A. Call to Order
B. Roll Call and Excuse Absent Members
C. Adoption of Agenda
D. Adoption of Meeting Minutes of August 13, 2019
E. New Business:
   1. Public hearing for a request for relief from the NFP slope protection standard for a project at 3825 Stadium Drive
   2. Consideration of a recommendation to the Zoning Board of Appeals to approve the NFP slope variance request from Spartan Partners Services LLC at 3825 Stadium Drive
F. Old Business:
   1. NFP Phase II community engagement
G. Board Comments
H. Citizen Comments
L. Adjourn Meeting
Minutes from the
Natural Features Protection Review Board
August 13, 2019
Regular Meeting

Community Room, Second Floor, City Hall, 241 W. South Street  4:00 p.m.

A. Meeting called to order at 4:09 PM

B. Members present: Alan Sylvester, Kyle Martin, Paul MacNellis, Ashley Cole-Wick
   Members absent: Mitch Lettow, Bobby Glasser, Erin Fuller

C. Adoption of Agenda
   Motion to approve agenda made by Alan Sylvester
   Motion supported by Kyle Martin
   Motion passed by voice vote

D. Adoption of Meeting Minutes from June 25, 2019 and July 9, 2019
   Motion to approve the minutes from the June 25 and July 9 meetings made by Paul
   MacNellis
   Motion supported by Alan Sylvester
   Motion passed by voice vote

E. New Business:

   1. Recent project meetings

      Jamie McCarthy gave the board an update on projects that had recently been
      reviewed at a Projects Meeting with the Site Plan Review staff team. On July 31 there
      was a meeting with the DNS Stadium Drive LLC project at 2231 S Drake Road and
      4301 and 4305 Stadium Drive and with the Consumers Credit Union project at 3110
      Oakland Drive. Staff provided input on site characteristics that will need additional
      work, including modification required to meet NFP standards.

   2. MNFI prescreening

      Jamie gave an update about the City working with the Michigan Natural Features
      Inventory (MNFI) team to develop a prescreening tool that staff can use to initially
      evaluate parcels in the NFP Overlay District. The tool will provide data on a parcel-
      by-parcel basis to screen out parcels that are not near known locations of rare or
      endangered species and natural communities.

   3. NFP Phase 2

      Jamie announced that the NFP Board has the opportunity to work with a graduate
      student at Western Michigan University during an internship this fall. Nolan
Bergstrom is in the Masters Degree program in the Department of Geography focusing on Community and Regional Planning. He will begin attending NFP board meetings in September to assist in Phase 2 of the NFP Overlay District development.

Board members provided input into the scope of work for the internship. The board was interested in Nolan comparing the existing NFP Overlay District against available datasets (GIS mapping analysis); evaluating the NFP development standards against cases that come to the board during this internship and provide any recommended amendments to the standards; and performing community engagement to understand residents’ priorities in protecting natural features.

F. Old Business
   1. NFP checklist

      The board received a copy of the most recent version of the NFP checklist. For cases coming forward, applicants will be required to complete the checklist and submit all supporting documents as part of their NPF site plan review application. Any recommendations for edits should be submitted to Jamie.

G. Board Comments

H. Citizen Comments

L. Meeting was adjourned at 5:15 PM
Project Address: 3825 Stadium Drive
Meeting Date: September 24, 2019

Applicant: Spartan Partners Services, LLC
Owner: Spartan Partners Services, LLC

Public Hearing: Yes
Notice Date: September 10, 2019

Summary:
Spartan Partners Services, LLC is proposing to construct a 4,000 square foot medical marihuana provisioning center on the parcel located at 3825 Stadium Drive. The site currently has a residential single-dwelling unit that would be demolished to build an improved driveway, upgraded utilities, retail provisioning center, and parking lot.

Details:

Property Size:
1.345 acres

Description of Current Use of Property:
The existing structure is an unoccupied residential single-dwelling unit.

Location and Current Zoning District:
The parcel is zoned CC (Commercial – Community).

Project Description:
The current owner has been authorized at the state and city levels to operate a medical marihuana provisioning center at the parcel location. The site must be redeveloped from a single-dwelling residential site into a commercial provisioning center. The owner’s consultant has been working with the city staff since the NFP moratorium was lifted in June 2019. The proposed conceptual site plan was reviewed by the Site Plan Review Team on August 14, 2019. During this meeting staff and consultant discussed the setback requirement for the water main that runs along the western parcel boundary from north to south. Staff also discussed the woodland survey, MNFI rare species survey, and the slope on the site.

To accommodate the 4,000 square foot commercial building, parking standards, water main setback, and delivery security requirements the site plan has been modified several
times. The most recent conceptual plan is shown in the attached document. This plan requires a variance from the NFP slope protection standard.

Review Criteria:
Site Plans must meet all City ordinances and regulations. According to Chapter 50 of the Zoning Code, relief from the NFP Overlay District standards may be granted when all of the following are satisfied: (1) the parcel cannot be used reasonably used for its zoned use, (2) the minimum amount of relief is requested to permit reasonable use, and (3) the granted relief will not cause substantial detriment to the public good and/or substantially impair the intent and purpose of the NFP Overlay District.

Recommendation:
The Planning Division requests that the NFP Review Board review the variance request and provide a recommendation to the Zoning Board of Appeals. Based on the review by the Planning Division, staff support the request for a variance.

Attachments:
1. NFP Review Checklist
2. Conceptual Site Plan
3. Woodland Assessment Report
4. MNFI Rare Species Review Letter and On-site Survey Report
5. Variance Application
## SECTION I. PROJECT AND APPLICANT INFORMATION

Please provide the project and applicant information requested below. Include the date of your regular site plan review meeting, if one has been scheduled or already taken place.

<table>
<thead>
<tr>
<th>APPLICANT NAME:</th>
<th>Spartan Partners Services, LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant Address:</td>
<td>14208 Lakeside Blvd. N.</td>
</tr>
<tr>
<td></td>
<td>(number) (street name)</td>
</tr>
<tr>
<td></td>
<td>Shelby Twp. MI 48315</td>
</tr>
<tr>
<td></td>
<td>(city) (state) (zip)</td>
</tr>
<tr>
<td>APPLICANT EMAIL:</td>
<td><a href="mailto:AFakhouri@plunkettcooney.com">AFakhouri@plunkettcooney.com</a></td>
</tr>
<tr>
<td>PHONE:</td>
<td>(248) 767-8466</td>
</tr>
<tr>
<td>PARCEL ADDRESS/PIN:</td>
<td>06-30-256-001</td>
</tr>
<tr>
<td>PROJECT DESCRIPTION:</td>
<td>Proposed 4,000 SF Provisioning Center.</td>
</tr>
<tr>
<td>OWNER NAME:</td>
<td>Spartan Partners Properties, LLC</td>
</tr>
<tr>
<td>(If different)</td>
<td>(first) (last)</td>
</tr>
<tr>
<td>DATE OF REGULAR SITE PLAN REVIEW:</td>
<td>11/20 (Tentative)</td>
</tr>
</tbody>
</table>

### NFP APPLICATION REQUIRED?

<table>
<thead>
<tr>
<th>Is the project limited to interior work only with no exterior ground changes or increase in impervious coverage?</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
</tr>
<tr>
<td>NO</td>
</tr>
</tbody>
</table>

By signing below, the applicant certifies that no natural features will be disturbed as part of this project.

Print name: ________________________________

Signature: ________________________________ Date: ________________
SECTION II. PRESENCE OF NATURAL FEATURES

Use this section to assist in determining if review and approval by the NFP Review Board must be completed as part of the site plan review process. Regardless of NFP review, regular site plan review will still be necessary. Contact the NFP staff liaison with questions regarding the NFP review process at mccarthyja@kalamazoocity.org or (269) 337-8789.

