the Site.



6) A west-facing view of an existing barn and open field and grassy lawn areas. Upland tree lines were observed along the western boundary.



7) View of an existing, vacated house observed on the 1614 W. Grand River Avenue property.



8) Another view of the existing house and associated upland field and lawn observed in the south-central portion of the overall Site.

## PHOTOGRAPHIC LOG



9) View of Wetland A, a largely emergent wetland with overhanging trees, observed within the northwestern portion of the Site.



10) A north-facing view of Wetland B, another emergent wetland with overhanging trees observed along the northern boundary of the Site.



11) View of an upland break that appears to separate Wetlands A & B in the northwest portion of the site.



12) A north-facing view of Wetland C, an emergent wetland in the northeast corner of the Site. Note upland shrubs (i.e. autumn-olive) in background of this photo.

## PHOTOGRAPHIC LOG



13) View of Wetland D, an emergent wetland, observed in the northeast portion of the Site.



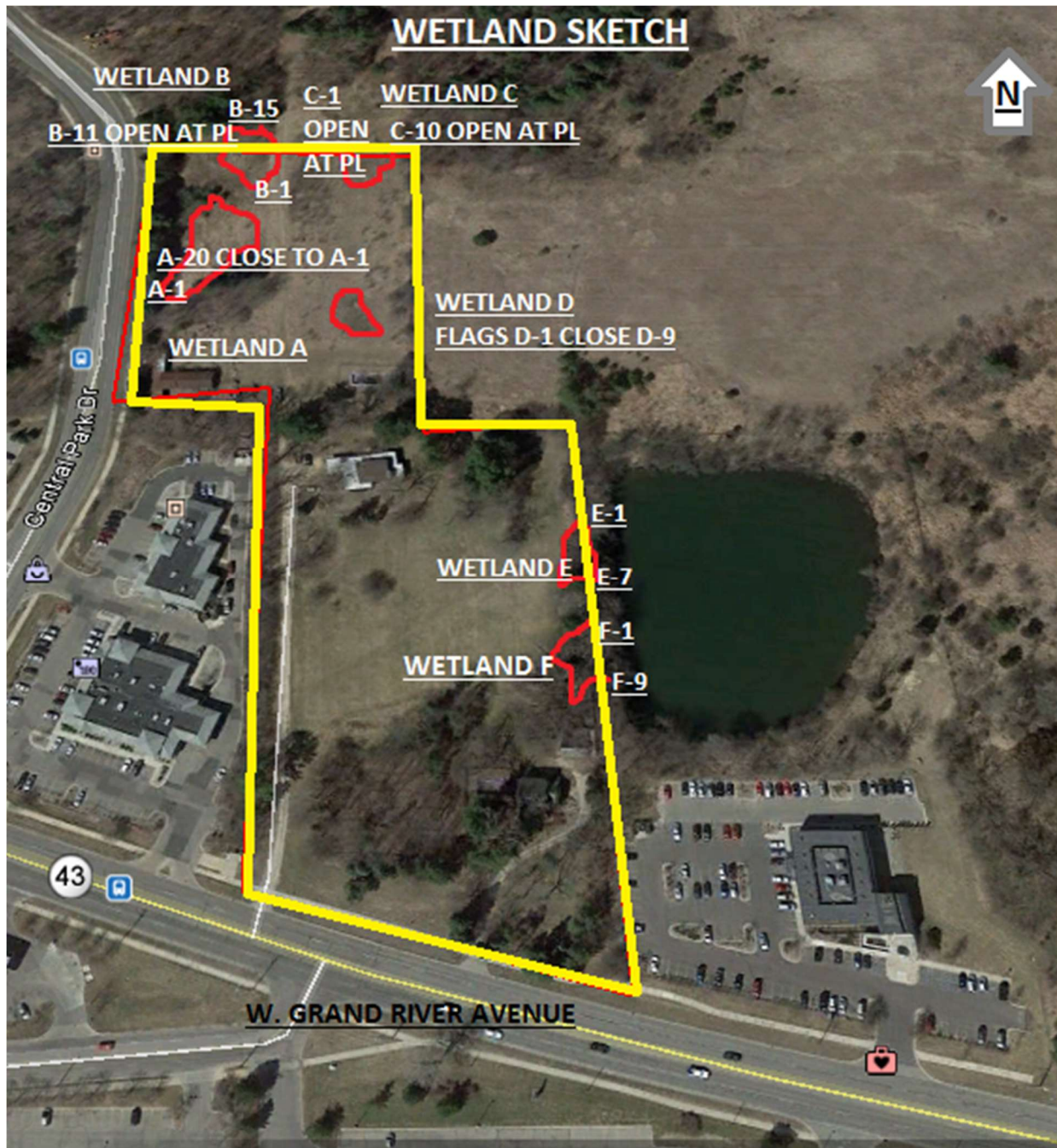
14) A north-facing view of Wetland E, an emergent wetland with overhanging trees, observed along the eastern boundary of the Site.



15) A south-facing view of Wetland F, an emergent wetland with overhanging trees, along the eastern site boundary.



16) An east-facing view of W. Grand River Avenue along the southern boundary of the Site.



- **Wetland A:** Flags A-1 close to A-20
- **Wetland B:** Flags B-1 continue to B-11 (open at property line-PL); continue B-15 close to B-1
- **Wetland C:** Flags C-1 open at PL; continue to C-10 open at PL
- **Wetland D:** Flags D-1 close to D-9
- **Wetland E:** Flags E-1 continue to E-7; (likely closes off-site)
- **Wetland F:** Flags F-1 continue to F-9; (likely closes off-site)

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: W. Grand River Avenue/Central Park Drive City/County: Meridian Twp/Ingham Co. Sampling Date: 9/17/2018  
 Applicant/Owner: DP Fox dba Green Castle Properties, LLC State: MI Sampling Point: A  
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S22, T4N, R1W  
 Landform (hillside, terrace, etc.): toeslope/depression Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR L Lat: 42.71956 Long: -84.40849 Datum: WGS84  
 Soil Map Unit Name: Kibbie loam, 0 to 3 percent slopes NWI classification: PEM/Minor (PFO) edge

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland system is observed in the northwest portion of the Site.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology is typical for this wetland type during the driest period of the year.	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     A    

	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30-ft radius</u> )			
1. <u><i>Acer saccharinum</i></u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
2. <u><i>Populus deltoides</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
3. <u><i>Ulmus americana</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>
4. <u><i>Quercus bicolor</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>30</u>	=Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15-ft radius</u> )			
1. <u><i>Fraxinus nigra</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
2. <u><i>Cornus amomum</i></u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
3. <u><i>Rubus allegheniensis</i></u>	<u>10</u>	<u>No</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>60</u>	=Total Cover	
<b>Herb Stratum</b> (Plot size: <u>5-ft radius</u> )			
1. <u><i>Phalaris arundinacea</i></u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>
2. <u><i>Schoenoplectus tabernaemontani</i></u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
3. <u><i>Euthamia graminifolia</i></u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
4. <u><i>Carex vulpinoidea</i></u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
5. <u><i>Apocynum cannabinum</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
6. <u><i>Symphotrichum lateriflorum</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>
7. <u><i>Carex lupulina</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>
8. <u><i>Carex scoparia</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>
9. <u><i>Juncus effusus</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>105</u>	=Total Cover	
<b>Woody Vine Stratum</b> (Plot size: <u>30-ft radius</u> )			
1. <u><i>Toxicodendron radicans</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
2. <u><i>Vitis riparia</i></u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	<u>20</u>	=Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>25</u>	x 1 = <u>25</u>
FACW species <u>120</u>	x 2 = <u>240</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>215</u> (A)	<u>485</u> (B)
Prevalence Index = B/A = <u>2.26</u>	

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes X      No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type1, Loc2), Texture, and Remarks. Includes data for depth 0-10 with matrix 10YR 3/2, 95% and redox features 7.5YR 4/6, 5%, Type C, Loc M, Texture Loamy/Clayey, Remarks Prominent redox concentrations.

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: Histosol (A1), Histic Epipedon (A2), Black Histic (A3), Hydrogen Sulfide (A4), Stratified Layers (A5), Depleted Below Dark Surface (A11), Thick Dark Surface (A12), Sandy Mucky Mineral (S1), Sandy Gleyed Matrix (S4), Sandy Redox (S5), Stripped Matrix (S6), Dark Surface (S7) (LRR R, MLRA 149B). Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) (LRR K, L, MLRA 149B), Coast Prairie Redox (A16) (LRR K, L, R), 5 cm Mucky Peat or Peat (S3) (LRR K, L, R), Dark Surface (S7) (LRR K, L), Polyvalue Below Surface (S8) (LRR K, L), Thin Dark Surface (S9) (LRR K, L), Iron-Manganese Masses (F12) (LRR K, L, R), Piedmont Floodplain Soils (F19) (MLRA 149B), Mesic Spodic (TA6) (MLRA 144A, 145, 149B), Red Parent Material (TF2), Very Shallow Dark Surface (TF12), Other (Explain in Remarks).

3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: None \_\_\_\_\_ Depth (inches): \_\_\_\_\_ Hydric Soil Present? Yes X No \_\_\_\_\_

Remarks:



## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: W. Grand River Avenue/Central Park Drive City/County: Meridian Twp/Ingham Co. Sampling Date: 9/17/2018  
 Applicant/Owner: DP Fox dba Green Castle Properties, LLC State: MI Sampling Point: B  
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S22, T4N, R1W  
 Landform (hillside, terrace, etc.): toeslope/depression Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR L Lat: 42.72033 Long: -84.40808 Datum: WGS84  
 Soil Map Unit Name: Kibbie loam, 0 to 3 percent slopes NWI classification: PEM/Minor (PFO) edge

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>  x  </u> No <u>    </u> Hydric Soil Present? Yes <u>  x  </u> No <u>    </u> Wetland Hydrology Present? Yes <u>  x  </u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>  x  </u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland B</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland system is observed in the northwest portion of the Site, along the northern boundary.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)                   ___ Aquatic Fauna (B13) ___ Saturation (A3)                           ___ Marl Deposits (B15) <u>x</u> Water Marks (B1)                           ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)                   ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)                        ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                   ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                        ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)   ___ Other (Explain in Remarks) <u>x</u> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>x</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>x</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>  XX  </u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>  XX  </u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>  xx  </u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No <u>    </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology is typical for this wetland type during the driest period of the year.	

**VEGETATION** – Use scientific names of plants.

Sampling Point:          B         

<u>Tree Stratum</u> (Plot size: <u>30-ft radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u><i>Acer saccharinum</i></u>	10	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>        </u> 9 <u>        </u> (A)  Total Number of Dominant Species Across All Strata: <u>        </u> 10 <u>        </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>        </u> 90.0% <u>        </u> (A/B)	
2. <u><i>Populus deltoides</i></u>	10	Yes	FAC		
3. <u><i>Ulmus americana</i></u>	5	No	FACW		
4. <u><i>Quercus bicolor</i></u>	5	No	FACW		
5. <u><i>Populus tremuloides</i></u>	5	No	UPL		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
	35	=Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15-ft radius</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>        </u> 35 <u>        </u> x 1 = <u>        </u> 35 FACW species <u>        </u> 85 <u>        </u> x 2 = <u>        </u> 170 FAC species <u>        </u> 40 <u>        </u> x 3 = <u>        </u> 120 FACU species <u>        </u> 5 <u>        </u> x 4 = <u>        </u> 20 UPL species <u>        </u> 5 <u>        </u> x 5 = <u>        </u> 25 Column Totals: <u>        </u> 170 <u>        </u> (A) <u>        </u> 370 <u>        </u> (B) Prevalence Index = B/A = <u>        </u> 2.18	
1. <u><i>Fraxinus nigra</i></u>	5	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> _____ Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u><i>Cornus amomum</i></u>	15	Yes	FAC		
3. <u><i>Rubus allegheniensis</i></u>	5	Yes	FACU		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
	25	=Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5-ft radius</u> )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>  </u> X <u>  </u> No <u>  </u> _____	
1. <u><i>Phalaris arundinacea</i></u>	20	Yes	FACW		
2. <u><i>Schoenoplectus tabernaemontani</i></u>	5	No	OBL		
3. <u><i>Euthamia graminifolia</i></u>	15	Yes	FACW		
4. <u><i>Carex vulpinoidea</i></u>	10	No	OBL		
5. <u><i>Apocynum cannabinum</i></u>	10	No	FAC		
6. <u><i>Symphyotrichum lateriflorum</i></u>	10	No	FACW		
7. <u><i>Carex lupulina</i></u>	5	No	FACW		
8. <u><i>Carex scoparia</i></u>	5	No	FACW		
9. <u><i>Juncus effusus</i></u>	20	Yes	OBL		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
	100	=Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>30-ft radius</u> )					
1. <u><i>Toxicodendron radicans</i></u>	5	Yes	FAC		
2. <u><i>Vitis riparia</i></u>	5	Yes	FACW		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
	10	=Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/2	95	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: None

Depth (inches): \_\_\_\_\_

Hydric Soil Present?      Yes X      No \_\_\_\_\_

Remarks:

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: W. Grand River Avenue/Central Park Drive City/County: Meridian Twp/Ingham Co. Sampling Date: 9/17/2018  
 Applicant/Owner: DP Fox dba Green Castle Properties, LLC State: MI Sampling Point: C  
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S22, T4N, R1W  
 Landform (hillside, terrace, etc.): toeslope/depression Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR L Lat: 42.720321 Long: -84.40785 Datum: WSG84  
 Soil Map Unit Name: Kibbie loam, 0 to 3 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>  x  </u> No <u>    </u> Hydric Soil Present? Yes <u>  x  </u> No <u>    </u> Wetland Hydrology Present? Yes <u>  x  </u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>  x  </u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland C</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland system is observed in the northeast corner of the Site.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)                   ___ Aquatic Fauna (B13) ___ Saturation (A3)                           ___ Marl Deposits (B15) ___ Water Marks (B1)                         ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)                 ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)                        ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                   ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                         ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)   ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ <u>  x  </u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ <u>  x  </u> Microtopographic Relief (D4) ___ <u>  X  </u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>  XX  </u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>  XX  </u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>  xx  </u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No <u>    </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology is typical for this wetland type during the driest period of the year.	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     C    

<u>Tree Stratum</u> (Plot size: <u>30-ft radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	=Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15-ft radius</u> )			
1. <u>Fraxinus nigra</u>	10	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	10 =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5-ft radius</u> )			
1. <u>Juncus effusus</u>	20	Yes	OBL
2. <u>Schoenoplectus tabernaemontani</u>	20	Yes	OBL
3. <u>Euthamia graminifolia</u>	15	No	FACW
4. <u>Carex vulpinoidea</u>	20	Yes	OBL
5. <u>Apocynum cannabinum</u>	15	No	FAC
6. <u>Symphyotrichum lanceolatum</u>	10	No	FACW
7. <u>Scirpus cyperinus</u>	5	No	OBL
8. <u>Prunella vulgaris</u>	5	No	FAC
9. <u>Agrostis gigantea</u>	20	Yes	FAC
10. <u>Carex scoparia</u>	5	No	FACW
11. <u>Carex normalis</u>	5	No	FACW
12. _____	_____	_____	_____
	140 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30-ft radius</u> )			
1. <u>Toxicodendron radicans</u>	5	Yes	FAC
2. <u>Vitis riparia</u>	5	Yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	10 =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:     7     (A)

Total Number of Dominant Species Across All Strata:     7     (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:   100.0%   (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>    65    </u>	x 1 = <u>    65    </u>
FACW species <u>    50    </u>	x 2 = <u>   100   </u>
FAC species <u>    45    </u>	x 3 = <u>   135   </u>
FACU species <u>    0    </u>	x 4 = <u>    0    </u>
UPL species <u>    0    </u>	x 5 = <u>    0    </u>
Column Totals: <u>   160   </u> (A)	<u>   300   </u> (B)
Prevalence Index = B/A = <u>    1.88    </u>	

**Hydrophytic Vegetation Indicators:**

     Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

     Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes   X        No     

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: C

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 4/1	95	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.     <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <u>X</u> No _____
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Remarks:

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: W. Grand River Avenue/Central Park Drive City/County: Meridian Twp/Ingham Co. Sampling Date: 9/17/2018  
 Applicant/Owner: DP Fox dba Green Castle Properties, LLC State: MI Sampling Point: E  
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S22, T4N, R1W  
 Landform (hillside, terrace, etc.): lowland Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR L Lat: 42.71866 Long: -84.407098 Datum: WSG84  
 Soil Map Unit Name: Urban land Capac-Colwood Complex, 0 to 4 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland E</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland system is observed along the eastern boundary line.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>			
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input checked="" type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Wetland hydrology is typical for this wetland type during the driest period of the year.			

**VEGETATION** – Use scientific names of plants.

Sampling Point:     E    

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30-ft radius</u> )				<p><b>Dominance Test worksheet:</b></p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>    6    </u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>    6    </u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>  100.0%  </u> (A/B)</p> <hr/> <p><b>Prevalence Index worksheet:</b></p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>    100    </u></td> <td>x 1 = <u>    100    </u></td> </tr> <tr> <td>FACW species <u>    60    </u></td> <td>x 2 = <u>    120    </u></td> </tr> <tr> <td>FAC species <u>    20    </u></td> <td>x 3 = <u>    60    </u></td> </tr> <tr> <td>FACU species <u>    0    </u></td> <td>x 4 = <u>    0    </u></td> </tr> <tr> <td>UPL species <u>    0    </u></td> <td>x 5 = <u>    0    </u></td> </tr> <tr> <td>Column Totals: <u>    180    </u></td> <td>(A) <u>    280    </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>    1.56    </u></td> </tr> </table> <hr/> <p><b>Hydrophytic Vegetation Indicators:</b></p> <p><u>    </u> Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> Dominance Test is &gt;50%</p> <p><input checked="" type="checkbox"/> Prevalence Index is ≤3.0<sup>1</sup></p> <p><u>    </u> Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</p> <p><u>    </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</p> <p><small><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small></p> <hr/> <p><b>Definitions of Vegetation Strata:</b></p> <p><b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p><b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.</p> <p><b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p><b>Woody vines</b> – All woody vines greater than 3.28 ft in height.</p> <hr/> <p><b>Hydrophytic Vegetation Present?</b>      Yes <u>  X  </u>      No <u>    </u></p>	Total % Cover of:	Multiply by:	OBL species <u>    100    </u>	x 1 = <u>    100    </u>	FACW species <u>    60    </u>	x 2 = <u>    120    </u>	FAC species <u>    20    </u>	x 3 = <u>    60    </u>	FACU species <u>    0    </u>	x 4 = <u>    0    </u>	UPL species <u>    0    </u>	x 5 = <u>    0    </u>	Column Totals: <u>    180    </u>	(A) <u>    280    </u> (B)	Prevalence Index = B/A = <u>    1.56    </u>	
Total % Cover of:	Multiply by:																			
OBL species <u>    100    </u>	x 1 = <u>    100    </u>																			
FACW species <u>    60    </u>	x 2 = <u>    120    </u>																			
FAC species <u>    20    </u>	x 3 = <u>    60    </u>																			
FACU species <u>    0    </u>	x 4 = <u>    0    </u>																			
UPL species <u>    0    </u>	x 5 = <u>    0    </u>																			
Column Totals: <u>    180    </u>	(A) <u>    280    </u> (B)																			
Prevalence Index = B/A = <u>    1.56    </u>																				
1. <u><i>Acer negundo</i></u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u><i>Salix nigra</i></u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>50</u>	=Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15-ft radius</u> )																				
1. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u><i>Rhamnus cathartica</i></u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>25</u>	=Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>5-ft radius</u> )																				
1. <u><i>Phalaris arundinacea</i></u>	<u>65</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u><i>Agrostis gigantea</i></u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
3. <u><i>Glechoma hederoma</i></u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
4. <u><i>Symphyotrichum lateriflorum</i></u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>100</u>	=Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>30-ft radius</u> )																				
1. <u><i>Toxicodendron radicans</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____																				
3. _____																				
4. _____																				
	<u>5</u>	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)



**SOIL**

Sampling Point:     E    

<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 2/1	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: None

Depth (inches):   

Hydric Soil Present?    Yes   X      No                 

Remarks:

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: W. Grand River Avenue/Central Park Drive City/County: Meridian Twp/Ingham Co. Sampling Date: 9/17/2018  
 Applicant/Owner: DP Fox dba Green Castle Properties, LLC State: MI Sampling Point: D  
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S22, T4N, R1W  
 Landform (hillside, terrace, etc.): lowland Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR L Lat: 42.7195 Long: -84.40798 Datum: WSG84  
 Soil Map Unit Name: Kibbie loam, 0 to 3 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>x</u> No <u>    </u> Hydric Soil Present? Yes <u>x</u> No <u>    </u> Wetland Hydrology Present? Yes <u>x</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>x</u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland D</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland system is observed in the northeast/north-central portion of the Site.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>XX</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>XX</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>xx</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology is typical for this wetland type during the driest period of the year.	

**VEGETATION** – Use scientific names of plants.

Sampling Point:     D    

<u>Tree Stratum</u> (Plot size: <u>30-ft radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	=Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15-ft radius</u> )			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	=Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5-ft radius</u> )			
1. <u>Juncus effusus</u>	15	Yes	OBL
2. <u>Schoenoplectus tabernaemontani</u>	15	Yes	OBL
3. <u>Euthamia graminifolia</u>	15	Yes	FACW
4. <u>Carex vulpinoidea</u>	10	No	OBL
5. <u>Rumex crispus</u>	15	Yes	FAC
6. <u>Symphyotrichum lateriflorum</u>	25	Yes	FACW
7. <u>Agrostis gigantea</u>	30	Yes	OBL
8. <u>Carex scoparia</u>	10	No	FAC
9. <u>Carex normalis</u>	10	No	FAC
10. <u>Phalaris arundinacea</u>	10	No	FACW
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	155 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30-ft radius</u> )			
1. <u>Toxicodendron radicans</u>	5	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	5 =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:     7     (A)

Total Number of Dominant Species Across All Strata:     7     (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>    70    </u>	x 1 = <u>    70    </u>
FACW species <u>    50    </u>	x 2 = <u>   100   </u>
FAC species <u>    40    </u>	x 3 = <u>   120   </u>
FACU species <u>    0    </u>	x 4 = <u>    0    </u>
UPL species <u>    0    </u>	x 5 = <u>    0    </u>
Column Totals: <u>   160   </u> (A)	<u>   290   </u> (B)
Prevalence Index = B/A = <u>    1.81    </u>	

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes   X        No     

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point:           D          

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 4/1	95	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	---	---

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): <u>                        </u>		<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--	---

Remarks:

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: W. Grand River Avenue/Central Park Drive City/County: Meridian Twp/Ingham Co. Sampling Date: 9/17/2018  
 Applicant/Owner: DP Fox dba Green Castle Properties, LLC State: MI Sampling Point: F  
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S22, T4N, R1W  
 Landform (hillside, terrace, etc.): lowland Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR L Lat: 42.71866 Long: -84.407098 Datum: WSG84  
 Soil Map Unit Name: Urban land Capac-Colwood Complex, 0 to 4 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>x</u> No <u>    </u> Hydric Soil Present? Yes <u>x</u> No <u>    </u> Wetland Hydrology Present? Yes <u>x</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>x</u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland F</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland system is observed along the eastern boundary line.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>x</u> Water-Stained Leaves (B9) ___ High Water Table (A2)                 ___ Aquatic Fauna (B13) ___ Saturation (A3)                           ___ Marl Deposits (B15) <u>x</u> Water Marks (B1)                          ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)                ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)                      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                 ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                       ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)    ___ Other (Explain in Remarks) <u>x</u> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>x</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>x</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>XX</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>XX</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>xx</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology is typical for this wetland type during the driest period of the year.	

**VEGETATION** – Use scientific names of plants.

Sampling Point:         F        

<u>Tree Stratum</u> (Plot size: <u>30-ft radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Acer negundo</i></u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>
2. <u><i>Salix nigra</i></u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
		<u>50</u> =Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15-ft radius</u> )			
1. <u><i>Fraxinus nigra</i></u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
2. <u><i>Rhamnus cathartica</i></u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
		<u>25</u> =Total Cover	
<u>Herb Stratum</u> (Plot size: <u>5-ft radius</u> )			
1. <u><i>Phalaris arundinacea</i></u>	<u>65</u>	<u>Yes</u>	<u>OBL</u>
2. <u><i>Agrostis gigantea</i></u>	<u>10</u>	<u>No</u>	<u>OBL</u>
3. <u><i>Glechoma hederoma</i></u>	<u>15</u>	<u>No</u>	<u>FACW</u>
4. <u><i>Symphyotrichum lateriflorum</i></u>	<u>10</u>	<u>No</u>	<u>OBL</u>
5. <u><i>Rumex crispus</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
		<u>105</u> =Total Cover	
<u>Woody Vine Stratum</u> (Plot size: <u>30-ft radius</u> )			
1. <u><i>Toxicodendron radicans</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
		<u>5</u> =Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:         6         (A)

Total Number of Dominant Species Across All Strata:         6         (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:     100.0%     (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>    100    </u>	x 1 = <u>    100    </u>
FACW species <u>    60    </u>	x 2 = <u>    120    </u>
FAC species <u>    25    </u>	x 3 = <u>    75    </u>
FACU species <u>    0    </u>	x 4 = <u>    0    </u>
UPL species <u>    0    </u>	x 5 = <u>    0    </u>
Column Totals: <u>    185    </u>	(A) <u>    295    </u> (B)
Prevalence Index = B/A = <u>    1.59    </u>	

**Hydrophytic Vegetation Indicators:**

         Rapid Test for Hydrophytic Vegetation

  X   Dominance Test is >50%

  X   Prevalence Index is ≤3.0<sup>1</sup>

         Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

         Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes   X        No         

Remarks: (Include photo numbers here or on a separate sheet.)





October 19, 2018  
Project No. 181577

Mr. Peter Menser  
Charter Township of Meridian  
5151 Marsh Road  
Okemos, MI 48864-1198

Re: Wetland Verification – WDV 18-12  
Green Castle Properties, LLC  
1614 and 1622 West Grand River Avenue, Okemos, Ingham County, Michigan

Dear Peter:

On October 17, 2018, Fishbeck, Thompson, Carr & Huber, Inc. (FTCH) staff conducted a field investigation and verified wetland boundaries on the following parcels located in Section 22 of Meridian Township (Town 4 North, Range 1 West):

- 1614 West Grand River Avenue, Parcel Number 33-02-02-22-426-001, 2.40 acres of residential property
- 1622 West Grand River Avenue, Parcel Number 33-02-02-22-401-003, 3.23 acres of residential property
- Central Park Drive (no street address), Parcel Number 33-02-02-22-252-003, 3.04 acres of undeveloped property, with a metal barn and in-ground pool.

The wetlands were recently delineated by Marx Wetlands, LLC, as described in its September 24, 2018, report entitled *Wetland Delineation Report: Grand River Avenue & Central Park Drive* (Report).

## Site Investigation

FTCH staff met Ms. Bryana Guevara of Marx Wetlands at the site on October 17th and inspected flagged wetland boundaries for six wetlands. Ms. Guevara stated the wetland boundaries noted on the wetland sketch in the wetland report are approximate. She did not know if wetland boundaries have been surveyed by the applicant (Green Castle Properties, LLC). Consequently, the size of the delineated wetlands is not known.

FTCH made minor changes to the wetland boundaries by moving and adding flags as follows:

**Wetland A:** Flag A10 was moved. In addition, Flag A12 was not present; the wetland boundary extended from Flag A11 to Flag A13.

**Wetland B:** Flag B3 was moved to the south. Wetland B extended offsite to the north. The northern limit of this wetland was flagged.

**Wetland C:** Added Flag C5.5 between Flags C5 and C6. Added Flag C6.5 between Flags C6 and C7. Wetland C extends slightly offsite to the north.

**Wetland D:** No changes.

**Wetland E:** No changes. Wetland E extends slightly offsite to the east.

**Wetland F:** No changes. Wetland F extends slightly offsite to the east.





## Regulatory Review

The regulatory review was based upon the Report, Google Earth aerial photographs, and site observations. Section 22-116 of the Township's Wetland Protection Ordinance defines "protected wetlands" as any of the following:

(1) Wetlands, regardless of size, which are contiguous (i.e. within 500 feet of) to any inland lake, stream, river, or pond, whether partially or entirely within the project site.

- Wetlands E and F are located within 30 feet of an approximately 2-acre pond and are therefore regulated by the State of Michigan (State) and the Township. Based upon Google Earth aerial photography, Wetland D is also located within 500 feet of the pond and is therefore regulated by the State and Township. It does not appear that Wetlands A, B, and C are located within 500 feet of a waterbody.

(2) Wetlands, regardless of size, which are partially or entirely within 500 feet of the ordinary high water mark of any inland lake, stream, river, or pond, unless it is determined by the state department of environmental quality that there is no surface or groundwater connection between the wetland and the water body.

- FTCH has no knowledge that the Michigan Department of Environmental Quality (MDEQ) has determined there is no surface or groundwater connection between site wetlands and the pond.

(3) Wetlands which are larger than two acres, whether partially or entirely contained within a lot, and which are not contiguous to any inland lake, stream, river, or pond.

- None of the site wetlands are greater than 2 acres in size, based upon site observations.

(4) Wetlands, regardless of size, which are not contiguous to any inland lake, stream, river, or pond, if the state department of environmental quality determines the protection of the wetland is essential to the preservation of the natural resources of the State from pollution, impairment, or destruction.

- FTCH does not know if the MDEQ has determined the protection of the site wetlands is essential to the preservation of the natural resources of the State from pollution, impairment, or destruction.

(5) Wetlands, equal to or greater than one-quarter acre and equal to or less than two acres in size, which are not contiguous to any inland lake, stream, river or pond and are determined to be essential to the preservation of the natural resources of the Township as provided in § 22-156.

- Wetland boundaries must be surveyed to determine wetland size. If Wetlands A, B, or C are greater than 0.25 acre in size, a determination of essentiality must be completed to determine whether these wetlands are regulated by the Township.

A Wetland Use Permit would be required from the Township for any of the following activities within wetland regulated by the Township:

- Placing fill or permitting the placement of fill in regulated wetland.
- Dredging, removing, or permitting the removal of soil or minerals from regulated wetland.
- Constructing, operating, or maintaining any use or development in regulated wetland.
- Draining surface water from regulated wetland.

In addition, the Township requires that all structures and grading activities during site development shall be set back 40 feet from the delineated wetland boundary and a natural vegetation strip shall be maintained within

October 19, 2018



20 feet of the wetland boundary. Wetland mitigation will be required for wetland impacts, creating new wetland at a ratio of 1:1.5.

If you have any questions regarding this letter or any other wetland-related issues, please contact me at 616.464.3738 or [ehtripp@ftch.com](mailto:ehtripp@ftch.com).

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

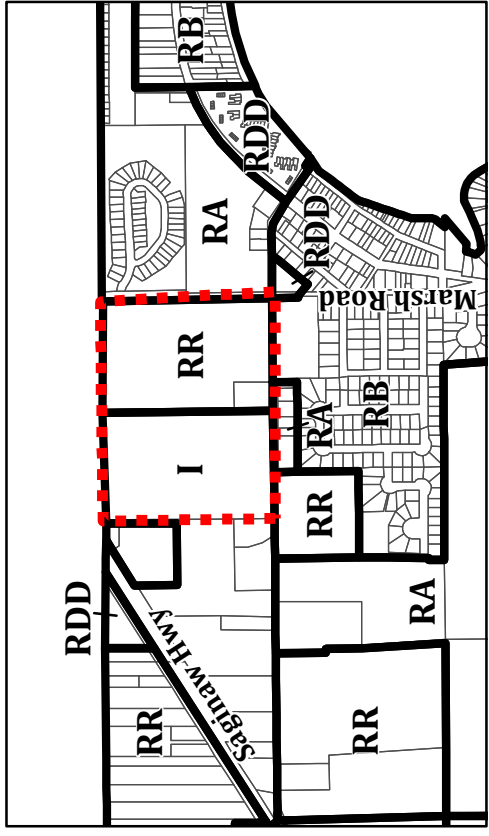
A handwritten signature in black ink, reading "Elise Hansen Tripp". The signature is written in a cursive style.

Elise Hansen Tripp, PWS

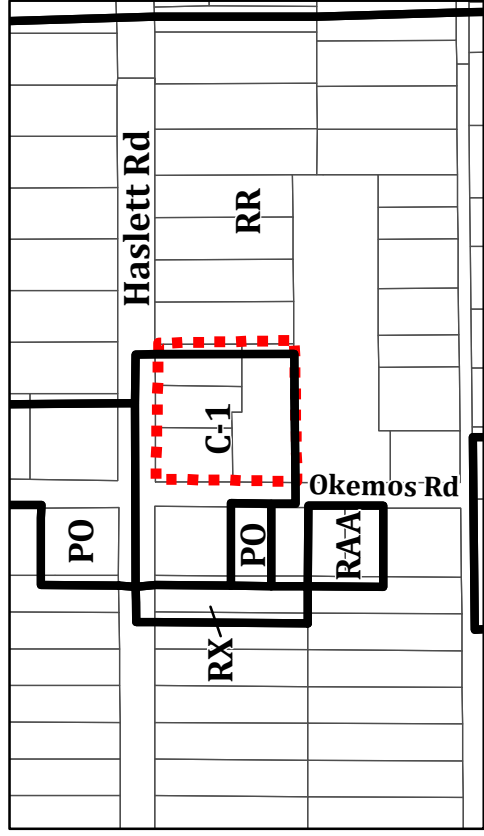
pmb

By email

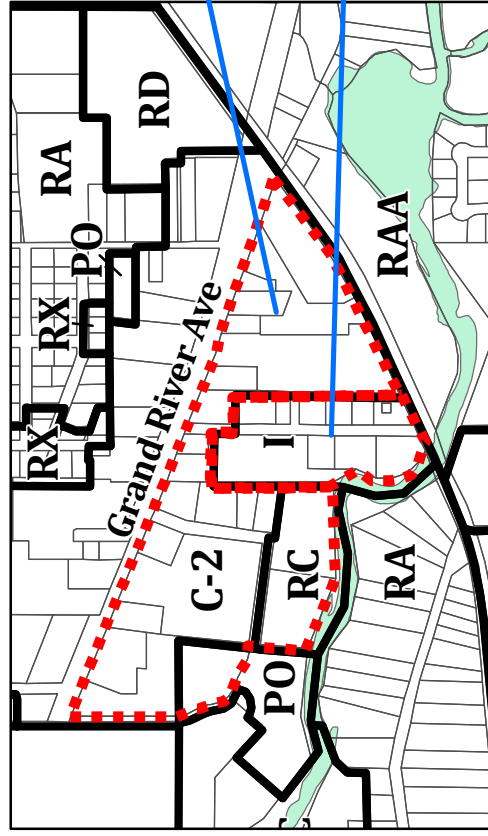
cc: Mr. Mark Kieselbach – Charter Township of Meridian



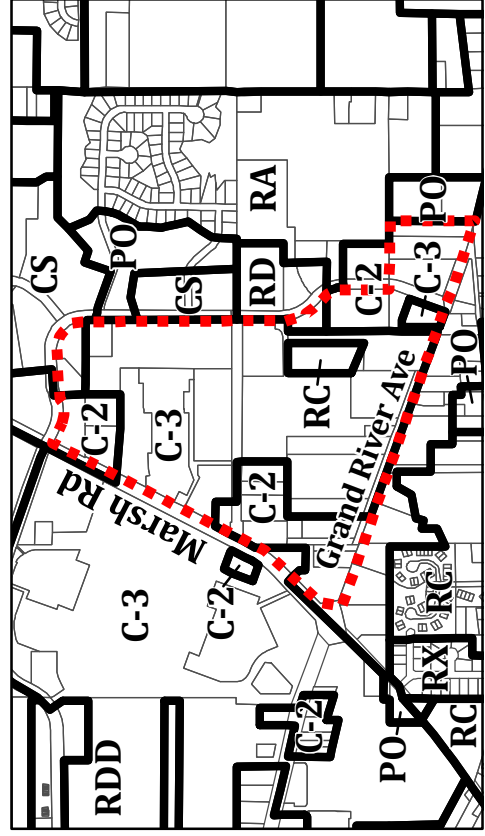
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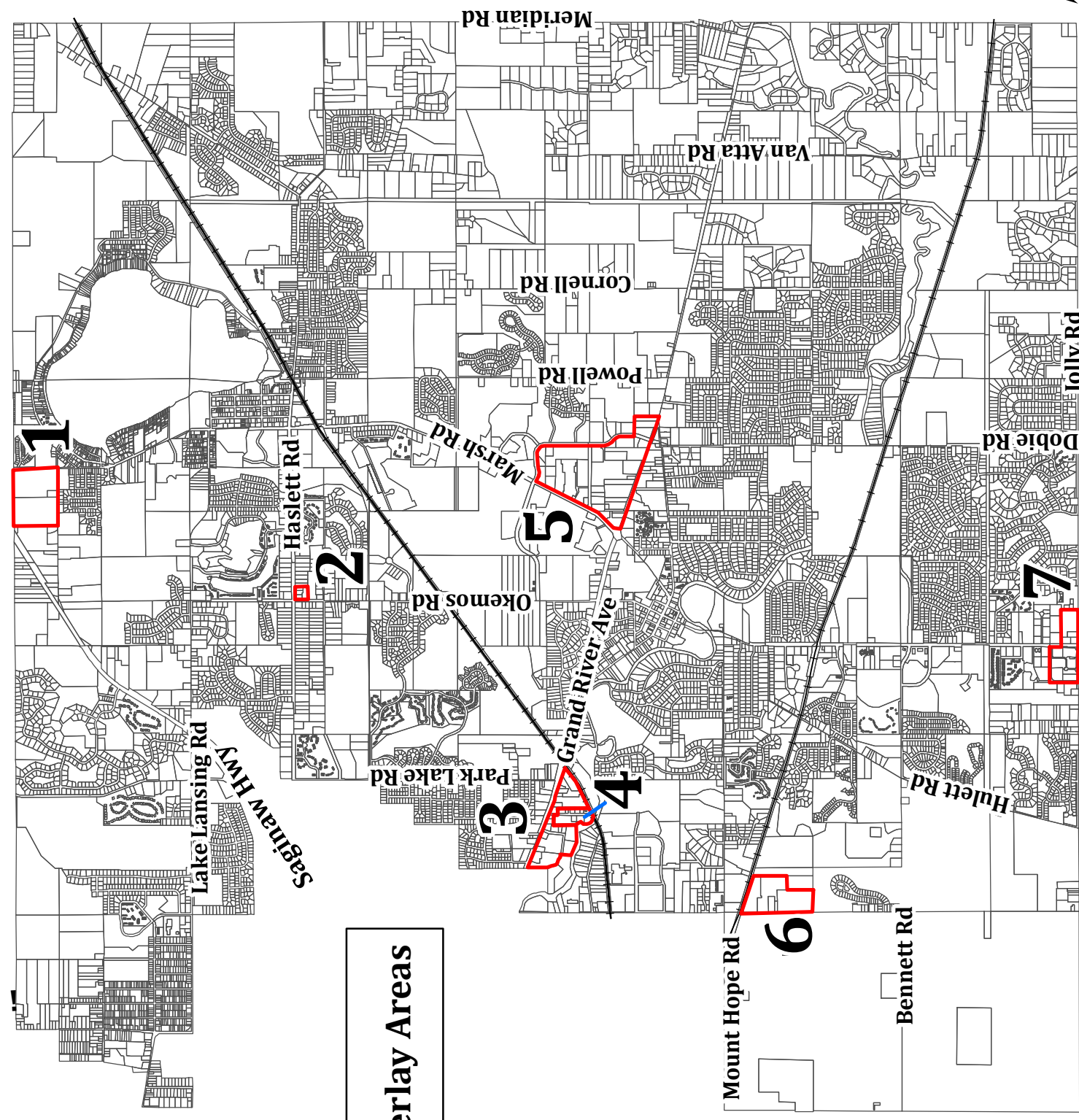
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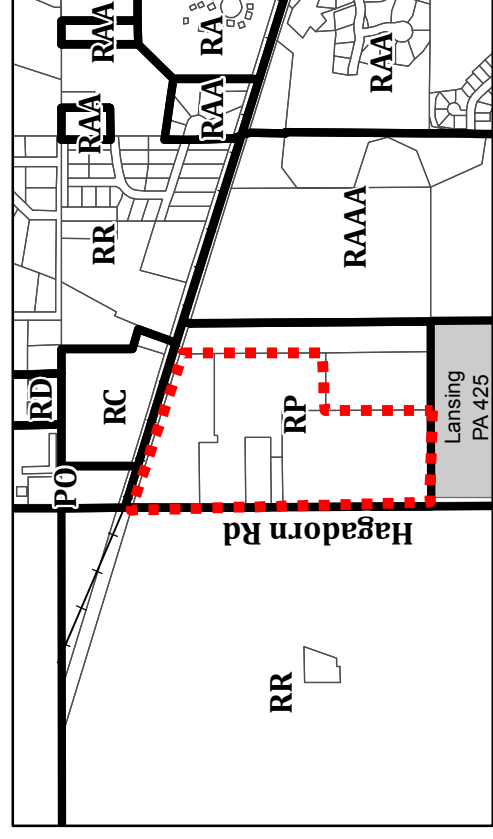
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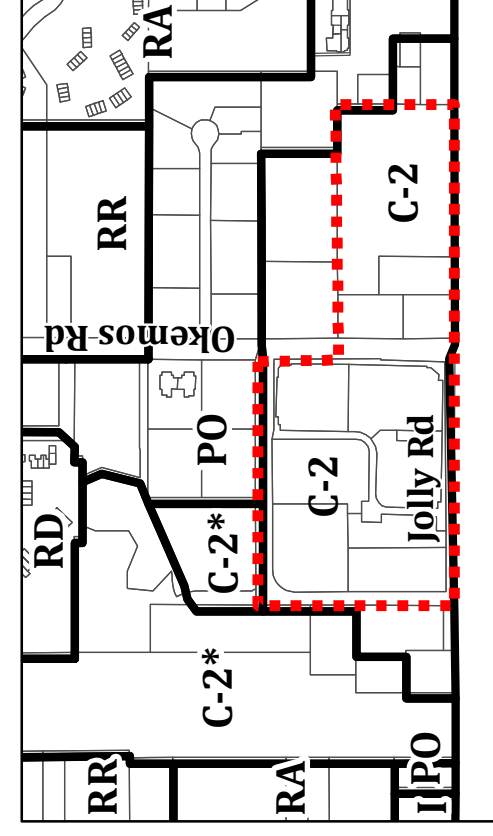
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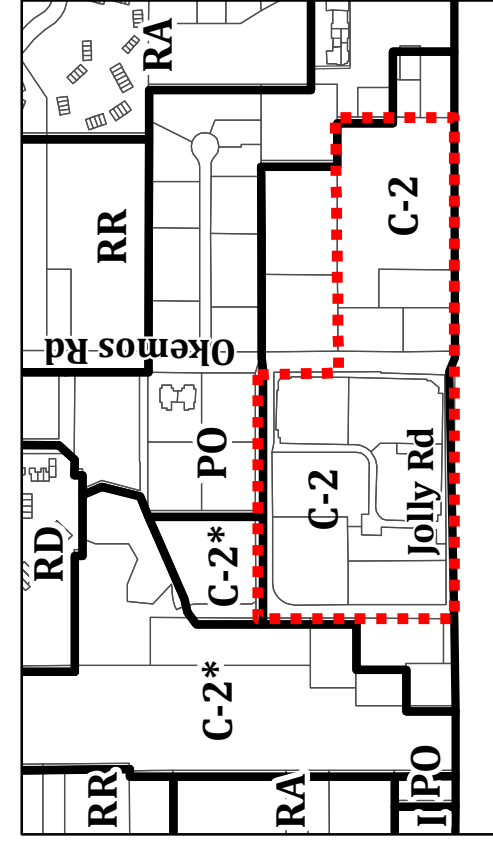
 Proposed Overlay Areas



5



6



7

Updated:  
5/16/19



**To:** Planning Commission

**From:** Peter Menser, Principal Planner

**Date:** February 20, 2020

**Re:** Special Use Permit #19131 (The W. Investment Holdings), construct a 4,000 square foot commercial medical marihuana provisioning center building located at 1614 Grand River Avenue.

---

The Planning Commission held the public hearing for Special Use Permit #19131 at its meeting on February 10, 2020. At the meeting the Planning Commission agreed to consider a resolution to recommend approval of the request at its next meeting on February 24, 2020.

### **Planning Commission Options**

The Planning Commission may recommend approval, approval with conditions, or denial of the proposed special use permit. A resolution to recommend approval of the request is provided.

- **Move to adopt the resolution recommending approval of Special Use Permit #19131.**

### **Attachment**

1. Resolution to recommend approval.

G:\Community Planning & Development\Planning\SPECIAL USE PERMITS (SUP)\2019\SUP 19141 (The W. Investment Holdings)\SUP 19131.pc2.docx

**RESOLUTION TO RECOMMEND APPROVAL**

**Special Use Permit #19131  
(The W. Investment Holdings)**

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 24th day of February, 2020, at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, The W. Investment Holdings has submitted a request to construct a new freestanding 4,000 square foot commercial medical marihuana provisioning center at 1614 Grand River Avenue; and

WHEREAS, the Township Board adopted both zoning and non-zoning ordinances allowing commercial medical marihuana facilities in designated overlay areas throughout the Township at its meeting on May 21, 2019; and

WHEREAS, the zoning ordinance established seven designated areas in the Township where commercial medical marihuana facilities are permitted and identified the zoning districts in which each of the five types of commercial medical marihuana facilities can locate; and

WHEREAS, the non-zoning ordinance established the application process, the facility types allowed, the number of permits, and the general operational standards for the different types of commercial facilities, which include growers, processors, secure transporters, provisioning centers, and safety compliance facilities; and

WHEREAS, the overlay areas adopted by the Township Board allow commercial medical marihuana provisioning centers in the I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park) zoning districts subject to the approval of a special use permit reviewed by the Planning Commission and approved by the Township Board; and

WHEREAS, the subject site is located entirely within Overlay Area 5 and is appropriately zoned C-2 (Commercial), which allows commercial medical marihuana provisioning centers by special use permit; and

WHEREAS, the proposed commercial medical marihuana provisioning center meets the required setbacks from any public or private K-12 school, church, place of worship or other religious facility, library, preschool, or child care center established in Section 40-31 of the Code of Ordinances; and

WHEREAS, the proposed commercial medical marihuana provisioning center will not adversely affect adjacent land uses or the health, safety, and general welfare of the community; and

WHEREAS, the proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.

**Resolution to Recommend Approval  
SUP #19131 (The W. Investment Holdings)  
Page 2**

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Special Use Permit #19131, subject to the following conditions:

1. Approval is in accordance with the site plan prepared by NF Engineers & Surveyors dated November 11, 2019 (revision date January 24, 2020) and received by the Township on January 27, 2020.
2. Approval is in accordance with the floor plan and building elevations prepared by ROGVOY Architects dated August 2, 2019 and received by the Township on January 27, 2020.
3. Approval is subject to the applicant receiving approval of a Commercial Medical Marihuana Facility permit by the Director of Community Planning and Development.
4. Approval is subject to the applicant receiving Final Approval for a medical marihuana license from the State of Michigan, Department of Licensing and Regulatory Affairs.
5. The applicant shall obtain and maintain any and all other applicable permits, licenses, and approvals necessary to operate the proposed commercial medical marihuana provisioning center from the State of Michigan, Township, and any other applicable agencies. Copies of all permits, licenses, and approvals shall be submitted to the Department of Community Planning and Development.
6. Site plan review approval is required to construct the proposed building. The final site plan, building elevations, and landscape plan shall be subject to the approval of the Director of Community Planning and Development.
7. The applicant shall obtain all necessary permits, licenses, and approvals from the Ingham County Road Department, Ingham County Drain Commissioner, Michigan Department of Environment, Great Lakes, and Energy, and the Township, as applicable. Copies of all permits, licenses, and approval letters shall be submitted to the Department of Community Planning and Development.
8. Utility, grading, and storm drainage plans for the site are subject to the approval of the Director of Public Works and Engineering and Ingham County Drain Commissioner and shall be completed in accordance with the Township Engineering Design and Construction Standards.
9. No grading or land clearing shall take place on the site until the site plan has been approved by the Director of Community Planning and Development and grading and soil erosion and sedimentation control (SESC) permits have been issued for the project.
10. All utility service distribution lines shall be installed underground.
11. Any future building additions or revisions to the site layout will require amendments to Special Use Permit #19131.
12. The final design of the trash and recycling facilities and related enclosures shall be subject to the approval of the Director of Community Planning and Development.

**Resolution to Recommend Approval  
SUP #19131 (The W. Investment Holdings)  
Page 3**

13. Site accessories such as railings, benches, exterior lighting fixtures, and bicycle racks shall be of commercial quality and complement the building design. The final design and location of such accessories shall be subject to the approval of the Director of Community Planning and Development.
14. All mechanical, heating, ventilation, air conditioning, and similar systems shall be screened from view by an opaque structure or landscape materials (if at street level) selected to complement the building. Such screening is subject to the approval of the Director of Community Planning and Development.
15. Sign permits shall be required for any signage proposed on the property.
16. The provisioning center shall remain in compliance with the operational requirements established in Section 40-31 of the Code of Ordinances.
17. The special use permit shall be revoked if the applicant fails to maintain a valid Commercial Medical Marihuana Facility permit from the Township and Facility License from the State of Michigan.

ADOPTED: YEAS: \_\_\_\_\_

\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )

I, the undersigned, the duly qualified and acting Chairperson of the Planning Commission of the Charter Township Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and a complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 24th day of February, 2020.

\_\_\_\_\_  
Ken Lane  
Planning Commission Chairperson

**RESOLUTION TO RECOMMEND APPROVAL**

**Special Use Permit #19131  
(The W. Investment Holdings)**

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 24th day of February, 2020, at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, The W. Investment Holdings has submitted a request to construct a new freestanding 4,000 square foot commercial medical marihuana provisioning center at 1614 Grand River Avenue; and

WHEREAS, the Township Board adopted both zoning and non-zoning ordinances allowing commercial medical marihuana facilities in designated overlay areas throughout the Township at its meeting on May 21, 2019; and

WHEREAS, the zoning ordinance established seven designated areas in the Township where commercial medical marihuana facilities are permitted and identified the zoning districts in which each of the five types of commercial medical marihuana facilities can locate; and

WHEREAS, the non-zoning ordinance established the application process, the facility types allowed, the number of permits, and the general operational standards for the different types of commercial facilities, which include growers, processors, secure transporters, provisioning centers, and safety compliance facilities; and

WHEREAS, the overlay areas adopted by the Township Board allow commercial medical marihuana provisioning centers in the I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park) zoning districts subject to the approval of a special use permit reviewed by the Planning Commission and approved by the Township Board; and

WHEREAS, the subject site is located entirely within Overlay Area 5 and is appropriately zoned C-2 (Commercial), which allows commercial medical marihuana provisioning centers by special use permit; and

WHEREAS, the proposed commercial medical marihuana provisioning center meets the required setbacks from any public or private K-12 school, church, place of worship or other religious facility, library, preschool, or child care center established in Section 40-31 of the Code of Ordinances; and

WHEREAS, the proposed commercial medical marihuana provisioning center will not adversely affect adjacent land uses or the health, safety, and general welfare of the community; and

WHEREAS, the proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.



