

AGENDA
Cascade Charter Township Planning Commission
Monday, September 11, 2023
7:00 pm
2870 Jacksmith Ave

Public may access the meeting via video conference software Zoom
<https://us02web.zoom.us/j/85807187174>

Meeting ID: 879 8058 1366
By Phone: +1 929 205 6099

- ARTICLE 1. Call the meeting to order
Record the attendance**
- ARTICLE 2. Pledge of Allegiance to the Flag**
- ARTICLE 3. Approve the current Agenda**
- ARTICLE 4. Disclose any Conflict of Interest**
- ARTICLE 5. Approve the Minutes of the August 21, 2023 Meeting**
- ARTICLE 6. Acknowledge visitors and those wishing to speak.
(Comments are limited to five minutes per speaker)**
- ARTICLE 7. Case #23-3786/Deppe
Property Address: 1878 Country Brook Dr
Public Hearing
Requested Action: Seeking a Type I Special Use permit for an 8-foot-tall fence.**
- ARTICLE 8. Case #23-3787/King
Property Address: 6820 Burton St
Public Hearing
Requested Action: Seeking a Type I Special Use permit for an 8-foot-tall fence.**
- ARTICLE 9. Case #22-3746/Chen
Property Address: 5745 Whitneyville Ave
Public Hearing
Requested Action: Type II special use permit to construct a commercial composting operation.**
- ARTICLE 10. Old Business**
- ARTICLE 11. Any Other Business**
- ARTICLE 12. Acknowledge visitors and those wishing to speak.
(Comments are limited to five minutes per speaker)**
- ARTICLE 13. Adjournment**

Meeting format

1. **Staff Presentation** *Staff report and recommendation*
2. **Project presentation-** *Applicant presentation and explanation of project*
 - a. **PUBLIC HEARINGS**
 - i. **Open Public Hearing.** *Comments are limited to five minutes per speaker; exception may be granted by the chair for representative speakers and applicants*

ii. *Close public hearing*

3. **Commission discussion** – *May ask for clarification from applicant, staff or public*

4. **Commission decision - Options**

a. *Table the decision*

b. *Deny*

c. *Approve*

d. *Approve with conditions*

e. *Recommendation to Township Board*

Minutes

Cascade Charter Township
Planning Commission
Monday, August 21, 2023
7:00 pm
2870 Jacksmith Ave SE

- ARTICLE 1.** Vice Chair Moxley called the meeting to order at 7:00 P.M.
Members Present: Noordhoek, Richardson, Moxley, Engel, Rissi, Bruneau, Rowland
Members Absent: Noordyke
Others Present: Planning Director Brian Hilbrands, Zoning Administrator (ZA) Madison Smith-Jacoby, and others listed on the sign-in sheet.
- ARTICLE 2. Pledge of Allegiance**
- ARTICLE 3. Approve the current Agenda**
Motion was made by Member Rissi to approve the current agenda. Supported by Member Engel. Motion carried 7 to 0.
- ARTICLE 4. Disclose any conflict of interest**
There was no conflict of interest disclosed.
- ARTICLE 5. Approve the Minutes of the August 7, 2023 Meeting**
Member Bruneau noticed a few errors in the public comment section of Article 7 seeking to correct Glenn Turek’s address to “7199 Mooring Heights” and in the last sentence of his statement “capping” was misspelled. He also noted that Mike “Kasmauskis” was spelled incorrectly and he wished to have that changed throughout the minutes. Member Bruneau wanted his comment in the first sentence on page 5 to be more specific and include reference to legal counsel’s letters and emails.
Member Richardson corrected a comment he made on page 4 to change “especially for young adults” to “for young professionals”.
Motion was made by Member Engel to approve the August 7, 2023 meeting minutes with the proposed changes. Supported by Member Rissi. Motion carried 7 to 0.
- ARTICLE 6. Acknowledge visitors and those wishing to speak**
There was no one that wished to speak.
- ARTICLE 7. Case #23-3785/Kluce**
Property Address: 8189 Ashwood Dr
Requested Action: Seeking a Type 1 Special Use permit for an accessory building exceeding 832sqft.

ZA Smith-Jacoby presented the case and explained the applicants have previously been approved for the accessory building, but were unable to start construction within a year. The plans are the same consisting of a 1,260sqft structure with a height to midpoint of 14ft that includes a 14X30 enclosed patio. The applicants meet all setback requirements and have a 1.9-acre parcel size. ZA Smith-Jacoby said that there will be no impact on neighbors and the applicants are utilizing the accessory building for a pool house and extra storage.

Staff recommended approval of the Type 1 Special Use permit.

Member Rissi suggested including meeting minutes for repeat cases.

Rachel Kluce (8189 Ashwood Dr) said there was a delay in the project to care for her mother-in-law.

Motion was made by Member Rissi to open public hearing. Supported by Member Noordhoek. Motion carried 7 to 0.

There was no one who wished to speak.

Motion was made by Member Rissi to close public hearing. Supported by Member Engel. Motion carried 7 to 0.

Motion was made by Member Rissi to approve the Special Use permit with Staff conditions. Supported by Member Engel. Motion carried 6 to 1.

ARTICLE 8. Master Plan Amendments

Danielle Bouchard with McKenna explained they have been involved with the township for a few years now regarding the Strategic Plan, implementation of DDA projects, and now a review of the Master Plan.

Upon review of the Master plan, Bouchard and her team compiled a list of recommended amendments. During the Strategic Plan process, there was significant public engagement and the Master Plan may require revisions to align with community preferences expressed in that public engagement. The 2019 Master Plan consisted of 4 major themes including neighborhoods and partnerships, sustainability and environment, economy and innovation, and transportation and mobility. The proposed themes are similarly related, but are more in alignment with what the community is seeking. Consistently across the board, resident's highest priority is the downtown village area followed by management and preservation, Parks and trails, and roads and streets.

Member Noordhoek asked what the defined village area is and Bouchard responded that there is an upper village around the area where the library is located and the lower village by the intersection of Cascade Road and 28th Street.

Members questioned whether there was a legal "village" of Cascade with a defined boundary and proper zoning. Bouchard stated that although the term "village" is used, they are actually referring to creating a bikeable, walkable, mixed-use atmosphere with

shopping and retail, not a legal village. McKenna has been collaborating with the DDA to add the above features to Thornapple Plaza, with aim to connect Old 28th Street and the upper village in some way as well.

Member Bruneau mentioned that he would like to see a map of where the village area is.

Bouchard gave general recommendations for the Master Plan including the creation of a goals and objectives section with a separate implementation plan for action items and projects. Having a hard copy of the Master Plan would also be helpful for mark ups and potential rezoning.

Member Rissi aimed to align the Master Plan, Future Land Use Plan, and zoning ordinances to avoid discrepancies in zoning terminology during amendments of the Master Plan. Bouchard said there are plans to create a comprehensive document relating the Future Land Use Plan and zoning documents together.

Bouchard provided a table graphic located in the meeting packet to showcase the 4 current themes in the 2019 Master Plan and project statuses, as well as McKenna's 2023 recommendations.

Member Richardson mentioned how he would like to see a recommendation for freight and rail, since heavy semi-trucks travel on several roads they should be redirected from.

Bouchard stated that the next task will be to provide more detailed designations in the Future Land Use Plan along with an updated zoning plan.

Member Rissi made note that "Thornapple Plaza" should be referred to as the "Thornapple Center", since that is the title of the PUD.

ARTICLE 9. Old Business

There was no old business to discuss.

ARTICLE 10. Any Other Business

- **Michigan Association of Planning Annual Conference** – Planning Director Hilbrands noted that this is an annual conference consisting of educational training for planning professionals, and is also available for Planning Commission members.
- **Rescheduling November 6 Meeting** – Planning Director Hilbrands noted that there is an election conflict with the November 6 meeting, so the meeting date will be moved to either the previous or following week.

Member Richardson requested that someone examine the website containing the township's Master Plan for possible integration into the main website.

Member Moxley noted that the Farmland Preservation Subcommittee of the Planning Commission had their first meeting on August 17.

ARTICLE 11. Acknowledge visitors and those wishing to speak.

There was no one that wished to speak.

ARTICLE 12. Adjournment

Motion was made by Member Rissi to adjourn the meeting. Supported by Member Engel. Motion carried 7 to 0. The meeting adjourned at 8:30 P.M.

Respectfully submitted,

Joe Engel, Secretary

DRAFT

STAFF REPORT

STAFF REPORT: Case # 22-3786
REPORT DATE: August 7, 2023
PREPARED FOR: Cascade Charter Township Planning Commission
MEETING DATE: September 11, 2023
PREPARED BY: Madison Smith-Jacoby

APPLICANT

Julie & Dean Deppe

ADDRESS: **1878 Country Brook Drive**

STATUS OF APPLICANT: Property Owner

REQUESTED ACTION: Seeking approval for a Type I Special Use permit for an 8-foot fence in the rear yard.

EXISTING ZONING OF SUBJECT PARCEL: R1

GENERAL LOCATION: East of Buttrick Avenue just north of Bolt Drive

PARCEL SIZE: 1- acre

EXISTING LAND USE ON THE PARCEL: Residential

ADJACENT AREA LAND USES:
N: Residential
E: Residential
S: Residential
W: Residential

ZONING ON ADJOINING PARCELS:
N: R1
E: PUD-10
S: R1
W: R1

STAFF COMMENTS:

- a. The applicant is requesting an 8-foot fence in the rear yard to prevent deer from getting to their garden.
- b. The proposed design of the fence is to be “dark black” to blend in with the wooded area. Refer to the applicant’s narrative for further appearance questions.
- c. The proposed fence will not be around the whole property, but would cut across the parcel (north to south) before the densely wooded area. Again, refer to the site plan for visual.
- d. The applicant claims that a 6-foot fence would not suffice because of the steep grade in their backyard allowing deer to jump over.
- e. Included with the application are two letters of support. See packet for details.
- f. Fences do not require a building permit but are required to comply with section 4.30 of the Zoning Ordinance.
- g. Previously we have granted special use permits for a 6-foot fence in the front yard as a protection from deer on gardens.
- h. The Township has approved one 8-foot fence at Bos Greenhouse on Spaulding Ave. The main reason being to keep deer out.
- i. As the Township’s deer population increases, this type of request may become more common. As for now, amending the zoning ordinance is not recommended by staff.

Conditions for Special Use Permit Approval

Due to the unusual circumstances related to the property location or use of the fence, the height of a fence may be increased to a height of eight (8) feet as measured from final grade in all agricultural, office and residential zoning districts and up to ten (10) feet, as measured from average grade in all other zoning districts. Upon review of a special use permit for additional fence height the Planning Commission shall consider the following:

Standard	Comment
To what extent the impact of additional height has on adjoining neighbors.	Adding a fence may push more deer into neighboring properties, but the fence itself would not impact the neighbors.
Whether the additional height severely impacts light and ventilation from flowing onto the adjoining properties.	The opacity of the fence has not been indicated, so a fence this tall could impact light and ventilation/wind movement depending on this. Other than this, I see not issue.

Whether the increased height creates a traffic hazard.	The fence is in the rear yard and thus not creating a traffic hazard.
Whether the increased height creates a fire, safety hazard.	The addition of more flammable materials could increase fire hazard, in general I see no increased safety hazard.
Whether the increased height violates any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.).	The parcel is not part of a PUD but is a plat (Lot 9 of Country Brook Estates). I am not aware of any restrictions.

RECOMMENDATION

Staff recommends that this variance be APPROVED based on the findings above.

The Zoning Board of Appeals may want to consider this approval with the following conditions:

1. The design of the fence allows for (some percentage) of transparency for light and air.



CASCADE CHARTER TOWNSHIP

5920 Tahoe Dr. SE, Grand Rapids, Michigan 49546-7140

PLANNING & ZONING APPLICATION

APPLICANT:

Name: Dean + Julie Deppe

Address: 1878 Country Brook

City & Zip Code: Ada mi 49501

Telephone: 616 260 8445 616 916 5405

Email Address: ddeppe@calvinseminary.edu jrdeppe@gmail.com

OWNER: * (If different from Applicant)

Name: _____

Address: _____

City & Zip Code: _____

Telephone: _____

Email Address: _____

NATURE OF THE REQUEST: (Please check the appropriate box or boxes)

- | | |
|--|--|
| <input type="checkbox"/> Administrative Appeal | <input type="checkbox"/> Administrative Site Plan Review |
| <input type="checkbox"/> Deferred Parking | <input type="checkbox"/> P.U.D. - Rezoning * |
| <input type="checkbox"/> P.U.D. - Site Condominium * | <input type="checkbox"/> Rezoning |
| <input type="checkbox"/> Site Plan Review * | <input type="checkbox"/> Sign Variance Subdivision |
| <input checked="" type="checkbox"/> Special Use Permit | <input type="checkbox"/> Plat Review * |
| <input type="checkbox"/> Zoning Variance | <input type="checkbox"/> Other: <u>Fence</u> * |

* Requires an initial submission of 5 copies of the completed site plan

BRIEFLY DESCRIBE YOUR REQUEST:**

(see sheet)

(**Use Attachments if Necessary)

-SEE OTHER SIDE-

LEGAL DESCRIPTION OF PROPERTY**:

(**Use Attachments if Necessary)

PERMANENT PARCEL (TAX) NUMBER: 41-19 02-351-028

ADDRESS OF PROPERTY: 1878 Country Brook Lot 9 Ann Mi 49301

PRESENT USE OF THE PROPERTY: home + garden

NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS HAVING A LEGAL OR
EQUITABLE INTEREST IN THE PROPERTY:

Name(s)	Address(es)
_____	_____
_____	_____

SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) also agree to reimburse the Cascade Charter Township for all costs, including consultant costs, to review this request in a timely manner. I (we) understand that these costs may also include administrative reviews which may occur after the Township has taken action on my (our) request.

I (we) the undersigned also acknowledge that the proposed project does not violate any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.)

Dean Deppe

Owner – Print or Type Name
(*If different from Applicant)

Julie Deppe

Applicant – Print or Type Name

* Dean Deppe 8/12/2023

Owner's Signature & Date
(*If different from Applicant)

Julie Deppe 8/12/2023

Applicant's Signature & Date

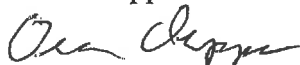
PLEASE ATTACH ALL REQUIRED DOCUMENTS NOTED IN THE PROCESS REVIEW SHEET – THANK YOU

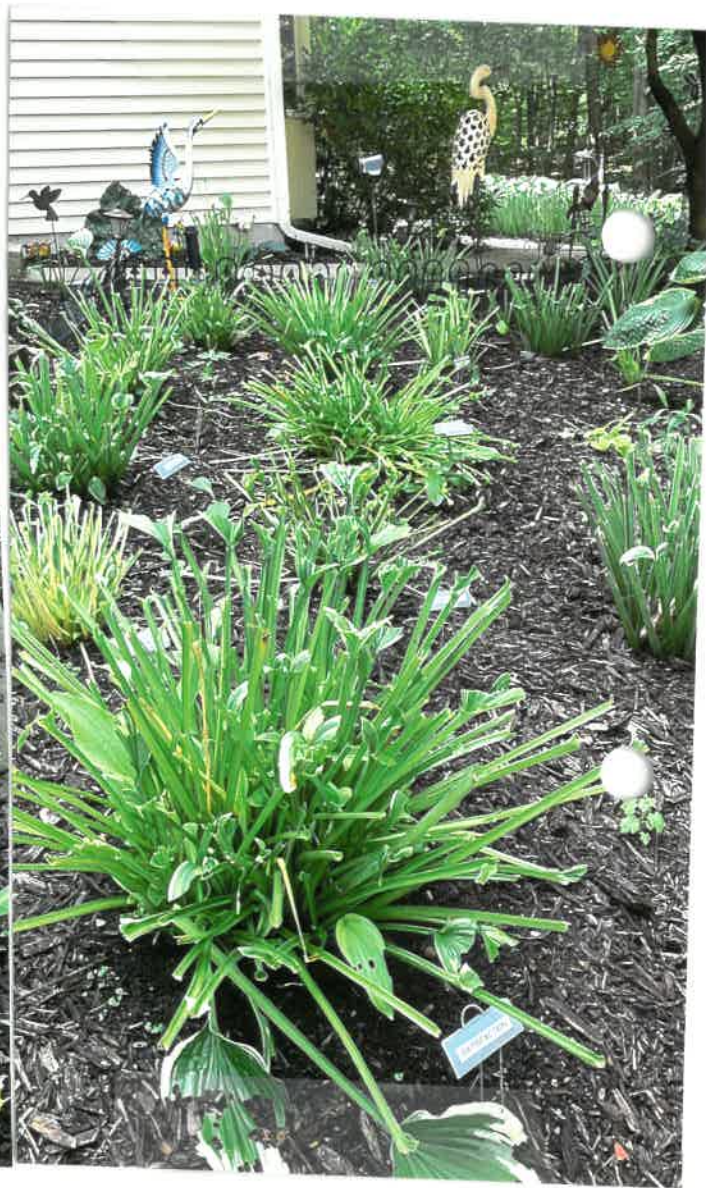
**Support for a Variance for an 8 foot fence in the wooded section of
the backyard at 1878 Country Brook, Ada Mi, 49301**
Dean and Julie Deppe

We are hosta growers and have participated in many hosta tours which has brought a lot of people to look at our garden in Ada Michigan. We have participated in the West Michigan tour four years ago, the Michigan tour three years ago, the National tour two years ago, and the Great Lakes tour last year. But this year we had to cancel the tour because of the increase of the deer population. The new homes on Bolt Drive have moved the deer population to the ravine behind our house. We have 1400 hosta and this year all of them have been decimated except maybe five. I have included pictures of the damage. In previous years we employed Liquid Fence and this deterrent performed admirably. But this year the deer seemed to pay no attention to the chemical. So we have decided that the only way to continue to be on the tours and attract people to our garden in Ada is to build a fence. But the problem with a six-foot fence in the backyard is the steepness of the ravine. Standing on the high side of the ground for a deer the fence would be like a four-foot barrier. So we are appealing for a variance for an 8 foot fence around a portion of the ravine. Support for such a variance include the following:

- 1) Deer can easily jump a six-foot fence where the steep ground of a ravine exists.
- 2) The fence would proceed through a wooded area behind our house and the neighbors. We would choose a dark black fence that would fit in with the wooded area and be difficult to see.
- 3) The neighbors on each side, Noel and Wendy Botkins on the north and Robin and Jennifer Ward on the south both approve of an 8 foot fence.
- 4) As in the diagram, the fence would proceed 81 feet back, then 33 feet on an angle to the northeast, 78 feet in a north-south direction, and 87 feet west back to the starting of the woods. So there would still be about 70 foot to the back edge of our lot line and an additional 135 feet of woods before the backyard of our neighbor to the east. So it would hardly be noticed as it proceeds through a wooded area.
5. We think it is a valuable attraction to have a hosta garden in Ada that many people visit every summer. This is presently impossible with the size of the deer population in our area.
6. Each hosta costs at least \$10. So we have an investment of more than \$14,000 in this garden besides all the garden art, metal birds, water fountain, and our annual flowers. We would hate to lose this wonderful resource every year.
7. Truthfully, and I say this without any intention of coercion, the placement of only a six-foot fence through the woods would not be worth the money since the deer would easily jump over it. Hosta growers around the country have consistently affirmed that an 8 foot fence is needed. I have included a letter from the head of the West Michigan Hosta Society confirming this fact.

Sincerely,
Rev. Dr. Dean Deppe.







August 11, 2023

To whom it may concern:

This is Donald Rawson, President of the West Michigan Hosta Society. I am writing this letter on the behalf of Dean and Julie Deppe, 1878 Country Brook Dr. SE, Ada, MI 49301. I am an avid hosta gardener myself and have grown this beautiful shade plant for over 40 years. I have thousands of hostas at three different locations.

Unfortunately, whitetail deer are a serious problem for many gardeners in West Michigan and elsewhere. Providing an effective means for repelling them can be a real challenge – simply because they are persistent and because they eat a lot. On average, a deer can consume anywhere from 6 to 8% of its body weight each day. That means that a 150-pound deer can eat up to 12 pounds of food (i.e., hostas) per day. Multiply that by 3, 4, or more - all dining on your hostas and other collectibles - for a period of many days and nights, and it becomes obvious why deer must be expelled from the garden.

While there are various methods intended to ward off deer or to restrict them from certain places in the landscape, the absolute best and most certain method is to exclude whitetail deer with heavy duty netting or fence. Whitetail deer are very agile and can scale amazing heights, especially when hungry or pressured to do so. That is why any barrier must be at least 8 feet in height. In addition, the fence must be strong enough and cannot have any holes or access points to significantly compromise its integrity.

Other methods for dealing with whitetail deer such as scent and sound deterrents are effective only to a certain extent, and are not as foolproof as fencing, which explains why many nurseries and farmers in the West Michigan area have now installed 8-foot fencing around their crops. It is essential for any serious home gardener as well.

Please review the information at the links provided below.

Best regards,

Donald Rawson, President of West Michigan Hosta Society
(616) 805-6519

Deer Busters,

<https://www.deerbusters.com/blog/how-high-does-a-deer-fence-need-to-be/#:~:text=For%20maximum%20deer%20protection%2C%20we,they%20have%20poor%20vertical%20vision.>

Deer Gardener,

<https://deergardener.com/how-high-can-deer-jump/>

Critter Fence,

https://www.critterfence.com/deer-fence?gad=1&gclid=Cj0KCQjwuNemBhCBARIsADp74QT0UY45Ltdc75ApiN6wVN9C1dE8hyC2EwPTa1U4e2DkruYOy1r4xQUaAluFEALw_wcB

Help At My Home,

<https://helpatmyhome.com/best-deer-fence/>

Angie's List,

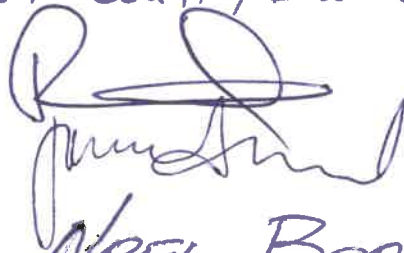
<https://www.angi.com/articles/want-keep-deer-out-your-yard-theres-fence.htm>

A – Z Animals, “How High Can a Deer Jump?”

<https://a-z-animals.com/blog/how-high-and-far-can-a-deer-jump/>

**We, the north and south neighbors of Dean and Julie Deppe,
support a variance for an 8 foot fence in the wooded section of the
backyard at 1878 Country Brook, Ada Mi, 49301**

Jennifer & Robin Ward
1896 Country Brook Dr, SE.



8/12/23

Noel Bookins
1860 Country Brook Dr.
Theresa Bookins

STAFF REPORT

STAFF REPORT: Case # 22-3787
REPORT DATE: August 24, 2023
PREPARED FOR: Cascade Charter Township Planning Commission
MEETING DATE: September 11, 2023
PREPARED BY: Madison Smith-Jacoby

APPLICANT

Joann M. King

ADDRESS: **6820 Burton SE**

STATUS OF APPLICANT: Property Owner

REQUESTED ACTION: Seeking approval for a Type I Special Use permit for an 8-foot fence in the rear yard.

EXISTING ZONING OF SUBJECT PARCEL: R1

GENERAL LOCATION: The east end of Burton Street, south of Burton Park.

PARCEL SIZE: 0.45 acres

EXISTING LAND USE ON THE PARCEL: Residential

ADJACENT AREA LAND USES:
N: Burton Park/Residential
E: Residential
S: Residential
W: Residential

ZONING ON ADJOINING PARCELS:
N: R1
E: R1
S: R1
W: R1

STAFF COMMENTS:

- a. The applicant is requesting to build an 8-foot privacy fence in her backyard to block the view of the neighbors’ recreational vehicle.
- b. The fence length measures at 55 feet.
- c. The parcel to the south, on Burton Woods Private Street, is oriented in a way that their side yard meets up with her backyard. That parcel is permitted to store their RV in the side yard but the applicant indicates it is an eye sore. The Township has worked with the resident to consider a different storage solution with no luck; thus, the applicant is pursuing a Special Use permit. See images in packet for visual.
- d. The 9-foot fence would shield the RV from view for the applicant from their backyard deck.
- e. Refer to the applicant for the design of the fence as it has not been indicated.
- f. Fences do not require a building permit but are required to comply with section 4.30 of the Zoning Ordinance.
- g. Previously the Township has granted variance for an 8-foot fence and 6-foot fences in the front yard.