If you have questions about regular site plan review, contact the Community Planning & Economic Development Department at (269) 337-8044.

<table>
<thead>
<tr>
<th>NATURAL FEATURES QUESTIONNAIRE</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Are there wetlands on the parcel?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2) Are there water resources on the parcel (e.g., rivers, lakes, streams, ponds)?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>3) If YES to question 2, check waterbody type and list name (if known)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Lake □ River/stream □ Pond □ Drain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name(s): ________________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Are there water resources along the parcel boundary or within 25 feet of the parcel boundary?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><em>If YES, setback from water resource may apply</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Will any trees be taken down as part of this project?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>6) Will site regrading, cut/fill, or construction of retaining walls be done to address grade changes on the parcel?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7) Are there any natural areas on the parcel (e.g., ground cover such as woodlands, open fields, areas with shrubs or brush, i.e. spaces not kept as mowed lawn or ornamental landscape/garden areas)?</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

喢 If you answered NO to all of the questions 1-7, skip to Section IV.

喢 If you answered YES to any of the questions 1-7, continue to Section III.
SECTION III. NFP SITE PLAN CHECKLIST

Complete the checklist below and provide all information relevant to the project as an attachment to the full site plan packet. Indicate the page number where the NFP item can be found in the appropriate column. If you checked “no” to certain NFP items in questions 1-7 in Section II, write “N/A” on the checklist. Only columns in blue need to be filled in.

The proposed NFP site plan must show both existing natural features and proposed alterations to those features. For example:

- Site work, balancing, and grading plans
- New and existing structures
- New and existing paved areas
- New or modified utilities (both above and below ground)
- Removal of or modifications to natural features

<table>
<thead>
<tr>
<th>WETLANDS</th>
<th>Required</th>
<th>Included on page</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Include the boundary of wetlands on the parcel and mark the required setbacks on the site plan. Include copy of EGLE permit for work in any State-regulated wetland.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WATER RESOURCES</th>
<th>Required</th>
<th>Included on page</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Include the location of all water resources on the parcel and those within 25 feet of the parcel boundaries.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show the required setback(s), describe the existing ground cover within the setback(s), and any changes to ground cover.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide a vegetated buffer plan, if required.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TREES</th>
<th>Required</th>
<th>Included on page</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Mark the location of all “protected” trees that are proposed to be removed.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Include documentation of each species name, size (DBH and height), and condition of “protected” trees that are proposed to be removed.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Include justification for removal (retaining all “protected” trees is a priority). Provide the replacement tree calculations with a list of replacement tree species including caliper size and planting location.</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SLOPES

<table>
<thead>
<tr>
<th>Required</th>
<th>Included on page #</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>C-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Provide a slope analysis that shows the boundaries of all “protected” slopes and mark the required setback(s).
- Denote which feature is present on the slope that makes it a “protected” slope (e.g., wooded, within 500 ft of water resource, etc.).

### WOODLANDS

<table>
<thead>
<tr>
<th>Required</th>
<th>Included on page #</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>C-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Delineate the boundary of all woodlands on the parcel and where the woodland system extends onto adjacent parcels.
- If woodlands will be cleared, include a woodland ecosystem assessment that describes condition and species composition.
- Mark parts of the woodland that will be retained and removed (i.e., cleared), include the percent acreage calculations to meet the preservation standard.
- Include justification for removal of the part of the woodland that will be cleared.

### NATURAL HERITAGE AREAS

<table>
<thead>
<tr>
<th>Required</th>
<th>Included on page #</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>See Attached Tree Survey</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Include the results of a Phase I MNFI rare species review. *(Phase I review can be done at no cost by contacting the NFP staff liaison).*
- If Phase I triggered a Phase II MNFI rare species review, attach the results of this review to your site plan.
- If rare species are found on the parcel from an on-site survey, provide protection and/or mitigation plans as required under state and federal law.
SECTION IV. GENERAL NFP SITE PLAN ELEMENTS

All applicants must complete the checklist below, including some applicants in the NFP Overlay District that do not have natural features present on the parcel. These standards are required to protect natural features in close proximity to the parcel.

Complete the checklist and attach the required documentation as part of your NFP application.

<table>
<thead>
<tr>
<th>IMPERVIOUS COVERAGE</th>
<th>Required</th>
<th>Included on page #:</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide the calculation of both the proposed percentage of impervious and semi-pervious coverage on the parcel.</td>
<td>Yes</td>
<td>C-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark areas on the NFP site plan that will remain undisturbed or include a justification and/or restoration plan, if applicable.</td>
<td>Yes</td>
<td>C-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIRED LANDSCAPING</th>
<th>Required</th>
<th>Included on page #:</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include a list of landscaping plants that will be planted to satisfy the requirements under the zoning code. For NFP parcels this required landscaping must be Michigan native species.</td>
<td>Yes</td>
<td>C-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STORMWATER MANAGEMENT</th>
<th>Required</th>
<th>Included on page #:</th>
<th>Approved</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark the location of all existing and proposed stormwater management structures and systems on the site plan.</td>
<td>Yes</td>
<td>C-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If there is any change (increase or decrease) of stormwater generated from the parcel, include:</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFP Stormwater Standard 1: Water Quality Treatment Volume Worksheet</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFP Stormwater Standard 2: Channel Protection Volume Worksheet</td>
<td>No</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Once you have completed the checklists in Sections III and IV and attached the necessary site plan map(s) and documentation, your NFP site plan review packet is complete.

You can schedule a review meeting with the NFP Review Board by contacting the NFP staff liaison. See Section V for the meeting schedule, contact information, and deadlines.
SECTION V. NFP REVIEW BOARD MEETING SCHEDULE

The NFP Review Board holds meetings on the second and fourth Wednesdays of each month. The meetings begin at 4:00 PM in the Community Room at City Hall, 241 W South Street, Kalamazoo 49007. All meetings are open to the public. Notice of any cancelations or change to the meeting will be posted at City Hall no later than 18 hours before the regularly scheduled meeting.

To be added to the NFP Review Board meeting agenda, a full site plan review packet and all required checklists must be received by the NFP staff liaison eight (8) days prior to the regularly scheduled meeting.

CONTACT INFORMATION:

Email: mccarthyja@kalamazoocity.org
Mail: 415 Stockbridge Ave, Kalamazoo, MI 49001
Phone: (269) 337-8789

<table>
<thead>
<tr>
<th>2019 ANNUAL MEETING SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 9, 2019</td>
</tr>
<tr>
<td>August 13, 2019</td>
</tr>
<tr>
<td>September 10, 2019</td>
</tr>
<tr>
<td>October 8, 2019</td>
</tr>
<tr>
<td>November 12, 2019</td>
</tr>
<tr>
<td>December 10, 2019</td>
</tr>
</tbody>
</table>
NATURAL FEATURES PROTECTION
SITE PLANS
FOR
3825 STADIUM DRIVE
PROPOSED PROVISIONING CENTER

PARCEL ID: 06-30-256-001
3825 STADIUM DRIVE
THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN

PLAN REFERENCE MATERIALS:
1. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDED BUT NOT LIMITED TO:
   TOPOGRAPHIC SURVEY PREPARED BY KEM-TEC & ASSOCIATES DATED 09/03/2019
   TREE SURVEY PREPARED BY DAVEY RESOURCE GROUP DATED 08/05/2019
   RARE SPECIES REVIEW PREPARED BY MICHIGAN NATURAL FEATURES INVENTORY DATED 07/22/2019
   ON SITE RARE SPECIES ASSESSMENT PREPARED BY MICHIGAN NATURAL FEATURES INVENTORY DATED 09/03/2019
   AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO
   LOCATION MAP OBTAINED FROM USGS ONLINE MAPS
   TAX MAP OBTAINED FROM CITY OF KALAMAZOO GIS
   ZONING MAP OBTAINED FROM CITY OF KALAMAZOO GIS

2. ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

STONEFIELD engineering & design
Detroit, MI · New York, NY · Rutherford, NJ
Princeton, NJ · Tampa, FL · Boston, MA
www.stonefieldeng.com
607 Shelby Street, Suite 200, Detroit, MI 48226
Phone 248.247.1115

Know what's below
Call before you dig.
LOCATION MAP
SCALE 1" = 300'
PROJECT BUILDINGS

REVIEWED/APPROVED

LOCATION

ALL FILL MATERIALS BROUGHT TO THE SITE.