**Resolution to Recommend Approval  
SUP #19131 (The W. Investment Holdings)  
Page 2**

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Special Use Permit #19131, subject to the following conditions:

1. Approval is in accordance with the site plan prepared by NF Engineers & Surveyors dated November 11, 2019 (revision date January 24, 2020) and received by the Township on January 27, 2020.
2. Approval is in accordance with the floor plan and building elevations prepared by ROGVOY Architects dated August 2, 2019 and received by the Township on January 27, 2020.
3. Approval is subject to the applicant receiving approval of a Commercial Medical Marihuana Facility permit by the Director of Community Planning and Development.
4. Approval is subject to the applicant receiving Final Approval for a medical marihuana license from the State of Michigan, Department of Licensing and Regulatory Affairs.
5. The applicant shall obtain and maintain any and all other applicable permits, licenses, and approvals necessary to operate the proposed commercial medical marihuana provisioning center from the State of Michigan, Township, and any other applicable agencies. Copies of all permits, licenses, and approvals shall be submitted to the Department of Community Planning and Development.
6. Site plan review approval is required to construct the proposed building. The final site plan, building elevations, and landscape plan shall be subject to the approval of the Director of Community Planning and Development.
7. The applicant shall obtain all necessary permits, licenses, and approvals from the Ingham County Road Department, Ingham County Drain Commissioner, Michigan Department of Environment, Great Lakes, and Energy, and the Township, as applicable. Copies of all permits, licenses, and approval letters shall be submitted to the Department of Community Planning and Development.
8. Utility, grading, and storm drainage plans for the site are subject to the approval of the Director of Public Works and Engineering and Ingham County Drain Commissioner and shall be completed in accordance with the Township Engineering Design and Construction Standards.
9. No grading or land clearing shall take place on the site until the site plan has been approved by the Director of Community Planning and Development and grading and soil erosion and sedimentation control (SESC) permits have been issued for the project.
10. All utility service distribution lines shall be installed underground.
11. Any future building additions or revisions to the site layout will require amendments to Special Use Permit #19131.
12. The final design of the trash and recycling facilities and related enclosures shall be subject to the approval of the Director of Community Planning and Development.

**Resolution to Recommend Approval  
SUP #19131 (The W. Investment Holdings)  
Page 3**

13. Site accessories such as railings, benches, exterior lighting fixtures, and bicycle racks shall be of commercial quality and complement the building design. The final design and location of such accessories shall be subject to the approval of the Director of Community Planning and Development.
14. All mechanical, heating, ventilation, air conditioning, and similar systems shall be screened from view by an opaque structure or landscape materials (if at street level) selected to complement the building. Such screening is subject to the approval of the Director of Community Planning and Development.
15. Sign permits shall be required for any signage proposed on the property.
16. The provisioning center shall remain in compliance with the operational requirements established in Section 40-31 of the Code of Ordinances.
17. The special use permit shall be revoked if the applicant fails to maintain a valid Commercial Medical Marihuana Facility permit from the Township and Facility License from the State of Michigan.

ADOPTED: YEAS: \_\_\_\_\_

\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )

I, the undersigned, the duly qualified and acting Chairperson of the Planning Commission of the Charter Township Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and a complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 24th day of February, 2020.

\_\_\_\_\_  
Ken Lane  
Planning Commission Chairperson



- B. Special Use Permit #19131 (The W. Investment Holdings), establish commercial medical marihuana provisioning center at 1614 Grand River Avenue.

Chair Lane opened the public hearing at 7:31 p.m.

Principal Planner Menser provided a brief summary of the request and said he would be available to answer questions.

The applicant, Ammar Alkhafji, 29580 N. Western Hwy, Suite 1000, Southfield, Michigan is the landlord and developer of the property.

The business owner and tenant, Marvin Karana, stated he also operates a provisioning center in Lapeer, Michigan, across the street from a police station. Mr. Karana noted he would be available to answer any questions.

Public Comment – None

Planning Commission Discussion:

- A question was asked about what the street view of the business might look like as someone drives on Grand River Avenue and the applicant stated the elevation of the area creates some issues but they will maintain as much vegetation as possible.

A straw poll indicated the Planning Commission would be in support of recommending approval of the proposed Special Use Permit #19131 at the next meeting on February 24, 2020.

Chair Lane closed the public hearing at 7:49 p.m.

- C. Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.

Chair Lane opened the public hearing at 7:50 p.m.

Principal Planner Menser provided an overview of the request and said he would be available to answer questions.

Public Comment – None

Planning Commission Discussion:

- A good proposal that allows flexibility for development with different dwelling units.
- Request for a map of where the RD, RC, and RCC zoning districts for reference.
- Concerns with potential of single family housing being built in existing multiple family developments.

A straw poll indicated the Planning Commission would be in support of recommending approval of the revised version of the proposed Zoning Amendment #20020 at the next meeting on February 24, 2020.

**6. Public Hearings - None**

**7. Unfinished Business**

- A. Special Use Permit #19141 (The Cured Leaf TC, Inc.), establish commercial medical marihuana provisioning center at 3520 Okemos Road.

Principal Planner Menser noted the applicant has submitted responses to the special use permit criteria and they are available in the meeting packet for review.

Motion by Commissioner Premoe to recommend approval of Special Use Permit #19141.

Supported by Commissioner Hendrickson.

ROLL CALL VOTE:

YEAS: Commissioner Premoe, Hendrickson, McConnell, Clark, Shrewsbury, Trezise, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0



- B. Special Use Permit #19131 (The W. Investment Holdings), establish commercial medical marihuana provisioning center at 1614 Grand River Avenue.

Principal Planner Menser commented there would be different conditions for this request compared to the previous special use permit discussed because new construction is proposed.

Motion by Commissioner Trezise to recommend approval with the 17 conditions stated in the resolution for Special Use Permit #1131.

Supported by Commissioner Premoe.

ROLL CALL VOTE:

YEAS: Commissioner Trezise, Premoe, Hendrickson, Shrewsbury, Clark, McConnell, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0

- C. Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.

Principal Planner Menser noted a map showing the location of multiple family zoning districts (noted in red) in the Township was included in the meeting packet per the request of the Planning Commission at the February 10, 2020 meeting. He also noted that changes to the text of the draft ordinance included swapping out the term "living unit" for "dwelling unit" where applicable.

Motion by Commissioner McConnell to adopt the resolution recommending approval of Zoning Amendment #20020 in accordance with the revised draft ordinance language dated February 11, 2020.

Supported by Commissioner Trezise.

Commissioner Hendrickson stated he would be voting in opposition to the proposed zoning change because of the concerns he expressed at the February 10, 2020 public hearing.



**13.B**

**To: Township Board**

**From: Mark Kieselbach, Director of Community Planning and Development**

**Date: March 12, 2020**

**Re: Special Use Permit #19141 (The Cured Leaf TC, Inc.)**

---

The Cured Leaf TC, Inc. has requested special use permit (SUP) approval to establish a 2,282 square foot commercial medical marihuana provisioning center in an existing 12,990 square foot multi-tenant building at 3520 Okemos Road. The subject site is located on the east side of Okemos Road, north of Jolly Road and zoned C-2 (Commercial).

The Planning Commission held a public hearing on the proposal at its meeting on February 10, 2020 and on February 24, 2020 voted to recommend approval, citing the following reasons for their decision:

- The subject site is located entirely within Overlay Area 7 and is appropriately zoned C-2 (Commercial), which allows commercial medical marihuana provisioning centers by special use permit.
- The proposed commercial medical marihuana provisioning center meets the required setbacks from any public or private K-12 school, church, place of worship or other religious facility, library, preschool, or child care center established in Section 40-31 of the Code of Ordinances.
- The proposed commercial medical marihuana provisioning center will not adversely affect adjacent land uses or the health, safety, and general welfare of the community.
- The proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.

Staff memorandums outlining the SUP request and minutes from the Planning Commission meetings at which the request was discussed are attached for the Board's review.

### **Township Board Options**

The Township Board may approve or deny the proposed special use permit proposal. If the Board amends the proposal, the request may be referred back to the Planning Commission for a recommendation. A resolution will be provided at a future meeting.

### **Attachments**

1. Staff memorandums dated February 7, 2020 and February 20, 2020 with attachments.
2. Resolution recommending approval.
3. Planning Commission minutes dated February 10, 2020 (public hearing) and February 24, 2020 (decision).



**To:** Planning Commission

**From:** Peter Menser, Principal Planner  
Mackenzie Dean, Assistant Planner

**Date:** February 7, 2020

**Re:** Special Use Permit #19141 (The Cured Leaf TC, Inc.), establish a 2,282 square foot commercial medical marihuana provisioning center in an existing commercial center located at 3520 Okemos Road.

---

The Cured Leaf TC, Inc. has applied for a special use permit (SUP) to establish a 2,282 square foot commercial medical marihuana provisioning center in an existing commercial center located at 3520 Okemos Road. As proposed the provisioning center would occupy two tenant spaces that are currently occupied by Sprint (Suite 9) and Asian Express (Suite 10). The 0.39 acre project site is zoned C-2 (Commercial). The site is currently developed with a 12,990 square foot multi-tenant building identified as Jolly Oak Center, which was built in 1989. Other tenants in the commercial center include Subway, Royal Nails, Mathnasium, Sport Clips, Biggby, and Baryames Cleaners.

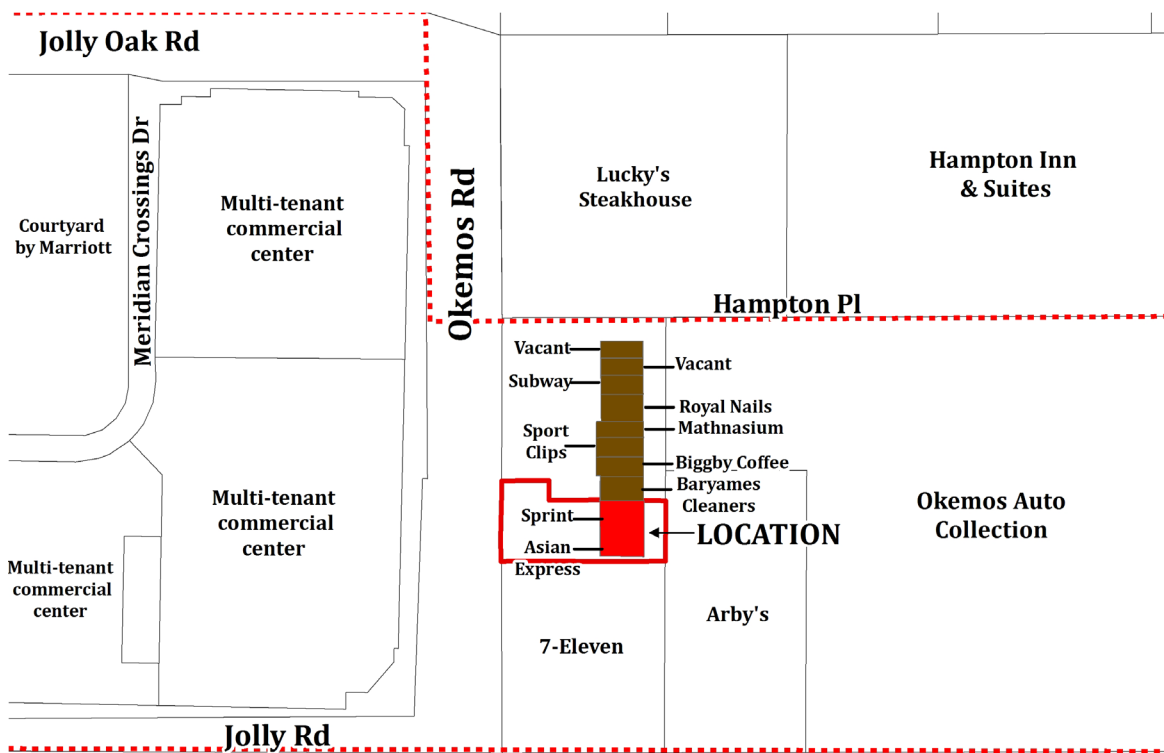
A provisioning center, also referred to a dispensary, is a facility where marihuana, or products derived from marihuana, is sold to registered medical marihuana patients or primary caregivers in accordance with the Michigan Medical Marihuana Act that was approved in 2008. A provisioning center license obtained from the State of Michigan, Department of Licensing and Regulatory Affairs (LARA), authorizes the holder to purchase or transfer marihuana only from growers and processors and to sell or transfer marihuana only to registered qualifying patients or registered primary caregivers. Under current State law consumption or use of marihuana or marihuana products at a provisioning center is prohibited. Provisioning centers are also prohibited from selling or allowing the consumption or use of alcohol or tobacco products on their premises, and from allowing a physician to conduct examinations and issue medical certifications for the purpose of obtaining a registry identification card.

## **Background**

At its meeting on May 21, 2019 the Township Board adopted both zoning and non-zoning ordinances allowing commercial medical marihuana facilities in designated areas in the Township. The non-zoning ordinance established the application process, the facility types allowed, the number of permits, and the general operational standards for the different types of commercial facilities, which include growers, processors, secure transporters, provisioning centers, and safety compliance facilities. The zoning ordinance established seven designated areas in the Township where commercial medical marihuana facilities are permitted and identified the zoning districts in which each of the five types of commercial medical marihuana facilities can locate, as identified in the table on the following page.

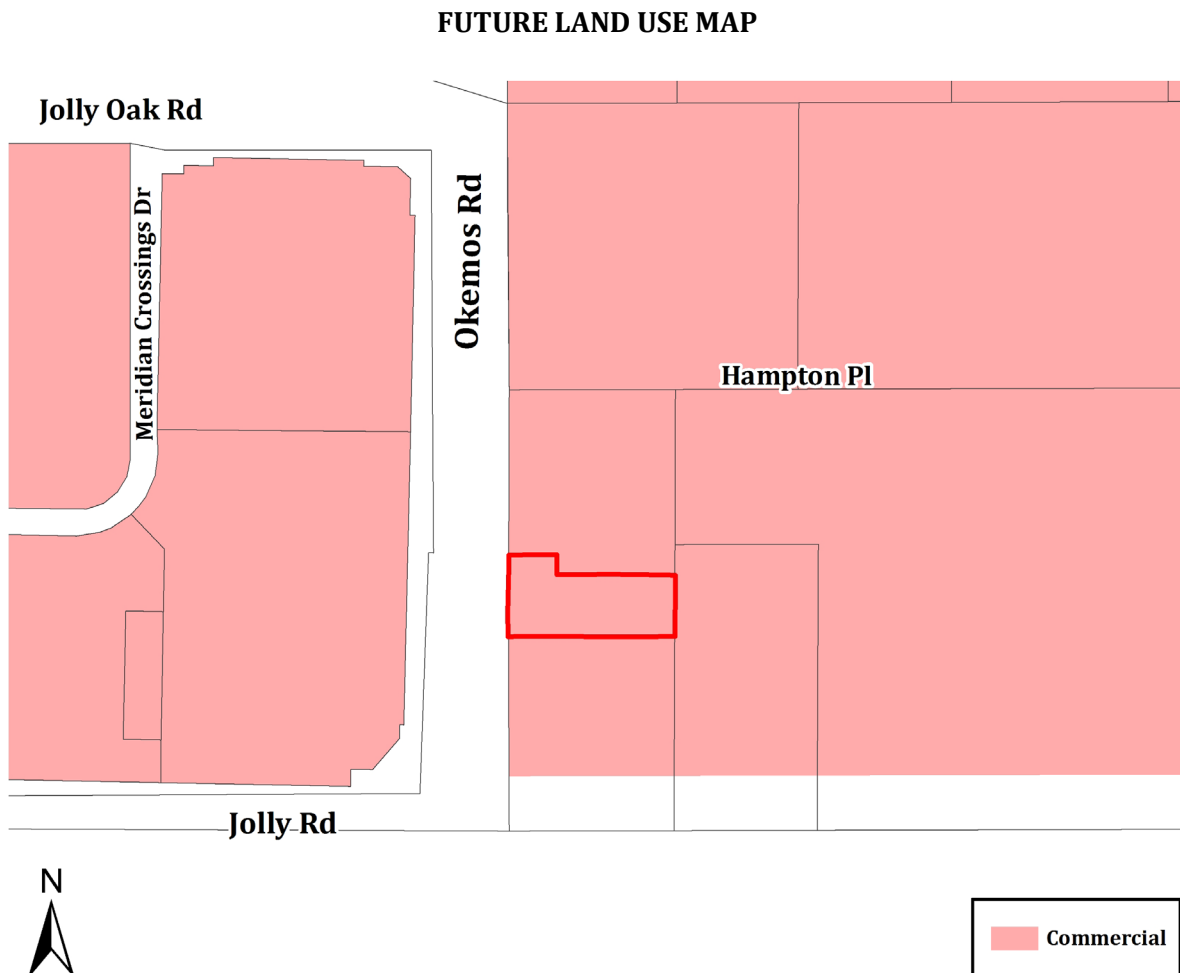
<i>Facility type</i>	<i>Zoning District(s) allowed</i>	<i>Overlay Area(s) allowed</i>
Grower	I (Industrial)	1, 4, 6
Processor	I (Industrial)	1, 4, 6
Provisioning Center	I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park)	1, 2, 3, 4, 5, 6, 7
Safety Compliance Facility	I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park)	1, 2, 3, 5, 6, 7
Secure Transporter	I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park)	1, 2, 3, 5, 6, 7

**LOCATION MAP**



**Master Plan**

The Future Land Use Map from the 2017 Master Plan designates the subject site in the Commercial category.

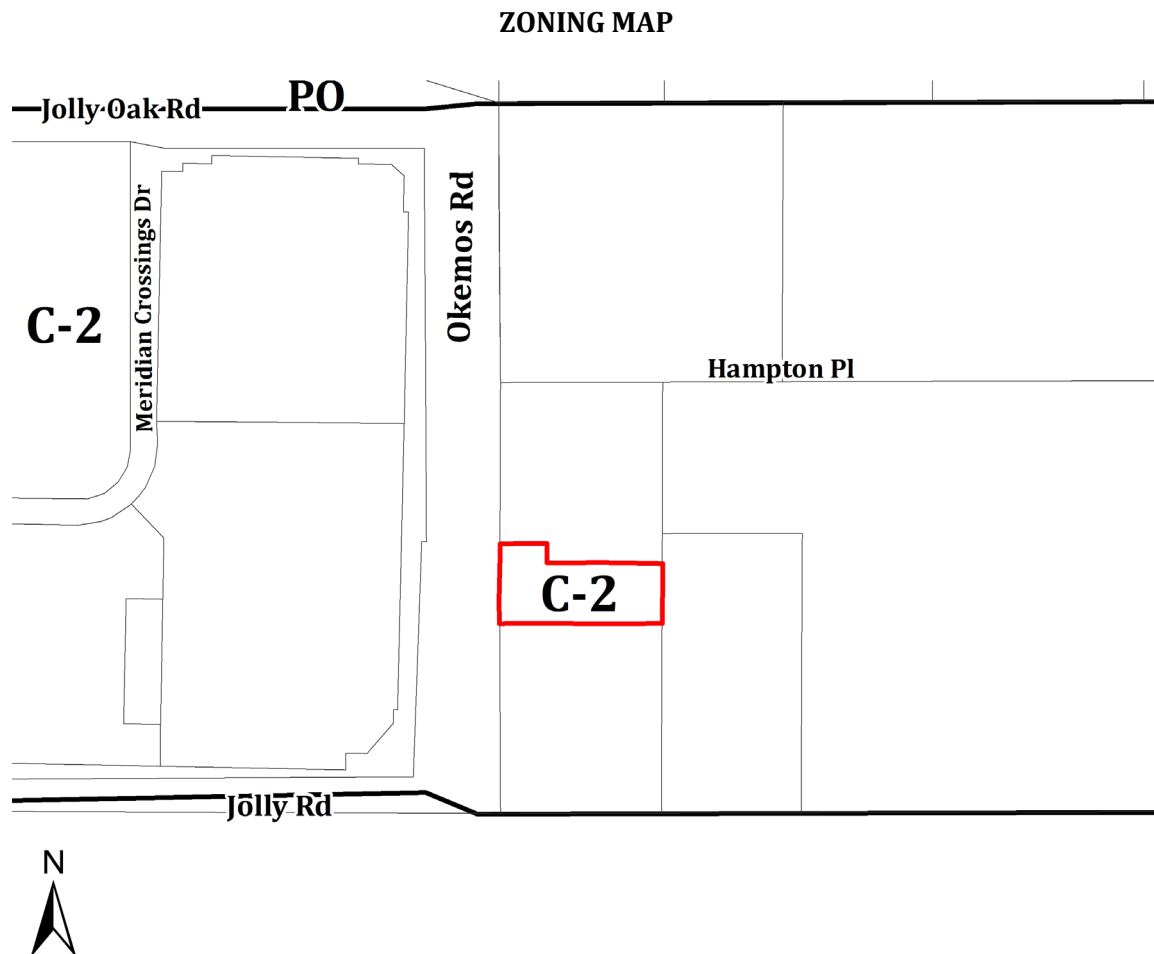


### Zoning

The proposed project is located in the C-2 (Commercial) zoning district. A provisioning center is permitted in the C-1, C-2, C-3 (Commercial), I (Industrial), and RP (Research and Office Park) zoning districts subject to approval of a special use permit reviewed by the Planning Commission and approved by the Township Board.

The C-2 district requires a minimum of 100 feet of lot frontage and 4,000 square feet of lot area. The parcel is 0.39 acres in size (16,988 square feet) and has 100 feet of frontage along Okemos Road.





### Physical Features

The site is currently developed with a 12,990 square foot multi-tenant commercial center identified as Jolly Oak Center, which was constructed in 1989.

The Flood Insurance Rate Map (FIRM) for Meridian Township indicates the property is not located in the floodplain and wetlands are not present on the site. The Township Greenspace Plan shows no special designation on the site.

### Streets and Traffic

The approximate 0.39 acre site is located on the east side of Okemos Road, north of Jolly Road. Access to the site is provided from two driveways, one from Okemos Road and one from Hampton Place. A seven foot wide pathway is installed along the Okemos Road frontage. Okemos Road and is a four-lane road with a center turn lane and curb and gutter that is classified as a Principal Arterial street in the Street Setbacks and Service Drive map in Section 86-367 of the Code of Ordinances.

The most recent (2018) traffic count information from the Michigan Department of Transportation (MDOT) showed a total of 21,981 two-way vehicle trips in a 24 hour period on Okemos Road, north of Jolly Road.

A traffic assessment is required for an expansion or change of an existing special use where the increase in intensity would generate an additional 50 to 99 directional trips during morning and afternoon peak hours of traffic. The applicant submitted a traffic assessment prepared by Giffels Webster dated December 16, 2019 that provides information on traffic generated by the proposed provisioning center.

The assessment looks at existing and future level of service (LOS) during the AM (7:30-8:30 a.m.) and PM (4:45-5:45 p.m.) peak hours at the two existing driveway locations located along Okemos Road and Hampton Plaza. The traffic assessment notes existing traffic at the studied locations all operate at an acceptable LOS (LOS C or better) during the AM and PM peak hours. Under future conditions, it is projected all movements will operate at an acceptable level of service (LOS C or better).

The submitted traffic assessment contains a trip generation analysis which estimates future vehicle trips that could be generated by the proposed provisioning center. The Institute of Transportation Engineers (ITE) trip generation rates for a Marijuana Dispensary (Land Use Code 882) were selected to represent the proposed provisioning center. The following table summarizes findings from the trip generation analysis.

Description	Size	AM Peak Hour			PM Peak Hour			Weekday
		In	Out	Total	In	Out	Total	
Marijuana Dispensary, Land Use Code 882	2,400 sq. ft.	14	11	25	26	26	52	606

The findings of the traffic assessment shows traffic generated by the proposed provisioning center would not create a significant impact at the studied locations.

**Parking**

The Township Code of Ordinances requires five (minimum) to 5.5 (maximum) parking spaces per 1,000 square feet of gross floor area for commercial centers and shopping malls having a gross floor area less than 25,000 square feet. The 12,990 square foot multi-tenant commercial center requires a minimum of 65 parking spaces and a maximum of 71 parking spaces. The shopping center currently has a total of 68 parking spaces, a portion of which the applicant intends to utilize.

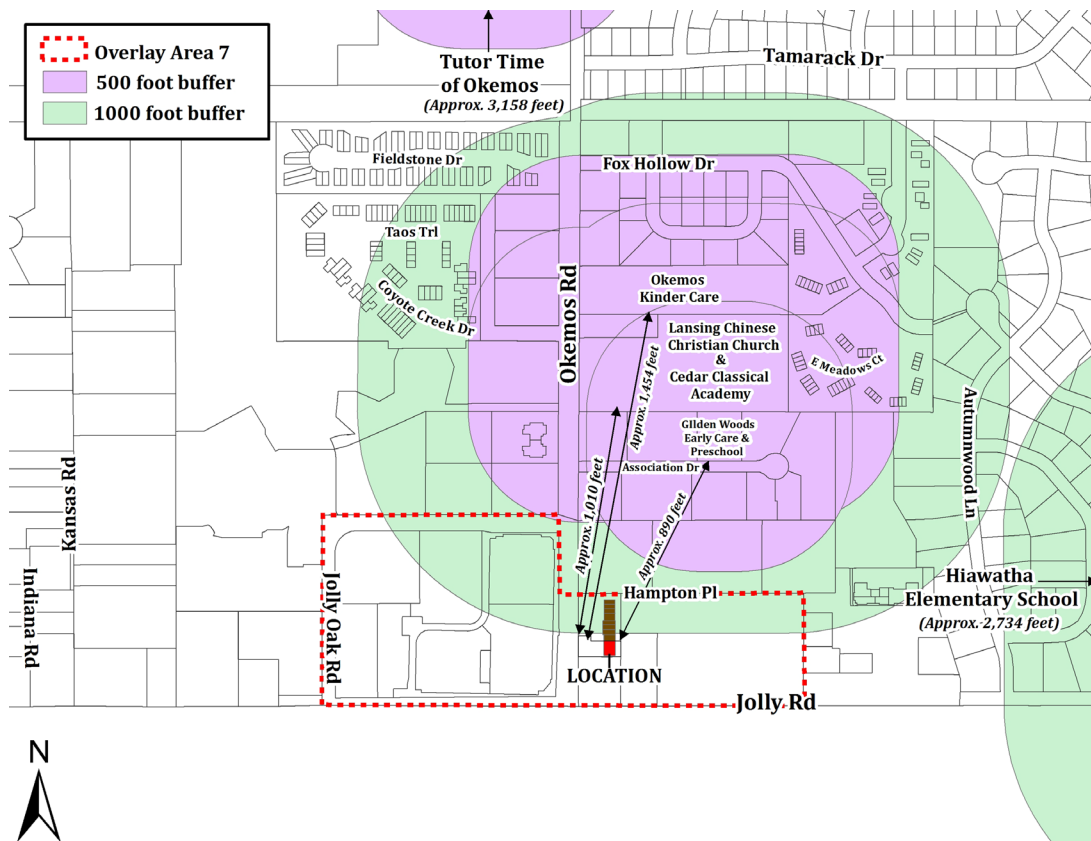
**Staff Analysis**

The Cured Leaf TC, Inc. has requested special use permit approval to occupy tenant space in the Jolly Oak Center commercial center at 3520 Okemos Road to operate a commercial medical marihuana provisioning center. For commercial medical marihuana facilities the Planning Commission makes a recommendation on the request and the Township Board makes the final decision. The special use permit review criteria found in Section 86-126 of the Code of Ordinances should be used when evaluating the proposed special use permit.

*Required Spacing*

The non-zoning ordinance adopted by the Township Board requires commercial medical marihuana facilities to be located one-thousand (1,000) feet from any public or private K-12 school, five hundred (500) feet from any church, place of worship or other religious facility, and five hundred (500) feet from any library, preschool, or child care center. The minimum distance between uses is measured horizontally between the nearest property lines. The map on the following page shows the 500 and 1,000 foot buffers near the proposed provisioning center. The closest facility to the proposed provisioning center is Gildden Woods Early Care and Preschool. Gildden Woods is located at 2190 Association Drive which is approximately 890 feet away from the proposed provisioning center.

**SETBACKS MAP**



*Commercial Medical Marihuana Facility Permit Application*

Applicants for a commercial medical marihuana facility must go through various steps in order to establish a facility within Meridian Township, including securing local and state approval. The local process begins with the initial application for a Commercial Medical Marihuana Facility Permit. To be eligible for a permit the applicant was required to submit a non-refundable \$5,000 dollar application fee and address at least two of the following three requirements: (1) an official statement issued by the Department of Licensing and Regulatory Affairs (LARA) indicating that the applicant has completed state prequalification for a license, (2) proof that the applicant or owners of at least 75% of the applicant are current Township residents and were residents for at least twelve months prior to filing the application, (3) signing of a certification restricting the transfer of the permit for a period of not less than 30 months after issuance. The applications were reviewed internally by Township staff and the Township Attorney. Other important aspects of the permit application process included submittal of documents addressing the organizational structure of the applicant, passing background checks, submitting a security plan for the facility, addressing waste disposal, providing details on staffing, and submitting information on product vendors and transporters.

Once the facility application is deemed complete, the applicant receives conditional approval from the Director of Community Planning and Development. In this initial application period the Township did received only applications for provisioning centers.

*Lottery*

If multiple applications are received for an overlay area a lottery is held to establish the order applicants can apply for a special use permit. If a conditionally approved applicant fails to submit a SUP application within the required 60 day period after the lottery then the applicant's conditional approval is revoked and the next applicant drawn in the lottery receives an opportunity to submit a SUP application. In the case of the current request, The Cured Leaf TC, Inc. was the only conditionally approved applicant in Overlay Area 7, so a lottery was not required.

*State Review and Next Steps*

SUP approval must be granted by the Township Board before an application can move forward to the final steps of approval for a Commercial Medical Marihuana Facility Permit. Before operations may begin at the facility the applicant must be granted a permit by the Director of Community Planning and Development and receive final approval from the State of Michigan by completing the License Qualification and Final Approval steps of the state application process. Only when the facility has been inspected and the Township has confirmed all applicable State approvals will a Commercial Medical Marihuana Facility Permit be issued and the facility allowed to open. The commercial medical marihuana facility permit is issued for a period of one year.

*Renewal*

After one year, the applicant must submit an application to renew the Commercial Medical Marihuana Facility Permit. A \$5,000 renewal fee is required at the time of application. Each year, any pending applications for renewal or amendment of valid, unexpired permits are reviewed and granted or denied before applications for new permits are considered. If a renewal is denied or licensure is not granted the permit shall be forfeited and the Director may accept new applicants in the next application period. If the applicant maintains a valid State license and remains in good standing with both the State and Township a renewal will be granted for another one year period.

**Planning Commission Options**

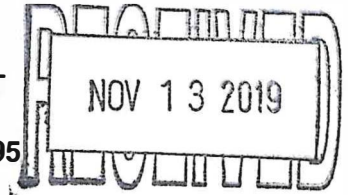
The Planning Commission may recommend approval, approval with conditions, or denial of the proposed special use permit. A resolution will be provided at a future meeting.

**Attachments**

1. Special use permit application and attachments.
2. Site plan prepared by Kebs, Inc. dated August 5, 2019 and received on November 13, 2019.
3. Floor plans prepared by Serra-Marko & Associates dated August 2019 and received by the Township on November 13, 2019.
4. Traffic Assessment prepared by Giffels Webster dated December 16, 2019 and received by the Township on December 16, 2019.
5. Medical Marihuana Overlay Area Map dated May 16, 2019.

G: Community Planning & Development\Planning\SPECIAL USE PERMITS (SUP)\2019\SUP 19141 (The Cured Leaf TC, Inc.)\SUP 19141.pc1.docx

**CHARTER TOWNSHIP OF MERIDIAN  
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT  
5151 MARSH ROAD, OKEMOS, MI 48864  
PLANNING DIVISION PHONE: (517) 853-4560, FAX: (517) 853-4095**



**SPECIAL USE PERMIT APPLICATION**

**Before submitting this application for review, an applicant may meet with the Director of Community Planning and Development to discuss the requirements for a special use permit and/or submit a conceptual plan for review to have preliminary technical deficiencies addressed prior to submittal of the application. If the property or land use is located in the following zoning districts RD, RC, RCC, RN then the applicant must meet with the Planning Director to discuss technical difficulties before filing a formal application.**

**Part I**

- A. Applicant The Cured Leaf TC, Inc.  
 Address of Applicant 108 S. Main Street, Royal Oak, MI. 48067  
 Telephone - Work 248-939-0525 Home \_\_\_\_\_ Fax \_\_\_\_\_ Email Nemer@MGMT10.com  
 Interest in property (circle one): **Owner** Tenant Option Other  
 (Please attach a list of all persons with an ownership interest in the property.)
- B. Site address / location / parcel number 3520 Okemos Road, Okemos, MI. 48864, 33-02-02-33-452-010  
 Legal description (please attach if necessary) (Please See Attached)  
 Current zoning C-2  
 Use for which permit is requested / project name Medical Marijuana Provisioning Center  
 Corresponding ordinance number 2019-01, 5-21-2019
- C. Developer (if different than applicant) Hagar I, LLC  
 Address 108 S. Main Street, Royal Oak, MI. 48067  
 Telephone - Work 248-802-8118 Home \_\_\_\_\_ Fax \_\_\_\_\_
- D. Architect, Engineer Planner or Surveyor responsible for design of project if different from applicant:  
 Name Roman Bonislawski, Ron & Roman, LLC  
 Address 275 E. Frank Street, Birmingham, MI. 48009  
 Telephone - Work 248-723-5790 Home \_\_\_\_\_ Fax \_\_\_\_\_
- E. Acreage of all parcels in the project: Gross 1.28 Net .39
- F. Explain the project and development phases: (Please See Attached Development Process)
- G. Total number of:  
 Existing: structures 1 bedrooms \_\_\_\_\_ offices \_\_\_\_\_ parking spaces 68 carports \_\_\_\_\_ garages \_\_\_\_\_  
 Proposed: structures 1 bedrooms \_\_\_\_\_ offices \_\_\_\_\_ parking spaces 68 carports \_\_\_\_\_ garages \_\_\_\_\_
- H. Square footage: existing buildings 12,990 proposed buildings \_\_\_\_\_  
 Usable Floor area: existing buildings 12,990 proposed buildings \_\_\_\_\_
- I. If employees will work on the site, state the number of full time and part time employees working per shift and hours of operation: (Please See Attached)
- J. Existing Recreation: Type N/A Acreage \_\_\_\_\_  
 Proposed Recreation: Type N/A Acreage \_\_\_\_\_  
 Existing Open Space: Type N/A Acreage \_\_\_\_\_  
 Proposed Open Space: Type N/A Acreage \_\_\_\_\_

K. If Multiple Housing: *No Housing*

Total acres of property \_\_\_\_\_

Acres in floodplain \_\_\_\_\_

Percent of total \_\_\_\_\_

Acres in wetland (not in floodplain) \_\_\_\_\_

Percent of total \_\_\_\_\_

Total dwelling units \_\_\_\_\_

Dwelling unit mix:	Number of single family detached:	for Rent _____	Condo _____
	Number of duplexes:	for Rent _____	Condo _____
	Number of townhouses:	for Rent _____	Condo _____
	Number of garden style apartments:	for Rent _____	Condo _____
	Number of other dwellings:	for Rent _____	Condo _____

L. The following support materials must be submitted with the application:

1. Nonrefundable Fee. (*Paid with MMFLA Application*)
2. Legal Description of the property. (*Please See Attached*)
3. Evidence of fee or other ownership of the property. (*Please See Attached Purchase Agreement*)
4. Site Plan containing the information listed in the attachment to this application. (*Please See Attached Site Plan*)
5. Architectural sketches showing all sides and elevations of the proposed buildings or structures, including the project entrance, as they will appear upon completion. The sketches should be accompanied by material samples or a display board of the proposed exterior materials and colors. *No structural changes to the building.*
6. A Traffic Study, prepared by a qualified traffic engineer, based on the most current edition of *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation. (*Attached Traffic Study Memo*)
  - a. A traffic assessment will be required for the following:
    - 1) New special uses which could, or expansion or change of an existing special use where increase in intensity would, generate between 50 to 99 directional trips during a peak hour of traffic.
    - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
  - b. A traffic impact study will be required for the following:
    - 1) New special uses which would, or expansion or change of an existing special use where increase in intensity would, generate over 100 directional trips or more during a peak hour of traffic, or over 750 trips on an average day.
    - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
7. Natural features assessment which includes a written description of the anticipated impacts on the natural features at each phase and at project completion that contains the following: *Attached Assessment*
  - a. An inventory of natural features proposed to be retained, removed, or modified. Natural features shall include, but are not limited to, wetlands, significant stands of trees or individual trees greater than 12 inches dbh, floodways, floodplains, waterbodies, identified groundwater vulnerable areas, slopes greater than 20 percent, ravines, and vegetative cover types with potential to sustain significant or endangered wildlife.
  - b. Description of the impacts on natural features.
  - c. Description of any proposed efforts to mitigate any negative impacts.

The natural features assessment may be waived by the Director of Community Planning and Development in certain circumstances.

- M. Any other information specified by the Director of Community Planning and Development which is deemed necessary to evaluate the application.
- N. In addition to the above requirements, for zoning districts, **RD, RC, RCC, RN, and CV** and **Group Housing Residential Developments** the following is required: *Does Not Apply*
1. Existing and proposed contours of the property at two foot intervals based on United States Geological Survey (USGS) data.
  2. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer.
  3. Ten copies of a report on the intent and scope of the project including, but not limited to: Number, size, volume, and dimensions of buildings; number and size of living units; basis of calculations of floor area and density and required parking; number, size, and type of parking spaces; architectural sketches of proposed buildings.
  4. Seven copies of the project plans which the Township shall submit to local agencies for review and comments.
- O. In addition to the above requirements, a special use application in zoning district **RP** requires the following material as part of the site plan: *Does Not Apply*
1. A description of the operations proposed in sufficient detail to indicate the effects of those operations in producing traffic congestion, noise, glare, air pollution, water pollution, fire hazards or safety hazards or the emission of any potentially harmful or obnoxious matter or radiation.
  2. Engineering and architectural plans for the treatment and disposal of sewerage and industrial waste tailings, or unusable by-products.
  3. Engineering and architectural plans for the handling of any excessive traffic congestion, noise, glare, air pollution, or the emission of any potentially harmful or obnoxious matter or radiation.
- P. In addition to the above requirements, a special use application for a use in the Floodway Fringe of zoning district **CV** requires the following: *Does Not Apply*
1. A letter of approval from the State Department of Environmental Quality.
  2. A location map including existing topographic data at two-foot interval contours at a scale of one inch representing 100 feet.
  3. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits, extent, and elevations of the proposed fill, excavation, and occupation.
  4. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- Q. In addition to the above requirements, a special use application for a use in the Groundwater Recharge area or zoning district **CV** requires the following: *Does Not Apply*
1. A location map including existing topographic data at two-foot interval contours.
  2. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits and extent of the proposed fill, excavation, and occupation.
  3. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- R. In addition to the above requirements, the Township Code of Ordinances, Article VI, should be reviewed for the following special uses: group housing residential developments, mobile home parks, nonresidential structures and uses in residential districts, planned community and regional shopping center developments, sand or gravel pits and quarries, sod farms, junk yards, sewage treatment and disposal installations, camps and clubs for outdoor sports and buildings greater than 25,000 square feet in gross floor area. *Does Not Apply*



Part II

SUP REQUEST STANDARDS  
Township Code of Ordinances, Section 86-126

Applications for Special Land Uses will be reviewed with the standards stated below. An application that complies with the standards stated in the Township Ordinance, conditions imposed pursuant to the Ordinance, other applicable Ordinances, and State and Federal statutes will be approved. Your responses to the questions below will assist the Planning Commission in its review of your application.

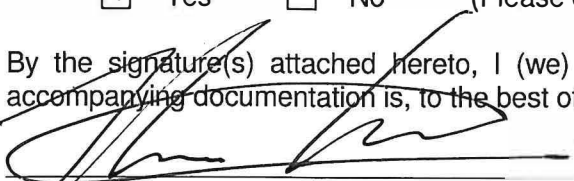
- (1) The project is consistent with the intent and purposes of this chapter.
- (2) The project is consistent with applicable land use policies contained in the Township's Master Plan of current adoption.
- (3) The project is designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such a use will not change the essential character of the same area.
- (4) The project will not adversely affect or be hazardous to existing neighboring uses.
- (5) The project will not be detrimental to the economic welfare of surrounding properties or the community.
- (6) The project is adequately served by public facilities, such as existing roads, schools, stormwater drainage, public safety, public transportation, and public recreation, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide any such service.
- (7) The project is adequately served by public sanitation facilities if so designed. If on-site sanitation facilities for sewage disposal, potable water supply, and storm water are proposed, they shall be properly designed and capable of handling the longterm needs of the proposed project.
- (8) The project will not involve uses, activities, processes, materials, and equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare, or odors.
- (9) The project will not directly or indirectly have a substantial adverse impact on the natural resources of the Township, including, but not limited to, prime agricultural soils, water recharge areas, lakes, rivers, streams, major forests, wetlands, and wildlife areas.

Part III

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes     No    (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate

  
\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date 11-12-2019

Nemer Haddad  
\_\_\_\_\_  
Type/Print Name

Fee: \$500 \_\_\_\_\_

Received by/Date: Peter Menser 11/13/19 \_\_\_\_\_

## **Meridian Township:**

### **Medical Marijuana Provisioning Center (The Cured Leaf TC)**

**Project:** Remodel 2 existing suites within Jolly Oaks Plaza, located at 3520 Okemos road Okemos, MI., into 1, Medical Marijuana Provisioning Center.

#### **Process:**

##### **Phase 1: Special use Permit**

- Apply for Special Use Permit.
- Complete pre-licensure steps.
- Begin employee recruitment and outreach.
- Select all vehicles, equipment, instruments, tools, and supplies required for year-one operation.
- Introduce the Company to the local government and discuss our plans, including hiring locally, odor control, and site security.

##### **Phase 2: Construction / Recruiting**

- Attain Special Use Permit
- Secure necessary construction permits from township
- Prepare site.
- Begin construction
- Continue employee recruitment and outreach.
- Move-in temporary office off site for recruitment.
- Purchase all equipment, instruments, tools, and supplies required for year-one operation.
- Receive Certificate of Occupancy
- Order Phase 2 State Approval Inspection

##### **Phase 3: Final Buildout and Inspection**

- Hire employees and remaining Executive Team.
- Staff training.
- Install Security systems
- Install Fire Systems
- Install and test all equipment and instruments.
- Phase 2 State Approval Inspection and Approval
- Facility dry run.
- Grand Opening

Michigan Township		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
<b>Core Hours</b>	8am - 8pm	8am - 8pm	8am - 8pm	8am - 8pm	8am - 8pm	8am - 8pm	8am - 8pm	10am - 6pm	80
<b>MM</b>	8am - 6pm	OFF	8am - 6pm	8am - 6pm	8am - 6pm	8am - 6pm	8am - 6pm	OFF	50
<b>Lead Bud Tender</b>	11am - 8pm	8am - 6pm	OFF	11am - 8pm	11am - 8pm	OFF	OFF	10am - 6pm	45
<b>Lead Tender 2</b>	11am - 8pm	11am - 8pm	11am - 8pm	OFF	11pm - 8pm	11am - 8pm	OFF	OFF	44
<b>Lead Tender 3</b>	8am - 4pm	OFF	OFF	8am - 4pm	8am - 4pm	8am - 4pm	8am - 4pm	10am - 6pm	40
<b>Lead Tender 4</b>	12pm - 8pm	8am - 4pm	8am - 4pm	OFF	8am - 4pm	OFF	OFF	10am - 6pm	40
<b>Lead Reception</b>	OFF	12pm - 8pm	12pm - 8pm	12pm - 8pm	12pm - 8pm	12pm - 8pm	OFF	OFF	40
<b>Reception 2</b>	8am - 8pm	OFF	8am - 5pm	8am - 5pm	8am - 5pm	8am - 5pm	OFF	OFF	48
<b>Lead Security</b>	OFF	8am - 8pm	5pm - 8pm	5pm - 8pm	5pm - 8pm	5pm - 8pm	10am - 6pm	OFF	32
<b>Security 2</b>	8am - 5pm	OFF	8am - 5pm	8am - 5pm	8am - 5pm	8am - 5pm	OFF	OFF	45
<b>Security 3</b>	OFF	8am - 5pm	5pm - 8pm	5pm - 8pm	5pm - 8pm	5pm - 8pm	10am - 6pm	OFF	29
<b>Security 3</b>	5pm - 8pm	5pm - 8pm	OFF	OFF	11am - 6pm	11am - 6pm	OFF	OFF	20
employees per shift	8	7	8	8	11	9	5		

The hours of operation will be 8AM - 8PM, Monday - Saturday and 10AM - 6PM on Sundays.

The management team will consist of a General Manager, an Assistant Store Manager, and the Lead Bud Tender, all full-time.

There will be 4 full-time bud tenders, 1 full-time lead receptionist, 1 part-time receptionist, 1 full-time security guard and 2 part-time security guards.

Full-time Employees	11
Part-time	8
Part-time	3

Legal Description of 3520 Okemos Rd. Okemos, MI. 48864 as pulled from the attached land survey.

**CERTIFICATE OF SURVEY:**

I hereby certify only to the parties named hereon that we have surveyed and divided into several parcels, at the direction of said parties, a parcel of land previously described as:

(As provided)

Tax ID: 33-02-02-33-452-010

BEG @ THE S 1/4 COR SEC 33 -N 89 DEG 46'40"E ALNG S SEC LN 50 FT -N 0 DEG 04'28"W PLL WITH NS 1/4 LN 217 FT TO POB -N 0 DEG 04'28"W 284.6 FT -N 89 DEG 46'40"E PLL WITH S SEC LN 197.5 FT -S 0 DEG 04'28"E 284.6 FT -S 89 DEG 46'40"W 197.5 FT TO POB ON SE 1/4 OF SEC 33, T4NR1W

and that we have found or set, as noted hereon, permanent markers to all corners and angle points of the boundaries of said parcels and that the more particular legal descriptions of said parcels are as follows:

Parcel A:

A parcel of land in the Southeast 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the surveyed boundary of said parcel described as: Commencing at the South 1/4 corner of said Section 33; thence N89°46'40"E along the South line of said Section 33 a distance of 50.00 feet; thence N00°04'28"W parallel with the North-South 1/4 line of said Section 33 a distance of 317.00 feet to the point of beginning of this description; thence continuing N00°04'28"W parallel with said North-South 1/4 line 184.60 feet; thence N89°46'40"E parallel with said South section line 197.50 feet; thence S00°04'28"E parallel with said North-South 1/4 line 202.63 feet; thence N89°48'31"W 147.43 feet; thence N00°18'47"W 16.96 feet; thence S89°46'40"W parallel with said South section line 50.00 feet to the point of beginning; said parcel containing 0.89 acre more or less; said parcel subject to all easements and restrictions if any.

Parcel B:

A parcel of land in the Southeast 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the surveyed boundary of said parcel described as: Commencing at the South 1/4 corner of said Section 33; thence N89°46'40"E along the South line of said Section 33 a distance of 50.00 feet; thence N00°04'28"W parallel with the North-South 1/4 line of said Section 33 a distance of 217.00 feet to the point of beginning of this description; thence continuing N00°04'28"W parallel with said North-South 1/4 line 100.00 feet; thence N89°46'40"E parallel with said South section line 50.00 feet; thence S00°18'47"E 16.96 feet; thence S89°48'31"E 147.43 feet; thence S00°04'28"E parallel with said North-South 1/4 line 81.97 feet; thence S89°46'40"W parallel with said South section line 197.50 feet to the point of beginning; said parcel containing 0.39 acre more or less; said parcel subject to all easements and restrictions if any.



## PURCHASE AGREEMENT

**THIS PURCHASE AGREEMENT** (this "Agreement"), is made by and between **JOLLY OAK LLC**, a Michigan limited liability company, ("Seller"), and **HAGER I, LLC**, a Michigan limited liability company ("Buyer") as of the Effective Date, as defined below.

### RECITALS:

A. Seller is the owner of improved real property located at 3520 Okemos Road, Charter Township of Meridian, County of Ingham, State of Michigan, more particularly described on **Exhibit A** (the "Real Property").

B. Seller desires to sell, and Buyer desires to purchase, the Property (as defined below), all in accordance with the terms set forth below.

**C. THIS AGREEMENT REMAINS VALID UNTIL 11:59 PM ON AUGUST 1, 2019 AND MUST BE EXECUTED AND RETURNED BY AFORESAID TIME, OTHERWISE THIS AGREEMENT IS NULL AND VOID.**

**NOW THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is acknowledged, Seller and Buyer agree as follows:

1. **Sale.** On the terms and subject to the conditions of this Agreement, Seller shall sell, convey and assign to Buyer, on the Closing Date (as defined below), the Real Property. All of Seller's right, title and interest in and to all easements, rights, interests, claims and appurtenances in any way belonging to, appertaining to, or benefiting the Real Property are collectively referred to herein as the "**Property**").

2. **Purchase.** In full consideration for the sale of the Property and the performance by Seller of its covenants and agreements contained in this Agreement, Buyer shall, on the terms and subject to the conditions of this Agreement, purchase the Property from Seller and pay to Seller the Purchase Price.

3. **Purchase Price.** The purchase price (the "Purchase Price") shall be Six Million and 00/100 Dollars (\$6,000,000.00).

4. **Payment of Purchase Price.** The Purchase Price shall be payable as follows:

- (a) Upon execution of a formal Purchase Agreement, the Buyer shall pay a Twenty-Five Thousand and 0/100 Dollars (\$25,000.00) non-refundable deposit directly to the Seller, which shall be applied to the Purchase Price at Closing. In the event Buyer does not wire transfer the Twenty-Five Thousand and 0/100 Dollars (\$25,000.00), within Three (3) Business Days, this Agreement shall be deemed null and void.
- (b) The balance of the Purchase Price, plus or minus closing prorations and adjustments, shall be paid to Seller at the Closing by wire transfer of immediately available funds.

