NOTICE OF MEETING
The City of Lake Elmo
Planning Commission will conduct a meeting on
Monday August 12, 2019
at 7:00 p.m.

AGENDA

1. Pledge of Allegiance

2. Approve Agenda

3. Approve Minutes
   a. July 22, 2019

4. Public Hearings
   a. Carmelite Hermitage (8249 Demontreville Trail)
      Access Variance - Chapel
      Conditional Use Permit
   b. Kwik Trip Fuel Station/Convenience Store (Inwood Avenue N. and 5th Street North)
      Minor Subdivision
      Conditional Use Permit
   c. Subdivision Ordinance Update

5. New Business
   a. Union Park First Addition – Easement Vacations and Final Plat (5th Street N. and Julia Ave.)

6. Communications/Updates
   a. City Council Update
   b. Staff Updates
   c. Upcoming Meetings:
      1. August 26, 2019
      2. September 9, 2019

7. Adjourn

***Note: Every effort will be made to accommodate person or persons that need special considerations to attend this meeting due to a health condition or disability. Please contact the Lake Elmo City Clerk if you are in need of special accommodations.
Commissioner Weeks called to order the meeting of the Lake Elmo Planning Commission at 7:00 p.m.

COMMISSIONERS PRESENT: Hartley, Holtz, Risner, Steil and Weeks
COMMISSIONERS ABSENT: Cadenhead
STAFF PRESENT: Planning Director Roberts

Approve Agenda:
M/S/P: Hartley/Steil move to approve the agenda, Vote: 6-0, motion carried unanimously.

Approve Minutes:
M/S/P: Hartley/Risner, move to approve the July 8, 2019 minutes as presented, Vote: 6-0, motion carried unanimously.

No Public Hearings

Elect Vice-Chairperson
Risner nominated and appointed.

Subdivision Ordinance Update
Roberts explained that updates to the Comprehensive Plan and the Zoning Code has created a need for updates to subdivision ordinance. The Parks Commission reviewed park dedication requirements for the mixed use zoning districts the City adopted this year.

Roberts stated staff is proposing that Final Plats should only be reviewed by the Planning Commission if there is substantial change from the Preliminary Plat for subdivisions, not PUDs. The Planning Commission agreed to this change.

Discussion about how to reference and further define the trails plan regarding connectivity.

The Planning Commission agreed upon changing the language to future planned trails.
Hartley mentioned a few changes that he noticed in the staff recommendation. He pointed out Item 3 mentioned subdivision but should have mentioned legal description since it is located in the consolidation section. Hartly stated that in Preliminary Major Subdivisions Item 7 references MN Statute 505 that explains how to design a plat document to be recorded, it does not describe the process. It should be referenced in section A and then mention the City has additional requirements.

The Commission had discussion about the street naming policy and asked staff to verify the current direction from the City Council. They also discussed the reference to septic drainfield sizing, purpose, need for two drainfields, and that it is regulated by the County.

The Commission discussed cul-de-sac, dead end road, and temporary stub roads on whether they should be allowed in subdivisions. They agreed to schedule the public hearing for the next meeting August 12, 2019.

**City Council Updates – July 16, 2019**
1. 39th Street senior housing concept review. The Council seemed generally supportive. The applicant has drafted a plan with only one driveway onto 39th Street N and moved the north building about 20 feet south to protect the trees.

**Staff Updates**
1. Upcoming Meeting
   a. August 12, 2019 – Kwik Trip proposal for Inwood Ave and 5th St, Carmelites have applied for their variance and to discuss direct access including the easement language, the public hearing will only be for the variance and not for the CUP since that was taken last time and close, and possibly a preliminary plat for the first phase of Bentley Village which is now called Union Park.
   
   2. Jeff asked has there been a delay in the Hudson Road realignment? Does that impact the school district? Roberts answered that the realignment is on hold as the developer works out details. A condition of approval for the school district to occupy the garage site was to be connected to water and sewer by December. The developer has not begun work on the connection.

   3. Roberts explained that the Council discussed the potential use for the former 3M property that was given to the City.

Meeting adjourned at 8:37 pm

Respectfully submitted,

Tanya Nuss
Permit Technician
TO: Planning Commission  
FROM: Ken Roberts, Planning Director  
AGENDA ITEM: Conditional Use Permit – Carmelite Hermitage of the Blessed Virgin Mary  
REVIEWED BY: Ben Prchal, City Planner  

BACKGROUND:  
The City has received an application for a conditional use permit (CUP) to allow the construction of a place of worship (chapel) on the property of the Carmelite Hermitage at 8249 Demontreville Trail. This site is within a Public and Quasi-Public Open Space zoning district. Places of worship (such as churches and chapels) are conditional uses in the Public and Quasi-Public Open Space zoning district.  

On June 24, 2019, the Planning Commission held a public hearing about this request. The Commission reviewed the staff report and took testimony from several persons (for and against) the CUP for the chapel. The Planning Commission closed the public hearing for the CUP and took no action on the proposal to allow the applicant and the City to review the question and alternatives about access and direct access for the proposed chapel.  

ISSUE(S) BEFORE PLANNING COMMISSION:  
The Planning Commission is being asked to consider the request for the conditional use permit and the variance request about direct access and then make a recommendation to the City Council about these requests for the proposed chapel at the Carmelite Hermitage at 8249 Demontreville Trail.  

PROPOSAL DETAILS/ANALYSIS:  
Applicants: Carmelite Hermitage of the Blessed Virgin Mary, 8249 Demontreville Trail, Lake Elmo, MN 55042  
Property Owners: Discalced Carmelite Nuns of St. Paul, 8251 Demontreville Trail, Lake Elmo, MN 55042  
Location: ALL OF GOVERNMENT LOT 4, IN SECTION 9, TOWNSHIP 29 NORTH, RANGE 21 WEST, ACCORDING TO THE GOVERNMENT SURVEY CONTAINING 59.4 ACRES OF LAND. ALSO, THE SOUTH 30.6 ACRES
OF GOVERNMENT LOT 4 IN SECTION 4, AND THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 4, ALL IN TOWNSHIP 029 RANGE 021, ACCORDING THE GOVERNMENT SURVEY, BEING THE SOUTH 688 FEET THEREOF.  PID# 09.029.21.12.0002

Request: Conditional Use Permit for a place of worship and religious institution

Existing Land Use: Hermitage – A retreat for monks with a community building and garage, cloistered living area with courtyards

Existing Zoning: PF – Public and Quasi-Public Open Space

Surrounding Land Use / Zoning: North – Properties owned by Discalced Carmelite Nuns (8251 Demontreville Trail) and Jesuit Retreat House (8243 Demontreville Trail);
South – Single-family homes (Rural Residential);
East – Single-family homes (Rural Residential);
West – Lake Demontreville

Comprehensive Plan Guidance: 2030 – Public/Park
2040 – Institutional. As noted the in the 2040 Comprehensive Plan, this land use category identifies land that is used for schools, religious institutions, City Hall, municipal buildings, libraries and other institutional uses.

History: In December 1991, the City approved a variance (regarding code requirement for having frontage on a public road) and a master plan for the Carmelite Hermitage of the Blessed Virgin Mary. This master plan included a phasing plan showing four parts or phases and included a court, guest house /library, chapel, cloister, hermitage, community building and workshop. The variance noted that the applicant has a private recorded easement that allows access to the north from their site to Demontreville Trail North (across the adjoining properties).

In October 2007, the City approved an amendment to the approved master plan to allow an additional accessory building (1,512 square feet) on their site.

Deadline(s) for Action:
Application Complete – 5-24-2019
60 Day Deadline – 7-23-2019
Extension Letter Mailed – No
120 Day Deadline – N/A

Applicable Regulations: §154.210 – Off-Street Parking
Article XIV: Public and Semi-Public Districts

Request. A place of worship in Lake Elmo is a conditional use in the Public and Quasi-Public Open Space district. The City approved the Master Plan for the Carmelite Hermitage in 1991 as previously mentioned in this report, but a conditional use permit was never obtained, as the use was considered permitted at that
time. The City adopted the Public and Quasi-Public Open Space ordinance in September of 2000, and this ordinance required conditional use permits for places of worship and set forth certain standards for such a use as well as other district requirements that are in place today.

Because the property does not have a conditional use permit as is required by the Zoning Code, the existing use is considered legal non-conforming. The City’s ordinance states that the lawful use of a building or structure may continue, but that the continuation of the non-conforming use does not include expansion. Since the applicant is requesting expansion of the non-conforming use (by adding a chapel), the City must approve a conditional use permit for the entire property in order for the applicant to add the chapel and to bring the property in to compliance with current zoning requirements. (Note: Conditional use permits run with or are applicable to a specific property, not with a particular owner or person).

Use on Proposed Site. The proposed chapel would be to the west of the existing buildings and south of the existing driveway into the site. As shown on the plans, the chapel would be about 8,520 square feet in area with a height of 41 feet, four inches. The applicant noted in their project description that the chapel would be used for liturgical services and for personal prayer and would have seating for 42 guests in addition to the seating for the 12 members of their community.

They also state that since their community members live in a Hermitage and since their way of life is relatively secluded, they do not generate a significant amount of vehicle traffic. They are anticipating an average of 10-15 visitors a day to their site. They have two part-time employees to help maintain the grounds and buildings. The Hermitage is open to the public between 7:30 AM and 4:30 PM. They are not planning to hold regular church or public worship services in the chapel.

Setback and Impervious Surface Requirements. The following table outlines how the proposed use adheres to the setback and impervious surface requirements of the Public and Quasi-Public Open Space District.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Required</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Parcel Area</td>
<td>20 acres</td>
<td>90 acres</td>
</tr>
<tr>
<td>Lot Width – Minimum (at ROW)</td>
<td>100 feet</td>
<td>Approximately 1793 feet</td>
</tr>
<tr>
<td>Lot Depth – Minimum</td>
<td>150 feet</td>
<td>Approximately 2015 feet</td>
</tr>
<tr>
<td>Maximum Height</td>
<td>50 feet</td>
<td>Approximately 41 feet</td>
</tr>
<tr>
<td>Maximum Impervious Coverage</td>
<td>15%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Front Yard Setback – Building</td>
<td>100 feet</td>
<td>Approximately 1000 feet</td>
</tr>
<tr>
<td>Interior Side Yard Setback – Building</td>
<td>100 feet</td>
<td>Approximately 900 feet</td>
</tr>
<tr>
<td>Rear Yard Setback - Building</td>
<td>100 feet</td>
<td>Approximately 1000 feet</td>
</tr>
<tr>
<td>Parking Lot Setback</td>
<td>100 foot</td>
<td>Approximately 200 feet</td>
</tr>
</tbody>
</table>

Standards for Places of Worship within the Public and Quasi-Public Zoning District. The following outlines standards for places of worship as outlined in the Public and Quasi-Public zoning district.

a. Direct access is provided to a public street classified by the Comprehensive Plan as major collector or arterial:
   - **Staff Comment.** The City approved a variance for the access to this site in 1991. There is an existing driveway that connects the property to Demontreville Trail that is in an access easement that has been in place since 1904. The City has classified Demontreville Trail as a major collector street.
b. No use may exceed 235 gallons wastewater generation per day per net acre of land;
   • Staff Comment. It is unknown how much wastewater is generated, but it is assumed there is no more than 235 gallons being generated per net acre on a 90 acre site.

c. No on-site sewer system shall be designed to handle more than 5,000 gallons per day;
   • Staff Comment. The proposed drainfield is 15,000 square feet in area and according to the SSTS design report dated May 8, 2019 is designed to handle 350 gallons of waste a day.

d. Exterior athletic fields shall not include spectator seating, public address facilities or lighting;
   • Staff Comment. There are no exterior athletic fields.

e. No freestanding broadcast or telecast antennas are permitted. No broadcast dish or antenna shall extend more than 6 feet above or beyond the principal structure.
   • Staff Comment. There are no broadcast or telecast antennas, existing or proposed.

Parking Lot Requirements.

The project plans show a new 18-vehicle parking lot to the west of the entrance driveway and to the northwest of the proposed chapel.

- Maneuvering Area. There is sufficient space in and around the parking lot so vehicles do not need to back in to the public street.

- Surfacing and Drainage. The majority of the parking lot would have curbing and would be paved with a durable surface. Stormwater drainage would be directed to the northeast to a new infiltration basin on the site.

- Marking of Parking Spaces. The Code requires parking areas with five or more spaces to be marked with painted lines at least four inches wide. The plans for the parking lot show striping to meet this requirement.

- Curbing. Open off-street parking areas designed to have head-in parking along the property line shall provide a bumper curb or barrier of normal height. The proposed parking lot meets this requirement.

- Accessible Parking. The proposed number of parking spaces is 18 and of these, one would be handicap–accessible, which meets the Americans with Disabilities Act (ADA) requirements.

- Number of Parking Spaces. The City’s parking requirements requires one space per six seats. There are 54 seats within the chapel so the Code would only require 9 parking spaces for the chapel. The applicant has proposed 18 parking spaces thus meeting this requirement.

Parking Lot Landscaping and Screening Standards

- Perimeter Parking Lot Landscaping. The proposed parking lot is located in the center of the property – well away from the street right-of-way and from any property lines. The existing trees on the site provide adequate screening and landscaping around the proposed parking lot.

Landscape Plans. The applicant has submitted surveys and project plans showing the existing landscaping and wooded areas on the property. Since the site has extensive areas of trees and the since the proposed chapel would not be removing any existing trees, staff does not recommend that the City review or require additional landscaping on the property.
Septic Drainfield. The existing drainfield is to the south of the existing building and the proposed chapel will not affect the existing drainfield. The project plans show a new drainfield to the south of the proposed chapel. This new drainfield will require a permit from the Washington County Public Health and Environment Department before installation.

Architectural Standards within the Public and Quasi-Public Open Space. The exterior design of the chapel is subject to the Performance Standards set forth in Section 154.600(F) of the Zoning Code. The proposed chapel would be constructed with a mix of brick, limestone, marble and have a green shingled roof. These materials meet the requirements for exterior materials as listed in the zoning code and the overall design meets or exceeds all the design standards set in Section 156.600 of the Zoning Code.

Fire Chief Review. I have attached the Fire Chief’s review comments (dated June 5, 2019) for your consideration. Staff is recommending that the applicant meet all the requirements of the Fire Chief before the City issues a building permit for the chapel.

City Engineer Review. The City Engineer’s review memo (dated June 17, 2019) is attached to this report. His comments are primarily about stormwater management for the project. He noted:

- The project will require a Valley Branch Watershed District (VBWD).
- The storm water facilities for this development should remain privately owned and maintained.
- The storm water facility 100-year HWL must be fully contained within the subject property and easement must be provided to protect the 100-year HWL flood area.
- The applicant shall provide drainage and utility easement over storm water BMP including the 100-year HWL and pond maintenance access road and access bench.

Recommendation Findings. Staff recommends the following findings:

1. The proposed use will not be detrimental to or endanger the public health, safety, comfort, convenience or general welfare of the neighborhood or the city. The use of the property for religious facilities, including the proposed chapel, will not be detrimental or in any way endanger the public health, safety, comfort, convenience or welfare of the neighborhood or the City.

2. The use or development conforms to the City of Lake Elmo Comprehensive Plan. The property is guided for Public/Park in the 2030 Comprehensive Plan and Institutional in the proposed 2040 Comprehensive Plan. A place of worship is a conditional use in these land use designations.

3. The use or development is compatible with the existing neighborhood. The use is compatible with the existing neighborhood. The religious facilities in this area were established in the 1950’s and Hermitage has been on this site since the 1980’s.

4. The proposed use meets all specific development standards for such use listed in Article 7 of this Chapter. The existing and proposed uses meet all specific development standards for such use as listed in Section 154.600 Public and Quasi-Public Open Space.

5. If the proposed use is in a flood plain management or shoreland area, the proposed use meets all the specific standards for such use listed in Chapter 150, §150.250 through 150.257 (Shoreland Regulations) and Chapter 152 (Flood Plain Management). The existing structures and the proposed chapel would be located outside the 0.2% annual chance floodplain and meets shoreland setback requirements.
6. The proposed use will be designed, constructed, operated and maintained so as to be compatible in appearance with the existing or intended character of the general vicinity and will not change the essential character of that area. The proposed chapel is compatible in appearance with the existing and intended character of the general vicinity and will not change the essential character of the area.

7. The proposed use will not be hazardous or create a nuisance as defined under this Chapter to existing or future neighboring structures. The existing religious facilities and the proposed chapel are not nor will they be hazardous or create a nuisance.

8. The proposed use will be served adequately by essential public facilities and services, including streets, police and fire protection, drainage structures, refuse disposal, water and sewer systems and schools or will be served adequately by such facilities and services provided by the persons or agencies responsible for the establishment of the proposed use. The existing facilities and the proposed chapel are and will be adequately served by essential public facilities and services, including streets, police and fire protection, drainage structures, refuse disposal, water and sewer systems and schools.

9. The proposed use will not create excessive additional requirements at public cost for public facilities and services and will not be detrimental to the economic welfare of the community. The existing facilities and the proposed chapel do not and will not create excessive additional requirements at public cost nor will the existing or proposed facilities on the property be detrimental to the economic welfare of the community.

10. The proposed use will not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property or the general welfare because of excessive production of traffic, noise, smoke, fumes, glare or odors. The existing and proposed uses will not excessively produce traffic, noise, smoke, fumes, glare or odors.

11. Vehicular approaches to the property, where present, will not create traffic congestion or interfere with traffic on surrounding public thoroughfares. Vehicular approaches to the property do not and will not create and have not created traffic congestion or interfere with traffic. The number of additional vehicles expected on the property because of the new chapel is minimal and will be limited to certain times and days of the weeks.

12. The proposed use will not result in the destruction, loss or damage of a natural or scenic feature of major importance. N/A

**Recommended Conditions of Approval.** If the Planning Commission wishes to recommend approval, staff recommends the following conditions:

1) The applicant must obtain all other necessary City, State, and other governing body permits and approvals before the commencement of any construction activity on the site. These include, but not limited to, a Valley Branch Watershed District permit, approval of revised plans by the City Engineer, a building permit and an on-site wastewater (septic) permit.

2) All items and changes outlined by the City Engineer in the memorandum addressing the Carmelite Chapel Conditional Use Permit and Site Improvements dated June 17, 2019 shall be incorporated into the project plans.

3) All items outlined by the Fire Chief in his memo dated June 5, 2019, shall be incorporated into the project plans and before the City issues a building permit for the project.
4) The applicant must provide written documentation demonstrating adequate wastewater management facilities exist or are proposed to serve the proposed chapel. This should include either a Washington County inspection compliance report for the existing on-site wastewater system or a wastewater management plan and permit approved by Washington County to serve the proposed chapel.

5) The applicant or owner receive a building permit from the City for chapel within 12 months of City Council approval of the conditional use permit.

6) If the applicant or owner has not taken action toward starting the chapel or if substantial construction of the chapel has not taken place within 12 months of the City’s approval of conditional use permit, the CUP approval shall become void. The applicant or owner may request City Council approval of a time extension to start or implement the conditional use permit.

**FISCAL IMPACT:**

None

**OPTIONS:**

The Planning Commission may:

- Recommend approval of the Conditional Use Permit with recommended findings and conditions of approval.
- Recommend approval of the Conditional Use Permit with amended findings and conditions of approval.
- Recommend denial of the Conditional Use Permit, citing findings for denial.

**RECOMMENDATION:**

Staff is recommending approval of the Conditional Use Permit for the Carmelite Hermitage of the Blessed Virgin Mary including the proposed chapel for the property located 8249 Demontreville Road:

*Move to recommend approval of the conditional use permit for the Carmelite Hermitage including the proposed chapel for the property located at 8249 Demontreville Road with recommended findings and conditions of approval as drafted by Staff.*

**ATTACHMENTS:**

- Application Narrative dated May 24, 2019
- 4 City Maps
- Site Survey
- Certificate of Survey
- Engineering Project Plans (2 sheets)
- Architectural Plans (5 sheets)
- May 8, 2019 SSTS Design Report
- City Engineer Review Memo dated June 17, 2019
- Fire Chief Review memo dated June 5, 2019
- Neighbor comments (Falzone) dated June 16, 2019
Land Use Application – 5-24-2019

Property Location
All of Government Lot 4 in Section 9, Township 29 north, Range 21 west, City of Lake Elmo, Washington County, Minnesota, according to government survey containing 59.4 acres of land. Also the south 30.6 acres of Government Lot 4 in Section 4, and of the southwest quarter of the southeast quarter of said Section 4, all in Township 29 north, Range 21 west, according to government survey, being the south 688 feet thereof.

Detailed Reason for the Request
In December of 1991, the City of Lake Elmo approved the master plan of the Carmelite Hermitage of the Blessed Virgin Mary (aka Carmel of the Blessed Virgin Mary). The master plan included a phasing plan of four parts. Phase 1, consisting of a community building and garage was constructed in 1991/92. Phase 2, consisting of a central court yard with covered walkways (cloister) was constructed in 2001/2002. Phase 3 consists of a chapel and is the building we would now like to construct. Phase 4 will consist of a guest building and library. We hope to commence Phase 4 around 2022. We request City approval of a conditional use permit to construct our chapel because it is an essential building of every monastery and will provide needed worship space for the members of the Hermitage and their guests.

Variance Requests
No variances requested.

2a. Contact Information

Owner of Record
Discalced Carmelite Nuns of Saint Paul
8251 Demontreville Trail
Lake Elmo, MN 55042
651-777-3882

Authorized Agent
Reverend John Burns
Carmelite Hermitage of the Blessed Virgin Mary
8249 Demontreville Trail
Lake Elmo, MN 55042
651-779-7351
carmelbvm@gmail.com

Architect
Duncan Stroik
218 West Washington Avenue
Suite 1200
South Bend, IN 46601
574-232-1783
stroik@stroik.com

Civil Engineer
Paul Cherne, P.E.
Pioneer Engineering
2b. Property Information

**Addresses**
Discalced Carmelite Nuns of St. Paul  
8251 DeMontreville Trail  
Lake Elmo, MN 55042

Carmelite Hermitage of the Blessed Virgin Mary  
8249 DeMontreville Trail  
Lake Elmo, MN 55042

**Current Zoning**
Public Facility (PF)

**Parcel Size**
90.109 acres  
3,924,760 square feet

**PID**
0902921120002

**Current Legal Description**
All of Government Lot 4 in Section 9, Township 29 north, Range 21 west, City of Lake Elmo, Washington County, Minnesota, according to government survey containing 59.4 acres of land. Also the south 30.6 acres of Government Lot 4 in Section 4, and of the southwest quarter of the southeast quarter of said section 4, all in Township 29 north, Range 21 west, according to government survey, being the south 688 feet thereof.
2c. History of the Property

The property under consideration was homesteaded in the 1800s and remained farm land until 1954. At one time William Jennings was owner of all of Lot 4, Section 9, Township 29, Range 21, and all of Lots 3 and 4 and the West one-half of the Southeast Quarter of Section 4, Township 29, Range 21, West in Washington County, Minnesota.

On 25 August 1904, William Jennings and his wife conveyed to Christian Figge by warranty deed dated that day, Government Lot 4, Section 9, Township 29, Range 21, and also the South 30.6 acres of Lot 4 in Section 4 and of the Southwest Quarter of the Southeast Quarter of Section 4, Township 29, Range 21. As part of said conveyance, William Jennings also granted to Christian Figge a right of way (easement) to Figge’s property over Government Lots 3 and 4 in Section 4 as described in a deed recorded in Book 72 of the Book of Deeds, page 80, Washington County, Minnesota. This is the easement from Demontreville Trail across property now owned by the Jesuit Retreat House and to the property under consideration that has existed since 1904.

In 1954, the Discalced Carmelite Nuns of Saint Paul, a non-profit corporation under the laws of the State of Minnesota, were looking for property upon which to build a permanent monastery. They were advised of the property which they now own and entered into negotiations with the current owners.

On 2 February 1954, Phillip C. Mackey and his wife Bernadine R. Mackey conveyed their property, along with its easement, to the Discalced Carmelite Nuns of Saint Paul by warranty deed, dated that day, and filed for record in Washington County, Minnesota, on 4 February 1954. At the time of purchase, said property had been on the market for five years. The Carmelite Nuns built their monastery upon their newly acquired property in 1954/55. They moved into the new monastery in 1955 and have resided there since that time.

In 1983, Rev. John Burns, a Carmelite priest, became chaplain for the Carmelite Nuns in Lake Elmo. After several years, the Carmelite Nuns and Fr. Burns mutually agreed that it would be beneficial to the Carmelite nuns if the Carmelite Fathers and Brothers established their own monastery on the property. This would assure the nuns of future chaplains and allowed the Carmelite Fathers to have a presence in the Twin Cities. In 1987 Carmel of the Blessed Virgin Mary (aka Carmelite Hermitage, Carmelite Hermitage of the Blessed Virgin Mary) was incorporated in the State of Minnesota. Other priests and brothers joined the community over the years.

The Order of Carmelites was founded on Mount Carmel (present State of Israel) sometime before 1200 AD. From there it has spread to six continents. Currently there are about 900 monasteries of nuns with a total membership of 10,000, and 1,000 houses of Carmelite priests and brothers with about a total membership of 6,000. We are part of the Roman Catholic Church.

Our way of life consists of prayer, study, and labor to support ourselves. We also welcome visitors who wish to find a quiet place to refresh their minds and hearts, to reflect and pray, either by themselves or with us, and who may desire to seek guidance for their lives by talking with one of the members of our community. The chapel is the heart of our monastery buildings. Our day is punctuated by liturgical services and times of personal prayer. We live a simple way of life and support ourselves through arts and crafts, organic gardening, maple syrup production, woodworking and self-maintenance of our property and buildings.

2d, i.

The 90 acre tract upon which the new chapel will be built is approximately 60% woodland and 40% prairie and is situated on the east bank of Lake Demontreville. Wildlife is abundant in all areas of the property. We have a personal commitment to live in harmony with our natural surroundings and to employ horticultural practices which do not pollute but rather benefit the environment. We have spent many hours removing buckthorn and diseased trees from our property and planting species of trees and shrubs which are beneficial to wildlife.
The new chapel will be situated just west of the existing buildings of the Hermitage. The land there is almost flat, and construction of the chapel will not require any significant changes to the topography. The hermitage is situated in an open field surrounded by woodlands. The area in the immediate vicinity of the hermitage is planted with lawn, trees, shrubs, and flower beds. Access to the hermitage is provided by a private road from Demontreville Trail. The distance between the hermitage and Demontreville Trail is approximately ½ mile.

Since we live at the Hermitage, and since our way of life is relatively secluded, we leave the Hermitage infrequently, and therefore we do not generate a significant amount of traffic. Visitors to our Hermitage now average 1-2 per day. Additionally, we have regular mail delivery and occasional deliveries by UPS or FedEx. Our new chapel will be open to the public during the day and may generate an increased number of visitors. Because of the remoteness of our property and the fact that we do not advertise, we do not anticipate an increase of visitors beyond an average of 10-15 per day. We do not operate any programs for the public, although we may have a special celebration a few times per year to which guests are invited. We do not anticipate any adverse effects upon the natural areas of our property during or after the construction of the chapel.

2d, ii.

We currently have seven members in our community, and we may eventually grow to a maximum of twelve members. We have two part-time employees who help to maintain our grounds and buildings. The Hermitage opens to the public at 7:30 AM and closes at 4:30 PM. We have a gate which prevents access to the hermitage after-hours.

Our community building provides living and work spaces for the members of the community, including a kitchen, dining room, laundry, shower room, library, infirmary, and mechanical room. To the west of the community building and attached to it lies the cloister. This consists of a quadrangle surrounded by covered walkways which allow passage from one building to another under a roof. The open interior of the cloister is landscaped with flowerbeds and a pool. Off the north and south sides of the cloister are found the bedrooms of the members of the community. The new chapel will be situated just west of the cloister. The chapel will be used for liturgical services and for personal prayer. It has a planned seating capacity of 42 guests, in addition to the members of our community (12 maximum).

2e, i.

Since the parcel of land upon which the chapel will be built is very large and since the chapel will be located in the middle of the parcel, we do not foresee that the chapel will cause any inconvenience or disturbance to the neighborhood or to the City. Our community greatly values silence as an appropriate atmosphere for prayer and personal reflection. None of the activities carried on in the new chapel will create noise. The chapel will be built of durable and noble materials which will enhance the beauty of the neighborhood. The safety of our grounds and buildings is important to us. No toxins or harmful waste products are produced as a result of activities at our monastery, and we are committed to recycling and energy conservation.

2e, ii.

Our parcel of land has always been and continues to be zoned as Public Facility. No change in land use is envisioned in our plans. Since our parcel of land is heavily wooded and borders Lake Demontreville on its west side, we in no way interfere with the development plans of the City of Lake Elmo. The comprehensive plan is for public/park. The rural character of the area will not be changed by the addition of the new chapel building.
2e, iii.

Our property is bordered on the south and east by low density private housing, on the north by the Jesuit Retreat House, and on the west by Lake Demontreville. Woodland separates our buildings from the single-family neighborhoods which border our property to the east and to the south. Woodlands also separate us from the Jesuit Retreat House. There is no direct view of our buildings from any neighboring property. There is no incompatibility between our hermitage and the existing neighborhood. We have excellent relations with our neighbors. Many have told us that they are very grateful to live next to our hermitage both because of the prayerful and religious nature of our life and also because of our extensive woodlands.

The Jesuit Retreat House shares the same prayerful and religious activities as we do. Far from being incompatible, our institutions belong to the same church and share a common way of life. The one priest who is resident at the Jesuit Retreat House opposes our new chapel because of a fear that it will increase traffic on the roadway which passes through Jesuit property to reach our hermitage. We have told him that we will work with him to minimize any disturbance to the retreats which take place from Thursday evening through Sunday evening most weeks. Since we do not advertise in any way nor offer programs for the public, we do not anticipate large crowds coming to our hermitage. Visitors will be intermittent and will usually arrive in a single car. By contrast, there may be fifty or more cars which come to and leave from the Jesuit Retreat House at the beginning or end of the weekly retreat. Trucks make food deliveries during the week and a laundry truck comes each week to replace sheets and towels. The Retreat House employs far more people than our Hermitage, and this also adds to the traffic in the area.

2e, iv.

Our project conforms to Article 7 of the Zoning Code, including general requirements for parking as regards dimensions and number of parking spaces.

2e, v.

The project is not in a flood plain. The project is in a shoreland district. The project meets the setback and lot area requirements of the ordinance. Demontreville Lake is a recreational development lake. The project is a permitted use in the shoreland district

<table>
<thead>
<tr>
<th>Setback County Road</th>
<th>Ordinance</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setback Public Street</td>
<td>20</td>
<td>1025’</td>
</tr>
<tr>
<td>Setback OHW</td>
<td>200</td>
<td>980’</td>
</tr>
<tr>
<td>Setback top of bluff</td>
<td>30</td>
<td>220’</td>
</tr>
<tr>
<td>Setback OHW- Septic</td>
<td>75</td>
<td>810’</td>
</tr>
<tr>
<td>Maximum impervious coverage</td>
<td>15%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>
The new chapel will be constructed of the same materials as the existing buildings of the hermitage (brick and stone). The monastery of the Carmelite nuns is also a brick structure. The main building complex of the Jesuit Retreat House is a limestone structure. No change in the character of the area will result from the construction of our chapel. The nearest land uses are also religious.

The chapel will be isolated from neighbors and will not create a hazard or nuisance to existing or future neighboring structures.

The project will be served adequately by existing public services and will not create any additional demand for public services. The site utilizes an onsite well and onsite septic system. In 1991 officials from the Lake Elmo Fire Department visited our Hermitage to determine whether our site presented any difficulties of access for the fire department. Fire Chief Dick Sachs stated in writing that our site did not pose any problems to his department. (See attached letter.)

The project will not create a need for additional public services or facilities. No detriment to the economic welfare of the community will result from the construction of our chapel.

The chapel will be used for religious purposes by the residents of the Hermitage. Guests and visitors will have access to the chapel at suitable hours of the day. The chapel has a planned seating of 42 persons, but we do not anticipate having nearly this many people at our services on a daily basis. At the present time, we have no more than 0 to 10 visitors a day. Most days the number is 0 to 2. The new chapel will not produce noise, smoke, fumes, glare, or odors, and the increase of traffic on account of the chapel will be minimal.

The site is accessed via a collector street (Demontreville Trail) and a private drive. The additional traffic generated by the chapel is estimated to be 8 average daily trips on most days of the year and 30 average daily trips on a few occasions in a calendar year. Most trips will occur during non-peak hours.
The new chapel will be built in an open field and will result in very minimal tree removal (8-10 evergreens which we ourselves had planted). No wetlands will be impacted. The chapel will be located 980’ feet from Lake Demontreville. The final phase of our monastery building program will consist of a building for visitors and guests as well as some rooms for community workshops and library.

**Landscaping Plan**

Because the area around the chapel will be further developed with a guest building, workshops and a small library, we do not plan extensive landscaping around the chapel. Lawn grasses, some foundations shrubs, and a few flower beds will be planted and mulched with wood chips. Mr. Ken Roberts thought that, under these circumstances, it would not be necessary to submit a separate landscaping plan.
Limestone Cornices

GAF Slateline Shingle Roof
Emerald Green

Painted Metal Clad Wood Windows,
with Sills and Brick Arches

Belden Brick
St. Simon Blend

Copper Gutters,
Flashing and Downspouts

Rustic Buff
Limestone Base

Stained Wood Doors,
Limestone Surround
and Limestone Tympanum
SSTS Design Summary Report

On April 19th, 2019, a site evaluation was conducted at 8249 Demontreville Trail N, MN 55082 in Washington County. The PID number is 09.029.21.12.0002

Scope of Report
The purpose of the design report is to create a plan for a new sub-surface treatment system to treat wastewater from the new chapel to be built at the address above. This design details the plan for the required tanks and soil treatment dispersal areas per Washington County Development Code, Chapter Four Subsurface Sewage Treatment System Regulations, Ordinance 206. The system is designed for an Assembly Hall w/ no kitchen plus two (2) full-time employees which will be at the Chapel during day. The system components will be a Type I designed Mound and a total of three Septic & Pump Tanks (1,000-gal; 1,000-gal & 1,000-gal). See Site Plan.

Preliminary & Field Evaluation Work
The Washington County Maps GIS data (https://maps.co.washington.mn.us/WCGIS/) was used to determine all property lines, utility Right of Ways, roads and other necessary features required by Ordinance 206, Section 9, Subparts 9.2 thru 9.3 prior to and during site evaluation. See Site Plan for details.

The information available at MN Well Index (https://mnwellindex.web.health.state.mn.us/) does not indicate the location of any wells within 100 feet of the proposed area. Section MN Well Index – Research.

The Web Soil Survey data (https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx), which is provided by the USDA, was gathered to determine the soil characteristics of the area prior to a field evaluation. See Section Web Soil Survey – Research for more details.

The field evaluation included staking a 50’ x 26’ soil absorption area, measurements from all setbacks and property line, elevations for absorption area, tanks and soil observations and a minimum of four (4) soil observations within or on the edge of the proposed absorption area for the Soil Treatment Area (STA) and an additional four (4) soil observations were conducted in second Soil Treatment Area identified for future use located to the South of the new Mound.

Soil Observations
The soil borings and pits were conducted, classified and recorded to meet the Washington County Ordinance 206, Section 9, 9.5 thru 9.7. Redox was observed in all Borings & Soil Pits. The limiting layer was observed at 14” at SB1. See attached Soil Observation Logs.
Wastewater Sources & Flows
The new Chapel is expected to have a seat capacity for 80 guests with 2 employees on staff full-time. The estimated Peak Flow rate is 350 gallons per day (gpd) was calculated using values provided by Chapter 7081.0130, Table I: Estimate design sewage flow from other establishments. A safety factor of 20% was applied to calculate the final Design Peak Flow of 400 gpd.

The Organic Load was calculated using the Estimate of Waste Strengths from Other Establishments chart provided with the University of Minnesota – SSTS Design Forms Worksheet (see U of MN Design Forms). The total Organic Loading Rate for 400 gpd for 80 guests (.01 #s / seat) & 2 full-time employees (.05 #s /employee) is .90 pounds of BOD per day which will need to be treated each day. This equals 269 mg/L of BOD per day. If the system was used to max capacity each day, this level of effluent would be considered At-Risk Effluent and might need to be sampled regularly to ensure treatment level C prior to dispersal to the Mound. However, the Septic Tanks, the Dose Tank & Soil Treatment Area have been designed to handle the worst-case scenario flow-rate & waste-strength from this building.

The septic tanks & dose tank are sized to provide a retention time of 5 days (typical is 3-days retention) & a storage capacity of 2 x Peak Flow in the event of unexpected pump failure.

The total size of the Soil Absorption Area was increased 25% to account for a potential of At-Risk Organic Loading rates of BOD & TSS. The Peak Design Flow rate of 400 gpd for a typical Type I system receiving Residential Strength Waste (170 mg/L BOD) would require 1,040 sqft of absorption in Silt Loam soil. The increased size was calculated using the University of Minnesota Chart (Table 5.1; Manual for Septic System Professionals in Minnesota) for determining Organic Loading Rate. The equivalent loading rate for Silt Loam is 0.0007 #/sqft. The required absorption for .90 #s/day BOD @ 400 gpd with an Organic Loading rate of .0007 #/sqft is 1,280 sqft.

Type I Mound
The total area for the STA will impact 3,837 sqft (45.3’ x 84.7’) located to the South of the new Chapel. The newly constructed mound will have an Absorption Area of 1,300 sqft (26’ x 50’). The observations found redoximorphic soil conditions at 14 inches from the surface and will require 22” of washed-mound sand to achieve the necessary vertical separation from the most limiting layer.

The required materials for the sewer line, distribution network, pumps, piping, sand, rock, fill and cover are detailed in the design worksheets included with this design. Please note, all calculations for materials and pumps are estimates. Actual values may change slightly and will need to field verified for correctness. See U of MN Worksheets for more details.

The pump used for dosing the pressure bed must deliver a minimum of 22 gallons per minute and overcome a total dynamic head pressure of 16 feet. All supply pipes and laterals shall be built to specifications and drain-out completely after each dose to prevent freezing.

A second 1,300 sqft area was identified and staked-off for future use. No structures or vehicle traffic can occur over this area. Precautions should be taken in the years to come to avoid damaging, compacting or disturbing this area.

Special Conditions
1. Due to the large flat area, drainage should be maintained throughout the area to avoid ponding around the tanks or at the edges of the Mound.
2. No final sewer elevation was provided by the builder. Elevation and locations are subject to change. No tank can be buried deeper than 4’ below grade.
3. Drainback for Supply Line & Freezing - The slope from the Pressure Bed Supply Line must drain back to the dose tank. Additional depth or insulation may be necessary to keep line from freezing if the supply line is buried too shallow.

4. Setbacks to Easements & Property Lines – There was no survey performed prior to site evaluation, so all measures are estimates. The owner and Installer will need to make sure all construction is within required setbacks.

Other Considerations

6.1 Building Permit requirements.
No construction shall be allowed by any local unit of government until the permit required for the subsurface sewage treatment system has been issued.

9.11 Site Protection

Prior to and during construction or lot improvements, the proposed initial and replacement soil treatment and dispersal areas shall be protected from disturbance, compaction, or other damage by use of stakes and silt fence or snow fence.

As-Built Drawing
The Licensed Installer must provide an As-built of the final location of all components. The attached Site Plan is only for reference and should not be considered as final survey

End of Report

Disclaimer
As property owner, I agree to use the system within the parameters described above and in the design worksheets. I also agree hold Steinbrecher Companies, Inc and the named designer harmless for any future issues regarding this system.

Owner Signature        Date

Note – This design is not recommended to be permitted until the following areas, included with this design, are signed by property owner.

• Design Summary Report, Preliminary Evaluation Worksheet (section 2) and Homeowner Maintenance Log
Materials & Specifications
8249 DeMontreville Trail N, Lake Elmo

Tanks – Minnesota Precast
- 1,000-gallon Septic Tank
- 1,000-gallon Septic Tank
- 1,000-gallon Dose Tank

Effluent Filter & Alarm
- Polylok 525 w/ Reed Switch for Alarm
- Dual-Alarm Box located in or near house (or Installer equivalent)
- Electrical wire & Junction Box (~100’ from building)
- Dedicated 120V circuit for alarm (10 Amp min.)

Sewer Line
- 4” Sch 40 dia. pipe @ ~ 20’
- Fittings, as necessary

Pump – Gould PE41 (or similar model)
- 23 GPM
- 16 TDH
- Mechanical (120V rated) Float for Pump On/Off
- Electrical wire & Junction Box, as necessary (~100’)
- Dedicated 20 amp, 120V circuit from building to pump

Supply Line to Pressure Laterals
- 2” sch 40 pipe @ ~ 100’
- Fittings, as necessary

Pressure Laterals
- 3 – 50’ long w/ 1 ½” sch 40 pipe
- 3’ spacing (orifices)
- 3/16” diameter orifices (drilled holes)
- Clean-outs at end of each lateral
- 1 ½” Bends, couplings, sweeps and fittings, as necessary

Inspection pipes
- 4” Sch 40 pipe built to spec in Mound design

Mound Sand
- Min. Height – 22”
- Absorption Area – 26’ x 50’

Rock Bed
- Dispersal Area – 10’ x 50’
- Rock depth – 6” + min 3.5” to cover pipe

Back Fill & Black Dirt for cover
- See calculations on Mound Materials Worksheet

*Note: All materials quantities for pipe, sand, rock, etc. are only estimates.
**Tonnage calculations for materials may differ from actual volume used onsite.
Total: 2838.1 Feet

Disclaimer: Map and parcel data are believed to be accurate, but accuracy is not guaranteed. This is not a legal document and should not be substituted for a title search, appraisal, survey, or for zoning verification.
Preliminary Evaluation Worksheet

1. Contact Information

<table>
<thead>
<tr>
<th>Property Owner/Client:</th>
<th>Carmelite Monastery</th>
<th>Date Completed:</th>
<th>4/20/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Address:</td>
<td>8249 Demontreville Trail N, Lake Elmo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email:</td>
<td></td>
<td>Phone:</td>
<td></td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>8249 Demontreville Trail N, Lake Elmo, MN 55402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parcel ID:</td>
<td>09.029.21.12.0002</td>
<td>TWP:</td>
<td>SEC:</td>
</tr>
</tbody>
</table>

2. Flow and General System Information

A. Client-Provided Information

- Project Type: ☑ New Construction  ☐ Replacement  ☐ Expansion  ☐ Repair
- Project Use:  ☐ Residential  ☑ Other Establishment: Assembly hall
- Residential use:  # Bedrooms:  # Adults:  # Children:  # Teenagers:
- In-home business (Y/N): If yes, describe:

- Water-using devices:
  - Sewage pump in basement
  - Large Bathtub >40 gallons
  - Clothes Washing Machine
  - High Eff. Furnace*
- Additional current or future uses:
- Anticipated non-domestic waste: Only domestic waste anticipated.

