

MARION TOWNSHIP
BOARD OF TRUSTEES
REGULAR MEETING
Thursday, September 12, 2019
7:30 p.m.

Call to Order
Pledge of Allegiance
Members Present/Members Absent
Call to the Public

- 1) Approval of Agenda
- 2) Consent Agenda
 - a. Approval of August 22, 2019 Regular Meeting Minutes
 - b. Complaint Report
 - c. DPW Report
 - d. Zoning Report
 - e. August 20, 2019 HAPRA Minutes
 - f. August 2019 Financial Report
 - g. August 21, 2019 MHOG Agenda/Minutes
 - h. August 21, 2019 HAFDA Agenda/Minutes
- 3) Triangle Lake Weed SAD Public Hearing
- 4) Triangle Lake Weed Control SAD Resolutions
- 5) Review Proposed Marion Township Development Standards
- 6) Marion Township Master Plan
- 7) Final Review of TXT \$04-17 Section 10.01 Landscape Operation in Light Industrial District
- 8) Final Review TXT #05-17 Section 9.01 HS Outdoor Vehicle Storage, Section 17.34 Special Use
- 9) Lisa Maher Sewer Lead (Bring Back)
- 10) Sewer Billing
- 11) Home Town Phase III Sale/ Water Tower
- 12) Private Roads
- 13) 2019 Livingston County Catholic Charities Request
- 14) ZBA Report

Correspondence and Updates
Township Wide Rubbish and Recycling
Site Plan Review Class

Call to the Public
Adjournment

Reminder: Next Board Packet will be ready after 3pm on Thursday, September 19, 2019

MARION TOWNSHIP
BOARD OF TRUSTEES
REGULAR MEETING
AUGUST 22, 2019

MEMBERS PRESENT: Les Andersen, Tammy Beal, Dan Lowe, Duane Stokes, Scott Lloyd, and Bob Hanvey

MEMBERS ABSENT: Greg Durbin

OTHERS PRESENT: Phil Westmoreland, Spicer

CALL TO ORDER

Bob Hanvey called the meeting to order at 7:30 pm.

PLEDGE OF ALLEGIANCE

BOARD MEMBERS PRESENT

The board members introduced themselves.

CALL TO THE PUBLIC

No response.

APPROVAL OF AGENDA

Les Andersen motioned to approve the agenda. Duane Stokes seconded. **Motion carried.**

CONSENT AGENDA

Les Andersen motioned to approve the consent agenda. Tammy Beal seconded. **Motion carried.**

NUISANCE ORDINANCE

Les Andersen said he prefers the longer version of the ordinance. Bob Hanvey said the board needs to decide whether they want civil infractions or misdemeanors. The board members agreed it should be civil infractions. Mr. Hanvey will send the version included in today's packet to the attorney for review and to help figure out the process for handling the civil infractions.

LISA MAHER SEWER LEAD

Phil Westmoreland said Spicer is almost done with the plans; he should have them next week, and he will send it out to contractors for prices. Bob Hanvey said that Ms. Maher indicated she would also like to connect the house to the north of hers. She says she has correspondence from the township that indicates that property can purchase an REU at \$5499 rate; Mr. Hanvey said he will continue to look for that letter in the township's files.

SEWER BILLING

Bob Hanvey said the City of Howell had a 6.9% increase effective August 1; he is waiting to receive a letter from them and will present it at the next board meeting.

2020 ROAD PROJECTS

An email from the Howell Township treasurer is included in the packet, asking whether the township would be interested in cost sharing work on Mason Road. Dan Lowe said let the LCRC pay for the work. Bob Hanvey said he will ask for more information from Howell Township. Les Andersen suggested that Phil Westmoreland look at the blacktop roads and come up with five, and also suggested Schafer Road. Scott Lloyd suggested adding more gravel to some of the dirt roads, such as Cedar Lake south of Coon Lake. Dan Lowe said the township should be spending \$50,000 each year on Cedar Lake in preparation for paving. Bob Hanvey said the township has received more requests for road SADs. A resident from Parker Drive said the road needs maintenance. Bob Hanvey said there are some issues with Parker Drive because several of the property owners don't actually have frontage. He suggested holding an informal meeting with the property owners to discuss.

WITKOWSKI'S PA #116

The board members reviewed the Witkowski's application. Les Andersen motioned to have the supervisor check with both attorneys on whether approving the PA #116 could impact current litigation with the property owner. Scott Lloyd seconded. **Motion carried.** If necessary, a special meeting may be scheduled to vote on this issue.

TRANSPORTATION MASTER PLAN IMPLEMENTATION

The Transportation Coalition is requesting the each of the units in the county support and encourage the county commissioners to fully implement the master plan. No motion from the board is required at this time.

PFEFFER, HANNIFORD, PALKA ENGAGEMENT LETTER

Les Andersen motioned to give permission to the clerk and supervisor to sign the contract with Pfeffer, Hanniford, Palka, as presented. Duane Stokes seconded. Roll call vote: Lowe, Lloyd, Beal, Hanvey, Andersen, Stokes—all yes. **Motion carried 6-0.**

CORRESPONDENCE & UPDATES

Tammy Beal said the zoning administrator hadn't heard from Dan Lowe and Les Andersen about attending the site plan review class; both said they will attend.

Les Andersen said a recent MTA magazine indicated that wedding barns are not covered by Right-to-Farm.

Genoa Township is hosting an upcoming Brown Bag Lunch meeting on how to write a wedding barn ordinance, led by Carlisle Wortman.

CALL TO THE PUBLIC

No response.

ADJOURNMENT

Tammy Beal motioned to adjourn at 8:58 pm. Les Andersen seconded. **Motion carried.**

Submitted by: S. Longstreet

Tammy L. Beal, Township Clerk Date

Robert W. Hanvey, Township Supervisor Date

Request for Zoning Administrator, **Dave Hamann**, to be present at
the Board of Trustee meeting on SEPTEMBER 12, 2019.
Date

Requested by Robert W. Harvey.
Signature

COMPLAINT LOG

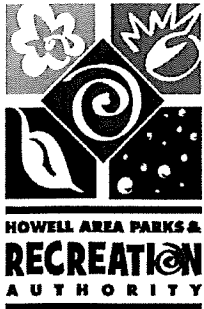
Complaint #	Complainant Name	Offender Name	Complaint Details	Action Taken	Date Violation	Show Cause Date	Resolved
#07-19	Gary Hatter	Ron Arnold	Abandon Van	Letter sent			
8/8/2019	2657 Clivedon	2631 Clivedon					
		4710-27-102-012					

DPW Report

	2019												
	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
WATER													
NEW	4	2	9	6	5	0	6	5					37
EXISTING													
REPLACEMENT													
IRRIGATION													
NEW			2	1	2	1	10						16
EXISTING													
SEWER													
NEW	4	1	8	4	3	0	7	5					32
EXISTING													
TOTAL	8	3	19	11	10	1	23	10					85

2019 ZONING REPORT

	'JAN	'FEB	'MARCH	'APRIL	'MAY	'JUNE	'JULY	'AUG	'SEPT	'OCT	'NOV	'DEC	TOTAL
Homes	5	2	9	11	4	5	9	7					52
Condo Units													0
Accessory Bldgs.	4	1		3		1	1	1					11
Decks		2	1	3	3	3	2	1					15
Pools		1	2	2				1					6
Additions	1			1		1	1						4
Land Balancing				1				1					2
Other			1	2		1							4
TOTAL LAND USES	10	6	13	23	7	11	13	11	0	0	0	0	94
Waivers	3	4	3	10	7	4	5	8					44
Finals	8	4	14	6	18	12	11	11					84
Site Plans													0
Pre-Planning Meetings	1		1		1	1							3



Howell Area Parks & Recreation Authority

Bennett Recreation Center

Regular Board Meeting Minutes

August 20, 2019

Call to Order

Chairperson Sean Dunleavy called the meeting to order at 7:00 pm.

Pledge of Allegiance

Attendance

Chairman Sean Dunleavy, Vice Chair Diana Lowe, Secretary Tammy Beal, Treasurer Bob Ellis, Trustee Jean Graham

Staff

Director Tim Church, Kyle Tokan, Kevin Troshak, Jordan Jones

Public

None

Approval of Agenda

Bob Ellis made a motion to approve the agenda, supported by Diana Lowe. **Motion carried 5-0.**

Approval of Minutes

Bob Ellis motioned to approve the June 25, 2019 Regular meeting minutes, supported by Jean Graham.

Motion carried 5-0.

Call to the Public

None heard.

Staff Comments

None

2020 Budgets

Director Church reported that he and Jenn have been going over the budget and it will be ready to take to the jurisdictions beginning in September, hoping to have them all completed by November. Adult and Youth sports will be combined into one budget.

Legend of Sleepy Howell

There were a couple of options of where to move the event so that Grand River would not have to be closed down. They were the Hive and Page Field but it was decided on closing Clinton Street and having it between Michigan Avenue and Barnard Street utilizing State Street and the County parking lot. Trick or Treating will be from 4:30-6:30 pm, Monster Mile will be at 7 pm and Headless Horseman will be at 7:30 pm.

Check Register and Bank Statements ending June 30, 2019

Everything looks good.

Financial Reports ending June 30, 2019

Treasurer Ellis passed out a graph and reported that everything looked great! Revenues and expenses were more than the targeted amount but the surplus is within the targeted amount.

Financial Report ending July 31, 2019

This is the time of year when we have the most surplus, it is \$10K above the targeted amount and the grant money will be added to that amount when it arrives.

Check Register and Bank Statements ending July 31, 2019

Everything looks good.

HAAC Report 2018-2019 Year End

We made money at the pool, July numbers are 3000 plus more than last year!

Directors Report

- Melon Fest went great and Amelia made it a smooth transition from Nicky. The festival tent brought in almost \$19K. Great job everyone!
- Fall Soccer has 474 enrolled this year, there were 420 last year. There are 30 kids ages 7-9 on the waiting list.
- Summer camp wrapped up, there was great feedback. The seasonal help are leaving.

Old Business

None

New Business

- Oceola Township is still contemplating the construction of a new recreation building, projected cost is estimated at 5 million. Director Church and Jenn have been running some numbers as to how much it will cost to maintain and operate the facility.
- Genoa Township just approved two outdoor courts, one will be for basketball the other is to be determined. They will be on the North side of the driveway by the walking path entrance.

- Marion Township's disc golf course was redesigned at the end of July. Cement T-pads were also constructed.

Next Meeting

The next regular meeting will be Tuesday, September 17, 2019 at 7 pm at the Bennett Center.

Motion to adjourn at 7:50 pm by Diana Lowe, supported by Bob Ellis. **Motion carried 5-0.**

Approved

Date

Respectively Submitted by: Tammy L. Beal, Secretary

11-15-2019 10:00 AM
11-15-2019 10:00 AM

FISCAL YEAR 2019-20 MARION TOWNSHIP FINANCIAL REPORT

Aug-19

GENERAL FUND CHECKING

Previous Balance	\$	1,221,210.49
Receipts	\$	55,776.92
Interest	\$	981.09
	\$	<u>1,277,968.50</u>
Expenditures	\$	268,737.34
Balance	\$	<u>1,009,231.16</u>

CEMETERY FUND

Previous Balance	\$	2,356.62
Receipts	\$	1,000.00
Interest		
	\$	<u>3,356.62</u>
Expenditures	\$	1,659.99
Balance	\$	<u>1,696.63</u>

PARKS & RECREATION FUND

Previous Balance	\$	9,759.06
Receipts	\$	-
Interest		
	\$	<u>9,759.06</u>
Expenditures	\$	3,174.35
Balance	\$	<u>6,584.71</u>

WATER - NEW USER

Previous Balance	\$	402,464.28
Receipts	\$	16,197.23
Interest	\$	318.27
	\$	<u>418,979.78</u>
Expenditures	\$	15,182.00
Balance	\$	<u>403,797.78</u>



FINANCIAL REPORT

Page 2

Aug-19

SEWER OPERATING & MANAGEMT

Previous Balance	\$	98,632.25
Receipts	\$	69,266.48
Interest		
	\$	<hr/> 167,898.73
Expenditures	\$	28,726.37
Balance	\$	<hr/> 139,172.36

SEWER - NEW USER

Previous Balance	\$	200,301.53
Receipts	\$	655.00
Interest		
	\$	<hr/> 200,956.53
Expenditures	\$	-
Balance	\$	<hr/> 200,956.53

SPEC ASSESS. FUND

Previous Balance	\$	197,317.02
Receipts	\$	1,862.87
	\$	<hr/> 199,179.89
Expenditures	\$	2,639.50
Balance	\$	<hr/> 196,540.39

SUMMARY TOTALS

General Fund	\$	1,009,231.16
Cemetery Fund	\$	1,696.63
Parks & Rec Capital Chkg Acct	\$	6,584.71
Water - New User	\$	403,797.78
Sewer Operating & Management	\$	139,172.36
Sewer - New User	\$	200,956.53
Special Assess. Fund	\$	196,540.39
TOTAL	\$	<hr/> 1,957,979.56

09/04/19 10:53:43 AM

#101 General Fund Account QuickReport As of August 31, 2019

09/04/19

Date	Num	Name	Memo	Amount
001 - CASH - GENERAL - FNB				
08/01/2019	10611	B&L Services	INVOICE# 1223 LAWN SERVICES 7/22 & 7/29	-370.00
08/01/2019	10612	DAVID HAMANN	JULY 2019 MILEAGE	-73.08
08/01/2019	10613	Karen Hawkins	JULY 2019 MILEAGE	-131.66
08/01/2019			Deposit	4,607.45
08/01/2019			Deposit	10.00
08/01/2019			Deposit	
08/05/2019	10617	ALCHIN'S DISPOSAL INC	ACCOUNT# 388465 INVOICE# 97100006 - RE...	-2,070.00
08/05/2019	10618	NEOFUNDS BY NEOPOST	ACCOUNT # 7900044449626229 / 7/25/2019	-250.00
08/06/2019	10619	Duane Stokes	JULY 2019 MILEAGE	-20.88
08/06/2019	10620	PNC Bank	JUNE 2019 EXPENSES	-607.88
08/07/2019	10623	WEST SHORE SERVICES, INC	INVOICE#26611 Annual Inspection & Maintena...	-850.00
08/07/2019	10624	MICHAEL J. KEHOE, P.C.	INVOICES# 2969, 2970, 2971, 2972	-1,173.00
08/07/2019			Deposit	50.00
08/08/2019	4766DD	TAMMY L. BEAL	JULY 2019 PAYROLL	-2,552.33
08/08/2019	4767DD	JESSICA S. TIMBERLAKE	JULY 2019 PAYROLL	-2,405.68
08/08/2019	4768DD	GAIL A. BURLINGAME	JULY 2019 PAYROLL	-2,932.69
08/08/2019	4769DD	KITSEY A. RENNELLS	JULY 2019 PAYROLL	-1,696.97
08/08/2019	4770DD	DUANE M. STOKES	JULY 2019 PAYROLL	-2,975.92
08/08/2019	4771DD	SANDRA J. LONGSTREET	JULY 2019 PAYROLL	-2,563.46
08/08/2019	04772	LESLIE D. ANDERSEN	JULY 2019 PAYROLL	-392.37
08/08/2019	4773DD	GREGORY L. DURBIN	JULY 2019 PAYROLL	-1,074.53
08/08/2019	04774	SCOTT R. LLOYD	JULY 2019 PAYROLL	-276.58
08/08/2019	04775	DANIEL F. LOWE	JULY 2019 PAYROLL	-515.70
08/08/2019	04776	LARRY J. FILLINGER	JULY 2019 PAYROLL	-92.35
08/08/2019	04777	EDMUND J. GALUBENSKY	JULY 2019 PAYROLL	-92.35
08/08/2019	4778DD	LAWRENCE W. GRUNN	JULY 2019 PAYROLL	-220.24
08/08/2019	4779DD	LINDA M. MANSON-DEMPSEY	JULY 2019 PAYROLL	0.00
08/08/2019	4780DD	DAVE HAMANN	JULY 2019 PAYROLL	-3,026.08
08/08/2019	04781	JAMES L. ANDERSON JR.	JULY 2019 PAYROLL	-88.10
08/08/2019	04782	BRUCE V. POWELSON	JULY 2019 PAYROLL	-92.35
08/08/2019	4783DD	ROBERT W. HANVEY	JULY 2019 PAYROLL	-3,672.65
08/08/2019	4784DD	KAREN D. HAWKINS	JULY 2019 PAYROLL	-2,359.28
08/08/2019	4785DD	PATRICIA J. HUGHES	JULY 2019 PAYROLL	-2,055.03
08/08/2019	4786DD	LOREEN B. JUDSON	JULY 2019 PAYROLL	-3,720.46
08/08/2019	4787DD	THOMAS A. LLOYD	JULY 2019 PAYROLL	-456.08
08/08/2019	4788DD	DIANE D. BOCKHAUSEN	JULY 2019 PAYROLL	-23.08
08/08/2019	04789	RICHARD C. DELL	JULY 2019 PAYROLL	-23.09
08/08/2019	4790DD	BARBARA J. HAMANN	JULY 2019 PAYROLL	-23.08
08/08/2019	04791	CHERYL A. RANGE	JULY 2019 PAYROLL	-115.44
08/08/2019	10614	Marion Township Flex Fund	JULY 2019 PAYROLL	-2,005.32
08/08/2019	10615	VOYA Institutional Trust	JULY 2019 PAYROLL	-300.00
08/08/2019	10616	ALERUS PAYMENT SOLUTIONS	JULY 2019 PAYROLL / PLAN ID 628233 / DIVI...	-3,648.45
08/08/2019	JULY 19 ...		PAYCHEX FEE - JULY 2019 PAYROLL	-342.67
08/08/2019	JULY 19 ...		TOTAL TAXES FOR JULY 2019 PAYROLL	-10,865.31
08/08/2019			Deposit	3,913.63
08/12/2019	10621	PAMELA DORER	HALL RENTAL REFUND 8-10-2019	-100.00
08/12/2019	10622	GAYLA REUTER-ALM	HALL RENTAL REFUND 8-11-2019	-100.00
08/12/2019	ATT- AU...		ATT CELL TOWER LEASE PAYMENT AUGUS...	2,281.31
08/12/2019	10625	DTE ENERGY	ACCOUNT# 9100 104 3211 0 / 7/04/2019 - 8/02...	-623.04
08/12/2019	10626	Michigan.com	ACCOUNT# 115165 / INVOICE# 0002698110	-365.00
08/12/2019	10627	Culligan of Ann Arbor	ACCOUNT 760611 / INVOICE# 553919 AND 55...	-102.10
08/12/2019	10628	Charter Communications	ACCOUNT 8245124870024359 / 08/06/19 - 09/...	-404.54
08/13/2019	10629	Applied Imaging Systems Inc.	INVOICE # 1358383 / BASE: 06/22/19 - 09/21/1...	-447.03
08/13/2019	10630	Chloride Solutions	INVOICE# 526 Triangle Lake Road D-19 to pav...	-870.28
08/14/2019	10631	BS & A SOFTWARE, INC	INVOICE# 124867ANNUAL SERVICE/SUPPO...	-1,365.00
08/15/2019			Deposit	3,972.28
08/15/2019			Deposit	50.00
08/15/2019	CHA APR...		CHARTER PAYMENT APRIL, MAY, JUNE 2019	32,366.40
08/19/2019	10632	B&L Services	LAWN SERVICES - INVOICE# 1229 8/7/2019 &...	-370.00
08/19/2019	10633	CARLISLE/WORTMAN, Inc.	INVOICE 2153902, 2153903, 2153904	-1,560.00
08/19/2019	10634	Blue Cross Blue Shield of Michigan	GROUP 007017906710 / COVERAGE 8-15-201...	-13,938.36
08/19/2019	10635	MICHIGAN ASSESSORS ASSOC.	MAA 2019 FALL EDUCATION REGISTRATION...	-105.00
08/21/2019	10636	Spicer Group Inc	INVOICE# 197518 PLANNING COMMISSION E...	-2,565.00
08/21/2019	10637	Green Oak Township	INVOICE# TD1721 2019 SUMMER DEFERME...	-20.00
08/21/2019	10638	CARTRIDGE WORLD	INVOICE# 134958 - 4 TONER/INK CARTRIDGES	-253.96
08/21/2019	10639	CONSUMERS ENERGY	ACCOUNT 100019742632 / SERVICE DATES: ...	-25.75
08/21/2019	10640	Bruce Powelson	MTA CLASS 08-20-19 HOT TOPICS ZONING &...	-75.40

11/20/2019 11:20 AM
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 11/20/2019 11:20 AM

#101 General Fund Account QuickReport As of August 31, 2019

09/04/19

Date	Num	Name	Memo	Amount
08/22/2019	10641	HOWELL AREA FIRE AUTHORITY	INVOICE# 19-005 - 2018 INTERNATIONAL FIR...	-95.68
08/22/2019			Deposit	475.00
08/22/2019			Deposit	1,000.00
08/28/2019	2014-19 L...		2014. 2015. 2016. 2017. 2018. 2019 ALLOCAT...	-150,000.00
08/28/2019	10642	Flushing Township	Lori Judson accomidations for Assessing Class ...	-269.40
08/28/2019	10643	VOID	PROVIDED VOIDED CHECK TO ADP - SWITC...	0.00
08/28/2019	10644	Colonial Life	BCN# E4270229 / INVOICE# 4270229-0801501	-265.83
08/28/2019	10645	STAPLES	ACT. 6035 5178 2005 6389 / 07/29/2019 - 08/1...	-151.88
08/29/2019	10646	B&L Services	LAWN SERVICES - INVOICE# 1237 / 08/28/2019	-185.00
08/29/2019	10647	Loreen Judson	JULY - AUGUST 2019 MILEAGE	-111.94
08/29/2019	10648	Jessica Timberlake	JULY - AUGUST 2019 MILEAGE AND STIPEND	-34.28
08/29/2019	10649	Karen Hawkins	AUGUST 2019 MILEAGE	-128.76
08/29/2019	10650	Tammy Beal	JULY - AUGUST 2019 MILEAGE & LUNCH STI...	-129.40
08/29/2019	10651	DAVID HAMANN	AUGUST 2019 MILEAGE AND EXPENSES	-107.76
08/29/2019			Deposit	5,869.76
08/29/2019			Deposit	200.00
08/30/2019			Deposit	981.09
08/30/2019	FNBFE...		FNB FEE FOR SWEEPING ACCOUNTS	-10.00
Total 001 · CASH - GENERAL - FNB				-175,157.61
TOTAL				-175,157.61

MHOG Water Authority Meeting

August 21, 2019

5:00 PM at Oceola Township Hall

AGENDA

- 1. Approval of the Minutes of July 17, 2019**
- 2. Call to Public**
- 3. Reports**
 - **Staff Reports: Greg Tatara and Tesha Humphriss**
 - **Treasurer (Robin Hunt)**
 - **Engineer (Gary Markstrom)**
 - **CPA (Ken Palka)**
- 4. New Business**
 - **Correspondence**
- 5. Old Business**
- 6. Adjournment**

MHOG Water Authority Meeting

MINUTES

The Marion, Howell, Oceola, Genoa Water Authority met on July 17, 2019 at 5:00 PM at the Oceola Township Hall. Members present were Bamber, Coddington, Rogers, Hanvey, Schuhmacher, Hunt, Lowe and Counts.

The meeting was called to order by Chairman Hanvey.

A motion was made by Rogers to approve the minutes of the June 19, 2019 meeting. The motion was seconded by Schuhmacher and carried.

A call to the public was held.

A motion was made by Hunt to award the Construction Contract for the WTP Storage Building to Schafer Construction for \$598,000. The motion was seconded by Schuhmacher and carried.

A motion was made by Hunt to accept change order items 1 through 8 on the Schafer Contract for WTP Storage Building totaling a \$98,000 reduction in price as recommended by Tetra Tech. The motion was seconded by Coddington and carried.

A motion was made by Rogers to contract with Tetra Tech for Bidding and Construction Phase Services not to exceed \$27,000.00 as an Amendment No. 263 to their contract for WTP Storage Structures. The motion was seconded by Counts and carried.

A motion was made by Schuhmacher to award a contract for painting Marion Tank #1 and exterior cleaning of the Hometown Tank to Sevea Brothers for \$235,800.00 from the Replacement Reserve Account. The motion was seconded by Coddington and carried.

A motion was made by Schuhmacher to approve expenditures of \$148,108.45 from the M.H.O.G. Operating Fund represented by checks numbered 8101 thru 8130 and for direct deposit debits 481 thru 488. The motion was seconded by Rogers and carried.

A motion was made by Rogers to approve an expenditure of \$2,900.00 from the MHOG Capital Reserve Replacement Fund represented by check number 1061. The motion was seconded by Coddington and carried.

A motion was made by Rogers to approve an expenditure of \$16,614.75 from the M.H.O.G. Capital Reserve Improvement Fund represented by checks numbered 1129 - 1131. The motion was seconded by Schuhmacher and carried.

A motion was made by Hunt to adjourn. The motion was seconded by Coddington and carried.

William J. Bamber, Secretary

HOWELL AREA FIRE AUTHORITY MEETING
Oceola Township Hall
1577 N. Latson Rd. – Howell, MI
August 21, 2019 – 6:00 PM

Authority Board
Members and Other
Officials:

Bill Bamber
Oceola Township
Chairman

Mike Coddington
Howell Township
Vice Chairman

Mark Fosdick
Cohoctah Township
Secretary

Robert Hanvey
Marion Township
Member

Nick Proctor
City of Howell
Treasurer

Andy Pless
Fire Chief

Laura Walker
Asst. Sec./Treasurer

1. Meeting called to order at 6:00 pm.
2. Pledge of Allegiance (all stand)
3. Approve minutes of the regular meeting of July 17, 2019
4. Call to Public (items not on agenda)
5. Discussion/Approval Annual Livingston County Form L-4029 Tax Rate Request
6. Chief's Comments
 - a. Update on firefighter union contract status
 - b. Annual Audit
 - c. Open House October 13, 2019 1:00pm – 4:00pm
7. Approve payment of bills and payroll in the amount of \$145,168.37
8. New Business
9. Old Business
10. Closed Session
11. Adjourn

WELCOME!

Visitors are invited to attend all meetings of the Howell Area Fire Authority Board.
If you wish to address the Board you will be recognized by the Chairman.

HOWELL AREA FIRE AUTHORITY

July 17, 2019 – 6:00 pm

Oceola Township Hall – 1577 N. Latson Rd. Howell, MI 48843

Present: Chairman Bill Bamber, Vice Chairman Mike Coddington, Secretary Mark Fosdick, Treasurer Nick Proctor, Member Bob Hanvey, Deputy Fire Chief Ron Hicks, Asst. Sec/Treas. Laura Walker, Attorney Kevin Gentry

Absent: Fire Chief Andy Pless

Chairman Bill Bamber called the meeting to order at 6:00 pm

Approve the minutes of the regular meeting of June 19, 2019: MOTION by Mr. Proctor, SUPPORT by Mr. Coddington to approve the minutes of the regular meeting of June 19, 2019. MOTION CARRIED UNANIMOUSLY.

Call to Public: No Response

Discussion/Approval Annual Election of HAFA Board Officers Positions: MOTION by Mr. Fosdick, SUPPORT by Mr. Hanvey to maintain current slate. MOTION CARRIED UNANIMOUSLY.

Approve Payment of Bills and Payroll: MOTION by Mr. Hanvey, SUPPORT by Mr. Proctor to authorize payment of bills and payroll in the amount of \$143,863.60. MOTION CARRIED UNANIMOUSLY.

Adjourn: MOTION by Mr. Proctor, SUPPORT by Mr. Fosdick to adjourn the meeting at 6:08pm. MOTION CARRIED UNANIMOUSLY.

Respectfully Submitted: _____

Laura Walker

Laura Walker, Asst. Secretary/Treasurer

Approved By: _____

Mark Fosdick, Secretary

MONTHLY UPDATE TO THE BOARD

TO: HOWELL AREA FIRE AUTHORITY BOARD OF DIRECTORS
FROM: ANDREW PLESS, FIRE CHIEF
SUBJECT: MONTHLY HAFD REPORT FOR JULY, 2019
DATE: AUGUST 5, 2019

During the month of July, the HAFD responded to a total of 185 calls for service. There were 125 calls in July of 2018. The total year-to-date runs for 2019 was 901. Last year's total at the end of July was 823.

Some of the more significant events for the month included:

On July 8th Howell Firefighters responded to a reported kitchen fire in Quail Creek Apartments in the City of Howell. On arrival smoke was showing outside the building and it had been evacuated. Firefighters quickly extinguished a small cooking fire and ventilated the building. Damage was limited to the kitchen and was minor.