**5. Conveyance.** Conveyance of title to the Property shall be consummated by delivery at Closing of an executed recordable warranty deed conveying fee simple marketable title to the Property to Buyer, subject only to Permitted Exceptions (as defined below). The warranty deed shall not reflect the Purchase Price, but instead, an executed Real Estate Transfer Tax Valuation Affidavit in the form required by Ingham County and the State of Michigan shall be delivered to Buyer at Closing. The personal property and intangibles contained in the definition of Property shall be conveyed by a bill of sale and assignment, free and clear of any and all liens, liabilities, encumbrances, exceptions and claims. All leases shall be assigned by Seller and assumed by Buyer at Closing. Seller has negotiated termination agreements for approximately 2,200 sf in the Property currently occupied by Asian Express and Preferred Wireless as shown on the attached **Exhibit B**. The termination agreements give the Landlord the option to terminate the subject leases upon sixty (60) days prior written notice and payment of termination fees in the total amount of \$75,000.00. These termination agreements shall be assigned to Buyer at closing.

**6. Evidence of Title.** Within ten (10) days after the Effective Date, Seller shall deliver to Buyer a commitment for an Owner's title insurance policy (the "Title Commitment"), a Title Commitment from Transnation Title Agency, 1675 WaterTower Place, Suite 200, East Lansing, MI 48823 or a title company insuring these types of transactions in the State of Michigan (the "Title Company") with standard exceptions, in the amount of the Purchase Price, along with copies of all recorded exceptions to title set forth in the Title Commitment.. At the Closing, Seller shall cause to be issued, at Seller's sole cost and expense, a policy of owner's title insurance pursuant to the Title Commitment (the "Owner's Title Policy").

**7. Objections to Title.** Buyer shall have ten (10) days after receipt of the Title Commitment and all copies of all documents referred to in the Title Commitment, to inspect the state of the title, and to object ("Objections") to any matters shown on the Title Commitment. Any matter shown on the Title Commitment not timely objected to by Buyer shall be considered a "Permitted Exception." If Buyer timely notifies Seller in writing of any Objections, Seller may elect (but shall have no obligation except as set forth in clause (B) below) to cure or remove any of the Objections, provided, that (A) in no event shall Seller be obligated to expend any sum in connection with any such cure, except as provided in the following clause (B), and (B) in any event Seller shall pay, satisfy and remove or cause to be removed Seller's mortgage and any other lien that is dischargeable by the payment of a definite and ascertainable amount (except the lien of any general real estate taxes not due and payable), if any, encumbering the Property (collectively, the "Removable Exceptions"). Subject to the terms of the preceding sentence, if Buyer does give Seller timely written notice of any Objections, Seller agrees to notify Buyer within ten (10) days after receipt of the Objections as to whether Seller will cure such Objections by the Closing Date. If Seller elects to cure an Objection, then Seller shall do so by the Closing Date. If Seller fails to notify Buyer within such 10-day period or Seller timely notifies Buyer that Seller does not intend to attempt to cure any or all of the Objections by the Closing Date, then Buyer shall elect to either (x) waive its Objections hereunder and accept any matters covered by such Objections as Permitted Exceptions hereunder, or (y) terminate this Agreement, whereupon the Deposit shall be returned to Buyer and neither party shall have any further rights or obligations hereunder.

**8. Initial Inspection Period.**

- (a) Buyer shall have until on or before September 16, 2019, to complete various inspections and investigations of all aspects of the Property at the Buyer's expense

("Investigation Contingencies"), including, but not limited to, the physical condition and environmental condition of the land and Improvements, and all other aspects of the Property and all documents relating thereto (the "Initial Inspection Period").

- i. Buyer may terminate this Agreement by written notice to Seller at any time within the Initial Inspection Period if, for any reason, it is not satisfied in its sole discretion with the results of any of its inspections, investigations or reviews. If Buyer does not terminate the Agreement prior to the expiration of the Initial Inspection Period, all the Investigation Contingencies shall be deemed waived except for the limited purpose of being selected for a Medical Marihuana License for this location by Meridian Township at the lottery ("Lottery") to be held on September 23, 2019, or such other date as may be adjusted by Meridian Township, and obtaining the Township and State license(s) or permits required for Buyer to operate a medical marihuana provisioning center in part of the Property as provided in ¶b below ("Licensing Contingency").
- ii. This Agreement shall automatically terminate, on or before September 24, 2019, or the day following the Lottery if it is not held on September 23, 2019, whichever is first to occur ("Licensing Contingency Period") if Buyer's application for a Medical Marihuana License for this location is not selected by Meridian Township at the Lottery, unless otherwise mutually agreed to in writing between the Parties. If Buyer is selected for a Medical Marihuana License for this Property by the Meridian Township Lottery, then Buyer shall make an additional non-refundable deposit of Seventy-Five Thousand and 00/100 (\$75,000.00) paid directly to the Seller within Three (3) Business Days, which shall be applied to the Purchase Price at Closing.
- iii. Notwithstanding the provisions of subparagraph ii above, the parties acknowledge that, in order to satisfy the Meridian Township 1000 feet "distance" rule to permit a licensed facility at this location, a lot split is required. The Real Property described on **Exhibit A** will be divided into two (2) separate parcels as shown on the diagram attached as **Exhibit A-1**. Seller agrees to proceed with the lot split process in conjunction with Buyer's application for a Medical Marihuana License at the Real Property, and to file such applications and documents required to obtain lot split approval from Meridian Township. Buyer shall be responsible to reimburse Seller at closing for all costs Seller incurs in connection with the lot split e.g. engineering, application and permit fees. The Deposit shall not go "hard" until the Lot Split is granted. Once the lot split is approved, this contingency shall be deemed satisfied and aforesaid Deposit shall be non-refundable.



- (b) Buyer shall have three (3) additional thirty (30) day options (the "Extension Option") to extend the Licensing Contingency Period for the sole and limited purpose of obtaining the Township and State license(s) or permits required for Buyer to operate a medical marijuana provisioning center in part of the Property. In the event Buyer elects to exercise its Extension Option, Buyer shall notify the Seller in writing of its intent to do so prior to the expiration of the Initial Inspection Period; provided, however, that Buyer's failure to do so will automatically trigger the Extension Option for this limited purpose upon Seller's receipt of the Option Payment set forth below, unless Buyer expressly terminates the Purchase Agreement in writing. Upon Buyer's exercise of an Extension Option, Buyer shall immediately deliver to Seller the sum of Twenty-Five Thousand Dollars (\$25,000) ("Option Payment"). Any Option Payments shall not be applied or credited against the Purchase Price at closing. Buyer may terminate this Agreement at any time within the Extension Period if Buyer does not receive the licensure or permits required to operate a medical marijuana provisioning center in part of the Property upon terms that are acceptable to Buyer, in its sole discretion. If Buyer does not terminate the Purchase Agreement as aforesaid, the Deposits will be applicable to the Purchase Price, and the parties shall proceed to closing.
- (c) Buyer agrees to apply for all necessary licenses and permits and process all applications with commercially reasonable dispatch. Buyer shall provide seller with regular written reports on the status of all pending licenses contemporaneous with each Extension Option(s).
- (d) Seller shall cooperate with and assist Buyer in obtaining such zoning variations, site plan approvals, sign approvals, engineering data, subdivision approvals and/or governmental approvals and in obtaining any other approvals, certificates or other authorizations required, in Buyer's sole opinion, to permit Buyer's intended use.
- (e) Except as is otherwise expressly provided in this Agreement, Seller hereby specifically disclaims any warranty (oral or written) concerning (i) the nature and condition of the Property and the suitability thereof for any and all activities and uses that Buyer may elect to conduct thereon, (ii) the manner, construction, condition and state of repair or lack of repair of any improvements located thereon, (iii) the nature and extent of any right-of-way, lien, encumbrance, license, reservation, condition or otherwise, (iv) the compliance of the Property or its operation with any laws, rules, ordinances or regulations of any government or other body, it being specifically understood that Buyer shall have full opportunity, during the Initial Inspection Period, to determine for itself the condition above ground or below ground of the Property; and (v) any other matter whatsoever except as expressly set forth in this Agreement. Except as otherwise expressly provided in this Agreement, the sale of the Property as provided for herein is made on a strictly "AS IS" "WHERE IS" basis as of the Closing Date. Buyer expressly acknowledges that, in consideration of the agreements of Seller herein, Seller make no warranty or representation, express or implied, or arising by operation of law, including, but in no way limited to, any warranty of quantity, quality, condition,

habitability, merchantability, suitability or fitness for a particular purpose of the Property, any Improvements located thereon or any soil conditions related thereto.

**9. Buyer's Access.** From the Effective Date Seller shall permit Buyer reasonable access to the Property in order to complete its due diligence inspections and reviews. All property inspections and reviews will be conducted at reasonable times agreed upon in advance by Seller and Buyer. Buyer is obligated to repair any damage caused by such tests, investigations and inspections and indemnify and hold Seller harmless from any damages or claims arising out of or related to such entry and inspections.

**10. Documents to Be Delivered.** Seller shall provide Buyer with copies of all existing environmental reports, surveys, drawings, existing contracts and leases, as well as such other written materials specifically itemized and requested by Buyer related to the Property in Seller's possession, such documents to be listed on **Exhibit C** within ten (10) days after the execution of the Purchase Agreement.

**11. Representations, Warranties and Covenants of Seller.** Between the Effective Date and the Closing Date, Seller shall, unless otherwise consented to in writing by Buyer or provided in this Agreement:

- (a) At Seller's sole cost and expense: (i) maintain and operate the Property in compliance with all laws, ordinances and other requirements of any governmental authority having jurisdiction and substantially in the same manner in which it maintained and operated the Property immediately before entering into this Agreement, and Seller shall not diminish the quality or quantity of maintenance and upkeep services heretofore provided to the Property, (ii) maintain and keep Seller's insurance in full force and effect, and (iii) pay all outstanding taxes, assessments, maintenance and other charges related to the Property.
- (b) Pay and satisfy in full or otherwise remove from the Property any and all liens, liabilities and encumbrances placed, or caused to be placed, of record against the Property evidencing a monetary obligation which can be removed by the payment of money, including, without limitation, delinquent real property taxes and assessments, mortgages, construction liens, attachment liens, execution liens, tax liens and judgment liens on or before the Closing Date, provided that Seller may use the proceeds of the sale to do so.
- (c) Seller represents, warrants, and covenants to Buyer that except as set forth or otherwise disclosed in this Agreement, or in any Exhibit to this Agreement, or in any schedule of exceptions attached to this Agreement:
  - (i) This Agreement constitutes a valid and binding agreement of Seller, enforceable in accordance with its terms. Seller has obtained all consents, releases and permissions and given all required notifications related to the transactions herein contemplated and required under any covenant, agreement, encumbrance, law or regulation to which Seller is a party or by which Seller is bound.

(ii) Seller is the fee simple owner of the Property subject to any exceptions shown on that will be discharged at closing and the Permitted Exceptions. Other than this Agreement, Seller is not a party to any contract, agreement or commitment to sell, convey, assign, transfer the fee interest in the Property or otherwise dispose of any portion or portions of the Property except outstanding leasehold interests.

(iii) Seller has not received notice of violation of any applicable law, ordinance, regulation, order or requirement relating to Seller's ownership or use of the Property.

(iv) Seller has not received, or is not under, any outstanding writ, order, injunction, or decree of any court, arbitration panel or governmental agency affecting Seller which would in any manner impede or impair the ability of Seller to sell the Property to Buyer in accordance with the terms of this Agreement.

(v) Seller has not been served with any written notices of intention to claim a construction lien against the whole or any part of the Property.

(d) All representations, warranties and covenants contained in this Agreement shall be deemed remade as of the Closing Date and survive the Closing for a period of one (1) year.

12. **Representations, Warranties and Covenants of Buyer.** Buyer represents and warrants to Seller as of the date hereof (and shall be deemed to represent and warrant to Seller as of the Closing Date) the following:

- (a) **Buyer's Authority.** Buyer has been duly organized and is in good standing in the state in which it was formed. Buyer has the full right and authority and has obtained any and all consents required to enter into this Agreement and to consummate or cause to be consummated the transactions contemplated hereby. This Agreement has been, and all of the documents to be delivered by Buyer at the Closing will be, authorized and executed and constitute, or will constitute, as appropriate, the valid and binding obligation of Buyer.
- (b) **Embargoed Persons.** Buyer represents and warrants that (A) Buyer and each person or entity owning an interest in Buyer is (1) not currently identified on the specially Designated Nationals and Blocked Persons List maintained by the Office of Foreign Assets Control, Department of the Treasury ("**OFAC**") and/or on any other similar list maintained by OFAC pursuant to any authorizing statute, executive order or regulation (collectively, the "**List**"), and (2) not a person or entity with whom a citizen of the United States is prohibited to engage in transactions by any trade embargo, economic sanction, or other prohibition of United States law, regulation, or Executive Order of the President of the United States, (B) none of the funds or other assets of Buyer constitute property of, or are beneficially owned, directly or indirectly, by any Embargoed Person (as hereinafter defined), (C) no Embargoed Person has any interest of any nature whatsoever in Buyer (whether directly or indirectly), and (D) Buyer has implemented procedures, and will consistently apply those procedures, to ensure the foregoing representations and warranties remain

true and correct at all times. The term "Embargoed Person" means any person, entity or government subject to trade restrictions under U.S. law, including, but not limited to, the International Emergency Economic Powers Act, 50 U.S.C. § 1701 et seq., The Trading with Enemy Act, 50 U.S.C. App. 1 et. Seq., and any Executive Orders or regulations promulgated thereunder with the result that the investment in Buyer is prohibited by law or Buyer is in violation of law. Buyer also shall require, and shall take reasonable measures to ensure compliance with the requirement, that no person who owns any other direct interest in Buyer is or shall be listed on any of the Lists or is or shall be an Embargoed Person. This Section shall not apply to any person to the extent that such person's interest in the Buyer is through a U.S. Publicly Traded Entity. As used in this Agreement, "U.S. Publicly Trade Entity" means a person (other than an individual) whose securities are listed on a national securities exchange, or quoted on an automated quotation system, in the United States, or a wholly-owned subsidiary of such a person.

- (c) All representations, warranties and covenants contained in this Agreement shall be deemed remade as of the Closing Date and survive the Closing for a period of one (1) year.

**13. Conditions Precedent to Buyer's Obligation to Close.** The obligations of Buyer under this Agreement are subject to the occurrence at or prior to the Closing Date of each of the following conditions, any or all of which may be waived in whole or in part by Buyer in writing:

- (a) The due performance by Seller of each and every covenant, undertaking and agreement to be performed by it hereunder and the truth of each material representation and warranty made in this Agreement by Seller at the time as of which the same is made and as of the Closing as if made on and as of the Closing.
- (b) There shall not have occurred at any time or times on or before the Closing any taking or threatened taking of the Property or any part thereof by eminent domain.
- (c) Buyer shall have received a full and complete Municipal Operating License from Meridian Township and a full and complete State Operating License from the State of Michigan for a medical marijuana provisioning center license ("Provisioning Center Licenses") for the Buyer's intended use of a developing a Medical Marijuana Provisioning Center for the Property, including but not limited to a physical license or other licensing verification documentation issued by Meridian Township and the State of Michigan in the name of the Buyer or its designated affiliate.

If any of the conditions set forth in subparagraphs (a)-(b) are not satisfied and such condition is not waived by Buyer by written notice to Seller, then Buyer may terminate this Agreement, whereupon, anything contained in this Agreement to the contrary notwithstanding, the Deposits shall be fully and immediately returned to Buyer, and neither party shall have any further liability to the other, except for such liabilities and obligations that are expressly stated herein to survive termination of this Agreement. If the condition set forth in subparagraph (a) is not satisfied, then Buyer shall have the rights and remedies provided for under Paragraph 20 below.

**14. Conditions Precedent to Seller's Obligation to Close.** The obligations of Seller under this Agreement are subject to the occurrence at or prior to the Closing Date of the following condition, which may be waived in whole or in part by Seller in writing:

- (a) The due performance by Buyer of each and every covenant, undertaking and agreement to be performed by it hereunder.
- (b) Buyer's compliance with ¶32d below.

If the conditions set forth in subparagraph (a)-(b) are not satisfied or waived by Seller by written notice to Buyer, then Seller shall have the rights and remedies provided in this Agreement.

**15. Closing.**

The closing of the purchase and sale of the Property (the "Closing") shall take place no later than ten (10) days following approval of a full and complete Municipal Operating License by Meridian Township and a full and complete State Operating License by the state of Michigan for a medical marijuana provisioning center, through a customary warranty deed and money escrow at the offices of the Title Company, or at such other time, date and place as the parties may agree.

**16. Possession.** Seller shall deliver to Buyer exclusive possession of the Property at the Closing subject to normal wear and tear excepted and subject to rights of tenants and persons in possession under Leases.

**17. Prorations; Closing Adjustments.**

- (a) Seller shall pay all delinquent taxes, assessments, liens and other charges which are a lien against the Property as of the Closing Date. Current real estate taxes and current installments of special assessments, if any, shall be prorated based on calendar year proration as is customary for commercial real estate in Ingham County, as of the date of the Closing. Any prorations to which Buyer may be entitled by reason of the foregoing shall be credited against the balance of the Purchase Price to be paid at closing. Rent and Operating expenses of the Property, if any, shall be prorated as of the midnight before the Closing Date. Buyer shall be responsible for operating expenses of the Property commencing with the Closing Date. Seller shall be responsible for all operating expenses and costs of the Property including, but not limited to, taxes and utility, water, maintenance, insurance, management costs and service contracts, if any, up to the date of the Closing, with Buyer responsible for the Closing Date and thereafter. Seller's non-cancellable service contracts and/or service agreements shall not continue from and after Closing unless Buyer chooses to accept such a service contract or service agreement in writing and, in such an event, Buyer shall only be responsible for fees accrued from and after Closing. Buyer shall be entitled to credit for the security deposits under the Leases. Buyer shall be entitled to credit for any prepaid rent by tenants under the Leases.

18. **Other Costs.** Seller shall pay the cost of recording any curative instruments and for the cost of the Owner's Title Policy. Buyer shall pay the cost of recording the warranty deed conveying title to the Property, transfer taxes, any fees charged by the Title Company or Escrow agent or attorney escrowing or processing any the Earnest Money or holding any funds, all engineering/survey and related costs required for land division application/approval by Meridian Township, and the premium for any additional endorsements to the owner's title policy requested by Buyer. Each party shall pay its own legal fees. Seller shall be entitled to credit for all transferable utility deposits transferred hereunder, if any. All other utility deposits, if any, may be withdrawn by and refunded to Seller and Buyer shall make its own replacement deposits for utilities as may be required by the respective utilities involved. Such other items which are customarily prorated in a purchase and sale of the type contemplated hereunder shall be prorated as of the Closing Date.

19. **Closing Deliveries.** At or prior to the Closing, Seller shall deliver to Buyer, or cause to be delivered to Buyer, all in form and substance satisfactory to Buyer, the instruments of conveyance described in Paragraph 5 above and the Owner's Title Policy (to be delivered in the form of a marked up and signed commitment or signed pro forma format so that upon closing the Title Company is insuring Buyer's title to the Property, as opposed to committing to insure title).

20. **Default.** If Buyer defaults under or breaches this Agreement, which such default or breach is not cured within seven (7) days following written notice from the Seller to the Buyer, then Seller may, as its sole remedy, terminate this Agreement by written notice to Buyer and the Deposits shall be retained by the Seller as liquidated damages and not as a penalty (it being understood that Seller's actual damages may be extremely difficult to calculate), in which event neither party shall have any further rights or obligations hereunder. If Seller defaults under this Agreement and fails to cure such default within seven (7) days after written notice of such default to Seller, at Buyer's option, Buyer shall be entitled to either (i) obtain specific performance of this Agreement or (ii) terminate this Agreement and receive the Deposits. In the event of litigation to enforce this Agreement, the substantially prevailing party shall be entitled to an award of reasonable attorneys' fees and litigation costs.

21. **Notices.** Any notice, demand, request or other communication which either party hereto may be required or may desire to give under this Agreement shall be in writing and shall be deemed to have been properly given (a) if hand delivered (effective upon delivery), (b) if mailed (effective seven (7) days after mailing) by United States registered or certified mail, postage prepaid, return receipt requested, (c) if sent by a nationally recognized overnight delivery service (effective one (1) business day after delivery to such courier) or (d) for the purpose of providing notice pursuant to Section 8 above, if sent by facsimile (effective upon confirmation of transmission) or electronic mail (Adobe Acrobat document) (effective upon sending) in each case addressed as follows:

If to Seller:	Jolly Oak LLC 1111 Michigan Ave, Suite 300 East Lansing, MI 48823 Attention: Van W. Martin Email: <a href="mailto:van.martin@martincommercial.com">van.martin@martincommercial.com</a>
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with a copy to: Grua, Tupper & Young, PLC  
2401 E. Grand River Ave  
Lansing, MI 48912  
Attention: Remo Mark Grua  
Email: [grua@wedolawinlansing.com](mailto:grua@wedolawinlansing.com)

If to Buyer: Hager I, LLC  
108 S. Main St., Suite A  
Royal Oak, MI 48067  
Email: [nemer@mgmt10.com](mailto:nemer@mgmt10.com)

with a copy to: Lumberg Freeman Gleeson Hicks & Khalil PLLC  
33 Bloomfield Hills Parkway, Suite 135  
Bloomfield Hills, MI 48304  
Attention: Michael K. Khalil  
Email: [mkhalil@LFGLawFirm.com](mailto:mkhalil@LFGLawFirm.com)

22. **Broker.** Seller and Buyer each represent and warrant to the other that it has not dealt with any broker or finder with respect to the transaction contemplated hereby other than Martin Commercial Properties, Inc., whereby the Buyer shall pay Martin Commercial Properties, Inc. One Hundred Thousand and 0/100 (\$100,000). Seller and Buyer shall each indemnify, defend and hold the other harmless from and against any claim for brokerage commission or finder's fee asserted by any person, firm or corporation claiming to have been engaged by them.

23. **Foreign Seller Affidavit.** Seller represents and warrants to Buyer that Seller is not a "foreign person" as defined in Section 1445 of the Internal Revenue Code and Seller is, therefore, exempt from the withholding requirements of such Section. Seller shall deliver to Buyer at Closing the exemption certificate described in Section 1445.

24. **Assignment.** This Agreement may be assigned or transferred by Buyer at any time after making the required Deposits to an entity to be formed subject to Seller's prior written consent, which shall not be unreasonably withheld, provided the assignee agrees to be specifically bound by the terms of this Agreement, and is a pre-qualified licensee of the Medical Marijuana Facilities Licensing Act (MMFLA).

25. **Binding Agreement.** This Agreement shall bind and benefit Seller and Buyer and their respective personal representatives, successors and assigns.

26. **Entire Agreement.** This Agreement represents the full and final agreement of the parties with respect to the subject matter hereof. This Agreement may be amended only by a writing signed by both parties. Neither party nor its respective officers, directors, managers, employees, agents, brokers, attorneys or representatives will disclose the subject matter or terms of this Agreement or the possible transactions contemplated hereby without the prior written consent of the other party.

27. **Counterparts.** This Agreement may be executed in one or more counterparts, each of which, when so executed and delivered, shall be deemed an original, but all of which taken together shall constitute but one and the same instrument.

28. **Interpretation.** This Agreement shall be interpreted and enforced in accordance with the laws of the State of Michigan. If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement. Whenever under the terms of this Agreement the time for performance of a covenant or condition falls on a Saturday, Sunday or legal holiday, such time for performance shall be extended to the next business day. Time is of the essence of this Agreement.

29. **Facsimile.** For the purposes of this Agreement, a signature or signatures delivered via facsimile or e-mail (in portable document format) transmission shall be deemed to be an original signature or signatures when attached to this Agreement or to any other document or notice provided for in this Agreement.

30. **Damage or Destruction.** In the event that the Property shall be damaged or destroyed, whether in whole or part, by fire or any other casualty or act of God between the Effective Date and the Closing Date which, in Buyer's reasonable estimation, exceeds Twenty Five Thousand and 00/100 Dollars (\$25,000.00) to repair (a "Casualty"), Buyer shall have the sole option of: (a) terminating this Agreement in which event this Agreement shall thereupon become null and void except for those matters that expressly survive termination hereof, and the Deposit shall be forthwith returned to Buyer; or (b) proceed with this transaction and assume all of Seller's rights, including the right to receive any insurance proceeds. If Buyer elects the option described in clause (b) immediately above, Seller shall not compromise, settle or adjust any claims to such proceeds without Buyer's prior written consent (which will not be unreasonably withheld), it being understood and agreed that Buyer has an interest in all such proceeds. Further, the amount of any deductible that must be paid under any insurance policy shall be credited to Buyer at Closing. Seller shall give immediate written notice to Buyer of any damage or destruction, and Seller shall provide Buyer with complete copies of all policies of insurance covering that portion of the Property so damaged or destroyed. In the event that the Property shall be damaged or destroyed by an event that is not a Casualty, then Buyer shall proceed with this transaction and assume all of Seller's rights, including the right to receive any insurance proceeds. In such an event, the amount of any deductible that must be paid under any insurance policy shall be credited to Buyer at Closing.

31. **Confidentiality.** Buyer and Seller shall keep all information delivered to it confidential (except information: (a) that has entered the public domain through no action or failure to act of Buyer or seller; or (b) prior to disclosure hereunder was already lawfully in Buyer's or Seller's possession without any obligation of confidentiality), and Buyer and Seller shall not disclose the information to third parties, other than its affiliates, officers, directors, shareholders, employees, consultants, advisors, financing sources, co-investors, professional representatives and/or agents, who are evaluating, negotiating, and/or implementing this transaction and/or the financing of this transaction.

32. **Miscellaneous; other Provisions:**

- (a) It is understood and agreed between the parties hereto that Seller's intent is to convert this transaction from a purchase and sale to a tax-deferred exchange under Section 1031 of the Internal Revenue Code. The parties agree to fully cooperate,



one with the other, in executing whatever additional documents or amendments that may be reasonably required in order to properly affect a tax-deferred exchange.

- (b) Martin Commercial Property, Inc. will have the option to continue to manage and lease the property for five (5) years after the closing and in such event Buyer shall enter into Martin Commercial Property, Inc.'s standard Management and Leasing Agreement and agree to pay a Management Fee of Five percent (5%) of gross receipts and standard leasing fees shown on attached **Exhibit D**.
- (c) **BUYER WILL NOT CONTACT OR HAVE ANY COMMUNICATION WITH ANY OF THE TENANTS AT THE PROPERTY UNTIL AFTER THE SALE IS COMPLETED.**
- (d) Buyer covenants and agrees to not to submit any other applications to Meridian Township for a Medical Marihuana License at any other location in the "zone" where the Property is located, which is Zone 7. Notwithstanding any other term or provision of the agreement between the parties, it is understood and agreed, if Buyer's submits any other application(s) for a Medical Marihuana License for any other location(s) in Zone 7 where the Property is located regardless of whether or not such application(s) is selected then Buyer shall forfeit the remaining balance of the Earnest Money and the Purchase Agreement shall be terminated and of no further force or effect, and Buyer shall have no interest in the Property.
- (e) Time is of the essence of each provision of this Agreement.
- (f) This Agreement shall not become a contract until executed and delivered by Buyer and Seller in the manner set forth herein.
- (g) If either party institutes a legal action against the other relating to this Agreement or any default hereunder, the unsuccessful party to such action shall reimburse the successful party for the reasonable expenses of prosecuting or defending such action, including without limitation, attorneys' fees and disbursements and court costs.
- (h) This Agreement shall not be construed more strictly against one party than against the other merely by virtue of the fact that the Agreement may have been prepared primarily by counsel for one of the parties, it being recognized that both Buyer and Seller have contributed substantially and materially to the preparation of this Agreement.

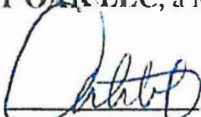
*Signature page follows*

**IN WITNESS WHEREOF**, Seller and Buyer have executed this Agreement on the dates provided below, to be effective as of the last date signed (the "Effective Date").

**SELLER:**

**JOLLY OAK LLC**, a Michigan limited liability company

By: \_\_\_\_\_

  
Van W. Martin  
Its: Manager

Date: August 1, 2019

**BUYER:**

**HAGER I, LLC**, a Michigan limited liability company,

By: \_\_\_\_\_

  
Name: member  
Its: Authorized Signatory

Date: August 1, 2019

**EXHIBIT A**

**LEGAL DESCRIPTION**

A parcel of land in the Southeast 1/4 of Section 33, Town 4 North, Range 1 West, Meridian Township, Ingham County, Michigan, the surveyed boundary of said parcel described as: Commencing at the South 1/4 corner of Section 33; thence North 89°46'40" East, along the South line of Section 33, a distance of 50.00 feet; thence North 00°04'28" West, parallel with the North-South 1/4 line of Section 33, a distance of 217.00 feet to the point of beginning of this description; thence North 00°04'28" West, parallel with the North-South 1/4 line, 284.60 feet; thence North 89°46'40" East, parallel with the South Section line, 197.50 feet; thence South 00°04'28" East, parallel with the North-South 1/4 line 284.60 feet; thence South 89°46'40" West, parallel with the South Section line, 197.50 feet to the point of beginning.

Parcel Number: 33-02-02-33-452-010

*ly* 8/1/19

**EXHIBIT A-1**

**LEGAL DESCRIPTION**

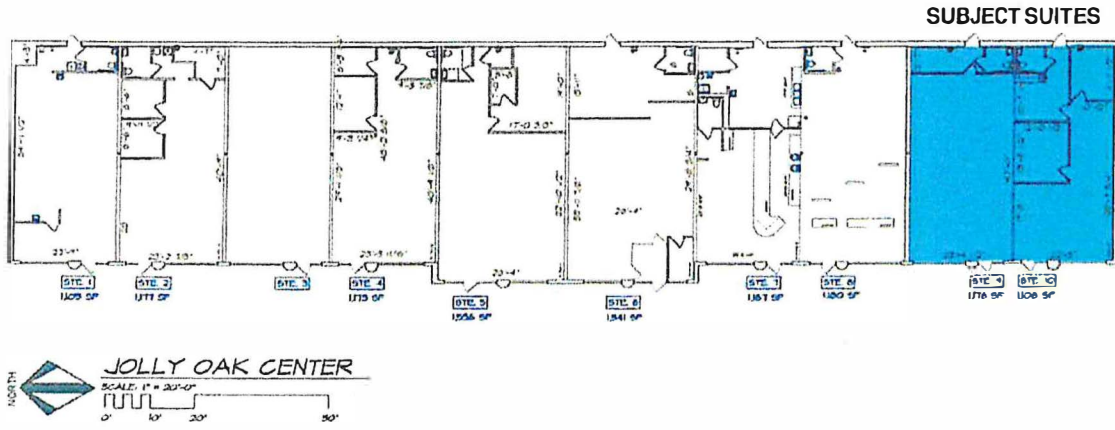
**[TO BE INSERTED BY THE TITLE COMPANY FOLLOWING LOT SPLIT APPROVAL]**

Parcel Number 33-02-02-33-xxx-xxx

Parcel Number 33-02-02-33-xxx-xxx

W  
8/1/19

# EXHIBIT B



*Handwritten signature*  
8/1/19

**EXHIBIT C**

**DUE DILIGENCE ITEMS**

1. The most recent Environmental Report (Phase One, Phase Two, if any BEA, etc.) in Seller's possession, if any.
2. Seller's current ALTA survey, if any.
3. All existing Leases, Current Rent Rolls, and Security Deposits on hand.
4. Real and personal tax bills and assessed value for the period from January 1, 2018 through the last invoice received by Seller.
5. Seller's current Owner's Policy of title insurance; if available.
6. All maintenance or service contracts and maintenance plans, if any.
7. Any property site plans, floor plans include square footage, leasing materials, etc., if applicable.

WJ 8/1/19

**EXHIBIT D**

**MARTIN COMMERCIAL PROPERTIES, INC.**  
**STANDARD LEASING FEES**

If during said period the Property is leased by OWNER, MARTIN or any other party; or if MARTIN produces a lessee ready, willing and able to lease the Property; OWNER agrees to pay to MARTIN a commission as per the following schedule:

Professional fee on any new lease, option, renewal, extension or expansion thereof:

First through fifth lease years:	Six percent (6%) of the gross lease income;
Sixth through tenth lease years:	Four percent (4%) of the gross lease income; and
Over ten years:	Three percent (3%) of the gross lease income.

*Minimum commission is one (1) month's rent, but not less than Five Hundred and No/100 (\$500.00) Dollars.*

All professional fees shall be paid to MARTIN by OWNER in the following manner: One Hundred Percent (100%) at signing of Lease. Any fee remaining outstanding thirty (30) days after it is due will be billed a late charge at the rate of one and one-quarter percent (1-1/4%) per month or fifteen percent (15%) on an annualized basis.

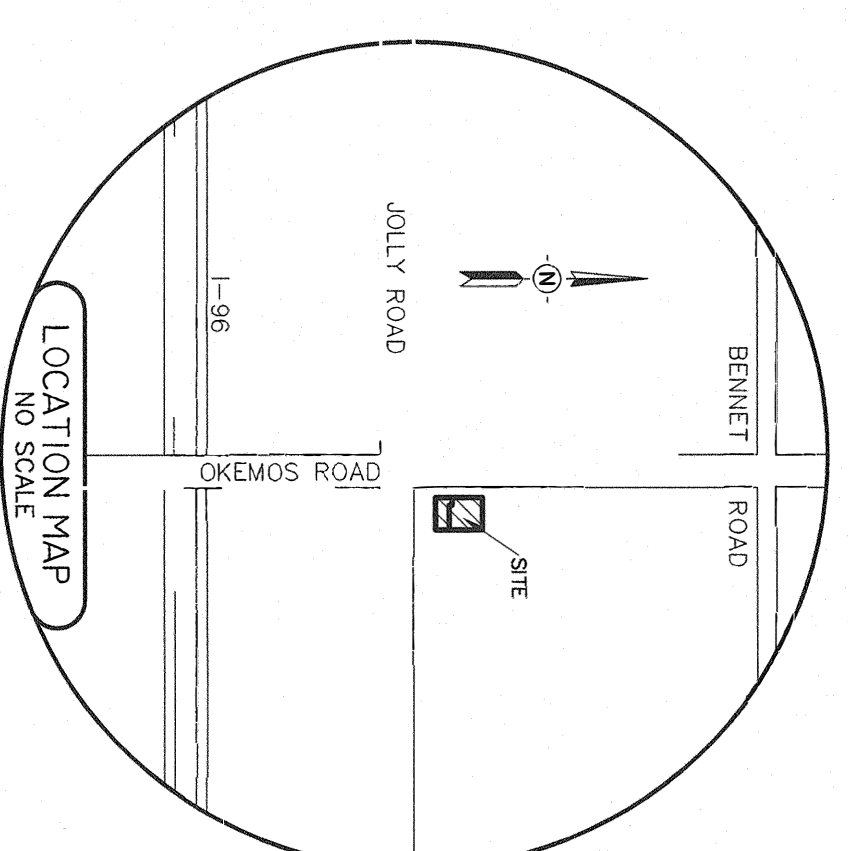
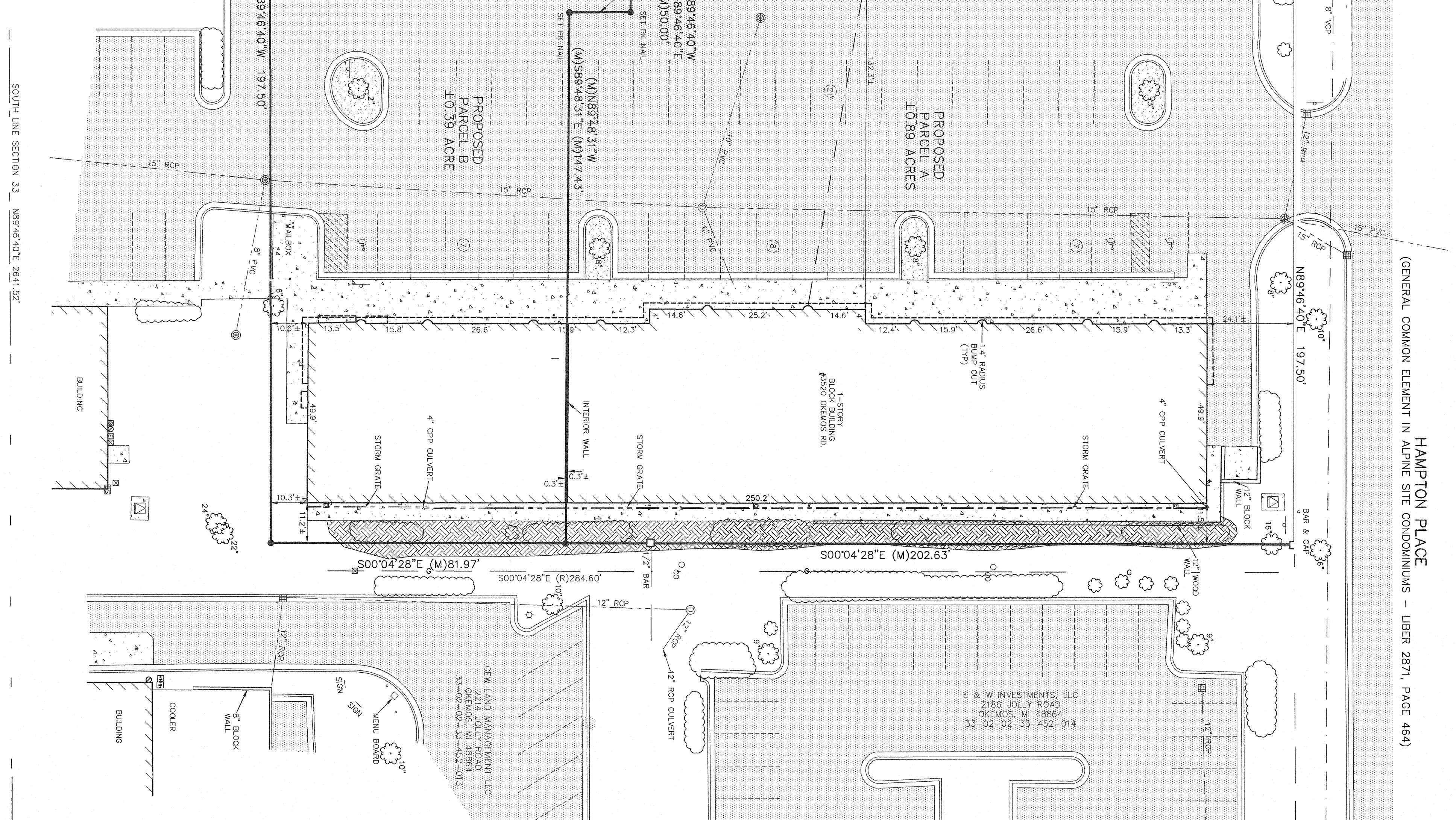
W  
8/1/19

# SITE PLAN

“3520 OKEMOS ROAD, OKEMOS, MI 48864”

HAMPTON PLACE  
(GENERAL COMMON ELEMENT IN ALPINE SIE CONDOMINIUMS - LIBER 2871, PAGE 464)

CHRISTIAN CHURCH  
KOS ROAD  
33-456-007  
PROPERTY LINE



### CERTIFICATE OF SURVEY

I hereby certify only to the parties named hereon that we have surveyed and divided into several parcels, at the direction of said parties, a parcel of land previously described as:

(As provided) 2-02-43-452-010

BEG. @ THE S 1/4 CORN. SEC. 33, -N 89 DEG. 46'40\"/>

and that we have found or set, as noted hereon, permanent markers to all corners and angle points of the boundaries of said parcels and that the more particular legal descriptions of said parcels are as follows:

#### Parcel A:

A parcel of land in the Southeast 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the surveyed boundary of said parcel described as: Commencing at the South 1/4 corner of said Section 33; thence N89°46'40\"/>

#### Parcel B:

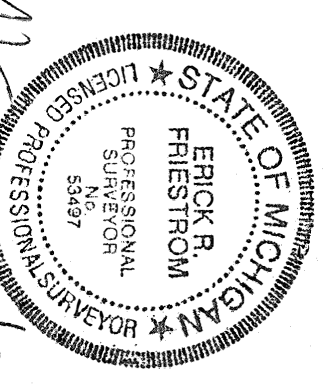
A parcel of land in the Southeast 1/4 of Section 33, T4N, R1W, Meridian Township, Ingham County, Michigan, the surveyed boundary of said parcel described as: Commencing at the South 1/4 corner of said Section 33; thence N89°46'40\"/>

### WITNESSES TO SECTION CORNERS:

- Found 1/4 corner, Section 33, T4N, R1W, Liber 9, Page 511
- Found Remon bar and cap in monument box, in C/L of Jolly and Okemos Roads
- Found nail and log #12034, Southwest side power pole, S50E, 60.51'
- C/L sanitary manhole, N30E, 60.10'
- C/L sanitary manhole, S51W, 77.33'
- Southeast bolt in sign base, N43W, 61.65'
- Center of Section 33, T4N, R1W, Liber 3, Page 255
- Found iron in monument box in centerline of Jolly Road
- Found nail & log #12034 South side utility pole, S85W, 33.10'
- Found nail & log #12034 Northwest side utility pole, N40W, 116.52'
- Found nail & log #12034 Northwest side utility pole, N40E, 115.00'
- Found nail & log #18989 North side utility pole, N75E, 52.62'
- Southeast corner Section 33, T4N, R1W, Liber 9, Page 517
- Found Remon, disk #30090 in mon. box centerline of Jolly
- Found nail and log #30090, Northeast side utility pole, N55W, 50.07'
- Found Southwest corner brick of house, N15E, 103.10'
- Found Remon, disk #28414, West, 72.65'
- Found Northwest corner Square catch basin at back of curb, N45E, 33.35'

### LEGEND

- (M) = MEASURED DISTANCE
- (R) = RECORD DISTANCE
- = SET 1/2" BAR WITH C
- ◐ = FOUND IRON AS NOTE
- = DEED LINE
- = DISTANCE NOT TO SCALE
- = FENCE
- = ASPHALT
- = CONCRETE
- = LANDSCAPING
- = GRAVEL
- = BUILDING OVERHANG
- = SANITARY SEWER
- = STORM SEWER
- = WATER LINE
- = GAS LINE
- = UNDERGROUND TELEPHONE
- = UNDERGROUND ELECTRIC
- = OVERHEAD WIRES
- = HEDGE LINE
- = DECIDUOUS TREE
- = CONIFEROUS TREE
- = BUSH



ERICK R. FRESTROM  
PROFESSIONAL SURVEYOR NO. 53497

DATE

REVISIONS	DATE
08/05/2019	







# MEMORANDUM



TO: Nemer Haddad

CC: Michael G. Darga, P.E.

FROM: William Stimpson, P.E., Mohamed Aguib, E.I.T

SUBJECT: The Cured Leaf Development Traffic Impact Assessment

DATE: December 16, 2019

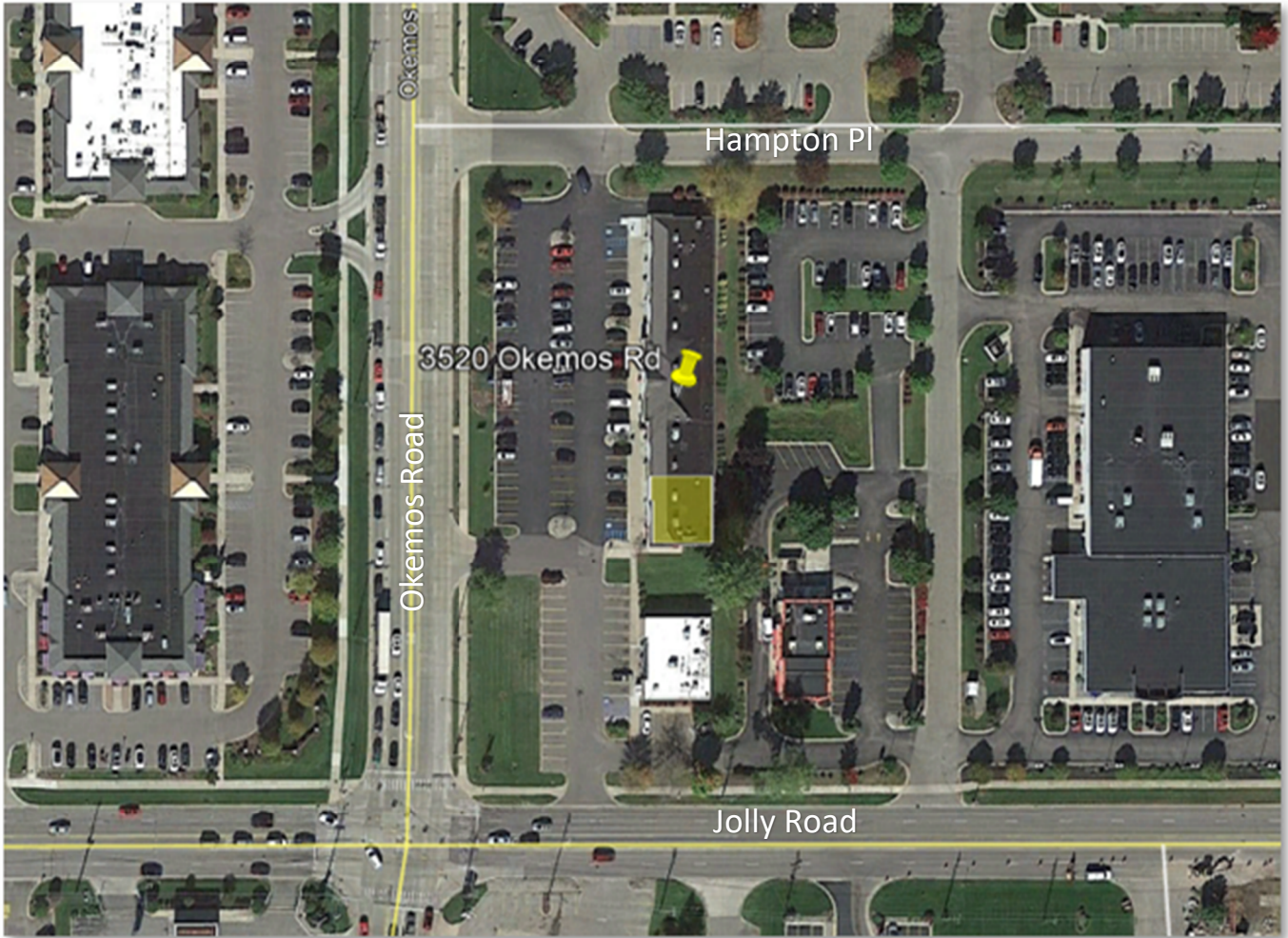
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This memorandum documents a traffic impact assessment (TIA) for a 2,400 SF outparcel located on the east side of Okemos Road between Jolly Road and Hampton Place (at 3520 Okemos Road). The subject outparcel was previously used as a retail shop and a restaurant which are intended to be replaced by a marijuana dispensary. The site location is shown on **Figure 1**. A traffic impact assessment is being requested for the subject outparcel as part of the permit application. This study assumes that the proposed development would be fully occupied by end of 2020.

The key findings and conclusions of the assessment are summarized below, followed by supporting analyses. Detailed data used in the supporting analyses are provided in the appendix.

## **Key Findings and Conclusions**

- The subject development can be expected to generate about 25 vehicle trips in the AM peak hour (14 entering and 11 exiting) and 52 vehicle trips in the PM peak hour (26 entering and 26 exiting).
- Under existing and future traffic conditions, both study intersections are expected to operate at acceptable levels of service (LOS) of C or better, with acceptable delays during both the AM and PM peak hours. (LOS is assigned on a letter-based grading scale, based on average vehicular delay).
- The simulation models for the existing and future traffic conditions indicated acceptable traffic operations and negligible queues at the study intersections. (The results of the simulation and queue lengths are included in the appendix.)
- Sight distance evaluation indicated no apparent sight distance issues, contingent on keeping the sight distance clear at the site access locations.
- Access management evaluation indicated that there is no conflict with the opposing driveways for the entering or exiting vehicles at the study intersections.
- An evaluation of internal site circulation indicated that, provided the current two two-way lanes in the parking lot and the multiple access points to the plaza, traffic circulation is not of concern.
- The expected impacts of adding site-generated traffic to the site driveways on Okemos Road are negligible.



**Figure 1. Site Location**

### **Existing Conditions**

**Roads** – Okemos Road between Jolly Road and Hampton Place is classified as a principal arterial and consists of four lanes with a center left-turn lane. The posted speed limit on Okemos Road is 45 mph.

**Traffic Volumes** – Daily traffic volumes along Okemos Road were obtained from the Michigan Department of Transportation’s (MDOT) Transportation Data Management System (TDMS). The study segment has an interpolated Annual Average Daily Traffic volume (AADT 2018) of 21,981 vehicles-per-day.

For this study, Traffic Data Collection, LLC (TDC) was subcontracted to make video-based turning-movement counts during the typical 7-9 a.m. and 4-6 p.m. peak periods of Thursday, December 5, 2019. As approved by the township, these counts were conducted at the following intersections:

- Okemos Road and Hampton Place
- Okemos Road and Site Access

These recent detailed count data are also presented in the appendix. The peak-hour volumes for the study intersections during existing conditions are illustrated in **Figure 2**.