Conditions for Special Use Permit Approval

Due to the unusual circumstances related to the property location or use of the fence, the height of a fence may be increased to a height of eight (8) feet as measured from final grade in all agricultural, office and residential zoning districts and up to ten (10) feet, as measured from average grade in all other zoning districts. Upon review of a special use permit for additional fence height the Planning Commission shall consider the following:

Standard	Comment
To what extent the impact of additional height has on adjoining neighbors.	The only neighbor impacted would be the neighbor to the south. A privacy fence is not seen as a negative impact.
Whether the additional height severely impacts light and ventilation from flowing onto the adjoining properties.	The proposed fence would be at the edge of the wooded area to the SE. The parcels surrounding have ample open space. The adjacent homes are at least 100’ away so this fence would not severely impact light or ventilation.
Whether the increased height creates a traffic hazard.	The fence is setback 50 feet from Burton Woods Court.
Whether the increased height creates a fire, safety hazard.	Not seen as a fire or safety hazard.
Whether the increased height violates any known property restrictions (i.e., plat restrictions, deed restrictions, covenants, etc.).	No special property restrictions.

RECOMMENDATION

Staff recommends that this variance be APPROVED based on the findings above.

Recommended conditions could be the following:

1. The design of the fence allows for (some percentage) of transparency for light and air.



CASCADE CHARTER TOWNSHIP

5920 Tahoe Dr. SE, Grand Rapids,
Michigan 49546-7140

PLANNING & ZONING APPLICATION

APPLICANT: Name: Joann M King
Address: 4820 Burton SE
City & Zip Code: Grand Rapids mi 49546
Telephone: 1-616-949-1852
Email Address: /

OWNER: * (If different from Applicant)
Name: _____
Address: _____
City & Zip Code: _____
Telephone: _____
Email Address: _____

NATURE OF THE REQUEST: (Please check the appropriate box or boxes)

<input type="checkbox"/> Administrative Appeal	<input type="checkbox"/> Administrative Site Plan Review
<input type="checkbox"/> Deferred Parking	<input type="checkbox"/> P.U.D. – Rezoning *
<input type="checkbox"/> P.U.D. – Site Condominium *	<input type="checkbox"/> Rezoning
<input type="checkbox"/> Site Plan Review *	<input type="checkbox"/> Sign Variance Subdivision
<input checked="" type="checkbox"/> Special Use Permit	<input type="checkbox"/> Plat Review *
<input type="checkbox"/> Zoning Variance	<input type="checkbox"/> Other: _____ *

** Requires an initial submission of 5 copies of the completed site plan*

BRIEFLY DESCRIBE YOUR REQUEST:**
To build a 9-foot fence in the side yard.

82
2012-12-11

(**Use Attachments if Necessary)
-SEE OTHER SIDE-

LEGAL DESCRIPTION OF PROPERTY**:

E 114.5 FT OF W 297.5 OF N 172 FT OF
SE 1/4* SEC 9 T6N R10W 0.45 A.

(**Use Attachments if Necessary)

PERMANENT PARCEL (TAX) NUMBER: 41-19 - 09 - 401 - 011

ADDRESS OF PROPERTY: 6820 Burton street SE

PRESENT USE OF THE PROPERTY: Residential

NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS HAVING A LEGAL OR
EQUITABLE INTEREST IN THE PROPERTY:

Name(s)

Address(es)

SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) also agree to reimburse the Cascade Charter Township for all costs, including consultant costs, to review this request in a timely manner. I (we) understand that these costs may also include administrative reviews which may occur after the Township has taken action on my (our) request.

I (we) the undersigned also acknowledge that the proposed project does not violate any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.)

Owner - Print or Type Name
(*If different from Applicant)

Joann M. King.
Applicant - Print or Type Name

*
Owner's Signature & Date
(*If different from Applicant)

Joann M. King Aug 14, 2023
Applicant's Signature & Date

PLEASE ATTACH ALL REQUIRED DOCUMENTS NOTED IN THE PROCESS REVIEW SHEET - THANK YOU

Rev. 7/27/21

#100,000
+ type of fence you're building
wood [drawing] screening
type

SITE PLAN Kent County Web Map

August 04, 2023



MEMORANDUM

To: Cascade Charter Township Planning Commission
From: Brian Hilbrands, Planning Director
Subject: Consider Type II Special Use Permit for a Commercial Composting Operation
Meeting Date: September 11, 2023

The applicant is requesting approval of a Type II special use permit for a commercial composting operation to be located at 5745 Whitneyville Avenue. The Township Board reviewed the application at the June 28 and July 26, 2023 meetings and decided to send it back to the Planning Commission for further review and consideration. The Board expressed concern regarding retail sales on site and the traffic that might bring, as well as potential negative effects to neighboring properties. The Board requested that the Planning Commission consider including additional conditions of approval to address these concerns.

Attached to this memo is a letter from the applicant dated July 8, 2023 that includes additional information to address some of the concerns brought up at previous meetings. The letter describes how traffic will be limited to the site and what measures are taken to prevent noxious odors, as well as contaminants from leaving the site. Examples of these measures include not accepting meat or animal parts, covering active composting areas, the use of an aerated compost system to prevent anaerobic conditions, and directing stormwater runoff from the composting pad to a lined catchment area.

Originally there were eight conditions of approval that were recommended to the Township Board. After hearing the Board's concerns, 5 additional conditions (#9-#13) have been added for a total of 13:

1. The applicant complies with the Township Engineer letter dated May 15, 2023, and all necessary permits are obtained before construction begins.
2. Record the stormwater maintenance agreement.
3. Any work within the right-of-way receives approval from KCRC and a driveway permit is obtained.
4. The applicant receives all necessary state, county, and local permits, and must still register with the EGLE Material Management Division (EGLE MMD) if there is no additional state permit required. The applicant shall also provide a copy of the Compost Site Management Plan to the Township. The operation must comply with all state, county, and local standards, rules, and regulations.
5. The site continues to meet all the special use requirements of Section 17.07(2)(t) of the zoning ordinance. This includes the requirement that the applicant return to the

Planning Commission for an annual review for a minimum of two years after receiving the special land use permit, and thereafter at the discretion of the Planning Commission, and that the applicant shall keep an inventory log showing the amount of composting intake and the total composting output, which shall be provided to the Planning Commission at the annual review and as otherwise requested by the Township. The Township reserves the right to add additional conditions during the first two years of reviews.

6. Provide an enclosed building for machinery as soon as practicable, and carry through on site improvements, including but not limited to, a biodiversity pond, 2 acres of pollinator habitat, 1 acre of total trees, 4 acres of biodynamic accumulator crops, and a ½ acre educational garden and orchard, as soon as practicable, while the 2-acre tree line is to remain intact and managed.
7. There will be no more than 3,000 cubic yards of compost intakes per year.
8. The Township must be notified upon any sale of the property. On sale of the property, the review provisions of condition 5 will be reactivated for the new owner(s).
9. No drop off of food scraps by third-parties is permitted. Food scraps may only be brought to the site by applicant's company vehicles. No meat or animal parts may be included as composting intakes.
10. The property to the northeast shall be screened with a minimum of 5 canopy trees with a minimum size of 2.5" caliper.
11. Retail sales on site are limited to appointment only.
12. The sign area of the permitted freestanding ground sign shall not exceed 30 square feet.
13. If the composting operation is discontinued, the property must be restored to its original condition and any contamination must be remediated and removed off of the site.

The application is scheduled for another public hearing at the meeting tonight.

After reviewing the additional information provided from the applicant to address the concerns of the Board, staff are recommending that you forward a positive recommendation back to the Township Board with the 13 conditions listed above.

Attachments: 7/8/23 Applicant Letter
 Minutes of 6/28/23 and 7/26/23 TB Meetings
 Minutes of Article 11 - 6/19 PC Meeting
 6/19 Planning Commission Staff Report
 Standards of Section 17.07.2.t.
 Application
 Site plan
 Township Engineer letter



July 8, 2023

Board of Trustees
Cascade Township

Brian Hilbrands
Planning Director
Cascade Township

RE: Case 22-3746/Luis Chen

Dear Brian and Board of Trustees,

I received your written notice following our June 28 meeting. Please find below my response to the three items requested by Brian Hilbrands to help expedite the review process.

I am also thankful for your time during the meeting and your willingness to look further into my application. Respectfully I would like to ask you to consider the following:

1. The time and money I have spent in this process, conservatively \$45,000 already spent on site planning and design which includes engineers, geotechnical analysis, lawyers and consultants. Also the loss of revenue over the past two years, estimated at \$220,000. I am committed to being a valued member of Cascade Township and prove my vision of a composting farm in complete harmony with nature and the community. However the further we extend this process the more it negatively affects me. I am now at risk of losing \$266,000 of grant money that was awarded by EGLE (Michigan Department of Environment, Great Lakes and Energy) expiring in December 2023 if not used, to develop this beautiful compost farm concept.

2. I have been thorough on my planning and proceeding with the township. I approached the township prior to purchasing the property seeking guidance on steps and I have followed your requests.

3. My project proposal, site design and operations have been reviewed and recommended for approval by the township planning commission and members of the special committee organized to create the ordinance. From April to August 2022 the planning commission and special committee consulted and became acquainted with our project to provide an informed decision in favor of our operation.

4. A cease and desist letter was issued from township attorney Mike Homier regarding a zoning violation. It is important for our record to clarify that we did not cause a nuisance. A neighbor's

dog trespassed over 300 feet into our property and was rolling in our piles of pre-composted material in the process of relocation from our old site. A pile of compost is acceptable and expected in an agricultural property. This event triggered further review of our operation.

5. Negative comments from neighbors at the planning commission meeting on June 22 and then trustees meeting on June 28 were clearly misinformed opinions and without consideration to read our 4 page site plan application. Almost all concerns and questions from neighbors can be addressed on the site plan application. We also submitted a 24 page project proposal that has been available at the township website since May 2022.

6. I have provided the township with industry professional counsel to further understand my project. Aaron Hiday / Michigan Director and regulator of composting operations was present at two of the meetings. He talked about the low nuisance risks of our site plan and nuisance mitigation measures we are implementing. It is not in his best interest to advocate for a facility with a potential to fail. Aaron spoke in favor of my experience as a compost operator and our proposed site design at the Cascade location.

I brought Amy Freeman to the board of trustees meeting. A 30 year industry professional. She is a former director of a large scale composting operation located in Genesee County MI, Country Oaks. She is also on the board of directors of the Michigan Organics Council, a MI chapter of the US Composting Council. She explained our operation and size classification as a “community composter”. She is available to further talk about risks of nuisances and any questions you may have. Her email organicsmaven@gmail.com

7. According to the Appraisal Institute (<https://www.appraisalinstitute.org>) neighbor property values are affected by the conditions of nearby properties and the value of nearby properties. Our permits, licensing or business organization is not a consideration for the value estimation of neighboring homes. It is how our property looks and any nuisances present. Please refer to our nuisance elimination measures presented below and our site beautification with landscaping. The value of our property will significantly increase once we add the driveway, electricity, well and the pond. With these additions to our property it is then a fact that our property value will increase, hence positively affecting the value calculation of neighboring homes. Related article: <https://www.atlanticbay.com/knowledge-center/neighbors-affect-property-value/>

8. Sadly most people’s only understanding of waste management is limited to a landfill, which is why they are fearful and ignorant and can’t understand that there is a proper, clean, holistic way to attend to organic waste material- which is composting. It is nothing like a landfill. It is aligned with nature. The lack of exposure to this modality is symptomatic of how out of touch we are with healthy environmental practices. One example of how unthreatening the veggie scraps are in populated areas is our self-drop-off hubs where we keep 20 gal bins for members to drop off their food scraps. Our oldest self-drop-off hub has been running for over two years without any nuisances. All of these hubs are in partnership with businesses that host the collection bins.

In response to Brian Hilbrands three items request to expedite the process of review by the board of trustees:

A breakdown of the daily traffic that can be expected on site once it is fully operational. This should include the number of employee vehicles entering the site, the expected number of customer vehicles entering the site, and what the expected delivery schedule will look like composting intakes. Will there be daily drop-offs of composting intakes such as food scraps, or weekly drop-offs of larger quantities such as wood chips or manure?

Once the site is fully operational this is the traffic we expect:

- Already submitted to the township. Page 1 of our site plan. More details:
- Daily (Mon-Fri) a total of 2 cars owned by Wormies or its staff going into the property once and then leaving the property. We do not expect these 2 cars to be going in and out of the property more than once per day.
- Expected number of customer vehicles will be for bulk sales of compost. We foresee an average of 2 vehicles (pickup trucks) per day during the low season (Sept-Feb) and an average of 5 vehicles (pickup trucks) during the busy season (Mar-Aug).
- Composting intake schedule: 1) Mon-Thu for food scraps from Wormies vehicles only. Pickup trucks size F150 and F250 leave the site at 7am and return at 7pm. 2) wood chips and manure will be coming from neighboring farm Melody Bee Farms once per month.
- Considering it is a 13.4 acre plot our expected traffic possesses no burden to current road traffic. Another agricultural operation or ARC approved use of land possesses a greater potential for more traffic than what we propose.

A narrative describing in detail what measures you will be taking to eliminate noxious odors from leaving the site, as well as how any potential airborne and waterborne contaminants are prevented from leaving the site and affecting any neighboring properties. Some of this information may already be required when you apply for an EGLE permit, so it would be helpful if you could submit it to us now.

Noxious odors are not a part of our regular daily operation and we do not have to deal with that sort of issue as part of our regular operation. Though we do not expect noxious odors to be present either coming from our intake material or output material we have measures in place to prevent and eliminate in the case it happens:

Preventative measures for noxious odors:

1. We accept vegetables scraps only. No meat or animal parts.
2. We are a micro-hauling operation. 5gal or 20gal size bins are picked up by Wormies staff at customer locations. At this point an assessment is made by our driver on the conditions of the material. If bins are putrid and with noxious odor it is left at the customer location for landfill disposal.

3. The volume of food scraps brought to our site at once in our pickup truck averages 1 cubic yard. This is easily mixed with carbon material and covered within 10 minutes. We use a tractor or skid steer for this task. Two skid steer buckets (1 cubic yard) of carbon material such as woodchips is mixed per 1 cubic yard of food scraps.

4. Woodchips, sawdust and Biochar (charcoal) will be available at all times for odor elimination purposes. If there is ever the need to cover or mix material that has a noxious odor. These materials due to their high porosity are highly effective in absorbing any smells and liquids.

5. Our farm and compost piles are physically monitored and supervised twice daily by Wormies staff trained by US Composting Council as Compost Facility Operators. Trained supervision is present when receiving, mixing and moving raw materials.

6. The maximum size and capacity of our active composting phase is 200 cubic yards. In the case of noxious odor this active pile can easily be covered with carbon material to eliminate odor or it can be removed from the site within 24 hrs using 50 cubic yd containers, removal with an estimated cost of \$4,000. Tractor operators from Wormies staff are available 24x7 to execute odor elimination measures such as adding carbon material to the pile or removing material from the farm.

7. An odor is the vaporization of a volatile chemical compound. Naturally this odor or gas will travel up and out of a pile if not captured by available carbon material. Our active piles contain an average of 50% carbon material as part of our composting recipe. Carbon material, such as woodchips absorbs potential gas. Once the pile is built, it is topped with a layer of finished compost for the purpose of bio-filtration, and moisture retention. In addition any inadvertent odor being released from the pile is blocked by the covering on top of our active compost bays and it will drip back into the piles. This is an intentional part of our Aerated Compost system designed by Peter Moon from O2 Compost.

8. Above mentioned measures 1 to 7 are well above Best Management Practices. We operate and we are regulated as a commercial composter but we handle volumes that are considerably smaller than a commercial composter and smaller than an on-farm composting operation allows. Hence our risks are considerably less than an average commercial composter.

9. Composting is an aerobic process. It requires oxygen for aerobic organisms to survive and work through these organic materials (food waste). Worms, roly-poly, rove beetles, millipedes and centipedes are some of the aerobic organisms that you will find in our windrows (piles). These organisms are not attracted and will not survive in anaerobic environments.

10. Anaerobic environments is what happens at the landfill due to the presence of inorganic material such as plastics & metals, when mixed with organic material such as food waste, the food waste decomposes anaerobically due to the lack of oxygen that can't travel freely through those piles. A different set of organisms thrive in an anaerobic environment, such as maggots and flies. We do not have anaerobic environments.

11. In 6 years of operation we have never had nuisance issues of smell, pest attraction or noise. We take pride in working in complete harmony with nature and our surroundings.

12. We provide an aerobic environment to our compost process with our composting recipe with at least a 50:50 ratio of carbon to nitrogen material.

13. We provide an aerobic environment to our compost process by placing pipes that blow air underneath our active piles. These pipes provide oxygen from underneath the piles, preventing it from becoming anaerobic. This system of composting is called "forced aeration".

14. Vegetative filters such as trees is the most effective way to dissipate odors molecules in the air. The job of trees is to filter and improve air quality through their leaves. The entire perimeter of our property is already surrounded by 15 to 20 feet buffer of trees of different kinds. We have also plans to plant over 200 trees (100 already planted) as part of the regenerative practices that supports our compost operation.

Preventing airborne and waterborne contaminants from leaving the site:

1. Our compost area was professionally designed by licensed engineers at RRS (Resource Recycling Systems). RRS is a leading recycling and composting consulting and engineering firm with projects all over the world. Including the design of Grand Rapids Butterworth compost site. They are headquartered in Ann Arbor. <https://recycle.com/about-us/>

2. Our Covered Aerated Static Pile Compost System was designed by Peter Moon from O2 Compost. Cutting edge composting system recognized globally. <https://www.o2compost.com>

From O2 Compost Website:

WHY IS THE O2COMPOST SYSTEM BETTER?

- * Mitigates impacts to surface and ground water resources
- * Produces high quality compost in 30 - 60 day
- * Eliminates pathogens, parasites, and weed seeds
- * No odors, no impact to air quality, reduced volatile organic compounds and greenhouse gases
- * No Vectors like rodents, flies, and birds
- * No pile turning. Greatly reduced cost of labor, fuel, and equipment use / maintenance

3. Per page 1 of our site plan submitted to the township and reviewed by township engineers and the planning commission: The first phase (active phase) of composting will occur within a covered aerated static pile system on an engineered surface comprised of 6 inches of asphalt overlaying a compacted base of engineered fill. This type of construction makes rainfall runoff and compost material management efficient throughout the year and ensures that the entire facility is accessible in all weather conditions. All-weather access provided by an engineered surface facilitates compost management without gravel entering the streams and promotes the quick drainage of runoff waters from beneath the compost piles. Drainage structures will convey water away from the piles and direct it to a lined catchment area or collection basin. The lined catchment area (no outlet and no groundwater discharge) with volume capacity for a 100 year 24-hour storm is proposed to catch compost leachate or "wastewater" from the composting pad. The stormwater from the other proposed structures and paved parking of the site will be directed around and beyond the compost pad and lined catchment basin to infiltrate and flow

overland to the stormwater retention pond in the SW, also designed for a 100 year 24-hour storm. The proposed retention pond and stormwater will not disturb the existing wetland on the adjacent property to the NW and the compost pad is at least 200 feet from the surface water/wetland (as required by the EGLE compost site regulations). The water table at the location of the proposed retention pond should be at least 18" below the retention pond and at least 4' below the asphalt compost pad. The compost pad surface is sloped at 1-2% to facilitate runoff between bays. Site operators will regularly inspect the pad surface to manage the water runoff. The engineered, impervious compost pad and compost "wastewater" catchment basin pond meets the requirements for composting as required by the Michigan Department of Great Lakes, Environment and Energy (EGLE). The proposed compost pad, typical CASP system stormwater design calculations are shown in site plan sheets 2,3 and 4.

4. Pre-composted material is then setup in covered windrows for further curing with worms. The covering on the windrows acts as prevention for runoff water in the event of rain and it also protects our worms from heat, water and sunlight. At this stage of our process the composted material acts as a sponge rather than releasing any moisture into the ground. Though no water is expected to runoff the windrows, the area where the windrows are placed is sloped to direct runoff water into our pond.

5. The trees and field crops planted on the property help limit stormwater runoff. As part of our composting operation we keep the soil in our property protected and lively with cover crops, shrubs and trees.

5. Measures 1 to 14 for noxious odors explained above also apply on preventing airborne contaminants from leaving the site and affecting neighboring properties.

6. The composting process is classified as non-hazardous by the EPA and the food waste, wood waste and manures that we use is also classified as "non-hazardous wastes". These waste might have the potential to be obnoxious if not managed, but it isn't inherently harmful. There is a much more higher risks to human and environmental health when using household products such as RoundUp.

7. The size of our operation does not require the use of heavy duty equipment that can cause dust. Our regular operation does not require the use of shredders, large loaders, semi trucks, bulldozers or excavators. We use a small tractor (Kubota LA525), a skidsteer (CASE TR310), two pickup trucks and a trailer.

If you are aware of any studies done on similar composting operations that demonstrate how they may or may not affect neighboring properties I believe the Board members would be interested in seeing those as well.

The scale of our compost operation and the model of our business is classified by ILSR (Institute for Local Self Reliance) as a "Community Composting Operation". ILSR is a national research and advocacy organization dedicated to building an American economy driven by local priorities and accountable to people and the planet.

From ILSR, list of community composters nationwide, including Wormies:
<https://ilsr.org/composting/community-composter-coalition/>

Examples of community composters located in expensive neighborhoods or densely populated areas:

- Community Compost Co. <https://www.hudsonsoil.com> Located in Hudson Valley NY at 5941 Route 209, Kerhonkson, NY. They have been in business since 2016. Their closest residential neighbor is less than 500 ft away. Average residential property value is \$1,200,000.
- Red Hook Compost / The NYC Compost Project <http://www.added-value.org/compost> Located at 103 Ostego St, Brooklyn NY. They have been operating since 2015. The largest community composting program in the US processing over 225 tons/year. The median price of a residential property in Brooklyn NY is \$840,000.
- Bennett Compost <https://www.bennettcompost.com/home#our-story> Located at 5650 Rising Sun Ave, Philadelphia PA. Operating since 2009. Median price of residential properties in that block is \$360,000.

From ILSR: <https://ilsr.org/composting/what-is-community-composting/>

What is community composting?

Composting can take place at many levels – backyard, block, neighborhood, schoolyard, community, and regional – and in urban, suburban, and rural areas. There are many methods and sizes. Large-scale centralized facilities can serve wide geographic areas and divert significant quantities of organic materials from disposal. Composting locally at the neighborhood or community-level yields many other benefits: social inclusion and empowerment, greener neighborhoods, improved local soils, enhanced food security and fewer food deserts, less truck traffic hauling garbage, more local jobs, and increased composting know-how and skills within the local workforce that is reinforced in the next generation. When composting is small-sized and locally based, community participation and education can flourish. When materials are collected and transported out of the community for processing, few if any of these benefits are realized at the local level. In addition, community-scale operations can move from concept to operation in a relatively short time frame. And community composting can build critical support for and participation in future citywide food scrap recovery programs.

Guiding Principles of Community Composting:

- Resources recovered: Waste is reduced; food scraps and other organic materials are diverted from disposal and composted.
- Locally based and closed loop: Organic materials are a community asset, and are generated and recycled into compost within the same neighborhood or community.
- Organic materials returned to soils: Compost is used to enhance local soils, support local food production, and conserve natural ecology by improving soil structure and maintaining nutrients, carbon, and soil microorganisms.

- Community-scaled and diverse: Composting infrastructure is diverse, distributed, and sustainable; systems are scaled to meet the needs of a self-defined community.
- Community engaged, empowered, and educated: Compost programming engages and educates the community in food systems thinking, resource stewardship, or community sustainability, while providing solutions that empower individuals, businesses, and institutions to capture organic waste and retain it as a community resource.
- Community supported: Aligns with community goals (such as healthy soils and healthy people) and is supported by the community it serves. The reverse is true, too; a community composting program supports community social, economic, and environmental well-being.

Cascade Township community will benefit from having our community compost operation and the natural beauty of our site design.

More benefits of our compost being easily available to our community. According to the EPA, compost also has a knack for suppressing diseases, helping to decrease the need for pesticides and inorganic fertilizers. Just like how compost helps prevent pathogens that cause disease in plants, it also helps destroy pathogens in soil and air.