During the month of July there were several severe wind and storm events causing multiple powerlines down. Firefighters also responded to several reported smoke investigations inside homes and businesses. Most of these were shorted electrical equipment and were quickly handled by personnel preventing any significant damage to the homes and businesses.

On July 31st Howell Firefighters responded to a shed on fire in the rear of a business on S. Walnut street in the City of Howell. On arrival firefighter quickly extinguished the fire containing it to the exterior of the building. Cause of the fire was due to a gas-powered power washer being used in very close proximity to the building. The exhaust caught the exterior on fire and burned up the unit. No injuries reported.

I attended the Northern Michigan Chiefs annual summer 3-day conference and learning symposium in Boyne City. There were several educational opportunities that I participated in.

The month of July brought several severe weather events including heavy rains and high winds. The Department responded to 38 separate reports of power lines down throughout the Authority response area.

Training for the month of July consisted of the annual Apparatus rodeo. All members of the Department are required to drive apparatus through a driving course.

The next meeting of the Howell Area Fire Authority Board is scheduled for Wednesday August 21st, 2019 at 6:00 pm.

**HOWELL AREA FIRE DEPARTMENT
FIRE MARSHAL DIVISION**

1211 W. Grand River
Howell, MI 48843
517-546-0560
FAX: 517-546-6011
firemarshal@howellfire.net

DATE: August 13, 2019
TO: Chief Pless
Fire Authority Board
FROM: Jamil Czubenko, Assistant Chief/Fire Marshal
REF: July 2019 Month End

The month of July 2019 was busy in the Fire Marshal Division.

The FMD participated in emergency responses and department training throughout the month.

Several Food Truck/Trailer events continue to be planned throughout our jurisdiction, where the FMD will be performing fire safety inspections. The Howell DDA and the Tanger Outlets have been very active with these events.

The FMD has been involved with buyers and sellers of property for vacant property and existing buildings throughout our jurisdiction. A few proposals for projects have been submitted for review and comment.

Planning and meetings continue for the Howell Melonfest. The 59th Annual Melonfest will be August 16-18. The HAFD will be active throughout the event for many of the activities going on.

To date 666 kids and 916 adults have made public education contact with the HAFD, totaling approximately 81 personnel hours.

The HAFD visited 9 homes and installed a total of 10 smoke detectors, 3 CO and replaced batteries in 22 detectors. To date, 149 working smoke detectors plus the 72 smokes and 16 CO detectors we've installed.

28 new inspections and 13 re-inspections were completed. 38 plan reviews, consultations and fire safety tests were also completed.

August 2019 brings us more planning for future projects and various fire prevention events.

MARION TWP
Information technology

Incident List by Alarm Date/Time

Alarm Date Between {07/01/2019} And {07/31/2019}
and Township = "MTP"

Incident-Exp#	Alm Date	Alm Time	Location	Incident Type
19-0000713-000	07/01/2019	00:57:30	2415 NORTON RD	736 CO detector activation due t
19-0000714-000	07/01/2019	01:37:44	3545 BLACK EAGLE DR	736 CO detector activation due t
19-0000722-000	07/02/2019	16:36:04	3498 CEDAR POINT RD	311 Medical assist, assist EMS c
19-0000723-000	07/02/2019	17:02:56	400 W COON LAKE RD	444 Power line down
19-0000724-000	07/02/2019	17:21:23	515 E SCHAFFER RD	444 Power line down
19-0000730-000	07/02/2019	20:01:38	FRANCIS RD & VILLA VIEW L	611 Dispatched & cancelled en ro
19-0000753-000	07/08/2019	00:02:12	W I96 & PINCKNEY RD	611 Dispatched & cancelled en ro
19-0000767-000	07/13/2019	10:11:10	E I96 & PINCKNEY RD	322 Motor vehicle accident with
19-0000770-000	07/14/2019	12:24:44	3031 CEDAR LAKE RD	631 Authorized controlled burnin
19-0000775-000	07/14/2019	15:48:18	3031 CEDAR LAKE RD	611 Dispatched & cancelled en ro
19-0000776-000	07/14/2019	16:56:15	4266 NORTON RD	324 Motor Vehicle Accident with
19-0000781-000	07/15/2019	08:21:50	1951 SUNDANCE RDG	311 Medical assist, assist EMS c
19-0000783-000	07/15/2019	13:49:10	5729 MASON RD /FOWLERVILL	463 Vehicle accident, general cl
19-0000789-000	07/16/2019	16:13:44	804 SPIREA	661 EMS call, party transported
19-0000790-000	07/17/2019	00:13:33	1048 SPIREA	622 No Incident found on arrival
19-0000792-000	07/17/2019	10:57:04	950 SPIREA	311 Medical assist, assist EMS c
19-0000793-000	07/17/2019	16:15:34	CEDAR LAKE RD & JEWELL RD	322 Motor vehicle accident with
19-0000794-000	07/18/2019	01:46:37	400 WRIGHT RD	611 Dispatched & cancelled en ro
19-0000795-000	07/18/2019	05:16:55	4211 PINCKNEY RD	611 Dispatched & cancelled en ro
19-0000799-000	07/18/2019	11:51:56	5225 CRANBERRY CT	311 Medical assist, assist EMS c
19-0000802-000	07/19/2019	19:38:33	2950 HIGH HILLCREST DR	444 Power line down
19-0000817-000	07/20/2019	15:53:17	DUTCHER RD & W COON LAKE	611 Dispatched & cancelled en ro
19-0000820-000	07/20/2019	18:32:01	1644 PINCKNEY RD	444 Power line down
19-0000821-000	07/20/2019	18:38:03	1811 PINCKNEY RD	444 Power line down
19-0000822-000	07/20/2019	18:58:25	255 HARMON RD	444 Power line down
19-0000824-000	07/20/2019	19:26:10	5950 VINES RD	445 Arcing, shorted electrical e
19-0000837-000	07/22/2019	18:09:04	5122 VINES RD	311 Medical assist, assist EMS c
19-0000838-000	07/22/2019	20:50:47	1644 PINCKNEY RD	154 Dumpster or other outside tr
19-0000839-000	07/23/2019	01:46:50	205 FRANCIS RD	611 Dispatched & cancelled en ro
19-0000843-000	07/23/2019	14:17:00	EI96 & PINCKNEY RD	322 Motor vehicle accident with
19-0000846-000	07/23/2019	17:08:24	3445 MASON RD	444 Power line down
19-0000850-000	07/23/2019	17:29:00	100 SUMMER SHADE DR	444 Power line down
19-0000847-000	07/23/2019	17:32:47	MASON RD & NORTON RD	444 Power line down
19-0000857-000	07/24/2019	00:56:30	2226 WOOD LN	746 Carbon monoxide detector act
19-0000860-000	07/24/2019	17:53:18	2400 PHEASANT RUN RD	311 Medical assist, assist EMS c
19-0000870-000	07/27/2019	23:06:43	3801 DUTCHER RD	240 Explosion (no fire), Other
19-0000874-000	07/28/2019	13:04:51	205 FRANCIS RD	611 Dispatched & cancelled en ro
19-0000876-000	07/29/2019	13:23:06	PEAVY RD & MASON RD	622 No Incident found on arrival
19-0000881-000	07/29/2019	13:43:39	400 WRIGHT RD	745 Alarm system activation, no
19-0000888-000	07/29/2019	17:54:04	2119 LYDIA LN	311 Medical assist, assist EMS c
19-0000892-000	07/29/2019	20:15:08	1185 PEAVY RD	445 Arcing, shorted electrical e

Total Incident Count 41

STATION RESPONSES July 2019

STA. 20 - Main Station		STA. 22 - Oceola Twp.	
Oceola Twp.	3	Oceola Twp.	26
Cohoctah Twp.	5	Cohoctah Twp.	3
Howell Twp.	18	Howell Twp.	0
Marion Twp.	22	Marion Twp.	7
City of Howell	62	City of Howell	6
Mutual Aid	5	Mutual Aid	10
TOTAL:	115	TOTAL:	52
STA. 23 - Marion Twp.		STA. 24 - Cohoctah Twp.	
Oceola Twp.	0	Oceola Twp.	2
Cohoctah Twp.	0	Cohoctah Twp.	10
Howell Twp.	1	Howell Twp.	5
Marion Twp.	20	Marion Twp.	4
City of Howell	6	City of Howell	7
Mutual Aid	6	Mutual Aid	4
TOTAL:	33	TOTAL:	32

MEMO

To: Marion Township Board

From: Bob Hanvey

Subject: Triangle Lake Aquatic Weed Management and Goose Control
Special Assessment District

Date: September 12, 2019

On the agenda for the September 12, 2019 Board meeting is a public hearing on the creation of a Special Assessment District for Aquatic Weed Management and Goose Control for Triangle Lake.

After the public hearing, if there are insufficient objections to stop the process, the board will offer a resolution to create the district and a resolution to set a date for a public hearing on the roll.

Attached are several documents relating to the Triangle Lake SAD:

1. Special Assessment District Objection Form.
2. Resolution to Create the District.
3. Proposed Assessment Roll
4. Resolution to set a date for a public hearing on the roll.
5. Actual expenses for the last five years.
6. Proposal from Lake Pro for the next five years.



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OBJECTION TO SPECIAL ASSESSMENT DISTRICT CREATION TRIANGLE LAKE AQUATIC WEED MANAGEMENT AND GOOSE CONTROL

Parcel Number: 4710-____-____-____

Property Address: _____

Owner Name: _____

Date: _____

I object to the creation of a special assessment district to fund aquatic weed management on Triangle Lake

Property Owner Signature: _____



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mariontownship.com

**RESOLUTION TO CREATE
TRIANGLE LAKE AQUATIC WEED MANAGEMENT AND GOOSE CONTROL
SPECIAL ASSESSMENT DISTRICT**

WHEREAS, the township board of Marion Township acting in the interest the residents of Triangle Lake and of the proposed special assessment district described hereinafter, determined to proceed under the provisions of PA 188 of 1954, as amended, to provide aquatic weed management, together with a proposed special assessment district for assessing the costs of the proposed service, and

WHEREAS, the estimated cost and proposed special assessment district were filed with the Township Clerk for public examination and notice of the hearing upon same was published and mailed in accordance with the law and statute provided as shown by affidavits pertaining thereto on file with the Township Clerk, and

WHEREAS, in accordance with the aforesaid notices, a hearing was held the twelfth day of September 2019 commencing at 7:30 PM and all persons given the opportunity to be heard in the matter, and

WHEREAS, the following written objections were received and filed:

Parcel Number	Area	% Area	Owner Names
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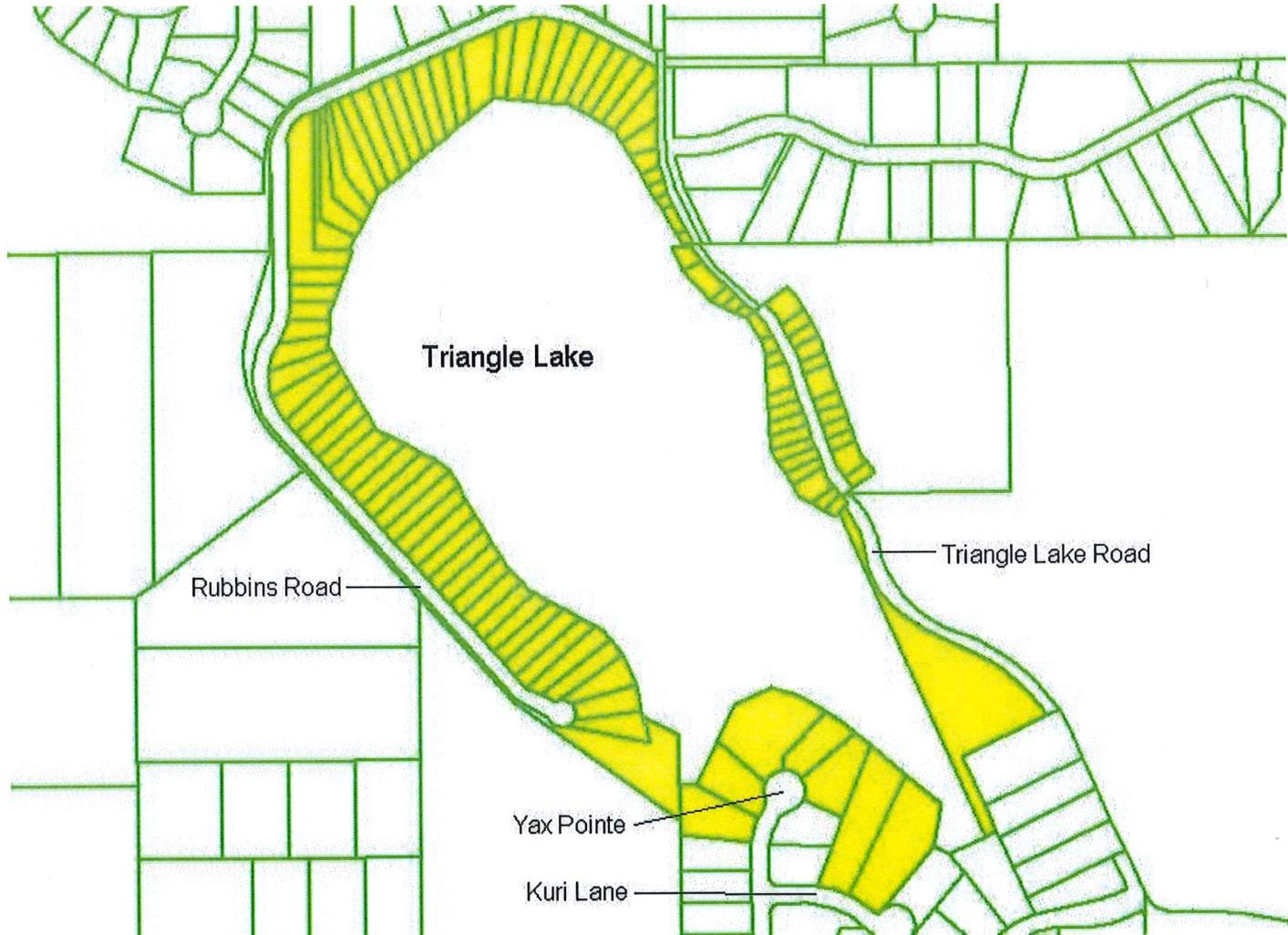
Total

WHEREAS, the written objections constitute less than twenty percent of the area,

WHEREAS, as a result of the foregoing, the township board believes the project to be in the best interests of the township and of the district proposed to be established therefore;

NOW THEREFORE BE IT HEREBY RESOLVED as follows:

1. That this township board does hereby approve the provision of aquatic weed management and goose control and total cost estimate not to exceed \$22,000.00 per year.
2. That this township board does hereby create, determine and define as a special assessment district to be known as Triangle Lake Aquatic Weed Management and Goose Control Special Assessment District within which the costs of such improvements shall be assessed according to the benefits, the following described area within said township:



Tax code numbers:

4710-27-101-001	4710-27-101-023	4710-27-301-008	4710-27-301-026	4710-27-401-011	4710-27-401-034
4710-27-101-002	4710-27-101-024	4710-27-301-009	4710-27-301-027	4710-27-401-013	4710-27-401-035
4710-27-101-004	4710-27-101-025	4710-27-301-010	4710-27-301-028	4710-27-401-014	4710-27-401-036
4710-27-101-005	4710-27-101-026	4710-27-301-011	4710-27-301-029	4710-27-401-015	4710-27-401-037
4710-27-101-006	4710-27-101-027	4710-27-301-012	4710-27-301-030	4710-27-401-016	4710-27-401-038
4710-27-101-007	4710-27-101-028	4710-27-301-013	4710-27-301-031	4710-27-401-017	4710-27-402-026
4710-27-101-008	4710-27-101-029	4710-27-301-014	4710-27-301-032	4710-27-401-018	4710-27-403-009
4710-27-101-009	4710-27-101-030	4710-27-301-015	4710-27-301-033	4710-27-401-019	4710-27-403-010
4710-27-101-010	4710-27-101-031	4710-27-301-016	4710-27-301-034	4710-27-401-021	4710-27-403-016
4710-27-101-011	4710-27-101-032	4710-27-301-017	4710-27-301-037	4710-27-401-022	4710-27-403-017
4710-27-101-012	4710-27-101-033	4710-27-301-018	4710-27-301-038	4710-27-401-023	4710-27-403-021
4710-27-101-013	4710-27-101-034	4710-27-301-019	4710-27-301-039	4710-27-401-026	4710-27-403-022
4710-27-101-014	4710-27-301-002	4710-27-301-020	4710-27-401-001	4710-27-401-027	4710-27-403-023
4710-27-101-015	4710-27-301-003	4710-27-301-021	4710-27-401-006	4710-27-401-028	
4710-27-101-016	4710-27-301-004	4710-27-301-022	4710-27-401-007	4710-27-401-029	
4710-27-101-018	4710-27-301-005	4710-27-301-023	4710-27-401-008	4710-27-401-030	
4710-27-101-019	4710-27-301-006	4710-27-301-024	4710-27-401-009	4710-27-401-032	
4710-27-101-022	4710-27-301-007	4710-27-301-025	4710-27-401-010	4710-27-401-033	

3. That on the basis of the foregoing, this township board does hereby direct the Supervisor and Assessing Officer to make a special assessment roll in which shall be entered all the parcels of land to be assessed together with the names of the respective owners thereof, and an estimated total amount to be assessed against each parcel of land which amount shall be the relative proportion of the whole sum levied against the parcels of land in the special assessment district as the benefit to the parcel of land bears to the total benefit to all the parcels of land in the special assessment district. When the same has been completed, the Supervisor shall affix thereto his certificate stating that it was made pursuant to this resolution and that in making such assessment roll he has, according to his best judgment, conformed in all respects to the directions contained in this resolution and the applicable state statutes.
4. That all resolutions and parts of resolutions insofar as the conflict with the provisions of the within resolutions be and the same are hereby rescinded.

Upon roll call vote on the adoption of the resolution,

The following voted "Aye":

The following voted "Nay":

The following abstained:

The supervisor declared the resolution duly adopted.

Township Clerk _____

Triangle Lake Weed Management and Goose Control SAD for 2020 - 2024 Dwellings with contiguous vacant parcels = one share
 Proposed Roll for 10-10-2019 public hearing
 102 parcels assessed, 98 shares

Parcel	share	amount	acres	% area	owner	owner address		property	address
4710-27-301-018	1.00	224.49	0.442	1.161660%	ACHO RITA G	32744 BIDDESTONE LN	FARMINGTON HI MI	48334	RUBBINS DR
4710-27-101-019	1.00	224.49	0.377	0.990828%	ALWARD KATHRYN	205 MASON RD.	HOWELL	48843	RUBBINS DR
4710-27-101-005	1.00	224.49	0.064	0.168204%	BANDY MAX R	9838 SPENCER RD	SOUTH LYON	48178	TRIANGLE LAKE RD
4710-27-101-007	1.00	224.49	0.181	0.475702%	BANDY MAX R	9838 SPENCER RD	SOUTH LYON	48178	TRIANGLE LAKE RD
4710-27-101-027	1.00	224.49	0.427	1.122237%	BANDY SUSAN	2629 RUBBINS DR	HOWELL	48843	RUBBINS DR
4710-27-301-002	1.00	224.49	1.311	3.445557%	BEADLE RUTH A	2797 RUBBINS DR	HOWELL	48843-895	RUBBINS DR
4710-27-301-012	1.00	224.49	0.346	0.909354%	BENEDETTI BARBARA R	2859 RUBBINS DR	HOWELL	48843-895	RUBBINS DR
4710-27-101-011	1.00	224.49	0.449	1.180057%	BIELANIEC ANGELA & GARRETT	26726 SYRACUSE	WARREN	48091	RUBBINS DR
4710-27-301-033	1.00	224.49	0.495	1.300954%	BLACKNEY BRIAN M & DEBERA A	2979 RUBBINS DR	HOWELL	48843-895	RUBBINS DR
4710-27-101-014	1.00	224.49	0.380	0.998712%	BOCKHAUSEN DIANE	2533 RUBBINS DR	HOWELL	48843	RUBBINS DR
4710-27-301-023	1.00	224.49	0.373	0.980315%	BONNICI JENNY M	30095 CLUB HOUSE LN	FARMINGTON HI MI	48334-202	RUBBINS DR
4710-27-101-028	1.00	224.49	0.445	1.169545%	BRAND PATRICIA ANNE	2637 RUBBINS DR	HOWELL	48843-895	RUBBINS DR
4710-27-401-009	1.00	224.49	0.072	0.189230%	BREMER ROBERT	9259 BECKER	ALLEN PARK	48101	TRIANGLE LAKE RD
4710-27-401-034	1.00	224.49	0.115	0.302242%	CAIN JILL M	1550 TRIANGLE LAKE RD	HOWELL	48843	TRIANGLE LAKE RD
4710-27-101-008	1.00	224.49	0.168	0.441536%	CAUDY CHRISTOPHER & DAWN	1725 TRIANGLE LAKE RD	HOWELL	48843	TRIANGLE LAKE RD
4710-27-401-010	1.00	224.49	0.076	0.199742%	CETLINSKI KATHLEEN	440 SADDLE LN	GROSSE POINTE MI	48236	TRIANGLE LAKE RD
4710-27-401-018	1.00	224.49	0.142	0.373203%	CHAKLOSH YOLANDE K	18382 HURON RIVER DR	NEW BOSTON	48164	TRIANGLE LAKE RD
4710-27-401-015	1.00	224.49	0.171	0.449420%	CHAMPAGNE CRAIG	4781 ALJOANNE RD	BRIGHTON	48116	TRIANGLE LAKE RD
4710-27-401-032	1.00	224.49	0.115	0.302242%	CHOUINARD MARY	1520 TRIANGLE LAKE RD	HOWELL	48843-895	TRIANGLE LAKE RD
4710-27-301-011	1.00	224.49	0.364	0.956661%	DAY DAVID W REV TRUST	2961 RUBBINS DR	HOWELL	48843	RUBBINS DR
4710-27-101-022	1.00	224.49	0.368	0.967174%	DECKER CATHY J	2589 RUBBINS DR	HOWELL	48843-895	RUBBINS DR
4710-27-101-023	1.00	224.49	0.377	0.990828%	DEMARTINIS ANTHONY F & CATHLEEN A	2597 RUBBINS DR	HOWELL	48843	RUBBINS DR
4710-27-301-017	1.00	224.49	0.421	1.106466%	DICKS JANET E	2889 RUBBINS DR	HOWELL	48843-792	RUBBINS DR
4710-27-101-009	1.00	224.49	0.246	0.646535%	EICHEN ROGER	1733 TRIANGLE LAKE RD	HOWELL	48843	TRIANGLE LAKE RD
4710-27-101-006	1.00	224.49	0.081	0.212883%	ENGELHUBER VIOLET LIVING TRUST	10418 HOMESTEAD LN	PLYMOUTH	48170	TRIANGLE LAKE RD
4710-27-101-030	1.00	224.49	0.406	1.067045%	FLOYD CHRISTOPHER L	2653 RUBBINS DR	HOWELL	48843	RUBBINS DR
4710-27-403-017	1.00	224.49	1.495	3.929144%	GALLETINE PAULA A	2402 KURI LN	HOWELL	48843	KURI LN
4710-27-401-026	0.50	112.24	0.110	0.289101%	GEHRINGER CAROL	3810 CHERYL DR	COMMERCE TOWNSHIP MI	48382	TRIANGLE LAKE RD
4710-27-401-027	0.50	112.24	0.115	0.302242%	GEHRINGER CAROL (vacant)	3810 CHERYL DR	COMMERCE TOWNSHIP MI	48382	0 TRIANGLE LAKE RD
4710-27-301-029	1.00	224.49	0.375	0.985571%	GERDEL LINDA K REVOCABLE TRUST	2955 RUBBINS DR	HOWELL	48843-895	RUBBINS DR
4710-27-401-001	1.00	224.49	0.164	0.431023%	GRIFKA CHRISTINE A	2474 SUNDANCE RIDGE	HOWELL	48843	0 TRIANGLE LAKE RD
4710-27-301-027	1.00	224.49	0.350	0.919866%	GRIMA ED	9901 MERRIMAN RD.	LIVONIA	48150	RUBBINS DR
4710-27-301-004	1.00	224.49	0.252	0.662304%	GRIMA JOSEPH F & KAREN M	17687 GOLFVIEW DR.	LIVONIA	48152	RUBBINS DR

Triangle Lake Weed Management and Goose Control SAD for 2020 - 2024 Dwellings with contiguous vacant parcels = one share
Proposed Roll for 10-10-2019 public hearing
102 parcels assessed, 98 shares

4710-27-301-006	1.00	224.49	0.279	0.733265%	GRIMA SANDRA R	47624 GLENGARRY	CANTON	MI	48188	2823	RUBBINS DR
4710-27-301-037	0.50	112.24	0.960	2.523062%	HAJDYLA GARY	2997 RUBBINS DR	HOWELL	MI	48843	2997	RUBBINS DR
4710-27-301-039	0.50	112.24	0.516	1.356146%	HAJDYLA GARY (vacant)	2997 RUBBINS	HOWELL	MI	48843	0	RUBBINS DR
4710-27-101-024	1.00	224.49	0.389	1.022366%	HAMBURGLER HUT LLC	2605 RUBBINS DR	HOWELL	MI	48843	2605	RUBBINS DR
4710-27-301-013	1.00	224.49	0.328	0.862046%	HAMWAY JOSEPH & JULIA ELLEN	2050 SIERRA SAGE LN	RENO	NV	89509-522	2865	RUBBINS DR
4710-27-401-037	1.00	224.49	0.233	0.612368%	HANSEN RITA	1450 TRIANGLE LAKE RI	HOWELL	MI	48843	1450	TRIANGLE LAKE RD
4710-27-301-021	1.00	224.49	0.402	1.066532%	HANVEY MARIE E	2909 RUBBINS DR	HOWELL	MI	48843-895	2909	RUBBINS DR
4710-27-301-008	1.00	224.49	0.350	0.919866%	HARRINGTON MARIE I	2835 RUBBINS DR	HOWELL	MI	48843	2835	RUBBINS DR
4710-27-301-026	1.00	224.49	0.350	0.919866%	HEASLIP JAMES B & KATHERINE E	2937 RUBBINS DR	HOWELL	MI	48843-895	2937	RUBBINS DR
4710-27-301-038	1.00	224.49	0.504	1.324608%	HEISNER KIMBERLY S	2989 RUBBINS DR	HOWELL	MI	48843	2989	RUBBINS DR
4710-27-301-032	1.00	224.49	0.519	1.364031%	HICKEY JEANETTE M TRUST	2973 RUBBINS DR	HOWELL	MI	48843-895	2973	RUBBINS DR
4710-27-101-004	1.00	224.49	0.054	0.141922%	HICKEY MICHAEL J	1687 TRIANGLE LAKE RI	HOWELL	MI	48843	1687	TRIANGLE LAKE RD
4710-27-301-025	1.00	224.49	0.346	0.909354%	HICKEY PEGGY	2931 RUBBINS DR	HOWELL	MI	48843-895	2931	RUBBINS DR
4710-27-101-010	1.00	224.49	0.358	0.940892%	HODGE MICHAEL	2501 RUBBINS DR	HOWELL	MI	48843	2501	RUBBINS DR
4710-27-301-020	1.00	224.49	0.423	1.111724%	JAMES JULIE	2905 RUBBINS DR	HOWELL	MI	48843	2905	RUBBINS DR
4710-27-403-009	1.00	224.49	0.655	1.721464%	JEWELL DOUGLAS & BROOKE	4910 YAX POINTE DR	HOWELL	MI	48843	4910	YAX POINTE DR
4710-27-403-023	1.00	224.49	0.836	2.197167%	JOHNSON BRUCE	140 N MISTWOOD CT	140 N MISTWOOD	MI	48383	0	YAX POINTE DR
4710-27-301-014	1.00	224.49	0.332	0.872559%	JONES VIRGINIA C	2871 RUBBINS DR	HOWELL	MI	48843-895	2871	RUBBINS DR
4710-27-401-008	1.00	224.49	0.047	0.123525%	JORGENSEN MIRIAM A	17922 PARKLANE	LIVONIA	MI	48152	1591	TRIANGLE LAKE RD
4710-27-401-013	1.00	224.49	0.125	0.328524%	KERR DEAN P	9878 CAMBRIDGE CT	SOUTH LYON	MI	48178	1501	TRIANGLE LAKE RD
4710-27-101-016	1.00	224.49	0.432	1.135378%	KIEFER MAUREEN, TRUST	2549 RUBBINS	HOWELL	MI	48843	2549	RUBBINS DR
4710-27-401-038	1.00	224.49	0.251	0.659676%	KLEBBA GAYLE	1615 TRIANGLE LAKE RI	HOWELL	MI	48843	1615	TRIANGLE LAKE RD
4710-27-401-014	0.50	112.24	0.140	0.367947%	KOTCH PATRICK J	495 NEWBERRY LN	HOWELL	MI	48843	1491	TRIANGLE LAKE RD
4710-27-401-029	0.50	112.24	0.115	0.302242%	KOTCH PATRICK J	1594 TRIANGLE LAKE RI	HOWELL	MI	48843	0	TRIANGLE LAKE RD
4710-27-401-023	1.00	224.49	0.115	0.302242%	KURTZ CHARLENE K	1446 TRIANGLE LAKE RI	HOWELL	MI	48843	1446	TRIANGLE LAKE RD
4710-27-301-019	1.00	224.49	0.442	1.161660%	LINDSAY DORIS	18569 SOUTHHAMPTON	LIVONIA	MI	48152	2901	RUBBINS DR
4710-27-401-035	1.00	224.49	0.115	0.302242%	LYBRINK MARK	1560 TRIANGLE LAKE RI	HOWELL	MI	48843-895	1560	TRIANGLE LAKE RD
4710-27-301-010	1.00	224.49	0.382	1.003969%	MCCLELLAND MIKE & JACQUILINE	2847 RUBBINS DR	HOWELL	MI	48843	2847	RUBBINS DR
4710-27-401-016	1.00	224.49	0.158	0.415254%	MCKAY GARY & SUSAN	1465 TRIANGLE LAKE RI	HOWELL	MI	48843	1465	TRIANGLE LAKE RD
4710-27-401-017	1.00	224.49	0.151	0.398857%	MCKAY GARY & SUSAN	1465 TRIANGLE LAKE RI	HOWELL	MI	48843	1457	TRIANGLE LAKE RD
4710-27-401-019	1.00	224.49	0.249	0.654419%	MCKAY SUSAN	280 BRIGHTON ROAD	HOWELL	MI	48843	1451	TRIANGLE LAKE RD
4710-27-101-033	1.00	224.49	0.294	0.772688%	MERRILL SUZANNE	2677 RUBBINS DR	HOWELL	MI	48843	2677	RUBBINS DR
4710-27-401-021	1.00	224.49	0.101	0.265447%	MEZWA VERA	3250 QUAIL RIDGE CIR	ROCHESTER HIL	MI	48309	1447	TRIANGLE LAKE RD
4710-27-301-016	1.00	224.49	0.391	1.027622%	MISTRETТА ANTHONY J TRUST	2883 RUBBINS DR	HOWELL	MI	48843-895	2883	RUBBINS DR

