



GOODHUE COUNTY MINNESOTA

TO EFFECTIVELY PROMOTE THE SAFETY, HEALTH, AND WELL-BEING OF OUR RESIDENTS

Goodhue County Planning Commission
Government Center - Board Room
509 West 5th St, Red Wing MN 55066

Call Meeting To Order

Approval Of Current Agenda

Approval Of Previous Month's Meeting Minutes

1. October 21, 2019 Meeting Minutes

Documents:

[MINUTES_OCTOBER2019_PAC.PDF](#)

Conflict/Disclosure Of Interests

Public Hearings:

1. PUBLIC HEARING: Request For Map Amendment (Rezone) - Thomforde

Request for map amendment, submitted by Larry Thomforde (Buyer) and the Goodhue County Agricultural Society (Owner), to rezone 1.10 acres from A3 (Urban Fringe District) to R1 (Suburban Residence District). Parcel 38.025.0200. 44279 CTY 6 BLVD, Zumbrota, MN 55992. Part of the NE ¼ of section 25 Twp 110 Range 16 in Minneola Township.

Documents:

[PACPACKET_REZONE_THOMFORDE.PDF](#)

2. PUBLIC HEARING: "Sugarloaf Estates First Addition" Preliminary/Final Plat Review

Request, submitted by Larry Thomforde (Buyer/Owner), for Preliminary and Final Plat review of the proposed Sugarloaf Estates First Addition to expand an existing parcel by approximately 1.10 acres. Parcels 38.105.0030 and 38.025.0200. 17468 Sugarloaf Parkway, Zumbrota, MN 55992. Lot 3 Block 1 of the Sugar Loaf Estates plat located in the NW ¼ and NE ¼ of section 25 Twp 110 Range 16 in Minneola Township.

Documents:

[PACPACKET_PLAT_THOMFORDE_REDACTED.PDF](#)

3. PUBLIC HEARING: Request For Map Amendment (Rezone) - Krueger

Request for map amendment, submitted by Jason Krueger (buyer) and Mark Braaten (owner), to rezone 5.0 acres from A3 (Urban Fringe District) to R1 (Suburban Residence District). Parcel 40.035.2200. 16632 515th Street, Pine Island, MN 55963. Part of the W ¼ of the E ½ of the NW ¼ of the SE ¼ of Sect 35 Twp 109 Range 16 in Roscoe Township.

Documents:

[PACPACKET_KRUEGER.PDF](#)

4. PUBLIC HEARING: CUP Request For Feedlot Expansion And Liquid Manure Storage Exceeding 500,000 Gallons (Buck)

Request for CUP amendment, submitted by David & Ann Buck (Owner/Operators), for an estimated 777 Animal Unit expansion of an existing 998 Animal Unit dairy Feedlot and construction of animal waste

storage pit exceeding 500,000 gallons. Parcel 33.019.0400. 37298 180th Ave, Goodhue, MN 55027. NW ¼ of Sect 19 Twp 111 Range 15 in Goodhue Township. A1 Zoned District.

Documents:

[PACPACKET_BUCK.PDF](#)

5. PUBLIC HEARING: CUP Request To Elevate A Structure Within A Floodplain By Means Other Than Fill Request submitted by James Plehal (Owner) to elevate a proposed storage building above the base flood elevation of a Floodplain area by means of foundational walls. Parcel 43.210.0840. 27882 Greens Point RD, Red Wing, MN 55066. Lot 14, Block 6 of Wacouta Beach Plat located in Sect 32 Twp 113, Range 13 in Wacouta Township. R1 Zoned District.

Documents:

[PACPACKET_PLEHAL.PDF](#)

6. PUBLIC HEARING: Request For Map Amendment (Rezone)
Request for map amendment, submitted by Goodhue County Land Use Management Department, to rezone approximately 87.69 acres from A1 (Agricultural Protection District) to PT (Parks and Trails District). Parcels 36.180.0010, 36.150.0090 and 36.130.0010. TBD Goodhue Avenue, Kenyon, MN 55946. Part of W ½ of section 7 Twp 110 Range 18 in Kenyon Township.

Documents:

[PACPACKET_KENYON_PARK.PDF](#)

Other-Discussion

Adjourn

Anyone interested is invited to attend. Agenda items may be subject to change.

Goodhue County Land Use Management

◆ Goodhue County Government Center ◆ 509 West Fifth Street ◆ Red Wing ◆ Minnesota ◆ 55066 ◆
◆ Building ◆ Planning ◆ Zoning ◆ Telephone: 651/385-3104 ◆ Fax: 651/385-3106 ◆

**PLANNING COMMISSION
GOODHUE COUNTY, MN
October 21st, 2019 MEETING MINUTES
DRAFT**

The meeting of the Goodhue County Planning Advisory Commission was called to order at 7:00 PM by Vice-Chair Tom Gale at the Goodhue County Government Center 3rd Floor Board Room in Red Wing, Minnesota.

Roll Call

Commissioners Present: Darwin Fox, Richard (Dick) Nystuen, Tom Gale, Barney Nesseth, Richard Miller, Howard Stenerson and Marc Huneke (Arrived at 7:07 PM)

Commissioners Absent: Sarah Pettit and Tom Drazkowski

Staff Present: Land Use Director Lisa Hanni, Zoning Assistant Ryan Bechel, Zoning Assistant Samantha Pierret

1. Approval of Agenda

¹Motion by Commissioner Miller; seconded by Commissioner Fox to approve the meeting agenda.

Motion carried 6:0.

2. Approval of Minutes

²Motion by Commissioner Nystuen; seconded by Commissioner Miller to approve the previous month's meeting minutes.

Motion carried 6:0.

3. Conflict/Disclosure of Interest

There were no conflicts or disclosures of interest reported.

4. Public Hearings

TABLED: Request for Map Amendment (Rezone)

Request for a map amendment, submitted by Colleen and Douglas Hill (Owners), to rezone 15.23 acres from A3 (Urban Fringe District) to R1 (Suburban Residence District). Parcel 31.001.4300. 1790 Bluebird Lane, Red Wing, MN 55066. Part of the NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sect 01 Twp 112 R15 in Featherstone Township.

Bechel presented the staff report and attachments.

Commissioner Stenerson questioned what the plan for annexation into the City of Red Wing is for this property.

Amy Anderson (Attorney for the Applicants) stated that the Applicant has not approached the City of Red Wing regarding formal annexation at this time. She added that the Applicant is focused on rezoning the property on the agenda but the letter included in the packet was to address any concerns the City may have. She noted that the parcel on the agenda is not proposed to be annexed.

Commissioner Stenerson asked for clarification that the two parcels on Pioneer Road are not proposed to be rezoned.

Staff confirmed that the only parcel proposed for rezoning is the larger parcel.

Commissioner Stenerson questioned why the two parcels are proposed to be annexed but not

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the larger parcel.

Ms. Anderson commented that there may be a waterway running through the parcels on Pioneer Road which may be part of the City's watershed. She added it would be hard to develop that area without negatively impacting the watershed.

Bechel gave a history on the project proposal, detailing conversations between the Applicant, the City of Red Wing and Goodhue County officials regarding access to the property and the proposed number of lots.

Commissioner Stenerson commented on the Township's struggles with small residential developments and their sewer systems. He added that the Township would not want to be responsible for utilities to these areas and noted that he would prefer to see this property be annexed into the City of Red Wing.

³It was moved by Commissioner Stenerson and seconded by Commissioner Nystuen for the Planning Advisory Commission to:

- Adopt the staff report into the record;
- Accept the application, testimony, exhibits and other evidence presented into the record; and

Recommend that the County Board of Commissioners **APPROVE** the map amendment request from Colleen Hill (Property Owner) to rezone parcel 31.001.4300 from A3 (Urban Fringe District) to R1 (Suburban Residence District).

Motion carried 7:0.

PUBLIC HEARING: CUP Request for Feedlot Expansion and Liquid Manure Storage Exceeding 500,000 Gallons (Circle K Family Farms)

Request for CUP amendment, submitted by Circle K Family Farms (owner/operators), for an estimated 815 Animal Unit expansion of an existing 2059 Animal Unit swine Feedlot and construction of animal waste storage pits exceeding 500,000 gallons. Parcel 26.011.0501. 35559 CTY 45 BLVD, Lake City, MN 55041. Part of the S ½ of the NW ¼ and the N ½ of the SW ¼ of Sect 11 Twp 111 R14 in Belvidere Township. A2 Zoned District.

Bechel presented the staff report and attachments.

Commissioner Nesseth questioned whether there would be more truck traffic on the road.

Yon Kohlnhofer (Applicant) stated that they would not be adding additional grain storage at the site therefore they will not make more tonnage that leaves the farm as more tonnage will be needed on the farm. He added that the majority of the manure that leaves the site leaves in a drag line system and they hope to continue that process to limit traffic. He noted they are weaning only two times per week instead of three times per week which takes away one truck. He noted that they understand there is truck traffic created by the farm.

Commissioner Stenerson commented on the proposed manure storage capacity and questioned at what point the local land capacity would no longer be able to handle that capacity.

Yon stated that the capacity of the storage facility is over-exaggerated because it is measured from bottom to top however the manure has to stay below the slats and beams so the animals are not standing in manure. He added there is a point that a farm could create more manure than it can handle with a hose, however they are not near that point.

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Vice Chair Gale opened the Public Hearing.

Kristi Rosenquist (42883 220th Ave Mazeppa, MN) stated she would ask for two additional conditions for the permit. The first would be that the Applicants be responsible for dust control on the road noting that in the fall there can be up to 100 semis per day on the road creating a lot of dust. She stated that 90-95% of the truck traffic on the road is from the Applicants' farming operation. The second condition would be to require that the Applicants notify neighbors when they will agitate and pump out the system. She spoke about MPCA permitting requirements and notification requirements.

Kandi Duffing (35785 CTY 45 BLVD, Lake City, MN) agreed with Ms. Rosenquist's statements and added that over the past weekend a semi drove past her property every four minutes. She added that they have paid for half of the chloriding of the road in the past and she would like to see the road chlorided to 385th Street. She stated that many other people are opposed to this operation. She stated her concerns regarding the amount of water the farm uses and she would like to be notified when they pump out and spread the manure.

Commissioner Gale questioned the distance the Applicants should notify people and who should be notified, those around the farm when it is agitated or property owners in the areas where the manure will be spread.

Ms. Duffing stated she would like to be notified when they will be agitating and spreading.

Commissioner Gale questioned the distance the Applicants should notify neighbors at.

Ms. Rosenquist stated the notification area for a CUP hearing may suffice, 5,000 feet.

Staff noted that CUP public hearings "neighbor notices" are provided to all neighbors within a ¼ mile distance of the proposal provided there is a minimum of 10 unique landowners notified. Bechel explained the notification procedures.

Ms. Duffing added that the traffic will increase due to this project and the semis drive fast down the road.

Marie Tipcke (1928 Gadiant Place, Red Wing, MN) stated her land abuts the Applicants' and she wanted to know the location of the new structures however she has no objections to the project.

Bechel reviewed a map provided depicting the proposed structure locations.

4 After Vice Chair Gale asked three times for additional comments it was moved by Commissioner Fox and seconded by Commissioner Miller to close the Public Hearing.

Motion carried 7:0.

Commissioner Stenerson questioned whether the manure was knifed in.

The Applicants confirmed that it is knife injected.

Commissioner Stenerson noted that the odor would mostly come when the pits are stirred on site. He questioned what the odor offset was for this project.

Bechel stated the minimum odor offset was 1379 feet based on the addition.

Mike Kohlnhofer (Applicant) stated that Marty Kehren is the only neighbor within the 95% odor offset distance. Noone is within the 91% odor offset distance.

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Bechel detailed the surrounding properties and distances to the nearest dwellings.

Commissioner Stenerson commented on the industrial nature of the zone and the odor offset modeling.

It was moved by Commissioner Stenerson and seconded by Commissioner Fox to:

- Adopt the staff report into the record;
- Adopt the findings of fact;
- Accept the application, testimony, exhibits and other evidence presented into the record; and

Recommend the County Board of Commissioners **APPROVE** the request for CUP amendment, submitted by Circle K Family Farms (owner/operators), to expand the existing 2059 Animal Unit swine Feedlot operation to 2874 Animal Units and construct two new animal waste storage pits creating a total on-site manure storage capacity of 11,389,406 gallons. Subject to the following conditions:

1. The Feedlot shall be constructed according to submitted plans, specifications and narrative unless modified by a condition of this CUP;
2. Applicants shall obtain Building Permit approvals from the Goodhue County Land Use Management Department prior to establishing the use;
3. Compliance with the Goodhue County Zoning Ordinance including, but not limited to, Article 22 (Agriculture District) and Article 13 (Confined Feedlot Regulations);
4. Compliance with all necessary State and Federal registrations, permits, licensing and regulations.

Commissioner Nystuen questioned how much chloride would be needed to satisfy the neighbors' request.

Hanni referenced a map provided regarding the distance.

Bechel commented that the Applicants have been doing some voluntary chloriding.

Mike Kohlnhofer stated that they have been doing some voluntary chloriding and he would be willing to work with the neighbors and pay for the work.

Discussion continued regarding where the chloriding should be done.

Commissioner Stenerson explained the reason he did not add the chloriding to his motion to approve was to not set a precedent for future applicants. He noted that he understands the neighbors' concerns, but the issue should be worked out between the neighbors, not set as a condition of a CUP.

Commissioner Gale stated he does not want to see one individual chloriding several miles of road to their farm.

Commissioner Fox questioned where the requirements would stop if the Commission began requiring chloriding for farmers.

Commissioner Nesseth stated the Applicants and neighbors seem to have an agreement in place and they can work on the details of that on their own. He noted that the issue could be brought back to the Commission if there were complaints.

Motion carried 7:0

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PUBLIC HEARING: Request for CUP for a Utility-Scale Solar Energy System (SES)

Request for a CUP submitted by SolarClub 8 LLC (applicant) and Lome Properties LLC (owner) for a Utility-Scale Photovoltaic Ground 1-Megawatt Solar Energy System (SES) occupying approximately 6.0 acres. Parcel 38.026.0700. TBD CTY 168 BLVD, Zumbrota, MN 55992. Part of the E ½ of the SE ¼ of Sect 26 Twp 110 R16 in Minneola Township. A3 Zoned District.

Pierret presented the staff report and attachments.

Commissioner Nesseth commented on the decommissioning language and that it seemed “lighter” than other decommissioning agreements the Commission has seen in the past. He questioned the statement regarding hazardous materials and waste not being required when solar panels are considered hazardous waste by the MPCA. He also questioned the statement material could be stored on site and removal of material “where practical”.

Chuck Beisner (SolarClub 8 LLC) stated that the goal is to have no material left on site permanently but some storage of materials may occur during the decommissioning process as it is moved off site. Mr. Beisner stated that he was not aware panels were considered “hazardous”. He noted they plan to recycle the panels by selling them to another user as they will be generating 80% of their capacity at the time of decommissioning. He stated that the panels would not be considered garbage as they plan to sell them.

Commissioner Nesseth commented on the bonding statement in the provided packet.

Mr. Beisner stated the statement has not been provided to the County yet as one of the conditions states it must be presented prior to issuance of the building permit.

Commissioner Nesseth questioned whether the Lomens had been provided the decommissioning agreement.

Mr. Beisner stated the Lomens had seen the agreement and a copy will be provided to the County.

Commissioner Nesseth commented on the amount of solar projects in the County and 30 years from now he doesn't want to see several abandoned projects sitting in the fields.

Commissioner Stenerson questioned whether the decommissioning agreement was just a statement or if it was an agreement with funds and specifics.

Mr. Beisner stated that the decommissioning agreement has a financial assurance specifically for this project and the owners will know the agreement is in place. He added that this is a part of the lease agreement so even if the project is sold, the decommissioning agreement is still valid.

Hanni stated that the County's position has been that decommissioning agreements are between the land owners and the contractors.

Mr. Beisner confirmed that the decommissioning agreements are in the lease agreements.

Commissioner Huneke questioned whether the two neighboring solar projects have been constructed.

Staff confirmed they have been constructed.

Commissioner Nesseth commented on the location of the arrays and that they are barely visible from the roads.

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Commissioner Fox spoke on a site visit he took to the sites and the new site will be less visible than the existing two sites from the road.

Vice Chair Gale opened the Public Hearing.

Lauri Mona (17135 452nd Street Way, Zumbrota, MN) questioned whether there is a plan to continue expanding the solar sites closer to residential areas.

Commissioner Gale stated that expansion of sites is determined by the market, legislature and the capacity of the actual Xcel line in the area.

Discussion continued on the possibility of another site in this area.

Commissioner Huneke noted that any application for a solar field would come through the Planning Advisory Commission and they would look at the surrounding area and the number of solar arrays in the area before approving more.

Ms. Mona stated she was concerned with the pace of the projects because two were approved two years ago and now another is up for approval this year.

Commissioner Gale stated the pace and amount of projects is also determined by the legislature and their focus on renewable energy projects.

Commissioner Huneke stated that just because a project is approved at the Planning Commission level does not mean it will be constructed as there have been projects fall through in Goodhue County after PAC approval.

¶After Vice Chair Gale asked three times for additional comments it was moved by Commissioner Huneke and seconded by Commissioner Miller to close the Public Hearing.

Motion carried 7:0.

¶It was moved by Commissioner Fox and seconded by Commissioner Huneke to:

- Adopt the staff report into the record;
- Adopt the findings of fact
- Accept the application, testimony, exhibits and other evidence presented into the record; and

Recommend the County Board of Commissioners **APPROVE** the request for a CUP submitted by SolarClub 8 LLC (applicant) and Lomen Properties LLC (owners) for a Utility-Scale Photovoltaic Ground 1 Megawatt Solar Energy System (SES) occupying approximately 6.0 acres. Subject to the following conditions:

1. Activities shall be conducted according to submitted plans, specifications, and narrative unless modified by a condition of this CUP;
2. The project shall be decommissioned according to Article 19 Section 6 of the Goodhue County Zoning Ordinance and submitted plans;
3. A decommissioning agreement between the landowner and SolarClub 8 LLC shall be maintained to ensure reclamation of the area;
4. LUM staff shall be notified by the landowner or solar company 30 days prior to ownership transfer or operator changes;
5. Applicants shall communicate with Beau Kennedy, Wetlands Coordinator with the Goodhue SWCD to ensure compliance with applicable Wetlands Rules prior to

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completion of any site grading/construction and/or submittal of the Building Permit Application;

6. A stormwater management and erosion control plan shall be submitted for administrative review as part of the Building Permit Application for the project;
7. Applicants shall work with the Goodhue County Soil and Water Conservation District to determine an appropriate seed mix to establish on disturbed areas of the site;
8. Applicants shall obtain Building Permit approvals from the Goodhue County Land Use Management Department prior to establishing the use;
9. Compliance with Goodhue County Zoning Ordinance including, but not limited to, Article 19 Solar Energy Systems (SES) and Article 23 (Urban Fringe District). The applicant shall request a final inspection of the project for compliance with applicable zoning requirements upon completion of the project;
10. Compliance with all necessary State and Federal registrations, permits, licensing and regulations; and
11. This CUP shall expire 30 years from the date of approval unless terminated prior to that date.

Motion carried 7:0

5. Other discussion

Hanni noted that the last Public Hearing on the agenda had been withdrawn prior to the meeting.

Commissioner Gale questioned whether that project will come back in the future.

Staff noted that they would have to re-apply and Stanton Township would have to amend its ordinance for the solar project to be permitted.

Hanni mentioned that staff has been working on amending the Subdivision Ordinance and that a draft will be given to the Commissioners in November for possible action in January.

Hanni noted there is a joint meeting next month with the Board of Adjustment with an earlier start time. She added there will be some statistics presented on Planning Commission and Board of Adjustment actions this year.

Commissioner Stenerson commented on using the Conditional Use Permit process instead of Interim Use Permits for solar projects due to financing reasons. He noted that in the Ordinance Solar projects in the Shoreland area are considered an Interim Use.

***ADJOURN: Motion by Commissioner Huneke and seconded by Commissioner Miller to close the public hearing.**

Motion carried 7:0

Respectfully Submitted,

Samantha Pierret; Zoning Assistant

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¹ APPROVE the PAC meeting agenda.

Motion carried 6:0.

² APPROVE the previous month's meeting minutes.

Motion carried 6:0.

³ Recommend the County Board of Commissioners **APPROVE** the request to Rezone 15.23 acres

Motion carried 7:0

⁴ Motion to close the Public Hearing.

Motion carried 7:0

⁵ Recommend the County Board of Commissioners Recommend **APPROVE** the request for an Animal Unit expansion and construction of associated manure storage pits

⁶ Motion to close the Public Hearing.

Motion carried 7:0

⁷ Recommend the County Board of Commissioners **APPROVE** the request for a SES on 6.0 acres

Motion carried 7:0

⁸ ADJOURN. Motion to adjourn the meeting at 7:58PM.

Motion carried 7:0

UNOFFICIAL UNTIL APPROVED BY PAC

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

To: Planning Advisory Commission
From: Land Use Management
Meeting Date: November 18, 2019
Report date: November 8, 2019

PUBLIC HEARING: Request for Map Amendment (Rezone) - Thomforde

Request for map amendment, submitted by Larry Thomforde (Buyer) and the Goodhue County Agricultural Society (Owner), to rezone 1.10 acres from A3 (Urban Fringe District) to R1 (Suburban Residence District).

Application Information:

Applicant: Larry Thomforde (Buyer) and the Goodhue County Agricultural Society (Owner)

Address of zoning request: 44279 CTY 6 BLVD, Zumbrota, MN 55992

Parcel(s): 38.025.0200

Abbreviated Legal Description: Part of the NE ¼ of section 25 Twp 110 Range 16 in Minneola Township

Zoning District: A3 (Urban Fringe District)

Attachments and links:

Application and submitted project summary

Site Map(s)

Project Review (Rezone)

Goodhue County Zoning Ordinance (GCZO):

<http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

Summary:

Mr. Thomforde's primary residence is located within the Sugar Loaf Estates residential plat adjacent to the subject property which is currently owned by the Goodhue County Agricultural Society. Mr. Thomforde would like to construct an accessory shed on his property to provide personal storage space. Due to the location of existing improvements as well as the physical limitations of his parcel Mr. Thomforde has negotiated a purchase agreement with the Agricultural Society to buy 1.10 acres along the eastern boundary of his parcel that would provide a flat, accessible area to construct the shed.

The property to be acquired is zoned A3 (Urban Fringe District) which requires a minimum parcel size of 35 acres. To avoid creating a new non-conforming parcel, Mr. Thomforde would be required to combine the 1.10 acres with his existing parcel. Given Mr. Thomforde's property is R1 (Suburban Residence District), he is requesting the rezone to R1 to match his property's zone to improve compatibility and prevent the creation of a split-zoned parcel. As an additional benefit, the rezone would allow him to take advantage of the reduced structure setback distances within the R1 District.

Mr. Thomforde's property is within an existing platted area and the 1.10 acres proposed to be acquired is unplatted. The only way to combine platted property with unplatted property is through the platting process. Because a rezone is needed, the Goodhue County Subdivisions Controls Ordinance requires the plat request be reviewed through the "formal" platting process. Mr. Thomforde has submitted a request for preliminary and final plat approval in conjunction with this request.

Project Summary:

Property Information:

- The subject property is currently 40.14-acres. The Applicants have a purchase agreement to split off the western 100 feet of the parcel comprising 1.10 acres.
- The property is currently accessed via CTY 6 BLVD on the east side of the property. Mr.Thomforde intends to utilize his existing driveway off of Sugarloaf Parkway to access the property in the future.
- The subject parcel is currently zoned A3. Adjacent zoning districts are A3 to the east, south, and west; R1 to the north (Sugarloaf Estates subdivision). The Zumbrota city limits abut the parcel's southern border. The Goodhue Pioneer State Trail also crosses along the southern border.

The area is characterized by primarily low-density residential uses mixed with medium-to-low intensity recreational and agricultural uses. Rezoning the 1.10 acres to R1 would not appear to have any substantial cumulative impacts to existing or potential future uses of the surrounding zoning districts.

- The property is not located within a Historic Preservation District. It is not anticipated that any scenic or historic amenities will be negatively impacted as a result of the proposed rezone.
- The southerly portion of the property is within the Floodplain of the North Fork of the Zumbro River. Floodplain development is regulated by the Goodhue County’s Zoning Ordinance and any development proposals would be required to conform to the standards in place. Mr. Thomforde’s proposed future use of the property is outside of the Floodplain designated areas.
- The property is not designated shoreland and there are no mapped Bluffland areas.

Existing/Proposed Uses:

- The eastern half of the property is the site of the Goodhue County Fairgrounds which hosts a variety of community events/functions. The remainder of the property, including the portion Mr. Thomforde proposes to buy, is agricultural land. The proposed future use of the property is to construct an accessory storage shed.

Planning Information:

- The R1 District is intended to provide a district that defines and protects areas suitable for low to medium density residential development as the principal use of the land and to allow related facilities desirable for a residential environment. It is also intended that the district allows varying densities of development in accordance with the ability to provide water and sewer facilities.
- A portion of the property is currently used for row-crop agricultural purposes. There are no registered feedlots on the property or within 1,000 feet of the parcel. The new R1 District would be greater than 1,000 feet from all existing registered Feedlots (including the Goodhue County Fair barns).

Mr. Thomforde explored acquiring only the minimum area necessary to construct his proposed building, however, the sellers preferred to maintain a “straight” boundary line along the west line which led to the agreement to acquire the western 100 feet of the property.

- The Prime Farmland Rating for Agriculture is as follows:

<i>Soil Name</i>	<i>Slope</i>	<i>Amount (acres)</i>	<i>% of Total</i>	<i>Prime Farmland Rating</i>
Chelsea Loamy Sand	2-6%	0.5	45%	Not Prime Farmland
Richwood Silt Loam	1-6%	0.6	55%	Prime Farmland

- The proposed rezone appears compatible with the goals and objectives of the Goodhue County Comprehensive Plan:

“Support the establishment of rural residences to provide rural living opportunities in the unincorporated areas of Goodhue County”

Goodhue County does not have an official future land use map.

- Mr.Thomforde is proposing to combine the rezoned property with his existing parcel which contains his primary residence so no additional dwelling density would be created. If the Applicant were to propose to split the property in the future, a formal platting process would be required which would necessitate additional public review/approval.

Rezoning the parcel to R1 would not affect the existing dwelling development eligibility of surrounding A3 parcels.

City of Zumbrota:

- LUM Staff contacted the city of Zumbrota regarding the request and will update the Planning Commission with any comments received.

Staff Recommendation:

LUM Staff recommends the Planning Advisory Commission

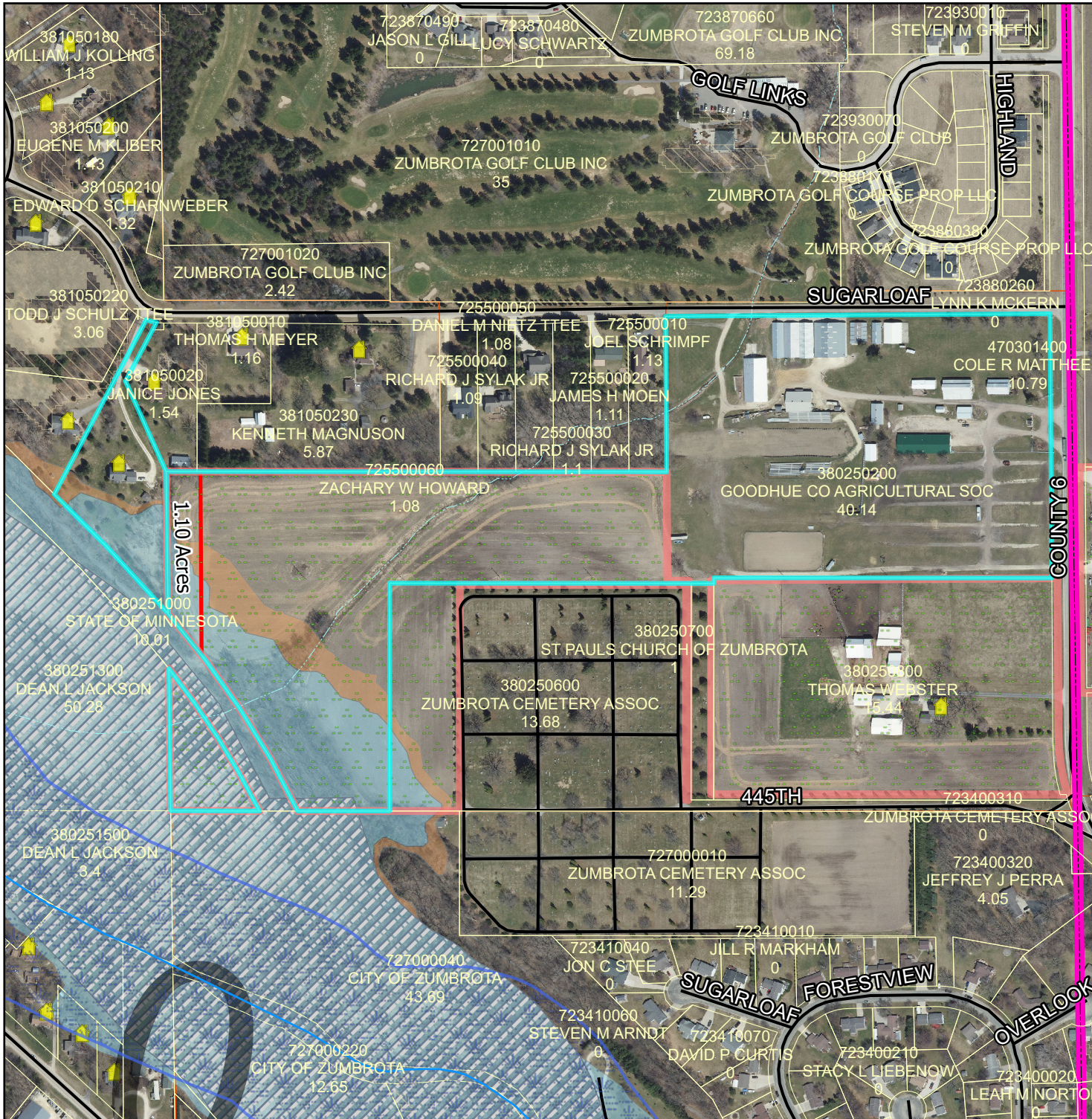
- adopt the staff report into the record;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

recommend that the County Board of Commissioners **APPROVE** the map amendment request from Larry Thomforde (Buyer) and the Goodhue County Agricultural Society (Owner) to rezone 1.10 acres from A3 (Urban Fringe District) to R1 (Suburban Residence District).

Subject to the following condition:

1. The 1.10 acres to be rezoned shall be platted and combined with PID 38.105.0030

MAP 01: PROPERTY OVERVIEW



PLANNING COMMISSION

Public Hearing
November 18, 2019

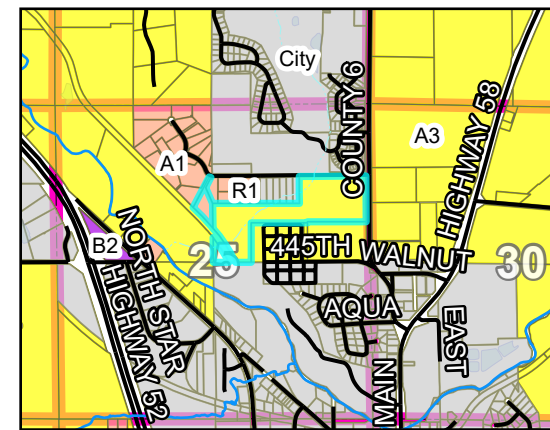
Larry Thomforde
R1 & A3 Zoned District

Lot 3 Block 1 of the Sugar Loaf Estates plat located in NW ¼ and NE ¼ of S25 T110 R16 in Minneola Township.

Request to rezone 1.10 acres from A3 to R1 and Preliminary and Final Plat review to combine with existing platted property

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X

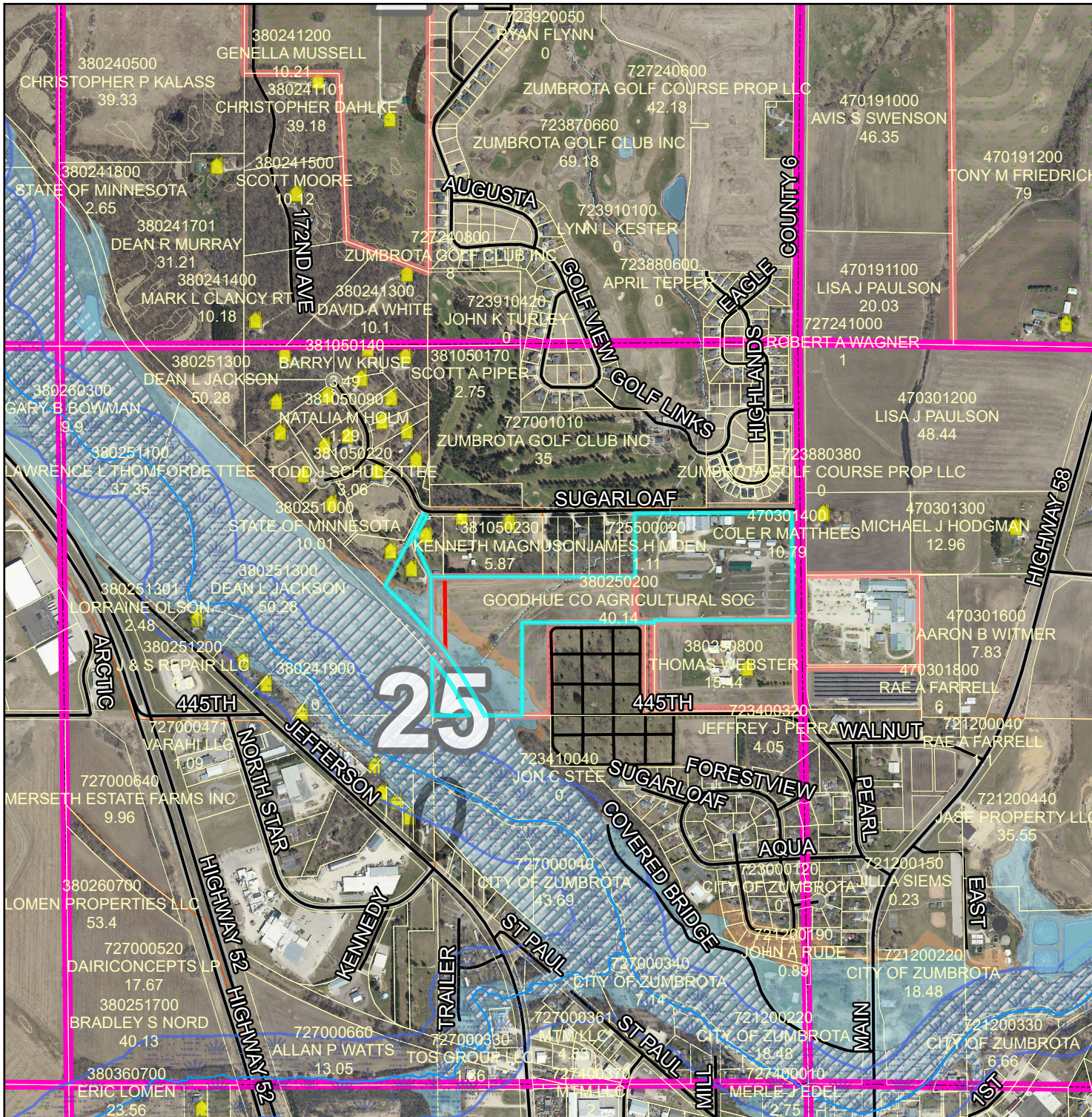


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MAP 02: VICINITY MAP



PLANNING COMMISSION

Public Hearing
November 18, 2019

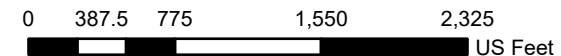
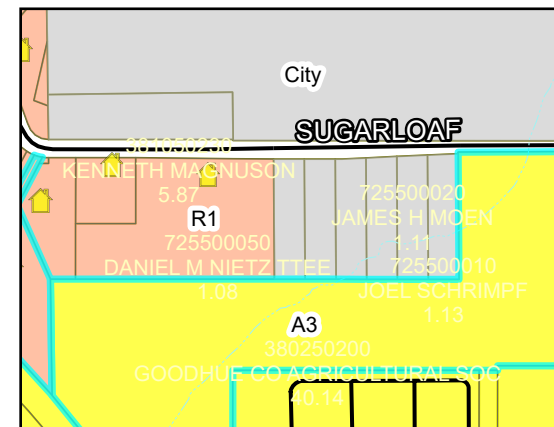
Larry Thomforde
R1 & A3 Zoned District

Lot 3 Block 1 of the Sugar Loaf
Estates plat located in NW ¼ and NE ¼
of S25 T110 R16 in Minneola Township.

Request to rezone 1.10 acres from A3 to
R1 and Preliminary and Final Plat review
to combine with existing platted property

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X

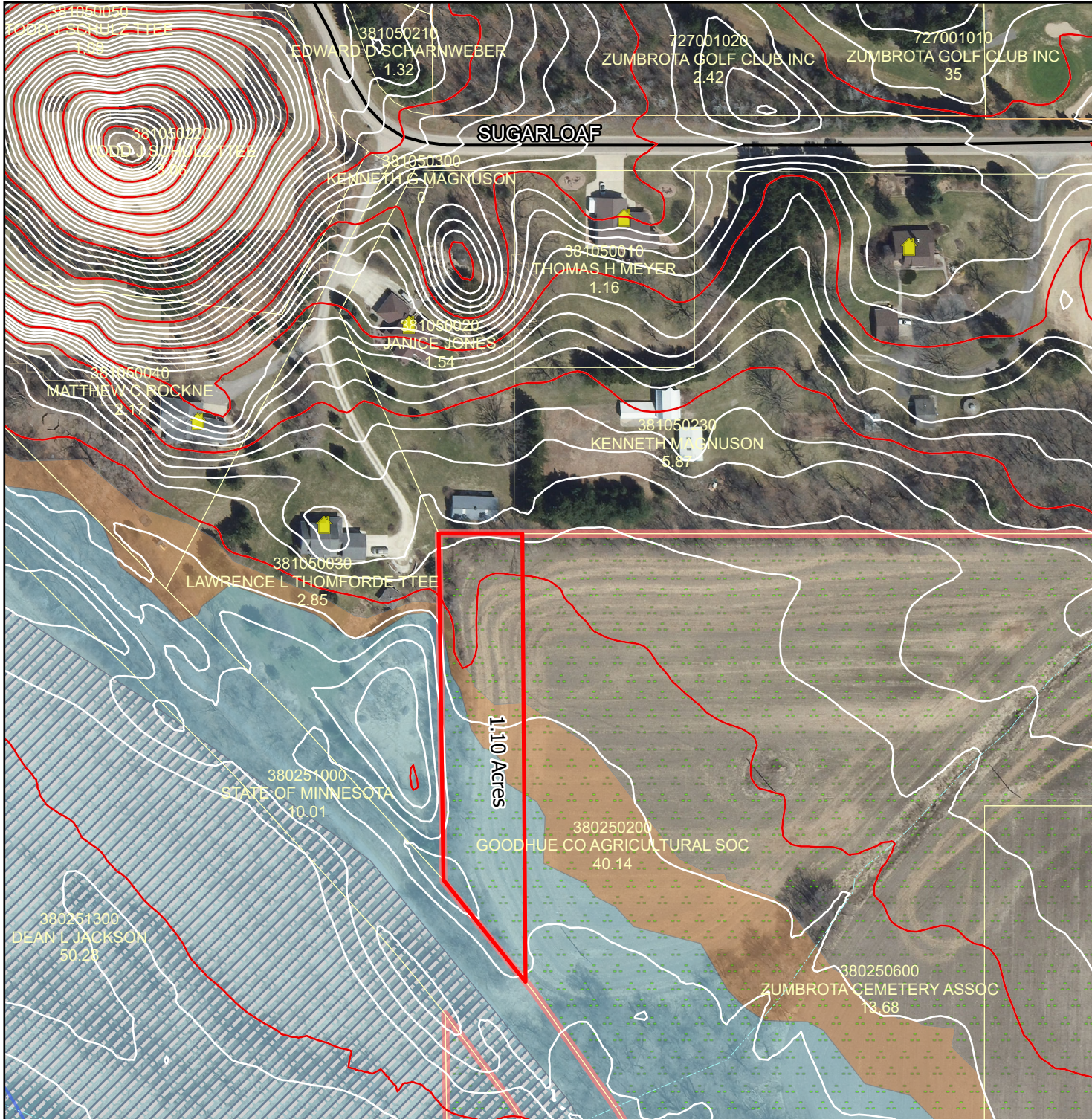


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MAP 03: ELEVATIONS



PLANNING COMMISSION

Public Hearing
November 18, 2019

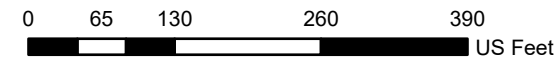
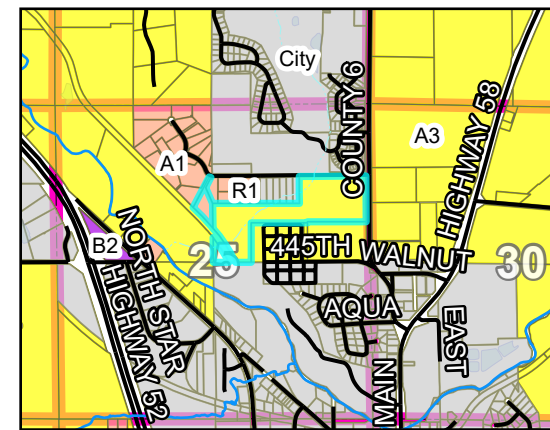
Larry Thomforde
R1 & A3 Zoned District

Lot 3 Block 1 of the Sugar Loaf Estates plat located in NW ¼ and NE ¼ of S25 T110 R16 in Minneola Township.

Request to rezone 1.10 acres from A3 to R1 and Preliminary and Final Plat review to combine with existing platted property

Legend

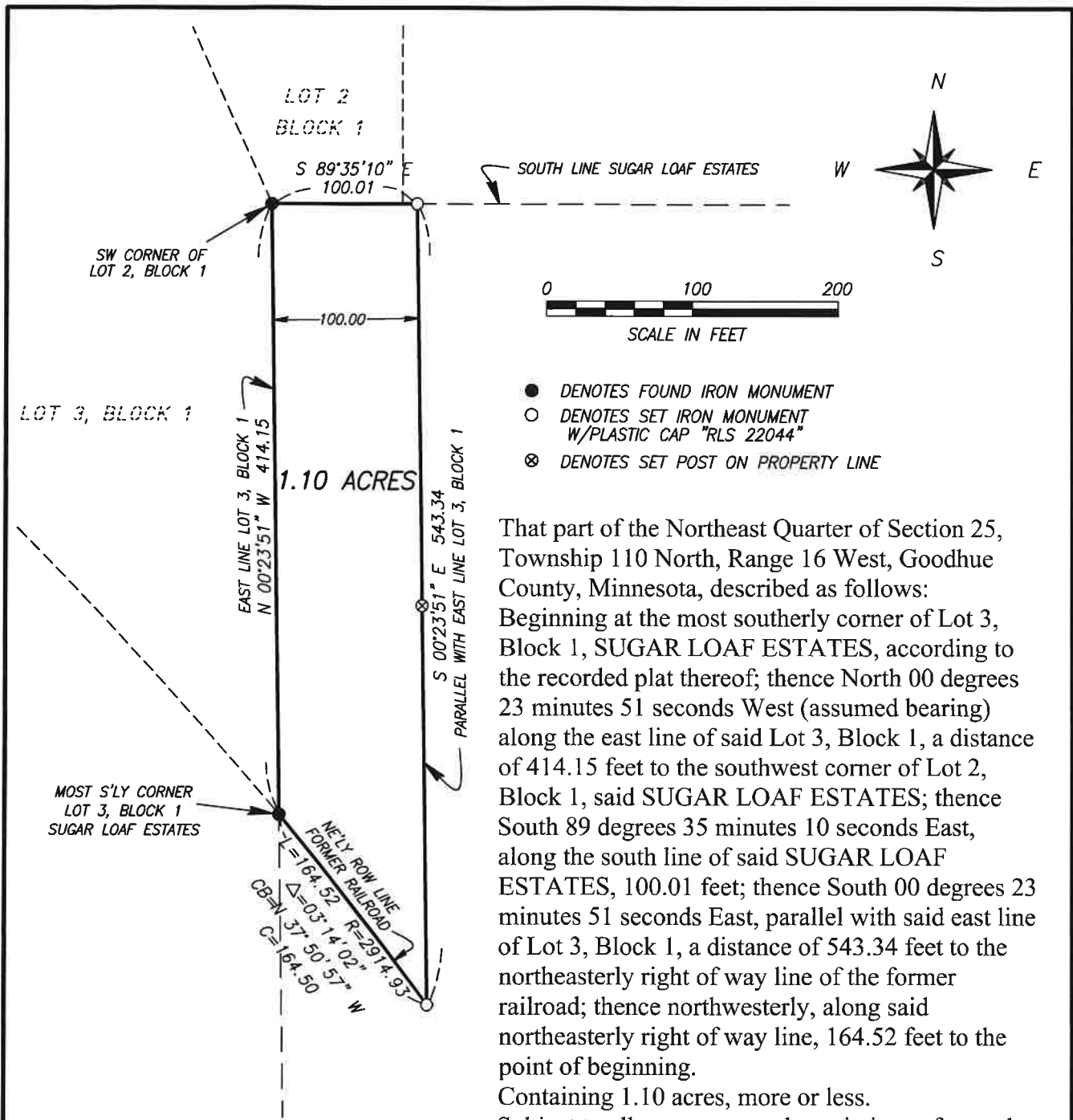
	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		FEMA Flood Zones
	Shoreland		2% Annual Chance
	Historic Districts		A
	Parcels		AE
	Registered Feedlots		AO
	Dwellings		X
	Municipalities		



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2018 Aerial Imagery
Map Created November, 2019 by LUM





That part of the Northeast Quarter of Section 25, Township 110 North, Range 16 West, Goodhue County, Minnesota, described as follows: Beginning at the most southerly corner of Lot 3, Block 1, SUGAR LOAF ESTATES, according to the recorded plat thereof; thence North 00 degrees 23 minutes 51 seconds West (assumed bearing) along the east line of said Lot 3, Block 1, a distance of 414.15 feet to the southwest corner of Lot 2, Block 1, said SUGAR LOAF ESTATES; thence South 89 degrees 35 minutes 10 seconds East, along the south line of said SUGAR LOAF ESTATES, 100.01 feet; thence South 00 degrees 23 minutes 51 seconds East, parallel with said east line of Lot 3, Block 1, a distance of 543.34 feet to the northeasterly right of way line of the former railroad; thence northwesterly, along said northeasterly right of way line, 164.52 feet to the point of beginning.