The above is complete & accurate:  

Client signature & date

B. Designer-determined flow Information

- Design Flow: 400 GPD
- Anticipated Waste Type: Other Est. - At-Risk
- BOD: 269 mg/L  
- TSS: 70 mg/L  
- Oil & Grease: 20 mg/L

---

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Mn. ID#</th>
<th>Well Depth (ft.)</th>
<th>Casing Depth (ft.)</th>
<th>Confining Layer</th>
<th>STA Setback</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Monestary Well</td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>MN Well Index</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Well Information: Well is located at NE corner of existing building.
### Preliminary Evaluation Worksheet

**Site within 200' of noncommunity transient well (Y/N)**  
[ ] Yes, source: 

**Site within a drinking water supply management area (Y/N)**  
[ ] Yes, source: 

**Site in a Well Head Protection inner wellhead management zone (Y/N)**  
[ ] Yes, source: 

**Buried water supply pipes within 50 ft of proposed system (Y/N)**  
[ ] Yes

**B. Site located in a shoreland district/area?**  
[ ] Yes, name: 

**Elevation of ordinary high water level:**  
[ ] ft  
**Source:**

**Classification:**  
[ ] Tank Setback:  
**STA Setbk:**  

**C. Site located in a floodplain?**  
[ ] Yes, Type(s): 

**Floodplain designation/elevation (10 Year):**  
[ ] ft  
**Source:**

**Floodplain designation/elevation (100 Year):**  
[ ] ft  
**Source:**

**D. Property Line Id / Source:**  
[ ] Owner  
[ ] Survey  
[ ] County GIS  
[ ] Plat Map  
[ ] Other:

**E. ID distance of relevant setbacks on map:**  
[ ] Water  
[ ] Easements  
[ ] Well(s)  
[ ] Building(s)  
[ ] Property Lines  
[ ] OHWL  
[ ] Other:

4. **Preliminary Soil Profile Information From Web Soil Survey (attach map & description)**

<table>
<thead>
<tr>
<th>Map Units</th>
<th>49—Antigo silt loam</th>
<th>Slope Range: 0-2 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>List landforms</td>
<td>Flats, terraces</td>
<td></td>
</tr>
<tr>
<td>Landform position(s)</td>
<td>Plain</td>
<td></td>
</tr>
<tr>
<td>Parent materials</td>
<td>Loess and/or silty glaciofluvial deposits</td>
<td></td>
</tr>
<tr>
<td>Depth to Bedrock/Restrictive Feature:</td>
<td>80 in</td>
<td>Depth to Watertable: 80 in</td>
</tr>
<tr>
<td>Septic Tank Absorption Field- At-grade:</td>
<td>Very Limited</td>
<td></td>
</tr>
<tr>
<td>Septic Tank Absorption Field- Mound:</td>
<td>Not Limited</td>
<td></td>
</tr>
<tr>
<td>Septic Tank Absorption Field- Trench:</td>
<td>Very Limited</td>
<td></td>
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5. **Local Government Unit Information**

<table>
<thead>
<tr>
<th>Name of LGU:</th>
<th>Washington County</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGU Contact:</td>
<td></td>
</tr>
<tr>
<td>LGU-specific setbacks:</td>
<td>N/A for this site</td>
</tr>
<tr>
<td>LGU-specific design requirements:</td>
<td>Contour Late rate for Mound is &lt;= 10</td>
</tr>
<tr>
<td>LGU-specific installation requirements:</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
</tr>
</tbody>
</table>
1. Project Information

Property Owner/Client: Carmelite Monastery

Site Address: 8249 Demontreville Trail N, Lake Elmo

Date Completed: 4/19/2019

2. Utility and Structure Information

Utility Locations Identified

Gopher State One Call #

Any Private Utilities:

Locate and Verify (see Site Evaluation map )

Existing Buildings

Improvements

Easements

Setbacks

3. Site Information

Vegetation type(s): Grass

Landscape position: Plain

Percent slope: 2%

Slope shape: Convex, Linear

Slope direction: North

Describe the flooding or run-on potential of site:

Describe the need for Type III or Type IV system:

Note:

Elevations and Benchmarks identified on map? (Y/N): Yes

If yes, describe: BM = Bottom of Apron

Proposed soil treatment area protected? (Y/N): Yes

If yes, describe: See Site Plan

4. General Soils Information

Filled, Compacted, Disturbed areas (Y/N): No

If yes, describe:

Soil observations were conducted in the proposed system location (Y/N): Yes

A soil observation in the most limiting area of the proposed system (Y/N): Yes

Number of soil observations: 8

Soil observation logs attached (Y/N): Yes

Percolation tests performed & attached (Y/N): No

5. Phase I. Reporting Information

Depth Elevation

Periodically saturated soil: 14 in 100.2 ft Soil Texture: silt loam

Standing water: in ft Percolation Rate: min/inch

Bedrock: in ft Soil Hyd Loading Rate: gpd/ft²

Benchmark: 100 ft

Benchmark Location: Bottom of Apron @ SW Corner of Existing building. - See Map

Differences between soil survey and field evaluation: There was no observed loam below silt loam. Depth of layers

Site evaluation issues / comments: Access for construction from NW corner of site.

Anticipated construction issues:
# Soil Observation Log

**Client:** Carmelite Monastery  
**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

## Soil Parent Material(s)
- Check all that apply:
  - Outwash
  - Lacustrine
  - Loess
  - Till
  - Alluvium
  - Bedrock
  - Organic Matter

## Landscape Position
- Check one:
  - Summit
  - Shoulder
  - Back/Side Slope
  - Foot Slope
  - Toe Slope

## Vegetation
- Grass

## Soil Survey Map Units
- 49

## Slope %
- 2.0

## Elevation
- 101.4

## Weather Conditions/Time of Day
- Sunny / 1:15 pm

## Date
- 04/19/19

## Observation #/Location
- SB1 - Mound - See Map

## Observation Type
- Auger

### Depth (in) | Texture | Rock Frag. % | Matrix Color(s) | Mottle Color(s) | Redox Kind(s) | Indicator(s) | Shape | Grade | Consistence
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
0-9 | Silt Loam | <35% | 10YR 3/4 | | | Blocky | Weak | Friable
9-14 | Silt Loam | <35% | 10YR 6/6 | | | Blocky | Strong | Firm
14-20 | Clay Loam | <35% | 10YR 6/8 10YR 6/2 | 10YR 5/8 | Depletions  Concentrations | S1  S1 | | |

## Comments
LL = 14" - 100.2'

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

**Jesse Kloeppner**
(Designer/Inspector)  
**L4043**  
(License #)  
**4/19/2019**  
(Signature)  
(Date)
### Additional Soil Observation Logs

<table>
<thead>
<tr>
<th>Client:</th>
<th>Carmelite Monastery</th>
<th>Location / Address:</th>
<th>8249 Demontreville Trail N, Lake Elmo</th>
</tr>
</thead>
</table>

**Soil parent material(s):**
- Outwash
- Lacustrine
- Loess
- Till
- Alluvium
- Bedrock
- Organic Matter

**Landscape Position:**
- Summit
- Shoulder
- Back/Side Slope
- Foot Slope
- Toe Slope

**Vegetation:**
- Grass

**Slope shape:**
- Convex, Linear

**Vegetation:**
- Grass

**Slope %:**
- 2.0

**Elevation:**
- 101.4

**Date:**
- 04/19/19

**Weather Conditions/Time of Day:**
- Sunny / 2:45 pm

**Observation #/Location:**
- SB2 - Mound - See Map

**Observation Type:**
- Auger

<table>
<thead>
<tr>
<th>Depth (in)</th>
<th>Texture</th>
<th>Rock Frag. %</th>
<th>Matrix Color(s)</th>
<th>Mottle Color(s)</th>
<th>Redox Kind(s)</th>
<th>Indicator(s)</th>
<th>Shape</th>
<th>Grade</th>
<th>Consistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/3</td>
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<td>Blocky</td>
<td>Weak</td>
<td>Friable</td>
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<tr>
<td>8-15</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 5/6</td>
<td>10YR 4/6</td>
<td></td>
<td>Blocky</td>
<td>Strong</td>
<td>Firm</td>
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<tr>
<td>15-20</td>
<td>Sandy Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 4/6</td>
<td>10YR 6/4</td>
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<td>S1</td>
<td>Blocky</td>
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<td>10YR 5/8</td>
<td>Concentrations</td>
<td>S1</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Additional Soil Observation Logs**

---

**Comments:**
- LL = 15" - 100.15'
### Soil Observation Log

**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

**Client:** Carmelite Monastery

#### Soil parent material(s): (Check all that apply)
- [ ] Outwash
- [ ] Lacustrine
- [ ] Loess
- [ ] Till
- [ ] Alluvium
- [ ] Bedrock
- [ ] Organic Matter

#### Landscape Position: (check one)
- [ ] Summit
- [ ] Shoulder
- [ ] Back/Side Slope
- [ ] Foot Slope
- [ ] Toe Slope

**Slope shape:** Convex, Linear

**Vegetation:** Grass

**Soil survey map units:** 49

**Slope %:** 2.0

**Elevation (ft):** 101.5

**Weather Conditions/Time of Day:** Sunny / 1:00 pm

**Date:** 04/19/19

#### Observation #/Location:

**Observation #:** SP1 - Mound - See Map

**Observation Type:** Soil Pit

### Soil Observation Log

<table>
<thead>
<tr>
<th>Depth (in)</th>
<th>Texture</th>
<th>Rock Frag. %</th>
<th>Matrix Color(s)</th>
<th>Mottle Color(s)</th>
<th>Redox Kind(s)</th>
<th>Indicator(s)</th>
<th>Shape</th>
<th>Grade</th>
<th>Consistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Friable</td>
</tr>
<tr>
<td>8-15</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Firm</td>
</tr>
<tr>
<td>15-20</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 5/6</td>
<td>10YR 6/4</td>
<td>Depletions</td>
<td>S1</td>
<td></td>
<td></td>
<td>Extremely Firm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.5YR 5/8</td>
<td>Concentrations</td>
<td>S1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 6/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extremely Firm</td>
</tr>
<tr>
<td>25-27</td>
<td>Sandy Clay</td>
<td>~45%</td>
<td>10YR 6/8</td>
<td>5YR 5/8</td>
<td>Concentrations</td>
<td>S1</td>
<td></td>
<td></td>
<td>Firm</td>
</tr>
</tbody>
</table>

### Comments

LL = 15" - 99.75'
# Additional Soil Observation Logs

**Client:** Carmelite Monastery  
**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

<table>
<thead>
<tr>
<th>Soil parent material(s): (Check all that apply)</th>
<th>Outwash</th>
<th>Lacustrine</th>
<th>Loess</th>
<th>Till</th>
<th>Alluvium</th>
<th>Bedrock</th>
<th>Organic Matter</th>
</tr>
</thead>
</table>

**Landscape Position: (check one)**  
- Summit
- Shoulder
- Back/Side Slope
- Foot Slope
- Toe Slope

**Slope shape:** Convex, Linear

**Vegetation:** Grass

**Soil survey map units:** 49

**Slope %:** 1.0  
**Elevation (ft):** 101.2

**Date:** 04/19/19

**Weather Conditions/Time of Day:** Sunny / 2:55 pm

<table>
<thead>
<tr>
<th>Observation #/Location:</th>
<th>SP2 - Mound - See Map</th>
<th>Observation Type:</th>
<th>Soil Pit</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth (in)</th>
<th>Texture</th>
<th>Rock Frag. %</th>
<th>Matrix Color(s)</th>
<th>Mottle Color(s)</th>
<th>Redox Kind(s)</th>
<th>Indicator(s)</th>
<th>I-------- Structure--------I</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/3</td>
<td></td>
<td></td>
<td>Granular</td>
<td>Weak</td>
</tr>
<tr>
<td>10-15</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/6</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Strong</td>
</tr>
<tr>
<td>15-21</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 6/8</td>
<td>10YR 7/2</td>
<td>Depletions</td>
<td>S1</td>
<td>Blocky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10YR 5/8</td>
<td>Concentrations</td>
<td>S1</td>
<td></td>
</tr>
<tr>
<td>21-25</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 6/8</td>
<td>10YR 7/2</td>
<td>Depletions</td>
<td>S1</td>
<td>Blocky</td>
</tr>
</tbody>
</table>

**Comments:** LL = 15" - 100.0’
# Soil Observation Log

**Client:** Carmelite Monastery  
**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

### Soil parent material(s): (Check all that apply)
- Outwash
- Lacustrine
- Loess
- Till
- Alluvium
- Bedrock
- Organic Matter

### Landscape Position: (check one)
- Summit
- Shoulder
- Back/Side Slope
- Foot Slope
- Toe Slope

### Slope shape
- Convex, Linear

### Vegetation:
- Grass

### Soil survey map units:
- 49

### Slope %:
- 2.0

### Elevation (ft):
- 101.2

### Weather Conditions/Time of Day:
- Sunny / 2:30 pm
- Date: 04/19/19

### Observation #/Location:
- SP3 - Secondary - See Map

### Observation Type:
- Soil Pit

<table>
<thead>
<tr>
<th>Depth (in)</th>
<th>Texture</th>
<th>Rock Frag. %</th>
<th>Matrix Color(s)</th>
<th>Mottle Color(s)</th>
<th>Redox Kind(s)</th>
<th>Indicator(s)</th>
<th><strong>Structure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/4</td>
<td></td>
<td></td>
<td>Blocky Weak Friable</td>
<td></td>
</tr>
<tr>
<td>8-15</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/6</td>
<td></td>
<td></td>
<td>Blocky Strong Firm</td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 5/6, 10YR 6/4</td>
<td>Depletions, S1</td>
<td>7.5YR 5/8</td>
<td>Concentrations, S1</td>
<td>Blocky Strong Extremely Firm</td>
</tr>
<tr>
<td>20-25</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 6/8</td>
<td></td>
<td></td>
<td>Blocky Strong Firm</td>
<td></td>
</tr>
</tbody>
</table>

### Comments:
LL = 16" - 99.9"
### Additional Soil Observation Logs

**Client:** Carmelite Monastery  
**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

**Soil parent material(s):** (Check all that apply)
- [ ] Outwash
- [ ] Lacustrine
- [X] Loess
- [ ] Till
- [ ] Alluvium
- [ ] Bedrock
- [ ] Organic Matter

**Landscape Position:** (Check one)
- [ ] Summit
- [ ] Shoulder
- [ ] Back/Side Slope
- [ ] Foot Slope
- [ ] Toe Slope

**Slope shape:** Convex, Linear

**Vegetation:** Grass

**Slope %:** 2.0  
**Elevation (ft):** 101.3

**Weather Conditions/Time of Day:** Sunny / 1:45 pm  
**Date:** 04/19/19

**Observation #/Location:** SB3 - Secondary - See Map  
**Observation Type:** Auger

<table>
<thead>
<tr>
<th>Depth (in)</th>
<th>Texture</th>
<th>Rock Frag. %</th>
<th>Matrix Color(s)</th>
<th>Mottle Color(s)</th>
<th>Redox Kind(s)</th>
<th>Indicator(s)</th>
<th>Shape</th>
<th>Grade</th>
<th>Consistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/4</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Weak</td>
<td>Firm</td>
<td>Friable</td>
</tr>
<tr>
<td>6-12</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 4/4</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Moderate</td>
<td>Firm</td>
<td></td>
</tr>
<tr>
<td>12-15</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 4/6</td>
<td>10YR 6/8</td>
<td>Concentrations</td>
<td>S1</td>
<td>Blocky</td>
<td>Moderate</td>
<td>Firm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10YR 7/8</td>
<td>Concentrations</td>
<td>S1</td>
<td>Blocky</td>
<td>Moderate</td>
<td>Firm</td>
</tr>
<tr>
<td>15-20</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 5/6</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Strong</td>
<td>Extremely Firm</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:** LL = 12" - 100.3'
## Soil Observation Log

**Project ID:**

**Client:** Carmelite Monastery

**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

### Soil parent material(s): (Check all that apply)
- [ ] Outwash
- [ ] Lacustrine
- [ ] Loess
- [ ] Till
- [ ] Alluvium
- [ ] Bedrock
- [ ] Organic Matter

### Landscape Position: (check one)
- [ ] Summit
- [ ] Shoulder
- [ ] Back/Side Slope
- [ ] Foot Slope
- [ ] Toe Slope

### Slope shape
- Convex, Linear

### Vegetation:
- Grass

### Soil survey map units:
- 49

### Slope %:
- 2.0

### Elevation (ft):
- 100.3

### Weather Conditions/Time of Day:
- Sunny / 3:00 pm
- Date: 04/19/19

### Observation #/Location:
- SB4 - Secondary - See Map

### Observation Type:
- Auger

### Depth (in) | Texture | Rock Frag. % | Matrix Color(s) | Mottle Color(s) | Redox Kind(s) | Indicator(s) | Structure |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/3</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Weak</td>
</tr>
<tr>
<td>5-11</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 6/6</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Moderate</td>
</tr>
<tr>
<td>11-15</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 5/6</td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10YR 4/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td>Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 5/8</td>
<td>10YR 3/6</td>
<td>Concentrations</td>
<td>S1</td>
<td>Blocky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10YR 6/8</td>
<td>Concentrations</td>
<td>S1</td>
<td></td>
</tr>
</tbody>
</table>

### Comments
- LL = 15" - 99.0'
### Additional Soil Observation Logs

**Client:** Carmelite Monastery  
**Location / Address:** 8249 Demontreville Trail N, Lake Elmo

**Soil parent material(s):** (Check all that apply)
- [ ] Outwash
- [ ] Lacustrine
- [ ] Loess
- [ ] Till
- [ ] Alluvium
- [ ] Bedrock
- [ ] Organic Matter

**Landscape Position:** (check one)
- [ ] Summit
- [ ] Shoulder
- [ ] Back/Side Slope
- [ ] Foot Slope
- [ ] Toe Slope

**Slope shape:** Convex, Linear

**Vegetation:** Grass

**Slope %:** 2.0

**Elevation (ft):** 101

**Weather Conditions/Time of Day:** Sunny / 3:15 pm

**Date:** 04/19/19

**Observation #/Location:** SB5 - Secondary - See Map

**Observation Type:** Auger

<table>
<thead>
<tr>
<th>Depth (in)</th>
<th>Texture</th>
<th>Rock Frag. %</th>
<th>Matrix Color(s)</th>
<th>Mottle Color(s)</th>
<th>Redox Kind(s)</th>
<th>Indicator(s)</th>
<th>Shape</th>
<th>Grade</th>
<th>Consistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 3/3</td>
<td></td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Weak</td>
<td>Friable</td>
</tr>
<tr>
<td>8-11</td>
<td>Silt Loam</td>
<td>&lt;35%</td>
<td>10YR 6/6</td>
<td></td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Moderate</td>
<td>Firm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10YR 5/4</td>
<td></td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Strong</td>
<td>Extremely Firm</td>
</tr>
<tr>
<td>11-14</td>
<td>Sandy Clay Loam</td>
<td>&lt;35%</td>
<td>10YR 5/6</td>
<td></td>
<td></td>
<td></td>
<td>Blocky</td>
<td>Strong</td>
<td>Extremely Firm</td>
</tr>
<tr>
<td>14-20</td>
<td>Sandy Clay</td>
<td>&lt;35%</td>
<td>10YR 5/8</td>
<td>10YR 6/2</td>
<td>Depletions</td>
<td>S1</td>
<td>Blocky</td>
<td>Strong</td>
<td>Extremely Firm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.5YR 5/8</td>
<td>Concentrations</td>
<td>S1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:** LL = 14" - 99.8"
## Design Summary Page

### 1. PROJECT INFORMATION

<table>
<thead>
<tr>
<th>Property Owner/Client:</th>
<th>Carmelite Monastery</th>
<th>Project ID:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Address:</td>
<td>8249 Demontreville Trail N, Lake Elmo</td>
<td>Date: 04/23/19</td>
</tr>
<tr>
<td>Email Address:</td>
<td></td>
<td>Phone:</td>
</tr>
</tbody>
</table>

### 2. DESIGN FLOW & WASTE STRENGTH

<table>
<thead>
<tr>
<th>Design Flow: 400 GPD</th>
<th>Anticipated Waste Type: Other Est. - At-Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD: 269 mg/L</td>
<td>TSS: 70 mg/L</td>
</tr>
<tr>
<td>Oil &amp; Grease: 20 mg/L</td>
<td></td>
</tr>
<tr>
<td>Treatment Level: C</td>
<td><em>Select Treatment Level C for residential septic tank effluent</em></td>
</tr>
</tbody>
</table>

### 3. HOLDING TANK SIZING

<table>
<thead>
<tr>
<th>Minimum Capacity: Residential = 400 gal/bedroom, Other Establishment = Design Flow x 5.0, Minimum size 1000 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Minimum Holding Tank Capacity: Gallons in Tanks or Compartments</td>
</tr>
<tr>
<td>Recommended Holding Tank Capacity: Gallons in Tanks or Compartments</td>
</tr>
<tr>
<td>Type of High Level Alarm: (Set @ 75% tank capacity)</td>
</tr>
<tr>
<td>Comments:</td>
</tr>
</tbody>
</table>

### 4. SEPTIC TANK SIZING

#### A. Residential dwellings:

<table>
<thead>
<tr>
<th>Number of Bedrooms (Residential):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Minimum Septic Tank Capacity: Gallons in Tanks or Compartments</td>
</tr>
<tr>
<td>Recommended Septic Tank Capacity: Gallons in Tanks or Compartments</td>
</tr>
<tr>
<td>Effluent Screen &amp; Alarm (Y/N):</td>
</tr>
</tbody>
</table>

#### B. Other Establishments:

<table>
<thead>
<tr>
<th>Waste received by: Gravity</th>
<th>400 GPD x 3 Days Hyd. Retention Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Minimum Septic Tank Capacity: Gallons in Tanks or Compartments</td>
<td></td>
</tr>
<tr>
<td>Recommended Septic Tank Capacity: Gallons in Tanks or Compartments</td>
<td></td>
</tr>
<tr>
<td>Effluent Screen &amp; Alarm (Y/N): Yes</td>
<td>Model/Type: Polylok 525</td>
</tr>
</tbody>
</table>

### 5. PUMP TANK SIZING

<table>
<thead>
<tr>
<th>Pump Tank 1 Capacity (Minimum): 500 Gal</th>
<th>Pump Tank 2 Capacity (Minimum):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump Tank 1 Capacity (Recommended): 1000 Gal</td>
<td>Pump Tank 2 Capacity (Recommended):</td>
</tr>
<tr>
<td>Pump 1 22.0 GPM Total Head 15.6 ft</td>
<td>Pump 2 GPM Total Head ft</td>
</tr>
<tr>
<td>Supply Pipe Dia. 2.00 in Dose Vol: 80.0 gal</td>
<td>Supply Pipe Dia. Dose Vol: Gal</td>
</tr>
</tbody>
</table>
### 6. SYSTEM AND DISTRIBUTION TYPE

<table>
<thead>
<tr>
<th>Soil Treatment Type:</th>
<th>Mound</th>
<th>Distribution Type:</th>
<th>Pressure Distribution-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation Benchmark:</td>
<td>100 ft</td>
<td>Benchmark Location:</td>
<td>Bottom of Apron @ SW corner</td>
</tr>
<tr>
<td>MPCA System Type:</td>
<td></td>
<td>Distribution Media:</td>
<td>Rock</td>
</tr>
<tr>
<td>Type III/IV Details:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 7. SITE EVALUATION SUMMARY:

Describe Limiting Condition: Redoximorphic Features/Saturated Soils

Layers with >35% Rock Fragments? (yes/no) No

If yes, describe below: % rock and layer thickness, amount of soil credit and any additional information for addressing the rock fragments in this design.

Note:

<table>
<thead>
<tr>
<th>Depth Limiting Condition</th>
<th>Depth Limitation</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 inches</td>
<td>1.2 ft</td>
<td>100.2 ft</td>
</tr>
</tbody>
</table>

Minimum Req’d Separation:

<table>
<thead>
<tr>
<th>Depth Minimum Req’d Separation</th>
<th>Depth</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 inches</td>
<td>3.0 ft</td>
<td></td>
</tr>
</tbody>
</table>

Code Max System Depth:

<table>
<thead>
<tr>
<th>Depth Code Max System Depth</th>
<th>Depth</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mound</td>
<td>-1.8 ft</td>
<td>102.0 ft</td>
</tr>
</tbody>
</table>

This is the maximum depth to the bottom of the distribution media. Negative Depth (ft) means it must be a mound.

Soil Texture: Silt Loam

Soil Hyd. Loading Rate: 0.50 GPD/ft²

Percolation Rate: MPI

Contour Loading Rate: 10

Note:

Measured Land Slope: 2.0 %

Note:

Comments:

### 8. SOIL TREATMENT AREA DESIGN SUMMARY

<table>
<thead>
<tr>
<th>Trench:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispersal Area</td>
<td>ft²</td>
<td>Sidewall Depth</td>
<td>in</td>
</tr>
<tr>
<td>Total Lineal Feet</td>
<td>ft</td>
<td>No. of Trenches</td>
<td></td>
</tr>
<tr>
<td>Contour Loading Rate</td>
<td>ft</td>
<td>Min. Length</td>
<td>ft</td>
</tr>
<tr>
<td>Designed Trench Depth</td>
<td>in</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Bed: | | | |
|------|----------------|-----------------||
| Dispersal Area | ft² | Sidewall Depth | in |
| Bed Width | ft | Bed Length | ft |
| Designed Bed Depth | in | |

<table>
<thead>
<tr>
<th>Mound:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispersal Area</td>
<td>500.0 ft²</td>
<td>Bed Length</td>
<td>50.0 ft</td>
</tr>
<tr>
<td>Absorption Width</td>
<td>26.0 ft</td>
<td>Clean Sand Lift</td>
<td>1.8 ft</td>
</tr>
<tr>
<td>Upslope Berm Width</td>
<td>15.3 ft</td>
<td>Downslope Berm</td>
<td>20.0 ft</td>
</tr>
<tr>
<td>Total System Length</td>
<td>84.7 ft</td>
<td>System Width</td>
<td>45.3 ft</td>
</tr>
<tr>
<td>Contour Loading Rate</td>
<td>10.0 gal/ft</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Design Summary Page

### At-Grade:

<table>
<thead>
<tr>
<th>Bed Width</th>
<th>ft</th>
<th>Bed Length</th>
<th>ft</th>
<th>Finished Height</th>
<th>ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contour Loading Rate</td>
<td>gal/ft</td>
<td>Upslope Berm</td>
<td>ft</td>
<td>Downslope Berm</td>
<td>ft</td>
</tr>
<tr>
<td>Endslope Berm</td>
<td>ft</td>
<td>System Length</td>
<td>ft</td>
<td>System Width</td>
<td>ft</td>
</tr>
</tbody>
</table>

### Level & Equal Pressure Distribution

| No. of Laterals | 3 | Perforation Spacing | 3 ft | Perforation Diameter | 3/16 in |
| Lateral Diameter | 1.50 in | Min Dose Volume | 63 gal | Max Dose Volume | 100 gal |

### Non-Level and Unequal Pressure Distribution

<table>
<thead>
<tr>
<th>Elevation (ft)</th>
<th>Pipe Size (in)</th>
<th>Pipe Volume (gal/ft)</th>
<th>Pipe Length (ft)</th>
<th>Perf Size (in)</th>
<th>Spacing (ft)</th>
<th>Spacing (in)</th>
<th>Minimum Dose Volume</th>
<th>Maximum Dose Volume</th>
</tr>
</thead>
</table>

### 9. Additional Info for At-Risk, HSW or Type IV Design

**A.** Starting BOD Concentration = Design Flow X Starting BOD (mg/L) X 8.35 ÷ 1,000,000

\[
\text{400 gpd} \times \frac{269 \text{ mg/L}}{8.35} \div 1,000,000 = 0.90 \text{ lbs. BOD/day}
\]

**B.** Target BOD Concentration = Design Flow X Target BOD (mg/L) X 8.35 ÷ 1,000,000

\[
\text{400 gpd} \times \frac{269 \text{ mg/L}}{8.35} \div 1,000,000 = 0.90 \text{ lbs. BOD/day}
\]

Lbs. BOD To Be Removed: 0.00

PreTreatment Technology: *Must Meet or Exceed Target

Disinfection Technology: *Required for Levels A & B

**C.** Organic Loading to Soil Treatment Area:

\[
\frac{269 \text{ mg/L}}{400 \text{ gpd}} \times 8.35 \div 1,000,000 \div 1300 \text{ ft}^2 = 0.00069 \text{ lbs./day/ft}^2
\]

### 10. Comments/Special Design Considerations:

The Soil Treatment Area is designed to handle potential At-risk Organic Loading Rate of BOD (269 mg/L).

- 0.90 [#/day] / .0007 [BOD Organic Loading #/sqft for Silt Loam] = 1,286 sqft required.
- Mound Absorption Area = 50' x 26' = 1,300 sqft

All Mound Materials Calculations are only estimates. Actual material amounts & weights may vary.

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

Jesse Kloeppner
(Designer)

L4043
(License #)

4/23/2019
(Date)
**1. SYSTEM SIZING:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Design Flow:</td>
<td>400</td>
<td>GPD</td>
</tr>
<tr>
<td>B. Soil Loading Rate:</td>
<td>0.50</td>
<td>GPD/ft²</td>
</tr>
<tr>
<td>C. Depth to Limiting Condition</td>
<td>1.2</td>
<td>ft</td>
</tr>
<tr>
<td>D. Percent Land Slope:</td>
<td>2.0</td>
<td>%</td>
</tr>
<tr>
<td>E. Design Media Loading Rate:</td>
<td>1.0</td>
<td>GPD/ft²</td>
</tr>
<tr>
<td>F. Mound Absorption Ratio:</td>
<td>2.60</td>
<td></td>
</tr>
</tbody>
</table>

**2. DISPERSAL MEDIA SIZING**

A. Calculate Dispersal Bed Area: Design Flow ÷ Design Media Loading Rate = ft²

400 GPD ÷ 1.0 GPD/ft² = 400 ft²

If a larger dispersal media area is desired, enter size: 500 ft²

B. Enter Dispersal Bed Width: 10.0 ft

C. Calculate Contour Loading Rate: Bed Width × Design Media Loading Rate

10 ft² × 1.0 GPD/ft² = 10.0 gal/ft

*Can not exceed Table 1*

D. Calculate Minimum Dispersal Bed Length: Dispersal Bed Area ÷ Bed Width = Bed Length

500 ft² ÷ 10.0 ft = 50.0 ft

**3. ABSORPTION AREA SIZING**

A. Calculate Absorption Width: Bed Width × Mound Absorption Ratio = Absorption Width

10.0 ft × 2.6 = 26.0 ft

B. For slopes >1%, the Absorption Width is measured downhill from the upslope edge of the Bed.

Calculate Downslope Absorption Width: Absorption Width - Bed Width

26.0 ft - 10.0 ft = 16.0 ft

**4. DISTRIBUTION MEDIA: ROCK**

A. Rock Depth Below Distribution Pipe

6 in = 0.50 ft
5. DISTRIBUTION MEDIA: REGISTERED TREATMENT PRODUCTS: CHAMBERS AND EZFLOW

A. Enter Dispersal Media: 

B. Enter the Component: Length: ______ ft Width: ______ ft Depth: ______ ft

C. Number of Components per Row = Bed Length divided by Component Length (Round up)

   ______ ft ÷ ______ ft = ______ components/row

D. Actual Bed Length = Number of Components/row X Component Length:

   ______ components X ______ ft = ______ ft

E. Number of Rows = Bed Width divided by Component Width (Round up)

   ______ ft ÷ ______ ft = ______ rows Adjust width so this is a whole number.

F. Total Number of Components = Number of Components per Row X Number of Rows

   ______ X ______ = ______ components

6. MOUND SIZING

A. Calculate Minimum Clean Sand Lift: 3 feet minus Depth to Limiting Condition = Clean Sand Lift

   3.0 ft - ______ ft = ______ ft Design Sand Lift (optional): ______ ft

B. Upslope Height: Clean Sand Lift + Depth of Media + Depth of Cover cover (1 ft.)

   ______ ft + ______ ft + ______ ft = ______ ft

C. Select Upslope Berm Multiplier (based on land slope):

D. Calculate Upslope Berm Width: Multiplier X Upslope Mound Height = Upslope Berm Width

   ______ ft X ______ ft = ______ ft

E. Calculate Drop in Elevation Under Bed: Bed Width X Land Slope ÷ 100 = Drop (ft)

   ______ ft X ______ % ÷ 100 = ______ ft

F. Calculate Downslope Mound Height: Upslope Height + Drop in Elevation = Downslope Height

   ______ ft + ______ ft = ______ ft

G. Select Downslope Berm Multiplier (based on land slope):

H. Calculate Downslope Berm Width: Multiplier X Downslope Height = Downslope Berm Width

   ______ ft X ______ ft = ______ ft

I. Calculate Minimum Berm to Cover Absorption Area: Downslope Absorption Width + 4 feet

   ______ ft + ______ ft = ______ ft

J. Design Downslope Berm = greater of 4H and 4I:

   ______ ft

K. Select Endslope Berm Multiplier: ______ (usually 3.0 or 4.0)

L. Calculate Endslope Berm X Downslope Mound Height = Endslope Berm Width

   ______ ft X ______ ft = ______ ft

M. Calculate Mound Width: Upslope Berm Width + Bed Width + Downslope Berm Width

   ______ ft + ______ ft + ______ ft = ______ ft

N. Calculate Mound Length: Endslope Berm Width + Bed Length + Endslope Berm Width

   ______ ft + ______ ft + ______ ft = ______ ft

Check registered product information for specific application details and design.
Comments:
All berms calculated at 4:1 ratio. Additional material may be needed on downslope to properly grade with hillside.
### A. Rock Volume:

\[ \text{Rock Volume} = (\text{Rock Below Pipe} + \text{Rock to cover pipe (pipe outside dia + 2 inch)}) \times \text{Bed Length} \times \text{Bed Width} = \text{Volume} \]

\[ \left( 6 \text{ in} + 3.5 \text{ in} \right) \div 12 = 50.0 \text{ ft} \times 10.0 \text{ ft} = 395.8 \text{ ft}^3 \]

Divide ft\(^3\) by 27 ft\(^3\)/yd\(^3\) to calculate cubic yards:

\[ 395.8 \text{ ft}^3 \div 27 = 14.7 \text{ yd}^3 \]

Add 30% for constructability:

\[ 14.7 \text{ yd}^3 \times 1.3 = 19.1 \text{ yd}^3 \]

### B. Calculate Clean Sand Volume:

**Volume Under Rock bed:**

\[ \text{Volume} = \text{Average Sand Depth} \times \text{Media Width} \times \text{Media Length} = \text{cubic feet} \]

\[ 2.2 \text{ ft} \times 10.0 \text{ ft} \times 50.0 \text{ ft} = 1116.7 \text{ ft}^3 \]

**For a Mound on a slope from 0-1%**

\[ \text{Volume from Length} = ((\text{Upslope Mound Height} - 1) \times \text{Absorption Width Beyond Bed} \times \text{Media Bed Length}) \div 2 = \text{cubic feet} \]

\[ \text{Volume from Width} = ((\text{Upslope Mound Height} - 1) \times \text{Absorption Width Beyond Bed} \times \text{Media Bed Width}) \div 2 = \text{cubic feet} \]

**Total Clean Sand Volume:**

\[ \text{Volume from Length} + \text{Volume from Width} + \text{Volume Under Media} = \text{cubic feet} \]

**For a Mound on a slope greater than 1%**

\[ \text{Upslope Volume} = ((\text{Upslope Mound Height} - 1) \times 3 \times \text{Bed Length}) \div 2 = \text{cubic feet} \]

\[ (4.1 \text{ ft} - 1) \times 3.0 \text{ ft} \times 50.0 \text{ ft} = 235.0 \text{ ft}^3 \]

\[ \text{Downslope Volume} = ((\text{Downslope Height} - 1) \times \text{Downslope Absorption Width} \times \text{Media Length}) \div 2 = \text{cubic feet} \]

\[ (4.3 \text{ ft} - 1) \times 16.0 \text{ ft} \times 50.0 \text{ ft} = 1333.3 \text{ ft}^3 \]

\[ \text{Endslope Volume} = (\text{Downslope Mound Height} - 1) \times 3 \times \text{Media Width} = \text{cubic feet} \]

\[ (4.3 \text{ ft} - 1) \times 3.0 \text{ ft} \times 10.0 \text{ ft} = 100.0 \text{ ft}^3 \]

**Total Clean Sand Volume:**

\[ \text{Upslope Volume} + \text{Downslope Volume} + \text{Endslope Volume} + \text{Volume Under Media} = \text{cubic feet} \]

\[ 235.0 \text{ ft}^3 + 1333.3 \text{ ft}^3 + 100.0 \text{ ft}^3 + 1116.7 \text{ ft}^3 = 2785.0 \text{ ft}^3 \]

Divide ft\(^3\) by 27 ft\(^3\)/yd\(^3\) to calculate cubic yards:

\[ 2785.0 \text{ ft}^3 \div 27 = 103.1 \text{ yd}^3 \]

Add 30% for constructability:

\[ 103.1 \text{ yd}^3 \times 1.3 = 134.1 \text{ yd}^3 \]

### C. Calculate Sandy Berm Volume:

**Total Berm Volume (approx):**

\[ ((\text{Avg. Mound Height} - 0.5 \text{ ft topsoil}) \times \text{Mound Width} \times \text{Mound Length}) \div 2 = \text{cubic feet} \]

\[ (4.2 \text{ ft} - 0.5 \text{ ft}) \times 45.3 \text{ ft} \times 84.7 \text{ ft} = 7158.4 \text{ ft}^3 \]

**Total Mound Volume - Clean Sand volume - Rock Volume = cubic feet**

\[ 7158.4 \text{ ft}^3 - 2785.0 \text{ ft}^3 - 395.8 \text{ ft}^3 = 3977.5 \text{ ft}^3 \]

Divide ft\(^3\) by 27 ft\(^3\)/yd\(^3\) to calculate cubic yards:

\[ 3977.5 \text{ ft}^3 \div 27 = 147.3 \text{ yd}^3 \]

Add 30% for constructability:

\[ 147.3 \text{ yd}^3 \times 1.3 = 191.5 \text{ yd}^3 \]

### D. Calculate Topsoil Material Volume:

**Total Mound Width X Total Mound Length X .5 ft**

\[ 45.3 \text{ ft} \times 84.7 \text{ ft} \times 0.5 \text{ ft} = 1917.4 \text{ ft}^3 \]

Divide ft\(^3\) by 27 ft\(^3\)/yd\(^3\) to calculate cubic yards:

\[ 1917.4 \text{ ft}^3 \div 27 = 71.0 \text{ yd}^3 \]

Add 30% for constructability:

\[ 71.0 \text{ yd}^3 \times 1.3 = 54.6 \text{ yd}^3 \]
Pressure Distribution
Design Worksheet

Project ID: \[ v 04.02.2019 \]

1. Media Bed Width: \[ 10 \text{ ft} \]

2. Minimum Number of Laterals in system/zone = Rounded up number of \((\text{Media Bed Width} - 4) ÷ 3 + 1\).

\[ \left( \frac{10 - 4}{3} \right) + 1 = 3 \text{ laterals} \]

3. Designer Selected Number of Laterals: \[ 3 \text{ laterals} \]

   Cannot be less than line 2 (Except in at-grades)

4. Select Perforation Spacing: \[ 3.00 \text{ ft} \]

5. Select Perforation Diameter Size: \[ 3/16 \text{ in} \]


\[ 50.0 - 2\text{ft} = 48.0 \text{ ft} \]

Perforation can not be closer then 1 foot from edge.

7. Determine the Number of Perforation Spaces. Divide the Length of Laterals by the Perforation Spacing and round down to the nearest whole number.

\[ \frac{48.0}{3.0} = 16 \text{ Spaces} \]

8. Number of Perforations per Lateral is equal to 1.0 plus the Number of Perforation Spaces. Check table below to verify the number of perforations per lateral guarantees less than a 10% discharge variation. The value is double with a center manifold.

Perforations Per Lateral = \[ 16 \text{ Spaces} + 1 = 17 \text{ Perfs. Per Lateral} \]

9. Total Number of Perforations equals the Number of Perforations per Lateral multiplied by the Number of Perforated Laterals.

\[ 17 \text{ Perf. Per Lat.} \times 3 \text{ Number of Perf. Lat.} = 51 \text{ Total Number of Perf.} \]

10. Spacing of laterals; Must be greater than 1 foot and no more than 3 feet: \[ 3.0 \text{ ft} \]

11. Select Type of Manifold Connection (End or Center): \[ \text{End} \]

12. Select Lateral Diameter (See Table): \[ 1.50 \text{ in} \]
12. Calculate the Square Feet per Perforation. Recommended value is 4-11 ft² per perforation. 

*Does not apply to At-Grades*

a. **Bed Area** = Bed Width (ft) X Bed Length (ft)

\[
\begin{array}{c}
10 \text{ ft} \\
\times \\
50 \text{ ft} \\
= \\
500 \text{ ft}^2
\end{array}
\]

b. **Square Foot per Perforation** = Bed Area divided by the Total Number of Perforations.

\[
\begin{array}{c}
500 \text{ ft}^2 \\
\div \\
51 \text{ perforations} \\
= \\
9.8 \frac{\text{ft}^2}{\text{perforations}}
\end{array}
\]

13. Select **Minimum Average Head**: 1.0 ft

14. Select **Perforation Discharge** (GPM) based on Table: 0.41 GPM per Perforation

15. Determine required **Flow Rate** by multiplying the Total Number of Perfs. by the Perforation Discharge.

\[
\begin{array}{c}
51 \text{ Perfs} \\
\times \\
0.41 \text{ GPM per Perforation} \\
= \\
22 \text{ GPM}
\end{array}
\]

16. **Volume of Liquid Per Foot of Distribution Piping** (Table II): 0.110 Gallons/ft

17. **Volume of Distribution Piping** =

\[
\begin{array}{c}
3 \text{ X} \\
\times \\
48 \text{ ft} \\
\times \\
0.110 \text{ gal/ft} \\
= \\
15.8 \text{ Gallons}
\end{array}
\]

18. **Minimum Delivered Volume** = Volume of Distribution Piping X 4

\[
\begin{array}{c}
15.8 \text{ gals} \\
\times \\
4 \\
= \\
63.4 \text{ Gallons}
\end{array}
\]

<table>
<thead>
<tr>
<th>Table II</th>
<th>Volume of Liquid in Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Diameter (inches)</td>
<td>Liquid Per Foot (Gallons)</td>
</tr>
<tr>
<td>1</td>
<td>0.045</td>
</tr>
<tr>
<td>1.25</td>
<td>0.078</td>
</tr>
<tr>
<td>1.5</td>
<td>0.110</td>
</tr>
<tr>
<td>2</td>
<td>0.170</td>
</tr>
<tr>
<td>3</td>
<td>0.380</td>
</tr>
<tr>
<td>4</td>
<td>0.661</td>
</tr>
</tbody>
</table>

Comments/Special Design Considerations:
Basic Pump Selection Design Worksheet

1.  PUMP CAPACITY

Pumping to Gravity or Pressure Distribution:  

1.  If pumping to gravity enter the gallon per minute of the pump: \( \text{GPM} \) (10 - 45 gpm) 

2.  If pumping to a pressurized distribution system: \( 22.0 \) GPM

3.  Enter pump description:  

Demand Dosing

2.  HEAD REQUIREMENTS

A.  Elevation Difference  
 between pump and point of discharge: \( 9 \text{ ft} \)

B.  Distribution Head Loss:  
\( 5 \text{ ft} \)

C.  Additional Head Loss:  
\( 0.0 \text{ ft} \) (due to special equipment, etc.)

<table>
<thead>
<tr>
<th>Distribution Head Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Distribution = 0ft</td>
</tr>
<tr>
<td>Pressure Distribution based on Minimum Average Head Value on Pressure Distribution Worksheet:</td>
</tr>
<tr>
<td>Minimum Average Head</td>
</tr>
<tr>
<td>1ft</td>
</tr>
<tr>
<td>2ft</td>
</tr>
<tr>
<td>5ft</td>
</tr>
</tbody>
</table>

D.  1.  Supply Pipe Diameter:  
\( 2.0 \text{ in} \)

2.  Supply Pipe Length:  
\( 95 \text{ ft} \)

E.  Friction Loss in Plastic Pipe per 100ft from Table I:

Friction Loss = \( 1.34 \) ft per 100ft of pipe

F.  Determine Equivalent Pipe Length from pump discharge to soil dispersal area discharge point. Estimate by adding 25% to supply pipe length for fitting loss. Supply Pipe Length \( (D.2) \) X 1.25 = Equivalent Pipe Length

\[ \text{Equivalent Pipe Length} = \frac{95 \text{ ft} \times 1.25}{100} = 118.8 \text{ ft} \]

G.  Calculate Supply Friction Loss by multiplying Friction Loss Per 100ft (Line E) by the Equivalent Pipe Length (Line F) and divide by 100.