I hope this additional information helps you make a more informed decision. Based on my quick turn around of information and thorough proposal I have previously submitted that contains additional information as well as this additional information I respectfully request to add us to the agenda for the July 26 board of trustees meeting. Thanks again for your time.

Luis Chen
Founder and Owner
Wormies, LLC
616-322-1677
luis@thewormies.com

**MINUTES OF THE
CASCADE CHARTER TOWNSHIP
REGULAR BOARD MEETING**

Wednesday, June 28, 2023

Wisner Center

2870 Jacksmith Dr SE

Grand Rapids, MI 49546

And Virtual Zoom Meeting

7:00 P.M.

HYBRID FORMAT

- Article 1.** Supervisor Lesperance called the meeting to order.
Present: Supervisor Lesperance, Clerk Slater, Treasurer Korstange, Trustees Koessel, McDonald, Shipley and Noordhoek
Absent: None
Also Present: Interim Township Manager Andrzejewski, Fire Chief Magers, Planning Director Hilbrands, Human Resources Director Murawski, Zoning Administrator Smith-Jacoby, Deputy Clerk Brott, and those listed in the Supplement
- Article 2.** Supervisor Lesperance led the Pledge of Allegiance.
- Article 3.** **Approval of Agenda**
Motion by Trustee Shipley, seconded by Trustee McDonald to approve the agenda.
Motion carried unanimously.
- Article 4.** **Presentations**
a. Fire Department Promotions
b. Parks and Recreation Director Update – Tassell & Memorial Parks
- Article 5.** **Public Comments-Anything on the Agenda not scheduled for a public hearing. (limit comments to 3 minutes)**
1. Pete Buurstra-8695 Laurel Ridge Dr-Re Wormies: Concerns about possible odor and increased traffic; the Ordinance is clear that the Planning Commission/Township have the responsibility to regulate.
 2. Mike Hemmingsen-8475 Laurel Ridge Dr-Requested the Board table the Wormies issue for 30 days. Suggested a third-party study be done on the impacts on property values.
 3. Cheryl Schuch-8609 Laurel Ridge Dr-In support of a 30-day table of the issue. Residents have a personal financial investment. Concerned about health hazards to residents; also a bus stop is in the same place as Wormies' proposed driveway.
 4. Darcy Afman-8717 Laurel Ridge Dr-Requests 30-day extension; is opposed to Wormies. Thinks it will impact her well, and is concerned about already heavy traffic, as well as air quality.
 5. Alexandra Campau-5745 Whitneyville-Employee of Wormies. Business is using a new micro-nutrient capable of breaking down PFAS.
 6. Melissa Bonner-8570 Laurel Ridge Dr-Supports Wormies but is concerned about close proximity to home. Will the Township follow through on infractions?
 7. Marc Afman-8717 Laurel Ridge Dr-Talked about his health concerns of Wormies as a physician. Trustee Koessel asked what would make him feel safe? He responded that a third-party study would help; more concerned about health than odor.

8. Sophie Pokhrel via Zoom-8698 Laurel Ridge Dr-Both physicians who are concerned about health implications re Wormies. No studies have been done by Wormies.
9. Craig Rumschlag-8456 Laurel Ridge Dr-Is Wormies already in operation?
10. Chandler Michalsky-5745Whitneyville-Re Wormies: Only six (6) trucks per week. Would you rather have 600 cars with a subdivision? Microorganisms are used in the process. The land needs remediation and this helps to regenerate soil. The farms in the area have large compost piles.
11. Richard Giebel-8469 Laurel Ridge Dr-Does not oppose Wormies, but the location of the business.
12. Amy Freeman via Zoom-In favor of Wormies. Serves on the Michigan Organic Council. This is a small-scale operation.
13. Luis Chen via Zoom-In favor of Wormies. Thanked the Board and Planning Commission. This is a small operation.
14. Scot VanSolkema via Zoom-2570 Orange Ct-Was initially opposed to Wormies, but now is in support due to learning about it. The soil needs to be rejuvenated. Re liquor license: Is in support of Backyard Restaurant getting it.

Article 6. Approval of Consent Agenda

- a. Receive and File Minutes
 1. Township Board Meeting – 6/14/23 & 6/16/23
- b. Receive and File Reports
None
- c. Receive and File Education Requests
None
- d. Receive and File Communication
None

Motion by Trustee Shipley, seconded by Clerk Slater to approve the Consent Agenda. Motion carried unanimously.

Article 7. Financial Actions

None

Article 8. Unfinished Business

None

Article 9. New Business

052-2023 Consider Approval of Type II Special Use Permit for a Commercial Composting Operation at 5745 Whitneyville Avenue

Considerable discussion.

Motion by Trustee Koessel, seconded by Supervisor Lesperance to table until the Board can obtain answers to many questions. Motion carried unanimously.

053-2023 a.) Public Hearing for Amendment to Home Design Center PUD to Accommodate an Addition to an Existing Office Building

Motion by Trustee McDonald, seconded by Trustee Koessel to open Public Hearing. Motion carried unanimously.

No comments.

Motion by Trustee McDonald, seconded by Trustee Koessel to close Public Hearing.
Motion carried unanimously.

b.) Consider Amendment to Home Design Center PUD to Accommodate an Addition to an Existing Office Building (Roll Call)

Motion by Trustee Koessel, seconded by Treasurer Korstange to approve. Motion carried unanimously by roll call vote.

054-2023 Consider Approval of a Type II Special Use Permit for a Bed & Breakfast Establishment at 5283 Whitneyville Ave SE

Motion by Trustee Shipley, seconded by Trustee McDonald to approve. Motion carried unanimously.

055-2023 Consider Issuance of the Cascade Charter Township Request for Proposals for Professional Architectural/Engineering Services for Kent District Library

Motion by Trustee McDonald, seconded by Treasurer Korstange to approve. Motion carried unanimously.

056-2023 Consider Architectural Review Committee Appointments

Motion by Trustee Koessel, seconded by Trustee McDonald to approve. Motion carried unanimously.

057-2023 Consider a Resolution to Defer Without Penalty Summer Tax Payment for Qualifying Taxpayers (Roll Call)

Motion by Trustee Shipley, seconded by Treasurer Korstange to approve. Motion carried unanimously by roll call vote.

058-2023 Consider Approval of Liquor License Application

Considerable discussion.

Motion by Clerk Slater, seconded by Trustee Shipley to approve a Liquor License for Backyard Restaurant. Motion carried 6-1 by roll call vote. In favor-Trustee Shipley, Trustee Koessel, Treasurer Korstange, Trustee McDonald, Clerk Slater, and Supervisor Lesperance. Opposed-Trustee Noordhoek.

Article 10. Discussion
None

Article 11. Public Comments

1. Dorothy Cribbs-1980 Deerfield Ct-Re Application to rent Wisner Center: It says that 501(c)(3) may rent it, but her organization is 501(c)(7). She used to be able to rent it. The form should be changed to be rentable.
2. Scot VanSolkema-Noticed that the stickers and graffiti were removed from the village. Tassell Park looks good but mentioned a wasps' nest. Good job on the liquor license decision. Any news on the perpetual garage sale?
3. Anne England-3415 Glenstone Ct-Property values of her home have gone down re Egypt Creek Landscaping. Planting trees won't help because his property is higher and no trees would be tall enough.
4. Mike Lemmingsen-Is there something at Wormies location now?

5. Cheryl Schuch-Also concerned about the large subdivision behind Wormies that may not have been notified because they are not in the Township.

Article 12. Manager Comments

1. Cascade Township is a really nice area, and he is glad to be here. The finances of the Township are in good shape.

Article 13. Board Member Comments

1. Trustee Shipley-Thanked those in attendance for coming to the meeting.
2. Supervisor Lesperance-Announced that the Township was awarded a \$3.5M grant from the State of Michigan for pedestrian bridge.
3. Board Members-All expressed their appreciation for Interim Manager Andrzejewski.
4. Trustee Noordhoek-Thanked Supervisor Lesperance for asking the State for the grant money.

Article 14. Adjournment

Motion by Clerk Slater, seconded by Trustee Shipley to adjourn. Motion carried unanimously.
Meeting adjourned at 9:50 pm.

Krissi Brott
Deputy Clerk

Approved by:

Grace Lesperance, Supervisor

Susan B. Slater, Clerk

**MINUTES OF THE
CASCADE CHARTER TOWNSHIP
REGULAR BOARD MEETING**

Wednesday, July 26, 2023
Wisner Center
2870 Jacksmith Dr SE
Grand Rapids, MI 49546
And Virtual Zoom Meeting
7:00 P.M.
HYBRID FORMAT

Article 1. Supervisor Lesperance called the meeting to order.
Present: Supervisor Lesperance, Clerk Slater, Trustees Koessel, McDonald, Shipley and Noordhoek
Absent: Treasurer Korstange (excused)
Also Present: Interim Township Manager Andrzejewski, Captain Stevenson, Planning Director Hilbrands, Assessor Genter, Deputy Clerk Brott, and those listed in the Supplement

Article 2. Supervisor Lesperance led the Pledge of Allegiance.

Article 3. Approval of Agenda
Motion by Trustee Shipley, seconded by Trustee Koessel to approve the agenda. Motion carried unanimously.

Article 4. Presentations
1. Kent County Sustainability Project/Park – Jack Brown, Republic Waste
2. Kent County Sustainability Project/Park – Darwin Baas, Kent County Director of Public Works

Article 5. Public Comments-Anything on the Agenda not scheduled for a public hearing. (limit comments to 3 minutes)
1. Scot VanSolkema-2570 Orange Ct-Metro Cruise Warm-Up has already been announced on Facebook, yet the Board is voting on it during this meeting. In favor of Wormies-composting is a natural process.
2. Ken Van Der Kolk-7200 Leyton-During this heatwave, emergency calls have increased. Is the Township being reimbursed for emergency calls to hotels?
3. Rod Schultz-2562 Orange Ct- Re Wormies: If you own the land, you should be able to do what you want if it's zoned for it.

Article 6. Approval of Consent Agenda
a. Receive and File Minutes
1. Township Board Meeting – 7/12/23
2. Planning Commission Meeting – 6/5/23 & 6/19/23
b. Receive and File Reports
1. Treasurer's Department – May 2023
c. Receive and File Education Requests
None
d. Receive and File Communication
1. DIRECTV, LLC (DIRECTV) Annual Video Report

Motion by Trustee Koessel, seconded by Trustee McDonald to approve the Consent Agenda. Motion carried unanimously.

Article 7. Financial Actions

a. Consider Approval of June 2023 Payables, Payroll and Transfers
Motion by Trustee McDonald, seconded by Trustee Koessel to approve the Financial Actions. Motion carried unanimously.

Article 8. Unfinished Business

052-2023 Consider Approval of Type II Special Use Permit for a Commercial Composting Operation at 5745 Whitneyville Avenue

Motion by Trustee Koessel, seconded by Trustee McDonald to remove item from table. Motion carried unanimously.

Motion by Trustee Noordhoek, seconded by Trustee McDonald to send item back to Planning Commission. Motion carried unanimously.

Article 9. New Business

060-2023 Consider Resolution to Approve the Levy of the 2023 Millage Rates (Roll Call)

Motion by Trustee McDonald, seconded by Trustee Shipley to approve. Motion carried unanimously by roll call vote.

061-2023 Consider Approval of the Furniture Bid for Fire Station #1

Motion by Trustee Koessel, seconded by Trustee Shipley to approve Custer's bid. Motion carried unanimously.

062-2023 Consider Resolution to Approve Rezoning of Approximately 10 Acres from PUD Ordinance to R-1 Residential for 7540 & 7550 Alaska Ridge (Roll Call)

Motion by Trustee Shipley, seconded by Trustee McDonald to approve. Motion carried unanimously by roll call vote.

063-2023 Consider Approval of Outdoor Gathering Permit for the Cascade Metro Cruise Warmup

Motion by Clerk Slater, seconded by Trustee Shipley to approve. Motion carried unanimously.

064-2023 Consider Resolution to Amend Ordinance No. 1B of 2020 (Roll Call)

Motion by Trustee McDonald, seconded by Trustee Noordhoek to extend the moratorium to October 1, 2023. Motion carried unanimously by roll call vote.

Article 10. Discussion

None

Article 11. Public Comments

1. Terri Riggle-2765 Orange Ave (Gaylord House)-Re Go Bus: Since it has been discontinued, residents who used the service only have Hope Network and Ride Link, which run Monday through Friday during business hours. Go Bus ran during the off hours. Asked the Board to reconsider contract or other options.

2. Frances Foley-2765 Orange Ave (Gaylord House)-Re Go Bus: Senior Citizens and those with disabilities should be taken care of. Grand Rapids is behind the times.
3. Jane Scholtens-2765 Orange Ave (Gaylord House)-Re Go Bus: Appreciated the service. It was not just a ride; it was a way to connect with others. Hopes the Board will reconsider.
4. Steve Faber-1845 Meadowfield Dr-Re Kent County Sustainability Project/Park: Works for Kent County Department of Public Works. Quoted Vern Ehlers. Supports the project and noted that Charlevoix does not have flow control.
5. Luis Chen-5745 Whitneyville-Re Wormies: Requested the Board resolve the issue quickly. Wormies helps the environment.
6. Rod Schultz-He hasn't received a response from Zoning Administrator Smith-Jacoby about Property Code 299-5.
7. Jarret Jakubowski-19 White Hills Ave-Re Parade Float Contest during Ada/Cascade Township Fourth of July Parade: Thinks the judges picked the wrong float.
8. Daniel Schoonmaker-Grand Rapids-Re Wormies: In support. Impressed with the diligence of the Board and Planning Commission. No one has anything bad to say about Wormies; it can also be a learning opportunity for elementary students. The State of Michigan has resources to support.
9. Kerry Gorsuch-3044 Thornapple River Dr-In support of traffic control on Thornapple River Drive. Please get more junk out of the river.
10. Scot VanSolkema-Who is responsible for the upkeep of sidewalks? Re Wormies: Why is it taking so long? Re Pathways on Peace Street: Extreme wash-out when it rains.
11. Chandler Michalsky-5745 Whitneyville-Re Wormies: There is very little traffic compared to the subdivisions. Spoke of the benefits of composting.

Article 12. Manager Comments

1. Personnel/Finance Committee is doing well.
2. The Rapid: They are very resistant to the Township's recommendations. The Township wants to find a solution and help workers, elderly and the disabled.

Article 13. Board Member Comments

1. Trustee Shipley-Thanked those in attendance for coming to the meeting and sharing ideas.
2. Supervisor Lesperance-Thanked everyone for attending. Thanked the Planning Commission and the Downtown Development Authority for their work.

Article 14. Adjournment

Motion by Clerk Slater, seconded by Trustee Shipley to adjourn. Motion carried unanimously.
Meeting adjourned at 9:08 pm.

Krissi Brott
Deputy Clerk

Approved by:

Grace Lesperance, Supervisor

Susan B. Slater, Clerk

Laurel Johnson, Whitneyville Rd, expressed concern with the air quality and wondered what the plan is for the colder months.

Motion was made by Member Rissi to close public hearing. Supported by Member Engel. Motion carried 7 to 0.

Member Rowland read an excerpt from the Michigan Legislature website stating that cigar bars located on the premises must be separated from any areas of the same or adjacent establishment in which smoking is prohibited. Physically separated was defined as areas that are enclosed on all sides by a combination of solid walls, windows, or doors that extend from floor to ceiling. Member Rowland would like to see the preliminary plan approval letter from the state.

Some members agreed they had no issue with the inside cigar bar since that appeared to be very regulated. There were numerous concerns with the allowance of smoking on the patio.

Member Rissi proposed that the State of Michigan should be allowed to make its own determinations based on its ordinances and laws, as it is beyond the control of the Planning Commission.

Member Bruneau said the request being made will have a significant impact on air quality. Even when approving accessory buildings, the effect of air and light on nearby properties is taken into consideration.

Member Richardson expressed concern about the neighboring building's pool being close in proximity.

Motion was made by Member Engel to approve the indoor cigar bar contingent on obtaining all necessary state, county, and local permits along with the other Staff conditions listed in the packet with the exception of the outdoor lounge. The applicant is free to come back with additional verification of state approval and adequate ventilation to address concerns stated by the Planning Commission. Supported by Member Rissi. Motion carried 7 to 0.

ARTICLE 11.

Case #23-3746/Chen

Formerly Article 7.

Property Address: 5745 Whitneyville Ave

Requested Action: Type II Special Use Permit to construct a commercial composting operation.

Planning Director Hilbrands presented the case explaining that the applicants are seeking a Type II Special Use Permit to allow for a commercial composting operation on their property in the agricultural and rural conservation zoning district.

The applicants had previously reached out to the township inquiring if their composting operation would be permitted and the former planning director determined that it would be permitted by right. After the operation began the township received a

complaint which made the current staff review and determine that the use would more appropriate as a special use.

The proposed facility will be used to receive composting intakes, mix, and process those intakes to create compost and soil mixes, and prepare finished material for sale and distribution. The property will have a pole barn for storing and processing materials, a hoop house building, an asphalt composting pad, and an area of covered composting rows. The operational area is limited to cover 30% of the parcel and must be set back a minimum of 150ft from property lines and 250ft from residential dwellings. The area meets setbacks and will cover 16% of the parcel. Planning Director Hilbrands also noted the operation will be within 400ft of a vacant property to the northeast, but the owner has indicated they will be building a home in the near future.

The operation is limited to 3,000 cubic yards of intake and output per year and can have no more than 4,500 cubic yards of material on-site at any given time.

The site will be accessed by a curb cut off of Whitneyville Ave, which will need to be approved by the Road Commission along with obtaining a driveway permit. The building and fire departments both reviewed and approved plans. The township engineer has reviewed the plans including a lined collection basin to collect and store runoff from the composting pad and a retention basin to collect additional run-off. There will also be a need for a stormwater maintenance agreement.

The applicant will need to come in for an annual review with the Planning Commission for a minimum of 2 years after receiving a Special Use Permit.

Composting operations are not treated the same as farm operations. Therefore, if there is any kind of nuisance, they are obligated to take measures to eliminate it.

Staff recommended giving a positive recommendation to the Township Board with the 5 conditions listed in the packet.

Member Rowland asked what the initial complaint was. Planning Director Hilbrands said a neighbor saw trash on-site and their dog would get into it.

Member Bruneau wanted to define a few items Wormies had noted. Firstly, he wanted a processing time frame for food waste and a more defined wind speed for mixing days since the applicants indicated they would only mix on low wind speed days.

Luis Chen (5745 Whitneyville) is the applicant and explained the nature of the composting business is to collect food waste from local residents to compost using a 3-step process. The whole process takes around 12 months. The main goal of the company is to compost free from pesticides, plastics, and synthetic chemicals. He empathized that this does not seem attractive to neighbors, but ensured this operation is not very large and they focus on quality over quantity. Further details about the company's science and overall explanation can be found in the packet.

Chen also mentioned staff from his company have planted 100 trees on site and will be developing pollinator habitats. Their mission is to create a place for people to learn, add value to their community, and change the way managing waste is handled.

Member Engel asked what type of initial input is being used. Chen clarified they would be using 100 cubic yards of woodchips, 25 cubic yards of leaves, and 20 cubic yards of food waste per month. They give customers a list of compostable items when they sign-up. He also added when their operation was in a different township, everything went great and there were no complaints.

Member Engel asked if any meat or animal byproducts would be included as inputs for the compost. Mr. Chen clarified that there will not be any included.

Chandler Michalsky (5745 Whitneyville) said they have only had a few neighbors come to the site and ask genuine questions. They were very pleased by what they saw and learned.

Member Bruneau calculated what 3,000 cubic yards would equate to over a year and configured it would be roughly 3 semi-trucks per month.

Member Rowland questioned what their method is to mitigate the smell. Chen stated they create a recipe with wood chips and volatile material (food waste). This mixture occurs within 30 minutes upon delivery of food waste and the woodchips help the odor. The aeration pipe underneath the composting also aids in odor elimination.

Member Rissi asked what the average intake would be. Chen stated they would have 2 truckloads go out 3 days a week.

Member Rissi also thanked the Wormies creators for their patience while the township developed regulations for their company.

Chen also noted in the 6 years Wormies resided at the previous location, which was within a residential neighborhood, they received no complaints from neighbors or people passing by.

Member Richardson agreed that this company sounds beneficial, but said most residents did not anticipate living next to a commercial composting site and it may be difficult for them to resell.

Member Bruneau wanted to clarify that Wormies had purchased this land with a promise from the previous planning director that composting was a permitted use.

The Planning Commission took a 5-minute break.

Motion was made by Member Rissi to open public hearing. Supported by Member Noordhoek. Motion carried 7 to 0.

Davis (5535 Whitneyville) has lived in the neighborhood for over 40 years and asked if they will be utilizing the same road shared by other neighbors. Member Rissi clarified that the applicant's driveway will be at least 600ft south of her property.

Lori Johnson (5640 Whitneyville) said that the Wormies concept is great but not a good fit for the neighborhood since there are million-dollar homes. She expressed concern about water runoff because her property is downhill.

Rudy Klein (5542 Whitneyville) lives across the street and has lived there his whole life. He has worked in the hauling waste business for many years and indicated once the operation starts blending waste together it will smell.

Nicole Cruiz (2300 Buttrick) is a consumer of Wormies and has a bucket in which she disposes of her vegetables. She explained that with the liquid and the closed lid, there is absolutely no smell. Cruize has never had issues with friends coming into her home and the neighbors never complain.

Bill Vanartsen (8650 Lilly Ridge) has lived there for over 20 years and would like the area to remain residential.

Mike Hemmingson (8475 Laurel Ridge) lives off of Whitneyville and is in full support of Wormies, just not the location of the business. He explained that the home values will drastically decrease with a composting facility nearby. Hemmingson would like to see documents and studies on airborne contaminants.

Dr. Pishad (Laurel Drive) explained there are major health and environmental concerns these facilities have in neighboring areas. There are long-term studies showing a correlation with an increased risk of lung disease and possible cancers. The seeping of the bio pollutants could impact residents' well water. Increased smell, traffic, and wildlife were other concerns.

James Knott (8611 Lilly Ridge) stated that this project is not for a residential area. He believes the applicants have been misled through this process.

Sarvesh Srivastava (8668 Lilly Ridge) believed this project is wrong for the neighborhood where there are million-dollar homes. He also has many health concerns relating to composting.

Mary Tallajowski (6624 Jack Ave) has lived in the area for 18 years. Over the years it has become more residential and she believed bringing this facility to the area would create much-needed balance. She looked forward to this beneficial addition.

Daren Steadman (5539 Whitneyville) grew up in the area his whole life and he did not believe this is the right place for Wormies. He did not see the benefit and said the increase in truck traffic will be too much.

Rachel Garnett (7745 Whitburn) said she has lived in Cascade for just over a year and has been composting for many years. She previously relied on a home pick-up service for her composting and really appreciated that service.

Tasha Pacheco (8686 Lilly Ridge) suggested organizing a community event to help neighbors gain a better understanding of the business. She didn't feel that Wormies would ruin the area and she would even utilize their services.

Mark Talbot (5337 Whitneyville) said he appreciated the presentation and all of his questions were answered. He stated that eventually, the United States will run out of topsoil and Wormies has a solution by making very powerful dirt that regenerates farms. Talbot wanted to give this business a chance since it will be extremely beneficial to the environment.

Nathanial Divine (5671 Whitneyville Ave) shares a property line with the applicants and had concerns about what this would do to his property value and the water.

William Tuma (5670 Whitneyville) had concerns with the increase in traffic, health concerns, and the potential smell.

Sean Ford (5672) lives directly across the street from the applicants and he was concerned about the water runoff. He moved here assuming this area to be residential and was worried more commercial companies would be allowed there in the future. In his explanation, Ford pointed out that the applicants were given a promise that should not have been made, and that the township has a responsibility to rectify this matter.

Dr. Sophie Pokhrel (8698 Laurel Ridge) stated it's very apparent there are health and safety concerns with this project. Pokhrel explained that the operation is situated too close to nearby residents, and there is insufficient research to demonstrate the potential environmental consequences.

Tom Baker (8840 Vincent Ave) has property along the southern border of the applicant's parcel. When he bought his home, he wasn't aware that there would be a commercial business in the neighborhood.

