City of Ramsey
Agenda
Regular Planning Commission
Thursday, April 6, 2017
7:00 pm
Council Chambers, 7550 Sunwood Drive NW

1. Call to Order

2. Citizen Input

3. Approve Agenda

4. Approve Minutes

1. Approve the March 2, 2017 Planning Commission Meeting Minutes

5. Public Hearing/Commission Business

1. PUBLIC HEARING: Consider Request for a Variance to Accessory Building Setback Requirements (Project #117-13); Case of Steve Roeder

2. PUBLIC HEARING: Consider Request for a Variance and Preliminary Plat Approval of Homestead Road Subdivision Located at 7131 166th Ave NW (Project #16-32); Case of CTW Group, Inc.

3. Consider Preliminary Plat and Zoning Amendment for Covenant Meadows (Project #17-102); Case of Eric Thomsen.

4. Consider Sketch Plan Review for Riverstone Addition Located Near Bunker Lake Boulevard and Puma Street; Case of Capstone Homes (Project No. 17-106)

5. Green Valley Greenhouse Land Use Planning and Comprehensive Plan Designation

6. Consider Architectural Recommendations for Aeon Ramsey Housing Development

7. Review Oakwood Development Concept (Levin Property)

8. PUBLIC HEARING: Consider Ordinance #17-04 Amending Irrigation Requirements (Project #17-104)

9. Appoint Ad-Hoc Subcommittee Members to Update Housing Plans

6. Comprehensive Plan Update Items

1. Review Format and Content for April 10 Comprehensive Plan Update Workshop (Transportation Plan; Parks and Recreation Plan)

2. Review Preliminary Feedback from Highway 10 Summit and Discuss Corridor Improvement Plan Next Steps

7. Commission/Staff Input

1. Zoning Bulletins

8. Adjournment

Regular Planning Commission **4. 1.**

Meeting Date: 04/06/2017

By: JoAnn Shaw, Community Development

Information

Title:

Approve the March 2, 2017 Planning Commission Meeting Minutes

Purpose/Background:

n/a

Notification:

Observations/Alternatives:

Funding Source:

Recommendation:

Action:

Attachments

03.02.17

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	JoAnn Shaw	03/31/2017 03:38 PM
Form Started By: JoAnn Shaw		Started On: 03/29/2017 08:56 AM
Final Approval Date: 03/31/2017		

PLANNING COMMISSION
CITY OF RAMSEY
ANOKA COUNTY
STATE OF MINNESOTA

The Ramsey Planning Commission conducted a regular meeting on Thursday, March 2, 2017, at the Ramsey Municipal Center, 7550 Sunwood Drive NW, Ramsey, Minnesota.

Members Present:	Chairperson Randy Bauer Commissioner Bruce Anderson Commissioner Ralph Brauer Commissioner Cindy Nosan Commissioner Patrick Surma Commissioner Gary VanScoy
Members Absent:	None
Also Present:	Community Development Director Timothy Gladhill City Planner Chris Anderson

1. CALL TO ORDER

Chairperson Bauer called the regular meeting to order at 7:00 p.m.

2. CITIZEN INPUT

None.

3. APPROVAL OF AGENDA

Motion by Commissioner VanScoy, seconded by Commissioner Anderson, to approve the agenda as presented.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners VanScoy, Anderson, Brauer, Nosan, and Surma. Voting No: None. Absent: None.

4. APPROVE PLANNING COMMISSION MINUTES

4.01: Approve the Following Planning Commission Minutes:

4.01.1: Planning Commission Meeting Minutes Dated February 2, 2017

Motion by Commissioner VanScoy, seconded by Commissioner Surma, to approve the following minutes with corrections: Planning Commission Meeting Minutes dated February 2, 2017.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners VanScoy, Surma, Anderson, Brauer, and Nosan. Voting No: None. Absent: None.

5. PUBLIC HEARINGS/COMMISSION BUSINESS

5.01: Public Hearing: Preliminary plat and Zoning Amendment for Covenant Meadows (Project #17-102); Case of Eric Thomsen.

Public Hearing

Chairperson Bauer called the public hearing to order at 7:01 p.m.

Presentation

City Planner Anderson presented the staff report stating the purpose of this case is to review an application for a Rezoning of the Subject Project from R-1 Rural Developing to Planned Unit Development (PUD) and Preliminary Plat. The site is generally located south of Trott Brook and west of Germanium Street and is identified as PID 02-32-25-44-0004. The Applicant has proposed to subdivide the approximately thirty-eight (38) acre Subject Property into twelve (12) single family homes that would be serviced by individual private utilities. The Preliminary Plat proposes deeding approximately fifteen (15) of the thirty-eight (38) acres to the City as the public benefit in relation to the PUD application. The proposed fifteen (15) acres straddles both sides of the Trott Brook, has steep slopes, and is also considered to be high quality natural open space. Staff reviewed the request in further detail along with the alternatives available to the Commission.

Citizen Input

Chairperson Bauer requested further clarification on where the pedestrian pathway was located and asked if it would connect to Trott Brook.

City Planner Anderson described the location of the trail easement that would be deeded to the City within the proposed development. He explained the steep slopes would not allow for an ADA trail. It was noted the trail would have a dead-end. Further discussion ensued regarding the specific standards for ADA trails.

Chairperson Bauer questioned if the cul-de-sac could be altered in any way to assist with better fire access.

Community Development Director Gladhill reported this was not the case and noted there was a broader neighborhood issue given the fact it only had a single access point.

Commissioner VanScoy inquired what the status was of the east/west cul-de-sac.

City Planner Anderson indicated the east/west cul-de-sac would be signed as a potential thru street but would be designed to meet full cul-de-sac standards.

Commissioner Anderson expressed concern that this neighborhood would have a single-point of entry.

Eric Thomsen, 6210 Green Valley Road, stated he has tried to make this development neighborhood friendly. He appreciated the assistance he has received from staff and thanked them for the thorough report.

Dan McShane, 17310 Geranium Street, reported he has lived at his address for the past 20 years and he appreciated the wildlife and trees. He feared how the new development would impact the wildlife population.

Terry McShane, 17310 Geranium Street, expressed concern with how the new development would impact the turkeys and deer behind her home. She did not approve of the tranquility being destroyed behind her property. She requested a sanctuary or buffer area be preserved for the wildlife.

Mr. McShane stated he would support the developer constructing nine houses instead of twelve. He asked how many of the lots were a single acre.

City Planner Anderson reviewed the lot sizes for the proposed development, along with the lot sizes of the adjacent properties.

Commissioner VanScoy discussed the purpose of a PUD noting the City would be receiving 15 acres from the developer. He explained the developer could be constructing 15 homes and was proposing 12.

Mr. McShane further commented on how the additional homes would impact the single point of entry to the neighborhood. He asked if any of the proposed homes would be low-income.

Community Development Director Gladhill stated this was not the intent of this project and explained the City does not determine housing prices. He understood the developer had not applied for any funding assistance. He clarified that the developer was proposing single-family homes and not duplexes.

Mark Ladean, 17330 Germanium Street, expressed concern with the added traffic that would be added to his neighborhood with only a single point of entry. He was also concerned with how water would drain off the new homes onto his property given the grade differences between the parcels. He understood new wells would be installed and feared how the water table would be impacted. He stated he moved to this neighborhood for the peace and quiet and it was his hope the trees, wildlife, deer and turkeys would remain.

Julie Ladean, 17330 Germanium Street, stated she was concerned with how difficult it was to access the creek in the spring and during large rain events. She believed it was a complete waste of tax dollars to construct a trail that would need constant repairs. She questioned if it was the developer's idea to provide land to the City. She explained that the 15 acres that would be turned over to the City were not buildable and could not be used as a park. While she understood these 38 acres would eventually be built on, it was her hope that her view of the creek would be maintained and that strangers would not be walking through her property in order to get to the creek.

Chairperson Bauer questioned how the width of Trott Brook varied during heavy rain events or wet springs.

Ms. Ladean explained Trott Brook was normally 12 to 20 feet in width but could reach up to 500 feet in width during the spring.

Len Simon, 17349 St. Francis Boulevard, stated he owns 40 acres directly west of this proposed property. He commented on the history of his property and noted he had a natural amphitheater. He explained he purchased his property to preserve the amphitheater, which required the combining of four lots. He recommended the City maintain the 2.5-acre minimum for the lots sizes to ensure septic waste does not seep from one property to another. He believed this property was a gift from God and should be preserved.

Juliann Simon, 17349 St. Francis Boulevard, shared the sentiments of the others who spoke previously. She expressed concern with the amount of traffic that would have to be accessing Highway 47 from a single access point. She understood the concerns that were raised by the Fire Department and cautioned the future homeowners on this. She encouraged the City to further investigate this development prior to approval.

Diane Weber, 5450 173rd Avenue NW, stated she appreciated her secluded neighborhood and appreciated the 2.5 to 3-acre lot size minimum. She requested the City hold the proposed development to these standards. She questioned who would be using the proposed trail. She worried about the number of new wells and septic systems that would be installed given the small lot size. She asked that the neighbors be made aware if low-income housing was being constructed. Lastly, she expressed concern with the water runoff from the new development and feared how it would impact the creek and river.

Chairperson Bauer discussed the approval process for this Planning Case and noted it was in proposal phase and the final approval would rest with the City Council.

Mr. Simon suggested this piece of property be preserved and that a monumental act be taken.

David Magnuson, 13907 Bluebird Street in Andover, stated he was interested in building in Covenant Meadows. He discussed the history of the proposed development and explained the dream was for several friends to be able to build homes and live among their friends. He loved the nature surrounding this property. He reported the land would not be clear cut or stripped.

His goal would be to do life with friends while allowing the natural beauty of the land to remain. He stated if the City did not approve this proposal, he would have to pursue another parcel of land.

Chairperson Bauer thanked Mr. Magnuson for this information.

Tim O'Shaughnessy, 17201 St. Francis Boulevard, stated he owns 37 acres along the south side of the proposed development. He reported he was new to the City of Ramsey. He suggested the development allow seven homes and not eight. He recommended that the 15 acres not become a public park.

Don Qveton, 5750 177th Avenue NW, discussed the flooding on this property and explained that during wet springs and winters, he has to move his cattle. He agreed that it would be a waste of money to put in a trail as it would routinely flood. He understood this was a beautiful piece of property and appreciated the sentiment behind the development. He understood the property would develop someday. However, he offered to purchase the 15 acre outlot, after receiving an appraisal, and indicated he could donate it back to the City if he ever sells his property. He explained that he bought his land so that he could live in the country, same as all the other neighbors.

Dave Jones, 17331 Germanium Street, commented on the cliffs surrounding his house and stated he would never allow a path in this area. He expressed concern with the water runoff in his neighborhood because of the steep slopes and cliffs. He stated if this development were to proceed the water runoff would have to be addressed. He noted he has lived at his home for the past 17 years.

Chairperson Bauer discussed the PUD that would allow lots less than two acres in size. He asked how several of the lots to the east were approved at less than 2.5 acres.

City Planner Anderson anticipated these lots were developed prior to this standard being put in place and were now lawful non-conforming lots.

Mr. Thomsen explained the entire development would be privately financed and all single-family homes were being proposed. He stated he was not an engineer but noted the property would be engineered properly for water runoff and infiltration.

Community Development Director Gladhill understood the neighbors were very concerned with the protection of the natural resources. This led the City to propose protecting 15 acres of land surrounding Trott Brook through a PUD. He stated his primary intent was to lock the property into its natural state. He explained if the trail was not seen as a benefit, the City would not have to pursue it. He reported the 15 acres would have to be deeded over to the City in order for the PUD process to be considered. He provided further comment on how the engineering of this site was reviewed and addressed by City staff. He discussed how traffic would enter and exit the neighborhood noting only 120 extra trips per day would be generated by the new homes. Staff

provided further comment on the financing plan for the project and noted the City would be securing sureties from the developer.

Commissioner Anderson understood this was a property with solitude. He discussed the cliffs within the neighborhood and questioned what the City would do with the 15 acre outlot.

Commissioner VanScoy questioned how the wildlife would be impacted through the proposed development.

Mr. Thomsen commented on the protection of the 15 acres stated this was being done to assist with preservation. He explained he was 56 years old and has lived in Ramsey the majority of his life. He discussed the proposed site plan further and stated a natural corridor would be maintained for the wildlife. He indicated his goal was to maintain as many trees as possible and noted new trees would be planted.

Commissioner VanScoy asked if any if the new homeowners would be installing fences.

Mr. Thomsen stated he was uncertain if fences would be installed.

Chairperson Bauer discussed the PUD approval process and noted the plans, once approved, could not be altered.

Mr. McShane questioned how far a home within the new development would be from his.

City Planner Anderson estimated a new home would be roughly 250 feet from Mr. McShane's home.

Motion by Commissioner VanScoy, seconded by Commissioner Surma, to close the public hearing.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners VanScoy, Surma, Anderson, Brauer, and Nosan. Voting No: None. Absent: None.

Chairperson Bauer closed the public hearing closed at 8:28 p.m.

Commission Business

Commissioner VanScoy requested further information from staff regarding the City's septic system regulations.

Community Development Director Gladhill discussed the MPCA and City's septic system requirements.

Commissioner VanScoy questioned what the City's minimum lots size standards were.

Community Development Director Gladhill explained lots with septic systems were to have enough room for a primary and secondary septic. This allows for a system to fail on a residential lot and still be replaced.

Commissioner Nosan believed there was no purpose in putting in a trail as this area frequently floods. She discussed the single access point to this neighborhood and requested further information.

Community Development Director Gladhill discussed the single access point and stated staff would be conducting additional study on a potential second access point.

Commissioner Brauer questioned if an EAW should be completed.

City Planner Anderson explained the proposed development would not trigger this requirement. He discussed how the neighbors could petition for an EAW. He indicated the development would have to meet all Rum River Watershed District requirements with regard to stormwater runoff.

Commissioner Nosan asked if this property could have any endangered species, such as turtles.

Community Development Director Gladhill understood the City could order an animal species database from the DNR. He explained a blanding turtle might exist in the general area of Ramsey but stated this had not stopped other projects in the area.

Ms. McShane questioned how an EAW process could be started.

Community Development Director Gladhill discussed the citizen petition process for an EAW. He commented further on the eight step requirements within the EAW. He stated he could email all of this information to Ms. McShane.

Commissioner Surma thanked all of the residents for being in attendance this evening. He appreciated their input and Mr. Simon's passion for this property. He stated he supported property rights and wanted to see all lots within the development be 2.5 acres in size. He supported the land surrounding Trott Brook being preserved.

Community Development Director Gladhill appreciated all of the comments received this evening as well. He recommended action on this development be delayed to allow several issues to be worked through with the developer that do not include an EAW. He stated Mr. Thomsen has been excellent to work with and staff would like the Commission to table action on Covenant Meadows to April.

Motion by Commissioner VanScoy, seconded by Commissioner Nosan, to table action on Covenant Meadows to the April 6, 2017 Planning Commission meeting.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners VanScoy, Nosan, Anderson, Brauer, and Surma. Voting No: None. Absent: None.

5.02: Stone Brook Children's Academy & Childcare Center Purchase Agreement

Presentation

Assistant City Administrator/Economic Development Manager Brama presented the staff report stating The EDA and City Council are considering the attached purchase agreement (PA) with Stone Brook Academy for 1-acre of land located near the center of The COR for a children's academy and childcare center. It is customary for the City to allow the Planning Commission to comment on purchase agreements for City-owned land before they are executed. Specifically, the City Council is seeking preliminary comments on the proposed land use/ concept site layout.

Staff suggests three major talking points for the Planning Commission:

(1) The proposed Stone Brook project has sparked the discussion of the Yolite Street connection. At this point, the EDA, Planning Commission, and City Council have all generally agreed, a connection is needed. However, the "type" of connection is an outstanding item. Should the City require Yolite to be a formal public roadway, designed to public road standards (much like Sapphire Street in The COR). Or, can the Yolite Street connection be constructed as a private drive connection (much like Residence at The COR or Casey's). Stone Brook would prefer a private drive connection. Staff is open to either option.

(2) The proposed Stone Brook building orientation does include portions of the building set-back from Sunwood Drive (much like the City's Municipal Center Building). Generally speaking, The COR Design Standards require the building to be pushed up against Sunwood Drive. Staff believes this project meets the general intent of The COR Design Standards. However, the proposed Stone Brook building orientation, partially set-back from Sunwood, will likely require some sort of deviation (or variance) from the City's COR Design Standards. Staff would like to know if the Planning Commission is open to the proposed building orientation on Sunwood Drive? From a preliminary perspective, Staff is generally comfortable with the proposed building orientation.

(3) The Planning Commission reviewed the attached four master plan options in February. At the time, the Planning Commission showed general support for layout "B" due to the internal east-to-west road connection. Staff would like to confirm the Planning Commission's position on that item.

Assistant City Administrator/Economic Development Manager Brama explained it should be noted, this case is not an "official/ formal review" of the site plan by the Planning Commission. That will occur formally in the future, during the entitlement process (i.e. official site plan/ plat). The purpose of this case is to gather "preliminary" input on the site layout for the benefit of the Council and Stone Brook, as they negotiate the attached purchase agreement. The site layout of

any project drastically effects project costs, and therefore has a direct effect on the purchase agreement negotiation. Additionally, this feedback will help Stone Brook with providing direction to their architects/ engineers that will formally design the project (and prepare for official applications). Therefore, any preliminary

Commission Business

Chairperson Bauer understood the sentiments of each group that has reviewed this request was that Yolite Street should be connected and that Mr. Johnson supported shared financing. He requested further information from staff on the benefits of this connection being public or private.

Assistant City Administrator/Economic Development Manager Brama offered a definition for a public road and explained sidewalks and lights would be required, which would be more costly. He indicated a private drive option would be less costly and noted the standards would be negotiable. He reported the City would pay 60% and the developer would pay 40% for a public roadway. If the road were to develop in a private manner, the expense would be negotiable and staff anticipated this could be split 50/50. He explained that if the road were developed as a private drive, it would remain open to the public.

Chairperson Bauer questioned if a private road made more sense for the remnant lot.

Assistant City Administrator/Economic Development Manager Brama stated this would make more sense for the remnant lot as this would allow for additional width.

Commissioner VanScoy asked if the future sale of the remnant lot would be improved if the roadway were public versus private.

Assistant City Administrator/Economic Development Manager Brama believed this issue would have to be further vetted. He anticipated that a private drive would reduce the entry costs for a future developer, while also maintaining more of the land.

Commissioner VanScoy discussed the importance of the Yolite connection for users of the train. For this reason, he supported a public street.

Commissioner Nosan questioned who would maintain the roadway if it were private.

Assistant City Administrator/Economic Development Manager Brama stated the maintenance would be negotiable.

Commissioner Anderson expressed concern with a private road and recommended the connection be public to allow for proper access.

Michael Johnson, Stone Brook Children's Academy, introduced himself to the Commission and stated he would be one of the owners of Stone Brook.

Chairperson Bauer understood Mr. Johnson's father-in-law owned two daycare academies.

Mr. Johnson reported this was the case. He explained that he has been doing research over the past two years which led him to deciding to choose Ramsey for his academy. He indicated he recently received his director certification.

Chairperson Bauer asked what the difference was between a daycare and an academy.

Mr. Johnson stated a daycare was an in-home service run by the County, while a childcare center was run by human services and the State of Minnesota. He reported all building requirements would be governed by the State. He elected to add the word academy after Stone Brook to set his facility apart and to show it was focused on preschool education.

Community Development Director Gladhill encouraged the Commission to not get wrapped up on this issue and noted this was a State licensing issue. He explained Stone Brook was proposing to have a commercial childcare facility.

Commissioner VanScoy commented on the building design. He asked if any brick could be put on the building.

Mr. Johnson indicated his plans architectural plans were preliminary and had yet to be finalized.

Commissioner Anderson questioned if the developer had looked over the four site plan options.

Mr. Johnson stated he had reviewed these options.

Commissioner Anderson understood the Commission supported Plan B and asked if the developer had any comments on this plan.

Mr. Johnson had no concerns but recommended the east/west drive be further south for safety purposes.

Chairperson Bauer questioned how drop-off and pick-up would be managed by Stone Brook.

Mr. Johnson reported a receptionist would be hired to assist with this process and noted the center would be open from 6:00 a.m. to 6:00 p.m.

Commissioner Nosan inquired how many parking stalls the academy would have.

Mr. Johnson indicated Stone Brook would have 27 parking stalls and he anticipated he would have 18 staff members.

Commissioner VanScoy questioned if the building would have access from Sunwood.

Mr. Johnson stated the building would only have one main entrance point, via the parking lot for safety purposes.

Commissioner Anderson inquired if the property would be fenced.

Mr. Johnson indicated only the playground area on the southwest corner would be fenced.

Commissioner Surma expressed concern with the lack of parking that would be available for pick-up and drop-off. He believed the Coburn's was not adequately parked and did not want to see this new business impacted.

Mr. Johnson stated the proposed parking was all that would be allowed on the one acre lot.

Commissioner VanScoy believed the proposed project was much needed and would greatly benefit the City of Ramsey and The COR.

Chairperson Bauer was pleased that both parties were able to reach an agreement on the purchase agreement.

Assistant City Administrator/Economic Development Manager Brama summarized the feedback provided by the Planning Commission. He understood a public road connection was preferred.

5.03: Consider Draft Ordinance Amendment Addressing Irrigation Requirements (Discussion Purposes Only)

Presentation

City Planner Anderson presented the staff report stating over the past two months, the Environmental Policy Board (EPB) has discussed a potential ordinance amendment regarding irrigation requirements for multi-family and commercial/industrial developments. The intention originally was simply to eliminate the City Code requirement that in-ground irrigation systems shall be installed in all multi-family and commercial/industrial projects. However, based on information received at their January meeting from a guest speaker, the EPB directed Staff to revise the DRAFT Ordinance so that it also stipulates that if an irrigation system is installed (including single family parcels), it shall be equipped with a rain sensor (per state statute) as well as one or more water efficient technologies. This could include, but would not be limited to, a smart controller, soil moisture sensor(s), and/or an evapotranspiration (ET) sensor(s). This provides enough flexibility so that as future advances in water efficient irrigation technologies are developed, it will not require additional ordinance amendments.

City Planner Anderson explained the cost of these 'smart', water efficient technologies has come down as they have become more commonplace. Again, based on input from a guest speaker from Conserva Irrigation, including a smart controller, for example, to a new irrigation system, only adds about $250 to $350 to the overall cost. It is more expensive to retrofit existing systems with the more water efficient technologies, approximately $650 to $750. However, the Return on

Investment (ROI) for a standard residential system could be realized relatively quickly, maybe in as few as two to four years (and would be even quicker on larger, commercial systems).

City Planner Anderson reported as water supply continues to be a prominent concern for the City and as the 'smart' technologies become more commonplace (and therefore with prices coming down), the EPB believes that requiring water efficient technologies is appropriate. However, the EPB has also noted that they want to ensure that this is enforceable. Thus, staff is still assessing how the water efficient requirement could be verified in the field. At this time, it does not appear that it could be addressed through any existing inspection. Additional review is still needed on this aspect.

Commission Business

Chairperson Bauer supported the City being proactive on the City's water usage and its proper management.

Commissioner Anderson agreed.

Commissioner VanScoy also supported the City addressing this issue and asked if the proposed plan went far enough. He questioned if something other than sod should be considered in order to reduce the City's dependence on water.

City Planner Anderson stated this was an excellent point. He discussed a portion of City Code regarding the use of native plantings and how the City was working to address landscaping that required less chemicals and water. He indicated the EPB was hoping to get something in place prior to the 2017 construction season.

Chairperson Bauer thanked City Planner Anderson for the update on this item.

5.04: Discussion Regarding Two Story Accessory Buildings; City Code Section 117-349.

Presentation

City Planner Anderson presented the staff report stating Recently, City Staff received an application for a two-story accessory building, which has brought about lengthy discussions about the standards that apply to such structures. While City Code allows for two-story accessory buildings, either by right (on parcels two [2] acres or larger and outside the MUSA) or through the issuance of a conditional use permit, there is no provision for such structures to deviate from the height limitation for accessory buildings (either sixteen [16] or twenty-two [22] feet), without the issuance of a variance. He explained a two-story accessory structure being approved through a conditional use permit was originally put into place due to oversized attics that contained enough room between the floor and the ceiling that Building Code deemed the attic space a second story even though from the exterior the structure did not appear to have a full two (2) levels. This is the reason for the height limitation remaining at sixteen (16) feet for two story

accessory buildings on parcels less than two (2) acres rather than allowing for additional height allowances at this time.

City Planner Anderson reported staff would like to have a discussion on this topic to determine if a text amendment that would allow for an increase in accessory building height for a two-story accessory building is warranted. Note, City Staff is not advocating for or recommending that an amendment is needed. There are several items to consider:

1. What does the Planning Commission feel was the intention of allowing a two (2) story accessory buildings: to accommodate a 'bonus room' or if it was to truly allow for two (2) full stories?

2. Would allowing a deviation from height standards by Conditional Use Permit rather than by Variance be a more appropriate tool to address accessory building height (similar to how deviations to sign standards are addressed)?

City Planner Anderson explained addressing the two above points will indicate whether a text amendment should be contemplated. However, staff also wanted to raise a potential concern related to two (2) story accessory buildings being converted to an accessory dwelling unit (complete independent living facilities entirely isolated from the primary dwelling unit). If the intention is to allow a true, two (2) story building, Staff would need to work with the City Attorney to develop proper and enforceable language prohibiting converting these into accessory dwelling units. That is, unless that is something the Planning Commission believes is worth exploring as well.

Commission Business

Chairperson Bauer asked if staff was aware of the intended use for the second story of the proposed accessory structure.

City Planner Anderson stated the second story was labeled storage/shop.

Chairperson Bauer feared that by allowing second stories on accessory structures they would be converted over time to living quarters. He recalled that this was never the City's intent to allow living quarters above a garage.

City Planner Anderson believed that the proposed language was strong enough that the City's requirements would be clear.

Commissioner Nosan questioned why the City had this restriction in place.

Community Development Director Gladhill stated the Commission could review this policy. It was his understanding that the City Council was not interested in allowing an accessory structure to become an accessory dwelling.

Commissioner Nosan supported a homeowner having a two-story accessory structure.

Commission Surma also supported this, so long as the surrounding neighbors offered their support.

Commissioner VanScoy recommended the current requirements remain in place.

Commissioner Anderson asked if an existing barn could be converted to allow for a second story.

City Planner Anderson reported this would only be allowed through a conditional use permit on a lot smaller two acres inside the MUSA.

The consensus of the Planning Commission was for the City to not allow a two-story accessory structure.

6. COMPREHENSIVE PLAN UPDATE ITEMS

Community Development Director Gladhill provided the Commission with an update on the recent Comprehensive Plan workshop. He discussed the upcoming Comprehensive Plan workshops and encouraged the public to participate.

7. COMMISSION / STAFF INPUT

7.01: Receive Staff Update

The Staff Update was noted.

7.02: Zoning Bulletins

Zoning Bulletins were noted.

8. ADJOURNMENT

Motion by Commissioner Anderson, seconded by Commissioner VanScoy, to adjourn the meeting.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners Anderson, VanScoy, Brauer, Nosan, and Surma. Voting No: None. Absent: None.

The regular meeting of the Planning Commission adjourned at 10:08 p.m.

Respectfully submitted,

_____

Tim Gladhill

Development Services Manager

ATTEST:

_____

JoAnn Shaw
Planning Division Secretary

Drafted by Heidi Guenther
TimeSaver Off Site Secretarial, Inc.

Regular Planning Commission **5. 1.**

Meeting Date: 04/06/2017

Submitted For: Tim Gladhill, Community Development

By: Eric Maass, Community Development

Information

Title:

PUBLIC HEARING: Consider Request for a Variance to Accessory Building Setback Requirements (Project #117-13); Case of Steve Roeder

Purpose/Background:

The City has received an application from Steve and Christine Roeder (the "Applicant") requesting a variance to the minimum side corner yard setback on the property located at 15359 Zumi Ct NW (the "Subject Property") to allow a six (6) foot setback. This matter was originally brought to the City's attention through the Code Enforcement program as the Applicant had begun work without a permit.

Notification:

Staff attempted to notify all Property Owners within a 350 foot radius of the Subject Property of the Public Hearing via Standard US Mail. The Public Hearing was also published in the City's official newsletter, the Anoka County Union Herald.

Observations/Alternatives:

The Subject Property is approximately 0.34 acres in size and is in the R-1 Residential (MUSA) District. It is surrounded by other residential properties of similar size which are also zoned as R-1 Residential (MUSA). The Subject Property is irregular in shape, in that it is long and narrow. It is also unique in that it is a corner cul-de-sac lot, so the property has public road right-of-way on three (3) sides of the property. As a result, the Subject Property has extensive setback requirements rendering much of it unusable after the required thirty (30) foot setbacks adjacent to public right-of-way. The Subject Property is within the plat known as Highlands at River Park.

The Applicant was unaware that the construction of a smaller accessory structure required a permit, so the structure in question was constructed without one. The required setback for the accessory structure is thirty (30) feet along Zuni Ct. NW. The accessory structure was constructed within that setback. The Applicant has been advised of minimum setback requirement and that a Zoning Permit is required. Subsequently, the Applicant submitted an application for a variance to allow the structure to remain in its current location. The official request is a variance of twenty-four (24) feet from the required thirty (30) foot corner side yard setback.

The accessory structure is 10’ x 12’ (120 square feet). It is located six (6) feet from the property line and within an existing ten (10) foot drainage and utility easement. The Applicant is aware that an Encroachment Agreement would need to be executed between the property owner and the City if a variance to the setback standard were approved. The Engineering Department has reviewed this request and noted that have no objection to the encroachment into the drainage and utility easement, with an approved Easement Encroachment Agreement, should the Planning Commission approve the requested variance.

An accessory structure constructed on the Subject Property is a reasonable use of the property. The property contains no other accessory structures, and the structure does not exceed maximum allowable size requirements. In this case, the layout of the property constitutes circumstances unique to the property. This property is the only one in the area that has a very long and narrow shape. It also has significantly more street frontage than others in the area, which causes a large portion of the rear yard to fall within the required setback from Zuni Ct. NW. These circumstances were not caused by the landowner. Due to these considerations, the Applicant feels that the structure

is located in the most reasonable spot within the rear yard. If granted, the variance would not alter the essential character of the locality. The structure is located on the inside of a six (6) foot privacy fence, which means the visual impact of the structure to neighboring properties is limited.

Alternatives

Alternative 1. Approve Resolutions #17-04-081 and #17-04-082 adopting Findings of Fact #0979 and granting a variance to the required corner side yard setback, contingent upon an executed encroachment agreement for the accessory building to be located in an existing drainage and utility easement. The Applicant unknowingly constructed the accessory structure within the required thirty (30) foot corner side yard setback. The location was chosen by the Applicant because of its level grade, the fact that it was clear of trees, it was the area furthest from neighboring properties, and for aesthetic reasons. The unique circumstance and practical difficulty in this case is the unique shape of the property and that the property fronts public right-of-way on three sides. In addition, allowing the one-hundred-twenty (120) square foot accessory structure to remain in its current location does not appear that it would alter the essential character of the neighborhood and thus, Staff supports this alternative.

Alternative 2. Do not approve the variance request. While the accessory structure, as it sits today, does not meet minimum setback requirements, it would not alter the essential character of the neighborhood. Staff does not support this alternative.

Funding Source:

All costs associated with this request are the Applicant's responsibility.

Recommendation:

Staff recommends approving Resolutions #17-04-081 and #17-04-082 adopting Findings of Fact #0979 granting a variance to the corner side yard setback requirement, contingent upon an executed encroachment agreement between the property owner and the City for the accessory building to be located in the existing drainage and utility easement. (alternative #1).

Action:

Motion to adopt Resolution #17-04-081 approving Findings of Fact #0979 and Resolution #17-04-082 granting a variance to the corner side yard setback.

Attachments

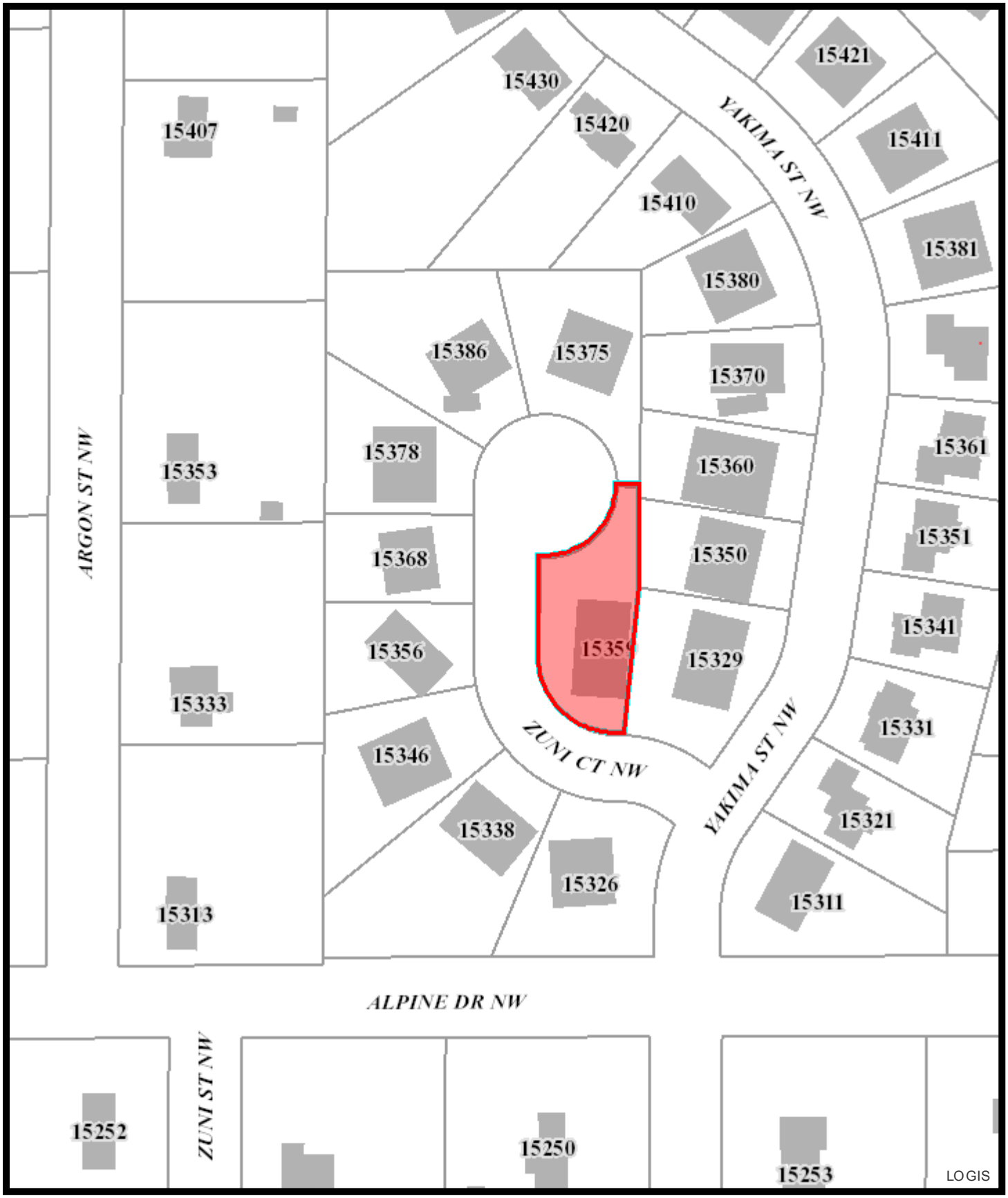
Site Location Map
Application
Applicant Site Plan
Letter of Support Received
Photos of Shed and Property
Resolution #17-04-081: DRAFT Findings of Fact
Resolution #17-04-082: Variance

Form Review

Inbox	Reviewed By	Date
Chris Anderson	Chris Anderson	03/30/2017 12:12 PM
Tim Gladhill	Tim Gladhill	03/31/2017 11:27 AM
Form Started By: Eric Maass		Started On: 03/02/2017 09:07 AM
Final Approval Date: 03/31/2017		

24-32-25-13-0093
15359 ZUNI CT NW

Site Location Map



Feet
0 30 60 120 180 240

Print Date: February 24, 2017

RECEIVED
FEB 16 2017
BY:

City of RAMSEY

17-113

Land Use Application

☐ Plat – Sketch Plan	☐ Plat – Preliminary Plat	☐ Plat – Final Plat
☐ Administrative Plat	☐ Site Plan Review	☐ Easement/ROW Vacation
☐ Conditional Use Permit	☐ Interim Use Permit	☐ Comprehensive Plan Amendment
☐ Zoning Amendment	☐ Home Occupation Permit	■ Variance
☐ Dwelling Moving Permit	☐ Environmental Permit	☐ Registered Land Survey
☐ Non-Traditional Animal License	☐ Beekeeping License	☐ Private Kennel License

Applicant Contact Information

Please note: All official communication will be routed through this contact.

Name:	Steve and Christine Roeder		
Street Address:	15359 Zuni Ct. NW		
City, State, ZIP:	Ramsey, MN 55303		
Home Phone:	612-369-0174	Work Phone:	651-643-2227
Email:	steve@roeder1.com	Fax Number:	
Name of Business (if applicable):			
Business Address (if applicable)			
Business City, State, ZIP			
Business Phone:		Business Fax:	

Subject Property Information

(Location of Application)

Address	15359 Zuni Ct. NW, Ramsey MN 55303
PIN	
Legal Description	
Zoning District	

Contact the Planning Division at 763-433-9824 or planning@cityoframsey.com to request a Zoning Verification

Property Owner Information

(If different than Applicant)

Name:	Steve and Christine Roeder		
Street Address:	15359 Zuni Ct. NW		
City, State, ZIP:	Ramsey, MN 55303		
Home Phone:	612-369-0174	Work Phone:	651-643-2227
Email:	steve@roeder1.com	Fax Number:	

Please provide a detailed description of your request and attached a copy of a scaled site plan

I am requesting a variance for a 10' x 12' shed that is residing on the NW corner of my back lot, due the nature of my very unique lot shape along with varying elevation discrepancies in my back yard the shed was built on the only level area that is available but is not within the 30' setback from my side property line. With the shape of my lot and all other zoning restrictions, the only other place for a shed would be in the very middle of my back yard, which would not be aesthetically pleasing to either myself or my neighbors that look down on my back yard, as well as requiring excavation and tree removal. The shed was constructed at a professional level and is pleasing to the eye from all directions. I have a 6' professionally installed vinyl fence that is obstructing up to 80% of the view of the shed from the side street and believe this to be the best possible location considering my lot irregularities. Thank you for you consideration.

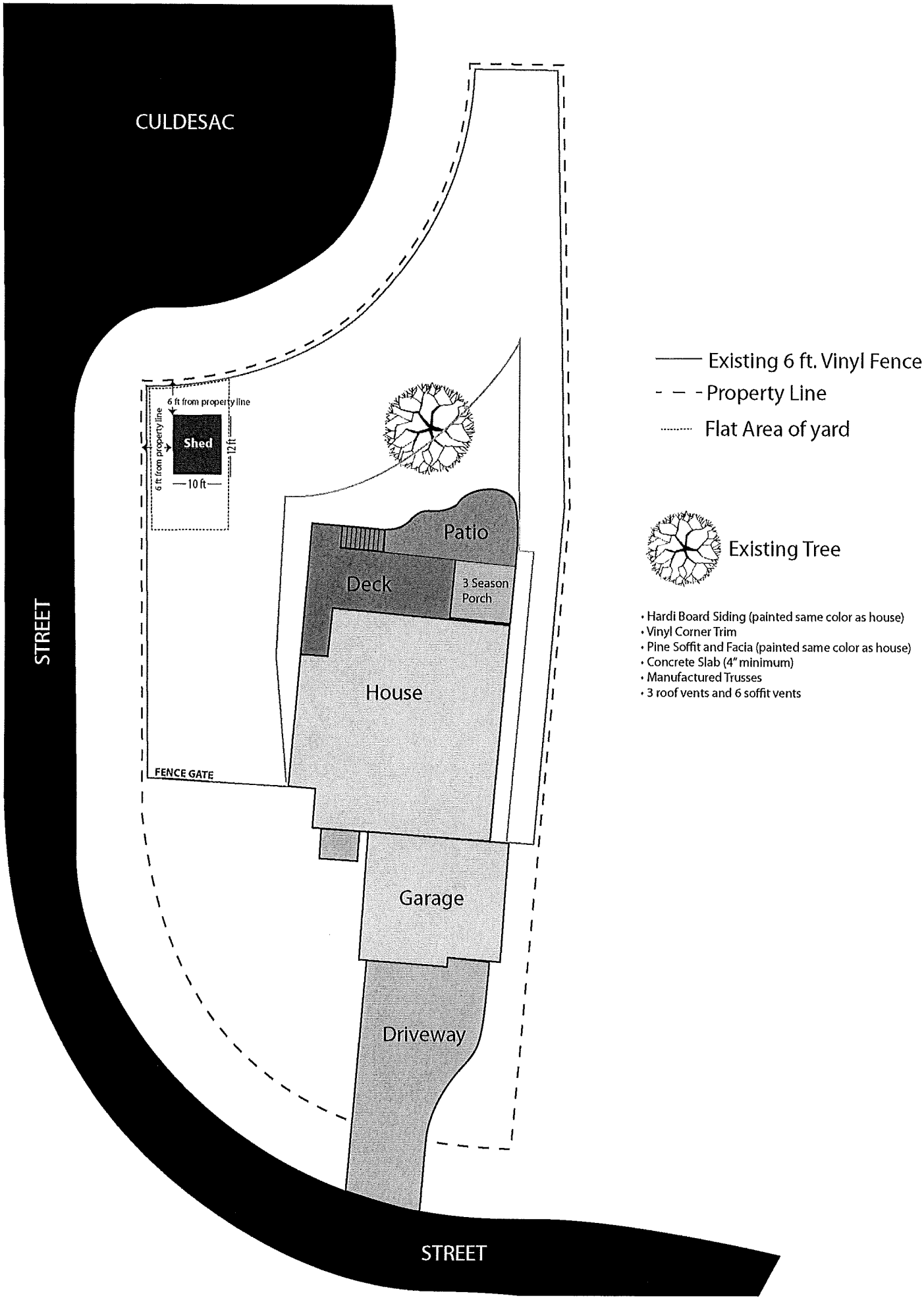
A "Land Use Sign" will be placed on the Subject Property to allow Ramsey Residents the opportunity to obtain information about your request.

Applicant Signature	Steve Roeder	Co-Applicant Signature	Christine J. Roeder
Printed Name	Steve Roeder	Printed Name	Christine J. Roeder
Title		Title	
Date	2-15-17	Date	2-15-17

I understand that the application fee is non-refundable. All costs associated with the processing of this application are the responsibility of the applicant whether this application is approved or denied. Any excess of escrow account deposits over expenditures will be refunded at the time of account closure. I also understand that as the applicant, it is my responsibility to obtain all other permits or licenses required by any applicable regulatory agencies for this Land Use Application.

Property Owner Signature	Steve Roeder	Property Owner Signature	Christine J. Roeder
Printed Name	Steve Roeder	Printed Name	Christine J. Roeder
Title		Title	
Date	2-15-17	Date	2-15-17

I hereby certify that I am the fee title owner/contract for deed vendee of record for the above-mentioned property. Failure to prove ownership may void any agreements entered into the City and I will be held liable for any and all costs incurred by the City.


CULDESAC
STREET
6 ft from property line
6 ft from property line
Shed
12 ft
10 ft
Patio
Deck
3 Season Porch
House
FENCE GATE
Garage
Driveway
STREET
Existing 6 ft. Vinyl Fence
Property Line
Flat Area of yard
Existing Tree
• Hardi Board Siding (painted same color as house)
• Vinyl Corner Trim
• Pine Soffit and Facia (painted same color as house)
• Concrete Slab (4" minimum)
• Manufactured Trusses
• 3 roof vents and 6 soffit vents

March 28, 2017

RECEIVED
MAR 30 2017
BY:

Tim Gladhill
Community Development Director

This letter is concerning the hearing on property 15359 Zuni Court. (See attached)

We live at 15378 Zuni Ct NW, Ramsey MN 55303.

The shed located in the corner of his property is well built and looks good. It adds cosmetic apeal to the neighborhood.

We request that you allow the owners to leave the shed where it is located.

Thank you,

LeeAnn Radtke
Thomas M Radtke

Commissioner _____ introduced the following resolution and moved for its adoption:

RESOLUTION #17-04-081

RESOLUTION ADOPTING FINDINGS OF FACT #0979 RELATING TO A REQUEST FROM STEVE AND CHRISTINE ROEDER FOR A VARIANCE TO THE SIDE CORNER YARD SETBACK REQUIREMENT.

WHEREAS, Steve and Christine Roeder, hereinafter referred to as "Applicant," has properly applied for a variance to the side corner yard setback requirement established in Section 117-111 (R-1 Residential District) of the Ramsey City Code on the property generally known as 15359 Zuni Ct. NW and legally described as follows:

Lot 9, Block 1, Highlands at River Park 4th Addition, Anoka County, Minnesota

(the "Subject Property").

NOW THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF RAMSEY, ANOKA COUNTY, STATE OF MINNESOTA, as follows:

1. That the Applicant submitted an application for a variance on February 16, 2017.

2. That the Applicant appeared before the Planning Commission for a public hearing pursuant to Section 117-53 of the Ramsey City Code on April 6, 2017 and that said public hearing was properly advertised, and that the minutes of said public hearing are hereby incorporated as a part of these findings by reference.

3. That the Subject Property is zoned R-1 Residential (MUSA) and is approximately 14,810 square feet (0.34 acres) in size.

4. That the Subject Property is surrounded by properties also zoned R-1 Residential (MUSA).

5. That the Subject Property is guided as Low Density Residential on the Future Land Use Map as are the surrounding properties.

6. That the Subject Property is within the Highlands at River Park, 4th Addition subdivision, which plat was recorded in 2004.

7. That Section 117-111 (d) of the Ramsey City Code establishes a corner side yard setback of thirty (30) feet from the right-of-way of public roads for accessory structures on properties within the R-1 Residential (MUSA) District.

8. That the Applicant is requesting a six (6) foot setback from due to the irregular shape and layout of the Subject Property.

9. That the standard side yard setback for accessory buildings in the R-1 (MUSA) district is six (6) feet.

10. That the accessory structure has already been constructed within the required corner side yard setback.

11. That the property has public right-of-way on three sides of the property severely inhibiting the amount of buildable area on the lot.

12. That there is a six (6) foot privacy fence in place that screens the majority of the accessory structure from view.

13. That the plight is/is not due to circumstances unique to the Subject Property.

14. That the plight was/was not created by the Applicant.

15. That, if granted, the Variance will/will not alter the locality's essential character.

16. That, if granted, the Variance will/will not impair an adequate supply of light and air to adjacent property.

17. That, if granted, the variance will/will not have the effect of allowing a use that is prohibited in the applicable zoning district.

18. That, if granted, the variance will/will not increase the congestion on the public street.

19. That, if granted, the variance will/will not adversely impact the degree of public health, safety and general welfare provided for in the Ramsey City Code.

20. That, if granted, the Variance will/will not permit standards that are lower than those required by state law.

21. That, if granted, the variance will/will not diminish established property values within the neighborhood.

22. That, if granted, the variance requested is/is not the minimum variance necessary to accomplish the intended purpose of the Applicants.

23. That, if granted, the variance will/will not grant the Applicants any special privilege that is denied to the owners of other land in the same district.

The motion for the adoption of the foregoing resolution was duly seconded by Commissioner _____, and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

and the following abstained:

and the following were absent:

whereupon said resolution was declared duly adopted by the Ramsey Planning Commission this the 6th day of April, 2017.

_____
Chairperson

ATTEST:

_____
City Clerk

Commissioner _____ introduced the following resolution and moved for its adoption:

RESOLUTION #17-04-082

A RESOLUTION APPROVING THE ISSUANCE OF A VARIANCE TO THE SIDE CORNER YARD SETBACK ON THE PROPERTY LOCATED AT 15359 ZUNI CT NW, AND DECLARING TERMS OF SAME.

WHEREAS, Steve and Christine Roeder (Permittee), have properly applied for a variance (the "Variance") from the side corner yard setback in the R-1 Residential (MUSA) District on the property generally known as 15359 Zuni Ct and legally described as follows:

Lot 9, Block 1, Highlands at River Park 4th Addition, Anoka County, Minnesota

(the "Subject Property"); and

WHEREAS, the Planning Commission met on April 6, 2017, conducted the public hearing and adopted findings of fact relating to the request for a variance from the corner side yard setback requirements on the Subject Property.

NOW THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF RAMSEY, ANOKA COUNTY, STATE OF MINNESOTA, as follows

1. Based on Findings of Fact #0979, a **Variance** to allow an accessory structure to remain in its current location within the required corner side yard setback area on the **Subject Property** is hereby granted contingent upon an approved drainage and utility easement encroachment agreement being executed between the Applicant and the City.

2. That the accessory structure on the **Subject Property** shall maintain at a corner side yard setback of six (6) feet from the public road right-of-way.

3. That the **Permittee** shall be responsible for obtaining a Zoning Permit for the existing, detached accessory structure.

4. The **Permittee** shall be responsible for all City costs incurred in administering and enforcing this variance.

The motion for the adoption of the foregoing resolution was duly seconded by Commissioner _____, and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

and the following abstained:

and the following were absent:

Whereupon said resolution was declared duly adopted by the Ramsey Planning Commission this the 6th day of April, 2017.

Steve and Christine Roeder hereby acknowledge receipt of this variance and that they have reviewed the terms of the variance and have agreed that they will comply with the terms of the variance.

Steve Roeder

Christine Roeder

STATE OF MINNESOTA)
) ss.
COUNTY OF ANOKA)

On this _____ day of _____, ____, before me, a Notary Public, personally appeared Steve and Christine Roeder, husband and wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

Notary Public

CITY OF RAMSEY:

By: _____ By: _____
Planning Commission Chairperson City Clerk

STATE OF MINNESOTA)
) ss.
COUNTY OF ANOKA)

On this ____ day of _____, _____, before me, a Notary Public, personally appeared Randy Bauer and JoAnn M. Thieling, to me personally known, who, being each by me duly sworn did say that they are respectively the Planning Commission Chairperson and City Clerk of the City of Ramsey, the Municipal Corporation named in the foregoing instrument, and seal affixed to said instrument is the corporate seal of said Municipal Corporation, and the said instrument was signed and sealed on behalf of said Municipal Corporation by authority of its City Council and said Randy Bauer and JoAnn M. Thieling acknowledge said instrument to be the free act and deed of said Municipal Corporation.

_____
Notary Public

This document drafted by:
City of Ramsey
7550 Sunwood Dr NW
Ramsey, MN 55303

This document reviewed by:
Ratwik, Roszak & Maloney
730 Second Ave. S., Suite 300
Minneapolis, MN 55402

Regular Planning Commission **5. 2.**

Meeting Date: 04/06/2017

By: Chris Anderson, Community Development

Information

Title:

PUBLIC HEARING: Consider Request for a Variance and Preliminary Plat Approval of Homestead Road Subdivision Located at 7131 166th Ave NW (Project #16-32); Case of CTW Group, Inc.

Purpose/Background:

The City has received an application from CTW Group, Inc. (the "Applicant") seeking a variance to lot depth standards and preliminary plat approval for a proposed three (3) lot subdivision on the property located at 7131 166th Ave NW (the "Subject Property"). The Planning Commission reviewed the Sketch Plan at their November 3, 2016 meeting. There is an existing dwelling on the proposed Lot 2 that would remain with two (2) new, buildable lots being created, one on each side of the existing dwelling.

Notification:

City Staff attempted to notify all property owners within 700 feet of the Subject Property of the request via U.S. mail and published a notice of public hearing in the Anoka Union Herald, the City's official newspaper.

Observations/Alternatives:

The Subject Property is zoned R-1 Residential (MUSA) and is approximately eight (8) acres in size. The Subject Property is adjacent to 1/4 acre residential lots to the east and north (Brookfield development), a four (4) acre parcel to the west that is all wetland and owned by the City, and larger lot residential parcels south of 166th Ave also within the R-1 Residential (MUSA) district. A significant portion of the Subject Property consists of wetlands and a large portion is within the Floodway District as well.

All three (3) lots meet or exceed the lot size and lot width standards for the R-1 Residential (MUSA) District. City Code requires a minimum lot depth of 100 feet for a width of sixty (60) feet (e.g. 6,000 square feet of buildable area) that is not encumbered by wetland, wetland setback area, floodway, or steep slopes. Lots 1 and 3 are slightly deficient regarding this standard, with Lot 1 being deficient 268 square feet and Lot 3 being deficient seventy-eight (78) square feet. As part of the Sketch Plan review, the deficiency was noted on Lot 1, with the understanding that a variance would be necessary. The deficiency on Lot 3 comes as a result of the Applicant shifting the proposed home location further south based on public comments provided as part of the Sketch Plan review.

The proposed subdivision does not include the construction of any new roads or sidewalks. Each of the three (3) lots will be accessed from 166th Ave. There is existing sidewalk along the north side of this road that was installed as part of the reconstruction of 166th Ave NW. The sidewalk terminates just east of the western boundary of the Subject Property due to the presence of wetland.

The Applicant is proposing two (2) rain gardens to address the Lower Rum River Watershed Management Organization's infiltration requirements. Staff is not opposed to this approach but additional details are required on each of the rain gardens as outlined in the Staff Review Letter.

The Environmental Policy Board (EPB) reviewed the Tree Preservation Plan and the request for a variance to the lot depth standard at their March meeting. The EPB recommended approval of the Tree Preservation Plan contingent upon compliance with the Staff Review Letter. The EPB also recommended approval of the variance request, as they felt that there would still be viable buildable area for the future homeowners to install features such as a deck and/or reasonably sized accessory building without encroaching into the required wetland, wetland

setback of floodway.

The proposed three (3) lot single family residential subdivision is a reasonable use of the property and appears to be generally compatible with the surrounding neighborhood. Each of the three lots would still be two (2) plus acres in size, albeit much of that consisting of wetland area, which is larger than the abutting parcels to the north and east and the parcel to the west, owned by the City, is essentially all wetland too. The Subject Property is rather unique with respect to the overall abundance of area encumbered by wetland and floodplain and the fact that five (5) sets of utility stubs were provided as part of a previous road reconstruction project (and only three [3] are proposed to be used).

Alternatives:

Alternative 1: Adopt Resolutions #17-04-077, #17-04-078 granting a variance to lot depth for Lots 1 & 3, Block 1 and recommend City Council approve the Preliminary Plat for Homestead Road Addition. Even though the City, as part of the reconstruction of 167th/166th Ave, installed five (5) sets of utility stubs to the Subject Property, the Applicant has only proposed three (3) lots due to current standards. The location of the existing dwelling on Lot 2 presents challenges to reconfiguring the boundaries to further reduce or eliminate the lot depth deficiencies. However, it appears that there would still be viable buildable area on each of the lots to accommodate a future deck and/or reasonably sized accessory building. This is a challenging site to work with based on the amount of wetland and floodplain and the proposed subdivision seems a reasonable use of the property. Staff supports this alternative.

Alternative 2: Adopt Findings of Fact unfavorable to the Applicant, deny the requested variance to lot depth, and recommend that the City Council not approve the Preliminary Plat. If the variance to lot depth is not granted, two (2) of the three (3) lots would not meet minimum standards and would be considered unlawful. Staff is of the opinion that the Applicant has been reasonable with the proposed subdivision rather than attempting to fully utilize all five (5) sets of utility stubs. The deficiency on Lot 3 is due to the Applicant attempting to address a concern raised from an adjacent property owner by repositioning the proposed home. While the deficiency on Lot 1 is slightly greater, there still appears to be room to accommodate a deck (as shown on the Preliminary Plat) and some building area where a reasonably sized accessory building could be erected. Staff does not support this alternative.

Funding Source:

All costs associated with processing the Application are the responsibility of the Applicant. There are no City funds proposed to be utilized for the construction of this project.

Recommendation:

City Staff recommends granting the variance to lot depth standards for Lots 1 & 3, Block 1 and approving the Preliminary Plat for Homestead Road Addition.

Action:

Motion to adopt Resolutions #17-04-077 and #17-04-078 approving favorable Findings of Fact and granting a Variance to lot depth for Lots 1 & 3, Block 1 and motion to recommend City Council approve the Preliminary Plat contingent upon compliance with the Staff Review Letter.

Attachments

Site Location Map
Combined Plan Set
Staff Review Letter
Planning Commission Meeting Minutes Dated November 3, 2016
DRAFT EPB Meeting Minutes Dated March 20, 2017
Resolution #17-04-077: DRAFT Findings of Fact
Resolution #17-04-078: DRAFT Variance

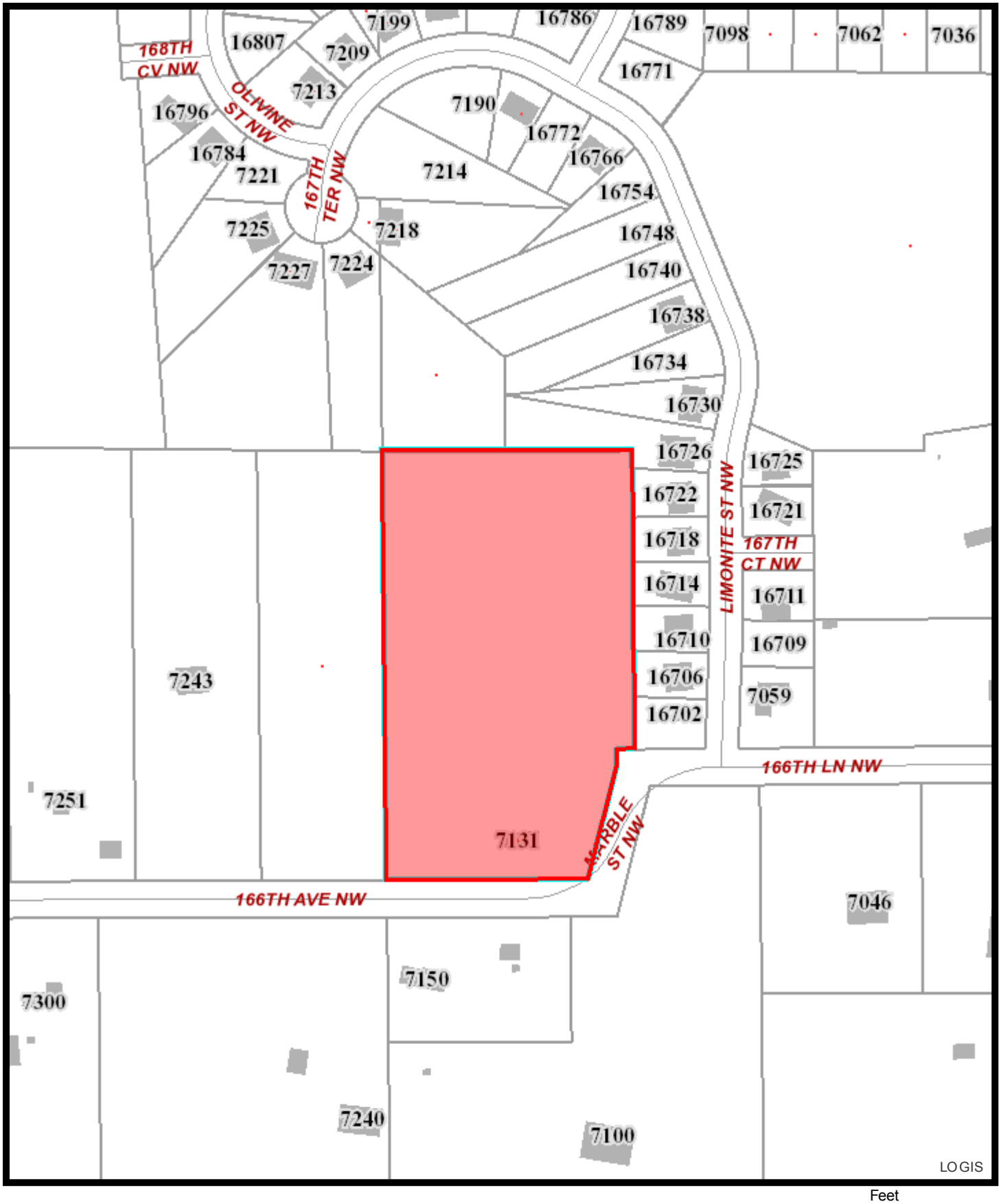
Resolution #17-04-079: Preliminary Plat

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	03/31/2017 02:16 PM
Chris Anderson (Originator)	Chris Anderson	03/31/2017 02:53 PM
Tim Gladhill	Tim Gladhill	03/31/2017 02:59 PM
Form Started By: Chris Anderson		Started On: 03/29/2017 11:17 AM
Final Approval Date: 03/31/2017		

10-32-25-33-0002
7131 166TH AVE NW

Site Location Map

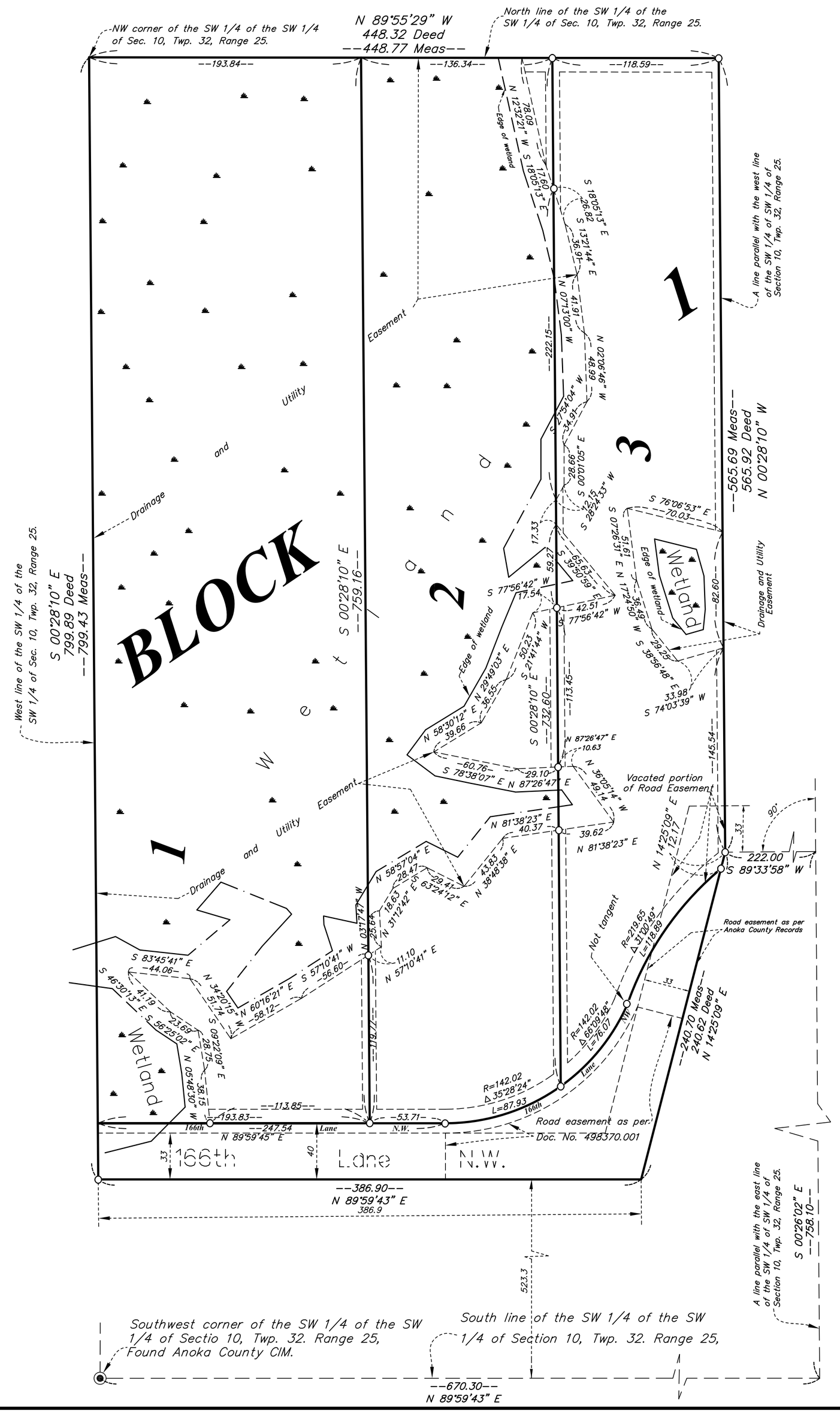


Feet
0 60 120 240 360 480

Print Date: October 6, 2016

HOMESTEAD ROAD SUBDIVISION

CITY OF RAMSEY
COUNTY OF ANOKA
SEC. 10, T. 32, R. 25

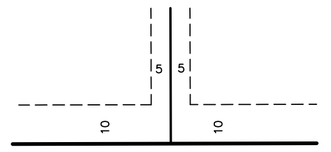


GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

DRAINAGE AND UTILITY EASEMENTS SHOWN THUS:



BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES, AND 10 FEET IN WIDTH AND ADJOINING STREET AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THE PLAT.

LEGEND

- ● DENOTES IRON PIPE MONUMENT FOUND
- ○ DENOTES SET 1/2 INCH IRON PIPE WITH CAP MARKED R.L.S. 42379.
- ◉ DENOTES ANOKA COUNTY MONUMENT.
- DENOTES WETLANDS SHOWN THAT WERE DELINEATED BY SVOBODA ECOLOGICAL RESOURCES, DECEMBER 2015.

BEARING NOTE

FOR THE PURPOSE OF THIS PLAT, THE SOUTH LINE OF THE SW 1/4 OF THE SW 1/4 OF SECTION 10, TWP. 32, RGE. 25, IS ASSUMED TO HAVE A BEARING OF NORTH 89 DEGREES 59 MINUTES 43 SECONDS EAST.

KNOW ALL PERSONS BY THESE PRESENTS: That CTW Group, Incorporated, a Minnesota corporation, owner of the following described property:

That part of the Southwest Quarter of the Southwest Quarter, Section 10, Township 32, Range 25, Anoka County, Minnesota described as follows:
Commencing at a point in the south line of said Southwest Quarter of the Southwest Quarter distant 670.30 feet east of the Southwest corner of said Southwest Quarter of the Southwest Quarter; thence North, parallel with the east line of said Southwest Quarter of the Southwest Quarter a distance of 758.10 feet; thence at a right angle West a distance of 222.00 feet, to the actual point of beginning of the tract of land to be described; thence northerly, parallel with the west line of said Southwest Quarter of the Southwest Quarter, a distance of 565.92 feet to the north line of said Southwest Quarter of the Southwest Quarter; thence westerly along the north line of said Southwest Quarter of the Southwest Quarter a distance of 448.32 feet to the northwest corner of said Southwest Quarter of the Southwest Quarter; thence southerly along the west line of said Southwest Quarter of the Southwest Quarter a distance of 799.89 feet to the intersection with the north line of the south 523.30 feet of said Southwest Quarter of the Southwest Quarter; thence East, along said north line of the south 523.30 feet, a distance of 386.90 feet to the northeast corner of the west 386.90 feet of the said south 523.30 feet of the Southwest Quarter of the Southwest Quarter; thence northeasterly 240.62 feet, to the actual point of beginning.

Have caused the same to be surveyed and platted as HOMESTEAD ROAD SUBDIVISION and do hereby dedicate to the public for public use the drainage and utility easements as shown on this plat.

In witness whereof said CTW Group, Incorporated, a Minnesota corporation, has caused these presents to be signed by its proper officers this _____ day of _____, 20____.

Signed: CTW Group, Incorporated

_____
Andrey Sokurec, President

_____
Alexander Delendik, Vice President

STATE OF MINNESOTA
COUNTY OF _____

This instrument was acknowledged before me on_____, 20___ by Andrey Sokurec, President, and Alexander Delendik, Vice President, of CTW Group Inc., a Minnesota Corporation, on behalf of the corporation.

_____

_____
Notary Public, _____ County, Minnesota

My Commission Expires _____

I Thomas M. Bloom do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this _____day of _____20____.

_____
Thomas M. Bloom, Licensed Land Surveyor
Minnesota License Number 42379

STATE OF MINNESOTA
COUNTY OF _____

This instrument was acknowledged before me on_____, 20___ by Thomas M. Bloom.

_____

_____
Notary Public, _____ County, Minnesota

My Commission Expires _____

CITY COUNCIL, CITY OF RAMSEY, MINNESOTA

This plat of HOMESTEAD ROAD SUBDIVISION was approved and accepted by the City Council of the City of Ramsey, Minnesota at a regular meeting thereof held this _____ day of _____, 20____, and said plat is in compliance with the provisions of Minnesota Statutes, Section 505.03, Subd. 2.

CITY COUNCIL, CITY OF RAMSEY, MINNESOTA

By _____ Mayor By_____City Clerk

ANOKA COUNTY SURVEYOR

I hereby certify that in accordance with Minnesota Statutes, Section 505.021, Subd. 11, this plat has been reviewed and approved this _____ day of _____, 20____.

_____
Larry D. Hoium, Anoka County Surveyor

COUNTY AUDITOR/TREASURER
Pursuant to Minnesota Statutes, Section 505.021, Subd. 9, taxes payable in the year 20____ on the land hereinbefore described have been paid. Also, pursuant to Minnesota Statutes, Section 272.12, there are no delinquent taxes and transfer entered this _____ day of _____, 20___.

_____
Property Tax Administrator

By_____, Deputy

COUNTY RECORDER/REGISTRAR OF TITLES
County of Anoka, State of Minnesota

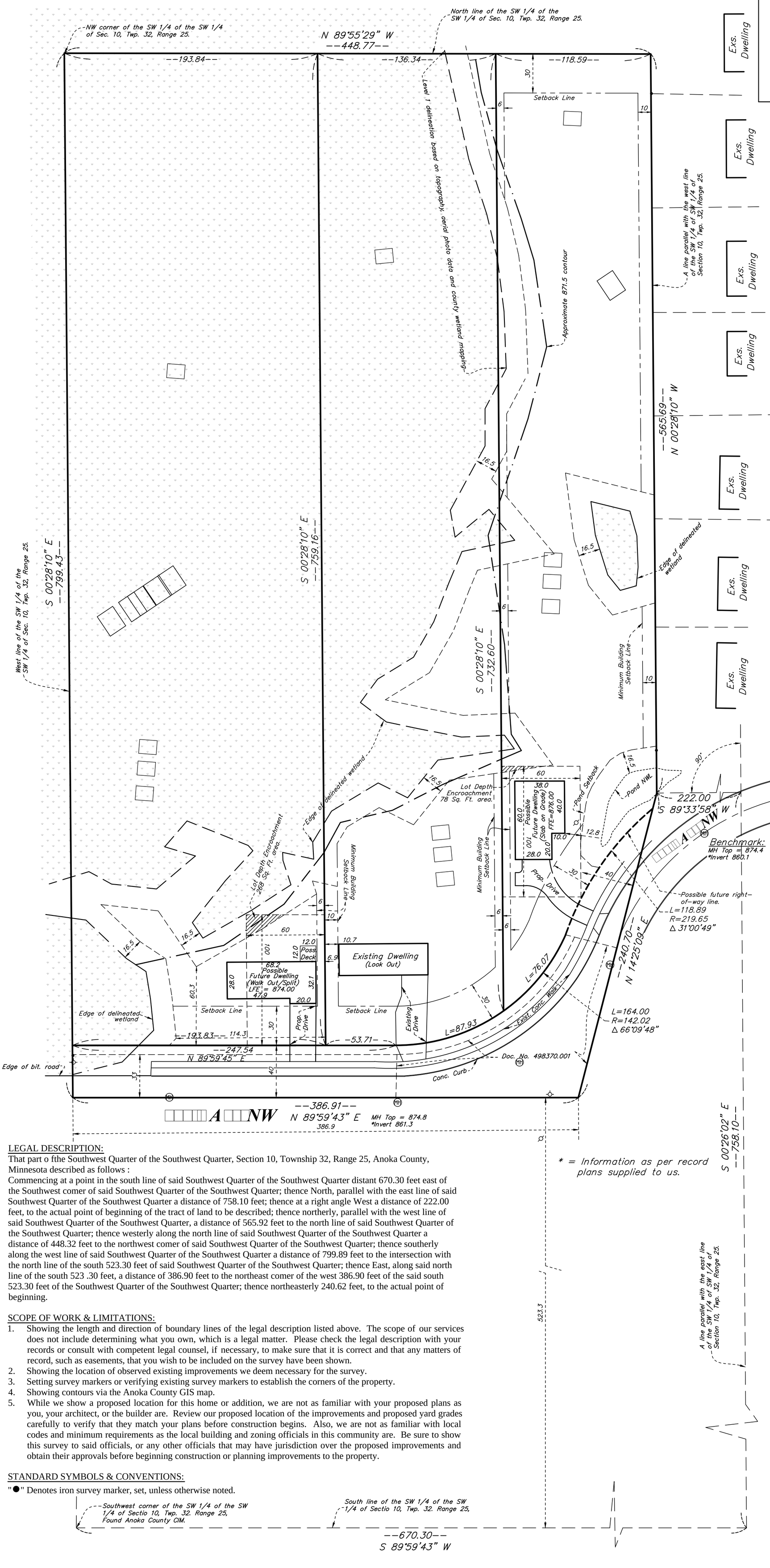
I hereby certify that this plat of HOMESTEAD ROAD SUBDIVISION was filed in the office of the County Recorder/Registrar of Titles for public record on this _____ day of _____, 20___, at _____o'clock ____.M. and was duly recorded in Book _____ Page _____ as Document Number _____.

_____
County Recorder/Registrar of Titles

By _____, Deputy

ADVANCE SURVEYING & ENGINEERING CO.

Preliminary Plat of Homestead Road Subdivision



LEGEND

	= CATCH BASIN
	= FIRE HYDRANT
	= POWER POLE
MH	= MANHOLE
	= TELEPHONE PED.
	= ELEC. TRANSFORMER
W	= WELL
G	= GATE VALVE
	= LIGHT POLE
—X—X—	= FENCE LINE
—SS—	= SANITARY SEWER LINE
—W—	= WATER LINE
—G—	= GAS LINE
—ST—	= STORM DRAIN LINE
—E—	= OVERHEAD UTILITY LINE

* = Information as per record plans supplied to us.

LEGAL DESCRIPTION:

That part o fthe Southwest Quarter of the Southwest Quarter, Section 10, Township 32, Range 25, Anoka County, Minnesota described as follows :

Commencing at a point in the south line of said Southwest Quarter of the Southwest Quarter distant 670.30 feet east of the Southwest comer of said Southwest Quarter of the Southwest Quarter; thence North, parallel with the east line of said Southwest Quarter of the Southwest Quarter a distance of 758.10 feet; thence at a right angle West a distance of 222.00 feet, to the actual point of beginning of the tract of land to be described; thence northerly, parallel with the west line of said Southwest Quarter of the Southwest Quarter, a distance of 565.92 feet to the north line of said Southwest Quarter of the Southwest Quarter; thence westerly along the north line of said Southwest Quarter of the Southwest Quarter a distance of 448.32 feet to the northwest comer of said Southwest Quarter of the Southwest Quarter; thence southerly along the west line of said Southwest Quarter of the Southwest Quarter a distance of 799.89 feet to the intersection with the north line of the south 523.30 feet of said Southwest Quarter of the Southwest Quarter; thence East, along said north line of the south 523 .30 feet, a distance of 386.90 feet to the northeast comer of the west 386.90 feet of the said south 523.30 feet of the Southwest Quarter of the Southwest Quarter; thence northeasterly 240.62 feet, to the actual point of beginning.

SCOPE OF WORK & LIMITATIONS:

1. Showing the length and direction of boundary lines of the legal description listed above. The scope of our services does not include determining what you own, which is a legal matter. Please check the legal description with your records or consult with competent legal counsel, if necessary, to make sure that it is correct and that any matters of record, such as easements, that you wish to be included on the survey have been shown.
2. Showing the location of observed existing improvements we deem necessary for the survey.
3. Setting survey markers or verifying existing survey markers to establish the corners of the property.
4. Showing contours via the Anoka County GIS map.
5. While we show a proposed location for this home or addition, we are not as familiar with your proposed plans as you, your architect, or the builder are. Review our proposed location of the improvements and proposed yard grades carefully to verify that they match your plans before construction begins. Also, we are not as familiar with local codes and minimum requirements as the local building and zoning officials in this community are. Be sure to show this survey to said officials, or any other officials that may have jurisdiction over the proposed improvements and obtain their approvals before beginning construction or planning improvements to the property.

STANDARD SYMBOLS & CONVENTIONS:

"●" Denotes iron survey marker, set, unless otherwise noted.

Advance
Surveying & Engineering, Co.

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

DRAWING ORIENTATION & SCALE

N

0 40 80

JOB NAME / JOB ADDRESS

HOMESTEAD ROAD

7131 166TH AVE. NW
RAMSEY

OWNER NAME / ADDRESS

CTW GROUP INC.

5402 PARKDALE DR.
SUITE 101
MINNEAPOLIS, MN
55416

PRELIMINARY PLAT NOTES:

1. SQUARE FOOTAGE CALCULATION:
   - ENTIRE SITE – 351,393 SQ. FT. (8.1 ACRES)
   - LOT 1 – 147,143 SQ. FT. (3.4 ACRES)
   - LOT 2 – 102,790 SQ. FT. (2.4 ACRES)
   - LOT 3 – 77,394 SQ. FT. (1.8 ACRES)
   - DEDICATED RIGHT OF WAY – 24,037 SQ. FT. (0.6 ACRES)
2. THE ZONING INFORMATION FOR THIS PROJECT IS R–1 MUSA.

DWELLING INFORMATION

LOT #	LOT 1	LOT 2	LOT 3
HOUSE TYPE	W/O SPLIT ENTRY	L/O (EXISTING)	SLAB ON GRADE
GARAGE ELEV.	877.0	(EXISTING)	876.0
MIN. FLOOR ELEV.	874.0	(EXISTING)	876.0

NET DENSITY INFORMATION

TOTAL NUMBER OF LOTS = 3

GROSS AREA = 133,327 SF

NET DENSITY =
133,327 / 3 = 44,442 SF OR 1.02 ACRES

DATE	REVISION DESCRIPTION
10/18/16	UPDATE PER CITY COMMENTS
11/18/16	CHANGE POSS. FUTURE HOUSE ON LOT 3
03/02/17	UPDATE PER CITY COMMENTS

DATE SURVEYED:

DATE DRAFTED:

SHEET TITLE

PRELIMINARY PLAT

DRAWING NUMBER

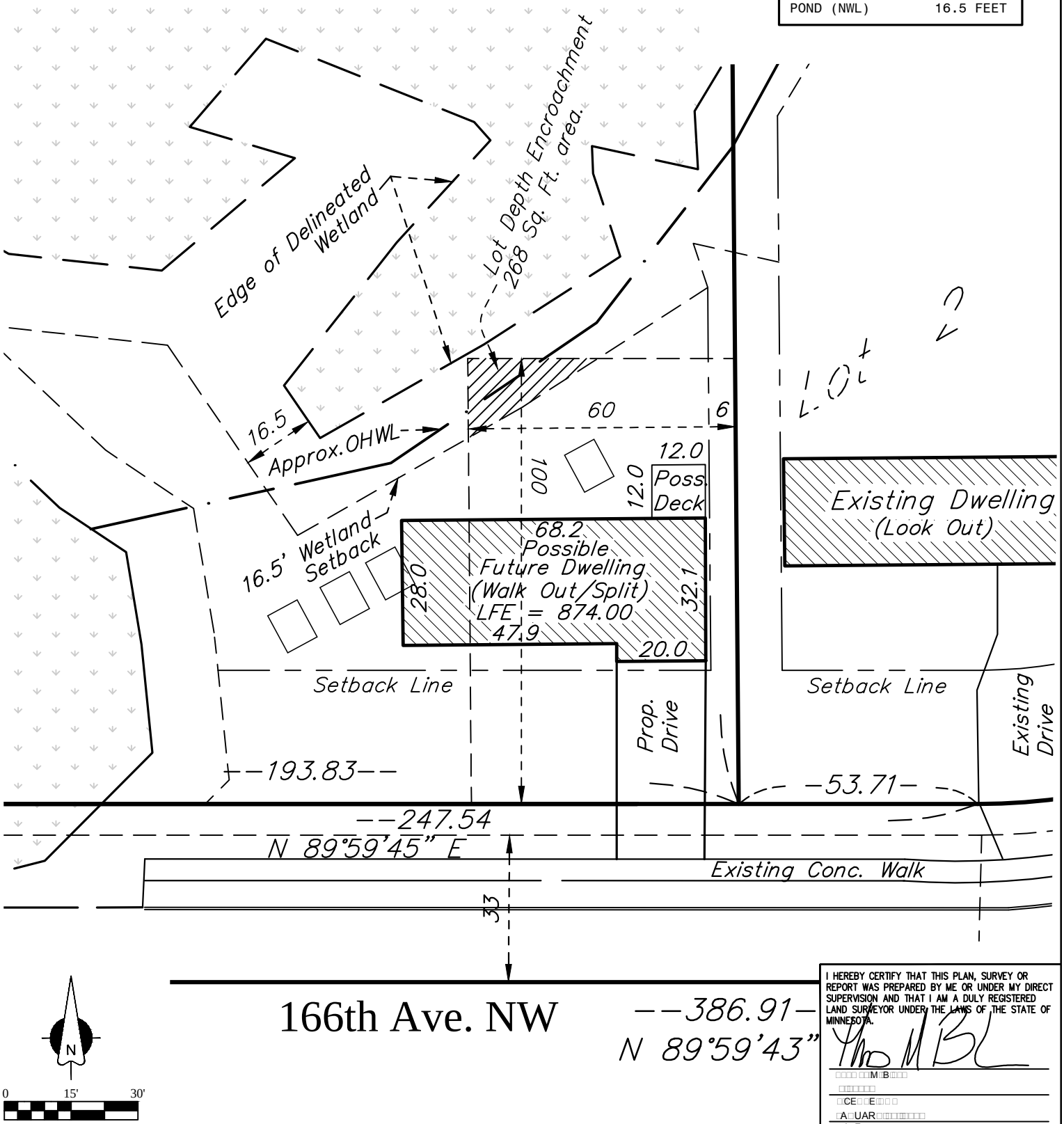
160806 TB
REV 01-03-17

SHEET NUMBER

LOT DEPTH VARIANCE EXHIBIT

LOT 1, BLOCK 1
HOMESTEAD ROAD SUBDIVISION, RAMSEY, MN

MINIMUM SETBACKS	
FRONT	30 FEET
SIDE (HOUSE)	10 FEET
SIDE (GARAGE)	6 FEET
REAR	30 FEET
WETLAND	16.5 FEET
POND (NWL)	16.5 FEET



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DATE	REVISION DESCRIPTION

CTW GROUP INC.	7131 166TH AVE. NW
# 160806 JR	JANUARY 13, 2017
AUGUST 24, 2016	ADVANCED SURVEYING & ENGINEERING, CO.

Advance
Surveying & Engineering, Co.

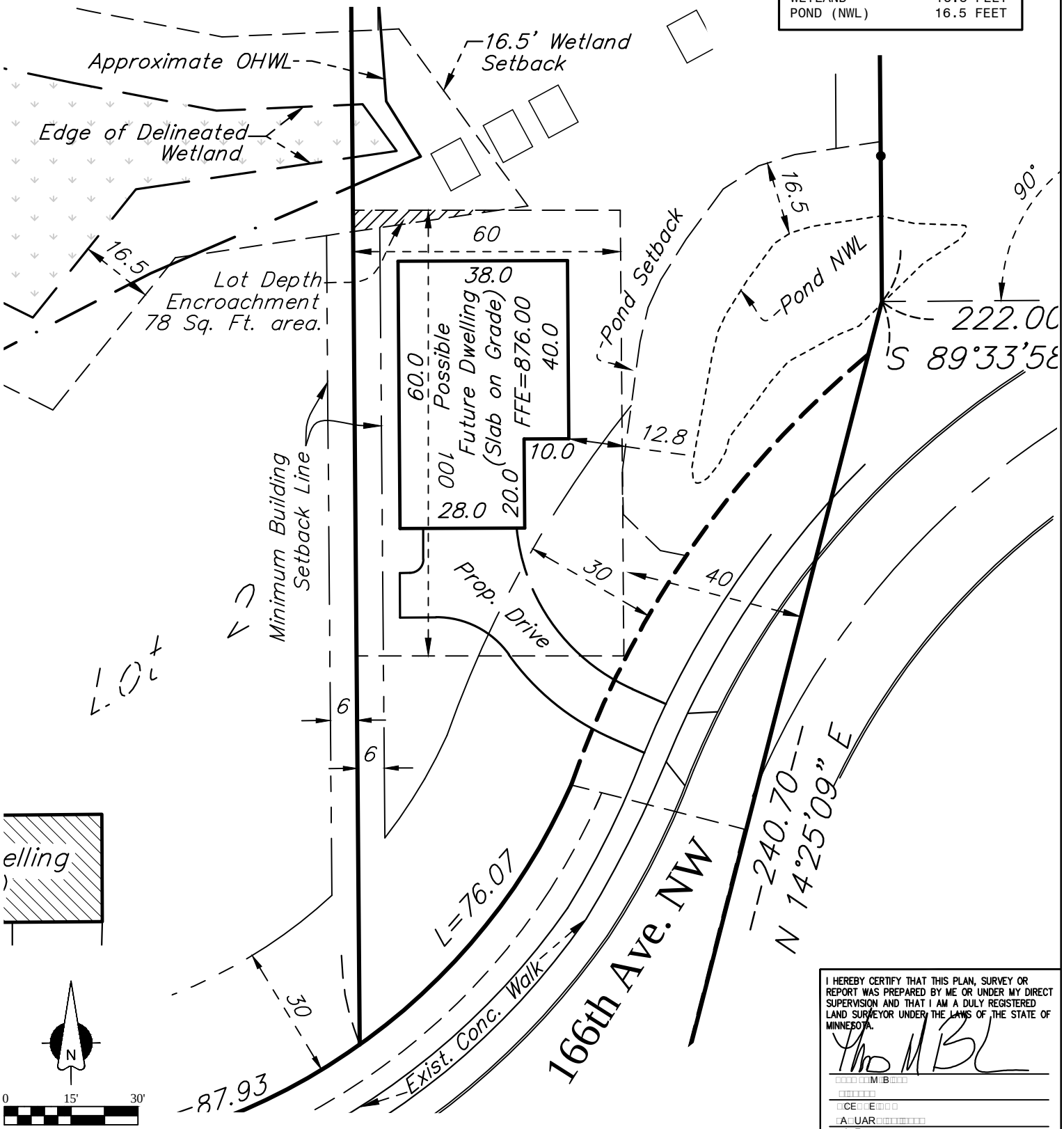
E

LOT DEPTH VARIANCE EXHIBIT

LOT 3, BLOCK 1

HOMESTEAD ROAD SUBDIVISION, RAMSEY, MN

MINIMUM SETBACKS	
FRONT	30 FEET
SIDE (HOUSE)	10 FEET
SIDE (GARAGE)	6 FEET
REAR	30 FEET
WETLAND	16.5 FEET
POND (NWL)	16.5 FEET



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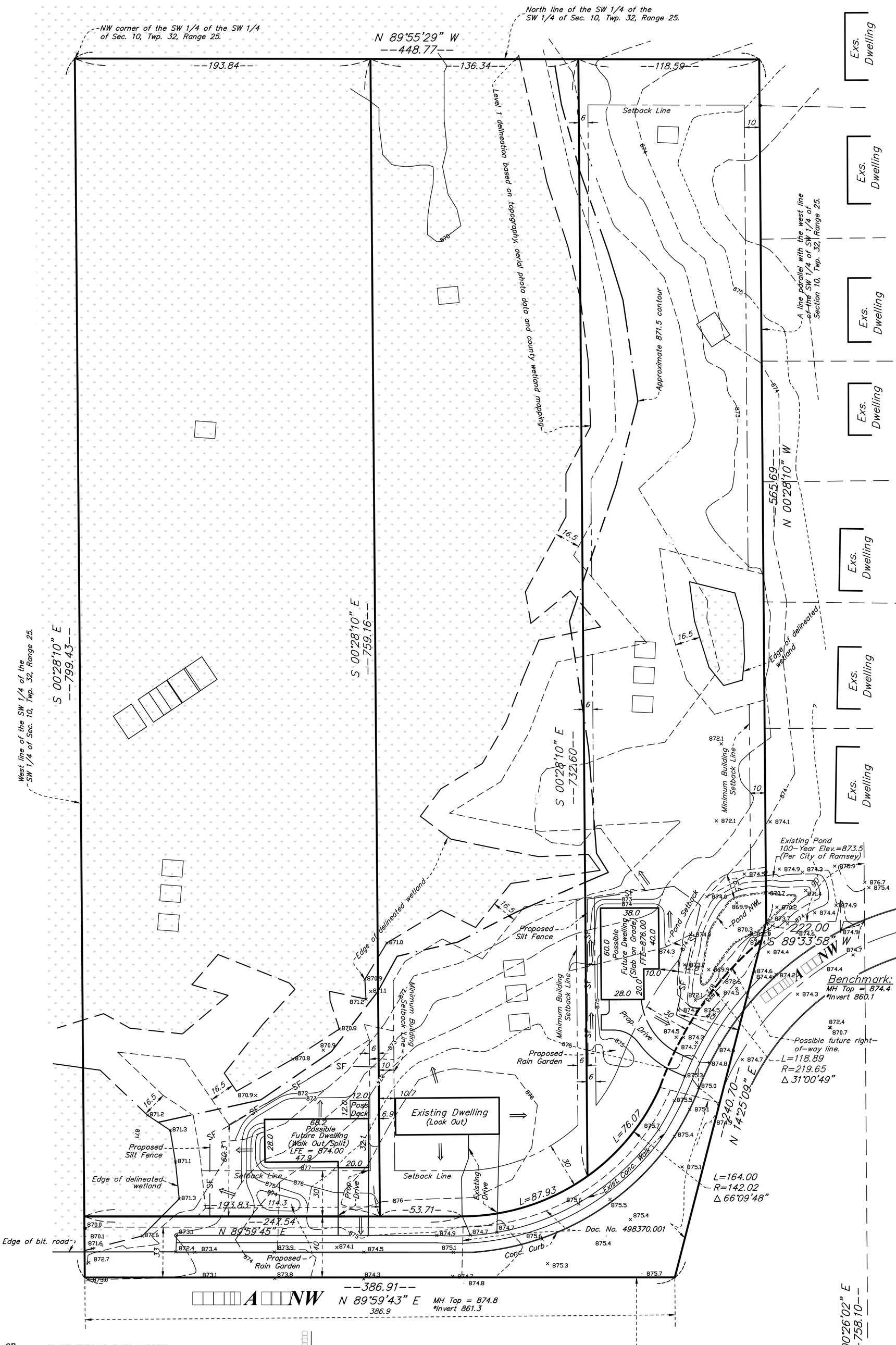
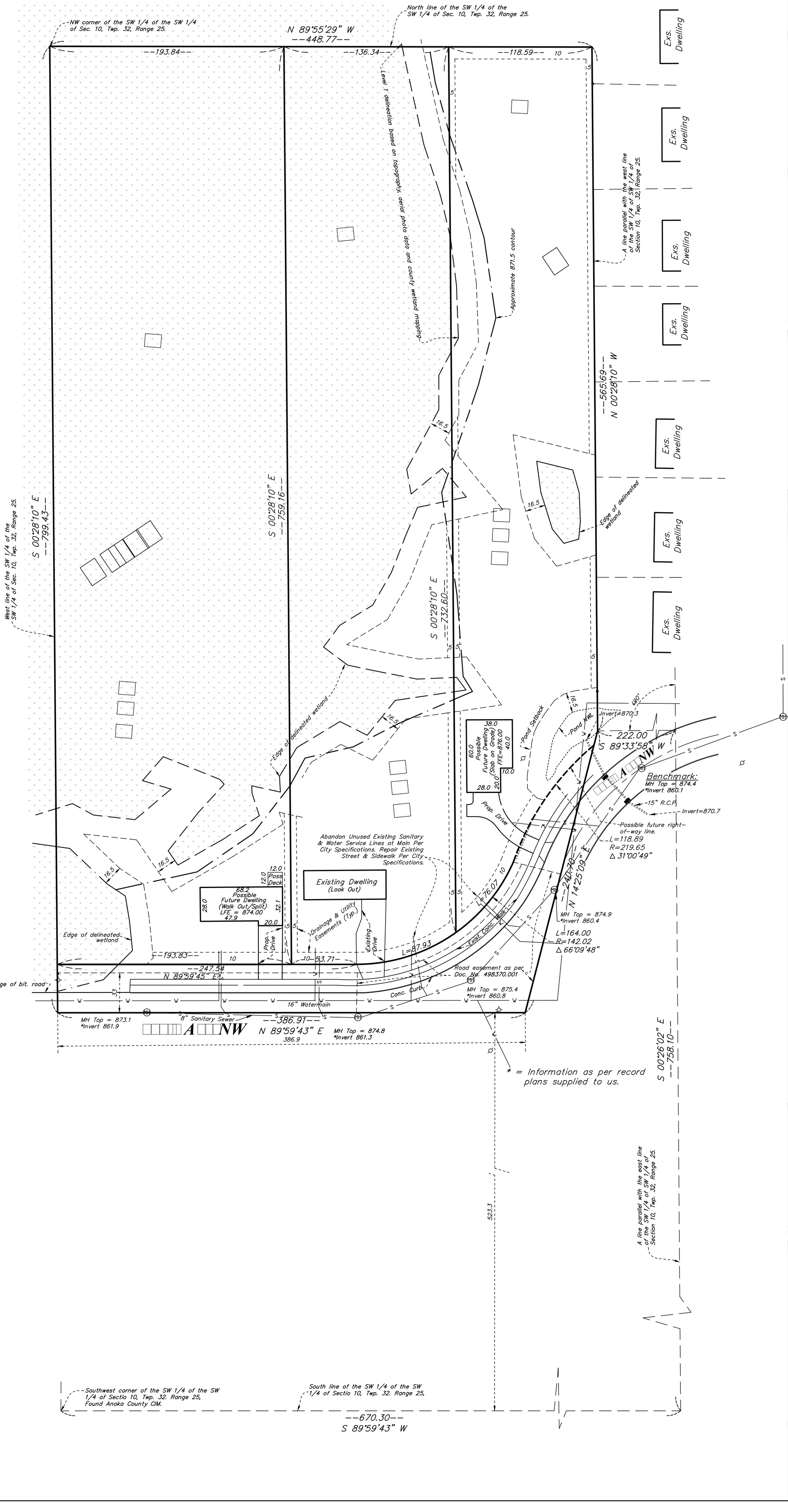
Surveying & Engineering, Co.

E

Preliminary Plat of Homestead Road Subdivision


NW corner of the SW 1/4 of the SW 1/4 of Sec. 10, Twp. 32, Range 25.
N 89°55'29" W
448.77
North line of the SW 1/4 of the SW 1/4 of Sec. 10, Twp. 32, Range 25.
193.84
136.34
118.59
Exs. Dwelling
Level 1 delineation based on topography, aerial photo data and county wetland mapping
Setback Line
6
10
874
875
Approximate 871.5 contour
A line pdrallel with the west line of the SW 1/4 of SW 1/4 of Section 10, Twp. 32, Range 25.
873
874
565.69
N 00°28'10" W
West line of the SW 1/4 of the SW 1/4 of Sec. 10, Twp. 32, Range 25.
S 00°28'10" E
799.43
759.16
732.60
16.5
Edge of delineated wetland
Minimum Building Setback Line
Proposed Silt Fence
Proposed Rain Garden
Existing Dwelling (Look Out)
68.2 Possible Future Dwelling (Walk Out Split) LFE = 874.00
28.0
47.9
20.0
32.1
12.0 Poss Deck
12.8
6.9
10/7
Setback Line
Existing Drive
Prop. Drive
193.83
247.54
N 89°59'45" E
114.3
53.71
L=87.93
L=76.07
L=164.00
R=142.02
Δ 66°09'48"
240.70
N 14°25'09" E
Exist. Conc. Walk
Doc. No. 498370.001
Conc. Curb
Edge of bit. road
Proposed Rain Garden
386.91
N 89°59'43" E
386.9
MH Top = 874.8
*Invert 861.3
60.0 Possible Future Dwelling (Slab on Grade) FFE=876.00
38.0
40.0
28.0
20.0
10.0
Pond NWL
Pond Setback
222.00
S 89°33'58" W
Benchmark:
MH Top = 874.4
*Invert 860.1
Possible future right-of-way line.
L=118.89
R=219.65
Δ 31°00'49"
Existing Pond
100-Year Elev.=873.5
(Per City of Ramsey)
Edge of delineated wetland
Minimum Building Setback Line
Prop. Drive
Minimum Building Setback Line
872.1
Minimum Building Setback Line
10
874
874.1
Exs. Dwelling
Exs. Dwelling
Exs. Dwelling

Preliminary Plat of Homestead Road Subdivision



Advance
Surveying & Engineering, Co.

[redacted]

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[redacted]

DRAWING ORIENTATION & SCALE

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W	= WATER LINE
G	= GAS LINE
ST	= STORM DRAIN LINE
E	= OVERHEAD UTILITY LINE
SF	= PROPOSED SILT FENCE
870	= PROPOSED CONTOUR
	= DRAINAGE ARROW
870	= EXISTING CONTOUR
X 870.5	= EXISTING SPOT ELEVATION

DATE	REVISION DESCRIPTION
10/18/16	UPDATE PER CITY COMMENTS
11/18/16	CHANGE POSS. FUTURE HOUSE ON LOT 3
03/02/17	UPDATE PER CITY COMMENTS

[redacted]

DRAWING NUMBER

160806 TB

SHEET NUMBER

[redacted]

2809 78th Ave. N., Brooklyn Park, MN 55444
pbrandt@soilinvestigations.us | 651-260-3783

February 13, 2017

Mr. Alex Delendik
Homestead Road
5402 Parkdale Drive, Suite 101
St. Louis Park, MN 55416

Re: Tree Survey 7131n – 166th Lane, Ramsey, Mn

Thank you for this opportunity to conduct a tree survey on the named property. We conducted the tree survey in conformance the City of Ramsey tree ordinance.

The tree survey was conducted from the northerly property boundary to the southern. The City of Ramsey tree ordinance requires that:

1. A Delineation of all areas located within a 100-year floodplain;
2. Dead trees shall not be part of the survey, however diseased trees shall be included in the survey:
3. All species of oak that have a DBH of four inches or greater;
4. All evergreen species that have a DBH of four inches or greater; and
5. All other trees that have a DBH of eight inches or greater;

Further it requires:

6. A *tree* survey overlay on the grading plan, which locates all significant trees within the developable areas of the site, identifying both diameter and species.
7. Existing soil conditions throughout the parcel; and
8. Existing contour data for the entire property with vertical contour data consistent with city standards for all areas to be disturbed by proposed *tree* removal operations, extending for a distance of at least 50 feet beyond the limits of such areas.

Items 6, 7, and 8 will be completed by the project engineer.

The trees were identified, species determined, the diameter at breast height was measured, the GPS location was determined using a Mesa 2 GPS system by Juniper systems, and all of the information was recorded in the attached table.

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pbrandt@soilinvestigations.us | 651-260-3783

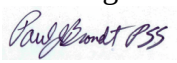
A total of 1081 inches of tree diameter measured at breast height was recorded. The City of Ramsey requires that a minimum of 40 percent of this number be maintained on the site. This means that of the 1081 inches of tree diameter a minimum of 432 inches must be maintained. If all of the trees in the proposed construction areas were removed a total of 154 inches of tree diameter would be removed. This volume is significantly lower than the 40 percent threshold. Therefore according to the City of Ramsey tree ordinance a landscape plan does not need to be submitted.

Attached below is the tree preservation plan required by the City of Ramsey. Please incorporate this into permit application materials.

Please note that we have not been supplied the grading plan and therefore cannot go into more detail. Please find attached the tree survey table along with the figure detailing tree locations.

Thank you for your time, please feel free to contact me with any questions.

Best Regards



Paul Brandt PSS,
Principal Scientist, Principal Forester
Soil Investigation & Design, Inc.

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pbrandt@soilinvestigations.us | 651-260-3783

GPS ID	Species	Tag Number	DBH	Longitude	Latitude	PDOP	StdDevLon	StdDevLat
1	Aspen	4588	8	-93.449159	45.27366	1.2	1.79	1.79
2	Aspen	4587	9	-93.448973	45.27351	1.2	1.827	1.827
3	Aspen	4586	8	-93.449044	45.27341	1.4	1.896	1.896
4	Aspen	4585	8	-93.449143	45.27343	1.4	2.303	2.303
5	Aspen	4584	8	-93.449107	45.27329	1.4	2.145	2.145
6	Aspen	4583	9	-93.449193	45.2733	1.4	2.289	2.289
7	Aspen	4582	10	-93.449164	45.27324	1.4	2.032	2.032
8	Aspen	4581	10	-93.449119	45.27322	1.4	2.195	2.195
9	Aspen	4580	8	-93.449017	45.27326	1.4	2.844	2.844
10	Aspen	4579	10	-93.448906	45.27324	1.4	2.846	2.846
11	Aspen	4578	9	-93.448899	45.27321	1.1	2.049	2.049
12	Aspen	4577	9	-93.448655	45.27304	1.3	2.334	2.334
13	Aspen	4576	11	-93.448513	45.27308	1.4	3.964	3.964
14	Aspen	4575	8	-93.448536	45.27306	1.4	4.884	4.884
15	Aspen	4574	8	-93.448529	45.27306	1.4	2.983	2.983
16	Aspen	4573	10	-93.44852	45.27306	1.4	2.769	2.769
17	Aspen	4571	9	-93.448538	45.27307	1.4	2.623	2.623
18	Aspen	4572	8	-93.448542	45.27305	1.4	2.666	2.666
19	Aspen	4570	8	-93.448622	45.27306	1.5	3.337	3.337
20	Aspen	4569	8	-93.448534	45.27303	1.5	2.806	2.806
21	Aspen	4568	9	-93.448828	45.27303	1.4	2.204	2.204
22	Aspen	4567	8	-93.448881	45.27305	1.4	2.486	2.486
23	Aspen	4566	8	-93.448867	45.27303	1.3	1.909	1.909
24	Aspen	4565	8	-93.448854	45.27301	1.3	1.851	1.851
25	Aspen	4564	9	-93.449078	45.273	1.3	2.397	2.397
26	Aspen	4563	8	-93.449112	45.27301	1.3	2.849	2.849
27	Aspen	4562	8	-93.449143	45.27299	1.3	2.253	2.253
28	Aspen	4561	8	-93.449033	45.27294	1.3	2.026	2.026
29	Aspen	4560	9	-93.448949	45.27293	1.3	2.072	2.072
30	Aspen	4556	8	-93.448852	45.27291	1.3	2.116	2.116
31	Aspen	4555	12	-93.44873	45.27294	1.3	2.102	2.102
32	Aspen	4554	10	-93.44871	45.27292	1.2	2.11	2.11
33	Aspen	4559	9	-93.448746	45.27288	1.2	2.085	2.085
34	Aspen	4558	9	-93.448766	45.27288	1.2	2.065	2.065
35	Aspen	4557	10	-93.448788	45.27284	1.2	2.116	2.116
36	Aspen	4552	10	-93.44875	45.27283	1.3	3.163	3.163
37	Aspen	4551	8	-93.448658	45.27295	1.3	2.707	2.707

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38	Aspen	4550	8	-93.448645	45.27296	1.2	2.65	2.65
39	Aspen	4549	8	-93.448617	45.27294	1.3	2.367	2.367
40	Aspen	4548	8	-93.448644	45.27278	1.2	3.467	3.467
41	Aspen	4544	8	-93.448695	45.27278	1.2	2.529	2.529
42	Aspen	4545	8	-93.448693	45.27275	1.2	2.731	2.731
43	Aspen	4546	8	-93.448683	45.27276	1.2	2.459	2.459
44	Aspen	4547	8	-93.448673	45.27276	1.2	2.867	2.867
45	Aspen	4543	9	-93.4488	45.27278	1.2	2.804	2.804
46	Aspen	4542	10	-93.4488	45.2728	1.3	3.023	3.023
47	Aspen	4541	10	-93.448772	45.27277	1.3	2.815	2.815
48	Aspen	4540	9	-93.448769	45.27272	1.3	2.204	2.204
49	Aspen	4539	9	-93.448753	45.27267	1.4	2.246	2.246
50	Aspen	4537	10	-93.448655	45.27267	1.2	2.539	2.539
51	Aspen	4538	8	-93.448689	45.27262	1.2	4.736	4.736
52	Aspen	4536	8	-93.448711	45.2726	1.2	5.273	5.273
53	Aspen	4535	12	-93.448817	45.27262	1.2	8.018	8.018
54	American Elm	4534	10	-93.448835	45.27267	1.2	5.658	5.658
55	Aspen	4533	8	-93.44889	45.27268	1.3	5.21	5.21
56	Aspen	4532	8	-93.44886	45.27263	1.3	7.672	7.672
57	Aspen	4531	8	-93.448875	45.27261	1.3	6.435	6.435
58	Aspen	4530	10	-93.44887	45.27257	1.3	15.719	15.719
59	Aspen	4589	8	-93.448766	45.2726	1.2	4.515	4.515
60	Aspen	4529	10	-93.448764	45.27255	1.3	4.748	4.748
61	Aspen	4527	10	-93.44873	45.27252	1.3	5.012	5.012
62	Aspen	4528	10	-93.448825	45.27248	1.3	6.428	6.428
63	Aspen	4526	8	-93.44884	45.27245	1.3	5.257	5.257
64	Aspen	4525	8	-93.448853	45.27247	1.3	4.334	4.334
65	Aspen	4520	8	-93.448824	45.2724	1.2	8.885	8.885
66	Aspen	4521	8	-93.448845	45.27241	1.2	7.435	7.435
67	Aspen	4801	8	-93.448824	45.2724	1.2	6.902	6.902
68	Aspen	4518	12	-93.448858	45.27236	1.2	8.4	8.4
69	Aspen	4519	9	-93.448813	45.27236	1.2	9.78	9.78
70	Aspen	4517	10	-93.44892	45.27238	1.2	7.701	7.701
71	Aspen	4515	10	-93.448956	45.27239	1.2	11.083	11.083
72	Aspen	4516	9	-93.448894	45.27234	1.2	8.79	8.79
73	Aspen	4514	9	-93.449049	45.27248	1.2	6.589	6.589
74	Aspen	4807	10	-93.449007	45.27241	1.2	10.641	10.641
75	Aspen	4513	10	-93.449069	45.27245	1.2	8.264	8.264
76	Aspen	4512	9	-93.449113	45.27243	1.2	7.523	7.523

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77	Aspen	4511	8	-93.449101	45.27245	1.3	10.193	10.193
78	Aspen	4510	8	-93.449151	45.27243	1.4	11.999	11.999
79	Aspen	4508	9	-93.449121	45.27236	1.4	13.637	13.637
80	Aspen	4507	11	-93.449026	45.27237	1.3	13.1	13.1
81	Aspen	4506	8	-93.449047	45.27234	1.3	6.839	6.839
82	Aspen	4808	8	-93.448909	45.27233	1.3	8.496	8.496
83	Aspen	4806	8	-93.448897	45.2723	1.3	9.158	9.158
84	Aspen	4504	8	-93.448952	45.27231	1.2	10.231	10.231
85	Aspen	4503	9	-93.448964	45.27228	1.1	17.495	17.495
86	Aspen	4502	9	-93.448982	45.27226	1.1	14.726	14.726
87	Aspen	4805	8	-93.44894	45.27228	1.1	15.847	15.847
88	Aspen	4501	8	-93.448926	45.27228	1.1	16.696	16.696
89	Aspen	4803	10	-93.448941	45.27227	1.1	8.182	8.182
90	Aspen	4505	12	-93.449042	45.2723	1.1	13.942	13.942
91		error						
92		error						
93	Aspen	4509	11	-93.449213	45.27235	1.2	4.58	4.58
94	Aspen	4810	8	-93.448716	45.27228	1.2	8.01	8.01
95	Aspen	4809	9	-93.4487	45.27222	1.2	6.558	6.558
96	Aspen	4819	11	-93.4487	45.2722	1.2	6.204	6.204
97	Aspen	4821	10	-93.448679	45.27218	1.3	5.08	5.08
98	Aspen	4820	11	-93.448711	45.27214	1.2	4.913	4.913
99	Aspen	4823	8	-93.448675	45.27213	1.2	5.689	5.689
100	Aspen	4822	8	-93.448735	45.27215	1.2	6.575	6.575
101	Aspen	4812	8	-93.448803	45.27214	1.2	5.524	5.524
102	American Elm	4817	12	-93.449095	45.27212	1.2	5.572	5.572
103	American Elm	4818	8	-93.449099	45.27214	1.2	4.436	4.436
104	BurOak	4824	36	-93.44916	45.27199	1.9	29.724	29.724
105	BurOak	4825	28	-93.44921	45.27184	1.9	21.183	21.183
106	BurOak	4811	10	-93.449178	45.27174	1.6	10.896	10.896
107	BurOak	4813	13	-93.449165	45.27179	1.5	9.468	9.468
108	BurOak	4814	14	-93.449218	45.27175	1.7	8.53	8.53
109	BurOak	4815	19	-93.449263	45.2718	1.6	13.54	13.54
110	BurOak	4816	12	-93.44928	45.27184	1.6	9.237	9.237
111	BurOak	4826	13	-93.4493	45.27173	1.6	8.114	8.114
112	BurOak	4827	11	-93.449313	45.27175	1.4	8.652	8.652
113	BurOak	4828	16	-93.449362	45.27176	1.5	10.273	10.273
114	BurOak	4829	16	-93.449424	45.27172	1.4	7.653	7.653
115	BurOak	4830	19	-93.449365	45.27181	1.4	8.461	8.461

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116	BurOak	4831	19	-93.449343	45.27182	1.4	9.343	9.343
117	BurOak	4832	12	-93.449419	45.27185	1.4	14.459	14.459
118	White Pine	4833	14	-93.448801	45.27174	1.3	7.704	7.704
119	White Pine	4834	14	-93.448805	45.27172	1.4	7.916	7.916
120	Eastern Red Cedar	4835	15	-93.44869	45.27171	1.3	7.702	7.702
121	Eastern Red Cedar	4837	8	-93.448695	45.2717	1.3	5.602	5.602
122	Eastern Red Cedar	4838	10	-93.448576	45.27186	1.2	5.398	5.398
123	Red Pine	4839	17	-93.448445	45.27192	1.2	11.863	11.863
124	Eastern Red Cedar	4840	10	-93.448435	45.27211	1.2	5.667	5.667
125	American Elm	4841	11	-93.449771	45.27185	1.4	12.021	12.021
126	BurOak	4834	20	-93.449805	45.2719	1.4	9.783	9.783
127	Aspen	4851	8	-93.449812	45.27202	1.4	7.038	7.038
128	Aspen	4847	8	-93.449827	45.27202	1.4	9.376	9.376
129	Aspen	4845	10	-93.44973	45.27203	1.4	11.635	11.635
130	Aspen	4846	12	-93.449704	45.27204	1.4	10.614	10.614
131	Aspen	4857	9	-93.449736	45.27196	1.4	9.946	9.946
132	American Elm	4852	10	-93.449725	45.27194	1.5	6.514	6.514
133	Aspen	4848	8	-93.449672	45.27207	1.4	10.428	10.428
134	Aspen	4853	9	-93.449643	45.27208	1.4	13.599	13.599
135	Aspen	4849	12	-93.449633	45.27216	1.5	11.602	11.602
136	Aspen	4855	11	-93.449755	45.27219	1.4	8.687	8.687
137	Aspen	4854	8	-93.449645	45.27223	1.5	7.312	7.312
138	Aspen	4850	11	-93.449717	45.27226	1.4	9.478	9.478
139	Aspen	4856	11	-93.449798	45.27255	1.5	6.234	6.234
140	Aspen	4842	8	-93.449678	45.27266	1.6	7.551	7.551
141	Aspen	4699	9	-93.449303	45.27194	1.3	11.112	11.112
142	Aspen	4698	8	-93.449276	45.27194	1.2	12.089	12.089
143	Aspen	4697	12	-93.449319	45.27195	1.1	5.155	5.155
144	Aspen	4696	12	-93.44943	45.2724	1.2	5.648	5.648
145	Aspen	4695	8	-93.449424	45.27237	1.2	4.479	4.479
146	Aspen	4694	9	-93.449464	45.27237	1.2	3.771	3.771
147	Aspen	4693	8	-93.44945	45.27232	1.2	5.043	5.043
148	Aspen	4692	10	-93.449388	45.27233	1.1	6.68	6.68
149	Aspen	4691	9	-93.44941	45.27228	1.1	5.282	5.282
150	Aspen	4690	8	-93.4494	45.27225	1.1	6.082	6.082
151	Aspen	4689	8	-93.449489	45.27221	1.2	11.926	11.926
152	Aspen	4688	8	-93.449495	45.27223	1.2	9.147	9.147
153	Aspen	4687	8	-93.449541	45.27217	1.2	8.232	8.232
154	Aspen	4686	12	-93.449526	45.27215	1.2	8.464	8.464

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155	Aspen	4685	8	-93.449428	45.2722	1.2	7.993	7.993
156	Aspen	4684	9	-93.449378	45.27214	1.2	8.94	8.94
157	Aspen	4683	10	-93.449453	45.27212	1.2	7.483	7.483
158	Aspen	4682	9	-93.449474	45.27207	1.2	8.153	8.153
159	Aspen	4681	11	-93.449524	45.27206	1.2	5.088	5.088
160	Aspen	4680	11	-93.449561	45.27205	1.2	6.339	6.339
161	Aspen	4679	8	-93.449571	45.27204	1.1	10.152	10.152
162	Aspen	4678	10	-93.449589	45.27203	1.1	6.023	6.023
163	Aspen	4677	10	-93.449467	45.27205	1.1	6.131	6.131
164	Aspen	4676	9	-93.449435	45.27205	1.1	4.542	4.542
165	Aspen	4675	8	-93.449425	45.27203	1.1	6.631	6.631
166	Aspen	4674	10	-93.449408	45.27204	1.1	4.741	4.741
167	Aspen	4673	11	-93.449358	45.27207	1.1	3.703	3.703
168	Aspen	4672	8	-93.449364	45.27204	1.1	4.747	4.747
169	Aspen	4671	8	-93.449403	45.27196	1.2	5.603	5.603
170	Aspen	4670	9	-93.449444	45.27195	1.2	5.453	5.453
171	Aspen	4669	8	-93.449436	45.27196	1.2	7.219	7.219
172	Aspen	4668	8	-93.449522	45.27187	1.2	6.141	6.141
173	Aspen	4666	10	-93.449608	45.27195	1.2	4.831	4.831
174	Aspen	4667	10	-93.449588	45.27188	1.3	4.885	4.885
175	Aspen	4665	10	-93.449576	45.27186	1.3	6.213	6.213
176	Aspen	4664	8	-93.449504	45.27187	1.3	7.107	7.107

Total DBH Inches	1081
Total DBH Inches in Construction Area	154
40% Threshold	432

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Tree preservation plan.

Purpose

To control epidemic *tree* diseases and insect infestations which threaten the health of trees in the community. Comply with regulations that ensure the placement of trees along the street right-of-way for the purpose of protecting against excessive noise, heat, and glare, and to enhance the attractiveness and value of property.

To ensure that landscaping is an integral part of development, not an afterthought. To support community forestry programs and encourage good *tree* management. To maintain and preserve the many benefits that trees provide including, but not limited to character, aesthetics air/water quality, erosion/flood control, and provide habitat for wildlife.

Trees enhance property values; and

Trees aid in the stabilization of soil by the prevention of erosion and sedimentation; and
Trees reduce stormwater runoff and the costs associated therewith and aid in the replenishment of groundwater supplies.

Definitions:

A landmark *tree*: shall be any *tree,* public or private, that has been designated as such by the city council, after public hearing and due notice to the owner of the *tree*. The criteria of such designation shall include, but not necessarily be limited to, notable historical interest and value to the city because of its location or historical association with the community.

Removal of public trees: No trees, brush, vines, shrubs and/or ground cover are to be removed by anyone, including adjacent landowners or agents of any landowner, from any city-owned land, greenways or access corridors from greenways without the permission of the city.

Storage upon public land: No person shall deposit, place, store, or maintain upon any public place of the municipality any stone, brick, sand, concrete, vehicles, equipment, toxins, animals, *tree* carving, or other materials which may impede the free passage of water, air, or fertilizer to the roots of any *tree* growing therein, except by written permit of the city.

Signage: It shall be unlawful for any person, firm, or public utility to attach any sign, advertisement, political endorsement or notice to any public *tree*.

Operation of equipment.

(1) All maintenance equipment, implements, machines and tools shall be used or operated in such a manner as not to damage or destroy any *tree,* shrub or plant in any public right-of-way or park.

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(2) During the erection, repair, alteration or removal of any building, house or structure, in the city, any person, firm, or corporation in charge of such work shall protect any *tree* in any public place within the city in the vicinity of such building or structure with sufficient guards or protectors to prevent injury to such *tree*.

(3) Notifying adjacent property owners of maintenance work. An attempt may be made to inform adjacent property owners of maintenance work on trees and landscaping along boulevards, city property, and easements. This notification will be left with direct and adjacent property owners. Suitable precautions shall be taken to protect and warn the public that spraying is being done to public trees. Spraying will be done only if following an integrated pest management plan as exemplified under such topic within the state department of agriculture.

(4) Adjacent landowners' limited responsibility. Trees planted along city property lines will be watered by those property owners adjacent to said trees. No one other than city employees or their designee may trim, prune, or remove public trees.

(5) There shall be no movement, clearing, or storage of equipment within a designated *tree* protection zone. The owner, developer, or agent shall not permit the placement of construction materials, debris, soil deposits, or fill; nor cause or permit disposal of waste materials such as paints, oils, solvents, asphalt, concrete, mortar or any other harmful material within the dripline of any protected *tree* area.

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The tree preservation plan includes:

A Delineation of all areas located within a 100-year floodplain;

A *tree* survey overlay on the grading plan, which locates all significant trees within the developable areas of the site, identifying both diameter and species. Dead trees shall not be part of the survey, however diseased trees shall be included in the survey:

All species of oak that have a DBH of four inches or greater;

All evergreen species that have a DBH of four inches or greater; and

All other trees that have a DBH of eight inches or greater;

Existing soil conditions throughout the parcel; and

Existing contour data for the entire property with vertical contour data consistent with city standards for all areas to be disturbed by proposed *tree* removal operations, extending for a distance of at least 50 feet beyond the limits of such areas.

Tree preservation barriers:

- All *tree* protection areas signed with "Tree Save Area" signs posted in addition to the required protective fencing.
- Signs requesting sub-contractor cooperation and compliance with *tree* protection standards are recommended for site entrances.
- Before any construction or grading takes place, snow fencing or erosion control fencing shall be placed around the borders of woodlots at the dripline of large trees to be preserved. Signs shall be placed along this fence line prohibiting grading beyond the fence line.
- These fences will be orange polyethylene laminar safety fencing or of woven polyethylene fabric (silt fencing).
- No construction shall begin until this work has been completed, inspected, and accepted by the city.
- Silt barriers or similarly effective erosion control barriers shall be required in any area where erosion or siltation may cause damage to protected trees.
- All protective *tree* fencing, staking or continuous ribbon and all erosion control barriers must be installed prior to and maintained throughout the land disturbance and construction process, and should not be removed until acceptable vegetation is established.
- Critical root zone. The root system within the dripline is generally considered to be the critical root zone. To protect these critical root zones, a *tree* protection area shall be established around each *tree* or group of trees to be retained.

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- The *tree* protection area shall include no less than the total area beneath the *tree* canopy as defined by the dripline of the *tree* or group of trees collectively.
- Wherein authorized excavations it becomes necessary to expose or cut roots more than one inch in diameter, it shall be the duty of the contractor to protect such root under advice from the city.
- All open trenching is prohibited. Utility installation within the dripline of protected trees, during construction or thereafter, can only occur using trenchless methods.
- The mowing, clearing, and grubbing of brush located within or under the dripline of protected trees may be allowed, provided such mowing, clearing, or grubbing is accomplished by hand or by mowers. The use of heavy equipment for this purpose shall not be allowed.

Removal threshold.

Within residential developments, at least 40 percent of the inches of existing significant *tree* DBH shall be retained on site.

Reforestation/restitution requirement. If a development exceeds the removal threshold specified in "Operation of Equipment section 3" above, the developer shall either reforest areas within the site, pay restitution, or some combination thereof.

For every one significant *tree* inch that is removed in excess of the removal threshold, the developer shall replant 1.25 inches (diameter) of new trees or provide the city with $125.00 in restitution.

Significant trees removed for water quality treatment ponds, public trails and sidewalks, and arterial and collector streets, or that are considered invasive species, are exempt from the removal threshold calculation.

Tree Protection:

Protection from disease and pestilence: All clearing in oak stands shall be performed prior to April 15 or after July 15 of each season. Any development involving oak trees on or adjacent to the development area must submit a plan in conjunction with the preliminary plat that identifies what precautionary steps will be taken to protect the trees from oak wilt.

Encroachment: If encroachment into a *tree preservation* area occurs that causes irreparable damage to a *tree*(s), the *tree preservation* plan shall be revised to compensate for the loss. Under no circumstance shall the developer be relieved of responsibility for compliance with the provisions of this division, nor shall planned revision activities prevent the city from instituting action for violation of this division.

Planting requirements: All trees chosen shall be from the acceptable/preferred list (or have approval of the city) and native and/or adaptable to this region and climate as described in the Ramsey Tree Book. The quantity of the required plantings shall be in accordance with the performance standards established for the respective zoning district.

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A. Size of trees at planting. For all required plantings, deciduous trees shall be a minimum of one-inch caliper at time of planting and all evergreen trees shall be a minimum of five feet in height at time of planting. Specifications shall be determined by the American Nurseryman's Standards.

B. Type of *tree* stock. For all required plantings, trees shall be free of insects, diseases, or mechanical injuries and have straight trunk and a form characteristic of the species.

C. Spacing at time of planting. The spacing of new trees must be compatible with spatial site limitations and with the responsible consideration toward species size when mature as outlined in the Ramsey Tree Book.

D. Planting standards. As outlined in the Ramsey Tree Book.

E. Planting standard: Soil amendment. As outlined in the Ramsey Tree Book.

F. Planting standards: Mulch. As outlined in the Ramsey Tree Book.

G. Planting distance along rural section streets. Shall be at the right-of-way unless approved by the city.

H. Planting distance from hydrants. Trees shall be planted a minimum of ten feet from hydrants.

I. Vision clearance (sight triangle). Tree plantings should not be within the vision clearance triangle as defined in the City of Ramsey.

J. Planting distance from utilities. Trees shall be planted a minimum of two feet from any joint utility trench whenever practicable.

K. Reforestation/restitution plan.

a. If the total number of *tree* inches exceeds the removal threshold, the developer shall provide a reforestation plan (can be included as part of landscaping plan, but must clearly identify those trees that are intended to satisfy the reforestation requirement), or a calculation of restitution, or a combination thereof.

b. Size at the time of planting shall comply with the planting standards outlined in the respective zoning district.

c. No more than 25 percent of the trees to be planted shall be from any one species.

d. Reforestation trees included in the reforestation plan may count toward the trees required for landscaping purposes within the applicable zoning district.

Hazardous and/or nuisance *trees*.

- The contractor shall remove of any dead or diseased trees on private property, when such trees constitute a hazard to life or property, or harbor insects or disease which constitute a potential threat to other trees

- Disease- or pest-infested trees. Any *tree* located within the city, which is determined by a certified professional to be afflicted with any dangerous or infectious insect infestation or plant disease, may be declared

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a public nuisance. This shall include trees and shrubs harboring injurious insects or pathogens that may cause significant potential danger to the community forest.