Containing 1.10 acres, more or less.
 Subject to all easements and restrictions of record, if any.

CERTIFICATE FOR:
LAWRENCE THOMFORDE
17468 SUGARLOAF PARKWAY
ZUMBROTA, MN 55992

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

OCTOBER 22, 2019

David G. Rapp
 David G. Rapp
 Minnesota Registration No. 22044

RAPP LAND SURVEYING, INC.		
45967 HIGHWAY 56 BLVD KENYON, MN 55946 612-532-1263		
DRAWN BY: DGR	DATE: 10-22-19	PROJECT NO. D19146
SCALE: 1"=100'	SHEET 1 of 1 sheet	BOOK/PAGE 45/12

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
 Telephone: 651.385.3104
 Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
 Telephone: 651.385.3223
 Fax: 651.385.3098

Project Review per Article 3, Section 2, Subd. 5-10:

- Subd. 5
- A. The names and addresses of the petitioner or petitioners and their signatures to the petition. **See application**
 - B. Survey information: **See application**
 - C. The current and proposed district: **A3 to R1**
 - D. The current use and the proposed use of the land.

The property has 2 primary existing uses including the site of the Goodhue County Fairgrounds which hosts a variety of community events/functions. The remainder of the site is agricultural land. The proposed future use of the property is to construct an accessory storage shed. Mr. Thomforde explored acquiring only the minimum area necessary to construct his proposed building, however, the sellers preferred to maintain a “straight” boundary line along the west line which led to the agreement to acquire the western 100 feet of the property.

E. The reason for the requested change of zoning district. **The applicant is requesting the zone change to allow to combine it with his existing parcel to provide a space to construct an accessory storage building.**

F. A copy of the soil map showing the soils types within the proposed boundary and the surrounding area. **A soils map for the site has been prepared.**

G. Prime Farmland Rating of the soil types in F.

- The Prime Farmland Rating for Agriculture is as follows:

Soil Name	Slope	Amount (acres)	% of Total	Prime Farmland Rating
Chelsea Loamy Sand	2-6%	0.5	45%	Not Prime Farmland
Richwood Silt Loam	1-6%	0.6	55%	Prime Farmland

H. A statement of how the requested change is compatible with the Goodhue County Comprehensive Plan including but not limited to the following:

1. The environmental impacts of the proposed use of land on the:
 - a. Groundwater
 - b. natural plant and animal communities
 - c. existing trees and vegetation
 - d. Bluffland stability
 - e. shoreland stability

1. **The property is not designated shoreland and there are no mapped Bluffland areas. The southerly portion of the property is within the Floodplain of the North Fork of the Zumbro River. Floodplain development is regulated by the Goodhue County’s Zoning Ordinance and any development proposals would be required to conform to the standards in place. Mr. Thomforde’s proposed future use of the property is outside of the Floodplain designated areas.**

2. The compatibility with surrounding land uses
The area is characterized by primarily low-density residential corridor mixed with medium-to-low intensity recreational and agricultural uses. Rezoning the 1.10 acres to R1 would not appear to have any substantial negative impacts to the existing or potential future uses of the surrounding zoning districts.

3. The physical and visual impacts on any scenic or historic amenities within or surrounding the proposed parcel.

It is not anticipated that any scenic or historic amenities will be negatively impacted as a result of the proposed rezone.

Subd. 6 The housing density of the affected Section

Mr. Thomforde is proposing to combine the rezoned property with his existing parcel which contains his primary residence so no additional dwelling density would be created. If the Applicant were to propose to split the property in the future, a formal platting process would be required which would necessitate additional public review/approval. Rezoning the parcel to R1 would not affect the existing dwelling development eligibility of surrounding A3 parcels.

Subd. 7 The impact on any surrounding agricultural uses

The property is currently used for row-crop agricultural purposes. There are no registered feedlots on the property or within 1,000 feet of the parcel. The new R1 District would be greater than 1,000 feet from all existing registered Feedlots.

Mr. Thomforde explored acquiring only the minimum area necessary to construct his proposed building, however, the sellers preferred to maintain a "straight" boundary line along the west line which led to the agreement to acquire the western 100 feet of the property.

Subd. 8 The impact on the existing transportation infrastructure

The property is currently accessed via CTY 6 BLVD on the east side of the property. Mr. Thomforde intends to utilize his existing driveway off of Sugarloaf Parkway to access the property in the future. The change of zone is not anticipated to negatively impact traffic or existing transportation infrastructure.

Subd. 9 The impact on surrounding zoning districts

The property is currently zoned A3. Adjacent zoning districts are A3 to the east, south, and west; R1 to the north (Sugarloaf Estates subdivision). The Zumbrota city limits abut the southern border of the subject parcel.

Subd. 10 A statement concerning the cumulative effect and compatibility of the requested zoning change on the affected Township and any cities located within 2 miles of the proposed parcel.

Rezoning the subject parcel to R1 does not appear to have negative cumulative effects on the immediate surrounding area or the City of Zumbrota. The area is characterized by primarily low-density residential uses mixed with medium-to-low intensity recreational and agricultural uses. Rezoning the 1.10 acres to R1 would not appear to have any substantial negative impacts to the existing or potential future uses of the surrounding zoning districts.

Subd. 11. Additional information as may be requested by the Planning Commission or zoning staff.

#19.20046

APPLICATION FOR

Map Amendment

Applicant Information

APPLICANT OR AUTHORIZED AGENT'S NAME:

LAWRENCE L. Thomforde

APPLICANT'S ADDRESS:

17468 SUGARLOAF FRwy
Zumbrota, MN 55992

TELEPHONE:

(507) 273 5668

EMAIL:

lthomforde@gmail.com

CONTACT FOR PROJECT INFORMATION:

LAWRENCE Thomforde

Same as Above

ADDRESS:

TELEPHONE:

()

EMAIL:

- Map Amendment - Parcel: 38.025,0200 ; Current District: A3 Requested District: R1
- Parcel: _____ ; Current District: _____ Requested District: _____
- Parcel: _____ ; Current District: _____ Requested District: _____
- Parcel: _____ ; Current District: _____ Requested District: _____
- Parcel: _____ ; Current District: _____ Requested District: _____

1. Stated reason for map amendment(s) requested: To purchase land from Goodhue County Agricultural Society - to combine with existing homestead
2. Proposed future use(s) of the property to be rezoned: Residential garage/storage building
3. Compatibility of the proposed zoning district with existing land uses in the area: Adjacent to R1 existing subdivision
4. Provide any additional information that will assist the Planning Advisory Commission and the County Board in reviewing your request: Existing parcel does not have existing space for additional garage - existing resident will have small 2 stall garage.

Applicant's Affidavit

Under penalty of perjury the following declarations are made:

1. The information presented is true and correct to the best of my knowledge.
2. If I am unable to be present at the meeting where my request is decided, I agree to accept the Notice of Decision by certified USPS.
3. Other information or applications may be required.

Signature: Lawrence L. Thomforde

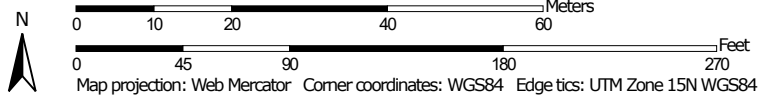
Date: 10/15/2019

Print name: LAWRENCE L. Thomforde owner or authorized agent

Soil Map—Goodhue County, Minnesota



Map Scale: 1:971 if printed on A portrait (8.5" x 11") sheet.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
N594B	Chelsea loamy sand, 2 to 6 percent slopes	0.5	41.6%
N606B	Richwood silt loam, 1 to 6 percent slopes	0.7	58.4%
Totals for Area of Interest		1.2	100.0%

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

To: Planning Advisory Commission
From: Land Use Management
Meeting Date: November 18, 2019
Report date: November 8, 2019

PUBLIC HEARING: “Sugarloaf Estates First Addition” Preliminary/Final Plat Review
Request, submitted by Larry Thomforde (Buyer/Owner), for Preliminary and Final Plat review of the proposed Sugarloaf Estates First Addition to expand an existing parcel by approximately 1.10 acres.

Application Information:

Applicant: Larry Thomforde (Buyer/Owner)

Address of zoning request: 17468 Sugarloaf Parkway, Zumbrota, MN 55992

Parcel(s): 38.105.0030 and 38.025.0200

Abbreviated Legal Description: Lot 3 Block 1 of the Sugarloaf Estates plat located in the NW ¼ and NE ¼ of section 25 Twp 110 Range 16 in Minneola Township

Zoning District: R1 (Suburban Residence District)

Attachments and links:

Application and submitted project summary (excerpt of materials, full submittal available upon request)

Site Map(s)

Survey

Goodhue County Zoning Ordinance (GCZO):

<http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

Summary:

Larry Thomforde (Applicant) owns a 2.85-acre parcel within the Sugarloaf Estates subdivision in Minneola Township. He would like to construct an accessory shed on his property to provide personal storage space. Due to the location of existing improvements as well as the physical limitations of his parcel Mr. Thomforde has negotiated a purchase agreement with the Agricultural Society to buy 1.10 acres along the eastern boundary of his parcel that would provide a flat, accessible area to construct the shed.

The property to be acquired is unplatted and zoned A3 (Urban Fringe District) which requires a minimum parcel size of 35 acres. To avoid creating a new non-conforming parcel, Mr. Thomforde would be required to combine the 1.10 acres with his existing parcel. The only way to combine platted property with unplatted property is through the platting process.

Because Mr. Thomforde is also requesting to rezone the 1.10 acres from A3 to R1 in conjunction with this request, the Goodhue County Subdivisions Controls Ordinance mandates the plat request be reviewed through the “formal” platting process.

Project Summary:

Property Information:

- The 2.85-acre property consists of an existing homestead and some undeveloped woodlands/prairie. The existing dwelling is the applicant’s primary residence.
- The property is zoned R1. The 1.10 acres to be acquired is currently zoned A3 but the Applicant has applied to rezone the property to R1. Adjacent zoning districts are A3 to the east, south, and west; R1 to the north (Sugarloaf Estates subdivision). The Zumbrota city limits abut the parcel’s

southern border. The Goodhue Pioneer State Trail also crosses along the southern border.

- The southerly portion of the property is within the Floodplain of the North Fork of the Zumbro River. Floodplain development is regulated by the Goodhue County's Zoning Ordinance and any development proposals would be required to conform to the standards in place. Mr. Thomforde's proposed future use of the property is outside of the Floodplain designated areas.
- The property is not designated shoreland and there are no mapped Bluffland areas.
- The property is not a Registered Feedlot and the nearest Registered Feedlot is located greater than 1000 feet from the proposed plat.
- Mr. Thomforde is proposing to combine the rezoned property with his existing parcel which contains his primary residence so no additional dwelling density would be created. If the Applicant were to propose to split the property in the future, a formal platting process would be required which would necessitate additional public review/approval.

Rezoning the parcel to R1 would not affect the existing dwelling development eligibility of surrounding A3 parcels.

Access/Traffic:

- The existing dwelling is accessed off Sugarloaf Parkway to the north. No new access drives are proposed.

Water/Wastewater:

- The property currently has a single-family dwelling served by a private well and septic system. No additional sanitary facilities are needed for the plat as proposed.

Minneola Township/City of Zumbrota:

- The Minneola Township chair endorsed the application plat application on 10/17/19. No specific comments/conditions were offered.
- LUM Staff contacted the city of Zumbrota regarding the request and will update the Planning Commission with any comments received.

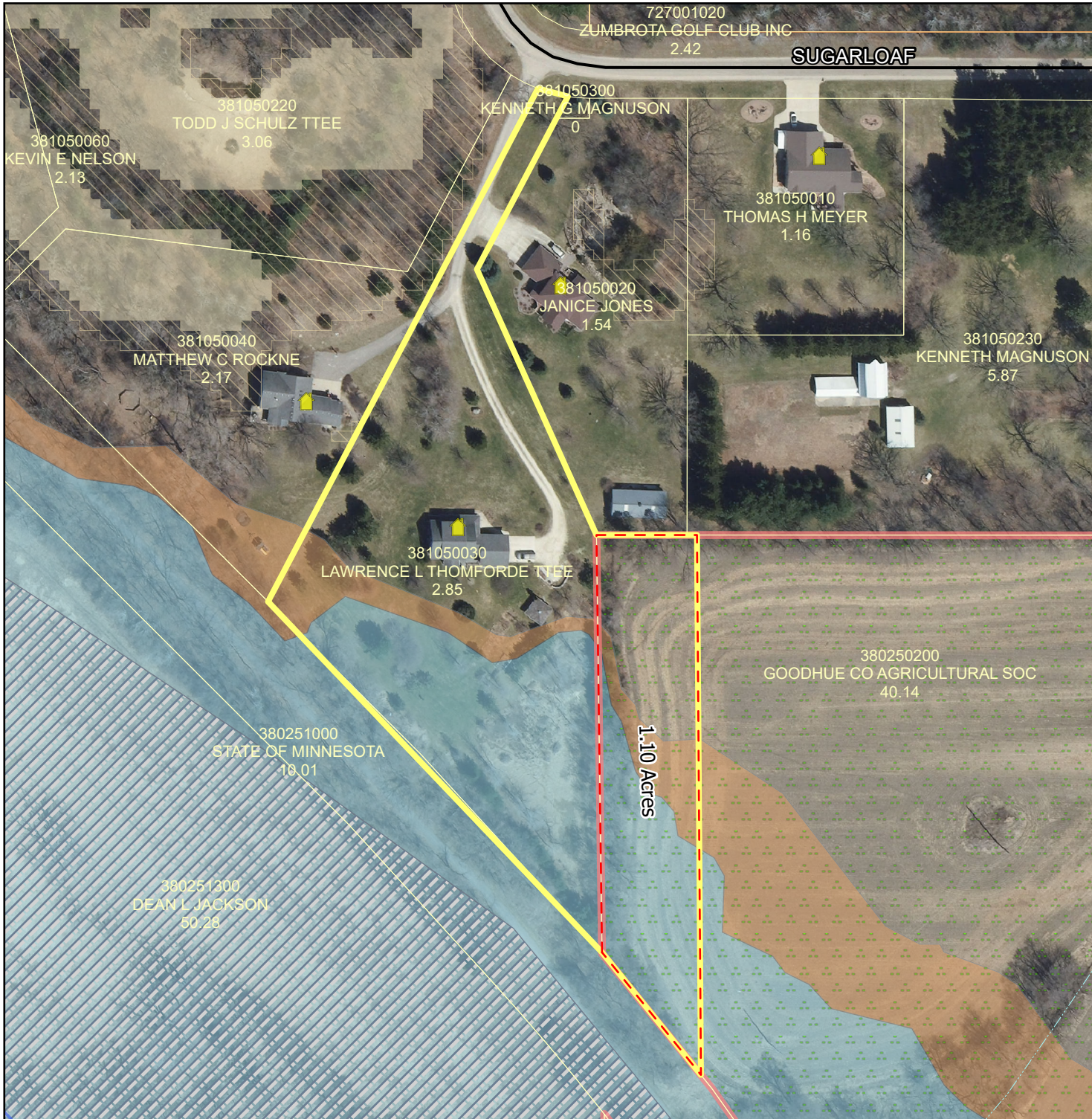
Staff Recommendation:

LUM Staff recommends the Planning Advisory Commission

- adopt the staff report into the record;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

Recommend that the County Board of Commissioners **APPROVE** the request submitted by Larry Thomforde (Buyer/Owner) for Preliminary and Final Plat approval of the proposed Sugarloaf Estates First Addition.

MAP 01: PROPERTY OVERVIEW



PLANNING COMMISSION

Public Hearing
November 18, 2019

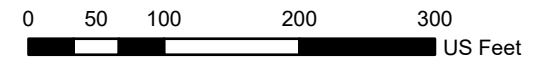
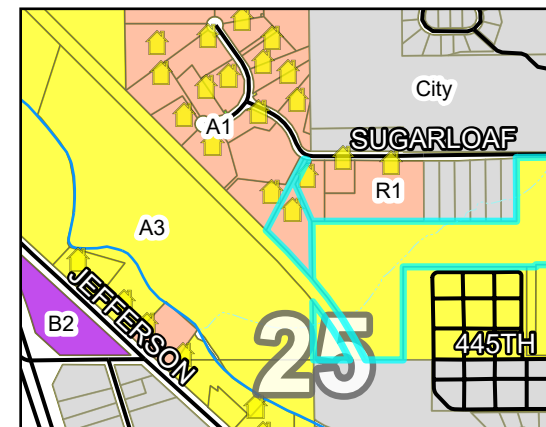
Larry Thomforde
R1 & A3 Zoned District

Lot 3 Block 1 of the Sugar Loaf Estates plat located in NW ¼ and NE ¼ of S25 T110 R16 in Minneola Township.

Request to rezone 1.10 acres from A3 to R1 and Preliminary and Final Plat review to combine with existing platted property

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X

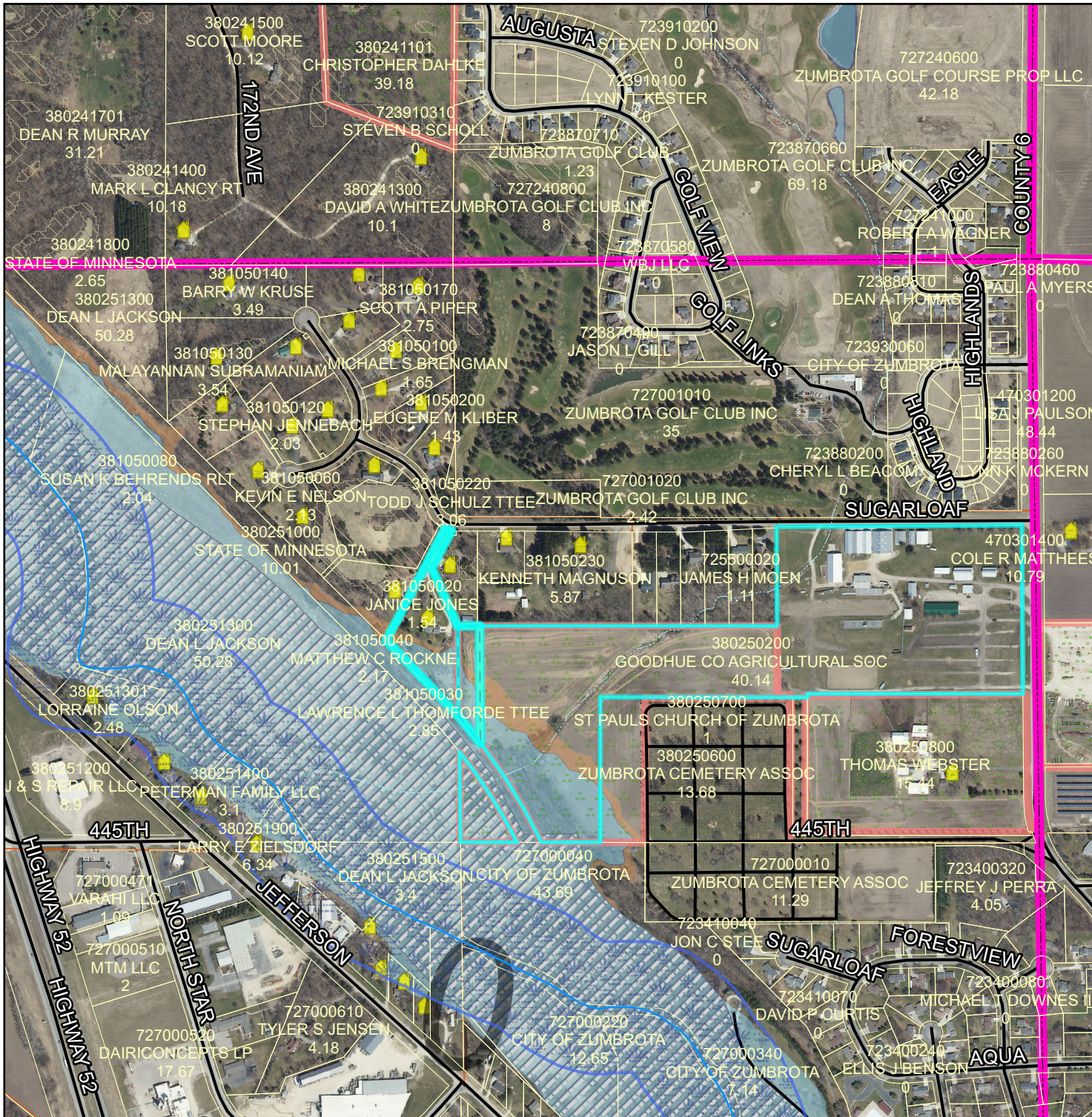


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MAP 02: VICINITY MAP



PLANNING COMMISSION

Public Hearing
November 18, 2019

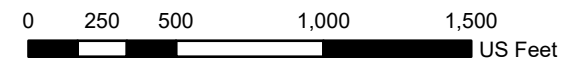
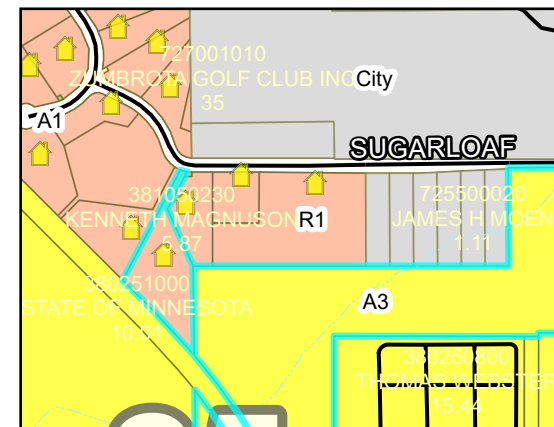
Larry Thomforde
R1 & A3 Zoned District

Lot 3 Block 1 of the Sugar Loaf
Estates plat located in NW ¼ and NE ¼
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Request to rezone 1.10 acres from A3 to
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	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
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			AO
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MAP 03: ELEVATIONS

PLANNING COMMISSION

Public Hearing
November 18, 2019

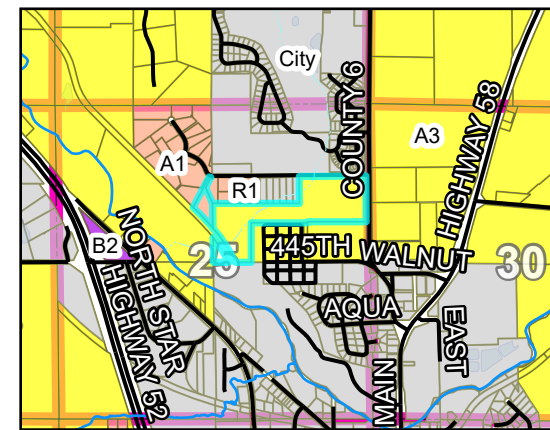
Larry Thomforde
R1 & A3 Zoned District

Lot 3 Block 1 of the Sugar Loaf Estates plat located in NW ¼ and NE ¼ of S25 T110 R16 in Minneola Township.

Request to rezone 1.10 acres from A3 to R1 and Preliminary and Final Plat review to combine with existing platted property

Legend

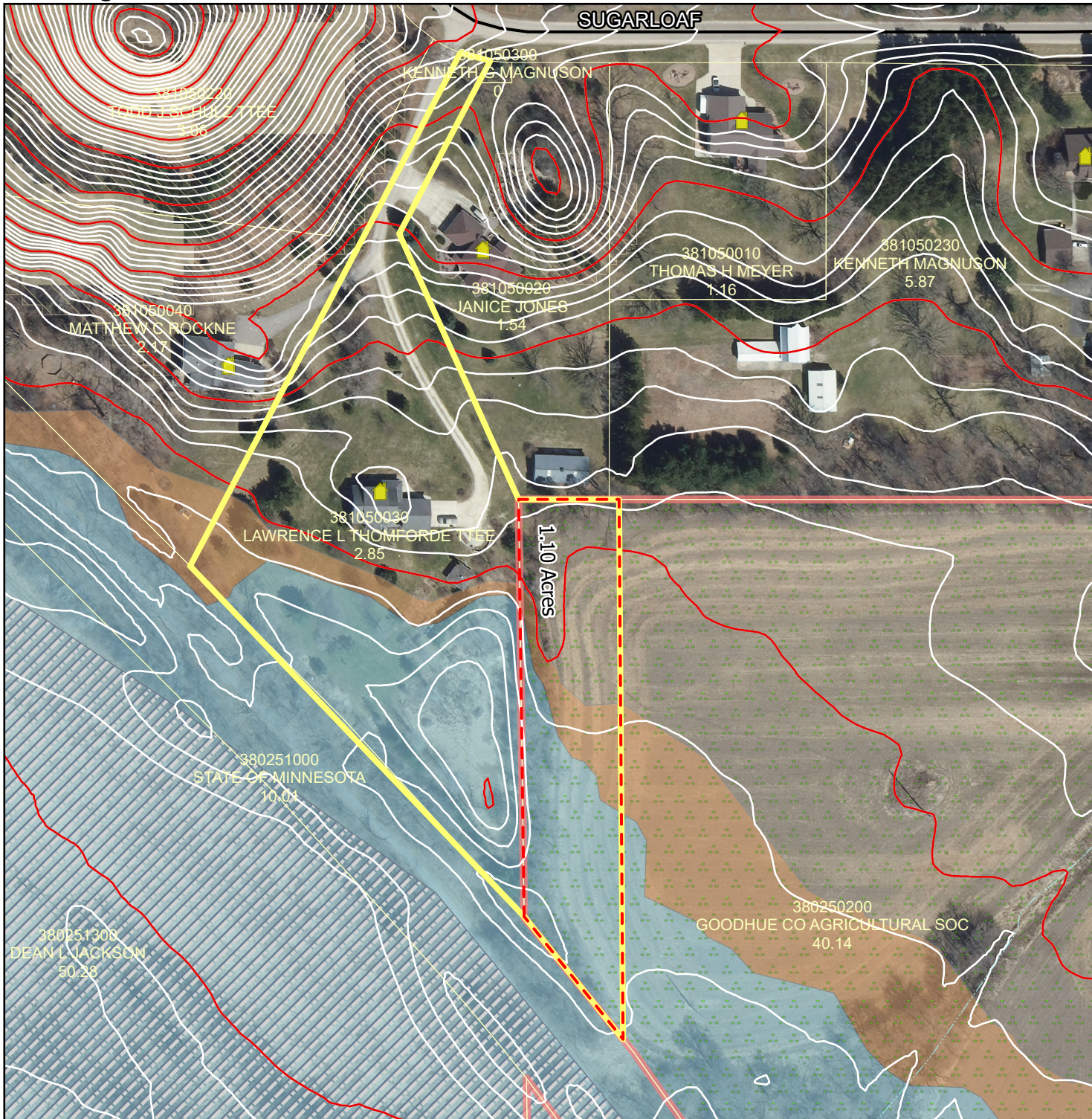
	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		FEMA Flood Zones
	Parcels		2% Annual Chance
	Registered Feedlots		A
	Dwellings		AE
	Municipalities		AO
			X



0 50 100 200 300
US Feet

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2018 Aerial Imagery
Map Created November, 2019 by LUM



FILE #	219.0047
PARCEL #	

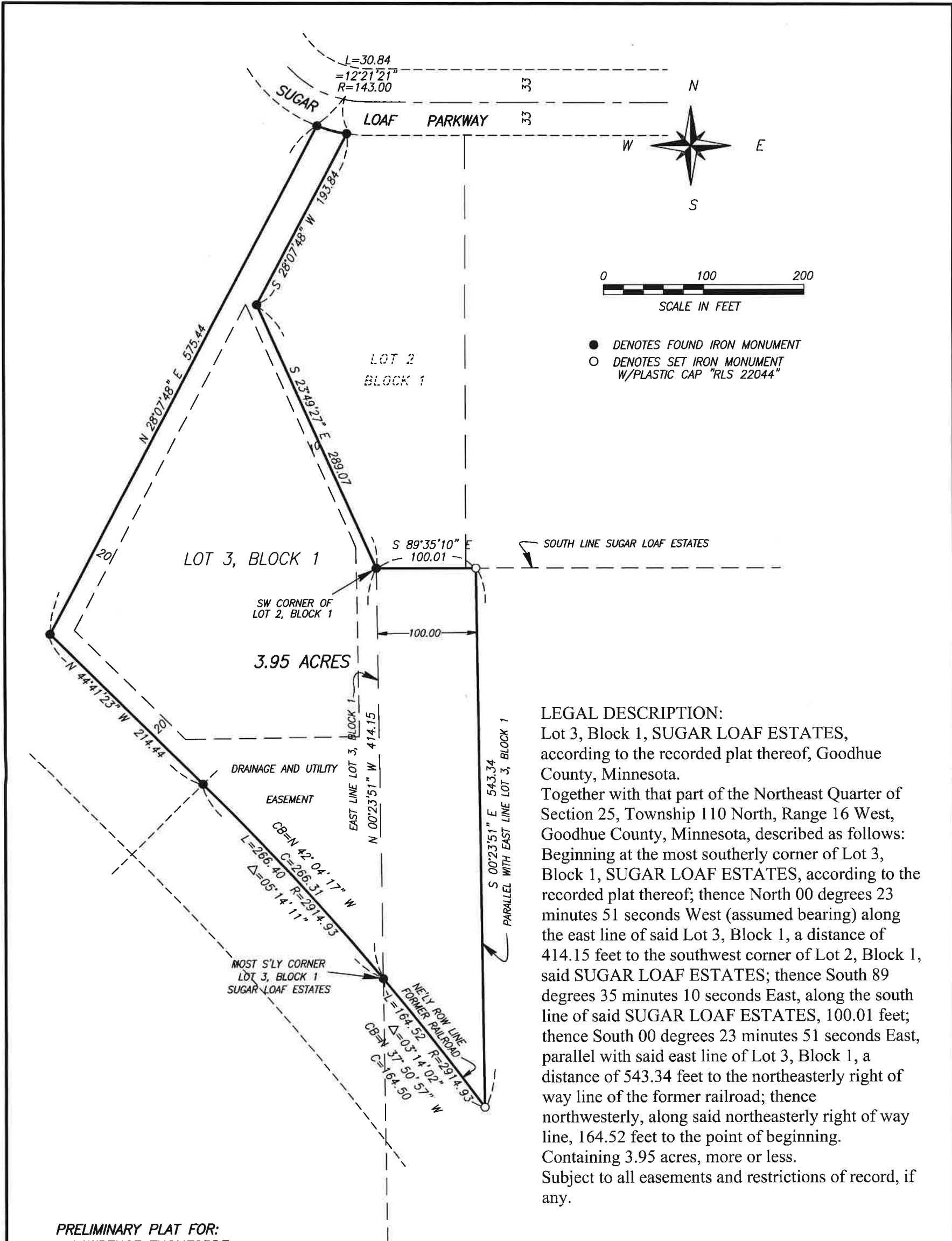
505 Plat Application

A. A Minnesota Statute Chapter 505 plat* is required under the following circumstances:

- 1) The creation of three or more tax parcels from one tax parcel, except when the tax parcels created can be described by an aliquot part of the Public Land Survey. The minimum division shall be a Quarter Quarter of the Section (i.e. SE 1/4 of the NW 1/4). Non-contiguous land must be separate tax parcels. The parcels shown on the plat provide for road access for each new division or reconfiguration of land;
- 2) If a subdivision of a platted lot or outlot can result in one or more potential dwelling sites, the subdivision must be platted.

*Requires approval and public hearings from the Planning Commission and County Board

Landowner Information			
Landowner Name	LAWRENCE L. THOMPSON	Email	
Mailing Address	17468 Sugarloaf Pkwy, Zumbrota, MN 55992		
Daytime Phone			
Applicant Information (if different than above)			
Applicant Name		Email	
Mailing Address			
Daytime Phone			
Township Information			
Township position	Chair	Date	10/17/2019
Signature	<i>Gilby Roden</i>		
County Use			
Application Fee	\$350	Receipt Number	170211
		Received Date	10.25.19
Initial Reviewed by			
Plat Name			
Request complies with Goodhue County Zoning and Subdivision requirements as attested by me			
_____ the Goodhue County Planner/Zoning Administrator on			
this day _____			



- DENOTES FOUND IRON MONUMENT
- DENOTES SET IRON MONUMENT W/PLASTIC CAP "RLS 22044"

LEGAL DESCRIPTION:

Lot 3, Block 1, SUGAR LOAF ESTATES, according to the recorded plat thereof, Goodhue County, Minnesota. Together with that part of the Northeast Quarter of Section 25, Township 110 North, Range 16 West, Goodhue County, Minnesota, described as follows: Beginning at the most southerly corner of Lot 3, Block 1, SUGAR LOAF ESTATES, according to the recorded plat thereof; thence North 00 degrees 23 minutes 51 seconds West (assumed bearing) along the east line of said Lot 3, Block 1, a distance of 414.15 feet to the southwest corner of Lot 2, Block 1, said SUGAR LOAF ESTATES; thence South 89 degrees 35 minutes 10 seconds East, along the south line of said SUGAR LOAF ESTATES, 100.01 feet; thence South 00 degrees 23 minutes 51 seconds East, parallel with said east line of Lot 3, Block 1, a distance of 543.34 feet to the northeasterly right of way line of the former railroad; thence northwesterly, along said northeasterly right of way line, 164.52 feet to the point of beginning. Containing 3.95 acres, more or less. Subject to all easements and restrictions of record, if any.

PRELIMINARY PLAT FOR:
 LAWRENCE THOMFORDE
 17468 SUGARLOAF PARKWAY
 ZUMBROTA, MN 55992

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

OCTOBER 23, 2019 David G. Rapp
 Dated: David G. Rapp
 Minnesota Registration No. 22044

RAPP LAND SURVEYING, INC.
 45967 HIGHWAY 56 BLVD
 KENYON, MN 55946
 612-532-1263

DRAWN BY: DGR	DATE: 10-23-19	PROJECT NO. D19146PP
SCALE: 1"=100'	SHEET 1 of 1 sheet	BOOK/PAGE 45/12

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

To: Planning Advisory Commission
From: Land Use Management
Meeting Date: November 18, 2019
Report date: November 8, 2019

PUBLIC HEARING: Request for Map Amendment (Rezone) - Brunner

Request for map amendment, submitted by Jason Krueger (Buyer) and Mark Braaten (Owner), to rezone 5.0 acres from A3 (Urban Fringe District) to R1 (Suburban Residence District).

Application Information:

Applicant: Jason Krueger (Buyer) and Mark Braaten (Owner)

Address of zoning request: 16632 515th Street, Pine Island, MN 55963

Parcel(s): 40.035.2200

Abbreviated Legal Description: Part of the W $\frac{1}{4}$ of the E $\frac{1}{2}$ of the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Sect 35 Twp 109 Range 16 in Roscoe Township.

Township Information: Roscoe Township signed the application November 5, 2019 with the note that "The Supervisors reviewed the application. Approval is up to the County."

Zoning District: A3 (Urban Fringe District)

Attachments and links:

Application and submitted project summary

Site Map(s) and Survey

Project Review

Goodhue County Zoning Ordinance (GCZO):

<http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

Summary:

The Applicant intends to purchase a single parcel comprising 5.0 acres in section 35 of Pine Island Township. The Applicant is requesting to rezone the parcel from A3 (Urban Fringe District) to R1 (Suburban Residence District) to allow a dwelling to be constructed on the parcel.

The parcel is currently not eligible as a dwelling site as the minimum parcel size for property in the A3 district is 35 acres.

New R1 districts are required to be a minimum of 1,000 feet from registered Feedlots. There is an existing registered Feedlot owned by Lee Schaefer located approximately 750 feet northwest of the subject parcel. Mr. Krueger has applied for a variance to the Feedlot setback requirement and his request is scheduled to be considered by the Goodhue County Board of Adjustment on November 18, 2019. A variance would need to be approved before an R1 zone change could be approved by the County Board.

Project Summary:

Property Information:

- The subject property consists of a single parcel comprising 5.0 acres. A .10 acre portion of the parcel is located across 515th Street from the larger portion of the property.
- Driveway access is located off of 515th Street on the north side of the property.
- The property is currently zoned A3. Adjacent zoning districts are all A3. The property is located approximately 1.3 miles from the City limits of Pine Island.

- Surrounding land uses include a mix of undeveloped agricultural lands and medium density dwellings on parcels less than 35-acres. There are 8 dwellings within ¼ mile of the proposed dwelling site. Six of the dwelling sites are located on parcels less than 35-acres in area. As previously stated, a variance would need to be approved before an R1 zone change could be approved by the County Board to address Feedlot setback standards to new R1 districts.
- The property is not located within a Historic Preservation District. It is not anticipated that any scenic or historic amenities will be negatively impacted as a result of the proposed rezone.
- The parcel is not designated Shoreland or Floodplain. There are some steeper slopes (approximately 25%) along the southern portion of the property. This area is considered a minor Bluffland area. Care should be taken during any future development of the site to prevent erosion and contain runoff during any construction. The Applicant has stated he does not plan to construct the dwelling in the Bluffland area.

Existing/Proposed Uses:

- The property currently has a dilapidated mobile home on the property, however this parcel has never been used as a permanent dwelling site. The Applicant intends to construct a single family dwelling on this parcel and remove the mobile home from the property. An associated well and septic system would be installed in correlation with the project.

Planning Information:

- The R1 District is intended to provide a district that defines and protects areas suitable for low to medium density residential development as the principal use of the land and to allow related facilities desirable for a residential environment. It is also intended that the district allows varying densities of development in accordance with the ability to provide water and sewer facilities.
- The property is not currently used for agricultural purposes. The Prime Farmland Rating for Agriculture is as follows:

<i>Soil Name</i>	<i>Slope</i>	<i>Amount (acres)</i>	<i>% of Total</i>	<i>Prime Farmland Rating</i>
Fayette-Hersey, Bedrock	18-25%	1	22.30%	Not prime farmland
Downs-Hersey, Bedrock	6-12%	1.4	29.30%	Farmland of statewide importance
Downs-Hersey, Bedrock	12-18%	0.5	11.40%	Not prime farmland
Barremills Silt Loam	1-5%	0.7	15.50%	Prime Farmland
Schapville Silt Loam	18-35%	1	21.30%	Not Prime Farmland

- The proposed rezone appears compatible with the goals and objectives of the Goodhue County Comprehensive Plan:
 “Support the establishment of rural residences to provide rural living opportunities in the unincorporated areas of Goodhue County”
 Goodhue County does not have a future land use map.
- Section 35 is all zoned A3. A3 Districts allow a maximum of one dwelling per 35 acres. There are currently 13 dwellings within the Section. Of the 13 dwellings, 11 are on parcels less than 35 acres in area. Rezoning the parcel to R1 would not affect the existing dwelling development eligibility of surrounding A3 parcels as they are not based on section density.

Roscoe Township:

- Roscoe Township discussed the proposal with LUM staff and signed the rezoning application noting that the Supervisors reviewed the application and final approval is up to the County.

The Planning Commission and County Board will need to determine whether the proposed rezone will be detrimental to future annexation efforts of the City of Pine Island. It should be noted that this is the second section zoned A3 west of the City of Pine Island. LUM staff are not aware of any immediate plans to annex land in this area.

Staff Recommendation:

LUM Staff recommends the Planning Advisory Commission

- adopt the staff report into the record;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

recommend that the County Board of Commissioners **APPROVE** the map amendment request from Jason Krueger (Buyer) and Mark Braaten (Owner) to rezone parcel 40.035.2200 from A3 (Urban Fringe District) to R1 (Suburban Residence District).