John Akins (5666 Whitneyville) has lived here for over 50 years and thanked the township for making this place beautiful. He mentioned that the traffic is terrible and suggested that it may not be wise to pursue this business venture due to the likelihood of increased traffic.

Jay Keller (8797 Laurel Ridge) was unaware of this potential operation until his neighbors brought it to his attention. He was concerned about his house value, smell, and water contamination.

Kyle Heft (5644 Whitneyville) would have liked more research on the impact a business like this has on health. Heft has three young children and wanted a healthy future for them. He explained the applicants have a responsibility to educate the community and he felt they did not adequately inform residents.

Richard Gable (8464 Laurel Ridge) noticed there was nothing in writing on the specific measures being taken to mitigate odor, the stormwater maintenance agreement is to be determined, and there was no composting site management plan. Gable said approval should not be granted until these issues have been resolved.

Jim Berry (5651 Whitneyville) owns property against the northeast corner of the Wormies site. He explained there is no barrier between his property and the composting site, which raised concerns about the safety of the water supply. Berry mentioned that

there is a 200ft buffer for residences from the composting site. Since his home hasn't been built yet, the close proximity was a major concern for him.

Mike Hemmingson (8475 Laurel Ridge) inquired about ways to inform additional residents and keep them updated on the studies conducted.

Motion was made by Member Rissi to close public hearing. Supported by Member Engel. Motion carried 7 to 0.

Member Rissi said that Cascade citizens have the ability to check meeting agendas on the website to remain informed.

Member Rowland explained he gained a better understanding after talking with the applicant and doing independent research. He thinks a community event would be a great idea to have residents attend and learn.

Member Bruneau stated he is typically a critical judge of case items and takes his time investigating details. The presentation packet provided by the applicant was very precise with only minor details needing to be better defined. Bruneau also mentioned that this area is zoned for agricultural rural conservation use, not residential. He also expressed reservations about the commercial aspect of the company, but there are guidelines and contingencies in place if they are out of alignment.

Member Rissi inquired how the township would ensure compliance. Planning Director Hilbrands said he or the Zoning Administrator would handle any complaints and they can also do site visits.

Member Engel said this is a very sophisticated, well-thought-out process that's received attention and endorsement from the West Michigan Sustainable Business Foundation.

Member Noordhoek was previously very opposed to the composting business entering Cascade. Through the subcommittee and extensive research for the past year and a half, they have created excellent guidelines and requirements.

Members discussed some additional stipulations to include for approval. There was an adjustment to the 5th Staff condition allowing the Planning Commission to add conditions during the first 2 annual reviews. Additionally, they wanted there to be no more than 3,000 cubic yards of intake inclusive of woodchips. If they are to sell the business, the new owner is under the two-year review period.

Motion was made by Member Engel to make a positive recommendation to the Township Board for the Type II Special Use Permit with the first 4 staff conditions as drafted with additional language to condition 5 giving the Planning Commission ability to add conditions during the first 2 annual reviews. A 6th condition was added requiring the applicant provide an enclosed building for machinery as soon as practicable, and carry through on site improvements, including not limited to, a biodiversity pond, 2 acres of pollinator habitat, 1 acre of total trees, 4 acres of biodynamic accumulator crops, and a ½ acre educational garden and orchard, as soon as practicable, while the 2-acre tree line is to remain intact and managed. A 7th

condition was added requiring that there will be no more than 3,000 cubic yards of compost intakes per year. An 8th condition was added requiring that on sale of the property, the review provisions of condition 5 will be reactivated for the new owner(s). Supported by Member Rissi. Motion carried 5 to 2.

ARTICLE 12. Old Business

Member Bruneau inquired what the Township Board amended from the Master Plan recommendations. Member Noordhoek said they did not like the M-6 exits, among other things, but the amendment was approved as presented.

ARTICLE 13. Any other business

Member Richardson mentioned how part of the newly paved section of Whitneyville, particularly where the fork in the road was, is now very dangerous. Member Rissi concurred.

ARTICLE 14. Acknowledge visitors and those wishing to speak

Lori Johnson (5640 Whitneyville) said the township appeared to be making exceptions for Wormies since the previous planner had allowed them to compost. She does not want this in a residential neighborhood.

Jeff Hines (8590 Lilly Ridge) has an associate's degree in architecture and was impressed with the way the Planning Commission handled the situation, even though the outcome was not what he wished. He appreciated the efforts made.

ARTICLE 15. Adjournment

Motion was made by Engel to adjourn the meeting. Supported by Member Rissi. Motion carried 7 to 0. The meeting adjourned at 11:40 P.M.

Respectfully submitted,

Joe Engel, Secretary

STAFF REPORT

STAFF REPORT: Case # 22-3746
REPORT DATE: June 13, 2023
PREPARED FOR: Cascade Charter Township Planning Commission
MEETING DATE: June 19, 2023
PREPARED BY: Brian Hilbrands, Planning Director

APPLICANT

Luis Chen
5745 Whitneyville Ave SE
Alto, MI 49302

STATUS

OF APPLICANT: Owner

REQUESTED ACTION: Type II Special Use Permit for a commercial composting operation

EXISTING ZONING OF SUBJECT PARCEL: ARC, Agriculture/Rural Conservation

GENERAL LOCATION: West side of Whitneyville Ave, between 52nd St and 60th St

PARCEL SIZE: 13.4 Acres

EXISTING LAND USE ON THE PARCEL: Vacant/Agricultural

ADJACENT AREA LAND USES: N,E,W – Residential
S – Vacant/Agricultural

ZONING ON ADJOINING PARCELS: All ARC

STAFF COMMENTS:

1. The applicant is requesting a Type II Special Use Permit to construct a new commercial composting operation. The operation would include two buildings (a 5,040 square foot hoop house and a 1,200 square foot pole barn), an asphalt compost pad that will include covered compost bays, a gravel driveway, ten parking spaces, and an area of covered compost rows. The special use will be reviewed using the standards of Chapter 17, specifically Section 17.07.2.t.

2. As a reminder, the requirements of Section 17.07.2.t were developed by the Township last year as a result of activity on this property. Previous Township staff had informed the applicant that the composting use would be permitted By Right. After the Township received a complaint from a neighbor the use was reviewed again, and it was determined that it would be more appropriate to be permitted as a Special Use. As a result, the 15 requirements included in Section 17.07.2.t were developed. The property owner is now applying for the required Special Use permit.
3. The applicant has provided a narrative describing the proposed use and how it will operate. The facility will be used to receive composting intakes, such as leaves, woodchips, manure, and food scraps, mix and process those intakes to create compost and soil mixes, and prepare finished material for sale and distribution.
4. The operation is located on a parcel that meets the minimum size requirement of 10 acres, and the operational area (buildings, composting areas, material storage, etc.) meets the minimum setback requirements of 150' from property lines and 250' from residential dwellings.
5. Operational areas are required to be visually screened if they are located within 400' of a parcel with a residential use. The operational area is located within 400' of the residential parcels to the west and north. There are a number of existing trees along those property lines that the site plan indicates will remain. The Planning Commission should consider if those trees are an adequate screen. It is also worth noting that the operational area is within 400' of the property to the northeast (5651 Whitneyville Ave). That property is currently vacant but staff have received notice from the new property owner that they intend to build a home shortly.
6. The operational area is limited to 30% of the total area of the parcel, while at least 50% of the parcel must be kept natural, landscaped, or used for agriculture. The site plan indicates that the operational area encompasses approximately 16% of the parcel, while 58% will be kept natural, landscaped, or used for agriculture.
7. Equipment operation and the receiving or distribution of materials, including retail/wholesale sales, may only occur between the hours of 7:00am to 9:00pm.
8. The operation is limited to 3,000 cubic yards of intake material and 3,000 cubic yards of output material per year, and may have a maximum of 4,500 cubic yards of compost/composting intake/finished compost on site at any one time, with no more than 1,000 cubic yards being composting intake.
9. The operation must take reasonable action to mitigate the potential of odor leaving the site. The applicant should provide information on how that will be done.
10. The site will be accessed with a curb cut onto Whitneyville. The location of will need to be approved by the KCRC and a driveway permit will need to be obtained.

11. A well and septic system will be added and will require approval from the Kent County Health Department.
12. A photometric plan was submitted that meets Township requirements.
13. The Fire and Building Departments have reviewed and approved the plans.
14. The Gerald R Ford Airport staff have been made aware of the project and provided comments.
15. The Township Engineer has reviewed and approved the plans, and their comments are included in your packet. The proposed stormwater controls include a lined collection basin to capture water runoff from the asphalt compost pad, and a retention basin for the remaining water runoff. A stormwater maintenance agreement will be required
16. The operation is required to be registered with EGLE within one year of commencing operations, and must comply with all standards, rules, and regulations of registered compost operations. The applicant must also return to the Planning Commission for an annual review for a minimum of two years after receiving the special use permit. They must also keep an inventory log showing the amount of composting intake and the total composted output, which shall be provided to the Planning Commission at the annual review and as otherwise requested by the Township.
17. The applicant notes that if they receive Township approval, they will develop a compost site management plan as part of their registration with EGLE. The applicant should also submit the plan to the Township.
18. Section 17.06 as well as 17.07 of the zoning ordinance requires the Planning Commission to review several factors before making a recommendation to the Township Board. I have listed those items for your consideration followed by my comments for each.

Factors	Comments
Be designed, constructed, operated and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the area in which the use is proposed.	The operation is located on an agriculturally zoned parcel with neighboring parcels that are also agriculturally zoned.
Be adequately served by essential facilities and services such as highways, streets, police and fire protection, drainage, refuse disposal, water and sewer facilities and schools.	This site would have well and septic and is located on a collector street.
Not create excessive additional requirements at public cost for public facilities and services.	This site would not cause excessive additional requirements at the expense of the public.
Not cause traffic congestion, conflict or movement in greater proportion to that normally prevailing for the use in the particular	The operation would not appear to create excessive traffic compared to other allowed uses such as greenhouses or schools, but the

zoning district.	applicant should speak to how traffic will be minimized.
Not involve uses, activities, processes, materials, equipment or conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of noxious or offensive production of noise, smoke, fumes, glare, vibration, odor or traffic.	The proposed use has the potential to be detrimental to neighboring properties if it is not well managed. The applicant should speak to the methods that will be used to prevent negative impacts on neighboring properties.

Section 21.07: Criteria For Site Plan Approval:

The Planning Commission shall use the following criteria in evaluating a site plan submittal:

1. Whether the required information has been furnished in sufficiently complete and understandable form to allow an accurate description of the proposed use(s) and structure(s) in terms of density, location, area, height, bulk, placement, setbacks, performance characteristics, parking, and traffic circulation.
2. Whether there are ways in which the configuration of uses and structures can be changed which would improve the impact of the development on adjoining and nearby properties, persons, and activities, and on the community, while allowing reasonable use of the property within the scope of district regulations and other regulations of this Ordinance that are applicable to the property and proposed use and structures.
3. The extent to which natural features and characteristics of the large trees, natural groves, watercourses, and similar will be preserved; the regard given to existing natural features that would add attractiveness to the property and environs if they were preserved; the preservation of natural drainage systems the dedication and/or provision, where appropriate, of scenic easements, natural buffering, and other techniques for preservation and enhancement of the physical environment.

STAFF RECOMMENDATION:

A Type II Special Use Permit requires approval from the Township Board. Staff is recommending that the Planning Commission provide a positive recommendation to the Township Board regarding the commercial composting operation, with the following conditions:

1. The applicant complies with the Township Engineer letter dated May 15, 2023, and all necessary permits are obtained before construction begins.
2. Record the stormwater maintenance agreement.
3. Any work within the right-of-way receives approval from KCRC and a driveway permit is obtained.
4. The applicant registers with the EGLE Material Management Division (EGLE MMD), and provides a copy of the Compost Site Management Plan to the Township. The operation must comply with all standards, rules, and regulations of EGLE MMD registered compost operations.
5. The site continues to meet all the special use requirements of Section 17.07(2)(t) of the zoning ordinance. This includes the requirement that the applicant return to the Planning Commission for an annual review for a minimum of two years after receiving the special land use permit, and thereafter at the discretion of the Planning Commission, and that the applicant shall keep an inventory log showing the amount of composting intake and the total composting output, which shall be

provided to the Planning Commission at the annual review and as otherwise requested by the Township.

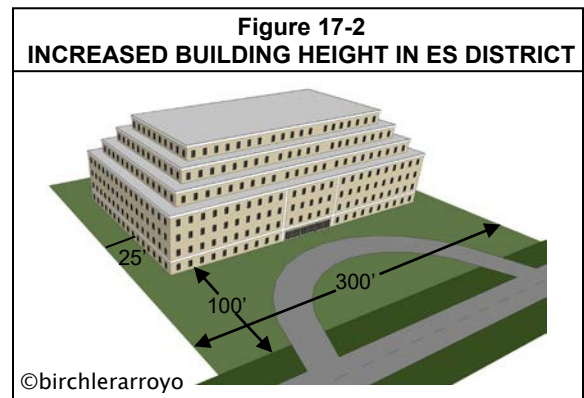
ATTACHMENTS: Standards of Section 17.07.2.t.
 Application
 Site plan
 Township Engineer letter
 EGLE Isolation Distance Information

Chapter 17 Special Uses

- 2) Due to the lower topography for some of the properties along I-96, a taller building may be allowed by the Township but in no case shall the height of the building exceed 72 feet or be more than 48 feet above the height of I-96 whichever is less. For purposed of determining the elevation of the highway, the highest point of the highway that is adjacent to the eligible property, will be used. For the eligible property the pre-development elevation will be used. Both elevations will be determined based on the Cascade Township REGIS system.
- 3) The application for special land use approval shall include a visual impact analysis, prepared by the applicant, which includes graphic depiction of the anticipated visual appearance of the building from important vantage points in the surrounding area. Methods used in preparing the analysis shall be reviewed and approved by the Planning Director.
- 4) In order to increase the height of the building beyond 48 feet, an elevated setback will be required. Elevated setbacks create a stepped facade, helping maintain light and air space and reduce the impact of building height on pedestrian and vehicular environments. The increased setback shall be an additional ten (10) feet in the front, side, and rear yards for each ten (10) feet of additional height or for each story, which ever is less. See Figure 17-2.
- 5) Increased height shall not be in conflict with any Federal Aviation Administration regulations.
- 6) The Planning Commission may require modifications to exterior building materials and architectural features to result in greater building articulation.
- 7) The Planning Commission shall determine the appropriate height allowance based on one or more of the following incentives provided:
 - i. Civic Space Incentive: Civic space may be in the form of plazas, squares, greens or parks that provide space for community gathering. Civic spaces may provide landscaping, seating, lighting, public art

or a water feature, and be oriented to the public realm.

- ii. Energy Efficient Design: The project may be constructed utilizing a nationally recognized green building rating system. Owners or developers applying for the special land use shall identify the system chosen at the time of application and shall provide quarterly updates that identify progress.
- iii. Roof Top Uses Incentive: The applicant may provide access and use by utility providers, including the Township for communications antennae.



- iv. Low Impact Development Incentive: The applicant may provide best management practices for drainage, such as green roofs, pervious pavement, bioswales, or others, to minimize discharge or result in zero discharge from the site.
- v. Streetscape Incentive: The project may incorporate entry features in the form of decorative street lighting and landscaping to match those along 28th Street within the Cascade Township Downtown Development Authority.
- vi. Other Incentives: The applicant may present to the Township other incentives which help mitigate any real or perceived impact of additional building height.

t. Commercial composting operations with associated limited retail and wholesale trade of material created on the premises.



Chapter 17 Special Uses

- 1) Minimum parcel size shall be 10 acres in the ARC and FP zoning districts and 2 acres in the I zoning district. Operational areas (buildings, composting areas, material storage, etc.) in the ARC and FP districts shall be located a minimum of 150 feet from property lines and 250 feet from adjacent residential dwellings. Operational areas in the I zoning district must meet the setback requirements of that district and shall also be located a minimum of 250 feet from adjacent residential dwellings.
- 2) Operational areas shall be visually screened from neighboring parcels with a screen consisting of berming, fencing, and/or vegetation buffer if the operational areas are within 400 feet of a residential parcel.
- 3) The operation must be registered with the Michigan Department of Environment, Great Lakes and Energy - Material Management Division (EGLE MMD) within one year of commencing operations. The operation must comply with all other applicable federal, state, and local laws, rules and regulations. The operation must comply with all standards, rules, and regulations of EGLE MMD registered compost operations.
- 4) When located in the ARC or FP districts, operational areas are limited to 30% of the total area of the parcel and 50% of the total area of the parcel must be kept natural, landscaped, or used for agriculture.
- 5) Equipment operation and receiving or distribution of materials, including retail/wholesale sales, may only occur between the hours of 7:00am to 9:00pm.
- 6) The use shall comply with all applicable Township and local Ordinances, regulations and standards including, but not limited to, the Township Noise Ordinance, stormwater regulations and lighting regulations.
- 7) The applicant must return to the Planning Commission for an annual review for a minimum of two years after receiving the special land use permit, and, thereafter, at the discretion of the Planning Commission. The applicant shall keep an inventory log showing the amount of Composting Intake and the total composted output, which shall be provided to the Township Planning Commission at the annual review and as otherwise requested by the Township.
- 8) An operation located on a parcel 20 acres or less in size in the ARC or FP districts is limited to 3,000 cubic yards of intake material and 3,000 cubic yards of output material per year. Facilities exceeding 3,000 cubic yards of intake and/or output per year may be permitted at the discretion of the Township, but must be located on a parcel that exceeds 20 acres in size, or in the I district.
- 9) An operation may have a maximum of 4,500 cubic yards of compost/composting intake/finished compost on site at any one time, with no more than 1,000 cubic yards being composting intake. Greater volume may be allowed at the discretion of the Township for operations located in the I district or on parcels 20 acres or more in size in the ARC or FP districts.
- 10) The facility must take reasonable action to mitigate the potential of odor leaving the site, such as using negative aeration systems or other common industry methods for odor mitigation. Such odor mitigation methods are subject to review and approval of the Township through the special land use approval process. The site shall be kept neat and clean and there shall be no noxious odors or garbage affecting neighboring properties.
- 11) In the case of vermiculture, the species of worms that may be used are limited to red wiggler (*Eisenia fetida*), red worms (*lumbricus rubellus*), and other species that are native to Michigan, at the discretion of the Township.
- 12) All machinery and equipment, except for motor vehicles and trailers used in the conduct of business, shall be stored within a completely enclosed building. Motor vehicles and trailers shall be stored indoors, out-of-view when not in use for longer than a two-week period.
- 13) Retail and wholesale sales on the premises to the general public shall be limited to material created on the site.



Chapter 17 Special Uses

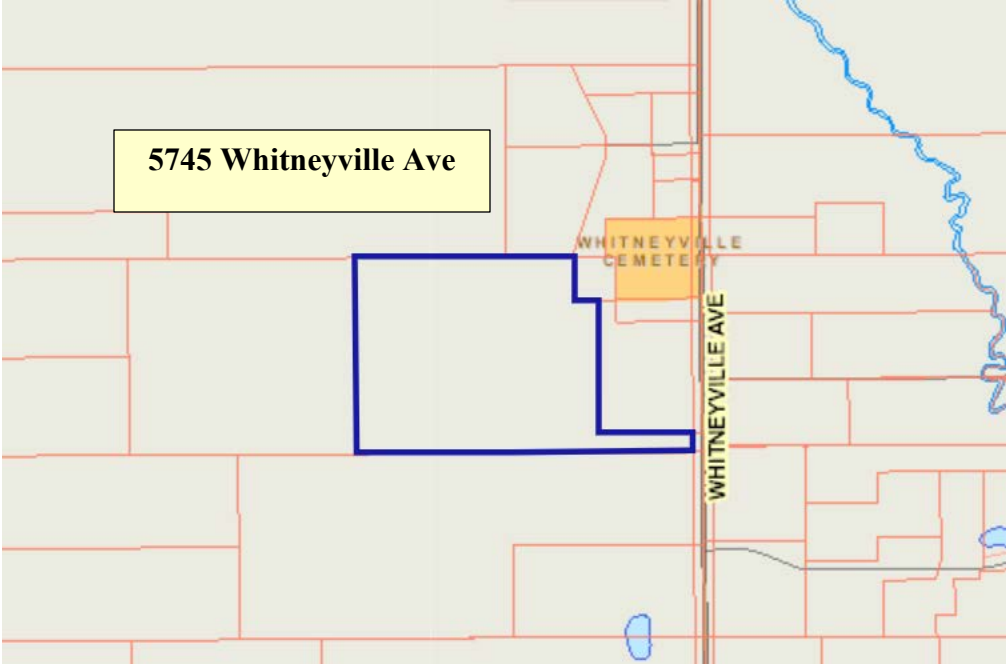
- 14) If waste from sorting exceeds one (1) cubic yard per month, that sorting process must be located in the Industrial (I) zoning district.
- 15) All Composting Intake material must be covered or stored so that it is contained and protected from wildlife and leaving the site.



Definitions
General Provisions
Development Review

Zoning Districts
Special Uses
Planned Unit Development

Height, Area, & Placement
Parking & Access
Landscaping





CASCADE CHARTER TOWNSHIP

5920 Tahoe Dr. SE, Grand Rapids,
Michigan 49546-7140

PLANNING & ZONING APPLICATION

APPLICANT: Name: Luis Chen
Address: 2067 Swensberg Ave NE, Grand Rapids MI 49505
City & Zip Code Grand Rapids MI 49505
Telephone: 616-322-1677
Email Address: luis@thewormies.com

OWNER: * (If different from Applicant)

Name:
Address:
City & Zip Code:
Telephone:
Email Address:

NATURE OF THE REQUEST: (Please check the appropriate box or boxes)

- | | | | |
|-------------------------------------|-----------------------------|--------------------------|---------------------------------|
| <input type="checkbox"/> | Administrative Appeal | <input type="checkbox"/> | Administrative Site Plan Review |
| <input type="checkbox"/> | Deferred Parking | <input type="checkbox"/> | P.U.D. – Rezoning * |
| <input type="checkbox"/> | P.U.D. – Site Condominium * | <input type="checkbox"/> | Rezoning |
| <input checked="" type="checkbox"/> | Site Plan Review * | <input type="checkbox"/> | Sign Variance Subdivision |
| <input checked="" type="checkbox"/> | Special Use Permit | <input type="checkbox"/> | Plat Review * |
| <input type="checkbox"/> | Zoning Variance | <input type="checkbox"/> | Other: _____ * |

*** Requires an initial submission of 5 copies of the completed site plan**

BRIEFLY DESCRIBE YOUR REQUEST:**

This request is for a Type II Special Use Permit and Site Plan Review for Wormies LLC commercial composting operation. The property is located in the ARC zoning district, which allows for commercial composting operations. Attached narrative describing the proposed operation and site plan in accordance to Chapter 21 of the zoning ordinance and stormwater ordinance.

(**Use Attachments if Necessary)

-SEE OTHER SIDE-

LEGAL DESCRIPTION OF PROPERTY:**

Property is situated in the Township of Cascade, County of Kent, State of Michigan.
Property address 5745 Whitneyville Ave SE, Alto MI 49302. This property may be located
within the vicinity of farmland or a farm operation. Generally accepted agricultural and
management practices which may generate noise, dust, odors and other associated
conditions may be used and are protected by the Michigan Right to Farm Act

(**Use Attachments if Necessary)

PERMANENT PARCEL (TAX) NUMBER: 41-19 -35-300-053

ADDRESS OF PROPERTY: 5745 Whitneyville Ave SE, Alto MI 49302

PRESENT USE OF THE PROPERTY: Agriculture

**NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS HAVING A LEGAL OR
EQUITABLE INTEREST IN THE PROPERTY:**

Name(s)	Address(es)
<u>Luis Chen</u>	<u>2067 Swensberg Ave NE</u>
<u>Sarah Yost</u>	<u>2067 Swensberg Ave NE</u>

SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) also agree to reimburse the Cascade Charter Township for all costs, including consultant costs, to review this request in a timely manner. I (we) understand that these costs may also include administrative reviews which may occur after the Township has taken action on my (our) request.

I (we) the undersigned also acknowledge that the proposed project does not violate any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.)