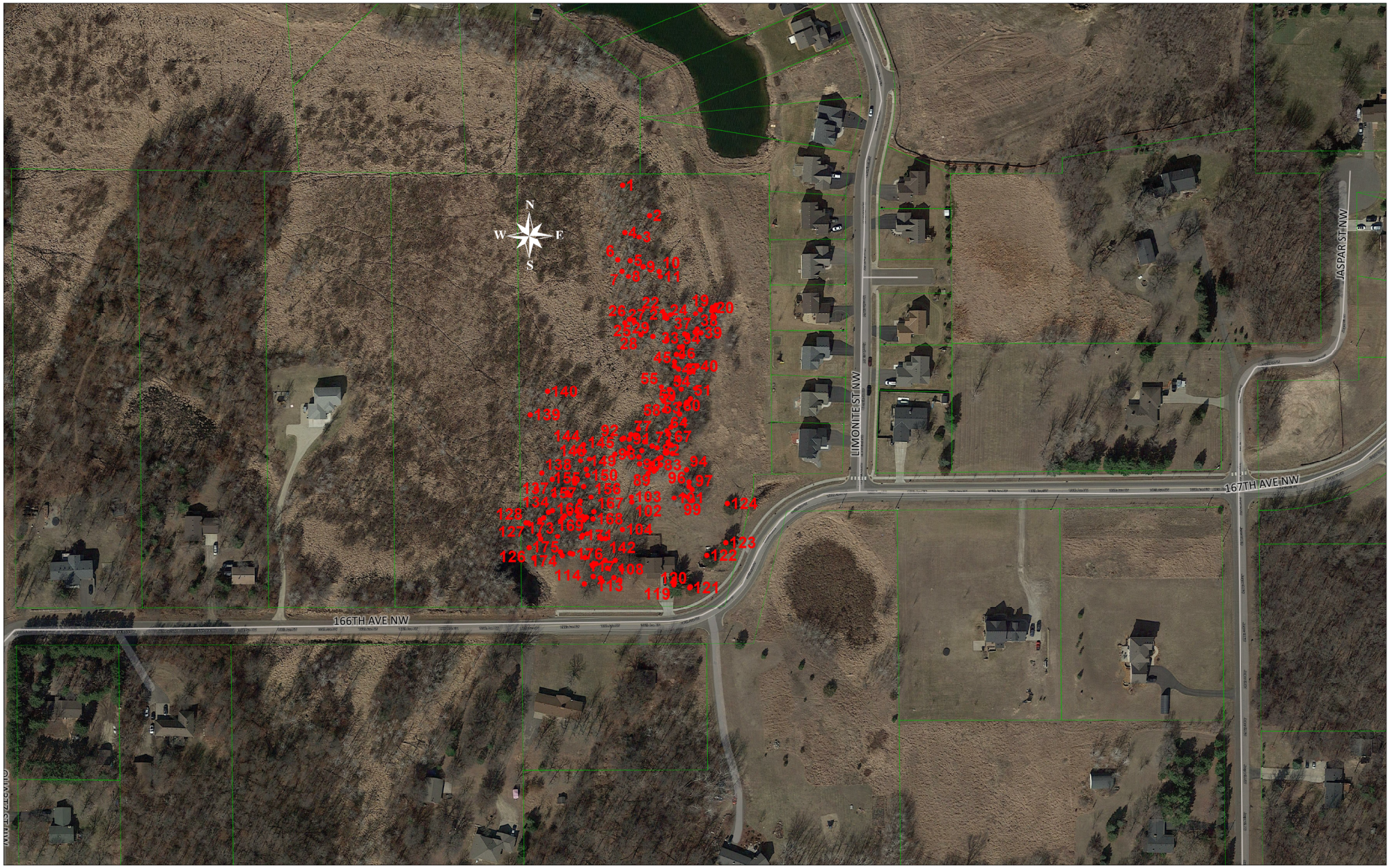

Figure 1: Site Detail Map

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Client: Homestead Road
7313 - 166th Lane Ramsey, MN

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	MARCH 31, 2017	**PROJECT ADDRESS**	7131 166TH AVE
PROJECT. TITLE	PRELIMINARY PLAT AND VARIANCE REQUEST: HOMESTEAD ROAD		
ESCROW #	115464		
DEPARTMENT:	Community Development: Planning Division (Zoning Code)		
TECHNICAL REVIEWER:	Name: Chris Anderson, City Planner Phone: (763) 433-9817 Email: canderson@cityoframsey.com		

We offer the following comments regarding the Preliminary Plat submittal for Homestead Road as it relates to the City's Zoning Code. The Preliminary Plat submittal consists of three (3) sheets, prepared by Advance Surveying & Engineering Co. and dated October 18, 2016, revised March 2, 2017. The proposal also includes a variance request to deviate from the minimum lot depth requirement. Two (2) exhibits, prepared by Advance Surveying & Engineering Co. and dated January 13, 2017, were also received relating the variance request.

Staff provides the following comments that require revisions:

Sheet S1 (Preliminary Plat)

1. On Lot 2, there appears to be a measurement noted as 6.9 feet, what is this measurement for? This must be clarified on the Plan Set.
2. Net density clarification required. Calculation shows gross area divided by the total number of units. Net density is defined as net acreage (gross acreage minus wetlands) divided by total number of units. It may be that the gross area already subtracted out the wetlands, but the acreage of wetland should be listed under the Net Density Information.
3. Side yard setback for habitable portions of a structure is ten (10) feet. It is unclear whether the proposed home on Lot 3 is compliant with that setback. This is also applicable to Lot 1; it is assumed that there will be some habitable space behind the garage (based on Exhibit 1) and thus that portion of the structure is subject to the ten (10) foot setback as well. The ten (10) foot building setback line shall be shown on Sheet S1 and Exhibits 1 & 2 to verify compliance.
4. As proposed, Lots 1 and 3 require a variance to the lot depth standard. This will be considered by the Planning Commission at the same time they consider the Preliminary Plat.
5. Based on the proximity of the proposed home on Lot 3 to the wetland setback to the north and east, any potential patio or deck would need to be located near the northeast corner of the home and will not be permitted to encroach into this setback area.

Sheet S2 (Grading Plan)

1. Both proposed rain gardens shall be encumbered with drainage and utility easements.
2. A Maintenance Agreement for both rain gardens shall be required. Preparation of this Agreement is the responsibility of the Applicant and the Agreement is subject to review and approval of the City. Note that these will need to be maintained by each property owner, not the City.
3. A planting plan for each rain garden is required. Note that it is recommended to use a limited number of plant species in each garden to simplify maintenance activities of the future property

owners. The Anoka Conservation District has information on rain gardens that may be helpful: https://www.anokaswcd.org/images/AnokaSWCD/Technical%20Assistance/Brochures/2015/brochure_raingardens.pdf. Planting plans are subject to review and approval by the City.

4. While a Tree Inventory was completed, it is not shown on the grading plan. A separate sheet shall be prepared that includes the trees, property boundaries, and grading information. This sheet shall clearly indicate trees being preserved and those proposed for removal.

Sheet S3 (Utility Plan)

1. Re-label this sheet to S3 (currently labeled as S2).

Plat Sheet

1. Revise street name to 166th Ave.
2. Revise drainage and utility easements to encumber both rain gardens and that portion of the existing stormwater pond that would now be on private property (if the permanent road easement were to be vacated).

General: The applicant is requesting review of a Preliminary Plat that contemplates platting the property at 7131 166th Ave NW (the "Subject Property") into three (3) single family residential lots. The existing home would remain as part of this plat and each of the three (3) lots would be served by municipal sewer and water. In general, the Subject Property is a difficult property to subdivide due to the expansive wetland and floodway located on the property. As proposed, a variance to lot depth would be necessary for Lots 1 and 3. In both instances, the encroachment into the 60' x 100' buildable area box is rather limited. Considering this, Staff believes the Applicant has done a commendable job with the proposed Preliminary Plat with regard to the proposed number of proposed lots.

Land Use and Zoning: The Subject Property is guided Low Density Residential in the Comprehensive Plan and is located within the R-1 Residential (MUSA) zoning district. Review of the Preliminary Plat is based on the current zoning designation of R-1 Residential (MUSA). Each proposed lot complies with the minimum lot size of 10,800 sq. ft.

Net Density Calculations. The Applicant shall provide gross acreage, as well as net acreage. Net acreage is calculated by subtracting wetland acreage from the gross acreage. The Applicant has provided a calculation of one (1) unit per 1.02 acres; however, the acreage of wetland must be added to the Net Density Information table on Sheet S1. *This table should list the gross acreage of the entire site, the acreage of wetland, net acreage (gross acreage minus the acreage of wetland), and net density (net acreage divided by total number of lots).*

Setbacks: The required setbacks are outlined below.

Setbacks	
Required:	Proposed:
Front yard: 30 feet	30 feet
Side yard uninhabitable: 6 feet	6 feet
Side yard habitable: 10 feet	10 feet
Side yard corner: 30 feet	Not applicable
Rear yard: 30 feet	30+ feet
Minimum lot width: 80 feet/corner lot 90 feet	80 feet

**Note: Minimum Lot Width is measured at front yard setback (30 feet from front property line), not front property line, nor at curb line.*

On Lots 1 and 3, the side yard setback is shown as six (6) feet. While this is accurate for the uninhabitable portions of the proposed structures (garages), the minimum side yard setback for habitable (home) portions is ten (10) feet. *The building setback line along the east line of Lot 1 and the west line of Lot 3 shall be revised to ten (10) feet.*

Building Elevations: No elevations of the proposed homes were submitted. Individual models are not included for review. In a single family development, it is difficult to approve every individual potential model at time of Plat. The Applicant has included a possible deck on the proposed home on Lot 1. This should also be provided for the proposed home on Lot 3. Based on the proximity to the wetland setback boundaries, the only possibility for a deck/patio on Lot 3 is off the northeast corner of the home.

Streets: 166th Ave is a Municipal State Aid (MSA) road, which requires a dedicated right-of-way (r-o-w) of eighty (80) feet. The Preliminary Plat is proposing to dedicate forty (40) feet of right-of-way to the public. As part of the reconstruction of 166th Ave, the City was granted a permanent road easement over portions of the Subject Property. As part of the platting process, this permanent road easement underlying what will become dedicated public right-of-way shall be vacated (plat must be adjusted though to ensure that there is sufficient drainage and utility easement around the existing stormwater pond). *A description of the Easement shall be prepared by the Applicant and submitted to the City for processing an Easement Vacation (done via ordinance, which requires two [2] readings by City Council).* There is an existing sidewalk in front of the Subject Property; no additional sidewalk is required.

Easements: Drainage and utility easements are required on each lot and must be ten (10) feet in width abutting dedicated right-of-way, five (5) feet in width along both side lot lines, and encumber any 100-year storm event for all existing and proposed surface waters and wetlands. Additionally, Drainage and Utility Easements must extend at least sixteen and a half (16.5) feet beyond the delineated wetland edge. *The Plat must be revised to provide sufficient drainage and utility easement over both rain gardens as well as the existing stormwater pond.*

Density Transitioning: The proposed plat is adjacent to an existing larger lot residential neighborhood that is zoned R-1 Residential (Rural Developing), and thus, density transitioning would be applicable. However the lot directly adjacent to the subject property is owned by the City and appears to be entirely wetland. As such, this satisfies the density transitioning requirement.

Tree Preservation: A detailed tree inventory identifying all significant trees, as defined in City Code Section 117-327 (and outlined below), was submitted. However, the inventory was not overlayed with the grading plan nor were there any indications of which trees were proposed to be removed or preserved. *The*

Tree Inventory must be added to the grading plan and must specify the intended fate of each tree (saved or preserved). This will also assist in determining whether any additional landscaping is required.

The inventory does indicate that there are oaks present on the Subject Property. As noted above though, it is unclear whether any site improvements would occur within vicinity of these trees. Due to concerns with Oak Wilt, any clearing within a stand of oak trees shall be completed prior to April 15 or after July 15. *If construction activities will occur within this stand of oaks, an Oak Wilt Management Plan could be prepared outlining steps that would be taken to prevent the introduction and spread of Oak Wilt beyond the Subject Property*.

Topsoil: Each individual lot will need to have four (4) inches of topsoil meeting the City's topsoil specification. A topsoil inspection is required prior to landscaping being installed and copies of the load tickets are required as well. This is reviewed at time of Building Permit Application and request for Certificate of Occupancy for each individual lot. There shall not be any fill (topsoil or sod) placed within any designated wetland or flood zone.

Development Fee Calculations: Development Fees will be due on the Plat. A DRAFT of the Development Fees is as follows:

Fee Type	Units	Unit Type	Unit Price	Total
Park Dedication (0-12 units per acre)	2	Per unit	$2,800	$5,600
Trail Development	2	Per unit	$800	$1,600
Water Fees (Trunk/Connection)	3	Per unit	$1,925*	$5,160
Water Fees (Lateral)	3	Per acre	TBD	TBD
Sewer Fees (Trunk/Connection)	3	Per unit	$1,154	$3,462
Sewer Fees (Lateral)	3	Per acre	TBD	TBD
Stormwater Management	2	Per unit	$473	$946
Street Light (Cobra)	TBD	Per light	$1,300	TBD
Street Light (3 Year O&M)	TBD	Per light	$294	TBD
Sewer Availability Charges (SAC)	3	Per SAC Unit	$2,485	$7,455
Water Availability Charges (WAC)	3	Per WAC Unit	$1,236	$3,708

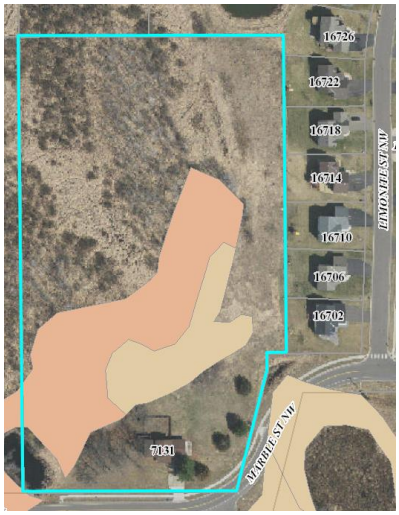
*Per the Water Main and Sanitary Sewer Cost Contribution/Reimbursement Agreement

Development Agreement: Upon approval of a Final Plat, an executed Development Agreement will be required prior to releasing the plat for recording.

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	MARCH 31, 2017	**PROJECT ADDRESS**	7131 166TH AVE NW
PROJECT. TITLE	HOMESTEAD ROAD		
ESCROW #	115464		
DEPARTMENT:	Community Development: Planning Division (Landscape Plan & Environmental Resources)		
TECHNICAL REVIEWER:	Name: Chris Anderson, City Planner Phone: 763-433-9817 Email: canderson@cityoframsey.com		

We offer the following comments regarding the Tree Inventory and Protection Plan prepared by Soil Investigation and Design Inc. and dated February 13, 2017:



The City's Natural Resources Inventory (NRI) identifies some moderate quality aspen forest (saturated soils) and non-native graminoid (grass) vegetation. Most, if not all of the moderate quality natural area is within wetland and/or floodplain area and thus, would not be impacted (or experience very little impact) as a result of the proposed development.

The Tree Preservation Plan indicates that only fourteen percent (14%) of the significant tree DBH inches will be removed, well below the allowable removal threshold. However, the plan set does not specify which trees will be removed and preserved, nor does it graphically depict the trees on the Preliminary Plat.

There is no Landscape Plan included in the plan set. While preserved trees can be credited toward the landscape requirements, it is not clear whether they would constitute front yard trees or not as they are not included on the Preliminary Plat. The plan set needs to be revised to include the tree layer on the Preliminary Plat before a determination can be made on compliance with landscaping requirements.

Topsoil is required for all lots being improved with a principal building. A note must be added to the plan set stating that topsoil, meeting the City's topsoil specification. There shall be no fill, including topsoil and sod, placed within the floodway or wetland areas.

The project is proposing the use of rain gardens on Lots 1 and 3 to address the infiltration requirements of the LRRWMO. Engineering Staff are reviewing that information to determine compliance. At a minimum, the rain gardens will need to be encumbered with Drainage and Utility Easement as well as a Maintenance Agreement to address responsibilities to ensure functionality. Planting plans and specifications must be provided for the rain gardens.

A variance to lot depth is required for both Lot 1 and Lot 3. Note that the plans were revised to reposition the house pad on Lot 3 in response to comments received during review of the Sketch Plan (previous location did not require a variance, but was not supported by neighboring property owner due to position behind their home). Lot 3 is deficient by only seventy-eight (78) square feet. Lot 1 is deficient by 268 square feet. However, the Preliminary Plat does include a twelve by twelve (12' x 12') deck to demonstrate that this common home owner improvement would still fit on the property.

Required Revisions

Tree Preservation Plan

- Tree layer must be added to plan set that includes the lot boundaries, grading contours, and proposed house pads.
- Revise plan to clearly indicate trees being removed and trees being preserved.
- If preserved trees do not qualify as front yard trees, a Landscape Plan shall also be prepared and submitted including proposed species, caliper (size), root stock, and it shall include a planting detail as well.
- Revise to show tree preservation fence.
- Tree preservation fence must be installed and then approved by City prior to any clearing work.
- Add note stating that any clearing within oak stands shall be performed prior to April 15 or after July 15 to minimize exposure to and/or introduction of oak wilt.
- Add precautionary steps to be taken on site to protect oak trees from Oak Wilt and/or reference said plan and that it is incorporated by reference.

Sheet S2

- Encumber rain gardens with Drainage and Utility Easements.
- Add note to sheet specifying that a Maintenance Agreement will be prepared for review and approval by the City.
- Maintenance Agreement will need to be recorded against each lot containing a rain garden.
- Update the plan sheet with planting design, species, and specifications.

Sheet S3

- Revise Drainage and Utility Easements to include rain gardens.

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	MARCH 31, 2017	**PROJECT ADDRESS**	NORTH OF 166TH AVE, WEST OF LIMONITE STREET
PROJECT. TITLE	HOMESTEAD ROAD		
ESCROW #	115464		
DEPARTMENT:	Engineering		
TECHNICAL REVIEWER:	Name: Leonard Linton Phone: 763 433-9834 Email: llinton@ci.ramsey.mn.us		

The Engineering Department offers the following comments regarding the Preliminary Plat Exhibits for Homestead Road. The submittal consists of 4 sheets prepared by Advance Surveying and Engineering Co. dated October 18, 2016, revised March 2, 2017. The submittal included 2 lot depth variance exhibits and a tree survey report prepared by Soil Investigation and Design, Inc. dated February 13, 2017.

General comments:

1. **A legend must be shown on all sheets. All symbols used on that sheet must be added to the legend for the sheet. A scale must be shown on all sheets.**
2. Class 5 shall meet the Ramsey modified gradation. This gradation must be included in the details.
3. Plan readability – Proposed sanitary sewer lines and symbols, and watermain lines and symbols must be the most prominent items on the sewer and water sheets. Proposed storm sewer lines and symbols must be the most prominent on the storm sewer sheets. Proposed curb lines, sidewalks and pedestrian ramps must be the most prominent lines on the street sheets. All other lines on the sheet must be screened so the lines and symbols for proposed features standout. This includes the symbols in the legends which must match the plan view in size, pattern, weight, and color.
4. **Underlying lines must be broken where they are under text boxes to enhance readability. Underlying text must be moved so there is not text on text.**
5. The southern curb line must be shown on sheets S1, S2 and S3.

Sheet Specific Comments:

Plat Sheet:

1. The plat must be revised in the southeast corner of Lot 3 to remove the note about vacated portion of road easement. The City is not vacating that easement. Additional easement must be dedicated to encompass the 100 year elevation of the existing pond. A portion of the road easement may be vacated with the plat if it is outside of the new pond easement.
2. New road right-of-way indicated as "possible future right-of-way" on the preliminary plat sheet must be dedicated with the plat.

Preliminary Plat Sheet S1:

1. The dashed line indicating possible future right-of-way must be changed as noted above.

Preliminary Plat Grading Plan Sheet S2:

1. The dashed line indicating possible future right-of-way must be changed as noted above.
2. The lot dimensions must be turned off on this sheet.
3. The line weights must be modified to differentiate between existing and proposed conditions.
4. Consider rotating the sheet and enlarging the scale to show the southern 300 feet of the lots as this is where all of the new work is occurring.
5. The proposed rain garden leader for Lot 1 runs into an existing contour line. Work needs to be done on the plans along 166th Avenue to improve readability.
6. The sanitary sewer labels must be turned off on this sheet.
7. The bottom of the rain gardens must be 3 feet above groundwater level to be considered eligible for infiltration credit. A hand auger boring must be performed in each proposed rain garden. The information from the boring can be shown on the final grading plan,
8. The proposed garage elevation must be listed for lots 1 and 3.
9. The FEMA 100 year flood elevation must be shown on this sheet.

   The lowest floor elevation of all development, including basements, must be at least 3 feet above the highest anticipated ground water table, 2 feet above the designated or designed 100-year flood elevation, or 1 foot above the emergency overflow, whichever is higher.

Preliminary Plat Utility Plan Sheet S3:

1. See note for sheet S2.
2. The dashed line indicating possible future right-of-way must be changed as noted above.
3. Turn off the dimensions on the utility sheet.
4. Add City details STR25 and STR 26 to the plan set. The details are available on the City website.
5. Add the following notes to the final utility plan regarding abandoning the existing services.

1. The work shall be inspected by the City.
2. The contractor must provide a detour plan to the City for approval prior to commencing work.
3. Pavement shall be sawcut per detail STR25, with the wear course milled to offset the vertical joints prior to paving.
4. The excavation must be backfilled at the end of the day, restored with Class 5 and open to traffic.

Tree Survey Report:

1. The tree survey information must be included as a sheet in the plans showing the location of trees to protect or remove in the area of the proposed homes. The viewport should match the grading and utility plan for showing the trees to be removed.

5.03: Review Sketch Plan for Three (3) Lot Subdivisions at 7131 166th Avenue NW (Project No. 16-32); Case of CTW Group Inc.

Presentation

Community Development Director Gladhill presented the staff report stating the purpose of this file is to review the official Sketch Plan prepared by Advance Surveying & Engineering, Co. for the purpose of creating three (3) new lots at 7131 166th Avenue NW (the "Subject Property"). The Sketch Plan Review process affords the Planning Commission the opportunity to provide early direction on the layout of the proposed plat, before a developer prepares detailed Preliminary Plat plans. A key decision will occur at Preliminary Plat, in which the layout will be approved, subject to approving final construction plans and Final Plat documents. At that time, the City will review items including, but not limited to, Grading and Drainage Plans, Utility Plan, Landscape Plan, and Street Light Plan. Staff requested feedback from the Commission on the Sketch Plan.

Commission Business

Commissioner Bauer asked how much of a concern the rear yard of Lot 1 would be.

Community Development Director Gladhill discussed the City's depth standards for residential lots. He reported the lot would have an adequate amount of buildable area.

Commissioner Surma requested to see an expanded aerial view of the property.

Community Development Director Gladhill reviewed an expanded aerial view of the site, along with the location of the wetland. He stated staff was comfortable moving this request forward and would address the wetland delineations during the next phase.

Commissioner Surma asked if another road would be needed to access the new lot.

Community Development Director Gladhill commented a new driveway would be created on the western end of the property to access the public roadway.

Commissioner Brauer questioned if dewatering would be needed to install utilities or the basement.

Community Development Director Gladhill explained the site had utilities stubs in place. He stated temporary dewatering may be needed and would be monitored closely by the City and watershed management organization.

Megan Jacobson, 16702 Limonite Street NW, expressed concern with Lot 3 noting the lot was very poorly maintained. She hoped to see a high-quality building put on this lot.

Carl Jacobson, 16702 Limonite Street NW, discussed how water drains on his property along with the tall grasses and wildlife in his rear yard. He did not want to see additional water brought onto his property through the new construction.

Commissioner Surma asked who would be developing the lot.

Community Development Director Gladhill deferred this question to the applicant.

Gan Ram, CTW Group, explained he was the developer of the property. He addressed the drainage concerns for the lot and explained he had put in a permit with the Lower Rum River Watershed District. He proposed shifting the house to another area in order for the driveway to be relocated.

Further discussion ensued regarding how the home and driveway could be realigned on the lot.

Commissioner Brauer encouraged the developer to work with staff and the adjacent neighbors to resolve the concerns addressed this evening.

Community Development Director Gladhill indicated he would be willing to work with the applicant prior to the Preliminary Plat being presented to the Commission.

Ms. Jacobson questioned if the rear portion of Lot 3 could be split into six divisions to allow for the adjacent property owners to purchase these parcels.

Community Development Director Gladhill stated this would be a more complex issue, but he could discuss this further with the developer.

Mr. Ram did not anticipate the rear portion of Lot 3 would be built on because the majority was wetland.

Community Development Director Gladhill reported staff would reach out to the applicant and explained neighbors would be re-notified when this item would be reconsidered by the Planning Commission.

5.01: Consider Natural Resources Elements of Homestead Road Subdivision

City Planner Anderson presented the staff report. He reported that the City has received an application for a three-lot subdivision known as Homestead Road. He stated that the application includes review of a Preliminary Plat and a Variance to lot depth. He noted that no new roads are proposed with the development and the site already has municipal utilities studded in as a result of a previous road improvement project. He stated that the development site is located at 7131 166th Avenue NW and noted that a significant portion of the subject property is encumbered with wetland and floodway. He recommended approval of the Tree Preservation Plan and the Variance request contingent upon compliance with the Staff Review Letter.

Chairperson Stodola commented that the staff report was well thought out and informative.

City Councilmember LeTourneau asked if rain gardens are used widely throughout the City in this purpose.

City Planner Anderson stated that the City is not commonly using them throughout the City. He stated that a few of the multi-family townhome developments have used rain gardens as part of their stormwater management but he was not aware of a single-family home development that currently uses that method. He provided additional details on rain gardens. He stated that rain gardens are becoming more popular throughout the metro area and noted that there are other opportunities in the City where rain gardens could be used.

Board Member Valentine stated that rain gardens are becoming more popular in single family home settings. He stated that he created three rain gardens on one of his properties which work very well and are very efficient. He was confident that the rain gardens would be a good fit but noted that the long-term maintenance would need to be identified to ensure peak performance.

City Councilmember LeTourneau stated that he does love the idea but just wanted to learn more information on the topic to ensure that it would be a good fit.

Board Member Valentine noted that the rain garden would need to be designed to the right size to ensure it would work correctly.

City Planner Anderson stated that the engineering staff will review the plans to ensure the rates and volumes are met. He stated that education is a part of the long-term maintenance to ensure those conducting the maintenance know which items remain and which need to be removed. He explained that water is intended to filter through the rain garden and not hold water for long periods of time.

Motion by Board Member Valentine and seconded by Chairperson Stodola to recommend approval of the Tree Preservation Plan and the Variance request contingent upon compliance with the Staff Review Letter.

Motion carried. Voting Yes: Chairperson Stodola, Board Member Valentine, Anderson, Bernard, Covart, and Trossen. Voting No: None. Absent: Board Member Hiatt.

DRAFT

Commissioner _____ introduced the following resolution and moved for its adoption:

RESOLUTION #17-04-077

A RESOLUTION ADOPTING FINDINGS OF FACT #0980 RELATING TO A REQUEST FOR A VARIANCE TO LOT DEPTH FOR LOTS 1 AND 3, BLOCK 1 OF HOMESTEAD ROAD ADDITION.

WHEREAS, CTW Group, Inc., hereinafter referred to as "Applicant", properly applied to the City of Ramsey (the "City") for a variance to lot depth standards for development of portions of the property legally described as follows:

> That part of the Southwest Quarter of the Southwest Quarter of Section 10, Township 32, Range 25, described as follows: Commencing at a point on south line of said Quarter Quarter 670.30 feet east of southwest corner thereof, thence north parallel with east line of said Quarter Quarter 758.10 feet, thence at a right angle west 222 feet to point of beginning thence northerly parallel with west line of aid Quarter Quarter 565.92 feet to north line of said Quarter Quarter, thence westerly along said north line, 448.21 feet to northwest corner thereof, thence southerly along said west line 799.89 feet to appoint on said wet line 523.3 feet north of said southwest corner, thence east parallel with said south line 386.9 feet, thence northeasterly 240.62 feet to point of beginning, except roads subject to easement of record, Anoka County, Minnesota

Or upon recording of the Final Plat

> Lots 1 and 3 (exclusive), Block 1 Homestead Road Addition
>
> (the "Subject Property");

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF RAMSEY PLANNING, as follows:

1) That the Applicant appeared before the Planning Commission for a public hearing pursuant to Section 117-53 (Variances) of the Ramsey City Code on April 6, 2017, and that said public hearing was properly advertised, and that the minutes of said public hearing are hereby incorporated as a part of these findings by reference.

2) That the Subject Property is zoned R-1 Residential (MUSA) and the Applicant has made proper application to the City to plat the Subject Property into three (3) single family residential lots.

3) That newly created lots are required to have a depth of 100 feet for a continuous width of sixty (60) feet that is not encumbered by wetland, wetland setback area, or floodway.

4) That the Applicant has applied for a variance to the lot depth standard for Lot 1, Block 1 and Lot 3, Block 1 of the proposed Homestead Road Addition.

5) That as part of the reconstruction of 166th Ave NW, the City installed five (5) sets of utility stubs to the Subject Property.

6) That the Applicant is only proposing three (3) lots to minimize deviations from the lot depth standard.

7) That the Environmental Policy Board reviewed the request at their March 20, 2017 meeting.

8) That the location of the existing dwelling on Lot 2 restricts the Applicant's ability to adjust lot lines to reduce or eliminate the encroachment into the sixty (60) foot by 100 foot buildable area box.

9) That both lots still meet the spirit and intent of the lot depth standard as they do have buildable area available to accommodate typical homeowner improvements, such as a deck and/or a detached accessory building.

10) That there are significant areas of wetland and floodway encumbering the Subject Property.

11) That there is additional buildable area beyond the 60'x100' area on each lot.

12) That economic circumstances alone do/do not create the practical difficulties.

13) That the plight is/is not due to circumstances unique to the Subject Property.

14) That the plight is/is not created by the Applicant.

15) That, if granted, the variance will/will not alter the locality's essential character.

16) That, if granted, the variance will/will not impair an adequate supply of light and air to adjacent property.

17) That, if granted, the variance will/will not have the effect of allowing a use that is prohibited in the applicable zoning district.

18) That, if granted, the variance will/will not unreasonably increase the congestion on the public street.

19) That, if granted, the variance will/will not adversely impact the degree of public health, safety and general welfare provided for in the Ramsey City Code.

20) That, if granted, the variance will/will not diminish established property values within the neighborhood.

21) That, if granted, the variance requested is/is not the minimum variance necessary to accomplish the intended purpose of the Applicant.

22) That the unique circumstances on the Subject Property do/do not result from the actions of the Applicant.

23) That, if granted, the variance will/will not grant the Applicant any special privilege that is denied to the owners of other land in the same district.

The motion for the adoption of the foregoing resolution was duly seconded by Commissioner _____, and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

and the following abstained:

and the following were absent:

whereupon said resolution was declared duly passed and adopted by the Ramsey Planning Commission this the 6th day of April, 2017.

_____
Chairperson

ATTEST:

_____
City Clerk

Commissioner _____ introduced the following resolution and moved for its adoption:

RESOLUTION #17-04-078

A RESOLUTION APPROVING THE ISSUANCE OF A VARIANCE TO LOT DEPTH FOR LOTS 1 AND 3, BLOCK 1 OF HOMESTEAD ROAD ADDITION AND DECLARING TERMS OF SAME.

WHEREAS, CTW Group, Inc., hereinafter referred to as "Applicant", properly applied for a variance from the lot depth standard prescribed in Section 117-614, Subd. (h)(11) on portions of the property legally described as follows:

> That part of the Southwest Quarter of the Southwest Quarter of Section 10, Township 32, Range 25, described as follows: Commencing at a point on south line of said Quarter Quarter 670.30 feet east of southwest corner thereof, thence north parallel with east line of said Quarter Quarter 758.10 feet, thence at a right angle west 222 feet to point of beginning thence northerly parallel with west line of aid Quarter Quarter 565.92 feet to north line of said Quarter Quarter, thence westerly along said north line, 448.21 feet to northwest corner thereof, thence southerly along said west line 799.89 feet to appoint on said wet line 523.3 feet north of said southwest corner, thence east parallel with said south line 386.9 feet, thence northeasterly 240.62 feet to point of beginning, except roads subject to easement of record, Anoka County, Minnesota
>
> Or upon recording of the Final Plat,
>
> Lots 1 and 3 (exclusive), Block 1 Homestead Road Addition
>
> (the "Subject Property"); and

WHEREAS, the Planning Commission met on April 6, 2017, conducted the public hearing and adopted Findings of Fact #0980 relating to the request for a variance from the lot depth standard on the Subject Property.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF ADJUSTMENT OF THE CITY OF RAMSEY, ANOKA COUNTY, STATE OF MINNESOTA, as follows

1. Based on Findings of Fact #0980, a variance to the lot depth standards, as established in Section 117-614, Subd. (h)(11) of the Ramsey City Code, is hereby granted for the **Subject Property**.

2. The variance allows for the **Subject Property** that does not meet the requirement of 100 feet for a width of 60 feet that is not encumbered by wetland, wetland setback area, floodway, or other unbuildable areas.

3. No construction of any building shall commence without the issuance of a building permit.

4. The **Permittee** shall be responsible for all **City** costs incurred in administering and enforcing this variance if approved.

5. This variance, if approved, shall automatically become null and void if it is not initiated within twelve (12) months of the date of approval, unless an extension is granted at the written request of the **Permittee**. Approval of the plat of Homestead Road Addition shall be considered as initiation of the variance.

The motion for the adoption of the foregoing resolution was duly seconded by _____ and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

and the following abstained:

and the following were absent:

Whereupon said resolution was declared duly adopted by the Ramsey Planning Commission this the 6th day of April, 2017.

PERMITTEE

CTW Group, Inc., hereby acknowledges receipt of this variance and that they have reviewed the terms of the variance and have agreed that they will comply with the terms of the variance.

By: _____

Its: _____

STATE OF MINNESOTA)
) ss.
COUNTY OF ANOKA)

On this _____ day of _____, ____, before me, a Notary Public, personally appeared _____, the _____ of CTW Group, Inc., to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as their free act and deed.

_____
Notary Public

CITY OF RAMSEY:

By: _____ _____
Planning Commission Chairperson City Clerk

STATE OF MINNESOTA)
) ss.
COUNTY OF ANOKA)

On this _____ day of _____, ____, before me, a Notary Public, personally appeared Randy Bauer and JoAnn M Thieling, to me personally known, who, being each by me duly sworn did say that they are respectively the Planning Commission Chairperson and City Clerk of the City of Ramsey, the Municipal Corporation named in the foregoing instrument, and seal affixed to said instrument is the corporate seal of said Municipal Corporation, and the said instrument was signed and sealed on behalf of said Municipal Corporation by authority of its City Council, and said Randy Bauer and JoAnn M Thieling acknowledge said instrument to be the free act and deed of said Municipal Corporation.

_____
Notary Public

This document drafted by:
City of Ramsey
7550 Sunwood Dr NW
Ramsey, MN 55303

This document reviewed by:
Ratwik, Roszak & Maloney
730 Second Ave. S., Suite 300
Minneapolis, MN 55402

Councilmember _____ introduced the following resolution and moved for its adoption:

RESOLUTION #17-04-079

RESOLUTION GRANTING PRELIMINARY PLAT APPROVAL OF HOMESTEAD ROAD ADDITION

WHEREAS, CTW Group, Inc., hereafter referred to as "Developer", properly applied for Preliminary Plat approval of the following described property located in the City of Ramsey:

> That part of the Southwest Quarter of the Southwest Quarter of Section 10, Township 32, Range 25, described as follows: Commencing at a point on south line of said Quarter Quarter 670.30 feet east of southwest corner thereof, thence north parallel with east line of said Quarter Quarter 758.10 feet, thence at a right angle west 222 feet to point of beginning thence northerly parallel with west line of aid Quarter Quarter 565.92 feet to north line of said Quarter Quarter, thence westerly along said north line, 448.21 feet to northwest corner thereof, thence southerly along said west line 799.89 feet to appoint on said wet line 523.3 feet north of said southwest corner, thence east parallel with said south line 386.9 feet, thence northeasterly 240.62 feet to point of beginning, except roads subject to easement of record, Anoka County, Minnesota
>
> (the 'Subject Property');

WHEREAS, the City of Ramsey received a sketch plan for Homestead Road Addition from the Developer; and

WHEREAS, the Planning Commission reviewed the sketch plan on November 3, 2017; and

WHEREAS, the Ramsey Environmental Policy Board (EPB) considered the tree preservation plan, landscaping, and the requested lot depth variance pertaining to the preliminary plat on March 20, 2017; and

WHEREAS, on April 6, 2017, the Ramsey Planning Commission conducted a public hearing regarding the proposed preliminary plat; and

WHEREAS, on April 25, 2017, the City Council reviewed the preliminary plat.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RAMSEY, ANOKA COUNTY, STATE OF MINNESOTA, as follows:

1) That the Ramsey City Council hereby grants preliminary plat approval of Homestead Road Addition in accordance with relevant City Codes, subject to the following conditions:

    a) Compliance with City Staff Review Letter dated March 31, 2017.
    b) The Developer entering into a Development Agreement with the City.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember _____, and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

and the following abstained:

and the following were absent:

whereupon said resolution was declared duly passed and adopted by the Ramsey City Council this 25th day of April, 2017

_____
Mayor

ATTEST:

_____
City Clerk

Regular Planning Commission **5. 3.**

Meeting Date: 04/06/2017

By: Chris Anderson, Community Development

Information

Title:

Consider Preliminary Plat and Zoning Amendment for Covenant Meadows (Project #17-102); Case of Eric Thomsen.

Purpose/Background:

The Planning Commission held (and closed) a Public Hearing regarding the proposed rezoning and Preliminary Plat of Covenant Meadows, a twelve (12) lot single family residential development. The Planning Commissino postponed action at their March 2 meeting to spend more time addressing concerns raised by neighboring property owners regarding impacts to ecological and wildlife resources. It was requested that the City explore a discretionary Environmental Assessment Worksheet (EAW) or Citizen Petition EAW. The City will be hosting a workshop on the project on Thursday, April 6 at 5:30 p.m. to discuss neighbor concerns in more detail. The City Council received an updated at their March 14, 2017 meeting and noted a preference to focus on the workshop as the means to work through these issues and that a full scale EAW appeared to be a larger process than needed and wouldn't truly answer the questions/concerns that were being raised by the public.

The project does not reach the threshold for a mandatory EAW. The mandatory threshold for Ramsey's community type is based on number of unattached units. The proposed project is twelve (12) lots. Additionally, there are a number of requirements of an EAW that go beyond the concerns raised by adjoining neighbors. Finally, Staff believes the Planned Unit Development process that permanently protects fifteen (15) acres of prime ecological resource along the Trott Brook Corridor is the correct approach to protect ecological resources in the area.

Staff has obtained an unofficial review of the Natural Heritage Information System (NHIS) database and no threatened or endangered species returned on the Subject Property. The NHIS is the database used in official EAWs. NHIS is proprietary and protected due to potential threats to threatened or endangered species and therefore, specific maps are not allowed to be published. Staff is working through the MN DNR to obtain the NHIS database for the benefit of the City (e.g. future development projects, Comprehensive Plan Update).

The original March Planning Commission case begins below.

The purpose of this case is to review an application for a Rezoning of the Subject Project from R-1 Rural Developing to Planned Unit Development (PUD) and Preliminary Plat. The site is generally located south of Trott Brook and west of Germanium Street and is identified as PID 02-32-25-44-0004.

The Applicant has proposed to subdivide the approximately thirty-eight (38) acre Subject Property into twelve (12) single family homes that would be serviced by individual private utilities. The Preliminary Plat proposes deeding approximately fifteen (15) of the thirty eight (38) acres to the City as the public benefit in relation to the PUD application. The proposed fifteen (15) acres straddles both sides of the Trott Brook, has steep slopes, and is also considered to be high quality natural open space.

Notification:

Staff attempted to notify all Property Owners within a 700 foot radius of the Subject Property of the Public Hearing via Standard US Mail. The Public Hearing was also published in the City's official newsletter, the Anoka County Union Herald.

Observations/Alternatives:

The Applicant is proposing a rezoning of the Subject Property from R-1 Residential (Rural Developing) to Planned Unit Development (PUD) and Preliminary Plat approval of Covenant Meadows.

Properties surrounding all sides of the Subject Property are currently zoned R-1 Residential (Rural Developing) and guided as Rural Developing. While the Applicant is requesting reduced lot sizes than what would normally be required in the R-1 Residential (Rural Developing) district, the proposed parcel sizes are similar in size and nature to surrounding parcels in that an adjacent parcel is 1.04 acres and the smallest parcel being proposed within Covenant Meadows is 1.00 acres. In exchange for the reduced lot size, the Applicant is proposing to deed to the City approximately fifteen (15) acres of land. The land being proposed has a high natural value as it straddles both sides of the Trott Brook and encompasses the steep slopes in the area. The Applicant is willing to provide a trail easement between lots 5 and 6 of block 1 so as to provide all lots in the proposed development and the neighborhood with access to this public amenity.

Upon further review of the contours of the steep slopes, Staff has identified that an ADA compliant trail is not feasible; however, Staff has identified that a twenty (20) foot trail easement should still be included between lots 5 and 6 of block 1 and that an eight (8) foot bituminous trail be constructed within that easement and that the trail terminate with a fifteen (15) foot bituminous bulb within Outlot A as part of the Stage I Improvements. The bituminous trail will need to connect to the bituminous edge of Iodine St NW and that connection will need to be ADA compliant. The Applicant is currently proposing a rural road section with a ditch system to convey runoff, so a culvert will be necessary to allow for the free flowing of runoff as well as elevate the trail connection to the roadway.

With the Preliminary Plat, the Applicant is proposing twelve (12) Single Family lots that would be serviced by individual private utilities. The lots being proposed range in size from 1.00 acres to 2.92 acres in size and in lot width of approximately 100 feet to over 200 feet. In addition to the reduced lot size and lot width, the proposed cul-de-sac length also exceeds 600 feet. Public Safety has reviewed this request. Police does not have any objections to the road configuration. The Fire Department has noted a couple potential concerns. One is that this is a non-hydranted area and thus, if there were a structure fire, tanker trucks would be necessary and maneuverability would be tough. Secondly, if there were trees down, it would also slow response time for first responders. It should be noted though that these conditions already exist with Iodine Street in this same neighborhood (that cul-de-sac is approximately 1,000 feet in length). No additional deviations from City Code are being requested in connection with the Covenant Meadows Preliminary Plat application. Generally speaking the Preliminary Plat is acceptable to Staff with changes to the plan set identified in the Staff Review Letter, which is attached to this case.

The proposed PUD and Subdivision are tentatively scheduled for review by the Parks and Recreation Commission at their March meeting.

Alternatives

Alternative 1: Recommend approval of Ordinance #17-08 rezoning the Subject Property from R-1 Residential (Rural Developing) to PUD (Planned Unit Development) and recommend approval of Resolution # 17-04-083 granting Preliminary Plat approval of Covenant Meadows, contingent upon compliance with the Staff Review Letter. Staff believes that the proposed development is reasonable, compatible with the character of the surrounding development, minimizes impacts to steep slopes adjacent to the Trott Brook, and provides the City and its residents with an important natural resource amenity surrounding Trott Brook. Staff supports Alternative 1.

Alternative 2: Recommend denial of Ordinance #17-08 rezoning of the Subject Property from R-1 Residential (Rural Developing) to PUD (Planned Unit Development). If the Planning Commission recommends denial of the rezoning then it should also recommend denial of the proposed Preliminary Plat and Resolution #17-04-083 as the proposed plat would only be considered under the zoning guidance of a PUD. However, the proposed development and public benefit in connection to the PUD request is viewed as adequate by Staff and thus, Staff is not supportive of this alternative.

Funding Source:

All costs associated with processing the Application are the responsibility of the Applicant.

Recommendation:

Staff recommends approval of Resolution #17-04-083 granting preliminary plat approval of Covenant Meadows and approval of Ordinance #17-08 rezoning of the Subject Property from R-1 Rural Developing to PUD (Planned Unit Development).

Action:

Motion to recommend City Council adopt Ordinance #17-08 rezoning the Subject Property from R-1 Residential (Rural Developing) to PUD (Planned Unit Development) and to recommend approval of Resolution #17-04-083 granting preliminary plat approval of Covenant Meadows, contingent upon compliance with the Staff Review Letter dated February 24, 2017.

Attachments

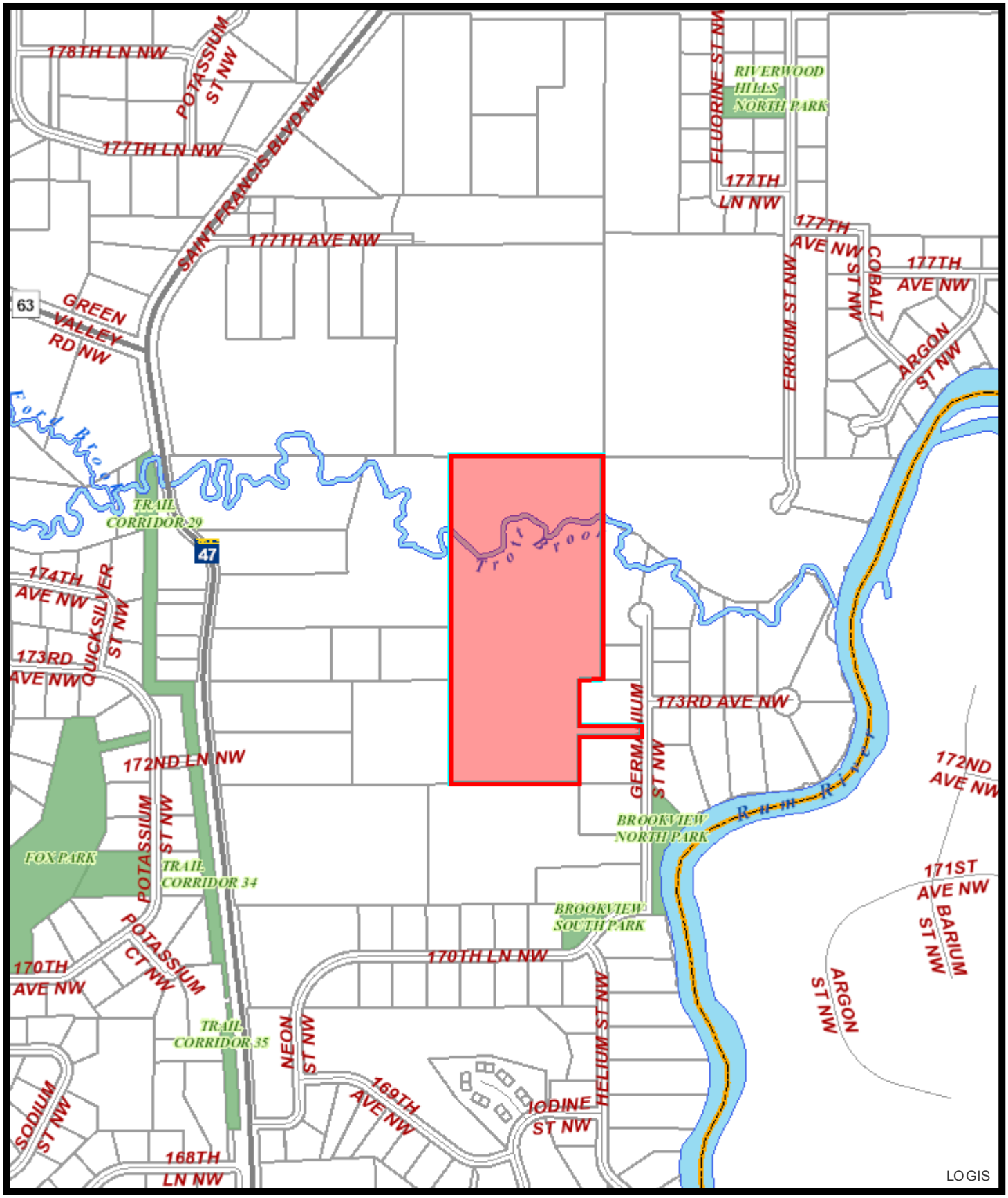
Site Location Map
Application Document
Complete Plan Set
Staff Review Letter
Supporing Info Regarding New Wells
Draft Planning Commission Meeting Minutes Dated March 2, 2017
City Council Meeting Minutes Dated March 14, 2017
Ordinance #17-08
Resolution #17-04-083: Preliminary Plat

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	03/31/2017 11:29 AM
Form Started By: Chris Anderson		Started On: 03/29/2017 03:14 PM
Final Approval Date: 03/31/2017		

02-32-25-44-0004

Site Location Map



Feet
0 190 380 760 1,140 1,520

Print Date: December 1, 2016

City of RAMSEY

RECEIVED
FEB 03 2017
BY:

Land Use Application

☐ Plat – Sketch Plan	☑ Plat – Preliminary Plat	☐ Plat – Final Plat
☐ Administrative Plat	☐ Site Plan Review	☐ Easement/ROW Vacation
☐ Conditional Use Permit	☐ Interim Use Permit	☐ Comprehensive Plan Amendment
☑ Zoning Amendment	☐ Home Occupation Permit	☐ Variance
☐ Dwelling Moving Permit	☐ Environmental Permit	☐ Registered Land Survey
☐ Non-Traditional Animal License	☐ Beekeeping License	☐ Private Kennel License

Applicant Contact Information

Please note: All official communication will be routed through this contact.

Name:	Eric Thomsen		
Street Address:	6210 Green Valley RD		
City, State, ZIP:	Ramsey		
Home Phone:	763 753-5716	Work Phone:	612 919-6862
Email:	eThomsen@a-p.com	Fax Number:	
Name of Business (if applicable):			
Business Address (if applicable)			
Business City, State, ZIP			
Business Phone:		Business Fax:	

Subject Property Information

(Location of Application)

Address	172nd Lane NW Ramsey MN
PIN	02-32-25-44-0004
Legal Description	
Zoning District	

Contact the Planning Division at 763-433-9824 or planning@cityoframsey.com to request a Zoning Verification

Property Owner Information

(If different than Applicant)

Name:	National Growth LLC		
Street Address:	16323 E Ridgeline Dr		
City, State, ZIP:	Fountain Hills AZ 85268		
Home Phone:	602-685-5400	Work Phone:	480-634-5965
Email:	aLawabni@anmedical transport.com	Fax Number:	480-634-5976

Please provide a detailed description of your request and attached a copy of a scaled site plan

Rezoning To PAD 12 Lots preliminary Plat

A "Land Use Sign" will be placed on the Subject Property to allow Ramsey Residents the opportunity to obtain information about your request.

Applicant Signature	Eric Thomson	Co-Applicant Signature	
Printed Name	Eric Thomson	Printed Name	
Title	Owner	Title	
Date	2/2/2017	Date	

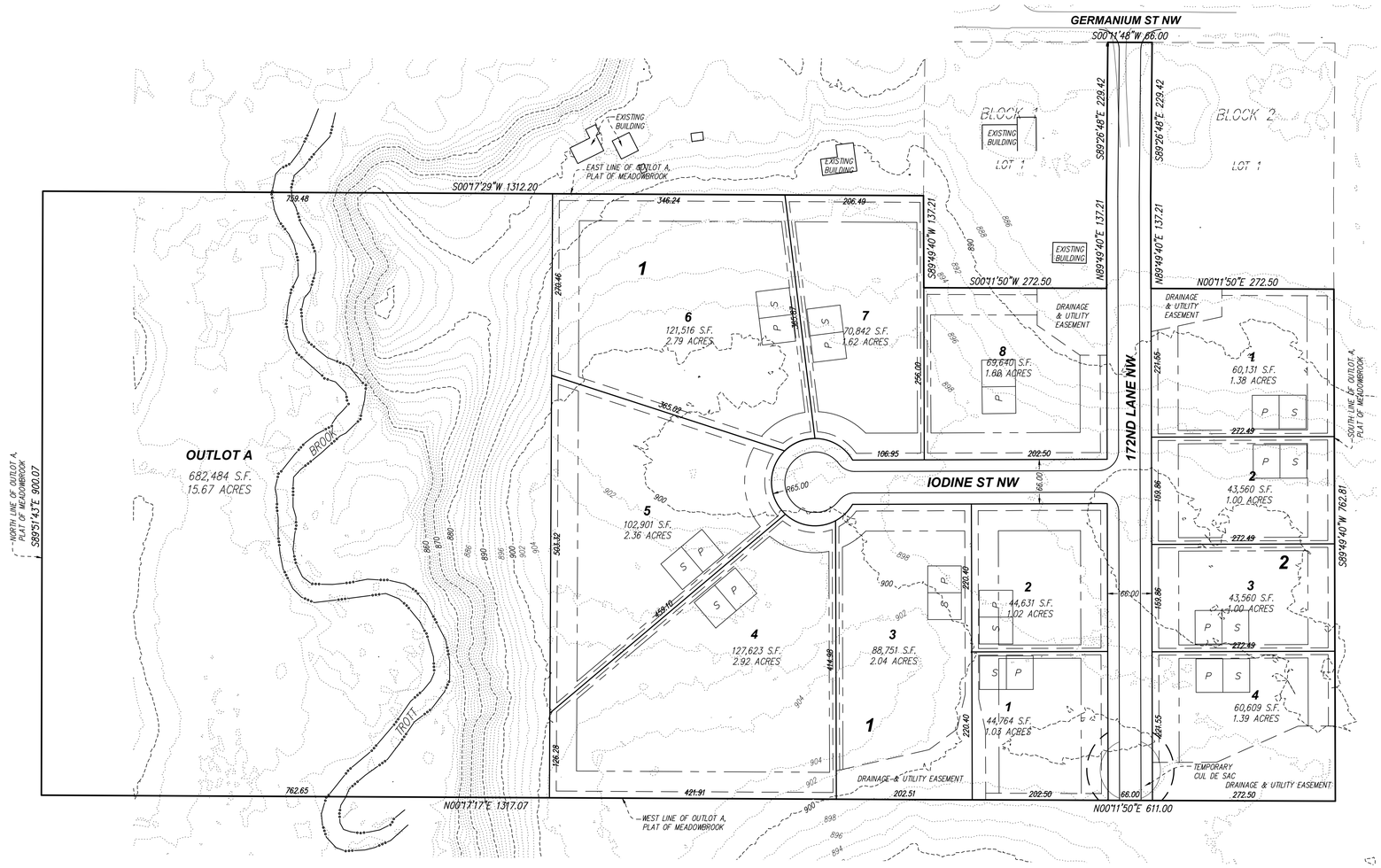
I understand that the application fee is non-refundable. All costs associated with the processing of this application are the responsibility of the applicant whether this application is approved or denied. Any excess of escrow account deposits over expenditures will be refunded at the time of account closure. I also understand that as the applicant, it is my responsibility to obtain all other permits or licenses required by any applicable regulatory agencies for this Land Use Application.

Property Owner Signature		Property Owner Signature	
Printed Name	ABED LAWABNI	Printed Name	Nohad Loabneh.
Title	C.E.O	Title	CEO
Date	02-02-2017	Date	2/2/17

I hereby certify that I am the fee title owner/contract for deed vendee of record for the above-mentioned property. Failure to prove ownership may void any agreements entered into the City and I will be held liable for any and all costs incurred by the City.

PRELIMINARY PLAT OF:
COVENANT MEADOWS

0 50 100 200
(SCALE IN FEET)



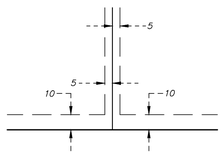
OWNER/DEVELOPER

Brookview Estates, LLC
6210 Green Valley Road
Ramsey, MN 55303

PROPERTY DESCRIPTION

Outlot A, MEADOWBROOK, according to the plat of record thereof, Anoka County, Minnesota.

DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:



BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES, ALSO BEING 10 FEET IN WIDTH AND ADJOINING RIGHT-OF-WAY AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THIS PLAT.

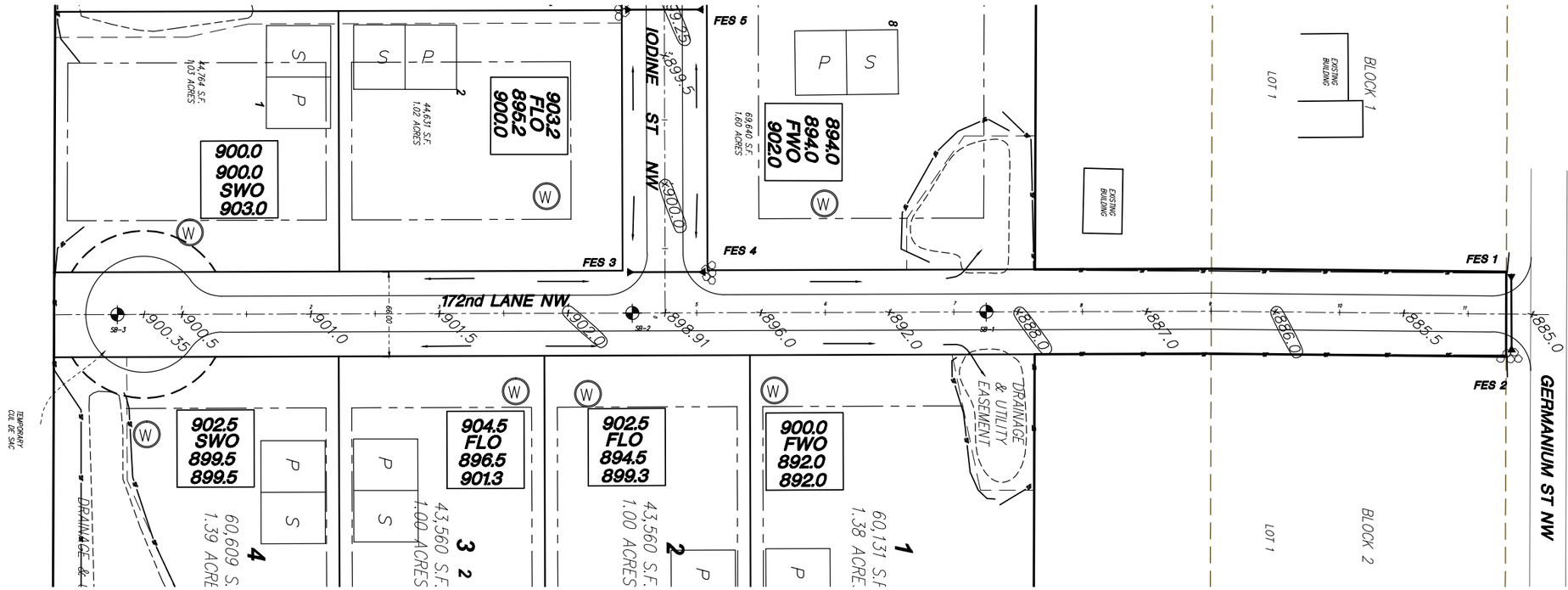
I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA

DATED: 2/2/17
KYLE R. RODDY, MN LIC. NO 42627

COPYRIGHT 2016 BY LHB, INC. ALL RIGHTS RESERVED.

LHB
PERFORMANCE DRIVEN DESIGN.
LH@lhbcorp.com
200 3rd Ave NE, Suite 100 | Cambridge, MN 55008 | 763.689.4042

172ND LANE NW IS 1163 FEET IN LENGTH FROM THE CENTERLINE OF GERMANIUM ST NW TO THE WESTERN BOUNDARY OF THE PLAT.



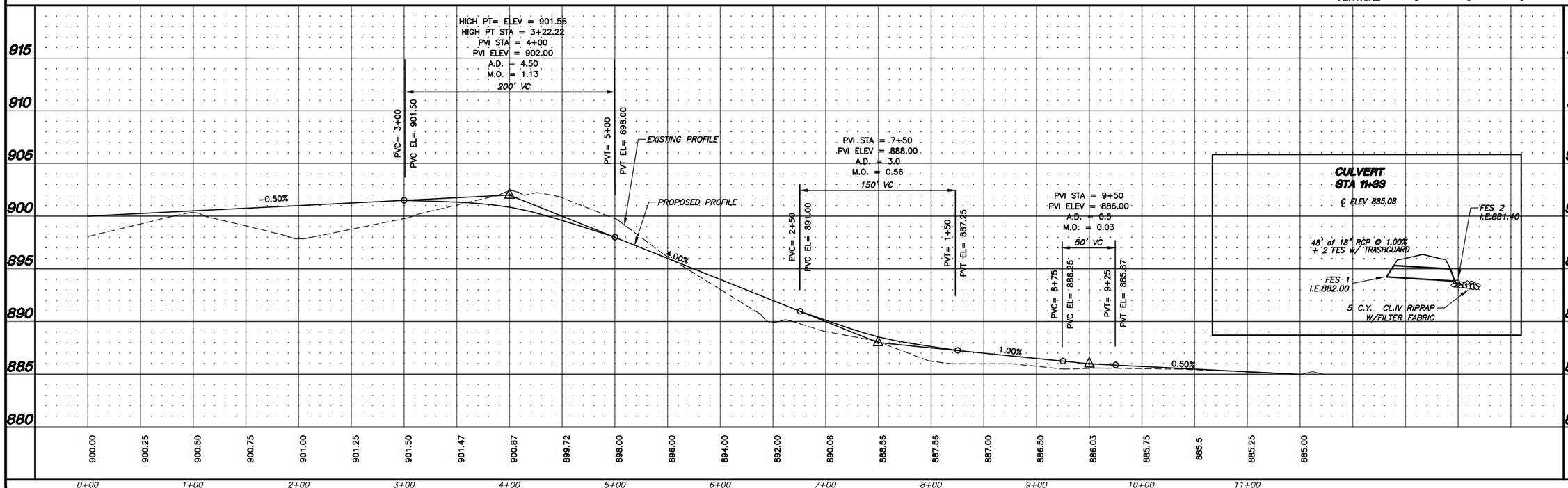
LINE TYPE LEGEND

- SF — SILT FENCE
- SETBACK
- EASEMENT
- LOT LINE
- R/W

N W E S

HORIZONTAL 50 0 50 100

VERTICAL 5 0 5 10



ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

BY	REVISIONS	DATE
	RECORD DRAWING	

COVENANT MEADOWS
STREET & STORM SEWER
172nd LANE NW
RAMSEY, MINNESOTA

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.

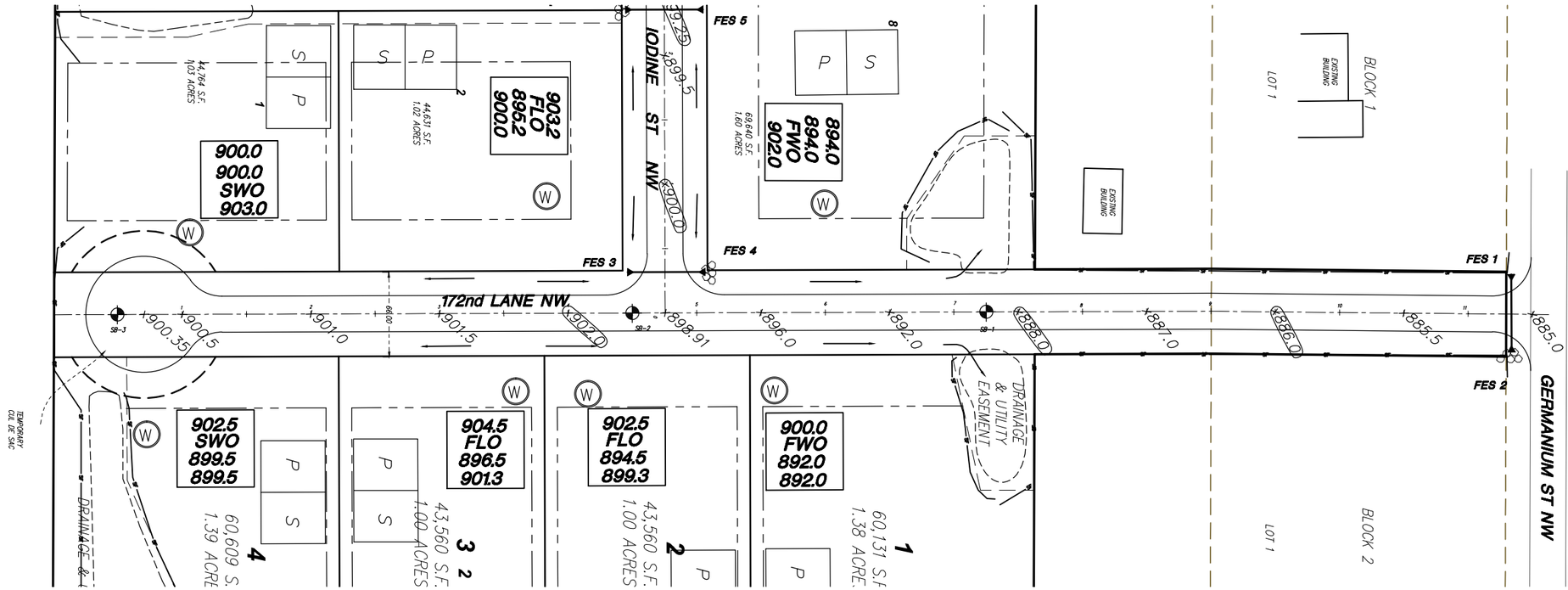
DATE 2/2/17 REG. NO. 24019

BRENT ROSHELL

DRAWN	DATE	SCALE	PROJECT	CHECKED	APPROVED
BR	12/19/16	1"=50'	RE-32	BTR	BTR

C1

172ND LANE NW IS 1163 FEET IN LENGTH FROM THE CENTERLINE OF GERMANIUM ST NW TO THE WESTERN BOUNDARY OF THE PLAT.



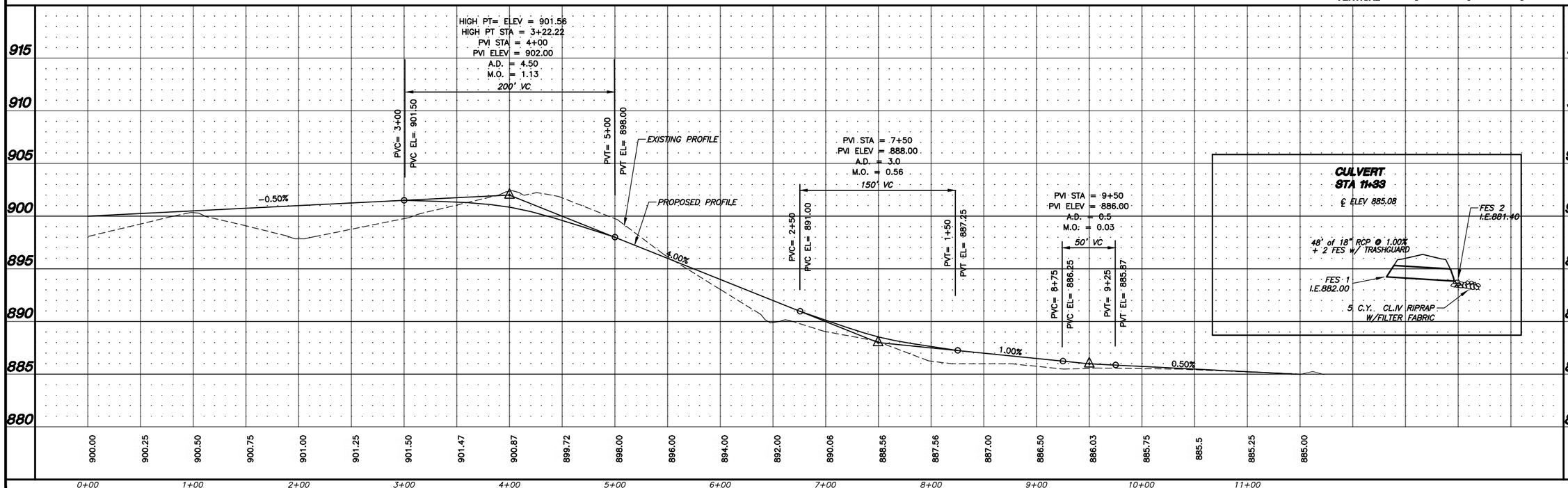
LINE TYPE LEGEND

- SF — SILT FENCE
- SETBACK
- EASEMENT
- LOT LINE
- R/W

N W E S

HORIZONTAL 50 0 50 100

VERTICAL 5 0 5 10



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BY	REVISIONS	DATE
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COVENANT MEADOWS
STREET & STORM SEWER
172nd LANE NW
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BR	12/19/16	1"=50'	RE-32	BTR	BTR

C1

IODINE ST NW IS 513 FEET IN LENGTH FROM THE CENTERLINE OF 172ND LANE NW TO THE NORTH EDGE OF THE CUL-DE-SAC TRAVEL SURFACE

LINE TYPE LEGEND

- SF — SILT FENCE
- SETBACK
- EASEMENT
- LOT LINE
- R/W

1 — 121,516 S.F. 2.79 ACRES — 900.0 / 895.2 FLO / 903.2

6

7 — 70,842 S.F. 1.62 ACRES — 900.0 / 895.2 FLO / 903.2

8 — 69,640 S.F. 1.60 ACRES — 894.0 / 894.0 FWO / 902.0

5 — 102,901 S.F. 2.36 ACRES — 901.0 / 896.2 FLO / 904.2

4 — 905.2 / FLO / 897.2 / 902.0

3 — 903.2 / FLO / 895.2 / 900.0

2 — 44,631 S.F. 1.02 ACRES — 903.2 / FLO / 895.2 / 900.0

IODINE ST NW — 66.00 — R65.00 — x900.55 — x900.34 — x900.0 — x899.5 — x899.25 — x899.5 — x900.0 — x898.91 — x892.0 — x896.0 — x886.0

172nd LANE NW — 66.00 — x902.0 — x901.5

FES 6 — FES 4 — FES 6 — FES 3

HORIZONTAL 50 0 50 100

VERTICAL 5 0 5 10

PVI STA = 2+50
PVI ELEV = 899.26
A.D. = 1.00
M.O. = 0.06
50' VC
PVI= 2+75 EL= 899.38
PVT EL= 899.38
PVC= 2+25 EL= 899.38
PVC EL= 899.38

PVI STA = 1+00
PVI ELEV = 900.01
A.D. = 1.60
M.O. = 0.16
80' VC
PVI= 1+40 EL= 899.81
PVT EL= 899.81
PVC= 0+60 EL= 899.57
PVC EL= 899.57

EXISTING PROFILE
PROPOSED PROFILE
0.50%
0.50%
1.10%

CULVERT STA 2+35
℄ ELEV 899.35
40' of 18" RCP @ 1.00% + 2 FES w/ TRASHGUARD
FES 5 I.E.896.00
5 C.Y. CL.IV RIPRAP W/FILTER FABRIC
FES 6 I.E.895.48

CULVERT STA 0+40
℄ ELEV 899.35
48' of 18" RCP @ 1.00% + 2 FES w/ TRASHGUARD
FES 4 I.E.898.40
FES 3 I.E.899.00
5 C.Y. CL.IV RIPRAP W/FILTER FABRIC

915 910 905 900 895 890 885 880

900.51 900.26 900.01 899.76 899.51 899.32 899.51 899.76 899.85 899.46 898.91

4+00 3+00 2+00 1+00 0+00

Z:\ALS JOBS\2003\129-03\129-03.dwg 1/5/2009 12:51:46 PM CST

BY | DATE | REVISIONS | RECORD DRAWING

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

COVENANT MEADOWS

STREET & STORM SEWER
IODINE ST NW
RAMSEY, MINNESOTA

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DRAWN BR
DATE 12/19/16
SCALE 1"=50'
PROJECT RE-32
CHECKED BTR
APPROVED BTR

C2

IODINE ST NW IS 513 FEET IN LENGTH FROM THE CENTERLINE OF 172ND LANE NW TO THE NORTH EDGE OF THE CUL-DE-SAC TRAVEL SURFACE

LINE TYPE LEGEND

- SF — SILT FENCE
- SETBACK
- EASEMENT
- LOT LINE
- R/W

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172nd LANE NW — 66.00 — x902.0 — x901.5

FES 6 — FES 4 — FES 6 — FES 3

HORIZONTAL 50 0 50 100

VERTICAL 5 0 5 10

PVI STA = 2+50
PVI ELEV = 899.26
A.D. = 1.00
M.O. = 0.06
50' VC
PVI= 2+75 EL= 899.38
PVT EL= 899.38
PVC= 2+25 EL= 899.38
PVC EL= 899.38

PVI STA = 1+00
PVI ELEV = 900.01
A.D. = 1.60
M.O. = 0.16
80' VC
PVI= 1+40 EL= 899.81
PVT EL= 899.81
PVC= 0+60 EL= 899.57
PVC EL= 899.57

EXISTING PROFILE
PROPOSED PROFILE
0.50%
0.50%
1.10%

CULVERT STA 2+35
℄ ELEV 899.35
40' of 18" RCP @ 1.00% + 2 FES w/ TRASHGUARD
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4+00 3+00 2+00 1+00 0+00

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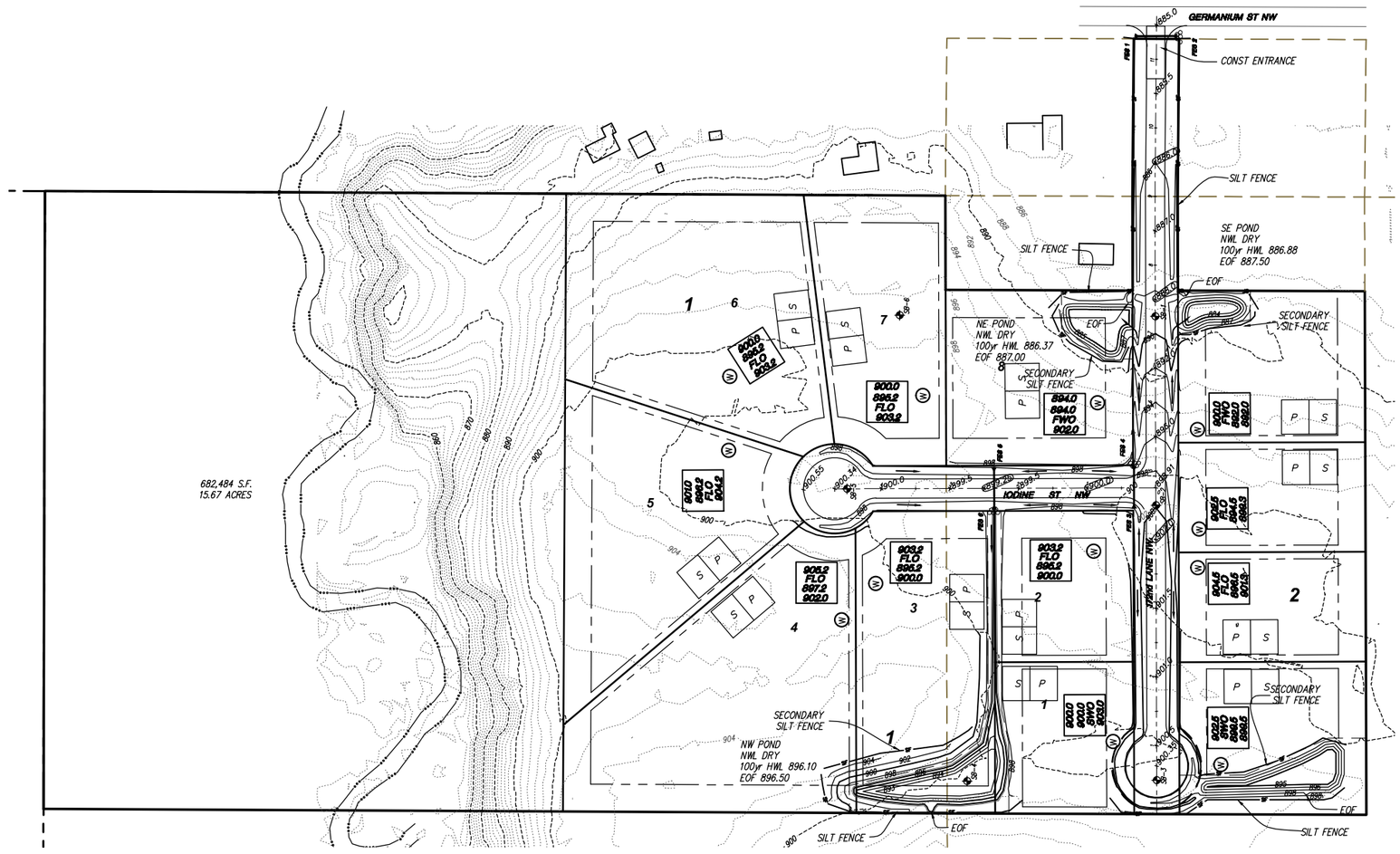
DRAWN BR
DATE 12/19/16
SCALE 1"=50'
PROJECT RE-32
CHECKED BTR
APPROVED BTR

C2



GRAPHIC SCALE

100 0 50 100 200

(IN FEET)

PROPERTY DESCRIPTION

Outlot A, MEADOWBROOK, according to the plat of record thereof, Anoka County, Minnesota.

NOTE: STREETS TO BE SWEPT DAILY OR AS DIRECTED BY THE CITY ENGINEER.

NOTE: NO ACTIVITY, OTHER THAN THE CONSTRUCTION OF, SHALL BE ALLOWED IN INFILTRATION POND AREAS.

NOTE: TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITY BY MEANS OF FENCING OR OTHER APPROVED METHOD.

NOTE: BUILDING PADS & DRAINFIELD SITE FOR GRAPHICAL PURPOSES ONLY. ACTUAL LOCATION MAY VARY.

NOTE: DRAINFIELD LOCATIONS, WHEN DETERMINED, ARE TO BE PROTECTED FROM CONSTRUCTION ACTIVITIES.

POND NOTES

INFILTRATION PONDS SHALL BE EXCAVATED BY USE OF BACKHOE WITH A TOOTHED BUCKET.

NE POND AND SE POND WILL REQUIRE OVER-EXCAVATION TO REMOVE A CLAY LAYER OF 4 FEET IN THICKNESS

BOTTOM OF POND SHALL NOT BE COMPACTED

NO TOPSOIL TO BE PLACED IN PONDS

PONDS TO BE SEED WITH MnDOT SEED MIX 33-262 (44 lb/ac)

PLACE SILT FENCE (SECONDARY) IMMEDIATELY AFTER GRADING COMPLETION

ACCESS TO PONDS VIA EASEMENTS ABUTTING PUBLIC ROADS

BUILDING PAD LEGEND

909.0	GARAGE FLOOR ELEVATION
FWO/MWO/SWO FLO/MLO/F	TYPE OF BUILDING
901.5	LOWEST FLOOR ELEVATION
909.0	LOWEST OPENING ELEVATION

BUILDING TYPE LEGEND

F	FULL BASEMENT
FWO	FULL BASEMENT WALKOUT
MWO	MODIFIED (NON STANDARD) WALKOUT BASEMENT VARIABLE 5 -12 COURSE BASEMENT
SWO	SPLIT ENTRY WALKOUT BASEMENT (5 COURSE)
FLO	FULL BASEMENT LOOKOUT ON 5 COURSE
MLO	MODIFIED (NON STANDARD) LOOKOUT BASEMENT VARIABLE 5 -12 COURSE BASEMENT

LINE TYPE LEGEND

- SF — SILT FENCE
- PROPOSED CONTOUR
- EXIST CONTOUR
- SETBACK
- EASEMENT
- LOT LINE
- R/W

REVISIONS	DATE	BY
RECORD DRAWING		

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

COVENANT MEADOWS

PRELIMINARY GRADING PLAN

RAMSEY, MINNESOTA

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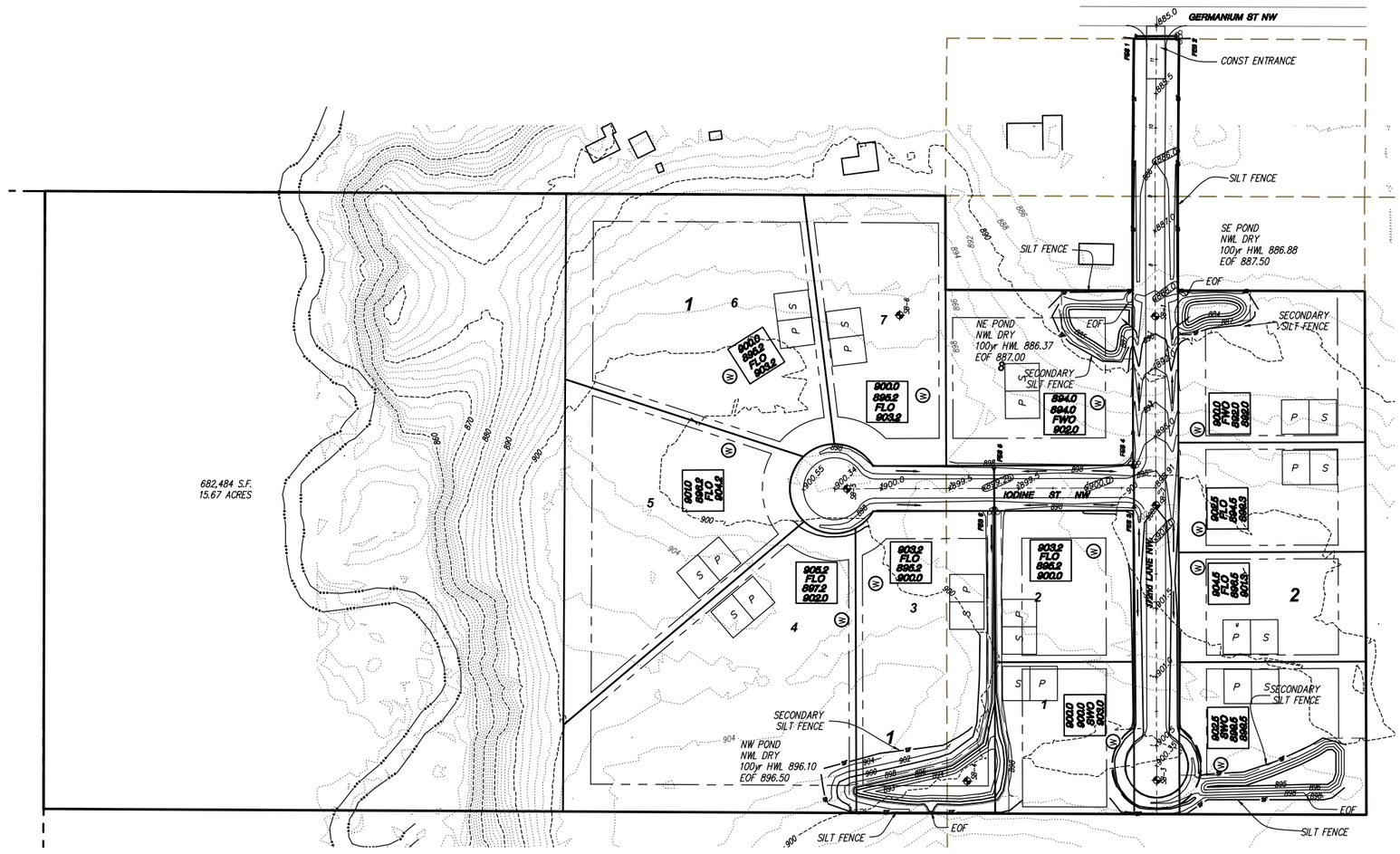
DATE 2/2/17 REG. NO. 24019

BRENT ROSHELL

DRAWN	DATE	SCALE	PROJECT	CHECKED	APPROVED
BR	12/19/16	AS SHOWN	RE-32	BR	BR

G1



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- EXIST CONTOUR
- SETBACK
- EASEMENT
- LOT LINE
- R/W

REVISIONS	DATE	BY
RECORD DRAWING		

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

COVENANT MEADOWS

PRELIMINARY GRADING PLAN

RAMSEY, MINNESOTA

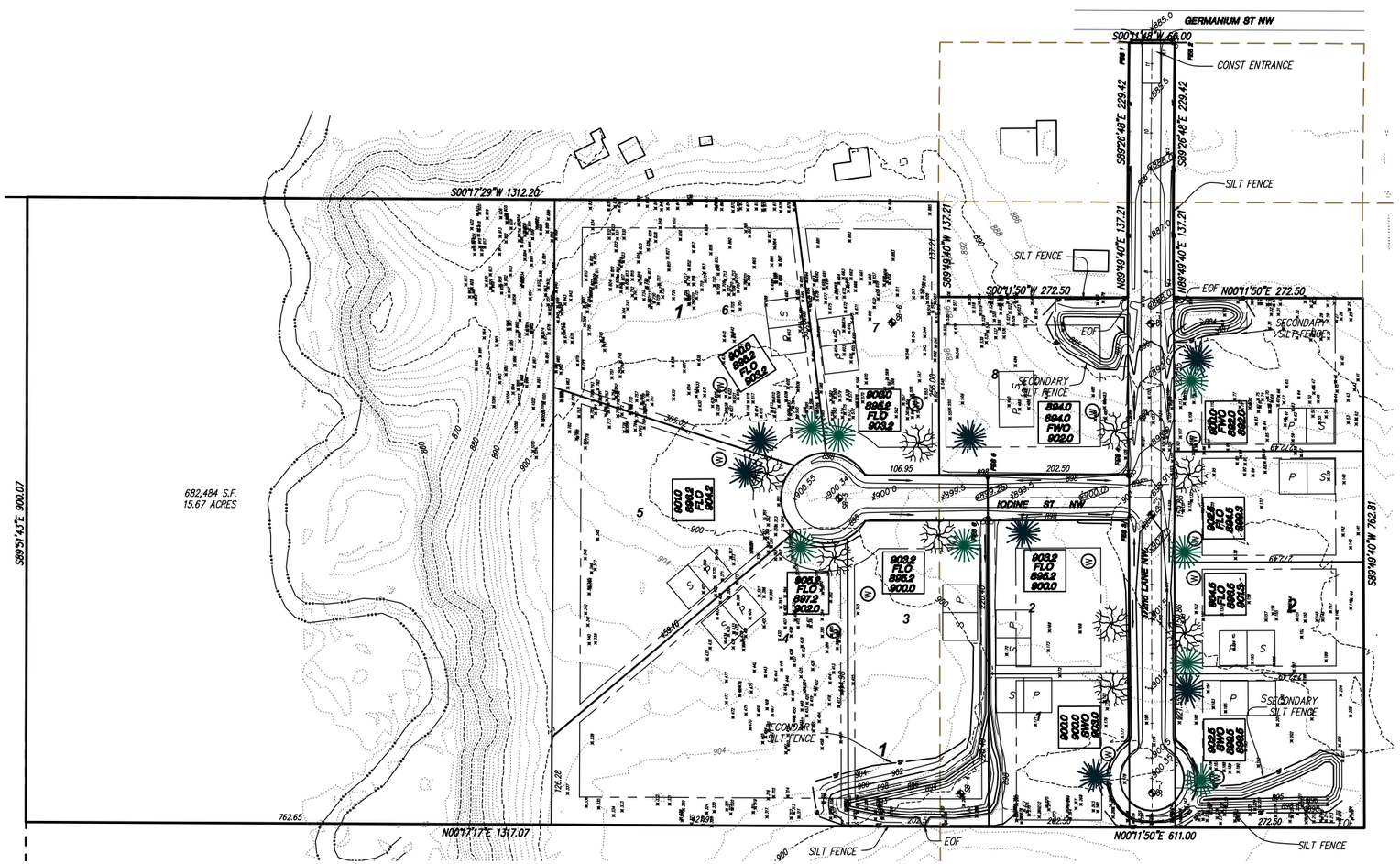
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

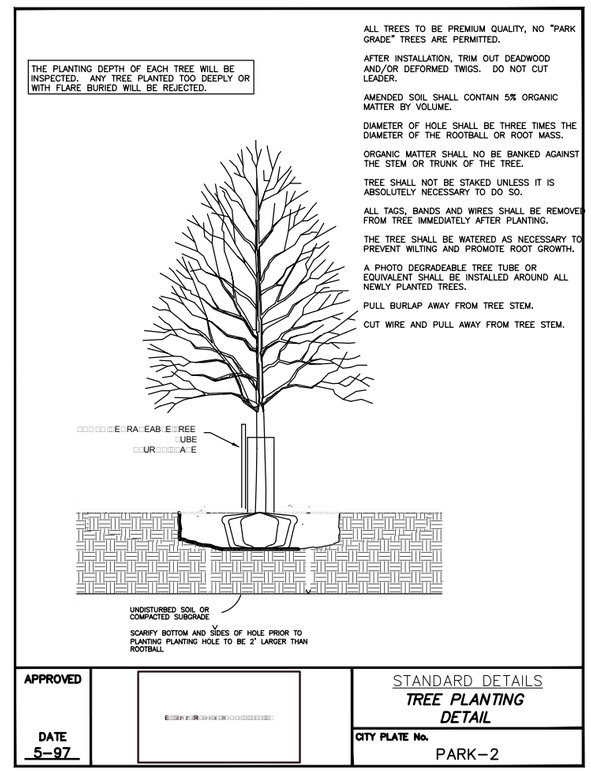
DATE 2/2/17 REG. NO. 24019

BRENT ROSHELL

DRAWN	DATE	SCALE	PROJECT	CHECKED	APPROVED
BR	12/19/16	AS SHOWN	RE-32	BR	BR

G1





GRAPHIC SCALE

100 0 50 100 200

(IN FEET)

LINE TYPE LEGEND

- SETBACK
- EASEMENT
- LOT LINE
- R/W
- CENTERLINE
- CURB & GUTTER
- TREE LINE w/TREE REMOVAL

PLANTING DEPTH SHALL BE SUCH THAT THE 1ST STE OF PRIMARY ROOTS IS AT FINISHED GRADE

ONLY PRUNE OUT DEAD/BROKEN/DEFORMED BRANCHES AT TIME OF INSTALLATION.

REMOVAL OF UPPER PORTION OF WIRE BASKET AND BURLAP AFTER BEING PLACED IN PLANTING HOLE IF USING B&B STOCK.

2–4 INCHES OF WOOD CHIP MULCH SHALL BE INCLUDED AROUND ALL TREES. MULCH SHALL NOT BE PILED AGAINST THE TRUNK OF TREES.

TOPSOIL: EACH INDIVIDUAL LOT WILL NEED TO HAVE FOUR (4) INCHES OF TOPSOIL MEETING THE CITY'S TOPSOIL SPECIFICATION. A TOPSOIL INSPECTION IS REQUIRED PRIOR TO LANDSCAPING BEING INSTALLED AND COPIES OF THE LOAD TICKETS ARE REQUIRED AS WELL. THIS IS REVIEWED AT TIME OF BUILDING PERMIT APPLICATION AND REQUEST FOR CERTIFICATE OF OCCUPANCY FOR EACH INDIVIDUAL LOT.

PLANTING REQUIREMENTS

TREES:
OVERSTORY DECIDUOUS TREES 1" DIAMETER MEASURED 6' FROM THE BASE AT PLANTING

CONIFEROUS TREES MUST HAVE A MINMUM HEIGHT OF 6 FEET

– MINIMUM 25% DECIDUOUS AND CONIFEROUS

PROPOSED CONIFEROUS TREES /QTY

DENOTES BLACK HILLS SPRUCE (PICEA GLAUCA DENSATA) — *7 EACH*

PROPOSED DECIDUOUS TREES /QTY

DENOTES WHITE OAK (QUERCUS ALBA) — *9 EACH*

DENOTES AUTUMN BLAZE MAPLE (ACER FREEMANII) — *8 EACH*

BY | DATE | REVISIONS | RECORD DRAWING

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

COVENANT MEADOWS

TREE / LANDSCAPE PLAN

RAMSEY, MINNESOTA

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.
DATE 2/2/17 REG. NO. 24519
BRENT ROSHELL

DRAWN	BR
DATE	2/2/17
SCALE	AS SHOWN
PROJECT	RE-32
CHECKED	BTR
APPROVED	BTR

L1

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE

PROJECT SITE EVALUATION, ASSESSMENT, AND PLANNING

THIS NARRATIVE IS TO SERVE AS A GUIDANCE PLAN AND MUST BE AMENDED AND MODIFIED AS SITE CONDITIONS CHANGE DURING CONSTRUCTION.

PROJECT LOCATION/DESCRIPTION

PROJECT/SITE NAME: COVENANT MEADOWS
PROJECT NUMBERS: RE-33
PROJECT LOCATION: STREET: 173rd & GERMANIUM CITY/TOWNSHIP: RAMSEY COUNTY: ANOKA
STATE: MINNESOTA ZIP: 55303
LATITUDE/LONGITUDE: 45.2845/-93.4102 SECTION: 2 TOWNSHIP: 32N RANGE: 25W

CONTACT INFORMATION/RESPONSIBLE PARTIES

ERIC THOMSEN OWNS THE LAND, ADJACENT ROADS, AND EASEMENT AREAS ASSOCIATED WITH THE PROJECT. ERIC THOMSEN IS THE OWNER PERMITTEE APPLYING FOR PERMIT COVERAGE AND WILL BE RESPONSIBLE FOR DEVELOPING THIS SWPPP AND THE LONG-TERM MAINTENANCE PLAN OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM FOR THIS PROJECT (IF APPLICABLE). THE OWNER WILL ENSURE THAT THE DESCRIBED WORK IN THE SWPPP IS BEING COMPLETED BY THE OPERATOR PERMITTEE.

OWNER/PERMITTEE: ERIC THOMSEN
6210 GREEN VALLEY RD
RAMSEY, MN 55303
612-919-6862

THE PRIMARY CONTRACTOR WILL ENTER INTO A CONTRACT WITH ERIC THOMSEN TO COMPLETE THE REQUIRED WORK FOR THIS PROJECT. THE PRIMARY CONTRACTOR WILL BECOME (UNDER CONTRACT) THE OPERATOR CO-PERMITTEE ON THE NPDES PERMIT (THROUGH EXECUTION OF A NPDES PERMIT MODIFICATION FORM), AND THEREBY AGREE TO IMPLEMENT THIS SWPPP IN COOPERATION WITH THE OWNER. THE OPERATOR IS RESPONSIBLE FOR DEVELOPING A CHAIN OF RESPONSIBILITY PRIOR TO STARTING CONSTRUCTION (REFER TO SWPPP AMENDMENT SECTION). THE NPDES PERMIT MODIFICATION FORM SHALL BE SUBMITTED TO THE MPCA AFTER THE PROJECT IS AWARDED TO THE PRIMARY CONTRACTOR, PRIOR TO LETTING THE PROJECT.

THE OPERATOR WILL INSURE THAT INDIVIDUALS OVERSEEING OR IMPLEMENTING THE SWPPP HAVE BEEN PROPERLY TRAINED AND THAT CERTIFICATIONS WILL BE MADE AVAILABLE UPON REQUEST. THIS INCLUDES ANY SUB-CONTRACTORS THAT THE OPERATOR EMPLOYS UNDER SEPARATE CONTRACT. THE OPERATOR WILL PROVIDE THE CONTACT INFORMATION FOR THE EROSION CONTROL SUPERVISOR, SITE SUPERINTENDENT/FOREMAN, AND BMP INSTALLERS. THE EROSION CONTROL SUPERVISOR SHALL BE A RESPONSIBLE EMPLOYEE OF THE PRIME CONTRACTOR AND/OR DULY AUTHORIZED BY THE PRIME CONTRACTOR TO REPRESENT THE PRIME CONTRACTOR ON ALL MATTERS PERTAINING TO THE NPDES CONSTRUCTION STORMWATER PERMIT COMPLIANCE. THE EROSION CONTROL SUPERVISOR SHALL HAVE AUTHORITY OVER ALL OPERATOR OPERATIONS WHICH INFLUENCE NPDES PERMIT COMPLIANCE, INCLUDING GRADING, EXCAVATION, BRIDGE CONSTRUCTION, CULVERT INSTALLATION, UTILITY WORK, CLEARING/GRUBBING, DEWATERING, AND ANY OTHER OPERATION THAT INCREASES THE EROSION POTENTIAL ON THE PROJECT.

THE OPERATOR WILL PERFORM A PRECONSTRUCTION SITE VISIT TO ADDRESS ANY AREAS OF CONCERN PERTAINING TO ENVIRONMENTAL COMPLIANCE. THE OPERATOR WILL IMPLEMENT AND MAINTAIN BMPS FOR THE DURATION OF CONSTRUCTION PROJECT. THE OPERATOR WILL COMPLETE THE REQUIRED SITE INSPECTIONS TO REMAIN IN COMPLIANCE WITH NPDES PERMIT REQUIREMENTS PART II.B, II.C, III.B-F, IV, V, AND APPLICABLE CONSTRUCTION ACTIVITY REQUIREMENTS FOUND IN APPENDIX A, PART C.

OPERATOR/PERMITTEE: (TO BE DETERMINED THROUGH TRANSFER OF NPDES-CSW PERMIT)

ROSHELL ENGINEERING, LLC HAS BEEN CONTRACTED BY THE OWNER TO DEVELOP THE SWPPP PLAN FOR THIS PROJECT. THIS SWPPP WAS PREPARED BY AN INDIVIDUAL THAT HAS BEEN PROPERLY TRAINED IN ACCORDANCE TOM PART III.F OF THE NPDES PERMIT (CERTIFICATION CARDS ARE AVAILABLE UPON REQUEST). ROSHELL ENGINEERING, LLC WILL OFFER GUIDANCE FOR COMPLIANCE WITH THE NPDES PERMIT BEFORE, DURING, AND AFTER CONSTRUCTION OF THE PROJECT.

SWPPP DEVELOPER/WATER RESOURCE ENGINEER: SWPPP CERTIFICATION
ROSHELL ENGINEERING (BRENT ROSHELL) DESIGN OF CONSTRUCTION SWPPP
6192 267TH CT WYOMING, MN 55092 DR. SHRI WAMASWAMY
763-286-0521/roshellengineering@gmail.COM EXPIRATION MAY 31, 2018

AGENCY CONTACTS

AGENCY	PERMIT	NAME	PHONE NUMBER/E-MAIL
MPCA (EMERGENCY)	N/A	STATE DUTY OFFICER	1-800-422-0798
MPCA	NPDES-CSW #XXXXXXXXX	SCOTT FOX	651-757-2368/ SCOTT.FOX@STATE.MN.US
ACOE	SECTION 404	OFFICER	651-290-5525
DNR	N/A	N/A	N/A
ANOKA SWCD	WCA	KRIS GUENTZEL	763-434-2030/ KRIS.GUENTZEL@ANOKASWCD.ORG
WATERSHED DISTRICT	LRRWMO	BOB OBERMEYER	

PROJECT DESCRIPTION & SCHEDULE

COVENANT MEADOWS IS A RESIDENTIAL SUBDIVISION COMPRISED OF 12 LOTS TO BE CONSTRUCTED IN 1 PHASE. THE CONSTRUCTION ACTIVITIES WILL INCLUDE GRADING OPERATIONS OF STREETS, HOUSEPADS, SURFACE DRAINAGE, AND PONDS. UTILITY CONSTRUCTION, EXPOSED SOIL STABILIZATION, AND PAVING WILL OCCUR AFTER GRADING OPERATIONS.

TENTATIVE CONSTRUCTION SCHEDULE (OPERATOR SHOULD PROVIDE ESTIMATED CONSTRUCTION SCHEDULE TO THE ENGINEER)

CONSTRUCTION ACTIVITIES:

CLEARING & GRUBBING OPERATIONS, GRADING, TEMP,	APRIL 2017
POND	APRIL 2017
BRIDGE	N/A
CULVERT REMOVAL AND REPLACEMENT	N/A
CURB & GUTTER/SIDEWALK	JUNE 2017
SMALL UTILITIES	N/A
PAVING	JUNE 2017
INITIAL TURF, BRIDGE RAILING/LIGHTING	MAY 2017
LANDSCAPING, FINAL TURF, MISC.	JULY - OCT 2017

PRE-CONSTRUCTION IMPERVIOUS SURFACE AND DISTURBED AREA CALCULATIONS

TOTAL AREA TO BE DISTURBED - 9.70 ACRES
IMPERVIOUS AREA: PRE-CONSTRUCTION = 0.00/POST-CONSTRUCTION = 2.30 ACRES
NET INCREASE OF IMPERVIOUS AREA = 2.30 ACRES

PERMANENT STORMWATER MANAGEMENT SYSTEMS

THE NPDES PERMANENT WATER QUALITY VOLUME (PART III.D) FROM THE NET NEW IMPERVIOUS SURFACES OF THE PROJECT IS PROVIDED IN THE STORM WATER SUMMARY. HYDROLOGIC AND WATER QUALITY MODELING DATA IS AVAILABLE UPON REQUEST.

LOCATION OF SWPPP COMPONENTS

DESCRIPTION	TITLE	LOCATION
SWPPP NARRATIVE	STORM WATER POLLUTION PREVENTION PLAN NARRATIVE	SHEET SW1 & 2
SITE CONDITIONS	STORM WATER POLLUTION PREVENTION PLAN NARRATIVE	SHEET SW1 & 2
SITE MAP (SOILS, WATER RESOURCES, POTENTIAL POLLUTANT GENERATING ACTIVITIES)	SWPPP WATER RESOURCES & SOILS MAP, SWPPP NARRATIVE	SHEET SW1 & 2
CONSTRUCTION PHASING/STAGING, BUFFERS & AREAS NOT TO BE DISTURBED	SWPPP NARRATIVE	
DIRECTION OF FLOW (PRE- & POST-CONSTRUCTION	DRAINAGE PLAN	SHEET G1
IMPERVIOUS SURFACES	CONSTRUCTION PLAN & PROFILE	SHEET C1 & C2
TEMPORARY EROSION & SEDIMENT CONTROL BMPS/STEEP SLOPES (3:1), DNR FISH EXCLUSION "WORK IN WATER RESTRICTIONS - REFER TO SWPPP",	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN, SWPPP NARRATIVE	SHEET G1
PERMANENT EROSION CONTROL BMPS	TURF ESTABLISHMENT PLAN, SWPPP NARRATIVE	SHEET SW1 & SW2
STORM SEWER	DRAINAGE PLAN	SHEET G1
GRADING	GRADING PLAN	SHEET G1
ESTIMATED BMP QUANTITIES	ESTIMATED QUANTITIES	SHEET G1
BMP DETAILS/SPECIFICATIONS	MISC. DETAILS, SWPPP NARRATIVE	SHEET G1, D1-3
HYDROLOGIC/WATER QUALITY MODELING		AVAILABLE UPON REQUEST

EXISTING SITE CONDITIONS, SOILS, & WATER RESOURCES

SOILS AND NATIVE TOPSOIL: NATIVE TOPSOIL WILL BE STRIPPED AND STOCKPILED AND FINAL GRADING OPERATIONS, WHERE INDICATED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. METHODS AND EQUIPMENT TO MINIMIZE SOIL COMPACTION (IN PROPOSED INFILTRATION AREAS, DRIP LINE OF TREES TO BE PRESERVED, ETC.) SHALL BE DETERMINED BY THE OPERATOR'S SWPPP AMENDMENT. TRACKED VEHICLES ARE PREFERRED AND WHEELED VEHICLES ARE DISCOURAGED IN THESE AREAS.

DESCRIPTION OF RECEIVING WATERS (LOCATED WITHIN 1-MILE): STORMWATER FROM THIS PROJECT WILL BE CONVEYED INTO SEVERAL STORM SEWER PIPES AND STORMWATER PONDS. PROJECT DISCHARGE POINTS . THE NPDES PERMANENT WATER QUALITY VOLUME (PART III.D) FROM THE NET NEW IMPERVIOUS SURFACES OF THE PROJECT IS PROVIDED IN THE CONSTRUCTED PONDS. HYDROLOGIC AND WATER QUALITY MODELING DATA IS AVAILABLE UPON REQUEST.

DESCRIPTION OF IMPAIRED WATERS OR WATER SUBJECT TO TMDLS: A SPECIAL AND IMPAIRED WATERS SEARCH WAS COMPLETED USING THE MPCA SEARCH ENGINE (HTTP://PCA-GIS02.PCA.STATE.MN.US/CSW/INDEX.HTML) ON 12-7-2016 BASED ON THIS REVIEW, THE FOLLOWING SPECIAL OR IMPAIRED WATERS (WITH CONSTRUCTION RELATED IMPAIRMENTS) ARE LOCATED WITHIN ONE MILE OF, AND DOWNSTREAM OF ANY PROJECT DISCHARGE POINTS: NO DISCHARGE POINTS

C.1.A EXPOSED SOILS: OPERATOR SHALL STABILIZE ALL EXPOSED SOIL AREAS WITH (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED (APPENDIX A.C.1.A).

C.1.B TEMPORARY BASIN: OPERATOR SHALL ADHERE TO THE REQUIREMENTS DESCRIBED IN PART III.C. 1-5 OF THE NPDES CONSTRUCTION PERMIT FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (10) OR MORE ACRES DISTURBED.

C.2 POST CONSTRUCTION: THE WATER QUALITY VOLUME THAT MUST BE TREATED BY THE PROJECT'S PERMANENT STORMWATER MANAGEMENT SYSTEM DESCRIBED IN PART III.D. SHALL BE ONE (1) INCH OF RUNOFF FROM THE NEW IMPERVIOUS SURFACES CREATED BY THE PROJECT. WHERE SITE CONDITIONS ALLOW. AT LEAST ONE (1) INCH OF THE WATER QUALITY VOLUME MUST BE INFILTRATED. SEE PART III.D. FOR MORE INFORMATION ON INFILTRATION DESIGN AND APPROPRIATE SITE CONDITIONS. IF IT IS DETERMINED THAT SITE CONDITIONS ARE NOT APPROPRIATE FOR INFILTRATION (E.G. LACK OF 3 FT. OF SEPARATION TO SEASONALLY SATURATED GROUND WATER, PROXIMITY TO BEDROCK, CONTAMINATED SOILS) THE REASONS SHOULD BE DOCUMENTED IN THE SWPPP FOR THE PROJECT. INFILTRATION IS NOT REQUIRED IN HYDROLOGIC SOIL GROUP D SOILS.

C.3 BUFFER ZONE: AN UNDISTURBED BUFFER ZONE OF NOT LESS THAN 50 LINEAR FEET FROM THE SPECIAL WATER (NOT INCLUDING TRIBUTARIES) SHALL BE MAINTAINED AT ALL TIMES. EXCEPTIONS FROM THIS REQUIREMENT FOR AREAS, SUCH AS WATER CROSSINGS, LIMITED WATER ACCESS AND RESTORATION OF THE BUFFER ARE ALLOWED IF THE PERMITTEE FULLY DOCUMENTS IN THE SWPPP THE CIRCUMSTANCES AND REASONS THAT THE BUFFER ENCROACHMENT IS NECESSARY. REPLACEMENT OF EXISTING IMPERVIOUS SURFACE WITHIN THE BUFFER IS ALLOWED UNDER THIS PERMIT. ALL POTENTIAL WATER QUALITY, SCENIC AND OTHER ENVIRONMENTAL IMPACTS OF THESE EXCEPTIONS MUST BE MINIMIZED BY THE USE OF ADDITIONAL OR REDUNDANT BMPS AND DOCUMENTED IN THE SWPPP FOR THE PROJECT.
C.4 ENHANCED RUNOFF CONTROLS: THE PERMANENT STORMWATER MANAGEMENT SYSTEM MUST BE DESIGNED SUCH THAT THE PRE- AND POST-PROJECT RUNOFF RATE AND VOLUME FROM THE 1 AND 2-YEAR 24-HOUR PRECIPITATION EVENTS REMAIN THE SAME OR ARE REDUCED.

C.5 TEMPERATURE CONTROLS: THE PERMANENT STORMWATER MANAGEMENT SYSTEM MUST BE DESIGN SUCH THAT THE DISCHARGE FROM THE PROJECT WILL MINIMIZE ANY INCREASE IN THE TEMPERATURE OF TROUT STREAM RECEIVING WATERS RESULTING FROM THE 1-AND 2-YEAR 24-HOUR PRECIPITATION EVENTS. THIS INCLUDES ALL TRIBUTARIES OF DESIGNATED TROUT STREAMS WITHIN THE SECTION THAT THE TROUT STREAM IS LOCATED. PROJECTS THAT DISCHARGE TO TROUT STREAMS MUST MINIMIZE THE IMPACT USING ONE OR MORE OF THE FOLLOWING MEASURES, IN ORDER OF PREFERENCE:
A. MINIMIZE NEW IMPERVIOUS SURFACES.
B. MINIMIZE THE DISCHARGE FROM THE CONNECTED IMPERVIOUS SURFACES BY DISCHARGING TO VEGETATED AREAS, OR GRASS SWALES, AND THROUGH THE USE OF OTHER NON-STRUCTURAL CONTROLS.
C. INFILTRATION OR EVAPO-TRANSPIRATION OF RUNOFF IN EXCESS OF PRE-PROJECT CONDITIONS (UP TO THE 2-YEAR 24-HOUR PRECIPITATION EVENT.

POTENTIAL FOR SEDIMENT AND/OR OTHER POLLUTANT(S) DISCHARGING FROM THE PROJECT SITE

THE TEMPORARY EROSION AND SEDIMENT CONTROL BMPS IN THIS SWPPP HAVE BEEN DESIGNED TO MINIMIZE THE POTENTIAL OF SEDIMENTS DISCHARGING OFF-SITE FROM A 0.5 INCH RAINFALL WITHIN A 24-HOUR PERIOD. THE NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATE FOR THE PROJECT LOCATION WAS REVIEWED AND USED FOR ANTICIPATED INSPECTION FREQUENCY, BMP DESIGN, AND ESTIMATING CONSTRUCTION ACTIVITIES IN THIS SWPPP. ATLAS 14 RESULTS DO NOT NECESSARILY REFLECT ANY DESIGN CRITERIA IN THE PERMANENT STORMWATER MANAGEMENT SYSTEM.

ROUTINE INSPECTION AND BMP MAINTENANCE BY THE OPERATOR IS CRUCIAL IN ENSURING THE FUNCTIONALITY OF EACH BMP. STEEP SLOPES AND OTHER ENVIRONMENTALLY SENSITIVE AREAS THAT ARE AT A HIGHER RISK OF SEDIMENTATION ARE DEFINED IN THE SWPPP (IF APPLICABLE).

CONSTRUCTION PHASING/STAGING, BUFFERS, & AREAS NOT TO BE DISTURBED

THE PRESERVED AREAS OF EXISTING VEGETATION WILL BE IDENTIFIED ON THE PLAN SHEETS AS "DO NOT DISTURB AREA". THE OPERATOR IS RESPONSIBLE FOR PRESERVING A 50 FOOT NATURAL BUFFER OR (IF INFEASIBLE) PROVIDE REDUNDANT SEDIMENT CONTROL BMPS, WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET AND RECEIVES DRAINAGE FROM THE PROJECT'S GRADING LIMITS. THIS REQUIREMENT DOES NOT APPLY TO ADJACENT ROAD SIDE DITCHES, JUDICIAL/COUNTY DITCHES, STORMWATER CONVEYANCES, STORM DRAIN INLETS, AND SEDIMENT BASINS.

THERE IS NO CONSTRUCTION PHASING OR STAGING DEFINED BY THE OWNER FOR THIS PROJECT. THE SCHEDULE FOR INSTALLING TEMPORARY BMPS SHALL BE INCORPORATED INTO THE OPERATOR'S WEEKLY SCHEDULE FOR EACH CONSTRUCTION STAGE AND PRESENTED TO THE OWNER'S REPRESENTATIVE 9PER MNDOT SPEC 1717.D).

ENVIRONMENTALLY SENSITIVE AREAS

STEEP SLOPES: EXISTING AND PROPOSED SLOPES 1 IN 3 (33.33% AND STEEPER) THAT ARE PROPOSED TO BE DISTURBED ARE ILLUSTRATED ON THE STEEP SLOPES MAYBE TEMPORARILY CREATED DURING GRADING OPERATIONS, AT WHICH TIME TEMPORARY BMPS MUST BE IMPLEMENTED BY THE OPERATOR (THROUGH AN APPROVED SWPPP AMENDMENT) WITHIN 14 DAYS OF NO LONGER WORKING THE STEEP SLOPE.

CONTAMINATED PROPERTIES: THE MPCA'S "WHAT'S IN MY NEIGHBORHOOD" DATABASE (PCA-GIS02.PCA.STATE.MN.US/WIMN2/INDEX.HTML) WAS REVIEWED ON 12-7-16. THE RESULTS OF THIS REVIEW SHOW NO KNOWN CONTAMINATED PROPERTIES OR LEAK SOURCES LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS. NO PRE-EXISTING HAZARDOUS MATERIALS OR WASTES ARE ANTICIPATED TO BE IMPACTED BY THE PROJECT.

STORMWATER POLLUTION MITIGATION MEASURES (AS IDENTIFIED FROM ENVIRONMENTAL REVIEW): NO FORMAL ENVIRONMENTAL REVIEW WAS REQUIRED FOR THIS PROJECT, THEREFORE, NO ADDITIONAL STORMWATER RELATED MITIGATION MEASURES APPLY.

KARST AREAS: THERE ARE NO KNOWN KARST AREAS WITHIN OR ADJACENT TO THE PROJECT LIMITS.

SITE PLAN REQUIRED AREAS: NO AREAS OF "HIGH ENVIRONMENTAL RISKS" ARE KNOWN TO BE LOCATED WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT LIMITS.
EACH SITE PLANS MUST DETAIL PROPOSED ACTIVITIES, CORRESPONDING SCHEDULING, STAGING, TEMPORARY EROSION AND SEDIMENT CONTROLS, AND BMP DETAILS PER SECTION 1717 OF THE MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. SITE PLANS MUST BE APPROVED BY PROJECT ENGINEER PRIOR TO INITIATING THE SPECIFIED WORK WITHIN EACH SITE PLAN AREA.

FLOOD CONTINGENCY PLAN: NO PROJECT ACTIVITIES ARE LOCATED WITHIN A 100-YEAR FLOODPLAIN OR FLOODWAY, THEREFORE, A FLOOD CONTINGENCY PLAN IS NOT REQUIRED. THE PROJECT ENGINEER (AT THEIR DISCRETION) MAY REQUIRE A PREVENTATIVE FLOOD CONTINGENCY PLAN FOR SPECIFIC PROJECT ACTIVITIES AND AREAS THAT ARE NOT LOCATED IN A 100-YEAR FLOODPLAIN OR FLOODWAY.

FISH EXCLUSION DATES: OPERATOR IS PROHIBITED FROM CONDUCTING IN-STREAM WORK DURING THE FISH SPAWNING AND MIGRATION DATES OF APRIL 15 TO JUNE 30 FOR NON-TROUT WATERS. IF WORK MUST BE CONDUCTING DURING THIS TIMEFRAME, CONTRACTOR SHALL CONTACT THE LOCAL DNR FISHERIES MANAGER FOR WRITTEN APPROVAL PRIOR TO CONDUCTING THE IN-STREAM WORK.

AQUATIC INVASIVE SPECIES: ALL IN-STREAM AND DEWATERING EQUIPMENT SHALL BE DECONTAMINATED OF ALL AQUATIC PLANTS AND PROHIBIT INVASIVE SPECIES PRIOR TO USING WITHIN SURFACE WATERS ON-SITE AND TRANSPORTING OFF-SITE. ALL DECONTAMINATION ACTIVITIES SHALL MEET THE CHAPTER 1 STANDARDS OF THE MINNESOTA DNR'S BEST PRACTICES MANUAL FOR MEETING DNR GENERAL PUBLIC WATERS WORK PERMIT GP 2004-001.

WETLANDS
WETLANDS, IF ANY, WITHIN THE PROJECT AREA AND MUST BE PROTECTED TO THE MAXIMUM EXTENT POSSIBLE.

APPLICABLE FEDERAL, TRIBAL, STATE OR LOCAL PROGRAMS
THE PROJECT FALLS UNDER THE JURISDICTION OF SEVERAL ENTITIES, AS IDENTIFIED IN THE 'AGENCY CONTACTS" TABLE OF PAGE 1 OF THE SWPPP. THE MORE STRINGENT OF LOCAL VS. STATE VS. FEDERAL RULES SHALL APPLY WHERE THEY CONFLICT. INFORMATION PERTAINING TO THE STATE NPDES PERMIT CAN BE FOUND AT: (HTTP://WWW.PCA.STATE.MN.US/INDEX.PHP/WATER/WATER-TYPES-AND-PROGRAMS/STORMWATER/CONSTRUCTION-STORMWATER/INDEX.HTML). THE OPERATOR IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE PERMITS, MNDOT SPECIAL PROVISION, MNDOT SPEC BOOK (2014 EDITION), MNDOT SPECIFICATIONS 1717.

BY	DATE	REVISIONS
BR	6/16/16	SWPPP CERT

RECORD DRAWING

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

COVENANT MEADOWS
STORM WATER POLLUTION PREVENTION PLAN
RAMSEY, MINNESOTA

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.
DATE: 2/2/17 REG. NO. 24918
BRENT ROSHELL

DRAWN	BR
DATE	12/19/16
SCALE	-
PROJECT	RE-32
CHECKED	BTR
APPROVED	BTR

SW1

SEQUENCE OF CONSTRUCTION/TIMING OF BMP INSTALLATION

NO CONSTRUCTION OPERATIONS, INCLUDING REMOVALS, THAT REQUIRE EROSION & SEDIMENT CONTROL PER THE SWPPP CAN COMMENCE UNTIL THE OPERATOR'S EROSION CONTROL SUPERVISOR CERTIFIES THE PROPER INSTALLATION OF BMP'S AND A CHAIN OF RESPONSIBILITY FOR SWPPP IMPLEMENTATION IS CREATED FOR ALL OPERATORS ON THE SITE. PERIMETER SEDIMENT CONTROLS (SILT FENCE, INLET PROTECTION, CONSTRUCTION ENTRANCES, ETC.) SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. THESE PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ACHIEVED. OPERATOR SHALL IMPLEMENT THE NECESSARY ON SITE BMP'S IN ACCORDANCE WITH THE NPDES PERMIT REQUIREMENTS TO PREVENT NUISANCE CONDITIONS (MN RULES 7050.2010) FROM ANY DISCHARGES UNDER COVERAGE OF THE NPDES PERMIT. IN SOME CASES, MULTIPLE OR REDUNDANT APPLICATIONS OF SOME BMP'S MAY BE NEEDED TO MEET THESE REQUIREMENTS.

INSPECTION, SWPPP AMENDMENTS, RECORD KEEPING, & TRAINING

1. THE SWPPP CHAIN OF RESPONSIBILITY MUST BE AMENDED BY THE OPERATOR WHEN THE IDENTITY OF RESPONSIBLE SITE OPERATORS (EROSION CONTROL SUPERVISOR, SUB-CONTRACTORS, ETC.) ARE KNOWN.
2. THE OPERATOR MUST INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. THE OPERATOR SHALL PROVIDE A RAINFALL GAUGE ON-SITE, WITHIN ONE MILE OF THE SITE, OR SOURCE OF THE WEATHER REPORTING SYSTEM THAT USES SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES. THE LOCATION AND SOURCE OF THE RAINFALL GAUGE OR REPORTING SYSTEM MUST BE DOCUMENTED IN THE FIRST SWPPP INSPECTION REPORT. THE INSPECTION FREQUENCY MAY BE REDUCED TO ONCE PER MONTH, IF SITE CONDITIONS MEET PART IV.E3 OF THE NPDES PERMIT. ALL INSPECTIONS AND MAINTENANCE CONDUCTED MUST BE RECORDED IN WRITING BY THE OPERATOR AND RETAINED WITH THE SWPPP. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE:
   A. DATE, TIME AND NAME OF PERSON(S) CONDUCTING INSPECTIONS;
   B. FINDINGS OF INSPECTIONS, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTIONS;
   C. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES AND PARTY COMPLETING MAINTENANCE ACTIVITIES); INCLUDING DOCUMENTATION/PHOTOS OF IMPLEMENTED BMPS INTENDED TO CORRECT A PROBLEM BUT FAILED.
   D. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN ½ INCH (0.5 INCHES) IN 24 HOURS;
   E. DOCUMENTATION OF CHANGES MADE TO THE SWPPP.
3. SWPPP AMENDMENTS AND SITE PLANS WILL BE PREPARED BY THE OPERATOR AND SUBMITTED TO THE OWNER FOR REVIEW AND WRITTEN APPROVAL BY THE PROJECT OWNER (OR DESIGNATED REPRESENTATIVE). ALL OWNER ACCEPTED AND DENIED SWPPP AMENDMENTS AND SITE PLANS MUST BE RECORDED IN WRITING RETAINED WITH THE SWPPP.
4. THE SWPPP SHALL BE AMENDED TO INCLUDE ADDITIONAL OR MODIFIED BMPS, DESIGNED TO CORRECT IDENTIFIED PROBLEMS OR ADDRESS SITUATIONS (UNDER PART III.B OF THE NPDES PERMIT), PRIOR TO CONDUCTING SPECIFIC STAGES/PHASES OF THE PROJECT, AS REQUIRED BY THE OWNER AND DEFINED IN THIS PROJECT SWPPP.

SUMMARY OF OPERATOR PREPARED SWPPP AMENDMENT NAME	SWPPP AMENDMENTS (REQUIREDBY OWNER) SWPPP AMENDMENT DETAILS	SUBMITTAL TIMEFRAME
OPERATOR CHAIN OF RESPONSIBILITY	REFER TO "CONTACT INFORMATION/ RESPONSIBLE PARTIES' SECTION	7 DAYS PRIOR TO INITIATING WORK
BMP AMENDMENTS	SUBSTITUTED, ADDITIONAL, OR REDUNDANT BMPS TO COMPENSATE FOR FAILING/FAILED BMPS	DURING/AFTER CONSTRUCTION ACTIVITIES
METHODS TO MINIMIZE SOIL COMPACTION	REFER TO "EXISTING SITE CONDITIONS, SOILS AND WATER RESOURCES" SECTION	7 DAYS PRIOR TO WORK WITHIN INFILTRATION BASINS AND PRESERVED TREE AREAS
STEEP SLOPES PHASING PLAN	REFER TO "ENVIRONMENTALLY SENSITIVE AREAS" SECTION	
SPILL PREVENTION & RESPONSE PLAN	REFER TO "POLLUTION PREVENTION MEASURES"	7 DAYS PRIOR TO INITIATING WORK
DEWATERING PLAN	REFER TO "DEWATERING" SECTION	7 DAYS PRIOR TO ACTIVITY

1. THE SWPPP (ORIGINAL OR COPIES), ALL CHANGES TO THE SWPPP, PROJECT MANUAL, AND INSPECTIONS/MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE OPERATOR WHO HAS OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. THE SWPPP CAN BE KEPT IN THE FIELD OFFICE OR ON SITE VEHICLE DURING NORMAL WORKING HOURS.
2. THE OPERATOR MUST ASSIGN A TRAINED INDIVIDUAL (S) (PURSUANT TO PARTS III.A.3 & III.F) TO OVERSEE THE IMPLEMENTATION, MAINTENANCE, AND REPAIR OF BMPS. THIS INDIVIDUAL (S) SHALL ALSO PERFORM INSPECTIONS, REVISE/AMEND THE SWPPP (DOCUMENT IN SWPPP AS NECESSARY), AND BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE PERMITTED OWNER FOR ITS DESIGNEE), LOCAL GOVERNMENT UNITS, OR MPCA.

POLLUTION PREVENTION MANAGEMENT MEASURES

POTENTIAL SOURCES OF POLLUTANTS FROM CONSTRUCTION ACTIVITIES INCLUDE:

- SEDIMENT AND FUGITIVE DUST GENERATED FROM CLEARING AND GRUBBING, IMPORT/EXPORT OPERATIONS, REMOVALS/COMPACTION, MASS/FINE GRADING, EXCAVATIONS, TRENCHING, TOPSOIL STRIPING STOCKPILING, WET/DRY PAVEMENT CUTTING, STREET CONSTRUCTION.
- BASIC/ACIDIC PH LEVELS FROM CURB AND GUTTER, MANHOLE STRUCTURES, SIDEWALKS, DRIVEWAY APRONS, FOUNDATIONS, BRIDGE ABUTMENTS, WET/DRY PAVEMENT CUTTING, MASONRY WASHOUT/CLEANOUT.
- EXCESS NUTRIENTS FROM LANDSCAPING INSTALLATIONS, SOIL ADDITIVES, FERTILIZATION, MULCHING.
- HYDROCARBONS FROM STREET CONSTRUCTION, DEMOLITION/REMOVALS, WET/DRY PAVEMENT CUTTING.

OPERATOR WILL COMPLY WITH ALL OF THE POLLUTION PREVENTION AND MANAGEMENT MEASURES IDENTIFIED IN THE NPDES-CSW PERMIT. OPERATOR WILL SUBMIT A SPILL PREVENTION AND RESPONSE PLAN (SPRP) TO THE ENGINEER PRIOR TO ANY CONSTRUCTION ACTIVITY. THE SPRP MUST SATISFACTORILY ADDRESS (AT A MINIMUM) THE FOLLOWING NPDES REQUIREMENTS BY THE PROPOSED IMPLEMENTATION AND MAINTENANCE OF APPROPRIATE BMPS:

NO-EXPOSURE: CONSTRUCTION AND BUILDING PRODUCTS (THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS), PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPING MATERIALS MUST BE UNDER COVER (PLASTIC SHEETING OR TEMPORARY ROOFS) TO MINIMIZE CONTACT WITH STORMWATER AND PRECIPITATION.

SOLID WASTE: (SEDIMENT, ASPHALT, CONCRETE MILLINGS, CONSTRUCTION, AND DEMOLITION DEBRIS) AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND SHALL COMPLY WITH MPCA DISPOSAL REQUIREMENTS (CH. 7035).

HAZARDOUS MATERIALS: (E.G. GAS, DIESEL, OIL, ANTIFREEZE, PAINT SOLVENTS, SOAPS, DETERGENTS, WOOD PRESERVATIVES, CLEANING SOLVENTS, CURING COMPOUNDS, ACIDS, ETC.) MUST BE STORED IN SEALED CONTAINERS (WITH SECONDARY SPILL CONTAINMENT) IN RESTRICTED ACCESS AREAS TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE AND MATERIALS MUST BE IN COMPLIANCE WITH MPCA REGULATIONS (CH. 7045) INCLUDING SECONDARY CONTAINMENT.

PORTABLE TOILETS: MUST BE POSITIONED AND SECURED SO THEY ARE NOT TIPPED OR KNOCKED OVER. WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MPCA GUIDELINES (CH. 7041).

EQUIPMENT/VEHICLE FUELING, EXTERNAL WASHING, AND MAINTENANCE PRACTICES: WHEN VEHICLE FUELING, MAINTENANCE, OR EXTERNAL WASHING MUST OCCUR ON-SITE, THE ACTIVITY IS LIMITED TO A CONTAINED PORTION OF THE STAGING AREA, UNLESS INFEASIBLE THROUGH A SWPPP AMENDMENT. PROCEDURES FOR SPILL RESPONSE AND MATERIALS FOR CONTAINMENT AND CLEAN UP (DRIP PANS, DRY ABSORBENTS, AND SPILL KITS) WILL BE AVAILABLE AT ALL TIMES ON-SITE. ENGINE DEGREASING IS PROHIBITED ON-SITE.

CONCRETE, STUCCO, PAINT, CURING COMPOUNDS, SOLVENTS, AND OTHER WASHOUT WASTES: TEMPORARY OR LONG-TERM STORAGE OF WASHOUT WASTE IS PROHIBITED ON-SITE (SLURRY MUST BE HAULED IMMEDIATELY OFF-SITE). OPERATOR MUST SUBMIT A CONCRETE WASHOUT PLAN TO THE PROJECT ENGINEER FOR APPROVAL OF ALL ON-SITE WASHOUT LOCATIONS. ON-SITE WASHOUT LOCATIONS MUST BE LOCATED 200 FEET FROM AN ENVIRONMENTALLY SENSITIVE AREA AND SURFACE WATERS, HAVE "CONCRETE WASHOUT AREA" SIGNAGE, AND BE CONTAINED IN A LEAK PROOF CONTAINER OR IMPERMEABLE LINER. LIQUID AND SOLID WASTES SHOULD NOT CONTACT THE GROUND (UNLESS PERMITTED IN THE CONCRETE WASHOUT PLAN), BE CONTAINED TO PREVENT RUNOFF FROM THE WASHOUT LOCATION, AND MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS.