MAP 01: PROPERTY OVERVIEW



PLANNING COMMISSION

Public Hearing
November 18, 2019

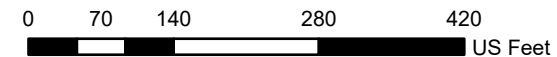
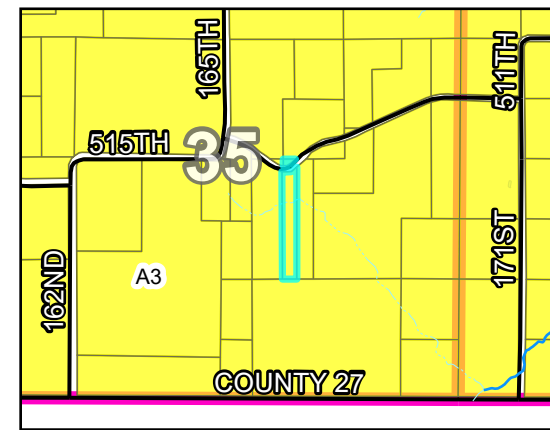
Jason Krueger (Buyer) &
Mark Braaten (Owner)
A3 Zoned District

Parcel 40.035.2200
Part of W 1/4 of E 1/2 of NW 1/4 of
SE 1/4 of Sect 35 TWP 109 R16
in Roscoe Township

Request to rezone 5.0 acres from A3 to R1

Legend

Intermittent Streams	Bluff Impact Zones (% slope)
Protected Streams	20
Lakes & Other Water Bodies	30
Shoreland	FEMA Flood Zones
Historic Districts	2% Annual Chance
Parcels	A
Registered Feedlots	AE
Dwellings	AO
Municipalities	X

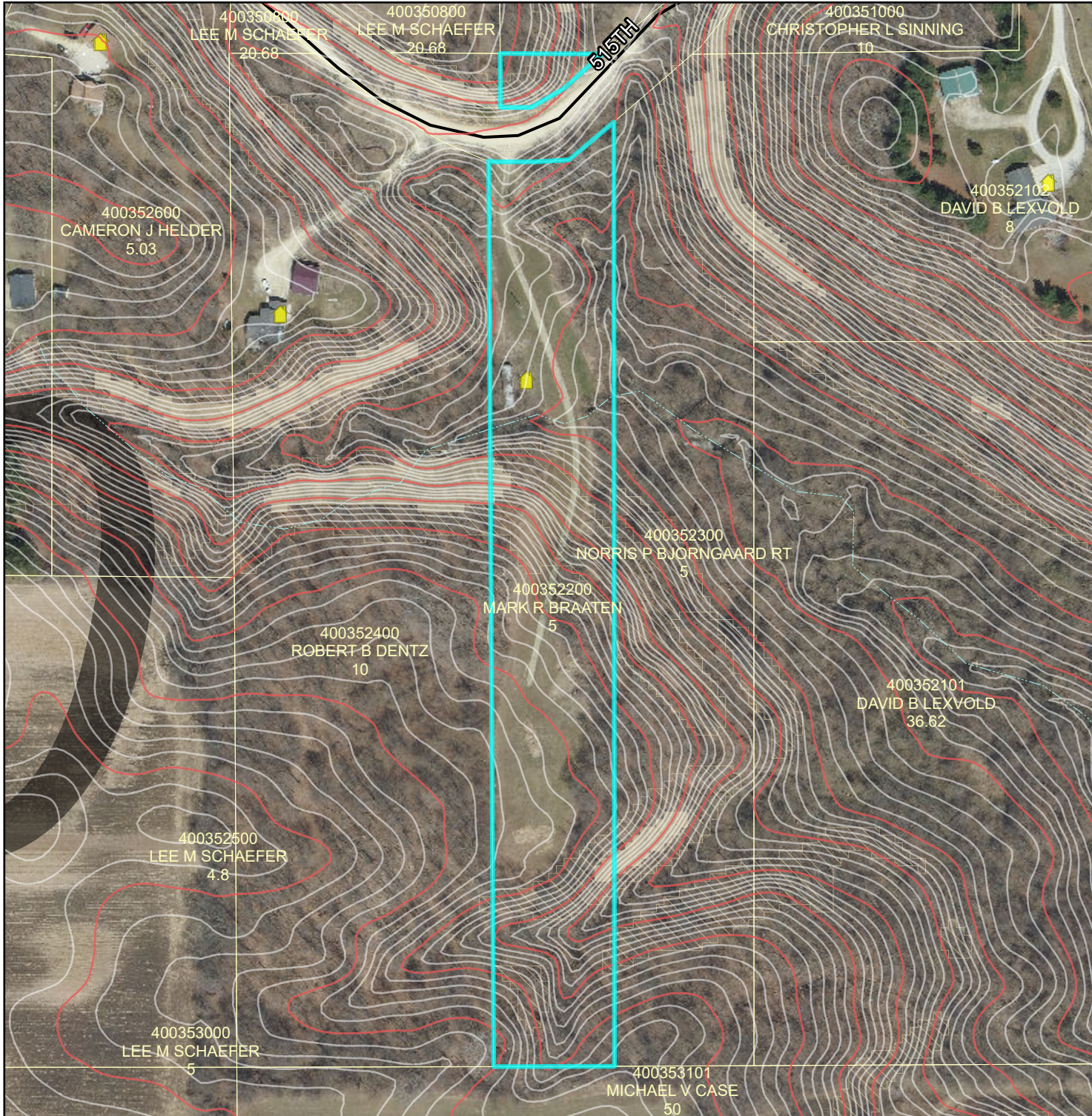


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2018 Aerial Imagery
Map Created October, 2019 by LUM



MAP 03: ELEVATIONS



PLANNING COMMISSION

Public Hearing
November 18, 2019

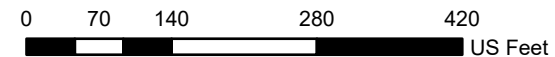
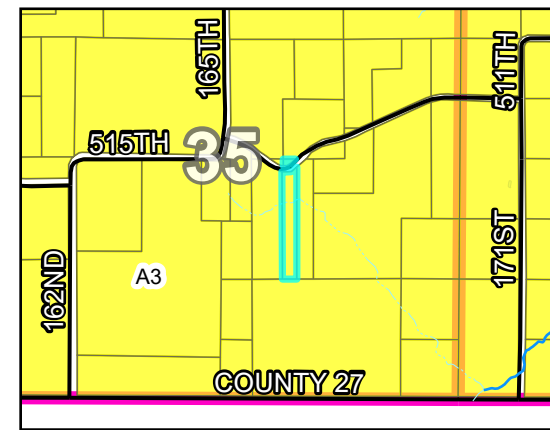
Jason Krueger (Buyer) &
Mark Braaten (Owner)
A3 Zoned District

Parcel 40.035.2200
Part of W 1/4 of E 1/2 of NW 1/4 of
SE 1/4 of Sect 35 TWP 109 R16
in Roscoe Township

Request to rezone 5.0 acres from A3 to R1

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X

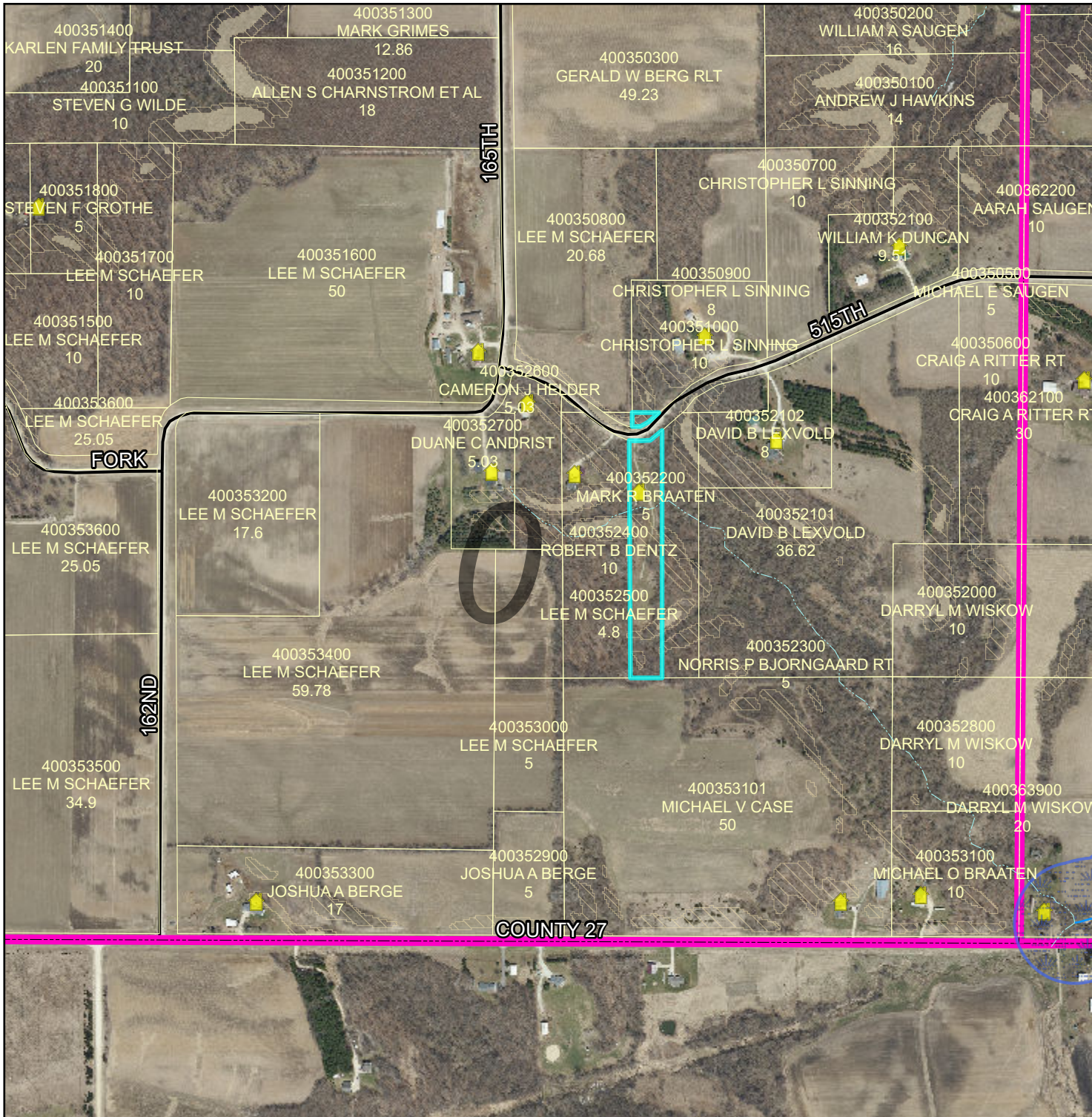


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2018 Aerial Imagery
Map Created October, 2019 by LUM



MAP 02: VICINITY MAP



PLANNING COMMISSION

Public Hearing
November 18, 2019

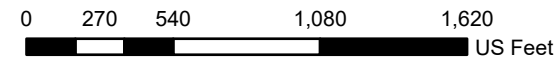
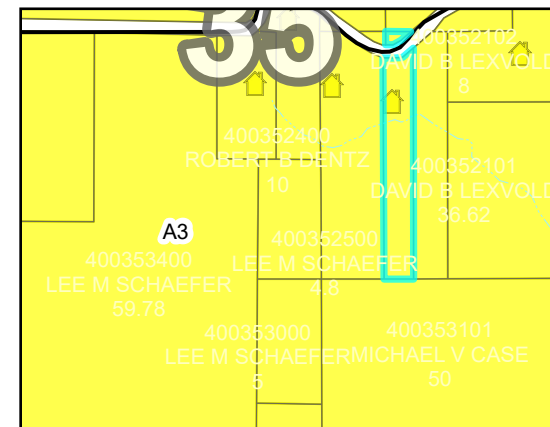
Jason Krueger (Buyer) &
Mark Braaten (Owner)
A3 Zoned District

Parcel 40.035.2200
Part of W 1/4 of E 1/2 of NW 1/4 of
SE 1/4 of Sect 35 TWP 109 R16
in Roscoe Township

Request to rezone 5.0 acres from A3 to R1

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X



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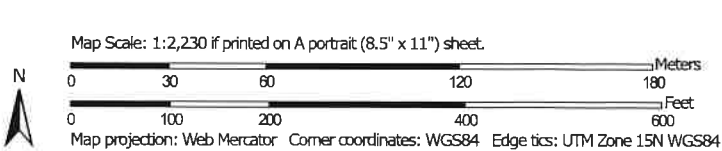
2018 Aerial Imagery
Map Created October, 2019 by LUM



Soil Map—Goodhue County, Minnesota



Soil Map may not be valid at this scale.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
N537E2	Fayette-Hersey, bedrock substratum, complex, 18 to 25 percent slopes, moderately eroded	1.0	22.3%
N538C2	Waubeek and Massbach soils, 6 to 12 percent slopes, moderately eroded	0.0	0.0%
N572C2	Downs-Hersey, bedrock substratum, complex, 6 to 12 percent slopes, moderately eroded	1.4	29.3%
N572D2	Downs-Hersey, bedrock substratum, complex, 12 to 18 percent slopes, moderately eroded	0.5	11.4%
N578B	Barremills silt loam, drainageway, 1 to 5 percent slopes, occasionally flooded	0.7	15.5%
N597C2	Waucoma-Winneshiek complex, 6 to 12 percent slopes, moderately eroded	0.0	0.0%
N631E	Schapville silt loam, 18 to 35 percent slopes	1.0	21.3%
Totals for Area of Interest		4.6	100.0%

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

Project Review per Article 3, Section 2, Subd. 5-10:

- Subd. 5
- A. The names and addresses of the petitioner or petitioners and their signatures to the petition. **See application**
 - B. Survey information: **See application**
 - C. The current and proposed district: **A3 to R1**
 - D. The current use and the proposed use of the land.
The property currently has a dilapidated mobile home which the County has never classified as a permanent residence. The Applicant proposes to remove this unit and construct a single family dwelling on the parcel.
 - E. The reason for the requested change of zoning district. **The applicant is requesting the zone change to allow a single family dwelling to be constructed on a lot less than 35-acres in area.**
 - F. A copy of the soil map showing the soils types within the proposed boundary and the surrounding area. **A soils map for the site has been prepared.**
 - G. Prime Farmland Rating of the soil types in F.
 - The Prime Farmland Rating for Agriculture is as follows:

Soil Name	Slope	Amount (acres)	% of Total	Prime Farmland Rating
Fayette-Hersey, Bedrock	18-25%	1	22.30%	Not prime farmland
Downs-Hersey, Bedrock	6-12%	1.4	29.30%	Farmland of statewide importance
Downs-Hersey, Bedrock	12-18%	0.5	11.40%	Not prime farmland
Barremills Silt Loam	1-5%	0.7	15.50%	Prime Farmland
Schapville Silt Loam	18-35%	1	21.30%	Not Prime Farmland

H. A statement of how the requested change is compatible with the Goodhue County Comprehensive Plan including but not limited to the following:

1. The environmental impacts of the proposed use of land on the:
 - a. Groundwater
 - b. natural plant and animal communities
 - c. existing trees and vegetation
 - d. Bluffland stability
 - e. shoreland stability
1. **The property is not designated Shoreland or Floodplain. There are some steeper slopes (approximately 25%) along the southern portion of the property. This area is considered a minor Bluffland area. Care should be taken during any future development of the site to prevent erosion and contain runoff during any construction. The Applicant has stated he does not plan to construct the dwelling in the Bluffland area. There will be minimal impacts to existing trees and vegetation.**
2. The compatibility with surrounding land uses
The area is characterized by primarily low-density residential with agricultural uses. Rezoning the 5.0 acres to R1 would not appear to have any substantial negative impacts to the existing or potential future uses of the surrounding zoning districts. There is an existing Feedlot within 1000 feet of the property. A variance has been applied for to allow the rezoning and construction of a dwelling within 1000 feet of a Feedlot.

3. The physical and visual impacts on any scenic or historic amenities within or surrounding the proposed parcel.

It is not anticipated that any scenic or historic amenities will be negatively impacted as a result of the proposed rezone.

Subd. 6 The housing density of the affected Section

The Applicant is proposing to construct one dwelling on the parcel. The A3 Zoning District allows new dwellings on parcels 35 acres or larger. If the Applicant were to propose to split the property in the future, a formal platting process would be required which would necessitate additional public review/approval. Rezoning the parcel to R1 would not affect the existing dwelling development eligibility of surrounding A3 parcels.

Subd. 7 The impact on any surrounding agricultural uses

The property is not currently used for agricultural purposes. There is one registered Feedlot within 1000 feet of the parcel. A variance has been applied for to allow the rezone and a new dwelling within 1000 feet of a registered Feedlot.

Subd. 8 The impact on the existing transportation infrastructure

The property is currently accessed via 515th Street on the north side of the property. The Applicant intends to utilize this existing driveway to access the property. The change of zone is not anticipated to negatively impact traffic or existing transportation infrastructure.

Subd. 9 The impact on surrounding zoning districts

The property is currently zoned A3. Adjacent zoning districts are all A3. The City of Pine Island is located approximately 1.3 miles from the property.

Subd. 10 A statement concerning the cumulative effect and compatibility of the requested zoning change on the affected Township and any cities located within 2 miles of the proposed parcel.

Rezoning the subject parcel to R1 does not appear to have negative cumulative effects on the immediate surrounding area or the City of Pine Island. The area is characterized by primarily low-density residential uses mixed with agricultural uses. Rezoning the 5.0 acres to R1 would not appear to have any substantial negative impacts to the existing or potential future uses of the surrounding zoning districts. The City of Pine Island is located 1.3 miles from the parcel. LUM Staff is not aware of any immediate plans for annexation of this area into the City. It should be noted this is the second section zoned A3 west of the City limits.

Subd. 11. Additional information as may be requested by the Planning Commission or zoning staff.

GOODHUE COUNTY ZONING DISTRICT CHANGE APPLICATION

Parcel # R 40.085.2200

Permit # _____

PROPERTY OWNER INFORMATION

Last Name <u>Braaten</u>	First <u>Mark</u>	M.I. <u>R</u>	Date of Birth <u>7/2/66</u>
Street Address <u>51499 176th Ave Way</u>		Phone _____	
City <u>Pine Island</u>	State <u>MN</u>	Zip <u>55963</u>	Attach Legal Description as Exhibit "A" <input checked="" type="checkbox"/>
Purchaser Authorized Agent <u>Jason P. Krueger</u>		Phone - Purchaser _____	
Mailing Address of Landowner: <u>51499 176th Ave Way, Pine Island</u>			
Mailing Address of Agent: <u>1040 9th Ave SW, Pine Island MN</u>			

Purchaser
7/19/17

PROJECT INFORMATION

Site Address (if different than above): 10632 515th St, Pine Island

Lot Size 5 acres Structure Dimensions (if applicable) N/A

Existing Zone A3 Proposed Zone R-1

Existing Use _____

Proposed Use: Residence - Buildable site

DISCLAIMER AND PROPERTY OWNER SIGNATURE

I hereby swear and affirm that the information supplied to Goodhue County Land Use Management Department is accurate and true. I acknowledge that this application is rendered invalid and void should the County determine that information supplied by me, the applicant in applying for this variance is inaccurate or untrue. I hereby give authorization for the above mentioned agent to represent me and my property in the above mentioned matter.

Signature of Landowner Mr. R. Braaten Date 10/20/19

Signature of Agent Authorized by Agent Purchaser Jason Krueger

TOWNSHIP INFORMATION

Township Zoning Permit Attached? If no please have township complete below:

By signing this form, the Township acknowledges being made aware of the request stated above. In no way does signing this application indicate the Township's official approval or denial of the variance request.

Signature Susan Keir Title Clerk Date 11/5/2019

Comments:
The Supervisors reviewed the application. Approval is up to the County.

COUNTY SECTION _____ COUNTY FEE \$500 RECEIPT # _____ DATE PAID _____

Applicant requests a variance from Article _____ Section _____ Subdivision _____ of the Goodhue County Zoning Ordinance

What is the formal wording of the request?

Shoreland _____ Lake/Stream Name _____ Zoning District _____

Date Received _____ Date of Public Hearing _____ DNR Notice _____ City Notice _____

Action Taken: _____ Approve _____ Deny _____ Conditions: _____

GOODHUE COUNTY ZONING DISTRICT CHANGE APPLICATION

**APPLICANT FINDINGS OF FACT
AND SUPPORTING INFORMATION REGARDING ZONING DISTRICT CHANGE APPLICATION**

1. How does the requested change compatible with the Goodhue County Comprehensive Plan?

The Goodhue County Comprehensive Plan allowed rural dwellings where appropriate

2. What is the cumulative effect of the requested zoning change on the affected Township and any cities located within 2 miles of the proposed parcel?

No effect on the Township. The Township is considering the request

3. Is the zoning change compatible with the affected Township and any cities located within 2 miles of the proposed parcel?

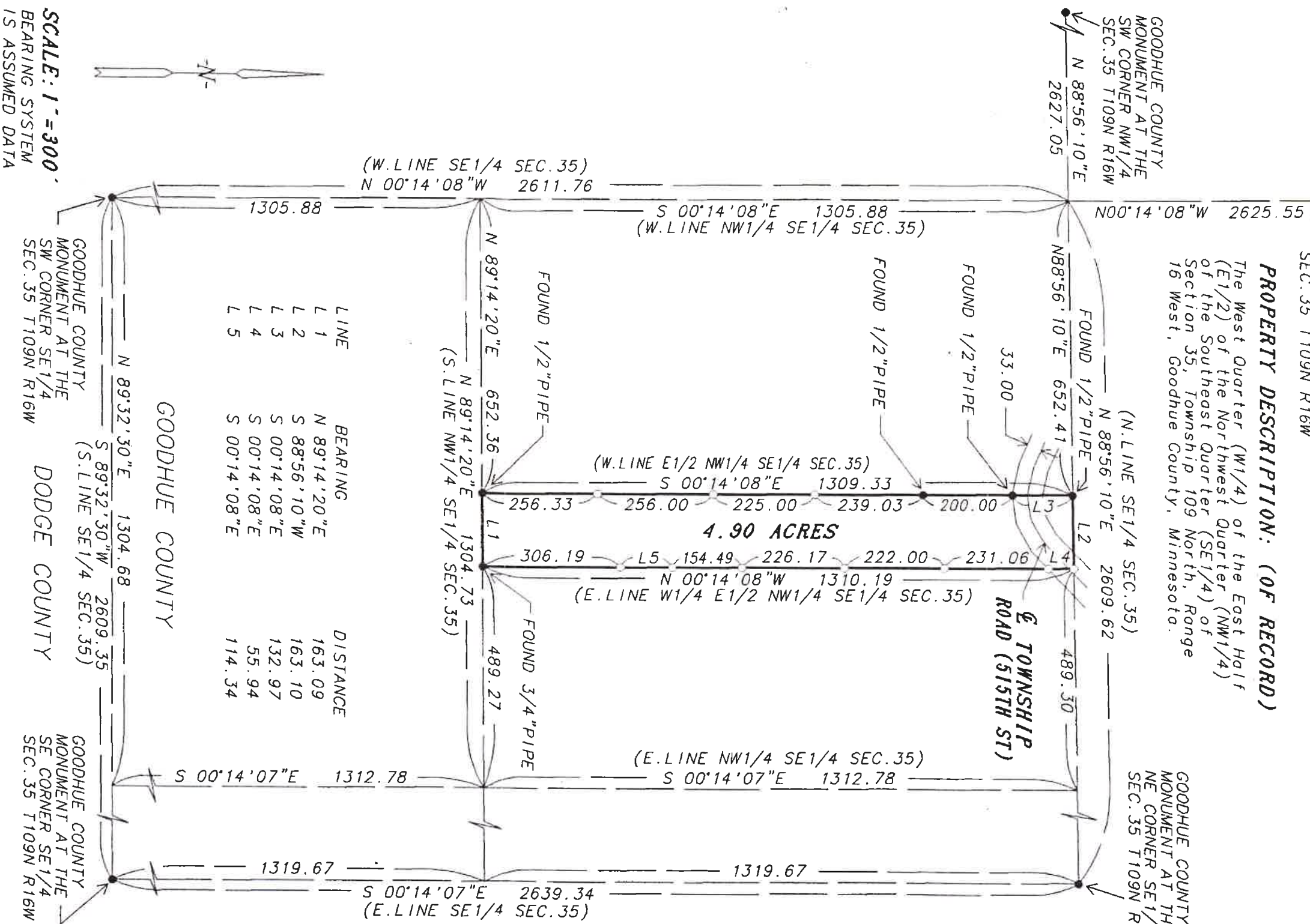
It is compatible

GOODHUE COUNTY
MONUMENT AT THE
NW CORNER NE1/4
SEC. 35 T109N R16W

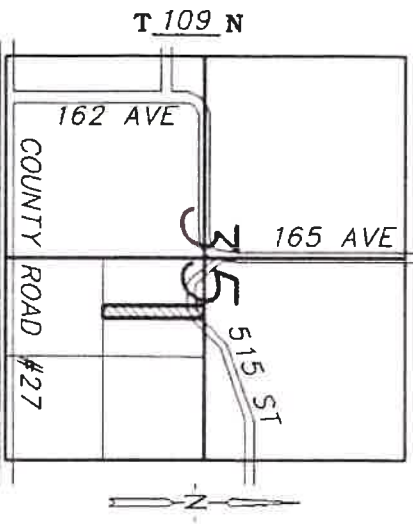
PROPERTY DESCRIPTION: (OF RECORD)

The West Quarter (W1/4) of the East Half
(E1/2) of the Northwest Quarter (NW1/4)
of the Southeast Quarter (SE1/4) of
Section 35, Township 109 North, Range
16 West, Goodhue County, Minnesota.

GOODHUE COUNTY
MONUMENT AT THE
NE CORNER SE1/4
SEC. 35 T109N R16W



VICINITY MAP SCALE 1" = 3000'



SURVEY FOR: _____

MARK BRAATEN

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS SURVEY, PLAN,
OR REPORT WAS PREPARED BY ME OR UNDER
MY DIRECT SUPERVISION AND THAT I AM A
DULY LICENSED LAND SURVEYOR UNDER THE
LAWS OF THE STATE OF MINNESOTA



VINCENT A. FANGMAN LS. NO. 14888

DATE 10/8/2009
PINE ISLAND, MN

DRAWN BY: M. FANGMAN

DATE: 10/08/09

JOB NO. 09-92

R 16 W GOODHUE COUNTY

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

To: Planning Commission
From: Land Use Management
Meeting Date: November 18, 2019
Report date: November 8, 2019

PUBLIC HEARING: CUP Request for Feedlot Expansion and Liquid Manure Storage Exceeding 500,000 Gallons (Buck)

Request for CUP amendment, submitted by David & Ann Buck (Owner/Operators), for an estimated 777 Animal Unit expansion of an existing 998 Animal Unit dairy Feedlot and construction of animal waste storage pit exceeding 500,000 gallons.

Application Information:

Applicant: David & Ann Buck (Owner/Operators)
Address of zoning request: 37298 180th Ave, Goodhue, MN 55027
Parcel(s): 33.019.0400
Abbreviated Legal: NW ¼ of Sect 19 Twp 111 Range 15 in Goodhue Township
Zoning District: A1 (Agriculture Protection District)

Attachments and links:

Application and project summary (excerpt of submitted materials; full submittal upon request)
Site Map(s)
Existing CUP: 02-C007
Feedlot Officer Review and Odor OFFSET calculations (Kelsey Petit)
Goodhue County Zoning Ordinance (GCZO):
<http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

Background:

The Applicants have an existing Feedlot registration and Conditional Use Permit (CUP) to raise dairy cattle on their multigenerational family farm. They are requesting to amend their existing CUP (02-C007) to improve operational efficiency by increasing their overall number of cattle and expanding manure storage capacity. The proposal is to construct a 240ft x 310ft dairy barn to provide space for an additional 540 head of cattle that, if approved, would expand the operation to an aggregate total of 1,775 Animal Units.

The Applicants are also proposing to construct a 480ft x 412ft above-grade liquid manure storage basin that would add an additional 23 million gallons of manure storage capacity to the operation.

The Goodhue County Zoning Ordinance (GCZO) requires CUP approval for all Feedlots exceeding 500 Animal Units in the A1 District and any animal waste storage pits exceeding 500,000 gallons.

The Applicants are concurrently pursuing variance approval from the Goodhue County Board of Adjustment to allow the proposed expansion to be constructed within the 91% odor OFFSET setback area. The variance is scheduled for consideration on 11/18/19.

Goodhue County Zoning Ordinance: Article 4 Conditional/Interim Uses

No CUP/IUP shall be recommended by the County Planning Commission unless said Commission specifies facts in their findings for each case which establish the proposed CUP/IUP will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, will not substantially diminish and impair property values within the immediate vicinity, will not impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area, that adequate measures have been, or will be, taken to provide utilities, access roads, drainage and

“To effectively promote the safety, health, and well-being of our residents”

www.co.goodhue.mn.us

other necessary facilities, to provide sufficient off-street parking and loading space, to control offensive odor, fumes, dust, noise and vibration so that none of these will constitute a nuisance, and to control lighted signs and other lights in such a manner that no disturbance to neighboring properties will result.

Project Summary:

Property Information:

- The 146-acre (approximate) property includes a dwelling, a registered feedlot, and tilled cropland.
- The parcel and all adjacent properties are zoned A1. Surrounding land uses are primarily agricultural (feedlots and row-crop agriculture). The immediate area has very-low density residential uses.
- Site access is via a “U-shaped” crushed aggregate driveway located off 180th Ave (crushed aggregate road) on the west side of the property. Emergency vehicle access appears adequate to service the property.

Feedlot Facilities:

- The Applicants are proposing to construct a 240ft x 310ft dairy barn. There are 7 existing cattle barns that were permitted with the previous CUP approvals. Additional facilities include feed and grain storage silos, bunkers, and bins, and multiple machinery storage/repair buildings.

Animal Units/Setbacks:

- The Applicants are proposing to add 540 head of dairy cattle producing a total of 1,775 Animal Units as shown below (new Animal Units shown in red).

Animal Type	A.U. Factor	# of Animals	Animal Units
<u>One mature cow (whether milked or dry)</u>			
over 1,000 lbs.	1.4	675 1230	945 1722
under 1,000 lbs.	1.0		
one Heifer	0.7	30	21
one Calf	0.2	160	32

Total Animal Units 998 1775

- New construction on existing Feedlots is required to meet a 91% Odor Annoyance-Free Rating distance (as determined by the Odor OFFSET Evaluation Model) to existing dwellings. A 1,825-foot minimum setback was calculated for the expansion.

There are two dwellings located within the 1,825-foot setback area for the proposed expansion, both of which are occupied by family members of the dairy operation. David J. Buck’s dwelling is located approximately 1,550 feet west of the proposed feedlot expansion. Ann Buck’s dwelling is located approximately 1,450 feet southwest of the proposed feedlot expansion.

The nearest dwellings not owned by family members related to the operation are more than 3,000 feet from the expansion.

The Applicants have requested a variance to the 91% Odor Annoyance-Free Rating distance requirement which is scheduled for consideration on 11/18/19.

- The Feedlot expansion is 1.25 miles northwest of the City of Goodhue. The city of Goodhue does not require a 99% Odor Annoyance-Free Rating distance for new construction on existing feedlots as other municipalities in the County do.
- There are currently 4 dwellings located in section 19. As an A1 zone, a maximum of 4 dwellings are allowed in the section so there is no more dwelling density available in the section. The sections to the north, east, and south are also “full” A1 zoned sections. New dwellings cannot be located within 1,000-foot or 94% Odor Annoyance-Free Rating distance (as determined by the Odor OFFSET Evaluation Model) to existing Feedlots operations.
- The proposed Feedlot expansion is sited to comply with all other setback standards of the GCZO including property lines, wells, septic systems, Shoreland, Floodplains, sinkholes, and Blufflands.

The site is not located within an abandoned quarry.

Drainage/Landscaping:

- The site has relatively limited topographic relief with slopes ranging from 2-6% in the project areas. The landscape drains generally towards the northeast following field drainage ways.
- An NPDES Stormwater Pollution Prevention Plan (SWPPP) will be required for the project. Under the NPDES permit, the facility will be required to comply with the federal effluent limitations, which includes providing containment of all manure, litter, and process wastewater for up to a 25-year, 24-hour rainfall event.
- Goodhue County Soil and Water Conservation District Technician/Water Planner Beau Kennedy reviewed the Applicant's submittal and the following is a summary of his comments:

The NWI map shows that a wetland may be present on the north end of the Buck farmyard. I do not think the boundary is accurate, but the bottom of the waterway may have wetland characteristics present. The Wetland Conservation Act of MN regulates the filling/drainage/excavating of wetlands in the state. I do not see the proposed new manure pit impacting wetlands as presented. Goodhue County does not impose any wetland setback for buildings/fill etc. However, if plans change and the waterway areas will be impacted with fill, we should determine this ahead of time so we can take care of any necessary wetland permits if needed.

Stormwater runoff from the building roofs, and open lot areas should be retained in an effort to reduce the peak flows from leaving the site. I have not done any calculations on the volumes required to hold back the regulated amount of stormwater from a rain event, their engineers will have to run the numbers to see if there is enough storage that could be captured here and size the drainage pipe accordingly. Like all sites with a lot of grading, typical erosion BMPs would be needed (a SWPPP plan, silt fence locations, temp/perm erosion and sediment control measures, etc).

Nutrient/Waste Management:

- The applicants have an existing 3 million gallon above-grade manure liquid manure storage basin. They are proposing to construct a second above grade manure pit with a storage capacity of up to 23 million gallons creating 26 million gallons of total manure storage capacity. The Applicants currently have approximately 90 days of storage capacity. The manure storage expansion will allow them to have more than 1 year of manure storage capacity for the operation improving the ability of the operation to have more flexibility in determining when to land apply manure.

The new storage pit will be subject to MPCA inspection throughout the construction process to ensure structural integrity and conformance with approved engineered plans. The manure storage areas and barn are being designed by MSA Professional Services, a licensed engineering firm.

- The Applicants have an existing manure management plan that will be updated to address the expansion. As a state-level Feedlot permit, the Nutrient Management Plan review will be conducted by the MPCA.
- An Emergency Response Plan is required as part of an NPDES permit submittal.
- An Animal Mortality Plan will be completed with the Applicants NPDES permit. Additional information will be available at the Public Hearing from MSA.

MPCA (Minnesota Pollution Control Agency) Review:

- The MPCA has determined the adjacent registered Feedlot (Ann Buck; PID 25.024.0401) is under common ownership meeting the state definition for "multiple sites." When combined, the two sites exceed the 1,000 Animal Unit threshold and therefore an MPCA NPDES permit is required.
- The MPCA NPDES permit review process is not currently complete.

County Feedlot Officer Comments:

- Goodhue County Feedlot Office Kelsey Petit reviewed the Application. She noted the registration,

permitting, and inspections will be primarily handled by the MPCA but the county will maintain a Feedlot registration for the facility until the individual parcel exceeds the county permit threshold as required by County Ordinance.

Township Information:

- Goodhue Township endorsed acknowledgement of the request. No specific comments or conditions were noted on the application.

Draft Findings of Fact:

The following staff findings shall be amended to reflect concerns conveyed during the PAC meeting and public hearing.

1. The proposed Feedlot and manure storage expansion does not appear injurious to the use and enjoyment of properties in the immediate vicinity for uses already permitted, nor would it substantially diminish and impair property values in the immediate vicinity. The use is located in an A1 (Agriculture Protection District) zone which was intended to allow for large-scale farming operations. There is also very low residential density in the surrounding area which limits the potential for future land-use conflicts. The proposal appears harmonious with the established uses in the vicinity which include primarily cropland and animal agriculture operations.
2. The Feedlot expansion and liquid manure storage pits are not anticipated to impede the normal and orderly development or improvement of surrounding vacant property for uses predominant to the area. The proposal meets or exceeds all setback and development standards of the Goodhue County Zoning Ordinance and appears compatible with adjacent land uses.
3. A review of the applicants submitted project summary indicates adequate utilities, access roads, drainage, and other necessary facilities are available to accommodate the proposed use.
4. The submitted plans identify means to provide sufficient off-street parking and loading space to serve the proposed use and meet the Goodhue County Zoning Ordinance’s parking requirements.
5. The submitted plans detail adequate measures to prevent or control offensive odor, fumes, dust, noise, and vibration so that none of these will constitute a nuisance. The applicant’s plans also appear capable of controlling lights in such a manner that no disturbance to neighboring properties will result.

Staff recommendation is based on the review of the submitted application and project area prior to the public hearing.

Staff Recommendation:

LUM Staff recommends the Planning Advisory Commission

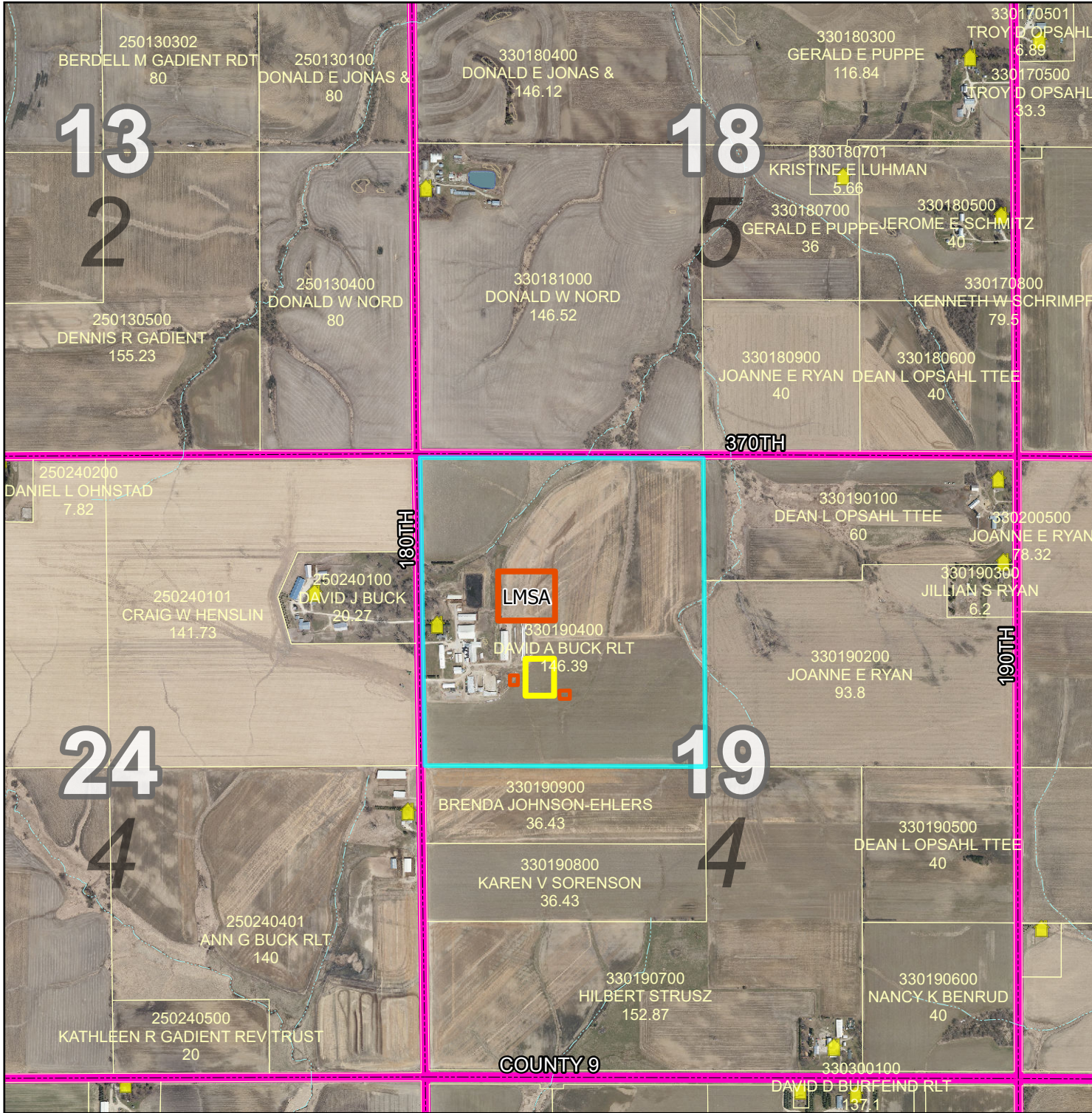
- adopt the staff report into the record;
- adopt the findings of fact;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

Recommend the County Board of Commissioners **APPROVE** the request for CUP amendment, submitted by David & Ann Buck (Owner/Operators), to expand an existing dairy Feedlot to an aggregate 1,775 Animal Units and allow on-site liquid manure storage capacity of up to 26 million gallons.

Subject to the following conditions:

1. The Feedlot shall be constructed according to submitted plans, specifications, and narrative unless modified by a condition of this CUP;
2. Applicants shall obtain Building Permit approvals from the Goodhue County Land Use Management Department prior to establishing the use;
3. Compliance with Goodhue County Zoning Ordinance including, but not limited to, Article 22 (Agriculture District) and Article 13 (Confined Feedlot Regulations);
4. Compliance with all necessary State and Federal registrations, permits, licensing, and regulations.

MAP 02: VICINITY MAP



PLANNING COMMISSION

Public Hearing
November 18, 2019

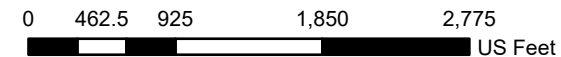
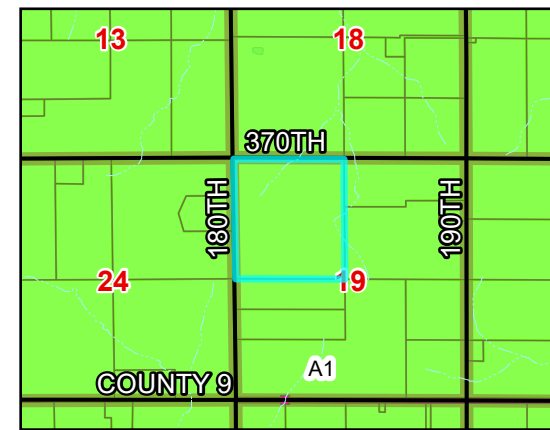
David & Ann Buck
A1 Zoned District

Parcel 33.019.0400
NW ¼ S19 T111 R15
in Goodhue Township

CUP amendment for 777 A.U.
expansion of an existing Feedlot and
waste storage pits exceeding 500,000 gal

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X



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2018 Aerial Imagery
Map Created November, 2019 by LUM



MAP 03: ELEVATIONS

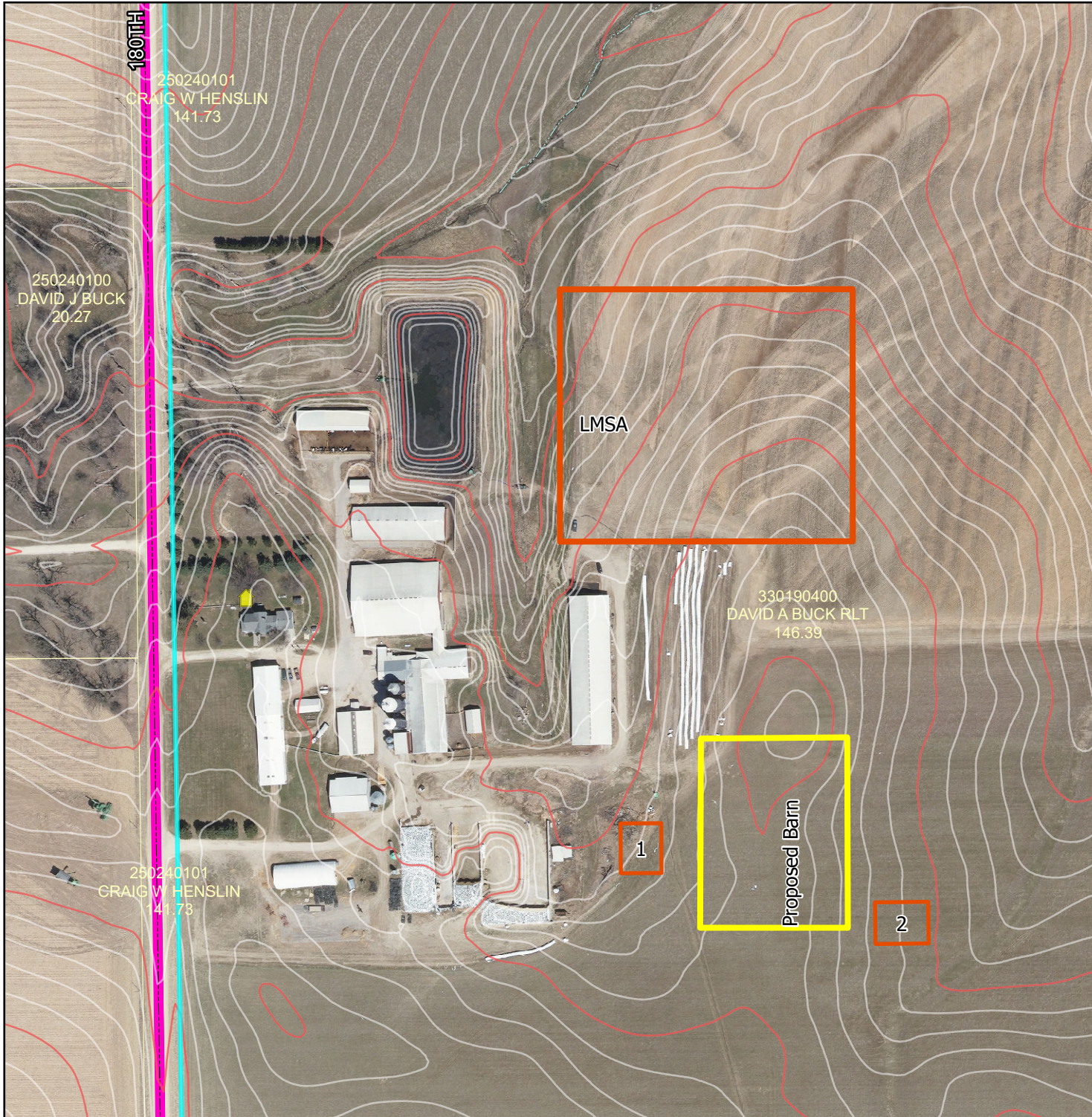
PLANNING COMMISSION

Public Hearing
November 18, 2019

David & Ann Buck
A1 Zoned District

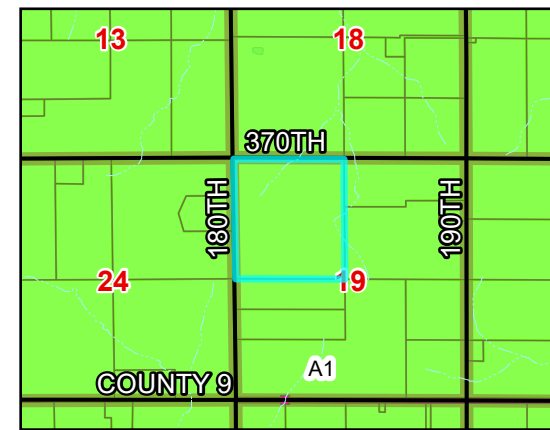
Parcel 33.019.0400
NW ¼ S19 T111 R15
in Goodhue Township

CUP amendment for 777 A.U.
expansion of an existing Feedlot and
waste storage pits exceeding 500,000 gal



Legend

- | | |
|----------------------------|---------------------------------|
| Intermittent Streams | Bluff Impact Zones (% slope) 20 |
| Protected Streams | Bluff Impact Zones (% slope) 30 |
| Lakes & Other Water Bodies | FEMA Flood Zones |
| Shoreland | 2% Annual Chance |
| Historic Districts | A |
| Parcels | AE |
| Registered Feedlots | AO |
| Dwellings | X |
| Municipalities | |



0 90 180 360 540 US Feet

DATA DISCLAIMER: Goodhue County assumes NO liability for the accuracy or completeness of this map OR responsibility for any associated direct, indirect, or consequential damages that may result from its use or misuse. Goodhue County Copyright 2019.