Supply Friction Loss = \[ \frac{1.34 \text{ ft per 100ft} \times 118.8 \text{ ft}}{100} = 1.6 \text{ ft} \]

H.  Total Head requirement is the sum of the Elevation Difference (Line A), the Distribution Head Loss (Line B), Additional Head Loss (Line C), and the Supply Friction Loss (Line G)

\[ 9.0 \text{ ft} + 5.0 \text{ ft} + 0.0 \text{ ft} + 1.6 \text{ ft} = 15.6 \text{ ft} \]

3.  PUMP SELECTION

A pump must be selected to deliver at least \( 22.0 \) GPM (Line 1 or Line 2) with at least \( 15.6 \) feet of total head.

Comments:
# Pump Tank Design Worksheet (Demand Dose)

## DETERMINE TANK CAPACITY AND DIMENSIONS

**Project ID:**

<table>
<thead>
<tr>
<th>1. A. Design Flow (Design Sum.1A): 400 GPD</th>
<th>B. Min. required pump tank capacity: 500 Gal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C. Tank Use: Dosing</td>
</tr>
<tr>
<td></td>
<td>D. Recommended pump tank capacity: 1000 Gal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. A. Tank Manufacturer: Minnesota Precast</th>
<th>B. Tank Model: 1000 Pump Tank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Note: Design calculations are based on this specific tank. Substituting a different tank model will change the pump float or timer settings. Contact designer if changes are necessary.</td>
</tr>
</tbody>
</table>

## DETERMINE DOSING VOLUME

3. Calculate **Volume to Cover Pump** (The inlet of the pump must be at least 4-inches from the bottom of the pump tank & 2 inches of water covering the pump is recommended)

\[(\text{Pump and block height} + 2 \text{ inches}) \times \text{Gallons Per Inch (2C or 3E)}\]  
\[= 10 \text{ in} + 2 \text{ inches} \times 25.0 \text{ Gallons Per Inch} = 300 \text{ Gallons}\]

4. **Minimum Delivered Volume** = \(4 \times \text{Volume of Distribution Piping} = 63 \text{ Gallons (Minimum dose)} \times 2.5 \text{ inches/dose}\)

5. Calculate **Maximum Pumpout Volume** (25% of Design Flow)

\[\text{Design Flow:} \quad 400 \text{ GPD} \times 0.25 = 100 \text{ Gallons (Maximum dose)} \times 4.0 \text{ inches/dose}\]

6. **Select a pumpout volume that meets both Minimum and Maximum**:

\[80 \text{ Gallons}\]

7. Calculate **Doses Per Day** = Design Flow ÷ Delivered Volume

\[\frac{400 \text{ gpd}}{80 \text{ gal}} = 5.00 \text{ Doses}\]

8. Calculate **Drainback**:

| A. Diameter of Supply Pipe = 95 inches |
| B. Length of Supply Pipe = 1.5 feet |
| C. Volume of Liquid Per Lineal Foot of Pipe = 0.170 Gallons/ft |
| D. Drainback = Length of Supply Pipe \times Volume of Liquid Per Lineal Foot of Pipe |

\[95 \text{ ft} \times 0.170 \text{ gal/ft} = 16.2 \text{ Gallons}\]

9. **Total Dosing Volume = Delivered Volume plus Drainback**

\[80 \text{ gal} + 16.2 \text{ gal} = 96 \text{ Gallons}\]

10. **Minimum Alarm Volume** = Depth of alarm (2 or 3 inches) \(\times\) gallons per inch of tank

\[3 \text{ in} \times 25.0 \text{ gal/in} = 75.0 \text{ Gallons}\]

## DEMAND DOSE FLOAT SETTINGS

11. Calculate **Float Separation Distance** using Dosing Volume.

\[\frac{96 \text{ gal}}{25.0 \text{ gal/in}} = 3.8 \text{ inches}\]

12. Measuring from bottom of tank:

| A. Distance to set Pump Off Float = Pump + block height + 2 inches |
| B. Distance to set Pump On Float = Distance to Set Pump-Off Float + Float Separation Distance |
| C. Distance to set Alarm Float = Distance to set Pump-On Float + Alarm Depth (2-3 inches) |

\[10 \text{ in} + 2 \text{ in} = 12 \text{ inches} \quad \text{Alarm Depth} = 18.8 \text{ in} \quad \text{Pump Off} = 15.8 \text{ in} \quad \text{Gal} \]

\[12 \text{ in} + 3.8 \text{ in} = 16 \text{ inches} \quad \text{Pump On} = 15.8 \text{ in} \quad 75.0 \text{ Gal} \]

\[16 \text{ in} + 3.0 \text{ in} = 19 \text{ inches} \quad \text{Gal} \]
### Flow Estimation: Other Establishments

<table>
<thead>
<tr>
<th>Establishment</th>
<th>7081 Specified Type of Establishment</th>
<th>Unit</th>
<th># of Units</th>
<th>Design Flow per Unit (See Table I)</th>
<th>Total Avg Daily Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assembly hall seat</td>
<td>80</td>
<td>4.00</td>
<td>320</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Assembly hall employee</td>
<td>2</td>
<td>15.00</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

Total Flow 7081 Establishments (gpd) 350

<table>
<thead>
<tr>
<th>Establishment</th>
<th>7081 Specified Type of Establishment - BOD</th>
<th>Unit</th>
<th># of Units</th>
<th>Design Pounds / Day</th>
<th>Total Avg Daily Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assembly hall seat</td>
<td>80</td>
<td>0.01</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Assembly hall employee</td>
<td>2</td>
<td>0.05</td>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

Total Organic Load 7081 Establishments BOD (lbs/unit/day) 0.90

Total Organic Load 7081 Establishments BOD (mg/L/day) 269
<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>BOD₅ (mg/L)</th>
<th>BOD₅ (lbs/unit/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per passenger</td>
<td>400 - 500</td>
<td>0.02</td>
</tr>
<tr>
<td>Per employee</td>
<td>400 - 500</td>
<td>0.05</td>
</tr>
<tr>
<td>Apartment houses</td>
<td>240 - 400</td>
<td>0.175/multiple family</td>
</tr>
<tr>
<td>Assembly hall (no kitchen)</td>
<td>240 - 400</td>
<td>0.01/seat</td>
</tr>
<tr>
<td>Boarding school</td>
<td>240 - 400</td>
<td></td>
</tr>
<tr>
<td>Bowling alley (no kitchen)</td>
<td>240 - 400</td>
<td>0.15/seat</td>
</tr>
<tr>
<td>Camps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction (Semi-permanent)</td>
<td>400 - 500</td>
<td>0.140</td>
</tr>
<tr>
<td>Country club (member)</td>
<td>400 - 500</td>
<td>0.052/member</td>
</tr>
<tr>
<td>Country club (resident)</td>
<td>240 - 400</td>
<td>0.208/resident</td>
</tr>
<tr>
<td>Day (no meals)</td>
<td>400 - 500</td>
<td>0.031</td>
</tr>
<tr>
<td>Luxury</td>
<td>400 - 500</td>
<td>0.208</td>
</tr>
<tr>
<td>Church (no kitchen)</td>
<td>240 - 400</td>
<td>0.02/seat</td>
</tr>
<tr>
<td>Country club</td>
<td>400 - 800</td>
<td>0.208/member</td>
</tr>
<tr>
<td>Personnel addition</td>
<td>240 - 400</td>
<td>0.04/employee</td>
</tr>
<tr>
<td>Day school</td>
<td>240 - 400</td>
<td>0.031/student</td>
</tr>
<tr>
<td>Add for showers</td>
<td>240 - 400</td>
<td>0.011/student</td>
</tr>
<tr>
<td>Add for cafeteria</td>
<td>500 - 700</td>
<td>0.031/meal</td>
</tr>
<tr>
<td>Factory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No showers</td>
<td>240 - 400</td>
<td>0.073/employee</td>
</tr>
<tr>
<td>With showers</td>
<td>240 - 400</td>
<td>0.083/employee</td>
</tr>
<tr>
<td>Food service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ordinary restaurant</td>
<td>600 - 1500</td>
<td>0.35/seat</td>
</tr>
<tr>
<td>24-Hour restaurant</td>
<td>600 - 1500</td>
<td>0.50/seat</td>
</tr>
<tr>
<td>Freeway restaurant</td>
<td>600 - 1500</td>
<td>0.70/seat</td>
</tr>
<tr>
<td>Tavern (limited food)</td>
<td>400 - 800</td>
<td>0.10/seat</td>
</tr>
<tr>
<td>Carry-out (single service)</td>
<td>600 - 800</td>
<td>0.70/100 sqft</td>
</tr>
<tr>
<td>Carry-out</td>
<td>200 - 600</td>
<td>0.04/employee</td>
</tr>
<tr>
<td>Fast food chain</td>
<td>1000 - 2000</td>
<td>0.80/seat</td>
</tr>
<tr>
<td>Kitchen Waste</td>
<td>600 - 1500</td>
<td>0.015/meal</td>
</tr>
<tr>
<td>Toilet and Kitchen Waste</td>
<td>600 - 1500</td>
<td>0.021/customer</td>
</tr>
<tr>
<td>Additional for bars &amp; cocktail lounges</td>
<td>600 - 1500</td>
<td>0.01/customer</td>
</tr>
<tr>
<td>Hospital (not including personnel)</td>
<td>400 - 600</td>
<td>0.518/bed</td>
</tr>
<tr>
<td>Laundromat</td>
<td>600 - 800</td>
<td>2.0/machine</td>
</tr>
<tr>
<td>Mobile home park</td>
<td>240 - 400</td>
<td>0.40/space</td>
</tr>
<tr>
<td>Mobile home park</td>
<td>240 - 400</td>
<td>0.140/person</td>
</tr>
<tr>
<td>Motel, Hotel</td>
<td>240 - 400</td>
<td>0.083/bed</td>
</tr>
<tr>
<td>Motel, Hotel</td>
<td>240 - 400</td>
<td>0.14/person</td>
</tr>
<tr>
<td>Nursing home (not including kitchen or laundry)</td>
<td>400 - 600</td>
<td>0.26/bed</td>
</tr>
<tr>
<td>Office building (per 8 hour shift)</td>
<td>240 - 400</td>
<td>0.05/employee</td>
</tr>
<tr>
<td>Park, toilets only</td>
<td>400 - 600</td>
<td>0.01/person</td>
</tr>
<tr>
<td>Park, bathhouse and flush toilets</td>
<td>240 - 400</td>
<td>0.021/person</td>
</tr>
<tr>
<td>Resort hotel, cottage</td>
<td>240 - 400</td>
<td>0.15/room</td>
</tr>
<tr>
<td>Add for self-service laundry</td>
<td>600 - 800</td>
<td>2.0/machine</td>
</tr>
<tr>
<td>Service station</td>
<td>240 - 400</td>
<td>0.50/toilet or urinal</td>
</tr>
<tr>
<td>Service station</td>
<td>240 - 400</td>
<td>0.02/vehicle served</td>
</tr>
<tr>
<td>Shopping center (no food service or laundry)</td>
<td>400 - 600</td>
<td>0.30/1000 sqft</td>
</tr>
<tr>
<td>Shopping center (no food service or laundry)</td>
<td>400 - 600</td>
<td>0.050/employee</td>
</tr>
<tr>
<td>Sports Stadium</td>
<td>400 - 600</td>
<td>0.20/person</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>300 - 500</td>
<td>0.021/person</td>
</tr>
<tr>
<td>Theaters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive-in</td>
<td>400 - 500</td>
<td>0.010/car space</td>
</tr>
<tr>
<td>Indoor</td>
<td>240 - 400</td>
<td>0.010/seat</td>
</tr>
<tr>
<td>Travel trailer or RV park</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No water/sewer hook up</td>
<td>400 - 800</td>
<td>0.25/space</td>
</tr>
<tr>
<td>With water and sewer</td>
<td>400 - 800</td>
<td>0.35/space</td>
</tr>
</tbody>
</table>
Septic System Management Plan
for Above Grade Systems

The goal of a septic system is to protect human health and the environment by properly treating wastewater before returning it to the environment. Your septic system is designed to kill harmful organisms and remove pollutants before the water is recycled back into our lakes, streams and groundwater.

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic maintainer or service provider. However, it is YOUR responsibility to make sure all tasks get accomplished in a timely manner.

The University of Minnesota’s Septic System Owner’s Guide contains additional tips and recommendations designed to extend the effective life of your system and save you money over time.

Proper septic system design, installation, operation and maintenance means safe and clean water!

<table>
<thead>
<tr>
<th>Property Owner</th>
<th>Carmelite Monestary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Address</td>
<td>8249 DeMontreville Trail N, Lake Elmo, MN 55402</td>
</tr>
<tr>
<td>Property ID</td>
<td></td>
</tr>
<tr>
<td>System Designer</td>
<td>Jesse Kloeppner</td>
</tr>
<tr>
<td>Contact Info</td>
<td>763-843-4114</td>
</tr>
<tr>
<td>System Installer</td>
<td>Capra’s Utilities</td>
</tr>
<tr>
<td>Contact Info</td>
<td>651-762-2500</td>
</tr>
<tr>
<td>Service Provider/Maintainer</td>
<td></td>
</tr>
<tr>
<td>Contact Info</td>
<td></td>
</tr>
<tr>
<td>Permitting Authority</td>
<td>Washington County</td>
</tr>
<tr>
<td>Contact Info</td>
<td></td>
</tr>
<tr>
<td>Permit #</td>
<td></td>
</tr>
<tr>
<td>Date Inspected</td>
<td></td>
</tr>
</tbody>
</table>

Keep this Management Plan with your Septic System Owner’s Guide. The Septic System Owner’s Guide includes a folder to hold maintenance records including pumping, inspection and evaluation reports. Ask your septic professional to also:

- Attach permit information, designer drawings and as-built of your system, if they are available.
- Keep copies of all pumping records and other maintenance and repair invoices with this document.
- Review this document with your maintenance professional at each visit; discuss any changes in product use, activities, or water-use appliances.

For a copy of the Septic System Owner’s Guide, visit www.bookstores.umn.edu and search for the word “septic” or call 800-322-8642.

For more information see http://septic.umn.edu

Version: August 2015
Septic System Management Plan
for Above Grade Systems

Your Septic System

Septic System Specifics

System Type: I  II  III  IV*  V*
(Based on MN Rules Chapter 7080.2200 – 2400)
*Additional Management Plan required

System is subject to operating permit*
System uses UV disinfection unit*
Type of advanced treatment unit ______________

Dwelling Type

Number of bedrooms: ______________________
System capacity/ design flow (gpd):   __________
Anticipated average daily flow (gpd): __________
Comments________________________________
Business? :  Y  N  What type? _______________

Well Construction

Well depth (ft):
- Cased well  Casing depth: __________
- Other (specify): _______________
Distance from septic (ft): > 50
Is the well on the design drawing?  Y  N

Septic Tank

☐ First tank  Tank volume: 1000 gallons
Does tank have two compartments?  Y  N
☐ Second tank  Tank volume: 1000 gallons
☐ Tank is constructed of _______________
☐ Effluent screen:  Y  N  Alarm  Y  N

Pump Tank  1000 gallons
Effluent Pump make/model: Installer Choice
Pump capacity 22 GPM
TDH 16 Feet of head
Alarm location TBD

Soil Treatment Area (STA)

Mound/At-Grade area (width x length): 45.3 ft x 84.7 ft
Rock bed size (width x length): 10 ft x 50 ft
Location of additional STA: South of New Mound
Type of distribution media: Rock

Inspection ports  Yes
Cleanouts  Yes
Surface water diversions  Yes
Additional STA not available  No
Homeowner Management Tasks

These operation and maintenance activities are your responsibility. Chart on page 6 can help track your activities.

Your toilet is not a garbage can. Do not flush anything besides human waste and toilet paper. No wet wipes, cigarette butts, disposal diapers, used medicine, feminine products or other trash!

The system and septic tanks needs to be checked every 36 months

Your service provider or pumper/maintainer should evaluate if your tank needs to be pumped more or less often.

Seasonally or several times per year

- Leaks. Check (listen, look) for leaks in toilets and dripping faucets. Repair leaks promptly.
- Soil treatment area. Regularly check for wet or spongy soil around your soil treatment area. If surfaced sewage or strong odors are not corrected by pumping the tank or fixing broken caps and leaks, call your service professional. Untreated sewage may make humans and animals sick. Keep bikes, snowmobiles and other traffic off and control borrowing animals.
- Alarms. Alarms signal when there is a problem; contact your service professional any time the alarm signals.
- Lint filter. If you have a lint filter, check for lint buildup and clean when necessary. If you do not have one, consider adding one after washing machine.
- Effluent screen. If you do not have one, consider having one installed the next time the tank is cleaned along with an alarm.

Annually

- Water usage rate. A water meter or another device can be used to monitor your average daily water use. Compare your water usage rate to the design flow of your system (listed on the next page). Contact your septic professional if your average daily flow over the course of a month exceeds 70% of the design flow for your system.
- Caps. Make sure that all caps and lids are intact and in place. Inspect for damaged caps at least every fall. Fix or replace damaged caps before winter to help prevent freezing issues.
- Water conditioning devices. See Page 5 for a list of devices. When possible, program the recharge frequency based on water demand (gallons) rather than time (days). Recharging too frequently may negatively impact your septic system. Consider updating to demand operation if your system currently uses time.
- Review your water usage rate. Review the Water Use Appliance chart on Page 5. Discuss any major changes with your service provider or pumper/maintainer.

During each visit by a service provider or pumper/maintainer

- Make sure that your service professional services the tank through the manhole. (NOT though a 4” or 6” diameter inspection port.)
- Ask how full your tank was with sludge and scum to determine if your service interval is appropriate.
- Ask your pumper/maintainer to accomplish the tasks listed on the Professional Tasks on Page 4.
Professional Management Tasks

These are the operation and maintenance activities that a pumper/maintainer performs to help ensure long-term performance of your system. At each visit a written report/record must be provided to homeowner.

Plumbing/Source of Wastewater

- Review the Water Use Appliance Chart on Page 5 with homeowner.
  Discuss any changes in water use and the impact those changes may have on the septic system.
- Review water usage rates (if available) with homeowner.

Septic Tank/Pump Tanks

- **Manhole lid.** A riser is recommended if the lid is not accessible from the ground surface. Insulate the riser cover for frost protection.
- **Liquid level.** Check to make sure the tank is not leaking. The liquid level should be level with the bottom of the outlet pipe. (If the water level is below the bottom of the outlet pipe, the tank may not be watertight. If the water level is higher than the bottom of the outlet pipe of the tank, the effluent screen may need cleaning, or there may be ponding in the soil treatment area.)
- **Inspection pipes.** Replace damaged or missing pipes and caps.
- **Baffles.** Check to make sure they are in place and attached, and that inlet/outlet baffles are clear of buildup or obstructions.
- **Effluent screen.** Check to make sure it is in place; clean per manufacturer recommendation. Recommend retrofitted installation if one is not present.
- **Alarm.** Verify that the alarm works.
- **Scum and sludge.** Measure scum and sludge in each compartment of each septic and pump tank, pump if needed.

Pump

- **Pump and controls.** Check to make sure the pump and controls are operating correctly.
- **Pump vault.** Check to make sure it is in place; clean per manufacturer recommendations.
- **Alarm.** Verify that the alarm works.
- **Drainback.** Check to make sure it is draining properly.
- **Event counter or elapsed time meter.** Check to see if there is an event counter or elapsed time meter for the pump. If there is one or both, calculate the water usage rate and compare to the anticipated use listed on Design and Page 2. Dose Volume: \( \frac{gallons}{\text{Pump run time: Minutes}} \) \[ 80 \]

Soil Treatment Area

- **Inspection pipes.** Check to make sure they are properly capped. Replace caps and pipes that are damaged.
- **Surfacing of effluent.** Check for surfacing effluent or other signs of problems.
- **Lateral flushing.** Check lateral distribution; if cleanouts exist, flush and clean at recommended frequency.
- **Vegetation.** Check to see that a good growth of vegetation is covering the system.

All other components – evaluate as listed here:
# Water-Use Appliances and Equipment in the Home

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Impacts on System</th>
<th>Management Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garbage disposal</td>
<td>• Uses additional water.</td>
<td>• Use of a garbage disposal is not recommended.</td>
</tr>
<tr>
<td></td>
<td>• Adds solids to the tank.</td>
<td>• Minimize garbage disposal use. Compost instead.</td>
</tr>
<tr>
<td></td>
<td>• Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.</td>
<td>• To prevent solids from exiting the tank, have your tank pumped more frequently.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Add an effluent screen to your tank.</td>
</tr>
<tr>
<td>Washing machine</td>
<td>• Washing several loads on one day uses a lot of water and may overload your system.</td>
<td>• Choose a front-loader or water-saving top-loader, these units use less water than older models.</td>
</tr>
<tr>
<td></td>
<td>• Overloading your system may prevent solids from settling out in the tank. Unsettled solids can exit the tank and enter the soil treatment area.</td>
<td>• Limit the addition of extra solids to your tank by using liquid or easily biodegradable detergents. Limit use of bleach-based detergents and fabric softeners.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Install a lint filter after the washer and an effluent screen to your tank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Wash only full loads and think even – spread your laundry loads throughout the week.</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>• Powdered and/or high-phosphorus detergents can negatively impact the performance of your tank and soil treatment area.</td>
<td>• Use gel detergents. Powdered detergents may add solids to the tank.</td>
</tr>
<tr>
<td></td>
<td>• New models promote “no scraping”. They have a garbage disposal inside.</td>
<td>• Use detergents that are low or no-phosphorus.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Wash only full loads.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Scrape your dishes anyways to keep undigested solids out of your septic system.</td>
</tr>
<tr>
<td>Grinder pump (in home)</td>
<td>• Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.</td>
<td>• Expand septic tank capacity by a factor of 1.5.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Include pump monitoring in your maintenance schedule to ensure that it is working properly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Add an effluent screen.</td>
</tr>
<tr>
<td>Large bathtub (whirlpool)</td>
<td>• Large volume of water may overload your system.</td>
<td>• Avoid using other water-use appliances at the same time. For example, don’t wash clothes and take a bath at the same time.</td>
</tr>
<tr>
<td></td>
<td>• Heavy use of bath oils and soaps can impact biological activity in your tank and soil treatment area.</td>
<td>• Use oils, soaps, and cleaners in the bath or shower sparingly.</td>
</tr>
<tr>
<td>Clean Water Uses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-efficiency furnace</td>
<td>• Drip may result in frozen pipes during cold weather.</td>
<td>• Re-route water directly out of the house. Do not route furnace discharge to your septic system.</td>
</tr>
<tr>
<td>Water softener</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reverse osmosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface drainage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Footing drains</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Homeowner Maintenance Log

Track maintenance activities here for easy reference. See list of management tasks on pages 3 and 4.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date accomplished</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Check frequently:</strong></td>
<td></td>
</tr>
<tr>
<td>Leaks: check for plumbing leaks*</td>
<td></td>
</tr>
<tr>
<td>Soil treatment area check for surfacing**</td>
<td></td>
</tr>
<tr>
<td>Lint filter: check, clean if needed*</td>
<td></td>
</tr>
<tr>
<td>Effluent screen (if owner-maintained)***</td>
<td></td>
</tr>
<tr>
<td>Alarm**</td>
<td></td>
</tr>
<tr>
<td><strong>Check annually:</strong></td>
<td></td>
</tr>
<tr>
<td>Water usage rate (maximum gpd _____)</td>
<td></td>
</tr>
<tr>
<td>Caps: inspect, replace if needed</td>
<td></td>
</tr>
<tr>
<td>Water use appliances – review use</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

*Monthly  
**Quarterly  
***BiAnnually

Notes:

“As the owner of this SSTS, I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in this Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system.”

<table>
<thead>
<tr>
<th>Property Owner Signature:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Plan Prepared By:</td>
<td></td>
</tr>
<tr>
<td>Jesse Kloeppner</td>
<td></td>
</tr>
<tr>
<td>Certification #:</td>
<td>C8188</td>
</tr>
<tr>
<td>Permitting Authority:</td>
<td>Washington County</td>
</tr>
</tbody>
</table>

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Soil Map—Washington County, Minnesota
(8249 Demontreville Trail N, Lake Elmo)

Map projection: Web Mercator   Corner coordinates: WGS84   Edge tics: UTM Zone 15N WGS84

Map Scale: 1:728 if printed on A portrait (8.5” x 11”) sheet.

Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey

12/7/2018
Page 1 of 3
**MAP LEGEND**

- **Area of Interest (AOI)**
- **Soils**
  - Soil Map Unit Polygons
  - Soil Map Unit Lines
  - Soil Map Unit Points
- **Special Point Features**
  - Blowout
  - Borrow Pit
  - Clay Spot
  - Closed Depression
  - Gravel Pit
  - Gravelly Spot
  - Landfill
  - Lava Flow
  - Marsh or swamp
  - Mine or Quarry
  - Miscellaneous Water
  - Perennial Water
  - Rock Outcrop
  - Saline Spot
  - Sandy Spot
  - Severely Eroded Spot
  - Sinkhole
  - Slide or Slip
  - Sodic Spot
- **Spoil Area**
- **Stony Spot**
- **Very Stony Spot**
- **Wet Spot**
- **Other**
- **Special Point Features**
- **Special Line Features**
- **Water Features**
  - Streams and Canals
- **Transportation**
  - Rails
  - Interstate Highways
  - US Routes
  - Major Roads
  - Local Roads
- **Background**
  - Aerial Photography

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:15,800.

**Warning:** Soil Map may not be valid at this scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

**Source of Map:** Natural Resources Conservation Service

**Web Soil Survey URL:**

**Coordinate System:** Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

**Soil Survey Area:** Washington County, Minnesota

**Survey Area Data:** Version 14, Oct 9, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

**Date(s) aerial images were photographed:** Jul 1, 2013—Sep 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
## Map Unit Legend

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>Antigo silt loam, 0 to 2 percent slopes</td>
<td>2.5</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td><strong>Totals for Area of Interest</strong></td>
<td><strong>2.5</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
Washington County, Minnesota

49—Antigo silt loam, 0 to 2 percent slopes

Map Unit Setting
- National map unit symbol: 2tnz7
- Elevation: 690 to 1,900 feet
- Mean annual precipitation: 27 to 36 inches
- Mean annual air temperature: 37 to 46 degrees F
- Frost-free period: 80 to 150 days
- Farmland classification: All areas are prime farmland

Map Unit Composition
- Antigo and similar soils: 80 percent
- Minor components: 20 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Antigo

Setting
- Landform: Flats, terraces
- Landform position (three-dimensional): Tread, rise
- Down-slope shape: Convex, linear
- Across-slope shape: Convex, linear
- Parent material: Loess and/or silty glaciofluvial deposits over loamy glaciofluvial deposits over stratified sandy and gravelly outwash

Typical profile
- Ap - 0 to 9 inches: silt loam
- E - 9 to 12 inches: silt loam
- B/E - 12 to 19 inches: silt loam
- Bt1 - 19 to 28 inches: silt loam
- 2Bt2 - 28 to 31 inches: loam
- 2Bt3 - 31 to 33 inches: very gravelly sandy loam
- 3C - 33 to 79 inches: stratified sand to very gravelly coarse sand

Properties and qualities
- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat):
  - Moderately high to high (0.60 to 2.00 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water storage in profile: Moderate (about 7.8 inches)
Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained
Other vegetative classification: Acer saccharum/Hydrophyllum (AH), Acer saccharum/Viola-Osmorhiza (AViO)

Hydric soil rating: No

Minor Components

Billyboy

Percent of map unit: 8 percent
Landform: Flats, terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Acer saccharum/Caulophyllum-Circaea (ACaCi), Acer saccharum/Hydrophyllum (AH), Acer saccharum-Tsuga/Maianthemum (ATM), Acer saccharum/Viola-Osmorhiza (AViO)

Hydric soil rating: No

Sconsin

Percent of map unit: 5 percent
Landform: Flats, terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Acer saccharum/Caulophyllum-Circaea (ACaCi), Acer saccharum/Hydrophyllum (AH), Acer saccharum-Tsuga/Maianthemum (ATM), Acer saccharum/Viola-Osmorhiza (AViO)

Hydric soil rating: No

Rosholt

Percent of map unit: 3 percent
Landform: Flats, terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Other vegetative classification: Acer saccharum/Vaccinium-Desmodium (AVDe), Acer saccharum/Athyrium (AAt), Acer saccharum/Caulophyllum-Circaea (ACaCi), Acer saccharum-Quercus/Viburnum=(Vaccinium) (AQVb-V)

Hydric soil rating: No

Brill

Percent of map unit: 2 percent
Landform: Flats, terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Acer saccharum/Athyrium (AAt), Acer saccharum/Caulophyllum-Circaea (ACaCi)
Hydric soil rating: No

Ossmer
Percent of map unit: 2 percent
Landform: Flats, terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear
Other vegetative classification: Acer saccharum/Hydrophyllum (AH), Acer saccharum-Tsuga/Maianthemum (ATM), Acer saccharum/Viola-Osmorhiza (AViO), Tsuga/Maianthemum-Coptis (TMC)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Washington County, Minnesota
Survey Area Data: Version 14, Oct 9, 2018
The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Date(s) aerial images were photographed: Jul 1, 2013—Sep 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
### Septic Tank Absorption Fields — At-Grade (MN)

<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Rating</th>
<th>Component name (percent)</th>
<th>Rating reasons (numeric values)</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>Antigo silt loam, 0 to 2 percent slopes</td>
<td>Very limited</td>
<td>Antigo (80%)</td>
<td>&gt;= 35% Rock Frags (0.90)</td>
<td>2.2</td>
<td>100.0%</td>
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**Totals for Area of Interest**

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**Rating Options**

*Aggregation Method: Dominant Condition*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*
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### Septic Tank Absorption Fields — Mound (MN)

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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Billyboy (8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rosholt (3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
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### Rating Options

*Aggregation Method: Dominant Condition*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*
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<table>
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<td>100.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Excessive percolation (0.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td></td>
<td></td>
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</table>

### Rating Options

*Aggregation Method:* Dominant Condition  
*Component Percent Cutoff:* None Specified  
*Tie-break Rule:* Higher
Well List selected

Highlighted are Field Verified Wells. Click Unique Well ID to see detailed well information

Unique Number  | Well Name         | Address     | City   | County  | Township | Range | Section | Depth(ft) | Elevation(ft) | Casing Depth(ft) | Casing Diameter |
---             | ----------------- | ----------- | ------ | ------- | --------- | ----- | ------- | --------- | -------------- | ---------------- | -------------- |
489214         | CARMELITE MONASTERY  | 8251 DEMONTREVILLE TR N LAKE ELMO | Washington | 29 | 21 | 9 | 261 | 1008 | 201 | 6 |

8249 Demontreville Trl N, Lake Elmo, MN, 55

Version 2.0.56, 07/13/18 11:48AM

Selected Wells
Public Wells
Domestic Wells
Irrigation Wells
Monitor Wells
Other Wells
Sealed Wells
Unverified Wells
Township
Range
Section
DWSMA
SWBCA

DWSMA: The area managed by a public water supplier to protect their source water
SWBCA: Special Well and Boring Construction Area layer

Click map to get township, range and section
Click Unique Well ID to see detailed well information

UTM: 505401 (x), 4985228 (y) Latitude/Longitude: 45.02048 / -92.93145
Click map to get township, range and section
MEMORANDUM

Date: June 17, 2019

To: Ken Roberts, Planning Director
Re: Carmelite Site Improvements

Cc: Chad Isakson, Assistant City Engineer
From: Jack Griffin, P.E., City Engineer

A Site Plan engineering review has been completed for the Carmelite Hermitage Chapel Conditional Use Construction Plan set. The site is located at 8249 DeMontreville Trail North in Lake Elmo. The submittal consisted of the following documentation received on May 28, 2019:

- Site Plans prepared by Pioneer Engineering, dated April 26, 2019.

Engineering review comments are as follows:

STORMWATER MANAGEMENT

- A Valley Branch Watershed District (VBWD) permit will be required. The site plan is subject to a storm water management plan (SWMP) meeting State, VBWD and City rules and regulations.
- The SWMP executive summary must be revised and resubmitted to clarify the required standards for this project (City and VBWD) and to demonstrate compliance with those applicable standards.
  - The total new and recreated impervious surface area must be identified in detail.
  - The applicable standards must reference the VBWD rules and Stormwater Rules for the City of Lake Elmo.
  - The report must state the soil types determined by the soil borings. Assumed infiltration rates must be identified in the report and the report must demonstrate drawdown in 48 hrs.
  - A soil boring location map must be provided and verified that sufficient borings have been taken in accordance with the City Engineering Design Standards Manual.
- Storm water facilities proposed for meeting State and VBWD permitting requirements must be designed and constructed in accordance with the City Engineering Design Standards Manual available on the City website, dated March 2017.
- Ownership. The storm water facilities constructed for this development should remain privately owned and maintained.
- Stormwater Maintenance and Easement Agreement. The applicant will be required to execute and record a Stormwater Maintenance and Easement Agreement in the City’s standard form of agreement.
- Maintenance Access. Even as privately owned and maintained facilities, maintenance access roads meeting the City engineering design standards must be provided for all storm water facilities.
- Easements. The storm water facility 100-year HWL must be fully contained within the subject property and easements must be provided to protect the 100-year HWL flood area.
• Sheet 4.10. The sanitary sewer and water services must be identified as to size and material. A plan note should be added to indicate the sanitary sewer and water service lines per state plumbing code requirements.
• Sheet 5.10. Revise grading plan to revise storm water BMP site to meet City of Lake Elmo and MN Storm Water Manual standards and as follows:
  ➢ Provide 10:1 aquatic bench and 10:1 maintenance bench around retention BMP.
  ➢ Provide 3:1 length to width ratio for retention basin.
  ➢ Provide defined rip rap overflow location between retention basin and infiltration basin and define overflow spot elevation.
  ➢ Provide retention basin NWL and ensure minimum 3-feet depth. Show NWL level contour on the plan sheet.
  ➢ Provide 100-year HWL contour for the 996.9 HWL. The 100-year HWL of 996.9 is not shown consistent between Sheets 5.10 and 5.30. Revise plans and use spot elevations has required to demonstrate extent of 100-year HWL.
• Sheet 5.10 Provide drainage and utility easement over storm water BMP including the 100-year HWL and pond maintenance access road and access bench. Access road grade must be less than or equal to 10% to the maintenance bench.
• Sheet 5.10. Remove plan note that states “Remove Trees as required within grading limits”. All trees to be removed must be surveyed and shown on the plans. Tree removal may be subject to replacement per City ordinances.
• Sheet 5.20. The rock construction entrance must be positioned for all grading activity on site; not just for basin 100P.
• The site plans must be updated to show the proposed on-site SSTS design. The Septic System Plan prepared by Steinbrecher Companies is not consistent with the site improvements plans.
• The plans must call out detailed site protection from construction activities for the proposed on-site wastewater treatment system and for the proposed storm water infiltration basin.
• No construction may begin until the applicant has received City Engineer approval for the Final Construction Plans; the applicant has obtained and submitted to the City all applicable permits, easements and permissions needed for the project; and a preconstruction meeting has been held by the City’s engineering department.
June 5, 2019

Review of plans for a Conditional Use Permit for construction of the Carmelite Chapel. There was an initial review done in February of 2019, by our then Building Official Mike Bent with regard to the requirement of sprinklers. It was determined that none were required. If the building as presented then is consistent with the current proposal, that determination still stands.

The following items need to be addressed:

- Must meet all applicable codes in the 2015 MN State Fire Code. These requirements also include Appendix D, FIRE APPARATUS ACCESS ROADS.
- With this building not requiring sprinklers, special attention to the following:
  - 503.1.1 “……shall extend to within 150 feet of all portions of the facility…”
  - Appendix D, Section D105 must be addressed regarding the height of the building (couldn’t determine on my plans) and if this section is applicable.
- Will there be any fire hydrants brought into the site?
- Location of Lockbox approved by Fire Chief
- Location of alarm annunciator panel approved by Fire Chief.
- Provide basic overhead view foot print plan of the building, non-architectural, showing rooms, access, utility locations, etc.

Greg Malmquist, Fire Chief

“Proudly Serving Neighbors & Friends”
To the Planning Commission of the City of Lake Elmo:

Regarding the proposed “Chapel” at the Carmelite Hermitage of the Blessed Virgin Mary, I speak on behalf of my family at 5124 Isle Avenue North, Lake Elmo, to say that we absolutely support the construction of a new chapel. However, a few years ago, it was mentioned that this new building would require adding a roadway through our street for new access to the Chapel. I am writing to share that we vehemently oppose the construction of a roadway through Isle Avenue.

We have shared a property line with the Carmelites for just over 20 years, and they have been phenomenal neighbors. My family supports their devoted and faith-filled lifestyle, so we are completely in favor of building the Chapel. We want them to do that! However, we feel they should maintain access where it has always been – along DeMontreville Trail. Adding a roadway through Isle Avenue would disrupt the quiet, residential neighborhood that drew us here originally.

When adding a roadway through Isle Avenue was discussed a few years ago, I was informed by sources affiliated with the city that Isle Avenue was not constructed to withstand consistent vehicular traffic – its weight capacity simply is not enough. Even though the Chapel will not draw many visitors, its weight rating would still need to be adequate, and our street just was not built that way.

We love the city of Lake Elmo. It is where our kids grew up, it’s where most of our family lives, and it’s where we are blessed to call home. Our street has been the place where all of the neighborhood kids grew up playing with each other, where we have gone for countless family bike rides and walks, and where we can take a deep breath from the fast-paced reality of our professional lives.

Isle Avenue is a sanctuary for many of us – not just for my family. It is a safe place. It is a quiet place. It is a lightly-traveled dead end. Because of what this neighborhood means to us, we sincerely ask that you consider maintaining the existing access for the new Chapel.

That said, we wish the Carmelites all the best in the construction of their Chapel. It will be a great addition for their lives, and we are excited for them!

Thank you for considering!

Craig Falzone and family

5124 Isle Avenue North
Lake Elmo, MN 55042

Sent from my T-Mobile 4G LTE Device
BACKGROUND:
The City has received a request from Rev. John Burns of the Carmelite Hermitage for a variance from the City Code requirement about direct access for a place of worship. He is making this request in order to add a chapel to the Carmelite’s site located at 8249 Demontreville Trail.

On December 3, 1991, the City Council approved a variance from the section of the City Code about having frontage a public road for the Carmelite Monastery. The Carmelites made this request so they could construct a building on their parcel (which does not have frontage on a public road). (See attached City Council Resolution 91-40).

ISSUE BEFORE COMMISSION:
The Commission is being asked to hold a public hearing, review and make recommendation on the above mentioned variance request.

VARIANCE REQUEST DETAILS/ANALYSIS:

Deadline for Action: Application Complete – 7/12/2019
60 Day Deadline – 9/11/2019
Extension Letter Mailed – N/A
120 Day Deadline – N/A

Applicable Regulations: Article V - Zoning Administration and Enforcement
Article XIV – Public and Semi-Public Districts

Variance Request: The Carmelite Hermitage of the Blessed Virgin Mary requests a variance from the direct access requirement for places of worship as outlined in Section 154.600(B)(2) of the City Code.
Reason for Request. The reason for the variance request is to facilitate the construction of a chapel on their site. The City Code requires places of worship (such as chapels and churches) to have “direct access” to a public street classified by the Comprehensive Plan as a major collector or arterial. The Carmelites property does not have frontage on Demontreville Trail but there is an existing easement across the neighboring property to the north that provides their property with access to Demontreville Trail. The Comprehensive Plan classifies Demontreville Trail as a major collector street.

The applicant believes their existing access to Demontreville Trail (with the easement) meets the direct access requirement of the City Code. If the City Code said that places of worship are required to have access to a major collector or arterial street, then the Carmelites site would meet that access requirement.

REVIEW AND ANALYSIS/DRAFT FINDINGS

An applicant must establish and demonstrate compliance with the variance criteria set forth in Lake Elmo City Code Section 154.109 before the City may grant an exception or modification to city code requirements. These criteria are listed below, along with comments from Staff about the applicability of these criteria to the applicant’s request.

1) Practical Difficulties. A variance to the provision of this chapter may be granted by the Board of Adjustment upon the application by the owner of the affected property where the strict enforcement of this chapter would cause practical difficulties because of circumstances unique to the individual property under consideration and then only when it is demonstrated that such actions will be in keeping with the spirit and intent of this chapter. Definition of practical difficulties - “Practical difficulties” as used in connection with the granting of a variance, means that the property owner proposes to use the property in a reasonable manner not permitted by an official control.

FINDINGS: The addition of a chapel to Carmelites site has been planned since at least 1991 when the City first approved a Master Plan for their site. The Carmelites have been using the easement to Demontreville Trail for access to the site since that time. Adding another driveway or access to the Carmelites property would be a practical difficulty as the only public street their property has frontage on is Hidden Bay Trail to south. A new driveway would be about 1,500 feet in length, would require extensive tree removal and grading and would be an access onto a local street – not a collector or arterial street as the City Code requires for places of worship.

The use of the existing driveway for access to Demontreville Trail for the addition of a chapel to site is a reasonable use of the property and the existing access.

2) Unique Circumstances. The plight of the landowner is due to circumstances unique to the property not created by the landowner.

FINDINGS: According to the applicant, the existing lot layout with the access easement to Demontreville Trail has been in place since 1904. This is a unique situation with circumstances not created by the landowner or the current land users – the Carmelite Monks.

3) Character of Locality. The proposed variance will not alter the essential character of the locality in which the property in question is located.