CONCRETE, STUCCO, PAINT, CURING COMPOUNDS, SOLVENTS, AND OTHER WASHOUT WASTES: TEMPORARY OR LONG-TERM STORAGE OF WASHOUT WASTE IS PROHIBITED ON-SITE (SLURRY MUST BE HAULED IMMEDIATELY OFF-SITE). OPERATOR MUST SUBMIT A CONCRETE WASHOUT PLAN TO THE PROJECT ENGINEER FOR APPROVAL OF ALL ON-SITE WASHOUT LOCATIONS. ON-SITE WASHOUT LOCATIONS MUST BE LOCATED 200 FEET FROM AN ENVIRONMENTALLY SENSITIVE AREA AND SURFACE WATERS, HAVE "CONCRETE WASHOUT AREA" SIGNAGE, AND BE CONTAINED IN A LEAK PROOF CONTAINER OR IMPERMEABLE LINER. LIQUID AND SOLID WASTES SHOULD NOT CONTACT THE GROUND (UNLESS PERMITTED IN THE CONCRETE WASHOUT PLAN), BE CONTAINED TO PREVENT RUNOFF FROM THE WASHOUT LOCATION, AND MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. (DUPLICATE)

BURNING: BURNING OF GARBAGE, CONSTRUCTION DEBRIS, TREES, BRUSH, OR OTHER VEGETATIVE MATERIAL IS NOT ALLOWED ON-SITE, UNLESS PRIOR APPROVAL IS GRANTED BY THE OWNER.

EROSION CONTROL PRACTICES, PROCEDURES, & MAINTENANCE STANDARDS

THE OPERATOR IS RESPONSIBLE FOR THE INSTALLATION, OPERATION, AND CONTINUED MAINTENANCE OF ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPS, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS, FOR THE DURATION OF THE CONSTRUCTION WORK AT TH SITE, UNTIL FINAL STABILIZATION IS ACHIEVED. ALL BMPS MUST BE ADEQUATELY LOCATED, DESIGNED, INSTALLED, AND MAINTAINED TO PREVENT EROSION FROM A MINIMUM 0.5 INCH TOTAL RAINFALL EVENT WITHIN 24 HOURS.

ALL NONFUNCTIONAL BMPS MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS UNLESS ANOTHER TIME FRAME IS SPECIFIED IN THE SWPPP. ALL ERODED MATERIAL THAT LEAVES THE SITE SHALL BE COLLECTED BY THE OPERATOR AND RETURNED TO THE SITE AT THE OPERATOR'S EXPENSE AND INCIDENTAL TO THE PROJECT COST.

TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED AS SOON AS POSSIBLE, BUT NO LATER THAN THE END OF THE NEXT WORK DAY FOLLOWING THE DAY EARTH-DISTURBING ACTIVITIES IN THAT PORTION OF THE SITE HAS TEMPORARILY OF PERMANENTLY CEASED. ALL EXPOSED SOIL AREAS SHALL BE STABILIZED WITHIN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. INITIATED STABILIZATION IS DEFINED AS COMPLETING ONE (OR MORE) OF THE FOLLOWING: SOIL PREPARATION FOR VEGETATION, MULCHING (OR OTHER TEMPORARY NONOVEGETATIVE BMP), SEEDING/PLANTING, OR SCHEDULING STABILIZATION MEASURES TO BE FULLY INSTALLED AND COMPLETED WITHIN THE 14 DAY TIMEFRAME.

ALL EXPOSED SOILS WITHIN 200 FEET AND DRAINING TO A DNR PUBLIC WATERS MUST BE STABILIZED WITHIN 24 HOURS OF TEMPORARILY OR PERMANENTLY CEASING WORK, DURING THE FISH SPAWNING PERIOD. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E. G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES ARE EXEMPT FROM THIS REQUIREMENT, BUT MUST BE IN COMPLIANCE WITH PART IV.C.5.

TEMPORARY STABILIZATION BMPS SHALL ONLY BE IMPLEMENTED WHEN PERMANENT STABILIZATION BMPS CANNOT BE IMPLEMENTED WITHIN THE 14 DAY TIMEFRAME FOR EXPOSED SOILS.

TEMPORARY/PERMANENT DRAINAGE DITCHES & SWALES: THE NORMAL WETTED PERIMETER (2-YEAR, 24-HOUR PRECIPITATION EVENT) OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH, CHANNEL, OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN THE LAST 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WITHIN 24 HOURS OF CONNECTION. STABILIZATION REMAINING OF THE REMAINING PORTIONS OF THE CHANNEL MUST BE STABILIZED WITHIN 14 DAYS. ALL STORMWATER CONVEYANCE CHANNELS MUST USE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES WITHIN AND ALONG THE LENGTH OF THE CHANNEL AND AT ANY OUTLETS. TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A TEMPORARY SEDIMENT CONTAINMENT SYSTEM (WITH PROPERLY DESIGNED ROCK DITCH CHECKS, BIO ROLLS, SILT DIKES ETC.) DO NO NEED TO BE STABILIZED. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM. MULCH, HYDROMULCH, TACKIFIER, OR POLYARCRYLAMIDE BELOW THE WETTED PERIMETER OF A DITCH, SWALE, OR OTHER SURFACE WATER CONVEYANCE IS NOT ACCEPTABLE STABILIZATION.

EROSION CONTROL BLANKETS/MATS: OPERATOR SHALL VERIFY DURING REGULAR INSPECTIONS THAT NO GULLIES, RILLS, OR SCOUR HOLES HAVE FORMED UNDER EROSION CONTROL BLANKETS AND MATS. ALL REPAIRS MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

MULCH: OPERATOR MUST APPLY MULCH IN A UNIFORM PATTERN OVER THE DISTURBED SOILS, TO ACHIEVE A MINIMUM OF 90% GROUND COVER.

DUST CONTROL: DUST FROM THE SITE WILL BE CONTROLLED BY INCREASED STREET SWEEPING AND/OR USING A MOBILE PRESSURE-TYPE DISTRIBUTOR TRUCK TO APPLY POTABLE WATER TO DISTURBED AREAS. THE MOBILE UNIT WILL APPLY WATER AT A RATE NECESSARY TO PREVENT RUNOFF AND PONDING.

STORM SEWER OUTLETS: PIPE OUTLETS MUST HAVE TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER HYDRAULIC CONNECTION TO A RECEIVING SURFACE WATER.

TEMPORARY & PERMANENT EROSION CONTROL BMPS

TYPE 1 MULCH: APPLY TO DISTURBED SLOPES LESS THAN 1:3 WITH BLOWER EQUIPMENT OR CONCURRENTLY WITH HYDROMULCH AT 2 TONS/ACRE. IMMEDIATELY OVERSPRAY (IF NOT HYDROMULCHED) WITH TACKIFIER (PER MANUFACTURES RECOMMENDED RATES) OR DISC-ANCHORED.

RAPID STABILIZATION METHOD #3: THIS WORK SHALL CONSIST OF OPERATIONS NECESSARY TO RAPIDLY STABILIZE SMALL CRITICAL AREAS WITHIN 200 FT OF SURFACE WATERS. TO PREVENT OFF-SITE SEDIMENTATION AND OR TO COMPLY WITH PERMIT REQUIREMENTS. INSTALL PER MNDOT SPECIFICATIONS 2575.3N.

RAPID STABILIZATION METHOD #4: (WOOD FIBER, NATURAL NET ONLY) IS AN ACCEPTABLE BMP FOR DISTURBED AREAS ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS, SURFACE WATERS, AND WITHIN THE LAST 200 FEET OF DITCH BOTTOMS.

TEMPORARY WINTER COVER: AREAS OF EXPOSED SOILS THAT ARE NOT COMPLETED BEFORE THE WINTER WILL BE STABILIZED WITH TYPE #3 (CERTIFIED AS WEED FREE) ADJACENT TO WETLAND OR STORMWATER PONDS. ALL OTHER DISTURBED AREAS SHALL BE STABILIZED WITH TYPE #1 MULCH, UNLESS ALTERNATIVE MORE PROTECTIVE BMPS ARE SPECIFIC WITHIN THE SWPPP. ALL EXPOSED SOILS SHALL BE STABILIZED BEFORE CONSTRUCTION IS COMPLETED FOR THE SEASON.

HYDRO-MULCH TYPE #5: HYDRAULIC SOIL STABILIZER IN COMBINATION WITH A TACKIFIER WILL BE INSTALLED PER MANUFACTURES SPECIFICATIONS TO EXPOSED SOILS AREAS TO PROVIDE TEMPORARY LONG-TERM OR PERMANENT COVER FOR VEGETATION ESTABLISHMENT.

SEDIMENT CONTROL PRACTICES, PROCEDURES, & MAINTENANCE STANDARDS

DOWN GRADIENT SYSTEMS: IF THE DOWN GRADIENT TREATMENT SYSTEM IS OVERLOADED, ADDITIONAL UP GRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS MUST BE INSTALLED TO ELIMINATE THE OVERLOADING, AND THE SWPPP MUST BE AMENDED TO IDENTIFY THESE ADDITIONAL PRACTICES.

PERIMETER CONTROL BMPS (SILT FENCES, CHIP/SLASH MULCH SACKS, BIOROLLS, FLOATING SILT CURTAIN, ETC.): PERIMETER CONTROL BMPS SHALL BE INSTALLED ON ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER AREAS, PRIOR TO INITIATING UPGRADIENT LAND DISTURBANCE ACTIVITIES. UPLAND PERIMETER CONTROLS BMPS SHALL BE PLACED AS CLOSE AS POSSIBLE TO FOLLOW A SINGLE CONTOUR ELEVATION. ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR MAINTAINED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ½ OF THE HEIGHT OF THE FENCE. ALL REPAIRS MUST BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS. FLOATING SILT CURTAIN SHALL BE INSTALLED AS CLOSE TO THE SHORELINE AS POSSIBLE FOR SHORELAND/IN-WATER SHORT-TERM CONSTRUCTION ACTIVITIES. AFTER THE SHORT-TERM ACTIVITY IS COMPLETE, AN UPLAND PERIMETER CONTROL MUST BE INSTALLED IF EXPOSED SOILS CONTINUE TO DRAIN TO THE SURFACE WATER.

TEMPORARY & PERMANENT SEDIMENT CONTROL BMPS

SILT FENCE ALONG PROJECT PERIMETER

TEMPORARY ROCK ENTRANCE FOR CONSTRUCTION OPERATIONS.

50 FOOT NATURAL BUFFER (S): REFER TO "CONSTRUCTION PHASING/STAGING, BUFFERS, & AREAS NOT TO BE DISTURBED" SECTION OF THIS SWPPP.

TEMPORARY SEDIMENTATION BASINS: WHERE TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, A TEMPORARY SEDIMENT BASIN MUST BE PROVIDED PRIOR TO RUNOFF LEAVING THE CONSTRUCTION SITE OR ENTERING SURFACE WATERS. ALL TEMPORARY BASINS SHALL BE CONSTRUCTED AND OPERATIONAL PRIOR TO GRADING TEN (10) OR MORE ACRES. BASINS MUST PROVIDE A LIVE STORAGE VOLUME FROM A TWO YEAR 24-HOUR STORM EVENT FROM EACH ACRE (DISTURBED AND UNDISTURBED) DRAINING TO THE BASIN. AT A MINIMUM, IF CALCULATIONS ARE NOT PERFORMED THE BASIN SHALL PROVIDE 3,600 CUBIC FEET OF LIVE STORAGE FROM EACH ACRE. THE BASIN INTAKE MUST BE DESIGNED TO WITHDRAW WATER FROM THE SURFACE, PREVENT SHORT CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS, INCLUDE AN EMERGENCY OVERFLOW ABOVE THE LIVE STORAGE ELEVATION, AND PROVIDE ENERGY DISSIPATION AT THE BASIN OUTLET. BASINS MUST BE DRAINED AND SEDIMENT REMOVED WHEN THE DEPTH OF COLLECTED SEDIMENT IN THE BASIN REACHES ½ THE LIVE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS. IF A BASIN IS INFEASIBLE WITHIN THE PROJECT LIMITS, EQUIVALENT SEDIMENT CONTROL BMPS MUST BE IMPLEMENTED AND DOCUMENTED IN THE SWPPP OR SWPPP AMENDMENT.

SEDIMENT TRAPS: WHERE A TEMPORARY SEDIMENT BASIN MEETING THE REQUIREMENTS OF THIS PART IS INFEASIBLE, EQUIVALENT SEDIMENT CONTROLS SUCH AS SMALLER SEDIMENT BASINS, AND/OR SEDIMENT TRAPS, SILT FENCES, VEGETATIVE BUFFER STRIPS, OR ANY APPROPRIATE COMBINATION OF MEASURES ARE REQUIRED FOR ALL DOWN-SLOPE BOUNDARIES OF THE CONSTRUCTION AREA AND FOR SIDE-SLOPE BOUNDARIES AS DICTATED BY INDIVIDUAL SITE CONDITIONS. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN INS INFEASIBLE, THE PERMITTEE(S) MUST CONSIDER PUBLIC SAFETY AND MAY CONSIDER FACTORS SUCH AS SITE SOILS, SLOPE, AND AVAILABLE AREA ON SITE. THIS DETERMINATION OF INFEASIBILITY MUST BE DOCUMENTED IN THE SWPPP PER PART III.A.5.m.

TEMPORARY STOCKPILES: ALL STOCKPILES MUST HAVE SILT FENCE OR EQUIVALENT PERIMETER SEDIMENT CONTROLS IMPLEMENTED AND MAINTAINED AT ALL TIMES. PILES CANNOT BE PLACED IN BUFFER AREAS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE TO PREVENT STORMWATER RUN-ON INTO THE STOCKPILE.

CONSTRUCTION SITE ENTRANCE/VEHICLE TRACKING: OPERATOR MUST MINIMIZE SEDIMENT FROM LEAVING THE CONSTRUCTION SITE (OR ONTO STREETS WITH THE SITE) BY IMPLEMENTING BMPS SUCH AS ROCK PADS, SLASH MULCH, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS. STREET SWEEPING MUST BE USED DAILY DURING CONSTRUCTION OPERATIONS IF SUCH BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES (ON AND OFF-SITE) WITHIN 24 HOURS OF DISCOVERY, OR SOONER AS DIRECTED BY THE PROJECT OWNER. MULTIPLE STREET SWEEPINGS AT THE OPERATOR'S EXPENSE MAY BE REQUIRED ON ALL ENTRY/EXIT POINTS TO THE SITE AT THE DISCRETION OF THE PROJECT OWNER.

SURFACE WATERS: INCLUDING OFF-SITE AND DOWNSTREAM DRAINAGE DITCHES, CATCH BASINS, AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. THE REMOVAL AND STABILIZATION OF EXPOSED SOILS MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. THE PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AGENCIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.

INLET PROTECTION: ALL STORM DRAIN INLETS (INCLUDING DOWN GRADIENT, OFF-SITE) MUST BE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. SILT FENCE IS NOT AN ACCEPTABLE CATCH BASIN INLET PROTECTION BMP. CONTRACTOR SHALL CLEAN, REMOVE AND DISPOSE OF SEDIMENT, AND/OR REPLACE STORM DRAIN INLET PROTECTION ON A ROUTINE BASIS TO ENSURE THE DEVICE IS FULLY FUNCTIONAL PRIOR TO THE NEXT FORECASTED PRECIPITATION EVENT (30% OR GREATER) INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED AND THE PERMITTEE(S) HAVE RECEIVED WRITTEN CORRESPONDENCE FROM THE JURISDICTIONAL AUTHORITY (E.G. CITY/COUNTY/TOWNSHIP/MNDOT ENGINEER) VERIFYING THE NEED FOR REMOVAL. WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THE SWPPP AND AVAILABLE WITHIN 72 HOURS UPON REQUEST. PERMISSION TO REMOVE INLET PROTECTION BASED ON A SPECIFIC SAFETY CONCERN MUST STILL BE OBTAINED FROM THE LOCAL JURISDICTIONAL AUTHORITY WITHIN 30 DAYS OF REMOVAL.

CHEMICAL TREATMENTS: OPERATOR MUST AMEND THE SWPPP TO INCLUDE THE INTENDED USES AND LOCATIONS OF FLOCCULANTS, POLYMERS, AND OTHER SEDIMENTATION TREATMENT CHEMICALS. CHEMICAL TREATMENTS MAY ONLY BE APPLIED IN AREAS WHERE TREATED STORMWATER IS DIRECTED TO A RECEIVING SEDIMENT CONTROL SYSTEM (NOT DIRECTLY DISCHARGED TO NATURAL WATER BODIES). THIS INCLUDES DOCUMENTING THE EXPECTED SOIL TYPES, MANUFACTURER'S RECOMMENDED DOSING, APPLICATION RATES/QUANTITIES, AND MONITORING RESULTS (TURBIDITY, PH).

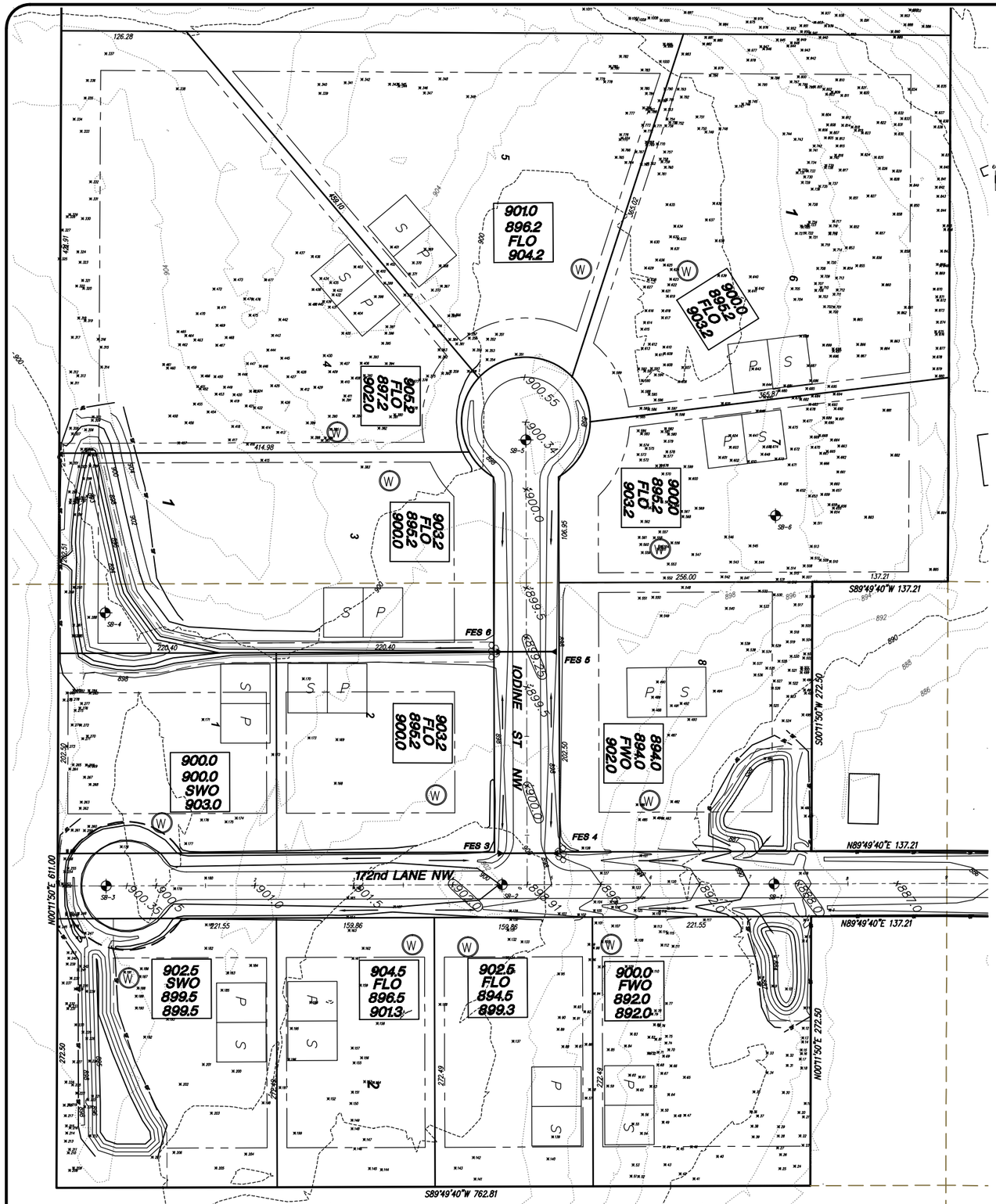
DEWATERING, STREAM DIVERSION, AND BASIN DRAINING

DEWATERING, STREAM DIVERSION, OR BASIN DRAINING IS ANTICIPATED DURING CONSTRUCTION OF THIS PROJECT. DITCH REALIGNMENT, CULVERT CONSTRUCTION, AND NEW POND GRADING WILL REQUIRE SITE DEWATERING. WHEN DEWATERING OR BASIN DRAINING IS REQUIRED, THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN AND NARRATIVE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO UNDERTAKING THESE ACTIVITIES. DEWATERING PLAN INCLUDE BMP'S TO PREVENT SEDIMENT TRANSPORT, EROSION, AND ADVERSE IMPACTS TO DOWNSTREAM RECEIVING WATERS. THE DEWATERING PLAN MUST ALSO INCLUDE ANY SPECIFIC CHEMICAL TREATMENTS (FLOC, POLYMERS, ETC.) THAT WILL BE USED. IF AN APPROVED TMDL WASTE LOAD ALLOCATION IS ESTABLISHED FOR CONSTRUCTION ACTIVITIES ON A RECEIVING WATERBODY, THE OPERATOR MUST IMPLEMENT ALL NECESSARY BMP'S TO MEET THE ASSIGNED WLA. THE DEWATERING PLAN AND DNR APPROPRIATIONS PERMIT WILL BECOME PART OF THE SWPPP. WATER THAT IS TURBID OR HAS SEDIMENT MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN (AND/OR OTHER APPROPRIATE BMPS) ON THE PROJECT SITE WHENEVER POSSIBLE. DISCHARGE FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASIN MUST BE VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT IS OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2), IMPACTS TO WETLANDS, AND EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES WILL NOT RESULT FROM THE DISCHARGE. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES. ADEQUATE SEDIMENTATION CONTROL MEASURES AND ADDITIONAL FILTRATION BMPS ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS, OIL, OR GREASE.

FINAL STABILIZATION

FINAL STABILIZATION IS ACHIEVED WHEN THE FOLLOWING FOUR PARAMETERS ARE COMPLETED, PRIOR TO SUBMISSION OF THE NOTICE OF TERMINATION TO MPCA. SEE PERMANENT EROSION CONTROL PRACTICES FOR SPECIFIC METHODS AND APPLICATIONS.

1. 70% VEGETATIVE COVER: ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL EXPOSED SOILS ARE STABILIZED BY A UNIFORM, LIVE PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OVER THE ENTIRE PERVIOUS SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSIVE CONDITIONS. REFER TO PART IV.G.5 IF THE PROJECT IS ON AGRICULTURAL LAND.
2. FINAL CLEAN OUT OF PERMANENT STORMWATER MANAGEMENT SYSTEMS & CONVEYANCE SYSTEMS: ALL SEDIMENT MUST BE REMOVED FROM PERMANENT STORMWATER MANAGEMENT SYSTEMS, CONVEYANCE SYSTEMS, AND DITCHES MUST BE STABILIZED WITH PERMAN



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

NOTE: TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITY BY MEANS OF FENCING OR OTHER APPROVED METHOD.

TREES SAVED

12	Pine, red	13
13	Pine, red	13
14	Pine, red	9
15	Pine, red	9
16	Pine, red	8
17	Pine, red	10
18	Pine, red	12
19	Pine, red	12
20	Pine, red	11
21	Pine, red	11
22	Pine, red	10
23	Pine, red	10
24	Pine, red	16
25	Pine, red	14
26	Pine, red	13
27	Pine, red	12
28	Pine, red	14
29	Pine, red	15
30	Pine, red	15
31	Pine, red	13
32	Pine, red	16
33	Pine, red	12
34	Pine, red	6
35	Pine, red	15
36	Pine, red	18
37	Pine, red	18
38	Pine, red	16
39	Pine, red	16
40	Cedar, red	7
41	Pine, red	18
42	Pine, red	13
43	Pine, red	14
44	Pine, red	12
45	Pine, red	15
46	Pine, red	18
47	Pine, red	16
48	Pine, red	10
49	Pine, red	18
50	Pine, red	20
51	Pine, red	10
52	Pine, red	11
53	Pine, red	13
54	Pine, red	15
55	Pine, red	13
56	Pine, red	12
57	Pine, red	16
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61	Pine, red	7
62	Pine, red	12
63	Pine, red	11
64	Pine, red	14
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67	Pine, red	11
68	Pine, red	9
69	Pine, red	13
70	Pine, red	8
71	Pine, red	8
72	Pine, red	9
73	Pine, red	10
74	Pine, red	10
75	Pine, red	11
81	Pine, red	6
82	Pine, red	15
83	Pine, scotch	5
84	Pine, red	13
85	Pine, red	18
86	Pine, red	14
87	Pine, red	11
88	Pine, red	17
89	Pine, red	12
90	Pine, red	15
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92	Pine, red	15
93	Pine, red	14
94	Pine, red	12
95	Pine, red	13
96	Pine, red	14
98	Pine, red	15
99	Pine, red	13
101	Pine, red	15
111	Pine, red	15
112	Pine, red	14
113	Pine, red	10
114	Pine, red	9
115	Pine, red	14
116	Pine, red	13
117	Pine, red	13
128	Pine, red	11
131	Pine, red	12
132	Pine, red	11
133	Pine, red	13
137	Pine, red	14
138	Cedar, red	7
140	Pine, red	11
141	Pine, red	12
142	Pine, red	11
143	Pine, red	11
144	Cedar, red	7
145	Pine, red	12
146	Pine, red	11
147	Pine, red	13
148	Pine, red	13
149	Pine, red	12
150	Pine, red	12
151	Pine, red	22
152	Pine, red	13
153	Pine, red	15
154	Pine, red	12
155	Pine, red	13
156	Pine, red	12
157	Pine, red	10
162	Pine, red	14
163	Pine, red	12
164	Pine, red	12
168	Pine, red	6
169	Cedar, red	7
171	Pine, red	13
172	Pine, red	11
173	Pine, red	10
174	Pine, red	8
175	Pine, red	10
176	Pine, red	13
177	Pine, red	13
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182	Cedar, red	8
184	Cedar, red	6
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194	Pine, red	10
195	Pine, red	13
196	Pine, red	14
197	Pine, red	12
198	Pine, red	13
199	Pine, red	7
200	Pine, red	12
201	Pine, red	7
202	Pine, red	14
203	Pine, red	15
204	Cedar, red	6
205	Pine, red	9
206	Pine, red	22
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208	Pine, red	20
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210	Pine, red	12
211	Pine, red	14
213	Pine, red	11
214	Pine, red	15
215	Pine, red	12
216	Pine, red	16
217	Pine, red	13
218	Pine, red	12
219	Pine, red	10
223	Pine, red	12
224	Pine, red	12
225	Pine, red	16
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233	Pine, red	11
235	Pine, red	14
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245	Pine, red	7
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262	Pine, red	11
263	Pine, red	13
264	Pine, red	11
265	Pine, red	15
266	Pine, red	11
267	Pine, red	12
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269	Pine, red	14
270	Cedar, red	6
271	Pine, red	16
272	Pine, red	14
273	Pine, red	10
274	Pine, red	12
275	Pine, red	10
276	Pine, red	15
277	Pine, red	11
278	Pine, red	11
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314	Pine, red	13
315	Pine, red	16
316	Pine, red	14
317	Pine, red	12
318	Pine, red	11
319	Pine, red	13
320	Pine, red	13
321	Pine, red	18
322	Pine, red	10
323	Pine, red	12
324	Pine, red	12
325	Pine, red	9
326	Pine, white	16
327	Pine, red	11
328	Pine, red	8
329	Pine, red	9
330	Pine, red	9
331	Pine, red	12
332	Pine, red	10
333	Pine, red	6
334	Pine, red	15
335	Pine, red	16
336	Pine, red	9
337	Pine, red	13
338	Pine, red	9
339	Pine, red	16
340	Pine, red	14
341	Pine, red	19
342	Pine, red	15
343	Pine, red	13
344	Pine, red	14
345	Pine, red	13
346	Pine, red	12
347	Pine, red	13
348	Pine, red	15
349	Pine, red	11
351	Pine, red	9
351	Pine, red	7
352	Oak, red	6
353	Oak, red	8
354	Oak, red	7
355	Oak, red	9
356	Oak, red	7
357	Oak, bur	23
358	Oak, red	10
359	Oak, red	22
360	Oak, red	5
361	Oak, red	23
362	Oak, red	14
363	Oak, red	13
364	Oak, red	4
365	Oak, red	25
366	Oak, bur	6
367	Oak, red	36
372	Oak, red	12
373	Oak, red	29
374	Oak, red	32
383	Pine, scotch	15
384	Oak, red	40
385	Oak, red	21
386	Oak, red	5
387	Oak, red	4
388	Oak, red	7
389	Oak, red	5
390	Oak, red	34
393	Oak, red	27
395	Oak, red	35
396	Oak, red	11
397	Oak, red	11
399	Oak, red	22
400	Oak, red	42
402	Oak, red	7
405	Oak, red	35
407	Oak, red	20
409	Oak, red	12
410	Oak, red	8
412	Oak, red	21
413	Oak, red	32
414	Oak, red	36
415	Oak, red	24
416	Oak, red	4
417	Oak, red	5
418	Oak, red	4
419	Oak, red	7
420	Oak, red	6
421	Oak, red	4
422	Oak, red	4
423	Oak, red	6
424	Oak, red	4
425	Oak, red	9
426	Oak, red	13
427	Oak, red	8
428	Oak, red	11
429	Oak, red	36
430	Oak, red	27
431	Oak, red	14
436	Oak, red	33
437	Oak, red	5
438	Oak, red	16
439	Oak, red	9
440	Oak, red	9
441	Oak, red	15
442	Oak, red	36
443	Oak, red	12
444	Oak, red	23
445	Oak, red	36
446	Oak, red	16
447	Oak, red	35
448	Oak, red	14
449	Oak, red	6
450	Oak, red	15
451	Oak, red	7
452	Oak, red	5
453	Oak, red	5
454	Oak, red	5
455	Oak, red	7
456	Oak, red	40
457	Oak, red	7
458	Cedar, red	9
459	Oak, red	6
460	Oak, red	10
461	Oak, red	6
462	Oak, red	27
463	Oak, red	38
464	Oak, red	12
465	Oak, red	14
466	Oak, red	5
467	Oak, red	21
468	Oak, red	24
469	Oak, red	15
470	Oak, red	7
471	Oak, red	9
472	Oak, red	7
473	Oak, red	5
474	Oak, red	42
475	Oak, red	20
476	Oak, red	24
477	Oak, red	35
479	Pine, red	11
480	Pine, red	13
482	Pine, red	12
483	Pine, red	7
484	Pine, red	10
485	Pine, red	16
486	Pine, red	12
493	Pine, red	20
494	Pine, red	11
495	Pine, red	15
496	Pine, red	15
497	Pine, red	10
498	Pine, red	9
499	Pine, red	8
500	Pine, red	8
501	Pine, red	10
502	Pine, red	9
503	Pine, red	9
504	Pine, red	8
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507	Pine, red	10
508	Pine, red	12
509	Pine, red	11
510	Pine, red	13
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512	Pine, red	12
513	Pine, red	11
514	Pine, red	12
515	Pine, red	13
516	Pine, red	12
517	Pine, red	15
518	Pine, red	13
519	Pine, red	12
520	Pine, red	11
521	Pine, red	9
522	Pine, red	11
523	Pine, red	12
524	Pine, red	13
525	Pine, red	15
526	Pine, red	12
527	Pine, red	12
528	Pine, red	13
529	Pine, red	14
530	Pine, red	13
531	Pine, red	13
532	Pine, red	14
533	Pine, red	15
534	Pine, red	14
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540	Pine, red	15
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543	Pine, red	14
544	Pine, red	13
545	Pine, red	16
546	Pine, red	12
547	Pine, red	14
548	Pine, red	17
549	Pine, red	12
550	Pine, red	14
551	Pine, red	11
552	Pine, red	15
553	Cedar, red	6
554	Pine, red	12
555	Pine, red	9
556	Pine, red	9
559	Pine, red	9
560	Pine, red	10
574	Pine, red	11
575	Pine, red	13
576	Pine, red	11
579	Pine, red	10
580	Pine, red	9
581	Pine, red	7
582	Pine, red	12
583	Pine, red	13
584	Pine, red	13
585	Pine, red	10
586	Pine, red	10
587	Pine, red	8
588	Pine, red	9
589	Pine, red	12
590	Pine, red	9
591	Pine, red	9
592	Pine, red	8
593	Pine, red	9
594	Pine, red	6
595	Pine, red	10
596	Pine, red	8
597	Pine, red	11
598	Pine, red	18
599	Pine, red	12
600	Pine, red	16
605	Pine, red	13
606	Pine, red	14
607	Pine, red	13
608	Pine, red	11
609	Pine, red	11
610	Pine, red	13
611	Pine, red	11
612	Pine, red	12
613	Pine, red	10
614	Pine, red	8
615	Pine, red	9
616	Pine, red	11
617	Pine, red	11
618	Pine, red	11
619	Pine, red	12
621	Pine, red	11
622	Pine, red	10
623	Pine, red	12
624	Pine, red	9
625	Pine, red	12
626	Pine, red	11
627	Pine, red	9
628	Pine, red	11
629	Pine, red	11
630	Pine, red	11
631	Pine, red	11
632	Pine, red	12
633	Pine, red	8
634	Pine, red	13
635	Pine, red	9
636	Pine, red	15
637	Pine, red	12
638	Pine, red	13
645	Pine, red	16
646	Pine, red	13
651	Pine, red	11
652	Pine, red	15
653	Pine, red	13
654	Pine, red	11
655	Pine, red	11
656	Pine, red	10
657	Pine, red	10
658	Pine, red	10
659	Pine, red	10
660	Pine, red	9
661	Pine, red	11
662	Pine, red	12
663	Pine, red	13
664	Pine, red	15
665	Pine, red	13
666	Pine, red	11
667	Pine, red	12
668	Pine, red	10
669	Pine, red	9
670	Pine, red	12
671	Pine, red	16

BY
DATE
REVISIONS
RECORD DRAWING

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

COVENANT MEADOWS

TREE PLAN

RAMSEY, MINNESOTA

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.

DATE 2/2/17 REG. NO. 24019

BRENT ROSHELL

DRAWN	BR
DATE	2/2/17
SCALE	AS SHOWN
PROJECT	RE-32
CHECKED	BTR
APPROVED	BTR

T1

TREES SAVED

672	Pine, red	15
675	Pine, red	11
677	Pine, red	17
678	Pine, red	12
679	Pine, red	12
680	Pine, red	11
682	Pine, red	10
683	Pine, red	12
684	Pine, red	8
685	Pine, red	13
689	Pine, red	12
690	Pine, red	12
691	Pine, red	14
692	Pine, red	13
693	Pine, red	13
694	Pine, red	15
695	Pine, red	12
696	Pine, red	14
697	Pine, red	14
698	Pine, red	16
699	Pine, red	12
700	Pine, red	17
701	Pine, red	10
702	Pine, red	16
703	Pine, red	14
704	Pine, red	13
705	Pine, red	8
706	Pine, red	12
707	Pine, red	12
708	Pine, red	10
709	Pine, red	9
710	Pine, red	10
711	Pine, red	16
712	Pine, red	12
713	Pine, red	10
714	Pine, red	13
715	Pine, red	9
716	Pine, red	9
717	Pine, red	11
718	Pine, red	14
719	Pine, red	11
720	Pine, red	13
721	Pine, red	13
722	Pine, red	7
723	Pine, red	12
724	Pine, red	12
725	Pine, red	11
726	Pine, red	13
727	Pine, red	14
728	Pine, red	14
729	Pine, red	13
730	Pine, red	11
731	Pine, red	14
732	Pine, red	8
733	Pine, red	10
734	Pine, red	12
735	Pine, red	15
736	Pine, red	17
737	Pine, red	11
738	Pine, red	15
739	Pine, red	9
740	Pine, red	6
741	Pine, red	12
742	Pine, red	15
743	Pine, red	16
744	Pine, red	13
745	Pine, red	11
746	Pine, red	10
747	Pine, red	20
748	Pine, red	17
749	Pine, red	16
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752	Pine, red	20
753	Pine, red	12
754	Pine, red	8
755	Pine, red	9
756	Pine, red	12
757	Pine, red	11
758	Pine, red	10
759	Pine, red	12
760	Pine, red	13
761	Pine, red	16
762	Pine, red	15
763	Pine, red	11
764	Pine, red	11
765	Pine, red	10
766	Pine, red	13
767	Pine, red	12
768	Pine, red	9
769	Pine, red	9
770	Pine, red	12
771	Pine, red	10
772	Pine, red	10
773	Pine, red	11
774	Pine, red	13
775	Pine, red	19
776	Pine, red	15
777	Pine, red	14
778	Pine, red	14
779	Pine, red	18
780	Pine, red	23
781	Pine, red	12
782	Cedar, red	9
783	Pine, red	14
784	Pine, red	16
785	Pine, red	16
786	Pine, red	9
787	Pine, red	14
788	Pine, red	10
789	Pine, red	13
790	Pine, red	15
791	Pine, red	12
792	Pine, red	14
793	Pine, red	26
794	Cedar, red	7
795	Pine, red	17
796	Pine, red	18
797	Pine, red	12
798	Pine, red	20
799	Pine, red	11
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805	Pine, red	13
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812	Pine, red	13
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818	Pine, red	12
819	Pine, red	15
820	Pine, red	16
821	Pine, red	14
822	Pine, red	19
823	Pine, red	16
824	Pine, red	19
825	Pine, red	14
826	Pine, red	19
827	Cedar, red	8
828	Pine, red	16
829	Pine, red	16
830	Pine, red	18
831	Pine, red	12
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834	Pine, red	14
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853	Pine, red	15
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857	Pine, red	12
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862	Pine, red	13
863	Pine, red	15
864	Pine, red	11
865	Cedar, red	7
866	Pine, red	13
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869	Pine, red	10
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871	Pine, red	7
872	Pine, red	13
873	Pine, red	14
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875	Pine, red	12
876	Pine, red	13
877	Pine, red	13
878	Pine, red	11
879	Pine, red	14
880	Pine, red	18
881	Pine, red	12
882	Pine, red	12
883	Pine, red	9
884	Pine, red	13
885	Oak, red	21
886	Oak, bur	16
887	Basswood	12
888	Aspen	13
889	Aspen	8
890	Aspen	13
891	Ash, green	23
892	Aspen	10
893	Oak, red	17
894	Aspen	9
895	Aspen	10
896	Aspen	8
897	Aspen	12
898	Aspen	10
899	Aspen	8
900	Aspen	13
901	Aspen	10
902	Aspen	9
903	Aspen	13
904	Aspen	8
905	Aspen	10
906	Aspen	14
907	Aspen	13
908	Oak, red	16
909	Aspen	9
910	Aspen	9
911	Aspen	11
912	Aspen	13
913	Cherry, black	16
914	Aspen	9
915	Aspen	18
916	Ash, green	14
917	Basswood	8
918	Basswood	8
919	Aspen	13
920	Aspen	10
921	Aspen	11
922	Aspen	9
923	Aspen	14
924	Aspen	12
925	Aspen	8
926	Aspen	8
927	Ash, green	9
928	Aspen	8
929	Aspen	9
930	Aspen	9
931	Aspen	10
932	Aspen	8
933	Oak, red	19
934	Aspen	9
935	Aspen	8
936	Aspen	9
937	Oak, red	8
938	Oak, red	12
939	Ash, green	12
940	Oak, red	8
941	Oak, bur	7
942	Oak, red	7
943	Oak, red	6
944	Oak, bur	6
945	Oak, bur	5
946	Oak, red	4
947	Oak, bur	5
948	Oak, red	7
949	Oak, red	7
950	Oak, red	7
951	Ash, green	13
952	Oak, red	14
953	Oak, red	12
954	Aspen	9
955	Oak, red	8
956	Aspen	9
957	Aspen	11
958	Aspen	8
959	Aspen	8
960	Aspen	12
961	Aspen	12
962	Oak, red	7
963	Aspen	14
964	Oak, red	25
965	Oak, bur	7
966	Oak, red	33
967	Oak, red	22
968	Oak, bur	15
969	Oak, red	12
970	Oak, red	22
971	Oak, red	24
972	Oak, red	18
973	Oak, red	17
974	Oak, red	50
975	Oak, red	15
976	Oak, bur	16
977	Oak, bur	7
978	Basswood	10
979	Oak, red	5
980	Oak, red	12
981	Oak, red	5
982	Oak, red	7
983	Oak, red	16
984	Oak, red	20
985	Oak, red	20
986	Oak, red	17
987	Oak, red	15
988	Oak, red	16
989	Oak, red	15
990	Oak, red	13
991	Oak, red	14
992	Oak, red	14
993	Oak, red	24
994	Oak, white	17
995	Basswood	8
996	Oak, red	28
997	Oak, red	40
998	Oak, red	6
999	Cedar, red	13
1000	Oak, red	10
1001	Oak, red	38
1002	Cedar, red	8
1003	Basswood	18
1004	Basswood	13
1005	Basswood	9
1006	Ash, green	10
1007	Oak, red	21
1008	Oak, red	14
1009	Ash, green	15
1010	Oak, red	9
1011	Oak, red	24
		10653

TREES REMOVED HOME CONST

76	Pine, red	12
77	Pine, red	14
78	Pine, red	14
79	Pine, red	12
80	Pine, red	13
97	Pine, red	21
107	Pine, red	15
108	Pine, red	18
109	Cedar, red	7
110	Pine, red	13
134	Pine, red	15
135	Pine, red	15
136	Pine, red	15
139	Pine, red	13
158	Pine, red	12
159	Pine, red	13
160	Pine, red	13
161	Pine, red	13
170	Pine, red	12
183	Pine, red	9
185	Pine, red	13
186	Pine, red	12
187	Pine, red	14
188	Pine, red	11
191	Pine, red	13
193	Pine, red	14
368	Oak, red	6
369	Oak, red	7
370	Oak, red	23
371	Oak, red	24
375	Oak, red	6
376	Oak, red	4
377	Oak, red	4
378	Oak, red	7
380	Oak, red	32
381	Oak, red	24
382	Oak, red	27
391	Oak, red	30
392	Oak, red	37
394	Oak, red	17
398	Oak, red	54
401	Oak, red	7
403	Oak, red	32
404	Oak, red	17
406	Oak, red	17
408	Oak, red	11
411	Oak, red	21
432	Oak, red	18
433	Oak, red	24
434	Oak, red	27
435	Oak, red	25
487	Pine, red	11
488	Pine, red	11
489	Pine, red	9
490	Pine, red	11
491	Pine, red	11
492	Pine, red	13
557	Pine, red	8
558	Pine, red	12
561	Pine, red	10
562	Pine, red	12
563	Pine, red	12
564	Pine, red	12
565	Pine, red	14
566	Pine, red	8
567	Pine, red	12
568	Pine, red	15
569	Pine, red	17
570	Pine, red	14
571	Pine, red	14
572	Pine, red	12
573	Pine, red	11
577	Pine, red	9
578	Pine, red	9
601	Pine, red	17
602	Pine, red	14
603	Pine, red	8
604	Pine, red	13
639	Pine, red	7
640	Pine, red	12
641	Pine, red	12
642	Pine, red	10
643	Pine, red	13
644	Pine, red	11
647	Pine, red	11
648	Pine, red	15
649	Pine, red	10
650	Pine, red	12
673	Pine, red	12
674	Pine, red	12
681	Pine, red	11
686	Pine, red	14
687	Pine, red	13
688	Pine, red	14
		1355

TREES REMOVED POND CONST

5	Pine, red	14
6	Pine, red	13
7	Pine, red	12
8	Pine, red	18
9	Pine, red	14
10	Pine, red	13
11	Pine, red	16
212	Pine, red	17
220	Pine, red	13
221	Pine, red	16
222	Pine, red	12
226	Pine, red	14
228	Pine, red	12
229	Pine, red	12
234	Pine, red	15
242	Pine, red	12
285	Pine, red	8
286	Pine, red	8
287	Pine, red	8
288	Pine, red	8
290	Pine, red	12
291	Pine, red	12
292	Pine, red	14
293	Pine, red	8
294	Pine, red	8
295	Pine, red	10
296	Pine, red	14
297	Pine, red	12
298	Pine, red	15
299	Pine, red	12
300	Pine, red	12
301	Pine, red	12
302	Pine, red	12
303	Pine, red	11
304	Pine, red	10
305	Pine, red	13
306	Pine, red	13
307	Pine, red	12
308	Pine, red	16
309	Pine, red	12
310	Pine, red	15
481	Pine, red	12
		522

TREES REMOVED ROAD CONST

1	Pine, red	10
2	Pine, red	17
3	Pine, red	14
4	Pine, red	12
102	Pine, red	18
103	Pine, red	13
104	Pine, red	13
105	Pine, red	16
106	Pine, red	14
116	Pine, red	13
118	Pine, red	12
119	Pine, red	13
120	Pine, red	12
121	Pine, red	10
122	Pine, red	12
123	Pine, red	13
124	Pine, red	11
125	Pine, red	15
126	Pine, red	19
127	Pine, scotch	11
129	Pine, red	8
130	Pine, red	9
165	Pine, red	12
166	Pine, red	11
167	Cedar, red	6
178	Pine, red	13
179	Pine, red	21
180	Pine, red	11
244	Pine, red	11
246	Pine, red	10
247	Pine, red	12
248	Pine, red	13
249	Pine, red	14
250	Pine, red	12
251	Pine, red	12
252	Pine, red	10
253	Pine, red	12
254	Pine, red	8
255	Pine, red	14
256	Pine, red	10
257	Pine, red	12
258	Pine, red	12
259	Pine, red	12
260	Pine, red	13
478	Pine, red	12
		558

ROSHELL ENGINEERING, LLC
6192 267 TH CT WYOMING, MN 55092
PHONE: 763.286.0521

DATE | REVISIONS | BY

RECORD DRAWING

COVENANT MEADOWS

TREE PLAN

RAMSEY, MINNESOTA

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.

DATE 2/2/17 REG. NO. 24519

BRENT ROSHELL

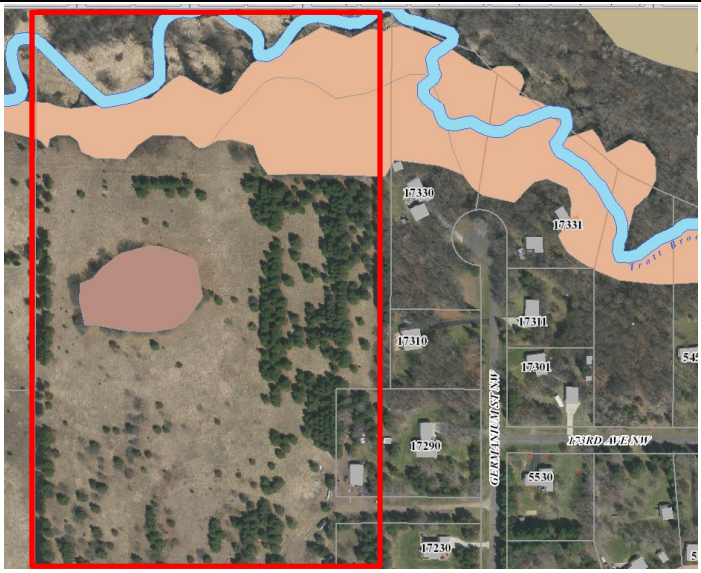
DRAWN	BR
DATE	2/2/17
SCALE	AS SHOWN
PROJECT	RE-32
CHECKED	BTR
APPROVED	BTR

T2

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	FEBRUARY 24, 2017	**PROJECT ADDRESS**	TBD
PROJECT. TITLE	COVENANT MEADOWS: PRELIMINARY PLAT AND REZONING		
ESCROW #	115528		
DEPARTMENT:	Community Development: Planning Division		
TECHNICAL REVIEWER:	Name: Eric Maass, Consultant Planner Phone: 763-433-4302 Email: EMaass@wsbeng.com		

Preliminary Plat Review



We offer the following comments regarding the Preliminary Plat submittal for Covenant Meadows as it relates to the City's Zoning Code. Preliminary Plat submittal consists of nine (9) sheets. LHB prepared 1 sheet and Roshell Engineering, LLC prepared the remaining 8 sheets. All of the plan sheets are dated February 2, 2017. The proposal includes a request a Zoning Amendment and a Preliminary Plat.

Staff provides the following comments that require revision:

Preliminary Plat Sheet

1. Trail easement between lots 5 and 6 of Block 1 will need to be shown.
2. Note indicating "Temporary Cul De Sac" at the termination of 172nd Lane NW will need to be revised to read "Full Cul De Sac". Associated line work with the cul-de-sac will need to be revised in conjunction with the note change.
3. Indicate location of soil borings completed for each proposed lot. Adjust indicated primary and secondary septic locations in connection with location of actual soil borings. Note that on Lot 8 Block 1 the indicated primary and secondary septic areas are located in the center of the property. This is not acceptable and will need to be relocated to allow for the siting of the building pad.
4. Indicate total development acreage, acreage within proposed right-of-way, and proposed density of the development.
5. Add lot width to each lot at the front yard setback line.
6. Add the length of each segment of cul-de-sac.

General Comment Requiring Revision

1. The plan should delineate the boundaries of the shoreland district tiers as well as the structure setback and bluff impact zones outlined in City Code Section 117-225 titled Shoreland Overlay District Development Standards. The identification and delineation of those zones will allow Staff to verify conditions of the shoreland management district are in fact met. This information will need to be shown on a separate sheet. The City has an example exhibit that it can provide.

Staff provides the following comments for general review of applications:

General. The Preliminary Plat proposes re-platting Outlot A, MeadowBrook, Anoka County, Minnesota, into twelve (12) single family residential lots. The twelve (12) new lots would be accessed by a one of two roadway extensions off of Germanium Street NW through the building of 172nd Lane NW and Iodine St NW. The Applicant has requested a rezoning from R-1 Rural Developing to Planned Unit Development (PUD). In exchange for allowing smaller lot sizes than what would generally be permitted, the proposed public benefit of this project is approximately fifteen (15) acres of the Subject Property being deeded to the City. The fifteen (15) acres would straddle both sides of the Trott Brook trail and the steep slopes located on the property.

Lot Sizes. The minimum lot size in the R-1 Rural Developing District is 2.5 acres with a minimum lot width of 200 feet, measured at the building setback line. Through a Planned Unit Development (PUD) the Applicant is permitted to deviate from those lot requirements due to the presence of a public benefit. The Applicant is proposing lots which range in size from 1.00 acres to 2.92 acres in size.

Setbacks and Dimensional Standards.

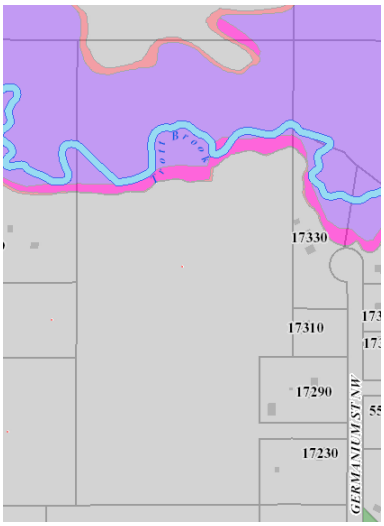
R-1 Rural Developing Base Zoning / Proposed PUD Dimensions	
Required	**Proposed**
Front yard: 40 feet	40 feet
Side yard: 10 feet	10 feet
Rear yard: 10 feet	10 feet
Minimum lot width*: 200 feet	Minimum lot width*: 80 feet
Lot depth**: 100 feet with a minimum width of 60 feet	Satisfactory

**Note: Minimum Lot Width is measured at front yard setback line, property must abut built street.*
*** Lot depth required is 100 feet for a width of 60 feet that is not encumbered by wetland, wetland setback area, floodway, or other unbuildable areas.*

The Applicant is not seeking any deviation from the R-1 Rural Developing bulk lot standards accept for lot size.

Density. The proposed density is 0.58 units per acre. This density increase from the normally allowed 1 unit per 2.5 acres is permitted through the Planned Unit Development (PUD) zoning.

DNR Review. Metro Area Hydrologist Kate Drewry review the proposed development and indicated that the plan appeared to meet the open space requirement with 50% of the area along the Creek and the steep slopes proposed for dedication to the City and the smaller lots located in the tiers furthest from the Creek. They indicated that the plan should delineate the boundaries of the shoreland district tiers as well as the structure setback and bluff impact zones.



Floodplains. There are floodplains within the boundaries of the project area, including both Floodway and Floodfringe. There shall be no fill placed within the Floodway (purple shading).

As proposed, the lots are laid out in such a fashion that each of the home sites is located in the upland area of the property.

Trott Brook. A portion of the lots will back up to Trott Brook, which is a tributary of the Rum River. Thus, the project is subject to the Scenic River Overlay District, which includes a 100 foot setback from the OHW of Trott Brook and has controlled vegetative cutting standards as well. Additionally, lands within 300 feet of the OHW of Trott Brook are subject to Shoreland Management requirements.

Landscaping. A tech report regarding landscaping requirements including Tree Preservation requirements was produced and presented to the City's Environmental Policy Board (EPB). Alterations to the plan set are provided in that report.

The Environmental Policy Board (EPB) recommended approval of the landscape and tree preservation plans with revisions as noted in the landscaping tech report.

Streets and Access. The Preliminary Plat indicates that 172nd Lane NW will be a new road and will connect to an existing road, Germanium St NW. A second proposed roadway, Iodine St NW will connect to the proposed 172nd Lane NW. Cul-de-sac length is limited to a maximum of 600 feet; the proposed length of the cul-de-sac is in excess of that limit. The Applicant is showing a complete cul-de-sac at the termination of 172nd Lane NW; however, the platted right-of-way for 172nd Lane NW does extend to the edge of the plat which would allow for 172nd Lane NW to be extended in the future eventually eliminating its status as a cul-de-sac. Exceeding the allowed length of a cul-de-sac is being requested as a deviation to the City's Code in connection with the Applicants Planned Unit Development (PUD) application.

Trails. The Applicant has indicated the intention to include a trail easement between Lots 5 and 6 of Block 1 that would provide the area necessary to eventually construct a trail that would connect to an extension of the Trott Brook Trail at which time the Trott Brook Trail was constructed in this area. After further review and discussion with our review team, it was determined that an eight (8) foot wide bituminous trail should be constructed as a Stage I Improvement provide access now to the land being deeded to the City. That cost can be credited toward the Trail Development Fees that would be due on the plat. It will be required that that proposed trail connection to the road be ADA compliant.

Grading and Drainage Plans. Please see Engineering Comments with regard to grading and drainage.

Development Fees. Development Fees will be due with the Plat including, but not limited to, Park Dedication, Trail Development, and Stormwater Management. These fees are collected at the time the Final Plat is recorded and at the rate in effect when the plat is recorded.

Development Agreement: An executed Development Agreement will be required prior to releasing the plat for recording.

ReZoning Application Review

As proposed Covenant Meadows would result in the creation of twelve (12) new single family lots.

The Applicant has proposed rezoning the property from R-1 (Rural Developing) to PUD (Planned Unit Development). The Planned Unit Development (PUD) zoning designation would allow for the Applicant to exceed the normal 1 unit per 2.5 acres in exchange for providing approximately 15 acres of high quality natural land surrounding the Trott Brook Trail. The proposed lots would range between 1.00 acres and 2.92 acres in size with an overall development density of 0.58 units per one acre in comparison to the usual 1 unit per 2.5 acres.

Staff is supportive of the proposed rezoning due to the high quality natural land proposed to be deeded to the City as a result of this project and would provide local residents with access to open space upon the a trail eventually being completed down to the Trott Brook.

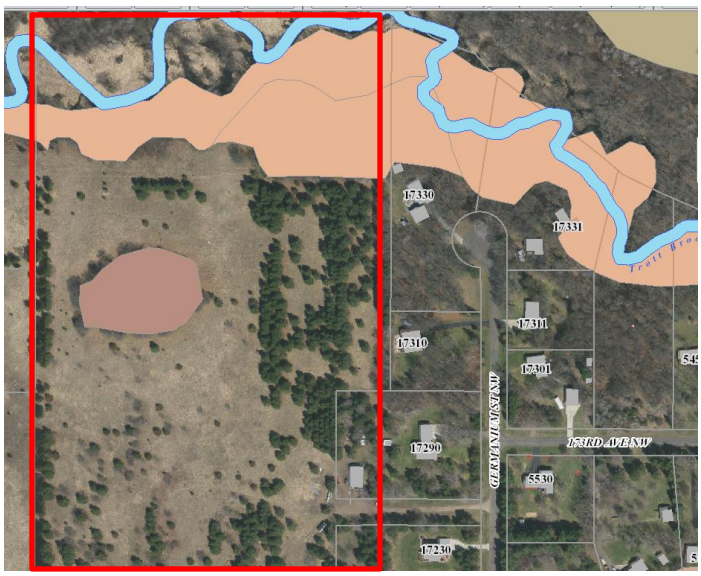
Standard	Required	Proposed
Lot Size	2.5 acres	1.00 + acres
Lot Width	200 feet	100 + feet
Front Setback	40 feet	40 feet
Rear Setback	40 feet	40 feet
Side Setback	10 feet	10 feet
Side Corner Setback	40 feet	40 feet
Cul-de-Sac Length	600 feet	1000 +/- feet

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	FEBRUARY 24, 2017	**PROJECT ADDRESS**	TBD
PROJECT. TITLE	COVENANT MEADOWS		
ESCROW #	115528		
DEPARTMENT:	Community Development: Planning Division (Landscape Plan & Environmental Resources)		
TECHNICAL REVIEWER:	Name: Chris Anderson, City Planner Phone: 763-433-9817 Email: canderson@cityoframsey.com		

We offer the following comments regarding the Tree Inventory and Protection Plan and the Landscape Plan, both prepared by Roshell Engineering, LLC and dated February 2, 2017:

The City's Natural Resources Inventory (NRI) identifies some moderate quality forest floodplain and oak woodlands adjacent to Trott Brook and a high quality oak woodland in the north central portion of the site. Most, if not all of the moderate quality areas are within the proposed Outlot A, which is to be deeded to the City as part of the Planned Unit Development (PUD). Per the Tree Inventory and Preservation Plan, it appears that much of the high quality oak woodland will also be preserved through the development process.



As part of this proposed project, almost sixteen (16) acres of land, straddling Trott Brook, would be deeded to the City. The City would like to work with the Developer to ensure that there is a trail corridor reserved along the common lot line of either Lots 4 and 5 or Lots 5 & 6 for future access to the Trott Brook trail.

The Landscape Plan is acceptable.

The Tree Plan indicates that fifteen percent (15%) of the existing significant trees will be removed, excluding those removed for ponding purposes, which is below the allowable threshold of thirty percent (30%). Due to the presence of larger stands of oak trees, tree clearing activities shall occur prior to April 15 or after July 15 to minimize the potential introduction of Oak Wilt to the site. This note must be added to both the Grading, Plan and the Tree Plan. Additionally, please

consult with the Certified Arborist that prepared the Tree Preservation Plan to prepare a plan that identifies the precautionary steps to be taken on site to protect oak trees from Oak Wilt. This should be included with the submittal of the Final Plat.

Required Sheet Revisions

Sheet G1 (Preliminary Grading Plan)
- Revise to show tree preservation fence.
- Tree preservation fence must be installed and then approved by City prior to any clearing work.
- Add note stating that any clearing within oak stands shall be performed prior to April 15 or after July 15 to minimize exposure to and/or introduction of oak wilt.
- Add precautionary steps to be taken on site to protect oak trees from Oak Wilt and/or reference said plan and that it is incorporated by reference.

Sheet L1 (Tree/Landscape Plan)
- Add note stating that any clearing within oak stands shall be performed prior to April 15 or after July 15 to minimize exposure to and/or introduction of oak wilt.
- Add precautionary steps to be taken on site to protect oak trees from Oak Wilt and/or reference said plan and that it is incorporated by reference.
- Revise to show tree preservation fence.

Sheet T1 (Tree Plan)
- Add note stating that any clearing within oak stands shall be performed prior to April 15 or after July 15 to minimize exposure to and/or introduction of oak wilt.
- Add precautionary steps to be taken on site to protect oak trees from Oak Wilt and/or reference said plan and that it is incorporated by reference.
- Revise to show tree preservation fence.

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	FEBRUARY 22, 2017	**PROJECT ADDRESS**	WEST OF GERMANIUM STREET, NORTH OF 172ND LANE (NEW)
PROJECT. TITLE	COVENANT MEADOWS		
ESCROW #	115528		
DEPARTMENT:	Engineering		
TECHNICAL REVIEWER:	Name: Leonard Linton Phone: 763 433-9834 Email: llinton@ci.ramsey.mn.us		

The Engineering Department offers the following comments regarding the Preliminary Plat Exhibits for Covenant Meadows. The submittal consists of 9 sheets. LHB prepared 1 sheet and Roshell Engineering, LLC prepared the remaining 8 sheets. All of the plan sheets are dated February 2, 2017.

General comments:

1. A cover sheet must be added to the plan set with a location map, sheet index and general project information.
2. A partial legend is shown on all sheets. All symbols used on that sheet must be added to the legend for the sheet. The symbols must be the same size in plan view and in the legend.
3. Ramsey City Details are not included in the set and must be added.
4. Class 5 shall meet the Ramsey modified gradation. This gradation must be included in the details.
5. Plan readability – Proposed grading lines and symbols must be the most prominent items on the grading sheets. Proposed storm sewer lines and symbols and pavement edges must be the most prominent on the street and storm sewer sheets. All other lines on the sheet must be screened so the lines and symbols for proposed features standout. This includes the symbols in the legends which must match the plan view in size, pattern, weight, and color.
6. Underlying lines must be broken where they are under text boxes to enhance readability. Underlying text must be moved so there is not text on text.
7. This project will require a stormwater permit from the Lower Rum River Watershed Management Organization (LRRWMO).
8. The LRRWMO requirements are presented at the end of this memo.
9. Add Street/ Storm Sheets to the plan set that show the center line profile, horizontal and vertical curve information. The street width must be dimensioned on these sheets.

10. Move the typical street section to one of the Street/ Storm Sheets.
11. Add match lines and continuation notes to all sheets where part of the street is shown on a different page. Station numbers must be darker in plan view.

Sheet Specific Comments:

Preliminary Plat:

1. All line types and symbols on sheet must be added to the legend.

G1:

1. All line types and symbols used on the sheet must be added to the legend.
2. Must demonstrate positive drainage away from rear of all houses. Label existing contours in back yards, add spot elevations as needed to show that runoff flows away from walkout/ lookout area.
3. Identify rectangular boxes on lots 1 & 2, Block 1 that touch houses.
4. The edge of pavement should be a lighter pen weight so that the grading is most prominent.
5. Soil classification information is required for the proposed drainfield areas.
6. Infiltration areas shall be excavated to final grade and vegetated after upland areas have permanent cover and are stabilized. Add a note to the plan: The secondary silt fence must remain in place until the infiltration basin vegetation is established.
7. The easement on lot 3, block 1 must be wide enough to allow maintenance vehicles to reach the pond without disturbing the bottom of the swale or driving on the steep side slope.
8. Identify or remove the black symbols along 172nd Lane adjacent to the existing lots.
9. The scale of the sheet must be changed so that spot elevations in the proposed ditches can be added.
10. Tree protection fencing must be shown on this sheet. It must be installed by hand prior to installing silt fence.
11. The potential flow route from each

C1, C2:

1. All line types and symbols on sheet must be added to the legend.
2. The pad grading information must only be shown on the grading plan.
3. Verify slope of all culverts in profile view.

SW1, SW2:

1. An area map must be added to the set.
2. A table listing erosion control measures to be installed and quantities of each item must be added to the sheet.

L1, T1, T2:

1. Trees to be removed must be clearly identified on the plan and in the tables. Add a column to the tables identifying trees to be removed.
2. Tree protection fencing must be shown on the plan and installed as noted above.

Detail Sheets:

1. Detail sheets must be added to the plan set.

Stormwater Calculations

A stormwater summary report was provided. The report states the 100 year storm is retained in the pond. The LRRWMO rules require sizing the basins for back to back 100 year storms if there is no outlet. The ponds will need to be enlarged.

The LRRWMO requires volume reduction (infiltration) on all projects. The LRRWMO rules require that infiltration basins empty completely within 48 hours after a 1" rainfall. The report must be revised to include the 1 inch, 2 year, 10 year, 100 year and 100 year back to back rain events. The HydroCAD report needs the Project Name and the Company Name on the page headers. These reports become part of the City's permanent stormwater records.

The report states onsite soils in the mitigation area will be removed and replaced with more permeable soils to promote infiltration. Details for the soil replacement must be included in the plans. The Minnesota Pollution Control Agency has produced the free MIDS calculator for evaluating stormwater practices like infiltration. The pond and infiltration basin must be evaluated with the MIDS calculator. The stormwater report must include the infiltration summary for each pond.

Draft boring logs were included with the stormwater report. A location map for the borings was not included.

A project manual which includes the bid form, contract and specifications must be submitted with the final plat.

Revised plans which address **all** of these changes must be submitted.

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	2/24/17	**PROJECT ADDRESS**	
PROJECT. TITLE	Covenant Meadows		
ESCROW #			
DEPARTMENT:	Fire Dept.		
TECHNICAL REVIEWER:	Name: Carey Schiferli Phone: 763-433-9832 Email: cschiferli@ci.ramsey.mn.us		

General: No issues with the development itself. The primary concern is that there is no other entrance/exit from this neighborhood. At this time, the only entrance/exit to this entire neighborhood (existing and proposed) is 169th Ave NW. This creates potential for several issues. First, if there were a structure fire in this area, we would have to transport water in tanker trucks and the maneuverability would be tough. Second, if we had a tree come down, it could block the only access for emergency responders.

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	2.24.17	**PROJECT ADDRESS**	OUTLOT A, MEADOWBROOK
PROJECT. TITLE	COVENANT MEADOWS PRELIMINARY PLAT		
ESCROW #			
DEPARTMENT:	Police Department		
TECHNICAL REVIEWER:	Name: Tim Frankfurth Phone: 763-433-9846 Email: tfrankfurth@ci.ramsey.mn.us		

Public Safety Review of Proposed Development:
The Police Department has no issues with the development itself; however, some concern was raised with regard to access to the development as the area is already a one in/one out accessed neighborhood. That access point is around Rum River Hills golf course from Highway 47.

The Covenant Meadows preliminary plat is proposing twelve (12) lots for this development and while it would add additional people to an emergency response scenario, public safety does not view the proposed development as an additional risk over and above the risk already present due to the singular access point from Highway 47 for the entire neighborhood. The proposed development provides for a westward roadway that may eventually lead to a connection back out to Highway 47 that would provide a second access point and lessen the risk in relation to an emergency response due to the secondary access point. It remains to be seen if MnDOT would be supportive of such a connection that would result in another access onto Highway 47.

E.H. RENNER & SONS
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WELL DRILLING FOR FIVE GENERATIONS
15688 JARVIS STREET N.W. / ELK RIVER, MN 55330

PHONE: (763) 427-6100 / FAX: (763) 427-0533
www.ehrenner.com

March 15, 2017

Brookview Estates LLC

6220 GREEN VALLEY ROAD ,RAMSEY, MN. 55303

Eric Thomsen

952-525-2334-Office, ethomsen@a-p.com

612-919-6862-c

Sir,

I have reviewed the hydrogeologic area South of the Trott Brook regarding impact of 4" water wells designed from domestic uses on 1 acre lots and bigger and concluded the following:

All water wells in group have an impact on the ground water supplied to the City of Ramsey from the Northwest. The impact of a 4" well pumping 25 gpm for domestic uses and irrigation of the resident property has very little impact. The Water Well Industry that service our City has not found the private wells have changed the water level on a permanent or seasonal uses. Changes in the static water levels seasonally could be in inches and could be seen on private well drop pipe (pump supply pipe) but none has been noticed.

It is for this reason the Minnesota Department of Health Well Management Unit as well as the Department of Natural Resources have not bothered dealing with wells that pump under 10,000 gallons per day or 1 million gallons per year.

Residential areas to the South and South West have numerous residential wells (one per house) with no impact on each other. Cone of depression for any well will exist but at 25 gpm may not be detectable 5 feet away from the well.

Wells in the area are mostly finished in the sedimentary sandstone call Franconia-Ironton Galesville now call the "Tunnel City". A smaller portion of wells are finished in the glacial gravels. The glacial gravels are somewhat protected by an up-flow from the Tunnel City into the glacial gravels above.

Your twelve wells will not have a measurable impact on other wells in the area or for other City users near Trott Brook as circled.

Raymond T. Renner CWD/PI

Raymond.t.renner@ehrenner.com

763-286-8806-cell

MDH Minnesota Department of Health

Minnesota Well Index

v1.0.16

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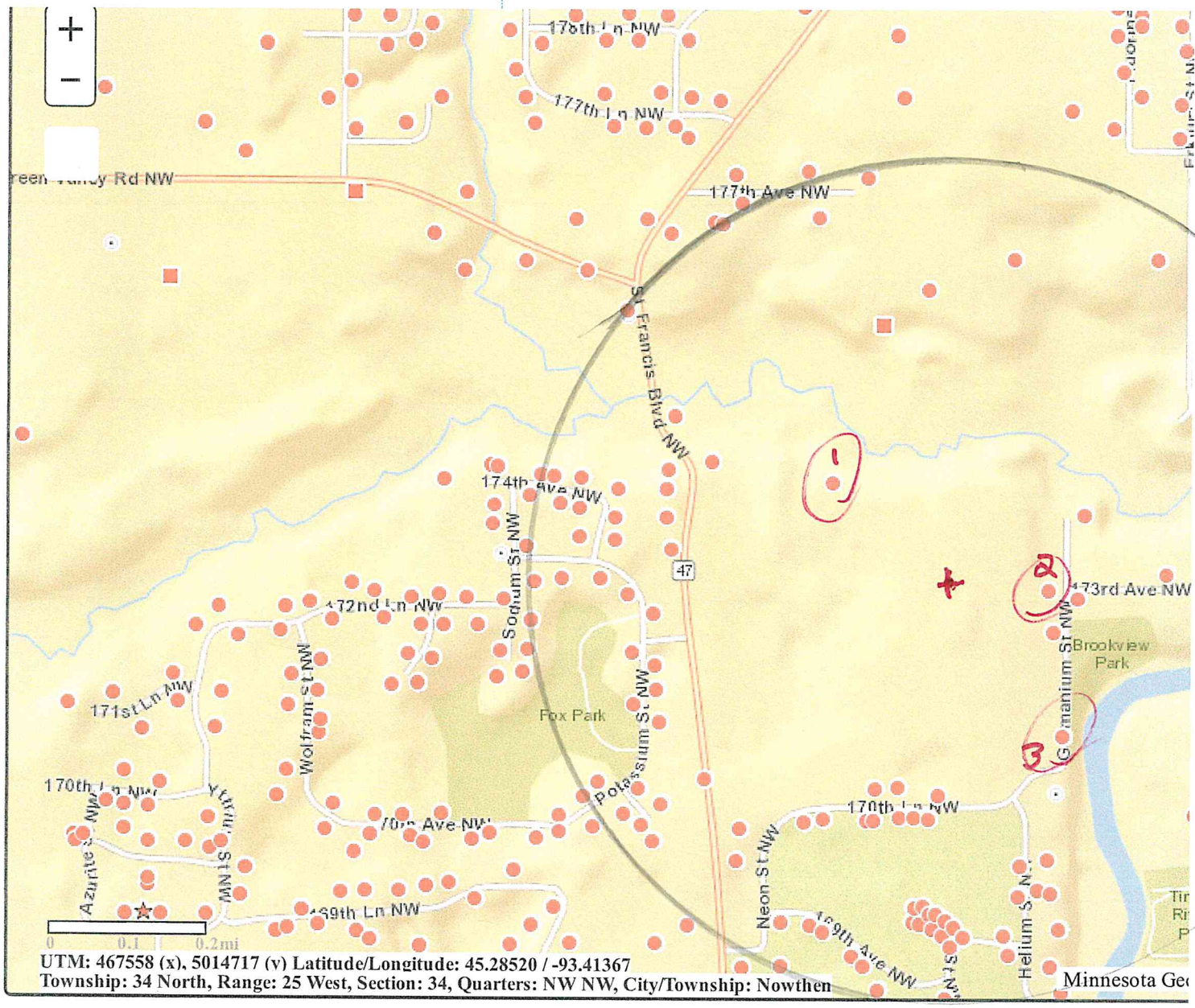

UTM: 467558 (x), 5014717 (y) Latitude/Longitude: 45.28520 / -93.41367
Township: 34 North, Range: 25 West, Section: 34, Quarters: NW NW, City/Township: Nowthen

Minnesota Ge

5.01: Public Hearing: Preliminary plat and Zoning Amendment for Covenant Meadows (Project #17-102); Case of Eric Thomsen.

Public Hearing

Chairperson Bauer called the public hearing to order at 7:01 p.m.

Presentation

City Planner Anderson presented the staff report stating the purpose of this case is to review an application for a Rezoning of the Subject Project from R-1 Rural Developing to Planned Unit Development (PUD) and Preliminary Plat. The site is generally located south of Trott Brook and west of Germanium Street and is identified as PID 02-32-25-44-0004. The Applicant has proposed to subdivide the approximately thirty-eight (38) acre Subject Property into twelve (12) single family homes that would be serviced by individual private utilities. The Preliminary Plat proposes deeding approximately fifteen (15) of the thirty-eight (38) acres to the City as the public benefit in relation to the PUD application. The proposed fifteen (15) acres straddles both sides of the Trott Brook, has steep slopes, and is also considered to be high quality natural open space. Staff reviewed the request in further detail along with the alternatives available to the Commission.

Citizen Input

Chairperson Bauer requested further clarification on where the pedestrian pathway was located and asked if it would connect to Trott Brook.

City Planner Anderson described the location of the trail easement that would be deeded to the City within the proposed development. He explained the steep slopes would not allow for an ADA trail. It was noted the trail would have a dead-end. Further discussion ensued regarding the specific standards for ADA trails.

Chairperson Bauer questioned if the cul-de-sac could be altered in any way to assist with better fire access.

Community Development Director Gladhill reported this was not the case and noted there was a broader neighborhood issue given the fact it only had a single access point.

Commissioner VanScoy inquired what the status was of the east/west cul-de-sac.

City Planner Anderson indicated the east/west cul-de-sac would be signed as a potential thru street but would be designed to meet full cul-de-sac standards.

Commissioner Anderson expressed concern that this neighborhood would have a single-point of entry.

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Eric Thomsen, 6210 Green Valley Road, stated he has tried to make this development neighborhood friendly. He appreciated the assistance he has received from staff and thanked them for the thorough report.

Dan McShane, 17310 Geranium Street, reported he has lived at his address for the past 20 years and he appreciated the wildlife and trees. He feared how the new development would impact the wildlife population.

Terry McShane, 17310 Geranium Street, expressed concern with how the new development would impact the turkeys and deer behind her home. She did not approve of the tranquility being destroyed behind her property. She requested a sanctuary or buffer area be preserved for the wildlife.

Mr. McShane stated he would support the developer constructing nine houses instead of twelve. He asked how many of the lots were a single acre.

City Planner Anderson reviewed the lot sizes for the proposed development, along with the lot sizes of the adjacent properties.

Commissioner VanScoy discussed the purpose of a PUD noting the City would be receiving 15 acres from the developer. He explained the developer could be constructing 15 homes and was proposing 12.

Mr. McShane further commented on how the additional homes would impact the single point of entry to the neighborhood. He asked if any of the proposed homes would be low-income.

Community Development Director Gladhill stated this was not the intent of this project and explained the City does not determine housing prices. He understood the developer had not applied for any funding assistance. He clarified that the developer was proposing single-family homes and not duplexes.

Mark Ladean, 17330 Germanium Street, expressed concern with the added traffic that would be added to his neighborhood with only a single point of entry. He was also concerned with how water would drain off the new homes onto his property given the grade differences between the parcels. He understood new wells would be installed and feared how the water table would be impacted. He stated he moved to this neighborhood for the peace and quiet and it was his hope the trees, wildlife, deer and turkeys would remain.

Julie Ladean, 17330 Germanium Street, stated she was concerned with how difficult it was to access the creek in the spring and during large rain events. She believed it was a complete waste of tax dollars to construct a trail that would need constant repairs. She questioned if it was the developer's idea to provide land to the City. She explained that the 15 acres that would be turned over to the City were not buildable and could not be used as a park. While she understood these 38 acres would eventually be built on, it was her hope that her view of the creek would be maintained and that strangers would not be walking through her property in order to get to the creek.

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Chairperson Bauer questioned how the width of Trott Brook varied during heavy rain events or wet springs.

Ms. Ladean explained Trott Brook was normally 12 to 20 feet in width but could reach up to 500 feet in width during the spring.

Len Simon, 17349 St. Francis Boulevard, stated he owns 40 acres directly west of this proposed property. He commented on the history of his property and noted he had a natural amphitheater. He explained he purchased his property to preserve the amphitheater, which required the combining of four lots. He recommended the City maintain the 2.5-acre minimum for the lots sizes to ensure septic waste does not seep from one property to another. He believed this property was a gift from God and should be preserved.

Juliann Simon, 17349 St. Francis Boulevard, shared the sentiments of the others who spoke previously. She expressed concern with the amount of traffic that would have to be accessing Highway 47 from a single access point. She understood the concerns that were raised by the Fire Department and cautioned the future homeowners on this. She encouraged the City to further investigate this development prior to approval.

Diane Weber, 5450 173rd Avenue NW, stated she appreciated her secluded neighborhood and appreciated the 2.5 to 3-acre lot size minimum. She requested the City hold the proposed development to these standards. She questioned who would be using the proposed trail. She worried about the number of new wells and septic systems that would be installed given the small lot size. She asked that the neighbors be made aware if low-income housing was being constructed. Lastly, she expressed concern with the water runoff from the new development and feared how it would impact the creek and river.

Chairperson Bauer discussed the approval process for this Planning Case and noted it was in proposal phase and the final approval would rest with the City Council.

Mr. Simon suggested this piece of property be preserved and that a monumental act be taken.

David Magnuson, 13907 Bluebird Street in Andover, stated he was interested in building in Covenant Meadows. He discussed the history of the proposed development and explained the dream was for several friends to be able to build homes and live among their friends. He loved the nature surrounding this property. He reported the land would not be clear cut or stripped. His goal would be to do life with friends while allowing the natural beauty of the land to remain. He stated if the City did not approve this proposal, he would have to pursue another parcel of land.

Chairperson Bauer thanked Mr. Magnuson for this information.

Tim O'Shaughnessy, 17201 St. Francis Boulevard, stated he owns 37 acres along the south side of the proposed development. He reported he was new to the City of Ramsey. He suggested the development allow seven homes and not eight. He recommended that the 15 acres not become a public park.

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Don Qveton, 5750 177th Avenue NW, discussed the flooding on this property and explained that during wet springs and winters, he has to move his cattle. He agreed that it would be a waste of money to put in a trail as it would routinely flood. He understood this was a beautiful piece of property and appreciated the sentiment behind the development. He understood the property would develop someday. However, he offered to purchase the 15 acre outlot, after receiving an appraisal, and indicated he could donate it back to the City if he ever sells his property. He explained that he bought his land so that he could live in the country, same as all the other neighbors.

Dave Jones, 17331 Germanium Street, commented on the cliffs surrounding his house and stated he would never allow a path in this area. He expressed concern with the water runoff in his neighborhood because of the steep slopes and cliffs. He stated if this development were to proceed the water runoff would have to be addressed. He noted he has lived at his home for the past 17 years.

Chairperson Bauer discussed the PUD that would allow lots less than two acres in size. He asked how several of the lots to the east were approved at less than 2.5 acres.

City Planner Anderson anticipated these lots were developed prior to this standard being put in place and were now lawful non-conforming lots.

Mr. Thomsen explained the entire development would be privately financed and all single-family homes were being proposed. He stated he was not an engineer but noted the property would be engineered properly for water runoff and infiltration.

Community Development Director Gladhill understood the neighbors were very concerned with the protection of the natural resources. This led the City to propose protecting 15 acres of land surrounding Trott Brook through a PUD. He stated his primary intent was to lock the property into its natural state. He explained if the trail was not seen as a benefit, the City would not have to pursue it. He reported the 15 acres would have to be deeded over to the City in order for the PUD process to be considered. He provided further comment on how the engineering of this site was reviewed and addressed by City staff. He discussed how traffic would enter and exit the neighborhood noting only 120 extra trips per day would be generated by the new homes. Staff provided further comment on the financing plan for the project and noted the City would be securing sureties from the developer.

Commissioner Anderson understood this was a property with solitude. He discussed the cliffs within the neighborhood and questioned what the City would do with the 15 acre outlot.

Commissioner VanScoy questioned how the wildlife would be impacted through the proposed development.

Mr. Thomsen commented on the protection of the 15 acres stated this was being done to assist with preservation. He explained he was 56 years old and has lived in Ramsey the majority of his life. He discussed the proposed site plan further and stated a natural corridor would be maintained

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for the wildlife. He indicated his goal was to maintain as many trees as possible and noted new trees would be planted.

Commissioner VanScoy asked if any if the new homeowners would be installing fences.

Mr. Thomsen stated he was uncertain if fences would be installed.

Chairperson Bauer discussed the PUD approval process and noted the plans, once approved, could not be altered.

Mr. McShane questioned how far a home within the new development would be from his.

City Planner Anderson estimated a new home would be roughly 250 feet from Mr. McShane's home.

Motion by Commissioner VanScoy, seconded by Commissioner Surma, to close the public hearing.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners VanScoy, Surma, Anderson, Brauer, and Nosan. Voting No: None. Absent: None.

Chairperson Bauer closed the public hearing closed at 8:28 p.m.

Commission Business

Commissioner VanScoy requested further information from staff regarding the City's septic system regulations.

Community Development Director Gladhill discussed the MPCA and City's septic system requirements.

Commissioner VanScoy questioned what the City's minimum lots size standards were.

Community Development Director Gladhill explained lots with septic systems were to have enough room for a primary and secondary septic. This allows for a system to fail on a residential lot and still be replaced.

Commissioner Nosan believed there was no purpose in putting in a trail as this area frequently floods. She discussed the single access point to this neighborhood and requested further information.

Community Development Director Gladhill discussed the single access point and stated staff would be conducting additional study on a potential second access point.

Commissioner Brauer questioned if an EAW should be completed.

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City Planner Anderson explained the proposed development would not trigger this requirement. He discussed how the neighbors could petition for an EAW. He indicated the development would have to meet all Rum River Watershed District requirements with regard to stormwater runoff.

Commissioner Nosan asked if this property could have any endangered species, such as turtles.

Community Development Director Gladhill understood the City could order an animal species database from the DNR. He explained a blanding turtle might exist in the general area of Ramsey but stated this had not stopped other projects in the area.

Ms. McShane questioned how an EAW process could be started.

Community Development Director Gladhill discussed the citizen petition process for an EAW. He commented further on the eight step requirements within the EAW. He stated he could email all of this information to Ms. McShane.

Commissioner Surma thanked all of the residents for being in attendance this evening. He appreciated their input and Mr. Simon's passion for this property. He stated he supported property rights and wanted to see all lots within the development be 2.5 acres in size. He supported the land surrounding Trott Brook being preserved.

Community Development Director Gladhill appreciated all of the comments received this evening as well. He recommended action on this development be delayed to allow several issues to be worked through with the developer that do not include an EAW. He stated Mr. Thomsen has been excellent to work with and staff would like the Commission to table action on Covenant Meadows to April.

Motion by Commissioner VanScoy, seconded by Commissioner Nosan, to table action on Covenant Meadows to the April 6, 2017 Planning Commission meeting.

Motion Carried. Voting Yes: Chairperson Bauer, Commissioners VanScoy, Nosan, Anderson, Brauer, and Surma. Voting No: None. Absent: None.

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7.01: Receive Update on Covenant Meadows and Consider Environmental Review Options (Project #17-102); Case of Eric Thomsen

Community Development Director Gladhill reviewed the staff report and provided an update on Covenant Meadows. He noted that the Planning Commission postponed action at their March 2nd meeting to spend more time addressing concerns raised by neighboring property owners regarding impacts to ecological and wildlife resources. It was requested that the City explore a discretionary Environmental Assessment Worksheet (EAW) or Citizen Petition EAW. He noted that the City will be hosting a workshop on the project on Thursday, April 6th at 5:30 p.m. to discuss neighbor concerns in more detail.

Councilmember Riley asked for more information on the 15 acres along Trott Brook that would be protected.

Community Development Director Gladhill noted that staff was able to negotiate with the developer to deed the 15 acres to the north that borders Trott Brook to the City at no cost. He stated that staff believes that would provide better protection than private development/ownership.

Mayor Strommen asked the next step.

Community Development Director Gladhill stated that the Planning Commission will hold a workshop on Thursday, April 6th at 5:30 p.m. prior to their regular meeting later that night, at which formal recommendation will be made.

Mayor Strommen stated that she agrees with staff that the EAW would not provide the answers the citizens are requesting and agrees that the public workshop would be the best course of action to resolve those concerns.

ORDINANCE #17-08

CITY OF RAMSEY
ANOKA COUNTY
STATE OF MINNESOTA

AN AMENDMENT TO CHAPTER 117 WHICH IS KNOWN AS THE ZONING AND SUBDIVISIONS CHAPTER OF THE CITY CODE OF RAMSEY, MINNESOTA.

AN ORDINANCE AMENDING SECTION 117-90 "MAP" OF CHAPTER 117 OF THE CITY CODE OF RAMSEY, MINNESOTA.

SECTION 1. AMENDMENT

The following legally described properties or portions thereof, are hereby rezoned from R-1 Residential (Rural Developing) to PUD (Planned Unit Development).

Outlot A, MEADOWBROOK, Anoka County, Minnesota

(the "Subject Property")

The following table outlines what deviations are permitted through this rezoning:

Standard	Required	Proposed
Lot Size	2.5 acres	1.00 + acres
Lot Width	200 feet	92 + feet
Front Setback	40 feet	40 feet
Rear Setback	40 feet	40 feet
Side Setback	10 feet	10 feet
Side Corner Setback	40 feet	40 feet
Cul-de-Sac Length	600 feet	1000 +/- feet

SECTION 2. MAP

The City is hereby instructed to cause this amendment to be shown on the "City of Ramsey Zoning Map", which map was adopted pursuant to Section 117-90 of the Ramsey City Code.

SECTION 3. EFFECTIVE DATE

This ordinance becomes effective 30 days after its passage and publication, subject to City Charter Section 5.04.

PASSED by the City Council of the City of Ramsey, Minnesota the _____ day of_____, 2017.

_____
Mayor

ATTEST:

_____
City Administrator

Introduction date:
Posting dates:
Adoption date:
Publication date:
Effective date:

Councilmember _____ introduced the following resolution and moved for its adoption:

RESOLUTION # 17-04-083

RESOLUTION GRANTING PRELIMINARY PLAT APPROVAL OF COVENANT MEADOWS

WHEREAS, Brookview Estates, LLC, hereafter referred to as "Developer", properly applied for Preliminary Plat approval of the following described property located in the City of Ramsey:

Outlot A, MEADOWBROOK, Anoka County, Minnesota

(the 'Subject Property');

WHEREAS, the City of Ramsey received a sketch plan for Brookview Estates from Brookview Estates, LLC on December 1, 2016; and

WHEREAS, the Planning Commission reviewed the sketch plan on January 5, 2017; and;

WHEREAS, the Developer changed the name of the proposed subdivision from Brookview Estates to Covenant Meadows due to a plat titled Brookview Estates already existing within Anoka County; and

WHEREAS, on March 2, 2017, the Ramsey Planning Commission conducted a public hearing regarding the proposed preliminary plat and tabled action until April; and

WHEREAS, the Ramsey Environmental Policy Board (EPB) considered tree preservation, landscape plan, and potential wetland impacts pertaining to the preliminary plat on February 22nd, 2017; and

WHEREAS, the Ramsey Parks Commission considered the preliminary plat on March 9, 2017; and

WHEREAS, on March 14, 2017, the City Council received an update regarding the preliminary plat; and

WHEREAS, the Planning Commission reviewed the preliminary plat again on April 6, 2017; and

WHEREAS, the City Council reviewed the preliminary plat of Covenant Meadows on April 11, 2017.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RAMSEY, ANOKA COUNTY, STATE OF MINNESOTA, as follows:

1) That the Ramsey City Council hereby grants preliminary plat approval of Covenant Meadows in accordance with relevant City Codes, subject to the following conditions:

a) Compliance with the Staff Review Letter dated February 24, 2017.
b) The Developer entering into a Development Agreement with the City.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember _____, and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

and the following abstained:

and the following were absent:

whereupon said resolution was declared duly passed and adopted by the Ramsey City Council this 11th day of April, 2017

_____
Mayor

ATTEST:

_____
City Clerk

Our Mission: To work together to resposibly grow our community, and to provide quality, cost-effective, and efficient government services.

Regular Planning Commission **5. 4.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title:

Consider Sketch Plan Review for Riverstone Addition Located Near Bunker Lake Boulevard and Puma Street; Case of Capstone Homes (Project No. 17-106)

Purpose/Background:

The purpose of this case is to review a sketch plan for a 293 lot subdivision (245 detached single-family and 48 townhomes). Please note that this has been revised from when the Planning Commission last saw the concept (originally closer to 350 lots; a number of the townhome lots have been removed.

A Sketch Plan affords the Planning Commission the opportunity to review a project before it enters the official Preliminary Plat stage. The Preliminary Plat (future step) is the most important step in the review process and gives the project 'entitlement' to the project.

Notification:

Staff attempted to notify all Property Owners within 700 feet of the Subject Property of the Sketch Plan Review.

Observations/Alternatives:

There are a number of layers to the review of this project. Please see the attached review letter for specific review. Topics include, but are not limited to, the following:

- Comprehensive Plan
- Zoning and Subdivision Code
- Collector/Arterial Streets/Cost Share
- Park Dedication

Funding Source:

All costs associated with processing the Application are the responsibility of the Developer. Interior infrastructure as part of the project area are the responsibility of the Developer. The Developer is responsible for standard Development Fees.

Regarding the collector infrastructure (Bunker Lake Boulevard and Puma Street) that will serve multiple developments, please see the March 28 City Council Work Session for more information regarding proposed cost-share and assessment arrangements.

Recommendation:

No action requested at this time.

Action:

No action required. Provide feedback on the overall project prior to Preliminary Plat review.

Attachments

Site Location Map
Plan Set
Environmental Assessment Worksheet
Staff Review Letter

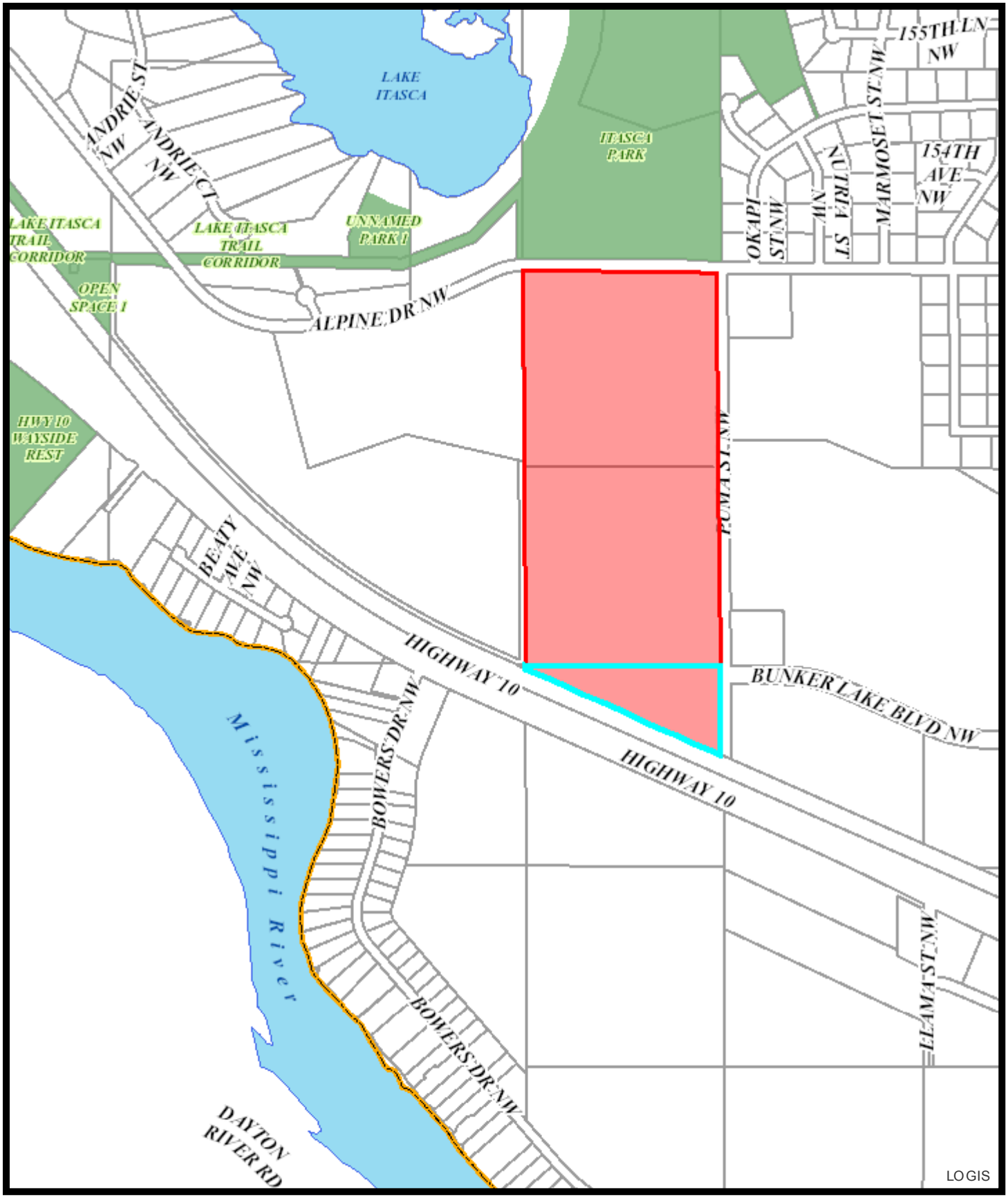
Form Review

Inbox	Reviewed By	Date
Chris Anderson	Chris Anderson	03/31/2017 11:35 AM
Kurt Ulrich	Tim Gladhill	03/31/2017 03:25 PM
Form Started By: Tim Gladhill		Started On: 03/28/2017 06:29 PM
Final Approval Date: 03/31/2017		

29-32-25-22-0004

Site Location Map

Riverstone



Feet

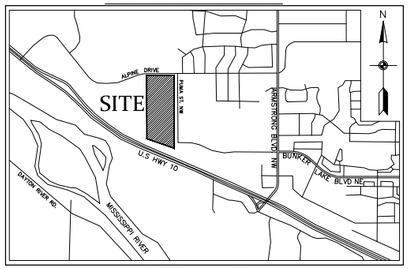
0 215430 860 1,290 1,720

Print Date: March 10, 2017

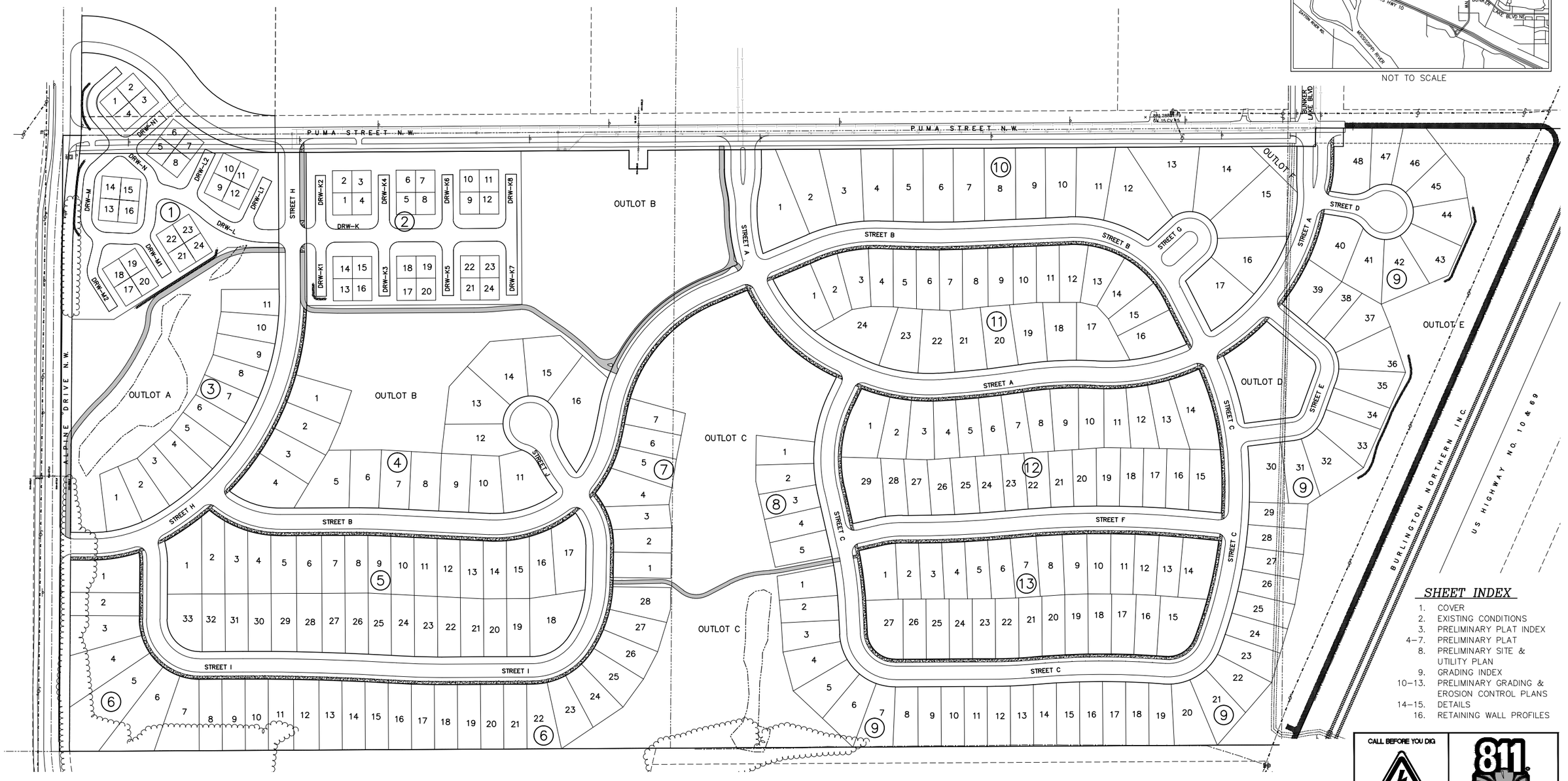
RIVERSTONE

RAMSEY, MINNESOTA

VICINITY MAP



NOT TO SCALE



SHEET INDEX

1. COVER
2. EXISTING CONDITIONS
3. PRELIMINARY PLAT INDEX
4–7. PRELIMINARY PLAT
8. PRELIMINARY SITE & UTILITY PLAN
9. GRADING INDEX
10–13. PRELIMINARY GRADING & EROSION CONTROL PLANS
14–15. DETAILS
16. RETAINING WALL PROFILES

BENCHMARK

1. Anoka County Benchmark No. 3076
   Elev.= 890.186 (NAVD 88)
2. Anoka County Benchmark No. 2078
   Elev.= 899.499 (NAVD 88)

N

0 50 100 200

(IN FEET)

CALL BEFORE YOU DIG

811

Know what's **below.** **Call** before you dig.

The subsurface utility information shown on this plan is utility Quality Level D. This quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."

Carlson McCain
• environmental
• engineering
• surveying

3890 Pheasant Ridge Drive NE, Suite 100
Blaine, MN 55449
Phone: (763) 489-7900
Fax: (763) 489-7959
www.carlsonmccain.com

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

Print Name: Brian J. Krystofiak, P.E.
Signature: DRAFT
Date: 3/08/17 License #: 25063

Drawn: ADB
Designed: BJK
Date: 3/08/17

Revisions:
1.

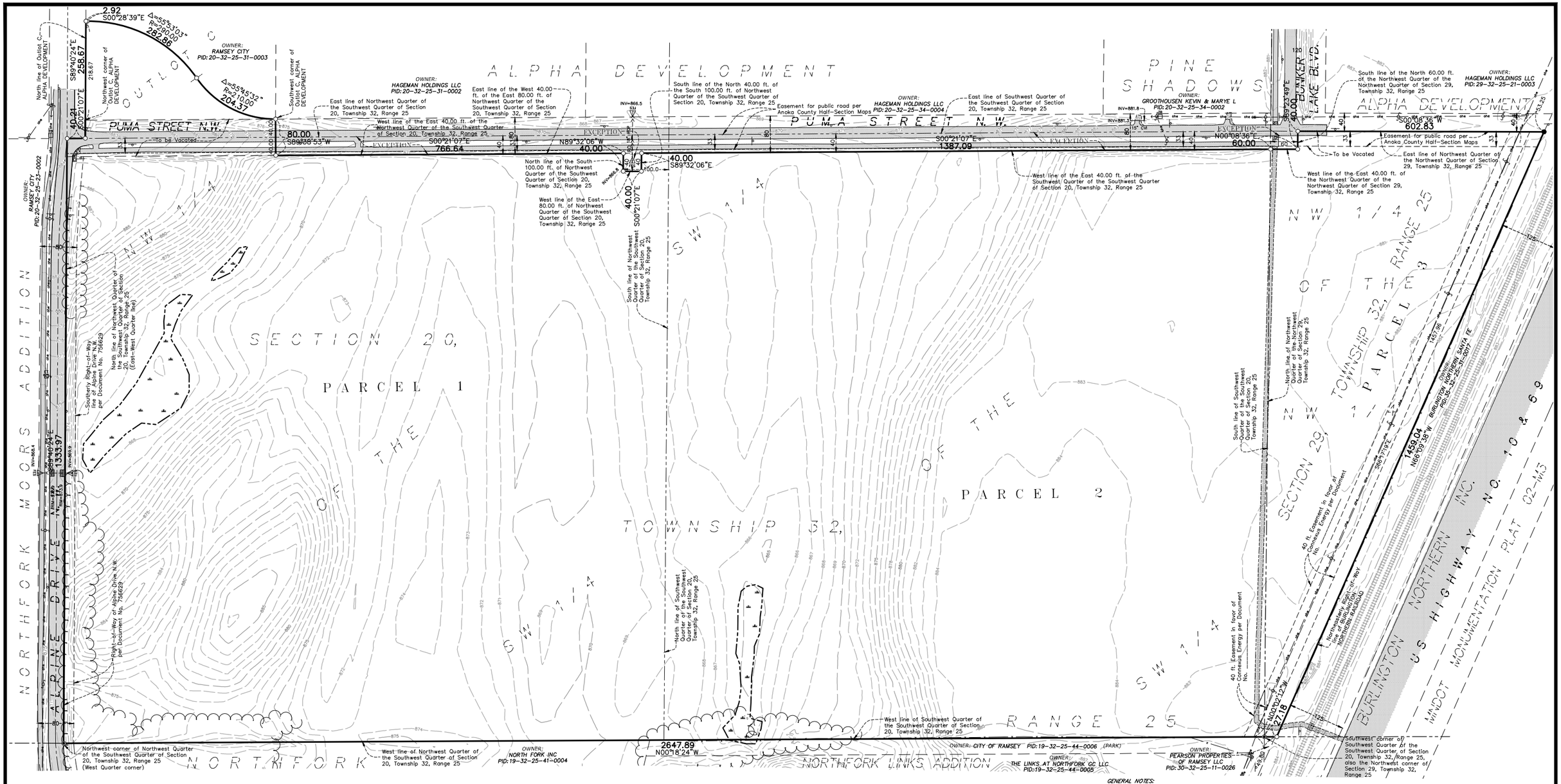
RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake B, Suite 400
Ramsey, MN 55303

RIVERSTONE
Ramsey, MN

COVER SHEET

1 of 16

Save Date: 03/10/17 I:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_cover.dwg



Parcel Description:
(Per Schedule A of Title Commitment No. 1273, with a commitment date of October 12th, 2016 at 7:30 A.M., prepared by Old Republic National Title Insurance Company)

Parcel 1:
The Northwest Quarter of Southwest Quarter of Section 20, Township 32, Range 25, Anoka County, Minnesota. EXCEPT the East 40.00 feet of said Northwest Quarter of Southwest Quarter lying southerly of the southerly right of way line of Alpine Drive as described in Document No. 756629.
AND ALSO EXCEPT the North 40.00 feet of the South 100.00 feet of the West 40.00 feet of the East 80.00 feet of said Northwest Quarter of Southwest Quarter.

Parcel 2:
The Southwest Quarter of Southwest Quarter of Section 20, Township 32, Range 25, Anoka County, Minnesota, EXCEPT the East 40.00 feet thereof.

Parcel 3:
The Northwest Quarter of Northwest Quarter of Section 29, Township 32, Range 25, Anoka County, Minnesota, lying northeasterly of the northeasterly right of way line of Burlington Northern Railroad, EXCEPT the North 60.00 feet of the East 40.00 feet of said Northwest Quarter of Northwest Quarter.

(Proposed Legal Description, subject to City approved parcel subdivision)
That part of Outlot C, ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota lying westerly and northwesterly of the following described line:

Commencing at the Northwest corner of said Outlot C; thence South 89 degrees 40 minutes 24 seconds East, assumed bearing, along the North line of said Outlot C, a distance of 218.67 feet to the point of beginning of the line to be described; thence South 00 degrees 28 minutes 39 seconds East, 2.92 feet; thence southwesterly 282.86 feet along a tangential curve concave to the northwest, having a radius of 290.00 feet and a central angle of 55 degrees 53 minutes 03 seconds to a point of reverse curvature; thence continuing southwesterly 204.37 feet along a reverse curve concave to the southeast, having a radius of 210.00 feet and a central angle of 55 degrees 45 minutes 32 seconds to the Southwest corner of said Outlot C and said line there terminating.

(Proposed Legal Description, subject to City approved Right-of-Way Vacation)
That part of Puma Street Northwest, as created and dedicated in the plat of ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota, lying southerly of the westerly extension of the north line of Outlot C, said plat, and lying northerly of the following described line:

Beginning at the southwest corner of said Outlot C; thence South 89 degrees 38 minutes 53 seconds West, 80.00 feet, assuming the North line of said Outlot C has a bearing of South 89 degrees 40 minutes 24 seconds East, and said line there terminating.

And

That part of the East 40.00 feet of the Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25, Anoka County, Minnesota, lying southerly of the southerly right of way line of Alpine Drive NW as described in Doc. No. 756629 and lying northerly of the following described line:

Beginning at the southwest corner of said Outlot C; thence South 89 degrees 38 minutes 53 seconds West, 80.00 feet, assuming the North line of said Outlot C has a bearing of South 89 degrees 40 minutes 24 seconds East, and said line there terminating.

LEGEND

- ◉ – Denotes Anoka County Cast Iron Monument
- ● – Denotes Found Iron Monument
- ○ – Denotes Set Iron Pipe, Marked with RLS 40361
- –o– – Denotes Miscellaneous Sign
- ▣ – Denotes Electric Box
- CB – Denotes Catch Basin
- EM – Denotes Electric Meter
- ▣ – Denotes Telephone Box
- UP – Denotes Utility Pole
- FES – Denotes Flared End Section
- HH – Denotes Hand Hole
- ——— – Denotes Overhead Electric
- ——>>—— – Denotes Storm Sewer
- — x — x — – Denotes Existing Fence as noted
- WL – *Denotes Wetland delineated by Kjolhaug Environmental Services Company in 2016*
- Denotes Gravel Surface
- Denotes Bituminous Surface
- – Denotes Existing 1 Ft. Contour
- – Denotes Existing 5 Ft. Contour

0 50 100 200 (IN FEET)

GENERAL NOTES:

1. The field work for this survey was completed on November 28th, 2016.
2. Bearings shown hereon are based on the North line of Outlot C, ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota, which is assumed to bear South 89 degrees 40 minutes 24 seconds East.
3. BENCHMARK: Anoka County Benchmark No. 3076 Elevation= 890.186 (NAVD 88)
4. Surveyed property contains ±3,934,125 sq.ft. (±90.32 acres).
5. Wetlands shown hereon were delineated by Kjolhaug Environmental Services Company in 2016.
6. Above ground utilities have been field located as shown. Underground utilities shown hereon are those which were field marked by utility companies responding to Gopher State One Call, Ticket No. 162941258 and 162941314, dated 10/20/2016 or were taken from utility plans provided by the City of Ramsey. All underground locations shown hereon are APPROXIMATE. Prior to any excavations or digging, contact Gopher State One Call for an on-site location (651-454-0002).

Carlson McCain | • environmental • engineering • surveying
3890 Pheasant Ridge Drive NE, Suite 100
Blaine, MN 55449
Phone: (763) 489-7900
Fax: (763) 489-7959
www.carlsonmccain.com

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 Land Surveyor under the laws of the State of Minnesota

Print Name: Thomas R. Balluff, L.S.
Signature: D R A F T
Date: 3/8/2017 License #: 40361

DRAWN BY: JAB
ISSUE DATE: 3/8/2017
FILE NO: 1308

Revisions:

RIVERSTONE DEVELOPMENT, LLC
14015 Sunfish Lake B, Suite 400
Ramsey, MN, 55303

RIVERSTONE
Ramsey, Minnesota

EXISTING CONDITIONS

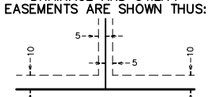
Save Date: 03/09/2017 F:\Jobs\6421 - 6440\6435 - ramsey site\cad c3d\survey\6435_exsurv.dwg

RIVERSTONE

SITE DATA

TOTAL SITE AREA	**±90.32 AC.**	**TOTAL MULTI-FAMILY AREA**	**±7.38 AC.**
TOTAL ROW AREA	**±16.77 AC.**	NUMBER OF LOTS	48
TOTAL OUTLOT AREA	**±20.67 AC.**	NUMBER OF COMMON AREA LOTS	2
OUTLOT A	±2.73 AC.	MULTI-FAMILY LOT SIZE	±2,016 S.F.
OUTLOT B	±6.20 AC.	**TOTAL SINGLE FAMILY AREA**	**±45.50 AC.**
OUTLOT C	±6.39 AC.	NUMBER OF LOTS	245
OUTLOT D	±0.66 AC.	SMALLEST LOT	±6,056 S.F.
OUTLOT E	±4.58 AC.	LARGEST LOT	±19,592 S.F.
OUTLOT F	±0.11 AC.	AVERAGE LOT	±8,090 S.F.
TOTAL LOT AREA	**±52.88 AC.**	**EXISTING ZONING**	**R-1, R-2, R-3, B-2**
TOTAL NUMBER OF LOTS	**293**	**PROPOSED ZONING**	**PUD**
(SINGLE FAMILY AND MULTI-FAMILY LOTS)		**UTILITIES**	**AVAILABLE**
		GROSS DENSITY	**3.24**
		(SINGLE FAMILY + MULTI-FAMILY LOTS/ TOTAL SITE AREA)	

PROPOSED DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:



being 5 feet in width, and adjoining side lot lines, and 10 feet in width and adjoining right of way lines and rear lot lines unless otherwise shown on this plat.

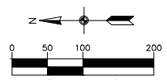
BENCHMARK

1. Anoka County Benchmark No. 3076 Elev.= 890.186 (NAVD 88)
2. Anoka County Benchmark No. 2078 Elev.= 899.499 (NAVD 88)

LEGEND

◉ – Denotes Anoka County Monument
● – Denotes Found Iron Monument
○ – Denotes 5/8 inch by 14 inch rebar, marked with RLS 40361

Bearings shown hereon are based on the North line of Outlot C, ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota, which is assumed to bear South 89 degrees 40 minutes 24 seconds East.



LEGAL DESCRIPTION

Parcel Description:
(Per Schedule A of Title Commitment No. 1273, with a commitment date of October 12th, 2016 at 7:30 A.M., prepared by Old Republic National Title Insurance Company)

Parcel 1:
The Northwest Quarter of Southwest Quarter of Section 20, Township 32, Range 25, Anoka County, Minnesota. EXCEPT the East 40.00 feet of said Northwest Quarter of Southwest Quarter lying southerly of the southerly right of way line of Alpine Drive as described in Document No. 756629. AND ALSO EXCEPT the North 40.00 feet of the South 100.00 feet of the West 40.00 feet of the East 80.00 feet of said Northwest Quarter of Southwest Quarter.

Parcel 2:
The Southwest Quarter of Southwest Quarter of Section 20, Township 32, Range 25, Anoka County, Minnesota, EXCEPT the East 40.00 feet thereof.

Parcel 3:
The Northwest Quarter of Northwest Quarter of Section 29, Township 32, Range 25, Anoka County, Minnesota, lying northeasterly of the northeasterly right of way line of Burlington Northern Railroad, EXCEPT the North 60.00 feet of the East 40.00 feet of said Northwest Quarter of Northwest Quarter.

(Proposed Legal Description, which may be subject to City approved parcel subdivision)
That part of Outlot C, ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota lying westerly and northwesterly of the following described line:

Commencing at the Northwest corner of said Outlot C; thence South 89 degrees 40 minutes 24 seconds East, assumed bearing, along the North line of said Outlot C, a distance of 218.67 feet to the point of beginning of the line to be described; thence South 00 degrees 28 minutes 39 seconds East, 2.92 feet; thence southwesterly 282.86 feet along a tangential curve concave to the northwest, having a radius of 290.00 feet and a central angle of 55 degrees 53 minutes 03 seconds to a point of reverse curvature; thence continuing southwesterly 204.37 feet along a reverse curve concave to the southeast, having a radius of 210.00 feet and a central angle of 55 degrees 45 minutes 32 seconds to the Southwest corner of said Outlot C and said line there terminating.

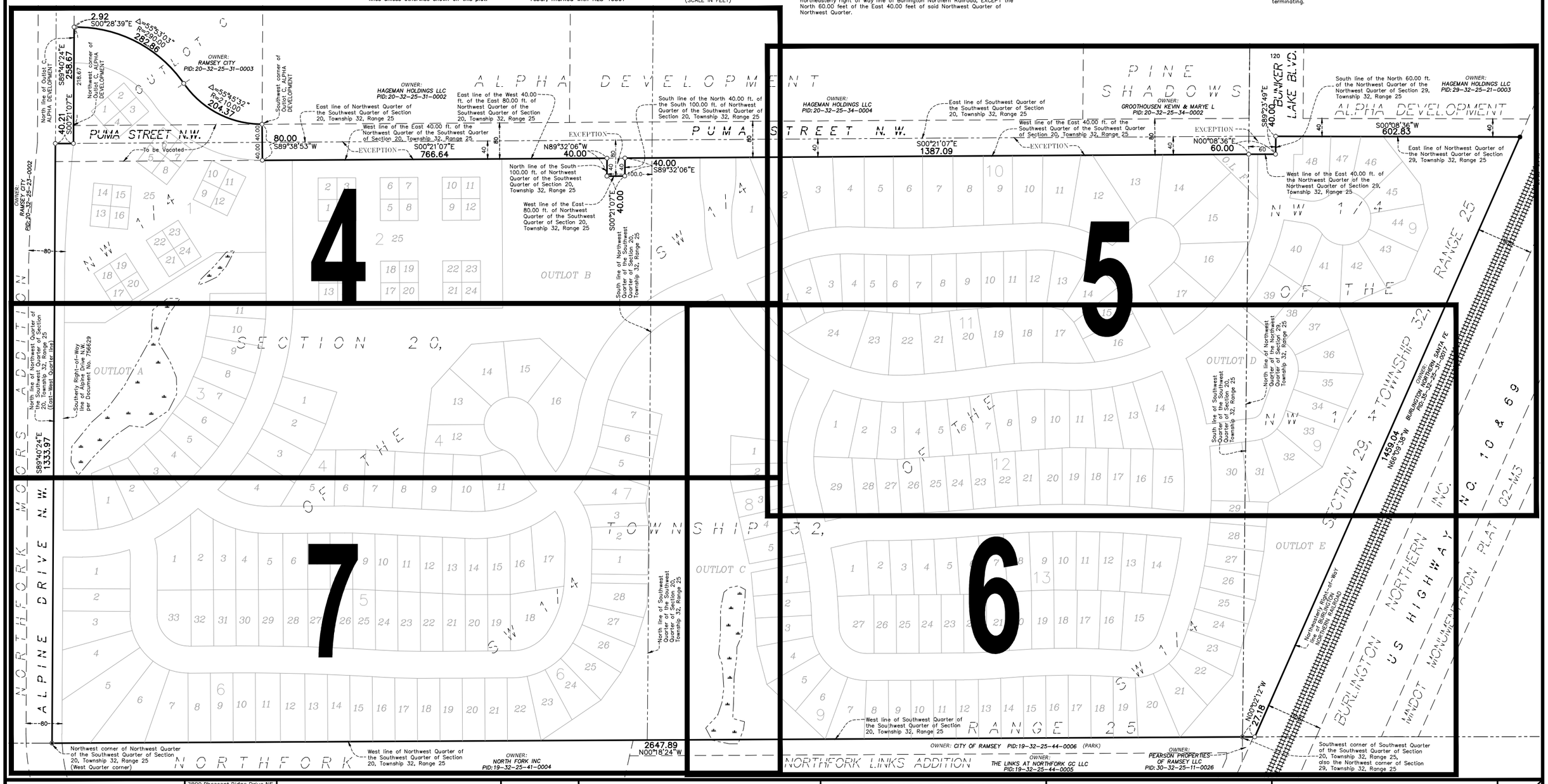
(Proposed Legal Description, which may be subject to City approved parcel subdivision)
That part of Puma Street Northwest, as created and dedicated in the plat of ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota, lying southerly of the westerly extension of the north line of Outlot C, said plat, and lying northerly of the following described line:

Beginning at the southwest corner of said Outlot C; thence South 89 degrees 38 minutes 53 seconds West, 80.00 feet, assuming the North line of said Outlot C has a bearing of South 89 degrees 40 minutes 24 seconds East, and said line there terminating.

AND

That part of the East 40.00 feet of the Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25, Anoka County, Minnesota, lying southerly of the southerly right of way line of Alpine Drive NW as described in Doc. No. 756629 and lying northerly of the following described line:

Beginning at the southwest corner of said Outlot C; thence South 89 degrees 38 minutes 53 seconds West, 80.00 feet, assuming the North line of said Outlot C has a bearing of South 89 degrees 40 minutes 24 seconds East, and said line there terminating.



Carlson McCain • environmental • engineering • surveying	3890 Pheasant Ridge Drive NE, Suite 100 Blaine, MN 55449 Phone: (763) 489-7900 Fax: (763) 489-7959 www.carlsonmccain.com	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 Land Surveyor under the laws of the State of Minnesota	Print Name: Thomas R. Balluff, L.S. Signature: D R A F T Date: 03/08/2017 License #: 40361	DRAWN BY: JAB ISSUE DATE: 03/08/2017 FILE NO: 1308	Revisions:

RIVERSTONE DEVELOPMENT, LLC 14015 Sunfish Lake B, Suite 400 Ramsey, MN, 55303	**RIVERSTONE** Ramsey, MN	**PRELIMINARY PLAT INDEX**	3 of 16

Save Date: 03/10/17 F:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\survey\6435_prpindex.dwg

LEGEND

- ◉ – Denotes Anoka County Monument
- ● – Denotes Found Iron Monument
- ○ – Denotes 5/8 inch by 14 inch rebar, marked with RLS 40361

Bearings shown hereon are based on the North line of Outlot C, ALPHA DEVELOPMENT, according to the recorded plat thereof, Anoka County, Minnesota, which is assumed to bear South 89 degrees 40 minutes 24 seconds East.

0 25 50 100
(SCALE IN FEET)

THORK MOORS ADDITION

ALPINE DRIVE N.W.

ALPINE DRIVE N. W. 889.6

S89°40'24"E 1333.97

North line of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25 (East-West Quarter line)

Southerly Right-of-Way line of Alpine Drive N.W. per Document No. 756629

OUTLOT A
±118,973 sq.ft.
Drainage & Utility Easement
(Over all of Outlot A)

OUTLOT B
±269,973 sq.ft.
Drainage & Utility Easement
(Over all of Outlot B)

PUMA STREET N.W.

PUMA STREET N.W.

ALPHA DEVELOPMENT

North line of Outlot C, ALPHA DEVELOPMENT

Northwest corner of Outlot C, ALPHA DEVELOPMENT

Southwest corner of Outlot C, ALPHA DEVELOPMENT

OWNER: RAMSEY CITY PID: 20-32-25-31-0003

OWNER: HAGEMAN HOLDINGS LLC PID: 20-32-25-31-0002

OWNER: RAMSEY CITY PID: 20-32-25-24-0002

2.92 S00°28'39"E

Δ=55°43'03" R=290.00 282.86

243.8 R=250.00

Δ=55°45'32" R=210.00 204.37

243.3 R=250.00

S89°40'24"E 258.67

S00°21'07"E 40.21

S89°38'53"W 80.00

East line of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

West line of the East 40.00 ft. of the Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

EXCEPTION

S00°21'07"E 766.64

East line of the West 40.00 ft. of the East 80.00 ft. of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

EXCEPTION
40.00
N89°32'06"W

North line of the South 100.00 ft. of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

West line of the East 80.00 ft. of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

S89°32'06"E 40.00

South line of the North 40.00 ft. of the South 100.00 ft. of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

40.00
S00°21'07"E

(To be Vacated)

SECTION 20, TOWNSHIP 32, RANGE 25

STREET H

STREET A

STREET B

STREET J

1 ±15,497 sq.ft.

2 ±10,082 sq.ft.

1 ±6,976 sq.ft.

2

7 ±6,588 sq.ft.

6 ±6,377 sq.ft.

5 ±7,337 sq.ft.

1 ±8,564 sq.ft.

2 ±8,606 sq.ft.

3 ±8,446 sq.ft.

4

11 ±6,625 sq.ft.

10 ±6,875 sq.ft.

9 ±6,875 sq.ft.

8 ±6,875 sq.ft.

3 7 ±6,875 sq.ft.

6 ±6,875 sq.ft.

5 ±6,875 sq.ft.

4 ±6,875 sq.ft.

3

14 ±12,007 sq.ft.

15 ±12,209 sq.ft.

13 ±11,744 sq.ft.

16 ±17,841 sq.ft.

4 12 ±9,479 sq.ft.

1 ±2,016 sq.ft.
2 ±2,016 sq.ft.
3 ±2,016 sq.ft.
4 ±2,016 sq.ft.
5 ±2,016 sq.ft.
6 ±2,016 sq.ft.
7 ±2,016 sq.ft.
8 ±2,016 sq.ft.
9 ±2,016 sq.ft.
10 ±2,016 sq.ft.
11 ±2,016 sq.ft.
12 ±2,016 sq.ft.
13 ±2,016 sq.ft.
14 ±2,016 sq.ft.
15 ±2,016 sq.ft.
16 ±2,016 sq.ft.
17 ±2,016 sq.ft.
18 ±2,016 sq.ft.
19 ±2,016 sq.ft.
20 ±2,016 sq.ft.
21 ±2,016 sq.ft.
22 ±2,016 sq.ft.
23 ±2,016 sq.ft.
24 ±2,016 sq.ft.

1 25 ±118,251 sq.ft.
Drainage & Utility Easement
(Over all of Lot 25, Block 1)

2 25 ±106,330 sq.ft.
Drainage & Utility Easement
(Over all of Lot 25, Block 2)

Drainage & Utility Easement

SEE SHEET 5

SEE SHEET 7

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3890 Pheasant Ridge Drive NE, Suite 100
Blaine, MN 55449
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www.carlsonmccain.com

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 Land Surveyor under the laws of the State of Minnesota

Print Name: Thomas R. Balluff, L.S.
Signature: D R A F T
Date: 03/08/2017 License #: 40361

DRAWN BY: JAB
ISSUE DATE: 03/08/2017
FILE NO: 1308

Revisions:

RIVERSTONE DEVELOPMENT, LLC
14015 Sunfish Lake B, Suite 400
Ramsey, MN, 55303

RIVERSTONE
Ramsey, MN

PRELIMINARY PLAT

4 of 16

Issue Date: 03/10/17 F:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\survey\6435_prp.dwg

LEGEND

- ◉ – Denotes Anoka County Monument
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- ○ – Denotes 5/8 inch by 14 inch rebar, marked with RLS 40361

0 25 50 100 (SCALE IN FEET)

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ALPHA DEVELOPMENT
OWNER: HAGEMAN HOLDINGS LLC
PID:20-32-25-34-0004

PINE SHADOWS
OWNER: GROOTHOUSEN KEVIN & MARYE L
PID:20-32-25-34-0002

BUNKER LAKE BLVD.

ALPHA DEVELOPMENT
OWNER: HAGEMAN HOLDINGS LLC
PID:29-32-25-21-0003

PUMA STREET N.W.
S00°21'07"E
1387.09

East line of Southwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

West line of the East 40.00 ft. of the Southwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25

EXCEPTION

West line of the East 40.00 ft. of the Northwest Quarter of the Northwest Quarter of Section 29, Township 32, Range 25

EXCEPTION
N00°08'36"E
60.00

South line of the North 60.00 ft. of the Northwest Quarter of the Northwest Quarter of Section 29, Township 32, Range 25

PUMA STREET N.W.
S00°08'36"W
602.83

East line of Northwest Quarter of the Northwest Quarter of Section 29, Township 32, Range 25

Easement for public road per Anoka County Half-Section Maps (To be Vacated)

S89°23'49"E 40.00

Drainage & Utility Easement

STREET B
STREET C
STREET D
STREET E
STREET F
STREET G

OUTLOT D
±28,544 sq.ft.

OUTLOT E
±199,714 sq.ft.
Drainage & Utility Easement
(Over all of Outlot E)

OUTLOT F
±4,941 sq.ft.