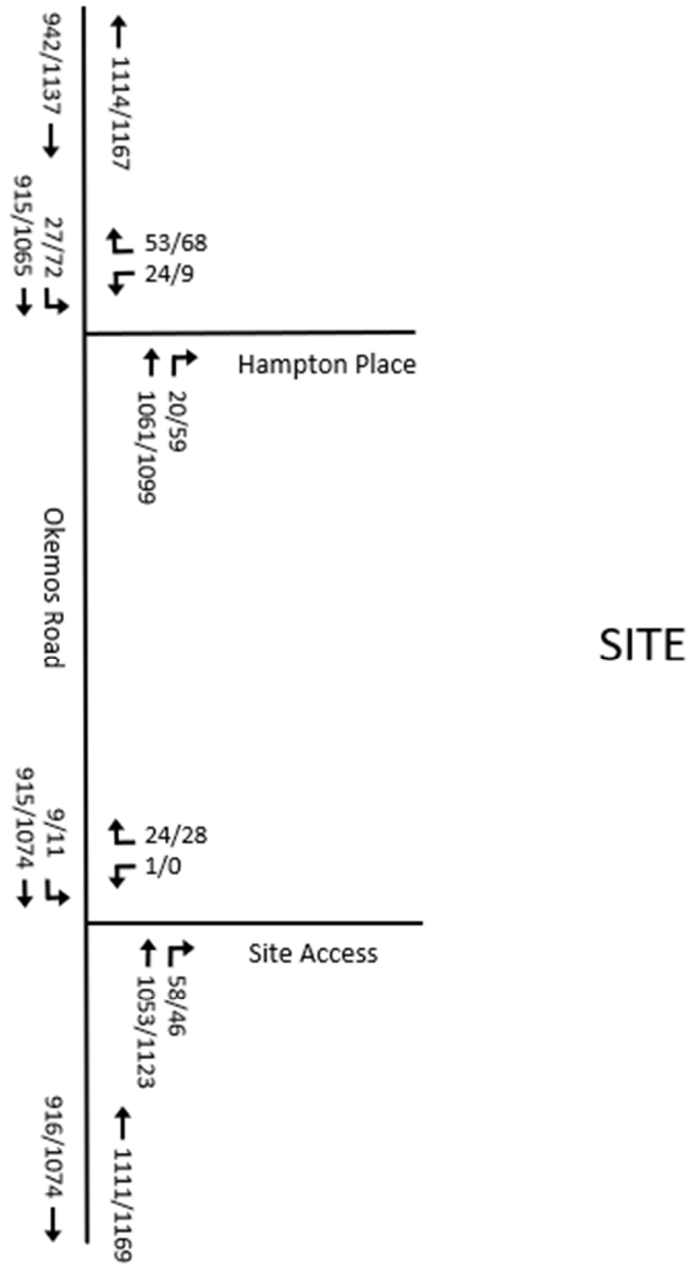
**Sight Distance Evaluation** – Since the study intersections are not proposed and currently being used, an evaluation of sight distance was deemed unnecessary. However, an evaluation of roadway geometry and obstructions at the study intersections was performed using traffic cameras, Google Earth Aerials, and Google Street View, indicating that no apparent issues would cause sight distance issues, contingent on keeping the sight distance clear.

**Access Management and Site Circulation** – The nearest opposing driveway on Okemos Road is located between the study intersections, about 80 feet south of Hampton Place, and it is currently a right-in/right-out driveway. This opposing driveway is not anticipated to affect the access to any of the study intersections due to its restricted movements. The second nearest opposing driveway on Okemos Road is located approximately 280 feet north of Hampton Place, and it is not anticipated to impact the Hampton Place site access. A simulation of traffic operations in future conditions indicated negligible vehicle queuing in the center two-way left-turn lane, see appendix for simulation files. Therefore, there will be no conflict with the opposing driveways for the entering or exiting vehicles at the study intersections.

The evaluation of internal site circulation indicated that, provided the current two two-way lanes in the parking lot and the multiple access points to the site, traffic circulation is not anticipated to be of concern.



**Legend**  
 X / Y, where  
 X = AM peak hour  
 Y = PM peak hour



**Figure 2. Existing Traffic Volumes**

**Future Conditions**

**Roads** – This study assumes that no major road improvements will occur in the study area. In addition, improvements were recently completed at the intersection of Jolly Road and Okemos Road.

**Background Traffic Volumes** – To properly evaluate the traffic impacts of a proposed development, it is generally necessary to anticipate the background volumes at the time of project build-out. Since the subject parcel is planned for occupation within one year of this study, background growth was excluded from the study following industry standards.

**Trip Generation** – The published daily and peak hour trip generation rates, along with inbound/outbound percentages from the Institute of Transportation Engineer’s *Trip Generation Manual (10<sup>th</sup> Edition)*, were used to calculate the number of daily and peak hour trips for the land uses, as shown on **Table 1**.

**Table 1. Trip Generation**

Land Use		ITE Use	Size	Week-day Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
					In	Out	Total	In	Out	Total
Existing	High-Turnover (Sit-Down) Restaurant	932	1,200 SF	135	7	5	12	7	5	12
	Shopping Center <sup>1</sup>	820	1,200 SF	45	1	0	1	2	3	5
	<b>Total Existing Trips</b>			<b>180</b>	<b>8</b>	<b>5</b>	<b>13</b>	<b>9</b>	<b>8</b>	<b>17</b>
Proposed	Marijuana Dispensary	882	2,400 SF	606	14	11	25	26	26	52
<b>Change in Total Trips</b>				<b>426</b>	<b>6</b>	<b>6</b>	<b>12</b>	<b>17</b>	<b>18</b>	<b>35</b>

<sup>1</sup> Potential trip generation if this (now vacant) space were to be re-occupied by a retail use

**Trip Distribution and Assignment** – Site-generated traffic is commonly assumed to be distributed consistent with existing traffic patterns, subject to professional judgment. Here, the directionality of overall traffic on Okemos Road – 54% southbound and 46% northbound in the AM peak hour and 48% southbound and 52% northbound in the PM peak hour – was a major determinant of this study’s trip distribution modeling. The expected distribution of the future additional site traffic between the two access intersections on Okemos Road was estimated by applying professional judgment to the location of the proposed new use within the overall site.

It should be noted that the site has a third access point on Jolly Road which, if included in the study, would provide more distributed site-generated trips and reduce the impacts predicted on the other two access points on Okemos Road. However, per the Township’s request and as a conservative approach, only two site access points were considered in this study.

The above directional considerations were combined to develop trip distribution patterns, which were then applied to the trip generation totals in **Table 1** to assign site trips by peak hour; see **Figure 3**. Total peak-hour traffic at build-out is predicted in **Figure 4**; this figure adds the site trips shown in Figure 3 to the existing traffic volumes shown in Figure 2.

**Traffic Impacts** – Impact (or capacity) analyses for the site access drives were conducted using the *Synchro 10* computerized traffic model, based on methodology contained in the Transportation Research Board’s *Highway Capacity Manual (HCM)*. The current study applied the latest, most conservative methodology, first appearing in the *HCM 6<sup>th</sup> Edition*. The primary objective of such analyses is to determine the *level of service*, a qualitative measure of the “ease” of traffic flow based on vehicular delay. Analytical models are

used in *Synchro* to estimate average “control” delay. These models account for lane configuration, grade (if any), type of traffic control, traffic volume and composition, and other traffic flow parameters. At intersections with stop-sign control on the side street, results are provided only for the side street and major street left turns.

Level of service (LOS) is expressed on a letter-based grading scale, with A being the highest level and F being the lowest level. **Table 2** defines LOS in terms of average control delay per vehicle according to HCM methodology. Detailed *Synchro* printouts are presented in the appendix, with the results summarized in **Tables 3 and 4**. Note that the summary results address current traffic and future total (build-out) traffic.

**Table 2. Level of Service Criteria for Unsignalized Intersections**

Level of Service	Average Control Delay per Vehicle (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50





**Legend**  
X / Y, where  
X = AM peak hour  
Y = PM peak hour

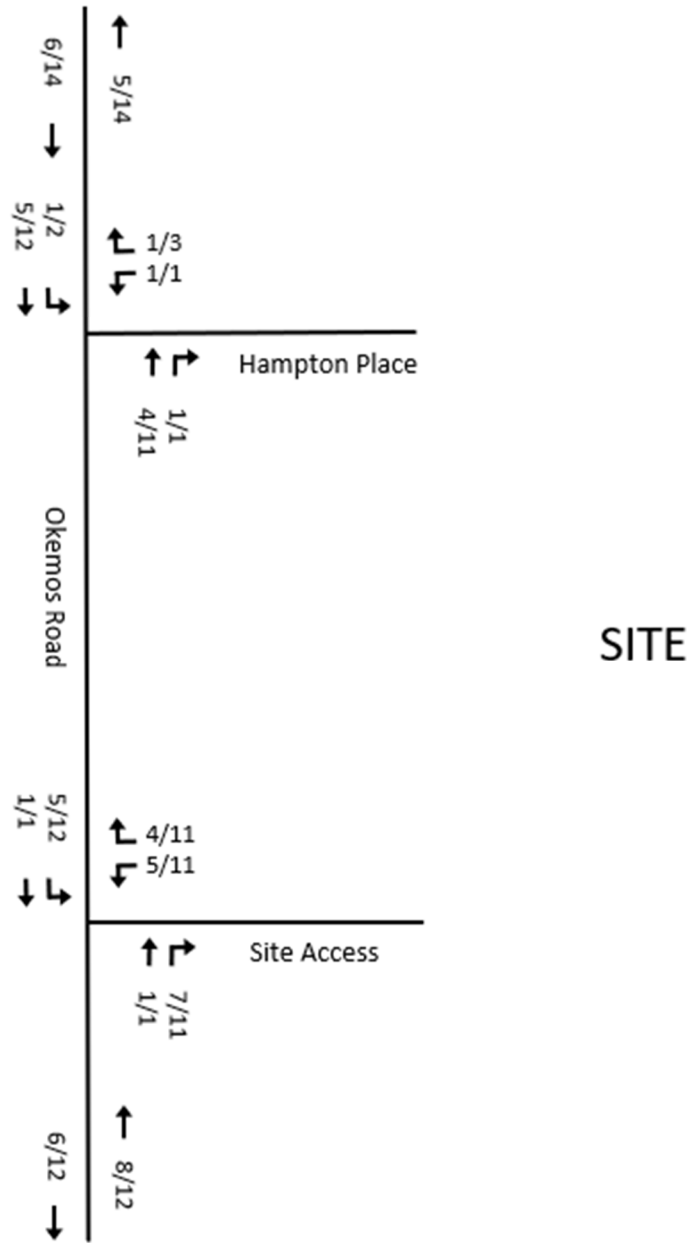


Figure 3. Site Generated Trips



**Legend**  
X / Y, where  
X = AM peak hour  
Y = PM peak hour

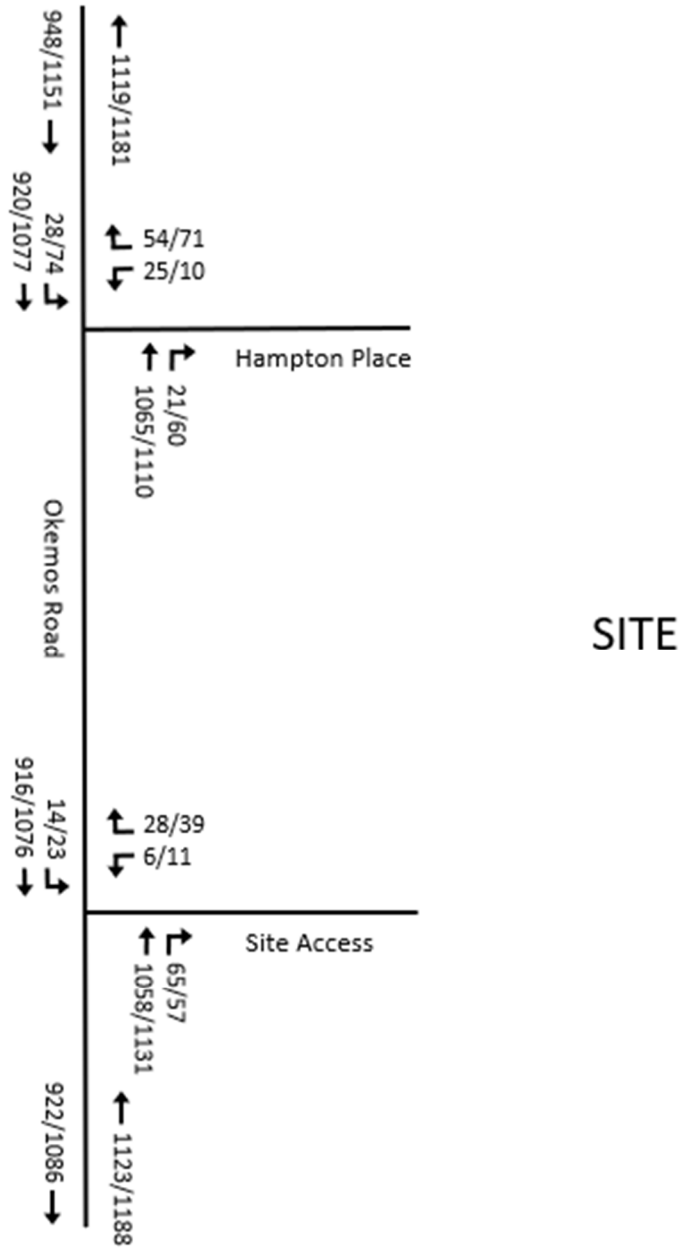


Figure 4. Future Traffic Volumes

The key findings of the *Synchro* analyses are as follows:

- Under the existing traffic condition, both study intersections are showing acceptable LOS of C or better, and acceptable delay during both the AM and PM peak hours.
- Under the future traffic condition, both study intersections are showing acceptable LOS of C or better, and acceptable delay during both the AM and PM peak hours.
- Under the future traffic condition at Okemos and Hampton, the delay on the westbound left-turn movement is 34.7 seconds (LOS D) during the PM peak hour. A simulation model was evaluated at this intersection indicating negligible queues, and vehicles were able to adequately enter Okemos Road.
- It should be noted that a third access to the site on Jolly Road was not included in the study, which is a conservative approach. More distributed site-generated trips (at three access points) would alleviate the operations at the two intersections evaluated.
- The simulation models for the existing and future traffic conditions indicated acceptable traffic operations and negligible queues. The results of the simulation and queue lengths are included in the appendix.

**Table 3. Level of Service Criteria at Okemos Road and Site Access**

Approach	Movement	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
<b>Existing Traffic Conditions</b>					
WB	L + R	14.8	B	15.3	C
SB	L	11.8	B	12.7	B
<b>Future Total Traffic Conditions</b>					
WB	L + R	17.4	C	21.5	C
SB	L	11.9	B	13.0	B

**Table 4. Level of Service Criteria at Okemos Road and Hampton Place**

Approach	Movement	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
<b>Existing Traffic Conditions</b>					
WB	L + R	20.2	C	19.0	C
SB	L	11.7	B	13.8	B
<b>Future Total Traffic Conditions</b>					
WB	L + R	20.5	C	19.5	C
SB	L	11.8	B	14.0	B

# Appendix



## William A. Stimpson, PE Senior Traffic Engineer

William Stimpson has 49 years of experience in transportation and traffic engineering, specializing in traffic safety and site planning. His traffic safety work has included applied research, facility safety auditing, and crash litigation support. His site planning work has included plan development and review, parking studies, traffic impact analysis, and access management. He has also dealt with a wide variety of other traffic planning issues, including freight transportation and ridesharing and bicycling incentives.

Mr. Stimpson has performed traffic reviews of hundreds of site plans; prepared shared parking studies, thoroughfare plans, crash data studies, corridor safety evaluations, and access management studies; conducted and reviewed numerous traffic impact studies; and completed signal warrant evaluations and cut-through traffic studies for both public and private clients. He has also investigated individual traffic crashes relative to alleged personal, premises, highway-tort, and auto product liability; conducted crash causation analyses; and provided expert testimony as requested.

### YEARS OF EXPERIENCE

49

### EDUCATION

Master of Engineering,  
Civil Engineering  
Texas A&M University

Bachelor of Science in  
Engineering,  
Civil Engineering  
University of Michigan

### LICENSES/REGISTRATION

Professional Engineer  
Michigan

### MEMBERSHIPS

Institute of Transportation  
Engineers,  
Fellow-Life Member

### AWARDS

DCA Certificate of  
Achievement, 1974;  
ITE Past Presidents'  
Award, Honorable  
Mention, 1978;  
APA Vernon Deines Awards  
for Outstanding Small Town  
Plans, 2007 & 2017  
(team member)

### SPECIAL EXPERTISE

Traffic Safety Research  
Facility Safety Auditing  
Crash Litigation Support  
Site Plan Traffic Review  
Traffic Impact Analysis  
Access Management  
Shared Parking

### Traffic Safety Research

Diagnostic studies of visual communication  
Driver Expectancy Concept (co-developer)  
National guidelines for Right Turn on Red  
Revised national standards for road striping  
Timing of yellow traffic signal

### Facility Safety Auditing

Proving Ground Safety Consultant (Ford Motor)  
Traffic Engineering Supervisor (Ada Co., ID)  
FHWA Geometric Design Lab (Program Mgr.)  
Interactive Highway Safety Design Model  
SEMCOG Traffic Safety Manual (lead author)  
Corridor & crash site safety evaluations

### Crash Litigation Support

Investigations of over 150 individual crashes  
Personal, premises, highway-tort, product liability  
Specialization in crash causation analysis  
Testimony in both civil & criminal cases

### Site Plan Traffic Review

Municipal reviews via nominal pass-through fee  
Requested access & circulation improvements  
Reductions in impervious parking surfaces  
Pedestrian safety improvements

### Parking

FHWA study on fringe parking for carpoolers  
Permit parking programs in various cities  
Shared parking evaluations

### Alternative Modes

Bike route planning & implementation (ID)  
Complete Streets Ordinance (Lath. Village)  
Americans with Disabilities standards

### Freight Transportation

FHWA research studies on heavy trucks  
Assembly sequencing to reduce delivery costs

### Traffic Impact Analysis

Numerous studies, beginning in 1974; e.g.:  
Francis Scott Key Mall  
The Mall at Partridge Creek  
Twelve Oaks Mall  
Loves Travel Stop & Country Store  
Emagine Theaters  
Plymouth High School  
South Lyon East High School  
Liberty Middle School  
Field, Eriksson, & Gallimore E.S.  
Perfecting Church  
Mt. Zion Church  
Kensington Community Church  
St. Joseph Mercy Hospital  
Mattawan LDFA TIS & interchange design  
Croswell TIS & MI Sugar site planning  
Catalyst Mixed-Use Building  
Brookside Mixed-Use Building  
Multifamily residential (Berkley)  
Birmingham Boutique Hotel  
Peabody Site Development (Birmingham)  
Detroit Pistons Performance Center  
New TIS policy for several communities  
TIS reviews for municipal clients  
Cut-through traffic studies

### Access Management

Ada Co. traffic engineering supervision  
MDOT Access Mgmt. Handbook training  
Plan for M-24, Oakland Co. line to I-69  
Plan for Allen & West Roads (Woodhaven)  
Ordinance policy for Grand Blanc Twp.  
Plan for Van Dyke Ave (Shelby Township)  
Plan for Orchard Lk Rd (Farmington Hills)



## Mohamed Aguib

### Traffic Engineer

Mr. Aguib has over 9 years of comprehensive traffic engineering experience. Throughout his career he has been responsible for transportation planning, traffic operations, roadway design, research, and grant applications. He has provided the transportation and traffic engineering services on the private, local municipalities, and state levels. Mohamed has expertise in a wide variety of transportation planning, traffic engineering, and design projects in which he has been responsible for all aspects of the project development. He is responsible for all aspects of the project scoping, analysis, design and delivery. As he is new to Giffels Webster, most of the projects listed below were performed while Mr. Aguib was employed with other firms.

#### YEARS OF EXPERIENCE

9

#### EDUCATION

Bachelor of Science  
Civil Engineering,  
University of Central Florida

#### CERTIFICATIONS

PSMJ Project Management  
Bootcamp

FDOT Local Agency Program  
Design Criteria, Specifications &  
Construction Checklist Training

Consortium for ITS Training and  
Education (CITE) Traffic  
Engineering and Operations

USDOT ITS Professional  
Capacity Building Program (ITS  
PCB) ITS Standards Training

National Highway Institute (NHI)  
ITS Procurement

E.I.T. (Civil) FBPE registration  
#1100019088

#### SPECIAL EXPERTISE

Traffic Engineering  
Transportation Planning  
Roadway Design  
Safety Studies  
Grants  
ITS Planning and Design  
Corridor & Intersection

#### Relevant Experience

American Center for Mobility (ACM) Phase 1A Design Plan - Ypsilanti, Michigan  
East Detroit Riverfront Riverwalk Design Plan - Detroit, Michigan  
Uniroyal Seawall Rehabilitation Design Plan - Detroit, Michigan  
Marathon Petroleum - Melvindale, Michigan  
Kalamazoo River Valley Trail - Kalamazoo, Michigan  
City Wide Signing and Pavement Marking Program - Kalamazoo, Michigan  
County Wide Signal Wattage Inventory Program - Kalamazoo, Michigan  
Tower Properties - Troy, Michigan  
Four Points by Sheraton Hotel - Novi, Michigan  
Private Developments Traffic Impact Studies, Michigan  
Wayne County Justice Center Traffic Impact Study - Detroit, Michigan  
Ford Field and Detroit Lions Arena Ingress and Egress Study - Detroit, Michigan  
Mayberry Homes Traffic Impact Study - Hartland, Michigan  
Signal Optimization Study for Lapeer Avenue - St Clair County, Michigan  
Signal Optimization Study for Adams Road and Lincoln Street - City of Birmingham, Michigan  
University Boulevard and Rouse Road, Intersection Improvements - Orange, Florida  
Lake Pickett Road at North Tanner Rd, Intersection Improvements - Orange, Florida  
Buck Road, Bridge Replacement - Orange, Florida  
Sherry Drive, Bridge Replacement - Orange, Florida  
West Bay Parkway Travel Demand Evaluations - Bay County, Florida  
Grove Park Residential Development, Parking Demand Analysis, Port St. Lucie, Florida  
Traffic Impact Analysis Projects, Florida  
City of Orlando, Signal Timing Project - Orlando, Florida  
FDOT District 5, Transportation Systems Management and Operations  
FDOT District 2, Putnam County 2016 Annual Counts  
FDOT District 2, DRI Tracker Application  
University of Central Florida, Safety Improvements - Orange, Florida  
University of Central Florida, Master Plan Update - Orange County, Florida  
Oak Ridge Road Pedestrian and Bike Safety Study - Orange, Florida  
Concurrency Management System (CMS) - Orange and Putnam Counties, Florida  
Orange County Transportation CMS Application User's Guide, Florida  
City of Orlando and FDOT District 3, Smart City Grant and Autonomous Vehicles Research - Orlando, Florida

## Land Use: 882 Marijuana Dispensary

### Description

A marijuana dispensary is a standalone facility where cannabis is sold to patients or consumers in a legal manner.

### Additional Data

Time-of-day distribution data for this land use for a weekday and Saturday are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 5:45 and 6:45 p.m., respectively.

The sites were surveyed in the 2010s in Colorado and Oregon.

### Source Numbers

867, 893, 919

# Traffic Data Collection, LLC

www.tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

**Giffels Webster**



**Project: Meridian Twp. Traffic Study**  
**Study: 4 Hr. Video Turning Movement Count**  
**Weather: Cldy. Dry Deg's 30's**  
**Count By Miovision Video VCU 3CU SW**

**File Name : TMC\_1 Okemos & Hampton PI\_12-5-19**  
**Site Code : TMC\_1**  
**Start Date : 12/5/2019**  
**Page No : 1**

4 Hour video traffic study was conducted during typical weekday (Thursday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

Start Time	Okemos Road Southbound				Hampton Place Westbound				Okemos Road Northbound				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
07:00 AM	145	6	0	151	7	5	0	12	0	109	0	109	272
07:15 AM	189	6	0	195	14	6	0	20	13	166	0	179	394
07:30 AM	271	8	0	279	20	8	0	28	4	278	0	282	589
07:45 AM	215	5	0	220	12	5	0	17	5	303	0	308	545
Total	820	25	0	845	53	24	0	77	22	856	0	878	1800
08:00 AM	211	4	0	215	10	7	0	17	7	252	0	259	491
08:15 AM	218	10	0	228	11	4	0	15	4	228	0	232	475
08:30 AM	250	9	0	259	19	4	0	23	4	238	0	242	524
08:45 AM	200	13	0	213	20	2	0	22	9	253	0	262	497
Total	879	36	0	915	60	17	0	77	24	971	0	995	1987
*** BREAK ***													
04:00 PM	268	14	0	282	18	5	0	23	10	240	0	250	555
04:15 PM	257	13	0	270	16	8	3	27	10	256	0	266	563
04:30 PM	239	12	0	251	15	6	1	22	10	217	0	227	500
04:45 PM	243	16	0	259	14	2	2	18	15	242	0	257	534
Total	1007	55	0	1062	63	21	6	90	45	955	0	1000	2152
05:00 PM	290	19	0	309	22	3	0	25	11	299	0	310	644
05:15 PM	291	20	0	311	15	1	0	16	23	326	0	349	676
05:30 PM	241	17	0	258	17	3	0	20	10	232	0	242	520
05:45 PM	216	15	0	231	20	4	0	24	12	236	0	248	503
Total	1038	71	0	1109	74	11	0	85	56	1093	0	1149	2343
Grand Total	3744	187	0	3931	250	73	6	329	147	3875	0	4022	8282
Apprch %	95.2	4.8	0		76	22.2	1.8		3.7	96.3	0		
Total %	45.2	2.3	0	47.5	3	0.9	0.1	4	1.8	46.8	0	48.6	
Pass Cars	3685	185	0	3870	247	73	0	320	146	3821	0	3967	8157
% Pass Cars	98.4	98.9	0	98.4	98.8	100	0	97.3	99.3	98.6	0	98.6	98.5
Single Units	48	2	0	50	1	0	0	1	1	46	0	47	98
% Single Units	1.3	1.1	0	1.3	0.4	0	0	0.3	0.7	1.2	0	1.2	1.2
Heavy Trucks	11	0	0	11	2	0	0	2	0	8	0	8	21
% Heavy Trucks	0.3	0	0	0.3	0.8	0	0	0.6	0	0.2	0	0.2	0.3
Peds	0	0	0	0	0	0	6	6	0	0	0	0	6
% Peds	0	0	0	0	0	0	100	1.8	0	0	0	0	0.1

TDC Traffic Comments: Non-signalized "T" intersection. Video VCU camera was located within SW intersection quadrant. Note: Peds. are excluded from peak hour reports. Traffic study was conducted for Meridian Township Traffic Impact Study for Giffels Webster.



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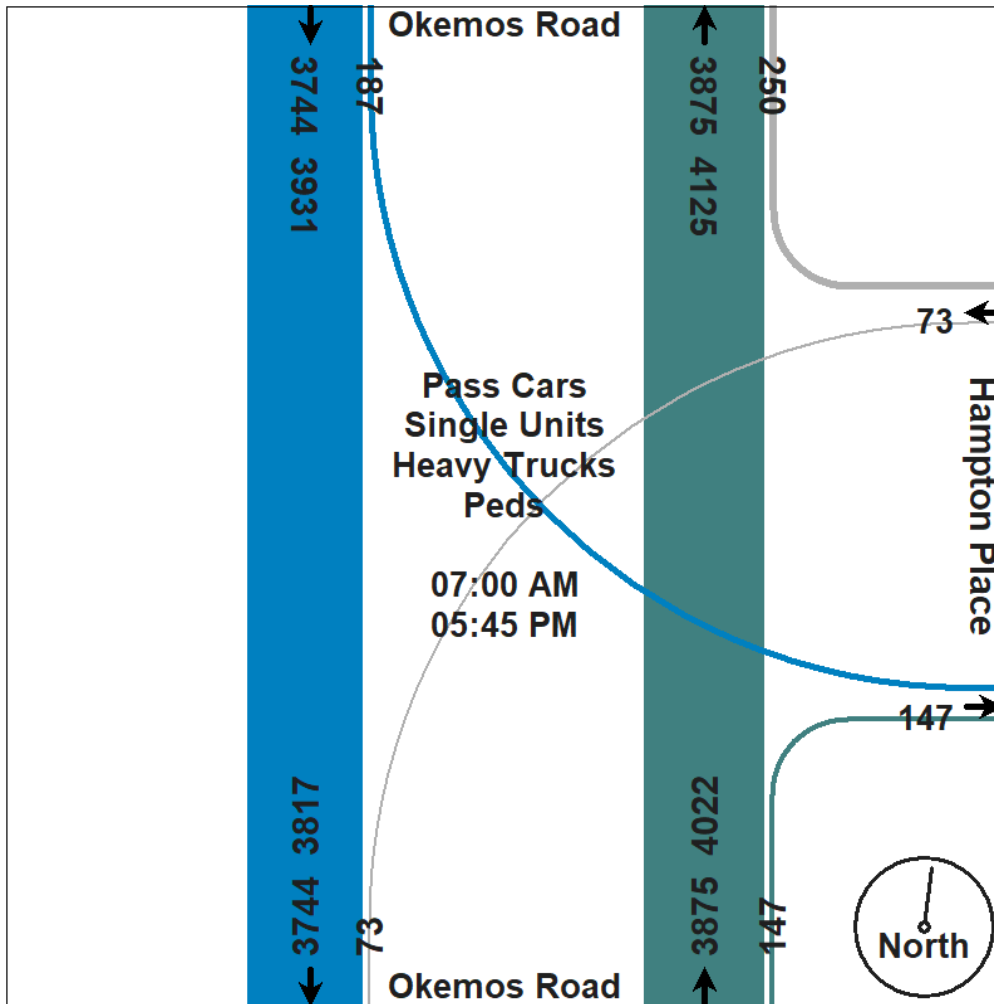
Traffic Study Performed For:

**Giffels Webster**



Project: Meridian Twp. Traffic Study  
Study: 4 Hr. Video Turning Movement Count  
Weather: Cldy. Dry Deg's 30's  
Count By Miovision Video VCU 3CU SW

File Name : TMC\_1 Okemos & Hampton PI\_12-5-19  
Site Code : TMC\_1  
Start Date : 12/5/2019  
Page No : 2



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Traffic Study Performed For:

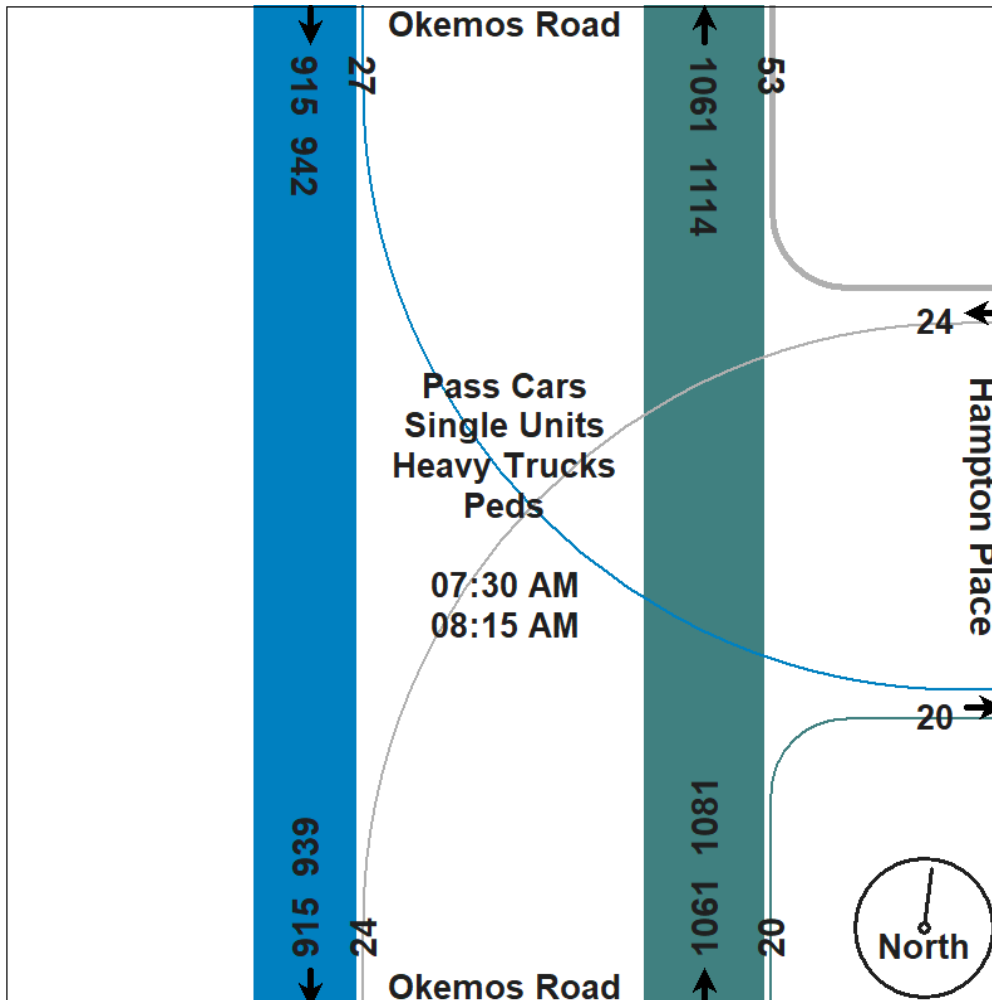
**Giffels Webster**



**Project: Meridian Twp. Traffic Study**  
**Study: 4 Hr. Video Turning Movement Count**  
**Weather: Cldy. Dry Deg's 30's**  
**Count By Miovision Video VCU 3CU SW**

**File Name : TMC\_1 Okemos & Hampton PI\_12-5-19**  
**Site Code : TMC\_1**  
**Start Date : 12/5/2019**  
**Page No : 3**

Start Time	Okemos Road Southbound			Hampton Place Westbound			Okemos Road Northbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	271	8	279	20	8	28	4	278	282	589
07:45 AM	215	5	220	12	5	17	5	303	308	545
08:00 AM	211	4	215	10	7	17	7	252	259	491
08:15 AM	218	10	228	11	4	15	4	228	232	475
Total Volume	915	27	942	53	24	77	20	1061	1081	2100
% App. Total	97.1	2.9		68.8	31.2		1.9	98.1		
PHF	.844	.675	.844	.663	.750	.688	.714	.875	.877	.891
Pass Cars	906	27	933	51	24	75	19	1043	1062	2070
% Pass Cars	99.0	100	99.0	96.2	100	97.4	95.0	98.3	98.2	98.6
Single Units	7	0	7	0	0	0	1	15	16	23
% Single Units	0.8	0	0.7	0	0	0	5.0	1.4	1.5	1.1
Heavy Trucks	2	0	2	2	0	2	0	3	3	7
% Heavy Trucks	0.2	0	0.2	3.8	0	2.6	0	0.3	0.3	0.3
Peds	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

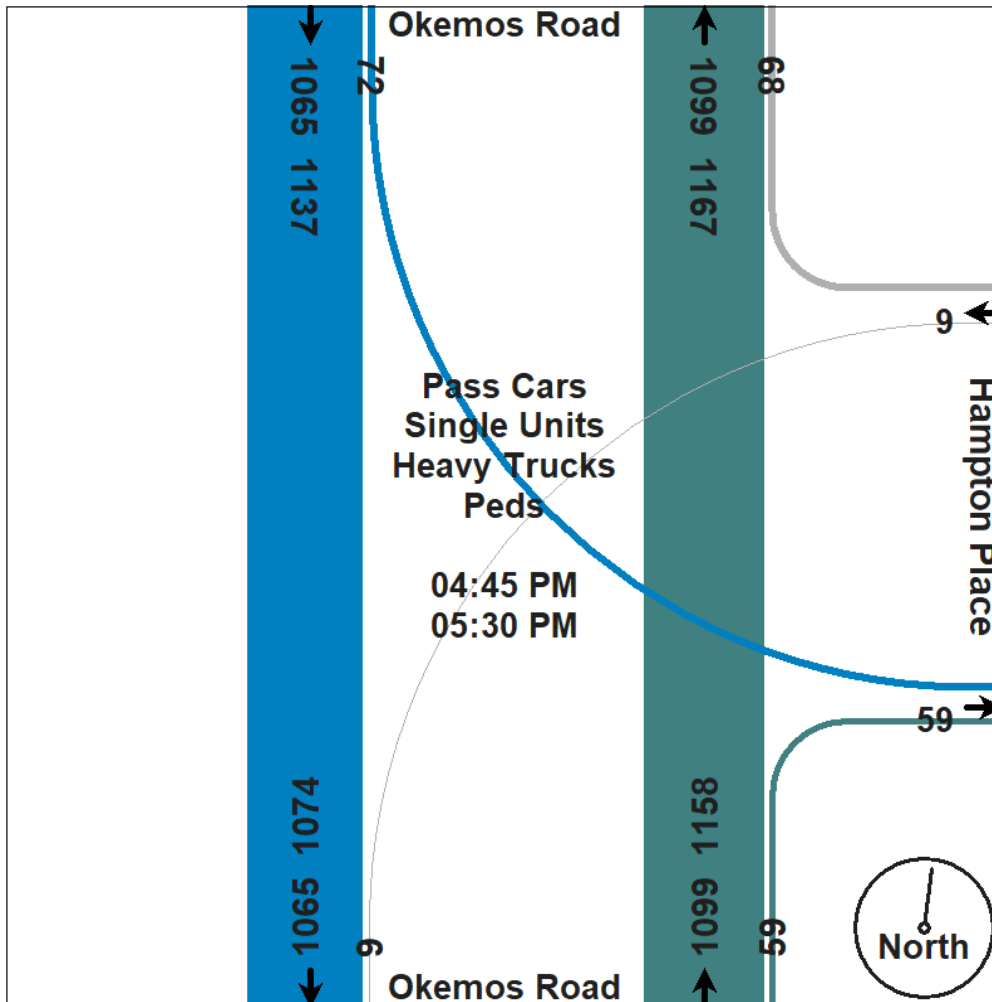
**Giffels Webster**



**Project: Meridian Twp. Traffic Study**  
**Study: 4 Hr. Video Turning Movement Count**  
**Weather: Cldy. Dry Deg's 30's**  
**Count By Miovision Video VCU 3CU SW**

**File Name : TMC\_1 Okemos & Hampton PI\_12-5-19**  
**Site Code : TMC\_1**  
**Start Date : 12/5/2019**  
**Page No : 4**

Start Time	Okemos Road Southbound			Hampton Place Westbound			Okemos Road Northbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	243	16	259	14	2	16	15	242	257	532
05:00 PM	290	19	309	22	3	25	11	299	310	644
05:15 PM	291	20	311	15	1	16	23	326	349	676
05:30 PM	241	17	258	17	3	20	10	232	242	520
Total Volume	1065	72	1137	68	9	77	59	1099	1158	2372
% App. Total	93.7	6.3		88.3	11.7		5.1	94.9		
PHF	.915	.900	.914	.773	.750	.770	.641	.843	.830	.877
Pass Cars	1048	71	1119	68	9	77	59	1095	1154	2350
% Pass Cars	98.4	98.6	98.4	100	100	100	100	99.6	99.7	99.1
Single Units	14	1	15	0	0	0	0	4	4	19
% Single Units	1.3	1.4	1.3	0	0	0	0	0.4	0.3	0.8
Heavy Trucks	3	0	3	0	0	0	0	0	0	3
% Heavy Trucks	0.3	0	0.3	0	0	0	0	0	0	0.1
Peds	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0



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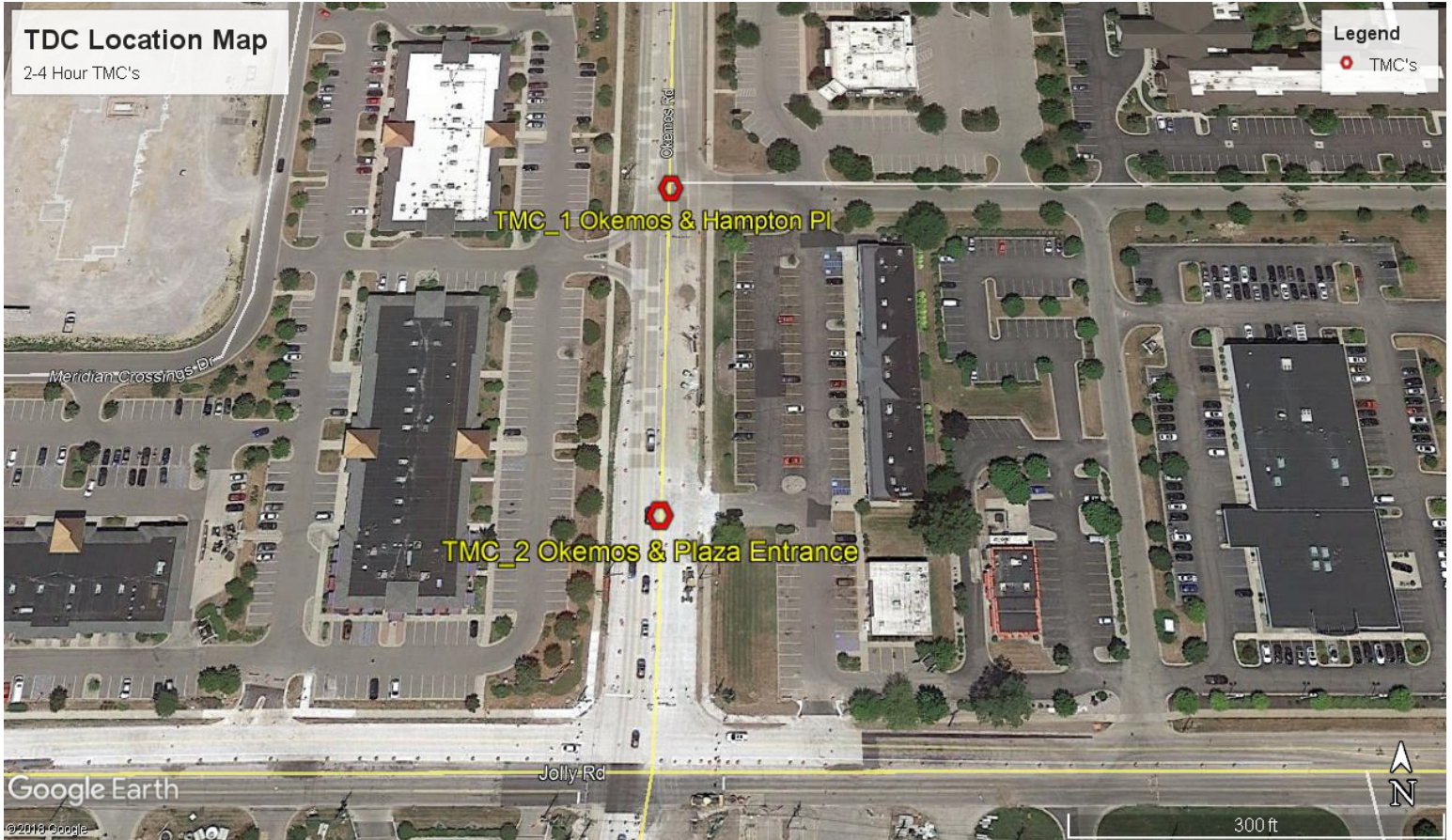
**Giffels Webster**



Project: Meridian Twp. Traffic Study  
Study: 4 Hr. Video Turning Movement Count  
Weather: Cldy. Dry Deg's 30's  
Count By Miovision Video VCU 3CU SW

File Name : TMC\_1 Okemos & Hampton Pl\_12-5-19  
Site Code : TMC\_1  
Start Date : 12/5/2019  
Page No : 5

## Aerial Photo



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Traffic Study Performed For:

**Giffels Webster**



**Project: Meridian Twp. Traffic Study**  
**Study: 4 Hr. Video Turning Movement Count**  
**Weather: Cldy. Dry Deg's 30's**  
**Count By Miovision Video VCU 24L SW**

**File Name : TMC\_2 Okemos & Plaza Dw\_12-5-19**  
**Site Code : TMC\_2**  
**Start Date : 12/5/2019**  
**Page No : 1**

4 Hour video traffic study was conducted during typical weekday (Thursday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

Start Time	Okemos Road Southbound				Plaza Driveway Westbound				Okemos Road Northbound				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
07:00 AM	142	4	0	146	4	4	0	8	8	103	0	111	265
07:15 AM	194	2	0	196	2	1	0	3	10	176	0	186	385
07:30 AM	279	1	0	280	8	0	0	8	17	274	0	291	579
07:45 AM	213	3	0	216	6	1	0	7	13	305	0	318	541
Total	828	10	0	838	20	6	0	26	48	858	0	906	1770
08:00 AM	217	2	0	219	6	0	1	7	15	247	0	262	488
08:15 AM	206	3	0	209	4	0	0	4	13	227	0	240	453
08:30 AM	249	4	0	253	4	3	0	7	14	236	0	250	510
08:45 AM	199	3	0	202	2	1	0	3	2	266	0	268	473
Total	871	12	0	883	16	4	1	21	44	976	0	1020	1924
*** BREAK ***													
04:00 PM	257	3	0	260	5	0	0	5	13	244	0	257	522
04:15 PM	274	4	0	278	5	2	0	7	10	263	0	273	558
04:30 PM	238	2	0	240	1	0	2	3	4	233	0	237	480
04:45 PM	235	1	0	236	7	0	2	9	14	238	0	252	497
Total	1004	10	0	1014	18	2	4	24	41	978	0	1019	2057
05:00 PM	288	2	0	290	8	0	1	9	11	304	0	315	614
05:15 PM	307	4	0	311	6	0	0	6	12	340	0	352	669
05:30 PM	244	4	0	248	7	0	0	7	9	241	0	250	505
05:45 PM	221	2	0	223	5	1	0	6	7	244	0	251	480
Total	1060	12	0	1072	26	1	1	28	39	1129	0	1168	2268
Grand Total	3763	44	0	3807	80	13	6	99	172	3941	0	4113	8019
Apprch %	98.8	1.2	0		80.8	13.1	6.1		4.2	95.8	0		
Total %	46.9	0.5	0	47.5	1	0.2	0.1	1.2	2.1	49.1	0	51.3	
Pass Cars	3704	44	0	3748	79	13	0	92	167	3886	0	4053	7893
% Pass Cars	98.4	100	0	98.5	98.8	100	0	92.9	97.1	98.6	0	98.5	98.4
Single Units	48	0	0	48	1	0	0	1	3	47	0	50	99
% Single Units	1.3	0	0	1.3	1.2	0	0	1	1.7	1.2	0	1.2	1.2
Heavy Trucks	11	0	0	11	0	0	0	0	2	8	0	10	21
% Heavy Trucks	0.3	0	0	0.3	0	0	0	0	1.2	0.2	0	0.2	0.3
Peds	0	0	0	0	0	0	6	6	0	0	0	0	6
% Peds	0	0	0	0	0	0	100	6.1	0	0	0	0	0.1

TDC Traffic Comments: Non-signalized "T" intersection. Video VCU camera was located within SW intersection quadrant. Note: Peds. are excluded from peak hour reports. Traffic study was conducted for Meridian Township Traffic Impact Study for Giffels Webster.