FINDINGS: The proposed variance will allow the Carmelites to use the existing driveway (that currently provides access to their site) for access for the proposed chapel. By using the existing...
3

driveway that has been in place for many years, the Carmelites will not be altering the essential character of the locality (or area) in which their property is located.

Conversely, adding another driveway to their site that would have access onto a local, neighborhood street would change the character of that locality and area of the City.

4) Adjacent Properties and Traffic. The proposed variance will not impair an adequate supply of light and air to properties adjacent to the property in question or substantially increase the congestion of the public streets or substantially diminish or impair property values within the neighborhood.

FINDINGS. The proposed variance to allow the use of the existing driveway and easement for access for the proposed chapel will not impair an adequate supply of light and air to properties adjacent to the subject property, increase congestion of public streets or substantially diminish or impair property values within the neighborhood.

Conversely, as I noted above, if the applicant added another driveway to access the streets to the south of their site that would increase the congestion on the local public streets near their property.

FISCAL IMPACT:
Staff has not found that the proposed variance will have any impact to the City.

OPTIONS:
The Planning Commission may:

- Recommend approval of the proposed variance.
- Recommend approval of the proposed variance with recommended conditions.
- Recommend denial of the variance, citing recommended findings of fact for denial.

RECOMMENDATION:
Staff recommends that the Planning Commission recommend approval of the request from Rev. John Burns of the Carmelite Hermitage for a variance from the City’s requirement for direct access to a major collector or arterial street for a place of worship for the property located at 8249 Demontreville Trail.

“Move to recommend approval of the request from Rev. John Burns of the Carmelite Hermitage for a variance from the City’s requirement for direct access to a major collector or arterial street for a place of worship for the property located at 8249 Demontreville Trail.”

ATTACHMENTS:

1) Variance request narrative dated July 12, 2019 (4 pages)
2) Proposed Site Plan
3) Resolution 91-40 - Variance resolution
Land Use Application – Variance

12 July 2019

Property Location

All of Government Lot 4 in Section 9, Township 29 north, Range 21 west, City of Lake Elmo, Washington County, Minnesota, according to government survey containing 59.4 acres of land. Also the south 30.6 acres of Government Lot 4 in Section 4, and of the southwest quarter of the southeast quarter of said Section 4, all in Township 29 north, Range 21 west, according to government survey, being the south 688 feet thereof.

Detailed Reason for the Request

In 1954, the Discalced Carmelite Nuns of Saint Paul, a non-profit corporation under the laws of the State of Minnesota, were looking for property upon which to build a permanent monastery. They were advised of the property which they now own and entered into negotiations with the owners of the property.

On 2 February 1954, Phillip C. Mackey and his wife Bernadine R. Mackey conveyed their property, along with its easement, to the Discalced Carmelite Nuns of Saint Paul by warranty deed, dated that day, and filed for record in Washington County, Minnesota, on 4 February 1954. As part of their deed of purchase, they obtained a right of way across the neighboring property to the north (owned by the Jesuit Retreat House) which gave them access to Demontreville Trail. This right of way has existed since 1904. At the time that the Carmelite Nuns purchased their property, the right of way across the Jesuit property was the only access from a public road to the Carmelite property, and it remains the only access today. The Carmelite Nuns have used this right of way continuously for 64 years.

In 1987 Carmel of the Blessed Virgin Mary (aka Carmelite Hermitage, Carmelite Hermitage of the Blessed Virgin Mary) was incorporated in the State of Minnesota as a community of Carmelite Priests and Brothers. In December of 1991, the City of Lake Elmo approved a master plan for the Carmelite Hermitage consisting of four phases: Phase 1, consisting of a community building and garage was constructed in 1991/92. Phase 2, consisting of a central courtyard with covered walkways (cloister) was constructed in 2001/2002. Phase 3 consists of a chapel and is the building we would now like to construct. Phase 4 will consist of a guest building and library. We hope to commence Phase 4 around 2022. Additionally, in 1991 the City of Lake Elmo granted a variance to the Carmelite Hermitage because the Hermitage also uses the easement over Jesuit land to access Demontreville Trail. The Jesuit Retreat House made no objection to the variance. The Carmelite Fathers and Brothers have used the easement continuously for 32 years.

In the intervening years, the Carmelite Hermitage has built four new buildings. In 2007, it requested and received an amendment to its master plan to add an additional building. This building was built in 2008. In none of the four construction projects did the City of Lake Elmo require the Carmelite Hermitage to obtain an additional variance. We maintain that our variance is valid for all buildings shown on the master plan which was approved by the City Council in 1991. City practice towards our Hermitage is evidence of our interpretation.
The Carmelite Hermitage wishes to construct its chapel, shown as phase three on its master plan. An objection has been raised by the Jesuit Retreat House that the Carmelite Hermitage needs a new variance to proceed with its chapel project because it does not meet the CUP requirements established by the City in 2000 and amended in 2006. Since there is doubt about the scope and language of the original variance as well as doubt about the meaning of the word direct in the City’s CUP requirements, City staff have suggested that we apply for a new variance that will clarify all issues related to access to our property. In a spirit of cooperation, we have agreed to apply for a new variance.

Variance Request, Practical Difficulties:

The Carmelite Hermitage of the Blessed Virgin Mary requests a variance from the direct access requirement of Section 154.600(B)(2) of the City Code. It further requests that the variance apply to all 90 acres of the property owned by the Discalced Carmelite Nuns of St. Paul and that the variance apply to all buildings currently existing on the property as well as all buildings shown on its approved master plan which remain to be built.

Strict enforcement of the City Code requiring direct access creates not only a practical difficulty but a serious hardship in that we would be unable to complete our monastery as planned and approved in 1991 by the City of Lake Elmo. In 1991, The City Council recognized the hardship that existed with regard to access to our property, and the Council granted us a variance at that time.

2. a.
Owner of Record
Discalced Carmelite Nuns of Saint Paul
8251 Demontreville Trail
Lake Elmo, MN 55042
651-777-3882

Officers of the Corporation
Sr. Angela Barrett
Sr. Maravillas Schwab
Sr. Rose Zaleski

Applicant
Carmelite Hermitage of the Blessed Virgin Mary
8249 Demontreville Trail
Lake Elmo, MN 55042
651-779-7351
carmelbvm@gmail.com

Officers of the Corporation
Reverend John Burns
Br. Joseph Bubanko
Br. Christopher Burnside
2.b.
Legal Description of the Property
All of Government Lot 4 in Section 9, Township 29 north, Range 21 west, City of Lake Elmo, Washington County, Minnesota, according to government survey containing 59.4 acres of land. Also the south 30.6 acres of Government Lot 4 in Section 4, and of the southwest quarter of the southeast quarter of said section 4, all in Township 29 north, Range 21 west, according to government survey, being the south 688 feet thereof.

PID
0902921120002

Parcel Size
90.109 acres
3,924,760 square feet

Existing Use of the Land
Religious. Two monasteries reside on the property whose members engage in a life of prayer, worship, gardening, arts, and crafts.

Current Zoning
Public Facility (PF)

2.c.
Section 154.600(B) (2) a. “Direct access is provided to a public street classified by the Comprehensive Plan as major collector or arterials.”

2.d.
The Carmelite Hermitage of the Blessed Virgin Mary requests a variance from the direct access requirement of Section 154.600(B)(2) of the City Code. It further requests that the variance apply to all 90 acres of the property owned by the Discalced Carmelite Nuns of St. Paul and that the variance apply to all buildings currently existing on the property as well as all buildings shown on its master plan which remain to be built.

2.e.
In December of 1991, the City of Lake Elmo approved the master plan of the Carmelite Hermitage consisting of four phases: Phase 1, consisting of a community building and garage was constructed in 1991/92. Phase 2, consisting of a central court yard with covered walkways (cloister) was constructed in 2001/2002. Phase 3 consists of a chapel and is the building we would now like to construct. Phase 4 will consist of a guest building and library. Additionally, the City of Lake Elmo granted a variance to the Carmelite Hermitage in 1991 since the Hermitage also used the easement over Jesuit land to access Demontreville Trail. The Jesuit Retreat House made no objection to the variance.

An attorney for the Jesuit Retreat House sent a letter to the City Attorney contending that the variance of 1991 is not valid for the construction of the chapel because the CUP code enacted by the City in 2000 and amended in 2006 requires direct access to a collector road or major arterials. The City Attorney stated that an argument can be made that we do not have direct access. Furthermore the City Attorney contends that the 1991 variance applied only to the building
which we built in 1991. We dispute this interpretation because it contradicts the practice of the City to date. We have built several buildings since 1991, including one in 2007 which required an amendment to our master plan, and in none of these cases did the City require a new variance. At a meeting with the City Attorney and the Director of Planning held at City offices on 2 July 2019, we stated our point of view. Nevertheless, we agreed to apply for a new variance in order to clarify all issues related to access to our property.

2.f.

The circumstances of our property are quite unique in that the property has never bordered a public road since it was divided from the property to the north in 1904. At that time, an unrestricted easement through the northern property was given in order that the southern property could have access to Demontreville Trail. The Discalced Carmelite Nuns received this easement as part of their deed of purchase.

In 2011 the Carmelite nuns acquired three small lots that border their property as well as Hidden Bay Trail. The lots are undeveloped and have no driveways into them. Hidden Bay Trail is not a collector road or major arterial street. It is not suitable as an access road to our property.

Strict enforcement of the City Code requiring direct access creates not only a practical difficulty but a serious hardship in that we would be unable to complete our monastery as planned and as approved by the City of Lake Elmo in 1991.

2.g.

Our plight was in no way created by ourselves; it is rather the result of the division of the property in 1904. Our circumstances were recognized as unique by the City Council in 1991, and for this reason the Council granted us a variance.

2.h.

Far from altering the essential character of the neighborhood, granting a variance will maintain the essential character of the neighborhood as it has always been since the Carmelite Nuns purchased the property in 1954. Building a driveway to Hidden Bay Trail would alter the neighborhood and is vehemently opposed by our neighbors on Hidden Bay Trail and Birch Bark Trail.
RESOLUTION 91-40

A RESOLUTION GRANTING A VARIANCE TO THE CARMELITE MONASTERY
FROM SECTION 301.090 I OF THE LAKE ELMO MUNICIPAL CODE
(FRONTAGE ON A PUBLIC ROAD)

WHEREAS, the Carmelite Monastery submitted an
application dated September 27, 1991 for a variance from
Section 301.090 I of the Lake Elmo Municipal Code in order
to be able to construct a building on a parcel which does
not have frontage on a public dedicated road; and

WHEREAS, the City Council, sitting as the Board of
Adjustment and Appeals held a public hearing pursuant to
Section 301.060 C. 3. of the Lake Elmo Municipal Code on
November 19, 1991 to consider such application; and

NOW, THEREFORE, BE IT RESOLVED that the Lake Elmo City
Council makes the following findings:

1. The applicant is the owner of the property
legally described as follows:

All of Government Lot 4 in Section 9, Township 29,
Range 21, according to government survey
containing 59.4 acres of land. Also the South
30.6 acres of Lot 4 in Section 4, and the South
West quarter of the South East quarter of said
Section 4, all in Township 29, Range 21, being the
Sough 688 feet, more or less, thereof.

2. The applicant has a private recorded easement
which allows access to the north to DeMontreville
Trail N. In order to connect to a public road on
the south or east side of the property, it would
be necessary for applicant to acquire a private
easement and incur substantial road construction
costs due to the existing topography.

3. The City's Law Enforcement Officials and the
City's Fire Chief have advised the City that the
private road is constructed in such a manner to
support emergency vehicles; that they can gain
access to such private roadway by notifying
applicant, and in an emergency circumstance, if
necessary, by cutting any security device on the
access gate; and that the private road system is
designed to facilitate the turn-around of
emergency vehicles.
4. This property is located in the PF (Public Facility) zoning district and there are no other parcels in the PF zoning district in similar circumstances.

5. The applicant's property is part of an overall campus currently served by a private easement to a public road.

6. The granting of the variance requested will not confer on the applicant any special privileges denied by this ordinance to owners of property in the same zoning district.

7. The building proposed to be constructed will house up to 14 additional people, but due to the nature of this religious community, there will be less than the normal amount of traffic.

8. The requested variance is the minimum variance which would be required to alleviate the hardship.

9. The construction of a building on this site, to be used as a monastery, will not be materially detrimental to the City's zoning ordinance.

NOW, THEREFORE, the City Council hereby grants a variance to the Carmelite Monastery from the provisions of Section 301.090 I., subject to the following conditions:

1. If the access gate is locked, the City's emergency personnel shall be provided with a key.

2. The City's emergency personnel shall be advised of the names and telephone numbers of on-site residents who can provide access to the site.

3. The private access road shall be maintained at all times, during all seasons, in a manner which allows access of emergency vehicles and shall be able to support emergency vehicles.

4. The Applicant shall comply with all State Building Standards and Safety Codes.

5. The City shall not be liable for damages incurred due to the use of wire cutters, or similar tools, when their use is necessary to gain access to property.

6. Any further expansion on this property shall comply with the then current zoning regulations.

[Signature]
David Johnson, Mayor

Attest:

[Signature]
Mary Kueffner, City Administrator
ITEM: Minor Subdivision – Outlot O of Inwood Addition (Inwood 6th Addition)

SUBMITTED BY: Ken Roberts, Planning Director

REVIEWED BY: Ben Prchal, City Planner

SUMMARY AND ACTION REQUESTED:
The Planning Commission is being asked to consider a minor subdivision request from RPS Legacy Desoto to divide Outlot O of the Inwood Addition into three separate parcels. The proposed minor subdivision would facilitate the transfer of 2.27 acres of land to Kwik Trip for the construction of a new fuel station/convenience store to be located on the southeast corner of Inwood Avenue North and 5th Street North. Staff is recommending approval of the minor subdivision as presented, subject to conditions of approval.

GENERAL INFORMATION
Applicant: RPS Legacy Desoto, Little Canada MN 55117
Property Owners: RPS Legacy Desoto, Little Canada MN 55117
Location: Outlot O, Inwood Addition. PID Number 33.029.21.13.0017
Request: Application for a Minor Subdivision to split said property into three separate parcels
Existing Land Use and Zoning: Open field; future development site within the Inwood PUD. Current Zoning: C – Commercial and HDR PUD
Surrounding Land Use and Zoning: North – Future commercial development site across 5th Street; East – Future High density residential site (Outlot A of Inwood) across Island Trail; West – Oakdale across Inwood Avenue North; South – Outlot C, Inwood (ponding area)
Comprehensive Plan: MU-C (mixed use commercial)
History: The City Council approved the general concept plan for the Inwood PUD on September 16, 2014, the preliminary plat on December 2, 2014 and the Final Plat on May 19, 2015 for Phase 1. Since then, the City has approved several additions for the Inwood PUD, all for property north of 5th Street North.
Deadline for Action: Application Complete – 7-12-2019
60 Day Deadline – 9-11-2019
Extension Letter Mailed – No
120 Day Deadline – N/A
Applicable Regulations: Chapter 153 – Subdivision Regulations
REQUEST DETAILS
The City of Lake Elmo has received a request from RPS Legacy Desoto (the property owners), for a minor subdivision to divide Outlot O of the Inwood Addition into three lots. The purpose of the proposed minor subdivision is to facilitate the transfer of 2.27 acres of land from the property owners to Kwik Trip for the construction of a new fuel station/convenience store. The proposed minor subdivision also would create 1.9-acre outlot (Outlot A) immediately east of the Kwik Trip site and a 5.72-acre outlot (Outlot B) lying west of Island Trail. The property owner intends to develop the future Outlot A for commercial uses and Outlot B for high-density residential land uses.

The City’s Subdivision regulations allow for certain subdivisions of land to be exempt from the City’s requirements for plating when no more than four lots are being created, when no new public infrastructure or rights-of-way or streets are necessary and when the proposed lots meet the minimum road frontage and area requirements of the underlying zoning. The proposed minor subdivision does not require any new public infrastructure or any new public streets as those improvements are in place. Each of the lots the minor subdivision would create exceed the commercial zoning requirements concerning lot size (20,000 square feet) and lot frontage (100 feet). As such, the proposed plat meets all the City requirements for a minor subdivision.

CITY ENGINEER REVIEW. I have attached the City Engineer’s review comments (dated August 6, 2019) for your consideration. Items of note are as follows and I have included these as recommended conditions of approval.

- The Preliminary plat and project plans should be revised to show the proposed lot lines and easements consistent on each set of plans.
- Drainage and utility easements must be provided for any public utilities constructed as part of this project, including City-owned watermain and hydrants, with easements shown on the plat and on the project plans. Any watermain lines serving hydrants placed internal to the site require minimum 30-foot-wide easements centered over the hydrants and pipe. These easements must be dedicated to the City and be provided in the City’s standard form of easement agreement.
- The developer/owner should consider adjusting the east lot line of Outlot A further west to facilitate shared commercial driveway access between Outlot A and Outlot B. As proposed, Outlot B would not have access to the new driveway along the east side of Outlot A as there would be a strip of land as part of Outlot A along the east side of the driveway.
- There were a number of other amendments required to the plan for approval, which can be reviewed in the memo. It is a recommended condition of approval that all of these comments be addressed on the plans before the applicant/developer submits a final plat for approval.

PARKLAND DEDICATION
When the City approved the Inwood PUD, the project plans showed property for public parks and trails over about 12 percent of the residential portion of the development (lying north of 5th Street). There were at that time, however, no provisions or park dedications made to the City for the commercial areas of the PUD or for area south of 5th Street.

The proposed development does not propose a public park and staff would not recommend a park land dedication with this proposal. The current City Code standard for park dedication for developments in a commercial zoning district is a fee of $4,500 per acre. At $4,500 an acre, the park dedication fee for this 2.27 acre site will be $10,215. The City will require the developer to pay this fee before issuing a grading or building permit for the site.
EASEMENT VACATIONS

The applicant also is requesting that the City vacate the existing easements on and around Outlot O as part of this plat approval. They are making this request as it would be easier and cleaner for the applicant to record the new plat with the existing easements vacated. The proposed plat will have new easements on it that will replace the easements the City will be vacating. City staff is recommending as a condition of approval that the plat or subdivision show a 10-foot-wide drainage and utility easement along the entire perimeter of the plat and property.

DRAFT FINDINGS

Staff is recommending that the Planning Commission consider the following findings with regards to the proposed Minor Subdivision:

- That the Minor Subdivision is consistent with the Lake Elmo Comprehensive Plan and the Future Land Use Map for this area.
- That the Minor Subdivision complies with the minimum lot frontage and area requirements of the City’s C – Commercial Zoning District.
- That the Minor Subdivision complies with the City’s subdivision ordinance and specifically the requirements concerning exceptions to platting.

CONDITIONS OF APPROVAL

Recommended Conditions of Approval. Staff recommends the following conditions of approval for Inwood 6th addition:

1. All required modifications to the plans as requested by the City Engineer in the review letter dated August 6, 2019 shall be incorporated into the plat and project plans. The City shall approve all plans before releasing the final plat for recording.
2. The developer shall pay a cash contribution in lieu of land for park dedication equal to 10% of the fair market value of the Lot 1, Block 1.
3. The project landscape plan shall be approved by the City’s Landscape Architect before recording of the final plat.
4. The final plat shall show a 10-foot-wide drainage and utility easement along all property lines.
5. All easements as requested by the City Engineer and Public Works Department shall be documented on the Final Plat before the execution of the final plat by City Officials.
6. Before recording the Final Plat, the Developer shall enter into a Developers Agreement or Site Work Agreement with the City. This agreement shall be in a form acceptable to the City Attorney and shall delineate who is responsible for the design, construction, and payment of public improvements and other site management and operation considerations including erosion control and construction staging.
7. Final Plat shall be contingent upon the City receiving separate drainage and utility easements in the City’s standard form of easement agreement for all off-site development improvements (beyond the plat limits). All off-site easements must be clearly shown on the street, grading and utility plans, with all dimensions labeled. The easements must be obtained before the start of grading or construction.
RECOMMENDATION:
Staff recommends that the Planning Commission recommend approval of the minor subdivision request from RPS Legacy Desoto to divide Outlot O of Inwood Addition into three separate parcels.

Suggested motion:

“Move to recommend approval of the Minor Subdivision request to split Outlot O of Inwood Addition into three lots, subject to the conditions of approval as listed in the City staff report.”

ATTACHMENTS:
1. Minor Subdivision Survey
2. City Engineer Review comments dated August 6, 2019
INWOOD 6TH ADDITION

SITE DATA

TOTAL SITE ACRES: 6.00 AC
TOTAL OUTLOT #1: 4.00 AC
TOTAL OUTLOT #2: 2.00 AC

LEGEND

- Existing Survey
- Surveyed Area
- Proposed Area

VICTORY MAP

ENVIRONMENTAL

- RPS LEGACY LLC
  2935 Country Drive, Suite 100
  Little Canada, MN  55117

INWOOD 6TH ADDITION

Lake Elmo, Minnesota

FILE NO: 1870

PRELIMINARY PLAT

Lake Elmo, Minnesota

INWOOD 6TH ADDITION

Name: Thomas R. Balluff
Signature: 
Date: 6/28/19
License #: 40361

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.
MEMORANDUM

Date: August 6, 2019

To: Ken Roberts, Planning Director
Cc: Chad Isakson, P.E., Assistant City Engineer
From: Jack Griffin, P.E., City Engineer

Re: Inwood 6th Addition – Kwik Trip Preliminary Plat Review

An engineering review has been completed for the Inwood 6th Addition – Kwik Trip Convenience Store. A Preliminary Plan submittal was received on July 12, 2019. The submittal consisted of the following documentation prepared by Carlson McCain:

- Kwik Trip Store #1078 Site Plans dated June 28, 2019.

STATUS/FINDINGS: Engineering has prepared the following review comments based on the plans submitted.

PRELIMINARY PLAT AND EASEMENTS

1. Outlot ownership should be identified on the Preliminary Plat and on the Preliminary Plans. Outlots A and B should be shown as Developer owned.

2. Lot lines and easements are not shown consistently between the Preliminary Plat and the Preliminary Plans. The plans must be revised to accurately reflect the proposed plat. The lot lines and easement locations may be subject to revision once they can be accurately reviewed with respect to the proposed improvements.

3. Drainage and utility easements must be provided for any public utilities constructed as part of the project, including City owned watermain and hydrants, with the easements shown on the preliminary plans.

4. Consideration should be given to adjusting the east lot line of Outlot A further west to facilitate a shared commercial driveway access between Outlot A and Outlot B. See comment #3 below for Site Plans, Traffic and Access Management.

5. Final Construction Plans and Specifications must be prepared in accordance with the latest version of the City Engineering Design Standards Manual, using City details, plan notes and specifications and meeting City Engineering Design Guidelines. The Final Construction Plans must include detailed existing condition information surrounding the plat boundaries to demonstrate that the proposed improvements match at the construction limits. Additional existing condition information is required along 5th Street North including existing small utilities, lane widths and pavement markings, existing street signs, and other features that may be impacted by the improvements.

SITE PLANS, TRAFFIC AND ACCESS MANAGEMENT

1. Access Management Guidelines were reviewed and approved along 5th Street North as part of the Inwood PUD Preliminary Plat/Plan application process (see SRF Consulting review memo dated December 15, 2014). The Preliminary Plans were amended to eliminate access between Inwood Avenue (CSAH 13) and Irene Avenue in accordance with this memorandum. Irene Avenue is located approximately 660 feet east...
of Inwood Avenue which meets the City’s access spacing requirements for streets and commercial driveways along a collector roadway.

2. The Kwik Trip Store site improvements show a proposed full access commercial driveway along the south leg at Irene Avenue and an intermediate right-in/right-out access to be located approximately half way between Inwood Avenue and Irene Avenue with the construction of a right turn lane. These improvements have also been reviewed by SRF Consulting with the following recommendations:

- The proposed full access commercial driveway at Irene Avenue is consistent with the approved preliminary plans and access spacing requirements for 5th Street north. Right and left turn lanes are already in place in anticipation of this intersection.
- The proposed intermediate right-in commercial driveway access is acceptable with modifications to the proposed right turn lane. The right turn lane should be constructed using a 150-foot full width turn lane with 5:1 taper for a total turn lane length of 210 feet.
- The proposed intermediate right-out commercial driveway access should be eliminated. It is recommended to design this driveway access as right-in only with internal signage directing traffic to the full driveway access intersection at Irene Avenue. A “No U-turn” sign should also be placed on eastbound 5th Street at the intersection with Irene Avenue. If a right-out access is permitted traffic safety concerns exist with vehicles attempting U-turns at Irene Avenue and 5th Street which is an uncontrolled intersection.

3. It is recommended that both the full access at Irene Avenue and the intermediate right-in access be constructed as shared commercial driveways to further manage access spacing along 5th Street North.

- The full commercial driveway access at Irene Avenue should be constructed as a shared access to both Outlot A and Outlot B.
- It appears from the site plans that the right-in access driveway is proposed as a shared access between Lot 1, Block 1 and Outlot A, with the lot line dividing the access road.

4. Inwood Avenue (CSAH 13) and 5th Street North Traffic Signal. A traffic impact study must be completed to review and evaluate the impacts to the intersection at Inwood Avenue (CSAH 13) and 5th Street North. A financial contribution to traffic signal should be considered.

MUNICIPAL WATER SUPPLY

1. The proposed property is located in the Southwest Planning MUSA and water system high pressure zone.

2. Water availability charges and connection charges will apply to the service connections. A Met Council SAC determination will be required to determine the WAC/Connection charges for each building.

3. Connection to the municipal water supply is readily available to serve this property. Based on the proposed Inwood PUD 6th Addition plat lines, the existing watermain stub for the Kwik Trip Store (Lot 1, Block 1) will now be located on the new Outlot A and may need to be extended across a portion of Outlot A to serve Lot 1, Block 1. The applicant will be required to connect, at its sole cost, to the existing 8-inch DIP stub on Outlot A, and/or the existing 16-inch HDPE pipe located along Inwood Avenue, and extend watermain and any required hydrants internal to the site.

4. The project proposes to extend a 6-inch DIP watermain internal to the site with a hydrant placed near the rear of the proposed building. The portion of the watermain internal to the site that serves a hydrant must be City owned and operated and may need to be upgraded to an 8-inch DIP pipe based on fire suppression requirements. The applicant must submit fire suppression requirements for the building to determine the size of watermain up to each hydrant.

5. The applicant will be responsible to place hydrants throughout the property at the direction of the Fire Department. All fire hydrants and connecting water mains shall be owned and maintained by the City.

6. The applicant may be required to construct a looped watermain with a second connection point, depending upon site layout, or connect to the existing 16-inch HDPE pipe located along Inwood Avenue.

7. Any watermain lines serving hydrants placed internal to the site will require minimum 30-foot easements centered over the hydrant and pipe. Easements must be dedicated to the City and be provided in the City’s standard form of easement agreement.
MUNICIPAL SANITARY SEWER
1. The proposed property is located in the Southwest Planning MUSA current Regional Sewer Staging Plan and would discharge to the MCES WONE Interceptor.
2. Sewer availability charges and connection charges will apply to the service connections. A Met Council SAC determination will be required to determine the SAC/Connection charges for each building.
3. Connection to the municipal sanitary sewer system is readily available to serve this property. The applicant will be required to connect, at its sole cost, to the existing 8-inch PVC stub that was installed to serve this property. A 6-inch diameter private sewer service is proposed to be extended internal to the site to serve the Kwik Trip Store. No public sanitary sewer mains are proposed to be extended internal to the site.
4. Based on the proposed Inwood PUD 6th Addition plat lines, the existing sanitary sewer stub for the Kwik Trip Store (Lot 1, Block 1) will now be located on the new Outlot A and will need to be extended across a portion of Outlot A to serve Lot 1, Block 1. A private sewer service easement may be needed between the property owners of Outlot A and Lot 1, Block 1.

STORMWATER MANAGEMENT
1. A State and South Washington Watershed District (SWWD) permit will be required. The site plan is subject to a storm water management plan meeting State, SWWD and City rules and regulations.
2. The storm water management report indicates that the existing storm water facilities for this property, located just south of the property, have been designed for Lot 1, Block 1 and Outlot A to each be 75% impervious. The narrative also indicates that the proposed Kwik Trip site (Lot 1, Block 1) is proposed to be 70% impervious. Therefore, no additional storm water BMPs are proposed. Preliminary Plat approval should be contingent upon verification of these assumptions by the SWWD and City storm water consultant.
3. The applicant is proposing a private storm sewer system internal to the commercial site to collect and convey storm water runoff. The storm water will be discharged to the City owned storm water pond and infiltration basin located to the south of the proposed site. This system was constructed as part of the Inwood PUD development and will be turned over to the City upon acceptance of the Inwood PUD 1st Addition development improvements.
4. A new (2nd) storm water discharge location to the existing storm water pond is proposed. A sump manhole is shown on the plans as required with a SNOUT oil and debris stop device. The sump manhole and SNOUT device should be relocated from manhole #102 to manhole #101.
5. The storm sewer system constructed for this development should remain privately owned and maintained. The applicant will be required to execute and record a Stormwater Maintenance and Easement Agreement in the City’s standard form of agreement. The agreement should provide a maintenance plan defining the maintenance responsibilities for the private owner, the type of maintenance and the maintenance intervals, including the SNOUT oil and debris stop device.
6. The storm sewer minimum pipe size should be 15-inch diameter pipe.
ITEM: Conditional Use Permit - Kwik Trip Convenience Store/Fuel Station

SUBMITTED BY: Ken Roberts, Planning Director

REVIEWED BY: Ben Prchal, City Planner
Jack Griffin, City Engineer
Greg Malmquist, Fire Chief

SUMMARY AND ACTION REQUESTED:
The Planning Commission is being asked to consider a request from RPS Legacy Desoto Properties and Kwik Trip, Inc. for a conditional use permit (CUP) for the construction of a Kwik Trip convenience store/fuel station with a car wash. The City Code requires City approval of a Conditional Use Permit for this request as gasoline (fuel) stations and car washes require approval of a conditional use permit in the Commercial zoning district. This request is for the property located immediately east of Inwood Avenue (CSAH 13) and immediately south of 5th Street North. Staff is recommending approval of the requests subject to compliance with the conditions as noted in this report.

GENERAL INFORMATION
Applicant: RPS Legacy Desoto Properties and Kwik Trip, Inc. (Nathan Byron); PO Box 2107, La Crosse, WI 54603.

Property Owners: RPS Legacy Desoto Properties, Little Canada, MN 55117

Location: Vacant site lying immediately east of Inwood Avenue North (CSAH 13), immediately south of 5th Street North. PID Number: 33.029.21.13.0017.

Request: Application for minor subdivision and conditional use permit approval of a gasoline (fuel) station with a convenience store and a car wash.


Surrounding Land Use and Zoning: North – vacant land, guided for C – Commercial (across 5th Street); west – Golf Course in Oakdale across Inwood Avenue; south – Existing storm water ponding area; east – vacant commercial/high density residential planned land (Inwood PUD) on the south side of 5th Street North

Comprehensive Plan: MU-C (Mixed use Commercial)

History: The City Council approved the general concept plan for the Inwood PUD on September 16, 2014, the preliminary plat on December 2, 2014 and the Final Plat on...
May 19, 2015 for Phase 1. Since then, the City has approved several additions for the Inwood PUD, all for property north of 5th Street North. The site for Kwik Trip was graded as part of the Inwood PUD. Public Utilities (sewer and water) are available to the site from 5th Street with the primary street access from 5th Street North.

**Deadline for Action:** Application Complete – 7/12/2019
60 Day Deadline – 9/11/2019
Extension Letter Mailed – No
120 Day Deadline – NA

**Applicable Regulations:**

- Chapter 153 – Subdivision Regulations
- §154.106 Conditional Use Permits
- Article 14 – Commercial Districts (C)
- Article 7 – Specific Development Standards (§154.305)
- §150.270 Storm Water, Erosion, and Sediment Control
- §150.035 Lighting, Glare Control and Exterior Lighting Standards

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**PLANNING AND ZONING ISSUES**

The proposed Kwik Trip site is guided for MU-C (Mixed Use Commercial) in the City’s 2040 Comprehensive Plan. The overall subdivision and site plan have been prepared in order to meet the standards for the Commercial zoning district in terms of lot size, lot widths, building setbacks and other design criteria. It should be noted that while a neighborhood convenience store is a permitted use in the Commercial zoning district, the City Code lists gasoline stations as a conditional use. In addition, car washes, while accessory to the gasoline station use, also are a conditional use. For these reasons, the applicant has applied for a conditional use permit for approval of the gasoline station and car wash land uses.

**Minor Subdivision**

The City of Lake Elmo has received a request from RPS Legacy Desoto Properties and Kwik Trip, Inc. for a minor subdivision to subdivide 9.9 acres of land located within the Inwood PUD into three lots. The western most lot of 2.3 acres is proposed for the constructing a Kwik Trip convenience store/fuel station. The proposed plat would be for property currently owned by RPS Legacy Desoto Properties and would be located immediately east of Inwood Avenue (CSAH 13) and immediately south of 5th Street North. The parcel had been used for agricultural purposes before the development of the Inwood PUD.

From staff’s perspective, the applicant’s subdivision proposal meets all the City submission requirements for a minor subdivision. The proposed plat is limited in scope and scale as there are no new proposed streets or public facilities proposed with the land subdivision. To better define what constitutes a project of limited scope or scale in staff’s judgment, a limited scale plat would involve subdivision of a limited number of parcels without the need for major infrastructure improvements (utility extensions, new public roads, etc.). In this context, the proposed plat is of limited scale and scope according to staff.

The proposed plat would subdivide the subject property into three parcels; one parcel (Lot 1, Block 1) for the proposed Kwik Trip and two outlots for a future development adjacent to the proposed Kwik Trip. The proposed size of the site (Lot 1) for the Kwik Trip is 98,881 square feet, or 2.27 acres. The proposed area for Outlot A would be 1.9 acres, which will likely be used for future
commercial development while Outlot B is proposed to be 5.72 acres which is guided for high-density residential development in the Inwood PUD.

Staff provided a more extensive review and recommendation about the proposed subdivision (to be known as Inwood 6th Addition) in a separate report.

**Kwik Trip Zoning and CUP Review**

In reviewing the applicable requirements from the City’s zoning and subdivision regulations, staff has found that the proposed project is in conformance with these requirements. More specifically, staff reviewed the proposed gasoline station in light of the following:

- **Lot Size.** The proposed lot being platted for the commercial use is 98,881 square feet, which meets the minimum lot size requirement of 20,000 square feet per the Commercial zoning district.

- **Building Setback Requirements.** The proposed gasoline station/convenience store meets the required building setbacks (front: 30 feet, corner side yard: 25 feet, interior side yard: 10 feet and rear yard: 10 feet) for the Commercial district. In addition, the car wash meets the 10-foot setback requirement for accessory buildings.

- **Parking Setbacks.** The proposed parking stalls all meet the required parking setback requirements per the Commercial zoning district.

- **Impervious Surface.** The maximum amount of impervious surface in the Commercial zoning district is 75%. The propose project complies with this requirement, as there is 68,845 square feet of pervious surface proposed, which is 69% of lot area.

- **Parking Stalls.** Per the City’s off-street parking requirements, gasoline stations are required to have one parking stall for every 250 square feet of gross floor area used for sales. Using this calculation, staff determined that 23 parking stalls would be required. The applicants are proposing 30 standard and 2 handicap parking stalls, easily meeting the City’s parking requirement.

- **Specific Development Standards – Gasoline Stations and Car Washes.** The City adopted specific development standards (§154.305) for gasoline stations and car washes, both of which are included in this development proposal. In reviewing these standards, staff found that the application was in compliance with the specific development standards related to these two land uses, including the following:
  - **Access to a Collector.** The proposed gas station meets the minimum lot size requirements and has access to a collector street (5th Street North.).
  - **Canopies.** The proposed canopy meets the required setback of 20 feet from all property lines. In addition the canopy columns reflect the design and building materials of the principal building.
  - **Outdoor Displays.** Proposed outdoor merchandise is either located under the canopy or adjacent to the principal structure, meeting all setback requirements.
  - **Car Wash Enclosure.** The proposed car wash has doors that enclose the car wash while in operation.
Sounds from Speakers. The car wash area is not within close proximity to any residential districts or properties. Any sounds from speakers related to the car wash should not negatively impact any residential properties.

Based on Staff’s review of the proposed Site Plan and the supporting plans for the proposed gasoline station and car wash, the applicant’s plans meet or exceed all applicable Zoning Code requirements for gasoline stations and car washes in Commercial districts.

In terms of parkland dedication, the Subdivision Ordinance requires any property being developed in Commercial districts to pay a fee as determined by Resolution by the City Council. Currently, the fee for parkland dedication for commercial properties is $4,500 per acre of land subdivided for commercial use. In this case, the applicant is proposing to subdivide 2.27 acres of land for Kwik Trip. The remaining land is being left in two outlots. Using the $4,500 fee per acre, the applicant will be required to provide $10,215 (2.27 acres x $4,500 per acre = $10,215) to the City to meet the City’s parkland dedication requirement. Staff would recommend that the developer/applicant provide this fee to the City in advance of releasing the final plat for recording (Condition #4).

Finally, as the gasoline station and car wash is considered a conditional use in the Commercial zoning district, the applicant has applied for a conditional use permit (CUP). Per the procedure described in Article 3 of the Zoning Code (§154.106), the City is required to make findings related to the proposed conditional use. Generally speaking, these finding are required to ensure that no negative impacts to the adjacent properties or broader community are associated with the proposed use. Staff reviewed all 12 required findings per the procedure for CUPs and found the proposed use meets all City criteria for granting a conditional use permit. As part of the draft findings for recommending approval of the request, staff has included the required findings that relate to the conditional use permit.

**REVIEW AND ANALYSIS**

As currently submitted, the proposed minor subdivision and Kwik Trip facilities will meet all applicable City requirements for conditional approval. Any deficiencies or changes that staff has identified are listed in the recommended conditions of approval.

Also, the City has received a detailed list of comments from the City Engineer and City’s Landscape Architect about the proposed gasoline station, in addition to informal review by the City’s Fire Chief and Building Official. I have attached the written review comments from the City Engineer and Landscape Architect for consideration by the Planning Commission.

In addition to the general comments that have been provided in the preceding sections of this report, Staff would like the Planning Commission to consider the following discussion areas as well:

- **Comprehensive Plan.** The proposed subdivision and commercial use are consistent with the 2040 Lake Elmo Comprehensive Plan for this area of the city.

- **Zoning.** The zoning for this part of the Inwood PUD is C-PUD (Commercial PUD). The submitted development plans demonstrate compliance with the City’s Commercial zoning district standards and are consistent with the approved PUD. Neighborhood Convenience Store is a permitted use in the Commercial zoning district, while gasoline station and car wash are conditional uses. The applicants have applied to the City for a conditional use permit for the fuel station/convenience and car wash in conjunction with the platting request.
• **Subdivision Requirements.** The City’s Subdivision Ordinance includes a fairly lengthy list of standards that must be met by all new subdivisions, and include requirements for blocks, lots, easements, erosion and sediment control, drainage systems, monuments, sanitary sewer and water facilities, streets, and other aspects of the plans. City Staff have not identified any conflicts or major issues with this proposal in regards to the City’s Subdivision Ordinance.

• **Access.** In terms of access, the proposed site plan for the development shows two access driveways to 5th Street North along the northern boundary of the site. To account for the appropriate access spacing necessary for 5th Street, the applicants are showing the western access to be a right-in, right-out (limited access) into the Kwik Trip site and the driveway farther to east would provide full access to this site and property to the east, supporting all turning movements. The City Engineer has reviewed the proposed access locations and found them to be acceptable with the proposed access spacing. He did however, have other concerns with the proposed driveways.

  o **Western (intermediate) Right-In/Right-Out Out Access.** To provide access to the proposed gasoline station, the applicant is proposing two access locations (west and east) along 5th Street North. The City Engineer reviewed the proposed access locations and found the spacing to be acceptable. For the western access point, the developer is proposing to construct the driveway for traffic to move right in and right out. They also are proposing to add a right turn lane to the eastbound drive lanes on 5th Street to help facilitate access into the site.

  Staff is recommending that the proposed western access be permitted only as a right-in only. This is because traffic leaving the site at this location may be tempted to do a U-turn at Irene Avenue to then proceed west on 5th Street to Inwood Avenue. The proposed design width for this driveway is 40 feet which is too wide for a right-in only driveway. Staff is comfortable working with the applicant to arrive and the best suited design for the right-in only western access (Condition #1b).

  o **Eastern Shared Access.** The developer also is showing a driveway across from the future Irene Avenue. This driveway location would serve as a full access (right and left turns in and out) and is consistent with the spacing requirements for access and driveways along 5th Street. Staff is recommending the developer review the design width of the eastern shared full access driveway. It is proposed to be 30 feet wide but with the expected traffic movements and turn lanes, the developer may want to expand it to 40 feet in width to allow for both right and left turn lanes to exit the site. The suggested expansion of 10 feet of additional width would allow better circulation in and out of the proposed gasoline station, as well as whatever future use is located on Outlot A. In addition to the suggested modification to the design of the eastern access drive, staff also is recommending that the applicant provide an access easement along the portion of shared access driveway that is located on Outlot A (Condition #2). The goal is to ensure that Kwik Trip and the users of the development on Outlot A have dedicated full access to the eastern driveway.

• **Landscaping.** The applicant has submitted a Landscape Plan (Sheet L1) as part of the proposed gasoline station. The City’s landscaping provisions (§154.258) require 1 tree per 50 feet of street frontage. In addition to street plantings, the City’s requirements include 5 trees per developed acre. Given these requirements, staff calculated that 13 street trees are
required (based on approximately 630 total feet of street frontage on 5th Street and Inwood Avenue) and 12 interior trees are required (5 trees per acre). In addition, the Code requires the developer to plant 1 tree for every 50 feet of perimeter parking lot frontage. In this case, that would require 3 trees. The total required amount of trees per staff’s calculation is 28 trees. The applicants are proposing to plant 25 trees of both deciduous and coniferous varieties, thus proposing three fewer trees than required by the City Code. In addition to the trees, the applicants are proposing a variety of shrubs and planted beds.

Staff distributed the Landscape Plan to the City’s Landscape Consultant for his review. I have attached his comments for your reference. Staff would recommend as a condition of approval (Condition #5) that the applicant update the Landscape Plan to meet all City requirements and to reflect the changes suggested by the City’s Landscape Architect. In addition to his review, staff would recommend that any modifications related to the number or location of trees, the plant species or location be incorporated in the Final Landscape Plan for City approval before the City issues a building permit.