Triangle Lake Weed Management and Goose Control SAD for 2020 - 2024 Dwellings with contiguous vacant parcels = one share
Proposed Roll for 10-10-2019 public hearing
102 parcels assessed, 98 shares

4710-27-401-033	1.00	224.49	0.125	0.328524%	MSG ENTERPRISES	47624 GLENGARRY BLV	CANTON	MI	48188	1540	TRIANGLE LAKE RD
4710-27-401-011	1.00	224.49	0.204	0.536151%	NIKODEN DOLORES	1525 TRIANGLE LAKE RI	HOWELL	MI	48843	1525	TRIANGLE LAKE RD
4710-27-101-002	1.00	224.49	0.096	0.252306%	O'BRIEN SHEILA	31016 EAGLE DR	NOVI	MI	48377	1677	TRIANGLE LAKE RD
4710-27-301-007	1.00	224.49	0.327	0.859418%	PANARETOS THEODORE	2829 RUBBINS	HOWELL	MI	48843	2829	RUBBINS DR
4710-27-403-016	1.00	224.49	1.516	3.984336%	PATRITTO MICHAEL	2420 KURI LN	HOWELL	MI	48843	2420	KURI LN
4710-27-101-032	1.00	224.49	0.384	1.009225%	PERETTO JOHN	2669 RUBBINS DR	HOWELL	MI	48843	2669	RUBBINS DR
4710-27-401-028	1.00	224.49	0.115	0.302242%	PIHLAJA LORETTA	1476 TRIANGLE LAKE RI	HOWELL	MI	48843-895	1476	TRIANGLE LAKE RD
4710-27-301-003	1.00	224.49	0.287	0.754291%	PILAT LINDA	2805 RUBBINS DR	HOWELL	MI	48843	2805	RUBBINS DR
4710-27-101-031	1.00	224.49	0.808	2.123577%	PRESTON KIM TRUST	1310 TRACILEE DR	HOWELL	MI	48843	2661	RUBBINS DR
4710-27-101-001	1.00	224.49	0.042	0.110384%	PYBUS CAROLYN E	2279 SUNDANCE RIDGE	HOWELL	MI	48843	0	TRIANGLE LAKE RD
4710-27-101-012	1.00	224.49	0.352	0.925123%	RADZVILLE L W & SHERWOOD E C	11365 HILLSIDE DR.	PINCKNEY	MI	48169	2517	RUBBINS DR
4710-27-101-015	1.00	224.49	0.412	1.082814%	ROGRITA LLC	2541 RUBBINS DR	HOWELL	MI	48843	2541	RUBBINS DR
4710-27-401-006	0.50	112.24	0.083	0.218140%	ROSOL S J	5860 OAKMAN	DETROIT	MI	48204	1607	TRIANGLE LAKE RD
4710-27-401-007	0.50	112.24	0.067	0.176089%	ROSOL S J (vacant)	5860 OAKMAN	DETROIT	MI	48204	0	TRIANGLE LAKE RD
4710-27-301-034	1.00	224.49	0.617	1.621593%	SAMMONS LINDA C	2985 RUBBINS DR	HOWELL	MI	48843	2985	RUBBINS DR
4710-27-401-036	1.00	224.49	0.232	0.609740%	SANO SCOTT	10053 VIRGIL	REDFORD	MI	48239	1570	TRIANGLE LAKE RD
4710-27-301-009	1.00	224.49	0.382	1.003969%	SCHEIDLER BEN	2841 RUBBINS	HOWELL	MI	48843	2841	RUBBINS DR
4710-27-101-018	1.00	224.49	0.544	1.429735%	SILVERS CARL	22200 GILL RD	FARMINGTON	MI	48335-464	2557	RUBBINS DR
4710-27-301-024	1.00	224.49	0.358	0.940892%	SKOCZYLAS PAUL & REBECCA	2925 RUBBINS DR	HOWELL	MI	48843-895	2925	RUBBINS DR
4710-27-301-030	1.00	224.49	0.479	1.258903%	SMITH ROBERT JEROME	2961 RUBBINS DR	HOWELL	MI	48843	2961	RUBBINS DR
4710-27-301-028	1.00	224.49	0.369	0.969802%	SMITH ROBERT L & KIMBERLY S	2949 RUBBINS DR	HOWELL	MI	48843	2949	RUBBINS DR
4710-27-101-029	1.00	224.49	0.462	1.214224%	SPRINGER SANDRA	2645 RUBBINS DR	HOWELL	MI	48843	2645	RUBBINS DR
4710-27-301-005	1.00	224.49	0.254	0.667560%	STABLEY DANIEL G & LISA	409 WEST ST	HOWELL	MI	48843-155	2817	RUBBINS DR
4710-27-301-022	1.00	224.49	0.388	1.019736%	STEFANIAK & DOLNEY MARILYN	2915 RUBBINS DR	HOWELL	MI	48843	2915	RUBBINS DR
4710-27-401-022	1.00	224.49	0.115	0.302242%	STILSON BETTY J	1441 TRIANGLE LAKE RI	HOWELL	MI	48843-895	1441	TRIANGLE LAKE RD
4710-27-101-034	1.00	224.49	0.711	1.868643%	STRICKER SARALEE	2581 RUBBINS DR	HOWELL	MI	48843	2581	RUBBINS DR
4710-27-301-015	1.00	224.49	0.360	0.946148%	THOMAS MARK	2877 RUBBINS DR	HOWELL	MI	48843	2877	RUBBINS DR
4710-27-402-026	0.00	-	-	-	TRIANGLE LAKE PROPERTY OWNERS						TRIANGLE LAKE RD
4710-27-101-013	1.00	224.49	0.360	0.946148%	TUMBARELLA MARY & ERIC	2525 RUBBINS DR	HOWELL	MI	48843	2525	RUBBINS DR
4710-27-101-025	1.00	224.49	0.390	1.024994%	VAGNETTI DOMINIC	2613 RUBBINS DR	HOWELL	MI	48843	2613	RUBBINS DR
4710-27-401-030	1.00	224.49	0.230	0.604484%	WEN RAYMOND E & SHU WANG	1500 TRIANGLE LAKE RI	HOWELL	MI	48843	1500	TRIANGLE LAKE RD
4710-27-101-026	1.00	224.49	0.408	1.072302%	WILCOX KEITH W	2621 RUBBINS DR	HOWELL	MI	48843	2621	RUBBINS DR
4710-27-403-010	1.00	224.49	0.698	1.834477%	YAX JUSTIN	9838 SPENCER RD	SOUTH LYON	MI	48178	4892	YAX POINTE DR
4710-27-403-022	1.00	224.49	1.199	3.151200%	YAX JUSTIN	12900 LAKE AVE., APT 4	LAKEWOOD	OH	44107	0	YAX POINTE DR

Triangle Lake Weed Management and Goose Control SAD for 2020 - 2024 Dwellings with contiguous vacant parcels = one share
 Proposed Roll for 10-10-2019 public hearing 102 parcels assessed, 98 shares

4710-27-403-021	1.00	224.49	1.607	4.223501%	YAX LAWRENCE & BETTY	830 ESTERO BLVD	FORT MYERS BEFL	33931	4858	YAX POINTE DR
4710-27-301-031	1.00	224.49	0.453	1.190570%	ZONCA HELEN T	2967 RUBBINS DR	HOWELL MI	48843-792	2967	RUBBINS DR
	98.00	\$22,000.00	38.049	100.00000000%						
Max Annual Amount	\$22,000.00									

RESOLUTION SCHEDULING HEARING ON ASSESSMENT ROLL FOR
TRIANGLE LAKE AQUATIC WEED MANAGEMENT AND GOOSE CONTROL
SPECIAL ASSESSMENT DISTRICT

WHEREAS, the supervisor of the township has prepared a special assessment roll in the total amount not to exceed \$22,000.00 per year covering all the parcels of land in the TRIANGLE LAKE AQUATIC WEED MANAGEMENT AND GOOSE CONTROL SPECIAL ASSESSMENT DISTRICT according to the relation of the benefit to each parcel of land to the total benefit to all parcels of land in such special assessment district and has affixed thereto his certificate as required by statute;

NOW, THEREFORE, BE IT HEREBY RESOLVED as follows:

1. That said special assessment roll shall be filed with the township clerk and shall be available for public examination during regular working hours of regular working days from the present date until the public hearing upon the same and shall further be examined at such public hearing.
2. That the township board shall meet at 7:30 o'clock p.m. on OCTOBER 10, 2019, at the Marion Township hall located at 2877 W. Coon Lake Road, Howell, MI, within the township, to review such special assessment roll and hear any objections thereto.
3. That the township clerk shall cause notice of such hearing and the filing of such assessment roll to be published twice in the Fowlerville News and Views, a newspaper of general circulation in the township prior to the date of the hearing with the first publication being not less than 10 days prior to the hearing and shall further cause notice of such hearing to be mailed by first-class mail to all owners of or persons interested in property within the Special Assessment District as shown on the current assessment roll of the township also at least ten (10) days prior to said hearing, all in accordance with law and statute provided.
4. All resolutions and parts of resolutions insofar as they conflict with the provisions of the within resolution are hereby rescinded.

Upon roll call vote, the following voted "Aye":

The following voted "Nay":

The supervisor declared the motion carried and the resolution duly adopted.

Township clerk signature: _____

X 0080 Triangle Lake Special Assess. W-2019
 Annual Interest Rate 5.00%
 Interest Date 11/30/2019
 Number of Parcels 102
 Number of Shares 98

Triangle Lake Special Assess. W-2019
LIMIT \$20,000 per year

Invoice Date	Vendor / Purpose	Invoice Amount	Interest to 11/30/2019	Tax Bill Total
12/10/2018	Kotch share allocation	\$168.70	\$0.00	\$168.70
4/23/2019	Lake Pro 2019 Permit fee Inv. 19-0071	\$800.00	\$24.22	\$824.22
5/12/2019	DNR geese capture permit	\$200.00	\$5.53	\$205.53
5/13/2019	Gooseworks egg/nest removal Inv. 2548	\$300.00	\$8.26	\$308.26
6/19/2019	Lake Pro Survey #1 Treatmnt #1	\$2,139.50	\$48.07	\$2,187.57
7/11/2019	Gooseworks goose roundup Inv. #2697	\$500.00	\$9.73	\$509.73
7/17/2019	Lake Pro Treat #2	\$3,825.00	\$71.26	\$3,896.26
8/6/2019	Lake Pro Survey #2 Inv. 19-0666	\$200.00	\$3.18	\$203.18
8/13/2019	Lake Pro Treat #3 Inv. 19-0743	\$4,260.00	\$63.61	\$4,323.61
8/14/2019	Lake Pro Survey #3 Inv. 19-0744	\$200.00	\$2.96	\$202.96
8/29/2019	Lake Pro Treat #4	\$1,023.00	\$13.03	\$1,036.03
		\$0.00	\$0.00	\$0.00
		\$0.00	\$0.00	\$0.00

 \$13,616.20 \$249.84 \$13,866.04 **Annual total**

\$138.94 \$2.55 \$141.49 **Parcel Total**

SAD

X 0080	Invoice Date	Vendor / Purpose	Annual Interest Rate	Interest Date	Number of Parcels	Number of Shares	Annual Interest	
							Amount	Total
		Triangle Lake Special Assess. W-2018	5.00%	11/30/2018	103	99		
		LIMIT \$20,000 per year						
	1/2/2018	Lake Pro 2018 MDEQ App fee Inv#18-0013	\$800.00	\$36.38			\$836.38	
	4/26/2018	Lake Pro 2018 H20 Qual Smping, Lab, ship.	\$2,200.00	\$65.70			\$2,265.70	
	4/26/2018	Lake Pro 2018 Survey #1 (4/18/18)	\$200.00	\$5.97			\$205.97	
	4/26/2018	Lake Pro 2018 Trmnt #1 (4/24/2018)	\$5,044.00	\$150.63			\$5,194.63	
	5/8/2018	Gooseworks, LLC	\$300.00	\$8.47			\$308.47	
	6/7/2018	Lake Pro Inv#18-0329 Treat#2 (5/14/18)	\$1,950.00	\$47.01			\$1,997.01	
	6/7/2018	Lake Pro Inv#18-0330 Treat#3 (5/21/18)	\$977.50	\$23.57			\$1,001.07	
	6/7/2018	Lake Pro Inv#18-0331 Survey #2 (6/5/18)	\$200.00	\$4.82			\$204.82	
	6/15/2018	Lake Pro Inv#18-0428 Tx#4 (6/12/18)	\$977.50	\$22.50			\$1,000.00	
	6/28/2018	Lake Pro Inv#18-0470 Tx #5 (6/26/18)	\$977.50	\$20.76			\$998.26	
	7/1/2018	Gooseworks, LLC Inv.#2118	\$450.00	\$9.37			\$459.37	
	8/16/2018	Lake Pro Inv#18-0870 Survey#3 (8/13/18)	\$200.00	\$2.90			\$202.90	
	8/24/2018	Lake Pro Inv#18-0899 Tx# 6,7 (8/22-23/18)	\$2,000.00	\$26.85			\$2,026.85	
		invoice is date bill paid		\$0.00			\$0.00	
		check parcel count and interest date		\$0.00			\$0.00	
		total not to exceed \$18,000 per year		\$0.00			\$0.00	
			\$16,276.50	\$424.93			\$16,701.43	Annual total
			\$164.41	\$4.29			\$168.70	Parcel Total

X 0080 Triangle Lake Special Assess. W-2017
 Annual Interest Rate 5.00%
 Interest Date 11/30/2017
 Number of Parcels 103
 Number of Shares 99

LIMIT \$20,000 per year

Invoice Date	Vendor / Purpose	Invoice Amount	Interest to 11/30/2017	Tax Bill Total
3/20/2017	Lake Pro MDEQ Permit Inv #17-0109	\$800.00	\$27.95	\$827.95
4/20/2017	Lake Pro Lake Survey (done 4/19/17)	\$200.00	\$6.14	\$206.14
5/3/2017	Lake Pro Inv#17-0181 Treatment 1	\$6,335.00	\$183.11	\$6,518.11
5/4/2017	Gooseworks LLC egg/nest removal	\$200.00	\$5.75	\$205.75
6/12/2017	Lake Pro Inv#17-0346 Treatment 2	\$935.00	\$21.90	\$956.90
6/13/2017	Lake Pro Inv#17-0364 Survey #2	\$200.00	\$4.66	\$204.66
6/21/2017	Lake Pro Inv#17-0402 Treatment #3	\$6,152.00	\$136.52	\$6,288.52
7/14/2017	Gooseworks LLC goose removal	\$450.00	\$8.57	\$458.57
8/28/2017	Lake Pro Inv#17-0691 Survey #3	\$200.00	\$2.58	\$202.58
8/28/2017	Lake Pro Inv #17-0691 Treatment #4	\$2,805.00	\$36.12	\$2,841.12
8/28/2017	Lake Pro Inv #17-0691 Treatment #5	\$600.00	\$7.73	\$607.73

invoice is date bill paid
 check parcel count and interest date
 total not to exceed \$18,000 per year

\$18,877.00 \$441.02 \$19,318.02 Annual total
 \$190.68 \$4.45 \$195.13 Parcel Total

SAD Template

X 0080 Triangle Lake Special Assess. W-2015

Invoice Date	Vendor / Purpose	Annual Interest Rate	Interest Date	Number of Parcels	Number of Shares
		5.00%	11/30/2015	103	93
		Invoice Amount	Interest to 11/30/2015	Tax Bill Total	
8/11/2014	Press Argus invoice 5935420	\$440.00	\$28.69	\$468.69	
9/15/2014	Press Argus invoice 5961176	\$440.00	\$26.58	\$466.58	
9/7/2014	Press Argus invoice 5987437	\$840.00	\$51.67	\$891.67	
2/10/2015	Lake Pro, Inc.MDEQ Permit 15-0025	\$400.00	\$16.05	\$416.05	
6/3/2015	Lake Pro. Inc Invoice 15-0205	\$200.00	\$4.93	\$204.93	
6/15/2015	Lake Pro. Inc Invoice 15-0254	\$5,600.00	\$128.88	\$5,728.88	
7/23/2015	Lake Pro. Inc Invoice 15-0423	\$200.00	\$3.56	\$203.56	
7/27/2015	Lake Pro. Inc Invoice 15-0627	\$3,465.00	\$59.81	\$3,524.81	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	

invoice is date bill paid
 check parcel count and interest date
 total not to exceed \$18,000 per year

\$11,585.00 \$320.17 \$11,905.17 Annual total
 \$124.57 \$3.44 \$128.01 Parcel Total

Triangle Lake 5 Year S.A.D. Plan

Triangle Lake
Marion Township
Livingston County
2020 – 2024

August 2019

Prepared By:

LakePro, Inc.
9353 Hill Road
Swartz Creek, MI 48473
810.635.4400
www.lakeproinc.com





Lake Description

Triangle Lake is 70 acres and located in Marion Township, Livingston County, Michigan (T 2N, R 4E, S 27). Triangle Lake is located within the Grand River Watershed.

The shoreline is approximately 90% developed with mostly year-round homes. The rest of the lakeshore is undeveloped and remains forested wetland. The lake is used for swimming, boating, and fishing. The lake is an all sports lake with no motor restrictions.

Concerns for Triangle Lake

LakePro is focused on managing the aquatic plants in the lake. The problems in the lake are invasive species, such as Eurasian Watermilfoil (EWM) and Curly-Leaf Pondweed, and nuisance native plants, such as Chara, Large-Leaf Pondweed, and Lily Pads. EWM is an invasive plant that grows very thick stands that will crowd out native plants and disrupt the natural ecosystem. Furthermore, the dense patches of EWM can impede boating and may pose a risk to swimmers.



Some native plants can also grow to nuisance levels in the lake. Surface algae, macroalgae (i.e. Chara), Pondweeds, Lily Pads, and Cattails grow in many areas of the lake and have the potential to grow to nuisance levels that impede recreation such as swimming and boating.

Prior Management Practices

The lake was treated in the past by LakePro. All treatments were either recommended by LakePro or requested by Mr. Joe Decker, a riparian on the lake. The treatment plans were approved by Mr. Decker prior to completion. Throughout the treatment history, treatment products, amounts, and areas changed to target the aquatic plants as determined by vegetation survey. Target plants have included those mentioned above.

Management Goals for Triangle Lake

Based on the problems facing the lake, we have identified four goals for the management program at Triangle Lake.

1. Control the invasive Eurasian Watermilfoil and Curly-Leaf Pondweed;
2. Survey for other invasive species, such as Starry Stonewort and Phragmites;
3. Manage the algae & macroalgae to acceptable levels within the lake;
4. Encourage the growth and spread of native plants in the lake, while keeping them below a nuisance level;

LakePro's Management Services

In order to manage the problems facing the lake, we will utilize an Integrated Plant Management Program. This program will incorporate different management practices for the different problems facing the lake. The different parts of the plan will work together to create a solution that is more effective and beneficial than any singular solution.



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This type of program requires diligence from the contractor to monitor the lake, carry out services, communicate with our client, evaluate the success of the program, and make adjustments as necessary. In order to ensure the success of the program, LakePro will assign a lead Lake Manager and an assistant to your lake. Your lake manager is responsible for all services and will be familiar with all aspects of the lake management plan. This ensures you have a single point of contact that can answer all of your questions and concerns. He will also be on the lake for all management activities and attend your meetings. Your lake manager will be Peter Filpansick. The assistant lake manager will assist and will also be familiar with your plan in the event you cannot reach your lake manager. Your assistant lake manager will be Tyson Wood.

Integrated Plant Management Program for Triangle Lake

The Integrated Plant Management Program for Triangle Lake is designed to manage the concerns for the lake and achieve the goals described above.

Aquatic Vegetation Assessment Surveys

In order to create a specific plan for managing the lake, we must periodically survey the lake to locate the plants in the lake, identify them, and quantify their density and distribution in the lake. These results of these surveys will direct the rest of the management program and will be included in the annual documentation of the lake condition.

Herbicide Treatments

The primary problems in the lake are invasive milfoil and nuisance native plants. Currently, the best management practice for these plants is herbicides. Herbicides are selective, provide reliable results, and eliminate the possibility of spreading the plants through fragmentation.

There are currently three different classes of herbicides that can be used to control aquatic plants in the lake:

Contact Herbicides can provide season-long control of the plants through spot treatments. These products will kill the shoots, but not the roots of the plants. Therefore, these products do not accomplish any long-term management of the plants. In some cases, the aquatic plants may need to be treated a second time during the summer. These herbicides are the least expensive and have the shortest water-use restrictions (e.g. lawn irrigation – 3 days).

Systemic Herbicides provide long-term control of the aquatic plants through spot treatments because they kill the shoots and roots of the plant. Therefore, the plants treated will never grow again; any regrowth will be new plants from the seed bed. Usually systemic herbicides only need to be applied once per year. These herbicides are more expensive and have slightly longer water-use restrictions (e.g. lawn irrigation – 14-28 days).

Fluridone is a specialized systemic herbicide that is utilized in whole-lake treatments. Fluridone is applied to the entire lake to achieve a specific concentration that controls Eurasian Milfoil but is too low to affect native plants. Whole-lake treatments should be utilized when the cost for spot-treatments exceed the cost for treating the entire lake at once. The MDEGLE (formerly MDEQ) allows Fluridone to be used no sooner than every fourth year. In order to do a whole-lake treatment with Fluridone, the MDEQ requires a "Lake Management Plan" to be completed that includes many details about the lake characteristics and condition.



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Algicide Treatments

Algicides can be used to treat nuisance algae growth on the shoreline of the lake. The MDEQ permit limits treatment of native algae to shoreline areas in front of homes, but invasive algae can be treated throughout the lake.

Education

The final part of the Integrated Plant Management Program is to help educate residents around the lake. It is important that residents know how their actions around and within the lake can affect the lake condition and how they can help the program be successful. LakePro strives to educate the residents around the lake through customer service, meetings, our website, and custom publications.



Triangle Lake – Annual Lake Management Plan

The following is a general layout of the services included in the annual lake management plan. These services are examples of what we expect to complete throughout a given summer. Actual services may be different and no work shall be completed until approval by the S.A.D. representative.

MDEQ Permit for Algicide & Herbicide Treatments (20-100 Acres)

Vegetation Survey #1

- 10 Acres of Algae Control for Memorial Day
(Charoid Algae Control with Copper Sulfate, Chelated Copper, and Endothal)
- 10 Acres of Curly-Leaf Pondweed Control with Contact Herbicide
(Aquathol-K at 1.0 GPA)
- 5 Acres of Eurasian Milfoil & Lily Pad Control with Systemic Herbicide
(Triclopyr Liquid at 5.0 GPA)

Vegetation Survey #2

- 10 Acres of Algae Control for July 4th
(Charoid Algae Control with Copper Sulfate, Chelated Copper, and Endothal)

Vegetation Survey #3

- 10 Acres of Algae Control
(Charoid Algae Control with Copper Sulfate, Chelated Copper, and Endothal)
- 10 Acres of Broad-Spectrum Weed Control
(Diquat Dibromide at 2.0 GPA)

Vegetation Survey #4

- 10 Acres of Algae Control for Labor Day
(Charoid Algae Control with Copper Sulfate, Chelated Copper, and Endothal)

Lake Management Plan Pricing

LakePro provides unit pricing for various treatment and service options within their contract. To plan for the next five years, we looked at our current unit pricing, future cost estimates, lake management history, and management objectives. Based on the services we believe may be necessary in the next five years, we forecast the annual costs may vary anywhere between \$15,000 and \$20,000. We also like to plan for a 10% contingency in the event services are needed that were not planned. So, the following 5-year budget estimate includes the high end that we would like to see you budget over that time period.

2020 Lake Management Services (Permit, Surveys, Algae & Weed Control)	Not to exceed \$22,000.00
2021 Lake Management Services (Permit, Surveys, Algae & Weed Control)	Not to exceed \$22,000.00
2022 Lake Management Services (Permit, Surveys, Algae & Weed Control)	Not to exceed \$22,000.00
2023 Lake Management Services (Permit, Surveys, Algae & Weed Control)	Not to exceed \$22,000.00
2024 Lake Management Services (Permit, Surveys, Algae & Weed Control)	Not to exceed \$22,000.00
5-Year SAD Total Cost:	Not to exceed \$110,000.00



9353 Hill Road • Swartz Creek, MI 48473
(810) 635-4400 • Fax (810) 635-4404

www.lakeproinc.com

The actual annual costs may be less than this proposal if fewer services or lower acreages are necessary. Also, these prices include the annual \$800.00 MDEQ ANC permit application fee, but that amount is paid directly to the State of Michigan.

Summary

LakePro appreciates the opportunity to help restore your lake and to improve its condition. The plan above is a combination of our education, experience, and expertise that will take care of the most important issues facing the lake, while ensuring our actions will maintain the lake in the future.

The Lake Management Plan will change based on the success of various management methods and the response of the lake to our efforts. We hope this description serves as a starting point for your S.A.D. budget and continues down the path of responsibly managing your lake and improving its condition.

If you have any questions or concerns, please feel free to contact me directly.

Thank you for choosing LakePro,

Peter Filpansick
Director of Lake Management
Aquatic Biologist

MARION TOWNSHIP
2877 W. COON LAKE ROAD
HOWELL, MI 48843
Phone 517-546-1588
Fax 517-546-6622

TRANSMITTAL

TO: Board of Trustees

DATE September 4, 2019

PROJECT REVIEW
Proposed Marion Township Development
Standards Draft August 2019

VIA Hand Delivery

WE ARE SENDING: Herewith Under Separate Cover

THE FOLLOWING:

Proposed Marion Township Development Standards Draft August 2019

FOR YOUR: approval/ denial as requested
 other review & comment

REMARKS:

The attached Proposed Marion Township Development Standards Draft August 2019 is presented for you review and feedback. It was reviewed by the Planning Commission. Let me know if you have any questions.