SUMP

FOLLOWS:

RESPONSIBLE

STONEFIELD

DISPOSED

STABILITY OF THE SURROUNDING SOILS.

V:\M\2018\M-18413-TERRA CAPITAL INDUSTRIES-3825 STADIUM DRIVE, KALAMAZOO, MI\CADD\PLOT\SDP-03-DRNG.DWG

POST-DEVELOPMENT DRAINAGE MAP

PRE-DEVELOPMENT DRAINAGE MAP

DRAWING:

SCALE:

LICENSED PROFESSIONAL ENGINEER

MICHIGAN LICENSE No. 6201065336

TOTAL AREA SF = 26,216

LANDSCAPE AREAS SF = 26,216

IMPERVIOUS AREAS 0

BUILDING COVERAGE SF = 0

AREA D-300

PROPOSED PROVISIONING THE CITY OF KALAMAZOO 3825 STADIUM DRIVE

PARCEL ID: 06-30-256-001

DISTURBANCE WOODLAND

LIMIT OF WOODLAND DISTURBANCE

TOTAL AREA SF = 50,561

LANDSCAPE AREAS SF = 50,561

IMPERVIOUS AREAS 0

BUILDING COVERAGE SF = 0

AREA D-200

DETENTION SYSTEM CATCH BASIN STORMWATER

PROPOSED AREA FOR PROPOSED FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

APPROVAL WITH SYSTEM SEWER STORM PUBLIC TO DISCHARGES UTILIZED, ARE PUMPS IF CODE

AND UTILIZED BASEMENT THE THE STRUCTURE. IF GROUNDWATER IS THE AT DEPTH DETERMINE TO

OF PROJECTS FOR PROPOSED, ARE PROPOSED, ARE ALL BUILDINGS WHERE PROJECTS FOR 6.
OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.

SEED.

ELEVATION

CONSTRUCTION.

MINIMUM 3 INCH LAYER OF MULCH.
PROPOSED PROVISIONING CENTER

10 FT SLOPE SETBACK

AREA OF PROTECTED SLOPES >20%

PRIVATE DRIVE

LIMITS OF IDENTIFIED WOODLANDS

V: M: 2018: M-18413- TERRA CAPITAL INDUSTRIES- 3825 STADIUM DRIVE, KALAMAZOO, MI

CADD: PLOT: SDP-05-NFP.DWG

ISSUE DATE

DESCRIPTION

NOT APPROVED FOR CONSTRUCTION

SITE DEVELOPMENT PLANS

THE CITY OF KALAMAZOO

3825 STADIUM DRIVE

PARCEL ID: 06-30-256-001

Detroit, MI · New York, NY · Rutherford, NJ

Princeton, NJ · Tampa, FL · Boston, MA

www.stonefieldeng.com

JAKE A. MODESTOW, P.E.

MICHIGAN LICENSE No. 6201065336

LICENSED PROFESSIONAL ENGINEER

607 Shelby Street, Suite 200, Detroit, MI 48226

Phone 248.247.1115

GRAPHIC SCALE IN FEET

SYMBOL

DESCRIPTION

PROTECTED SLOPES

NATURAL FEATURE STANDARDS: SLOPES

CODE SECTION

REQUIRED

PROPOSED

H.1.a

SLOPES PROTECTED:

GRADES >20% WITH A SLOPE FACE

CONTAINING A WOODLAND AND SLOPES EXTENDING TO ADJACENT PARCELS

H.3.a

SLOPE SETBACK:

0 FT (V)

THE HEIGHT OF THE SLOPE OR 10 FT FROM TOP AND TOE OF SLOPE (WHICH IS GREATER)

REQUIRED SETBACK:

10 FT (V)

(*) VARIANCE TO BE REQUESTED

SURFACE WATER SHALL NOT BE DIRECTED TOWARD ANY REGULATED SLOPE

STORMWATER BMPS ARE NOT PERMITTED WITHIN THE SLOPE FACE OR SETBACKS

NO UNDERGROUND UTILITIES MAY BE PLACED WITHIN THE SLOPE FACE OR SETBACKS
August 5, 2019

Ms. Erin McMachan  
Stonefield Engineering  
607 Shelby Street, Suite #200,  
Detroit, Michigan 48226  

RE: Tree Study 3825 Stadium Drive, Kalamazoo, Michigan  

Dear Ms. McMachan:  

This letter is in reference to a tree study that Davey Resource Group “DRG” recently prepared for you regarding a property at 3825 Stadium Drive in Kalamazoo, Michigan. The inspections were performed on July 30, 2019. The study provides details pertaining to the trees identified on site.

Three main tasks were completed on site in regards to this project. First, data points were taken at property corners and other ground control points within the study area to accurately line up the data collected to the mapping that was provided to DRG (Attachment 1). Second, all trees 24” and greater measured at diameter at breast height (DBH) were recorded within and near the project boundaries (Table 1). Lastly, three fixed area plots were randomly established within the site. A count of stems greater than 2” at DBH were recorded for all species within the plots (Table 2).

When the fixed area plots were established on site, one of the plots fell slightly outside of the study area boundaries. This happened due to the mapping being slightly off on the field GPS unit. The ground control points were collected to account for this error when doing data processing but when identifying the study area on site, it proved difficult to follow the GPS unit. Data collected in the fixed area plot came to an average of 13.67 stems per plot which comes out to an estimate of 273.33 stems per acre.

The woodland on this property extends well outside of the study area on the West and East sides. The southern border of the woodland is adjacent to the parking lot of the neighboring property. Within the study area, the woodland occupies 1.2 acres. To the north, the woodland opens up to a non-wooded area where the existing house is located. This non-wooded area extends outside of the study area. Within the study area the woodland occupies 0.1 acre.
### Table 1. Fixed Area Plot Data

<table>
<thead>
<tr>
<th>Plot Number</th>
<th>Species</th>
<th>Count</th>
<th>Considered for stems per acre calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Lonicera</em> spp.</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td><em>Frangula cathartica</em></td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td><em>Acer saccharum</em></td>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td><em>Prunus serotina</em></td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td><em>Prunus serotina</em></td>
<td>11</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td><em>Quercus velutina</em></td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td><em>Carya glabra</em></td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td><em>Carya glabra</em></td>
<td>8</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td><em>Lonicera</em> spp.</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td><em>Quercus velutina</em></td>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td><em>Quercus rubra</em></td>
<td>4</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Table 2. Trees ≥24” DBH