2018 Aerial Imagery
Map Created November, 2019 by LUM



GOODHUE COUNTY CONDITIONAL/INTERIM USE PERMIT APPLICATION

Parcel # 33.019.0400

Permit# 219.0051

PROPERTY OWNER INFORMATION

Last Name BUCK First DAVID + ANN Email: _____
Street Address 37298 180th AVE Phone _____
City GOODHUE State MN Zip 55027 Attach Legal Description as Exhibit "A"
Authorized Agent MSA PROFESSIONAL SERVICES Phone _____
Mailing Address of Landowner: SAME
Mailing Address of Agent: _____

PROJECT INFORMATION

Site Address (if different than above): _____
Lot Size 146.39 Structure Dimensions (if applicable) SEE ATTACHED
What is the conditional/interim use permit request for? Amendment/ Addition to an existing feedlot CUP
Written justification for request including discussion of how any potential conflicts with existing nearby land uses will be minimized
SEE ATTACHMENT

DISCLAIMER AND PROPERTY OWNER SIGNATURE

I hereby swear and affirm that the information supplied to Goodhue County Land Use Management Department is accurate and true. I acknowledge that this application is rendered invalid and void should the County determine that information supplied by me, the applicant in applying for this variance is inaccurate or untrue. I hereby give authorization for the above mentioned agent to represent me and my property in the above mentioned matter.

Signature of Landowner: Dale A Buck Date 10-21-19

Signature of Agent Authorized by Agent: _____



TOWNSHIP INFORMATION

Township Zoning Permit Attached? If no please have township complete below:

By signing this form, the Township acknowledges being made aware of the request stated above. In no way does signing this application indicate the Township's official approval or denial of the request.

Signature Dale Duke Title Chairman Date OCT 21, 19

Comments: _____

COUNTY SECTION _____ COUNTY FEE \$350 _____ RECEIPT # 17045 DATE PAID 10/28/2019

Applicant requests a CUP/IUP pursuant to Article _____ Section _____ Subdivision _____ of the Goodhue County Zoning Ordinance

What is the formal wording of the request? _____

Shoreland _____ Lake/Stream Name _____ Zoning District _____

Date Received _____ Date of Public Hearing _____ DNR Notice _____ City Notice _____

Action Taken: _____ Approve _____ Deny _____ Conditions: _____

 **MSA** Memo

To: Goodhue County
From: MSA Professional Services
Subject: Application for CUP and Variance: Buck Farms
Date: October 18, 2019

Parcel Number: 33.019.0400
Deed Holder: DAVID A BUCK RLT
Deed Holder 2: ANN G BUCK RLT
Property Address: 37298 180TH AVE GOODHUE, MN 55027-5123
Mailing Address: 37269 180TH AVE GOODHUE, MN 55027 USA
Class: AG DWELLING
Tax District: GOODHUE TWP 253
Zoning: A1
Sec-Twp-Rng: 19-111-015
Brief Legal Description: DOC#608476 NW1/4 SEC 19-111-15ID# 33-0000-14900 1

Conditional Use Permit- David A. Buck – 146.39 acres of the NW ¼ of Section 19, T111N R15W, Goodhue Township. The request is for an amendment to an existing conditional use permit for a feedlot over 500 animal units in the A-1 Agricultural Protection District.

Attachments and links:

Application and project summary
Site Map(s)
Existing CUP
Feedlot Officer Review and Odor OFFSET calculations (Kelsey Petit)

Background:

The Applicants have an existing Feedlot registration and Conditional Use Permit (CUP) n their multigenerational family dairy farm. They are requesting to amend their CUP (02-C007) to improve operational efficiency.

The proposed facility is to be located on a 146 acre parcel (NW ¼ Section 19, Goodhue Township) which currently includes a Dairy Farm operation exceeding 500 animal units and 500,000 gallons of manure storage that received CUP approval in April 2002 and amendment in 2007. A conditional use permit is required for “any new or expanding feedlot that meets or exceeds 500 animal units” in an A-1 zoning.

MEMO

October 25, 2019

1. CUP approved in 2002 included a Manure Management Basin with a 3 million gallon capacity.
2. CUP approved in 2007 includes the addition of a Dairy Barn (56' x 248') to accommodate an additional 108 Dairy Cows
3. Feed lot registration 2012 for 754 Total Animal Units
4. Feed lot registration 2017 for 860 Total Animal Units
5. Current Animal Units on site for 2019, 998 Total Animal Units
6. Feedlot registration # 049-72909

David Buck (owner/operators), is requesting an amendment to the CUP approved in 2007. The proposal includes the addition of a Dairy Barn (240' x 310') to accommodate an additional 540 Dairy Cows at the Farm (see site plan) which, if approved, would expand the site to an aggregate total of 1,775 Animal Units. The manure storage pit (480' x 412') would approximately add an additional 23,000,000 gallons of liquid manure storage capacity to the site.

Goodhue Township has signed the Zoning Application Summary Form, indicating their approval of the request. The field nutrient management plan and manure management plan will be submitted as part of the Farm's NPDES permit application.

Beau Kennedy, Water Planner, Wetland Administrator has supplied the following review comments and will be visiting the site on Monday October 28, 2019:

- The NWI map shows that a wetland may be present on the north end of the buck farmyard. I do not think the boundary is accurate, but the bottom of the waterway to may have wetland characteristics present. See [map] below. The Wetland Conservation Act of MN regulates the filling/drainage/excavating of wetlands in the state. That being said, from the conceptual plans you sent over, I do not see the proposed new manure pit impacting wetlands as presented. Goodhue County does not impose any wetland setback for buildings/fill etc. However, if plans change and the waterway areas will be impacted with fill, we should determine this ahead of time so we can take care of any necessary wetland permits if needed.
- The other item we comment on these proposals are erosion and sediment control measures. Stormwater runoff from the building roofs, and open lot areas should be retained in an effort to reduce the peak flows from leaving the site. I have not done any calculations on the volumes required to hold back the regulated amount of stormwater from a rain event, but the two brownish lines I placed across the two waterways may provide an opportunity for runoff retention and treatment. You/their engineers will have to run the numbers to see if there is enough storage that could be captured here and size the drainage pipe accordingly. And like all sites with a lot of grading, typical erosion BMPs would be needed (a SWPPP plan, silt fence locations, temp/perm erosion and sediment control measures, etc)

MEMO

October 25, 2019



Kelsey Petit, the county feedlot officer, has supplied an 91% OFFSET distance of 1825 ft. for the expansion. The map provided shows this expansion has no problem meeting this setback to surrounding dwellings not owned by family members.

David J. Buck PID 25.024.0100 Dwelling estimated distance to proposed feedlot 1,500ft.

Ann G. Buck PID 25.024.0401 Dwelling estimated distance to proposed feedlot 1,500ft.

North Donald W Nord PID 33.018.1000 Dwelling estimated distance to proposed feedlot 3,300ft.

Northwest Daniel Ohnstad PID 25.024.0200 Dwelling estimated distance to proposed feedlot 4,500ft.

Southwest William Gadiant PID 25.025.0100 Dwelling estimated distance to proposed feedlot 4,900ft.

South Hilbert Strusz PID 33.019.0700 Dwelling estimated distance to proposed feedlot 4,500ft.

East Jillian Ryan PID 33.190.0300 Dwelling estimated distance to proposed feedlot 4,000ft.

East Dean Opsahl PID 33.019.0100 Dwelling estimated distance to proposed feedlot 4,100ft.

MEMO

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MPCA permitting, MPCA Environmental Specialist Mark Gernes: The registration, permitting, and inspections will be primarily handled by the MPCA. Under the NPDES permit, the Farm will be required to comply with the federal effluent limitations, which include the requirement that the feedlot be designed and operated to contain all manure, litter, and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour rainfall event. The permit will contain requirements, conditions, or schedules for achieving compliance with discharge standards and requirements, management of animal manure, and construction and operation of animal holding areas and manure storage areas. An Emergency Response Plan and a manure management plan are required as part of an NPDES permit submittal.

The MPCA considers two or more animal feedlots under common ownership to be a "multiple site" operation when:

1. The combined capacity is 1,000 or more animal units, or the combined number and type of animals that meet the definition of a Large CAFO; and
2. One of the following conditions apply
 - a. The animal feedlots are adjacent to each other; or
 - b. The animal feedlots use a common area or system for manure management.

When these criteria are met, the MPCA will require either a NPDES or SDS permit coverage for the multiple site operation in accordance with Minn. R. 7020.0405, subp. 1, and will provide a single permit coverage that includes all of the combined feedlots.

For Goodhue County permit and clarification we are including information on the Ann Buck existing feedlot located at 37609 180 Ave PID 25.024.0401 (Feedlot Registration 049-100634). This property and facility will be included in the MPCA Multiple Site Individual NPDES permit.

Feed lot registration 2012 for 140 Total Animal Units

Feed lot registration 2017 for 280 Total Animal Units

2020 proposed 403 total animal units (375 heifers, 100 cows).

Dwelling estimated distance to feedlot expansion 1,500ft.

Regarding David J Buck existing feedlot located at 37269 180th Ave PID 25.024.0100 (Feedlot Registration 049-72910). Not to be included in the MPCA Multiple Site Individual NPDES permit.

Feed lot registration 2013 for 131 Total Animal Units

Feed lot registration 2017 for 131 Total Animal Units

Dwelling estimated distance to feedlot expansion 1,500ft.

Conditional use permit:

PROJECT SUMMARY

1. Description of purpose and planned scope of operations (including retail/wholesale activities).
Continue to be a successful Family run Dairy Operation
2. Planned use of existing buildings and proposed new structures associated with the proposal.
New Barn for dry and milking cows and manure storage
3. Proposed number of non-resident employees.

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Estimated 15-20 non-family employees from the community

4. Proposed hours of operation (time of day, days of the week, time of year) including special events not within the normal operating schedule.

The operation with continue operating as it has for the past 19 years; estimated hours of operation are predominantly to be 4:00AM-6:30 PM daily.

5. Planned maximum capacity/occupancy.

See site plan

6. Traffic generation and congestion, loading and unloading areas, and site access.

Traffic generally exits the site on 180th Ave south to County Blvd 9, see site plan

7. Off-street parking provisions (number of spaces, location, and surface materials).

See site plan

8. Proposed solid waste disposal provisions.

See site plan

9. Proposed sanitary sewage disposal systems, potable water systems, and utility services.

See site plan

10. Existing and proposed exterior lighting.

See site plan

11. Existing and proposed exterior signage.

Any future signs will be in conformance with Goodhue County Sign Ordinance standards, see site plan.

12. Existing and proposed exterior storage.

See site plan

13. Proposed safety and security measures.

Emergency Management Plans are regularly updated

14. Adequacy of accessibility for emergency services to the site.

Any emergency service vehicles has full and easy access to all structures on the site

15. Potential for generation of noise, odor, or dust and proposed mitigation measures.

The farm will follow all MPCA rules and guidelines and will have completed a NPDES permit.

16. Anticipated landscaping, grading, excavation, filling, and vegetation removal activities.

The farm will follow all MPCA rules and guidelines and will have completed a NPDES permit.

Site will be excavated per engineering plans included in the Storm Water Pollution Prevention Plan as a part of the NPDES permitting by the MPCA.

17. Existing and proposed surface-water drainage provisions.

See map and will be addressed through the construction plans.

18. Description of food and liquor preparation, serving, and handling provisions.

None

19. Provide any other such information you feel is essential to the review of your proposal:

- The proposed Feedlot and manure storage expansion does not appear injurious to the use and enjoyment of properties in the immediate vicinity for uses already permitted, nor would it substantially diminish and impair property values in the immediate vicinity. The use is located in an A1 (Agriculture Protection) zone which was intended to allow for large-scale farming operations. There is also very low residential density in the surrounding area which limits the

MEMO

October 25, 2019

potential for future land-use conflicts. The proposal appears harmonious with the established uses in the vicinity which include primarily cropland and animal agriculture operations.

- The Feedlot expansion and liquid manure storage pits are not anticipated to impede the normal and orderly development or improvement of surrounding vacant property for uses predominant to the area. The proposal meets or exceeds all setback and development standards of the Goodhue County Zoning Ordinance and appears compatible with adjacent land uses.
- The project utilities, access roads, drainage, and other necessary facilities are available to accommodate the proposed use.
- The submitted plans identify means to provide sufficient off-street parking and loading space to serve the proposed use and meet the Goodhue County Zoning Ordinance's parking requirements.
- The submitted plans detail adequate measures to prevent or control offensive odor, fumes, dust, noise, and vibration so that none of these will constitute a nuisance. The applicant's plans also appear capable of controlling lights in such a manner that no disturbance to neighboring properties will result. The new barns and manure pits exceed the 91% Odor Annoyance-Free Rating distance to minimize odor or fume impacts to non-related surrounding landowners.

Request for Variance, submitted by David A. Buck, to Article 13 (Confined Feedlot Regulations) setback standards to allow an expansion of an existing feedlot to be within 91% odor annoyance-free rating as determined by the OFFSET model of an existing dwelling. Goodhue County Zoning Ordinance ARTICLE 13 CONFINED FEEDLOT REGULATIONS Subd. 7 *New construction on existing feedlots shall meet a 91% odor annoyance free rating distance, as determined by the OFFSET odor evaluation model, to a dwelling other than those designated as an accessory to a feedlot or the feedlot operator's dwelling.*

Variance Standards: Variances shall only be permitted when they are in harmony with the general purposes and intent of the Goodhue County Zoning Ordinance and when consistent with the adopted comprehensive plan. Variances may be granted when the applicant establishes "practical difficulties" exist in complying with the existing official controls. Practical difficulties mean the applicant proposes to use the property in a reasonable manner not permitted by an official control, the plight of the landowner is due to circumstances unique to the property not created by the landowner, and the variance, if granted, will not alter the essential character of the locality. Economic considerations alone do not constitute practical difficulties.

1) Harmony with the general purposes and intent of the official control:

The purpose of the A1 district is to maintain, conserve and enhance agricultural lands which are historically valuable for crop production, pasture land, and natural habitat for plant and animal life. This district is intended to encourage long-term agricultural uses and preserve prime agricultural farmland by restricting the location and density of nonfarm dwellings and other non-farm land uses.

Reciprocal feedlot setbacks between feedlots and dwellings are intended to decrease conflict between residential and agricultural uses. The nearest dwelling (David J Buck) is located approximately 1,500 feet west of the proposed feedlot location. Mr. David J. Buck has submitted a written statement in support of the Applicant's variance requests.

MEMO

October 25, 2019

The next nearest dwelling (Ann Buck) is located approximately 1,500 feet west of the proposed feedlot location. Ann Buck has submitted a written statement in support of the Applicant's variance requests.

The Applicant's variance request appears harmonious with the purpose and intent of the official controls.

- 2) The variances request is consistent with the adopted Comprehensive Plan: The Comprehensive Plan prioritizes agricultural land uses over dwellings to protect farmland and decrease conflict between residential and agricultural uses. The proposed variance is not likely to produce conflict among residential and agricultural uses. The occupant of the nearest neighboring dwellings (family members David J Buck and Ann Buck) are in support of the variance request. Any future occupants of the dwelling will have the opportunity to be informed of the presence of a feedlot in the area prior to purchasing the property. The request appears consistent with the adopted comprehensive plan.
- 3) There are "practical difficulties" in complying with the official control (the applicant proposes to use the property in a reasonable manner not permitted by an official control, the plight of the landowner is due to circumstances unique to the property not created by the landowner, and the variance, if granted, will not alter the essential character of the locality):

The property comprises 146.39 acres and is a conforming lot size in the A1 district (2-acre minimum). The new barn and manure storage would be located adjacent to the existing farmyard, allowing the greatest distance to non-related existing dwellings.

The existing and new structures meet all required setbacks from property lines. All livestock buildings are required to be at least 100 feet from property lines in the A1 Zoning District

The Applicant's request to expand an existing registered feedlot is a reasonable use of property in the A1 District.

The property has been historically used for animal agriculture and has infrastructure available to raise livestock.

The property and existing feedlot configuration existed prior to the establishment of the current zoning standards for OFFSET Rating

A review of the existing development pattern in the vicinity reveals very low-density residential development among predominantly agricultural uses (feedlots and row-crop agriculture). The request for variance appears unlikely to alter the essential character of the locality.

- 4) No variance may be granted that would allow any use that is not allowed in the zoning district in which the subject property is located.
- Feedlots are a permissible use in the A1 district. The request does not constitute a use variance.

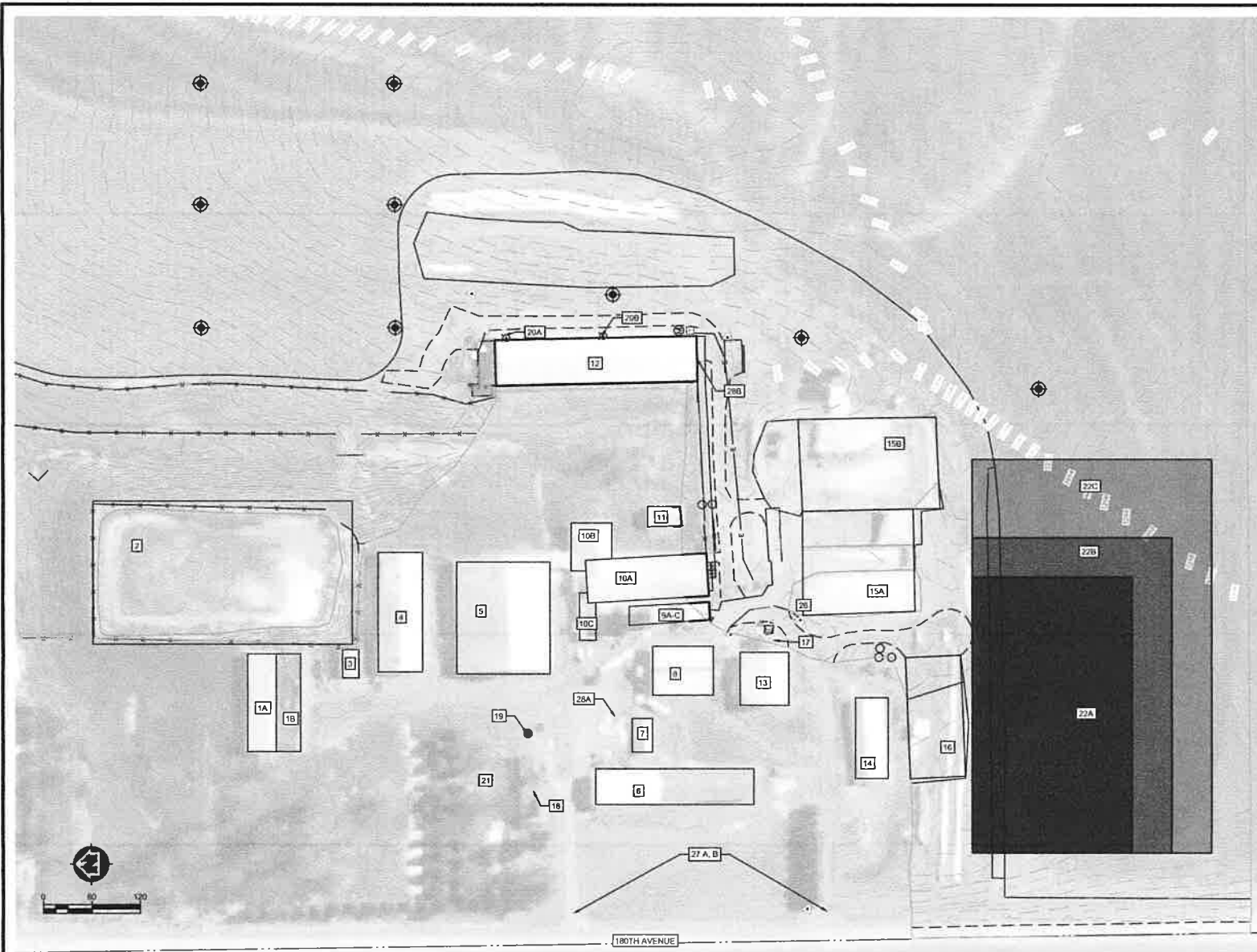


LEGEND

- EXISTING YARD HYDRANT
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC TRANSFORMER
- BURIED ELECTRIC
- FENCE LINE
- PROPERTY LINE
- BENCHMARK
- CONTROL POINT
- SOIL BORING
- STRUCTURE I.D.

STRUCTURES

- 1A DRY COW BARN - 120' X 35'
- 1B DRY COW LOT - 120' X 30'
- 2 LMSA 1 - 180' X 320'
- 3 SHED - 35' X 20'
- 4 FREESTALL BARN - 55' X 150'
- 5 FREESTALL BARN - 140' X 115'
- 6 SHOP - 45' X 195'
- 7 SHED - 40' X 25'
- 8 CALF BARN - 60' X 75'
- 9A SILO
- 9B SILO
- 9C SILO
- 10A HOLDING PEN/BARN - 150' X 55'
- 10B PARLOR - 50' X 60'
- 10C MILK HOUSE - 60' X 20'
- 11 SHED - 40' X 25'
- 12 FREESTALL BARN - 250' X 55'
- 13 COMMODITY BUILDING - 50' X 65'
- 14 CALF HOOP BUILDING - 40' X 100'
- 15A FEED STORAGE BUNKER - 140' X 130'
- 15B FEED STORAGE BUNKER - 170' X 115'
- 16 HAY STORAGE - 150' X 70'
- 17 GRAN BIN
- 18 HOUSE
- 19 WELL
- 20A YARD HYDRANT
- 20B YARD HYDRANT
- 21 SEPTIC
- 20 CONSTRUCTION 2020 - PROPOSED LMSA 2 - 480' X 412'
- 21 CONSTRUCTION 2020 - PROPOSED BARN - 240' X 310'
- 25A CONSTRUCTION 2020 - PROPOSED SEPARATION BUILDING LOCATION OPTION 1 - 65' X 85'
- 25B CONSTRUCTION 2020 - PROPOSED SEPARATION BUILDING LOCATION OPTION 2 - 65' X 85'
- 26 APPROX. LOC. AGRICULTURAL PLASTIC RECYCLING AND SOLID WASTE DUMPSTERS
- 28A YARD LIGHT
- 28B YARD LIGHT

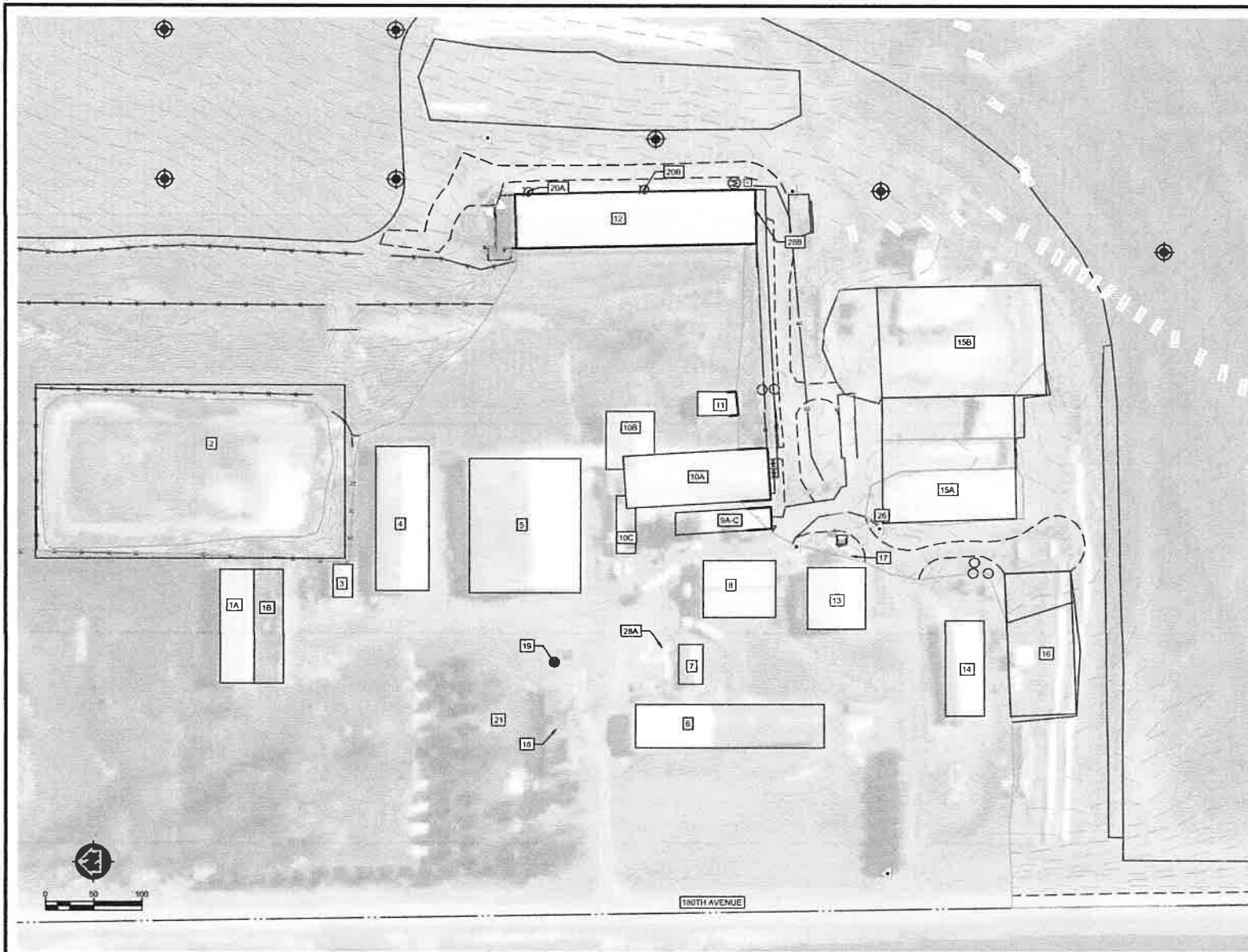


LEGEND

- ⊙ EXISTING YARD HYDRANT
- ⊙ EXISTING ELECTRIC METER
- ⊠ EXISTING ELECTRIC TRANSFORMER
- BURIED ELECTRIC
- FENCE LINE
- PROPERTY LINE
- BENCHMARK
- ▲ CONTROL POINT
- ⊙ (N, X) SOIL BORING
- 13 STRUCTURE I.D.

STRUCTURES

- 1A. DRY COW BARN - 120' X 35'
- 1B. DRY COW LOT - 120' X 30'
- 2. LMSA 1 - 180' X 320'
- 3. SHED - 35' X 20'
- 4. FREESTALL BARN - 55' X 150'
- 5. FREESTALL BARN - 140' X 115'
- 6. SHOP - 45' X 195'
- 7. SHED - 40' X 25'
- 8. CALF BARN - 60' X 75'
- 9A. SILO
- 9B. SILO
- 9C. SILO
- 10A. HOLDING PEN/BARN - 150' X 55'
- 10B. PARLOR - 50' X 60'
- 10C. MILK HOUSE - 60' X 20'
- 11. SHED - 40' X 25'
- 12. FREESTALL BARN - 250' X 55'
- 13. COMMODITY BUILDING - 60' X 65'
- 14. CALF HOOP BUILDING - 40' X 100'
- 15A. FEED STORAGE BUNKER - 140' X 130'
- 15B. FEED STORAGE BUNKER - 170' X 115'
- 16. HAY STORAGE - 150' X 70'
- 17. GRAIN BIN
- 18. HOUSE
- 19. WELL
- 20A. YARD HYDRANT
- 20B. YARD HYDRANT
- 21. SEPTIC
- 22A. PROPOSED FEED STORAGE OPTION 1 - 345' X 200'
- 22B. PROPOSED FEED STORAGE OPTION 2 - 395' X 245'
- 22C. PROPOSED FEED STORAGE OPTION 3 - 495' X 295'
- 26. APPROX. LOC. AGRICULTURAL PLASTIC RECYCLING AND SOLID WASTE DUMPSTERS
- 27. POTENTIAL NEW SIGNS AT ENTRANCES
- 28A. YARD LIGHT
- 28B. YARD LIGHT



LEGEND

- EXISTING YARD HYDRANT
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC TRANSFORMER
- BURIED ELECTRIC
- FENCE LINE
- PROPERTY LINE
- BENCHMARK
- CONTROL POINT
- SOIL BORING
- STRUCTURE I.D.

STRUCTURES

- 1A. DRY COW BARN - 120' X 35'
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- 9B. SILO
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- 14. CALF HOOP BUILDING - 40' X 100'
- 15A. FEED STORAGE BUNKER - 140' X 130'
- 15B. FEED STORAGE BUNKER - 170' X 115'
- 16. HAY STORAGE - 150' X 70'
- 17. GRAN BIN
- 18. HOUSE
- 19. WELL
- 20A. YARD HYDRANT
- 20B. YARD HYDRANT
- 21. SEPTIC
- 25. APPROX. LOC. AGRICULTURAL PLASTIC RECYCLING AND SOLID WASTE DUMPSTERS
- 28A. YARD LIGHT
- 28B. YARD LIGHT

PROJECT NAME	DATE	BY	REV	DESCRIPTION
BUCKS UNLIMITED 2020 EXPANSION	08/20/2018	MSA	1	PRELIMINARY

MSA ENGINEERING | ARCHITECTURE | SURVEYING
 FUNDING | PLANNING | ENVIRONMENTAL
 3230 South Bourkeville, Eau Claire WI 54602
 (715) 836-2728 www.msa-engineers.com

BUCKS UNLIMITED 2020 EXPANSION
 BUCKS UNLIMITED DAIRY
 GOODHUE TOWNSHIP, GOODHUE COUNTY MINNESOTA

EXISTING CONDITIONS

PROJECT NO.	20044000
SHEET NO.	1

Kate Eiyneck

From: Kennedy, Beau <bkennedy@goodhueswcd.org>
Sent: Thursday, October 24, 2019 3:54 PM
To: Kate Eiyneck; Petit, Kelsey
Subject: RE: Buck's Farm Parcel Number: 33.019.0400

Hey Kate

Thanks for the opportunity of the initial review. Here are my thoughts on the information you sent over on Oct. 23rd.

- The NWI map shows that a wetland may be present on the north end of the buck farmyard. I do not think the boundary is accurate, but the bottom of the waterway to may have wetland characteristics present. See below. The Wetland Conservation Act of MN regulates the filling/drainage/excavating of wetlands in the state. That being said, from the conceptual plans you sent over, I do not see the proposed new manure pit impacting wetlands as presented. Goodhue County does not impose any wetland setback for buildings/fill etc. However, if plans change and the waterway areas will be impacted with fill, we should determine this ahead of time so we can take care of any necessary wetland permits if needed.
- The other item we comment on these proposals are erosion and sediment control measures. Stormwater runoff from the building roofs, and open lot areas should be retained in an effort to reduce the peak flows from leaving the site. I have not done any calculations on the volumes required to hold back the regulated amount of stormwater from a rain event, but the two brownish lines I placed across the two waterways may provide an opportunity for runoff retention and treatment. You/their engineers will have to run the numbers to see if there is enough storage that could be captured here and size the drainage pipe accordingly. And like all sites with a lot of grading, typical erosion BMPs would be needed (a SWPPP plan, silt fence locations, temp/perm erosion and sediment control measures, etc)

October 25, 2019

To Whom It May Concern:

I am Ann Buck and I own a farm adjacent to Dave Buck; Buck's Unlimited and I support the proposed feedlot expansion on their property adjoining mine.

Buck's Unlimited has caused no problems for me and I completely endorse this expansion.

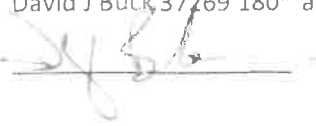
Ann Buck

A handwritten signature in cursive script that reads "Ann Buck". The signature is written in dark ink and is positioned below the printed name "Ann Buck".

To Whom it may Concern,

I am DJ Buck and I live across the road from Dave Buck and Bucks Unlimited. I fully support their expansion. This farm has caused no problems for me. I understand that I am living near a feedlot that is growing in size. This is not a problem at all. Once again, I fully support their expansion.

David J Buck 37269 180th ave Goodhue MN 55027

A handwritten signature in dark ink, appearing to read "DJ Buck", is written over a horizontal line. The signature is somewhat stylized and includes a small mark resembling a checkmark or a flourish at the end.

Odors From Feedlots Setback Estimation Tool

OFFSET Ver 2.0
University of Minnesota
12/16/2017

Farm Name	Bucks Unlimited at 91%
Address or County	Goodhue County
Evaluator	K. Petit
Date	10/25/19

Clear All

OFFSET
Annoyance-free
91%

Source Edge to Nearest Neighbor (ft)	1825
Source Edge to Property Line (ft)	708

Building Sources

Building Type	Width (ft)	Length (ft)	# of Similar Sources	Total Area (sqft)	Control Technology	% air treated
Dairy - free stall	240	310	1	74400	None	
None				0	None	
None				0	None	
None				0	None	
None				0	None	
None				0	None	
None				0	Biofilter	

AREA SOURCES

Source Description	Shape	Width (ft) (or Dia)	Length (ft)	Area (sqft)	Control Technology
Earthen manure storage	Rectangle	480	412	197760	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None

Building Sources	
Add Source Type	
Name of Source	
Odor Flux (ou/s/m2)	
H2S Flux (ug/s/m2)	
NH3 Flux (ug/s/m2)	
Documentation	
Add a Control Technology	
Name of technology	
Odor reduction (%)	
H2S reduction (%)	
NH3 Reduction (%)	
Documentation	

Area Sources	
Add a Source Type	
Name of Source	
Odor Flux (ou/s/m2)	
H2S Flux (ug/s/m2)	
NH3 Flux (ug/s/m2)	
Documentation	
Add Control Technology	
Name of technology	
Odor reduction (%)	
H2S reduction (%)	
NH3 Reduction (%)	
Documentation	

OFFSET Summary and Results

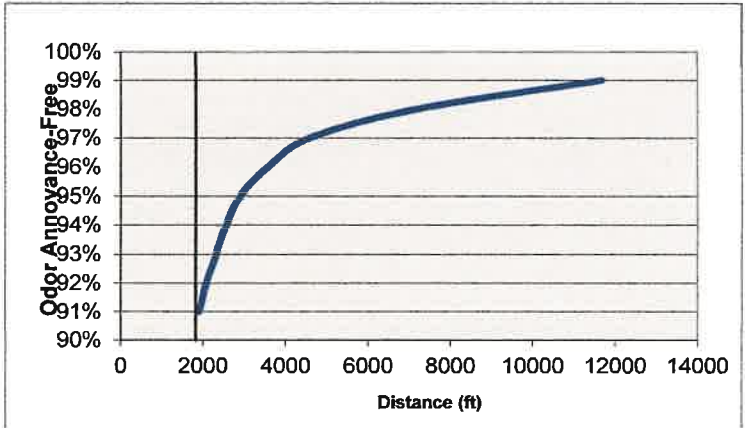


Farm Name	Bucks Unlimited at 91%
County	Goodhue County
Evaluator	K. Petit
Date	10/25/19

Source Characteristics Summary					Flux Rates (with control technology)				Source Emission Rates*		
	Similar Sources	Emit Area sq ft	Control Technology Type	Percent Treated	Odor ou/s/m2	OFFSEt OER	H2S ug/s/m2	Ammonia ug/s/m2	Odor ou/s	H2S ug/s	Ammonia ug/s
Buildings											
Dairy - free stall	1	74400	None	0%	1.8	6.0	0.7	31.0	12725	4841	214381
Area Sources											
Earthen manure storage		197760	None		14.0	13	25.3	107.0	257347	465062	1966865

*includes control technologies

Site Emissions	
Total Site Area (ft2)	272,160
Total Odor Emission Factor (TOEF)	302
Total Site H2S Emissions (mg/s)	470
Total Site H2S Emission AVERAGE (lbs/day)	89
Total Site H2S Emission MAX (lbs/day)	179
Total Site H2S Emissions (tons/yr)	16
Total Site Ammonia Emissions (mg/s)	2181
Total Site Ammonia Emission AVERAGE (lbs/day)	415
Total Site Ammonia Emissions MAX (lbs/day)	830
Total Site Ammonia Emissions (tons/yr)	76
Source Edge to Nearest Neighbor (ft)	1825
OFFSEt Annoyance-free frequency	91%



DOC: 467460

Recorded
MAY 09, 2002 AT 10:45AM

Signed: *[Signature]*

GOODHUE COUNTY RECORDER
RED WING, MINNESOTA

Fee Amount: \$20.00



APPLICATION FOR A CONDITIONAL USE PERMIT
GOODHUE COUNTY, MINNESOTA

Permit 02-C007

Parcel # 33-019-0400

Applicant DAVID BUCK

Date 2-28-02

Legal Description NW 1/4, Sec 19, T111N, R15W, Goodhue Township.

Present Zoning A-1 Agricultural Protection

Specify the section of the Ordinance which applies to this project: Article 5, Section 6, Subd. 1A & 1C

Proposed use of building & area for an expansion of a feedlot (dairy) that exceeds 500 animal units and an animal manure storage exceeding 500,000 gallons located in an (A-1) Agricultural Protection zoning district.

Applicant's
Signature /s/ DAVID BUCK

Address 37298 - 180th AVENUE
Goodhue MN 55027

Hearing Date March 18, 2002

Rec'd Payment Joanne Wood

DECISION OF THE GOODHUE COUNTY PLANNING ADVISORY COMMISSION

This 18 day of MARCH 2002 the Goodhue County Planning Advisory Commission recommends to the Goodhue County Board that this application be: Approved for the feedlot expansion for over 500 animal units and an animal manure storage exceeding 500,000 gallons based on the staff's findings of fact.

Signed /s/ RICK SAMUELSON
Chairman

/s/ JOANNE A. WOOD
Zoning Administrator

DECISION OF THE GOODHUE COUNTY BOARD OF COMMISSIONERS

This 2 day of APRIL 2002 the Goodhue County Board of Commissioners Approved the expansion of the feedlot (dairy) that exceeds 500 animal units and an animal manure storage exceeding 500,000 gallons located in an (A-1) Agricultural Protection zoning district as recommended by the Zoning Administrator and the Planning Advisory Commission.

Signed /s/ JIM BRYANT
Chairman

/s/ DAVID HAMILTON
County Administrator

Goodhue County Feedlot Registration Form

PAID
JUN 29 2017

All blanks in bold print are required information. Your form will not be complete without this information. Please sign the form. If there are no changes from the original registration please re-copy the information from the original to provide a new registration for the next four years.

I. Name of Applicant David A. Bucks RLT Title: Owner / Operator (Circle one or both)
 Phone: 651-380-5865 Address: 37298 180 Ave City: Goodhue Zip: 55027
 Email: bucks@sleepyeyetell.net
 Name of Owner (if different from above) _____
 Name and Address of others that should be listed with this feedlot (specify Owner or Operator) _____

RECEIVED
JUN 29 2017

Farm Name: Bucks Unlimited Active (10 or more animal units in the last five years)
 Location of Feedlot facility: Inactive (less than 10 animal units throughout the last five years)
 Township: Goodhue Section: 19 Qtr Section: NW Qtr of Qtr Section: NW
 Township T111 N Range R15 W
 Feedlot Permit #: Existing NPDES permit or Registration number: 049-72909
 Parcel I.D. # 33-019-0400 (Same as your county tax ID number)
 Unique Well Number: _____ Are there any other wells on the property used or unused: (Y or N)
 Shortest Distance from any Well to Feedlot or Manure Storage is: 80 feet.

II. Listed below are common components of livestock operations, please check all that apply:

- 1. Feedlot is total confinement.
- 2. Feedlot has open lots (dirt, concrete, other) that are designed as animal holding areas.
- 3. Feedlot has buildings that are designed for animal confinement or as animal holding areas.
- 4. Animals are on pasture for at least part of the year.
- 5. Feedlot has a liquid manure storage basin or pit.
- 6. Part or all of the manure storage basin or pit is underground.
- 7. Feedlot has a manure (solids) stockpile.
- 8. Feedlot is within 1000 feet of the following surface waters: intermittent Distance 300'
 (Includes lakes, rivers, streams, drainage ditches, tile intakes, floodplains, and wetlands)
- 9. Sinkholes are located on or near your property. (Location: Qtr/Qtr _____)
- 10. Is the facility located within a drinking water supply management area (DWSMA)?

If you checked yes, list the name of the DWSMA: _____

III. Animal Units 860 (Transferred from worksheet on back of this form) Worksheet must be completed.

By completing, signing, and submitting this form to the entity listed below you have completed the Minnesota feedlot registration requirements.

To the best of my knowledge, the information submitted on this Registration form is complete and accurate.

David A. Bucks
Signature

6-28-17
Date

FOR OFFICE USE ONLY
 RECEIVED ON #330
 COPY SENT TO APPLICANT

Return to: Goodhue SWCD, 104 E. 3rd Ave., P O Box 335, Goodhue, MN 55027
 Phone: (651) 923-5286 ext.4

Example:

For each animal type, Enter the maximum number of animals that you have maintained (standing herd or flock size) at the facility at any given time in the **past five years**. Fill that number in column #3. Multiply Animal Unit Factor (column #2) by # of Animals (column #3) to get Animal Units (column #4)

1. Animal Type	2. Animal Unit Factor	3. # of Animals	4. Animal Units
Heifer	0.7	70	49

1. Animal Type	2. Animal Unit Factor	3. # of Animals	4. Animal Units
Dairy Cattle			
Mature Cow over 1,000 Pounds	1.4	600	840
Mature Cow under 1,000 Pounds	1.0		
Heifer	0.7		
Calf	0.2	100	20
Beef Cattle			
Slaughter Steer or stock cow	1.0		
Feeder Cattle (stocker or backgrounding) or heifer	0.7		
Cow and calf pair	1.2		
Calf	0.2		
Swine			
Over 300 pounds	0.4		
Between 55 and 300 pounds	0.3		
Under 55 pounds (and separate from sow)	0.05		
Horses			
Horse	1.0		
Sheep			
Sheep or lamb	0.1		
Chickens			
Laying hen or broiler, if the facility has a liquid manure system	0.033		
Chicken over 5 pounds, if using a dry manure system	0.005		
Chicken under 5 pounds, if using a dry manure system	0.003		
Turkeys			
Over five pounds	0.018		
Under five pounds	0.005		
Ducks			
Duck	0.01		
Animals not listed above			
List:	Average weight of the animal in pounds divided by 1,000 pounds		
TOTAL ANIMAL UNITS			860



Design Phase Geotechnical Evaluation:

Proposed Manure Storage Structure
Buck's Unlimited Farm
T111N R15W Section 19 NW ¼
Goodhue Township, Goodhue County, Minnesota

Prepared for:

Mr. Andy Skwor
MSA Professional Services, Inc.

November 7, 2019
15683.19.MNR

Certification:

A circular professional seal for Devin M. Ehler, a Licensed Professional Engineer in the State of Minnesota. The seal features the name 'DEVIN M. EHLER' around the top inner edge, 'LICENSED PROFESSIONAL ENGINEER' in the center, and '52649' below it. The outer edge of the seal contains the text 'STATE OF MINNESOTA'.	<p>I hereby certify that this report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.</p> <p><i>Devin Ehler</i></p> <p>Devin M. Ehler, PE Geotechnical Engineer Registration Number 52649 Date: November 7, 2019</p>
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BORING LOCATION SKETCH
LOG OF BORING # 1 – 11
ATTERBERG LIMITS
GRADATION CURVES
LEGEND TO SOIL DESCRIPTION

Chosen Valley Testing, Inc.

Geotechnical Engineering and Testing, 1470 7th Street NW, Rochester, Minnesota 55901, (507) 281-0968, fax (507) 289-2523

Mr. Andrew Skwor, P.E.
MSA Professional Services, Inc.
1230 South Boulevard
Baraboo, WI 53913
askwor@msa-ps.com

November 7, 2019

**Re: Design Phase Geotechnical Evaluation
Proposed Manure Storage Structure
Buck's Unlimited Farm
T111N R15W Section 19 NW ¼
Goodhue Township, Goodhue County, Minnesota
CVT Project Number: 15683.19.MNR**

Dear Mr. Skwor,

As authorized, we performed borings at the site of the proposed manure storage structure at the Buck's Unlimited Farm in Goodhue Township, Goodhue County, Minnesota. This brief report summarizes the results of the borings.

A. Introduction

The intent of this report is to present our findings and describe the means used to collect the data. The data was collected for a specific purpose and may not be suitable for other purposes. We should be consulted before attempting to use the data for other uses. A complete and thorough review of the entire document, including its assumptions and its appendices, should be undertaken immediately upon receipt.

A.1. Scope

To provide data for analysis, a total of 11 penetration test borings were performed. The borings were to be drilled to depths of about 11 to 70 ½ feet. Our engineering scope consisted of providing the results of our exploration and geotechnical recommendations for the basin.