FROM: Dave Hamann, Zoning Administrator

Copy: file

**MARION TOWNSHIP
DEVELOPMENT STANDARDS
AUGUST 2019**

DRAFT

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GENERAL PLAN SUBMITTAL REQUIREMENTS AND PROCEDURES

I. PURPOSE

- A. It is the purpose of this Section to specify standards and data requirements, which shall be followed in the preparation of the site plans. It is also the purpose of this Section to ensure that:
1. The proposed use will not be injurious to the surrounding neighborhood and protects the general health, safety, welfare, and character of the Township;
 2. Natural resources will be preserved to the maximum extent possible in the site design by developing in a manner which will not detrimentally affect or destroy natural features such as lakes, ponds, streams, wetlands, steep slopes, soils, ground water, and woodlands; and
 3. Landscaping, including grass, trees, shrubs, and other vegetation is provided to maintain and improve the aesthetic quality of the site and area.

II. SITE PLAN PROCEDURE SUMMARY

- A. A site plan shall be reviewed by the Planning Commission, who shall then provide a recommendation of approval, approval with conditions, or denial, to the Township Board of Trustees. The Township Board of Trustees must approve or approve with conditions the final site plan prior to the establishment of any new land use, change of use, addition to an existing use, or the erection of any structure in any zoning district. Individual single-family structures erected within a single lot, parcel or building envelope shall not require site plan review.
1. The Township shall not issue a land balancing permit until the final site plan has been approved by the Township Board of Trustees and is in effect.
 2. No grading, removal of trees or other vegetation, landfilling, land balancing, or construction of improvements shall commence for any development that requires site plan approval until a final site plan is approved and is in effect, except as otherwise provided in these specifications.

B. Preliminary Site Plan

1. **Application.** Any applicant may submit a request for preliminary site plan review by filing with the Zoning Administrator completed forms, payment of the review fee required herein, and three (3) copies of the plans or a PDF file. Upon review and approval by the Zoning Administrator, the Township Planner, the Township Engineer, and any other applicable agencies, nine (9) copies of the administratively approved preliminary site plan drawing(s) shall be submitted for distribution to the Township Planning Commission. Upon Planning Commission approval, an additional eight (8) copies of the plans shall be submitted for distribution to the Township Board of Trustees. Unless specifically directed by the Zoning Administrator, the Board of Trustees submittal shall be the same as the Planning Commission submittal and no changes shall be made to the plans. The Administrator shall transmit only administratively complete submittals of the preliminary site plan to the Planning Commission and Township Board. The purpose of such preliminary review is to confirm general compliance with Township standards as well as to suggest changes, if necessary, for final site plan approval
2. **Combining Preliminary and Final Site Plans.** An applicant may, at the discretion of the Administrator and/or the Planning Commission, request to combine a preliminary and final site plan in one (1) application for approval. In such a situation, the portion of the review process concerning preliminary site plan application and review may be waived by the Planning Commission. The Planning Commission shall have the authority to require

submittal of a preliminary site plan separate from a final site plan where, in its opinion, the complexity and/or scale of the site for the proposed development to warrant.

3. **Pre-application meeting.** The applicant may request a pre-application meeting with the Planning Commission to discuss a proposed project. The item will be placed on an agenda of a regularly scheduled Planning Commission meeting. Site plan approval will not be given during a pre-application meeting discussion.
4. **Information Required.** Site plans shall consist of an overall plan for the entire development. Sheet size shall be at least 24" x 36" with plan view drawn to a scale of no greater than 1" = 50'. A preliminary site plan submitted for review shall contain all of the following information in a clear and legible format:

General Information

- a. Name of the proposed development
- b. Name, address, phone, fax number and/or email address of applicant(s), property owner(s), engineer(s), architect(s), and landscape architect(s). The property owner must provide written approval of all project representatives.
- c. A written narrative of the proposed use(s) of the property. For other than residential uses, including factors that potentially impact the proposed development may have on the surrounding area.
- d. One (1) presentation quality aerial photograph with adjacent property information and features including, though not limited to, the following: land use(s), property owner(s), sidwell number(s), location of adjacent buildings, driveways, streets, existing and proposed lot lines, building lines, structures, and parking areas on the parcel and within one hundred (100) feet of the site.
- e. Date of plan preparation, including revision dates.
- f. Complete legal description of the site.
- g. Professional seal of a registered architect, engineer, surveyor, landscape architect, or a planner.
- h. Vicinity map drawn at a scale of 1" = 2,000'.
- i. Dimensions and gross acreage of the site.
- j. Zoning classification of petitioner's parcel and all abutting parcels and demonstration of compliance with lot area, width, coverage, and setback requirements.
- k. Scale and north arrow on each plan sheet.
- l. Existing natural features and man-made features to be retained or removed.
- m. Adjacent property information and features including, though not limited to, the following: land use(s), property owner(s), sidwell number(s), zoning classification, location of adjacent buildings, driveways, streets.
- n. Existing and proposed lot lines, building lines, structures, parking areas, etc., on the parcel and within one hundred (100) feet of the site.
- o. Proposed construction phasing.
- p. Identification of variances that are be required.

Physical Features

- a. Location, size, and dimension of proposed buildings/structures, including floor area, finished floor elevation, number of floors, height, number and type of dwelling units (where applicable).
- b. Location of existing and proposed private and public roads and access drives, including general alignment, right-of-way or easement, surface type, and width.

- c. Location, size, and dimension of the following existing and proposed site features: water main, wells, detention and forebay basins, private utilities, utility poles, and public and private easements.
- d. Location, size, and dimension of existing and proposed storm sewer, culverts, ditches, and public and private storm sewer easements.
- e. Location, size, and dimension of existing and proposed sanitary sewer, septic fields, reserve septic fields, sewage disposal facilities, and public and private sanitary sewer easements.
- f. Location of all existing and proposed parking, including dimensions of spaces, maneuvering lanes, and surface type, where applicable.

Natural Features

- a. Soil characteristics of the parcel to at least the detail provided by the U.S. Soil Conservation Service, Soil Survey of Livingston County, Michigan.
- b. Existing topography with a maximum contour interval of two (2) feet for the site and beyond the site for a distance of one hundred (100) feet in all directions. Final grading plan, showing finished contours at a maximum interval of two (2) feet, correlated with existing contours so as to clearly indicate required cutting, filing, and grading.
- c. Location of existing wetlands, drainage courses, floodplains, and associated bodies of water, within one hundred (100) feet of the site, and their elevations.
- d. Location of existing woodlands delineated with symbolic lines tracing the spread of the outermost branches and shall be described as to the general sizes and kinds of trees contained.
- e. Location of natural resource features, including, but not limited to, woodlands and areas with slopes greater than eighteen percent (18%) incline.

Additional Requirements for Residential Developments

- a. Density calculation by type of unit.
- b. designation of units by type and number of units in each building.
- c. Amount, type, and location of common open space, including general and limited common elements within a site condominium, and any recreational amenities (i.e., playground equipment).

5. **Planning Commission Action.** The Planning Commission shall recommend to the Township Board of Trustees approval, approval with conditions, or denial of the preliminary site plan. If the preliminary site plan requires extensive revisions to meet Township requirements, the Planning Commission may recommend denial of the preliminary site plan. The Planning Commission shall set forth the reason for its action in the record of the meeting at which action is taken.
- a. The Planning Commission recommendation of the preliminary site plan shall be forwarded to the Township Board of Trustees for its review.
 - b. If the preliminary site plan is recommended for denial, the applicant may address all the conditions and submit the revised preliminary site plan to the Zoning Administrator for further action by the Planning Commission.
 - c. The Township Board of Trustees shall review the preliminary site plan and approve, approve with conditions, or deny the preliminary site plan.
 - d. If the Board of Trustees approves the preliminary site plan, the applicant may

submit a final site plan to the Zoning Administrator in accordance with the provisions herein.

- e. If the preliminary site plan is approved with conditions, the applicant shall address all the conditions during final site plan review.
 - f. If the preliminary site plan is denied by the Township Board, the applicant may submit an alternative preliminary site plan to the Zoning Administrator for review by the Planning Commission in accordance with the provisions herein.
6. **Effect of Approval.** Approval or approval with conditions of a preliminary site plan by the Township Board of Trustees shall indicate general acceptance of the use and the proposed layout of buildings, streets and drives, parking areas, other facilities, and overall character of the proposed development.
 7. **Expiration of Approval.** Approval of a preliminary site plan by the Board of Trustees shall be valid for a period of one (1) year from the date of approval and shall expire and be of no effect unless a completed application for a final site plan approval with all necessary supporting information is filed with the Zoning Administrator within that time period.

C. Final Site Plan

1. **Application.** For final site plan, the applicant shall submit to the Zoning Administrator three (3) copies of the plans or a PDF file. Upon review and approval by the Zoning Administrator, the Township Planner, the Township Engineer, and any other applicable agencies, nine (9) copies of the administratively approved preliminary site plan drawing(s) shall be submitted for distribution to the Township Planning Commission. Upon Planning Commission approval, an additional eight (8) copies of the plans shall be submitted for distribution to the Township Board of Trustees. Unless specifically directed by the Zoning Administrator, the Board of Trustees submittal shall be the same as the Planning Commission submittal and no changes shall be made to the plans. The Administrator shall transmit only administratively complete submittals of the preliminary site plan to the Planning Commission and Township Board.
2. **Information Required.** Site plans shall consist of an overall plan for the entire development. Sheet size shall be at least 24" x 36" with plan view drawn to a scale of no greater than 1" = 50'. A final site plan submitted for review and approval shall contain all of the information required for the preliminary site plan in addition to the following data presented in a clear and legible format.

Physical Features

- a. Location of existing and proposed centerline, edge of roadway, approach radii at intersections, and pavement cross-sections for public and/or private roads on site or abutting the site. Acceleration, deceleration, passing lanes, approaches, and curb and gutter shall also be shown.
- b. There is a proper relationship between major thoroughfares and proposed service drives, driveways, and parking areas. Proper access to all portions of the site and all sides of any structure is provided. All structures or groups of structures shall be so arranged as to permit emergency vehicle access by some practical means.
- c. Existing and proposed location, width, and approach radii of access drives, driveways, sidewalks, pathways, and curb and gutter. Pavement cross sections shall be provided for each.
- d. Existing and proposed off-street parking with calculation of the number of parking spaces required and provided.

- e. Location of existing storage tanks. This may include, but not be limited to, information on the following:
 - I. Chemical and fuel storage tanks and containers;
 - II. Water supply facilities;
 - III. Sanitary sewage disposal facilities;
 - IV. Storm water control facilities and structures; and
 - V. Location of all easements.
- f. Sites which include storage of hazardous materials or waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the ground, groundwater or nearby water bodies in accordance with County and State standards, where applicable.
- g. Location, size/dimension of existing and proposed fire hydrants, water service and fire suppression leads, and public and private water main easements. (All proposed water mains must meet the standards of the Marion, Howell, Oceola, Genoa (MHOG) Water Authority.)
- h. Grading and overflow route for proposed and existing detention and forebay basins and public and private drainage easements. Calculations shall be included and indicate that the detention and forebay areas meet the Livingston County Drain Commission standards.
- i. A note shall indicate the ultimate outlet for storm water runoff (County Drain, creek, or river).
- j. Location of all building structures with setback and yard dimensions.
- k. Dimensioned floor plans and typical elevation views for all buildings, where applicable.
- l. Proposed exterior lighting locations, typical detail, and illumination pattern.
- m. Location and description of all existing and proposed landscaping, berms, fencing, retaining walls, and quantity and size of all proposed landscaping.
- n. Trash receptacle pad location, area, method of screening, pavement type and cross-section.
- o. Location, area, depth, and method of screening of transformer pads, compressors, air conditioners, generators, refrigeration units, and similar equipment, where applicable.
- p. Entrance detail(s) including traffic control and monument sign locations and size.
- q. Designation of fire lanes.
- r. Proposed grading and how it shall tie into existing grading, and the limits of clearing and grading. Elevations shall be provided at, though not limited to: top of curb and/or edge of pavement, edge of walk/pathway, top and bottom of retaining wall, property corners, finished floor, storm structures, and detention and forebay high water.
- s. Location of existing and proposed ground, wall, or directional signs, and details of all proposed signs.
- t. Any other pertinent physical features.

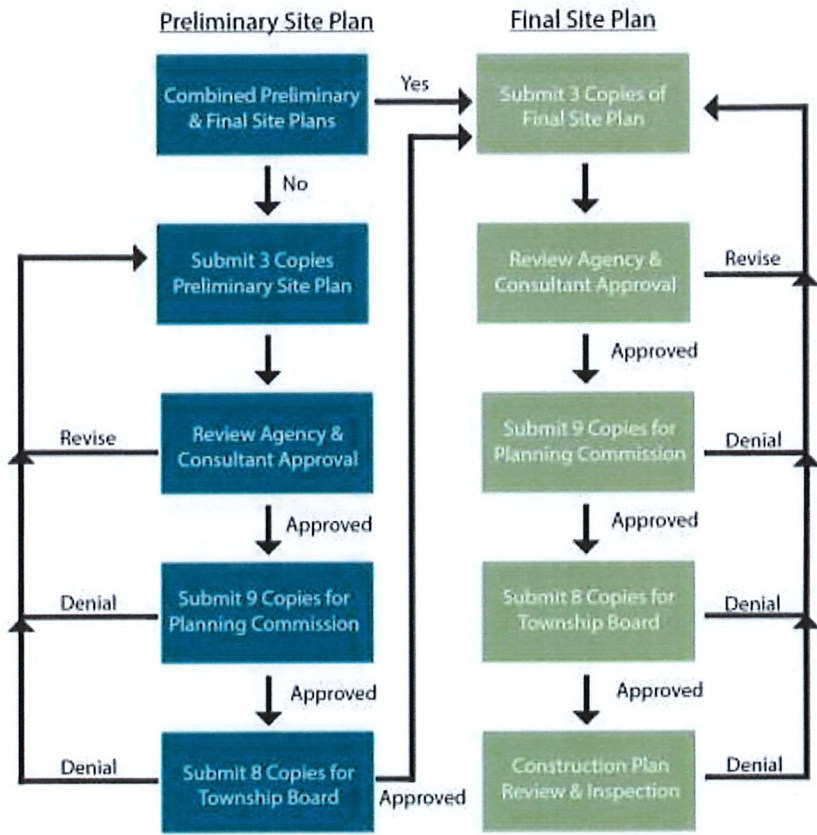
Additional Requirements for Commercial and Industrial Developments

- a. Loading/unloading areas.
- b. Total and useable floor area.
- c. Number of employees in peak usage.

3. **Standards for Review.** In reviewing the final site plan, the Planning Commission and Township Board shall determine whether the plan meets the following specification and standards:
 - a. The plan conforms to the approved preliminary site plan and with all Zoning Ordinance regulations.
 - b. All required information is provided.
 - c. The proposed use is in compliance with all Township Ordinances and any other applicable laws.
4. **Planning Commission Action.** The Planning Commission shall recommend to the Township Board of Trustees approval, approval with conditions, or denial of the final site plan. If the final site plan requires extensive revisions to meet Township requirements, the Planning Commission may recommend denial of the preliminary site plan. The Planning Commission shall set forth the reason for its action in the record of the meeting at which action is taken.
 - a. The Planning Commission recommendation of the final site plan shall be forwarded to the Township Board of Trustees for its review.
 - b. If the final site plan is recommended for denial, the applicant may address all the conditions and submit the revised final site plan to the Zoning Administrator for further action by the Planning Commission.
 - c. The Township Board of Trustees shall review the final site plan and approve, approve with conditions, or deny the final site plan.
 - d. If the preliminary site plan is denied by the Township Board, the applicant may submit an alternative final site plan to the Zoning Administrator for review by the Planning Commission in accordance with the provisions herein.
5. **Effect of Approval.** A recommendation of approval advances the final site plan to the Township Board of Trustees for its review and action. Upon approval of a final site plan by the Township Board of Trustees, the applicant may apply for a land use permit **for land balancing ONLY** in accordance with the terms of the approved final site plan and any other Township requirements. Land use permits for building shall only be issued after construction plan approval.
6. **Expiration of Approval.** Approval of a final site plan shall expire and be of no effect one (1) year following the date of approval unless construction has begun on the property in conformance with the approved final site plan.
7. **Conformity to Approved Site Plans.** Property, which is the subject of an approved final site plan, must be developed in strict compliance with the approved final site plan and any amendments thereto which have been approved by the Township Board of Trustees. If construction does not conform to the approved final site plan, the approval shall be revoked. Upon revocation of such approval, all construction activities shall immediately cease upon the site, other than actions taken to correct the violation. For residential developments, no land use permit for dwellings shall be issued until the first course of blacktop, by development phase if applicable, and landscaping has been installed. The required landscaping shall include, but not be limited to, greenbelts, entrance(s), detention/retention basins, and buffers as shown on the approved final site plan.
8. **Amendment of Approved Site Plan.** The Zoning Administrator shall have the authority to determine if a proposed change requires an amendment to an approved final site plan. The Zoning Administrator may approve minor changes in an approved final site plan, provided that a revised final site plan drawing(s) be submitted showing such minor changes, for purposes of record. An approved final site plan may be amended upon re-

application including any fees required and in accordance with the procedure herein for a final site plan.

- D. **Construction Plan Review** Following approval of the final site plan by the Township Board of Trustees, the applicant shall submit to the Zoning Administrator two (2) copies of construction plans as well as any other data and exhibits hereinafter required. The construction plans shall be consistent with the approved final site plan but shall provide greater detail in accordance with these standards. Approval of the construction plans by appropriate authorities is required prior to beginning construction.
- E. **Construction Observation** Marion Township or its designated representative will provide observation on all proposed public utilities and improvements, as well as limited construction observation of private improvements. The requirements for construction observation and final project closure shall be in accordance with these standards, as amended.



III. CONSTRUCTION PLAN SUBMITTAL PROCEDURES

- A. Following approval of the preliminary and final site plans by the Township, the applicant shall submit to the Zoning Administrator two (2) copies of construction plans as well as any other data and exhibits hereinafter required, the review fee, and a completed application form. After the initial submittal, subsequent revisions can be sent directly to the Township Engineer.
- B. The construction plans shall address the same concerns as the final site plan but shall include much greater detail in accordance with the adopted Marion Township Engineering Standards. Approval of the construction plans is required prior to beginning construction.
- C. As part of the review process, the Township Engineer may contact the Township, the DPW, Fire Department, or other regulatory agencies for comments and feedback. If other agencies (MDOT, MDEQ, LCRC, LCDC, etc.) have not completed their reviews, the Township Engineer may request that their comments be supplied to the Township Engineer prior to final approvals. In general, the following agencies shall have review authority over the type of improvement:
 1. Marion Township
 - a. Sanitary sewer and appurtenances
 - b. Public and Private water distribution system and appurtenances
 - c. Private storm sewer and appurtenances
 - d. Stormwater management (detention, retention, etc.)
 - e. Private roads and paved areas
 - f. Pathways and sidewalks
 - g. Grading and restoration
 - h. Any other improvements not regulated by another agency
 2. Livingston County Road Commission (LCRC)
 - a. Public roads, streets, and right-of-ways
 3. Livingston County Drain Commissioner (LCDC)
 - a. Public storm sewer and appurtenances
 - b. Stormwater management (detention, retention, etc.)
 - c. Soil Erosion Control
 4. Livingston County Department of Public Health
 - a. Private septic fields
 - b. Private water wells
 5. Marion Howell Ocala Genoa Water Authority (MHOG)
 - a. Public water distribution system and appurtenances
- D. When plans are complete and ready for approval the Township Engineer will request additional sets of plans be submitted for distribution to MDEQ for sanitary sewer permitting (see item 7 in this section).
- E. The applicant shall be responsible for submitting directly to the LCRC, LCDC, MHOG, and other separate regulatory agencies (MDOT, MDEQ for wetland permitting, etc.). Any such approvals shall be forwarded to the Township Zoning Administrator and the Township Engineer prior to beginning construction.
- F. All public improvement plans submitted for permits must carry the seal and signature of the Design Engineer. Note that the amount and type of sanitary and/or water main pipe must be summarized on the cover sheet when MDEQ permitting is required.
- G. Sanitary sewer plans along with a completed MDEQ Sanitary Sewer Permit Application Part 41, shall be provided to the Township Engineer. The Township engineer will have the Township execute the permit application and then forward the application and plans to the MDEQ for

permitting.

- H. Modification of Plan During Construction. All improvements shall conform to the final site plan. It shall be the responsibility of the applicant to notify the Zoning Administrator of any such changes prior to such change being made. Any changes which result in a material alteration of the approved final site plan shall require resubmittal of a site plan, which shows the proposed changes, to the Planning Commission including any fees determined by the township Board of Trustees. The Planning commission or Township Board of Trustees may require the applicant to correct the changes so as to conform to the approved final site plan.
- I. Phasing of Development. The applicant may, at their discretion, divide the proposed development into two (2) or more phases. In such case, the preliminary site plan shall cover the entire property involved and shall clearly indicate the location, size, and character of each phase. A site plan for each phase shall be submitted in accordance with the procedure herein for a final site plan including any fees required.
- J. Appeals. No decision or condition related to a construction plan approval shall be taken to the Zoning Board of Appeals
- K. Fees. The Marion Township Board shall establish by resolution a fee schedule to defray costs, which may include but not be limited to inspection, plan review, administration, and enforcement of this section. Before final approval, any costs incurred by the Township shall be paid by the applicant. The applicant may also be required to post a cash Escrow Account according to Section 4.07 of the Marion Township Zoning Ordinance.

IV. INSURANCE

- A. Prior to construction, the Contractor shall procure and maintain, during the term of the project, public liability and property damage insurance with a responsible insurance company which meets the approval of Marion Township, in such amounts as will be adequate to protect the public, Marion Township interests, and shall not be less than the limits set forth herein.

Type of Insurance:

- 1. Workmen's Compensation Insurance and Employer's Liability Limit: As required by laws of State of Michigan

Public Liability & Property Damage:

Bodily Injury:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000
Property Damage:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000

Owner's and Contractor's Protective Liability & Property Damage:

Bodily Injury:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000
Property Damage:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000

Motor Vehicle (including Owner, Hired and Non-Owned Vehicles):

Bodily Injury:	Each Occurrence:	\$1,000,000
Property Damage:	Each Occurrence:	\$1,000,000
Combined Single Limit:		\$2,000,000

- B. Policies shall be made available to Marion Township and the Township Engineer for examination as to their validity and any undesirable exclusions deemed improper by legal opinion rendered to the Township regarding same. Underground construction, where applicable, shall be specified in

the coverage. Certificates of coverage signed by the insurance carriers shall include a guarantee that 30 days written notice shall be given by the insurance carrier to Marion Township prior to cancellation of, or any change in the respective policies. In the event that the insurance is canceled, operations shall cease prior to the cancellation date and shall not resume until evidence is provided that proper insurance is again in effect. Additional Named Insured under Owners and Contractors Protective Public Liability and Property Damage Insurance shall include Marion Township, the Township Engineer (specifically by name) and members of staff, employees and agents for the Township.

- C. The name of the proposed development must be included on the insurance documents.

V. CONSTRUCTION OBSERVATION PROCEDURES

Marion Township or their designated representative will provide observation on all proposed public utilities and improvements, as well as limited construction observation of private improvements. Any facilities installed without Township provided observation may not be accepted by the Township, and therefore may be required to be re-installed. The requirements and procedures for Construction Observation and final project closure shall be as follows.

A. Pre-Construction Meeting

1. Upon construction plan approval and receipt of all permits, but prior to commencing construction, a Pre-construction meeting shall be held. The Developer or the Developer's Authorized Representative shall contact the Township Engineer to schedule the Pre-construction meeting.
 2. Attendees shall include: Township representatives, Township Engineer, Developer or Developer's Authorized Representative, Design Engineer, Underground and Paving Contractors and any interested regulatory agency.
 3. At the Pre-construction meeting, the following information shall be provided:
 - a. Proof of insurance naming Marion Township and its Engineer as additionally insured.
 - b. All permits from other agencies (MDOT, MDEQ, LCRC, etc.).
 - c. Approximate schedule for construction.
 4. Prior to the Pre-construction meeting, the contractor shall provide the inspection escrow to the Township. Proof of payment should be forwarded to the Township Engineer. The final approval letter from the Township Engineer will detail the amounts and basis of the escrow based upon industry standard production rates.
 - a. Unused observation and administration escrow funds will be eligible for return as described in the final approval letter.
 - b. The Township Engineer shall monitor the observation escrow and may require additional deposits. This shall be dependent on the contractor's rate of progress and the difficulty in completing the project.
 - c. Failure to keep the observation escrow current may result in withholding construction observation, and therefore possibly delaying construction.
- B. Initially and/or after a significant delay in construction, the Township Engineer shall have a minimum 72 hour's notice (not including weekends or holidays) prior to the start of any construction requiring observation.
- C. The Township's Engineer shall observe all public and private improvements according to the following criteria. The criteria may be adjusted for large or phased developments, at the discretion of the Township. The Township's Engineer may inspect all other operations requested by the Township.

1. Tree removal and site clearing – Representatives of the Township, the Township’s Engineer, the Developer or Developer’s Authorized Representative, the Design Engineer, and the Developer’s Contractor will meet prior to beginning any site work. The meeting will take place on site after the removal/clearing limits have been marked or staked, with the purpose being to verify general compliance with the approved plans. The proposed clearing limits must be clearly marked on the site prior to the meeting.
 2. Mass grading – The Township or the Township’s Engineer will not review the site grading for compliance with the plans unless specifically directed by the Township. Responsibility for adhering to the approved grading plan shall fall upon the developer or their engineer/surveyor. Any irregularities observed while out performing other inspections will be brought to the Township’s and developer’s attention. A grading certificate as described under project acceptance requirements shall be required.
 3. Soil erosion control - All inspections related to soil erosion control will be handled by the permitting agency, LCDC. Any problems observed by the Township’s engineer while on site performing other inspections will be brought to the Township’s, LCDC’s, and the developer’s attention.
 4. Water system improvements – Full time inspection will be provided by MHOG or their representatives as outlined in their approvals and permits.
 5. Sanitary system improvements – Full time inspection will be provided by the Township’s Engineer.
 6. Storm system improvements (private sewers) – The Township’s Engineer will perform a maximum of two (2) inspections during the storm sewer installation to verify general compliance with the plans and specifications. The developer shall be responsible for certifying the storm system prior to project acceptance. Copies of testing reports and all certifications shall be provided to the Township.
 7. Storm system improvements (public sewers) – All inspections related to public storm sewers will be handled by the permitting agency, LCDC, or the Township Engineer. Any problems observed by the Township’s Engineer while on site performing other inspections will be brought to the Township’s, LCDC’s, and the developer’s attention.
 8. Private road improvements – The Township’s Engineer will perform inspections at critical junctions of the road construction process. Critical junctions will be defined as:
 - a. Witnessing the proof-roll of the sub-grade (Permit to place sub-base)
 - b. Verification of sub-base construction (Permit to place base)
 - c. Verification of base construction (Permit to place pavement material)
 - d. Two (2) inspections during the placing of the asphalt or concrete pavement to verify general compliance with the plans and specifications.
 The developer shall be responsible for certifying the road system prior to project acceptance. Copies of testing reports and all certifications shall be provided to the Township.
 9. Public road improvements - All inspections related to public road improvements will be handled by the permitting agency, LCRC. Any problems observed by the Township’s Engineer while on site performing other inspections will be brought to the Township’s, LCRC’s, and the developer’s attention.
- D. Acceptance of final project:
1. The Township Engineer will generate a preliminary punch list. Once the items have been addressed, the Township and the Township’s Engineer will conduct a final site inspection.
 2. All punch list items must be addressed.
 3. All fees and escrows must be paid in full.

4. A Maintenance and Guarantee bond should be provided to the Township. The bond should be 50% of the engineer's estimate for public improvements. The Township will keep the bond for two years from the date of acceptance.
5. Record drawings and related documents must be provided to the Township:
 - a. Upon acceptance of field improvements, the Developer's Engineer will be provided with a copy of the Inspector's Daily Reports (IDR), any applicable lead reports, and a blank "Record Drawing Requirement Checklist" in order to provide record drawings to the Township's Engineer for review and approval.
 - b. A grading certificate will be required at this time. This form (provided by the Township's Engineer with IDR's) will also need to be signed and sealed by the Developer's Engineer and then submitted to the Township's Engineer along with the record drawings.
 - c. Easements for public utilities based on "As-Built" conditions requires a sketch and legal description to be submitted by the Developer's Engineer to the Township's Engineer for review and approval along with the record drawings. Once easements documents are approved, the Township's Engineer will mail the Developer/Township the easements to be recorded with the County Register of Deeds. Once the easements are recorded with liber and page number, recorded copies will need to be forwarded to the Township and the Township's Engineer.
 - d. Once the record drawings are approved by the Township's Engineer, the Developer's Engineer will be instructed as to what is required for final distribution (i.e. bluelines, mylars, CD-ROM or possibly micro-film.)