- **Architectural Design Review.** City staff reviewed the architectural plans and architectural renderings of the proposed Kwik Trip gasoline station and car wash for consistency with the Lake Elmo Design Guidelines and Standards Manual. Overall, Staff finds that the proposed building meets the guidelines and standards for Commercial development contained within the manual and would offer the following review comments:
  
  o **Building Materials.** The proposed building is chiefly constructed of red modular brick. Accent materials include limestone and tan brick soldier course. The proposed building materials meet the City standards for building materials in the Commercial district.
  
  o **Streetscape.** A significant portion of the proposed landscaping is located along the public right-of-way for 5th Street North. The City Code requires that a landscape frontage strip at least five feet wide be provided between parking areas and public street, sidewalks or paths. This area is to provide screening that is between 3.5 feet and 4 feet in height and not be less than 50 percent opaque on a year-round basis. The City’s landscape architect is recommending that the applicant change the plans to add landscaping/screening along 5th Street as required by the City Code.
  
  o **Storage Areas.** The City requires that trash collection areas be located out of the view of the public right-of-way. The proposed site plan indicated that the trash collection area will be enclosed and located in the southwest part of the site. The proposed trash collection area meets the intent of the standard.
  
  o **Entry.** The proposed convenience store has accent treatments of both limestone and tan brick soldier course around the entryway. In addition, the peaked roof at the entry provides an additional architectural feature.

- **Photometric Plan.** To demonstrate compliance with the City’s sign and exterior lighting ordinances, the applicant has submitted a Photometric Plan. The Photometric Plan includes information about the lighting fixtures proposed for the site. In addition, it provides information about the light intensity, measuring the foot candles across the entire site and beyond. Based on the plan, the applicants are proposing pole lights that are 16 feet in height
and that include a LED fixture with a 90 degree cutoff. In addition, the proposed lighting internal to the canopy are recessed LEDs. From staff’s review of the photometric plan, the proposed lighting is consistent with the City’s ordinance, as the plan does an effective job of limiting light from being directed outside of the property. Generally speaking, the foot-candle reading at or near the property boundaries are all very low and are consistent with the ordinance. In addition, the 16-foot pole lights do not exceed the maximum height allowed for such lighting (30 feet maximum height for lights in non-residential districts with cutoff 90 degrees or less). When City staff reviews the building permit for the proposed gasoline station, a more in-depth review of the proposed lighting will be completed to ensure conformance to the City’s ordinance.

- **Signage Plan.** As part of the plat and conditional use permit applications, the applicants have submitted a signage plan. The signage plan includes multiple sign types, including wall signs, canopy signs and a monument or ground sign. From a high level review perspective, it appears that the proposed signage will meet the City’s Sign Ordinance. However, the applicant will be required to submit sign permits for the proposed signage, at which time staff will conduct a more in-depth review. Staff is recommending that the applicant submit sign permits for any proposed signage (Condition #6)

- **City Engineer Review.** The City Engineer has provided the Planning Department with a detailed comment letter (Attachment #8) as a summary of his review of the proposed minor subdivision and the gasoline station. The majority of the Engineer’s comments relate to traffic and access management. In addition, the Engineer identifies other aspects of the proposed plan that currently do not meet City Engineering Standard, including utilities, grading and erosion control. As a condition of approval, staff is recommending that all modification requested by the City Engineer in his memo dated August 6, 2019 be incorporated into Final Plans before City approval of the building permit (Condition #1).

- **Fire Department Review.** The Fire Chief has reviewed the proposed gasoline station project plans. He found they are generally consistent with City requirements but did provide the following comments:

  The following items need to be addressed:
  - Must meet all applicable codes in the 2015 MN State Fire Code.
  - Ensure proper emergency vehicle access throughout the site.
  - Fire hydrant locations throughout the site to be reviewed by Fire Chief, Public Works Director and City Engineer.
  - Additional items to be addressed as we move forward:
    - Emergency Fuel Shut Off
    - FDC (Fire Department Connection) Location
    - Lockbox
    - Location of annunciator panel
  - Provide basic overhead view footprint plan of the building, non-architectural, showing rooms, access, utility locations, etc.
Additional review and approval of the project plans by the Fire Chief will be required upon the submission of the building permit.

- **Trails and Sidewalks.** There is an existing concrete sidewalk on the south side of 5th Street adjacent to the project site. The applicant is proposing to relocate a part of the sidewalk to accommodate the proposed right-hand turn lane in to the site.

- **Watershed Districts.** The project area lies within the South Washington Watershed District (SWWD). It should be noted that the developer must meet all the rules of the SWWD and will need to secure permits from the SWWD in order to proceed with the development as planned (Condition #3).

Based on the above Staff report and analysis, staff is recommending approval of the conditional use permit for the proposed Kwik Trip convenience store/fuel station and car wash on the corner of Inwood Avenue and 5th Street North, subject to the conditions of approval. The recommended conditions are as follows:

**Recommended Conditions of Approval:**

1) All required modifications to the proposed plat and project plans as requested by the City Engineer in a review memo dated August 6, 2019 shall be incorporated into the final plat and project plans before the City approves the building permit for the gasoline station. Required modifications include, but are not limited to, the following:

   a. The design of the east-bound right turn lane proposed for the western access on 5th Street must be revised to incorporate a 150-foot full width turn lane with a 5:1 taper to account for the design speed of the road as suggested by the City Engineer and the supporting consultant.

   b. The design of the western driveway access onto 5th Street must be revised per the recommendation of the City Engineer to accommodate right turns in only. The design of the access must be approved by the City before the City approves the building permit.

   c. The width of the eastern full access driveway may need to be modified to 40 feet to allow for one inbound lane (16 feet wide) and two outbound lanes (left and right turn lanes, 12 feet wide).

2) The applicant shall provide for an access easement over the entire portion of the shared western driveway located on Lot 1, Block 1 to provide dedicated access for Outlot A.

3) The developer shall acquire the needed permits from South Washington Watershed District before starting any grading or development activity on the site.

4) The applicant shall pay the City a parkland dedication fee in the amount of $10,215 before the City releases to the minor subdivision or final plat for recording.
5) The Landscape Plan shall be updated and reviewed by the City’s Landscape Consultant. Any modifications requested by the Landscape Consultant shall be incorporated into the Final Landscape Plan before the City approves the building permit for the gasoline station.

6) The applicant shall secure a sign permit from the City for all signage associated with the proposed gasoline station.

7) Before starting any site work and before recording the Final Plat, the Developer shall enter into a Developers Agreement or Site Work Agreement with the City. This agreement shall be in a form acceptable to the City Attorney and shall delineate who is responsible for the design, construction, and payment of public improvements and other site management and operation considerations including erosion control and construction staging.

**DRAFT FINDINGS**

Staff is recommending that the Planning Commission consider the following findings with regards to the proposed conditional use permit for a Kwik Trip fuel station/convenience store and car wash to be located on the southeast corner of Inwood Avenue and 5th Street:

- That the proposed Kwik Trip fuel station/convenience store will meet all City zoning ordinance requirements, such as landscaping, erosion and sediment control.
- That the proposed Kwik Trip fuel station/convenience store will be consistent with the City’s engineering standards provided the developer updates the plans to address the City Engineer’s comments documented in a letter August 6, 2019.
- That the proposed architectural design of the gasoline station, canopy and car wash are consistent with the Lake Elmo Design Guidelines and Standards Manual.
- That the proposed use will not be detrimental to or endanger the public health, safety, comfort, convenience or general welfare of the neighborhood or City.
- That the use or development conforms to the City of Lake Elmo Comprehensive Plan.
- That the use or development is consistent with the Inwood PUD and will be compatible with the existing neighborhood.
- That the proposed use meets all specific development standards for such use listed in Article 7 of the Zoning Code.
- That the proposed use will be designed, constructed, operated and maintained so as to be compatible in appearance with the existing or intended character of the general vicinity and will not change the essential character of the area.
- That the proposed use will not be hazardous or create a nuisance as defined under the Zoning Code to existing or future neighboring structures.
- That the proposed use will be served adequately by essential public facilities and services, including streets, police and fire protection, drainage structures, refuse disposal, water and sewer systems.
• That the proposed use will not create excessive additional requirements at public cost for public facilities and services and will not be detrimental to the economic welfare of the community.

• That the proposed use will not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property or the general welfare because of excessive production of traffic, noise, smoke, fumes, glare or odors.

• That vehicular approaches to the property will not create traffic congestion or interfere with traffic on surrounding public thoroughfares.

• That the proposed use will not result in the destruction, loss or damage of a natural or scenic feature of major importance.

RECOMMENDATION:

Staff recommends that the Planning Commission recommend approval of the Conditional Use Permit for the proposed Kwik Trip gasoline station/convenience store and car wash to be located on the southeast corner of Inwood Avenue and 5th Street North. Staff is recommending approval of the conditional use permit subject to the conditions of approval as listed in the Staff report. Suggested motion:

“Move to recommend approval of the Conditional Use Permit for the proposed Kwik Trip fuel station/convenience store and car wash to be located on the southeast corner of Inwood Avenue and 5th Street North, subject to the conditions of approval as drafted by Staff and based on the findings of fact listed in the Staff Report.”

ATTACHMENTS:

1. Project Narrative/Cover Letter
2. Final Site Survey
3. Inwood 6th Addition Minor Subdivision (Preliminary Plat)
4. City Maps and Project Plans
5. Kwik Trip Construction Plans (15 pages)
6. Kwik Trip Architectural Rendering
7. Kwik Trip Signage Plans (8 pages)
8. City Engineer Review Memorandum dated 8/06/2019
9. Landscape Architect’s review dated 7-22-19
10. Neighbor e-mail comments dated 8-05-2019
City of Lake Elmo  
3800 Laveine Avenue North  
Lake Elmo, MN 55042  

Letter of Intent  

July 10th, 2019  

To whom it may concern,  

This letter is intended to accompany our submittal for our application to the City of Lake Elmo for the required Conditional Use Permit application for our proposed project at the SE corner of inwood Ave North and 5th Street North.  

Kwik Trip, Inc. is proposing the construction of a convenience store with an attached carwash, attached dumpster enclosure, and auto fueling canopy. Included in the submittal is: 1 copy full submittal (Digital Email), 5 copies (full size) Civil Plans, 10 copies (11 x 17) Civil Plen, 10 copies (11x17) Sign Plan, 10 copies ALTA survey with legal description, and (8.5 x 11) copies of all other documents requested. Also included is one copy of the Stormwater management plan.  

The proposed method of operation for this development will be consistent with that for our existing convenience stores within the area. The requested hours of operation will be 24 hours for all uses. The type of products that will be sold will be similar to that of our existing stores: gasoline, in line diesel, E-85, groceries, bakery and dairy, hot and cold food and beverages, tobacco products, lotto, convenience store merchandise, ice, and propane. The outside merchandising of products is being requested next to the store (ice and propane) and merchandising under the gas canopy. The proposed store is projected to have between 25-30 full and part time employees, with 2-8 on staff at any given time.  

The proposed architectural plan will consist of a brick facade with standing seam metal roof. The building and canopy fascia will tie in with franchise colors. We have recently revised our prototype plans to have a larger retail floor area as well as kitchen and mechanical space all on the main level with no basement. The total estimated project costs excluding land and equipment is $2,000,000.  

Kwik Trip would be happy to provide any additional information or answer any questions or concerns you may have with our submission. Please feel free to call me with any questions.  

Sincerely,  

[Signature]  

Nathan Byorn  
Kwik Trip, Inc - Store Engineering  
Development/Project Manager  
608-791-7448  
nbyorn@kwiktrip.com  

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OUR MISSION  

To serve our customers and community more effectively than anyone else by treating our customers, co-workers and suppliers as we, personally, would like to be treated, and to make a difference in someone’s life.
Written Statements

a. Contact Information:

Owner of Record: RPSLegacyDeSoto LLC (a Minnesota limited liability company)
2335 County Drive
Little Canada, MN 55117

Under Contract to Purchase:
Kwik Trip, Inc.
Nathan Byom – Project Manager
1626 Oak Street
La Crosse, WI 54602
608-791-7448
nbyom@kwktrip.com

Civil Engineer:
Carlson McCain, Inc.
Joseph Radach
3890 Pheasant Ridge Dr NE, #100
Blaine, MN 55449
763-469-7912
jradach@carlsonmccain.com

Site Designer:
Carlson McCain, Inc.
Joseph Radach
3890 Pheasant Ridge Dr NE, #100
Blaine, MN 55449
763-469-7912
jradach@carlsonmccain.com

Surveyor:
Carlson McCain, Inc.
Thomas Beltuff
3890 Pheasant Ridge Dr NE, #100
Blaine, MN 55449
763-469-7913
fbeltuff@carlsonmccain.com

b. Site Data:

The site is located in the SE quadrant of Inwood Ave N (CSAH NO 13) and 5th Street N., the parcel is zoned Commercial Planned Development Unit, the parcel is 98,974 SF (2.27 ACRES), the current PID is 33.029.21.13.0017, Current legal description is part of Outlot O, Inwood Addition, Washington County, MN.

c. The site is currently vacant and is rough graded as part of the Inwood Addition.
d. The site is proposed to be developed as a Convenience Store (approx. 7,200 SF) with an attached carwash (approx. 1,900SF) and 10 fueling pumps. The site will have approx. 60,000 SF of concrete pavement, a total of 52 parking locations (30 standard, 2 handicap, and 20 at the fueling canopy). The building will be 24 ft high, the carwash 14 ft, and the fuel canopy 15.5 ft high.

The landscaping is designed in accordance with Lake Elmo Landscape code and includes 25 new trees, 70 shrubs, 50 perennials, a mixture of Sod and seed, and an irrigation system.

The site access is designed with a right in – right out from 5th Street North (Eastbound) at the Eastern property line to be a shared access with the currently undeveloped parcel to the East. A right turn lane will be constructed as part of the development for this access. A shared full access onto 5th Street North is proposed East of the parcel where the 5th street curbs was designed for an access (see civil plan set).

The store is proposed to be open 24hrs, will have 25-30 employees (2-10 on staff at any time). The development timeframe currently has this site being constructed in early 2020.

e. The proposed Kwik Trip convenience store will be a great fit to this location providing fuel, groceries, and food to the traveling public and local residents with an attractive and well-kept building and site. The store will be well lit while meeting the downcast lighting requirements, will have safe access by vehicles and pedestrians.

The Kwik Trip development will conform to City of Lake Elmo Comprehensive plan, is compatible with the PUD Commercial zoning, the existing neighborhood, meets the use in Article 7 of Zoning code, is not in a flood plain, will be designed, constructed, operated, and maintained to be compatible in appearance with the intended character of the vicinity. The use as a Kwik Trip store will not create a nuisance to existing or future neighbors, is served adequately by essential public facilities, will not create excessive additional requirements at public cost for public facilities/services, will not involve uses, activities, or conditions of operation that will be detrimental to persons, property or general welfare. Vehicular access to the property will not create traffic congestion or interfere with traffic on surrounding public roadways. The proposed use will not result in destruction, loss or damage of natural scenic features of major importance.
I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

EXISTING CONDITIONS

RPS LEGACY, LLC
2935 Country Drive, Suite 100
Little Canada, MN, 55117

ENVIRONMENTAL ENGINEERING
SURVEYING

2820 Pheasant Ridge Dr. NE #100, Blaine, MN
Phone: 763-489-7900   Fax: 763-489-7959
Proposed Kwik Trip Location - Lake Elmo Current Zoning

Oakdale

Zoning Districts:
- A
- C-PUD
- LDR-PUD
- ROW
- BP-PUD
- HDR-PUD
- PF
- RR

Proposed Kwik Trip Location
Know what's below.
Before you dig.
Call 811 SP1

EXISTING CONDITIONS & REMOVALS PLAN
LAKE ELMO, MINNESOTA
INWOOD AVE N & 5TH STREET N
WITH SINGLE BAY CARWASH

FAX (608) 781-8960
PH. (608) 781-8988
LA CROSSE, WI  54602-2107
1626 OAK STREET
P.O. BOX 2107
KWIK TRIP, Inc.

JTR 7967-00
2019-06-28
GRAPHIC
DRAWN BY
SCALE
PROJ. NO.
DATE
SHEET
DESCRIPTION
DATE
#

Name:
Signature:
Date:

License #:

ENVIRONMENTAL ENGINEERING
SURVEYING

Joseph T. Radach, P.E.
I hereby certify that this plan, specification or 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.

KWIK TRIP, Inc.
P.O. BOX 2107
LA CROSSE, WI 54602-2107
PH. (608) 761-8893
FAX (608) 761-8893

Kwik Trip
Kwik Star

45889
3890 Pheasant Ridge Dr, #100, Blaine, MN  55449
Phone: 763-489-7900   Fax: 763-489-7959
Know what's below. Call before you dig.
Know what's below before you dig. Call R 1078 SP2.1 SITE PLAN (KEYNOTE) LAKE ELMO, MINNESOTA INWOOD AVE N & 5TH STREET N CONVENIENCE STORE #1078

FAX (608) 781-8960
PH. (608) 781-8988
LA CROSSE, WI  54602-2107
1626 OAK STREET
P.O. BOX 2107
KWIK TRIP, Inc.

Joseph T. Radach, P.E. hereby certify that this plan, specification or report was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

ENVIRONMENTAL ENGINEERING SURVEYING

45889 3890 Pheasant Ridge Dr, #100, Blaine, MN  55449 Phone: 763-489-7900   Fax: 763-489-7959
7030-2092 TRI-FOAM PUMPING PLANT
CAR
WASH
NO
PARKING
LOADING
ZONE
UNL
20K
12K
20K
UNL
88
PREM
SPLIT
E85

Know what's below.
before you dig.
Call
1078 SP3
GRADING & EROSION
CONTROL PLAN
LAKE ELMO, MINNESOTA
INWOOD AVE N & 5TH STREET N
WITH SINGLE BAY CARWASH

FAX (608) 781-8960
PH.  (608) 781-8988
LA CROSSE, WI  54602-2107

1626 OAK STREET
P.O. BOX 2107
KWIK TRIP, Inc.

JTR
7967-00
2019-06-28
GRAPHIC
DRAWN BY
SCALE
PROJ. NO.
DATE
SHEET
DESCRIPTION
DATE
#

Name:
Signature:
Date:
License #:

Joseph T. Radach, P.E.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Know what's below before you dig.

Call R 1078 SP4

UTILITY PLAN
LAKE ELMO, MINNESOTA
INWOOD AVE N & 5TH STREET N
CONVENIENCE STORE #1078

WITH SINGLE BAY CAR WASH

KWIK TRIP, Inc.
FAX (608) 781-8960
PH.  (608) 781-8988
LA CROSSE, WI  54602-2107
1626 OAK STREET
P.O. BOX 2107
KWIK TRIP, Inc.
JTR 7967-00
2019-06-28
GRAPHIC
DRAWN BY
SCALE
PROJ. NO.
DATE
SHEET
DESCRIPTION
DATE
#
Name:
Signature:
Date:
License #:
Joseph T. Radach, P.E.
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
7030-2092 TRI-FOAM PUMPING PLANT
CAR
NO PARKING
LOADING ZONE
UNL
20K
PREM SPLIT 20K
E85

Know what's below.
before you dig.
Call 1-888-258-8088

STORMWATER POLLUTION PREVENTION PLAN
LAKE ELMO, MINNESOTA
INWOOD AVE N & 5TH STREET N

WITH SINGLE BAY CAR WASH
CONVENIENCE STORE #1078

FAX (608) 781-8960
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GRAPHIC DRAWN BY
SCALE
PROJ. NO.
DATE
SHEET

DESCRIPTION
DATE

#

Name: Signature: Date:
06/28/9

License #:

Joseph T. Radach, P.E.

I hereby certify that this plan, specification or 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.

45889
3890 Pheasant Ridge Dr, #100, Blaine, MN  55449
Phone: 763-489-7900   Fax: 763-489-7959

"
1. A minimum of (1) tree per 50 LF of street frontage.
2. Total street frontage = 630 LF.
3. [630/50] = 13 trees required
4. Additionally, (5) trees shall be planted per (1) acre of developed land or disturbed by development activity.
5. Overall site acreage = (98,974sf) = 2.27 ac.
6. [2.27 x 5] = 12 trees required
7. At least 25% of tree count shall be deciduous or coniferous.
8. Irrigation shall be provided for all sod/seed and landscape areas per Lake Elmo Details/Specifications.
9. [SEED MIX LEGEND (FOR ALL SHEETS)]
10. [LANDSCAPE LEGEND]
11. [LANDSCAPE QUANTITIES]

LAKE ELMO LANDSCAPE CODE

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10. [LANDSCAPE LEGEND]
11. [LANDSCAPE QUANTITIES]
PROPOSED SIGNS:
#01 24" LED KWIK TRIP BUILDING LETTERS
#02 CARWASH DIRECTIONAL WALL SIGN
#03 24" LED KWIK TRIP BUILDING LETTERS
#04 18" KWIK TRIP & 24" CARWASH LED BUILDING LETTERS
#05 CARWASH ENTER
#06 CARWASH EXIT
#07 CARWASH INFORMATIONAL SIGN
#08 24" LED KWIK TRIP CANOPY LETTERS
#09 24" LED KWIK TRIP CANOPY LETTERS
#10 24" LED KWIK TRIP CANOPY LETTERS
#11 DRIVEWAY DIRECTIONAL
#12 DRIVEWAY DIRECTIONAL
#13 DRIVEWAY DIRECTIONAL
#14 DRIVEWAY DIRECTIONAL
#15 FREESTANDING PYLON SIGN
ADDRESS SIGN A
SCALE: 1:19" = 1'-0"

INFORMATIONAL SIGNS C & D
SCALE: 1:19" = 1'-0"

DOUBLE SIDED DIRECTIONAL SIGN

NORTH SIDE

AUTO GAS
CARWASH

SOUTH SIDE

ONE WAY

NON-LIT DIRECTIONAL SIGN
WHITE VINYL ON RED ALUMINUM
1'-0"H X 4'-0"W = 4.9 SQ FT

NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-8"T = 4.59 SQ FT
#15 KWIK TRIP FREESTANDING PYLON SIGN

SEE ATTACHMENT FROM LA CROSSE SIGN CO
An engineering review has been completed for the Inwood 6th Addition – Kwik Trip Convenience Store. A Preliminary Plan submittal was received on July 12, 2019. The submittal consisted of the following documentation prepared by Carlson McCain:

- Kwik Trip Store #1078 Site Plans dated June 28, 2019.

**STATUS/FINDINGS:** Engineering has prepared the following review comments based on the plans submitted.

**PRELIMINARY PLAT AND EASEMENTS**

1. Outlot ownership should be identified on the Preliminary Plat and on the Preliminary Plans. Outlots A and B should be shown as Developer owned.
2. Lot lines and easements are not shown consistently between the Preliminary Plat and the Preliminary Plans. The plans must be revised to accurately reflect the proposed plat. The lot lines and easement locations may be subject to revision once they can be accurately reviewed with respect to the proposed improvements.
3. Drainage and utility easements must be provided for any public utilities constructed as part of the project, including City owned watermain and hydrants, with the easements shown on the preliminary plans.
4. Consideration should be given to adjusting the east lot line of Outlot A further west to facilitate a shared commercial driveway access between Outlot A and Outlot B. See comment #3 below for Site Plans, Traffic and Access Management.
5. Final Construction Plans and Specifications must be prepared in accordance with the latest version of the City Engineering Design Standards Manual, using City details, plan notes and specifications and meeting City Engineering Design Guidelines. The Final Construction Plans must include detailed existing condition information surrounding the plat boundaries to demonstrate that the proposed improvements match at the construction limits. Additional existing condition information is required along 5th Street North including existing small utilities, lane widths and pavement markings, existing street signs, and other features that may be impacted by the improvements.

**SITE PLANS, TRAFFIC AND ACCESS MANAGEMENT**

1. Access Management Guidelines were reviewed and approved along 5th Street North as part of the Inwood PUD Preliminary Plat/Plan application process (see SRF Consulting review memo dated December 15, 2014). The Preliminary Plans were amended to eliminate access between Inwood Avenue (CSAH 13) and Irene Avenue in accordance with this memorandum. Irene Avenue is located approximately 660 feet east.
of Inwood Avenue which meets the City’s access spacing requirements for streets and commercial driveways along a collector roadway.

2. The Kwik Trip Store site improvements show a proposed full access commercial driveway along the south leg at Irene Avenue and an intermediate right-in/right-out access to be located approximately half way between Inwood Avenue and Irene Avenue with the construction of a right turn lane. These improvements have also been reviewed by SRF Consulting with the following recommendations:

- The proposed full access commercial driveway at Irene Avenue is consistent with the approved preliminary plans and access spacing requirements for 5th Street north. Right and left turn lanes are already in place in anticipation of this intersection.
- The proposed intermediate right-in commercial driveway access is acceptable with modifications to the proposed right turn lane. The right turn lane should be constructed using a 150-foot full width turn lane with 5:1 taper for a total turn lane length of 210 feet.
- The proposed intermediate right-out commercial driveway access should be eliminated. It is recommended to design this driveway access as right-in only with internal signage directing traffic to the full driveway access intersection at Irene Avenue. A “No U-turn” sign should also be placed on eastbound 5th Street at the intersection with Irene Avenue. If a right-out access is permitted traffic safety concerns exist with vehicles attempting U-turns at Irene Avenue and 5th Street which is an uncontrolled intersection.

3. It is recommended that both the full access at Irene Avenue and the intermediate right-in access be constructed as shared commercial driveways to further manage access spacing along 5th Street North.

- The full commercial driveway access at Irene Avenue should be constructed as a shared access to both Outlot A and Outlot B.
- It appears from the site plans that the right-in access driveway is proposed as a shared access between Lot 1, Block 1 and Outlot A, with the lot line dividing the access road.

4. Inwood Avenue (CSAH 13) and 5th Street North Traffic Signal. A traffic impact study must be completed to review and evaluate the impacts to the intersection at Inwood Avenue (CSAH 13) and 5th Street North. A financial contribution to traffic signal should be considered.

MUNICIPAL WATER SUPPLY

1. The proposed property is located in the Southwest Planning MUSA and water system high pressure zone.
2. Water availability charges and connection charges will apply to the service connections. A Met Council SAC determination will be required to determine the WAC/Connection charges for each building.
3. Connection to the municipal water supply is readily available to serve this property. Based on the proposed Inwood PUD 6th Addition plat lines, the existing watermain stub for the Kwik Trip Store (Lot 1, Block 1) will now be located on the new Outlot A and may need to be extended across a portion of Outlot A to serve Lot 1, Block 1. The applicant will be required to connect, at its sole cost, to the existing 8-inch DIP stub on Outlot A, and/or the existing 16-inch HDPE pipe located along Inwood Avenue, and extend watermain and any required hydrants internal to the site.
4. The project proposes to extend a 6-inch DIP watermain internal to the site with a hydrant placed near the rear of the proposed building. The portion of the watermain internal to the site that serves a hydrant must be City owned and operated and may need to be upgraded to an 8-inch DIP pipe based on fire suppression requirements. The applicant must submit fire suppression requirements for the building to determine the size of watermain up to each hydrant.
5. The applicant will be responsible to place hydrants throughout the property at the direction of the Fire Department. All fire hydrants and connecting watermains shall be owned and maintained by the City.
6. The applicant may be required to construct a looped watermain with a second connection point, depending upon site layout, or connect to the existing 16-inch HDPE pipe located along Inwood Avenue.
7. Any watermain lines serving hydrants placed internal to the site will require minimum 30-foot easements centered over the hydrant and pipe. Easements must be dedicated to the City and be provided in the City’s standard form of easement agreement.
MUNICIPAL SANITARY SEWER
1. The proposed property is located in the Southwest Planning MUSA current Regional Sewer Staging Plan and would discharge to the MCES WONE Interceptor.
2. Sewer availability charges and connection charges will apply to the service connections. A Met Council SAC determination will be required to determine the SAC/Connection charges for each building.
3. Connection to the municipal sanitary sewer system is readily available to serve this property. The applicant will be required to connect, at its sole cost, to the existing 8-inch PVC stub that was installed to serve this property. A 6-inch diameter private sewer service is proposed to be extended internal to the site to serve the Kwik Trip Store. No public sanitary sewer mains are proposed to be extended internal to the site.
4. Based on the proposed Inwood PUD 6th Addition plat lines, the existing sanitary sewer stub for the Kwik Trip Store (Lot 1, Block 1) will now be located on the new Outlot A and will need to be extended across a portion of Outlot A to serve Lot 1, Block 1. A private sewer service easement may be needed between the property owners of Outlot A and Lot 1, Block 1.

STORMWATER MANAGEMENT
1. A State and South Washington Watershed District (SWWD) permit will be required. The site plan is subject to a storm water management plan meeting State, SWWD and City rules and regulations.
2. The storm water management report indicates that the existing storm water facilities for this property, located just south of the property, have been designed for Lot 1, Block 1 and Outlot A to each be 75% impervious. The narrative also indicates that the proposed Kwik Trip site (Lot 1, Block 1) is proposed to be 70% impervious. Therefore, no additional storm water BMPs are proposed. Preliminary Plat approval should be contingent upon verification of these assumptions by the SWWD and City storm water consultant.
3. The applicant is proposing a private storm sewer system internal to the commercial site to collect and convey storm water runoff. The storm water will be discharged to the City owned storm water pond and infiltration basin located to the south of the proposed site. This system was constructed as part of the Inwood PUD development and will be turned over to the City upon acceptance of the Inwood PUD 1st Addition development improvements.
4. A new (2nd) storm water discharge location to the existing storm water pond is proposed. A sump manhole is shown on the plans as required with a SNOUT oil and debris stop device. The sump manhole and SNOUT device should be relocated from manhole #102 to manhole #101.
5. The storm sewer system constructed for this development should remain privately owned and maintained. The applicant will be required to execute and record a Stormwater Maintenance and Easement Agreement in the City’s standard form of agreement. The agreement should provide a maintenance plan defining the maintenance responsibilities for the private owner, the type of maintenance and the maintenance intervals, including the SNOUT oil and debris stop device.
6. The storm sewer minimum pipe size should be 15-inch diameter pipe.
To: Ken Roberts, City of Lake Elmo Planning Director  
From: Lucius Jonett, Wenck Landscape Architect  
Date: July 22, 2019  
Subject: City of Lake Elmo Landscape Plan Review  
Kwik Trip Store #1078, Review #1

Submittals


Location: Southeast quadrant of Inwood Ave N (CSAH NO 13) and 5th Street N, Lake Elmo, MN

Land Use Category: Commercial Planned Unit Development

Surrounding Land Use Concerns: None.

Special landscape provisions in addition to the zoning code: None.
Tree Preservation:

A. A tree removal plan has been submitted showing all trees to be removed. All trees are less than the significant tree definition and no mitigation is required.

B. There are no specimen trees identified in the tree inventory.

C. Tree replacement is not required because no significant trees are being removed.

D. This project is commercial development; therefore mitigation replacement trees can be included toward landscape required tree counts, however there are no mitigation trees required.

Landscape Requirements:

The master landscape plans does not meet the code required number of trees.

<table>
<thead>
<tr>
<th>Master Plan (Code Required)</th>
<th>Master Plan Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street frontage 630 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>Lake Shore 0 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>Stream Frontage 0 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>Total Linear Feet 630 Lineal Feet</td>
<td>13 Trees</td>
</tr>
<tr>
<td>/50 Feet = Required Frontage Trees</td>
<td>12 Trees</td>
</tr>
<tr>
<td>Development or Disturbed Area - SF</td>
<td></td>
</tr>
<tr>
<td>Development or Disturbed Area 2.27 Acres</td>
<td></td>
</tr>
<tr>
<td>*5 = Required Development Trees</td>
<td>12 Trees</td>
</tr>
<tr>
<td>Interior Parking Lot Spaces* 18 Spaces</td>
<td></td>
</tr>
<tr>
<td>/10 = Required Parking Lot Trees 0 Trees</td>
<td></td>
</tr>
<tr>
<td>Perimeter Parking Lot Frontage Length 150 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>/50 = Required Frontage Strip Trees 3 Trees</td>
<td></td>
</tr>
<tr>
<td>Required Mitigation Trees 0</td>
<td></td>
</tr>
<tr>
<td>Required Number of Trees ** 28</td>
<td></td>
</tr>
</tbody>
</table>

* Parking lot landscaping or screening trees are included in landscape required tree counts.
  None if 0 - 30 Parking Spaces
  1 tree per 10 spaces if 31 - 100 Parking Spaces
  1 tree per 15 spaces if >101 Parking Spaces

** Commercial development - mitigation replacement trees are included in landscape required tree counts.

1. A minimum one (1) tree is proposed for every fifty (50) feet of street frontage.
2. A minimum of five (5) trees are proposed to be planted for every one (1) acre of land that is developed or disturbed by development activity.

The landscape plans do meet the minimum compositions of required trees:
- At least 25% of the required number of trees shall be deciduous shade trees
- At least 25% of the required number of trees shall be coniferous trees
- Up to 15% of the required number of trees may be ornamental tree

<table>
<thead>
<tr>
<th>Master Plan</th>
<th>Qty</th>
<th>% Composition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deciduous Shade Trees</td>
<td>13</td>
<td>52%</td>
<td>&gt;25%</td>
</tr>
<tr>
<td>Coniferous Trees</td>
<td>6</td>
<td>24%</td>
<td>&gt;25%</td>
</tr>
<tr>
<td>Ornamental Trees</td>
<td>6</td>
<td>24%</td>
<td>&lt;15%</td>
</tr>
<tr>
<td><strong>Tree Count</strong></td>
<td></td>
<td></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

A. A landscape plan has been submitted that does meet all requirements

B. The landscape plan **does not include** the landscape layout requirements:

- **Topsoil Minimum** ................................................................. 6-inch
- **Tree Location without Sidewalk or Trail** ...................... 8-feet back of curb
- **Tree Location with Sidewalk or Trail** .......................... 5-feet back of curb

C. Interior Parking Lot Landscaping – The development does include interior parking lots however its less than 30 parking space. No additional tree planting is needed.

D. Perimeter Parking Lot Landscaping – The development does include perimeter parking lots along 5th Street. Perimeter parking lot landscaping **has not** been provided according to:

1. A landscaped frontage strip at least five (5) feet wide shall be provided between parking areas and public streets, sidewalks, or paths.
   a. Within the frontage strip, screening shall consist of either a masonry wall, fence, berm, or hedge or combination that forms a screen a minimum of three and one-half (3.5) and a maximum of four (4) feet in height, and not less than fifty percent (50%) opaque on a year-round basis.
   b. Trees shall be planted at a minimum of one deciduous tree per fifty (50) linear feet within the frontage strip.

E. Screening – Screening is not required by City code.

**Special Landscape Considerations:**

A. 5th Street – The development is along 5th Street.
   i. The landscape plan **does not include** the required landscaping elements:

   - **Topsoil Minimum** ................................................................. 6-inch
   - **Turf Treatment** .............................................................. Salt Tolerant Sod (MN DOT 3878 C)
     - Turf sod to be located from back of curb to 5 feet behind trail or sidewalk.
   - **Prairie sod** may be used for remaining R/W
   - **Tree Location** ................................................................. 7-feet back of curb
Findings:
1. The submitted landscape plan does not meet the required number of trees. 3 Additional trees are needed to account for the Perimeter Parking Lot Frontage.
2. The proposed development has perimeter parking along 5th Street that requires perimeter parking lot landscaping.
3. One tree was found to be in conflict with sidewalk and curb setbacks and should be relocated to elsewhere on the property. See attached markup plan.
4. Two evergreen trees are in conflict with proposed storm sewer and should be relocated to elsewhere on the property. See attached markup plan.
5. 6” of topsoil is required versus the 4” of topsoil stated in the notes. See attached markup plan.

Recommendation:
It is recommended that a condition of approval include:
1. Submit a revised landscape plan to address the findings above.

Sincerely,

Lucius Jonett, PLA (MN)
Wenck Associates, Inc.
City of Lake Elmo Municipal Landscape Architect
Tree conflict with back of curb. Also doesn’t match 5th street boulevard spacing, species and size. Relocate tree.

Tree conflict with stormsewer. Relocate trees.

LAKE ELMO LANDSCAPE CODE
1. A MINIMUM OF 1 TREE PER 50 LF
   OF STREET FRONTAGE.
2. ADDED BY 50-50 RULE.
3. TREES REQUIRED
   IN RUNOFF ZONE
   DEPENDING ON
   DEGREE OF
   DEVELOPMENT
   ACTIVITY.
4. ADDED BY 50-50 RULE.
5. AT LEAST 25% OF TREE COUNT SHALL
   BE DECIDUOUS OR CONIFEROUS

LANDSCAPE QUANTITIES

LANDSCAPE LEGEND

SEED MIX LEGEND (FOR ALL SHEETS)

SHADEMASTER
HONEYLOCUST
HACKBERRY
SUGAR MAPLE
NORTHWOODS MAPLE

Acer rubrum 'Nothwoods'
Acer saccharum
Celtis occidentalis
Gleditsia triacanthos var. inermis ‘Shademaster’

MALUS X 'SPRING SNOW'
PICEA GLAUCA VAR. DENSATA

LANDSCAPE QUANTITIES

1. DEPTH OF TOPSOIL REQUIRED.
To: Lake Elmo Planning Commission

From: Ben and Melissa Douglas, 8769 Upper 7th Place North, Lake Elmo

Re: Proposed Kwik Trip Station at Inwood at 5th

We are homeowners in the Inwood neighborhood who received a letter regarding the proposed use of a vacant lot at 5th and Inwood for a Kwik Trip gas station. We are writing to let you know that we are vehemently against this request for several reasons.

First of all, we feel there is no reason for a gas station at this location. There is already a Kwik Trip at Hudson Blvd N. and Keats Avenue. There are also several gas stations just west of our neighborhood in Oakdale on 10th Street at Helmo Avenue and then again just across 694 at both 11th St. N. and Hadley Avenue. Going east on 10th Street, there is a Marathon at Lake Elmo Avenue. Hagberg’s on County 14 also has a gas station. Adding another gas station to the area will not provide any additional benefit to the residents of Lake Elmo. If you are truly trying to serve the residents of Lake Elmo by adding another gas station, you should consider allowing the building of another gas station further out from the proposed area.

Second, research has proven that gas stations and convenience stores drive down property values for homes close to the them. Why should the homeowners suffer when we were here first? Gas stations/convenience stores do not belong next to homes. Again, research has shown that gas stations lead to an increase in accidents, both traffic and pedestrian (and the intersection of Inwood and 5th is already way too busy!) and robberies. The reason we chose to live in the Inwood neighborhood is because it is a quiet, peaceful residential neighborhood with great walking trails. Adding a busy gas station and convenience store will completely destroy the feeling of this neighborhood.

Third, we have environmental concerns as well despite all the safety guidelines, gas stations, must follow, they can still pose significant exposures including ground level ozone from gasoline fumes groundwater hazards from petroleum leakage, and carbon monoxide from idling vehicles. There is also, light, sound and air pollution from the gas station, all of which are migraine triggers for me. Adding a gas station so close to our home, could greatly add pollution to our neighborhood and exacerbate my chronic migraines which have been much better maintained since moving to this neighborhood.

Thank you for your time,

Ben and Melissa Douglas
STAFF REPORT
DATE: August 12, 2019
REGULAR
ITEM #:
MOTION

TO: Planning Commission
FROM: Ben Prchal, City Planner
AGENDA ITEM: Lake Elmo Subdivision Code
REVIEWED BY: Ken Roberts, Planning Director

BACKGROUND:
The Planning Commission work plan requires Staff to prepare code amendments as necessary keep pace with the 2040 Comprehensive plan. Furthermore, there are some aspects of the subdivision code that could be amended to encourage a functional development review process. The Parks Commission has reviewed the section of code that pertains to park dedication and the Planning Commission had a chance to review the proposed Staff amendments on July 22, 2019. The comments from both Commissions are incorporated into the version that is being reviewed today.

ISSUE BEFORE THE COMMISSION:
Does the Commission have final comments or changes about the proposed amendments to the subdivision code?

REVIEW AND ANALYSIS:
The Parks Commission has reviewed the code for all items pertaining to park dedication. Their recommended amendments are incorporated into Section 154.15 of the attached subdivision code. At this point many of the proposed amendments will appear to be grammatical and not as significant in terms of function. However, there is a significant change in Section 154.10 Final Major Subdivisions, (B) Review of Final Plat. This is noteworthy because the Planning Commission would no longer review final plats, unless there is a significant change from the preliminary plat. The justification for this is that the City cannot apply more restrictive conditions or deny a phase of development if it matches what had been approved with the preliminary plat review. As long as the proposed final plat matches approval, Staff does not necessarily see a reason ask the Commission to formally review the plan. The proposed change is listed below:

Review of Final Plat:
After a developer receives preliminary plat approval from the City they are awarded development rights. The preliminary plat sets the design and scope of the development. At this point they are legally allowed to build their project as it was presented and established during the preliminary review, subject to the applied conditions. Once a developer submits for a final plat and as long as this plat is in line with the preliminary plat approval, the City cannot deny the request and is limited on applicable conditions that can be applied. Because of this Staff is recommending language requiring the Planning Commission to review final plats be removed from the subdivision ordinance since the review is more or less a formality. The amendment is outlined below.

(3) Planning Commission action. After review of the final plat by the staff, the Planning Commission shall review the final plat for substantial compliance with the approved preliminary plat and make recommendation to Council. The Planning Commission shall review final plats if the applicant is proposing a substantial change(s) as determined by City Staff from the preliminary plat as approved by the City Council.

City Staff would then only ask the Commission to review Final Plats if there is a change to them but as previously stated, if the final plat matches the preliminary plat there is not a need for the Planning Commission to provide a review of a final plat.

Park Dedication Review:
The Parks Commission focused their attention on the park related components of the code. To break it down the Parks Commission was asked to review the dedication requirements for two new zoning classifications, which are Mixed Use Commercial (MU-C) and Mixed Use Business (MU-BP). Staff was uncertain of how to appropriately apply the existing fee structure for park dedication to these two districts. The table outlining the dedication requirements has
been reduced from four sections to three. Staff was also recommending an increase in Commercial Park Land dedication. The Parks Commission recommended an increase and although Staff recommended a $5,000 dedication requirement per acre for commercial development, which is up from current collection of $4,500 per acre the Parks Commission felt that the amount could be increased further. Staff informed the Parks Commission a more detailed look into the collection amount would happen to see if a further increase could be justified. During the July 22nd meeting Staff has asked the Planning Commission to also review the increase in fee structure.

### Existing Fee Structure

<table>
<thead>
<tr>
<th>Zoning Districts</th>
<th>Minimum Required Land Dedication</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS, V-LDR, GCC, LDR, MDR, HDR</td>
<td>10%</td>
</tr>
<tr>
<td>RE and OP Development</td>
<td>7%</td>
</tr>
<tr>
<td>RR and AG</td>
<td>4%</td>
</tr>
<tr>
<td>C, CC, LC, GP, BP, VMX</td>
<td>Fees as set by Council resolution</td>
</tr>
</tbody>
</table>

### Proposed Fee Structure

<table>
<thead>
<tr>
<th>Zoning Districts</th>
<th>Minimum Required Land Dedication</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-LDR, GCC, LDR, MDR, HDR</td>
<td>10%</td>
</tr>
<tr>
<td>RS, AG, RE, RR (Rural Districts)</td>
<td>5%</td>
</tr>
<tr>
<td>C, CC, LC, BP, VMX, MU-BP, MU-C</td>
<td>Fees as set by Council resolution</td>
</tr>
</tbody>
</table>

### Minor Subdivisions

- **A 10% land or cash charge is only applied if a residential component is incorporated into the development/subdivision. However, the 10% charge does not apply to a minor subdivisions.**

### Commercial Requirements:

As stated before the Parks Commission thought the commercial payment could increase further from the first suggestion. As addition criteria for the second review Staff used Cities that share a border with a major highway such as Highway 36 or I-94. The thought behind this comparison is that values for commercial land would be more similar in value. Staff then calculated an average price per acre of undeveloped and platted land in Lake Elmo which was zoned or guided for commercial, or mixed use development. The estimated price per acre was calculated by taking the tax value (determined by Washington County) of a property divided by the number of acres. Please understand that there are many factors that go into determining value but, the **estimated price** per acre is $131,564.