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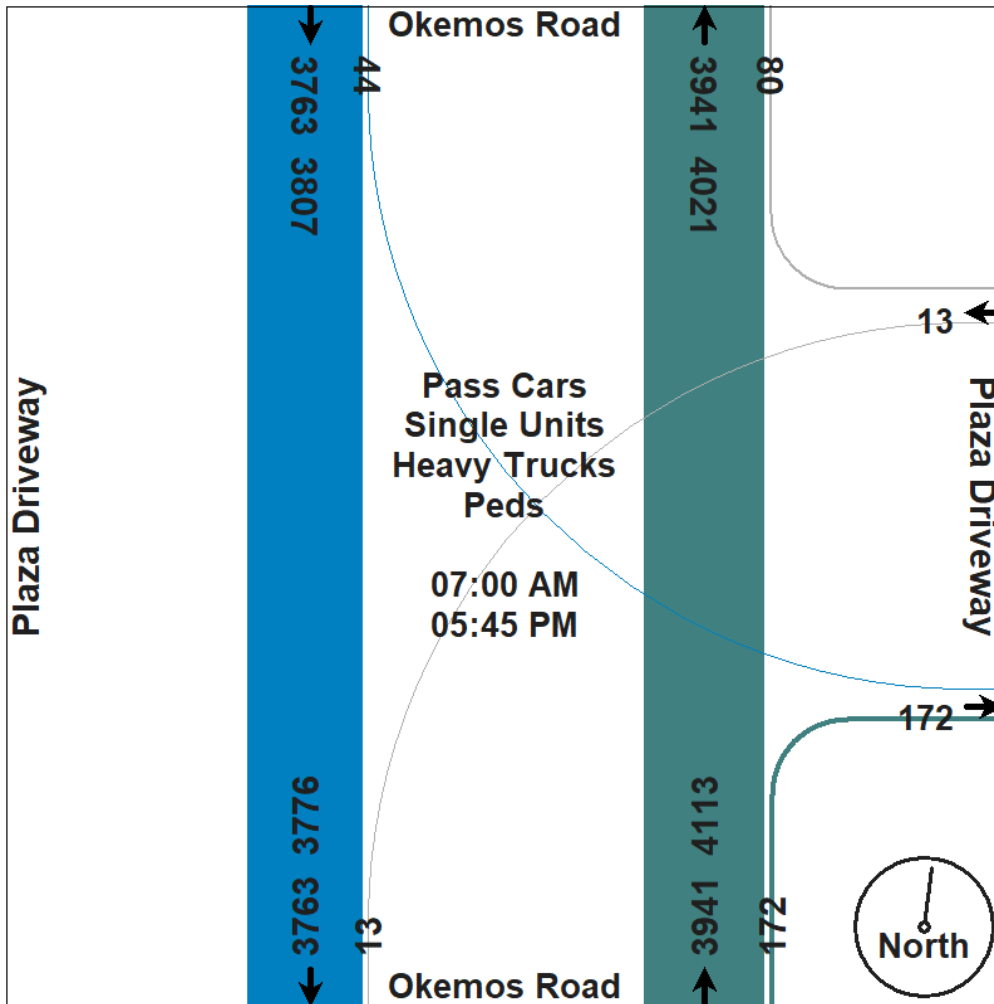
Traffic Study Performed For:

**Giffels Webster**



Project: Meridian Twp. Traffic Study  
Study: 4 Hr. Video Turning Movement Count  
Weather: Cldy. Dry Deg's 30's  
Count By Miovision Video VCU 24L SW

File Name : TMC\_2 Okemos & Plaza Dw\_12-5-19  
Site Code : TMC\_2  
Start Date : 12/5/2019  
Page No : 2



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Traffic Study Performed For:

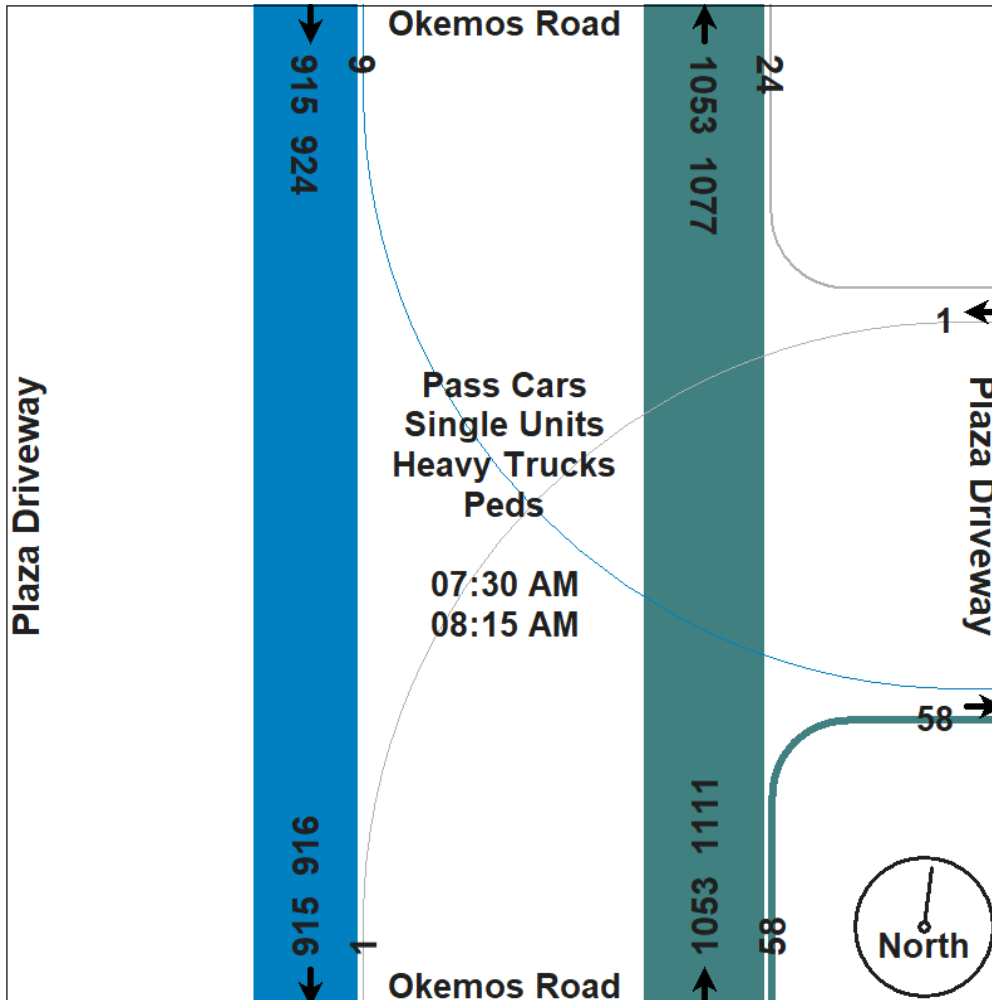
**Giffels Webster**



**Project: Meridian Twp. Traffic Study**  
**Study: 4 Hr. Video Turning Movement Count**  
**Weather: Cldy. Dry Deg's 30's**  
**Count By Miovision Video VCU 24L SW**

**File Name : TMC\_2 Okemos & Plaza Dw\_12-5-19**  
**Site Code : TMC\_2**  
**Start Date : 12/5/2019**  
**Page No : 3**

Start Time	Okemos Road Southbound			Plaza Driveway Westbound			Okemos Road Northbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	279	1	280	8	0	8	17	274	291	579
07:45 AM	213	3	216	6	1	7	13	305	318	541
08:00 AM	217	2	219	6	0	6	15	247	262	487
08:15 AM	206	3	209	4	0	4	13	227	240	453
Total Volume	915	9	924	24	1	25	58	1053	1111	2060
% App. Total	99	1		96	4		5.2	94.8		
PHF	.820	.750	.825	.750	.250	.781	.853	.863	.873	.889
Pass Cars	906	9	915	24	1	25	55	1035	1090	2030
% Pass Cars	99.0	100	99.0	100	100	100	94.8	98.3	98.1	98.5
Single Units	7	0	7	0	0	0	1	15	16	23
% Single Units	0.8	0	0.8	0	0	0	1.7	1.4	1.4	1.1
Heavy Trucks	2	0	2	0	0	0	2	3	5	7
% Heavy Trucks	0.2	0	0.2	0	0	0	3.4	0.3	0.5	0.3
Peds	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0



# Traffic Data Collection, LLC

www.tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

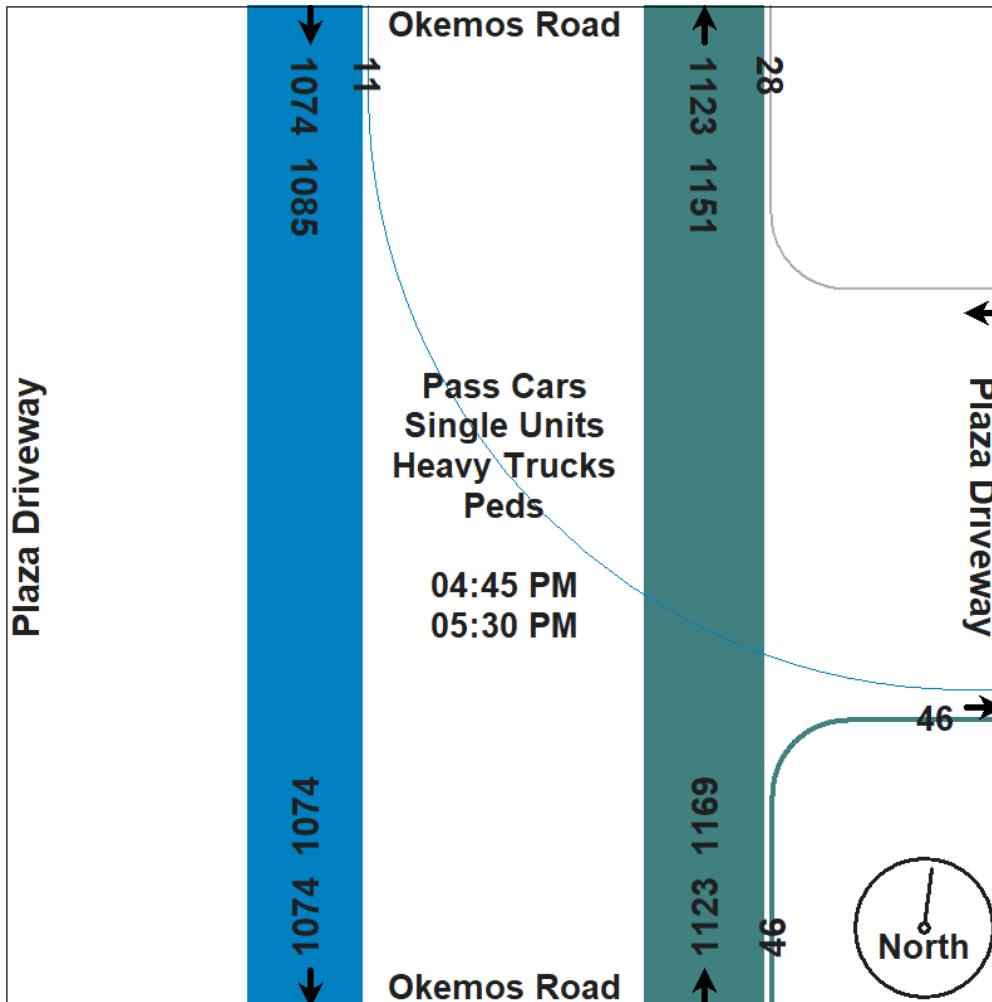
**Giffels Webster**



**Project: Meridian Twp. Traffic Study**  
**Study: 4 Hr. Video Turning Movement Count**  
**Weather: Cldy. Dry Deg's 30's**  
**Count By Miovision Video VCU 24L SW**

**File Name : TMC\_2 Okemos & Plaza Dw\_12-5-19**  
**Site Code : TMC\_2**  
**Start Date : 12/5/2019**  
**Page No : 4**

Start Time	Okemos Road Southbound			Plaza Driveway Westbound			Okemos Road Northbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	235	1	236	7	0	7	14	238	252	495
05:00 PM	288	2	290	8	0	8	11	304	315	613
05:15 PM	<b>307</b>	<b>4</b>	<b>311</b>	6	0	6	12	<b>340</b>	<b>352</b>	<b>669</b>
05:30 PM	244	4	248	7	0	7	9	241	250	505
Total Volume	1074	11	1085	28	0	28	46	1123	1169	2282
% App. Total	99	1		100	0		3.9	96.1		
PHF	.875	.688	.872	.875	.000	.875	.821	.826	.830	.853
Pass Cars	1059	11	1070	28	0	28	44	1119	1163	2261
% Pass Cars	98.6	100	98.6	100	0	100	95.7	99.6	99.5	99.1
Single Units	12	0	12	0	0	0	2	4	6	18
% Single Units	1.1	0	1.1	0	0	0	4.3	0.4	0.5	0.8
Heavy Trucks	3	0	3	0	0	0	0	0	0	3
% Heavy Trucks	0.3	0	0.3	0	0	0	0	0	0	0.1
Peds	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0





# Traffic Data Collection, LLC

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Phone: 586.786-5407

Traffic Study Performed For:

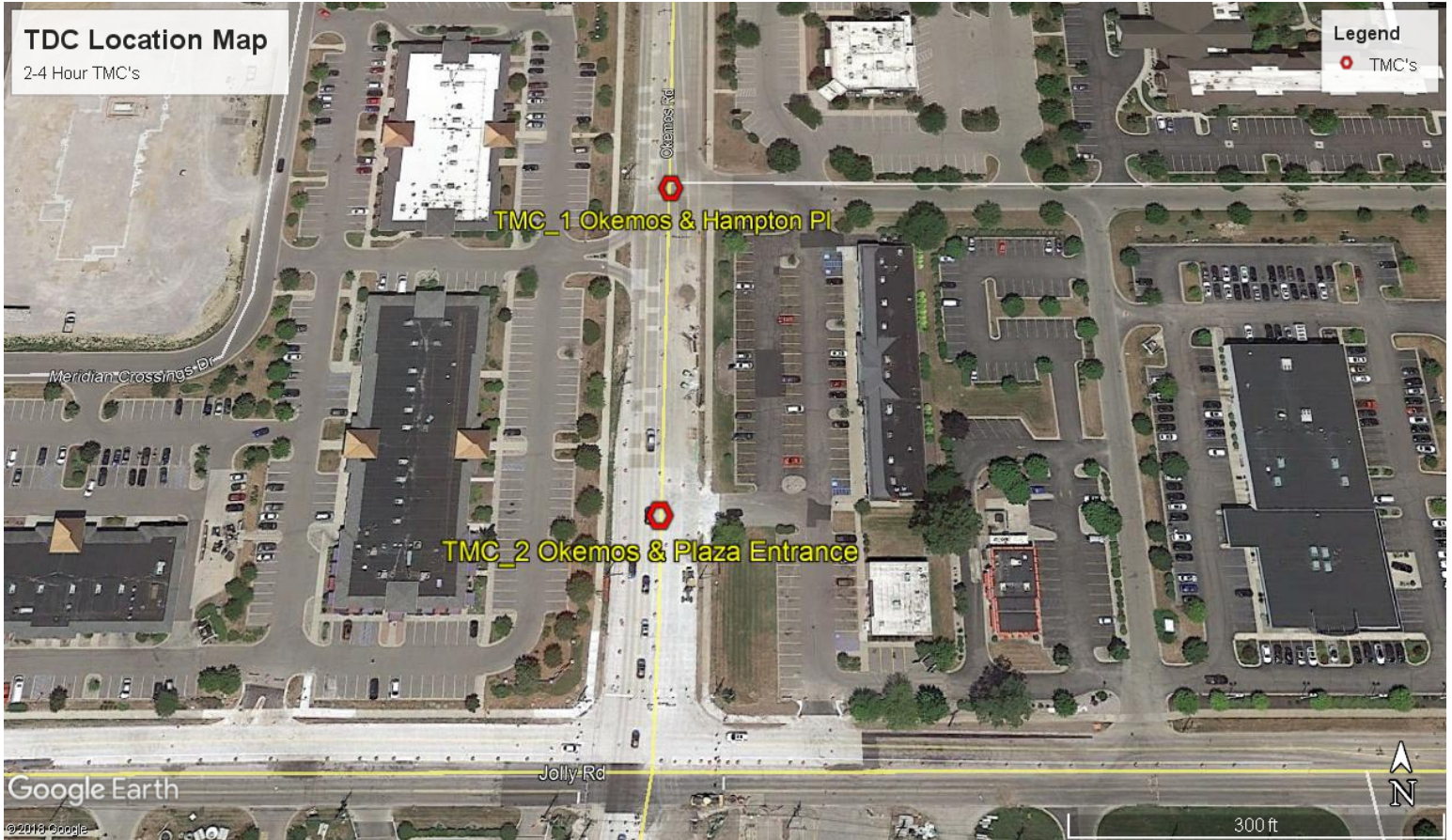
**Giffels Webster**



Project: Meridian Twp. Traffic Study  
Study: 4 Hr. Video Turning Movement Count  
Weather: Cldy. Dry Deg's 30's  
Count By Miovision Video VCU 24L SW

File Name : TMC\_2 Okemos & Plaza Dw\_12-5-19  
Site Code : TMC\_2  
Start Date : 12/5/2019  
Page No : 5

## Aerial Photo



Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	1	24	1057	58	9	915
Future Vol, veh/h	1	24	1057	58	9	915
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	87	87	83	83
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	1	31	1215	67	11	1102

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1822	641	0	0	1282
Stage 1	1249	-	-	-	-
Stage 2	573	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.12
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.21
Pot Cap-1 Maneuver	70	422	-	-	543
Stage 1	237	-	-	-	-
Stage 2	533	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	69	422	-	-	543
Mov Cap-2 Maneuver	175	-	-	-	-
Stage 1	237	-	-	-	-
Stage 2	522	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	399	543
HCM Lane V/C Ratio	-	-	0.08	0.02
HCM Control Delay (s)	-	-	14.8	11.8
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↶	↶↷		↵	↶↷
Traffic Vol, veh/h	24	53	1061	20	27	915
Future Vol, veh/h	24	53	1061	20	27	915
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	88	88	84	84
Heavy Vehicles, %	3	3	2	2	1	1
Mvmt Flow	35	77	1206	23	32	1089

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1827	615	0	0	1229
Stage 1	1218	-	-	-	-
Stage 2	609	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.12
Critical Hdwy Stg 1	5.86	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.21
Pot Cap-1 Maneuver	67	432	-	-	568
Stage 1	241	-	-	-	-
Stage 2	503	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	63	432	-	-	568
Mov Cap-2 Maneuver	171	-	-	-	-
Stage 1	241	-	-	-	-
Stage 2	475	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	171	432	568
HCM Lane V/C Ratio	-	-	0.203	0.178	0.057
HCM Control Delay (s)	-	-	31.4	15.1	11.7
HCM Lane LOS	-	-	D	C	B
HCM 95th %tile Q(veh)	-	-	0.7	0.6	0.2

Intersection: 1: Okemos & Site Access

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	45	31
Average Queue (ft)	16	5
95th Queue (ft)	43	23
Link Distance (ft)	242	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Okemos & Hampton

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	L
Maximum Queue (ft)	65	65	17	9	44
Average Queue (ft)	21	28	1	0	16
95th Queue (ft)	55	55	7	6	43
Link Distance (ft)	503	503	49	49	
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)					200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 0
------------------------------

HCM 6th TWSC  
1: Okemos & Site Access

12/13/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑		↘	↑↑
Traffic Vol, veh/h	0	28	1130	46	11	1074
Future Vol, veh/h	0	28	1130	46	11	1074
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	83	83	87	87
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	0	33	1361	55	13	1234

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2032	708	0	0	1416	0
Stage 1	1389	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.12	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.21	-
Pot Cap-1 Maneuver	51	382	-	-	482	-
Stage 1	200	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	50	382	-	-	482	-
Mov Cap-2 Maneuver	147	-	-	-	-	-
Stage 1	200	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	382	482
HCM Lane V/C Ratio	-	-	0.085	0.026
HCM Control Delay (s)	-	-	15.3	12.7
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↶	↕↶		↵	↕↶
Traffic Vol, veh/h	9	68	1099	59	72	1065
Future Vol, veh/h	9	68	1099	59	72	1065
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	83	83	91	91
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	12	88	1324	71	79	1170

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2103	698	0	0	1395
Stage 1	1360	-	-	-	-
Stage 2	743	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.14
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.22
Pot Cap-1 Maneuver	45	388	-	-	486
Stage 1	207	-	-	-	-
Stage 2	436	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	38	388	-	-	486
Mov Cap-2 Maneuver	136	-	-	-	-
Stage 1	207	-	-	-	-
Stage 2	365	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	136	388	486
HCM Lane V/C Ratio	-	-	0.086	0.228	0.163
HCM Control Delay (s)	-	-	33.9	17	13.8
HCM Lane LOS	-	-	D	C	B
HCM 95th %tile Q(veh)	-	-	0.3	0.9	0.6

Intersection: 1: Okemos & Site Access

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	36	30
Average Queue (ft)	17	5
95th Queue (ft)	43	22
Link Distance (ft)	242	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Okemos & Hampton

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	L
Maximum Queue (ft)	43	61	23	18	69
Average Queue (ft)	8	31	1	2	30
95th Queue (ft)	32	53	11	11	60
Link Distance (ft)	503	503	49	49	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 0
------------------------------

HCM 6th TWSC  
1: Okemos & Site Access

12/13/2019

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	28	1058	65	14	916
Future Vol, veh/h	6	28	1058	65	14	916
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	87	87	83	83
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	8	36	1216	75	17	1104

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1840	646	0	0	1291
Stage 1	1254	-	-	-	-
Stage 2	586	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.12
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.21
Pot Cap-1 Maneuver	68	419	-	-	538
Stage 1	236	-	-	-	-
Stage 2	525	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	66	419	-	-	538
Mov Cap-2 Maneuver	172	-	-	-	-
Stage 1	236	-	-	-	-
Stage 2	508	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.4	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	334	538
HCM Lane V/C Ratio	-	-	0.131	0.031
HCM Control Delay (s)	-	-	17.4	11.9
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.4	0.1



Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↕↔		↙	↕↕
Traffic Vol, veh/h	25	54	1065	21	28	920
Future Vol, veh/h	25	54	1065	21	28	920
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	88	88	84	84
Heavy Vehicles, %	3	3	2	2	1	1
Mvmt Flow	36	78	1210	24	33	1095

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1836	617	0	0	1234
Stage 1	1222	-	-	-	-
Stage 2	614	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.12
Critical Hdwy Stg 1	5.86	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.21
Pot Cap-1 Maneuver	67	430	-	-	566
Stage 1	239	-	-	-	-
Stage 2	500	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	63	430	-	-	566
Mov Cap-2 Maneuver	170	-	-	-	-
Stage 1	239	-	-	-	-
Stage 2	471	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.5	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	170	430	566
HCM Lane V/C Ratio	-	-	0.213	0.182	0.059
HCM Control Delay (s)	-	-	31.8	15.2	11.8
HCM Lane LOS	-	-	D	C	B
HCM 95th %tile Q(veh)	-	-	0.8	0.7	0.2

Intersection: 1: Okemos & Site Access

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	57	10	35
Average Queue (ft)	20	0	7
95th Queue (ft)	48	8	28
Link Distance (ft)	242	193	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Okemos & Hampton

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	L
Maximum Queue (ft)	78	66	29	9	44
Average Queue (ft)	24	29	1	0	16
95th Queue (ft)	60	55	11	6	42
Link Distance (ft)	503	503	49	49	
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)					200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 0
------------------------------

HCM 6th TWSC  
1: Okemos & Site Access

12/14/2019

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	39	1131	57	23	1076
Future Vol, veh/h	11	39	1131	57	23	1076
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	83	83	87	87
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	13	45	1363	69	26	1237

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2069	716	0	0	1432
Stage 1	1398	-	-	-	-
Stage 2	671	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.12
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.21
Pot Cap-1 Maneuver	48	377	-	-	476
Stage 1	198	-	-	-	-
Stage 2	475	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	45	377	-	-	476
Mov Cap-2 Maneuver	142	-	-	-	-
Stage 1	198	-	-	-	-
Stage 2	449	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	276	476
HCM Lane V/C Ratio	-	-	0.211	0.056
HCM Control Delay (s)	-	-	21.5	13
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.8	0.2

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵	↕↕		↵	↕↕
Traffic Vol, veh/h	10	71	1110	60	74	1077
Future Vol, veh/h	10	71	1110	60	74	1077
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	83	83	91	91
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	13	92	1337	72	81	1184

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2127	705	0	0	1409	0
Stage 1	1373	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.14	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.22	-
Pot Cap-1 Maneuver	44	383	-	-	480	-
Stage 1	204	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	37	383	-	-	480	-
Mov Cap-2 Maneuver	134	-	-	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	358	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	134	383	480
HCM Lane V/C Ratio	-	-	0.097	0.241	0.169
HCM Control Delay (s)	-	-	34.7	17.4	14
HCM Lane LOS	-	-	D	C	B
HCM 95th %tile Q(veh)	-	-	0.3	0.9	0.6

Intersection: 1: Okemos & Site Access

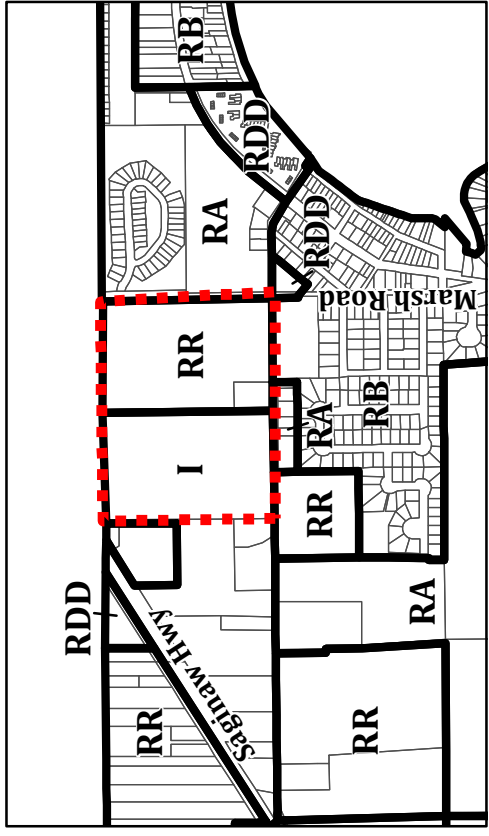
Movement	WB	SB	SB
Directions Served	LR	L	T
Maximum Queue (ft)	62	35	4
Average Queue (ft)	27	10	0
95th Queue (ft)	53	33	2
Link Distance (ft)	242		221
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Okemos & Hampton

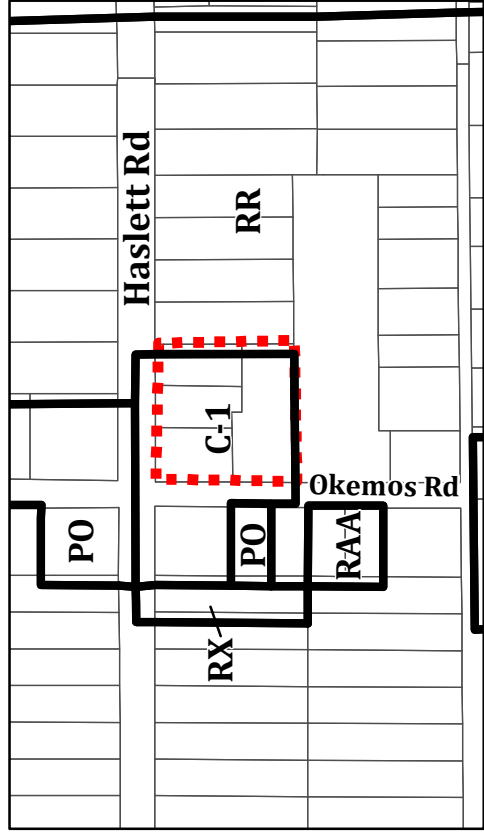
Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	L
Maximum Queue (ft)	38	66	23	32	66
Average Queue (ft)	9	31	1	2	31
95th Queue (ft)	32	56	11	14	58
Link Distance (ft)	503	503	49	49	
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)					200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

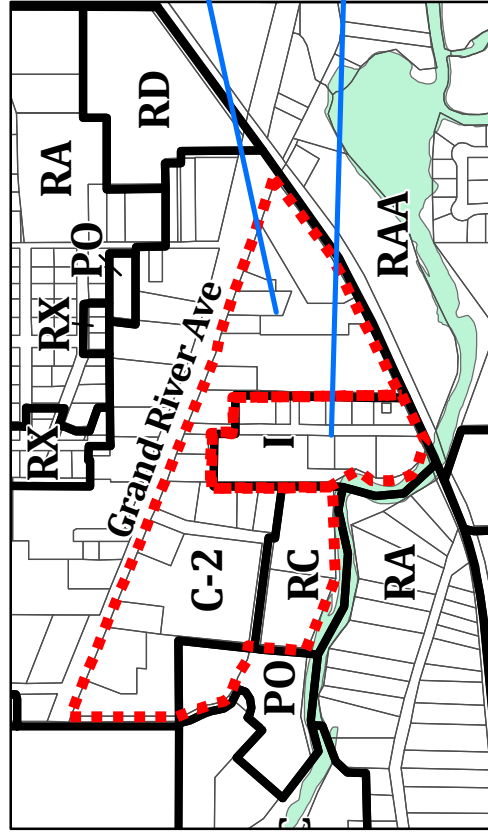
Zone wide Queuing Penalty: 0
------------------------------



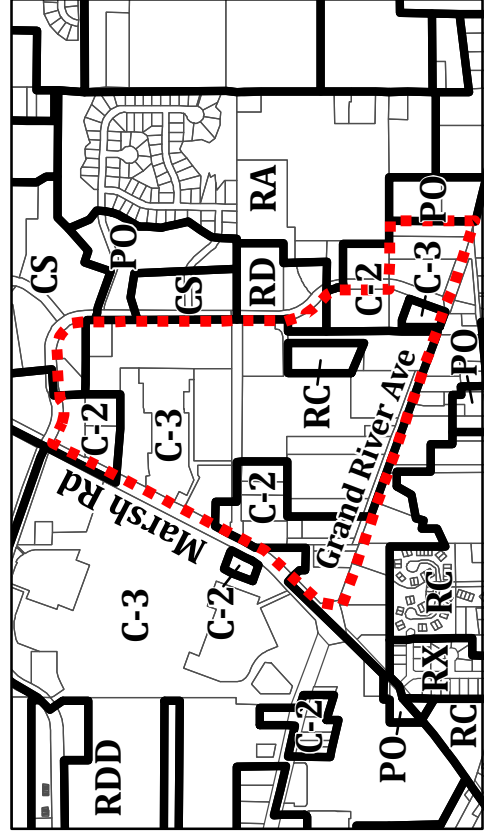
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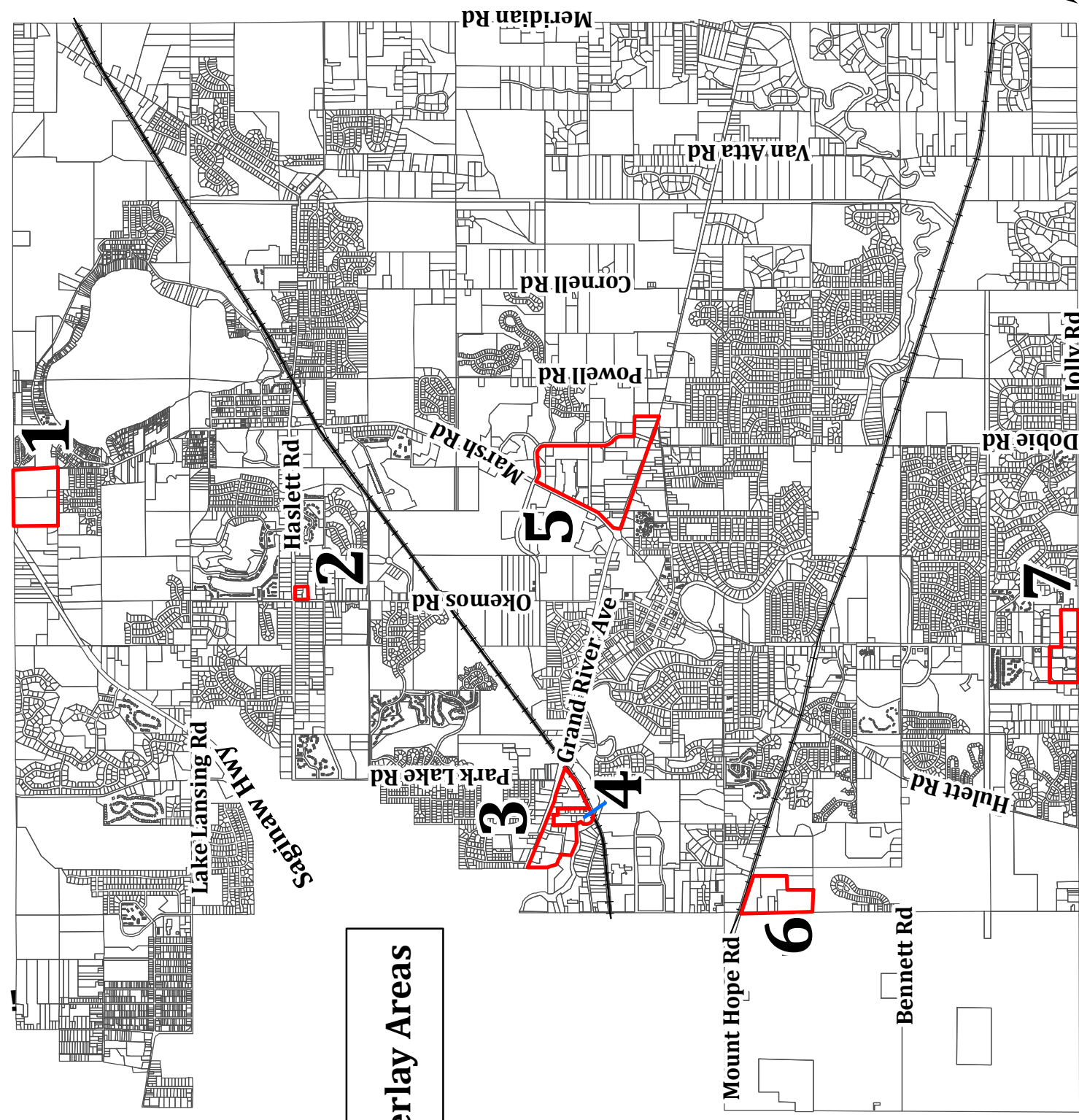
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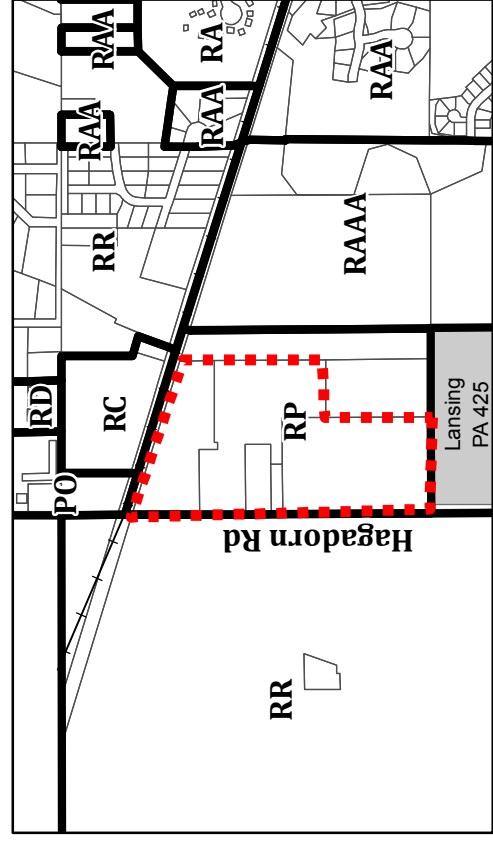
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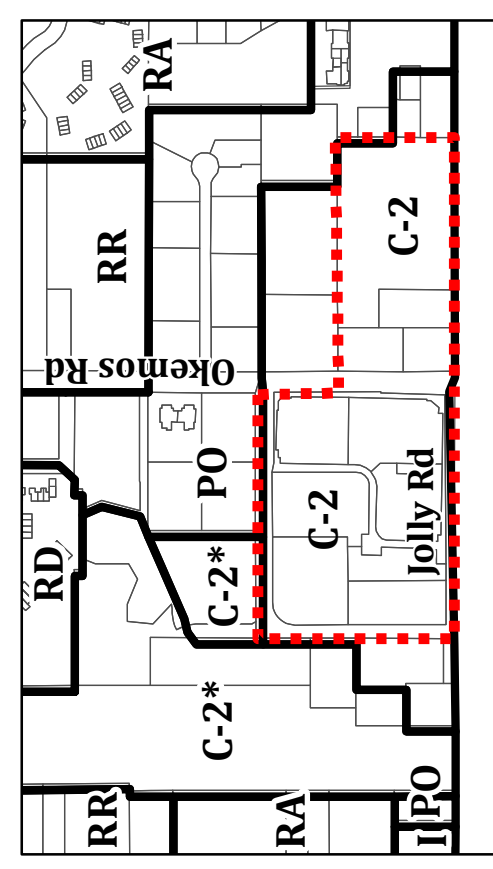
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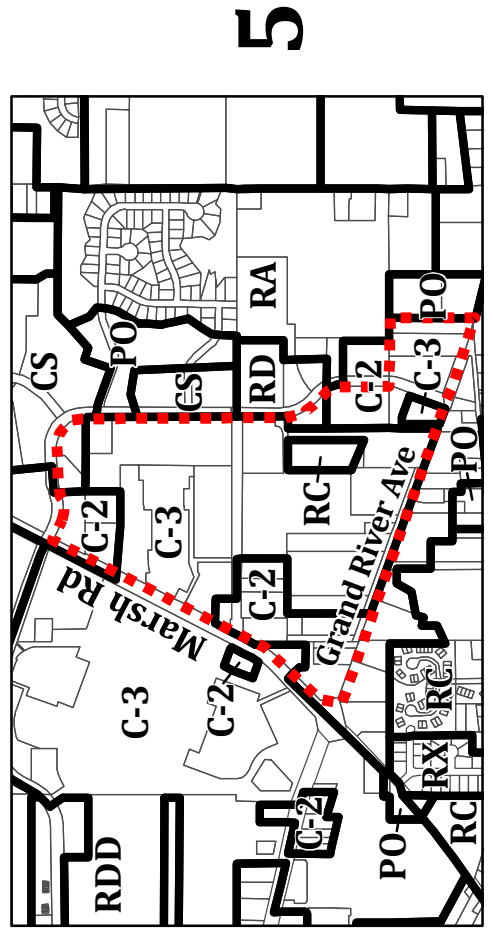
Proposed Overlay Areas



5



6



7

Updated:  
5/16/19



**To:** Planning Commission

**From:** Peter Menser, Principal Planner

**Date:** February 20, 2020

**Re:** **Special Use Permit #19141 (The Cured Leaf TC, Inc.), establish a commercial medical marihuana provisioning center in an existing commercial center located at 3520 Okemos Road.**

---

The Planning Commission held the public hearing for Special Use Permit #19141 at its meeting on February 10, 2020. At the meeting the Planning Commission agreed to consider a resolution to recommend approval of the request at its next meeting on February 24, 2020.

Since the last meeting the applicant has provided responses to the special use permit criteria, which are attached for consideration

### **Planning Commission Options**

The Planning Commission may recommend approval, approval with conditions, or denial of the proposed special use permit. A resolution to recommend approval of the request is provided.

- **Move to adopt the resolution recommending approval of Special Use Permit #19141.**

### **Attachment**

1. Resolution to recommend approval.
2. SUP review criteria.

G:\Community Planning & Development\Planning\SPECIAL USE PERMITS (SUP)\2019\SUP 19141 (The Cured Leaf TC, Inc.)\SUP 19141.pc2.docx

**RESOLUTION TO RECOMMEND APPROVAL**

**Special Use Permit #19141  
(The Cured Leaf TC, Inc.)**

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 24th day of February, 2020, at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, The Cured Leaf TC, Inc. has submitted a request to establish a 2,282 square foot commercial medical marihuana provisioning center in an existing commercial center located at 3520 Okemos Road; and

WHEREAS, the Township Board adopted both zoning and non-zoning ordinances allowing commercial medical marihuana facilities in designated overlay areas throughout the Township at its meeting on May 21, 2019; and

WHEREAS, the zoning ordinance established seven designated areas in the Township where commercial medical marihuana facilities are permitted and identified the zoning districts in which each of the five types of commercial medical marihuana facilities can locate; and

WHEREAS, the non-zoning ordinance established the application process, the facility types allowed, the number of permits, and the general operational standards for the different types of commercial facilities, which include growers, processors, secure transporters, provisioning centers, and safety compliance facilities; and

WHEREAS, the overlay areas adopted by the Township Board allow commercial medical marihuana provisioning centers in the I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park) zoning districts subject to the approval of a special use permit reviewed by the Planning Commission and approved by the Township Board; and

WHEREAS, the subject site is located entirely within Overlay Area 7 and is appropriately zoned C-2 (Commercial), which allows commercial medical marihuana provisioning centers by special use permit; and

WHEREAS, the proposed commercial medical marihuana provisioning center meets the required setbacks from any public or private K-12 school, church, place of worship or other religious facility, library, preschool, or child care center established in Section 40-31 of the Code of Ordinances; and

WHEREAS, the proposed commercial medical marihuana provisioning center will not adversely affect adjacent land uses or the health, safety, and general welfare of the community; and

WHEREAS, the proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.



**Resolution to Recommend Approval  
SUP #19141 (The Cured Leaf TC, Inc.)  
Page 2**

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Special Use Permit #19141, subject to the following conditions:

1. Approval is in accordance with the site plan prepared by Kebs, Inc. dated August 5, 2019 and received on November 13, 2019.
2. Approval is in accordance with the floor plans prepared by Serra-Marko & Associates dated August 2, 2019 and received by the Township on November 13, 2019.
3. Approval is subject to the applicant receiving approval of a Commercial Medical Marihuana Facility permit by the Director of Community Planning and Development.
4. Approval is subject to the applicant receiving Final Approval for a medical marihuana license from the State of Michigan, Department of Licensing and Regulatory Affairs.
5. The applicant shall obtain and maintain any and all other applicable permits, licenses, and approvals necessary to operate the proposed commercial medical marihuana provisioning center from the State of Michigan, Township, and any other applicable agencies. Copies of all permits, licenses, and approvals shall be submitted to the Department of Community Planning and Development.
6. Any proposed future expansion, additions, or revisions to the proposed tenant space, building, or site, will require an amendment to Special Use Permit #19141.
7. All applicable conditions from previous approvals for the construction of the shopping center shall remain in effect.
8. A sign permit shall be required to install a wall sign on the building.
9. The provisioning center shall remain in compliance with the operational requirements established in Section 40-31 of the Code of Ordinances.
10. The special use permit shall be revoked if the applicant fails to maintain a valid Commercial Medical Marihuana Facility permit from the Township and Facility License from the State of Michigan.

ADOPTED: YEAS: \_\_\_\_\_  
\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )

**Resolution to Recommend Approval  
SUP #19141 (The Cured Leaf TC, Inc.)  
Page 3**

I, the undersigned, the duly qualified and acting Chairperson of the Planning Commission of the Charter Township Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and a complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 24th day of February, 2020.

\_\_\_\_\_  
Ken Lane  
Planning Commission Chairperson

The Cured Leaf TC, Inc.  
108 S. Main Street  
Suite A  
Royal Oak, MI 48067

February 20, 2020

Meridian Township  
Planning Department  
5151 Marsh Drive  
Okemos, MI 48864

RE: Special Land Use for Medical Marijuana Provisioning Center – 3520 Okemos Road

Dear Mr. Menser:

I would like to submit the following answers to the questions provided in the Application for a Special Land Use application for the proposed medical marijuana provisioning center facility to be located at 3520 Okemos Road, Suites 9 & 10.

**1. The Project is consistent with the intent and purpose of this chapter.**

Meridian Township adopted Chapter 40 of the Meridian Township Code of Ordinances which details the application and licensing process for a medical marijuana provisioning center to apply for licensure within the Township. The applicant for this project, The Cured Leaf TC, Inc., submitted a timely application and paid the appropriate fee to the Township for their application at 3520 Okemos Road, Suites 9 & 10.

The Township's Planning Department determined that this applicant was the only complete application received by the deadline, so a lottery was not required and the applicant was allowed to move forward through the process. The project meets all requirements in the ordinance that are required of a medical marijuana provisioning center to be located within the Township

**2. The project is consistent with applicable land use policies contained in the Township's Master Plan of current adoption.**

The project is to be located in an existing commercial structure located at 3520 Okemos Road. The property is zoned C-2 Commercial and this is a commercial project which meets the Zoning Requirements in the medical marijuana zoning ordinance. Medical Marijuana

Provisioning Center is permitted in C-1, C-2, C-3 (Commercial), I (Industrial), and/or RP (Research and Office Park) zoning.

- 3. The project is designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such a use will not change the essential character of the same area.**

As stated above, the project will occupy approximately 2,282 square feet of an existing structure located at 3520 Okemos Road. The exterior structure and parking lot will not be modified by this project in anyway. The interior of Suites 9 & 10 are being proposed to be renovated to the floor plan that was submitted. The only noticeable physical change to the exterior of the building will be the removal of the signs for the two tenants currently occupying the space to the name of the new business proposed, The Cured Leaf.

As for operations and maintenance, the current use of the proposed space is as a cell phone retailer and a carry-out Chinese restaurant. The proposed use is as a medical marijuana provisioning center. The operation of a medical marijuana provisioning center is similar to a pharmacy with slightly more of a retail experience. The operation of this business will not impact the appearance of the building or surrounding area and there should be harmonious in appearance with the existing character of the general vicinity.

- 4. The project will not adversely affect or be hazardous to existing neighboring uses.**

The project as a medical marijuana provisioning center facility will not adversely affect or be hazardous to existing neighborhood uses. The general vicinity is all commercial activity and this will be a retail business most similar to a pharmacy. There will no hazardous chemicals on site and also no loose marijuana product. All of the marijuana and marijuana infused products will come pre-packaged and, as forbidden by state law, no consumption of marijuana or marijuana infused products will be allowed on site.

Furthermore, there will be security on site to prevent any loitering around the facility and to prevent any unauthorized access to the facility. When the facility is not open for business, there will be a number of security cameras monitoring the area, both interior and exterior, and it will be linked directly to the local emergency services. So any attempt at unlawful activity will immediately notify the business owners and also the local police will receive a notification that attention is needed.

**5. The project will not be detrimental to the economic welfare of surrounding properties in the community.**

As can be seen on the traffic assessment that is attached, there will be increased traffic flow over the existing uses in the space. This increased traffic flow will benefit the businesses in the area as more visitors to the plaza means potentially more customers for them as well. Also, as noted above, there will be increased security over the existing use so that security personnel will be on site during business hours and the cameras will capture any attempts at illegal activity in the immediate vicinity.

Furthermore, the surrounding community is made up nearly entirely of commercial businesses. There have been several studies done in Colorado and California which detail that when a provisioning center or dispensary (as many other states call it) open in the area, crime goes down and property values go up. Attached are two articles which describe these studies in more detail and give some examples of the change neighborhoods and properties see as a result of the new business in the area.

**6. The project is adequately served by public facilities, such as existing roads, schools, stormwater drainage, public safety, public transportation, and public recreation, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide any such service.**

The project will not change any of the existing building nor will it modify any service by public facilities to the area. The use of the space will be very similar to the existing use in regards to use by public roads, parking, draining and public safety. There should be no noticeable change in this regard.

**7. The project is adequately served by public sanitation facilities if so designated. If on-site sanitation facilities for sewage disposable, potable water supply, and storm water are proposed, they shall be properly designed and capable of handling long term needs of the proposed project.**

As stated, this is an existing building that will not have any changes to the overall use of sanitation facilities. The existing service is more than adequate for the project's intended use.

**8. The project will not involve uses, activities, processes, materials, and equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glares, or odors.**

The project will be that of a medical marijuana provisioning center that will sell only packaged marijuana flower, marijuana infused items, and accessories related to the marijuana industry. There will be no loose flower on site at the location at any time as all items will be manufactured and packaged at another facility owned by the owned of The Cured Leaf in Warren, MI.

The Cured Leaf also has an existing location in Traverse City, Michigan which has operated without issue for months. At neither location has there been or will there be any excessive traffic, noise, smoke, fumes, glares or odors. The only chemicals on site will be common office cleaning supplies such as Windex, Lysol, Clorox and other similar commonly found cleaning supplies.

The Cured Leaf will also have HEPA filtration within the space to reduce the smell of marijuana within the facility and to prevent and smell from exiting the facility. This has proven effective at the existing location in Traverse City as there is no smell or other indication outside of the facility, other than the signage, of the activity that is occurring inside.

**9. The project will not directly or indirectly have a substantial adverse impact on the natural resources of the Township, including but not limited to, prime agricultural soils, water recharge areas, lakes, rivers, streams, major forests, wetlands, and wildlife areas.**

The project will not cause any direct or indirect adverse impact on the natural resources of the Township. The building and parking lot have already been built and only the interior of the structure will be renovated for the new floor plan as proposed.

As stated above, if any additional information is needed or requested, please do not hesitate to reach out to me. Thank you.

Sincerely,



Alan Shamoun  
General Counsel  
E-mail: [alan@mgmt10.com](mailto:alan@mgmt10.com)  
Office: (248) 307-7037 ext. 105  
Cell: (248) 808-5222

**RESOLUTION TO RECOMMEND APPROVAL**

**Special Use Permit #19141  
(The Cured Leaf TC, Inc.)**

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 24th day of February, 2020, at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, The Cured Leaf TC, Inc. has submitted a request to establish a 2,282 square foot commercial medical marihuana provisioning center in an existing commercial center located at 3520 Okemos Road; and

WHEREAS, the Township Board adopted both zoning and non-zoning ordinances allowing commercial medical marihuana facilities in designated overlay areas throughout the Township at its meeting on May 21, 2019; and

WHEREAS, the zoning ordinance established seven designated areas in the Township where commercial medical marihuana facilities are permitted and identified the zoning districts in which each of the five types of commercial medical marihuana facilities can locate; and

WHEREAS, the non-zoning ordinance established the application process, the facility types allowed, the number of permits, and the general operational standards for the different types of commercial facilities, which include growers, processors, secure transporters, provisioning centers, and safety compliance facilities; and

WHEREAS, the overlay areas adopted by the Township Board allow commercial medical marihuana provisioning centers in the I (Industrial), C-1, C-2, C-3 (Commercial), and RP (Research and Office Park) zoning districts subject to the approval of a special use permit reviewed by the Planning Commission and approved by the Township Board; and

WHEREAS, the subject site is located entirely within Overlay Area 7 and is appropriately zoned C-2 (Commercial), which allows commercial medical marihuana provisioning centers by special use permit; and

WHEREAS, the proposed commercial medical marihuana provisioning center meets the required setbacks from any public or private K-12 school, church, place of worship or other religious facility, library, preschool, or child care center established in Section 40-31 of the Code of Ordinances; and

WHEREAS, the proposed commercial medical marihuana provisioning center will not adversely affect adjacent land uses or the health, safety, and general welfare of the community; and

WHEREAS, the proposed project is consistent with the general standards for granting a special use permit found in Section 86-126 of the Code of Ordinances.

**Resolution to Recommend Approval  
SUP #19141 (The Cured Leaf TC, Inc.)  
Page 2**

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Special Use Permit #19141, subject to the following conditions:

1. Approval is in accordance with the site plan prepared by Kebs, Inc. dated August 5, 2019 and received on November 13, 2019.
2. Approval is in accordance with the floor plans prepared by Serra-Marko & Associates dated August 2, 2019 and received by the Township on November 13, 2019.
3. Approval is subject to the applicant receiving approval of a Commercial Medical Marihuana Facility permit by the Director of Community Planning and Development.
4. Approval is subject to the applicant receiving Final Approval for a medical marihuana license from the State of Michigan, Department of Licensing and Regulatory Affairs.
5. The applicant shall obtain and maintain any and all other applicable permits, licenses, and approvals necessary to operate the proposed commercial medical marihuana provisioning center from the State of Michigan, Township, and any other applicable agencies. Copies of all permits, licenses, and approvals shall be submitted to the Department of Community Planning and Development.
6. Any proposed future expansion, additions, or revisions to the proposed tenant space, building, or site, will require an amendment to Special Use Permit #19141.
7. All applicable conditions from previous approvals for the construction of the shopping center shall remain in effect.
8. A sign permit shall be required to install a wall sign on the building.
9. The provisioning center shall remain in compliance with the operational requirements established in Section 40-31 of the Code of Ordinances.
10. The special use permit shall be revoked if the applicant fails to maintain a valid Commercial Medical Marihuana Facility permit from the Township and Facility License from the State of Michigan.

ADOPTED: YEAS: \_\_\_\_\_  
\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )



**Resolution to Recommend Approval  
SUP #19141 (The Cured Leaf TC, Inc.)  
Page 3**

I, the undersigned, the duly qualified and acting Chairperson of the Planning Commission of the Charter Township Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and a complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 24th day of February, 2020.

\_\_\_\_\_  
Ken Lane  
Planning Commission Chairperson

**CHARTER TOWNSHIP OF MERIDIAN  
PLANNING COMMISSION  
REGULAR MEETING MINUTES**

**February 10, 2020  
5151 Marsh Road, Okemos, MI 48864-1198  
517-853-4560, Town Hall Room, 7:00 P.M.**

**PRESENT: Commissioners Lane, Hendrickson, Trezise, Premoe, Cordill, and McConnell  
ABSENT: Commissioner Richards, Shrewsbury, and Clark  
STAFF: Director of Community Planning & Development Mark Kieselbach and  
Principal Planner Peter Menser**

**1. Call meeting to order**

Chair Lane called the regular meeting to order at 7:01 P.M.

**2. Public Remarks**

- 1. Darcie Whiddon, 4090 Wabaningo Road, purchased property at 5937 Potter Street and asked if the Planning Commission would consider rezoning the property from C-1 to RN district like the other residential properties near her property. The property is a 3-bedroom, 1-bath residential home and has always been used for residential purposes.

**3. Approval of Agenda**

Chair Lane requested to add a discussion about the potential rezoning of 5937 Potter Street as item 8D under Other Business on the agenda.  
Commissioner Hendrickson moved to approve the amended agenda.  
Seconded by Commissioner Cordill.  
VOICE VOTE: Motion approved unanimously.

**4. Approval of Minutes**

- A. January 27, 2020 Regular Meeting

Commissioner Trezise moved to approve the minutes as written.  
Seconded by Commissioner McConnell.  
VOICE VOTE: Motion approved unanimously.

**5. Communications**

Chair Lane noted the communication listed in the meeting packet.