CONSTRUCTION PLAN REQUIREMENTS

The following is a list of requirements that shall be used to assist in Construction Drawing and Record Drawing preparation. Items or criteria not specifically on this list or contained within the Marion Township Zoning Ordinance shall be subject to Township approval, based solely on the Township's discretion as to appropriate standards, regulations, or local impact.

I. PLAN REQUIREMENTS

A. GENERAL

1. Plan paper shall be 24" x 36"
2. Plan scale shall be a maximum horizontal scale of 1":50' and vertical scale of 1":5'.
3. Plan cover sheet shall include the following; project name, name of Marion Township, Livingston County, Michigan, proprietor's, engineer's, architect's and landscape architect's name, address, phone and fax number, a location map (1" = 2000' scale) with north arrow, property Sidwell number(s), agency approvals required, plan sheet index, and professional architect's or engineer's seal.
4. A title block shall be present on each plan sheet.
5. The legal description for the property shall be included, must also be represented by bearing angles and distances in plan view, and shall have a ratio of closure no greater than 1 part in 5000.
6. Zoning information including zoning designation, land use, minimum lot area, frontage, and setbacks; and maximum lot coverage and building height requirements for the site's zoning designation.
7. A topographic survey plan sheet shall be included; additional requirements are outlined in Section II, Topographical Survey, of this document.
8. A general area plan shall be included at 1"=100' or 1"=200' when size of the site prohibits a single sheet. The general plan shall show existing and proposed roadways, site location and dimensions, utilities, building structures, landscaping, and topography.
9. A landscaping plan with tree survey information shall be included.
10. Location of wetlands, drainage courses, and floodplain areas.
11. On and offsite permanent and temporary easements shall be shown on the plans.
12. Private and public roadways, road right-of-way, and road easements shall be shown on the plans.
13. Dimensions for existing and proposed road right-of-way and/or easements, roadways, parking areas, driveways, sidewalks, and pathways shall be shown on the plans and shall be in accordance with the Marion Township Zoning Ordinance and the requirements outlined herein.

II. TOPOGRAPHICAL SURVEY

A. GENERAL

1. A complete topographical survey is required for all sites. Existing offsite elevations must be given at a minimum of 100' abutting the entire perimeter of the site. Onsite contours are required to establish the existing site drainage. Contours shall be at the following spacing:
 - a. 1-foot contours if scale of plan is less than or equal to 1"=50'
 - b. 2-foot contours if scale of plan is greater than 1"=50'

2. A minimum of two (2) benchmarks based on NAD83 or NGVD88 must be included. The datum shall be clearly referenced.
3. Property lines shall be indicated by bearing and distance.
4. All existing conditions shall be shown, including but not limited to the following items (location and elevation):
 - a. All utilities including sanitary, water main, gas, telephone, cable, and electrical (including rim and invert elevations).
 - b. Along property lines.
 - c. The building finished floor.
 - d. Sidewalks and pathways.
 - e. Retaining walls.
 - f. Finished grades of all adjacent buildings.
 - g. All easements.
 - h. 100-year flood plain.
 - i. Existing drainage courses and wetlands.
 - j. Upstream and downstream culverts.
 - k. Adjoining road right-of-way.
5. Road Topography shall extend across the entire site with grades shown on both sides of the street for:
 - a. Property line.
 - b. Ditch centerline and top of bank.
 - c. Edge of shoulder.
 - d. Edge of pavement or top of curb.
 - e. Crown or centerline.

III. UTILITIES (GENERAL)

A. GENERAL

1. The location, size, and type of pipe of all existing and proposed utilities shall be shown in plan view.
2. Proposed sanitary shall extend across the property frontage(s) or to a property line, as directed by the Township.
3. No new utilities shall be placed below or within a 1:1 influence of a building footprint. The limits of all removals and/or abandonments shall be shown on the plans. The following criteria shall apply for all existing utilities within the influence of a building foundation:
 - a. Utilities within five (5) or less below a footing shall be removed.
 - b. Utilities greater than five (5) feet below a footing shall be grouted full using a standpipe to prevent air voids.
 - c. Utilities that are to be abandoned and are not within the influence of a footing shall be bulkhead unless the utility is determined to be a hazard, nuisance or potential maintenance problem by the Township.
4. A minimum ten (10) feet wide horizontal separation shall be required between water main and sewers.
5. No water main or sanitary sewer shall be within five (5) feet (measured horizontally) from the high-water elevation of a detention, retention, and/or forebay basin.
6. All utility crossings, including sanitary sewer leads, shall specify top and bottom of pipe elevations in both plan and profile view. An 18" minimum vertical clearance between water main and storm or sanitary sewer is required.

7. A casing pipe shall be provided when utilities must cross retaining walls or when a bore is proposed under a roadway. The casing pipe must extend beyond the angle of repose of the retaining wall or roadway. The size, length and invert of the casing pipe shall be indicated. All bores under roadways shall meet the requirements of the Livingston County Road Commission Requirements.

IV. WATER MAIN

A. GENERAL

1. The location, size, length and type of existing and proposed water main, water service leads, and water main appurtenances such as, though not limited to; valves, hydrants, vertical and horizontal bends, and tees shall be shown in plan view. All water main, including appurtenances shall meet the Marion Howell Ocala Genoa Sewage and Water Authority standards and the Howell Fire Department standards.

V. SEWERS (SANITARY/STORM)

A. GENERAL

1. The following must be shown in plan view for sanitary and storm sewer:
 - a. Length, size, type, class, and slope of pipe between structures.
 - b. Top of casing elevation at structures.
 - c. Easement width (20' minimum for sanitary sewer, 12' minimum for storm sewer).
 - d. Progressive numbering system for all structures.
2. The following must be shown in profile view for sanitary and storm sewer:
 - a. Length, size, type, class, and slope of pipe between structures.
 - b. Size and type of structure.
 - c. Top of casing and sewer invert elevations at structures.
 - d. Existing and proposed ground elevations.
 - e. Hydraulic grade line (storm sewer only).
 - f. Utility crossings, including top and bottom of pipe elevations.
 - g. Special backfill areas under or within pavement areas.
 - h. Progressive numbering system for all structures.
3. Storm and sanitary sewer size, grade, and structure spacing table

Size	Std Grade (%)	Min Grade (%)	Max Grade (%)	Std Grade (ft)	Max Grade (ft)		
10" *	0.60	0.30	6.2	300	350		
12" **	0.40	0.22	6.0	300	350		
15"	0.24	0.16	3.6	300	350		
18"	0.18	0.12	2.8	300	400		
21" & greater		0.14		0.10	2.2	300	400

* minimum allowable sanitary sewer size is 10"
 ** minimum allowable storm sewer size is 12"

4. All pipe connections at structures shall be separated by a minimum of one (1) foot between pipe walls and 40% of the structure circumference must remain intact. The design engineer shall provide details for all structures with multiple pipe connections not meeting the requirements below:

<u>Structure Diameter</u>	<u>Max. Pipe Size for Straight – Through Installation</u>	<u>Max. Pipe Size For Right Angle Installation</u>
48"	24"	18"
60"	36"	24"
72"	42"	36"
96"	60"	42"

5. Where Manning's equation is used to compute flow, a minimum value for "n", roughness coefficient shall be as follows:
 - a. Sewers = 0.013
 - b. Culverts = 0.025
 - c. Open Channel = 0.035

VI. SANITARY SEWER

A. GENERAL

1. A minimum 20' wide easement is required for all public sanitary sewer. Wider easements will be required for deeper sewer to maintain a 1:1 excavated side slope within the easement. The sanitary sewer shall be centered within the public easement.
2. Prior to acceptance of the sewer, the developer or contractor shall provide a videotape or approved digital image file of the sewer (with flows) to the Township. The video shall be taken no less than 30 days after installation.
3. The Township Engineer will inspect all sanitary taps into existing Township structures.
4. Lift stations will not be permitted unless there is no other alternative for sewer service. If a lift station is required, the Design Engineer shall provide the Township with all design details and calculations, which shall be in accordance to all current local, County and State requirements.
5. The testing requirements are as follows:
 - a. The contractor shall conduct a sanitary air test with the Township Engineer witnessing. Air tests shall comply with current testing standards and requirements. Air testing should not be used if the groundwater level is 2 feet or more above the top-of-pipe at the upstream end (reference ASTM F1417) or if the air pressure required is for testing is greater than a psi-gauge.
 - b. A sanitary infiltration test shall comply with current standards and is required when the water table is 7' or higher than the invert elevation.

B. DESIGN CRITERIA

1. A quantity list and design data (on the cover sheet or first sheet of the plans) shall be provided and be in accordance with the current 10 States Standards.
2. The maximum depth to the invert of any sanitary sewer pipe shall not exceed 80% of the manufacturer's recommendation.
3. When there is a change in direction in a sewer at a manhole, an allowance of 0.10 feet in grade shall be made for a loss of head through the manhole.
4. Whenever there is a change in pipe size, the inverts of both sewers shall be set at a grade so that both sewers maintain the same energy gradient.
5. Siphons shall only be allowed when specifically approved by the Township and Township Engineer.
6. A minimum cover of 4' is required over all sanitary sewers, including leads.

7. The building lead location, size, type, and slope (minimum 6" diameter, SDR 23.5, and 1%) shall be provided. In order to verify the slope of the lead, invert elevations shall be provided at the finished grade of the building and at the connection to the mainline sanitary sewer. The 6" lead shall extend all the way to the building.
8. All sewer leads in high groundwater areas to be installed according to the township standard lead detail.
9. In sanitary sewers where construction of building leads to the property line is not required, a wye branch (tees not allowed) shall be installed for each lot or potential building site.
10. Leads shall not be connected to manholes unless specifically approved by the Township for connection to the last manhole or connection to deep sewer. A drop connection will be required at connections to manholes.

C. DROP CONNECTIONS

1. External drop connections are required when there is an 18" vertical difference between inverts on the outlet and inlet pipes and shall be constructed according to the Standard Details.
2. The Township must approve internal drop connections. The connection shall be based on field conditions and in accordance with standard details.

VII. STORM SEWER

A. GENERAL

1. A drainage area map shall be provided. The drainage area map shall show the storm sewer system, sub-area boundaries and acreage contributing to each storm structure, and impervious (C-factor) for each sub area.
2. Storm water shall not be diverted onto adjoining properties nor shall storm water flow be impeded from its existing drainage path due to a proposed development. Detention may be required to meet County discharge rate requirements. See the Detention/Retention section of this document for requirements.
3. Storm water discharge shall be per the Livingston County Drain Commissioner's requirements or the Livingston County Road Commission's requirements if discharging into the road right-of-way. At no time shall storm water discharge exceed a rate of 0.2 cfs/acre.
4. The location, size, type of pipe, and length of all culverts shall be shown on the plans. Culvert requirements are further outlined in the design criteria of this section.
5. The location, length and cross-section of all ditches shall be shown the plans. The cross-sectional ditch requirements are further outlined in the design criteria of this section.
6. Roof drainage and sump pump leads may be directed overland or connected to a storm sewer system. If connecting to a storm sewer system, the connection shall be made at a storm structure unless otherwise approved by the Township Engineer. If approved, a tap to an existing 12" concrete storm sewer may be made with a Fernco EZ Tap and a tap to a larger concrete storm sewer pipe with a KOR-N-TEE. The location, size, type and slope of the leads shall be included on the plans.
7. The owner/developer shall be responsible for cleaning and maintaining all storm sewer, storm structures, sediment forebays, filter berms, detention basins, and detention basin outlets. These storm water management systems shall be cleaned once all buildings within the development are complete. A note indicating this, as well as a description of the mechanism for which the owner/developer plans to establish in order to provide for long term maintenance, should be included on the plans.

B. DESIGN CRITERIA

1. Enclosed storm sewer design calculations shall be submitted using the Rational Method, $Q = CIA$. The following shall be considered:
 - a. 10-year storm, $I = 175/(T+25)$ with initial $T=15$ minutes. Time (T) shall be based on the actual time of flow from the most distant point of flow measurement.
 - b. Typical surface runoff coefficients shall be:

Surface	C
Pavement (Asphalt, Concrete, Brick)	0.90
Roofs	0.90
Open Water	1.00
Aggregate	0.65
Greenbelt (Lawns, Vegetation)	0.20

Note: Surface area of detention, retention, and forebay areas shall be considered open water unless a naturally vegetative basin is provided.

2. Velocity: Minimum = 2.0 ft/s; Maximum = 10.0 ft/s. Velocities exceeding 5.0 ft/s will require erosion protection as directed by the Township Engineer.
3. Manning's formula shall be used to calculate pipes flowing full to verify the capacity of the storm sewer system: $Q = (1.49/n) AR^{2/3}S^{1/2}$
4. The storm sewer system shall be designed, if possible, so that the hydraulic grade line (HGL) is within the pipe. When discharging storm sewer into an existing or proposed detention basin, the 10-year storm elevation or bankfull elevation shall be considered when calculating the HGL of the proposed system. When discharging into an existing storm sewer system, the HGL must be calculated from the outlet of the existing system.
5. Sewer and structure requirements
 - a. All storm sewer shall be in accordance with Section V., Sewers (Sanitary/Storm).
 - b. The minimum size storm sewer shall be 12" diameter.
 - c. The Township Engineer must approve direct taps for storm sewer. Direct taps shall only be permitted if the storm sewer that is to be tapped is significantly larger than the tapping pipe. A KOR-N-Seal boot connection shall be required for allowable taps. A detail shall be included on the plans.
 - d. The sump leads and roof drain leads connecting to a storm sewer system shall be a minimum of 4" diameter and shall be SDR 35, non-perforated, solid wall, PVC pipe.
 - e. Storm sewer, unless otherwise approved by the Township Engineer, shall be reinforced concrete pipe (RCP) and shall meet the following requirements:
 - I. Class IV for a depth up to 14 feet
 - II. Class V for depth 14 feet to 24 feet
 - III. Class III may be allowed in greenbelt areas for a depth up to 14 feet. At no time shall Class III be allowed under or within the influence of pavement areas
All RCP shall meet ASTM C76 requirements
 - f. RCP elliptical storm sewer may be allowed and must be approved by the Township Engineer. Elliptical storm sewer shall meet ASTM C507 requirements.
 - g. Plastic storm sewer pipe may be allowed in greenbelt areas only and must be approved the Township Engineer. The following requirements shall apply:
 - I. Maximum 18" diameter

- II. Smooth interior
 - III. PVC pipe shall meet ASTM F949 requirements
 - IV. HDPE pipe shall meet ASTM M294 requirements
- h. End sections shall be RCP, with a bar grate and 8" to 15" rip rap at the outlet.
 - i. Manholes and catch basins shall be a minimum of 48" diameter. A detail of a typical manhole and catch basin shall be included on the plans. The type of casting for each structure shall be indicated in either plan or profile view and on the detail.
 - j. Inlets shall be a minimum of 24" diameter. Inlets shall only be permitted at a structure that is the first (upstream) structure in a series and 12" diameter pipe serves as the discharge. The next downstream structure must have a sump.
 - k. A minimum cover of 2'-6" is required. MDOT "lowhead" or "flat top" structures are required instead of a cone/corbel section if there is less than 4' of cover over the pipe. Both plan and profile shall specify "low head" where necessary. A detail of the "lowhead" structure should be included on the plans.
 - l. A two (2) foot sump is required for any structure receiving surface runoff, with the exception of inlet structures.
 - m. All storm sewer shall be premium joint (rubber gasket). A note indicating this shall be included on the plans.
 - n. Trench drains shall only be permitted within truck wells. A trench drain detail shall be included in the plans.
 - o. All storm water runoff within a truck well or discharging into a wetland shall be pre-treated with an oil and gas separator. A detail of the treatment structure, including the type and model number, shall be included on the plans.
6. Culvert calculations shall be submitted for inlet headwater control or outlet tailwater control with proper "K" factors used to determine culvert sizes. All culverts shall be sized for a 10-year storm event.
7. Culvert requirements
- a. The minimum size culvert shall be 12" diameter
 - b. Culverts 48" diameter and greater shall require sloped paving at the inlet. Headwalls shall not be permitted.
 - c. Culverts shall be either corrugated metal pipe (CMP) or reinforced concrete pipe (RCP) and shall meet the following requirements:
 - I. 12" – 24" CMP shall be 16 gauge
 - 30" – 36" CMP shall be 14 gauge
 - 42" – 54" CMP shall be 12 gauge
 - 60" – 72" CMP shall be 10 gauge
 - All RCP shall be a minimum of Class IV
8. Open ditch calculations shall be submitted and shall be sized for a 10- year storm event using Manning's formula: $Q = (1.49/n) AR^2/3S^{1/2}$. A one (1) foot freeboard shall be required.
9. Open ditch requirements:
- a. Minimum flat bottom width: 2'
 - b. Minimum flat bottom depth: 2' (measured from shoulder hinge point).
 - c. Transverse slopes: 1.0% - 5.0%; ditch slopes exceeding 3% shall be sodded to a point one (1) foot above the ditch flow line.
 - d. Maximum side slopes 3:1
 - e. Culverts sized for a 10-year storm elevation

- f. Flow through an open ditch system shall not exceed eight (8) cfs
- g. No more than six (6) acres of tributary area may be conveyed through an open ditch system. An enclosed storm sewer system is required for all tributary areas exceeding six (6) acres.
- H. A ditch cross-section, which clearly indicates the dimensions outlined above shall be included on the plans.

VIII. DETENTION/RETENTION

A. GENERAL

- 1. The location of the detention, standpipe riser structure, retention, forebay, forebay filter berms, and rain garden areas shall be shown in plan view. Storm water management systems proposed under the jurisdiction of the Drain Commissioner shall be located on common-owned property, not on privately owned lots.
- 2. Detention must accommodate all onsite drainage and any runoff entering the site from neighboring properties.
- 3. The Livingston County Drainage District for which the site discharges should be indicated on the plans. Discharge rates shall not exceed 0.2 cfs/acre. More restrictive discharge rates may be required based on site conditions and the drainage district for which the site discharges. The Township Engineer and/or the Livingston County Drain Commissioner shall determine if a more restrictive discharge rate is required.
- 4. Detention basins shall be wet basins or storm water marsh systems. Dry basins, providing extended storage, will be accepted when the development site's physical characteristics or other local circumstances make the use of a wet basin infeasible.
- 5. Storm water management system incorporating pumps shall not be permitted in developments with multiple owners. Variances from this requirement will only be considered if a demonstration that no other alternative is feasible is provided on the plans.
- 6. The use of underground detention/retention is not allowed without Township approval.

B. DETENTION/RETENTION/FOREBAY DESIGN

- 1. Calculations for sizing the detention basin shall be submitted and included on the plans. All detention basin sizing shall be per the Drain Commissioner's "Simple Method of Detention Basin Design" for a 100-year storm event and have a minimum freeboard of one (1) foot. Drainage calculations shall include the following:
 - a. Tributary area in acres.
 - b. C-factor
 - c. Discharge rate
 - d. Volume of storage required
 - e. Volume of storage provided
 - f. Volume of the permanent wet area, which shall be based on the following equation:

$$2.5 * 0.5 \text{ inch} * \text{runoff coefficient} * \text{site drainage area (cf)}$$
 - g. Bankfull elevation. This volume shall be based on a 1.5-year, 24-hour storm event and the following equation:

$$5160 * \text{tributary area acreage} * \text{C-factor}$$
 - h. The bankfull volume shall be stored not less than 24-hours and not more than 40 hours.
 - i. First flush elevation. This volume represents the first 0.5 inch of runoff and shall be calculated using the following equation:

1815 * tributary area acreage * C-factor

- j. Standpipe-type riser structures are required for all detention basins. The size of the riser pipe and calculations showing the size and number of infiltration holes within the riser pipe shall be included. Riser pipes shall be a minimum of 36" diameter for a height up to four (4) feet and a minimum of 48" diameter for a height exceeding four (4) feet. Infiltration holes shall be set at the bottom of the riser pipe and at the first flush and bankfull elevations. A standpipe detail shall be included on the plans.
 - k. Hoods or trash racks shall be installed on the riser to prevent clogging. Grate openings shall be a maximum of three inches.
 - l. Orifice plates are discouraged. Where an orifice plate is to be used in the standpipe to control discharge, it will have a minimum diameter of four inches
 - m. The riser shall be placed near the pond embankment to provide for ready maintenance access.
 - n. Riser pipes will be constructed with concrete bottom.
 - o. Outlet pipe size. The outlet pipe shall be sized for a 10-year storm event.
2. A marsh fringe shall be established near the inlet or forebay and shall surround a minimum of 50% of the basin's perimeter. The location of this area shall be shown on the plans.
3. If connecting into an existing detention basin, calculations showing the total volume of the existing basin, the C-factor used to size the existing basin, the amount of storage volume dedicated for the site and the amount of storage volume required for the site.
4. Calculations for sizing a retention basin shall be submitted and included on the plans. Retention basins shall be sized to accommodate two consecutive 100- year storm events and shall be capable of storing two (2) inches of runoff from the entire tributary area. A minimum three (3) foot freeboard shall be required. Calculations shall include all requirements for detention basins shown in sections a-e above.
5. Calculations for sizing the sediment forebay(s) shall be included on the plans. The capacity of the forebay shall be equivalent to 5% of the 100-year storm volume based on the area tributary to the inlet. Forebays shall be separated from the detention basin using either gabions or compacted earthen filter berms. A detail of the separation method shall be included on the plans. Direct maintenance access to the forebay for heavy equipment will be provided.
6. Basin side slopes, regardless of the type shall be no flatter than 20:1 and no steeper than 3:1. Slopes steeper than 5:1 must have a four (4) foot high chain link fence with a twelve (12) foot wide access gate. The fence shall completely surround the basin.
7. Anti-seep collars should be installed on any piping passing through the sides or bottom of the basin to prevent leakage through the embankment.
8. All basins will have provisions for a defined emergency spillway, routed so that it can be picked up by the main outflow channel while not discharging directly over the outlet pipe. The emergency spillway will be set at an elevation six inches above the design high water elevation.
9. Adequate maintenance access from public or private right-of-way to the basin will be reserved. The access will be on a slope of 5:1 or less, stabilized to withstand the passage of heavy equipment, and will provide direct access to both the forebay and the riser/outlet.
10. The placement of retention/detention basins within a floodplain of a stream, creek, or lake is prohibited.

C. PERMANENT RETENTION PONDS

1. Freeboard: Retention Basins shall provide three feet of freeboard.
2. Storage Volume
Retention basins will be capable of storing two inches of runoff from the entire tributary area, contingent upon the following:
 - a. An overflow assessment will be required. The assessment should include descriptions of the surrounding areas, including nearby homes, which would be impacted in the event of an overflow.
 - b. The proprietor must submit a soil boring log taken within the basin bottom area to a depth of 25 feet below existing ground or 20 feet below proposed basin bottom elevation. The Drain Commissioner reserves the right to require additional storage up to that required by two consecutive 100-year storm events based on the results of soils data or the overflow assessment. If such additional storage is required, freeboard requirements may be reduced at the discretion of the Drain Commissioner.

D. RAIN GARDEN

1. Located a minimum distance of 10' from any building structure or parking area.
2. Maximum contributing acreage shall be five (5) acres. Contributing acreage of one (1) acre or less is preferred.
3. The size of the rain garden shall be indicated on the plans. Sizing shall be based on contributing drainage area, amount of imperviousness, and soil type. The calculations using following formula shall be included on the plans:
$$A = \text{Drainage area} * 5\% * Rv \quad Rv = 0.05 + (\% \text{ impervious})$$
4. A cross-section of the rain garden shall be included on the plans and shall meet the following requirements:
 - a. Soil mixes shall consist of 50%-60% sand, 20%-30% topsoil and 20%-30% compost.
 - b. Water depth shall be based on the ground slope of the surrounding area.
Depth = 4" – 5" for slopes 2-4%
Depth = 6" – 7" for slopes 5%-7%
Depth = 8" for slopes 8% - 12%
Water depth shall not exceed 8" and ground slopes should not exceed 12% within 30 feet from the rain garden.
 - c. A minimum 4" mulch layer shall be placed between the water storage area and planting soil bed. The mulch specified shall be appropriate for water quality gardens. Coarse, fibrous, shredded wood chip mulch is preferred.
 - d. (If necessary) Type and size of underdrain shall be specified. All underdrain shall be surrounded by pea gravel with 12" minimum layer of class II sand.
 - e. Water depth shall be based on the ground slope of the surrounding area.
5. The number and type of plants should be included. The plants shall be water tolerant and the one (1) plant for every square foot of rain garden area is required.

E. GENERAL REQUIREMENTS

1. All runoff generated by proposed impervious surfaces, unless otherwise permitted by the Drain Commissioner, must be conveyed into a stormwater storage facility for water quality treatment and detention/retention prior to being discharged from the site.
2. Public safety will be a paramount consideration in stormwater system and pond design. Providing safe retention/detention is the proprietor's responsibility. Pond designs will incorporate gradual side slopes, topsoiling, seeding and mulching, plantings per

landscape plan if one is required, and safety shelves. Where further safety measures are required, the proprietor is expected to include them within the proposed development plans.

F. DETENTION REQUIREMENTS

1. The volume and storage provided for controlling the "bankfull" flood will be equal to or in excess of the total rain from a 1.5-year, 24-hour storm. This storage volume is slightly increased from C_{pv} , the channel protection storage volume, as used in Appendix H. This can be determined by:

$$8160 \times \text{acreage} \times \text{the relative imperviousness factor } C = \text{cubic feet}$$

The release rate from the "bankfull" storage volume will be such that this volume will be stored not less than 24 or more than 40 hours.

2. The "first flush" of runoff is defined as the first 0.5 inch of runoff over the entire site. The majority of this volume will be captured in the sediment forebay, with the residual volume detained for a minimum of 24 hours. The volume of the first flush can be determined by:

$$1815 \times \text{acreage} \times \text{the relative imperviousness factor } C = \text{cubic feet}$$

3. Basin Inlet/Outlet Design

- a. Engineered velocity dissipation measures based on discharge flow rates and velocities will be incorporated into basin designs to minimize erosion at inlets and outlets, to minimize the re-suspension of pollutants, and to create sheet flow conditions where feasible.
- b. To the extent feasible, the distance between inlets and outlets will be maximized. The length and depth of the flow path across basins and marsh systems can be maximized by:
 - I. increasing the length-to-width ratio of the entire design.
 - II. increasing the dry weather flow path within the system to attain maximum sinuosity. If possible, inlets and outlets should be offset at opposite longitudinal ends of the basin.
- c. The outlet will be well protected from clogging.
- d. Riser Design
 - I. The use of a perforated standpipe-type riser structure to assure an appropriate detention time for all storm events is required.
 - II. Orifices used to maintain a permanent pool level should withdraw water at least one foot below the surface of the water.

IX. FLOOD PLAIN DEVELOPMENT

- A. An MDEQ permit is required for work within the floodplain.
- B. An equivalent volume of excavation must compensate for all fill within floodplain in order to maintain water storage volume.
- C. In certain instances, the 100-year flood plain boundary must be shown on the plans.
- D. Where available, the community flood insurance study shall be used.

X. SITE GRADING

A. GENERAL

1. Sufficient proposed grades must be indicated to ensure the following:
 - a. Drainage is adequately discharged offsite with proper detention or retention.
 - b. No upstream drainage is restricted.
 - c. Paving slopes are adequate.

- d. The site generally drains without standing water.
 - e. Site grading merges with grading on neighboring sites.
 - f. Sight lines are not obstructed.
- B. The finished grade elevation for all proposed and existing buildings on site or on neighborhood properties must be provided.
 - C. The maximum slope to an abutting property line is 1:4.
 - D. A slope of 1:3 may be approved based on township review. a slope of 1:3 shall be restored using an approved "erosion blanket". this shall be identified on the plans.
 - E. Grading plans shall take into account the natural features of the land as much as possible.
 - F. A grading easement from an adjacent property owner will be required for any offsite grading and for any retaining wall footing or where it appears that "normal" (1 on 1 side slope) excavation to the bottom of the footing encroaches the adjacent property.
 - G. No filling will be allowed within the flood plain of a river, stream, creek, or lake unless under the terms of a permit granted by the mdeq.