A.2. Boring Locations and Elevation

The desired boring locations were indicated to Chosen Valley Testing by staking on site, provided by MSA. The Boring Location Sketch in the Appendix shows the approximate locations as drilled according to GPS coordinates recorded in the field from a handheld devices, which were then plotted onto aerial imagery using Google Earth Software. These locations should be considered approximate. Ground surface elevations at the borings were also provided by MSA.

A.3. Geologic Background

A geotechnical report is based on subsurface data collected for the specific structure or problem. Available geologic data from the region can help interpretation of the data and is briefly summarized in this section.

Geologic maps and nearby well logs indicate the uppermost soils on site are loessial (wind deposited) clays and silts overlying unsorted glacial till deposits of clay, silt, and sand mixtures. Bedrock is indicated to be on the order of 100 to 200 feet below the surface and with the uppermost formation consisting of St. Peter Sandstone.

B. Subsurface Data

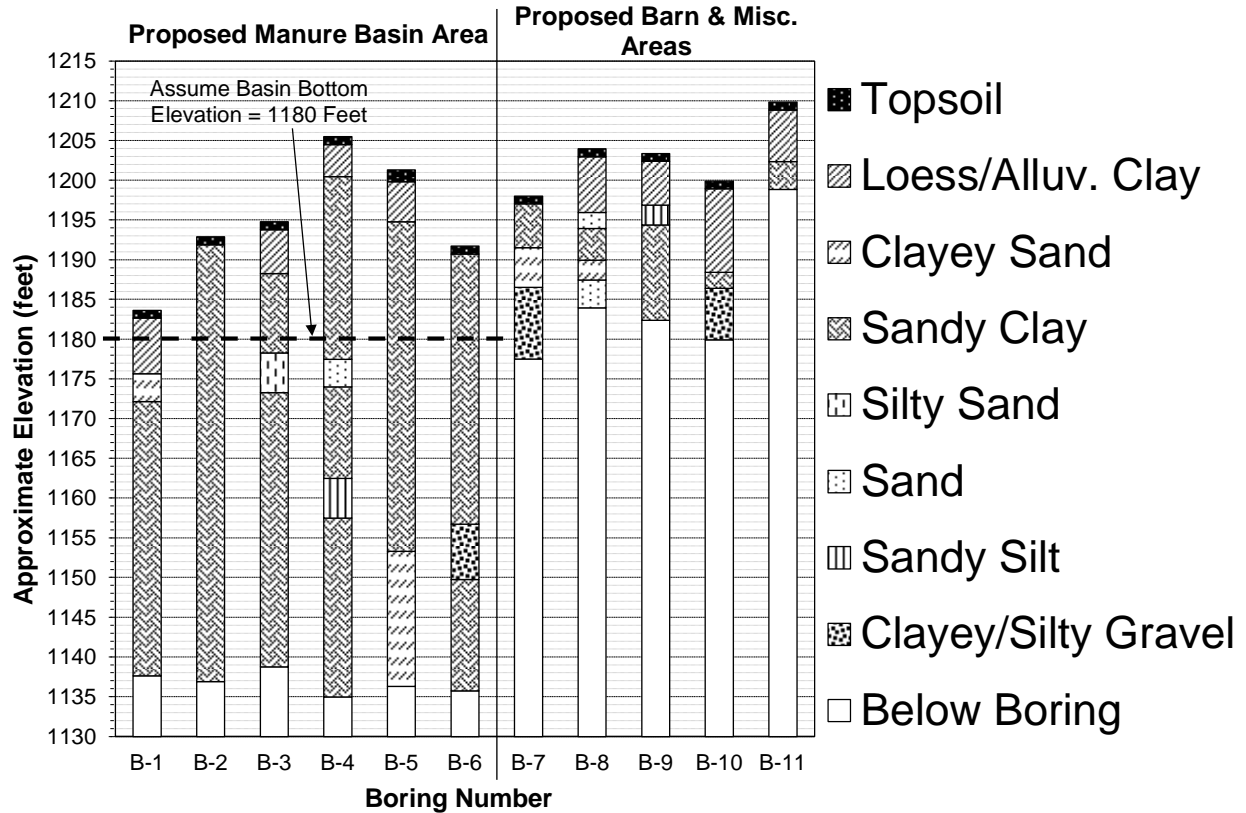
The borings were performed using penetration test procedures (Method of Test D1586 of the American Society for Testing and Materials). This procedure allows for the extraction of intact soil specimen from deep in the ground. With this method, a hollow-stem auger is drilled to the desired sampling depth. A 2-inch OD sampling tube is then screwed onto the end of a sampling rod, inserted through the hole in the auger's tip, and then driven into the soil with a 140-pound hammer dropped repeatedly from a height of 30 inches above the sampling rod. The sampler is driven 18 inches into the soil, unless the material is too hard. The samples are generally taken at 2½ to 5-foot intervals. The core of soil obtained was classified and logged by our drilling personnel at the site and a representative portion was then sealed and delivered to our laboratory for further review.

B.1. Strata

At the surface, the borings encountered about 1 to 1 ½ feet of topsoil. The topsoil primarily consisted of slightly organic clay.

Beneath the topsoil, the majority of the borings met loessial/alluvial clays to depths of approximately 5 to 11 ½ feet. Glacial sandy clays dominantly followed along with some sands, silts, and gravels to planned termination depths around 11 to 70 ½ feet below the surface.

The boring data has been summarized in the following cross-section on the next page. Please refer to the individual Log of Boring sheets in the Appendix for more detailed information.



B.2. Penetration and Laboratory Test Results

Penetration Test Results: The number of blows needed for the hammer to advance the penetration test sampler is an indicator of soil characteristics. The results tend to be more meaningful for natural mineral soils, than for fill soils. In fill soils, density tests are more meaningful. Laboratory testing was performed on the samples recovered from the borings. The results of the tests are briefly summarized below and are presented in greater detail in the Appendix. All tests were performed in general accordance with ASTM standards.

Penetration resistance values ("N" Values) ranging from 2 to 8 blows per foot (BPF) were recorded in the loessial/alluvial clays, indicating they were soft to medium.

The glacial sandy clays, sands, and gravels returned values of 4 BPF to 50 hammer blows for 1 inch of sampler advancement, indicating the clays were rather soft to hard, while the sands and gravels were very loose to very dense.

A key to the descriptors used to qualify the relative density of soil (such as *soft*, *stiff*, *loose*, and *dense*) can be found on the Legend to Soil Description in the Appendix.

A pocket penetrometer was used to help estimate the compressive strength of cohesive soils on site. The glacio-fluvial clays returned values of less than ¼ to 1 ton per square foot (tsf), while the glacial sandy clays returned values of ¾ to greater than 4 ½ tsf.

B.3. Groundwater Data

During drilling, the drillers may note the presence of moisture on the sampler, in the cuttings, or in the borehole itself. These findings are reported on the Logs of Boring. Because water levels vary with weather, time of year, and other factors, the presence or lack of water during exploration is subject to interpretation and is not always conclusive.

Water was observed in the majority of the borings around 8 to 29 feet below the surface during our exploration. The depths correspond near elevations 1176 to 1187 feet. This water appears to be perched within seams and layers sands above and within less permeable clay deposits. Groundwater levels are expected to fluctuate seasonally with local weather patterns and similar to water levels in nearby creeks and rivers.

The Soil Survey of Goodhue County indicates that the dominant soil type of the area is the Mt. Carroll-Hersey complex, 2 to 6 percent slopes. The seasonal high water table for this soil is indicated as greater than 6 ½ feet below the surface.

C. Design Data

Because each structure has a different loading configuration and intensity, different grades, and different structural or performance tolerances, the results of a geotechnical exploration will mean different things for different facilities. If the design of the facility changes, we should be contacted to discuss the possible implications of the changes. Without a chance to review such changes, the recommendations of the soils engineer may no longer be valid or appropriate.

The proposed project consists of the construction of a manure storage structure. Design information was very preliminary at the time of this report. It is understood that an earthen structure is planned to have on the order of 9 to 10 million gallons of storage with possible dimensions of approximately 250-foot by 400-foot. For analysis purposes, we have assumed the storage basin will have a bottom elevation near 1180 feet. It is understood that a clay liner will be constructed to control seepage.

D. Analysis

D.1. Bedrock Considerations

According to the Minnesota Rules Chapter 7020, manure in an earthen-lined pit must be kept at least 20 feet above soluble bedrock, with this rule further dependent on pit size/animal units, the use of additional liners, and other karst factors. Bedrock was not encountered during our exploration and is mapped on the order of 100 to 200 feet below the surface on site.

The County Feedlot officer or the Minnesota Pollution Control Agency (MPCA) should be contacted to determine the type of preparations needed for this facility in consideration of the several factors involved.

D.2. Groundwater/Dewatering

Basin bottoms must be maintained above the water table or a drain tile should be installed to maintain water levels below the basin. Water was observed in the borings around 8 to 29 feet below the surface during our exploration or near elevations 1176 to 1187 feet. Therefore, drain tile is recommended to prevent water issues.

D.3. Subgrade

Prior to grading and excavating, we recommend stripping and removing the topsoil from the site. The topsoil was about 1 to 1 ½ feet thick at the locations explored on site.

Depending upon the pit bottom elevation, the soils at the bottom of the basin could consist of a variety of materials ranging from loessial/alluvial clay, glacial sandy clay, clayey/silty sand, and possibly some clean sand.

The loessial/alluvial clays found in the upper 5 to 11 ½ feet at the majority of locations on site were commonly very wet and soft. Under these conditions, the clays will need to be scarified and compacted in order to stabilize bottoms. Perched water was also observed around 8 to 29 feet below the surface. Any seepage or precipitation that ponds in the basin area should be directed to a low spot and then pumped out. Multiple sumps and pumps will likely be required during wet periods in order to prevent water from ponding.

The glacial clays and sands on site appear to be generally suitable for direct support of compaction equipment in their present condition.

All fill placed below the liner or in the embankment areas should be compacted to at least 95% of its maximum standard Proctor density.

D.4. Clay Liner

The clays encountered on site are considered generally suitable for use as clay liner material, provided they have proper moisture and compaction levels.

The loessial/alluvial clays found in the upper 5 to 11 ½ feet have different characteristics than the deeper glacial sandy clays. Therefore, the materials should be stockpiled in separate areas and mixing or blending should only be considered on an as needed basis. The average optimum moisture for clays typically range between 17 to 20%. The upper loessial/alluvial clays appear to be above optimum moisture levels for compaction, while the deeper glacial sandy clays appear to be at or below optimum. Based on these conditions and for ease of construction, we recommend using the loessial/alluvial clays as liner material and the glacial sandy clays as bulk fill material. Otherwise, the deeper glacial sandy clays will likely require watering and mixing in order to properly moisture condition for compaction. Clays that are dry may come out in large chunks or blocks during excavation which will need to be broken down into particle sizes that are suitable for uniform moisturizing and compaction.

To function as a liner, all clays within the liner zone will have to be excavated and compacted back into place in order to ensure that the full liner thickness is intact and to disrupt any high-permeability discontinuities that may naturally exist in the stratum. Any sand layers found will need to be removed from within the liner zone and replaced with clay. The clay fill should be compacted to about an average of 95% of the soils' standard Proctor density, and at a moisture content at least 1% to 5% over its standard Proctor optimum moisture content. Compaction tests should be performed on the liner soils to evaluate the moisture and compactive efforts. Moisture levels are far more critical than compaction, provided proper compactive effort is actually applied. We recommend obtaining thin wall tube samples after grading to confirm or evaluate the suitability of the completed liner.

D.5. Construction Phase Testing

The MPCA requires construction testing and inspection on all manure storage structures. Typical requirements would include:

- Evaluation of the natural soils after topsoil stripping and before placement of any fill
- Compaction testing on fills used for embankments, liners, subgrades, etc.
- Permeability testing on liner samples after completion.

Although our firm provides such services, the necessity and extent of such services will need to be determined by consultation between the designer and the appropriate regulatory agencies.

E. Level of Care

The services provided for this project have been conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area, under similar budget and time constraints. This is our professional responsibility. No other warranty, expressed or implied, is made.

Appendix

Boring Location Sketch
Log of Boring # 1-11
Atterberg Limits
Gradation Curves
Legend to Soil Description



Legend

- ⊙ Boring Location



Boring Location Sketch
Proposed Manure Storage Structure
T111N R15W Section 19 NW ¼
Goodhue Twp., Goodhue Co., Minnesota
15683.19.MNR



LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-01	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1183.6	0.0					
1182.6	1.0	CL OL CL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY grey with iron staining, very wet, medium. (Loess)	6		PP = 0.25 tsf, MC = 27.1%
				2		PP = 0.25 tsf
1175.6	8.0	SC	CLAYEY SAND fine grained, trace gravel, brown, water bearing, loose to medium dense. (Glacial Till)	7	▽	MC = 19.9%
				11		PP = 0.75 tsf
1172.1	11.5	CL	SANDY LEAN CLAY trace gravel, dark grey, moist, stiff to hard. (Glacial Till)	8		PP = 1.75 tsf, MC = 14.0%
				14		PP = 4.5 tsf
				25		PP = 4.5 tsf
				23		PP = 4.5 tsf, MC = 11.5%
				56		PP > 4.5 tsf
				75		PP > 4.5 tsf, MC = 8.7%

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-01 (cont.)	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
		CL <i>(continued)</i>				
			Cobble encountered around 40 feet.			
1137.6	46.0			51		PP > 4.5 tsf
				*		* 50 = 5" (set)
				60		PP > 4.5 tsf
			End of boring. Water observed around 8 feet during drilling. Boring sealed upon completion.			

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-02	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1192.9	0.0	CL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
	1.0	OL				
		CL	LEAN CLAY with SAND brown, moist, stiff. (Glacio-Fluvium)	13		PP = 1.0 tsf, MC = 16.0%
1188.9	4.0	CL				
		CL	SANDY LEAN CLAY trace gravel, brown, wet, medium to very stiff. (Glacial Till) Very wet around 7.5 feet.	7		PP = 1.25 tsf PP = 1.0 tsf, MC = 17.8%
				16		
				27		
1181.4	11.5					
		SM SC	SILTY SAND to CLAYEY SAND fine grained, trace gravel, brown, moist, medium dense to dense. (Glacial Till) Seam of water bearing sand around 16.5 feet.	15		MC = 8.4%
				36	▽	
				42		
1173.9	19.0					
		CL	SANDY LEAN CLAY trace gravel, brown and gray mottling, moist to wet, hard. (Glacial Till)	36		PP = 4.5 tsf
1171.4	21.5	CL				
		CL	SANDY LEAN CLAY fine grained, trace gravel, dark grey, moist, dense to very dense. (Glacial Till) Seam of sand encountered around 30 feet.	40		PP > 4.5 tsf MC = 10.5%
				45		
				*		

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNIN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-02 (cont.)	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1136.9	56.0	CL <i>(continued)</i>	Cobble encountered around 35 feet.	* * 56 *		* 14 / 33 / 50 = 2" MC = 5.7% * 10 / 14 / 50 = 4" PP > 4.5 tsf PP > 4.5 tsf MC = 10.3% * 16 / 15 / 50 = 4"
			End of boring. Water observed around 16.5 feet during drilling. Boring sealed upon completion.	52		

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG A.GNIN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-03	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1194.8	0.0					
1193.8	1.0	CL OL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	SANDY LEAN CLAY brown, wet, rather soft to medium. (Alluvium)	5		PP = 0.75 tsf, MC = 19.0%
			Seams of sand around 5 feet.	8		PP = 0.75 tsf
1188.3	6.5	CL SC	SANDY LEAN CLAY to CLAYEY SAND fine grained, brown, moist to wet, rather stiff to hard or medium dense to dense. (Glacial Till)	12		MC = 10.2%
				31		PP > 4.5 tsf
				26		MC = 9.3%
				25		MC = 10.3%
1178.3	16.5	SM	SILTY SAND very fine grained, brown, water bearing, dense. (Glacial Till)	30	▽	
				38		
1173.3	21.5	CL	SANDY LEAN CLAY fine grained, trace gravel, dark grey, moist, very stiff to hard. (Glacial Till)	30		PP > 4.5 tsf
				34		MC = 10.1%
				35		PP > 4.5 tsf

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-03 (cont.)	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
		CL <i>(continued)</i>				
				34		PP > 4.5 tsf, MC = 10.4%
				*		PP > 4.5 tsf * 15 / 43 / 50 = 2"
				31		PP > 4.5 tsf, MC = 8.8%
				34		PP > 4.5 tsf
1138.8	56.0		End of boring. Water observed around 16.5 feet during drilling. Boring sealed upon completion.	52		

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNIN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-04	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev. 1205.5	Depth 0.0	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1204.5	1.0	CL OL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY brown, very wet, soft. (Loess)	2		MC = 28.8%
1200.5	5.0	CL	LEAN CLAY with SAND trace gravel, brown, wet, rather soft. (Glacio-Fluvium)	4		
1199.0	6.5	CL	LEAN CLAY with SAND brown, wet, rather stiff to stiff. (Glacial Till)	12		PP = 1.25 tsf, MC = 17.9%
				15		PP = 4.25 tsf
1194.0	11.5	CL	SANDY LEAN CLAY trace gravel, brown, moist to wet, very stiff to hard. (Glacial Till)	21		MC = 9.5%
			Cobble encountered around 16 feet.	*		PP > 4.5 tsf * 10 / 19 / 50 = 5"
				21		PP = 4.5 tsf
			Dark grey below 22 feet.	30		PP > 4.5 tsf, MC = 12.5%
				27		PP = 4.5 tsf
				35		PP > 4.5 tsf, MC = 10.8%
1177.5	28.0	SP	POORLY GRADED SAND fine grained, brown, water bearing, very dense. (Glacial Outwash)	58	▽	
				*		* 26 / 50 / 50 = 6"
1174.0	31.5	CL	SANDY LEAN CLAY trace gravel, dark grey, moist to wet, hard. (Glacial Till)	32		PP > 4.5 tsf

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT. 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-04 (cont.)	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
		CL <i>(continued)</i>		33		PP > 4.5 tsf, MC = 10.3%
1162.5	43.0			36		PP > 4.5 tsf
1157.5	48.0	ML	SANDY SILT very fine grained, trace cobbles, dark grey, wet, hard. (Glacial Till)	*		41 / 50 = 3" MC = 17.9%
		CL	SANDY LEAN CLAY with seam of silt at 50 feet, trace gravel, dark grey, moist to wet, hard. (Glacial Till)	*		14 / 18 / 50 = 3"
				44		PP > 4.5 tsf MC = 9.7%
				*		* 18 / 24 / 50 = 4"
			Trace seams of sand around 65 feet.	55		MC = 11.2%

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNIN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-04 (cont.) LOCATION: See attached sketch DATE: 10/8/2019 SCALE: 1" = 4'
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Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1135.0	70.5	CL <i>(continued)</i>	End of boring. Water observed around 29 feet during drilling. Boring sealed upon completion.	*		* 16 / 50 = 4"

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNHN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-05	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev. 1201.3	Depth 0.0	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1199.8	1.5	CL OL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
1197.3	4.0	CL	LEAN CLAY greyish brown, wet, rather soft. (Loess / Alluvium)	5		PP = 1.0 tsf, MC = 17.7%
1194.8	6.5	CL	LEAN CLAY with SAND brown, very wet, soft. (Alluvium)	3		PP < 0.25 tsf, MC = 19.8%
		CL	SANDY LEAN CLAY trace gravel, brown, wet, stiff to hard. (Glacial Till)	14		PP = 2.25 tsf, MC = 17.0%
				29		PP > 4.5 tsf
				23		PP > 4.5 tsf
				30		PP > 4.5 tsf, MC = 11.6%
				25		PP = 4.5 tsf
				28		PP = 3.5 tsf
			Trace seams of sand around 22.5 to 25 feet.	31	▽	PP = 3.5 tsf
				40		PP > 4.5 tsf, MC = 10.4%
			Dark grey below 27 feet.	31		PP > 4.5 tsf
				28		PP > 4.5 tsf
				27		PP > 4.5 tsf

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN1106.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-05 (cont.)	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
		CL <i>(continued)</i>		29		PP > 4.5 tsf, MC = 10.1%
				67		PP > 4.5 tsf
				61		PP > 4.5 tsf, MC = 9.7%
1153.3	48.0	SC	CLAYEY SAND fine grained, trace gravel, dark grey, moist, very dense. (Glacial Till)	66		
				58		
			Cobble encountered around 60 feet.	*		* 50 = 3" (Set) MC = 12.1%
1136.3	65.0			*		* 50 = 5" (Set) MC = 8.4%
			End of boring. Water observed around 21.5 feet during drilling. Boring sealed upon completion.			

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNIN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-06	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1191.7	0.0					
-1190.7	1.0	CL OL CL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY with SAND trace gravel, brown, wet, rather soft to hard. (Glacial Till)	9		PP = 1.25 tsf, MC = 18.0%
				5		PP = 1.0 tsf
				16		PP = 3.75 tsf, MC = 12.6%
				17		PP = 2.0 tsf
			With seams of sand around 12 to 19 feet.	37	▽	PP = 1.75 tsf, MC = 13.3%
				24		PP = 4.0 tsf
				34		
				26		PP > 4.5 tsf, MC = 10.1%
1170.2	21.5	CL	SANDY LEAN CLAY trace gravel, dark grey, moist, very stiff to hard. (Glacial Till)	25		PP = 3.25 tsf
				34		PP > 4.5 tsf, MC = 11.0%
				63		

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-06 (cont.)	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
-1156.7	35.0	CL <i>(continued)</i> GC	CLAYEY GRAVEL with SAND fine to coarse grained, trace cobbles, dark grey, moist to wet, very dense. (Glacial Till)	*		* 22 / 50 = 2"
-1149.7	42.0	CL	SANDY LEAN CLAY trace gravel, dark grey, moist, hard. (Glacial Till)	*		* 50 = 5" (set)
				58		
				52		PP > 4.5 tsf, MC = 10.2%
-1135.7	56.0		End of boring. Water observed around 12.5 feet during drilling. Boring sealed upon completion.	44		

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-07	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev. 1198.0	Depth 0.0	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1197.0	1.0	CL OL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY with SAND brown, wet, medium. (Glacial Till)	6		PP = 1.75 tsf, MC = 17.7%
1194.0	4.0	CL	SANDY LEAN CLAY trace gravel, brown, wet, rather stiff. (Glacial Till)	11		PP = 4.0 tsf, MC = 12.8%
1191.5	6.5	SC	CLAYEY SAND fine grained, trace gravel, brown, moist, medium dense. (Glacial Till)	19		MC = 9.9%
				29		
1186.5	11.5	CL	SANDY LEAN CLAY trace gravel, brown, wet, very stiff to hard. (Glacial Till) Cobble encountered around 12.5 feet.	34		PP = 1.0 tsf, MC = 16.6%
				22		PP = 3.75 tsf
			Dark grey below 16.5 feet.	36		PP > 4.5 tsf, MC = 12.2%
1177.5	20.5		End of boring. Water not observed during drilling. Boring sealed upon completion.	*		* 38 / 50 = 3"

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-08	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev. 1203.9	Depth 0.0	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1202.9	1.0	CL OL CL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY brown with slight grey mottling, trace sand, wet, rather soft to medium. (Loess / Alluvium)	4		PP = 0.75 tsf
				6		PP = 0.75 tsf, MC = 25.9%
1195.9	8.0			4		
		SP SM	POORLY GRADED SAND with SILT fine grained, brown, moist, very loose. (Alluvium)			
1193.9	10.0					
		CL	LEAN CLAY with SAND trace gravel, brown, wet, medium. (Glacial Till)	7		MC = 20.1%
1192.4	11.5					
		CL	SANDY LEAN CLAY trace gravel, brown, wet, hard. (Glacial Till)	44		PP = 3.5 tsf, MC = 12.8%
1189.9	14.0					
		SC SM	SILTY SAND to CLAYEY SAND fine grained, trace gravel, brown, moist, very dense. (Glacial Till)	58		MC = 10.6%
1187.4	16.5					
		SP SM	POORLY GRADED SAND with SILT fine to medium grained, trace gravel, brown, water bearing, very dense. (Glacial Outwash)	*	▽	* 7 / 23 / 50 = 5"
1183.9	20.0			*		* 50 = 4" (Set)
			End of boring. Water observed around 17 feet during drilling. Boring sealed upon completion.			

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNIN06.GDT 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-09	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1203.4	0.0					
1202.4	1.0	CL OL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY greyish brown, wet to very wet, rather soft. (Loess / Alluvium)	4		PP = 0.25 tsf, MC = 27.7%
				4		PP = 0.25 tsf
1196.9	6.5	ML	SANDY SILT very fine grained, brown, moist, loose. (Alluvium)	10		MC = 19.7%
1194.4	9.0	CL	LEAN CLAY brown, wet, medium to rather stiff. (Glacio-Fluvium)	8		PP = 1.25 tsf, MC = 20.4%
			Dark brown around 12.5 feet.	13		PP = 1.0 tsf, MC = 22.0%
1189.4	14.0	CL	SANDY LEAN CLAY trace gravel, brown, wet, very stiff to hard. (Glacial Till) Trace seams of sand below 16 feet.	26	▽	PP = 2.5 tsf, MC = 13.9%
				23		PP = 4.5 tsf
1182.4	21.0		End of boring. Water observed around 16.5 feet during drilling. Boring sealed upon completion.	44		

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GNIN06.GDT. 11/7/19

LOG OF BORING

CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-10	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev. 1199.9	Depth 0.0	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1198.9	1.0	CL OL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY grey to brown, trace pin roots, very wet, soft to rather soft. (Loess / Alluvium)	3		PP = 0.25 tsf
				4		PP = 0.5 tsf MC = 26.6%
1193.4	6.5	CL	LEAN CLAY with SAND brown, wet, medium. (Alluvium)	7		PP = 1.0 tsf MC = 18.5%
				7		PP = 0.5 tsf
1188.4	11.5	CL	SANDY LEAN CLAY trace gravel, brown, wet, hard. (Glacial Till)	*		* 6 / 50 = 5" PP = 3.5 tsf MC = 14.3%
1186.4	13.5	GM	SILTY GRAVEL with SAND fine to coarse grained, trace cobbles, grey, water bearing, very dense. (Glacial Till)	*	▽	* 50 = 3" (Set)
				*		* 50 = 2" (Set)
1179.9	20.0		End of boring. Water observed around 13.5 feet during drilling. Boring sealed upon completion.	*		* 50 = 1" (Set)

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG A.GN06.GDT 11/7/19

LOG OF BORING

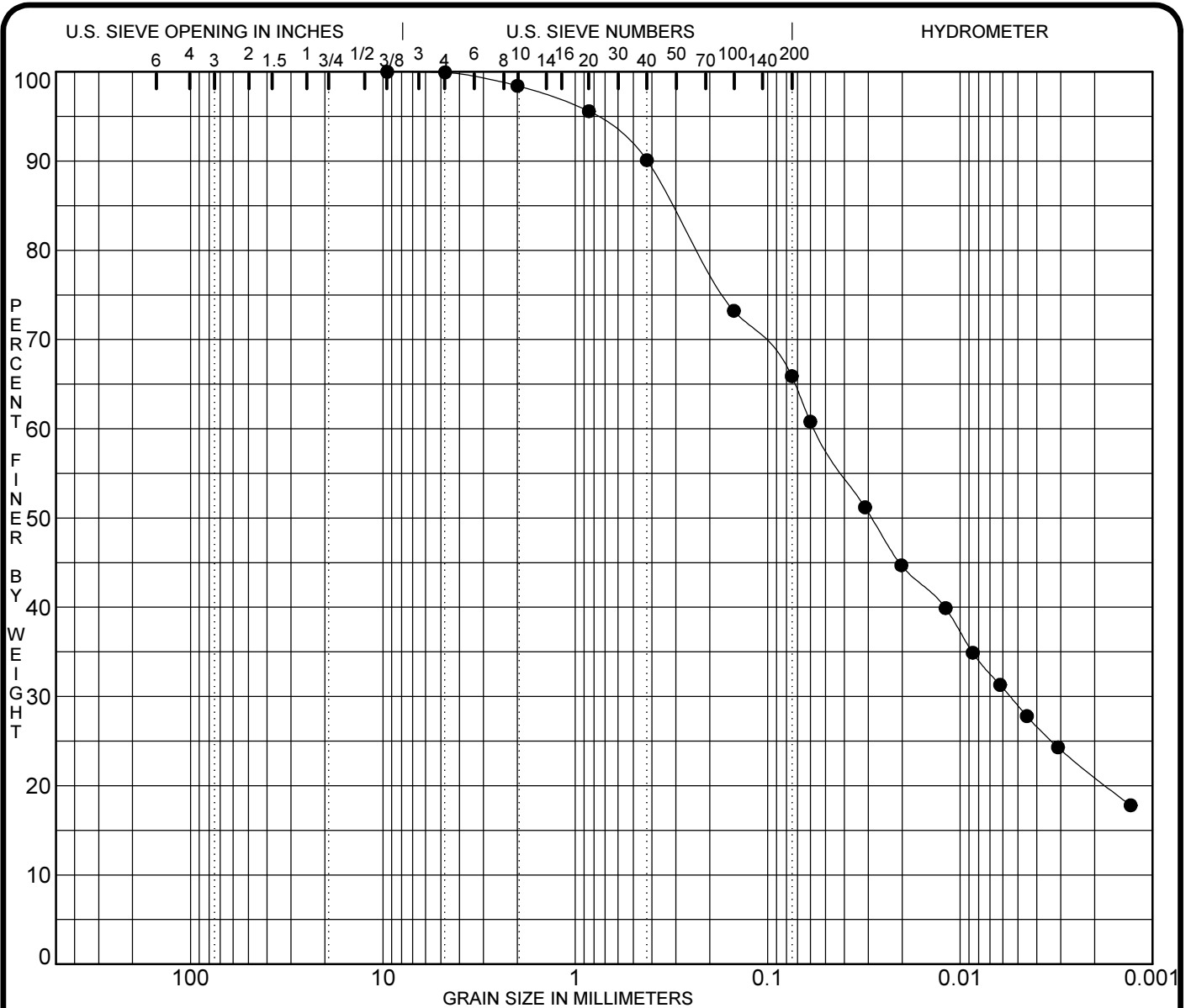
CHOSEN VALLEY TESTING



PROJECT: 15683.19.MNR Design Phase Geotechnical Evaluation Proposed Manure Storage Structure T111N, R15W, Section 19, NW 1/4 Goodhue Twp., Goodhue Co., Minnesota	BORING: B-11	
	LOCATION: See attached sketch	
	DATE: 10/8/2019	SCALE: 1" = 4'

Elev. 1209.8	Depth 0.0	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
-1208.8	1.0	CL OL CL	Slightly Organic LEAN CLAY black. (Topsoil)			Ground surface elevation provided by MSA.
		CL	LEAN CLAY brown, very wet, rather soft to medium. (Loess / Alluvium)	5		PP = 0.25 tsf MC = 27.2%
				6		PP = 0.75 tsf
1202.3	7.5	CL	LEAN CLAY with SAND trace gravel, brown, wet, medium. (Alluvium / Glacio-Fluvium)	7		MC = 17.2%
-1198.8	11.0		End of boring. Water not observed during drilling. Boring sealed upon completion.	8		PP = 1.25 tsf

CVT STANDARD 15683.19.MNR (GOODHUE MANURE STORAGE STRUCTURE).GPJ LOG-A.GN06.GDT 11/7/19



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	MC%	LL	PL	PI	Cc	Cu
● B-03 2.5	SANDY LEAN CLAY CL		29	14	15		
















Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-03 2.5	9.50	0.06	0.006		0.1	34.0	37.0	29.0

PROJECT **Proposed Manure Storage Structure - T111N, R15W, Section 19, NW 1/4** JOB NO. **15683.19.MNR**
 DATE **11/7/19**

GRADATION CURVES
 Chosen Valley Testing, Inc.





UNIFIED SOIL CLASSIFICATION (ASTM D-2487/2488)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND	
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO. 4. SIEVE	CLEAN GRAVELS <5% FINES	$Cu > 4$ AND $1 < Cc < 3$	GW	WELL-GRADED GRAVEL	
		GRAVELS WITH FINES >12% FINES	$Cu > 4$ AND $1 > Cc > 3$	GP	POORLY-GRADED GRAVEL	
		FINES CLASSIFY AS ML OR CL	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL	
		FINES CLASSIFY AS CL OR CH	FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL	
	SANDS >50% OF COARSE FRACTION PASSES ON NO. 4. SIEVE	CLEAN SANDS <5% FINES	$Cu > 6$ AND $1 < Cc < 3$	SW	WELL-GRADED SAND	
		SANDS AND FINES >12% FINES	$Cu > 6$ AND $1 > Cc > 3$	SP	POORLY-GRADED SAND	
		FINES CLASSIFY AS ML OR CL	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND	
		FINES CLASSIFY AS CL OR CH	FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND	
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT < 50	INORGANIC	$PI > 7$ AND PLOTS > "A" LINE	CL	LEAN CLAY	
		INORGANIC	$PI > 4$ AND PLOTS < "A" LINE	ML	SILT	
		ORGANIC	LL (oven dried)/LL (not dried) < 0.75	OL	ORGANIC CLAY OR SILT	
	SILTS AND CLAYS LIQUID LIMIT > 50	INORGANIC	PI PLOTS > "A" LINE	CH	FAT CLAY	
		INORGANIC	PI PLOTS < "A" LINE	MH	ELASTIC SILT	
		ORGANIC	LL (oven dried)/LL (not dried) < 0.75	OH	ORGANIC CLAY OR SILT	
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT	


Relative Proportions of Sand and Gravel	
TERM	PERCENT
Trace	< 15
With	15 - 29
Modifier	> 30
Relative Proportions of Fines	
TERM	PERCENT
Trace	< 5
With	5 - 12
Modifier	> 12
Grain Size Terminology	
TERM	SIZE
Boulder	> 12 in.
Cobble	3 in. - 12 in.
Gravel	#4 sieve to 3 in.
Sand	#200 sieve to #4 sieve
Silt or Clay	Passing #200 sieve

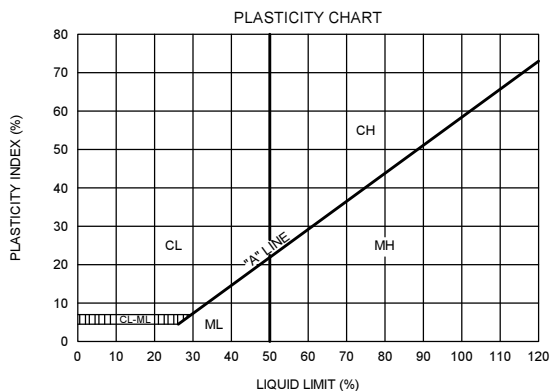
SAMPLE TYPES

-  Hollow Stem
-  Standard Penetration Test

TEST SYMBOLS

- | | |
|-----------------------------|--|
| MC - MOISTURE CONTENT | LL - LIQUID LIMIT |
| OC - ORGANIC CONTENT | PI - PLASTISITY INDEX |
| CN - CONSOLIDATION | SW - SWELL TEST |
| DD - DRY DENSITY | UU - Unconsolidated Undrained triaxial |
| PP - POCKET PENETROMETER | |
| RV - R-VALUE | |
| SA - SIEVE ANALYSIS | |
| P200 - % PASSING #200 SIEVE | |

-  WATER LEVEL (WITH TIME OF MEASUREMENT)



PENETRATION RESISTANCE (RECORDED AS BLOWS / 0.5 FT)				
SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	COMPRESSIVE STRENGTH (TSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 1	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 3	0.25 - 0.50
MEDIUM DENSE	10 - 30	RATHER SOFT	4 - 5	0.50 - 1.0
DENSE	30 - 50	MEDIUM	6 - 8	
VERY DENSE	OVER 50	RATHER STIFF	9 - 12	1.0 - 2.0
		STIFF	13 - 16	2.0 - 4.0
		VERY STIFF	17 - 30	OVER 4.0
		HARD	OVER 30	

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

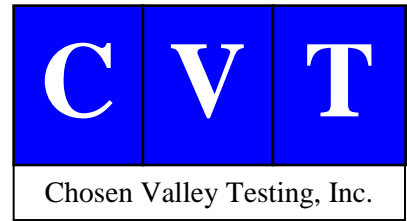
CVT - 15683.19.MNR (GOODHUE MANUE STORAGE STRUCTURE).GPJ 11/7/19

Chosen Valley Testing, Inc.

Job No. 15683.19.MNR

LEGEND TO SOIL
DESCRIPTIONS





Karst Evaluation:

Proposed Manure Storage Structure
Buck's Unlimited Farm
T111N R15W Section 19 NW ¼
Goodhue Township, Goodhue County, Minnesota

Prepared for:

Mr. Andrew Skwor, P.E.
MSA Professional Services, Inc.

November 8, 2019
15683.19.MNR

Certification:

A circular professional seal for Devin M. Ehler, a Licensed Professional Engineer in the State of Minnesota. The seal contains the text: 'DEVIN M. EHLER', 'LICENSED PROFESSIONAL ENGINEER', and '52649'. The outer ring of the seal reads 'STATE OF MINNESOTA'.	<p>I hereby certify that this report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.</p> <p><i>Devin Ehler</i> Devin M. Ehler, PE Geotechnical Engineer Registration Number 52649 Date: November 8, 2019</p>
--	---

Chosen Valley Testing, Inc.

Geotechnical Engineering and Testing • 1410 7th Street N.W. • Rochester, MN 55904 • Telephone (507) 281-0968

www.chosenvalleytesting.com • rochester@chosenvalleytesting.com

Mr. Andrew Skwor, P.E.
MSA Professional Services, Inc.
1230 South Boulevard
Baraboo, WI 53913
askwor@msa-ps.com

November 8, 2019

**Re: Karst Evaluation
Proposed Manure Storage Structure
Buck's Unlimited Farm
T111N R15W Section 19 NW ¼
Goodhue Township, Goodhue County, Minnesota
CVT Project Number: 14979.19.MNR**

Dear Mr. Skwor,

As authorized, a karst survey has been performed for the proposed manure storage structure at the Buck's Unlimited Farm in Goodhue Township, Goodhue County, Minnesota. The karst site walk was performed on October 25, 2019. This brief letter and attachments describe our findings.

Background and Scope

The proposed project consists of the construction of a new earthen manure basin at the Buck's Unlimited Farm site in Goodhue Township, Goodhue County, Minnesota. Our scope consisted of reviewing available geologic data and performing a walk-over survey of the site to investigate for potential karst features.

Chosen Valley Testing performed 11 standard penetration test borings on site on October 8, 2019 to investigate subsurface soil and bedrock conditions. Six of these borings were performed for the proposed manure storage location. The borings generally encountered about 1 to 1 ½ feet of topsoil, followed by loessial/alluvial clays to depths of approximately 5 to 11 ½ feet. Glacial sandy clays dominantly followed along with some sands, silts, and gravels to planned termination depths around 46 to 70 ½ feet below the surface at the proposed manure storage structure location, and to depths around 11 to 21 feet at the other 5 boring locations.

Area of Investigation

The karst investigation was performed around the Buck's Unlimited Farm property located in T111N, R15W, Section 19, NW ¼. This is located in Goodhue Township in Goodhue County, Minnesota.

Summary of Desktop Findings

Available aerial photography, topographic data, geologic data, and soil survey data were reviewed. Based on the Goodhue County Surficial Geology Map, the dominant soil types within 1,000 feet of the site generally consist of loessial (wind-deposited) clays and silts overly unsorted glacial till deposited clay, silt, and sand mixtures. According to the County Bedrock Geology map the underlying bedrock within 1,000 feet of the site is indicated to be on the order of 100 to 200 feet of the surface, with the uppermost formation consisting of St. Peter Sandstone. This geological information is illustrated in the attachments labelled "Surficial Geology Sketch" and "Bedrock Geology Sketch".

The attachment labeled "Sinkhole Probability Sketch" shows the location of the site, approximate ½ mile radius of the proposed structure location, 1,000-foot radius of the proposed structure location, 300-foot radius of the proposed structure location, and the Minnesota DNR published karst features. As shown on that sketch, no published karst features are mapped within a ½ mile radius of the site. The closest published karst features are sinkholes located about 3 ½ miles northeast of the site, springs approximately 4 miles or more northeast of the site, and a stream sink/sieve roughly 3 ¾ miles southeast of the site.

Summary of Site Findings

A karst walk survey was performed on October 25, 2019. The area investigated consisted of approximately a 1,000-foot radius of the proposed manure storage structure location. The site is located on the edge of a farm field on the east side of the existing Buck's Unlimited Farm, which has an existing manure storage structure, several barns, sheds, silos, and a house on the property. The land within 1,000 feet of the site mainly consisted of harvested farm fields with a few grass covered water ways to the north, east, and west, and the Buck farm that was described earlier to the west. The harvested farm fields contained corn stalks 1-foot in height or less and grass in waterways was ½-foot tall or less, allowing for good ground visibility. The topography of the land included rolling hills going from high to low from the southwest to the northeast. Water was observed flowing in the waterways, which was likely from run-off and possibly some seepage due to rain earlier in the week. The weather prior to the survey had consisted of the wettest year on record with seasonal temperature. It was sunny and in the lower 50 degrees Fahrenheit the day of the site walk. General site photos can be seen in the attached Photos #1 through #6.

During our site walk, no sinkholes, depressions, caves, springs, disappearing streams, karst windows, or blind valleys were observed.

A wet grass area in the field to the northeast of the proposed site was observed as can be seen in the attached "Topographic Sketch" and Photos #7 and #8. This wet area is believed to be caused by perching and seepage of water above the very stiff, low permeable glacial clays dominantly found with depth on site.

Some granite cobbles and boulders were also observed in the grass waterway to the northwest of the site and stockpiled on the Buck Farm property. Attached Photos #9 and #10 illustrate this.

Analysis

Based on the results of our desktop study and our subsequent reconnaissance of the site, no karst features were observed within a 1,000-foot radius of the proposed manure storage structure location.

According to the Minnesota Rules Chapter 7020, manure in an earthen-lined pit must be kept at least 20 feet above soluble bedrock, with this rule further dependent on pit size/animal units, the use of additional liners, and other karst factors. Bedrock was not encountered during our exploration and is mapped on the order of 100 to 200 feet below the surface on site.

The County Feedlot officer or Minnesota Pollution Control Agency (MPCA) should be contacted to determine the type of preparations needed for this facility in consideration of the several factors involved.

Level of Care

The services provided for this project have been conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area, under similar budget and time constraints. This is our professional responsibility. No other warranty, expressed or implied, is made.

Remarks

CVT appreciate the opportunity to provide services on this project. If you have any questions about our findings, please feel free to contact us at (507) 281-0968.

Sincerely,
Chosen Valley Testing, Inc.



Devin M. Ehler, PE
Geotechnical Engineer

Karst Feature Inventory Reporting Form For a Proposed Liquid Manure Storage Area (LMSA)

The purpose of this form is to provide documentation regarding all karst features identified within ½ mile from the facility. Additional follow-up inspections may be needed by qualified individuals to assess potential karst features. Submit this form and required map(s) along with your plans and specifications for the LMSA.

Proposed LMSA Location

County: Goodhue Township: Goodhue Sect.: 19 ¼ Sect.: NW

Facility Owner Name: Buck's Unlimited Farms Phone: (651) 923-5418

Inspector Information

Name: Devin M. Ehler, PE Date of Field Inspection: 10/25/2019

Company/Organization: Chosen Valley Testing, Inc. Phone: (507) 281-0968

The area investigated consisted of approximately a 1,000-foot radius of the proposed manure storage structure location. The site is located on the edge of a farm field on the east side of the existing Buck's Unlimited Farm, which has an existing manure storage structure, several barns, sheds, silos, and a house on the property. The land within 1,000 feet of the site mainly consisted of harvested farm fields with a few grass covered water ways to the north, east, and west, and the Buck farm that was described earlier to the west. The harvested farm fields contained corn stalks 1-foot in height or less and grass in waterways was ½-foot tall or less, allowing for good ground visibility. The topography of the land included rolling hills going from high to low from the southwest to the northeast. Water was observed flowing in the waterways, which was likely from run-off and possibly some seepage due to rain earlier in the week. The weather prior to the survey had consisted of the wettest year on record with seasonal

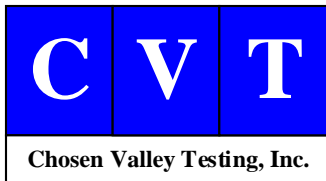
Field Conditions (snow cover, vegetation, etc.): temperature.

Karst Feature Inventory Documentation

The inspector must review existing map resources for all land within ½ mile of the proposed site and must also conduct a visual on-site inspection of the land within 1,000 feet of the proposed site, traversing the land closely enough to identify small sinkholes or other karst features. The following documentation is required.