#### Stillwater: Requires a 7.5% dedication rate per acre. (Value of $9,867)

#### Woodbury: Requires a land dedication of 10% or $6,000 per acre of the subdivision.

#### Oak Park Heights: Requires a dedication of 10% of the value, either land or cash. (Value of $13,156.4)

#### Maplewood: Requires a 9% dedication of land or cash. (Value $11,840)

### Average Collection: $10,215.85

Based on the collected average of the communities used above Lake Elmo is collecting $5,700 less than neighboring communities that also boarder a major highway. Because of the more specific criteria used Staff believes that an increase from $5,000 (currently recommended) to $10,000 per acre could be justified. This amount would be required for projects that do not have a residential component

### Trails:

It was also important for the Commission to make sure they had an opportunity to improve upon the trail dedication language that is incorporated into the park section of the code. The proposed amendment is outlined below in red.

(D) **Trails.** Trails constructed by a subdivider within dedicated public open space having at least 30 feet of width are eligible for park credit. The maximum amount of trail dedication credit shall not exceed 25% of the total required park dedication. To receive credit for a trail, there must be a through public trail connection to the larger Lake Elmo or Washington County trail network. If the proposed trails are not able to connect to existing trails, they must be installed in a way that would provide a connection to future planned trails as additional infrastructure is established.
**FISCAL IMPACT:**
Staff does not foresee a negative fiscal impact with the proposed code change.

**COMMENTS AND RECOMMENDATION:**

**Park Commission:** The parks Commission recommended approval of the amended fee structure and the language as it pertains to trails (under the fee table). 4-0

**Planning Commission:** The comments/amendments from the previous Planning Commission meeting are incorporated into the amended sub division code that is presented today *(8.12.2019)*

**Options:**
Recommend approval of the amendments as proposed.
Recommend approval with amendments to the proposed language.
Recommend denial of the amended language.

**Staff Recommendation:** Staff believes that the edits in the attached subdivision code will help the aide in a smooth development process. Furthermore, the research that had been gathered for trail connection(s) and park dedication seem to further benefit the City and the residents.

“Motion to recommend to the City Council approval of the subdivision code amendments as proposed”

**ATTACHMENTS**
- Lake Elmo Subdivision Code with redlines.
CITY OF LAKE ELMO
COUNTY OF WASHINGTON
STATE OF MINNESOTA

ORDINANCE NO. 08-XXX

AN ORDINANCE AMENDING THE LAKE ELMO CITY CODE OF ORDINANCES BY AMENDING THE SUBDIVISION REGULATIONS ORDINANCE

SECTION 1. The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 153: Subdivision Regulations by amending the following:

Section
153.01 Regulations established
153.02 Generally
153.03 Definitions
153.04 Registered land survey
153.05 Conveyance by metes and bounds and other unapproved descriptions
153.06 Lot Consolidation/Lot Line Adjustment
153.07 Minor Subdivisions
153.08 Major Subdivisions – Sketch Plan Review
153.09 Major Subdivisions – Preliminary Subdivision Approval
153.10 Major Subdivisions – Final Subdivision Approval
153.11 Variances; standards; platting
153.12 Variance procedures
153.13 Planned Unit Developments (P.U.D.)
153.14 Design standards; required improvements
153.15 Park land dedication requirements
153.16 Required improvements; financial arrangements
153.17 Fees
153.18 Violations

§ 153.01 REGULATIONS ESTABLISHED.

No land shall be subdivided, nor shall any land be platted, in the City except as provided by this chapter.

(1997 Code, § 400.02) (Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

§ 153.02 GENERALLY.
(A) **Purpose.** In order to provide for orderly, economic, and safe development of land, necessary urban services and facilities, and to promote the public health, and safety, morals as to the urban services and facilities, the following subdivision regulations are adopted by the Council of the City. It is the intent of the City to protect the right of landowners to put their land to its highest and best use and protect each owner's right to full beneficial use of his or her land in far as the use and enjoyment may be accomplished without detriment to the public interest and within the minimum standards established by this chapter.

(B) **Scope.** The provisions of this chapter apply to any division of a tract of land into 2 or more parcels for the purpose of transfer of ownership, building development, or tax assessment purposes by platting, re-platting, registered land survey, conveyance, sale, contract for sale or any other means by which a beneficial interest in land is transferred or any means by which a tract of land is divided into 2 or more parcels for tax assessment purposes, except those divisions listed below:

1. where all the resulting parcels, tracts, lots, or interests will be 20 acres or larger in size and 500 feet in width for residential uses and five acres or larger in size for commercial and industrial uses;
2. creating cemetery lots; or
3. resulting from court orders.

(C) **Approval necessary for acceptance of subdivision plats.** Before any plat or subdivision shall be recorded or be of any validity, it shall be referred to the Planning Commission and approved by the Council as having fulfilled the requirements of this chapter.

(D) **Building permits.** No building permits shall be issued for the construction of any building, structure, or improvement to any land or lot in a subdivision, as defined in this chapter, until all requirements of this chapter have been satisfied, with the following exceptions:

1. Building permits may be issued for model homes after approval of the final plat by the council upon receipt of a signed developers agreement. The issuance of building permits for model homes shall be in accordance with the signed development agreement.
2. Developer shall agree in writing to indemnify and hold harmless the City for damages that may occur as a result of the model home construction prior to the required improvements being completed.
3. No certificate of occupancy shall be issued by the City until all applicable requirements set forth by the development agreement have been met.
4. Traffic and parking arrangements relating to model homes shall be subject to the City's review and approval.

(E) **Conflicts.** Whenever there is a difference between minimum standards or dimensions required by this chapter or other ordinances of the City, the most restrictive standards of dimensions shall apply.
(F) **Flood plain management.**

(1) No land shall be subdivided which is held unsuitable by the Council for reason of flooding, inadequate drainage, water supply, or sewage treatment facilities. All lots within the flood plain shall contain a building site at or above the regulatory flood protection elevation. All subdivisions shall have water and sewage disposal facilities that comply with the provisions of this chapter, and have road access both to the subdivision and to the individual building sites no lower than 2 feet below the regulatory flood protection elevation.

(2) In the general flood plain district, applicants shall provide the information required in § 152.140. The Council shall evaluate the subdivision in accordance with procedures established in this chapter and standards contained in § 152.07.

(G) **Consistency with Comprehensive Plan and Zoning District.** Subdivision of property shall be in compliance with the City’s Comprehensive Plan and zoning district in which the property is located.

(1997 Code, § 400.03) (Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

**§ 153.03 DEFINITIONS.**

Unless specifically defined in this chapter, common definitions, words, and phrases used in this chapter shall be interpreted so as to give them the same meaning as they have in common usage throughout this code and are found in § 11.01.

(1997 Code, § 400.04) (Am. Ord. 08-205, passed 4-3-2018)

**§ 153.04 REGISTERED LAND SURVEY.**

No registered land survey of lands in the City shall be recorded with the Registrar of Titles until the registered land survey has been approved by the City. The approval shall be indicated by resolution endorsed on or attached to the registered land survey signed by the Mayor and City Clerk. No registered land survey shall be approved by the City or signed by the officers if the recording of the registered land survey will result in a subdivision in violation of any provision, regulation, or requirement of this chapter.

(1997 Code, § 400.05) (Am. Ord. 08-205, passed 4-3-2018)

**§ 153.05 CONVEYANCE BY METES AND BOUNDS AND OTHER UNAPPROVED DESCRIPTIONS.**

(A) No conveyance of lands to which the regulations contained in this chapter are applicable shall be made and no conveyance of land to which the regulations contained in this chapter are
applicable shall be filed or recorded, if the land is described in the conveyance by metes and bounds or by reference to an unapproved registered land survey made after 10-3-1968, or to an unapproved plat made after 10-3-1968.

(B) The foregoing provision does not apply to a conveyance if the land described:

(1) Was a separate parcel of record prior to or on 10-3-1968, or as to lands within the jurisdictional boundaries of the Old Village prior to its consolidation with the Town of East Oakdale if the land was a separate parcel of record 6-4-1974;

(2) Was the subject of a written agreement to convey, entered into prior to 10-3-1968;

(3) Is a single parcel of land having not less than 20 acres and having a width of not less than 500 feet and its conveyance does not result in the division of a parcel into 2 or more lots or parcels any 1 of which is less than 20 acres in area or 500 feet in width; and/or

(4) Is a single parcel of commercial or industrial land of not less than five acres and having a width of not less than 300 feet and its conveyance does not result in the division of the parcel into two or more lots or parcels, any one of which is less than five acres in area or 300 feet in width;

§ 153.06 LOT CONSOLIDATION/LOT LINE ADJUSTMENT.

(A) Purpose and Intent. The lot consolidation/lot line adjustment process provides a simple administrative procedure for the consolidation of 2 or more lots into 1 parcel, or to adjust a common lot line affecting existing parcels. In areas that are well defined and land descriptions are simple, the City may permit the conveyance of land using metes and bounds descriptions or without the preparation and recording of a plat. In areas which are not well defined, or where lots are irregular in shape and/or are included in more than one plat, the City may require that lot consolidation/lot line adjustment occur through the major or minor subdivision platting requirements of this chapter.

(B) Criteria for Lot Line Adjustment/Lot Consolidation. Lot line adjustments exempted from platting by Minnesota Statute 462.352, Subd. 12 and shall not require a plat or replat and may be administratively approved, provided all of the following are met:

(1) Each resultant parcel equals or exceeds the minimum lot dimension requirements and public road frontage requirements for the zoning district in which the property is located or is made more conforming through the lot line adjustment;

(2) The lot line adjustment does not create additional lots.

(3) The lot line adjustment shall not cause any structure on the property to be made non-conforming or in violation of the Zoning Chapter or any other provisions of the City Code.

(4) All resultant parcels shall have frontage and access on an existing improved street or access to an existing improved street protected by a restrictive covenant approved by the City Attorney which includes the City as a beneficiary.

(5) The resulting parcels shall generally conform to the shape, character, and area of existing or anticipated land subdivisions in the surrounding areas.
(6) Any such lot line adjustment shall not require any public improvements.

(7) Any easements that become unnecessary as a result of the combination of parcels
must be vacated. A request to vacate easements shall be made concurrently with the
application for lot consolidation/lot line adjustment. Review of the easement vacation
request, including any public hearings and City Council action, shall be completed before
action may be taken on the application for lot consolidation/lot line adjustment.

(8) New easements shall be established as appropriate.

(C) Subdivision of Property for Public Purpose. Alternatively, the subdivision of property
resulting from acquisition by governmental agencies for public improvements or uses
may be processed in the same manner as a lot line adjustment or lot consolidation.

(D) Submittal Requirements. Requests for lot line adjustments or lot consolidation shall be filed
with the Zoning Administrator on an official application form. The applicant’s signatures
shall be provided on the application form. If the applicant is not the fee owner of the property,
the fee owner’s signature shall also be provided on the application form, or the applicant shall
provide separate written and signed authorization for the application from the fee owner. Such
application shall be accompanied by the following information. The application shall be
considered as being officially submitted and complete when the applicant has complied with all
the specified requirements. The applicant will be responsible for all expenses incurred in
obtaining the required information.

(1) A fee as set forth by the City’s adopted fee schedule.

(2) Detailed written and graphic materials fully explaining the proposed lot line
adjustment.

(3) A legal description of the affected parcels which is being subdivided and legal
descriptions for each of the resulting parcels; and, in regard to lot line adjustments,
legal descriptions for the adjusted or consolidated parcels;

(4) A written description stating the reason for the request; and

(5) A land survey prepared by and signed by a registered land surveyor describing the lot
line adjustment and showing all buildings, driveways, easements, setbacks, and other
pertinent information including the legal descriptions herein required.

(6) A title search showing ownership of the property and any existing deed restrictions.

(7) Other information shall be provided as may be reasonably requested by the City staff.

(E) Review of lot line adjustment or lot consolidation. A completed application shall be
reviewed administratively by the Zoning Administrator who shall make a written finding in regard to the provisions of division (B) above. The Zoning
Administrator’s approval shall be conditioned upon recording of documents which
effectuate the lot line adjustment or lot consolidation and any other conditions deemed
necessary to ensure compliance with the Zoning Code. Unless a request for additional
review time is requested by the Zoning Administrator, action on the application shall
be taken within 60 days after a complete application is submitted. Prior to the issuance of
any development permits, and no later than 60 days after administrative review and
approval, the applicant shall provide the Zoning AdministratorCity with recorded documents or recorded document numbers for the deeds of conveyance which effectuate the lot line adjustment or lot consolidation. Failure to provide the required verifications within the required time shall invalidate the Zoning AdministratorCity’s approval.

(F) Certification of Taxes Paid. Prior to approval of an application for a lot line adjustment or lot consolidation, the applicant shall provide certification to the City that there are no delinquent property taxes, special assessments, interest, or City utility fees due upon the parcel of land to which the lot line adjustment or lot consolidation application relates.

(1997 Code, § 400.06) (Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

§ 153.07 MINOR SUBDIVISIONS.

(A) Purpose and Intent. The purpose of a minor subdivision process is to allow the City to waive certain procedures and requirements of a major subdivision. The purpose is to reduce the time and cost to the property owner for dividing land in locations and situations that are well defined and where no new public infrastructure is required. The minor subdivision process allows for concurrent review and approval of a Preliminary and Final Plat.

(B) Criteria for Minor Subdivision. A minor subdivision is a division of land which results in no more than 4 parcels wherein shown on the plat/survey:

1. Each resultant parcel meets all applicable requirements of the Zoning Code, including but not limited to density, lot size, lot width, and minimum frontage on a public road, unless a variance has been approved according to the procedures set forth in 153.11.
2. No new public rights-of-way or streets shall be necessary for or created by the subdivision.
3. Streets, utility easements, drainage easements or public park land or cash in lieu of land shall be dedicated or fee paid in lieu of dedication as required by the City.
4. All wetland areas and Minnesota Department of Natural Resources protected waters shall be protected with a conservation easement up to the 100-year flood level.
5. The minor subdivision complies with all applicable requirements of the road authority, including access spacing and location criteria for sight distances if located adjacent to a state or county highway, and/or of the watershed district(s) in which it is located.

(C) Submittal Requirements. Requests for minor subdivision shall be filed with the Zoning AdministratorCity on an official application form. The applicant’s signatures shall be provided on the application form. If the applicant is not the fee owner of the property, the fee owner’s signature shall also be provided on the application form, or the applicant shall provide separate written and signed authorization for the application from the fee owner. Such application shall be accompanied by the following information. The applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11” X 17”) copies of all graphics. The application shall be considered as being officially
submitted and complete when the applicant has complied with all the specified requirements. The applicant will be responsible for all expenses incurred in obtaining the required information.

(1) A fee as set forth by the City’s adopted fee schedule

(2) Detailed written and graphic materials fully explaining the proposed minor subdivision

(3) List of property owners located within 350 feet of the subject property in a format prescribed by the Zoning AdministratorCity

(4) A preliminary plat prepared by a registered land surveyor in the form required by M.S. Ch. 505, as it may be amended from time to time, and the name, address, and registration number of the surveyor, which includes:
   a. Graphical scale not more than 1 inch equals 100 feet.
   b. North point indication.
   c. Original and proposed lot boundaries.
   d. Topographic data at 2 foot contours.
   e. Existing and resulting parcel legal descriptions.
   f. Buildable area on each lot and proposed building pad.
   g. The location of existing structures on the site.
   h. Existing and proposed driveway locations.
   i. Existing easement locations.
   j. Existing parks, streets and utility easements.
   k. Delineated wetlands and water bodies including ordinary high water elevations and floodplain boundaries as applicable.
   l. Sewage treatment systems and/or well locations.
   m. Location and size of existing sewers, water mains, wells, culverts, or other underground utilities within the tract and to a distance of 150 feet beyond the tract, the data as grades, invert elevations, and locations of catch basins, and manholes shall also be shown;

(5) Drainage, grading and erosion control plans, if applicable.

(6) Existing and proposed lowest floor elevations for each lot.

(7) Soil testing for the installation of subsurface sewage treatment system, if applicable.

(8) If driveways to a state or county highway are required, driveway permits or a letter of intent to approve said driveways from the applicable road authority.

(9) Any additional information if deemed necessary and required by the Zoning AdministratorCity. The Zoning AdministratorCity may waive for good cause certain information requirements not pertinent to the particular minor subdivision request.

(D) Review of Minor Subdivision.
(1) **Review by staff and other commissions or jurisdictions.** The City shall refer copies of the preliminary plat to the City Engineer, Planner, Attorney, the Parks Commission, and the appropriate county, state, or other public agencies for their review and comment. The **Zoning Administrator City** shall instruct the appropriate staff persons to prepare technical reports where appropriate, and to provide general assistance in preparing a recommendation on the action to the Planning Commission and Council.

(2) **Public Hearing Set.** Upon receipt of a complete application, the **Zoning Administrator City** shall set a public hearing following proper hearing notification. The Planning Commission shall conduct the hearing, and report its findings and make recommendation to Council. Notice of said hearing shall consist of a legal property description and a description of the request, which shall be published in the official newspaper at least 10 days prior to the hearing and written notification of said hearing shall be mailed at least 10 days prior to the hearing to all owners of land within 350 feet of the boundary of the property in question. Failure of a property owner to receive said notice shall not invalidate any such proceedings as set forth within this Chapter.

(3) The Planning Commission shall make a finding of fact and recommend such actions or conditions relating to the request as it deems necessary to carry out the intent and purpose of this Chapter.

(4) The City Council shall not approve a minor subdivision until it has received a report and recommendation from the Planning Commission and the City staff, or until 60 days after the first regular Planning Commission meeting at which the request was considered.

(5) Approval of a minor subdivision shall require passage of a resolution by a majority vote of a quorum of the City Council.

(6) Prior to certification by the City of the approval of the minor subdivision, the applicant shall submit the final plat for signature, supply the deed(s) granting the City any easements required by the City and pay any required fees.

(7) Whenever an application for a minor subdivision has been considered and denied by the City Council, a similar application for a minor subdivision affecting substantially the same property shall not be considered again by the Planning Commission or City Council for at least 6 months from the date of its denial unless a decision to reconsider such matter is made by a majority vote of the entire City Council.

(E) **Recording of the Minor Subdivision.** If the minor subdivision is approved by the Council, the subdivider shall record it with the County Recorder within 120 days after the approval. If not filed within 120 days, approval of the minor subdivision shall be considered void, unless a request for time extension is submitted in writing and approved by the Council. The subdivider shall, immediately upon recording, furnish the **Zoning Administrator City** with a certified copy of such record.
AdministratorCity with copies of the recorded documents which effectuate the minor subdivision. No building permits shall be issued for construction of any structure on any lot within the approved minor subdivision until the City has received evidence of the plat being recorded by the County.

(F) **Financial Guarantee.** Following the approval of a minor subdivision as required by this Section and prior to the issuing of any building permits or the commencing of any work, the applicant may be required to guarantee to the City the completion of any improvements as shown on the approved plans and as required as a condition of minor subdivision approval.

(G) **Certification of Taxes Paid.** Prior to approval of an application for a minor subdivision, the applicant shall provide certification to the City that there are no delinquent property taxes, special assessments, interest, or City utility fees due upon the parcel of land to which the minor subdivision application relates.

§ 153.08 MAJOR SUBDIVISIONS-SKETCH PLAN REVIEW.

(A) **Purpose and Intent.** In order to ensure that all applicants are informed of the procedural requirements and minimum standards of this chapter and the requirements or limitations imposed by other City ordinances or plans, prior to the development of a preliminary plat, applicants are required to submit a sketch plan to the City for review.

(B) **Submittal requirements.** Requests for major subdivision shall be filed with the Zoning AdministratorCity on an official application form. The applicant’s signatures shall be provided on the application form. If the applicant is not the fee owner of the property, the fee owner’s signature shall also be provided on the application form, or the applicant shall provide separate written and signed authorization for the application from the fee owner. Such application shall be accompanied by the following information. The applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11” X 17”) copies of all graphics. The application shall be considered as being officially submitted and complete when the applicant has complied with all the specified requirements. The applicant will be responsible for all expenses incurred in obtaining the required information.

   (1) A fee as set forth by the City’s adopted fee schedule
   (2) Detailed written and graphic materials fully explaining the proposed major subdivision
   (3) List of property owners located within 350 feet of the subject property in a format prescribed by the Zoning AdministratorCity
   (4) A scaled drawing which includes:
      a. Locations of boundary lines in relation to a known section, quarter section, or quarter quarter section line comprising a legal description of the property;
b. Graphical scale not less than 1 inch equals 100 feet.

c. Data and north point.

d. Existing conditions.
   i. Boundary line of proposed subdivision, clearly indicated;
   ii. Existing zoning classification for land within and abutting the subdivision;
   iii. A statement on the acreage and dimensions of the lots;
   iv. Location widths and names of existing or previously platted streets or other public ways, showing type, width, and conditions of improvements, if any, railroad and utility rights-of-way, parks and other open spaces, permanent buildings and structures, easements in section and corporate lines within the tract and to a distance of 150 feet beyond the tract;
   v. Location and size of existing sewers, water mains, wells, culverts, or other underground utilities within the tract and to a distance of 150 feet beyond the tract, the data as grades, invert elevations, and locations of catch basins, and manholes shall also be shown;
   vi. Boundary lines of adjoining unsubdivided or subdivided land, within 150 feet, identified by name and ownership, including all contiguous land owned or controlled by the subdivider;
   vii. Topographic data, including contours at vertical intervals of not more than 5 feet; water courses, marshes, rock outcrops, power transmission poles and lines and other significant features shall also be shown; National Geodetic Vertical Datum (N.G.V.D.) shall be used for all topographic mapping; and
   viii. The subdivider may be required to file a report prepared by a registered civil engineer or soil scientist on the feasibility of on-site sewer and water systems on each lot; the report shall include a soil borings analysis and a percolation test to verify conclusions.
   ix. Buildable area on each lot and proposed building pad.
   x. Existing and proposed driveway locations.
   xi. Existing parks, streets and easement locations.
   xii. Delineated wetlands and water bodies including ordinary high water elevations and floodplain boundaries as applicable.

e. Proposed design features.
   i. Layout of proposed streets showing right-of-way widths, center line grade, typical cross-sections, and proposed names of streets in conformance with all applicable City ordinances and policies; the name of any street used in the City or its environs shall not be used unless the proposed street is the logical extension of an already named street, in
which event the same name shall be used. The names and number shall comply with the County Uniform Street Numbering System

ii. Areas other than streets, pedestrian ways, utility easement, intended to be dedicated or reserved for public use, including the size of the areas in acres.

iii. Provision for surface water disposal, drainage, and flood control within the boundaries of the proposed property division consistent with §section 150.273 of the City Code, storm water management and erosion and sediment control

f. Supplementary information.

i. The supplementary information as shall reasonably be deemed necessary by the Planning Commission or the Council;

ii. Proposed protective covenants;

iii. Statement of the proposed use of lots stating type of residential buildings with number of proposed dwellings and type of business or industry, so as to review the effect of the development on traffic, fire hazards, and congestion of population;

iv. If any zoning changes are contemplated, the proposed zoning plan for the areas, including dimensions, shall be shown. The proposed zoning plans shall be for information only and not vest any rights in the application for use other than residential;

v. A statement showing the proposed density with the method of calculating said density also shown.

vi. Where the subdivider owns property adjacent to that which is being proposed for division, the Planning Commission may require that the subdivider submit a sketch plan of the remainder of the property so as to show the possible relationship between the proposed division and a future subdivision. All subdivisions shall be reasonably consistent with the existing or potential adjacent subdivisions; and

vii. Where structures are to be placed on large or excessively deep lots, which are subject to replat, the development subdivision plans shall indicate placement of structures so that lots may be further subdivided, in addition to a sketch plan that illustrates a way in which the lots can possibly be resubdivided.

(C) Sketch Plan Review. The sketch plan shall be reviewed by Staff, the Planning Commission, and Council. The City may refer the sketch plan to the Parks Commission to secure its recommendation as to the location of any property that should be dedicated to the public, such as parks, playgrounds, trails, open space or other public property. The City shall accept the information received, but take no formal or informal action which could be construed as approval or denial of the proposed plat.
§ 153.09 PRELIMINARY MAJOR SUBDIVISIONS.

(A) Submittal requirements. Requests for preliminary plat approval may be filed with the Zoning Administrator City on an official application form after the applicant has received comments on the proposed sketch plan as outlined in Section 153.08 of this Chapter. The applicant’s signatures shall be provided on the application form. If the applicant is not the fee owner of the property, the fee owner’s signature shall also be provided on the application form, or the applicant shall provide separate written and signed authorization for the application from the fee owner. Such application shall be accompanied by the following information. The applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11” X 17”) copies of all graphics. The application shall be considered as being officially submitted and complete when the applicant has complied with all the specified requirements and submitted all the information as outlined below. The applicant will be responsible for all expenses incurred in obtaining the required information.

1. The applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11” X 17”) copies of all graphics as well as electronic versions of all the submitted documentation and project plans. The applicant will be responsible for all expenses incurred in obtaining the required information.

2. Graphic scale of preliminary plat prepared by a registered land surveyor in the form required by M.S. Ch. 505, as it may be amended from time to time, and the name, address, and registration number of the surveyor not less than 1 inch to 100 feet;

3. A fee as set forth by the City’s adopted fee schedule;

4. Detailed written and graphic materials fully explaining the proposed major subdivision;

5. List of property owners located within 350 feet of the subject property in a format prescribed by the Zoning Administrator City;

6. Proposed name of subdivision; names shall not duplicate or too closely resemble names of existing subdivisions; in any case, the name must be approved by the County Recorder;

7. Location of boundary lines in relation to a known section, quarter section, or quarter quarter section lines comprising a legal description of the property;

8. Names and addresses of all persons having any interest in the property, the developer, designer, and surveyor together with the interested person’s registration number;
Graphic scale of preliminary plat prepared by a registered land surveyor in the form required by M.S. Ch. 505, as it may be amended from time to time, and the name, address, and registration number of the surveyor not less than 1 inch to 100 feet.

Data and north point; and

Date of preparation.

Existing conditions.

a. Boundary line of proposed subdivision, clearly indicated;
b. Existing zoning classifications for land within and abutting the subdivision;
c. A general statement on the approximate acreage and dimensions of the lots;
d. Location, widths, and names of all existing or previously platted streets or other public ways, showing type, width, and condition of improvements if any, railroad and utility rights-of-way, parks and other public open spaces, permanent buildings and structures, easements and section and corporate lines within the tract and to a distance of 150 feet beyond the tract;
e. Location and size of existing sewers, water mains, culverts, or other underground facilities within the tract and to a distance of 150 feet beyond the tract; the data as grades, invert elevations, and locations of catch basins, manholes, shall also be shown;
f. Boundary lines of adjoining unsubdivided or subdivided land, within 150 feet, identified by name and ownership, including all contiguous land owned or controlled by the subdivider;
g. Topographic data, including contours at vertical intervals of not more than 2 feet; water courses, marshes, rock outcrops, power transmission poles and lines, and other significant feature shall also be shown; National Geodetic Vertical Datum (N.G.V.D.) shall be used for all topographic mapping; and
h. In-major subdivisions where public water and sewer are not available, the City Engineer may require the subdivider to file a report prepared by a soil scientist or a registered civil engineer on the feasibility of on-site sewer and water systems on each lot. The report shall include a soil boring analysis and percolation tests to verify conclusions.

Proposed design features

i. Layout of proposed streets showing right-of-way widths, center line grade, typical cross-sections, and proposed names of streets in conformance with all applicable City ordinances and policies; the name of any street used in the City or its environs shall not be used unless the proposed street is the logical extension of an already named street, in which event the same name shall be used. The names and number shall comply with the County Uniform Street Naming and Property Numbering System, with the following exceptions:
i. Unless a newly proposed street directly extends from an existing street, no street name that already exists in the City or its environs shall be used, regardless if it is on the same grid as another street.
   a. North-south avenues shall follow the grid system, increasing alphabetically from east to west, but must use different names.
   b. East-west streets shall follow the grid numbering system as appropriate, but a different suffix such as Lane, Place, Way, etc. or a different prefix such as Upper or Lower shall be used.

ii. The names of deflecting streets shall not vary; names of continual streets shall not change, even if the street changes direction, unless an intersection exists.

iii. The names of deflecting streets shall be determined according to their relation to an Arterial or Collector Street if appropriate, otherwise such names shall be determined according to their main point of entry in to a development or as deemed appropriate by Council.

iv. If appropriate, names with the same theme (i.e. flowers, nature) are permitted for naming streets in an entire subdivision.

v. All street names shall end with the directional suffix of North.

b. Locations and widths of proposed alleys and pedestrian ways;

c. Locations and size of proposed sewer lines and water mains;

d. Layout, numbers, lot areas, and preliminary dimensions of lots and blocks;

e. Building pads shall be shown to demonstrate minimum front and side street building setback lines;

f. When lots are located on a curve, the width of the lot at the building setback line shall be shown;

g. Areas, other than streets, alleys, pedestrian ways, and utility easements intended to be dedicated or reserved for public use, including the size of the area or areas in acres. This shall include areas planned for trails and parks within the City;

h. Area calculations of lots, right-of-way, streets, public highways, alleys, parks and public trails, wetland and wetland buffers and other features with accurate dimensions;

i. Water mains shall be provided to serve the subdivision by extension of any existing community system wherever feasible. Service connections shall be stubbed into the property line and all necessary fire hydrants shall also be provided. Extensions of the public water supply system shall be designed so as to provide public water in accordance with the standards of the City. In areas where public water supply is not available, well plans must comply with applicable state regulations and shall be submitted for the approval of the City Building Official;

j. Sanitary sewer mains and service connections shall be installed in accordance with the standards established by the City;
k. All private sewage treatment systems shall be installed in accordance with standards established by the City of Washington County. Demonstration of two separate and distinct 10,000 square-foot contiguous land areas, suitable for septic drainfields or onsite system treatment area, is required;
l. Surface water disposal, drainage, and flood control shall be provided within the boundaries of the proposed property division consistent with section 150.273 of the City Code, storm water management and erosion sediment control;
m. Location of 100-year flood plain areas and floodway districts from existing adopted maps or data; and
n. A line or contour representing the ordinary high water level, the “toe” and the “top” of bluffs, and the minimum building setback distances from the top of the bluff and the lake or stream.
o. Supplementary information. The following supplementary information shall be submitted when deemed necessary by the City:
  i. Written statement explaining changes or modifications to the sketch plan.
  ii. Proposed protective covenants;
  iii. An accurate soil survey of the subdivision prepared by a qualified person. In areas of questionable soil conditions, percolation tests at the rate of no fewer than two successful test results for each proposed septic disposal area (a total of four tests per proposed lot) may be required on a lot-by-lot basis to determine the suitability of any particular site for building.
  iv. A statement prepared by a qualified person identifying tree coverage in the proposed subdivision in terms of type, weakness, maturity, potential hazard, infestation, vigor, density, and spacing;
  v. Statement of the proposed use of lots stating type of residential buildings with number of proposed dwelling units and/or type of business or industry, so as to reveal the effect of the development on traffic, fire hazards, and congestion of population;
  vi. If any zoning changes are contemplated, the proposed zoning plat for the areas, including dimensions, shall be shown;
  vii. Where the subdivider owns property adjacent to that which is being proposed for the subdivision, the Planning Commission may require that the subdivider submit a sketch plan of the remainder of the property so as to show the possible relationships between the proposed subdivision and the future subdivision. All subdivisions shall be shown to relate well with existing or potential adjacent subdivisions;
  viii. Where structures are to be placed on large or excessively deep lots which are subject to potential replat, the subdivider shall provide in the preliminary plat, a sketch plan which indicates minimum building setback
lines and future roadway alignments which would not interfere with structural placement at the time of future subdivision; and

ix. A vegetation preservation and protection plan, consistent with Section 154.257 of the Zoning Code, that shows those trees proposed to be removed, those to remain, the types and locations of trees and other vegetation that are to be planted;

x. Developer shall provide a landscape plan, signed by a licensed landscape architect, which shows the placement of ponding, berms, trees, and tree seedlings, shrubs, and shrub seedlings and native grasses.

1. Landscape plans shall adhere to all requirements of Section 154.258 of the Zoning Code and shall include the City’s Landscape Standard Notes.

2. Irrigation plans shall be submitted and be in compliance with Lake Elmo General Irrigation Standards.

xi. If the development is an Open Space Preservation development, architectural and performance standards shall be submitted. If applicable, developments within the I-94 corridor and Old Village shall submit architectural renderings in order to ensure compliance with City of Lake Elmo Design Guidelines & Standards.

xii. Any environmental review, such as an Environmental Assessment Worksheet, as required by State Statutes. If an environmental review is required, the Preliminary Plat application cannot proceed until the review or study is complete;

p. Other information. Other information shall be provided as may be reasonably requested by the City staff, Planning Commission, or Council.

(B) Preliminary Major Subdivision Review.

(1) Review by staff and other commissions or jurisdictions. The City shall refer copies of the preliminary plat to the City Engineer, Planner, and Attorney, the Park Commission, and the appropriate county, state, or other public agencies, including but not limited to Watershed Districts, the Minnesota Department of Transportation and/or Washington County if the application abuts a county road or highway or county state-aid highway, and/or the Department of Natural Resources (DNR) if the application is within a Shoreland Overlay District and/or Floodplain Management District, for their review and comment. The Zoning Administrator shall instruct the appropriate staff persons to prepare technical reports where appropriate, and to provide general assistance in preparing a recommendation on the action to the Planning Commission and Council.

(2) Comment must be received within 30 days or it will be assumed there are no objections.
(C) Public Hearing Set. Upon receipt of a complete application, the Zoning Administrator shall set a public hearing following proper hearing notification. The Planning Commission shall conduct the hearing and report its findings and recommendations to the Council. The Planning Director shall give notice of the hearing. The notice shall consist of a property description and a description of the request. The notice shall be published in the official newspaper at least 10 days prior to the date of the hearing and written notification of the hearing shall be mailed at least 10 days prior to all owners of land within 350 feet of the boundary of the property in question. The Planning Commission, at its discretion, may direct that notification be sent to property owners at distances of greater than 350 feet. The failure of any property owner to receive notice shall not invalidate the proceedings set forth in this Chapter.

(D) Planning Commission action. The Planning Commission shall make a finding of fact and recommend such actions or conditions relating to the request as it deems necessary to carry out the intent and purpose of this Chapter. The Planning Commission and shall have the authority to request additional information from the subdivider concerning the proposal, as deemed necessary to formulate a recommendation on the proposal.

1. The Planning Commission shall recommend approval of the preliminary plat if it in all ways conforms to the City’s Comprehensive Plan and Development Code. The Commission shall recommend denial of the preliminary plat if it makes any of the following findings:
   a. That the proposed subdivision is in conflict with the City’s Comprehensive Plan, Development Code, Capital Improvements Program, or other policy or regulation.
   b. That the physical characteristics of the site, including but not limited to topography, vegetation, susceptibility to erosion and siltation, susceptibility to flooding, water storage, and retention, are such that the site is not suitable for the type or intensity of development or use contemplated.
   c. That the design of the subdivision or the proposed improvements are likely to cause substantial and irreversible environmental damage.
   d. That the design of the subdivision or the type of improvements will be detrimental to the health, safety, or general welfare of the public.
   e. That the design of the subdivision or the type of improvement will conflict with easements on record or with easements established by judgment of a court.
   f. That the subdivision is premature as determined by the standards of this Chapter.

(E) City Council Action.

1. The Council shall act upon the preliminary plat after it has received a report and recommendation from the Planning Commission and the City staff, or until 60 days after the first regular Planning Commission meeting at which the request
was considered. The Council shall have the option of receiving additional testimony if it so chooses. An application for preliminary plat shall be approved or denied within 120 days from the date of its official and complete submission unless extended pursuant to Statute or a time waiver is granted by the subdivider.

(2) If the preliminary plat is not approved by the Council, the reasons for the action shall be recorded in the proceedings of the council and transmitted to the applicant. If the preliminary plat is approved, the approval shall not constitute final acceptance of the layout. Subsequent approval will be required of the engineering proposals and other features and requirements as specified by this chapter to be indicated on the final plat. The Council may require revisions in the preliminary plat and final plat as it deems necessary for the public health, safety, general welfare, and convenience.

(F) Effect of Approval. For one year following preliminary plat approval, unless the subdivider and City agree otherwise, no amendment to the Comprehensive Plan or other official controls shall apply to or affect the use, development density, lot size, or lot layout that was approved.

(G) Effect of Denial. If a preliminary plat application is denied by the City Council, a similar application for a preliminary plat affecting substantially the same property shall not be considered again by the Planning Commission or City Council for at least six months from the date of its denial.

(H) Submission of final plat; request for extension. If the preliminary plat is approved by the Council, the subdivider must submit the final plat within 180 days after the City Council approval, or approval of the preliminary plat shall be considered void, unless a request for time extension is submitted in writing and approved by the council. Such request for an extension shall include the following: 1) an explanation for why a final plat has not been applied for, 2) what, if any, good faith efforts have been made to complete the platting process, and 3) the anticipated completion date. The Council may approve up to two such extensions of not more than one additional year per extension.

(1997 Code, § 400.08) (Am. Ord. 08-024, passed 4-20-2010) (Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

§ 153.10 FINAL MAJOR SUBDIVISIONS.

(A) Submittal requirements. Requests for final plat approval may be filed with the Zoning Administrator on an official application form following approval of a preliminary plat. The applicant’s signatures shall be provided on the application form. If the applicant is not the fee owner of the property, the fee owner’s signature shall also be provided on the application form, or the applicant shall provide separate written and signed authorization for the application from the fee owner. Such application shall be accompanied by the following information: The
applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11" X 17") copies of all graphics. The application shall be considered as being officially submitted and complete when the applicant has complied with all the specified requirements and submitted all the information as outlined below. The applicant will be responsible for all expenses incurred in obtaining the required information.

(1) The applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11" X 17") copies of all graphics as well as electronic versions of all the submitted documentation and project plans.

(2) Certification by a registered land surveyor in the form required by M.S. Ch. 505, as it may be amended from time to time, and the name, address, and registration number of the surveyor;

(3) A fee as set forth by the City’s adopted fee schedule.

(4) Final tree preservation and landscape plans.

(5) A written summary of how all conditions of preliminary plat approval have been met.

(6) Written statement explaining changes or modifications to the preliminary plat.

(7) Final plat including the following information:
   i. Name of the subdivision;
   ii. Location by section, township, range, county, and state, and including descriptive boundaries of the subdivision;
   iii. The location of monuments shall be shown and described on the final plat;
   iv. Location and area calculations of lots, right-of-way, streets, public highways, alleys, parks and trails, wetland and wetland buffers and other features with accurate dimensions;
   v. Lots shall be numbered clearly; blocks are to be numbered, with numbers shown clearly in the center of the block;
   vi. The exact locations, widths, and names of all streets to be dedicated;
   vii. Location width and use of all easements to be dedicated;
   viii. Certification by a registered land surveyor in the form required by M.S. Ch. 505, as it may be amended from time to time, and the name, address, and registration number of the surveyor;
   ix. Scale of plat (the scale to be shown graphically on a bar scale), date, and north point;
   x. Statement dedicating all easements;
   xi. Statement dedicating all streets, utility easements, and other public areas not previously dedicated; and
   xii. Certificate for approval by the City Planning Commission and the Council. The certificate shall be prepared for the signatures of the Chair...
and Secretary of the City Planning Commission, and the Mayor and Administrator.

Final grading and drainage plan, appropriately labeled, using a copy of the current certificate of survey as a base for the site in question and prepare and signed by a Minnesota licensed engineer, depicting the following information:

i. North arrow and date of preparation.

ii. Graphic Scale (engineering scale only, not less than one (1) inch equals fifth (50) feet).

iii. For each lot, provide lot and block numbers, building pad location, building type and proposed building first floor elevation, low floor elevation and elevation at garage slab.

iv. Stormwater Management Plan, with a narrative, including the configuration of drainage areas and calculations that meet the requirements of the City Code and/or applicable Watershed Standards.

v. Location of all natural features on the tract. Natural features are considered to include, but are not limited to the following: tree lines, wetlands, ponds, lakes, streams, drainage channels, bluffs, steep slopes, etc.

vi. All delineated Wetlands and watercourse buffers per the City and Watershed standards; and wetland replacement plan, if needed.

vii. Location of all existing storm sewer facilities, including pipes, manholes, catch basins, ponds, swales, and drainage channels within one hundred fifty (150) feet of the tract. Existing pipe type, grades, rim and invert elevations and normal and high water elevations must be included.

viii. Normal water level (NWL) and 100-year high water level (100-year HWL) for all water bodies, existing and proposed.

ix. Spot elevations at drainage break points and emergency overflows (in BOLD) with directional arrows indicating site, swale and lot drainage.

x. Retaining Walls (wall heights and elevations).

xi. Locations, grades, rim and invert elevations of all storm sewer facilities, including ponds and BMP’s proposed to serve the tract.

xii. Locations and elevations of all street high and low points.

xiii. Street grades shown.

xiv. Provide phasing plan for site grading.

xv. All soil erosion and sediment control measures to be incorporated during and after construction must be shown. Locations and standard detail plates for each measure must be included on the plan using Lake Elmo City standard details. Plan must meet the requirements of MPCA General Permit Construction Activity.
xvi. All revegetation measures proposed for the tract, including seed and mulch types and application rates must be included on the plan.

xvii. Existing contours at two (2) foot intervals shown as dashed lines (may be prepared by a Minnesota licensed surveyor). Existing contours shall extend one hundred fifty (150) feet outside of the tract.

xviii. Proposed grade elevations at two (2) foot intervals shown as solid lines.

xix. Other information as required and outlined in the City Plan Sheet Format Requirements.

(9)(10) Final street and storm sewer plan, appropriately labeled, prepared and signed by a Minnesota licensed engineer, depicting the following information:
   i. Layout of proposed streets showing the proposed lot lines, right-of-way widths, and proposed street names, in accordance with the City’s Street Naming Policy, as outlined in 153.09 (11) (a).
   ii. Locations and widths of proposed streets, alleys and pedestrian-ways.
   iii. Location, dimensions and purpose of all easements.
   iv. Annotation of street geometrics for all horizontal curves, tangent lengths and corner radii.
   v. Centerline profile and gradients for all streets, with vertical geometrics annotated on the plan profiles.
   vi. Typical cross section of proposed street improvements.
   vii. Minimum front and side street building setback lines.
   viii. When lots are located on a curve, the width of the lot at the building setback line.
   ix. For any non-single family residential development, location and number of off-street parking spaces (guest, handicapped, bicycle, motorcycle, etc.) including typical dimensions of each.
   x. Other information as required and outlined in the City Plan Sheet Format Requirements.