XI. RETAINING WALLS

A. GENERAL

- 1. Walls separating a grade differential of more than 2' are considered a retaining wall and require a structural engineering design and review. The Design Engineer must supply a cross-sectional detail on the plans and computations (sealed by a registered engineer) with the plan submittal. The cost of all retaining walls must be included in the engineering cost estimate.
- B. Top and bottom of wall elevations and dimensions above and below grade and from the property line shall be shown on the plans.
- C. The face of a retaining wall shall be a minimum of 2' from the property line.
- D. Edge drain shall be provided along the base of all retaining walls. edge drain shall be a minimum of 6" diameter. the type of pipe should be included in the cross-sectional detail.
- E. The developer shall provide appropriate material testing at his/her cost during construction.
- F. Protective railing is required for all walls within 2' of parking, driving, pedestrian walkways and/or when the height of the wall is 30" or greater.
- G. The design engineer shall execute and submit a retaining wall certification form. see page 31.
- H. Type of walls allowed, specifications, and inspection items
 - 1. Concrete Walls
 - a. Formwork dimensions for the base (inspection only)
 - b. Steel size, quantity, spacing, overlap (2" minimum clearance for reinforcing steel from any formwork.
 - c. Box-outs, keyways, weep holes, footing drain and any other plan details.
 - d. No vibration of concrete occurs inside the form during placement (inspection only).
 - e. Concrete cylinders, slump, air entrainment tests performed by developer's testing firm are acceptable (inspection only).
 - f. Concrete mix shall not be over watered at the job site (inspection only).
 - g. Copies of the delivery tickets are obtained (inspection only).
 - 2. Pre-cast walls
 - a. Certification shall be obtained from the manufacturer (inspection only).
 - b. Wall base placement, material, size, thickness, and compaction.
 - c. Embedment and batter are per the manufacturer's recommendations.
 - 3. Wood Walls

- a. Certificates of treatment level for wood materials.
 - b. Connection details and fasteners (i.e. nails, bolts, etc.)
 - c. Proper length and embedment of "dead men".
4. Boulder Walls
- a. Maximum height: 4 feet.
 - b. Boulder size shall range from 24" to 30" and embedment shall be a minimum of 8" into the ground.

DRAFT

Date: _____

XXXXX

XXXXX

XXXXX

XXXXX

Regarding: Retaining Wall Review for: _____
S.T.P.C.#: _____
Sidwell#: _____

Design Engineer and Firm Name: _____
Address: _____
Phone: _____ Fax: _____

Owner: _____
Address: _____
Phone: _____ Fax: _____

A retaining wall(s) is proposed for the above referenced site. The wall(s) was designed to applicable standards, and all necessary loads (including vehicular surcharge) have been incorporated into the design. In addition, the wall meets minimum factors of safety against both overturning and sliding.

A retaining wall detail has been incorporated into the drawings and has been submitted for review.

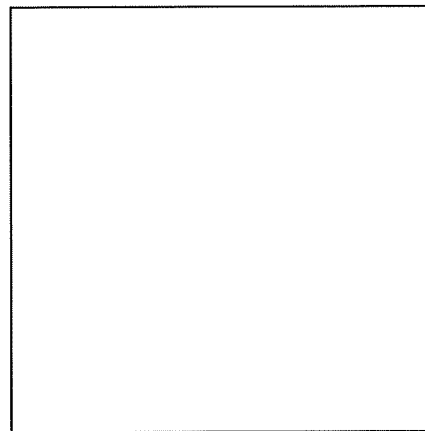
Sincerely,

Seal

Printed Name of Professional Engineer

Signature

cc: Philip Westmoreland, P.E., Spicer Group, Inc.,
125 Helle Blvd., Ste. 2
Dundee, MI 48131



XII. PAVING AND ROADS

- A. All public roads shall meet the requirements of the Livingston County Road Commission and the Marion Township Zoning Ordinance.
- B. All private roads shall meet the requirements of the Marion Township Ordinances and the standards outlined within the private road sections below.
- C. All facets of the intersection of two or more roads, public or private, where at least one (1) of the roads is a public road, shall meet the then current requirements of the Livingston County Road Commission.
- D. The type of surface proposed for roadways, parking areas, driveways, sidewalks, pathways, loading zones, and dumpster pads shall be shown on the plans and shall be in accordance with the requirements outlined herein.
- E. All applicable pavement and/or gravel cross-sections shall be included on the plans for roadways, parking areas, driveways, sidewalks, pathways, and dumpster pads. Curb and gutter cross-sections shall be included on the plans, if applicable.
- F. Private roads shall be limited to serving no more than thirty (30) single-family dwelling units on a single access and seventy-five (75) with more than one point of access. Any dwelling unit whose only means of ingress or egress is via the private road shall be considered in the number of dwelling units allowed. If private roads are an extension of a dead-end public road, the number of dwelling units along the public road shall be considered in the number of dwelling units allowed. This limit shall apply to any type of roadway surface, gravel or pavement.
- G. Private roads with only one connection to a county road, state highway, or another approved private road shall not be longer than two thousand (2000) feet.
- H. Dead end roads shall terminate with a cul-de-sac, unless site conditions necessitate the use of another configuration. The Township must approve any alternate configuration.
- I. All cul-de-sacs or turnarounds shall terminate at the property line except when precluded by a natural barrier or when the cul-de-sac terminates at the last available building envelope, lot, or parcel within the development and that building envelope, lot, or parcel fronts upon the cul-de-sac.
- J. Frontage measurements along a cul-de-sac shall be measured tangent to the front setback line and at right angles to the side lot lines.
- K. Not more than four (4) principal buildings or lots shall have frontage on a cul-de-sac. any lot located on a cul-de-sac shall have its side lot lines designed to be radial to the front property line or right-of-way line on either public or private roads, except where such lot lines would create unusual, inconvenient, or irregular lot shapes.
- L. **PRE-EXISTING OR NEW PRIVATE ROADS SERVING 2-5 DWELLING UNITS**
 - 1. Any road serving between 2 and 5 dwelling units shall be considered a private road and shall be referred to as a Minor Private Road.
 - 2. Minor Private Roads should generally conform to the following criteria. Additional requirements are set forth in Marion Township General Ordinance for Private Roads No. 07-03.
 - 3. Requirements for Minor Private Roads will be on a case-by-case basis. The requirements set forth herein are general guidelines to ensure public health, safety and welfare, and may be adjusted by the township as necessary based on site conditions.
 - 4. Submission requirements shall be sufficient to determine the nature and extent of the existing conditions and any proposed improvements. The extent of the information provided shall be at the discretion of the Township, Township Engineer, and Township Planner.
 - 5. Right-of-way or easements should have sufficient width to encompass the entire cross

- section of the road, including any ditches or drainage systems.
6. Roadway width should be sixteen (16) feet whether paved or gravel. A one (1) foot grass shoulder should be provided on both sides of the road.
 7. Roadway cross section should generally conform to the following:
 - a. Gravel road:
 - I. Six (6) inches MDOT 22A aggregate placed in two (2) courses.
 - b. Paved road:
 - I. Four (4) inches bituminous surface placed in two (2) courses. No course or lift shall exceed 2" in depth.
 - II. Eight (8) inches of aggregate base, MDOT 21AA Limestone.
 8. All roadways should be sufficiently crowned for drainage.
 9. Vertical alignment should generally conform to the following guidelines:
 - a. Site distances at all intersections (public roads or private roads) should be verified and shall meet the requirements of the Livingston County Road Commission.
 - b. Roadway grades should be minimized and provide safe emergency vehicle access.
 10. A system to adequately collect and discharge tributary roadway runoff is required. Either open ditch or enclosed storm sewer systems are acceptable and shall be sized reasonably for the anticipated run-off. Generally, a 10- year storm event shall be used to determine run-off.

M. PRE-EXISTING, NON-CONFORMING PRIVATE ROADS SERVING MORE THAN 5 DWELLING UNITS

1. Pre-existing, non-conforming private roads should generally conform to the following criteria. Additional requirements are set forth in Marion Township General Ordinance for Private Roads No. 07-03.
2. Requirements for pre-existing, non-conforming private roads will be on a case-by-case basis. The requirements set forth herein are general guidelines to ensure public health, safety and welfare, and may be adjusted by the township as necessary based on site conditions.
3. Submission requirements shall be sufficient to determine the nature and extent of the existing conditions and any proposed improvements. The extent of the information provided shall be at the discretion of the Township, Township Engineer and Township Planner. In general:
 - c. Minor changes in the physical characteristics of the road will require a sketch of the proposed improvements. The sketch shall be legible and clearly identify all improvements. The sketch should utilize current aerial information but do not need to be to scale. Aerial information is available at the Livingston County GIS Management Department, 304 E. Grand River Ave., Suite 101, Howell, MI 48843.
 - d. Major changes in the physical characteristics of the road will require detailed plans. The level of detail shall meet the requirements of a full, complete construction plan submittal.
4. Right-of-way or easements should have sufficient width to encompass the entire cross section of the road, including any ditches or drainage systems. Depending on the location of the private road easement in relation to adjacent parcels, a landscape buffer as provided in the Township Zoning Ordinance may be required by the Township to reduce the impact of the private road upon existing abutting parcels.
5. Roadway width should generally meet the following requirements:
 - a. Gravel road: twenty-two (22) feet edge of gravel to edge of gravel.

- b. Paved road:
 - I. Shoulder (with or without ditch): twenty-two (22) feet edge of pavement to edge of pavement, with a one (1) foot wide gravel shoulder on either side of pavement edge.
 - II. Curb and gutter: a minimum of twenty-five (25) feet back of curb to back of curb, with a minimum lane width of eleven (11) feet. Either a 2-½ foot wide curb and gutter or a 1-½ foot wide curb and gutter are acceptable.
- 6. Roadway cross sections should generally conform to the following:
 - a. Existing or alternate cross sections may be considered if the alternate section has been demonstrated to have equivalency to the required section via the AASHTO Guide for the Design of Pavement Structures. Geotechnical analysis may be required by the Township Engineer.
 - b. Gravel road:
 - II. Six (6) inches MDOT 22A aggregate placed in two (2) courses. Six (6) inch sand sub-base, meeting MDOT Class II requirements.
 - c. Paved road:
 - III. Four (4) inches bituminous surface placed in two (2) courses. No course or lift shall exceed 2" in depth. Eight (8) inches of aggregate base, MDOT 21AA Limestone.
 - d. Shoulder sections shall match the section for the road.
- 7. Vertical alignment should generally conform to the following guidelines:
 - a. Site distances at all intersections (public roads or private roads) should be verified and shall meet the requirements of the Livingston County Road Commission.
 - b. The roadway grade within one hundred (100) feet of an intersection should generally not exceed a slope of three (3) percent regardless of surface type.
 - i. Gravel Surface:
 - 1. Minimum: one (1) percent.
 - 2. Maximum: five (5) percent.
 - ii. Paved surface:
 - 1. Minimum: 0.5 percent.
 - 2. Maximum: six (6) percent.
- 8. All roadways, regardless of surface type, should have a sufficient crown to adequately drain runoff from the roadway.
- 9. Drainage should conform to the following requirements:
 - a. A system to adequately collect and discharge tributary roadway runoff is required. Either open ditch or enclosed storm sewer systems are acceptable and shall be sized reasonably for the anticipated run-off. Generally, a 10- year storm event shall be used to determine run-off.
 - b. All paved roads with curb and gutter shall have an enclosed storm sewer system, unless otherwise approved by the Township.
 - c. Drainage ditches and swales shall meet the following:
 - a. Minimum flat bottom depth of one (1) foot, measured from shoulder hinge point.
 - b. Longitudinal slope shall generally follow the slope of the road. The slope design shall minimize soil erosion. Slopes shall generally be between one (1) percent and five (5) percent. Maximum front slope is 1:3, and the maximum back slope is 1:2.

- d. Culverts should be sized for a 10-year storm elevation and their invert set at the ditch flow-line. Culverts shall be clean and free of debris.
- 10. Roadway signage shall meet the requirements of the Livingston County Road Commission and the Michigan Department of Transportation's Manual of Uniform Traffic Control Devices.
- 11. Any pre-existing, non-conforming road that serves multi-family residential, commercial, or industrial uses shall meet the requirements for a new road according to the Township Engineering Standards. Any changes in the road will require the road be improved to meet the standards for a new road in its entirety.

N. NEW PUBLIC AND PRIVATE ROADS

- 1. New roads, whether public or private, shall meet the following criteria. Additional requirements are set forth in Article VI: General Provisions, Section 6.20 New Private Roads of the Township Zoning ordinance.
- 2. All roadways that are to be public shall meet the requirements of the Livingston County Road Commission. Approval and acceptance of the roads shall be granted by the Livingston County Road Commission.
- 3. All roadways that are to be private shall meet the requirements of the Livingston County Road Commission, the Marion Township Zoning Ordinance and the standards outlined below. If a conflict exists between the Road Commission and Township standards, the stricter requirements shall govern.
- 4. Right-of-way or easements shall have sufficient width to encompass the entire cross section of the road, including any ditches or drainage systems.
 - a. Depending on the location of the private road easement in relation to adjacent parcels, a landscape buffer as provided in the Township Zoning Ordinance may be required by the Township to reduce the impact of the private road upon existing abutting parcels.
 - b. Minimum road right-of-way or easement width shall meet the following:
 - i. All residential (single or multi-family) shall be sixty-six feet (66').
 - ii. Commercial, industrial and all other uses shall be eighty feet (80').
- 5. Roadway width shall meet the following requirements:
- 6. Gravel road:
 - a. Gravel road: thirty (30) feet edge of gravel to edge of gravel.
- 7. Paved road:
 - a. Residential streets without curb shall be a minimum of twenty-two (22) feet edge of pavement to edge of pavement, with a four (4) foot wide paved or gravel shoulder on either side of roadway edge.
 - b. Residential streets with curb and gutter: a minimum of twenty-seven (27) feet back of curb to back of curb, with a minimum lane width of twelve (12) feet. Either a 2-½ foot wide curb and gutter or a 1-½ foot wide curb and gutter are acceptable.
 - c. Commercial streets shall be a minimum of twenty-nine feet (29') back of curb to back of curb. Minimum lane with shall be twelve feet (12'). A 2-½ foot wide curb and gutter is required.
 - d. Industrial roads shall be a minimum of thirty-five feet (35') back of curb to back of curb. Minimum lane with shall be fifteen feet (15'). A 2-½ foot wide curb and gutter is required.

- e. In areas where on-street parking is allowed, the minimum width of the road shall be increased by 8'. Including the gutter pan in the width extension for parking is not permitted.
 - f. Roadway recovery areas, (clear zones) shall be a minimum of 7' for straight-line sections and inside diameter curves. A minimum of 15' is required for outside diameter curves. Recovery areas shall be considered the distance between a permanent structure and edge of gravel shoulder or back of curb.
8. Roadway cross sections shall conform to the following criteria. Alternate cross sections may be considered if the alternate section has been demonstrated to have equivalency to the required section via the AASHTO Guide for the Design of Pavement Structures. Geotechnical analysis may be required by the Township Engineer:
- a. Residential roads or streets shall have a minimum of four (4) inches bituminous surface placed in two (2) courses (no course or lift shall exceed 2" in depth), with eight (8) inches of aggregate base (MDOT 21AA limestone), Gravel roads, if permitted by the Township, shall consist of a minimum of eight (8) inches of aggregate base (MDOT 22A) and six (6) inches of sand sub-base meeting the requirements of MDOT Class II.
 - b. Commercial streets shall have a minimum four (4) inches of bituminous surface placed in two (2) courses (no course or lift shall exceed 2" in depth), with eight (8) inches of aggregate base (MDOT 21AA limestone), and six (6) inches of sand sub-base meeting the requirements of MDOT Class II. An open graded drainage course may be substituted for sand sub-base.
 - c. Industrial streets shall have a minimum of nine (9) inches of non-reinforced concrete pavement, four (4) inches of aggregate base (MDOT 21AA limestone), and four (4) inches of sand sub-base meeting the requirements of MDOT Class II.
 - d. Shoulder pavement sections shall match the section of the road.
 - e. The pavement shall have transverse slope (crown) of 2% each way of the pavement center-line. Superelevated sections are prohibited in any development having a proposed operating speed of less than fifty-five (55) miles per hour. Where the design speed for a proposed street or road is less than fifty-five (55) mph and super elevation would otherwise be required as determined in the latest edition of the AASHTO Policy on Geometric Design for Streets and Highways, the horizontal curve shall be designed with a radius long enough to counter the need for superelevation.
 - f. Edge drain is required on all streets with curb and gutter. The trench must be filled with pea stone to the level of the base material, and the entire trench wrapped with geotextile fabric.
 - g. Proposed sections utilizing an open ditch section shall have a ditch depth of not less than two (2) feet relative to the shoulder hinge point and two (2) feet wide rounded at the bottom. The depth shall be increased if warranted by drainage discharge calculations.
 - h. The maximum slope within the proposed right-of-way shall be 1:4 (rise/distance). The use of slopes steeper than 1:4 outside of the proposed right-of-way draining toward the roadway should be avoided.
 - i. Driveway slopes or lot access areas shall have a slope not greater than 1:10 within the right-of-way. Only one drive approach is allowed per single-family dwelling unit. Driveways beyond the right-of-way shall generally not exceed 12% slope without significant topographical limitations.

- j. Pavement sections for residential driveways shall meet the following:
 - i. Gravel – six (6) inches of MDOT 21AA limestone or MDOT 22A.
 - ii. Asphalt – three (3) inches of bituminous surface over six (6) inches of MDOT 21AA limestone.
 - iii. Concrete – six (6) inches of concrete over four (4) inches of MDOT Class II.
 - k. Pavement sections for commercial or industrial driveways shall meet the following:
 - i. Gravel drives will not be permitted.
 - ii. Asphalt – four (4) inches of bituminous surface over eight (8) inches of MDOT 21AA limestone. For development with significant truck traffic, asphalt approaches will not be permitted.
 - iii. Concrete – eight (8) inches of concrete over four (4) inches of MDOT Class II.
9. Horizontal alignment shall conform to the following guidelines. All horizontal alignment and intersection design shall follow the latest edition of the AASHTO Policy on Geometric Design for Streets and Highways. The design speed shall be thirty-five (35) mph for interior subdivision streets unless otherwise directed by the Township or Road Commission.
- a. Minimum center-line radius for a horizontal curve shall be 230 feet.
 - b. Minimum cul-de-sac radius at the outside edge of the pavement shall be fifty (50) feet, not including any curb.
 - c. The fillet radius from cul-de-sac to tangent sections shall be a minimum of fifty (50) feet.
 - d. Intersection radii shall be a minimum of thirty-five (35) feet for residential streets and a minimum of forty-five (45) feet for commercial and industrial streets.
 - e. Intersection shall be at right angles and shall be designed such that the first sixty-five (65) feet in any direction shall be straight line sections.
 - f. Boulevard intersections or entrances shall have concrete curb and gutter around the island.
 - g. MDOT Detail M openings shall be used for all commercial or industrial drives or approaches. All commercial or industrial approaches shall be curbed regardless of the road cross section.
 - h. Commercial and industrial drive approaches shall have a minimum forty-five(45) foot radius.
 - i. Drive approaches shall be contained within the property lines, including radii and any acceleration/deceleration tapers, if required.
 - j. Drive approaches shall be a minimum of 125' from any intersection, measured from the centerline of the drive approach to centerline of the road.
10. Vertical alignment shall conform to the following guidelines. All vertical alignment design shall follow the latest edition of the AASHTO Policy on Geometric Design for Streets and Highways. The design speed shall be thirty-five (35) mph for interior subdivision streets unless otherwise directed by the Township or Road Commission.
- a. The percent of grade on a road with an open ditch cross section shall be no less than 1.0% or more than 5.0% where ditch grades are centerline dependent.

- b. The percent of grade on a road with a curb and gutter cross section shall be no less than 0.50% or more than 6.0%.
 - c. A vertical curve shall be required where the algebraic difference in slopes of the tangent sections exceeds 1.0%. The minimum length of the vertical curve shall be 100'.
 - d. Road grades within 100' of an intersection shall not exceed a slope of three (3) percent regardless of the surface type.
11. A drainage system to adequately collect and discharge tributary roadway runoff is required. Either an open ditch or enclosed storm sewer system per the Township requirements is acceptable.
- a. All paved roads with curb and gutter shall have an enclosed storm sewer system unless otherwise approved by the Township.
 - b. The maximum allowable storm water runoff tributary area conveyed overland in drainage ditches shall be no more than six (6) acres. When the tributary area is more than six (6) acres or the amount of flow in the ditch exceeds 8.0 cfs, an enclosed storm sewer system and curb and gutter will be required.
 - c. The percent of grade in an open ditch shall not be less than 1.0% or greater than 5.0%
 - d. Any open ditch that exceeds 3.0% shall have a sodded ditch bottom. Sod in these areas shall extend from the ditch bottom up either side of the ditch to a point one foot above the flow line of the ditch.
12. Roadway signage shall meet the requirements of the Livingston County Road Commission and the Michigan Department of Transportation's Manual of Uniform Traffic Control Devices.

XIII. PARKING LOT REQUIREMENTS

- A. A striping and traffic control plan for parking areas shall be included. The location of all traffic control, regulatory, street, and subdivision signs shall be shown on the plans.
- B. Minimum drive widths and parking dimensions shall be in accordance with the Marion Township Zoning Ordinance.
- C. Concrete curb and gutter shall be provided for the perimeter of the parking area and for all island areas within the parking area.
- D. Minimum drive widths and parking dimensions shall be in accordance with the Marion Township Zoning Ordinance.
- E. Private Developments
 - 1. Loading zones and dumpster pads: 8" concrete on 6" 21 AA limestone aggregate.
 - 2. Minimum drive widths and parking dimensions shall be in accordance with the Marion Township Zoning Ordinance.

XIV. PATHWAYS AND SIDEWALKS

- A. Sidewalks shall be located in the right of way and one (1) foot from the ultimate right-of-way line.

- B. The sidewalk will be five (5) feet wide constructed of four (4) inches of concrete on compacted well-draining subgrade. The walk must be continued through driveway sections where it will be increased in thickness to eight (8) inches on major thoroughfares and collector roads and six (6) inches in all other instances. Curbs must be tapered to meet the walk.
- C. Proposed grades must be shown along the property line, driveways, and intermittent locations along the length of the walk.
- D. Any structures, hydrants, poles, etc., which are existing along the alignment of the walk, must be adjusted or relocated at the expense and coordination of the developer.
- E. All sidewalk construction will be according to public Act No. 8, 1973, the new MDOT standards for ADA ramps with detectable warning domes.

XV. SOIL EROSION AND SEDIMENT CONTROL

A. GENERAL

- 1. All proposed erosion control measures and sequence of soil erosion control measures shall be shown on the plans.
- B. Erosion control shall conform to Livingston County standard details, with a detail of each measure used shown on the plans.
- C. The smallest practical area of land should be exposed at any one time during development. "Practical area" shall be defined as the area in which temporary or permanent restoration can and will be performed within a reasonable period of time, as defined by the Township. When land is exposed during development, the exposure should be kept to the shortest possible period of time, as deemed by the Township.
- D. Temporary vegetation or mulching may be required to protect areas exposed during development, particularly if an unexpected erosion problem becomes evident. The developer will be required to assign this activity top priority upon notification by the Township. Failure to act after a second notification will be grounds for the Township to take necessary action to address the problem and charge the owner/developer accordingly.
- E. Sediment basins or temporary basin outlet standpipe filters shall be maintained during construction to ensure that sediment within runoff is not being discharged onto neighboring properties.
- F. Sediment basins prior to discharge into any wetland, stream, pond, etc., require 1 x 3 stone outlet filter at all low points/discharge points properly toed into silt fence.
- G. Permanent vegetation and structures/basins should be installed as soon as practical during development. This should be included in the Soil Erosion Control Sequence noted above.
- H. Wherever feasible, natural vegetation should be retained and protected.
- I. The development plan should be best fitted to the topography and soil so as to create the least erosion potential. The best earth balance may not be the best fit with respect to topography and natural vegetation.
- J. All new or existing (disrupted ditches) shall be sodded.
- K. Seed and mulch is not permitted on slopes greater than 1:4. "Excelsior" Mulch blanket, sod pegged per Township specifications, or approved equal will be required on such slopes.
- L. Erosion protection shall be provided in the public roadway for all drainage structures receiving road runoff to the low point.
- M. The developer shall clean all structures impacted during construction along with any other erosion control items prior to occupancy.
- N. SITES REQUIRING PERMITS
 - 1. A permit is required for all earth moving activities as follows:
 - a. All projects that disturb one (1) or more acres.

- b. All projects that occur within 500 feet of surface water and disturb more than 225 square feet.
- c. Construction of new ponds or alterations to existing ponds.
- d. All major projects as defined by Livingston County.

O. INTENT OF PERMIT

- 1. The intent of this requirement is to ensure that no silt or sediment enters the public stream or watercourses. This is accomplished through means of sediment basins, filters, diversions, etc.

P. PLAN REQUIRED

- 1. A soil erosion and sediment control plan is required for all sites that require a permit. This can be made a part of the plan documents. Itemized on this plan shall be step-by-step requirements for controlling erosion (sequence of construction). No work, including site clearing, will be allowed until approved soil erosion and sediment control measures are in place.

Q. Accelerated erosion and sedimentation must be prevented during all phases of construction including:

- 1. Initial site clearing.
- 2. Utility construction.
- 3. Building construction.
- 4. Site paving.
- 5. Final site approval.

R. INSPECTION

- 1. Inspection will be made periodically throughout construction on the maintenance and effectiveness of soil erosion control methods by designated consultants or personnel from Marion Township and Livingston County.

S. If inspection reveals that the controls are not being implemented, a cease and desist order on all site construction may be issued.

MEMORANDUM

TO: Marion Township Board of Trustees
FROM: Marion Township Planning Commission
DATE: September 12, 2019
RE: Distribution of DRAFT Master Plan

This memo is to respectfully request the Township Board approve distribution of the draft Master Plan for review and comment from adjacent communities and utilities. We are pleased with the draft especially the excellent responses to the survey.

Please note that once the 42 day review period is complete the Planning Commission will hold 1-2 Public Hearings to gather further input prior to approving the plan. Also note that once complete we will not need to amend the plan for another 5 years. Lastly, the Planning Commission asks you take the time to provide any comments to David Hamman during the review period.

We thank you for your consideration in this matter.

The Marion Township 2019 Master Plan Draft is available on

www.mariontownship.com

Links

Planning & Zoning

2019 Master Plan Draft

MARION TOWNSHIP
2877 W. COON LAKE ROAD
HOWELL, MI 48843
Phone 517-546-1588
Fax 517-546-6622

TRANSMITTAL

TO: Board of Trustees

DATE
PROJECT

September 12, 2019
FINAL REVIEW
Proposed Text Amendment
TXT#04-17 Section 10.01 Landscape
Operation in Light Industrial District.
Proposed Text Amendment
TXT# 05-17 Section 9.01 HS
Outdoor Vehicle Storage, Section 17.34
Special Use

VIA

Hand Delivery

WE ARE SENDING: Herewith Under Separate Cover

THE FOLLOWING:

- o Proposed text amendment – TXT#04-17 Section 10.01 Landscape Operation Section 8.01 Landscape Nursery Section 3.02 Definitions.
- o Proposed text amendment -- TXT# 05-17 Section 9.01 HS Outdoor Vehicle Storage with Section 17.34 Special Use for Outdoor Vehicle Storage, Section 3.02 Definitions.
- o Livingston County Department of Planning review and comment Dated April 19,2018
- o Attorney review Dated May 2,2018 and October 21, 2018
- o Planning Commission Minutes Dated February 27,2018, May 22,2018, September 25, 2018, and February 26, 2019

FOR YOUR: approval/ denial as requested
 other review & comment

REMARKS:

The attached text amendment has been pending adoption. This information is for a **Review and Adoption**.
Let me know if you have any questions.