SECTION 29, T.32, R.25
SECTION 20, T.32, R.25
OF THE FOURTH PRINCIPAL MERIDIAN

BURLINGTON NORTHERN SANTA FE
OWNER: BURLINGTON NORTHERN SANTA FE
PID:20-32-25-23-0017

1459.04
N66°09'55"W

BURLINGTON NORTHERN INC.
U.S. HIGHWAY 169

MNDOT MONUMENTATION PLAT 02-M3

SEE SHEET 4

SEE SHEET 6

Carlson McCain • environmental • engineering • surveying	3890 Pheasant Ridge Drive NE, Suite 100 Blaine, MN 55449 Phone: (763) 489-7900 Fax: (763) 489-7959 www.carlsonmccain.com	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 Land Surveyor under the laws of the State of Minnesota	Print Name: Thomas R. Balluff, L.S. Signature: D R A F T Date: 03/08/2017 License #: 40361	DRAWN BY: JAB ISSUE DATE: 03/08/2017 FILE NO: 1308	Revisions:	**RIVERSTONE DEVELOPMENT, LLC** 14015 Sunfish Lake B, Suite 400 Ramsey, MN, 55303	**RIVERSTONE** Ramsey, MN **PRELIMINARY PLAT** 5 of 16

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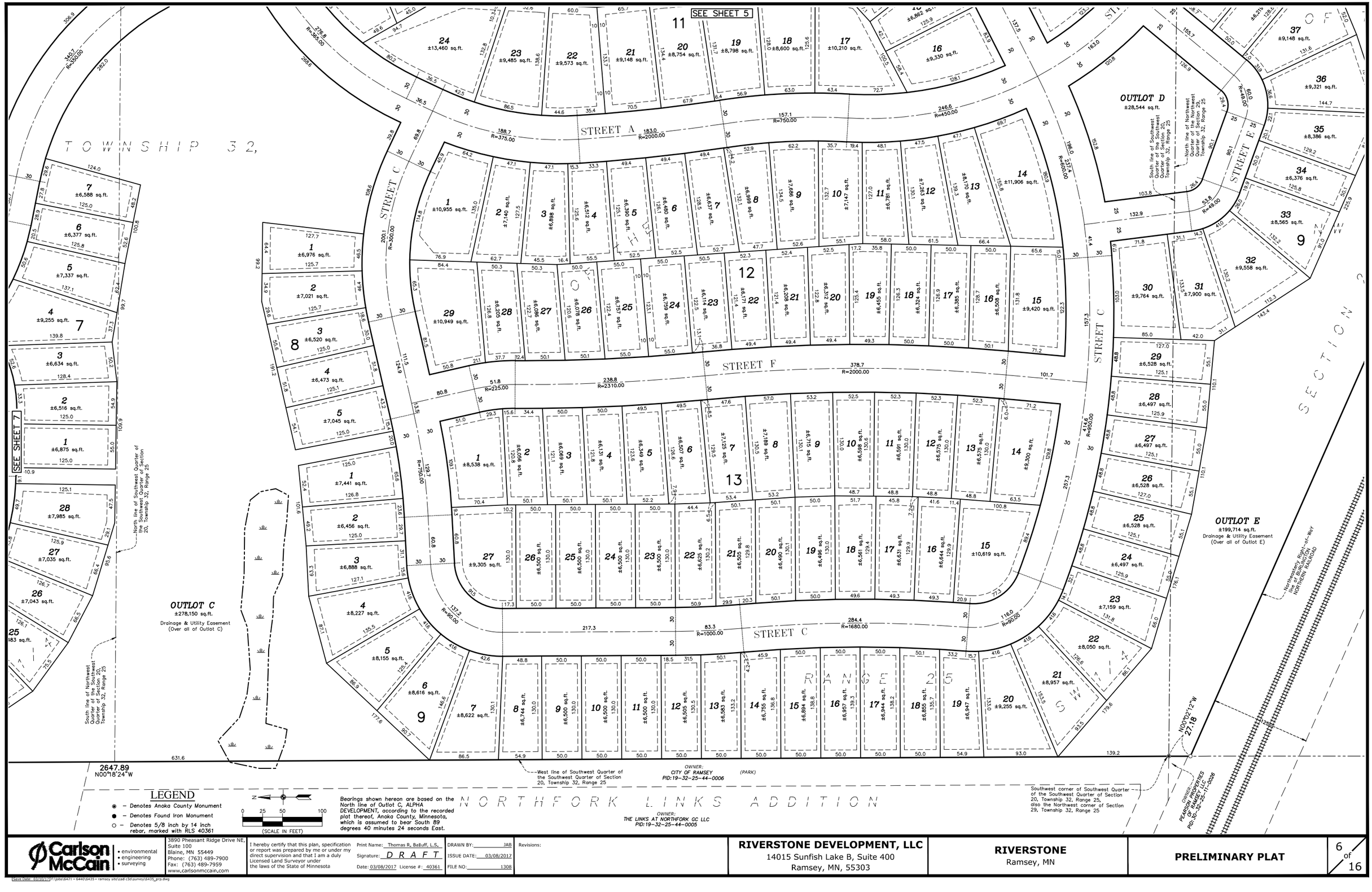

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RIVERSTONE
Ramsey, MN

PRELIMINARY PLAT

Save Date: 03/10/17 F:\jobs\6471 + 6440\6435 + ramsey site\cad c3d\survey\6435_prp.dwg

SEE SHEET 4

NORTHFORK MOORS

ALPINE DRIVE N.W.

ALPINE DRIVE N. W.

889.6

461.8

S89°40'24"E
1333.97

Southerly Right-of-Way line of Alpine Drive N.W. per Document No. 756629

North line of Northwest Quarter of the Southwest Quarter of Section 20, Township 32, Range 25 (East-West Quarter line)

90.9

OUTLOT A
±118,973 sq.ft.
Drainage & Utility Easement
(Over all of Outlot A)

STREET H

STREET B

STREET I

STREET J

STREET K

STREET L

STREET M

STREET N

STREET O

STREET P

STREET Q

STREET R

TOWNSHIP 32,

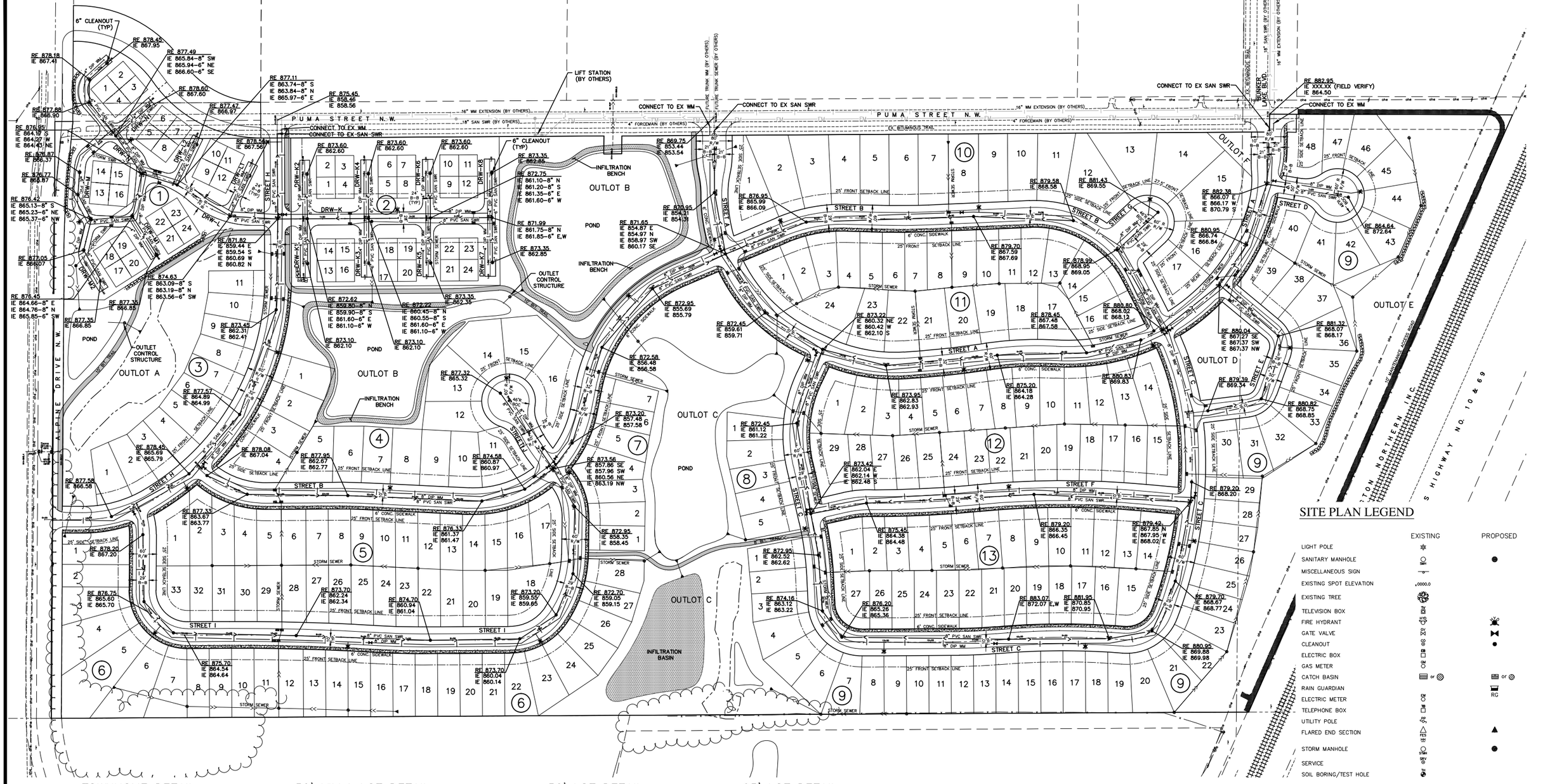
SEE SHEET 6

OUTLOT C
±278,150 sq.ft.
Drainage & Utility Easement
(Over all of Outlot C)

Drainage & Utility Easement

Drainage & Utility Easement

Drainage & Utility Easement



SITE PLAN LEGEND

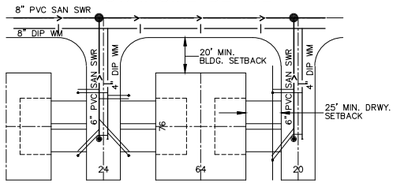
	EXISTING	PROPOSED
LIGHT POLE	☼	
SANITARY MANHOLE	SAN	●
MISCELLANEOUS SIGN		
EXISTING SPOT ELEVATION	x0000.0	
EXISTING TREE		
TELEVISION BOX	TV	
FIRE HYDRANT		
GATE VALVE		
CLEANOUT	CO	●
ELECTRIC BOX	ELEC	
GAS METER	GAS	
CATCH BASIN	or ⊘	or ⊘
RAIN GUARDIAN		RG
ELECTRIC METER	ELEC	
TELEPHONE BOX	TEL	
UTILITY POLE		
FLARED END SECTION		▲
STORM MANHOLE	STORM	●
SERVICE		
SOIL BORING/TEST HOLE		
RETAINING WALL		
PROPERTY LINE		
SETBACK LINE		
CURB		
WETLAND		
DITCH		
UNDERGROUND TELEPHONE	ut	
UNDERGROUND ELECTRIC	ue	
WATERMAIN		
SANITARY SEWER		
UNDERGROUND GAS	ug	
STORM SEWER		
FENCE	x	
OVERHEAD ELECTRIC	ohe	
EXISTING FENCE AS NOTED	x	
CONCRETE SURFACE		
BITUMINOUS SURFACE		

0 50 100 200

BENCHMARK

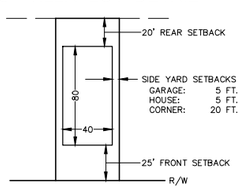
1. Anoka County Benchmark No. 3076
   Elev.= 890.186 (NAVD 88)
2. Anoka County Benchmark No. 2078
   Elev.= 899.499 (NAVD 88)

TOWNHOME DETAIL



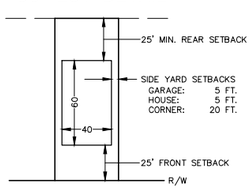
TYPICAL SERVICES SHALL BE:
WATER: 1" COPPER TYPE K
SEWER: 4" PVC SDR 26
CURB STOP TO BE PLACED 10' BEHIND THE CURB.

50' VILLA LOT DETAIL



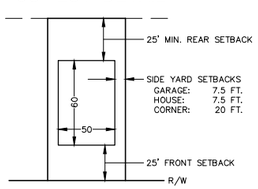
TYPICAL SERVICES SHALL BE:
WATER: 1" COPPER TYPE K
SEWER: 4" PVC SDR 26
CURB STOP TO BE PLACED AT THE R/W

50' LOT DETAIL



TYPICAL SERVICES SHALL BE:
WATER: 1" COPPER TYPE K
SEWER: 4" PVC SDR 26
CURB STOP TO BE PLACED AT THE R/W

65' LOT DETAIL



TYPICAL SERVICES SHALL BE:
WATER: 1" COPPER TYPE K
SEWER: 4" PVC SDR 26
CURB STOP TO BE PLACED AT THE R/W

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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

Print Name: Brian J. Krystofiak, P.E.
Signature: DRAFT
Date: 3/08/17 License #: 25063

Drawn: ADB
Designed: BJK
Date: 3/08/17

Revisions:
1.

RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake B, Suite 400
Ramsey, MN 55303

RIVERSTONE
Ramsey, MN

PRELIMINARY SITE & UTILITY PLAN

8 of 16

[Save Date: 03/10/17] I:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_site.dwg

SHEET 13 | SHEET 12 | SHEET 11 | SHEET 10

PUMA STREET N.W.

ALPINE DRIVE N.W.

BUNKER LAKE BLVD.

CRANE CREEK ENTRANCE

BURLINGTON NORTHERN INC.

US HIGHWAY NO. 10 & 69

0 50 100 200
(IN FEET)

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
EASEMENT LINE		
CURB LINE		
BITUMINOUS		
CONCRETE		
SANITARY SEWER		
STORM SEWER		
WATER MAIN		
OVERHEAD UTILITY		
STORM CATCH BASIN		DENOTES INLET PROTECTION
STORM MANHOLE		
OUTLET CONTROL STRUCTURE		
MANHOLE		
HYDRANT		
GATE VALVE		
TELEVISION BOX		
TELEPHONE BOX		
UTILITY POLE		
RETAINING WALL		
FENCE		
10' CONTOUR		
2' CONTOUR		
FEMA FLOOD PLAIN		
WETLAND LINE		
SPOT ELEVATION	00.0	00.0 E.O.F. 000.0
EMERGENCY OVERFLOW		
SILT FENCE		
TREE FENCE		
TREELINE		
SOIL BORING	TH	
GRADING LIMITS		
STORM CATCH BASIN		DENOTES INLET PROTECTION
WETLAND BUFFER SIGN		DENOTES SIGN / DENOTES POST

WETLAND SUMMARY

WETLAND FILL = 1738 SF

NOTE: WETLAND FILL TOTAL IS LESS THAN THE DEMINIMUS AMOUNT; NO WETLAND REPLACEMENT WILL BE REQUIRED

CALL BEFORE YOU DIG

811 Know what's below. Call before you dig.

The subsurface utility information shown on this plan is utility Quality Level D. This quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."

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• engineering
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Print Name: Brian J. Krystofiak, P.E.
Signature: DRAFT
Date: 3/08/17 License #: 25063

Drawn:
Designed: BJK
Date: 3/08/17

Revisions:
1.

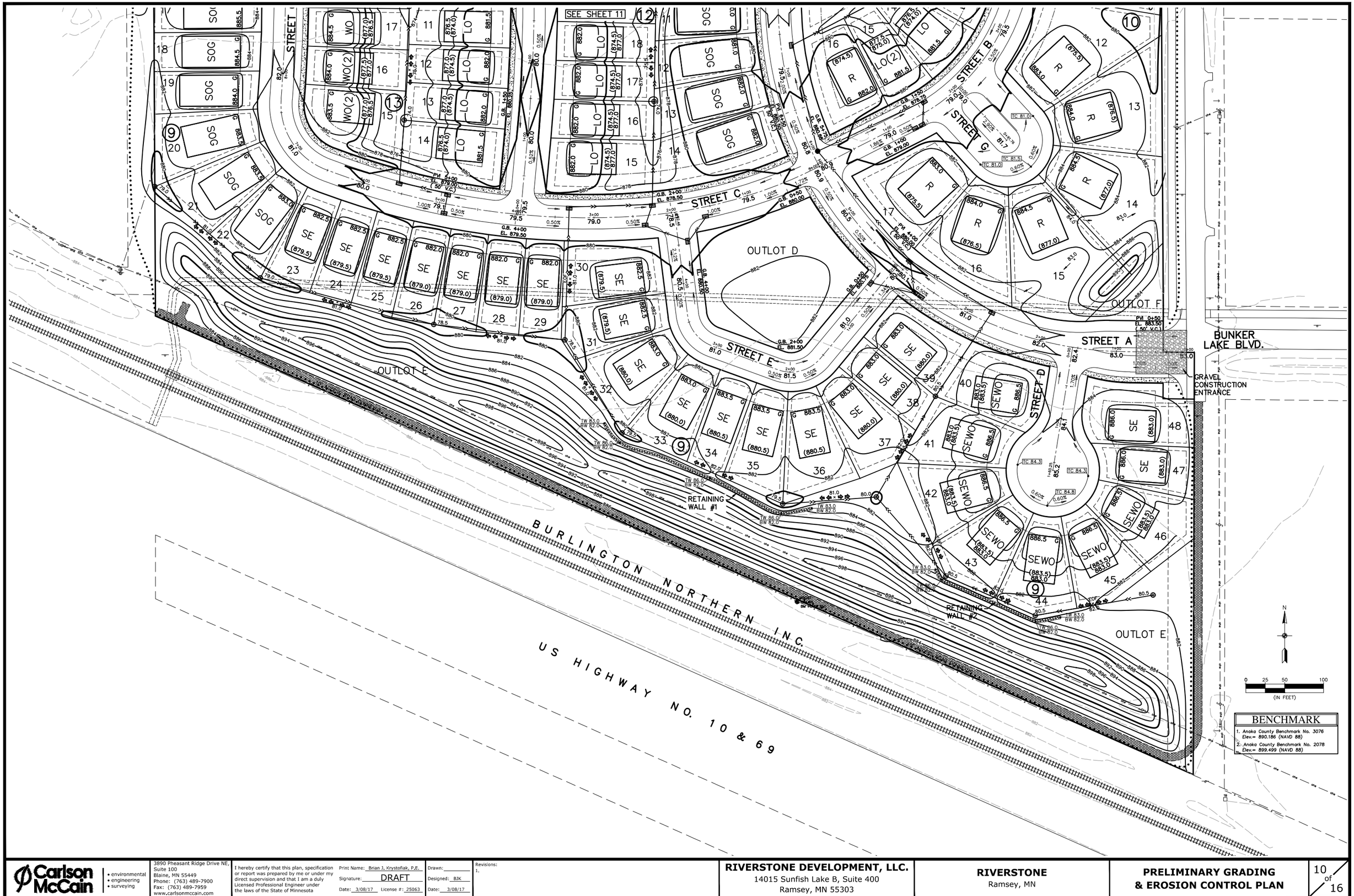
RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake B, Suite 400
Ramsey, MN 55303

RIVERSTONE
Ramsey, MN

GRADING INDEX

9 of 16

Save Date: 03/10/17 I:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_gi-inx.dwg



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• surveying

3890 Pheasant Ridge Drive NE, Suite 100
Blaine, MN 55449
Phone: (763) 489-7900
Fax: (763) 489-7959
www.carlsonmccain.com

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

Print Name: Brian J. Krystofiak, P.E.
Signature: DRAFT
Date: 3/08/17 License #: 25063

Drawn:
Designed: BJK
Date: 3/08/17

Revisions:
1.

RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake B, Suite 400
Ramsey, MN 55303

RIVERSTONE
Ramsey, MN

PRELIMINARY GRADING & EROSION CONTROL PLAN

10 of 16

[Save Date: 03/10/17] T:\jobs\6421 - 6440\6435 - Ramsey site\cad c3d\engineering\preliminary\6435_gr.dwg

NWL = 866.5
OUTLET = 867.0
100 YR HWL = 869.3 OUTLOT C

SEE SHEET 12

SEE SHEET 10

STREET A

STREET B

STREET C

STREET F

STREET G

10' BITUMINOUS TRAIL

1.0% SWALE

P U M A S T R E E T N. W.

BENCHMARK

1. Anoka County Benchmark No. 3076
   Elev.= 890.186 (NAVD 88)
2. Anoka County Benchmark No. 2078
   Elev.= 899.499 (NAVD 88)

0 25 50 100
(IN FEET)

N

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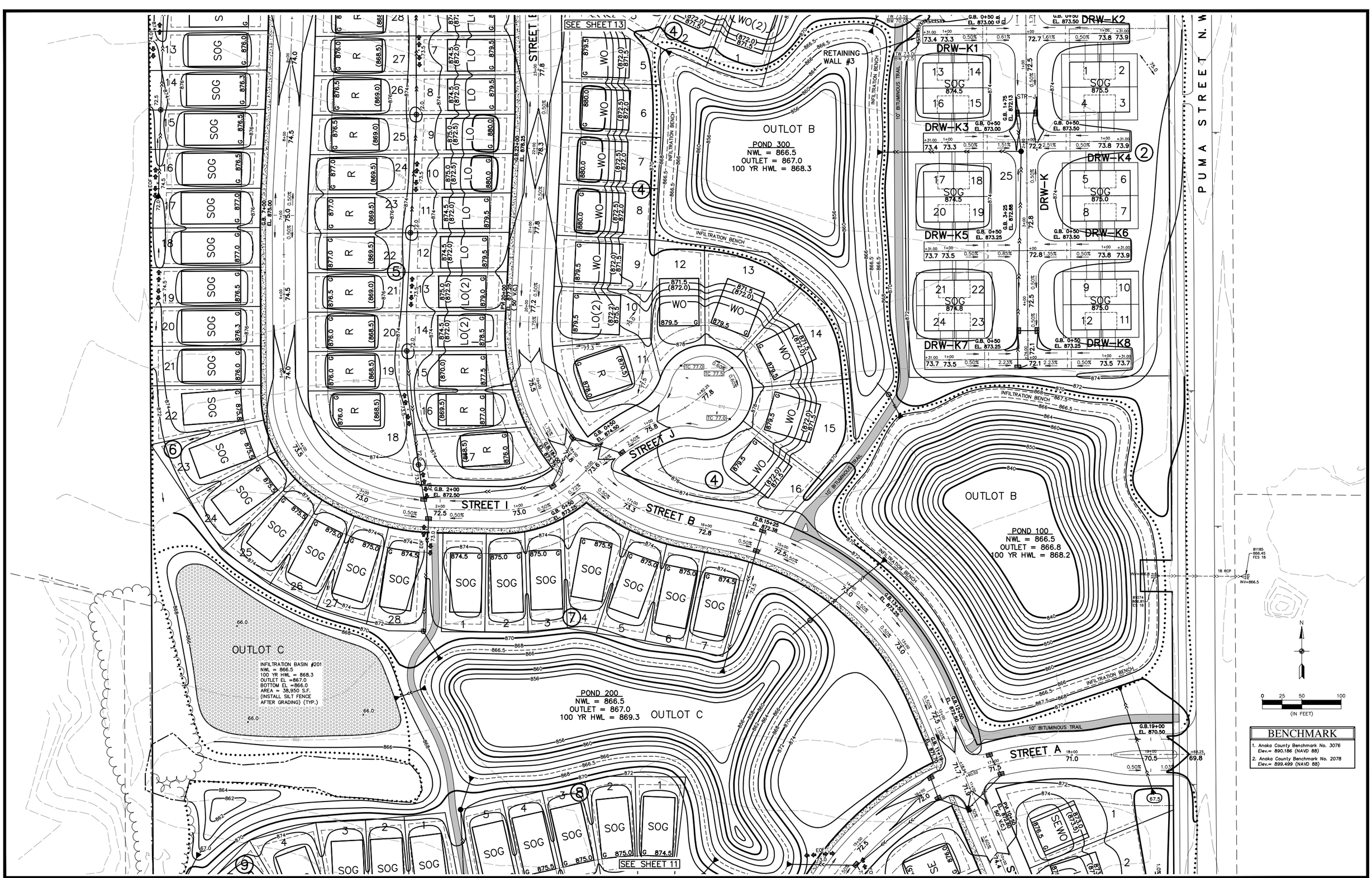
11 of 16

Save Date: 03/10/17 I:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_gr.dwg



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ALPINE DRIVE N.W.

ALPINE DRIVE N. W.

RETAINING WALL #5

RETAINING WALL #6

10' BITUMINOUS TRAIL

TOP OF BERM

POND 400
NWL = 868.5
100 YR HWL = 869.6

OUTLOT A

WETLAND 1
NWL = 867.5
100 YR HWL = 868.4

RETAINING WALL #4

WETLAND FILL
1738 SF

STREET I

STREET H

STREET B

STREET A

RETAINING WALL #3

OUTLOT B

POND 300
NWL = 866.5
OUTLET = 867.0
100 YR HWL = 868.3

INFILTRATION BENCH

INFILTRATION TRENCH

DRW-M2

DRW-M

DRW-N

DRW-M1

DRW-N1

DRW-L2

DRW-L

DRW-L1

DRW-K2

DRW-K1

DRW-K3

DRW-K4

DRW-K

DRW-K5

DRW-K6

DRW-K7

DRW-K8

PUMA STREET N. W.

SEE SHEET 12

N

0 25 50 100
(IN FEET)

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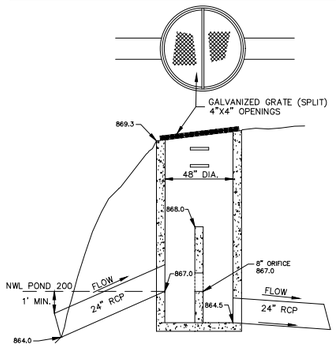
PRELIMINARY GRADING & EROSION CONTROL PLAN

13 of 16

[Save Date: 03/10/17] T:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_gr.dwg

OUTLET CONTROL STRUCTURE POND 200



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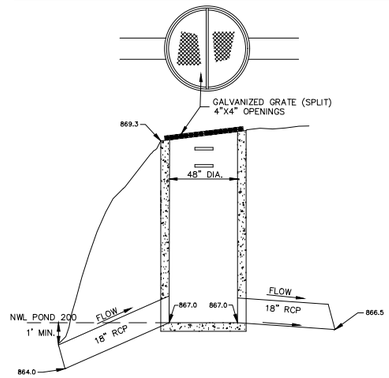
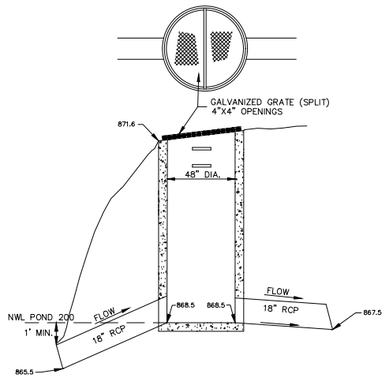
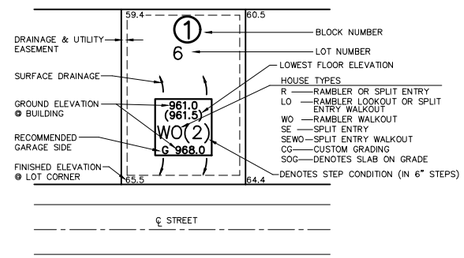


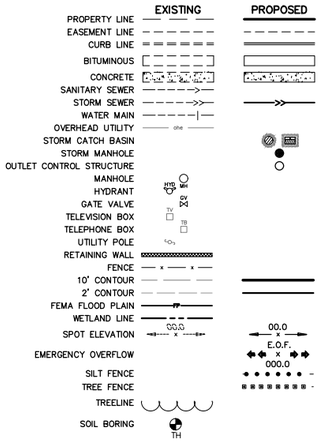
OUTLET CONTROL STRUCTURE POND 400



GRADING PLAN LOT KEY

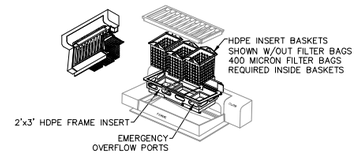


LEGEND



INFRASAFE – 2'x3' DEBRIS COLLECTION DEVICE

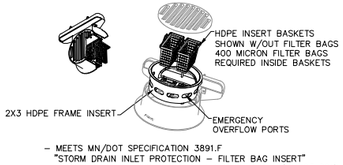
AS MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS



- MEETS MN/DOT SPECIFICATION 3891.F
"STORM DRAIN INLET PROTECTION – FILTER BAG INSERT"
- DESIGNED FOR NEENAH R–3067 OR R–3290 SERIES

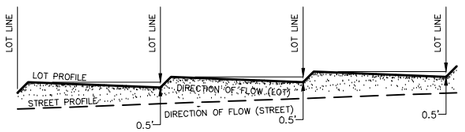
INFRASAFE – 27" DEBRIS COLLECTION DEVICE

AS MANUFACTURED BY ROYAL ENVIRONMENTAL SERVICES



- MEETS MN/DOT SPECIFICATION 3891.F
"STORM DRAIN INLET PROTECTION – FILTER BAG INSERT"
- DESIGNED FOR NEENAH R–3250–A OR R–3250–1 (MNDOT 801) FRAME CASTING

LOT BENCHING DETAIL



TURF ESTABLISHMENT

TURF ESTABLISHMENT SHALL APPLY TO ALL DISTURBED AREAS AND SHALL BE ACCORDING TO MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION (2005) EXCEPT AS MODIFIED BELOW.

TURF ESTABLISHMENT SHALL OCCUR AS SOON AS POSSIBLE BUT IN NO CASE MORE THAN 14 DAYS.

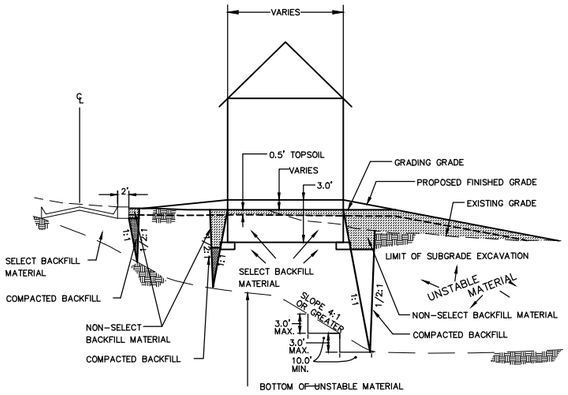
SEED: MnDOT MIXTURE 250 AT 70 POUNDS PER ACRE.

DORMANT SEED: SHALL BE APPLIED AT TWICE THE NORMAL RATE AFTER NOVEMBER 1ST.

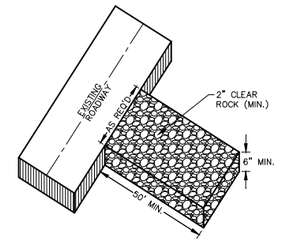
MULCH: TYPE 1 AT 2 TONS PER ACRE (DISK ANCHORED).

FERTILIZER: TYPE 24–12–24 AT 300 POUNDS PER ACRE.

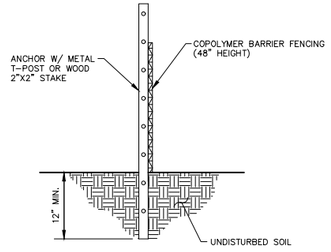
SUBGRADE CORRECTION



ROCK CONSTRUCTION ENTRANCE



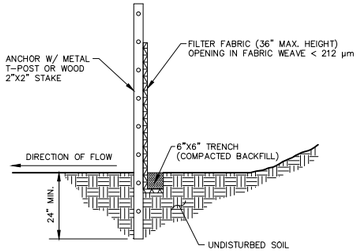
TREE FENCE



NOTES:

1. TREE FENCING SHALL BE PLACED A MINIMUM OF 1 FOOT PER CALIPER INCH OF TREE DIAMETER FROM TREE(S) THAT IS/ARE TO BE SAVED.
2. ANCHOR POST MAY BE SPACED UP TO 10 FEET APART.
3. SECURELY ATTACH TREE FENCE TO ANCHOR POSTS W/ MINIMUM OF TWO ATTACHMENTS PER POST.
4. SEE MNDOT SPECIFICATION 2572.

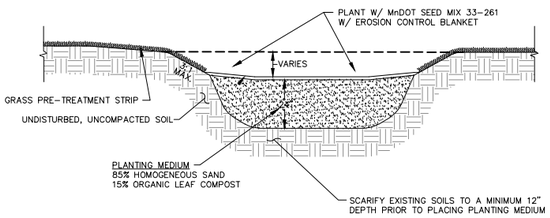
SILT FENCE



NOTES:

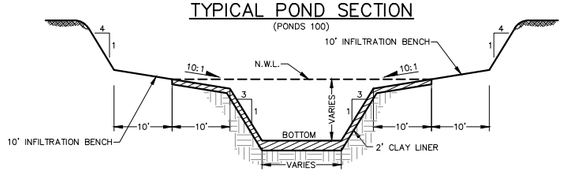
1. DIG A 6"X6" TRENCH ALONG THE INTENDED SILT FENCE LINE.
2. DRIVE ALL ANCHOR POSTS INTO THE GROUND AT THE DOWNHILL SIDE OF THE TRENCH.
3. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART.
4. LAY OUT SILT FENCE ALONG THE UPHILL SIDE OF THE ANCHOR POSTS AND BACK FILL 6"X6" TRENCH.
5. SECURELY ATTACH SILT FENCE TO ANCHOR POSTS W/ MINIMUM OF THREE ATTACHMENTS PER POST.
6. SEE MNDOT SPECIFICATIONS 2573 & 3886.

INFILTRATION BASIN



TYPICAL POND SECTION

(PONDS 100)



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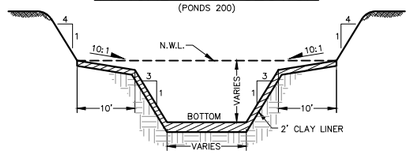

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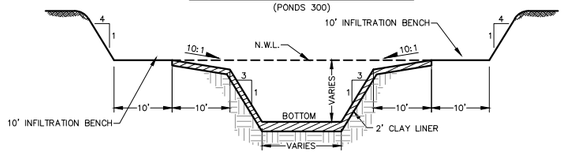

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DETAILS

14 of 16

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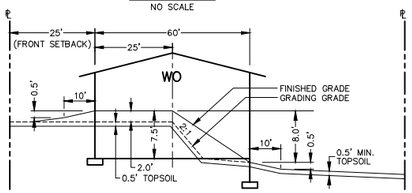
65' LOTS

WALKOUT
NO SCALE



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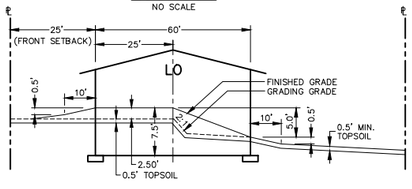

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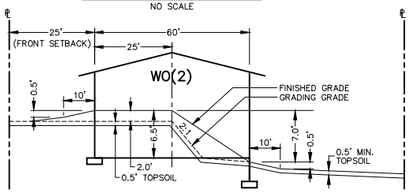

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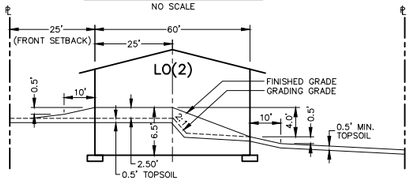

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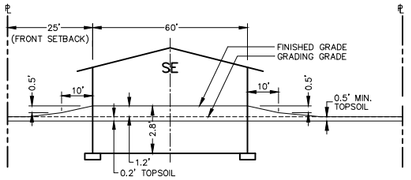

RAMBLER
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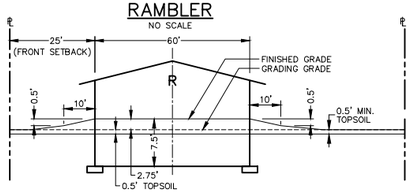
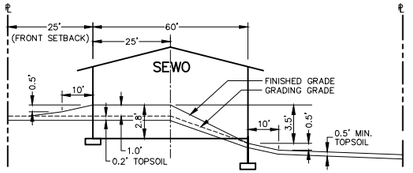
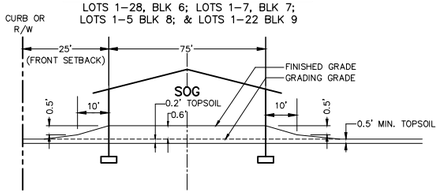
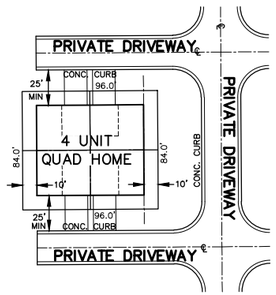


SPLIT ENTRY WALKOUT

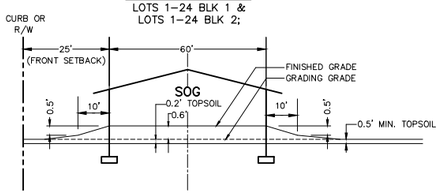


50' VILLAS
SINGLE FAMILY HOLDOWNS
LOTS 1–28, BLK 6; LOTS 1–7, BLK 7;
LOTS 1–5 BLK 8; & LOTS 1–22 BLK 9





QUAD HOMES
LOTS 1–24 BLK 1 &
LOTS 1–24 BLK 2;



50' LOTS

WALKOUT
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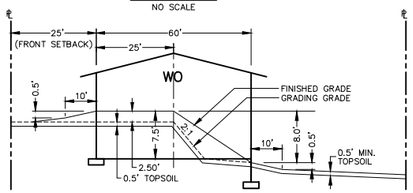

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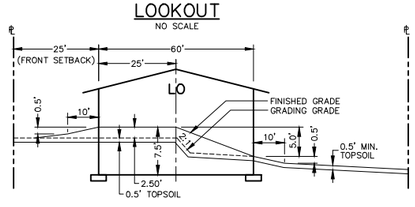

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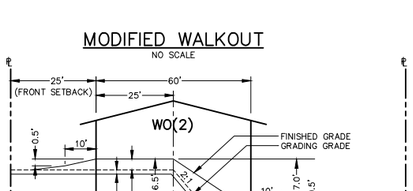

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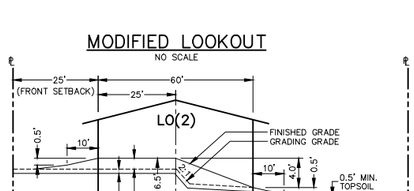

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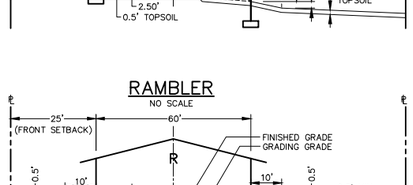

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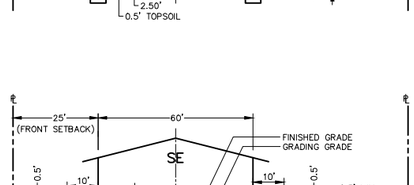

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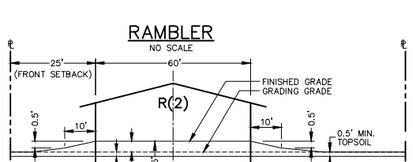

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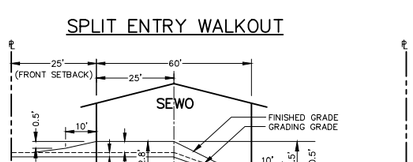

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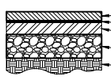
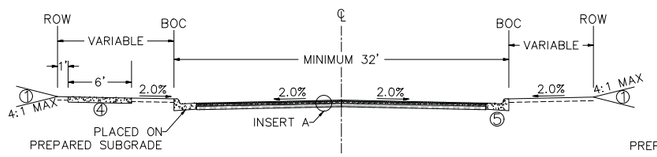


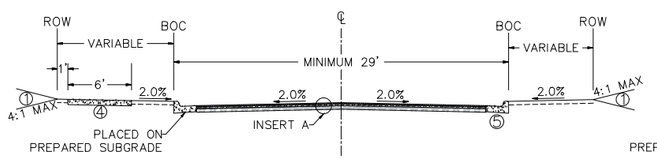
REFERENCE NOTES:

1. GRADE TO MATCH EXISTING SURFACE MINIMUM 4" COMMON TOPSOIL BORROW IN BOULEVARDS. SEE CITY PLATE No. ERO–6
2. CLASS 5 GRADATION IS MODIFIED PER CITY PLATE No. STR–26
3. CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING ANY FILL MATERIALS OR CLASS 5 AGGREGATE BASE.
4. ALL SIDEWALKS SHALL BE 6" THICK, 6' WIDE, PLACED ON PREPARED SUBGRADE.
5. CONCRETE CURB AND GUTTER PER PLAN. SEE CITY PLATE No. STR–1.

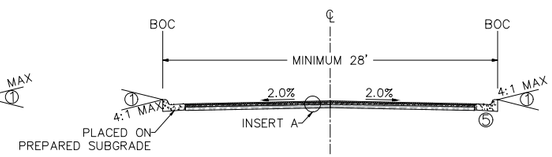
32' – URBAN STREET
NOTE: NOT TO SCALE



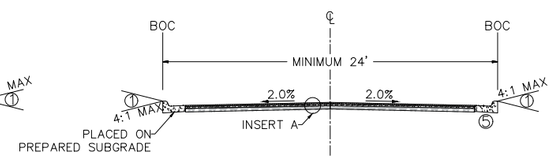
29' – URBAN STREET
NOTE: NOT TO SCALE



28' – PRIVATE STREET
NOTE: NOT TO SCALE



24' – PRIVATE STREET
NOTE: NOT TO SCALE



Carlson McCain
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www.carlsonmccain.com

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

Print Name: Brian J. Krystofiak, P.E.
Signature: DRAFT
Date: 3/08/17 License #: 25063

Drawn:
Designed: BJK
Date: 3/08/17

Revisions:
1.

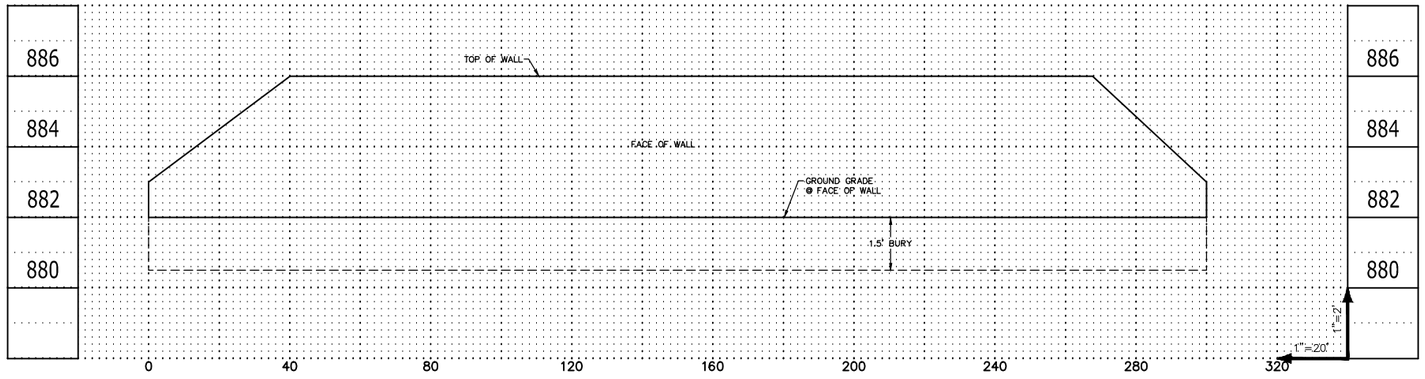
RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake B, Suite 400
Ramsey, MN 55303

RIVERSTONE
Ramsey, MN

DETAILS

Save Date: 03/10/17 I:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_details.dwg

MODULAR RETAINING WALL #1
(1542 SF)



MODULAR RETAINING WALL #2
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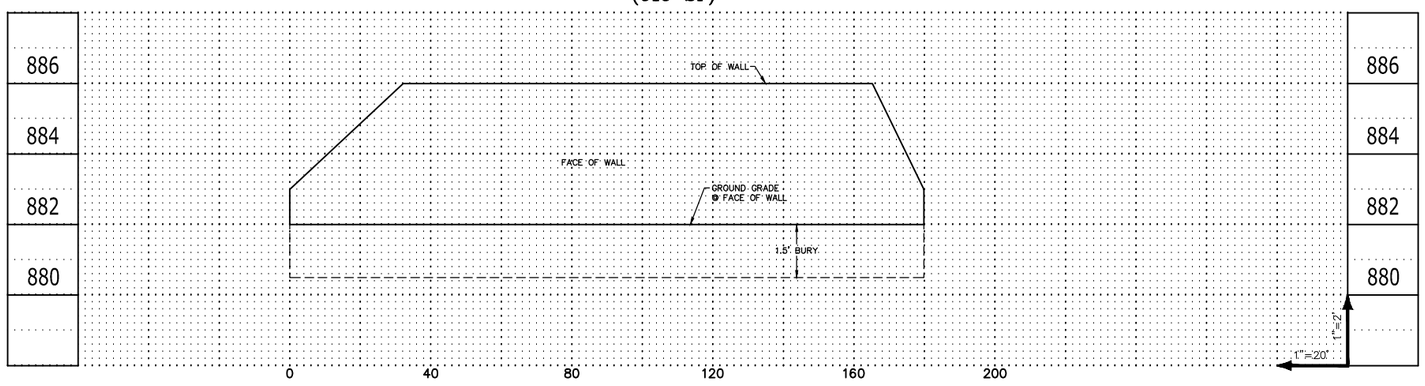

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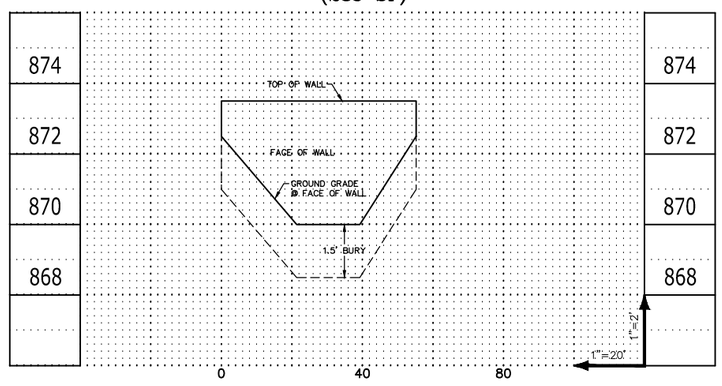
(235 SF)



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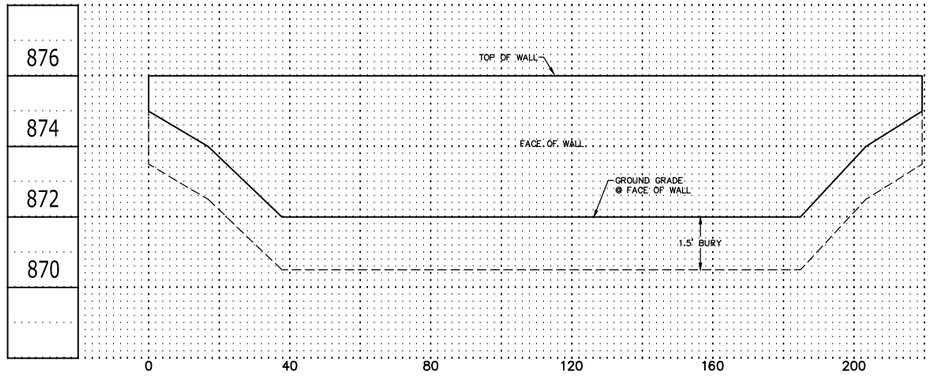
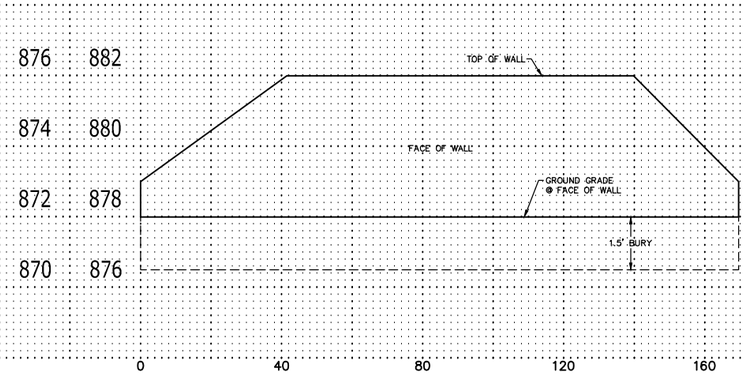
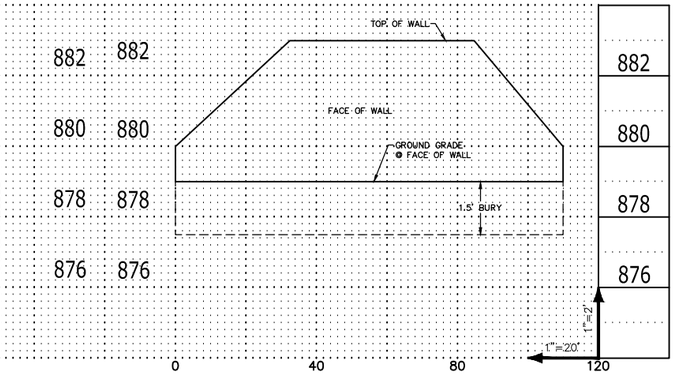
(1085 SF)



MODULAR RETAINING WALL #5
(830 SF)



MODULAR RETAINING WALL #6
(525 SF)



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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

Print Name: Brian J. Krystofiak, P.E.
Signature: DRAFT
Date: 3/08/17 License #: 25063

Drawn: BJK
Designed: BJK
Date: 3/08/17

Revisions:
1.

RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake B, Suite 400
Ramsey, MN 55303

RIVERSTONE
Ramsey, MN

RETAINING WALL PROFILES

Save Date: 03/10/17 I:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\engineering\preliminary\6435_details.dwg

Pearson Farm Residential Development

Environmental Assessment Worksheet

Draft, March 10, 2017

Responsible Governmental Unit (RGU)

City of Ramsey
Community Development
7550 Sunwood Drive NW
Ramsey, Minnesota 55303
http://www.cityoframsey.com/

City of Ramsey
Community Development
7550 Sunwood Drive NW
Ramsey, Minnesota 55303
http://www.cityoframsey.com/

Memo

To: Minnesota Environmental Quality Board
Environmental Review Distribution List

From: Tim Gladhill, Community Development Director

Date: March X, 2017

Subject: Pearson Farm Residential Development EAW

As the Responsible Governmental Unit (RGU), the City of Lake Ramsey is issuing this Environmental Assessment Worksheet (EAW) for the Pearson Farm Residential Development. The public comment period on this EAW begins when the public notice is published in the Minnesota Environmental Quality Board (EQB) Monitor on March X, 2017. A press release or public notice has been submitted for publication in the Anoka County Union Herald. Public comments on this EAW will be accepted by the City of Ramsey until 4:30pm on _____, 2017.

Environmental Assessment Worksheet (EAW)

Pearson Farm Residential Development

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Environmental Assessment Worksheet (EAW)

Pearson Farm Residential Development

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at: http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title: **Pearson Farm Residential Development**

2. Proposer:	Eagle Cove Land Company	**RGU:**	City of Ramsey
Contact person:	Stephen Bona	Contact person:	Tim Gladhill
Title:	Development Manager	Title:	Community Development Dir.
Address:	14015 Sunfish Lake Blvd.	Address:	7550 Sunwood Drive NW
	Ramsey, MN 55303		Ramsey, MN 55303
Phone:	(763) 427-3090	Phone:	(763) 433-9826
Fax:	(763) 712-9060	Fax:	(763) 433-9848
Email	stephen@capstonehomes-mn.com	Email	tgladhill@cityoframsey.com

4. Reason for EAW Preparation

Required:
- ☐ EIS Scoping
- ☑ Mandatory EAW

Discretionary:
- ☐ Citizen petition
- ☐ RGU discretion
- ☐ Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):
Minnesota Rules Part 4410.4300, Subp. 19.c (Residential development)

5. Project Location

County: Anoka County, Minnesota
City/Township: City of Ramsey
PLS Location (¼, ¼, Section, Township, Range): part of SW ¼ of Section 20 and part of NW ¼ of NW ¼ of Section 29, T32N, R25W
Watershed (81 major watershed scale): Mississippi River Twin Cities (20)
GPS Coordinates: 45.244662, -93.488471
Tax Parcel Number(s): 20-32-25-32-0001, 20-32-25-33-0001, 29-32-25-22-0004, 20-32-25-31-0003

At a minimum attach each of the following to the EAW:

- *County map showing the general location of the project;*
- *U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and*
- *Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.*

6. Project Description

a. Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).

The Pearson Farm Residential Development is proposed on 89.44 acres of land in southwestern Anoka County. The project will include up to 246 detached single-family homes and 98 attached townhome units. Site development will include installation of municipal sewer and water, mass grading, and stormwater features.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

The Pearson Farm Residential Development is proposed on 89.44 acres of land in the southwestern part of the City of Ramsey, Anoka County, Minnesota (**Figure 1**). The project area is dominated by cropland and has a history of agricultural use. The project is located in Sections 20 and 29, T32N, R25W (**Figure 2**). The project area is bordered on the north by Alpine Drive NW; on the east by Puma Street NW; on the south by the Burlington Northern Railroad and U.S. Highway 10/169, and the west by the Links at Northfork Golf Course.

The project will include up to 246 single-family homes and 98 townhome units, installation of municipal sewer and water, mass grading, and stormwater features. The project will convert approximately 85.48 acres of annually-tilled cropland and small areas of trees to streets, homes, lawns, landscaping, and stormwater features (**Figures 3 and 4**). The project will include about 20.60 acres of open space and stormwater features. The project area includes 1.02 acres of wetland distributed among three small basins. The two largest wetlands will be preserved and protected by buffers. The smallest wetland, which covers only 0.04 acre (1,738 square feet), will be eliminated by site grading necessary to create an emergency overflow for the largest wetland on the site.

The site includes sandy soils, 18 feet of topographic relief, and mostly gradual slopes. Graded ditch slopes along the south side of Alpine Drive NW range up to 20% (5:1), but the steepest natural slopes on the site are 12% and they cover only about a third acre. The site will be mass graded to install utilities, streets, residential building pads, and stormwater features. The southern edge of the site will include a raised berm to buffer the townhomes from the Burlington Northern railroad.

Approximately 4.4 acres in the northwest part of the site is located within 1,000 feet of Lake Itasca, which is Minnesota DNR (MN DNR) pubic water 2-110P.

Single-family lots will generally range from 50- to 65-feet wide and from 120 to 230 feet deep. Public streets are expected to be 28 feet wide and located within 60-foot rights-of-ways, except in two locations, where the right-of-way is proposed to narrow to 50 to allow for more open space. Trails will connect to neighborhood open spaces and Puma Street NW. Sidewalks will be constructed on one side of municipal streets. The development will operate under a homeowners' association.

Development of the project area will involve installation of public and private infrastructure, including streets, trails, municipal water and sanitary sewer, stormwater systems, electrical lines, and telephone lines. The project area will be served by City of Ramsey fire and police services and by the Anoka-Hennepin School District.

It is anticipated that construction of the development will start in summer 2017 and be phased over 5 to 10 years, depending on market conditions. Construction will generally be phased from the southeast to the northwest based on the extension of municipal water and sewer, which will be extended from the intersection of Puma Street NW and Bunker Lake Blvd NW, at the southeastern edge of the site. The number of phases will be determined by market demand and absorption. Infrastructure will be installed at the initiation of each construction phase. In most cases, streets, water main, and sanitary sewer will only be installed to serve the upcoming phase of construction. It may be necessary to initiate stormwater system construction at the start of each construction phase to properly treat stormwater and minimize potential effects of stormwater runoff.

c. Project magnitude:

Table 1. Project Magnitude

Characteristic	Number of Units
Total Project Acreage	89.44
Linear project length	NA
Number and type of residential units	246 (single-family detached)
Number and type of residential units	98 (multi-family attached)
Commercial building area (square feet)	0
Industrial building area (square feet)	0
Institutional building area (square feet)	0
Other uses – specify (acres)	NA
Structure height(s) (feet)	20-35

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of the Pearson Farm Residential Development is to provide a residential development with a variety of housing types in proximity to transportation corridors and open spaces. The project will be carried out by a private entity.

e. Are future stages of this development including development on any other property planned or likely to happen? ☐ Yes ☑ No
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

Future stages are not planned or likely.

f. Is this project a subsequent stage of an earlier project? ☐ Yes ☑ No
If yes, briefly describe the past development, timeline and any past environmental review.

The project is not a subsequent stage of an earlier project.

7. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development:

Table 2. Cover Types

Land Cover	Before (acres)[1]	After (acres)[2]
Cropland	85.48	0.00
Tree rows	1.82	0.96
Grassland	0.81	0.94
Wetlands	1.02	0.98
Lawn and landscaping	0.00	62.52
Impervious surface (developed)	0.31	14.54
Stormwater features	0.00	9.50
Totals	89.44	89.44

[1] Existing impervious surface includes part of Puma Street NW.

[2] After development wetland acreage assumes about 0.04 acre (1,738 square feet) of onsite wetlands will be impacted and will not require replacement.

Existing cover types are shown on **Figure 5**. Delineated wetlands are shown on **Figure 6**.

8. Permits and Approvals Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 3. Permits and Approvals Required

Unit of Government	Type of Application	Status
City of Ramsey	EAW Decision	To be applied for
City of Ramsey	Comprehensive Plan Amendment	To be applied for
City of Ramsey	Rezoning	To be applied for
City of Ramsey	Concept Plan Approval	Submitted
City of Ramsey	Plat Approval	To be applied for
City of Ramsey	PUD Approval	To be applied for
City of Ramsey	Grading Permit	To be applied for
City of Ramsey	Building Permit	To be applied for
City of Ramsey	Stormwater Management and Erosion Control Approval	To be applied for
City of Ramsey	Municipal Water Connection Permit	To be applied for
City of Ramsey	Sanitary Sewer Connection Permit	To be applied for
Lower Rum River WMO	WCA Wetland Boundary/Type Determination	Approved
Lower Rum River WMO	WCA De minimis Exemption	To be applied for
Lower Rum River WMO	Watershed Permit	To be applied for
Metropolitan Council	Comprehensive Plan Amendment	Submitted
Minnesota Department of Health	Water Main Extension Approval	To be applied for
Minnesota Department of Natural Resources	Water Appropriation Permit	To be applied for
Minnesota Pollution Control Agency	NPDES/SDS General Permit	To be applied for
Minnesota Pollution Control Agency	Sanitary Sewer Extension Approval	To be applied for
U. S. Army Corps of Engineers	Wetland Delineation Concurrence / Jurisdictional Determination	Submitted
U. S. Army Corps of Engineers	Confirmation of RGP-003-MN Coverage	To be applied for

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19

9. Land Use

a. Describe:

i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

The project area has been in agricultural use since at least the 1930s. Crops grown on the site during 2016 include corn, soybeans, wheat and sorghum. Itasca Park, which is owned by the City of Ramsey, is located north of the project area, covers about 61 acres, and adjoins the southeast shore of Lake Itasca. Other surrounding land uses include residential to the northeast, agricultural cropland and one isolated residence to the east; the Burlington Northern Railroad, U.S. Highway 10/169, cropland, and commercial development to the south; and the Links at Northfork golf course and open grassland to the west (**Figure 7**).

Farmland ratings for soils mapped in the project area are listed in **Table 4** under **Item 10b** of this EAW. Of the five soil map units present in the project area, none are considered prime farmland, prime farmland if drained, or farmland of statewide importance.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

The City of Ramsey 2030 Comprehensive Plan shows the planned land use of the site as Low Density Residential (LDR, average of 4 lots/net acre), Medium Density Residential (MDR, average of 7 units/acre), High Density Residential (HDR, average of 15 units/acre), and Commercial. The City of Ramsey Master Park and Trail Plan shows 2030 Park System Plan shows proposed trails running east-west through northern and southern parts of the site. Mapping prepared by the Minnesota DNR shows Metro Conservation Corridors and Regionally Significant Ecological Areas (RSEA) in the vicinity of the project. These general planning areas for conservation and ecological management area centered on Itasca Lake and the Mississippi River.

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

Zoning Overview

The City of Ramsey Zoning Map mirrors the City of Ramsey 2030 Comprehensive Plan for the project area. It shows the project area zoned for R-1 (Low-Density Residential [MUSA]), R-2 (Medium-Density Residential), R-3 (High-Density Residential), and B-2 (Business District). The Mississippi River Corridor Critical Area, which is overseen by the Minnesota DNR, and the Mississippi National River & Recreation Area, which is overseen by the National Park Service, is located southwest of the project area, across U.S. Highway 10/169. The project area does not fall in or near a wild and scenic river or an agricultural preserve. Shoreland overlay districts and floodplains are discussed below.

Shorelands

The shoreland overlay district of Lake Itasca (DNR public water 2-110P) extends over approximately 193,605 square feet (4.4 acres) in the northwestern part of the site (**Figure 8**). Lake Itasca has a Natural Environment shoreland classification and is located 600 to 1,000 feet north of the site. Lake Itasca is a shallow lake that covers about 130 acres. It has an Ordinary High Water (OHW) level of 871.4 feet (NGVD 29 Datum).

Development in shorelands is regulated under the City of Ramsey Shoreland Management Overlay District Ordinance (Section 117-221 to 117-229) and Minnesota Rules Part 6120. The Minnesota state legislature has delegated authority for regulation of development in shorelands of public waters to local government units as a means to preserve and enhance the quality of surface waters, conserve the economic and natural environmental values of shorelands, and provide for the wise use of waters and related land resources.

Shoreland is defined as land located within 1,000 feet from the OHW of a lake. However, the definition in the City of Ramsey City code and at MN Rules 6120.2500, Subp. 15 states that the "limits of shorelands may be reduced whenever the waters involved are bounded by topographic divides which extend landward from the waters for lesser distances and when approved by the [DNR] commissioner."

The shoreland on the project area is eligible to be reduced because Alpine Drive NW functions as a drainage divide. The project area will not drain north or affect Lake Itasca. The project area drains east through a culvert under Puma Street NW. Although a culvert exists under Alpine Drive NW at the north end of the site, the control elevation in the culvert is 870.4 feet. This control elevation is higher than the elevation of nearby delineated wetland boundaries and 0.7 feet higher than the wetland's 1% frequency flood elevation, which is 869.7 feet. Given these elevations, the proposed development is not predicted to affect Lake Itasca.

Floodplains

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 27003C0280E, dated December 16, 2015, shows an unnumbered Zone A 1% frequency floodplain of Lake Itasca located north of site and north of Alpine Drive NW (**Figure 8**). Flood Zone A includes special flood hazard areas subject to inundation by the 1% annual chance of flood. The Lake Itasca floodplain is outside the project area. The floodplain of the Mississippi River is located about 1,350 feet southwest of the project area, and at an elevation about 15 feet lower than the project area.

An analysis of Lake Itasca water levels under existing and future land uses was conducted for a previous development. That analysis showed that Lake Itasca does not outlet during 100-year snowmelt and rainfall events, but modeled water levels came close to reaching the outlet on the south side of the lake, so the City of Ramsey proposed to install an outlet for the lake. The City assumed that any outlet elevation would be above the OHW of 871.4 feet and the approximate 100-year flood elevation of 871.0 feet.

The proposed project will not affect the floodplain of Lake Itasca or the floodplain of the Mississippi River. The project will avoid floodplain impacts and comply with Lower Rum River Watershed Management Organization (LRRWMO) Stormwater Standards that require lowest floor elevations to be at least 3 feet above the highest anticipated groundwater table and 2 feet above the 100-year flood elevation, or 1 foot above the emergency overflow, whichever is greater.

b. *Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.*

The project is compatible with surrounding land uses, which include parkland, grassland, golf course, cropland, and residential. The City of Ramsey 2030 Comprehensive Plan guides the project area for Low Density Residential (LDR, average of 4 lots/net acre), Medium Density Residential (MDR, average of 7 units/acre), High Density Residential (HDR, average of 15 units/acre), and Commercial. The project area is currently zoned R-1 (Low-Density Residential [MUSA]), R-2 (Medium-Density Residential), R-3 (High-Density Residential), and B-2 (Business District). Although the proposed residential development is only partially compatible with the existing Comprehensive Plan and zoning, the project is designed to be compatible with nearby land uses, as discussed under **Item 9c** below.

c. *Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.*

The project will require a Comprehensive Plan Amendment to guide the site for LDR-Low Density Residential, which is intended for an average density of 4 units/acre. The proposed project has a gross density of 3.27 to 3.85 units/acre and a net density of 3.31 to 3.89 units/acre. The project area will be rezoned from a mix of uses to PUD-Planned Unit Development. The proposed project is compatible with the proposed land use, zoning, and surrounding land uses. Land use conflicts are not anticipated.

10. Geology, Soils and Topography / Land Forms

a. *Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.*

The Geologic Atlas of Anoka County, Minnesota (University of Minnesota Geological Survey 2011 and Minnesota DNR 2016) indicates the surficial geology of the area is characterized by terrace sand and gravelly sand that is located above the floodplain. The bedrock geology of the site falls in the Tunnel City Group and is dominantly quartz sandstone.

The estimated depth to bedrock in the project area, based on the Geologic Atlas, generally ranges between 100 and 250 feet. As indicated under **Item 11.a.ii**, the depth to bedrock in three nearby domestic wells ranged between 107 and 116 feet, and the depth to static groundwater in five nearby wells ranged between 28 to 41 feet.

Sinkholes and karst lands are not known to occur in western Anoka County where the project is located. Minnesota Karst Lands and Sinkhole Mapping prepared by Calvin Alexander and others (2006) does not shows karst lands or sinkholes in or near the project area.

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

The Web Soil Survey indicates the project area includes five soil mapping units that consist of mostly loamy sands (**Table 4, Figure 9**).

Table 4. Soil Classifications

Symbol	Soil Name	% of Area	% Hydric	Hydric Category	Farmland Category
D20A	Isan-Isan, frequently ponded, complex, 0-2% slopes	8.1	95	Predominantly hydric	Not prime farmland
D67A	Hubbard loamy sand, Mississippi River Valley, 0-2% slopes	55.1	1	Predominantly non-hydric	Not prime farmland
D67B	Hubbard loamy sand, Mississippi River Valley, 2-6% slopes	5.7	3	Predominantly non-hydric	Not prime farmland
D67C	Hubbard loamy sand, Mississippi River Valley, 6-12% slopes	13.4	0	Non-hydric	Not prime farmland
Dp	Duelm loamy sand, 0-2% slopes	17.7	7	Predominantly non-hydric	Not prime farmland

These soils have varying levels of limitations for dwelling units and local streets due to factors such as depth to saturated zone, frost action, ponding, and slope. Depth to saturation limitations are often associated with wetlands, which are addressed under **Item 11.a.i** below. Soils in the project area are generally considered slightly to moderately susceptible to the sheet and rill erosion by water, as indicated by slopes and K factors that range between 0.0 and 0.50.

Grading operations for residential development construction are expected to affect about 87 acres and involve movement of about 475,000 cubic yards of soil to construct streets, residential building pads, and stormwater features. Grading is expected to avoid disturbance of wetlands and trees that will be preserved, which cover about two acres within the project area.

Elevations in the project area range from 887 feet above mean sea level at the highest point in the northeast part of the project to 868 feet at the lowest onsite wetland. Review of two-foot contour mapping indicates the site has less than an acre of slopes that equal or exceed 12% and the site does not include any bluffs. Soils mapping does not classify any parts of site as having slopes of 12% or more (**Table 4, Figure 9**).

Development of the project area will disturb more than one acre of land and therefore will require application for coverage under the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Permit administered by the Minnesota Pollution Control Agency (MPCA) prior to initiation of earthwork. In compliance with the General NPDES Permit for construction activities, the project proponent and construction contractor will need to implement Best Management Practices (BMPs) to reduce erosion and sedimentation and stabilize exposed soils after construction. Erosion and sedimentation control BMPs related to stormwater runoff are discussed in greater detail within **Item 11.b.ii**.

NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 11 must be consistent with the geology, soils *and topography/land forms and potential effects described in EAW Item 10.*

11. Water Resources

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The project area includes three wetlands that were delineated by Kjolhaug Environmental Services on October 6, 2016 (**Figure 6, Table 5)**. Of the three wetlands, only Wetland 1 corresponds to a wetland location shown on National Wetlands Inventory (NWI) mapping **(Figure 10**). All three wetlands correspond to locations of predominantly hydric Isan soils (**Figure 9, Table 4**). There are no listed or mapped trout streams/lakes, wildlife lakes, migratory waterfowl feeding/resting lakes, or outstanding resource value waters in or near the project area.

Delineated wetland boundaries have been approved by the Lower Rum River Watershed Management Organization (LRRWMO) and wetland boundary approval from the U.S. Army Corps of Engineers (USACE) is pending. The LRRWMO is the local government unit administering the Minnesota Wetland Conservation Action (WCA). **Appendix A** includes the LRRWMO notice of decision approving the wetland boundary and type determinations. The site does not include any MN DNR public waters, public waters wetlands, or public watercourses.

Table 5. Wetlands on the Pearson Farm Residential Development site

Map ID	Acres Onsite	Classification			Dominant Vegetation
		Circ. 39	Cowardin	Eggers and Reed	
1	0.34	1	PEMAf	Seasonally flooded basin	Soybeans, reed canary grass
2	0.64	1	PEMAf	Seasonally flooded basin	Stunted corn, green bulrush
3	0.04	1	PEMAf	Seasonally flooded basin	Stunted corn
Total	1.02				

Impaired waters listed by the Minnesota Pollution Control Agency (MPCA) and located within 1 mile of the site include the Mississippi River (07010206-567), which is impaired for mercury and PCBs in fish tissue between the Crow River and the northwestern limits of the City of Anoka.

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Depth to groundwater varies across the project area. Depth to surficial groundwater may be as little as one foot in the wetlands on the site during the spring. Depth to static groundwater levels based on domestic water wells located near the project area ranges from 28 to 41 feet (**Table 6, Appendix B**). Geotechnical borings completed by Northern Technologies on December 30, 2016, indicate the depth to groundwater ranged from about 4.5 to 18.5 feet below existing grade. This correlates to an approximate elevation range of 858.5 to 874.5 feet. Groundwater was at elevations of 858.5 to 860.5 feet in most of the borings where groundwater was encountered. The project area does not fall within a MDH wellhead protection area. Although a number of groundwater wells are located near the site, review of the Minnesota County Well Index did not identify any wells located onsite.

Table 6. Domestic Water Wells located near the Pearson Farm site

Well No.	Surface Elevation (feet)	Depth (feet)	Cased Depth (feet)	Depth to		Location (Direction from Site)	Aquifer
				Static Water Level (feet)	Bedrock (feet)		
541778	883	66	63	28	--	Southwest	Tunnel City-Wonewoc
227345	883	75	71	30	--	Southwest	Tunnel City-Wonewoc
430232	883	338	294	30	116	East	Tunnel City-Wonewoc
783804	885	155	113	28	107	Northeast	Tunnel City-Wonewoc
227037	886	156	141	41	110	Northeast	Tunnel City-Wonewoc

The project will be served by the City of Ramsey municipal water supply. The City has eight water supply wells that are all located at least one mile east of the project area.

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

The project is expected to produce normal domestic wastewater that is typical of residential developments. The project will not include industrial wastewater production or onsite wastewater treatment.

Sanitary wastewater production for the project was estimated using methods described in the Sewer Availability Charge (SAC) Procedure Manual (Metropolitan Council 2017). Metropolitan Council has established 274 gallons per day (GPD) as the average daily wastewater production from a typical residential unit. Based on this residential equivalent, the project is expected to generate a maximum of 94,256 gallons of wastewater per day. An 18-inch sanitary sewer line will be extended from Bunker Lake Boulevard and Puma Street to serve the development area. The project will require installation of a sanitary sewer lift station along Puma Street to serve roughly the northern two-thirds of the site. The southern third of the site will be served by a gravity sanitary sewer main that will drain to Puma Street.

Domestic wastewater from the project will be routed through the City of Ramsey sanitary sewer system and ultimately to the Metropolitan Wastewater Treatment Plant (MWWTP) located on the Mississippi River near Pig's Eye Lake in St. Paul. With the capacity to treat 251 million gallons of wastewater per day (MGD), this is the largest wastewater treatment facility in Minnesota. The MWWTP is owned and operated by Metropolitan Council. The Metropolitan Council's 2040 Water Resources Policy Plan includes a specific plan to serve the region's projected growth through 2040 and a general plan to serve the region's growth far beyond 2040. The City of Ramsey and Metropolitan Council have planned for increased capacity to convey and treat sanitary wastewater. The proposed project is not expected to require expansion of wastewater treatment infrastructure or raise wastewater treatment capacity concerns.

2) *If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.*

Wastewater will not be discharged to subsurface sewage treatment systems.

3) *If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.*

Wastewater will be treated in the MWWTP described above and then discharged to the Mississippi River. The MWWTP is an advanced secondary wastewater treatment plant located on the east bank of the Mississippi River, approximately three miles south of downtown St. Paul. The plant began treating wastewater and incinerating sewage sludges in 1938. Treatment capability is maintained during times of flood by a levee and floodwall that protect the plant treatment area.

The plant uses an activated sludge process to remove phosphorus and ammonia nitrogen from wastewater prior to discharge to the Mississippi River. Sludge is processed by thickening, centrifugal dewatering, and fluidbed incineration with energy recovery (steam and electricity). These processing facilities were completed in 2004 as part of a major rehabilitation and upgrade program at the plant. At that time, six outdated multiple hearth incinerators were replaced with three fluid bed sludge incinerators, state-of-the-art air pollution control systems and an alkaline stabilization system that produces biosolids for agricultural utilization. Ash from incineration is disposed of in a landfill.

ii. *Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major*

downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

Pre-Construction Site Runoff

Soils in the project area are quite sandy and most precipitation likely infiltrates into the soils, resulting in little surface runoff. Surface runoff from the project area under existing conditions likely contains some sediment pesticides, fertilizers, and other nutrients. Existing runoff drains overland from the project area to local wetlands. Nearly the entire project area drains east through a culvert under Puma Street NW. From the culvert, runoff drains through an intermittent drainageway and wetlands to a point about 1.4 miles downstream from the project area, where the drainageway ends. Runoff appears to infiltrate into the ground at that location. Although the region contains highly permeable soils, some surface runoff may reach the Mississippi River during extreme runoff events.

Post-Construction Site Runoff

Compliance with LRRWMO, City of Ramsey, and NPDES requirements will minimize and mitigate potential adverse effects on receiving waters. Project development will change the land use from agricultural to residential use. This land use change is expected to have mixed effects on runoff water volume and quality. Residential development may reduce concentrations of agricultural chemicals, but may increase the loading of suspended solids during construction. Other typical components of impervious surface runoff, such as hydrocarbons and heavy metals, may also increase. Post-development runoff water quality will be typical of suburban developments, and will likely be slightly degraded by pollutants carried in runoff from streets, roofs, and driveways.

Residential project construction will add about 14.5 acres of impervious surface, consisting of streets, homes, and driveways. The increased impervious surface area is expected to increase in urban runoff pollutants and the volume of runoff during significant storm events. However, it is anticipated that stormwater rate and volume controls that comply with City of Ramsey and LRRWMO requirements will limit increases in runoff volume and associated pollutant transport to large storm events that occur infrequently. The creation of stormwater ponds and infiltration basins is expected to mitigate potential adverse effects from the increase in impervious surface.

The project will include approximately 6.5 acres of stormwater ponds and infiltration areas in compliance City of Ramsey and LRRWMO requirements (**Figures 3, 4 and 8**). The proposed design also includes excavation of a deep 3-acre pond. The deep pond will connect to the storm sewer system and discharge to the east under Puma Street NW, but it will not be designed as a stormwater pond and is not required to meet stormwater treatment requirements. However, the deep pond will serve some infiltration functions.

Section 117-392 of the of Ramsey City Code requires permanent stormwater pollution controls, including: (1) infiltrating or retaining the first inch of precipitation over the impervious surface of the site; (2) retaining the post-construction runoff volume onsite for the 95th percentile storm; and (3) no increase in the post-construction rate, volume, and duration of runoff over existing conditions for the

one- and two-year storms. Section 117-394 of the City Code protects natural wetlands from the discharge of stormwater without appropriate treatment for water quality and runoff quantity control. The minimum treatment required for discharge to wetlands is to meet NURP Guidelines, which include a dead storage treatment pond volume at least equal to the runoff from a 2.5 inch storm over the entire contributing area assuming full development, an average pool depth of more than 3, and a maximum depth of 10 feet. LRRWMO Stormwater Standards require stormwater basins designed to store the volume of the 100-year storm; stormwater treatment to NURP standards prior to discharge to a lake, stream, wetland, or offsite; and infiltration of a runoff volume equal to 1 inch from all impervious surfaces onsite.

Potential adverse effects of runoff volume and quality will be mitigated by the construction of stormwater basins designed to manage peak runoff rates, runoff volume, and water quality. Impervious surface runoff from storm events will be retained in four stormwater ponds and one or two infiltration basins until it is discharged at or below existing peak runoff rates. Wetlands on the site provide potential for additional runoff storage and infiltration. Treated stormwater runoff from the site will be routed east under Puma Street NW into an existing intermittent drainageway, and eventually into the City's storm sewer system that ultimately reaches the Mississippi River. Proposed discharge flow rates will be equal to or less than the existing flow rates.

Stormwater ponds designed to NURP criteria are considered effective in removing sediment, pollutants, and nutrients, as discussed in Protecting Water Quality in Urban Areas: Best Management Practices for Dealing with Storm Water Runoff from Urban, Suburban and Developing Areas of Minnesota (MPCA 2000). The NURP research projects conducted by the U.S. EPA concluded that 90% removal of total suspended solids was an attainable goal, and that significant removal of other pollutants, such as phosphorus, was also achievable. Although nutrient removal efficiency varies with site conditions, well-designed wet ponds and constructed wetland treatment systems are effective in removing sediment and associated pollutants, such as trace metals, nutrients and hydrocarbons. Stormwater basins also remove or treat oxygen-demanding substances, bacteria and dissolved nutrients.

Other BMPs such as vegetative buffer strips are expected to filter sediment and nutrients from runoff before it reaches wetlands and surface waters, mitigating potential effects on water quality. LRRWMO Wetland Protection Standards require establishment of native vegetation within a 16.5-foot-wide buffer strip around wetland boundaries. Temporary sediment basins will be necessary to comply with the MPCA General Stormwater Permit for Construction Activity and to manage stormwater discharge during construction.

Stormwater and Erosion Control BMPs

Because project construction will involve disturbance of more than one acre of land, the project proponent will be required to apply to the MPCA for coverage under the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Permit prior to initiating earthwork on the site. BMPs will be employed during construction to reduce erosion and sediment loading of stormwater runoff. Inspection of BMPs will be required after each rainfall exceeding 0.5 inches in 24 hours, and on a routine basis every 7 days. The NPDES permit will also

require perimeter sediment control maintenance and sediment removal. BMPs to be implemented during construction include:

1. Construction of temporary sediment basins in the locations proposed for stormwater ponding, and development of these basins for permanent use following construction.
2. Installation of silt fence and other perimeter erosion controls prior to initiation of earthwork and maintenance of these controls until viable turf or ground cover is established on exposed areas.
3. Periodic street cleaning and installation of a rock construction entrance to reduce tracking of dirt onto public streets.
4. Stabilization of exposed soils within the time limits specified in the General NPDES permit.
5. Energy dissipation, such as riprap, installed at storm sewer outfalls.
6. Use of cover crops, native seed mixes, sod, and landscaping to stabilize exposed surface soils after final grading.

Erosion control plans will be reviewed and accepted by the City of Ramsey and the LRRWMO prior to project construction. Potential adverse effects from construction-related sediment and erosion on water quality will be minimized by implementation of the above BMPs during and after construction.

iii. Water Appropriation. Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

Surface/Groundwater Appropriations and Dewatering

Project construction is expected to require dewatering and groundwater appropriation to facilitate installation of sanitary sewer and excavation of a deep 3-acre pond, but the project will not involve installation of new water wells. Project development will require a MN DNR water appropriation permit if dewatering required for installation of utilities exceeds 10,000 gallons/day or 1 million gallons/year. If construction dewatering does not exceed 50 million gallons in total and a duration of one year from the start of pumping, the project proponent will be eligible for coverage under the amended MN DNR General Permit 1997-0005 for temporary water appropriations. Although the extent and duration of construction dewatering that may be necessary is currently unknown, construction dewatering is expected to be unnecessary or temporary. Groundwater appropriated for construction dewatering will be discharged to temporary sediment basins within the project area. It is not anticipated that construction dewatering will be extensive or continue long enough to affect nearby domestic water wells.

Well Abandonment

The project area does not include any existing wells, as indicated from review of the site, the project survey, and the Minnesota County Well Index. The project is not expected to involve well abandonment.

Connection to a Public Water Supply

The project will be connected to the City of Ramsey municipal water supply. The City of Ramsey draws its public water supply from the Tunnel City-Wonewoc aquifer. The City currently maintains eight municipal wells that are all located at least one mile east of the project area (**Table 7**). These existing wells have a combined permitted capacity to pump 6,800 million gallons of water per year (MGY).

Table 7. City of Ramsey Municipal Water Appropriation Permits

Permit No.	Well No.	Permitted Volume (MGY)	Max Use 2010-2015 (MGY)
1985-6005	161441	850	141.611
1985-6005	416183	850	5.462
1985-6005	580303	850	164.864
1985-6005	580313	850	194.032
1985-6005	593672	850	79.897
1985-6005	706840	850	138.082
1985-6005	743832	850	118.526
1985-6005	743833	850	117.421
Total		6,800	959.895

During 2010-2015, these wells used a maximum of 960 million gallons per year. Based on past use and permitted capacity, the existing municipal wells have sufficient surplus capacity to serve the proposed project. A 16-inch trunk water main will be extended from Bunker Lake Boulevard and Puma Street to serve the development area. Water flow, pressure, and storage will be adequate to serve the development area. As indicated under **Item 11.a.ii**, the project is not located in or near a wellhead protection area.

iv. Surface Waters

a) Wetlands. Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

Background

Wetlands in and near the project area are generally regulated by the Lower Rum River Watershed Management Organization (LRRWMO), which administers the Minnesota Wetland Conservation Act (WCA) in the project area; the U.S. Army Corps of Engineers (USACE), which administers Section 404 of the Federal Clean Water Act (CWA). The project area includes three delineated wetlands that are identified on **Figure 6**.

Physical Effects and Alterations

Construction of an emergency overflow from Wetland 2 is expected to result in physical effects that will eliminate the existing wetland hydrology of Wetland 3. Wetland 3 is a 1,738-square-foot Type 1 seasonally-flooded, farmed wetland that was dominated by stunted corn at the time of the wetland delineation. The proposed 1,738 square feet of wetland impact falls below the 2,500-square-foot de minimis exemption threshold, which applies to wetlands in a 50 to 80 percent area (e.g., Anoka County) under the Minnesota Wetland Conservation Act "except for type 3, 4, 5, or 8 wetland or white cedar and tamarack wetland, outside of the shoreland wetland protection zone and inside the 11-county metropolitan area." (MN Rules 8420.0420, Subp. 8(2)(b). The proposed wetland impact also falls below the 5,000-square-foot wetland sequencing/compensatory mitigation threshold administered by the U.S. Army Corps of Engineers under RGP-003-MN, General Condition 1.

The other wetlands on the site will be avoided. LRRWMO Wetland Protection Standards will require establishment of native vegetation within a 16.5-foot-wide buffer strip around these wetlands.

b) Other Surface Waters. Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

The proposed project is not expected to affect other surface water features such as lakes, streams, ponds, intermittent channels, or county/judicial ditches. The Mississippi River is located approximately 1,400 feet southwest of the project and will not be affected by the project. The site does not include other surface waters and the proposed project will not affect any MN DNR pubic waters. Although the National Hydrography Dataset shows a flowline running southeast through Wetlands 2 and 3, across the northeastern part of the site, this flowline was not observed in the field during the wetland delineation. Field investigation of this area found that it was dominated by corn with areas of green bulrush and intermittent inundation. The area did not include a drainage channel.

12. Contamination / Hazardous Materials / Wastes

a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed

landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

The project area has been used as cropland since at least the 1930s. The site is not known to include environmental hazards and the agricultural land use history suggests a low potential for environmental contamination. The project area is not known to include previous building sites, disposal areas, storage tanks, pipelines, or utility corridors. Carlson McCain completed a Phase I Environmental Site Assessment for the property in November, 2016, and did not identify recognized environmental conditions their assessment.

A review of the MPCA's "What's in My Neighborhood" (WIMN) database identified one Leak Site in close proximity to the proposed project. Leak Site 6487 is located about 400 feet southwest of the project, across the Burlington Northern Railroad and Highway 10/169. The leak involved the release of an unknown quantity of diesel fuel on the David Nathe Farm. The leak was discovered on June 28, 1993, reported to the MPCA on June 30, 1993. The leak site closed by the MPCA on April 24, 1996. Available information suggests the site was properly investigated and that the site does not affect the project area.

b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

Project construction activities will generate wastes typical of residential development operations. Most solid waste is expected to include organics, paper, other waste, and plastic (**Table 8**).

Table 8. Estimated Solid Waste Composition

Waste Type	Estimated %
Organic	31.0
Paper	24.5
Other	18.3
Plastic	17.9
Hazardous	0.4
Metal	4.5
Glass	2.2
Electronics	1.2
Total	100.0

Source: 2013 Statewide Waste Characterization (Burns & McDonnell for MPCA 2013).

Neither the construction process nor the proposed residential development is expected to generate substantial solid or hazardous wastes, solid animal manure, sludge, or ash. The construction

contractor will be required to dispose of wastes generated at the site during construction using approved methods and facilities. The contractor will minimize and mitigate adverse effects from solid waste generation and storage by recycling construction waste to the degree practicable. Brush and tree waste generated by construction will likely be chipped or otherwise recycled rather than burned on site.

Residents and in the new development will contract individually with waste haulers for solid waste collection and recycling services under the City's open trash and recycling collection system, which uses eight licensed waste haulers. Curbside recycling, including paper, plastics, glass, and metals is available to City of Ramsey residents through their solid waste collector. Participation in the recycling program by future residents of the project area is expected to reduce the volume of solid waste generated by the project.

Solid waste generated in the City of Ramsey that is not recycled or hazardous is delivered to the Elk River Resource Recovery Station. The Elk River Energy Recovery Station convert refuse derived fuel (RDF) from mixed municipal waste into energy. Using waste to generate electricity provides an efficient disposal method for garbage and prevents garbage from going to landfills.

c. *Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.*

Development of the project area is not expected to generate or require storage of substantial amounts of hazardous wastes or materials. Future residential development is expected to result in the storage or generation of small amounts of typical household cleaners, paints, lubricants, and small engine fuels over time. Petroleum storage tanks and commercial petroleum-based businesses are not proposed in the project area.

d. *Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.*

Normal construction and household hazardous wastes are anticipated. Toxic or hazardous materials such as fuel for construction equipment and materials used in the construction of homes (paint, adhesives, stains, contaminated rags, acids, bases, herbicides, and pesticides) will likely be used during site preparation and home construction. Spills of these materials is not likely to occur, but a substantial spill could notification of the Minnesota Duty Officer. Contractors and builders will be responsible for proper management and disposal of wastes generated during construction. Homeowners will be responsible for management and disposal of hazardous waste thereafter. Homeowners will be able to dispose of household hazardous waste at the Anoka County Household Hazardous Waste Facility.

13. Fish, Wildlife, Plant Communities and Sensitive Ecological Resources (Rare Features)

a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

Fish and wildlife resources on and near the site are related to the composition, quality, size, and connectivity of plant communities such as cultivated cropland, wetlands, woodlands, and grasslands. Vegetative cover types on the project area were mapped based on aerial photography, the wetland delineation, and field reviews (**Figure 5**). The project area is roughly 96% cropland, 2% tree rows, 1% wetland, and 1% grassland. Habitats in the project area are likely used by wildlife adapted to agricultural and suburban environments, such as white-tailed deer, songbirds, small mammals, and amphibians.

The project area falls in the Anoka Sandplain Ecological Subsection of the MN DNR Ecological Classification System and the Anoka Sand Plain and Mississippi Valley Outwash of the Level IV Ecoregion of the U.S. EPA. This area consists of a flat, sandy lake plain and terraces along the Mississippi River. The area includes row crops, small grains, suburban development, wetlands, woodlands.

Most of the project area has limited wildlife habitat value because it is occupied by annually tilled agricultural crops. Cropland consisted of corn, soybeans, and wheat during 2016. Wetlands in the project area were dominated by stunted crops, reed canary grass, and green bulrush (**see Table 5**). Tree rows included elm, aspen, boxelder, pines, and red cedar. Grassy field edges were dominated by smooth brome, and Kentucky bluegrass.

*b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (**LA-732**) and/or correspondence number (**ERDB 2017____**) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.*

The MN DNR queried the Natural Heritage Inventory System (NHIS) to assess whether known locations of rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the project area (**Appendix C**). Kjolhaug Environmental Services also queried a licensed copy of the NHIS database. The NHIS review identified six records of rare species and sensitive natural communities.

Observations of Blanding's turtles (*Emydoidea blandingii*), a state threatened reptile, were recorded in 1989 and 1995 at locations north and east of the project area. One observation occurred on or near the Itasca Park and the other occurred in an area that currently includes a mix of cropland, suburban development, and wetland.

Blanding's turtles prefer calm shallow water, rich aquatic vegetation, and select open grassy uplands with sandy soils for nesting. The project area includes potential Blanding's turtle habitat consisting of wetlands and sandy soils, but does not include much grassland. The best Blanding's turtle habitat

includes wetland complexes larger than 10 acres that are surrounded by open sandy uplands. Blanding's turtles do not typically lay eggs under forest cover.

Other rare feature records included three observations of the black sandshell mussel (*Ligumia recta*), and one record of a silver maple floodplain forest. These features were found along the Mississippi River. The black sandshell is a state-listed special concern species. None of the NHIS records represent federally threatened and endangered species.

Online information on rare species information maintained by the U.S. Fish and Wildlife Service (USFWS) was also reviewed for the project area. The project area falls within the occupied range of the federally threatened northern long-eared bat (*Myotis septentrionalis*). The northern long-eared bat (NLEB) roosts and forages in forests during spring and summer and hibernates in caves and mines during winter., sometimes swarming in wooded areas near caves in autumn. The USFWS listed the NLEB as threatened under the Federal Endangered Species Act (ESA) on April 2, 2015. Although the project area includes about 1.8 acres of woodland and is located in the white-nose syndrome zone defined under the Final 4(d) Rule, there are no known incidental, breeding, or hibernacula records of NLEBs occurring within one mile of the project area.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

Project development is expected to convert about 85.5 acres of cropland and 0.9 acres of trees to residential land uses, including roads, homes, lawns, landscaping, and stormwater ponding. The project may affect the number and type of wildlife species in the area, but changes in wildlife abundance are not expected to be regionally significant. The existing croplands provide wildlife food, but have limited value as wildlife cover. Wildlife species that depend on agricultural cropland will be displaced by the project. The project will likely have short-term negative effects and long-term positive effects on species adapted to suburban habitats. Non-migratory species with small home ranges such as small mammals may experience more adverse effects, including mortality during project construction.

Development of the project area is not expected to have substantial effects on rare species and sensitive natural communities. Four of the six rare occurrences identified during the MN DNR NHIS review were associated with the Mississippi River, which is south of the project area and will not be physically affected by the project. These include three occurrences of black sandshell and one record of a silver maple floodplain forest.

The project may have effects on Blanding's turtles that may occur in the area. To minimize potential adverse effects on turtles and their mobility, the project will avoid most wetlands, implement stringent sediment and erosion controls, consider the use of surmountable curbs on roadways, and consider using erosion control materials constructed of organic fibers rather than plastic.

The project is not considered likely to affect the northern long-eared bat (NLEB) because the project area includes mostly cropland, few trees, which is not considered characteristically suitable NLEB

habitat. The white nose syndrome buffer zone map and the Minnesota NLEB bat occurrence maps available from the USFWS and the MN DNR indicate there are no NLEB maternity roost colonies or hibernacula known to occur within 1 mile of the project area.

Although project construction could be expected to slightly increase the potential for the spread of invasive and weedy species, the project area has been disturbed by agricultural use for decades. BMPs may include the cleaning of construction equipment before transport, which might reduce the potential spread of invasive species.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

Measures to minimize and mitigate adverse effects on wildlife include the preservation of about 1 acre of wetlands, about 1 acre of trees, establishment of native grassland buffers along wetland edges, and creation of approximately 9.5 acres of stormwater features.

14. Historic Properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

A search of the historical property information database was requested from the Minnesota State Historic Preservation Office (SHPO) for the project area to assess whether known historic structures or archaeological sites exist in the project vicinity. The SHPO queried the Minnesota Archaeological Inventory and Historic Structures Inventory, and did not identify any archaeological sites or historic structures known to exist in the project vicinity. Correspondence from the SHPO is included in **Appendix D**.

The project site has relatively flat topography and a history of agricultural tillage, which suggests the site has relatively low potential for undiscovered intact archaeological material. Although the potential for project effects on historic and archaeological resources has not been investigated in detail, the initial cultural resource screening did not identify potential for effects on known historic resources.

15. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

There are no scenic views or vistas located on or adjacent to the project area. Substantial effects on visual resources are not anticipated in conjunction with project development. Project development is expected to result in routine effects on visual resources. The project will not involve installation of intense lights that would cause glare, nor will it include industries that would emit vapor plumes.

16. Air

a. Stationary source emissions. Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

The proposed project does not include heavy industrial facilities or stationary source air emissions.

b. Vehicle emissions. Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The proposed project will generate increased traffic, which will generate a relatively small corresponding increase in carbon monoxide, carbon dioxide and other vehicle-related air emissions. Project development is expected to have a negligible effect on air quality. The project does not include air quality monitoring, modeling, or measures to mitigate effects on air quality.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

The project is not expected to generate dust or odors at levels considered unusual for suburban development construction practices. Odors, noise, or dust produced during construction is expected to be consistent with applicable regulations of the MPCA and local governments. Dust, odors, and noise levels are expected to be slightly higher during project construction than project operations.

The construction process is expected to generate some fugitive dust, but dust is not expected to be generated in objectionable quantities. The dust receptors nearest to the project area include the residential areas northeast and east of the site. Odors routinely generated during construction will be typical of those associated with construction activity, such as exhaust from diesel and gasoline powered construction equipment.

Consideration will be given to suppression of airborne dust by application of water if fugitive dust generation during site grading exceeds levels typically expected during normal construction practices.

17. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise

levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

It is anticipated that local noise levels will temporarily increase during project construction, but noise levels are expected to be at or near existing levels after construction is complete. Noise levels on and adjacent to the project area will vary considerably during construction, depending on the amount of construction that occurs simultaneously, the time of operation, and the distance between construction equipment and receptors. The noise receptors nearest to the project area include the residential areas northeast and east of the site. Noise generated by construction equipment and residential building construction will be limited primarily to daylight hours when noise levels are commonly higher than at night.

18. Transportation

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

Spack Consulting completed a Traffic Impact Study to estimate the trips generated by the proposed residential development and evaluate the potential need for transportation or roadway improvements. The complete Traffic Impact Analysis is included in **Appendix E**.

Existing and Proposed Parking Spaces

The project area does not include any parking stalls under existing conditions. The proposed 246 single-family lots and 98 multi-family homes will include off-street parking and garages to accommodate parking for the residential units.

Estimated Traffic Generation

Trip generation was estimated using the methodology outlined in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition (2012). Future trip generation estimates were based on traffic generated by 246 single-family and 98 multi-family residential units. The residential development is expected to generate a total of 2,912 average daily trips, including 1,456 vehicles entering the site and 1,456 vehicles exiting the site (**Table 9**).

Table 9. Project Trip Generation Estimates

Land Use	ITE Code	No. of Units	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
Single-family detached housing	210	246	2,342	46	138	184	155	91	246
Multi-family attached housing	230	98	570	7	36	43	34	17	51
Total		344	2,912	53	174	227	189	108	297

Spack Consulting has completed trip generation studies in the Twin Cities Metropolitan Area and found local trip generation rates for residential uses to be lower than the comparable ITE rates. For the purposes of this study, ITE trip generation rates were used to provide a conservatively high estimate.

The peak hour traffic in the study area occurs between 4:45 and 5:45PM. Based on recent traffic counts, it is expected that traffic from the project will also peak during this time. Within this peak hour, the residential project is expected to generate 297 trips, consisting of 189 entering vehicles and 108 exiting vehicles. The Traffic Impact Study included in **Appendix E** provides a full description and analysis of the peak hour traffic and traffic recommendations.

Availability of Transit and Alternative Transportation

The Ramsey Metro Transit Station is located about 1.5 miles southeast of the project area along the railroad and Highway 10/169. The station includes a park and ride lot and access to the Northstar Commuter Rail Line. The Northstar Line offers service between Big Lake and downtown Minneapolis, stopping at stations in Elk River, Ramsey, Anoka, Coon Rapids and Fridley.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: http://www.dot.state.mn.us/accessmanagement/resources.html) or a similar local guidance.

Effects on Traffic and Roadways

The Traffic Impact Study concluded that the proposed project will have minimal effects on adjacent public roads and that nearby intersections will continue to operate at an overall Level of Service (LOS) A (**Appendix E**). The principle findings of the Traffic Impact Study are:

1. All Study intersections are all well within their capacity range and the proposed development traffic is not predicted to cause significant delays or congestion on the local roadway system.
2. Study area intersections, as described in the Traffic Impact Study, are expected to continue to operate at an overall LOS A during the AM and PM peak hours.
3. The proposed site access points are sufficient to service the expected site generated traffic.

The Traffic Impact Study analyzed the extended traffic forecast to the year 2040. The extended forecast included traffic generated by the proposed project and background traffic growth. Under this forecast, all intersections continue to operate at an acceptable LOS during peak hours of operation causing minimal effects on adjacent public roadways and intersections.

The traffic that will be generated by the proposed project does not raise capacity or safety concerns. Traffic generated by the project will have little effect on the regional transportation system. Intersections surrounding the site will continue to operate at acceptable levels of service with the addition of traffic generated by the proposed project.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

The Traffic Impact Study concluded that the study area intersections and roadways have sufficient capacity to accommodate the expected daily and peak hour trips. The study predicted that the existing road network surrounding the project area will safely and efficiently accommodate the traffic generated by the proposed development without safety or capacity improvements.

The Traffic Impact Study included a review of the MnDOT Access Management Manual and related turn treatment warrants. Due to the speed limits along Puma Street and Alpine Drive being lower than 45 MPH, turn lane treatments are not warranted. If the speed limits along Puma Street or Alpine Drive is increased to 45 MPH or higher the Turn-Lane Warrants should be re-evaluated. The City of Ramsey and the project proponent will coordinate the necessary details to address street improvements at these locations. The full turn lane analysis is provided near the back of **Appendix E.**

The project will include internal sidewalks to help facilitate safe pedestrian, bicycle, and traffic mobility within the residential project and the adjoining sidewalk/trail network. An addition of a sidewalk/trail along the southern side Alpine Drive should be considered stretching from the site access to the Puma Street and Alpine Drive intersection. An additional crosswalk should also be considered, connecting pedestrians north to the existing sidewalk/trail along the northern side of Alpine Drive. The addition of internal sidewalk/trail connections will help improve safety and stimulate use of alternative modes of transportation, lowering the overall number of vehicle trips expected at the site. The detailed Traffic Impact Study includes a full description of the existing and future traffic, with recommendations for the proposed project (**Appendix E**).

19. Cumulative Potential Effects

Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items.

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

It is anticipated that the project area will develop over the next 5 to 10 years, but the actual timing of development could vary depending on the demand for housing and market conditions. Other projects are expected to develop in the City of Ramsey during this time period. These projects and their geographic locations are described under **Item 19.b** below.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

The City of Ramsey is reviewing and has recently approved several other development projects that are located 0.15 to 4.4 miles from the Pearson Farm development site (**Table 10**). These projects range from a trailer sales display lot to a 141-lot residential subdivision.

Table 10. Other Projects in the City of Ramsey

Name	Description	Status	Distance/Direction from Pearson Farm
Northfork Alpine Addition	4 rural single-family residential lots	Approved	0.15 mile west/northwest
Pearson Bowers Drive	13 rural single-family residential lots	Under review	0.6 mile south
Brookview Addition	11 rural single-family residential lots	Under review	4.4 miles northeast
Rum River on the Green	2 rural single-family residential lots	Approved	4.1 miles northeast
Sunwood Village	47 unit apartment building	Approved	1.0 mile east-southeast
McDonald's	Restaurant	Approved	0.9 mile east-southeast
COR Three North Commons	13 sewered single-family residential lots	Approved	1 mile east
Woodlands	85 sewered single-family residential lots	Partially approved	1.7 miles northeast
Harvest Estates	44 sewered single-family residential lots	Approved	3.6 miles east
Brookfield Subdivision	141 sewered single-family residential lots	Partially approved	2.9 miles northeast
Vistas North Commons	12 sewered single-family residential lots	Under review	0.9 mile east-southeast
Stonebrook Academy	Early childhood learning	Under review	1.1 mile east-southeast
Aeon Housing	40-60 unit apartment building	Under review	1.4 miles east-southeast
Regency Commons	Self-storage facility	Under review	1.8 miles east
Station	77 townhome units	Approved	1.7 miles east-southeast
Parkview East	121 unit apartment building	Approved	1.7 miles east-southeast
M & G Trailers	Display lot	Approved	1.5 miles east-southeast

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

Reasonably foreseeable future projects may combine with the proposed project to result in cumulative effects on municipal infrastructure and natural resources. The potential for cumulative effects varies with the type of resource affected and the geographic area of impact.

Potential cumulative effects on public infrastructure relate to municipal water supply systems, sanitary sewer conveyance and treatment systems, stormwater management systems, and traffic and transportation systems. The City of Ramsey has planned for continued growth and expanded infrastructure system capacity to address these effects and serve anticipated future projects. The City of Ramsey will consider the timing and staging of other development proposals within the context of

the Comprehensive Plan and related growth management tools at the time that such proposals are brought forward. Over time, much of Ramsey may develop into a combination of residential, commercial, and public uses. Consequently, cumulative effects on public infrastructure are not expected to be significant.

Potential cumulative effects of anticipated future projects on natural resources depend largely on the type, density, and location of future developments. Potential effects on natural resources such as wetlands and wildlife habitat typically vary with project location and the extent of habitat diversity. Effects of the project on wetlands, vegetation communities, and wildlife resources may combine with effects of nearby or nearly concurrent projects in a manner that results in local and subtle cumulative effects. Cumulative effects of suburban development on natural resources can include the loss of agricultural land and the loss and fragmentation of wildlife habitat. Surface water runoff from the project area will infiltrate into the soil and some treated runoff may discharge to the Mississippi River. However, the highly-regulated nature of stormwater runoff and the ubiquitous implementation of BMPs to control erosion and sedimentation is expected to minimize cumulative effects of post-development runoff on downstream waters. The policies and regulations set forth by the City of Ramsey, the Lower Rum River Watershed Management Organization, and other government agencies provide the impetus for certain mitigation measures discussed in this EAW. These mitigation measures will help ensure the minimization of cumulative effects on the environment and the capacity for municipal services.

20. Other Potential Environmental Effects

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No other additional environmental effects are anticipated as a result of development of the project area. Potential environmental effects have been addressed in **Items 1** through **19**.

RGU CERTIFICATION.

(The Environmental Quality Board will only accept SIGNED Environmental Assessment Worksheets for public notice in the EQB Monitor.)

I hereby certify that:

- *The information contained in this document is accurate and complete to the best of my knowledge.*
- *The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.*
- *Copies of this EAW are being sent to the entire EQB distribution list.*

Signature _____ Date _____

Title _____

Figures 1 – 10

Pearson Farm Residential Development EAW

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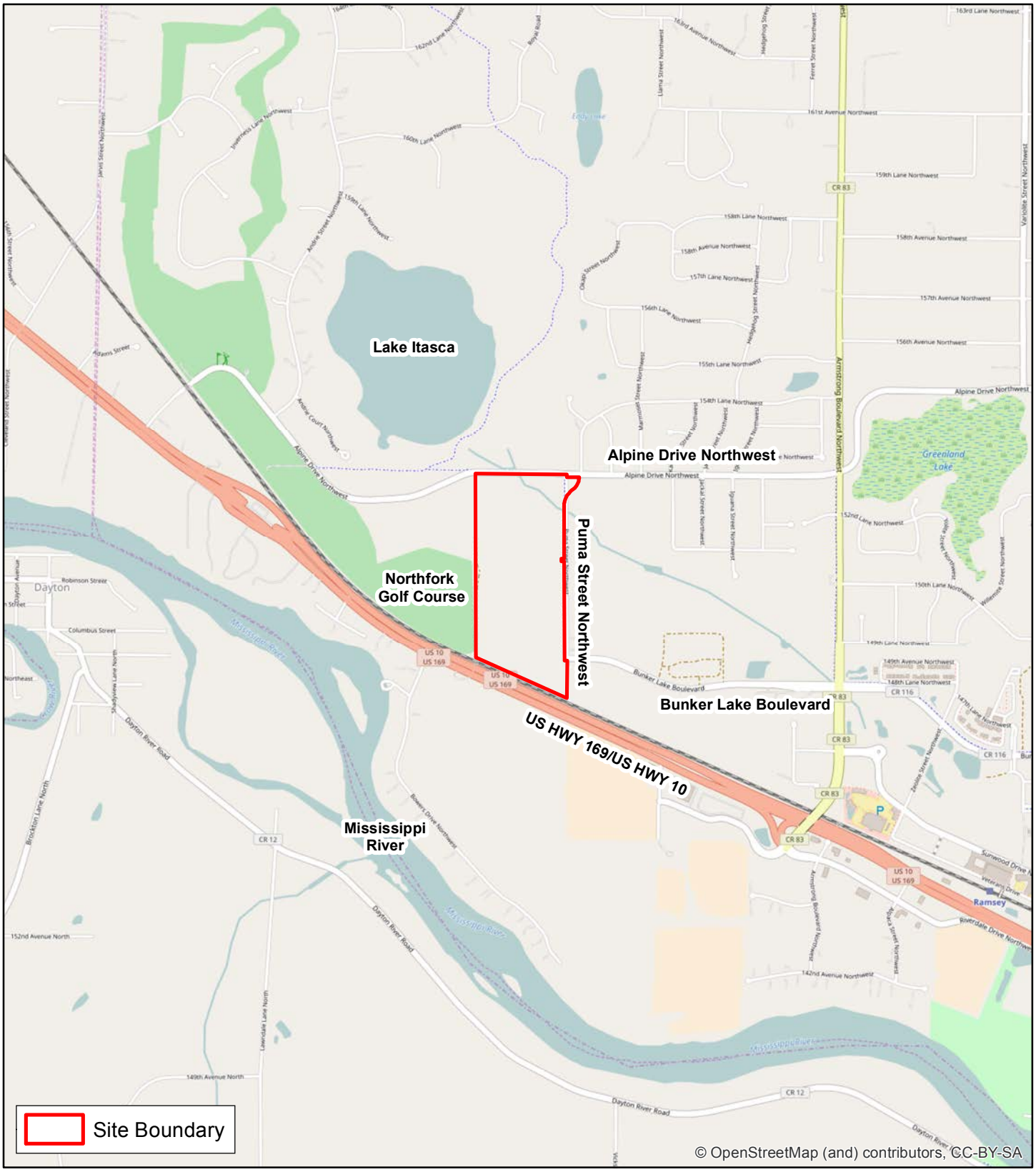

Figure 1 - Site Location

N

0 2,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: ESRI Streets Basemap

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

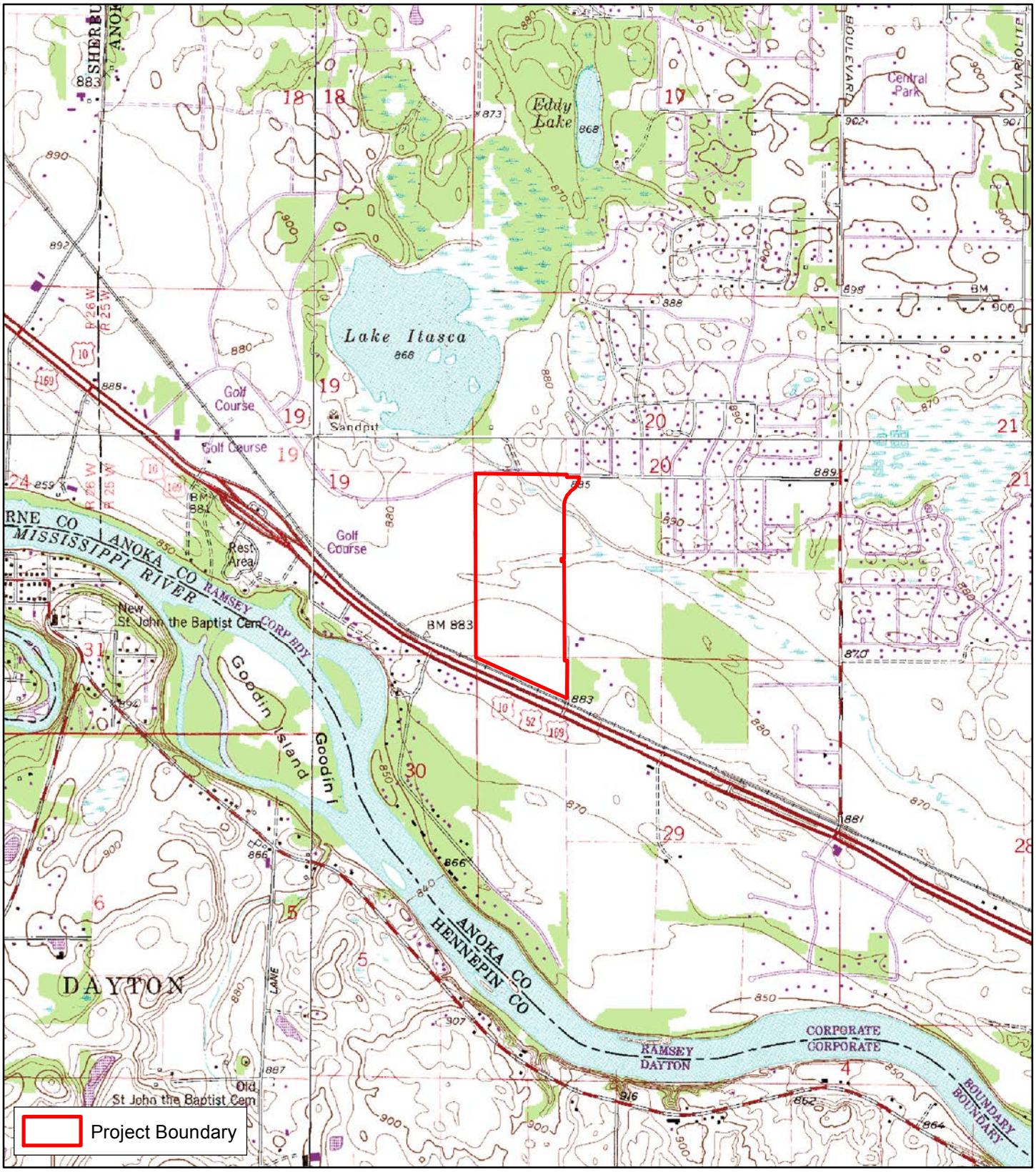

Figure 2 - USGS Topography

N

0 2,000 Feet

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MnGeo, ESRI Imagery Basemap

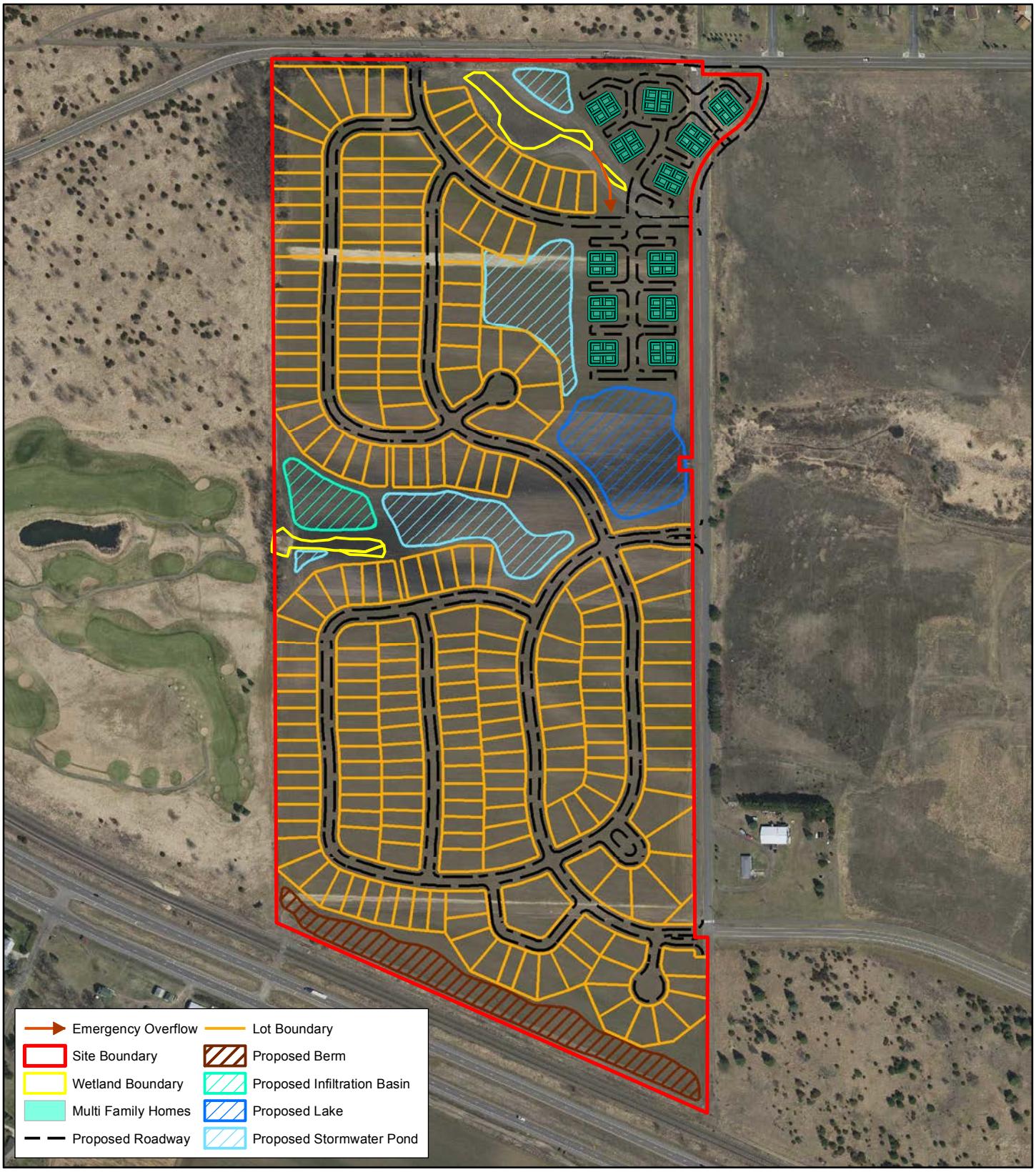

Figure 3 - Proposed Site Plan

N

0 425 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: Minnesota DNR (2013), USFWS

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

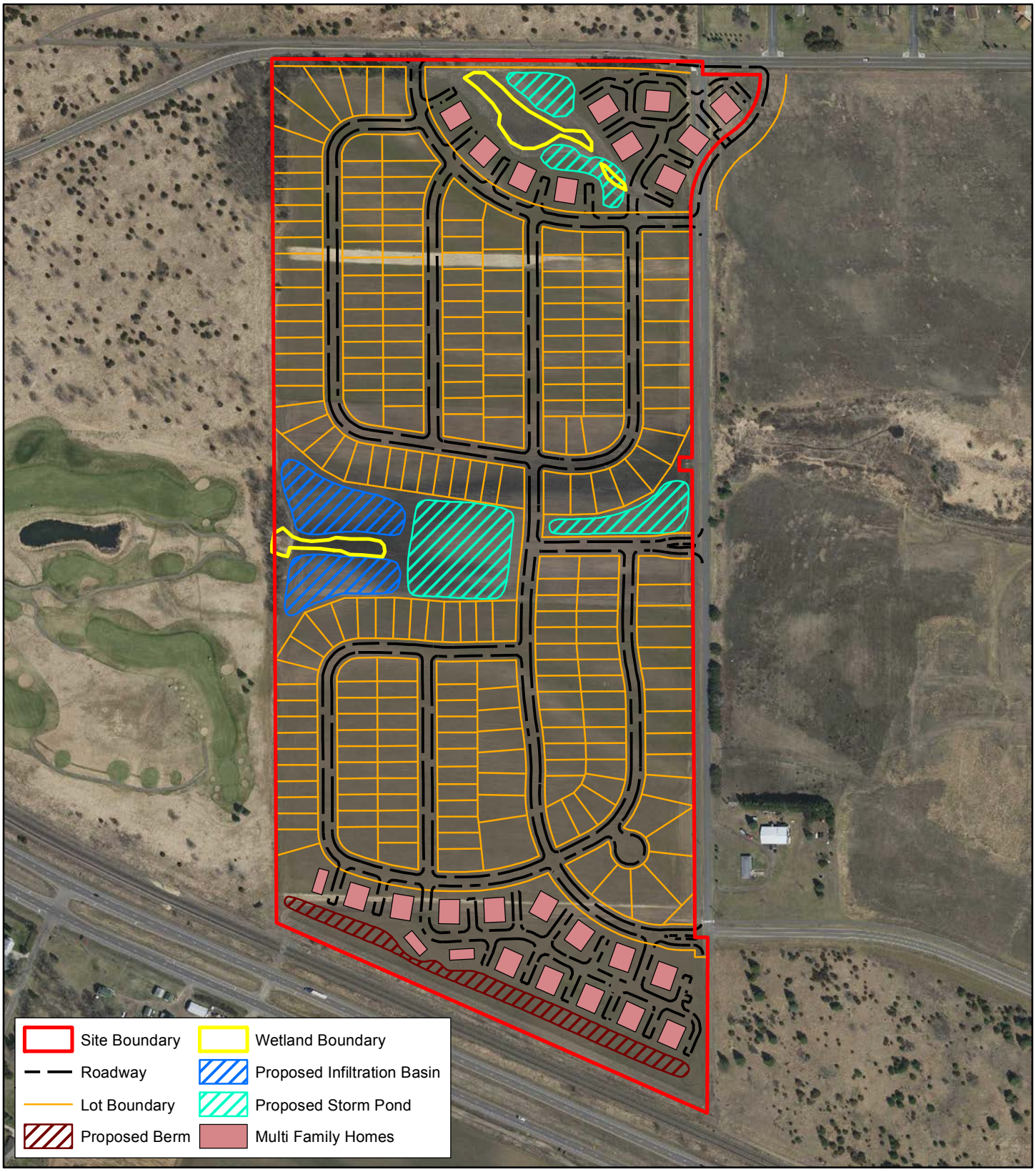

Figure 4 - Maximum Density Site Plan

N

0 425 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: Minnesota DNR (2013), USFWS

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

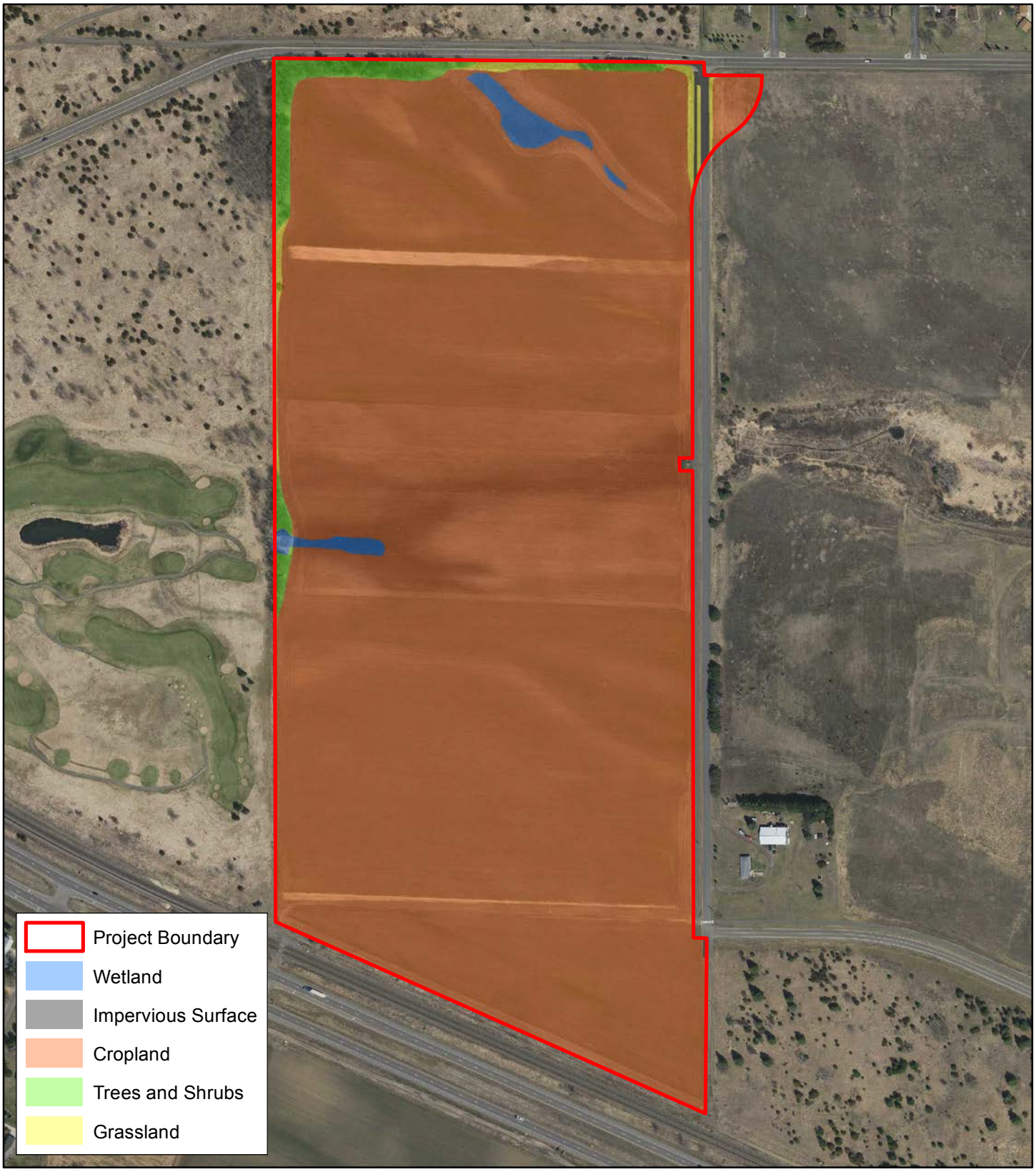

Figure 5 - Existing Cover Types

N

0 425 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: USDA, NRCS

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Figure 6 - Delineated Wetlands and Waters

N

0 1,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: Minnesota DNR

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Figure 7 - Existing Land Use

N

0 1,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: USGS

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

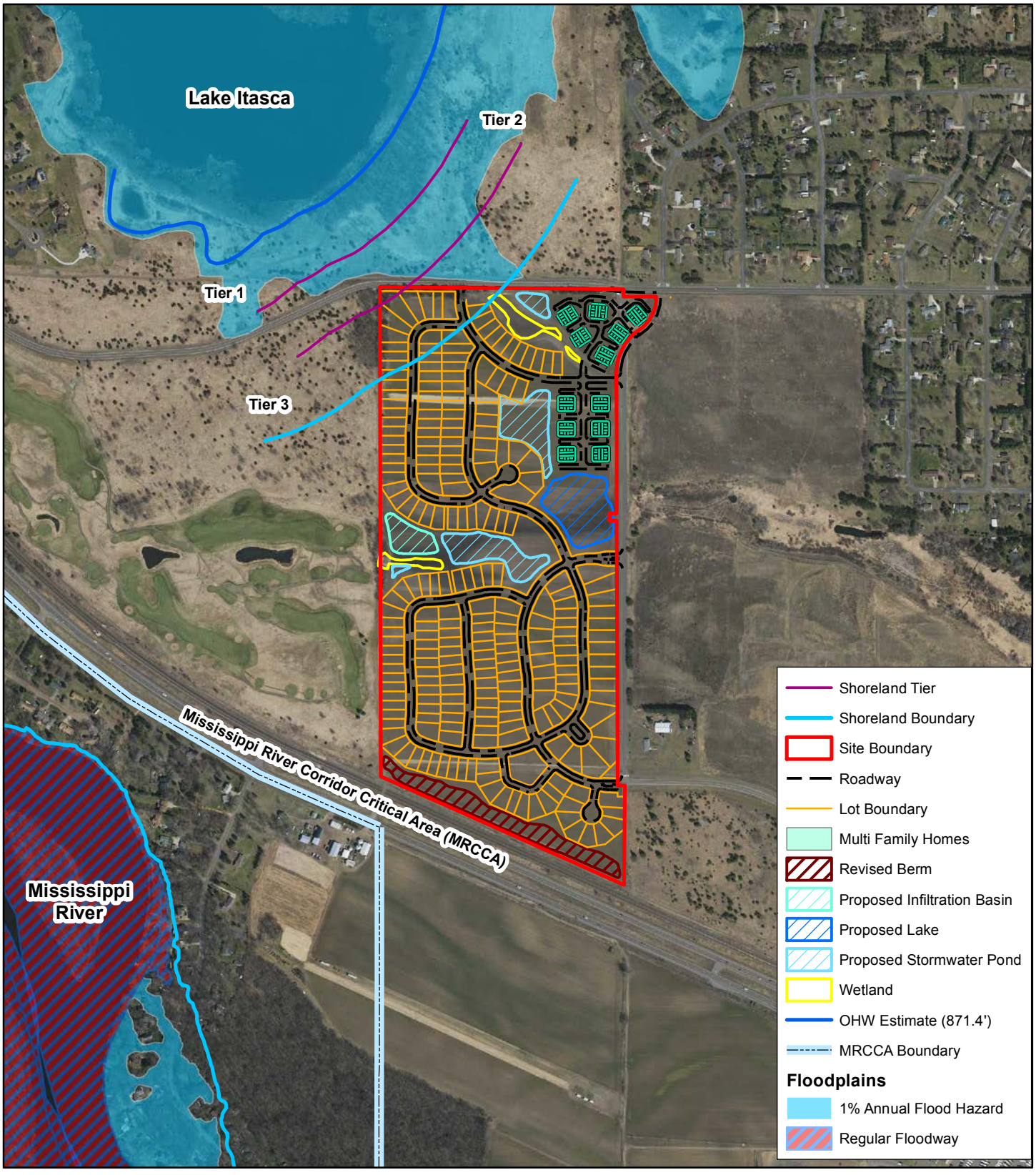

Figure 8 - Shorelands and Floodplains

N

0 750 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MnGeo, ESRI Imagery Basemap

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

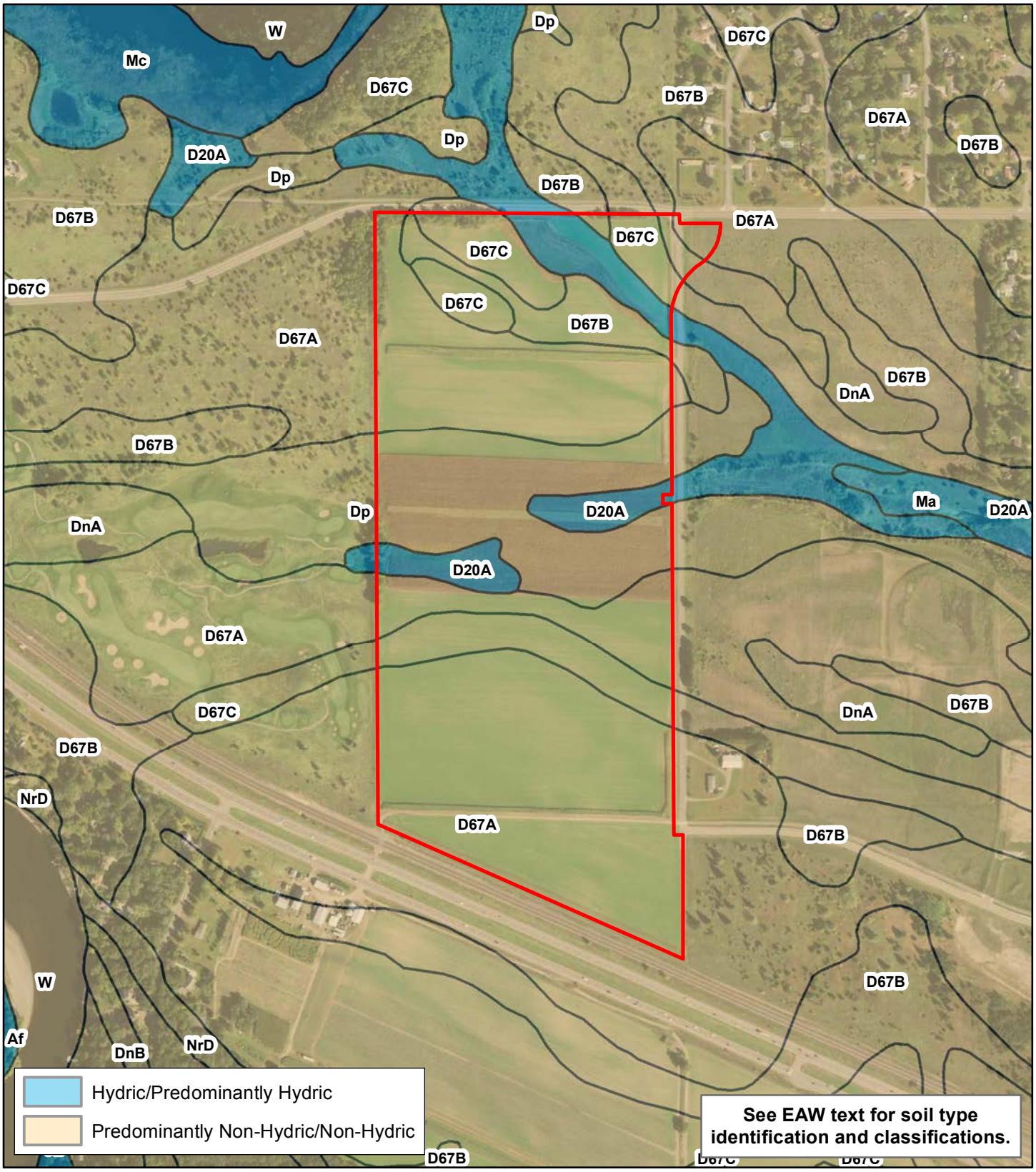

Figure 9 - Soil Types

N

0 600 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MnGeo, ESRI Imagery Basemap

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

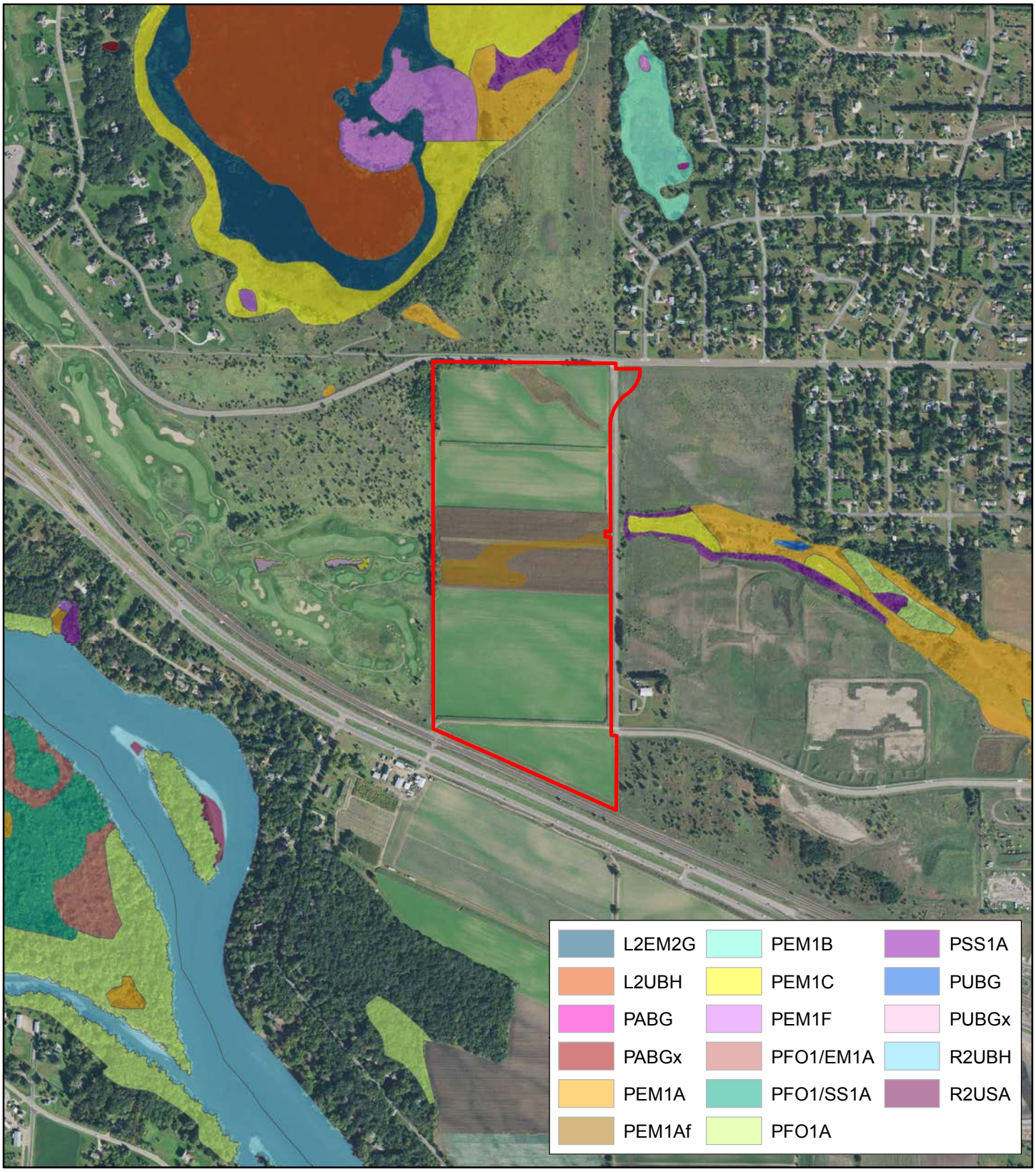

Figure 10 - National Wetlands Inventory

N

0 1,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MnGeo, ESRI Imagery Basemap

Pearson Farm Residential Development (KES 2017-004)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Appendix A
Wetland Delineation Approval

Pearson Farm Residential Development EAW

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LOWER RUM RIVER WATERSHED MANAGEMENT ORGANIZATION
ANDOVER - ANOKA - RAMSEY
2015 First Avenue • Anoka, MN 55303

November 21, 2016

Mr. Stephen Bona
Capstone Homes
14015 Sunfish Lake Blvd. NW
Ramsey, MN 55303

Subject: LRRWMO Permit #2016-19 ~ Pearson Property - **Wetland Boundary & Type** ~ Ramsey

Dear Mr. Bona,

The LRRWMO, at its November 17, 2016 meeting, addressed the permit indicated above.