Owner – Print or Type Name
(*If different from Applicant)

* _____
Owner's Signature & Date
(*If different from Applicant)

Luis Chen
Applicant – Print or Type Name


Applicant's Signature & Date

PLEASE ATTACH ALL REQUIRED DOCUMENTS NOTED IN THE PROCESS REVIEW SHEET – THANK YOU

Wormies Compost Site- Type II Special Use Site Plan

Type II Special Use Site Plan Approval

Narrative and Site Plan included in this application demonstrates how the proposed operation will meet the special use design standards found in Section 17.07 of the Cascade Township zoning ordinance amendment that was approved by the Township to allow (subsection section 17.07 t) commercial composting with associated limited retail and wholesale trade of material created on the premises as a special use.

Narrative and Proposed Use

The property is 13.47 acres located at 5745 Whitneyville Road in the ARC (Agricultural Rural Conservation) zoning district, which allows for commercial composting operations involving limited retail and wholesale trade of material created on the premises. The proposed Wormies Compost Site will provide a properly designed space for compost production and provide a rich soil amendment for soil health and landscaping use and will meet the special use design standards found in Section 17.07 of the Cascade Township zoning ordinance. The compost site will register with the Michigan Department of Environment, Great Lakes and Energy- Material Management Division (EGLE MMD) after township approval of the site plan. EGLE registration requires that the operation follows best management practices to minimize noise, odor and dust production, does not cause a nuisance to neighbors, and protects compost wastewater from entering the groundwater and surface waters.

Planned development timeline is May to December 2023 for all composting operation areas.

The barn, which is planned for equipment storage, utility storage and bathroom area, will be completed by November 2025

Operational areas (buildings, composting areas, material storage, etc.) meet setback requirements and area coverages and are further than 400 feet of the nearest residential parcel. 16% of property space will be used for composting activities.

	Acres	SqFt or ft	%	Maximum Allowed	Minimum Allowed	Proposed Use
Total parcel area	13.4	583,836 SqFt	100	N/A	10	
Operational areas (buildings compost areas, material storage, etc.)		93,410 SqFt	16	30%		
Natural areas (landscaped or agriculture)		339,040 SqFt	58		50%	
Front, side & rear yard building setbacks or agricultural buildings and structures		150ft			150 ft from property lines; 250 ft from adjacent dwelling	
Max building height		150ft		35ft		
Hoop House		5,040 Sq Ft	<1			Operations & Curing
Barn		1,200 Sq Ft	<1			Storage & Maintenance
Asphalt compost pad		6,784 Sq Ft	1			
Concrete parking pad		1,320 Sq Ft	<1			

Wormies is more than a conventional composting operation. Most of the space in the property will be regenerated with the goal of having natural ecosystems that increase the biodiversity in the property and benefit Wormies composting process and finished products. Its composting operation is considerably low intensity compared to conventional composting operations and not limited to composting but also micro-hauling, manufacturing of soil blends, growing of biodynamic accumulators, compost tea application service, consulting and education. Wormies' operation possesses a low risk of nuisance such as odor, noise, dust, traffic and pests.

The first phase of composting will occur within a covered aerated static pile (CASP) system on an engineered surface comprised of 6 inches of asphalt overlaying a compacted base of engineered fill. This type of construction makes rainfall runoff and compost material management efficient throughout the year and ensures that the entire facility is accessible in all weather conditions. All-weather access provided by an engineered surface facilitates compost management without gravel entering the streams and promotes the quick drainage of runoff waters from beneath the compost piles.

Drainage structures will convey water away from the piles and direct it to a lined catchment area or collection basin. The lined catchment area (no outlet and no groundwater discharge) with volume capacity for a 100 year 24-hour storm is proposed to catch compost leachate or "wastewater" from the composting pad. The stormwater from the other proposed structures and paved parking of the site will be directed around and beyond the compost pad and lined catchment basin to infiltrate and flow overland to the stormwater retention pond in the SW, also designed for a 100 year 24-hour storm. The proposed retention pond and stormwater will not disturb the existing the wetland on the adjacent property to the NW and the compost pad is at least 200 feet from the surface water/wetland (as required by the EGLE compost site regulations). The water table at the location of the proposed retention pond should be at least 18" below the retention pond and at least 4' below the asphalt compost pad.

The compost pad surface is sloped at 1-2% to facilitate runoff between bays. Site operators will regularly inspect the pad surface to manage the water runoff. The engineered, impervious compost pad and compost "wastewater" catchment basin pond meets the requirements for composting as required by the Michigan Department of Great Lakes, Environment and Energy (EGLE). The proposed compost pad, typical CASP system stormwater design calculations are shown in site plan sheets 2,3 and 4.

- The compost site is designed for a capacity of 250 cubic yards per month (3,000 cubic yards per year) of incoming feedstock material, and a total of 4,500 cubic yards of active composting on site at one time.
- The following site features are shown on the site plan:
 - o 6,784 square foot asphalt pad for receiving, mixing and pre-processing in a covered aerated static pile (CASP) system
 - o 5040 square foot hoophouse/greenhouse for vermiculture, compost curing and finished compost distribution and sales
 - o 1200 square foot enclosed pole barn for equipment storage and maintenance. Motor vehicles and trailers can also be stored in the pole barn when not in use.
 - o 6 parking spaces for employees on the gravel and 4 for visitors with one handicap space on the engineered concrete;
 - o 1179 square foot (surface area) lined detention pond with 2849 cubic feet volume of storage capacity.
 - o Site access is secured with a gate, which will be accessible to emergency service vehicles.
 - o Barn will have a restroom and a septic system will be installed.
 - o A water well will be drilled for potable water, equipment and compost operations.
 - As required by the Fire Marshall, a water tank of adequate volume can be

o Landscape management strategy - letting a rotation of cover crops and wildflowers grow, which will be periodically mowed and harvested for compost material.

o Overhead electrical will be installed with Consumers Energy for site lighting, hoophouse and pole barn electrical needs and to power the CASP aeration fans.

- Downcast lighting is proposed around the pole barn.
- All parking and loading areas utilized during darker hours will be artificially illuminated to a minimum level of 0.5 foot candles and a maximum level of five (5) foot candles, with one (1) foot candle the level of average illumination. Lighting fixtures shall be designed and arranged to:
 - Deflect light away from adjacent properties and streets.
 - Not be more than 20 feet above the parking surface and shall be shrouded to prevent glare.
 - Allow a reduction of the amount of artificial light during other than normal parking hours.
- o Traffic will come from site's main entrance, through the gate and onto the compost receiving pad. Incoming material will be from Wormies vehicles or pre-approved contractors only to minimize the level of contamination or inappropriate loads. It is estimated that no more than 10 vehicles will enter and exit the site each day for composting operations.

o Incoming material will be unloaded on Receiving Area of the asphalt pad, mixed with a loader and then loaded into the CASP system.

-Incoming material is made up of food waste, wood waste, yard waste and herbivorous manures. The custom mix of materials (recipe) allows for optimal composting environment:

- Carbon to Nitrogen Ratio of 30:1
- Moisture Content between 55% and 60%
- Bulk Density between 900 lbs/CY and 1200 lbs/CY
- Feedstock such as food waste is received and processed immediately after receiving by mixing it with carbon material such as wood waste.
- Any obvious contaminants will be removed from the feedstock before loading into the bays. Contamination will not exceed 1 cubic yard per month and will be placed in the dumpster located on the pad.
- Mixing will occur on the pad toward the middle of the site and on days when winds are low to minimize any odor, noise or dust impact downwind.
- Prevailing winds are from the NW. Even though odors strong enough to travel outside the compost area are not usual, a windsock will be installed to ensure that material mixing does not occur at a time that winds blow towards the adjacent neighbors.
- The mixture is placed into the CASP composting bays for pre-processing with forced aeration technology for 21 days.
- The material in the CASP rows will meet the time and temperature requirements, with adequate moisture levels of 50% to actively compost. The use of temperature and moisture content probes can be used to monitor piles. To keep the moisture content to an optimal range, windrows will be watered using water from the detention pond. The volume of water in the detention pond is anticipated to be used on a regular basis to water the piles, and watering can be supplemented with well water as needed.
- After approximately 21 days, the pre-composted material is then removed from the bays and laid into vermiculture windrows 8' W x 2-4' H x various lengths to finish the compost using red wiggler worms (*Eisenia fetida*).
- The windrows are monitored and managed for the next 8-12 months and then screened to extract the worm castings. The screened "overs" will be reintroduced into the windrows for further processing. Waste from the process will be minimal.
- The finished material is screened and stored in the greenhouse for distribution and sales.

Hours of Operation:

7:00 am through 9:00 pm for operation. receiving and distribution of materials, including retail/wholesale sales.

Equipment to be used:

- Skidsteer
- Tractor
- Trommel soil screener
- Truck and trailer
- Soil mixer

Planned Staffing and Training:

- Mechanic 0.10 FTE (Full-Time Equivalent)
- Site and equipment operator 0.25 FTE
- Coordinator/supervisor 0.10 FTE

Luis Chen, owner of Wormies, and site supervisor, has completed the US Composting Council's Compost Operator Training to gain compost operations manager certification as recommended by EGLE and will plan to train future site operators or send to training, future site operators.

Other Permits/Approvals:

As soon as Wormies gains Cascade Township Special Use Site Plan approval, Wormies will submit an application to Michigan Department of Great Lakes, Environment and Energy (EGLE) for compost site registration, which is required for a compost site larger than of 200 cubic yards. Wormies will obtain necessary permits and approvals for soil erosion and sedimentation control permit, water supply well, septic, electrical and site lighting, entrance sign and access drive. Wormies is working with Consumers Energy to locate electrical pole and install electrical service to the site.

No other approvals or permits are known at this time.

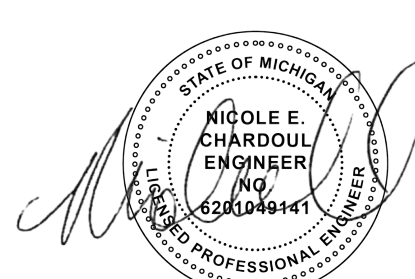


Site Management Plan:

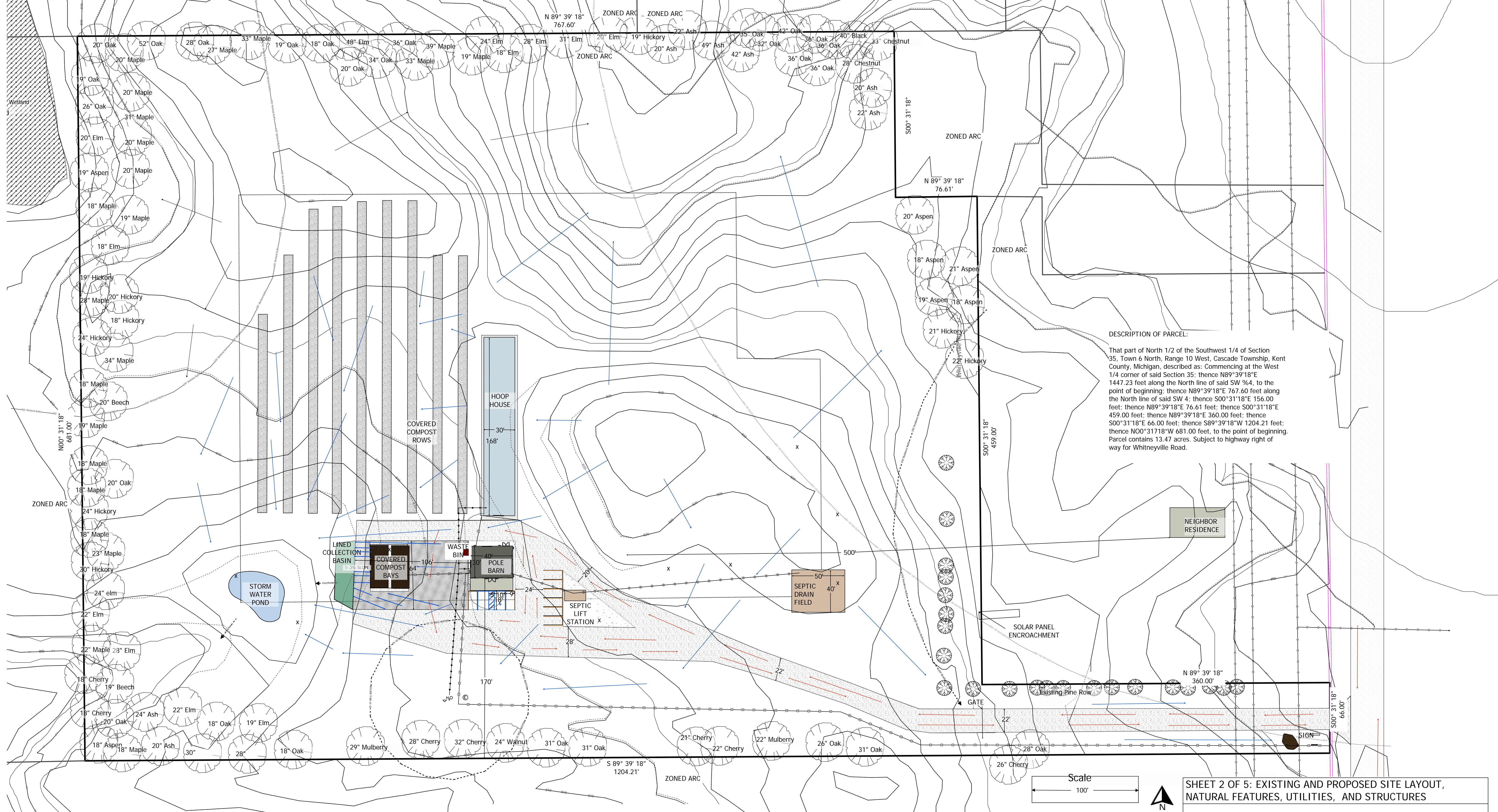
A comprehensive compost site management plan (CSMP) will be developed after Township site plan approval with specific standard operating procedures for staffing, managing, and monitoring the incoming materials and piles; site, pond and equipment maintenance; as well as and troubleshooting for odor, noise and dust.



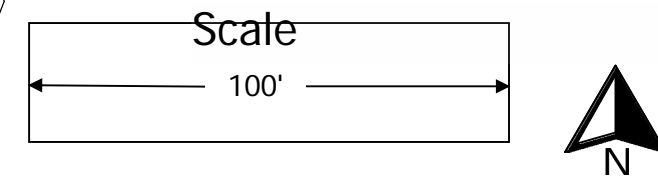
Description of Parcel:

That part of North 1/2 of the Southwest 1/4 of Section 35, Town 6 North, Range 10 West, Cascade Township, Kent County, Michigan, described as: Commencing at the West 1/4 corner of said Section 35; thence N89°39'18"E 1447.23 feet along the North line of said SW ¼, to the point of beginning; thence N89°39'18"E 767.60 feet along the North line of said SW 4; thence S00°31'18"E 156.00 feet; thence N89°39'18"E 76.61 feet; thence S00°31'18"E 459.00 feet; thence N89°39'18"E 360.00 feet; thence S00°31'18"E 66.00 feet; thence S89°39'18"W 1204.21 feet; thence N00°31'18"W 681.00 feet, to the point of beginning. Parcel contains 13.47 acres. Subject to highway right of way for Whitneyville Road.

SHEET 1 OF 5
SHEET 1: COVER SHEET, USE DESCRIPTION, AREA MAP
SHEET 2: EXISTING AND PROPOSED SITE LAYOUT, NATURAL FEATURES, UTILITIES, AND STRUCTURES
SHEET 3: STRUCTURE DETAILS AND ELEVATIONS, ENTRANCE SIGN DETAIL, LIGHTING SPECS
SHEET 4: STORMWATER CALCULATIONS AND DRAINAGE DESCRIPTION
SHEET 5: PHOTOMETRIC PLAN
Wormie's Compost Farm Design 5745 Whitneyville Rd, Alto, Michigan 49302 Prepared by: Nicole E. Chardoul, Youssef Darwich April 18, 2023
  



DESCRIPTION OF PARCEL:
 That part of North 1/2 of the Southwest 1/4 of Section 35, Town 6 North, Range 10 West, Cascade Township, Kent County, Michigan, described as: Commencing at the West 1/4 corner of said Section 35; thence N89°39'18"E 1447.23 feet along the North line of said SW ¼, to the point of beginning; thence N89°39'18"E 767.60 feet along the North line of said SW 4; thence S00°31'18"E 156.00 feet; thence N89°39'18"E 76.61 feet; thence S00°31'18"E 459.00 feet; thence N89°39'18"E 360.00 feet; thence S00°31'18"E 66.00 feet; thence S89°39'18"W 1204.21 feet; thence N00°31'18"W 681.00 feet, to the point of beginning. Parcel contains 13.47 acres. Subject to highway right of way for Whitneyville Road.



Legend

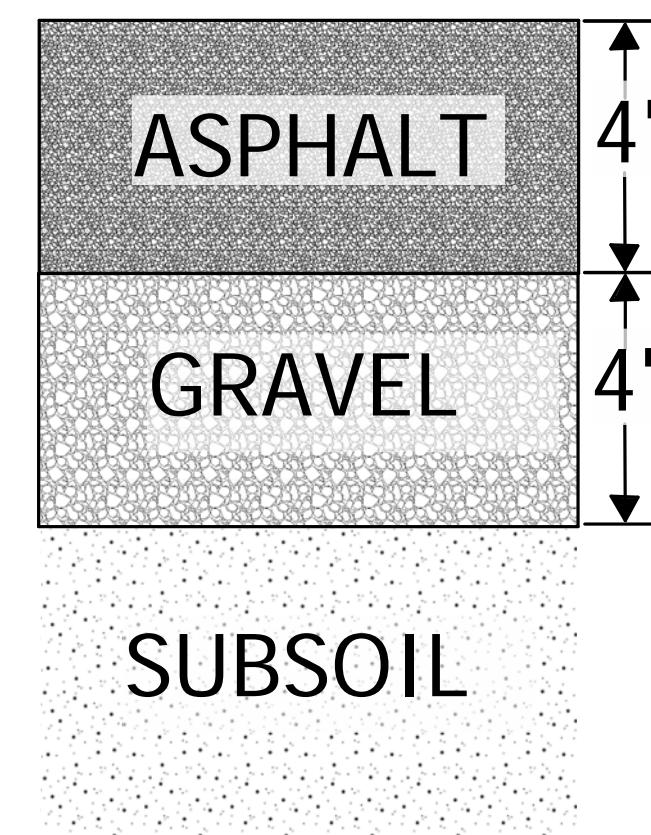
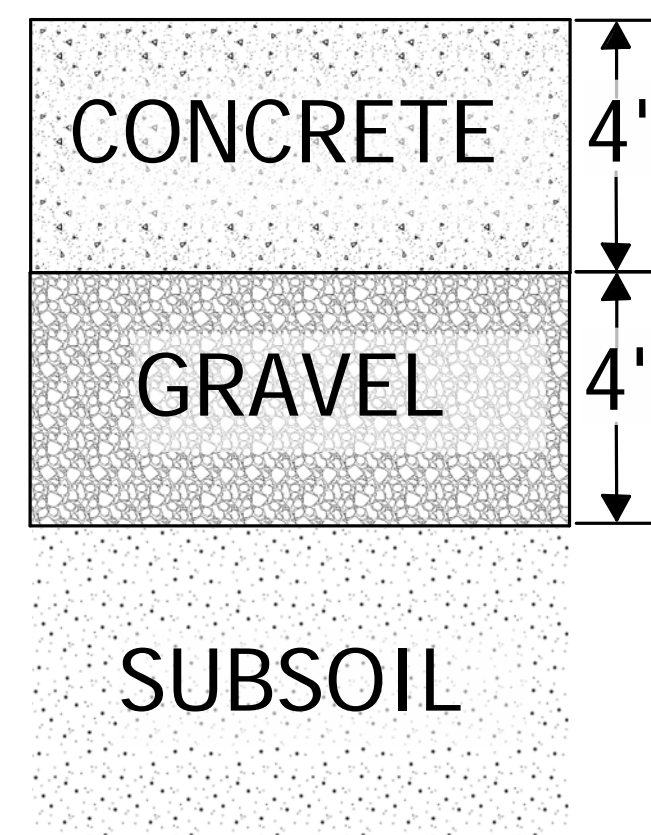
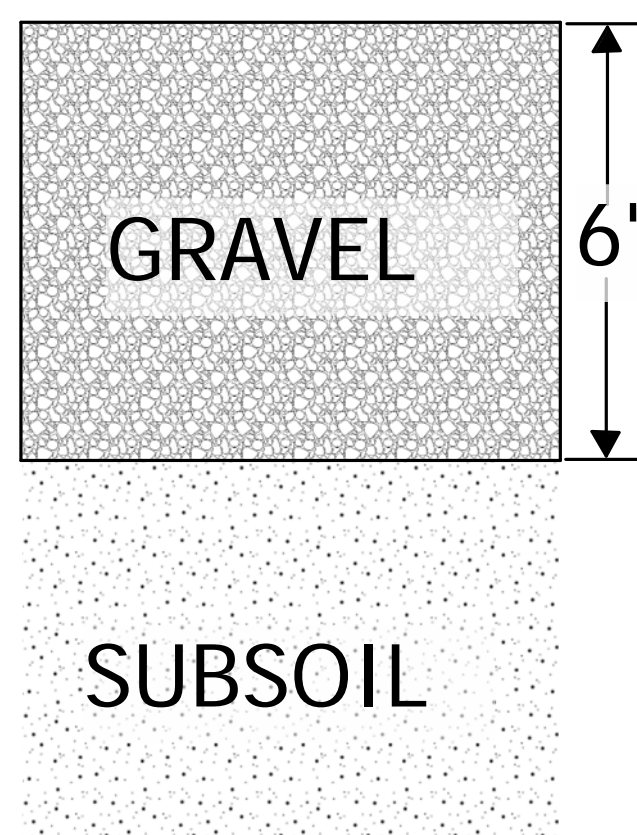
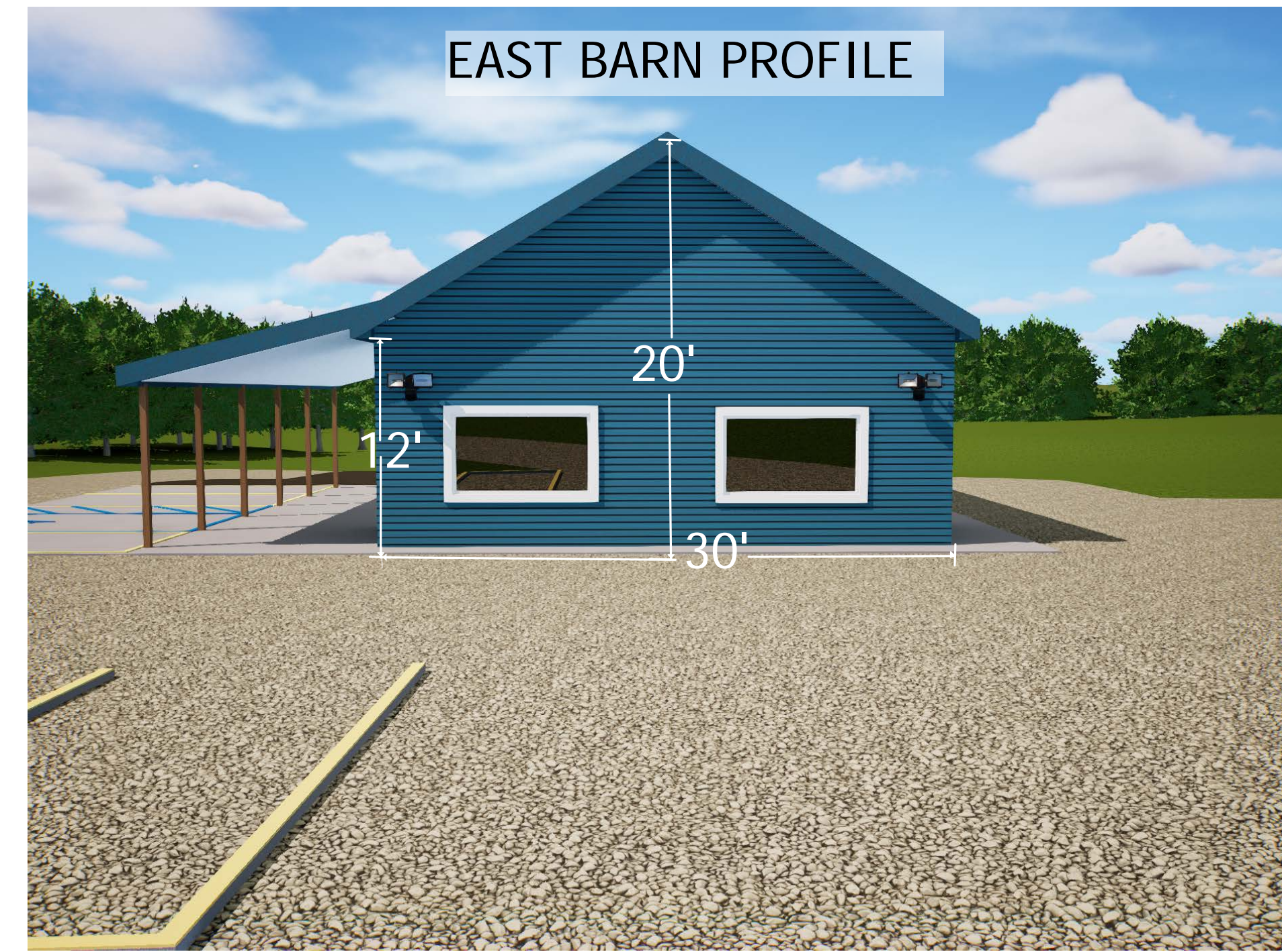
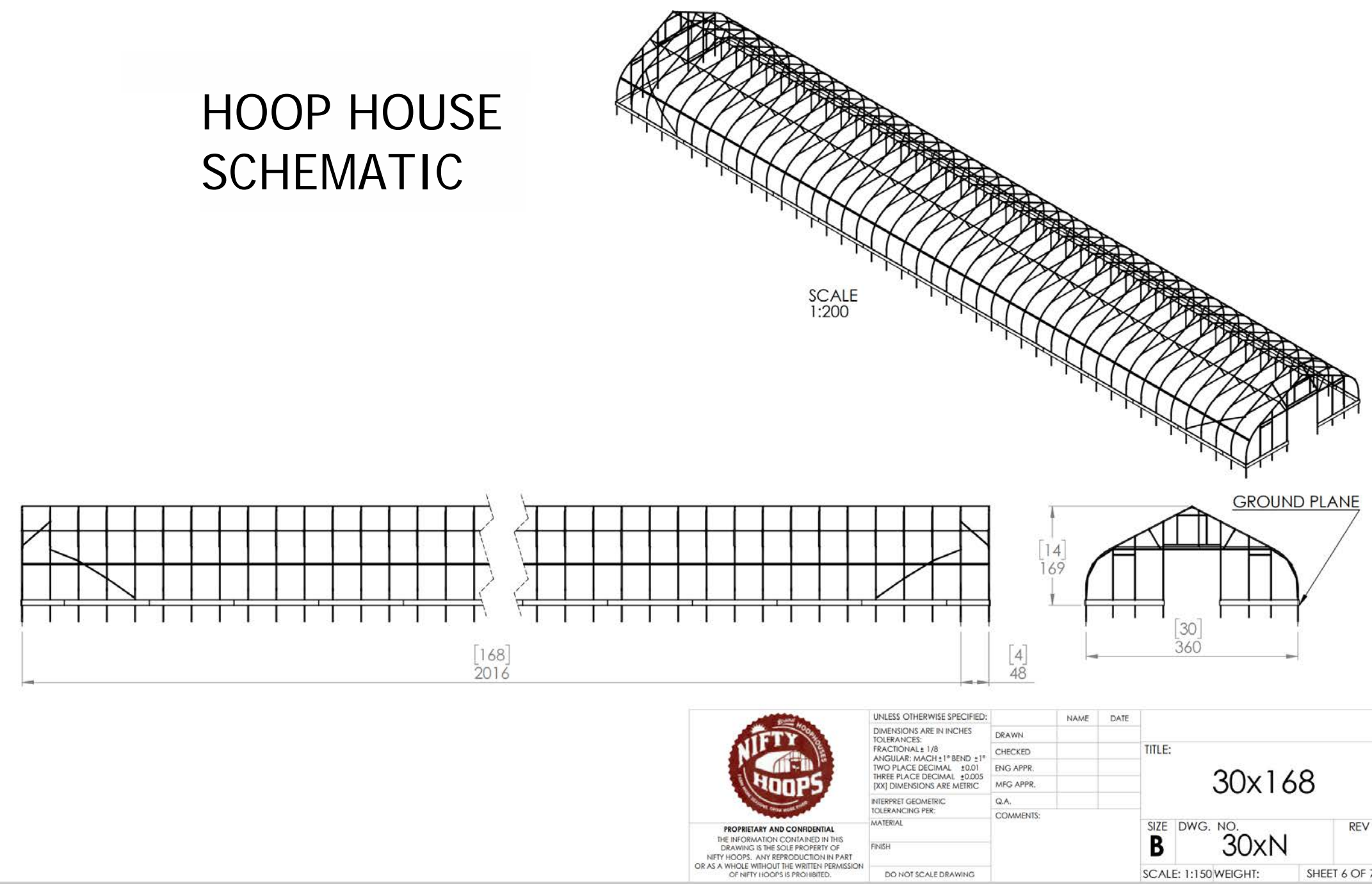
- Property Line —————
- 150' Property Buffer - - - - -
- 800' Well Bufer ————— 800' 11B Well Buffer —————
- 250' Residence Buffer - - - - - 250' Residence Buffer - - - - -
- 200' Wetland Buffer — 200' Wetland Buffer — 200' Wetland Buffer —
- Existing Contours 800 800 800 800
- ADA Parking —————
- ADA Parking —————
- Right of Way —————
- Traffic Flow —————
- Stormwater Flow —————
- Electrical ————
- ATT Lines ————
- Water Line ————
- SEPTIC ————
- Emergency overflow - - - - -
- Asphalt ————
- Concrete ————
- Gravel ————
- Existing Trees ————
- Proposed Well ————
- Temporary Electric Panel ————
- Soil Boring Locations X