1. Where sinkhole probability maps exist, attach a copy of the map showing the location of the LMSA and all sinkholes within ½ mile.
2. Attach a copy of an aerial photograph showing the location of the LMSA and all karst features within ½ mile.
3. Number each Karst feature on the aerial photograph and provide a description in the following table:





Feature Sketch ID and Description	Source of information	Feature size and description	Distance from LMSA & Other information
Ex. <i>Depression in the landscape</i>	<i>Walk-over survey</i>	<i>12 feet in diameter and 1-2 feet deep</i>	<i>Located 500 feet from LMSA</i>
N/A		None Observed.	





Topographic Sketch

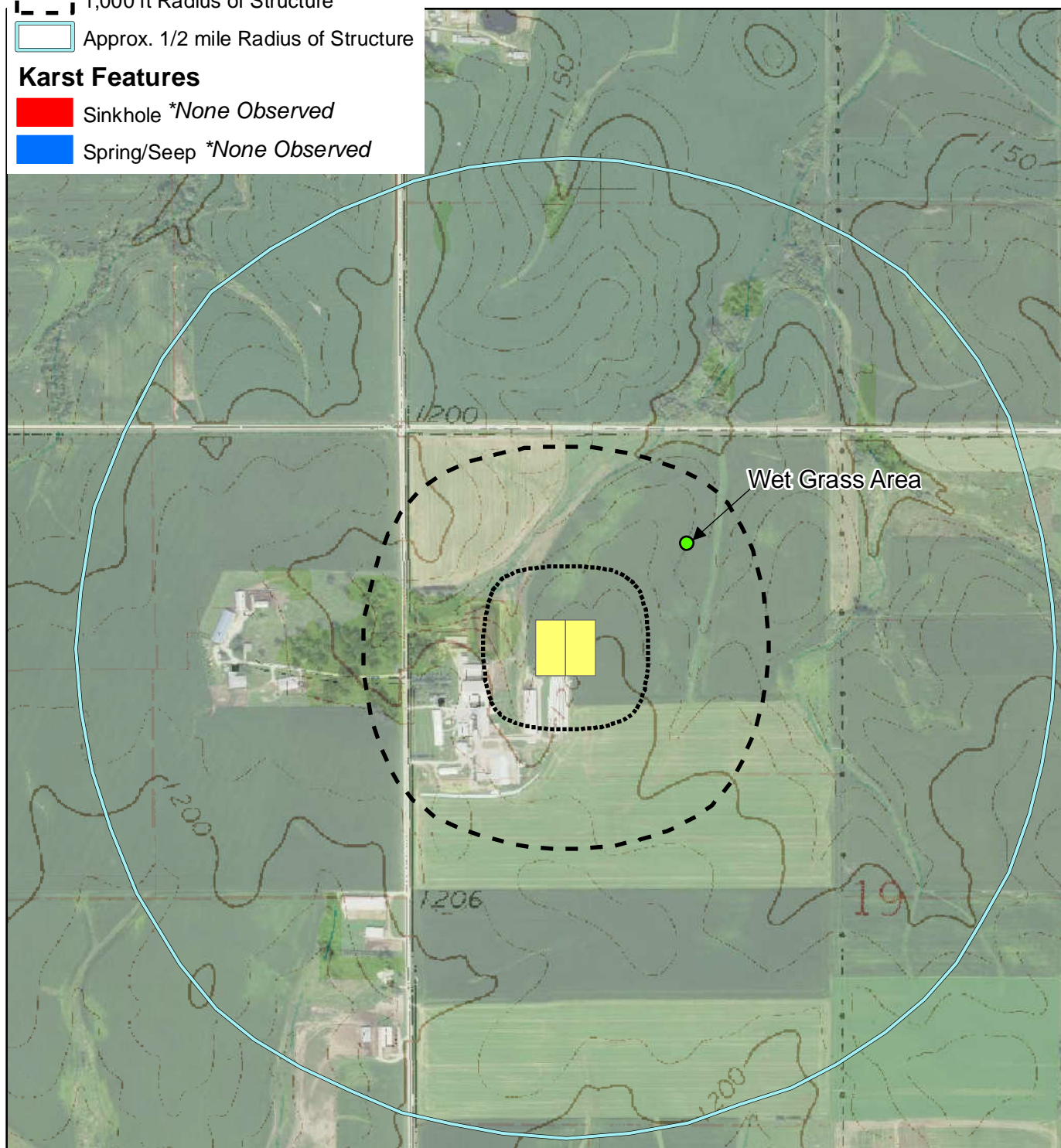
Proposed Manure Storage Structure
 T111N R15W, Section 19, NW ¼
 Goodhue Twp, Goodhue Co, MN
 15683.19.MNR

Legend

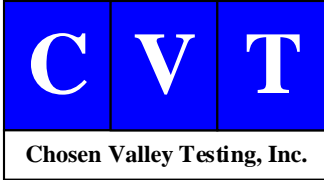
-  Project Area
-  300 ft Radius of Structure
-  1,000 ft Radius of Structure
-  Approx. 1/2 mile Radius of Structure

Karst Features

-  Sinkhole **None Observed*
-  Spring/Seep **None Observed*







1. MnGeo WMS service (aerial photography), Statewide 2017 color FSA.
 2. MnGeo WMS service (quad sheet drgs). Scanned 24k DRG.



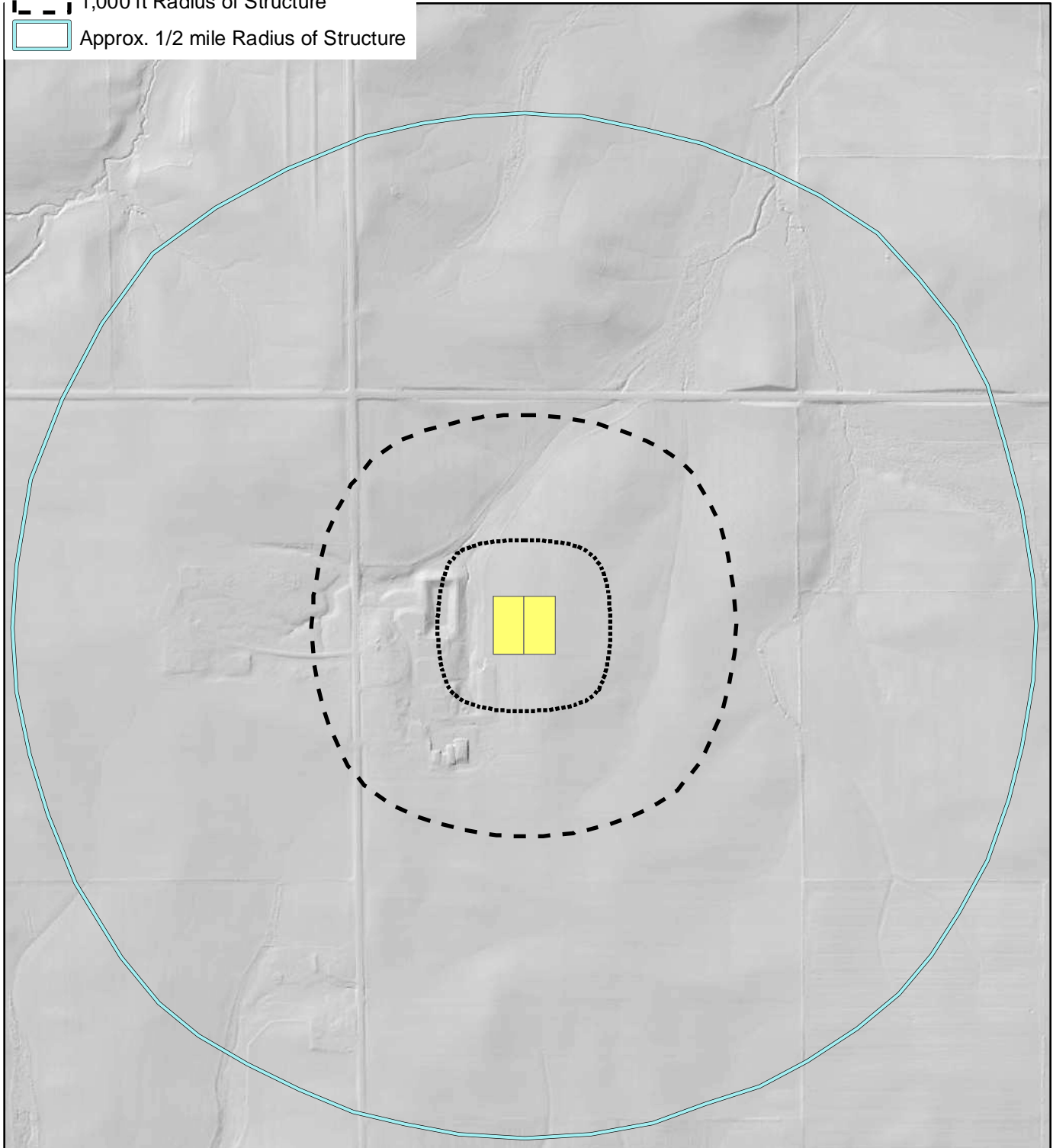
LiDAR Sketch

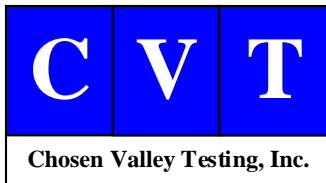
Proposed Manure Storage Structure
T111N R15W, Section 19, NW ¼
Goodhue Twp, Goodhue Co, MN
15683.19.MNR

Legend

-  Project Area
-  300 ft Radius of Structure
-  1,000 ft Radius of Structure
-  Approx. 1/2 mile Radius of Structure

0 500 1,000 2,000 Feet









Sinkhole Probability Sketch

Proposed Manure Storage Structure
T111N R15W, Section 19, NW ¼
Goodhue Twp, Goodhue Co, MN
15683.19.MNR





Legend

-  Project Area
-  300 ft Radius of Structure
-  1,000 ft Radius of Structure
-  Approx. 1/2 mile Radius of Structure







0 0.5 1 2 Miles

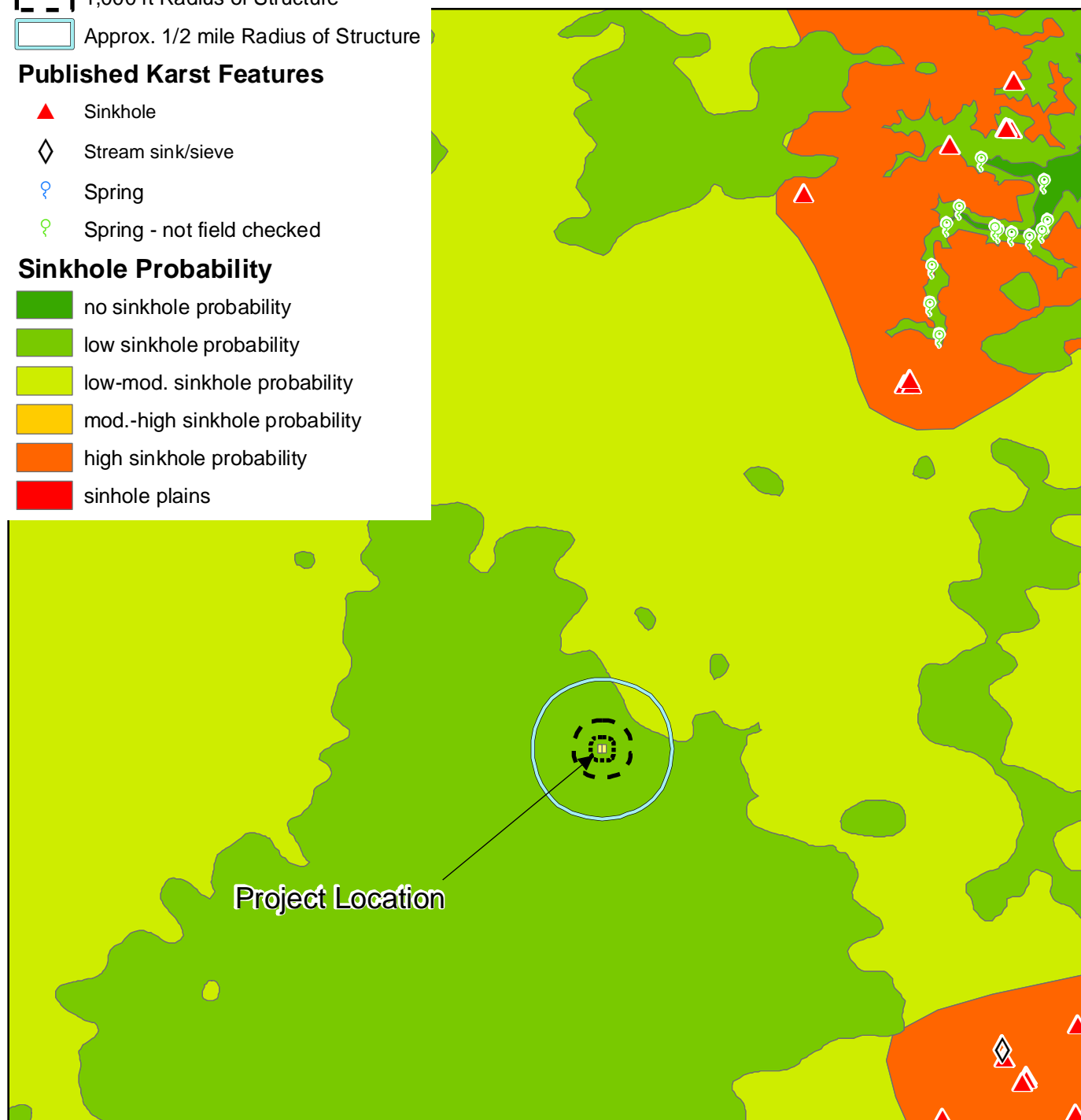


Published Karst Features

-  Sinkhole
-  Stream sink/sieve
-  Spring
-  Spring - not field checked

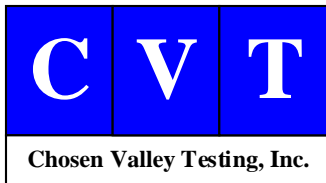
Sinkhole Probability

-  no sinkhole probability
-  low sinkhole probability
-  low-mod. sinkhole probability
-  mod.-high sinkhole probability
-  high sinkhole probability
-  sinkhole plains



Project Location

1. Alexander, Jr., E. Calvin, et al. (2003). University of Minnesota Geological Survey, County Atlas Series, Atlas C-12, Plate 10, Sinkholes, Sinkhole Probability, and Springs and Seeps.
 2. Minnesota DNR Karst Feature Inventory Data Points - <http://deli.dnr.state.mn.us/> or <http://www.gis.state.mn.us/stds/metadata.htm>



Surficial Sketch

Proposed Manure Storage Structure
 T111N R15W, Section 19, NW ¼
 Goodhue Twp, Goodhue Co, MN
 15683.19.MNR

Legend

- Project Area
- 300 ft Radius of Structure
- 1,000 ft Radius of Structure
- Approx. 1/2 mile Radius of Structure

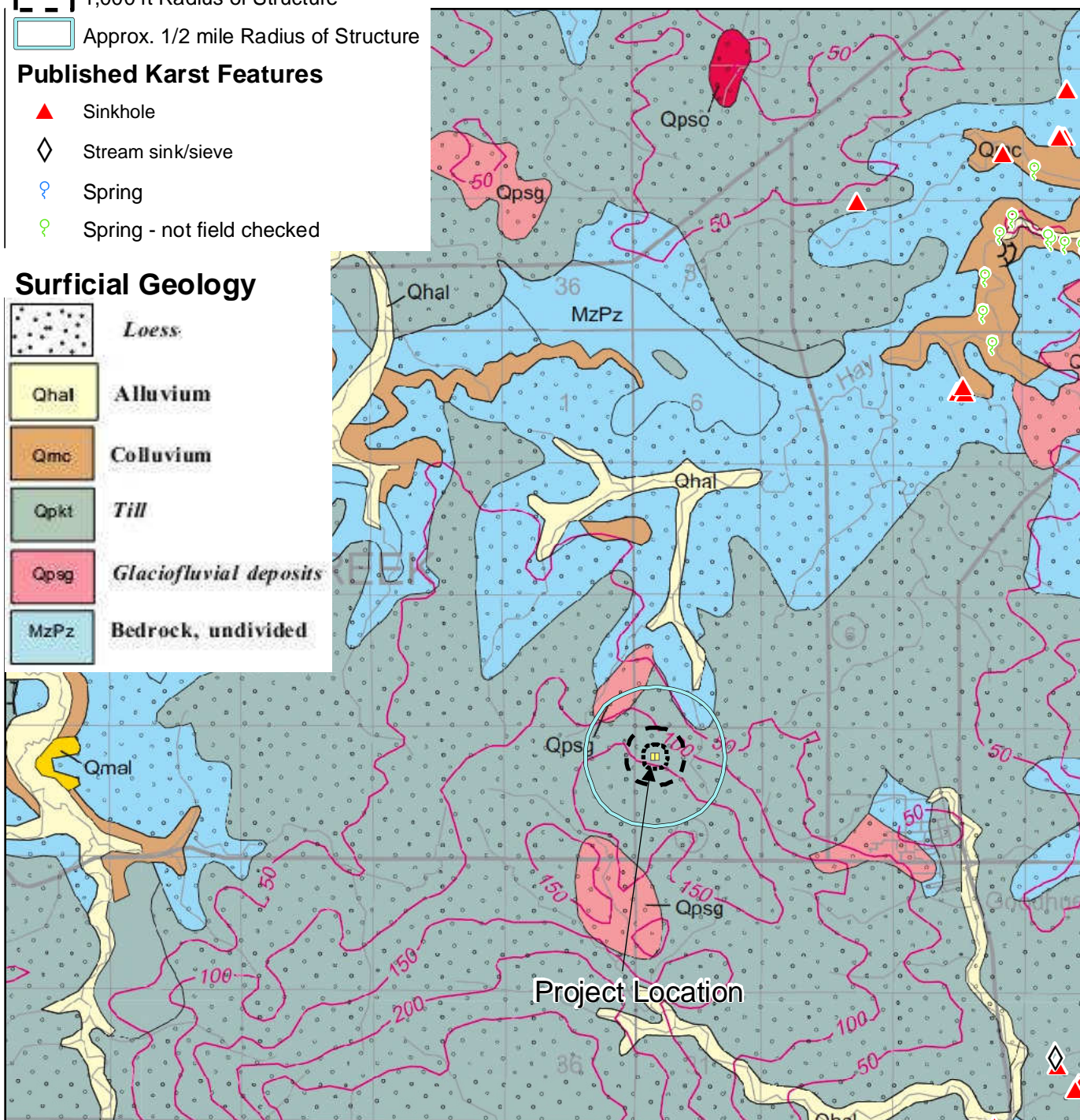


Published Karst Features

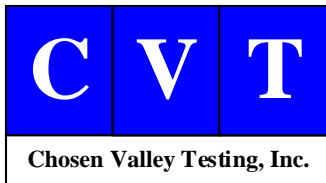
- ▲ Sinkhole
- ◇ Stream sink/sieve
- ⊕ Spring
- ⊕ Spring - not field checked

Surficial Geology

- Loess*
- Qhal **Alluvium**
- Qmc **Colluvium**
- Qpkt **Till**
- Qpsg **Glaciofluvial deposits**
- MzPz **Bedrock, undivided**



1. Hobbs, Howard C. and Setterholm, Dale R. (1998). University of Minnesota Geological Survey, County Atlas Series, Atlas C-12, Part A, Plate 3 - Surficial Geology and Thickness of Quaternary Sediments.
 2. Minnesota DNR Karst Feature Inventory Data Points - <http://deli.dnr.state.mn.us/> or <http://www.gis.state.mn.us/stds/metadata.htm>



Bedrock Sketch

Proposed Manure Storage Structure
 T111N R15W, Section 19, NW ¼
 Goodhue Twp, Goodhue Co, MN
 15683.19.MNR

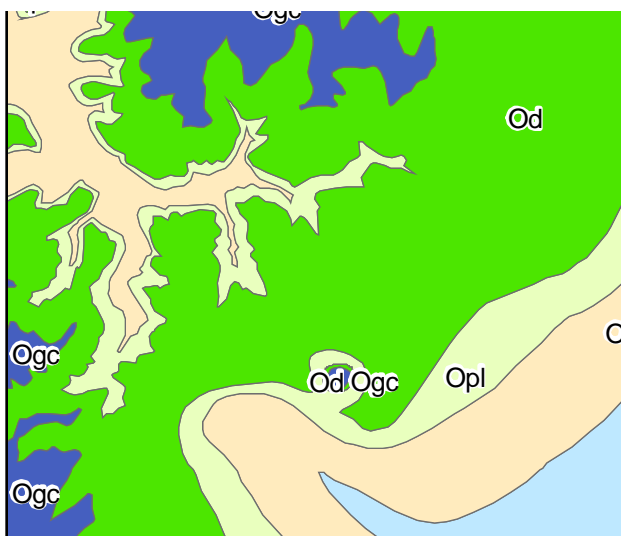
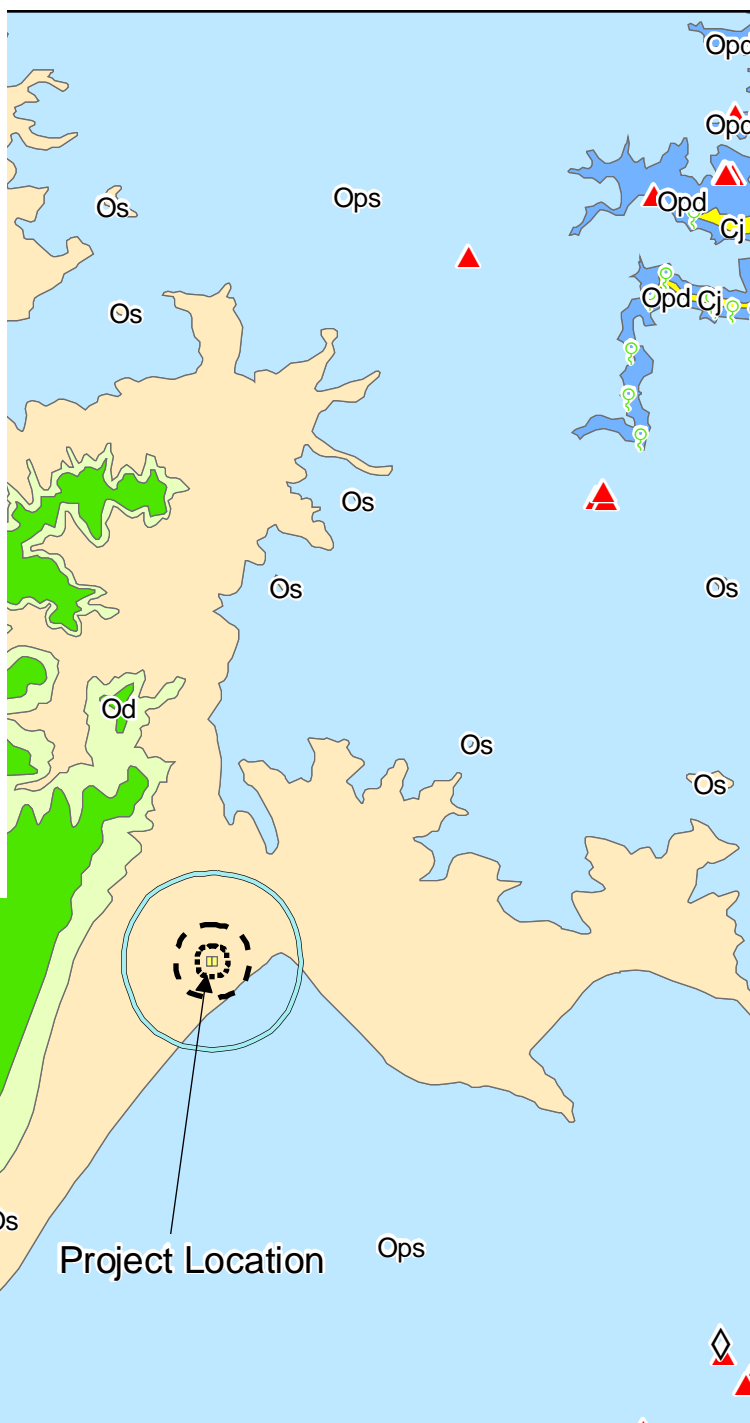


Legend

- Project Area
- 300 ft Radius of Structure
- 1,000 ft Radius of Structure
- Approx. 1/2 mile Radius of Structure

Published Karst Features

- Sinkhole
- Stream sink/sieve
- Spring
- Spring - not field checked
- Ogp - Prosser Limestone
- Ogc - Cummingsville Formation
- Od - Decorah Shale
- Opl - Platteville Formation
- Os - St. Peter Sandstone
- Ops - Shakopee Formation
- Opd - Oneota Dolomite
- Cj - Jordan Sandstone
- Csf - St. Lawrence & Franconia Formations
- Cig - Ironton & Galesville Sandstones
- Ce - Eau Claire Formation
- Cmt - Mt. Simon Sandstone



1. Runkel, Anthony C. (1998). University of Minnesota Geological Survey, County Atlas Series, Atlas C-12, Part A, Plate 2 - Bedrock Geology.
 2. Minnesota DNR Karst Feature Inventory Data Points - <http://deli.dnr.state.mn.us/> or <http://www.gis.state.mn.us/stds/metadata.htm>

Photo #1 - Proposed site looking from east to west.



Photo #2 - Proposed site looking from north to south.



Photo #3 - Proposed site looking from south to north.



Photo #4 - Proposed site looking from west to east.



Photo #5 - Existing manure basin and proposed new site looking from northwest to southeast.



Proposed Site



Existing Manure Basin

Photo #6 - Grass waterway located northwest of site, looking northeast from existing manure basin.



Photo #7 - Wet grass area in field northeast of site, looking southwest.



Wet Grass Area

Photo #8 - Wet grass area in field northeast of site, looking northeast.



Photo #9 - Granite cobble in waterway.



Photo #10 - Granite boulder stockpile on farm.



Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

To: Planning Advisory Commission
From: Land Use Management
Meeting Date: November 18, 2019
Report date: November 8, 2019

PUBLIC HEARING: CUP Request to Elevate a Structure within a Floodplain by Means Other than Fill

Request submitted by James Plehal (Owner) to elevate a proposed storage building above the base flood elevation of a Floodplain area by means of foundational walls.

Application Information:

Applicant: James Plehal (Owner)

Address of zoning request: 27882 Greens Point RD, Red Wing, MN 55066

Parcel(s): 43.210.0840

Abbreviated Legal Description: Lot 14, Block 6 of Wacouta Beach Plat located in Sect 32 Twp 113, Range 13 in Wacouta Township

Zoning District: R1 (Suburban Residence District)

Attachments and links:

Application and submitted project summary (excerpt of submitted materials; full submittal available from LUM Department upon request)

Site Map(s)

Article 4, Section 4 CUP Floodplain review addendum

Goodhue County Zoning Ordinance (GCZO):

<http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

Summary:

The Applicant (James Plehal) salvaged and relocated a 40-foot x 22-foot garage roof onto his property in 2017 to reuse as part of a planned personal storage building for his lakefront property on Greens Point. He is proposing to use the garage roof and associated components as part of a two-story garage that would have shop/workspace area on the second level. The entire property is within the floodplain of the Mississippi River.

FEMA rules divide the floodplain areas of lakes and rivers into 2 distinct zones referred to as the "floodway" (areas in the path of flowing water during flood events) and the "flood-fringe" (areas inundated with floodwater during flood events). The proposed garage would be constructed within the "flood-fringe" areas on the property. Structures may be built within the flood-fringe provided they are either elevated to the Regulatory Flood Protection Elevation (RFPE) or "floodproofed" in accordance with floodplain regulations. The RFPE is the Base Flood Elevation plus one foot of "free-board."

The primary method for elevating to the RFPE is to construct the building on fill. Alternative methods for elevating a structure's lowest floor to the RFPE such as by stilts, pilings, parallel walls, crawl spaces, or tuck-under garages require the issuance of a CUP. The Applicant is proposing to use a combination of fill and floodproofed foundational walls to elevate his proposed building.

It should be noted the structure was moved onto the property without appropriate permits in 2017 and has remained in the same spot propped up on pallet blocking since. Staff received complaints regarding the unpermitted structure and, though the Applicant has fully cooperated with staff, he failed to make genuine progress towards resolving the matter and an Ordinance Violation citation

was issued. Mr. Plehal has an agreement in place to remedy the violation by completing the construction of the building or removing it from the premises before the end of the year.

Goodhue County Zoning Ordinance: Article 4 Conditional/Interim Uses

No CUP/IUP shall be recommended by the County Planning Commission unless said Commission specifies facts in their findings for each case which establish the proposed CUP/IUP will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, will not substantially diminish and impair property values within the immediate vicinity, will not impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area, that adequate measures have been, or will be, taken to provide utilities, access roads, drainage and other necessary facilities, to provide sufficient off-street parking and loading space, to control offensive odor, fumes, dust, noise and vibration so that none of these will constitute a nuisance, and to control lighted signs and other lights in such a manner that no disturbance to neighboring properties will result.

Project Summary:

Property/Building Information:

- The subject property consists of a single parcel comprising approximately 24,458 square feet. The property is zoned R1 (Suburban Residence District) and is located within the Wacouta Beach Plat (1920). *Per GCZO Article 24 the minimum lot size for an R1 parcel platted prior to September 2019 is 20,000 square feet so it is a conforming parcel for lot area. The parcel does meet current requirements for minimum lot width (100 feet).*
- Parcel access is located off of Greens Point Drive on the west end of the parcel. Emergency vehicle access to the site is limited during flood events as there is no dryland access route available to serve Greens Point during the higher flood stages. Flooding along the Mississippi River is generally not a “flash flood” and residents have ample time to evacuate the area as necessary.
- The property is bordered by R1 zoning districts on all sides. Adjacent land uses are primarily medium-to-low density residential. The Mississippi River (Lake Pepin) borders the property to the east.
- The applicant intends to construct a 40-foot x 22-foot 2-story garage with second-floor workspace area atop a 9-foot tall poured concrete wall foundation. The lowest floor of the structure would be constructed above 3 feet of fill material to provide some flood protection for the first floor of the building. The Applicant intends to place fill to a depth of 3 feet in a 15-foot perimeter of the garage in accordance with floodplain fill placement practices to provide greater stability during a flood event.

Though the 3 feet of fill will provide some relief during lesser flood events, the fill doesn’t elevate the lowest structure of the floor to the RFPE as required by ordinance.

The “tuck under” garage area would be used for parking and cold storage only.

Floodplain:

- The Base Flood Elevation (BFE) at the site has been determined to be 681.5 feet mean sea level. The RFPE is therefore 682.5 feet mean sea level. The proposed building location is not within the FEMA identified floodway portion of the floodplain.
- *Per GCZO Article 32, Section 5 Alternative elevation methods other than the use of fill may be utilized to elevate a structure's lowest floor above the RFPE. These alternative methods may include the use of stilts, pilings, parallel walls, etc., or above grade enclosed areas such as crawl spaces or tuck under garages. The base or floor of an enclosed area shall be considered above grade and not a structure's basement or lowest floor if:*
 1. *If the enclosed area is above grade on at least one side of the structure.*
 2. *Is designed to internally flood and is constructed with flood-resistant materials.*
 3. *Is used solely for parking of vehicles, building access or storage.*

The above noted alternative elevation methods are subject to the following additional standards:

a. Design and Certification. The structure's design and as-built condition must be certified by a registered professional engineer or architect as being in compliance with the general design standards of the State Building Code and, specifically, that all electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities must be at or above the RFPE or be designed to prevent floodwater from entering or accumulating within these components during times of flooding.

b. Specific Standards for Above Grade, Enclosed Areas. Above grade, fully enclosed areas such as crawl spaces or tuck under garages must be designed to internally flood and the design plans must stipulate:

i. A minimum area of "automatic" openings in the walls where internal flooding is to be used as a flood-proofing technique. There shall be a minimum of two openings on at least two sides of the structure and the bottom of all openings shall be no higher than one (1) foot above grade. The automatic openings shall have a minimum net area of not less than one square inch for every square foot of enclosed area subject to flooding unless a registered professional engineer or architect certifies that a smaller net area would suffice. The automatic openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters without any form of human intervention.

ii. That the enclosed area will be designed of flood-resistant materials in accordance with the FP-3 or FP-4 classifications in the State Building Code and shall be used solely for building access, parking of vehicles, or storage.

- The applicant is proposing to elevate the workplace floor, as well as all machinery and equipment servicing the building to 690 feet mean sea level. The existing grade around the structure was surveyed at 677 feet mean sea level by Johnson-Schofield surveying. The addition of the proposed 3 feet of fill would elevate the lowest floor elevation to 680 feet mean sea level.
- The applicant intends to submit engineered plans which will detail a series of automatic openings (Flood Flaps) spaced grade around the perimeter of the structure.

A building permit will need to be reviewed and approved by the Department prior to construction of the facility. Goodhue County Building Permits Department staff will review the submitted engineering plans to ensure proposed floodproofing meets applicable engineering standards.

Shoreland:

- The lot is considered a conforming lot of record as it contains the minimum 20,000 square feet lot area required for riparian lots on unsewered General Development lakes.
- The entire property is located within the shoreland overlay of the Mississippi River. As required, the structure would be setback greater than 75 feet from Ordinary High Water Level (OHWL).
- The structure as proposed satisfies shoreland impervious surface standards (maximum 25%), R1 building coverage limits (maximum coverage 20%), and shoreland height requirements (maximum height 25 feet).

Septic/Well:

- Goodhue County Environmental Health has approved a sanitary permit to construct a replacement Type-2 "box-mound" septic system that would be installed and operated in compliance with MPCA rules for SSTS located in Floodplains. The proposed SSTS is proposed to be shared and provide sanitary facilities for the subject parcel as well as the Applicant's adjacent parcel to the south (PID 43.210.0880).

Township Information:

- Wacouta Township reviewed the Applicant's proposal and has approved a permit for the structure subject to county zoning approvals.

Draft Findings of Fact:

The following staff findings shall be amended to reflect concerns conveyed during the PAC meeting and public hearing.

1. The proposed garage does not appear injurious to the use and enjoyment of properties in the immediate vicinity for uses already permitted, nor would it substantially diminish and impair property values in the immediate vicinity. The garage is being located so as to provide as little viewshed blockage of the water for neighboring property owners as is practical. The structure would be similar to those already existing in the vicinity of Greens Point and would be constructed in conformance with current building code and zoning ordinance standards.
2. The establishment of the proposed garage is not anticipated to impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area. The structure is proposed to meet all development standards of the Goodhue County Zoning Ordinance. The use as proposed appears compatible with existing adjacent land uses.
3. A review of the applicants submitted project summary indicates adequate utilities, access roads, drainage, and other necessary facilities are available or will be installed to accommodate the proposed use.
4. The submitted plans identify means to provide sufficient off-street parking and loading space to serve the proposed use and meet the Goodhue County Zoning Ordinance’s parking requirements.
5. No offensive odor, fumes, dust, noise, light, or vibration that would constitute a nuisance are anticipated from the proposal.

Staff recommendation is based on the review of the submitted application and project area prior to the public hearing.

Staff Recommendation:

LUM Staff recommends the Planning Advisory Commission

- adopt the staff report into the record;
- adopt the findings of fact;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

Recommend that the County Board of Commissioners **APPROVE** the request submitted by James Plehal (Owner) to elevate a proposed storage building above the base flood elevation of a Floodplain area by means of foundational walls. Subject to the following conditions:

1. Activities shall be conducted according to submitted plans, specifications, and narrative unless modified by a condition of this CUP;
2. Applicant shall provide an as-built Elevation Certificate verifying final grade and floor elevations and that all electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities meet or exceed the regulatory flood protection elevation (RFPE) of 682.5 feet mean sea level;
3. Compliance with Goodhue County Zoning Ordinance including, but not limited to, Article 24 (Suburban Residence District), Article 31 (Shoreland Regulations), and Article 32 (Floodplain District).

MAP 01: PROPERTY OVERVIEW

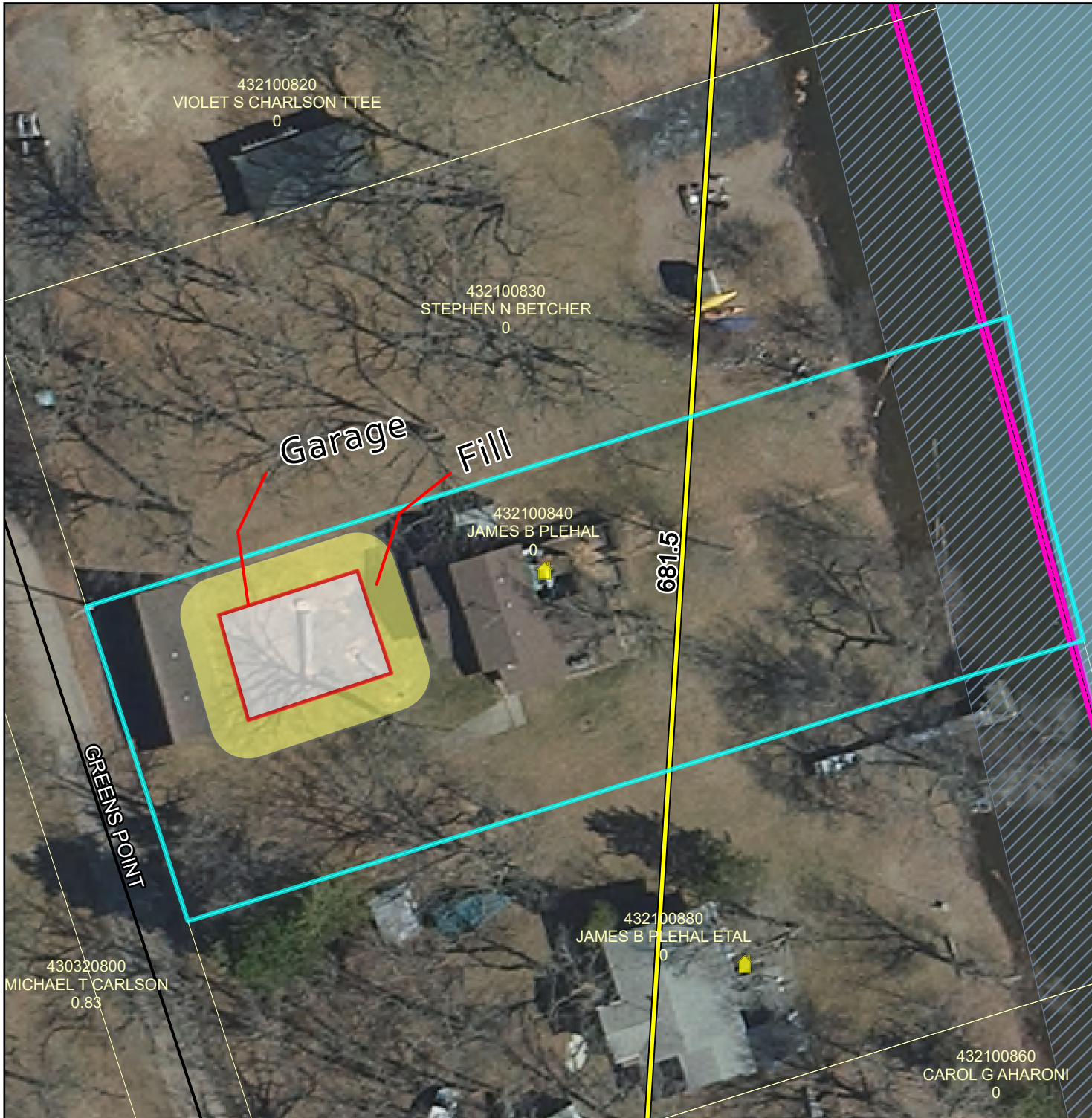
PLANNING COMMISSION

Public Hearing
November 18, 2019

James Plehal
R1 Zoned District

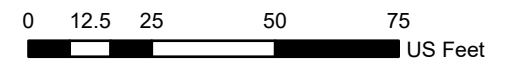
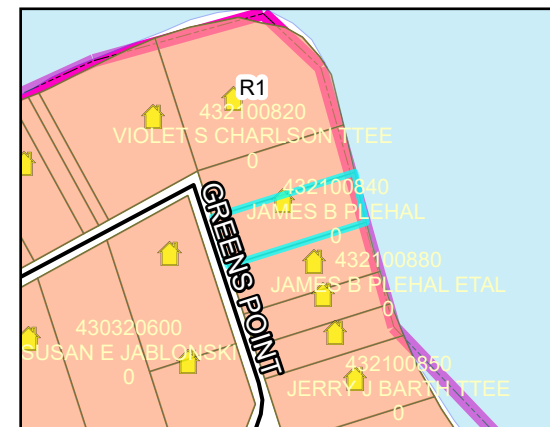
Lot 14, Block 6 of
Wacouta Beach Plat
S32 T113, R13 in
Wacouta Township

CUP request to elevate a structure
to RFPE by means other than fill



Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		20
	Lakes & Other Water Bodies		30
	Shoreland		FEMA Flood Zones
	Historic Districts		2% Annual Chance
	Parcels		A
	Registered Feedlots		AE
	Dwellings		AO
	Municipalities		X



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MAP 02: VICINITY MAP

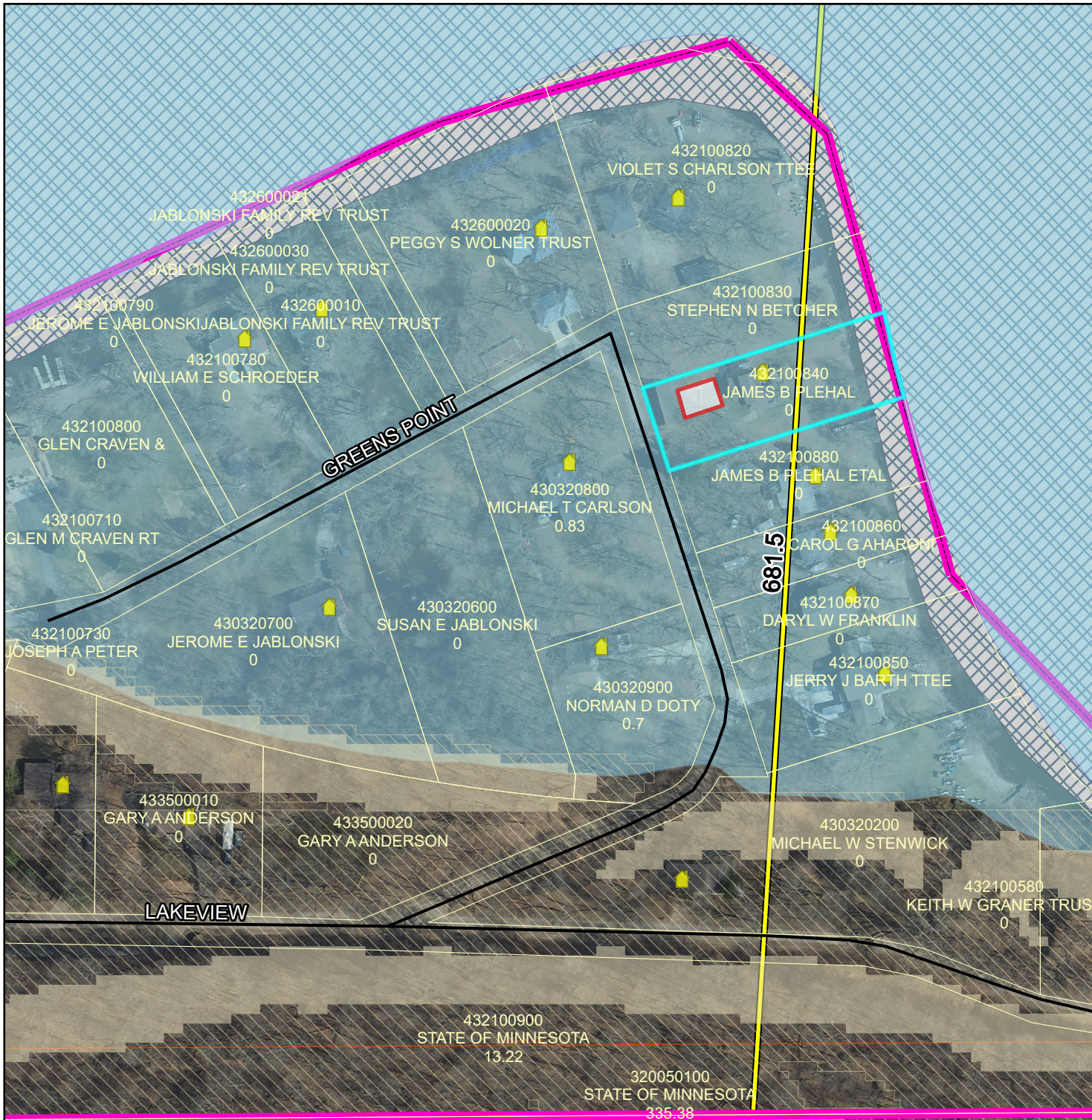
PLANNING COMMISSION

Public Hearing
November 18, 2019

James Plehal
R1 Zoned District

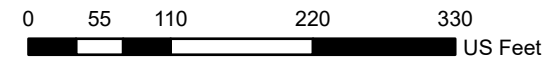
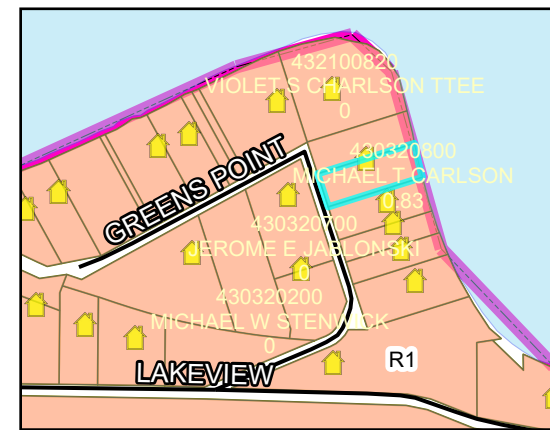
Lot 14, Block 6 of
Wacouta Beach Plat
S32 T113, R13 in
Wacouta Township

CUP request to elevate a structure
to RFPE by means other than fill



Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		20
	Lakes & Other Water Bodies		30
	Shoreland		FEMA Flood Zones
	Historic Districts		2% Annual Chance
	Parcels		A
	Registered Feedlots		AE
	Dwellings		AO
	Municipalities		X



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MAP 03: ELEVATIONS

PLANNING COMMISSION

Public Hearing
November 18, 2019

James Plehal
R1 Zoned District

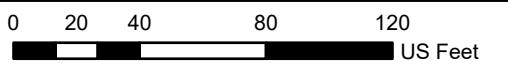
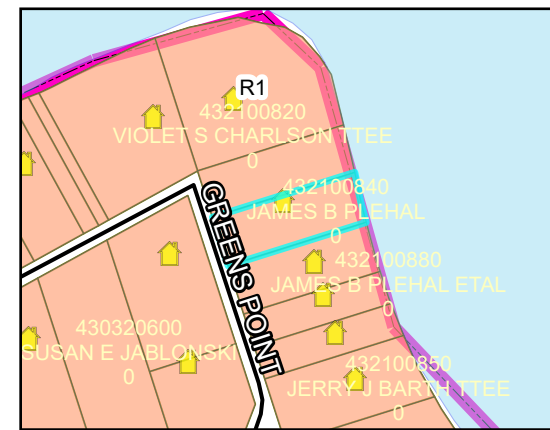
Lot 14, Block 6 of
Wacouta Beach Plat
S32 T113, R13 in
Wacouta Township

CUP request to elevate a structure
to RFPE by means other than fill



Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		20
	Lakes & Other Water Bodies		30
	Shoreland		FEMA Flood Zones
	Historic Districts		2% Annual Chance
	Parcels		A
	Registered Feedlots		AE
	Dwellings		AO
	Municipalities		X



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Map Created November, 2019 by LUM



Article 4, Section 4 CUP Floodplain review

Subd. 4. CUP/IUP applications for projects in a floodplain or shoreland area, shall consider all relevant factors specified in other sections of this Ordinance, and:

A. The danger to life and property due to increased flood height or velocities caused by encroachments.

The structure will not be located within the Floodway of the Mississippi River. The Applicant proposes to place 3 feet of fill below the structure and within a 15-foot wide perimeter of it. Approximately 400 cubic yards of material would be needed. The Applicant has been granted a Land Alteration Permit to place the fill within the Floodplain/Shoreland area as required by Ordinance. The structure will be designed to internally flood to the Base Flood Elevation. No increase in the flood stage is anticipated to occur as a result of the proposal.