The Board has taken action to approve the wetland boundary and type as indicated on the attached Notice of Decision.

If you have any questions regarding this process, please contact Ms. Karen Wold of Barr Engineering. Good luck with your project.

Sincerely,

Todd Haas
Chair

Enclosure: Notice of Decision
Approved Permit Application #2016-19

cc: Melissa Barrett, Kjolhaug Env. Serv.
Bruce Westby, City of Ramsey Engineer
Chris Lord, Anoka Conservation District
Karen Wold, Barr Engineering
LRRWMO
TEP Agencies
Becky Wozney, Anoka Conservation District
Becky Horton, MnDNR Div. of Ecological & Water Resources
Kate Drewry, MnDNR Water
Ben Meyer, MN Board of Water & Soil Resources
Andrew Beaudet, U.S. Army Corps of Engineers
Marissa Vine, U.S. Army Corps of Engineers

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
Lower Rum River WMO (LRRWMO)	**2015 First Avenue** **Anoka, MN 55303**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Stephen Bona, Capstone Homes Inc.	**Pearson Property**	**10/17/16**	**2016-19**

☒ Attach site locator map.

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel (TEP) Findings and Recommendation (if any):

☐ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach): **no TEP Findings Report, see below for TEP communication**

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **11/17/16**

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

On behalf of Capstone Homes, Kjolhaug Environmental submitted a wetland delineation report and a joint application request for wetland boundary and type concurrence for the Pearson property in Section 20 & 29, Township 32N, Range 25W in the City of Ramsey, within Anoka County.

Two wetlands were delineated within the evaluation area both of which were identified as Type 1 (PEMBf/PEMA) farmed seasonally flooded basins.

The wetland delineation report and a Notice of Application were provided to the TEP on 10/26/16 with a 15-business day comment period.

A site review was conducted on 10/21/16 with Ben Carlson (Kjolhaug) and Karen Wold (Barr Engineering for the LRRWMO) and wetland boundaries were revised on both wetlands. A revised wetland delineation figure was submitted on 10/25/16 which was provided to the TEP with the Notice of Application on 10/26/16.

The revised wetland boundaries and types were found to be accurate, based on the requirements of the 1987 USACE Wetland Delineation Manual, the 2010 Midwest Regional Supplement, and the 2015 Guidance for Submittal of Delineation Reports to the USACE and WCA LGU in Minnesota, Version 2.0.

The comment period ended on 11/16/16 and no additional comments were received.

The wetland boundaries and types are approved.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name **Todd Haas**	Title **Chairman**	
Signature	Date **11/17/16**	Phone Number and E-mail **763/755-5100** **thaas@andovermn.gov**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for five years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☐ Appeal of an LGU staff decision. Send petition and $_____ fee (if applicable) to:	☒ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Becky Wozney**
☒ BWSR TEP member: **Dennis Rodacker and Ben Meyer**
☒ DNR TEP member: **Becky Horton, Kate Drewry**
☒ WD or WMO (if applicable): **Todd Haas (LRRWMO), Carla Wirth (Timesaver), Bob Obermeyer and Deb Burt (Barr Engineering Co.)**
☒ City Contact for LRRWMO permitting **Bruce Westby (City of Ramsey)**
☒ Applicant and Landowner (if different) **Stephen Bona (Capstone Homes Inc.), Ben Carlson and Melissa Barrett (Kjolhaug Environmental)**
☒ Corps of Engineers Project Manager**Andrew Beaudet and Marissa Vine**
☐ BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

➢For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

➢For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
☒ **wetland delineation map**
☐

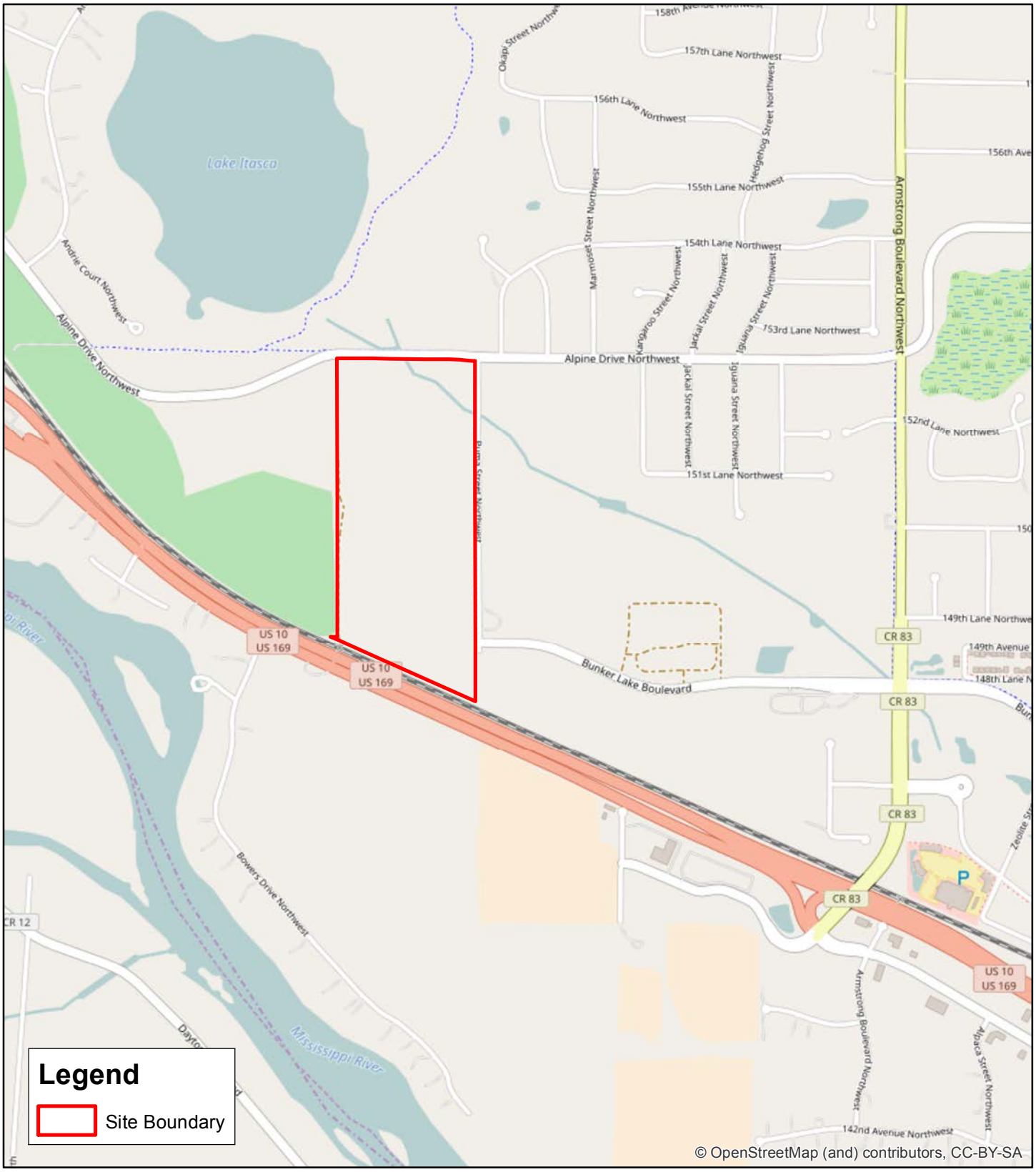


Figure 1 - Site Location

N

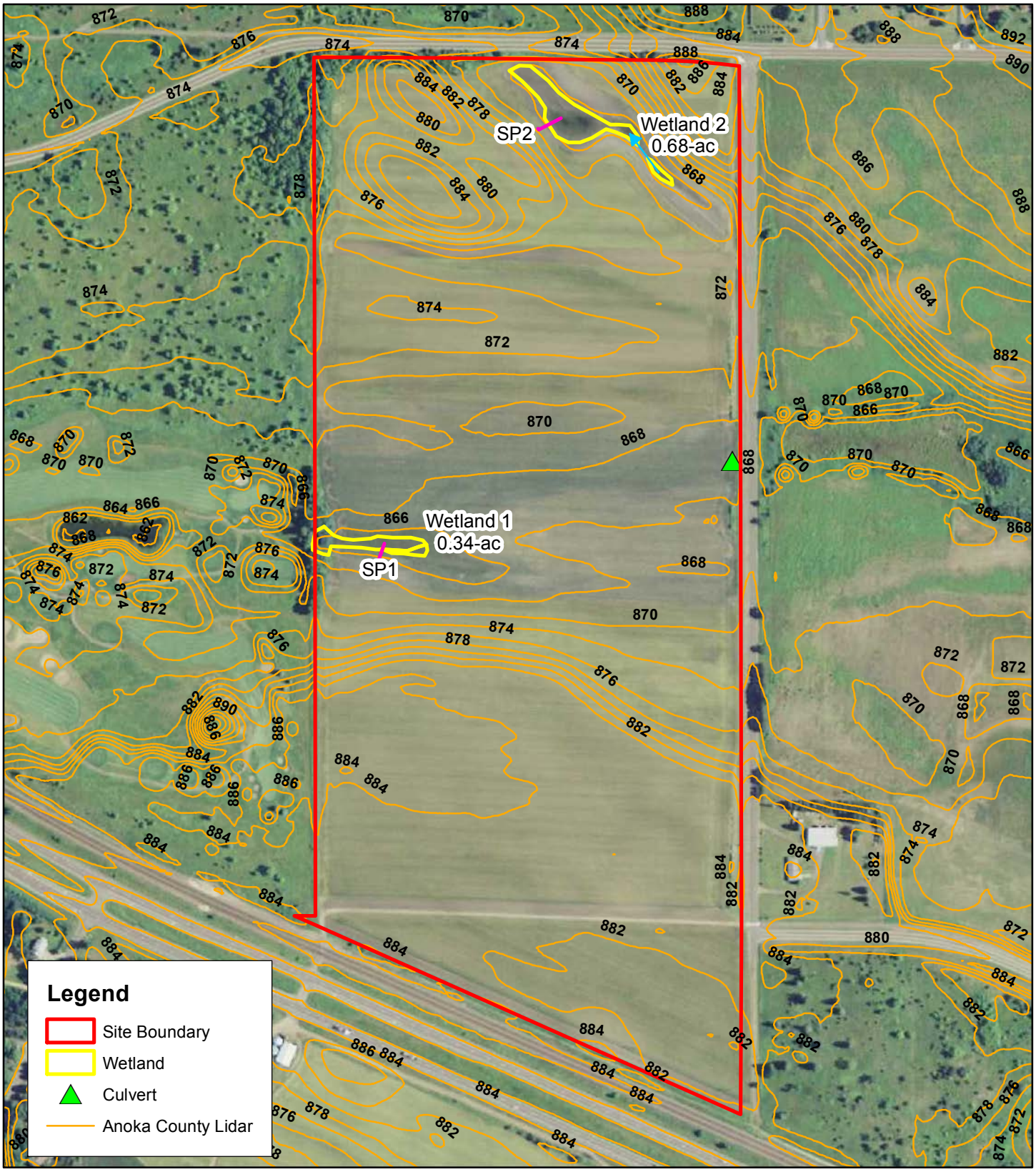
0 2,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: ESRI Streets Basemap

Pearson Property (KES 2016-167)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.



Revised Figure 2 - Existing Conditions (2013 FSA Photo) per 10/21/2016 TEP Review

N

0 500 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: Minnesota DNR (2013), USFWS

Pearson Property (KES 2016-167)
Ramsey, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

City Authorization: Ramsey Date Received: 10-17-16 Permit No: 16-19

Lower Rum River Watershed Management Organization ("LRRWMO")

Andover—Anoka—Coon Rapids—Ramsey

2015 First Avenue • Anoka, MN 55303

PERMIT APPLICATION

The $100.00 application fee and the $700.00 escrow deposit must accompany this permit application. Applications for projects involving wetlands and/or involving a Wetland Replacement Plans must include an additional $75 application fee plus an escrow deposit as determined in accordance with Attachment D.

Permits are to be processed at the same time as the site plan, preliminary plat or other city land use or building application submitted to the city in which the work or project is located.

Project Name: Pearson Property

Address/Location: S9 T32N R25W Ramsey, MN

Project Description/Purpose: Wetland Delineation Review

Stephen Bona	Melissa Barrett — Kjolhaug Env. Serv.
Name of Applicant (Site Owner or Property Owner)	**Applicant's Contact — Organization Name**
14015 Sunfish Lake Blvd NW	26105 Wild Rose Lane
Address	**Address**
Ramsey, MN 55303	Shorewood, MN, 55331
City, State, Zip	**City, State, Zip**
(651) 271-4951	(952) 401-8757
Phone — Fax	**Phone — Fax**
Stephen.bona@gmail.com	Melissa@kjolhaugenv.com
Email	**Email**

Submittal Requirements

Complete applications are to be submitted as per attachments A (Permit Requirements), B (Office Procedure), C (LRRWMO Permit Standards). Projects involving wetlands and/or involving a Wetland Replacement Plan have special notice requirements and require submittal of four copies (4) and an electronic copy of all wetland-related submittal materials.

PROJECT SUBMITTALS (check all that apply):

- ☐ **GRADING PLAN:** Including existing and proposed contours and boundaries of all wetlands and surface waters.
- ☐ **STORM SEWER/ DRAINAGE PLAN:** Including all permanent drainage features and all permanent water quality features.
- ☐ **STORM DRAINAGE CALCULATIONS:** Design computations as required by the LRRWMO (see attachment C).
- ☐ **EROSION CONTROL PLAN:** Including all temporary measures proposed to retain all sediment on site.
- ☑ **MITIGATION PLAN*/WETLAND DETERMINATION:** Quality level of mitigated wetland(s) shall be determined by the LRRWMO.
- ☐ **REQUEST FOR EXEMPTION UNDER THE WETLAND CONSERVATION ACT (WCA)**
- ☐ **OTHER**

****NOTE: Four copies of permit submittals are required for projects involving wetland replacement plans.***

City Authorization: _____ Date Received: _____ Permit No: 16-19

Lower Rum River Watershed Management Organization ("LRRWMO")

Andover—Anoka—Coon Rapids—Ramsey

2015 First Avenue • Anoka, MN 55303

START OF PROJECT: _____	EST. COMPLETION DATE: _____	APPROVAL DATE: 11/17/16

By signing this Permit Application, the undersigned consents and agrees on behalf of the Applicant that:

1. The permit application fee is non-refundable. Escrow deposits will be held by the LRRWMO until the project has been completed and all conditions of issuance of the permit are satisfied. The Applicant is responsible for all expenses incurred by the LRRWMO in the processing, administration and enforcement of the permit application and permit. The escrow deposit will be used to reimburse the LRRWMO for all expenses incurred by the LRRWMO in processing, administering and enforcing the permit application and permit, including engineering, legal and other consultant costs. If such expenses exceed the escrow deposit, the LRRWMO will bill the Applicant or Permittee for such excess amount and payment will be due within twenty (20) days of mailing the invoice. Timely payment of such invoices is a condition of all permits and work may be stopped on the project for failure to make payments when due.

2. The undersigned, its agents, principal, assigns and/or representatives (hereinafter "Permittee") shall abide by all the standard conditions and special terms and conditions of the LRRWMO.

3. Any work that violates the terms of the permit may result in the LRRWMO or the City in which the work is being done immediately causing the work on the project relating to the permit to cease and desist. All work on the project shall cease until the permit conditions are met and approved by the LRRWMO and/or the City in which the work is being done.

4. The Permittee agrees to be bound by the terms of the LRRWMO permit requirements, final permit, standard conditions and special conditions required by the LRRWMO for approval of the permit. The undersigned has the authority to bind the permit holder, the owner of the property and/or any entity performing work on the property pursuant to the terms of LRRWMO permit, and shall be responsible for complying with terms of the LRRWMO permit.

"I certify that I have thoroughly read and understand the above information."

Alan R Pearson — Signature of property owner or designated Agent (no agent without a letter of authority)

10/17/16 — Date

Stephen A. Bova — Signature of applicant if different from property owner

10/17/16 — Date

Alan Pearson — Print Signer's name

Stephen A. Bova — Print Signer's name

SIGNATURE OF LRRWMO CHAIRMAN: ** _____

NOTE: Subject to conditions recommended by Bob Obermeyer, Barr Engineering (see attached)

PERMIT IS NOT VALID IF PROJECT HAS NOT STARTED WITHIN ONE YEAR FROM DATE OF APPROVAL

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MINNESOTA 55101-1678

10/24/2016

REPLY TO
ATTENTION OF
Operations
Regulatory (MVP-2016-03719-MLV)

THIS IS NOT A PERMIT

Melissa Barrett
Kjolhaug Environmental
26105 Wild Rose Lane
Shorewood, MN 55331

Dear Ms. Barrett:

We have received your submittal described below. You may contact the Project Manager with questions regarding the evaluation process. The Project Manager may request additional information necessary to evaluate your submittal.

File Number: MVP-2016-03719-MLV

Applicant: Capstone Homes - Steve Bona

Project Name: Pearson Property

Received Date: 10/17/2016

Project Manager: Marissa Vine
651-290-5362

Additional information about the St. Paul District Regulatory Program, including the new Clean Water Rule, can be found on our web site at http://www.mvp.usace.army.mil/missions/regulatory.

Please note that initiating work in waters of the United States prior to receiving Department of the Army authorization could constitute a violation of Federal law. If you have any questions, please contact the Project Manager.

Thank you.

U.S. Army Corps of Engineers
St. Paul District
Regulatory Branch

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Appendix B

Well Logs

Pearson Farm Residential Development EAW

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Minnesota Unique Well Number

541778

County Anoka
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/05/1997
Update Date 02/14/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
PEARSON,	32	25	W	30	AABACD

Elevation 883 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Well 8846 10 SH W RAMSEY MN 55303

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	23	BROWN	SOFT
CLAY & ROCKS	23	43	BROWN	SOFT
SAND	43	66	GRAY	SOFT
CLAY FIRM	66	66	GRAY	

Remarks

Well Depth 66 ft. **Depth Completed** 66 ft. **Date Well Completed** 08/24/1994

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Threaded

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 63 ft.	10.7 lbs./ft.	8.7 in. To 30 ft.
		6.2 in. To 66 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON 304

Diameter	Slot/Gauze	Length	Set	
4.5 in.	18	4 ft.	62 ft.	66 ft.

Static Water Level

28 ft. land surface Measure 08/24/1994

Pumping Level (below land surface)

48 ft. 3 hrs. Pumping at 40 g.p.m.

Wellhead Completion

Pitless adapter manufacturer BAKER Model SNAPPY

☒ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite	0.8 Cubic yards	ft.	60 ft.

Nearest Known Source of Contamination

50 feet South Direction Septic tank/drain field Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 01/10/1994

Manufacturer's name RED JACKET

Model Number 100CNS1- HP 1 Volt 230

Length of drop pipe 42 ft Capacity 18 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat clay-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:24,000)

System UTM - Mad83, Zone 15, Meters X 461347 Y 5009793

Unique Number Verification Address verification Inpute Date 07/03/2008

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Renner E.H. Well	71015	SCHAFFER, R.

Minnesota Unique Well Number

227345

County Anoka
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 04/15/1991
Update Date 02/14/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
PEARSON,	32	25	W	30	AAABCA

Elevation 883 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W 8846 10 HY NW RAMSEY MN 55303

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	10	BROWN	
GRAVEL & SAND	10	15	YELLOW	
CLAY & GRAVEL	15	60	BROWN	
GRAVEL	60	75	BROWN	

Remarks

WELL LOCATION: SOUTH SIDE OF HIGHWAY 10 & EAST OF PUMA

Well Depth 75 ft. **Depth Completed** 75 ft. **Date Well Completed** 12/13/1972

Drill Method **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Threaded
Drive Shoe? Yes ☐ No ☐ **Above/Below** 0 ft.

Casing Diameter		Weight	
4	in. To 71 ft.		lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
4 in.	20	4 ft.	ft.	ft.

Static Water Level

30 ft. land surface Measure 12/13/1972

Pumping Level (below land surface)

40 ft. hrs. Pumping at 17 g.p.m.

Wellhead Completion

Pitless adapter manufacturer BAKER Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☒ Not Specified

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed 12/00/1972

Manufacturer's name AERMOTOR

Model Number HP 0.75 Volt

Length of drop pipe 50 ft Capacity 12 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat gravel (+larger)-brown Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitized - scale 1:24,000 or larger (Digitizing Table)

System UTM - Mad83, Zone 15, Meters X 461304 Y 5009799

Unique Number Verification Address verification Inpute Date 01/01/1990

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Renner E.H. & Sons	27015	LEDBETTER, B.

Minnesota Unique Well Number

430232

County Anoka
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 04/15/1991
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
MCINNIS, DAN	32	25	W	20	CDCCCA

Elevation 883 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Well 14915 PUMA ST NW RAMSEY MN 55303

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	27	BROWN	SOFT
CLAY	27	30	BROWN	SOFT
SAND & GRAVEL	30	51	BROWN	SOFT
CLAY & GRAVEL	51	93	BROWN	HARD
CLAY	93	116	GRAY	MEDIUM
SANDROCK & SHALE	116	131	YEL/BRN	HARD
SHALE & SANDROCK	131	140	WHITE	SOFT
SANDROCK & SHALE	140	176	PNK/GRN	SOFT
SANDROCK & SHALE	176	276	GREEN	SOFT
SANDROCK & SHALE	276	338	BRN/GRN	HARD

Remarks

Well Depth	Depth Completed	Date Well Completed
338 ft.	338 ft.	03/17/1988

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☒ No ☐ **Above/Below** 1 ft.

Casing Diameter	Weight	Hole Diameter
4 in. To 294 ft.	11 lbs./ft.	6.2 in. To 294 ft.
		4 in. To 338 ft.

Open Hole From 294 ft. To 338 ft.

Screen? ☐ **Type** **Make**

Static Water Level
30 ft. land surface Measure 03/17/1988

Pumping Level (below land surface)
100 ft. 3 hrs. Pumping at 50 g.p.m.

Wellhead Completion
Pitless adapter manufacturer MONITOR Model 8PL41UCI
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
cuttings		0 ft.	194 ft.

Nearest Known Source of Contamination
75 feet East Direction Septic tank/drain field Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 03/21/1988
Manufacturer's name MEYERS
Model Number B352BM- HP 0.5 Volt 230
Length of drop pipe 60 ft Capacity 10 g.p. Typ Submersible

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock St.Lawrence-Tunnel City Aquifer Wonewoc
Last Strat Wonewoc Sandstone Depth to Bedrock 116 ft
Located by Minnesota Geological Survey
Locate Method Digitized - scale 1:24,000 or larger (Digitizing Table)
System UTM - Mad83, Zone 15, Meters X 461892 Y 5009911
Unique Number Verification Address verification Inpute Date 01/01/1990

Angled Drill Hole

Well Contractor
Mork Well Co. 02133 LAWRENCE, R.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

783804

County Anoka
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 09/30/2011
Update Date 08/18/2014
Received Date 12/05/2011

Well Name	Township	Range	Dir	Section	Subsection
WIEHLE, SCOTT	32	25	W	20	BDCCAC

Elevation 885 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W 15310 OKAPI ST NW RAMSEY MN 553037004

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	54	BROWN	SOFT
CLAY	54	62	BROWN	SOFT
GRAVEL	62	65	BROWN	SOFT
CLAY	65	107	BROWN	SOFT
SHALE	107	155	VARIED	SOFT

Remarks

OLD WELL ON PROPERTY GAMMA LOGGED 9-30-2011. UNIQUE NO. 272037.

NEAREST CONTAMINATION: TYPE= FLOOR DRAIN.

Well Depth 155 ft. **Depth Completed** 155 ft. **Date Well Completed** 08/26/2011

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint** Glued

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 113 ft.	lbs./ft.	7.7 in. To 113 ft.
		6.5 in. To 155 ft.

Open Hole From 113 ft. To 155 ft.

Screen? ☐ **Type** **Make**

Static Water Level

28 ft. land surface Measure null

Pumping Level (below land surface)

60 ft. 1 hrs. Pumping at 60 g.p.m.

Wellhead Completion

Pitless adapter manufacturer AQUASEAL Model T-SERIES

☐ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	3 Sacks	103 ft.	113 ft.
bentonite	6 Sacks	ft.	103 ft.

Nearest Known Source of Contamination

52 feet East Direction Other Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name GOULDS

Model Number 18GS10 HP 1 Volt 230

Length of drop pipe 60 ft Capacity g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Tunnel City Group Aquifer Tunnel City

Last Strat Tunnel City Group Depth to Bedrock 107 ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:12,000)

System UTM - Mad83, Zone 15, Meters X 461928 Y 5010727

Unique Number Verification Information from Inpute Date 09/30/2011

Angled Drill Hole

Well Contractor

Mork Well Co., Inc. 1877 RICKE, G.

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

272037

County Anoka
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 09/30/2011
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
WIEHELE, DEB	32	25	W	20	BDCCAC

Elevation 886 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W 15310 OKAPI ST NW RAMSEY MN 553037004

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	60		
GRAVEL & CLAY	60	110		
GRAVEL & CLAY	110	126		
SANDROCK	126	156		

Remarks

GAMMA LOGGED 9-20-2011. LOGGED FOR ANOKA CO. ATLAS AND MDH.

Well Depth 156 ft. **Depth Completed** 156 ft. **Date Well Completed** 07/30/1974

Drill Method **Drill Fluid**

Use domestic **Status** Inactive

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 141 ft.	lbs./ft.	4 in. To 156 ft.

Open Hole From 141 ft. To 156 ft.

Screen? ☐ **Type** **Make**

Static Water Level

41 ft. land surface Measure 09/30/2011

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☒ Not Specified

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Tunnel City Group Aquifer Tunnel City

Last Strat Tunnel City Group Depth to Bedrock 110 ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:12,000)

System UTM - Mad83, Zone 15, Meters X 461922 Y 5010728

Unique Number Verification Information from Inpute Date 09/30/2011

Angled Drill Hole

Well Contractor

Licensee Business Lic. or Reg. No. Name of Driller

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Appendix C

Minnesota DNR Natural Heritage Information System Report

Pearson Farm Residential Development EAW

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The DNR NHIS Report is expected to be available by March 17

Appendix D

State Historic Preservation Office Response

Pearson Farm Residential Development EAW

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From: Thomas Cinadr [mailto:thomas.cinadr@mnhs.org]
Sent: Thursday, February 02, 2017 8:46 AM
To: Andrew Krinke <Andrew@kjolhaugenv.com>
Subject: Re: SHPO Request

THIS EMAIL IS NOT A PROJECT CLEARANCE.

This message simply reports the results of the cultural resources database search you requested. The database search produced results for only previously known archaeological sites and historic properties. Please read the note below carefully.

No archaeological sites or historic structures were identified in a search of the Minnesota Archaeological Inventory and Historic Structures Inventory for the search area requested.

The result of this database search provides a listing of recorded archaeological sites and historic architectural properties that are included in the current SHPO databases. Because the majority of archaeological sites in the state and many historic architectural properties have not been recorded, important sites or structures may exist within the search area and may be affected by development projects within that area. Additional research, including field survey, may be necessary to adequately assess the area's potential to contain historic properties.

If you require a comprehensive assessment of a project's potential to impact archaeological sites or historic architectural properties, you may need to hire a qualified archaeologist and/or historian. If you need assistance with a project review, please contact Kelly Gragg-Johnson in Review and Compliance @ 651-259-3455 or by email at kelly.graggjohnson@mnhs.org.

The Minnesota SHPO Survey Manuals and Database Metadata and Contractor Lists can be found at **http://www.mnhs.org/shpo/survey/inventories.htm**

Tom Cinadr
Survey and Information Management Coordinator
Minnesota Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. West
St. Paul, MN 55102

651-259-3453

On Wed, Feb 1, 2017 at 1:12 PM, Andrew Krinke <Andrew@kjolhaugenv.com> wrote:

Hi Tom,

We are requesting a historical property information/database search for a 88.4-acre site located in the southwest quarter of Section 20, T32N, R25W, Ramsey, Anoka County, Minnesota. The site corresponds to Anoka County PIN 203225320001, 203225330001, and 293225220004 and the Lat/Long coordinates of the site are 45.243891, -93.488493.

We are requesting this search because the Pearson Farm Residential Development is proposed on this property. The Pearson Farm Residential Development project will include 246 single-family lots and 98 townhomes. Site development will include mass grading and the site will be served by municipal sewer and water. . The project area is dominated by annually tilled cropland, but includes three farmed wetlands and some field edges with trees and grassland.

Attached please find a USGS topography site location map and a shapefile to support this request. I would appreciate your prompt attention to this review.

Thank you,

Andrew Krinke
Kjolhaug Environmental Services Company
26105 Wild Rose Lane
Shorewood, MN 55331
Office: 952-401-8757
Cell: 612-704-6743
Andrew@kjolhaugenv.com

Appendix E
Traffic Impact Study

Pearson Farm Residential Development EAW

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Spack CONSULTING
ENGINEERING TRAFFIC FORWARD

Traffic Impact Study

Pearson Farm Residential Development
Ramsey, Minnesota

I hereby certify this 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.

By: _____
Vern Swing, P.E.
License No. 41417

Date: March 10, 2017_____

Executive Summary

Background: The Pearson Farms Development is proposed for construction on the vacant land bounded by Puma Street, Alpine Drive, Trunk Highway (TH) 10, and Links at Northfork Golf Course in Ramsey, Minnesota. This development will include 344 total residential units (98 townhomes and 246 single family homes). The purpose of this study is to determine the traffic impacts associated with the build out of the proposed development on the study intersections.

Results: The principal findings of this traffic study are:

- The proposed expansion is expected to generate approximately 2,912 new trips during an average weekday (1,456 entering and 1,456 exiting), approximately 227 new trips during the a.m. peak hour (53 entering and 174 exiting) and approximately 297 new trips during the p.m. peak hour (189 entering and 108 exiting).
- The existing study intersections operate with acceptable delays and vehicle queues today.
- The study intersections are expected to operate acceptably during the 2040 no-build and build scenarios.
- Left turn lanes are not warranted based on the expected 2040 build year volumes and mainline speeds.
- Right turn lane warrants are not fulfilled due to the mainline speeds remaining below 45 MPH, which is consistent for neighborhood streets, however, the right turn lane volume thresholds were reached by the estimated 2040 Build volumes.

Recommendations: The following items are recommended based on the analyses contained in this study:

- No additional intersection mitigation is required to help improve capacity.
- If the speed limits along Puma Street or Alpine Drive are increased to 45 MPH or higher, re-evaluate the Turn-Lane Warrants.
- Construct a new sidewalk/trail along the southern edge of Alpine Drive connecting the proposed access to the existing Alpine Drive/Puma Street intersection. The addition of a north/south crosswalk should also be considered at this intersection to help promote safe crossing to the existing northern sidewalk/trail.
- Ensure the proposed internal sidewalks connect to the external sidewalk/trail system.
- Work with Metro Transit or their affiliates to improve transit options within the project area as the closest existing transit is located roughly 1.5 miles away at Ramsey Station and Platform.

This study is based upon a concept plan from January 6, 2017. Assuming the general characteristics of the proposed development remain approximately the same as documented, minor changes in the final design are not expected to alter the results or recommendations of this study.

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1. Introduction

a. Proposed Development

The Pearson Farm Development is proposing to construct a new residential development located on the vacant land bounded by Puma Street, Alpine Drive, Trunk Highway (TH) 10, and Links at Northfork Golf Course in Ramsey, Minnesota. The development is currently proposed to include 98 townhomes and 246 single family homes for a total of 344 units.

For the purposes of this study, the development is expected to be fully built and occupied by the 2040 forecast year.

b. Purpose of Study

The purpose of this study is to:

i. Examine the existing operations of the surrounding study intersections.
ii. Forecast the amount of traffic expected to be generated by the proposed development.
iii. Determine the traffic impacts associated with the build out of the proposed development.

The traffic impacts are studied on the roads and intersections where significant impact is anticipated and improvements are recommended where mitigation is needed. For those not familiar with the general concepts and terms associated with traffic engineering, *The Language of Traffic Engineering* guide is included in the Appendix.

c. Study Objectives

The objectives of this study are:

i. Document how the study intersections and roadways currently operate.
ii. Forecast the amount of traffic expected to be generated by the proposed development.
iii. Determine how the study intersections and roadways will operate in the future AM and PM peak hours with the proposed development.
iv. Recommend appropriate mitigation and operation measures to improve operations if deficiencies are identified within the development or on the study intersections.

The study intersections closest to the proposed development were chosen for review as these will experience the greatest impact from traffic associated with the development. The study intersections include:

i. Alpine Drive/Puma Street
ii. Bunker Lake Boulevard/Puma Street
iii. Alpine Drive/Site Access
iv. Puma Street/Site Access

2. Existing Conditions

a. Corridor Characteristics

As mentioned, the proposed site is located to the west of Puma Street, south of Alpine Drive, and north of Trunk Highway (TH) 10 in Ramsey, Minnesota. Table 1 shows the characteristics of the key roadway corridors around this site and within the study area.

Table 1 – Study Corridor Characteristics

Name[1]	Designation	Speed Limit	Lanes	Transit[2]	Peds/ Bicycles
Bunker Lake Boulevard (MSAS 12)	Minor Collector	30 mph	2 undivided	None	Sidewalk on north side
Puma Street (MSAS 109)	Local Street	30 mph	2 undivided	None	Sidewalk on west side
Alpine Drive (MSAS 112)	Minor Collector	40 mph	2 undivided	None	Sidewalk on north side

[1] MSAS = Municipal State Aid Street

[2] Transit routes are available roughly 1.5 miles away at Ramsey Station & Platform

b. Traffic Volumes

48-hour intersection videos were collected at the existing study intersections under normal weekday conditions in February 2017. Using these videos, 24-hour turning movement counts were created by averaging the two days to smooth out any single day anomalies and create a typical day.

Based on these averages, the AM and PM peaks were determined to be 7:00 AM to 8:00AM and 4:45PM to 5:45 PM. The averaged turning movement counts from these two peak hours were used at the study intersections for analysis. The turning movement count data from the counts are contained in fifteen minute intervals in the Appendix.

Based on the Weekday turning movement volumes, the current daily traffic volumes on each study corridor are:

i. 38 vehicles per day on Bunker Lake Boulevard.
ii. 100 vehicles per day on Puma Street.
iii. 1,100 vehicles per day on Alpine Drive.

3. Forecasted Traffic

a. Site Traffic Forecasting

The *Institute of Transportation Engineers (ITE)* provides the *Trip Generation Manual, 9th Edition*, the standard document for determining expected traffic for proposed land uses. Using this ITE information, trip generation forecasts can be made for the development site.

The ITE manual compiles studies from across the country to provide a national average traffic for various land uses. For the proposed residential development, the designation of Single Family Homes and Townhomes were used. Based on information supplied in the site plan, the development is currently proposed to include 98 townhomes and 246 single family homes for a total of 344 units. With this information, the expected trip generation was completed based on the full build out of the development.

The resultant new trips generated by the proposed development are shown in Table 2. A detailed trip generation table showing the exact breakdowns is provided in the Appendix.

Table 2 – New Trip Generation

Land Use Code – Source	Description & Size	Daily		AM Peak Hour		PM Peak Hour	
		Total In	Total Out	Total In	Total Out	Total In	Total Out
210	Single Family Home	1,171	1,171	46	138	155	91
230	Townhomes	285	285	7	36	34	17
TOTAL		**1,456**	**1,456**	**53**	**174**	**189**	**108**

A trip distribution pattern was developed for the site generated traffic going to and from the proposed development. This pattern is based on the existing traffic volumes, access locations, location of major roadways leading to and from the site, and prior studies within the project area. The general trip distribution pattern for this study is:

i. 22 percent of the site generated traffic to/from the west on Alpine Drive.
ii. 78 percent of the site generated traffic to/from the east on Alpine Drive and Bunker Lake Boulevard.

Traffic generated by the development of the site was assigned to the area roadways per this distribution pattern.

b. Non-site Traffic Forecasting

To forecast future traffic volumes for the year 2040 in the study area outside of the proposed development's traffic, additional trip generations were considered based on proposed developments within the project area. These trip generations were based on a prior study completed by Bolton & Menk analyzing the Future

Business Park, which included a preliminary look at the Pearson Farm Development. Using this study the total acreage of the new proposed land uses were determined and their corresponding trip generations were completed. The proposed developments and trip generations can be found in the Appendix.

Applying the background growth rate and surrounding development trip generations to the existing traffic volumes established the 2040 No-Build forecasts.

c. Total Traffic

Traffic forecasts were developed for the 2040 Build scenarios by adding the traffic generated by the proposed development to the non-site forecast volumes. Peak hour forecasts are shown in the Appendix.

4. Analyses

a. *Intersection Vehicular Analysis*

The scenarios analyzed in this study for both the a.m. and p.m. peak hours were the existing, 2040 No-Build, and 2040 Build scenarios. Capacity analyses are performed for the study intersections to determine if they need improvements such as turn lanes or an upgrade in traffic control. It should be noted that for the No-Build and Build scenarios it is assumed Puma Street will be realigned on the north end to line up with Okapai Street as shown in the site plan in the Appendix.

The existing and forecasted turning movement volumes along with the existing intersection configurations and traffic control were used to develop the average delay per intersection in each study scenario. The delay calculations were done in accordance with the *Highway Capacity Manual 6th Edition* using the Vistro software package. The full calculations for each study scenario, including Level of Service (LOS) grades and queue lengths, are included in the Appendix. Also, included in the Appendix is a guide explaining the Level of Service grade concept.

Chart 1 (a.m. peak hour) and Chart 2 (p.m. peak hour) show the 95th percentile queue lengths on the busiest stop sign controlled approach at intersections with side street stop sign control. Average delays are not calculated for intersections with side street stop sign control because the vast majority of vehicles going through the intersection are on the main roadway and have zero delay, which leads to low overall average delays. At side street stop sign controlled approaches to busy roadways, the average delay for all the vehicles on the approach often exceeds 60 seconds. This can be the case for a few vehicles waiting at the stop sign where improvements would not be justified for the low traffic volume. In general, vehicle queuing of five cars or more is considered unreasonable and could warrant mitigation.

Chart 1 – A.M. Peak Hour Queues: Side-Street Stop-Controlled Intersections

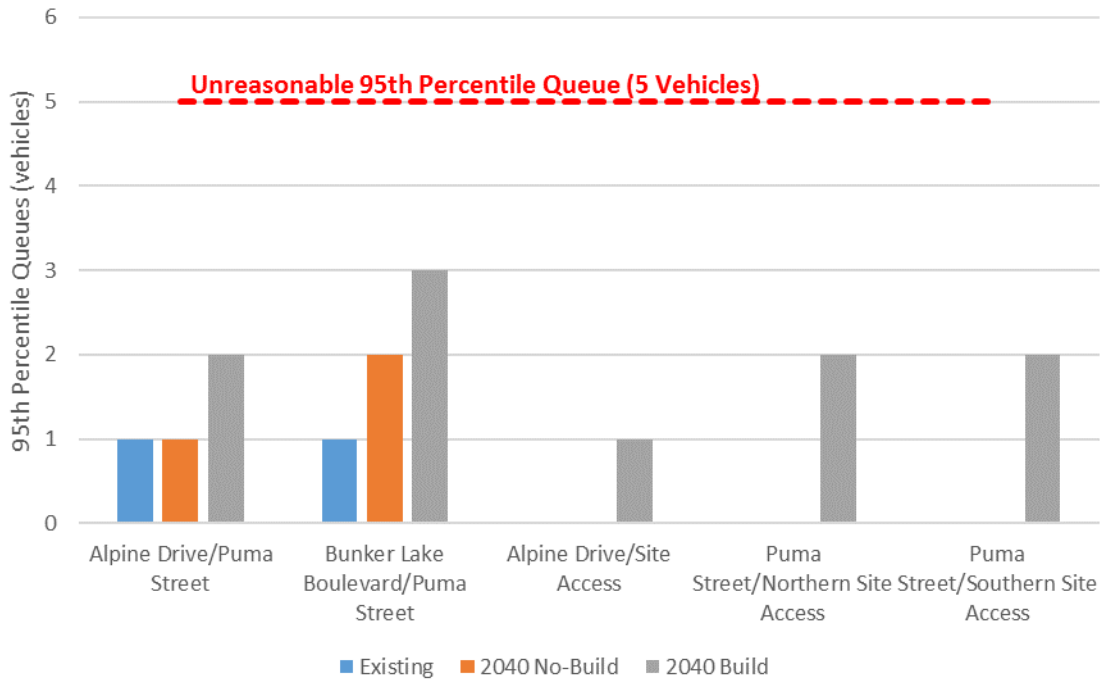
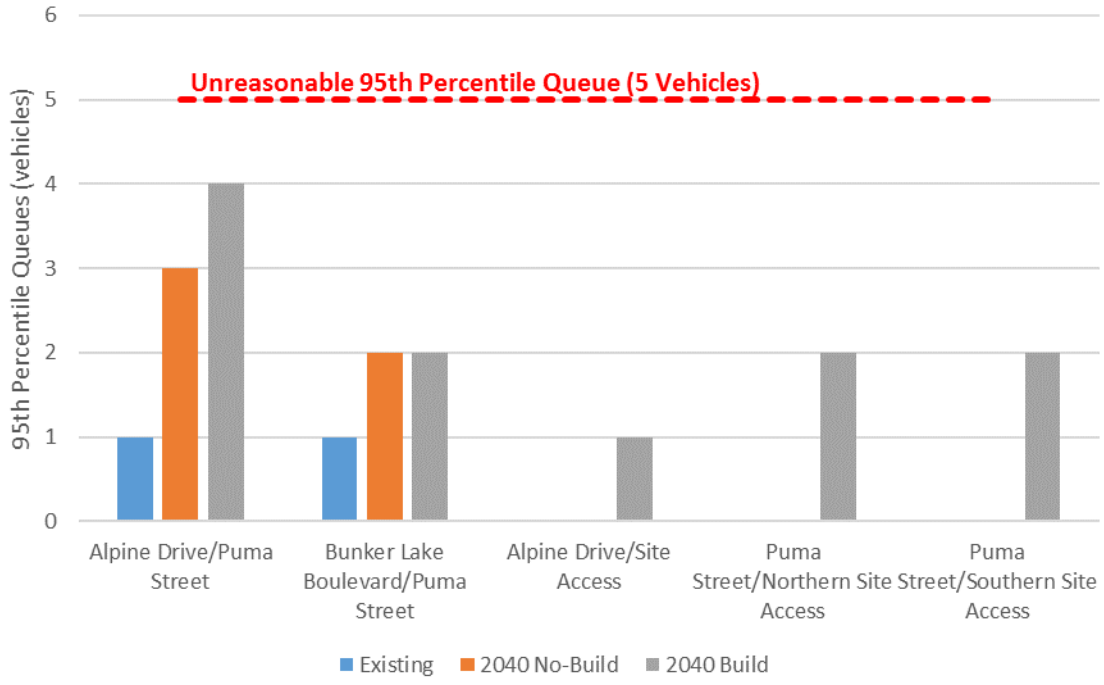


Chart 2 – P.M. Peak Hour Queues: Side-Street Stop-Controlled Intersections



b. Vehicular Mitigation Analysis

The above analyses indicate all study intersections are forecast to operate acceptably under all scenarios, including with the addition of traffic generated by the proposed addition of the Pearson Farm Development. As Charts 1 and Chart 2 show, the existing, no-build, and build queues stay consistent and well below the standard thresholds. All 95th percentile queues remain at or below four vehicles per approach at all study intersections. These results suggest that the addition of the Pearson Farm Development will not adversely impact the traffic operations at the study intersections. No mitigation is required at these intersections to help improve capacity.

With the existing low speed along Alpine Drive and Puma Street, the Turn-Lane Warrants published by MnDOT will not be fulfilled, as a 45 MPH minimum speed limit is not present on either roadway. The 30 MPH speed limit is consistent for a neighborhood street. A preliminary Turn-Lane Warrant analysis was completed based on volumes alone and ignoring the 45 MPH minimum speed requirement.

The daily total traffic entering and exiting the site accesses based on the collected turning movement counts, surrounding development trip generations, and the site trip generation were estimated as follows:

i. Southern site access at Bunker Lake Boulevard – 970 Vehicles per day
ii. Center site access onto Puma Street – 920 Vehicles per day
iii. Northern site access onto Puma Street – 680 Vehicles per day
iv. Site access onto Alpine Drive – 350 Vehicles per day

Main Line ADTs are roughly:

i. Puma Street – 4,400 Vehicles per day
ii. Alpine Drive – 2,700 Vehicles per day

Based on these estimated volumes and the criteria published in Warrant 9 (Vehicular Volume Warrant) from the *MnDOT Access Management Manual's Turn-Lane Warrants for Undivided Highways*, Table 3, below, was created. This table shows the estimated mainline and access volumes and the corresponding MnDOT Warrant thresholds.

Table 3 – New Trip Generation

Intersection	Left Turn Lane		Right Turn Lane	
	Street ADT	Access ADT	Street ADT	Access ADT
Southern site access at Bunker Lake Boulevard	4,400	970	4,400	970
Center site access onto Puma Street	4,400	920	4,400	920
Northern site access onto Puma Street	4,400	680	4,400	680
Site access onto Alpine Drive	2,700	350	2,700	350
Criteria	**4,000 – 4,999 -or- 1,500 – 2,999**	**> 1,000 -or- > 1,500**	**> 1,500**	**> 100**

As Table 3 shows, left-turn lanes are not warranted based on the estimated 2040 Build volumes while the right-turn lane warrant is satisfied. Again, these values are based upon a 45 MPH speed limit, which is not present on either Alpine Drive or Puma Street. If the speed along these streets are raised to 45 MPH or higher the Turn-Lane Warrants should be re-assessed.

It should be noted that this analysis did not consider modification to Armstrong Boulevard & Bunker Lake Boulevard as the prior Future Business Park Traffic Memorandum completed by Bolton & Menk already defined necessary upgrades for the intersection that would be required for proper traffic flow through the intersection.

c. Concept Site Plan & Multi-Modal Review

The concept site plan contained in the Appendix was reviewed to determine what changes are recommended, if any, to the proposed Pearson Farm Development. Following are key transportation elements of the concept site plan that should be implemented:

i. **Car Circulation**: The proposed site plan provides sufficient vehicle circulation with four accesses spaced evenly throughout the development. These accesses allow vehicles multiple options for entering and exiting the development which will help spread traffic more evenly throughout the site

ii. **Bicycle and pedestrian infrastructure:** An additional sidewalk/trail should be considered along the southern side of Alpine Drive from the proposed site access to the intersection of Alpine Drive and Puma Street. At this intersection, an additional crosswalk should be considered, connecting pedestrians north to the existing sidewalk/trail along the northern side of Alpine Drive. This new sidewalk/trail connection will provide a safe crossing and clear route for pedestrians and bicyclist to connect to the existing infrastructure. The existing trail along the western side of Puma Street will be lengthened to the southern edge of the development and an additional leg will be brought into the development at the Center Site Access location on Puma Street. This segment will stretch to the internal park to the north. Additional internal sidewalks will also be provided on one side of each street within the development and

should connect to the existing sidewalk/trail along Puma Street, as well as the proposed additional sidewalk/trail along the southern side of Alpine Drive.

iii. **Adjacent Transit:** The addition of transit near the Pearson Farm Development should be considered. Having access to other modes of travel is often seen as an amenity and a general benefit to a site, while helping to reduce the overall number of vehicles throughout the study area.

5. Conclusions and Recommendations

The traffic impacts and operation of the proposed Pearson Farm Development were thoroughly studied and the principal findings are:

- The proposed expansion is expected to generate approximately 2,912 new trips during an average weekday (1,456 entering and 1,456 exiting), approximately 227 new trips during the a.m. peak hour (53 entering and 174 exiting) and approximately 297 new trips during the p.m. peak hour (189 entering and 108 exiting).
- The existing study intersections operate with acceptable delays and vehicle queues today.
- The study intersections are expected to operate acceptably during the 2040 no-build and build scenarios.
- Left turn lanes are not warranted based on the expected 2040 build year volumes and mainline speeds.
- Right turn lane warrants are not fulfilled due to the mainline speeds remaining below 45 MPH, which is consistent for neighborhood streets, however, the right turn lane volume thresholds were reached by the estimated 2040 Build volumes.

The following recommendations are made based on the above findings:

- No additional intersection mitigation is required to help improve capacity.
- If the speed limits along Puma Street or Alpine Drive are increased to 45 MPH or higher, re-evaluate the Turn-Lane warrants.
- Construct a new sidewalk/trail along the southern edge of Alpine Drive connecting the proposed access to the existing Alpine Drive/Puma Street intersection. The addition of a north/south crosswalk should also be considered at this intersection to help promote safe crossing to the existing northern sidewalk/trail.
- Ensure the proposed internal sidewalks connect to the external sidewalk/trail system.
- Work with Metro Transit or their affiliates to improve transit options within the project area as the closest existing transit is located roughly 1.5 miles away at Ramsey Station and Platform.

6. Appendix

A. Site Plan

B. The Language of Traffic Engineering

C. Traffic Counts

D. Trip Generation Tables

E. Peak Hour Volumes

F. Level of Service (LOS)

G. Capacity Analysis Backup

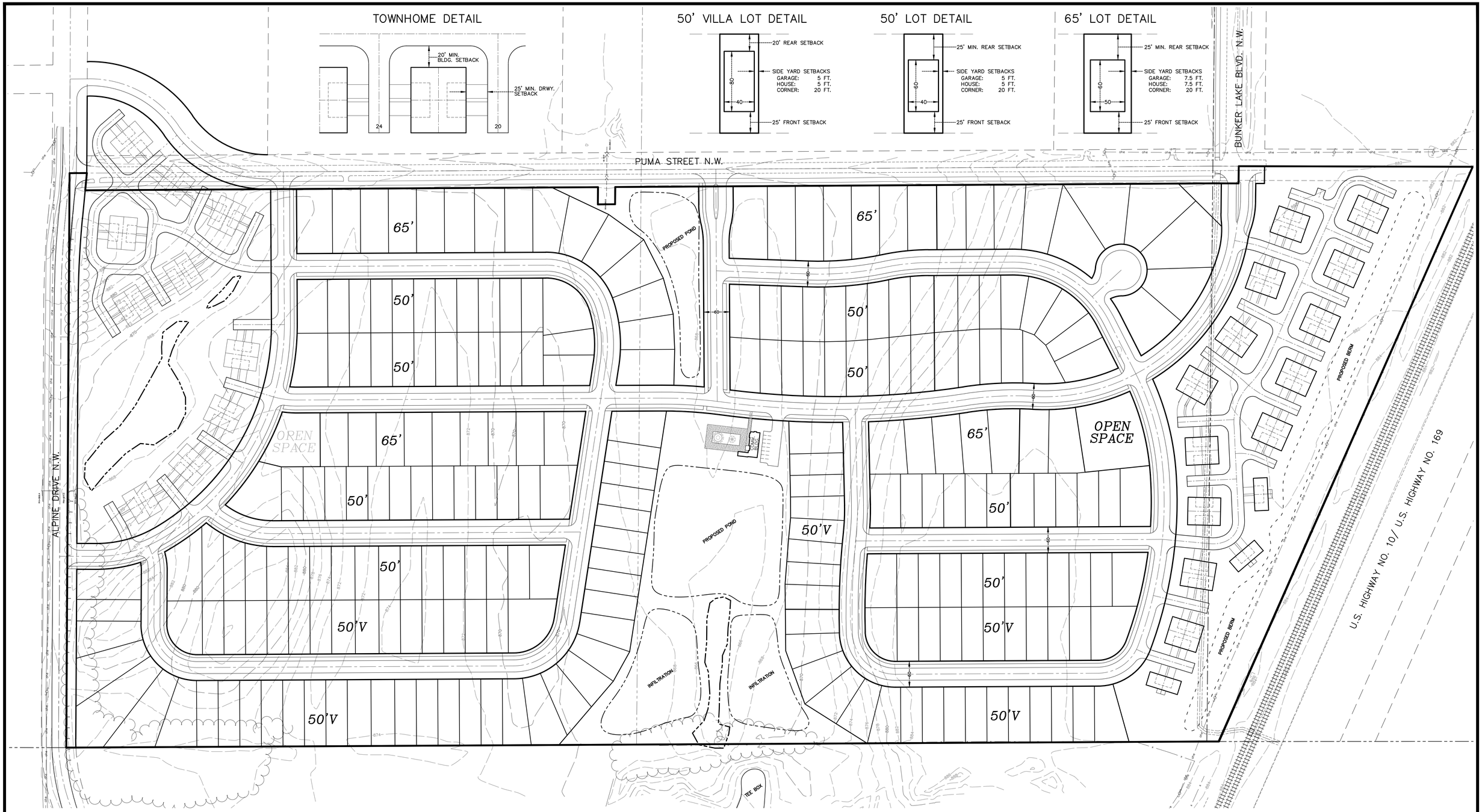
- AM Existing
- PM Existing
- AM 2040 No-Build
- PM 2040 No-Build
- AM 2040 Build
- PM 2040 Build

TOWNHOME DETAIL

50' VILLA LOT DETAIL

50' LOT DETAIL

65' LOT DETAIL



SITE DATA

TOTAL AREA	±88.44 AC.	SETBACK DATA:	
TOTAL NUMBER OF LOTS	344	50' S.F. – SIDE	5 FT.
50' S.F.	111	65' S.F. – SIDE	7.5 FT.
65' S.F.	48	50' VILLAS – SIDE	5 FT.
50' VILLAS	87	FRONT (ALL)	25 FT.
TOWNHOMES	98	REAR	20 FT. MIN.

SOUTH HALF DATA

TOTAL NUMBER OF LOTS	172	SETBACK DATA:	
50' S.F.	55	50' S.F. – SIDE	5 FT.
65' S.F.	24	65' S.F. – SIDE	7.5 FT.
50' VILLAS	35	50' VILLAS – SIDE	5 FT.
TOWNHOMES	58	FRONT (ALL)	25 FT.
		REAR	20 FT. MIN.

N

0 50 100 200

(IN FEET)

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DRAWN BY: C#
ISSUE DATE: 01/06/17
FILE NO: XXX

Revisions:

CAPSTONE HOMES
14015 Sunfish Lake Blvd. - Suite 400
Ramsey, MN 55303

PEARSON FARM
Ramsey, Minnesota

CONCEPT PLAN

1 of 1

Save Date: 01/06/17 | F:\jobs\6421 - 6440\6435 - ramsey site\cad c3d\survey\6435_layout 4.dwg

The Language of Traffic Engineering

Traffic Engineering, and Traffic Engineers, often use technical terms or jargon that may be confusing or tough to understand even within the context of a sentence. Key terms and acronyms that can generally be found in all types of traffic studies are defined in this document.

Types of Studies

Access Management – The practice of government agencies limiting the amount of intersections (both public roadway crossings and private driveways) along a roadway corridor based on the function of the roadway to improve safety and mobility while streamlining access.

Corridor Study – A transportation review and analysis of the existing and future traffic operations of a roadway segment. Varies in length from a couple blocks to a few miles and typically covers all modes of travel.

Intersection Control Evaluation (ICE) Report – A document that examines and determines the most appropriate type of control (stop sign, signal, roundabout, or other) at one or more intersections.

Safety Study – An examination of crash records to identify potential trends, issues, and problem intersections/ corridors. Usually includes potential mitigation options expected to decrease crash rates in the future.

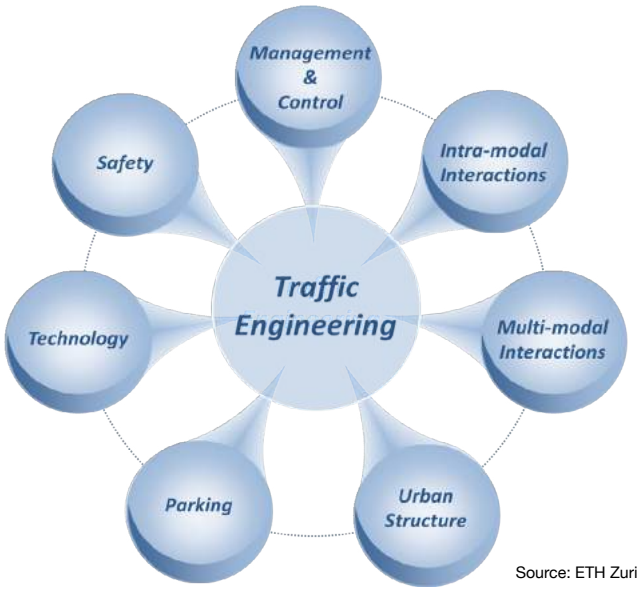
Speed Study – A review of existing travel speeds and the corridor characteristics to determine if speeding is an issue, the appropriate speed to post as the limit, and/or areas to provide reduced speed warnings.

Traffic Impact Study (TIS) – A document that addresses the expected traffic impacts of a development and, if necessary, mitigation options that will reduce or eliminate negative impacts. Also referred to as a Traffic Impact Analysis.

Transportation Plan – A document developed by a government agency to take inventory of their transportation network, identify concerns or issues and lay out the path for improvement of the system.

Travel Demand Management Plan (TDMP) – A plan that documents the existing infrastructure around a site, including transit and non-motorized vehicle options, and develops measures to be implemented to encourage those alternative modes of travel.

Warrant Evaluation – Review of traffic volumes and other characteristics at an intersection against thresholds to determine if a traffic signal or other traffic control option is needed/warranted.



Source: ETH Zurich

Traffic Engineering is a branch of civil engineering that focuses on the safe and efficient movement of people and vehicles. It is part science and part art, requiring not only technical skills for analysis but an understanding of motivations in choosing travel routes.

Key Organizations

AASHTO – American Association of State Highway and Transportation Officials. A nonprofit, nonpartisan association representing transportation departments with a primary goal of fostering the development, operation, and maintenance of an integrated national transportation system.

DOT – Department of Transportation. Government organizations within federal and state agencies dedicated to serving the transportation needs of the community and typically responsible for study, design, operation, and maintenance of all facets of transportation.

FHWA – Federal Highway Administration. An agency within the US Department of Transportation that supports State and local governments in the design, construction, and maintenance of the highway system.

ITE – Institute of Transportation Engineers. An international educational and scientific association of transportation professionals who are responsible for meeting mobility and safety needs.

Results

85th Percentile Speed – Speed at which 85 percent of drivers are traveling at or below. Speed limits are typically set at the 85th percentile speed.

95th Percentile Queue – The distance, generally measured in feet or number of vehicles, which will be exceeded in a lane, typically at an intersection, only five percent of the time. Usually used to help determine intersection turn lane lengths.

Control Delay – The total amount of time a motorist takes to get through a road segment or intersection minus the time it would take without stopping due to traffic controls (like stop signs or traffic signals). Control delay includes decelerating and accelerating back to full driving speed.

Functional Classification – the grouping of streets and highways into categories according to their characteristics and emphasis on mobility or access. Generally, categories include arterials (emphasizing mobility and fast travel), local roads (emphasizing access to adjoining properties), and collector roads (emphasizing a balance between the two and usually connecting arterials to local roads).

Intersection Delay – The average amount of time, usually expressed in seconds, experienced by any vehicle traveling through an intersection.

Level of Service (LOS) – Qualitative measure of traffic operations related to the amount of average delay experienced. Expressed in letter grades with LOS A representing the best operations with little to no delay and LOS F representing the worst operations with excessive delays and congestion.

Measures of Effectiveness – Performance measures that define how well traffic is moving along a corridor or thru an intersection. The common MOEs are travel time, corridor speed, delay, and queues.

Mitigation – Measures intended to reduce the impact of a development or improve an identified traffic issue by either improving capacity (like adding lanes) or reducing demand (like encouraging carpooling).

Queue – Length of line of cars waiting at an intersection or at a bottleneck in a corridor, typically measured for each individual lane of traffic in feet or number of vehicles.

Volume to Capacity (v/c) ratio – the number of vehicles through an intersection or roadway segment in a specific amount of time divided by the expected capacity of the road. Less than 1.0 indicates available capacity and above 1.0 indicates more vehicles than can be accommodated. Typically, a v/c ratio above 0.85 suggests operational issues.

Trip Generation – The amount of vehicle traffic generated by a land use. One trip is equal to one vehicle traveling from an origin to a destination (traveling to and from work equals two trips).

Warrants – Criteria based on volumes and other Measures of Effectiveness for determining when all way stop signs, roundabouts, traffic signals, or other type of control should be installed.

Important Manuals/Guides

HCM – Highway Capacity Manual (released by the Transportation Research Board, or TRB). The guide for engineers and planners to assess traffic and environmental effects of highway projects. This manual presents the foundation of traffic analysis procedures in the US.

MUTCD – Manual of Uniform Traffic Control Devices. A document that sets minimum standards and provides guidance to ensure uniformity of traffic control devices (such as messages, location, size, shapes, and colors) across the nation. All roads are subject to its jurisdiction.

HSM – Highway Safety Manual (released by AASHTO). A guide that presents a variety of methods for quantitatively estimating crash frequency or severity.

Resources

MUTCD, 2009 Edition, published by FHWA

Highway Capacity Manual, HCM2010

Highway Safety Manual, HSM

About This Brief

Spack Consulting prepared this brief as part of our company's vision to significantly improve the practice of traffic engineering and transportation planning. Transportation professionals from around the world have assisted us in developing this document. We are providing this brief under the Creative Commons Attribution License. Feel free to use-modify-share this guide, but please give us some credit in your document. To request our whole series of Design Briefs and to be included on our distribution list for new materials, please email mspack@spackconsulting.com. And please reach out if you have any comments or questions related to this Design Brief.

Traffic Data Inc

PO Box 16269
St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-15-17
Site Code : 1
Start Date : 2/15/2017
Page No : 1

Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	4
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	4
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	3
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	1	0	3	4
Total	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	2	1	0	3	11
05:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
05:30 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
05:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Total	0	0	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	0	0	3	0	0	3	19
06:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	4	0	0	4	10
06:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	11	1	0	12	16
06:30 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	6	0	0	6	14
06:45 AM	0	0	0	0	0	0	0	0	12	0	0	12	0	1	0	0	0	1	0	0	8	2	0	10	23
Total	0	0	0	0	0	0	0	0	30	0	0	30	0	1	0	0	0	1	0	0	29	3	0	32	63

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-15-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	1	0	0	0	1	0	0	5	0	0	5	15
07:15 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	23	2	0	25	35
07:30 AM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	10	2	0	12	25
07:45 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	12	2	0	14	24
Total	0	0	0	0	0	0	0	0	42	0	0	42	0	1	0	0	0	1	0	0	50	6	0	56	99
08:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	0	0	11	0	0	11	18
08:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	7	1	0	8	13
08:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	15	1	0	16	22
08:45 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	1	0	1	0	2	0	0	11	0	0	11	22
Total	0	0	0	0	0	0	0	0	26	0	0	26	0	1	0	2	0	3	0	0	44	2	0	46	75
09:00 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	0	0	8	18
09:15 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	7	0	0	7	14
09:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	1	0	3	6
09:45 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	0	0	4	8
Total	0	0	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	0	0	21	1	0	22	46
10:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
10:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	6	0	0	6	11
10:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	1	0	0	0	1	0	0	3	0	0	3	10
10:45 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	1	0	0	7	1	0	8	14
Total	0	0	0	0	0	0	0	0	20	0	0	20	0	2	0	0	0	2	0	0	17	1	0	18	40
11:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	1	0	5	9
11:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	1	0	6	11
11:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	9	0	0	9	15
11:45 AM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	0	8	0	0	8	22
Total	0	0	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	0	0	0	26	2	0	28	57
12:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	1	0	0	4	0	0	4	10
12:15 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	1	0	0	8	0	0	8	14
12:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	0	0	2	0	0	9	1	0	10	15
12:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	1	0	0	0	1	0	0	8	0	0	8	16
Total	0	0	0	0	0	0	0	0	20	0	0	20	0	5	0	0	0	5	0	0	29	1	0	30	55
01:00 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	1	0	0	0	1	0	0	8	0	0	8	17
01:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	1	0	0	0	1	0	0	7	0	0	7	16
01:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	2	0	0	0	2	0	0	5	1	0	6	14
01:45 PM	0	0	0	0	0	0	0	1	6	0	0	7	0	1	0	1	0	2	0	0	6	0	0	6	15
Total	0	0	0	0	0	0	0	1	28	0	0	29	0	5	0	1	0	6	0	0	26	1	0	27	62

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	7	0	0	7	11
02:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	2	0	1	0	3	0	0	3	0	0	3	14
02:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	1	0	0	7	0	0	7	15
02:45 PM	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	1	0	1	0	0	11	1	0	12	27
Total	0	0	0	0	0	0	0	0	33	0	0	33	0	2	0	3	0	5	0	0	28	1	0	29	67
03:00 PM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	7	1	0	8	19
03:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	9	1	0	10	18
03:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	8	1	0	9	16
03:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	1	0	0	0	1	0	0	16	0	0	16	25
Total	0	0	0	0	0	0	0	0	34	0	0	34	0	1	0	0	0	1	0	0	40	3	0	43	78
04:00 PM	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	0	13	0	0	13	17
04:15 PM	0	0	0	0	0	0	0	0	16	0	0	16	0	1	0	0	0	1	0	0	11	0	0	11	28
04:30 PM	0	0	0	0	0	0	0	0	16	0	0	16	0	1	0	0	0	1	0	0	10	1	0	11	28
04:45 PM	0	0	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	0	0	0	15	1	0	16	28
Total	0	0	0	0	0	0	0	2	46	0	0	48	0	2	0	0	0	2	0	0	49	2	0	51	101
05:00 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	2	0	1	0	3	0	0	17	0	1	18	31
05:15 PM	0	0	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0	0	0	0	18	0	0	18	32
05:30 PM	0	0	0	0	0	0	0	0	15	0	0	15	0	2	0	0	0	2	0	0	14	0	0	14	31
05:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	13	0	0	13	21
Total	0	0	0	0	0	0	0	1	46	0	0	47	0	4	0	1	0	5	0	0	62	0	1	63	115
06:00 PM	0	0	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	0	0	0	9	1	0	10	20
06:15 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	2	0	0	0	2	0	0	13	1	0	14	29
06:30 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	7	0	0	7	19
06:45 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	7	0	0	7	17
Total	0	0	0	0	0	0	0	1	44	0	0	45	0	2	0	0	0	2	0	0	36	2	0	38	85
07:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	8	0	0	8	13
07:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	7
07:30 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	10
07:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	3	0	0	3	10
Total	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	0	20	0	0	20	40
08:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	5	0	0	5	8
08:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	1	0	0	1	8
08:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	8	0	0	8	12
08:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	5	0	0	5	11
Total	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	0	19	0	0	19	39

Traffic Data Inc
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St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-15-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
09:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
09:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	1	0	4	7
09:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
09:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
Total	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	10	1	0	11	20
10:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
10:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
10:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	7	0	0	7	10
11:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
11:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
11:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	10
Grand Total	0	0	0	0	0	0	0	5	510	0	0	515	0	27	0	7	0	34	0	0	529	27	1	557	1106
Apprch %	0	0	0	0	0		0	1	99	0	0		0	79.4	0	20.6	0		0	0	95	4.8	0.2		
Total %	0	0	0	0	0	0	0	0.5	46.1	0	0	46.6	0	2.4	0	0.6	0	3.1	0	0	47.8	2.4	0.1	50.4	
Cars +	0	0	0	0	0	0	0	5	500	0	0	505	0	21	0	6	0	27	0	0	519	27	1	547	1079
% Cars +	0	0	0	0	0	0	0	100	98	0	0	98.1	0	77.8	0	85.7	0	79.4	0	0	98.1	100	100	98.2	97.6
Trucks	0	0	0	0	0	0	0	0	10	0	0	10	0	6	0	1	0	7	0	0	10	0	0	10	27
% Trucks	0	0	0	0	0	0	0	0	2	0	0	1.9	0	22.2	0	14.3	0	20.6	0	0	1.9	0	0	1.8	2.4

Traffic Data Inc
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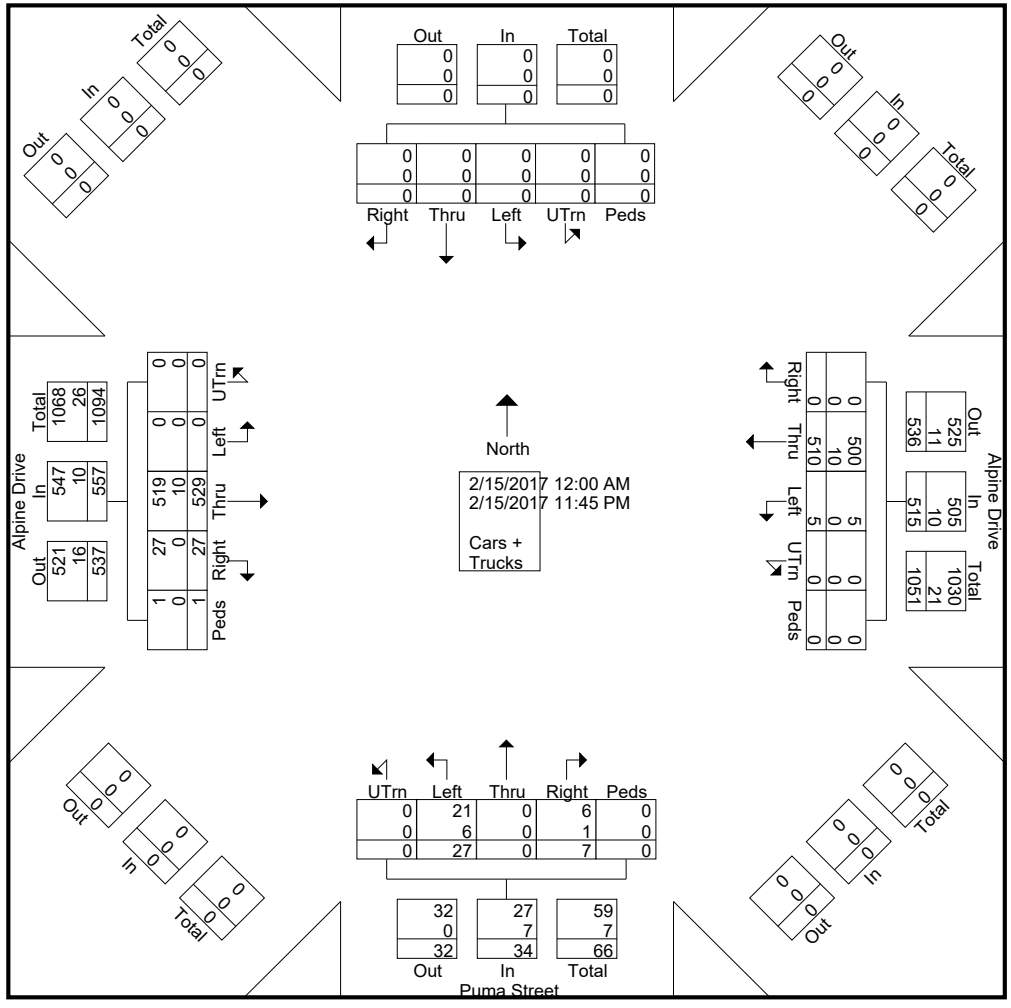
Oxford Street & Fairmount Avenue
Saint Paul, MN



Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-15-17
Site Code : 1
Start Date : 2/15/2017
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Oxford Street & Fairmount Avenue
Saint Paul, MN

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:15 AM																									
07:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	23	2	0	25	35
07:30 AM	0	0	0	0	0	0	0	0	**13**	0	0	**13**	0	0	0	0	0	0	0	0	10	2	0	12	25
07:45 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	12	2	0	14	24
08:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	**1**	0	**1**	0	0	11	0	0	11	18
Total Volume	0	0	0	0	0	0	0	0	39	0	0	39	0	0	0	1	0	1	0	0	56	6	0	62	102
% App. Total	0	0	0	0	0		0	0	100	0	0		0	0	0	100	0		0	0	90.3	9.7	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750	.000	.000	.000	.250	.000	.250	.000	.000	.609	.750	.000	.620	.729
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:30 PM																									
12:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	**2**	0	0	0	**2**	0	0	**9**	**1**	0	**10**	15
12:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	1	0	0	0	1	0	0	8	0	0	8	16
01:00 PM	0	0	0	0	0	0	0	0	**8**	0	0	**8**	0	1	0	0	0	1	0	0	8	0	0	8	**17**
01:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	1	0	0	0	1	0	0	7	0	0	7	16
Total Volume	0	0	0	0	0	0	0	0	26	0	0	26	0	5	0	0	0	5	0	0	32	1	0	33	64
% App. Total	0	0	0	0	0		0	0	100	0	0		0	100	0	0	0		0	0	97	3	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.813	.000	.000	.813	.000	.625	.000	.000	.000	.625	.000	.000	.889	.250	.000	.825	.941
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	0	0	0	0	**1**	11	0	0	12	0	0	0	0	0	0	0	0	15	**1**	0	16	28
05:00 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	**2**	0	**1**	0	**3**	0	0	17	0	**1**	**18**	31
05:15 PM	0	0	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0	0	0	0	**18**	0	0	18	**32**
05:30 PM	0	0	0	0	0	0	0	0	**15**	0	0	**15**	0	2	0	0	0	2	0	0	14	0	0	14	31
Total Volume	0	0	0	0	0	0	0	2	49	0	0	51	0	4	0	1	0	5	0	0	64	1	1	66	122
% App. Total	0	0	0	0	0		0	3.9	96.1	0	0		0	80	0	20	0		0	0	97	1.5	1.5		
PHF	.000	.000	.000	.000	.000	.000	.000	.500	.817	.000	.000	.850	.000	.500	.000	.250	.000	.417	.000	.000	.889	.250	.250	.917	.953

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-16-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
01:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
02:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
Total	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
03:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
03:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	2	0	0	2	7
04:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
05:30 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
Total	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	6	0	0	6	18
06:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	5	0	0	5	11
06:15 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	1	1	0	2	9
06:30 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	0	0	8	18
06:45 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	6	1	0	7	16
Total	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	0	0	20	2	0	22	54

Traffic Data Inc
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St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-16-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	12	0	0	12	0	1	0	0	0	1	0	0	11	0	0	11	24
07:15 AM	0	0	0	0	0	0	0	0	11	0	0	11	0	1	0	0	0	1	0	0	14	0	0	14	26
07:30 AM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	17	1	0	18	31
07:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	13	4	0	17	24
Total	0	0	0	0	0	0	0	0	43	0	0	43	0	2	0	0	0	2	0	0	55	5	0	60	105
08:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	12	0	0	12	15
08:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	7	1	0	8	14
08:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	11	2	0	13	19
08:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	8	0	0	8	15
Total	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	0	0	38	3	0	41	63
09:00 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	8	0	0	8	17
09:15 AM	0	0	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	5	0	0	5	12
09:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	1	0	4	8
09:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	1	0	0	5	0	0	5	9
Total	0	0	0	0	0	0	0	1	22	0	0	23	0	0	0	1	0	1	0	0	21	1	0	22	46
10:00 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	1	0	0	8	1	0	9	15
10:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	8	0	0	8	13
10:30 AM	0	0	0	0	0	0	0	1	4	0	0	5	0	1	0	0	0	1	0	0	2	0	0	2	8
10:45 AM	0	0	0	0	0	0	1	0	3	0	0	4	0	1	0	0	0	1	0	0	9	0	0	9	14
Total	0	0	0	0	0	0	1	1	17	0	0	19	0	3	0	0	0	3	0	0	27	1	0	28	50
11:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	1	0	7	13
11:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	1	1	0	0	5	0	0	5	11
11:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
11:45 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	1	0	0	0	1	0	0	6	0	0	6	13
Total	0	0	0	0	0	0	0	0	21	0	0	21	0	1	0	0	1	2	0	0	18	1	0	19	42
12:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	8	1	0	9	11
12:15 PM	0	0	0	0	0	0	0	0	5	0	1	6	0	1	0	0	1	2	0	0	2	0	0	2	10
12:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	7	0	0	7	13
12:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	7
Total	0	0	0	0	0	0	0	0	16	0	1	17	0	1	0	0	1	2	0	0	21	1	0	22	41
01:00 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	2	0	0	0	2	0	0	10	0	0	10	18
01:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	0	0	8	1	0	9	13
01:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	0	0	6	0	0	6	9
01:45 PM	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	1	0	2	0	0	9	0	0	9	17
Total	0	0	0	0	0	0	0	1	16	0	0	17	0	5	0	1	0	6	0	0	33	1	0	34	57

Traffic Data Inc
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St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-16-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	2	0	0	0	2	0	0	6	0	0	6	18
02:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	7	1	0	8	10
02:30 PM	0	0	0	0	0	0	0	1	8	0	0	9	0	1	0	1	0	2	0	0	6	0	0	6	17
02:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	1	0	1	0	2	0	0	9	2	0	11	20
Total	0	0	0	0	0	0	0	1	26	0	0	27	0	5	0	2	0	7	0	0	28	3	0	31	65
03:00 PM	0	0	0	0	0	0	0	0	11	0	0	11	0	1	0	0	0	1	0	0	6	2	0	8	20
03:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	2	0	0	0	2	0	0	10	1	0	11	20
03:30 PM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	15	0	0	15	26
03:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	1	0	0	0	1	0	0	10	0	0	10	19
Total	0	0	0	0	0	0	0	0	37	0	0	37	0	4	0	0	0	4	0	0	41	3	0	44	85
04:00 PM	0	0	0	0	0	0	0	1	18	0	0	19	0	2	0	0	0	2	0	0	14	1	0	15	36
04:15 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	3	0	0	0	3	0	0	13	0	0	13	29
04:30 PM	0	0	0	0	0	0	0	0	21	0	0	21	0	1	0	0	0	1	0	0	8	0	0	8	30
04:45 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	14	2	0	16	28
Total	0	0	0	0	0	0	0	1	64	0	0	65	0	6	0	0	0	6	0	0	49	3	0	52	123
05:00 PM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	2	2	0	0	15	1	0	16	27
05:15 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	1	0	0	0	1	0	0	13	1	0	14	27
05:30 PM	0	0	0	0	0	0	0	0	18	0	0	18	0	2	0	0	0	2	0	0	14	1	0	15	35
05:45 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	20	1	0	21	31
Total	0	0	0	0	0	0	0	0	49	0	0	49	0	3	0	0	2	5	0	0	62	4	0	66	120
06:00 PM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	16	1	0	17	26
06:15 PM	0	0	0	0	0	0	1	0	7	0	0	8	0	0	0	0	0	0	0	0	11	0	0	11	19
06:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	3	0	0	0	3	0	0	6	1	0	7	16
06:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	1	0	0	6	0	0	6	12
Total	0	0	0	0	0	0	1	0	27	0	0	28	0	4	0	0	0	4	0	0	39	2	0	41	73
07:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
07:15 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	8	0	0	8	16
07:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	8
07:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	7	0	0	7	10
Total	0	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0	24	0	0	24	41
08:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	6
08:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	12
08:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
08:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	0	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	0	0	12	0	0	12	31

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 1 - Alpine Dr & Puma St, 2-16-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
09:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	5	0	0	5	9
09:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	0	0	5	0	0	5	8
09:30 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	5	0	0	5	11
09:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	6
Total	0	0	0	0	0	0	0	0	14	0	0	14	0	1	0	0	0	1	0	0	19	0	0	19	34
10:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	4
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
10:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
10:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	5	6
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	11	0	0	11	16
11:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
11:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	9
Grand Total	0	0	0	0	0	0	2	5	478	0	1	486	0	35	0	4	4	43	0	0	539	30	0	569	1098
Apprch %	0	0	0	0	0		0.4	1	98.4	0	0.2		0	81.4	0	9.3	9.3		0	0	94.7	5.3	0		
Total %	0	0	0	0	0	0	0.2	0.5	43.5	0	0.1	44.3	0	3.2	0	0.4	0.4	3.9	0	0	49.1	2.7	0	51.8	
Cars +	0	0	0	0	0	0	1	5	468	0	1	475	0	33	0	4	1	38	0	0	526	30	0	556	1069
% Cars +	0	0	0	0	0	0	50	100	97.9	0	100	97.7	0	94.3	0	100	25	88.4	0	0	97.6	100	0	97.7	97.4
Trucks	0	0	0	0	0	0	1	0	10	0	0	11	0	2	0	0	3	5	0	0	13	0	0	13	29
% Trucks	0	0	0	0	0	0	50	0	2.1	0	0	2.3	0	5.7	0	0	75	11.6	0	0	2.4	0	0	2.3	2.6

Traffic Data Inc
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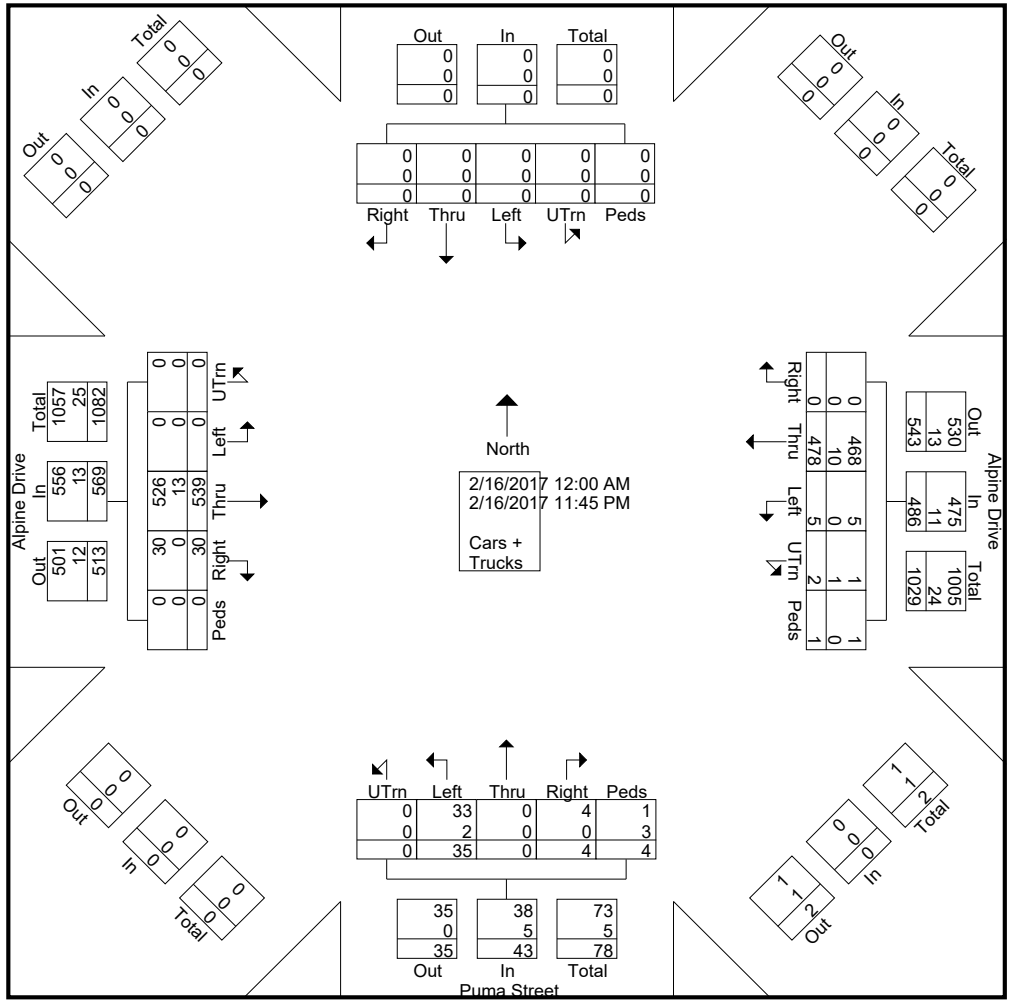
Oxford Street & Fairmount Avenue
Saint Paul, MN



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File Name : 1 - Alpine Dr & Puma St, 2-16-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

	Southbound						Alpine Drive Westbound						Puma Street Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**12**	**0**	1	0	0	0	1	0	0	11	0	0	11	24
07:15 AM	0	0	0	0	0	0	0	0	11	0	0	11	0	1	0	0	0	1	0	0	14	0	0	14	26
07:30 AM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	0	**17**	1	0	**18**	**31**
07:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	13	**4**	0	17	24
Total Volume	0	0	0	0	0	0	0	0	43	0	0	43	0	2	0	0	0	2	0	0	55	5	0	60	105
% App. Total	0	0	0	0	0		0	0	100	0	0		0	100	0	0	0		0	0	91.7	8.3	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.827	.000	.000	.827	.000	.500	.000	.000	.000	.500	.000	.000	.809	.313	.000	.833	.847
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	0	0	0	0	0	0	0	**6**	0	0	**6**	0	**2**	0	0	0	**2**	0	0	**10**	0	0	**10**	**18**
01:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	0	0	8	**1**	0	9	13
01:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	0	0	6	0	0	6	9
01:45 PM	0	0	0	0	0	0	0	**1**	5	0	0	6	0	1	0	**1**	0	2	0	0	9	0	0	9	17
Total Volume	0	0	0	0	0	0	0	1	16	0	0	17	0	5	0	1	0	6	0	0	33	1	0	34	57
% App. Total	0	0	0	0	0		0	5.9	94.1	0	0		0	83.3	0	16.7	0		0	0	97.1	2.9	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.667	.000	.000	.708	.000	.625	.000	.250	.000	.750	.000	.000	.825	.250	.000	.850	.792
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	0	0	0	0	0	0	**1**	18	0	0	19	0	2	0	0	0	2	0	0	**14**	1	0	15	**36**
04:15 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	**3**	0	0	0	**3**	0	0	13	0	0	13	29
04:30 PM	0	0	0	0	0	0	0	0	**21**	0	0	**21**	0	1	0	0	0	1	0	0	8	0	0	8	30
04:45 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	14	**2**	0	**16**	28
Total Volume	0	0	0	0	0	0	0	1	64	0	0	65	0	6	0	0	0	6	0	0	49	3	0	52	123
% App. Total	0	0	0	0	0		0	1.5	98.5	0	0		0	100	0	0	0		0	0	94.2	5.8	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.762	.000	.000	.774	.000	.500	.000	.000	.000	.500	.000	.000	.875	.375	.000	.813	.854

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	2	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	3	0	0	0	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4

Traffic Data Inc
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File Name : 2 - Bunker Lake Blvd & Puma St, 2-15-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	7	0	0	0	7	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8
08:00 AM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	0	0	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Traffic Data Inc
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File Name : 2 - Bunker Lake Blvd & Puma St, 2-15-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	0	0	0	4	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	7
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	20	0	0	0	20	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	35
Apprch %	0	100	0	0	0		0	0	0	100	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	57.1	0	0	0	57.1	0	0	0	42.9	0	42.9	0	0	0	0	0	0	0	0	0	0	0	0	
Cars +	0	20	0	0	0	20	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	32
% Cars +	0	100	0	0	0	100	0	0	0	80	0	80	0	0	0	0	0	0	0	0	0	0	0	0	91.4
Trucks	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% Trucks	0	0	0	0	0	0	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	8.6

Traffic Data Inc
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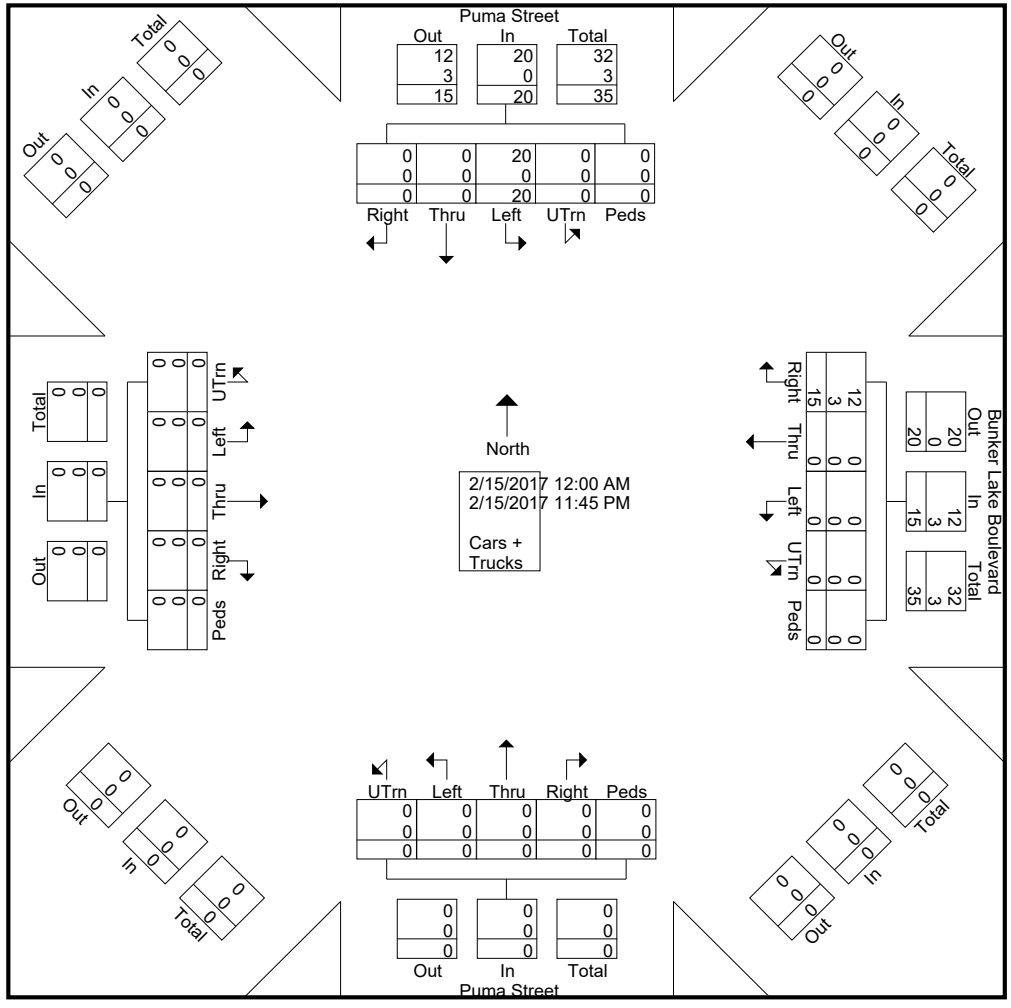
Oxford Street & Fairmount Avenue
Saint Paul, MN



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Oxford Street & Fairmount Avenue
Saint Paul, MN

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 06:45 AM																									
06:45 AM	**0**	₂	0	0	0	₂	0	0	0	₁	0	₁	0	0	0	0	0	0	0	0	0	0	0	0	**3**
07:00 AM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	6	0	0	0	6	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	8
% App. Total	0	100	0	0	0		0	0	0	100	0		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.750	.000	.000	.000	.750	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.667
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 10:00 AM																									
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	**2**	0	0	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0	0	0	0	0	**3**
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	3	0	0	0	3	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	9
% App. Total	0	100	0	0	0		0	0	0	100	0		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.375	.000	.000	.000	.375	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	5	0	0	0	5	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 2 - Bunker Lake Blvd & Puma St, 2-16-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	2	0	0	0	0	0	0	3
03:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	0	0	2	0	1	0	3	0	4	0	0	1	1	0	2	0	0	0	0	0	0	8
04:00 PM	0	2	0	0	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	0	1	0	0	0	1	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	5	0	0	0	5	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	11
05:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	0	2	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	0	0	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	22	0	0	0	22	1	1	0	15	0	17	0	0	1	1	0	2	0	0	0	0	0	0	41
Apprch %	0	100	0	0	0		5.9	5.9	0	88.2	0		0	0	50	50	0		0	0	0	0	0		
Total %	0	53.7	0	0	0	53.7	2.4	2.4	0	36.6	0	41.5	0	0	2.4	2.4	0	4.9	0	0	0	0	0	0	
Cars +	0	22	0	0	0	22	1	1	0	13	0	15	0	0	1	1	0	2	0	0	0	0	0	0	39
% Cars +	0	100	0	0	0	100	100	100	0	86.7	0	88.2	0	0	100	100	0	100	0	0	0	0	0	0	95.1
Trucks	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% Trucks	0	0	0	0	0	0	0	0	0	13.3	0	11.8	0	0	0	0	0	0	0	0	0	0	0	0	4.9

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 2 - Bunker Lake Blvd & Puma St, 2-16-17
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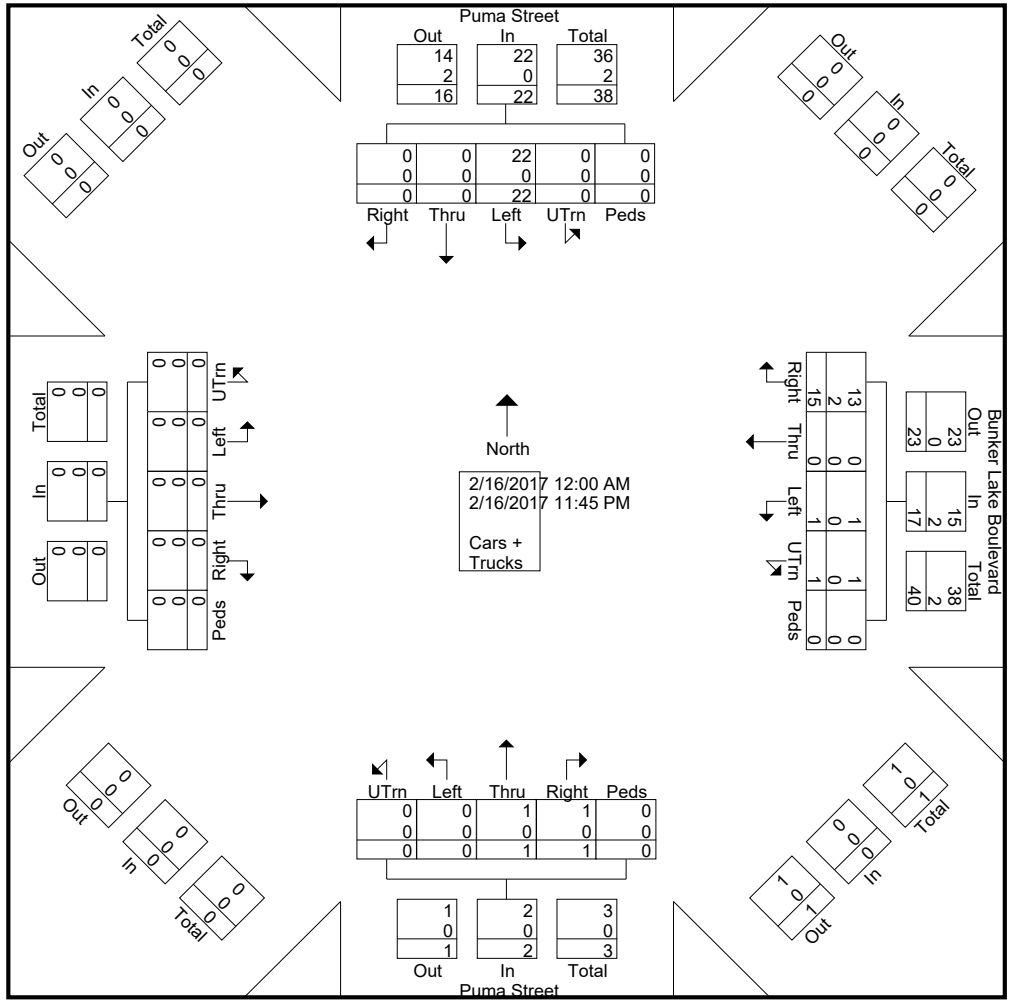
Oxford Street & Fairmount Avenue
Saint Paul, MN



Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 2 - Bunker Lake Blvd & Puma St, 2-16-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

	Puma Street Southbound						Bunker Lake Boulevard Westbound						Puma Street Northbound						Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	5	0	0	0	**5**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Total Volume	0	5	0	0	0	5	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	8
% App. Total	0	100	0	0	0		33.3	0	0	66.7	0		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.250	.000	.000	.000	.250	.250	.000	.000	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.400
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 10:00 AM																									
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 03:30 PM																									
03:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	**1**	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00 PM	0	**2**	0	0	0	**2**	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
04:15 PM	0	1	0	0	0	1	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	4	0	0	0	4	0	1	0	6	0	7	0	0	0	0	0	0	0	0	0	0	0	0	11
% App. Total	0	100	0	0	0		0	14.3	0	85.7	0		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.500	.000	.000	.000	.500	.000	.250	.000	.500	.000	.583	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.688

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 3 - Alpine Dr & Okapi, 2-15-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	5
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	0	0	1	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	4
04:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
04:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	2	0	0	2	10
05:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30 AM	0	1	0	0	0	1	0	0	8	0	0	8	0	0	0	0	0	0	0	0	1	0	0	1	10
05:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Total	0	1	0	0	0	1	0	0	16	0	0	16	0	0	0	0	0	0	0	0	2	0	0	2	19
06:00 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	4	0	0	4	10
06:15 AM	0	3	0	0	0	3	0	0	4	0	0	4	0	0	0	0	0	0	0	0	8	0	0	8	15
06:30 AM	0	1	0	0	1	2	0	0	8	0	0	8	0	0	0	0	0	0	0	0	9	0	0	9	19
06:45 AM	0	2	0	0	0	2	0	0	10	0	0	10	0	0	0	0	0	0	0	0	10	0	0	10	22
Total	0	6	0	0	1	7	0	0	28	0	0	28	0	0	0	0	0	0	0	0	31	0	0	31	66

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

File Name : 3 - Alpine Dr & Okapi, 2-15-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	5	0	0	5	14
07:15 AM	0	0	0	2	0	2	0	0	8	0	0	8	0	0	0	0	0	0	0	0	21	0	0	21	31
07:30 AM	0	2	0	0	0	2	0	0	13	1	0	14	0	0	0	0	0	0	0	0	12	0	0	12	28
07:45 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	12	0	0	12	22
Total	0	2	0	2	0	4	0	0	40	1	0	41	0	0	0	0	0	0	0	0	50	0	0	50	95
08:00 AM	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	11	0	0	11	17
08:15 AM	0	2	0	0	0	2	0	0	6	0	0	6	0	0	0	0	0	0	0	0	7	0	0	7	15
08:30 AM	0	0	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	0	0	15	0	0	15	22
08:45 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	12	0	0	12	21
Total	0	3	0	0	0	3	0	0	26	1	0	27	0	0	0	0	0	0	0	0	45	0	0	45	75
09:00 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	0	0	8	18
09:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	7	0	0	7	13
09:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	6
09:45 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
Total	0	0	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	0	0	20	0	0	20	44
10:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
10:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	3	0	0	3	8
10:30 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	6	0	0	6	11
10:45 AM	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	0	0	1	7	0	0	8	15
Total	0	1	0	0	0	1	0	0	19	0	0	19	0	0	0	0	0	0	0	1	18	0	0	19	39
11:00 AM	0	1	0	0	1	2	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	0	0	4	10
11:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	6	0	0	6	11
11:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	8	0	0	8	14
11:45 AM	0	0	0	1	0	1	0	0	13	0	0	13	0	0	0	0	0	0	0	1	8	0	0	9	23
Total	0	1	0	1	1	3	0	0	28	0	0	28	0	0	0	0	0	0	0	1	26	0	0	27	58
12:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	0	0	4	8
12:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	8	0	0	8	15
12:30 PM	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	9	0	0	9	12
12:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	8	0	0	8	14
Total	0	0	0	0	0	0	0	0	19	1	0	20	0	0	0	0	0	0	0	0	29	0	0	29	49
01:00 PM	0	3	0	0	0	3	0	0	10	0	0	10	0	0	0	0	0	0	0	0	8	0	0	8	21
01:15 PM	0	0	0	0	1	1	0	0	7	0	0	7	0	0	0	0	0	0	0	0	6	0	0	6	14
01:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	4	0	0	4	11
01:45 PM	0	0	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	0	1	9	0	0	10	16
Total	0	3	0	0	1	4	0	0	29	1	0	30	0	0	0	0	0	0	0	1	27	0	0	28	62

Traffic Data Inc
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St. Louis Park, MN 55416

File Name : 3 - Alpine Dr & Okapi, 2-15-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	6	0	0	6	10
02:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	5	0	0	5	12
02:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	8	0	0	8	16
02:45 PM	0	0	0	1	0	1	0	0	13	1	0	14	0	0	0	0	0	0	0	0	12	0	0	12	27
Total	0	0	0	1	0	1	0	0	32	1	0	33	0	0	0	0	0	0	0	0	31	0	0	31	65
03:00 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	7	0	0	7	17
03:15 PM	0	1	0	0	0	1	0	0	9	1	0	10	0	0	0	0	0	0	0	0	9	0	0	9	20
03:30 PM	0	0	0	0	0	0	0	0	6	2	0	8	0	0	0	0	0	0	0	0	9	0	0	9	17
03:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	15	0	0	15	23
Total	0	1	0	0	0	1	0	0	33	3	0	36	0	0	0	0	0	0	0	0	40	0	0	40	77
04:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	13	0	0	13	18
04:15 PM	0	1	0	1	0	2	0	0	15	0	0	15	0	0	0	0	0	0	0	0	12	0	0	12	29
04:30 PM	0	0	0	0	0	0	0	0	15	2	0	17	0	0	0	0	0	0	0	0	10	0	0	10	27
04:45 PM	0	0	0	1	0	1	0	0	11	0	0	11	0	0	0	0	0	0	0	0	13	0	0	13	25
Total	0	1	0	2	0	3	0	0	46	2	0	48	0	0	0	0	0	0	0	0	48	0	0	48	99
05:00 PM	0	0	0	1	0	1	0	0	10	1	0	11	0	0	0	0	0	0	0	1	18	0	0	19	31
05:15 PM	0	0	0	0	0	0	0	0	13	2	0	15	0	0	0	0	0	0	0	1	18	0	0	19	34
05:30 PM	0	0	0	1	1	2	0	0	15	0	0	15	0	0	0	0	0	0	0	0	14	0	0	14	31
05:45 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	13	0	0	13	21
Total	0	0	0	2	1	3	0	0	46	3	0	49	0	0	0	0	0	0	0	2	63	0	0	65	117
06:00 PM	0	0	0	1	0	1	0	0	8	0	0	8	0	0	0	0	0	0	0	1	8	0	0	9	18
06:15 PM	0	0	0	0	0	0	0	0	14	1	0	15	0	0	0	0	0	0	0	0	14	0	0	14	29
06:30 PM	0	0	0	1	0	1	0	0	9	1	0	10	0	0	0	0	0	0	0	0	7	0	0	7	18
06:45 PM	0	0	0	1	0	1	0	0	10	0	0	10	0	0	0	0	0	0	0	0	7	0	0	7	18
Total	0	0	0	3	0	3	0	0	41	2	0	43	0	0	0	0	0	0	0	1	36	0	0	37	83
07:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	7	0	0	7	9
07:15 PM	0	1	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	8
07:30 PM	0	0	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	0	0	5	0	0	5	11
07:45 PM	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	0	0	0	3	0	0	3	11
Total	0	1	0	0	0	1	0	0	17	2	0	19	0	0	0	0	0	0	0	0	19	0	0	19	39
08:00 PM	0	1	0	0	0	1	0	0	3	2	0	5	0	0	0	0	0	0	0	0	5	0	0	5	11
08:15 PM	0	1	0	0	0	1	0	0	7	0	0	7	0	0	0	0	0	0	0	0	1	0	0	1	9
08:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	7	0	0	7	11
08:45 PM	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	13
Total	0	3	0	0	0	3	0	0	20	2	0	22	0	0	0	0	0	0	0	0	19	0	0	19	44

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
09:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
09:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	5	0	0	6	9
09:30 PM	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	0	1	0	0	1	6
09:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
Total	0	0	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	0	1	12	0	0	13	23
10:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
10:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
10:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	7	0	0	7	10
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
11:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
11:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	5	0	0	5	9
Grand Total	0	23	0	13	4	40	0	0	493	20	0	513	0	0	0	0	0	0	0	7	535	0	0	542	1095
Apprch %	0	57.5	0	32.5	10		0	0	96.1	3.9	0		0	0	0	0	0		0	1.3	98.7	0	0		
Total %	0	2.1	0	1.2	0.4	3.7	0	0	45	1.8	0	46.8	0	0	0	0	0	0	0	0.6	48.9	0	0	49.5	
Cars +	0	22	0	13	4	39	0	0	479	20	0	499	0	0	0	0	0	0	0	7	525	0	0	532	1070
% Cars +	0	95.7	0	100	100	97.5	0	0	97.2	100	0	97.3	0	0	0	0	0	0	0	100	98.1	0	0	98.2	97.7
Trucks	0	1	0	0	0	1	0	0	14	0	0	14	0	0	0	0	0	0	0	0	10	0	0	10	25
% Trucks	0	4.3	0	0	0	2.5	0	0	2.8	0	0	2.7	0	0	0	0	0	0	0	0	1.9	0	0	1.8	2.3

Traffic Data Inc
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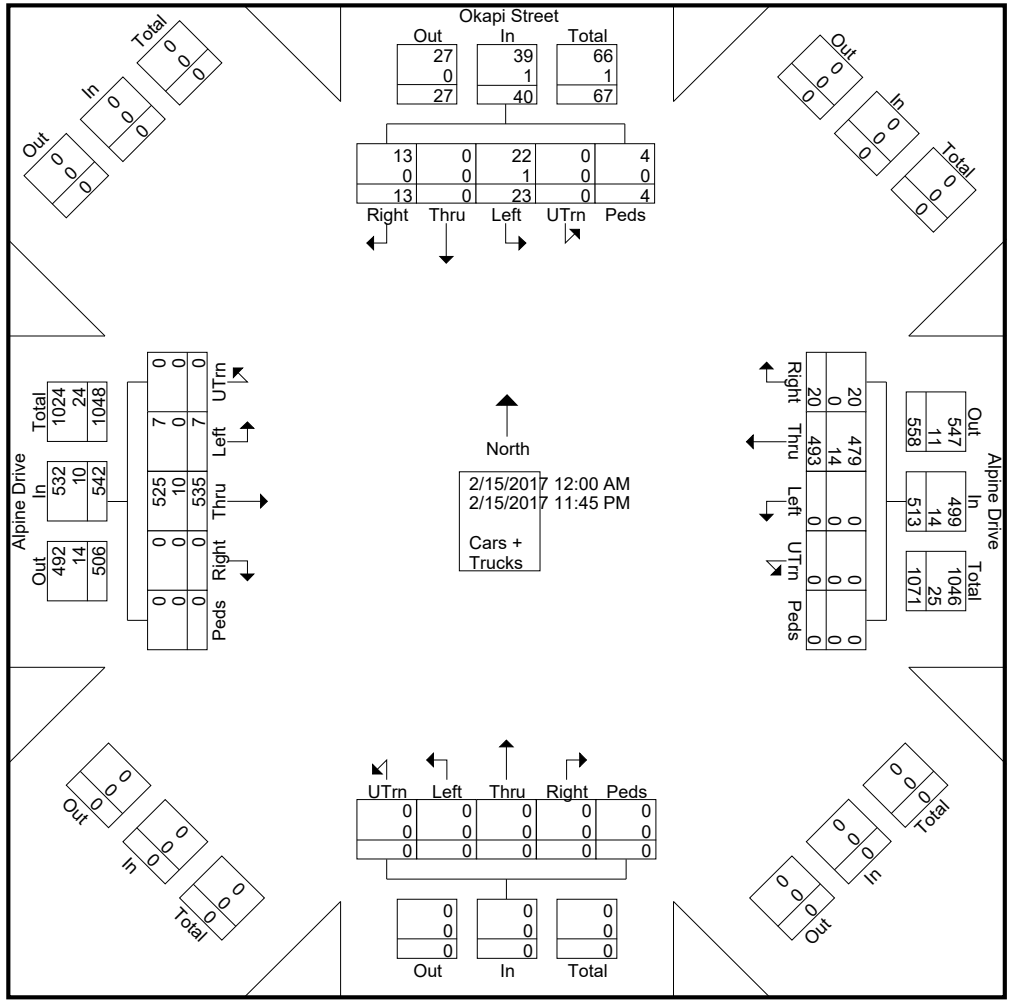
Oxford Street & Fairmount Avenue
Saint Paul, MN



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File Name : 3 - Alpine Dr & Okapi, 2-15-17
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Oxford Street & Fairmount Avenue
Saint Paul, MN

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:15 AM																									
07:15 AM	**0**	**0**	**0**	2	0	2	0	0	8	0	0	8	0	0	0	0	0	0	0	0	21	0	0	21	**31**
07:30 AM	0	**2**	0	0	0	2	0	0	**13**	**1**	0	**14**	0	0	0	0	0	0	0	0	12	0	0	12	28
07:45 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	12	0	0	12	22
08:00 AM	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	11	0	0	11	17
Total Volume	0	3	0	2	0	5	0	0	36	1	0	37	0	0	0	0	0	0	0	0	56	0	0	56	98
% App. Total	0	60	0	40	0		0	0	97.3	2.7	0		0	0	0	0	0		0	0	100	0	0		
PHF	.000	.375	.000	.250	.000	.625	.000	.000	.692	.250	.000	.661	.000	.000	.000	.000	.000	.000	.000	.000	.667	.000	.000	.667	.790
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:15 PM																									
12:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	8	0	0	8	15
12:30 PM	0	0	0	0	0	0	0	0	2	**1**	0	3	0	0	0	0	0	0	0	0	**9**	0	0	**9**	12
12:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	8	0	0	8	14
01:00 PM	0	**3**	0	0	0	**3**	0	0	**10**	0	0	**10**	0	0	0	0	0	0	0	0	8	0	0	8	**21**
Total Volume	0	3	0	0	0	3	0	0	25	1	0	26	0	0	0	0	0	0	0	0	33	0	0	33	62
% App. Total	0	100	0	0	0		0	0	96.2	3.8	0		0	0	0	0	0		0	0	100	0	0		
PHF	.000	.250	.000	.000	.000	.250	.000	.000	.625	.250	.000	.650	.000	.000	.000	.000	.000	.000	.000	.000	.917	.000	.000	.917	.738
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	**1**	0	1	0	0	11	0	0	11	0	0	0	0	0	0	0	0	13	0	0	13	25
05:00 PM	0	0	0	1	0	1	0	0	10	1	0	11	0	0	0	0	0	0	0	**1**	**18**	0	0	**19**	31
05:15 PM	0	0	0	0	0	0	0	0	13	**2**	0	**15**	0	0	0	0	0	0	0	1	18	0	0	19	**34**
05:30 PM	0	0	0	1	**1**	**2**	0	0	**15**	0	0	15	0	0	0	0	0	0	0	0	14	0	0	14	31
Total Volume	0	0	0	3	1	4	0	0	49	3	0	52	0	0	0	0	0	0	0	2	63	0	0	65	121
% App. Total	0	0	0	75	25		0	0	94.2	5.8	0		0	0	0	0	0		0	3.1	96.9	0	0		
PHF	.000	.000	.000	.750	.250	.500	.000	.000	.817	.375	.000	.867	.000	.000	.000	.000	.000	.000	.000	.500	.875	.000	.000	.855	.890

Traffic Data Inc
PO Box 16269
St. Louis Park, MN 55416

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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
01:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
02:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
02:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	3	0	0	3	8
03:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
03:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	1	0	1	0	0	4	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	7
04:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:15 AM	0	1	0	0	0	1	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	6
05:30 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
05:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	5
Total	0	1	0	0	0	1	0	0	14	0	0	14	0	0	0	0	0	0	0	0	6	0	0	6	21
06:00 AM	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	0	0	0	5	0	0	5	12
06:15 AM	0	2	0	0	0	2	0	0	6	0	0	6	0	0	0	0	0	0	0	0	9	0	0	9	17
06:30 AM	0	2	0	0	0	2	0	0	10	0	0	10	0	0	0	0	0	0	0	0	10	0	0	10	22
06:45 AM	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	0	0	0	5	0	0	5	16
Total	0	6	0	0	0	6	0	0	32	0	0	32	0	0	0	0	0	0	0	0	29	0	0	29	67

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	12	0	0	12	24
07:15 AM	0	1	0	1	0	2	0	0	10	0	0	10	0	0	0	0	0	0	0	0	15	0	0	15	27
07:30 AM	0	2	0	0	0	2	0	0	13	1	0	14	0	0	0	0	0	0	0	0	14	0	0	14	30
07:45 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	14	0	0	14	22
Total	0	3	0	1	0	4	0	0	43	1	0	44	0	0	0	0	0	0	0	0	55	0	0	55	103
08:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	12	0	0	12	15
08:15 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	7	0	0	7	13
08:30 AM	0	0	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	0	0	11	0	0	11	18
08:45 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	8	0	0	8	15
Total	0	0	0	0	0	0	0	0	22	1	0	23	0	0	0	0	0	0	0	0	38	0	0	38	61
09:00 AM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	8	0	0	8	17
09:15 AM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	5	0	0	5	12
09:30 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
09:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	8
Total	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	0	0	22	0	0	22	44
10:00 AM	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	0	0	0	7	0	0	7	15
10:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	8	0	0	8	13
10:30 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	1	0	0	1	6
10:45 AM	0	0	0	0	1	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	7	0	0	7	13
Total	0	0	0	0	1	1	0	0	22	1	0	23	0	0	0	0	0	0	0	0	23	0	0	23	47
11:00 AM	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	13
11:15 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	10
11:30 AM	0	0	0	0	1	1	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	6
11:45 AM	0	0	0	1	0	1	0	0	6	2	0	8	0	0	0	0	0	0	0	0	5	0	0	5	14
Total	0	1	0	1	1	3	0	0	21	2	0	23	0	0	0	0	0	0	0	0	17	0	0	17	43
12:00 PM	0	0	0	0	1	1	0	0	2	0	0	2	0	0	0	0	0	0	0	0	8	0	0	8	11
12:15 PM	0	0	0	0	1	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	2	0	0	2	8
12:30 PM	0	0	0	0	1	1	0	0	6	0	0	6	0	0	0	0	0	0	0	0	6	0	0	6	13
12:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	7
Total	0	0	0	0	3	3	0	0	15	0	0	15	0	0	0	0	0	0	0	0	21	0	0	21	39
01:00 PM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	5	0	0	5	16
01:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	7	0	0	7	10
01:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	6	0	0	7	9
01:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	1	9	0	0	10	15
Total	0	0	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	0	2	27	0	0	29	50

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	5	0	0	5	16
02:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	7	0	0	7	8
02:30 PM	0	1	0	0	0	1	0	0	9	0	0	9	0	0	0	0	0	0	0	0	6	0	0	6	16
02:45 PM	0	0	0	0	1	1	0	0	6	0	0	6	0	0	0	0	0	0	0	0	11	0	0	11	18
Total	0	1	0	0	1	2	0	0	27	0	0	27	0	0	0	0	0	0	0	0	29	0	0	29	58
03:00 PM	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	1	6	0	0	7	18
03:15 PM	0	1	0	1	0	2	0	0	6	0	0	6	0	0	0	0	0	0	0	0	10	0	0	10	18
03:30 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	12	0	0	12	24
03:45 PM	0	1	0	0	0	1	0	0	8	1	0	9	0	0	0	0	0	0	0	0	12	0	0	12	22
Total	0	2	0	1	0	3	0	0	37	1	0	38	0	0	0	0	0	0	0	1	40	0	0	41	82
04:00 PM	0	1	0	0	0	1	0	0	19	0	0	19	0	0	0	0	0	0	0	1	13	0	0	14	34
04:15 PM	0	1	0	0	0	1	0	0	14	1	0	15	0	0	0	0	0	0	0	0	13	0	0	13	29
04:30 PM	0	0	0	0	0	0	0	0	19	1	0	20	0	0	0	0	0	0	0	0	7	0	0	7	27
04:45 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	1	14	0	0	15	27
Total	0	2	0	0	0	2	0	0	64	2	0	66	0	0	0	0	0	0	0	2	47	0	0	49	117
05:00 PM	0	0	0	0	0	0	0	0	10	3	0	13	0	0	0	0	2	2	0	0	9	0	0	9	24
05:15 PM	0	0	0	2	0	2	0	0	11	1	0	12	0	0	0	0	0	0	0	0	16	0	0	16	30
05:30 PM	0	0	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	0	0	14	0	0	14	32
05:45 PM	0	0	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	0	0	0	19	0	0	19	30
Total	0	0	0	2	0	2	0	0	49	5	0	54	0	0	0	0	2	2	0	0	58	0	0	58	116
06:00 PM	0	0	0	0	0	0	0	0	9	3	0	12	0	0	0	0	0	0	0	0	16	0	0	16	28
06:15 PM	0	1	0	1	0	2	0	0	9	0	0	9	0	0	0	0	0	0	0	1	12	0	0	13	24
06:30 PM	0	0	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	0	0	6	0	0	6	13
06:45 PM	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	0	0	0	6	0	0	6	12
Total	0	2	0	1	0	3	0	0	29	4	0	33	0	0	0	0	0	0	0	1	40	0	0	41	77
07:00 PM	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	0	3	0	0	3	8
07:15 PM	0	0	0	0	0	0	0	0	8	2	0	10	0	0	0	0	0	0	0	0	8	0	0	8	18
07:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	8
07:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	7	0	0	7	11
Total	0	0	0	0	0	0	0	0	18	3	0	21	0	0	0	0	0	0	0	0	24	0	0	24	45
08:00 PM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	3	0	0	3	7
08:15 PM	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	0	0	0	6	0	0	6	14
08:30 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	4	9
08:45 PM	0	0	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	0	0	0	0	0	0	0	0	21	3	0	24	0	0	0	0	0	0	0	0	13	0	0	13	37

Traffic Data Inc
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Oxford Street & Fairmount Avenue
Saint Paul, MN

Groups Printed- Cars + - Trucks

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
09:00 PM	0	0	0	1	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	1	3	0	0	4	8
09:15 PM	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	7	0	0	7	9
09:30 PM	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	0	0	0	3	0	0	3	11
09:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	7
Total	0	1	0	1	0	2	0	0	13	1	0	14	0	0	0	0	0	0	0	1	18	0	0	19	35
10:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	4
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
10:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
10:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	5
Total	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	10	0	0	10	16
11:00 PM	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	5
11:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	4
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	9	0	0	9	13
Grand Total	0	21	0	8	6	35	0	0	495	24	0	519	0	0	0	0	2	2	0	7	534	0	0	541	1097
Apprch %	0	60	0	22.9	17.1		0	0	95.4	4.6	0		0	0	0	0	100		0	1.3	98.7	0	0		
Total %	0	1.9	0	0.7	0.5	3.2	0	0	45.1	2.2	0	47.3	0	0	0	0	0.2	0.2	0	0.6	48.7	0	0	49.3	
Cars +	0	20	0	7	6	33	0	0	481	22	0	503	0	0	0	0	0	0	0	7	520	0	0	527	1063
% Cars +	0	95.2	0	87.5	100	94.3	0	0	97.2	91.7	0	96.9	0	0	0	0	0	0	0	100	97.4	0	0	97.4	96.9
Trucks	0	1	0	1	0	2	0	0	14	2	0	16	0	0	0	0	2	2	0	0	14	0	0	14	34
% Trucks	0	4.8	0	12.5	0	5.7	0	0	2.8	8.3	0	3.1	0	0	0	0	100	100	0	0	2.6	0	0	2.6	3.1

Traffic Data Inc
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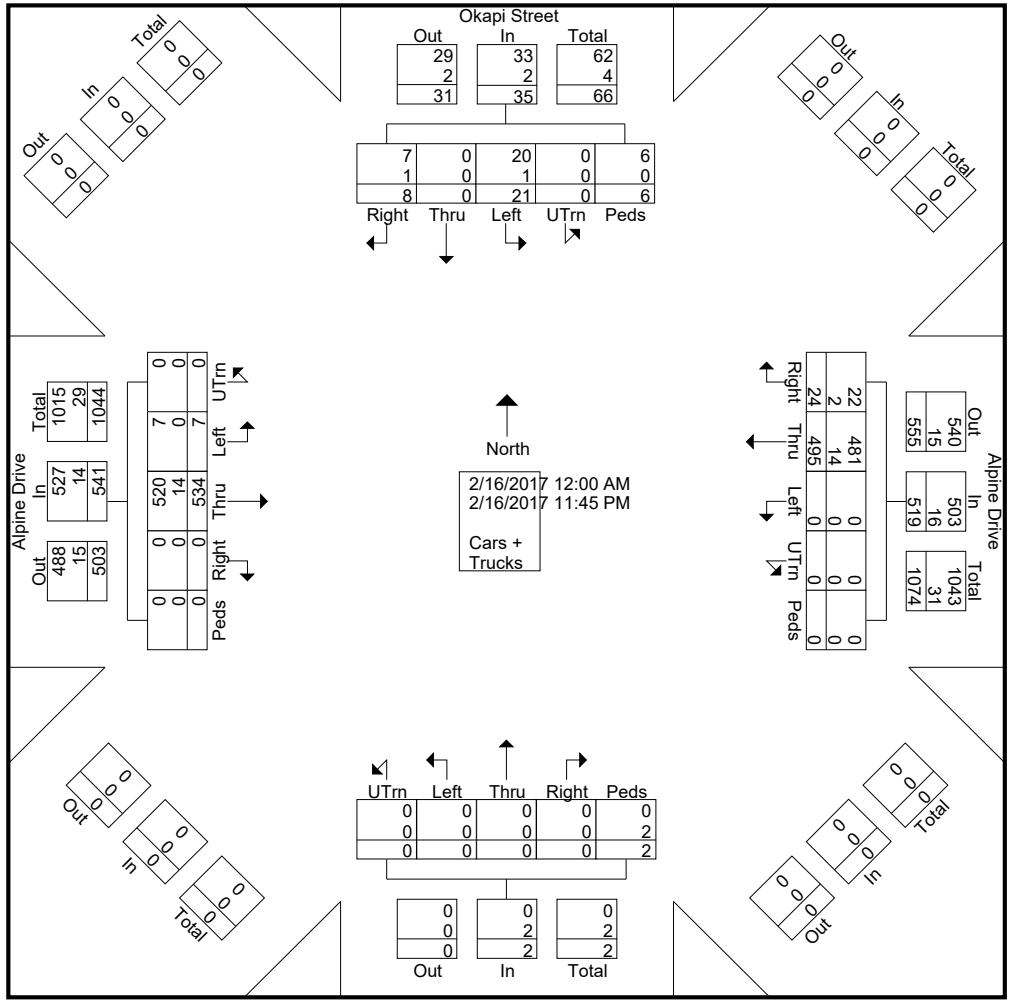
Oxford Street & Fairmount Avenue
Saint Paul, MN



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St. Louis Park, MN 55416

File Name : 3 - Alpine Dr & Okapi, 2-16-17
Site Code : 1
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Oxford Street & Fairmount Avenue
Saint Paul, MN

	Okapi Street Southbound						Alpine Drive Westbound						Northbound						Alpine Drive Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**12**	**24**
07:15 AM	**0**	**1**	**0**	1	0	2	0	0	10	0	0	10	0	0	0	0	0	0	0	0	15	0	0	15	27
07:30 AM	0	**2**	0	0	0	2	0	0	**13**	**1**	0	**14**	0	0	0	0	0	0	0	0	14	0	0	14	**30**
07:45 AM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	14	0	0	14	22
Total Volume	0	3	0	1	0	4	0	0	43	1	0	44	0	0	0	0	0	0	0	0	55	0	0	55	103
% App. Total	0	75	0	25	0		0	0	97.7	2.3	0		0	0	0	0	0		0	0	100	0	0		
PHF	.000	.375	.000	.250	.000	.500	.000	.000	.827	.250	.000	.786	.000	.000	.000	.000	.000	.000	.000	.000	.917	.000	.000	.917	.858
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	0	0	0	0	0	0	0	**11**	0	0	**11**	0	0	0	0	0	0	0	0	5	0	0	5	**16**
01:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	7	0	0	7	10
01:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	**1**	6	0	0	7	9
01:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	1	**9**	0	0	**10**	15
Total Volume	0	0	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	0	2	27	0	0	29	50
% App. Total	0	0	0	0	0		0	0	100	0	0		0	0	0	0	0		0	6.9	93.1	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.477	.000	.000	.477	.000	.000	.000	.000	.000	.000	.000	.500	.750	.000	.000	.725	.781
Peak Hour Analysis From 02:00 PM to 11:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:15 PM																									
05:15 PM	0	0	0	**2**	0	**2**	0	0	11	1	0	12	0	0	0	0	0	0	0	0	16	0	0	16	30
05:30 PM	0	0	0	0	0	0	0	0	**18**	0	0	**18**	0	0	0	0	0	0	0	0	14	0	0	14	**32**
05:45 PM	0	0	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	0	0	0	**19**	0	0	**19**	30
06:00 PM	0	0	0	0	0	0	0	0	9	**3**	0	12	0	0	0	0	0	0	0	0	16	0	0	16	28
Total Volume	0	0	0	2	0	2	0	0	48	5	0	53	0	0	0	0	0	0	0	0	65	0	0	65	120
% App. Total	0	0	0	100	0		0	0	90.6	9.4	0		0	0	0	0	0		0	0	100	0	0		
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.667	.417	.000	.736	.000	.000	.000	.000	.000	.000	.000	.000	.855	.000	.000	.855	.938

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Table D1
Forecasted Trip Generation

Weekday Daily Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	DAILY RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS	
							ENTER	EXIT
Single Family Home	210	Units	246.0	9.52	50%	50%	1,171	1,171
Townhomes	230	Units	98.0	5.81	50%	50%	285	285
Total							**1,456**	**1,456**

AM Peak Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS	
							ENTER	EXIT
Single Family Home	210	Units	246.0	0.75	25%	75%	46	138
Townhomes	230	Units	98.0	0.44	17%	83%	7	36
Total							**53**	**174**

PM Peak Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS	
							ENTER	EXIT
Single Family Home	210	Units	246.0	1.00	63%	37%	155	91
Townhomes	230	Units	98.0	0.52	67%	33%	34	17
Total							**189**	**108**

NOTES:

1. **All trip generation rates based on "Trip Generation", Institute of Transportation Engineers, 9th Edition unless otherwise noted.**
2. **A.M. Trip Generation is for the peak hour of adjacent street traffic (one hour between 7 and 9 a.m.).**
3. **P.M. Trip Generation is for the peak hour of adjacent street traffic (one hour between 4 and 6 p.m.).**

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Table D2
Forecasted Trip Generation
South of Bunker

Weekday Daily Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	DAILY RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	45.1	61.17	50%	50%	1,380	1,380
Total								

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	45.1	8.20	83%	17%	307	63
Total							**307**	**63**

PM Peak Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	45.1	8.53	21%	79%	81	304
Total							**81**	**304**

NOTES:

1. **All trip generation rates based on "Trip Generation", Institute of Transportation Engineers, 9th Edition unless otherwise noted.**
2. **AM Peak Trip Generation is for the AM Peak Hour.**
3. **PM Peak Trip Generation is for the Peak Hour of Generator**

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Table D3
Forecasted Trip Generation
North of Bunker

Weekday Daily Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	DAILY RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	37.2	61.17	50%	50%	1,137	1,137
Total							**1,137**	**1,137**

AM Peak Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	37.2	8.20	83%	17%	253	52
Total							**253**	**52**

PM Peak Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	37.2	8.53	21%	79%	67	250
Total							**67**	**250**

NOTES:

1. **All trip generation rates based on "Trip Generation", Institute of Transportation Engineers, 9th Edition unless otherwise noted.**
2. **AM Peak Trip Generation is for the AM Peak Hour.**
3. **PM Peak Trip Generation is for the Peak Hour of Generator**

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Table D4
Forecasted Trip Generation
East of Puma

Weekday Daily Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	DAILY RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	32.0	61.17	50%	50%	979	979
Single Family Detached Housing	210	Acres	34.6	26.04	50%	50%	451	451
Total								

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	32.0	8.20	83%	17%	218	45
Single Family Detached Housing	210	Acres	34.6	2.06	31%	69%	22	49
Total							**240**	**94**

PM Peak Volumes

LAND USE	ITE CODE #	DEVELOPMENT UNITS	QUANTITY	PEAK RATE	ENTER PERCENT	EXIT PERCENT	NEW TRIPS ENTER	NEW TRIPS EXIT
Industrial Park	130	Acres	32.0	8.53	21%	79%	57	216
Single Family Detached Housing	210	Acres	34.6	2.74	66%	34%	63	32
Total							**120**	**248**

1. **All trip generation rates based on "Trip Generation", Institute of Transportation Engineers, 9th Edition unless otherwise noted.**
2. **AM Peak Trip Generation is for the AM Peak Hour.**
3. **PM Peak Trip Generation is for the Peak Hour of Generator**

AM Peak Volumes

Figure 1: Existing Peak Volumes

- **AM Peak Hour on top, PM Peak Hour on bottom**

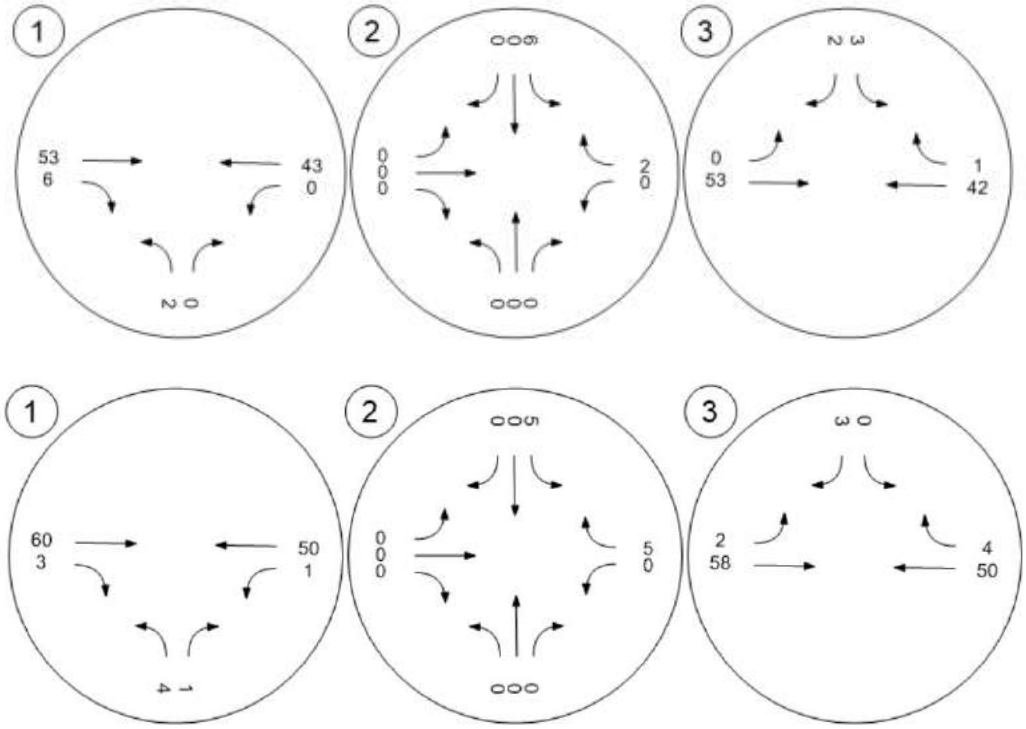


Figure 2: 2018 No-Build Peak Volumes

- **AM Peak Hour on top, PM Peak Hour on bottom**

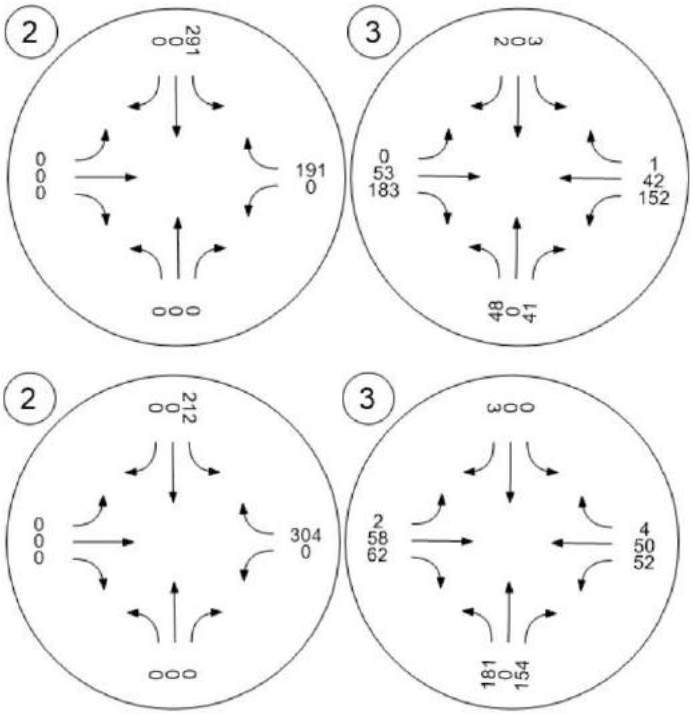


Figure 3: 2018 Build Peak Volumes

- **AM Peak Hour on top, PM Peak Hour on bottom**

Level of Service (LOS)

Level of Service (LOS) is a qualitative description, similar to typical school grades, that traffic engineers use to communicate how good or bad traffic operations are on a corridor, intersection, or interchange.