SHEET 2 OF 5: EXISTING AND PROPOSED SITE LAYOUT, NATURAL FEATURES, UTILITIES, AND STRUCTURES

Wormie's Compost Farm Design
 5745 Whitneyville Rd,
 Alto, Michigan 49302
 Prepared by: Nicole E. Chardoul, Youssef Darwich
 April 18, 2023



HOOP HOUSE SCHEMATIC



GROUND CROSS SECTIONS

Installation Specifications for Pad Construction

Topsoil Stripping: Remove all organic materials down to a depth of at least 12 inches
Subgrade Undercutting: After excavation and undercutting to required depth, it shall be evenly graded and recompacted to not less than 95% of the soil's maximum unit weight.
Subgrade (Fill Material to bring pad "to grade"): Non-organic soil suitable with engineering characteristics suitable to achieve 95% compaction of maximum unit weight and to support overlying base material to specified compaction, placed in loose layers not more than 8 inches and not less than 4 inches. Each layer placed shall be compacted separately to the required level of compaction.
Base Course: compacted base course with a minimum thickness of 6 inches shall be placed on the compacted subgrade and beneath the slab. The base course shall consist of granular material (sand, gravel, crushed stone, or sand/gravel mix). A geotextile liner may be included below the subbase.
Compost Pad Material: 4 inches of hot mix asphalt (HMA) applied in two layers, a 2 inch base course and a 2 inch wearing course. Recycled asphalt pavement (RAP) may be substituted for a

SHEET 3 OF 5: STRUCTURE DETAILS AND ELEVATIONS, ENTRANCE SIGN DETAILS AND ELEVATIONS, ENTRANCE SIGN DETAIL, LIGHTING SPECS

Wormie's Compost Farm Design
 5745 Whitneyville Rd,
 Alto, Michigan 49302
 Prepared by: Nicole E. Chardoul, Youssef Darwich
 April 18, 2023



Drainage Narrative

The operational areas of the 13.47-acre parcel naturally drains to the low area in the SW corner of the site. The proposed work involves construction of a new impervious composting pad of approximately 6,784 square feet and two new structures.

Existing Drainage:

The stormwater runoff from the existing undeveloped site is directed toward the low area in the SW corner of the site, with a small area directed to the NE corner of the site and another small area directed to the NW corner of the site. The proposed composting operational areas all occur in the watershed area where the stormwater flows to the SW corner.

Proposed Stormwater Management:

A lined catchment area (no outlet and no groundwater discharge) with volume capacity for runoff from a 100 year 24-hour storm is proposed to catch compost leachate or "wastewater" from the composting pad. The pond will be 3 feet deep with a 12" freeboard and will have a volume capacity of 2,300 cubic feet.

The asphalt compost pad will be constructed at a 1-2% slope to the west to allow the stormwater from the pad to be directed to the lined catchment basin and the edges of the pad will be constructed as sloped impervious ditches to allow the stormwater runoff from the pad to be directed to the lined catchment area. A raised edge or curb along the sides of the pad will prevent stormwater from other areas of the site to enter the ditch or compost pad. The impervious pad and catchment area meets the MI Department of Environment Great Lakes and Energy (EGLE) compost site stormwater management requirements when processing cannabis plant waste and also meets EGLE Water Resources Division requirements for compost leachate management. The lined catchment area will prevent groundwater discharge of the compost leachate wastewater. The water collected in the catchment area will be recirculated back to the compost piles to keep optimal moisture levels in the piles. If the water in the catchment area exceeds the need for compost pile watering, it will be pumped out and hauled for proper disposal.

The stormwater from the other proposed structures and paved parking of the site will be directed around and beyond the compost pad and lined catchment basin to infiltrate and flow overland to the to the stormwater retention pond in the SW. The pond will be 5 feet deep with a 12" freeboard and will have a volume capacity of 2,000 cubic feet. The soil type of 36C-Filer Loam should allow adequate infiltration.

The water table at the location of the proposed retention pond should be at least 18" below the bottom of the retention pond and at least 4' below the asphalt compost pad.

Soil Type & Groundwater

Native Sandy clay overlying granular soils consisting of sand and gravelly sand. Approximately 4 to 5 inches of sandy clay topsoil is present at the ground surface within the soil boring locations. Native cohesive soils, consisting of silty clay and sandy clay, underlie the topsoil within soil borings B-01 and B-03 extending to depths ranging from 3.5 to 9 feet. Native granular soils, consisting of sand and clayey sand, underlie the native cohesive soils within the soil boring locations extending to the explored depths ranging from 10 to 15 feet.

The native cohesive soils are medium to very stiff in consistency, with natural moisture contents ranging from 18 to 27 percent, and unconfined compressive strengths ranging from 1,000 to 7,000 psf. The native granular soils are loose to medium compact in relative density, with Standard Penetration Test (SPT) N-values ranging from 9 to 18 blows per foot (bpf).

The groundwater was not encountered to the explored depths of 8 to 15 feet during and upon completion of drilling and test pit operations.

Installation Specifications for Pad Construction

The relatively high moisture content of the surficial cohesive soils are likely in close proximity to their respective plastic limits. Therefore, these soils may become unstable under repeated loading from construction equipment. The subgrade should not be exposed to prolonged periods of precipitation to prevent the subgrade from becoming unstable. We recommend earthwork operations be performed during the predominantly drier summer months.

Topsoil Stripping: Remove all organic materials down to a depth of at least 12 inches
 Subgrade Undercutting: After excavation and undercutting to required depth, it shall be evenly graded and recompacted to not less than 95% of the soil's maximum unit weight.
 Subgrade (Fill Material to bring pad "to grade"): Non-organic soil suitable with engineering characteristics suitable to achieve 95% compaction of maximum unit weight and to support overlying base material to specified compaction, placed in loose layers not more than 8 inches and not less than 4 inches. Each layer placed shall be compacted separately to the required level of compaction.
 Base Course: compacted base course with a minimum thickness of 6 inches shall be placed on the compacted subgrade and beneath the slab. The base course shall consist of granular material (sand, gravel, crushed stone, or sand/gravel mix). A geotextile liner may be included below the subbase.
 Compost Pad Material: 4 inches of hot mix asphalt (HMA) applied in two layers, a 2 inch base course and a 2 inch wearing course. Recycled asphalt pavement (RAP) may be substituted for a portion of the new material required to produce the HMA mixture.

Installation Specifications for Lined Catchment Basin and Compost Pad Ditch

Topsoil Stripping: Remove all organic materials down to a depth of at least 12 inches
 Subgrade Undercutting: After excavation and undercutting to required depth, it shall be evenly graded and recompacted to not less than 95% of the soil's maximum unit weight.
 Clay Base Placement: The impermeable clay layer shall be placed as directed in the bottom of the basin in loose layers not more than 6 inches and not less than 4 inches. The material shall be compacted to 90% of its maximum unit weight with kneading compaction (sheepsfoot roller).
 Alternately, the basin can be lined with a geotextile liner consisting of a minimum 30-mil thickness geomembrane overlying a structurally stable foundation to support the liners and the contents, or a high density polyethylene geomembranes at least 60-mil thick to allow for proper welding, or an alternative design approved by the township or county water resources board.
 Vegetation: Clear debris and all stone greater than two (2) inches in diameter from planting areas. Level finish grades to eliminate small depressions. Roll the finished surface with spiked roller to eliminate soil clods. Kill any volunteer vegetation with "Round-up" herbicide seven (7) days before all seeding operations. Spread stockpiled or new topsoil and seed with seed mixes as shown on plan. Drill seeding is required for all permanent seed matrices to ensure direct soil-seed contact. No seed will be planted with more than 1/4-inch soil cover. Apply straw at a rate of 1500 lbs/acre to all seeded areas. Secure straw with crimping implement. Install erosion control blanket to all shallow channels.

Drainage Assumptions	
Design Return Period (years) =	100
Design Storm Duration, d (hours) =	24
Design Storm Duration, d (min) =	1440
Pond Depth (ft) =	3
Pond Side Slope =	3 to 1
Freeboard (inches) =	12

Area Analysis (lined catchment area for compost pad):				
	A (square feet)	A (acres)	C	AC
Type of Drainage Area	Drainage Area (square feet)	Drainage area (acres)	Rational runoff coefficient	
Compost Pad (asphalt)	6,784	0.16	0.95	0.14795
Runoff Coefficient (C):				
	C avg = AC total / A total		0.95	
Lined Catchment Area/Basin Volumes (Q = C * I * A):				
	C avg	I (*)	A total	
	Runoff Coefficient	Rainfall intensity (inches per hour)	Drainage area (acres)	
		0.95	0.261	0.16
Q = Peak Discharge (acre-in/hr) =	0.039			
Q (cf per second) =	0.039			
Peak Discharge (cf over 24-hr) =	3,366			
Lined Catchment Area/Basin Volumes Provided:				
Volume = 0.33 H (A1 + A2 + (A1*A2)/0.5)	Elevation	Area (SF)	Volume (CF)	Incremental (CF)
	807.0	1,387	1,186	3,036
	806.0	1,019	850	1,850
	805.0	708	570	1,000
	804.0	453	346	430
	803.0	255	84	84
Volume (with 12" of freeboard) =				3,364

Area Analysis (stormwater retention basin):				
	A (square feet)	A (acres)	C	AC
Type of Drainage Area	Drainage Area (square feet)	Drainage area (acres)	Rational runoff coefficient	Rational runoff coefficient (adjusted for sheet flow over lawn)
Structures	6,240	0.14	0.95	0.70
Concrete parking	1,320	0.03	0.95	0.70
Total	7,560	0.17		0.12149
Runoff Coefficient (C):				
	C avg = AC total / A total		0.70	
Retention Volumes (Q = C * I * A):				
	C avg	I (*)	A total	
	Runoff Coefficient	Rainfall intensity (inches per hour)	Drainage area (acres)	
	0.70	0.2613	0.17	
Q = Peak Discharge (acre-in/hr) =	0.032			
Q (cf per second) =	0.032			
Peak Discharge (cf over 24-hr) =	2,764			
Retention Volumes Provided:				
Volume = 0.33 H (A1 + A2 + (A1*A2)/0.5)	Elevation	Area (SF)	Volume (CF)	Incremental (CF)
	802.0	1,179	935	1,752
	801.0	842	690	1,507
	800.0	562	441	817
	799.0	338	247	376
	798.0	171	110	129
	797.0	60	20	20
Volume (with 12" of freeboard) =				2,849

* Source: <https://hdsc.nws.noaa.gov/hdsc/pfds> Used rainfall over 24 hours for a 100-year storm at Grand Rapids International Airport

Retention Pond Seed Mix

Andropogon gerardii (Big Blue Stem): 4.000 lbs/acre
 Panicum virgatum (Prairie Switch Grass): 0.500 lbs/acre
 Sorghastrum nutans (Indian Grass): 4.500 lbs/acre
 Spartina pectinata (Prairie Cord Grass): 0.250 lbs/acre
 Avena sativa (Seed Oats): 48.000 lbs/acre
 Elymus canadensis (Prairie Wild Rye): 1.000 lbs/acre
 Lolium multiflorum (Annual Rye): 10.000 lbs/acre

NOAA Atlas 14, Volume 8, Version 2 GRAND RAPIDS INTL AP
 Station ID: 20-3333
 Location name: Grand Rapids, Michigan, USA*
 Latitude: 42.8825°, Longitude: -85.5239°
 Elevation: 803 ft**
 Elevation (station metadata): 803 ft**
* source: ESRI Maps ** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES
 Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaak, Dale Umuhl, Michael Yelso, Geoffrey Bonnis

NOAA, National Weather Service, Silver Spring, Maryland
[PF_tabular | PF_graphical | Maps_ &_aerials](#)

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.306 (0.261-0.347)	0.352 (0.306-0.408)	0.442 (0.383-0.514)	0.522 (0.448-0.610)	0.638 (0.528-0.765)	0.733 (0.541-0.908)	0.832 (0.628-1.06)	0.938 (0.696-1.23)	1.08 (0.729-1.47)	1.26 (0.771-1.65)
10-min	0.439 (0.362-0.508)	0.515 (0.448-0.597)	0.648 (0.561-0.753)	0.764 (0.656-0.893)	0.934 (0.767-1.14)	1.07 (0.851-1.33)	1.22 (0.919-1.55)	1.37 (0.975-1.80)	1.59 (1.07-2.15)	1.76 (1.14-2.41)
15-min	0.535 (0.406-0.619)	0.628 (0.547-0.728)	0.790 (0.684-0.918)	0.932 (0.800-1.09)	1.14 (0.935-1.39)	1.31 (1.04-1.62)	1.49 (1.12-1.89)	1.67 (1.19-2.20)	1.94 (1.30-2.62)	2.15 (1.39-2.94)
30-min	0.801 (0.698-0.928)	0.941 (0.819-1.09)	1.18 (1.02-1.37)	1.39 (1.20-1.63)	1.70 (1.40-2.08)	1.95 (1.55-2.42)	2.21 (1.67-2.82)	2.49 (1.77-3.27)	2.88 (1.93-3.90)	3.18 (2.06-4.37)
60-min	1.06 (0.919-1.22)	1.24 (1.07-1.43)	1.55 (1.34-1.80)	1.83 (1.57-2.14)	2.24 (1.84-2.74)	2.58 (2.05-3.20)	2.94 (2.22-3.75)	3.32 (2.36-4.37)	3.86 (2.60-5.23)	4.29 (2.77-5.86)
2-hr	1.31 (1.15-1.50)	1.53 (1.34-1.76)	1.92 (1.67-2.21)	2.26 (1.96-2.63)	2.79 (2.30-3.39)	3.21 (2.57-3.96)	3.66 (2.79-4.65)	4.15 (2.96-5.43)	4.84 (3.29-6.52)	5.39 (3.53-7.35)
3-hr	1.45 (1.27-1.66)	1.69 (1.48-1.93)	2.11 (1.84-2.43)	2.50 (2.17-2.89)	3.08 (2.57-3.75)	3.57 (2.87-4.39)	4.09 (3.13-5.18)	4.65 (3.36-6.07)	5.45 (3.73-7.32)	6.10 (4.01-8.27)
6-hr	1.69 (1.49-1.92)	1.96 (1.73-2.23)	2.45 (2.15-2.80)	2.91 (2.53-3.34)	3.60 (3.02-4.36)	4.19 (3.39-5.13)	4.82 (3.72-6.07)	5.52 (4.02-7.16)	6.51 (4.50-8.69)	7.31 (4.86-9.86)
12-hr	1.95 (1.73-2.20)	2.25 (1.99-2.55)	2.81 (2.48-3.19)	3.33 (2.91-3.79)	4.13 (3.49-4.97)	4.82 (3.93-5.87)	5.56 (4.33-6.96)	6.38 (4.89-8.22)	7.55 (5.27-10.0)	8.50 (5.71-11.4)
24-hr	2.22 (1.98-2.49)	2.56 (2.28-2.88)	3.18 (2.83-3.59)	3.77 (3.31-4.26)	4.66 (3.97-5.58)	5.43 (4.47-6.53)	6.27 (4.92-7.80)	7.19 (5.34-9.20)	8.51 (6.00-11.2)	9.58 (6.51-12.7)
2-day	2.55 (2.28-2.84)	2.91 (2.61-3.25)	3.59 (3.20-4.02)	4.22 (3.73-4.74)	5.19 (4.44-6.16)	6.02 (4.98-7.23)	6.92 (5.47-8.53)	7.90 (5.92-10.0)	9.32 (6.84-12.2)	10.5 (7.18-13.8)
3-day	2.81 (2.53-3.12)	3.18 (2.86-3.54)	3.87 (3.46-4.31)	4.51 (4.05-5.05)	5.49 (4.72-6.37)	6.34 (5.27-7.57)	7.26 (5.77-8.91)	8.26 (6.23-10.4)	9.71 (6.96-12.6)	10.9 (7.52-14.3)
4-day	3.04 (2.74-3.36)	3.41 (3.07-3.78)	4.11 (3.68-4.56)	4.75 (4.23-5.31)	5.75 (4.96-6.76)	6.60 (5.50-7.86)	7.53 (6.00-9.20)	8.54 (6.46-10.8)	9.99 (7.20-13.0)	11.2 (7.75-14.6)
7-day	3.58 (3.24-3.94)	4.00 (3.61-4.41)	4.75 (4.27-5.25)	5.43 (4.85-6.03)	6.47 (5.57-7.53)	7.34 (6.15-8.66)	8.26 (6.84-10.0)	9.29 (7.08-11.6)	10.7 (7.79-13.8)	11.9 (8.33-15.5)
10-day	4.07 (3.69-4.47)	4.54 (4.14-4.98)	5.35 (4.83-5.89)	6.08 (5.45-6.73)	7.16 (6.20-8.28)	8.06 (6.77-9.45)	9.01 (7.25-10.9)	10.0 (7.66-12.5)	11.5 (8.35-14.7)	12.6 (8.87-16.3)
20-day	5.56 (5.07-6.05)	6.16 (5.61-6.71)	7.18 (6.51-7.84)	8.04 (7.28-8.83)	9.27 (8.04-10.5)	10.2 (8.64-11.8)	11.2 (9.26-13.4)	12.3 (9.45-15.0)	13.7 (10.1-17.3)	14.8 (10.5-19.0)
30-day	6.85 (6.26-7.42)	7.57 (6.92-8.22)	8.75 (7.96-9.53)	9.73 (8.80-10.6)	11.1 (9.62-12.5)	12.1 (10.2-13.9)	13.1 (10.7-15.5)	14.2 (12.1-17.3)	15.5 (11.5-19.5)	16.6 (11.9-21.2)
45-day	8.52 (7.82-9.20)	9.40 (8.61-10.2)	10.8 (9.85-11.7)	11.9 (10.8-13.0)	13.4 (11.6-15.0)	14.5 (12.3-16.5)	15.6 (12.7-18.2)	16.6 (12.9-20.0)	17.9 (13.3-22.3)	18.8 (13.6-24.0)
60-day	9.97 (9.17-10.7)	11.0 (10.1-11.8)	12.6 (11.5-13.6)	13.8 (12.5-15.0)	15.4 (13.4-17.1)	16.5 (14.1-18.7)	17.6 (14.4-20.5)	18.6 (14.5-22.4)	19.8 (14.8-24.6)	20.7 (15.0-26.3)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical

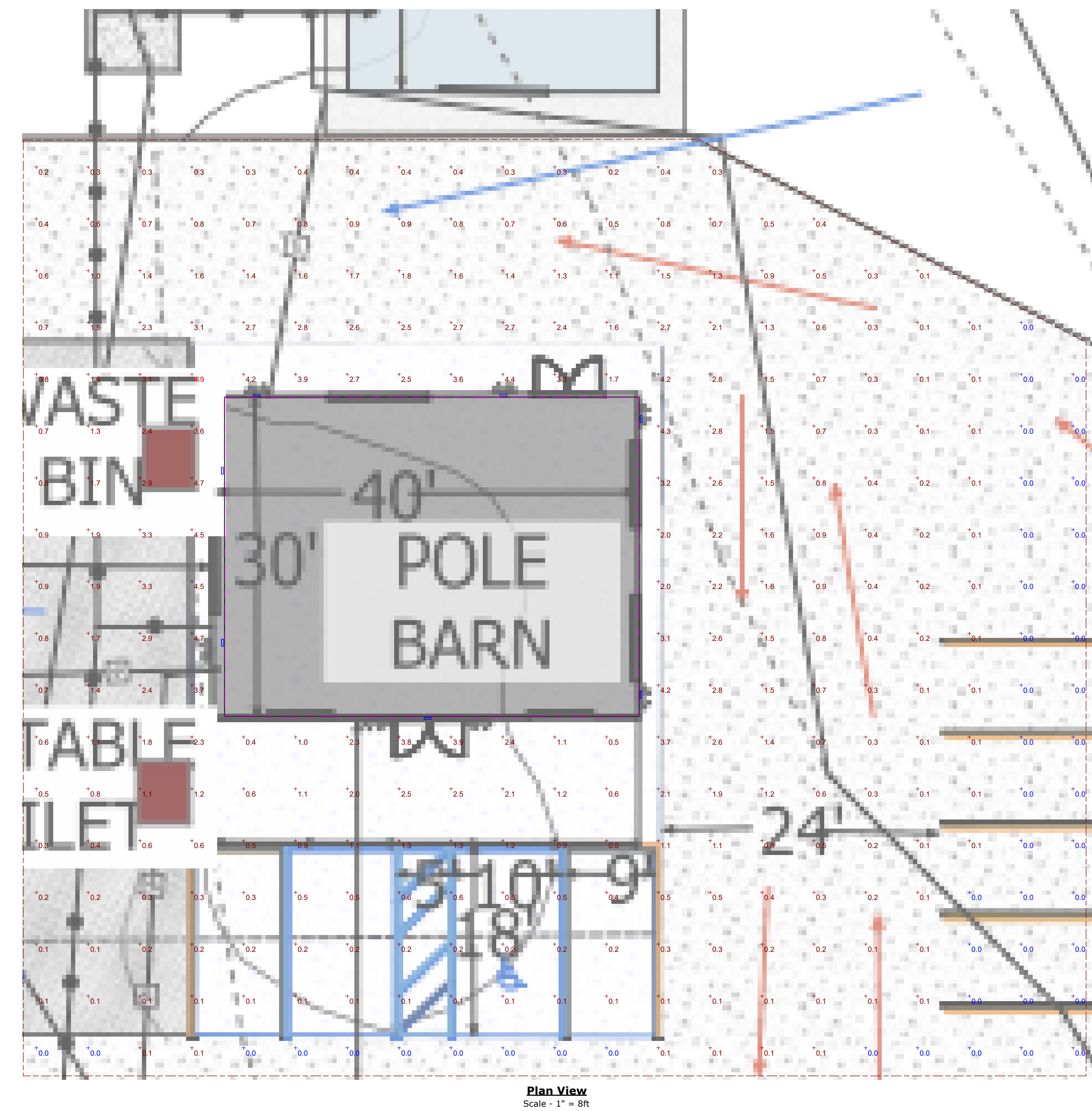
SHEET 4 OF 5: STORMWATER CALCULATIONS AND DRAINAGE DESCRIPTION

Wormie's Compost Farm Design
 5745 Whitneyville Rd,
 Alto, Michigan 49302
 Prepared by: Nicole E. Chardoul, Youssef Darwich
 April 18, 2023



Schedule											
Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
WPX	WPX		7	Lithonia Lighting	WPX1 LED P1 40K Mvolt	WPX1 LED wallpack 1500lm 4000K color temperature 120-277 Volts	1	1568	1	11.47	 Max: 701cd

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.0 fc	4.9 fc	0.0 fc	N/A	N/A



WORMIES, LLC

**PROJECT PROPOSAL FOR CASCADE TOWNSHIP
PLANNING COMMISSION**

April 18, 2022



TABLE OF CONTENTS

Introduction 3

History, recognitions and awards 3

Site development at 5745 Whitneyville Ave SE, Alto MI 4

Regulations and guidelines 7

Wormies composting site in comparison to conventional composting sites 9

Wormies composting system and technologies 13

Risk and nuisance controls 14

Growth plan 15

Community engagement and education 16

Current customers in Cascade Township 16

Wormies team 17

Wormies proposal to Cascade Township Planning Commission 18

Letters of support 18

Appendix A (Country Oaks Article) 19

Appendix B (Letters of Support) 24



Introduction

Wormies is a regenerative agricultural business focusing on composting with worms. The worms are fed, in part, food scraps from local residents. The food waste is mixed with carbon sources and passes through stages of hot composting, vermicomposting with worms, and finally harvesting. The finished product is sold as worm castings or blended into craft soil mixes or liquid soil amendments.

Worm castings are highly valued by organic gardeners and farmers due to their beneficial microbiology that promotes plant growth and soil fertility. Worm poop is odorless and safe for pets, people and the environment. It is pH-neutral.

Wormies is a purpose-driven company that believes these services are essential in improving the health of our communities, including our living ecosystems. By managing valuable resources such as food waste, Wormies is able to cycle nutrients back into the soil to grow plants that are nutrient dense and healthier for consumers.

Wormies composting operation is not only a solution that helps neutralize the effect of carbon dioxide emissions from landfills, but it also removes carbon dioxide and methane emissions from landfills but also removes carbon dioxide from the atmosphere and sequesters it for longer periods of time. This is considered a carbon-negative business.

History, recognitions & awards

Luis Chen started Wormies in 2018 with the vision to create the healthiest soil while providing a better solution for waste management. Up until 2021, Wormies operations were located in Jenison, Georgetown Township at Trillium Haven farm, which is adjacent to a residential subdivision. For 4 years Wormies operated without causing any nuisance to the neighborhood and serving as an attraction and educational space for the residents. (Please see attached letters of reference from our Trillium neighbor and Georgetown Township.) In 2020 our landlord sold the property to the township and we continued to rent the space from Georgetown Township. We moved out of the property due to the township's decision to use the land for wetland conservation purposes.



Over the past 4.5 years Wormies has been recognized and awarded for the quality of the finished products, its composting service, and for the innovation of its business model.

- 2022 Nextcycle MI, MICROS Grant
- 2022 Nextcycle MI, Market Development Grant
- 2021 NextCycle MI FLOWS Awardee and Showcase Winner
- 2021 Nominated as a finalist for GRBJ Newsmaker of the Year Award in the category of Sustainability
- 2020 Start Garden 5x5 winner
- 2019 Start Garden 100 Ideas winner
- 2018 Partners Worldwide startup idea winner
- 2018 US Composting Council mentorship award with Rodale Institute

Site development at 5745 Whitneyville Ave SE, Alto MI (Cascade Township)

Wormies, following discussions with Township officials, purchased this 13 acre property to move its operation and to develop the infrastructure for it. To that end Wormies secured a grant from the state of Michigan for \$365,000.

It is important to note that Wormies is more than a conventional composting operation. Most of the space in the property will be regenerated with the goal of having natural ecosystems that increase the biodiversity in the property and benefit Wormies composting process and finished products.

Natural Ecosystem upgrades -Wormies plans to make the following changes to the property:

- Biodiversity pond with biofiltration
- 2 acres of pollinator habitats NRCS
- 1 acre total of trees will be added
- 4 acres for biodynamic accumulator crops
- 1/2 acre educational garden and orchard



- 2 acre tree line to remain intact and managed

Infrastructure:

- 0.27 acre (12,000 sqf) driveway
- 0.23 acre (10,000 sqf) of hoophouses and barn
- 0.08 acre (3,600 sqf) feedstock pad bays
- 2 acre (87,000 sqf) for worm rows. That's only 1 acre of windrows with the space we leave in between.

16% of property space will be used for composting activities.

[Click here for aerial view rendering on youtube](#)





Regulations and guidelines

This type of facility is regulated by both the Township and the Michigan Department of Environment, Great Lakes and Energy - Material Management Division (EGLE MMD) and also requires their approval. A package of legislation relating to composting has passed the Michigan House of Representatives and is awaiting action by the State Senate. Wormies plans to satisfy those requirements as well as the requirements in Michigan Administrative Code Rule R 299.4121, as applicable, EGLE guidance, and MCL 324.11521. Other State requirements for this type of facility include:

- Register with the EGLE MMD.
- Conduct compost under controlled conditions.
- No compost water discharges into groundwater or surface water.
- Don't create nuisance.
- Compost material application will be done at agronomic rates.
- Inventory controls to ensure material is not kept on site for longer than is appropriate.
- Report volumes on a yearly basis.
- Annual \$600 registration fee.

Further, Wormies plans to adhere to the requirements of MCL 324.11521, even if they do not apply to Wormies' operations including:

1. Operations will be at least the following distances from each of the following features:
 - (A) 50 feet from a property line.
 - (B) 200 feet from a residence.
 - (C) 100 feet from a body of surface water, including a lake, stream, or wetland.
 - (D) 2,000 feet from a type I or type IIA water supply well.
 - (E) 800 feet from a type IIB or type III water supply well.
 - (F) 500 feet from a church or other house of worship, hospital, nursing home, licensed day care center, or school, other than a home school.
 - (G) 4 feet above groundwater.
2. Finished compost with not more than 1%, by weight, of foreign matter that will remain on a 4 millimeter screen.
3. Prevents the pooling of water by maintaining proper slopes and grades.
4. Properly manages stormwater runoff.
5. Does not attract or harbor rodents or other vectors.
6. Maintains, and makes available to EGLE, all of the following records:
 - (A) Records identifying the volume of compostable material accepted and the volume of compostable material and of compost transferred off-site each month.



(B) Records demonstrating that the composting operation is being performed in a manner that prevents nuisances and minimizes anaerobic conditions, including, unless otherwise approved by EGLE, records of carbon-to-nitrogen ratios, the amount materials received in tons or cubic yards, temperature readings, moisture content readings, and lab analysis of finished products.

Wormies is currently seeking approval from Cascade Township to develop and operate a “Medium Composting Facility” as defined in the pending legislation. This will be accomplished by amending the Township’s Zoning Ordinance to either: (1) provide that vermicompost operations fall within the definition of “agricultural;” (2) provide that properties zoned agricultural may operate a vermicompost operation with special use approval; or (3) rezone Wormies’ property to some other newly created zone in which vermiculture is permitted.

Before Wormies will renew its operations, it will register with the State and seek approval of a petition to approve its operation as proposed as well. We understand that the Planning and Zoning process will take some time and that the EGLE process should be faster as EGLE is already familiar with Wormies’ process and that is why we are starting with the Planning Commission first.

Michigan.gov released a “Composting Operation Training Guidebook”.

https://www.michigan.gov/documents/deq/deq-oea-compostoperatorguidebook_488399_7.pdf

This is one of the resources Wormies has used through its years of operation. In this guidebook composting operations are classified by capacity and sizing into three categories and recommendations are given: low, medium and high intensities. 3,000 cy annual per acre of composting material for low intensity to 8,000 cy for high intensity.

EGLE has confirmed to us that this type of facility would be allowed to have up to 1,000 cy of food waste on site in its active composting phase, a period of 3-6 months.

Wormies’ operation is below the low threshold for intensity at a maximum of 2,500 cy per year in a 13 acre property, thereby greatly diminishing the risk of nuisance.



Wormies composting site in comparison to conventional composting sites

Site biodiversity

Wormies composting operation incorporates permaculture principles to manage and regenerate the natural resources on the property. By increasing the biodiversity in the site Wormies provides a better habitat for its worms and increases the availability of beneficial organisms to work in the composting process. Through the NRCS programs WORMIES will be allocating 2 acres for pollinator habitats. Trees, shrubs and biodynamic accumulator crops will be grown on the property. This approach also helps to mitigate the risk of pests, smells and the pooling of water. Most commercial composting facilities use a bare plot and large acreage similar to a monoculture type of agriculture.

Yard clippings

Wormies does not offer composting of yard clippings. This makes the operation considerably smaller when compared to other facilities and also avoids the need for large equipment to manage the material. Also avoids traffic of vehicles onto the property.

Size of piles

Most composting facilities accumulate large amounts of feedstock in windrows over 6-8 ft tall to benefit from economies of scale. Wormies hot composting system and worm windrows have a maximum height of 4 ft. It makes it easier to manage with small equipment and mitigates the risk of anaerobic conditions that cause smells.

Wormies maximum processing capacity is targeted at 2,400 cy per year, a small amount easily manageable and with a low risk of nuisance given all the controls and protocols in place. To put it in perspective, neighboring farms in Cascade Township are allowed and do in fact have active compost piles of 5,000 cubic yards.

For your reference Country Oaks composting operation located at 3218 E Atherton Rd, Burton, MI 48529. Considered a high intensity operation, they compost 17,000 cubic yards of material per year. They have been operating for over 15 years in a residential subdivision with its closest residential neighbor less than 200 ft from their site. They use similar negative aeration technology to what Wormies uses for its active composting phase. They were recently featured in this [article](#). (See Appendix A)



Micro-hauling model

Wormies is the only company in Kent County offering a micro-hauling solution for residential collection of food waste for composting purposes. Wormies recommends that its sources provide food-preparation waste, not post consumption waste. Wormies requires that its larger sources (restaurants) provide only preparation, pre-consumption plant waste. Most composting facilities and haulers focus on hauling large quantities of material or yard waste due to their efficiencies of scale. Wormies focuses on micro-hauling of 5 gal sizes per residential customer while other composting facilities offer 30 gal or 65 gal carts per residence which can be too big for the needs of one household. On average each household produces 5 gal of food waste per week.

Vermicomposting

The utilization of worms in the composting process at Wormies is an extra step that most composting facilities do not have. Once the material is passed through the gut of the worm it's naturally neutralized and pelletized, becoming odorless and pH-neutral.

Wormies is not a monoculture of composting windrows



Wormies is not a dump site



Wormies is not a facility with large loud machinery

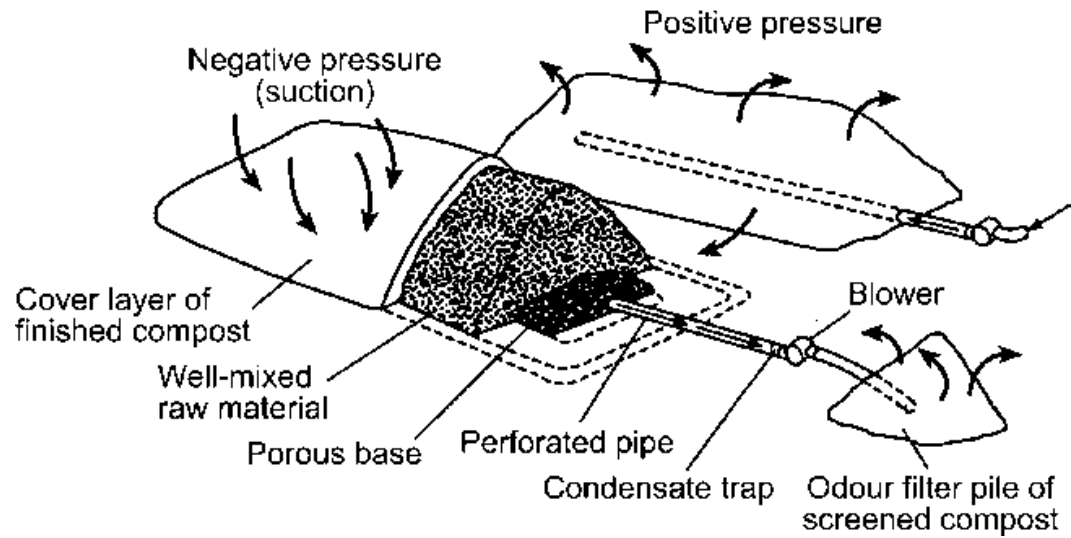


Wormies is not a facility with high volume tall windrows



Wormies composting system and technologies

1st. Thermophilic composting using ASP with negative aeration for at least 21 days.
Material is contained in enclosed bays.



2nd. Vermicomposting with worms in windrows for at least 8 months.



3. Screening and bagging equipment



Risk and Nuisance Controls

1. ASP Negative Aeration system sucks in the oxygen and any potential odors from the active piles and directs it through pipes into a carbon filter pool.
2. Active composting phase is at least 21 days. We do not turn the active piles until day 21 at least. Diminishing the risk of smells.
3. Piles are monitored daily for temperature, moisture content, particle size, oxygen content and diffusion. Ensuring aerobic conditions are present and decreasing the risk of smells.
4. Feedstock receipt protocol. On collection days we will receive between 1 to 10 cubic yards of food waste. A very small amount that allows us to manage and mix our recipe with carbon particles quickly in under 20 minutes. We do not accept or process feedstock that are already putrid or with an unmanageable foul smell. And we are able to enforce this protocol through our micro-hauling activities. We do not process large amounts of yard waste and it is not in our business model to receive large amounts of yard waste.
5. Active compost piles are located over 200 ft distance from neighboring houses. Greatly diminishing the risk of nuisance.
6. Thick vegetation buffers surround all our 2 acre composting areas. It helps to intercept and filter particulate matter that may contain odorous compounds.



7. Active composting area is sheltered and surrounded by trees, a hoophouse, and on a low surface point in the property. This greatly diminishes the risk for potential odors to travel with the wind.
8. Active piles are capped with a layer of aged or finished compost or fine aged wood chips. This prevents odors from escaping the piles.
9. Composting areas are designed with drainage so runoff water is managed to prevent odorous puddles from forming.
10. Our composting recipe consists of at least 40% carbon, that carbon is mostly woodchips, sawdust or leaves which allows for all the nitrogen sources to dissipate and adhere to the carbon particles quickly. Preventing anaerobic conditions with the risk of odor.
11. Initial active phase of composting (thermophilic) is done in bays keeping the material contained and sheltered. This diminishes the risk of pests. Though those are already deterred by the temperature that the piles reach and the insulation cap that we place on the material.
12. Wormies finished product, aka worm castings, vermicompost or worm manure is odorless. It provides no risk of nuisance in comparison to the manure of other farm livestock.
13. Wormies avoids post-consumer food waste, including animal parts (bones and meats). This decreases the risk of pests and odor nuisance.

Growth Plan

January to December 2022:

- 15 cy/month food waste collection
- Max of 200 cy of active composting material on site at a time.
- Using 20,600 sqf (½ acre) area for active and matured compost
- Develop the infrastructure for the new site will allow to increase the capacity to process value added products

January to December 2023:

- 75 cy/month food waste collection



- 1000 cy active composting on site
- Using 103,000 sqf (2.3 acres) area for active and matured compost

January to December 2024:

- Upon the success of the site we will pursue the development of a second location near Holland

Community engagement and education

Wormies is all about creating community around the idea of composting. Pickup service customers receive a share of the finished product to close the loop or they can opt to donate their share of finished compost to Wormies community garden partners.

Every growing season Wormies organizes donation events at community gardens in the area and delivers finished compost on behalf of customers. Some of the gardens and organizations Wormies has partnered with include: Mary Free Bed YMCA, Our Kitchen Table, MLK Freedom School, SECOM, Dwelling Place and many more!

Wormies offers educational workshops and events throughout the year on various topics including composting and soil health. Wormies has been part of Meijer Gardens educational programming for the past 3 years. In 2021 Wormies co-founded the 1st Michigan Compost Cup and Symposium that attracted over 75 soil nerds from all over the state.

Wormies offered consulting for Delta College, GVSU, Ada Christian School and many farms in West Michigan.

To promote awareness around composting and soil health Wormies partners with community leaders and organizations, such as Kent County Department of Public Works, West Michigan Sustainable Business Forum, Michigan Recycling Coalition, GR Public Schools, Urban Agriculture Committee, Kent County Food Policy Council, Climate Crisis Coalition, West Michigan Growers Group and others.

Current customers in Cascade Township:

6995 Bridge Water Dr SE, Sarah Klemm
802 Dogwood Meadows, Jennifer Whyte
841 Dogwood Meadows, Dale Bowman
2300 Buttrick Ave SE, Nicole Cruz



3157 Howlett Dr, SE, Rachell Babbit
3279 Hidden Hills Ct SE, Laura Vaughn
7170 Artisan Woods SE, Jessa Challa
6940 Bridgewater Dr SE, Sandy Van Brouwer
6399 Cascade Pointe Dr SE, Leslie Stolz
2300 Christine Ct SE, Kelly Bowen Burke
Thomett Stables
Mary Free Bed YMCA

Plus another dozen served through the sales of products and consulting service.

Team

Wormies continues to grow due to the commitment of a strong leadership team and our team of consultants.

Luis Chen - Founder & CEO

Certified Compost Facility Operator by the US Composting Council. Member of the Soil Food Web Institute. Former 12 year career as a forensic auditor. Board member of the West Michigan Growers Group. Board member of the Young Farmers Coalition.

Jim Yost - Development Partner

A former science teacher, specializing in environmental studies. Leads operations and compliance, biochar, and educational outreach.

Chandler Michalsky - Living Soil Director

Craft organic grower specializing in no-till and living soil methods. Oversees all soil blends operations and product innovation including bokashi and recipes for soil blends and teas.

Sarah Yost - Brand and Marketing

UX specialist and digital artist specializing in small business and non-profit branding, web design and marketing. Graduate of Boston University's Center for Digital Imaging Arts.

Consultants:

- O2 Compost
- EarthFort Labs
- NextCycle



- Start Garden
- Spring GR

Wormies proposal to Cascade Township Planning Commission

Wormies, LLC appreciates the time and consideration of the planning commission to allow Wormies to operate at 5745 Whitneyville Ave SE as an agricultural activity with its main focus on composting as a “Medium Composting Facility” based on permitting and approval from EGLE MMD. Wormies has the funding to succeed and provide an enriching experience for the neighbors and possesses the team, qualifications and experience to do so. Its composting operation is considerably low intensity compared to conventional composting operations and not limited to composting but also micro-hauling, manufacturing of soil blends, growing of biodynamic accumulators, compost tea application service, consulting and education. Wormies’ operation possesses a low risk of nuisance such as smells, noise, dust, traffic and pests.

Letters of support - See Appendix B

We hope these letters of support will help Cascade Township with their decision.

- Georgetown Township, previous landlord
- Andrew Poole, neighbor at old property
- Kent County DPW
- Kent County Food Policy Council
- Local First of West Michigan
- West Michigan Sustainable Business Forum
- Spring GR
- Jennifer Whyte, customer in Cascade
- Sandy Van Brouwer, customer in Cascade
- Kelly Burke, customer in Cascade
- Nicole Marie Cruz, customer in Cascade



Appendix A



MARCH 21, 2022 | COLLECTION, COMPOSTING, FOOD WASTE, OPERATIONS

Compost Heat Recovery Spawns Aquaponics Enterprise

The need to switch from windrows to aerated static piles to manage odors prompted Michigan landscape supply company to take advantage of the opportunity to recover heat.



RELATED POSTS

On-Site Commercial Food Waste Digester



Waste Disposal Surcharges Review



New Industry Classification For Compost



Top: Heat from the composting process warms the radiant floor in the greenhouse. Nutrients from the fish waste (tanks in background) are processed to fertilize the crops. Images courtesy of Country Oaks Landscape Supply

Nora Goldstein

Country Oaks Landscape Supply (Country Oaks) in Burton, Michigan, founded in 1987, began composting yard trimmings in the mid-2010s. The turned windrow composting operation complemented an existing mulch production facility, expanding product offerings. Mark Cherry, second generation owner of Country Oaks since 2001, took a compost operator training course to learn the fundamentals. "I was more interested in the end product than the tipping fees," he recalls. "There is not a lot of composting infrastructure in this part of the state."



Panoramic view of Country Oaks Landscape Supply, showing, from left to right, the end of the composting pad, new greenhouse, biofilter, CAHR unit, the shop and sales building, and back to the composting pad and recessed channels. Photo by Jason McCune-Sanders, Agrilab Technologies Inc.