B. The danger that materials may be swept onto other lands or downstream to the injury of others or they may block bridges, culverts or other hydraulic structures.

It is not anticipated that structure will create downstream hazards due to materials blocking bridges, culverts, or other hydraulic structures.

C. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.

The Applicant has applied to construct a replacement Type-2 “box-mound” septic system that would be installed and operated in compliance with MPCA rules for SSTs located in Floodplains. The proposed SSTs is proposed to be shared and provide sanitary facilities for the subject parcel as well as the Applicant’s adjacent parcel to the south (PID 43.210.0880).

D. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.

The structure will be required to meet all zoning and building code requirements for buildings located within a floodplain including flood-proofing, using flood-resistant materials, and elevating all living spaces and mechanical components/services above the RFPE.

E. The importance of the services provided by the proposed facility to the County.

The structure is not proposed to provide any services to the County.

F. The requirements of the facility for a waterfront location.

The structure will be required to adhere to all provisions of the Article 31 Shoreland Regulations including impervious surface limits, OHWL setbacks, and vegetation management.

G. The availability of alternative locations not subject to flooding for the proposed use.

The entirety of the subject parcel is located within the floodplain of the Mississippi River and was platted as such.

H. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.

The Wacouta Beach plat was developed in 1920 to provide medium-density residential lots along the Lake Pepin waterfront. There are 14 existing residences in the floodplain area of Greens Point. There is an existing dwelling on the parcel that the Applicant intends to improve in the future that will likely need CUP approval to comply with floodplain regulations as well. The proposal appears compatible with the existing and anticipated development patterns of the Point.

I. The relationship of the proposed use to the Comprehensive Plan and Floodplain Management Program for the area.

The Goodhue County Comprehensive Plan encourages the maintenance and administration of the Floodplain regulations consistent with Minnesota Administrative Rules 6120.5400 (Floodplain Management Rules) which are the basis for the County's current Floodplain Regulations.

J. The safety of access to the property in times of flood for ordinary and emergency vehicles.

Emergency vehicle access to the site can be limited during flood events as there is no dryland access route to the dwellings on Greens Point when floodwaters reach higher levels. Flooding along the Mississippi River is generally not a "flash flood" and residents have ample time to evacuate the area as necessary.

K. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site.

The structure will not be located within the Floodway of the Mississippi River. The structure is designed to internally flood and the limited amount of fill (400 cubic yards) is not anticipated to cause an increase in the flood stage of the river.

L. Such other factors which are relevant to the purposes of this Ordinance.

GOODHUE COUNTY CONDITIONAL/INTERIM USE PERMIT APPLICATION

Parcel # R 43.21D.0840

Permit # Z19-0048

PROPERTY OWNER INFORMATION

Last Name Plehal First James Email: _____
 Street Address 1015 W. 4th St. Phone _____
 City Red Wing State MN Zip 5606 Attach Legal Description as Exhibit "A"
 Authorized Agent _____ Phone _____
 Mailing Address of Landowner: same
 Mailing Address of Agent: _____

PROJECT INFORMATION

Site Address (if different than above): 27882 Green's Point Road
 Lot Size 90x275x90x269 Structure Dimensions (if applicable) 40' x 22'

What is the conditional/interim use permit request for?
Build structure by means other than fill to rise above 100-yr flood
 Written justification for request including discussion of how any potential conflicts with existing nearby land uses will be minimized
Build 40'x22' boat house/garage structure in Mississippi flood plain.
Use of 3' imported fill to raise the structure above the 10 yr flood line.
CUP required as elevation with fill insufficient to raise structure above 100-yr flood line.

DISCLAIMER AND PROPERTY OWNER SIGNATURE

I hereby swear and affirm that the information supplied to Goodhue County Land Use Management Department is accurate and true. I acknowledge that this application is rendered invalid and void should the County determine that information supplied by me, the applicant in applying for this variance is inaccurate or untrue. I hereby give authorization for the above mentioned agent to represent me and my property in the above mentioned matter.

Signature of Landowner:  Date 10/25/19
 Signature of Agent Authorized by Agent: _____

TOWNSHIP INFORMATION

Township Zoning Permit Attached? If no please have township complete below:

By signing this form, the Township acknowledges being made aware of the request stated above. In no way does signing this application indicate the Township's official approval or denial of the request.

Signature _____ Title _____ Date _____

Comments:

COUNTY SECTION _____ COUNTY FEE \$350 _____ RECEIPT # 17039 DATE PAID 10/25/19

Applicant requests a CUP/IUP pursuant to Article _____ Section _____ Subdivision _____ of the Goodhue County Zoning Ordinance

What is the formal wording of the request?

Shoreland _____ Lake/Stream Name _____ Zoning District _____
 Date Received _____ Date of Public Hearing _____ DNR Notice _____ City Notice _____

Action Taken: _____ Approve _____ Deny _____ Conditions: _____

GOODHUE COUNTY CONDITIONAL/INTERIM USE PERMIT APPLICATION

PROJECT SUMMARY

Please provide answers to the following questions in the spaces below. If additional space is needed, you may provide an attached document.

1. Description of purpose and planned scope of operations (including retail/wholesale activities).

40' x 22' boat house/garage/workshop/utility space. Waterfront lot with existing family home. Bringing in 3' 3" fill to raise structure at least 1 foot above 100 yr flood line. Engineering plan

2. Planned use of existing buildings and proposed new structures associated with the proposal.

family home existing. New building will be a garage/boat house (lower level), workshop/utility area (second level) (cont below)

3. Proposed number of non-resident employees.

0

4. Proposed hours of operation (time of day, days of the week, time of year) including special events not within the normal operating schedule.

normal family use / hours

5. Planned maximum capacity/occupancy.

family use - N/A

6. Traffic generation and congestion, loading and unloading areas, and site access.

no traffic added, Normal family use

7. Off-street parking provisions (number of spaces, location, and surface materials).

N/A. All parking is off street.

8. Proposed solid waste disposal provisions.

regular family waste pick up

9. Proposed sanitary sewage disposal systems, potable water systems, and utility services.

normal gas/electricity, well water, septic for sanitary sewage

#1 (continued) to install flood mitigation requirements

10. Existing and proposed exterior lighting.

current - 1 light on house
proposed - additional 5 lights

11. Existing and proposed exterior signage.

n/a - none

12. Existing and proposed exterior storage.

n/a - none

13. Proposed safety and security measures.

Code compliance

14. Adequacy of accessibility for emergency services to the site.

Worcester Township contract service - Redding Fire, Graham County Sheriff

15. Potential for generation of noise, odor, or dust and proposed mitigation measures.

n/a

16. Anticipated landscaping, grading, excavation, filling, and vegetation removal activities.

retaining wall / rock for important fill (2 2 foot high)

17. Existing and proposed surface-water drainage provisions.

natural

18. Description of food and liquor preparation, serving, and handling provisions.

n/a

19. Provide any other such information you feel is essential to the review of your proposal.

n/a

GENERAL CONSTRUCTION NOTES:

ROOF ASSEMBLY ITEMS:

- 1. TYPICAL ROOF TRUSS TO HAVE 4" MINIMUM ENERGY RIB, UNLESS OTHERWISE NOTED ON PLANS AND/OR SECTIONS.
- 2. MINIMUM AIR FLOW PASSAGE TO BE MAINTAINED - ALL ROOF EDGES FOR A MINIMUM OF 4'-0" FROM OUTSIDE OF EXTERIOR WALL - METALS ARE DIFFERENT RINGS.
- 3. GUTTERS SIDE & WATER SHIELD & ALL ROOF EDGES.
- 4. SOFFIT VENTILATION TO BE REDUCED TO 1/200 PROVIDED SOFFIT BOX OR VENTED AREA IS PROVIDED WITH VENTILATORS LOCATED IN THE OPEN PORTION OF THE SPACE BEING VENTED 18IN. OR 36" ABOVE EAVE OR CORNICE, WITH THE BALANCE OF THE ROOF VENTILATORS IN THE EAVE OR CORNICE. SEE IRC 804.2.

WALL ASSEMBLY & STRUCTURE ITEMS:

- 1. ALL WINDOWS & DOORS TO BE CALKED PER MANUFACTURER RECOMMENDATIONS.
- 2. INTERIOR VAPOR BARRIERS TO BE CONTINUOUS W/APPED & TAPPED BEAMS. VAPOR BARRIER TO BE CALKED TO FRAMING & SUB-FLOOR & INTERIOR PARTITION WALLS.
- 3. ALL OUTLETS & SWITCHES ON EXTERIOR WALLS TO BE IN SEALED ELECTRICAL ENERGY BOXES.
- 4. GASKETS REQ'D AT ALL RM & PLATE LOCATIONS.
- 5. SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER OR AN APPROVED COLLECTION POINT. PROPERTY SHALL BE GRADED AWAY FROM FOUNDATION WALL WITH A MIN. GRADE FALL OF 6" WITHIN THE FIRST 10'-0" FROM THE HOUSE.
- 6. ALL HEADER SIZES AS NOTED ON PLANS.
- 7. HEADEN IS REQUIRED TO BE FULL LENGTH OF GARAGE WALL WHEN LESS THAN 24" OF EXTERIOR WALL ARE ADJACENT ON EACH SIDE OF OVERHEAD DOOR.
- 8. SOLID BEARING REQUIRED TO GO TO BASEMENT FOUNDATION FOOTINGS FOR ALL POINT LOADS, INCLUDING GROUND POINT LOADS.

FOUNDATION ASSEMBLY ITEMS:

- 1. ALL CONC. FOUNDATION WALLS REINFORCED AS REQUIRED PER CODE.
- 2. EXTERIOR FACE OF ALL POURED CONC. BASEMENT WALLS TO HAVE WATERPROOFING MEMBRANE/COATING APPLIED.
- 3. 1/2" dia. x 12" long ANCHOR BOLTS @ 4'-0" O.C. AROUND PERIMETER WALL ANCHOR BOLTS TO BE PLACED 12" FROM END OF PLATE OR SPLICE.
- 4. CONTRACTOR TO VERIFY ALL FOOTING SIZES AS REQUIRED PER LOCATION & SOILS.
- 5. POLY UNDER ALL CONC. SLABS WHICH PROVIDES A VAPOR/RADON BARRIER.
- 6. DRAIN TILE AS DESIGNED BY CONTRACTOR AND/OR REQUIRED PER SOIL CONDITIONS.
- 7. ALL WOOD IN DIRECT CONTACT WITH CONC. TO BE DECAY RESISTANT OR PRESURE TREATED.

ALL OF THE GENERAL CONSTRUCTION NOTE APPLICATIONS MENTIONED ABOVE ARE TO BE VERIFIED AND MAY BE ALTERED AS DECIDED BY THE GENERAL CONTRACTOR AND/OR SUB-CONTRACTOR'S BUILDING PRACTICES.

VERIFY ALL EXTERIOR SELECTIONS WITH CONTRACTOR & HOMEOWNER

DESIGN PHASE

PRELIMINARY PLAN	8-26-19
CONCEPT PLAN	9-15-19
FINAL PLAN ISSUED	9-16-19
REVISION 1	1-14-20
REVISION 2	
REVISION 3	

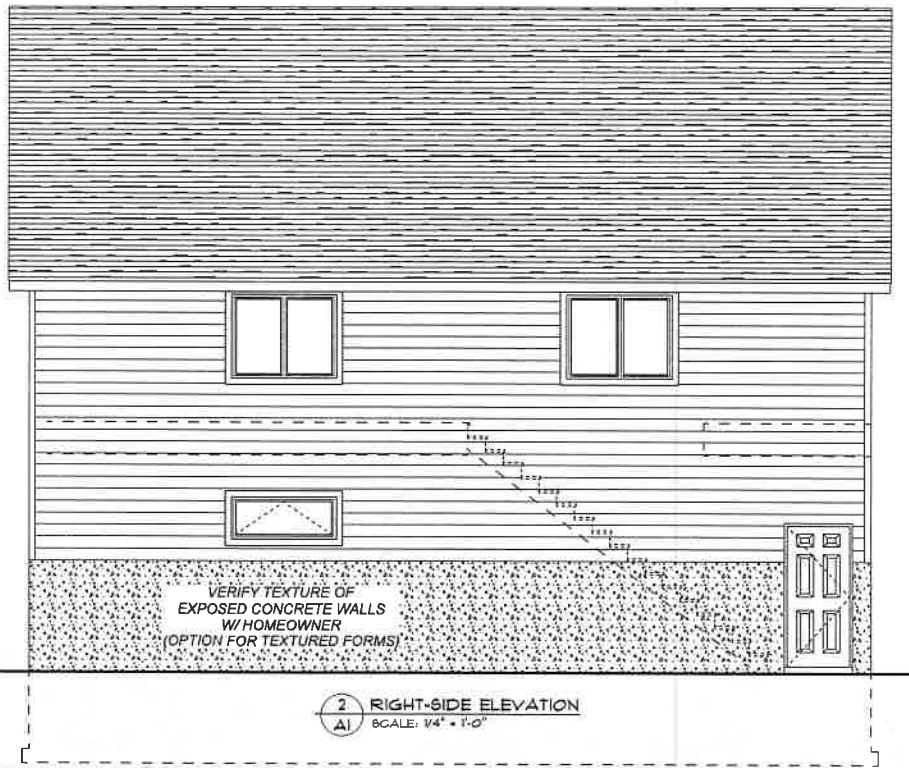
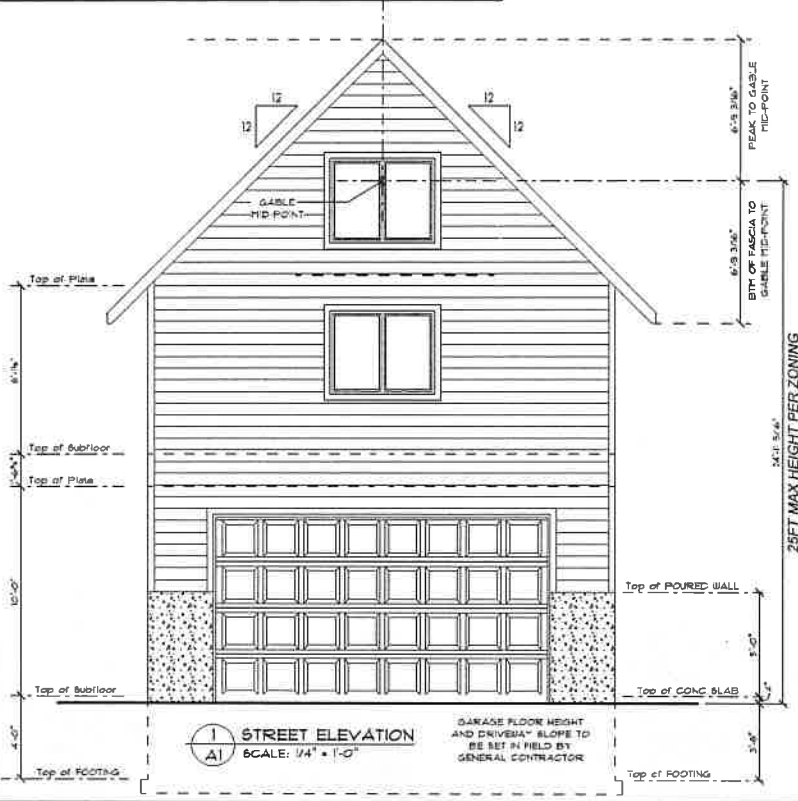
ABC Arrow BUILDING CENTER
 170 CANNON BOTTOM ROAD
 REDWING, MINNESOTA 55066
 651-355-6741

THESE PLANS WERE DRAFTED & DESIGNED FOR:
PLEHAL DETACHED GARAGE
 21882 GREENSPRING ROAD - RED WING, MN 55066
 CONTRACTOR NUMBER:

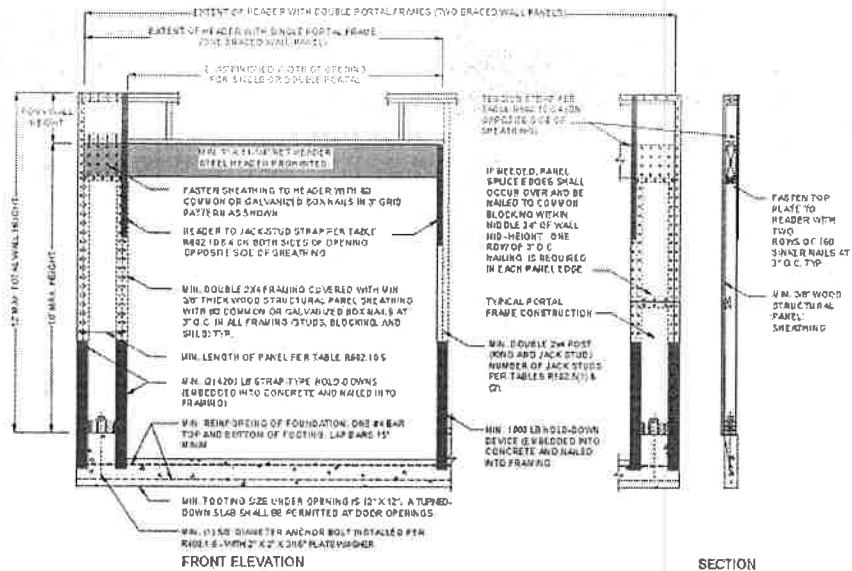
ARROW BUILDING CENTER OWS ALL RIGHTS INCLUDING BUT NOT LIMITED TO COPYRIGHTS OF THE BLUEPRINTS OR FLOOR PLANS CREATED UNDER THIS AGREEMENT. ARROW BUILDING CENTER LICENSES THE BLUEPRINT OR FLOOR PLAN TO THE CLIENTS FOR THE PURPOSE OF CONSTRUCTING THE STRUCTURE SPECIFIED IN THE BLUEPRINT OR FLOOR PLAN. THE CLIENT SHALL NOT DUPLICATE OR DISTRIBUTE TO THE PUBLIC OR OTHERWISE THIS BLUEPRINT OR FLOOR PLAN. THIS BLUEPRINT OR FLOOR PLAN IS NOT A WORK MADE FOR HIRE AS DEFINED UNDER U.S.C. SECTION 1101.

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, CONTRACTOR/HOMEOWNER MUST VERIFY GRADES, FOOTING SIZES, ELEVATIONS, ROOMS, OPENINGS, HEADERS AND DEATH LINES AND ALL OTHER DIMENSIONS AND SPECS AND BE RESPONSIBLE FOR THE SAME.

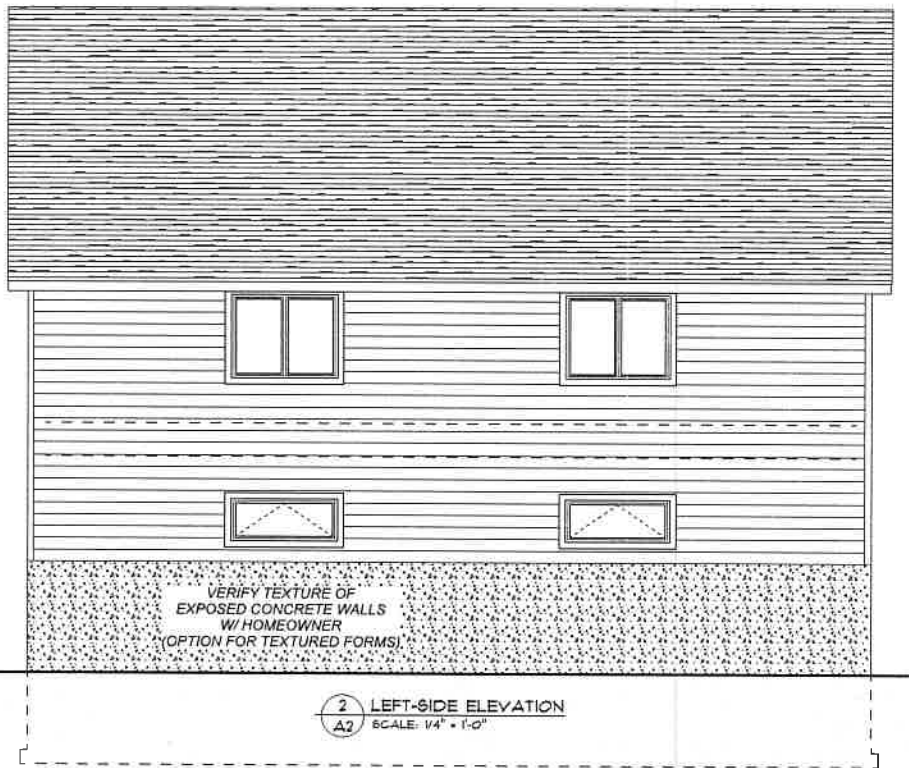
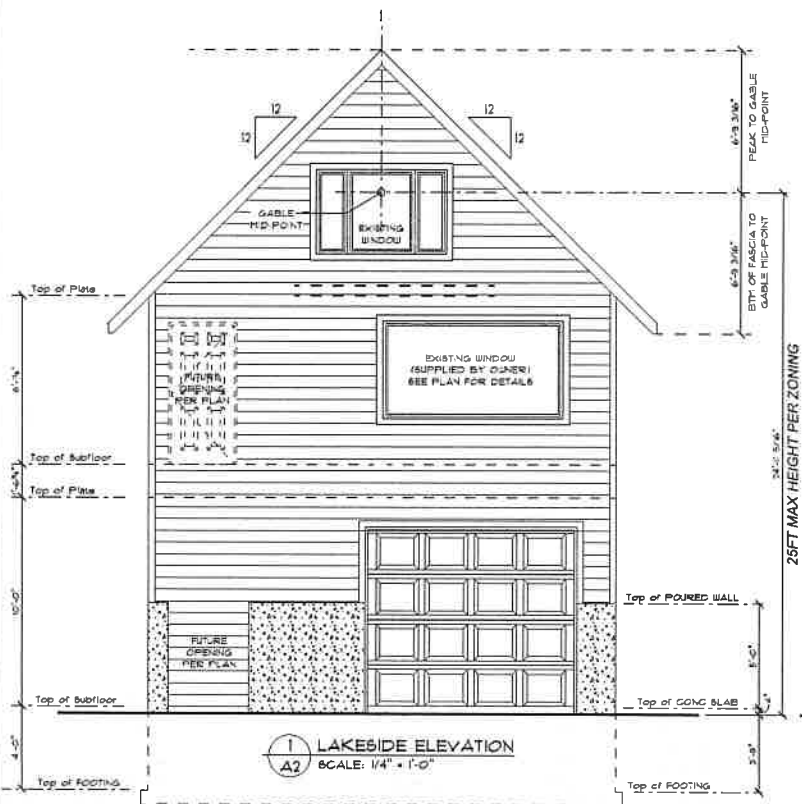
AS NOTED
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K. FRIEGEN
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AI
 4-201 | of 5



VERIFY ALL EXTERIOR SELECTIONS WITH CONTRACTOR & HOMEOWNER



METHOD PFH - PORTAL FRAME (SEE FIGURE 602.10.6.2)



DESIGN PHASE	
PRELIMINARY PLAN	8-24-16
CONCEPT PLAN	9-10-16
FINAL PLAN ISSUED	9-16-16
REVISION 1	1-14-17
REVISION 2	
REVISION 3	

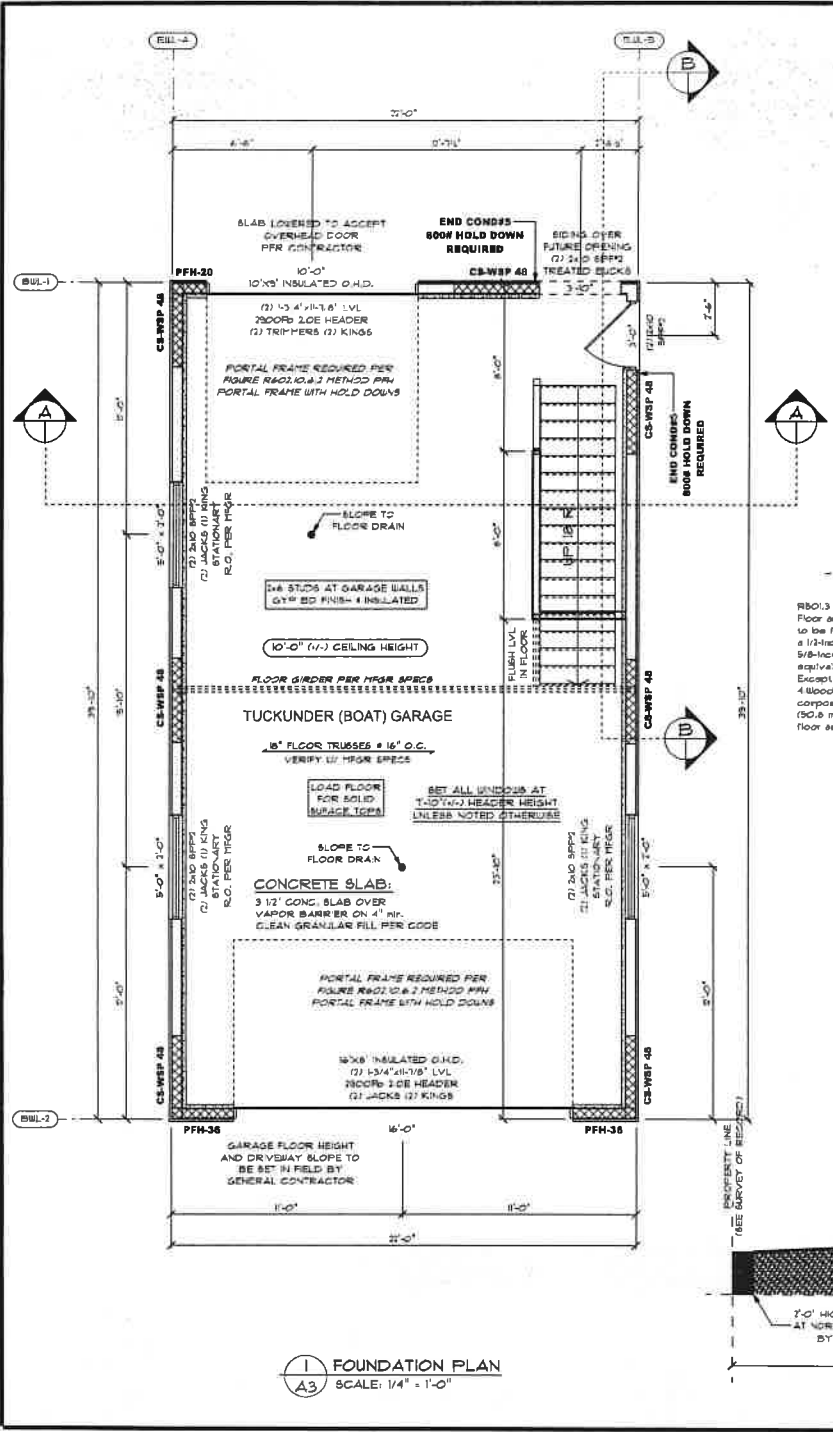
ABC Arrow
 BUILDING CENTER
 100 CANNON BOTTOM ROAD
 REDDING, MINNESOTA 55066
 651-365-6741

THESE PLANS WERE DRAFTED & DESIGNED FOR:
PLEHAL DETACHED GARAGE
 21882 GREENSPRING ROAD - RED WING, MN 55066

ARROW BUILDING CENTER Ours
 ALL RIGHTS INCLUDING BUT NOT
 LIMITED TO COPYRIGHTS OF THE
 BLUEPRINTS OR FLOOR PLANS
 CREATED UNDER THIS AGREEMENT
 AND/OR BUILDING CENTER LICENSE
 THE BLUEPRINT OR FLOOR PLAN
 TO THE EXTENT FOR PURPOSES OF
 CONSTRUCTION FOR THE PROJECT
 DEPICTED IN THE BLUEPRINT OR
 FLOOR PLAN. THE CUSTOMER SHALL
 NOT DUPLICATE, DISTRIBUTE TO THE
 PUBLIC, OR DISPLAY THIS BLUEPRINT
 OR FLOOR PLAN. THIS BLUEPRINT
 OR FLOOR PLAN IS NOT A WORK
 MADE FOR HIRE AS DEFINED UNDER
 THE C.C. SECTION 850.

ALTHOUGH EVERY EFFORT HAS
 BEEN MADE IN PREPARING
 THESE PLANS AND CHECKING
 THEM FOR ACCURACY,
 CONTRACTOR/HOMEOWNER MUST
 VERIFY DIMENSIONS, FOUNDATION
 ELEVATIONS, ROOM OPENINGS,
 HEADERS AND DEATH DIMS, AND ALL
 OTHER DIMENSIONS AND SPECS AND
 BE RESPONSIBLE FOR THE SAME.

AS NOTED
 PREPARED BY
K. FRIESEN
 ARCHITECT
 SHEET NUMBER
A2
 SHEET 2 OF 5



1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

THE FOLLOWING NOTES PERTAIN TO NEW CONSTRUCTION ONLY:

ROOF ASSEMBLY:
2SP-ALT SHINGLES
#15 FEL UNDERLAMENT
15/32" OSB ROOF SHEATHING
ENGINEERED ROOF TRUSSES
#24" O.C. W/ ENERGY WEEL

**BLOWN-IN INSULATION
CLG ASSEMBLY:**
R-49 BLOWN-IN ROOF INSUL
POLY VAPOR BARRIER
DRYWALL CEILING FINISH

HOUSE WRAP:
WEATHER BARRIER TO
EXTEND TO UNDERISE
OF TRUSS TOP CHORD

**BATT INSULATION (MINIMUM)
WALL ASSEMBLY:**
5" STG MATERIAL
HOUSE WRAP
7/16" OSB SHEATHING
2x6 STUDS @ 16" O.C.
R-2 BATT INSULATION (VERIFY)
VAPOR BARRIER
1/2" INTERIOR DRYWALL

FLOOR ASSEMBLY:
FOOTINGS TO BE 3000 PSI OR
APPROVED ADHURTURE TO A
3500 PSI CONC. FTG.

NEW FOUNDATION:
VERIFY FOUNDATION REQUIREMENTS
W/ MINING CODE SECTION R400
8'ep Wall as Req'd
by Code

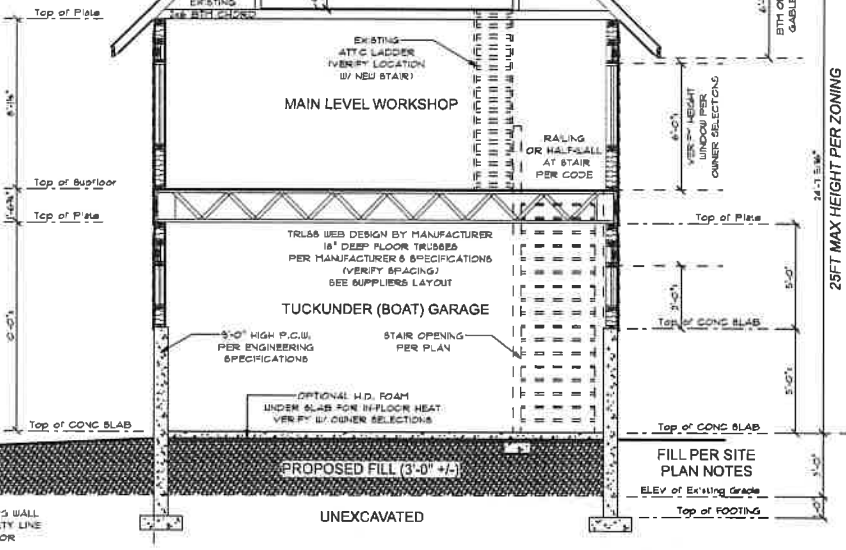
BILL BEAL:
CLOSED-CELL BILL BEALER
WATERPROOFING FROM TOP
OF FND WALL TO TOP OF FOOTING
ON EXTERIOR FACE OF FND WALL

FND WALL ANCHOR:
INSTALL 1/2" LUG-TZ OR LUG-TZ (or equal)
CONNECT RIM BRD TO BILL PLATE @ 24" O.C.
W/ CONNECTOR HAVING A 350LB/FT CAPACITY
TO ENSURE A CONTINUOUS LOAD PATH TO
TRANSFER UNBALANCED SOIL LOADS
THRU STRUCTURE DOWN TO FOUNDATION.

BASEMENT SLAB:
3 1/2" CONC. SLAB OVER VAPOR
BARRIER ON 4" min. CLEAN CRUSHED
STONE OR ROCK.

CONCRETE FOOTINGS:
FOOTINGS TO BE 3000 PSI OR
APPROVED ADHURTURE TO A
3500 PSI CONC. FTG.

REBOL FIRE PROTECTION OF FLOORS (UNFINISHED BATT).
Floor assemblies, not required elsewhere in this code
to be fire-resistance rated, shall be provided with a
1/2-inch (12.7 mm) gypsum wallboard membrane,
5/8-inch (16 mm) wood structural panel membrane, or
equivalent on the underside of the floor framing member.
Exceptions:
1 Wood floor assemblies using dimension lumber or structural
composite lumber equal to or greater than 2-inch by 10-inch
(50.8 mm by 254 mm) nominal cross-section, or other approved
floor assemblies demonstrating equivalent fire performance.



2 TYPICAL SECTION
SCALE: 1/4" = 1'-0"

**CONTRACTOR RESPONSIBILITY -
SOLID BEARING LOCATIONS:**
ALL SOLID BEARING COLUMN LOCATIONS TO
FALL DIRECTLY UNDERneath UNFINISHED HEADERS
FOR GIRDER END REACTIONS. SUCH POINT
LOADS TO BE CARRIED DOWN TO A FOUNDATION
WALL OR CONC PAD FOOTING DESIGNED FOR
HIGH LOAD. CONTRACTOR IS RESPONSIBLE
TO VERIFY AND COORDINATE SOLID BEARING
COLUMN LOCATIONS WITH FINALIZED ROOF AND
FLOOR TRUSS LAYOUT DESIGN DRAWINGS THAT
ARE SUPPLIED BY TRUSS DESIGNER.

RESIDENTIAL ENERGY EFFICIENCY:
IT IS THE RESPONSIBILITY OF THE
GENERAL CONTRACTOR TO INSURE
THAT THE BUILDING ADDITIONS AND
ALTERATIONS COMPLY WITH THE
MINNESOTA RESIDENTIAL ENERGY CODE
PER SECTION 1800.0310.1.

HEADER SIZING NOTE:
MINIMUM OF (1) 2X4 HOLD
(1) SHIP TRIMMER AT EACH END
UNLESS NOTED OTHERWISE (N.H.D.)
HEADERS GREATER THAN 4'-0" IN LENGTH:
(1) 6"X12" TRIMMERS EACH END
(2) 6"X12" KINGS EACH SIDE
UNLESS NOTED OTHERWISE (N.H.D.)

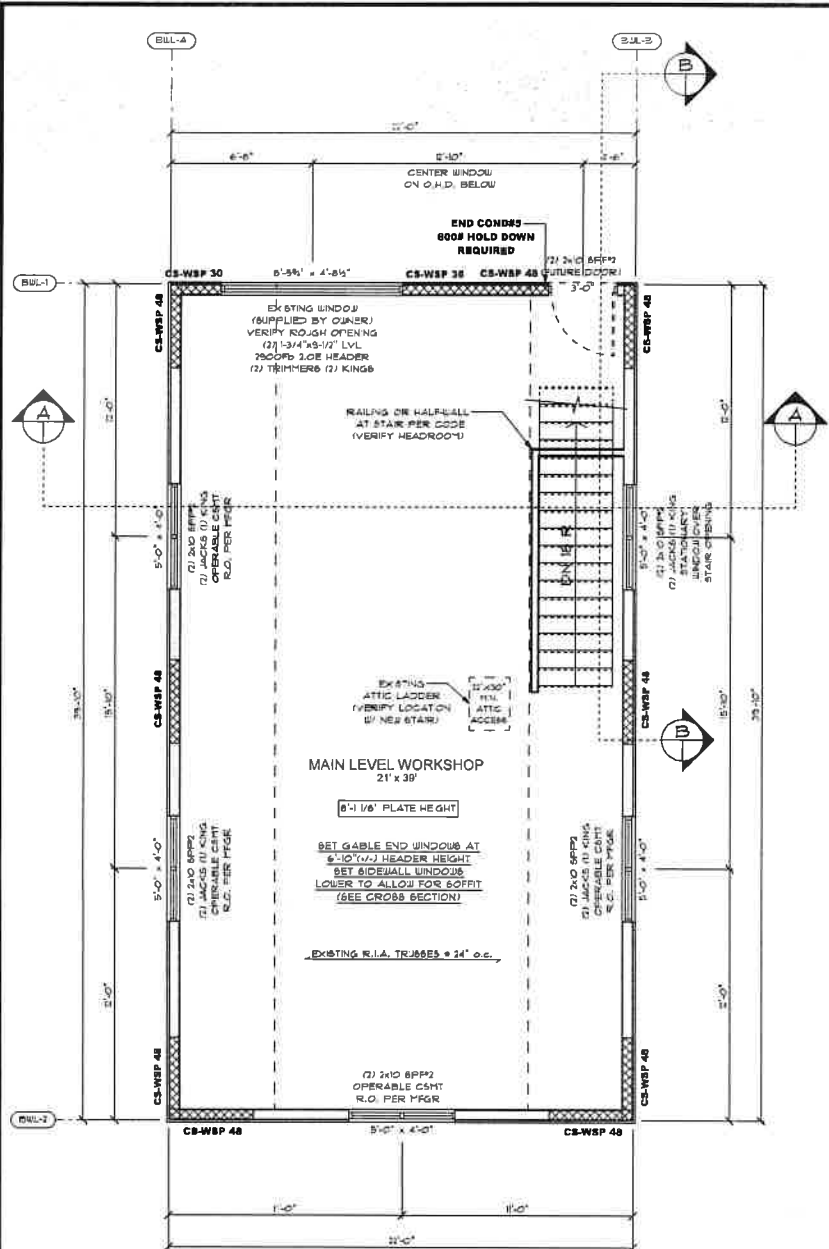
DESIGN PHASE	
REV. "PLAN" PLAN	2-23-19
CHECKED PLAN	4-8-19
FINAL PLAN ISSUE	9-14-19
REVISION	(1-4)
REVISION 2	
REVISION 3	

ABC Arrow
BUILDING CENTER
170 CANNON BOTTOM ROAD
REDWING, MINNESOTA 55066
651-368-6141

THESE PLANS WERE DRAFTED & DESIGNED FOR:
PLEHAL DETACHED GARAGE
27882 GREENSPONT ROAD - RED WING, MN 55066

ARROW BUILDING CENTER DOES
ALL RIGHTS, INCLUDING, BUT NOT
LIMITED TO, COMMENTS OF THE
BLUEPRINTS OR FLOOR PLANS
CREATED UNDER THE CONTRACT.
ARROW BUILDING CENTER LICENSES
THE BLUEPRINT OR FLOOR PLAN
TO THE CUSTOMER FOR PURPOSES
OF CONSTRUCTING THE STRUCTURE
DEPCTED IN THE BLUEPRINT OR
FLOOR PLAN AND THE CUSTOMER SHALL
NOT DUPLICATE OR REPRODUCE IN
ANY MANNER OR FOR ANY PURPOSE
OTHER THAN THAT AUTHORIZED
HEREIN UNDER THE CONTRACT.
ALTHOUGH EVERY EFFORT HAS
BEEN MADE IN PREPARING
THESE PLANS AND CHECKING
THEIR FOR ACCURACY,
CONTRACTOR/OWNER MUST
VERIFY GRADES, FOOTING SIZES,
ELEVATIONS, ROUGH OPENINGS,
GLAZERS AND CLEAN UPES AND ALL
OTHER DETAILS AND SPECS AND
BE RESPONSIBLE FOR THE SAME.

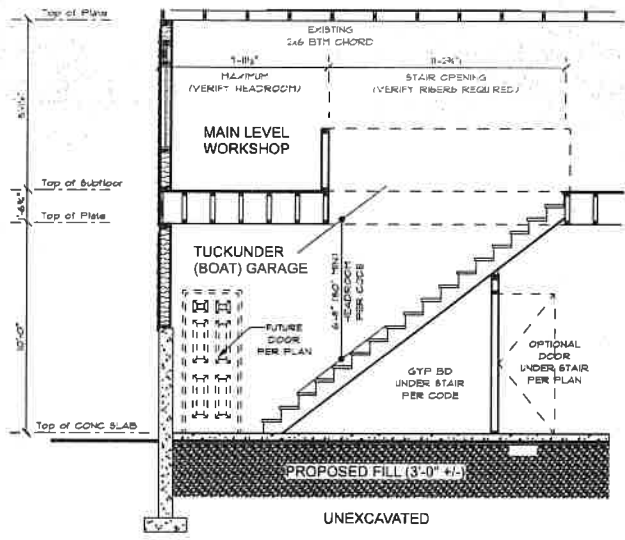
AS NOTED
DRAWN BY
K. FRIESEN
DATE
LAST UPD
A3
PAGE 3 OF 5



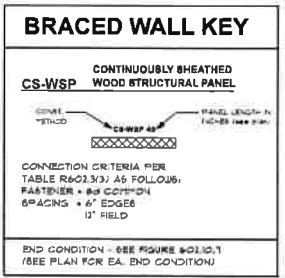
1 FLOOR PLAN - MAIN LEVEL
A4 SCALE: 1/4" = 1'-0"

MINNESOTA CODE STAIR DATA:
 (1) 10" MINIMUM TREAD DEPTH
 (2) 1 1/2" MAXIMUM RISER HEIGHT
 (3) 7" x 1" STAR STRINGERS
 (4) 3/4" x 3/8" CON. HANDRAIL
 (5) 6-8" MINIMUM HEADROOM

HEADER SIZING NOTE:
 MINIMUM OF (2) 2x10 HOR'S
 (1) SPPG TRIMMER AT EACH END
 UNLESS NOTED OTHERWISE (W.N.O.)
 HEADERS GREATER THAN 6'-0" IN LENGTH
 (2) SPPG TRIMMERS EACH END
 (2) BPPG KINGS EACH SIDE
 UNLESS NOTED OTHERWISE (W.N.O.)