Common Factors

Traffic can be a hard thing to quantify as everyone has a different tolerance for congestion. What seems excessively long to one person may seem good enough for another. These differences are readily apparent when comparing small towns or rural areas, where five cars an hour can be the norm, to big cities or downtowns, where less than hundred cars an hour, even in the middle of night, is rare.

To combat this issue and provide a consistent measuring tool for traffic studies, a "Level of Service" rating was developed. Level of Service ratings are based on the roadway or intersection characteristics and the amount of traffic. Just like grade school, LOS A represents the best traffic operations, where traffic flows freely. LOS F, on the other hand, represents failing operations, where the road or intersection is congested and running beyond maximum capacity. LOS E is typically considered "at capacity" which means the amount of traffic is right at the level the roadway or intersection can adequately accommodate. Using Level of Service letter grades provides an easy way to convey road operations to the general public and has been adopted across the United States.

Common Factors Impacting Level of Service

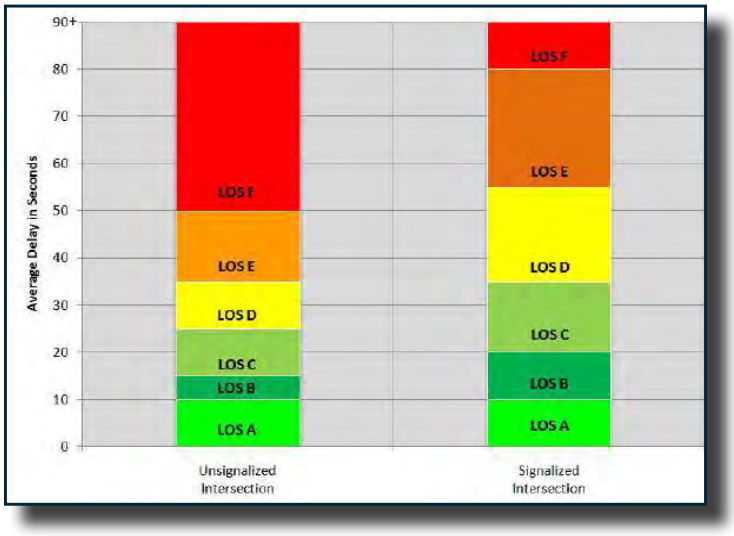
- **Number of Lanes.**
- **Traffic Volumes.**
- **Intersection Control (stop sign, signal, roundabout, interchange.)**
- **Amount of access on a corridor.**
- **Percentage of turning traffic.**
- **Traffic signal cycle length (green time devoted to each approach) and phasing (one green for all approach movements or separate green arrows.)**
- **Percentage of heavy trucks.**
- **Roadway Grades.**
- **Distribution of traffic within a peak hour as well as over the course of a day.**
- **Pedestrian activity.**
- **Bicycle activity.**

Level of Service criteria have been developed for multiple types of traffic operations including:

- Intersections
- Urban Corridors
- Freeways
- Transit Service
- Bicycle Operations
- Pedestrian Operations

The most common LOS criteria used is for car operations at intersections; both signalized and unsignalized. For an intersection Level of Service analysis, average delay for cars travelling through the intersection is used to determine the appropriate grade. A high delay results in a poor LOS rating and equates to poor operations. Similarly, low delay results in a good LOS rating and equates to good or great operations.

LOS can be determined for the intersection as a whole, or for individual movements. It is common during peak periods in major population areas for an intersection to have an acceptable overall LOS rating, but fail to achieve a good grade for individual movements.



LOS A

LOS C

LOS D = Acceptable

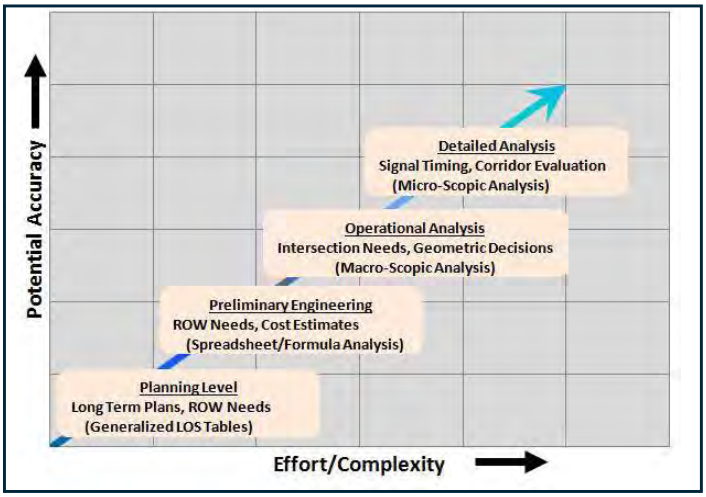
LOS F = Unacceptable

Source: City of San Jose, CA.

Although a Level of Service rating of A represents the best traffic operations, it is not always the most desirable. Providing LOS A for all corridors and all operations at all times would require a significant amount of land to be devoted to the road infrastructure, which makes it extremely costly to build and maintain. During non-peak times, like overnight, much of that infrastructure would sit unused.

On the opposite side of the spectrum, a Level of Service rating of E and F represent traffic operations close to breaking down, or that already have. These ratings mean high delays, long queues, and slow speeds, not to mention driver frustration. Instead of trying to achieve one or the other, government agencies try to strike a balance between providing acceptable operations, neither falling nor flowing too freely. Because of this, LOS D is typically considered the lowest LOS acceptable by government agencies and is reflective of a balanced approach between cost and benefit.

There are many tools and guidelines used to determine a roads Level of Service rating. Simple tools like generalized roadway capacities allow for planning-level efforts. While inexpensive and quick to complete, they are not as accurate as other options. More complicated tools, such as micro-simulations, provide more accurate results, but cost more and take more time. It is important to understand the trade-offs between the analysis types as well as the purpose of the study.



Source: Florida Deptarment of Transportation

Resources

- Highway Capacity Manual, fifth edition
- Nation Cooperative Highway Research Program Report 616; Multimodal Level of Service Analysis for Urban Streets
- http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_616.pdf
- Florida Department of Transportation Quality/Level of Service Handbook
- http://www.dot.state.fl.us/planning/systems/programs/sm/los/pdfs/2009FDOTQLOS_Handbook.pdf

About This Brief

Spack Consulting prepared this brief as part of our company's vision to significantly improve the practice of traffic engineering and transportation planning. Transportation professionals from around the world have assisted us in developing this document. We are providing this brief under the Creative Commons Attribution License. Feel free to use-modify-share this guide, but please give us some credit in your document. To request our whole series of Design Briefs and to be included on our distribution list for new materials, please email mspack@spackconsulting.com. And please reach out if you have any comments or questions related to this Design Brief.

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Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\Users\Jonah\Desktop\AM EXIST.pdf

Scenario 1 Existing AM Peak
3/7/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alpine Drive & Puma Street	Two-way stop	HCM 2010	NB Left	0.002	9.0	A
2	Puma Street & Bunker Lake Boulevard	Two-way stop	HCM 2010	SB Thru	0.000	9.0	A
3	Alpine Drive & Okapi Street	Two-way stop	HCM 2010	SB Left	0.005	9.1	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 1: Alpine Drive & Puma Street

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	0	53	6	0	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	53	6	0	43
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	13	2	0	11
Total Analysis Volume [veh/h]	2	0	53	6	0	43
Pedestrian Volume [ped/h]	0		0		0	

Appendix G: Capacity Analysis Backup

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.01	8.57	0.00	0.00	7.33	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.17	0.17	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.01		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	A					

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Intersection Level Of Service Report
Intersection 2: Puma Street & Bunker Lake Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name											
Base Volume Input [veh/h]	0	0	0	6	0	0	0	0	0	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	6	0	0	0	0	0	0	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	2	0	0	0	0	0	0	1
Total Analysis Volume [veh/h]	0	0	0	6	0	0	0	0	0	0	2
Pedestrian Volume [ped/h]	0			0			0			0	

Appendix G: Capacity Analysis Backup

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.52	9.03	8.32	8.54	9.04	8.34	7.22	0.00	0.00	7.22	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A		A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.44	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.62			8.54			2.41			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	6.41											
Intersection LOS	A											

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Intersection Level Of Service Report
Intersection 3: Alpine Drive & Okapi Street

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	3	2	0	53	42	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	2	0	53	42	1
Peak Hour Factor	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	16	12	0
Total Analysis Volume [veh/h]	4	2	0	62	49	1
Pedestrian Volume [ped/h]	0		0		0	

Appendix G: Capacity Analysis Backup

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.09	8.56	7.31	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.49	0.49	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.91		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	A					

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Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\Users\Jonah\Desktop\AM EXIST.pdf

Scenario 1 Existing AM Peak
3/7/2017

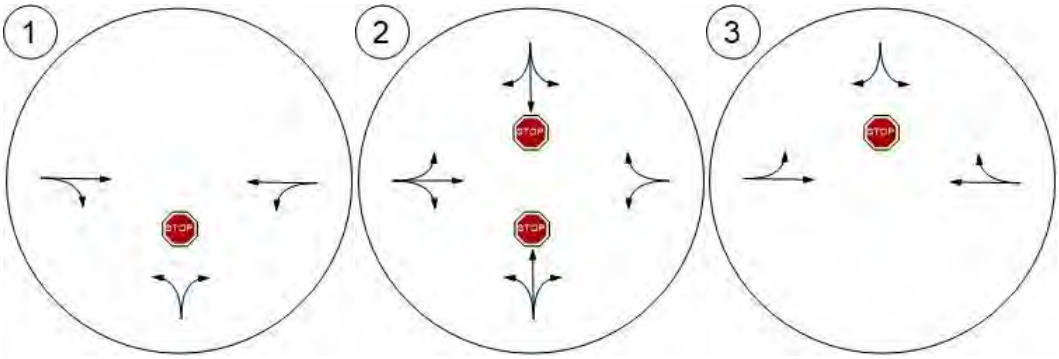
Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
1	Alpine Drive & Puma Street	2	0	53	6	0	43	104

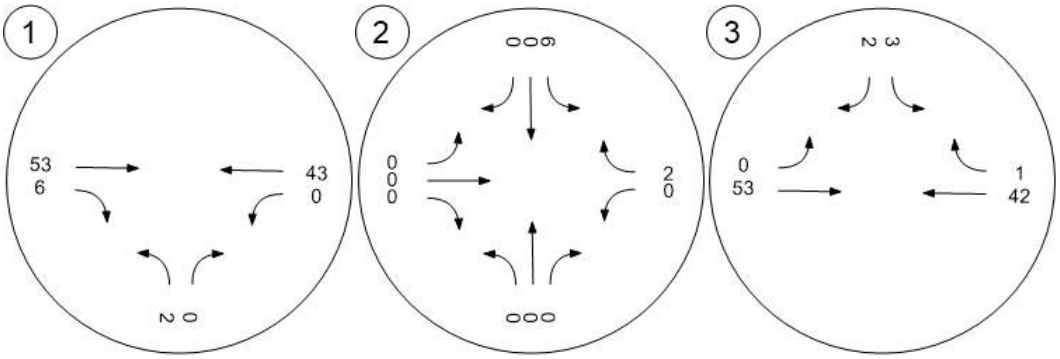
ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Right	
2	Puma Street & Bunker Lake Boulevard	0	0	0	6	0	0	0	0	0	0	2	8

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
3	Alpine Drive & Okapi Street	3	2	0	53	42	1	101

Lane Configuration and Traffic Control



Traffic Volume - Base Volume



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Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\Users\Jonah\Desktop\PM EXIST.pdf

Scenario 2 Existing PM Peak
3/7/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alpine Drive & Puma Street	Two-way stop	HCM 2010	NB Left	0.005	9.1	A
2	Puma Street & Bunker Lake Boulevard	Two-way stop	HCM 2010	SB Thru	0.000	9.0	A
3	Alpine Drive & Okapi Street	Two-way stop	HCM 2010	SB Left	0.000	9.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 1: Alpine Drive & Puma Street

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	4	1	60	3	1	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	1	60	3	1	50
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	15	1	0	13
Total Analysis Volume [veh/h]	4	1	60	3	1	50
Pedestrian Volume [ped/h]	0		0		0	

Appendix G: Capacity Analysis Backup

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.10	8.61	0.00	0.00	7.34	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.02	0.02	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft]	0.42	0.42	0.00	0.00	2.57	2.57
d_A, Approach Delay [s/veh]	9.00		0.00		0.14	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	A					

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Intersection Level Of Service Report
Intersection 2: Puma Street & Bunker Lake Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name											
Base Volume Input [veh/h]	0	0	0	5	0	0	0	0	0	0	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	5	0	0	0	0	0	0	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	0	0	0	0	0	1
Total Analysis Volume [veh/h]	0	0	0	5	0	0	0	0	0	0	5
Pedestrian Volume [ped/h]	0			0			0			0	

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.53	9.04	8.32	8.55	9.05	8.35	7.23	0.00	0.00	7.22	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A		A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.37	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.63			8.55			2.41			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.27											
Intersection LOS	A											

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Intersection Level Of Service Report
Intersection 3: Alpine Drive & Okapi Street

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	3	2	58	50	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	2	58	50	4
Peak Hour Factor	0.9023	0.9023	0.9023	0.9023	0.9023	0.9023
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	16	14	1
Total Analysis Volume [veh/h]	0	3	2	64	55	4
Pedestrian Volume [ped/h]	0		0		0	

Appendix G: Capacity Analysis Backup

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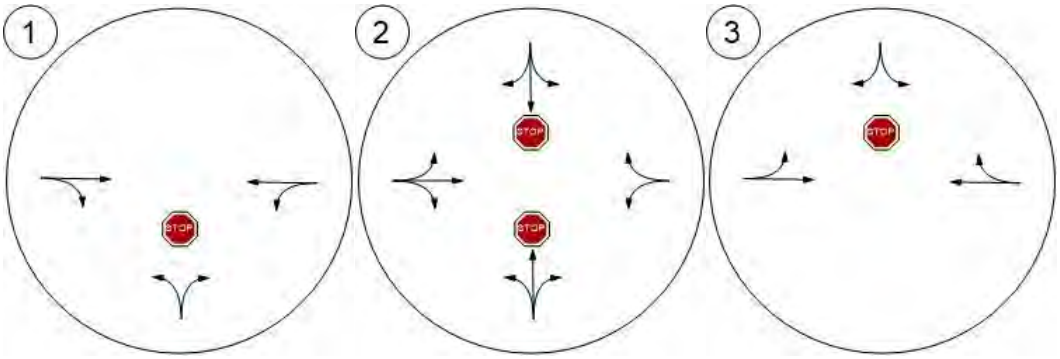
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

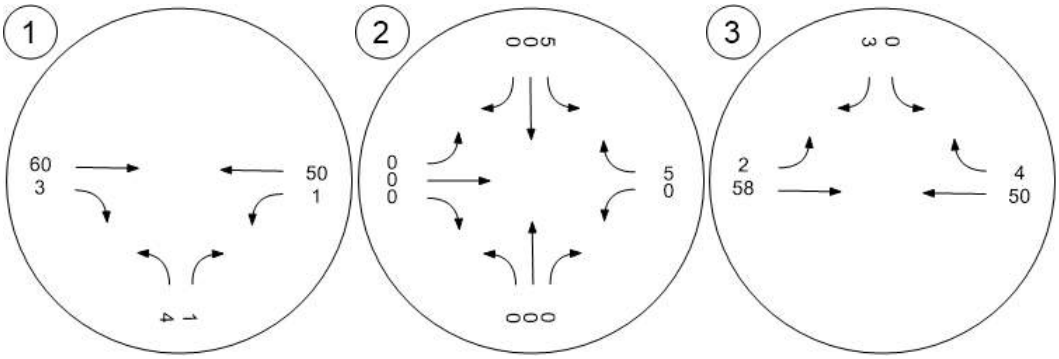
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.15	8.58	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.01	0.01	0.13	0.13	0.00	0.00
95th-Percentile Queue Length [ft]	0.22	0.22	3.34	3.34	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.22		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	A					

Lane Configuration and Traffic Control



Traffic Volume - Base Volume



Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\...\2040_No-Build AM.pdf

Scenario 4 2040 No-Build_ AM Peak
3/7/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	Puma Street & Bunker Lake Boulevard	Two-way stop	HCM 2010	SB Thru	0.000	11.5	B
3	Alpine Drive & Okapi/Puma Street	Two-way stop	HCM 2010	NB Thru	0.000	16.6	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 2: Puma Street & Bunker Lake Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name											
Base Volume Input [veh/h]	0	0	0	6	0	0	0	0	0	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	285	0	0	0	0	0	0	189
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	291	0	0	0	0	0	0	191
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	73	0	0	0	0	0	0	48
Total Analysis Volume [veh/h]	0	0	0	291	0	0	0	0	0	0	191
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.06	10.11	8.32	11.02	11.50	10.71	7.60	0.00	0.00	7.22	0.00	0.00
Movement LOS	A	B	A	B	B	B	A	A	A	A		A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.44	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	35.91	35.91	35.91	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.16			11.02			2.53			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	6.66											
Intersection LOS	B											

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Intersection Level Of Service Report
Intersection 3: Alpine Drive & Okapi/Puma Street

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	2	0	1	3	0	2	0	53	6	0	42	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	0	40	0	0	0	0	0	177	152	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	0	41	3	0	2	0	53	183	152	42	1
Peak Hour Factor	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	12	1	0	1	0	16	54	45	12	0
Total Analysis Volume [veh/h]	56	0	48	4	0	2	0	62	214	178	49	1
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	16.20	16.55	10.87	15.44	16.38	8.64	7.31	0.00	0.00	8.25	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.75	0.75	0.75	0.04	0.04	0.04	0.00	0.00	0.00	0.64	0.64	0.64
95th-Percentile Queue Length [ft]	18.69	18.69	18.69	1.02	1.02	1.02	0.00	0.00	0.00	16.07	16.07	16.07
d_A, Approach Delay [s/veh]	13.74			13.18			0.00			6.44		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.85											
Intersection LOS	C											

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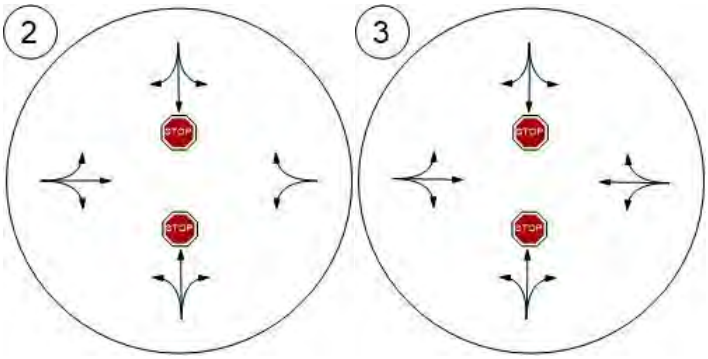
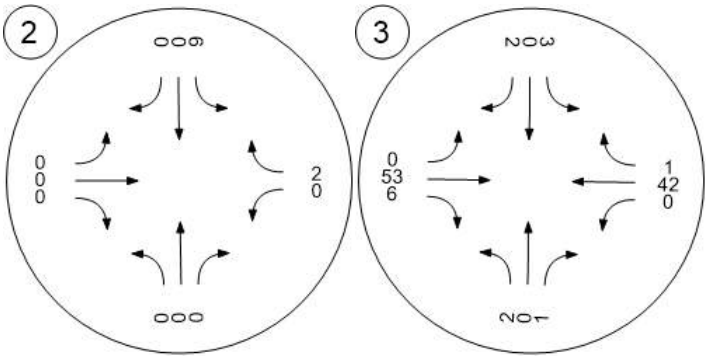
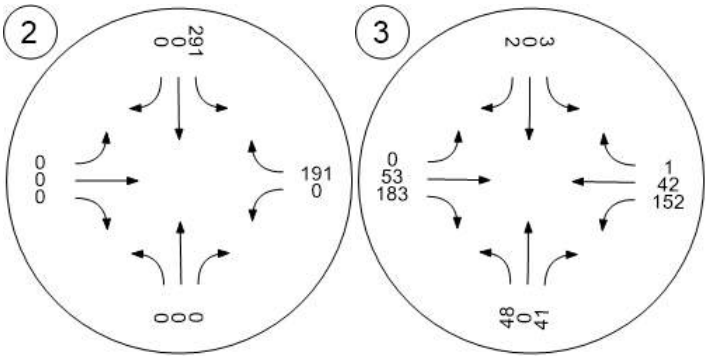
Lane Configuration and Traffic Control



Traffic Volume - Base Volume



Traffic Volume - Future Total Volume



Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\...\2040_No-Build PM.pdf

Scenario 5 2040 No-Build_ PM Peak
3/7/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	Puma Street & Bunker Lake Boulevard	Two-way stop	HCM 2010	SB Thru	0.000	11.4	B
3	Alpine Drive & Okapi/Puma Street	Two-way stop	HCM 2010	NB Thru	0.000	14.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 2: Puma Street & Bunker Lake Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name											
Base Volume Input [veh/h]	0	0	0	5	0	0	0	0	0	0	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	207	0	0	0	0	0	0	299
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	212	0	0	0	0	0	0	304
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	53	0	0	0	0	0	0	76
Total Analysis Volume [veh/h]	0	0	0	212	0	0	0	0	0	0	304
Pedestrian Volume [ped/h]	0			0			0			0	

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.42	10.91	8.32	10.96	11.41	10.57	7.86	0.00	0.00	7.22	0.00	0.00
Movement LOS	A	B	A	B	B	B	A	A	A	A		A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.04	1.04	1.04	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	26.00	26.00	26.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.55			10.96			2.62			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	4.50											
Intersection LOS	B											

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Intersection Level Of Service Report
Intersection 3: Alpine Drive & Okapi/Puma Street

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	0	1	0	0	3	2	58	3	1	50	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	177	0	153	0	0	0	0	0	59	51	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	181	0	154	0	0	3	2	58	62	52	50	4
Peak Hour Factor	1.0000	1.0000	1.0000	0.9023	1.0000	0.9023	0.9023	0.9023	1.0000	1.0000	0.9023	0.9023
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	0	39	0	0	1	1	16	16	13	14	1
Total Analysis Volume [veh/h]	181	0	154	0	0	3	2	64	62	52	55	4
Pedestrian Volume [ped/h]	0			0			0			0		

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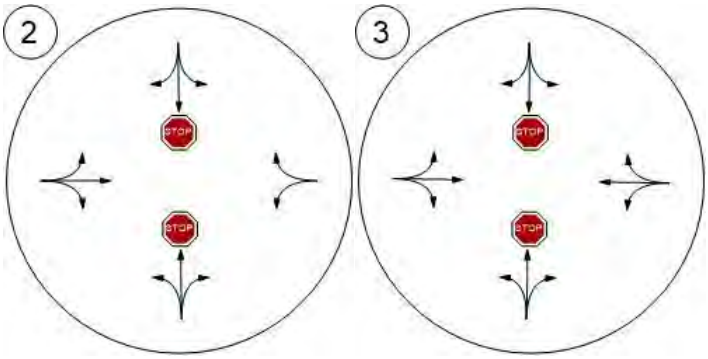
Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	13.83	14.27	12.20	12.17	11.05	8.58	7.33	0.00	0.00	7.56	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	2.18	2.18	2.18	0.01	0.01	0.01	0.27	0.27	0.27	0.25	0.25	0.25
95th-Percentile Queue Length [ft]	54.57	54.57	54.57	0.22	0.22	0.22	6.77	6.77	6.77	6.16	6.16	6.16
d_A, Approach Delay [s/veh]	13.08			8.58			0.11			3.54		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	8.35											
Intersection LOS	B											

Lane Configuration and Traffic Control



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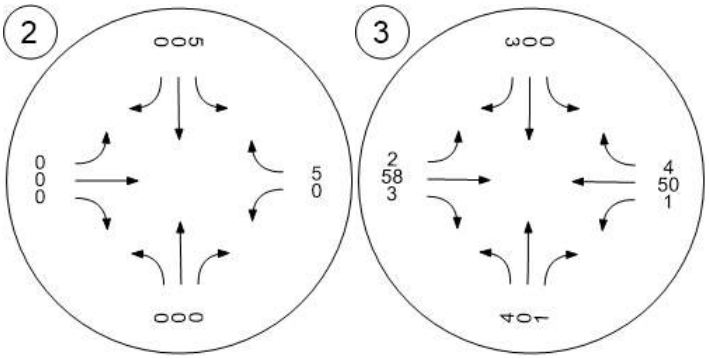
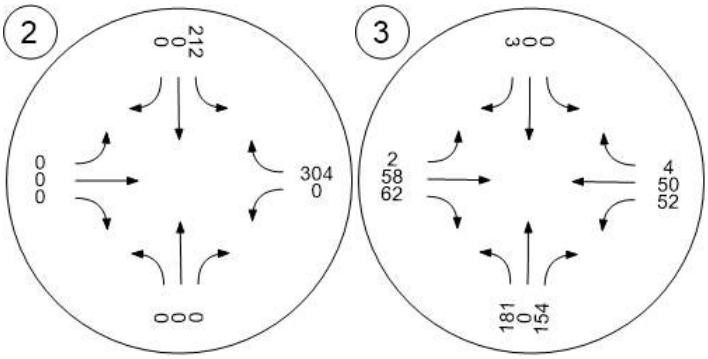
Traffic Volume - Base Volume



Traffic Volume - Future Total Volume



Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\...\2040_Build AM.pdf

Scenario 6 2040 Build_ AM Peak
3/7/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	Puma Street & Bunker Lake Boulevard	Two-way stop	HCM 2010	SB Thru	0.000	14.0	B
3	Alpine Drive & Okapi Street	Two-way stop	HCM 2010	NB Thru	0.000	18.9	C
4	Puma Street & Northern Site Access	Two-way stop	HCM 2010	WB Left	0.071	14.9	B
5	Puma Street & Southern Site Access	Two-way stop	HCM 2010	WB Left	0.075	15.5	C
6	Alpine Drive & Site Access	Two-way stop	HCM 2010	NB Left	0.021	11.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 2: Puma Street & Bunker Lake Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	6	0	0	0	0	0	0	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	357	0	4	11	31	0	0	19	201
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	363	0	4	11	31	0	0	19	203
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	91	0	1	3	8	0	0	5	51
Total Analysis Volume [veh/h]	0	0	0	363	0	4	11	31	0	0	19	203
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.46	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.62	10.74	8.45	13.54	13.99	12.82	7.69	0.00	0.00	7.28	0.00	0.00
Movement LOS	A	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	2.51	2.51	2.51	0.10	0.10	0.10	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	62.73	62.73	62.73	2.41	2.41	2.41	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.61			13.53			2.02			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	8.01											
Intersection LOS	B											

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Intersection Level Of Service Report
Intersection 3: Alpine Drive & Okapi Street

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	2	0	1	3	0	2	0	53	6	0	42	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	71	0	65	0	0	0	0	8	185	160	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	0	66	3	0	2	0	61	191	160	45	1
Peak Hour Factor	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534	0.8534
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	0	19	1	0	1	0	18	56	47	13	0
Total Analysis Volume [veh/h]	86	0	77	4	0	2	0	71	224	187	53	1
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.00	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
d_M, Delay for Movement [s/veh]	18.62	18.94	12.74	16.83	17.18	8.69	7.32	0.00	0.00	8.33	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.43	1.43	1.43	0.05	0.05	0.05	0.00	0.00	0.00	0.70	0.70	0.70
95th-Percentile Queue Length [ft]	35.73	35.73	35.73	1.14	1.14	1.14	0.00	0.00	0.00	17.53	17.53	17.53
d_A, Approach Delay [s/veh]	15.84			14.12			0.00			6.47		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	5.99											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 4: Puma Street & Northern Site Access

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.071

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	2	0	6	4	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	102	71	50	291	5	14	0	31	28	0	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	104	71	56	295	5	14	0	31	28	0	20
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	26	18	14	74	1	4	0	8	7	0	5
Total Analysis Volume [veh/h]	6	104	71	56	295	5	14	0	31	28	0	20
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.04	0.07	0.00	0.02
d_M, Delay for Movement [s/veh]	7.87	0.00	0.00	7.68	0.00	0.00	14.39	14.63	10.36	14.87	14.46	9.68
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh]	0.50	0.50	0.50	1.01	1.01	1.01	0.25	0.25	0.25	0.31	0.31	0.31
95th-Percentile Queue Length [ft]	12.52	12.52	12.52	25.34	25.34	25.34	6.18	6.18	6.18	7.67	7.67	7.67
d_A, Approach Delay [s/veh]	0.26			1.21			11.61			12.70		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.55											
Intersection LOS	B											

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Intersection Level Of Service Report
Intersection 5: Puma Street & Southern Site Access

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	2	0	0	6	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	135	71	50	292	7	25	0	41	28	0	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	137	71	50	298	7	25	0	41	28	0	20
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	34	18	13	75	2	6	0	10	7	0	5
Total Analysis Volume [veh/h]	6	137	71	50	298	7	25	0	41	28	0	20
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.06	0.00	0.06	0.08	0.00	0.02
d_M, Delay for Movement [s/veh]	7.88	0.00	0.00	7.74	0.00	0.00	15.10	15.28	10.76	15.49	14.81	9.94
Movement LOS	A	A	A	A	A	A	C	C	B	C	B	A
95th-Percentile Queue Length [veh]	0.61	0.61	0.61	1.05	1.05	1.05	0.40	0.40	0.40	0.33	0.33	0.33
95th-Percentile Queue Length [ft]	15.33	15.33	15.33	26.20	26.20	26.20	10.12	10.12	10.12	8.13	8.13	8.13
d_A, Approach Delay [s/veh]	0.22			1.09			12.41			13.18		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.76											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 6: Alpine Drive & Site Access

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	61	0	0	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	8	185	4	3	71
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	8	246	4	3	125
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	62	1	1	31
Total Analysis Volume [veh/h]	13	8	246	4	3	125
Pedestrian Volume [ped/h]	0		0		0	

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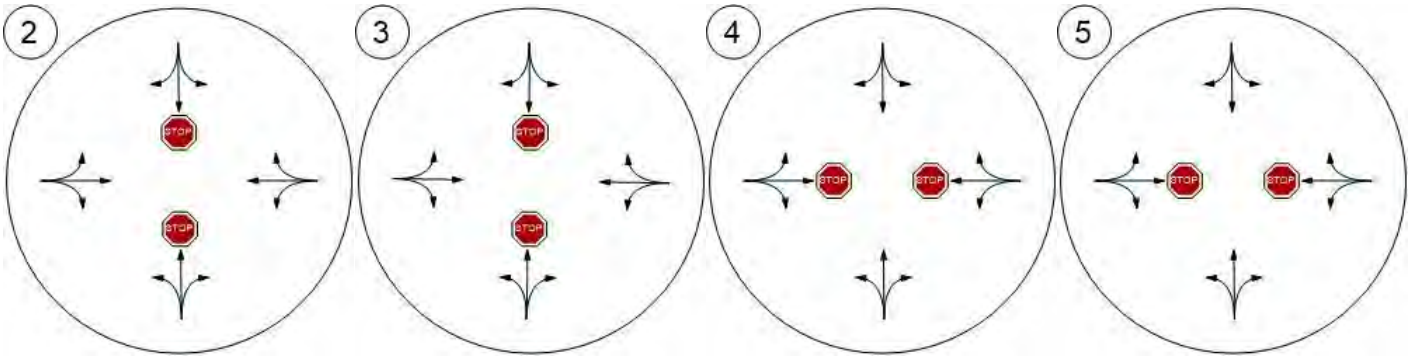
Intersection Settings

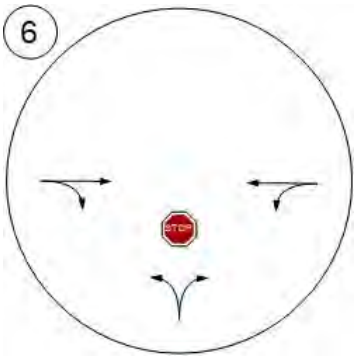
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

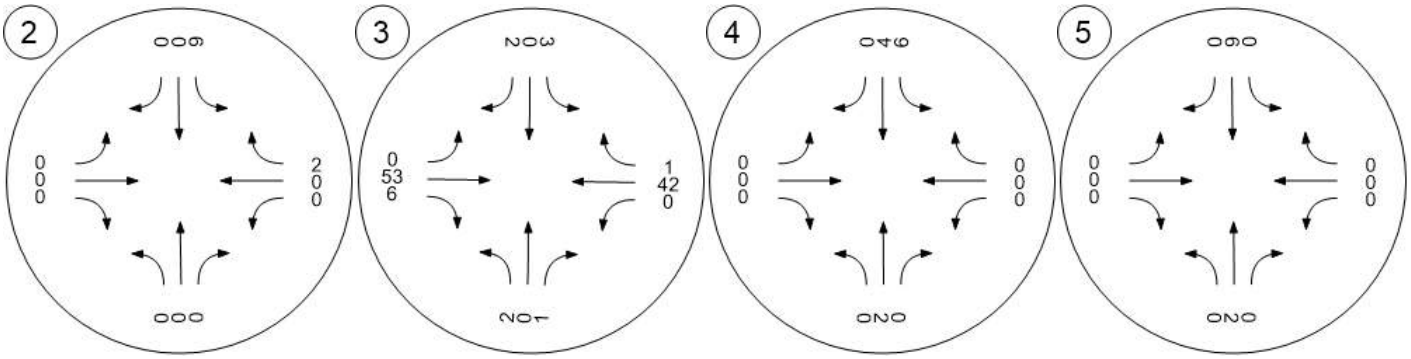
V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.96	9.72	0.00	0.00	7.74	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.10	0.10	0.00	0.00	0.32	0.32
95th-Percentile Queue Length [ft]	2.40	2.40	0.00	0.00	8.07	8.07
d_A, Approach Delay [s/veh]	10.49		0.00		0.18	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.61					
Intersection LOS	B					

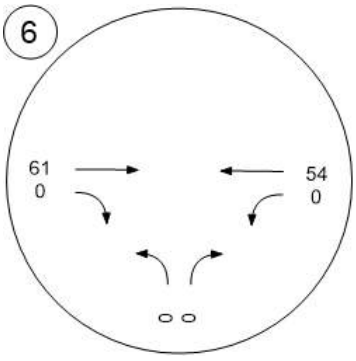
Lane Configuration and Traffic Control



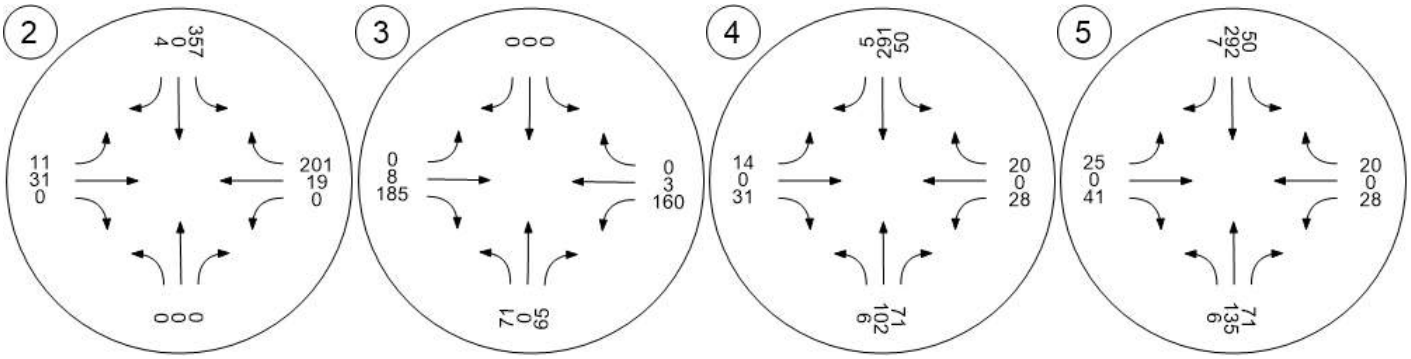


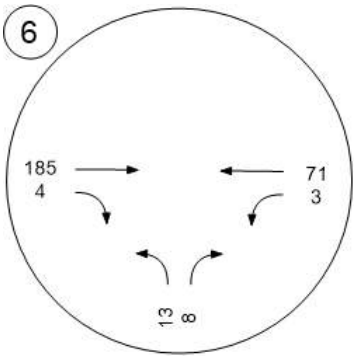
Traffic Volume - Base Volume



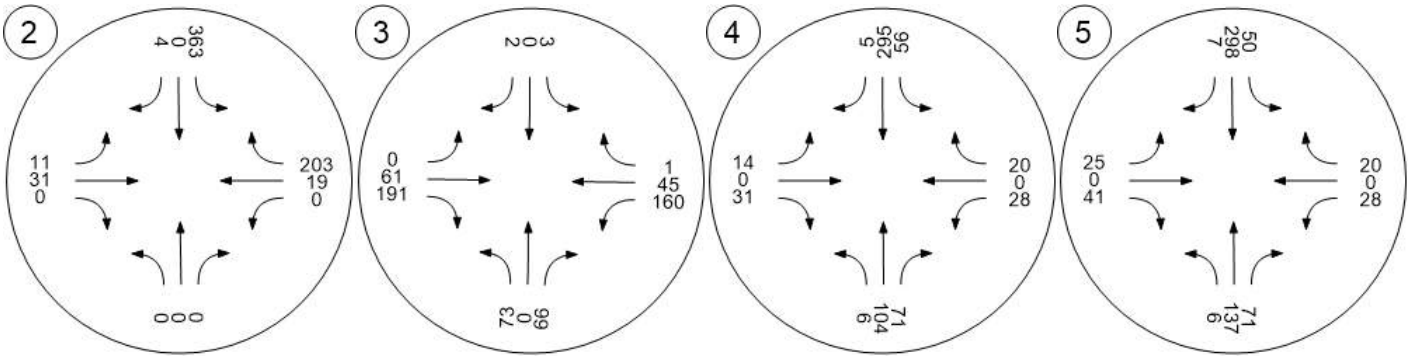


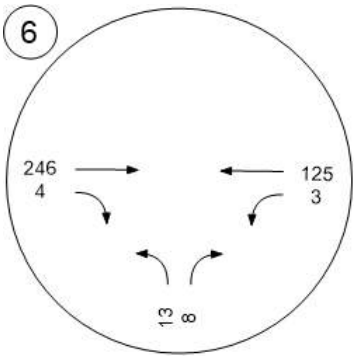
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





Vistro File: C:\...\Pearson Farm Model.vistro
Report File: C:\...\2040_Build PM.pdf

Scenario 7 2040 Build_ PM Peak
3/7/2017

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	Puma Street & Bunker Lake Boulevard	Two-way stop	HCM 2010	SB Thru	0.000	14.2	B
3	Alpine Drive & Okapi Street	Two-way stop	HCM 2010	NB Thru	0.000	17.1	C
4	Puma Street & Northern Site Access	Two-way stop	HCM 2010	WB Left	0.177	16.1	C
5	Puma Street & Southern Site Access	Two-way stop	HCM 2010	WB Left	0.190	17.0	C
6	Alpine Drive & Site Access	Two-way stop	HCM 2010	NB Left	0.014	11.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. for all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 2: Puma Street & Bunker Lake Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	5	0	0	0	0	0	0	0	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	251	0	14	7	19	0	0	67	344
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	256	0	14	7	19	0	0	67	349
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	64	0	4	2	5	0	0	17	87
Total Analysis Volume [veh/h]	0	0	0	256	0	14	7	19	0	0	67	349
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.38	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.49	12.17	8.40	13.78	14.17	12.96	8.17	0.00	0.00	7.25	0.00	0.00
Movement LOS	B	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.90	1.90	1.90	0.07	0.07	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	47.61	47.61	47.61	1.74	1.74	1.74	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.35			13.73			2.20			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	5.29											
Intersection LOS	B											

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Intersection Level Of Service Report
Intersection 3: Alpine Drive & Okapi Street

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	0	1	0	0	3	2	58	3	1	50	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	193	0	169	0	0	0	0	5	88	78	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	197	0	170	0	0	3	2	63	91	79	59	4
Peak Hour Factor	1.0000	1.0000	1.0000	0.9023	1.0000	0.9023	0.9023	0.9023	1.0000	1.0000	0.9023	0.9023
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	0	43	0	0	1	1	17	23	20	16	1
Total Analysis Volume [veh/h]	197	0	170	0	0	3	2	70	91	79	65	4
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	16.66	17.08	14.29	13.61	12.03	8.62	7.35	0.00	0.00	7.69	0.00	0.00
Movement LOS	C	C	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	3.05	3.05	3.05	0.01	0.01	0.01	0.36	0.36	0.36	0.35	0.35	0.35
95th-Percentile Queue Length [ft]	76.27	76.27	76.27	0.23	0.23	0.23	8.91	8.91	8.91	8.72	8.72	8.72
d_A, Approach Delay [s/veh]	15.56			8.62			0.09			4.10		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	9.34											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 4: Puma Street & Northern Site Access

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.177

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	5	0	0	4	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	302	36	25	125	17	9	0	19	73	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	307	36	25	129	17	9	0	19	73	0	51
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	77	9	6	32	4	2	0	5	18	0	13
Total Analysis Volume [veh/h]	22	307	36	25	129	17	9	0	19	73	0	51
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.02	0.18	0.00	0.07
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	8.02	0.00	0.00	14.69	14.02	9.22	16.09	16.01	12.39
Movement LOS	A	A	A	A	A	A	B	B	A	C	C	B
95th-Percentile Queue Length [veh]	1.01	1.01	1.01	0.49	0.49	0.49	0.14	0.14	0.14	0.97	0.97	0.97
95th-Percentile Queue Length [ft]	25.37	25.37	25.37	12.23	12.23	12.23	3.48	3.48	3.48	24.26	24.26	24.26
d_A, Approach Delay [s/veh]	0.45			1.17			10.98			14.57		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.61											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 5: Puma Street & Southern Site Access

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	5	0	0	4	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	293	36	25	166	26	16	0	25	73	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	298	36	25	170	26	16	0	25	73	0	51
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	75	9	6	43	7	4	0	6	18	0	13
Total Analysis Volume [veh/h]	22	298	36	25	170	26	16	0	25	73	0	51
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.03	0.19	0.00	0.07
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	8.00	0.00	0.00	15.48	14.71	9.70	17.00	16.77	12.61
Movement LOS	A	A	A	A	A	A	C	B	A	C	C	B
95th-Percentile Queue Length [veh]	1.04	1.04	1.04	0.66	0.66	0.66	0.24	0.24	0.24	1.03	1.03	1.03
95th-Percentile Queue Length [ft]	25.94	25.94	25.94	16.42	16.42	16.42	5.92	5.92	5.92	25.78	25.78	25.78
d_A, Approach Delay [s/veh]	0.47			0.90			11.96			15.19		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	3.70											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 6: Alpine Drive & Site Access

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	61	0	0	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	5	88	13	9	193
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	5	149	13	9	247
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	37	3	2	62
Total Analysis Volume [veh/h]	8	5	149	13	9	247
Pedestrian Volume [ped/h]	0		0		0	

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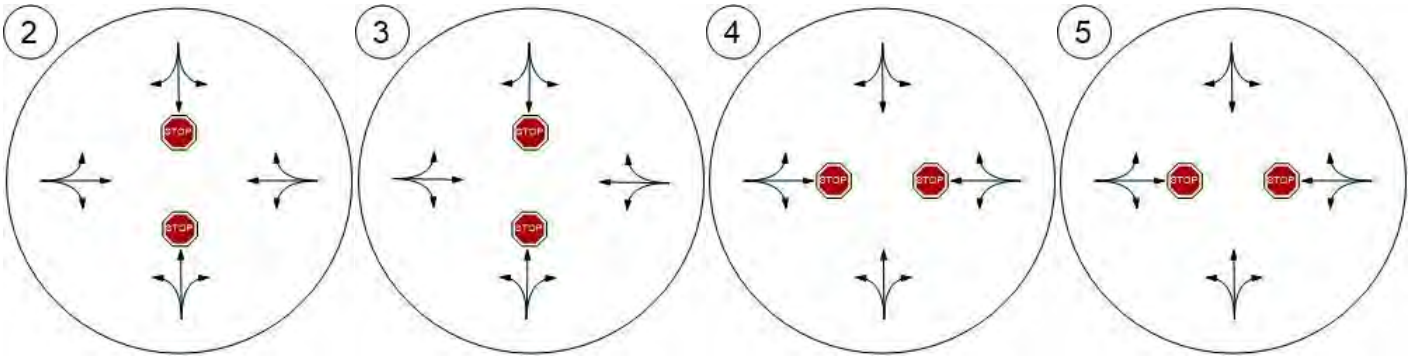
Intersection Settings

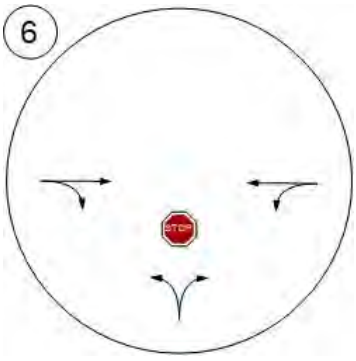
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

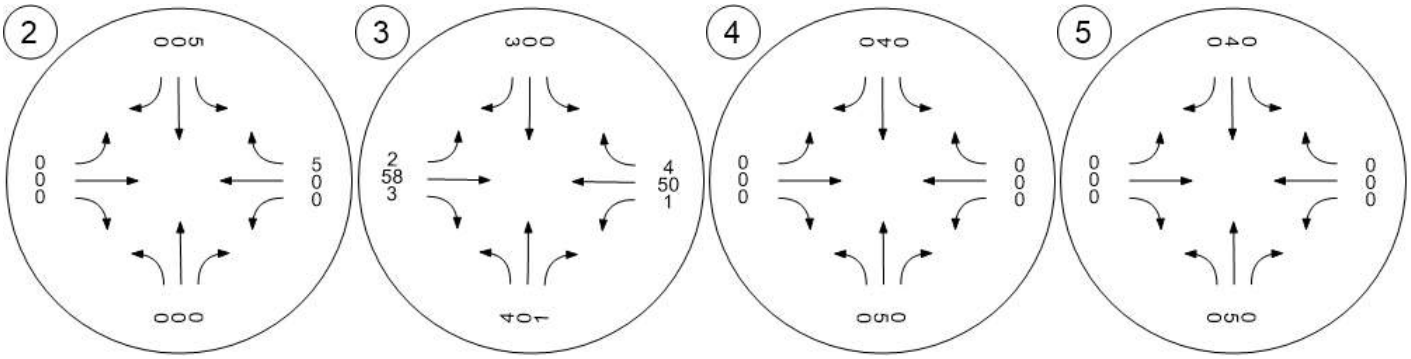
V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.26	9.15	0.00	0.00	7.56	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.06	0.06	0.00	0.00	0.66	0.66
95th-Percentile Queue Length [ft]	1.47	1.47	0.00	0.00	16.47	16.47
d_A, Approach Delay [s/veh]	10.45		0.00		0.27	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	B					

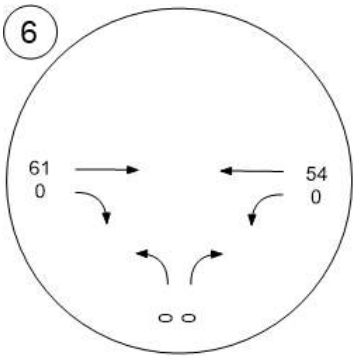
Lane Configuration and Traffic Control



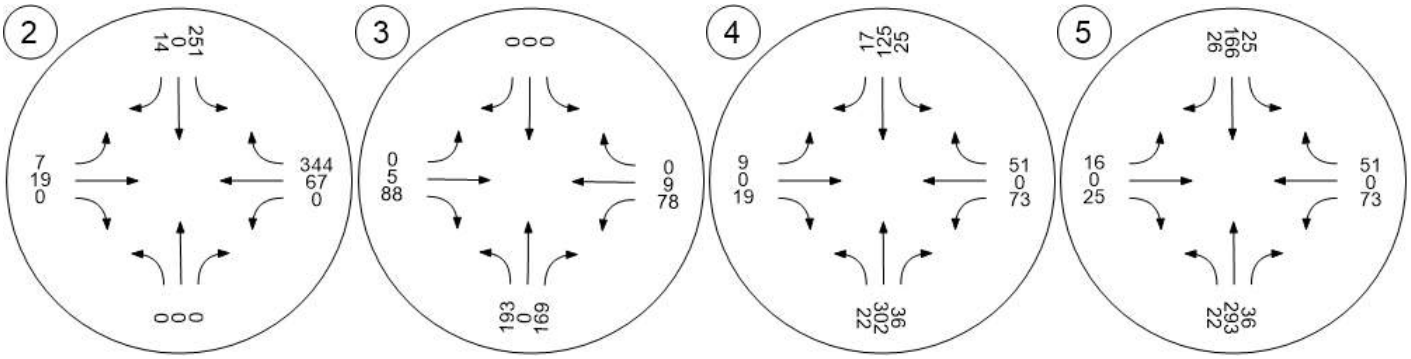


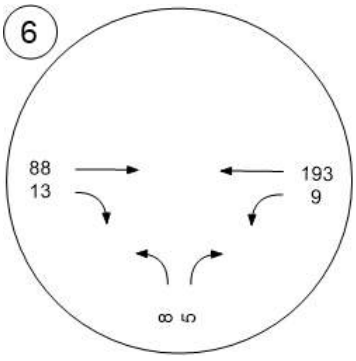
Traffic Volume - Base Volume



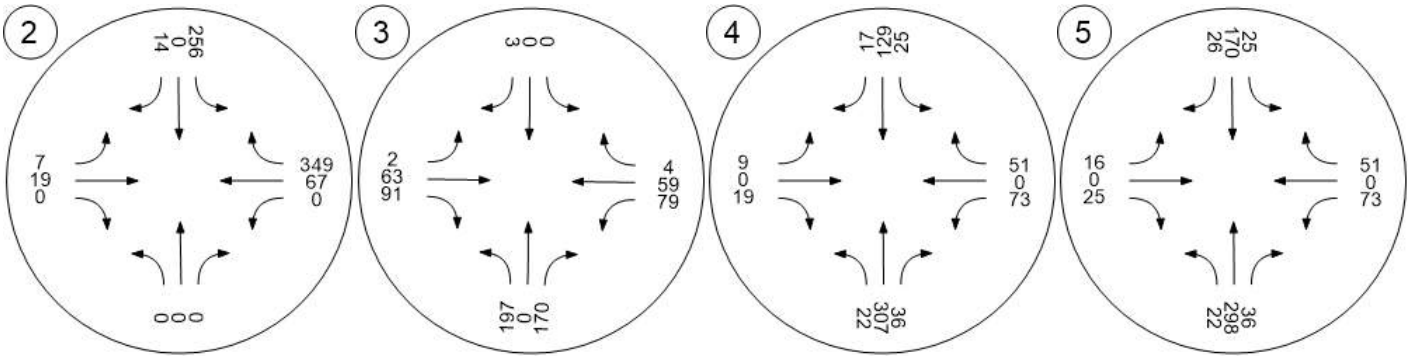


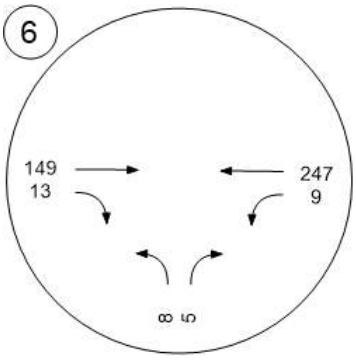
Traffic Volume - Net New Site Trips





Traffic Volume - Future Total Volume





CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	3/31/17	**PROJECT ADDRESS**	14800 BLOCK PUMA ST NW
PROJECT. TITLE	RIVERSTONE ADDITION (SKETCH PLAN)		
PROJECT #	17-106		
DEPARTMENT:	Community Development – Planning Division		
TECHNICAL REVIEWER:	Name: Tim Gladhill, Community Development Director Phone: 763-433-9826 Email: tgladhill@cityoframsey.com		

We offer the following comments regarding your land use application. Staff is supportive of the proposed subdivision, subject to corrections to plans identified within this report and final review for compliance with future steps (Preliminary Plat and Final Plat). This sketch plan phase is a conceptual review that focuses on layout and general development standards, but not detailed grading, stormwater, and utility review.

Comprehensive Plan

Action Item: *Comprehensive Plan Amendment required to change areas of High Density Residential and Commercial.*

The City Council already authorized a Comprehensive Plan Amendment for the 'Armstrong West' area. The amendment will now enter Metropolitan Council review. Upon approval of the Comprehensive Plan Amendment, the entire site will be guided as Medium Density Residential. Please note that approximately 90% of the project site is already guided in this manner. The Comprehensive Plan Amendment adjusts two (2) minor areas based off of previous land use planning. In 2013, the City embarked on a minor Small Area Plan commonly referred to as Armstrong West. The proposed project is consistent with policy direction from that planning effort. Results of that process are attached under separate cover.

The Comprehensive Plan defines Medium Density Residential as areas that are within the MUSA and intended to receive medium density housing including lower density multi-family housing and higher density single-family housing. Average density will be 6 units per acre [Zoning Code allows for range of 3 – 6 units per acre].

The fact that the project requires an amendment to the Comprehensive Plan and Planned Unit Development affords the City certain discretion in approving/not approving the project.

Permitted Uses

Action Item: *Zoning Amendment required to be consistent with Comprehensive Plan Amendment noted above. Staff recommends utilizing a Planned Unit Development (PUD) due to the overall master plan for the project to be discussed below.*

The project is being generally reviewed under the standards of the R-2 Residential District (this district implements the Medium Density Residential (MDR) designation of the Comprehensive Plan. The intent of the R-2 Residential District is to accommodate multiple dwellings at a density of three to seven dwelling units per acre and multiple-dwelling complexes within the 2002 MUSA. All lots created by subdivision located within the 2020 MUSA shall be serviced by sanitary sewer and municipal water. However, there are multiple residential types within the proposed project that make it difficult to apply one single zoning district to the project. Please note that one of the City's goal is to provide a variety of housing options for people at all life stages and income levels to encourage existing and future residents to stay in Ramsey throughout their lives and to achieve a balanced housing supply. One strategy identified in the Comprehensive Plan to achieve this is to continue to develop more affordable single family housing such as small-lot single family homes. The four (4) different types of housing proposed within the project include:

1. 65-foot-wide traditional single-family lot
2. 50-foot-wide traditional single-family lot
3. 50-foot-wide 'villa' lot (association maintained lawn care and snow removal)
4. 4-unit townhome building

Traditional Single-Family/Small-Lot Single Family Lots (65 foot width, 50 foot width)

Detached single-family lots are traditionally guided by the R-1 Residential District. However, the minimum lot width is 80 feet. The City has on multiple occasions allowed this style of development through the PUD process. Most recently, this was utilized for the Villages of Sunfish Lake Development (mid-2000s). These units do not meet the specific definition of detached townhomes in the R-2 Residential District, thus necessitating the need for a PUD, an appropriate tool.

Villa Lots

These would be classified as detached townhomes. The use is consistent with the R-2 Residential District. Please note that the definition of detached townhome within Zoning Code is slightly different than that of Building Code. Staff raises this point not to suggest any conflicts with the proposal, yet clarify for future steps (Building Permit Review).

Townhome Lots (Quad Units)

The use is consistent with the R-2 Residential District.

Layout

The following design standards are required for the various housing types proposed within the development. Please note that due to the variety of housing types, it is difficult to apply a single-set of layout standards to the project. Any perceived deviation to City Code appears to be reasonable with the utilization of a Planned Unit Development. A significant portion of the project area is being preserved for open space, a key component of a PUD Approval.

Continued on Next Page

Traditional Single-Family/Small Lot Single-Family and Villa Lots

Miscellaneous Standards	Attached and Detached Townhomes
Lot size	None
Minimum density (net)	3.0
Maximum density (net)	7.0
Lot width	None
Building setback from public street right-of-way	25 feet
Building setback from private street measured from back of curb	25 feet
Building setback from exterior development boundary line	30 feet 25 feet (detached)
Minimum separation between buildings, including any appurtenances thereto (i.e., patios, decks)	20 feet 15 feet (detached)
Parking node setback from exterior development boundary line	30 feet
Parking node setback from structure	15 feet
Maximum lot coverage	35%
Maximum building height (measured from mean ground level to mean gable)	35 feet
Accessory structure setback (measured from the development boundary line)	30 feet
Maximum number of units per structure	81 (detached)
Open space required	40% general open space 10% of which must be identifiable community space

The only deficiency in the above table would be the minimum separation between buildings. The Planning Commission and City Council have already seen this project in concept, and appeared generally supportive of the overall approach. The PUD appears to be an appropriate tool in this instance.

Continued on next page.

Townhome/Quad Units

Miscellaneous Standards	Twinhome or Quad
Lot size	7,000 square feet per dwelling unit
Minimum density (net)	3.0
Maximum density (net)	7.0
Lot width	50 feet
Front yard setback	30 feet
Side yard setback	10 feet
Side yard setback corner lot	30 feet
Side yard interior wall setback	0
Rear yard setback	30 feet
Maximum lot coverage for all principal and accessory buildings (excludes impervious or prepared surface)	35%
Maximum building height (measured from mean ground level to mean ground gable)	35 feet
Accessory structure setbacks:	
Front	30 feet or same as principal structure, which ever is greater
Rear	5 feet
Side	6 feet
Side corner	30 feet
Maximum number of units per structure	4

The only apparent deficiency to the above table is lot width, which is measured at approximately 45 feet. There appears to be sufficient space in the common area to widen the individual lots without impacting the proposed buildings themselves.

Action Item: Adjust the lot widths of the quad units to 50 feet.

Continued on next page.

Architectural Standards

The R-2 Residential District has increased architectural design standards when compared to the R-1 Residential District. The current submittal does not include architectural renderings. The PUD approval process does require this step.

Action Item: *Submit architectural renderings for all unit types. Master Plans for model types must be approved by the Planning Commission and City Council. Please note this requirement for future building permit submittals. We encourage you to submit all desired model types in advance to avoid delays in building permit review. Please note, individual permits meeting the requirements of the Building Code Master Plan process can be reviewed. Each individual permit does not need to be reviewed by the Planning Commission and City Council. Minor adjustments to master plan floor plans is acceptable.*

Street Widths and Design

The proposed street widths are deficient of minimum width standards for the City (32 foot wide streets). Staff continues to debate the pros and cons of this approach. This approach was utilized in the Village of Sunfish Lake Addition. The City's Public Safety and Public Works Maintenance Teams have expressed concern with this design due to maneuverability. On the other hand, Staff also sees other benefits.

The intersection of Street H and Alpine Drive is deficient in pedestrian safety. The current recommended strategy is a roundabout in this location and would include a cost share. The proposed intersection has been identified as a concern due to sight lines, geometry, and pedestrian safety. The intersection will also serve as an entrance to future Lake Itasca Park.

The project also requires execution of the Armstrong West Arterial/Collector Infrastructure Project. This topic was discussed at the March 28 City Council Work Session. This topic will be discussed as part of Preliminary Plat.

Action Item: *Either 1) amend the proposal to 32 foot street widths or 2) provide a narrative outlining the benefits of 29 foot street widths. This is for public streets only. Private streets must meet the minimum design requirements of the R-2 Residential District.*

Action Item: *Amend the plan set to include a roundabout at the intersection of Street H and Alpine Drive –OR- propose an equivalent approach the improves sight line and pedestrian safety.*

Stormwater Pond

Based on projects with similar stormwater pond size and depth, Staff anticipates some concerns regarding safety to be raised by Planning Commission. Plans should be updated to better reflect the fact that these are intended to be lined ponds that hold water as an amenity. We also encourage you to be prepared to discuss stormwater safety, especially along public trails and compliance with stormwater regulations. Since this is not Preliminary Plat review, Staff has not finalized our recommendations on this matter.

Development Fees

Standard Development Fees are due on the plat. You have indicated a desire to obtain certain Park Dedication and Trail Development Fee Credit for the open space and trail areas. Staff's recommendation is that trail easement and trail construction for the Lake Itasca Greenway internal to the site is eligible for Park Dedication Credit. Staff does not recommend credit for the private (not City owned) open space areas (Outlot C and Outlot D). However, the City Council has noted that they would be open to additional options for parks.

This topic will be discussed further in May during Preliminary Plat Review.

Environmental Review

An Environmental Assessment Worksheet (EAW) is mandatory by the State of Minnesota for this project. A draft has been completed and is available for review. The City Council will consider authorizing distribution for official comment period later in April or early May. Staff has completed an initial review, and has determined this EAW to be incomplete. Minor updates and revisions are required before distribution. The draft EAW is included in the Planning Commission packet.

Policy Document

During concept plan phase (unofficial review), the City prepared a Policy Document to guide discussions between Staff and Developer. This document is included as reference.

CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	MARCH 29, 2017	**PROJECT ADDRESS**	WEST OF PUMA STREET, SOUTH OF ALPINE DRIVE
PROJECT. TITLE	RIVERSTONE		
ESCROW #	115626		
DEPARTMENT:	Engineering		
TECHNICAL REVIEWER:	Name: Leonard Linton Phone: 763 433-9834 Email: llinton@ci.ramsey.mn.us		

The Engineering Department offers the following comments regarding the Sketch Plan Exhibits for Riverstone. The submittal consists of 16 sheets prepared by Carlson McCain dated March 8, 2017. The submittal included a document with the stormwater summary and geotechnical report. This review also covers the draft EAW submitted for this project.

General comments:

1. **A legend must be shown on all sheets. All symbols used on that sheet must be added to the legend for the sheet. A scale must be shown on all sheets.**
2. All sidewalks in public right-of-way must be shown as 6 feet wide and 6 inches thick.
3. Class 5 shall meet the Ramsey modified gradation. This gradation must be included in the details.
4. Plan readability – Proposed sanitary sewer lines and symbols, and watermain lines and symbols must be the most prominent items on the sewer and water sheets. Proposed storm sewer lines and symbols must be the most prominent on the storm sewer sheets. Proposed curb lines, sidewalks and pedestrian ramps must be the most prominent lines on the street sheets. All other lines on the sheet must be screened so the lines and symbols for proposed features standout. This includes the symbols in the legends which must match the plan view in size, pattern, weight, and color.
5. **Underlying lines must be broken where they are under text boxes to enhance readability. Underlying text must be moved so there is not text on text.**
6. Move the typical street section to one of the Street/ Storm Sheets.
7. Add match lines and continuation notes to all sheets where part of the street is shown on a different page. Station numbers must be darker in plan view. Lines must be broken under the match lines.
8. Each pedestrian ramp requires a specific detail with walk/ trail width, ramp slope, landing pad slope, spot elevations and number of truncated domes.

9. Final plat documents must have plan and profiles for streets, sanitary sewer, storm sewer and watermain. Plan view must be shown for all pipes extending outside of the right-of-way.

Sheet Specific Comments:

Sheet 4:

1. A drainage and utility easement must be dedicated along Puma Street for the future Lift Station. See additional comments on utility plan.

Sheet 8:

1. The future lift station must be placed in a drainage and utility easement outside of the public right-of-way. The lift station must have a driveway access from Puma Street.
2. Water valves must be added mid-block near Lot 14, Block 9, Lot 8, Block 13, Lot 7, Blcok 12, Lot 14, Block 6, Lot 10, Block 5 and Lot 8, Block 11.
3. The manhole information for the structure near Lot 43, Block 9 is not correct. The rim and invert elevations are reversed. The invert elevation is lower than the downstream invert.
4. Rim and invert elevations are required on the proposed sanitary sewer in Puma Street. The responsibility for construction of this line and the lift station has not been determined; however, design information must be shown on this plan to ensure that the proposed line will function properly.
5. Watermain must be placed on the north side or east side of the road. The location must be changed adjacent to Block 6.
6. Sanitary sewer north of the lift station can be 8", not 18" diameter pipe.

Sheets 10-13:

1. The grading plan must be revised to achieve the following separation distances per the Lower Rum River Watershed Management Organization rules (LRRWMO).

   The lowest floor elevation of all development, including basements, must be at least 3 feet above the highest anticipated ground water table, 2 feet above the designated or designed 100-year flood elevation, or 1 foot above the emergency overflow, whichever is higher.

   This requirement may be waived if evidence that a lesser separation can be achieved is:
   - submitted and certified by a geotechnical engineer
   - reviewed and approved by the city engineer or other party designated by the city engineer, and
   - approved by the LRRWMO.

If this process is pursued, the developer should consult with the LRRWMO Engineer before beginning the study to discuss acceptable methodologies.

Stormwater Management Plan:

1. The proposed conditions section states 27.3 acres of new impervious will be created. The next paragraph states 35 acres of new impervious will be created. The locations of these areas must be identified in plan view.
2. The proposed infiltration areas do not meet the LRRWMO criteria for infiltration as outlined below:
    a. The volume to be infiltrated must be retained in the basin prior to any discharge leaving the basin. The large infiltration basin does not retain any water prior to discharge leaving the pond.
    b. The bottom of the basin must be at least 3 feet above the ground water level, The infiltration benches do not meet this separation requirement.
3. If water will be discharged directly to the infiltration area then allowed to overflow to the pond, then a sump manhole or water quality treatment structure must be installed up stream of the infiltration basin to capture sediment and debris.
4. Soil borings are required in the area of the infiltration practices to verify the soils are suitable for infiltration.
5. Water cannot be directly discharged to the wetland. It must be treated as noted above.
6. Detailed procedures for constructing the infiltration basins and bringing them online will be required in the final plans.
7. The narrative indicates 0.04 acres of wetlands will be lost. Wetland sequencing must be provided to document this loss. If this area is larger than the de-minimus then mitigation must be provided.
8. The table on page 4 lists Highway 10 as a discharge point. Drainage from this area does not reach Highway 10. The railroad tracks block flow to the south.
9. The title of the HydroCAD models must be revised to include the project name and designate Existing or Proposed conditions.
10. The rainfall used in the model must indicate Ramsey, not Andover.
11. The normal water level of the ponds is 866, the soils report indicates the groundwater level was 858 – 860. This is 6 – 8 feet below the normal water level and could result in dry dusty ponds. This possibility must be evaluated during development of the final plans.
12. The ponds must be less than 10 feet deep to comply with the recommended guidelines in the Minnesota Stormwater Manual.
13. A Minimal Impact Design (MIDS) model or P8 model must be submitted showing the water quality improvements provided by the stormwater system.
14. Staff downloaded the De Minimus calculation form and worked through it. This part of Ramsey is in the 2,500 sq. ft. exemption area. The proposed impact is 1,742 sq. ft. This is under the threshold; however, this wetland was described as seasonally flooded type. Staff looked at the several aerial photos from different years in GIS and measured the apparent area of the north east wetland for 1997. There were over 1.2 acres that appear to be wet. The delineation lists the area of this wetland as 0.68 acres.

The De Minimus form states that the historic impacts + the proposed impacts exceed the de minimus then the exemption cannot be claimed. Staff feels the request for exemption needs further investigation before we accept it. The request must also be reviewed by the wetland specialists at the LRRWMO as part of the approval process for the exception.

Geotechnical Report:

1. The logs indicate loose to very loose sands at depth in each boring. The report must be revised to indicate how these loose to very loose sands should be addressed under the future pavements. The City must maintain the roads and requires that the subgrade be as uniform as possible to prevent differential settlement of the pavements.

Draft EAW:

The following comments were generated after reviewing the draft EAW.

Page 7 - Utility phasing needs to be clarified. The southernmost streets can be served with sewer from Bunker Lake Boulevard. The remainder of the development will send sewage to a lift station. The responsibility for construction of the lift station must be identified.

Page 8 - The tabulation lists a loss of 0.4 acres of wetland. Commentary needs to be added justifying this loss, ie. De Minimus exemption. See comments above regarding supporting the exemption.

Page 31 - The list of permits must be updated. McDonalds has withdrawn their permit application.

Page 74 - The traffic study states turn lanes are not required on the existing roadways. Historically projects of this size in Ramsey have needed some traffic modifications. The traffic study commentary should be expanded to show the justification for not adding turn lanes.

Page 85 - Remove the transit comment. Ramsey does not have transit in any part of the City due to low population density.

Page 90 - The traffic data count sheets need to be updated. The file name lists Ramsey streets while the page header lists a St. Paul intersection.

Page 128 - The diagrams do not accurately reflect the inplace roadways at the modeled intersections. The southern leg of diagram 2 does not exist and should not be shown.

Page 130 - The picture does not show the location of all of the diagrams listed on the page. The comments on the diagrams generally apply to all of the pages in the report.

Page 167 - Diagram 3 lists minimal traffic from the existing neighborhood to the north. It shows the trips heading west. It also shows 181 vehicles making the north to west movement. This is not intuitive. The Alpine Drive –TH10 intersection is to the west and is not a good connection for going east on TH10. There are no plans for future employment or businesses along Alpine Drive west of the project site, so there are not apparent destinations in this direction.

701 Xenia Avenue South | Suite 300 | Minneapolis, MN 55416 | (763) 541-4800

Memorandum

To: ***Tim Gladhill, City of Ramsey***

From: ***Breanne Rothstein, WSB & Associates, Inc.***
Alison Harwood, WSB & Associates, Inc.

Date: ***March 30, 2017***

Re: ***Capstone Homes (Riverstone Addition) EAW Review***

WSB Project No. 01973-350

On behalf of the City of Ramsey, WSB & Associates, Inc. has reviewed the Pearson Farm Residential Development EAW for compliance with requirements. The following comments were noted during our review:

1) Project Title
   - Page 1 – Include the location in the project title.

5) Project Location
   - Page 2 – For residential development, it is recommended that grading, drainage, or other plans be attached if available.

6) Project Description
   - Page 2 – Figures 3 and 4 show the proposed site plan and a maximum density site plan, but both are referenced for the proposed site plan. Consideration should be made to distinguish between the two in the project description

11) Water Resources
   - Page 11 – for the Table 6, Appendix B reference, the formatting makes it seem like Table 6 is located in Appendix B. Consider reformatting by possibly using semicolon or ampersand symbol.
   - Page 11 – Include a table that shows the location of the wellhead protection area or other sensitive water management areas.
   - Page 16 – in the Surface Waters section, include measures taken to avoid or minimize impacts to wetlands, such as an alternatives analysis.

12) Contamination / Hazardous Materials / Waters
   - Page 18 – Include a figure for the WIMN database listings.

17) Noise
   - **Page 23 – With the project adjacent to TH 10 a noise analysis should be considered to document the need for future noise walls. Although this is not a requirement, in the future if issues arise MnDOT will not participate in funding of needed walls. It will be the local responsibility.**

18) Transportation
   - Page 24 – This section should be updated based on the Traffic Study comments.

Figures
   - On the site plan the access at Bunker Lake Blvd shows a center median. In order to provide lane continuity Bunker Lake Blvd will need to be widened.

Appendix E

1. Introduction:
   - **Page 1 – the study only include analysis at the intersections closest to the development. Consideration should be given to also evaluating for regional impacts:**
     - **Bunker Lake Blvd at Armstrong Blvd**
     - **Alpine Dr at Armstrong Blvd**

- **Alpine Dr at TH 10**

3. Forecasted Traffic:

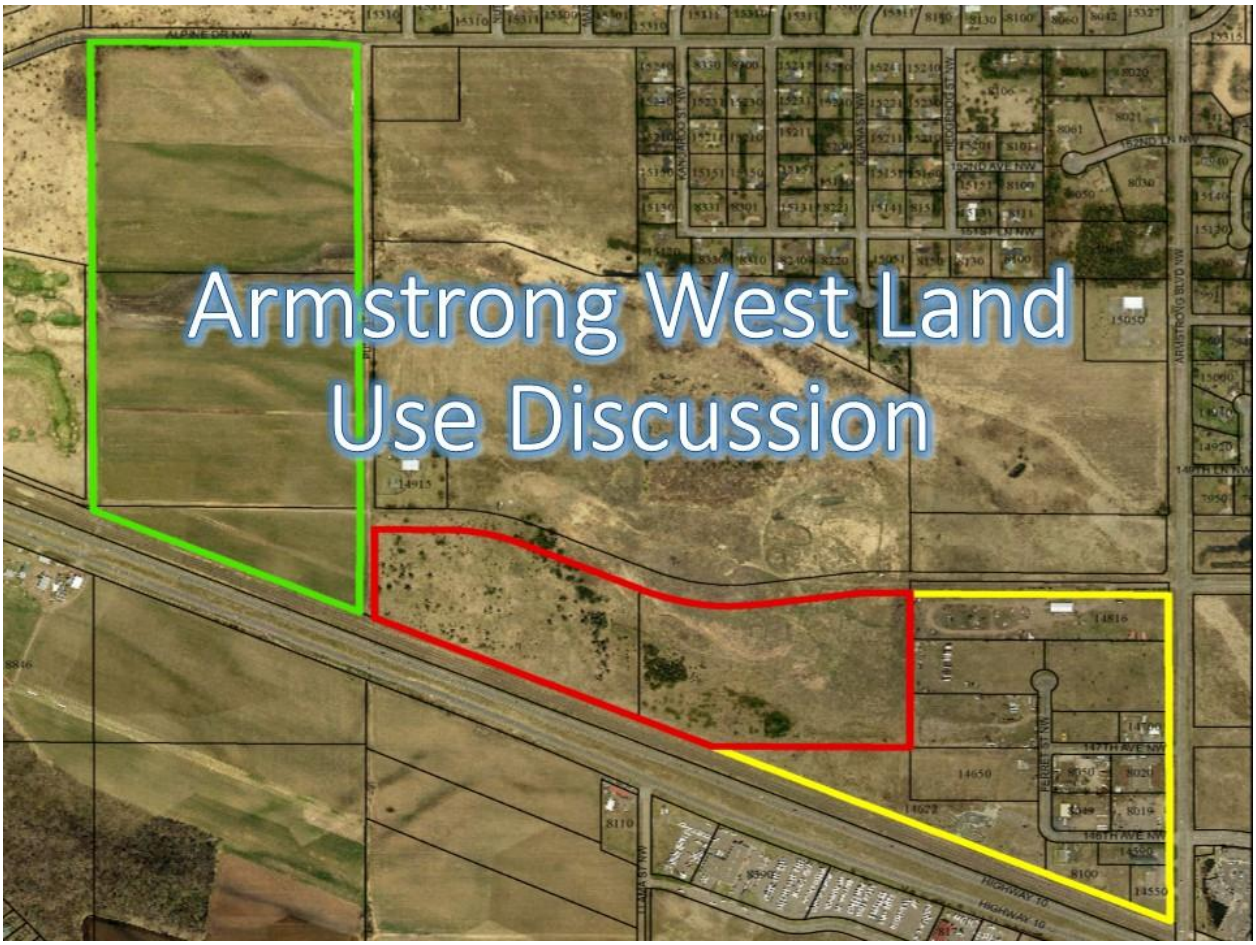
- Page 3 – in the Site Traffic Forecasting section, the traffic distribution indicates 78% to/from east on Alpine Dr and Bunker Lake Blvd. Please provide the break down between the two roadways.
- Page 3/4 – in the Non-site Traffic Forecasting section:
  - **More detail on what was assumed in the previous studies should be provided.**
  - **The text indicates that the previous studies were for a Business Park however, the trip generation tables in the Appendix show Industrial Park uses. This should be clarified.**
  - **Was other approved or anticipated development in the area included with the analysis? The EAW in Table 10 shows other projects in the City. The projects in the area of the proposed development should be included as background traffic.**
  - **The text indicates that a background traffic growth was applied. Provide a discussion on how this was calculated and applied.**
- Page E2 and E3 - Figure 2 and Figure 3 indicate 2018 volumes however all reference and analysis is for 2040. This should be clarified.

4. Analysis

- Page 5 – the text indicates that the capacity and LOS analysis is included in the appendix. A summary should be included in the body of the report for each analysis scenario.
- Page 5 - the capacity analysis did not show the results for the left and right turning traffic from mainline (Alpine Dr and Puma St). This should be provided to show if delays and queues are an issue turning into the site.
- Page 5 – the text indicates that “vehicle queuing of five cars or more is considered unreasonable”. How was this determined?
- **Page 7 – in the Vehicle Mitigation section it was concluded that with the existing posted speed limit of 40 mph no turn lanes would be required for capacity. However, safety at the intersections should also be considered. Additional analysis of the sight lines should be provided at each of the driveway accesses.**
- Page 8 – in the Vehicle Mitigation section it indicates that future improvements at Armstrong Blvd and Bunker Lake Blvd were not considered. Additional information should be provided. The current study does not include this intersection in the analysis, although it is recommended to include it.

Riverstone Addition Schedule												
	2017											
	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	January	February	March	April	May	June	July	August	September	October	November	December
Task 1: Environmental Assessment Worksheet												
Order EAW												
Complete Draft												
City Council Approval for Distribution												
Comment Period												
Public Comment Meeting												
Planning Commission Review												
Environmental Policy Board Review												
City Council EIS Needs Decision/Final Draft												
Distribute Final Document												
Task 2: Assessment/Petition and Waiver Agreement (Trunk Infrastructure Agreement)												
City Council Approves Memorandum of Understanding												
Design												
Accept Plans and Specifications and Advertise for Bids												
Accept Bids and Award Contract												
PLACEHOLDER: OVERALL PROCESS												
Task 3: Comprehensive Plan Amendment												
Adjacent Review												
Metropolitan Council Review												
Task 3: Sketch Plan Review												
~~Environmental Policy Board~~												
Planning Commission												
~~Parks and Recreation Commission~~												
Task 4: Preliminary Plat Review												
Environmental Policy Board												
Planning Commission												
Parks and Recreation Commission												
City Council												
Task 5: Final Plat Approval												
City Council												
Task 6: Construction												
Plan Revisions												
Pre-Construction Meeting												
Field Staff On Site Pre-Construction Meeting												
					Desired Preliminary Plat Approval	Desired Final Plat Approval		Desired Construction Start Date = August 1				

Working Draft
Not for Formal Use

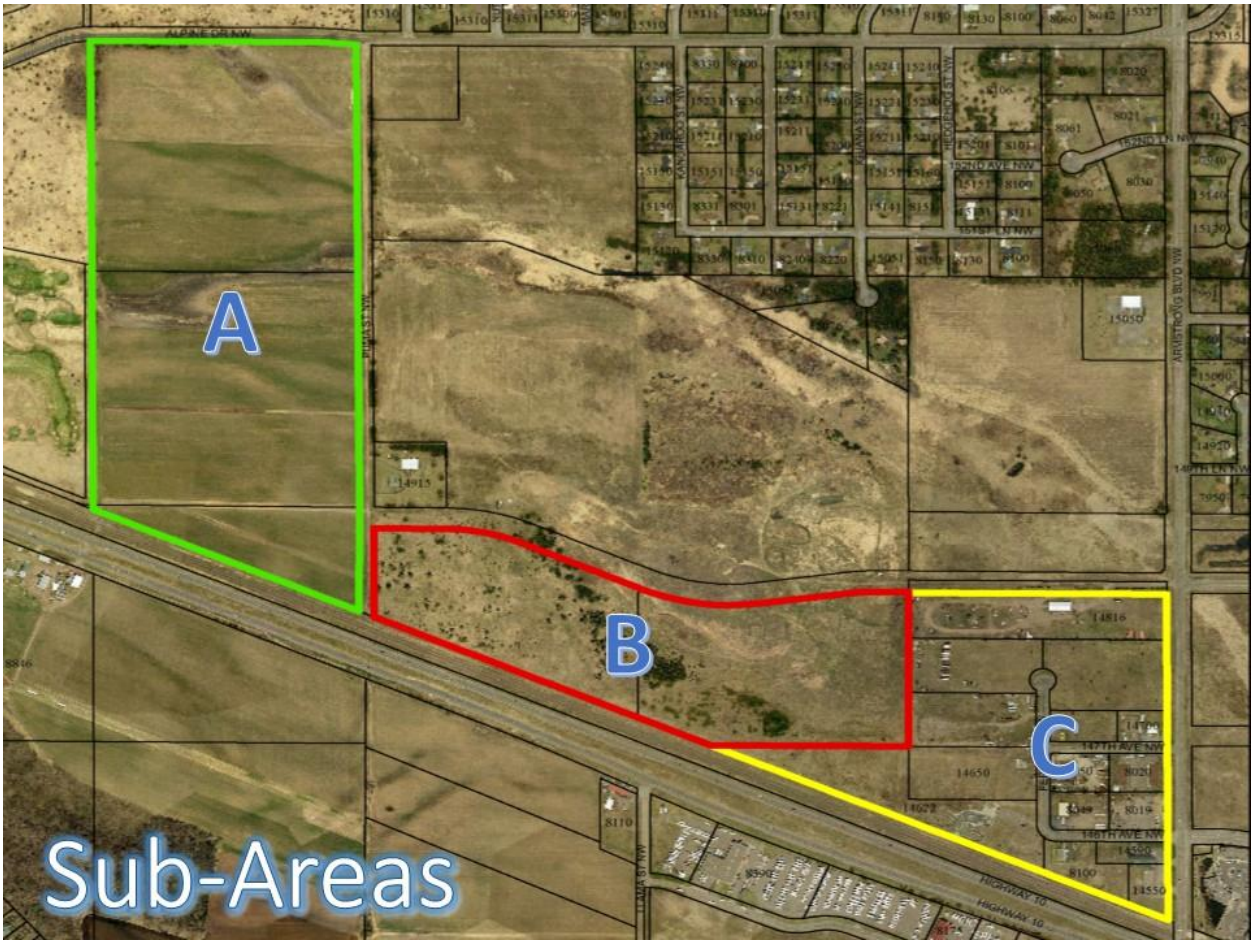


Public Discussion – December 12, 2013

The following represents comments submitted by participants.

Goals (as defined by participants)

- Add commercial and industrial land in order to add to the tax base
- Discuss necessary infrastructure
    - Water & sewer
    - Streets & access



Definitions

- Business Parks – uses could include warehousing, office, light manufacturing. May or may not include outside storage.
- Retail – places to shop.
- Low Density Residential – average three (3) homes per acre. May or may not include attached units.
- Medium Density Residential – three (3) to seven (7) homes per acre. Traditionally includes attached units, but may include detached units as well (twin-homes, detached townhomes, small-lot single-family).
- High Density Residential – seven (7) to fifteen (15) homes per acre.

Sub-Area 'A' – Pearson Properties [NOTE: discussion also added areas of Northfork, Inc. to the west and to the north]

- Portion of area as business park
  - Light manufacturing
  - Limited or no outside storage
  - High architectural standards
- Portion of area as residential
  - Low to medium density
    - Small lot single-family or twin-homes
  - High quality design standards
  - Fit well with adjacent golf course [The Links at Northfork]
  - Low traffic
  - PUD-Planned Unit Development
    - Cluster development with permanently protected green/open space to serve as buffer/transition
    - Conservation style subdivision without creating a new district/subdivision process (utilize existing PUD process)
      - NOTE: would NOT be the same, previous ordinance known as the Cluster Subdivision Ordinance (circa 2005).
      - Proposed PUD would permanently protect open space, not preserve areas for future development.
  - Focus on transition from residential to business park and compatibility with golf course
- *Written Comments:*
  - Keep in consideration golf course area for higher end residential & possibly private road (compared to industrial access)
  - Homes along golf course
  - Industrial park north of tracks
  - Residential North end
- *Northfork, Inc. Area*
  - Currently guided as larger acreage lots without sewer
  - Screening may be important depending on adjacent land use type
  - Interested in other land use options
    - Site has private, restrictive covenants
    - Could consider a higher density (low density to medium density) to match development pattern of what happens on Pearson site
  - Interested in working with Pearson Properties

Sub-Area 'B' – Hageman Holdings [NOTE: discussion also added other Hageman Holdings properties to the north]

- Open to a project in the short/near-term
- Focus = business park
- Open to the concept of retail
- Future school will provide its own buffer for compatibility
- *Written Comments:*
  - Industrial/business
  - Retail option
  - Not the school area or land on Alpine = residential
  - Residential north half
  - Industrial park south half

Hageman Residential Portion (36 Acres along Alpine Drive)

- High quality architecture
- Single-family feel
- Allow for some clustering with permanent buffer
- See Saint Michael example
  - Hans Hagen development adjacent to J & B Group
  - Medium density with screening/buffer
    - Twin-homes; small-lot single-family

Future School Site (North of Bunker and Sub-Area 'B')

- Current vision remains a school (user to be determined) or other youth-focused philanthropic endeavor
- If unable to develop as a school:
  - Potential for retail development (first choice)
  - Also potential for a business park

Sub-Area 'C' – West (COR) Retail

- Existing standards may be too restrictive
  - Continue quality standards on the façade
  - Default to traditional bulk standards (setbacks, parking, etc.)
- Potential/need for frontage roads
- Potential for railroad crossings and/or railroad spurs
- Hageman Holdings OK with concept of adjacent retail (Sub-Area 'B')
- Market should drive scale of retail
  - Large-scale (big-box) or small/medium-scale (convenience, food, etc.).
  - Not quite at the stage to fully determine where exact locations or large, medium, or small scale should be – let the market drive
- Reduced visibility due to Armstrong Interchange
- Need taller signs
- *Written Comments:*
  - Retail as best fit for the new interchange, etc.
  - Industrial park to the west

Pearson Farm City Policy Statements

Contents

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Planned Unit Development 1

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Environmental Assessment Worksheet (EAW) 2

Environmental Impact Statement (EIS) 2

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Park Dedication 2

Regional Infrastructure 3

Land Use and Zoning

1. The project site is guided as a mix of Medium Density Residential (majority of site) and High Density Residential (small portion of site).
2. The proposed project is a mix of unattached Medium Density Residential (majority of site) and attached medium density residential (two small quadrants).
3. The City supports the utilization of a Planned Unit Development given the variety of unique housing types and styles and to allow flexibility in the application of land use standards.

Medium Density Residential Character

These areas are within the MUSA and intended to receive medium density housing including lower density multi-family housing and higher density single-family housing. Average density will be 6 units per acre.

Planned Unit Development

The intent of the Planned Unit Development District is to provide a district that will encourage flexibility in land development in order to 1) make better use of new techniques in building design and construction and land development, 2) housing affordable to all income groups, 3) more efficient use of public infrastructure, 4) energy conservation through the use of more efficient building designs and through the clustering of buildings and land uses, 5) preservation of desirable land characteristics and open space and protection of sensitive environmental features such as steep slopes, poor soils and trees and 6) more effective and efficient use of land, open space and public facilities through the mixing of land uses and assembly and development of land in larger lots.

Environmental Review

1. An Environmental Assessment Worksheet (EAW) is mandatory.
2. An Alternative Urbanwide Area Review (AUAR) is another option in lieu of an EAW, but not recommended in this instance.

DRAFT

3. The City of Ramsey is the Responsible Governmental Unit (RGU) for the EAW, and therefore owns the document and has final decision power on the content of the document.

Environmental Assessment Worksheet (EAW)

An Environmental Assessment Worksheet (EAW) is mandatory for this project due to the number of proposed lots. An EAW is a baseline environmental review that studies traffic, congestion, air quality, ecological resources, historical resources, etc. It is a simple planning tool that helps entities that approve projects that will alter the physical development of a property better understand the potential impacts. An EAW requires a specific project to be under review. An EIS is a much more in depth environmental review for significantly large project or project with the potential for significant environmental impacts.

Environmental Impact Statement (EIS)

An Environmental Impact Statement (EIS) may be necessary based on the findings of the Environmental Assessment Worksheet (EAW). An EIS is not automatically required based on the mandatory thresholds, but could be triggered by the findings of the EAW.

Alternative Urban Areawide Review (AUAR)

An Alternative Urban Areawide Review (AUAR) is an option in lieu of an EAW. An AUAR is a tool that allows communities to look more comprehensively and proactively and potential environmental impacts. It does not require a specific project to be under review. The project is part of a broader small area planning effort. Other future uses adjacent to the project include a 1) future business park, 2) redevelopment of an existing industrial park to retail, and 3) a future high density residential area. If timing were not a concern with a specific project desiring to commence this year, the City would recommend this approach. However, as there is a specific project with a specific timeline, the City supports forgoing this option in lieu of the traditional AUAR.

Park Dedication

1. It is the policy of the City to favor larger, accessible neighborhood and community public parks with quality amenities and improvements over smaller, pocket parks with few to no 'destination' improvements.
2. The Master Park and Trail Plan for the project area is to be serviced by improvements (existing and proposed) within Lake Itasca Park, the Lake Itasca Trail, and The COR. The area is further served by greenway trail connections between these two significant recreation opportunities (Lake Itasca Park and The COR).
3. The City supports smaller recreational areas and open space within individual developments when properly maintained by homeowners.
4. The City supports pursuing the following in negotiations for cost-share/Park Dedication and Trail Fee credit:
    a. Mass grading of Lake Itasca Park predicated upon an approved concept plan, which may include export of fill from the park for the proposed subdivision.
    b. Specific stand-alone improvements to Lake Itasca Park. For example, future parking parking areas and boardwalk/pier to Lake Itasca, canoe/kayak station, or establishment of native landscapes (following grading).
    c. Alpine Drive Roundabout (Staff recommended exploration only).

DRAFT

i. The Developer shall be responsible for the design and construction consistent with the phasing of the project.
ii. The proposed roundabout shall include enhanced pedestrian safety measures above and beyond standard/minimum improvements.
iii. Park Dedication credit may be applied to the 'leg' of the roundabout which would serve as the Lake Itasca Park entrance

d. Greenway Trail Connection
i. Construct 10' trail adjacent to the wetland in the north edge of the plat, and exchange land for Hageman parcel (4 acres of earlier Park Dedication to the city)
ii. Explore creation of area of linear open water (visual amenity for townhomes), along trail.
iii. Consider plaza adjacent to greenway trail and the Mississippi River Trail (Puma Street) for bench, drinking fountain, enhanced landscape, etc.

e. Advance park improvements in The COR
i. Identify within the Development Agreement, specified improvement E.g. Schematic Design for the water-centric park, plans and specifications for the proposed splash pad etc.

5. The City supports continued discussion on all options for parks and recreation within this development given the number of proposed housing units.

Regional Infrastructure

The section will be populated at future steps.

- Regional Infrastructure for the project area is defined as Bunker Lake Boulevard and Puma Street.
  - Roadway
  - Water Trunk (paid for by normal Trunk Fees)
  - Sanitary Trunk (paid for by normal Trunk Fees)
- An additional suggested improvement is the Alpine Drive Roundabout (Staff recommended exploration only).
- The City supports some degree of cost share for these improvements. The specifics shall be negotiated with future steps.
- The Developer shall be responsible for the final design and construction for portions adjacent to the project.

For specific detail on this policy topic, please review the Infrastructure Study completed by Bolton and Menk. This section will be completed upon completion of the Revised Infrastructure Study by Bolton and Menk and subsequent policy direction from the City Council.

DRAFT

Regular Planning Commission **5. 5.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title:

Green Valley Greenhouse Land Use Planning and Comprehensive Plan Designation

Purpose/Background:

The purpose of this case is to receive a presentation from Green Valley Greenhouse regarding their future expansion plans. The Comprehensive Plan Steering Committee, outside of this request, desires to discuss the appropriate future land use designation. The use currently operates as a Conditional Use Permit in the R-1 Residential District (low density residential). The request for future expansion planning magnifies the need to discuss this topic.

Notification:

No notification has been provided at this stage.

Observations/Alternatives:

This is a very preliminary discussion. Staff has not reviewed in earnest, other than to identify the need to discuss appropriate land use designation and platting/subdivision process. This case is for presentation/discussion purposes only.

Funding Source:

This case is being handled as part of normal Staff duties.

Recommendation:

No action is being requested. This case is for discussion purposes.

Action:

No action is being requested. This case is for discussion purposes.

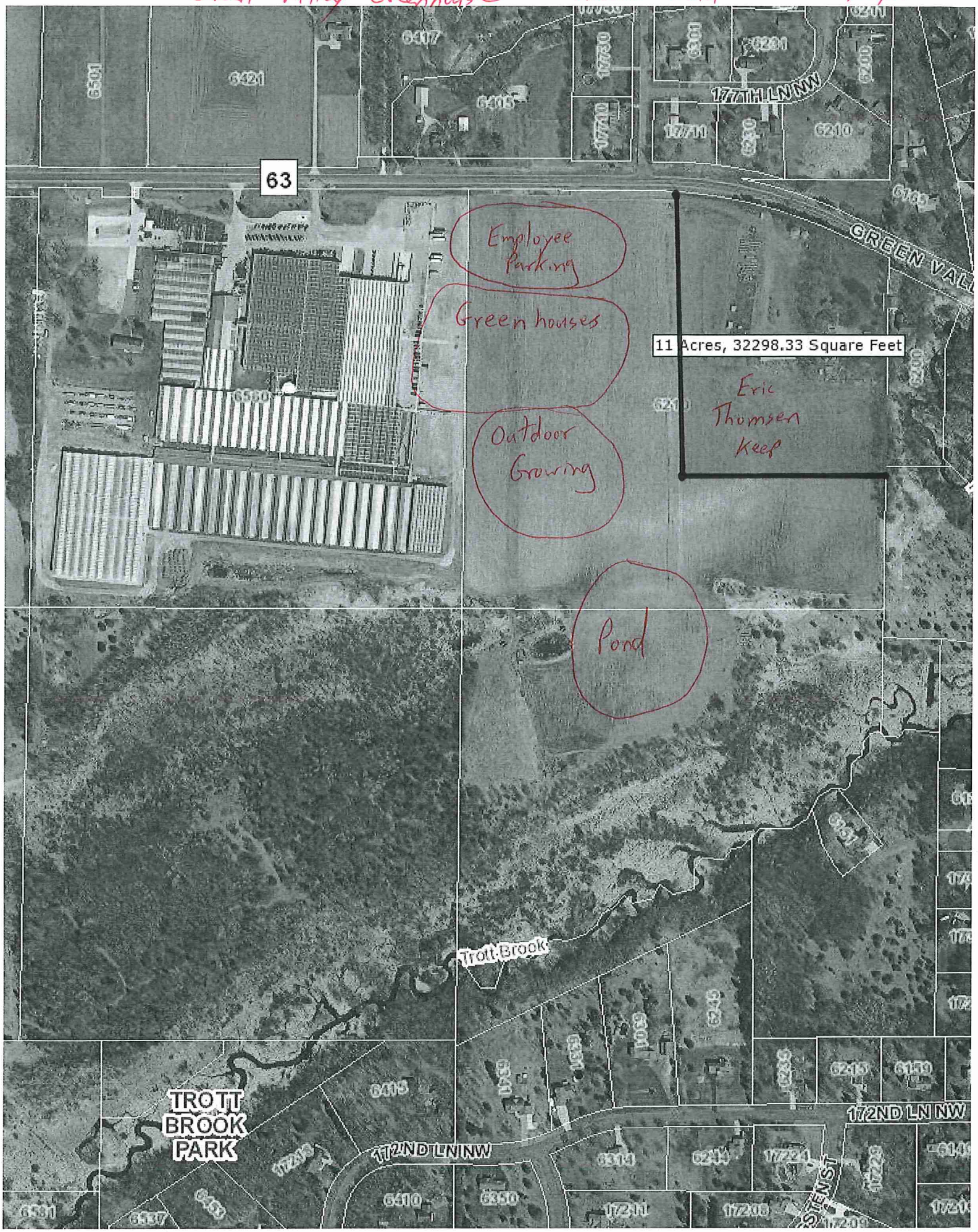
Attachments

Green Valley Greenhouse Planning

Form Review

Inbox	Reviewed By	Date
Tim Gladhill (Originator)	Tim Gladhill	03/31/2017 11:26 AM
Form Started By: Tim Gladhill		Started On: 03/30/2017 10:00 AM
Final Approval Date: 03/31/2017		

Green Valley Greenhouse - Sketch Plan 3/15/17


63
177TH LN NW
GREEN VALL
Employee Parking
Greenhouses
Outdoor Growing
11 Acres, 32298.33 Square Feet
Eric Thomsen Keep
Pond
Trott Brook
TROTT BROOK PARK
172ND LN NW
172ND LN NW
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Regular Planning Commission **5. 6.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title:

Consider Architectural Recommendations for Aeon Ramsey Housing Development

Purpose/Background:

In May 2016, the Planning Commission reviewed a concept for a new apartment building to be located in The COR. The City Council entered into a Purchase Agreement with Aeon for a parcel north of The Draw Park and Amphitheater. The project has secured financing, and is about to enter into the design stage. Before design, Staff desires to discuss architecture recommendations, since the project is located in The COR.

Notification:

Notification has not yet been provided.

Observations/Alternatives:

Attached to the case is the architectural package and COR Design Framework. The project is located within the COR-4c Sub-District (intended for higher density developments/apartments).

Funding Source:

This case is being handled as part of normal Staff duties.

Recommendation:

No action is being requested.

Action:

No action is being requested. Staff is seeking general feedback on the architectural package before official design review.

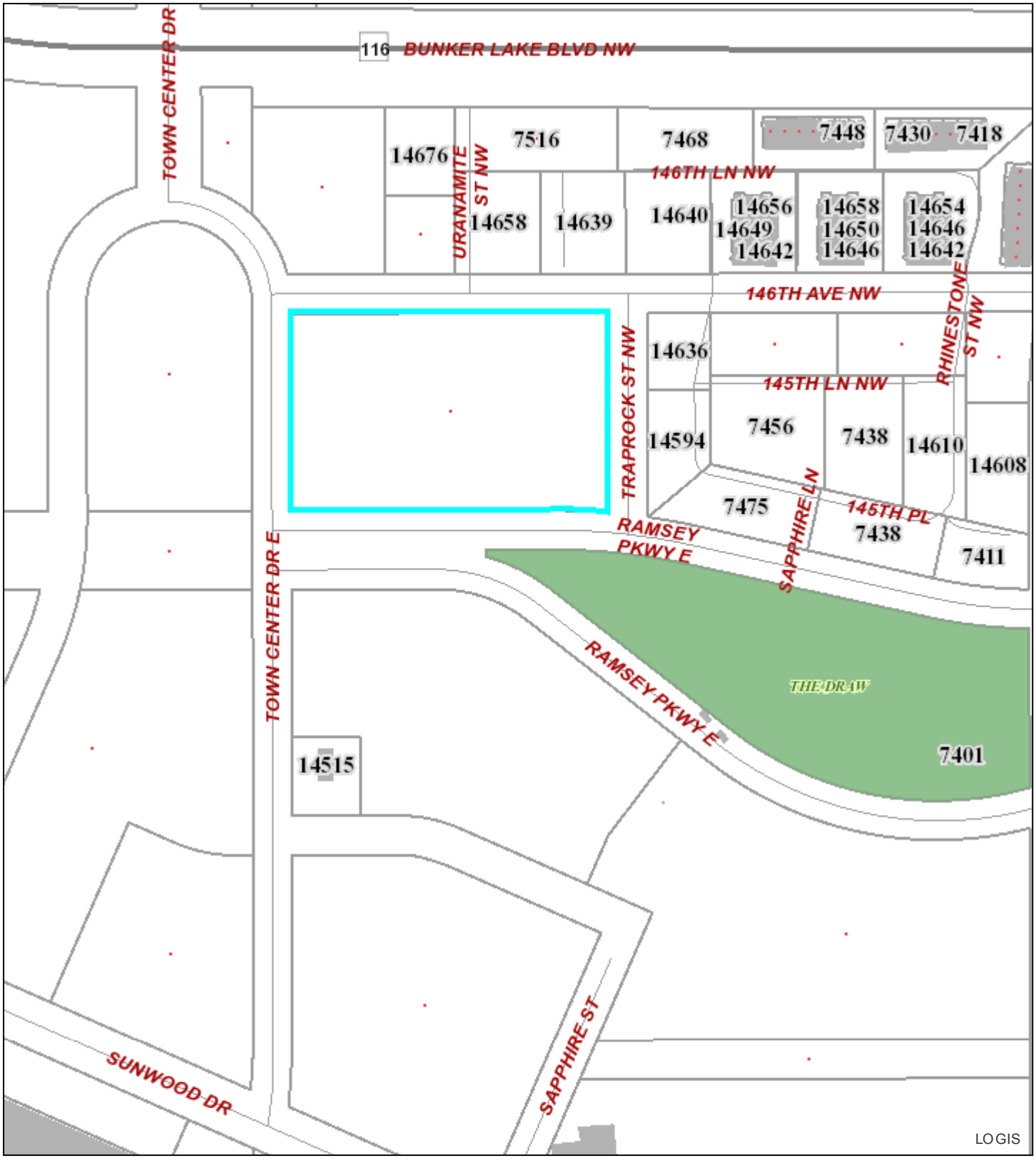
Attachments

Site Location Map

Architectural Package

Form Review

Inbox	Reviewed By	Date
Chris Anderson	Chris Anderson	03/31/2017 11:35 AM
Tim Gladhill (Originator)	Tim Gladhill	03/31/2017 11:41 AM
Form Started By: Tim Gladhill		Started On: 03/30/2017 08:08 AM
Final Approval Date: 03/31/2017		



City of RAMSEY

Aeon Purchase Agreement

28-32-25-13-0033

Legend

Site

Parcels

N

Print Date: April 29, 2016

0 380 760 Feet

Transit — Miles

P 1. Veterans Drive & Ramsey Park & Ride 0.55

T 2. Ramsey Station & Platform 0.6

Parks

1. The Draw 0.0
2. Mississippi West Park 0.47
3. Cottonwood Park 0.8
4. Pelzer Park 0.9

Education

1. PACT Charter School 0.34

Civic Facilities

1. Ramsey City Fire Departments 0.22
   Ramsey Police Department 0.22
   Anoka County License Bureau 0.22

Clinics

1. Metro Dental Care 0.22
2. Northwest Metro VA Clinic 0.25
3. Allina Health Ramsey Clinic 0.41
4. Barnett Family Dentistry 0.55
5. Ramsey Eye Clinic 0.55
6. Pine Ridge Pet Care 0.6

Grocery / Dining

1. The Lunch Box 0.2
1. Corborn's Super Store 0.5
2. Subway 0.45
3. Caribou 0.55
4. Acapulco Restaurant 0.55

Other

1. Anytime Fitness 0.45
2. Crossfit Ursa 1.0
3. Anoka Ramsey Farm & Garden Center 0.44

URBANWORKS ARCHITECTURE

aeon Homes for Generations

Ramsey Apartments

RAMSEY, MN | 03.29.2017 | 16-0011

N

1 VICINITY MAP

URBANWORKS ARCHITECTURE

aeon Homes for Generations

Ramsey Apartments

RAMSEY, MN | 03.29.2017 | 16-0011

N

1" = 50'-0"

2 SITE PLAN

SOUTH ELEVATION

EAST ELEVATION

1” = 20’

URBANWORKS ARCHITECTURE

aeon Homes for Generations

Ramsey Apartments

RAMSEY, MN | 03.29.2017 | 16-0011

BUILDING ELEVATIONS

NORTH ELEVATION

WEST ELEVATION

URBANWORKS ARCHITECTURE

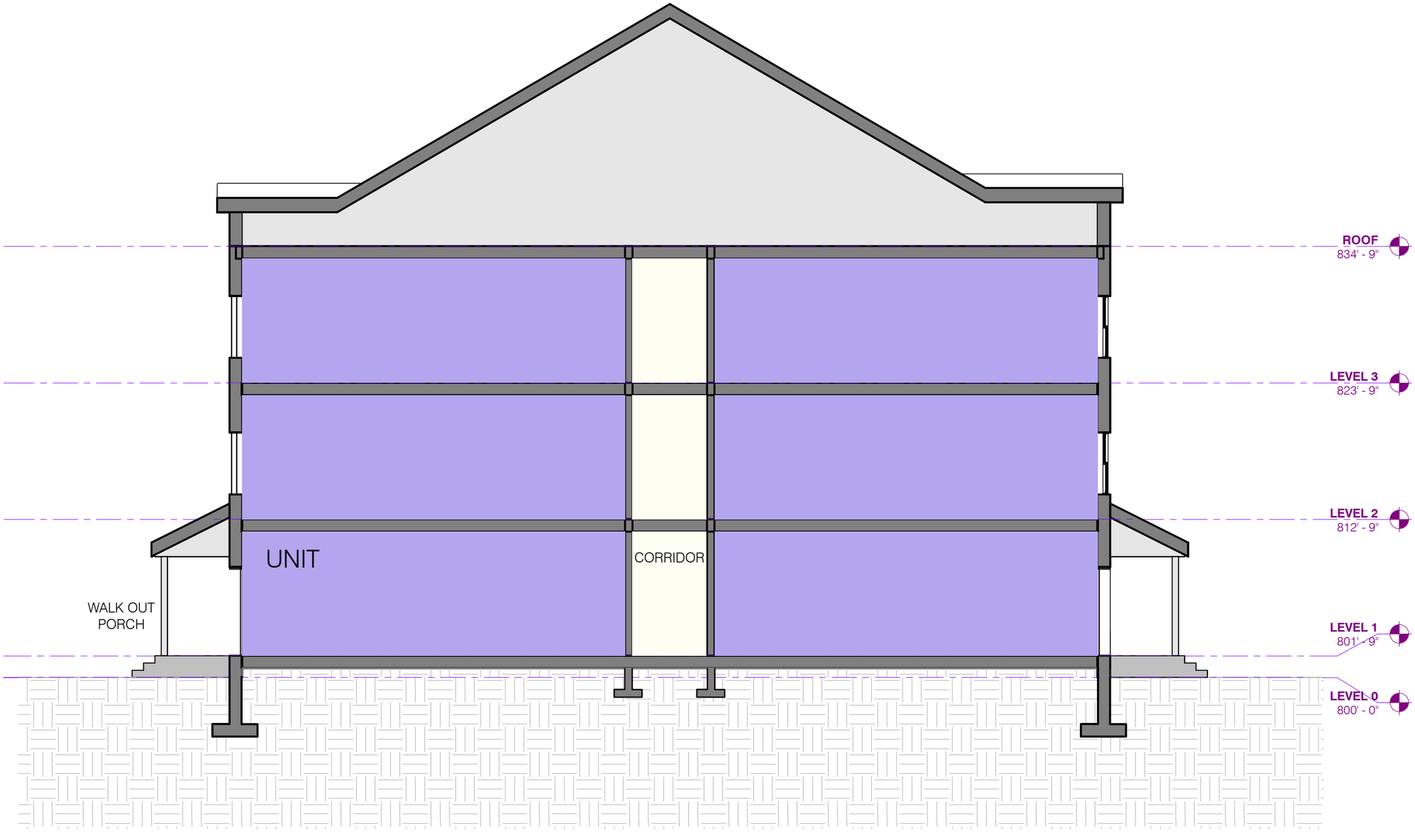
aeon Homes for Generations

Ramsey Apartments

RAMSEY, MN | 03.29.2017 | 16-0011

1" = 20'

BUILDING ELEVATIONS



URBANWORKS ARCHITECTURE

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Ramsey Apartments

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1/8" = 1'-0"

BUILDING SECTION

URBANWORKS ARCHITECTURE

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PERSPECTIVE VIEW
LOOKING SOUTH

URBANWORKS ARCHITECTURE

aeon Homes for Generations

Ramsey Apartments

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PERSPECTIVE VIEW
LOOKING EAST

URBANWORKS ARCHITECTURE

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RAMSEY, MN | 03.29.2017 | 16-0011

PERSPECTIVE VIEW
SOUTH EAST CORNER

Regular Planning Commission **5. 7.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title:

Review Oakwood Development Concept (Levin Property)

Purpose/Background:

The purpose of this case is to review a concept proposed by Oakwood Development for a property north of Estates of Silver Oaks located along Highway 47. This is for presentation and discussion only. Staff has not completed an official review. This project would require a Comprehensive Plan Amendment to expand the Metropolitan Urban Service Area (MUSA). Staff is awaiting final decision by the Metropolitan Council on two similar amendments (Brookfield 8th Addition; Woodlands 4th Addition) to see how that might impact this request.

Notification:

Notification has not been provided.

Observations/Alternatives:

This is an opportunity for Oakwood Development to present to the Planning Commission prior to an official submittal and discuss key sticking points. A more robust review process will follow, with public comment.

Funding Source:

This case is being handled as part of normal Staff duties.

Recommendation:

No action being requested.

Action:

No action being requested.

Attachments

Site Location Map

Concept Plan

Form Review

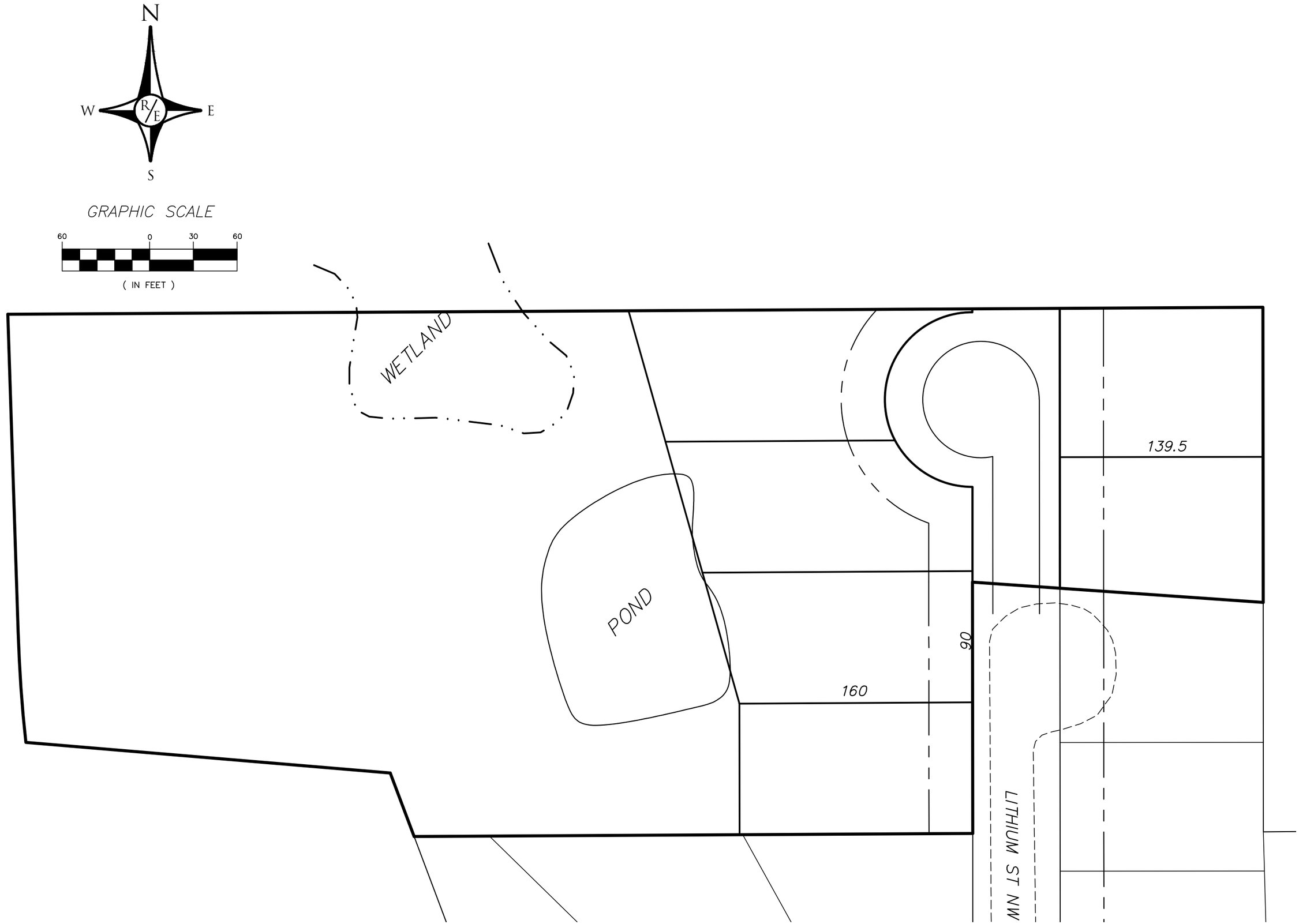
Inbox	Reviewed By	Date
Chris Anderson	Chris Anderson	03/31/2017 11:57 AM
Tim Gladhill (Originator)	Tim Gladhill	03/31/2017 12:54 PM
Form Started By: Tim Gladhill		Started On: 03/30/2017 09:01 AM
Final Approval Date: 03/31/2017		

Levin Property

Oakwood Development Concept

Aerial Photo: Flown Spring of 2014

N
W
R/E
E
S
GRAPHIC SCALE
60
0
30
60
(IN FEET)
WETLAND
POND
HWY 47
160
90
139.5
LITHIUM ST NW


N
W
R/E
E
S
GRAPHIC SCALE
60
0
30
60
(IN FEET)
WETLAND
POND
HWY 47
139.5
90
160
LITHIUM ST NW

Regular Planning Commission **5. 8.**

Meeting Date: 04/06/2017

By: Chris Anderson, Community Development

Information

Title:

PUBLIC HEARING: Consider Ordinance #17-04 Amending Irrigation Requirements (Project #17-104)

Purpose/Background:

During the early part of this year, the Environmental Policy Board (EPB) discussed a potential ordinance amendment regarding irrigation requirements for multi-family and commercial/industrial developments. The intention originally was simply to eliminate the City Code requirement that in-ground irrigation systems be installed in all multi-family and commercial/industrial projects. However, based on information received at their January meeting from a guest speaker, the EPB directed Staff to revise the Ordinance so that it also stipulates that *if* an irrigation system is installed (including single family parcels), it shall be equipped with a rain sensor (per state statute) as well as one or more water efficient technologies. This could include, but would not be limited to, a smart controller, soil moisture sensor(s), and/or an evapotranspiration (ET) sensor(s). This provides enough flexibility so that as future advances in water efficient irrigation technologies are developed, it will not require additional ordinance amendments.