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Species Name</th>
<th>DBH</th>
<th>Condition</th>
<th>Tree Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>white oak</td>
<td><em>Quercus alba</em></td>
<td>34.0</td>
<td>Fair</td>
<td>1.0</td>
</tr>
<tr>
<td>white oak</td>
<td><em>Quercus alba</em></td>
<td>29.0</td>
<td>Fair</td>
<td>2.0</td>
</tr>
<tr>
<td>white oak</td>
<td><em>Quercus alba</em></td>
<td>33.0</td>
<td>Good</td>
<td>3.0</td>
</tr>
<tr>
<td>black oak</td>
<td><em>Quercus velutina</em></td>
<td>29.0</td>
<td>Fair</td>
<td>4.0</td>
</tr>
<tr>
<td>black oak</td>
<td><em>Quercus velutina</em></td>
<td>39.0</td>
<td>Fair</td>
<td>5.0</td>
</tr>
<tr>
<td>pignut hickory</td>
<td><em>Carya glabra</em></td>
<td>33.0</td>
<td>Good</td>
<td>6.0</td>
</tr>
<tr>
<td>Dead</td>
<td><em>Dead</em></td>
<td>32.0</td>
<td>Dead</td>
<td>7.0</td>
</tr>
<tr>
<td>black oak</td>
<td><em>Quercus velutina</em></td>
<td>45.0</td>
<td>Fair</td>
<td>8.0</td>
</tr>
<tr>
<td>black oak</td>
<td><em>Quercus velutina</em></td>
<td>24.0</td>
<td>Good</td>
<td>9.0</td>
</tr>
<tr>
<td>black oak</td>
<td><em>Quercus velutina</em></td>
<td>28.0</td>
<td>Fair</td>
<td>10.0</td>
</tr>
<tr>
<td>black cherry</td>
<td><em>Prunus serotina</em></td>
<td>34.0</td>
<td>Fair</td>
<td>11.0</td>
</tr>
<tr>
<td>eastern cottonwood</td>
<td><em>Populus deltoides</em></td>
<td>25.0</td>
<td>Good</td>
<td>12.0</td>
</tr>
</tbody>
</table>
Thank you for the opportunity to work with you on this project. Should you have any questions, please feel free to call me at 248-520-6740 or Lee Mueller at 248-221-0439.

Sincerely,

Scott Larson
Scott Larson
Site Manager
ISA Certified Arborist MI-4418A
Attachment 1
Tree Assessment Map

Non-woodland
(Open area 0.1 acre)

- = Tree plot location and 26.3-foot radius
- = Approximate study area (1.3 acres)
- = Tree location and ID
- = Woodland (woodland area is 1.2 acres)

Non-woodland
(Open area 0.1 acre)
Ms. Erin McMachen
Stonefield Engineering & Design LLC
607 Shelby Street – Suite 200
Detroit, MI 48226

Re: Rare Species Review #2428 – Commercial Development Project, 3825 Stadium Drive, Kalamazoo, Kalamazoo County, MI (T02S, R11W Section 30).

Ms. McMachen:

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan’s endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a particular site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, “a person shall not take, possess, transport, ...fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened,” unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.

Several rare natural features have been documented within 1.5 miles of the project site and it is possible that rare natural features will be adversely affected. Keep in mind that MNFI cannot fully evaluate this project without visiting the project site. MNFI offers several levels of Rare Species Reviews, including field surveys which I would be happy to discuss with you.

Sincerely,

Michael A. Sanders

Michael A. Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory
Comments for Rare Species Review #2428: It is important to note that it is the applicant’s responsibility to comply with both state and federal threatened and endangered species legislation. Therefore, if a state listed species occurs at a project site, and you think you need an endangered species permit please contact: Casey Reitz, Michigan DNR Wildlife Division, 517-284-6210, or ReitzC@michigan.gov. If a federally listed species is involved and, you think a permit is needed, please contact Carrie Tansy, Endangered Species Program, U.S. Fish and Wildlife Service, East Lansing office, 517-351-8375, or Carrie_Tansy@fws.gov.

Special concern species and natural communities are not protected under endangered species legislation, but efforts should be taken to minimize any or all impacts. Species classified as special concern are species whose numbers are getting smaller in the state. If these species continue to decline they would be recommended for reclassification to threatened or endangered status.

Please consult MNFI’s Rare Species Explorer for additional information regarding the table below.

Table 1: Occurrences of threatened & endangered species within 1.5 miles of RSR #2428

<table>
<thead>
<tr>
<th>ELCAT</th>
<th>SNAME</th>
<th>SCOMNAME</th>
<th>USESA</th>
<th>SPROT</th>
<th>G_RANK</th>
<th>S_RANK</th>
<th>FIRSTOBS</th>
<th>LASTOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal</td>
<td>Clemmys guttata</td>
<td>Spotted turtle</td>
<td>T</td>
<td>G5</td>
<td>S2</td>
<td></td>
<td>1958</td>
<td>1958-04-21</td>
</tr>
<tr>
<td>Plant</td>
<td>Eryngium yuccifolium</td>
<td>Rattlesnake-master or button snakeroat</td>
<td>T</td>
<td>G5</td>
<td>S2</td>
<td></td>
<td>1979</td>
<td>1979-10-31</td>
</tr>
<tr>
<td>Plant</td>
<td>Silphium integrifolium</td>
<td>Rosinweed</td>
<td>T</td>
<td>G5</td>
<td>S2</td>
<td></td>
<td>1979</td>
<td>1983-07-28</td>
</tr>
<tr>
<td>Plant</td>
<td>Dichanthelium leibergii</td>
<td>Leiberg's panic grass</td>
<td>T</td>
<td>G4</td>
<td>S2</td>
<td></td>
<td>1926</td>
<td>1997</td>
</tr>
<tr>
<td>Plant</td>
<td>Digitalis elata</td>
<td>Starry campanon</td>
<td>T</td>
<td>G5</td>
<td>S2</td>
<td></td>
<td>1983</td>
<td>1983-07-28</td>
</tr>
<tr>
<td>Plant</td>
<td>Silphium laciniatut</td>
<td>Compass plant</td>
<td>T</td>
<td>G5</td>
<td>S152</td>
<td></td>
<td>1970</td>
<td>1980-06-16</td>
</tr>
<tr>
<td>Plant</td>
<td>Eryngium yuccifolium</td>
<td>Rattlesnake-master or button snakeroat</td>
<td>T</td>
<td>G5</td>
<td>S2</td>
<td></td>
<td>1980</td>
<td>1980-06-16</td>
</tr>
<tr>
<td>Plant</td>
<td>Silene stellata</td>
<td>Starry campanon</td>
<td>T</td>
<td>G5</td>
<td>S2</td>
<td></td>
<td>1947</td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td>Zizania aquatica</td>
<td>Wild rice</td>
<td>T</td>
<td>G5</td>
<td>S253</td>
<td></td>
<td>2005</td>
<td>2005-09-15</td>
</tr>
<tr>
<td>Plant</td>
<td>Bouteloua curtipendula</td>
<td>Side-oats grama grass</td>
<td>E</td>
<td>G5</td>
<td>S1</td>
<td></td>
<td>2005</td>
<td>2005-11-16</td>
</tr>
<tr>
<td>Plant</td>
<td>Besseya bullii</td>
<td>Kitten-tails</td>
<td>E</td>
<td>G3</td>
<td>S1</td>
<td></td>
<td>1932</td>
<td>1932-05-20</td>
</tr>
<tr>
<td>Plant</td>
<td>Spirantechus ovialis</td>
<td>Lesser ladies'-tresses</td>
<td>T</td>
<td>G5?</td>
<td>S1</td>
<td></td>
<td>2015</td>
<td>2016-09-22</td>
</tr>
</tbody>
</table>

Comments for Table 1:

Rosinweed – the state threatened (ST) rosinweed (Silphium integrifolium) has been known to occur in the area. Rosinweed occurs in prairie remnants along roads and railroad tracks or in cemeteries, in wet-mesic prairies and fens on peaty mucks and loams, and on dry-mesic to mesic loams and sandy loams. Associates include big bluestem, little bluestem, cordgrass, prairie coreopsis, wild geranium, and pale-leaved sunflower. Survey period is from early July to late September.