The facility ran into odor challenges, primarily when turning piles that had become anaerobic. Odor complaints ultimately led to the municipality issuing a warning that if Country Oaks did not address the situation, its composting operation would be shut down. "I knew that to solve the problem, my best option was to switch to an aerated static pile system," notes Cherry. "I took a class on compost pile aeration at the US Composting Council Conference in 2019, as well as did a lot of research — including the option of combining aeration with compost heat recovery. I decided it made sense to go with that option, as I could use the recovered heat in a pole barn we had built for product storage and a sales office."

Cherry connected with Brian Jerose, owner of Agrilab Technologies, Inc. (AGT) in Enosburg Falls, Vermont, which designs and installs compost aeration and heat recovery (CAHR) equipment. AGT installed an AGT Compost Hot Box 250-8R unit, which has 8 compost zone intakes and vapor recirculation capability. The composting pad is 100 feet by 200 feet. "The system, which began operating in February 2020, runs on two 3-HP aeration blowers that can push or pull airflow through the pipes installed in concrete trenches in the aeration floor under each zone," explains Jerose. "When operating in the negative aeration mode, vapor comes through the pipes [ductwork], passes through a sump tank to remove condensate, and then goes into the heat exchanger. Water and glycol circulate through the heat exchanger, which capture the thermal energy in the vapor stream. That tubing connects via an underground insulated pipe to the radiant floor in the pole barn."



iq

Classification For Compost Manufacturing






The 100 foot by 200 foot, 8 zone composting pad has pipes in the trenches of the aeration zones (above). The system runs in both positive and negative aeration modes.

The recovered condensate can be used to irrigate the compost biofilter. The airflow also can operate in the positive mode to maintain a minimum of 10% oxygen in the active compost or to have hot exhaust recirculated into new compost piles to give the temperature a boost. Country Oaks starts new piles on positive aeration to build up the heat, and then switches to negative aeration. The company contracts with AGT to remotely monitor and manage the composting aeration system, including optimizing the use of positive/negative operating modes and heat recovery. Since the CAHR system was installed, the facility has not received any odor complaints.



Heat exchangers and piping inside the AGT Compost Hot Box 250-8R. Photo courtesy Agrilab Technologies, Inc.

Food Waste Collection

Country Oaks composts 10,000 to 15,000 tons/year of source separated organics, or between 30,000 to 35,000 cubic yards/year. "About 97% of incoming feedstocks are yard trimmings, and the rest is food waste that we collect from commercial generators," says Cherry. "We purchased a truck with a cart lifter, which tips the food waste into the top of the truck. All food waste is accepted, as well as soiled paper and BPI-certified compostable products. Customers are provided 32- and 64-gallon carts for their food waste. We've only been collecting and composting food waste for about 10 months so are relatively new to it."

The active aerated composting phase is about four to five weeks. The curing phase is anywhere from three to eight months. The piles are turned during curing to



Products include a wide range of soil blends, including compost-based soils for storm water management and erosion control. Country Oaks owns a Rotobagger unit (manufactured by Rotochopper) that can be used to fill sediment control socks. It also supplies mulches, compost and soil blends in bulk and in bags to area garden centers.

The CAHR has increased compost process efficiency and significantly cut diesel fuel costs, adds Cherry. "It also saves on labor. The entire process is more hands off, especially as AGT oversees aeration and heat exchanger management."

Aquaponics Venture

The ability to recover and circulate heat combined with Cherry's ongoing interest and willingness to diversify Country Oaks' offerings, led to the launch of an aquaponics enterprise in 2021. A 3,500 sq. ft. greenhouse was constructed, along with two 1,000-gallon fish tanks to raise tilapia. Cherry worked with Jim Gill, founder of Aqua Growers of Michigan, to build and manage the aquaponics system. A second heat exchanger was installed in the AGT Compost Hot Box 250-8R to recover additional thermal energy from the composting process to heat the aquaponics operation. The glycol and water tubes inside insulated Badger pipe run underground from the heat exchanger to the fish tanks. The desired temperature in the fish tanks is 73°F to 78°F; the warm air also is used to provide radiant heating in the greenhouse.



Fish waste in the tanks (rear) flows into clarifiers (center) to separate the solids from the nitrites. Microbes on floating biofilters (foreground) consume the nitrites and convert them to nitrates for the plants to absorb. Greenhouse-raised tilapia on right (inset).

The fish waste in the tanks goes through a clarifier to separate the solids from the nitrites. (The solids are removed and composted.) Microbes on a floating biofilter consume the nitrites and convert them to nitrates for the plant roots to absorb. "We are definitely on a learning curve since we started up the system last fall," notes Cherry. "The tilapia requires specific conditions to thrive, and the plants require specific nutrients to grow, so optimizing the process for both fish and plants is critical. Everything is going well. We are growing lettuce, herbs, kale, tomatoes and other plants and selling the produce to restaurants and other customers. At this

collage-1.indd



The fish waste in the tanks goes through a clarifier to separate the solids from the nitrites. (The solids are removed and composted.) Microbes on a floating biofilter consume the nitrites and convert them to nitrates for the plant roots to absorb. "We are definitely on a learning curve since we started up the system last fall," notes Cherry. "The tilapia requires specific conditions to thrive, and the plants require specific nutrients to grow, so optimizing the process for both fish and plants is critical. Everything is going well. We are growing lettuce, herbs, kale, tomatoes and other plants and selling the produce to restaurants and other customers. At this point, we do not have a market for the tilapia."

All in, Country Oaks has invested about \$500,000 in the transition from windrow composting to aerated static piles with heat recovery and the aquaponics enterprise (view process in this [video](#) on Facebook). Around \$350,000 of that amount was for the CAHR equipment, biofilter and working pad improvements. The labor, heat and fuel savings are significant, and compost and soil blends sales are strong. The CAHR system enabled the site to increase total production on a smaller physical footprint. "It's too early to gauge our return on investment," says Cherry. "But we have achieved our goal of creating a full-circle, closed loop enterprise that contributes to building healthy soils, generating renewable energy, and growing fresh food."



TAGS: [AQUAPONICS](#), [YARD TRIMMINGS](#), [ZERO WASTE](#)

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Appendix B





**KENT COUNTY
DEPARTMENT OF
PUBLIC WORKS**

April 5, 2022

2022 BOARD

Emily Brieve
Chair

Cynthia Janes
Vice Chair

Ben Greene
Secretary

David Bulkowski

Dan Burrill

Phil Skaggs

Ken Yonker

Darwin Baas
Director

Chris Noordyke, Chair
Cascade Township Planning Commission
RE: Wormies Vermicompost, Luis Chen, 5745 Whitneyville Ave SE

Chair Noordyke:

Kent County Department of Public Works is pleased to extend support to Wormies Vermicompost in their work to keep food scraps out of landfills by creating a nutrient-rich soil amendment that helps build sustainable food systems in our community. Though small in scale, their vermicompost operation is supporting Kent County DPW's goal of reducing waste going to landfill by 90% by 2030.

Wormies Vermicompost Farm is a startup that began in 2017 and has received recognition from various Economic Support Organizations (ESOs), such as Start Garden, Next Cycle and Local First, and intentionally partners with community players, such as Our Kitchen Table, to reduce waste and increase access to resources that rejuvenate soil.

Through their micro-hauler and micro-composting business model, they will collect and process up to 1,000 cubic yards of food scraps from residential and commercial customers and local farms and stables on their 13-acre parcel. Comparatively speaking, nearby farms in Cascade Township are allowed to have compost piles containing 5,000 cubic yards of organic farm wastes per acre. The entire process of hot composting and vermicomposting with worms is closely supervised by qualified staff and mostly contained in an enclosed building.

Wormies fills an important niche in Kent County with their innovative approach to turning food waste into a valuable product. We're confident that they will be a good neighbor in Cascade Township. I encourage you to thoughtfully consider Wormies Vermicompost's request to operate in Cascade Township to reduce organic waste going to landfill, replenish nutrients in the soil, and provide jobs and economic value to the local economy.

Please don't hesitate to contact me regarding this, recycling, or other subject matter related to municipal solid waste.

Darwin Baas
Director



1045 Wealthy Street SW
Grand Rapids, MI 49504

616.632.7920 tel
616.632.7925 fax
kcdpw@kentcountymi.gov
www.reimaginetrash.org



Kent County Food Policy Council

A Committee of ENTf

Cascade Township Planning Commission.
Re: 5745 Whitneyville Ave SE

April 6, 2022

To Whom This May Concern:

I write on behalf of the Kent County Food Policy Council to express our support for for Wormies Vermicompost Farm as it pursues the development of a new site in Cascade Township. Wormies makes sure that locally generated food waste is returned to the local soil through composting. Their micro-hauling and micro-composting operation significantly diverts food waste from landfills. Additionally, Wormies ensures that members of our community can learn about the waste management benefits of composting through their residential services and community outreach.

The Kent County Food Policy Council (KCFPC) formed in 2021 to inform local policy and decision makers on the current and future issues that will impact local food production, consumption, and access. We bring together residents, organizations, agencies, and businesses to strengthen and grow the local food system. Part of our food system includes food waste recovery: as food waste is a significant contributor to climate change and since soil erosion is a significant issue we face; we need actors like Wormies to show us the way to a more sustainable future.

What is most impressive about Wormies is their commitment to community benefit: this is not a business that will steamroll a community for the sake of profit. Wormies is committed to the betterment of our greater food system and is willing to put in the time to build relationships, educate the community and provide ways to participate for people who want to be engaged. We need more businesses like this.

The Kent County Food Policy Council supports Wormies Vermicompost and Luis Chen's efforts to expand their business in Kent County. We encourage you to consider their proposal to create a stronger and more resilient food system in our region.

Thank you for your consideration and we wish you well.

Warmly,



Janelle Vandergrift
Coordinator
Kent County Food Policy Council





April 5, 2022

Attention: Cascade Township Planning Commission

Dear Commissioners,

I am writing to indicate our strong support for the Wormies compost facility that will be located at 5745 Whitneyville Ave SE, an agricultural use in agricultural zoned property in Cascade Township. As an introduction, West Michigan Sustainable Business Forum works with businesses and institutions to advance business practices that promote clean energy, community resilience and the creation of a circular economy. We are the largest organization for beyond-compliance sustainability practitioners in the Midwest, and are active partners to several of the largest employers in the township.

I have some familiarity with the township's efforts to promote a high-quality of life for its residents through conservation programs, parks and community assets. These thoughtful investments and decisions have made it one of the most desirable communities in the state.

My organization works with businesses and communities throughout the region and state. We are among the state's foremost experts in composting and organics recycling, and I will note that it is not uncommon for these facilities to receive additional scrutiny from local governments. There has been a history of bad actors in Michigan, to a certain degree enabled by outdated state policy. We understand why local governments and neighbors often are hesitant to invite this use into their communities.

Problem facilities are universally composters that focus on yard waste and the larger volume municipal streams that are banned from Michigan landfills. This is the polar opposite of Wormies' business model, a boutique operation designed to thrive at a small to medium scale. It will not process yard waste and will never serve more than 2,000 homes. Unlike the yard waste processors, this company is focused on creating high-quality compost for demanding customers. This is not a waste management operation, it is a farm. The site will preserve agricultural use in a unique industry with growth potential. It will also offer educational opportunities for local youth and professionals that are not currently available in the area.

Last month I served as a judge for the NextCycle program, a start-up competition managed by Lawrence Technological University and global consulting firm RRS. We were pleased to recognize Wormies as the winner in the organics category against competition from across the country. This is an innovative and important start-up that I strongly believe will be an asset to the township and region.

I can be reached at (616) 308-4761 or dschoonmaker@wmsbf.org if you have any questions. I strongly recommend approving the application.

Daniel Schoonmaker
Executive Director

West Michigan Sustainable Business Forum • Michigan's Great Southwest Sustainable Business Forum
Michigan Sustainable Business Forum • Lakeshore Sustainability Forum
PO Box 68696 • Grand Rapids, Mich. 49516 • wmsbf.org





March 28, 2022

Dear Planning Commission at Cascade Township:

We are pleased to provide this letter in support of a new development site in Cascade Township for Wormies Vermicompost Farm. Believing that every individual deserves the opportunity to succeed, we intentionally partner with entrepreneurs and initiatives that increase access to economic mobility and build thriving communities. Our work at SpringGR (www.springgr.com) focuses on empowering primarily minority entrepreneurs to start businesses and create real profit, which strengthens our community. Wormies Vermicompost Farm, a SpringGR business, is one of those local startup companies creating economic opportunity in the greater Grand Rapids area.

In 2016, Luis Chen, founder of Wormies, participated in the SpringGR program. Here, he developed the necessary skills to bring his idea to life. Luis’s passion was to create a high-quality natural fertilizer by composting food scraps, and through the support of the SpringGR program, his idea became a strong and sustainable business. He gained an in-depth perspective of business and management and learned how to launch, organize, and scale his business. In 2017, Wormies Vermicompost Farm was officially founded as a collective effort of family, friends, and volunteers. We have since supported and followed Luis’s excellent work over the years. The company’s passion for composting is rooted in principles of sustainable and organic agriculture, which is good not only for our environment but also for our economy.

We believe local businesses are key players in our economic ecosystem—a system that exists to scale new startup companies and build a strong business community. Local businesses create enriching opportunities and add value to our community, providing healthy places for people to live, work, learn, and play. We can attest to the transformative impact small businesses like Wormies have in creating economic benefits, and we urge you to consider granting the proper permits to develop land in Cascade Township for a new site location. Approval will allow the company to expand and continue its good work.

Thank you for your consideration and support. We look forward to the benefits this will bring to the Cascade area. If you have any questions, please feel free to contact us.

Sincerely,

Jason Zylstra
VP of Philanthropy
jasonz@dvfoundations.org

Attah Obande
SpringGR Director
attah@springgr.com

Arlene Campbell
SpringGR Director
arlene@springgr.com

818 Butterworth SW, Ste. 100, Grand Rapids, MI 49504



Cascade Township
Planning Commission

To whom it may concern,

I was a neighbor to Wormies during the years they were located in Jenison, MI, from 2018-2021. My house was located about 250 feet away from their composting operation. It was a consistently positive experience. We never experienced any type of nuisance, smells, noise or pests. I did enjoy coming to visit them frequently.

Their worm farm and composting operation was clean and professional and posed no negative effects to our residential subdivision. On the contrary, as they succeeded with their business I also gained interest to grow my own garden using Wormies all natural and organic methods.

I understand Wormies has relocated to your township and is seeking a special permit to run their business. We recommend them as considerate neighbors and good stewards of the land who perform a very valuable service for our community.

Please do not hesitate to contact me if you have any questions. I will be happy to answer any further questions.

Sincerely,

Andrew Poole
1300 Elmwood Dr, Jenison MI
Phone: 616-822-8439



To the Cascade Township Planning Commission,

I've been a customer of Wormies Vermicompost since week 1 and I'm so glad a service such as theirs exists in our community. I was also very delighted to hear they had acquired a new space to operate out of and that it was in my township, Cascade Township. Wormies does so much for the environment and the community and I believe they're such a valuable and amazing enterprise. Composting has changed so much and modern composting is so helpful and unintrusive, the lives of people around them will not be impacted in a negative way by the operations of Wormies. I have my Wormies bucket out on my porch and I put the pepper food waste and they pick it up, every number of pickups they drop off compost at my door ready to use to feed my garden. As a resident of Cascade Township I love this service. I implore the Cascade Township Planning Commission to consider and support Wormies and all it has to offer for our community and our environment.

Sincerely,
Nicole Marie Cruz Flores
2300 Buttrick Ave SE, Ada MI
(616) 286-4596



To whom it may concern,

I am a current customer of Wormies and I am also a resident of Cascade Township.

I understand Wormies has relocated to our township and is seeking a special permit to run their business. We highly recommend them as an excellent business to have in our township. They are providing a solution like no one else and are good stewards of the land who perform a valuable service for our community.

Every Spring I look forward to gardening with their line of soil products, which is all organic and locally made with my own food scraps! And I very much appreciate having an environmentally responsible alternative to sending my food scraps to the landfill.

Please do not hesitate to contact me if you have any questions. We look forward to continuing our Wormies membership and are excited for all of the environmental and economic benefits they will bring to Cascade.

Sincerely,

Kelly Burke
Phone: (810) 599-1036
2300 Christine Ct. SE, Grand Rapids, MI 49546



April 8, 2022

To the attention of the Cascade Township Planning Commission,

I am writing to you as a valued Wormies customer and a longtime resident of the Ada/Cascade area to express my support for Luis Chen and the great work he is doing for our community.

It has been brought to my attention that a resident(s) is opposing Luis' compost farm. I feel there are concerns with this individual(s) due to lack of knowledge and education around composting. Not only is his farm zoned for agriculture, but Luis and his team maintain a clean environment, complying to all regulated processes and guidelines.

I believe most people think of a compost farm and have visions of a landfill. That is the furthest from the truth. We need to help educate our neighbors. His farm is no different than the nurseries in our neighborhood like Bos Farms and Koetsiers living adjacent to residential homes. The work Luis and his team do every day, enhances the structure and quality of our town's soil, creates less waste, reduces stormwater runoff and soil erosion, protects the climate, reduces methane emissions, creates jobs; supporting our local economy, and it is just simply environmentally responsible.

I fully support the work that Luis, Wormies Vermicompost, and his team are doing. Please feel free to reach out if you have any questions.

Thank you,

Sandy Van Brouwer
6940 Bridgewater Dr
Grand Rapids, MI 49546



April 4, 2022

To the attention of the Cascade Township Planning Commission,

I am writing to you as a valued Wormies customer and a longtime resident of the Ada/Cascade area to express my support for Luis Chen and the great work he is doing for our community.

It has been brought to my attention that a resident(s) is opposing Luis' compost farm. I feel there are concerns with this individual(s) due to lack of knowledge and education around composting. Not only is his farm zoned for agriculture, but Luis and his team maintain a clean environment, complying to all regulated processes and guidelines.

I believe most people think of a compost farm and have visions of a landfill. That is the furthest from the truth. We need to help educate our neighbors. His farm is no different than the nurseries in our neighborhood like Bos Farms and Koetsiers living adjacent to residential homes. The work Luis and his team do every day, enhances the structure and quality of our town's soil, creates less waste, reduces stormwater runoff and soil erosion, protects the climate, reduces methane emissions, creates jobs; supporting our local economy, and it is just simply environmentally responsible.

I fully support the work that Luis, Wormies Vermicompost, and his team are doing. Please feel free to reach out if you have any questions.

Thank you,

Jennifer Whyte
802 Dogwood Meadows Drive SE
Ada, MI 49301





111 South Division Ave NE
Grand Rapids, MI 49503
616.808.3788
localfirst.com

March 22, 2022

On behalf of Local First West Michigan, I am pleased to provide this letter of support for Wormies Vermicompost Farm as it pursues the development of a new site in Cascade Township. At Local First, our team focuses on supporting a people first economy through local ownership. We do this because communities with higher percentages of locally-owned companies are healthier by nearly every **social**, **environmental**, and **economic** indicator. Wormies Vermicompost Farm is one of those beloved local businesses helping to move the needle on local, comprehensive sustainability and, as we see it, the betterment of its community.

Wormies Vermicompost Farm is a startup that began in 2017 and has received recognition from various Economic Support Organizations (ESOs), such as Start Garden, Next Cycle and ourselves, and intentionally partners with community players, such as Our Kitchen Table, to reduce waste and increase access to resources that rejuvenate our soil. The work of Wormies invites community members to engage in the care of our common home. Wormies takes the greatest care is utilizing the best technology for organic processing and producing the highest quality soil.

Passionate, innovative local businesses like Luis' are the vehicles by which our dollars recirculate in the community, our friends and family receive job opportunities, and our local economy becomes more self-reliant. A [study](#) in partnership with [Civic Economics](#), revealed that 68% of our money stays in our community when individuals support local businesses over national brands/chains and franchises. It's also a way to reintegrate our lives and connect in practical ways with the people we live and work with.

It's my understanding that Wormies recently received an underwriting grant to develop land in Cascade Township for a new site location and is working with the township to file and obtain the proper permits. We urge you to consider the place-based and economic benefits of this medium-sized, scalable business within your community, as Luis has shown over time the value of collaboration and created enriching opportunities in the Greater Grand Rapids area through their product and service offerings. Approval of the proper permits will allow Wormies to further its impacts through community education and engagement in the township, as well as, employment opportunities.

While Local First strives to lead the development of an economy grounded in local ownership that meets the basic needs of people, builds local wealth and social capital, functions in harmony with our ecosystem, and encourages joyful community; our organization could not make this mission and vision possible without the presence of companies like Wormies Vermicompost Farms.

Please do not hesitate to contact me if you have any questions. It would be my pleasure to share my enthusiasm for Wormies' impact in the region.

Sincerely,
Kathleen Roark

Director of Engagement, Local First West Michigan
kathleen@localfirst.com





CASCADE CHARTER TOWNSHIP

5920 Tahoe Drive SE Grand Rapids, Michigan 49546-7140

Date May 15, 2023
To Brian Hilbrands
From Aric Thorne, PE
Subject Site Plan Review: Wormie's Compost Farm, 5745 Whitneyville Ave SE

I have reviewed the site plan for Wormie's Compost Farm prepared by Resource Recycling Systems and Water Stone Gardens. **The current site plan and basis of this review are dated April 18, 2023.** The applicant is proposing the construction of a soil compost site on Agricultural Rural Conservation zoned land.

Stormwater and Drainage

The proposed project is being reviewed under the 2022 Stormwater Ordinance and the criteria in the Stormwater Standards Manual revised March 2021.

The project site is in Flood Control Zone 1 and critical subwatershed Cascade Southeast. The overall layout of the site includes a 5,040-sft hoophouse, 1,200-sft enclosed pole barn, 6,784-sft asphalt pad for receiving, mixing, and pre-processing compost material, 2,849-cft lined collection basin, and 1,320-sft concrete parking area all accessible by gravel drive from Whitneyville Avenue. The proposed stormwater controls include a lined collection basin to capture water runoff contaminated by compost from an asphalt pad and a retention basin for the remaining runoff area.

Flood Control

Retention basins in Flood Control Zone 1 are required to be designed to the 100-year storm event. The applicant provided supporting calculations for sufficient design of both the lined catchment basin and retention basin. The geotechnical report provides soiling borings and test pit data in key design locations throughout the site. The report indicates that ground water was not encountered during testing. The depth of the lined catchment basin and retention basin then appear feasible. Emergency overflow routes are indicated on the plan. The lined basin overflows into the retention basin, and the basin into a natural channel draining to wetlands in the southwestern part of the site plan.

Water Quality and Channel Protection

Water quality may be provided through the retention basin. Basin design and soil data results, including the infiltration rate, are sufficiently provided to meet standard. Each basin includes minimum 1-foot of freeboard above the required storage volume and minimum 18-inches above groundwater level. Should groundwater be encountered during construction, subsequent geotechnical investigation to ensure standard adherence should be completed.

Drainage Plan

The applicant has submitted a plan sheet with drainage patterns and the location of stormwater management facilities. The peak discharges for the lined collection and retention basins are provided.

A maintenance agreement and a long-term maintenance plan are required before construction begins. The maintenance agreement and plan should include at a minimum the cleaning of pretreatment areas and the retention basin.

Utilities and General Comments

The plan drawing indicates a water well to be drilled for potable water, equipment, and composting operations. The well and required buffer is shown. No sanitary sewer or septic system will be installed on-site. The Fire Department should provide input on water tank volume for fire suppression needs.

The applicant must register the compost site through the Michigan Department of Great Lakes, Environment and Energy (EGLE). I reviewed the required setbacks EGLE specifies and the applicant appears to meet these.

The Township should acquire the Comprehensive Compost Site Management Plan (CSMP) described in the plan drawing once it is complete. I recommend that the Township requires in this plan, or through the maintenance plan, or another means, consideration in the event that operation on-site was to pause for a period of time or completely cease (e.g., cleaning and/or filling in the lined collection basin).

Soil Erosion and Sedimentation Control

The Kent County Road Commission (KCRC) must review and approve plans and issue a soil erosion and sedimentation control permit before construction may begin. No measures are shown on the plan drawing.

Summary

The proposed stormwater management design meets the Township Stormwater Ordinance requirements for the site location. I recommend approval from an engineering point of view.

Let me know if you have any questions or concerns.