FROM: Dave Hamann, Zoning Administrator

LANDSCAPE OPERATIONS IN MARION TOWNSHIP

Step #1

Section 8.01.B.3 **Delete**

Section 8.01.E.22 **Add**

Amend RR Rural Residential District to allow “Landscape Nursery Operations” as interpreted by the Zoning Board of Appeals and as a Special Land Use within the Rural Residential District. See created definition below:

3.02 Definitions **Add**

Landscape Nursery Operations: *A parcel, area, space, building or structure, or combination thereof, used chiefly for the storage, wholesale sale, or retail sale, of live trees, shrubs and plants primarily but not exclusively grown onsite. Incidental or secondary items directly related to a nursery or greenhouse may also be sold, including but not limited to pots, decorations, mulch, stone, rocks, pavers, edging materials, etc. The area and amount of such structures, equipment, vehicle storage and other areas dedicated to the use shall be consistent with the residential character of the area and shall not adversely impact neighboring properties.*

Step #2

Section 10.01.B.16 **Add**

Amend LI Light Industrial District to allow landscape contractors buildings, offices and yards as a use permitted by right. See definitions as suggested by the Township Attorney below:

3.02 Definitions **Add**

Landscape Contractor’s Buildings, Offices and Yards: *A space, building or structure, or combination thereof, used primarily for the storage of equipment, tools, vehicles, and materials used in or associated with a landscape contracting business.*

Landscape Contractor/Contracting. *The sale, storage or transportation of fertilizers, mulch, groundcovers, boulders, and similar products used for landscaping or gardening and could include the sale of live trees, shrubs or plants grown or not grown on the property.*

SECTION 1. MODIFY TABLE OF CONTENTS ARTICLE XVII: STANDARDS FOR SPECIFIC SPECIAL LAND USES

[Add the following] Section 17.34 Outdoor Vehicle Storage

SECTION 2. MODIFY SECTION 3.02 DEFINITIONS

[Add the following definition] **Motor Vehicle:** Any vehicle which is self-propelled.

Recreational Vehicle: Includes travel trailers, pickup campers, motor homes, folding tent trailers, boats, boat trailers, snowmobiles, all terrain or special terrain vehicles, utility trailers, and similar equipment used for transporting recreational equipment.

Vehicle: Every device in, upon, or by which any person or property is or may be transported or driven upon a highway except devices moved by human power or used exclusively upon stationary rails or tracks.

~~*[Delete the following definition]* **Recreational Vehicle:** A vehicle primarily designed and used as a temporary living quarters for recreational, camping, or travel purposes, including a vehicle having its own motor power or a vehicle mounted on or drawn by another vehicle. — Why is this being deleted? Also, this term is used elsewhere in the ordinance. I recommend it stay.~~

SECTION 3. MODIFY SECTION 9.01 HS: Highway Service District

Township Zoning Ordinance Section 9.01 D. titled “Uses Permitted By Special Use Permit” is modified to include Subsection 9.01 D. 11.

11. Outdoor Vehicle Storage, subject to additional requirements found in Section 17.34.

SECTION 4. MODIFY ARTICLE XVII: STANDARDS FOR SPECIFIC SPECIAL LAND USES

Township Zoning Ordinance Article XVII is modified to include Subsection 17.34.

Section 17.34 Outdoor Vehicle Storage

A. Location Requirements: Outdoor Vehicle Storage uses are permitted by Special Use Permit in the Highway Service District.

B. Site Requirements

1. The minimum lot area shall be three (3) acres.
2. Site Design and layout shall meet all applicable requirements and standards of Article VI: GENERAL PROVISIONS, and Article XVIII: SITE PLAN REQUIREMENTS

C. Performance Standards

1. All vehicle storage sites shall contain a permanent enclosed office use only building.
2. No vehicles shall be stored in the front yard.
3. All lighting shall be shielded from adjacent residentially used or zoned districts.

4. No repair or refinishing shall be done either indoors or outdoors on the lot.
 5. Motor homes, mobile homes, or other large vehicles over eight (8) feet in height shall not be parked or stored any nearer to the property line than the required minimum setback distance of the HS: Highway Service District.
 6. All vehicles being stored on site must be operable and licensed to operate on the highways of the State of Michigan
 7. No person/s shall live temporarily or permanently in any vehicle stored on site.
- D. Buffering Requirements:**
1. The front yard shall be planted with trees, grass, and shrubs. The spacing and type of plant materials shall be consistent with the provisions of Section 6.13.
 2. A solid fence, wall or earthen berm at least eight (8) feet in height shall be provided around the periphery of the site to screen said site from surrounding property. Such fence, wall or berm shall be of sound construction, painted or otherwise finished neatly and inconspicuously. Such fence, wall or berm shall be of permanent finish and construction. Dependent upon location, site angles, security or other factors; fence, wall or berm may be reduced or modified by the Planning Commission.
 3. Dependent on provided screening and buffering, required setbacks may be reduced or modified.

the counter. It is very difficult and hard to do, but doing this is what works. You have to enforce your ordinances or it doesn't work. John will provide an electronic copy of Howell Township's ordinance.

Jim Anderson made a motion, allowing Cheryl Range to prepare language for a Nuisance ordinance, using the language from Howell Township, along with our existing definitions. Bruce Powelson seconded. **Motion carried.**

OLD BUSINESS:

1) FINAL CHANGES TO RULES AND PROCEDURES

Everyone signed the signature page for the Planning Commission Rules and Procedures.

2) LANDSCAPE NURSERY OPERATION REVIEW

John Enos said that Marion has a landscape operation definition and now we have to decide if it needs to be changed. The ZBA made this definition, so Dave has to follow this until told otherwise, so this needs to be incorporated to the zoning ordinance. John Enos stated that there is a difference between a "landscape operation" and a guy mowing grass for a living. That would fall under "home occupation". Bob Harvey said that this definition doesn't say "secondary to growing". John thinks that it does say that.

John said that the Planning Commission needs to determine whether or not we want this as our definition. Should this definition be changed/modified or should we make it part of the ordinance. Dave Hamann said he thinks we should make this part of our Special Use process and that way, we have the ability to review it. John Enos completely agreed with Dave.

Tim Ryan, 459 East Davis Road, asked if a particular parcel is in a RR district and they build a pole barn on their parcel, but later they decide to split the parcel. The barn is now on a parcel without a house and is operating as a business. This is what happened with Eddies and now, it is actually more of a trucking company versus a landscaping operation.

John Enos said that a landscape nursery with or without a barn is not unusual. John said that we could look at over fifty different pieces of language, but they will all be similar to this one. John said that if the Planning Commission wants this as our definition, he recommends sending this language to the board for review. If the board wants us to change/modify anything, then we can do so at that time.

Jim Anderson made a motion to send this language along with the new definition to the Board of Trustees for review. Bruce Powelson seconded. **Motion carried.**

3) TXT# 07-17 PROPOSED CHANGES LOTS

Cheryl Range made a motion to postpone this item until the next meeting on March 26, 2019. Jim Anderson seconded. **Motion carried.**

4) TXT# 03-18 HOME OCCUPATION

Jim Anderson found some interesting language regarding "Home Occupations".

community regarding their Master Plan. Their Master Plan is an interactive web-based document. They are also doing some general clean up and listing the URL for each topic. They did a photo contest within the community for the Master Plan. There are over 1000 links throughout this Master Plan and they are using a special software that will help users with these links to ensure that they are working properly. Rob said that this will be a guide for the local municipalities. Rob said they received a lot of really good and thoughtful comments back from the community. They also have implemented a table of contents to make things easier and more user friendly. Bob Hanvey asked when this Master Plan will be complete. Rob said that they are hoping for December 2018. Jim Anderson asked about the section regarding open space. Rob said that there is a section on open space and it offers a wide variety of ideas and best practices. Rob said that this is meant to be a living document and acts as a guide for the community.

OLD BUSINESS:

TXT # 04-17 Landscape Operation

John Enos reviewed his suggested changes for the proposed language regarding Landscape Operations.

Landscape Contractors Building, Offices & Yards: If the majority of the materials on the property are being brought, delivered or transported, this would not be allowed in a residential area. This would have to be located in light industrial.

Greenhouse/Plant Nursery/Farm related operations: These would be located in the RR district. These operations would require a special use permit from the township. Lawn care businesses would not fall in this category. Bob asked if there would be a minimum lot requirement. John said that he did not put a minimum lot requirement in the language because there is already a two acre minimum for lot sizes and this would be sufficient. Bob asked if you have to have specific criteria in order to put requirements on a special use permit. John said no. Bob then asked what would stop someone from selling lawn mowers, shovels, etc. John said that the other option is to put them in a commercial area. John explained that one way to preserve and promote open space and preservation of land is to allow things like event barns and greenhouses in certain areas. John said that we cannot exclude any type of use within the township. We can, however, place conditions on that specific use being requested. Cheryl Range asked how many people are actually coming in and asking for a Special Use Permit? Dave Hamann said that right now, none of them are requesting one because we don't have the right language to back anything up. Dave asked if we should send this proposed language to our attorney first. Larry Grunn asked if we should limit how many trucks and deliveries are allowed. John said that we are putting them in a light industrial zoned area so they are allowed to have deliveries and semi-trucks.

*Cheryl Range made a motion to send the proposed Landscaping Operation language from Carlisle Wortman to Mike Kehoe for review. If there are no major changes or comments, then it can be sent to the Board and then the Livingston County Planning Commission for final review. Bruce Powelson seconded. **Motion carried***

TXT #05-17 Outdoor Vehicle Storage

John Enos read the language for the Outdoor Vehicle Storage ordinance.

*Cheryl Range made a motion for John to send the proposed Outdoor Vehicle Storage language from Carlisle Wortman to our attorney, Mike Kehoe, for review, along with the recommended change. If there are no major changes or comments from Mike, then it can be sent to the Board and then the Livingston County Planning Commission for final review. Bruce Powelson seconded. **Motion carried***

TXT#07-17 Proposed Changes Lots

John Enos said that this language could take some significant hours to put together. There is a lot to it and John and his team are still working on it.

*Bob Hanvey motioned to postpone this topic until John has the language prepared and ready for review. Jim Anderson seconded. **Motion carried***

PUBLIC HEARING

2) **TXT#04-17 Proposed Landscape Contractors Operation Section 10.01**

John Enos explained that this public hearing had to be re-done because the time requirement was not met back in November. This language is going to help regulate land use for these types of things.

PUBLIC HEARING

3) **TXT#05-17 Proposed Outdoor Vehicle Storage Section 17.34**

John Enos explained that this public hearing had to be re-done because the time requirement was not met back in November. This language is going to help regulate land use for these types of things.

PUBLIC HEARING

4) **SUP#02-17 D19 Marion LLC 17.04B Automobile Fueling/Mixed-Use Station**

TJ Lekander owns several gas stations through the county. They are hoping to open a new Mugg and Bopp's gas station where Bella's party store is currently located. They plan on extending the left turn lane on D19, provide more parking, and reduce traffic by providing a gas station for those getting off and on I-96. It will eliminate the need to cross the I-96 overpass to fuel up. They can get off I-96 and get gas without having to travel across the bridge. It will also make it easier for them to get back on the expressway.

John Enos said according to their site plan, the new gas station will be a beautiful building and will have significant landscaping.

Leo Hirschman, 475 Hosta: Leo asked if any kind of soil testing will be done, because of it being a gas station, to make sure that nothing is going to get into our sewer system or leak into our subdivision.

Tom Miller, 16 Sedum: Tom wants to know if they could put in a sidewalk with landscaping so the people living close by can walk or ride their bike to the gas station, which would help cut back on traffic.

Regina Fisher, 485 Hosta: Regina asked if the new Mugg and Bopp's intends on having any of the tall signs that other service stations have. TJ Lekander said they are not installing any tall signs and do not intend on asking for that in the future. John Enos stated that those would not be allowed.

Margaret Kelly, 1044 Spirea: Margaret asked if any of the fuel will be leaking into the ground. TJ Lekander said that the only place he wants the fuel to go is in your car. He doesn't want to pollute the earth or cause harm to anyone. The fuel sits in double-walled tanks and will not be leaking into the ground at any point.

Nancy Dubay, 294 Newberry Lane: Nancy is worried about the traffic and the outsiders coming here to use the gas station. She just hopes that the Planning Commission thinks about all of our faces when making these decisions.

Lawrence Jackson, 420 Newberry Lane: We have enough noise and light pollution as it is. We already have six gas stations in this area and don't need any more.

asked if there is any way that we can speed this process up. John Enos said no, because we have to inform the proper channels of the public hearing in advance. We also need more details on the design and landscaping. Cheryl Range also added that she got a late response from MHOG regarding fire suppression.

Cheryl Range motioned to postpone this for review and timing of outside agencies. Also so the variance can be requested from the ZBA. Bob Hanvey seconded. **Motion carried.**

NEW BUSINESS:

PUD#01-18 Casa Villa Entrance- Golf Ranch Conceptual Review

John Enos explained that Casa Villa is proposing this PUD because they are not going to be developing all the units that they originally thought. John recommends that we postpone decision making until the next meeting.

Brent Lavanway with Boss Engineering explained that they are requesting a PUD on the corner of Peavy Road and Mason. They were planned for 61 units and revised to 52 units. This allows several different options with the remaining unused parcels. This leaves more open space available, it could increase the size of the park, allow room for walking trails to be put in and it could increase the size of the entrance. The community can only benefit from these added amenities. John Enos thanked Brent for the fast turnaround time and recommends that the Planning Commission set a public hearing for the next meeting.

Bruce Powelson asked what the square footage of the houses are. Brent replied with 1300 square feet, plus an extra 1000 for two story homes.

Bruce Powelson also inquired about the retention pond. Brent explained that it gives an opportunity to create a large buffer and because it is so shallow, it does not require a fence.

Bob Hanvey motioned to set a public hearing for March 27, 2018. Claire Stevens seconded. **Motion carried.**

NEW BUSINESS:

TXT#04-17 Proposed Landscape Contractors Operation Section 10.01

Cheryl Range motioned to send this language over the County Planning Commission with comments for review. Bob Hanvey seconded. **Motion carried.**

NEW BUSINESS:

TXT#05-17 Proposed Outdoor Vehicle Storage Section 17.34

Cheryl Range motioned to send this language over the County Planning Commission with comments for review. Bob Hanvey seconded. **Motion carried.**

CALL TO THE PUBLIC

No response.

AMEND AGENDA:

Set public hearing for Pardiac Auto Repair for June 26, 2018.

Cheryl Range motioned to set a public hearing for Pardiac Auto Repair on June 26, 2018 at 7:30pm. Bob Hanvey seconded. ***Motion carried***

AMEND AGENDA:

Dave explained that Pardiac is applying for another SUP for the Auto Repair section and combining the two businesses. They are in a highway service area so they are allowed to do this.

OLD BUSINESS:

TXT #04-17 AND #05-17 RE-REVIEW MIKE KEHOE'S LETTER AND ISSUES WITH THE "LANDSCAPE CONTRACTOR OPERATION" LANGUAGE

John Enos reviewed the notes from Mike Kehoe regarding Landscape Contractors Buildings, Offices and Yards. John suggested that we change the current header to **Farm and Farm Operations, Including Animals and Crops**. Cheryl questioned whether we were being too detailed in this language. Bob asked if we had the authority to separate animals and crops since we do not have a lot of authority when regulating farm land and the right to farm act. John Enos said that we do have some control over WHERE some of these farms end up, but aside from that, Marion does not have a lot of control over WHAT residents are doing on site, with Right to Farm. Dave said that animals and crops are allowed in the RR district but animals are not allowed in the SR district. Cheryl suggested combining the following language from paragraph three; ***Plant Nursery, Greenhouse, Farm Related:*** to paragraph one; ***Landscape Contractor's Buildings, Offices and Yards:*** *"The area and amount of such structures, equipment, vehicle storage and other areas dedicated to the use shall be consistent with the residential character of the area and shall not adversely impact the neighboring properties."* Cheryl explained that by combining them, we will not lose any of the existing language. John said that we need to make sure that we spell out in our language that, contractors are not allowed to be in unpermitted areas to avoid issues in the future, which is why we are cleaning up some of this language. Dave asked how what criteria do we look at when we are distinguishing the difference between a landscaping company based within the home and a contractor's yard. John said it depends on how many employees the business has and are they storing vehicles and/or material on the property. Dave said that three employees is considered a class II home based business. Bob asked what happens when the business begins to grow and become more successful. John asked who is going to enforce these ordinances if the business does become successful and outgrow the original permit. John explained that we can create these ordinances all day long, but if no one is going to enforce them, then it doesn't matter what language is within these ordinances. John said that we should be willing to say that a Homebased Business class II, is when someone only has vehicles stored on the property but does not have any material/product located on site. Bob suggested we also change the words "contouring land" to "lawn mowing". John said that we could use a new term or come up with new language all together.

Bruce Powelson motioned to send the language prepared for **Landscape Operations and Contractor Yard** to the Board of Trustees, with the following recommended adjustments.

In Paragraph two; **Landscape Contractors Operation:** *"A homebased business engaged in the practice of improving building sites or other grounds by ~~contouring the land and mowing lawns~~, planting flowers, shrubs and trees. A landscaping Contractors Operation typically consists of equipment, tools, vehicles and materials used in or associated with such a business."* Cheryl Range seconded. Bob then asked if the word "materials" is

going to get us in trouble by giving the impression that they can store materials onsite. John said we could take out the word "materials" and also add in that they are not allowed to have any outdoor storage and are not allowed to have employees' onsite. Dave asked, what would we call the lawn care guys who park at home? Would they be a use by right? John said that it can be a use by right if it is in the RR district. Some of these class I and class II homebased business' who are in the light industrial RR district, are going to be non-confirming with a permitted use.

TXT #07-17 PROPOSED CHANGES TO "LOTS"

Bruce said on page 13 the word "insure" should be "ensure". Bob has some concerns with "lots" If we change 20 words does it have to go to the county? John said it depends on if we change the definition of those words. John said that Bob has a low of legit concerns about this and it is a lot to wrap your head around. John thinks that we should review Bob's concerns and then he will make some recommendations after he discusses things with Bob.

Cheryl Range motioned to postpone #07-17 until the 6-26-2018 meeting. Bruce Powelson seconded.
Motion carried

GENERAL ORDINANCE: PROPOSED #01-17 LAND DIVISIONS

Cheryl Range motioned to postpone #01-17 until the 6-26-2018 meeting. Bruce Powelson seconded.
Motion carried

GENERAL ORDINANCE: PROPOSED #05-17

Change Cemetery

Chery was concerned because this didn't have a signature on it. Bob said that the updated one didn't make it on the website.

Change Cemetery

Bob said that we are still waiting on the Attorneys feedback.

PROPOSED ORDINANCE CHANGE LIST: DISCUSS ANIMAL UNIT

Bob said that we don't have jurisdiction on animals per unit involving GAMPS. This needs a little more work and thought on this.

An invitation and survey may be sent out with the tax bill which goes out in June. John said that they should have a Masterplan draft in early fall.

CALL TO THE PUBLIC

Les Andersen made a comment about the lawn services and home occupation. He is concerned as well about these business' growing out of control. In the beginning Pardiac Auto Repair was allowed to have eight vehicles and now they have way more than that. John said that Dave should be doing the enforcing with the Boards support.

ADJOURNMENT

Bruce Powelson motioned to adjourn the meeting at 9:30pm. Cheryl Range seconded. ***Motion carried***

MICHAEL J. KEHOE, P.C.
ATTORNEY AT LAW
710 E. GRAND RIVER
HOWELL, MI 48843



Michael J. Kehoe

517-546-4570
Fax No. 517-546-7651

May 2, 2018

Mr. David Hamann
Marion Township Zoning Administrator
2877 W. Coon Lake Rd.
Howell, MI 48843

via email only

Re: Text Amendments; Landscape Operations, etc.

Dear Dave:

As requested, I've reviewed the various proposed zoning ordinance text amendments along with review comments by the Livingston County Planning Department. I have a few comments and or questions, as listed below.

I'm not sure about using "**Farm/Farm Operation**: As defined by the Right to Farm Act, PA 93 of 1981, as amended" because it seems a little inconsistent with the Right to Farm Act for a couple of reasons. First, "farm" and "farm operation" have separate definitions in the Act and the way it's titled in the ordinance gives the impression that's a definition in the Act. Also, the ordinance definitions of "**Farm Operation, Animals**" isn't defined in the Act and neither is there a definition in the Act for **Farm Operation, Crops**. Furthermore, the subsections a-j aren't the same as in the Act. Perhaps the wording could be "**Farm and Farm Operation** include the following:" and then follow with the more specific definitions. The Right to Farm Act prohibits the Township from doing anything contrary to the Act so I'm not sure it's necessary to specifically refer to it or refer to terms as "defined in the Act."

In the definition of Landscape Contractor's Operation, the second paragraph dealing with "Plant nursery, greenhouse, farm related," the last two lines "shall be consistent with the residential character of the area and shall not adversely impact neighboring properties" might be inconsistent with the Right to Farm Act. The Act defines farm products as including "...nursery stock, trees and tree products" so I have a little concern with that language as it refers to those things exclusively grown on site.

In 8.01 B. 3., while not a big deal, it just seems to end awkwardly. Also, although it's never been an issue, the number of animals as limited in #2 could have potential for a problem depending upon the GAAMPS (generally accepted agricultural and management practices) which is what the State ag department uses in determining if a

Mr. David Hamann
May 2, 2018
Page 2

farm is properly operating. The actual number of animals or size of a property is not as determinative if an operation complies with the GAAMPS. As I said, it's never been an issue, but I mention it just in case.

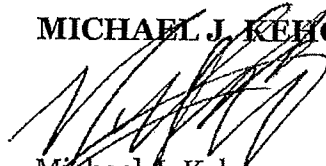
In 17.34 C.4, the wording "No major repair or major refinishing shall be done on the lot" leaves me to wonder if a person can do that within a building, but just not outdoors? I think that should be clarified. "Anywhere on the property," I think is a little clearer. This is meant to be outdoor storage but there is a provision for an office building so could it have room for some type of repairs.

In D.2., was the intent to have the entire parcel fenced, or just the storage area? As I read the current wording, the entire parcel must be fenced.

If you have any questions or desire any further information, please contact me.

Yours truly,

MICHAEL J. KEHOE, P.C.

A handwritten signature in black ink, appearing to read "Michael J. Kehoe", written over the typed name.

Michael J. Kehoe
Attorney at Law

11/21/2018
MICES
Comments

LANDSCAPE OPERATIONS IN MARION TOWNSHIP

Step #1

Amend RR Rural Residential District to allow plant nursery, greenhouse as a Special Land Use and farm related and Farm/Farm Operations as a use permitted by right in our largest zoned area. See definition below:

Plant nursery, greenhouse, farm related: A parcel, area, space, building or structure, or combination thereof, used chiefly for the storage, wholesale sale, or retail sale, of live trees, shrubs, and plants primarily but not exclusively grown onsite. Incidental or secondary items directly related to a nursery or greenhouse may also be sold, including but not limited to pots, decorations etc. The area and amount of such structures, equipment, vehicle storage and other areas dedicated to the use shall be consistent with the **rural** residential character of the area and shall not adversely impact neighboring properties.

Farm/Farm Operation: As defined by the Right to Farm Act, PA 93 of 1981, as amended.

- 1. Farm Operation, Animals.** All aspects of a Farm Operation, Crops, with the addition of the following: use of feed lots; handling and care of farm animals for profit. A Farm Operation, Animals, does not include an Intensive Livestock Operation (ILO.)
- 2. Farm Operation, Crops.** The operation and management of a farm or a condition or activity that occurs at any time as necessary on a farm in connection with the commercial production, harvesting, and storage of farm products. **The way this is worded, I read this to mean #1 and #2 are set out in the Right to Farm Act and they aren't. I'm not sure why these two are in this part.**

Step #2

Amend LI Light Industrial District to allow landscape contractors buildings, offices and yards as a use permitted by right. See definition below:

Landscape Contractor's Buildings, Offices and Yards: A space, building or structure, or combination thereof, used exclusively for the storage of equipment, tools, vehicles, and materials used in or associated with such a business and/or the sale of live trees, shrubs or plants grown or not grown on the property. Products used for gardening or landscaping such as, but not limited to, fertilizers, mulch, groundcovers, boulders, etc., may also be sold.

Consider instead:

Landscape Contractor's Buildings, Offices and Yards: A space, building or structure, or combination thereof, used primarily for the storage of equipment, tools, vehicles, and materials used in or associated with a landscape contracting business.

Landscape Contractor/contracting. The sale, storage or transportation of fertilizers, mulch, groundcovers, boulders, and similar products used for landscaping or gardening and could include the sale of live trees, shrubs or plants grown or not grown on the property.

Marion Township
Vehicle Storage in Commercial District
Outdoor Vehicle Storage
October 4, 2018

11/21/18
MIRES
Comments

SECTION 1. MODIFY TABLE OF CONTENTS ARTICLE XVII: STANDARDS FOR SPECIFIC SPECIAL LAND USES
[Add the following] Section 17.34 Outdoor Vehicle Storage

SECTION 2. MODIFY SECTION 3.02 DEFINITIONS

[Add the following definition] **Motor Vehicle:** Any vehicle which is self-propelled.

Recreational Vehicle: Includes travel trailers, pickup campers, motor homes, folding tent trailers, boats, boat trailers, snowmobiles, all terrain or special terrain vehicles, utility trailers, and similar equipment used for transporting recreational equipment.

Vehicle: Every device in, upon, or by which any person or property is or may be transported or driven upon a highway except devices moved by human power or used exclusively upon stationary rails or tracks.

[Delete the following definition] **Recreational Vehicle:** A vehicle primarily designed and used as a temporary living quarters for recreational, camping, or travel purposes, including a vehicle having its own motor power or a vehicle mounted on or drawn by another vehicle. *Why is this being deleted? Also, this term is used elsewhere in the ordinance. I recommend it stay.*

SECTION 3. MODIFY SECTION 9.01 HS: Highway Service District

Township Zoning Ordinance Section 9.01 D. titled "Uses Permitted By Special Use Permit" is modified to include Subsection 9.01 D. 11.

11. Outdoor Vehicle Storage, subject to additional requirements found in Section 17.34.

SECTION 4. MODIFY ARTICLE XVII: STANDARDS FOR SPECIFIC SPECIAL LAND USES

Township Zoning Ordinance Article XVII is modified to include Subsection 17.34.

Section 17.34 Outdoor Vehicle Storage

A. Location Requirements: Outdoor Vehicle Storage uses are permitted by Special Use Permit in the Highway Service District.

B. Site Requirements

1. The minimum lot area shall be three (3) acres.
2. Site Design and layout shall meet all applicable requirements and standards of Article VI: GENERAL PROVISIONS, and Article XVIII: SITE PLAN REQUIREMENTS

C. Performance Standards

1. All vehicle storage sites shall contain a permanent enclosed office building. *Consider saying or limiting to office use only.*
2. No vehicles shall be stored in the front yard.

Marion Township
Vehicle Storage in Commercial District
Outdoor Vehicle Storage
October 4, 2018

3. All lighting shall be shielded from adjacent residentially used or zoned districts.
4. No **major repair or major refinishing** shall be done on the lot. *Since this is outdoor storage I'd recommend going further and specify neither indoors nor outdoors. Maybe consider no repair or refinishing. What is major repair or major refinishing. Seems like outdoor storage is enough. Why allow for repairs? There's a difference between needing to jump the battery, or something like that, to get it started and having a statement that allows repairs or refinishing. You could be setting up a big headache.*
5. Motor homes, mobile homes, or other large vehicles over eight (8) feet in height shall not be parked or stored any nearer to the property line than the required minimum setback distance of the HS: Highway Service District.
6. All such **recreational vehicle and equipment** storage must be operable and licensed to operate on the highways of the State of Michigan. *Not sure what is meant by equipment and the use of this arguably expands what is being, or could be, stored. Maybe state: "All vehicles being stored for which the permit is issued must be in operating condition and licensed to operate..."*
7. No person/s shall live temporarily or permanently in any vehicle stored on site.

D. Buffering Requirements:

1. The front yard shall be planted with trees, grass, and shrubs. The spacing and type of plant materials shall be consistent with the provisions of Section 6.13.
2. A solid fence, wall or earthen berm at least eight (8) feet in height shall be provided around the periphery of the site to screen said site from surrounding property. Such fence, wall or berm shall be of sound construction, painted or otherwise finished neatly and inconspicuously. Such fence, wall or berm shall be of permanent finish and construction. Dependent upon location, site angles, security or other factors; fence, wall or berm may be reduced or modified. *Is there a need, or any concern, about allowing or requiring a fence higher than 8 feet to screen if the property is lower than the adjacent street?*
3. Dependent on provided screening and buffering, required setbacks may be reduced or modified.



Livingston County Department of Planning

April 19, 2018

Marion Township Board of Trustees
c/o Tammy Beal, Township Clerk
Marion Township Hall - 2877 West Coon Lake Road
Howell, MI 48843

Kathleen J. Kline-Hudson
AICP, PEM
Director

**Re: Livingston County Planning Commission
Review of Zoning Ordinance Amendments –**

Robert A. Stanford
AICP, PEM
Principal Planner

**Z-01-18: Regarding landscape operations and contractor yards
Z-02-18: Regarding outdoor vehicle storage**

Scott Barb
PEM
Principal Planner

Dear Board Members:

The Livingston County Planning Commission met on Wednesday, April 18, 2018, and reviewed the proposed Township Zoning Ordinance amendments. The County Planning Commissioners made the following recommendations:

Z-01-18 Approval.