Management and Conservation: much of this habitat type has been lost or severely degraded. Many prairie remnants are vulnerable to common right-of-way maintenance activities such as mowing, herbiciding, and bulldozing.

Eastern massasauga rattlesnake - the federally threatened (LT) and state special concern (SC) Eastern massasauga rattlesnake (Sistrurus catenatus) has been known to occur in the area. Michigan’s only venomous snake is found in a variety of wetland habitats including bogs, fens, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. Eastern massasaugas occur throughout the Lower
Peninsula but are not found in the Upper Peninsula. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are better known from lowland coniferous forests, such as cedar swamps. These snakes normally overwinter in crayfish or small mammal burrows often close to the groundwater level and emerge in spring as water levels rise. During late spring, these snakes move into adjacent uplands they spend the warmer months foraging in shrubby fields and grasslands in search of mice and voles, their favorite food.

Often described as “shy and sluggish”, these snakes avoid human confrontation and are not prone to strike, preferring to leave the area when they are threatened. However, like any wild animal, they will protect themselves from anything they see as a potential predator. Their short fangs can easily puncture skin and they do possess potent venom. Like many snakes, the first human reaction may be to kill the snake, but it is important to remember that all snakes play vital roles in the ecosystem. Some may eat harmful insects. Others like the massasauga consider rodents a delicacy and help control their population. Snakes are also a part of a larger food web and can provide food to eagles, herons, and several mammals.

Management and Conservation: any sightings of these snakes should be reported to the Michigan Department of Natural Resources, Wildlife Division. If possible, a photo of the live snake is also recommended.

**Rattlesnake-master or button snakeroot** – the state threatened (ST) rattlesnake-master (*Eryngium yuccifolium*) has been known to occur in the area. This plant occurs in sedge and grass-dominated portions of prairie fen complexes, including thickets along stream drainages. Also found in sandy soils and wet prairies in former oak savannas and oak barrens, often occurring in small remnants along power lines and railroad rights-of-way. The species likely occurred historically in a variety of prairie and savanna habitats. Plant associates include sensitive fern, golden-alexanders, white camass, Culver’s root, and rosinweed. Survey period is from early July to late September.

Management and Conservation: maintain openings through use of prescribed fire, which will reduce vigorous woody plant competition.

**Side-oats grama grass** – the state endangered (SE) side-oats grama grass (*Bouteloua curtipendula*) has been known to occur in the area. Side-oats grama grass inhabits dry, sandy hillside prairies or open oak woodlands. This perennial, rhizomatous grass flowers in August. It produces fruit in late August and September, after which the spikelets fall. Associates include white oak, black oak, lupine, little bluestem, needle grass, kitten-tails and sassafras.

Management and Conservation: the species requires the maintenance of the savanna community. Brush removal and prescribed burns are recommended, since sites tend to heavily brush in without natural disturbance regime. Most examples of these sites are small and becoming degraded through further landscape fragmentation and lack of management.

**Lesser ladies’-tresses** – the state threatened (ST) lesser ladies’-tresses (*Spiranthes ovalis*) has been known to occur in the area. This species is one of the few forest dwelling ladies’-tresses, but it is also adapted to successional communities and appears to do well in some disturbed communities. Oval ladies’-tresses inhabits moist woods and bottomlands, along with old fields and pastures. It is a perennial species that flowers in late September and October. Only three locations for oval ladies’-tresses are known from Michigan, two of which are in Kalamazoo County. Associates include big bluestem, little bluestem, cordgrass, prairie coreopsis, wild geranium, and pale-leaved sunflower.

Management and Conservation: much of this habitat type has been lost or severely degraded. Many prairie remnants are vulnerable to common right-of-way maintenance activities such as mowing, herbiciding, and bulldozing.
Table 2: Occurrences of special concern species & other natural features within 1.5 miles of RSR #2428

<table>
<thead>
<tr>
<th>ELCAT</th>
<th>SNAME</th>
<th>SCOMNAME</th>
<th>USESA</th>
<th>SPROT</th>
<th>G_RANK</th>
<th>S_RANK</th>
<th>FIRSTOBS</th>
<th>LASTOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal</td>
<td>Terrapene carolina carolina</td>
<td>Eastern box turtle</td>
<td>SC</td>
<td>G5T5</td>
<td>S2S3</td>
<td>1978</td>
<td>1978-06-21</td>
<td></td>
</tr>
<tr>
<td>Animal</td>
<td>Sistrurus catenatus</td>
<td>Eastern massasauga</td>
<td>LT</td>
<td>SC</td>
<td>G3</td>
<td>S3</td>
<td>1993</td>
<td>2004</td>
</tr>
<tr>
<td>Plant</td>
<td>Baptisia lactea</td>
<td>White or prairie false indigo</td>
<td>SC</td>
<td>G4Q</td>
<td>S3</td>
<td>1978</td>
<td>1978</td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td>Linum sulcatum</td>
<td>Furrowed flax</td>
<td>SC</td>
<td>G5</td>
<td>S2S3</td>
<td>1838</td>
<td>1838-08-01</td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td>Sporobolus heterolepis</td>
<td>Prairie dropseed</td>
<td>SC</td>
<td>G5</td>
<td>S3</td>
<td>1940</td>
<td>1940-08-01</td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td>Angelica venenosa</td>
<td>Hairy angelica</td>
<td>SC</td>
<td>G5</td>
<td>S3</td>
<td>2009-08-07</td>
<td>2009-08-07</td>
<td></td>
</tr>
</tbody>
</table>

Comments for Table 2:

**Eastern box turtle** - the state special concern (SC) Eastern box turtle (*Terrapene carolina carolina*) has been known to occur close to the project site. The Eastern box turtle is Michigan’s only truly terrestrial turtle. This species typically prefers deciduous or mixed woodlands, especially those with sandy soils. They also utilize adjacent thickets, old fields, pastures, vegetated dunes, marshes, and bog edges. Access to water (e.g. small ponds, seepages, springs, bogs, or slow streams) is important, as is the availability of unshaded nesting sites.

As a species of special concern, the Eastern box turtle is not protected under state or federal endangered species legislation, but it is becoming rare throughout its range and it is protected under the authority of the Department of Natural Resources Director’s Order, Regulations on the Take of Reptiles and Amphibians, dated October 12, 2001 (section 324 of PA 451).

Eastern box turtles are active from late April to late October and breeding typically occurs from late May to mid-October. Home ranges can be as large as 40 acres. Many box turtles are killed on roads and collected as pets each year. These turtles are diurnal and most active in spring and fall. During the summer they may have brief activity in the morning or falling rain, but otherwise spend much time buried in leaf litter, shallow burrows, under brush piles or rotting logs. Hibernation occurs most frequently in burrows or under leaf litter, less often submerged in a pond or stream.

Box turtles consume a wide variety of plant and animal foods with a taste for raspberries or blackberries. Most box turtles remain in a rather small home range (often less than 5 acres) for most of their lives. Nesting takes place in June and early July, with eggs being buried in an open, often elevated location. Hatchlings emerge in September and October.