**6. Public Hearings**



- A. Special Use Permit #19141 (The Cured Leaf TC, Inc.), establish commercial medical marihuana provisioning center at 3520 Okemos Road.

Chair Lane opened the public hearing at 7:05 p.m.

Principal Planner Menser provided a brief summary of the request and said he would be available to answer questions.

The applicant's representative, Alan Shamoun, 108 S. Main, Suite A, Royal Oak, Michigan, 48067, legal counsel for the applicant, said the applicant currently operates a similar business in Traverse City and is also in the process of opening businesses in Detroit and Ypsilanti.

Mr. Shamoun noted Baryames Cleaners was included in the lot split along with Sprint and Asian Express but the proposed Special Use Permit is only for the space where Sprint and Asian Express are located. He also said he would be available to answer any questions.

Public Comment - None

Planning Commission Discussion:

- A question was asked about the Jolly Oak Center and why it was split into two parcels. Principal Planner Menser explained the Cedar Classical Elementary School proposal was submitted during the same time as this request and the land was split to meet the eligibility and spacing requirements for the Special Use Permit.
- A question was asked about the Traffic Assessment and why the Jolly Road access to the Jolly Oak Center, through the Seven Eleven Store parking lot, was not taken into consideration in the report. Principal Planner Menser stated more detailed studies would have been initiated if the trip generation for the proposed use was higher.
- Concern about a tenant in the Jolly Oak Center called Mathnasium that tutors school aged children.
- Concern was expressed about the impact the proposed new business might have on the other stores in the shopping center.
- A question was asked about what the store front would look like for the proposed provisioning center and the applicant's representative stated the windows will be tinted and you will not be able to see anything inside. The exterior door to the business would be open and the reception area would look like a doctor's office with seating, reception area, and restrooms. The reception staff would greet guests and review the necessary credentials before a person would be escorted to the secured sales floor beyond the reception area. There will also be many security cameras which are available to the police department at any time.
- All products are prepackaged when they arrive to the provisioning center so there will be no odors that will affect the other stores in the shopping center.
- The applicant's representative noted the provisioning centers that reside in strip mall shopping center environments historically create increased traffic, better security, and no negative property values.

A straw poll indicated the Planning Commission would be in support of recommending approval of the proposed Special Use Permit #19141 at the next meeting on February 24, 2020.

Chair Lane closed the public hearing at 7:30 p.m.

**6. Public Hearings - None**

**7. Unfinished Business**



- A. Special Use Permit #19141 (The Cured Leaf TC, Inc.), establish commercial medical marihuana provisioning center at 3520 Okemos Road.

Principal Planner Menser noted the applicant has submitted responses to the special use permit criteria and they are available in the meeting packet for review.

Motion by Commissioner Premoe to recommend approval of Special Use Permit #19141.

Supported by Commissioner Hendrickson.

ROLL CALL VOTE:

YEAS: Commissioner Premoe, Hendrickson, McConnell, Clark, Shrewsbury, Trezise, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0

- B. Special Use Permit #19131 (The W. Investment Holdings), establish commercial medical marihuana provisioning center at 1614 Grand River Avenue.

Principal Planner Menser commented there would be different conditions for this request compared to the previous special use permit discussed because new construction is proposed.

Motion by Commissioner Trezise to recommend approval with the 17 conditions stated in the resolution for Special Use Permit #1131.

Supported by Commissioner Premoe.

ROLL CALL VOTE:

YEAS: Commissioner Trezise, Premoe, Hendrickson, Shrewsbury, Clark, McConnell, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0

- C. Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.

Principal Planner Menser noted a map showing the location of multiple family zoning districts (noted in red) in the Township was included in the meeting packet per the request of the Planning Commission at the February 10, 2020 meeting. He also noted that changes to the text of the draft ordinance included swapping out the term "living unit" for "dwelling unit" where applicable.

Motion by Commissioner McConnell to adopt the resolution recommending approval of Zoning Amendment #20020 in accordance with the revised draft ordinance language dated February 11, 2020.

Supported by Commissioner Trezise.

Commissioner Hendrickson stated he would be voting in opposition to the proposed zoning change because of the concerns he expressed at the February 10, 2020 public hearing.



## 13.C

**To:** Township Board

**From:** Mark Kieselbach, Director of Community Planning and Development

**Date:** March 12, 2020

**Re:** Zoning Amendment #20020 (Township Board), Multiple Family Zoning Districts

---

The Township Board in November 2019 initiated a zoning amendment to Section 86-376 of the Code of Ordinances to allow a mix of single family detached and multiple family dwellings in the RDD, RD, RC, and RCC Multiple Family zoning districts. The primary difference between the four districts is the density of the dwelling units per acre (du/a) allowed in each district. The density allowed for the districts is as follows: RDD (5 du/a), RD (8 du/a), RC (14 du/a), and RCC (34 du/a). The ordinance currently only allows a development to have a mix of multiple family and single family dwelling units by special use permit in the RDD zoning district. At 5 du/a the RDD zoning district does not provide the density needed for most projects. Allowing the mixing of different types of residential units in the other multiple family zoning districts will address the growing housing trend. The proposed amendment will also put the Township in a position to attract diverse housing projects that provide options for those seeking alternatives to the long-term purchase of a house.

The proposed amendment includes the following changes to the Multiple Family zoning ordinance:

- New provision allowing single-family detached dwelling units in the RD, RC, and RCC, in addition to those already allowed in RDD by special use permit.
- Establishment of a 50 percent maximum standard for the number of single-family dwellings in a multiple-family project.
- Removal of the provision allowing the Planning Commission to delegate review of special use permits for multiple family projects to the Director of Community Planning and Development.
- Reconfiguration of the ordinance language to eliminate duplication.
- Standardization and simplification of the provision requiring a minimum distance between buildings.
- Elimination of the provision requiring a 25 foot setback for an entrance to a multiple-family building from any street, access road, driveway, or parking area.
- Addition of ordinance reference related to construction standards for single-family dwellings.
- Revision to the minimum size of parking spaces in multiple-family projects from 200 square feet to 180 square feet to match the standards for other zoning districts.
- Minor revisions to grammar and terminology.

The Planning Commission held a public hearing on the proposed amendment at its meeting on February 10, 2020 and on February 24, 2020 voted to recommend approval, citing the following reasons for their decision:

**Zoning Amendment #20020 (Township Board)**  
**Township Board (March 17, 2020)**  
**Page 2**

- The proposed zoning amendment will provide additional housing options and alternatives to encourage diverse populations to live in the Township.
- The proposed zoning amendment is consistent with Goal 1, Objective B of the 2017 Master Plan to maintain a community of desirable, attractive, residential neighborhoods.

Staff memorandums outlining the proposed zoning amendment and the minutes from the Planning Commission meetings where the amendment was discussed are attached for the Board's review.

**Township Board Options**

The Township Board may approve or deny the proposed zoning amendment. If the Board amends the proposal, the amendment may be referred back to the Planning Commission for a recommendation. A resolution will be provided at a future meeting.

**Attachments**

1. Staff memorandums dated February 6, 2020 and February 20, 2020 with attachments.
2. Resolution recommending approval.
3. Draft amendment dated February 11, 2020.

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**To: Planning Commission**

**From: Peter Menser, Principal Planner**

**Date: February 6, 2020**

**Re: Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.**

---

Staff has been working with DTN Management over the last year on a potential project called Grand Reserve on the east side of Central Park Drive, north of Grand River Avenue. The Township Board reviewed a concept plan for the development in 2018, which included a mix of multiple family and detached single family dwelling units, similar to DTN's recently approved Newton Park project at the southeast corner of Saginaw Highway and Newton Road (MUPUD #18044). Given its location along Saginaw Highway, the developer felt the commercial component at Newton Park was warranted. For the proposed Grand Reserve, since it is located adjacent to an already well-established commercial area in the Township, DTN would like to make the project strictly multiple family and exclude the commercial component.

The Township's multiple family zoning ordinance (Section 86-376 of the Code of Ordinance) is comprised of four zoning districts, identified as RDD, RD, RC, and RCC. The primary difference between the districts is the density (dwelling units per acre (du/a) allowed in each, which is as follows: RDD (5 du/a), RD (8 du/a), RC (14 du/a), and RCC (34 du/a). The ordinance currently only allows a development to have a mix of multiple family and single family dwelling units in the RDD zoning district. The RDD zoning district allows a mix of multiple and single family dwellings by special use permit, but at five du/a does not provide the density needed for most projects. To accommodate a development like Grand Reserve, which will include a similar unique mix of multiple family and detached single family housing options the Township Board expressed appreciation for in the Newton Park development, a zoning amendment is necessary.

At its meeting on November 19, 2019 the Township Board initiated a zoning amendment to Section 86-376 of the Code of Ordinances to allow a mix of single family detached and multiple family dwellings in the RDD, RD, RC, and RCC (Multiple Family) zoning districts. Staff is suggesting the following changes to the ordinance to address the directive from the Board:

- New provision allowing single-family detached dwelling units in the RD, RC, and RCC, in addition to those already allowed in RDD by special use permit.
- Establishment of a 50 percent maximum standard for the number of single-family dwellings in a multiple-family project.
- Removal of the provision allowing the Planning Commission to delegate review of special use permits for multiple family projects to the Director of Community Planning and Development.
- Reconfiguration of the ordinance language to eliminate duplication.
- Standardization and simplification of the provision requiring a minimum distance between buildings.

**Zoning Amendment #20020 (Township Board)**  
**Planning Commission (February 10, 2020)**  
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- Elimination of the provision requiring a 25 foot setback for an entrance to a multiple-family building from any street, access road, driveway, or parking area.
- Addition of ordinance reference related to construction standards for single-family dwellings.
- Revision to the minimum size of parking spaces in multiple-family projects from 200 square feet to 180 square feet to match the standards for other zoning districts.
- Minor revisions to grammar and terminology.

A draft ordinance with proposed changes to Section 86-376 is attached. The amendment to the ordinance is not intended to address only the potential proposal from DTN; the mixing of different types of residential units is a growing housing trend and expected in future projects. Amending the ordinance now will put the Township in a position to attract diverse housing projects that provide options for those seeking alternatives to the long-term purchase of a home.

**Planning Commission Options**

The Planning Commission may recommend approval as written, recommend approval of a revised version, or recommend denial of the proposed zoning amendment. A resolution will be provided at a future meeting.

**Attachment**

1. Draft ordinance language dated January 10, 2020.



## Chapter 86 Zoning

### Article IV District Regulations

#### DIVISION 2 Residential Districts

##### Section 86-376 Multiple-Family Residential Districts: RDD, RD, RC, RCC Districts

- (a) Purpose. The RDD, RD, RC, and RCC districts are intended to accommodate multiple-family residential uses at a higher density than any single-family district, but at no lower standards of quality. The primary purposes of these districts are to accommodate multiple-family developments of sustained desirability and stability that will be harmonious to adjacent properties, to promote large parcel, single-owner developments that allow an added degree of flexibility in the placement, bulk, and interrelationship of the buildings and uses within a planned project and adjacent areas, and to maintain the overall intensity of land use, density of population, and required open space specified in this section and in the comprehensive development plan of the Township.
- (1) The primary distinction between these districts is density. The RDD zone permits a maximum of five dwelling units per acre, the RD zone permits a maximum of eight dwelling units per acre, the RC zone permits a maximum of 14 dwelling units per acre, and the RCC zone permits variable high density up to a maximum of 34 dwelling units per acre. In addition, single-family detached living units dwellings are permitted in the RDD, RD, RC, and RCC zoning districts, but not in the RD, RC, and RCC zoning districts.
- (b) Uses permitted by right.
- ~~(1) All uses permitted by right in the RB district, subject to the restrictions and dimensional requirements specified therefor, except that one family dwellings shall not be permitted in the RD, RC, and RCC zoning districts.~~
- ~~(2) Two-family dwellings in the RDD, RD, and RC districts; provided that no more than two unrelated persons may occupy a living unit in these districts.~~
- ~~(c) Uses permitted by special use permit from the Planning Commission or planning director.~~
- ~~(1) The Planning Commission, after giving notice and holding a hearing pursuant to the procedures set forth in Article II, Division 4 of this chapter, may approve the following uses by special use permit:~~
- ~~a. Any single structure on a single parcel of land containing three or more living units.~~
- ~~b. Group housing developments containing up to 50 dwelling units.~~
- ~~(2) The Planning Commission may, by formal resolution, delegate the review and approval of special use permits under this subsection to the planning director. The decision of the planning director shall be made after notice and hearing pursuant to the procedures of Article II, Division 4 of this chapter. Any person aggrieved by a decision of the planning director under this~~

**Zoning Amendment #20020 (Township Board)**  
**Planning Commission (February 10, 2020)**  
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~~subsection may appeal the decision within 10 days to the Township Board pursuant to Article II, Division 6 of this chapter.~~

- (~~d~~c) Uses permitted by special use permit.
- (1) **RDD**, RD, RC, and RCC districts. The following uses may be permitted by special use permit in the **RDD**, RD, RC, and RCC districts, provided all requirements of this chapter are met:
- a. Any single structure on a single parcel of land containing three or more living units.
  - b. Single-family detached dwellings when part of a multiple-family development in the RDD, RD, RC, and RCC districts; provided the number of single-family dwellings does not exceed more than 50 percent of the density (dwelling units per acre) allowed for the multiple family development.
  - c. Development containing a mix of single-family detached dwellings and two-family dwellings; a mix of two-family dwellings and multiple-family dwellings; or a mix of single-family detached dwellings, two-family dwellings, and multiple-family dwellings. In any case the number of single-family dwellings may not exceed more than 50 percent of the density (dwelling units per acre) allowed for the proposed development.
  - ad. Group housing developments containing more than 50 dwelling units, in accordance with the requirements of Article VI of this chapter.
  - be. Community center when part of a housing project.
  - ef. Incidental commercial services for principal use of the development's occupants, when in conjunction with a housing project identified in subsection (d)(1)a. of this section containing at least 200 units; provided, that:
    - 1. Plans for any advertising signs or window displays shall be submitted to the Planning Commission for approval;
    - 2. There shall be no direct access to the commercial service from any exterior (off-site) road;
    - 3. The architectural appearance of the commercial service building, if a separate structure, shall be harmonious with the appearance of other structures in the development; and
    - 4. Commercial services shall be limited to the following:
      - i. Grocery stores;
      - ii. Services such as dry cleaning pickup agencies, shoe repair shops, beauty parlors, or barber shops;
      - iii. Drug stores; and
      - iv. Restaurants without dancing or entertainment, but excluding dairy bars and drive-in establishments.

**Zoning Amendment #20020 (Township Board)**

**Planning Commission (February 10, 2020)**

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- ~~dg.~~ Functional families as defined by this chapter.
- ~~eh.~~ Nonresidential structures and uses in accordance with § 86-654.

~~(2)~~ RDD districts. The following uses may be permitted by special use permit in the RDD district, provided all requirements of this chapter are met:

- ~~a.~~ Development containing one-family dwellings, each of which is not proposed to be located on a separate recorded lot.
- ~~b.~~ Development containing both one-family dwellings and two-family dwellings, both one-family dwellings and multiple-family dwellings, both two-family dwellings and multiple-family dwellings, or all of the three aforementioned housing types.
- ~~c.~~ Group housing developments containing more than 50 dwelling units in accordance with the requirements of § 86-651.
- ~~d.~~ Community center when part of a housing project.
- ~~e.~~ Incidental commercial services for principal use of the development's occupants when in conjunction with a housing project identified in subsections (2)b or c of this section containing at least 200 units; provided, that:
  - ~~1.~~ Plans for any advertising signs or window displays shall be submitted to the Planning Commission for approval;
  - ~~2.~~ There shall be no direct access to the commercial services from any exterior (off-site) road;
  - ~~3.~~ The architectural appearance of the commercial service building, if a separate structure, shall be harmonious with the appearance of other structures in the development; and
  - ~~4.~~ Commercial services shall be limited to the following:
    - ~~i.~~ Grocery stores;
    - ~~ii.~~ Services such as dry cleaning pickup agencies, shoe repair shops, beauty parlors, and barber shops;
    - ~~iii.~~ Drug stores; and
    - ~~iv.~~ Restaurants without dancing or entertainment, but excluding dairy bars and drive-in establishments.
- ~~f.~~ Functional families, as defined by this chapter.
- ~~g.~~ Nonresidential structures and uses in accordance with § 86-654.

(ed) Procedure for obtaining special use permits. The following procedure shall be followed for all developments identified in subsections (d)(1) and (2) of this section, in addition to the requirements of Article II, Division 4 of this chapter, relating to special use permits in general.

**Zoning Amendment #20020 (Township Board)**

**Planning Commission (February 10, 2020)**

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- (1) Preliminary procedures. The applicant shall meet with the planning director to discuss any technical difficulties of a proposed development prior to formal application for a special use permit. The applicant shall provide the planning director preliminary plans of the project and preliminary engineering information on the project.
  
- (2) Application procedures. The applicant shall submit the following information to the Planning Commission via the planning director.
  - a. A site plan drawn to a readable scale including dimensions and locations of buildings, parking, roads, road names, access, and preliminary landscape design;
  - b. A legal description of the property in question, together with proof of ownership or a certified letter from the owner agreeing to the request;
  - c. Existing contours of the property at two foot intervals based on USGS data;
  - d. Proposed contours of the property at two-foot intervals based on USGS data;
  - e. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer;
  - f. Ten copies of a report on the intent and scope of the project including, but not limited to:
    1. Number, size, volume, and dimensions of buildings;
    2. Number and size of living units;
    3. Basis of calculations of floor area and density and required parking;
    4. Number, size, and type of parking spaces; and
    5. Architectural sketches or rendering of proposed buildings; and
  - g. If necessary, the planning director may require the applicant to submit selected soil borings taken on the site.
  
- (3) Local agency review. The applicant shall provide the Township copies of the project plans for each local agency. The Township shall transmit plans to the following agencies for review and optional comment within 10 days:
  - a. The County Road Commission;
  - b. The County Drain Commissioner;
  - c. The County Health Department;
  - d. The appropriate School Board;
  - e. The Township Engineer;
  - f. The Township Fire Department; and
  - g. The Township Board.

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**Planning Commission (February 10, 2020)**

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- (4) Public hearing. The Planning Commission shall set the public hearing date after having received all required information and plans in accordance with this chapter.
  - (5) Approval of special use permit. After reviewing the proposed project, the Planning Commission shall either approve or deny the special use permit, or approve subject to any conditions they deem appropriate, and shall prepare a report stating its conclusions, the basis for its decision and any conditions relating to approval.
  - (6) Issuance of special use permit. If the Planning Commission has acted favorably on an application for special use permit, the planning director shall issue such permit after review of construction plans to determine compliance with the terms and conditions of the special use permit, which plans shall include:
    - a. Detailed site plans, including a landscaping plan drawn by a registered landscape architect;
    - b. Detailed utility construction plans; and
    - c. Working plans of all other aspects of the project. If construction plans vary substantially from those approved by the Planning Commission, such variations must be resubmitted to the Planning Commission for approval after notice and public hearing.
- (fe) Duration and validity of permit.
- (1) The Planning Commission's approval of a special use permit shall be issued on a site plan and is valid regardless of change of ownership, provided that all terms and conditions are complied with by the new owner. Such permit shall be placed on file with the planning director.
  - (2) In cases where construction has not been commenced within a one-year period after approval, the permit shall automatically become null and void and all rights thereunder shall terminate. Upon written application filed prior to the termination of the one-year period, the Planning Commission may authorize a single extension of the permit for not more than one year without further notice or hearing.

**Zoning Amendment #20020 (Township Board)**

**Planning Commission (February 10, 2020)**

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- (3) No permit for occupying any completed residential units shall be granted until all utilities, access drives, parking walkways, pools, screening, drainage, and other improvements indicated on the approved plan have been inspected and approved. If such improvements have not been completed and an occupancy permit is desired, a performance guarantee in the form of a cash deposit, certified check, or irrevocable bank letter of credit acceptable to the Township, covering the estimated cost of improvements associated with the project, shall be deposited with the Township to insure faithful completion of the improvements. Quarterly rebates of any cash deposits shall be made by the Township in reasonable proportion to the ratio of work completed on the required improvements as work progresses.

(g) Minimum design standards.

(1) Minimum lot areas.

- a. Refer to § 86-366, schedule of regulations for residential districts.
- b. Minimum lot area requirements apply to one or more buildings on a particular parcel provided each building has at least two dwelling units in it.

(2) Minimum lot width: 100 feet.

- (3) Maximum lot coverage and open space required. All buildings including accessory buildings shall not occupy more than 35% of the net area of land included within the limits of the proposed project or any stage in the development of the proposed project which may receive approval under this chapter. A minimum of 35% of the total land area of the project ~~exclusive of~~ **excluding** drives and parking areas must be set aside as open space. All land used for open space must be improved for the use of all residents of the development. Open space may be dedicated for public use. Such dedication may be required by the Planning Commission if shown as public open space on the ~~comprehensive development~~ **Master pPlan**.

(4) Minimum yard dimensions.

- a. Front yard. No less than 25 feet for one- or two-story buildings with an additional one foot required for each additional one foot the building exceeds 35 feet in height.
- b. Side yards.
  1. **Single-family and T**two families shall not be less than 10 feet.
  2. Three families to 10 families shall not be less than 15 feet.
  3. Greater than 10 families shall not be less than 25 feet from the property line for one- or two-story buildings with an additional foot required for each additional foot of height of the building over 35 feet.

**Zoning Amendment #20020 (Township Board)**

**Planning Commission (February 10, 2020)**

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- c. Rear yard. Building shall not be less than 40 feet from the property line for one- or two-story buildings with an additional foot required for each additional foot of height of the building over 35 feet.
- d. Required setbacks. In addition to the foregoing, all buildings shall be located in accordance with the particular setback requirement of Section 86-367.
- e. Distance from a single-family district boundary. No **single-family, two-family, or** multiple-family building designed, erected, or used for three or more families shall be located closer than 50 feet to any single-family residential zone line nor shall any accessory building to a multiple structure containing three or more dwelling units be located closer than 50 feet to any single-family residential zone line. Where commission studies indicate adjoining property will eventually assume similar zoning as property in question, the commission may waive the fifty-foot minimum.
- f. Distance between buildings.
  - 1. ~~Abutting widest dimension buildings. The minimum horizontal distance between one-story square buildings or one-story buildings, both of whose widest dimensions face each other, shall be 50 feet. This distance shall be increased by five feet for every story added to either building. The minimum distance between buildings may be decreased on one side of a building by not more than 10 feet if the distance on the other side of a building is increased proportionately. If the buildings are staggered in location so as to allow free flow of air and sunlight, the distance between buildings may be decreased by not more than 10 feet.~~
  - 2. ~~Abutting narrowest dimension buildings. The minimum distance between one- or two-story buildings, both of whose narrowest dimensions face each other, shall be 25 feet. This distance shall be increased by five feet for every story added to either building over two stories.~~
  - 3. ~~Abutting narrowest dimension building to widest dimension building. The minimum horizontal distance between buildings, one of whose narrowest dimension faces the widest dimension of the other building, shall be 30 feet if one or both of such buildings are one story in height. This distance shall increase by five feet for every additional story added to either or both buildings.~~

41. Minimum distance. Buildings with two or more dwelling units shall be located no closer than 25 feet to any other building. Detached single-family dwellings shall be located no closer than 10 feet from any other building. ~~In no case shall any building be located closer than 25 feet to any other building.~~
52. Closed courts. No courts completely enclosed by building structure shall be permitted; however, screen walls not exceeding six feet in height are permitted to enclose what would otherwise be open court. All dimensional requirements for open courts shall apply to such enclosed courts.
63. Open courts.
  - i. Projecting wings of a building that form a court, enclosed on three sides, shall conform to the following when the court face of either wing contains windows from a living room, bedroom, or dining room.
    - A. The minimum distance between wings shall be 50 feet for one-story buildings. For any additional stories added to either wing the distance shall be increased five feet for each additional story added to either wing.
    - B. The maximum distance that a wing can project from the face of a building shall be 1 1/2 times the horizontal distance between wings.
  - ii. Projecting wings of a building that form a court enclosed on three sides shall conform to the following when neither court face of the wings contains a window from a living room, bedroom, or dining room.
    - A. The minimum distance between wings shall be 25 feet for one-story buildings. For any additional stories added to either wing the distance shall be increased five feet for each additional story added to either wing.
    - B. The maximum distance a wing can project from the face of a building shall be 1 1/2 times the horizontal distance between wings.



74. Other yard dimensions.

- i. ~~No entrance to a multiple-family structure containing three or more units shall be located closer to any street, access road, driveway, or parking area than 25 feet.~~
- ii. ~~No~~ Any single-family detached dwelling, two-family dwelling, or multiple-family structure containing three or more units shall **not** be located closer **than 20 feet** to any street, access road, driveway, or parking area ~~than 20 feet~~.
- iii. ~~No~~ Any single building or connected building may **not** exceed 200 feet in any one dimension. All buildings shall be so arranged as to permit emergency vehicle access, by some practical means, to all sides.

(5) ~~(Reserved)~~ Single-family detached dwellings shall be constructed in accordance with the standards established in Section 86-368(b)(1) a.-l, unless otherwise superseded by provisions of this section.

(6) Maximum building height. Maximum building height shall not exceed 2 1/2 stories or 35 feet, except as noted below. No space below grade level shall be used for dwelling purposes except as follows.

- a. When the finished floor grade of the space below grade level is no more than four feet below finished outside ground level at any point on the property of that part of the structure enclosing the below grade dwelling space.
- b. On sloping sites when the finished floor grade of the space below grade level is finished outside ground level for at least the length of one wall. In the same instance, such dwelling space have either adequate through or cross ventilation.
- c. Building height may be increased to a maximum of 70 feet in the RC zone and 12 stories in the RCC zone; provided, that:
  - 1. The building in question is part of a group housing plan and receives Planning Commission approval.
  - 2. All yard requirements, except distance to parking areas or street, must be increased by one foot for every two feet of building height in excess of 25 feet.
  - 3. No structure in excess of 25 feet in height shall be placed closer to any property line than a distance equal to 1 1/2 times the height of the building, or 50 feet, whichever is greater.

4. Any proposed building in the RCC zone which is to exceed 70 feet in height must be approved by the Township Engineer and fire and building departments for fire protection and water service prior to issuance of a special use permit.
- (7) Signs. Identifying any of the permitted uses in this district shall be in accordance with those requirements specified in Article VII of this chapter.
- (8) Minimum living space. Minimum gross living space area for multiple-family dwelling units shall be 350 square feet for one room, 500 square feet for two rooms, and 750 square feet for three rooms. An average of 100 additional square feet for each room in excess of three rooms. The term "room" as used in this subsection shall not include kitchenette, dinette, alcove, bathrooms, halls, or patio.
- (9) Parking requirements. For motor vehicle and bicycle parking requirements, refer to § 86-366 and Article VIII of this chapter. In addition, every multiple-family structure shall provide motor vehicle parking facilities which:
  - a. Are appropriately spaced and divided by landscaped areas as opposed to one continuous parking lot.
  - b. Are screened by landscaping and physical structures and where feasible, depressed below eye level or enclosed.
  - c. Are served by two points of access to public street when there are 50 or more living units in the project.
  - d. Are served by access to a public street other than a local street when there are 25 or more ~~living~~ **dwelling** units in the project.
  - e. Shall provide a minimum of ~~200~~ **180** square feet in area for each vehicle parking space, each space shall be definitely designated and reserved for parking purposes, and each space shall be accessible separately from a drive.
  - f. May be allowed within or under any multiple-family structure; however, carports or **surface** ~~nonself-contained~~ parking shall not be located closer than 20 feet to any multiple-family residential structure.
  - g. Shall have no parking located farther than 150 feet from one entrance to the multiple-family structure which it is intended to serve.
  - h. Shall have no commercial repair work, servicing, or selling of any kind conducted on any parking area.

**Zoning Amendment #20020 (Township Board)**

**Planning Commission (February 10, 2020)**

**Page 11**

- (10) Storage of refuse. All refuse containers, including trash and recycling containers, shall be enclosed on at least three sides by a screening device approved by the planning director, subject to the following provisions:
  - a. For existing uses receiving a certificate of occupancy prior to the effective date of this section, recycling containers shall be placed adjacent to other refuse containers on-site. If the planning director determines that it is not practical to place the container adjacent to other refuse containers on the site, such containers may be placed in parking areas, provided that the space used for the container shall not occupy required parking spaces and further provided that recycling containers shall be enclosed on three sides by a screening device approved by the planning director.
  - b. For uses receiving a certificate of occupancy after the effective date of this section, recycling containers shall meet the requirements of this section and the requirements for site plan review under Article II, Division 5 of this chapter.
  
- (11) Landscaping required. Landscaping acceptable to the Planning Commission shall be provided in open spaces, around buildings, and within parking areas. No occupancy permit may be issued until landscaping has been inspected and approved or a performance bond equal to the estimated cost has been posted with the Township.
  - a. A plan for control of soil erosion which meets the Township's standards for soil erosion and sedimentation control shall be carried out during the construction and completion of the project.
  - b. When deemed necessary by the Planning Commission, in order to protect surrounding properties, appropriate screening of plant materials, wood, or brick, approved by the Planning Commission, may be required.
  
- (12) Density. The density (dwelling units per acre) in the RDD, RD, RC, RN, and RCC zoned districts shall be in accordance with the table below and the following stipulations:

- a. Maximum Density Table.

Zone	Maximum Density (dwelling units per acre)
RDD	5
RD	8
RC	14
RN	14
RCC	34

- b. Those sites which contain wetlands and/or floodplains shall be permitted a maximum number of units based on the following formula:

$$N = A \times D \times C$$

Where:

N = Maximum number of units permitted.

A = Area of site outside the floodplain and wetland.

D = Allowable density from Maximum Density Table [Subsection (g)(12)a above].

C = 1+ percent of site in floodplain and wetland expressed as decimal.

For purposes of this chapter, wetland areas are those lands which meet the definition of a wetland set forth in § 30301 of the Natural Resources and Environmental Protection Act (MCL § 324.30301). For purposes of this chapter, floodplain areas are those lands which meet the definition contained in § 86-436(b).

State law reference: State-mandated residential uses, MCL 125.286g.

**Chapter 86 Zoning**  
**Article VIII Off-Street Parking and Loading**  
**DIVISION 2 Off-Street Parking**  
**Section 86-756 Design and construction requirements**

In addition to general design requirements specified in other sections of this division, the following design and construction requirements shall be satisfied in all of street parking areas, except for single-family parking areas and as noted:

(1) – (2) Remain as written.

(3) Minimum residential parking space size. A minimum of ~~200~~ 180 square feet shall be provided for each vehicle parking space located within a multiple-family residential development.

(4) – (14) Remain as written.



**To:** Planning Commission

**From:** Peter Menser, Principal Planner

**Date:** February 20, 2020

**Re:** **Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.**

---

The Planning Commission discussed Zoning Amendment #20020 at its last meeting on February 10, 2020. After discussing the proposed amendment the Planning Commission agreed to consider a resolution to recommend approval at its next meeting on February 24, 2020.

As requested by the Planning Commission, a map showing the location of multiple family zoning districts in the Township has been provided. The only changes to the text of the draft ordinance since the public hearing was to swap out the term “living unit” for “dwelling unit” where applicable.

### **Planning Commission Options**

The Planning Commission may recommend approval as written, recommend approval of a revised version, or recommend denial of the proposed zoning amendment. A resolution to recommend approval of the proposed zoning amendment is provided.

- **Motion to adopt the resolution recommending approval of Zoning Amendment #20020 in accordance with the revised draft ordinance language dated February 11, 2020.**

### **Attachments**

1. Resolution to recommend approval.
2. Draft ordinance language dated February 11, 2020.
3. Map of multiple family zoning districts.

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**RESOLUTION TO RECOMMEND APPROVAL**

**Zoning Amendment #20020  
Township Board**

**RESOLUTION**

At the regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 24th day of February, 2020 at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, the Township Board, at its meeting on November 19, 2019, initiated a zoning amendment to Section 86-376 of the Code of Ordinances to allow a mix of single family detached and multiple family dwellings in the RDD, RD, RC, and RCC (Multiple Family) zoning districts; and

WHEREAS, the proposed zoning amendment would allow single-family detached dwellings in the RD, RC, and RCC zoning districts limited to a maximum of 50 percent of the number of dwellings in any given project, subject to approval of a special use permit; and

WHEREAS, the Planning Commission held a public hearing on the proposed zoning amendment at its regular meeting on February 10, 2020 and reviewed staff material forwarded under cover memorandums dated February 6 and February 20, 2020; and

WHEREAS, the proposed zoning amendment will provide additional housing options and alternatives to encourage diverse populations to live in the Township; and

WHEREAS, the proposed zoning amendment is consistent with Goal 1, Objective B of the 2017 Master Plan to maintain a community of desirable, attractive, residential neighborhoods.

NOW THEREFORE BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Zoning Amendment #20020, to amend Section 86-376 of the Code of Ordinances to allow single-family detached dwellings in the RD, RC, and RCC zoning districts limited to a maximum of 50 percent of the number of dwellings in any given project, subject to approval of a special use permit. The recommendation is in accordance with the revised draft ordinance language dated February 11, 2020.

**Zoning Amendment #20020 (Township Board)**

**February 24, 2020**

**Page 2**

ADOPTED: YEAS: \_\_\_\_\_

\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )

I, the undersigned, the duly qualified and acting Chair of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 24th day of February, 2020.

\_\_\_\_\_  
Ken Lane  
Planning Commission Chair

## Chapter 86 Zoning

### Article IV District Regulations

#### DIVISION 2 Residential Districts

##### Section 86-376 Multiple-Family Residential Districts: RDD, RD, RC, RCC Districts

- (a) Purpose. The RDD, RD, RC, and RCC districts are intended to accommodate multiple-family residential uses at a higher density than any single-family district, but at no lower standards of quality. The primary purposes of these districts are to accommodate multiple-family developments of sustained desirability and stability that will be harmonious to adjacent properties, to promote large parcel, single-owner developments that allow an added degree of flexibility in the placement, bulk, and interrelationship of the buildings and uses within a planned project and adjacent areas, and to maintain the overall intensity of land use, density of population, and required open space specified in this section and in the comprehensive development plan of the Township.
- (1) The primary distinction between these districts is density. The RDD zone permits a maximum of five dwelling units per acre, the RD zone permits a maximum of eight dwelling units per acre, the RC zone permits a maximum of 14 dwelling units per acre, and the RCC zone permits variable high density up to a maximum of 34 dwelling units per acre. In addition, single-family detached living units dwellings are permitted in the RDD, RD, RC, and RCC zoning districts, but not in the RD, RC, and RCC zoning districts.
- (b) Uses permitted by right.
- ~~(1) All uses permitted by right in the RB district, subject to the restrictions and dimensional requirements specified therefor, except that one family dwellings shall not be permitted in the RD, RC, and RCC zoning districts.~~
- (2) Two-family dwellings in the RDD, RD, and RC districts; provided that no more than two unrelated persons may occupy a living dwelling unit in these districts.
- ~~(c) Uses permitted by special use permit from the Planning Commission or planning director.~~
- ~~(1) The Planning Commission, after giving notice and holding a hearing pursuant to the procedures set forth in Article II, Division 4 of this chapter, may approve the following uses by special use permit:~~
- a. Any single structure on a single parcel of land containing three or more living units.
- b. Group housing developments containing up to 50 dwelling units.
- ~~(2) The Planning Commission may, by formal resolution, delegate the review and approval of special use permits under this subsection to the planning director. The decision of the planning director shall be made after notice and hearing pursuant to the procedures of Article II, Division 4 of this chapter.~~



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~~Any person aggrieved by a decision of the planning director under this subsection may appeal the decision within 10 days to the Township Board pursuant to Article II, Division 6 of this chapter.~~

(d) Uses permitted by special use permit.

(1) **RDD**, RD, RC, and RCC districts. The following uses may be permitted by special use permit in the **RDD**, RD, RC, and RCC districts, provided all requirements of this chapter are met:

- a. Any single structure on a single parcel of land containing three or more dwelling units.
- b. Single-family detached dwellings when part of a multiple-family development in the RDD, RD, RC, and RCC districts; provided the number of single-family dwellings does not exceed more than 50 percent of the density (dwelling units per acre) allowed for the multiple family development.
- c. Development containing a mix of single-family detached dwellings and two-family dwellings; a mix of two-family dwellings and multiple-family dwellings; or a mix of single-family detached dwellings, two-family dwellings, and multiple-family dwellings. In any case the number of single-family dwellings may not exceed more than 50 percent of the density (dwelling units per acre) allowed for the proposed development.
- ad. Group housing developments containing more than 50 dwelling units, in accordance with the requirements of Article VI of this chapter.
- be. Community center when part of a housing project.
- ef. Incidental commercial services for principal use of the development's occupants, when in conjunction with a housing project identified in subsection (d)(1)a. of this section containing at least 200 units; provided, that:
  - 1. Plans for any advertising signs or window displays shall be submitted to the Planning Commission for approval;
  - 2. There shall be no direct access to the commercial service from any exterior (off-site) road;
  - 3. The architectural appearance of the commercial service building, if a separate structure, shall be harmonious with the appearance of other structures in the development; and
  - 4. Commercial services shall be limited to the following:
    - i. Grocery stores;
    - ii. Services such as dry cleaning pickup agencies, shoe repair shops, beauty parlors, or barber shops;
    - iii. Drug stores; and
    - iv. Restaurants without dancing or entertainment, but excluding dairy bars and drive-in establishments.

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- ~~dg.~~ Functional families as defined by this chapter.
- ~~eh.~~ Nonresidential structures and uses in accordance with § 86-654.

~~(2)~~ RDD districts. The following uses may be permitted by special use permit in the RDD district, provided all requirements of this chapter are met:

- ~~a.~~ Development containing one family dwellings, each of which is not proposed to be located on a separate recorded lot.
- ~~b.~~ Development containing both one family dwellings and two family dwellings, both one family dwellings and multiple family dwellings, both two family dwellings and multiple family dwellings, or all of the three aforementioned housing types.
- ~~c.~~ Group housing developments containing more than 50 dwelling units in accordance with the requirements of § 86-651.
- ~~d.~~ Community center when part of a housing project.
- ~~e.~~ Incidental commercial services for principal use of the development's occupants when in conjunction with a housing project identified in subsections ~~(2)~~b or c of this section containing at least 200 units; provided, that:

- ~~1.~~ Plans for any advertising signs or window displays shall be submitted to the Planning Commission for approval;
- ~~2.~~ There shall be no direct access to the commercial services from any exterior (off-site) road;
- ~~3.~~ The architectural appearance of the commercial service building, if a separate structure, shall be harmonious with the appearance of other structures in the development; and
- ~~4.~~ Commercial services shall be limited to the following:
  - ~~i.~~ Grocery stores;
  - ~~ii.~~ Services such as dry cleaning pickup agencies, shoe repair shops, beauty parlors, and barber shops;
  - ~~iii.~~ Drug stores; and
  - ~~iv.~~ Restaurants without dancing or entertainment, but excluding dairy bars and drive-in establishments.

- ~~f.~~ Functional families, as defined by this chapter.
- ~~g.~~ Nonresidential structures and uses in accordance with § 86-654.

~~(ed)~~ Procedure for obtaining special use permits. The following procedure shall be followed for all developments identified in subsections (d)(1) and (2) of this section, in addition to the requirements of Article II, Division 4 of this chapter, relating to special use permits in general.

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- (1) Preliminary procedures. The applicant shall meet with the planning director to discuss any technical difficulties of a proposed development prior to formal application for a special use permit. The applicant shall provide the planning director preliminary plans of the project and preliminary engineering information on the project.
  
- (2) Application procedures. The applicant shall submit the following information to the Planning Commission via the planning director.
  - a. A site plan drawn to a readable scale including dimensions and locations of buildings, parking, roads, road names, access, and preliminary landscape design;
  - b. A legal description of the property in question, together with proof of ownership or a certified letter from the owner agreeing to the request;
  - c. Existing contours of the property at two foot intervals based on USGS data;
  - d. Proposed contours of the property at two-foot intervals based on USGS data;
  - e. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer;
  - f. Ten copies of a report on the intent and scope of the project including, but not limited to:
    1. Number, size, volume, and dimensions of buildings;
    2. Number and size of living dwelling units;
    3. Basis of calculations of floor area and density and required parking;
    4. Number, size, and type of parking spaces; and
    5. Architectural sketches or rendering of proposed buildings; and
  - g. If necessary, the planning director may require the applicant to submit selected soil borings taken on the site.
  
- (3) Local agency review. The applicant shall provide the Township copies of the project plans for each local agency. The Township shall transmit plans to the following agencies for review and optional comment within 10 days:
  - a. The County Road Commission;
  - b. The County Drain Commissioner;
  - c. The County Health Department;
  - d. The appropriate School Board;
  - e. The Township Engineer;
  - f. The Township Fire Department; and
  - g. The Township Board.

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- (4) Public hearing. The Planning Commission shall set the public hearing date after having received all required information and plans in accordance with this chapter.
  - (5) Approval of special use permit. After reviewing the proposed project, the Planning Commission shall either approve or deny the special use permit, or approve subject to any conditions they deem appropriate, and shall prepare a report stating its conclusions, the basis for its decision and any conditions relating to approval.
  - (6) Issuance of special use permit. If the Planning Commission has acted favorably on an application for special use permit, the planning director shall issue such permit after review of construction plans to determine compliance with the terms and conditions of the special use permit, which plans shall include:
    - a. Detailed site plans, including a landscaping plan drawn by a registered landscape architect;
    - b. Detailed utility construction plans; and
    - c. Working plans of all other aspects of the project. If construction plans vary substantially from those approved by the Planning Commission, such variations must be resubmitted to the Planning Commission for approval after notice and public hearing.
- (fe) Duration and validity of permit.
- (1) The Planning Commission's approval of a special use permit shall be issued on a site plan and is valid regardless of change of ownership, provided that all terms and conditions are complied with by the new owner. Such permit shall be placed on file with the planning director.
  - (2) In cases where construction has not been commenced within a one-year period after approval, the permit shall automatically become null and void and all rights thereunder shall terminate. Upon written application filed prior to the termination of the one-year period, the Planning Commission may authorize a single extension of the permit for not more than one year without further notice or hearing.

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- (3) No permit for occupying any completed residential units shall be granted until all utilities, access drives, parking walkways, pools, screening, drainage, and other improvements indicated on the approved plan have been inspected and approved. If such improvements have not been completed and an occupancy permit is desired, a performance guarantee in the form of a cash deposit, certified check, or irrevocable bank letter of credit acceptable to the Township, covering the estimated cost of improvements associated with the project, shall be deposited with the Township to insure faithful completion of the improvements. Quarterly rebates of any cash deposits shall be made by the Township in reasonable proportion to the ratio of work completed on the required improvements as work progresses.

(g) Minimum design standards.

(1) Minimum lot areas.

- a. Refer to § 86-366, schedule of regulations for residential districts.
- b. Minimum lot area requirements apply to one or more buildings on a particular parcel provided each building has at least two dwelling units in it.

(2) Minimum lot width: 100 feet.

- (3) Maximum lot coverage and open space required. All buildings including accessory buildings shall not occupy more than 35% of the net area of land included within the limits of the proposed project or any stage in the development of the proposed project which may receive approval under this chapter. A minimum of 35% of the total land area of the project ~~exclusive of~~ **excluding** drives and parking areas must be set aside as open space. All land used for open space must be improved for the use of all residents of the development. Open space may be dedicated for public use. Such dedication may be required by the Planning Commission if shown as public open space on the ~~comprehensive development~~ **Master pPlan**.

(4) Minimum yard dimensions.

- a. Front yard. No less than 25 feet for one- or two-story buildings with an additional one foot required for each additional one foot the building exceeds 35 feet in height.
- b. Side yards.
  1. **Single-family and T**two families shall not be less than 10 feet.
  2. Three families to 10 families shall not be less than 15 feet.
  3. Greater than 10 families shall not be less than 25 feet from the property line for one- or two-story buildings with an additional foot required for each additional foot of height of the building over 35 feet.

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- c. Rear yard. Building shall not be less than 40 feet from the property line for one- or two-story buildings with an additional foot required for each additional foot of height of the building over 35 feet.
- d. Required setbacks. In addition to the foregoing, all buildings shall be located in accordance with the particular setback requirement of Section 86-367.
- e. Distance from a single-family district boundary. No **single-family, two-family, or** multiple-family building designed, erected, or used for three or more families shall be located closer than 50 feet to any single-family residential zone line nor shall any accessory building to a multiple structure containing three or more dwelling units be located closer than 50 feet to any single-family residential zone line. Where commission studies indicate adjoining property will eventually assume similar zoning as property in question, the commission may waive the fifty-foot minimum.
- f. Distance between buildings.
  - 1. ~~Abutting widest dimension buildings. The minimum horizontal distance between one-story square buildings or one-story buildings, both of whose widest dimensions face each other, shall be 50 feet. This distance shall be increased by five feet for every story added to either building. The minimum distance between buildings may be decreased on one side of a building by not more than 10 feet if the distance on the other side of a building is increased proportionately. If the buildings are staggered in location so as to allow free flow of air and sunlight, the distance between buildings may be decreased by not more than 10 feet.~~
  - 2. ~~Abutting narrowest dimension buildings. The minimum distance between one- or two-story buildings, both of whose narrowest dimensions face each other, shall be 25 feet. This distance shall be increased by five feet for every story added to either building over two stories.~~
  - 3. ~~Abutting narrowest dimension building to widest dimension building. The minimum horizontal distance between buildings, one of whose narrowest dimension faces the widest dimension of the other building, shall be 30 feet if one or both of such buildings are one story in height. This distance shall increase by five feet for every additional story added to either or both buildings.~~

41. Minimum distance. Buildings with two or more dwelling units shall be located no closer than 25 feet to any other building. Detached single-family dwellings shall be located no closer than 10 feet from any other building. ~~In no case shall any building be located closer than 25 feet to any other building.~~
52. Closed courts. No courts completely enclosed by building structure shall be permitted; however, screen walls not exceeding six feet in height are permitted to enclose what would otherwise be open court. All dimensional requirements for open courts shall apply to such enclosed courts.
63. Open courts.
  - i. Projecting wings of a building that form a court, enclosed on three sides, shall conform to the following when the court face of either wing contains windows from a living room, bedroom, or dining room.
    - A. The minimum distance between wings shall be 50 feet for one-story buildings. For any additional stories added to either wing the distance shall be increased five feet for each additional story added to either wing.
    - B. The maximum distance that a wing can project from the face of a building shall be 1 1/2 times the horizontal distance between wings.
  - ii. Projecting wings of a building that form a court enclosed on three sides shall conform to the following when neither court face of the wings contains a window from a living room, bedroom, or dining room.
    - A. The minimum distance between wings shall be 25 feet for one-story buildings. For any additional stories added to either wing the distance shall be increased five feet for each additional story added to either wing.
    - B. The maximum distance a wing can project from the face of a building shall be 1 1/2 times the horizontal distance between wings.

74. Other yard dimensions.

- i. ~~No entrance to a multiple-family structure containing three or more units shall be located closer to any street, access road, driveway, or parking area than 25 feet.~~
- ii. ~~No~~ Any single-family detached dwelling, two-family dwelling, or multiple-family structure containing three or more units shall **not** be located closer **than 20 feet** to any street, access road, driveway, or parking area ~~than 20 feet~~.
- iii. ~~No~~ Any single building or connected building may **not** exceed 200 feet in any one dimension. All buildings shall be so arranged as to permit emergency vehicle access, by some practical means, to all sides.

(5) ~~(Reserved)~~ Single-family detached dwellings shall be constructed in accordance with the standards established in Section 86-368(b)(1) a.-l, unless otherwise superseded by provisions of this section.

(6) Maximum building height. Maximum building height shall not exceed 2 1/2 stories or 35 feet, except as noted below. No space below grade level shall be used for dwelling purposes except as follows.

- a. When the finished floor grade of the space below grade level is no more than four feet below finished outside ground level at any point on the property of that part of the structure enclosing the below grade dwelling space.
- b. On sloping sites when the finished floor grade of the space below grade level is finished outside ground level for at least the length of one wall. In the same instance, such dwelling space have either adequate through or cross ventilation.
- c. Building height may be increased to a maximum of 70 feet in the RC zone and 12 stories in the RCC zone; provided, that:
  - 1. The building in question is part of a group housing plan and receives Planning Commission approval.
  - 2. All yard requirements, except distance to parking areas or street, must be increased by one foot for every two feet of building height in excess of 25 feet.
  - 3. No structure in excess of 25 feet in height shall be placed closer to any property line than a distance equal to 1 1/2 times the height of the building, or 50 feet, whichever is greater.



4. Any proposed building in the RCC zone which is to exceed 70 feet in height must be approved by the Township Engineer and fire and building departments for fire protection and water service prior to issuance of a special use permit.
- (7) Signs. Identifying any of the permitted uses in this district shall be in accordance with those requirements specified in Article VII of this chapter.
  - (8) Minimum living space. Minimum gross living space area for multiple-family dwelling units shall be 350 square feet for one room, 500 square feet for two rooms, and 750 square feet for three rooms. An average of 100 additional square feet for each room in excess of three rooms. The term "room" as used in this subsection shall not include kitchenette, dinette, alcove, bathrooms, halls, or patio.
  - (9) Parking requirements. For motor vehicle and bicycle parking requirements, refer to § 86-366 and Article VIII of this chapter. In addition, every multiple-family structure shall provide motor vehicle parking facilities which:
    - a. Are appropriately spaced and divided by landscaped areas as opposed to one continuous parking lot.
    - b. Are screened by landscaping and physical structures and where feasible, depressed below eye level or enclosed.
    - c. Are served by two points of access to public street when there are 50 or more ~~living~~ **dwelling** units in the project.
    - d. Are served by access to a public street other than a local street when there are 25 or more ~~living~~ **dwelling** units in the project.
    - e. Shall provide a minimum of ~~200~~ **180** square feet in area for each vehicle parking space, each space shall be definitely designated and reserved for parking purposes, and each space shall be accessible separately from a drive.
    - f. May be allowed within or under any multiple-family structure; however, carports or **surface** ~~nonself-contained~~ parking shall not be located closer than 20 feet to any multiple-family residential structure.
    - g. Shall have no parking located farther than 150 feet from one entrance to the multiple-family structure which it is intended to serve.
    - h. Shall have no commercial repair work, servicing, or selling of any kind conducted on any parking area.