(10)(11) Other written materials. The application form shall be accompanied by, or address, the following written materials:
   i. Lot size for all lots and outlots in tabular form.
ii. Area calculations of lots, right-of-way, streets, public highways, alleys, parks and public trails, wetland and wetland buffers and other features with accurate dimensions;

iii. Cost estimates for grading and all public improvements.

iv. A copy of any proposed homeowners association documents, private covenants or deed restrictions.

v. Commitment for Title Insurance.

vi. If a common interest community (CIC) is created, the developer shall provide proof that a replacement reserve amount was created in accordance with Minnesota Statute 515(b)(3)-1141.

(B) Review of Final Plat.

(1) The application shall be in substantial compliance with the approved preliminary plat, including any modifications required as a condition of preliminary plat approval. Pursuant to Minnesota Statutes, Chapter 462.358, an application for a final plat shall be approved or denied within 60 days of the date from the date of its official and complete submission unless extended pursuant to Statute or a time waiver is granted by the subdivider.

(2) Review by staff and other commissions or jurisdictions. The City shall refer copies of the preliminary plat to the City Engineer, Planner, Attorney, the Park Commission, and the appropriate county, state, or other public agencies, including but not limited the Minnesota Department of Transportation and/or Washington County if the application abuts a county road or highway or county state-aid highway, and/or the Department of Natural Resources (DNR) if the application is within a Shoreland Overlay District and/or Floodplain Management District, for their review and comment. The Zoning Administrator shall instruct the appropriate staff persons to prepare technical reports where appropriate, and to provide general assistance in preparing a recommendation on the action to the Planning Commission and Council.

(3) Planning Commission action. After review of the final plat by the staff, the Planning Commission shall review the final plat for substantial compliance with the approved preliminary plat and make recommendation to Council. The Planning Commission shall review final plats if the applicant is proposing a substantial change(s) as determined by City Staff from the preliminary plat as approved by the City Council.

(4) City Council Action. The final plat shall be approved or disapproved within 60 days after the filing of the final plat by resolution and conditioned upon the execution of the development agreement for basic improvements, public dedication, security, and other requirements determined necessary or appropriate by the Council. If disapproved, the grounds for any refusal to approve a plat shall be set forth in the proceedings of the Council and reported to the applicant.

(5) The resolution approving the plat shall authorize the Mayor and Administrator to execute an endorsement of approval for the City. The Mayor and Administrator shall
not execute the endorsement until any development agreement or security required by
the resolution of the approval have been approved in writing by the City Attorney.
(Am. Ord. 9705, passed 5-6-1997) (Am. Ord. 08-205, passed 4-3-2018)

(3) **Special assessments.** When any existing special assessments which have been levied
against the property described are to be divided and allocated to the respective lots in the
proposed plat, the Engineer shall estimate the cost of preparing a revised assessment roll, filing
the assessment roll with the County Auditor, and making the division and allocation. Upon
approval by the Council of the cost, the cost shall be paid to the City.

(4) **Recording final plat.** If the final plat is approved by the Council, the subdivider shall
record it with the County Recorder within 120 days after the approval. If not filed within 120
days, approval of the final plat shall be considered void, unless a request for time extension is
submitted in writing and approved by the Council. The subdivider shall, immediately upon
recording, furnish Administrator with 2 paper prints and 1 reproducible film positive of the plat
showing evidence of the recording. No building permits shall be issued for construction of any
structure on any lot in the plat until the City has received evidence of the plat being recorded by
the County. This evidence may be in the form of a receipt or other documentation from
Washington County.
(Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

**§ 153.11 VARIANCES; STANDARDS; PLATTING.**

(A) **Purpose.** A variance may be granted from the minimum standards required by this
chapter as they apply to specific property where unusual hardship on the land exists, but
variances may be granted only upon the specific ground set forth in this section. In granting any
variance, the Planning Commission may recommend, and the Council shall prescribe, the
conditions as it deems necessary and desirable to protect the public interests. In no case shall
any of the procedural requirements of this chapter be waived nor shall a variance be deemed to
permit any waiver or avoidance of the procedural requirements.

(B) **Planning Commission review.** No variance shall be granted until the matter has been
considered by the Planning Commission. In making its recommendations, the Planning
Commission shall take into account the nature of the proposed use of land and the existing use of
land in the vicinity, number of persons to reside or work in the proposed subdivision and the
probable effect of the proposed subdivision upon traffic conditions in the vicinity.

(C) **Findings.** A variance shall be granted only where the Council finds:

1. That there are special circumstances or conditions affecting the applicant's land that the
strict application of the minimum standards of this chapter would deprive the applicant of the
reasonable use of that land;

2. That the granting of the variance will not be detrimental to the public welfare or
injurious to other property; and
That the variance required by reason of unusual hardship relating to the physical characteristics of the land.

(1997 Code, § 400.11) (Am. Ord. 08-205, passed 4-3-2018)

§ 153.12 VARIANCE PROCEDURES.

(A) Application. Requests for a variance or appeal shall be filed with the Zoning Administrator on an official application form. The application shall be accompanied by a fee as established from time to time by resolution of the Council. The application shall also be accompanied by detailed written and graphic materials necessary for the explanation of the request. The applicant shall submit a minimum of 4 large scale copies and 10 reduced scale (11” X 17”) copies of all graphics.

(B) Hearing. The Planning Commission shall hold a public hearing on the variance request in accordance with the standards set forth in the zoning code.

(C) Appearance of applicant before Planning Commission. The applicant or a representative of applicant shall appear before the Planning Commission in order to answer questions concerning the proposed variance request.

(D) Findings. The Planning Commission shall make its findings and recommend the actions or conditions relating to the request as they deem necessary to carry out the intent.

(E) Approval/denial. Upon receiving the report and recommendation of the Planning Commission, the Council shall decide whether to approve or deny the request for a variance. The Council shall not grant a variance until it has received the report and recommendation from the Planning Commission or until 30 days after the application was accepted by the City. The Council shall decide whether to approve or deny the request for a variance or an appeal no later than 60 days after the filing of the application.

(F) Written findings and order. The Council shall make written finding of fact and order in granting or denying any application for a variance or appeal. In granting any variance or making any order related to a variance or appeal, the Council shall impose any condition it considers necessary to protect the public health, safety, or welfare.

(G) Notification of decision. The Administrator shall notify the applicant of the Council’s decision in writing.

(1997 Code, § 400.12) (Am. Ord. 08-205, passed 4-3-2018)

§ 153.13 PLANNED UNIT DEVELOPMENTS (P.U.D.).

(A) Upon receiving a report from the Planning Commission, the Council may grant exceptions from the provisions of these regulations in the case of a Planned Unit Development, provided that the Council finds that the proposed development is fully consistent with the purpose and
intent of these regulations and in compliance with the Planned Unit Development objectives as identified in Article XVII of the zoning code.

(B) This provision is intended to provide the necessary flexibility for new land planning and land development trends and techniques.

(1997 Code, § 400.13) (Am. Ord. 08-072, passed 3-5-2013) (Am. Ord. 08-205, passed 4-3-2018)

§ 153.14 ENGINEERING DESIGN STANDARDS; REQUIRED IMPROVEMENTS.

Submittals must meet plan sheet format requirements set forth by the City of Lake Elmo Engineering Design Standards.

(A) Blocks.

(1) In general, intersecting streets, determining block lengths, shall be provided at the intervals as to serve cross traffic adequately and to meet existing streets. Where no existing plats control the blocks in residential subdivisions, blocks shall not be less than 600 feet nor more than 1,800 feet in length, except where topography or other conditions justify a departure from this maximum. In blocks longer than 900 feet, pedestrian ways and/or easements through the block may be required near the center of the block. Blocks for business or industrial use may vary from the elements of design contained in this section if the nature of the use requires other treatment.

(2) The width of the block shall normally be sufficient to allow 2 tiers of lots of appropriate depth. Blocks intended for business or industrial use shall be of the width as to be considered most suitable for their respective use, including adequate space for off-street parking and deliveries.

(3) Blocks for commercial and industrial areas may vary from the elements of design contained in this section if the nature of the use requires other treatment. In those cases, off-street parking for employees and customers shall be provided along with safe and convenient limited access to the street system. Space for off-street loading shall also be provided with similar access. Extension of roads, railroad access right-of-way, and utilities shall be provided as necessary.

(B) Lots.

(1) Area. The minimum lot area, width, and depth shall not be less than that established by the zoning code in effect at the time of adoption of the final plat.

(2) Corner lots. Corner lots for residential use shall have additional width to permit appropriate building setback from both streets as required in the zoning code.

(3) Side lot lines. Side lines of lots shall be approximately at right angles to street lines or radial to curved street lines.

(4) Frontage. Every lot must have a minimum frontage on a public street accepted for maintenance purposes by the City (or to be accepted upon completion of construction by the applicant), other than an alley, as required in the zoning code. No subdivision shall be permitted
which will result in a lot with less than the minimum frontage on a public street as required by the zoning code except where a variance is granted as provided by this chapter. In no case shall a variance to this frontage requirement be granted which would permit access to a lot by means of an easement or private road except as provided in § 153.191.

(5) **Setback lines.** Setback or building lines shall be shown on all lots intended for residential use and shall not be less than the setback required by the zoning code.

(6) **Water courses.** Lots abutting a water course, drainage way, channel, or stream shall have additional depth and width, as required under the provisions of the zoning code for the shoreland and wetland system districts.

(7) **Features.** In the subdividing of any land, due regard shall be shown for all natural features, such as tree growth, water courses, wetlands, historic spots, or similar conditions which, if preserved, will add attractiveness and stability to the proposed development.

(8) **Lot remnants.** All remnants of lots below minimum size left over after subdividing of a larger tract must be added to adjacent lots or planned as outlots, rather than allowed to remain as unusable parcels.

(9) **Frontage on 2 streets.** Double frontage, or lots with frontage on 2 parallel streets, shall not be permitted except where lots back on arterial streets or highways, or where topographic or other conditions render subdividing otherwise unreasonable. Double frontage lots shall have an additional depth of at least 20 feet in order to allow space for screen planting along the back lot line.

(10) **Turn-around access.** Where proposed residential lots abut a collector or arterial street, they should be platted in a manner as to encourage turn-around access and egress on each lot.

(11) **Minimum lot line.** No lot shall have a total width at the front or rear lot line of less than 30 feet.

(12) **Large lot planning.** In any area where lots are platted in excess of 24,000 square feet or 160 feet in width at the minimum building setback line, a preliminary resubdivision plan may be required showing a potential and feasible way in which the lot or lots may be resubdivided in future years for more intensive use of the land, the placement of buildings or structures upon the lots shall allow for potential resubdivision.

(13) **Shoreland.**

(a) **Land suitability.** No land shall be subdivided which is held unsuitable by the City for the purposes of the use because of flooding, inadequate drainage, soil and rock formations with severe limitation for development, severe erosion potential, inadequate water supply or sewage disposal capabilities.

(b) **Review by Commissioner of Natural Resources.** All plats within a shoreland district shall be reviewed by the Commissioner before approval by the City may be granted. Review shall require that the proposed plats be received by the Commissioner at least 10 days before a hearing is called by the City for consideration of approval of a preliminary plat.

(c) **Copies of plats supplied to Commissioner.** Copies of all plats within shoreland areas shall be submitted to the Commissioner within 10 days of final approval by the City.
(C) Easements.

(1) Width and location. An easement for utilities at least 10 feet wide, shall be provided along all lot lines. If necessary for the extension of main water or sewer lines or similar utilities, easements of greater width may be required along lot lines or across lots. See § 150.277(A)(2)(e) of the City code for other applicable easement regulations.

(2) Continuous utility easement locations. Utility easements shall connect with easements established in adjoining properties. These easements, when approved, shall not subsequently be changed without the approval of the Council after a public hearing.

(3) Provisions for drainage. Easements shall be provided along each side of the center line of any water course or drainage channel whether or not shown in the Comprehensive Plan, to a width sufficient in the judgment of the Council to provide proper maintenance and protection and to provide for storm water runoff and installation and maintenance of storm sewers. They shall be dedicated to the City by appropriate language in the owner’s certificate. See § 150.277(A)(2)(e) of the City code for other applicable easement regulations.

(D) Erosion and sediment control. Erosion and sediment control plans shall be provided in accordance with § 150.277(B) of the City code.

(E) Drainage. A complete and adequate drainage system design, in accordance with the Watershed District, § 150.277(A) of the City code, and Local Storm Water Management Plan, approved by the City Engineer, shall be required for the subdivision.

(F) Monuments for plats.

(1) Official monuments, as designated or adopted by the County Surveyor's Office or approved by the County District Court for use as judicial monuments, shall be set at each corner or angle on the outside boundary of the final plat or in accordance with a plan as approved by the City Engineer. The boundary line of the property to be included with the plat must be fully dimensioned, all angles of the boundary excepting the closing angle to be indicated, all monuments and surveyor's irons to be indicated, each angle point of the boundary perimeter to be so monumented.

(2) Twenty-four inch long pipes or steel rods shall be placed at each lot and at each intersection of street center lines. All United States, state, county, or other official bench marks, monuments, or triangular stations in or adjacent to the property shall be preserved in precise position and shall be recorded on the plat.

(3) A second monumentation shall be required following the final grading and completion of streets, curbs and utility improvements for a plat in order to ensure that all irons and monuments are correctly in place.

(4) Proof of the final monumentation shall be in the form of a surveyor's affidavit that the monumentations complete. The surveyor's affidavit shall be submitted to the county; and

(b) Surveyor's office and to the City within 1 year from the date of recording the plat.

(G) Sanitary sewer and water distribution and public utilities.

(1) Sanitary sewers and water facilities shall be installed in accordance with the standards and specifications as provided for in the City's Comprehensive Sewer Plan and Water Supply
and Distribution Report, and other City plans, and shall be subject to the review and approval of the City Engineer.

(2) Where City water facilities are not available for extension into the proposed subdivision, the Council may, by ordinance, grant a franchise for the water facilities, to serve all properties within a subdivision where a complete and adequate neighborhood water distribution system is designed in conjunction with the subdivision, and complete plans for the system are submitted for the approval of the Council.

(3) Where City sewer and water facilities are not available for extension into proposed subdivision, the Council may permit the use of private or other water and sewer systems in accordance with all appropriate state and local regulations.

(4) Telephone, electric, and/or gas service. All utility lines are to be placed underground in accordance with the provisions of all applicable City ordinances and standards. Exceptions to this requirement may be granted by action of the Council.

(H) Streets, alleys, and curbs. The design of streets, alleys, and curbs shall conform to the City of Lake Elmo Engineering Design Standards.

(1) Streets, continuous. Except for cul-de-sacs, streets shall connect with streets already dedicated in adjoining or adjacent subdivisions, or provide for future connections to adjoining unsubdivided tracts, or shall be a reasonable projection of streets in the nearest subdivided tracts. The arrangement of thoroughfares and collector streets shall be considered in their relation to the reasonable circulation of traffic, to topographic conditions, to runoff of storm water, to public convenience and safety, and in their appropriate relation to the proposed uses of the area to be served.

(2) Local streets and dead-end streets. Local streets should be so planned as to discourage their use by non-local traffic. Permanent dead-end streets are prohibited except for public streets that will provide a street connection to an adjoining property, but cul-de-sacs shall be permitted where topography or other physical conditions justify their use. Temporary and permanent cul-de-sacs shall be designed in conformance with the City of Lake Elmo Engineering Design Standards.

(3) Street plans for future subdivisions. Where the plat to be submitted includes only part of the tract owned or intended for development by the subdivider, a tentative plan for a proposed future street system for the unsubdivided portion shall be prepared and submitted by the subdivider.

(4) Provisions for subdivision of large lots and parcels. When a tract is subdivided into larger than normal building lots or parcels, the lots or parcel shall be arranged to permit the logical location and openings of future streets and appropriate resubdivision, with provision for adequate utility connections for the resubdivision.

(5) Subdivisions abutting collector or minor arterial streets. Wherever a proposed subdivision abuts or contains an existing or planned collector or minor arterial street as designated on the City's thoroughfare plan, the lots shall access onto local streets wherever possible. Local streets may be existing or provided with the subdivision.
(6) **Alleys.** Except in the case of a planned unit development, either a public or private alley may be required in a block where commercially zoned property abuts a major thoroughfare or a major street. Alleys in residential areas other than those zoned for multiple family use shall not be permitted.

(7) **Half streets.** Dedication of half streets shall not be approved, except where it is essential to the reasonable development of the subdivision and in conformity with the other requirements of these regulations, where it is found that it will be practical to require the dedication of the other half when the adjoining property is subdivided, or where it becomes necessary to acquire the remaining half by condemnation so that it may be improved in the public interest.

(8) **Adding width to existing streets.** Where a subdivision abuts or contains an existing street of inadequate width, sufficient additional width shall be provided to meet standards set forth in the City of Lake Elmo Engineering Design Standards and/or other applicable standards.

(9) **Additional right-of-way and roadway widths.** Additional right-of-way and roadway widths may be required to promote public safety and convenience when special conditions require it or to provide parking space in areas of intensive use.

(10) **Street improvements for plats.**
   (a) The City Engineer shall determine when the full width of the right-of-way shall be graded, including the subgrade in accordance with the provisions for construction as outlined in the City of Lake Elmo Engineering Design Standards.
   (b) All streets shall be improved in accordance with the standards and specifications for street construction established by the Council.

(11) **Curb and gutter.** Curb and gutter shall be provided when required in accordance with the City of Lake Elmo Engineering Design Standards.

(12)(13) Proposed streets shall conform to the state, county, or local road plans or preliminary plans as have been prepared, adopted and/or filed.

(I) **General improvements.** The following shall be installed in accordance with the City of Lake Elmo Engineering Design Standards Manual and all other applicable City standards:
   (1) Trees and boulevard sodding.
   (2) Streets signs shall be installed at each intersection.
   (3) Driveway approaches, sidewalks, or pedestrian pathways.
   (4) Street lighting fixtures.
   (5) Sidewalks are required on one side of all streets. The Council may require sidewalks along both sides of all streets in areas where the residential density equals or exceeds 3 dwelling units per net acre of land or in any commercial, industrial, or other business areas if the Council determines that sidewalks are required for public safety.

(1997 Code, § 400.14) (Am. Ord. 08-024, passed 4-20-2010) (Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

§ 153.15 PARK LAND DEDICATION REQUIREMENTS.
(A) **Dedication of land for park and open space use.** In all new residential subdivisions, a percentage of the gross area of all property subdivided shall be dedicated for parks, playgrounds, trails, public open space, or other public recreational use. For non-residential developments, the City requires a payment in lieu of land dedication as established by resolution of the City Council. Such percentage or fee shall be in addition to the property dedicated for streets, alleys, waterways, pedestrian ways or other public use pursuant to this chapter. The following schedule describes the required dedication by zoning district. This schedule is based upon density of the development allowed in each district and is intended to equalize the amount and value of land dedicated for parks per dwelling unit in the various districts.

<table>
<thead>
<tr>
<th>Zoning Districts</th>
<th>Minimum Required Land Dedication</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-LDR, GCC, LDR, MDR, HDR, RS, V-LDR, GCC, LDR, MDR, HDR</td>
<td>10%</td>
</tr>
<tr>
<td>RS, AG, RE, RR (Rural Districts) RE and OP Development</td>
<td>7.5%</td>
</tr>
<tr>
<td>RR and AG</td>
<td>4%</td>
</tr>
<tr>
<td>C, CC, LC, BP, VMX, MU-BP, MU-CC, CC, LC, GP, BP, VMX</td>
<td>Fees as set by Council resolution</td>
</tr>
</tbody>
</table>

a. A 10% charge is applied if a residential component is incorporated into the development/subdivision. However, the 10% charge does not apply to a minor subdivision.

(B) **Land title.** Public land dedications, which are not dedicated to the City on a plat, shall be conveyed to the City by warranty deed free and clear of all liens or encumbrances. The subdivider shall provide proof of title, in a form acceptable to the City, prior to the conveyance of the property.

(C) **Land acceptability.** The City must approve the location and configuration of any park land which is proposed for dedication and shall take into consideration the suitability of the land and for its intended purpose; the future needs of the City for parks, playgrounds, trails, or open space; and the recommendations of the City’s Parks Commission. The following properties shall not be accepted for park land dedications:

1. Land dedicated or obtained as easements for streets, sewer, electrical, gas, storm water drainage and retention areas, or other similar utilities and improvements;
2. Land which is unusable or of limited use; and/or
3. Land within a protected wetland or within a flood plain area unless the Council determines that all of the following criteria are satisfied:
   a. Would be in the best interests of the general public;
   b. Would be valuable resource for environmental preservation, educational, or habitat preservation purposes;
   c. Has an exceptional aesthetic value; and
Would not become financially burdensome to the City as a result of maintenance or preservation requirements.

(D) Trails. Trails constructed by a subdivider within dedicated public open space having at least 30 feet of width are eligible for park credit. The maximum amount of trail dedication credit shall not exceed 25% of the total required park dedication. To receive credit for a trail, there must be a through public trail connection to the larger Lake Elmo or Washington County trail network. If the proposed trails are not able to connect to existing trails, they must be installed in a way that would provide a connection to future planned trails as additional infrastructure is established.

(E) Cash contribution in lieu of land dedication - residential subdivisions larger than three lots. In lieu of the land dedication for major subdivisions, the City may elect to require the subdivider to contribute a cash equivalent payment to the City’s Park and Open Space Fund, or may require the developer to satisfy the park land dedication requirement by a combination of land and cash contribution. For all major subdivisions, the required cash equivalent payment shall be an amount equal to the fair market value of the percentage land dedication for the zoning district in which the subdivided property is located. The City shall determine the fair market value of the land by reference to current market data, if available, or by obtaining an appraisal from a licensed real estate appraiser; the subdivider shall pay for the cost of the appraisal. The fair market value determination of the appraiser shall be conclusive.

(F) Cash contribution in lieu of land dedication - minor residential subdivisions and commercial development. Required cash equivalent payments for minor subdivisions or for commercial development projects shall be as determined from time to time by Council resolution.

(G) Payment of cash contribution. Cash contribution payments shall be made to the City prior to release of building permits for the project or phase of development, final plat approval for commercial developments or major subdivisions, or prior to the City’s approval of the deeds of conveyance in those cases where a residential subdivision will result in 1 or fewer lots.

(H) Previously subdivided property from which a park dedication or cash in lieu contribution has been received, upon resubdivision with the same number of lots, is exempt from park dedication requirements. If, as a result of the resubdivision of the property, the number of lots is increased, the park dedication or cash in lieu contribution shall be applied only to the net increase in the number of lots.

(F) Park Dedication Fund

(1) All cash contributions paid to the City shall be placed in a special fund. The money shall be used only for:

(a) The acquisition and development or improvement of parks, recreational facilities, playgrounds, trails, wetlands or open space based on the approved park systems plan;

(b) Redevelopment or rehabilitation of existing park facilities or sites; or

(c) Debt service in connection with land previously acquired or improvements thereto previously constructed.
(2) No funds shall be used for ongoing operation or maintenance of existing parks
recreational facilities or sites or City vehicles.

(1997 Code, § 400.15) (Am. Ord. 08-072, passed 3-5-2013) (Am. Ord. 08-205, passed 4-3-
2018) Penalty, see § 10.99

§ 153.16 REQUIRED IMPROVEMENTS; FINANCIAL ARRANGEMENTS.

(A) **Improvements.** All sanitary sewer, water main and storm sewer facilities, streets, concrete
curb, gutters, sidewalks, sodding, drainage swales, and other public utilities ("improvements")
shall be made and constructed on or within the subdivided lands or where otherwise required and
dedicated to the City and shall be designed in compliance with City standards by a registered
professional engineer.

(B) **Plans and specifications approval.** Plans and specifications shall be submitted to the City
Engineer for approval prior to construction. All of the improvements shall be completed by the
developer and acceptable to the City Engineer and shall be free and clear of any lien, claim,
charge, or encumbrance, including any for work, labor, or services rendered in connection
therewith or material or equipment supplied therefor.

(C) **Improvement warranties and guarantees.** Developer shall warrant and guarantee the
improvements against any defect in materials or workmanship for a period of 2 years following
completion and acceptance. In the event of the discovery of any defect in materials or
workmanship within the 2-year period, the defect shall be promptly repaired or corrected, and the
warranty and guarantee for the entire project shall be extended for 1 additional year beyond the
original 2-year period, for a period of 3 years following the completion and acceptance. Defects
in material or workmanship shall be determined by the City Engineer.

(D) **Required inspections of improvements.** Improvements that are to be installed shall be
inspected during the course of construction by the City Engineer, at the developer's
expense. Notice shall be given to the City Engineer a minimum of 24 hours prior to the required
inspection. Failure to provide City Engineer with required notice shall result in a stop-order
issued to the project. If developer proceeds with work within the development without required
inspection, City Engineer shall have the discretion to accept or reject all or part of the
improvement, by giving appropriate written notice to the developer.

(E) **Acceptance of improvements.** Acceptance of improvements by the City Engineer may be
subject to the reasonable conditions as Engineer may impose at the time of
acceptance. Developer, through his or her engineer, shall provide for competent daily inspection
during the construction of all improvements. As-built drawing, Whitehall include service and
valve ties, on reproducible mylar shall be delivered to the Engineer within 60 days of completion
of the improvements together with a written certification from a registered engineer that all
improvements have been completed, inspected, and tested in accordance with City-approved
plans and specifications.
(F) **Changes to construction plans and specifications.** All changes to the construction plans and specifications must be approved by the City Engineer.

(G) **Clean-up obligations; street signs.**

1. Developer shall remove all soil and debris from and clean all streets within the lands developed in accordance with § 150.277(B)(2)(d) of this code.

2. In the event there are or will be constructed on the property, 2 or more streets, and if permanent street signs have not been installed, developer shall install temporary street signs in accordance with recommendations of the Maintenance Department, prior to the issuance of any permit to build upon the property.

(H) **Erosion control.** Erosion control shall be provided with the installation of utilities and street curbs in accordance with the City of Lake Elmo Engineering Design Standards.

(I) **Developers agreement/security.** Subsequent to approval by the Council of a final plat and before execution by the City of the final plat or other appropriate forms of City approval, developer shall:

1. Enter into a developer's agreement whereby developer shall undertake performance of the obligations imposed by this chapter, or by Council condition, and containing the other terms and provisions and in the form as shall be acceptable to the City Attorney, including, but not limited to, provisions for default including fines and penalties; and

2. Submit a letter of credit, or cash deposit ("security") which guarantees completion of all improvements within the times specified by the City Engineer. The amount of the security shall be 125% of the estimated construction cost of the improvements, subject to reduction as outlined by the development agreement after acceptance thereof by the City Engineer, and receipt of as-built drawings. The security shall be in the form and contain the other provisions and terms as may be required by the City Engineer and/or City Attorney. The developer's registered engineer shall make and submit for approval to the City Engineer, a written estimate of the costs of the improvements. Reduction of security shall be as outlined per the development agreement.

(J) **Petitions for improvements by City.** With the approval of the Council, and instead of the obligations imposed by divisions (A) through (I) above, developer may enter into an agreement signed by 100% of all owners of the land to be developed, requesting the City to install some or all of the improvements, request all of the costs be assessed against the property, and waiving the rights to appeal from the levied special assessments. Upon approval by the Council, the City may cause the improvements to be made and special assessments for all costs of the improvements to be levied on the land, except any land that is or shall be dedicated to the public. The special assessment shall be payable over a term of 5 years unless otherwise authorized by the Council. Prior to the award of any contract by the City for the construction of any improvement, developer shall have entered into a contract for rough grading of streets included in the improvement to a finished subgrade elevation, and including the other terms as required by Council. Developer's obligation with respect to the rough grading work shall be secured by letter of credit, or the deposit which shall guarantee completion, and payment for all labor and materials expended in connection with the rough grading. The amount of the security
shall be 125% of the cost of the rough grading and shall be in the form and contain the further
terms as may be required by the City Engineer and/or City Attorney.

(K) City Attorney approval. No final plat shall be approved by the Council without first
receiving a report signed by the City Attorney certifying that the agreements and documents
required under this chapter meet the requirements of the City. The City Treasurer Finance
Director shall also certify that all fees required to be paid to the City in connection with the plat
have been paid.

(1997 Code, § 400.16) (Am. Ord. 08-024, passed 4-20-2010) (Am. Ord. 08-205, passed 4-3-
2018) Penalty, see § 10.99

§ 153.17 FEES.

(A) The Council shall by ordinance, adopted from time to time, establish fees to be paid by
the applicant to defray the administrative costs and expenses incurred by the City in processing
development applications, applications for variance or appeals under the provisions of this
chapter.

(B) Fees to be paid by the applicant shall include all administrative, engineering, legal, and
consulting fees and materials costs reasonably incurred in the review of the proposed subdivision
and the processing of the applications or appeals.

(1997 Code, § 400.17) (Am. Ord. 08-205, passed 4-3-2018)

§ 153.18 VIOLATIONS.

(A) Sale of lots from unrecorded plats. It shall be a violation of this chapter to sell, trade, offer
to sell, trade, or otherwise convey a lot or parcel of land as part of, or in conformity with any
plan, plat, or replat of any subdivision or area located within the City unless the plan, plat, or
replat shall first have been approved by the City in writing as provided by this chapter and in the
case of a plat, replat, or registered land survey unless the survey is recorded in the office of the
County Recorder or Registrar of Titles.

(B) Misrepresentation as to construction, supervision, or inspection of improvements. It shall
be unlawful for any person to represent that any improvement upon any of the streets, alleys, or
avenue of the addition or subdivision or any sewer in the addition or subdivision has been
constructed according to the plans and specifications approved by the Council, or has been
supervised or inspected by the City, when the improvements have not been so constructed,
supervised, or inspected.

(1997 Code, § 400.18) (Am. Ord. 08-205, passed 4-3-2018) Penalty, see § 10.99

SECTION 2. Effective Date. This ordinance shall become effective immediately upon adoption
and publication in the official newspaper of the City of Lake Elmo.
SECTION 3. Adoption Date. This Ordinance 08-205 was adopted on this _____ day of ___ 2019, by a vote of ___ Ayes and ___ Nays.

LAKE ELMO CITY COUNCIL

_________________________________
Mike Pearson, Mayor

ATTEST:

_________________________________
Julie Johnson, City Clerk

This Ordinance 08-205 was published on the ____ day of ___________________, 2019.
TO: Planning Commission
FROM: Ken Roberts, Planning Director
AGENDA ITEM: Union Park Addition – Easement Vacations and Final Plat
REVIEWED BY: Jack Griffin, City Engineer

BACKGROUND:

Pulte Homes of Minnesota (Pulte) is requesting City approval of easement vacations and the Final Plat to create lots for 62 townhomes located on 7.92 acres. This proposed final plat is the first phase of a 240 townhouse residential development on +/-32.40 acres. This site is part of a 72.60 acre final plat to be known as Union Park.

The First Addition includes 62 lots for town houses, street rights-of-way and storm water ponding areas that are located within a 7.92 acre area. Proposed final plat also includes the street right-of-way for 5th Street North, for future Julia Avenue and would create several outlots for future development. Staff is recommending approval of the request subject to meeting the conditions listed in this report.

ISSUE BEFORE THE COMMISSION:

The Commission is respectfully being requested to review and make a recommendation to the City Council about the proposed easement vacations and on the proposed Final Plat for the Union Park First Addition.

GENERAL INFORMATION:

Applicant: Pulte Homes of Minnesota, 7500 Flying Cloud Drive, Suite 670, Eden Prairie, MN 55344
Property Owner: DPS – Lake Elmo, LLC (Alan Dale), 6007 Culligan Way, Minnetonka, MN 55345
Location: South Side of 5th Street North, east of future Julia Avenue North
PID#: 34-029-21-0006 (west property) and 34-029-21-43-0003 (east property)
Request: Easement Vacations and Final Plat
Site Area: 7.92 acres (total for first townhouse phase)
Total Dev. Area: 72.60 acres (overall final plat area)
Surrounding Area: North – Savona (Urban Low Density Residential); West – Multi-tenant strip mall and Lampert’s lumber yard (Commercial); East – Vacant land (Commercial) and Savona townhomes (Urban Medium Density); South – Vacant land (Rural Development Transitional
Comprehensive Plan (2040): MDR - Medium Density Residential (4-8 units per acre)

History:
On November 6, 2018, the City Council reviewed and commented on the 239-unit sketch plan for this site.

On February 25, 2019, the Planning Commission held a public hearing and recommended approval of Bentley Village subject to the conditions listed in the staff report.

On March 19, 2019, the City Council approved the proposed preliminary plat and zoning map change (to MDR) for Bentley Village by Resolution 2019 – 020. This approval was for up to 240 townhouses on 41.6 acres lying south of 5th Street North.

Action Deadline:
Application Submittal – 5/24/2019
Incomplete Letter Sent – 5/31/2019
Resubmittal – 7/12/2019
60 Day Deadline – 9/11/2019
Extension Letter Mailed – No
120 Day Deadline – N/A

Regulations:
Chapter 153 – Subdivision Regulations
Article 10 – Urban Residential Districts (MDR)
§150.270 Storm Water, Erosion, and Sediment Control

PROPOSAL DETAILS/ANALYSIS:

Changes since Preliminary Plat Reviewed by the Planning Commission. The most significant change to the project plans and proposed final plat are the scope of the property that the developer is including in the final plat. As proposed, the Union Park final plat will divide the area between 5th Street North and Hudson Boulevard into several lots and outlots and includes the rights-of-way for 5th Street and Julia Avenue. As shown, the final plat includes four outlots for future development or phases of development and the street rights-of-way for 5th Street North and Julia Avenue. These changes account for all the property between 5th Street North and Hudson Boulevard that is now owned by one property owner and provides the City with the necessary right-of-way for Julia Avenue and creates Outlot H – the site of the Springs Apartment development.

As for the part of the final plat that will be for the first phase of the Pulte townhouses, the proposed final plat is consistent with the approved preliminary plat.

Lot Sizes and Widths. The proposed lot layout and sizes for the townhouses are consistent with the approved preliminary plat.

Landscape and Tree Preservation Plans. The City’s Landscape Architect reviewed the landscape plans and tree for this phase of the development. I have attached his report. He found that the First Phase landscape plans as submitted to the City are consistent with the preliminary approval and all City requirements. As such, he is recommending approval of those plans.
Streets. All the local streets in this development will have a 53 foot right-of-way and are 28 feet wide – consistent with the standards the City approved with the preliminary plat. The developer is showing no parking on one side of the neighborhood streets – primarily along the side of the street with the driveways for the townhouses. The proposed street names are consistent with the street names as approved by the City with the preliminary plat.

Outlots. The proposed final plat has several outlots. Outlots A, B, C and D will be owned and maintained by the HOA and are consistent with the preliminary plat. The plans indicate that Outlot B will be owned by the HOA but it also will be for a storm water pond. Outlot E will be for the second phase of the townhouse development while Outlot F will be for Phases 3 and 4 of the townhouse development.

Outlots G and H incorporate the remainder of the underlying property and will be for future development. The City recently approved the Springs Apartment development for Outlot H.

Park Dedication. The proposed development is within a Neighborhood Park search area of the Comprehensive Plan. Savona Park meets the needs of this search area, as it is located just over 500 feet from the northern edge of the proposed development. The developer is proposing and Staff recommends that fees in lieu of land be paid in order to satisfy the park dedication requirements. As per the City’s Subdivision Regulations, the required cash equivalent payment shall be an amount equal to the fair market value of the percentage land dedication for the zoning district in which the subdivided property is located (the MDR zoning district requires 10% of the total acreage being developed), and the amount is to be determined by reference to current market data, if available, or by obtaining an appraisal from a licensed real estate appraiser. In summary, the developer will be required to 10% of the value of land as park dedication.

The applicant will need to provide the City with the purchase price of the property in order for the City to determine parkland dedication fee.

Subdivision Signs. Section 154.212(G)(1)(c) of the Zoning Code allows each residential subdivision to have one subdivision identification sign per entrance. The maximum size for subdivision identification sign is 32 square feet in area for the main entrance and a maximum sign area of 24 square feet per sign for all other locations.

The developer has not yet submitted a proposal for an entrance monument or subdivision identification sign for this site. Any signs would require a permit from the City.

Fire Chief and Building Official Comments. Planning staff provided the Fire Chief and Building Official copies of the proposed Union Park First Addition final plat. They offered the following comments:

Fire Chief Malmquist:

Some of the following comments are continued from my project review of January 31, 2019

- All aspects of this project must comply with the 2015 MN State Fire Codes as applicable.
- Determination of sprinkler requirements per code.
- Location of FDC (Fire Department Connection) approved by Fire Chief for all sprinkled buildings.
- Location of hydrants. I met with City Engineer Jack Griffin on May 21, 2019 to review hydrant locations. Recommendations were forward to the developer with one follow up revision. I will rely on our Engineer to ensure compliance based on the master set of plans.
- Roads – private or public, proper widths, allowable parking, proper signage? Reviewed plans for Parking and No Parking areas with City Engineer Jack Griffin on May 21, 2019. I will rely on our Engineer to ensure compliance based on the master set of plans.

- Proper access for emergency vehicles. Based on City Engineers review based on City Standards.

- Chemical storage for pool. Has pool been eliminated? (NOTE – It has been eliminated).

- Any additional items identified as the project moves forward.

Building Official:

1. Fire hydrant spacing/locations, street signage, etc. shall be in accordance with City regulations.
2. Provide temporary turn-arounds or temporary cul-de-sac and street ends where necessary.
3. Street signs shall be installed before any (home) construction may be begin.

City Engineer Comments. The City Engineer memo dated August 1, 2019 is attached to this report. He had several comments about the ownership and platting of the various outlots and the easements the City should require from the developer as this project moves forward.

Other Concerns.

Watering Ban. Due to shortage of water, the City may need to implement severe watering restrictions in the City for this summer and into the future. This could include limiting or prohibiting the use water outside including for car washing and for watering grass. This could affect future home builders and buyers as there may be a limited supply of water available for outdoor uses. It may be wise for City to put a condition on this phase of the plat to require the home builders to inform the buyers about the possible watering restrictions.

Off-Site Easements. Condition 23 of the preliminary plat approve states: “The applicant shall provide the City with a copy of written permission for any off-site grading work and storm sewer discharges to adjacent properties before starting any site work, grading and as part of any final plat application.” For Union Park, there are two areas from the development that discharge storm water to adjoining properties – to the south and to the east. The property to the south is currently owned by the same property owner as the development site so grading along the southern edge of the site and discharging storm water to the south is not a major concern of City staff. The property to the east of the site, lying south of the Savona townhouses, however, is owned by a different person. The development plans show a storm water pond along the eastern edge of the site to collect the storm water run-off before it discharges to the east. The existing overland flow in this area is generally from northwest to the southeast. The pond discharges are shown to be a reduced discharge rate in the storm water model that satisfies the storm water permit requirements for the development. However, the discharge is changed from a broader sheet flow to two single point discharges, with one of the discharges being moved roughly 200 feet south of the existing drainage way on the adjoining property. This discharge location may create a different storm water flow pattern over a portion of the neighboring property.

It is consistent with City ordinances and practices to require developers to obtain written permission or easements from neighboring properties for storm water impacts to those adjoining properties. The developer has not agreed to get an easement for their storm water discharge stating that an easement is not necessary since there already is storm water going onto that property. The City Attorney provided staff with an opinion that in this case the developer does not need to obtain and easement from the neighboring landowner. However, the City will want to ensure the City is not liable or responsible for any damages caused by the change in the storm
water flow if this plan moves forward. The best way to ensure this is to require the developer to get an easement before the City releases the final plat for recording or before issuing a grading permit for the project. If the City does not require Pulte to get an off-site easement, then the City should require Pulte to indemnify the City from any liability in this case.

**Final Plat Approval Process.** The City’s subdivision ordinance establishes the procedure for obtaining final subdivision approval, in which case a final plat may only be reviewed after the City takes action on a preliminary plat. As long as the final plat is consistent with the preliminary approval, it must be approved by the City. Please note that the City’s approval of the Preliminary Plat did include a series of conditions that must be met by the applicant, which are addressed in the “Review and Analysis” section below. There are no public hearing requirements for a final plat.

In order to provide the Planning Commission with an update concerning the conditions associated with the preliminary plat for Union Park (formerly known as Bentley Village), Staff has prepared the following:

**Preliminary Plat Conditions of Approval for Bentley Village as designated by Council Resolution 2019-020 - with Staff Update Comments (updated information in bold):**

1. That the City approves a Zoning Map Amendment to rezone the site from RT (Rural Development Transitional) to MDR (Medium Density Residential). (DONE)
2. That the preliminary plat includes parcels with the PID#s 34-029-21-34-0006 and 34-029-21-43-0003.
3. That all comments and conditions of approval in the City Engineer’s Memorandum dated February 17, 2019 be addressed and included with the revised project plans for City approval. (The City Engineer reviewed the latest project plans and has provided the City comments dated August 1, 2019.)
4. That revised preliminary plat plans include an overall tree planting and landscape plans for each phase of the development. Landscaping must not conflict with utilities and with pond maintenance access. Boulevard trees are not allowed in the 10-foot-wide drainage and utility easements along the public streets. All landscaping and tree plans shall incorporate the comments and conditions in the Landscape Architect’s memos dated February 15, 2019 and March 6, 2019 and shall be approved by the City’s Landscape Architect. (The City’s Landscape Architect has reviewed the latest project tree and landscape plans and is recommending their approval).
5. That the developer shall incorporate each phase of Bentley Village into the Common Interest Agreement concerning management of the common areas and establish a homeowner’s association that shall be submitted in final form to the Planning Director before the City will issue a building permit for any structure in any phase of the development. Said agreement shall comply with Minnesota Statues 515B-103, and specifically the provisions concerning the transfer of control to the future property owners. The HOA documents shall include required maintenance of all private amenities including open space and trails. (Still pending).
6. The applicant shall enter into a landscape license and maintenance agreement with the City that clarifies the individuals or entities responsible for any landscaping installed for each platted phase of the development. (Still pending – City staff will work with the applicant to prepare the necessary agreement).
7. That the HOA be responsible for the ownership and maintenance of all landscape (retaining) walls within the development.
8. That the developer shall install an HOA owned and maintained children’s play structure or other similar improvement on Outlot H as shown on the preliminary plat submittal.
9. That the developer provide the City fees in lieu of park land dedication as required by 153.15 of the City Code with each final plat. (Still pending – the exact amount of this fee for this phase needs to be calculated).

10. That the revised preliminary plat plans include a parking area for the HOA pool/recreation area (if the developer constructs the pool) that meets all applicable standards. (Not applicable – the developer has changed the pool to a dog park).

11. That the HOA documents include architectural requirements that require 4-sided architecture on all buildings and garage doors shall not have flat panels. The City encourages the builder to include windows and/or other architectural features in all exterior doors and garage doors. City staff shall approve all building exterior designs including colors and materials before the City issues building permits for the town houses. (Still pending – needs City approval).

12. That the developer submit a sidewalk and trail phasing plan to be approved by City Staff and that the developer/contractor construct the public sidewalks and trails within each phase before the City issues building permits for that phase of development.