Notification:

The Public Hearing for the proposed ordinance was properly published in the City's Official Newsletter.

Observations/Alternatives:

The cost of 'smart', water efficient technologies has come down as they have become more commonplace. Again, based on input from a guest speaker from Conserva Irrigation, including a smart controller, for example, to a new irrigation system, only adds about $250-$350 to the overall cost. It is more expensive to retrofit existing systems with the more water efficient technologies, approximately $650-$750. However, the Return on Investment (ROI) for a standard residential system could be realized relatively quickly, maybe in as few as 2-4 years (and would be even quicker on larger, commercial systems).

As water supply continues to be a prominent concern for the City and as the 'smart' technologies become more commonplace (and therefore with prices coming down), the EPB believes that requiring water efficient technologies is appropriate. However, the EPB has also noted that they want to ensure that this is enforceable. At this time, it does not appear that it could be addressed through any existing building or plumbing inspection, as it is common that the in-ground system is not yet installed when the backflow preventer inspection is done. This inspection will be incorporated into the standard landscape inspection (verifying that yard is established and required trees are planted) when part of a new construction project (majority of irrigation permits) or as a stand-alone inspection for those systems that are not part of a new construction project.

A draft of this Ordinance was reviewed with the Planning Commission at its regular March meeting. There have been no revisions to the document since that time.

The EPB is recommending adoption of Ordinance #17-04.

Funding Source:

This is being handled as part of Staff's regular duties.

Action:

Motion to recommend City Council adopt Ordinance #17-04 eliminating the requirement for in-ground irrigation systems in any zoning district and requiring any newly installed irrigation system to have one or more water efficient technologies.

Attachments

Redlined Sections
EPB Meeting Minutes Dated January 18, 2017
EPB Meeting MInutes Dated Feb. 22, 2017
DRAFT Planning Commission Meeting Minutes Dated March 2, 2017
Ordinance #17-04

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	03/31/2017 11:29 AM
Form Started By: Chris Anderson		Started On: 03/30/2017 01:51 PM
Final Approval Date: 03/31/2017		

Sec. 117-111. - R-1 Residential District.

(g) *General R-1 residential performance standards.*

(1) *Fences.*

a. *Height.* Fencing or walls (except retaining walls) located in the required front yard setback shall not exceed four feet in height except for "ornamental fences" as defined in section 117-1. Fencing or walls located in the side or rear yard shall not exceed eight feet in height. A zoning permit is required for all fences that are not addressed by the Minnesota State Building Code.

b. *Materials and construction.* Fences shall be constructed in a workmanlike manner and of substantial material reasonably suited for its intended purpose. Fencing material shall consist only of wood, chain link, wrought iron, maintenance free vinyl, aluminum, or steel. Any other material must be approved by the zoning administrator prior to installation.

1. No boards, planks, or panels shall be larger than 12 inches in width.

2. Link fences shall be constructed such that no barbed ends shall be at the top.

(i) Agricultural uses.

A. Fences may be constructed of barbless wire or have the capability to carry an electric charge to accommodate agricultural activities and the raising of livestock and animals as defined by chapter 10, Animals. Lots of record as of July 1, 2002, within the MUSA that are currently used for agricultural activities or the raising of livestock and animals also qualify under this provision.

B. Electric fences must be set back a minimum of three feet from property lines and must be posted as being electric.

C. A sketch drawing shall be submitted to the city showing the proposed location of an electric fence.

3. Fence framing must face inward on the fence owner's lot.

c. *Location.* Fencing must be located 100 percent on the fence owner's lot and it is the responsibility of the fence owner to accurately locate property boundaries.

1. For corner lots, no fence shall be located within the vision clearance triangle as described in section 117-348.

2. The zoning administrator may require the owner of the property upon which a fence will be constructed to establish the boundary lines of the property by a survey thereof to be made by any registered land surveyor.

(2) *Garbage receptacle storage.* Outdoor garbage receptacles serving multifamily units must be in either the rear or side yard and must be screened from public view and adjacent lots.

(3) *Lot landscaping.*

a. *Number of plantings.* The minimum number of overstory trees on any given lot shall be as required below:

Required planting types	Required number of plantings
Overstory deciduous/coniferous trees	2 trees per dwelling unit

b. *Minimum size of plantings.* Required trees shall be of the following minimum planting size:

Planting Type	Size
Deciduous trees	1-inch diameter as measured six inches above ground
Coniferous trees	5 feet in height

c. *Planting types.* Acceptable plantings shall be determined by the city planting schedule. The compliment of trees fulfilling the landscaping requirements shall not be less than 25 percent deciduous and not less than 25 percent coniferous.

(4) *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

a. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

b. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

(5) *Lighting.* Lighting used to illuminate an off-street parking area, sign or structure, shall be arranged to deflect light away from adjacent residential districts or public streets. Bulbs emitting in excess of 3,000 lumens (150 watts) shall be directed so that the bulb is not visible from off the property where the light source is located.

(~~5~~6) *Exterior building materials.* The type of building materials used on exterior walls on all structures in the R-1 Residential District shall be face brick, natural stone, stucco, aluminum, steel, or vinyl siding, wood, masonite products or other compatible residential materials that may be approved by the city.

Sec. 117-112. - R-2 Residential District.

(e) *General R-2 residential performance standards.*

(6) *Lot landscaping.*

a. *Minimum landscaping requirements.* All open space areas of a lot which are not used or improved for required parking areas, drives or storage shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the lot. A reasonable attempt should be made to preserve as many existing trees as practicable in order to incorporate the trees into the development.

b. *Minimum planting requirements.* The minimum number of plantings required shall be determined based on crown or canopy cover. To fulfill the planting requirements, a combination of trees and shrubs shall meet or exceed the minimum required canopy cover square footage. The minimum canopy cover shall be calculated as follows:

1. Determine ratio of impervious area to entire site area.
2. Multiply the impervious area/site area ratio by the square footage of the pervious area to calculate the required canopy cover square footage for the project area.
3. The following formula shall be utilized to determine the average canopy cover of a species:

   [(Minimum + Maximum Spread) ÷ 4] ^{2} × π × (0.65 for preferred species or 0.50 for acceptable species, as identified in the Ramsey Tree Book).

c. *Minimum size of plantings.* Required trees shall be of the following minimum planting size:

Planting Type	Size
Deciduous trees	1-inch diameter as measured six inches above ground
Coniferous trees	5 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1-inch diameter as measured six inches above ground

d. *Planting types.* Acceptable and preferred plantings shall be identified in the Ramsey Tree Book. The compliment of trees fulfilling the landscaping requirements shall not be less than 25 percent deciduous and not less than 25 percent coniferous. No more than 25 percent of the canopy cover requirements shall be fulfilled with the use of shrubs and ornamental trees.

e. *Irrigation.* If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~All landscaped areas shall include underground irrigation systems. Exceptions to this requirement include natural areas that are left undisturbed.~~

f. *Open space.* Each townhouse development shall have at a minimum, 40 percent open space for the enjoyment of its residents that may be held as private lots or in common areas. Qualifying areas include grassed lawns, landscape areas, gardens, natural areas, landscape rock, mulch, wetlands, and ponding areas. Of the 40 percent open space, ten percent is to be dedicated as an identifiable common area for use by residents of the development.

Sec. 117-113. - R-3 Residential District.

(e) *General R-3 residential performance standards.*

(5) *Lot landscaping.*

a. *Minimum landscaping requirements.* All open space areas of a lot which are not used or improved for required parking areas, drives or storage shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the lot. A reasonable attempt should be made to preserve as many existing trees as practicable in order to incorporate the trees into the development.

b. *Minimum planting requirements.* The minimum number of plantings required shall be determined based on crown or canopy cover. To fulfill the planting requirements, a combination of trees and shrubs shall meet or exceed the minimum required canopy cover square footage. The minimum canopy cover shall be calculated as follows:

1. Determine ratio of impervious area to entire site area.
2. Multiply the impervious area/site area ratio by the square footage of the pervious area to calculate the required canopy cover square footage for the project area.
3. The following formula shall be utilized to determine the average canopy cover of a species:

   [(Minimum + Maximum Spread) ÷ 4] ^{2} × π × (0.65 for preferred species or 0.50 for acceptable species, as identified in the Ramsey Tree Book).

c. *Minimum size of plantings.* Required trees shall be of the following minimum planting size:

	Size
Deciduous trees	1-inch diameter as measured six inches above ground
Coniferous trees	5 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1-inch diameter as measured six inches above ground

d. *Planting types.* Acceptable and preferred plantings shall be identified in the Ramsey Tree Book. The compliment of trees fulfilling the landscaping requirements shall not be less than 25 percent deciduous and not less than 25 percent coniferous. No more than 25 percent of the canopy cover requirement shall be fulfilled with the use of shrubs and ornamental trees.

~~e.~~ e. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~*Irrigation.* All landscaped areas shall include underground irrigation systems. Exceptions to this requirement include natural areas that are left undisturbed.~~

f. *Open space.* Each townhouse development shall have at a minimum, 40 percent open space for the enjoyment of its residents that may be held as private lots or in common areas. Qualifying areas include grassed lawns, landscape areas, gardens, natural areas, landscape rock, mulch, wetlands, and ponding areas. Of the 40 percent open space, ten percent is to be dedicated as an identifiable common area for use by residents of the development.

Sec. 117-114. - B-1 General Business District.

(e) *Standards.* (Also refer to article II, division 6 of this chapter for general performance standards.)

(14) Landscaping and buffering.

a. Site landscaping.

1. Minimum landscaping requirements. All open space areas of a lot which are not used or improved for required parking areas, drives or storage shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the site. A reasonable attempt should be made to preserve as many existing trees as is practicable and to incorporate them into the development. For each existing significant tree retained one overstory tree can be deducted from the minimum requirements.

2. Number of plantings. The minimum number of overstory trees on any given site shall be as indicated below. These are minimum requirements that are typically supplemented with other understory trees, shrubs, flowers and ground covers deemed appropriate for a complete quality landscape treatment of a site.

	Business Districts
Deciduous/coniferous trees	1 per 50 lineal feet of site perimeter, or 1 tree per 1,000 square feet of building footprint, whichever is greater. For expansions to buildings, 1 additional tree is required for each 1,000 square feet of additional building footprint area.
Shrubs	1 per 30 feet of site perimeter or 1 per 300 square feet of building footprint area, whichever is greater.

3. Minimum size of plantings. Landscaping material shall be of the following minimum planting size:

Landscape Material	Size
Deciduous trees	2.5 inches diameter as measured three feet above ground
Coniferous trees	6 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1.5 inches diameter as measured three feet above ground

4. Planting types.

   (i) Acceptable plantings shall be determined by the City of Ramsey Tree Book.

   (ii) The compliment of trees fulfilling the landscaping requirements shall be not less than 25 percent deciduous and lot less than 25 percent coniferous. No more than 25 percent of the required plantings shall consist of ornamental trees.

   (iii) For every 35 feet of public road frontage, one overstory tree shall be planted on the private property adjacent to the public road right-of-way.

b. *Topsoil.* All exposed ground areas of a site not occupied by building, parking or storage, excluding natural areas that are left undisturbed, shall be covered with four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348.

c. Sodding and ground cover. All areas not otherwise improved in accordance with approved site plans shall be finished with sod up to the edge of improved streets. Any alternative to the sod requirement shall require city council approval.

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~Irrigation.~~

~~1. All landscaping areas required under this section shall include underground irrigation systems.~~

~~2. Exceptions include natural areas that are left undisturbed.~~

Sec. 117-115. - B-2 Highway Business District.

(e) *Standards.* (Also refer to article II, division 6 of this chapter for general performance standards).

(16) Landscaping and buffering.

a. Site landscaping.

1. Minimum landscaping requirements. All open space areas of a lot which are not used or improved for required parking areas, drives or storage shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the site. A reasonable attempt should be made to preserve as many existing trees as is practicable and to incorporate them into the development. For each existing significant tree retained one overstory tree can be deducted from the minimum requirements.

2. Number of plantings. The minimum number of overstory trees on any given site shall be as indicated below. These are minimum requirements that are typically supplemented with other understory trees, shrubs, flowers and ground covers deemed appropriate for a complete quality landscape treatment of a site.

	Business Districts
Deciduous/coniferous trees	1 per 50 lineal feet of site perimeter or 1 tree per 1,000 square feet of building footprint area, whichever is greater. For expansions to buildings, 1 additional tree is required for each 1,000 square feet of additional building area.
Shrubs	1 per lineal feet of site perimeter or 1 per 300 square feet of building footprint area, whichever is greater.

3. Minimum size of plantings. Landscaping material shall be of the following minimum planting size:

Landscape Material	Size
Deciduous trees	2.5 inches diameter as measured three feet above ground
Coniferous trees	6 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1.5 inches diameter as measured three feet above ground

4. Planting Types.

   (i) Acceptable plantings shall be determined by the City of Ramsey Tree Book.

   (ii) The compliment of trees fulfilling the landscaping requirements shall be not less than 25 percent deciduous and not less than 25 percent coniferous. No more than 25 percent of the required plantings shall consist of ornamental trees.

   (iii) For every 35 feet of public road frontage, one overstory tree shall be planted on the private property adjacent to the public road right-of-way.

b. *Topsoil.* All exposed ground areas of a site not occupied by building, parking or storage, excluding natural areas that are left undisturbed, shall be covered with four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348.

c. Sodding and ground cover. All areas not otherwise improved in accordance with approved site plans shall be finished with sod up to the edge of improved streets. Any alternative to the sod requirement shall require city council approval.

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~Irrigation.~~

~~1. All landscaping areas required under this section shall include underground irrigation systems.~~

~~2. Exceptions include natural areas that are left undisturbed.~~

Sec. 117-116. - E-2 Employment District.

(e) *Standards.* (Also refer to article II, division 6 of this chapter for general performance standards).

(3) Landscaping and buffering.

a. Site landscaping.

1. Minimum landscaping requirements. All open space areas of a lot which are not used or improved for required parking areas, drives or storage shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the site. A reasonable attempt should be made to preserve as many existing trees as is practicable and to incorporate them into the development. For each existing significant tree retained one overstory tree can be deducted from the minimum requirements.

2. Number of plantings. The minimum number of overstory trees on any given site shall be as indicated below. These are minimum requirements that are typically supplemented with other understory trees, shrubs, flowers and ground covers deemed appropriate for a complete quality landscape treatment of a site.

Type	Number of Plantings
Deciduous/coniferous trees	1 per 50 lineal feet of site perimeter or 1 tree per 1,000 square feet of building footprint area, whichever is greater. For expansions to buildings, 1 tree is required for each 1,000 square feet of additional building footprint area.
Shrubs	1 per 30 lineal feet of site perimeter or 1 per 300 square feet of building footprint area, whichever is greater.

3. Minimum size of plantings. Landscaping material shall be of the following minimum planting size:

Type	Size
Deciduous trees	2.5 inches diameter as measured three feet above ground
Coniferous trees	6 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1.5 inches diameter as measured three feet above ground

4. Planting types.

(i) Acceptable plantings shall be determined by the City of Ramsey Tree Book.

(ii) The compliment of trees fulfilling the landscaping requirements shall be not less than 25 percent deciduous and lot less than 25 percent coniferous. No more than 25 percent of the required plantings shall consist of ornamental trees.

(iii) For every 35 feet of public road frontage, one overstory tree shall be planted on the private property adjacent to the public road right-of-way.

b. *Topsoil.* All exposed ground areas of a site not occupied by building, parking or storage, excluding natural areas that are left undisturbed, shall be covered with four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348.

c. Sodding and ground cover. All areas not otherwise improved in accordance with approved site plans shall be finished with sod up to the edge of improved streets. Any alternative to the sod requirement shall require city council approval.

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~Irrigation.~~

~~1. All landscaping areas required under this section shall include underground irrigation systems.~~

~~2. Exceptions include natural areas that are left undisturbed.~~

Sec. 117-117. - E-1 Employment District.

(e) *Standards.* (Also refer to article II, division 6 of this chapter for general performance standards)

(3) *Landscaping and buffering.*

a. *Site landscaping.*

1. *Minimum landscaping requirements.* All open space areas of a lot which are not used or improved for required parking areas, drives or storage shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the site. A reasonable attempt should be made to preserve as many existing trees as is practicable and to incorporate them into the development. For each existing significant tree retained one overstory tree can be deducted from the minimum requirements.

2. *Number of plantings.* The minimum number of overstory trees on any given site shall be as indicated below. These are minimum requirements that are typically supplemented with other understory trees, shrubs, flowers and ground covers deemed appropriate for a complete quality landscape treatment of a site.

Type	Number of Plantings
Deciduous/coniferous trees	1 per 50 lineal feet of site perimeter or 1 tree per 1,000 square feet of building footprint area, whichever is greater. For expansions to buildings, 1 tree is required for each 1,000 square feet of additional building footprint area.
Shrubs	1 per 30 lineal feet of site perimeter or 1 per 300 square feet of building footprint area, whichever is greater.

3. *Minimum size of plantings.* Landscaping material shall be of the following minimum planting size:

Type	Size
Deciduous trees	2.5 inches diameter as measured three feet above ground
Coniferous trees	6 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1.5 inches diameter as measured three feet above ground

4. *Planting types.*

   (i) Acceptable plantings shall be determined by the City of Ramsey Tree Book.

   (ii) The compliment of trees fulfilling the landscaping requirements shall not be less than 25 percent deciduous and lot less than 25 percent coniferous. No more than 25 percent of the required plantings shall consist of ornamental trees.

   (iii) For every 35 feet of public road frontage, one overstory tree shall be planted on the private property adjacent to the public road right-of-way.

b. Topsoil. All exposed ground areas of a site not occupied by building, parking or storage, excluding natural areas that are left undisturbed, shall be covered with four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348.

c. *Sodding and ground cover.* All areas not otherwise improved in accordance with approved site plans shall be finished with sod up to the edge of improved streets. Any alternative to the sod requirement shall require city council approval.

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

   1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

   2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~*Irrigation.*~~

~~1. All landscaping areas required under this section shall include underground irrigation systems.~~

~~2. Exceptions include natural areas that are left undisturbed.~~

Sec. 117-120. - H-1 Highway 10 Business District.

(e) *Standards.* (Also refer to article II, division 6 of this chapter for general performance standards.)

(14) Landscaping and buffering.

a. Site landscaping.

1. Minimum landscaping requirements. All open space areas of a lot which are not used or improved for required parking areas, drives or display areas shall be landscaped with a combination of overstory trees, ornamental trees, shrubs, flowers, ground cover, decorative walks, or other similar site design materials in a quantity and placement suitable for the site. A reasonable attempt should be made to preserve as many existing trees as is practicable and to incorporate them into the development. For each existing significant tree retained one overstory tree can be deducted from the minimum requirements.

2. Number of plantings. The minimum number of overstory trees on any given site shall be as indicated below. These are minimum requirements that are typically supplemented with other understory trees, shrubs, flowers and ground covers deemed appropriate for a complete quality landscape treatment of a site.

	Business Districts
Deciduous/coniferous trees	1 per 50 lineal feet of site perimeter or 1 tree per 1,000 square feet of building footprint area, whichever is greater. For expansions to buildings, 1 additional tree is required for each 1,000 square feet of additional building footprint area.
Shrubs	1 per 30 lineal feet of site perimeter or 1 per 300 square feet of building footprint area, whichever is greater.

3. Minimum size of plantings. Landscaping material shall be of the following minimum planting size:

Landscape Material	Size
Deciduous trees	2.5 inches diameter as measured three feet above ground
Coniferous trees	6 feet in height
Deciduous shrubs	2 feet in height
Evergreen shrubs	2 feet in height or 2 feet in width, whichever applies
Ornamental trees	1.5 inches diameter as measured three feet above ground

4. Planting types:

   (i) Acceptable plantings shall be determined by the City of Ramsey Tree Book.

   (ii) The compliment of trees fulfilling the landscaping requirements shall be not less than 25 percent deciduous and lot less than 25 percent coniferous. No more than 25 percent of the required plantings shall consist of ornamental trees.

   (iii) For every 35 feet of public road frontage, one overstory tree shall be planted on the private property, adjacent to the public road right-of-way.

b. *Topsoil.* All exposed ground areas of a site not occupied by building, parking or storage, excluding natural areas that are left undisturbed, shall be covered with four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348.

c. Sodding and ground cover. All areas not otherwise improved in accordance with approved site plans shall be finished with sod up to the edge of improved streets. Any alternative to the sod requirement shall require city council approval.

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~Irrigation.~~

~~1. All landscaping areas required under this section shall include underground irrigation systems.~~

~~2. Exceptions include natural areas that are left undisturbed.~~

Sec. 117-121. - B-3 Business District.

(g) *Standards.*

(2) *Performance standards.*

a. *Building design.* Building massing shall be varied throughout the development site and should include building components such as columns, articulated rooflines and facades, specialized window and door treatments, and unique architectural details. A common architectural theme shall be employed throughout the development site, with an emphasis on integration of color, style, and materials between buildings.

b. *Building materials.* All exterior wall surfaces shall be brick, glass, stone, stucco, or pre-cast concrete units whose surface has been integrally treated with an applied decorative material, texture, or color. Other exterior materials may be used as approved by the planning commission and city council. Exterior materials shall not include smooth-faced concrete block, steel panels, fiberglass or vinyl siding. The use of metal for architectural accents may be permitted. A color palette for all materials shall be included in the site plan submittal.

1. At least 50 percent of the front facade and street-facing facades must be comprised of brick.

2. Windows must be utilized extensively on the front facade of all buildings to allow visual access into the store. Windows are also required on all facades with street frontage. For buildings where this is not feasible, additional architectural details and/or landscaping will be required.

c. *Building orientation.* Buildings should be oriented to face public streets where possible. When this is not possible, additional landscaping and/or improved building design will be required to improve street-facing facades. Multiple buildings are permitted on one lot, if approved as part of the master plan.

d. *Street system.* The street system internal to the development site is an essential element of the master plan. The new system must connect to existing city streets.

e. *Pedestrian circulation/sidewalks/trails.* A comprehensive pedestrian network is required in the overall master plan for this zoning district. While this zoning district is intended to accommodate larger-scale retail uses, safe pedestrian access is required throughout the zoning district and between the district and adjacent neighborhoods. Sidewalks are required on both sides of all streets within the zoning district. Crosswalks are required where all sidewalks meet the street and shall be indicated with paver bricks or integrally-treated pavement rather than paint.

f. Landscaping. The master plan shall include a landscape plan for the entire development site. Landscaping shall be integrated throughout the site and shall include a combination of overstory trees, ornamental trees, shrubs, flowers (planting beds and raised planters), ground cover, and other landscaping elements. The required number of plantings will be site specific and will be determined largely by the total pervious area of a site. Landscaping should be used to soften and shade parking areas, line sidewalks and streets, accent building entrances, and break up large building facades. Plant selection should focus on functionality and take into account characteristics such as tolerance of soil compaction, poor drainage, and deicing salts. All landscaping shall be over at least four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

~~*Landscaping.* The master plan shall include a landscape plan for the entire development site. Landscaping shall be integrated throughout the site and shall include a combination of overstory trees, ornamental trees, shrubs, flowers (planting beds and raised planters), ground cover, and other landscaping elements. The required number of plantings will be site specific and will be determined largely by the total pervious area of a site. Landscaping should be used to soften and shade parking areas, line sidewalks and streets, accent building entrances, and break up large building facades. Plant selection should focus on functionality and take into account characteristics such as tolerance of soil compaction, poor drainage, and deicing salts. All landscaping shall be over at least four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348, and all landscaped areas shall include underground irrigation systems.~~

g. *Stormwater.* The master plan shall include a stormwater plan for the entire development site. In addition to traditional stormwater management methods, low impact development (LID) strategies are encouraged throughout the development site, particularly in parking areas. Such methods might include special soil systems, pervious pavements, storm ceptors, underground storage, and bio-retention strips and cells (rain gardens).

h. *Parking areas.* A parking plan shall be included as part of the master site plan submittal. Parking lots, stalls, and drive accesses shall be designed to accommodate a variety of vehicle sizes and turning movements.

i. *Building service areas (loading docks, trash storage and removal).* Such areas shall be internal to the building wherever possible and in all cases constructed of the same exterior materials and screened from adjacent lots, public streets, and building entrances.

j. *Mechanical equipment.* All mechanical equipment associated with buildings must be completely screened from view, whether located on the roof or ground level.

k. *Outdoor storage.* All storage, including open storage, storage in containers, trailers, or similar enclosures, is prohibited, except as permitted under subsection (f) of this section.

l. *Lighting.* A lighting plan shall be included as part of the master plan submittal. Lighting must be used to illuminate off-street parking areas, signs, structures, and pedestrian walkways. The scale of lighting fixtures must be appropriate to the scale of what is proposed to be lighted. Fixtures must be arranged so that the bulb is not visible from outside the area proposed to be lighted by that fixture.

m. *Signs.* A sign plan shall be included as part of the master plan submittal. No temporary signs are permitted anywhere in the zoning district.

(Code 1978, § 9.20.28; Ord. No. 06-29, 8-8-2006; Ord. No. 07-04, 2-13-2007; Ord. No. 09-06, § 2(9.20.28), 4-28-2009; Ord. No. 10-04, § 2, 4-13-2010; Ord. No. 11-09, § 2, 6-28-2011)

ENVIRONMENTAL POLICY BOARD
CITY OF RAMSEY
ANOKA COUNTY
STATE OF MINNESOTA

On Wednesday, January 18, 2017, the Environmental Policy Board (EPB) met in the Lake Itasca Conference Room at the Ramsey Municipal Center, 7550 Sunwood Drive N.W., Ramsey, Minnesota.

Members Present:	Chairperson Thomas Stodola (arrived at 6:34 p.m.) Board Member Colleen Anderson Board Member Reid Bernard Board Member Jane Covart Board Member Lucas Trossen Board Member Michael Valentine
Members Absent:	Board Member Michael Hiatt
Also Present:	City Planner Chris Anderson Councilmember John LeTourneau

1. CALL TO ORDER

Vice Chairperson Valentine called the meeting to order at 6:32 p.m.

2. CITIZEN INPUT

None.

3. APPROVE AGENDA

Motion by Board Member Covart and seconded by Board Member Bernard to approve the agenda as submitted.

Motion carried. Voting Yes: Vice Chairperson Valentine, Board Member Covart, Bernard, Anderson, and Trossen. Voting No: None. Absent: Commissioner Hiatt and Chairperson Stodola.

4. APPROVE MINUTES

4.01: Approve Meeting Minutes December 19, 2016

Motion by Board Member Covart and seconded by Board Member Trossen to approve the regular meeting minutes dated December 19, 2016.

Motion carried. Voting Yes: Vice Chairperson Valentine, Board Member Covart, Trossen, Anderson, and Bernard. Voting No: None. Absent: Commissioner Hiatt and Chairperson Stodola.

5. POLICY BOARD BUSINESS

5.01: Receive Presentation on Irrigation System Components and an Overview of Incentive Programs

City Planner Anderson introduced the topic and guest speaker Russ Jundt of Conserva Irrigation, and stated that Mr. Jundt would provide a presentation on water conserving technologies available for irrigation systems and an overview of Minnesota Nursery and Landscape Association (MNLA) incentive/rebate programs that encourage use of these newer technologies.

Russ Jundt, Conserva Irrigation, shared a presentation that outlined his background and explained water conservation as it relates to irrigation in residential, commercial, and municipal areas with over 46 million residential irrigation systems nationwide. He stated irrigation systems waste more water than any other source.

Councilmember John LeTourneau asked if the waste comes from systems not being designed properly.

Mr. Jundt explained components are very inexpensive and that every head needs to be check-valved, which is not an expensive upgrade. He said zoning needs to be done per micro-climates and that a smart controller is much better than a simple timer in saving water. He shared a sketch outlining zones versus time watering and explained how less watering is needed in April versus August which results in massive overwatering. Mr. Jundt explained how rain sensors operate like a "snooze alarm" and shuts off but then returns to programmed time resulting in overwatering. He said smart controllers can be programmed based on weather data by zip code which saves substantial amounts of water and shared an example in a Hugo homeowners association where over 2,200 sprinkler heads were broken in their 7,800 head system.

Mr. Jundt shared changing industry dynamics including landscaping demand, control consumption, increased pricing, fines, and penalties and said most water wasted is through irrigation systems. He shared how smart controllers can reduce water usage by 40-60% and that they developed a proprietary system where low scores provide motivation. He shared their partnerships with Toro and The Wyland Foundation which are dedicated to water conservation.

Mr. Jundt displayed samples of ET sensors and controllers and outlined the Metropolitan Council's water efficiency grant program and cities who offer rebates, adding the return on investment for commercial systems can be seen in days and residential systems within one to two seasons.

City Planner Anderson asked if ET sensors are different than soil moisture sensors.

Mr. Jundt said ET sensors are different as they operate based on 40 years of weather data.

Board Member Trossen inquired about the life expectancy of these controllers.

Mr. Jundt replied controllers are warrantied up to five years and that data is updated every year.

Chairperson Stodola asked how much would be added to a system in new construction.

Mr. Jundt said smart controllers cost $250-350 more than standard controllers on new installations.

Board Member Anderson clarified the total additional cost for an existing system to be retrofitted would be $475-675 and asked if one system is better than another.

Mr. Jundt said a system that includes a smart controller with an ET sensor would be better than just a soil moisture sensor and would result in the City saving a lot in water.

Informational; no action required.

5.02: Receive Update from Anoka County Community Health and Environmental Services Department related to Water Resources

City Planner Anderson introduced Bret Biernat, Anoka County Environmental Services (ACES) who would provide an update on water related initiatives/activities.

Mr. Biernat, ACES, shared his background beginning in 1991 with the ground water management act established in 1989 to address watershed management issues and creating the groundwater protection plan. He reviewed priorities and said Anoka County created a task force to prioritize water, including coordination of water resources protection and management. He said it is important not to work as silos and that Ramsey's citizen survey included very good scores rating the drinking water. Mr. Biernat reviewed the Board's priorities and outlined the County's Water Task Force statement as a committee charged with making water a priority. He said the wellhead protection act ensures no pollution sources and the Community Health Services Plan includes measurable goals such as well sealing to reduce pollution.

Mr. Biernat outlined the goal of reducing wells by two percent per year and to test private wells and collaborate better with all the organizations. He shared that the Irrigation Association has declared July as Smart Irrigation Month and reviewed community health issues including water quality and sustainable drinking water. Mr. Biernat shared how the County has provided water testing for homeowners since 1972 which is important from a public health standpoint and outlined how they can support the Board. He shared water conservation goals as a partner with WaterSense and the EPA and referred to their "KnowTheFlow" coordination tool website and outreach and education efforts. Mr. Biernat outlined drinking water protection and the Water Task Force focus and shared how the County can be an advocate for cities such as creating a well sealing video.

City Planner Anderson distributed a sign-up sheet for notification of Task Force meetings and offerings then referred to Ray Renner of Renner & Sons well drilling, who provided the Department of Health with well locations in Ramsey.

Mr. Biernat said the records were very helpful and that Mr. Renner's brother is on the Water Task Force.

City Planner Anderson shared how the City offers water testing kits at City Hall.

Mr. Biernat said he is pleased with this partnership as cities can distribute bottles for testing instead of plastic bags which provides better results.

City Planner Anderson inquired about WaterSense program obligations such as reporting requirements.

Mr. Biernat said an annual report is required for the EPA to promote water efficiency as a collaborative effort which could be done separately.

Mr. Jundt inquired about the fee for a water test.

Mr. Biernat said the cost is relatively inexpensive at $30 per test.

5.03: Consider DRAFT Ordinance #17-04 Eliminating the Requirement for In-Ground Irrigation in Multiple Zoning Districts

City Planner Anderson presented the staff report and draft ordinance to amend multiple sections of City Code to eliminate the in-ground irrigation requirement for multi-family and commercial/industrial projects. He explained this would not prohibit a project from including such a system, if they wished, but simply removes it as a required improvement. City Planner Anderson stated revisions can be made to this draft, if desired, based on the information received tonight about technological improvements to irrigation systems.

City Planner noted the proposed ordinance could be amended if the Board wishes to include language regarding smart technologies. He said due to the rescheduled meeting the public hearing notice deadlines could not be met so if brought forward the ordinance now it would be discussed at the March Planning Commission with Council consideration in March or possibly April. City Planner Anderson asked Mr. Jundt if the State Statute requirement refers to rain sensors only as it seems that it could be interpreted to require smart technologies.

Mr. Jundt said the Statute's intention was for rain sensors but the legislation is looking at broadening language to include any device affected by rain.

Chairperson Stodola said the ordinance drafted satisfies our direction and asked if staff is requesting the Board go further by requiring different technologies.

City Planner Anderson said that he was not requesting that but thought it should be discussed based on input from the Board last month. He said the timing would provide for an opportunity to include ET sensors, smart controllers, moisture control sensors and other technologies if the Board desired.

Chairperson Stodola confirmed the recommendation of incentives.

City Planner Anderson said staff intended that language would be formalized after the evening's discussion on Item 5.01 so staff will bring forward an outline for incentive programs for both retrofits and new systems and could include irrigation as well as indoor appliances and fixtures at a future meeting. He noted they now understand that outdoor water conservation provides the most return but that the Board could expand any type of rebate program.

Board Member Anderson said she would like to see incentives rather than rebates as it would provide better participation.

Chairperson Stodola said he is not advocating for incentivizing upgrades but would prefer language requiring smart sensors, ET sensor, etc. for new construction and at incentivizing retrofitting existing system.

Board Member Bernard agreed.

Board Member Trossen said he supported eliminating the requirement for systems but if someone is going to install a new system it should be water efficient.

Board Member Valentine agreed, stating the return on investment is huge.

City Planner Anderson noted an in-ground irrigation system is not required for single family home construction and asked for an estimate for multi-family/homeowner associations, and commercial/industrial projects.

Mr. Jundt said the cost is usually not much more and noted the return on investment for large systems is much quicker because of the larger water source.

Board Member Anderson referred to the need for fees and inspections and asked how we guarantee the system works.

City Planner Anderson said irrigation permits are currently required to ensure backflow preventers are installed but agreed that this is something that will need to be reviewed in greater detail.

Board Member Anderson suggested the requirements be included as part of the Certificate of Occupancy process.

Chairperson Stodola said more research is needed.

Board Member Covart confirmed the proposed ordinance is for new construction only for multi-family and homeowners associations.

City Planner Anderson said once the Board reaches consensus staff can include language on permitting processes.

Chairperson Stodola said the overall goal is to use less water and that he wants to be bold in their recommendation.

Board Member Trossen agreed, stating pricing makes this action obvious and suggested an incentive for retrofit.

City Planner Anderson said staff will develop an ordinance outlining requirements for single family, multi-family, commercial, and industrial projects. A potential incentive program for retrofitting existing systems will be explored and brought back at a future meeting.

Chairperson Stodola clarified incentives will not be included in the ordinance amendment but instead Staff will work to develop a program for retrofitting existings systems.

It was the consensus of the Environmental Policy Board to bring forward an ordinance for Council consideration outlining irrigation system requirements for all properties, including single family, multi-family, commercial, and industrial and separately develop an incentive program to encourage retrofitting existing irrigation systems with more water efficient components.

Mr. Jundt said he would offer proposed language for the ordinance and applauded the Board for their work in water conservation.

Board Member Valentine referred to revenue loss due to this ordinance.

City Planner Anderson said staff will discuss those implications with the Finance and Public Works Departments.

Chairperson Stodola said with discussions of constructing an additional treatment plant this action could potentially delay that need.

Mr. Biernat said this action could delay some demand costs and allow the City to work together with Nowthen and Oak Grove when they are ready for increased water needs.

Board Member Anderson asked who pays for the rebates.

City Planner Anderson said grant programs could potentially be renewed or similar programs created.

Board Member Anderson asked if this type of proposal is typical throughout the country.

Mr. Jundt said no as California's need is much higher. He added the City of Andover odd/even water restrictions do not apply if a homeowner's system includes a smart controller.

Board Member Anderson said Metropolitan Council grants need to be included in these discussions.

City Planner Anderson noted that the decision not to participate in past grant opportunities was based on the lack of staff resources to administer the program.

Chairperson Stodola asked that direction could be changed.

City Planner Anderson said the direction could potentially be changed if the program is renewed.

5.04: Review Concept Plan and Mandatory Environmental Review for Pearson Farm Residential Development

City Planner Anderson presented the staff report, noting the City received a Concept Plan for the potential future residential development currently named Pearson Farm. If approved, it could result in approximately 350 new housing units on City services. Due to its scale and size, the project will be subject to an Environmental Assessment Worksheet (EAW).

City Planner Anderson noted the EAW process takes 2-3 months to review and could result in the need for an Environmental Impact Statement (EIS). He said the Board will have a significant role in the EAW review and will include support of a planning consultant who focuses on EAWs. He asked if the Board had any comments otherwise prior to the review and stated this will be a complex process including navigation with the public. He added that the Environmental Quality Board is looking for volunteers for their review panel on how this process can be improved and to let him know if any Board Members are interested in being involved.

Board Member Trossen inquired about the developer.

City Planner Anderson said the developer is Capstone Homes and the property owner is Al Pearson. He said Capstone Homes is located in Ramsey and has experience in the City with closing out the Brookfield project. He said Capstone Homes has proven to be a good developer and that the proposed 350 units will be phased over a number of years.

Chairperson Stodola asked what type of housing the developer proposes.

City Planner Anderson said although they have not received a formal application the project would include both single and multi-family homes with multi-family on the north and south portions and single-family in between with a community building and small neighborhood parks.

Board Member Covart inquired about road improvements.

City Planner Anderson said road improvements are planned for Bunker Lake Boulevard and Puma Street with a proposed second connection to Alpine Drive.

Informational; no action required.

6. BOARD / STAFF INPUT

- **Pilot Program for Collecting Extra Cardboard over Holidays**

City Planner Anderson advised the implemented pilot program with ACE Solid Waste for cardboard collection was very popular. He stated over the three weeks it was available, the 20-yard container was dumped four times. He said the effort was at no cost to the City to gauge how well it would be utilized and was successful with a total of over 2 tons of cardboard recycled with no illegal dumping. City Planner Anderson said staff will likely continue with this program over the holidays in the future.

City Planner Anderson stated the Board's February meeting will be rescheduled to Wednesday, February 22 due to the President's Day holiday.

7. ADJOURNMENT

Motion by Chairperson Stodola and seconded by Board Member Valentine to adjourn the meeting.

The meeting adjourned at 8:53 p.m.

Respectfully submitted,

_____
Chris Anderson
City Planner

ATTEST:

_____
JoAnn Shaw
Community Development Secretary

Drafted by Cathy Sorensen
TimeSaver Off Site Secretarial, Inc.

5.02: Consider Draft Ordinance Amendment Addressing Irrigation Requirements

City Planner Anderson presented the staff report. He stated that over the past two months, the Board has discussed a potential ordinance amendment regarding irrigation requirements for multi-family and commercial/industrial developments. He stated that based on the discussed at the January meeting, staff has updated a draft ordinance that eliminates the irrigation requirement and also stipulates that if an irrigation system is installed (including single family parcels), it must be equipped with a rain sensor, per state statute, as well as one or more water efficient technologies. This could include, but would not be limited to, a smart controller, soil moisture sensor(s), and/or an evapotranspiration (ET) sensor(s). He stated that this provides enough flexibility so that as future advances in water efficient irrigation technologies are developed, it will not require additional ordinance amendments. He noted that while not specifically included in the draft ordinance, it may be worth noting that this could be an opportunity to encourage more native landscaping within projects; noting that the Board would contemplate some sort of landscaping credit for projects incorporating a native grass and plant community. He noted that staff is not suggesting that this be contemplated as part of the draft ordinance but something that the Board may wish to keep in mind from a broader water conservation perspective. He noted that staff is still assessing how the water efficient requirement would be verified in the field and any potential action on the draft ordinance could be contingent upon finalizing an effective and efficient inspection methodology.

Board Member Anderson asked if there is some sense of how an inspection could occur.

City Planner Anderson stated that the building official did not say he could not do an inspection but simply stated that it would not fit in with an existing inspection. He stated that he believes that there is a way to fit in the inspection but simply wants to ensure that the proper methodology can be identified. He stated that he has heard positive comments from the staff members he has spoken with, noting that they all agree that it makes sense to have the sensors as a requirement.

Board Member Anderson asked whether staff would be looking for the sensor or ensure that it is functional during the inspection.

City Planner Anderson stated that staff is most likely going to check to ensure that it's installed.

Chairperson Stodola stated that he likes the language proposed as it provides flexibility for future technology that is developed. He asked if City Planner Anderson believed that the Council would agree with the vague language or whether they would like it more defined.

City Planner Anderson stated that there are specific examples listed, but the language simply leaves the door open for future technologies. He stated that if the Council is in agreement with the concept he did not believe that there would be a problem with the language.

Board Member Anderson noted that another option would be to use different language and state other approved technologies. She stated that she does prefer the language as proposed but was simply providing an alternative.

DRAFT

City Planner Anderson noted that City Attorney Langel has reviewed the language and approves of the proposed language. He confirmed the consensus of the Board to use the language as proposed and if there is a problem the alternate suggested could be used.

Motion by Chairperson Stodola and seconded by Board Member Covart to recommend adoption of Ordinance #17-04, Amending Multiple Sections of the Ramsey City Code Relating to Irrigation Requirements, contingent upon staff developing an efficient and effective inspection methodology.

Motion carried. Voting Yes: Chairperson Stodola, Board Member Covart, Anderson, Bernard, Trossen, and Valentine. Voting No: None. Absent: Board Member Hiatt.

It was the consensus of the Board to direct staff to vet out the opportunity to encourage more native landscaping within project, with the use of some sort of landscaping credit for projects incorporating a native grass and plant community; as well as the possibility to retrofit existing irrigation systems.

DRAFT

5.03: Consider Draft Ordinance Amendment Addressing Irrigation Requirements (Discussion Purposes Only)

Presentation

City Planner Anderson presented the staff report stating over the past two months, the Environmental Policy Board (EPB) has discussed a potential ordinance amendment regarding irrigation requirements for multi-family and commercial/industrial developments. The intention originally was simply to eliminate the City Code requirement that in-ground irrigation systems shall be installed in all multi-family and commercial/industrial projects. However, based on information received at their January meeting from a guest speaker, the EPB directed Staff to revise the DRAFT Ordinance so that it also stipulates that if an irrigation system is installed (including single family parcels), it shall be equipped with a rain sensor (per state statute) as well as one or more water efficient technologies. This could include, but would not be limited to, a smart controller, soil moisture sensor(s), and/or an evapotranspiration (ET) sensor(s). This provides enough flexibility so that as future advances in water efficient irrigation technologies are developed, it will not require additional ordinance amendments.

City Planner Anderson explained the cost of these 'smart', water efficient technologies has come down as they have become more commonplace. Again, based on input from a guest speaker from Conserva Irrigation, including a smart controller, for example, to a new irrigation system, only adds about $250 to $350 to the overall cost. It is more expensive to retrofit existing systems with the more water efficient technologies, approximately $650 to $750. However, the Return on Investment (ROI) for a standard residential system could be realized relatively quickly, maybe in as few as two to four years (and would be even quicker on larger, commercial systems).

City Planner Anderson reported as water supply continues to be a prominent concern for the City and as the 'smart' technologies become more commonplace (and therefore with prices coming down), the EPB believes that requiring water efficient technologies is appropriate. However, the EPB has also noted that they want to ensure that this is enforceable. Thus, staff is still assessing how the water efficient requirement could be verified in the field. At this time, it does not appear that it could be addressed through any existing inspection. Additional review is still needed on this aspect.

Commission Business

Chairperson Bauer supported the City being proactive on the City's water usage and its proper management.

Commissioner Anderson agreed.

Commissioner VanScoy also supported the City addressing this issue and asked if the proposed plan went far enough. He questioned if something other than sod should be considered in order to reduce the City's dependence on water.

City Planner Anderson stated this was an excellent point. He discussed a portion of City Code regarding the use of native plantings and how the City was working to address landscaping that required less chemicals and water. He indicated the EPB was hoping to get something in place prior to the 2017 construction season.

Chairperson Bauer thanked City Planner Anderson for the update on this item.

ORDINANCE #17-04
CITY OF RAMSEY
ANOKA COUNTY
STATE OF MINNESOTA

AN AMENDMENT TO CHAPTER 117 OF THE CITY CODE, WHICH CHAPTER IS KNOWN AS ZONING AND SUBDIVISIONS OF THE CITY CODE OF RAMSEY, MINNESOTA

AN ORDINANCE AMENDING MULTIPLE SECTIONS OF THE RAMSEY CITY CODE RELATING TO IRRIGATION REQUIREMENTS.

The City of Ramsey Ordains:

SECTION 1 AUTHORITY

This ordinance is adopted pursuant to and under the authority of the City Charter of the City of Ramsey.

SECTION 2 AMENDMENTS

Section 117-111. – R-1 Residential (g) (4) is amended as follows and the existing (4) and (5) are renumbered to (5) and (6):

(4) *Irrigation.* If a landscape irrigation system is provided, the system shall be equipped with the following:
   a. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
   b. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-112. - R-2 Residential District (e) (6) e. is amended as follows:

e. *Irrigation.* If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-113. – R-3 Residential District (e) (5) e. is amended as follows:

e. *Irrigation.* If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).

DRAFT

2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-114. – B-1 General Business District (e) (14) d. is amended as follows:

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-115. – B-2 Highway Business District (e) (16) d. is amended as follows:

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-116. – E-2 Employment District (e) (3) d. is amended as follows:

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-117. – E-1 Employment District (e) (3) d. is amended as follows:

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

DRAFT

Section 117-120. – H-1 Highway 10 Business District (e) (14) d. is amended as follows:

d. *Irrigation*. If a landscape irrigation system is provided, the system shall be equipped with the following:

2. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
3. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

Section 117-121. – B-3 Business District (g) (2) f. is amended as follows:

f. *Landscaping.* The master plan shall include a landscape plan for the entire development site. Landscaping shall be integrated throughout the site and shall include a combination of overstory trees, ornamental trees, shrubs, flowers (planting beds and raised planters), ground cover, and other landscaping elements. The required number of plantings will be site specific and will be determined largely by the total pervious area of a site. Landscaping should be used to soften and shade parking areas, line sidewalks and streets, accent building entrances, and break up large building facades. Plant selection should focus on functionality and take into account characteristics such as tolerance of soil compaction, poor drainage, and deicing salts. All landscaping shall be over at least four inches of topsoil, as defined in section 117-1, or an approved alternative as referenced in section 117-348. If a landscape irrigation system is provided, the system shall be equipped with the following:

1. Technology that inhibits or interrupts operation of the irrigation system during periods of sufficient moisture (rain sensor).
2. One or more water efficient technologies. This could include, but is not limited to, WasterSense labeled weather-based irrigation controllers, soil moisture sensors, and/or evapotranspiration (ET) sensors.

SECTION 3. SUMMARY

The following is the official summary of Ordinance #17-04, which has been approved by the City Council of the City of Ramsey as clearly informing the public of the intent and effect of the Ordinance.

It is the intent and effect of Ordinance #17-04 to amend Ramsey, Minnesota City Code Chapter 117 to eliminate the requirement for in-ground irrigation systems in all zoning districts and to specify that if an irrigation system is installed, it shall be equipped with a rain sensor as well as one or more water efficient technologies.

SECTION 4. EFFECTIVE DATE

The effective date of this Ordinance is thirty (30) days after its passage and publication, subject to City Charter Section 5.07.

Adopted by the Ramsey City Council the _____ day of _____, 2017.

DRAFT

_____
Mayor

ATTEST:

_____
City Clerk

Introduction Date:
Posting Dates:
Adoption Date:
Publication Date:
Effective Date:

DRAFT

Regular Planning Commission **5. 9.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title:

Appoint Ad-Hoc Subcommittee Members to Update Housing Plans

Purpose/Background:

The purpose of this case is to authorize the Planning Commission to re-establish an Ad-Hoc Subcommittee to update various Housing Plans for the City. This structure was used to create the City's Housing Assistance Policy.

A Housing Plan is a required component of the 2040 Comprehensive Plan Update.

Notification:

Notification is not required.

Observations/Alternatives:

The Planning Commission has been integral in establishing housing policies and plans for the community. The City does not have a Housing Committee or Housing and Redevelopment Authority to focus on housing issues and policy. The Planning Commission has served in this role in the past. In 2014, an ad-hoc sub-committee of the Planning Commission was established specifically to create a Housing Assistance Policy.

Both the Housing Plan and Housing Assistance Policy are in need of update for a variety of reasons. Most notably, Staff believes there is a more effective way to retain the structure of both documents and coordinate with the City's Business Subsidy Policies, also in need of update. The EDA will be taking a proactive role in the update of the Comprehensive Plan Update - Economic Development Plan and updates to the City's Business Subsidy Policies. The EDA will also have a key role in the financial component of the City's housing plans. In essence, this board will be an equal partner with the Planning Commission in updating the City's Housing Plans.

Funding Source:

Updates to the Housing Plans are being handled as part of normal Staff duties.

Recommendation:

Staff recommends the Planning Commission to appoint two (2) Planning Commissioners to the Ad-Hoc Housing Committee to update the City's Housing Plan. The City Council requested one (1) EDA member also be appointed.

Action:

Motion to to appoint two (2) Planning Commissioners to the Ad-Hoc Housing Committee to update the City's Housing Plan.

Attachments

2030 Comprehensive Plan Housing Plan

Housing Assistance Policy

Planning Commission Work Plan

Comprehensive Plan Update Schedule

Form Review

Inbox	Reviewed By	Date
Tim Gladhill (Originator)	Tim Gladhill	03/31/2017 11:26 AM

Form Started By: Tim Gladhill Started On: 03/20/2017 10:32 AM

Final Approval Date: 03/31/2017

7. HOUSING PLAN

A. Introduction

History - The City of Ramsey has historically developed in a typical suburban fashion. In the 1970s, Ramsey's land was developed primarily as ramblers and split level housing on large, rural lots, with the exception of auto related commercial uses and some heavy industry.

Growth - Since 1985, Ramsey has had municipal sewer and water services available to the south-eastern part of the city. The relatively recent availability of these services, in addition to a continually growing and thriving metropolitan area, has sparked the interest of developers and metro area residents and workers. The City has begun a transition period of growth that is sometimes difficult to address. Developers are buying large tracts of land, requesting to connect to the available municipal sewer and water systems, and developing this land at higher densities than previously developed. This new urban development is oftentimes occurring directly adjacent to existing rural residential neighborhoods, which remain on individual septic systems.

Need to Establish a Plan – Due to increasing growth and changing development patterns from rural to suburban, the City and its residents need to determine how they want to develop in the future. A plan will help to provide for orderly, well-designed, and varied housing development that provides opportunities for all types of families and people of differing income ranges. In addition, the policy makers need to identify short and long term areas of growth and redevelopment that may require public facilitation and financial resources.

Purpose of the Plan - The Master Housing Plan (The "Plan") is intended to provide direction for future housing development in Ramsey as well as provide a vision for the City's neighborhoods as the community evolves and grows.

The plan includes a review of the existing housing stock, housing trends, and housing demand within the City as well as provides a variety of goals and objectives of the City and its Housing & Redevelopment Authority. The goals and objectives were identified through a series of discussions with stakeholders in the community as part of the Comprehensive Plan update process. This included feedback from housing partners and business leaders as well as Ramsey residents.

Not only does this housing plan state the realities and goals of the City, but it serves as a handbook of policy solutions to the challenges that Ramsey and similar communities face when deciding the future direction of the housing and population. Furthermore, it incorporates sources of funding available by local, state, and federal government agencies and other sources to achieve the stated goals of the community. This plan not only frames the housing issues and ideals, it answers the question of how to achieve these ideals.

B. Housing Supply

It is important to assess the current housing stock in order to determine how Ramsey residents' housing needs are being met currently and into the future. Analyzing the existing housing supply informs decision-makers about what exists, the condition of housing, and what segments of the housing stock are already well-represented and which are under-represented. This section will describe the structure, tenure, quality, and affordability of the housing stock in Ramsey. These attributes will paint a picture of existing conditions, and, combined with housing demand information, will assist decision-makers in creating housing policies and programs.

Structure

As the table below illustrates, Ramsey consists of primarily single family, detached housing. However, over the past several years Ramsey has seen an increase in the development of townhomes and multifamily housing. Between 2000-2007, 60% of the new development was multifamily type housing such as townhomes. Table 1 indicates the mix of housing types by structure within Ramsey.

Table 7-1: Occupied Housing Units

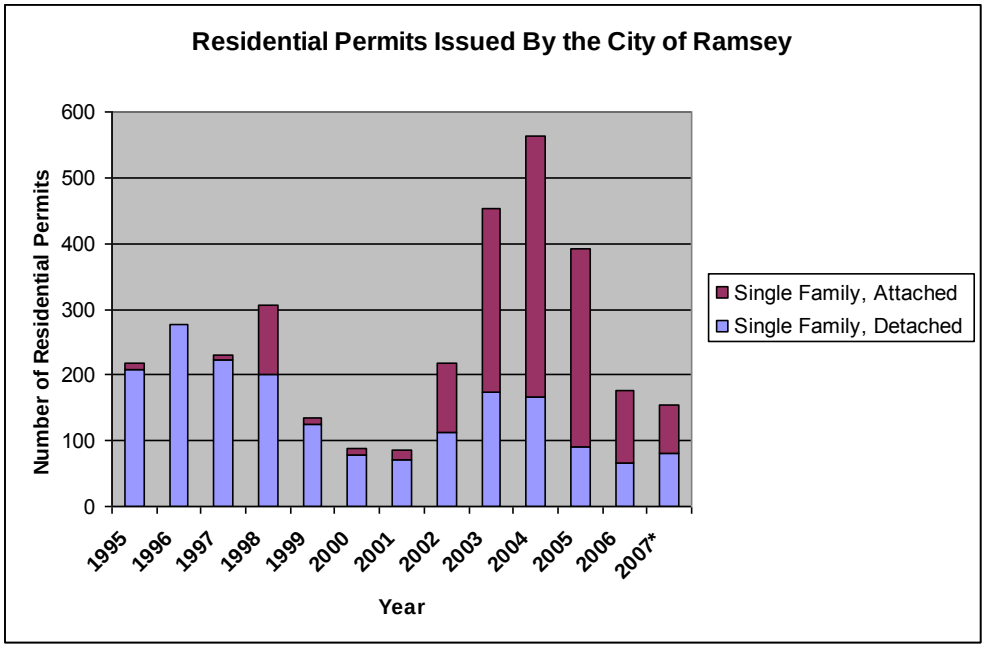
Type of Unit	Number	Percentage
Single Family, Detached	6,341	81%
Townhomes, Duplexes, Twinhomes	1,310	17%
Mobile Home Units	30	<1%
Apartment Units	114	1%
Total	7,795	100%

Source: Anoka County GIS Data, November 2007

In addition to existing housing units, there are many more units that have been approved by the City but are yet to be constructed. As of June 2007, there are 453 platted single-family lots that are currently unimproved. There are also 618 platted townhome lots that are unimproved. When constructed, the City will have a total of over 8,500 housing units, 19% of which will be townhomes.

In recent years, the City has been approving a larger variety of housing styles than in the past. The City of Ramsey has approved a larger number of townhomes since 2001, compared to earlier years. Single-family attached townhouses and rowhouses are gaining popularity in the market, and Figure 1 illustrates the shift in housing type between 2001-2004. While this recent increase in townhome development has contributed to the diversity of housing, Ramsey still consists of primarily single-family, detached homes. Permits for detached homes remain relatively steady over time, despite increases in other forms of housing.

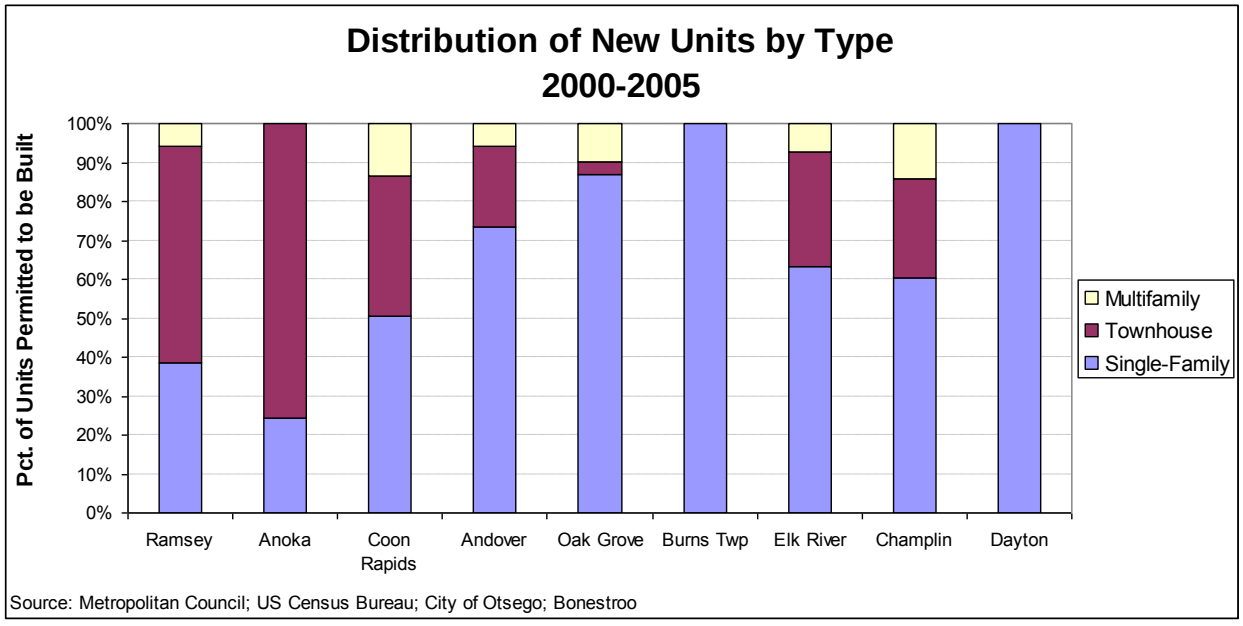
Figure 1: Permits Issued, by Type



Source: City of Ramsey, November 2007

Compared to other cities in the area for type of new units built between 2000-2005, Ramsey has the 2nd largest percentage of townhomes constructed.

Figure 2: Permits Issued in Surrounding Cities, by Type

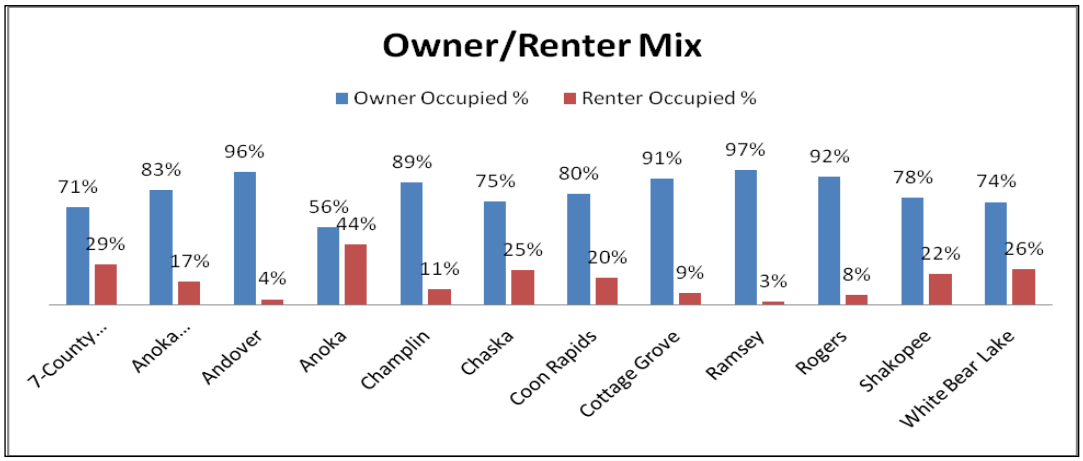


Tenure

As of 2007, there were approximately 300 rental units within Ramsey, or about 4% of the total number of housing units. In 2003, the City enacted a rental licensing requirement to ensure the quality of rental units and improve the ability of the City to track rental housing. This program tracks known units of rental housing within the City and conducts inspections every two years as a part of the licensure process. Of the 300 units, approximately one-third are located within apartment-style buildings. The remaining units are dispersed throughout townhome and single-family developments within the city.

Comparing the owner/renter mix of housing with other communities using 2000 census data, Ramsey's housing is primarily owner-occupied (97%) with very few rental units. This is a substantially higher percentage than Anoka County which has 83% owner occupied units and 17% rental housing overall. Ramsey has a smaller percentage of rental housing than all except seven incorporated cities in the metropolitan area, according to the 2000 Census. However, many cities in the northwest metro have similar ownership-to-rental ratios. Andover, Lino Lakes, and Ham Lake have very little rental housing but compared to other similar cities, Ramsey has the smallest percentage of rental units. Currently, a 63 unit apartment building is being constructed called Terrace Hill. In the past several years there has been an increase in developer interest for sites to construct apartments and this trend is likely to continue particularly with the downturn in the housing market for ownership units. With only 4% of the total housing stock as rental, Ramsey is a strong market for new apartment living.

Figure 3: Owner/Renter Mix in Surrounding Communities



Source: 2000 Census

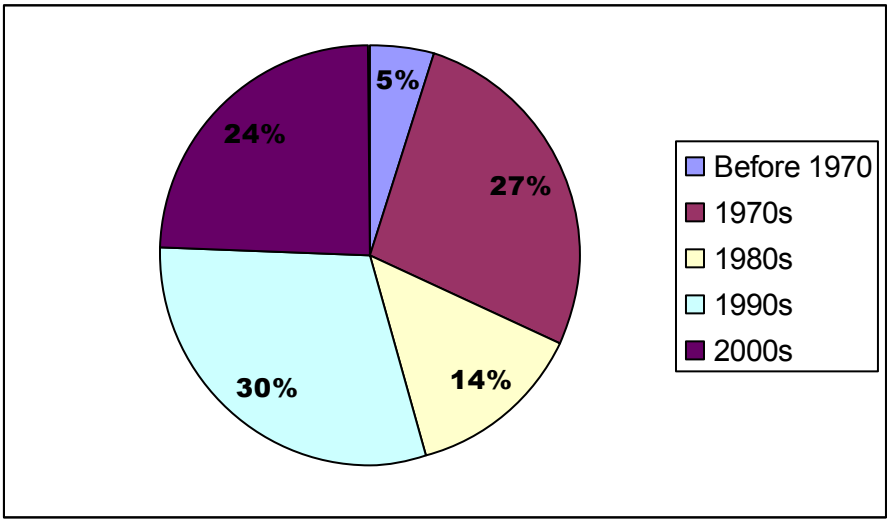
Why is Rental Housing Important?

Adequate opportunities for safe, decent and affordable rental housing are a key component of a balanced housing supply. There are many reasons why an individual and/or family choose to rent rather than own. Those choices may be short term due to financial issues (unable to afford a mortgage, need to save for a down payment, clear up credit issues), family issues (divorce, separation, job relocation) or social issues (disability, in-between home ownership, not secure in job, unsure on location preference). Also, many people choose a life of renting rather than owning due to income, transitional careers, traveling and aging. For all these reasons, a community should consider the benefits of providing a wide range of living choices which includes rental housing.

Housing Quality:

Quality is a crucial characteristic of the housing stock that oftentimes determines the marketability and affordability of a home. However, there are few measures of housing quality available for analysis within Ramsey. One factor that plays a role in the overall quality of housing is age. The following chart indicates the proportion of houses built in each decade since the 1970s.

Figure 4: Age of Housing Stock, By Decade

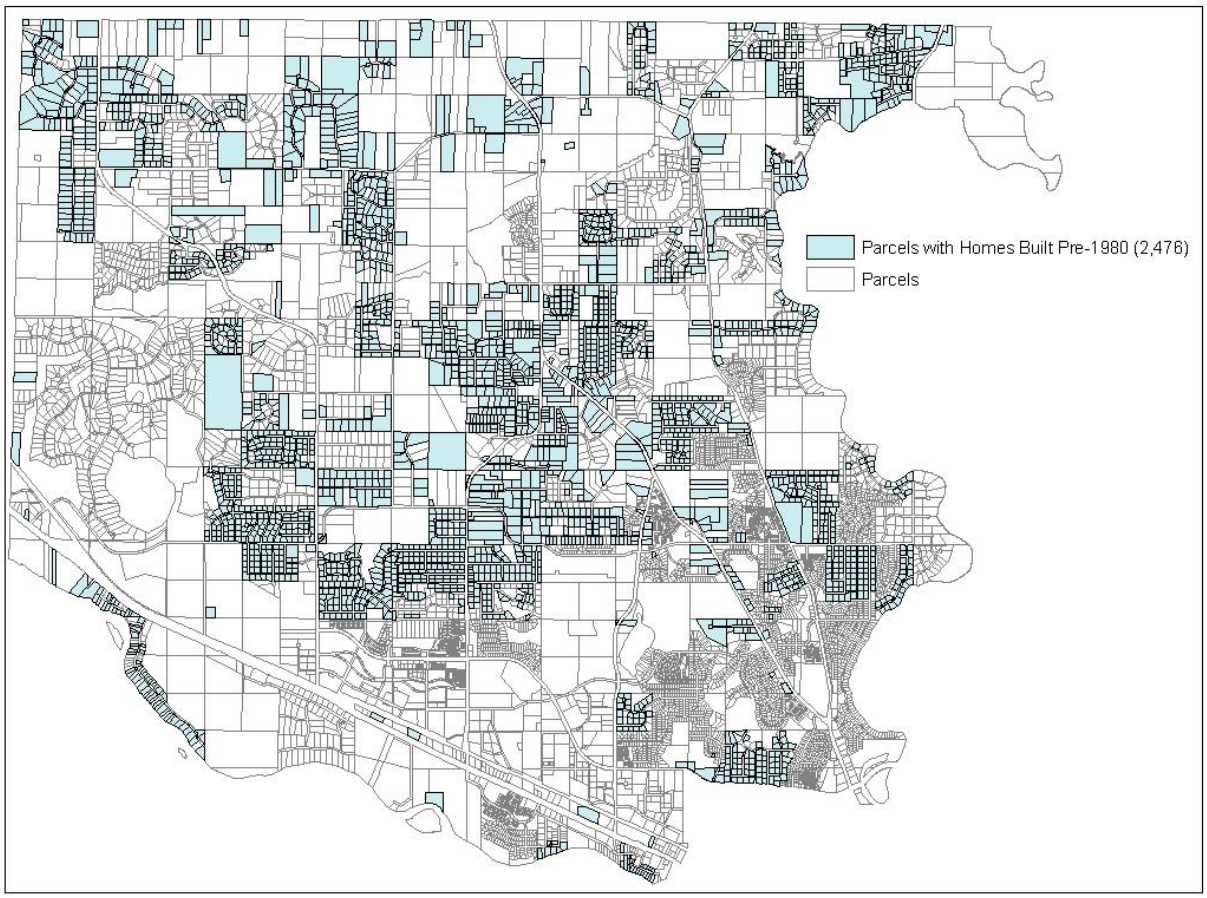


Source: Anoka County Property Tax Data, November 2007

About one-third of the housing in Ramsey was built in the 1970s or before. This suggests that some areas of the city are aging. The housing that was built before 1970 is scattered throughout the City, and lies on land that is unplatted or is part of the registered land survey conducted by Anoka County. Figure 5 provides a spatial representation of the older housing stock in Ramsey. Prior to 1970, there were no substantial subdivisions within the City limits. Between 1970 and 1980, many large-lot neighborhoods were developed, and the houses in these areas rely on septic systems and private wells.

Homes over 30 years of age require some level of maintenance and repair as well as modernization to remain positively valued. One of the most significant issues associated with neighborhood decline is the deferred maintenance of homes and street appeal or lack of modernization of the older housing stock.

Figure 5: Aging Housing in Ramsey



In addition to aging single family homes, the small percentage of rental housing in the City is aging. Keeping the rental housing stock maintained and fresh is just as important to the community as the single family housing stock.

Table 2: Age of Rental Complexes in Ramsey

Complex Name	Year Built	Number of Units
Rivers Bend	**1991**	**32**
Savannah Oaks	**1998**	**50**
Sunwood Rental Town Homes	**2002**	**32**

Source: City of Ramsey, 2007

Housing Cost: Ownership

One of the most important factors in analyzing the housing stock is its affordability. Up until recently, housing prices were increasing rapidly, and it was difficult to determine the true market value of housing. The County Assessor's Office is the best source of current information available to cities to determine

housing values. Table 3 outlines the estimated market value of housing in Ramsey. The table breaks down this data according to different categories of affordability.

Table 3: Affordability of Ownership Housing in Ramsey

Affordability Level	Approximate Affordable Market Value*	Number of Houses at this Estimated Market Value**	Percentage of Ramsey Homes at This Level
Affordable at 30% of AMI**	Under $70,000	**22**	**.03%**
Affordable at 60% of AMI	$70,001 to $152,000	**250**	**3.3%**
Affordable at 80% of AMI	$152,001 to $206,800	**2,177**	**28.4%**
Affordable at 100% of AMI	$206,801 to $250,000	**2,740**	**35.8%**
Affordable at Over 100% of AMI Only	Over $250,000	**2,464**	**32.2%**

Source: Anoka County Property Tax Data, November 2007

* These affordable home prices are approximate, based on a household spending 30% of their income on mortgage and obtaining a mortgage interest rate of 6.5%, with no down payment.

**The median total housing value for 2007 is $216,050 with the average total housing value at $249,813.

**AMI is "area median income" and represents the median household income in the seven county metropolitan area. This is approximately $78,500 in 2007.

About 28% of the market-rate, ownership housing stock in Ramsey is affordable to households earning 80% of Area Median Income (AMI), a common standard used in assessing the affordability of housing. However, there are considerably fewer homes (approximately 4%) available for lower income households in the 60% and 30% of AMI categories, as Table 2 indicates. Future (2011-2020) metropolitan area targets for affordable housing will focus on the lower income households making at or below the 60% AMI rather than 80% AMI.

Housing Cost: Rental

Although there are relatively few rental options in Ramsey, the majority of the rental housing is market-rate affordable. Table 4 represents the rental prices for Ramsey's units. According to the Metropolitan Council's "affordable rent" definition, 115 (52% of the total) of the rental units in Ramsey are affordable to a family earning 50% of the area median income.

Table 4: Rent Prices in Ramsey

	Number of Units	Rent Levels
Market-rate Senior	50	$700-1,000
General Occupancy-Subsidized	33	$700-1,000
Market-rate apartments	32	$600-850
Market-rate townhomes	98	$1,000-$1,500
Market-rate Single Family	10	$1,500
Total Rental Units	223	

Source: Maxfield Study, January 2006 & City of Ramsey 2005

Housing Foreclosures

Home foreclosures can have an impact on a neighborhood and community with deferred maintenance and vacant homes.

In 2006, Anoka County recorded 844 properties in foreclosure. Ramsey has a fairly small percentage of the County's foreclosed property 7% or 63 homes. However in the first half of 2007, the number of foreclosures in the county is above the total for 2006 at 863, with Ramsey having 66 properties (7.6% of the total).

What does this mean to Ramsey? It is possible that some housing values may decline and some homes may go unoccupied and not be maintained properly for a period of time, potentially putting additional burden on code enforcement staff and increasing the potential for neighborhood housing decline. These potential newly vacant homes could be an opportunity for affordable housing purchases. Conversely, the vacant homes may also attract investment buyers who in turn rent the homes for a short period until the market resurges. In a slow market, investment buyers tend to purchase homes of lower value ($200,000 or less) and rent without additional investment in maintenance and/or cosmetic improvements.

Land Supply

Available land for development will have a large impact on housing supply and demand within Ramsey. "Available Land" can be defined in a variety of ways. By examining the larger parcels in Ramsey, we can determine the areas that may be under development pressure. Also, by examining building permit and subdivision trends, we can estimate how many more housing units will be built in the next few years.

In 2006, there were over 4,000 acres of parcels that are at least 10 acres in size and zoned residential. This provides a significant opportunity for residential development in the future. Of the 4,000 acres of large parcels currently in Ramsey, over 800 acres (20%) were subdivided OR began the subdivision process in 2005 and 50 acres (1.3%) in 2006. Recently, there has been a general slowdown of requests for subdivisions. In addition, many of the recent development inquiries include land for new rental housing.

In 2005, the City of Ramsey approved approximately 500 new residential lots through the subdivision process and in 2006 there was approval for 100 units. There are an additional 1,200 units that are in some stage of the approval process. This is an unprecedented amount of growth for the City, and compares to cities like Woodbury and Maple Grove in the amount of new residential lots.

Based upon household growth projections provided by the Metropolitan Council through 2030, Ramsey would need an additional 998 acres available for new housing which is 32% of the total acres available for subdivision. However, the 998 acres assumed that 67% is for low-density development and 33% is for median to high density development with the majority of the development occurring between 2010 -2020. This translates into a total of 6,085 units of which 2,000 would be low density single family units and 4,085 would be medium to high density multifamily housing units.

Metropolitan Council Livable Communities Act: Affordability Goals

In January of 2006, the Metropolitan Council released goals for the production of new affordable housing in the metropolitan region for the years 2011-2020. The goals focus on households earning at or below 60% of the AMI to more effectively target lower income households with limited financial resources. In 2007 dollars, a household of four with an income at or below 60% AMI earns up to $47,100 and can afford to purchase a home at or less than $152,000 or pay fair market rent up to $1,177. This will be very difficult to achieve for ownership housing in developing suburbs such as Ramsey.

The Metropolitan Council has established a need for 1,140 new affordable housing units to be developed in Ramsey between 2011 – 2020 based upon existing growth projections. New affordable units are defined as

ownership or rental housing affordable to households earning at or below 60% AMI. According to the estimated growth needs for housing units between 2010-2030 as noted above, the City of Ramsey should strive to provide 28% of the 4,085 medium to high density multifamily housing units as affordable to meet the Metropolitan Council identified goals by 2020. According to the Metropolitan Council, the Update provides for an affordable housing need share of 669 units.

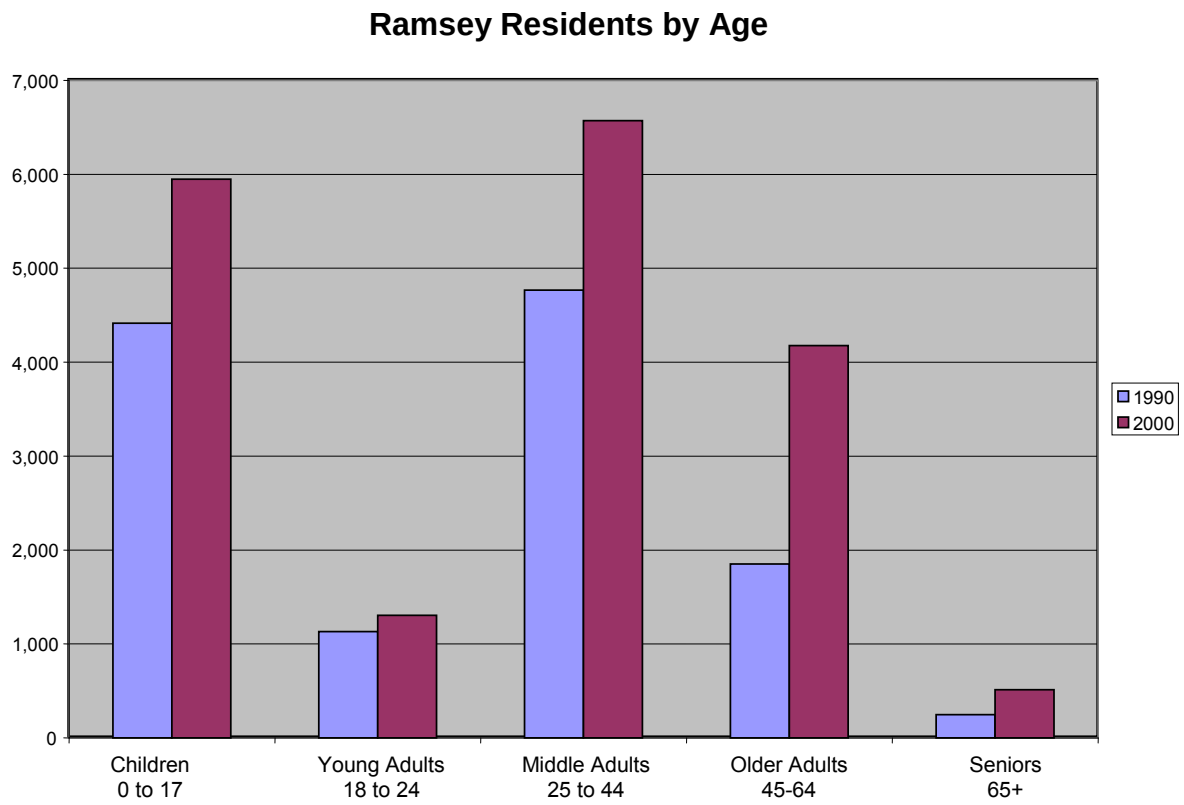
Considering that ownership housing would require a purchase price at or less than $152,000 and rental properties would need to charge rent at or below $1,177 for a family of four in 2007, Ramsey will need to consider a wide variety of housing options to achieve the Metropolitan Council's forecasted need. Those options will likely be additional rental housing and/or ownership multifamily or small lot housing that is developed in partnership with non-profit housing groups such as Habitat for Humanity and community land trusts.

C. Housing Demand

Age

The age structure of the population of Ramsey and surrounding areas will have an important impact on housing type, style, and price points that current and future residents will demand. It is important to examine the age distribution of current Ramsey residents because they will also affect demand for certain types of housing as their age and family composition changes. Figure 6 below shows the age of Ramsey residents, aggregated to examine "life cycle" categories. This chart shows that all age groups have gained population from 1990 to 2000. The categories of Children, Middle Adults, and Older Adults have shown the largest increases. The Senior and Young Adult categories increased only incrementally. The chart indicates that the largest categories had the highest percentage gains. The Older Adult category more than doubled in population from 1990 to 2000. This trend will continue as the Baby Boomers move into the 45 to 64 age category over the next 20 years.

Figure 6: Ramsey Residents within Life Cycles (Number)



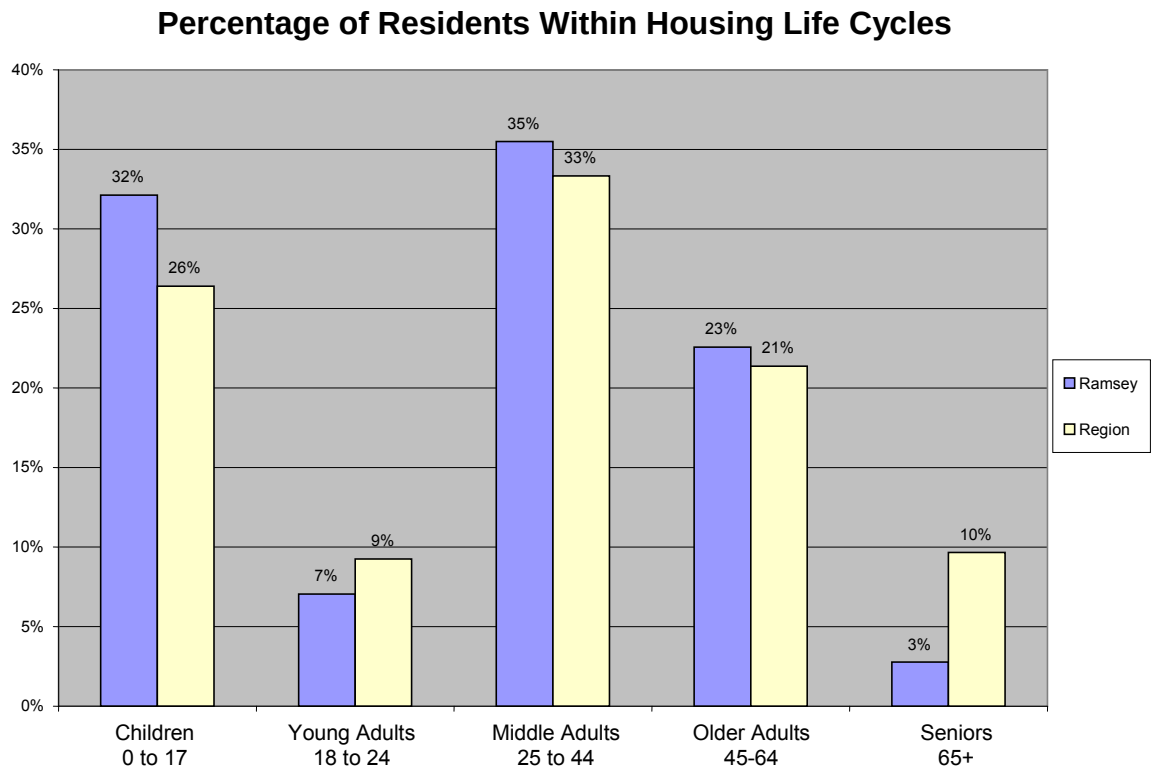
Source: 2000 US Census Data (aggregated)

This trend is typical of the metropolitan area, and will have a significant impact on the type of housing that will be in Ramsey in the future. Empty-nesters and pre-retirees often seek to downsize their living space and seek lower maintenance housing options. The demand for association-maintained and one-level living will only increase over the next twenty years in Ramsey as these age groups desire different housing styles. However, it is also important to remember that some empty-nesters and seniors will desire to stay in their existing home, and over time may require assistance to do so. Ramsey will need to continue diversifying its

housing stock in order to stay competitive in attracting new residents to the City, and retaining existing residents as they move into different life cycles.

Figure 7 indicates the differences between Ramsey and the overall metropolitan area. Ramsey has a substantially smaller percentage of seniors than the region as a whole, which could be attributed to the lack of housing options. This will change though as Middle Adults and Older Adults transition into older age categories – meaning that demand for lower-maintenance, more accessible housing will increase in the city.

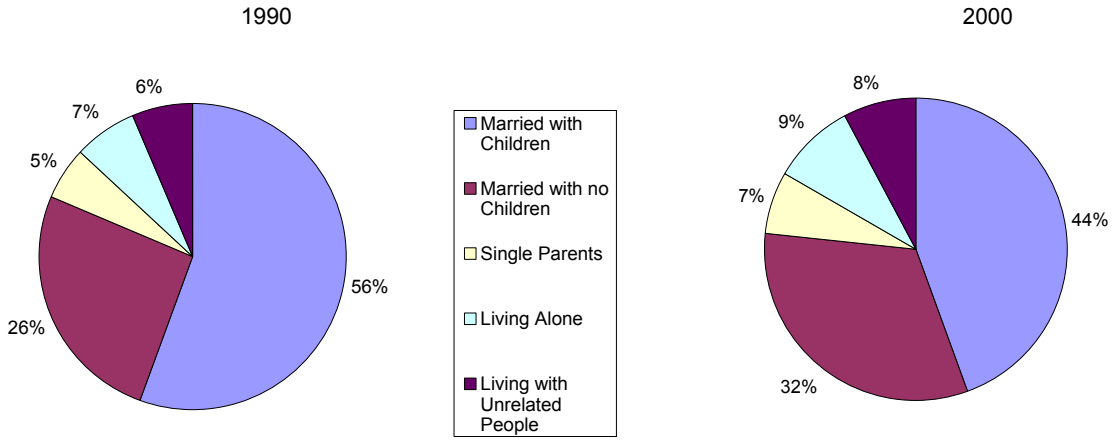
Figure 7: Ramsey Residents Within Life Cycles (Percentage)



Family Composition

In addition to age, family composition can provide clues as to the type of housing that will be needed by current and future residents of Ramsey. Figure 8 compares household composition in 1990 and 2000. In 1990, 61% of households had children. In 2000, this percentage had decreased to 51%. This decrease was attributable to the fact that the categories "non-family households" and "families with no children living at home" increased more than "families with children living at home." However, there are still 809 more families with children living in Ramsey than there were in 1990, according to the 2000 Census. The number of family households with no children living at home doubled, representing an increase of 1,085 households. This indicates that while 50% of households are families with children, their share of the total number of households is decreasing. If these changes continue, Ramsey will have more childless households than families with children by 2010.

Figure 8: Household Composition



Income

The median household income in Ramsey in 2000 was about $77,000, according to data obtained from the 2000 Census. This is higher than the metropolitan average. 10% of the ownership households and 30% of rental households in Ramsey are considered very low income by state standards. (State's standards for very low income are households earning less than 50% of the Area Median Income, AMI) which is very similar to the County as a whole at 9% ownership and 28% renter households. Only 1.3% of the total households in Ramsey lives in poverty or earn less than 30% of the AMI which is well below the poverty rate in the County at 4.1% and the metropolitan region at 6.4%.

Job Growth and Economic Base

Ramsey is a middle class community with a growing commercial base and a continually increasing number of jobs. In 1997, a survey was conducted by Decision Resources, Ltd that provided statistically significant information concerning the demographics of Ramsey residents. The survey showed that 11% of those surveyed worked in Ramsey and 41% worked in Anoka County.
Between 1990 and 2000, the City of Ramsey almost doubled its employment, from 1,941 jobs in 1990 to 3,587 jobs in 2000. The average salary for a job in Ramsey is $32,956 per year.

In addition, according to labor shed data prepared by Excensus, in the second quarter of 2001 there were 4,100 jobs in Ramsey and 19% (784) of those jobs were held by Ramsey residents with an average annual salary of $36,750. Of those 784 jobs held by Ramsey residents 15% earned less than $12,000 per year. These jobs are most likely part time and retail sector positions. Conversely, 52% of the jobs held by Ramsey residents pay more than $35,000 annually.

It is projected that Ramsey job growth will exceed over 10,000 jobs in the next 20-25 years. If 20% of those jobs are held by Ramsey residents there will be approximately 2,000 jobs held by people who live in the community. Many of those job holders will attract new residents who will look for a variety of housing choices.

Housing Sustainability/Green Community Components

Housing conditions are an important factor that influences a community's health and well being. Green design and building practices can create healthier home and community environments through better indoor air quality, healthier building materials and the overall reduction of green house gases and the reduction of water and energy resources. In addition, green affordable homes are becoming an increasingly vital part of the new "sustainable city". Developing cities like Ramsey have an opportunity to provide housing policy and dedicate resources to become a green community through housing sustainability.

While researchers remain cautious, many public health professionals, and a growing number of affordable housing developers believe sufficient evidence exists to justify adoption of basic "healthy homes" practices to keep homes dry, clean, well ventilated.

The following are benefits of green building practices, as outlined by the national Green Communities group (http://www.greencommunitiesonline.org/).

Benefit #1: Healthier Indoor Environments

Building practices and materials that minimize moisture, provide proper ventilation, prevent pest infestation and avoid chemical and biological contaminants, protect parents and children against asthma, toxic poisoning, cancer and many other conditions caused or affected by housing construction.

Benefit #2: Energy Savings

High utility costs often impose a substantial financial hardship on low-income households, forcing many to make tradeoffs between heat or electricity and other basic necessities. A recent national study documented the brutal choices that poor families make when faced with unaffordable home energy bills. The study found that during the prior five years, due to their energy bills:

- 57 percent of non-elderly owners and 36 percent of non-elderly renters went without medical or dental care;
- 25 percent made a partial payment or missed a whole rent or mortgage payment; and
- 20 percent went without food for at least one day.

In addition, energy costs have increased much faster than incomes for low-income households in recent years. Today a family earning minimum wage pays more than four times as much a share of their income for energy as a median income household.

Benefit #3: Reduced Transportation Costs

Transportation costs consume a large share of low-income family incomes. A study of 28 metropolitan areas found that families with incomes between $20,000 and $50,000 spend an average of 40 percent of their income on transportation and an average of 28 percent on housing. More broadly, poorly planned development can isolate low-income people in distressed areas and make it harder to get to better schools and job opportunities.

Benefit #4: More Active Living

Oftentimes, the steps for healthier communities are very simple. Smarter site planning and development creates a sense of community, encouraging walking and providing access to parks and mass transit. Research suggests that people who live in sprawling areas walk less, weigh more and are more likely to suffer from high blood pressure.

Benefit #5: Wider Opportunities

Residents of green communities often have greater community interaction through walking access to mass transit, jobs, schools and local services. Green communities also can enhance low-income families' exposure to natural environments.

Building green policies into the Ramsey Master Housing Plan will benefit the community and establish Ramsey as a proactive sustainable city.

D. Housing Goals & Policies

Providing a balanced community with a variety of housing stock is essential to the future stability of a city in terms of property value, ability to attract quality commerce and industry and support the services of the city. The following housing goals were developed by the City's Housing & Redevelopment Authority (HRA) as a guide for providing direction regarding development and distribution of housing financial resources. The Ramsey City Council serve as the board of directors of the HRA and evaluated citizens comments and discussions surrounding Ramsey's current and future housing needs in framing these housing goals.

HOUSING GOAL #1:

Provide a variety of housing options for people at all life stages and income levels to encourage existing and future residents to stay in Ramsey throughout their lives and to achieve a balanced housing supply.

***SUPPORTIVE FINDINGS*:**

1. **Ramsey's population consists of primarily middle-aged adults and children.** Children (ages 0-17) and middle adults (ages 25-44) compose 67% of the total population, which is substantially higher than the region (58%). An additional 23% are older adults (ages 45-64). Only 7% of the population is young adults (18-24) and 3% are seniors (over 65). Compared with the region, Ramsey has a substantially lower percentage of young adults and seniors. However, the senior population shows the greatest difference. The region's senior population is 10% of the total population, while the senior population in Ramsey is only 3% of the total.

2. **Despite increases in children and middle-aged adults, the percentage of households that are classified as families with children decreased from 61% of the total population to 51%.** This observation, combined with finding #1, indicates that the increase in children and middle-aged adults does not parallel the increase in the percentage of families in Ramsey. While the City is growing, and adding families, the percentage of the city defined as families with children is decreasing. This suggests that there is an increase in the number of families without children and middle-aged adults in non-family situations. This observation is important when assessing housing demand. It indicates that there is an increasing number and percentage of empty-nester households in Ramsey who may be exploring options to relocate, downsize, or age-in-place.

3. **According to the market study conducted by Maxfield Research, the Ramsey Town Center provides the best market, land use, and shopping and transit opportunities for rental housing development.** The area of the City where Ramsey Town Center lies is zoned for the highest density in the City. Furthermore, there are still many parcels available for housing development and the master plan calls for the development of market-rate and affordable rental housing opportunities. Maxfield Research concluded, as part of their market analysis, that Ramsey Town Center is the best location for any rental housing within the community. The proximity to transit and shopping makes Ramsey Town Center an ideal location for young people, seniors, and others who rely on public transportation.

4. **Ramsey is beginning to diversify its housing stock by developing alternatives to single-family housing, thus expanding options for residents of all income levels and lifestyles.** Reviewing the breakdown of the number of type of residential building permits issued in Ramsey since 1995 shows that the number of permits for single-family, detached housing has remained relatively steady, while the number of permits for townhomes has increased rapidly. This diversification contributes to Ramsey's housing goals.

5. **The price of existing single-family housing is affordable for the average family living in the metropolitan area.** According the Anoka County Assessor's records, in 2005 the mean market value for housing in Ramsey was about $198,000. The average home price in 1990 was $111,000, which results in an increase of 56% from 1990 to 2000. There are 3,765 (64% of total) homes in Ramsey that are affordable to households earning 80% of the Area Median Income (AMI). Furthermore, only 17% of Ramsey residents pay more than 30% of their income to housing costs. It must be noted, however, that the county assessor's estimated market value is usually below the true market value of property. This factor limits conclusions about the affordability of existing housing in Ramsey.

6. **The price of new single-family housing is increasingly unaffordable.** While the average home price in Ramsey is relatively affordable to a household earning the area median income (about $76,000), the cost of new housing is substantially more expensive. The average market value of a home built between 1990 and 2005 is $220,000, which is barely affordable to households earning the median income.

7. **Ramsey has very few alternatives to homeownership.** As of 2007, only 4% of the housing stock was rental. In the rental complexes there is very low vacancy rate and waiting lists for the senior rental complex. To have a balanced housing supply, affordable and market rate rental opportunities are essential.

IMPLEMENTATION STRATEGIES:

1) **Work toward developing various senior housing options including independent living, cooperatives, and assisted living facilities, both market rate and affordable.**
    a. **Tactic-**Evaluate opportunities to provide Tax Increment Financing (TIF) for senior housing projects, such as Crest View Senior Communities' proposed project for the Ramsey Town Center.
    b. Tactic-Pursue partnerships with non-profit developers of senior housing, such as Lord of Life, Anoka County, and others
    c. **Tactic-**Continue to promote the Town Center as a neighborhood for residents of all ages, complete with amenities, multi-modal transportation options, recreation, and a variety of housing choices.

2) **Focus on providing choices for empty-nesters, including aging in place and downsizing, to allow the majority of current residents to stay in Ramsey.**
    a. **Tactic-** Evaluate lot split programs to allow seniors to split off their lot for income generation and downsizing
    b. Tactic- Consider the establishment of grant and/or loan remodeling programs to help seniors stay in their homes.
    c. Tactic- Consider coordinating service programs that would assist seniors with yard work or other home improvement projects.
    d. Tactic- Consider providing referral assistance to seniors looking to move to a smaller home within Ramsey or the surrounding areas.
    e. Tactic – Investigate the feasibility and desirability of allowing accessory apartments in residential areas.

3) **Provide opportunities for young adults to continue to live in Ramsey after leaving their parents' homes by supporting the development of quality rental housing.**

a. **Tactic-** Investigate the feasibility and desirability of allowing accessory apartments in residential areas.
b. **Tactic –** Verify through the 2008 Comprehensive Plan Update process that the City has sufficient land designated for the development of medium- and high-density residential development, to accommodate the construction of additional apartment buildings. This development should be focused within the Ramsey Town Center.

4) **Provide a balanced housing supply, with approximately 90% ownership housing and 10% rental housing, to expand options for workforce housing and housing for young professionals.**
   a. Tactic - Support the development of quality rental housing and a variety of affordable ownership housing options

5) **Continue to develop more affordable single family housing such as condominiums and small-lot single family homes.**
   a. Tactic - Support the development of quality rental housing and a variety of affordable ownership housing options

6) **Explore opportunities to attract executive level housing to provide a variety of housing choices and opportunities in the City.**
   a. Tactic - Identify development areas to adequately accommodate executive level housing
   b. Tactic - Evaluate the costs and benefits of various housing types to ensure that there is a balance of housing choices

HOUSING GOAL #2:

Revitalize/rehabilitate areas where the housing is aging and in need of repair and where the land is underutilized.

SUPPORTIVE FINDING:

The housing in some areas of Ramsey is aging.
According to the Anoka County Assessor's records, 32% of the housing in Ramsey was built before 1980. While that is not a large percentage, the older housing is relatively concentrated in a few neighborhoods within Ramsey. Neighborhoods in the central portion of the city such as Pineview Estates, Greenland Hills, Whispering Pines Estates, Groham's Sandy Acres, Halland Acres, Woodland Green, Hall Anderson Acres, and Hall's Dover Acres are examples of areas where the housing is starting to show signs of age. Additionally, these areas were developed at a time before municipal services were available, and are characterized by large lot development, with lots ranging from 1 to 2 acres.

SUPPORTIVE FINDING:

There are several areas where the land is underutilitzed and could become redevelopment areas that positively contribute to the growth of the city.
The HRA has preliminarily identified several opportunity areas in the City as shown in Figure 9. These opportunity areas are key nodes for infrastructure improvements, new housing development within core transit areas of the city, or areas where the housing stock is aging and property owners may be interested in rehabilitation and/or redevelopment opportunities.

IMPLEMENTATION STRATEGIES:

1) **Encourage residents to upgrade the functionality and marketability of their aging housing, and put quality additions on as they need more space.**
    a. **Tactic-** Consider the establishment of grant and/or loan remodeling programs to assist people in upgrading their homes.
2) **Provide options for residents to subdivide and/or hook up to municipal services, if they so choose.**
    a. **Tactic-** Initiate a feasibility study, upon request from residents.
3) **Encourage redevelopment where land is underutilized**
    a. **Tactic-** Identify and designate areas appropriate for redevelopment
    b. **Tactic –** Prepare redevelopment plans
    c. **Tactic –** Identify resources and partners to implement those plans.

HOUSING GOAL #3:

Maintain and improve the housing stock to preserve the character and quality of existing neighborhoods.

SUPPORTIVE FINDING:

The housing in some areas of Ramsey is aging. Similarly to Housing Goal #2, there are some homes and neighborhoods that will need rehabilitation in coming years. Also, in 2007 the City established an Abatement process that provides an additional tool for the City to use in addressing code violations and problem properties.

IMPLEMENTATIONS STRATEGIES:

1) **Encourage the development of homeowner's associations or common interest communities for areas of older multifamily housing and new subdivisions of smaller lot neighborhoods.**
2) **Develop and maintain a close relationship with existing homeowner's associations.**
    a. **Tactic:** Increase communication by meeting annually with homeowner's associations and maintaining an updated mailing list.
3) **Investigate the creation of a homeowner rehabilitation program, and increase marketing efforts for existing county and state home renovation programs.**
4) **Enhance code enforcement efforts.**
    a. **Tactic:** Review and update Ramsey's Housing Maintenance Code.
    b. **Tactic:** Consider neighborhood sweeps that includes a proactive code enforcement and education effort on housing maintenance.
    c. **Tactic:** Link code enforcement orders with home improvement funding.
    d. **Tactic:** Consider code violation disclosure and/or required improvement prior to sale of existing homes particularly those homes that are going into foreclosure through a point of sale or truth in housing program.
    e. **Tactic:** Increase education efforts surrounding code enforcement requirements and expectations.
5) **Educate Ramsey residents about the importance and value of maintaining their homes.**
6) **Partner with Anoka County to ensure that foreclosed homes that are vacant are maintained and secure.**
7) **Ensure that new housing developments provide appropriate density transition with existing established neighborhoods.**
8) **Update and enhance design standards for new developments and encourage housing construction that incorporates quality and diverse architecture.**
9) **Continue to administer the rental licensing program**

a. **Tactic:** Improve the licensing and inspection process**,** and update City Code as needed.
b. **Tactic:** Provide additional outreach to landlords on the requirements of the program.

HOUSING GOAL #4:

Provide a development environment that increases residential health and respects the natural environment.

SUPPORTIVE FINDING:

Ramsey is a developing community that will have an impact on the protection and improvement of the environment. According to the U.S. Department of Energy's Center for Sustainable Development, buildings consume 40% of the world's total energy, 25% of its wood harvest and 16% of its water. While researchers remain cautious, many public health professionals, and a growing number of affordable housing developers believe sufficient evidence exists to justify adoption of basic "healthy homes" practices to keep homes dry, clean, well ventilated. Some of the key benefits to encouraging green building and sensitive land planning include:

- lower electric and water utility costs
- environmentally effective use of building materials
- enhanced health and productivity
- long-term economic returns
- reduced environmental impact

IMPLEMENTATIONS STRATEGIES:

1) Encourage development that incorporates environmentally sensitive site planning, resource efficient building materials and superior indoor environmental quality practices.
    a. **Tactic**: coordinate policies within the land use section of the comprehensive plan update that will include specific code amendments
    b. **Tactic:** educate residents on environmental issues and the financial impacts of implementing sustainability within the home
2) Evaluate additional sustainability standards, such as Minnesota Green Star Certification or LEED, for the Ramsey Town Center.
3) Encourage housing development that incorporates connections to existing pathways and creates natural and safe walkable areas.
4) Develop partnerships with utilities, banks and green building experts to develop financial incentives for incorporation of green building technologies.
5) Evaluate the cost and benefits of incorporating geothermal heating within new and existing housing developments.
    a. **Tactic:** create a geothermal prototype to present to housing developers
    b. **Tactic:** create a deferred loan program for households that incorporate geothermal heating within scattered site housing development and renovation.
    c. **Tactic:** evaluate zoning and building codes to ensure that geothermal heating can be implemented with no additional permitting costs

E. Housing Financial Resources

Providing an adequate amount of funding to assist in the implementation of the HRA Master Housing Plan is an ongoing issue. The following are several options that the HRA can access either through their own power or with the support of and marketing of existing programs to assist in the maintenance of the housing stock, development of affordable housing and encouragement of green building and energy efficient home building and renovation. The HRA evaluates the use of the tools to support the housing goals and to enable the success of the implementation strategies.

HRA Financing Tools

1. **HRA Levy Funds -** Per Minnesota Statutes 469.033, Subdivision 6, an HRA has the authority to levy a special tax upon all taxable property within the City boundaries specifically to fund the purposes of the housing plan within that City. The maximum HRA levy is equal to .0144 percent of taxable market value. The HRA levy is spread across all property owners including commercial and industrial properties. Any HRA levy funds must be expended only for the purposes of sections 469.001 – 469.047 and only through the authority of the HRA Board and with signature of the authorize representative. The HRA levy must be requested annually and approved by a majority vote of the City Council.

2. **Tax Increment Financing -** The HRA has the authority, with the City support, to provide TIF assistance to achieve its housing and redevelopment plans. TIF uses the increase in property taxes resulting from new development to finance qualified public improvement costs related to that development. It is this increase or difference between the current property tax on a parcel of land and the estimated property tax after development that is the tax increment. When TIF is used for a housing project, state law requires that a certain percentage of the units be made affordable for the life of the TIF district (typically 20-25 years). The HRA will consider the support and use of TIF for projects that meet the objectives of the Housing Master Plan and are consistent with the City of Ramsey TIF policies. However, each project will be reviewed individually and only on its ability to meet the statutory requirements

3. **Anoka County HRA Funds –** The County Housing & Redevelopment Authority levies a special tax upon all taxable property within communities that participate in their program. The City of Ramsey is a participant in the Anoka HRA's programs and has approximately $700,000 available funds to be used for housing & redevelopment authority purposes. Of the $700,000, $300,000 is earmarked for the ACCAP rental housing project at the request of the City. In addition, approximately $200,000 per year is available to the City of Ramsey for HRA eligible projects. The City can access these funds through a request to the County regarding the potential use of funds. The County is generally supportive of requests from local communities that participate in their levy as long as the use is an HRA eligible project.

Non-HRA Funded Financial Resources Available to Ramsey Residents

1. **Housing Improvement Programs:**

   a) **Minnesota Housing Fix-Up Loan Program -** low interest rate loans to qualifying homeowners. The Fix-Up Fund was established to improve the basic livability and/or energy efficiency of the borrower's home

   b) **Home Rehab Loan Program –** Up to $15,000 in zero interest deferred payment and interest loan funds provided by Anoka County Community Development Block Grant for necessary home

improvements. The program is available for low-income households and is administered by the Housing Resource Center North Metro at 651-481-7401.

2. Homebuyer Programs:

a. First Time Homebuyer Low Interest Loan Program – administered by the County and Financed by Minnesota Housing. Low interest first mortgages provided to first time homebuyers within Anoka County.

b. Down Payment Assistance – Administered by ACCAP, the program is designed to help first time homebuyers purchase homes more affordably by providing deferred loans that can be used for down payment assistance. Eligible buyers may qualify for up to $5,000 with 0% interest to bring their monthly housing costs down to 30% of income. The principle only mortgage must be repaid when the property is sold.

c. Family Assets for Independence in Minnesota (FAIM II) – Administered through ACCAP for Anoka County residents the program enables persons with a low-wage job to build assets through long-term savings. Each participant commits to 12 hours of financial management educational workshops. Participants deposit a portion of their income into a Family Asset Account that generates a 3:1 match in this program. Up to $120 a month is the maximum match amount for an eligible FAIM participant if they deposit up to $40.00 into their account. The account can be used only to buy a home, higher education expenses, or to begin a small business.

d. **Habitat for Humanity -** Habitat for Humanity forms a partnership with families that need and want decent housing and are willing to build or renovate housing. Habitat is a national model for increasing affordable home ownership through a series of financing and educational methods and has been implemented with success in the City of Ramsey.

e. **Community Land Trust -** A community land trust model of financing provides affordable housing on a long-term basis. The homeowner owns the house but the community land trust owns the land underneath the house and provides the homeowner with a 99-year, renewable ground lease. A resale clause helps to ensure affordability of the unit for the long term. The initial subsidy in the project can then be retained and applied to subsequent buyers, while also rewarding homeowners with equity and a portion of the market value increase, allowing them to eventually move into market rate housing. This method has been implemented successfully within many counties throughout the metropolitan area. Currently there are no available land trust entities within Anoka County. However, the Ramsey HRA may find this method desirable to meet their affordable housing goals and could encourage Anoka County to pursue the establishment and/or funding of a Community Land Trust within the County.

3. Foreclosure Prevention

a) Prevention Counseling & hotline provided by ACCAP for Anoka County residents – 763-783-4747.

4. Energy Assistance

a) MN Energy Loans - low interest (6.625%) fixed rate loan up to $35,000 for energy improvements administered by the Neighborhood Energy Center - 651-221-4462 x132. Household income must be less than $89,000. An energy audit is required and typical improvements might include air conditioning replacement, furnace replacement, kitchen & bath fans, new windows, insulation, water heater replacement, hard-wired lighting and weatherization. The program will also fund renewable

energy systems such as geothermal heating/cooling, solar water heaters and photovoltaic/solar electric.

b) Weatherization Program – Administered by ACCAP, the Weatherization Program provides energy saving improvements to income-qualified households of the Energy Assistance program. Priority is given to the elderly, disabled, and/or high fuel consumption households. An auditor inspects the home, furnace and water heater to determine if weatherization work is required. This program helps residents conserve energy, lower their monthly utility costs, and helps to make the home more comfortable.

c) Energy Rebates – various utility rebates provided for installation of energy efficient systems and appliances provided by Connexus Energy. Additional information on the rebate program can be provided by Connexus customer service department at 763-323-2650.

d) **Energy Audits –** online audit and guidance on performing your own audit to reduce utility costs provided by Connexus Energy. Access to the energy audit information can be provided at the Connexus website at http://www.connexusenergy.com/energyaudit.htm

e) **Federal Energy Star Tax Credit –** Federal tax credits are available for many types of home improvements including adding insulation, replacement windows, and certain high efficiency heating and cooling equipment. The maximum amount of homeowner credit for all improvements combined is $500 during the two year period of the tax credit. This tax credit applies to improvements made to your primary residence from January 1, 2006 through December 31, 2007. If you are building a new home, you do not qualify for the tax credits for "eligible building envelope components" (windows, doors, insulation, roofs) or "qualified energy property" (HVAC & non-solar water heaters). However, the tax credit for photovoltaic's, solar water heating, and fuel cells is available for homeowners building new homes. Access to the Federal Tax Credit information can be found at the Federal Energy Star website at http://www.energystar.gov/index.cfm?c=products.pr_tax_credits

f) **Minnesota GreenStar Certification –** Minnesota GreenStar is a new program that offers green certification for new home construction and home remodeling. The benefits include mortgage and home equity rate discounts, rebates on building materials and products, tax credits, preferred utility rates and preferred homeowner and health insurance rates. For more details regarding the program visit http://www.mngreenremodeling.com/

Housing Assistance Policy

Affordable Housing

3/20/2014

City of Ramsey

Housing Assistance Policy – Affordable

BACKGROUND 2
HOUSING PRIORITIES 2
SCORING PROCESS 2
PROJECT BRIEF 4
PROJECT DETAILS 4
Number of Units 4
Minimum Threshold: 4
Rank Scoring 7
Total Points 15
FINANCIAL REQUIREMENTS/INFORMATION 16
Eligible Uses of Funding 16
Required Information 16
Sources and Uses 16
~~BACKGROUND ..... 2~~
~~HOUSING PRIORITIES ..... 2~~
~~SCORING PROCESS ..... 2~~
~~PROJECT BRIEF ..... 4~~
~~PROJECT DETAILS ..... 4~~
~~Number of Units ..... 4~~
~~Minimum Threshold: ..... 4~~
~~Rank Scoring ..... 6~~
~~Total Points ..... 13~~
~~FINANCIAL REQUIREMENTS/INFORMATION ..... 13~~
~~Eligible Uses of Funding ..... 13~~
~~Required Information ..... 13~~
~~Sources and Uses ..... 13~~
~~Financial Scoring ..... 14~~

Housing Assistance Policy – Affordable

Background

The City of Ramsey is committed to supporting well planned single family, multi-family development and redevelopment as a necessary element to achieve the goals for well-balanced housing inventory meeting the needs of residents during all life stages. The City Council and the Housing and Redevelopment Authority (HRA) of the City of Ramsey have determined that a policy is necessary to review requests for financial assistance related to housing projects to ensure any financially supported project meets Housing Polices of the Comprehensive Plan and housing priorities established by the City and reviewed on a regular basis.

Housing Priorities

To maximize the impact of City and HRA involvement, a priority list was developed by the Ad-Hoc-Sub-Committee of the Planning Commission and is subject to City Council approval. This is a list of priorities that the City believes would qualify for or is in the highest need of assistance, if available. This is not a reflection of the amount of individual types of housing products that the City believes will develop overall.

This list is based off current market conditions, demographics and financial need for assistance. This list will evolve over time, and will be revisited at least annually. With each project completed, the priority for assistance will change. Priorities are listed below:

1. Senior Independent
2. Affordable/Workforce
3. Redevelopment
4. Energy Efficient
5. Rehabilitation of Existing
6. Amenity Rental (market rate)
7. Three plus bedroom Rental
8. Inclusion of Accessory Dwelling Units
9. Executive Single-Family (note: City funding not likely for this product)
10. Senior Skilled Nursing
11. Assisted Living/Memory Care
12. Condominium

Scoring Process

Projects will be scored on a two (2) step process: 1) Minimum Thresholds and 2) Priority Scoring. Priority scoring is divided between *affordable housing projects* (targeting households below 80% of AMI and *market rate housing projects* (targeting households 80% and above AMI.

Housing Assistance Policy – Affordable

All applicants shall meet at least one of the goals and related implementation strategies listed below. Please provide a check mark in the box and on a separate sheet provide a brief explanation as to how the proposed project will meet the goal.

Priority scoring will be used to gauge the quality of the project and used to rank projects in the event of multiple proposals. The City reserves the right to reject any and all applications if it deems necessary.

The amount of funds that may be provided will be based on several factors including:

1. Project meets a housing priority.
2. Ability to meet the minimum thresholds.
3. Priority scoring results and the overall quality of the proposed project.
4. Availability of funding. The City reserves the right to cap the maximum assistance given, if funds are available. ~~City funding (when available) will be capped at $10,000 per unit.~~ Grant funding will be based on the grant type and related funding.
5. Third party review. Assistance is subject to third –party financial analysis and a 'but-for' analysis. Please contact City Staff for specifics on this analysis. Financial review is subject to look-back provisions traditionally found in Tax Increment Finance (TIF) analysis.

Housing Assistance Policy – Affordable

Project Brief

Please briefly describe your project. This section will be used as general background on the project, and is not intended to be a full analysis of the project. This project description will be used for short marketing pieces if assistance is approved.

_____
_____
_____
_____

Project Details

Number of Units

	Market Rate	80% AMI	60% AMI	50% AMI	30% AMI	Total # of Units
# of Units						

Minimum Threshold:

All applicants must meet one of the following minimum thresholds listed below. These are goals and implementation strategies from the City's Master Housing Plan, adopted as part of the City's 2009 Comprehensive Plan update. Check which threshold best matches your project and describe how your project will meet the implementation strategies.

	Applicant	City
Goal 1: Provide a variety of housing options for people at all life stages and income levels to encourage existing residents, and attract new residents, to stay in Ramsey throughout their lives. Housing opportunities should include a mixture of rental and owner-occupied to provide life-cycle housing choices meeting a full spectrum of demographics. [On a separate sheet please describe how your project will use one of the following implementation strategies to achieve this goal. Word limit = 500 words] 1) Work toward developing various senior housing options including independent living, cooperatives, and assisted living facilities, both market rate and affordable. 2) Focus on providing choices for empty-nesters, including aging in place and downsizing, to allow the majority of current residents to stay in Ramsey. 3) Provide opportunities for young adults to continue to live in Ramsey after leaving their parents' homes by supporting the development of quality rental housing.		

4) Provide a balanced housing supply, with approximately 90% ownership housing and 10% rental housing, to expand options for workforce housing and housing for young professionals. 5) Continue to develop more affordable single family housing such as condominiums and small-lot single family homes that includes higher architectural variety and quality. 6) Explore opportunities to attract executive level housing to provide a variety of housing choices and opportunities in the City.		
Goal 2: Revitalize/rehabilitate areas where the housing is aging and in need of repair and where the land is underutilized and/or has potential for future redevelopment consistent with the Comprehensive Plan. [On a separate sheet please describe how your project will use one of the following implementation strategies to achieve this goal. Word limit = 500 words] 1) Encourage residents to upgrade the functionality and marketability of their aging housing, and put quality additions on as they need more space. 2) Provide options for residents to subdivide if consistent with and allowed by the Comprehensive Plan. 3) Encourage redevelopment where land has potential for future development consistent with the Comprehensive Plan.		
Goal 3: Maintain and improve the housing stock to preserve the character and quality of existing neighborhoods. [On a separate sheet please describe how your project will use one of the following implementation strategies to achieve this goal. Word limit = 500 words] 1) Encourage the development of homeowner's associations or common interest communities for areas of older multifamily housing and new subdivisions of smaller lot neighborhoods. 2) Ensure that new housing developments provide appropriate density transition with existing established neighborhoods.		

3) Update and enhance design standards for new developments and encourage housing construction that incorporates quality and diverse architecture.		
Goal 4: Provide a development environment that increases residential health and reduces energy consumption. [On a separate sheet please describe how your project will use one of the following implementation strategies to achieve this goal. Word limit = 500 words] 1) The development incorporates environmentally sensitive site planning, resource efficient building materials and superior indoor environmental quality practices. 2) The development meets sustainability standards, such as Minnesota Green Star Certification or LEED. 3) Use of sustainable development elements such as the use of storm water management BMP's to manage on site storm water 4) The development incorporates connections to existing pathways and creates natural and safe walkable areas.		

Housing Assistance Policy – Affordable

Rank Scoring

Affordable Housing Project Scoring –Projects must target occupants that are below 80% AMI

Affordable Housing - Rental:	Applicant Point Allocation	City Point Allocation
Points will be given for units rented at greater affordability levels. **Chose 1 (or chose all that apply) and insert total number and percent of units at each affordability level:**		
~~50~~40% of units at 60% AMI = 5 points		
~~50~~20% of units at 50% AMI= 5~~7~~ points		
~~50% of units at 30% AMI= 10 points~~		

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Long-Term Affordability ~~Rental~~:	Applicant Point Allocation	City Point Allocation
Projects that demonstrate the ability to serve tenants for longest period of time. **Chose 1 (or chose all that apply) and insert total number of units.**		
30 years or more= 10 points		
15~~-29~~ years = 5~~8~~ points		
~~10- 15 years = 3 points~~ ~~(Deed restriction will be required for homes constructed with affordability limits in order to earn points)~~		

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~~***Affordable Housing - Ownership:***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~

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Housing Assistance Policy – Affordable

~~Points will be given for homes priced at greater affordability levels.~~ **~~Chose 1 (or chose all that apply) and insert total number and percent of units at each affordability level:~~**		
~~30% of units between 60 and 80% AMI = 5 points~~		
~~30% of units at 60 and below 80% AMI=7 points~~		
~~30% of units at 30% or less AMI= 10 points~~ ~~(Proposed affordable lots shall be deed restricted and scattered throughout the development)~~		

~~***Long-Term Affordability-Owner-occupied Housing:***~~ ~~Projects that demonstrate the ability to serve tenants for longest period of time.~~ **~~Chose 1 (or chose all that apply) and inset total number of units.~~**	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~5 years or more= 5 points~~		
~~10 years or more= 10 points (Deed restriction will be required for homes constructed with affordability limits in order to earn points. Lots shall be scattered throughout the development)~~		

Number of Bedrooms **If applicable, insert total number of units:**	Applicant Point Allocation	City Point Allocation
At least 25% of units include three + bedrooms = 5 points		
At least 50% of units includes three + bedrooms total units= 10 points		

Development of Senior Housing	Applicant Point Allocation	City Point Allocation
Senior independent (rental or owner-occupied) = 5 points. **Insert total number of age restricted units.**		

Housing Assistance Policy – Affordable

Specialized Senior Housing: At least 25% of total units include one (or combination) of specialized services. **Chose 1 (or chose all that apply) and insert total number and percent of total.** Maximum of 5 points		
Assisted Living units = 5 points		
Memory care units = 5 points		
Senior skilled nursing on site= 5 points		

Mixed Income Development:	Applicant Point Allocation	City Point Allocation
~~Inclusion of market rate and affordable within a single project (single or multiple buildings). All projects must have at least 50% of units at 80% AMI or above (market rate).~~		
Inclusion of market rate and affordable within a single project (single or multiple buildings). All projects must have at least 50% of units at 80% AMI or above (market rate).~~30% of total units (SF or attached) at 60-80% of AMI = 5 points~~		
~~30% of total units (SF or attached) at 50% (or below) of AMI= 10 points~~		

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~~***Redevelopment:***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~Rehabilitation of existing housing unit(s) for occupants below 80% of AMI= 5 points.~~ ~~**If applicable, insert total number of units:**~~		
~~Rehabilitation of existing housing unit(s) 30% of AMI= 10 points.~~ ~~**If applicable, insert total number of units:**~~		

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~~Infill redevelopment that results in removal of blighted residential and/or commercial buildings/sites that result in new housing units: Occupants must be at or below 80% AMI. Additional points will be given for greater affordability levels.~~ **~~If applicable, insert total number of units:~~**		
~~50% of units at 60% AMI = 5 points~~		
~~50% of the units at 50% AMI= 7 points~~		
~~50% of the units at 30% AMI= 10 points~~		

~~***Proximity to Transit***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~Within quarter mile (.25) of Northstar Commuter Rail-Ramsey Station: 10 points.~~	~~Circle: Yes/No~~	
~~Within one-half mile (.5) of Northstar Commuter Rail-Ramsey Station: 5 points.~~	~~Circle: Yes/No~~	
~~***Proximity to Local Employment***~~ ~~Within a two-mile radius of area zoned Employment= 5 points~~	~~Circle: Yes/No~~	

Proximity to Transit	Applicant Point Allocation	City Point Allocation
Within quarter mile (.25) of Northstar Commuter Rail-Ramsey Station: 10 points.	Circle: Yes/No	
Within one-half mile (.5) of Northstar Commuter Rail-Ramsey Station: 5 points.	Circle: Yes/No	
Proximity to Local Employment Within a two-mile radius of area zoned Employment= 5 points	Circle: Yes/No	

~~***Non-Financial Readiness to Proceed:***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~

Housing Assistance Policy – Affordable

~~Land use and zoning approvals have been obtained = 2 points~~ ~~***Architectural Standards (check all that apply)***~~	~~Circle:~~ Applicant Point Allocation	City Point Allocation
~~***Site Control:***~~		
Use of Hardi-Board or equivalent= 2 points ~~Fee Title Ownership has been obtained= 5 points~~	~~Circle:~~ ~~Yes/No~~	
Horizontal siding accessory only = 2 points ~~***Private Equity Percentage***~~		
~~Cash equity commitment of at least 5% down payment is secured: 5 points.~~ Minimum of 30% front elevation-brick or stone= 2 points	~~Circle:~~ ~~Yes/No~~	
50% brick or stone threshold = 2 points		
Building articulation= 2 points		
Roof articulation= 2 points		
Covered front porch > 50 square feet = 2 points		
Roof < 25% of front façade= 2 points		
2+ dormers (gabled ends to not count) for SF= 2 points		
Multiple dormers if townhome building or apartment building = 2 points		
Use of alley or internal drive for garage access (not visible from public street and HOA maintained) = 2 points		
Use of side loaded garages (SF and TH only) = 2 points		
House forward design (SF and TH only) = 2 points		
Architectural styled garage doors (15% of lots) (SF and TH only) = 2 points		
Anti-monotony elevation/color plan (applicable to developments with multiple buildings that have a minimum of three material colors that vary between buildings) = 2 points		
Four sided architecture (attached or detached) = 2 points		
High speed internet access in all units= 2 points		
Smoke free units/buildings= 2 points		

Housing Assistance Policy – Affordable

~~***Federal/Local or Philanthropic Partnerships:***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~Project funds from the federal government, a local unit of government, area employer and/or a private philanthropic, religious or charitable organization. **If applicable, provide percentage:**~~		
~~20.1% and above of the development cost= 10 points~~		
~~15.1%-20%= 8 points~~		
~~10.1%-10%= 6 points~~		
~~5.1%-10%= 4 points~~		
~~2.1%-5%= 2 points~~		

Federal/Local or Philanthropic Partnerships:	Applicant Point Allocation	City Point Allocation
Project funds from the federal, county, or state unit of government, ~~a local unit of government~~, area employer and/or a private philanthropic, religious or charitable organization. **If applicable, provide percentage:**		
20.1% and above of the development cost= 10 points		
15.1%-20%= 8 points		
10.1%-10%= 6 points		
5.1%-10%= 4 points		
2.1%-5%= 2 points		

Project Amenities **- Check all that apply.**	Applicant Point Allocation	City Point Allocation
Community room/gathering area= 1 point		

On-site fitness center= 1 point		
Terrace/Courtyard or Roof top gathering area= 1 point		
Indoor theatre= 1 point		
Outdoor facilities= 1 point per element: (i.e. walking trails, tennis/basketball courts, playground, others as proposed by applicant)		
Indoor or outdoor swimming pool= 1 additional point		
Use of shared parking to reduce total parking installed= 2 points		

~~***Architectural Standards (check all that apply)***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~Use of Hardi-Board or equivalent = 2 points~~		
~~Horizontal siding accessory only = 2 points~~		
~~Minimum of 30% front elevation brick or stone= 2 points~~		
~~50% brick or stone threshold = 2 points~~		
~~Building articulation= 2 points~~		
~~Roof articulation= 2 points~~		
~~Covered front porch > 50 square feet = 2 points~~		
~~Roof < 25% of front façade= 2 points~~		
~~2+ dormers (gabled ends to not count) for SF= 2 points~~		
~~Multiple dormers if townhome building or apartment building = 2 points~~		
~~Use of alley or internal drive for garage access (not visible from public street and HOA maintained) = 2 points~~		
~~Use of side loaded garages (SF and TH only) = 2 points~~		
~~House forward design (SF and TH only) = 2 points~~		
~~Architectural styled garage doors (15% of lots) (SF and TH only) = 2 points~~		

~~Anti-monotony elevation/color plan (applicable to developments with multiple buildings that have a minimum of three material colors that vary between buildings) = 2 points~~		
~~Four sided architecture (attached or detached) = 2 points~~		
~~High speed internet access in all units= 2 points~~		
~~Smoke free units/buildings= 2 points~~		

Development Standards (check all that apply) *Sidewalks, trails and streetscaping*	Applicant Point Allocation	City Point Allocation
Sidewalks to each front door (SF and TH) or main entry (apartment building)= 2 points		
Sidewalks/ trail on both sides of public streets (SF and TH); or sidewalk / trail on one side if project consists of only a single building = 2 points		
Installation of off-road trails within the development = 2 points		
Sidewalk " bump-outs" or "chokers" = 2 points		
Trail connection beyond development (installed by developer)= 5 points		
Boulevard trees at 35 foot spacing (new installation provided by developer= 2 points		
Installation of development wide streetscaping and decorative lighting= 2 points		

~~***Energy Efficient Elements (check all that apply)***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~Storm water Best Management Practices= 2 points~~		
~~Energy efficient roofing material or colors = 2 points~~		
~~Buildings oriented on site to optimize passive solar and cooling= 2 points~~		

~~Installation of a green roof occupying a minimum of 30% of the total roof area= 2 points~~		
~~Use of resource efficient building materials= 2 points~~		
~~Use of Green Star certified mechanical and appliances = 2 points~~		
~~Use of energy efficient windows/doors= 2 points~~		
~~Other energy efficient new technology as approved by the City= 2 points~~		

Energy Efficient Elements (check all that apply)	Applicant Point Allocation	City Point Allocation
Storm water Best Management Practices= 2 points		
Energy efficient roofing material or colors = 2 points		
Buildings oriented on site to optimize passive solar and cooling= 2 points		
Installation of a green roof occupying a minimum of 30% of the total roof area= 2 points		
Use of resource efficient building materials= 2 points		
Use of Green Star certified mechanical and appliances = 2 points		
Use of energy efficient windows/doors= 2 points		
Other energy efficient new technology as approved by the City= 2 points		

Total Points

	Applicant Point Allocation	City Point Allocation
Total Points Accumulated		

FINANCIAL REQUIREMENTS/INFORMATION

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Financial award is based on availability of funds. Maximum funding is set ~~at $8,000 per unit or not greater than 15% of entire project cost~~based on actual project need after a detailed financial analysis of the Developer and the project. The City reserves the right to contract with a third-party for financial analysis, which costs of said analysis are the responsibility of the Developer unless otherwise waived by the City. Owner equity must be greater than 10%.