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- (10) Storage of refuse. All refuse containers, including trash and recycling containers, shall be enclosed on at least three sides by a screening device approved by the planning director, subject to the following provisions:
  - a. For existing uses receiving a certificate of occupancy prior to the effective date of this section, recycling containers shall be placed adjacent to other refuse containers on-site. If the planning director determines that it is not practical to place the container adjacent to other refuse containers on the site, such containers may be placed in parking areas, provided that the space used for the container shall not occupy required parking spaces and further provided that recycling containers shall be enclosed on three sides by a screening device approved by the planning director.
  - b. For uses receiving a certificate of occupancy after the effective date of this section, recycling containers shall meet the requirements of this section and the requirements for site plan review under Article II, Division 5 of this chapter.
  
- (11) Landscaping required. Landscaping acceptable to the Planning Commission shall be provided in open spaces, around buildings, and within parking areas. No occupancy permit may be issued until landscaping has been inspected and approved or a performance bond equal to the estimated cost has been posted with the Township.
  - a. A plan for control of soil erosion which meets the Township's standards for soil erosion and sedimentation control shall be carried out during the construction and completion of the project.
  - b. When deemed necessary by the Planning Commission, in order to protect surrounding properties, appropriate screening of plant materials, wood, or brick, approved by the Planning Commission, may be required.
  
- (12) Density. The density (dwelling units per acre) in the RDD, RD, RC, RN, and RCC zoned districts shall be in accordance with the table below and the following stipulations:
  - a. Maximum Density Table.

Zone	Maximum Density (dwelling units per acre)
RDD	5
RD	8
RC	14
RN	14
RCC	34

- b. Those sites which contain wetlands and/or floodplains shall be permitted a maximum number of units based on the following formula:

$$N = A \times D \times C$$

Where:

N = Maximum number of units permitted.

A = Area of site outside the floodplain and wetland.

D = Allowable density from Maximum Density Table [Subsection (g)(12)a above].

C = 1+ percent of site in floodplain and wetland expressed as decimal.

For purposes of this chapter, wetland areas are those lands which meet the definition of a wetland set forth in § 30301 of the Natural Resources and Environmental Protection Act (MCL § 324.30301). For purposes of this chapter, floodplain areas are those lands which meet the definition contained in § 86-436(b).

State law reference: State-mandated residential uses, MCL 125.286g.

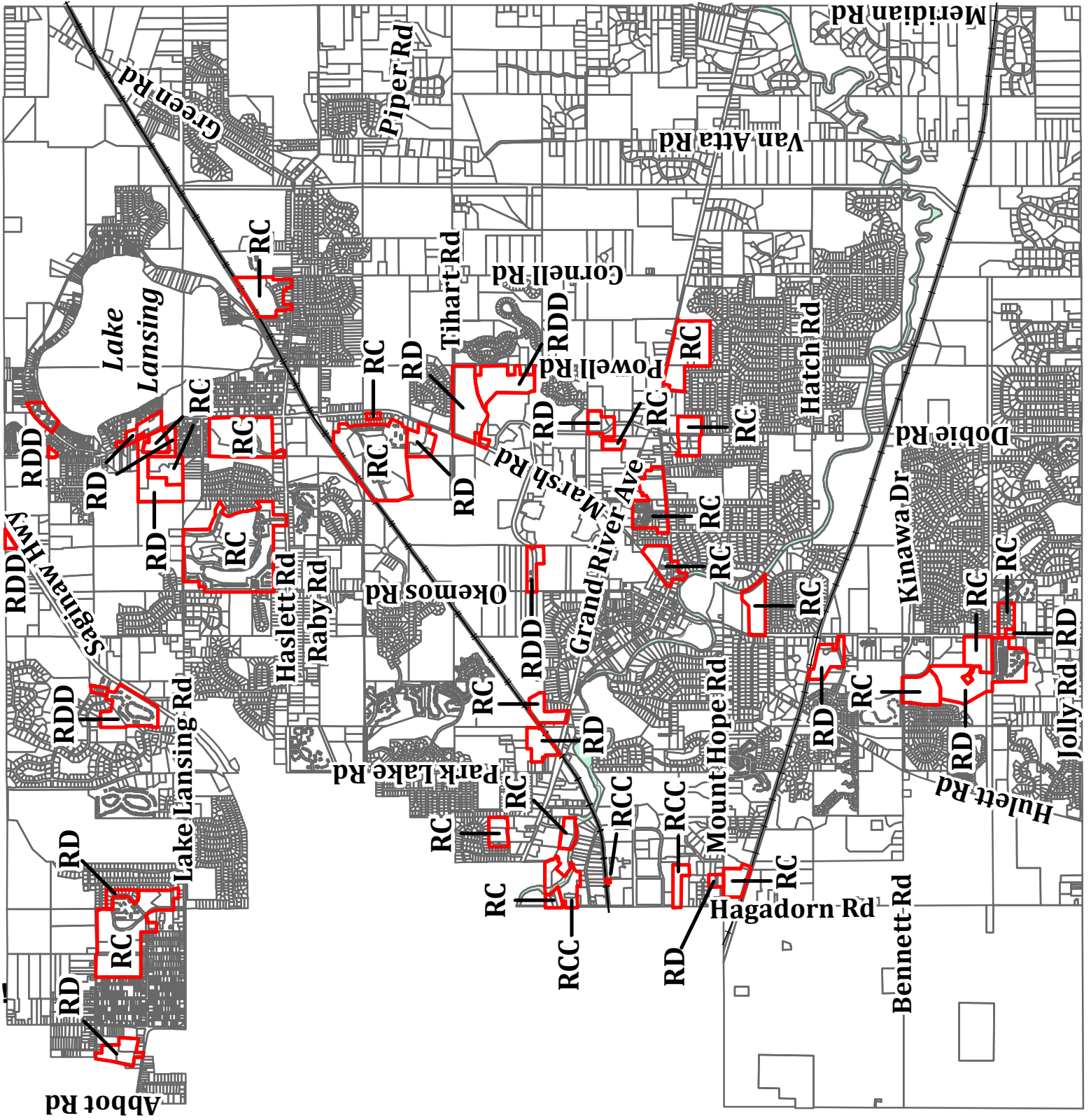
**Chapter 86 Zoning**  
**Article VIII Off-Street Parking and Loading**  
**DIVISION 2 Off-Street Parking**  
**Section 86-756 Design and construction requirements**

In addition to general design requirements specified in other sections of this division, the following design and construction requirements shall be satisfied in all of street parking areas, except for single-family parking areas and as noted:

(1) – (2) Remain as written.

(3) Minimum residential parking space size. A minimum of ~~200~~ 180 square feet shall be provided for each vehicle parking space located within a multiple-family residential development.

(4) – (14) Remain as written.



**RESOLUTION TO RECOMMEND APPROVAL**

**Zoning Amendment #20020  
Township Board**

**RESOLUTION**

At the regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 24th day of February, 2020 at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_  
\_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, the Township Board, at its meeting on November 19, 2019, initiated a zoning amendment to Section 86-376 of the Code of Ordinances to allow a mix of single family detached and multiple family dwellings in the RDD, RD, RC, and RCC (Multiple Family) zoning districts; and

WHEREAS, the proposed zoning amendment would allow single-family detached dwellings in the RD, RC, and RCC zoning districts limited to a maximum of 50 percent of the number of dwellings in any given project, subject to approval of a special use permit; and

WHEREAS, the Planning Commission held a public hearing on the proposed zoning amendment at its regular meeting on February 10, 2020 and reviewed staff material forwarded under cover memorandums dated February 6 and February 20, 2020; and

WHEREAS, the proposed zoning amendment will provide additional housing options and alternatives to encourage diverse populations to live in the Township; and

WHEREAS, the proposed zoning amendment is consistent with Goal 1, Objective B of the 2017 Master Plan to maintain a community of desirable, attractive, residential neighborhoods.

NOW THEREFORE BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Zoning Amendment #20020, to amend Section 86-376 of the Code of Ordinances to allow single-family detached dwellings in the RD, RC, and RCC zoning districts limited to a maximum of 50 percent of the number of dwellings in any given project, subject to approval of a special use permit. The recommendation is in accordance with the revised draft ordinance language dated February 11, 2020.

**Zoning Amendment #20020 (Township Board)**

**February 24, 2020**

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ADOPTED: YEAS: \_\_\_\_\_

\_\_\_\_\_

NAYS: \_\_\_\_\_

STATE OF MICHIGAN )

) ss

COUNTY OF INGHAM )

I, the undersigned, the duly qualified and acting Chair of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 24th day of February, 2020.

\_\_\_\_\_  
Ken Lane  
Planning Commission Chair

- B. Special Use Permit #19131 (The W. Investment Holdings), establish commercial medical marihuana provisioning center at 1614 Grand River Avenue.

Chair Lane opened the public hearing at 7:31 p.m.

Principal Planner Menser provided a brief summary of the request and said he would be available to answer questions.

The applicant, Ammar Alkhafji, 29580 N. Western Hwy, Suite 1000, Southfield, Michigan is the landlord and developer of the property.

The business owner and tenant, Marvin Karana, stated he also operates a provisioning center in Lapeer, Michigan, across the street from a police station. Mr. Karana noted he would be available to answer any questions.

Public Comment – None

Planning Commission Discussion:

- A question was asked about what the street view of the business might look like as someone drives on Grand River Avenue and the applicant stated the elevation of the area creates some issues but they will maintain as much vegetation as possible.

A straw poll indicated the Planning Commission would be in support of recommending approval of the proposed Special Use Permit #19131 at the next meeting on February 24, 2020.

Chair Lane closed the public hearing at 7:49 p.m.



- C. Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.

Chair Lane opened the public hearing at 7:50 p.m.

Principal Planner Menser provided an overview of the request and said he would be available to answer questions.

Public Comment – None

Planning Commission Discussion:

- A good proposal that allows flexibility for development with different dwelling units.
- Request for a map of where the RD, RC, and RCC zoning districts for reference.
- Concerns with potential of single family housing being built in existing multiple family developments.

A straw poll indicated the Planning Commission would be in support of recommending approval of the revised version of the proposed Zoning Amendment #20020 at the next meeting on February 24, 2020.

Chair Lane closed the public hearing at 8:16 p.m.

**6. Public Hearings - None**

**7. Unfinished Business**

- A. Special Use Permit #19141 (The Cured Leaf TC, Inc.), establish commercial medical marihuana provisioning center at 3520 Okemos Road.

Principal Planner Menser noted the applicant has submitted responses to the special use permit criteria and they are available in the meeting packet for review.

Motion by Commissioner Premoe to recommend approval of Special Use Permit #19141.

Supported by Commissioner Hendrickson.

ROLL CALL VOTE:

YEAS: Commissioner Premoe, Hendrickson, McConnell, Clark, Shrewsbury, Trezise, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0

- B. Special Use Permit #19131 (The W. Investment Holdings), establish commercial medical marihuana provisioning center at 1614 Grand River Avenue.

Principal Planner Menser commented there would be different conditions for this request compared to the previous special use permit discussed because new construction is proposed.

Motion by Commissioner Trezise to recommend approval with the 17 conditions stated in the resolution for Special Use Permit #1131.

Supported by Commissioner Premoe.

ROLL CALL VOTE:

YEAS: Commissioner Trezise, Premoe, Hendrickson, Shrewsbury, Clark, McConnell, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0



- C. Zoning Amendment #20020 (Township Board), amend Section 86-376 of the Code of Ordinances to allow a mix of single family and multiple family dwelling units in the RD, RC, and RCC (Multiple Family) zoning districts.

Principal Planner Menser noted a map showing the location of multiple family zoning districts (noted in red) in the Township was included in the meeting packet per the request of the Planning Commission at the February 10, 2020 meeting. He also noted that changes to the text of the draft ordinance included swapping out the term "living unit" for "dwelling unit" where applicable.

Motion by Commissioner McConnell to adopt the resolution recommending approval of Zoning Amendment #20020 in accordance with the revised draft ordinance language dated February 11, 2020.

Supported by Commissioner Trezise.

Commissioner Hendrickson stated he would be voting in opposition to the proposed zoning change because of the concerns he expressed at the February 10, 2020 public hearing.



ROLL CALL VOTE:

YEAS: Commissioner McConnell, Trezise, Premoe, Shrewsbury, Clark, and Chair Lane.

NAYS: Commissioner Hendrickson

MOTION CARRIED: 6-1

**8. Other Business**

A. 2020 Planning Commission goals

Principal Planner Menser summarized the 4 goals discussed by the Planning Commission at the February 10, 2020 regular meeting and noted they were listed in the meeting packet.

Commissioner Hendrickson asked to amend the language of the fourth goal to reflect the date change from June 30<sup>th</sup> to September 30<sup>th</sup> as previously discussed for the amended minutes.

Motion by Commissioner Hendrickson to adopt the amended 2020 Planning Commission goals. Supported by Commissioner Trezise.

ROLL CALL VOTE:

YEAS: Commissioner Hendrickson, Trezise, Premoe, McConnell, Clark, Shrewsbury, and Chair Lane.

NAYS: None

MOTION CARRIED: 7-0

B. Form based code meeting

Principal Planner Menser thanked Chair Lane, Vice Chair Hendrickson, and Commissioner McConnell for attending the Township Board Meeting on February 18, 2020. Chair Lane and Vice Chair Hendrickson presented an overview to the Board of what the Planning Commission has been working on relating to the Form based code initiative and Commissioner McConnell was also in attendance at the meeting.

A link to the video of the presentation was included in the meeting packet as well as a copy of the memo from Principal Planner Menser to the Township Board introducing the topic of the presentation.

Principal Planner Menser asked the Planning Commission how they would like to proceed.

Planning Commission Discussion:

- The Board may be more supportive of the Form based code after having time to review the ordinance draft details and include the Planning Commission's purpose and intent statement for the proposed area on the East Gateway of Grand River Avenue.
- Follow up with another presentation to the Board after submitting the written draft to discuss questions they may have.
- The Board might want to prescribe uses and define the approval process. The question was asked if the Planning Commission should continue working on the initiative or submit what has been done so far for the Board to review.

## Chapter 86 Zoning

### Article IV District Regulations

#### DIVISION 2 Residential Districts

##### Section 86-376 Multiple-Family Residential Districts: RDD, RD, RC, RCC Districts

- (a) Purpose. The RDD, RD, RC, and RCC districts are intended to accommodate multiple-family residential uses at a higher density than any single-family district, but at no lower standards of quality. The primary purposes of these districts are to accommodate multiple-family developments of sustained desirability and stability that will be harmonious to adjacent properties, to promote large parcel, single-owner developments that allow an added degree of flexibility in the placement, bulk, and interrelationship of the buildings and uses within a planned project and adjacent areas, and to maintain the overall intensity of land use, density of population, and required open space specified in this section and in the comprehensive development plan of the Township.
- (1) The primary distinction between these districts is density. The RDD zone permits a maximum of five dwelling units per acre, the RD zone permits a maximum of eight dwelling units per acre, the RC zone permits a maximum of 14 dwelling units per acre, and the RCC zone permits variable high density up to a maximum of 34 dwelling units per acre. In addition, single-family detached living units dwellings are permitted in the RDD, RD, RC, and RCC zoning districts, but not in the RD, RC, and RCC zoning districts.
- (b) Uses permitted by right.
- ~~(1) All uses permitted by right in the RB district, subject to the restrictions and dimensional requirements specified therefor, except that one family dwellings shall not be permitted in the RD, RC, and RCC zoning districts.~~
- (2) Two-family dwellings in the RDD, RD, and RC districts; provided that no more than two unrelated persons may occupy a living dwelling unit in these districts.
- ~~(c) Uses permitted by special use permit from the Planning Commission or planning director.~~
- ~~(1) The Planning Commission, after giving notice and holding a hearing pursuant to the procedures set forth in Article II, Division 4 of this chapter, may approve the following uses by special use permit:~~
- a. Any single structure on a single parcel of land containing three or more living units.
- b. Group housing developments containing up to 50 dwelling units.
- ~~(2) The Planning Commission may, by formal resolution, delegate the review and approval of special use permits under this subsection to the planning director. The decision of the planning director shall be made after notice and hearing pursuant to the procedures of Article II, Division 4 of this chapter.~~

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~~Any person aggrieved by a decision of the planning director under this subsection may appeal the decision within 10 days to the Township Board pursuant to Article II, Division 6 of this chapter.~~

(d) Uses permitted by special use permit.

(1) **RDD**, RD, RC, and RCC districts. The following uses may be permitted by special use permit in the **RDD**, RD, RC, and RCC districts, provided all requirements of this chapter are met:

- a. Any single structure on a single parcel of land containing three or more dwelling units.
- b. Single-family detached dwellings when part of a multiple-family development in the RDD, RD, RC, and RCC districts; provided the number of single-family dwellings does not exceed more than 50 percent of the density (dwelling units per acre) allowed for the multiple family development.
- c. Development containing a mix of single-family detached dwellings and two-family dwellings; a mix of two-family dwellings and multiple-family dwellings; or a mix of single-family detached dwellings, two-family dwellings, and multiple-family dwellings. In any case the number of single-family dwellings may not exceed more than 50 percent of the density (dwelling units per acre) allowed for the proposed development.
- ad. Group housing developments containing more than 50 dwelling units, in accordance with the requirements of Article VI of this chapter.
- be. Community center when part of a housing project.
- ef. Incidental commercial services for principal use of the development's occupants, when in conjunction with a housing project identified in subsection (d)(1)a. of this section containing at least 200 units; provided, that:
  - 1. Plans for any advertising signs or window displays shall be submitted to the Planning Commission for approval;
  - 2. There shall be no direct access to the commercial service from any exterior (off-site) road;
  - 3. The architectural appearance of the commercial service building, if a separate structure, shall be harmonious with the appearance of other structures in the development; and
  - 4. Commercial services shall be limited to the following:
    - i. Grocery stores;
    - ii. Services such as dry cleaning pickup agencies, shoe repair shops, beauty parlors, or barber shops;
    - iii. Drug stores; and
    - iv. Restaurants without dancing or entertainment, but excluding dairy bars and drive-in establishments.

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- ~~dg.~~ Functional families as defined by this chapter.
- ~~eh.~~ Nonresidential structures and uses in accordance with § 86-654.

~~(2)~~ RDD districts. The following uses may be permitted by special use permit in the RDD district, provided all requirements of this chapter are met:

- ~~a.~~ Development containing one family dwellings, each of which is not proposed to be located on a separate recorded lot.
- ~~b.~~ Development containing both one family dwellings and two family dwellings, both one family dwellings and multiple family dwellings, both two family dwellings and multiple family dwellings, or all of the three aforementioned housing types.
- ~~c.~~ Group housing developments containing more than 50 dwelling units in accordance with the requirements of § 86-651.
- ~~d.~~ Community center when part of a housing project.
- ~~e.~~ Incidental commercial services for principal use of the development's occupants when in conjunction with a housing project identified in subsections ~~(2)~~b or c of this section containing at least 200 units; provided, that:

- ~~1.~~ Plans for any advertising signs or window displays shall be submitted to the Planning Commission for approval;
- ~~2.~~ There shall be no direct access to the commercial services from any exterior (off-site) road;
- ~~3.~~ The architectural appearance of the commercial service building, if a separate structure, shall be harmonious with the appearance of other structures in the development; and
- ~~4.~~ Commercial services shall be limited to the following:
  - ~~i.~~ Grocery stores;
  - ~~ii.~~ Services such as dry cleaning pickup agencies, shoe repair shops, beauty parlors, and barber shops;
  - ~~iii.~~ Drug stores; and
  - ~~iv.~~ Restaurants without dancing or entertainment, but excluding dairy bars and drive-in establishments.

- ~~f.~~ Functional families, as defined by this chapter.
- ~~g.~~ Nonresidential structures and uses in accordance with § 86-654.

~~(ed)~~ Procedure for obtaining special use permits. The following procedure shall be followed for all developments identified in subsections (d)(1) and (2) of this section, in addition to the requirements of Article II, Division 4 of this chapter, relating to special use permits in general.

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- (1) Preliminary procedures. The applicant shall meet with the planning director to discuss any technical difficulties of a proposed development prior to formal application for a special use permit. The applicant shall provide the planning director preliminary plans of the project and preliminary engineering information on the project.
  
- (2) Application procedures. The applicant shall submit the following information to the Planning Commission via the planning director.
  - a. A site plan drawn to a readable scale including dimensions and locations of buildings, parking, roads, road names, access, and preliminary landscape design;
  - b. A legal description of the property in question, together with proof of ownership or a certified letter from the owner agreeing to the request;
  - c. Existing contours of the property at two foot intervals based on USGS data;
  - d. Proposed contours of the property at two-foot intervals based on USGS data;
  - e. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer;
  - f. Ten copies of a report on the intent and scope of the project including, but not limited to:
    1. Number, size, volume, and dimensions of buildings;
    2. Number and size of living dwelling units;
    3. Basis of calculations of floor area and density and required parking;
    4. Number, size, and type of parking spaces; and
    5. Architectural sketches or rendering of proposed buildings; and
  - g. If necessary, the planning director may require the applicant to submit selected soil borings taken on the site.
  
- (3) Local agency review. The applicant shall provide the Township copies of the project plans for each local agency. The Township shall transmit plans to the following agencies for review and optional comment within 10 days:
  - a. The County Road Commission;
  - b. The County Drain Commissioner;
  - c. The County Health Department;
  - d. The appropriate School Board;
  - e. The Township Engineer;
  - f. The Township Fire Department; and
  - g. The Township Board.

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- (4) Public hearing. The Planning Commission shall set the public hearing date after having received all required information and plans in accordance with this chapter.
  - (5) Approval of special use permit. After reviewing the proposed project, the Planning Commission shall either approve or deny the special use permit, or approve subject to any conditions they deem appropriate, and shall prepare a report stating its conclusions, the basis for its decision and any conditions relating to approval.
  - (6) Issuance of special use permit. If the Planning Commission has acted favorably on an application for special use permit, the planning director shall issue such permit after review of construction plans to determine compliance with the terms and conditions of the special use permit, which plans shall include:
    - a. Detailed site plans, including a landscaping plan drawn by a registered landscape architect;
    - b. Detailed utility construction plans; and
    - c. Working plans of all other aspects of the project. If construction plans vary substantially from those approved by the Planning Commission, such variations must be resubmitted to the Planning Commission for approval after notice and public hearing.
- (fe) Duration and validity of permit.
- (1) The Planning Commission's approval of a special use permit shall be issued on a site plan and is valid regardless of change of ownership, provided that all terms and conditions are complied with by the new owner. Such permit shall be placed on file with the planning director.
  - (2) In cases where construction has not been commenced within a one-year period after approval, the permit shall automatically become null and void and all rights thereunder shall terminate. Upon written application filed prior to the termination of the one-year period, the Planning Commission may authorize a single extension of the permit for not more than one year without further notice or hearing.

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- (3) No permit for occupying any completed residential units shall be granted until all utilities, access drives, parking walkways, pools, screening, drainage, and other improvements indicated on the approved plan have been inspected and approved. If such improvements have not been completed and an occupancy permit is desired, a performance guarantee in the form of a cash deposit, certified check, or irrevocable bank letter of credit acceptable to the Township, covering the estimated cost of improvements associated with the project, shall be deposited with the Township to insure faithful completion of the improvements. Quarterly rebates of any cash deposits shall be made by the Township in reasonable proportion to the ratio of work completed on the required improvements as work progresses.

(g) Minimum design standards.

- (1) Minimum lot areas.

- a. Refer to § 86-366, schedule of regulations for residential districts.
- b. Minimum lot area requirements apply to one or more buildings on a particular parcel provided each building has at least two dwelling units in it.

- (2) Minimum lot width: 100 feet.

- (3) Maximum lot coverage and open space required. All buildings including accessory buildings shall not occupy more than 35% of the net area of land included within the limits of the proposed project or any stage in the development of the proposed project which may receive approval under this chapter. A minimum of 35% of the total land area of the project ~~exclusive of~~ **excluding** drives and parking areas must be set aside as open space. All land used for open space must be improved for the use of all residents of the development. Open space may be dedicated for public use. Such dedication may be required by the Planning Commission if shown as public open space on the ~~comprehensive development~~ **Master pPlan**.

- (4) Minimum yard dimensions.

- a. Front yard. No less than 25 feet for one- or two-story buildings with an additional one foot required for each additional one foot the building exceeds 35 feet in height.
- b. Side yards.
  1. **Single-family and T**two families shall not be less than 10 feet.
  2. Three families to 10 families shall not be less than 15 feet.
  3. Greater than 10 families shall not be less than 25 feet from the property line for one- or two-story buildings with an additional foot required for each additional foot of height of the building over 35 feet.

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- c. Rear yard. Building shall not be less than 40 feet from the property line for one- or two-story buildings with an additional foot required for each additional foot of height of the building over 35 feet.
- d. Required setbacks. In addition to the foregoing, all buildings shall be located in accordance with the particular setback requirement of Section 86-367.
- e. Distance from a single-family district boundary. No **single-family, two-family, or** multiple-family building designed, erected, or used for three or more families shall be located closer than 50 feet to any single-family residential zone line nor shall any accessory building to a multiple structure containing three or more dwelling units be located closer than 50 feet to any single-family residential zone line. Where commission studies indicate adjoining property will eventually assume similar zoning as property in question, the commission may waive the fifty-foot minimum.
- f. Distance between buildings.
  - 1. ~~Abutting widest dimension buildings. The minimum horizontal distance between one-story square buildings or one-story buildings, both of whose widest dimensions face each other, shall be 50 feet. This distance shall be increased by five feet for every story added to either building. The minimum distance between buildings may be decreased on one side of a building by not more than 10 feet if the distance on the other side of a building is increased proportionately. If the buildings are staggered in location so as to allow free flow of air and sunlight, the distance between buildings may be decreased by not more than 10 feet.~~
  - 2. ~~Abutting narrowest dimension buildings. The minimum distance between one- or two-story buildings, both of whose narrowest dimensions face each other, shall be 25 feet. This distance shall be increased by five feet for every story added to either building over two stories.~~
  - 3. ~~Abutting narrowest dimension building to widest dimension building. The minimum horizontal distance between buildings, one of whose narrowest dimension faces the widest dimension of the other building, shall be 30 feet if one or both of such buildings are one story in height. This distance shall increase by five feet for every additional story added to either or both buildings.~~



41. Minimum distance. Buildings with two or more dwelling units shall be located no closer than 25 feet to any other building. Detached single-family dwellings shall be located no closer than 10 feet from any other building. ~~In no case shall any building be located closer than 25 feet to any other building.~~
52. Closed courts. No courts completely enclosed by building structure shall be permitted; however, screen walls not exceeding six feet in height are permitted to enclose what would otherwise be open court. All dimensional requirements for open courts shall apply to such enclosed courts.
63. Open courts.
  - i. Projecting wings of a building that form a court, enclosed on three sides, shall conform to the following when the court face of either wing contains windows from a living room, bedroom, or dining room.
    - A. The minimum distance between wings shall be 50 feet for one-story buildings. For any additional stories added to either wing the distance shall be increased five feet for each additional story added to either wing.
    - B. The maximum distance that a wing can project from the face of a building shall be 1 1/2 times the horizontal distance between wings.
  - ii. Projecting wings of a building that form a court enclosed on three sides shall conform to the following when neither court face of the wings contains a window from a living room, bedroom, or dining room.
    - A. The minimum distance between wings shall be 25 feet for one-story buildings. For any additional stories added to either wing the distance shall be increased five feet for each additional story added to either wing.
    - B. The maximum distance a wing can project from the face of a building shall be 1 1/2 times the horizontal distance between wings.

74. Other yard dimensions.

- i. ~~No entrance to a multiple-family structure containing three or more units shall be located closer to any street, access road, driveway, or parking area than 25 feet.~~
- ii. ~~No~~ Any single-family detached dwelling, two-family dwelling, or multiple-family structure containing three or more units shall **not** be located closer **than 20 feet** to any street, access road, driveway, or parking area ~~than 20 feet~~.
- iii. ~~No~~ Any single building or connected building may **not** exceed 200 feet in any one dimension. All buildings shall be so arranged as to permit emergency vehicle access, by some practical means, to all sides.

(5) ~~(Reserved)~~ Single-family detached dwellings shall be constructed in accordance with the standards established in Section 86-368(b)(1) a.-l, unless otherwise superseded by provisions of this section.

(6) Maximum building height. Maximum building height shall not exceed 2 1/2 stories or 35 feet, except as noted below. No space below grade level shall be used for dwelling purposes except as follows.

- a. When the finished floor grade of the space below grade level is no more than four feet below finished outside ground level at any point on the property of that part of the structure enclosing the below grade dwelling space.
- b. On sloping sites when the finished floor grade of the space below grade level is finished outside ground level for at least the length of one wall. In the same instance, such dwelling space have either adequate through or cross ventilation.
- c. Building height may be increased to a maximum of 70 feet in the RC zone and 12 stories in the RCC zone; provided, that:
  - 1. The building in question is part of a group housing plan and receives Planning Commission approval.
  - 2. All yard requirements, except distance to parking areas or street, must be increased by one foot for every two feet of building height in excess of 25 feet.
  - 3. No structure in excess of 25 feet in height shall be placed closer to any property line than a distance equal to 1 1/2 times the height of the building, or 50 feet, whichever is greater.

4. Any proposed building in the RCC zone which is to exceed 70 feet in height must be approved by the Township Engineer and fire and building departments for fire protection and water service prior to issuance of a special use permit.
- (7) Signs. Identifying any of the permitted uses in this district shall be in accordance with those requirements specified in Article VII of this chapter.
  - (8) Minimum living space. Minimum gross living space area for multiple-family dwelling units shall be 350 square feet for one room, 500 square feet for two rooms, and 750 square feet for three rooms. An average of 100 additional square feet for each room in excess of three rooms. The term "room" as used in this subsection shall not include kitchenette, dinette, alcove, bathrooms, halls, or patio.
  - (9) Parking requirements. For motor vehicle and bicycle parking requirements, refer to § 86-366 and Article VIII of this chapter. In addition, every multiple-family structure shall provide motor vehicle parking facilities which:
    - a. Are appropriately spaced and divided by landscaped areas as opposed to one continuous parking lot.
    - b. Are screened by landscaping and physical structures and where feasible, depressed below eye level or enclosed.
    - c. Are served by two points of access to public street when there are 50 or more living dwelling units in the project.
    - d. Are served by access to a public street other than a local street when there are 25 or more living dwelling units in the project.
    - e. Shall provide a minimum of ~~200~~ 180 square feet in area for each vehicle parking space, each space shall be definitely designated and reserved for parking purposes, and each space shall be accessible separately from a drive.
    - f. May be allowed within or under any multiple-family structure; however, carports or surface nonself-contained parking shall not be located closer than 20 feet to any multiple-family residential structure.
    - g. Shall have no parking located farther than 150 feet from one entrance to the multiple-family structure which it is intended to serve.
    - h. Shall have no commercial repair work, servicing, or selling of any kind conducted on any parking area.

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- (10) Storage of refuse. All refuse containers, including trash and recycling containers, shall be enclosed on at least three sides by a screening device approved by the planning director, subject to the following provisions:
  - a. For existing uses receiving a certificate of occupancy prior to the effective date of this section, recycling containers shall be placed adjacent to other refuse containers on-site. If the planning director determines that it is not practical to place the container adjacent to other refuse containers on the site, such containers may be placed in parking areas, provided that the space used for the container shall not occupy required parking spaces and further provided that recycling containers shall be enclosed on three sides by a screening device approved by the planning director.
  - b. For uses receiving a certificate of occupancy after the effective date of this section, recycling containers shall meet the requirements of this section and the requirements for site plan review under Article II, Division 5 of this chapter.
  
- (11) Landscaping required. Landscaping acceptable to the Planning Commission shall be provided in open spaces, around buildings, and within parking areas. No occupancy permit may be issued until landscaping has been inspected and approved or a performance bond equal to the estimated cost has been posted with the Township.
  - a. A plan for control of soil erosion which meets the Township's standards for soil erosion and sedimentation control shall be carried out during the construction and completion of the project.
  - b. When deemed necessary by the Planning Commission, in order to protect surrounding properties, appropriate screening of plant materials, wood, or brick, approved by the Planning Commission, may be required.
  
- (12) Density. The density (dwelling units per acre) in the RDD, RD, RC, RN, and RCC zoned districts shall be in accordance with the table below and the following stipulations:
  - a. Maximum Density Table.

Zone	Maximum Density (dwelling units per acre)
RDD	5
RD	8
RC	14
RN	14
RCC	34

- b. Those sites which contain wetlands and/or floodplains shall be permitted a maximum number of units based on the following formula:

$$N = A \times D \times C$$

Where:

N = Maximum number of units permitted.

A = Area of site outside the floodplain and wetland.

D = Allowable density from Maximum Density Table [Subsection (g)(12)a above].

C = 1+ percent of site in floodplain and wetland expressed as decimal.

For purposes of this chapter, wetland areas are those lands which meet the definition of a wetland set forth in § 30301 of the Natural Resources and Environmental Protection Act (MCL § 324.30301). For purposes of this chapter, floodplain areas are those lands which meet the definition contained in § 86-436(b).

State law reference: State-mandated residential uses, MCL 125.286g.

**Chapter 86 Zoning**  
**Article VIII Off-Street Parking and Loading**  
**DIVISION 2 Off-Street Parking**  
**Section 86-756 Design and construction requirements**

In addition to general design requirements specified in other sections of this division, the following design and construction requirements shall be satisfied in all of street parking areas, except for single-family parking areas and as noted:

(1) – (2) Remain as written.

(3) Minimum residential parking space size. A minimum of ~~200~~ 180 square feet shall be provided for each vehicle parking space located within a multiple-family residential development.

(4) – (14) Remain as written.



**To: Township Board**

**From: Mark Kieselbach, Director of Community Planning and Development**  
**Peter Menser, Principal Planner**

**Date: March 13, 2020**

**Re: Medical Marihuana Ordinance Amendment**

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The Township Attorney has updated the Medical Marihuana Non-Zoning Ordinance to address issues during the implementation of the marihuana lottery and application process. Specifically, the post-lottery timelines have been modified and extended and the special use permit (SUP) process has been clarified and updated to better manage the processing of applications after the lottery process. The proposed ordinance amendment focuses on four areas; the lottery, the SUP process, the amount of time allowed for construction of the facility, and the renewal process.

After a lottery is held, the list and order of winners is maintained which determines who may apply for a permit if the first selected applicant fails to move forward. The proposed ordinance amendment adjusts this from a December 31 expiration date to a one year timeframe from the date of the lottery, after which the list expires.

After being selected at a lottery, an applicant must submit and secure approval for a special use permit. The proposed amendment encourages selected applicants to work closely with the Department of Community Planning and Development in preparing their special use application, which is required to be submitted within 60 days of the lottery. Currently, after submitting the SUP there are no timelines for correcting deficiencies or ensuring the applicant is moving forward with the project. The proposed amendment provides one 30-day timeframe for the applicant to address any SUP deficiencies identified by staff. SUP applications will thus be complete within 90 days and scheduled for Planning Commission review under the normal SUP process. Following issuance of the SUP the applicant must diligently pursue operations, but it may be more than a year between issuance of the SUP and the opening of the facility. The proposed amendment requires each applicant and permit holder to submit annual renewal applications and if an applicant fails to diligently pursue operations then the Township may refuse to renew their application. Additionally, certain other technical modifications and improvements have been made to strengthen the Township's ordinance and the required application material.

If the proposed amendment is adopted the timeline for application and approval of a medical marihuana facility will be as follows:

1. Application: Notices are published and the application window opens on the second Tuesday in January.
2. Staff Review (several weeks): Township staff will review the applications for completeness. A five business day period will be provided to correct deficiencies.

## **Medical Marihuana Ordinance Amendment**

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3. Set and Hold Lottery (one day): A date for a lottery will be set to draw all complete applications. The lottery will determine the applicant who may apply for a special use permit and the order of any subsequent applicants.
4. Special Use Permit Submission (90 days total):
  - a. Winning applicants are encouraged to submit conceptual plans within 21 days.
  - b. Complete SUP applications must be submitted within 60 days of the lottery.
  - c. Any deficiency identified in the SUP application must be corrected within 30 days of notice.
  - d. Applicants will only be allowed to submit for the location in their original application papers.
5. Planning Commission Review (several weeks): The complete SUP applications will be placed on the Planning Commission calendar for consideration and recommendation to the Township Board.
6. Township Board Decision (several weeks): The Township Board will grant or deny the application for a special use permit.
7. Location Build Out (six months or more). The applicant will build out their location, either making any required modifications to an existing structure or building a new structure. Building permits are valid for six months and may be renewed for an additional six months. The SUP is valid for 24 months and some marihuana applicants may require more than one year after issuance of the SUP to complete construction.
8. Other Permits (several months): All building, electrical, and other permits will be issued in the normal process for those permits as needed for new construction or remodel.
9. Marihuana Application Renewals (90 days before expiration): Depending on when the SUP is granted, an applicant will be required to submit a renewal application if a Permit has not been issued.
10. Final Walk Through (one day): A final review of the marihuana operation will be undertaken prior to issuance of the Permit under the Ordinance.
11. Permit Issuance: Subsequent renewal applications will be required annually using the date the Permit was issued.

### **Attachments**

1. Draft non-zoning ordinance dated March 13, 2020 (clean)
2. Draft non-zoning ordinance dated March 13, 2020 (red-line)

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ORDINANCE NO. \_\_\_\_\_

**ORDINANCE AMENDING THE CODE OF THE CHARTER TOWNSHIP OF MERIDIAN,  
INGHAM COUNTY, MICHIGAN BY ADDING CHAPTER 40 COMMERCIAL MEDICAL  
MARIHUANA FACILITIES**

**THE CHARTER TOWNSHIP OF MERIDIAN ORDAINS:**

Section 1. Amendment to the Code of Ordinances by adding Chapter 40. The code of the Charter Township of Meridian, Ingham County, Michigan, Chapter 40 entitled Commercial Medical Marihuana Facilities is hereby amended to read as follows:

**Chapter 40  
COMMERCIAL MEDICAL MARIHUANA FACILITIES**

**ARTICLE II  
Commercial Medical Marihuana Facilities**

**Section 40-29. Other Laws and Ordinances.**

In addition to the terms of this chapter, any commercial medical marihuana facility shall comply with all Township ordinances, including without limitation the Township Zoning Ordinance, and with all other applicable state and local ordinances, laws, codes and regulations. To the extent that the terms of this chapter are in conflict with the terms of any other applicable state or local ordinances, laws, codes or regulations, the terms of the most restrictive ordinance, law, code or regulation shall control.

**Section 40-30. Application for and Renewal of Permits.**

1. *Application.* An Application for a Permit for a Facility shall be submitted to the Director of Community Planning and Development per Permitted Premise, and shall contain the following information:
  - a. The name, address, phone number and e-mail address of the Applicant and the proposed Commercial Medical Marihuana Facility.
  - b. The names, home addresses and personal phone numbers for all owners, directors, officers and managers of the Permit Holder and the Commercial Medical Marihuana Facility.
  - c. One (1) copy of all the following:
    - 1) To encourage both local industry and also well-qualified applicants, at least two of the following items:
      - i) An official statement issued by the Department indicating that the Applicant has successfully completed prequalification for a License, if any. Copies of



**Medical Marihuana Non-Zoning Ordinance**

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Entity/Individual Prequalification Packets and Supplemental Applicant Prequalification Packets or investigations conducted by the Department (if available) shall be provided.

- ii) Proof that the Applicant or owners of at least 75% of the Applicant are current Township residents and were residents for at least twelve months prior to filing the Application. Any proof of residency must be satisfactory to the Township and must include more than one of the following: residential leases, tax or special assessment bills, utility bills (water, sewer, electric, gas, cable, internet, etc.), credit card bills, voter registration, driver license, tax returns, or homeowner insurance policies, showing current and at least 12 months' prior residence in the Township. The Applicant's majority shareholders, managing members, or managing partners must submit the same information.
  - iii) Applicant's Certification on a form provided by the Township restricting transfer of the Permit and subsequent renewed Permits, and restricting the transfer of any interest in the Permit Holder for a period of not less than 30 months after issuance of the Permit and License. This commitment shall be enforceable severally or jointly by the Township against the Applicant, Permit Holder, and any owners of the Applicant or Permit Holder.
- 2) All documentation showing the Applicant's valid tenancy, ownership or other legal interest in the proposed Permitted Property and Permitted Premises. If the Applicant is not the owner of the proposed Permitted Property and Permitted Premises, a notarized statement from the owner of such property authorizing the use of the property for a Commercial Medical Marihuana Facility. A property owner shall only enter into one notarized statement per property with one prospective permit holder for each lottery drawing. All documentation establishing that the Permitted Premises and Permitted Property are within an overlay area with available permits.
  - 3) If the Applicant is a corporation, non-profit organization, limited liability company or any other entity other than a natural person, it must indicate its legal status, attach a copy of all company formation documents (including amendments), proof of registration with the State of Michigan, and a certificate of good standing with the State of Michigan.
  - 4) A valid, unexpired driver's license or state issued ID for all owners, directors, officers and managers of the proposed Facility.

**Medical Marihuana Non-Zoning Ordinance**

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- 5) Evidence of a valid sales tax license for the business if such a license is required by state law or local regulations.
- 6) Application for Sign Permit, if any sign is proposed.
- 7) Non-refundable Application fee.
- 8) Business and Operations Plan, showing in detail the Commercial Medical Marihuana Facility's proposed plan of operation, including without limitation, the following:
  - i. A description of the type of Facility proposed and the anticipated or actual number of employees.
  - ii. A security plan meeting the requirements of Section 40-31(3) of this Chapter, which shall include a general description of the security systems(s), current centrally alarmed and monitored security system service agreement for the proposed Permitted Premises, and confirmation that those systems will meet State requirements and be approved by the State prior to commencing operations.
  - iii. A description by category of all products to be sold.
  - iv. A list of Material Safety Data Sheets for all nutrients, pesticides, and other chemicals proposed for use in the Commercial Medical Marihuana Facility.
  - v. A description and plan of all equipment and methods that will be employed to stop any impact to adjacent uses, including enforceable assurances that no odor will be detectable from outside of the Permitted Premises.
  - vi. A plan for the disposal of Marihuana and related byproducts that will be used at the Facility.
- 9) An identification of any business that is directly or indirectly involved in the growing, processing, testing, transporting or sale of Marihuana for the Facility.
- 10) Whether any Applicant, owner, partner, director, officer, or manager of the Applicant or any entity owned or controlled by any owner, partner, director, officer, or manager of the Applicant has ever applied for or has been granted any commercial license or certificate issued by a licensing authority in Michigan or any other jurisdiction that has been denied, restricted, suspended, revoked, or not renewed and a statement describing the facts and circumstances concerning the application, denial, restriction, suspension,

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revocation, or nonrenewal, including the licensing authority, the date each action was taken, and the reason for each action.

- 11) Signed and sealed (by Michigan registered architect, surveyor or professional engineer) site plan and interior floor plan of the Permitted Premises and the Permitted Property.
- 12) Information regarding any other Commercial Medical Marihuana Facility, Marihuana Establishment, similar Permit or License, or any other marihuana business or venture that the Applicant, or any owner, partner, director, officer, or manager of the Applicant or any entity owned or controlled in whole or part by any owner, partner, director, officer, or manager of the Applicant is authorized to operate in any other jurisdiction within the State, or another State, and the Applicant's involvement in each Facility.
- 13) Applicant and all related Persons consent to a background check conducted by the Township or any agency used by the Township to complete such checks.

- d. Any other information reasonably requested by the Township to be relevant to the processing or consideration of the Application.
- e. If the Director of Community Planning and Development identifies or is informed of a deficiency in an Application, the Applicant shall have five (5) business days to correct the deficiency after notification by the Director of Community Planning and Development.
- f. Information obtained from the Applicant or Permit Holder is exempt from public disclosure under state law.

**2. *Receipt of Applications.***

- a. The Director of Community Planning and Development shall accept Applications for new permits during normal business hours on the second Tuesday in January at the Township Hall. Notice of the day, time, and place shall be given by publication once in a newspaper of general circulation within the Township, which shall be at least 10 days before the date set to accept the Applications. The notice shall also be posted on the Township's website, if any.
- b. Notwithstanding Section 40-30(2)(a), the Director of Community Planning and Development may accept Applications for new permits on dates, times, and places as he deems appropriate. Before accepting any Applications on a date other than permitted by Section 40-30(2)(a), notice of the day, time, and place shall be given by publication twice in a newspaper of general circulation within the Township, the first of which shall be at least 10 days before the date set to accept the Applications. The notice shall also be posted on the Township's website, if any.

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3. *Denial of Application.*

- a. The Director of Community Planning and Development shall reject any Application that does not meet the requirements of the MMFLA or this Chapter. The Director of Community Planning and Development shall reject any Application that contains any false, misleading, or incomplete information.
- b. An Applicant whose Application is rejected or denied because of missing, incomplete, erroneous, false, or misleading information, or because of a lack of submission of the full amount of the fees due, does not have a right to an administrative appeal of the decision.

4. *Issuance of Conditional Approval.*

- a. Complete Applications for a Commercial Medical Marihuana Facility Permit determined to be in full compliance with the requirements of this Chapter shall be issued conditional approval in accordance with the procedures specified in this Section.
- b. The Director of Community Planning and Development shall issue a conditional approval if:
  - 1) The background checks are complete and satisfactory;
  - 2) The Applicant has submitted satisfactory proof in two of the three following categories:
    - i. Official statement issued by the Department, pursuant to Section 40-30(1)(c)(1)(i).
    - ii. Proof of residency within the Township pursuant to Section 40-30(1)(c)(1)(ii).
    - iii. A certificate pursuant to Section 40-30(1)(c)(1)(iii).
  - 3) All other information available to the Township verifies that the Applicant as a grower, processor, provisioning center, safety compliance facility, secure transporter has submitted a full and complete Application and is in compliance with the Township Code of Ordinances and any other applicable law, rule, or regulation.
- c. A conditional approval only means that the Applicant has submitted a valid Application for a Commercial Medical Marihuana Facility Permit and is eligible for the lottery.

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- d. Within (30) thirty days from the issuance of a conditional approval the Applicant shall submit proof to the Township that the Applicant has applied for prequalification for a License or has submitted a full application for such License, unless such information was provided in the Application. If the Applicant fails to submit such proof, the conditional approval shall be void, the application denied, and any lottery position void.
  - e. A conditional approval and any lottery selection shall be void if an Applicant is denied prequalification for a License or is denied a License. Such denial shall be provided immediately to the Director of Community Planning and Development.
  - f. A conditional approval does not prevent the Director of Community Planning and Development from requesting additional documentation, as required or permitted under this Chapter.
5. *Lottery; Order of Special Use Permit Applications.*
- a. After all Applications have been either granted conditional approval or denied the Director of Community Planning and Development shall then sort the Applications by the type of facility permit requested.
  - b. Each conditionally approved Application will be entered in a lottery by facility type to determine which Applications may submit special use permit applications. Each facility type shall be drawn by random lottery as follows:
    - 1) For Provisioning Centers, the applications shall be additionally sorted by their zoning overlay area. For each overlay area, the Director of Community Planning and Development shall randomly draw the name or number of each Provisioning Center Applicant until all conditionally approved applications are drawn in each overlay area. The Applicant of each first Provisioning Center drawn in each overlay area may then apply for a special use permit. If any bonus second provisioning center is available under Section 40-28(2)(f), then each overlay area with more than one conditionally approved provisioning center application shall itself be drawn by random lottery until all bonus second provisioning center overlay areas have been awarded. The Applicant of each second Provisioning Center drawn in each overlay area awarded a bonus may then apply for a special use permit.
    - 2) For each other facility type, the Director of Community Planning and Development shall randomly draw the name or number of the Applicants until all conditionally approved applications are drawn.
    - 3) The number of special use permit applications submitted may not exceed the number of available Permits under this Chapter. In each facility type, the number of Applicants drawn equal to the available Permits under this Chapter at the time of the lottery may apply for a

special use permit. Applicants drawn after the number of available Permits will retain that lottery position as provided in this Chapter.

- 4) The Director of Community Planning and Development shall maintain a record of the lottery results and order of drawing for each facility type for one year after the lottery occurred after which time they will expire and be invalid. Subsequent lotteries for any facility types shall have secondary priority to earlier results until the earlier results expire. Lottery positions do not confer any right to a Permit under this Chapter.
  - 5) All lottery drawings shall be conducted publicly by the Director of Community Planning and Development with the date and time published on the Township's website and all entrants provided notice.
- c. An applicant is encouraged to discuss the requirements for a special use permit and submit a conceptual plan within 21 days of selection under this sub-section in order that preliminary technical deficiencies may be addressed prior to submittal of the application for a special use permit. All special use permit applications must be complete as provided in § 86-124 of the Code of Ordinances and submitted within 60 days of the lottery or notice under this sub-section. If the Director of Community Planning and Development identifies or is informed of a deficiency in the special use permit application, the Applicant shall have 30 days to correct the deficiency after notification by the Director of Community Planning and Development. If the Applicant does not submit a special use permit application, does not submit supplemental material curing an identified defect, or a special use permit is denied and all appeals are exhausted, then the Director of Community Planning and Development may consult the lottery results and notify the next Applicant that they may apply for a special use permit.

6. *Renewal Application.*

- a. The same requirements that apply to all new Applications for a Permit, except for special use permit and lottery requirements, shall apply to all Renewal Applications. If an Applicant has been selected in the lottery or submitted a special use permit application but a Permit has not been issued under this Chapter, then the Applicant must submit a renewal application.
- b. A Renewal Application may expressly incorporate by reference information or documentation contained in the original Application or prior Renewal Application, making it clear where such information or documentation can be found, provided that the Permit Holder certifies that the information or documentation has not changed.

- c. Renewal Applications shall be submitted to and received by the Director of Community Planning and Development not less than ninety (90) days prior to the expiration of the annual Permit or if a Permit has not been issued under this Ordinance then not less than ninety (90) days prior to the anniversary of the lottery at which the Applicant was selected under this Ordinance. Any Application requesting a change in the location of the Permitted Premises shall be submitted and received not less than one hundred twenty (120) days prior to the expiration of the Permit.
- d. A Permit Holder or Applicant whose Permit or lottery selection expires and for which a complete Renewal Application has not been received by the expiration date shall be deemed to have forfeited the Permit or lottery selection under this Chapter. The Township will not accept Renewal Applications after the expiration date of the Permit or lottery selection.