**Management and Conservation:** management recommendations include protection of forests. Loss of wooded habitat to various human uses is the most serious threat to the species. Conservation efforts should concentrate on protecting large tracts of habitat especially on public land to provide the box turtle additional protection from the effects of development. Wetland hydrology and quality should be maintained by preventing improper off-road vehicle use, implementing minimum development set-back distances, leaving buffer zones during timber harvest, grazing and agricultural operations, minimizing use of herbicides and pesticides in or near wetlands, and/or controlling invasive plants. Upland nesting areas should be identified, protected and in some cases created. Construction of new roads should be minimized or routed to avoid separating foraging and/or overwintering habitat from nesting areas. Finally, the public should be educated about the laws protecting
reptiles and amphibians and encouraged to leave wild turtles in their natural habitats rather than collecting them for pets.

**Hairy angelica** – the state special concern (SC) hairy angelica (*Angelica venenosa*) plant has been known to occur in the area. Hairy angelica inhabits upland woods, especially oak woods; also known from thickets, sandy open ground, and prairie-like areas. Hairy angelica flowers from July to September. Associates include white oak, black oak, pignut hickory, sassafras and black cherry.

**Management and Conservation:** this species likely requires disturbance such as prescribed fire to maintain openings. Soil disturbance also may be needed.
**Codes to accompany Tables:**

**State Protection Status Code Definitions (SPROT)**
E: Endangered  
T: Threatened  
SC: Special concern

**Federal Protection Status Code Definitions (USESA)**
LE = listed endangered  
LT = listed threatened  
LELT = partly listed endangered and partly listed threatened  
PDL = proposed delist  
E(S/A) = endangered based on similarities/appearance  
PS = partial status (federally listed in only part of its range)  
C = species being considered for federal status

**Global Heritage Status Rank Definitions (GRANK)**
The priority assigned by NatureServe's national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.
G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3: Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.
G4: Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5: Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
Q: Taxonomy uncertain

**State Heritage Status Rank Definitions (SRANK)**
The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.
S1: Critically imperiled in the state because of extreme rarity (5 of fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.
S2: Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.
S3: Rare or uncommon in state (on the order of 21 to 100 occurrences).
S4 = apparently secure in state, with many occurrences.
S5 = demonstrably secure in state and essentially ineradicable under present conditions.
SX = apparently extirpated from state.
Rare Species and Natural Features Assessment
Stonefield Engineering & Design, LLC
3825 Stadium Drive Commercial Development Site
Kalamazoo County, MI
Draft Report of September 3, 2019

Introduction

In August 2019, Michigan Natural Features Inventory (MNFI) contracted with Stonefield Engineering & Design, LLC (Stonefield) to conduct a rare species and natural features assessment of a 1.33-acre parcel located at 3825 Stadium Drive, Kalamazoo, Kalamazoo County, MI (T02S, R11W Section 30). The proposed project involves a 4,000 square foot commercial building with parking areas. MNFI assessed the project site to determine the presence or potential habitat for the following species: the federally threatened (LT) and state special concern (SC) eastern massasauga rattlesnake (*Sistrurus catenatus*), the ST rosinweed (*Silphium integrifolium*), the ST rattlesnake master (*Eryngium yuccifolium*), the state endangered (SE) side-oats gramma grass (*Bouteloua curtipendula*), the ST lesser ladies’s-tresses (*Spiranthes ovalis*), the state SC hairy angelica (*Angelica venenosa*), and the state SC eastern box turtle (*Terrapene carolina carolina*). MNFI also recorded observations of any rare species encountered during our survey. This report summarizes the methods and findings of our assessment.

Methods

We performed a visual search of the project site on August 28, 2019 to determine if the 1.33-acre parcel contains suitable habitat and could support the target species. The survey (i.e., random meander search) consisted of two MNFI biologists walking through the project site. The survey date occurred within a window with a reasonable possibility to observe all target species, and to accurately assess the suitability of habitat for target animal species.

The parcel has two portions, a building footprint with an existing single-family house in the north, and woodland sloping toward the south. The area around the house is comprised primarily of lawn and landscaping and contains little to no potential habitat for any at-risk species. The woodland, a disturbed dry-mesic southern forest (oak-hickory) contains a mixture of native and non-native vegetation, but is largely in a natural state, so theoretically could provide habitat for at-risk species. The historical right-of-way of the Fruitbelt Railroad is adjacent to the southern boundary of the property. Many railroad rights-of-way, both current and historical, harbor relictual prairie and savanna habitats, and at-risk species associated with these habitats. A more detailed description of the vegetation is found under the heading, “Plant Surveys.”

The LT and SC eastern massasauga rattlesnake is Michigan’s only venomous snake and occurs in a variety of wetland habitats including bogs, fens, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. Eastern massasaugas occur throughout the Lower Peninsula but are not found in the Upper Peninsula. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are better known from lowland coniferous forests, such as cedar swamps. These snakes normally overwinter in crayfish or small mammal burrows often close to the groundwater level and emerge in spring as water levels rise. During late spring, these snakes move into adjacent uplands they spend the warmer months foraging in shrubby fields and grasslands in search of mice and voles, their favorite food.
The ST rosinweed is a rare plant that occurs in prairie remnants along roads and railroad tracks or in cemeteries. Associates include big bluestem, little bluestem, cordgrass, prairie coreopsis, wild geranium, and pale-leaved sunflower. The recommended survey period is from early July to late September. Rosinweed likely requires natural disturbances associated with prairie habitat such as a fire to prevent woody plant encroachment. Many prairie remnants are susceptible to common maintenance activities such as mowing and bulldozing.

The ST rattlesnake-master is a rare plant typically found in sandy soils and wet prairies in former oak savannas and oak barrens, often occurring in small remnants along power lines and railroad rights-of-way. The species likely occurred historically in a variety of prairie and savanna habitats. Plant associates include sensitive fern, golden-alexanders, white camass, Culver’s root, and rosinweed. The survey window is from early July to late September. This species likely requires natural disturbances associated with prairie habitat such as a fire to prevent woody plant encroachment.

The SE side-oats grama grass inhabits dry, sandy hillside prairies or open oak woodlands. This perennial, rhizomatous grass flowers in August. It produces fruit in late August and September, after which the spikelets fall. Plant associates include white oak, black oak, lupine, little bluestem, needle grass, kitten-tails and sassafras. This species requires maintenance of the savanna community through brush removal and prescribed burning, as suitable habitat is reduced through the natural succession process. Most examples of these sites are small and becoming degraded through further landscape fragmentation and lack of management.

The ST lesser ladies’-tresses is one of the few forest dwelling ladies’-tresses, but it is also adapted to successional communities and appears to do well in some disturbed communities. This small orchid inhabits moist woods and bottomlands, along with old fields and pastures. It is a perennial species that flowers in late September and October. Almost 50% of the known occurrences from Michigan are in Kalamazoo County. Plant associates include big bluestem, little bluestem, cordgrass, prairie coreopsis, wild geranium, and pale-leaved sunflower. Much of the habitat for this species has been lost or severely degraded.

The state SC hairy angelica inhabits upland woods, especially oak woods; also known from thickets, sandy open ground, and prairie-like areas. Hairy angelica flowers from July to September. Plant associates include white oak, black oak, pignut hickory, sassafras and black cherry. This species likely requires disturbance such as prescribed fires to maintain suitable open habitat conditions.

The state SC eastern box turtle is Michigan’s only truly terrestrial turtle and typically prefers deciduous or mixed woodlands, especially those with sandy soils. They also utilize adjacent thickets, old fields, pastures, vegetated dunes, marshes, and bog edges. Access to water (e.g. small ponds, seepages, springs, bogs, or slow streams) is important, as is the availability of unshaded nesting sites.