Eligible Uses of Funding

Eligible uses of funding include; site acquisition, land improvements, building construction, and payment of development fees. The City will not waive development fees (park dedication, trail development, sanitary sewer, stormwater) or permit fees). The City and Developer will need to work together to identify a funding source for these fees if assistance is required specific to these fees.

Required Information

1. Sources and Uses Statement (below)
2. Financial Scoring Scorecard ~~(below)~~
3. Organizational Financial Statements (2 years of P&L and Balance Sheet)
4. Personal Financial Statements of Stakeholders and Tax Returns (2 years)
5. Project Pro forma/Projections (two [2] year and fifteen [15] year projections)
6. Letter(s) of Commitment from other Funding Sources (terms, conditions)
7. Proof that the Property is not delinquent in Property Taxes

Sources and Uses

The Developer shall provide a detailed sources and uses statement. ~~Please use the Sources and Uses Excel Spreadsheet and include as an attachment.~~ This shall include all sources of financing for the project and how those funds will be used. The Applicant shall provide a detailed listing of each.

Owner equity shall be equity above and beyond any tax credit or grant source of funding. The City will exclude any tax equity.

SOURCES	AMOUNT ($)		USES	AMOUNT ($)
Owner Equity			Land Acquisition	
Bank Loan			Site Development	
Other Loan			Construction	
Fed. Grant/Loan			Engineering/Arch. Services	
State Grant/Loan			Debt Service	
TIF			Contingencies	
Tax Abatement			Other	
Revolving Loan Fund			TOTAL	
Other				
TOTAL				

The City reserves the right to request additional data regarding the above required information as well as sources and uses. Review of sources and uses is subject to third-party financial analysis.

~~Financial Scoring~~

~~Please calculate points based on this project's ratio of private to public financing.~~

~~Ratio= *Private Financing : Public Financing*~~

~~***Leveraged Funds***~~	~~Applicant Point Allocation~~	~~City Point Allocation~~
~~Ratio of Private to Public Investment~~ • ~~5:1 = 5 points~~ • ~~4:1 = 4 points~~ • ~~3:1 = 3 points~~ • ~~2:1 = 2 points~~ • ~~Less than 2:1 = 1 point~~		

Planning Commission Work Plan 2016 – 2018

THIS IS A WORKING DOCUMENT. ITEMS WILL BE COMPLETED AS RESOURCES PERMIT

MISSION

To work together to responsibly grow our community, and to provide quality, cost-effective, and efficient government services

Strategic Imperative I: Financial Stability

Ensure strategic economic development that complements the city's desired quality of life and builds a stable tax base, all while maintaining a low tax levy.

On Target	Behind Schedule	Significantly Behind Schedule

Strategic Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
Improve budget preparation to identify operational efficiencies and cost-savings	Community Development/ Engineering	PC1.1 - Analyze development fees to ensure proper nexus to development impacts	2018	2018	None	None	Multiple	• Completion of System Plan Studies. • Amended rates and charges as recommended.
	Community Development/ Economic Development	PC1.2 - Create a policy to foster a business incubator facility	2016	2017	TBD	TBD	TBD	• Proper land use controls in place. • Completed an analysis of appropriate sites. • Completed an analysis of City's role.

DRAFT

Planning Commission Work Plan 2016 – 2018

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Strategic Imperative II: A Connected Community

Ensure that the city is a connected city that is part of a comprehensive regional transportation system that enables all citizens to easily navigate the community and attracts business development.

On Target	Behind Schedule	Significantly Behind Schedule

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Strategic Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
Improve the safety and mobility of major road corridors	Engineering	PC2.1 - Conduct CSAH 5 Corridor Study (land use and traffic integrated) in cooperation with the County [Strategic Plan]	2016	2017	Professional services - $50,000 (PIR) Anoka County Coordination Construction funds	None	B. Westby	• Corridor study completion in 2017 • At least one high priority improvement project commenced by 2018
	Engineering	PC2.2 - Conduct MN State Hwy 47 Study in cooperation with MNDOT and City of Anoka [Strategic Plan]	2016	2017	Anoka County & MNDOT coordination Construction Funds	None	B. Westby	• Corridor study completion in 2017 • At least one high priority improvement project commenced by 2018
	Community Development	PC2.3 - Ensure correct address and street name standards	2016	2016	None	None	TBD	• Corrected Street Name and Address Database
Create a diverse and robust offering of recreational opportunities	Community Development	PC2.4 - Develop Plan for future parks, trails, and open space capital improvements [Strategic Plan] [Comprehensive Plan]	2016	2017 [Minimum requirements for Comprehensive Plan Amendment – broader plan in future years]	None	None	T. Gladhill	• Completed Master Park and Trail Plan Update • CIP Aligned with Parks Plan

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Planning Commission Work Plan 2016 – 2018

MISSION

To work together to responsibly grow our community, and to provide quality, cost-effective, and efficient government services

Strategic Imperative III: Smart, Citizen-Focused Government

Continue the delivery of quality services to ensure the city will have safe and thriving neighborhoods and business districts, and a clean environment.

On Target	Behind Schedule	Significantly Behind Schedule

Strategic Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
Improve and maintain safety of the community	Community Development/Fire Department	PC2.5 - Expand and improve residential rental licensing program [Strategic Plan]	2017	2017 Program approved by City Council. Implementation in Q2 2017.	None	None	T. Gladhill	• Cost Benefit analysis completed • Improved property maintenance • Improved landlord/tenant relationships • Improved public safety response
		PC 2.6 – Ensure adequate telecommunications coverage	2018	2018	None	None	TBD	• Revised telecommunications tower ordinance
Enhance Community Engagement	Community Development	PC2.7 - Increase engagement opportunities in future land use decisions [Strategic Plan]	2015	2018	Professional service dollars for technical support and analysis (forecasts, etc.) $32,000 Planning Grant awarded by Metropolitan Council.	TBD	T. Gladhill	• Adopt a citizen engagement framework for 2040 Comprehensive Plan update • Determine appropriate scale of update to the City's Comprehensive Plan • Complete required 2040 Comprehensive Plan update • Clarified vision for the COR • Tax Directed Planning Policy • Comprehensive Transportation Plan

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Planning Commission Work Plan 2016 – 2018

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Strategic Imperative III: Smart, Citizen-Focused Government

Continue the delivery of quality services to ensure the city will have safe and thriving neighborhoods and business districts, and a clean environment.

On Target	Behind Schedule	Significantly Behind Schedule

Strategic Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
Enhance Community Engagement	Community Development	PC3.1 - Create a walkable community in The COR that balances market realities	2015	2016 New work plan approved for Q1 2017 Completion.	None	None	T. Gladhill	• Completed Boards and Commissions Survey • Completed Citizen Survey/Workshop • Updated Development Plan
	Community Development	PC3.2 - Prevent erosion from damaging shoreline properties and reducing water quality along the Mississippi River.	2015	2016 Complete!	$5,000 in professional services	None	C. Anderson	• Completed shoreline inventory through Anoka Conservation District.
	Community Development	PC3.3 - Create a community sign plan that focuses on community gateways and focal points. [Strategic Plan]	2017 Now part of COR System Plan Effort	2017	None	None	P. Brama	• Revised zoning code • Monument signage plan for the City completed • Tenant panel distribution policy completed • Funding and Priority Plan
Enhance Community Engagement	Community Development	PC3.4 - Enhance protection of wetlands during and after construction activities and ensuring adequately sized lots.	January, 2016	April, 2016 Complete!	None	None	L. Linton	• Amend City Code per LRRWMO requirements for wetland setbacks.

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Planning Commission Work Plan 2016 – 2018

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Strategic Imperative III: Smart, Citizen-Focused Government

Continue the delivery of quality services to ensure the city will have safe and thriving neighborhoods and business districts, and a clean environment.

On Target	Behind Schedule	Significantly Behind Schedule

Strategic Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
	Community Development	PC3.5 - Create areas to support existing residential neighborhoods	2017	2017	None	None	T. Gladhill	• Create Neighborhood Office District
	Community Development	PC3.6 - Ensure timely completion of projects that do not disrupt the tranquility of residential neighborhoods	2018	2018	None	None	T. Gladhill	• Establish policy for extensions of Building Permits.
	Community Development	PC3.7 - Create lifecycle housing that allows our aging population find housing without leaving our community.	2016	2017 [2 projects in review process]	TBD	TBD	TBD	• Facilitate the private development of a one-level housing product with common area maintenance.
Ensure long-term sustainability of Public Water System	Engineering	PC3.8 - Develop a Comprehensive Plan for City long-term water supply [Strategic Plan] [Comprehensive Plan]	2015	2016 [Draft complete. To be reviewed Q1 2017].	None	TBD	B. Westby	• Updated Comprehensive Water Supply Study

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Planning Commission Work Plan 2016 – 2018

MISSION

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Strategic Imperative IV: An Effective Organization

Maintain a highly functional staff, citizen volunteers, and elected officials and governance structure that meet the increasingly ever-changing needs of the organization.

On Target	Behind Schedule	Significantly Behind Schedule

Strategic Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
Continue to implement process improvement initiatives	Community Development	PC4.1 - Improve submittal process for the Lower Rum River Watershed Management Organization	2017 or as time permits in 2016	2017	None	None	T. Gladhill	• Revised Application Packet
	Community Development	PC4.2 - Ensure safety and welfare of the community without creating burdensome and duplicative requirements.	2017 Note – business licensing policy may be undertaken by the City Clerk in 2016	2018 Complete!	None	None	TBD	• Revised Variance Policy (2017) • Revised CUP Policy (2017) • Revised Business License Policy (2017)
	Community Development	PC4.3 - Clarify development standards for the Flintwood Hills Neighborhood	2018	2018	None	None	C. Anderson	• Bulk Standard Matrix

DRAFT

Comprehensive Plan

City Staff
WSB
Others

	Q4 2016		Q1 2017			Q2 2017			Q3 2017			Q4 2017			Q1 2018			Q2 2018				Q3 2018			Q4 2018	
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
Task One: Community Engagement																										
1.1 Steering Committee Meetings	21-Nov		COR?		LU		X		X		X	DRAFT PLAN														
1.2 Community Workshops				COR		LU		X		X																
1.3 Online Engagement																										
1.4 Pop up Engagements (Happy Days, Expo, Concert series)						COR		LU	X	X	X															
1.5 Draft Plan Open House													X													
1.6 Interagency Coordination				X		X		X		X																
1.7 Commissions				EPB	EDA	EPB	EDA	Parks	Parks	Parks																
1.8 Planning Commission/ City Council meetings							X					X				PH PC	CC prelim							CC Final		
Task Two: Introduction and Demographics (Tim)																										
2.1 Chapter Completion, including charts/graphs																										
Task Three: Housing (Tim)																										
3.1 Prepare charts and data																										
3.2 Prepare maps																										
3.3 Goals and Policies																										
3.4 Draft Chapter																										
Task Four: Land Use (Tim/WSB)																										
4.1 Create Community Designation Map																										
4.2 Create Existing Land Use Map																										
4.3 Create Existing Land Use Table																										
4.4 Prepare Future Land Use Map (City to provide a marked up map																										
4.5 Create Future Land Use Table																										
4.6 Create forecasts for pop, hh, emp for 2020, 2030, 2040																										
4.7 Divide forecasts by sanitary sewer interceptor district																										
4.8 Goals and Policies																										
4.9 Draft Chapter (including exhibits)																										
Task Five: Transportation (WSB)																										
5.1 Divide forecasts by TAZ																										
5.2 Roadways																										
5.3 Transit																										
5.4 Bike/Ped																										
5.5 Aviation																										
5.6 Freight																										
5.7 Draft Goals and Policies																										
5.8 Draft Chapter (including exhibits)																										
Task Six: Parks, Trails, and Open Space Update (Bruce)																										
6.1 Draft Chapter (Regional Requirements)																										
6.2 Parks, Trails, and Open Space Chapter																										
Task Seven: Sanitary Sewer and Water (BMI)																										
7.1 update capacity analysis																										
7.4 Goals and policies																										
7.5 draft chapter (including exhibits)																										
Task Eight: Surface Water Management (BMI)																										
8.1 Surface Water Management Plan Chapter update																										
Task Nine: Implementation (Tim)																										
9.1 Review existing plans																										
9.2 Implementation Recommendations																										
9.3 Exhibits (Zoning Map)																										
Task Ten: Economic Development (Pat)																										
10.1 Goals and Policies																										
10.2 Draft Chapter																										
Task Eleven: Natural Resources/Resiliency (Chris)																										
11.1 Goals and Policies																										
11.2Draft Chapter																										
Task Twelve: Met Council Coordination (Tim)																										
12.1 Draft Full Plan																										
12.2Adjacent Community Review																										
12.3 Meeting with Met Council and Submit																										
12.4 Complete Comp Plan Submittal Form																										

Our Mission: To work together to resposibly grow our community, and to provide quality, cost-effective, and efficient government services.

Regular Planning Commission **6. 1.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title:

Review Format and Content for April 10 Comprehensive Plan Update Workshop (Transportation Plan; Parks and Recreation Plan)

Purpose/Background:

The purpose of this case is to provide information in regard to the materials to be presented at the April 10 Comprehensive Plan Community Workshop.

On March 13, the Comprehensive Plan Steering Committee met to prepare for the April 10 Community Workshop. This workshop will focus on the following two (2) topics:

1. Transportation Plan
2. Parks and Recreation Plan

Attached to this case are materials/working documents to be presented at the public workshop.

Observations/Alternatives:

Transportation Plan

During the months of February and March, Staff, the Transportation Plan Consulting Team (WSB Associates), Anoka County Highway, and MnDOT have been collaborating and working through comprehensive transportation planning issues leading up to this stage of the Comprehensive Plan Update. The attached map represents the work of this collaboration and direction provided by the Comprehensive Plan Steering Committee. The intent is to allow participants in the transportation planning process to mark up the map and provide feedback on potential ideas. The workshop will also include a review of existing goals and strategies related to this Chapter of the Comprehensive Plan. These goals and strategies are carry over from the 2030 Comprehensive Plan. The Steering Committee recommended that 1) these goals be presented in their current form, with update commentary provided by City Staff; 2) Staff compile feedback from the workshop and other community engagement processes; and 3) Staff recommend revisions to goals and strategies based on that feedback for further review.

Parks and Recreation Plan

The City's Parks and Recreation Team has been completing a work order request to complete this task. Please note - there are two components to the Comprehensive Parks and Recreation Plan. Part 1 is the minimum requirements of State Statute Chapter 473 for comprehensive planning in the metropolitan area. Part 2 is related to the City's Strategic Plan Initiative to provide a robust recreation program in the community, and is much broader than the minimum requirements of the Comprehensive Plan Update.

Similar to the Transportation Plan process, working maps and analysis of goals and strategies will be the focus of the April 10 Workshop. Note - the planning map attached is an example only that will be cleaned up prior to the

workshop. This was the actual feedback map produced at the 2016 Happy Days Event.

Funding Source:

Funding for the Comprehensive Plan Update comes primarily from the General Fund Budget. The City did receive a $32,000 Planning Grant from the Metropolitan Council to off set the costs of preparation.

Recommendation:

Staff recommends general feedback on the attached planning materials. The City Council reviewed these materials on March 28 and found them acceptable.

Action:

No formal action is being requested. Informal feedback is appropriate.

Attachments

Transportation Goals
Forecasted Traffic Levels
Transportation Planning Map
Transit Planning Map
Not Motorized Transportation Planning Map
Minimum Requirements - Transportation
Park and Recreation Goals
Parks Planning Map
Minimum Requirements - Parks and Recreation
Steering Committee Minutes

Form Review

Inbox	Reviewed By	Date
Kurt Ulrich	JoAnn Shaw	03/31/2017 01:05 PM
Form Started By: Tim Gladhill		Started On: 03/31/2017 11:24 AM
Final Approval Date: 03/31/2017		

TRANSPORTATION ELEMENT

2040 Update Note: The Comprehensive Plan Steering Committee recommends forwarding these existing goals and strategies as a beginning point for community dialogue. These goals and strategies represent a positive body of work prepared by the community in 2008, and still generally serve as an appropriate foundation with relevant updates. The Comprehensive Plan Steering Committee did recommend streamlining the strategies and prioritize similar to the Highway 10 Access Planning Study (Current Projects, Immediate Projects, Long Term Projects, Opportunity Driven Projects, and Development Driven Projects, etc.).

A. Framework and Goals

The Federal Highway Act of 1962 required continuous, comprehensive, and coordinated transportation planning for metropolitan areas. It was an important step in creating a mechanism for local, regional and federal agencies to plan for transportation needs. This plan was developed using previous transportation planning documents for the City of Ramsey and Anoka County and the Metropolitan Council Transportation Policy Plan. The transportation system in Ramsey is complex due to many factors. Nonetheless, key transportation planning principles and characteristics of the transportation system have been established in order to provide a basis for sound transportation planning decisions. The following plan involves simplistic tools and is designated to encompass thorough stakeholder involvement and coordination of diverse governmental efforts.

The following goals and strategies have been established for the transportation plan:

a) A safe and efficient motorized transportation system throughout the community

STRATEGIES:

1. Complete planning and design stages for Highway 10 interchanges & Highway 47 expansion/re-alignment improvements
2. Update the access management plans (done – now Access Planning Study)
3. Complete interchange designs
4. Complete The COR~~RTC AUAR~~ area roadway improvement projects
5. Secure funding for transportation projects
6. Assess the need for local traffic control and access improvements
7. Consider roundabouts where appropriate
8. Secure funding for transportation projects
9. Pursue additional east/west collector in the northern portion of the city (discuss)

DRAFT: 2030 Plan Carry Over

b) A safe and efficient non-motorized transportation system throughout community

STRATEGIES:

1. Explore options for revising the City's sidewalk policy, including requiring sidewalks or trails on both sides of some new public streets, different standards for public versus private roads, high-volume versus low-volume roads, and issues related to long-term maintenance (partially implemented)
2. Encourage design choices in new and existing development that enhance neighborhood walkability (partially implemented)
3. Examine the ability of transportation network to handle pedestrians, bicyclists, and automobiles through design of streets (complete streets policy)
4. Ensure future roadway improvement include sufficient right of way for pedestrian and bicycle paths
5. Secure funding for transportation projects such as additional trails, bike paths, and pedestrian connections
6. Include a review of infrastructure, including parking for walking and other non-motorized transportation modes when reviewing any transportation improvement projects
7. Advocate affordable, dependable and efficient means of public transit in the community
8. Complete the master trail plan (see part 2 of this evening's meeting)
9. Continue efforts to establish the Mississippi River regional trail
10. Explore options for constructing a pedestrian bridge over Highway 10 and the Mississippi River (Mississippi Skyway)
11. Ensure trail connections to transit stops, employment centers, shopping and other services

c) Connectivity with regional transportation corridors and transit

STRATEGIES:

1. Consider officially mapping the remainder of the Mississippi River bridge crossing corridor (continued; major discussion; new alignment)
2. Collaborate with adjacent communities and county, state, and federal agencies on the planning, design and construction of regional transportation projects
3. Secure a stop on the Northstar Commuter Rail line (done)
4. Establish numerous, efficient, affordable transportation connections, both within and Ramsey and connecting to other communities, that include multi-modal transportation choices
5. Continue involvement in the Northstar Corridor Development Authority (NCDA) (amended; NCDA disbanded; Northstar Marketing Group established)
6. Market the municipal parking facility as a park-and-ride opportunity

DRAFT: 2030 Plan Carry Over

7. Develop an affordable, efficient, and reliable transit system that includes commuter rail and bus capabilities
8. Secure funding for transportation projects

DRAFT: 2030 Plan Carry Over

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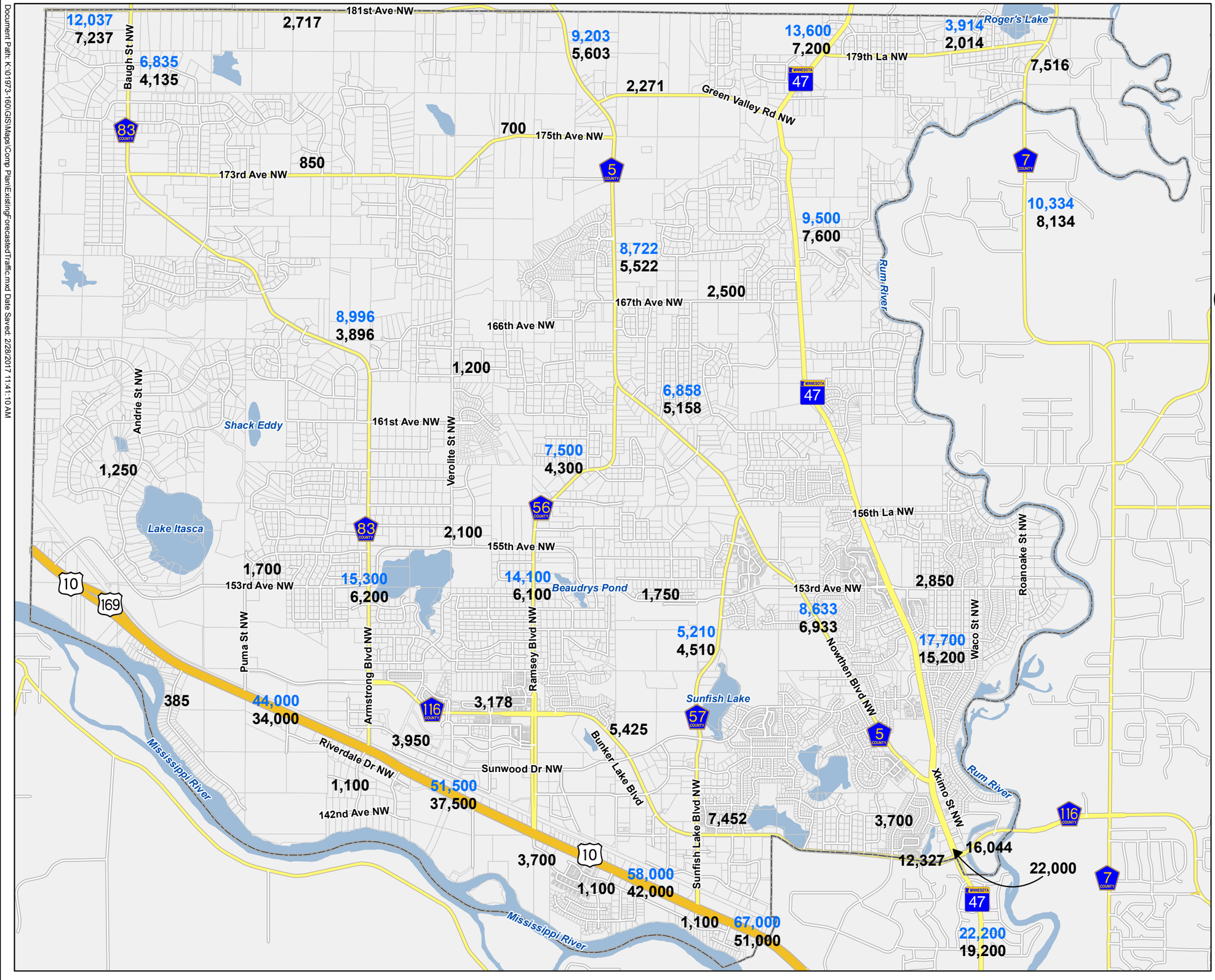

Ramsey Comprehensive Plan
Existing Traffic Volumes & Adjusted Met Council Forecast
Ramsey, MN

(NO IMPROVEMENTS)

DRAFT

XXX- Existing AADT (2012-2015)
XXX- Met Council Adjusted 2040 AADT

AADT- Average Annual Daily Traffic From MnDOT Website
AADT- Average Annual Daily Traffic Forecast from Met Council

NOTES:

* Adjusted forecast applies MET Council travel model growth to known existing volumes.

* Forecast is based on capacity constraint of existing roadway lanes: No improvements assumed.

N

0 3,000 Feet

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Ramsey Comprehensive Plan
Roadway Issues
Ramsey, MN

DRAFT
FOR DISCUSSION

Additional East/West Roadway Needed between Green Valley Rd & Bunker Lake Blvd

NOTE: This map is out of date and needs direction.
City staff mark-up COPY.

Possible Rum River Crossing??

Nowthen
Green Valley Rd NW
175th Ave NW
173rd Ave NW
179th La NW
Roger's Lake
Roanoke St NW
Baugh St NW
Elk River
Rum River
Andover
167th Ave NW
164th La NW
Shack Eddy
161st Ave NW
160th La NW
Nowthen Blvd NW
Armstrong Blvd NW
Verolite St NW
Lake Itasca
155th Ave NW
Jasper St NW
Ramsey Blvd NW
Beaudrys Pond
Sunfish Lake Blvd NW
156th La NW
153rd Ave NW
Uranimite St NW
Puma St NW
Waco St NW
149th Ave NW
Sunfish Lake
Liama St NW
Sunwood Dr NW
Riverdale Dr NW
Bunker Lake Blvd
Mississippi River
Mckinley St NW
Anoka

	Potential Future Signal
	Existing Interchange
	Proposed Interchange
	Proposed Railroad Grade Separation
	Proposed RCUT Intersection
	Possible River Crossing (Long Term)
	Congestion/Safety Concern
	Proposed Connection
	Proposed Frontage Road
	Ramsey Boundary
	Parcel Boundary

Note: The illustrated issues have been taken from existing city of Ramsey & Anoka County 2030 Transportation Plans for discussion purposes

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WSB

February 2017

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Ramsey Comprehensive Plan
Transit Map
Ramsey, MN

Roger's Lake
Rum River
Shack Eddy
Lake Itasca
Beaudrys Pond
Sunfish Lake
Mississippi River
Mississippi River
Rum River

Proposed Circulator Shuttle Service
(Long-Term Improvement)

- Northstar Commuter Rail
- Northstar Station
- Northstar Link (Fridays Only)
- Northstar Link Bus Stop
- Ramsey Boundary

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Ramsey Comprehensive Plan Non-Motorized Transportation Network Ramsey, MN

City of RAMSEY

Roger's Lake
Trott Brook
Rum River
Rum River Central Regional Trail
Shack Eddy
Lake Itasca
Beaudrys Pond
Sunfish Lake
Central Anoka Regional Trail
Mississippi River
Rum River

Note: updated map will include existing on-street bike lanes.

N

0 3,000 Feet

- Rum River Library
- Anoka High School
- Proposed Trailhead
- City Hall
- Fire Station
- Existing Trailheads
- Crosswalks
- Proposed Underpass
- Existing Underpass
- Ramsey Boundary
- Trott Brook Trail Corridor
- Ramsey Elementary School

City Trails

- Asphalt (37.52 miles)
- Tunnel (0.05 miles)
- Wooden Walkway (0.48 miles)
- Sidewalks

Regional Trails

- Existing
- Planned
- Mississippi River Trail Route

Regional Bicycle Transportation Network Alignments

- Tier 1 Alignment
- Tier 2 Alignment

Park and Open Space

- PARKS
- OPEN SPACE/ TRAIL CORRIDOR
- PROPOSED PARK
- QUASI-PUBLIC
- REGIONAL

Regional Bicycle Transportation Network Corridors

- Tier 1 Priority Corridor

WSB

TRANSPORTATION

Transportation Analysis Zones

- ☐ Include a table allocating forecasted population, household, and employment growth by TAZ for 2020, 2030 and 2040.
- ☐ Describe how you have allocated demographic growth based on your plan's assumptions for guided future land use (e.g., density, mix of uses, locations for new development, highway/transit access, redevelopment, etc.).
- ☐ When doing your land use planning, accommodate development densities around transit consistent with density expectations established in Chapter 3 of the 2040 Transportation Policy Plan (2040 TPP).

Roadways

- ☐ Describe and map the functional classification of all existing and proposed roads within your community, using the functional classification system described in Appendix D of the TPP and the roadway classification map currently recognized in the region.
  - ☐ Maps must reflect the principal arterials adopted as the metropolitan highway system in the 2040 Transportation Policy Plan (2040 TPP).
  - ☐ If a community determines that a change to the A-minor arterial system in the community is warranted, a request should be made to the Transportation Advisory Board (TAB) for the change, and TAB's approval secured, prior to reflecting the new classification in the community's plan. Check the council's website or contact Elaine Koutsoukos at 651-602-1717 for more information.
  - ☐ Maps should also show the streets classified by the community as major and minor collectors and local streets. Changes to these streets from the function shown on the regional map are at a community's discretion, and do not need approval from TAB. However, these changes should follow the criteria laid out in Appendix D of the TPP and maintain system continuity. A map or table highlighting any discrepancies between the community's map and the regional functional classification map previously referenced should be submitted to Council staff so the regional map can be updated.
- ☐ Include the following information for the principal and A-minor arterials:
  - ☐ Identify the existing and future number of lanes.
  - ☐ Map current traffic volumes, including heavy commercial volumes, which include both ADT and HCADT.
  - ☐ Map forecasted 2040 traffic volumes. (This should be done using the Council's regional model, or another method with approval from Council forecasting staff.)
  - ☐ Identify future rights-of-way that need to be preserved.
  - ☐ Identify planned improvements to principal arterials as shown in the Current Revenue scenario of the 2040 TPP.
  - ☐ Identify any existing or proposed future MnPASS lanes, dedicated busways and bus-only shoulder lanes as shown in Figure 6-6 of the 2040 TPP.
  - ☐ For other proposed interchange improvements, follow the Highway Interchange Request Criteria and Review Procedure, which can be found in Appendix F of the 2040 TPP.
  - ☐ Incorporate access management guidelines of MnDOT, or those of the county in which your community is located, into your comprehensive plan as well as into your subdivision and zoning ordinances.
  - ☐ Describe recommendations from recent corridor studies regarding roadway improvements, changes in land use, and/or access.

Transit

- ☐ The region has established Transit Market Areas to guide the types and levels of transit service that are appropriate for efficient and effective services. Transit Market Areas are defined in Appendix G of the 2040 TPP by the demographic and urban design factors that are associated with successful transit service. Identify your community in relationship to your transit market area(s). Describe and map the existing and planned transit infrastructure and services in your community, including those of Metro Transit or other regional transit service providers. Communities should include the identification of the following basic elements of the transit system in their comprehensive plan:
  - ☐ Existing transit routes and dial-a-ride services
  - ☐ Existing and potential high-frequency transit routes
  - ☐ Existing and planned transit stations and transit centers
  - ☐ Existing and planned park-and-rides and express bus corridors
  - ☐ Existing and planned transit advantages
  - ☐ Existing transit support facilities

For communities with transitways in the 2040 TPP Current Revenue Scenario with an identified mode and alignment and for high-frequency bus corridors:

- ☐ Describe the community's roles and responsibilities in transitway development, including activities completed or currently underway.

- ☐ Describe and map these transitways in your community, including future stations identified by the end of project development.
- ☐ Conduct station-area or corridor planning including an investment and regulatory framework that guides future implementation activities.
- ☐ Incorporate station area or corridor plans into the comprehensive plan by the end of Project Development.
  - ☐ Identify the geography of transit station areas.
  - ☐ Ensure that land guided for future residential development in station areas conforms to minimum density levels in the 2040 TPP; and address opportunities for residential density at target density levels.
  - ☐ Plan for a total level of activity in station areas that is supportive of transitway investments; and address the activity level guideline of a minimum combined total of 7,000 residents, jobs, or students.
- ☐ Address access to stations by pedestrians and bicyclists.

For communities with transitways in the 2040 TPP Current Revenue Scenario prior to an identified mode and alignment:

- ☐ Describe the community's roles and responsibilities in early transitway development, including analysis of potential modes, alignment, and station locations.
- ☐ Describe and map these transitways in your community including alternative alignment(s) and station locations under consideration.

Bicycling and Walking

- ☐ Describe and map the existing and planned on-road and off-road bicycle facilities in your community.
- ☐ Map and describe the Regional Bicycle Transportation Network (RBTN) within your community:
  - ☐ Show all Tier 1 and Tier 2 RBTN corridors and alignments.
  - ☐ Show the relationship of the RBTN to the local bicycle network of off-road trails and on-street bikeways including all existing and planned connections.
  - ☐ Include locations of regional employment clusters and activity center nodes (as shown on the RBTN map) and other local activity centers.
  - ☐ For Tier 1 and Tier 2 corridors on the RBTN, describe and map the existing or planned bicycle facility alignments that are within the established corridors; the purpose of these corridors is as a placeholder for cities/counties to designate a planned alignment. If there is a planned alignment that would fulfill the intent of the corridor and that lies within and in line with the corridor's directional orientation that the community would propose to replace the established corridor, map that alignment and denote by indicating it as "proposed for the RBTN."
- ☐ Analyze and address the need for local bicycle and pedestrian facility improvements to provide connections that remove major physical barriers (i.e., freeways, railroad corridors, rivers and streams) on the regional (RBTN) and local networks.
- ☐ Discuss pedestrian system needs in a manner that responds to your community designation (as described in Thrive MSP 2040) and addresses the needs of your community.

Aviation

- ☐ Identify policies and ordinances that protect regional airspace from obstructions. Include how your community will notify the FAA of proposed structures.
- ☐ Recognize seaplane use on surface waters as designated and regulated by MnDOT; communities should recognize these areas on plan maps where appropriate and consider issues of land use compatibility.
- ☐ Map any facilities such as radio beacons or other air navigation aids sited in off-airport locations and address how they will be protected from physical encroachment and electronic interference through your local ordinance and notification processes. Your system statement will indicate whether your community hosts one of these facilities.

Freight

- ☐ Identify railways, barge facilities and truck or intermodal freight terminals within the community.
- ☐ Identify other important nodes that may generate freight movement, such as industrial parks and large shopping areas.
- ☐ Map the road network showing volumes of multi-axle trucks (also known as "heavy commercial average annual daily traffic or HCAADT") for Principal Arterial and A-Minor functional classifications.
- ☐ Identify any local roadway issues or problem areas for goods movement, such as weight-restricted roads or bridges, bridges with insufficient height or width clearances, locations with unprotected road crossings of active rail lines, or intersections with inadequate turning radii.

Parks and Recreation Goals

2040 Update Note: The Comprehensive Plan Steering Committee recommends forwarding these existing goals and strategies as a beginning point for community dialogue. These goals and strategies represent a positive body of work prepared by the community in 2008, and still generally serve as an appropriate foundation with relevant updates.

The following goals and strategies came from the community meetings held in 2007 and 2008 under the Ramsey3 effort.

a) A comprehensive, balanced park and trail system consisting of large and small scale parks, active and passive parks, natural preserves, and recreational facilities.

STRATEGIES:

1. Incorporate planned parks and trails into all new development where appropriate
2. Design for connectivity with local and regional parks
3. Improve coordination of park and trail planning within City and adjacent communities
4. Establish a regional trail along the Mississippi River
5. Develop a Trott Brook Trail Corridor
6. Explore providing pedestrian access from the Mississippi River to the north side of Highway 10
7. Design trails with a variety of surfaces appropriate for different uses
8. Seek out alliances and partnerships with non-profit and governmental agencies to assist in securing funding and other resources that will assist in implementing the park and trail plan
9. Improve quality of existing parks, through careful planning, continued maintenance and adequate funding
10. Explore options for an additional community park
11. Where appropriate, consolidate existing parks to improve quality and provide more efficient service
12. Explore options for a revenue source for permanent protections of parks, trails and open space

b) A system of safe parks and trails

STRATEGIES:

1. Locate trails where appropriate in greenway corridors and natural areas
2. Promote Crime Prevention Through Environmental Design CPTED and other techniques
3. Where appropriate, use existing power/utility easements for the trail system
4. Provide adequate signage and pavement markings to warn automobile traffic of park and trail traffic

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5. Explore use of pedestrian-activated signals, continuous flashing signage, and mid-block crossings where safe and appropriate, to further increase park and trail safety
6. Minimize at-grade crossings of trails and roads and other interactions between trail users and automobiles, with underpasses or overpasses

~~e)~~ A variety of park facilities and programs that meet the life cycle needs of residents.

STRATEGIES:

1. Work with the schools and community organizations to plan for athletic fields and facilities that will accommodate the growing community
2. Explore options for a revenue source for recreational facilities and programming
3. Study the need for a Community Center that offers a variety of recreational uses for all age groups

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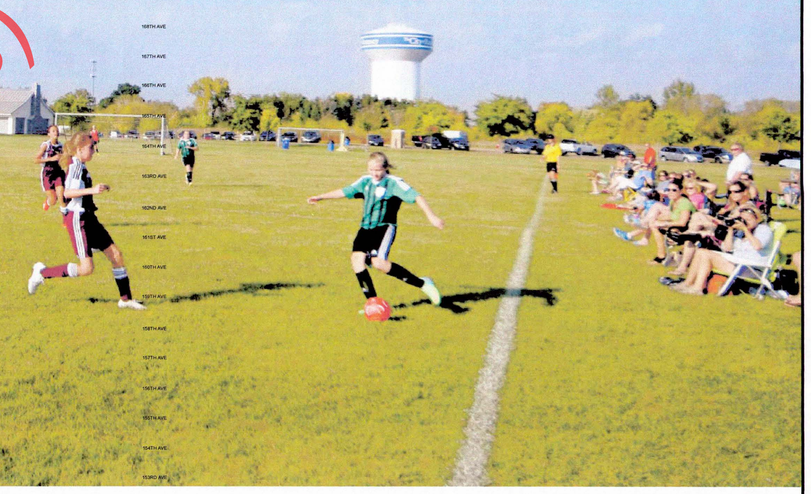
City of Ramsey
2016 Park and Trail User Map

Sample Planning Map
2040 Comprehensive Plan Update



Sample (From 2016 Happy Days)

Connect

Pos Park

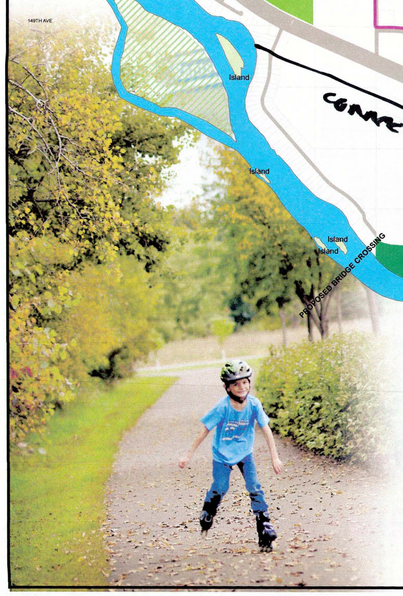
New Park Please!

Happy Days 2016

7550 Sunwood Drive NW Ramsey MN 55303
www.ci.ramsey.mn.us

Prepared by City of Ramsey
Revised September 2016

0 0.5 1 Miles



Legend

Park Map Symbols

- Underpass
- Proposed Underpass
- Crosswalk
- Existing Trailhead
- Fire Station
- City Hall
- Proposed Trailhead

TYPE

- OFF-ROAD (OUT OF ROW)
- BOARWALKS
- ON-ROAD (WITHIN ROW)
- Right of Way (ROW)

Park and Open Space

- PARKS
- QUASI-PUBLIC
- REGIONAL
- PROPOSED PARK
- OPEN SPACE/ TRAIL CORRIDOR

PARKS AND TRAILS

Regional Parks and Trails

- ☐ Describe, map, and label the Regional Parks System facilities that are located in your community.
- ☐ Describe, map, and label the federal and state recreational lands within your community, as shown on your System Statement.
- ☐ Depict existing regional parkland with a land use of “Park” (or your community’s equivalent) on your Existing Land Use map.
- ☐ Acknowledge the Council-approved master plan boundaries of regional parks, park reserves, and special recreation features by guiding the properties with a land use of “Park” (or your community’s equivalent) on your Future Land Use map.

Local Parks and Trails

- ☐ Describe and map your existing and proposed local parks, trails, and recreation facilities.
- ☐ Include a capital improvement program for parks and open space facilities as part of your implementation program.

RAMSEY 2040 COMPREHENSIVE PLAN STEERING COMMITTEE
CITY OF RAMSEY
ANOKA COUNTY
STATE OF MINNESOTA

On Monday, March 13, 2017, the 2040 Comprehensive Plan Steering Committee met at the Ramsey Municipal Center, 7550 Sunwood Drive N.W., Ramsey, Minnesota.

Present: Tim Gladhill, Community Development Director
Mark Riverblood, Parks & Assistant Public Works Superintendent
Bruce Westby, City Engineer
Scott Mareck, WSB
____ Bennett, Committee Chairperson
Randy Bauer
Scott Breuer
Christopher Ouelette
Leslie Roering
Dan Torgerson
Michael Valentine

1. CALL TO ORDER

The meeting was called to order at 6:00 p.m.

2. DISCUSSION

Mr. Gladhill welcomed the Steering Committee members and meeting attendees. He stated Erica Sitz, a City resident who has been attending the Steering Committee meetings, is no longer able to participate. He added there will hopefully be a new resident attendee, Meghan Mathson, who previously worked as an intern for the City of Ramsey, and was recently appointed to the Anoka County Commute Solutions TMO. He noted her father, Bruce, is the owner of Fairway Liquors.

Mr. Gladhill stated the Kick-Off Public Workshop was held on February 28, and feedback and comments were received from many residents. He added the Public Workshop was very productive, and everyone who attended had an opportunity to provide their input and comments. He noted many residents expressed the importance of maintaining the rural character of the City, including preservation of natural resources and maintaining large lot sizes, and how these issues are affected by the metropolitan urban service area.

Mr. Gladhill stated the discussion centered around maintaining a healthy balance between encouraging urban growth in certain areas but also maintaining large lot sizes and rural areas. He added there was a lot of discussion about a possible community recreation center, as well as

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transportation systems and schools. He noted the School District has indicated a new elementary school will be opening in Ramsey in the fall of 2019.

Mr. Gladhill stated another topic of discussion was visions and resources for developing the COR and affordable housing, and many residents had specific development issues they wanted to discuss. He added the larger group broke out into four smaller groups to review and define the following issues: rural character strategies; Parks and Recreation; schools; and transportation and roads. He noted these topics will continue to filter throughout the process, and are good points for beginning the Comprehensive Plan discussion.
Mr. Gladhill stated many residents left comments in the comment box about specific topics, and City staff intends to follow up on those issues.

Mr. Bauer stated a key issue is maintaining areas for small, local farms, as that type of land use is dependent upon the economy and not something over which the City has much control. Mr. Gladhill stated there are strategies and tools for land use preservation that the City can explore.

Mr. Gladhill reviewed a document compiled from staff's notes from the first Workshop, specifically related to Transportation and Parks and Recreation. He added there is some overlap between these two areas, especially when it comes to trails planning. He noted the April 10 Workshop will include more specific discussions on existing goals and strategies, and staff's compilation includes 3-4 goals per chapter with implementation strategies for each goal.

Mr. Gladhill stated the City's existing 2030 Comprehensive Plan goals include planning and design stages for Highway 10 and an updated Access Management Plan, which is now called the Access Planning Study. He added the new Comprehensive Plan will incorporate this Study, as well as roadway improvement projects and possible funding sources, local traffic control and access improvements, and development plans for the north side of the COR. He noted a key area of focus will be the need for an additional east/west collector in the northern part of the City.

Mr. Gladhill stated the issue of non-motorized accessibility will be an important component of the Transportation Plan, including sufficient right of way for bike paths. He added a Green Valley Road resident attended the first Workshop and expressed concern about pedestrian safety on that 2-lane roadway with minimal amount of shoulder. He noted this location should be reviewed for pedestrian access and safety.

Mr. Gladhill stated the Committee should consider issues related to public transport and connectivity with regional transportation corridors and other transit. He added another area for discussion is the completion of a master trail plan, major segments of which have been completed. Mr. Riverblood confirmed that a trail segment will be completed and open for use in early Spring 2017.

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Mr. Gladhill stated an Anoka County initiative called The Greater Minnesota Gateway brings adjacent communities together to advocate for changes and improvements to the Highway 10 corridor. He added Ramsey's involvement with this initiative will provide much-needed regional support for and attention to this transportation issue.

Mr. Gladhill requested the Committee's feedback and comments on the goals and strategies that have been discussed so far.

Mr. Bauer stated the 2030 Comprehensive Plan includes some items related to Highway 47 that are on schedule to be completed. He added it might be unnecessary to include items in the 2040 Comprehensive Plan that could potentially be resolved in 20 years. Mr. Valentine agreed.

Ms. Roering stated removing Highway 47 improvements from the Comprehensive Plan could be misconstrued. Mr. Gladhill stated it is helpful to leave potential improvements in the plan, in terms of goals, strategies, funding and resources.

Mr. Valentine stressed the importance of being cognizant about use of time and resources about projects in the 2030 Comprehensive Plan, such as completion of an east/west collector. Mr. Ouelette stated it makes sense to leave Armstrong Boulevard in the Plan because of increased traffic patterns. Mr. Gladhill agreed, adding a review is included in the Council's strategic plan.

Mr. Bennett stated many of the review items are very specific rather than an overall vision document. He added residents at the community meeting were focused on future connectivity and growth in the long term. Mr. Gladhill stated a general time frame could be used instead of a specific year.

Mr. Bauer asked why the river bridge crossing project is not included. Mr. Gladhill stated that project is included in the transportation map, but was not included in the Comprehensive Plan as there is no support for it from the Met Council. He added the City will continue to plan land use and build support for the project, but Highway 10 improvements is the City Council's priority.

Ms. Roering asked, with regard to Rum River crossing, whether the City can look at different ways to cross the river beyond Highway 7. She added new transportation technologies and planning should be considered. Mr. Valentine agreed.

Mr. Bennett stated the main bullet points should be better aligned and the language should be more clear. Mr. Gladhill agreed to have City staff draft a document from the first Workshop.

Scott Mareck, WSB Transportation Planner, stated a regional transportation plan has been compiled by the Metropolitan Council that identifies priority projects. He added there are components being addressed by roadway authorities that relate to Anoka County, which include Highways 47 and 169.

Mr. Mareck reviewed the regional transportation plan, which takes into account the local population. He added the plan shows that Highways 10 and 47 are major growth corridors, with significant growth on Bunker Lake Boulevard as well.

Mr. Bauer stated the 4-lane highways are both at maximum capacity for daily counts. He asked how that can be addressed at the regional level. Mr. Mareck stated the transportation plan identifies and attempts to address facilities that are under-sized, and develops strategies to determine priorities for which corridors are important to address first. He added the plan also reviews infrastructure problems, funding sources, and possible solutions.

Mr. Mareck stated the first issue to be addressed is funding, and Mn/DOT has possible sources of funding available for Highway 47 improvements, and discussions are under way with Anoka County as well. He added the whole corridor will be assessed, including volumes, safety issues, congestion and increased access.

Mr. Breuer stated, in terms of securing funding, traffic safety and efficient traffic flow are important issues and should be a good place to start. Mr. Westby stated Mn/DOT focuses on channelizing and restricting access. Mr. Mareck agreed, adding railroad crossings and frontage roads are also a high priority for Mn/DOT.

Mr. Bauer asked whether a possible bridge connection collaboration could be discussed with Andover. Mr. Mareck stated that could be suggested to Andover and Anoka County, although a "wish list" prioritization of projects needs to be determined.

Ms. Roering stated the Mississippi River crossing should stay in the Comprehensive Plan so it remains a focus, and as residents feel strongly about it. Mr. Ouelette agreed, adding it will show that the City is pursuing plans for a river bridge, and the Comprehensive Plan should show a specific location. Mr. Gladhill stated that will be shown under the Armstrong Boulevard improvements.

Ms. Roering stated it would be interesting to show what the east/west connector options are. She added that is an issue that residents are talking about. There was consensus among the Committee members that inclusion of east/west connector plans is an important goal for the 2040 Comprehensive Plan.

Mr. Mareck stated there is currently not an overall non-motorized trails map of the City and the COR. He added a separate marked bike lane should be considered, including paved shoulders and sidewalks, with pedestrian overpasses, and there should be a pedestrian crossing near the civic center. He noted other cities are currently doing "multi-modal" reviews of bike paths, and developing trails plans that are destination-based.

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Mr. Mareck stated a Master Park and Trail Plan is being planned depicting the City's existing sidewalks and proposed connectivity, using a model from Anoka County and the Metropolitan Council. He added this is helpful as it shows where there are currently on-street bike lanes.

Ms. Roering asked whether the map colors could be changed, and make the background more opaque, to make it easier to see pathway connections. Mr. Mareck agreed.

Mr. Mareck stated the North Star commuter rail station is an important part of the community infrastructure. He added a circular shuttle service is being considered, and the City of Fridley is doing a pilot project with van service from the rail station to local businesses. He noted these are important aspects of the City's multi-modal transportation plan.

Mr. Riverblood stated the 2030 Comprehensive Plan's transportation component (Chapter 10) is focused on goals and strategies. He added the first seven strategies identified by the Comprehensive Plan have been completed, which gives an indication of how useful the Comprehensive Plan is at identifying viable goals.

Mr. Riverblood stated one of the top 4 current imperatives is a "connected community". He added the City has increased its trail connectivity south of Bunker Lake Boulevard in recent years, and is now included in the Anoka County Regional Trails System.

Mr. Riverblood stated the City received funding from the National Park Service to construct a pedestrian bridge connecting the Mississippi River Trail. He added that connectivity will increase the number of North Star Rail users along Ramsey Boulevard.

Mr. Riverblood stated a new community park is planned near Itasca Lake on an area of land that was purchased by the City in Spring 2016.

Mr. Breuer asked whether the Park Trust Fund comes from fees from developers. Mr. Riverblood stated park dedication fees are paid to the City when new development occurs, but they do not cover parks and trails costs.

Mr. Bauer stated the City's green spaces currently do not require much maintenance. Mr. Gladhill agreed, adding Lacrosse fields are expected to be in high demand, and that will require some additional planning and field changes. He noted larger parks can be reconfigured for new uses.

Mr. Bennett stated many residents ask why the City spends more money on trails than on sports fields and playing areas. He added this should be addressed as a long-term planning issue. Mr. Riverblood stated there is a give and take in terms of available funding for parks, and it is a misconception that a disproportionate amount of funds is spent on trails.

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Mr. Ouelette stated he likes the concept of trails connecting and defining neighborhoods within the City. Mr. Riverblood stated a lot community feedback has been received about the value of trails as a natural resource.

Mr. Gladhill stated a potential community center continues to resurface as an amenity that the City's residents support. He added the City Council has reviewed public and private partnership and funding scenarios but further review is necessary and a feasibility study is planned.

Mr. Gladhill stated Adrenaline Sports Center, an indoor sports facility with a variety of indoor sports programs, hopes to relocate to Ramsey. Ms. Roering stated a community center, as well as the City's parks, should have programs and services that appeal to all the City's residents.

Mr. Riverblood stated the data is available and the larger neighborhoods can be studied to determine who is using the parks. Mr. Bennett stated he likes the idea of parks that can be adjusted to suit the people who are using them.

Mr. Torgerson stated parks that have amenities that cater to every age group are ideal as there is less of a cyclical component. Mr. Riverblood stated Parks Planning was previously carried out with that in mind, to accommodate as many age groups as possible. He added it is important to have a balance of park uses, including trails, to reach a wider demographic range.

Ms. Roering stated the five large parks, which are the City's priority, should have a variety of amenities for all age groups. Mr. Riverblood stated each of the five parks has its own focus or emphasis. He added, for instance, Riverbend is the most actively-used community park, with park users from all different demographics. Mr. Bennett stated community parks with a variety of amenities, such as a municipal plaza or water feature, are a significant draw for park users.

Mr. Gladhill stated the parks maps would be available at the Committee's next meeting, as well as Workshop meeting notes. He added finalizing the Comprehensive Plan will be a two-part process, with a draft plan ready by October 2017 followed by a review phase. He added the April 10 Workshop will be held at 6:00 p.m. at ____ so there will be more room as a larger crowd is expected. He noted the third Workshop will be held June 12, 2017.

Mr. Gladhill stated the City was recently selected by the University of Minnesota's Resilient Communities Project to be the Partner Community for the 2017-18 school year. He added the project will be a significant investment for the City, but resources are already allocated for strategic planning, and this is an exciting opportunity for Ramsey.

Mr. Gladhill stated City staff created a Facebook page, "City of Ramsey Comprehensive Plan Update". He encouraged the Committee members to visit the Facebook page and share this information with other residents.

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Mr. Ouelette asked whether City staff can initiate a Twitter feed, like many other communities have been doing. Mr. Riverblood agreed to look into it. He added the City Council is currently reviewing the City's communication plan, which includes social media tools. He noted the final plan should be adopted at the end of March, and could potentially coincide with a City Twitter feed.

Mr. Gladhill noted that Planning Commissioner Patrick Surma was in attendance at the meeting, and thanked him for coming.

3. ADJOURNMENT

The 2040 Comprehensive Plan Steering Committee was adjourned at 7:45 p.m.

Respectfully submitted,

_____

Tim Gladhill
Community Development Director

ATTEST:

_____

Jo Ann M. Thieling
City Clerk

Drafted by Mary Mullen
TimeSaver Off Site Secretarial, Inc.

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Regular Planning Commission **6. 2.**

Meeting Date: 04/06/2017

By: Tim Gladhill, Community Development

Information

Title

Review Preliminary Feedback from Highway 10 Summit and Discuss Corridor Improvement Plan Next Steps

Purpose/Background:

The purpose of this case is to provide a brief update from the Highway 10 Summit held on March 16 with a portion of the corridor business community. The purpose of this case is also to review next steps, as well as discuss how this project can fit within the upcoming Resilient Communities Project with the University of Minnesota (2017-2018 Academic Year).

Observations/Alternatives:

More detailed feedback can be found in the attached document. The following themes emerged from this event.

1. The need to complete the Highway 10 Plan in Ramsey is the most crucial step moving forward.
    1. Multiple scenarios still exist.
    2. Removes uncertainty.
2. Stakeholders would generally support City efforts to buy and remove vacant and blighted buildings.
3. Public sector should step up maintenance (i.e. boulevard mowing).
4. Mix of feelings about public resources to improve private properties (business subsidies).
5. Some businesses frustrated with lack of focus and attention on existing businesses, especially those impacted by acquisition.
6. City should continue to plan for a Mississippi River Crossing.

The following businesses are interested in a one-on-one follow up:

- Connexus Energy
- Lano Equipment
- Molin Concrete
- RM Golf Carts
- Son Watersports
- Village Bank

Next Steps

The attached work plan outlines more detail on next steps. Generally speaking, over the next 30 - 60 days, Staff will be conducting one-on-one business visits and continue to market and compile the online survey.

Recommendation:

No action requested.

Action:

No action requested.

Attachments

Work Plan - Detailed

Work Plan - Summary

Highway 10 Summit Notes

Form Review

Inbox	Reviewed By	Date
Kurt Ulrich	JoAnn Shaw	03/31/2017 01:05 PM
Form Started By: Tim Gladhill		Started On: 03/31/2017 11:25 AM
Final Approval Date: 03/31/2017		

Work Plan Proposal
Corridor Improvement Program

Purpose

The City has an adopted Strategic Plan that includes an initiative to improve the image of key corridors such as Highway 10. The City continues to get feedback from various industrial, commercial, and residential stakeholders that the image of Highway 10 is an issue that needs to be addressed. The City Council first desires to work with the community and stakeholders to identify/confirm that the consensus of the community is that an image issue does exists, and continue to work with the community and stakeholders to identify strategies to address the issue, if needed. The City Council desires to take an incentive-based approach, rather than an enforcement-based approach.

Key Steps in Plan Development/Plan of Action

In order to move from discussion to action, this Plan of Action is offered as a guide to complete the desired initiative in a reasonable timeframe and to ensure that this remains a high priority for the community.

1. Authorize Work Plan (this step)
2. Engage Stakeholders
3. Adopt a Plan of Action (Corridor Improvement Program)
4. Implement Strategies

Sidebar 1 – somewhere in this document we should provide an update on the direction to address 'low hanging fruit' administratively. This would be another update of the Staff Corridor Tour.

Sidebar 2 – somewhere in this document we should note our plan to create a consolidated geometric of the Ramsey Corridor that shows the full project upon completion (rather than the 20+ individual slides in the Study itself).

Step 1: Authorize Work Plan

In order to ensure that all are moving towards a common goal in a manner that meets the needs of policy makers, a Work Plan is first developed to hold the project team accountable for completing key tasks at agreed upon timeframes.

Authorizing Work Plan is planned for January 24, 2017.

Step 2: Engage Stakeholders

DRAFT

The Strategic Plan identifies utilizing citizen engagement techniques as the first step in identifying a problem and designing strategies. The City Council does not want the City to be the entity to suggest strategies, but wants the stakeholders that are impacted by these policy decisions to design said strategies. The citizen engagement is planned to be an inclusive process, while keeping in mind the desire to move towards action in a reasonable timeframe.

This citizen engagement step is planned to be accomplished in three broad types.

1. Host a Stakeholder Forum
2. Conduct an Online Survey of Business Community
3. Conduct In Person Business Visits for Sample of Business Community

Host a Stakeholder Forum

The City plans to hold a Stakeholder Forum in February, 2017. While the impetus is the development of a Corridor Improvement Program, this also creates an opportunity to better communicate to overall vision for Highway 10 over the next twenty years. Many of the key stakeholders are not aware that the Highway 10 Access Planning Study nor the Greater Minnesota Gateway Initiative exist. Others are not aware of the corridor's legislative and funding request activities. This forum will be the kick off to the primary means of input, and online survey and in-person business visits.

The Forum will focus on three (3) broad categories:

1. Highway 10 Access Planning Study/Greater MN Gateway Update
2. Ramsey Legislative and Funding Efforts (Ramsey Boulevard Railroad Grade Separation)
3. Corridor Improvement Program

The Stakeholder Forum is being planned for Thursday, March 9 at 8:00 a.m. at the Fountains of Ramsey.

Highway 10 Access Planning Study/Greater MN Gateway Update

Elwyn Tinklenberg will provide an update on the Highway 10 Access Planning Study and outline the key improvements planned within Ramsey. This portion will also introduce the Greater Minnesota Gateway

Ramsey Legislative and Funding Efforts

Kurt Ulrich will provide background on the Ramsey Boulevard Grade Separation Effort and funding applications.

Corridor Improvement Program

Tim Gladhill will provide background on the Council's Strategic Initiative to improve the image of key corridors. The request for feedback will be framed as follows.

DRAFT

1. The City continues to receive feedback from multiple retail, industrial, and residential stakeholders with a desire to improve the image of Highway 10. Do you feel that there is a need for the City to initiate efforts to improve the image of Highway 10?
2. If you feel there is a need to improve the image, what do you feel is creating the image issue?
3. What strategies could the City implement to improve the image?

Step 3: Adopt a Plan of Action (Corridor Improvement Program)

Key to the success of this Strategic Plan Initiative is to move from issue identification and strategy development to a plan of action. The details of the Plan of Action are not defined until strategies are developed as part of the stakeholder engagement.

Developing the Plan of Action (Corridor Improvement Program itself) is planned for the month of May, 2017. The Corridor Improvement Program will be reviewed by advisory boards and City Council in the month of June, to be adopted this same month. The Corridor Improvement Program is anticipated to be the authorization to begin to implement acceptable strategies.

Step 4: Implement Strategies

While some policy strategies are anticipated to be created and adopted parallel to the overall Corridor Improvement Program, it is possible that certain strategies will need to be authorized by the Program first, and will be implemented in the months to follow adoption of the Corridor Improvement Program. Details will not be known until strategies are developed.

The City has loosely planned for this task during the month of July and August, 2017.

Highway 10 Initiatives Communication Document

As part of this work plan, the City will put together a robust document that outlines the various Highway 10 initiatives. In our communication with various stakeholders, it has become clear that not all stakeholders are aware of the status of the Highway 10 Access Planning Study or even aware that such a study exists. The intent of this document is to easily and clearly articulate the priorities of Highway 10 for the community and illustrate the progress that has been made and continues to be made for this priority.

The document is planned to be similar to the City's existing Community Profile and Developer Information documents. These are high-quality marketing materials that can be easily updated and refreshed as needed. The centerfold of the document is planned to be a pull out map of the Highway 10 Initiatives in Ramsey, similar to the materials provided by the Greater Minnesota Gateway initiative. The following are planned to be listed as a To Do List on the map and/or overall document.

1. Highway 10 Access Planning Study (complete)
2. Greater Minnesota Gateway Initiative (underway)
3. Stakeholder Engagement
4. Corridor Improvement Program
5. Right of Way Acquisition and Loan Fund (RALF) Policy Initiative

DRAFT

6. Land Use Control Update (Official Map and Zoning District)

DRAFT

Corridor Improvement Program Plan of Action												
	2017											
	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	January	February	March	April	May	June	July	August	September	October	November	December
Task 1: Authorize Work Plan												
City Council Authorization												
Task 2: Engage Key Stakeholders - Define if a Problem Exists and Design Alternatives												
Develop Communication Materials - Map and Highway 10 Initiatives Document (Highlight progress already made and plan of action moving forward)												
Stakeholder Forum/Citizen Engagement Strategy												
Business Survey												
Business Visits												
Review Results with Planning Commission												
Review Results with Economic Development Authority												
Review Results with City Council												
Task 3: Plan Development												
Develop Plan Draft												
Develop Policies for Selected Strategies												
Review Plan Draft with Planning Commission												
Review Plan Draft with Economic Development Authority												
City Council Adopts Plan												
Task 4: Implement Strategies												
Implement strategies identified in plan above												

Corridor Improvement Program
March 16, 2017 Highway 10 Summit Public Comment

Highway 10 Plan

- Businesses are frustrated with these studies and a perceived lack of focus on existing businesses and stakeholders. Businesses will either be forced out of business or forced to relocate.
- What will happen to the parcels already purchased for right-of-way under the old Highway 10 Plan?
    - To the extent possible, those parcels were still used in the new Highway 10 Plan. For those that will no longer be needed, the City will sell unneeded portions with revenues going back into the RALF program. This step likely will not occur until construction of a project is completed.
- What is the status of the Mississippi River Crossing?
    - The Mississippi River Crossing remains in the Comprehensive Plans for the cities of Dayton and Ramsey. The Mississippi River Crossing is not on MnDOT's improvement plan nor the Metropolitan Council's regional transportation plan. The cities of Dayton and Ramsey will continue to plan for land uses with the river crossing in mind, but any plan is 20+ years in the future, if not greater.
- The right-of-way acquisition process has been arduous and onerous on property owners. The burden of the Highway 10 plan has been placed on too few people, primarily property owners.
    - The City is looking to adjust our official controls (Zoning Code) to attempt to ease some burden while retaining the necessary protection of future right-of-way.

Highway 10 Corridor Improvement Program

- Are dollars available for improvements to private sites?
    - The City does not have dollars specifically available for the image improvement initiative. This is a tactic that could be explored. The City is focused on incentive-based approaches.
- Stop wasting government dollars on assistance to private properties. City has no vision. Focus on vacant land and acquire vacant buildings.
- Take out vacant buildings and mow ditches and medians more frequently.
- If ordinances change, financial assistance to comply should be provided.
- Focus on low-hanging fruit; old and vacant buildings.

Post Meeting Suggestions

- Run mock scenario to relocate a business in the corridor.
- Complete a tax-base study for those businesses/uses to be removed.
- Complete Ramsey Highway 10 Plan (consolidated exhibit)

DRAFT

Regular Planning Commission **7. 1.**

Meeting Date: 04/06/2017

By: JoAnn Shaw, Community Development

Information

Title:

Zoning Bulletins

Purpose/Background:

Enclosed are zoning periodicals for your review.

Notification:

Observations/Alternatives:

Funding Source:

Recommendation:

Action:

Attachments

Zoning Bulletins

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	03/31/2017 12:54 PM
Form Started By: JoAnn Shaw		Started On: 03/29/2017 08:57 AM
Final Approval Date: 03/31/2017		

QUINLAN™ February 25, 2017 | Volume 11 | Issue 4

Zoning Bulletin

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Standing—Neighboring municipality challenges zoning reclassification in adjacent municipality 5

Due Process—At one of a series of public hearings on her property, landowner is prohibited from cross-examining witnesses 8

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Mat #41945575

Vested Rights—New storm water regulations apply to projects approved prior to effective date of regulations

Several counties argue that required retroactive application to completed development applications violates the vested rights doctrine

Contributors

Corey E. Burnham-Howard

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Citation: *Snohomish County v. Pollution Control Hearings Board, 2016 WL 7495874 (Wash. 2016)*

WASHINGTON (12/29/16)—This case addressed the issue of whether Washington's vested rights doctrine—which entitles developers to have a land development proposal processed under the regulations in effect at the time a complete building application is filed, regardless of subsequent changes in zoning or other land use regulations—excuses compliance with the state-mandated requirements of a municipal storm water permit. In addressing that issue, the case addressed the issue of "[w]hat constitutes a 'land use control ordinance,' " and more specifically, whether a storm water regulation is a "land use control ordinance" subject to the vested rights doctrine.

The Background/Facts: Pursuant to the the Federal Water Pollution Control Act (also known as the Clean Water Act) ("CWA"), 25 U.S.C.A. §§ 1251-1388, and the National Pollutant Discharge Elimination System ("NPDES") permitting program established by the CWA, the Washington State Department of Ecology (the "Department") issued the third iteration of a municipal storm water permit (the "2013 Phase I Permit"). That latest iteration of the storm water permit required the owners or operators of large and medium municipal separate storm sewer systems to adopt and make effective a local storm water management program by June 30, 2015. The program could include local ordinances and "shall apply to all [development] applications submitted after July 1, 2015 and shall apply to [development] projects approved prior [to] July 1, 2015, which have not started construction by June 30, 2020."

Various permittees—including several counties—(collectively, the "Counties") appealed that portion of the permit to Washington's Pollution Control Hearing Board (the "Board"). They argued that the 2013 Phase I Permit violated the vested rights doctrine because it compelled them to retroactively apply new storm water regulations to completed development applications.

Originating at common law but now statutory, Washington's vested rights doctrine "entitles developers to have a land development proposal processed under the regulations in effect at the time a complete building permit application is filed, regardless of subsequent changes in zoning or other land use regulations." (See, e.g., RCW 19.27.095 (building permits) and RCW 58.17.033(1) (land division).)

The Department maintained that the vesting statutes were intended to limit the exercise of municipal discretion, and thus did not apply to municipal storm water permits because they were required under state action, not municipal action.

The Board agreed that the vested rights doctrine does not apply to storm water regulations permittees must implement as part of the

NPDES permitting program. More specifically, the Board concluded that storm water regulations required under the 2013 Phase I Permit are not "land use control ordinances" governed by Washington's vesting statutes.

The Counties appealed.

The Court of Appeals reversed. It found that the vested rights doctrine excuses compliance with the storm water regulations because those regulations are "land use control ordinances."

The Department (as well as several environmental groups, which had intervened) appealed.

DECISION: Judgment of Court of Appeals reversed.

The Supreme Court of Washington held that the storm water regulations that permittees were required to implement and apply to completed development applications as part of the NPDES permitting program (pursuant to the 2013 Phase I Permit) were not "land use control ordinances" subject to Washington's vesting statutes.

In so holding, the court explained that the vesting statutes apply only to "land use control ordinances." (See RCW 19.27.095(1); RCW 58.17.033(1)). The court concluded that the storm water regulations that municipal storm water permittees were required to implement and apply to completed development applications as part of the NPDES permitting program were not "land use control ordinances" subject to the vesting statutes. Looking at "the legislative history and the purpose of the vesting statutes, as well as [court] precedent," the court found that the vested rights doctrine "grew out of a concern that municipalities were abusing their discretion with respect to land use and zoning rules." Thus, the vesting statutes were intended to restrict municipal discretion with respect to local land use ordinances. Here, however, the storm water regulations were mandatory state regulations, rather than discretionary local regulations. In other words, the court found that the vested rights doctrine places limits on municipal discretion, and found that with mandates of federal and state environmental laws there was no "local" in the sense that municipalities had discretion to decide whether applicants must comply. (The only local discretion with regard to such environmental laws, found the court, was to include those mandates in a local ordinance.)

See also: *State ex rel. Ogden v. City of Bellevue, 45 Wash. 2d 492, 275 P.2d 899 (1954).*

See also: *West Main Associates v. City of Bellevue, 106 Wash. 2d 47, 720 P.2d 782 (1986).*

Case Note:

The holding in this case disapproved of Adams v. Thurston County, 70 Wash.

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App. 471, 855 P.2d 284 (Div. 2 1993) (disapproved of by, Snohomish County v. Pollution Control Hearings Board, 2016 WL 7495874 (Wash. 2016)) and Victoria Tower Partnership v. City of Seattle, 49 Wash. App. 755, 745 P.2d 1328 (Div. 1 1987) (disapproved of by, Snohomish County v. Pollution Control Hearings Board, 2016 WL 7495874 (Wash. 2016)).

Case Note:

In discussing related case law as supporting the court's statutory interpretation here, the court noted that where a county develops the storm water requirements on its own rather than as a requirement imposed by the State through a municipal storm water permit—such a scenario is distinguishable from the present case. (See Westside Business Park, LLC v. Pierce County, 100 Wash. App. 599, 5 P.3d 713 (Div. 2 2000) (finding that storm water drainage ordinances developed by the county on its own were "land use control ordinances")).

Case Note:

The Counties had also presented a "finality" argument, which the court of appeals rejected. Under that argument, the Counties contended that building and development permits were "irrefutably valid" if not challenged under the Land Use Petition Act within 21 days of being issued." The court said the argument was "misplaced" because the deadline was for a judicial appeal of a land use decision and no party was challenging any land use decision here.

Standing—Neighboring municipality challenges zoning reclassification in adjacent municipality

Parties dispute whether neighboring municipality has "standing" to bring such a legal challenge

Citation: *Village of Willow Springs v. Village of Lemont, 2016 IL App (1st) 152670, 2016 WL 7380514 (Ill. App. Ct. 1st Dist. 2016)*

ILLINOIS (12/29/16)—This case addressed the issue of whether a neighboring municipality had standing to contest the zoning reclassification of property in another municipality.

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The Background/Facts: Property on Grant Road (the "Property") in the Village of Lemont, Illinois ("Lemont") had been zoned by Cook County for industrial use. The Property was later annexed by Lemont and rezoned by default by Lemont to residential use. Eventually, the Property owners and prospective buyers of the Property (collectively, the "applicants") sought to develop the Property and applied to Lemont for rezoning of the Property from R-1 Single Family Residential to M-3 Heavy Manufacturing District. The applicants also submitted a development application for the Property.

The Village of Willow Springs ("Willow Springs") was adjacent to Lemont. Notably, Willow Springs did not own property adjacent to the Property. Willow Springs sought to enjoin Lemont from, among other things, approving the zoning reclassification and the development application. In its legal action against Lemont, Willow Springs argued, among other things, that Lemont's approval of the application for rezoning of the Property would be "arbitrary, unreasonable, and capricious," and would "bear no substantial relation to public health, safety or welfare[,] and would result in special injury and damage to [Willow Spring] in its corporate capacity." More specifically, Willow Spring alleged that unless restrained or enjoined, Lemont and the applicants would proceed with the application and a proposed "heavy industrial development," which would be "injurious to Willow Springs in that, among other things, it negatively affects the quality of life by the Village residents, property values within its borders, and the Village's growth and development." Willow Springs also alleged that approval of the development application would "result in irreparable harm to Willow Springs" because "the proposed development is inconsistent with the character of the adjoining area [,] . . . property values in [Willow Springs] will diminish[,] municipal property tax revenue will be lost[,] . . . roads will be more congested resulting in safety hazards[, and] the development will result in the degradation of air quality."

Lemont asked the court to dismiss Willow Springs' action. Among other arguments, Lemont maintained that Willow Springs lacked standing (i.e., the legal right to bring the action) because Willow Springs had not and could not allege that it owned or controlled any property contiguous to or even near the Property, and was therefore required to "allege and eventually prove that the rezoning would have a substantial, direct and adverse injury [on its] 'corporate capacity,' " which it had not done.

Willow Springs maintained that approval of the zoning reclassification and development application would "cause it to suffer the sort of injury recognized by Illinois courts as conferring standing on a municipality to challenge the zoning ordinances of other municipalities: 'a direct, substantial, and adverse effect upon the . . . performance of [its] corporate obligations.' "

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While the lawsuit was pending, Lemont approved the zoning reclassification for the Property (but made no other determination as to the development application for the Property). Lemont continued to maintain that Willow Springs' action should be dismissed because Willow Springs lacked standing.

The circuit court agreed with Lemont. It held that Willow Springs lacked standing to challenge the rezoning of the Property. It also held that Willow Springs lacked standing to contest the development application at this time.

Willow Springs appealed.

DECISION: Judgment of circuit court affirmed.

The Appellate Court of Illinois, First District, First Division, agreed with Lemont and the circuit court that Willow Springs lacked standing to challenge the zoning reclassification of the Property. The court further concluded that dismissal of Willow Springs' claim in its entirety was proper because, since there had been no approval yet of the proposed development for the Property, there was no government action that could properly be challenged other than the zoning reclassification.

In so holding, the court explained that a municipality's standing to bring a constitutional challenge on another municipality's zoning ordinance, as Willow Springs had here, required "a clear demonstration that [the challenging municipality] would be substantially, directly and adversely affected in its corporate capacity." In other words, Willow Springs had to show an injury that was "(a) distinct and palpable, (b) fairly traceable to the [Lemont's] actions, and (c) substantially likely to be prevented or redressed by the grant of the requested relief."

The court found that Lemont had submitted evidence that Willow Springs would not be adversely affected by the zoning reclassification since industrial use of the Property was "compatible with surrounding land uses." Lemont had offered evidence that the Property: had previously been zoned for industrial use; was to be "industrial" under the Lemont 2030 Comprehensive Plan; was currently being used for a "[j]unk yard, home/office, truck parking, billboards"; and the surrounding property consisted of either unincorporated county land, forest preserve/public land, or land zoned for industrial or intensive industrial use. In other words, the court found that Lemont presented evidence that the zoning reclassification did not represent any change to the *status quo* but rather was in line with both the the current use of the property and the zoning prior to annexation. The court found that this indicated that there would be no "harm" to Willow Springs with the zoning reclassification for the Property.

Since Lemont had presented such evidence, the court found the burden shifted to Willow Springs to demonstrate some adverse affect

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from the zoning reclassification. The court found that Willow Springs failed to meet its burden. Willow Springs had alleged harm from the zoning reclassification that involved "decreased tax revenue due to lower property values, increased municipal expenditures for road repairs, and lower air quality." The court found such "conclusory allegation[s]" were insufficient, and that Willow Springs had failed to submit specific evidence demonstrating that "it would suffer the substantial adverse effects necessary for it to have standing to challenge Lemont's ordinance." Willow Springs' alleged possibility of future harm that was dependent on specific ways in which the Property may be used, was not sufficient for standing, concluded the court.

See also: *Village of Barrington Hills v. Village of Hoffman Estates, 81 Ill. 2d 392, 43 Ill. Dec. 37, 410 N.E.2d 37 (1980).*

See also: *Village of Northbrook v. Cook County, 126 Ill. App. 3d 145, 81 Ill. Dec. 413, 466 N.E.2d 1215 (1st Dist. 1984).*

Case Note:

Willow Springs had also sought an injunction against the proposed development on the Property, alleging that the proposed development on the Property would be a "public nuisance." The court rejected that, finding the complaint lacked sufficient facts to state a claim. The court found it could not reasonably be inferred, from the mere filing of the development application or from other allegations in Willow Springs' complaint, that an injunction was appropriate.

Due Process—At one of a series of public hearings on her property, landowner is prohibited from cross-examining witnesses

Landowner contends this denied her due process, along with the bias of decisionmakers

Citation: *Beal v. Town of Stockton Springs, 2017 ME 6, 2017 WL 117293 (Me. 2017)*

MAINE (01/12/17)—This case addressed the issue of whether a landowner was denied due process in relation to a determination on the safety of a building on her property. More specifically, the case addressed whether a landowner was denied due process when she was

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denied an opportunity to cross-examine witnesses. It also addressed whether comments made by decisionmakers prior to public hearings on the matter resulted in a bias that violated the landowner's due process rights.

The Background/Facts: In 2004, Hollie A. Beal ("Beal") acquired property in Stockton Springs (the "Town"). The property included a 556-square foot building that had been approximately 100 years earlier as a grain storage shed. The building had more recently been used as a residence. In 2014, after receiving complaints about the condition of the property, the Town's Code Enforcement Officer ("CEO") visited the property. The CEO had concerns about the safety of the building. Ultimately, the Town's Board of Selectmen (the "Board") set a public hearing to determine whether the building constituted a "dangerous building" within the meaning of Maine statutory law—17 M.R.S. § 2851.

Under 17 M.R.S. § 2851, municipal officers are authorized to, after notice and hearing, order "what disposal must be made" of a building that is deemed "structurally unsafe; unstable; unsanitary; constitutes a fire hazard; is unsuitable or improper for the use or occupancy to which it is put; constitutes a hazard to health or safety because of inadequate maintenance, dilapidation, obsolescence or abandonment; or is otherwise dangerous to life or property . . . ."

Prior to the hearing on the dangerousness of Beal's building, during informal negotiations with Beal, one of the members of the Board had stated that he believed that the building should be "condemned." Beal later requested that the three members of the Board recuse themselves from determining the dangerousness of her building because they "had already prejudged the case." The Board members then expressly stated on the record, at the public hearing, that "they had not already decided the issue and would base their decision on the evidence presented at the hearing." Each of the Board members declined to recuse themselves from participating in the hearing and from the subsequent decision-making on the safety of Beal's building.

During the hearing, the Board heard testimony from the CEO, Beal's general contractor, and Beal. The Board asked witnesses questions that were submitted, but did not allow Beal's counsel to question any of the witnesses by either direct or cross examination. Beal's attorney was permitted to submit written questions that the Board would then pose to the witness.

At the conclusion of the hearing, the Board members voted unanimously that the structure was a dangerous building. However, on a later date, the Board reopened the hearing "for the purpose of allowing additional testimony to be presented to ensure all areas of the definition of a dangerous building have been thoroughly explored." Beal attended

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the reopened hearing, but declined to present any further information to the Board. At the conclusion of the hearing, the Board affirmed its decision declaring the building hazardous, and continued the hearing with regard to the issue of disposition of the building.

At the public hearing on the disposition of the Beal's building, Beal presented evidence, and was provided an opportunity to question the CEO and dispute his observations. Once again, at the close of the hearing, the Board unanimously concluded that the structure was a dangerous building. With regard to disposition of the building, the Board ordered Beal to have a licensed plumber and a licensed electrician bring the building up to code, and required her to "repair and/or replace all structural members" by August 26, 2015.

Beal appealed the Board's decision. Beal contended that the Board violated her due process rights in that the Board "denied her the opportunity to present evidence, to cross-examine witnesses; and to have an impartial fact-finder."

The superior court rejected Beal's arguments and affirmed the decision of the Board.

Beal appealed.

DECISION: Judgment of superior court affirmed.

The Supreme Judicial Court of Maine held that Beal failed to demonstrate that she was denied due process or that she was subjected to a decision by a biased decision-maker.

In so holding, the court explained that, when assessing whether an individual's due process rights have been violated, courts "must analyzed three distinct factors": (1) "the private interest that will be affected by the official action"; (2) "the risk of an erroneous deprivation of such interest through procedures used, and the probable value, if any, of additional or substitute procedural safeguards"; and (3) "the Government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would entail."

Here, the court found there was "no dispute that declaring Beal's property a dangerous building affects an important private property interest or that the Town has an interest in limiting use of or eliminating dangerous buildings." Thus, the court found only the second factor of the required analysis was in play: "whether Beal was afforded the process she was due, including 'notice of the issues, an opportunity to be heard, the right to introduce evidence and present witnesses, the right to respond to claims and evidence, and an impartial fact-finder.' "

Despite restrictions on Beal's cross-examination of witnesses at the first hearing, the court concluded that Beal was afforded the due process that she was due in that: even at the first hearing Beal had an op-

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portunity to respond to evidence presented against her through the presentation of rebuttal testimony and through the submission of written questions which could then be asked by the Board; and any such restriction on cross-examination had been rescinded for the remaining hearings. Moreover, the court found "forty years of precedent" showed that boards are not required to provide the opportunity for cross-examination at every local administrative hearing.

The court additionally found that Beal's bias claim failed because she failed to rebut "the presumption that the Board members acted with honesty and integrity." The court found that it was only at "informal negotiations" that one Board member had said the building should be "condemned." Whereas, at the formal hearings, the Board members had stated on the record that they had not prejudged the case, and they spent months hearing and deliberating before rendering their final decision.

See also: *Mathews v. Eldridge, 424 U.S. 319, 96 S. Ct. 893, 47 L. Ed. 2d 18 (1976).*

See also: *Hale v. Petit, 438 A.2d 226 (Me. 1981).*

Case Note:

The appellate court also concluded that the Board's decision on Beal's structure was supported by substantial evidence.

Zoning News from Around the Nation

INDIANA

Under a newly proposed bill, cities and towns in Indiana would be prohibited from banning short-term rentals (such as Airbnb rentals). House Bill 1131 "[s]pecifies requirements for local unit of government regulation of short term rental of residential property." The bill would allow regulation of short-term rentals only for certain, specified purposes, including: protection of the public's health and safety related to fire and building safety, sanitation, transportation, traffic control, and pollution control—"if enforcement [of such regulations] does not prohibit the use of a property as a short term rental."

Source: *Indiana General Assembly*; https://iga.in.gov

MASSACHUSETTS

Boston Mayor Marty Walsh is reportedly "looking to expand ten-

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ants' rights, reward good landlords and expand affordable housing funding with a five-part legislative package." Among the legislation is a bill that "seeks to protect inclusionary zoning mandates that require developers to build affordable units when constructing 10 or more residential homes."

Source: *Metro.us*; *www.metro.us*

TEXAS

State Representative Gina Hinojosa has introduced House Bill 1175, which "confirms petition rights for community members living within 200 feet from unzoned land."

Source: *The Daily Texan*; *www.dailytexanonline.com*

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Zoning Bulletin

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Constitutionality of Zoning Regulation/Right to Bear Arms—City zoning ordinances limit location of gun firing ranges

Ordinances are challenged as violating the Second Amendment to the U.S. Constitution

Citation: *Ezell v. City of Chicago, 2017 WL 203542 (7th Cir. 2017)*

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The Seventh Circuit has jurisdiction over Illinois, Indiana, and Wisconsin.

SEVENTH CIRCUIT (ILLINOIS) (01/18/17)—This case addressed the issue of whether the combined effect of zoning restrictions that limited firearm ranges to a small percentage of a city's total acreage violated the Second Amendment's right to bear arms.

The Background/Facts: In 2011, the United States Court of Appeals, Seventh Circuit, held that a zoning ordinance enacted by the City of Chicago (the "City"), which banned firearm shooting ranges throughout the city was "incompatible with the Second Amendment." The Second Amendment of the United States Constitution provides: "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed."

The City responded to the Seventh Circuit's decision by replacing the shooting range ban with regulations governing shooting ranges. Among those regulations were two zoning restrictions: (1) a zoning restriction allowing gun ranges only as special uses in manufacturing districts; and (2) a zoning restriction prohibiting gun ranges within 100 feet of another range or within 500 feet of a residential district, school, place of worship, and multiple other uses.

City residents and a builder of firing ranges, as well as several organizations dedicated to the promotion of gun rights, (collectively, the "Opponents") brought a legal action against the City, challenging the zoning ordinances as unconstitutional in violation of the Second Amendment. The City defended the zoning restrictions as being necessary to protect public health and safety. Specifically, the City maintained that firing ranges: attract gun thieves; cause airborne lead contamination; and carry a risk of fire.

The United States District Court judge found the City's arguments "inadequate to discharge the City's burden to justify relegating shooting ranges to manufacturing districts." Finding the City "failed to establish a connection between this zoning rule and the public interests it is meant to serve," the judge invalidated the manufacturing-district zoning restriction. The judge, however, upheld the 500-foot distance restriction finding it was "significantly less burdensome" when considered "standing alone." The judge likened the restriction "to a 'law forbidding the carrying of firearms in sensitive places such as schools and government buildings,' " which the United States Supreme Court had upheld as constitutional. (The judge did not specifically address the additional requirement of a 100-foot buffer zone between firing ranges.)

Both the City and the Opponents appealed. The City asked the United States Court of Appeals, Seventh Circuit, to reinstate the zoning restrictions limiting firing ranges to manufacturing districts. The Opponents argued that the distance restriction violated the Second Amendment.

DECISION: Judgment of United States District Court affirmed in part, reversed in part, and remanded.

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The United States Court of Appeals, Seventh Circuit, held that the "combined effect" of the manufacturing-district classification and the distancing restriction violated the Second Amendment because those zoning regulations "severely restrict[ed] the right of Chicagoans to train in firearm use at a range."

In so holding, the court explained that constitutional challenges under the Second Amendment require the following inquiries: (1) whether the regulated activity falls within the scope of the Second Amendment; and (2) if it does, whether the government's justification for restricting or regulating the exercise of Second Amendment rights withstands a heightened standard of scrutiny. With regard to the second inquiry, the court explained that the government has the burden of justifying restrictions and regulations on the exercise of Second Amendment rights. That burden, said the court, requires a "very strong public-interest justification and a close means-end fit" (i.e., regulatory means and public-benefits end).

With regard to the first inquiry, the court held that firearm range training fell within the scope of the Second Amendment. The court said that the "core individual right of armed defense . . . includes a corresponding right to acquire and maintain proficiency in firearm use through target practice at a range."

Turning to the second inquiry, the court first determined that it was an error for the district court judge to analyze the two zoning restrictions separately. The Seventh Circuit found that the two zoning restrictions worked "in tandem to limit where shooting ranges may locate" and therefore would "stand or fall together." The court then returned to analyzing whether the City's justification for restricting shooting range locations demonstrated a strong public-interest justification and a close fit between the regulations and the intended public-interest benefits. The court found that the City failed to provide any evidentiary support for its claims that firing ranges attract gun thieves, cause airborne lead contaminants, and carry a fire risk. While the City and its witnesses made those assertions, the court found they failed to point to any data or empirical evidence to support those claims or establish that the zoning restrictions had any connection to reducing those claimed risks.

Having found that the City failed to satisfy its burden of justifying the shooting range zoning restrictions, the court concluded that the manufacturing and distancing restrictions were unconstitutional in violation of Second Amendment rights.

See also: *District of Columbia v. Heller, 554 U.S. 570, 128 S. Ct. 2783, 171 L. Ed. 2d 637 (2008).*

See also: *Ezell v. City of Chicago, 651 F.3d 684 (7th Cir. 2011).*

Case Note:

In its decision, the court noted that the City had "room to regulate the construc-

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tion and operation of firing ranges to address genuine risks to public health and safety." The City could, said the court, set rules about where firing ranges may locate, but it must do so with justification. For example, noted the court, "[a] different combination of zoning rules—say, a more permissive zoning classification and a less restrictive buffer-zone rule—may well be justified, if carefully drafted to serve actual public interests while at the same time making commercial firing ranges practicable in the [C]ity."

Case Note:

The case also addressed a non-zoning issue of whether regulations barring anyone under age 18 from entering a shooting range violated the Second Amendment. The court found that the City's such regulation did violate the Second Amendment. The court held that older adolescents and teens had a Second Amendment right to receive adult-supervised firearm instruction in a controlled setting, even if those minors lacked the general right to purchase or possess firearms. The court further found that the public safety benefits that the City had relied on in defending that age restriction could be addressed by existing environmental regulations and by more closely tailoring age restrictions so that the right of older adolescents and teens to obtain firearm training is not "completely extinguished."

Public and low-income housing—After executive agency fails to promulgate valid rules regarding municipality fair housing obligations, municipalities seek declaration of obligation from courts

Municipalities contend they have no obligation for housing needs arising during sixteen-year gap period without agency rules

Citation: *In re Declaratory Judgment Actions Filed By Various Municipalities, 2017 WL 192895 (N.J. 2017)*

NEW JERSEY (01/18/17)—This case addressed the issue of whether

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New Jersey municipalities were required to address the need for low- and moderate-income housing that arose during a sixteen-year period of time during which New Jersey's Council on Affordable Housing failed to promulgate viable rules for construction of such housing. More specifically, the case addressed whether municipalities were constitutionally obligated to provide a realistic opportunity for their fair share of affordable housing for low and moderate-income household formed during that gap period of time and presently existing. The case further addressed how any obligations from that gap period of time must be accounted.

The Background/Facts: Municipalities in New Jersey have been found to have a constitutional obligation to provide their fair share of the affordable housing need of low and moderate-income households. More specifically, New Jersey law recognizes that municipalities have a constitutional obligation to use their zoning power in a manner that creates a "realistic opportunity for the construction of [their] fair share" of the region's low-and moderate-income housing. That obligation was first recognized by courts and then codified in 1985 by the New Jersey Legislature, which enacted the state's Fair Housing Act ("FHA") and created the Council on Affordable Housing ("COAH") to facilitate and monitor compliance with the constitutional mandate. COAH was tasked with determining and assigning municipal affordable housing obligations through promulgation of procedural and substantive rules for successive housing cycles. COAH adopted rules to govern its first and second housing cycles but failed to propose valid new rules for the third housing cycle. Having failed to produce valid rules from 1999 through 2015, in March 2015, the New Jersey Supreme Court declared COAH defunct. The court also eliminated the FHA's exhaustion-of-administrative-remedies requirement and provided for a judicial forum to adjudicate affordable housing disputes.

In 2015, in an attempt to ascertain their fair share obligation of affordable housing needs, thirteen Ocean County municipalities filed declaratory judgment actions in the courts. Those actions were consolidated. The municipalities argued that their fair share obligations only included "present need" and "prospective need," and that they had no obligation for the needs during the sixteen-year gap period (i.e., 1999-2015). Finding that the "fair share obligation is cumulative," the trial court held that the municipalities were constitutionally required to recognize needs that arose during the gap period. The court held that such need was not a part of "prospective need," but rather constituted a "separate and discrete component" of the fair share obligation. Accordingly, the trial court held that the municipalities' "Third Round" (i.e., third housing cycle) obligation consisted of four components: (1) prior (First and Second) round unmet obligations; (2) the need arising during the gap period; (3) a traditional present-need analysis; and (4) calculation of prospective need for the 2015-2025 period.

The trial court's decision was appealed. The Appellate Division re-

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versed the decision. While the Appellate Division recognized that the affordable housing need that arose during the gap period was a responsibility of the municipalities, it held that "the FHA does not require a municipality to retroactively calculate a new 'separate and discrete' affordable housing obligation arising during the gap period." The court pointed to language of the FHA that prevents a retroactive calculation of "prospective need" (defined as a "forward-looking projection of household growth"). Rather, the court observed that, to the extent that "[low- and moderate-income] households formed during the gap period" might be living in overcrowded or deficient housing, the need that arose during the gap would be "partially included" in the calculation of present need (i.e., "the actual number of deficient housing units occupied by low- and moderate-income households").

That Appellate Division's decision was also appealed.

DECISION: Judgment of Appellate Division affirmed as modified.

Agreeing with both the trial court and the Appellate Division, the Supreme Court of New Jersey held that municipalities were required to address the need for low- and moderate-income housing that arose during the gap period (i.e., 1999-2015) during which COAH failed to promulgate viable Third Round rules. The court found it clear that the municipalities had a "constitutional obligation to address pent-up affordable housing need for low- and moderate-income household that formed during [the gap period]." Specifically, the court concluded that: "the need of presently existing low- and moderate-income households formed during the gap period must be captured and included in setting affordable housing obligations for towns that seek to be protected from exclusionary zoning actions under the process this Court has set up while COAH is defunct."

The Supreme Court of New Jersey agreed with the Appellate Division, with some modification, as to how to account for the affordable housing need that arose during the gap period. The Appellate Division had concluded that the "permissible categories within which to work, when considering how to accommodate need arising during [the gap period], were: unfulfilled prior cycle obligations, prospective need, and present need." The Appellate Division had rejected the trial court's addition of a "separate and discrete" category for recognizing needs that arose during the gap period.

In agreeing with the Appellate Division as to the three permissible categories for determining municipal affordable housing obligation, the Supreme Court of New Jersey noted that it had, in prior case law, expressly directed the first category—unfulfilled prior cycle obligations. It also agreed that "prospective need" was an "inapt fit" for the need arising during the gap period because the FHA definition of "prospective need" rendered the term "forward-looking": "a projection of housing needs based on development and growth which is reasonably likely to occur in a region or a municipality" within the next housing cycle. (N.J.S.A. 52:27D-304(j).) Finally, the court concluded that "present need offers the best approach to capturing the [gap period] need that must be addressed."

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The court held that, in determining municipal fair share obligations for the Third Round, the trial courts must employ an expanded definition of "present need." The court directed that, in light of the need arising during the gap period, the present-need analysis must be expanded to "include, in addition to a calculation of overcrowded and deficient housing units, an analytic component that addresses the affordable housing need of low- and moderate-income households created since 1999, provided that the households remain income-eligible and situated in New Jersey, and are not calculated in a way that includes persons now deceased or whose households may be already captured through the historic practice of assessing deficient housing units within the municipality."

See also: *Southern Burlington County N.A.A.C.P. v. Mount Laurel Tp., 92 N.J. 158, 456 A.2d 390 (1983).*

See also: *Southern Burlington County N.A.A.C.P. v. Mount Laurel Tp., 67 N.J. 151, 336 A.2d 713 (1975).*

Case Note:

In its decision, the court recognized that COAH could be resurrected and/or the Legislature could dictate "alternative methods for calculating and assigning a municipal fair share of affordable housing."

Civil Rights/Religious Discrimination—Planning Board requires property owner provide, for its proposed mosque, a number of parking spaces far greater than that required by township's parking ordinance

Property owner alleges Planning Board's disparate application of the parking space requirement violates the Nondiscrimination Provision of the federal Religious Land Use and Institutionalized Persons Act

Citation: *Islamic Society of Basking Ridge v. Township of Bernards, 2016 WL 7496661 (D.N.J. 2016)*

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NEW JERSEY (12/31/16)—This case addressed the issue of whether a planning board violated the Nondiscrimination Provision of the federal Religious Land Use and Institutionalized Persons Act (RLUIPA) by applying a parking ordinance differently on the basis of religion. More specifically, it addressed whether or not the application of a parking ordinance was neutral and generally applicable with regard to religion. The case also addressed whether a provision in a parking ordinance, which allowed a planning board to change a 3:1 ratio between seats and parking spaces for churches, was unconstitutionally vague.

The Background/Facts: In 2011, The Islamic Society of Basking Ridge ("ISBR") purchased property (the "Property") in the Township of Bernards (the "Township") with the goal of building a mosque on the Property. In April 2012, ISBR applied for a preliminary and final site plan approval related to its proposed mosque. Among other things, the site plan provided for fifty parking spaces based on the mosque's estimated occupancy of 150 people. The Township's Parking Ordinance set forth a 3:1 ratio, between seats and parking spaces, as an acceptable standard for "churches."

After community opposition, and 39 hearings over a three-and-a-half year period, the Planning Board required ISBR to construct 107 parking spaces—which far exceeded the 3:1 ratio. ISBR ultimately revised its site plan to provide for 107 parking spaces, although it did not formally create a final site plan including that revision. Nevertheless, in January 2016, the Planning Board denied ISBR's application.

In denying ISBR's application, the Planning Board explained that it believed that the Parking Ordinance's 3:1 ratio for "churches" applied only to Christian Churches. The Planning Board also explained that the Parking Ordinance required the Board to engage in an individualized analysis of every applicant's parking need, regardless of the ratios set forth in the ordinance. Specifically, the Board pointed to language in the Parking Ordinance, which referred to a schedule of standards, which included the 3:1 ratio for "churches," and which further provided as follows:

> Since a specific use may generate a parking demand different from those enumerated [in the schedule], documentation and testimony shall be presented to the Board as to the anticipated parking demand. Based upon such documentation and testimony, the Board may: . . . Allow construction of a lesser number of spaces, [or] . . . In the case of nonresidential uses, require that provision be made for the construction of spaces in excess of those required . . . to ensure that the parking demand will be accommodated by off-street spaces.

ISBR challenged the Planning Board's decision. ISBR alleged that the Planning Board's disparate application of the off-street parking requirement between Christian churches and Muslim mosques violated the Nondiscrimination Provision of the federal RLUIPA.

RLUIPA prohibits discrimination and impermissible exclusion on the

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basis of religion by prohibiting three distinct types of regulations: (1) land use regulations that treat a "religious assembly or institution on less than equal terms with a nonreligious assembly or institution" ("Equal Terms Provision"); (2) land use regulations that "discriminate[ ] against any assembly or institution on the basis of religion or religious denomination" ("Nondiscrimination Provision"); and (3) land use regulations that "totally exclude[ ] religious assemblies from a jurisdiction," or "unreasonably limit[ ] religious assemblies, institutions, or structures within a jurisdiction" ("Exclusions and Limits Provision"). (42 U.S.C.A. § 2000cc(b)(1)-(3).)

ISBR also contended that the language in the Parking Ordinance, which gave the Planning Board discretion to require parking spaces in excess of the 3:1 ratio based on presented "documentation and testimony" was unconstitutionally vague on its face in violation of the Due Process Clauses of the federal and state constitutions.

ISBR motioned, asking the court to issue partial summary judgment on the pleadings based on those two challenges.

DECISION: ISBR's motion granted.

The United States District Court, D. New Jersey, found in favor of ISBR on its challenges. The court first held that the Planning Board violated RLUIPA's Nondiscrimination Provision when the Planning Board applied the Parking Ordinance differently on the basis of religion.

In so holding, the court examined the language of the Parking Ordinance. The court found that the Parking Ordinance specifically set forth a 3:1 ratio between seats and parking spaces for "churches." Since the Ordinance failed to define "churches," the court looked to the dictionary definition of the word. The dictionary defined "church" as "a place of worship of any religion ([e.g.] a Muslim [mosque])." The court concluded that the 3:1 ratio in the Parking Ordinance applied not only to Christian churches, as the Planning Board had concluded, but also to synagogues and mosques. Thus, the court found that, on its face, the Parking Ordinance was neutral and generally applicable and therefore was not a "facial" violation of RLUIPA's Nondiscrimination Provision. The court however, found that the "application" of the Parking Ordinance by the Planning Board to ISBR constituted discrimination on the basis of religion in violation of RLUIPA's Nondiscrimination Provision.

The court explained that the Planning Board's intent to apply the 3:1 ratio differently on the basis of religion was sufficient to establish discriminatory intent under RLUIPA's Nondiscrimination Provision. The court said it was unnecessary for ISBR to prove that the Planning Board harbored hostility toward Muslims. The court further explained that, where a government expressly discriminates on the basis of religion, RLUIPA's Nondiscrimination Provision does not require a showing of a similarly situated comparator. Accordingly, the court found that, here, ISBR, did not need to show how the Parking Ordinance treated other

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religious applicants that had the same effect on the Parking Ordinance's policy for provision off-street parking in order to prove violation of RLUIPA's Nondiscrimination Provision. (In any case, the court said that even if ISBR had to point to similarly situated comparators in order to show that the Planning Board's application of the Parking Ordinance violated RLUIPA's Nondiscrimination Provision, it could show that a Jewish congregation, Jewish center, and Baptist church were all similarly situated and had received site plan approval from the Planning Board in accordance with the Parking Ordinance's 3:1 ratio.) Finally, the court concluded that the Planning Board discriminatorily applied the Parking Ordinance on the basis of religion when it applied the 3:1 parking ratio to Christian churches and Jewish synagogues but not to Muslim mosques. The Planning Board had claimed that disparate application was based on legitimate differences in parking needs, and not on religion, but the court rejected that argument. The court said it would not consider the Planning Board's proffered justification for its discriminatory application of the Parking Ordinance because a strict liability (rather than a strict scrutiny) standard applied to RLUIPA's Nondiscrimination Provision.

The court also held that the language in the Parking Ordinance that allowed the Planning Board discretion to require parking spaces in excess of the 3:1 ratio based on presented "documentation and testimony" was unconstitutionally vague on its face in violation of the Due Process Clauses of the federal and state constitutions. The court explained that to establish that a law is impermissibly vague under the Federal and New Jersey Constitutions, the law: (1) must fail to "give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly"; or (2) "if arbitrary and discriminatory enforcement is to be prevented, laws must provide explicit standards for those who apply them." Here, the court found that the Parking Ordinance allowed the Planning Board "to require additional parking spaces without having to abide by any specific guidelines as to what constitutes sufficient off-street parking." The court concluded that language "unambiguously" provided the Planning Board with "unbridled and unconstitutional discretion."

See also: *Hassan v. City of New York, 804 F.3d 277 (3d Cir. 2015).*

See also: *Lighthouse Institute for Evangelism, Inc. v. City of Long Branch, 510 F.3d 253,269 (3d Cir. 2007).*

See also: *Fowler v. State of R.I., 345 U.S. 67, 73 S. Ct. 526, 97 L. Ed. 828 (1953).*

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Zoning News from Around the Nation

IDAHO

In late January, House Bill 66 was introduced in the state Legislature. Under the bill, municipalities would be prohibited from adopting "an ordinance restricting or regulating short-term rentals, except as related to codes enforcing building, fire, noise, property maintenance and nuisance standards." Municipalities would also be permitted to prohibit short-term rentals used to "house sex offenders or sell drugs, pornography, nude or topless dancing or 'other adult-oriented businesses.' " The proposed legislation would also require marketplaces such as Airbnb to register with the Idaho Tax Commission and receive a license.

Source: *Idaho Mountain Express*; www.mtexpress.com

MASSACHUSETTS

Reportedly, a bill is being prepared for introduction in the state Legislature that would allow the City of Boston to "amend the zoning code in order to strengthen the Inclusionary Development Policy, a policy which raises funds for affordable housing. Currently, the policy comes into play when a residential development project of 10 or more units requires a zoning variance, but this proposed Inclusionary Zoning Article would insure that affordable units are created based on the size of the project, and not the need for zoning relief."

Source: *Jamaica Plain Gazette*; http://jamaicaplaingazette.com

VIRGINIA

A state Senate Committee has passed onto the full Senate a bill that aims to regulate short-term rentals such as Airbnb. SB 1578 would require people who rent out their homes through Airbnb and other online platforms to register their names and addresses with their cities. Cities could charge a fee for such registration, and could impose a penalty of up to $500 for failure to register.

Source: *The Virginian-Pilot*; http://pilotonline.com

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Community Associations, Hazard Mitigation, and Development Regulation

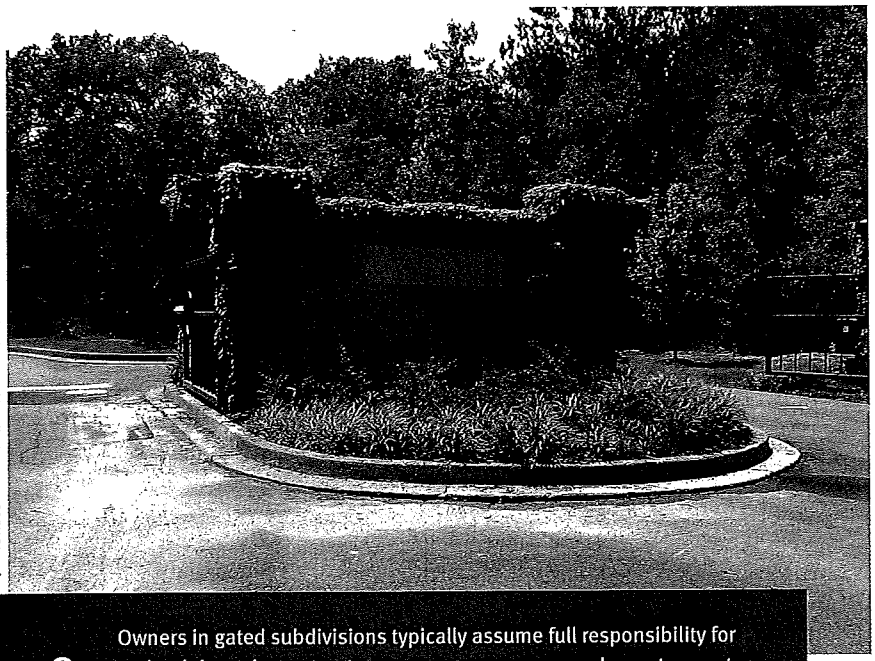
By Tyler P. Berding and Joseph DeAngelis

Common-interest community associations, including home owner associations (HOAs), condominium associations, and housing cooperatives, play a critical role in the maintenance of local infrastructure.

Over the past few decades, a growing number of cities and counties have delegated the responsibility for long-term maintenance of common infrastructure associated with new residential development to community associations. This often includes maintenance of common open space and may include maintenance of private streets and sidewalks, stormwater facilities, or other infrastructure that plays a role in hazard mitigation.

For healthy and stable associations, requiring home owners to maintain their own common open space can reduce the fiscal burden on the local government. But do community associations have the expertise to manage complex critical infrastructure such as levees, retention basins, and stormwater infrastructure? What about cases where community associations fail? Are cities and counties ready, willing, or able to assume control over long-neglected infrastructure?

This article will: (1) lay out the increasing role that community associations play in the maintenance of critical disaster mitigation infrastructure; (2) provide an overview of the risks of delegating maintenance responsibilities to community associations; (3) discuss the role of performance guarantees in the development process and their impact on long-term infrastructure maintenance; (4) make recommendations for local development regulations to ensure that community associations are capable of long-term disaster mitigation infrastructure maintenance; and (5) present three examples that potentially illustrate "better" practices in dealing with community association responsibilities for critical disaster mitigation infrastructure maintenance.



Thomas R. Machnitzki (The Preserve Lakeland TN 1, Wikimedia Commons CC BY-SA 3.0)

Owners in gated subdivisions typically assume full responsibility for maintaining private streets, common open areas, and any stormwater or flood control infrastructure.

THE INCREASING ROLE OF COMMUNITY ASSOCIATIONS IN HAZARD MITIGATION

What is different today from subdivisions built four or more decades ago is that most will be built and incorporated as community associations. In many cases, the engineered facilities to protect these developments from storms, rising tides, and sea levels will not be maintained by cities or states, but will be the responsibility of the home owners who live there.

Since the early 1960s, community associations have served as surrogates for cities and counties to manage new infrastructure. To conserve tax dollars that would otherwise be necessary to maintain streets, parks, and public utilities in new developments, many local governments shifted fiscal responsibility for that infrastructure to the small group of owners living within that new subdivision. The community association provided a useful way for developers to entice municipalities to approve their projects—generating new tax dollars without the consequent public works expense.

Statutes in most states and hundreds of municipal ordinances provide the authority for this shift. They cover the gamut from what is required in the governing documents to how a community association is to maintain the resulting infrastructure. They generally assume that the financial wherewithal and necessary expertise will follow. These assumptions might be untrue, but that misunderstanding is usually not corrected by the enabling ordinances. Statutes and ordi-

nances promote the *creation* of a community association to own and maintain certain facilities, but are sorely lacking in requiring the oversight or enforcement to make sure that maintenance happens.

Streets, levees, storm sewers, parks, parking lots, and sidewalks in old developments are owned and maintained by cities and counties using tax dollars raised from a broad tax base. In many newer projects the community association is responsible for maintaining most "common areas" as well as critical facilities like levees, berms, pumps, riprap, and retaining walls. Developers and municipalities thereby avoid long-term responsibility for such projects. The homes and units within the development are sold off in the near term. The developer takes the profits and is protected from long-term liability not only by the assessment or taxing arrangement that moves the cost of future repairs to owners, but also by various statutes of limitation that cut off legal liability within a few years of projected completion.

After that, the property owners within the association are on their own. What will happen when sophisticated, critical improvements are maintained solely with owner assessments? Levees and seawalls in marine coastal areas, and critical mitigation facilities in flood-prone lowlands elsewhere, will depend upon the willingness of individual home owners to assess themselves to provide adequate funding and to provide the necessary management.

It's one thing to let the landscaping go to seed or to allow chuckholes to exist in the parking lot, but a crumbling dam or bay levee is at another threat level altogether.

Relatively few cities and counties include provisions in their subdivision codes that indicate how the locality will ensure that a required community association is actually created. In practice, the developer remains on the hook for infrastructure and common space completion and maintenance until he can provide evidence that he has transferred responsibility to a community association. Some cities and counties do, however, require evidence of the formation of an association before issuing either a preliminary or final plat approval.

In these cases, the developer must produce documentation (e.g., articles of incorporation, bylaws, and recorded covenants) showing s how and when ownership of common facilities will be conveyed to the new association. When localities explicitly address the timing of the transfer of responsibility from the developer to the association, the language is typically vague. For example, a number of cities and counties require association bylaws or covenants to contain a schedule for the transfer to owners and stipulate that developers must disclose the timing of the transfer to prospective buyers.

La Citra Vita (residential community), Wikimedia CC BY-SA 2.0)

A stormwater retention pond serving a residential subdivision in Prince George's County, Maryland.

A few communities set out a specific threshold that triggers the transfer (e.g., a percentage or number of units sold).

THE RISKS OF DELEGATING INFRASTRUCTURE MAINTENANCE TO COMMUNITY ASSOCIATIONS

Planning decisions involving community associations are usually based on three assumptions: (1) The association will have an infinite life; (2) During that period the owners will assess themselves as necessary to properly maintain critical facilities; and (3) The owners and their managers have the expertise to maintain critical facilities or know how to get it. Each of these assumptions will usually prove false.

Generally speaking, local governments require community associations in order to ensure that common (private) property and infrastructure is maintained in perpetuity. If the association fails to adhere to maintenance requirements, the local government has the authority to perform the maintenance itself and bill the owners (often by creating property liens). In reality, though, every community association has a limited "service" life because it is not self-sustaining over time. Most community associations will eventually become obsolete because funding for normal and extraordinary maintenance is not sufficient, leading to increasing deferred maintenance until the property becomes uninhabitable. This is more pronounced in attached housing, but will also occur in single-family home developments eventually. Critical infrastructure within these subdivisions will suffer a similar fate. The timing of obsolescence is the only question. We're talking decades, but with many older projects, we're already there.

Because owners determine the cash contributions to long-term maintenance reserves, and because most plan for a near horizon, owners will reject assessment increases to bring long-term reserves to an acceptable level or to specially assess themselves for emergency repairs brought on by normal deterioration. If a natural disaster occurs, and insurance or government assistance is not available, the owners may not fund a rebuild.

Owners and most community managers have no experience with sophisticated infrastructure like floodgates, damns, levees, and weirs. They might not understand what those

facilities are or how they operate—especially decades later. The owners may not realize that a lake is part of a regional flood and stormwater control facility. To them, a lake is a lake, not a reservoir, and when the lake silts up from years of neglect and loses capacity to hold back floodwaters, downstream communities may be damaged. A levee can be riddled by critters that weaken it, but if the problem is not recognized, or if the funds to strengthen or rebuild the levee are not available, a critical piece of infrastructure may fail. Owners are not engineers, and they can't draw on the services of city engineering staff or tax dollars to help them fix a facility for which the municipality has no responsibility.

In local government, decision makers consider the long-term interests of their city or county when they set revenue goals. They plan for a far horizon. With community associations, the interest of the individual owner rarely extends beyond five to seven years—a near horizon. Owners determine how much to assess themselves for such things as maintenance reserves based on their individual interests, which are usually short-term. There is no third-party oversight, so long-term maintenance obligations rarely receive the funding to sustain the subdivision.

If all we were concerned about were paint, roofs, asphalt, or landscaping, that could be handled. But developments managed by associations have grown in size. They are in floodplains, abandoned quarries, and landslide-prone hillsides, and endowed with levees, damns, debris fences, lakes intended as holding ponds, weirs, and other disaster mitigation facilities. And there has been too little attention given to whether the proposed association will have the financial capability and expertise to manage these critical facilities for decades. Usually, it won't.

The planner is presented with a professional package created by a developer which anticipates most questions the planner might ask. Too often, the problem is that no one present then is asking all of the right questions. A developer is the ultimate short-timer. Its horizon is maybe three to four years, depending on the size of the project and its ability to sell out. No one representing the ultimate user—the community association—is present when critical decisions are made.

COMMUNITY ASSOCIATIONS AND PERFORMANCE GUARANTEES

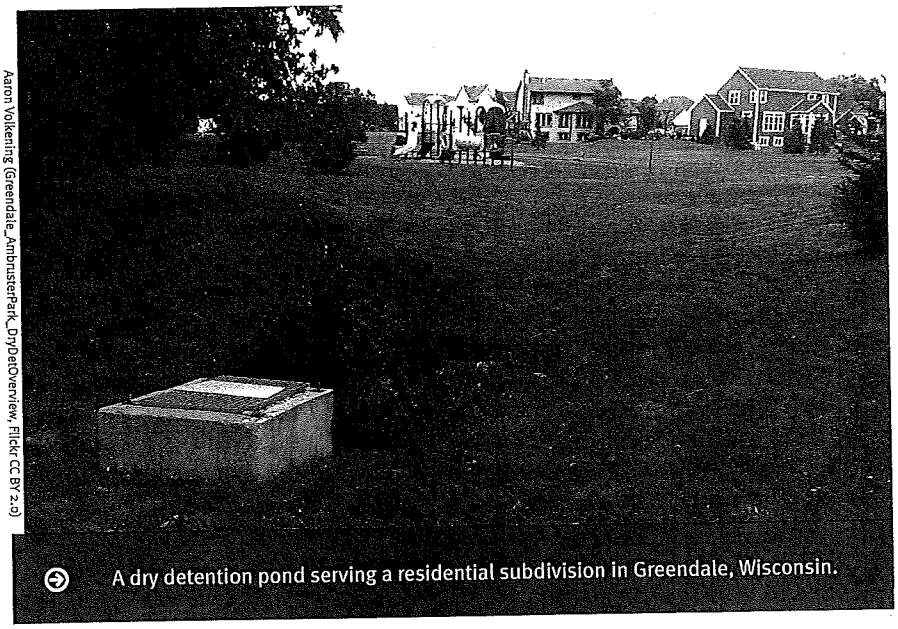
Traditionally, cities and counties have relied on performance guarantees to minimize the risk associated with delegating infrastructure development and maintenance to subdivision developers. But conventional approaches to performance guaranteeing may be of limited utility for ensuring long-term infrastructure maintenance by community associations.

Performance guarantees are "legal and financial tools used to increase permittees' compliance with regulations" (Feiden and Burby 2002). They are often used by cities and counties in the subdivision development process to ensure developer compliance with agreed-upon infrastructure development responsibilities and in order to avoid complex and expensive litigation. There are two general categories of performance guarantees: financial and non-financial. Financial performance guarantees require that funds necessary to complete agreed to development (including infrastructure) are obligated before construction or permitting. This is a useful tool to avoid half-finished "zombie" subdivisions in the event that the developer defaults. Non-financial performance guarantees do not rely on the availability of funds, but seek to ensure continuity of operations and adequate attention to the municipal permitting process. Requiring the formation of a community association or the use of special assessments are common non-financial performance guarantees. However, there are significant risks and downsides of this approach.

According to Feiden and Burby, HOA covenants can grant the government the right to perform required infrastructure maintenance and later charge the association for the work performed (2002). The local municipality controls an escrow account on behalf of the association, or has the authority to place liens on properties to ensure eventual reimbursement of maintenance costs.

However, this is no guarantee that critical infrastructure such as levees or stormwater storage will be maintained effectively. In the event that a common-interest development fails, there is neither a means to locally manage infrastructure (as there will be no HOA), nor the possibility of the municipality to recoup costs for necessary maintenance. This impact can be mitigated if there is a maintenance guarantee (a financial performance guarantee that ensures adequate maintenance of infrastructure over a required time period) in place with the developer. But if there is still no HOA in place upon conclusion of the maintenance guarantee, the municipality will still be on the hook for maintenance costs.

In the event that a community association is formed, there are still significant barriers to guaranteeing adequate infrastructure maintenance. New improvements or maintenance work may be opposed by residents who were not properly informed about the responsibilities of the association. Further, residential turnover can have a detrimental impact on the overall stability of an association, and newer residents may be less willing to contribute toward shared maintenance.



Aaron Volkening (Greendale_AmbrusterPark_DryDetOverview, Flickr CC BY 2.0)

A dry detention pond serving a residential subdivision in Greendale, Wisconsin.

Raymond Shobe (Flood water retention pond with broken levee, Flickr CC BY-SA 2.0)

Heavy rains in 2010 revealed flaws in the maintenance of this levee protecting the Mission Lakes subdivision in Desert Hot Springs, California.

Without strong and stable association management, what had once been a "guarantee" between the developer and the municipality risks becoming an unsustainable burden for owners.

RECOMMENDATIONS FOR CODE REFORM

Require a maintenance plan for any subdivision proposal that includes flood control or stormwater management facilities that would be managed and maintained by owners. This plan must identify what expertise will be necessary, where it can be obtained, what maintenance will be required, and the annual cost likely to be incurred by the owners of the subdivision to carry out those obligations. Cost estimates and work scope should be based on an evaluation by an estimator independent of the developer just as if the city itself were taking ownership.

If the funding proposed for maintenance and repair of critical infrastructure relies on assessments levied only on homes within that subdivision, the proponent must demonstrate not just adequate funding for construction, but at least a 30-year funding plan that includes allowances for inflation, delinquent assessments, expert assistance, a disaster contingency, and a realistic reserve for long-term maintenance and replacement. The city or county should have the authority to step in and levy additional assessments to pay for inspections, maintenance, or repair, and the authority to make emergency repairs. Adequate funding may mean owner assessments must be set higher than the proponent wants to qualify enough buyers. Assessment underfunding to attract sales is a popular tool, but that can leave the subdivision unable to address long-term maintenance of critical facilities and force the city or county to advance its own funds to do it.

If a critical improvement's projected cost to repair or rebuild is greater than, say, 15 percent of the market value of all of the lots in the subdivision and if there isn't adequate insurance or government assistance, the owners may not voluntarily raise the funds to rebuild it, and there won't be sufficient equity to support a special assessment secured by a lien. Cities and counties should not count on the equity in the homes for reimbursement for emergency repairs. There is always an upper limit on emergency funds that any community association can raise by assessing its owners, and the equity in the homes may be illusory. Lenders usually have priority to whatever equity there is, and equity does not always increase with time—especially where the project has been damaged by a natural disaster.

Public officials not experienced with the long-term management of a community association may ask why ordinances or provisions in an association's governing documents can't be used to enforce compliance with a community's obligation to properly maintain critical infrastructure. They can be, but someone has to know that enforcement is necessary. A jurisdiction that rarely inspects private facilities may not know of the condition until the facility fails. When that happens, years of neglect will cost much more to remedy than if the city or county itself had conducted regular inspections and performed necessary maintenance.

The local municipality can reserve for itself, by ordinance or conditions of approval, the right of reimbursement from the owners in the subdivision for any funds it has to spend to maintain or repair critical facilities.

But even if that right exists, it may not be useful. To realize cash would require foreclosure and a dispute with lenders with superior rights. In some states, associations enjoy priority lien status over lenders, but they are in the minority. Usually lenders' rights come first, and there may well be nothing left after that. If it should come to that, the municipality should instead take ownership of the infrastructure in the beginning and use its expertise and taxing authority to maintain it, rather than wait to see if the lay owners will do the job properly. There is definitely a "tipping point" where a critical piece of infrastructure is too expensive or too sophisticated to be maintained by lay home owners. The trick is recognizing that in the beginning and convincing the municipality it is a better candidate to own it.

TOWARD 'BETTER' PRACTICES

The examples below discuss steps three specific jurisdictions have taken to minimize the risks associated with delegating maintenance responsibilities to community associations. While these approaches do not address every potential problem, they do show how some cities and counties are going beyond the status quo.

Lake County, Illinois: Requiring Maintenance Plans

Effective management of flood mitigation infrastructure requires regular inspections, specialized upkeep, and dedicated funding. A community association that is unfamiliar with or unwilling to dedicate the time, funds, or expertise to proper maintenance of critical disaster mitigation infrastructure is likely to suffer significant impacts in the event of a flood.

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An HOA is responsible for maintaining this complicated hillside stabilization and stormwater infrastructure, but silt-laden runoff has clogged the drainage inlets behind the lower retaining walls, causing polluted water to run into the San Francisco Bay.

Local officials in Lake County, Illinois, recognized some of the primary issues and solutions associated with HOA-managed stormwater best management practices (BMPs). Lacking the budget for a dedicated maintenance program, maintenance of stormwater BMPs in Lake County is often the responsibility of the local HOA. Rather than relying solely on guidance or trusting in the good faith of the home owners association, the Lake County Stormwater Management Commission developed a multistep process focused on codifying maintenance in plan approval procedures, education, and outreach for HOAs, and direct collaboration with the HOA in BMP inspections.

Lake County engages with the developer early in the permitting process, requiring that a dedicated source of funds be allotted to stormwater infrastructure maintenance in perpetuity. Often, this funding source is HOA dues. Next, the stormwater plan is incorporated into the subdivision plat. The commission then develops a maintenance plan along with the HOA, clearly spelling out the roles and responsibilities of the association and the necessary maintenance schedule. Finally, the commission performs regular inspections of the infrastructure, and directly involves a representative of the HOA in the inspection. This allows the commission and the HOA to address any issues on site.

Outside of this formal permitting and maintenance process, the commission holds workshops and education sessions with HOAs to increase local expertise in local stormwater maintenance issues (Rafter 2000).

Roanoke County, Virginia: Proactive Inspections and Service Districts

A recent public outreach process undertaken by the Roanoke County Department of Stormwater Management sought to address some of the primary issues of HOA management of stormwater infrastructure. The Roanoke County Stormwater Advisory Committee (RCSWAC) developed a report highlighting the primary improvements that should be made to the permitting, inspection, and long-term maintenance process. While conclusions were wide-ranging, the committee also directly addressed crucial gaps in how stormwater infrastructure is (or isn't) managed by HOAs, and how that process can be improved.

Enforcement of stormwater infrastructure maintenance has traditionally been undertaken by the HOAs themselves. Inspections were rare as they tended only to follow reports of violations. RCSWAC suggested that proactive and regular inspections by county staff are necessary to ensure proper maintenance procedures are being followed.

Additionally, as many HOAs simply lack the expertise to perform BMP maintenance, the advisory committee recommended the use of a local service district in order to fund direct county maintenance of HOA stormwater infrastructure. Under this plan, a service district fee would allow the program to be cost-neutral for the county (cost being one of the primary reasons for HOA-managed infrastructure in the first place) and absolving the HOA of maintenance responsibilities. As proposed, this would be a voluntary program. An alternative proposal would allow the county to serve as a contractor for the HOA, performing required maintenance and directly billing the association (Roanoke County 2014).

In 2014, the county updated its stormwater management ordinance with provisions refining the process of transferring stormwater facility maintenance responsibilities to HOAs and establishing a five-year schedule for county inspections of all HOA-maintained stormwater facilities (§23-1 et seq.). However, the county has not yet implemented the service district proposal outlined in the RCSWAC draft stormwater program.

Gadsden, Alabama: Establishing Clear Responsibilities

Gadsden, Alabama, directly addresses maintenance of private stormwater infrastructure in its stormwater management regulations. According to the code, property owners (and HOAs) served by on-site stormwater management facilities must: (1) agree to and execute a deed-restricted maintenance plan; (2) provide for defined and periodic inspections by a registered professional engineer; (3) provide minimum maintenance and repair according to the standards outlined in the BMP manual; (4) perform repairs according to a city-determined time line; and (5) allow for city-performed maintenance, should maintenance not occur in a timely manner at the expense of the association or property owner (§108-5.g).

This transparent process allows the city to communicate clearly with subdivision developers and subsequent HOAs on the rules and responsibilities governing stormwater infrastructure maintenance and repair. Direct codification of clear rules and responsibilities is an approach that can be clearly replicated in other municipalities nationwide, though the efficacy of this approach relies heavily on funding for enforcement and inspections.

CONCLUSION

For planners and local officials aiming to mitigate hazard risk associated with new

development, development regulations addressing community association responsibilities are where the rubber hits the road. A review of a subdivision proposal based on aesthetics, compliance with existing zoning, traffic, the availability of public utilities to service it, and similar criteria is typical.

With a large subdivision, a street and trail plan, open space management, parks, schools, and similar facilities add challenges that are nothing unusual. If a community association with "normal" improvements—streets, parks, tot lots, and open space—fails in its job or its funding, the place will look bad but won't threaten someone's health or well-being.

When you add to that mix critical flood or stormwater control facilities, the planner must question owner capability. If the development includes engineered improvements—dams, levees, landslide mitigation measures such as debris fences or large retaining walls, recreational lakes that are part of a regional stormwater management system, or any similar improvement—which, if they fail, will endanger other property or human life, the planner should carefully analyze the situation before responsibility is delegated to lay owners for maintenance and repair.

If the planner cannot with confidence say that the future owners of a proposed subdivision can fund the proper maintenance and repair of a critical piece of infrastructure, serious consideration should be given to rejecting the project outright, recommending that the mitigation facilities be publicly owned and maintained using broad-based tax revenues, or requiring the developer to post a financial performance guarantee calculated to underwrite at least half of the cost of failure, while bearing interest to guard against inflation.

If the planner cannot with confidence say that the future owners of a proposed subdivision can fund the proper maintenance and repair of a critical piece of infrastructure, serious consideration should be given to rejecting the project outright . . .

In many jurisdictions, any of the foregoing options will elicit objections from the developer, the planning commission, or both. But unless we realistically evaluate the capability of the eventual owner to properly care for critical facilities, the planner will leave too much to chance and the local government may inherit it anyway, but at a much less opportune time.

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Cover: Photo by Dean Terry (A large community in Plano, Texas, near Dallas, Flickr CC-BY-NC-ND-2.0)

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