The proposed text amendments are reasonable and appropriate appear to add no further undue hardship on the public. The proposed revisions to these Sections appear to improve the intended nature of these types of land uses through more distinct and detail-specific regulatory provisions.

Z-02-18 Approval.

The proposed text amendments are reasonable and appropriate. Staff would highly recommend that the Township consider Staff comments prior to final approval by the Township.

Copies of the staff review as well as draft Livingston County Planning Commission meeting minutes are enclosed. Please do not hesitate to contact our office should you have any questions regarding county actions.

Department Information

Administration Building
304 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

Sincerely,


Kathleen J. Kline-Hudson, Director

(517) 546-7555
Fax (517) 552-2347

Enclosures

• Web Site
• www.livingston.mi.us

c: Larry Grunn, Chair, Marion Township Planning Commission
Dave Hamann, Zoning Administrator, Marion Township

Additional minutes and agendas are available at: <http://www.livgov.com/plan/Pages/agendas.asp>



Livingston County Department of Planning

LIVINGSTON COUNTY PLANNING COMMISSION MEETING

Wednesday, April 18, 2018 – 6:30 p.m.

Administration Building, Board of Commissioners Chambers
304 East Grand River, Howell, MI 48843

Agenda

Kathleen J. Kline-Hudson
AICP, PEM
Director

Robert A. Stanford
AICP, PEM
Principal Planner

Scott Barb
AICP, PEM
Principal Planner

1. Call To Order
2. Pledge of Allegiance
3. Roll and Introduction of Guests
4. Approval of Agenda – April 18, 2018
5. Approval of Meeting Minutes – March 21, 2018
6. Call to the Public
7. Zoning Reviews
 - A. Z-01-18 Marion Township, Zoning Ordinance Amendment, Article III Definitions, Article VIII Residential Districts, and Article X Industrial Districts
 - B. Z-02-18 Marion Township, Zoning Ordinance Amendment, Article III Definitions, Article IX Commercial Districts, and Article XVII Standards for Specific Special Land Uses
 - C. Z-13-18 Putnam Township, Zoning Ordinance Amendment, Section 340-39 Alternative Energy Systems
 - D. Z-14-18 Hamburg Township, Zoning Ordinance Amendment, Article 4 Site Plan Review, Section 4.3 Applicability and Article 9 Environmental Provisions, Section 9.2.4 Standards for Agricultural, Scenic, or Recreational Ponds
 - E. Z-15-18 Howell Township, Rezoning, RSC to HC in Section 29
8. Old Business
 - A. Amendment and adoption of An Ordinance For The Creation Of A Planning Commission For Livingston County, Michigan
9. New Business

Department Information

Administration Building
304 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

(517) 546-7555
Fax (517) 552-2347

Web Site
co.livingston.mi.us

**LIVINGSTON COUNTY PLANNING COMMISSION
MEETING MINUTES**

**DRAFT – April 18, 2018
6:30 p.m.**

304 E. Grand River Ave., Howell, Michigan

PLANNING COMMISSION		
COMMISSIONERS PRESENT:	BRIAN PROKUDA JEANNE CLUM	JAMES SPARKS BILL ANDERSON
COMMISSIONERS ABSENT:	LAURA ABRAMSON	MATT IKLE
STAFF PRESENT:	KATHLEEN KLINE-HUDSON ROB STANFORD	SCOTT BARB
OTHERS PRESENT:	ROBERT STECKROTH-HOWELL RESIDENT BOB HANVEY-MARION TOWNSHIP SUPERVISOR	

1. **CALL TO ORDER:** Meeting was called to order by Commissioner Prokuda at 6:30 PM.
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL AND INTRODUCTION OF GUESTS**
4. **APPROVAL OF AGENDA**

Commissioner Action: IT WAS MOVED BY COMMISSIONER ANDERSON TO APPROVE THE AGENDA DATED APRIL 18, 2018, SECONDED BY COMMISSIONER CLUM.

All in favor, motion passed.

5. **APPROVAL OF MINUTES**

Commissioner Action: IT WAS MOVED BY COMMISSIONER CLUM TO APPROVE THE MINUTES OF THE PLANNING COMMISSION MEETING DATED MARCH 21, 2018, SECONDED BY COMMISSIONER SPARKS.

All in favor, motion passed.

6. **CALL TO THE PUBLIC:** Mr. Robert Steckroth stated that he has been a resident of Howell for over 30 years and he has had difficulty homesteading. He was evicted, was homeless, and is now temporarily sheltered. He said that he is on disability income. He proposes establishing a church/property with a variety of purposes and he requested endorsement from the County Planning Commission. Director Kline-Hudson stated that we could not endorse a development proposal that does not come from a local Township Planning Commission, and that the role of the County Planning Commission is defined by the Michigan Planning Enabling Act. Commissioners and staff referred him to Livingston County Habitat for Humanity, the 211 call center and the large job fair at Crystal Gardens.

Commissioner Prokuda closed the Call to the Public.

7. ZONING REVIEWS

A. Z-01-18: MARION TOWNSHIP, ZONING ORDINANCE AMENDMENTS - ARTICLE III DEFINITIONS, ARTICLE VIII RESIDENTIAL DISTRICTS, ARTICLE X INDUSTRIAL DISTRICTS.

The Marion Township Planning Commission proposes to revise Article III Definitions, Article VIII Residential Districts, and Article X Industrial Districts regarding landscape operations and contractor yards.

Township Planning Commission Recommendation: Approval. The Marion Township Planning Commission recommended **Approval** of the text amendments at their February 27, 2018 meeting. There were no public comments.

Staff Recommendation: Approval. The proposed text amendments are reasonable and appropriate appear to add no further undue hardship on the public. The proposed revisions to these Sections appear to improve the intended nature of these types of land uses through more distinct and detail-specific regulatory provisions.

Commission Discussion: Commissioner Sparks asked where Rural Residential fits in with these Agricultural uses. Bob Hanvey, Marion Township Supervisor, stated that Rural Residential is their Agricultural district.

Public Comment: Bob Hanvey, Marion Township Supervisor, spoke about animal units, as questioned by Commissioner Sparks. He stated that 200 animal units is equivalent to 1 feeder cow. Commissioner Sparks stated that Right to Farm supersedes the animal unit requirement.

Commissioner Action:

Commissioner Action: IT WAS MOVED BY COMMISSIONER SPARKS TO RECOMMEND APPROVAL. SECONDED BY COMMISSIONER ANDERSON.

Motion passed: 4-0

B. Z-02-18: MARION TOWNSHIP, ZONING ORDINANCE AMENDMENTS - ARTICLE III DEFINITIONS, ARTICLE IX COMMERCIAL DISTRICTS, AND ARTICLE XVII STANDARDS FOR SPECIFIC SPECIAL LAND USES.

The Marion Township Planning Commission proposes to revise Article III Definitions, Article IX Commercial Districts, and Article XVII Standards for Specific Special Land Uses regarding outdoor vehicle storage.

Township Planning Commission Recommendation: Approval. The Marion Township Planning Commission recommended **Approval** of the text amendments at their February 27, 2018 meeting. There were no public comments.

Staff Recommendation: Approval. The proposed text amendments are reasonable and appropriate. Staff would highly recommend that the Township consider Staff comments prior to final approval by the Township.

Commission Discussion: Commissioner Sparks asked if this special use could be next to a filling station. Principal Planner Stanford answered in the affirmative. The Highway Service commercial zoning district allows fillings stations and now this use as a special use.

Public Comment: None.

7. ZONING REVIEWS

A. Z-01-18: MARION TOWNSHIP, ZONING ORDINANCE AMENDMENTS - ARTICLE III DEFINITIONS, ARTICLE VIII RESIDENTIAL DISTRICTS, ARTICLE X INDUSTRIAL DISTRICTS.

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Commissioner Action:

Commissioner Action: IT WAS MOVED BY COMMISSIONER SPARKS TO RECOMMEND APPROVAL. SECONDED BY COMMISSIONER ANDERSON.

Motion passed: 4-0

B. Z-02-18: MARION TOWNSHIP, ZONING ORDINANCE AMENDMENTS - ARTICLE III DEFINITIONS, ARTICLE IX COMMERCIAL DISTRICTS, AND ARTICLE XVII STANDARDS FOR SPECIFIC SPECIAL LAND USES.

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Staff Recommendation: Approval. The proposed text amendments are reasonable and appropriate. Staff would highly recommend that the Township consider Staff comments prior to final approval by the Township.

Commission Discussion: Commissioner Sparks asked if this special use could be next to a filling station. Principal Planner Stanford answered in the affirmative. The Highway Service commercial zoning district allows fillings stations and now this use as a special use.

Public Comment: None.



Livingston County Department of Planning

MEMORANDUM

TO: Livingston County Planning Commissioners and the Marion Township Board of Trustees

FROM: Robert Stanford, Principal Planner

DATE: April 2, 2018

SUBJECT: Z-01-18 Amendments to Zoning Ordinance Article -
 Article III: Definitions
 Article VIII: Residential Districts:
 Section 8.01 RR: Rural Residential District
 Article X: Industrial Districts:
 Section 10.01 LI: Light Industrial District

Kathleen J. Kline-Hudson
 AICP, PEM
 Director

Robert A. Stanford
 AICP, PEM
 Principal Planner

Scott Barb
 PEM
 Principal Planner

The Marion Township Planning Commission proposes to revise the following Articles/Sections regarding landscape operations and contractor yards:

Article III: Definitions
Article VIII: Residential Districts: Section 8.01 RR: Rural Residential District
Article X: Industrial Districts: Section 10.01 LI: Light Industrial District

NOTE: When existing (current) text are utilized in this review for illustrative purposes, additions (or newly proposed text) are noted in **underlined bold** font while deletions to existing text are noted in ~~striketrough~~ font (Times New Roman). Planning Staff comments are noted in ***bold italic underline*** fashion (Arial).

Marion Township proposes to revise its township zoning ordinance regarding landscape operations and contractor yards:

Add The Following New Definitions:

Section 3.02 Definitions

Landscape Contractor's Buildings, Offices and Yards: A space, building or structure, or combination thereof, used exclusively for the storage of equipment, tools, vehicles, and materials used in or associated with such a business and/or the retail sale of live trees, shrubs or plants not grown on the property. Products used for gardening or landscaping such as, but not limited to fertilizers, mulch, groundcovers, boulders, etc., may also be sold.

Department Information

Administration Building
 04 E. Grand River Avenue
 Suite 206
 Howell, MI 48843-2323

(517) 546-7555
 Fax (517) 552-2347

Web Site
 co.livingston.mi.us



Landscape Contractor's Operation: A business engaged in the practice of improving building sites or other grounds by contouring the land and planting flowers, shrubs, and trees. A Landscaping Contractor's Operation typically consists of equipment, tools, vehicles, and materials used in or associated with such a business.

Plant nursery, greenhouse, farm related: A parcel, area, space, building or structure, or combination thereof, used chiefly for the storage, wholesale sale, or retail sale, of live trees, shrubs, and plants exclusively grown onsite. The area and amount of such structures, equipment, vehicle storage and other areas dedicated to the use shall be consistent with the residential character of the area and shall not adversely impact neighboring properties.

Delete The Following Definitions:

~~**Nursery, Commercial:** A space, building or structure, or combination thereof, used exclusively for the storage or retail sale of live trees, shrubs or plants not grown on the property. Products used for gardening or landscaping such as, but not limited to, fertilizers, mulch, groundcovers, boulders, etc., may also be sold.~~

Revise The Following Definitions:

2. Farm Operation, Crops. The operation and management of a farm or a condition or activity that occurs at any time as necessary on a farm in connection with the commercial production, harvesting, and storage of farm products, and includes, but is not limited to:

- a. Marketing produce at roadside stands
- b. The generation of noise, odors, dust, fumes, and other associated conditions
- c. The operation of machinery and equipment necessary for a farm including, but not limited to, irrigation and drainage systems and pumps and on-farm grain dryers, and the movement of vehicles, machinery, equipment, and farm products and associated inputs necessary for farm operations
- d. Field preparation and ground and aerial seeding and spraying.
- e. The application of chemical fertilizers or organic materials, conditioners, liming materials, or pesticides
- f. Use of alternative pest management techniques
- g. The fencing, feeding, watering, sheltering, transportation, treatment, use, handling and care of farm animals not for profit
- h. The management, storage, transport, utilization, and application of farm by-products, including manure or agricultural wastes
- i. The conversion from a farm operation activity to other farm operation activities
- j. The employment and use of labor.

This use includes greenhouses, **plant nurseries**, and orchards, but does not include nurseries (see definition) landscape contractor's **operations (see definition)**.



Township Zoning Ordinance Section 8.01 B. titled "Uses Permitted By Right" is modified as follows:

Section 8.01 RR: Rural Residential District

B. Uses Permitted By Right:

1. Single-family dwellings.
2. Agricultural buildings and agricultural operations involving no more than two hundred (200) animal units at a density not to exceed 1.4 animal units per acre.
3. Landscape **Plant nursery operations, greenhouse, farm related** including retail sales of nursery stock grown on the premises.
4. Public or private conservation areas, parks, game refuges, and similar uses.
5. Family day care homes.
6. Adult foster care small group homes.
7. Accessory buildings.

Township Zoning Ordinance Section 8.01 C. titled "Permitted Accessory Uses" is modified as follows:

Section 8.01 RR: Rural Residential District

C. Permitted Accessory Uses:

1. Accessory uses or structures, clearly incidental to the operation of an existing farm, including:
 - a. Agricultural buildings, pole barns, sheds, **greenhouses** and similar structures customarily incidental to the permitted principal use.

Township Zoning Ordinance Section 10.01 B. titled "Uses Permitted By Right" is amended to add the following new Subsection 10.01 B. 16:

Section 10.01 LI: Light Industrial District

B. Uses Permitted By Right:

(16) Landscape Contractor's Buildings, Offices and Yards

Township Recommendation: Approval. The Marion Township Planning Commission recommended **Approval** of the text amendments at their February 27, 2018 meeting. There were no public comments.

Staff Recommendation: Approval. The proposed text amendments are reasonable and appropriate appear to add no further undue hardship on the public. The proposed revisions to these Sections appear to improve the intended nature of these types of land uses through more distinct and detail-specific regulatory provisions.



Livingston County Department of Planning

MEMORANDUM

TO: Livingston County Planning Commissioners and the Marion Township Board of Trustees

FROM: Robert Stanford, Principal Planner

DATE: April 2, 2018

SUBJECT: Z-02-18 Amendments to Zoning Ordinance Article -
Article III: Definitions
Article IX: Commercial Districts:
Section 9.01 RR: Highway Service District
Article XVII: Standards For Specific Special Land Uses:
Section 17.34 Outdoor Vehicle Storage

Kathleen J. Kline-Hudson
AICP, PEM
Director

Robert A. Stanford
AICP, PEM
Principal Planner

Scott Barb
PEM
Principal Planner

The Marion Township Planning Commission proposes to revise the following Articles/Sections:

Article III: Definitions
Article IX: Commercial Districts:
Section 9.01 RR: Highway Service District
Article XVII: Standards For Specific Special Land Uses:
Section 17.34 Outdoor Vehicle Storage

The proposed amendments address revisions to the township zoning ordinance regarding outdoor vehicle storage.

NOTE: When existing (current) text are utilized in this review for illustrative purposes, additions (or newly proposed text) are noted in **underlined bold** font while deletions to existing text are noted in ~~strike through~~ font (Times New Roman). Planning Staff comments are noted in ***bold italic underline*** fashion (Arial).

Department Information

Administration Building
14 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

Marion Township proposes to revise its township zoning ordinance regarding outdoor vehicle storage:

Modify Table Of Contents – Add a New Section:

Article XVII: Standards for Specific Special Land Uses

Section 17.34 Outdoor Vehicle Storage

(517) 546-7555
Fax (517) 552-2347

Web Site
co.livingston.mi.us



Add The Following New Definitions:

Motor Vehicle: Any vehicle which is self-propelled.

Recreational Vehicle: Includes travel trailers, pickup campers, motor homes, folding tent trailers, boats, boat trailers, snowmobiles, all terrain or special terrain vehicles, utility trailers, and similar equipment used for transporting recreational equipment. A vehicle primarily designed and used as a temporary living quarters for recreational, camping, or travel purposes, including a vehicle having its own motor power or a vehicle mounted on or drawn by another vehicle.

Vehicle: Every device in, upon, or by which any person or property is or may be transported or driven upon a highway except devices moved by human power or used exclusively upon stationary rails or tracks.

Modify Article IX: Commercial Districts, Section 9.01 HS: Highway Service District, Item D. – “Uses Permitted By Special Use Permit”- Add new subitem #11:

D. Uses Permitted By Special Use Permit:

1. Public facilities, including municipal buildings, schools, libraries, recreational facilities, and similar uses and activities.
 2. Automobile repair garage.
 3. Automobile fueling/mixed-use station.
 4. Billboards.
 5. Communication towers.
 6. Drive-in establishments including but not limited to: drive-in, drive-through, take-out, pickup, and other forms of in-vehicle retail or service establishments including restaurants, financial institutions, dry cleaning businesses, and similar facilities.
 7. Motels and hotels.
 8. Open air business uses such as retail sales of plant materials, sale of lawn furniture, playground equipment and garden supplies.
 9. Outdoor commercial recreation facilities.
 10. Adult Entertainment Uses (Amended 10/2000)
 - 11. Outdoor Vehicle Storage, subject to additional requirements found in Section 17.34.**
-



Modify Article XVII: Add New Subsection 17.34:

Section 17.34 Outdoor Vehicle Storage

A. Location Requirements: Outdoor Vehicle Storage uses are permitted by Special Use Permit in the Highway Service District.

B. Site Requirements

- 1. The minimum lot area shall be three (3) acres.**
- 2. Site Design and layout shall meet all applicable requirements and standards of Article VI: General Provisions, and Article XVIII: Site Plan Requirements**

C. Performance Standards

- 1. All vehicle storage sites shall contain a permanent enclosed office building.**
- 2. No vehicles shall be stored in the front yard.**
- 3. All lighting shall be shielded from adjacent residentially used or zoned districts.**
- 4. No major repair or major refinishing shall be done on the lot. This includes but is not limited to**
 - a) Cylinder head replacement;**
 - b) Valve grinding or replacement;**
 - c) Repair, replace transmission, rear end, rear axles;**
 - d) Body work;**
 - e) Engine replacement;**
 - f) Repair of fuel tank;**
 - g) Radiator or heater core repair or replacement;**
 - h) Painting;**
 - i) Fender repair;**
 - j) Engine or transmission removal**
- 5. Motor homes, mobile homes, or other large vehicles over eight (8) feet in height shall not be parked or stored any nearer to the property line than the required minimum setback distance of the HS: Highway Service District.**
- 6. All such recreational vehicle and equipment storage must be operable and licensed to operate on the highways of the State of Michigan.**
- 7. No person/s shall live temporarily or permanently in any vehicle stored on site.**



D. Buffering Requirements:

- 1. The front yard shall be planted with trees, grass, and shrubs. The spacing and type of plant materials shall be consistent with the provisions of Section 6.13.**
- 2. A solid fence, wall or earthen berm at least eight (8) feet in height shall be provided around the periphery of the site to screen said site from surrounding property. Such fence, wall or berm shall be of sound construction, painted or otherwise finished neatly and inconspicuously. Such fence, wall or berm shall be of permanent finish and construction.**
- 3. Dependent on provided screening and buffering, required setbacks may be reduced or modified.**
- 4. Dependent upon location, site angles, security or other factors; fence, wall or berm may be reduced or modified.**

STAFF COMMENTS: Along with sub-items entitled "(A) Locational Requirements", "(B) Site Requirements", and "(C) Buffering Requirements", most all Special Uses identified and described in Section 17 include a sub-item entitled "(D) Performance Standards", which typically addresses signage issues or other miscellaneous or use specific catch-all regulatory provisions not included in other sub-items, but still pertinent to that particular use. To ensure complete comprehensiveness, Staff would simply suggest that the Township perform a final review of the desired and intended regulatory provisions for this special land use to make sure there are no potential regulatory gaps for this special land use type which need to be included and addressed for which this sub-item could be utilized.

Township Recommendation: Approval. The Marion Township Planning Commission recommended **Approval** of the text amendments at their February 27, 2018 meeting. There were no public comments.

Staff Recommendation: Approval. The proposed text amendments are reasonable and appropriate. Staff would highly recommend that the Township consider Staff comments prior to final approval by the Township.

PHP

PFEFFER ■ HANNIFORD ■ PALKA
Certified Public Accountants

John M. Pfeffer, C.P.A.
Patrick M. Hanniford, C.P.A.
Kenneth J. Palka, C.P.A.

225 E. Grand River - Suite 104
Brighton, Michigan 48116-1575
(810) 229-5550
FAX (810) 229-5578

Members:
AICPA Private Practice Companies Section
MACPA

August 28, 2019

Marion Township
Honorable Board of Trustees
2877 West Coon Lake Road
Howell, Michigan 48843

Dear Honorable Board Members:

I have met with the officials, Bob, Tammy and Duane to review the attached documents and discuss the rates for sewer operations.

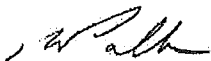
Based on our discussion and review of the attached, I agree with the methodology used by Bob in which he came up with a rate of \$4.95 per 1,000 gallons. However, I would urge the Board as I have done in the past to add at least 5 to 10 cents per 1,000 gallons in order to start a capital reserve fund for future improvements and replacements. I would therefore recommend at least 1 to 2% (the 5 to 10 cents per 1,000 gallons included in the invoice to the customer) of collections be put into a separate reserve account.

Therefore, I would look at increasing the charge to \$5.00 up to \$5.05 per 1,000 gallons for the current year. Each year thereafter, an increase of 1 to 3% should be done to keep up with inflation.

If we had done a full rate study/analysis our opinion of Bob's methodology may have been different. The aforementioned is only based on the information provided.

If you should have any questions, please don't hesitate to call.

Best Regards,



Ken Palka



**HOWELL
MICHIGAN**

Department of Public Service

611 E. Grand River · Howell, MI 48843 · (517) 546-7510 · FAX: (517)546-6019

August 23, 2019

Bob Hanvey
Marion Township
2877 West Coon Lake Road
Howell, MI 48843

Dear Mr. Hanvey:

Please be advised that on 7/8/2019 the City of Howell Council approved a rate increase of 6.9% on the City Wastewater Treatment Rate. Currently the City charges Marion Township \$3.51 per thousand gallons, this rate will be increased by 6.9% to \$3.75 per thousand gallons effective September 1, 2019.

If you have any questions please feel free to contact me at my office or by cell phone at (517)404-2520.

Sincerely,

Ervin J Suida
Public Service Director

Sewer usage rate analysis for Marion Township

	Current Rates	New Rates
City charges Marion	\$3.51	\$3.75
City charges residents	\$4.25	\$4.54
Marion charges residents	\$4.48	\$?.??

City ready-to-serve \$273/year, Township ready-to-serve \$43.52/year.

The difference between the processing rate we are charged by the City and the rate we charge our customers plus the ready-to-serve amount should be the funding source for maintaining the system. In the last twelve months we billed our residents for about 52 million gallons of waste water. Our current year budget for sewer maintenance is about \$106,000.

$$\$106,000(\text{expense}) - \$44,000(\text{ready-to-serve}) = \$62,000(\text{covered by rate})$$

So to have our current billing plus ready-to-serve cover our current maintenance expense we need to charge our residents about \$1.20 per thousand more than the City charges us.

That would be about \$4.95 per thousand, almost a 10% increase. This does not include any funding for major repairs such as pump station failures.

Presented at Board Meeting 08/08/2019

Comparison of Peavy Road sewer meter readings with MHOG meter readings 2014 - 2019.

Time Period	Gallons on Peavy Meter	Number of metered users	Metered Gallons	Number of flat rate users	Flat Rate Estimated Gallons	Total gallons on MHOG Billing	Gallons Difference	Annual Total Difference
2014/Q1	11,927,460	753	9,070,000	66	794,980	9,864,980	-2,062,480	
2014/Q2	12,736,030	785	10,541,000	65	872,822	11,413,822	-1,322,208	
2014/Q3	11,797,470	798	13,461,000	66	1,113,316	14,574,316	2,776,846	
2014/Q4	11,945,550	804	9,903,000	66	812,933	10,715,933	-1,229,617	
								-1,837,460
2015/Q1	12,671,510	799	10,593,000	66	875,016	11,468,016	-1,203,494	
2015/Q2	12,882,986	825	11,556,000	67	938,487	12,494,487	-388,499	
2015/Q3	12,319,516	837	13,439,000	70	1,123,931	14,562,931	2,243,415	
2015/Q4	12,372,220	834	10,789,000	70	905,552	11,694,552	-677,668	
								-26,246
2016/Q1	11,825,430	825	9,917,000	71	853,463	10,770,463	-1,054,967	
2016/Q2	12,450,780	858	12,634,000	71	1,045,471	13,679,471	1,228,691	
2016/Q3	12,572,510	875	15,622,000	68	1,214,053	16,836,053	4,263,543	
2016/Q4	12,516,660	890	10,881,000	68	831,357	11,712,357	-804,303	
								3,632,964
2017/Q1	13,704,340	896	10,163,000	70	793,984	10,956,984	-2,747,356	
2017/Q2	14,760,090	901	12,134,000	74	996,577	13,130,577	-1,629,513	
2017/Q3	12,595,320	888	15,630,000	72	1,267,297	16,897,297	4,301,977	
2017/Q4	13,741,970	913	10,965,000	72	864,710	11,829,710	-1,912,260	
								-1,987,151
2018/Q1	14,394,180	928	10,470,000	72	812,328	11,282,328	-3,111,852	
2018/Q2	15,501,830	935	12,052,000	72	928,068	12,980,068	-2,521,762	
2018/Q3	12,697,570	927	15,337,000	73	1,207,768	16,544,768	3,847,198	
2018/Q4	13,721,190	930	10,390,000	73	815,559	11,205,559	-2,515,631	
								-4,302,047
2019/Q1	13,667,710	948	11,282,000	72	856,861	12,138,861	-1,528,849	
2019/Q2	14,825,970	948	12,151,000	73	935,678	13,086,678	-1,739,292	
Total (net) difference for selected quarters							-7,788,081	

**MARION TOWNSHIP
SEWER FUND BUDGET
July 2019 - June 2020**

	Actual YTD 18' - '19	Approved 19' - 20'
Income		
400 · BILLINGS - OPERATIONS	314,854.25	325,000.00
414 · NEW USER- REU'S PURCHASED	-	-
415 · NEW USERS - TAPS	1,250.00	1,000.00
420 · Revenue Misc		
435 ASSESSMENT INTEREST	1,465.11	300.00
ASSET MANAGEMENT PLAN (SAW)	-	-
440 · INTEREST BANK REVENUE	-	-
Total Income	317,569.36	326,300.00
Expense		
600 · CONTRACT LABOR - CITY	36,521.41	40,000.00
605 · SEWER USAGE-CITY OF HOWELL	193,195.61	225,000.00
630 · R & M -	38,059.70	1,000.00
630 · LAWN SERVICES	1,350.00	1,500.00
640 · UTILITIES (Electricity & Gas)	10,682.92	12,000.00
645 · TELEPHONE	12,695.48	15,000.00
660 · CONSTRUCTION		
710 · AGENT FEES		
715 · ADMIN CHGE - GENOA	20,499.38	22,000.00
720 · PROFESSIONAL FEES	5,889.75	7,500.00
735 · SAW GRANT EXPENSE	1,623.00	
HOWELL SEWER PLANT		310,000.00
750 · AUDIT	6,280.00	7,000.00
Total Expense	326,797.25	641,000.00
Net Income	-9,227.89	-314,700.00
Beginning Fund Balance	3,071,540.00	3,062,312.11
Ending Fund Balance	3,062,312.11	2,747,612.11

Bob Hanvey

From: Suzanne Snyder <suzi@livingstoncatholiccharities.org>
Sent: Monday, August 19, 2019 1:48 PM
To: supervisor@mariontownship.com
Subject: Livingston County Catholic Charities

Hello Bob,

Hope things are going good for you. With summer still here, it's hard to believe that the LCCC Senior Christmas project committee will be meeting soon to prepare for the 2019 Senior Christmas project. We would were wondering if it would be possible to use your wonderful space again this year to host this project. It has been such a great location and with the growing number of seniors in need, we anticipate our numbers to grow and your space allows us to do so. Thank you.

Suzi Snyder
Director of Senior Services
Livingston County Catholic Charities
517-546-9910
suzi@livingstoncatholiccharities.org

<https://www.facebook.com/LivingstonCatholicCharities/>

<https://www.linkedin.com/company/livingston-county-catholic-charities-michigan/>

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