Eastern box turtles are active from late April to late October and breeding typically occurs from late May to mid-October. Eastern box turtles are diurnal and most active in spring and fall. During the summer they may have brief activity in the morning or during falling rain showers, but otherwise spend much time buried in leaf litter, shallow burrows, under brush piles or rotting logs. Eastern box turtles consume a wide variety of plant and animal foods with a taste for raspberries and blackberries. Most eastern box turtles remain in a rather small home range (often less than 5 acres) for most of their lives, but home ranges up to 50 acres have been reported. Nesting takes place in June and early July, with eggs being buried in an open, often elevated location. Hatchlings emerge in September and October. Hibernation occurs most frequently in burrows or under leaf litter, less often submerged in a pond or stream.
Findings

Animal Surveys

While eastern massasaugas are associated with wetland habitats, they do require drier areas for basking, foraging and other aspects of their life cycle (Lee 2017). The upland habitat contains some dry, south-facing slopes and could support eastern massasaugas during the active season, but the site appears isolated from the surrounding wetlands needed for the active and non-active seasons. Therefore, it is unlikely that the commercial development will negatively impact eastern massasaugas as the project area and surrounding wetlands do not provide suitable habitat and/or unlikely to support this species.

The site and surrounding area could support the eastern box turtle. With home ranges of up to 40 acres, this species could potentially access the site. There are some brush piles and leaf litter available for cover and thermoregulation. It is possible that the commercial development will negatively impact eastern box turtles. As a species of special concern, eastern box turtles are not protected under state or federal endangered species legislation, but they are becoming rare throughout its range and it is protected under the authority of the Department of Natural Resources Director’s Order, Regulations on the Take of Reptiles and Amphibians, dated October 12, 2001 (section 324 of PA 451).

Although not targeted in this survey, there appears to be suitable summer roost habitat for the federally endangered and SE Indiana bat (Myotis sodalis) and the LT and state SC northern long-eared bat (M. septentrionalis). Indiana bats are found only in the eastern United States and are typically confined to the southern three tiers of counties in Michigan. Indiana bats that summer in Michigan winter in caves in Indiana and Kentucky. Indiana bats typically avoid houses or other artificial structures and have been known to roost underneath loose bark of oak and hickory species. In Michigan, northern long-eared bats hibernate in abandoned mines and caves in the Upper Peninsula, migrating southward in summer. Northern long-eared bats typically roost and forage in forested areas. During the summer, these bats roost singly or in colonies underneath bark, in cavities or in crevices of both living trees and dead trees, where they give birth. These bats seem to select roost trees based on suitability to retain bark or provide cavities or crevices.

Although we did not confirm the presence of either bat species at the location, we encourage you to conduct tree-cutting activities during October 1 through March 31 when possible, but you are not required by the Endangered Species Act to do so. When that is not possible, we encourage you to remove trees prior to June 1 or after July 31, as that will help to protect young bats that may be in forested areas but are not yet able to fly.

Plant Surveys

The parcel contains a small woodland along the south-facing slope in the south of the property. The woodland associated with this parcel comprises a small portion of a larger patch of woodland, when considered in the context of adjacent parcels. The description of the vegetation here, and the potential to support at-risk plant species is limited to the parcel at 3285 Stadium Drive.

The woodland contained many native species, particularly in the canopy, but was overall very disturbed and low-quality. The canopy was dominated by black oak (Quercus velutina), with codominant species including pignut hickory (Carya glabra) and wild black cherry (Prunus serotina). These are typical
dominant species of dry-mesic southern forest (oak-hickory) in Michigan. However, the understory was dominated by disturbance-adapted, invasive shrubs such as honeysuckles (Lonicera maackii, L. morrowii), common buckthorn (Rhamnus cathartica), and common privet (Ligustrum vulgare). The ground layer was very disturbed by trampling from excessive foot traffic, with limited vegetation.

No at-risk plant species were observed during the survey. The potential for this parcel to support any of the target plant species is low. All of the target species, which are generally associated with prairie and savanna habitats, require greater light availability than was observed at the site. Occasionally, prairie and savanna species occur on the edges of woodlands, particularly along the margins of historical rail beds, yet we did not observe any of the target species along the edges either. The target species are all generally associated with less disturbed habitats, with the exception of lesser ladies-tresses.

Acknowledgements

This project was supported by an agreement with Stonefield Engineering & Design, LLC and we thank Erin McMachen of Stonefield for her efforts. Additionally, we would like to thank Ashley Adkins and Nancy Tobin for providing administrative support and Rebecca Rogers and Kraig Korroch for technical assistance.

List of plant species observed

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Physiognomy</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromus inermis</td>
<td>smooth brome</td>
<td>grass</td>
<td>perennial</td>
</tr>
<tr>
<td>Carex pensylvanica</td>
<td>sedge</td>
<td>sedge</td>
<td>perennial</td>
</tr>
<tr>
<td>Carya glabra</td>
<td>pignut hickory</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Catalpa speciosa</td>
<td>northern catalpa</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Centaurea stoebe</td>
<td>spotted knapweed</td>
<td>forb</td>
<td>biennial</td>
</tr>
<tr>
<td>Desmodium marilandicum</td>
<td>small-leaved tick-trefoil</td>
<td>forb</td>
<td>perennial</td>
</tr>
<tr>
<td>Dichanthelium oligosanthes</td>
<td>panic grass</td>
<td>grass</td>
<td>perennial</td>
</tr>
<tr>
<td>Geum canadense</td>
<td>white avens</td>
<td>forb</td>
<td>perennial</td>
</tr>
<tr>
<td>Hypericum perforatum</td>
<td>common st. johns-wort</td>
<td>forb</td>
<td>perennial</td>
</tr>
<tr>
<td>Juglans nigra</td>
<td>black walnut</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Ligustrum vulgare</td>
<td>common privet</td>
<td>shrub</td>
<td>perennial</td>
</tr>
<tr>
<td>Lonicera maackii</td>
<td>amur honeysuckle</td>
<td>shrub</td>
<td>perennial</td>
</tr>
<tr>
<td>Lonicera morrowii</td>
<td>morrow honeysuckle</td>
<td>shrub</td>
<td>perennial</td>
</tr>
<tr>
<td>Parthenocissus quinquefolia</td>
<td>virginia creeper</td>
<td>vine</td>
<td>perennial</td>
</tr>
<tr>
<td>Poa pratensis</td>
<td>kentucky bluegrass</td>
<td>grass</td>
<td>perennial</td>
</tr>
<tr>
<td>Prunus serotina</td>
<td>wild black cherry</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Quercus alba</td>
<td>white oak</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Quercus velutina</td>
<td>black oak</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Rhamnus cathartica</td>
<td>common buckthorn</td>
<td>tree</td>
<td>perennial</td>
</tr>
<tr>
<td>Sanicula odorata</td>
<td>black snakeroot</td>
<td>forb</td>
<td>perennial</td>
</tr>
<tr>
<td>Sporobolus cryptandrus</td>
<td>sand dropseed</td>
<td>grass</td>
<td>perennial</td>
</tr>
</tbody>
</table>
September 12, 2019

Peter Eldridge
City of Kalamazoo - Community Planning & Development
415 Stockbridge
Kalamazoo, MI 49001

RE: Zoning Board of Appeals Approval
Proposed Provisioning Center
PARCEL ID: 06-30-256-001
3825 Stadium Drive
City of Kalamazoo, Kalamazoo County, MI

Peter:

Stonefield Engineering & Design, LLC is pleased to submit documents for Zoning Board of Appeals Approval for the above referenced property. A total of three (3) variances are being requested:

1. **§ 50-6.2.H.1** Encroachment into protected slopes
   a. Slopes greater than 20% are to be protected. These slopes account for approximately 0.40 acres of the site – running the width of the Northern most (front) portion of the site.