7. *Issuance of Commercial Medical Marihuana Facilities Permit.*

- a. An inspection of the proposed Commercial Medical Marihuana Facility by the Township shall be required prior to issuance of the Permit. Such inspection shall occur after the premises are ready for operation, but prior to the stocking of the business with any medical marihuana, and prior to the opening of the business or commencement of operations. The inspection is to verify that the business facilities are constructed and can be operated in accordance with the Application submitted and the applicable requirements of this Chapter, the Special Use Permit, and any other applicable law, rule, or regulation.
- b. After verification the facilities are constructed and can be operated in accordance with the Application and any renewal submitted and the applicable requirements of this Chapter, the Special Use Permit, and any other applicable law, rule, or regulation, and the issuance of a permanent certificate of occupancy for the facility, the Director of Community Planning and Development shall issue the Permit for a term of one (1) year.
- c. Maintaining a valid License is a condition for the issuance and maintenance of the Permit issued under this Chapter and the continued operation of any marihuana facility.
- d. An Applicant or Permit Holder has a duty to notify the Director of Community Planning and Development in writing of any pending criminal charge, and any criminal conviction of a felony or other offense involving a crime of moral turpitude by the Applicant, any owner, principal officer, director, manager, or employee within ten (10) days of the event.
- e. An Applicant or Permit Holder has a duty to notify the Director of Community Planning and Development in writing of any pending criminal charge, and any criminal conviction, whether a felony, misdemeanor, petty

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offense, or any violation of a local law related to the cultivation, processing, manufacture, storage, sale, distribution, testing or consumption of any form of marihuana, the MMMA, the MMFLA, any building, fire, health or zoning statute, code or ordinance related to the cultivation, processing, manufacture, storage, sale, distribution, testing or consumption of any form of marihuana by the Applicant, any owner, principal officer, director, manager, or employee within (10) ten days of the event.

8. *Applications for new Permits where no building is as yet in existence.* Any Applicant for a Commercial Medical Marihuana Facility Permit whose building is not yet in existence at the time the Township grants the special use permit shall have one year immediately following the date of the Township's special use permit approval to start construction of the building, in accordance with applicable zoning ordinances, building codes, and any other applicable state or local laws, rules or regulations. Start of construction means the first placement of permanent construction of a structure on a site, such as the pouring of a slab or footings, the installation of piles, construction of columns, or other work beyond the stage of excavation.
9. *Duty to Supplement.* If, at any time before or after a Permit is issued pursuant to this Chapter, any information required in the Application, the MMFLA, or any rule or regulation promulgated thereunder, changes in any way from that which is stated in the Application, the Applicant or Licensee shall supplement such information in writing within ten (10) days from the date upon which such change occurs.
10. *Permit Forfeiture.* In the event that a Commercial Medical Marihuana Facility does not commence operations within one year of issuance of a Township Permit, the Permit shall be deemed forfeited; the facility may not commence operations and the Permit is not eligible for renewal.

**Section 40-32. Penalties and Consequences for Violation.**

In addition to any other penalties or legal consequences provided under applicable state and local law, regulations, codes and ordinances:

1. Violations of the provisions of this Chapter or failure to comply with any of the requirements of this Chapter shall constitute a misdemeanor. Any Person who violates this Chapter or fails to comply with any of the requirements of this Chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than \$500.00, or imprisoned for not more than 90 days, or both, and, in addition, shall pay all costs and expenses involved. Each day the violation continues shall be considered a separate offense.
2. Violations of the provisions of this Chapter or failure to comply with any of the requirements of this Chapter shall be subject to and found responsible for a municipal civil infraction. The fine for any municipal civil infraction shall be one thousand dollars (\$1,000.00) plus court costs, attorney fees and abatement costs of each violation, together with all other remedies pursuant to MCL 600.8701, et seq. Each day a violation continues shall be deemed a separate municipal civil infraction.



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3. Increased civil fines shall be imposed for repeated violations of any requirement of this Chapter. As used in this subsection, the term “repeat offense” means a second (or any subsequent) municipal civil infraction violation of the same requirement or provision committed within any six-month period and found to be responsible. The increased fine for a repeat offense shall be as follows:
  - a. The fine for any offense which is a first repeat offense shall be two thousand five hundred dollars (\$2,500).
  - b. The fine for any offense which is a second repeat offense or any subsequent repeat offense shall be five thousand dollars (\$5,000).
4. Non-Renewal or Revocation.
  - a. A Permit issued under this Chapter may be denied, limited, revoked, or restricted under any of the following conditions:
    - 1) Any fraudulent, false, misleading, or material misrepresentation contained in the Application.
    - 2) Repeat violations of any requirements of this Chapter or other applicable law, rule, or regulation. As used in this subsection, the term “repeat offense” means a second (or any subsequent) misdemeanor violation or civil infraction of the same requirement or provision committed within any six-month period and upon conviction or responsibility thereof.
    - 3) A valid License is not maintained as required by this Chapter.
    - 4) The Permit Holder, its agent, manager, or employee failed to timely submit any document or failed to timely make any material disclosure as required by this Chapter.
  - b. Non-Renewal. If an Applicant who has been issued a special use permit and fails to diligently pursue commencement of operations, including but not limited to, submitting a complete site plan for site plan review, submitting a complete building permit, or apply for other permits as provided for in this Ordinance, then the Director of Community Planning and Development may deny any renewal application or any subsequent application submitted by the Applicant or any individual having any direct or indirect membership, stockholder, or equity interest in the Applicant.
  - c. If a Permit is revoked or limited under this Chapter, the Director of Community Planning and Development shall issue a notice stating the revocation, limitation, or restriction including the reason for the action and providing a date and time for an evidentiary hearing before the Township Board.

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5. The owner of record or tenant of any building, structure or premises, or part thereof, and any architect, builder, contractor, agent or Person who commits, participates in, assists in or maintains such violation may each be found guilty or responsible of a separate offense and suffer the penalties and fines provided in subsections (1) and (2) of this section, except as excluded from responsibility by state law.
6. In addition to any other remedies, the Township may institute proceedings for injunction, mandamus, abatement or other appropriate remedies to prevent, enjoin, abate or remove any violations of this Chapter. The rights and remedies provided herein are both civil and criminal in nature. The imposition of any fine, jail sentence or forfeiture shall not exempt the violator from compliance with the provisions of this Chapter.

Section 2. Validity and Severability. The provisions of this Ordinance are severable and the invalidity of any phrase, clause or part of this Ordinance shall not affect the validity or effectiveness of the remainder of the Ordinance.

Section 3. Repealer Clause. All ordinances or parts of ordinances in conflict therewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings Clause. This Ordinance does not affect rights and duties matured, penalties that were incurred, and proceedings that were begun, before its effective date.

Section 5. Effective Date. This Ordinance shall become effective immediately upon its publication.

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Ronald J. Styka, Township Supervisor

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Brett Dreyfus, Township Clerk

ORDINANCE NO. \_\_\_\_\_

**ORDINANCE AMENDING THE CODE OF THE CHARTER TOWNSHIP OF MERIDIAN,  
INGHAM COUNTY, MICHIGAN BY ADDING CHAPTER 40 COMMERCIAL MEDICAL  
MARIHUANA FACILITIES**

**THE CHARTER TOWNSHIP OF MERIDIAN ORDAINS:**

Section 1. Amendment to the Code of Ordinances by adding Chapter 40. The code of the Charter Township of Meridian, Ingham County, Michigan, ~~is hereby amended to add~~ Chapter 40 entitled Commercial Medical Marihuana Facilities ~~is hereby amended~~ to read as follows:

**Chapter 40  
COMMERCIAL MEDICAL MARIHUANA FACILITIES**

**ARTICLE II  
Commercial Medical Marihuana Facilities**

**Section 40-29. Other Laws and Ordinances.**

In addition to the terms of this chapter, any commercial medical marihuana facility shall comply with all Township ordinances, including without limitation the Township Zoning Ordinance, and with all other applicable ~~federal~~, state and local ordinances, laws, codes and regulations. To the extent that the terms of this chapter are in conflict with the terms of any other applicable ~~federal~~, state or local ordinances, laws, codes or regulations, the terms of the most restrictive ordinance, law, code or regulation shall control.

**Section 40-30. Application for and Renewal of Permits.**

1. *Application.* An Application for a Permit for a Facility shall be submitted to the Director of Community Planning and Development per ~~p~~Permitted ~~p~~Premise, and shall contain the following information:
  - a. The name, address, phone number and e-mail address of the ~~proposed Permit Holder~~Applicant and the proposed Commercial Medical Marihuana Facility.
  - b. The names, home addresses and personal phone numbers for all owners, directors, officers and managers of the Permit Holder and the Commercial Medical Marihuana Facility.
  - c. One (1) copy of all the following:
    - 1) To encourage both local industry and also well-qualified applicants, at least two of the following items:

- i) An official statement issued by the Department indicating that the Applicant has successfully completed prequalification for a License, if any. Copies of Entity/Individual Prequalification Packets and Supplemental Applicant Prequalification Packets or investigations conducted by the Department (if available) shall be provided.
  - ii) Proof that the Applicant or owners of at least 75% of the Applicant are current Township residents and were residents for at least twelve months prior to filing the Application. Any proof of residency must be satisfactory to the Township and must include more than one of the following: residential leases, tax or special assessment bills, utility bills (water, sewer, electric, gas, cable, internet, etc.), credit card bills, voter registration, driver license, tax returns, or homeowner insurance policies, showing current and at least 12 months' prior residence in the Township. The Applicant's majority shareholders, managing members, or managing partners must submit the same information.
  - iii) Applicant's Certification on a form provided by the Township restricting transfer of the Permit and subsequent renewed Permits, and restricting the transfer of any interest in the Permit Holder for a period of not less than 30 months after issuance of the Permit and License. This commitment shall be enforceable severally or jointly by the Township against the Applicant, Permit Holder, and any ~~members or shareholders thereof~~ owners of the Applicant or Permit Holder.
- 2) All documentation showing the ~~proposed Permit Holder's~~ Applicant's valid tenancy, ownership or other legal interest in the proposed Permitted Property and Permitted Premises. If the Applicant is not the owner of the proposed Permitted Property and Permitted Premises, a notarized statement from the owner of such property authorizing the use of the property for a Commercial Medical Marihuana Facility. A property owner shall only enter into one notarized statement per property with one prospective permit holder for each lottery drawing. All documentation establishing that the Permitted Premises and Permitted Property are within an overlay area with available permits.
  - 3) If the ~~proposed Permit Holder~~ Applicant is a corporation, non-profit organization, limited liability company or any other entity other than a natural person, it must indicate its legal status, attach a copy of all company formation documents (including amendments), proof of registration with the State of Michigan, and a certificate of good standing with the State of Michigan.

- 4) A valid, unexpired driver's license or state issued ID for all owners, directors, officers and managers of the proposed Facility.
- 5) Evidence of a valid sales tax license for the business if such a license is required by state law or local regulations.
- 6) Application for Sign Permit, if any sign is proposed.
- 7) Non-refundable Application fee.
- 8) Business and Operations Plan, showing in detail the Commercial Medical Marihuana Facility's proposed plan of operation, including without limitation, the following:
  - i. A description of the type of Facility proposed and the anticipated or actual number of employees.
  - ii. A security plan meeting the requirements of Section 40-31(3) of this Chapter, which shall include a general description of the security systems(s), current centrally alarmed and monitored security system service agreement for the proposed Permitted Premises, and confirmation that those systems will meet State requirements and be approved by the State prior to commencing operations.
  - iii. A description by category of all products to be sold.
  - iv. A list of Material Safety Data Sheets for all nutrients, pesticides, and other chemicals proposed for use in the Commercial Medical Marihuana Facility.
  - v. A description and plan of all equipment and methods that will be employed to stop any impact to adjacent uses, including enforceable assurances that no odor will be detectable from outside of the Permitted Premises.
  - vi. A plan for the disposal of Marihuana and related byproducts that will be used at the Facility.
- 9) An identification of any business that is directly or indirectly involved in the growing, processing, testing, transporting or sale of Marihuana for the Facility.
- 10) Whether any Applicant, owner, partner, director, officer, or manager of the Applicant or any entity owned or controlled by any owner, partner, director, officer, or manager of the Applicant has ever applied for or has been granted any commercial license or certificate issued by a licensing authority in Michigan or any other

jurisdiction that has been denied, restricted, suspended, revoked, or not renewed and a statement describing the facts and circumstances concerning the application, denial, restriction, suspension, revocation, or nonrenewal, including the licensing authority, the date each action was taken, and the reason for each action.

- 11) Signed and sealed (by Michigan registered architect, surveyor or professional engineer) site plan and interior floor plan of the Permitted Premises and the Permitted Property.
  - 12) Information regarding any other Commercial Medical Marihuana Facility, Marihuana Establishment, similar Permit or License, or any other marihuana business or venture that the Applicant, or any owner, partner, director, officer, or manager of the Applicant or any entity owned or controlled in whole or part by any owner, partner, director, officer, or manager of the Applicant ~~that the Licensee~~ is authorized to operate in any other jurisdiction within the State, or another State, and the Applicant's involvement in each Facility.
  - 13) Applicant and all related Persons consent to a background check conducted by the Township or any agency used by the Township to complete such checks.
- d. Any other information reasonably requested by the Township to be relevant to the processing or consideration of the Application.
  - e. If the Director of Community Planning and Development identifies or is informed of a deficiency in an Application, the Applicant shall have five (5) business days to correct the deficiency after notification by the Director of Community Planning and Development.
  - f. Information obtained from the Applicant or ~~proposed~~ Permit Holder is exempt from public disclosure under state law.

2. *Receipt of Applications.*

- a. The Director of Community Planning and Development shall accept Applications for new permits during normal business hours on the second Tuesday in January at the Township Hall. Notice of the day, time, and place shall be given by publication once in a newspaper of general circulation within the Township, which shall be at least 10 days before the date set to accept the Applications. The notice shall also be posted on the Township's website, if any.
- b. Notwithstanding Section 40-30(2)(a), the Director of Community Planning and Development may accept Applications for new permits on dates, times, and places as he deems appropriate. Before accepting any Applications on a date other than permitted by Section 40-30(2)(a), notice of the day, time, and place shall be given by publication twice in a newspaper of general

circulation within the Township, the first of which shall be at least 10 days before the date set to accept the Applications. The notice shall also be posted on the Township's website, if any.

3. *Denial of Application.*

- a. The Director of Community Planning and Development shall reject any Application that does not meet the requirements of the MMFLA or this Chapter. The Director of Community Planning and Development shall reject any Application that contains any false, misleading, or incomplete information.
- b. An Applicant whose Application is rejected or denied because of missing, incomplete, erroneous, false, or misleading information, or because of a lack of submission of the full amount of the fees due, does not have a right to an administrative appeal of the decision.

4. *Issuance of Conditional Approval.*

- a. Complete Applications for a Commercial Medical Marihuana Facility Permit determined to be in full compliance with the requirements of this Chapter shall be issued conditional approval in accordance with the procedures specified in this Section.
- b. The Director of Community Planning and Development shall issue a conditional approval if:
  - 1) The background checks are complete and satisfactory;
  - 2) The Applicant has submitted satisfactory proof in two of the three following categories:
    - i. Official statement issued by the Department, pursuant to Section 40-30(1)(c)(1)(i).
    - ii. Proof of residency within the Township pursuant to Section 40-30(1)(c)((1)(ii).
    - iii. A certificate pursuant to Section 40-30(1)(c)(1)(iii).
  - 3) All other information available to the Township verifies that the Applicant as a grower, processor, provisioning center, safety compliance facility, secure transporter has submitted a full and complete Application and is in compliance with the Township Code of Ordinances and any other applicable law, rule, or regulation.

- c. A conditional approval only means that the Applicant has submitted a valid Application for a Commercial Medical Marihuana Facility Permit and is eligible for the lottery.
  - d. Within (30) thirty days from the issuance of a conditional approval the Applicant shall submit proof to the Township that the Applicant has applied for prequalification for a License or has submitted a full application for such License, unless such information was provided in the Application. If the Applicant fails to submit such proof, the conditional approval shall be void, the application denied, and any lottery position void.
  - e. A conditional approval and any lottery selection shall be void if an Applicant is denied prequalification for a License or is denied a License. Such denial shall be provided immediately to the Director of Community Planning and Development.
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- a. After all Applications have been either granted conditional approval or denied the Director of Community Planning and Development shall then sort the Applications by the type of facility permit requested.
  - b. Each conditionally approved Application will be entered in a lottery by facility type to determine which Applications may submit special use permit applications. Each facility type shall be drawn by random lottery as follows:
    - 1) For Provisioning Centers, the applications shall be additionally sorted by their zoning overlay area. For each overlay area, the Director of Community Planning and Development shall randomly draw the name or number of each Provisioning Center Applicant until all conditionally approved applications are drawn in each overlay area. The Applicant of each first Provisioning Center drawn in each overlay area may then apply for a special use permit. If any bonus second provisioning center is available under Section 40-28(2)(f), then each overlay area with more than one conditionally approved provisioning center application shall itself be drawn by random lottery until all bonus second provisioning center overlay areas have been awarded. The Applicant of each second Provisioning Center drawn in each overlay area awarded a bonus may then apply for a special use permit.
    - 2) For each other facility type, the Director of Community Planning and Development shall randomly draw the name or number of the Applicants until all conditionally approved applications are drawn.



- 3) The number of special use permit applications submitted may not exceed the number of available Permits under this Chapter. In each facility type, the number of Applicants drawn equal to the available Permits under this Chapter at the time of the lottery may apply for a special use permit. Applicants drawn after the number of available Permits will retain that lottery position as provided in this Chapter.
- 4) The Director of Community Planning and Development shall maintain a record of the lottery results and order of drawing for each facility type ~~until December 31 of the year in which~~ for one year after the lottery occurred after which time they will expire and be invalid. Subsequent lotteries for any facility types shall have secondary priority to earlier results until the earlier results expire. Lottery positions do not confer any right to a Permit under this Chapter.
- 5) All lottery drawings shall be conducted publicly by the Director of Community Planning and Development with the date and time published on the Township's website and all entrants provided notice.

- c. An applicant is encouraged to discuss the requirements for a special use permit and submit a conceptual plan within 21 days of selection under this sub-section in order that preliminary technical deficiencies may be addressed prior to submittal of the application for a special use permit. All special use permit applications must be complete as provided in § 86-124 of the Code of Ordinances and submitted within 60 days of the lottery or notice under this sub-section. If the Director of Community Planning and Development identifies or is informed of a deficiency in the special use permit application, the Applicant shall have 30 days to correct the deficiency after notification by the Director of Community Planning and Development. If the Applicant does not submit a special use permit application, does not submit supplemental material curing an identified defect, or a special use permit is denied and all appeals are exhausted, then the Director of Community Planning and Development may consult the lottery results and notify the next Applicant that they may apply for a special use permit.

6. *Renewal Application.*

- a. The same requirements that apply to all new Applications for a Permit, except for special use permit and lottery requirements, shall apply to all Renewal Applications. If an Applicant has been selected in the lottery or submitted a special use permit application but a Permit has not been issued under this Chapter, then the Applicant must submit a renewal application.
- b. A Renewal Application may expressly incorporate by reference information or documentation contained in the original Application or prior Renewal Application, making it clear where such information or documentation can be found, provided that the

Permit Holder certifies that the information or documentation has not changed.

c. Renewal Applications shall be submitted to and received by the Director of Community Planning and Development not less than ninety (90) days prior to the expiration of the annual Permit or if a Permit has not been issued under this Ordinance then not less than ninety (90) days prior to the anniversary of the lottery at which the Applicant was selected under this Ordinance. ~~except that a~~ Any Application requesting a change in the location of the Permitted Premises shall be submitted and received not less than one hundred twenty (120) days prior to the expiration of the Permit.

d. A Permit Holder or Applicant whose Permit or lottery selection expires and for which a complete Renewal Application has not been received by the expiration date shall be deemed to have forfeited the Permit or lottery selection under this Chapter. The Township will not accept Renewal Applications after the expiration date of the Permit or lottery selection.

7. *Issuance of Commercial Medical Marihuana Facilities Permit.*

- a. An inspection of the proposed Commercial Medical Marihuana Facility by the Township shall be required prior to issuance of the Permit. Such inspection shall occur after the premises are ready for operation, but prior to the stocking of the business with any medical marihuana, and prior to the opening of the business or commencement of operations. The inspection is to verify that the business facilities are constructed and can be operated in accordance with the Application submitted and the applicable requirements of this Chapter, the Special Use Permit, and any other applicable law, rule, or regulation.
- b. After verification the facilities are constructed and can be operated in accordance with the Application and any renewal submitted and the applicable requirements of this Chapter, the Special Use Permit, and any other applicable law, rule, or regulation, and the issuance of a permanent certificate of occupancy for the facility, the Director of Community Planning and Development shall issue the Permit for a term of one (1) year.
- c. Maintaining a valid License is a condition for the issuance and maintenance of the Permit issued under this Chapter and the continued operation of any marihuana facility.
- d. An Applicant or Permit Holder has a duty to notify the Director of Community Planning and Development in writing of any pending criminal charge, and any criminal conviction of a felony or other offense involving a crime of moral turpitude by the Applicant, any owner, principal officer, director, manager, or employee within ten (10) days of the event.

- e. An Applicant or Permit Holder has a duty to notify the Director of Community Planning and Development in writing of any pending criminal charge, and any criminal conviction, whether a felony, misdemeanor, petty offense, or any violation of a local law related to the cultivation, processing, manufacture, storage, sale, distribution, testing or consumption of any form of marihuana, the MMMA, the MMFLA, any building, fire, health or zoning statute, code or ordinance related to the cultivation, processing, manufacture, storage, sale, distribution, testing or consumption of any form of marihuana by the Applicant, any owner, principal officer, director, manager, or employee within (10) ten days of the event.
8. *Applications for new Permits where no building is as yet in existence.* Any Applicant for a Commercial Medical Marihuana Facility Permit whose building is not yet in existence at the time ~~of the Township grants the special use permit's initial approval~~ shall have one year immediately following the date of the Township's ~~special use permit 's initial~~ approval to ~~complete start~~ construction of the building, in accordance with applicable zoning ordinances, building codes, and any other applicable state or local laws, rules or regulations. Start of construction means the first placement of permanent construction of a structure on a site, such as the pouring of a slab or footings, the installation of piles, construction of columns, or other work beyond the stage of excavation, and to commence business operations.
9. *Duty to Supplement.* If, at any time before or after a Permit is issued pursuant to this Chapter, any information required in the Application, the MMFLA, or any rule or regulation promulgated thereunder, changes in any way from that which is stated in the Application, the Applicant or Licensee shall supplement such information in writing within ten (10) days from the date upon which such change occurs.
10. *Permit Forfeiture.* In the event that a Commercial Medical Marihuana Facility does not commence operations within one year of issuance of a Township Permit, the Permit shall be deemed forfeited; the facility may not commence operations and the Permit is not eligible for renewal.

#### **Section 40-32. Penalties and Consequences for Violation.**

In addition to any other penalties or legal consequences provided under applicable ~~federal,~~ state and local law, regulations, codes and ordinances:

1. Violations of the provisions of this Chapter or failure to comply with any of the requirements of this Chapter shall constitute a misdemeanor. Any Person who violates this Chapter or fails to comply with any of the requirements of this Chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than \$500.00, or imprisoned for not more than 90 days, or both, and, in addition, shall pay all costs and expenses involved. Each day the violation continues shall be considered a separate offense.
2. Violations of the provisions of this Chapter or failure to comply with any of the requirements of this Chapter shall be subject to and found responsible for a

municipal civil infraction. The fine for any municipal civil infraction shall be one thousand dollars (\$1,000.00) plus court costs, attorney fees and abatement costs of each violation, together with all other remedies pursuant to MCL 600.8701, et seq. Each day a violation continues shall be deemed a separate municipal civil infraction.

3. Increased civil fines shall be imposed for repeated violations of any requirement of this Chapter. As used in this subsection, the term “repeat offense” means a second (or any subsequent) municipal civil infraction violation of the same requirement or provision committed within any six-month period and found to be responsible. The increased fine for a repeat offense shall be as follows:

- a. The fine for any offense which is a first repeat offense shall be two thousand five hundred dollars (\$2,500).
- b. The fine for any offense which is a second repeat offense or any subsequent repeat offense shall be five thousand dollars (\$5,000).

4. Non-Renewal or Revocation.

a. A Permit issued under this Chapter may be denied, limited, revoked, or restricted under any of the following conditions:

- 1) Any fraudulent, false, misleading, or material misrepresentation contained in the Application.
- 2) Repeat violations of any requirements of this Chapter or other applicable law, rule, or regulation. As used in this subsection, the term “repeat offense” means a second (or any subsequent) misdemeanor violation or civil infraction of the same requirement or provision committed within any six-month period and upon conviction or responsibility thereof.
- 3) A valid License is not maintained as required by this Chapter.
- 4) The Permit Holder, its agent, manager, or employee failed to timely submit any document or failed to timely make any material disclosure as required by this Chapter.

b. Non-Renewal. If an Applicant who has been issued a special use permit and fails to diligently pursue commencement of operations, including but not limited to, submitting a complete site plan for site plan review, submitting a complete building permit, or apply for other permits as provided for in this Ordinance, then the Director of Community Planning and Development may deny any renewal application or any subsequent application submitted by the Applicant or any individual having any direct or indirect membership, stockholder, or equity interest in the Applicant.

c. If a Permit is revoked or limited under this Chapter, the Director of Community Planning and Development shall issue a notice stating the

revocation, limitation, or restriction including the reason for the action and providing a date and time for an evidentiary hearing before the Township Board.

5. The owner of record or tenant of any building, structure or premises, or part thereof, and any architect, builder, contractor, agent or Person who commits, participates in, assists in or maintains such violation may each be found guilty or responsible of a separate offense and suffer the penalties and fines provided in subsections (1) and (2) of this section, except as excluded from responsibility by state law.
6. In addition to any other remedies, the Township may institute proceedings for injunction, mandamus, abatement or other appropriate remedies to prevent, enjoin, abate or remove any violations of this Chapter. The rights and remedies provided herein are both civil and criminal in nature. The imposition of any fine, jail sentence or forfeiture shall not exempt the violator from compliance with the provisions of this Chapter.

Section 2. Validity and Severability. The provisions of this Ordinance are severable and the invalidity of any phrase, clause or part of this Ordinance shall not affect the validity or effectiveness of the remainder of the Ordinance.

Section 3. Repealer Clause. All ordinances or parts of ordinances in conflict therewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings Clause. This Ordinance does not affect rights and duties matured, penalties that were incurred, and proceedings that were begun, before its effective date.

Section 5. Effective Date. This Ordinance shall become effective immediately upon its publication.

\_\_\_\_\_  
Ronald J. Styka, Township Supervisor

\_\_\_\_\_  
Brett Dreyfus, Township Clerk



13. E.

**To: Township Board Members**

**From: Derek N. Perry, Deputy Township Manager  
Director of Public Works & Engineering**

**Date: March 12, 2020**

**Re: MiWARN Membership**

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The Michigan Water and Wastewater Agency Response Network (MiWARN) is a State-wide network of member Utilities and Public Works agencies designed to facilitate a mutual aid and assistance approach to providing assistance during times of crisis by utilizing a members helping members network.

While we have strong partnerships with our neighboring communities and plans developed for mutual aid, we do have vulnerability to a regional crisis. One way to mitigate that potential is membership in MiWARN.

There is no cost to join MiWARN, but being an active participant would provide us access to specialized equipment and personnel in times of emergency and connects resources throughout the State and Nation.

**Proposed ACTION Motion:**

**“Move to join and participate in MiWARN and authorize Deputy Township Manager Perry to be named the Authorized Official and execute the MiWARN Mutual Aid and Assistance Agreement.”**

Attachment: Mutual Aid and Assistance Agreement

# MICHIGAN WATER/WASTEWATER AGENCY RESPONSE NETWORK

## Mutual Aid and Assistance Agreement

### RECITALS

WHEREAS, certain Michigan water, wastewater and public works agencies (the “Members”), have formed the “Michigan Water/Wastewater Agency Response Network,” (Michigan WARN or MiWARN), to share resources and to assist each other in the form of personnel, equipment, materials and supplies in the event of emergencies that disrupt utility services; and

WHEREAS, the Urban Cooperation Act of 1967, being MCL 124.501 et seq. (the “Act”) permits a public bodies and private entities to work together to provide mutual aid and assistance to both public and private water and wastewater utilities in need of emergency assistance caused by natural or man-made disasters.

WHEREAS, the Members have agreed to enter into this “Michigan Water/Wastewater Agency Response Network Mutual Aid and Assistance Agreement,” (“Agreement”), to describe the terms and conditions under which emergency assistance may be requested and provided; and

WHEREAS, by executing the Agreement, the Parties express their intent to participate in a program of mutual aid and assistance within the State of Michigan.

NOW, THEREFORE, in consideration of the promises and the mutual undertakings contained in this Agreement, the Members of the Michigan WARN, as agreed upon, and authorized by, their respective legislative authorities mutually agree as follows:

### AGREEMENT

This Agreement is made and entered into by public and private Water and Wastewater Utilities and Public Works Agencies that have, by executing this Agreement, manifested their intent to participate in an Intrastate Program for Mutual Aid and Assistance.

### ARTICLE I. PURPOSE

The water/wastewater mutual aid program was established to provide a method whereby water/wastewater utilities together with public works agencies sustaining physical damage from natural or manmade disasters may obtain emergency assistance, in the form of personnel, equipment, and materials and other associated services necessary, from other water/wastewater utilities and public works agencies. This Agreement hereby establishes within the State of Michigan an intrastate program for mutual aid and assistance. Through the Michigan WARN Program, Members shall coordinate voluntary response activities and shall share voluntary resources during emergencies and other events, as described in this Agreement.

## **ARTICLE II.        DEFINITIONS**

**A. Agreement** - The Michigan Water/Wastewater Agency Response Network Mutual Aid and Assistance Agreement.

**B. Authorized Official** - An employee, agent, or official of a Member who is authorized by the Member's governing board or management to request assistance and/or offer assistance under this agreement.

**C. Emergency** - A natural or manmade event that is, or is likely to be, beyond the control of the available services, personnel, equipment, and facilities of a mutual aid and assistance program member. The request for aid does not require an official declaration of an emergency by the local or state agencies, and the aid may be provided during the emergency response or recovery phases.

**D. Member** - Any public body or political subdivision or private water and/or wastewater utility and/or public works agency or its principals that execute this Agreement.

**E. Requesting Member** - A Member who requests assistance in accordance with the terms and conditions of this Agreement and the mutual aid and assistance program.

**F. Responding Member** - A Member that responds to a request for assistance under the Mutual Aid and Assistance Program.

**G. National Incident Management System (NIMS)** – A national, standardized approach to incident management and response created by the federal Department of Homeland Security that sets uniform processes and procedures for emergency response operations to prepare for, protect against, respond to and recover from emergency events.

**H. Period of Assistance** - A specified period of time during which a Responding Member assists a Requesting Member. The period commences when personnel, equipment, or supplies depart from a Responding Member's facility and ends when the resources are returned to its facility (portal to portal). All protections identified in the Agreement apply during this period. The specified Period of Assistance may occur during response to or recovery from an emergency, as previously defined.

**I. Steering Committee** – A committee consisting of representatives from Members and other agencies that may have a role to play in the mutual aid and assistance program (e.g., MIAWWA, APWA-Mi, MDEQ, MWEA, RCAP,



MRWA, WEF, MSPMHSD, public health, water and wastewater utility organizations), that shall administer the MiWARN program for the State of Michigan.

**K. Work or Work Related Period** - Any Period of time in which either the personnel or equipment of the Responding Member are being used by the Requesting Member to provide assistance. Specifically included within such period of time are rest breaks when the personnel of the Responding Member will return to active work within a reasonable time. Also, included is mutually agreed-upon rotation of personnel and equipment.

### **ARTICLE III.        ADMINISTRATION**

The mutual aid and assistance program shall be administered through Regional Committee and, as needed, a Steering Committee. The purpose of the Regional Committee is to provide local coordination of the mutual aid and assistance program, before, during and after an emergency event. The purpose of a Steering Committee is to provide coordination on a statewide basis of the mutual aid and assistance program before, during and after an emergency. The Steering Committee, under the leadership of an elected Chair, shall meet at least annually to address mutual aid and assistance program issues and to review emergency preparedness and response procedures. Under the leadership of the Chair, the Steering Committee members shall plan and coordinate emergency response planning and response activities for the mutual aid and assistance program.

The Steering Committee, upon being formed and authorized, shall adopt by-laws to govern the administration of the Steering and Regional Committees, and the implementation of this Agreement. The by-laws for the Regional Committees shall be uniform and subject to changes or amendments only by the Steering Committee.

### **ARTICLE IV.        PROCEDURES**

The Steering Committee shall develop operational and planning procedures for the MI WARN Program. These procedures shall be reviewed at least annually and updated as needed.

It is the responsibility of each Member to develop its own operational and planning procedures in accordance and consistent with the procedures adopted by the Steering Committee, to identify the critical components of its own infrastructure and its emergency response resources.

### **ARTICLE V.        REQUESTS FOR ASSISTANCE**

**A. Member Responsibility** – Within forty-eight (48) hours after execution of this Agreement, Members shall identify an Authorized Official and alternates; provide contact information, including 24-hour access; and maintain resource information made available for mutual aid and assistance response.

In the event of an Emergency, a Member's Authorized Official may request mutual aid and assistance from a Member. Requests for assistance can be made orally or in writing via the website. When made orally, the request for assistance shall be prepared in writing as soon as practicable after the oral request. Requests for assistance shall be directed to the Authorized Official of a Member. Specific protocols for requesting aid are set forth in the operational and planning procedures referenced in Article IV, above.

**B. Response to a Request for Assistance** – After a Member receives a request for assistance, the Authorized Official shall evaluate whether resources are available to respond to the request for assistance. As soon as possible after completing the evaluation, the Authorize Official shall inform the Requesting Member whether it has the resources to respond. If the Member is willing and able to provide assistance, the Member shall inform the Requesting Member about the type of available resources and the approximate arrival time of such assistance.

**C. Discretion of Responding Member's Authorized Official** – Each Member recognizes and agrees that execution of this Agreement does not create any duty to respond to a request for assistance. When a Member receives a request for assistance, the Authorized Official shall have absolute discretion as to the ability of that Member to respond to a request for assistance. An Authorized Official's decisions on the availability of resources shall be final.

## **ARTICLE VI.        RESPONDING MEMBER PERSONNEL**

**A. National Incident Management System (NIMS)** - When providing assistance under this Agreement, the Requesting Member and Responding Member shall be organized and shall function under NIMS.

NIMS provides a consistent nationwide approach that allows federal, state, local and tribal governments as well as private sector and nongovernmental organizations to work together to manage incidents and disasters of all kinds. To be eligible for federal emergency management assistance, water and wastewater mutual aid and assistance programs must meet NIMS standards for emergency preparedness and response.

**B. Control** - Personnel sent by a Responding Member shall remain under the direct supervision and control of the Responding Member. The Requesting Member's Authorized Official shall coordinate response activities with the designated supervisor(s) of the Responding Members(s). Whenever practical, Responding Member's personnel must be self-sufficient for up to 72 hours.

**C. Food and Shelter** - The Requesting Member shall supply reasonable food and shelter for the Responding Member's personnel. If the Requesting Member fails to provide food and shelter for Responding Member's personnel, the Responding Member's designated supervisor is authorized to secure the resources necessary to meet the needs of its personnel. The cost for such resources must not exceed the per diem rates established

by the State of Michigan for that area. The Requesting Member remains responsible for reimbursing Responding Member for all costs associated with providing food and shelter, if such resources are not provided.

**D. Communication** - The Requesting Member shall provide Responding Member's personnel with radio equipment as available, or radio frequency information to facilitate communications with local responders and utility personnel.

**E. Status** - Unless otherwise provided by law, the Responding Member's officers and employees retain the same privileges, immunities, rights, duties and benefits as provided in their respective jurisdictions.

**F. Licenses & Permits** - To the extent permitted by law, the Responding Member's personnel who hold licenses, certifications or permits issued by the State of Michigan evidencing professional, mechanical or other skills and when such assistance is sought by the Requesting Member, shall be allowed to carry out activities and tasks relevant to their respective credentials during the specified Period of Assistance.

**G. Right to Withdraw** - The Responding Member's Authorized Official retains the right to withdraw some or all of its resources at any time. Notice of intention to withdraw must be communicated to the Requesting Member's Authorized Official as soon as possible. Notice of withdrawal can be made orally or in writing and is within the complete discretion of the Responding Member. When made orally, the notice of withdrawal shall be prepared and submitted in writing as soon as practicable after the oral notice.

**H. No Waiver of Governmental Immunity** – All of the privileges and immunities from liability, and exemptions from laws, ordinances and rules which apply to the activity of officers, agents and employees of public bodies, including, but not limited to counties, cities, townships, and villages, shall apply to the same degree and extent to the performance of such functions and duties of Members extraterritorially under the provision of this Agreement. No provision of this Agreement is intended to, nor shall any provision of the Agreement be construed as a waiver by any governmental entity, its agents, employees or officials, of any governmental immunity as provided by Public Act 170 of 1964, the "Governmental Immunity Act," as set forth in MCL 691. 1401, et seq.

**I. Independent Contractor** - The Members agree that at all times and for all purposes under the terms of this Agreement each Member's relationship to any other Member shall be that of an independent contractor. No liability, right or benefit arising out of any employer/employee relationship, either express or implied, shall arise or accrue to any Member as a result of this Agreement. Personnel dispatched to aid a Member are entitled to receive benefits and/or compensation to which they are otherwise entitled under the Michigan Workers' Disability Compensation Act of 1969, any pension law, or any act of Congress.

Members, as independent contractors are not authorized to enter into or sign any agreements on behalf of other Members or to make any representations to third parties that are binding upon other Members.

**J. Liability.** Each Member will be solely responsible for the acts of its own employees, agents, and subcontractors, the costs associated with those acts and the defense of those acts. The Members shall not be responsible for any liability or costs associated with those acts and the defense of those acts for Members outside of their political jurisdictions. It is agreed that none of the Members shall be liable for failure to respond for any reason to any request for assistance or for leaving the scene of an Emergency with proper notice after responding to a Request for Assistance.

**K. Insurance.** Each Member shall be responsible for insuring its activities as they relate to MiWARN. MiWARN may choose to require each Member to provide Certificates of Insurance or Self-Insurance demonstrating the Member's proper coverage and limits. In the event any Member has a lapse in proper insurance coverage, as determined by the Steering Committee, the Member may be suspended from participation in MiWARN.

**L. Confidential Information.** To the extent permitted by law, Members shall maintain the strictest confidence and shall take all reasonable steps necessary to prevent the disclosure of any confidential information relating to the ongoing security measures of a public body, capabilities and plans for responding to a violation of the Michigan anti-terrorism act, chapter LXXXIII-A of the Michigan penal code, 1931 PA 328, MCL 750.543a to 750.543z, emergency response plans, risk planning documents, threat assessments, and domestic preparedness strategies, including but not limited to confidential information relating to the plans, specifications and location of water and wastewater facilities provided to it by another Member pursuant to this Agreement. If any Member or third party requests or demands by subpoena or otherwise, that Member shall immediately notify the owner of the confidential information and shall take all reasonable steps necessary to prevent the disclosure of any confidential information by asserting all applicable rights and privileges with respect to such information and shall cooperate fully in any judicial or administrative proceeding related thereto.

## **ARTICLE VII. COST REIMBURSEMENT**

Unless otherwise mutually agreed in whole or in part, the Requesting Member shall reimburse the Responding Member for each of the following categories of costs incurred while providing aid and assistance during the specified Period of Assistance.

**A. Personnel** - Responding Member's personnel are to be paid for work completed during a specified Period of Assistance according to the terms provided in their employment contracts or other conditions of employment. The Responding Member's designated supervisor(s) must keep accurate records of work performed by personnel during the specified Period of Assistance. Re-questing Member reimbursement to the Responding

Member must consider all personnel costs, including salaries or hourly wages, costs for fringe benefits, and indirect but necessary costs.

**B. Equipment** - The Requesting Member shall reimburse the Responding Member for the use of equipment during a specified Period of Assistance. At a minimum, rates for equipment use must be based on the FEMA Schedule of Equipment Rates. If a Responding Member uses rates different from those in the FEMA Schedule of Equipment Rates, The Responding Member must provide such rates in writing to the Requesting Member's Authorized Official prior to supplying resources. Mutual agreement on which rates are used must be reached in writing prior to dispatch of the equipment. Reimbursement for equipment not referenced on the FEMA Schedule of Equipment Rates must be developed based on actual recovery of costs. In the event the Responding Member's equipment is damaged during the Period of Recovery that is not caused by carelessness, negligence or operator error on the part of the Responding Member, the Requesting Member shall reimburse the Responding Member for the repair or replacement of the damaged equipment. Damage must be reasonably attributed to the specific response and taking into consideration normal wear and tear.

**C. Materials and Supplies** - The Responding Member shall be reimbursed for all materials and supplies furnished by it and used or damaged during the Period of Assistance, unless such damage is caused by negligence of the Responding Member or their utility personnel. The Requesting Member must reimburse the Responding Member in kind or at actual replacement cost, plus handling charges, for use of expendable or non-returnable supplies. Handling charges shall be as set forth in the by-laws or resolution of the Steering Committee. The Responding Member must not charge direct fees or rental charges to the Requesting Member for other supplies and reusable items that are returned as soon as practicable to the Responding Member in clean, damage-free condition. Reusable supplies that are returned to the Responding Member with damage must be treated as expendable supplies for the purposes of cost reimbursement. Requesting Members shall be given the option of providing the supplies need or used by the Responding Member.

**D. Incidental Costs** - Other reasonably related incidental costs that are accrued by the Responding Member during the specified Period of Assistance shall be paid by the Requesting Member. Incidental costs include travel costs to deploy personnel to the Requesting Member's location, shipping costs to transport equipment, etc.

**E. Payment Period** - The Responding Member must provide an itemized bill to the Requesting Member, listing the services provided, the dates services were provided, and the amount of payment due for all expenses it

incurred as a result of providing assistance under this Agreement. The Responding Member shall send the itemized bill not later than ninety (90) days following the end of the Period of Assistance. The requesting Member must pay the bill in full on or before the sixtieth (60<sup>th</sup>) day following the billing date. The Requesting Member shall return any invalid or incomplete invoice to the Responding Member within thirty (30) days after the Requesting Member receives the invoice. An explanation will accompany the invoice that states the reason for the return and any information needed to correct the invoice. Unpaid bills become delinquent upon the sixty-first (61<sup>st</sup>) day following the billing date unless alternate payment agreement between parties can be reached. Once a bill is determined to be delinquent, it shall accrue interest at the rate of prime plus two percent (2%) per annum as reported by the Wall Street Journal.

**F. Disputed Billings** - Those undisputed portions of a bill shall be paid under the payment plan specified above. Only the disputed portions should be sent to arbitration under Article VIII.

#### **ARTICLE VIII. DISPUTE RESOLUTION**

If any controversy or claim arises out of or relates to the Agreement, including but not limited to an alleged breach of the Agreement, the disputing Member may agree in writing, if authorized by the Member's governing body, to arbitration of the matter in accordance with the rules of the American Arbitration Association. This provision does not waive any right of any party to file the claim in appropriate court having jurisdiction.

#### **ARTICLE IX. SIGNATORY INDEMNIFICATION**

In the event of a liability, claim demand, action or proceeding of whatever kind or nature arising out of a specified event of Assistance, the Requesting and Responding Members who receive and provide assistance shall indemnify and hold harmless those non-responding Members whose involvement in the transaction or occurrence that is the subject of such claim, demand, or other proceeding is limited to execution of this Agreement.

In the event of a claim for property damage or bodily injury by a non-party hereto, arising from an event of assistance neither the Responding Member nor the Requesting Member will be deemed to indemnify, defend or hold harmless the other from any act or omission of the other Member's officers, employees, agents, contractors or volunteers acting under this Agreement.

#### **ARTICLE X. WORKER'S COMPENSATION CLAIMS**

Each Member is responsible for providing worker's compensation benefits and administering worker's compensation for its own personnel as it would in the normal course of business.

**ARTICLE XI.      NOTICE**

A Member who becomes aware of a claim or suit that in any way, directly or indirectly contingently or otherwise, affects or might affect other Members of this Agreement shall provide prompt and timely notice to the Members who may be affected by the suit or claim. Each Member reserves the right to participate in the defense of such claims or suits as necessary to protect its own interests.

**ARTICLE XII.     EFFECTIVE DATE**

This Agreement shall be effective on the date of full execution of the Agreement. The date of full execution of this Agreement shall be the last date on which this agreement has been signed by a party to this Agreement. The Steering Committee shall maintain a list of all Members.

**ARTICLE XIII.    DURATION, WITHDRAWAL, AND TERMINATION OF AGREEMENT**

**A. Duration.** This Agreement shall commence on the Effective Date and continues until terminated in accordance with Section C, below.

**B. Withdrawal by a Member.** Any Member may withdraw, at any time, from this Agreement for any reason, or for no reason at all, upon seven (7) days written notice to the Steering Committee. The withdrawal of any Member shall not terminate or have any effect upon the provisions of this Agreement so long as MiWARN remains composed of at least two (2) Members.

**C. Termination.** The MiWARN shall continue until terminated by the first to occur of the following:

- (a) MiWARN consists of less than two (2) Members; or
- (b) A unanimous vote of termination by the total membership of MiWARN.

**ARTICLE XIV.     MODIFICATION**

No provision in this Agreement may be modified, altered, or rescinded by individual parties to the Agreement. Modification to this Agreement may be due to programmatic operational changes to support the Agreement. Modifications require a simple majority vote of Members. The Chair of the Steering Committee must provide written notice to all Members of approved modifications to this Agreement. Approved modifications take effect 60 days after the date upon which notice is sent to the Members.

**ARTICLE XV. ASSIGNMENT OF RIGHTS/DUTIES**

Assignments of benefits and delegations of duties created by this Agreement are prohibited and must be without effect.

**ARTICLE XVI. PRIOR AGREEMENTS**

Nothing within this Agreement shall prohibit a Member from participating in other mutual aid agreements and this Agreement shall not supersede prior Agreements between Members unless the prior Agreement is terminated.

**ARTICLE XVII. PROHIBITION ON THIRD PARTIES AND ASSIGNMENT OF RIGHTS/DUTIES**

This Agreement is for the sole benefit of the Members and no person or entity may have any rights under this Agreement as a third-Member beneficiary. Assignments of benefits and delegations of duties created by this Agreement are prohibited and must be without effect. Any Member may be removed from participation in this Mutual Aid Agreement by majority vote of the Members of the applicable Regional Committee, or Steering Committee, with adequate notice and a right to be heard at a regular or special meeting.

**ARTICLE XVIII. INTRASTATE & INTERSTATE MUTUAL AID AND ASSISTANCE PROGRAMS**

To the extent practicable, Members of MiWARN shall participate in Mutual Aid and Assistance activities conducted under the State of Michigan Intrastate Mutual Aid and Assistance Program and Interstate Emergency Management Assistance Compact (EMAC). Members may voluntarily agree to participate in an interstate Mutual Aid and Assistance Program for water and wastewater utilities and public works agencies through this Agreement if such a Program were established.

**ARTICLE XIX. RECORDS, DOCUMENTS AND SENSITIVE INFORMATION**

All records, documents, writings or other information produced or used by the parties to this Agreement, which, under the laws of the State of Michigan, are classified as public or privileged, will be treated as such by the other parties to this Agreement. The parties to this Agreement shall not use any information, systems or records made available to them for any purpose other than to fulfill their contractual duties specified in this Agreement. Both Requesting and Responding Members acknowledge that they will have access to sensitive information of others that may be considered sensitive or protected under the laws of the State of Michigan. If a Member receives a request to provide information of another Member or a third party, the Member receiving such request shall notify the other Member and they shall jointly agree upon what documentation is to be released, subject to applicable laws, ordinances and regulations.



## **ARTICLE XX. MISCELLANEOUS**

A. This Agreement sets forth the entire agreement between the parties. The language of this Agreement shall be construed as a whole according to its fair meaning and not construed strictly for or against any Member. The parties have taken all actions and secured all approvals necessary to authorize and complete this Agreement.

B. **Severability of Provisions.** If a Court of competent jurisdiction finds any provision of this Agreement invalid or unenforceable, then that provision shall be deemed severed from this Agreement. The remainder of this Agreement shall remain in full force.

C. **Governing Law/Consent to Jurisdiction and Venue.** This Agreement is made and entered into in the State of Michigan and shall in all respects be interpreted, enforced and governed under the laws of the State of Michigan.

D. **Captions.** The captions, headings, and titles in this Agreement are intended for the convenience of the reader and not intended to have any substantive meaning and are not to be interpreted as part of this Agreement.

E. **Terminology.** All terms and words used in this Agreement, regardless of the numbers or gender in which they are used, are deemed to include any other number and any other gender as the context may require.

F. **Recitals.** The Recitals shall be considered an integral part of this Agreement.

G. **Amendment.** The Agreement may be amended or an alternative form of the Agreement adopted only upon written agreement and approval of the governing bodies of all parties, except an amendment to remove a Member shall not require agreement or approval of the governing body of the Member being removed. Upon an Amendment to this Agreement being adopted, a copy, certified by the secretary of the Steering Committee, shall be furnished to all Members.

H. **Compliance with Law.** MiWARN shall comply with all federal and State laws, rules, regulations, and orders applicable to this Agreement.

I. **No Third Party Beneficiaries.** Except as expressly provided herein, this Agreement does not create, by implication or otherwise, any direct or indirect obligation, duty, promise, benefit, right of indemnification (i.e., contractual, legal, equitable, or by implication) right of subrogation as to any party's rights in this Agreement, or any other right of any kind in favor of any individual or legal entity

J. **Counterpart Signatures.** This Agreement may be signed in counterpart. The counterparts taken together shall constitute one (1) agreement.

**K. Permits and Licenses.** Each Member shall be responsible for obtaining and maintaining, throughout the term of this Agreement, all licenses, permits, certificates, and governmental authorizations for its employees/and/or agents necessary to perform all its obligations under this Agreement. Upon request, a Member shall furnish copies of any permit, license, certificate or governmental authorization to the requesting Member.

**L. No Implied Waiver.** Absent a written waiver, no fact, failure, or delay by a party to pursue or enforce any rights or remedies under this Agreement shall constitute a waiver of those rights with regard to any existing or subsequent breach of this Agreement. No waiver of any term, condition, or provision of this Agreement, whether by conduct or otherwise, in one or more instances shall be deemed or construed as a continuing waiver of any term, condition, or provision of this Agreement. No waiver by any party shall subsequently affect its right to require strict performance of this Agreement.

NOW, THEREFORE, in consideration of the covenants and obligations contained herein, the participating utilities listed here, as a Participating Member duly executes this Water/Wastewater Mutual Aid Agreement this \_\_\_\_ day of \_\_\_\_\_, 2014.

Water/Wastewater Utility or Public Works Agency Authorized Official(s):

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Name of Participating Member: \_\_\_\_\_

**(Please note:** Attach a copy of your MiWARN resolution to this document when you submit it. Thank You.