13. That the developer install a six-foot-wide concrete public sidewalk on one side of every street in the development. (These are shown on the construction plans).

14. That the Applicant place storm water ponds within outlots including the 100-year high water flood level and all maintenance access. All outlots are to be owned and maintained by the HOA with drainage and utility easements placed over all of each Outlot.

15. All storm water facilities shall be publicly owned and maintained. A storm water maintenance and easement agreement in a form acceptable to the City shall be executed and recorded with the final plat. (Still pending – City staff will work with the developer to prepare the necessary agreements. These will cover all the outlots within the development site).

16. That if the applicant/developer wants to reuse storm water for private irrigation within the development that the project engineer submit details to the City about the proposed storm water reuse system and ongoing operations that will be subject to approval by the City. The applicant must clearly define the proposed ownership, maintenance and ongoing operational responsibilities for the proposed system and City acceptance of storm water reuse will be contingent upon the City agreeing to the ongoing ownership, maintenance and operation plan, including the execution of a storm water maintenance agreement that addresses storm water reuse. In addition, all storm water system plans and specifications shall be subject to approval by the City Engineer and must address recommended reuse water quality, storm water pond pump intake design, pond draw down guidelines, filtration recommendations, backflow prevention design, and potable water back-up supply design. (Still pending – the developer has proposed reuse in the approved storm water management plan so the City will need to approve the design details for the reuse systems. Should the developer choose not to implement storm water reuse, a revised storm water management plan and revised VBWD permit will be required.).

17. The Preliminary Plat approval is conditioned upon the applicant meeting all City standards and design requirements unless specifically addressed otherwise in these conditions.

18. The revised preliminary plat and Final Plat(s) shall include all necessary public right-of-way and easements for 5th Street North and for Road G. (Done).

19. The revised preliminary plat plans shall include a storm water management plan including a summary report describing the overall management plan and performance criteria for all required storm events. (In process – plan will need final City approval).

20. That the applicant shall obtain all necessary permits including but not limited to all applicable city permits (building, grading, sign, etc.), NPDES/SWPPP permits and Valley Branch Watershed District approval before starting any grading or construction activities.
21. That the preliminary plat plans be approved by Valley Branch Watershed District and that the applicant provide the City evidence that all conditions attached to a Valley Branch Watershed District permit will be met before the starting any grading activity on the site.

22. The applicant must provide the City a letter of approval from the owner of the gas main to perform the proposed work in the gas pipeline easement as a condition of preliminary plat approval and before the contractor starts any site work or site grading. *(Not needed for Phase 1 or 2 unless the developer chooses to grade the entire site with the First Addition).*

23. The applicant shall provide the City with a copy of written permission for any off-site grading work and storm sewer discharges to adjacent properties before starting any site work, grading and as part of any final plat application. *(Still pending – see discussion on staff report).*

24. That the applicant or developer address all the comments of the Fire Chief and the Building Official with final site and building plans including the placement of buildings and fire hydrants, street and driveway design, on-street parking and emergency vehicle access within the site. *(Done).*

25. That the applicant revise the project plans to show storm sewer easements and effective maintenance areas with a minimum width of 30 feet with a minimum of 15 feet of clearance from the pipe centerline. This includes locations where underground pipes run between buildings. *(Done – subject to the City Engineer’s review of the final project plans).*

26. That there shall be no encroachments into drainage and utility easements and corridors other than those reviewed and approved by the City Engineer and upon execution of an easement encroachment agreement. Prohibited encroachments include, but are not limited to trees, landscaping, retaining walls, buildings and storm water retention.

27. That the developer prepare exhibits for City staff approval that clearly identifies the property lines, easements, proposed building locations and the required and proposed setbacks for each of the lots and each building site within the development. *(Done).*

28. That all garage doors be setback at least 25 feet from the street right-of-way to provide off street parking on the driveway to allow vehicle parking without blocking a public sidewalk. *(Done).*

29. That the applicant update the preliminary plat plans to include street names that are consistent with the City’s street naming policy with the names listed herein. All street names shall be approved by the City Council. *(The proposed street names are consistent with the street names the City approved with the preliminary plat).*

30. The Applicant(s) or developers shall submit a photometric plan for the development for staff review and approval. All lighting must meet the requirements of Sections 150.035-150.038 of the City Code. *(Still pending – City staff will need to approve this plan before the City issues building permits).*

31. Before the installation or construction of any subdivision identification signs or neighborhood markers within the development, the developer shall submit sign plans to the City for review and obtain a sign permit from the City.

32. That the applicant provide the City a detailed construction and staging plan with the construction plans and final plat for each phase of the development. These plans are to clearly indicate the phasing of the site grading, the phasing of the construction of each public infrastructure component (including required turn lanes, trails and sidewalks) and shall address access to that phase of the development for construction purposes and for residents. The City may require temporary cul-de-sacs at the end of streets with the first and third phases of the development. *(The phasing plans are complete and the City is requiring the developer provide the City with temporary easements for the temporary cul-de-sacs).*

33. Before the execution and recording of a final plat for any phase of the development, the developer or applicant shall enter into a Developer’s Agreement with the City for that phase or project. The Developer’s Agreement must be approved by the City Attorney and by the City Council. Each such Developer’s Agreement shall delineate who is responsible for the design, construction and
payment for the required improvements with financial guarantees therefore. (Pending – City staff will work with the developer to prepare the necessary development agreement).

34. The applicant or developer shall enter into a separate grading agreement with the City before starting any grading activity in advance of final plat approval. The City Engineer shall review any grading plan that is submitted in advance of a final plat, and said plan shall document extent of any proposed grading on the site. (Pending – City staff will work with the developer to prepare the necessary agreement).

35. That the applicant submit revised preliminary plat and project plans meeting all conditions of approval for City review and approval. The revised applicant/developer project plans shall meet all of the above conditions before the City will accept a final plat application for any phase of the development and before the start of any clearing or grading activity on the site. (The City Engineer has completed his review of the proposed final plat and the proposed construction plans. They are mostly ready and approved – subject to corrections and changes).

**EASEMENT VACATIONS**

**Easement Vacations.** The applicant is requesting the City vacate two existing drainage and utility easements that are now on the property. These easements are both just south of 5th Street – one running from northwest to the southeast and the other runs from the northeast to the southwest. They were put into place when Savona was developed. (Please see that attached exhibits showing the two existing easements.) The City will not need these easements as the developer will be constructing new utility systems and will be dedicating new easements with the final plat. In addition, the developer could not record a new final plat (or replat) with the existing easements in place.

Minnesota Statue outlines the provisions for vacating a public right-of-way or easement. It states in part that “Council may, by resolution, vacate any street, alley, public grounds, public way, or any part thereof, on its own motion or on petition of a majority of the owners of land abutting said property. Easement vacations require a public hearing and 4/5 vote by Council only if there has been no petition.”

**Recommended Findings.** Staff recommends approval of the Union Park First Addition Final Plat based on the following findings:

1. That all the requirements of City Code Section 153.10 related to the Final Plan and Final Plat have been met by the Applicant.

2. That the proposed Final Plat and for the Union Park First Addition will create 62 lots for townhouses (Attached) residential units.

3. That the Union Park First Addition Final Plat are generally consistent with the Preliminary Plat and Plans as approved by the City of Lake Elmo on March 19, 2019 by Resolution 2019-020.

4. That the Union Park Addition Final Plat and Plans are consistent with the Lake Elmo Comprehensive Plan and the Future Land Use Map for this area.

5. That the Union Park First Addition Final Plat and Plans comply with general intent of the City’s Medium Density Residential zoning district regulations.

6. That the Union Park First Addition Final Plat and Plans comply with all other applicable zoning requirements, including the City’s landscaping, storm water, sediment and erosion control and other ordinances with the exception of issues identified in the August 12, 2019 Staff report to the Planning Commission.
7. That the Union Park First Addition Final Plat and Plans comply with the City’s subdivision ordinance.

8. That Union Park First Addition Final Plat and Plans are generally consistent with the City’s engineering standards with the exception of necessary plan revisions outlined by the City Engineer in his review comments to the City about the Union Park First Addition Final Plat and Plans dated August 1, 2019.

**Recommended Conditions of Approval.** Staff is recommending certain conditions that have been specifically identified as part of the final plat review and that have not otherwise been addressed by the applicant, be addressed as part of the Planning Commission’s recommendation to the City Council. The City Engineer’s review letter does identify several issues that need to be addressed by the developer in order for the City to deem the final plans complete. Staff is recommending that City Officials not sign the final plat mylars until the City’s construction plan review is finalized and all necessary easements are documented on the final plat and if necessary, obtained for any off-site impacts.

Based on the above Staff report and analysis, Staff is recommending approval of the final plat with several conditions intended to address the outstanding issues noted above and to further clarify the City’s expectations in order for the developer to proceed with the recording of the final plat.

Staff recommends the Planning Commission recommend approval of the requested Union Park First Addition Final Plat with the following conditions:

1. Final grading, drainage, and erosion control plans, sanitary and storm water management plans, landscape plans, and street and utility construction plans shall be reviewed and approved by the City Engineer and applicable Staff before the recording of the Final Plat. All changes and modifications to the plans requested by the City Engineer in the memorandums addressing Union Park Final Plat and Plans dated August 1, 2019 shall be incorporated into these documents before they are approved.

2. All easements as requested by the City Engineer and Public Works Department shall be documented on the Final Plat before its execution by City Officials.

3. Final Plat shall be contingent upon the City receiving separate drainage and utility easements in the City’s standard form of easement agreement for all off-site development improvements (beyond the plat limits). All off-site easements must be clearly shown on the street, grading and utility plans, with all dimensions labeled. The easements must be obtained before the start of grading or construction.

4. Before the execution of the Final Plat by City officials, the Developer shall enter into a Development Agreement acceptable to the City Attorney and approved by the City Council that delineates who is responsible for the design, construction, and payment of the required improvements and shall include the payment of required park dedication fees for the Union Park First Addition Final Plat with financial guarantees therefore.

5. A Landscape License Agreement shall be executed for the maintenance of commonly held homeowners’ association-owned and City-owned outlots, right-of-ways, and medians before the release of the final plat by City Officials.
6. That the Landscape Plans for this phase of the development be approved by the City’s Landscape Architect before recording of final plat.

7. That the applicant include in the Architectural Control guidelines the requirements that villa lots utilize 4-sided architecture and garages facing the public right-of-ways to have windows and/or other architectural features.

8. That the applicant address all Fire Chief and Building Official comments in their final development plans.

9. That the applicant pay the City the required parkland dedication fee applicable to this phase of the development (based on 7.92 acres of land) before the City releases the final plat for recording.

10. That the applicant notify all home builders and home buyers about possible City outdoor watering restrictions and that the developer notify all home buyers that the City may impose limits on outdoor water use including no watering of grass, sod or landscaping.

11. That applicant obtain any necessary approvals or easements from adjoin property owners for any private off-site work or impacts the development may have, including, but not limited to, storm water drainage and utility work.

RECOMMENDATIONS:

Staff recommends that the Planning Commission recommend approval of the proposed vacation of the two drainage and utility easements lying south of 5th Street North in the proposed Union Park First Addition as shown on the drainage and utility easement vacation Exhibits dated 1-03-2019 and 1-17-2019.

“Move to recommend approval of the request for the vacation of the two drainage and utility easements on site of the Union Park final plat as shown on the drainage and utility easement vacation exhibits dated 1-03-2019 and 1-17-2019.”

Staff recommends that the Planning Commission recommend approval of the Union Park First Addition Final Plat and with recommended findings and conditions of approval.

“Move to recommend approval of the Union Park First Addition Final Plat with recommended findings and conditions of approval.”

ATTACHMENTS:

1. Application Narrative dated May 24, 2019
2. City Maps and Project Plans (5 pages)
3. Proposed Final Plat (3 pages)
4. Easement Vacation Exhibit dated 1-3-2019
5. Easement Vacation exhibit dated 1-17-2019
6. City Engineer Report dated August 1, 2019
7. Landscape Architect’s report dated July 24, 2019
Introduction

Pulte Homes of Minnesota, LLC (“Pulte”) is pleased to be submitting this application.

Our company mission statement is “Building Consumer Inspired Homes and Communities to Make Lives Better”. We currently operate under three distinct brands of homebuilding throughout the country: Pulte Homes, Centex Homes, and Del Webb. Pulte’s Minnesota Division has an office in Eden Prairie. We sold approximately 500 homes in the Twin Cities in 2018, all under the Pulte Homes brand.

Pulte will act as both developer of the property and builder of the homes. The primary contact for Pulte is:

Paul Heuer, Director of Land Planning & Entitlement
7500 Flying Cloud Drive, Suite 670
Eden Prairie, MN 55344
952-229-0722
Paul.Heuer@PulteGroup.com

The owner of the property is:

DPS - Lake Elmo, LLC – Alan Dale
6007 Culligan Way
Minnetonka, MN 55345
952-288-2201
adale@stonehenge-usa.com

The surveyor, civil engineer, and landscape architect is:

Alliant Engineering
Primary contact: Mark Rausch
733 Marquette Ave Ste 700
Minneapolis, MN 55402-2340
(612) 767-9339
mrausch@alliant-inc.com
The Property

Legal Description:

That portion of the East Half of the Southwest Quarter and that portion of the West Half of the Southeast Quarter, both in Section 34, Township 29, Range 21, Washington County, Minnesota, described as follows:

Commencing at the West Quarter corner of said Section 34; thence South 00 degrees 00 minutes 40 seconds East, along the West line of said Section 34, a distance of 472.55 feet; thence North 89 degrees 57 minutes 32 seconds East, a distance of 1315.91 feet to the West line of said East Half of the Southwest Quarter; thence South 00 degrees 02 minutes 55 seconds West, along said West line a distance of 714.99 feet to the point of beginning; thence North 89 degrees 55 minutes 22 seconds East, a distance of 212.38 feet; thence Southeasterly along a tangential curve concave to the Southwest having a central angle of 29 degrees 05 minutes 37 seconds, a radius of 1100.00 feet for an arc distance of 558.56 feet; thence South 60 degrees 59 minutes 01 seconds East, tangent to said curve, a distance of 224.27 feet; thence Southeasterly along a tangential curve concave to the North, having a central angle of 68 degrees 21 minutes 23 seconds, a radius of 760.00 feet for an arc distance of 906.71 feet; thence North 50 degrees 39 minutes 36 seconds East, a distance of 410.97 feet; thence Northeasterly along a tangential curve concave to the Southeast, having a central angle of 20 degrees 49 minutes 17 seconds, a radius of 1060.00 feet for an arc distance of 385.20 feet; thence North 71 degrees 28 minutes 52 seconds East, tangent to said curve, a distance of 202.22 feet to the East line of said West Half of the Southeast Quarter; thence South 00 degrees 01 minutes 13 seconds West, along the East line a distance of 1517.53 to a line parallel with and distant 217.80 feet North of the North right of way line of Highway No. 12; thence South 89 degrees 54 minutes 16 seconds West, along said parallel line, a distance of 200.00 feet to a line parallel with and distant 200.00 feet West of said East line of the West Half of the Southeast Quarter; thence South 00 degrees 01 minutes 13 seconds West, along said parallel line, a distance of 173.18 feet to the North line of Minnesota Department of Transportation Right of Way Plat No. 82-43; thence South 89 degrees 18 minutes 12 seconds West, along said North line a distance of 1875.94 feet; thence continuing along said North line South 89 degrees 53 minutes 55 seconds West, a distance of 230.61 feet to the East line of the West 333.00 feet of said East Half of the Southwest Quarter; thence North 00 degrees 02 minutes 55 seconds East, along said line a distance of 599.99 feet to the North line of the South 675.00 feet of said East Half of the Southwest Quarter; thence South 89 degrees 53 minutes 57 seconds West, along said North line a distance of 333.00 feet to said West line of the East Half of the Southwest Quarter; thence North 00 degrees 02 minutes 55 seconds East, along said West line a distance of 774.53 feet to the point of beginning.

Washington County, Minnesota
Abstract Property

Property Identification Number:

34-029-21-34-0006 west property
34-029-21-43-0003 east property
Key Facts

Townhome Development per Approved Preliminary Plat:

- In March 2019, the City of Lake Elmo approved rezoning and preliminary plat for a 240 attached townhome development name Bentley Village
- Townhome development name has now been changed to “Union Park”
- 2030 Comprehensive Plan indicates Urban Medium Density with a density range of 4.5 to 7 units/acre
- 2040 Draft Comprehensive Plan indicates Urban Medium Density with a density range of 4 to 8 units/acre
- Townhome development area was rezoned to MDR Urban Medium Density Residential
- Development use: 240 attached townhomes with homeowner’s association maintenance
- Gross calculations, Townhome Development Only – Per Preliminary Plat Application:
  - West property = 839,837 square feet = 19.28 acres
  - East property = 971,593 square feet = 22.30 acres
  - Total = 1,811,430 square feet = 41.58 acres
  - Gross density = 240 units/41.58 acres = 5.77 units/acre
- Net calculations: Townhome Development Only – Per Preliminary Plat Application:
  - Gross area = 1,811,430 square feet = 41.58 acres
  - 5th Street ROW dedication = 294,126 square feet = 6.75 acres
  - Net area = 1,517,304 square feet = 34.83 acres
  - Net density = 6.89 acres
- Dimensions/Setbacks: Townhome Development
  - 25-foot front setback
  - 25-foot rear setback
  - 15-foot corner/side setback
  - 20-foot side internal setback (building separation)
- Public utilities and streets throughout townhome development
- Local streets are 28-feet wide within a 53-foot right-of-way
- Open space area: Townhome Development – Per Preliminary Plat
  - Open space (private outlots) = +/-594,015 square feet = 13.64 acres
- Open space/unit requirement = 500 sf
- Minimum open space/unit provided = 557 sf
- Impervious surface requirement = 50% maximum
- Impervious surface provided = 739,433 square feet = 49.8%

Phase 1 Final Plat “Union Park”

- Union Park Final Plat to include Phase 1 of the townhome development with the first 62 townhome units, collector road right of way dedication and outlot parcel creation within parent parcel for future development.
- Gross calculations, Final Plat (also refer to provided lot area summary)
- Right-of-way area dedication in Phase 1 Final Plat:
• Local = 73,770 square feet = 1.69 acres
• Julia Avenue “Collector” = 92,292 square feet = 2.12 acres
• 5th Street = 294,126 square feet = 6.75 acres
• Total = 460,188 square feet = 10.56 acres

• Phase 1 townhome development area + outlots = 345,135 square feet = 7.92 acres

• Future Development Outlots:
  • Outlot E – Future phase 2 of townhome development = 381,050 square feet = 8.75 acres
  • Outlot F – Future phaseS 3 and 4 of townhome development = 685,070 square feet = 15.73 acres
  • Outlot G – Future development lots retained by Property Owner = 556,066 square feet = 12.77 acres
  • Outlot H – Future development lots retained by Property Owner = 735,149 square feet = 16.88 acres

• Total Final Plat Area = 3,162,659 square feet = 72.60 acres
• Wetland outside townhome development in Outlot H = 14,202 square feet = 0.33 acres
• Phase 1 townhome development dedicated open space (private outlots A,B,C,D) = 229,315 square feet = 5.26 acres

**Neighborhood Vision**

This property is in a very attractive location. It is conveniently located near freeways, parks, and retail. However, its proximity to I-94 (as near as 700 feet) leads to higher levels of noise. This, in addition to having a commercial property immediately to the south is an indicator that this property is not a strong candidate for detached homes. The ideal use for this property is attached housing as a natural transition between commercial properties to the south and single-family properties to the north. Townhome buyers tend to be more tolerant of freeway noise and more intensive land uses.

Our vision is to create an attractive townhome neighborhood with a focus on convenient access to regional amenities and privately owned recreational amenities within the neighborhood. Key neighborhood traits are:

1. **Access** – Union Park is very short drive to I-94 and 494, leading to high level of convenience for homeowners.

2. **Parks** – Lake Elmo Park Reserve is just over one mile from Union Park, offering a wide variety of recreational opportunities such as walking trails, swimming, archery, fishing, horseback riding, camping, and cross-country skiing. A City park with a playground is just to the north of 5th Street North with trail access connecting the park to 5th Street North. 5th Street North has a trail along the north side and a sidewalk along the south side. Union Park has a wide range of recreational opportunities nearby.

3. **Retail** – A wide variety of retail properties are just blocks away from the neighborhood, including restaurants, Target, Walmart, Trader Joe’s, Cabela’s, and many others.

4. **Private Amenities** – We are planning the incorporation of private amenities for the use of Union Park residents. Not only are such amenities attractive for homebuyers, but they also help to create a sense of neighborhood identity and to facilitate social interaction in a neighborhood.
Neighborhood Design

We have carefully studied the market, the City’s Comprehensive Plan, the property, and the surrounding uses and have worked diligently to create a neighborhood layout that is ideally suited for this property. We are very pleased with how our vision and the resulting plan have come together. Below is a description of the various traits and strategies utilized in designing the neighborhood.

Access

The trunk transportation network serving this property is in place. What remains is to connect to the existing network at the safest locations.

We are making two connections to 5th Street North directly across from Jasmine Road North and Junco Road North. By connecting at these locations, we will avoid the introduction of additional connection points to 5th Street North. This results in the safest possible access to 5th Street North.

We have included a 100-foot wide right-of-way to accommodate the new collector street “Julia Avenue” which will connect 5th Street North to the commercial properties to the south and ultimately to Hudson Boulevard North. We plan to build the portion of collector street that runs through the subject property and to connect to this street to serve both the west and east properties.

Combined, both the west and east properties have two safe access points with strong internal connectivity between the access points.

Physical Constraints

Near the west edge of the west property, a natural gas pipeline bisects the property. Buildings cannot be placed within this existing 50-foot wide easement. We have designed the neighborhood to comply with the pipeline company requirements. The pipeline area is within or near the phase 1 townhome area but will included within a future development outlot. No land disturbance is proposed near the pipeline during this phase of the project.

On the north side of the west property, an existing overland drainage and utility easement exists. We will extend storm sewer to collect this water and will provide new drainage and utility easements. The old easement will be vacated. We have included an exhibit with this application to facilitate vacation.

Near the east edge of the east property, an existing temporary 21-inch diameter storm sewer pipe within an existing 30-foot wide easement runs through a portion of the property. The west property also contains a storm sewer that discharges within easement onto the property. Both storm sewer will ultimately be realigned and the easements will be vacated as required. We have included an easement vacation request with the preliminary plat submittal and the 2 exhibits and legal descriptions have been provided with this application to facilitate vacation. We understand the timing of the final vacations will occur as development phasing requires.

Parks

It is our understanding that the parks and open space dedicated within properties to the north of 5th Street North satisfy park needs for the area. Therefore, we anticipate paying park dedication fees to satisfy our park requirements. The incorporation of private recreational amenities within Union Park will reduce the demand/need for public parks and recreational amenities in the area.
Building Orientation

One important design attribute that can make a townhome neighborhood feel more “livable” is to vary the orientation of the buildings. This prevents the feeling of “barracks” that can sometime occur if attention is not given to how the geometric layout of the neighborhood impacts how it “feels.” We are utilizing this strategy most powerfully at the primary intersection of 5th Street North and the future collector road. Additionally, we have purposely created internal streets that do not run in parallel, thereby preventing the “barracks” feel.

Private Amenities

A key part of creating new neighborhoods is understanding our customers and anticipating their desires. This property is in an attractive location, surrounded by a variety of recreational, retail, and convenience-oriented amenities. Still, many people desire private, social gathering places to form bonds with their immediate neighbors. This is an important priority for many of our customers, and the size of the neighborhood is large enough to economically sustain such amenities. Based on our early market research, we are planning the following private amenities, all to be owned and maintained by a professionally managed home owners association:

- Dog Park – Fenced dog park available to all townhome development residents to be built in phase 1 in the east parcel.
- Playground/tot lot – Although a public tot lot exists north of 5th Street North, this street will increasingly become a barrier as traffic volumes increase. Inclusion of a private tot lot will be desirable.
- Open play areas – We are planning some open play area in both the east and west sides. Residents will find many uses for these versatile spaces.
- Trails

Parking

Adequate parking in a townhome neighborhood is critical and we have a great deal of experience in this area. We have designed the neighborhood to have a significant amount of guest parking (see parking plan). In addition, the parking lot for the pool area is available for overflow parking. It is our understanding that homeowners living in the existing townhome neighborhood to the east have complained about lack of guest parking in their neighborhood. Please be assured that our design differs from the adjacent neighborhood, which primarily includes narrow private streets that do not allow parking. We are utilizing wider public streets that accommodate parking on one side throughout the neighborhood. The difference in guest parking accommodation is substantial.

Changes Since Preliminary Plat

The townhome development has been refined through the preliminary plat application submittal to address comments from City Staff, Planning Commission and City Council.

Plan revisions since preliminary plat have been technical without needing fundament changes to the development plan. Preliminary plat documents have been resubmitted to the City to address City Engineer comment requests. Some of the updates to the plans include:
1. **Parking** – At the request of the City, the development plan has been updated to limit parking to one side of the public street. No parking signage is identified in the design plans.

2. **Utility Easements** – Site plan has been refined to accommodate 30’ wide easement corridors for all public utilities outside of public right of way.

3. **Stormwater Management** – Stormwater basin design has been refined to provided maintenance access and address comments from the City and Watershed Districts.

4. **Miscellaneous Engineering** – Plans have been refined to address other comments related to civil engineering and landscape architecture.

### Adjacent Land Uses

There are no conflicts with adjacent land uses. Traditionally, townhomes and other multifamily residential land uses are utilized as transitional buffers between more intensive uses and less intensive uses. In this case, single family homes lie to the north. However, 5th Street North lies between these two land uses, providing a significant existing buffer. To the east of the neighborhood lies similar townhomes. To the west lies industrial uses. Properties to the south are guided for Mixed Use – Commercial, a somewhat higher intensive land use. A townhome neighborhood is the ideal transitional land use for this location.

### Natural Resources

There are no wetlands or significant tree stands within the townhome development portion of the final plat boundary. There is a small wetland within the final plat boundary on the far southern edge within a future development outlot to be retained by the land owner. We understand that delineation report has been provided to the City by others representatives of the land owner.

### Justification that Services have Capacity

The subject property is in an area of the City that has recently been developing. In conjunction with the adjacent development, new infrastructure has been designed and extended to and through the area to adequately serve the area.

A new sanitary sewer has been extended through the subject property with service stubs extended into the property. This sewer serves Phase 1 of the Regional Sewer Staging Plan and it discharges to the MCES WONE Interceptor. Our application includes land uses and densities consistent with the Comp Plan, so the sewer has been designed to accommodate this neighborhood.

Water main has previously been constructed along 5th Street North. According to the City engineer memo from the sketch plan review, “the existing water system has sufficient capacity”. Our application includes land uses and densities consistent with the Comp Plan, so the water has been designed to accommodate this neighborhood.
Storm water quantity is traditionally handled on site by limiting post development flows to be equal to or less than predevelopment flows. Due to sandy soils found on site, we will be infiltrating storm water to meet City and Watershed quality requirements. The ponds designed to serve the neighborhood are of sufficient size to serve the new neighborhood.

5th Street North has been recently designed and constructed to serve a fully developed area.

The land use and density proposed with this application is consistent with the Comp Plan. Therefore, all past and current long-term planning for fire, public safety, parks, and schools are unchanged by this application.

Our Homes

Pulte Homes is known for the extraordinary steps that we take to ensure that we are designing and building homes that meet the needs and desires of home buyers. We continually reach out to the public and Pulte homeowners to get feedback to improve our home designs. We call this Life Tested®. Through this intensive process, we have conceived of and incorporated many innovative home design features such as the Pulte Planning Center, Everyday Entry, Super Laundry, Oversized Pantry, and the Owner’s Retreat. This exhaustive process has played a major part in Pulte’s success in “Building Consumer Inspired Homes and Communities to Make Lives Better.”

Townhome Design

Our overall approach in designing the exterior of these two-story townhomes was to “individualize and stylize” each unit. The result is individual units which differ in architecture from all other units within the same building and which vary in color scheme. The result is that each unit will appear unique and distinct within each building and to a substantial degree within the new community. Attached you will find photos of the buildings to be constructed.

Innovative Approach to Rowhome Floor Plans

It is worth noting that our approach to “individualized and stylized” rowhome units extends to the interior as well. Buyers can choose from a range of options that were not typically seen in the previous generation of townhome floor plans:

- a. 3 bedrooms with an option for a 4th
- b. 1st floor sunroom addition with 2nd floor owner’s suite bathroom expansion
- c. Loft
- d. Rooftop terrace

We find that this versatile townhome appeals to a much broader spectrum of demographics than the previous generation of townhomes. This two-story townhome appeals to young, first time homebuyers, young families, and empty nesters in search of homeowner’s association maintenance of the yard, snow removal, and exterior of the buildings.
Phasing & Schedule

The following preliminary schedule for development is envisioned based on current projections and information:

- **2019**: Development of Phase 1 with Mass Grading Permit to start Summer 2019
- **2020**: Development of Phase 2
- **2021 or 2022**: Development of Phase 3
- **2022 or 2023**: Development of Phase 4
- **2024-2026**: Full build out

We have created a detailed Phasing Plan ‘map’ that is included with this application and attached to this narrative. We put a considerable amount of thought into balancing the infrastructure issues and coming up with a workable Phasing Plan. Please also note that the Phasing Plan includes a brief listing of the infrastructure and amenities included within each phase.

This submittal includes:

- Land Use application
- Application fee/escrow
  - Final plat = $1,250 fee + $8,000 escrow
- This narrative
- Parcel info/mailing labels
- Survey, engineering, and landscape architecture, phasing, and parking exhibits
LEGAL DESCRIPTION – VACATION OF DRAINAGE AND UTILITY EASEMENT PER DOC. NO. 407703

A 30.00 Drainage & Utility Easement lying over, under and across that part of the East Half of the Southwest Quarter of Section 34, Township 29, Range 21, Washington County, Minnesota, the centerline of which is described as follows:

Commencing at the southeast corner of said East Half of the Southwest Quarter of Section 34; thence North 00 degrees 06 minutes 31 seconds East, assumed bearing along the east line of said East Half of the Southwest Quarter, a distance of 1105.27 feet; thence northwesterly along a non-tangential curve concave to the northeast having a central angle of 29 degrees 11 minutes 27 seconds, a radius of 760.00 feet for an arc distance of 387.20 feet, the chord of said curve bears North 75 degrees 34 minutes 45 seconds West; thence North 60 degrees 59 minutes 01 seconds West, tangent to said curve a distance of 68.11 feet to the point of beginning of the centerline to be described; thence South 24 degrees 47 minutes 08 seconds West, a distance of 109.07 feet; thence South 34 degrees 47 minutes 21 seconds West, a distance of 52.00 feet and said centerline there terminating.

The sidelines of said easement are to be prolonged shortened to terminate at a line bearing North 60 degrees 59 minutes 01 seconds West from said point of beginning.

Area: 4,832 sf or 0.11 acres
LEGAL DESCRIPTION — VACATION OF DRAINAGE AND UTILITY EASEMENT PER DOC. NO. 4007793

A 30.00 Drainage & Utility Easement lying over, under and across that part of the West Half of the Southeast Quarter of Section 34, Township 29, Range 21, Washington County, Minnesota, the centerline of which is described as follows:

Commencing at the southwest corner of said West Half of the Southeast Quarter of Section 34; thence North 00 degrees 06 minutes 31 seconds East, assumed bearing along the west line of said West Half of the Southeast Quarter, a distance of 1105.27 feet; thence northeasterly along a non-tangential curve concave to the northwest having a central angle of 39 degrees 09 minutes 56 seconds, a radius of 760.00 feet for an arc distance of 519.51 feet, the chord of said curve bears North 70 degrees 14 minutes 34 seconds East; thence North 50 degrees 39 minutes 36 seconds East, tangent to said curve a distance of 284.70 feet to the point of beginning of the centerline to be described; thence South 39 degrees 52 minutes 31 seconds East, a distance of 139.66 feet; thence South 66 degrees 39 minutes 51 seconds East, a distance of 22.00 feet and said centerline there terminating.

The sidelines of said easement are to be prolonged shortened to terminate at a line bearing North 50 degrees 39 minutes 36 seconds East from said point of beginning.

Area: 4,850 sf or 0.11 acres
An engineering review has been completed for the Union Park 1st Addition. Final Plat/Final Construction Plans were received consisting of the following documentation:

- Union Park 1st Addition Narrative dated May 24, 2019.
- Union Park 1st Addition Final Plat, Sheets 1-3, received May 28, 2019. No print/preparation date.

**STATUS/FINDINGS:** Engineering review comments have been provided in two separate memos; one for Final Plat approval, and one to assist with the completion of the final Construction Plans. Please see the following review comments relating to the Final Plat application.

**FINAL PLAT: UNION PARK 1ST ADDITION**

- The 5th Street North roadway along the northern border of the property will be platted at a width of 100-feet as required. The roadway currently resides within a roadway easement.
- Julia Avenue North will be platted at a width of 100-feet as required by the preliminary plat, extending from 5th Street North to Hudson Boulevard.
- Outlots A, B, C, and D will be HOA owned and maintained with drainage and utility easements over all of each Outlot. These easements are consistent with the preliminary plan approval.
- Outlot B includes a storm water infiltration basin which must incorporate the entire basin including the 100-year HWL and maintenance access road.
- Outlots E, F, G, and H will be privately owned for future platting.
- Outlot ownership has been identified on the Final Construction Plans as required.
- Additional drainage and utility easements have been shown on the plat as required in the preliminary plat approval over portions of Lot 6, Block 3; Lot 1, Block 4; Lot 6, Block 6; and Lot 4, Block 7.
- Final Plat must be contingent upon the City receiving separate drainage and utility easements, or temporary grading/construction easements in the City’s standard form of easement agreement for all temporary and off-site development improvements.

A permanent off-site drainage and utility easement is required for the storm sewer run from MH 701 to FES 700 to maintain a minimum 30-foot easement centered over the pipe and from the end of the FES. This easement covers storm sewer pipe to be installed as Phase 2, however this easement is required is needed.
Temporary roadway easements are required over a portion of Outlot E in accordance with the City standard details for each proposed temporary cul-de-sac. Easements can be held and not recorded until future plat phases terminate their need.

A temporary drainage and utility easement must be provided over a portion of Outlot E for the proposed storm sewer discharge pipe from 4th Street Lane North to the Outlot B infiltration basin, and for the watermain pipe stub and hydrant to the southern property line. This easement can be held and not recorded until future plat phases terminate their need.

Temporary construction and grading easements are required over a portion of Outlot H to facilitate the off-site grading and erosion control work.

A drainage and utility easement is required over a portion of Outlot H to facilitate the extension of watermain with temporary hydrant to the southern property line.

- All off-site easements must be clearly shown on the street, grading and utility plans, with all dimensions labeled. The easements must be obtained and recorded prior to recording of final plat.
- All easements as requested by the City Engineer and Public Works department shall be documented on the Final Plat prior to the release of the Final Plat for recording.
- No pipe oversize pipe costs are anticipated for this development.
- Final Construction Plans and Specifications must be prepared in accordance with the latest version of the City Engineering Design Standards Manual, using City details, plan notes and specifications and meeting City Engineering Design Guidelines.
- Final Construction Plans and Specifications must be revised in accordance with the Construction Plan engineering review memorandum dated July 31, 2019.
- The Final Plat shall not be recorded until final construction plan approval is granted.
- No construction for Union Park 1st Addition may begin until the applicant has received City Engineer approval for the Final Construction Plans; the applicant has obtained and submitted to the City all applicable permits, easements and permissions needed for the project; and a preconstruction meeting has been held by the City’s engineering department.
To: Ken Roberts, City of Lake Elmo Planning Director

From: Lucius Jonett, Wenck Landscape Architect

Date: July 24, 2019

Subject: City of Lake Elmo Landscape Plan Review
Union Village (formerly Bentley Village) 1st Phase, Review #1

Submittals

- Final plat – Phase 1 Plans (Tree Inventory, Tree Preservation, Landscape), dated 5-24-2019, received 5-24-2019.

Location: Northwest quadrant of the intersection of Keats Ave. N & Interstate Hwy 94, Lake Elmo, MN. South of the Savona Development.

Land Use Category: Urban Medium Density Residential

Surrounding Land Use Concerns:

The property to the north (Savona Development) is Urban Low Density Residential and is less intensive land use than the proposed Urban Medium Density Residential. Screening is required on the north boundary.

The properties to the west (Lampert’s lumber yard), east and south are, or are guided, to be Commercial or Mixed-Use Commercial zones which are more intensive land use than this proposed Urban Medium Density Residential. Screening is not required on the west, east or south boundaries.

Special landscape provisions in addition to the zoning code: This proposed development will be required to provide screening along all borders North, South, West and East consisting of either a masonry wall or fence in combination with landscape material that forms a screen at least six feet in height and not less than 90% opaque on a year-round basis.
**Tree Preservation:**

A. A tree preservation plan has been submitted that does meet all requirements.

<table>
<thead>
<tr>
<th>Entire Site</th>
<th>905</th>
<th>Cal Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Caliper Inches of Significant Trees On-Site:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Trees</td>
<td>270</td>
<td></td>
</tr>
<tr>
<td>Conifer/Evergreen Trees</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hardwood Trees</td>
<td>635</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Significant Inches Removed On-Site</th>
<th>724</th>
<th>Cal Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Trees</td>
<td>236</td>
<td></td>
</tr>
<tr>
<td>Conifer/Evergreen Trees</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hardwood Trees</td>
<td>488</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>30% Tree Removal Limits (Cal. Inches)</th>
<th>Allowed</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtract Common Tree Removals</td>
<td>81</td>
<td>236</td>
</tr>
<tr>
<td>Subtract Conifer/Evergreen Tree Removals</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Subtract Hardwood Tree Removals</td>
<td>190.5</td>
<td>488</td>
</tr>
</tbody>
</table>

Removals in excess of 30% allowances

<table>
<thead>
<tr>
<th>Removels in excess of 30% allowances</th>
<th>452.5</th>
<th>Cal Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Removals in Excess of 30% Allowance</td>
<td>155.0</td>
<td></td>
</tr>
<tr>
<td>Conifer Removals in Excess of 30% Allowance</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Hardwood Removals in Excess of 30% Allowance</td>
<td>297.5</td>
<td></td>
</tr>
</tbody>
</table>

| Common Tree Replacement Needed (1/4 the dia inches removed) | 38.8 | Cal Inches |
| Conifer Tree Replacement Needed (1/2 the dia inches removed) | 0.0  | Cal Inches |
| Hardwood Tree Replacement Needed (1/2 the dia inches removed) | 148.8 | Cal Inches |

| Common Tree Replacement Required @ 2.5” per Tree | 16 | # Trees |
| Conifer Tree Replacement Required @ 3” per 6’ Tall Tree | 0 | # Trees |
| Hardwood Tree Replacement Required @ 2.5” per Tree | 60 | # Trees |

B. There is a significant tree on the property. Tree ID #2742 – 44” DBH Oak. The tree is not marked for removal.

C. Tree replacement is required because more than thirty (30) percent of the diameter inches of significant trees surveyed will be removed.

D. Tree replacement calculations follow the required procedure and are correct.

E. This project is residential development; therefore mitigation replacement trees shall be in addition to landscape required tree counts.
Landscape Requirements:

The landscape plans meet the code required number of trees.

<table>
<thead>
<tr>
<th></th>
<th>Preliminary Plan (Code Required)</th>
<th>1st Phase Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Frontage</td>
<td>5908 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>Lake Shore</td>
<td>0 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>Stream Frontage</td>
<td>0 Lineal Feet</td>
<td></td>
</tr>
<tr>
<td>Total Linear Feet</td>
<td>5908 Lineal Feet</td>
<td>119 Trees</td>
</tr>
<tr>
<td>/50 Feet = Required Frontage Trees</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development or Disturbed Area</th>
<th>SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development or Disturbed Area</td>
<td>41.6 Acres</td>
</tr>
</tbody>
</table>

*5 = Required Development Trees 208 Trees

Required Mitigation Trees 76

** Required Number of Trees (*) 403

** Total Trees to Date 403 124

* Residential development - mitigation replacement trees are in addition to landscape required tree counts.

1. A minimum one (1) tree is proposed for every fifty (50) feet of street frontage.
2. A minimum of five (5) trees are proposed to be planted for every one (1) acre of land that is developed or disturbed by development activity.

The landscape plans do meet the minimum compositions of required trees:

<table>
<thead>
<tr>
<th>Master Plan</th>
<th>Qty</th>
<th>% Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deciduous Shade Trees</td>
<td>173</td>
<td>43%</td>
</tr>
<tr>
<td>Coniferous Trees</td>
<td>171</td>
<td>42%</td>
</tr>
<tr>
<td>Ornamental Trees</td>
<td>59</td>
<td>15%</td>
</tr>
</tbody>
</table>

** Tree Count 403

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Qty</th>
<th>% Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deciduous Shade Trees</td>
<td>57</td>
<td>46%</td>
</tr>
<tr>
<td>Coniferous Trees</td>
<td>51</td>
<td>41%</td>
</tr>
<tr>
<td>Ornamental Trees</td>
<td>16</td>
<td>13%</td>
</tr>
</tbody>
</table>

** Tree Count 124

The landscape plans do show the required mitigation tree types and quantities:

<table>
<thead>
<tr>
<th>Required</th>
<th>Preliminary Plat</th>
<th>1st Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Trees</td>
<td>16</td>
<td>111</td>
</tr>
<tr>
<td>Conifers</td>
<td>0</td>
<td>171</td>
</tr>
<tr>
<td>Hardwood Trees</td>
<td>60</td>
<td>62</td>
</tr>
</tbody>
</table>

A. A landscape plan has been submitted that does meet all requirements.
B. The landscape plan does meet the landscape layout requirements:

C. Interior Parking Lot Landscaping – The development does not include interior parking lots.

D. Perimeter Parking Lot Landscaping – The development does not include perimeter parking lots.

E. Screening – The landscape plan does meet screening requirements.

**Special Landscape Considerations:**

A. 5th Street – The development is along 5th Street, which has been previously or is schedule to be constructed by other developments. No additional landscape requirements are required of this applicant.

**Findings:**

1. Requiring full screening along the north property line (5th Street) is not recommended as it will interfere with the required boulevard tree plantings in the 5th Street Design Guidelines.

2. The property to the South is currently vacant land (Rural Development Transitional guided for Commercial development in 2030 Comprehensive Plan and Mixed Use Commercial in draft 2040 Comprehensive Plan). Currently vacant can be interpreted as a currently less intensive use than this proposed development and by ordinance would require screening. Because the property to the South is planned to be a more intensive land use, then by ordinance future development of the South properties would be required to provide screening. The proposed single row planting along the south property of this development’s preliminary plat is a fair compromise for current conditions. If the development occurs in multiple phases, each phase should be evaluated for changes of intensity along the southern border, and screening requirements adjusted accordingly.

**Recommendation:**

The 1st Phase landscape plans submitted for the Union Park development are consistent with the preliminary plat landscape plans approved on July 24, 2019. It is recommended that the 1st phase landscape plans be approved.

Sincerely,

[Signature]

Lucius Jonett, PLA (MN)
Wenck Associates, Inc.
City of Lake Elmo Municipal Landscape Architect