2. **§ 50-6.2.H.3** Encroachment into protected slope setbacks
   a. A 10’ setback is required from the top and toe of all protected slopes. The proposed development encroaches each side of the protected slope setbacks.

3. **§ 7-4** Off-premises sign
   a. The site is located on a private drive and does not have frontage on Stadium Drive. An off-premises sign is required and being requested to adequately direct traffic from Stadium Drive to the site. The existing gas station sign located 4’ from the right-of-way is proposed to be refurbished and reused.

Please find the following items enclosed for review:

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>DATED</th>
<th>COPIES</th>
<th>PREPARED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Development Plans</td>
<td>09-12-19</td>
<td>1</td>
<td>Stonefield Engineering &amp; Design, LLC</td>
</tr>
<tr>
<td>A check for $275.00 (Sent via USPS)</td>
<td>09-12-19</td>
<td>1</td>
<td>Spartan Partners Services, LLC</td>
</tr>
</tbody>
</table>

Should you have any questions, please do not hesitate to contact our office.

Best regards,

Erin McMachen
emcmachen@stonefieldeng.com
Stonefield Engineering and Design, LLC
1. ZBA applications are available from the Community Planning & Development Department, 8:00 a.m. to 4:30 p.m., Monday through Friday, or on-line at http://www.kalamazoocity.org/applications-forms-and-permits.

2. Applications consist of the Application Guidelines, Application Form, and Variance Requirements List(s).

3. Any public agency or interested person may make a written request to the ZBA for an interpretation, use, non-use, or temporary use variance.

4. Applications should be submitted to the Community Planning & Development Department.

5. It is the applicant’s responsibility to ensure that the application is complete. An incomplete application may require additional staff review time.

6. The application will be forwarded to members of the ZBA for a public hearing.

7. The application must be received by the Community Planning & Development Department at least four (4) weeks prior to the ZBA meeting.

8. ZBA meetings are held the second Thursday of every month, beginning at 7:00 p.m. in the City Commission Chambers, 241 W. South Street, 2nd Floor.

9. A notice of the public hearing must be mailed to the property owners and occupants within three hundred (300) feet of the subject property not less than fifteen (15) days before the public hearing.

10. The applicant will receive a notice of the public hearing in the mail, and is expected to attend the meeting.

11. The ZBA has final authority on the granting of a use, non-use or temporary use variance.

12. It is the applicant’s responsibility to review the appropriate sections of the Zoning Ordinance.
Zoning Board of Appeals (ZBA) Application Form
Community Planning & Development Department
415 Stockbridge
Kalamazoo, MI 49001
Phone: 269-337-8026
www.kalamazoocity.org

Your fully completed application, fee, and all related documents must be submitted to the Community Planning & Development Department at least four (4) weeks prior to the Zoning Board of Appeals meeting.

Applicant: Name Spartan Partners Services, LLC
Address 14208 Lakeside Blvd. N.
City, State, Zip Shelby Twp, MI, 48315
Phone 248-361-0012 Cell N/A
Fax N/A Email AFakhouri@plunkettcooney.com

Owner: Name Spartan Partners Properties, LLC
Address 14208 Lakeside Blvd. N.
City, State, Zip Shelby Twp, MI, 48315
Phone 248-361-0012 Cell N/A
Fax N/A Email AFakhouri@plunkettcooney.com

(if the applicant is not the property owner, a letter signed by the owner agreeing to the variance must be included with the application.)

Property Information
Street or Street Address 3825 Stadium Drive
This property is located between S Drake Road street and Howard street, on the
north X south east X west side of the street.
CCN# PID: 06-30-256-001 Zone CC - Community Commercial District

Type of Request
[ ] Interpretation of Chapter(s) ___________________________ Sections(s) ___________________________
Paragraph(s) ___________________________ of the City of Kalamazoo Zoning Ordinance.

[ ] Use Variance: Applicant must demonstrate that if the Zoning Ordinance is applied strictly, unnecessary hardship to the applicant will result. All Use Variance Requirements must be met. (See Requirements List.)

[X] Dimensional Variance: Applicant must demonstrate that if the Zoning Ordinance is applied strictly, practical difficulties to the applicant will result. All Dimensional Variance Requirements must be met. (See Requirements List.)

[ ] Appeal of an Administrative Decision

Description Requesting a dimensional variance for the proposed development encroaching on protected slope and into the required slope setbacks. Requesting a variance for an off-premises sign.

Attachments
[X] $ 275 Fee (Sent via USPS 9/12)
[X] Brief narrative (less than one type-written page) describing the nature of the request (2 copies)
[X] Sketch plan of the property in questions (2 copies)
[ ] Additional attachments as needed e.g. (pictures, architectural drawings, petitions, etc. (2 copies)

Signature of Applicant ___________________________ Date 9/12/2019

Signature of Owner (if different than applicant) ___________________________ Date ___________________________
Use Variance

When granting any variance, the Zoning Board of Appeals must ensure that the spirit of the ordinance is observed, public safety secured and substantial justice done. The Board shall approve a Use Variance on a finding there is competent, material, and substantial evidence in the record that all of the following standards are met:

1. The literal interpretation and enforcement of the terms and provisions of this Ordinance would deprive the applicant for all practical purposes from using the property for a permitted use identified in Sec. 4.1: Use Table, which is a right commonly enjoyed by other land in the same zone district.

2. There is unnecessary hardship based on special circumstances or conditions that are peculiar to the land or structure for which the use variance is sought that is not applicable to other land or structures in the same zone district.

3. The special circumstances are not the result of the actions of the applicant.

4. The granting of the variance is the minimum action that will make possible the use of the land or structure that is not contrary to the public interest, and that would carry out the spirit of this Ordinance.

5. The granting of the variance will not adversely affect adjacent land in a material way.

6. The granting of the variance will be generally consistent with the purposes and intent of this Ordinance.
Dimensional Variance

When granting any variance, the Zoning Board of Appeals must ensure that the spirit of the ordinance is observed, public safety secured and substantial justice done. The Board shall approve a Dimensional Variance on a finding there is competent, material, and substantial evidence in the record that all of the following standards are met:

1. There are special circumstances or conditions (like exceptional topographic conditions, narrowness, shallowness, or the shape of property) that are peculiar to the land or structure for which the variance is sought, that is not applicable to other land or structures in the same zone district.

2. The special circumstances are not the result of the actions of the applicant or titleholder of the land.

3. The literal interpretation and enforcement of the terms and provisions of this Ordinance would deprive the applicant of rights commonly enjoyed by other land in the same zone district, and would cause practical difficulty.

4. The granting of the variance is the minimum action that will make possible the use of the land or structure that is not contrary to the public interest, and that would carry out the spirit of this Ordinance.

5. The granting of the variance will not adversely affect adjacent land in a material way.

6. The granting of the variance will be generally consistent with the purposes and intent of this Ordinance.

7. Where the requested dimensional variance involves required landscaping, the Zoning Board of Appeals may grant a variance upon the following additional criteria:

   a. Existing landscaping, screening or wetlands intended to be preserved meets the intent of this section.

   b. The landscape design proposed by the applicant meets the intent of this section.

   c. There is a steep change in topography that would limit the benefits of required landscaping.

   d. The proposed building and parking lot placement is setback well beyond the minimum required.

   e. The abutting or adjacent land is developed or will be developed in the near future with a use other than residential.

   f. Similar conditions to the above exist such that no good purpose would be served by providing the landscaping or screening required.