2 STAIR SECTION
A4 SCALE: 1/4" = 1'-0"



BRACED WALL PANEL CONNECTIONS:
 Braced wall panels shall be connected to floor framing or foundation as follows:
 A. Where joists are perpendicular to a braced wall panel above or below, a rim joist, band joist, or blocking in accordance with IRC Figure R602.10.6(1). Reversing of top and bottom wall panels to framing, rim joist, band joist and/or blocking shall be in accordance with IRC Table R602.10.1.
 B. Where joists are parallel to a braced wall panel above or below, a rim joist, and joist or other parallel framing member shall be provided directly above and below the braced wall panel in accordance with IRC Figure R602.10.6(2) where a parallel framing member cannot be located directly above and below the panel, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the braced wall panel in accordance with IRC Figure R602.10.6(2). Fastening of blocking and wall panels shall be in accordance with IRC Table R602.10.1 and IRC Figure R602.10.6(2).
 C. Connections of braced wall panels to concrete or masonry shall be in accordance with IRC Section R403.1.6.

2012 IRC PRESCRIPTIVE WALL BRACING CRITERIA R602.10

BWL = BRACED WALL LINE BWP = BRACED WALL PANEL

- PANEL METHOD per TABLE R602.10.4
 CS-WSP = CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL
 CB-O = CONTINUOUSLY SHEATHED CS-WSP AT OVERHEAD DOOR OPENING
 PFH = PORTAL FRAME WITH HOLD COLUMNS
- BRACED WALL LINE BRACING REQUIREMENTS per TABLE R602.10.1.3 (30mph WIND SPEED, EXPOSURE B, 2 STORY, 60'-0" max. BRACED WALL LINE BRACING)
- BRACED WALL PANEL TO BE FULL HEIGHT SECTIONS THAT SHALL HAVE NO VERTICAL OR HORIZONTAL OFFSETS per R602.10.2
 4'-0" OFFSET EACH WAY IS PERMITTED
- A BRACED WALL PANEL SHALL BE WITHIN 10'-0" FROM EACH END OF A BRACED WALL LINE & NOT GREATER THAN 20'-0" BETWEEN BRACED WALL PANELS per R602.10.2.2
- BRACING REQUIREMENTS per TABLE R602.10.1.1
 SEE SIMPSON WALL BRACING CALCULATOR FOR TABULATIONS.
 NOTE: SEE WALL BRACING LINES TABLE PROVIDED FOR CALCULATIONS OF REQUIRED WALL BRACING
- TABLE R602.10.5 BRACED WALL PANEL MIN. LENGTH
 CS-WSP = 8'-0" WALL WITH (MAIN - WORKSHOP LEVEL), LESS THAN OR EQUAL TO 64" HIGH ADJACENT OPENG. + 24" min. BUP LENGTH
 60" ADJACENT OPENG (DOOR) + 30" min. BUP LENGTH
 CS-O = 10'-0" WALL = GARAGE DOOR, + 30" min BUP LENGTH
 PFH = 10'-0" WALL = GARAGE DOOR, + 24" min BUP LENGTH

ALTHOUGH EVERY EFFORT HAS BEEN MADE TO PREPARE THESE PLANS AND CHECKING CONTRACTOR/OWNER SHALL VERIFY GRADES, FOOTING SIZES, ELEVATIONS, ROOM OPENINGS, HEADERS AND DEAN USES AND ALL OTHER DIMENSIONS AND BRICS AND BE RESPONSIBLE FOR THE SAME.

SAMPLE OF BRACED WALL LAYOUT

DESIGN PHASE

REV. "PLAN" PLAN	8-16-19
CHECK DEE PLAN	9-25-19
FINAL PLAN BESS	9-25-19
REVISION	1-14-20
REVISION 2	
REVISION 3	

ABC Arrow BUILDING CENTER
 10 CANNON BOTTOM ROAD
 REDWING, MINNESOTA 55066
 651-328-6141

THESE PLANS WERE DRAFTED & DESIGNED FOR:
PLEHAL DETACHED GARAGE
 27882 GREENSPRING ROAD - RED WING, MN 55066

CONTRACT NUMBER: _____

ARROW BUILDING CENTER DUNS ALL RIGHTS, INCLUDING BUT NOT LIMITED TO, COPYRIGHTS OF THE BLUEPRINTS OR FLOOR PLANS CREATED UNDER THIS AGREEMENT. ARROW BUILDING CENTER LICENSES THE BLUEPRINT OR FLOOR PLAN TO THE CUSTOMER FOR THE PURPOSES OF CONSTRUCTING THE STRUCTURE SPECIFIED IN THE BLUEPRINT OR FLOOR PLAN. THE CUSTOMER SHALL NOT DUPLICATE, REPRODUCE, OR IN ANY MANNER, OR DISPLAY THIS BLUEPRINT OR FLOOR PLAN IN ANY MANNER OR FOR ANY PURPOSE OTHER THAN THAT SPECIFIED IN SECTION 3.01.

ALTHOUGH EVERY EFFORT HAS BEEN MADE TO PREPARE THESE PLANS AND CHECKING CONTRACTOR/OWNER SHALL VERIFY GRADES, FOOTING SIZES, ELEVATIONS, ROOM OPENINGS, HEADERS AND DEAN USES AND ALL OTHER DIMENSIONS AND BRICS AND BE RESPONSIBLE FOR THE SAME.

AS NOTED

DRAWN BY: **K. FRIESEN**

CHECKED BY: _____

DATE: _____

A4

1 of 5

NOTE: FINAL PLACEMENT DETERMINED BY CONTRACTOR. STRUCTURE SHOWN PARALLEL TO THE PROPERTY LINE.

CONTRACTOR TO VERIFY REQUIRED SETBACKS WITH LOCAL ZONING REQUIREMENTS FOR LAND USE.

VERIFY MINIMUM SETBACK (FRONT) :
VERIFY MINIMUM SETBACK (REAR) :
5'-0" MINIMUM SETBACK (SIDE)

VERIFY DRIVEWAY & UTILITY BASEMENTS.

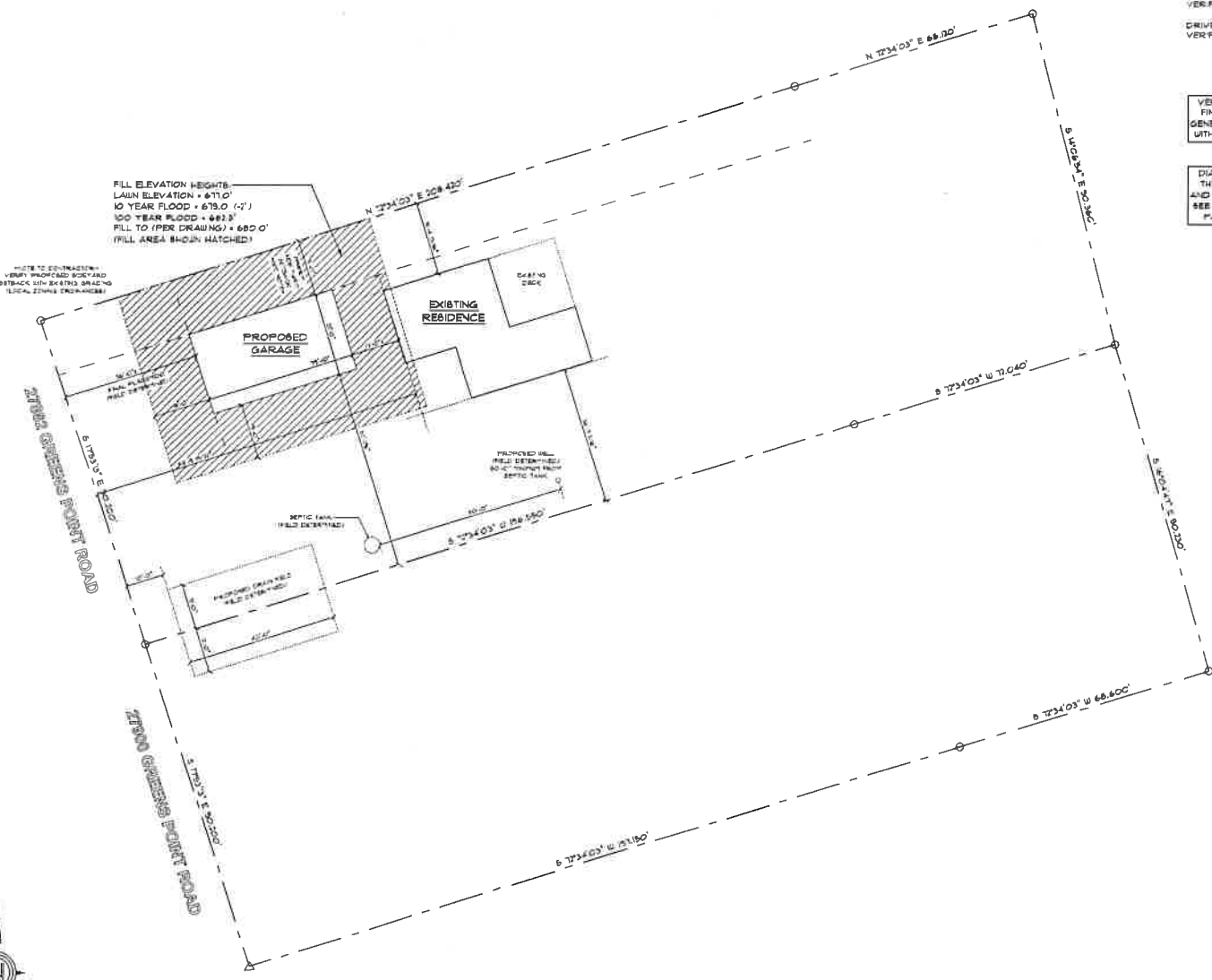
DRIVEWAY LAYOUT DETERMINED BY CONTRACTOR. VERIFY WITH ASSOCIATION GUIDELINES & BUILDING PERMIT.

VERIFY ALL DIMENSIONS WITH PLANS. FINAL PLACEMENT DETERMINED BY GENERAL CONTRACTOR - FIELD VERIFY WITH HOMEOWNER PRIOR TO DIGGING.

DIAGNOSTIC SITE PLAN NOTE: THIS IS A PROPOSED SITE PLAN AND IS NOT A REGISTERED SURVEY. SEE SURVEY OF RECORD OR PLAT MAP FOR MORE INFORMATION.

FILL ELEVATION HEIGHTS:
LAWN ELEVATION = 671.0'
10 YEAR FLOOD = 678.0' (-2')
100 YEAR FLOOD = 682.3'
FILL TO (PER DRAWING) = 680.0'
(FILL AREA SHOWN HATCHED)

NOTE TO CONTRACTOR:
VERIFY PROPOSED SETBACKS WITH LOCAL ZONING ORDINANCES (LOCAL ZONING ORDINANCES)



SITE PLAN
SCALE: 1" = 20'-0"

DESIGN PHASE	
PRELIMINARY PLAN	8-14-19
CHECK SET PLAN	9-01-19
FINAL PLAN REVISION	9-16-19
REVISION 1	1-14-20
REVISION 2	
REVISION 3	
100 CANNON BOTTOM ROAD REDDING, MINNESOTA 55066 651-388-6741	
THESE PLANS WERE DRAFTED & DESIGNED FOR: PLEHAL DETACHED GARAGE 21882 GREENSPRING ROAD - RED WING, MN 55066	
ARROW BUILDING CENTER OWNS ALL RIGHTS INCLUDING, BUT NOT LIMITED TO, COPYRIGHTS ON THE BLUEPRINTS OR FLOOR PLANS CREATED UNDER THIS AGREEMENT. ARROW BUILDING CENTER LICENSES THE BLUEPRINT OR FLOOR PLAN TO THE CUSTOMER FOR THE PURPOSES OF CONSTRUCTING THE STRUCTURE SPECIFIED IN THE BLUEPRINT OR FLOOR PLAN. THE CUSTOMER SHALL NOT EXHIBIT, DISTRIBUTE TO THE PUBLIC, OR DISPLAY THE BLUEPRINT OR FLOOR PLAN. THIS BLUEPRINT OR FLOOR PLAN IS NOT A WORK MADE FOR HIRE AS DEFINED UNDER U.S.C. SECTION 101.	
ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND SPECIFICATIONS FOR ACCURACY, CONTRACTOR/HOMEOWNER MUST VERIFY GRADES, FOOTING DEPTH, ELEVATION, BUSH OPENINGS, WINDOW AND DOOR SIZES AND ALL OTHER DIMENSIONS AND SPECIFICATIONS BE RESPONSIBLE FOR THE SAME.	
AS NOTED DRAWN BY: K. FRIESEN	
SHEET NUMBER SP-1 5 of 5	

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

To: Planning Advisory Commission
From: Land Use Management
Meeting Date: November 18, 2019
Report date: November 8, 2019

PUBLIC HEARING: Request for Map Amendment (Rezone)

Request for map amendment, submitted by Goodhue County Land Use Management Department, to rezone approximately 87.69 acres from A1 (Agricultural Protection District) to PT (Parks and Trails District).

Application Information:

Applicant: Goodhue County

Address of zoning request: No site address has been assigned as of yet.

Parcel(s): 36.180.0010, 36.150.0090 and 36.130.0010

Abbreviated Legal Description: Goodhue County Kenyon Park, Lot 1, Block 1; and, Lot 1 Auditor's Subdivision of the South Half of the Northwest Quarter of Section 7, and Part of Lot 11 Auditor's Subdivision of the Southwest Quarter of Section 7 south of the southerly bank of the Zumbrota River in Kenyon Township.

Township Information: Kenyon Township has been made aware of this Zoning Map Amendment.

They have not adopted a Parks zoning district. Their township meeting is scheduled for November 11.

Zoning District: A1 (Agricultural Protection Zone)

Attachments and links:

Application and submitted project summary

Site Map(s)

Project Review

Goodhue County Zoning Ordinance (GCZO):

<http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

Nielsen Memorial Preserve Master Plan and Appendix

<https://www.co.goodhue.mn.us/1209/Nielsen-Memorial-Preserve>

Summary:

On June 18, 2019, the County Board approved an amendment to the Zoning Ordinance to establish a Parks and Trails (PT) District (Article 34). The purpose of this district is to preserve, conserve, and protect open space and recreation areas throughout the County. It is intended that this district will accommodate a wide variety of open space and recreational uses such as conservation of natural amenities, hiking, trails, wildlife habitat, educational programs, and park and recreation facilities among other similar uses. The District shall be applied only to Goodhue County owned property reserved for recreational parks or trails. The district is intended to coordinate with Goodhue County parks and trails Master Plans and Comprehensive Plans by allowing uses consistent with those plans.

The property included as part of the Zoning Map Amendment being presented for consideration by the Planning Advisory Commission is known as the Nielsen Memorial Preserve and is located within Section 7 of Kenyon Township at the western boundary of Goodhue County.

The Nielsen Memorial Preserve consists of approximately 88 acres of land that is a "Big Woods" remnant in Section 7 of Kenyon Township. The majority of this property was donated to the County

by the estate of Harold Nielsen in early 2016. Home to a diverse range of plants and wildlife, this park will provide a refuge for many different species and a great hiking and observing opportunity for park visitors. The park has diverse terrain with an even, level area towards the northern side of the park, as well as several ravines that lead down to the North Fork of the Zumbro River.

This park land does not yet have any parking areas, trails, or amenities.

Goodhue County has approved a master plan that will guide future development, management, restoration, and enhancement of the park. The Nielson Memorial Preserve Master Plan was approved on December 7, 2017 and included opportunities for public input.

The Parks and Trails District represents the most appropriate zone district for the intended use of the Nielson Memorial Preserve as a Goodhue County Park.

Project Summary:

Property Information:

- The subject property consists of three parcels of property comprising approximately 88 acres.
- The property is currently zoned A1. Adjacent and nearby properties to the north, east and south are also located within the A1 Zone District. Rezoning the subject parcel to the PT District would not appear to have any substantial negative impacts to the existing and potential future uses of the surrounding zoning districts. The Nielson Memorial Preserve is located at the western boundary of Goodhue County. The western boundary of the preserve abuts property located within Rice County’s Agriculture Zone District.
- The Nielson Memorial Preserve is surrounded by other wooded properties along with a limited number of nearby rural residential properties. A limited amount of tilled cropland is located on abutting properties in the general vicinity of the Preserve.
- The subject properties are not located within a Historic Preservation District. It is not anticipated that any scenic or historic amenities will be negatively impacted as a result of the proposed rezone.
- The Nielson Memorial Preserve property includes areas within the Floodplain and Shoreland Overlay Zone along the North Branch of the Zumbro River which is located along the southern boundary of the Preserve.

Existing/Proposed Uses:

- The Nielson Memorial Preserve is an undeveloped natural area that has been in private ownership until recently. The site’s native forest landscape has varying topography. The North Fork of the Zumbro River traverses the south part of the park, but access to the river is difficult. Proposed use of the Park Preserve includes various passive and active recreational uses are provided for in the plan as well as Outdoor Education programming.

Planning Information:

- The PT District is intended to coordinate with Goodhue County Parks and Trails Master Plans and Comprehensive Plans by allowing uses consistent with those plans. Proposed uses and programming for the Nielson Memorial Preserve are identified in Nielson Memorial Preserve Master Plan.
- The property is not currently used for agricultural purposes. The Prime Farmland Rating for Agriculture is as follows:

<i>Soil Name</i>	<i>Slope</i>	<i>Amount (acres)</i>	<i>% of Total</i>	<i>Prime Farmland Rating</i>
Coland, Spillville	0-2%	6.2	7.4%	Not prime farmland

Kasson Silt Loam	2-6%	40.2	47.9%	Prime Farmland
Oran Silt Loam	1-4%	8.3	10%	Prime Farmland
Maxfield Silt Loam	0-2%	8.5	10.2%	Prime Farmland
Bassett-Racine Complex	18-25%	13.4	16%	Not Prime Farmland
Bassett-Kasson Complex	6-12%	7.1	8.5%	Farmland of Statewide Importance

- The proposed rezone appears compatible with the objectives and implementation strategies of the Goodhue County Comprehensive Plan:

“Encourage development of new parks”

“Develop a master plan for the Kenyon Park”

Since the land has already been assembled for the Nielsen Memorial Preserve and the master plan is complete; the change of zone of the park property from the A1 District to the PT District represents a logical step to best facilitate land use regulation and permitting for development of park facilities and to guide overall land management practices.

- Rezoning of the Nielsen Memorial Preserve property from the A1 District to the PT District will not negatively impact nearby agricultural or residential uses. The Park is already in place and the master planning process has identified future development and uses that are consistent with public preferences.

Staff Recommendation:

LUM Staff recommends the Planning Advisory Commission

- adopt the staff report into the record;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

recommend that the County Board of Commissioners **APPROVE** the map amendment request initiated by Land Use Management Department Staff on behalf of the County to rezone Parcels 36.180.0010, 36.150.0090 and 36.130.0010 from A1 (Agricultural Protection District) to PT (Parks and Trails District).

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Lisa M. Hanni, L.S. Director

Building | Planning | Zoning
 Telephone: 651.385.3104
 Fax: 651.385.3106



County Surveyor / Recorder

Environmental Health | Land Surveying | GIS
 Telephone: 651.385.3223
 Fax: 651.385.3098

Project Review per Article 3, Section 2, Subd. 5-10:

- Subd. 5
- A. The names and addresses of the petitioner or petitioners and their signatures to the petition. **Goodhue County LUM**
 - B. Survey information: **See application**
 - C. The current and proposed district: **A1 to PT**
 - D. The current use and the proposed use of the land.
The property is currently vacant with dense tree coverage. The property is proposed to be used as a County Park nature preserve.
 - E. The reason for the requested change of zoning district. **The Parks and Trails Zoning District is intended to preserve, conserve and protect open space and recreation areas throughout the County.**
 - F. A copy of the soil map showing the soils types within the proposed boundary and the surrounding area. **A soils map for the site has been prepared.**
 - G. Prime Farmland Rating of the soil types in F.
 - The Prime Farmland Rating for Agriculture is as follows:

Soil Name	Slope	Amount (acres)	% of Total	Prime Farmland Rating
Coland, Spillville	0-2%	6.2	7.4%	Not prime farmland
Kasson Silt Loam	2-6%	40.2	47.9%	Prime Farmland
Oran Silt Loam	1-4%	8.3	10%	Prime Farmland
Maxfield Silt Loam	0-2%	8.5	10.2%	Prime Farmland
Bassett-Racine Complex	18-25%	13.4	16%	Not Prime Farmland
Bassett-Kasson Complex	6-12%	7.1	8.5%	Farmland of Statewide Importance

H. A statement of how the requested change is compatible with the Goodhue County Comprehensive Plan including but not limited to the following:

1. The environmental impacts of the proposed use of land on the:
 - a. Groundwater
 - b. natural plant and animal communities
 - c. existing trees and vegetation
 - d. Bluffland stability
 - e. shoreland stability
1. **The Southern portion of the property is in the Shoreland District and Floodplain. There are some steep slopes classified as Bluffland in this area as well. There will be no environmental impacts due to the proposed rezone as the area will be preserved as a County Park.**
2. The compatibility with surrounding land uses
The area is characterized by primarily low-density residential with agricultural uses. Rezoning the parcels to PT will allow for the preservation of the land and the proposed use as a County Park.
3. The physical and visual impacts on any scenic or historic amenities within or surrounding the proposed parcel.
It is not anticipated that any scenic or historic amenities will be negatively impacted as a result of the proposed rezone.

Subd. 6 The housing density of the affected Section

Single family dwellings are not a permitted use in the PT District.

Subd. 7 The impact on any surrounding agricultural uses

The property is not currently used for agricultural purposes. Surrounding agricultural properties will not be impacted by the proposed rezone.

Subd. 8 The impact on the existing transportation infrastructure

The property does not currently have an address or public access point. Proposed access would be off of Monkey Valley.

Subd. 9 The impact on surrounding zoning districts

The property is currently zoned A1. Adjacent zoning districts in Goodhue County are all zoned A1. Rice County borders the property directly to the west.

Subd. 10 A statement concerning the cumulative effect and compatibility of the requested zoning change on the affected Township and any cities located within 2 miles of the proposed parcel.

Rezoning the subject parcel to PT does not appear to have negative cumulative effects on the immediate surrounding area or the City of Kenyon. The area is characterized by primarily low-density residential uses mixed with agricultural uses. Rezoning the 88 acres to PT would not appear to have any substantial negative impacts to the existing or potential future uses of the surrounding zoning districts.

Subd. 11. Additional information as may be requested by the Planning Commission or zoning staff.

Soil Map—Goodhue County, Minnesota

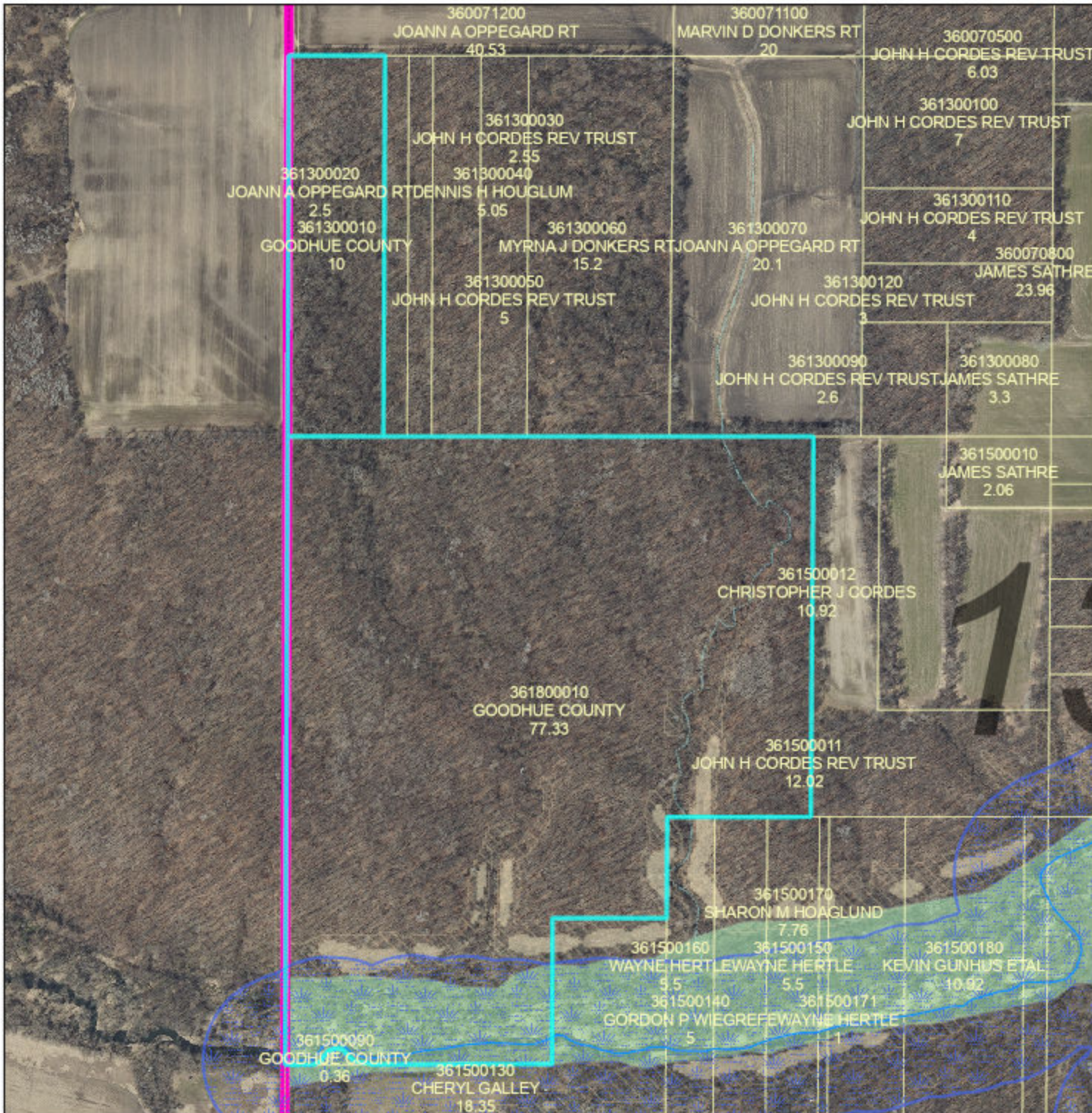


Map Scale: 1:6,290 if printed on A portrait (8.5" x 11") sheet.
0 50 100 200 300 Meters
0 300 600 1200 1800 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 15N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1027A	Coland, frequently flooded- Spillville, occasionally flooded complex, 0 to 2 percent slopes	6.2	7.4%
M506B	Kasson silt loam, 2 to 6 percent slopes	40.2	47.9%
M508A	Oran silt loam, 1 to 4 percent slopes	8.3	10.0%
M510A	Maxfield silt loam, 0 to 2 percent slopes	8.5	10.2%
M522E	Bassett-Racine complex, 18 to 25 percent slopes	13.4	16.0%
M523C2	Bassett-Kasson complex, 6 to 12 percent slopes, eroded	7.1	8.5%
Totals for Area of Interest		83.7	100.0%

MAP 01: PROPERTY OVERVIEW



PLANNING COMMISSION

Public Hearing
November 18, 2019

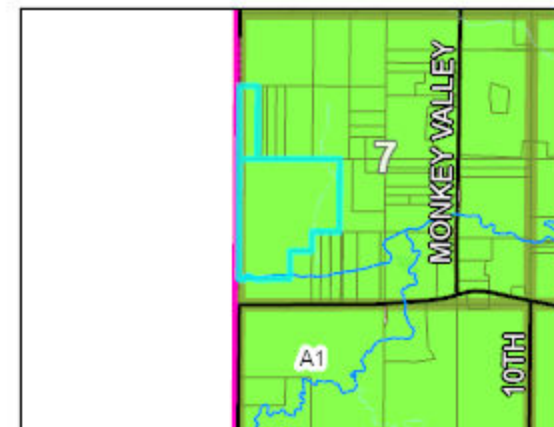
Kenyon Park
A1 Zoned District

Parcels 36.180.0010, 36.150.0090
and 36.130.0010
Part of the W1/2 of S7 Twp110 R18
in Kenyon Township

Request to rezone 87.69 acres
from A1 to PT

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		
	Shoreland		
	Historic Districts		
	Parcels		
	Registered Feedlots		
	Dwellings		
	Municipalities		
			FEMA Flood Zones
			2% Annual Chance
			A
			AE
			AO
			X



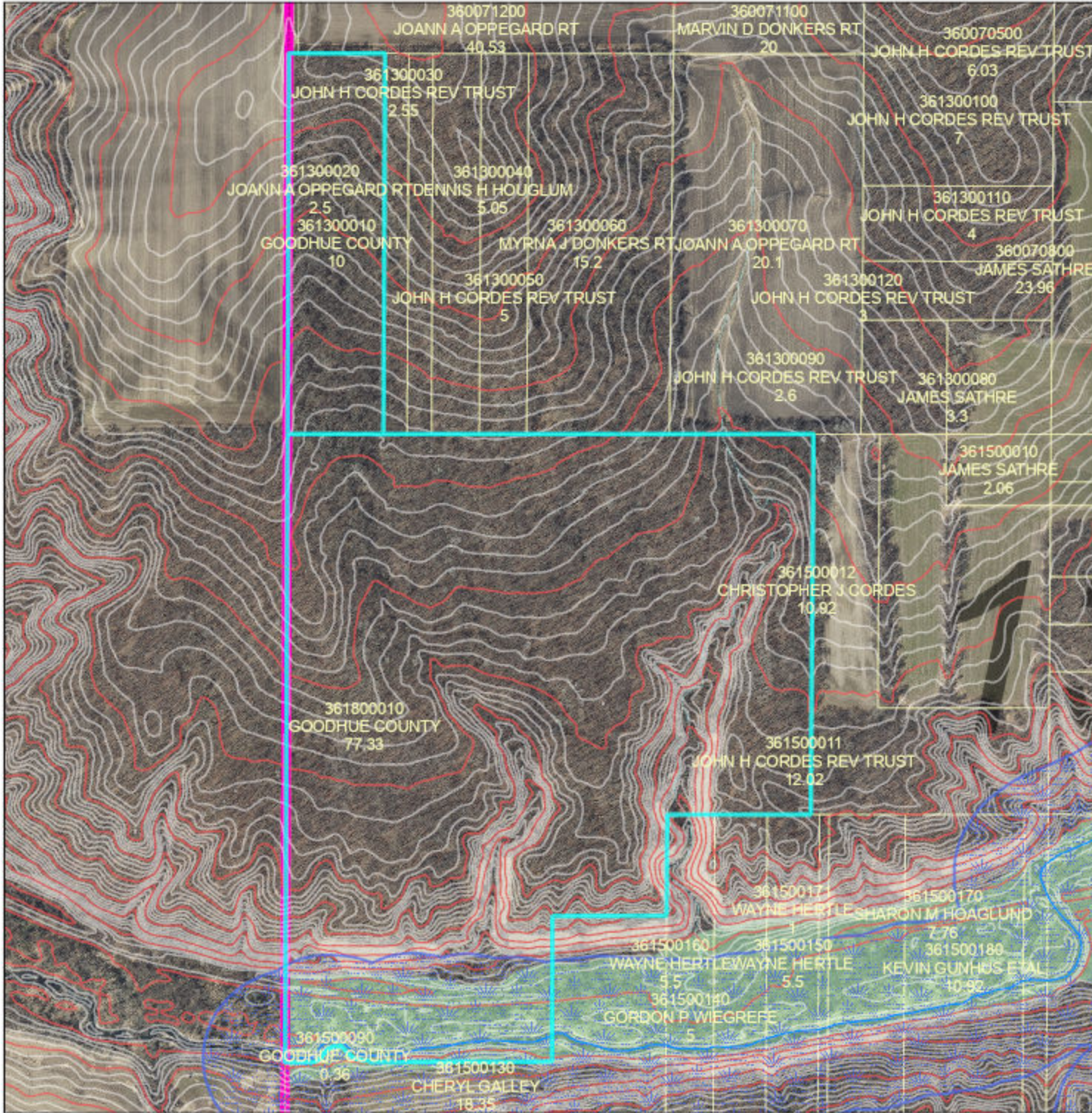
0 187.5 375 750 1,125 US Feet

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2018 Aerial Imagery
Map Created October, 2019 by LUM



MAP 03: ELEVATIONS



PLANNING COMMISSION

Public Hearing
November 18, 2019

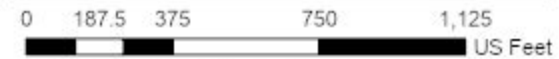
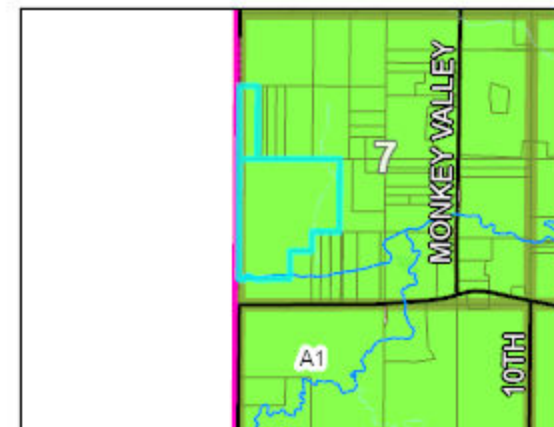
Kenyon Park
A1 Zoned District

Parcels 36.180.0010, 36.150.0090
and 36.130.0010
Part of the W1/2 of S7 Twp110 R18
in Kenyon Township

Request to rezone 87.69 acres
from A1 to PT

Legend

	Intermittent Streams		Bluff Impact Zones (% slope)
	Protected Streams		30
	Lakes & Other Water Bodies		FEMA Flood Zones
	Shoreland		2% Annual Chance
	Historic Districts		A
	Parcels		AE
	Registered Feedlots		AO
	Dwellings		X
	Municipalities		



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2018 Aerial Imagery
Map Created October, 2019 by LUM



THE GOODHUE COUNTY KENYON PARK

KNOW ALL PERSONS BY THESE PRESENTS: That Goodhue County, a Municipal Corporation under the laws of the State of Minnesota, owner of the following described property to wit:

The West 5 acres of Lot 1, Auditor's Subdivision of the Southwest Quarter of Section 7, Township 109 North, Range 18 West, according to the recorded plat thereof, Goodhue County, Minnesota.

AND Lot 2,3,4,5,6,7,8,9,10,12,13 of Auditor's Subdivision of the Southwest Quarter of Section 7, Township 109 North, Range 18 West, according to the recorded plat thereof, Goodhue County, Minnesota.

AND That part of Auditor's Subdivision of the Southwest Quarter of Section 7, Township 109 North, Range 18 West, according to the recorded plat thereof, described as follows: Beginning at a point 54 rods North of the Southeast corner of the Southwest Quarter of the Southwest Quarter of said Section 7; running thence West 24 rods, thence North 26 rods, thence East 24 rods, thence South 28 rods to the place of beginning.

AND The West 4 chains and 78 links of the North 33 chains of the Southwest Quarter (SW1/4) of Section 7, in Township 109 North of Range 18 West of the fifth principal meridian, in the County Goodhue, State of Minnesota. Also described as Lot 11 of Auditor's Subdivision of the Southwest Quarter (SW1/4) of said Section 7. EXCEPT all that part of said tract which lies south of the south bank of the Zumbro River.

Has caused the same to be surveyed and platted as THE GOODHUE COUNTY KENYON PARK and do hereby dedicate to the public Lot 1, Block of 1 as a Park.

In witness whereof said Goodhue County has caused these presents to be signed by its proper officers this 12th day of December, 2016.
By: Dan Reichzigel, Board Chair Attest: Scott Ameson, Administrator

STATE OF MINNESOTA
County of Goodhue
The foregoing instrument was acknowledged before me this 12th day of December, 2016.
Jason G. Jensen
Notary Public Goodhue County, Minnesota
My Commission Expires: 1/31/2018

I hereby certify:
That I have surveyed or directly supervised the survey of the property described on this plat; that I have prepared or directly supervised the preparation of this plat as THE GOODHUE COUNTY KENYON PARK; that this plat is a correct representation of the boundary survey, that all mathematical data and labels are correctly designated on the plat; that all monuments depicted on the plat have been correctly set; that as of the date of this certification all water boundaries and wet lands, as defined in Minnesota Statutes 505.01, Subd. 3, are shown and labeled on the plat, and that all public ways are shown and labeled on the plat.

Dated this 12th day of December, 2016.

Jeffrey Ekblad
Jeffrey Ekblad, Land Surveyor
Minnesota License Number 45776

STATE OF MINNESOTA
County of Goodhue
The foregoing instrument was acknowledged before me this 12th day of December, 2016 by Jeffrey Ekblad, Land Surveyor.

Jason G. Jensen
Notary Public Goodhue County, Minnesota
My Commission Expires: 1/31/2018

Approved by the Kenyon Township Board of Supervisors this 10th day of October, 2016.

Chair: John A. Kule Clerk: John E. Lindman

Approved by the Goodhue County Board of Commissioners at their meeting on 12th day of December, 2016.

Dan Reichzigel Attest: Scott Ameson
Dan Reichzigel, Chair Scott Ameson, Administrator

Bearings are based upon the Goodhue County coordinate system NAD 1983 (1996 HARN adj.)

Benchmark: MNDOT Aluminum Monument Hwy 60 2.8 miles west of Hwy 60 and Hwy 56 intersection. 1160.75 NAVD88 1996 adjustment

I hereby certify that proper evidence of title has been presented to and examined by me and I hereby approve this plat as to form and execution.

Stephen H. Betts
Goodhue County Attorney

Taxes payable in the year 2016 on the land herein described have been paid, there are no delinquent taxes and transfer has been entered this 8th day of December, 2016.
Goodhue County Auditor Gregory H. Hoverson

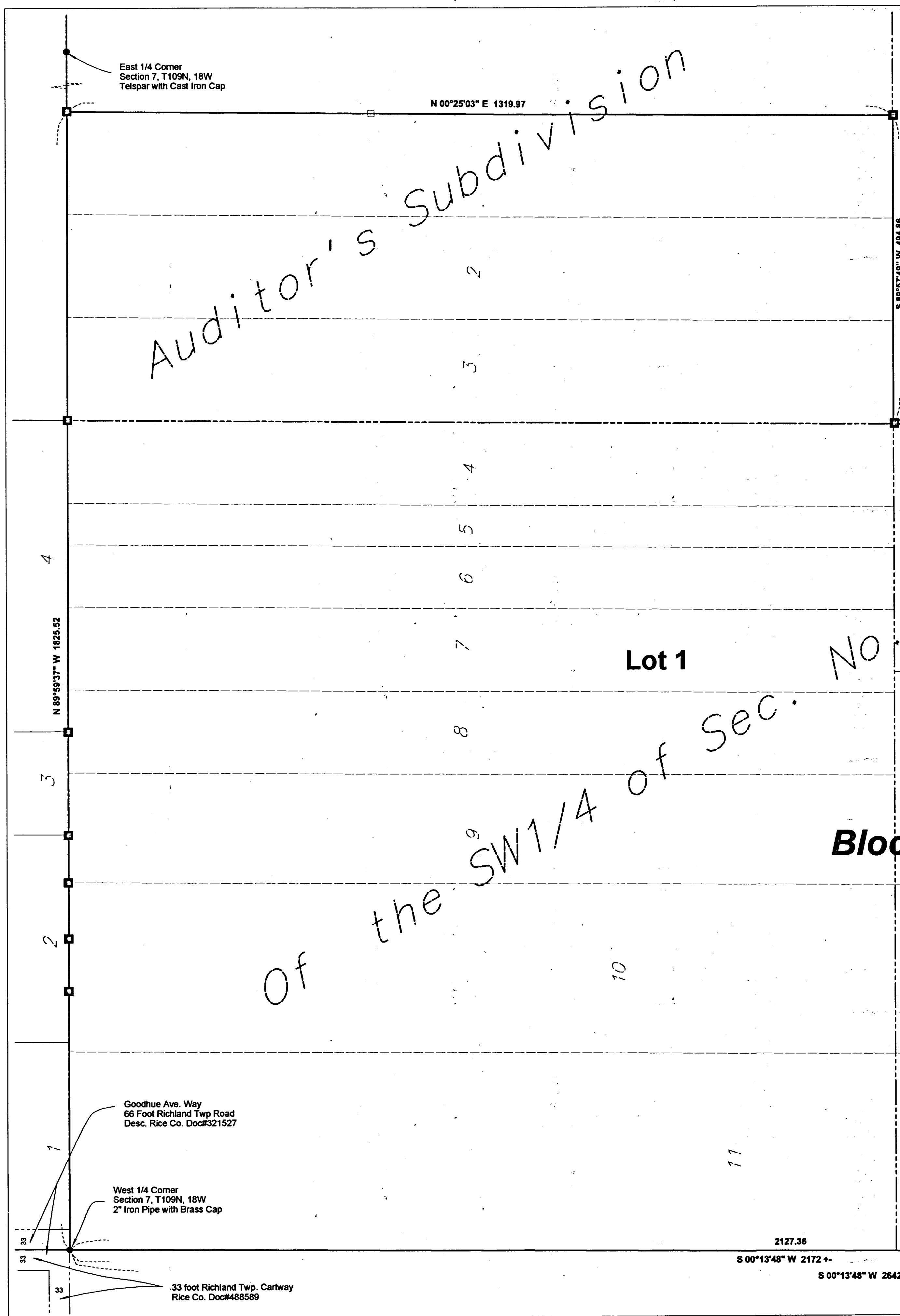
By: Lisa M. Hanni

Pursuant to Chapter 389.09, laws of Minnesota, and Goodhue County Ordinance No. 2-78, this plat has been approved this 12th day of December, 2016.

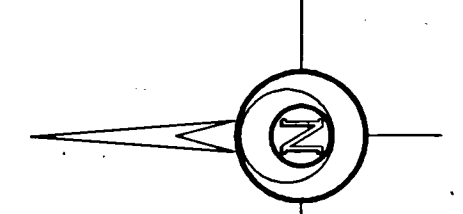
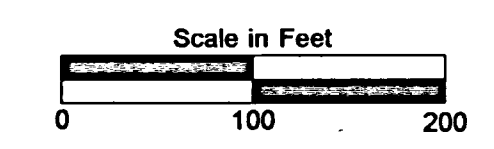
Lisa M. Hanni
Lisa M. Hanni, Goodhue County Surveyor

I hereby certify that the within instrument was filed in this office for record this 12th day of December, 2016, at 2:17 pm and was duly recorded as document number 125612 file number 25704.

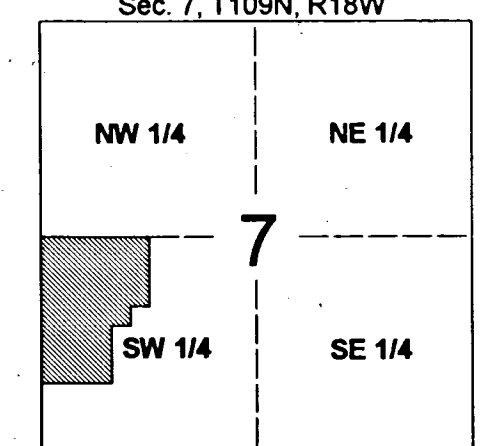
Lisa M. Hanni
Lisa M. Hanni, Goodhue County Recorder



- LEGEND:
● Found iron pipe (LS 155473)
■ Set Bronze Cap (LS 45776) over found iron pipe (LS 15473)
○ Set iron pipe with Bronze Cap LS 45776



Vicinity Map



Not to Scale

Southwest Corner Section 7, T109N, 18W Cast Iron Monument